SECURITY CONTROL SYSTEM

А

В

С

D

Ε

CONTENTS

COUPE

BASIC INSPECTION10
DIAGNOSIS AND REPAIR WORKFLOW10 Work Flow
PRE-INSPECTION FOR DIAGNOSTIC13Basic Inspection13Vehicle Security Operation Check13
INSPECTION AND ADJUSTMENT15
ECM RE-COMMUNICATING FUNCTION
FUNCTION DIAGNOSIS16
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION
NVIS (NISSAN VEHICLE IMMOBILIZER SYS- TEM-NATS)22
System Diagram22System Description22Component Parts Location24Component Description25
VEHICLE SECURITY SYSTEM26System Diagram26System Description26Component Parts Location28Component Description29
DIAGNOSIS SYSTEM (BCM)30

COMMON ITEM	F
INTELLIGENT KEY	G
THEFT ALM	П
IMMU	J
COMPONENT DIAGNOSIS	
U1000 CAN COMM CIRCUIT	SE
U1010 CONTROL UNIT (CAN)	L
B2013 ID DISCORD, IMMU-STRG	IVI
Description	Ν
B2014 CHAIN OF STRG-IMMU	
Description	0
DTC Logic	
B2108 STEERING LOCK RELAY42	Ρ
Description	
DTC Logic42 Diagnosis Procedure42	
B2109 STEERING LOCK RELAY43 Description43	

DTC Logic Diagnosis Procedure	43 43
B210A STEERING LOCK CONDITION SWITCH	
Description	
Description	
Diagnosis Procedure	
B210B STARTER CONTROL RELAY	
Description	48
DTC Logic	
Diagnosis Procedure	48
B210C STARTER CONTROL RELAY	49
Description	
DTC Logic	
Diagnosis Procedure	49
B210D STARTER RELAY	50
Description	
DCSCIPIION	
Diagnosis Procedure	
C C C C C C C C C C C C C C C C C C C	
B210E STARTER RELAY	
Description DTC Logic	
Diagnosis Procedure	
B210F PNP/CLUTCH INTERLOCK SWITCH	
Description	
DTC Logic Diagnosis Procedure	
Component Inspection	
B2110 PNP/CLUTCH INTERLOCK SWITCH	
Description DTC Logic	
Diagnosis Procedure	
Component Inspection	
B2190, P1610 NATS ANTENNA AMP	
Description DTC Logic	
Diagnosis Procedure	
-	
B2191, P1615 DIFFERENCE OF KEY	
Description DTC Logic	
Diagnosis Procedure	
C C C C C C C C C C C C C C C C C C C	
B2192, P1611 ID DISCORD, IMMU-ECM	
Description	
DTC Logic Diagnosis Procedure	
C C	
B2193, P1612 CHAIN OF ECM-IMMU	
Description	
DTC Logic	
Diagnosis Procedure	69
B2555 STOP LAMP	70

Description DTC Logic	70
Diagnosis Procedure Component Inspection	
B2556 PUSH-BUTTON IGNITION SWITCH	
Description DTC Logic	
Diagnosis Procedure	72
Component Inspection	
B2557 VEHICLE SPEED	
Description DTC Logic	
Diagnosis Procedure	74
B2560 STARTER CONTROL RELAY	
Description DTC Logic	
Diagnosis Procedure	
B2601 SHIFT POSITION	76
Description	
DTC Logic Diagnosis Procedure	
Component Inspection	
B2602 SHIFT POSITION	
Description	
DTC Logic Diagnosis Procedure	
B2603 SHIFT POSITION STATUS	81
Description	81
DTC Logic Diagnosis Procedure	
B2604 PNP SWITCH	
Description	
DTC Logic	
Diagnosis Procedure	
B2605 PNP SWITCH	
Description DTC Logic	
Diagnosis Procedure	86
B2606 STEERING LOCK RELAY	
Description DTC Logic	
Diagnosis Procedure	
	89
B2607 STEERING LOCK RELAY	
Description	89
	89 89
Description DTC Logic Diagnosis Procedure B2608 STARTER RELAY	89 89 89
Description DTC Logic Diagnosis Procedure	89 89 89 91 91

Description 93 DTC Logic 93 Diagnosis Procedure 93 B260B STEERING LOCK UNIT 97 Description 97 Diagnosis Procedure 97 Diagnosis Procedure 97 B260C STEERING LOCK UNIT 98 Description 98 Diagnosis Procedure 98 Diagnosis Procedure 98 Description 99 Description 99 Description 99 Description 99 Description 99 Description 100 Description 100 DTC Logic 100 Description 100 DTC Logic 101 Description 101 DTC Logic 101 Description 101 Description 105 Description 105 DESCIP 105 Description 107 Description 107 <t< th=""></t<>
DTC Logic 93 Diagnosis Procedure 93 B260B STEERING LOCK UNIT 97 DTC Logic 97 DTC Logic 97 DTC Logic 97 B260C STEERING LOCK UNIT 98 Description 98 Description 98 Description 98 Description 99 Diagnosis Procedure 99 Diagnosis Procedure 99 Description 99 Description 99 Diagnosis Procedure 99 Diagnosis Procedure 100 Description 100 Description 100 Description 100 Diagnosis Procedure 101 Description 101 Description 101 Description 101 Description 101 Description 105 DTC Logic 105 DTC Logic 105 Description 107 Description 107 Description
Diagnosis Procedure 93 B260B STEERING LOCK UNIT 97 Description 97 Diagnosis Procedure 97 B260C STEERING LOCK UNIT 98 Description 98 Description 98 DESCIPTION 98 DESCIPTION 98 Description 98 DESCIPTION 99 DTC Logic 99 DESCRIPTION 99 DEC Logic 99 Description 100 Description 100 Description 100 Description 100 Description 100 Description 101 Description 105 Description 105 Description 105 Description 107 Description 107
Description 97 DTC Logic 97 Diagnosis Procedure 97 B260C STEERING LOCK UNIT 98 Description 98 DTC Logic 98 Diagnosis Procedure 98 B260D STEERING LOCK UNIT 99 DTC Logic 99 Diagnosis Procedure 99 DTC Logic 99 DTC Logic 100 Description 100 Description 100 DTC Logic 100 Description 100 DTC Logic 100 Description 101 DTC Logic 101 Description 101 DTC Logic 101 Description 101 DTC Logic 101 Description 105 Description 105 DEscription 105 DEscription 107 Description 107 Description 107 Des
Description 97 DTC Logic 97 Diagnosis Procedure 97 B260C STEERING LOCK UNIT 98 Description 98 DTC Logic 98 Diagnosis Procedure 98 B260D STEERING LOCK UNIT 99 DTC Logic 99 Diagnosis Procedure 99 DTC Logic 99 DTC Logic 100 Description 100 Description 100 DTC Logic 100 Description 100 DTC Logic 100 Description 101 DTC Logic 101 Description 101 DTC Logic 101 Description 101 DTC Logic 101 Description 105 Description 105 DEscription 105 DEscription 107 Description 107 Description 107 Des
DTC Logic 97 Diagnosis Procedure 97 B260C STEERING LOCK UNIT 98 Description 98 DTC Logic 98 Diagnosis Procedure 98 B260D STEERING LOCK UNIT 99 Description 99 Description 99 Diagnosis Procedure 99 B260F ENGINE STATUS 100 Description 100 DTC Logic 100 Description 100 Description 100 Description 100 Description 100 Description 101 Description 101 Description 101 Diagnosis Procedure 101 Description 105 Description 105 Description 105 Description 107 Description 107 Description 107 Description 107 Description 107 Description 108 Description
Diagnosis Procedure 97 B260C STEERING LOCK UNIT 98 Description 98 Diagnosis Procedure 98 B260D STEERING LOCK UNIT 99 Description 99 DTC Logic 99 Diagnosis Procedure 99 Diagnosis Procedure 99 B260F ENGINE STATUS 100 Description 100 Description 100 Description 100 Diagnosis Procedure 100 Description 101 Description 101 Description 101 Description 101 Description 105 Description 105 Description 105 Description 105 Description 107 Description 107 Description 107 Description 107 Description 107 Description 107 Description 108 Description 108 De
B260C STEERING LOCK UNIT 98 Description 98 DTC Logic 98 Diagnosis Procedure 98 B260D STEERING LOCK UNIT 99 Description 99 DTC Logic 99 Diagnosis Procedure 99 DTC Logic 99 Diagnosis Procedure 99 B260F ENGINE STATUS 100 Description 100 DTC Logic 100 Description 100 DEscription 101 DTC Logic 101 Description 101 DTC Logic 101 Description 101 DTC Logic 101 Description 105 Description 105 DEscription 105 DEscription 107 Description 107 Description 107 Diagnosis Procedure 107 Diagnosis Procedure 108 DTC Logic 107 <
Description 98 DTC Logic 98 Diagnosis Procedure 98 B260D STEERING LOCK UNIT 99 Description 99 DTC Logic 99 Diagnosis Procedure 99 B260F ENGINE STATUS 100 Description 100 Description 100 DTC Logic 100 Diagnosis Procedure 100 B2612 STEERING STATUS 101 Description 101 DTC Logic 101 Description 101 DTC Logic 101 Diagnosis Procedure 101 DTC Logic 101 Diagnosis Procedure 105 DEscription 105 DTC Logic 105 Diagnosis Procedure 107 Description 107 Description 107 Diagnosis Procedure 108 DTC Logic 107 Diagnosis Procedure 108 Diagnosis Procedure
DTC Logic 98 Diagnosis Procedure 98 B260D STEERING LOCK UNIT 99 Description 99 DTC Logic 99 Diagnosis Procedure 99 B260F ENGINE STATUS 100 Description 100 Description 100 DTC Logic 100 Description 101 DTC Logic 101 Diagnosis Procedure 101 B2617 STARTER RELAY CIRCUIT 105 Description 105 DTC Logic 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 Description 107 DEscription 107 DEscription 108 DTC Logic 108 DTC Logic 108 Diagnosis Procedure
Diagnosis Procedure 98 B260D STEERING LOCK UNIT 99 Description 99 DTC Logic 99 Diagnosis Procedure 99 B260F ENGINE STATUS 100 Description 100 Description 100 Diagnosis Procedure 100 Diagnosis Procedure 100 B2612 STEERING STATUS 101 Description 101 DTC Logic 101 Diagnosis Procedure 101 Description 101 Diagnosis Procedure 101 B2617 STARTER RELAY CIRCUIT 105 Description 105 DTC Logic 105 Diagnosis Procedure 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 DTC Logic 107 Description 107 DEscription 108 DTC Logic 108 DTC Logic 108 Diagnosis Procedure 108 Diagnosis Procedure
B260D STEERING LOCK UNIT 99 Description 99 DTC Logic 99 Diagnosis Procedure 99 B260F ENGINE STATUS 100 Description 100 DTC Logic 100 Description 100 DTC Logic 100 Description 100 DTC Logic 100 Description 101 Diagnosis Procedure 105 DTC Logic 105 Diagnosis Procedure 105 DTC Logic 107 Diagnosis Procedure 107 Description 107 Diagnosis Procedure 107 Description 107 Diagnosis Procedure 107 Diagnosis Procedure 108 DTC Logic 108 DTC Logic 108 Diagnosi
Description 99 DTC Logic 99 Diagnosis Procedure 99 B260F ENGINE STATUS 100 Description 100 DTC Logic 100 Diagnosis Procedure 100 B2612 STEERING STATUS 101 Description 101 DTC Logic 101 Description 101 DTC Logic 101 Description 101 DTC Logic 101 Diagnosis Procedure 101 B2617 STARTER RELAY CIRCUIT 105 Description 105 DTC Logic 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 Description 107 Description 107 Diagnosis Procedure 107 B261A PUSH-BUTTON IGNITION SWITCH 108 Description 108 Diagnosis Procedure 108 Diagnosis Procedure 108 Diagnosis Procedure 110 Description
DTC Logic 99 Diagnosis Procedure 99 B260F ENGINE STATUS 100 Description 100 DTC Logic 100 Diagnosis Procedure 100 B2612 STEERING STATUS 101 Description 101 DTC Logic 101 Description 101 DTC Logic 101 Diagnosis Procedure 101 B2617 STARTER RELAY CIRCUIT 105 Description 105 DTC Logic 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 DTC Logic 107 Diagnosis Procedure 107 B2619 BCM 107 Description 107 Diagnosis Procedure 108 DTC Logic 108 DTC Logic 108 DTC Logic 108 Diagnosis Procedure 108 Diagnosis Procedure 108 DESCRIPTION OF ENGINE STA- 110 Description 110 <
Diagnosis Procedure 99 B260F ENGINE STATUS 100 Description 100 DTC Logic 100 Diagnosis Procedure 100 B2612 STEERING STATUS 101 Description 101 Description 101 Diagnosis Procedure 101 Diagnosis Procedure 101 B2617 STARTER RELAY CIRCUIT 105 Description 105 DTC Logic 105 Diagnosis Procedure 105 Diagnosis Procedure 105 Diagnosis Procedure 105 DTC Logic 105 Diagnosis Procedure 107 Description 107 DTC Logic 107 Diagnosis Procedure 107 B2614 PUSH-BUTTON IGNITION SWITCH .108 Description 108 DTC Logic 108 DTC Logic 108 Diagnosis Procedure 108 Diagnosis Procedure 108 Description 110 Description 110 <t< td=""></t<>
B260F ENGINE STATUS 100 Description 100 DTC Logic 100 Diagnosis Procedure 100 B2612 STEERING STATUS 101 Description 101 DTC Logic 101 Diagnosis Procedure 101 Diagnosis Procedure 101 B2617 STARTER RELAY CIRCUIT 105 Description 105 Diagnosis Procedure 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 Diagnosis Procedure 107 Diagnosis Procedure 108 DESCRIPTION OF ENGINE STA- 108 Diagnosis Procedure 108 B26E1 NO RECEPTION OF ENGINE STA- 110 Description 110 DTC Logic 110 Diagnosis Procedure 110
Description 100 DTC Logic 100 Diagnosis Procedure 100 B2612 STEERING STATUS 101 Description 101 DTC Logic 101 DTC Logic 101 Diagnosis Procedure 101 B2617 STARTER RELAY CIRCUIT 105 Description 105 DTC Logic 105 Diagnosis Procedure 105 DTC Logic 105 Diagnosis Procedure 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 Diagnosis Procedure 107 Diagnosis Procedure 107 B261A PUSH-BUTTON IGNITION SWITCH 108 Description 108 DTC Logic 108 Diagnosis Procedure 108 Diagnosis Procedure 110 Description 110 Description 110 Description 110 Diagnosis Procedure 110
Description 100 DTC Logic 100 Diagnosis Procedure 100 B2612 STEERING STATUS 101 Description 101 DTC Logic 101 DTC Logic 101 Diagnosis Procedure 101 B2617 STARTER RELAY CIRCUIT 105 Description 105 DTC Logic 105 Diagnosis Procedure 105 DTC Logic 105 Diagnosis Procedure 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 Diagnosis Procedure 107 Diagnosis Procedure 107 B261A PUSH-BUTTON IGNITION SWITCH 108 Description 108 DTC Logic 108 Diagnosis Procedure 108 Diagnosis Procedure 100 Description 110 Description 110 Description 110 Diagnosis Procedure 110
DTC Logic 100 Diagnosis Procedure 100 B2612 STEERING STATUS 101 Description 101 DTC Logic 101 Diagnosis Procedure 101 B2617 STARTER RELAY CIRCUIT 105 Description 105 DTC Logic 105 Description 105 DTC Logic 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 Description 107 Description 107 Diagnosis Procedure 107 B2614 PUSH-BUTTON IGNITION SWITCH 108 Description 108 DTC Logic 108 Diagnosis Procedure 108 Diagnosis Procedure 108 Diagnosis Procedure 110 Description 110
Diagnosis Procedure 100 B2612 STEERING STATUS 101 Description 101 DTC Logic 101 Diagnosis Procedure 101 B2617 STARTER RELAY CIRCUIT 105 Description 105 DTC Logic 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 Diagnosis Procedure 107 B261A PUSH-BUTTON IGNITION SWITCH 108 Description 108 DTC Logic 108 Diagnosis Procedure 108 B26E1 NO RECEPTION OF ENGINE STA- TUS SIGNAL 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 Diagnosis Procedure 110 Diagnosis Procedure <td< td=""></td<>
Description 101 DTC Logic 101 Diagnosis Procedure 101 B2617 STARTER RELAY CIRCUIT 105 Description 105 DTC Logic 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 DTC Logic 107 Description 107 Description 107 Description 107 DEscription 107 Description 107 Diagnosis Procedure 107 B2614 PUSH-BUTTON IGNITION SWITCH .108 Description 108 DTC Logic 108 Diagnosis Procedure 108 Diagnosis Procedure 108 Description 110 DTC Logic 110 Diagnosis Procedure 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 Diagnosis Procedure 110 Diagnosis Procedure 111
Description 101 DTC Logic 101 Diagnosis Procedure 101 B2617 STARTER RELAY CIRCUIT 105 Description 105 DTC Logic 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 DTC Logic 107 Description 107 Description 107 Description 107 DEscription 107 Description 107 Diagnosis Procedure 107 B2614 PUSH-BUTTON IGNITION SWITCH .108 Description 108 DTC Logic 108 Diagnosis Procedure 108 Diagnosis Procedure 108 Description 110 DTC Logic 110 Diagnosis Procedure 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 Diagnosis Procedure 110 Diagnosis Procedure 111
DTC Logic 101 Diagnosis Procedure 101 B2617 STARTER RELAY CIRCUIT 105 Description 105 DTC Logic 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 Description 107 Diagnosis Procedure 107 DTC Logic 107 Diagnosis Procedure 107 B2614 PUSH-BUTTON IGNITION SWITCH 108 Description 108 DTC Logic 108 Diagnosis Procedure 108 DTC Logic 108 Description 108 DTC Logic 108 Diagnosis Procedure 108 B26E1 NO RECEPTION OF ENGINE STA- 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 DTC Logic 110 Diagnosis Procedure 110 DESCRIPTION OF ENGINE STA- 110 DESCHIPHY AND GROUND CIRCUIT 111 BCM 111
Diagnosis Procedure 101 B2617 STARTER RELAY CIRCUIT 105 Description 105 DTC Logic 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 Description 107 Description 107 Diagnosis Procedure 107 Diagnosis Procedure 107 B261A PUSH-BUTTON IGNITION SWITCH .108 Description 108 DTC Logic 108 Description 108 DTC Logic 108 Description 108 DTC Logic 108 Diagnosis Procedure 108 B26E1 NO RECEPTION OF ENGINE STA- 110 Description 110 DTC Logic 110 Description 110 DTC Logic 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 DECM 111
B2617 STARTER RELAY CIRCUIT 105 Description 105 DTC Logic 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 DTC Logic 107 Description 107 DTC Logic 107 Diagnosis Procedure 107 Diagnosis Procedure 107 B261A PUSH-BUTTON IGNITION SWITCH 108 Description 108 DTC Logic 108 Description 108 Description 108 DTC Logic 108 Diagnosis Procedure 108 Diagnosis Procedure 108 Diagnosis Procedure 108 Description 110 Description 110 Description 110 Description 110 Diagnosis Procedure 110 Diagnosis Procedure 110 Diagnosis Procedure 111
Description 105 DTC Logic 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 DTC Logic 107 DTC Logic 107 Diagnosis Procedure 107 B261A PUSH-BUTTON IGNITION SWITCH 108 Description 108 DTC Logic 108 Diagnosis Procedure 108 Description 108 DTC Logic 108 Description 108 DTC Logic 108 Diagnosis Procedure 108 Diagnosis Procedure 101 Description 110 DTC Logic 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 Description 110 DESCRIPTION OF ENGINE STA- 110 Description 110 DESCRIPTION OF ENGINE STA- 110 DESCRIPTION 110 DESCRIPTION 110 DESCR 111
DTC Logic 105 Diagnosis Procedure 105 B2619 BCM 107 Description 107 DTC Logic 107 Diagnosis Procedure 107 B261A PUSH-BUTTON IGNITION SWITCH 108 Description 108 DTC Logic 108 Description 108 DTC Logic 108 Description 108 DTC Logic 108 Diagnosis Procedure 108 B26E1 NO RECEPTION OF ENGINE STA- 110 Description 110 Diagnosis Procedure 110 Diagnosis Procedure 111 BCM 111 BCM 111
Diagnosis Procedure 105 B2619 BCM 107 Description 107 DTC Logic 107 Diagnosis Procedure 107 B261A PUSH-BUTTON IGNITION SWITCH 108 Description 108 DTC Logic 108 Description 108 DTC Logic 108 Description 108 Diagnosis Procedure 108 B26E1 NO RECEPTION OF ENGINE STA- 110 Description 110 Diagnosis Procedure 111 BCM 111 BCM 111
B2619 BCM 107 Description 107 DTC Logic 107 Diagnosis Procedure 107 B261A PUSH-BUTTON IGNITION SWITCH 108 Description 108 DTC Logic 108 Diagnosis Procedure 108 B26E1 NO RECEPTION OF ENGINE STA- 108 B26E1 NO RECEPTION OF ENGINE STA- 110 Description 110 DTC Logic 110 Description 110 DTC Logic 110 Description 110 DESCRIPTION OF ENGINE STA- 110 Description 110 DESCRUPPLY AND GROUND CIRCUIT 111 BCM 111 BCM 111
Description 107 DTC Logic 107 Diagnosis Procedure 107 B261A PUSH-BUTTON IGNITION SWITCH 108 Description 108 DTC Logic 108 Diagnosis Procedure 108 B26E1 NO RECEPTION OF ENGINE STA- TUS SIGNAL 110 Description 110 DTC Logic 110 Description 110 DTC Logic 110 Description 110 DTC Logic 110 DESCRIPTION OF ENGINE STA- 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 Diagnosis Procedure 111 BCM 111 BCM 111
DTC Logic 107 Diagnosis Procedure 107 B261A PUSH-BUTTON IGNITION SWITCH 108 Description 108 DTC Logic 108 Diagnosis Procedure 108 B26E1 NO RECEPTION OF ENGINE STA- 110 Description 110 Description 110 Description 110 DTC Logic 110 Description 110 DTC Logic 110 Description 110 DESCRUPPLY AND GROUND CIRCUIT 111 BCM 111 BCM : Diagnosis Procedure 111
Diagnosis Procedure 107 B261A PUSH-BUTTON IGNITION SWITCH 108 Description 108 DTC Logic 108 Diagnosis Procedure 108 B26E1 NO RECEPTION OF ENGINE STA- 100 Description 110 Description 110 Description 110 DTC Logic 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 DESCRIPTION OF ENGINE STA- 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 Diagnosis Procedure 111 BCM 111 BCM : Diagnosis Procedure 111
B261A PUSH-BUTTON IGNITION SWITCH108 Description 108 DTC Logic 108 Diagnosis Procedure 108 B26E1 NO RECEPTION OF ENGINE STA- 100 Description 110 Description 110 Diagnosis Procedure 110 Description 110 DTC Logic 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 Diagnosis Procedure 111 BCM 111 BCM : Diagnosis Procedure 111
Description 108 DTC Logic 108 Diagnosis Procedure 108 B26E1 NO RECEPTION OF ENGINE STA- 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 Diagnosis Procedure 111 BCM 111 BCM : Diagnosis Procedure 111
Description 108 DTC Logic 108 Diagnosis Procedure 108 B26E1 NO RECEPTION OF ENGINE STA- 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 Diagnosis Procedure 111 BCM 111 BCM : Diagnosis Procedure 111
DTC Logic
Diagnosis Procedure 108 B26E1 NO RECEPTION OF ENGINE STA- 110 TUS SIGNAL 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 POWER SUPPLY AND GROUND CIRCUIT 111 111 BCM 111 BCM : Diagnosis Procedure 111
TUS SIGNAL 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 POWER SUPPLY AND GROUND CIRCUIT 111 BCM 111 BCM : Diagnosis Procedure 111
TUS SIGNAL 110 Description 110 DTC Logic 110 Diagnosis Procedure 110 POWER SUPPLY AND GROUND CIRCUIT 111 BCM 111 BCM : Diagnosis Procedure 111
Description 110 DTC Logic 110 Diagnosis Procedure 110 POWER SUPPLY AND GROUND CIRCUIT 111 111 BCM 111 BCM : Diagnosis Procedure 111
DTC Logic
Diagnosis Procedure
POWER SUPPLY AND GROUND CIRCUIT 111 BCM
BCM
BCM : Diagnosis Procedure111
PCM · Special Densir Dequirement 111
IPDM E/R (INTELLIGENT POWER DISTRIBU-
TION MODULE ENGINE ROOM)
IPDM E/R (INTELLIGENT POWER DISTRIBU-
TION MODULE ENGINE ROOM) : Diagnosis Pro-

Diagnosis Procedure	113 113 A
KEY SLOT ILLUMINATION Description Component Function Check Diagnosis Procedure	114 B 114 B
KEY CYLINDER SWITCH Description Component Function Check Diagnosis Procedure (With LH and RH Anti-Pinch)	116 116
 Diagnosis Procedure (With LH Anti-Pinch Only) Component Inspection	118 E
HORN Description Component Function Check Diagnosis Procedure	120 120 _F
HEADLAMP Description Component Function Check Diagnosis Procedure	122 G 122
WARNING LAMP Description Component Function Check	H 123 123 123
Diagnosis Procedure	124 124 J 124
	125 SE
ECU DIAGNOSIS	125
BCM (BODY CONTROL MODULE) Reference Value Terminal Layout Physical Values Wiring Diagram - INTELLIGENT KEY SYSTEM/ ENGINE START FUNCTION Wiring Diagram - VEHICLE SECURITY SYSTEM	125 125 L 130 130
BCM (BODY CONTROL MODULE) Reference Value Terminal Layout Physical Values Wiring Diagram - INTELLIGENT KEY SYSTEM/ ENGINE START FUNCTION	125 125 L 130 130 149 M 162 173 N 182 184
BCM (BODY CONTROL MODULE) Reference Value Terminal Layout Physical Values Wiring Diagram - INTELLIGENT KEY SYSTEM/ ENGINE START FUNCTION Wiring Diagram - VEHICLE SECURITY SYSTEM - Wiring Diagram - NVIS Fail Safe DTC Inspection Priority Chart DTC Inspection Priority Chart DTC Index	125 125 L 130 130 149 M 162 173 N 182 184 185 O
BCM (BODY CONTROL MODULE) Reference Value Terminal Layout Physical Values Wiring Diagram - INTELLIGENT KEY SYSTEM/ ENGINE START FUNCTION Wiring Diagram - VEHICLE SECURITY SYSTEM - Wiring Diagram - NVIS Fail Safe DTC Inspection Priority Chart	125 125 125 130 130 149 162 173 182 184 185 188 196 201 203

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS
VEHICLE SECURITY SYSTEM SYMPTOMS . 205 Symptom Table
NISSAN VEHICLE IMMOBILIZER SYSTEM- NATS SYMPTOMS
ON-VEHICLE REPAIR
KEY SLOT
PUSH BUTTON IGNITION SWITCH 208 Removal and Installation
BASIC INSPECTION
DIAGNOSIS AND REPAIR WORKFLOW 209 Work Flow
PRE-INSPECTION FOR DIAGNOSTIC
INSPECTION AND ADJUSTMENT 214
ECM RE-COMMUNICATING FUNCTION
FUNCTION DIAGNOSIS
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION
System Diagram215System Description215Component Parts Location219Component Description220
NVIS (NISSAN VEHICLE IMMOBILIZER SYS-TEM-NATS)221System Diagram221System Description221Component Parts Location223Component Description224
VEHICLE SECURITY SYSTEM225System Diagram225System Description225Component Parts Location227Component Description228
DIAGNOSIS SYSTEM (BCM) 229
COMMON ITEM229

COMMON ITEM : Diagnosis Description COMMON ITEM : CONSULT-III Function	
INTELLIGENT KEY INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)	
THEFT ALM THEFT ALM : CONSULT-III Function (BCM - THEFT ALM)	
IMMU IMMU : CONSULT-III Function (BCM - IMMU)	. 233
COMPONENT DIAGNOSIS	. 235
U1000 CAN COMM CIRCUIT	.235
Description	
DTC Logic	
Diagnosis Procedure	235
U1010 CONTROL UNIT (CAN)	.236
DTC Logic	
Diagnosis Procedure	
B2013 ID DISCORD, IMMU-STRG	227
Description	
DTC Logic	
Diagnosis Procedure	
B2014 CHAIN OF STRG-IMMU	220
Description	
DTC Logic	
Diagnosis Procedure	
B2108 STEERING LOCK RELAY	244
Description	
DTC Logic	
Diagnosis Procedure	
B2109 STEERING LOCK RELAY	
Description	
DTC Logic	
Diagnosis Procedure	
0	
B210A STEERING LOCK CONDITION SWITCH	242
Description	
Description	
Diagnosis Procedure	
-	
B210B STARTER CONTROL RELAY	
Description DTC Logic	
Diagnosis Procedure	
-	
B210C STARTER CONTROL RELAY	
Description DTC Logic	
Diagnosis Procedure	
-	
B210D STARTER RELAY	.249

Description	
DTC Logic Diagnosis Procedure	249 249
B210E STARTER RELAY	250
Description	
DTC Logic	
Diagnosis Procedure	
B210F PNP/CLUTCH INTERLOCK SWITCH	253
Description	
DTC Logic	
Diagnosis Procedure	
Component Inspection	
B2110 PNP/CLUTCH INTERLOCK SWITCH	258
Description	
DTC Logic	258
Diagnosis Procedure	258
Component Inspection	262
B2190, P1610 NATS ANTENNA AMP	262
Description	
DTC Logic	
Diagnosis Procedure	203
-	
B2191, P1615 DIFFERENCE OF KEY	
Description	
DTC Logic	
Diagnosis Procedure	266
B2192, P1611 ID DISCORD, IMMU-ECM	267
Description	
DTC Logic	
Diagnosis Procedure	267
B2193, P1612 CHAIN OF ECM-IMMU	268
Description	268
DTC Logic	268
Diagnosis Procedure	268
B2555 STOP LAMP	269
Description	
DTC Logic	
Diagnosis Procedure	
Component Inspection	
B2556 PUSH-BUTTON IGNITION SWITCH	271
Description	
DTC Logic	
Diagnosis Procedure	271
Component Inspection	
	272
B2557 VEHICLE SPEED	
Description	
Description DTC Logic	273
Description DTC Logic Diagnosis Procedure	
Description DTC Logic Diagnosis Procedure B2560 STARTER CONTROL RELAY	274
Description DTC Logic Diagnosis Procedure	274 274

Diagnosis Procedure274	
B2601 SHIFT POSITION275	A
Description	В
B2602 SHIFT POSITION278Description278DTC Logic278Diagnosis Procedure278	С
B2603 SHIFT POSITION STATUS	D
Description	E
B2604 PNP SWITCH283Description283DTC Logic283Diagnosis Procedure283	F
B2605 PNP SWITCH 285 Description 285 DTC Logic 285	G
Diagnosis Procedure	Н
B2606 STEERING LOCK RELAY287Description287DTC Logic287Diagnosis Procedure287	I
B2607 STEERING LOCK RELAY 288	J
Description	SE
B2608 STARTER RELAY290Description290DTC Logic290Diagnosis Procedure290	L
B2609 STEERING STATUS292Description292DTC Logic292Diagnosis Procedure292	M
B260B STEERING LOCK UNIT	Ν
Description	0
B260C STEERING LOCK UNIT297Description297DTC Logic297Diagnosis Procedure297	Ρ
B260D STEERING LOCK UNIT298Description298DTC Logic298Diagnosis Procedure298	

B260F ENGINE STATUS	200
Description	
DTC Logic Diagnosis Procedure	
B2612 STEERING STATUS	300
Description	
DTC Logic	
Diagnosis Procedure	
B2617 STARTER RELAY CIRCUIT	304
Description	304
DTC Logic	
Diagnosis Procedure	
-	
B2619 BCM	
Description	
DTC Logic	306
Diagnosis Procedure	306
B261A PUSH-BUTTON IGNITION SWITCH	
Description	
DTC Logic	
Diagnosis Procedure	307
B26E1 NO RECEPTION OF ENGINE STA	
TUS SIGNAL	
Description	
DTC Logic	
Diagnosis Procedure	309
POWER SUPPLY AND GROUND CIRCUI	T 310
BCM	
ВСМ	310
BCM BCM : Diagnosis Procedure	310 310
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement	310 310 310
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU-	310 310 310
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM)	310 310 310 310
BCMBCM : Diagnosis ProcedureBCM : Special Repair RequirementBCM : Special Repair RequirementBCM : Special Repair RequirementBCM : Special Repair RequirementBCM : Special Repair Repair Repair RequirementBCM : Special Repair Repair RequirementBCM : Special Repair Repa	310 310 310
BCMBCM : Diagnosis ProcedureBCM : Special Repair RequirementBCM : Special Repair Repair RequirementBCM : Special Repair RequirementBCM : Special Repair RequirementBCM : Special Repair RequirementBCM : Special Repair R	310 310 310
BCMBCM : Diagnosis ProcedureBCM : Special Repair RequirementBCM : Special Repair RequirementBCM : Special Repair RequirementBCM : Special Repair RequirementBCM : Special Repair Repair Repair RequirementBCM : Special Repair Repair RequirementBCM : Special Repair Repa	310 310 310
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) : Diagnosis cedure	310 310 310
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) : Diagnosis cedure	310 310 310
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) : Diagnosis cedure	310 310 310
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) : Diagnosis cedure KEY SLOT Diagnosis Procedure	310 310 310 J- Pro- 310 310 312 312
BCMBCM : Diagnosis ProcedureBCM : Special Repair RequirementBCM : Diagnosis ProcedureBCM : Diagnosis ProcedureBCM : Diagnosis ProcedureBCM : SLOT ILLUMINATIONBCM : Diagnosis ProcedureBCM : Diagnosis Procedur	310 310 310 J- Pro- 310 310 312 312 313
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) Diagnosis KEY SLOT Diagnosis Procedure KEY SLOT ILLUMINATION Description	310 310 310 J- Pro- 310 310 312 313
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) Diagnosis Procedure KEY SLOT Diagnosis Procedure KEY SLOT ILLUMINATION Description Component Function Check	310 310 310 J- Pro- 310 310 312 313 313 313
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) : Diagnosis cedure KEY SLOT Diagnosis Procedure KEY SLOT ILLUMINATION Component Function Check Diagnosis Procedure	310 310 310 J- Pro- 310 310 313 313 313
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IDION MODULE ENGINE ROOM) : Diagnosis cedure KEY SLOT Diagnosis Procedure KEY SLOT ILLUMINATION Description Component Function Check Diagnosis Procedure KEY CYLINDER SWITCH	310 310 310 J- Pro- 310 310 312 312 313 313 313
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) : Diagnosis cedure KEY SLOT Diagnosis Procedure KEY SLOT ILLUMINATION Component Function Check Diagnosis Procedure	310 310 310 J- Pro- 310 310 312 312 313 313 313
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IDION MODULE ENGINE ROOM) : Diagnosis cedure KEY SLOT Diagnosis Procedure KEY SLOT ILLUMINATION Description Component Function Check Diagnosis Procedure KEY CYLINDER SWITCH	310 310 310 J- Pro- 310 312 312 313 313 313 313 315
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) : Diagnosis cedure KEY SLOT Diagnosis Procedure Description Component Function Check Diagnosis Procedure KEY CYLINDER SWITCH Description	310 310 310 J- Pro- 310 312 312 313 313 313 315 315
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) : Diagnosis cedure KEY SLOT Diagnosis Procedure Description Component Function Check Diagnosis Procedure KEY CYLINDER SWITCH Description Component Function Check	310 310 310 J- Pro- 310 312 312 313 313 313 315 315
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) : Diagnosis cedure KEY SLOT Diagnosis Procedure Description Component Function Check Diagnosis Procedure KEY CYLINDER SWITCH Description Component Function Check	310 310 310 J- Pro- 310 310 312 313 313 313 315 315 315 315
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) Diagnosis Procedure KEY SLOT Diagnosis Procedure KEY SLOT ILLUMINATION Description Component Function Check Diagnosis Procedure KEY CYLINDER SWITCH Description Component Function Check Diagnosis Procedure (With LH and RH Anti-Pir	310 310 310 J- Pro- 310 310 312 312 313 313 313 315 315 315 y)316
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) : Diagnosis cedure KEY SLOT Diagnosis Procedure KEY SLOT ILLUMINATION Description Component Function Check Diagnosis Procedure KEY CYLINDER SWITCH Description Component Function Check Diagnosis Procedure (With LH and RH Anti-Pir Diagnosis Procedure (With LH Anti-Pinch Onl Component Inspection	310 310 310 J- Pro- 310 310 312 312 313 313 313 315 315 315 315 y)316 318
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) : Diagnosis cedure KEY SLOT Diagnosis Procedure KEY SLOT ILLUMINATION Description Component Function Check Diagnosis Procedure KEY CYLINDER SWITCH Description Component Function Check Diagnosis Procedure (With LH and RH Anti-Pir Diagnosis Procedure (With LH and RH Anti-Pir Diagnosis Procedure (With LH Anti-Pinch Onl Component Inspection	310 310 J- Pro- 310 310 310 310 312 313 313 313 315 315 y)316 318 319
BCM BCM : Diagnosis Procedure BCM : Special Repair Requirement IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM) : Diagnosis cedure KEY SLOT Diagnosis Procedure KEY SLOT ILLUMINATION Description Component Function Check Diagnosis Procedure KEY CYLINDER SWITCH Description Component Function Check Diagnosis Procedure (With LH and RH Anti-Pir Diagnosis Procedure (With LH Anti-Pinch Onl Component Inspection	310 310 310 J- Pro- 310 312 312 313 313 313 315 315 315 y)316 318 319 319

-
HEADLAMP
Description
Component Function Check
Diagnosis Procedure 321
WARNING LAMP
Description
Component Function Check
Diagnosis Procedure
VEHICLE SECURITY INDICATOR
Description
Component Function Check
Diagnosis Procedure
ECU DIAGNOSIS
BCM (BODY CONTROL MODULE)
Reference Value
Terminal Layout
Physical Values
Wiring Diagram - ENGINE START FUNCTION - WITH INTELLIGENT KEY
Wiring Diagram - VEHICLE SECURITY SYSTEM
- WITH INTELLIGENT KEY
Wiring Diagram - NVIS - WITH INTELLIGENT
KEY
Fail Safe
DTC Inspection Priority Chart
DTC Index
IPDM E/R (INTELLIGENT POWER DISTRI-
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)BUTION MODULE ENGINE ROOM)390Reference Value390Wiring DiagramSedanFail Safe403
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)BUTION MODULE ENGINE ROOM)390Reference Value390Wiring DiagramSedanFail Safe403DTC Index405
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)BUTION MODULE ENGINE ROOM)390Reference Value390Wiring DiagramSedanFail Safe403
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)BUTION MODULE ENGINE ROOM)390Reference Value390Wiring DiagramSedanFail Safe403DTC Index405
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)390Reference Value390Wiring Diagram — Sedan398Fail Safe403DTC Index405SYMPTOM DIAGNOSIS406
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)BUTION MODULE ENGINE ROOM)390Reference Value390Wiring Diagram — Sedan398Fail Safe403DTC Index405SYMPTOM DIAGNOSIS406INTELLIGENT KEY SYSTEM/ENGINE
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)BUTION MODULE ENGINE ROOM)390Reference Value390Wiring Diagram — Sedan398Fail Safe403DTC Index405SYMPTOM DIAGNOSIS406INTELLIGENT KEY SYSTEM/ENGINE406Symptom Table406
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)BUTION MODULE ENGINE ROOM)390Reference Value390Wiring Diagram — Sedan398Fail Safe403DTC Index405SYMPTOM DIAGNOSIS406INTELLIGENT KEY SYSTEM/ENGINESTART FUNCTION SYMPTOMS406
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)BUTION MODULE ENGINE ROOM)390Reference Value390Wiring DiagramSedanSedan398Fail Safe403DTC Index405SYMPTOM DIAGNOSIS406INTELLIGENT KEY SYSTEM/ENGINESTART FUNCTION SYMPTOMS406Symptom Table406VEHICLE SECURITY SYSTEM SYMPTOMS407Symptom Table407
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)BUTION MODULE ENGINE ROOM)390Reference Value390Wiring DiagramSedanSedan398Fail Safe403DTC Index405SYMPTOM DIAGNOSIS406INTELLIGENT KEY SYSTEM/ENGINESTART FUNCTION SYMPTOMS406Symptom Table406VEHICLE SECURITY SYSTEM SYMPTOMS407Symptom Table407NISSAN VEHICLE IMMOBILIZER SYSTEM-
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)BUTION MODULE ENGINE ROOM)390Reference Value390Wiring DiagramSedanSedan398Fail Safe403DTC Index405SYMPTOM DIAGNOSIS406INTELLIGENT KEY SYSTEM/ENGINESTART FUNCTION SYMPTOMS406Symptom Table406VEHICLE SECURITY SYSTEM SYMPTOMS407Symptom Table407
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)BUTION MODULE ENGINE ROOM)390Reference Value390Wiring DiagramSedanSafe403DTC Index405SYMPTOM DIAGNOSIS406INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS406Symptom Table406VEHICLE SECURITY SYSTEM SYMPTOMS407NISSAN VEHICLE IMMOBILIZER SYSTEM- NATS SYMPTOMS408
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)BUTION MODULE ENGINE ROOM)390Reference Value390Wiring DiagramSedanSafe403DTC Index405SYMPTOM DIAGNOSIS406INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS406Symptom Table406VEHICLE SECURITY SYSTEM SYMPTOMS407NISSAN VEHICLE IMMOBILIZER SYSTEM- NATS SYMPTOMS408Symptom Table408ON-VEHICLE REPAIR409
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)BUTION MODULE ENGINE ROOM)390Reference Value390Wiring Diagram — Sedan398Fail Safe403DTC Index405SYMPTOM DIAGNOSIS406INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS406Symptom Table406VEHICLE SECURITY SYSTEM SYMPTOMS407NISSAN VEHICLE IMMOBILIZER SYSTEM- NATS SYMPTOMS408Symptom Table408Symptom Table408
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)BUTION MODULE ENGINE ROOM)390Reference Value390Wiring Diagram — Sedan398Fail Safe403DTC Index405SYMPTOM DIAGNOSIS406INTELLIGENT KEY SYSTEM/ENGINESTART FUNCTION SYMPTOMS406Symptom Table406VEHICLE SECURITY SYSTEM SYMPTOMS407NISSAN VEHICLE IMMOBILIZER SYSTEM- NATS SYMPTOMS408Symptom Table408ON-VEHICLE REPAIR409KEY SLOT409Removal and Installation409PUSH BUTTON IGNITION SWITCH410
IPDM E/R (INTELLIGENT POWER DISTRI- BUTION MODULE ENGINE ROOM)BUTION MODULE ENGINE ROOM)390Reference Value390Wiring Diagram — Sedan398Fail Safe403DTC Index405SYMPTOM DIAGNOSIS406INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS406Symptom Table406VEHICLE SECURITY SYSTEM SYMPTOMS407NISSAN VEHICLE IMMOBILIZER SYSTEM- NATS SYMPTOMS408Symptom Table408ON-VEHICLE REPAIR409KEY SLOT409Removal and Installation409

BASIC INSPECTION4	11 DT
DIAGNOSIS AND REPAIR WORKFLOW4	
Work Flow4	
PRE-INSPECTION FOR DIAGNOSTIC4	
Basic Inspection	51
Vehicle Security Operation Check	
	B201
INSPECTION AND ADJUSTMENT4	200
ECM RE-COMMUNICATING FUNCTION4	DT(
ECM RE-COMMUNICATING FUNCTION : De-	Dia
scription4	16 B210
ECM RE-COMMUNICATING FUNCTION : Spe-	Des
cial Repair Requirement4	
FUNCTION DIAGNOSIS 4	Dia
	B210
ENGINE START FUNCTION4	17 Des
System Diagram4	-17 DT(
System Description	
Component Parts Location	
Component Description4	
NVIS (NISSAN VEHICLE IMMOBILIZER SYS-	SWI Des
TEM-NATS)4	22 DT
System Diagram4	²² Dia
System Description4	-22
Component Parts Location4	
Component Description4	
VEHICLE SECURITY SYSTEM4	25 Die
System Diagram	1/14
System Description4	
Component Parts Location4	27 Des
Component Description4	28 DT(
DIAGNOSIS SYSTEM (BCM)4	Dia
	B210
COMMON ITEM 4	29 Deg
COMMON ITEM : Diagnosis Description	
COMMON ITEM : CONSULT-III Function4	²⁹ Dia
MULTI REMOTE ENT4	³⁰ B210
MULTI REMOTE ENT : CONSULT-III Function	Dec
(BCM - MULTIREMOTE ENT)4	-30 DES
THEFT ALM	
THEFT ALM : CONSULT-III Function (BCM -	
THEFT ALM)	31 B210
	Des
IMMU	
IMMU : CONSULT-III Function (BCM - IMMU)4	
COMPONENT DIAGNOSIS 4	
	Des
U1000 CAN COMM CIRCUIT4	51
Description4 DTC Logic4	
Diegnosis Procedure	
	B219
U1010 CONTROL UNIT (CAN)4	34 Des

DTC Logic434 Diagnosis Procedure434	A
B2013 ID DISCORD, IMMU-STRG	
Description	В
B2014 CHAIN OF STRG-IMMU436Description436DTC Logic436Diagnosis Procedure436	С
B2108 STEERING LOCK RELAY	D
Description	E
B2109 STEERING LOCK RELAY440Description440DTC Logic440Diagnosis Procedure440	F
B210A STEERING LOCK CONDITION	G
SWITCH441Description441DTC Logic441Diagnosis Procedure441	Н
B210B STARTER CONTROL RELAY445Description445DTC Logic445Diagnosis Procedure445	l
B210C STARTER CONTROL RELAY446Description446DTC Logic446Diagnosis Procedure446	SE
B210D STARTER RELAY447Description447DTC Logic447Diagnosis Procedure447	L
B210E STARTER RELAY 448 Description 448 DTC Logic 448 Diagnosis Procedure 448	M
B210F PNP/CLUTCH INTERLOCK SWITCH . 450	0
Description	0
B2110 PNP/CLUTCH INTERLOCK SWITCH . 452	Ρ
Description	
B2190, P1610 NATS ANTENNA AMP	

DTC Logic Diagnosis Procedure	455
B2191, P1615 DIFFERENCE OF KEY Description DTC Logic Diagnosis Procedure	458 458
B2192, P1611 ID DISCORD, IMMU-ECM Description DTC Logic Diagnosis Procedure	459 459
B2193, P1612 CHAIN OF ECM-IMMU Description DTC Logic Diagnosis Procedure	460 460
B2555 STOP LAMP Description DTC Logic Diagnosis Procedure Component Inspection	461 461 461
B2556 PUSH-BUTTON IGNITION SWITCH Description DTC Logic Diagnosis Procedure Component Inspection	463 463 463
B2557 VEHICLE SPEED Description DTC Logic Diagnosis Procedure	465 465
B2560 STARTER CONTROL RELAY Description DTC Logic Diagnosis Procedure	466 466
B2601 SHIFT POSITION Description DTC Logic Diagnosis Procedure Component Inspection	467 467 467
B2602 SHIFT POSITION Description DTC Logic Diagnosis Procedure	470 470
B2603 SHIFT POSITION STATUS Description DTC Logic Diagnosis Procedure	472 472
B2604 PNP SWITCH Description DTC Logic Diagnosis Procedure	475 475
B2605 PNP SWITCH	477

Description
B2606 STEERING LOCK RELAY479Description479DTC Logic479Diagnosis Procedure479
B2607 STEERING LOCK RELAY 480 Description 480 DTC Logic 480 Diagnosis Procedure 480
B2608 STARTER RELAY
B2609 STEERING STATUS484Description484DTC Logic484Diagnosis Procedure484
B260B STEERING LOCK UNIT488Description488DTC Logic488Diagnosis Procedure488
B260C STEERING LOCK UNIT489Description489DTC Logic489Diagnosis Procedure489
B260D STEERING LOCK UNIT490Description490DTC Logic490Diagnosis Procedure490
B260F ENGINE STATUS491Description491DTC Logic491Diagnosis Procedure491
B2612 STEERING STATUS492Description492DTC Logic492Diagnosis Procedure492
B2617 STARTER RELAY CIRCUIT 496 Description 496 DTC Logic 496 Diagnosis Procedure 496
B2619 BCM 498 Description 498 DTC Logic 498 Diagnosis Procedure 498
B261A PUSH-BUTTON IGNITION SWITCH 499 Description

SEC-8

Diagnosis Procedure 499
B26E1 NO RECEPTION OF ENGINE STA- TUS SIGNAL
DTC Logic501 Diagnosis Procedure501
POWER SUPPLY AND GROUND CIRCUIT 502
BCM502BCM : Diagnosis Procedure502BCM : Special Repair Requirement502
IPDM E/R (INTELLIGENT POWER DISTRIBU- TION MODULE ENGINE ROOM)
KEY SLOT
KEY SLOT ILLUMINATION505Description505Component Function Check505Diagnosis Procedure505
KEY CYLINDER SWITCH507Description507Component Function Check507Diagnosis Procedure507Component Inspection508
HORN510Description510Component Function Check510Diagnosis Procedure510
HEADLAMP512Description512Component Function Check512Diagnosis Procedure512
WARNING LAMP

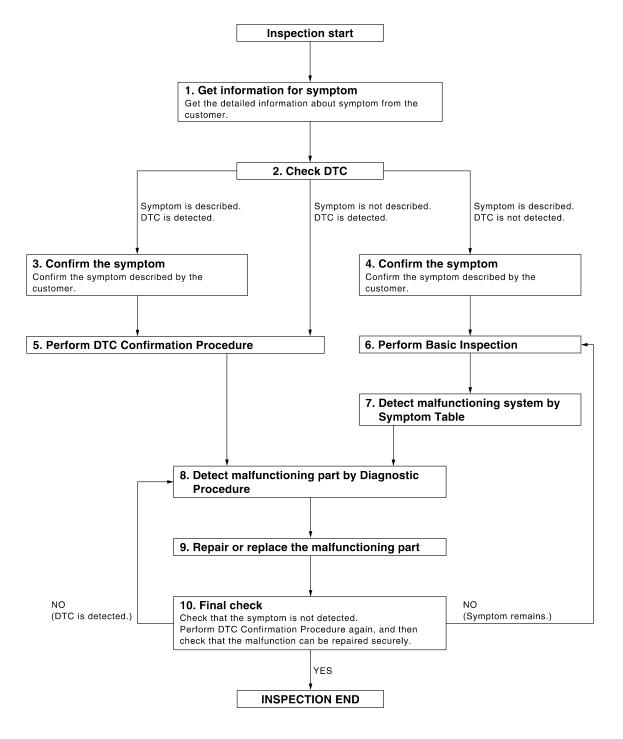
VEHICLE SECURITY INDICATOR	
Description	A
Component Function Check	
-	В
ECU DIAGNOSIS 515	D
BCM (BODY CONTROL MODULE)	
Reference Value515	С
Terminal Layout	
Physical Values	
WITH REMOTE KEYLESS ENTRY	D
Wiring Diagram - VEHICLE SECURITY SYSTEM	
- WITH REMOTE KEYLESS ENTRY	F
Wiring Diagram - NVIS - WITH REMOTE KEY- LESS ENTRY	
Fail Safe	
DTC Inspection Priority Chart	F
DTC Index574	
IPDM E/R (INTELLIGENT POWER DISTRI-	
BUTION MODULE ENGINE ROOM)	G
Reference Value577	
Wiring Diagram — Sedan	Н
Fail Safe	
SYMPTOM DIAGNOSIS 593	
ENGINE START FUNCTION SYMPTOMS 593	
Symptom Table593	
VEHICLE SECURITY SYSTEM SYMPTOMS . 594	J
Symptom Table	
NISSAN VEHICLE IMMOBILIZER SYSTEM-	SEC
NATS SYMPTOMS	
Symptom Table	
ON-VEHICLE REPAIR	
UN-VEHICLE REPAIR	
KEY SLOT 596	M
Removal and Installation596	1 4 1
PUSH BUTTON IGNITION SWITCH 597	
Removal and Installation597	Ν

0

BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



INFOID:000000004205986

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[COUPE]

1.GET INFORMATION FOR SYMPTOM
Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).
>> GO TO 2
2.CHECK DTC WITH BCM AND IPDM E/R
 Check "Self Diagnostic Result" with CONSULT-III. Perform the following procedure if DTC is displayed. Record DTC and freeze frame data (Print them out with CONSULT-III.) Erase DTC.
 Study the relationship between the cause detected by DTC and the symptom described by the customer. Check related service bulletins for information.
Is any symptom described and any DTC detected?
Symptom is described, DTC is displayed>>GO TO 3 Symptom is described, DTC is not displayed>>GO TO 4 Symptom is not described, DTC is displayed>>GO TO 5
3. CONFIRM THE SYMPTOM
Confirm the symptom described by the customer. Connect CONSULT-III to the vehicle in "Data Monitor" mode and check real time diagnosis results. Verify relation ship between the symptom and the condition when the symptom is detected.
>> GO TO 5
4.CONFIRM THE SYMPTOM
Confirm the symptom described by the customer. Connect CONSULT-III to the vehicle in "Data Monitor " mode and check real time diagnosis results. Verify relation ship between the symptom and the condition when the symptom is detected.
>> GO TO 6
5. PERFORM DTC CONFIRMATION PROCEDURE
Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always keep CONSULT-III connected to the vehicle, and check diagnostic results in real time. If two or more DTCs are detected, refer to <u>SEC-386</u> , " <u>DTC Inspection Priority Chart</u> " and determine trouble diagnosis order. NOTE:
 Freeze frame data is useful if the DTC is not detected. Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check. If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC Confirmation Procedure.
Is DTC detected?
YES >> GO TO 8 NO >> Refer to <u>GI-42, "Intermittent Incident"</u> .
6.PERFORM BASIC INSPECTION
Perform <u>SEC-13, "Basic Inspection"</u> .
Inspection End >> CO TO 7
Inspection End >> GO TO 7 7.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE
Detect malfunctioning system according to following symptom tables based on the confirmed symptom in step
4, and determine the trouble diagnosis order based on possible causes and symptoms.

- 4, and determine the trouble diagnosis order based on possible causes and symptoms.
 Intelligent Key system/engine start function: <u>SEC-204</u>, "Symptom Table".

Vehicle security system: <u>SEC-205, "Symptom Table"</u>.

SEC-11

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

• Nissan vehicle immobilizer system-NATS: SEC-206, "Symptom Table".

>> GO TO 8

8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

The Diagnostic Procedure described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.

Is malfunctioning part detected?

YES >> GO TO 9

NO >> Check voltage of related BCM terminals using CONSULT-III.

9.REPAIR OR REPLACE THE MALFUNCTIONING PART

- 1. Repair or replace the malfunctioning part.
- 2. Reconnect parts or connectors disconnected during Diagnostic Procedure again after repair or replacement.
- 3. Check DTC. If DTC is displayed, erase it.

>> GO TO 10

10.FINAL CHECK

When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction have been fully repaired.

When symptom was described from the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Is the inspection result normal?

NO (DTC is detected)>>GO TO 8

NO (Symptom remains)>>GO TO 6

YES >> Inspection End.

PRE-INSPECTION FOR DIAGNOSTIC

< BASIC INSPECTION >

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

The engine start function, door lock function, power distribution system and NATS-IVIS/NMS in the Intelligent Key system are closely related to each other regarding control. Narrow down the functional area in question by performing basic inspection to identify which function is malfunctioning. The vehicle security function can operate only when the door lock and power distribution system are operating normally. Therefore, it is easy to identify any factor unique to the vehicle security system by performing the vehicle security operation check after basic inspection.

1. CHECK DOOR LOCK OPERATION

1. Check the door lock for normal operation with the Intelligent Key controller and door request switch. Successful door lock operation with the Intelligent Key and request SW indicates that the remote keyless entry receiver is functioning normally.	D
Identify the malfunctioning point by referring to the DLK section if the door cannot be unlocked.	Ε
Can the door be locked with the Intelligent Key and door request switch?	
YES >> GO TO 2 NO >> Refer to <u>DLK-187, "Symptom Table"</u> .	F
2. CHECK ENGINE STARTING	
1. Checks that the engine starts when operating the Intelligent Key inserted into the key slot.	G
Does the engine start?	
YES >> GO TO 3	
NO >> Refer to <u>SEC-204, "Symptom Table"</u> .	Н
3. CHECK STEERING LOCKING	
 Does the steering lock when operating door switch after switching the power supply from ON position (or ACC position) to LOCK position? If door switch is malfunctioning, BCM cannot lock the steering. If BCM does not detect DTC, steering lock unit is normal. 	
Does steering lock?	J
YES >> GO TO 4	
NO >> Refer to <u>DLK-69</u> , "Component Function Check".	
4. CHECK POWER SUPPLY INDICATOR SWITCHING	SE
1. Press push-button ignition switch and position indicator will switch from LOCK, ACC to ON gradually when steering is locked. Checks that the position indicator is illuminated at different positions of the circuit.	L
Is each position indicator illuminating?	
YES >> GO TO 5 NO >> Refer to <u>PCS-80, "Component Function Check"</u> .	M
5. CHECK VEHICLE SECURITY SYSTEM	
1. Check the vehicle security system for normal operation. The vehicle security function can operate only when the door lock and power distribution functions are	Ν

operating normally.

Therefore, it is easy to identify any factor unique to the vehicle security by performing the vehicle security operation check after this basic inspection.

>> Refer to <u>SEC-13. "Vehicle Security Operation Check"</u>.

Vehicle Security Operation Check

_

1.INSPECTION START

Turn ignition switch "OFF" and pull out Intelligent Key from key slot. **NOTE:**

Before starting operation check, open front windows.

INFOID:000000004206166

А

В

Ο

Ρ

INFOID:000000004206167

PRE-INSPECTION FOR DIAGNOSTIC

< BASIC INSPECTION >

2. CHECK SECURITY INDICATOR LAMP

- 1. Lock doors using Intelligent Key or mechanical key.
- 2. Check that security indicator lamp illuminates for 30 seconds.

Security indicator lamp should illuminate.

- OK >> GO TO 3
- NG >> Perform diagnosis and repair. Refer to <u>SEC-124, "Component Function Check"</u>.

3.CHECK ALARM FUNCTION

- 1. After 30 seconds, security indicator lamp will start to blink.
- 2. Open any door or hood before unlocking with Intelligent Key or mechanical key, or open trunk lid without Intelligent Key or mechanical key.

Do alarm function properly.

OK >> GO TO 4 NG >> Check th

- >> Check the following.
 - The vehicle security system does not phase in alarm mode. Refer to <u>SEC-205</u>, "<u>Symptom</u> <u>Table</u>".
 - Alarm (horn, headlamp and hazard lamp) do not operate. Refer to SEC-205. "Symptom Table".

4.CHECK ALARM CANCEL OPERATION

Unlock any door or open trunk lid using Intelligent Key or mechanical key.

Alarm (horn, headlamp and hazard lamp) should stop.

- OK >> Inspection End.
- NG >> Check door lock function. Refer to <u>DLK-25, "INTELLIGENT KEY : System Description"</u>.

INSPECTION AND ADJUSTMENT [COUPE] < BASIC INSPECTION > INSPECTION AND ADJUSTMENT А ECM RE-COMMUNICATING FUNCTION ECM RE-COMMUNICATING FUNCTION : Description INFOID:000000004205987 В Performing following procedure can automatically perform re-communication of ECM and BCM, but only when the ECM has been replaced with a new one (*1). *1: New one means an ECM which has never been energized on-board. (In this step, initialization procedure by CONSULT-III is not necessary) NOTE: · When registering new Key IDs or replacing the ECM that is not brand new, refer to CONSULT-III Oper-D ation Manual. If multiple keys are attached to the key holder, separate them before work. • Distinguish keys with unregistered key ID from those with registered ID. Ε ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement INFOID:000000004205988 1.PERFORM ECM RE-COMMUNICATING FUNCTION 1. Install ECM. Insert the registered Intelligent Key (*2), turn ignition switch to "ON". 2. *2: To perform this step, use the key that has been used before performing ECM replacement. 3. Maintain ignition switch in "ON" position for at least 5 seconds. 4. Turn ignition switch to "OFF". 5. Start engine. Can engine be started? Н YES >> Procedure is completed. NO >> Initialize control unit. Refer to CONSULT-III Operation Manual.

J

SEC

Μ

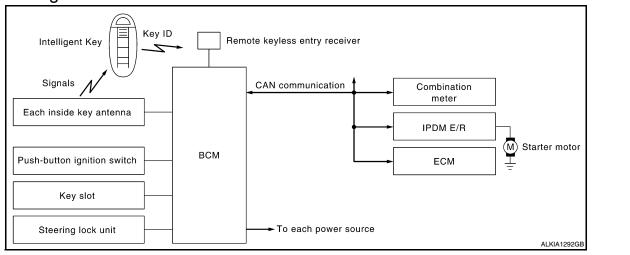
Ν

Ο

< FUNCTION DIAGNOSIS >

FUNCTION DIAGNOSIS INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

System Diagram



System Description

INFOID:000000004205990

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator		
Push-button ignition switch	Push switch				
CVT device (CVT models)	P range				
PNP switch (CVT models)	N, P range		 Steering lock relay 		
Clutch interlock switch (M/T mod- els)	Clutch ON/OFF		Starter relay (IPDM E/R)		
Stop lamp switch	Brake ON/OFF		Starter control relay (IPDM E/ R)		
Each inside key antenna	Request signal		Starter motor		
Remote keyless entry receiver	Key ID		 KEY warning lamp 		
Each door switch	Door open/close				
ECM	Engine status signal				

SYSTEM DESCRIPTION

The engine start function of Intelligent Key system is a system that makes it possible to start and stop the
engine without removing the key. It verifies the electronic ID using two-way communications when pressing
the push-button ignition switch while carrying the Intelligent Key, which operates based on the results of
electronic ID verification for Intelligent Key using two-way communications between the Intelligent Key and
the vehicle.

NOTE:

The driver should carry the Intelligent Key at all times.

- Intelligent Key has 2 IDs [for Intelligent Key and for NVIS (NATS)]. It can perform the door lock/unlock operation and the push-button ignition switch operation when the registered Intelligent Key is carried.
- When the Intelligent Key battery is discharged, it can be used as emergency back-up by inserting the Intelligent Key to the key slot. At that time, perform the NVIS (NATS) ID verification. If it is used when the Intelligent Key is carried, perform the Intelligent Key ID verification.
- If the ID is successfully verified, and when push-button ignition switch is pressed, steering lock will be released and initiating the engine will be possible.
- If the door lock/unlock operation is performed when the Intelligent Key battery is discharged, all doors lock/ unlock can be performed by operating the driver door key cylinder using the mechanical key set in the Intelligent Key.

SEC-16

INFOID:000000004205989

< FUNCTION DIAGNOSIS >

[COUPE]

 Intelligent Key can be registered up to 4 keys (Including the standard Intelligent Key) on request from the owner. А NOTE: Refer to DLK-25. "INTELLIGENT KEY : System Description" for any functions other than engine start function of Intelligent Key system. В PRECAUTIONS FOR INTELLIGENT KEY SYSTEM • In the Intelligent Key system of model L32, the transponder [the chip for NVIS (NATS) ID verification] is integrated into the Intelligent Key. (For the conventional models, it is integrated into the mechanical key.) Therefore, the mechanical key cannot perform the ID verification, and thus it cannot start the engine. Instead, the NVIS (NATS) ID verification can be performed by inserting the Intelligent Key into the key slot, and then it can start the engine. D OPERATION WHEN INTELLIGENT KEY IS CARRIED 1. When the push-button ignition switch is pressed and brake pedal is depressed, the BCM signals the inside key antenna and transmits the request signal to the Intelligent Key. Ε 2. The Intelligent Key receives the request signal and transmits the Intelligent Key ID signal to the BCM via the remote keyless entry receiver. The BCM receives the Intelligent Key ID signal and verifies it with the registered ID. 3. F BCM transmits the steering lock unlock signal to steering lock unit and IPDM E/R if the verification results 4. are OK. IPDM E/R turns the steering lock relay ON and supplies power to the steering lock unit. 6. Release of the steering lock. BCM transmits the power supply stop signal to IPDM E/R when it confirms that the steering lock is in the 7. unlock condition. Н IPDM E/R turns the steering lock relay OFF and stops power supply to the steering lock unit. BCM turns ACC relay ON and transmits the ignition power supply ON signal to IPDM E/R. IPDM E/R turns the ignition relay ON and starts the ignition power supply. 11. BCM confirms that the shift position is P or N (CVT models). 12. BCM transmits the starter request signal via CAN communication to IPDM E/R and turns the starter relay J in IPDM E/R ON if BCM judges that the engine start condition is satisfied. IPDM E/R turns the starter control relay ON when receiving the starter request signal. 14. Battery power is supplied through the starter relay and the starter control relay to operate the starter motor SEC and to start the cranking. CAUTION: If a malfunction is detected in the Intelligent Key system, the "KEY" warning lamp in the combination meter illuminates. At that time, the engine cannot be started. L 15. When BCM received feedback signal from ECM acknowledging the engine has been initiated, the BCM transmits a stop signal to IPDM E/R and stops the cranking by turning OFF the starter motor relay. (If the engine initiating has failed, the cranking will stop automatically within 5 seconds.) Μ CAUTION: When the Intelligent Key is carried outside of the vehicle (inside key antenna detection area) with the power supply in ACC or ON position, even if the engine start condition* is satisfied, the engine Ν cannot be started. *: For the engine start condition, refer to "PUSH-BUTTON IGNITION SWITCH OPERATION PROCEDURE". OPERATION RANGE Engine can be started when Intelligent Key is inside the vehicle. However, sometimes engine might not start when Intelligent Key is on instrument panel or in glove box. OPERATION WHEN KEY SLOT IS USED Ρ When the Intelligent Key battery is discharged, it performs the NVIS (NATS) ID verification between the integrated transponder and BCM by inserting the Intelligent Key into the key slot, and then the engine can be started. For details relating to starting the engine using key slot, refer to SEC-22, "System Description".

BATTERY SAVER SYSTEM

When all the following conditions are met for 60 minutes, the battery saver system will cut off the power supply to prevent battery discharge.

< FUNCTION DIAGNOSIS >

- The ignition switch is in the ACC position
- All doors are closed
- CVT selector lever is in the P position
- No Intelligent Key failures (Intelligent Key warning indicator is not ON)

Reset Condition of Battery Saver System

CVT models

In order to prevent the battery from discharging, the battery saver system will cut off the power supply when all doors are closed, the selector lever is on P position and the ignition switch is left on ACC position for 1 hour. If any of the following conditions are met the battery saver system is released and the steering will change automatically to lock position from OFF position.

- Opening any door
- Operating with request switch on door lock
- Operating with Intelligent Key on door lock

Press push-button ignition switch and ignition switch will change to ACC position from OFF position.

M/T models

If any of the conditions above is met the battery saver system is released but the steering will not lock. In this case, the steering operation OFF to LOCK is prohibited.

STEERING LOCK OPERATION

Steering is locked by steering lock unit when ignition switch is in the OFF position, CVT selector lever is in the P position and any of the following conditions are met.

- Opening door
- Closing door
- Door is locked with request switch
- · Door is locked with Intelligent Key

PUSH-BUTTON IGNITION SWITCH OPERATION PROCEDURE

The power supply position changing operation can be performed with the following operations. **NOTE:**

- When an Intelligent Key is within the detection area of inside key antenna or when it is inserted to the key slot, it is equivalent to the operations below.
- When starting the engine, the BCM monitors under the engine start conditions,
- Brake pedal operating condition (CVT models)
- CVT selector lever position (CVT models)
- Clutch pedal operating condition (M/T models)
- Vehicle speed
- Steering lock condition
- Engine status
- Unless each start condition is fulfilled, the engine will not respond regardless of how many times the engine switch is pressed. At that time, illumination repeats the position in the order of LOCK→ACC→ON→OFF.

	Engine start	Push-button ignition switch op-		
Power supply position	Brake pedal (CVT) /clutch pedal (M/T) CVT selector lever position		eration frequency	
$LOCK \rightarrow ACC$	Not depressed	Any position	1	
$LOCK\toACC\toON$	Not depressed	Any position	2	
$\begin{array}{c} LOCK \to ACC \to ON \to \\ OFF \end{array}$	Not depressed	Any position	3	
LOCK \rightarrow START ACC \rightarrow START ON \rightarrow START (Engine start)	Depressed	P or N position (*1)	1 [If the switch is pressed once, the engine starts from any pow- er supply position (LOCK, ACC, and ON)]	
Engine is running → OFF (Engine stop)	_	Any position Vehicle speed < 4 km/h (2 MPH)	1	

< FUNCTION DIAGNOSIS >

[COUPE]

	Engine start/	Duch hutton ignition quitch on			
Power supply position	Brake pedal (CVT) /clutch pedal (M/T)	CVT selector lever position	Push-button ignition switch op- eration frequency	A	
Engine is running → ACC (Engine stop)	_	Any position other than P (*2)	1	E	
Engine stall return oper- ation while driving	_	P position	1	C	

*1: When the CVT selector lever position is N position, the engine start condition is different according to the vehicle speed.

· At vehicle speed of 4 km/h (2 MPH) or less, the engine can start only when the brake pedal is depressed.

At vehicle speed of 4 km/h (2 MPH) or more, the engine can start even if the brake pedal is not depressed. (It is the same as "Engine D stall return operation while driving".)

*2: When the CVT selector lever position is in any position other than P position and when the vehicle speed is 5 km/h (3 MPH) or more, the engine stop condition is different.

• Press and hold the push-button ignition switch for 2 seconds or more. (When the push-button ignition switch is pressed for too short a time, the operation may be invalid, so properly press and hold to prevent an incorrect operation.)

· Press the push-button ignition switch 3 times or more within 1.5 seconds. (Emergency stop operation)

Н

Ε

F

J

SEC

L

Μ

Ν

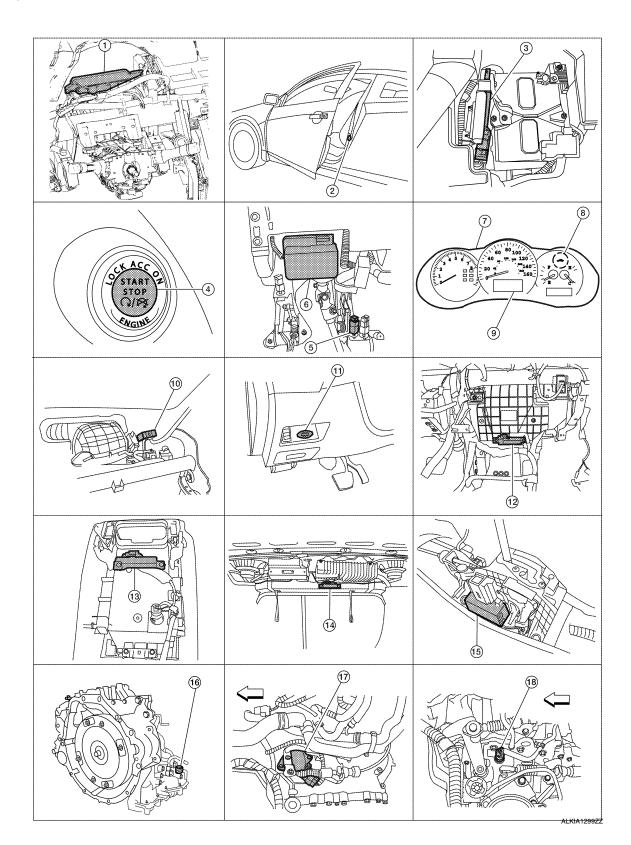
Ο

< FUNCTION DIAGNOSIS >

Component Parts Location

INFOID:000000004205991

[COUPE]



< FUNCTION DIAGNOSIS >

(with CVT/VQ)

Component Description

[COUPE]

1.	Body control module M16, M17, M18, M19, M21 (view with instrument panel removed)	2.	Door switch LH B8 RH B108	3.	ECM E10	А
4.	Push button ignition switch M38	5.	Stop lamp switch E38 (view with lower driver instrument panel removed)	6.	Electronic steering column lock M32 (steering column)	В
7.	Combination meter M24	8.	Security indicator lamp	9.	Information display	
10.	Remote keyless entry receiver M27 (view with instrument panel removed)	11.	Key slot M40	12.	Instrument panel antenna M49 (view with instrument panel removed)	С
13.	Front console antenna M203 (bottom view of console)	14.	Rear parcel shelf antenna B29	15.	CVT device (park position switch) M23 (with CVT)	D
16.	Park neutral position switch connector (TCM connector) F16	17.	Park neutral position switch F25 (with CVT/QR)	18.	Park neutral position switch F32 (with M/T)	J

INFOID:000000004205992

Е

Component	Reference	
BCM	<u>SEC-107</u>	
Steering lock unit	<u>SEC-97</u>	G
Push-button ignition switch	<u>SEC-108</u>	
Door switch	DLK-69	
CVT device (park position switch)	<u>SEC-76</u>	— Н
Inside key antenna	DLK-59	
Remote keyless entry receiver	DLK-112	
Stop lamp switch	<u>SEC-70</u>	
Park/neutral position switch	<u>SEC-84</u>	
Clutch switch	<u>SEC-54</u>	J
Steering lock relay	<u>SEC-88</u>	
Starter relay	<u>SEC-91</u>	SE
Starter control relay	<u>SEC-75</u>	
Security indicator	<u>SEC-124</u>	
Key warning lamp	SEC-123	L

M

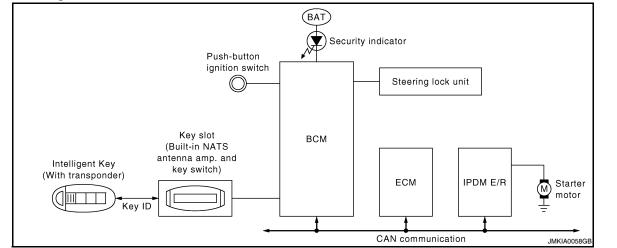
Ν

0

< FUNCTION DIAGNOSIS >

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

System Diagram



System Description

INFOID:000000004205994

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator
Push-button ignition switch	Push switch	Steering lock relay	
CVT device (CVT models)	P range		Steering lock relay
PNP switch (CVT models)	N, P range	-	Steering lock unit
Clutch interlock switch (M/T models)	Clutch ON/OFF	 Starter relay (IPDM E/R Starter control relay (IPI Starter motor KEY warning lamp Security indicator lamp 	
Stop lamp switch	Brake ON/OFF		
Key slot	Key ID		o 1
Each door switch	Door open/close		
ECM	Engine status signal		

SYSTEM DESCRIPTION

- The NVIS (NATS) is an anti-theft system by registering an Intelligent Key ID in to the vehicle and prevents the engine being started by an unregistered Intelligent Key. It has a higher protection against auto thefts that duplicate mechanical key.
- It performs the ID verification when starting the engine in the same way as the Intelligent Key system. But, it performs the NVIS (NATS) ID verification when inserting the Intelligent Key and performs the Intelligent Key ID verification when carrying the Intelligent Key.
- The Intelligent Key system of L32 is not the same as the conventional models. The mechanical key integrated in the Intelligent Key cannot start the engine. When the Intelligent Key battery is discharged, the NVIS (NATS) ID verification memorized to the transponder integrated with Intelligent Key is performed by inserting the Intelligent Key into the key slot. If the verification results are OK, the engine start operation can be performed by the push-button ignition switch operation.
- Locate the security indicator and apply the anti-theft system equipment sticker, forewarn that the NVIS (NATS) is onboard with the model.
- The security indicator always blinks when the Intelligent Key is removed from the key slot and when the power supply position is in LOCK position.
- Intelligent Key can be registered up to 4 keys (Including the standard ignition key) on request from the owner.
- The specified registration is required when replacing ECM, BCM or Intelligent Key. The registrations procedure for NVIS (NATS) and registration procedure for Intelligent Key when installing the BCM, refer to CON-SULT-III Operation Manual.

INFOID:000000004205993

ICOUPE1

< FUNCTION DIAGNOSIS >

 Possible symptom of NVIS (NATS) malfunction is "Engine cannot start". In L32, the engine can be started with the Intelligent Key system and NVIS (NATS). Identify the possible causes according to "Work Flow", Refer to <u>SEC-10</u>, "Work Flow".

• If ECM other than Genuine NISSAN is installed, the engine cannot be started. For ECM replacement procedure, refer to <u>SEC-15, "ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement"</u>.

PRECAUTIONS FOR KEY REGISTRATION

- The key registration is a procedure that erases the current NVIS (NATS) ID once, and then re-registers a new ID operation. Therefore the registered Intelligent Key is necessary for this procedure. Before starting the registration operation collect all registered Intelligent Keys from the customer
- When registering the Intelligent Key, performs only one procedure to register simultaneously both ID (NVIS "NATS" ID registration and Intelligent Key ID registration). The NVIS (NATS) ID registration is the procedure that registers the ID stored into the transponder (integrated in intelligent key) to BCM. The Intelligent key ID registration is the procedure that registers the ID to BCM.
- When performing the Intelligent Key system registration only, the engine cannot be started by inserting the key into the key slot. When performing the NVIS (NATS) registration only, the engine cannot be started by the operation when carrying the key. The registrations of both systems should be performed.

SECURITY INDICATOR

- Warns that the vehicle is equipped with NVIS (NATS).
- The security indicator always blinks when the Intelligent Key is removed from the key slot and when the ignition switch is in LOCK position.

NOTE:

Because security indicator is highly efficient, the battery is barely affected.

SEC

M

Ν

Ο

Ρ

[COUPE]

А

В

E

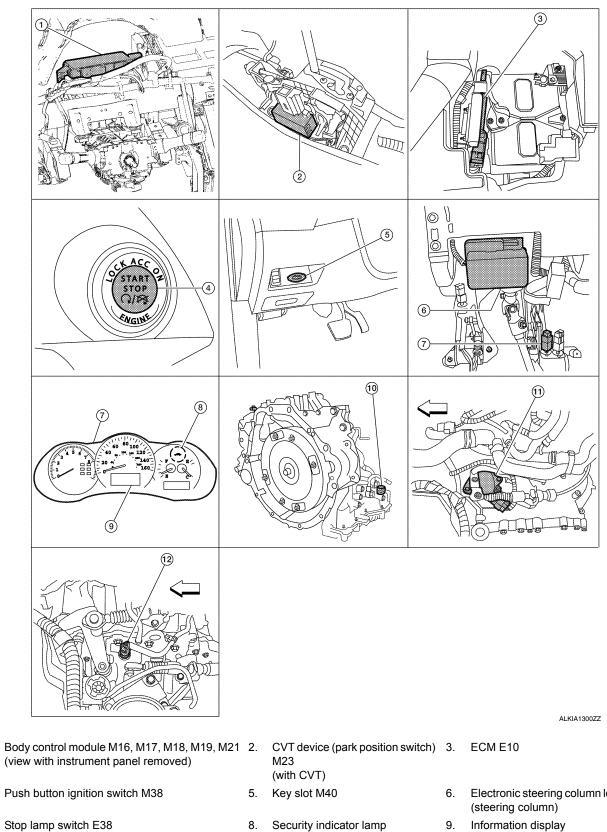
F

< FUNCTION DIAGNOSIS >

Component Parts Location

INFOID:000000004205995

[COUPE]



10. Park neutral position switch connector (TCM connector) F16 (with CVT/VQ)

(view with lower LH instrument panel removed)

1.

4.

7.

- (with CVT/QR)
- Electronic steering column lock M32
- 11. Park neutral position switch F25 12. Park neutral position switch F32 (with M/T)

SEC-24

< FUNCTION DIAGNOSIS >

Component Description

INFOID:000000004205996

А

[COUPE]

Component	Reference	
BCM	<u>SEC-107</u>	В
Steering lock unit	<u>SEC-97</u>	
Push-button ignition switch	<u>SEC-108</u>	0
Door switch	DLK-69	U
CVT device (park position switch)	<u>SEC-76</u>	
Inside key antenna	DLK-59	D
Remote keyless entry receiver	<u>DLK-112</u>	
Stop lamp switch	<u>SEC-70</u>	
Park/neutral position switch	<u>SEC-84</u>	E
Clutch switch	<u>SEC-54</u>	
Steering lock relay	<u>SEC-88</u>	F
Starter relay	<u>SEC-91</u>	
Starter control relay	<u>SEC-75</u>	
Security indicator	<u>SEC-124</u>	G
Key warning lamp	<u>SEC-123</u>	

Н

J

SEC

L

Μ

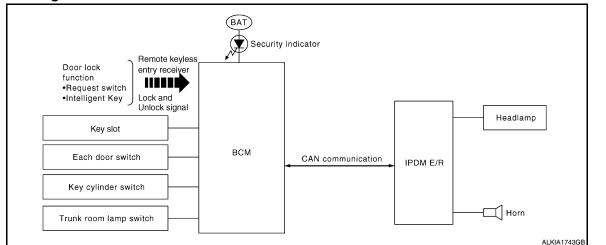
Ν

0

< FUNCTION DIAGNOSIS >

VEHICLE SECURITY SYSTEM

System Diagram



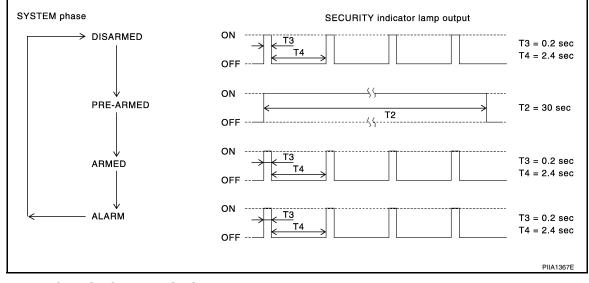
System Description

INFOID:000000004205998

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM system	Actuator
All door switch			
Trunk room lamp switch	Open or close		
Door key cylinder switch			IPDM E/R
Door lock and unlock switch	Lock or unlock	Vahiele ecourity evotors	Head lamp
Door request switch		Vehicle security system	• Horn
Intelligent Koy	Lock or unlock	Security indicato	Security indicator lamp
Intelligent Key	Panic alarm		
Key slot	Intelligent Key sensing		

OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

• Ignition switch is in OFF position.

INFOID:000000004205997

< FUNCTION DIAGNOSIS >

В

Е

F

Disarmed Phase

- When doors or trunk is open, the vehicle security system is set in the disarmed phase on the assumption A that the owner is inside or near the vehicle.
- When the vehicle security system is in the disarmed phase, the security indicator lamp blinks every 2.4 seconds.

Pre-armed Phase and Armed Phase

When the following operation 1 or 2 is performed, the vehicle security system turns into the "pre-armed" phase. (The security indicator lamp illuminates.)

- 1. BCM receives LOCK signal from front door key cylinder switch or Intelligent Key, after trunk and all doors are closed.
- Trunk and all doors are closed after front doors are locked by key or door lock and unlock switch. The security indicator lamp illuminates for 30 seconds. Then, the system automatically shifts into the "armed" phase.

CANCELING THE SET VEHICLE SECURITY SYSTEM

When one of the following operations is performed, the armed phase is canceled.

- 1. Unlock the doors with the key or Intelligent Key.
- 2. Turn ignition switch "ON" or "ACC" position.

CANCELING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM When unlocking the door with the key or Intelligent Key the alarm operation is canceled.

ACTIVATING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

Check that the system is in the armed phase. (The security indicator lamp blinks every 2.4 seconds.) When the following operation 1 or 2 is performed, the system sounds the horns and flashes the headlamps for about 50 seconds.

- 1. Trunk or any door is opened during armed phase.
- 2. Disconnecting and connecting the battery connector before canceling armed phase.

PANIC ALARM OPERATION

Intelligent Key system will not operate horn and headlamps if the ignition switch is in the ACC or ON position. When the Intelligent Key system is triggered, ground is supplied intermittently to both headlamp relay and horn relay.

When headlamp relay and horn relay are energized, then power is supplied to headlamps (LH and RH) and horns (HIGH and LOW).

The headlamp flashes and the horn sounds intermittently.

The alarm automatically turns off after 50 seconds or when BCM receives any signal from Intelligent Key.

L

M

Ν

Ο

Ρ

SEC

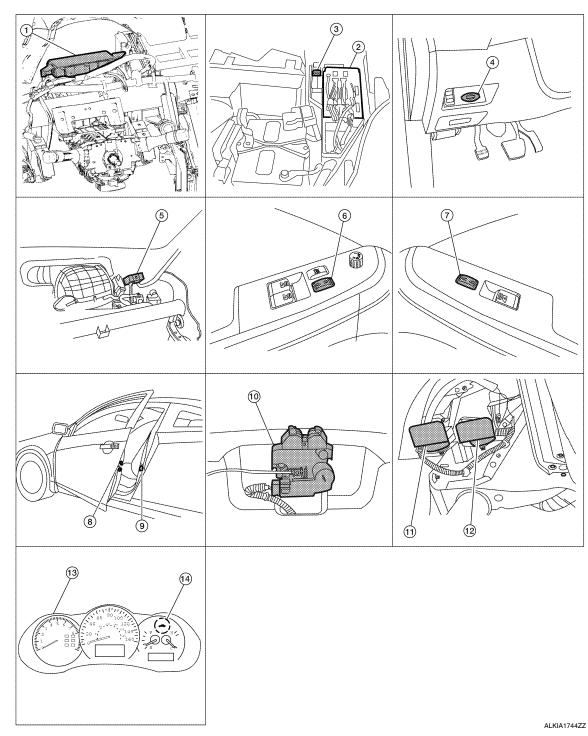
J

< FUNCTION DIAGNOSIS >

Component Parts Location

INFOID:000000004205999

[COUPE]



- 1. Body control module M16, M17, M18, 2. M19, M21 (view with instrument panel removed)
- 4. Key slot M40
- 7. Power window and door lock/unlock switch RH D105
- IPDM E/R E17, E18
- 5. Remote keyless entry receiver M27 (view with instrument panel removed)
- 8. Door lock assembly LH (key cylinder switch) D10

- 3. Horn relay H-1
- 6. Main power window and door lock/ unlock switch D7, D8
- Door switch LH B8 9. RH B108

< FUNCTION DIAGNOSIS >

- 10. Trunk lamp switch and trunk release solenoid T4
- Horn (low) E215 (view with front fender protector LH removed)
 Security indicator lamp

12. Horn (high) E216

13. Combination meter M24

INFOID:000000004206000

[COUPE]

А

В

Component	Reference	C
BCM	<u>SEC-26</u>	
Horn relay	<u>SEC-120</u>	
Security indicator	<u>SEC-124</u>	L
Door switch	<u>DLK-69</u>	
Door lock actuator	DLK-103	E
Trunk lid lock assembly	DLK-105	
Door key cylinder switch	<u>DLK-81</u>	
Door lock and unlock switch	DLK-72	F
Key slot	<u>DLK-79</u>	
Remote keyless entry receiver	DLK-112	(-

SEC-29

Н



J

SEC

L

Μ

Ν

Ο

DIAGNOSIS SYSTEM (BCM) COMMON ITEM

COMMON ITEM : Diagnosis Description

BCM CONSULT-III FUNCTION

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM.
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	This function is not used even though it is displayed.

SYSTEM APPLICATION

BCM can perform the following functions for each system. **NOTE:**

It can perform the diagnosis modes except the following for all sub system selection items.

System	Sub system selection item	Diagnosis mode		
System	Sub system selection item	WORK SUPPORT	DATA MONITOR	ACTIVE TEST
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Remote keyless entry system	MUTI REMOTE ENT	×	×	×
Exterior lamp	HEADLAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
BCM	BCM	×		
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	

COMMON ITEM : CONSULT-III Function

ECU IDENTIFICATION Displays the BCM part No.

SELF-DIAG RESULT Refer to <u>BCS-91, "DTC Index"</u>. INFOID:000000004501248

INFOID:000000004501247

< FUNCTION DIAGNOSIS >

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY) INFOLD:0000004501249

WORK SUPPORT

Λ	
A	
/ \	

В

[COUPE]

Monitor item	Description
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode.
AUTO LOCK SET	Auto door lock time can be changed in this mode. MODE 1: 1 minute MODE 2: 5 minutes MODE 3: 30 seconds MODE 4: 2 minutes
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side, passenger side and trunk) mode can be changed to operate (ON) or not operate (OFF) with this mode.
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (ON) or not operate (OFF) with this mode.
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by trunk opener request switch can be changed to operate (ON) or not operate (OFF) with this mode.
PANIC ALARM SET	 Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode. 0.5 sec. 1.5 sec. OFF: Non-operation
PW DOWN SET	 Unlock button pressing time on Intelligent Key button to lower front windows can be selected from the following with this mode. 3 sec. 5 sec. OFF: Non-operation
TRUNK OPEN DELAY	 Trunk button pressing time on Intelligent Key button can be selected from the following with this mode. 0.5 sec. 1.5 sec. OFF: No delay
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode.
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode.
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) with this mode.
HAZARD ANSWER BACK	 Hazard reminder function mode can be selected from the following with this mode. LOCK ONLY: Door lock operation only UNLOCK ONLY: Door unlock operation only LOCK AND UNLOCK: Lock/unlock operation OFF: Non operation
ANS BACK I-KEY LOCK	 Buzzer reminder function (lock operation) mode by door request switch (driver side and passenger side) can be selected from the following with this mode. HORN CHIRP: Sound horn BUZZER: Sound Intelligent Key warning buzzer OFF: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operate (ON) or not operate (OFF) with this mode.
SHORT CRANKING OUTPUT	Starter motor can operate during the times below. • 70 msec • 100 msec • 200 msec
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.

< FUNCTION DIAGNOSIS >

DATA MONITOR

Monitor Item	Condition
REQ SW-DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW-AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW-BD/TR	Indicates [ON/OFF] condition of trunk opener request switch.
PUSH SW	Indicates [ON/OFF] condition of push button ignition switch.
IGN RLY2-F/B	Indicates [ON/OFF] condition of ignition relay 2.
ACC RLY1-F/B	Indicates [ON/OFF] condition of accessory relay.
CLUTCH SW	NOTE: This item is displayed, but cannot be monitored.
BRAKE SW 1	Indicates [ON/OFF] condition of brake switch.
DETE/CANCL SW	Indicates [ON/OFF] condition of P position.
SFT PN/N SW	Indicates [ON/OFF] condition of P or N position.
S/L -LOCK	Indicates [ON/OFF] condition of steering lock (LOCK).
S/L -UNLOCK	Indicates [ON/OFF] condition of steering lock (UNLOCK).
S/L RELAY-F/B	Indicates [ON/OFF] condition of ignition switch.
UNLK SEN-DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
PUSH SW -IPDM	Indicates [ON/OFF] condition of push button ignition switch from IPDM E/R via CAN.
IGN RLY1-F/B	Indicates [ON/OFF] condition of ignition relay 1 from IPDM E/R via CAN.
DETE SW -IPDM	Indicates [ON/OFF] condition of P position from TCM via CAN.
SFT PN -IPDM	Indicates [ON/OFF] condition of P or N position from TCM via CAN.
SFT P -MET	Indicates [ON/OFF] condition of P position from TCM via CAN.
SFT N -MET	Indicates [ON/OFF] condition of N position from IPDM E/R via CAN.
ENGINE STATE	Indicates [STOP/START/CRANK/RUN] condition of engine states from ECM via CAN.
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock (LOCK) request from IPDM E/R via CAN.
S/L UNLOCK-IPDM	Indicates [ON/OFF] condition of steering lock (UNLOCK) request from IPDM E/R via CAN.
S/L RELAY-REQ	Indicates [ON/OFF] condition of steering lock relay from IPDM E/R via CAN.
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [Km/h].
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or CVT by numerical value [Km/h].
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of driver side door status.
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger side door status.
ID OK FLAG	Indicates [SET/RESET] condition of key ID.
PRMT ENG STRT	Indicates [SET/RESET] condition of engine start possibility.
PRMT RKE STRT	NOTE: This item is displayed, but cannot be monitored.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk lid.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.
RKE-PANIC	Indicates [ON/OFF] condition of PANIC button of Intelligent Key.

SEC-32

< FUNCTION DIAGNOSIS >

[COUPE]

В

Monitor Item	Condition	
RKE-P/W OPEN	Indicates [ON/OFF] condition of P/W DOWN signal from Intelligent Key.	A
RKE-MODE CHG	Indicates [ON/OFF] condition of MODE CHANGE signal from Intelligent Key.	

ACTIVE TEST

Test item	Description	
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.	
PW REMOTO DOWN SET	This test is able to check power window down operation. The power window down will be activated after "ON" on CONSULT-III screen is touched.	
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. Intelligent Key warning buzzer sounds when "ON" on CONSULT-III screen is touched.	
INSIDE BUZZER	 This test is able to check warning chime by combination meter operation. Take out warning chime sounds when "TAKE OUT" on CONSULT-III screen is touched. Key warning chime sounds when "KEY WARN" on CONSULT-III screen is touched. P position warning chime sounds when "P RNG WARN" on CONSULT-III screen is touched. ACC warning chime sounds when "ACC WARN" on CONSULT-III screen is touched. 	
INDICATOR	 This test is able to check warning lamp operation. "KEY" Warning lamp illuminates when "KEY IND ON" on CONSULT-III screen is touched. "KEY" Warning lamp flashes when "KEY IND FSH" on CONSULT-III screen is touched. 	
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.	
LCD	 This test is able to check meter display information Engine start information displays when "BRAKE/P" on CONSULT-III screen is touched. Engine start information displays when "BRAKE/P/ON" on CONSULT-III screen is touched. Key ID warning displays when "KEY ID NG" on CONSULT-III screen is touched. Steering lock information displays when "STLCK RELES" on CONSULT-III screen is touched. P position warning displays when "P RNG IND" on CONSULT-III screen is touched. Intelligent Key insert information displays when "INSERT KEY" on CONSULT-III screen is touched. Intelligent Key low battery warning displays when "KEY BAT LOW" on CONSULT-III screen is touched. Take away window warning displays when "TK AWAY WDW" on CONSULT-III screen is touched. Take away warning display when "TAKE AWAY" on CONSULT-III screen is touched. OFF position warning display when "IGN OFF WARN" on CONSULT-III screen is touched. 	
TRUNK/GLASS HATCH	This test is able to check trunk lid opener actuator open operation. This actuator opens when "ON" on CONSULT-III screen is touched.	
FLASHER	This test is able to check security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.	
HORN	This test is able to check horn operation. The horn will be activated after "ON" on CONSULT-III screen is touched.	
P RANGE	This test is able to check CVT device power supply CVT device power is supplied when "ON" on CONSULT-III screen is touched.	
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation. Push-ignition switch illumination illuminates when "ON" on CONSULT-III screen is touched.	
LOCK INDICATOR	This test is able to check LOCK indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.	
ACC INDICATOR	This test is able to check ACC indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.	
IGNITION ON IND	This test is able to check INGITION ON indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.	
KEY SLOT ILLUMI	This test is able to check key slot illumination operation. Key slot illumination flash when "ON" on CONSULT-III screen is touched.	

THEFT ALM

< FUNCTION DIAGNOSIS >

THEFT ALM : CONSULT-III Function (BCM - THEFT ALM)

INFOID:000000004501250

[COUPE]

WORK SUPPORT

Test Item	Description	
SECURITY ALARM SET	This mode is able to confirm and change security alarm ON-OFF setting.	
THEFT ALM TRG	The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching "CLEAR" on CONSULT-III screen.	

DATA MONITOR

Monitored Item	Description	
REQ SW -DR	Indicates [ON/OFF] condition of front door request switch (driver side).	
REQ SW -AS	Indicates [ON/OFF] condition of front door request switch (passenger side).	
REQ SW -RR	Indicates [ON/OFF] condition of rear door request switch (passenger side.	
REQ SW -RL	Indicates [ON/OFF] condition of rear door request switch (driver side).	
REQ SW -BD/TR	Indicates [ON/OFF] condition of trunk request switch.	
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch	
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.	
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.	
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.	
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.	
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.	
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.	
DOOR SW-BK	NOTE: This is displayed even when it is not equipped.	
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.	
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH.	
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from front door key cylinder switch.	
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from front door key cylinder switch.	
KEY CYL SW-TR	NOTE: This is displayed even when it is not equipped.	
TR/BD OPEN SW	Indicates [ON/OFF] condition of trunk opener switch.	
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk lid.	
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.	
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.	
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.	

ACTIVE TEST

Test Item	Description	
THEFT IND	This test is able to check security indicator lamp operation. The lamp will be turned on when "ON" on CONSULT-III screen is touched.	
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation. The horns will be activated for 0.5 sec- onds after "ON" on CONSULT-III screen is touched.	
HEADLAMP(HI)	This test is able to check vehicle security lamp operation. The headlamps will be activated for 0.5 seconds after "ON" on CONSULT-III screen is touched.	
FLASHER	This test is able to check vehicle security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.	

< FUNCTION DIAGNOSIS >

IMMU : CONSULT-III Function (BCM - IMMU)

[COUPE] 251

DATA MONITOR

		Λ
	1	

Monitor item	Content	
CONFRM ID ALL		
CONFIRM ID4	Indicates [YET] at all time. Switch to [DONE] when a registered Intelligent Key is inserted into the key slot.	
CONFIRM ID3		
CONFIRM ID2		
CONFIRM ID1		1
TP 4	Indicates the number of ID which has been registered.	
TP 3		
TP 2		
TP 1		
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.	
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.	
ACTIVE TEST		

ACTIVE TEST

Test Item	Description	
THEFT IND This test is able to check security indicator operation [ON/OFF].		Н

J

L

Μ

Ν

0

COMPONENT DIAGNOSIS U1000 CAN COMM CIRCUIT

Description

INFOID:000000004501291

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H line, CAN-L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only. CAN Communication Signal Chart, refer to LAN-25, "CAN Communication Signal Chart".

DTC Logic

INFOID:000000004206007

DTC DETECTION LOGIC

CONSULT-III dis- play description	DTC Detection Condition	Possible cause
CAN COMM CIR- CUIT [U1000]	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more	In CAN communication system, any item (or items) of the following listed below is malfunctioning. • Transmission • Receiving (ECM) • Receiving (VDC/TCS/ABS) • Receiving (METER/M&A) • Receiving (TCM) • Receiving (MULTI AV) • Receiving (IPDM E/R)

Diagnosis Procedure

INFOID:000000004206008

1.PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 second or more.

2. Check "Self Diagnostic Result".

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to LAN-8, "CAN Communication Control Circuit".
- NO >> Refer to GI-42, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

U1010 CONTROL UNIT (CAN) DTC Logic

DTC DETECTION LOGIC

< COMPONENT DIAGNOSIS >

CONSULT-III display description	DTC Detection Condition	Possible cause	С
CAN COMM CIRCUIT [U1010]	BCM detected internal CAN communication circuit malfunction.	ВСМ	
Diagnosis Proce	dure	INFOID:000000004206010	D
1. REPLACE BCM When DTC U1010 is	detected, replace BCM.		E
>> Replace	BCM. Refer to BCS-96, "Removal and Installation".		F
			G
			Н
			J
			SEC

[COUPE]

INFOID:000000004206009

А

В

EC

L

Μ

Ν

0

Ρ

B2013 ID DISCORD, IMMU-STRG

Description

INFOID:000000004206023

BCM performs the ID verification with the steering lock unit and releases the steering lock if both BCM and steering lock unit ID are same. BCM starts the communication with the steering lock unit when Intelligent Key is carried into the passenger compartment and the push-button ignition switch is pressed.

DTC Logic

INFOID:000000004206024

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2013	ID DISCORD, IMMU- STRG	The ID verification results between BCM and steer- ing control unit are NG. The registration is neces- sary.	Steering wheel lock unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Lock steering.

- 2. Press the push-button ignition switch
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-38. "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

INFOID:000000004206025

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all Intelligent Keys. For initialization and registration of Intelligent Key. Refer to "CONSULT-III Operation Manual".

Can the system be initialized and can steering lock be released with re-registered Intelligent Key?

- YES >> Steering lock unit was unregistered.
- NO >> Replace steering wheel lock unit.

B2014 CHAIN OF STRG-IMMU

Description

BCM performs the ID verification with the steering lock unit to release the steering. BCM starts the communication with the steering lock unit when Intelligent Key is carried into the passenger compartment and the pushbutton ignition switch is pressed.

DTC Logic

INFOID:000000004206027 С

INFOID:000000004206028

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2014	CHAIN OF STRG- IMMU	Inactive communication between steering control unit and BCM	 Harness or connectors (steering lock unit circuit is open or short- ed) Steering lock unit BCM 	F

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Lock steering.
- 2. Press the push-button ignition switch.
- Check "Self diagnostic result" with CONSULT-III. 3.

Is DTC detected?

- YES >> Refer to SEC-39, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK STEERING LOCK UNIT POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect steering lock unit harness connector.
- 3. Check voltage between steering lock unit harness connector and ground while turning ignition switch from OFF to ACC.

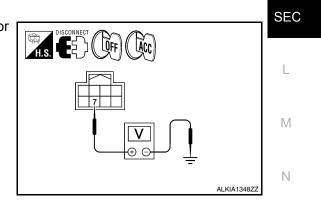
Steering	Steering lock unit		Ignition switch	Voltage [V]
Connector	Terminal	Ground	position	voltage [v]
M32	7	Ground	$OFF \to ACC$	Battery voltage
11132	1	Ground	OFF or ON	0

Is the inspection result normal?

 $2. {\sf CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT}$

1. Turn ignition switch OFF.

2. Disconnect BCM harness connector.



Ρ

[COUPE]

INFOID:000000004206026

А

В

D

Н

B2014 CHAIN OF STRG-IMMU

< COMPONENT DIAGNOSIS >

 Check continuity between steering lock unit harness connector M32 (A) terminal 7 and BCM harness connector M19 (B) terminal 94.

Steering	lock unit	B	CM	Continuity
Connector	Terminal	connector	Terminal	Continuity
A: M32	7	B: M19	94	Yes

4. Check continuity between steering lock unit harness connector M32 (A) terminal 7 and ground.

Steering	lock unit	Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M32	7	Ground	No

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

3. CHECK STEERING LOCK UNIT GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Check continuity between steering lock unit and ground.

Steering	Steering lock unit		Continuity
Connector	Terminal	Ground	Continuity
M32	5	Ground	Yes
IVIJZ	6	Ground	163

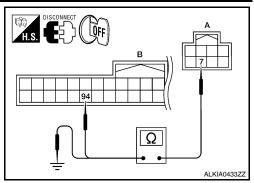
Is the inspection result normal?

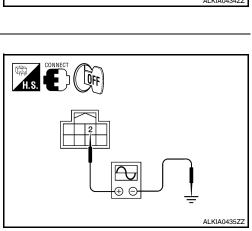
YES >> GO TO 4

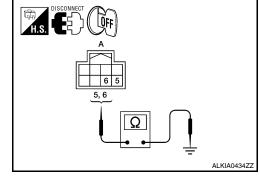
NO >> Repair harness or connector.

4.CHECK STEERING LOCK UNIT COMMUNICATION SIGNAL

- 1. Connect steering lock unit harness connector.
- 2. Using an oscilloscope, read voltage signal between steering lock unit harness connector and ground.







[COUPE]

B2014 CHAIN OF STRG-IMMU

< COMPONENT DIAGNOSIS >

[COUPE]

	ring lock unit	0	Steel	ring lock unit condi-	1/-1
Connector	Termina	Grour al	na	tion	Value
				Lock	Battery voltage
M32	2	Grour		Lock or unlock	(V) 15 10 5 0 50 ms JJJJJJJJJJJJJJJJJJJJJJJJJJJJJJJJJJJJ
			For 1	5 seconds after un- lock	Battery voltage
			15 se	econds or later after unlock.	0 V
Steerir	ng is locked	: Ор	ening the c	loor when igniti	on switch is ON to OFF.
Steerin	ng is unlocke	ed : Ign	nition switc	h is OFF to ACC	0.
ES >> Re	on result norn eplace steerir				
	O TO 5 EERING LOO	CK UNIT COM	IMUNICATI	ON CIRCUIT	
	on switch OF				
	t BCM harne	es connector			
Check cor	ntinuity betwe		ess connec	tor M19 (A) ter-	
minal 99 a		en BCM harn		tor M19 (A) ter- tor M32 (B) ter-	
		en BCM harn			
minal 99 a minal 2.	and steering	en BCM harn lock unit harn	ess connec		
minal 99 a minal 2. BC	and steering	een BCM harn lock unit harn Steering	ess connec		
minal 99 a minal 2.	and steering	en BCM harn lock unit harn	ess connec	tor M32 (B) ter-	
minal 99 a minal 2. BC Connector A: M19	And steering M M Terminal 99	een BCM harn lock unit harn Steering connector B: M32	ess connec	tor M32 (B) ter-	
minal 99 a minal 2. BC Connector A: M19 Check cor	And steering M M Terminal 99	een BCM harn lock unit harn Steering connector B: M32	ess connec	tor M32 (B) ter-	
minal 99 a minal 2. BC Connector A: M19 Check cor	M Terminal 99 ntinuity betwe nd ground.	een BCM harn lock unit harn Steering connector B: M32	ess connec	tor M32 (B) ter-	
minal 99 a minal 2. BC Connector A: M19 Check cor minal 99 a	M Terminal 99 ntinuity betwe nd ground. BCM	een BCM harn lock unit harn Steering connector B: M32 een BCM harn	ess connec	tor M32 (B) ter-	
minal 99 a minal 2. BC Connector A: M19 Check cor minal 99 a Connector	M Terminal 99 ntinuity betwe ind ground. BCM Termin	Steering connector B: M32 een BCM harn	ess connec lock unit Terminal 2 less connec	tor M32 (B) ter- Continuity Yes tor M19 (A) ter- Continuity	
minal 99 a minal 2. BC Connector A: M19 Check cor minal 99 a Connector A: M19	M Terminal 99 ntinuity betwe ind ground. BCM Termin 99	een BCM harn lock unit harn Steering connector B: M32 een BCM harn nal	ess connec lock unit Terminal 2 ness connec	tor M32 (B) ter- Continuity Yes tor M19 (A) ter-	
minal 99 a minal 2. BC Connector A: M19 Check cor minal 99 a Connector A: M19 the inspectio	M Terminal 99 ntinuity betwe ind ground. BCM Termin	een BCM harn lock unit harn Steering connector B: M32 een BCM harn nal	ess connec lock unit Terminal 2 less connec	tor M32 (B) ter- Continuity Yes tor M19 (A) ter- Continuity	
minal 99 a minal 2. BC Connector A: M19 Check cor minal 99 a Connector A: M19 the inspection ES >> GO	M Terminal 99 ntinuity betwe ind ground. BCM Termin 99 on result norm O TO 6	een BCM harn lock unit harn Steering connector B: M32 een BCM harn nal	ess connec lock unit Terminal 2 less connec Ground	tor M32 (B) ter- Continuity Yes tor M19 (A) ter- Continuity	
minal 99 a minal 2. BC Connector A: M19 Check cor minal 99 a Connector A: M19 the inspectio ES >> GC O >> Re	M Terminal 99 ntinuity betwe ind ground. BCM Termin 99 on result norm O TO 6	een BCM harn lock unit harn Steering connector B: M32 een BCM harn nal Conal? s or connector.	ess connec lock unit Terminal 2 less connec Ground	tor M32 (B) ter- Continuity Yes tor M19 (A) ter- Continuity	
minal 99 a minal 2. BC Connector A: M19 Check cor minal 99 a Connector A: M19 the inspectio ES >> GC O >> Re CHECK INT	M Terminal 99 ntinuity betwee and ground. BCM BCM Termin 99 on result norm O TO 6 epair harness FERMITTEN	Steering connector B: M32 een BCM harn nal connector connector B: M32 een BCM harn connector. C	ess connec lock unit Terminal 2 less connec Ground	tor M32 (B) ter- Continuity Yes tor M19 (A) ter- Continuity	
minal 99 a minal 2. BC Connector A: M19 Check cor minal 99 a Connector A: M19 the inspectio ES >> GC O >> Re CHECK INT	M Terminal 99 ntinuity betwee and ground. BCM BCM Termin 99 on result norm O TO 6 epair harness	Steering connector B: M32 een BCM harn nal connector connector B: M32 een BCM harn connector. C	ess connec lock unit Terminal 2 less connec Ground	tor M32 (B) ter- Continuity Yes tor M19 (A) ter- Continuity	
minal 99 a minal 2. BC Connector A: M19 Check cor minal 99 a Connector A: M19 the inspectio ES >> GC O >> Re CHECK INT fer to <u>GI-42</u>	M Terminal 99 ntinuity betwee and ground. BCM BCM Termin 99 on result norm O TO 6 epair harness FERMITTEN	en BCM harn lock unit harn connector B: M32 en BCM harn al conal? or connector. T INCIDENT t Incident".	ess connec lock unit Terminal 2 less connec Ground	tor M32 (B) ter- Continuity Yes tor M19 (A) ter- Continuity	
minal 99 a minal 2. BC Connector A: M19 Check cor minal 99 a Connector A: M19 the inspectio ES >> GC O >> Re CHECK INT fer to <u>GI-42</u>	M Terminal 99 ntinuity betwee and ground. BCM Termin 99 on result norm O TO 6 epair harness FERMITTEN , "Intermittent	en BCM harn lock unit harn connector B: M32 en BCM harn al conal? or connector. T INCIDENT t Incident".	ess connec lock unit Terminal 2 less connec Ground	tor M32 (B) ter- Continuity Yes tor M19 (A) ter- Continuity	
minal 99 a minal 2. BC Connector A: M19 Check cor minal 99 a Connector A: M19 the inspectio ES >> GC O >> Re CHECK INT fer to <u>GI-42</u>	M Terminal 99 ntinuity betwee and ground. BCM Termin 99 on result norm O TO 6 epair harness FERMITTEN , "Intermittent	en BCM harn lock unit harn connector B: M32 en BCM harn al conal? or connector. T INCIDENT t Incident".	ess connec lock unit Terminal 2 less connec Ground	tor M32 (B) ter- Continuity Yes tor M19 (A) ter- Continuity	

B2108 STEERING LOCK RELAY

Description

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID:000000004206102

INFOID:000000004206103

INFOID:000000004206101

DTC DETECTION LOGIC

NOTE:

- If DTC B2108 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B2108 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2108	STRG LCK RELAY ON	IPDM E/R detects that the relay is stuck at ON po- sition for about 1 second even if the IPDM E/R re- ceives steering lock relay ON/OFF signal from BCM.	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-42</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK FUSE

NO

- 1. Turn ignition switch OFF.
- 2. Check 10A fuse (No. 40, located in IPDM E/R).

Is the inspection normal?

- YES >> Replace IPDM E/R. Refer to PCS-48. "Removal and Installation".
 - >> Check the following.
 - Harness for open or short between IPDM E/R and battery
 - Fuse

B2109 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

B2109 STEERING LOCK RELAY

Description

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID-000000004206105

INFOID:000000004206106

INFOID:000000004206104

DTC DETECTION LOGIC

NOTE:

- If DTC B2109 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to D SEC-36, "DTC Logic".
- If DTC B2109 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-37, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	_
B2109	STRG LCK RELAY OFF	IPDM E/R detects that the relay is stuck at OFF po- sition for about 1 second even if the IPDM E/R re- ceives steering lock relay ON/OFF signal from BCM.	 Harness or connector (power supply circuit) IPDM E/R Battery 	F

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Press the push-button ignition switch under the following conditions and wait for at least 1 second. 1.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- Check "Self diagnostic result" with CONSULT-III. 2.

Is DTC detected?

- >> Refer to SEC-43, "Diagnosis Procedure". YES
- NO >> Inspection End.

Diagnosis Procedure

- 1. CHECK POWER SUPPLY CIRCUIT
- Check IPDM E/R power supply circuit. Refer to PCS-23, "Diagnosis Procedure".

Is the inspection result normal?

- YES >> GO TO 2
- NO >> Repair the malfunctioning parts
- 2.CHECK FUSE
- 1. Turn ignition switch OFF.
- Check 10A fuse (No. 40, located in IPDM E/R). 2.

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation". NO
 - >> Check the following.
 - Harness for open or short between IPDM E/R and battery
 - Fuse

А

В

Е

Н

SEC

L

Μ

Ν

Ο

Ρ

< COMPONENT DIAGNOSIS >

B210A STEERING LOCK CONDITION SWITCH

Description

There are 2 switches in the steering unit. IPDM E/R compares those 2 switches conditions to judge the present steering status and transmit the result to BCM via CAN communication.

DTC Logic

INFOID:000000004206108

INFOID:000000004206107

DTC DETECTION LOGIC

NOTE:

- If DTC B210A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B210A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210A	STRG LCK STATE SW	 BCM detects the mismatch between the following for 1 second Steering lock or unlock Feedback of steering lock status from IPDM E/R (CAN) 	 Harness or connectors [steering lock unit circuit (BCM side) is open or shorted] Harness or connectors [steering lock unit circuit (IPDM E/ R side) is open or shorted.] Steering lock unit IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-44, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

INFOID:000000004206109

1.INSPECTION START

Check the case in which DTC is detected.

- · Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed
- · Case2: It is detected after ignition switch is changed from ON to OFF

In which case is DTC detected?

Case1 >> GO TO 2 Case2 >> GO TO 7

2.check bcm output signal

1. Turn ignition switch OFF.

2. Disconnect steering lock unit harness connector and IPDM E/R harness connector.

< COMPONENT DIAGNOSIS >

3. Check voltage between steering lock unit harness connector and ground.

Steering	lock unit	Ground	Voltage [V]	
Connector	Terminal	Ground	voltage [v]	
M32	3	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 4 NO >> GO TO 3

3. CHECK STEERING LOCK UNIT CIRCUIT-I

- 1. Disconnect BCM harness connector.
- 2. Check continuity between BCM harness connector M19 (A) terminal 85 and steering lock unit harness connector M32 (B) terminal 3.

BCM		Steering lock unit		Continuity
Connector	Terminal	Connector Terminal		Continuity
A: M19	85	B: M32	3	Yes

Check continuity between BCM harness connector M19 (A) ter-3. minal 85 and ground.

	BCM		Ground	Continuity	
-	Connector	Terminal	Ground	Continuity	
_	A: M19	85	Ground	No	

Is the inspection result normal?

YES >> GO TO 6

>> Repair harness or connector. NO

4.CHECK IPDM E/R OUTPUT SIGNAL

- 1. Connect IPDM E/R harness connector.
- 2. Disconnect BCM harness connector.
- 3. Check voltage between steering lock unit harness connector and ground.

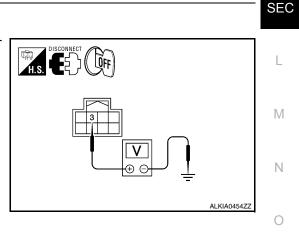
Steering	Steering lock unit		Voltage [V]	
Connector	Terminal	Ground	voltage [v]	
M32	3	Ground	Battery voltage	

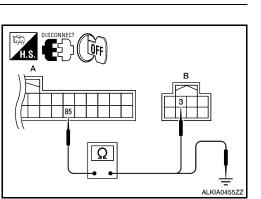
Is the inspection result normal?

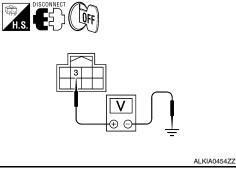
YES >> Replace steering lock unit.

NO >> GO TO 5

5. CHECK STEERING LOCK UNIT CIRCUIT-II







[COUPE]

А

В

D

Ε

F

Н

J

Ρ

< COMPONENT DIAGNOSIS >

 Check continuity between steering lock unit harness connector M32 (A) terminal 3 and IPDM E/R harness connector E18 (B) terminal 32.

Steering lock unit		IPDM E/R		Continuity
Connector	Terminal	Connector Terminal		Continuity
A: M32	3	B: E18	32	Yes

 Check continuity between steering lock unit harness connector M32 (A) terminal 3 and ground.

	Steering lock unit		Ground	Continuity	
-	Connector	Terminal	Ground	Continuity	
	A: M32	3	Ground	No	

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

7.CHECK BCM OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect steering lock unit harness connector and IPDM E/R harness connector E5.
- 3. Check voltage between steering lock unit harness connector and ground.

Steering	Steering lock unit		Voltage [V]	
Connector	Terminal	Ground	voltage [v]	
M32	8	Ground	Battery voltage	

Is the inspection result normal?

Is the inspection result normal?

YES >> GO TO 9 NO >> GO TO 8

NO >> GO 10 8

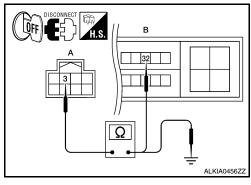
8. CHECK STEERING LOCK UNIT CIRCUIT-I

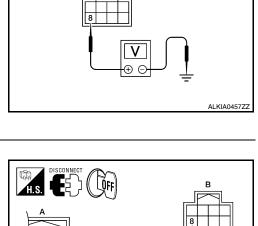
- 1. Disconnect BCM harness connector M122.
- Check continuity between BCM harness connector M19 (A) terminal 86 and steering lock unit harness connector M32 (B) terminal 8.

BCM		Steering	Steering lock unit	
Connector	Terminal	Connector Terminal		Continuity
A: M19	86	B: M32	8	Yes

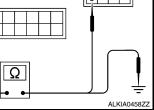
 Check continuity between BCM harness connector M19 (A) terminal 86 and ground.

B	CM	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M19	86	Ground	No	





OFF



[COUPE]

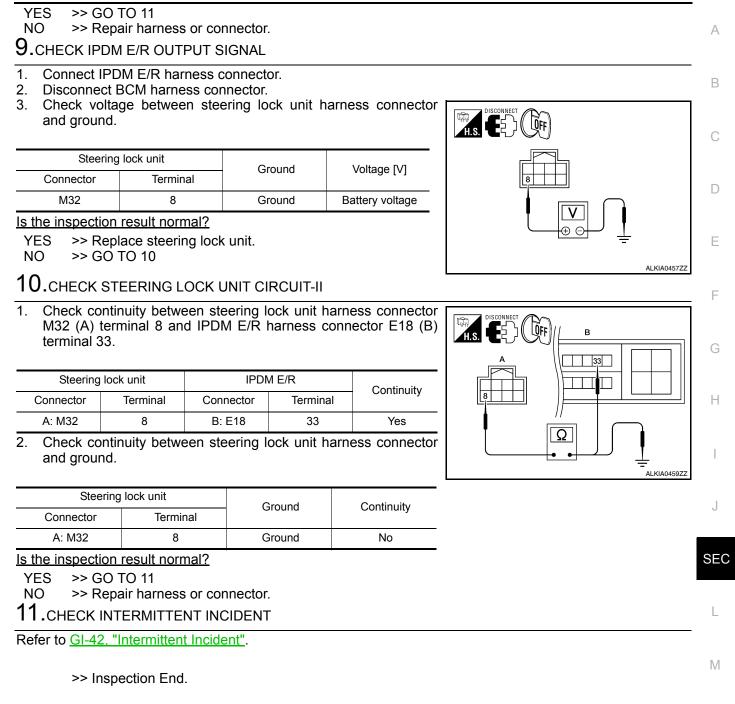
< COMPONENT DIAGNOSIS >

[COUPE]

Ν

Ο

Ρ



B210B STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000004206111

INFOID:000000004206112

INFOID:000000004206110

DTC DETECTION LOGIC

NOTE:

- If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B210B is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210B	START CONT RLY ON	 IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second. Starter control relay ON/OFF signal from BCM Clutch interlock or shift park neutral position (PNP) switch input signal 	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn the power supply position to start under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position.
- Depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-48, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See PCS-45, "DTC Index".

Is the DTC B210B displayed again?

- YES >> Replace IPDM E/R. Refer PCS-48, "Removal and Installation".
- NO >> Inspection End.

SEC-48

B210C STARTER CONTROL RELAY

< COMPONENT DIAGNOSIS >

B210C STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000004206114

INFOID:000000004206113

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B210C is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37, "DTC Logic"</u>.

	DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
	B210C	START CONT RLY OFF	 IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second. Starter control relay ON/OFF signal from BCM Clutch interlock or shift park neutral position (PNP) switch input signal 	• IPDM E/R	
D٦	C CONFI	RMATION PROC	EDURE		
1	PERFORM	I DTC CONFIRMA	TION PROCEDURE		
1. - -	CVT sele Depress	ctor lever is in the I the brake pedal		nd wait for at least 1 second.	•
2. Is	Check "S DTC detec	•	t" with CONSULT-III.		
Y	'ES >> F	Refer to <u>SEC-49, "D</u>	iagnosis Procedure".		_
		nspection End.			
DI	agnosis	Procedure		INFOID:00000004206115	5
1	INSPECTI	ON START			
1. 2.		tion switch ON.			•
3.	Touch "E	RASE".	" with CONSULT-III.		
4.		DTC Confirmation	Procedure.		
ls		210C displayed aga	<u>ain?</u>		
		Replace IPDM E/R.	Refer to PCS-48. "Removal and Installation	<u>"</u> .	

[COUPE]

А

С

Е

B210D STARTER RELAY

Description

INFOID:000000004206116

[COUPE]

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000004206117

DTC DETECTION LOGIC

NOTE:

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B210D is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37. "DTC Logic"</u>.
- If DTC B210D is displayed with DTC B2617, first perform the trouble diagnosis for DTC B2617. Refer to <u>SEC-105, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210D	STARTER RELAY ON	 IPDM E/R detects that the relay is stuck at ON position even if the followings condition are met for about 1 second. Starter control relay ON/OFF signal from BCM Clutch interlock or shift park neutral position (PNP) switch input 	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Ignition switch ON under the following conditions and wait for at least 1 second.
- ČVT selector lever is P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-50, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

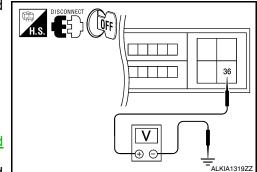
INFOID:000000004206118

- 1. CHECK STARTER RELAY POWER SUPPLY CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R harness connector.
- Check voltage between IPDM E/R harness connector and ground.

IPDN	/IE/R	Ground	Voltage (V)
Connector	Terminal	Ground	voltage (v)
E18	36	Ground	Battery voltage

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to <u>PCS-48</u>, "<u>Removal and</u> <u>Installation</u>".
- NO >> Check harness for open or short between IPDM E/R and battery.



B210E STARTER RELAY

< COMPONENT DIAGNOSIS >

B210E STARTER RELAY

Description

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000004206120

∨ ⊕ ⊕

ALKIA0452ZZ

INFOID:000000004206119

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B210E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210E	STARTER RELAY OFF	• IPDM E/R	
	FIRMATION PRO		
1 .PERFO	RM DTC CONFIRM	ATION PROCEDURE	
	nition switch ON un elector lever is in the	der the following conditions and wait for at le	ast 1 second.
- Do not	depress the brake	bedal .	
2. Check Is DTC det	•	ult" with CONSULT-III.	
YES >>	Refer to <u>SEC-51</u> , "	Diagnosis Procedure".	
	Inspection End.		
	s Procedure		INFOID:00000004206121
	TION START		
	ch type of transmissi <u>of transmission</u>	on the vehicle is equipped with.	
CVT >>	> GO TO 2		
~	GO TO 3		
-		OUTPUT SIGNAL/CVT MODELS	
2. Discon	inition switch OFF. Inect BCM harness (
3. Check	voltage between BC	CM harness connector and ground.	

[COUPE]

А

В

С

Е

B210E STARTER RELAY

< COMPONENT DIAGNOSIS >

BCM connector		Ground	Condition			Voltage (V)	
Connector	Terminal	Ground	Ignition switch	Brake pedal	CVT selector lever	voltage (v)	
M21	132	Ground	ON Depressed		P or N	Battery voltage	
1712 1	132	Ground	ON	Depressed	Other than above	0	

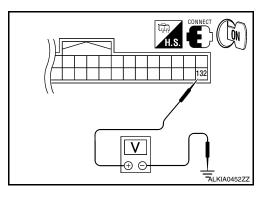
Is the inspection result normal?

YES >> GO TO 5

NO >> GO TO 4

3. CHECK STARTER RELAY OUTPUT SIGNAL / M/T MODELS

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- 3. Check voltage between BCM harness connector and ground.



BCM connector		Ground	Condition		Voltage (V)
Connector			Ignition switch	Clutch pedal	vollage (v)
M21	132	Ground	OFF	Not depressed	0
	152	Ground	OIT	Depressed	Battery voltage

Is the inspection result normal?

YES >> GO TO 5

NO >> GO TO 4

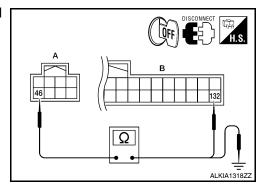
4. CHECK STARTER RELAY OUTPUT SIGNAL CIRCUIT

1. Disconnect IPDM E/R harness connector.

 Check continuity between IPDM E/R harness connector and BCM harness connector.

IPDN	M E/R	B	Continuity	
Connector	Terminal	Connector Terminal		Continuity
A: E17	46	B: M21	132	Yes

3. Check continuity between BCM harness connector and ground.



IPDI	/I E/R	Ground	Continuity	
Connector	Terminal		Continuity	
A: E17	46	Ground	No	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation".

NO >> Repair harness connector.

5.CHECK STARTER RELAY POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect IPDM E/R harness connector.

B210E STARTER RELAY

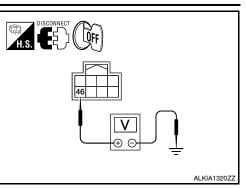
< COMPONENT DIAGNOSIS >

3. Check voltage between IPDM E/R harness connector and ground.

IPDN	/I E/R	Ground	Voltage (V)
Connector	Terminal	Ground	voltage (v)
E17	46	Ground	Battery voltage

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to <u>PCS-48</u>, "Removal and <u>Installation"</u>.
- NO >> Check harness for open or short between IPDM E/R and battery.



SEC

L

Μ

Ν

Ο

Ρ

J

SEC-53

[COUPE]

А

В

С

D

Е

F

G

Н

B210F PNP/CLUTCH INTERLOCK SWITCH

Description

- Park/neutral position (PNP) switch (CVT models)
- Clutch interlock switch (M/T models)
- Shift position signal from BCM (CAN)

DTC Logic

INFOID:000000004206123

INFOID:000000004206124

DTC DETECTION LOGIC

NOTE:

- If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>
- If DTC B210F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-36, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTER LOCK/PNP SW ON	 IPDM E/R detects a mismatch between the signals below for 1 second or more. Clutch interlock input signal (M/T models) Shift PNP switch input signal (CVT models) Shift position signal from BCM (CAN) 	 Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted (CVT mod- els)] or (Clutch interlock switch cir- cuit is open or shorted.) Clutch interlock switch (M/T mod- els) Park/neutral position (PNP) switch (CVT models)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON under the following conditions and wait for at least 1 second.

- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-54, "Diagnosis Procedure"</u>.

NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

Check which type of transmission the vehicle is equipped with.

Which type of transmission

CVT >> GO TO 2 M/T >> GO TO 5

2. СНЕСК DTC WITH BCM

Refer to BCS-91, "DTC Index".

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace malfunctioning parts.

 $\mathbf{3}.$ CHECK PNP SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.

- 2. Disconnect IPDM E/R harness connector.
- 3. Turn ignition switch ON.

[COUPE]



OFF

口

30

< COMPONENT DIAGNOSIS >

4. Check voltage between IPDM E/R harness connector and ground under following condition.

IPDM E/R		Ground	Condition		Voltage (V)
Connector	Terminal	Ground	Condition		voltage (v)
			CV/T selector	P or N	0
E18	30 Ground CVT selector lever			Other than above	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation".

>> (VQ35DE) GO TO 4 NO NO

>> (QR25DE) GO TO 10

CHECK PNP SWITCH CIRCUIT

- Turn ignition switch OFF. 1.
- Disconnect TCM harness connector. 2.
- 3. Check continuity between IPDM E/R harness connector and TCM harness connector.

ТСМ		IPDN	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
A: F16	20	B: E18	72	Yes	

4. Check continuity between TCM harness connector and ground.

Т	CM	Ground	Continuity	
Connector	Terminal	Cround		
A: F16	20	Ground	No	

Is the inspection result normal?

YES >> GO TO 13

NO >> Repair harness or connector.

5. CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL (BCM)

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.

3. Check voltage between BCM harness connector and ground.

BCM					
Connec- tor	Terminal	Ground	Condition		Voltage (V)
M18	22	Ground	Clutch	Not depressed	0
	22	Ground	pedal	Depressed	Battery voltage

Is the inspection result normal?

>> GO TO 6 YES

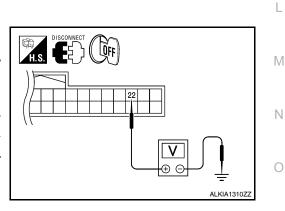
NO >> GO TO 7

6.CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.

2. Disconnect IPDM E/R harness connector.

Turn ignition switch ON. 3.



Ð F ALKIA1308ZZ

в

72

Ω





ALKIA1309Z

SEC

Ρ

[COUPE]

А

В

D

Е

F

B210F PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

 Check voltage between IPDM E/R harness connector and ground.

IPDM E/R		Ground	(Condition	Voltage (V)
Connector	Terminal	Ground		Sonation	voltage (v)
E18	30	Ground	Clutch	Not depressed	0
L10		Giounu	pedal	Depressed	Battery voltage

Is the inspection result normal?

- YES >> Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and</u> <u>Installation"</u>.
- NO >> Check harness for open between clutch interlock switch and IPDM E/R.

7. CHECK CLUTCH INTERLOCK SWITCH POWER SUPPLY

- 1. Disconnect clutch interlock switch harness connector.
- 2. Check voltage between clutch interlock switch harness connector and ground.

Clutch inte	rlock switch	Ground	Voltage (V)	
Connector	Terminal	Ground	voltage (v)	
E36	1	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 8 NO >> Check har

>> Check harness for open or short between clutch interlock switch and fuse.

8. CHECK CLUTCH INTERLOCK SWITCH CIRCUIT

1. Check continuity between IPDM E/R harness connector and clutch interlock switch harness connector.

Clutch interlock switch		IPDM E/R		Continuity
Connector	Terminal	Connector Terminal		Continuity
A: E36	2	B: E18	30	Yes

2. Check continuity between clutch interlock switch harness connector and ground.

Clutch interlock switch		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: E36	2	Ground	No	

Is the inspection result normal?

YES >> GO TO 9

NO >> Repair harness or connector.

9.CHECK CLUTCH INTERLOCK SWITCH

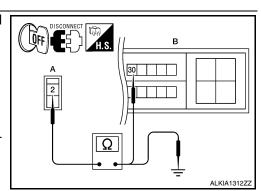
Refer to SEC-57, "Component Inspection".

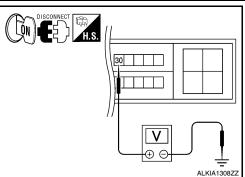
Is the inspection result normal?

- YES >> Replace the IPDM E/R. Refer to PCS-48. "Removal and Installation".
- NO >> Replace clutch interlock switch.

10. CHECK PNP SWITCH CIRCUIT FOR CONTINUITY

1. Turn ignition switch OFF.





[COUPE]

ALKIA1311ZZ

B210F PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

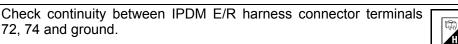
2. Check continuity between IPDM E/R harness connector terminals 72 and 74.

IF	PDM E/R		C	ondition	Continuity	
Connector	Tern	ninals	Condition		Continuity	
F10	72	74	PNP switch	P or N	Yes	
110	12	74	position	Other	No	

Is the inspection result normal?

YES >> GO TO 11 NO >> GO TO 12

11. CHECK PNP SWITCH CIRCUIT FOR SHORT



	IPDM E/R		Ground	Continuity	
	Connector	Terminal	Ground	Continuity	
_	F10	72	Ground	No	
	FIU	74	Ground	INU	

Is the inspection result normal?

- YES >> Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation".
- NO >> Repair or replace harness.

12. CHECK PNP SWITCH INPUT SIGNAL CIRCUIT

- 1. Disconnect PNP switch harness connector.
- 2. Check continuity between PNP switch and IPDM E/R harness connectors.

Park/neutral	position switch	IPDM E/R		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
A: F25	1	B: F10	74	Yes	
A. 1 25	2	D.110	72	163	

3. Check continuity between PNP switch harness connector and ground.

Park/neutral	position switch	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: F25	1	Ground	No	
A. 1 23	2	Gibund	NO	

Is the inspection result normal?

>> Replace PNP switch. YES

NO >> Repair harness or connector.

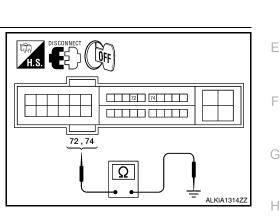
13. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

YES >> Inspection End.

Component Inspection

1.CHECK CLUTCH INTERLOCK SWITCH

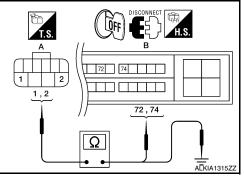


HS

QFF

72 74

Ω





Ο

Ρ

SEC

L

INFOID:000000004206125

[COUPE]

ALKIA1313ZZ

А

В

D

F

B210F PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

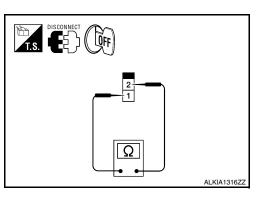
- 1. Turn ignition switch OFF.
- 2. Disconnect clutch interlock switch harness connector.
- 3. Check continuity between clutch interlock switch under the following conditions.

	interlock vitch	Condition Continuity		Continuity
Terr	minal			-
1	2	Clutch podal Not depressed		No
	2	Clutch pedal Depressed		Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace clutch interlock switch.



B2110 PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

B2110 PNP/CLUTCH INTERLOCK SWITCH

Description

IPDM E/R confirms the shift position with the following signals.

- Park/neutral position (PNP) switch (CVT models)
- Clutch inter lock switch (M/T models)
- Shift position signal from BCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B2110 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	F
B2110	INTER LOCK/PNP SW	IPDM E/R detects mismatch between the signals below for 1 second or more.Clutch interlock input signal (M/T models)Shift NP switch input signal (CVT models)	 Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted (CVT mod- els)] or (Clutch interlock switch circuit is open or shorted.) Clutch inter lock switch (MT models) Park/neutral position (PNP) switch (CVT models) 	G H

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

I.PERFORM DIC CONFIRMATION PROCEDURE	
 Turn the ignition switch ON under the following conditions and wait for at least 1 second. CVT selector lever is in the P or N position 	J
 Do not depress the brake pedal Check "Self diagnostic result" with CONSULT-III. 	SEC
<u>Is DTC detected?</u> YES >> Refer to <u>SEC-59, "Diagnosis Procedure"</u> .	
NO >> Inspection End.	L
Diagnosis Procedure	
1.INSPECTION START	M
Check which type of transmission the vehicle is equipped with.	
Which type of transmission	
CVT >> GO TO 2	Ν
M/T >> GO TO 5	
2. СНЕСК DTC WITH BCM	0
Refer to BCS-91, "DTC Index".	
Is the inspection result normal?	
YES >> GO TO 3	Ρ
NO >> Repair or replace malfunctioning parts.	
3. CHECK PNP SWITCH INPUT SIGNAL	
1. Turn ignition switch OFF.	
 Disconnect IPDM E/R harness connector. Turn ignition switch ON 	

3. Turn ignition switch ON.

[COUPE]

А

INFOID:000000004206127

В

D

Ε

B2110 PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

4. Check voltage between IPDM E/R harness connector and ground under following condition.

IPDM	E/R	Ground	Condition		Voltage (V)
Connector	Terminal	Giouna			voltage (v)
			CVT selector	P or N	0
E18	30	Ground	lever Other than above		Battery voltage
Is the inspection result normal?					

YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and

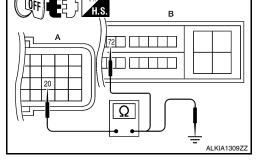
Installation".

NO >> (VQ35DE) GO TO 4

- NO >> (QR25DE) GO TO 10
- CHECK PNP SWITCH CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect TCM harness connector.
- Check continuity between IPDM E/R harness connector and TCM harness connector.

T	СМ	IPDN	M E/R	Continuity
Connector	Terminal	Connector Terminal		Continuity
A: F16	20	B: E18	72	Yes

4. Check continuity between TCM harness connector and ground.



TCM		Ground	Continuity	
Connector	Terminal	Croana	Continuity	
A: F16	20	Ground	No	

Is the inspection result normal?

YES >> GO TO 13

NO >> Repair harness or connector.

5. CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL (BCM)

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.

3. Check voltage between BCM harness connector and ground.

Connector Terminal Ground Condition		Voltage (V)
Not doproop		
M18 22 Ground Clutch Not depress	esse	d 0
pedal Depressed	ssed	Battery voltage

Is the inspection result normal?

YES >> GO TO 6 NO >> GO TO 7

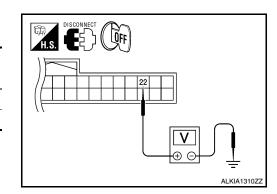
NO >> GO TO 7

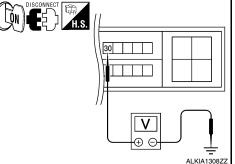
6.CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.

2. Disconnect IPDM E/R harness connector.

3. Turn ignition switch ON.





Turn ignition switch OFF.

< COMPONENT DIAGNOSIS >

4. Check voltage between IPDM E/R harness connector and ground.

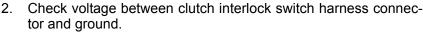
IPDM	E/R	Ground	Condition		Voltage (V)
Connector	Terminal	Ciouna			voltage (V)
E18	30	Ground	Clutch pedal	Not depressed	0
LIO	50	Giouna	Clutch pedal	Depressed	Battery voltage

Is the inspection result normal?

- YES >> Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation".
- NO >> Check harness for open between clutch interlock switch and IPDM E/R.

7.CHECK CLUTCH INTERLOCK SWITCH POWER SUPPLY

1. Disconnect clutch interlock switch harness connector.



Clutch inte	Clutch interlock switch		Voltage (V)	
Connector	Terminal	Ground	voltage (v)	
E36	1	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 8 NO

>> Check harness for open or short between clutch interlock switch and fuse.

8.check clutch interlock switch circuit

1. Check continuity between IPDM E/R harness connector and clutch interlock switch harness connector.

Clutch interlock switch		IPDN	/I E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: E36	2	B: E18	30	Yes

^{2.} Check continuity between clutch interlock switch harness connector and ground.

Clutch interlock switch		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: E36	2	Ground	No	

Is the inspection result normal?

YES >> GO TO 9

NO >> Repair harness or connector.

9.CHECK CLUTCH INTERLOCK SWITCH

Refer to SEC-62, "Component Inspection".

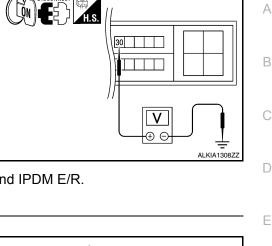
Is the inspection result normal?

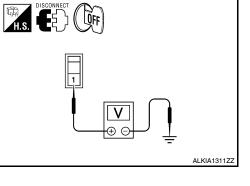
YES >> Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation".

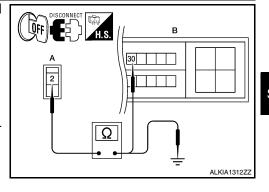
NO >> Replace clutch interlock switch.

10. CHECK PNP SWITCH CIRCUIT FOR CONTINUITY

1.







Μ

Ν

Ρ

F

Н

[COUPE]

 Check continuity between IPDM E/R harness connector terminals 72 and 74.

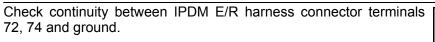
IPDM E/R		Condition		Continuity	
Connector	Tern	ninals	Condition		Continuity
F10	72	74	PNP switch	P or N	Yes
110	12	74	position	Other	No

Is the inspection result normal?

YES >> GO TO 11

NO >> GO TO 12

11. CHECK PNP SWITCH CIRCUIT FOR SHORT



IPDI	IPDM E/R		Continuity
Connector	Terminal	Ground	Continuity
F10	72	Ground	No
FIU	74	Ground	INO

Is the inspection result normal?

- YES >> Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and</u> <u>Installation"</u>.
- NO >> Repair or replace harness.

12. CHECK PNP SWITCH INPUT SIGNAL CIRCUIT

- 1. Disconnect PNP switch harness connector.
- 2. Check continuity between PNP switch and IPDM E/R harness connectors.

Park/neutral	oosition switch	IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: F25	1	B: F10	74	Yes
A. F20	2	D.110	72	165

3. Check continuity between PNP switch harness connector and ground.

Park/neutral position switch		Ground	Continuity
Connector	Terminal	Ground	Continuity
A: F25	1	Ground	No
A. 1 23	2	Ground	NO

Is the inspection result normal?

YES >> Replace PNP switch.

NO >> Repair harness or connector.

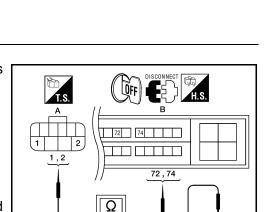
13. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

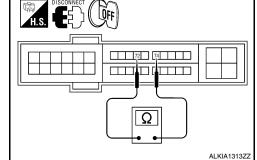
Component Inspection

1. CHECK CLUTCH INTERLOCK SWITCH



Ω

SEC-62



ŨFF

72,74

[COUPE]

ALKIA1314ZZ

B2110 PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.

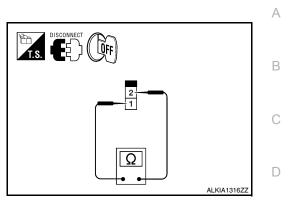
- 2. Disconnect clutch interlock switch harness connector.
- 3. Check continuity between clutch interlock switch under the following conditions.

	interlock vitch	Condition		Condition Continuity		Continuity
Terr	minal					
1	2	Clutch pedal	Not depressed	No		
	2		Depressed	Yes		

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace clutch interlock switch.



J

Е

F

G

Н

SEC

L

Μ

Ν

Ο

Ρ

B2190, P1610 NATS ANTENNA AMP

Description

Performs ID verification through BCM and Intelligent Key when push-button ignition switch is pressed. Prohibits the release of steering lock or start of engine when an unregistered ID of Intelligent Key is used.

DTC Logic

INFOID:000000004206012

INFOID:000000004206013

INFOID:000000004206011

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2190			Harness or connectors
P1610	NATS ANTENNA AMP	Inactive communication between key slot and BCM.	(The key slot circuit is open or shorted)Key slotBCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Insert Intelligent Key into the key slot.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to SEC-64, "Diagnosis Procedure".
- NO >> GO TO 2

2. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-64, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1. INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected when Intelligent Key is inserted into key slot.
- Case2: It is detected after Intelligent Key is inserted into key slot and push-button ignition switch is pressed.

In which case is DTC detected?

Case1. >> GO TO 2 Case2. >> GO TO 4

2.CHECK KEY SLOT INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect key slot harness connector.

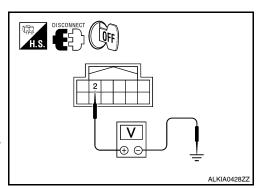
3. Check voltage between key slot harness connector and ground.

Key	Key slot Ground Voltage [V]		Voltage [V]
Connector	Terminal	Cround	(approx.)
M40	2	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key slot. Refer to <u>SEC-207. "Removal and</u> <u>Installation"</u>.

NO >> GO TO 3



B2190, P1610 NATS ANTENNA AMP

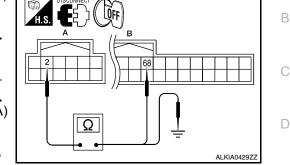
< COMPONENT DIAGNOSIS >

3. CHECK KEY SLOT CIRCUIT

- 1. Disconnect BCM harness connector.
- Check continuity between key slot harness connector M40 (A) terminal 2 and BCM harness connector M19 (B) terminal 68.

Key slot		BCM		Continuity
Connector	Terminal	Connector Terminal		Continuity
A: M40	2	B: M19	68	Yes

 Check continuity between key slot harness connector M40 (A) terminal 2 and ground.



Key slot		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M40	2	Ground	No	

Is the inspection result normal?

YES >> GO TO 8

NO >> Repair harness or connector.

4.CHECK PUSH-IGNITION SWITCH OPERATION

Press push-button ignition switch and check if it turns ON.

Does ignition switch turn to ON?

YES >> GO TO 5 NO >> GO TO 7

NO >> GO TO 7

5. CHECK KEY SLOT COMMUNICATION SIGNAL

1. Turn ignition switch OFF.

- 2. Disconnect key slot harness connector.
- 3. Check voltage between key slot harness connector and ground.

Key	slot	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M40	3	Ground	Yes	

Is the inspection result normal?

YES >> Replace key slot. Refer to <u>SEC-207</u>, "Removal and <u>Installation"</u>.

NO >> GO TO 6

6.CHECK KEY SLOT COMMUNICATION SIGNAL CIRCUIT

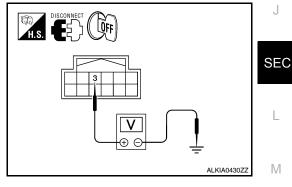
1. Disconnect BCM harness connector.

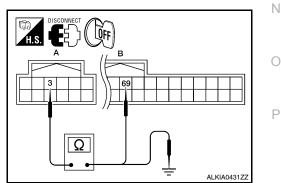
 Check continuity between key slot harness connector M40 (A) terminal 3 and BCM harness connector M19 (B) terminal 69.

Key slot		BCM		Continuity
Connector	Terminal	Connector Terminal		Continuity
A: M40	3	B: M19	69	Yes

3. Check continuity between key slot harness connector M40 (A) terminal 3 and ground.

Key slot		Ground	Continuity	
Connector	Terminal	Cround	Continuity	
A: M40	3	Ground	No	





[COUPE]

А

Е

F

Н

SEC-65

B2190, P1610 NATS ANTENNA AMP

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

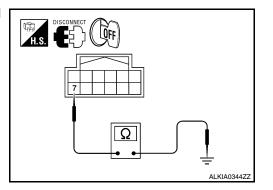
YES >> GO TO 8

NO >> Repair harness or connector.

7. CHECK KEY SLOT GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect key slot harness connector. 2.
- 3. Check continuity between key slot harness connector and ground.

Key slot		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M40	7	Ground	Yes	



Is the inspection result normal?

- YES >> GO TO 8
- NO >> Repair harness or connector.

8. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

[COUPE]

B2191, P1615 DIFFERENCE OF KEY

Description

Performs ID verification through BCM and Intelligent Key when push-button ignition switch is pressed. Prohibits the release of steering lock or start of engine when an unregistered ID of Intelligent Key is used.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis	DTC detecting condition	Possible cause	ľ
B2191	name DIFFERENCE OF	The ID verification results between BCM and Intel-		
P1615	KEY	ligent Key are NG. The registration is necessary.	Intelligent Key	
	RMATION PROC	EDURE		
1.PERFORI	M DTC CONFIRMA	TION PROCEDURE		
2. Check "S Is DTC detec	ted?	" with CONSULT-III.		
	nspection End.	iagnosis Procedure".		
Diagnosis	Procedure		INFOID:000000004206016	
1.PERFORM	M INITIALIZATION			
		JLT-III. Re-register all Intelligent Keys. of Intelligent Key. Refer to CONSULT-III Op	peration Manual	
	•	I can the engine be started with re-registered		
YES >> I	ntelligent Key was u	inregistered.		
	BCM is malfunction Replace BCM. Ref Perform initialization	er to BCS-96, "Removal and Installation".		00

Μ

0

Ρ

[COUPE]

INFOID:000000004206014

INFOID:000000004206015

Α

В

С

B2192, P1611 ID DISCORD, IMMU-ECM

Description

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2192	ID DISCORD, IMMU-	The ID verification results between BCM and ECM	• BCM
P1611	ECM	are NG. The registration is necessary.	• ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to SEC-68. "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all Intelligent Keys. For initialization and registration of Intelligent Key. Refer to CONSULT-III Operation Manual.

Can the system be initialized and can the engine be started with re-registered Intelligent Key?

- YES >> ID was unregistered.
- NO >> BCM is malfunctioning.
 - Replace BCM. Refer to <u>BCS-96, "Removal and Installation"</u>.
 - Perform initialization again.
 - Replace ECM.

INFOID:000000004206017

INFOID:000000004206018

B2193, P1612 CHAIN OF ECM-IMMU

< COMPONENT DIAGNOSIS >

B2193, P1612 CHAIN OF ECM-IMMU

Description

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

DTC DETECTION LOGIC NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to Е SEC-37, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2193 P1612	CHAIN OF ECM- IMMU	Inactive communication between ECM and BCM	 Harness or connectors (The CAN communication line is open or shorted) BCM 	
	RMATION PROC	EDURE TION PROCEDURE	• ECM	
CVT sele	tion switch ON unde ector lever is in the l epress brake pedal.			_
	Self diagnostic resul	t" with CONSULT-III.		

Is DTC detected?

1.

2.

YES >> Refer to <u>SEC-69</u>, "Diagnosis Procedure". NO >> Inspection End. Diagnosis Procedure INFOID:000000004206022 **1.**REPLACE BCM Replace BCM. Refer to BCS-96, "Removal and Installation". Perform initialization with CONSULT-III. For initialization, refer to CONSULT-III Operation Manual". Does the engine start? YES >> BCM is malfunctioning. Replace BCM. Refer to <u>BCS-96</u>, "Removal and Installation". · Perform initialization again. NO >> ECM is malfunctioning. Replace ECM. Perform ECM re-communicating function.

SEC-69

А

В

D

SEC

L

Μ

Ν

Ο

Ρ

INFOID:000000004206020

B2555 STOP LAMP

Description

BCM detects the stop lamp status and confirms the stop lamp switch ON/OFF status. BCM confirms the engine start condition according to the stop lamp switch ON/OFF status.

DTC Logic

INFOID:000000004206030

DTC DETECTION LOGIC

DTC No.	Trouble diagno- sis name	DTC detecting condition	Possible cause
B2555	STOP LAMP	BCM makes a comparison between the upper voltage and lower voltage of stop lamp switch. It judges from their values to detect the malfunctioning circuit.	 Harness or connectors (stop lamp switch circuit is open or shorted) Stop lamp switch Fuse

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Depress the brake pedal and wait for at least 1 second.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-70, "Diagnosis Procedure"</u>.

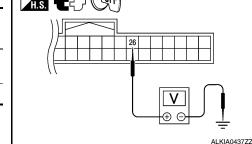
NO >> Inspection End.

Diagnosis Procedure

1. CHECK STOP LAMP SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- 3. Check voltage between BCM harness connector and ground.

BCM		Ground	Stop lamp	Voltage [V]
Connector	Terminal	Cround	switch position	voltage [v]
M18	26	26 Ground		Battery volt- age
			Released	0



Is the inspection result normal?

YES >> Stop lamp switch is OK.

NO >> GO TO 2

2. CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

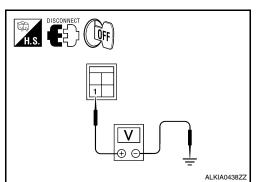
- 1. Disconnect stop lamp switch harness connector.
- 2. Check voltage between stop lamp harness connector and ground.

Stop lamp switch		Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
E38	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3

NO >> Check harness for open or short between stop lamp switch and fuse.



SEC-70

INFOID:000000004206029

B2555 STOP LAMP

< COMPONENT DIAGNOSIS >

[COUPE]

3.CHECK STOP LAMP SWITCH CIRCUIT

 Check continuity between stop lamp switch harness connector E38 (A) terminal 2 and BCM harness connector M18 (B) terminal 26.

Stop lan	Stop lamp switch		СМ	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: E38	2	B: M18	26	Yes

2. Check continuity between stop lamp switch harness connector E38 (A) terminal 2 and ground.

	Stop lamp switch		Ground	Continuity
	Connector	Terminal	Ground	Continuity
	A: E38	2	Ground	No
_				

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair harness or connector.

4.CHECK STOP LAMP SWITCH

Refer to <u>SEC-71, "Component Inspection"</u>.

Is the inspection result normal?

YES >> GO TO 5

NO >> Replace stop lamp switch.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

Component Inspection

1. CHECK STOP LAMP SWITCH

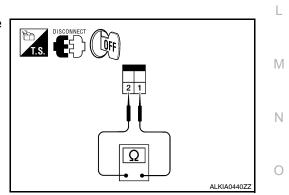
- 1. Turn ignition switch OFF.
- 2. Disconnect stop lamp switch harness connector.
- Check continuity between stop lamp switch terminals under the following conditions.

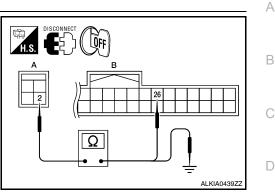
Stop lan	np switch	Condition		Continuity
Terr	ninal	Condition		Continuity
1	2	Brake pedal	Not depressed	No
1			Depressed	Yes
			Depressed	res

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace stop lamp switch.





INFOID:000000004206032

SEC

Ρ

J

Е

F

Н

B2556 PUSH-BUTTON IGNITION SWITCH

Description

The switch that changes the power supply position. BCM maintains the power supply position status. BCM changes the power supply position with the operation of the push-button ignition switch.

DTC Logic

INFOID:000000004206034

INFOID:000000004206035

INFOID:000000004206033

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2556	PUSH-BUTTON IG- NITION SWITCH	BCM detects the push-button ignition switch stuck to ON for 100 seconds or more	 Harness or connectors (Push-button ignition switch circuit is shorted.) Push-button ignition switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine and wait for at least 100 seconds.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-72, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK PUSH-BUTTON IGNITION SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect push-button ignition switch harness connector.
- Check voltage between push-button ignition switch harness connector and ground.

Push-button ignition switch		Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M38	4	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 2

NO >> GO TO 4

2. CHECK PUSH-BUTTON IGNITION SWITCH

Refer to SEC-73. "Component Inspection".

Is the inspection result normal?

YES >> GO TO 3

NO >> Replace push-button ignition switch. Refer to <u>SEC-208. "Removal and Installation"</u>.

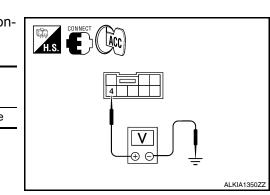
3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

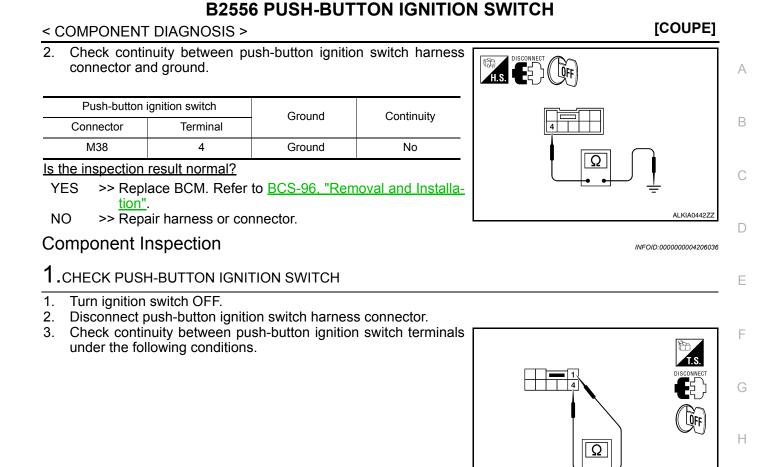
>> Inspection End.

4.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT FOR SHORT

1. Disconnect BCM harness connector and IPDM E/R harness connector.



SEC-72



ALKIA0443ZZ

J

SEC

L

Μ

Ν

Ο

Ρ

Push-button	Push-button ignition switch		Continuity	
Terminal		Condition	Continuity	
1	1	Pressed	Yes	
I		Not pressed	No	

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Replace push-button ignition switch. Refer to <u>SEC-208. "Removal and Installation"</u>.

B2557 VEHICLE SPEED

Description

INFOID:000000004206037

INFOID-000000004206038

BCM receives the 2 vehicle speed signals via CAN communication. 1 signal is transmitted by the "unified meter" Another signal is transmitted by "ABS actuator and electric unit (control unit)". BCM compares both signals to detect the vehicle speed.

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37, "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2557	VEHICLE SPEED	BCM detects the following difference between the vehicle speed from "unified meter" and the one from "ABS actuator and electric unit" for 10 seconds continuouslyOne is 10km/h or more and the other is 4km/h or less.	 Wheel sensor Unified meter ABS actuator and electric unit (control unit)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Drive the vehicle at the vehicle speed of 10 km/h or more and wait for at least 10 seconds.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-74, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

INFOID:000000004206039

1.CHECK DTC WITH "ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)"

Check "Self diagnostic result" with CONSULT-III. Refer to <u>BRC-51, "DTC No. Index"</u> (ABS), <u>BRC-121, "DTC No. Index"</u> (TCS/ABS) or <u>BRC-223, "DTC No. Index"</u> (VDS/TCS/ABS).

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace malfunctioning parts.

2.CHECK UNIFIED METER.

Check unified meter. Refer to MWI-4, "Work Flow".

B2560 STARTER CONTROL RELAY

< COMPONENT DIAGNOSIS >

B2560 STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000004206041

INFOID:000000004206040

DTC DETECTION LOGIC

NOTE:

- If DTC B2560 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B2560 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37, "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes	
B2560	STARTER CONTROL RELAY	BCM detects a mismatch between the OFF re- quest of starter control relay to IPDM E/R and the feedback. (The feedback is ON instead of OFF.)	• IPDM E/R	F
DTC CONFIRMA	TION PROCEDUR	E		0
4	CONFIRMATION P			G
 CVT selector le Depress the br 	ever is in the P position ake pedal		seconds.	Н
Is DTC detected?	agnostic result" with (CONSOLT-III.		Ι
YES >> Refer t	o <u>SEC-75, "Diagnosi</u>	<u>s Procedure"</u> .		
NO >> Inspect				J
Diagnosis Proc	edure		INFOID:000000004206042	
1 .CHECK DTC W	ITH IPDM E/R			SEC
Check "Self diagno	stic result" with CON	SULT-III. Refer to PCS-45, "DTC Index".		SEC
Is the inspection re-	<u>sult normal?</u>			
YES >> GO TO				L
^	or replace malfunction	oning parts.		
Z.CHECK INTERN	AITTENT INCIDENT			ъл
Refer to GI-42, "Inter-	ermittent Incident".			M
>> Inspect	tion End.			Ν

Ο

[COUPE]

А

С

Ε

B2601 SHIFT POSITION

Description

- CVT selector lever
- P position signal from IPDM E/R (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37, "DTC Logic"</u>.
- If DTC B2601 is displayed with DTC B2605, first perform the trouble diagnosis for DTC B2605. Refer to <u>SEC-86, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2601	SHIFT POSITION	BCM detects when a difference between the shift P input signal and the shift position signal re- ceived from IPDM E/R via CAN communication continues for 2 seconds or more	 Harness or connectors (CVT device circuit is open or shorted) CVT device (park position switch)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions, and wait for at least 2 seconds.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Turn ignition switch ON under the following conditions, and wait for at least 2 seconds.
- CVT selector lever is in other than P position.
- Do not depress the brake pedal.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-76. "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK CVT DEVICE POWER SUPPLY

- 1. Turn ignition switch to ACC.
- 2. Disconnect CVT device (park position switch) harness connector.
- Check voltage between CVT device (park position switch) harness connector and ground.

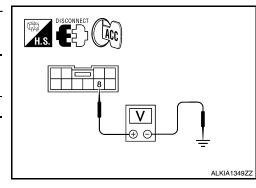
CVT device (park position switch)ConnectorTerminal		Ground	Voltage [V]	
		Ground	voltage [v]	
M23 8		Ground	Battery voltage	
s the inspection result normal?				

is the inspection result norma

YES >> GO TO 3 NO >> GO TO 2

2. CHECK CVT DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM harness connector.



INFOID:000000004206043

INFOID:000000004206044

B2601 SHIFT POSITION

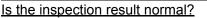
< COMPONENT DIAGNOSIS >

2. Check continuity between BCM harness connector M19 (A) terminal 84 and CVT device (park position switch) harness connector M23 (B) terminal 8.

B	СМ	CVT device (par	Continuity	
Connector	Terminal	Connector Terminal		Continuity
A: M19	84	B: M23	8	Yes

Check continuity between BCM harness connector M19 (A) ter-3. minal 84 and ground.

	BCM		Ground	Continuity	
Co	nnector	Terminal	Ground	Continuity	
A	A: M19	84	Ground	No	



- YES >> Replace BCM. Refer to BCS-96, "Removal and Installation".
- NO >> Repair harness or connector.

3. CHECK CVT DEVICE CIRCUIT (BCM)

- 1. Disconnect BCM harness connector and IPDM E/R harness connector.
- 2. Check continuity between BCM harness connector M19 (A) terminal 87 and CVT device (park position switch) harness connector M23 (B) terminal 9.

ВСМ		CVT device (park position switch)		Continuity	
Connector	Terminal	Connector Terminal			
A: M19	87	B: M23	9	Yes	

3. Check continuity between BCM harness connector M19 (A) terminal 87 and ground.

B	CM	Ground	Continuity	
Connector	Terminal	Ground		
A: M19	87	Ground	No	

Is the inspection result normal?

YES >> GO TO 4

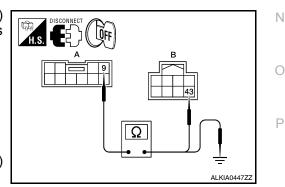
NO >> Repair harness or connector.

4.CHECK CVT DEVICE CIRCUIT (IPDM E/R)

- 1. Disconnect BCM harness connector.
- 2. Check continuity between CVT device (park position switch) harness connector M23 (A) terminal 9 and IPDM E/R harness connector E17 (B) terminal 43.

-	device tion switch)	IPDM E/R		Continuity
Connector	Terminal	Connector Terminal		
A: M23	9	B: E17	43	Yes

3. Check continuity between CVT device (park position switch) harness connector M23 (A) terminal 9 and ground.

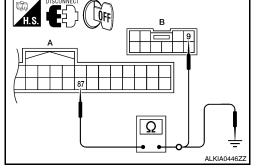


в Ω ALKIA0446ZZ

F\$

OFF

Ω





L

Μ

[COUPE]

ALKIA0445ZZ

А

В

D

Е

F

Н

B2601 SHIFT POSITION

< COMPONENT DIAGNOSIS >

[COUPE]

-	device tion switch)	Ground	Continuity	
Connector	Terminal			
A: M23	9	Ground	No	
Is the inspection	result normal?			
_ '	air harness or con	nector.		
5.CHECK CVT	DEVICE			
Refer to SEC-78	, "Component Insp	pection".		
Is the inspection	result normal?			
YES >> GO				
				nd Installation" (RE0F09B) or <u>TM-431,</u>
	noval and Installat RMITTENT INCIE	, ,		
Refer to <u>GI-42, "</u>	Intermittent Incide	<u>nt"</u> .		
	ection End.			
•				
Component I	nspection			INFOID:000000004206046
1. СНЕСК СУТ	DEVICE (PARK P	POSITION SWIT	CH)	
1. Turn ignition				
			harness connector	:
 Check contin minals as fol 	nuity between CVT	i device (park po	osition switch) ter-	
	10110.			T.S.

	(park position itch)	Condition		Continuity
Terr	minal			
8	9	CVT selector lever	P position	No
0	9	CVT Selector level	Other than above	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace CVT device. Refer to <u>TM-255, "Removal and Installation"</u> (RE0F09B) or <u>TM-431,</u> <u>"Removal and Installation"</u> (RE0F10A).

B2602 SHIFT POSITION

B2602 SHIFT POSITION

Description

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- Speed signal from meter

DTC Logic

DTC DETECTION LOGIC NOTE:

- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to Е SEC-37, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2602	SHIFT POSITION	 BCM detects the following status for 10 seconds. Shift position is in P position Vehicle speed is 4km/h (2 MPH) or more Ignition switch is in the ON position 	 Harness or connectors (CVT drive circuit is open or short- ed) CVT device (park position switch) Combination meter 	(
TC CONFI	IRMATION PROC	EDURE		

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine under the following conditions and wait for at least 10 seconds. CVT selector lever is in the P or N position Depress the brake pedal. 2. Drive the vehicle for at least 10 seconds at a speed greater than 4 km/h (2 MPH).
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to SEC-79, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

- 1.CHECK DTC WITH "COMBINATION METER"
- Check "Self diagnostic result" with CONSULT-III. Refer to MWI-95, "DTC Index".

Is the inspection result normal?

- YES >> GO TO 2
- NO >> Repair or replace malfunctioning parts.

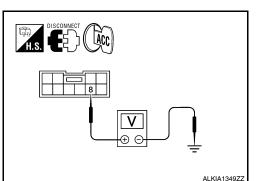
2.CHECK CVT DEVICE POWER SUPPLY

- 1. Turn ignition switch to ACC.
- 2. Disconnect CVT device (park position switch) harness connector.
- 3. Check voltage between CVT device (park position switch) harness connector and ground.

CVT device (par	k position switch)	Ground	Voltage [V]	
Connector	Connector Terminal		voltage [v]	
M23	8	Ground	Battery voltage	

Is the inspection result normal?

>> GO TO 4 YES NO >> GO TO 3



INFOID:000000004206047

INFOID:000000004206048

А

В

D

SEC

L

Μ

Ν

Ρ

3. CHECK CVT DEVICE POWER SUPPLY CIRCUIT

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 84 and CVT device (park position switch) harness connector M23 (B) terminal 8.

BCM		CVT device (park position switch)		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
A: M19	84	B: M23	8	Yes	

 Check continuity between BCM harness connector M19 (A) terminal 84 and ground.

B	CM	Ground	Continuity	
 Connector Terminal		Ground	Continuity	
A: M19	84	Ground	No	

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-96, "Removal and Installation"</u>.

NO >> Repair harness or connector.

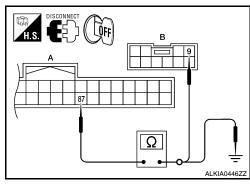
4.CHECK CVT DEVICE CIRCUIT

1. Disconnect BCM harness connector.

2. Check continuity between CVT device (park position switch) harness connector and BCM harness connector.

BCM		CVT device (park position switch)		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
A: M19	87	B: M23	9	Yes	

3. Check continuity between CVT device (park position switch) harness connector and ground.



B	CM	Ground	Continuity	
Connector	Connector Terminal		Continuity	
A: M19	87	Ground	No	

Is the inspection result normal?

YES >> GO TO 5

NO >> Repair harness or connector.

5.CHECK CVT DEVICE

Refer to SEC-78, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6

NO >> Replace CVT device. Refer to <u>TM-255, "Removal and Installation"</u> (RE0F09B) or <u>TM-431,</u> <u>"Removal and Installation"</u> (RE0F10A).

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

B2603 SHIFT POSITION STATUS

Description

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- P/N position switch

DTC Logic

DTC DETECTION LOGIC **NOTE**:

- If DTC B2603 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-36, "DTC Logic".
- If DTC B2603 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37, "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes	F
B2603	SHIFT POSITION STATUS	 BCM detects the followings status for 500 ms or more when shift is in P position and, ignition switch is in ON position. Park/neutral position (PNP) switch: approx. 0V CVT device (park position switch): approx 0V 	 Harness or connector (CVT device circuit is open or shorted.) Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted.] CVT device (park position switch) Park/neutral position (PNP) switch 	C F

DTC CONFIRMATION PROCEDURE

PERFORM DTC CONFIRMATION PROCEDURE Start the engine under the following conditions and wait for at least 1 second.

- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Shift to N and wait for at least 1 second.
- 3. Shift to any gear other than P or N and wait for at least 1 second.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-81, "Diagnosis Procedure"</u>. NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R		
Check "Self diagnostic result" with CONSULT-III. Refer to PCS-45, "DTC Index".		
Is the inspection result normal?	0	
YES >> GO TO 2	0	
NO >> Repair or replace malfunctioning parts.		
2. CHECK PNP SWITCH CIRCUIT	Р	
1 Turn ignition quitch OFF		

1. Turn ignition switch OFF.

2. Disconnect TCM harness connector and BCM harness connector.

А

В

D

Е

J

SEC

M

INFOID:000000004206052

INFOID:000000004206050

B2603 SHIFT POSITION STATUS

< COMPONENT DIAGNOSIS >

 Check continuity between TCM harness connector F16 (A) terminal 20 and BCM harness connector M18 (B) terminal 48.

ТСМ		BCM		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
A: F16	20	B: M18	48	Yes	

 Check continuity between TCM harness connector F16 (A) terminal 20 and ground.

т	СМ	Ground	Continuity	
 Connector Terminal		Ground	Continuity	
A: F16	20	Ground	No	

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3.CHECK CVT DEVICE POWER SUPPLY

1. Turn ignition switch OFF.

- 2. Disconnect CVT device (park position switch) harness connector.
- 3. Check voltage between CVT device (park position switch) harness connector and ground.

CVT device (park position switch)		Ground	Voltage [V]
Connector	Terminal	Giodila	voltage [v]
M23	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 5

NO >> GO TO 4

4. CHECK CVT DEVICE POWER SUPPLY CIRCUIT

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 84 and CVT device (park position switch) harness connector M23 (B) terminal 8.

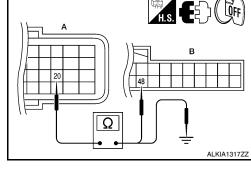
BCM		CVT device (park position switch)		Continuity
Connector	Terminal	Connector Terminal		Continuity
A: M19	84	B: M23	8	Yes

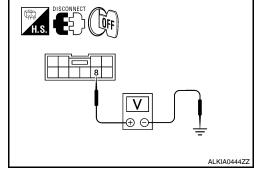
 Check continuity between BCM harness connector M19 (A) terminal 84 and ground.

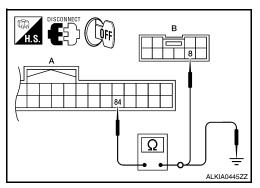
B	CM	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M19	84	Ground	No	

Is the inspection result normal?

- YES >> Replace BCM. Refer to <u>BCS-96, "Removal and Installation"</u>.
- NO >> Repair harness or connector.
- 5. CHECK CVT DEVICE CIRCUIT
- 1. Disconnect BCM harness connector.







[COUPE]

B2603 SHIFT POSITION STATUS

Continuity

< COMPONENT DIAGNOSIS >

2. Check continuity between BCM harness connector M19 (A) terminal 87 and CVT device (park position switch) harness connector M23 (B) terminal 9.

CVT device

(park position switch)

	A
	E
	C
ALKIA0446ZZ]

Connector	Terminal	Connector	Terminal	
A: M19	87	B: M23	9	Yes
3. Check co	ontinuity betwe	een BCM harr	ness connecto	or M19 (A) ter-

minal 87 and ground.

BCM

B	CM	Ground	Continuity
Connector	Connector Terminal		Continuity
A: M19	87	Ground	No

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

6.CHECK CVT DEVICE

Refer to SEC-78, "Component Inspection".

Is the inspection result normal?

- YES >> GO TO 7
- NO >> Replace CVT device. Refer to TM-255, "Removal and Installation" (RE0F09B) or TM-431, "Removal and Installation" (RE0F10A).

7. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

SEC

J

Е

F

Н

Μ

Ν

Ο

Ρ

[COUPE]

B2604 PNP SWITCH

Description

BCM confirms the shift position with the following 4 signals.

- CVT selector lever
- P/N position switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2604	PNP SWITCH	 BCM detects the following status for 500 ms or more when the ignition switch is in the ON position. P/N switch indicates vehicle is in P or N shift position. Signal from TCM indicates vehicle is in forward or reverse gear. P/N switch indicates vehicle is in forward or reverse gear. Signal from TCM indicates vehicle is in P or N. 	 Harness or connectors [The park/neutral position (PNP) switch circuit is open or shorted.] Park/ neutral position (PNP) switch TCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 1 seconds.

- CVT selector lever is in the P position

- Do not depress the brake pedal
- 2. Use CVT selector lever to select each gear one at a time. Wait at each gear for at least 1 second.
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-84, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1. СНЕСК ДТС WITH TCM

Check "Self diagnostic result" with CONSULT-III. Refer to <u>TM-221, "DTC Index"</u> (RE0F09B) or <u>TM-399, "DTC Index"</u> (RE0F10A).

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace malfunctioning parts.

2. CHECK PNP SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect TCM harness connector and BCM harness connector.

INFOID:000000004206053

INFOID:000000004206054

B2604 PNP SWITCH

< COMPONENT DIAGNOSIS >

3. Check continuity between TCM harness connector and BCM harness connector.

T	СМ	BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: F16	20	B: M18	48	Yes

4. Check continuity between TCM harness connector and ground.

т	CM	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: F16	20	Ground	No	

Is the inspection result normal?

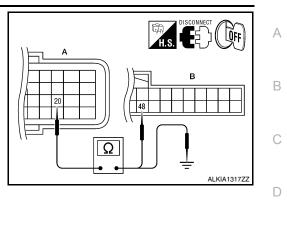
YES >> GO TO 3

NO >> Repair harness or connector.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.



J

Е

F

G

Н

L

Μ

Ν

Ο

Ρ

[COUPE]

B2605 PNP SWITCH

Description

BCM confirms the shift position with the following 4 signals.

- AT selector lever
- · P/N position switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2605	PNP SWITCH	 BCM detects the following status for 500 ms or more when the ignition switch is in ON position N position input signal exists. Shift position signal from IPDM E/R does not exist. N position input signal does not exist. Shift posi- tion signal from IPDM E/R exists. 	 Harness or connectors [The park/neutral position (PNP) switch circuit is open or shorted.] Park/neutral position (PNP) switch IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 1 seconds.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-86, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to PCS-45. "DTC Index".

Is the inspection result normal?

- YES >> GO TO 2
- NO >> Repair or replace malfunctioning parts.

2.CHECK PNP SWITCH CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect TCM harness connector and BCM harness connector.

INFOID:000000004206056

INFOID:000000004206057

INFOID:000000004206058

[COUPE]

B2605 PNP SWITCH

< COMPONENT DIAGNOSIS >

3. Check continuity between TCM connector and BCM harness connector.

T	CM	BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: F16	20	B: M18	48	Yes

4. Check continuity between TCM harness connector and ground.

т	CM	Ground	Continuity
Connector	Connector Terminal		Continuity
A: F16	20	Ground	No

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.



J

SEC

L

Μ

Ν

Ο

Ρ

[COUPE]

А

В

С

D

Е

F

G

Н

B2606 STEERING LOCK RELAY

Description

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID:000000004206060

INFOID:000000004206059

DTC DETECTION LOGIC

NOTE:

- If DTC B2606 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B2606 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2606	STEERING LOCK RELAY	 BCM detects that there is a mismatch between the following statuses. Steering lock unit ON signal transmitted by IPDM E/R The steering lock unit status feedback 	Steering lock relay (in IPDM E/R)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions.
- CVT selector lever is in the P or N position.
- Do not depress the brake pedal.
- 2. Steering is locked.
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-88, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to PCS-45, "DTC Index".

Is the inspection result normal?

- YES >> GO TO 2
- NO >> Repair or replace malfunctioning parts.

2. INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

[COUPE]

B2607 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

B2607 STEERING LOCK RELAY

Description

BCM requests to IPDM E/R to supply power to electronic steering column lock. IPDM E/R sends status of steering lock unit back to BCM.

DTC Logic

INFOID:000000004206063

ALKIA0450ZZ

INFOID:000000004206062

DTC DETECTION LOGIC

NOTE:

- If DTC B2607 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B2607 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37. "DTC Logic"</u>.

DTC No.	Trouble diag name	-	DTC detection	ng condition	Possible cause
B2607	STEERING L RELAY	-OCK	 BCM detects that there is a following statuses. BCM request for electron power supply (ON/OFF) IPDM E/R status of electron power supply (ON/OFF) 	nic steering column lock ronic steering column lock	 Harness or connectors (electronic steering column lock power supply circuit is open or shorted) Steering lock relay (in IPDM E/R)
	IRMATION				
			TION PROCEDURE		
- CVT sele - Do not d 2. Steering 3. Check "S	ector lever is lepress brake lock is locke Self diagnost	s in the e pedal ed.		lowing conditions.	
<u>Is DTC detec</u> YES >> I		<u>-80 "</u> Г	<u>Diagnosis Procedure"</u> .		
	Inspection Er		Jagnosis Procedure.		
NO1					
	Procedur				INFOID:00000004206064
Diagnosis	Procedur	re	R		INFOID:00000004206064
Diagnosis 1.снеск с	Procedur	re PDM E/	R ith CONSULT-III. Refer	to PCS-45, "DTC In	
Diagnosis 1.CHECK D Check "Self o Is the inspec	DTC WITH IP diagnostic re	re PDM E/ esult" w		• to <u>PCS-45, "DTC_In</u>	
Diagnosis 1.CHECK D Check "Self o Is the inspec YES >> 0	DTC WITH IP diagnostic re ction result no GO TO 2	re PDM E/ esult" w ormal?	ith CONSULT-III. Refer	to <u>PCS-45, "DTC_In</u>	
Diagnosis 1.CHECK D Check "Self o Is the inspec YES >> 0 NO >> F	Procedur DTC WITH IP diagnostic re stion result no GO TO 2 Repair or rep	re PDM E/ esult" w ormal? place m	ith CONSULT-III. Refer		dex".
Diagnosis 1.CHECK D Check "Self o Is the inspec YES >> 0 YES >> 0 NO >> F 2.CHECK E	Procedur DTC WITH IP diagnostic re diagnostic re diagnostic re diagnostic re diagnostic re diagnostic re diagnostic re stion result no GO TO 2 Repair or rep	re PDM E/ esult" w ormal? place m C STE	ith CONSULT-III. Refer		dex".
Diagnosis 1.CHECK D Check "Self o Is the inspec YES >> 0 NO >> F 2.CHECK E 1. Turn igni 2. Disconno	DTC WITH IP diagnostic re diagnostic re diagnostic re diagnostic re diagnostic re diagnostic re stion result no ELECTRONIC ition switch C ect electronic	PDM E/ esult" w ormal? blace m C STEE OFF. c steeri	ith CONSULT-III. Refer halfunctioning parts. ERING COLUMN LOCI	K POWER SUPPLY (dex".
Diagnosis 1.CHECK D Check "Self of Is the inspect YES >> 0 NO >> F 2.CHECK E 1. Turn igni 2. Disconno 3. Check v	DTC WITH IP diagnostic re diagnostic re diagnostic re diagnostic re diagnostic re diagnostic re stion result no ELECTRONIC ition switch C ect electronic	re PDM E/ esult" w ormal? olace m C STEE OFF. c steeri veen e	ith CONSULT-III. Refer halfunctioning parts. ERING COLUMN LOCI ing column lock harnes lectronic steering colu	K POWER SUPPLY (dex".
Diagnosis 1.CHECK D Check "Self of Is the inspect YES >> 0 NO >> F 2.CHECK E 1. Turn igni 2. Disconno 3. Check v	Procedur DTC WITH IP diagnostic re diagnostic re diagnostic re diagnostic re stion result no GO TO 2 Repair or rep ELECTRONIC ition switch C ect electronic voltage betw under the foll	re PDM E/ esult" w ormal? olace m C STEE OFF. c steeri veen e	ith CONSULT-III. Refer halfunctioning parts. ERING COLUMN LOCI ing column lock harnes lectronic steering colu	K POWER SUPPLY (dex".
Diagnosis 1.CHECK D Check "Self of Is the inspec YES >> 0 NO >> F 2.CHECK E 1. Turn igni 2. Disconno 3. Check v ground u Electronic stee loc	Procedur DTC WITH IP diagnostic re diagnostic re diagnosti	re PDM E/ esult" w ormal? olace m C STEE OFF. c steeri veen e	ith CONSULT-III. Refer halfunctioning parts. ERING COLUMN LOCI ing column lock harnes lectronic steering colu	K POWER SUPPLY (dex".
Diagnosis 1.CHECK D Check "Self of Is the inspect YES >> 0 NO >> F 2.CHECK E 1. Turn igni 2. Disconno 3. Check v ground u Electronic stee	Procedur DTC WITH IP diagnostic re diagnostic re diagnostic re diagnostic re diagnostic re diagnostic re GO TO 2 Repair or rep ELECTRONIC ition switch C ect electronic voltage betw under the foll	PDM E/ esult" w ormal? blace m C STEE OFF. c steeri veen e lowing	ith CONSULT-III. Refer alfunctioning parts. ERING COLUMN LOCI ing column lock harnes lectronic steering colu conditions.	K POWER SUPPLY (s connector. umn lock and	dex".

Is the inspection result normal?



[COUPE]

С

Е

B2607 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

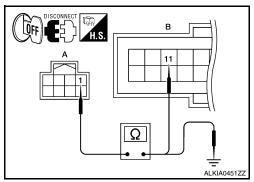
YES >> GO TO 4 NO >> GO TO 3

3. CHECK ELECTRONIC STEERING COLUMN LOCK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R harness connector.
- 3. Check continuity between electronic steering column lock and IPDM E/R harness connector.

	Electronic steering column lock		/I E/R	Continuity
Connector	Terminal	Connector	Terminal	Ť
A: M32	1	B: E18	11	Yes

4. Check continuity between electronic steering column lock and ground.



Electronic stee	ring column lock	Ground	Continuity	
Connector	Connector Terminal		Continuity	
A: M32	1	Ground	No	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation".

NO >> Repair harness or connector.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

B2608 STARTER RELAY

< COMPONENT DIAGNOSIS >

B2608 STARTER RELAY

Description

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000004206066

INFOID:000000004206067

INFOID:000000004206065

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2608	STARTER RELAY	BCM receives starter relay ON signal (CAN) from IPDM E/R even if BCM turns the starter relay OFF	 Harness or connectors (starter relay circuit is open or shorted.) IPDM E/R 	F

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions.
- CVT selector lever is in the P or N position.
- Depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

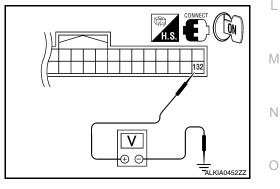
Is DTC detected?

- YES >> Refer to <u>SEC-91</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK STARTER RELAY

- 1. Turn ignition switch ON.
- Check voltage between BCM harness connector and ground under the following condition.



BCM		Ground		Condition	Voltage (V)	
Connector	Terminal	Giouna	Condition		voltage (v)	
			CVT selector lever	N or P position	Battery voltage	
M21	100	132	Ground	Other than above	0	
1012 1	152	Giouna			Not depressed	0
			Clutch pedal	Depressed	Battery voltage	

А

В

Е

Н

SEC

P

B2608 STARTER RELAY

< COMPONENT DIAGNOSIS >

[COUPE]

Is the measurement value within the specification?

YES >> GO TO 3

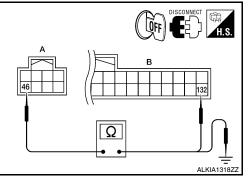
NO >> GO TO 2

2. CHECK STARTER RELAY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector M21 and IPDM E/R harness connector E17.
- 3. Check continuity between IPDM E/R harness connector and BCM harness connector.

IPDN	/IE/R	B	СМ	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: E17	46	B: M21	132	Yes

4. Check continuity between IPDM E/R harness connector and ground.



IPDM E/R		Ground	Continuity
Connector	Connector Terminal		Continuity
A: E17	46	Ground	No

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-48</u>, "Removal and Installation".

NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

< COMPONENT DIAGNOSIS >

B2609 STEERING STATUS

Description

There are 2 switches in the electronic steering column lock (steering lock/unlock switch 1 and 2). BCM compares those two switches conditions to judge the present steering status.

DTC Logic

INFOID:000000004206069

INFOID:000000004206068

DTC DETECTION LOGIC

NOTE:

- If DTC B2609 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B2609 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2609	STEERING STATUS	BCM detects the malfunction of electronic steering column lock switches for 1 second.	 Harness or connectors [electronic steering column lock circuit (BCM side) is open or short- ed] Harness or connectors [electronic steering column lock circuit (IPDM E/R side) is open or shorted.] Electronic steering column lock IPDM E/R

DTC CONFIRMATION PROCEDURE

1 .PERFORM DTC CONFIRMATION PROCEDURE 1	
 Press the push-button ignition switch under the following conditions and wait for at least 1 second. CVT selector lever is in the P position. Do not depress brake pedal 	J
- Steering is locked 2. Check "Self diagnostic result" with CONSULT-III.	SEC
Is DTC detected?	
YES >> Refer to <u>SEC-93, "Diagnosis Procedure"</u> . NO >> GO TO 2	L
2. PERFORM DTC CONFIRMATION PROCEDURE 2	
 Turn ignition switch ON. Turn ignition switch OFF. Press door switch. Check "Self diagnostic result" with CONSULT-III. 	M
Is DTC detected?	Ν
YES >> Refer to <u>SEC-93, "Diagnosis Procedure"</u> . NO >> Inspection End.	0
Diagnosis Procedure	0
1.INSPECTION START	Р
Check the case in which DTC is detected.	

· Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed

Case2: It is detected after ignition switch is changed from ON to OFF

In which case is DTC detected?

Case1 >> GO TO 2 Case2 >> GO TO 7

SEC-93

Е

А

H.S.

< COMPONENT DIAGNOSIS >

[COUPE]

ALKIA0454ZZ

2.CHECK BCM OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect electronic steering column lock harness connector and IPDM E/R harness connector.
- Check voltage between electronic steering column lock harness connector and ground.

Electronic steer	ring column lock	Ground	Voltage [V]
Connector	Connector Terminal		voltage [v]
M32	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4 NO >> GO TO 3

3. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 85 and electronic steering column lock harness connector M32 (B) terminal 3.

B	CM	Electronic stee	ring column lock	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	85	B: M32	3	Yes

 Check continuity between BCM harness connector M19 (A) terminal 85 and ground.

B	CM	Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M19	85	Ground	No

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

4.CHECK IPDM E/R OUTPUT SIGNAL

- 1. Connect IPDM E/R harness connector.
- 2. Disconnect BCM harness connector.

3. Check voltage between electronic steering column lock harness connector and ground.

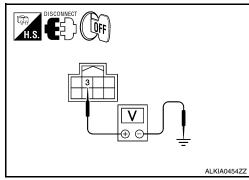
Electronic steer	Electronic steering column lock		Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	3	Ground	Battery voltage

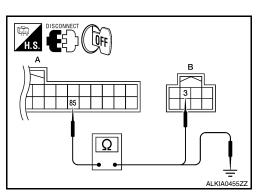
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 5

5. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II





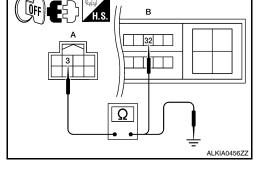
< COMPONENT DIAGNOSIS >

 Check continuity between electronic steering column lock harness connector M32 (A) terminal 3 and IPDM E/R harness connector E18 (B) terminal 32.

Electronic stee	ring column lock	IPD	II E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	3	B: E18	32	Yes

 Check continuity between electronic steering column lock harness connector M32 (A) terminal 3 and ground.

Electronic steer	ring column lock	Ground	Continuity	
Connector	Terminal	Ground		
A: M32	3	Ground	No	



Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

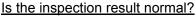
7.CHECK BCM OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect electronic steering column lock harness connector and IPDM E/R harness connector E5.

H.S. 5

Check voltage between electronic steering column lock harness connector and ground.

Electronic steer	ring column lock	Ground	Voltage [V]
Connector	Connector Terminal		voltage [v]
M32	8	Ground	Battery voltage



Is the inspection result normal?

YES >> GO TO 9

NO >> GO TO 8

8. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

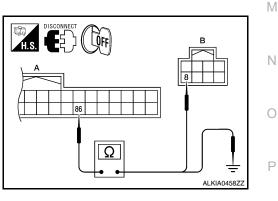
1. Disconnect BCM harness connector M19.

 Check continuity between BCM harness connector M19 (A) terminal 86 and electronic steering column lock harness connector M32 (B) terminal 8.

B	CM	Electronic stee	ring column lock	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	86	B: M32	8	Yes

 Check continuity between BCM harness connector M19 (A) terminal 86 and ground.

В	CM	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M19	86	Ground	No	





J

SEC

ALKIA0457ZZ

SEC-95

[COUPE]

А

В

D

Ε

F

< COMPONENT DIAGNOSIS >

ALKIA0457ZZ

YES >> GO TO 11

NO >> Repair harness or connector.

9.CHECK IPDM E/R OUTPUT SIGNAL

- 1. Connect IPDM E/R harness connector.
- 2. Disconnect BCM harness connector M19.
- 3. Check voltage between electronic steering column lock harness connector and ground.

Electronic steer	Electronic steering column lock		Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	8	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace electronic steering column lock.

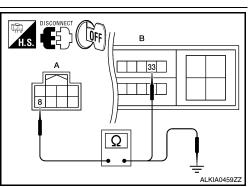
NO >> GO TO 10

10. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

 Check continuity between electronic steering column lock harness connector M32 (A) terminal 8 and IPDM E/R harness connector E18 (B) terminal 33.

Electronic stee	ring column lock	IPDN	/I E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	8	B: E18	33	Yes

2. Check continuity between electronic steering column lock harness connector and ground.



 $\oplus \in$

H.S.

ŨFF

Electronic steering column lock		Ground	Continuity
Connector	Connector Terminal		Continuity
A: M32	8	Ground	No

Is the inspection result normal?

YES >> GO TO 11

NO >> Repair harness or connector.

11.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

B260B STEERING LOCK UNIT

< COMPONENT DIAGNOSIS >

B260B STEERING LOCK UNIT

Description

The steering lock unit performs the check by itself according to the steering status.

DTC Logic

INFOID:000000004206072

INFOID:000000004206071

DTC DETECTION LOGIC

DTC No. Trouble diagnosis name DTC detecting condition Possible cause B200B STEERING LOCK UNIT BCM detects malfunctioning of electronic steering column lock before steering unlocking. • Electronic steering column lock DTC CONFIRMATION PROCEDURE 1.PERFORM DTC CONFIRMATION PROCEDURE • Electronic steering column lock 1. PRES the push-button ignition switch, when steering is locked. • Check "Self diagnostic result" with CONSULT-III. Is DTC detected? YES >> Refer to SEC-97. "Diagnosis Procedure". NO >> Inspection End. • Meoic concounce of the consumer of				
B260B UNIT column lock before steering unlocking. • Electronic steering column lock DTC CONFIRMATION PROCEDURE 1. PERFORM DTC CONFIRMATION PROCEDURE 1. Press the push-button ignition switch, when steering is locked. 2. Check "Self diagnostic result" with CONSULT-III. Is DTC detected? YES >> Refer to SEC-97, "Diagnosis Procedure". NO >> Inspection End. Diagnosis Procedure INFOLE 00000004200073 1. INSPECTION START 1. Turn ignition switch ON. 2. Check "Self diagnostic result" with CONSULT-III. 3. Touch "ERASE". 4. Perform DTC Confirmation Procedure. See SEC-97, "DTC Logic". Is the DTC B260B displayed again? YES >> Replace electronic steering column lock.	DTC No.		DTC detecting condition	Possible cause
1. PERFORM DTC CONFIRMATION PROCEDURE 1. Press the push-button ignition switch, when steering is locked. 2. Check "Self diagnostic result" with CONSULT-III. Is DTC detected? YES >> Refer to SEC-97. "Diagnosis Procedure". NO >> Inspection End. Diagnosis Procedure INFORMOUS ACCOUNTS 1. INSPECTION START Inspection Start 1. Turn ignition switch ON. Check "Self diagnostic result" with CONSULT-III. 3. Touch "ERASE". Perform DTC Confirmation Procedure. See SEC-97. "DTC Logic". Set he DTC B260B displayed again? YES >> Replace electronic steering column lock.	B260B		a a	Electronic steering column lock
 Press the push-button ignition switch, when steering is locked. Check "Self diagnostic result" with CONSULT-III. <u>Is DTC detected?</u> YES >> Refer to <u>SEC-97. "Diagnosis Procedure"</u>. NO >> Inspection End. Diagnosis Procedure INSPECTION START INSPECTION START Check "Self diagnostic result" with CONSULT-III. Touch "ERASE". Perform DTC Confirmation Procedure. See <u>SEC-97. "DTC Logic"</u>. Is the DTC B260B displayed again? YES >> Replace electronic steering column lock. 		IRMATION PROC	EDURE	
 2. Check "Self diagnostic result" with CONSULT-III. Is DTC detected? YES >> Refer to SEC-97. "Diagnosis Procedure". NO >> Inspection End. Diagnosis Procedure INFORCEMENT 1. INSPECTION START 1. Turn ignition switch ON. 2. Check "Self diagnostic result" with CONSULT-III. 3. Touch "ERASE". 4. Perform DTC Confirmation Procedure. See SEC-97. "DTC Logic". Is the DTC B260B displayed again? YES >> Replace electronic steering column lock. 	1.PERFOR	M DTC CONFIRMA	TION PROCEDURE	
YES >> Refer to <u>SEC-97. "Diagnosis Procedure"</u> . NO >> Inspection End. Diagnosis Procedure 1.INSPECTION START 1. Turn ignition switch ON. 2. Check "Self diagnostic result" with CONSULT-III. 3. Touch "ERASE". 4. Perform DTC Confirmation Procedure. See <u>SEC-97. "DTC Logic"</u> . Is the DTC B260B displayed again? YES >> Replace electronic steering column lock.	2. Check "S	Self diagnostic resul		
 1.INSPECTION START 1. Turn ignition switch ON. 2. Check "Self diagnostic result" with CONSULT-III. 3. Touch "ERASE". 4. Perform DTC Confirmation Procedure. See <u>SEC-97, "DTC Logic"</u>. Is the DTC B260B displayed again? YES >> Replace electronic steering column lock. 	YES >> F	Refer to <u>SEC-97, "D</u>	iagnosis Procedure".	
 Turn ignition switch ON. Check "Self diagnostic result" with CONSULT-III. Touch "ERASE". Perform DTC Confirmation Procedure. See <u>SEC-97, "DTC Logic"</u>. Is the DTC B260B displayed again? YES >> Replace electronic steering column lock. 	Diagnosis	Procedure		INFOID:00000004206073
 Check "Self diagnostic result" with CONSULT-III. Touch "ERASE". Perform DTC Confirmation Procedure. See <u>SEC-97, "DTC Logic"</u>. Is the DTC B260B displayed again? YES >> Replace electronic steering column lock. 	1 .INSPECT	ION START		
 Perform DTC Confirmation Procedure. See <u>SEC-97, "DTC Logic"</u>. <u>Is the DTC B260B displayed again?</u> YES >> Replace electronic steering column lock. 	2. Check "S	Self diagnostic resul	t" with CONSULT-III.	
YES >> Replace electronic steering column lock.	4. Perform See <u>SEC</u>	DTC Confirmation		
			teering column lock.	

L

Μ

Ν

Ο

Ρ

SEC-97

[COUPE]

А

В

С

B260C STEERING LOCK UNIT

Description

The electronic steering column lock performs the check by itself according to the steering status.

DTC Logic

INFOID:000000004206075

INFOID:000000004206076

INFOID:000000004206074

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260C	STEERING LOCK UNIT	BCM detects malfunctioning of electronic steering column lock before steering locking.	Electronic steering column lock

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Turn ignition switch OFF.
- 3. Press door switch.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-98, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-98. "DTC Logic"</u>.

Is the DTC B260C displayed again?

- YES >> Replace electronic steering column lock.
- NO >> Inspection End.

B260D STEERING LOCK UNIT

< COMPONENT DIAGNOSIS >

B260D STEERING LOCK UNIT

Description

The electronic steering column lock performs the check by itself according to the steering lock status (before lock, after lock and unlock).

DTC Logic

DTC DETECTION LOGIC

	DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	D
	B260D	STEERING LOCK UNIT	BCM detects malfunctioning of electronic steering column lock after steering locking.	Electronic steering column lock	Е
D	TC CONFI	RMATION PROC	EDURE		
1	PERFORM	I DTC CONFIRMA	TION PROCEDURE		F
1. 2. 3. 4. Is	Turn ignit Press do	elf diagnostic result	" with CONSULT-III.		G
١	(ES >> F		iagnosis Procedure".		Η
D	iagnosis	Procedure		INFOID:00000004206079	
1	.INSPECTI	ON START			I
1. 2. 3.	Check "S Touch "E	RASE".	" with CONSULT-III.	_	J
4. Ie	See <u>SEC</u>	DTC Confirmation -99, "DTC Logic". 260D displayed aga			SE
١	(ES >> F		teering column lock.		L
					Μ

А

С

Ν

Ο

Ρ

B260F ENGINE STATUS

Description

BCM receives the engine status signal from ECM via CAN communication.

DTC Logic

INFOID:000000004206081

INFOID:000000004206082

INFOID:000000004206080

DTC DETECTION LOGIC

NOTE:

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260F	INTERRUPTION OF ENGINE STATUS SIGNAL	BCM is not yet received the engine status signal from ECM when ignition switch is in ON position	• ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-100, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-100, "DTC Logic"</u>.

Is the DTC B260F displayed again?

- YES >> GO TO 2
- NO >> Inspection End.

2.REPLACE ECM

- 1. Replace ECM.
- Refer to <u>EC-1048</u>, "BASIC INSPECTION : Special Repair Requirement" (VQ35DE), <u>EC-24</u>, "BASIC INSPECTION : <u>Special Repair Requirement</u>" (QR25DE California) or <u>EC-560</u>, "BASIC INSPECTION : <u>Special Repair Requirement</u>" (QR25DE except for California).

< COMPONENT DIAGNOSIS >

B2612 STEERING STATUS

Description

There are 2 switches in the steering unit. IPDM E/R compares those 2 switches conditions to judge the present steering status and transmit the result to BCM via CAN communication.

DTC Logic

INFOID:000000004206087

INFOID:000000004206086

DTC DETECTION LOGIC

NOTE:

- If DTC B2612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B2612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37. "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2612	STEERING STA- TUS	 BCM detects the mismatch between the following status for 1 second Steering lock or unlock Feedback of steering lock status from IPDM E/R (CAN) 	 Harness or connectors [steering lock unit circuit (BCM side) is open or shorted] Harness or connectors [steering lock unit circuit (IPDM E/R side) is open or shorted.] Steering lock unit IPDM E/R
TC CONFIRM	ATION PROCED	URE	
.PERFORM D	TC CONFIRMATIO	N PROCEDURE 1	
	sh-button ignition s	witch under the following condition	ns and wait for at least 1 second.

- Do not depress brake pedal.
- Steering is locked.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-101, "Diagnosis Procedure"</u>.

NO	>> GO	TO 2
~		

2.PERFORM DTC CONFIRMATION PROCEDURE 2

- 1. Turn ignition switch ON.
- 2. Turn ignition switch OFF.
- 3. Press door switch.
- Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-101, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed.
- Case2: It is detected after ignition switch is changed from ON to OFF

In which case is DTC detected?

Case1 >> GO TO 2 Case2 >> GO TO 7 2.CHECK BCM OUTPUT SIGNAL

SEC-101

А

Е

J

SEC

L

Μ

Ν

Ρ

< COMPONENT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- 2. Disconnect steering lock unit harness connector and IPDM E/R harness connector.
- 3. Check voltage between steering lock unit harness connector and ground.

Steering lock unit Connector Terminal		Ground	Voltage [V]
		Ground	
M32	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4

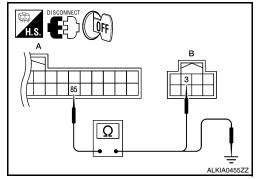
NO >> GO TO 3

3. CHECK STEERING LOCK UNIT CIRCUIT-I

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 85 and steering lock unit harness connector M32 (B) terminal 3.

B	СМ	Steering	lock unit	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	85	B: M32	3	Yes
		50141		

 Check continuity between BCM harness connector M19 (A) terminal 85 and ground.



BCM		Ground	Continuity
 Connector	Terminal	Ground	Continuity
 A: M19	85	Ground	No

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

4.CHECK IPDM E/R OUTPUT SIGNAL

- 1. Connect IPDM E/R harness connector.
- 2. Disconnect BCM harness connector.
- Check voltage between steering lock unit harness connector and ground.

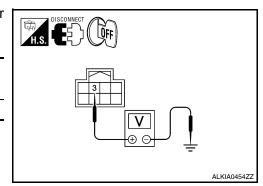
Steering lock unit		Ground	Voltage [V]
Connector	Connector Terminal		voltage [v]
M32	3	Ground	Battery voltage

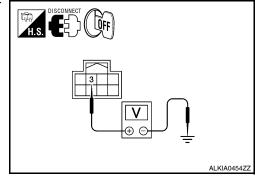
Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 5

5. CHECK STEERING LOCK UNIT CIRCUIT-II





< COMPONENT DIAGNOSIS >

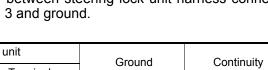
 Check continuity between steering lock unit harness connector M32 (A) terminal 3 and IPDM E/R harness connector E18 (B) terminal 32.

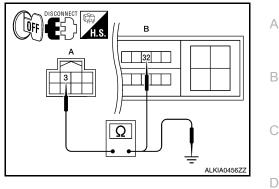
Steering lock unit		IPD	IPDM E/R	
Connector	Terminal	Connector	Terminal	Continuity
A: M32	3	B: E18	32	Yes

 Check continuity between steering lock unit harness connector M32 (A) terminal 3 and ground.

Steering	lock unit	Ground	Continuity	
Connector Terminal		Ground	Continuity	
A: M32	3	Ground	No	

>> Repair harness or connector.





E



F

G

Н

SEC

>> Inspection End.

6.CHECK INTERMITTENT INCIDENT Refer to <u>GI-42, "Intermittent Incident"</u>.

Is the inspection result normal?

>> GO TO 6

YES

NO

7. CHECK BCM OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect steering lock unit harness connector and IPDM E/R harness connector.
- Check voltage between steering lock unit harness connector and ground.

Steering lock unit Connector Terminal		Ground	Voltage [V]
		Ground	voltage [v]
M32	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 9

NO >> GO TO 8

8. CHECK STEERING LOCK UNIT CIRCUIT-I

1. Disconnect BCM harness connector.

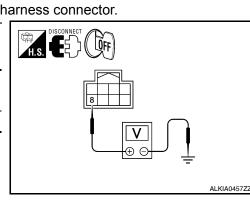
 Check continuity between BCM harness connector M19 (A) terminal 86 and steering lock unit harness connector M32 (B) terminal 8.

BCM		Steering lock unit		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
A: M19	86	B: M32	8	Yes	

 Check continuity between BCM harness connector M19 (A) terminal 86 and ground.

B	СМ	Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M19	86	Ground	No

Is the inspection result normal?



[COUPE]

< COMPONENT DIAGNOSIS >

- YES >> GO TO 11
- NO >> Repair harness or connector.

9.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector.

- 2. Disconnect BCM harness connector.
- Check voltage between steering lock unit harness connector and ground.

Steering	eering lock unit Ground Voltage [V		Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	8	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 10

10. CHECK STEERING LOCK UNIT CIRCUIT-II

 Check continuity between steering lock unit harness connector M32 (A) terminal 8 and IPDM E/R harness connector E18 (B) terminal 33.

Steering	Steering lock unit IPDM E		IPDM E/R	
Connector	Terminal	Connector	Terminal	Continuity
A: M32	8	B: E18	33	Yes

2. Check continuity between steering lock unit harness connector and ground.

				L
Steering	lock unit	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M32	8	Ground	No	

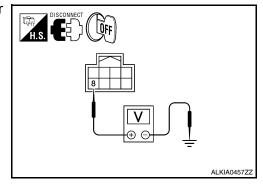
Is the inspection result normal?

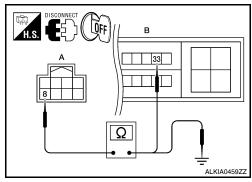
YES >> GO TO 11

NO >> Repair harness or connector.

11. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".





B2617 STARTER RELAY CIRCUIT

< COMPONENT DIAGNOSIS >

B2617 STARTER RELAY CIRCUIT

Description

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000004206090

INFOID:000000004206089

DTC DETECTION LOGIC

NOTE:

- If DTC B2617 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B2617 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37, "DTC Logic"</u>.
- If DTC B2617 is displayed with DTC B2611, first perform the trouble diagnosis for DTC B2611. Refer to <u>PCS-63, "DTC Logic"</u>.
- If DTC B2617 is displayed with DTC B210E, first perform the trouble diagnosis for DTC B210E. Refer to <u>SEC-105, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	G
B2617	STARTER RELAY CIRCUIT	 An immediate operation of starter relay is requested by BCM, but there is no response for more than 1 second BCM is not commanding starter relay activation, but BCM detects starter relay output is active 	 Harness or connectors (Starter relay circuit is open or short- ed.) IPDM E/R 	Н

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-105, "Diagnosis Procedure".

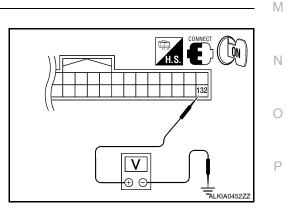
NO >> Inspection End.

Diagnosis Procedure

1.CHECK STARTER RELAY

1. Turn ignition switch ON.

 Check voltage between BCM harness connector and ground under the following condition.



А

В

Ε

F

SEC

B2617 STARTER RELAY CIRCUIT

< COMPONENT DIAGNOSIS >

[COUPE]

BC	M	Ground Transmission type		Condition	Voltage (V)	
Connector	Terminal	Giouna	Transmission type	Condition	voltage (v)	
		CVT: Select lever in Park	Ignition switch cranking or request to start	Battery voltage		
M21	132		Oracinad		Other than above	0
IVIZ I	132	Ground	M/T: Clutch pedal depressed	Ignition switch cranking or request to start	Battery voltage	
			depressed	Other than above	0	

Is the measurement value within the specification.

YES >> GO TO 3

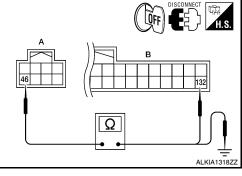
2. CHECK STARTER RELAY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector and IPDM E/R harness connector.
- Check continuity between IPDM E/R harness connector and BCM harness connector.

IPDN	/I E/R	BC	CM	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: E17	46	B: M21	132	Yes

4. Check continuity between IPDM E/R harness connector and ground.

IPDN	II E/R	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: E17	46	Ground	No	



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-96. "Removal and Installation".

NO >> Repair harness or connector.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

B2619 BCM

Description

BCM requests IPDM E/R to supply power to steering lock unit. After receiving the power, the steering lock unit transmits an ON signal to BCM.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2619	BCM	BCM detects a mismatch between the power sup- plied to the steering lock unit and the feedback for one second or more.	• BCM	
DTC CONFI	RMATION PROC	EDURE		
1.PERFORM	M DTC CONFIRMA	TION PROCEDURE		
 CVT sele Do not de Check "S 	ector lever is in the l epress brake pedal Self diagnostic resul	on switch under the following conditions and P position t" with CONSULT-III.	I wait for at least 1 second.	
		<u>Diagnosis Procedure".</u>		
Diagnosis	Procedure		INFOID:00000004206094	
1.INSPECTI	ION START			
		t" with CONSULT-III.		
4. Perform	DTC Confirmation	Procedure.		S
YES >> F	<u>2619 displayed aga</u> Replace BCM. Refe nspection End.	in? r to <u>BCS-96, "Removal and Installation"</u> .		

INFOID:000000004206092

INFOID:000000004206093

А

С

Ο

Ρ

B261A PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

B261A PUSH-BUTTON IGNITION SWITCH

Description

INFOID:000000004206095

ICOUPE1

IPDM E/R transmits the push-button ignition switch status via CAN communication to BCM. BCM receives push-button ignition switch status by hardwire input. BCM compares the 2 signals for mismatch.

DTC Logic

INFOID:000000004206096

DTC DETECTION LOGIC

NOTE:

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B261A	PUSH-BUTTON IGNITION SWITCH	 BCM detects the mismatch between the following for 1 second or more Push-button ignition switch status Push-button ignition switch status from IPDM E/R (CAN) 	 Harness or connectors (Push-button ignition switch circuit is open or shorted) Between BCM and push-button igni- tion switch Between IPDM E/R and push-button ignition switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position
- Do not depress brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-108</u>, "Diagnosis Procedure".
- NO >> Inspection End.

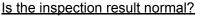
Diagnosis Procedure

INFOID:000000004206097

1. CHECK PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 1

- 1. Turn ignition switch OFF.
- 2. Disconnect push-button ignition switch harness connector and IPDM E/R harness connector.
- 3. Check voltage between push-button ignition switch harness con-
- nector and ground.

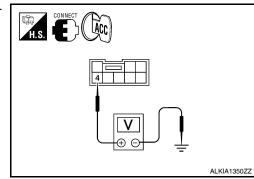
Push-button	ignition switch	Ground	Voltage (V)	
Connector	Terminal	Ground	voltage (v)	
M38	4	Ground	Battery voltage	



YES >> GO TO 4 NO >> GO TO 2

2.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT

1. Disconnect BCM harness connector.



B261A PUSH-BUTTON IGNITION SWITCH

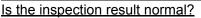
< COMPONENT DIAGNOSIS >

 Check continuity between push-button ignition switch harness connector M38 (A) terminal 4 and BCM harness connector M19 (B) terminal 77.

Push-button	Push-button ignition switch		BCM	
Connector	Terminal	Connector	Terminal	Continuity
A: M38	4	B: M19	77	Yes

3. Check continuity between push-button ignition switch harness connector M38 (A) terminal 4 and ground.

Push-button ignition switch		Ground	Continuity	
Connector	Terminal	Gibund	Continuity	
A: M38	4	Ground	No	



YES >> GO TO 3

NO >> Repair harness or connector.

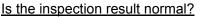
 $\mathbf{3}$.check push-button ignition switch

- 1. Disconnect IPDM E/R harness connector.
- Check continuity between push-button ignition switch harness connector M38 (A) terminal 4 and IPDM E/R harness connector E18 (B) terminal 28.

Push-button	ignition switch	IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M38	4	B: E18	28	Yes

3. Check continuity between push-button ignition switch harness connector and ground.

Push-button ignition switch		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M38	4	Ground	No	



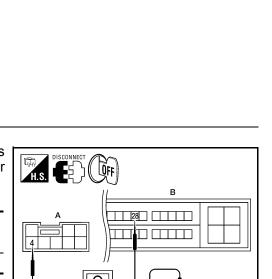
YES >> GO TO 4

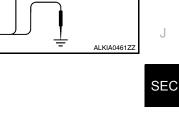
NO >> Repair harness or connector.

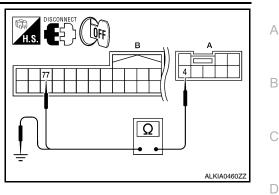
4.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.







[COUPE]

Е

F

Н

L

Μ

Ν

Ο

Ρ

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

< COMPONENT DIAGNOSIS >

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

Description

BCM receives the engine status signal from ECM via CAN communication.

DTC Logic

INFOID:000000004206084

INFOID:000000004206083

DTC DETECTION LOGIC

NOTE:

- If DTC B26E1 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-36, "DTC Logic"</u>.
- If DTC B26E1 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-37, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260F	NO RECEPTION OF ENGINE STATUS SIGNAL	BCM does not receive the engine status signal from ECM when ignition switch is in the ON position	• ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions.
- CVT selector lever is in the P or N position.
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-110</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-110, "DTC Logic"</u>.

Is the DTC B26E1 displayed again?

- YES >> GO TO 2
- NO >> Inspection End.

2.REPLACE ECM

- 1. Replace ECM.
- Refer to <u>EC-1048</u>, "BASIC INSPECTION : Special Repair Requirement" (VQ35DE), <u>EC-24</u>, "BASIC INSPECTION : Special Repair Requirement" (QR25DE California), <u>EC-560</u>, "BASIC INSPECTION : Special Repair Requirement" (QR25DE except California).

>> Inspection End.

INFOID:000000004206085

< COMPONENT			PLY AND GR	ROUND	CIRCUIT [COUPE]	
POWER SUF			ND CIRCUIT	Г	<u> </u>	А
BCM : Diagnos	sis Procedi	ure			INFOID:000000004501377	
1. CHECK FUSE						В
Check if the follow			nk are blown.			С
Terminal No.	Signal nar	ne Fuse	and fusible link No.			
1	Battery power	supply	Н			D
11			10			
Is the fuse or fusib YES >> Repla NO >> GO TO 2. CHECK POWE	ce the blown f O 2	fuse or fusibl	e link after repairir	ing the af	fected circuit.	E
 Turn ignition s Disconnect B0 	witch OFF. CM.		onnector and grou	und.		F
	Terminals					
(+)		(-)	Voltage (Approx.)			Η
BCM Connector	Terminal		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
M16	1	Ground			<u> </u>	
M17	11		Battery voltage	L	ALCIA0025ZZ	
Is the measureme YES >> GO TO NO >> Repai 3. CHECK GROU	O 3 r or replace ha					J SE(
Check continuity b	etween BCM	harness con	nector and ground	id.	顾 人	
BCM Connector M17	Terminal 13	Ground	Continuity			L
Does continuity ex	kist?					1 1 1
YES >> Inspec	ction End. r or replace ha	arness.				Ν
BCM : Special	Ronair Ro	auiromon	t	L	ALCIA0024ZZ	~
	-				INFOID:000000004501378	0

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to BCS-6, "CONFIGURATION (BCM) : Special Repair Requirement".

>> Work End. IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : DiΡ

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

agnosis Procedure

INFOID:000000004501379

1. CHECK FUSES AND FUSIBLE LINK

Check that the following IPDM E/R fuses or fusible link are not blown.

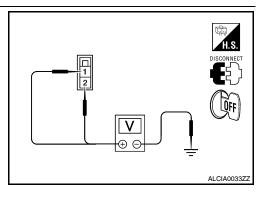
Terminal No.	Signal name	Fuses and fusible link No.
1, 2		B, D
	Battery power supply	42
—		43

Is the fuse blown?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

- NO >> GO TO 2
- 2. CHECK POWER SUPPLY CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R connectors.
- 3. Check voltage between IPDM E/R harness connector and ground.

	Terminals		
(+)		(-)	Voltage (V) (Approx.)
IPDI	IPDM E/R		
Connector	Terminal		
E16	1	Ground	Battery voltage
L 10	2		Dattery Voltage



Is the measurement value normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

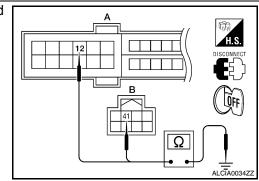
Check continuity between IPDM E/R harness connectors and ground.

IPDM E	E/R		Continuity	
Connector	Terminal	Ground	Continuity	
A: E18	12	Ground	Yes	
B: E17	41		165	

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.



KEY SLOT

< COMPONENT DIAGNOSIS >

KEY SLOT

Diagnosis Procedure

1. CHECK KEY SLOT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.

- 2. Disconnect key slot connector.
- 3. Check voltage between slot connector and ground.

Key slot		Ground	Voltage (V)
Connector	Terminal	Cround	(Approx.)
M40	1	Ground	Battery voltage
10140	5	Gibunu	Dattery Voltage

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace key slot power supply circuit.

2. CHECK KEY SLOT GROUND CIRCUIT

Check continuity between key slot connector and ground.

Кеу	slot	Cround	Continuity	
Connector	Terminal	Ground	Continuity	
M40	7	Ground	Yes	

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace key slot ground circuit.

3. CHECK INTERMITTENT INCIDENT

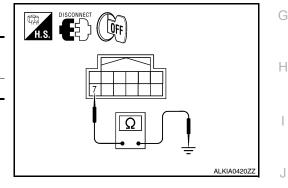
Refer to GI-42, "Intermittent Incident".

>> Inspection End.

А

В

INFOID:000000004206132



L

Μ

Ν

0

Ρ

KEY SLOT ILLUMINATION

< COMPONENT DIAGNOSIS >

KEY SLOT ILLUMINATION

Description

Blinks when Intelligent Key insertion is required.

Component Function Check

1.CHECK FUNCTION

(P) With CONSULT-III

Check key slot illumination ("KEY SLOT ILLUMI") Active Test mode.

Is the inspection result normal?

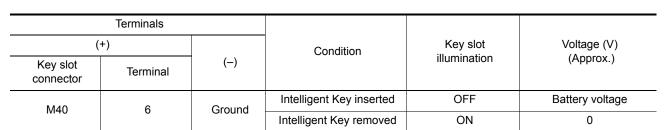
YES >> Key slot function is OK.

NO >> Refer to SEC-114, "Diagnosis Procedure".

Diagnosis Procedure

1. CHECK KEY SLOT ILLUMINATION OUTPUT SIGNAL

Check voltage between key slot connector and ground.



Is the inspection result normal?

YES >> GO TO 6

NO >> GO TO 2

2. CHECK KEY SLOT POWER SUPPLY CIRCUIT

- Turn ignition switch OFF. 1.
- 2. Disconnect key slot connector.
- 3. Check voltage between slot connector and ground.

Terminals			
(+	-)	()	Voltage (V) (Approx.)
Key slot connector	Terminal	(-)	
M40	1	Ground	Battery voltage
10140	5	Ground	Dattery voltage
Is the inspection	result normal?		

YES >> GO TO 3

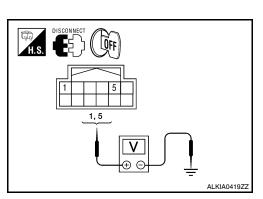
Щ. Н.S.

INFOID:000000004206133

INFOID:000000004206134

INFOID:000000004206135

ALKIA0418ZZ



KEY SLOT ILLUMINATION

< COMPONENT DIAGNOSIS >

NO >> Repair or replace key slot power supply circuit.

3. CHECK KEY SLOT GROUND CIRCUIT

Check continuity between key slot connector and ground.

Key slot connector	Terminal	Cround	Continuity
M40	7	Ground	Yes
Is the inspection	result normal?		

YES >> GO TO 4

NO >> Repair or replace key slot ground circuit.

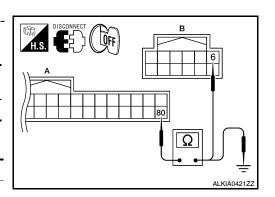
4. CHECK KEY SLOT CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and key slot connector.
- 3. Check continuity between BCM connector and key slot connector.

BCM connec- tor	Terminal	Key slot connector	Terminal	Continuity
A: M19	80	B: M40	6	Yes

4. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
A: M19	80	Ground	No



H.S. DISCONNECT

Is the inspection result normal?

YES >> GO TO 5

NO >> Repair or replace harness between BCM and key slot.

5. CHECK KEY SLOT

	050
Refer to DLK-83, "Component Inspection".	SEC
Is the inspection result normal?	
YES >> GO TO 6	1
NO >> Replace key slot. Refer to <u>SEC-207, "Removal and Installation"</u> .	L
6.CHECK INTERMITTENT INCIDENT	
Refer to GI-42, "Intermittent Incident".	Μ
>> Inspection End.	
	N

0

Ρ

ALKIA0420ZZ

D

Е

F

Н

J

А

В

< COMPONENT DIAGNOSIS >

KEY CYLINDER SWITCH

Description

INFOID:000000004206136

ICOUPE1

For vehicles equipped with LH and RH anti-pinch system, the main power window and door lock/unlock switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signal.

For vehicles equipped with LH anti-pinch system only, the door lock assembly LH (key cylinder switch) transmits the LOCK or UNLOCK signal directly to the BCM.

Component Function Check

INFOID:000000004206137

INFOID:000000004206138

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check KEY CYL UN-SW, KEY CYL UN-SW in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to <u>DLK-276, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)"</u>.

Monitor item	Condition		
KEY CYL LK-SW	Lock	: ON	
KET OTE LK-SW	Neutral / Unlock	: OFF	
KEY CYL UN-SW	Unlock	: ON	
KET CTL UN-SW	Neutral / Lock	: OFF	

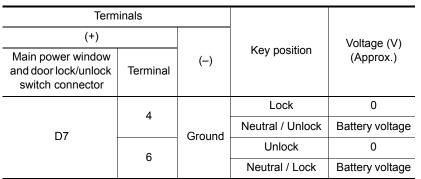
Is the inspection result normal?

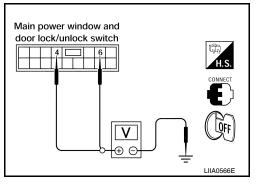
- YES >> Key cylinder switch is OK.
- NO >> With LH and RH anti-pinch, refer to <u>SEC-116. "Diagnosis Procedure (With LH and RH Anti-Pinch)"</u>.
- NO >> With LH anti-pinch only, refer to <u>SEC-117, "Diagnosis Procedure (With LH Anti-Pinch Only)</u>".

Diagnosis Procedure (With LH and RH Anti-Pinch)

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

- 1. Turn ignition switch ON.
- Check voltage between main power window and door lock/ unlock switch connector and ground.





Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-91</u>, "<u>Removal and Instal-</u> <u>lation</u>".

NO >> GO TO 2

2.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect main power window and door lock/unlock switch connector and door lock assembly LH (key cylinder switch) connector.

< COMPONENT DIAGNOSIS >

 Check continuity between main power window and door lock/ unlock switch connector and door lock assembly LH (key cylinder switch) connector.

Main power window and door lock/unlock switch connector	Terminal	Door lock assembly LH (key cylinder switch) connector	Terminal	Continuity
A [.] D7	4	B: D10	6	Yes
A. D1	6	B. 010	5	165

4. Check continuity between main power window and door lock/ unlock switch connector and ground.

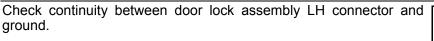
Power window main switch connector	Terminal		Continuity
A: D7	4	Ground	No
	6		INO

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3.CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT



Door lock assembly LH connector	Terminal	Ground	Continuity
D10	4	Ground	Yes

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch. Refer to <u>SEC-118, "Component Inspection"</u>.

Is the inspection result normal?

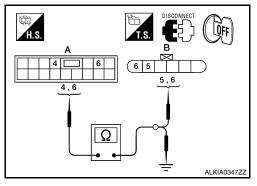
- YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".
- NO >> Replace door lock assembly LH (key cylinder switch). Refer to <u>DLK-222, "FRONT DOOR LOCK :</u> <u>M</u> <u>Removal and Installation"</u>.

Diagnosis Procedure (With LH Anti-Pinch Only)

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

- 1. Turn ignition switch ON.
- 2. Check voltage between BCM connector and ground.

Terminals					
(+)		(-)	Key position	Voltage (V) (Approx.)	
BCM connector	Terminal				
	56			Lock	0
M18			50	Ground	Neutral / Unlock
IVI I O		Ground	Unlock	0	
	54		Neutral / Lock	Battery voltage	



[COUPE]

А

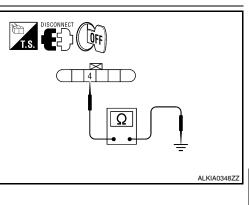
В

D

Е

F

Н





Ν

Ρ

INFOID:000000004206139

ALKIA0349ZZ

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-91, "Removal and Instal-</u> lation".

NO >> GO TO 2

2. CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect door lock assembly LH (key cylinder switch) connector.
- 3. Check continuity between door lock assembly LH (key cylinder
- switch) connector and ground.

Door lock assembly LH con- nector	Terminal	Ground	Continuity
D10	4		Yes

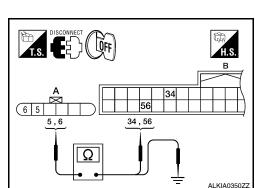
Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

- 1. Disconnect BCM connector M18.
- Check continuity between door lock assembly LH (key cylinder switch) connector D(10) terminals 5, 6 and BCM connector M18 (B) terminals 34, 56.



Main power window and door lock/unlock switch

Door lock assembly LH connector	Terminal	BCM connector	Terminal	Continuity
A: D10	5	B: M18	34	Yes
A. 010	6	D. 1010	56	165

3. Check continuity between door lock assembly LH (key cylinder switch) connector D10 (A) terminals 5, 6 and ground.

Door lock assembly LH connector	Terminal		Continuity
٨٠ ◘ ١٥	5	Ground	No
A: D10	6		NO

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch. Refer to <u>SEC-118</u>, "Component Inspection".

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to <u>GI-42, "Intermittent Incident"</u>.
- NO >> Replace door lock assembly LH (key cylinder switch). Refer to <u>DLK-222, "FRONT DOOR LOCK :</u> <u>Removal and Installation"</u>.

Component Inspection

1.CHECK DOOR KEY CYLINDER SWITCH

INFOID:000000004206140

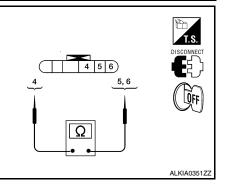
SEC-118

LIIA0566E

< COMPONENT DIAGNOSIS >

Check door lock assembly LH (key cylinder switch).

Term	inal	Key position	Continuity	
Door lock assembly LH (key cylinder switch)		Rey position	Continuity	
5 		Unlock	Yes	
	1	Neutral / Lock	No	
	4	Lock	Yes	
		Neutral / Unlock	No	



Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Replace door lock assembly LH (key cylinder switch). Refer to <u>DLK-222, "FRONT DOOR LOCK :</u> <u>Removal and Installation"</u>.

E

G

Н

А

В

С

D

J

L

Μ

Ν

Ο

Ρ

< COMPONENT DIAGNOSIS >

HORN

Description

Horn (high/low) is located inside of front bumper and operates when theft warning system is in alarm phase.

Component Function Check

1.CHECK FUNCTION

1. Select HORN in "ACTIVE TEST" mode with CONSULT-III.

2. Check the horn (high/low) operation.

T	lest item		Description
HORN	ON	Horn relay	ON (for 20 ms)

Is the operation normal?

YES >> Inspection End. NO >> Refer to <u>SEC-120</u>, "Diagnosis Procedure".

Diagnosis Procedure

1.CHECK HORN FUNCTION

Check horn function with horn switch

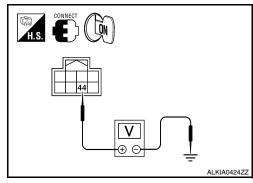
Do the horns sound?

YES >> GO TO 2

NO >> Refer to <u>HRN-3, "Wiring Diagram - Coupe"</u>.

2. CHECK HORN RELAY POWER SUPPLY

- 1. Turn ignition switch ON.
- 2. Perform "ACTIVE TEST" ("HORN") with CONSULT-III.
- 3. Using an analog voltmeter or an oscilloscope, check voltage between IPDM E/R connector E17 terminal 44 and ground.



IPDI	M E/R	Ground Te	Test item	Voltage (V)	
Connector	Terminal	Ground	ON	(Approx.)	
E17	44	Ground	HORN	ON	Battery voltage $\rightarrow 0 \rightarrow$ Battery voltage
	44	Ground	HORN	Other than above	Battery voltage

Is the inspection result normal?

YES >> Repair or replace harness between IPDM E/R and horn relay.

NO >> GO TO 3.

3. CHECK HORN RELAY CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect IPDM E/R and horn relay connector.

INFOID:000000004206141

INFOID:000000004206142

INFOID:000000004206143

IPD	M E/R	Ground	Continuity
 Connector	Terminal	Ground	Continuity
 A: E17	44	Ground	No

Connector

B: H-1

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace IPDM E/R.Refer to PCS-48, "Removal and Installation".

Horn relay

Terminal

1

HORN

Continuity

Yes

>> Repair or replace the malfunctioning part. NO

SEC-121

horn relay harness connector.

Terminal

44

IPDM E/R

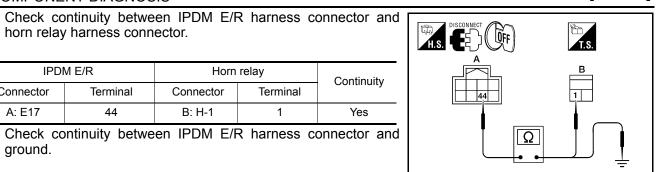
Connector

A: E17

ground.

3.

4.



[COUPE]

ALKIA0425ZZ

А

В

С

D

Е

F

J

SEC

L

Μ

Ν

Ο

Ρ

Н

< COMPONENT DIAGNOSIS >

HEADLAMP

Description

Headlamp lighting when theft warning system is alarm phase.

Component Function Check

1.CHECK HEADLAMP OPERATION

Check if headlamp operate by lighting switch.

Does headlamp come on when turning switch "ON"?

YES >> Headlamp circuit is OK.

NO >> Check headlamp system. Refer to <u>SEC-122, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1.CHECK HEADLAMP OPERATION

Refer to EXL-40, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace.

2. CHECK INTER MITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

Is the inspection result normal?

>> Inspection End.

INFOID:000000004206144

INFOID:000000004206145

INFOID:000000004206146

WARNING LAMP

VVAR			
< COMPONENT DIAGNOSIS >		[COUPE]	
WARNING LAMP			А
Description		INFOID:00000004206147	A
Warning lamp is built in combination meter.Intelligent Key system malfunction is reported to	the driver by the warni	ng lamp illumination.	В
Component Function Check	-	INFOID:00000004206148	
1.CHECK FUNCTION			С
 Perform "INDICATOR" in the "Active Test" mo Check warning lamp operation. 	de with CONSULT-III.		D
Test item		Description	
INDICATOR	Warning lamp	ON	Е
OFF		OFF	
Is the inspection result normal?			F
YES >> Inspection End. NO >> Refer to <u>SEC-123, "Diagnosis Proced</u>	lure".		
Diagnosis Procedure		INFOID:00000004206149	G
1. CHECK "COMBINATION METER."			
Check combination meter function. Refer to MWI-	4. "Work Flow".		Н
Is the inspection result is normal?			
YES >> GO TO 2			
NO >> Repair or replace the malfunctioning p	parts.		1
2. CHECK INTERMITTENT INCIDENT			
Refer to GI-42, "Intermittent Incident".			J

SEC

L

Μ

Ν

Ο

Ρ

>> Inspection End.

VEHICLE SECURITY INDICATOR

< COMPONENT DIAGNOSIS >

VEHICLE SECURITY INDICATOR

Description

- Vehicle security indicator is built in combination meter.
- NVIS (Nissan Vehicle Immobilizer System-NATS) and vehicle security system conditions are indicated by blink or illumination of vehicle security indicator.

Component Function Check

1.CHECK FUNCTION

- 1. Perform "THEFT IND" in the "ACTIVE TEST" mode with CONSULT-III.
- 2. Check vehicle security indicator operation.

Test it	em	Descripti	ion
	ON	Vehicle security indicator	ON
THEFT IND	OFF		OFF

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to <u>SEC-124, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1.CHECK COMBINATION METER

Check combination meter. Refer to MWI-4, "Work Flow".

Is the inspection result is normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

INFOID:000000004206150

INFOID:000000004206151

INFOID:000000004206152

< ECU DIAGNOSIS >

ECU DIAGNOSIS BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status	0
	Other than front wiper switch HI	OFF	
FR WIPER HI	Front wiper switch HI	ON	D
	Other than front wiper switch LO	OFF	_
FR WIPER LOW	Front wiper switch LO	ON	
FR WASHER SW	Front washer switch OFF	OFF	— C
FR WASHER SW	Front washer switch ON	ON	
FR WIPER INT	Other than front wiper switch INT	OFF	F
	Front wiper switch INT	ON	
	Front wiper is not in STOP position	OFF	
FR WIPER STOP	Front wiper is in STOP position	ON	G
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position	
	Other than turn signal switch RH	OFF	Н
TURN SIGNAL R	Turn signal switch RH	ON	
	Other than turn signal switch LH	OFF	
TURN SIGNAL L	Turn signal switch LH	ON	
	Other than lighting switch 1ST and 2ND	OFF	
TAIL LAMP SW	Lighting switch 1ST or 2ND	ON	
	Other than lighting switch HI	OFF	
HI BEAM SW	Lighting switch HI	ON	_
	Other than lighting switch 2ND	OFF	SEC
HEAD LAMP SW 1	Lighting switch 2ND	ON	
	Other than lighting switch 2ND	OFF	_
HEAD LAMP SW 2	Lighting switch 2ND	ON	L
PASSING SW	Other than lighting switch PASS	OFF	
PASSING SW	Lighting switch PASS	ON	M
AUTO LIGHT SW	Other than lighting switch AUTO	OFF	
AUTO LIGHT SW	Lighting switch AUTO	ON	
	Front fog lamp switch OFF	OFF	- N
FR FOG SW	Front fog lamp switch ON	ON	
	Driver door closed	OFF	0
DOOR SW-DR	Driver door opened	ON	
	Passenger door closed	OFF	
DOOR SW-AS	Passenger door opened	ON	P
	Rear door RH closed	OFF	
DOOR SW-RR	Rear door RH opened	ON	
	Rear door LH closed	OFF	_
DOOR SW-RL	Rear door LH opened	ON	

INFOID:000000004501292

А

< ECU DIAGNOSIS >

[COUPE]

Monitor Item	Condition	Value/Status
DOOR SW-BK	NOTE: This item is displayed, but cannot be monitored.	OFF
	Other than power door lock switch LOCK	OFF
CDL LOCK SW	Power door lock switch LOCK	ON
	Other than power door lock switch UNLOCK	OFF
CDL UNLOCK SW	Power door lock switch UNLOCK	ON
	Other than driver door key cylinder LOCK position	OFF
KEY CYL LK-SW	Driver door key cylinder LOCK position	ON
	Other than driver door key cylinder UNLOCK position	OFF
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	ON
KEY CYL SW-TR	NOTE: This item is displayed, but cannot be monitored.	OFF
	When hazard switch is not pressed	OFF
HAZARD SW	When hazard switch is pressed	ON
REAR DEF SW	When rear window defogger switch is pressed	ON
	Trunk lid opener cancel switch OFF	OFF
TR CANCEL SW	Trunk lid opener cancel switch ON	ON
	Trunk lid opener switch OFF	OFF
TR/BD OPEN SW	While the trunk lid opener switch is turned ON	ON
TRNK/HAT MNTR	Trunk lid closed	OFF
	Trunk lid opened	ON
RKE-LOCK	When LOCK button of Intelligent Key is not pressed	OFF
	When LOCK button of Intelligent Key is pressed	ON
RKE-UNLOCK	When UNLOCK button of Intelligent Key is not pressed	OFF
	When UNLOCK button of Intelligent Key is pressed	ON
	When TRUNK OPEN button of Intelligent Key is not pressed	OFF
RKE-TR/BD	When TRUNK OPEN button of Intelligent Key is pressed	ON
RKE-PANIC	When PANIC button of Intelligent Key is not pressed	OFF
	When PANIC button of Intelligent Key is pressed	ON
	When UNLOCK button of Intelligent Key is not pressed and held	OFF
RKE-P/W OPEN	When UNLOCK button of Intelligent Key is pressed and held	ON
	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON
OPTICAL SENSOR	When outside of the vehicle is bright	Close to 5 V
UF HUAL JENJUK	When outside of the vehicle is dark	Close to 0 V
	When driver door request switch is not pressed	OFF
REQ SW-DR	When driver door request switch is pressed	ON
	When passenger door request switch is not pressed	OFF
REQ SW-AS	When passenger door request switch is pressed	ON
	When trunk request switch is not pressed	OFF
REQ SW-BD/TR	When trunk request switch is pressed	ON
	When engine switch (push switch) is not pressed	OFF
PUSH SW	When engine switch (push switch) is pressed	ON

< ECU DIAGNOSIS >

[COUPE]

Monitor Item	Condition	Value/Status
	Ignition switch OFF or ACC	OFF
GN RLY2-F/B	Ignition switch ON	ON
	Ignition switch OFF	OFF
ACC RLY-F/B	Ignition switch ACC or ON	ON
CLUTCH SW	When the clutch pedal is not depressed	OFF
	When the clutch pedal is depressed	ON
BRAKE SW 1	When the brake pedal is not depressed	ON
BRAKE SW 1	When the brake pedal is depressed	OFF
	When selector lever is in P position	OFF
DETE/CANCL SW	When selector lever is in any position other than P	ON
	When selector lever is in any position other than P or N	OFF
SFT PN/N SW	When selector lever is in P or N position	ON
	Electronic steering column lock LOCK status	OFF
S/L-LOCK	Electronic steering column lock UNLOCK status	ON
	Electronic steering column lock UNLOCK status	OFF
S/L-UNLOCK	Electronic steering column lock LOCK status	ON
	Ignition switch OFF or ACC	OFF
S/L RELAY-F/B	Ignition switch ON	ON
UNLK SEN-DR	Driver door UNLOCK status	OFF
	Driver door LOCK status	ON
PUSH SW-IPDM	When engine switch (push switch) is not pressed	OFF
	When engine switch (push switch) is pressed	ON
IGN RLY1 F/B	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
	When selector lever is in P position	OFF
DETE SW -IPDM	When selector lever is in any position other than P	ON
	When selector lever is in any position other than P or N	OFF
SFT PN -IPDM	When selector lever is in P or N position	ON
	When selector lever is in any position other than P	OFF
SFT P-MET	When selector lever is in P position	ON
	When selector lever is in any position other than N	OFF
SFT N-MET	When selector lever is in N position	ON
	Engine stopped	STOP
	While the engine stalls	STALL
ENGINE STATE	At engine cranking	CRANK
	Engine running	RUN
	Electronic steering column lock LOCK status	OFF
S/L LOCK-IPDM	Electronic steering column lock UNLOCK status	ON
	Electronic steering column lock UNLOCK status	OFF
S/L UNLCK-IPDM	Electronic steering column lock LOCK status	ON
	Ignition switch OFF or ACC	OFF
S/L RELAY-REQ	Ignition switch ON	ON
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading

< ECU DIAGNOSIS >

[COUPE]

DOOR STAT-DR Wait Drive Pass DOOR STAT-AS Wait Pass ID OK FLAG Ignit Ignit Ignit PRMT ENG STAT Whe PRMT RKE STAT NOT This KEY SW -SLOT Whe RKE OPE COUN1 Duri RKE OPE COUN2 NOT	en Intelligent Key is not inserted into key slot en Intelligent Key is inserted into key slot en Intelligent Key is inserted into key slot ng the operation of Intelligent Key	LOCK READY UNLK LOCK READY UNLK RESET SET RESET SET RESET OFF ON Operation frequency of Intelligent Key Operation frequency of Intelligent Key
Drive PassDOOR STAT-ASPassDOOR STAT-ASWait PassID OK FLAGIgnit IgnitID OK FLAGIgnit IgnitPRMT ENG STATWhe Whe RKE STATPRMT RKE STATNOT This Whe RKE OPE COUN1RKE OPE COUN2NOT This	er door UNLOCK status senger door LOCK status t with selective UNLOCK operation (5 seconds) senger door UNLOCK status tion switch ACC or ON tion switch OFF en the engine start is prohibited en the engine start is permitted TE: a item is displayed, but cannot be monitored. en Intelligent Key is not inserted into key slot en Intelligent Key is inserted into key slot en Intelligent Key islot	UNLK LOCK READY UNLK RESET SET SET RESET SET OFF ON Operation frequency of Intelligent Key
PassDOOR STAT-ASWaitPassWaitPassIgnitID OK FLAGIgnitIgnitIgnitPRMT ENG STATWhePRMT RKE STATNOTPRMT RKE STATNOTKEY SW -SLOTWheRKE OPE COUN1DuriRKE OPE COUN2NOTThis	senger door LOCK status t with selective UNLOCK operation (5 seconds) senger door UNLOCK status tion switch ACC or ON tion switch OFF en the engine start is prohibited en the engine start is permitted FE: a item is displayed, but cannot be monitored. en Intelligent Key is not inserted into key slot en Intelligent Key is inserted into key slot ing the operation of Intelligent Key FE: a item is displayed, but cannot be monitored. key ID that the key slot receives does not accord with any key	LOCK READY UNLK RESET SET RESET SET RESET OFF ON Operation frequency of Intelligent Key
DOOR STAT-AS Wait Pass ID OK FLAG Ignit Ignit Ignit Ignit PRMT ENG STAT Whe PRMT RKE STAT NOT This KEY SW -SLOT Whe RKE OPE COUN1 Duri RKE OPE COUN2 NOT This	t with selective UNLOCK operation (5 seconds) senger door UNLOCK status tion switch ACC or ON tion switch OFF en the engine start is prohibited en the engine start is permitted TE: a item is displayed, but cannot be monitored. en Intelligent Key is not inserted into key slot en Intelligent Key is inserted into key slot	READY UNLK RESET SET RESET SET OFF ON Operation frequency of Intelligent Key
PassID OK FLAGIgnitIgnitIgnitPRMT ENG STATWhePRMT RKE STATNOTPRMT RKE STATNOTKEY SW -SLOTWheRKE OPE COUN1DuriRKE OPE COUN2NOTThis	senger door UNLOCK status tion switch ACC or ON tion switch OFF en the engine start is prohibited en the engine start is permitted TE: is item is displayed, but cannot be monitored. en Intelligent Key is not inserted into key slot en Intelligent Key is inserted into key slot en Intelligent Key is inserted into key slot ing the operation of Intelligent Key TE: is item is displayed, but cannot be monitored. key ID that the key slot receives does not accord with any key	UNLK RESET SET RESET SET RESET OFF ON Operation frequency of Intelligent Key
ID OK FLAG Ignit Ignit	tion switch ACC or ON tion switch OFF en the engine start is prohibited en the engine start is permitted TE: a item is displayed, but cannot be monitored. en Intelligent Key is not inserted into key slot en Intelligent Key is inserted into key slot re: a item is displayed, but cannot be monitored. key ID that the key slot receives does not accord with any key	RESET SET RESET SET OFF ON Operation frequency of Intelligent Key Operation frequency of Intelligent Key
ID OK FLAG Ignit Ignit PRMT ENG STAT Whe PRMT RKE STAT NOT This KEY SW -SLOT Whe RKE OPE COUN1 Duri RKE OPE COUN2 NOT This	tion switch OFF en the engine start is prohibited en the engine start is permitted TE: sitem is displayed, but cannot be monitored. en Intelligent Key is not inserted into key slot en Intelligent Key is inserted into key slot ing the operation of Intelligent Key TE: sitem is displayed, but cannot be monitored. key ID that the key slot receives does not accord with any key	SET RESET SET RESET OFF ON Operation frequency of Intelligent Key Operation frequency of Intelligent Key
Ignit PRMT ENG STAT Whe PRMT RKE STAT NOT PRMT RKE STAT Whe KEY SW -SLOT Whe RKE OPE COUN1 Duri RKE OPE COUN2 NOT	en the engine start is prohibited en the engine start is permitted TE: sitem is displayed, but cannot be monitored. en Intelligent Key is not inserted into key slot en Intelligent Key is inserted into key slot ng the operation of Intelligent Key TE: sitem is displayed, but cannot be monitored. key ID that the key slot receives does not accord with any key	RESET SET RESET OFF ON Operation frequency of Intelligent Key Operation frequency of Intelligent Key
PRMT ENG STAT Whe PRMT RKE STAT NOT KEY SW -SLOT Whe RKE OPE COUN1 Duri RKE OPE COUN2 NOT	en the engine start is permitted TE: is item is displayed, but cannot be monitored. en Intelligent Key is not inserted into key slot en Intelligent Key is inserted into key slot ing the operation of Intelligent Key TE: is item is displayed, but cannot be monitored. key ID that the key slot receives does not accord with any key	SET RESET OFF ON Operation frequency of Intelligent Key Operation frequency of Intelligent Key
Whe PRMT RKE STAT NOT This KEY SW -SLOT Whe RKE OPE COUN1 Duri RKE OPE COUN2 NOT This	 FE: a item is displayed, but cannot be monitored. an Intelligent Key is not inserted into key slot an Intelligent Key is inserted into key slot ang the operation of Intelligent Key FE: a item is displayed, but cannot be monitored. key ID that the key slot receives does not accord with any key 	RESET OFF ON Operation frequency of Intelligent Key Operation frequency of Intelligent Key
PRMT RKE STAT This KEY SW -SLOT Whe RKE OPE COUN1 Duri RKE OPE COUN2 NOT This This	 item is displayed, but cannot be monitored. en Intelligent Key is not inserted into key slot en Intelligent Key is inserted into key slot ng the operation of Intelligent Key FE: item is displayed, but cannot be monitored. key ID that the key slot receives does not accord with any key 	OFF ON Operation frequency of Intelligent Key Operation frequency of Intelligent Key
KEY SW -SLOT Whe RKE OPE COUN1 Duri RKE OPE COUN2 NO1 This	en Intelligent Key is inserted into key slot ng the operation of Intelligent Key FE: a item is displayed, but cannot be monitored. key ID that the key slot receives does not accord with any key	ON Operation frequency of Intelligent Key Operation frequency of Intelligent Key
RKE OPE COUN1 Duri RKE OPE COUN2 NO1 This	ing the operation of Intelligent Key	Operation frequency of Intelligent Key Operation frequency of Intelligent Key
RKE OPE COUN2 NOT This	FE: sitem is displayed, but cannot be monitored. key ID that the key slot receives does not accord with any key	Operation frequency of Intelligent Key
RKE OPE COUN2 This	item is displayed, but cannot be monitored. key ID that the key slot receives does not accord with any key	
The		
ID re		YET
	key ID that the key slot receives accords with any key ID regis- d to BCM.	DONE
key	key ID that the key slot receives does not accord with the fourth ID registered to BCM.	YET
	key ID that the key slot receives accords with the fourth key ID stered to BCM.	DONE
key	key ID that the key slot receives does not accord with the third ID registered to BCM.	YET
	key ID that the key slot receives accords with the third key ID stered to BCM.	DONE
ond	key ID that the key slot receives does not accord with the sec- key ID registered to BCM.	YET
	key ID that the key slot receives accords with the second key egistered to BCM.	DONE
kev	key ID that the key slot receives does not accord with the first ID registered to BCM.	YET
	key ID that the key slot receives accords with the first key ID stered to BCM.	DONE
TP 4	ID of fourth key is not registered to BCM	YET
The	ID of fourth key is registered to BCM	DONE
TP 3	ID of third key is not registered to BCM	YET
The	ID of third key is registered to BCM	DONE
TP 2	ID of second key is not registered to BCM	YET
	ID of second key is registered to BCM	DONE
TP 1	ID of first key is not registered to BCM	YET
The	ID of first key is registered to BCM	DONE
AIR PRESS FL Ignit	tion switch ON (only when the signal from the transmitter is re- ed)	Air pressure of front LH tire
AIR PRESS FR	tion switch ON (only when the signal from the transmitter is re- ed)	Air pressure of front RH tire

< ECU DIAGNOSIS >

[COUPE]

Monitor Item	Condition	Value/Status	
AIR PRESS RR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear RH tire	
AIR PRESS RL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear LH tire	
ID REGST FL1	When ID of front LH tire transmitter is registered	DONE	
ID REGST FLT	When ID of front LH tire transmitter is not registered	YET	
	When ID of front RH tire transmitter is registered	DONE	
ID REGST FR1	When ID of front RH tire transmitter is not registered	YET	
	When ID of rear RH tire transmitter is registered	DONE	
ID REGST RR1	When ID of rear RH tire transmitter is not registered	YET	
	When ID of rear LH tire transmitter is registered	DONE	
ID REGST RL1	When ID of rear LH tire transmitter is not registered	YET	
	Tire pressure indicator OFF	OFF	
WARNING LAMP	Tire pressure indicator ON	ON	
	Tire pressure warning alarm is not sounding	OFF	
BUZZER	Tire pressure warning alarm is sounding	ON	

Н

J

SEC

L

Μ

Ν

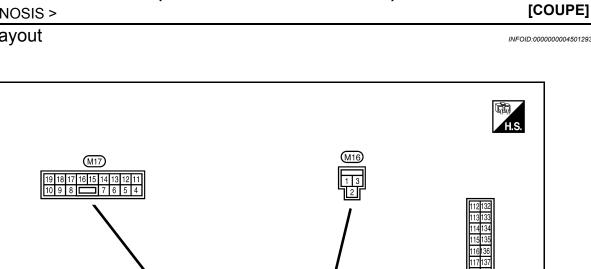
0

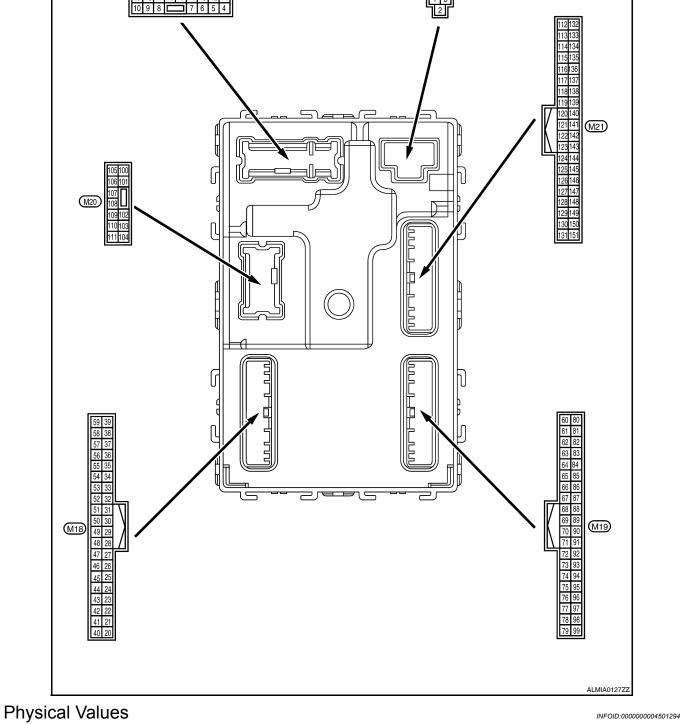
Ρ

< ECU DIAGNOSIS >

Terminal Layout

INFOID:000000004501293





< ECU DIAGNOSIS >

Term	inal No.	Description				
	e color) (-)	Signal name	Input/ Output		Condition	Value (Approx.)
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OF	F	Battery voltage
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON	I	Battery voltage
4	Ground	Interior room lamp	Output	After passing the ir er operation time	nterior room lamp battery sav-	0V
(P/W)	Ground	power supply	Output	Any other time after lamp battery save	er passing the interior room roperation time	Battery voltage
5	Cround	Front door RH UN-	Outout	Front door RH	UNLOCK (actuator is activated)	Battery voltage
(G/Y)	Ground	LOCK	Output		Other than UNLOCK (actuator is not activated)	0V
7	Cround	Ston Jamp	Outout	Stop Jomp	ON	0V
(R/W)	Ground	Step lamp	Output	Step lamp	OFF	Battery voltage
8	8 Ground All doors LOCK Or	Output	All doors	LOCK (actuator is activat- ed)	Battery voltage	
(V)		All doors LUCK	Output		Other than LOCK (actuator is not activated)	0V
9	9	Front door LH UN-	Output	Front door LH	UNLOCK (actuator is activated)	Battery voltage
(G)	Ground	LOCK			Other than UNLOCK (actuator is not activated)	0V
10 ¹	Ground	Rear door RH and rear door LH UN-	Output	Rear door RH and rear door LH	UNLOCK (actuator is activated)	Battery voltage
(G/Y)	Ground	LOCK	Output		Other than UNLOCK (actuator is not activated)	0V S
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
13 (B)	Ground	Ground		Ignition switch ON	I	٥V
					OFF	0V
14 (R/Y)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	ON	NOTE: When the illumination brighten- ing/dimming level is in the neutral position (V) 10 0 2 ms
15	0				OFF	Battery voltage
-	(Y/L) Ground ACC	ACC indicator lamp	Output	Ignition switch	ACC or ON	0V

< ECU DIAGNOSIS >

[COUPE]

	inal No.	Description				Value
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
					Turn signal switch OFF	0V
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 0 1 1 1 1 1 1 5 0 1 1 5 0 1 1 5 0 1 5 0 1 1 5 1
					Turn signal switch OFF	0V
18 (G/Y)	Ground	Turn signal (LH)	Output	lgnition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s 1 s PKID0926E 6.5 V
19	Ground	Room lamp timer	Output	Interior room	OFF	Battery voltage
(Y)	0.04.14	control	Carpar	lamp	ON	0V
21 (P/B)	Ground	Optical sensor signal	Input	Ignition switch ON	When outside of the vehi- cle is bright When outside of the vehi-	Close to 5V
					cle is dark	Close to 0V
22 (R/Y)	Ground	Clutch interlock switch	Input	Clutch interlock switch	OFF (clutch pedal is not depressed) ON (clutch pedal is de-	0V
					pressed)	Battery voltage
24 (R/W)	Ground	Stop lamp switch 1	Input		_	Battery voltage
26	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (brake pedal is not de- pressed)	0V
(O/L)					ON (brake pedal is de- pressed)	Battery voltage
27 (G/W)	Ground	Front door lock as- sembly LH (unlock sensor)	Input	Front door LH	LOCK status	(V) 15 0 0 10 ms JPMIA0011GB 11.8V
					UNLOCK status	0V
29	Ground	Key slot switch	Input	When Intelligent Key is inserted into key slot		Battery voltage
(Y)	Croand		mpor	When Intelligent K	ey is not inserted into key slot	0V
30	Ground	ACC feedback signal	Input	Ignition switch	OFF	0
(V/Y)	-	U -		-	ACC or ON	Battery voltage

< ECU DIAGNOSIS >

[COUPE]

	inal No.	Description				Value	٨
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	A
31	Ground	Rear window defog-	Input	Rear window de-	OFF	0V	В
(G)	Ground	ger feedback signal	Input	fogger switch	ON	Battery voltage	D
32 (R/B)	Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes)	(V) 15 10 5 0 10 ms 10 ms 11.8 V	C
					ON (when front door RH opens)	0V	E
33	Ground	Compressor ON sig-	Input	A/C switch	OFF	5V	F
(SB)	Ground	nal	Input	A/C Switch	ON	0V	
34 ²	<u> </u>	Front door lock as-		Front door lock	OFF (neutral)	5V	
(L/R)	Ground	sembly LH (key cylin- der switch) (unlock)	Input	assembly LH (key cylinder switch)	ON (unlock)	0V	G
36 ²	Cround		lanut	Door lock/unlock	Lock	Battery voltage	
(GR)	Ground	Lock switch signal	Input	switch	Unlock	0V	Н
37 (O)	Ground	Trunk lid opener can- cel switch	Input	Trunk lid opener cancel switch	CANCEL	(V) 15 10 5 0 10 ms JPMIA0012GB 1.1V	J
					ON	0V	SEC
38		Rear window defog-		Rear window de-	OFF	5V	
(GR/ W)	Ground	ger ON signal	Input	fogger switch	ON	0V	I
39 ²					Unlock	Battery voltage	L
(GR/	Ground	Unlock switch signal	Input	Door lock/unlock switch	Lock	0V	
R)					2001		M
40 ³ (Y/G)	Ground	Power window serial link	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10 ms JPMIA0013GB	N
						10.2V	
				Ignition switch OF		0V	Ρ
41	Ground	Engine switch (push	Output	Engine switch (push switch) illu-	ON	5.5V	
(W)	Cround	switch) illumination	Juiput	mination	OFF	0V	
40				LOCK indicator	ON	0V	
42 (R)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF	Battery voltage	

< ECU DIAGNOSIS >

	inal No.	Description				Value	
(+)	e color) (-)	Signal name	Input/ Output	Condition		(Approx.)	
45 (P)	Ground	Receiver & sensor ground	Input	Ignition switch ON		0V	
46 (V/W)	Ground	Receiver & sensor power supply output	Output	Ignition switch	OFF ACC or ON	0V 5.0V	
47 Ground	Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0 + 0.2s OCC3881D		
(G/O)	Giouna	er signal	Output	ON	When receiving the signal from the transmitter	(V) 6 4 2 0 ••• 0.25	
48	Ground	Selector lever P/N	Input	Selector lever	P or N position	12.0V	
(R/G)		position signal			Except P and N positions	0V 0V	
49 (L/O)	Ground	Security indicator sig- nal	Output	Security indicator	ON Blinking	(V) 15 10 5 0 15 15 15 15 15 15 15 15 15 15	
					OFF	Battery voltage	
50 (LG/ B)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Lighting switch 1ST Lighting switch high-beam Lighting switch 2ND	0V (V) 15 0 5 0 2 ms J J J J J J J J J J J J J	

< ECU DIAGNOSIS >

(Wire color) Input/ Condition	Value A
	(Approx.)
(+) (-) Output All switch OFF OV	В
51 (L/W) Ground Combination switch OUTPUT 1 Output Combination switch Combination switch Combination Switch Combination Switch Any of the conditions below with all switch OFF (V) (Wiper intermittent dial 4) (V) (V) 10 51 (L/W) Combination OUTPUT 1 Combination Switch May of the conditions below with all switch OFF 10 0 Wiper intermittent dial 1 0 10 10 0 Wiper intermittent dial 3 10 10 0 Wiper intermittent dial 3 10 10	→ → → → → → → → → → → → → → → → → → →
All switch OFF (Wiper intermittent dial 4)	E
Front washer switch ON (Wiper intermittent dial 4) (V)	F
52 (G/B) Ground Combination switch OUTPUT 2 Output Combination switch Any of the conditions below with all switch OFF 10 5 0 • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	JPMIA0033GB
All switch OFF 0V	10.7V
Front wiper switch INT	
Front wipor owitch LO (V)	۱ ۱
53 (LG/ R) Ground Combination switch OUTPUT 3 Output Combination switch (Wiper intermit- tent dial 4) From when switch LO 15 10 5 0 10 Suitch 10 10 10 10 10 10 10 10 10 10 10 10 10 1	JPMIA0034GB
	10.7V SEC
All switch OFF 0V	
Front fog lamp switch ON	L
Combination	
54 (G/Y)Combination switch OUTPUT 4OutputSwitch (Wiper intermit-Lighting switch flash-to- pass10 5 0	
tent dial 4) Turn signal switch LH	2 ms ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
ETODI DIOWEL MO-	y voltage
(BR/ Ground Front blower monitor Input Front blower mole tor switch OFF 0V	0
56 ² Cround combled by (low adia line) Front door lock OFF (neutral) 5V	
So Ground sembly LH (key cylin- der switch) (lock) Input assembly LH (key cylinder switch) ON (lock) 0V	Р
57 (W)GroundTire pressure warn- ing check switchInput—5V	

< ECU DIAGNOSIS >

	inal No.	Description		a		Value	
(vvire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	
58 (SB)	Ground	Front door LH switch	Input	Front door LH switch	OFF (front door LH CLOSE)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V	
					ON (front door LH OPEN)	0V	
59 (G/R)	Ground	Rear window defog- ger relay	Output	Rear window de- fogger	Active Not activated	Battery voltage 0V	
60	Ground	Front console anten- na 2 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB	
(B/R)	Ground				When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB	
61	Ground	Ground Center console an- tenna 2 (+)		Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB	
(W/R)			Output		When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB	

< ECU DIAGNOSIS >

	inal No.	Description				Value	٥
	e color)	Signal name	Input/ Output		Condition	(Approx.)	А
(+) 62 ⁴	(-)	Front outside handle	Output	When the front door RH request	When Intelligent Key is in the antenna detection area	(V) 15 0 1 s JMKIA0062GB	B C D
(B/Y)	Ground	RH antenna (-)		switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	E F G
63 ⁴	63 ⁴ Ground Front ou	Front outside handle	Output	tput When the front door RH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 0 1 s JMKIA0062GB	H
(LG)		RH antenna (+)			When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	J SEC
64 ⁴	Ground	Front outside handle LH antenna (-)	Output	When the front door LH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JJKIA0062GB	M
(V)	Ground				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	O P

< ECU DIAGNOSIS >

	ninal No. e color)	Description		Condition		Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
65 ⁴	Ground	Front outside handle LH antenna (+)	Output	When the front door LH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(P)	Ground				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
66	Ground	Instrument panel an- tenna (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
(R)	Ground				When Intelligent Key is not in the passenger compart- ment	(V) 15 0 5 0 1 s JMKIA0063GB
67	Ground	Ground Instrument panel an- tenna (+)		utput Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
(G)			Cutput		When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB

< ECU DIAGNOSIS >

[COUPE]

Terminal No.		Description				Value	
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	A
68 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelli- gent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	В
69 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelli- gent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	С
70 (R/B)	Ground	Ignition relay-2 con- trol	Output	Ignition switch	OFF or ACC ON	0V Battery voltage	D
71	71	Remote keyless entry	Input/	During waiting		(V) 15 10 5 0 1 1 ms JMKIA0064GB	E
(L/O)	Ground	receiver signal	Output	When operating e	ither button on Intelligent Key	(V) 15 10 5 0 1 ms JMKIA0065GB	G H I
		Combination switch INPUT 5	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4V	J SEC
75 (R/Y)	Ground				Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3V	M
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 10 0 2 ms JPMIA0040GB 1.3V	P

< ECU DIAGNOSIS >

[COUPE]

	inal No.	Description				Value	
(VVire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	
					All switch OFF (Wiper intermittent dial 4)	(V) 15 0 2.ms JPMIA0041GB 1.4V	
76	Ground	Combination switch	Input	Combination	Lighting switch high-beam (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0036GB 1.3V	
(R/G)		INPUT 3		switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3V	
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	(V) 15 10 5 2 ms JPMIA0040GB 1.3V	
77	Cround	Engine switch (push	lanut	Engine switch	Pressed	0V	
(BR)	Ground	switch)	Input	(push switch)	Not pressed	Battery voltage	
78 (P)	Ground	CAN-L	Input/ Output		_	_	
79 (L)	Ground	CAN-H	Input/ Output		_	_	
80 (R/L)	Ground	Key slot illumination	Output	Key slot illumina- tion	OFF Blinking	0V	
					ON	Battery voltage	

< ECU DIAGNOSIS >

[COUPE]

	inal No.	Description				Value
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
81			0.1.1		OFF or ACC	0V
(LG)	Ground	ON indicator lamp	Output	Ignition switch	ON	Battery voltage
83	Ground	ACC relay control	Output	Ignition switch	OFF	0V
(L)	Giodila	Acc relay control	Output	Ignition switch	ACC or ON	Battery voltage
84 (Y/R)	Ground	CVT device	Output		_	Battery voltage
85		Electronic steering	1	Electronic steer-	Lock status	0V
(L/O)	Ground	column lock condition No. 1	Input	ing column lock	Unlock status	Battery voltage
86	0	Electronic steering	1. 1	Electronic steer-	Lock status	Battery voltage
(G/R)	Ground	column lock condition No. 2	Input	ing column lock	Unlock status	0V
87	Ground	Selector lever P posi-	Input	Selector lever	P position	0V
(G/B)	Ground	tion switch	Input		Any position other than P	Battery voltage
					ON (pressed)	0V
88 ⁴ (P/L)		Input	Front door RH re- quest switch	OFF (not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB 1.0V	
					ON (pressed)	OV
89 ⁴ (B/W)	Ground	Front door LH re- quest switch	Input	Front door LH re- quest switch	OFF (not pressed)	(V) 15 0 10 10 10 10 10 10 10 10 10
90	Ground	Blower fan motor re-	Output	Ignition switch	OFF or ACC	0V
(Y)	Ground	lay control	Supul	ignition switch	ON	Battery voltage
91 (L/R)	Ground	Remote keyless entry receiver power sup- ply	Output	Ignition switch OF	F	Battery voltage
94	Ground	Steering wheel lock	Output	Ignition switch	OFF or ACC	Battery voltage
(G/Y)	Ground	unit power supply	Supul	ignition switch	ON	0V

Ρ

< ECU DIAGNOSIS >

	inal No.	Description				Value	
(vvire (+)	e color) (-)	Signal name	Input/ Output	Condition		(Approx.)	
					All switch OFF	(V) 15 0 2 ms 10 2 ms 10 10 10 10 10 10 10 10 10 10 10 10 10	
					Turn signal switch LH	(V) 15 0 2 ms 1.3V	
95 (R/W)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 0 2 ms JPMIA0036GB 1.3V	
					Front wiper switch LO	(V) 15 0 0 2 ms JPMIA0038GB 1.3V	
					Front washer switch ON	(V) 15 0 2 ms JPMIA0039GB 1.3V	

< ECU DIAGNOSIS >

[COUPE]

Terminal No. (Wire color)		Description				Value	Δ
(VVire (+)	e color) (-)	Signal name	Input/ Output	Condition		(Approx.)	A
96 (P/B)	Ground	Combination switch INPUT 4	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	(V) 15 0 2.ms JPMIA0041GB 1.4V	B C D
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0038GB 1.3V	E
					Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0036GB 1.3V	G H I
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3V	J SEC

M

Ν

0

< ECU DIAGNOSIS >

	inal No.	Description		Condition		Value (Approx.)	
(Wire (+)	e color) (-)	Signal name Input/ Output					
	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	(V) 15 0 2 ms JPMIA0041GB 1.4V	
					Lighting switch flash-to- pass	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3V	
97 (R/B)					Lighting switch 2ND	(V) 15 0 2 ms JPMIA0036GB 1.3V	
					Front wiper switch INT	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3V	
					Front wiper switch HI	(V) 15 10 0 2 ms JPMIA0040GB 1.3V	
					Pressed	0 V	
98 (G/O)	Ground	Hazard switch	Input	Hazard switch	Not pressed	(V) 15 10 10 10 10 10 10 10 10 10 10	

< ECU DIAGNOSIS >

[COUPE]

	inal No.	Description				Value	^		
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	A		
					LOCK status	Battery voltage	В		
99 (L/Y)	Ground	Electronic steering column lock unit com- munication	Input/ Output	Electronic steer- ing column lock	LOCK or UNLOCK	(V) 15 10 50 50 ms JMKIA0066GB	C		
					For 15 seconds after UN- LOCK	Battery voltage	E		
					15 seconds or later after UNLOCK	0V			
103	Ground	Trunk lid opening	Output	Trunk lid	Open (trunk lid opener ac- tuator is activated)	Battery voltage	F		
(V)	Ground	Trunk ild opening	Output		Close (trunk lid opener ac- tuator is not activated)	0V	G		
110	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0V			
(V/W)	Giouna	папр	Output	Trank toom amp	OFF	Battery voltage	Н		
114		Rear parcel shelf an-		Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 0 1 s JMKIA0062GB	J		
(B)	Ground	tenna 1 (-)	Output	OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 0 10 1 s JMKIA0063GB	SEC L		

Ν

0

Ρ

< ECU DIAGNOSIS >

	inal No. e color)	Description				Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
115	Ground	Rear parcel shelf an-	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
(W)		tenna 1 (+)	Culput	OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 1 1 1 5 0 1 1 5 0 1 1 5 0 1 1 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1
118 ⁴			When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB		
(L/O)		na (-)	Culput	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 1 1 1 5 0 1 5 1 5 0 1 5 1 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1
119 ⁴ (BR/	Ground	Rear bumper anten-	Output	When the trunk lid request switch	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(BR/ W)	Siduid	na (+)	Cutput	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB

< ECU DIAGNOSIS >

Term	inal No.	Description				Value		
·	e color) (-)	Signal name	Input/ Output		Condition	Value (Approx.)	А	
(+) 127	(-)		Output		OFF or ACC	Potton (voltage		
(BR/ W)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	ON ON	Battery voltage 0V	В	
130 (Y/G)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	(V) 15 10 5 0 •••••••••••••••••••••••••••••	C	
						JPMIA0011GB 11.8V	Е	
					ON (trunk is open)	0V		
				lgnition switch OFF (M/T vehi-	When the clutch pedal is depressed	Battery voltage	F	
				cle)	When the clutch pedal is not depressed	0V		
132 (R)	Ground	Starter motor relay control	Output	Ignition switch ON (other than M/	When selector lever is in P or N position and the brake is depressed	Battery voltage	G	
				T vehicle)	When selector lever is in P or N position and the brake is not depressed	0V	Η	
					ON (pressed)	0V	1	
141 (G/R)	Ground	Trunk request switch	Input	Trunk request switch	OFF (not pressed)	(V) 15 10 5 10 10 ms JPMIA0016GB 1.0V	J SEC	
144 ⁴		Intelligent Key warn-	_	Request switch	Sounding	0V	L	
(GR)	Ground	ing buzzer	Output	buzzer	Not sounding	Battery voltage		
144 ⁵		Outside warning		Outside warning	Sounding	0V		
(GR)	Ground	buzzer	Output	buzzer	Not sounding	Battery voltage	Μ	
147	Ground	Trunk lid opener	Input	Trunk lid opener	Pressed	0V		
(L/R)	Gibuilu	switch	input	switch	Not pressed	Battery voltage	Ν	
148 ¹ (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V	O P	
					ON (when rear door RH opens)	0V		

< ECU DIAGNOSIS >

[COUPE]

	inal No.	Description				Value
	e color)	Signal name	Input/ Output		Condition	(Approx.)
(+)	(-)		Output		1	
149 ¹ (R/B)	Ground	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes)	(V) 15 10 50 10 ms JPMIA0011GB 11.8V
					ON (when rear door LH opens)	ΟV

1: Sedan only

2: With LH front window anti-pinch

3: With LH and RH front window anti-pinch

4: With Intelligent Key

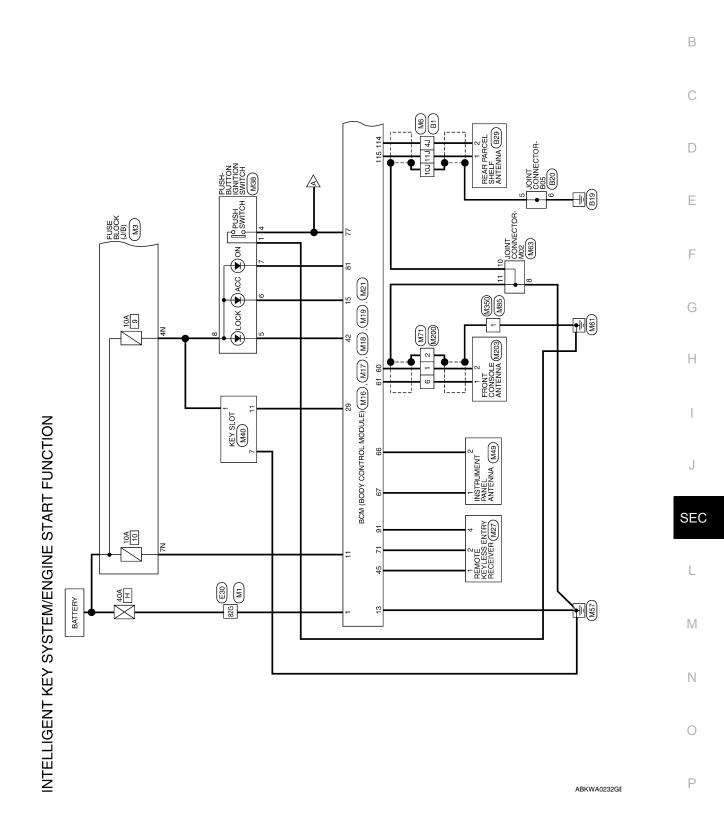
5: Without Intelligent Key

< ECU DIAGNOSIS >

[COUPE]

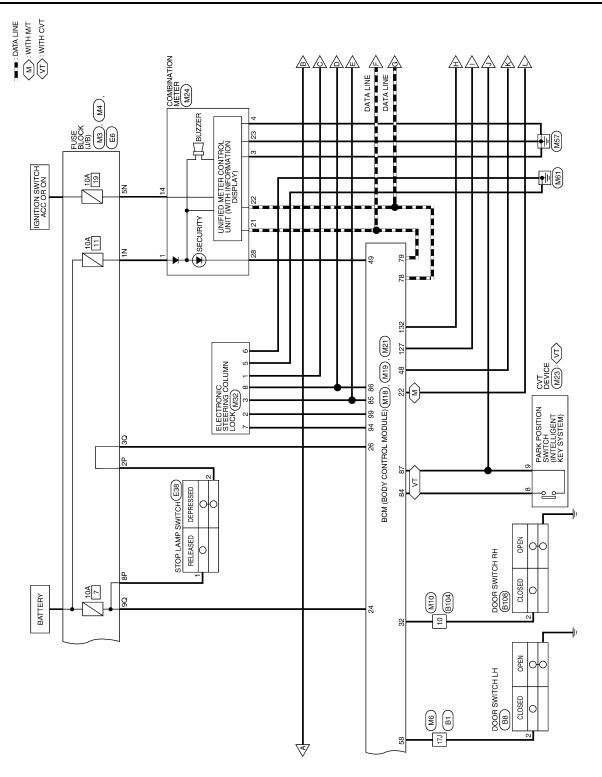
А





< ECU DIAGNOSIS >

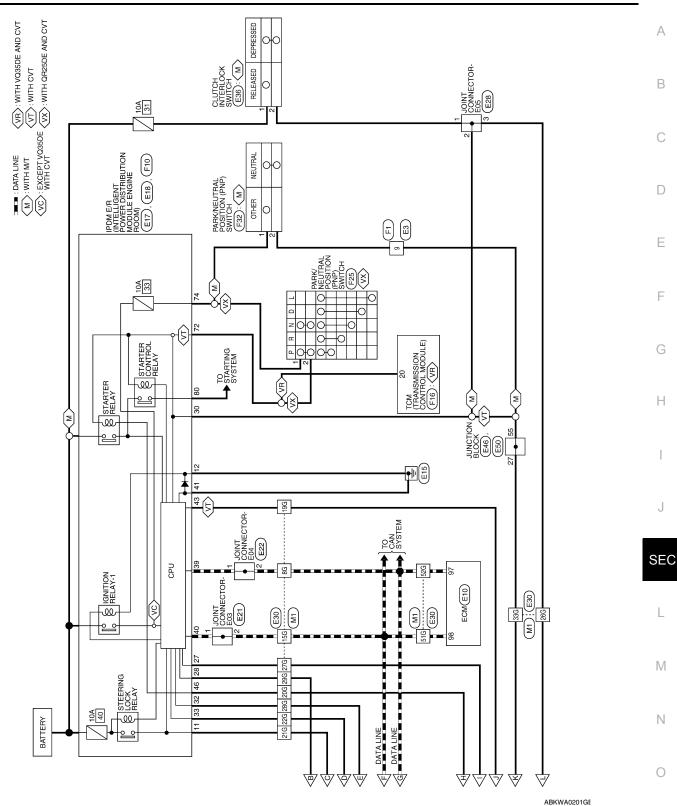
[COUPE]



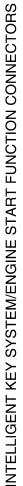
ABKWA0200GE

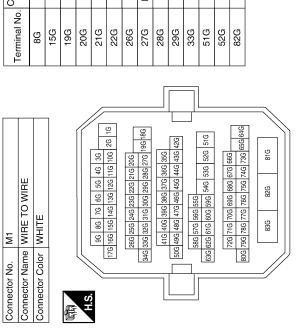
< ECU DIAGNOSIS >

[COUPE]



Ρ





Signal Name	I	1	I	I	I	I	I	I	I	I	I	I	I	
Color of Wire	٩	_	≻	щ	P/L	G/R	RУ	BR/W	۲0	BR	R/G	_	Ч	W/B
minal No.	8G	15G	19G	20G	21G	22G	26G	27G	28G	29G	33G	51G	52G	82G

Connector Name FUSE BLOCK (J/B) 3N 2N 1N 8N 7N 6N 5N 4N Connector Color WHITE Connector No. M3 佢

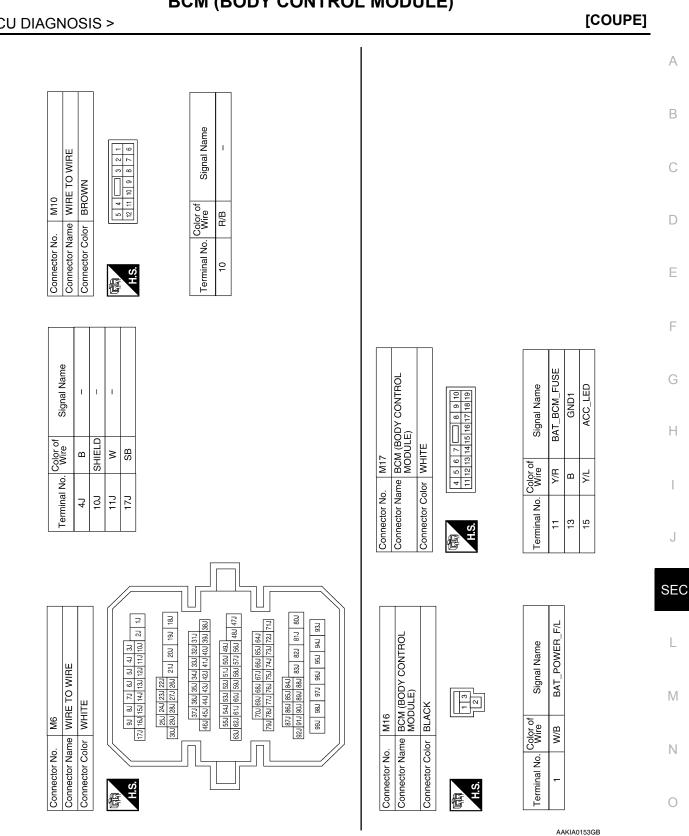
H.S.

	Signal Name	I	I	I	I
]	Color of Wire	W/L	G/Y	۲/Y	Y/R
	Terminal No. Color of	٩N	4N	5N	N∠





Signal Name	I	I	
Color of Wire	O/L	R/W	
Terminal No.	30	06	



< ECU DIAGNOSIS >

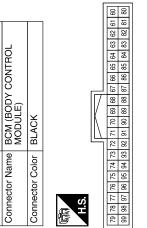
SEC-153

Ρ

[COUPE]

							[13 112	33 132						
_	BCM (BODY CONTROL	MODULE)	AY				R	23 122 121 120 119 118 117 116 115 114 113 112	151 150 148 148 147 146 145 144 143 142 141 140 138 138 157 136 135 134 133 132		Signal Name	TRUNK_ANT_1_B	TRUNK_ANT_1_A	IGN_USM_CONT1	ST_CONT_USM
M21		ğ	or GR/					26 125 124 1	46 145 144 1	olor of	Wire	В	M	BR/W	в
Connector No.	Connector Name		Connector Color GRAY	4		H.S.		131 130 129 128 127 126 125 124 123 122	151 150 149 148 147 1		Terminal No.	114	115	127	132
	le	SIGNAL	RT_SW			LED	E_OUT	TION_1	TION_2	٩	SUPPLY	12V	INE		
	olgnal Name	RF1_TUNER_SIGNAL	ENG_START_SW	CAN-L	CAN-H	IGN_ON_LED	AT_DEVICE_OUT	S/L_CONDITION_1	S/L_CONDITION_2	SHIFT_P	RF1_POWER_SUPPLY	S/L POWER SUPPLY 12V	S/L K-LINE	I	
Color of	Wire	Г/О	BB	٩	_	ГG	Y/R	2	G/R	G/B	L/R	G/Y	Z	- - 1	
	No													1	

Signal Name	RF1_TUNER_SIGNAL	ENG_START_SW	CAN-L	CAN-H	IGN_ON_LED	AT_DEVICE_OUT	S/L_CONDITION_1	S/L_CONDITION_2	SHIFT_P	RF1_POWER_SUPPLY	S/L_POWER SUPPLY_12V	S/L_K-LINE	
Color of Wire	D/J	ВВ	٩	Γ	ГG	Y/R	L/O	G/R	G/B	L/R	G/Y	Γ	
Terminal No.	11	17	78	62	81	84	85	86	87	91	94	66	



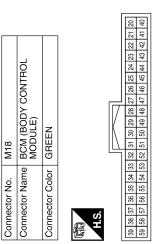
M19

Connector No.

Signal Name	ROOM_ANT_2_B	ROOM_ANT_2_A	ROOM_ANT_1_B	ROOM_ANT_1_A
Color of Wire	B/R	W/R	щ	G
Terminal No. Color of	60	61	66	67

ABKIA0644GB

Signal Name	CLUTCH_SW	STOP_LAMP_LOW_SW	STOP_LAMP_HIGH_SW	FOB_IN_SW	AS_DOOR_SW	S/L_LOCK_LED	GND_RF2_A/L	SHIFT_N/P	IMMO_LED	DR_DOOR_SW
Color of Wire	R/Y	R/W	O/L	٢	R/B	В	Р	R/G	Г/О	SB
Terminal No.	22	24	26	29	32	42	45	48	49	58



BCM (BODY CONTROL MODULE)	

< ECU DIAGNOSIS >

Signal Name

Color of Wire W/L

Terminal No.

Connector Name COMBINATION METER

Connector Name CVT DEVICE Connector Color WHITE

M23

Connector No.

Connector No. M24

Connector Color WHITE

H.S.H E

H.S. E

BAT GND GND

m m

ო 4

-

SECURITY

20

GND

۵. m

28 53 55 54 58 53 55 54

Signal Name

Color of Wire

Terminal No.

_

ACC CAN-H CAN-L

≿

14

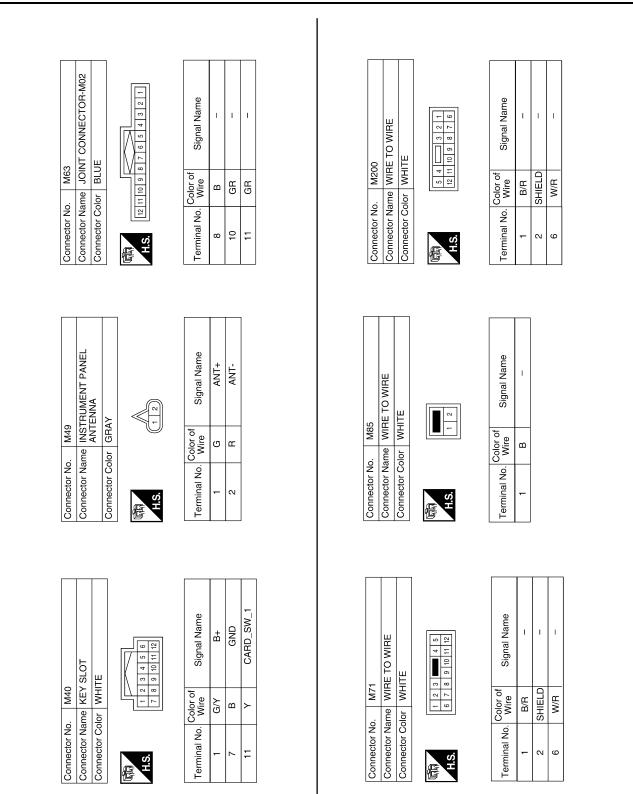
[COUPE]

28 LO SECURITY Connector No. M38 Connector Name PUSH-BUTTON IGNITION Connector Name PUSH-BUTTON IGNITION Connector Name PUSH-BUTTON IGNITION Terminal No. WitcH 1 B 5 R 7 LG 8 G/Y 8 G/Y	
28 1 3 3 4 1 3 3 4 1 <	
28 1 1 3 3 3 3	
F	
Connector No. M32 Connector No. M32 Connector Name ELECTRONIC STEERING Terminal No. Write 1 P/L 2 L/Y 3 L/O 6 B 6 S/L_12V_MECHANICAL 7 G/N 6 S/L_2CONDITION_1 7 S/L_12V_CPU (V2) 8 G/N	
H H H H	
Color of Col	
Connector No. Connector No. Connector Name Connector Color 3 1 7 6 8 6 2 1 7 6 8 6 7 6 8 6 7 7 7 7 6 8 6 7 7 7 7 7 7 7 7 7 7 7 7 7	
SEC	
R DETENT_KEV_SW M27 M27 M27 Signal Name e Signal Name 0 Signal Name 12V 12V	

Ρ

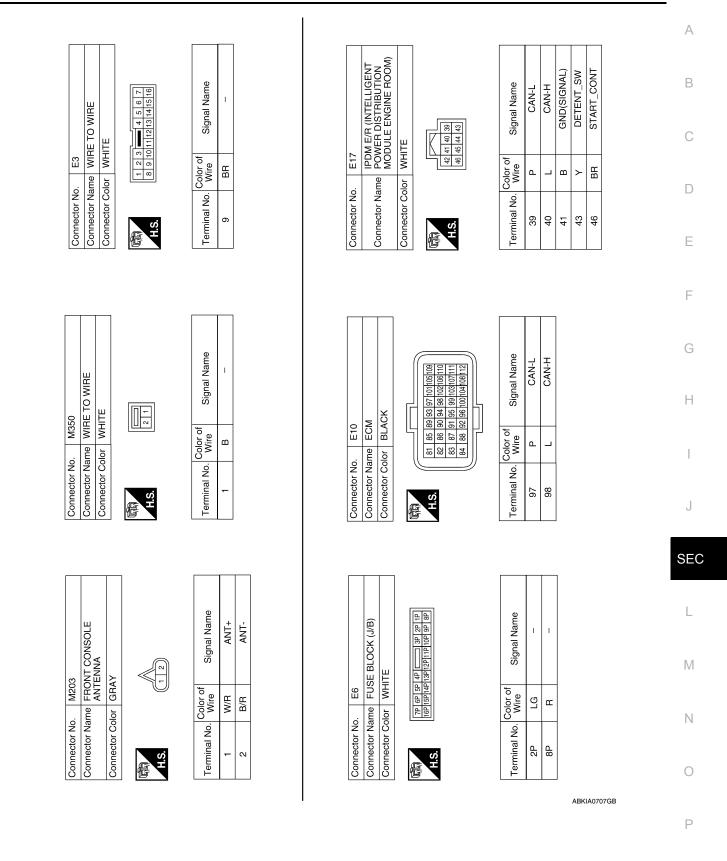
SIS >

[COUPE]



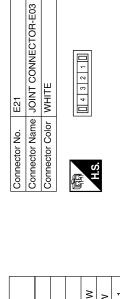
ABKIA0788GB

< ECU DIAGNOSIS >



< E

ECU	DIAGNOSIS >	



Signal Name	ESCL	GND(POWER)	IGN_SIGNAL	PUSH_START_SW	CLUTCH_I/L_SW	SL_CONDITION_1	SL_CONDITION_2	
Color of Wire	11	12	27	28	30	32	33	
Terminal No. Wire	0	В	M	SB	н	Ъ	ŋ	

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Connector Name Connector Color

E18

Connector No.

WHITE

Ή.S Æ

			1
5	38	36	
	37	35	
	2526272829 3031323334	15 16 17 18 19 20 21 22 23 24	-
			Ŀ.
	14	80	
	10 11 12 13	7	
	12	9	
	÷	5	
		4	
	6	ю	
			J

Connector No. Connector Name	Connector No. E22 Connector Name JOINT CONNECTOR-E04
Connector Color WHITE	WHITE
献 H.S.	

Connector Name JOINT CONNECTOR-E05 WHITE

Connector Color

Connector No. E28

4 3 2 1 1	Signal Name
	Color of Wire
际可 H.S.	Terminal No.

μ			
[]
Signal Name	I	-	
or of lire		<u>م</u>	

-N

3 2 1	Signal Name	
4	Color of Wire	
品. H.S.	Terminal No.	

Signal Name	-	-	-
Color of Wire	н	В	н
Terminal No.	-	2	3

		Signal Name
WHITE		Color of Wire
olor		<u>లి</u> >
Connector Color WHITE	赋词 H.S.	Terminal No.

Γ

T. I

_

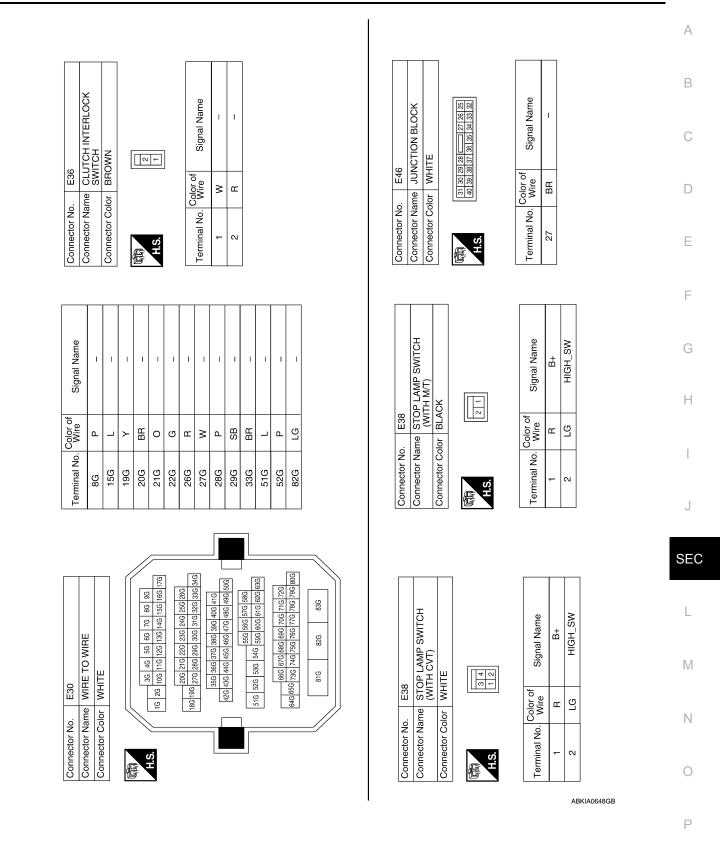
-N

ABKIA0647GB



< ECU DIAGNOSIS >

[COUPE]



SEC-159

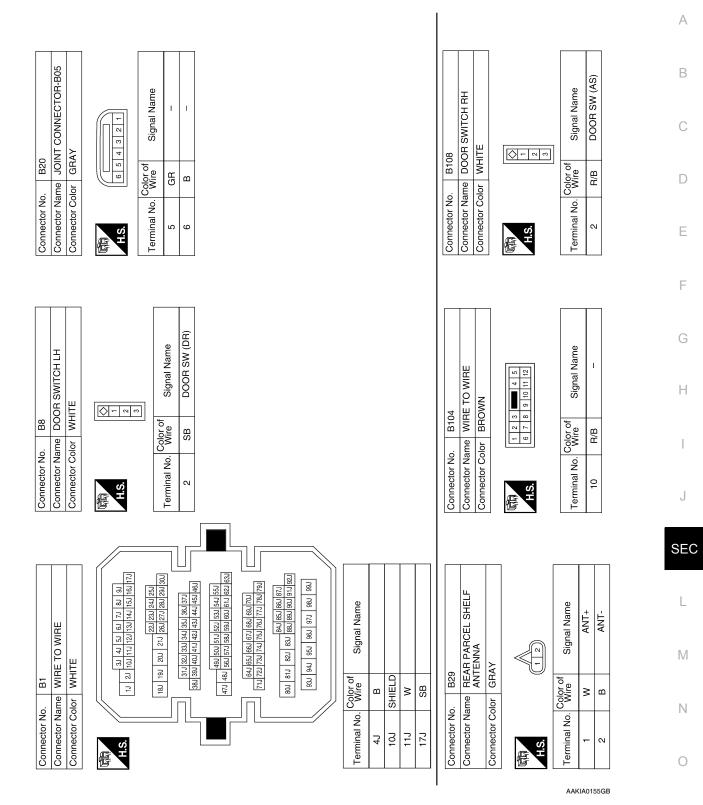
< ECU DIAGNOSIS >

Connector No. F10 Connector Name PDW E/R (INTELLICENT Connector Name MODULE ENGINE ROOM) Connector Color WHITE	53 54 55 56 57 58 47 48 49 50 51 52 59 50 51 52 59 79 80	Terminal No. Color of Wire Signal Name 72 R/B NPSW 74 Y START_IG_EGI 80 B/W STARTER_MOTOR	Connector No. F32 Connector Name PARK/NEUTRAL POSITION Connector Color BLACK	H.	Terminal No. Color of Wire Signal Name 1 Y - 2 R/B -
Connector No. F1 Connector Name WIRE TO WIRE Connector Color WHITE Image: State of the state of		Terminal No. Color of Wire Signal Name 9 R/B -	Connector No. F25 Connector Name PARK/NEUTRAL POSITION Connector Color BLACK	B 4 3 7 H.S.	Terminal No. Color of Wire Signal Name 1 Y IGN_P_N 2 R/B P_N_OUTPUT
Connector No. E50 Connector Name JUNCTION BLOCK Connector Color WHITE MS 56 55		Terminal No. Color of Wire Signal Name 55 R/B -	Connector No. F16 Connector Name CONTROL MODULE) Connector Color BLACK	31 32 33 35 37 38 30 41 48 11 12 13 14 16 17 18 19 20 43 44 46 1 2 3 4 5 6 7 8 9 10 41 42	Terminal No. Color of Signal Name 20 R/B ST_RLY

ABKIA0649GB



[COUPE]



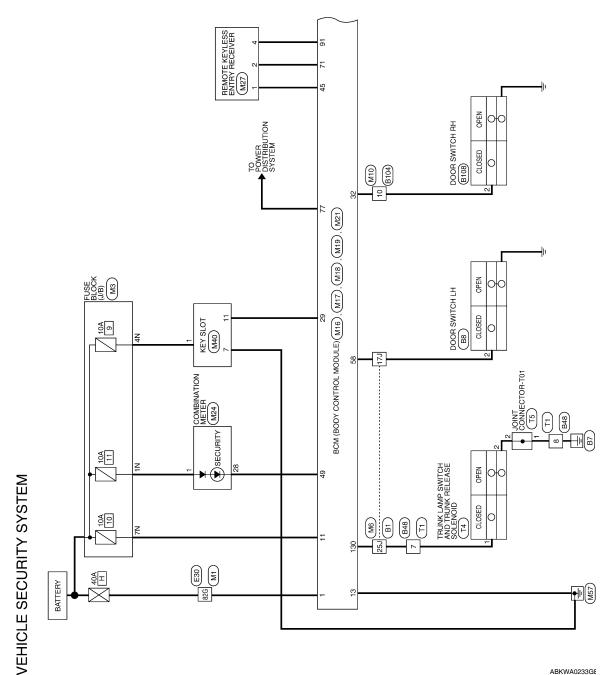
Ρ

< ECU DIAGNOSIS >

Wiring Diagram - VEHICLE SECURITY SYSTEM -

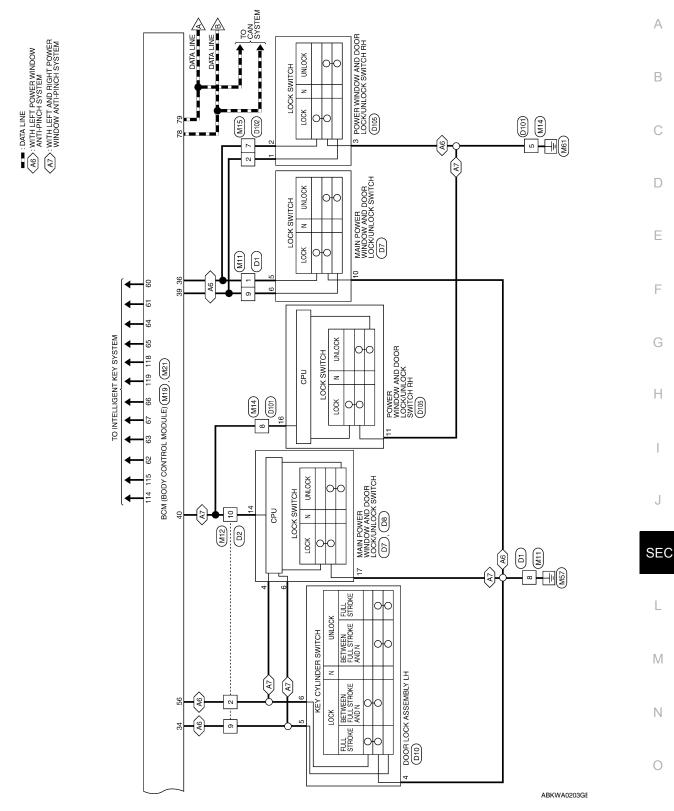


[COUPE]

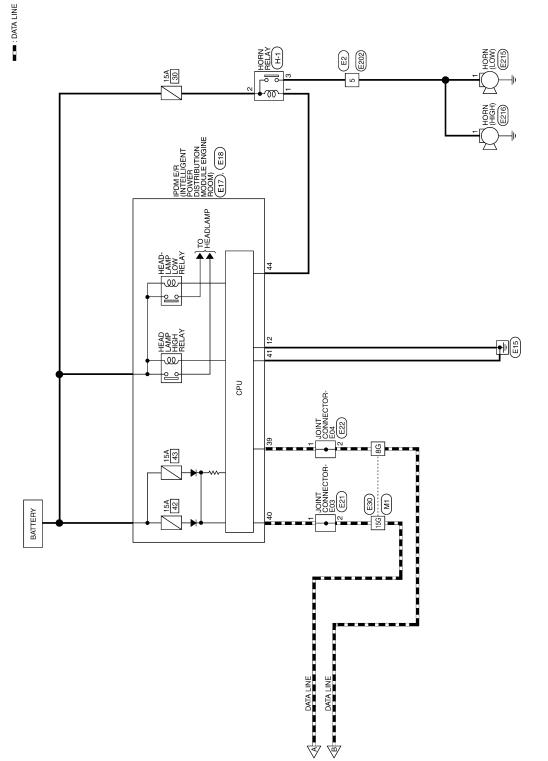


ABKWA0233GE

< ECU DIAGNOSIS >

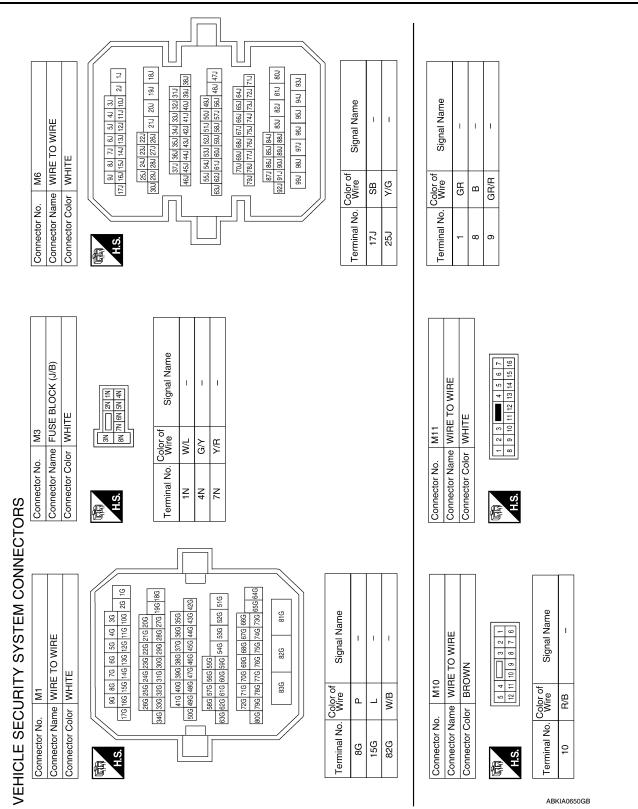






ABKWA0217GE

< ECU DIAGNOSIS >



Р

0

[COUPE]

А

В

С

D

Ε

F

Н

J

SEC

L

Μ

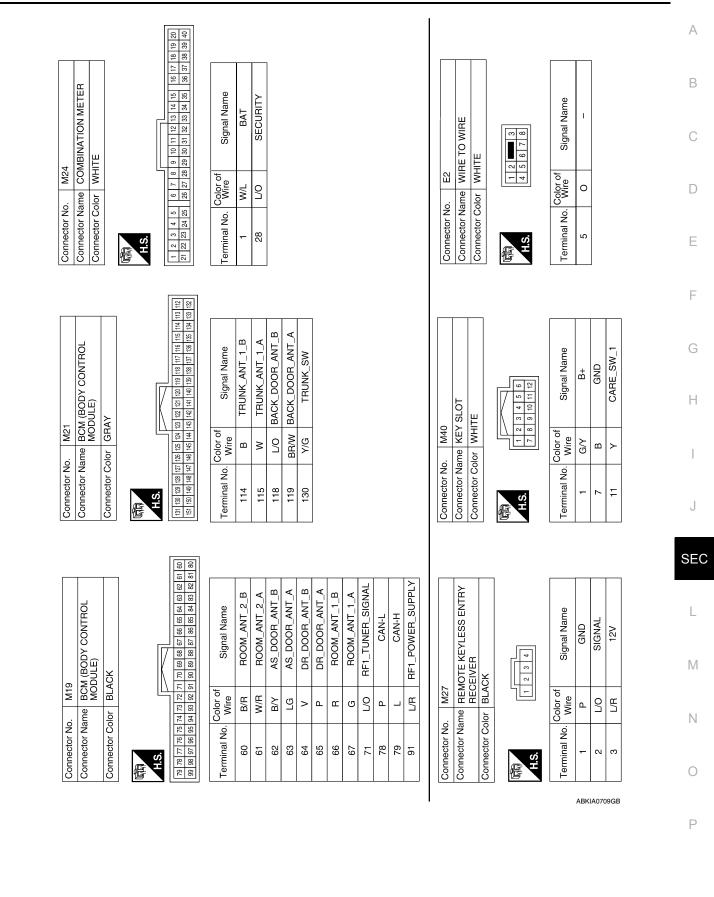
Ν

Connector No. M15 Connector Name WIRE TO WIRE Connector Color WHITE	7 8 9 10 11 12	al No. Color of Signal Name	GR –	GR/R –		tor No. M18	Connector Name BCM (BODY CONTROL MODULE)	Connector Color GREEN		36 53 54 53 22 31 30 29 28 27 26 23 24 23 22 21 20 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40	I No. Color of Signal Name	Y FOB_IN_SW_1	R/B AS_DOOR_SW	L/R DOOR_KEY/CUNLOCK_SW	GR CENTRAL_LOCK_SW	GR/R CENTRAL_UNLOCKSW	Y/G PW_K-LINE	P GND_RF2_A/L	L/O IMMO_LED	
Connector No. Connector Nar Connector Col	品. H.S.	Terminal No.	N	7		Connector No.	Connect	Connect	中 H.S.	39 38 37 3 59 58 57 3	Terminal No.	29	32	34	36	36	40	45	49	56
E TO WIRE TE	7 8 9 10	Signal Name	1	I			BCM (BODY CONTROL MODULE)	LE	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 10		Signal Name	BAT_BCM_FUSE	GND1							
M14 Me WIRE T	1 2 5 6	Color of Wire	в	Y/G		. M17		lor WHITE	4 5 6 7 11 12 13 14		Color of Wire	Y/R	в							
Connector No. M14 Connector Name WIRE TO WIRE Connector Color WHITE	中 H.S.	Terminal No.	5	8		Connector No.	Connector Name	Connector Color	S.H		Terminal No.	11	13							
) WIRE	5 6 7 8 13 14 15 16	Signal Name	1	1	I		BCM (BODY CONTROL MODULE)				Signal Name	BAT_POWER_F/L								
	9 10 11 12 1	Color of Wire	L/B	L/R	٨/G	M16					Color of Wire	W/B E								
Connector No. M12 Connector Name WIRE TO WIRE Connector Color WHITE					> I I		Connector Name	Connector Color			<u>0</u> 5	<								

< ECU DIAGNOSIS >

[COUPE]

< ECU DIAGNOSIS >



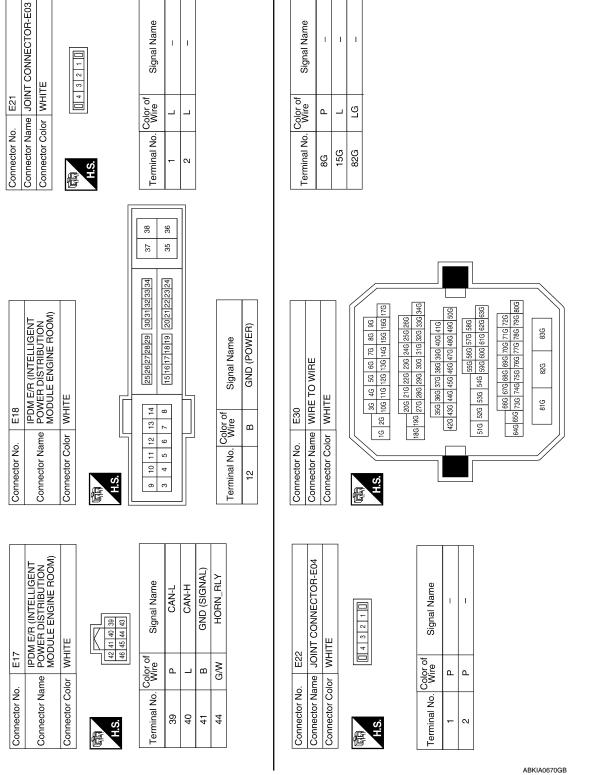
< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE)

I I

Signal Name T. Т I. Color of Wire ŋ ٩ _ Terminal No. 82G 15G 8G 34G
 36
 46
 56
 66
 76
 86
 96

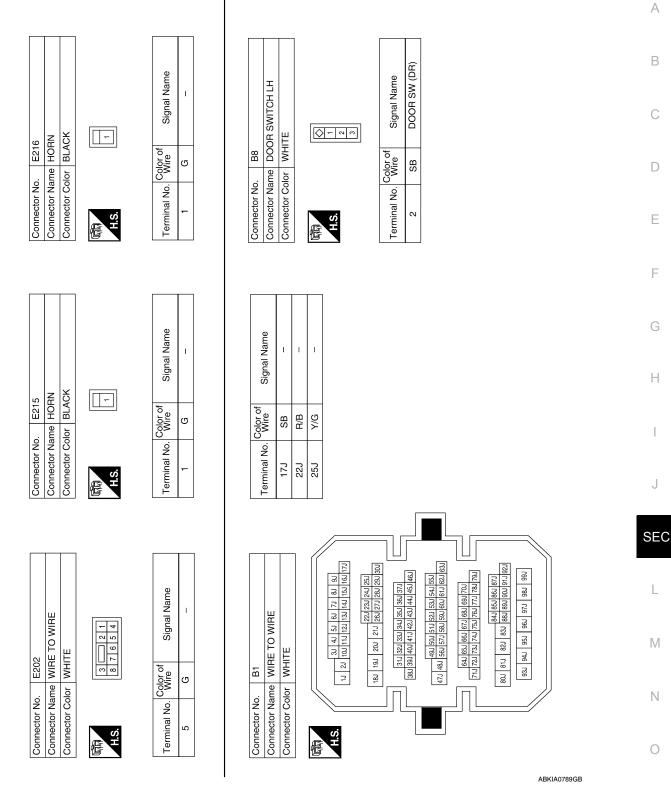
 16
 26
 106
 116
 126
 136
 166
 176
 42G 43G 44G 45G 46G 47G 48G 49G 50G 206 216 226 236 246 256 266 196 276 286 296 306 316 326 336 35G 36G 37G 38G 39G 40G 41G GND (POWER) Signal Name E30 മ



< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE)

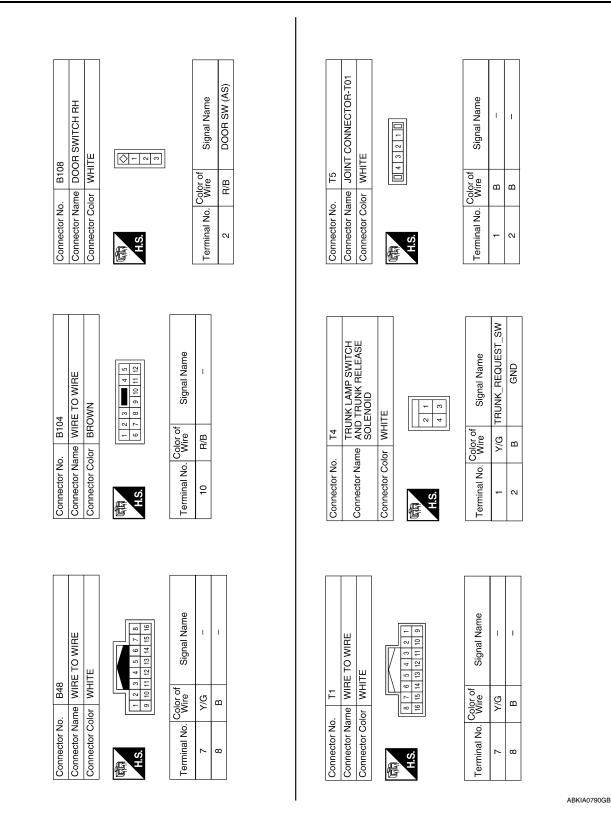
_____[0



Ρ

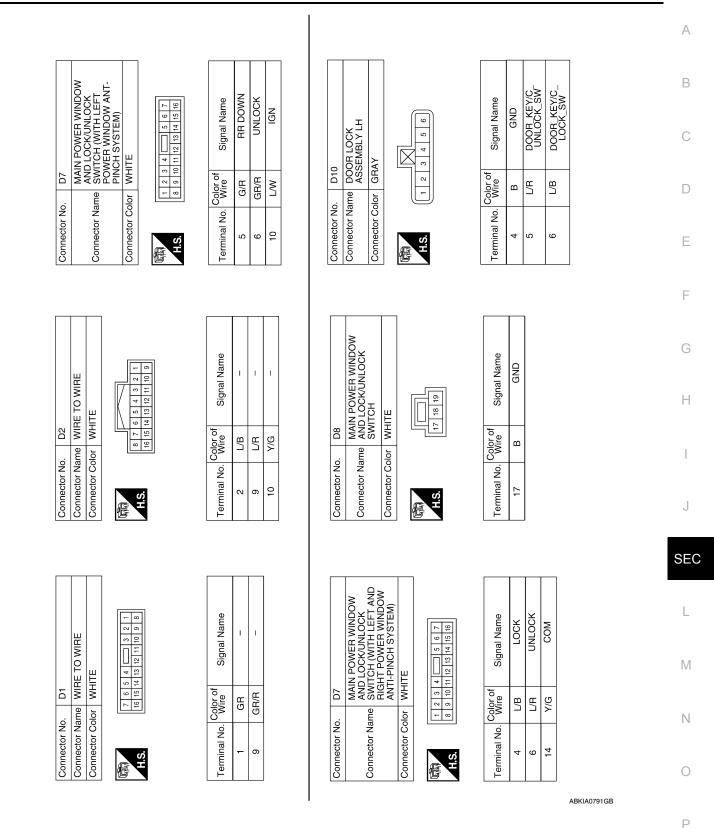
< ECU DIAGNOSIS >

[COUPE]

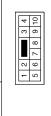


SEC-170

< ECU DIAGNOSIS >



Connector Name WIRE TO WIRE	Connector No. D101	Connector No. D101 Connector Name WIRE TO WIRE Connector Color WHITE
	connector Name WIRE TO WIRE	ector Color WHITE



ALS. E

H.S.

佢

Signal Name	I
Color of Wire	в
rminal No.	5

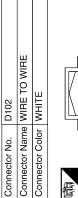
Signal Name	I	1	
Color of Wire	в	Y/G	
Terminal No.	5	8	

Connector No.	D105
	POWER WINDOW AND
	DOOR LOCK/UNLOCK
Connector Name	Connector Name SWITCH RH (WITH LEFT
	POWER WINDOW ANTI-
	PINCH SYSTEM)
Connector Color WHITE	WHITE

8 9 10 11 12	Signal Name
1 2 E	Color of Wire
H.S.	Terminal No.

ABKIA0795GB

Signal Name	LOCK	NNLOCK	GND
Color of Wire	GR	GR/R	В
Terminal No.	F	2	3



Signal Name	I	I
Color of Wire	GR	GR/R
Terminal No.	2	2

т

Connector No.	D105
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK Connector Name SWITCH RH (WITH LEFT AND RIGHT WINDOW ANTI-PINCH SYSTEM)
Connector Color WHITE	WHITE
H.S.	2 3 4 5 6 7 9 10 111 12 13 14 15 16

Signal Name	GND
Color of Wire	В
Terminal No.	11

COM

۲/G

16

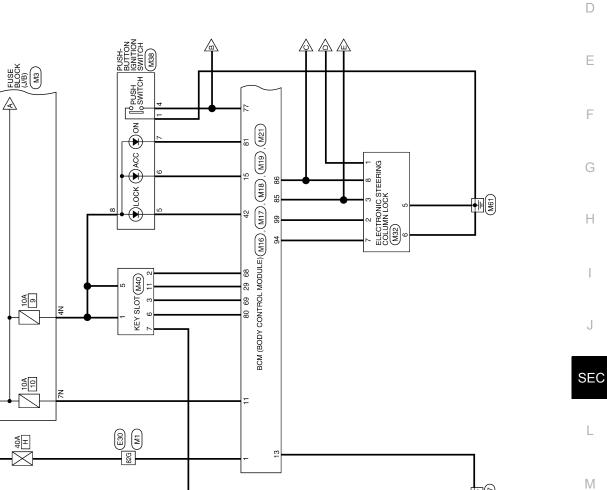
< ECU DIAGNOSIS >

< ECU DIAGNOSIS >

Wiring Diagram - NVIS -

INFOID:000000004206158





NVIS

BATTERY

Р

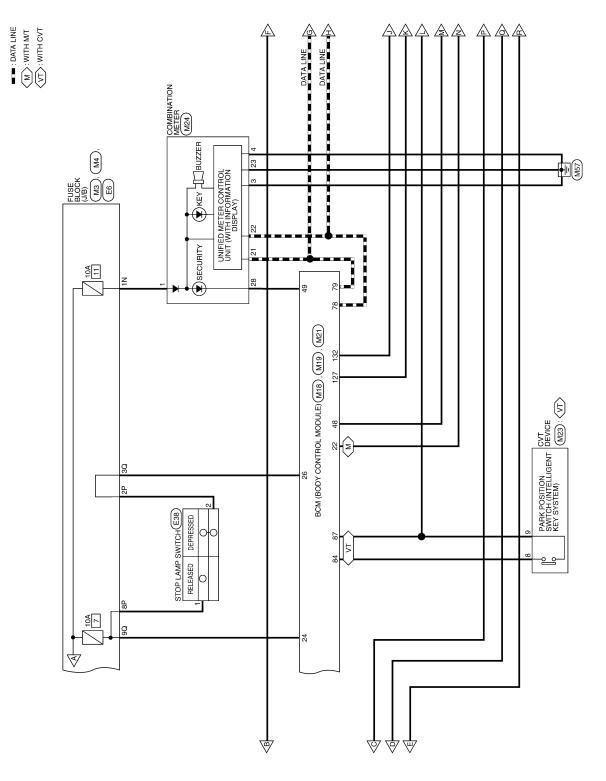
Ν

0

ABKWA0204GE

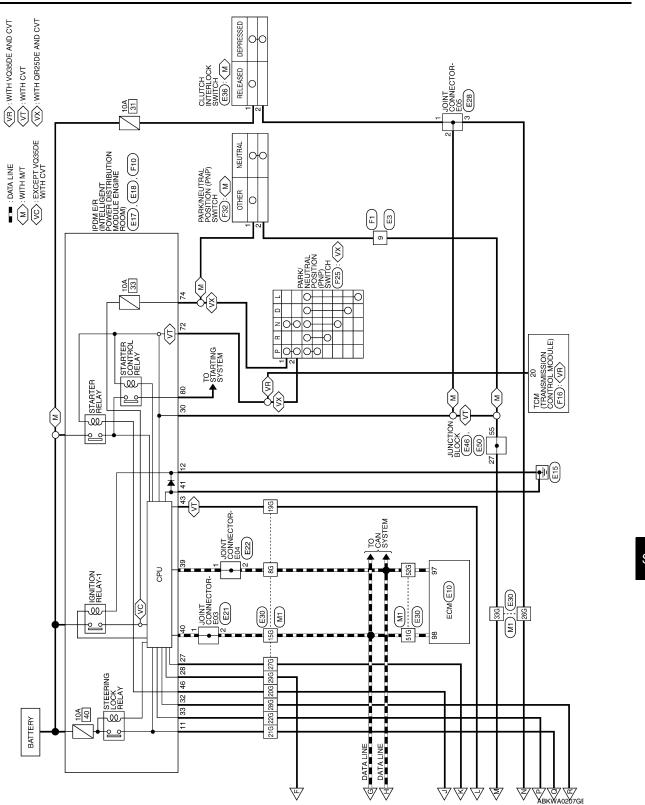
< ECU DIAGNOSIS >

[COUPE]



ABKWA0206GE

< ECU DIAGNOSIS >



G

[COUPE]

А

В

С

D

Ε

F

SEC

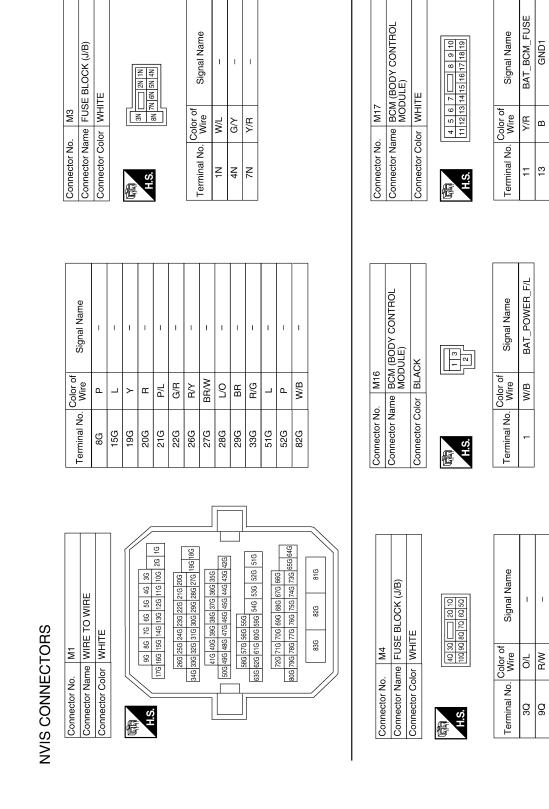
L

M

Ν

J

Ρ



< ECU DIAGNOSIS >

[COUPE]

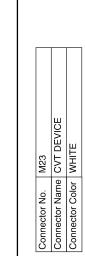
ACC_LED

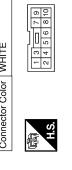
٦

15

ABKIA0792GB

		1									٦
FOB_READER_CLOCK	FOB_READER_DATA							23	/T DEVICE	HITE	
G/O	0							M23	ne CV	or VI	
68	69							Connector No.	Connector Name CVT DEVICE	Connector Color WHITE	
CLUTCH_SW	STOP_LAMP_LOW_SW	STOP_LAMP_HIGH_SW	FOB_IN_SW_1	S/L_LOCK_LED	SHIFT_N/P	IMMO_LED		M21	Connector Name BCM (BODY CONTROL	MODULE)	RAY
Яγ	R/W	0/L	≻	æ	R/G	Г/0			me	Σ	lor
22	24	26	29	42	48	49		Connector No.	Connector Na		Connector Color GRAY
		-									





H.S. E

Terminal No. Color of Wire 8 Y/R 9 G/B
Terminal No. 8 9

Signal Name	DETENT_KEY_SW	DETENT_KEY_SW	
Color of Wire	Y/R	G/B	
Terminal No.	8	6	
			I

Signal Name	IGN_USM_CONT1	ST_CONT_USM	
Color of Wire	BR/W	В	
Terminal No. Color of	127	132	

AWKIA0165GB

Ρ

S/L_CONDITION_2 S/L_CONDITION_1 AT_DEVICE_OUT

> G/R G/B

Y/R 9

84 85 86 87

H.S.

E

H.S.

E

Signal Name

Terminal No. Wire

Signal Name

Terminal No. Color of

8

SHIFT_P

S/L POWER SUPPLY_12V S/L_K-LINE

|∑

94

≤

66

< ECU DIAGNOSIS >

ENG_START_SW

ВВ

٩

Signal Name

Color of Wire

Terminal No. 17 78 79 80

Connector Name BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE)

Connector No. M18

Connector Name Connector Color

GREEN

M19

Connector No.

BLACK

Connector Color

FOB SLOT IGN_ON_LED

ВЧ ŋ

CAN-H CAN-L

_

[COUPE]

А

В

С

D

Ε

F

G

Н

J

SEC

L

Μ

Ν

Ο

SEC-177

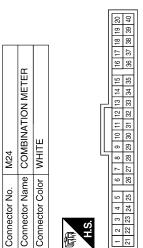
< ECU DIAGNOSIS >

M32

Connector No.

Connector Name Connector Color Terminal No. Vo 5 5 L 6 6 Color		ELECTRONIC STEERING COLUMN LOCK WHITE Prof 8 2 2 1 8 2 2 1 8 3 2 12V MECHANICAL Y S/L_12V MECHANICAL Y S/L_COM 0 S/L_COM 1 2V CPI 1/V3
8	G/R	S/L_CONDITION_2

Signal Name	BAT	GND	GND	ACC	CAN-H	CAN-L	GND	SECURITY
Color of Wire	W/L	в	в	۲/۷	L	٩	в	L/O
Terminal No.	-	ю	4	14	21	22	23	28



M40	KEY SLOT	WHITE	7 8 9 1 1 1 1 2 1
Connector No.	Connector Name KEY SLOT	Connector Color WHITE	国 H.S.

PUSH-BUTTON IGNITION SWITCH

Connector Name

M38

Connector No.

BROWN

Connector Color

Signal Name	B+	CLOCK	DATA	LIGHT_BAT+	LIGHT_A	GND
Color of Wire	G/Y	G/O	0	G/Y	R/L	В
Terminal No. Color of Wire	Ļ	2	3	5	9	2

Signal Name

Color of Wire

Terminal No.

ВВ

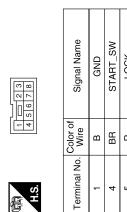
ი

H.S. 佢

Connector Name WIRE TO WIRE Connector Color WHITE

Ш

Connector No.



Signal Name	GND	START_SW	LOCK	ACC	NO	B+	
Color of Wire	В	BR	н	۲/۲	ГG	G/Y	
Terminal No.	÷	4	5	9	7	8	

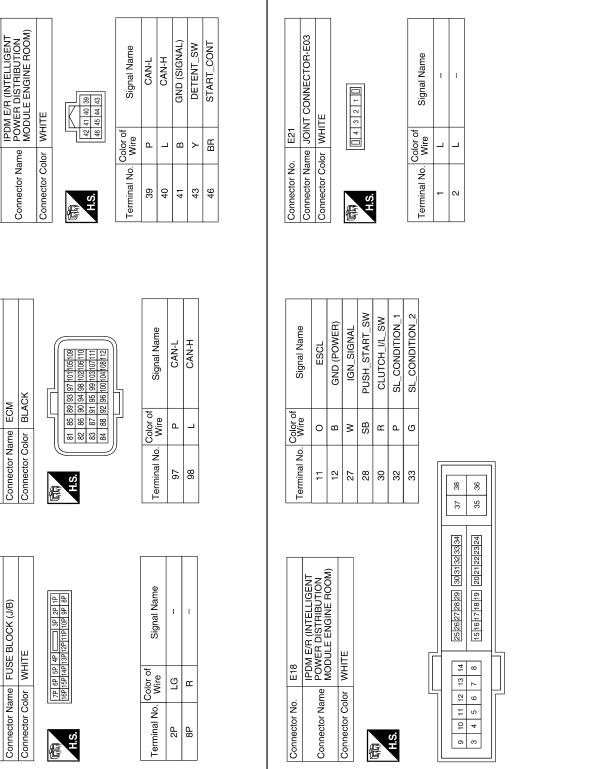
ABKIA0793GB

CARD_SW_1

≻

÷

BCM (BODY CONTROL MODULE)



Ρ

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

E17

Connector No.

Connector Name

ECM E10

Connector Name Connector No.

FUSE BLOCK (J/B)

Connector Name

<u>Е</u>0

Connector No.

[COUPE]

А

В

С

D

Ε

F

Н

J

SEC

L

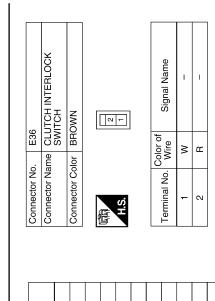
Μ

Ν

Ο

SEC-179

< ECU DIAGNOSIS >

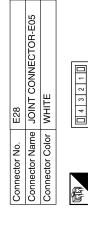


BR

0 വ ۳

21G 22G

26G 27G 28G 29G 33G 51G



Signal Name	I	I	I
Color of Wire	В	В	В
Terminal No.	٢	2	3
	Terminal No. Wire Signal Name		

Т Т

Connector Name JOINT (Connector Name JOINT CONNECTOR-E04
Connector Color WHITE	Connector Color WHITE
国 H.S.	

E22

Connector No.

H.S.

Signal Name	-	I	
Color of Wire	Р	Р	
Terminal No. Color of Wire	I.	2	

Connector No.	E30
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE
E E	

Signal Name T Т Т I. Т Т T I. T Т T I Т 1

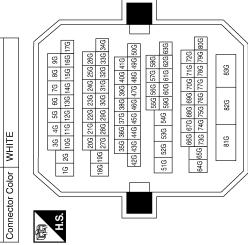
Color of Wire

Terminal No.

٩ _ ≻

8G

15G 19G 20G



BR/W

٩

BR BR

ŋ

Р

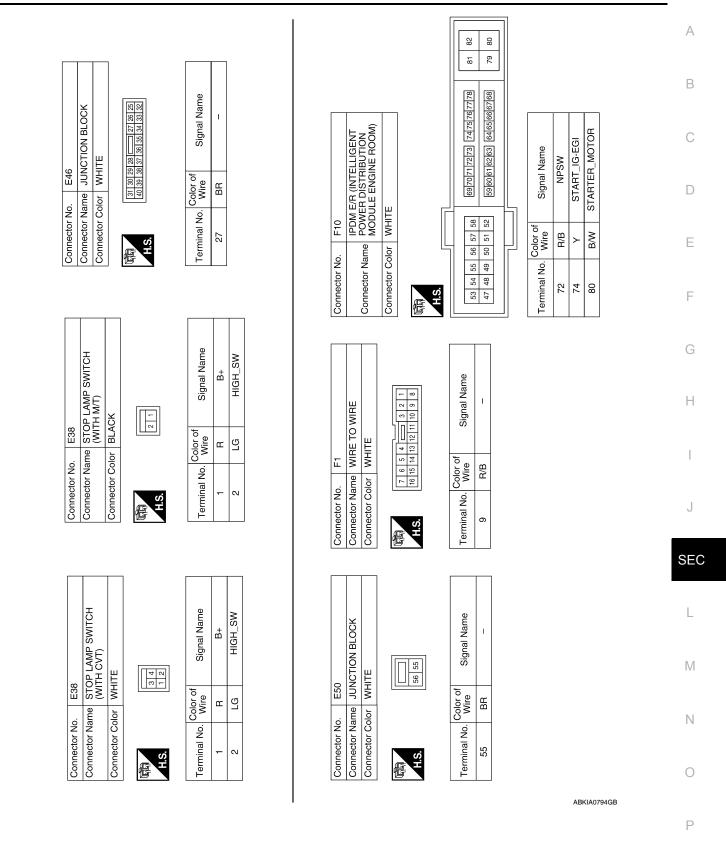
52G 82G

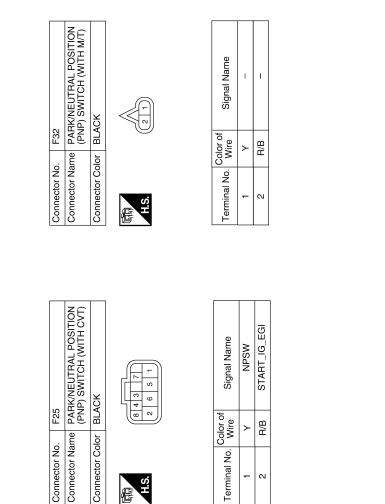
_

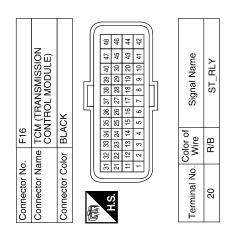
ABKIA0676GB

< ECU DIAGNOSIS >

[COUPE]







Fail Safe

B2190: NATS ANTENNA AMP

ABKIA0712GB

INFOID:000000004501295

			IN 012-0000000-01235
	Display contents of CONSULT	Fail-safe	Cancellation
-	B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
	B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC

< ECU DIAGNOSIS >

SEC-182

Erase DTC

Inhibit engine cranking

< ECU DIAGNOSIS >

[COUPE]

Display contents of CONSULT	Fail-safe	Cancellation
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit electronic steering column lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistentStarter control relay signalStarter relay status signal
B2562: LO VOLTAGE	 Inhibit engine cranking Inhibit electronic steering column lock 	100 ms after the power supply voltage increases to more than 8.8 V
B2601: SHIFT POSITION	Inhibit electronic steering column lock	 500 ms after the following signal reception status becomes consistent Selector lever P position switch signal P range signal (CAN)
B2602: SHIFT POSITION	Inhibit electronic steering column lock	 5 seconds after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Vehicle speed: 4 /h or more
B2603: SHIFT POSI STATUS	Inhibit electronic steering column lock	 500 ms after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit electronic steering column lock	 500 ms after any of the following BCM recognition conditions is fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P and N position (battery voltage) P range signal or N range signal (CAN): ON Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) P range signal and N range signal (CAN): OFF
B2605: PNP SW	Inhibit electronic steering column lock	 500 ms after any of the following BCM recognition conditions is fulfilled Ignition switch is in the ON position Power position: IGN Selector lever P/N position signal: Except P and N positions (0 V) Interlock/PNP switch signal (CAN): OFF Status 2 Ignition switch is in the ON position Selector lever P/N position signal: P or N position (battery voltage) PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has become consistent Electronic steering column lock relay signal (Request signal) Electronic steering column lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has become consistent Electronic steering column lock relay signal (Request signal) Electronic steering column lock relay signal (Condition signal)

< ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2608: STARTER RELAY	Inhibit engine cranking	 500 ms after the following signal communication status becomes consistent Starter motor relay control signal Starter relay status signal (CAN)
B2609: S/L STATUS	 Inhibit engine cranking Inhibit electronic steering column lock 	 When the following electronic steering column lock conditions agree BCM electronic steering column lock control status Electronic steering column lock condition No. 1 signal status Electronic steering column lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit engine cranking	 500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (Battery voltage) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilledPower position changes to ACCReceives engine status signal (CAN)
B2612: S/L STATUS	 Inhibit engine cranking Inhibit electronic steering column lock 	 When any of the following conditions is fulfilled Electronic steering column lock unit status signal (CAN) is received normally The BCM electronic steering column lock control status matches the electronic steering column lock status recognized by the electronic steering column lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM be- comes normal
B2619: BCM	Inhibit engine cranking	1 second after the electronic steering column lock unit power sup- ply output control inside BCM becomes normal
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions is fulfilledPower position changes to ACCReceives engine status signal (CAN)

DTC Inspection Priority Chart

INFOID:000000004501296

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC
1	B2562: LOW VOLTAGE
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
3	 B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM

< ECU DIAGNOSIS >

Priority	DTC	
	B2013: ID DISCORD BCM-S/L	
	B2014: CHAIN OF S/L-BCM	
	B2553: IGNITION RELAY	
	B2555: STOP LAMP	
	B2556: PUSH-BTN IGN SW	
	B2557: VEHICLE SPEED	
	B2560: STARTER CONT RELAY	
	B2601: SHIFT POSITION	
	B2602: SHIFT POSITION	
	B2603: SHIFT POSI STATUS	
	• B2604: PNP SW	
	• B2605: PNP SW	
	• B2606: S/L RELAY	
	• B2607: S/L RELAY	
	B2608: STARTER RELAY	
4	• B2609: S/L STATUS	
4	B260A: IGNITION RELAY	
	B260B: STEERING LOCK UNIT	
	B260C: STEERING LOCK UNIT	
	B260D: STEERING LOCK UNIT	
	B260F: ENG STATE SIG LOST	
	B2612: S/L STATUS	
	B2614: ACC RELAY CIRC	
	B2615: BLOWER RELAY CIRC	
	B2616: IGN RELAY CIRC	
	B2617: STARTER RELAY CIRC	
	• B2618: BCM	
	• B2619: BCM	
	B261A: PUSH-BTN IGN SW	
	B26E1: ENG STATE NO RECIV	
	C1729: VHCL SPEED SIG ERR	
	U0415: VEHICLE SPEED SIG	
	C1704: LOW PRESSURE FL	
	C1705: LOW PRESSURE FR	
	C1706: LOW PRESSURE RR	
	C1707: LOW PRESSURE RL	1
	• C1708: [NO DATA] FL	
	• C1709: [NO DATA] FR	
	C1710: [NO DATA] RR	
	C1711: [NO DATA] RL	
	C1712: [CHECKSUM ERR] FL	
	C1713: [CHECKSUM ERR] FR	
	C1714: [CHECKSUM ERR] RR	
_	C1715: [CHECKSUM ERR] RL	
5	C1716: [PRESSDATA ERR] FL	
	C1717: [PRESSDATA ERR] FR	
	C1718: [PRESSDATA ERR] RR	
	C1719: [PRESSDATA ERR] RL	
	C1720: [CODE ERR] FL	
	C1721: [CODE ERR] FR	
	C1722: [CODE ERR] RR	
	C1723: [CODE ERR] RL	
	C1724: [BATT VOLT LOW] FL	
	C1725: [BATT VOLT LOW] FR	
	C1726: [BATT VOLT LOW] RR	
	C1727: [BATT VOLT LOW] RL	
	C1734: CONTROL UNIT	
	B2621: INSIDE ANTENNA	
6	B2622: INSIDE ANTENNA	

DTC Index

INFOID:000000004501297

< ECU DIAGNOSIS >

Details of time display

- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1
 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter
 remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch
 OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	—	—	—	<u>BCS-38</u>
U1010: CONTROL UNIT (CAN)	-	—	—	<u>BCS-39</u>
U0415: VEHICLE SPEED SIG	_	—	—	<u>BCS-40</u>
B2013: ID DISCORD BCM-S/L	×	—	—	<u>SEC-38</u>
B2014: CHAIN OF S/L-BCM	×	_		<u>SEC-39</u>
B2190: NATS ANTENNA AMP	×	_		<u>SEC-64</u>
B2191: DIFFERENCE OF KEY	×	_		<u>SEC-67</u>
B2192: ID DISCORD BCM-ECM	×	_		<u>SEC-68</u>
B2193: CHAIN OF BCM-ECM	×	_		<u>SEC-69</u>
B2553: IGNITION RELAY	_	_		PCS-60
B2555: STOP LAMP	_	_		<u>SEC-70</u>
B2556: PUSH-BTN IGN SW	_	×		<u>SEC-72</u>
B2557: VEHICLE SPEED	×	×		<u>SEC-74</u>
B2560: STARTER CONT RELAY	×	×		<u>SEC-75</u>
B2562: LOW VOLTAGE		_		<u>BCS-41</u>
B2601: SHIFT POSITION	×	×		<u>SEC-76</u>
B2602: SHIFT POSITION	×	×		<u>SEC-79</u>
B2603: SHIFT POSI STATUS	×	×		<u>SEC-81</u>
B2604: PNP SW	×	×		<u>SEC-84</u>
B2605: PNP SW	×	×		<u>SEC-86</u>
B2606: S/L RELAY	×	×		<u>SEC-88</u>
B2607: S/L RELAY	×	×		<u>SEC-89</u>
B2608: STARTER RELAY	×	×		<u>SEC-91</u>
B2609: S/L STATUS	×	×		<u>SEC-93</u>
B260A: IGNITION RELAY	×	×		PCS-62
B260B: STEERING LOCK UNIT	_	×		<u>SEC-97</u>
B260C: STEERING LOCK UNIT		×		<u>SEC-98</u>
B260D: STEERING LOCK UNIT		×		<u>SEC-99</u>
B260F: ENG STATE SIG LOST	×	×	—	<u>SEC-100</u>
B2612: S/L STATUS	×	×		<u>SEC-101</u>
B2614: ACC RELAY CIRC	_	×	_	PCS-65
B2615: BLOWER RELAY CIRC		×		PCS-68
B2616: IGN RELAY CIRC		×		PCS-71
B2617: STARTER RELAY CIRC	×	×	_	<u>SEC-105</u>
B2618: BCM	×	×		PCS-74

< ECU DIAGNOSIS >

[COUPE]

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page	ļ
B2619: BCM	×	×	—	<u>SEC-107</u>	-
B261A: PUSH-BTN IGN SW	_	×	—	<u>SEC-108</u>	E
B2621: INSIDE ANTENNA	_	_	—	<u>DLK-59</u>	_
B2622: INSIDE ANTENNA	_	_	—	DLK-62	(
B2623: INSIDE ANTENNA	_	_	—	DLK-65	
B26E1: ENG STATE NO RES	×	×	—	<u>SEC-110</u>	_
C1704: LOW PRESSURE FL	_	_	×	<u>WT-52</u>	
C1705: LOW PRESSURE FR	_	_	×	<u>WT-52</u>	-
C1706: LOW PRESSURE RR	_	_	×	<u>WT-52</u>	-
C1707: LOW PRESSURE RL	—	—	×	<u>WT-52</u>	- E
C1708: [NO DATA] FL	—	_	×	<u>WT-14</u>	-
C1709: [NO DATA] FR	_	_	×	<u>WT-14</u>	F
C1710: [NO DATA] RR	—	_	×	<u>WT-14</u>	-
C1711: [NO DATA] RL	_	_	×	<u>WT-14</u>	-
C1712: [CHECKSUM ERR] FL	—	_	×	<u>WT-16</u>	- (
C1713: [CHECKSUM ERR] FR	—	_	×	<u>WT-16</u>	-
C1714: [CHECKSUM ERR] RR	_	_	×	<u>WT-16</u>	-
C1715: [CHECKSUM ERR] RL	_	_	×	<u>WT-16</u>	_
C1716: [PRESSDATA ERR] FL	—	_	×	<u>WT-18</u>	-
C1717: [PRESSDATA ERR] FR	—	_	×	<u>WT-18</u>	-
C1718: [PRESSDATA ERR] RR	_	_	×	<u>WT-18</u>	-
C1719: [PRESSDATA ERR] RL	—	_	×	<u>WT-18</u>	-
C1720: [CODE ERR] FL	—	_	×	<u>WT-16</u>	
C1721: [CODE ERR] FR	_	_	×	<u>WT-16</u>	-
C1722: [CODE ERR] RR	—	_	×	<u>WT-16</u>	SI
C1723: [CODE ERR] RL	—	—	×	<u>WT-16</u>	
C1724: [BATT VOLT LOW] FL	—	—	×	<u>WT-16</u>	-
C1725: [BATT VOLT LOW] FR	—	—	×	<u>WT-16</u>	- 1
C1726: [BATT VOLT LOW] RR	—	—	×	<u>WT-16</u>	-
C1727: [BATT VOLT LOW] RL	—	—	×	<u>WT-16</u>	- 1
C1729: VHCL SPEED SIG ERR	—	_	×	<u>WT-19</u>	-
C1734: CONTROL UNIT	_	_	×	<u>WT-20</u>	-

0

Ρ

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) < ECU DIAGNOSIS > [COUPE]

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Reference Value

INFOID:000000004501298

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	(Condition	Value/Status			
RADFAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	0 - 100 %			
		A/C switch OFF	Off			
AC COMP REQ	Engine running	A/C switch ON (Compressor is operating)	On			
	Lighting switch OFF		Off			
TAIL&CLR REQ	Lighting switch 1ST, 2ND, HI or	AUTO (Light is illuminated)	On			
	Lighting switch OFF		Off			
HL LO REQ	Lighting switch 2ND HI or AUTO	(Light is illuminated)	On			
	Lighting switch OFF		Off			
HL HI REQ	Lighting switch HI		On			
		Front fog lamp switch OFF	Off			
FR FOG REQ	Lighting switch 2ND or AUTO (Light is illuminated)	 Front fog lamp switch ON Daytime running light activated (Only for Canada models) 	On			
	Ignition switch ON	Front wiper switch OFF	STOP			
FR WIP REQ		Front wiper switch INT	1LOW			
FR WIP REQ		Front wiper switch LO	Low			
		Front wiper switch HI	Hi			
	Ignition switch ON	Front wiper stop position	STOP P			
WIP AUTO STOP		Any position other than front wiper stop position	ACT P			
		Front wiper operates normally	Off			
WIP PROT	Ignition switch ON	Front wiper stops at fail-safe opera- tion	BLOCK			
	Ignition switch OFF or ACC		Off			
IGN RLY1 -REQ	Ignition switch ON	Ignition switch ON				
	Ignition switch OFF or ACC	Ignition switch OFF or ACC				
IGN RLY	Ignition switch ON		On			
	Release the push-button ignition) switch	Off			
PUSH SW	Press the push-button ignition sw	Press the push-button ignition switch				
	Ignition switch ON	CVT selector lever in any position other than P or N (CVT models)	Off			
		Release clutch pedal (M/T models)				
INTER/NP SW	Ignition switch ON	CVT selector lever in P or N posi- tion (CVT models)	On			
		Depress clutch pedal (M/T models)	Off			
ST RLY CONT		Ignition switch ON				
	At engine cranking	At engine cranking				

< ECU DIAGNOSIS >

Monitor Item	Monitor Item Condition			
IHBT RLY -REQ	Ignition switch ON	Off		
	At engine cranking	On		
	Ignition switch ON	Off		
	At engine cranking	ST →INHI		
ST/INHI RLY	The status of starter relay or starter control relay cannot be recognized by the battery voltage malfunction, etc. when the starter relay is ON and the starter control relay is OFF	UNKWN		
DETENT SW	Ignition switch ON• Press the selector button with CVT selector lever in P position • CVT selector lever in any posi- tion other than P	Off		
	Release the CVT selector button with CVT selector lever in P position NOTE: The lever is fixed ON for M/T	On		
	None of the conditions below are present	Off		
S/L RLY -REQ	 Open the driver door after the ignition switch is turned OFF (for a few seconds) Press the push-button ignition switch when the steering lock is activated Depress the clutch pedal when the steering lock is activated 	On		
	Steering lock is activated	LOCK		
S/L STATE	Steering lock is deactivated	UNLK		
	[DTC B210A] is detected	UNKWN		
DTRL REQ	NOTE: This item is displayed, but cannot be monitored.	Off		
OIL P SW	Ignition switch OFF, ACC or engine running	Open		
	Ignition switch ON	Close		
	Not operated	Off		
THFT HRN REQ	 Panic alarm is activated Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYS- TEM 	On		
	Not operated	Off		
HORN CHIRP	Door locking with Intelligent Key (horn chirp mode)	On		
CRNRNG LMP REQ	NOTE: This item is displayed, but cannot be monitored.	Off		

M

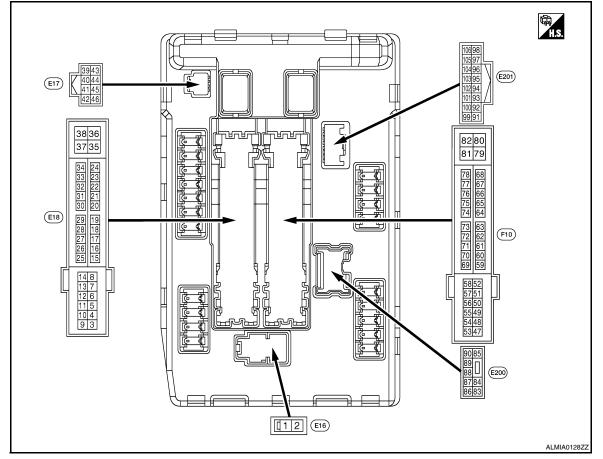
Ν

0

Ρ

< ECU DIAGNOSIS >

TERMINAL LAYOUT



PHYSICAL VALUES

	nal No.	Description				Value	
(Wire color) + –		Signal name	Input/ Output	Condition		(Approx.)	
1 (R)	Ground	Battery power supply	Input	Ignition swi	itch OFF	Battery voltage	
2 (L)	Ground	Battery power supply	Input	Ignition sw	itch OFF	Battery voltage	
4	Cround	FrontwinerLO	Output	Ignition	Front wiper switch OFF	0V	
(L/R)	Ground	Front wiper LO	Output	switch ON	Front wiper switch LO	Battery voltage	
5	Ground	Front wiper HI	Output	Ignition	Front wiper switch OFF	0V	
(L/B)	Ground		Output	switch ON	Front wiper switch HI	Battery voltage	
6 (SB)	Ground	Daytime light relay power supply (Canada models only)	Output	Ignition swi	itch OFF	Battery voltage	
7	Ground	Tail, license plate lamps &	Output	Ignition	Lighting switch OFF	0V	
(R/L)	Giouria	interior lamps	Output	switch ON	Lighting switch 1ST	Battery voltage	
10				Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0V	
(R/B)	Ground	ECM relay power supply	Output	 Ignition s (More th) 	switch ON switch OFF an a few seconds after turn- on switch OFF)	Battery voltage	

< ECU DIAGNOSIS >

[COUPE]

Terminal No.		Description				Value	
(Wire +	color) _	Signal name	Input/ Output		Condition	(Approx.)	Α
			Ignition switch OFF A few seconds after open- ing the driver door		Battery voltage	E	
11 (P/L)	Ground	Steering lock unit power supply	Output	Ignition switch LOCK	Press the push-button ig- nition switch	Battery voltage	C
				Ignition sw	itch ACC or ON	0V	
12 (B)	Ground	Ground	_	Ignition sw	itch ON	0V	
					tely 1 second or more after ignition switch ON	0V	E
13 (W)	Ground	Fuel pump power supply	Output		nately 1 second after turning on switch ON unning	Battery voltage	F
15	Ground	Ignition relay-1 power sup-	Output	Ignition sw	itch OFF	0V	
(G/W)	Oround	ply	Output	Ignition sw	itch ON	Battery voltage	
16	Ground		Input	Ignition	Front wiper stop position	0V	0
(L/Y)		Front wiper auto stop		switch ON	Any position other than front wiper stop position	Battery voltage	
19	Ground	Ignition relay-1 power sup-	Output	Ignition switch OFF		0V	ŀ
(L/Y)	Cround	ply	Output	Ignition sw	itch ON	Battery voltage	=.
20 (B/Y)	Ground	Ambient sensor ground	—	Ignition sw	itch ON	0V	
21 (O/B)	Ground	Ambient sensor	_	Ignition sw	itch ON	5V	
22 (W/R)	Ground	Refrigerant pressure sen- sor ground	_	Ignition sw	itch ON	0V	
23 (B/R)	Ground	Refrigerant pressure sen- sor	_	Both A/C	witch ON (READY) C switch and blower motor N (electric compressor oper-	1.0 - 4.0V	SE
24 (BR/W)	Ground	Refrigerant pressure sen- sor power supply	_	Ignition sw	itch ON	5V	L
25	Ground	Ignition relay-1 power sup-	Output	Ignition sw	itch OFF	0V	
(GR)	Ground	ply	Juipui	Ignition sw	itch ON	Battery voltage	N
27	Ground	Ignition relay monitor	Input	-	itch OFF or ACC	Battery voltage	-
(BR/W)		<u> </u>	r	Ignition sw		0V	
28 (BR)	Ground	Push-button ignition switch	Input		bush-button ignition switch	0V	
				Release th	e push-button ignition switch	Battery voltage	-
				CVT mod- els	CVT selector lever in any position other than P or N (ignition switch ON)	0V	C
30 (R/B)	Ground	Starter relay control	Input	eis	CVT selector lever P or N (ignition switch ON)	Battery voltage	F
				M/T mod-	Release the clutch pedal	0V	
				els	Depress the clutch pedal	Battery voltage	

< ECU DIAGNOSIS >

[COUPE]

Terminal No.		Description				Value
(Wire +	color) –	Signal name	Input/ Output		Condition	(Approx.)
32	Ground	Electronic steering column	Input	Electronic s	steering column lock is acti-	0V
(L/O)	Cround	lock unit condition-1	mput	Electronic s tivated	teering column lock is deac-	Battery voltage
33	Ground	Electronic steering column	Input	Electronic s vated	steering column lock is acti-	Battery voltage
(G/R)	Clound	lock unit condition-2	mput	Electronic s tivated	steering column lock is deac-	0V
34	Ground	Cooling fan relay-3 control	Input	Ignition swi	tch OFF or ACC	0V
(O/L)	Giouna	Cooling lan relay-5 control	input	Ignition swi	tch ON	0.7V
35	Oraciand	Occilian fear motor control	Output	Ignition swi	tch OFF or ACC	0V
(L/B)	Ground	Cooling fan motor control	Output	Ignition swi	tch ON	0.7V
36 (G)	Ground	Battery power supply	Input	Ignition swi	tch OFF	Battery voltage
38			0.1.1	Ignition swi	tch OFF or ACC	0V
(R/W)	Ground	Cooling fan motor control	Output	Ignition swi	tch ON	0.7V
39 (P)		CAN - L	Input/ Output		_	_
40 (L)		CAN - H	Input/ Output		_	_
41 (B)	Ground	Ground	_	Ignition swi	tch ON	0V
42	Ground	Cooling fan relay-2 control	Input	Ignition swi	tch OFF or ACC	0V
(SB)	Glound	Cooling fan Telay-2 control	Input	Ignition swi	tch ON	0.7V
					Press the CVT selector button (CVT selector lever P)	Battery voltage
43 (G/B)	Ground	CVT device (Detention switch)	Input	lgnition switch ON	 CVT selector lever in any position other than P Release the CVT selector tor button (CVT selector lever P) 	0V
44			1	The horn is	deactivated	Battery voltage
(G/W)	Ground	Horn relay control	Input	The horn is	activated	0V
45				The horn is	deactivated	Battery voltage
(L/O)	Ground	Anti theft horn relay control	Input	The horn is	activated	0V
				CVT mod-	CVT selector lever in any position other than P or N (ignition switch ON)	0V
46 (R)	Ground	Ind Starter relay control	Input	els	CVT selector lever P or N (ignition switch ON)	Battery voltage
				M/T mod-	Release the clutch pedal	0V
				els	Depress the clutch pedal	Battery voltage
					A/C switch OFF	0V
48 (Y/R)	Ground	A/C relay power supply	Output	Engine running	A/C switch ON (A/C compressor is oper- ating)	Battery voltage

< ECU DIAGNOSIS >

[COUPE]

	nal No.	Description			Value	٥
(Wire +	e color)	Signal name	Input/ Output	Condition	(Approx.)	А
49				Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0V	В
49 (R/B)	Ground	ECM relay power supply (with VQ35DE)	Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 	Battery voltage	С
49		ECM relay power supply		Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0V	D
49 (B/R)	Ground	(without VQ35DE)	Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 	Battery voltage	E
51	Ground	Ignition relay power supply	Output	Ignition switch OFF	0V	F
(LG)	Ground		Output	Ignition switch ON	Battery voltage	
52	Ground	Ignition relay power supply	Output	Ignition switch OFF	0V	G
(Y/G)	Croana	ignition relay power supply	Output	Ignition switch ON	Battery voltage	G
53				Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0V	Н
(B/R)	Ground	ECM relay power supply (with VQ35DE)	Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 	Battery voltage	I
50				Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0V	J
53 (R/B)	Ground	ECM relay power supply (without VQ35DE)	Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 	Battery voltage	SEC
54		Throttle control motor re-		Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0V	L
(G/W)	Ground	lay power supply	Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 	Battery voltage	M
55 (W/L)	Ground	ECM power supply	Output	Ignition switch OFF	Battery voltage	Ν
56	Crownel	Ignition roles never every	Quitt	Ignition switch OFF	0V	
(R/Y)	Ground	Ignition relay power supply	Output	Ignition switch ON	Battery voltage	0
57	Ground	Ignition relay power supply	Outout	Ignition switch OFF	0V)
(0)	Ground	Ignition relay power supply	Output	Ignition switch ON	Battery voltage	
58	Ground	Ignition relay power supply	Output	Ignition switch OFF	0V	Ρ
(Y)	Ground	ignition relay power supply	Output	Ignition switch ON	Battery voltage	

< ECU DIAGNOSIS >

[COUPE]

	nal No.	Description				Value
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)
69				Ignition swi (For a few s switch OFF	econds after turning ignition	Battery voltage
(W/B)	Ground	ECM relay control	Output			0 - 1.5V
70 (O)	Ground	Throttle control motor re- lay control	Output	Ignition swi	tch ON \rightarrow OFF	0 -1.0V ↓ Battery voltage ↓ 0V
				Ignition swi	tch ON	0 - 1.0V
					CVT selector lever in P or N position	Battery voltage
72 (R/B)	Ground	PNP switch signal	Input	Ignition switch ON	CVT selector lever in any position other than P or N position	0V
74	Ground	Ignition relay power supply	Output	Ignition swi	tch OFF	0V
(Y)	Cround	ignition relay power suppry	Output	Ignition swi		Battery voltage
75 (P/L)	Ground	Oil pressure switch	Input	Ignition switch ON	Engine stopped Engine running	0V Battery voltage
				Ignition swi	tch ON	(V) 6 4 2 0 ★ 2 ms ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
76 (GR)	Ground	Power generation com- mand signal	Output		on "Active test", "ALTERNA- " of "ENGINE"	(V) 6 2 0 4 2 2 m 2 2 m 5 2 m 5 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1
					on "Active test", "ALTERNA- ‴ of "ENGINE"	(V) 6 4 0 • • • • • • • • • • • • • • • • • •
77 (P/P)	Ground	Fuel pump relay control	Output		nately 1 second after turning on switch ON unning	1.4V 0 - 1.0V
(B/R)			-		ely 1 second or more after ignition switch ON	Battery voltage

< ECU DIAGNOSIS >

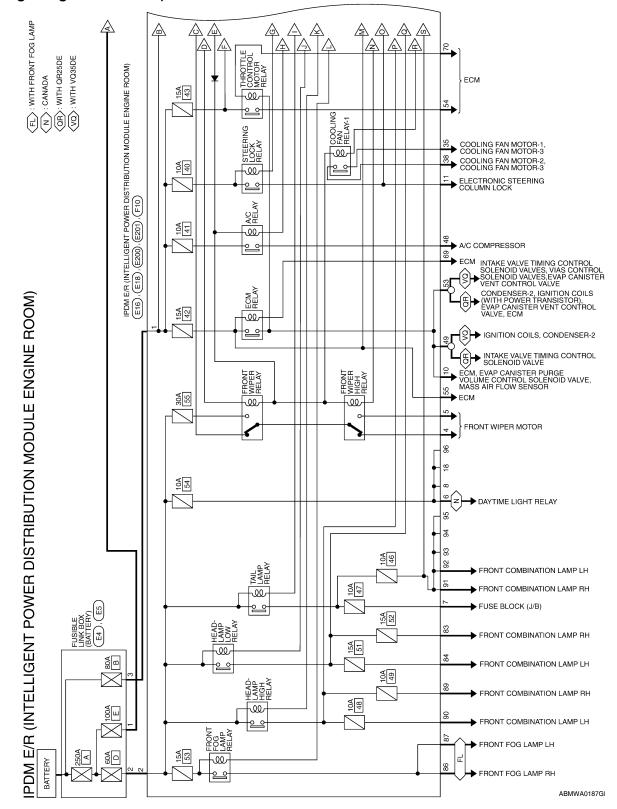
[COUPE]

	nal No.	Description	1			Value
(VVire	color)	Signal name	Input/ Output		Condition	(Approx.)
80 (B/W)	Ground	Starter motor	Output	At engine c	ranking	Battery voltage
83	Cround	Headlamp I.O. (DH)	Output	Ignition	Lighting switch OFF	0V
(R/Y)	Ground	Headlamp LO (RH)	Output	switch ON	Lighting switch 2ND	Battery voltage
84	Ground	Headlamp LO (LH)	Output	Ignition	Lighting switch OFF	0V
(L)	Ground	Headiamp LO (LH)	Output	switch ON	Lighting switch 2ND	Battery voltage
86 (W/R)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND	 Front fog lamp switch ON Daytime running light activated (Only for Can- ada models) 	Battery voltage
					Front fog lamp switch OFF	0V
87 (L/Y)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	 Front fog lamp switch ON Daytime running light activated (Only for Can- ada models) 	Battery voltage
					Front fog lamp switch OFF	0V
88 (R/W)	Ground	Washer pump power sup- ply	Output	Ignition swi	tch ON	Battery voltage
89 (L/W)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	Lighting switch HIlighting switch PASS	Battery voltage
(Ľ/ 🗤)				Switch ON	Lighting switch OFF	0V
90 (G)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	Lighting switch HILighting switch PASS	Battery voltage
(0)				Switch ON	Lighting switch OFF	0V
91	Ground	Parking lamp (RH)	Output	Ignition	Lighting switch 1ST	Battery voltage
(LG/R)	cround		output	switch ON	Lighting switch OFF	0V
92	Ground	Parking lamp (LH)	Output	Ignition	Lighting switch 1ST	Battery voltage
(LG/B)		J		switch ON	Lighting switch OFF	0V
99 (BR/W)	Ground	Ambient sensor ground		Ignition swi	tch ON	0V
100 (SB)	Ground	Ambient sensor		Ignition swi	tch ON	5V
101 (O/L)	Ground	Refrigerant pressure sen- sor ground		Ignition swi	tch ON	0V
102 (R/B)	Ground	Refrigerant pressure sen- sor	_	Both A/C	witch ON (READY) switch and blower motor N (electric compressor oper-	1.0 - 4.0V
103 (P)	Ground	Refrigerant pressure sen- sor power supply		Ignition swi	tch ON	5V
105	Ground	Daytime light relay control	Output	Ignition switch ON	Daytime light system ac- tive	Battery voltage
(V)	Ground	Daytime light relay collion	Ουιραί	Ignition switch ON	Daytime light system inac- tive	0V

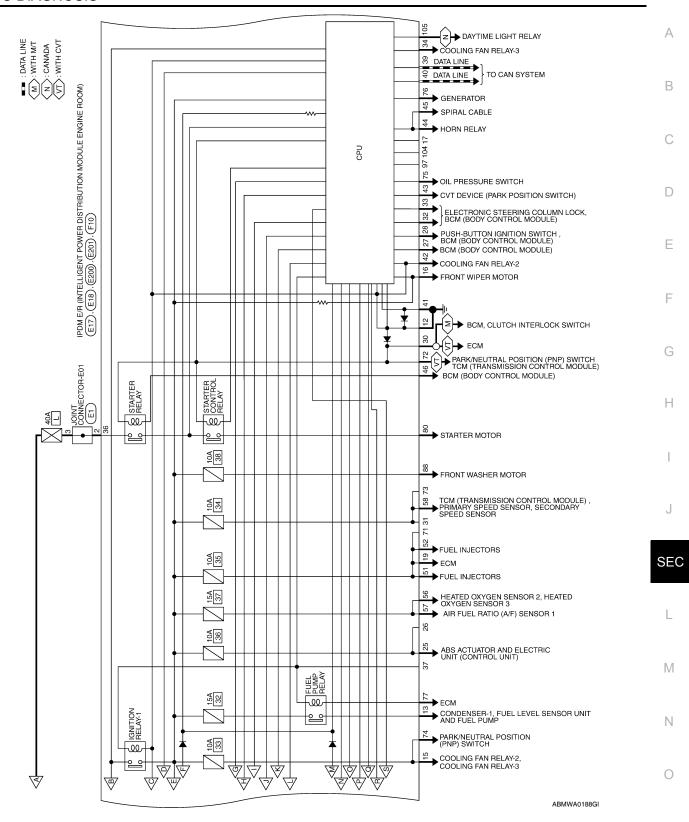
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) < ECU DIAGNOSIS > [COUPE]

Wiring Diagram — Coupe

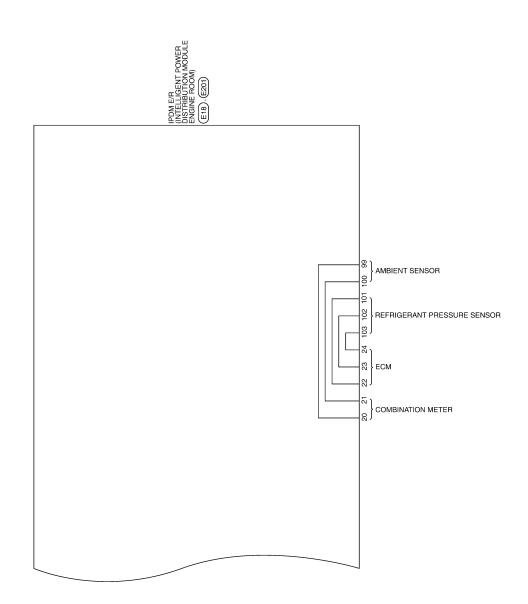
INFOID:000000004501299



IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) < ECU DIAGNOSIS > [COUPE]

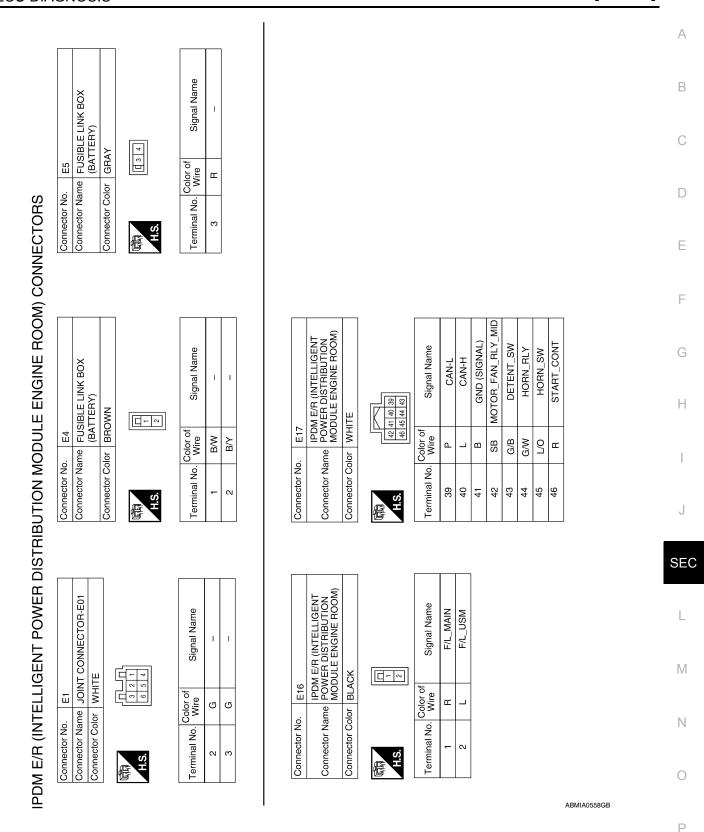


Ρ



ABMWA0189GI

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) < ECU DIAGNOSIS > [COUPE]



< ECU DIAGNOSIS >

Connector No.	E18 IDDM E/D /INITEL LICENT		<u> </u>	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name
Connector Name	POWER DISTRIBUTION		L	80	I	1	23	B/R	PD_SENS_SIG-E/R
- ()	MODULE ENGINE ROOM)		1	6	I	1	24	BR/W	PD_SENS PWR-E/R
Connector Color	WHITE		1	10	R/B	ECM_VB	25	GR	ABS_ECU
			1	1	P/L	ESCL	26	I	I
				12	в	GND (POWER)	27	BR/W	IGN_SIGNAL
H.S.	0 11 12 13 14 25 26 27 28 29	30 31 32 33 34	37 38	13	×	FUEL_PUMP	28	BR	PUSH_START_SW
3 4	ŝ	20 21 22 23 24	35	14	1	1	29	Ι	I
		- II		15	G/W	START_IG-E/R	30	R/B	CLUTCH_I/L_SW
				16	Z	WIPER_AUTOSTOP	31	I	I
-	J.		1	17	1	1	32	Р	SL_CONDITION_1
Terminal No. W	Wire Signal Name		1	18	1	1	33	G/R	SL_CONDITION_2
۔ ع	1		1	19	5	BCM_IGNSW	34	0/L	MOTOR_FAN_RLY_HI
4	L/R FR_WIPER_LO		1	20	B/Y	AMB_SENS_GND-E/R	35	L/B	MOTOR_FAN_LO
2 F	L/B FR_WIPER_HI		1	21	O/B	AMB_SENS_SIG-E/R	36	ŋ	F/L_IGNSW
9	SB DTRL		1	22	W/R	PD SENS GND-E/R	37	I	I
	R/L TAIL/ILLUMI				-	1	38	МЛ	F/L_MOTOR_FAN
Connector No.	E200		Connector No.	. E201			Terminal No	Color of	Simal Name
	IPDM E/R (INTELLIGENT				IPDM E/R (INTELLIGENT	GENT	ç		
Connector Name			Connector Name		MODULE ENGINE ROOM)	(MOOK	90		
			Connector Color	-			66	BR/W	SENS
Connector Color	WHITE						100	SB	AMB_SENS_SIG-FEM
ą			ł		[101	O/L	PD_SENS_GND-FEM
	8 5		1414h		04 00 00		102	R/B	PD_SENS_SIG-FEM
H.S.	AU 08 08 07 00		H.S.	3/ 30 30 105 104 103	94 90 92 91 102 101 100 99		103	Р	PD_SENS_PWR-FEM
Terminal No Colo	Color of Signal Name						104	I	I
			Terminal No.	Color of Wire	Signal Name	ame	105	>	DTRL_RLY
84 84	L HEADLAMP_LO_HH		91		CLEARANCE_RH	Ë_RH	901	I	1
'			92	LG/B	CLEARANCE_LH	ж_LH			
86 W	W/R FR_FOG_LAMP_RH		93	1	I				
87 L	L/Y FR_FOG_LAMP_LH		94	I	Ι				
88 Fl	R/W WASHER_MTR		95	I	Ι				
89 L	L/W HEADLAMP_HI_RH		96	1	I				
06	G HEADLAMP_HI_LH		97	1	I				

ABMIA0559GB

< ECU DIAGNOSIS >

							Τ	Τ		×					~		
Signal Name	1	I	1	1	SSOF	MOTRLY	NPSW	1	START_IG-EGI	OIL_PRESSURE_SW	ALT_C	FPR	I	I	STARTER_MOTOR	I	I
Color of Wire	1	1	1	1	W/B	0	B/B		7	P/L	GB	B/B	1	ı	B/W	I	I
Terminal No.	65	66	67	68	69	70	72	73	74	75	76	77	78	79	80	81	82
Signal Name	1	INJECTOR_#1	INJECTOR_#2	IGN_SOL (WITH OR25DE)	ENG SOL	(WITH VQ35DE)	ETC	ECM_BAT	02_SENS_#1 02_SENS_#2	AT ECU		,	1	1	1	1	
Color of Wire	1	ГG	Y/G	B/B	!	B/B	N/S	W/L	ξ o	>	. 1		1	1	1	1	
Terminal No.	50	51	52	53		53	54	22 2	57	58	59	60	61	62	63	64	
						74 75 76 77 78 81								1			
E/D /INITELLIGENT		ULE ENGINE KOOM)	ш			56 57 58 69/0/71/2/3 50 51 52 58 59/0/71/72/3	;		Cianal Namo		1 0	A/C_COMP	ENG_SOL (WITH QR25DE)	IGN_SOL (WITH	VQ35DE)		
			or WHITE			54 55 48 40	2		Color of		1	Υ/Η	B/R	a/a	<u>נ</u>		
Connector No.			Connector Color			_	·		Torminal No		47	48	49	10	P +		
		1				_											
е																	

INFOID:000000004501301 Ρ

А

В

С

D

Ε

F

Н

J

SEC

Μ

Ν

Ο

CAN COMMUNICATION CONTROL

When CAN communication with ECM and BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With ECM

< ECU DIAGNOSIS >

Control part	Fail-safe in operation
Cooling fan	 Signals cooling fans ON when the ignition switch is turned ON Signals cooling fans OFF when the ignition switch is turned OFF
A/C compressor	A/C relay OFF
Generator	Outputs the power generation command signal (PWM signal) 0%

If No CAN Communication Is Available With BCM

Control part	Fail-safe in operation
Headlamp	 Turns ON the headlamp low relay when the ignition switch is turned ON Turns OFF the headlamp low relay when the ignition switch is turned OFF Headlamp high relay OFF
 Parking lamps License plate lamps Illumination Tail lamps 	 Turns ON the tail lamp relay when the ignition switch is turned ON Turns OFF the tail lamp relay when the ignition switch is turned OFF
Front wiper	 The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.
Front fog lamps (if equipped)	Front fog lamp relay OFF
Horn	Horn OFF
Ignition relay	The status just before activation of fail-safe is maintained.
Starter motor	Starter control relay OFF
Electronic steering column lock unit	Electronic steering column lock relay OFF

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

• IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay inside it.

• IPDM E/R judges the ignition relay error if the voltage differs between the contact circuit and the excitation coil circuit.

· If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

DTC	Ignition switch	Ignition relay	Tail lamp relay
_	ON	ON	—
_	OFF	OFF	—
B2098: IGN RELAY ON	OFF	ON	ON (10 minutes)
B2099: IGN RELAY OFF	ON	OFF	—

NOTE:

The tail lamp turns OFF when the ignition switch is turned ON.

FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper auto stop signal.

When a front wiper auto stop signal is in the conditions listed below, IPDM E/R stops power supply to wiper after repeating a front wiper 10 second activation and 20 second stop five times.

Ignition switch	Front wiper switch	Auto stop signal
ON	OFF	Front wiper stop position signal cannot be input 10 seconds.
	ON	The signal does not change for 10 seconds.

NOTE:

This operation status can be confirmed on the IPDM E/R "Data Monitor" that displays "BLOCK" for the item "WIP PROT" while the wiper is stopped.

< ECU DIAGNOSIS >

STARTER MOTOR PROTECTION FUNCTION

IPDM E/R turns OFF the starter control relay to protect the starter motor when the starter control relay remains А active for 90 seconds.

DTC Index

INFOID:000000004501302

В

CONSULT-III display	Fail-safe	TIM	E ^{NOTE}	Refer to	
No DTC is detected. further testing may be required.	_	_	_	_	_
U1000: CAN COMM CIRCUIT	×	CRNT	1 – 39	PCS-20	
B2098: IGN RELAY ON	×	CRNT	1 – 39	PCS-21	
B2099: IGN RELAY OFF	—	CRNT	1 – 39	PCS-22	_
B2108: STRG LCK RELAY ON		CRNT	1 – 39	<u>SEC-42</u>	
B2109: STRG LCK RELAY OFF	_	CRNT	1 – 39	<u>SEC-43</u>	
B210A: STRG LCK STATE SW		CRNT	1 – 39	<u>SEC-44</u>	
B210B: START CONT RLY ON		CRNT	1 – 39	<u>SEC-48</u>	
B210C: START CONT RLY OFF	_	CRNT	1 – 39	<u>SEC-49</u>	
B210D: STARTER RELAY ON	—	CRNT	1 – 39	<u>SEC-50</u>	_
B210E: STARTER RELAY OFF	—	CRNT	1 – 39	<u>SEC-51</u>	_
B210F: INTRLCK/PNP SW ON	—	CRNT	1 – 39	<u>SEC-54</u>	_
B2110: INTRLCK/PNP SW OFF	_	CRNT	1 – 39	<u>SEC-59</u>	

NOTE:

The details of TIME display are as follows.

CRNT: The malfunctions that are detected now

• 1 - 39: The number is indicated when it is normal at present and a malfunction was detected in the past. It increases like $0 \rightarrow 1 \rightarrow 2 \cdots 38 \rightarrow 39$ after returning to the normal condition whenever IGN OFF \rightarrow ON. It is fixed to 39 until the self-diagnosis results are erased if it is over 39. It returns to 0 when a malfunction is detected again in the process.

SEC

L

Μ

Ν

Ο

Ρ

J

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS < SYMPTOM DIAGNOSIS > [COUPE]

SYMPTOM DIAGNOSIS

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS

Symptom Table

INFOID:000000004206163

Engine cannot be started with all Intelligent Keys. **CAUTION:**

- Follow Trouble Diagnosis Flowchart referring to "<u>SEC-10, "Work Flow"</u>". Determine malfunctioning condition before performing this diagnosis.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis.
- Check systems shown in the "Diagnosis/service procedure" column in this order.

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

- Engine start function is ON when setting on CONSULT-III.
- Use Intelligent Key with registered Intelligent Key ID.
- One or more of Intelligent Keys with registered Intelligent Key ID is in the passenger compartment.

Diagnosis/service pr	ocedure	Reference page
1. Check power supply and ground sizewit	BCM	<u>DLK-292</u>
1. Check power supply and ground circuit	IPDM E/R	PCS-23
2. Check push button ignition switch		PCS-80
3. Check Intermittent Incident		<u>GI-42</u>

VEHICLE SECURITY SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

VEHICLE SECURITY SYSTEM SYMPTOMS

Symptom Table

[COUPE]

А

INFOID:000000004206164

Procedure Symptom			– Diagnostic procedure	Refer to page		
				Relei to page		
		Door switch	Check door switch	<u>DLK-69</u>		
		Trunk	Check trunk room lamp switch	DLK-93		
	Vehicle security sys- tem cannot be set by 	Door outside key	Check key cylinder switch	<u>SEC-116</u> , or <u>SEC-117</u>		
1		Intelligent Key	Check Intelligent Key battery and function	<u>DLK-115</u>		
		—	Check Intermittent Incident	<u>GI-42</u>		
	Security indicator does	a not turn ON	Check vehicle security indicator	<u>SEC-124</u>		
	Security indicator does	S HOL LUITI OIN.	Check Intermittent Incident	<u>GI-42</u>		
	* Vehicle security		Check door switch	DLK-69		
2	system does not sound alarm when ····	Any door is opened.	Check Intermittent Incident	<u>GI-42</u>		
		Horn alarm	Check horn	<u>SEC-120</u>		
3	alarm does not acti-	Vehicle security alarm does not acti- vate.		Check Intermittent Incident	<u>GI-42</u>	
5			Head lamp alarm	Check head lamp alarm	<u>SEC-122</u>	
		neau lamp alaini	Check Intermittent Incident	<u>GI-42</u>		
	Vehicle security sys-	Door outside key	Check key cylinder switch	<u>SEC-116</u> , or <u>SEC-117</u>		
4	tem cannot be can-		Check Intermittent Incident	<u>GI-42</u>		
	celed by ····	Intelligent Koy	Check Intelligent Key battery and function	<u>DLK-115</u>		
		Intelligent Key	Check Intermittent Incident	<u>GI-42</u>		

*: Check the system is in the armed phase.

SEC

L

Μ

Ν

Ο

Ρ

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

< SYMPTOM DIAGNOSIS >

[COUPE]

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

Symptom Table

INFOID:000000004206165

Security indicator does not turn ON or flash. CAUTION:

- Follow Trouble Diagnosis Flowchart referring to "<u>SEC-10, "Work Flow"</u>". Determine malfunctioning condition before performing this diagnosis.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis.
- Check systems shown in the "Action" column in this order.

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

- Intelligent Key is not inserted into key slot.
- Engine switch is not depressed.

Action	Reference page
1. Check vehicle security indicator	<u>SEC-124</u>
2. Check Intermittent Incident	<u>GI-42</u>

KEY SLOT

< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR KEY SLOT

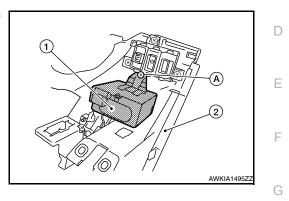
REMOVAL

- 1. Remove the instrument lower panel LH. Refer to IP-12. "Removal and Installation".
- 2. Disconnect key slot connector.
- 3. Remove the key slot screw (A), and then remove key slot (1) from instrument lower panel LH (2).

INSTALLATION Installation is in the reverse order of removal.



С



SEC

L

Μ

Ν

Ο

Ρ

J

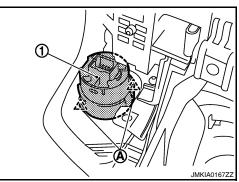
Н

PUSH BUTTON IGNITION SWITCH

Removal and Installation

REMOVAL

- 1. Remove the cluster lid A assembly. Refer to IP-12. "Removal and Installation".
- 2. Release the pawls (A) and remove the push-button ignition
- switch (1) from cluster lid A.



INSTALLATION Installation is in the reverse order of removal. INFOID:000000004206169

[SEDAN WITH INTELLIGENT KEY]

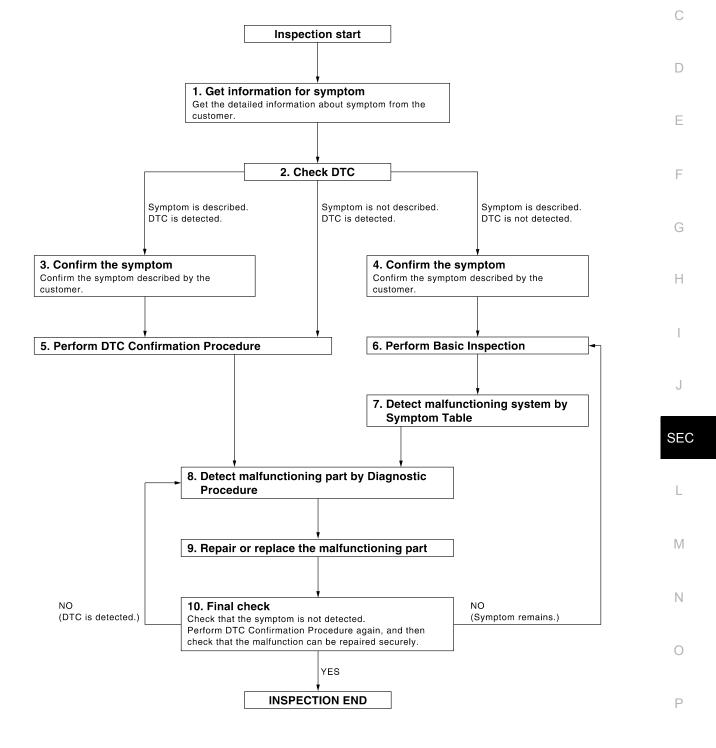
BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000004206170

А

OVERALL SEQUENCE



< BASIC INSPECTION >

1.GET INFORMATION FOR SYMPTOM

Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2

2.CHECK DTC WITH BCM AND IPDM E/R

- 1. Check "Self Diagnostic Result" with CONSULT-III.
- 2. Perform the following procedure if DTC is displayed.
- Record DTC and freeze frame data (Print them out with CONSULT-III.)
- Erase DTC.
- Study the relationship between the cause detected by DTC and the symptom described by the customer.
- 3. Check related service bulletins for information.

Is any symptom described and any DTC detected?

Symptom is described, DTC is displayed>>GO TO 3 Symptom is described, DTC is not displayed>>GO TO 4 Symptom is not described, DTC is displayed>>GO TO 5

3.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "Data Monitor" mode and check real time diagnosis results. Verify relation ship between the symptom and the condition when the symptom is detected.

>> GO TO 5

4.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "Data Monitor" mode and check real time diagnosis results. Verify relation ship between the symptom and the condition when the symptom is detected.

>> GO TO 6

5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always keep CONSULT-III connected to the vehicle, and check diagnostic results in real time. If two or more DTCs are detected, refer to <u>SEC-386</u>, "<u>DTC Inspection Priority Chart</u>" and determine trouble diagnosis order.

NOTE:

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. This
 simplified check procedure is an effective alternative though DTC cannot be detected during this check.
 If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC Confirmation Procedure.

Is DTC detected?

YES >> GO TO 8

NO >> Refer to <u>GI-42, "Intermittent Incident"</u>.

6.PERFORM BASIC INSPECTION

Perform SEC-212, "Basic Inspection".

Inspection End >>GO TO 7

7. DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to following symptom tables based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptoms.

• Intelligent Key system/engine start function: <u>SEC-406</u>, "Symptom Table".

Vehicle security system: <u>SEC-407, "Symptom Table"</u>.

DIAGNOSIS AND REPAIR WORKFLOW		
< BASIC INSPECTION > [SEDAN WITH INTELLIGENT KEY]		
 Nissan vehicle immobilizer system-NATS: <u>SEC-408, "Symptom Table"</u>. 		
>> GO TO 8		
8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE		
Inspect according to Diagnostic Procedure of the system. NOTE:		
The Diagnostic Procedure described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.		
Is malfunctioning part detected?		
YES >> GO TO 9		
NO >> Check voltage of related BCM terminals using CONSULT-III.		
9. REPAIR OR REPLACE THE MALFUNCTIONING PART		
 Repair or replace the malfunctioning part. Reconnect parts or connectors disconnected during Diagnostic Procedure again after repair or replacement. 		
 Check DTC. If DTC is displayed, erase it. 		
>> GO TO 10		
10.FINAL CHECK		
When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check		
again, and then check that the malfunction have been fully repaired. When symptom was described from the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.		
Is the inspection result normal?		
NO (DTC is detected) >> GO TO 8		
NO (Symptom remains) >>GO TO 6 YES >> Inspection End.		
TES >> Inspection End.		

L

 \mathbb{N}

Ν

Ρ

Ο

< BASIC INSPECTION >

[SEDAN WITH INTELLIGENT KEY]

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

INFOID:000000004206353

The engine start function, door lock function, power distribution system and NATS-IVIS/NMS in the Intelligent Key system are closely related to each other regarding control. Narrow down the functional area in question by performing basic inspection to identify which function is malfunctioning. The vehicle security function can operate only when the door lock and power distribution systems are operating normally. Therefore, it is easy to identify any factor unique to the vehicle security system by performing the vehicle security operation check after basic inspection.

1. CHECK DOOR LOCK OPERATION

 Check the door lock for normal operation with the Intelligent Key controller and door request switch. Successful door lock operation with the Intelligent Key and request SW indicates that the remote keyless entry receiver is functioning normally.

Identify the malfunctioning point by referring to the DLK section if the door cannot be unlocked.

Can the door be locked with the Intelligent Key and door request switch?

YES >> GO TO 2

NO >> Refer to <u>DLK-415</u>, "INTELLIGENT KEY : Symptom Table".

2. CHECK ENGINE STARTING

1. Checks that the engine starts when operating the Intelligent Key inserted into the key slot.

Does the engine start?

YES >> GO TO 3

NO >> Refer to <u>SEC-406</u>, "Symptom Table".

3.CHECK STEERING LOCKING

1. Does the steering lock when operating door switch after switching the power supply from ON position (or ACC position) to LOCK position?

If door switch is malfunctioning, BCM cannot lock the steering. If BCM does not detect DTC, steering lock unit is normal.

Does steering lock?

- YES >> GO TO 4
- NO >> Refer to <u>DLK-293</u>, "Component Function Check".

4.CHECK POWER SUPPLY INDICATOR SWITCHING

1. Press push-button ignition switch and position indicator will switch from LOCK, ACC to ON gradually when steering is locked. Check that the position indicator is illuminated at different positions of the circuit.

Is each position indicator illuminating?

YES >> GO TO 5

NO >> Refer to <u>SEC-307</u>, "Description".

5.CHECK VEHICLE SECURITY SYSTEM

1. Check the vehicle security system for normal operation.

The vehicle security function can operate only when the door lock and power distribution functions are operating normally.

Therefore, it is easy to identify any factor unique to the vehicle security by performing the vehicle security operation check after this basic inspection.

>> Refer to SEC-212, "Vehicle Security Operation Check".

Vehicle Security Operation Check

INFOID:000000004206354

1.INSPECTION START

Turn ignition switch "OFF" and pull out Intelligent Key from key slot. **NOTE:**

Before starting operation check, open front windows.

PRE-INSPECTION FOR DIAGNOSTIC

< BASIC INSPECTION >

[SEDAN WITH INTELLIGENT KEY]

>> GO TO 2	
2. CHECK SECURITY INDICATOR LAMP	А
 Lock doors using Intelligent Key or mechanical key. Check that security indicator lamp illuminates for 30 seconds. 	В
Security indicator lamp should illuminate.	D
OK >> GO TO 3 NG >> Perform diagnosis and repair. Refer to <u>SEC-323, "Component Function Check"</u> .	С
3. CHECK ALARM FUNCTION	
 After 30 seconds, security indicator lamp will start to blink. Open any door or hood before unlocking with Intelligent Key or mechanical key, or open trunk lid without Intelligent Key or mechanical key. 	D
Do alarm function properly.	
OK >> GO TO 4	Е
 NG >> Check the following. The vehicle security system does not phase in alarm mode. Refer to <u>SEC-407. "Symptom Table"</u>. Alarm (horn, headlamp and hazard lamp) do not operate. Refer to <u>SEC-407. "Symptom Table"</u>. 	F
4. CHECK ALARM CANCEL OPERATION	
Unlock any door or open trunk lid using Intelligent Key or mechanical key.	G
Alarm (horn, headlamp and hazard lamp) should stop.	
 OK >> Inspection End. NG >> Check door lock function. Refer to <u>DLK-246, "INTELLIGENT KEY : System Description"</u>. 	Η

J

SEC

L

Μ

Ν

0

Ρ

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

INSPECTION AND ADJUSTMENT

ECM RE-COMMUNICATING FUNCTION

ECM RE-COMMUNICATING FUNCTION : Description

INFOID:000000004206171

Performing following procedure can automatically perform re-communication of ECM and BCM, but only when the ECM has been replaced with a new one (*1).

*1: New one means an ECM which has never been energized on-board.

(In this step, initialization procedure by CONSULT-III is not necessary)

NOTE:

- When registering new Key IDs or replacing the ECM that is not brand new, refer to CONSULT-III Operation Manual.
- If multiple keys are attached to the key holder, separate them before work.
- Distinguish keys with unregistered key ID from those with registered ID.

ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement

INFOID:000000004206172

1.PERFORM ECM RE-COMMUNICATING FUNCTION

1. Install ECM.

- Insert the registered Intelligent Key (*2), turn ignition switch to "ON".
 *2: To perform this step, use the key that has been used before performing ECM replacement.
- 3. Maintain ignition switch in "ON" position for at least 5 seconds.
- 4. Turn ignition switch to "OFF".
- 5. Start engine.

Can engine be started?

- YES >> Procedure is completed.
- NO >> Initialize control unit. Refer to CONSULT-III Operation Manual.

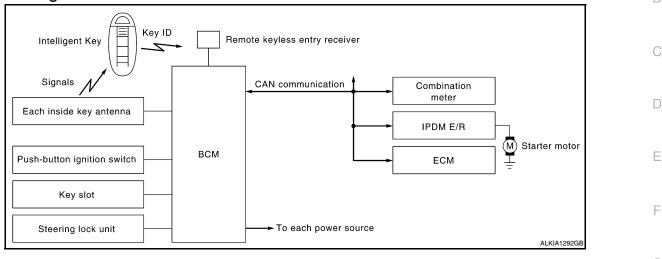
INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

FUNCTION DIAGNOSIS INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

System Diagram



System Description

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator	
Push-button ignition switch	Push switch	Engine start function	 Steering lock relay Steering lock unit Starter relay (IPDM E/R) Starter control relay (IPDM E/R) Starter motor KEY warning lamp 	
CVT device (CVT models)	P range			
PNP switch (CVT models)	N, P range			
Clutch interlock switch (M/T mod- els)	Clutch ON/OFF			_
Stop lamp switch	Brake ON/OFF			S
Each inside key antenna	Request signal			
Remote keyless entry receiver	Key ID			
Each door switch	Door open/close			
ECM	Engine status signal			

SYSTEM DESCRIPTION

• The engine start function of Intelligent Key system is a system that makes it possible to start and stop the engine without removing the key. It verifies the electronic ID using two-way communications when pressing the push-button ignition switch while carrying the Intelligent Key, which operates based on the results of electronic ID verification for Intelligent Key using two-way communications between the Intelligent Key and the vehicle.

NOTE:

The driver should carry the Intelligent Key at all times.

- Intelligent Key has 2 IDs [for Intelligent Key and for NVIS (NATS)]. It can perform the door lock/unlock operation and the push-button ignition switch operation when the registered Intelligent Key is carried.
- When the Intelligent Key battery is discharged, it can be used as emergency back-up by inserting the Intelligent Key to the key slot. At that time, perform the NVIS (NATS) ID verification. If it is used when the Intelligent Key is carried, perform the Intelligent Key ID verification.
- If the ID is successfully verified, and when push-button ignition switch is pressed, steering lock will be released and initiating the engine will be possible.
- If the door lock/unlock operation is performed when the Intelligent Key battery is discharged, all doors lock/ unlock can be performed by operating the driver door key cylinder using the mechanical key set in the Intelligent Key.

А

INFOID:000000004206173

INFOID:000000004206174

Н

ΞC

Μ

Ν

P

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

- Intelligent Key can be registered up to 4 keys (Including the standard Intelligent Key) on request from the owner.
 NOTE:
 - Refer to <u>DLK-246, "INTELLIGENT KEY : System Description"</u> for any functions other than engine start function of Intelligent Key system.

PRECAUTIONS FOR INTELLIGENT KEY SYSTEM

 In the Intelligent Key system of model L32, the transponder [the chip for NVIS (NATS) ID verification] is integrated into the Intelligent Key. (For the conventional models, it is integrated into the mechanical key.) Therefore, the mechanical key cannot perform the ID verification, and thus it cannot start the engine. Instead, the NVIS (NATS) ID verification can be performed by inserting the Intelligent Key into the key slot, and then it can start the engine.

OPERATION WHEN INTELLIGENT KEY IS CARRIED

- 1. When the push-button ignition switch is pressed and brake pedal is depressed, the BCM signals the inside key antenna and transmits the request signal to the Intelligent Key.
- 2. The Intelligent Key sends the request signal and transmits the Intelligent Key ID signal to the BCM via the remote keyless entry receiver.
- 3. The BCM receives the Intelligent Key ID signal and verifies it with the registered ID.
- 4. BCM transmits the steering lock unlock signal to steering lock unit and IPDM E/R if the verification results are OK.
- 5. IPDM E/R turns the steering lock relay ON and supplies power to the steering lock unit.
- 6. Release of the steering lock.
- 7. BCM transmits the power supply stop signal to IPDM E/R when it confirms that the steering lock is in the unlock condition.
- 8. IPDM E/R turns the steering lock relay OFF and stops power supply to the steering lock unit.
- 9. BCM turns ACC relay ON and transmits the ignition power supply ON signal to IPDM E/R.
- 10. IPDM E/R turns the ignition relay ON and starts the ignition power supply.
- 11. BCM confirms that the shift position is P or N (CVT models).
- 12. BCM transmits the starter request signal via CAN communication to IPDM E/R and turns the starter relay in IPDM E/R ON if BCM judges that the engine start condition is satisfied.
- 13. IPDM E/R turns the starter control relay ON when receiving the starter request signal.
- 14. Battery power is supplied through the starter relay and the starter control relay to operate the starter motor and to start the cranking. CAUTION:

If a malfunction is detected in the Intelligent Key system, the "KEY" warning lamp in the combination meter illuminates. At that time, the engine cannot be started.

15. When BCM received feedback signal from ECM acknowledging the engine has been initiated, the BCM transmits a stop signal to IPDM E/R and stops the cranking by turning OFF the starter motor relay. (If the engine initiating has failed, the cranking will stop automatically within 5 seconds.) CAUTION:

When the Intelligent Key is carried outside of the vehicle (inside key antenna detection area) with the power supply in ACC or ON position, even if the engine start condition* is satisfied, the engine cannot be started.

*: For the engine start condition, refer to "PUSH-BUTTON IGNITION SWITCH OPERATION PROCEDURE".

OPERATION RANGE

Engine can be started when Intelligent Key is inside the vehicle. However, sometimes engine might not start when Intelligent Key is on instrument panel or in glove box.

OPERATION WHEN KEY SLOT IS USED

When the Intelligent Key battery is discharged, it performs the NVIS (NATS) ID verification between the integrated transponder and BCM by inserting the Intelligent Key into the key slot, and then the engine can be started.

For details relating to starting the engine using key slot, refer to SEC-215, "System Description".

BATTERY SAVER SYSTEM

When all the following conditions are met for 60 minutes, the battery saver system will cut off the power supply to prevent battery discharge.

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

А

В

D

Ε

F

Н

SEC

< FUNCTION DIAGNOSIS >	[SEDAN WITH INTELLIGENT KEY]
 The ignition switch is in the ACC position 	

- All doors are closed
- CVT selector lever is in the P position
- No Intelligent Key failures (Intelligent Key warning indicator is not ON)

Reset Condition of Battery Saver System

CVT models

In order to prevent the battery from discharging, the battery saver system will cut off the power supply when all doors are closed, the selector lever is on P position and the ignition switch is left on ACC position for 1 hour. If any of the following conditions are met the battery saver system is released and the steering will change automatically to lock position from OFF position.

- Opening any door
- Operating with request switch on door lock
- Operating with Intelligent Key on door lock

Press push-button ignition switch and ignition switch will change to ACC position from OFF position.

M/T models

If any of the conditions above is met the battery saver system is released but the steering will not lock. In this case, the steering operation OFF to LOCK is prohibited.

STEERING LOCK OPERATION

Steering is locked by steering lock unit when ignition switch is in the OFF position, CVT selector lever is in the P position and any of the following conditions are met.

- · Opening door
- Closing door
- Door is locked with request switch
- Door is locked with Intelligent Key

PUSH-BUTTON IGNITION SWITCH OPERATION PROCEDURE

The power supply position changing operation can be performed with the following operations. **NOTE:**

- When an Intelligent Key is within the detection area of inside key antenna or when it is inserted to the key slot, it is equivalent to the operations below.
- When starting the engine, the BCM monitors under the engine start conditions,
- Brake pedal operating condition (CVT models)
- CVT selector lever position (CVT models)
- Clutch pedal operating condition (M/T models)
- Vehicle speed
- Steering lock condition
- Engine status
- Unless each start condition is fulfilled, the engine will not respond regardless of how many times the engine switch is pressed. At that time, illumination repeats the position in the order of LOCK→ACC→ON→OFF.

	Engine start/stop condition		Buch button ignition switch on
Power supply position	Brake pedal (CVT) /clutch pedal (M/T)	CVT selector lever position	Push-button ignition switch op- eration frequency
$LOCK \rightarrow ACC$	Not depressed	Any position	1
$LOCK\toACC\toON$	Not depressed	Any position	2
$\begin{array}{c} LOCK \to ACC \to ON \to \\ OFF \end{array}$	Not depressed	Any position	3
$LOCK \rightarrow START$ ACC $\rightarrow START$ ON $\rightarrow START$ (Engine start)	Depressed	P or N position (*1)	1 [If the switch is pressed once, the engine starts from any pow- er supply position (LOCK, ACC, and ON)]
Engine is running → OFF (Engine stop)	_	Any position Vehicle speed < 4 km/h (2 MPH)	1

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

	Engine start/stop condition		Push-button ignition switch op-
Power supply position	Brake pedal (CVT) /clutch pedal (M/T)	CVT selector lever position	eration frequency
Engine is running → ACC (Engine stop)	_	Any position other than P (*2)	1
Engine stall return oper- ation while driving	_	P position	1

*1: When the CVT selector lever position is N position, the engine start condition is different according to the vehicle speed.

• At vehicle speed of 4 km/h (2 MPH) or less, the engine can start only when the brake pedal is depressed.

• At vehicle speed of 4 km/h (2 MPH) or more, the engine can start even if the brake pedal is not depressed. (It is the same as "Engine stall return operation while driving".)

*2: When the CVT selector lever position is in any position other than P position and when the vehicle speed is 5 km/h (3 MPH) or more, the engine stop condition is different.

• Press and hold the push-button ignition switch for 2 seconds or more. (When the push-button ignition switch is pressed for too short a time, the operation may be invalid, so properly press and hold to prevent an incorrect operation.)

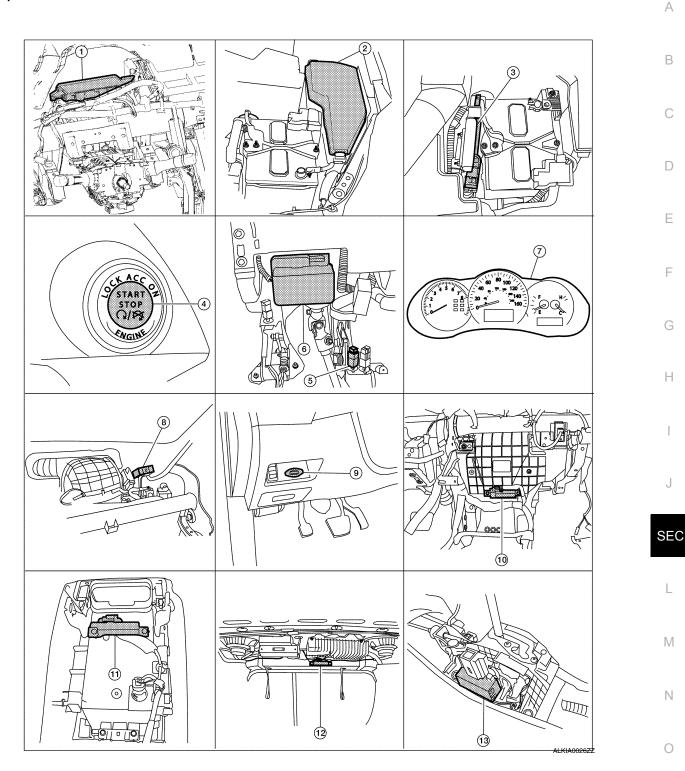
• Press the push-button ignition switch 3 times or more within 1.5 seconds. (Emergency stop operation)

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION [SEDAN WITH INTELLIGENT KEY]

< FUNCTION DIAGNOSIS >

Component Parts Location

INFOID:000000004206175



- 1. Body control module (view with instrument panel removed)
- Push button ignition switch 4.
- 7. Combination meter
- 10. Instrument panel antenna (view with instrument panel removed)
- 13. CVT device (park position switch)

- 2. IPDM E/R
- Stop lamp switch (view with lower driv- 6. 5. er instrument panel removed)
- 8. Remote keyless entry receiver (view 9. with instrument panel removed)
- 11. Front console antenna (bottom view of 12. Rear parcel shelf antenna console)
- 3. ECM
 - Steering lock unit (steering column)

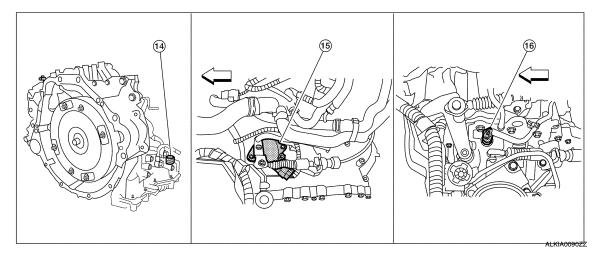
Ρ

- Key slot

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]



- 14. Park neutral position switch connec- 15. Park neutral position switch (CVT/ tor (switch inside trans) (CVT/VQ)
- QR)
- 16. Park neutral position switch (M/T)

Component Description

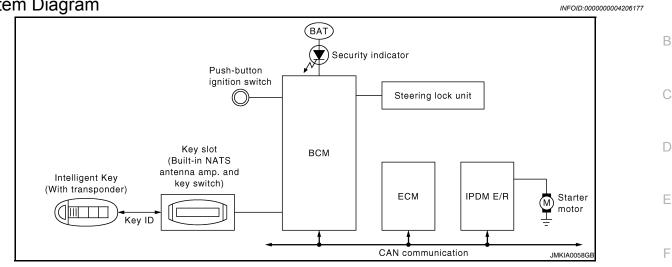
Component	Reference
BCM	<u>SEC-306</u>
Steering lock unit	<u>SEC-296</u>
Push-button ignition switch	<u>SEC-271</u>
Door switch	DLK-293
CVT device (park position switch)	<u>SEC-275</u>
Inside key antenna	DLK-283
Remote keyless entry receiver	DLK-337
Stop lamp switch	<u>SEC-269</u>
Park/neutral position switch	<u>SEC-283</u>
Clutch switch	<u>SEC-253</u>
Steering lock relay	<u>SEC-242</u>
Starter relay	<u>SEC-249</u>
Starter control relay	<u>SEC-247</u>
Security indicator	<u>SEC-323</u>
Key warning lamp	<u>SEC-322</u>

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

< FUNCTION DIAGNOSIS >

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

System Diagram



System Description

INFOID:000000004206178

L

Μ

Ρ

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator	
Push-button ignition switch	Push switch			
CVT device (CVT models)	P range	– NVIS (NATS)	Steering lock relay	
PNP switch (CVT models)	N, P range		Steering lock unitStarter relay (IPDM E/R)	
Clutch interlock switch (M/T models)	Clutch ON/OFF			
Stop lamp switch	Brake ON/OFF • Starter control relay (I		 Starter control relay (IPDM E/R) Starter motor 	
Key slot	Key ID		KEY warning lamp	•
Each door switch	Door open/close		Security indicator lamp	
ECM	Engine status signal	_		

SYSTEM DESCRIPTION

- The NVIS (NATS) is an anti-theft system by registering an Intelligent Key ID in to the vehicle and prevents the engine being started by an unregistered Intelligent Key. It has a higher protection against auto thefts that duplicate mechanical key.
- It performs the ID verification when starting the engine in the same way as the Intelligent Key system. But, it performs the NVIS (NATS) ID verification when inserting the Intelligent Key and performs the Intelligent Key ID verification when carrying the Intelligent Key.
- The Intelligent Key system of L32 is not the same as the conventional models. The mechanical key integrated in the Intelligent Key cannot start the engine. When the Intelligent Key battery is discharged, the NVIS Ν (NATS) ID verification memorized to the transponder integrated with Intelligent Key is performed by inserting the Intelligent Key into the key slot. If the verification results are OK, the engine start operation can be performed by the push-button ignition switch operation.
- Locate the security indicator and apply the anti-theft system equipment sticker, forewarn that the NVIS (NATS) is onboard with the model.
- The security indicator always blinks when the Intelligent Key is removed from the key slot and when the power supply position is in LOCK position.
- Intelligent Key can be registered up to 4 keys (Including the standard ignition key) on request from the owner.
- The specified registration is required when replacing ECM, BCM or Intelligent Key. The registrations procedure for NVIS (NATS) and registration procedure for Intelligent Key when installing the BCM, refer to CON-SULT-III Operation Manual NATS-IVIS/NVIS.

SEC-221

А

[SEDAN WITH INTELLIGENT KEY]

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

< FUNCTION DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

- Possible symptom of NVIS (NATS) malfunction is "Engine cannot start". In L32, the engine can be started with the Intelligent Key system and NVIS (NATS). Identify the possible causes according to "Work Flow", Refer to <u>SEC-209, "Work Flow"</u>.
- If ECM other than Genuine NISSAN is installed, the engine cannot be started. For ECM replacement procedure, refer to <u>SEC-214, "ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement"</u>.

PRECAUTIONS FOR KEY REGISTRATION

- The key registration is a procedure that erases the current NVIS (NATS) ID once, and then re-registers a new ID operation. Therefore the registered Intelligent Key is necessary for this procedure. Before starting the registration operation collect all registered Intelligent Keys from the customer
- When registering the Intelligent Key, performs only one procedure to register simultaneously both ID (NVIS "NATS" ID registration and Intelligent Key ID registration).
 The NVIS (NATS) ID registration is the procedure that registers the ID stored into the transponder (integrated in intelligent key) to BCM.

The Intelligent key ID registration is the procedure that registers the ID to BCM.

• When performing the Intelligent Key system registration only, the engine cannot be started by inserting the key into the key slot. When performing the NVIS (NATS) registration only, the engine cannot be started by the operation when carrying the key. The registrations of both systems should be performed.

SECURITY INDICATOR

- Warns that the vehicle is equipped with NVIS (NATS).
- The security indicator always blinks when the Intelligent Key is removed from the key slot and when the ignition switch is in LOCK position.

NOTE:

Because security indicator is highly efficient, the battery is barely affected.

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS) [SEDAN WITH INTELLIGENT KEY] < FUNCTION DIAGNOSIS >

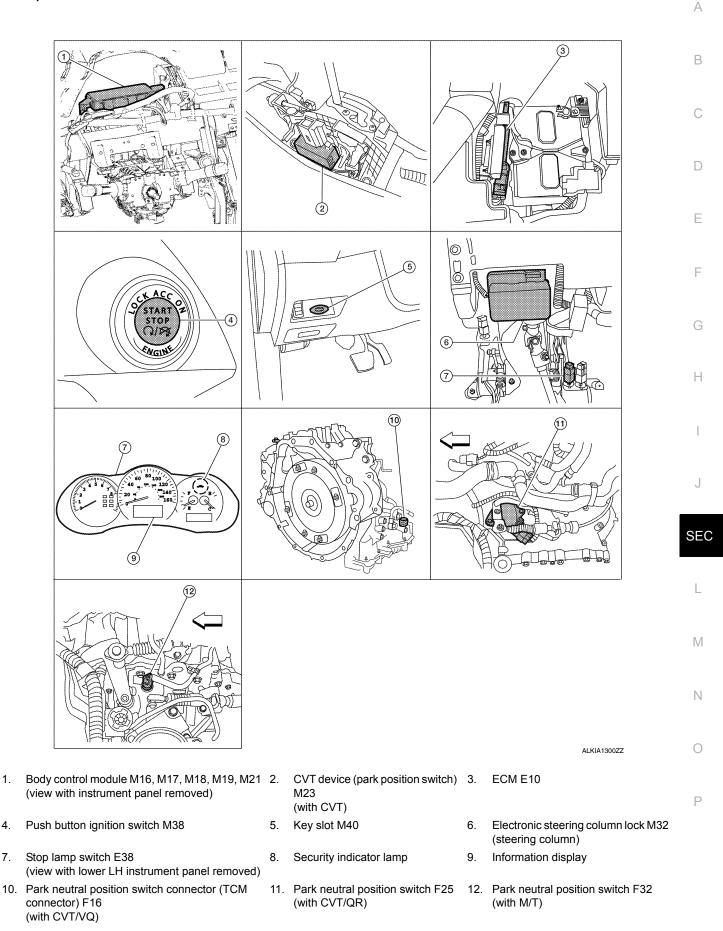
Component Parts Location

1.

4.

7.

INFOID:000000004206179



SEC-223

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS) IAGNOSIS > [SEDAN WITH INTELLIGENT KEY]

< FUNCTION DIAGNOSIS >

Component Description

INFOID:000000004206180

Component	Reference
BCM	<u>SEC-306</u>
Steering lock unit	<u>SEC-296</u>
Push-button ignition switch	<u>SEC-307</u>
Door switch	DLK-293
CVT device (park position switch)	<u>SEC-275</u>
Inside key antenna	<u>DLK-283</u>
Remote keyless entry receiver	<u>DLK-337</u>
Stop lamp switch	<u>SEC-269</u>
Park/neutral position switch	<u>SEC-283</u>
Clutch switch	<u>SEC-253</u>
Steering lock relay	<u>SEC-241</u>
Starter relay	<u>SEC-290</u>
Starter control relay	<u>SEC-274</u>
Security indicator	<u>SEC-323</u>
Key warning lamp	<u>SEC-322</u>

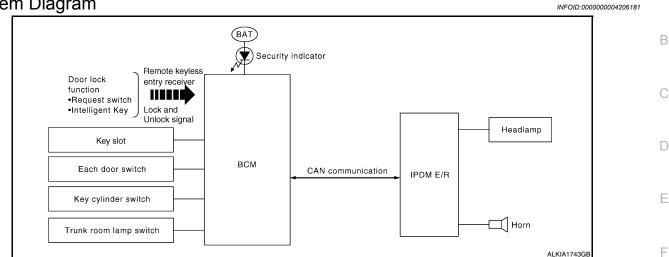
VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

VEHICLE SECURITY SYSTEM

System Diagram



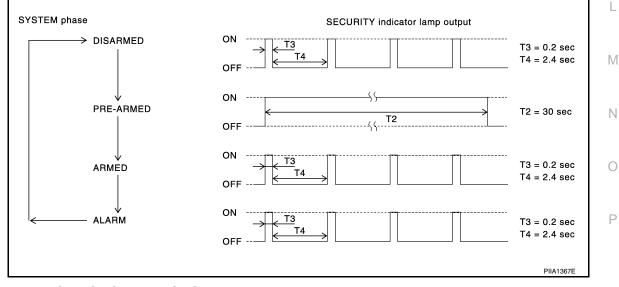
System Description

INFOID:000000004206182

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM system	Actuator	-
All door switch	Onen er elege			
Trunk room lamp switch	Open or close			
Door key cylinder switch				1
Door lock and unlock switch	Lock or unlock		IPDM E/RHead lamp	
Door request switch		Vehicle security system	Horn	J
latelline at Marc	Lock or unlock		Security indicator lamp	
Intelligent Key	Panic alarm			
Key slot	Intelligent Key sensing			SE

OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

• Ignition switch is in OFF position.

А

VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

Disarmed Phase

- When doors or trunk is open, the vehicle security system is set in the disarmed phase on the assumption that the owner is inside or near the vehicle.
- When the vehicle security system is in the disarmed phase, the security indicator lamp blinks every 2.4 seconds.

Pre-armed Phase and Armed Phase

When the following operation 1 or 2 is performed, the vehicle security system turns into the "pre-armed" phase. (The security indicator lamp illuminates.)

- 1. BCM receives LOCK signal from front door key cylinder switch or Intelligent Key, after trunk and all doors are closed.
- Trunk and all doors are closed after front doors are locked by key or door lock and unlock switch. The security indicator lamp illuminates for 30 seconds. Then, the system automatically shifts into the "armed" phase.

CANCELING THE SET VEHICLE SECURITY SYSTEM

When one of the following operations is performed, the armed phase is canceled.

- 1. Unlock the doors with the key or Intelligent Key.
- 2. Turn ignition switch "ON" or "ACC" position.

CANCELING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM When unlocking the door with the key or Intelligent Key the alarm operation is canceled.

ACTIVATING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

Check that the system is in the armed phase. (The security indicator lamp blinks every 2.4 seconds.) When the following operation 1 or 2 is performed, the system sounds the horns and flashes the headlamps for about 50 seconds.

- 1. Trunk or any door is opened during armed phase.
- 2. Disconnecting and connecting the battery connector before canceling armed phase.

PANIC ALARM OPERATION

Intelligent Key system will not operate horn and headlamps if the ignition switch is in the ACC or ON position. When the Intelligent Key system is triggered, ground is supplied intermittently to both headlamp relay and horn relay.

When headlamp relay and horn relay are energized, then power is supplied to headlamps (LH and RH) and horns (HIGH and LOW).

The headlamp flashes and the horn sounds intermittently.

The alarm automatically turns off after 50 seconds or when BCM receives any signal from Intelligent Key.

VEHICLE SECURITY SYSTEM [SEDAN WITH INTELLIGENT KEY]

< FUNCTION DIAGNOSIS >

Component Parts Location

А

В

С

D

Е

F

Н

J

SEC

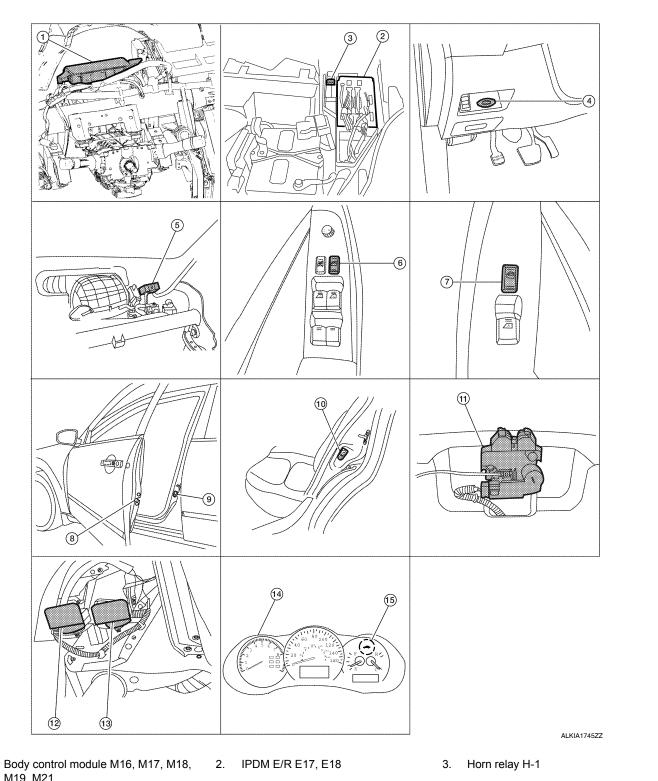
L

Μ

Ν

Ο

Ρ



- M19, M21 (view with instrument panel removed)
- 4. Key slot M40

1.

- 7. Power window and door lock/unlock switch RH D105
- 5. Remote keyless entry receiver M27
 - (view with instrument panel removed)
- Front door lock assembly LH (key cylinder switch) D10
- 6. Main power window and door lock/ unlock switch D7, D8
 - . Front door switch LH B8 RH B108

VEHICLE SECURITY SYSTEM [SEDAN WITH INTELLIGENT KEY]

< FUNCTION DIAGNOSIS >

10. Rear door switch LH B18 RH B116

13. Horn (high) E216

- 11. Trunk lamp switch and trunk release solenoid B28
- Horn (low) E215 (view with front fender protector LH removed)
- 14. Combination meter M24
- 15. Security indicator lamp

INFOID:000000004206184

Component Description

Component	Reference
BCM	<u>SEC-225</u>
Horn relay	<u>SEC-319</u>
Security indicator	<u>SEC-323</u>
Door switch	<u>DLK-293</u>
Door lock actuator	<u>DLK-326</u>
Trunk lid lock assembly	<u>DLK-330</u>
Door key cylinder switch	<u>DLK-305</u>
Door lock and unlock switch	<u>DLK-296</u>
Key slot	<u>DLK-303</u>
Remote keyless entry receiver	DLK-337

DIAGNOSIS SYSTEM (BCM) COMMON ITEM

COMMON ITEM : Diagnosis Description

BCM CONSULT-III FUNCTION

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description	
WORK SUPPORT	Changes the setting for each system function.	
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM.	
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.	
DATA MONITOR	The BCM input/output signals are displayed.	
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.	
ECU IDENTIFICATION	The BCM part number is displayed.	
CONFIGURATION	This function is not used even though it is displayed.	

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

Custom	Cub sustam aslastian itam	Diagnosis mode			
System	Sub system selection item	WORK SUPPORT	DATA MONITOR	ACTIVE TEST	
Door lock	DOOR LOCK	×	×	×	
Rear window defogger	REAR DEFOGGER		×	×	
Warning chime	BUZZER		×	×	
Interior room lamp timer	INT LAMP	×	×	×	
Remote keyless entry system	MUTI REMOTE ENT	×	×	×	
Exterior lamp	HEADLAMP	×	×	×	
Wiper and washer	WIPER	×	×	×	
Turn signal and hazard warning lamps	FLASHER	×	×	×	
Air conditioner	AIR CONDITONER		×		
Intelligent Key system	INTELLIGENT KEY	×	×	×	
Combination switch	COMB SW		×		
BCM	BCM	×			
Immobilizer	IMMU		×	×	
Interior room lamp battery saver	BATTERY SAVER	×	×	×	
Trunk open	TRUNK		×		
Vehicle security system	THEFT ALM	×	×	×	
RAP system	RETAINED PWR		×		
Signal buffer system	SIGNAL BUFFER		×	×	
TPMS	AIR PRESSURE MONITOR	×	×		

COMMON ITEM : CONSULT-III Function

ECU IDENTIFICATION Displays the BCM part No.

SELF-DIAG RESULT Refer to <u>BCS-91, "DTC Index"</u>. А

В

С

1.1

INFOID:000000004498328

INFOID:000000004498329

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY) INFOLD:00000004498330

WORK SUPPORT

Monitor item	Description
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode.
AUTO LOCK SET	 Auto door lock time can be changed in this mode. MODE 1: 1 minute MODE 2: 5 minutes MODE 3: 30 seconds MODE 4: 2 minutes
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side, passenger side and trunk) mode can be changed to operate (ON) or not operate (OFF) with this mode.
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (ON) or not operate (OFF) with this mode
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by trunk opener request switch can be changed to operate (ON) or not operate (OFF) with this mode.
PANIC ALARM SET	 Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode. 0.5 sec. 1.5 sec. OFF: Non-operation
PW DOWN SET	 Unlock button pressing time on Intelligent Key button to lower front windows can be selected from the following with this mode. 3 sec. 5 sec. OFF: Non-operation
TRUNK OPEN DELAY	 Trunk button pressing time on Intelligent Key button can be selected from the following with this mode. 0.5 sec. 1.5 sec. OFF: No delay
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode.
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not op erate (OFF) with this mode.
HAZARD ANSWER BACK	 Hazard reminder function mode can be selected from the following with this mode. LOCK ONLY: Door lock operation only UNLOCK ONLY: Door unlock operation only LOCK AND UNLOCK: Lock/unlock operation OFF: Non operation
ANS BACK I-KEY LOCK	 Buzzer reminder function (lock operation) mode by door request switch (driver side and passenger side) can be selected from the following with this mode. HORN CHIRP: Sound horn BUZZER: Sound Intelligent Key warning buzzer OFF: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to op erate (ON) or not operate (OFF) with this mode.
SHORT CRANKING OUTPUT	Starter motor can operate during the times below. • 70 msec • 100 msec • 200 msec
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS > DATA MONITOR

[SEDAN WITH INTELLIGENT KEY]

А

Monitor Item	Condition
REQ SW-DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW-AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW-BD/TR	Indicates [ON/OFF] condition of trunk opener request switch.
PUSH SW	Indicates [ON/OFF] condition of push button ignition switch.
IGN RLY2-F/B	Indicates [ON/OFF] condition of ignition relay 2.
ACC RLY1-F/B	Indicates [ON/OFF] condition of accessory relay.
CLUTCH SW	NOTE: This item is displayed, but cannot be monitored.
BRAKE SW 1	Indicates [ON/OFF] condition of brake switch.
DETE/CANCL SW	Indicates [ON/OFF] condition of P position.
SFT PN/N SW	Indicates [ON/OFF] condition of P or N position.
S/L -LOCK	Indicates [ON/OFF] condition of steering lock (LOCK).
S/L -UNLOCK	Indicates [ON/OFF] condition of steering lock (UNLOCK).
S/L RELAY-F/B	Indicates [ON/OFF] condition of ignition switch.
UNLK SEN-DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
PUSH SW -IPDM	Indicates [ON/OFF] condition of push button ignition switch from IPDM E/R via CAN.
IGN RLY1-F/B	Indicates [ON/OFF] condition of ignition relay 1 from IPDM E/R via CAN.
DETE SW -IPDM	Indicates [ON/OFF] condition of P position from TCM via CAN.
SFT PN -IPDM	Indicates [ON/OFF] condition of P or N position from TCM via CAN.
SFT P -MET	Indicates [ON/OFF] condition of P position from TCM via CAN.
SFT N -MET	Indicates [ON/OFF] condition of N position from IPDM E/R via CAN.
ENGINE STATE	Indicates [STOP/START/CRANK/RUN] condition of engine states from ECM via CAN.
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock (LOCK) request from IPDM E/R via CAN.
S/L UNLOCK-IPDM	Indicates [ON/OFF] condition of steering lock (UNLOCK) request from IPDM E/R via CAN.
S/L RELAY-REQ	Indicates [ON/OFF] condition of steering lock relay from IPDM E/R via CAN.
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [Km/h].
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or CVT by numerical value [Km/h].
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of driver side door status.
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger side door status.
ID OK FLAG	Indicates [SET/RESET] condition of key ID.
PRMT ENG STRT	Indicates [SET/RESET] condition of engine start possibility.
PRMT RKE STRT	NOTE: This item is displayed, but cannot be monitored.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk lid.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.
RKE-PANIC	Indicates [ON/OFF] condition of PANIC button of Intelligent Key.

SEC-231

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

Monitor Item	Condition	
RKE-P/W OPEN	Indicates [ON/OFF] condition of P/W DOWN signal from Intelligent Key.	
RKE-MODE CHG	DDE CHG Indicates [ON/OFF] condition of MODE CHANGE signal from Intelligent Key.	

ACTIVE TEST

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
PW REMOTO DOWN SET	This test is able to check power window down operation. The power window down will be activated after "ON" on CONSULT-III screen is touched.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. Intelligent Key warning buzzer sounds when "ON" on CONSULT-III screen is touched.
INSIDE BUZZER	 This test is able to check warning chime by combination meter operation. Take out warning chime sounds when "TAKE OUT" on CONSULT-III screen is touched. Key warning chime sounds when "KEY WARN" on CONSULT-III screen is touched. P position warning chime sounds when "P RNG WARN" on CONSULT-III screen is touched. ACC warning chime sounds when "ACC WARN" on CONSULT-III screen is touched.
INDICATOR	 This test is able to check warning lamp operation. "KEY" Warning lamp illuminates when "KEY IND ON" on CONSULT-III screen is touched. "KEY" Warning lamp flashes when "KEY IND FSH" on CONSULT-III screen is touched.
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
LCD	 This test is able to check meter display information Engine start information displays when "BRAKE/P" on CONSULT-III screen is touched. Engine start information displays when "BRAKE/P/ON" on CONSULT-III screen is touched. Key ID warning displays when "KEY ID NG" on CONSULT-III screen is touched. Steering lock information displays when "STLCK RELES" on CONSULT-III screen is touched. P position warning displays when "P RNG IND" on CONSULT-III screen is touched. Intelligent Key insert information displays when "INSERT KEY" on CONSULT-III screen is touched. Intelligent Key low battery warning displays when "KEY BAT LOW" on CONSULT-III screen is touched. Intelligent Key low battery warning displays when "TK AWAY WDW" on CONSULT-III screen is touched. Take away window warning display when "TAKE AWAY" on CONSULT-III screen is touched. OFF position warning display when "IGN OFF WARN" on CONSULT-III screen is touched.
TRUNK/GLASS HATCH	This test is able to check trunk lid opener actuator open operation. This actuator opens when "ON" on CONSULT-III screen is touched.
FLASHER	This test is able to check security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.
HORN	This test is able to check horn operation. The horn will be activated after "ON" on CONSULT-III screen is touched.
P RANGE	This test is able to check CVT device power supply CVT device power is supplied when "ON" on CONSULT-III screen is touched.
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation. Push-ignition switch illumination illuminates when "ON" on CONSULT-III screen is touched.
LOCK INDICATOR	This test is able to check LOCK indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
ACC INDICATOR	This test is able to check ACC indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
IGNITION ON IND	This test is able to check INGITION ON indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
KEY SLOT ILLUMI	This test is able to check key slot illumination operation. Key slot illumination flash when "ON" on CONSULT-III screen is touched.

THEFT ALM

< FUNCTION DIAGNOSIS >

THEFT ALM : CONSULT-III Function (BCM - THEFT ALM)

WORK SUPPORT

Test Item	Description	
SECURITY ALARM SET	This mode is able to confirm and change security alarm ON-OFF setting.	
THEFT ALM TRG	The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching "CLEAR" on CONSULT-III screen.	С

DATA MONITOR

Monitored Item Description		
REQ SW -DR	Indicates [ON/OFF] condition of front door request switch (driver side).	
REQ SW -AS	Indicates [ON/OFF] condition of front door request switch (passenger side).	
REQ SW -RR	Indicates [ON/OFF] condition of rear door request switch (passenger side.	
REQ SW -RL	Indicates [ON/OFF] condition of rear door request switch (driver side).	
REQ SW -BD/TR	Indicates [ON/OFF] condition of trunk request switch.	
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch	
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.	
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.	
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.	
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.	
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.	
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.	
DOOR SW-BK	NOTE: This is displayed even when it is not equipped.	
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.	
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH.	
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from front door key cylinder switch.	
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from front door key cylinder switch.	
KEY CYL SW-TR	NOTE: This is displayed even when it is not equipped.	
TR/BD OPEN SW	Indicates [ON/OFF] condition of trunk opener switch.	
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk lid.	
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.	
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.	
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.	

ACTIVE TEST

Test Item	Description		
THEFT IND This test is able to check security indicator lamp operation. The lamp will be turned on when "O on CONSULT-III screen is touched.			
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation. The horns will be activated for 0.5 sec- onds after "ON" on CONSULT-III screen is touched.	s will be activated for 0.5 sec-	
HEADLAMP(HI)	EADLAMP(HI) This test is able to check vehicle security lamp operation. The headlamps will be activated for 0 seconds after "ON" on CONSULT-III screen is touched.		
FLASHER	This test is able to check vehicle security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.		

[SEDAN WITH INTELLIGENT KEY]

INFOID:000000004498331

D

< FUNCTION DIAGNOSIS >

IMMU : CONSULT-III Function (BCM - IMMU)

[SEDAN WITH INTELLIGENT KEY]

INFOID:000000004498332

DATA MONITOR

Monitor item	Content	
CONFRM ID ALL		
CONFIRM ID4		
CONFIRM ID3	Indicates [YET] at all time. Switch to [DONE] when a registered Intelligent Key is inserted into the key slot.	
CONFIRM ID2		
CONFIRM ID1	-	
TP 4		
TP 3		
TP 2	Indicates the number of ID which has been registered.	
TP 1		
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.	
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.	

DIAGNOSIS SYSTEM (BCM)

ACTIVE TEST

Test Item	Description
THEFT IND	This test is able to check security indicator operation [ON/OFF].

COMPONENT DIAGNOSIS U1000 CAN COMM CIRCUIT

Description

INFOID:000000004206190

INFOID:000000004206191

А

Ε

SEC

Μ

Ν

Ρ

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H line, CAN-L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

DTC Logic

DTC DETECTION LOGIC

CONSULT-III dis- play description	DTC Detection Condition	Possible cause	F
CAN COMM CIR- CUIT [U1000]	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more.	In CAN communication system, any item (or items) of the following listed below is malfunctioning. • Transmission • Receiving (ECM) • Receiving (VDC/TCS/ABS) • Receiving (METER/M&A) • Receiving (METER/M&A) • Receiving (TCM) • Receiving (MULTI AV) • Receiving (IPDM E/R)	ſ

Diagnosis Procedure

INFOID:000000004206192

1. PERFORM SELF DIAGNOSTIC	
-----------------------------------	--

1. Turn ignition switch ON and wait for 2 seconds or more.

2. Check "Self Diagnostic Result".

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to LAN-8, "CAN Communication Control Circuit".
- NO >> Refer to GI-42, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

DTC DETECTION LOGIC

CONSULT-III display description	DTC Detection Condition	Possible cause
CAN COMM CIRCUIT [U1010]	BCM detected internal CAN communication circuit malfunction.	ВСМ

Diagnosis Procedure

INFOID:000000004206194

1. REPLACE BCM

When DTC U1010 is detected, replace BCM.

>> Replace BCM. Refer to BCS-96, "Removal and Installation".

INFOID:000000004206193

B2013 ID DISCORD, IMMU-STRG

Description

BCM performs the ID verification with the steering lock unit and releases the steering lock if both BCM and В steering lock unit ID are same. BCM starts the communication with the steering lock unit when Intelligent Key is carried into the passenger compartment and the push-button ignition switch is pressed.

DTC Logic

С INFOID:000000004206196

INFOID:000000004206195

DTC DETECTION LOGIC

					D
	DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
	B2013	ID DISCORD, IMMU- STRG	The ID verification results between BCM and steer- ing control unit are NG. The registration is neces- sary.	Steering wheel lock unit	Е
D	C CONFI	RMATION PROC	EDURE		F
1	.PERFORM	/I DTC CONFIRMA	TION PROCEDURE		
	 Lock steering. Press the push-button ignition switch. Check "Self Diagnostic Result" with CONSULT-III. 				G
	DTC detec				Н
	YES >> Refer to <u>SEC-237, "Diagnosis Procedure"</u> . NO >> Inspection End.				
D	agnosis	Procedure		INFCID:00000004206197	
1	PERFORM	INITIALIZATION			
			ULT-III. Re-register all Intelligent Keys. of Intelligent Key, refer to "CONSULT-III Op	eration Manual".	J
Can the system be initialized and can steering lock be released with re-registered Intelligent Key?			0.50		
-		Steering lock unit wa Replace steering wh			SEC
					L

Μ

Ν

Ο

Ρ

SEC-237

А

B2014 CHAIN OF STRG-IMMU

Description

INFOID:000000004206198

[SEDAN WITH INTELLIGENT KEY]

BCM performs the ID verification with the steering lock unit to release the steering. BCM starts the communication with the steering lock unit when Intelligent Key is carried into the passenger compartment and the pushbutton ignition switch is pressed.

DTC Logic

INFOID:000000004206199

INFOID:000000004206200

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2014	CHAIN OF STRG- IMMU	Inactive communication between steering control unit and BCM	 Harness or connectors (steering lock unit circuit is open or short- ed) Steering lock unit BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Lock steering.
- 2. Press the push-button ignition switch.
- 3. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-238</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK STEERING LOCK UNIT POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect steering lock unit harness connector.
- 3. Check voltage between steering lock unit harness connector and ground while turning ignition switch from OFF to ACC.

Steering lock unit		Ground	Ignition switch	Voltage [V]
Connector	Terminal	Cround	position	voltage [v]
M32	7	Ground	$OFF \to ACC$	Battery volt- age
			OFF or ON	0

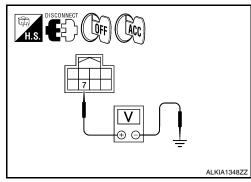
Is the inspection result normal?

NO >> GO TO 2

2.CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect BCM harness connector.



B2014 CHAIN OF STRG-IMMU

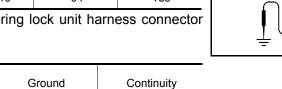
< COMPONENT DIAGNOSIS >

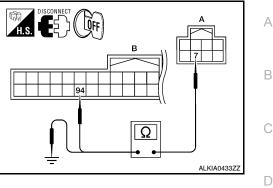
 Check continuity between steering lock unit harness connector M32 (A) terminal 7 and BCM harness connector M19 (B) terminal 94.

Steering lock unit		BCM		Continuity	
Connector	Terminal	connector Terminal		Continuity	
A: M32	7	B: M19	94	Yes	

4. Check continuity between steering lock unit harness connector M32 (A) terminal 7 and ground.

Steering	lock unit	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M32	7	Ground	No	





Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

$\mathbf{3}$.check steering lock unit ground circuit

- 1. Turn ignition switch OFF.
- 2. Check continuity between steering lock unit and ground.

Steering lock unit		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M32	5	Ground	Yes	
10132	6	Ground	165	

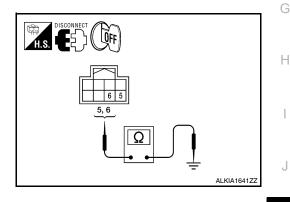
Is the inspection result normal?

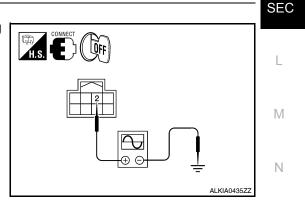
YES >> GO TO 4

NO >> Repair harness or connector.

4.CHECK STEERING LOCK UNIT COMMUNICATION SIGNAL

- 1. Connect steering lock unit harness connector.
- 2. Using an oscilloscope, read voltage signal between steering lock unit harness connector and ground.





0

Е

F

B2014 CHAIN OF STRG-IMMU

< COMPONENT DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

Steering	lock unit	Ground	Steering lock unit condi-	Value	
Connector	Terminal	Gloand	tion	value	
			Lock	Battery voltage	
M32	2	Ground	Lock or unlock	(V) 15 10 5 0 50 ms JMKIA0066GB	
			For 15 seconds after un- lock	Battery voltage	
			15 seconds or later after unlock.	0 V	

Steering is locked Steering is unlocked

- : Opening the door when ignition switch is ON to OFF.
- : Ignition switch is OFF to ACC.

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 5

5. CHECK STEERING LOCK UNIT COMMUNICATION CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect BCM harness connector.

 Check continuity between BCM harness connector M19 (A) terminal 99 and steering lock unit harness connector M32 (B) terminal 2.

BCM		Steering lock unit		Continuity
Connector	Terminal	connector Terminal		Continuity
A: M19	99	B: M32	2	Yes

4. Check continuity between BCM harness connector M19 (A) terminal 99 and ground.

B	СМ	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M19	99	Ground	No	

Is the inspection normal?

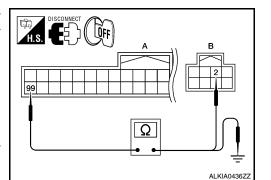
YES >> GO TO 6

NO >> Repair harness or connector.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.



B2108 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

B2108 STEERING LOCK RELAY

Description

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID-000000004206286

INFOID:000000004206287

INFOID:000000004206285

А

В

Е

Н

SEC

L

Μ

DTC DETECTION LOGIC

NOTE:

- If DTC B2108 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to D SEC-235, "DTC Logic".
- If DTC B2108 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-236, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2108	STRG LCK RELAY ON	IPDM E/R detects that the relay is stuck at ON po- sition for about 1 second even if the IPDM E/R re- ceives steering lock relay ON/OFF signal from BCM.	• IPDM E/R	F

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Press the push-button ignition switch under the following conditions and wait for at least 1 second. 1.
- CVT selector lever is in the P position
- Do not depress the brake pedal.
- Check "Self diagnostic result" with CONSULT-III. 2.

Is DTC detected?

- >> Refer to SEC-241, "Diagnosis Procedure". YES
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK FUSE

- 1. Turn ignition switch OFF.
- Check 10A fuse (No. 40, located in IPDM E/R). 2.
- Is the inspection result normal?

>> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation". YES NO

>> Check the following.

Harness for open or short between IPDM E/R and battery

Fuse

Ο

Ρ

[SEDAN WITH INTELLIGENT KEY]

B2109 STEERING LOCK RELAY

Description

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID-000000004206289

INFOID:000000004206290

INFOID:000000004206288

DTC DETECTION LOGIC

NOTE:

- If DTC B2109 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-235, "DTC Logic".
- If DTC B2109 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-236, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2109	STRG LCK RELAY OFF	IPDM E/R detects that the relay is stuck at OFF po- sition for about 1 second even if the IPDM E/R re- ceives steering lock relay ON/OFF signal from BCM.	 Harness or connector (power supply circuit) IPDM E/R Battery

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Press the push-button ignition switch under the following conditions and wait for at least 1 second. 1.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- Check "Self diagnostic result" with CONSULT-III. 2.

Is DTC detected?

- >> Refer to SEC-242, "Diagnosis Procedure". YES
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK POWER SUPPLY CIRCUIT

Check IPDM E/R power supply circuit. Refer to PCS-23, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2

- NO >> Repair the malfunctioning parts
- 2.CHECK FUSE
- Turn ignition switch OFF. 1.
- Check 10A fuse (No. 40, located in IPDM E/R). 2.

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation". NO
 - >> Check the following.
 - Harness for open or short between IPDM E/R and battery
 - Fuse

SEC-242

< COMPONENT DIAGNOSIS >

B210A STEERING LOCK CONDITION SWITCH

Description

There are 2 switches in the electronic steering column lock. IPDM E/R compares those 2 switches conditions by to judge the present steering status and transmit the result to BCM via CAN communication.

DTC Logic

INFOID:000000004206292

DTC DETECTION LOGIC

NOTE:

- If DTC B210A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B210A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B210A	STRG LCK STATE SW	 BCM detects the mismatch between the following for 1 second Steering lock or unlock Feedback of steering lock status from IPDM E/R (CAN) 	 Harness or connectors [electronic steering column lock circuit (BCM side) is open or short- ed] Harness or connectors [electronic steering column lock circuit (IPDM E/R side) is open or shorted.] Electronic steering column lock IPDM E/R 	F

DTC CONFIRMATION PROCEDURE

PERFORM DTC CONFIRMATION PROCEDURE Press the push-button ignition switch under the following conditions and wait for at least 1 second.

J CVT selector lever is in the P or N position Do not depress the brake pedal 2. Check "Self diagnostic result" with CONSULT-III. SEC Is DTC detected? YES >> Refer to SEC-243, "Diagnosis Procedure". NO >> Inspection End. Diagnosis Procedure INFOID:000000004206293 **1**.INSPECTION START Μ Check the case in which DTC is detected. Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed · Case2: It is detected after ignition switch is changed from ON to OFF Ν In which case is DTC detected? Case1 >> GO TO 2 Case2 >> GO TO 7 Ο 2.CHECK BCM OUTPUT SIGNAL Turn ignition switch OFF. 1. Ρ

2. Disconnect electronic steering column lock harness connector and IPDM E/R harness connector.

[SEDAN WITH INTELLIGENT KEY]

INFOID:000000004206291

А

Е

< COMPONENT DIAGNOSIS >

3. Check voltage between electronic steering column lock harness connector and ground.

connector and ground.				H.S.
Electronic stee	ring column lock	Ground	Voltage [V]	
Connector	Terminal	Ground	voltage [v]	
M32	3	Ground	Battery voltage	

Is the inspection result normal?

>> GO TO 4 YES NO >> GO TO 3

3. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

- 1. Disconnect BCM harness connector.
- 2. Check continuity between BCM harness connector M19 (A) terminal 85 and electronic steering column lock harness connector M32 (B) terminal 3.

B	BCM		Electronic steering column lock	
Connector	Terminal	Connector Terminal		Continuity
A: M19	85	B: M32	3	Yes

Check continuity 3. minal 85 and gr

round.		ector M19 (A) ter-	
Terminal	Ground	Continuity	

BCM		Ground	Continuity
Connector Terminal		Ground	Continuity
A: M19	85	Ground	No

Is the inspection result normal?

YES >> GO TO 6

>> Repair harness or connector. NO

4.CHECK IPDM E/R OUTPUT SIGNAL

- 1. Connect IPDM E/R harness connector.
- 2. Disconnect BCM harness connector.
- Check voltage between electronic steering column lock harness 3. connector and ground.

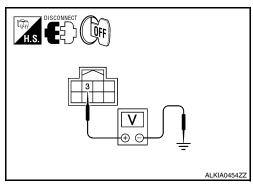
Electronic stee	ring column lock	Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	3	Ground	Battery voltage

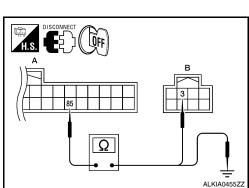
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 5

5. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II





[SEDAN WITH INTELLIGENT KEY]

٧

ALKIA0454ZZ

Æ

OFF

-5

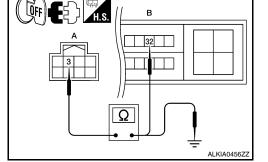
< COMPONENT DIAGNOSIS >

 Check continuity between electronic steering column lock harness connector M32 (A) terminal 3 and IPDM E/R harness connector E18 (B) terminal 32.

Electronic steering column lock		IPDI	IPDM E/R	
Connector	Terminal	Connector	Terminal	Continuity
A: M32	3	B: E18	32	Yes

 Check continuity between electronic steering column lock harness connector M32 (A) terminal 3 and ground.

Electronic stee	ring column lock	Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M32	3	Ground	No



D

F

А

В

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

7.CHECK BCM OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect electronic steering column lock harness connector and IPDM E/R harness connector E5.

H.S. 5

Check voltage between electronic steering column lock harness connector and ground.

Electronic stee	ring column lock	Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 9

NO >> GO TO 8

8. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

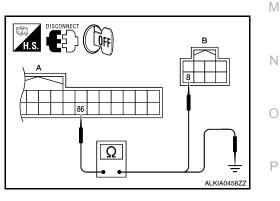
1. Disconnect BCM harness connector M122.

 Check continuity between BCM harness connector M19 (A) terminal 86 and electronic steering column lock harness connector M32 (B) terminal 8.

B	CM	electronic steer	electronic steering column lock	
Connector	Terminal	Connector	Terminal	Continuity
A: M19	86	B: M32	8	Yes

 Check continuity between BCM harness connector M19 (A) terminal 86 and ground.

BCM		Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M19	86	Ground	No



Is the inspection result normal?

SEDAN WITH INTELLIGENT KEY]

SEC-245

Η

J

SEC

ALKIA0457ZZ

< COMPONENT DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

OFF

YES >> GO TO 11

NO >> Repair harness or connector.

9.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector.

- 2. Disconnect BCM harness connector.
- 3. Check voltage between electronic steering column lock harness connector and ground.

Electronic steer	ring column lock	Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	8	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace electronic steering column lock.

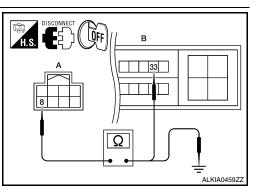
NO >> GO TO 10

10. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

 Check continuity between electronic steering column lock harness connector M32 (A) terminal 8 and IPDM E/R harness connector E18 (B) terminal 33.

Electronic steering column lock		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	8	B: E18	33	Yes

2. Check continuity between electronic steering column lock harness connector and ground.



 $\oplus \in$

ALKIA0457ZZ

	Electronic steer	ring column lock	Ground	Continuity
-	Connector	Terminal	Ground	Continuity
-	A: M32	8	Ground	No

Is the inspection result normal?

YES >> GO TO 11

NO >> Repair harness or connector.

11.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

B210B STARTER CONTROL RELAY

< COMPONENT DIAGNOSIS >

B210B STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000004206295

INFOID:000000004206294

DTC DETECTION LOGIC

NOTE:

- If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B210B is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-236, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B210B	START CONT RLY ON	 IPDM E/R detects that the relay is stuck at ON position even if the following conditions are met for about 1 second. Starter control relay ON/OFF signal from BCM Clutch interlock or shift park neutral position (PNP) switch input signal 	• IPDM E/R	_
DTC CONFI	RMATION PROC	EDURE		_
1.PERFORM	I DTC CONFIRMA	TION PROCEDURE		
 CVT sele Depress 	ctor lever is in the I the brake pedal		nd wait for at least 1 second.	
2. Check "S ls DTC detec	•	t" with CONSULT-III.		
		Diagnosis Procedure".		
	nspection End.			9
Diagnosis	Procedure		INFOID:000000004	206296
1.INSPECTI	ON START			
	tion switch ON.			
 Check "S Touch "E 		t" with CONSULT-III.		
	DTC Confirmation	Procedure.		
Is the DTC B	210B displayed aga	<u>iin?</u>		
YES >> F	Replace IPDM E/R.	<u>iin?</u> Refer to <u>PCS-48, "Removal and Installation</u>	<u>".</u>	
YES >> F			<u>"</u> .	

[SEDAN WITH INTELLIGENT KEY]

А

С

Е

B210C STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000004206298

INFOID:000000004206299

INFOID:000000004206297

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B210C is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210C	START CONT RLY OFF	 IPDM E/R detects that the relay is stuck at ON position even if the following conditions are met for about 1 second. Starter control relay ON/OFF signal from BCM Clutch interlock or shift park neutral position (PNP) switch input signal 	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn the power supply position to start under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position.
- Depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-248</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. Refer to <u>PCS-45, "DTC Index"</u>.

Is the DTC B210C displayed again?

- YES >> Replace IPDM E/R. Refer to PCS-48. "Removal and Installation".
- NO >> Inspection End.

SEC-248

B210D STARTER RELAY

Description

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000004206301

INFOID:000000004206300

А

В

Ε

SEC

Μ

INFOID:000000004206302

DTC DETECTION LOGIC

NOTE:

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B210D is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.
- If DTC B210D is displayed with DTC B2617, first perform the trouble diagnosis for DTC B2617. Refer to <u>SEC-304, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	F
B210D	STARTER RELAY ON	 IPDM E/R detects that the relay is stuck at ON position even if the following conditions are met for about 1 second. Starter control relay ON/OFF signal from BCM Clutch interlock or shift park neutral position 	• IPDM E/R	G
		(PNP) switch input		Н

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Ignition switch ON under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to SEC-249, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

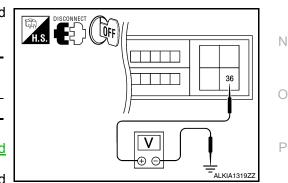
1. CHECK STARTER RELAY POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R harness connector.
- Check voltage between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Voltage (V)
Connector	Terminal	Gibund	voltage (v)
E18	36	Ground	Battery voltage

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to <u>PCS-48, "Removal and</u> <u>Installation"</u>.
- NO >> Check harness for open or short between IPDM E/R and battery.



B210E STARTER RELAY

Description

INFOID:000000004206303

[SEDAN WITH INTELLIGENT KEY]

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000004206304

INFOID:000000004206305

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B210E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210E	STARTER RELAY OFF	 IPDM E/R detects that the relay is stuck at ON position even if the following conditions are met for about 1 second. Starter control relay ON/OFF signal from BCM Clutch interlock or shift park neutral position (PNP) switch input 	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-250, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

Check which type of transmission the vehicle is equipped with.

Which type of transmission

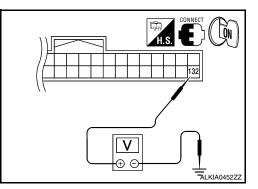
CVT >> GO TO 2 M/T >> GO TO 3

 $\mathbf{2}$

2.CHECK STARTER RELAY OUTPUT SIGNAL/CVT MODELS

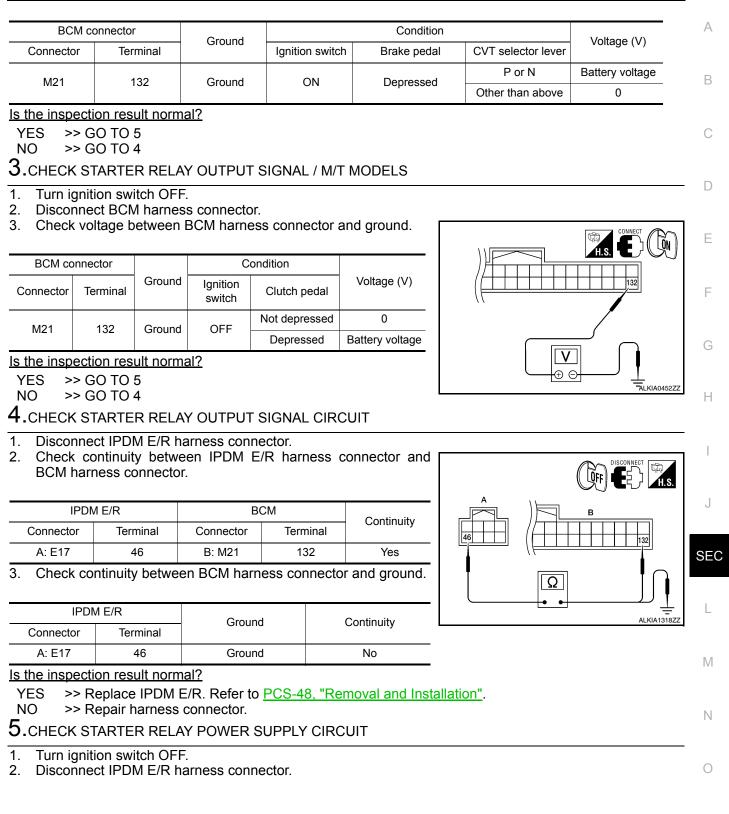
1. Turn ignition switch OFF.

- 2. Disconnect BCM harness connector.
- 3. Check voltage between BCM harness connector and ground.



B210E STARTER RELAY

< COMPONENT DIAGNOSIS >



Ρ

B210E STARTER RELAY

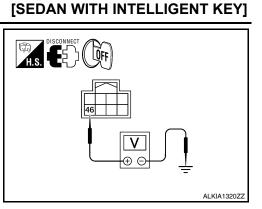
< COMPONENT DIAGNOSIS >

3. Check voltage between IPDM E/R harness connector and ground.

IPDN	IPDM E/R		Voltage (V)
Connector	Terminal	Ground	voltage (v)
E17	46	Ground	Battery voltage

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to <u>PCS-48</u>, "Removal and <u>Installation"</u>.
- NO >> Check harness for open or short between IPDM E/R and battery.



< COMPONENT DIAGNOSIS >

B210F PNP/CLUTCH INTERLOCK SWITCH

Description

IPDM E/R confirms the shift position with the following signals.

- Park/neutral position (PNP) switch (CVT models)
- Clutch interlock switch (M/T models)
- Shift position signal from BCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-235, "DTC Logic"
- If DTC B210F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-235, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTER LOCK/PNP SW ON	 IPDM E/R detects a mismatch between the signals below for 1 second or more. Clutch interlock input signal (M/T models) Shift PNP switch input signal (CVT models) Shift position signal from BCM (CAN) 	 Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted (CVT mod- els)] or (Clutch interlock switch cir- cuit is open or shorted.) Clutch interlock switch (M/T mod- els) Park/neutral position (PNP) switch (CVT models)

DTC CONFIRMATION PROCEDURE

1 DEREGRM DTC CONFIRMATION PROCEDURE

I.PERFORM DTC CONFIRMATION PROCEDURE	
 Turn ignition switch ON under the following conditions and wait for at least 1 second. CVT selector lever is in the P or N position 	J
 Do not depress the brake pedal Check "Self diagnostic result" with CONSULT-III. 	SEC
Is DTC detected? YES >> Refer to <u>SEC-253, "Diagnosis Procedure"</u> . NO >> Inspection End.	
NO >> Inspection End. Diagnosis Procedure INFOID:00000004.	206308
1.INSPECTION START	M
Check which type of transmission the vehicle is equipped with.	
Which type of transmission	Ν
CVT >> GO TO 2 M/T >> GO TO 5	14
2. СНЕСК DTC WITH BCM	0
Refer to BCS-91, "DTC Index".	
Is the inspection result normal?	
YES >> GO TO 3	Р
NO >> Repair or replace malfunctioning parts.	
3. CHECK PNP SWITCH INPUT SIGNAL	
1. Turn ignition switch OFF.	
2. Disconnect IPDM E/R harness connector.	
3. Turn ignition switch ON.	

Turn ignition switch ON.

[SEDAN WITH INTELLIGENT KEY]

INFOID:000000004206306

В

D

Ε

А

INFOID:000000004206307

< COMPONENT DIAGNOSIS >

4. Check voltage between IPDM E/R harness connector and ground under following condition.

IPDM	E/R	Ground	Cond	lition	Voltage (V)
Connector	Terminal	Cround	Cond		vollage (v)
			CVT selector	P or N	0
E18	30	Ground	lever	Other than above	Battery voltage
Is the insp	action reg	ult norma	12		·

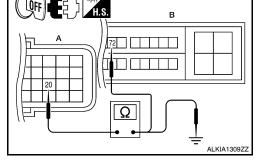
YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation".

>> (VQ35DE) GO TO 4 NO NO

- >> (QR25DE) GO TO 10
- CHECK PNP SWITCH CIRCUIT
- 1. Turn ignition switch OFF.
- Disconnect TCM harness connector. 2.
- 3. Check continuity between IPDM E/R harness connector and TCM harness connector.

T	CM	IPDN	/I E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: F16	20	B: E18	72	Yes

4. Check continuity between TCM harness connector and ground.



T	CM	Ground	Continuity
Connector	Terminal	Ground	Continuity
A: F16	20	Ground	No

Is the inspection result normal?

YES >> GO TO 13

NO >> Repair harness or connector.

5. CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL (BCM)

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.

3. Check voltage between BCM harness connector and ground.

BC	М	Ground Con		ndition	Voltage (V)
Connector	Terminal	Ground	00	nation	voltage (v)
M18	22	Ground	Clutch pedal	Not depressed	0
IVI I O	22	Giounu	Ciutori peuai	Depressed	Battery voltage

Is the inspection result normal?

YES >> GO TO 6

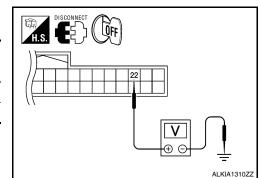
NO >> GO TO 7

6.CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL

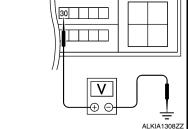
1. Turn ignition switch OFF.

Disconnect IPDM E/R harness connector. 2.

Turn ignition switch ON. 3.



[ON]I 30



[SEDAN WITH INTELLIGENT KEY]



4. Check voltage between IPDM E/R harness connector and ground.

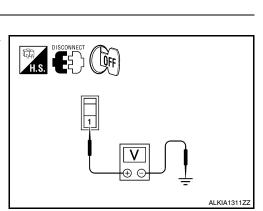
IPDN	I E/R	Ground	C	ondition	Voltage (V)
Connector	Terminal	Ground		onation	voltage (v)
E18	30	Ground	Clutch	Not depressed	0
L10	50	Ground	pedal	Depressed	Battery voltage

Is the inspection result normal?

- YES >> Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and</u> <u>Installation"</u>.
- NO >> Check harness for open between clutch interlock switch and IPDM E/R.

7. CHECK CLUTCH INTERLOCK SWITCH POWER SUPPLY

- 1. Disconnect clutch interlock switch harness connector.
- Check voltage between clutch interlock switch harness connector and ground.



Clutch inte	rlock switch	Ground	Voltage (V)
Connector	Terminal	Ground	Voltage (V)
E36	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 8

NO >> Check harness for open or short between clutch interlock switch and fuse.

8.CHECK CLUTCH INTERLOCK SWITCH CIRCUIT

 Check continuity between IPDM E/R harness connector and clutch interlock switch harness connector.

Clutch inte	rlock switch	IPDN	II E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: E36	2	B: E18	30	Yes

Check continuity between clutch interlock switch harness connector and ground.

Clutch inte	rlock switch	Ground	Continuity
Connector	Terminal	Ground	Continuity
A: E36	2	Ground	No

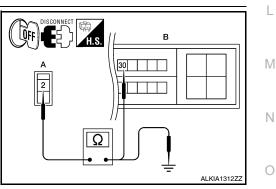
Is the inspection result normal?

YES >> GO TO 9

NO >> Repair harness or connector.

9. CHECK CLUTCH INTERLOCK SWITCH

Refer to SEC-257, "Component Inspection".



Ρ

SEC

А

В

D

Е

F

Н

ALKIA1308ZZ

[SEDAN WITH INTELLIGENT KEY]

30

ν

θE

LON

∎5 }

< COMPONENT DIAGNOSIS >

QFF

Ω

ALKIA1313ZZ

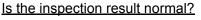
Is the inspection result normal?

- YES >> Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation".
- NO >> Replace clutch interlock switch.

10. CHECK PNP SWITCH CIRCUIT FOR CONTINUITY

- 1. Turn ignition switch OFF.
- Check continuity between IPDM E/R harness connector terminals 72 and 74.

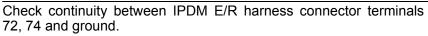
IF	DM E/R		C	ondition	Continuity
Connector	Tern	ninals		manon	Continuity
F10	72	74	PNP switch	P or N	Yes
110	12	74	position	Other	No



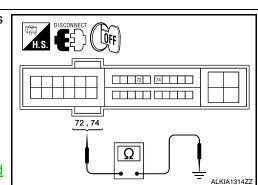
YES >> GO TO 11

NO >> GO TO 12

11. CHECK PNP SWITCH CIRCUIT FOR SHORT



IPDM E/R		Ground	Continuity
Connector	Terminal	Ground	Continuity
F10	72	Ground	No
FIU	74	Ground	No



Is the inspection result normal?

- YES >> Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and</u> <u>Installation"</u>.
- NO >> Repair or replace harness.

12. CHECK PNP SWITCH INPUT SIGNAL CIRCUIT

- 1. Disconnect PNP switch harness connector.
- 2. Check continuity between PNP switch and IPDM E/R harness connectors.

Park/neutral p	Park/neutral position switch		/I E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: F25	A: E25		74	Yes
A. 1 25	2	B: F10	72	165

Check continuity between PNP switch harness connector and ground.

T.S.	
	// <u>72,74</u> <u>Q</u> <u>A</u> <u>A</u> <u>A</u> <u>A</u> <u>A</u> <u>A</u> <u>A</u> <u>A</u>

Park/neutral p	position switch	Ground	Continuity	
Connector Terminal		Ground	Continuity	
A: F25	1	Ground	No	
	2	Ground		

Is the inspection result normal?

YES >> Replace PNP switch.

- NO >> Repair harness or connector.
- 13. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

< COMPONENT DIAGNOSIS >

>> Inspection End.

Component Inspection

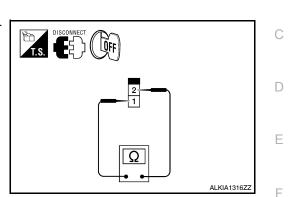
1. CHECK CLUTCH INTERLOCK SWITCH

- 1. Turn ignition switch OFF.
- Disconnect clutch interlock switch harness connector. 2.
- 3. Check continuity between clutch interlock switch under the following conditions.

Clutch inte	erlock switch	C	Condition	Continuity
Ter	minal		ondition	Continuity
1	2	Clutch pedal	Not depressed	No
I	2	Ciuton pedal	Depressed	Yes

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Replace clutch interlock switch.





Н



SEC

L

Μ

Ν

Ο

Ρ

[SEDAN WITH INTELLIGENT KEY]

SEC-257

- INFOID:000000004206309
- В

А

< COMPONENT DIAGNOSIS >

B2110 PNP/CLUTCH INTERLOCK SWITCH

Description

INFOID:000000004206310

[SEDAN WITH INTELLIGENT KEY]

IPDM E/R confirms the shift position with the following signals.

- Park/neutral position (PNP) switch (CVT models)
- Clutch inter lock switch (M/T models)
- Shift position signal from BCM (CAN)

DTC Logic

INFOID:000000004206311

INFOID:000000004206312

DTC DETECTION LOGIC

NOTE:

- If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235. "DTC Logic"</u>.
- If DTC B2110 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2110	INTER LOCK/PNP SW	IPDM E/R detects mismatch between the signals below for 1 second or more.Clutch interlock input signal (M/T models)Shift NP switch input signal (CVT models)	 Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted (CVT mod- els)] or (Clutch interlock switch circuit is open or shorted.) Clutch inter lock switch (MT models) Park/neutral position (PNP) switch (CVT models)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn the ignition switch ON under the following conditions and wait for at least 1 second.

- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-258</u>, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

Check which type of transmission the vehicle is equipped with.

Which type of transmission

CVT >> GO TO 2 M/T >> GO TO 5

2. CHECK DTC WITH BCM

Refer to BCS-91, "DTC Index".

Is the inspection result normal?

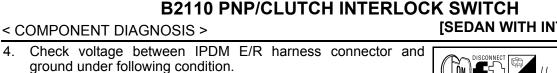
YES >> GO TO 3

NO >> Repair or replace malfunctioning parts.

3.CHECK PNP SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.

- 2. Disconnect IPDM E/R harness connector.
- 3. Turn ignition switch ON.



IPDM E/R		Ground	Condition		Voltage (V)
Connector	Terminal	Ground	Condition		voltage (v)
			CVT selector	P or N	0
E18	30	Ground	lever	Other than above	Battery voltage

Is the inspection result normal?

4.

YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation".

>> (VQ35DE) GO TO 4 NO

- NO >> (QR25DE) GO TO 10
- CHECK PNP SWITCH CIRCUIT
- 1. Turn ignition switch OFF.
- Disconnect TCM harness connector. 2.
- 3. Check continuity between IPDM E/R harness connector and TCM harness connector.

T	ТСМ		IPDM E/R	
Connector	Terminal	Connector	Terminal	Continuity
A: F16	20	B: E18	72	Yes

4. Check continuity between TCM harness connector and ground.

Т	CM	Ground	Continuity	
Connector	Terminal	Cround	Continuity	
A: F16	20	Ground	No	

Is the inspection result normal?

YES >> GO TO 13

NO >> Repair harness or connector.

5. CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL (BCM)

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.

3. Check voltage between BCM harness connector and ground.

BCM		Ground Co		ndition	Voltage (V)
Connector	Terminal	Ground	Condition		voltage (v)
M18	22	Ground	Clutch pedal	Not depressed	0
IVITO	22	Giouria Cil	Ciulcii peuai	Depressed	Battery voltage

Is the inspection result normal?

>> GO TO 6 YES

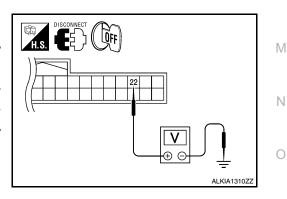
NO >> GO TO 7

6.CHECK CLUTCH INTERLOCK SWITCH INPUT SIGNAL

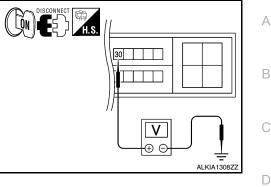
1. Turn ignition switch OFF.

Disconnect IPDM E/R harness connector. 2.

Turn ignition switch ON. 3.



[SEDAN WITH INTELLIGENT KEY]



в

72

Ω

OFF

口

Е

F

Н

SEC

L

Ρ

ALKIA1309Z

< COMPONENT DIAGNOSIS >

4. Check voltage between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Condition		Voltage (V)
Connector	Terminal	Ground	Condition		voltage (v)
E18	30	Ground	Clutch	Not depressed	0
EIO	30	Ground	pedal	Depressed	Battery voltage

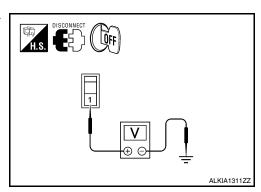
Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to <u>PCS-48, "Removal and</u> <u>Installation"</u>.

NO >> Check harness for open between clutch interlock switch and IPDM E/R.

7. CHECK CLUTCH INTERLOCK SWITCH POWER SUPPLY

- 1. Disconnect clutch interlock switch harness connector.
- 2. Check voltage between clutch interlock switch harness connector and ground.



Clutch inte	rlock switch	Ground	Voltage (V)	
Connector	Connector Terminal		voliage (v)	
E36	1	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 8

NO >> Check harness for open or short between clutch interlock switch and fuse.

8.check clutch interlock switch circuit

1. Check continuity between IPDM E/R harness connector and clutch interlock switch harness connector.

Clutch inte	Clutch interlock switch IPDM E/R		Continuity	
Connector	Terminal	Connector Terminal		Continuity
A: E36	2	B: E18	30	Yes

2. Check continuity between clutch interlock switch harness connector and ground.

Clutch interlock switch		Ground	Continuity
Connector	Terminal	Ground	Continuity
A: E36	2	Ground	No

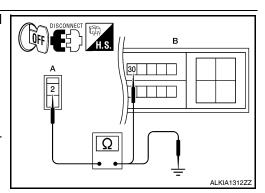
Is the inspection result normal?

YES >> GO TO 9

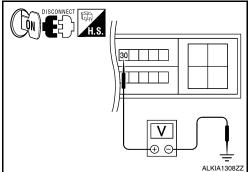
NO >> Repair harness or connector.

9. CHECK CLUTCH INTERLOCK SWITCH

Refer to SEC-262, "Component Inspection".







< COMPONENT DIAGNOSIS >

Is the inspection result normal?

- YES >> Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation".
- NO >> Replace clutch interlock switch.

10. CHECK PNP SWITCH CIRCUIT FOR CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Check continuity between IPDM E/R harness connector terminals 72 and 74.

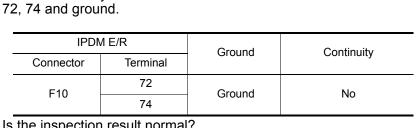
IF	PDM E/R		Condition		Continuity	
Connector	Tern	ninals			Continuity	
F10	72	74	PNP switch	P or N	Yes	
110	10 72 74		F10 72 74 position	position	Other	No

Is the inspection result normal?

YES >> GO TO 11

NO >> GO TO 12

11. CHECK PNP SWITCH CIRCUIT FOR SHORT



Check continuity between IPDM E/R harness connector terminals

Is the inspection result normal?

- >> Replace the IPDM E/R. Refer to PCS-48, "Removal and YES Installation".
- NO >> Repair or replace harness.

12. CHECK PNP SWITCH INPUT SIGNAL CIRCUIT

- 1. Disconnect PNP switch harness connector.
- 2. Check continuity between PNP switch and IPDM E/R harness connectors.

Park/neutral	position switch	IPDN	/I E/R	Continuity
Connector	Terminal	Connector Terminal		Continuity
A: F25		B: F10	74	Yes
A. F25	2	D. FIU	72	165

3 Check continuity between PNP switch harness connector and ground.

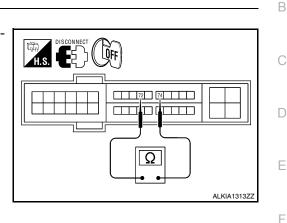
Park/neutral position switch		Ground	Continuity
Connector	Terminal	Ground	Continuity
A: F25	1	Ground	No
n. 1 20	2	Cround	NO

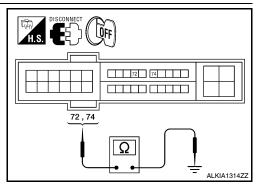
Is the inspection result normal?

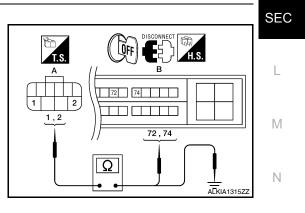
YES >> Replace PNP switch.

NO >> Repair harness or connector.

Refer to GI-42, "Intermittent Incident".







[SEDAN WITH INTELLIGENT KEY]

А

Н

J

Ο

Ρ

< COMPONENT DIAGNOSIS >

>> Inspection End.

Component Inspection

1. CHECK CLUTCH INTERLOCK SWITCH

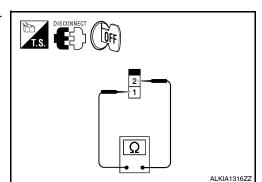
- 1. Turn ignition switch OFF.
- 2. Disconnect clutch interlock switch harness connector.
- 3. Check continuity between clutch interlock switch under the following conditions.

Clutch inte	erlock switch	Condition		Continuity
Terminal		Condition		Continuity
1	2	Clutch pedal	Not depressed	No
I	2	Ciuton pedal	Depressed	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace clutch interlock switch.



[SEDAN WITH INTELLIGENT KEY]

INFOID:000000004206313

B2190, P1610 NATS ANTENNA AMP

Description

Performs ID verification through BCM and Intelligent Key when push-button ignition switch is pressed. Prohibits the release of steering lock or start of engine when an unregistered ID of Intelligent Key is used.

DTC Logic

INFOID:000000004206202

ALKIA0428ZZ

INFOID:000000004206201

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC c	etecting condition	Possible cause
B2190 P1610	NATS ANTENNA AMP	Inactive communica BCM.	tion between key slot and	 Harness or connectors (The key slot circuit is open or shorted) Key slot BCM
	RMATION PROC		DE	
. Insert Int . Check "S <u>a DTC detec</u> YES >> F NO >> C . PERFORM . Press the . Check "S <u>a DTC detec</u> YES >> F	elligent Key into the Self Diagnostic Rest ted? Refer to <u>SEC-263, "</u> GO TO 2 M DTC CONFIRMA e push-button ignitic Self Diagnostic Rest ted? Refer to <u>SEC-263, "</u>	key slot. Ilt" with CONSUL Diagnosis Proced TION PROCEDU on switch. Ilt" with CONSUL	T-III. <u>ure"</u> . RE T-III.	
	nspection End. Procedure			INFOID:0000000420620
I. INSPECT	ION START			
Case1: It is Case2: It is <u>n which case</u> Case1. >> C Case2. >> C	e is DTC detected? GO TO 2	Iligent Key is inse ligent Key is inse		ush-button ignition switch is pressed.
2. Disconne	tion switch OFF. ect key slot harness oltage between key		nector and ground.	
	Key slot	Ground	Voltage [V]	
Connector			(approx.)	
M40	2	Ground	Battery voltage	
YES >> F	tion result normal? Replace key slot. Installation".	Refer to <u>SEC-40</u>	9. "Removal and	

Installation". NO >> GO TO 3

В

С

SEC-263

B2190, P1610 NATS ANTENNA AMP

< COMPONENT DIAGNOSIS >

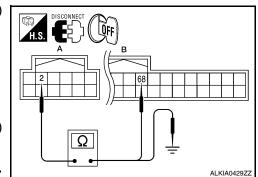
[SEDAN WITH INTELLIGENT KEY]

3. CHECK KEY SLOT CIRCUIT

- 1. Disconnect BCM harness connector.
- 2. Check continuity between key slot harness connector M40 (A) terminal 2 and BCM harness connector M19 (B) terminal 68.

Key	Key slot		BCM	
Connector	Terminal	Connector	Terminal	Continuity
A: M40	2	B: M19	68	Yes

3. Check continuity between key slot harness connector M40 (A) terminal 2 and ground.



Key slot		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M40	2	Ground	No	

Is the inspection result normal?

YES >> GO TO 8

NO >> Repair harness or connector.

4.CHECK PUSH-IGNITION SWITCH OPERATION

Press push-button ignition switch and check if it turns ON.

Does ignition switch turn to ON?

YES >> GO TO 5

NO >> GO TO 7

5. CHECK KEY SLOT COMMUNICATION SIGNAL

1. Turn ignition switch OFF.

- 2. Disconnect key slot harness connector.
- 3. Check voltage between key slot harness connector and ground.

Key	r slot	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M40	3	Ground	Yes	

Is the inspection result normal?

YES >> Replace key slot. Refer to <u>SEC-409</u>, "Removal and <u>Installation"</u>.

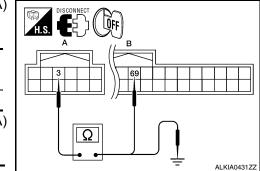
NO >> GO TO 6

6.CHECK KEY SLOT COMMUNICATION SIGNAL CIRCUIT

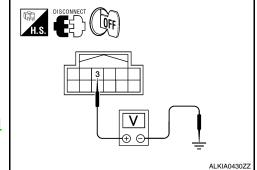
- 1. Disconnect BCM harness connector.
- 2. Check continuity between key slot harness connector M40 (A) terminal 3 and BCM harness connector M19 (B) terminal 69.

Key	Key slot		BCM	
Connector	Terminal	Connector	Terminal	Continuity
A: M40	3	B: M19	69	Yes

3. Check continuity between key slot harness connector M40 (A) terminal 3 and ground.



Key	/ slot	Ground	Continuity	
 Connector	Terminal	Ground	Continuity	
A: M40	3	Ground	No	



B2190, P1610 NATS ANTENNA AMP

< COMPONENT DIAGNOSIS >

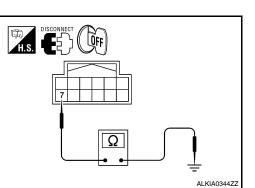
Is the inspection result normal?

- YES >> GO TO 8
- NO >> Repair harness or connector.

7. CHECK KEY SLOT GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect key slot harness connector.
- 3. Check continuity between key slot harness connector and ground.

Key	v slot	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M40	7	Ground	Yes	



8. CHECK INTERMITTENT INCIDENT

>> Repair harness or connector.

Is the inspection result normal?

>> GO TO 8

YES

NO

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

J

SEC

L

Μ

Ν

Ο

Ρ

SEC-265

[SEDAN WITH INTELLIGENT KEY]

A B

С

D

Е

F

Н

B2191, P1615 DIFFERENCE OF KEY

Description

Performs ID verification through BCM and Intelligent Key when push-button ignition switch is pressed. Prohibits the release of steering lock or start of engine when an unregistered ID of Intelligent Key is used.

DTC Logic

INFOID:000000004206205

INFOID:000000004206206

INFOID:000000004206204

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2191	DIFFERENCE OF	The ID verification results between BCM and Intel-	Intelligent Key
P1615	KEY	ligent Key are NG. The registration is necessary.	• Intelligent Key

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch.

2. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-266, "Diagnosis Procedure"</u>. NO >> Inspection End.

Diagnosis Procedure

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all Intelligent Keys. For initialization and registration of Intelligent Key, refer to CONSULT-III Operation Manual.

Can the system be initialized and can the engine be started with re-registered Intelligent Key?

- YES >> Intelligent Key was unregistered.
- NO >> BCM is malfunctioning.
 - Replace BCM. Refer to BCS-96, "Removal and Installation".
 - Perform initialization again.

B2192, P1611 ID DISCORD, IMMU-ECM

Description

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

DTC DETECTION LOGIC

< COMPONENT DIAGNOSIS >

NOTE:

- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	F
B2192	ID DISCORD, IMMU-	The ID verification results between BCM and ECM	• BCM	
P1611	ECM	are NG. The registration is necessary.	• ECM	
				G

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

I.FERIORWIDTE CONTINUATION PROCEDURE		Н
 Turn ignition switch ON under the following conditions: CVT selector lever is in the P or N position. Do not depress the brake pedal. Check "Self Diagnostic Result" with CONSULT-III. 		
Is DTC detected?		
YES >> Refer to <u>SEC-267. "Diagnosis Procedure"</u> . NO >> Inspection End.		J
Diagnosis Procedure	INFOID:000000004206209	
1.PERFORM INITIALIZATION		SEC
Perform initialization with CONSULT-III. Re-register all Intelligent Keys. For initialization and registration of Intelligent Key, refer to "CONSULT-III Operation Manual. Can the system be initialized and can the engine be started with re-registered Intelligent Key?		L
 YES >> ID was unregistered. NO >> BCM is malfunctioning. Replace BCM. Refer to <u>BCS-96</u>, "<u>Removal and Installation</u>". Perform initialization again. 		Μ
Replace ECM.		Ν
		\bigcirc

[SEDAN WITH INTELLIGENT KEY]

А

В

D

Ρ

INFOID:000000004206207

INFOID:000000004206208

4

B2193, P1612 CHAIN OF ECM-IMMU

Description

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

INFOID:000000004206211

INFOID:000000004206212

INFOID:000000004206210

[SEDAN WITH INTELLIGENT KEY]

DTC DETECTION LOGIC **NOTE**:

- If DTC B2103
- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2193			Harness or connectors
P1612	CHAIN OF ECM- IMMU	Inactive communication between ECM and BCM.	(The CAN communication line is open or shorted)BCMECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions:
- CVT selector lever is in the P or N position.
- Do not depress brake pedal.
- 2. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to SEC-268, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1.REPLACE BCM

- 1. Replace BCM. Refer to <u>BCS-96, "Removal and Installation"</u>.
- Perform initialization with CONSULT-III. For initialization, refer to "CONSULT-III Operation Manual.

Does the engine start?

NO

- YES >> BCM is malfunctioning.
 - Replace BCM. Refer to BCS-96, "Removal and Installation".
 - Perform initialization again.
 - >> ECM is malfunctioning.
 - Replace ECM.
 - Perform ECM re-communicating function.

B2555 STOP LAMP

Description

BCM detects the stop lamp status and confirms the stop lamp switch ON/OFF status. BCM confirms the engine start condition according to the stop lamp switch ON/OFF status.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagno- sis name	DTC detecting condition	Possible cause	[
B2555	STOP LAMP	BCM makes a comparison between the upper voltage and lower voltage of stop lamp switch. It judges from their values to detect the malfunctioning circuit.	 Harness or connectors (stop lamp switch circuit is open or shorted) Stop lamp switch Fuse 	I

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Depress the brake pedal and wait for at least 1 second.
- 2. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to SEC-269, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK STOP LAMP SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- 3. Check voltage between BCM harness connector and ground.

BCM		Ground	Stop lamp	Voltage [V]
Connector	Terminal	Ground	switch position	voltage [v]
M18	26	Ground	Depressed	Battery volt- age
			Released	0

Is the inspection result normal?

YES >> Stop lamp switch is OK.

NO >> GO TO 2

2. CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

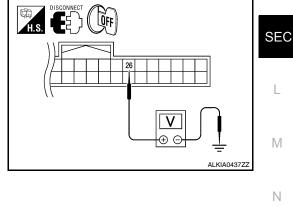
- 1. Disconnect stop lamp switch harness connector.
- 2. Check voltage between stop lamp harness connector and ground.

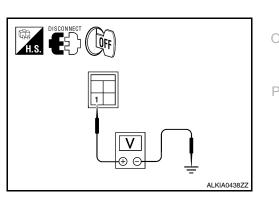
Stop lan	np switch	Ground	Voltage [V]
Connector	Terminal	Ground	
E38	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3

NO >> Check harness for open or short between stop lamp switch and fuse.





А

Н

INFOID:000000004206213

INFOID:000000004206214

INFOID:000000004206215

B2555 STOP LAMP

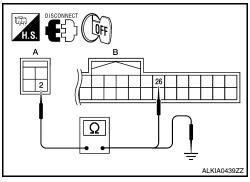
< COMPONENT DIAGNOSIS >

3.CHECK STOP LAMP SWITCH CIRCUIT

 Check continuity between stop lamp switch harness connector E38 (A) terminal 2 and BCM harness connector M18 (B) terminal 26.

Stop lan	np switch	B	CM	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: E38	2	B: M18	26	Yes

2. Check continuity between stop lamp switch harness connector E38 (A) terminal 2 and ground.



Stop lamp switch	Ground	Continuity	
Connector Termin		Continuity	
A: E38 2	Ground	No	

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair harness or connector.

4.CHECK STOP LAMP SWITCH

Refer to SEC-270, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5

NO >> Replace stop lamp switch.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

Component Inspection

1. CHECK STOP LAMP SWITCH

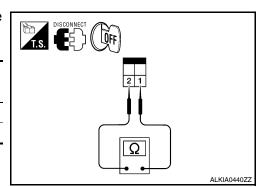
- 1. Turn ignition switch OFF.
- 2. Disconnect stop lamp switch harness connector.
- 3. Check continuity between stop lamp switch terminals under the following conditions.

Stop lamp switch Terminal		Condition		Continuity	
		Condition	Continuity		
1	2	Prako podal	Not depressed	No	
I	1 2 Brake pedal		Depressed	Yes	

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace stop lamp switch.



INFOID:000000004206216

B2556 PUSH-BUTTON IGNITION SWITCH

Description

The switch that changes the power supply position. BCM maintains the power supply position status. BCM changes the power supply position with the operation of the push-button ignition switch.

DTC Logic

INFOID:000000004206218

INFOID:000000004206219

INFOID:000000004206217

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	D
B2556	PUSH-BUTTON IG- NITION SWITCH	BCM detects the push-button ignition switch stuck to ON for 100 seconds or more.	 Harness or connectors (Push-button ignition switch circuit is shorted.) Push-button ignition switch 	E

H.S.

ACC

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine and wait for at least 100 seconds.
- 2. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-271, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK PUSH-BUTTON IGNITION SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect push-button ignition switch harness connector.
- Check voltage between push-button ignition switch harness connector and ground.

Push-button ignition switch		Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M38	4	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 2 NO >> GO TO 4

NO >> GO 10 4

2. CHECK PUSH-BUTTON IGNITION SWITCH

Refer to SEC-272. "Component Inspection".

Is the inspection result normal?

YES >> GO TO 3

NO >> Replace push-button ignition switch. Refer to <u>SEC-410, "Removal and Installation"</u>.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

4.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT FOR SHORT

1. Disconnect BCM harness connector and IPDM E/R harness connector.

SEC-271

Ν

Ρ



M

ALKIA1350Z

SEC

Н

А

В

B2556 PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

2. Check continuity between push-button ignition switch harness connector and ground.

Push-button	Push-button ignition switch		Continuity
Connector	Connector Terminal		Continuity
M38	4	Ground	No

Is the inspection result normal?

- YES >> Replace BCM. Refer to <u>BCS-96, "Removal and Installa-</u> tion".
- NO >> Repair harness or connector.

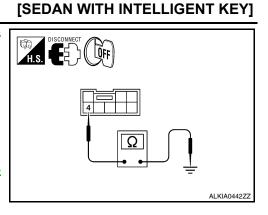
Component Inspection

- $1. {\sf check \ push-button \ ignition \ switch}$
- 1. Turn ignition switch OFF.
- 2. Disconnect push-button ignition switch harness connector.
- 3. Check continuity between push-button ignition switch terminals under the following conditions.

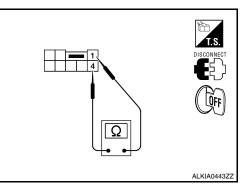
Push-button ignition switch Terminal		Condition	Continuity
		Condition	Continuity
1	1 4	Pressed	Yes
I	4	Not pressed	No

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Replace push-button ignition switch. Refer to <u>SEC-410,</u> <u>"Removal and Installation"</u>.



INFOID:000000004206220



B2557 VEHICLE SPEED

Description

BCM receives the 2 vehicle speed signals via CAN communication. One signal is transmitted by the "unified meter". Another signal is transmitted by "ABS actuator and electric unit (control unit)". BCM compares both signals to detect the vehicle speed.

DTC Logic

DTC

DTC DETECTION LOGIC

Self-diagnosis

name

NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

DTC detecting condition

	name			
B2557	VEHICLE SPEED	 BCM detects the following difference between the vehicle speed from "unified meter" and the one from "ABS actuator and electric unit" for 10 seconds continuously One is 10 km/h or more and the other is 4 km/h or less. 	 Wheel sensor Unified meter ABS actuator and electric unit (control unit) 	G
DTC CONFIR	MATION PRO	CEDURE		
1.PERFORM	DTC CONFIRM	ATION PROCEDURE		Н
		nicle speed of 10 km/h or more and wait for at leas sult" with CONSULT-III.	t 10 seconds.	I
Is DTC detecte				
	efer to <u>SEC-273,</u> spection End.	"Diagnosis Procedure".		J
Diagnosis F	Procedure		INFOID:00000004206223	
1 .CHECK DT	C WITH "ABS A	CTUATOR AND ELECTRIC UNIT (CONTROL UN	IT)"	SEC
Check "Self Di	agnostic Result"	with CONSULT-III. Refer to BRC-51, "DTC No. In	dex".	
•	on result normal?	-		L
	D TO 2 epair or replace r	nalfunctioning parts.		
-	IFIED METER.			Μ
				IVI

Check unified meter. Refer to MWI-4, "Work Flow".

>> Inspection End.

D

F

Ν

Ο

Ρ

INFOID:000000004206221

INFOID:000000004206222

Possible causes

B2560 STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000004206225

INFOID:000000004206226

INFOID:000000004206224

DTC DETECTION LOGIC

NOTE:

- If DTC B2560 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B2560 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2560	STARTER CONTROL RELAY	BCM detects a mismatch between the OFF re- quest of starter control relay to IPDM E/R and the feedback. (The feedback is ON instead of OFF.)	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 2 seconds:
- CVT selector lever is in the P position.
- Depress the brake pedal.
- 2. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-274</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self Diagnostic Result" with CONSULT-III. Refer to PCS-45, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace malfunctioning parts.

2. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

[SEDAN WITH INTELLIGENT KEY]

B2601 SHIFT POSITION

Description

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- P position signal from IPDM E/R (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.
- If DTC B2601 is displayed with DTC B2605, first perform the trouble diagnosis for DTC B2605. Refer to <u>SEC-285, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2601	SHIFT POSITION	BCM detects when a difference between the shift P input signal and the shift position signal received from IPDM E/R via CAN communication continues for 2 seconds or more	 Harness or connectors (CVT device circuit is open or shorted.) CVT device 	G

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions, and wait for at least 2 seconds.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Turn ignition switch ON under the following conditions, and wait for at least 2 seconds.
- CVT selector lever is in other than P position.
- Do not depress the brake pedal.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to SEC-275, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK CVT DEVICE POWER SUPPLY

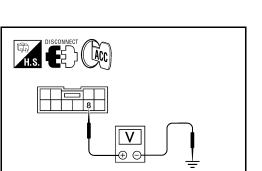
- 1. Turn ignition switch to ACC.
- 2. Disconnect CVT device (park position switch) harness connector.
- Check voltage between CVT device (park position switch) harness connector and ground.

CVT device (park position switch)ConnectorTerminal		Ground	Voltage [V]	
		Giodila	voltage [v]	
M23 8		Ground	Battery voltage	
Is the inspection result normal?				

YES >> GO TO 3 NO >> GO TO 2

2.CHECK CVT DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM harness connector.



M

Ν

Ρ

ALKIA1349ZZ

INFOID:000000004206229

INFOID:000000004206228

А

В

D

F

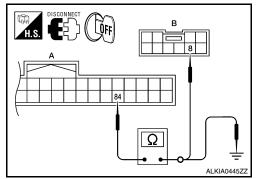
[SEDAN WITH INTELLIGENT KEY]

B2601 SHIFT POSITION

< COMPONENT DIAGNOSIS >

 Check continuity between BCM harness connector M19 (A) terminal 84 and CVT device (park position switch) harness connector M23 (B) terminal 8.

[SEDAN WITH INTELLIGENT KEY]



B	CM	CVT device (par	k position switch)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	84	B: M23	8	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 84 and ground.

BC	СМ	Ground	Continuity	
Connector	Connector Terminal		Continuity	
A: M19	84	Ground	No	

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-96, "Removal and Installation".

NO >> Repair harness or connector.

3.CHECK CVT DEVICE CIRCUIT (BCM)

- 1. Disconnect BCM harness connector and IPDM E/R harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 87 and CVT device (park position switch) harness connector M23 (B) terminal 9.

ec-	
-	
-	
ter-	

B	BCM		CVT device (park position switch)	
Connector	Terminal	Connector Terminal		Continuity
A: M19	87	B: M23	9	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 87 and ground.

	В	CM	Ground	Continuity
_	Connector Terminal		Ground	Continuity
	A: M19	87	Ground	No

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair harness or connector.

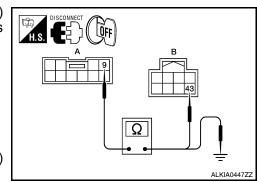
4.CHECK CVT DEVICE CIRCUIT (IPDM E/R)

1. Disconnect BCM harness connector.

 Check continuity between CVT device (park position switch) harness connector M23 (A) terminal 9 and IPDM E/R harness connector E17 (B) terminal 43.

	CVT device (park position switch)		IPDM E/R	
Connector	Terminal	Connector Terminal		
A: M23	9	B: E17	43	Yes

3. Check continuity between CVT device (park position switch) harness connector M23 (A) terminal 9 and ground.



B2601 SHIFT POSITION

< COMPONENT DIAGNOSIS >

(Dark D	VT device osition s	-	Ground	Continuity		A
Connector		Terminal	Ground	Continuity		
A: M23		9	Ground	No		E
s the inspection	on resu	It normal?				
	O TO 5 epair ha	arness or connect	or.			(
5 .CHECK CV	T DEV	ICE				
Refer to <u>SEC-</u>	277, "C	omponent Inspec	tion".			
s the inspection	on resu	<u>lt normal?</u>				
	O TO 6 eplace		efer to <u>TM-255</u> ,	"Removal ar	nd Installation" (RE0F09B) or TM-431,	E
		I and Installation"	. ,			
CHECK IN	TERMI	TTENT INCIDENT	Г			F
Refer to <u>GI-42</u>	<u>, "Inter</u> i	mittent Incident".				
	spectio					(
Component	t Insp	ection			INFOID:000000004206230	
LOHECK UV	T DEV	ICE (PARK POSI	TION SWITCH)			ŀ
I. Turn igniti		-	TION SWITCH)			ŀ
. Turn igniti	on swit ct CVT	ch OFF. device (park posit	tion switch) harn	less connector		ŀ
. Turn igniti	on swit ct CVT ntinuity	ch OFF. device (park posil between CVT dev	tion switch) harn	less connector		ŀ
Turn ignition Disconnect Check cor	on swit ct CVT ntinuity	ch OFF. device (park posil between CVT dev	tion switch) harn	less connector	T.S.	ŀ
 Turn ignition Disconnect Check corninals as CVT device 	on swit ct CVT ntinuity follows	ch OFF. device (park posit between CVT dev	tion switch) harn vice (park positio	less connector		
 Turn ignition Disconnect Check corninals as CVT device (park position state) 	on swit ct CVT ntinuity follows ce switch)	ch OFF. device (park posit between CVT dev	tion switch) harn	less connector		I
 Turn ignition Disconnect Check corninals as CVT device 	on swit ct CVT ntinuity follows ce switch)	ch OFF. device (park posit between CVT dev	tion switch) harn vice (park position	ess connector on switch) ter- Continuity	9 DISCONNECT	F
 Turn ignition Disconnect Check corninals as CVT device (park position state) 	on swit ct CVT ntinuity follows ce switch)	ch OFF. device (park posit between CVT dev	tion switch) harn vice (park position ndition P position	Continuity		
Turn ignitie Disconner Check cor minals as CVT devic (park position s Termina 8	on swit ct CVT ntinuity follows ce switch) I 9	ch OFF. device (park posit between CVT dev Cor	tion switch) harn vice (park position	Continuity		SI
Turn ignition Disconnect Check correct CVT device (park position stream) Termina 8 s the inspection	on swit ct CVT follows follows switch) 1 9 on resu	ch OFF. device (park posit between CVT dev Cor CVT selector lever It normal?	tion switch) harn vice (park position ndition P position	Continuity		SI
Turn ignition Disconnect Disconnect Check correst CVT device (park position state) Termina	on swit ct CVT follows ce switch) 9 on resu spectio eplace	ch OFF. device (park posit between CVT dev Cor CVT selector lever It normal? n End. CVT device. Re	tion switch) harn vice (park position ndition P position Other than above efer to <u>TM-255</u> .	Continuity		SI
Turn ignition Disconnect Disconnect Check correst CVT device (park position state) Termina	on swit ct CVT follows ce switch) 9 on resu spectio eplace	ch OFF. device (park posit between CVT dev Cor CVT selector lever It normal? n End.	tion switch) harn vice (park position ndition P position Other than above efer to <u>TM-255</u> .	Continuity	B B B B B B B B B B B B B B B B B B B	
Turn ignition Disconnect Disconnect Check correst CVT device (park position state) Termina	on swit ct CVT follows ce switch) 9 on resu spectio eplace	ch OFF. device (park posit between CVT dev Cor CVT selector lever It normal? n End. CVT device. Re	tion switch) harn vice (park position ndition P position Other than above efer to <u>TM-255</u> .	Continuity	B B B B B B B B B B B B B B B B B B B	SI
. Turn ignitie . Disconnect . Check cor minals as CVT devic (park position state) Termina 8 s the inspectic YES >> Ins NO >> Reference	on swit ct CVT follows ce switch) 9 on resu spectio eplace	ch OFF. device (park posit between CVT dev Cor CVT selector lever It normal? n End. CVT device. Re	tion switch) harn vice (park position ndition P position Other than above efer to <u>TM-255</u> .	Continuity	B B B B B B B B B B B B B B B B B B B	S

0

Ρ

B2602 SHIFT POSITION

Description

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- Speed signal from meter

DTC Logic

DTC DETECTION LOGIC

- NOTE:
- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2602	SHIFT POSITION	 BCM detects the following status for 10 seconds. Shift position is in P position Vehicle speed is 4km/h (2 MPH) or more Ignition switch is in the ON position 	 Harness or connectors (CVT drive circuit is open or short- ed) CVT device (park position switch) Combination meter

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine under the following conditions and wait for at least 10 seconds.
- CVT selector lever is in the P or N position
- Depress the brake pedal.
- 2. Drive the vehicle for at least 10 seconds at a speed greater than 4 km/h (2 MPH).
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-278, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH "COMBINATION METER"

Check "Self diagnostic result" with CONSULT-III. Refer to MWI-95, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace malfunctioning parts.

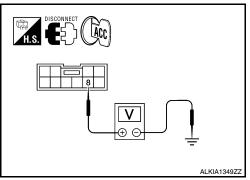
2. CHECK CVT DEVICE POWER SUPPLY

- 1. Turn ignition switch to ACC.
- 2. Disconnect CVT device (park position switch) harness connector.
- Check voltage between CVT device (park position switch) harness connector and ground.

CVT device (par	CVT device (park position switch)		Voltage [V]	
Connector	Terminal	Ground	voltage [v]	
M23	8	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 4 NO >> GO TO 3



INFOID:000000004206231

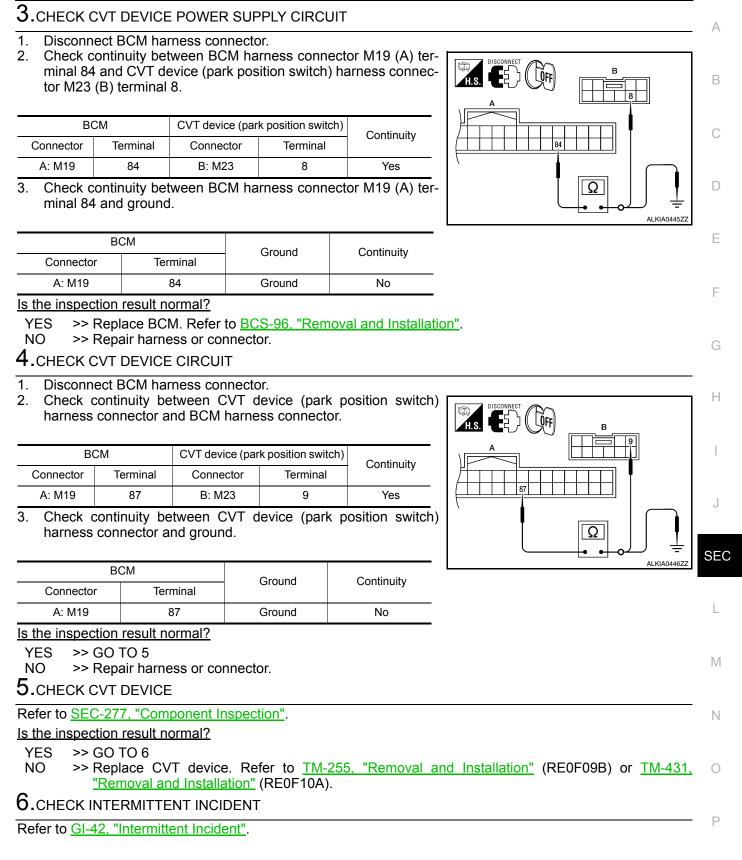
INFOID:000000004206232

INFOID:000000004206233

B2602 SHIFT POSITION

< COMPONENT DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]



>> Inspection End.

B2603 SHIFT POSITION STATUS

Description

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- P/N position switch

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2603 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235</u>, "DTC Logic".
- If DTC B2603 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2603	SHIFT POSITION STATUS	 BCM detects the followings status for 500 ms or more when shift is in P position and, ignition switch is in ON position. Park/neutral position (PNP) switch: approx. 0V CVT device (park position switch): approx 0V 	 Harness or connector (CVT device circuit is open or shorted.) Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted.] CVT device (park position switch) Park/neutral position (PNP) switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Shift to N and wait for at least 1 second.
- 3. Shift to any gear other than P or N and wait for at least 1 second.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-280, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to PCS-45, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace malfunctioning parts.

2. CHECK PNP SWITCH CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect TCM harness connector and BCM harness connector.

INFOID:000000004206234

INFOID:000000004206235

[SEDAN WITH INTELLIGENT KEY]

B2603 SHIFT POSITION STATUS

< COMPONENT DIAGNOSIS >

 Check continuity between TCM harness connector F16 (A) terminal 20 and BCM harness connector M18 (B) terminal 48.

T	СМ	B	CM	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: F16	20	B: M18	48	Yes

4. Check continuity between TCM harness connector F16 (A) terminal 20 and ground.

Т	СМ	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: F16	20	Ground	No	

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3.CHECK CVT DEVICE POWER SUPPLY

1. Turn ignition switch OFF.

- 2. Disconnect CVT device (park position switch) harness connector.
- Check voltage between CVT device (park position switch) harness connector and ground.

CVT device (park position switch)		Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M23	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 5

NO >> GO TO 4

4. CHECK CVT DEVICE POWER SUPPLY CIRCUIT

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 84 and CVT device (park position switch) harness connector M23 (B) terminal 8.

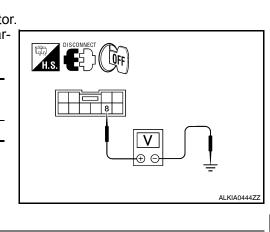
B	BCM		CVT device (park position switch)	
Connector	Terminal	Connector	Terminal	Continuity
A: M19	84	B: M23	8	Yes

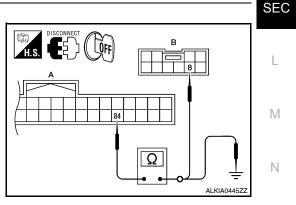
 Check continuity between BCM harness connector M19 (A) terminal 84 and ground.

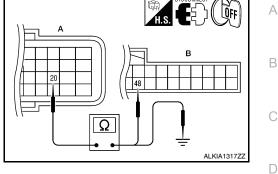
B	CM	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M19	84	Ground	No	

Is the inspection result normal?

- YES >> Replace BCM. Refer to BCS-96, "Removal and Installation".
- NO >> Repair harness or connector.
- **5.**CHECK CVT DEVICE CIRCUIT
- 1. Disconnect BCM harness connector.







Е

F

Н

Ο

Ρ

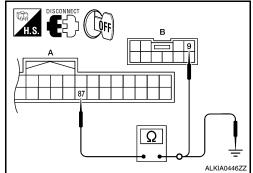
[SEDAN WITH INTELLIGENT KEY]

B2603 SHIFT POSITION STATUS

< COMPONENT DIAGNOSIS >

 Check continuity between BCM harness connector M19 (A) terminal 87 and CVT device (park position switch) harness connector M23 (B) terminal 9.

[SEDAN WITH INTELLIGENT KEY]



B	СМ	CVT device (park position switch)		Continuity
Connector	Terminal	Connector	Terminal	
A: M19	87	B: M23	9	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 87 and ground.

B	BCM		Continuity
Connector	Terminal	Ground	Continuity
A: M19	87	Ground	No

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

6.CHECK CVT DEVICE

Refer to SEC-277, "Component Inspection".

Is the inspection result normal?

- YES >> GO TO 7
- NO >> Replace CVT device. Refer to <u>TM-255</u>, "<u>Removal and Installation</u>" (RE0F09B) or <u>TM-431</u>, <u>"Removal and Installation"</u> (RE0F10A).

7. CHECK INTERMITTENT INCIDENT

Refer to GI-42. "Intermittent Incident".

>> Inspection End.

< COMPONENT DIAGNOSIS > B2604 PNP SWITCH

Description

BCM confirms the shift position with the following 4 signals.

- CVT selector lever
- P/N position switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

INFOID-000000004206238

INFOID:000000004206237

А

В

D

Е

DTC DETECTION LOGIC

NOTE:

- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-235, "DTC Logic".
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-236, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2604	PNP SWITCH	 BCM detects the following status for 500 ms or more when the ignition switch is in the ON position. P/N switch indicates vehicle is in P or N shift position. Signal from TCM indicates vehicle is in forward or reverse gear. P/N switch indicates vehicle is in forward or reverse gear. Signal from TCM indicates vehicle is in P or N. 	 Harness or connectors [The park/neutral position (PNP) switch circuit is open or shorted.] Park/ neutral position (PNP) switch TCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

Start the engine under the following conditions and wait for at least 1 second. 1.

- CVT selector lever is in the P position
- Do not depress the brake pedal
- 2. Use CVT selector lever to select each gear one at a time. Wait at each gear for at least 1 second.
- Check "Self diagnostic result" with CONSULT-III. 3.

Is DTC detected?

- YES >> Refer to SEC-283, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

CHECK DTC WITH TCM

INFOID:000000004206239

Μ

Ρ

SEC

Check "Self diagnostic result" with CONSULT-III. Refer to TM-221, "DTC Index" (RE0F09B) or TM-399, "DTC Index" (RE0F10A). Ν Is the inspection result normal?

YES >> GO TO 2

NO

>> Repair or replace malfunctioning parts.

2. CHECK PNP SWITCH CIRCUIT

1. Turn ignition switch OFF.

Disconnect TCM harness connector and BCM harness connector. 2.

B2604 PNP SWITCH

< COMPONENT DIAGNOSIS >

3. Check continuity between TCM harness connector and BCM harness connector.

ТСМ		BCM		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
A: F16	20	B: M18	48	Yes	

4. Check continuity between TCM harness connector and ground.

т	CM	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: F16	20	Ground	No	

QFF O ALKIA1317ZZ

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

SEC-284

[SEDAN WITH INTELLIGENT KEY]

А

В

D

Е

SEC

M

Ν

Ρ

INFOID:000000004206242

INFOID:000000004206240

INFOID-000000004206241

< COMPONENT DIAGNOSIS > B2605 PNP SWITCH

Description

BCM confirms the shift position with the following 4 signals.

- CVT selector lever
- P/N position switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2605	PNP SWITCH	 BCM detects the following status for 500 ms or more when the ignition switch is in ON position N position input signal exists. Shift position signal from IPDM E/R does not exist. N position input signal does not exist. Shift posi- tion signal from IPDM E/R exists. 	 Harness or connectors [The park/neutral position (PNP) switch circuit is open or shorted.] Park/neutral position (PNP) switch IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-285. "Diagnosis Procedure"</u>.

NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to <u>PCS-45, "DTC_Index"</u>. <u>Is the inspection result normal?</u> YES >> GO TO 2

NO >> Repair or replace malfunctioning parts.

2. CHECK PNP SWITCH CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect TCM harness connector and BCM harness connector.

B2605 PNP SWITCH

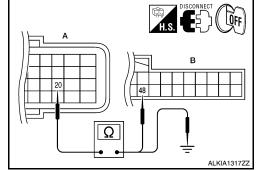
< COMPONENT DIAGNOSIS >

3. Check continuity between TCM connector and BCM harness connector.

ТСМ		B	Continuity		
Connector	Terminal	Connector	Terminal	Continuity	
A: F16	20	B: M18	48	Yes	

4. Check continuity between TCM harness connector and ground.

т	CM	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: F16	20	Ground	No	



[SEDAN WITH INTELLIGENT KEY]

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

SEC-286

B2606 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

B2606 STEERING LOCK RELAY

Description

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID:000000004206244

INFOID:000000004206243

DTC DETECTION LOGIC

NOTE:

- If DTC B2606 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B2606 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	_
B2606	STEERING LOCK RELAY	 BCM detects that there is a mismatch between the following statuses. Steering lock unit ON signal transmitted by IPDM E/R The steering lock unit status feedback 	Steering lock relay (in IPDM E/R)	F

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions.
- CVT selector lever is in the P or N position.
- Do not depress the brake pedal.
- 2. Steering is locked.
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-287, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to <u>PCS-45, "DTC_Index"</u>. <u>Is the inspection result normal?</u>

is the inspection result norma

YES >> GO TO 2

NO >> Repair or replace malfunctioning parts.

2.INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

[SEDAN WITH INTELLIGENT KEY]

А

В

Е

Н

INFOID:000000004206245

SEC

L

Μ

Ν

Ο

Ρ

B2607 STEERING LOCK RELAY

Description

BCM requests to IPDM E/R to supply power to electronic steering column lock. IPDM E/R sends status of electronic steering column lock back to BCM.

DTC Logic

INFOID:000000004206247

INFOID:000000004206248

INFOID:000000004206246

DTC DETECTION LOGIC

NOTE:

- If DTC B2607 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B2607 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2607	STEERING LOCK RELAY	 BCM detects that there is a difference between the following statuses. BCM request for electronic steering column lock power supply (ON/OFF) IPDM E/R status of electronic steering column lock power supply (ON/OFF) 	 Harness or connectors (electronic steering column lock power supply circuit is open or shorted) Steering lock relay (in IPDM E/R)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions.
- CVT selector lever is in the P position
- Do not depress brake pedal
- 2. Steering lock is locked.
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-288, "Diagnosis Procedure"</u>.

NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to PCS-45, "DTC Index".

Is the inspection result normal?

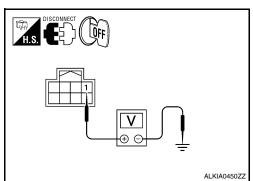
YES >> GO TO 2

NO >> Repair or replace malfunctioning parts.

2.CHECK ELECTRONIC STEERING COLUMN LOCK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect electronic steering column lock harness connector.
- Check voltage between electronic steering column lock and ground under the following conditions.

Electronic steering col- umn lock		Ground	Condition	Voltage (V)
Connector	Terminal			
M32	1	Ground	Press push-button igni- tion switch when steering lock is in lock condition.	Battery voltage



Is the inspection result normal?



[SEDAN WITH INTELLIGENT KEY]

B2607 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

А

YES >> GO TO 4 NO >> GO TO 3

 $\mathbf{3}$. CHECK ELECTRONIC STEERING COLUMN LOCK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect IPDM E/R harness connector.

3. Check continuity between electronic steering column lock and IPDM E/R harness connector.

Electronic steering column lock		IPDI	Continuity	
Connector	Terminal	Connector	Terminal	
A: M32	1	B: E18	11	Yes

Check continuity between electronic steering column lock and ground.

Electronic steer	ring column lock	Ground	Continuity	
Connector Terminal		Ground	Continuity	
A: M32	1	Ground	No	

Is the inspection result normal?

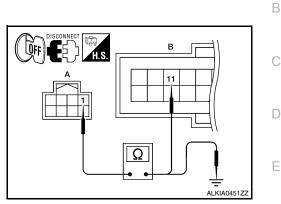
YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation".

NO >> Repair harness or connector.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.



Н

F

SEC

L

Μ

Ν

0

Ρ

B2608 STARTER RELAY

Description

INFOID:000000004206249

[SEDAN WITH INTELLIGENT KEY]

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000004206250

INFOID:000000004206251

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2608	STARTER RELAY	BCM receives starter relay ON signal (CAN) from IPDM E/R even if BCM turns the starter relay OFF	 Harness or connectors (starter relay circuit is open or shorted.) IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions.
- CVT selector lever is in the P or N position.
- Depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

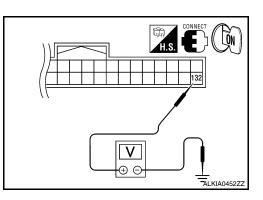
Is DTC detected?

- YES >> Refer to <u>SEC-290. "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK STARTER RELAY

- 1. Turn ignition switch ON.
- Check voltage between BCM harness connector and ground under the following condition.



BCM		Ground	Condition		Voltage (V)	
Connector	Terminal	Ground	Conduon		voltage (v)	
			CVT selector lever	N or P position	Battery voltage	
M21	132	Ground		Other than above	0	
1012 1	132		Clutch pedal	Not depressed	0	
				Depressed	Battery voltage	

< COMPONE	ENT DIAGNC	SIS >				[SEDAN WITH INTELLIGENT KEY]	
	60 TO 3 60 TO 2		·	ation?			A
 Turn ignit Disconne Check co 	ion switch OF	F. ess conn /een IP[ector M21		PDM E/R harness connector and	connector E17.	В
IPDN	/I E/R		BCM			А) В	
Connector	Terminal	Conne	ector 7	Ferminal	Continuity		D
A: E17	46	B: M	21	132	Yes		
4. Check co ground.	ontinuity betw	veen IP[DM E/R h	narness	connector and		E
IPDM E/R				0	ALKIA1318ZZ	F	
Connector	Termi	nal	Groun	d	Continuity		
A: E17	46		Groun	d	No		G
Is the inspect							G
	epair harness	s or conr	nector.	<u>5-48, "F</u>	Removal and Insta		Н
Refer to GI-42	2, "Intermitten	t Incider	<u>nt"</u> .				
							I
>> Ir	nspection End						
							J
						S	SEC
							L

B2608 STARTER RELAY

 \mathbb{N}

Ν

Ο

Ρ

B2609 STEERING STATUS

Description

There are 2 switches in the electronic steering column lock (steering lock/unlock switch 1 and 2). BCM compares those two switches conditions to judge the present steering status.

DTC Logic

INFOID:000000004206253

INFOID:000000004206252

DTC DETECTION LOGIC

NOTE:

- If DTC B2609 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B2609 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2609	STEERING STATUS	BCM detects the malfunction of electronic steering column lock switches for 1 second.	 Harness or connectors [electronic steering column lock circuit (BCM side) is open or short- ed] Harness or connectors [electronic steering column lock circuit (IPDM E/R side) is open or shorted.] Electronic steering column lock IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.

- CVT selector lever is in the P position.
- Do not depress brake pedal
- Steering is locked
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-292</u>, "Diagnosis Procedure". NO >> GO TO 2

NO >> GO 10 2

2. PERFORM DTC CONFIRMATION PROCEDURE 2

1. Turn ignition switch ON.

- 2. Turn ignition switch OFF.
- 3. Press door switch.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-292, "Diagnosis Procedure"</u>.

NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed
- Case2: It is detected after ignition switch is changed from ON to OFF

In which case is DTC detected?

Case1 >> GO TO 2 Case2 >> GO TO 7

SEC-292

INFOID:000000004206254

B2609 STEERING STATUS

< COMPONENT DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

H.S.

A

В

D

Е

F

Н

ALKIA0454ZZ

2.CHECK BCM OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect electronic steering column lock harness connector and IPDM E/R harness connector.
- Check voltage between electronic steering column lock harness connector and ground.

Electronic stee	ring column lock	Ground	Voltage [V]	
Connector	Terminal	Ground		
M32	3	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 4 NO >> GO TO 3

3. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 85 and electronic steering column lock harness connector M32 (B) terminal 3.

BO	BCM		Electronic steering column lock	
Connector	Terminal	Connector	Terminal	Continuity
A: M19	85	B: M32	3	Yes

 Check continuity between BCM harness connector M19 (A) terminal 85 and ground.

B	CM	Ground	Continuity	
Connector	Terminal	Ground		
A: M19	85	Ground	No	

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

4.CHECK IPDM E/R OUTPUT SIGNAL

- 1. Connect IPDM E/R harness connector.
- 2. Disconnect BCM harness connector.

 Check voltage between electronic steering column lock harness connector and ground.

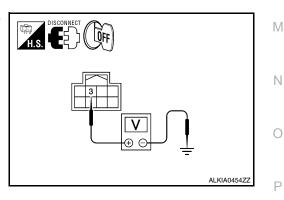
Electronic stee	ring column lock	Ground	Voltage [V]	
Connector	Terminal	Ground	voltage [v]	
M32	3	Ground	Battery voltage	

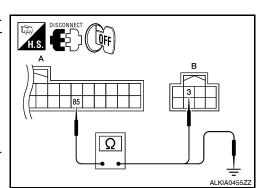
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 5

5. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II







SEC

_ P

B2609 STEERING STATUS [SEDAN WITH INTELLIGENT KEY]

< COMPONENT DIAGNOSIS >

1. Check continuity between electronic steering column lock harness connector M32 (A) terminal 3 and IPDM E/R harness connector E18 (B) terminal 32.

Electronic stee	ring column lock	IPDN	Continuity		
Connector	Terminal	Connector Terminal		Continuity	
A: M32	3	B: E18	32	Yes	

2. Check continuity between electronic steering column lock harness connector M32 (A) terminal 3 and ground.

Electronic steering column lock		Ground	Continuity
Connector Terminal		Ground	Continuity
A: M32	3	Ground	No

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

7.CHECK BCM OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- Disconnect electronic steering column lock harness connector and IPDM E/R harness connector E5. 2.
- Check voltage between electronic steering column lock harness 3. connector and ground.

Electronic stee	ring column lock	Ground	Voltage [V]
Connector	Terminal	Cibuna	Voltage [V]
M32	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 9

NO >> GO TO 8

8. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

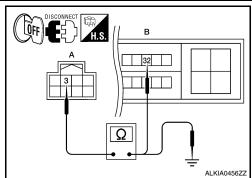
1. Disconnect BCM harness connector M19.

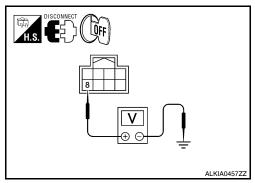
2. Check continuity between BCM harness connector M19 (A) terminal 86 and electronic steering column lock harness connector M32 (B) terminal 8.

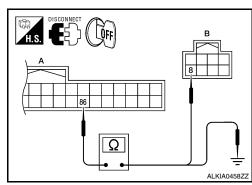
B	CM	Electronic stee	ring column lock	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	86	B: M32	8	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 86 and ground.

B	CM	Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M19	86	Ground	No







Is the inspection result normal?

SEC-294

B2609 STEERING STATUS

< COMPONENT DIAGNOSIS >

YES >> GO TO 11 NO >> Repair harness or connector. А 9.CHECK IPDM E/R OUTPUT SIGNAL 1. Connect IPDM E/R harness connector. В 2. Disconnect BCM harness connector M19. Check voltage between electronic steering column lock harness 3. connector and ground. Electronic steering column lock Ground Voltage [V] Terminal Connector D M32 8 Ground Battery voltage Is the inspection result normal? θE YES >> Replace electronic steering column lock. Ε NO >> GO TO 10 ALKIA0457ZZ 10. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II F Check continuity between electronic steering column lock har-1 ness connector M32 (A) terminal 8 and IPDM E/R harness con-в nector E18 (B) terminal 33. 33 Electronic steering column lock IPDM E/R Continuity Connector Terminal Connector Terminal Н 8 B: E18 A: M32 33 Yes Ω 2. Check continuity between electronic steering column lock harness connector and ground. AI KIA045977 Electronic steering column lock Ground Continuity Connector Terminal A: M32 8 Ground No Is the inspection result normal? SEC YES >> GO TO 11 NO >> Repair harness or connector. 11. CHECK INTERMITTENT INCIDENT L Refer to GI-42, "Intermittent Incident". Μ >> Inspection End. Ν Ρ

B260B STEERING LOCK UNIT

Description

The electronic steering column lock performs the check by itself according to the steering status.

DTC Logic

INFOID:000000004206256

INFOID:000000004206257

INFOID:000000004206255

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260B	STEERING LOCK UNIT	BCM detects malfunctioning of electronic steering column lock before steering unlocking.	electronic steering column lock

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch, when steering is locked.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-296, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-296, "DTC Logic"</u>.

Is the DTC B260B displayed again?

- YES >> Replace electronic steering column lock.
- NO >> Inspection End.

B260C STEERING LOCK UNIT

< COMPONENT DIAGNOSIS >

B260C STEERING LOCK UNIT

Description

The electronic steering column lock performs the check by itself according to the steering status.

DTC Logic

INFOID:000000004206259

INFOID:000000004206258

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260C	STEERING LOCK UNIT	BCM detects malfunctioning of electronic steering column lock before steering locking.	Electronic steering column lock
TC CONFI	RMATION PROC	EDURE	
.PERFORM	I DTC CONFIRMA	TION PROCEDURE	
	tion switch ON. tion switch OFF.		
. Press doo	or switch.		
 Check "S s DTC detect 	-	t" with CONSULT-III.	
YES >> R		Diagnosis Procedure".	
Diagnosis	Procedure		INFOID:00000004206260
.INSPECTI	ON START		
	tion switch ON.		
 Touch "El 	RASE".	t" with CONSULT-III.	
	DTC Confirmation		
	260C displayed aga		
	Replace electronic s	teering column lock.	
110 11	ispection End.		

А

В

С

Ν

Ο

Ρ

B260D STEERING LOCK UNIT

Description

The electronic steering column lock performs the check by itself according to the steering lock status (before lock, after lock and unlock).

DTC Logic

INFOID:000000004206262

INFOID:000000004206263

INFOID:000000004206261

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260D	STEERING LOCK UNIT	BCM detects malfunctioning of electronic steering column lock after steering locking.	electronic steering column lock

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.

- 2. Turn ignition switch OFF.
- 3. Press door switch.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-298, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-298</u>, "DTC Logic".

Is the DTC B260D displayed again?

- YES >> Replace electronic steering column lock.
- NO >> Inspection End.

B260F ENGINE STATUS

< COMPONENT DIAGNOSIS >

B260F ENGINE STATUS

Description

BCM receives the engine status signal from ECM via CAN communication.

DTC Logic

INFOID:000000004206265

INFOID:000000004206264

DTC DETECTION LOGIC

- NOTE:
- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235. "DTC Logic"</u>.
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

				E
DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	L
B260F	INTERRUPTION OF ENGINE STATUS SIGNAL	BCM has not yet received the engine status signal from ECM when ignition switch is in ON position	• ECM	F
DTC CONFI	IRMATION PROC	EDURE		C
1.PERFORM	M DTC CONFIRMA	TION PROCEDURE		
 CVT sele Do not de 	ector lever is in the F epress the brake pe			ŀ
		Diagnosis Procedure".		I
Diagnosis	Procedure		INFOID:00000004206266	L.
1.INSPECT	ION START			
 Check "S Touch "E Perform 		" with CONSULT-III. Procedure.		SE
Is the DTC B YES >> (260F displayed aga GO TO 2 nspection End.	in?		N
2.REPLACE	ECM			Ν
INSPEC	EC-1048, "BASIC TION : Special Repa	INSPECTION : Special Repair Requirem air Requirement" (QR25DE except Californi " (QR25DE California).		C
~ 1	nonaction End			

>> Inspection End.

А

В

С

D

Ρ

B2612 STEERING STATUS

Description

INFOID:000000004206270

[SEDAN WITH INTELLIGENT KEY]

There are 2 switches in the electronic steering column lock. IPDM E/R compares those 2 switches conditions to judge the present steering status and transmit the result to BCM via CAN communication.

DTC Logic

INFOID:000000004206271

INFOID:000000004206272

DTC DETECTION LOGIC

NOTE:

- If DTC B2612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B2612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236. "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2612	STEERING STA- TUS	 BCM detects the mismatch between the following status for 1 second Steering lock or unlock Feedback of steering lock status from IPDM E/R (CAN) 	 Harness or connectors [electronic steering column lock circuit (BCM side) is open or shorted] Harness or connectors [electronic steering column lock circuit (IP-DM E/R side) is open or shorted.] Electronic steering column lock IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

- 1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position.
- Do not depress brake pedal.
- Steering is locked.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-300, "Diagnosis Procedure"</u>.

NO >> GO TO 2

2. PERFORM DTC CONFIRMATION PROCEDURE 2

- 1. Turn ignition switch ON.
- 2. Turn ignition switch OFF.
- 3. Press door switch.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-300, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed.
- Case2: It is detected after ignition switch is changed from ON to OFF

In which case is DTC detected?

Case1 >> GO TO 2 Case2 >> GO TO 7

2.CHECK BCM OUTPUT SIGNAL

B2612 STEERING STATUS

< COMPONENT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- 2. Disconnect electronic steering column lock harness connector and IPDM E/R harness connector.
- 3. Check voltage between electronic steering column lock harness connector and ground.

Electronic stee	ring column lock	Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	3	Ground	Battery voltage

Is the inspection result normal?

>> GO TO 4 YES

3. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

- 1. Disconnect BCM harness connector.
- 2. Check continuity between BCM harness connector M19 (A) terminal 85 and electronic steering column lock harness connector M32 (B) terminal 3.

Connector Terminal Connector Terminal	B	CM	Electronic stee	ring column lock	Continuity
Δ· M19 85 B· M32 3 Yes	Connector	Terminal	Connector	Terminal	Continuity
D. WIZ 3 163	A: M19	85	B: M32	3	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 85 and ground.

B	CM	Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M19	85	Ground	No

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

4.CHECK IPDM E/R OUTPUT SIGNAL

- 1. Connect IPDM E/R harness connector.
- 2. Disconnect BCM harness connector.
- 3. Check voltage between electronic steering column lock harness connector and ground.

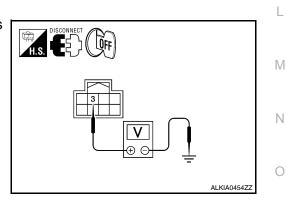
Electronic steer	ring column lock	Ground	Voltage [V]	
Connector	Terminal	Ground		
M32	3	Ground	Battery voltage	

Is the inspection result normal?

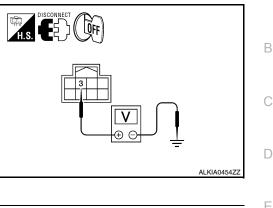
YES >> Replace electronic steering column lock.

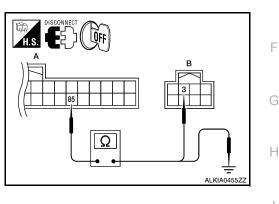
NO >> GO TO 5

5. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II









SEC

Ρ

А

В

Ε

B2612 STEERING STATUS [SEDAN WITH INTELLIGENT KEY]

< COMPONENT DIAGNOSIS >

 Check continuity between electronic steering column lock harness connector M32 (A) terminal 3 and IPDM E/R harness connector E18 (B) terminal 32.

Electronic steering column lock		IPDN	Continuity		
Connector	Terminal	Connector Terminal		Continuity	
A: M32	3	B: E18	32	Yes	

2. Check continuity between electronic steering column lock harness connector M32 (A) terminal 3 and ground.

Electronic steer	ring column lock	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M32	3	Ground	No	

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

7.CHECK BCM OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect electronic steering column lock harness connector and IPDM E/R harness connector.
- 3. Check voltage between electronic steering column lock harness connector and ground.

Electronic steel	ring column lock	Ground	Voltage [V]
Connector	Connector Terminal		voltage [v]
M32	8	Ground	Battery voltage
			•

Is the inspection result normal?

YES >> GO TO 9

NO >> GO TO 8

8. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

1. Disconnect BCM harness connector.

 Check continuity between BCM harness connector M19 (A) terminal 86 and electronic steering column lock harness connector M32 (B) terminal 8.

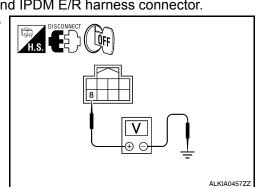
B	BCM		Electronic steering column lock		
Connector	Terminal	Connector Terminal		Continuity	
A: M19	86	B: M32	8	Yes	

 Check continuity between BCM harness connector M19 (A) terminal 86 and ground.

В	CM	Ground	Continuity	
Connector	Terminal	Ground		
A: M19	86	Ground	No	

Is the inspection result normal?

SEC-302



B2612 STEERING STATUS

< COMPONENT DIAGNOSIS >

YES >> GO TO 11 NO >> Repair harness or connector. А 9.CHECK IPDM E/R OUTPUT SIGNAL 1. Connect IPDM E/R harness connector. В 2. Disconnect BCM harness connector. 3. Check voltage between electronic steering column lock harness connector and ground. Electronic steering column lock Ground Voltage [V] Connector Terminal D M32 8 Ground Battery voltage Is the inspection result normal? θE YES >> Replace electronic steering column lock. Ε >> GO TO 10 NO ALKIA0457ZZ 10. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II F Check continuity between electronic steering column lock har-1 ness connector M32 (A) terminal 8 and IPDM E/R harness conв nector E18 (B) terminal 33. 33 Electronic steering column lock IPDM E/R Continuity Connector Terminal Connector Terminal Н 8 B: E18 A: M32 33 Yes Ω 2. Check continuity between electronic steering column lock harness connector and ground. AI KIA045977 Electronic steering column lock Ground Continuity Connector Terminal A: M32 8 Ground No Is the inspection result normal? SEC YES >> GO TO 11 NO >> Repair harness or connector. 11. CHECK INTERMITTENT INCIDENT L Refer to GI-42, "Intermittent Incident". Μ >> Inspection End. Ν

Ρ

B2617 STARTER RELAY CIRCUIT

Description

INFOID:000000004206273

[SEDAN WITH INTELLIGENT KEY]

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000004206274

DTC DETECTION LOGIC

NOTE:

- If DTC B2617 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B2617 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236. "DTC Logic"</u>.
- If DTC B2617 is displayed with DTC B210E, first perform the trouble diagnosis for DTC B210E. Refer to <u>SEC-304, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2617	STARTER RELAY CIRCUIT	 An immediate operation of starter relay is requested by BCM, but there is no response for more than 1 second BCM is not commanding starter relay activation, but BCM detects starter relay output is active 	 Harness or connectors (Starter relay circuit is open or short- ed.) IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-304</u>, "Diagnosis Procedure".

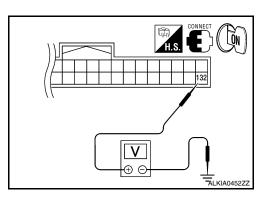
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000004206275

1.CHECK STARTER RELAY

- 1. Turn ignition switch ON.
- 2. Check voltage between BCM harness connector and ground under the following condition.



B2617 STARTER RELAY CIRCUIT

< COMPONENT DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

В	СМ		T				
Connector	Terminal	- Ground	Transmiss	ion type		Condition	Voltage (V)
				CVT: Select lever in Park Ignition switch cranking or request to start Other than above		Battery voltage	
M21	132	Ground	Park			er than above	0
IVIZ I	152	Gibana	M/T: Clutch depressed	pedal		switch cranking or juest to start	Battery voltage
			uepresseu		Othe	er than above	0
ES >> G O >> G	O TO 3 O TO 2	vithin the speci	fication.				
CHECK ST	ARTER REL	AY CIRCUIT					
	on switch OF					t	
		ss connector a een IPDM E/F					
	ess connecto						
			4				
IPDM Connector	Terminal	BCI	M Terminal	Con	tinuity		В
A: E17	46	B: M21	132	~	′es	46	
	-	een IPDM E/F	-			Ì	
ground.	minuly DelW		1011633				Ω
							ALKIA
	PDM E/R	Gro	ound	Contin	uity		
Connector	Termin						
A: E17	46		bund	No			
	on result norn	<u>nal?</u> Refer to <u>BCS-(</u>)6 "Pomou	al and b	netallatio		
		or connector.			istaliatio	<u>"1 </u> .	
	TERMITTEN1						
fer to GI-42							
er to <u>GI-42</u>		<u>moldent</u> .					
	spection End.						
fer to <u>GI-42</u> >> In							

B2619 BCM

Description

BCM requests IPDM E/R to supply power to steering lock unit. After receiving the power, the steering lock unit transmits an ON signal to BCM.

DTC Logic

INFOID:000000004206277

INFOID:000000004206276

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis DTC detecting condition Po		Possible cause
B2619	BCM	BCM detects a mismatch between the power sup- plied to the steering lock unit and the feedback for one second or more.	• BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.

- CVT selector lever is in the P position
- Do not depress brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-306</u>, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

INFOID:000000004206278

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-306, "DTC Logic"</u>.

Is the DTC B2619 displayed again?

- YES >> Replace BCM. Refer to <u>BCS-96. "Removal and Installation"</u>.
- NO >> Inspection End.

B261A PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

B261A PUSH-BUTTON IGNITION SWITCH

Description

IPDM E/R transmits the push-button ignition switch status via CAN communication to BCM. BCM receives push-button ignition switch status by hardwire input. BCM compares the 2 signals for mismatch.

DTC Logic

INFOID:000000004206280

А

Е

Н

SEC

L

INFOID:000000004206281

DTC DETECTION LOGIC

NOTE:

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235, "DTC Logic"</u>.
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236. "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B261A	PUSH-BUTTON IGNITION SWITCH	 BCM detects the mismatch between the following for 1 second or more Push-button ignition switch status Push-button ignition switch status from IPDM E/R (CAN) 	 Harness or connectors (Push-button ignition switch circuit is open or shorted) Between BCM and push-button igni- tion switch Between IPDM E/R and push-button ignition switch 	F

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Press the push-button ignition switch under the following conditions and wait for at least 1 second.
 CVT selector lever is in the P position
- Do not depress brake pedal.
- Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

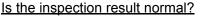
- YES >> Refer to <u>SEC-307</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 1

- 1. Turn ignition switch OFF.
- 2. Disconnect push-button ignition switch harness connector and IPDM E/R harness connector.
- Check voltage between push-button ignition switch harness connector and ground.

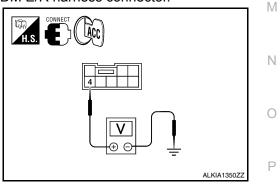
Push-button i	Push-button ignition switch		Voltage (V)	
Connector	Terminal	Ground	voltage (v)	
M38	4	Ground	Battery voltage	



YES >> GO TO 4 NO >> GO TO 2

2.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT

1. Disconnect BCM harness connector.



[SEDAN WITH INTELLIGENT KEY]

B261A PUSH-BUTTON IGNITION SWITCH OSIS > [SEDAN WITH INTELLIGENT KEY]

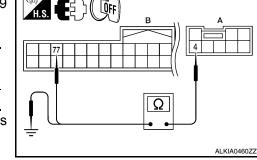
< COMPONENT DIAGNOSIS >

 Check continuity between push-button ignition switch harness connector M38 (A) terminal 4 and BCM harness connector M19 (B) terminal 77.

Push-button	Push-button ignition switch		BCM		
Connector	Terminal	Connector Terminal		Continuity	
A: M38	4	B: M19	77	Yes	

3. Check continuity between push-button ignition switch harness connector M38 (A) terminal 4 and ground.

Push-button ignition switch		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: M38	4	Ground	No	



Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

 $\mathbf{3}$.check push-button ignition switch

- 1. Disconnect IPDM E/R harness connector.
- Check continuity between push-button ignition switch harness connector M38 (A) terminal 4 and IPDM E/R harness connector E18 (B) terminal 28.

ector	
	В
y	
ness	

Push-button	utton ignition switch IPDM E/R		/IE/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M38	4	B: E18	28	Yes

3. Check continuity between push-button ignition switch harness connector and ground.

Push-button ignition switch		Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M38	4	Ground	No

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair harness or connector.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

< COMPONENT DIAGNOSIS >

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

Description

BCM receives the engine status signal from ECM via CAN communication.

DTC Logic

INFOID:000000004206267

[SEDAN WITH INTELLIGENT KEY]

В

С

D

Ρ

А

INFOID:000000004206268

DTC DETECTION LOGIC

- NOTE:
- If DTC B26E1 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-235. "DTC Logic"</u>.
- If DTC B26E1 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-236, "DTC Logic"</u>.

				E	
DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause		
B26E1	NO RECEPTION OF ENGINE STATUS SIGNAL	BCM does not receive the engine status signal from ECM when ignition switch is in the ON position	• ECM	F	
DTC CON	FIRMATION PROC	EDURE		G	
1 .PERFOR	RM DTC CONFIRMA	TION PROCEDURE		G	
- CVT se - Do not	nition switch ON unde lector lever is in the I depress the brake pe 'Self diagnostic resul	dal.		Η	
Is DTC dete	•				
		<u>Diagnosis Procedure"</u> .			
	Inspection End.			J	
Diagnosis	s Procedure		INFOID:00000004206269		
1.INSPEC	TION START			SEC	
	nition switch ON.			SEC	
	"Self diagnostic resul ERASE".	" with CONSULT-III.			
	n DTC Confirmation	Procedure.		L	
	<u>C-309, "DTC Logic"</u> . B26E1 displayed aga	in?			
	GO TO 2	<u></u>		Μ	
•	Inspection End.				
2.REPLAC	E ECM			Ν	
1. Replac					
		INSPECTION : Special Repair Requiremair air Requirement" (QR25DE except California			
<u>Special Repair Requirement"</u> (QR25DE California).					
	Inspection End				

>> Inspection End.

POWER SUPPLY AND GROUND CIRCUIT BCM

BCM : Diagnosis Procedure

1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuse or fusible link are blown.

Terminal No.	Signal name	Fuse and fusible link No.
1	Battery power supply	Н
11	Dattery power supply	10

Is the fuse or fusible link blown?

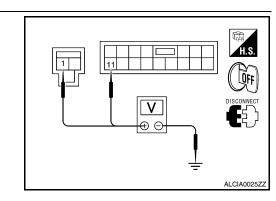
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM.
- 3. Check voltage between BCM harness connector and ground.

	Terminals			
(+) (-)			Voltage	
B	BCM		(Approx.)	
Connector	Terminal	Ground		
M16	1		Pottony voltage	
M17	11		Battery voltage	



Is the measurement normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

B	BCM		Continuity	
Connector Terminal		Ground	Continuity	
M17	13		Yes	

Does continuity exist?

YES >> Inspection End.

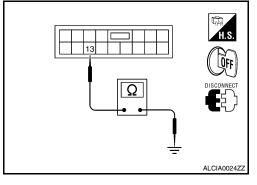
NO >> Repair or replace harness.

BCM : Special Repair Requirement

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to BCS-6, "CONFIGURATION (BCM) : Special Repair Requirement".

>> Work End. IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Di-



INFOID:000000004498340

[SEDAN WITH INTELLIGENT KEY]

INFOID:000000004498339

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

agnosis Procedure

1. CHECK FUSES AND FUSIBLE LINK

Check that the following IPDM E/R fuses or fusible link are not blown.

Terminal No.	Signal name	Fuses and fusible link No.	
1, 2		B, D	
	Battery power supply	42	
—		43	

Is the fuse blown?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

- NO >> GO TO 2
- 2. CHECK POWER SUPPLY CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R connectors.
- 3. Check voltage between IPDM E/R harness connector and ground.

Terminals			
(+)		(-)	Voltage (V) (Approx.)
IPDI	IPDM E/R		
Connector	Terminal		
E16	1	Ground	Battery voltage
L 10	2		Dattery voltage

Is the measurement value normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

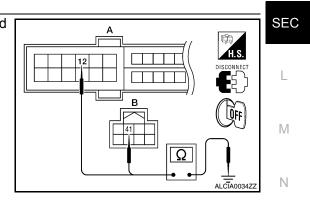
Check continuity between IPDM E/R harness connectors and ground.

IPDM E/R			Continuity
Connector	Terminal	Ground	Continuity
A: E18	12	Ground	Yes
B: E17	41		165

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.



0

[SEDAN WITH INTELLIGENT KEY]

INFOID:000000004498341

С

В

А

D

Ε

F

Н

J

KEY SLOT

Diagnosis Procedure

1. CHECK KEY SLOT POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect key slot connector.
- Check voltage between slot connector and ground. 3.

Key	Key slot		Voltage (V)
Connector	Terminal	Ground	(Approx.)
M40	1	Ground	Battery voltage
M40	5	Ground	Dallery Vollage

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace key slot power supply circuit.

2. CHECK KEY SLOT GROUND CIRCUIT

Check continuity between key slot connector and ground.

Key	slot	Ground	Continuity
Connector	Terminal	Ground	Continuity
M40	7	Ground	Yes

Is the inspection result normal?

>> GO TO 3 YES

NO >> Repair or replace key slot ground circuit.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

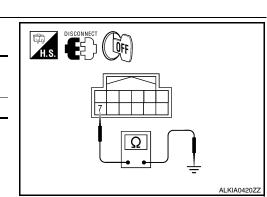
H.S.

OFF

1, 5

INFOID:000000004206316

ALKIA0419ZZ



6

KEY SLOT ILLUMINATION

	IT DIAGNOS	-		[SEDAN W	
KEY SLOT	ILLUMIN	ATION			
Description					INFOID:0000000042063
Blinks when Inte	elligent Key in	sertion is re	quired.		
Component	Function	Check			INFOID:000000042063
1.CHECK FUN	ICTION				
With CONSU Check key slot		KEY SLOT I	LLUMI") Active Test mod	le.	
	slot function	is OK.	s Procedure".		
Diagnosis P	rocedure				INFOID:0000000042063
1 .CHECK KEY	SLOT ILLUN	/INATION C	OUTPUT SIGNAL		
Check voltage t	between key s	lot connecto	or and ground.	CONNECT	
Check voltage I	between key s	slot connecto	or and ground.		
Check voltage I	between key s	slot connecto	or and ground.		
Check voltage t	Detween key s	slot connecto	or and ground.		
(+	Terminals		or and ground.	Key slot	LKIA0418ZZ
	Terminals	slot connecto		Key slot illumination	
(+ Key slot	Terminals				LKIA0418ZZ

Disconnect key slot connector.
 Check voltage between slot connector and ground.

(+	-)	(-)	Voltage (V) (Approx.)	
Key slot connector Terminal		(-)	X FF - 7	
M40 1 5		Ground	Battery voltage	
Is the inspection	result normal?			

YES >> GO TO 3

SEC-313

H.S.

QFF

1, 5

E

0

Ρ

ALKIA0419ZZ

KEY SLOT ILLUMINATION

< COMPONENT DIAGNOSIS >

NO >> Repair or replace key slot power supply circuit.

3.CHECK KEY SLOT GROUND CIRCUIT

Check continuity between key slot connector and ground.

Key slot connec- tor	Terminal	Ground	Continuity
M40	7		Yes

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace key slot ground circuit.

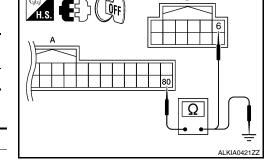
4.CHECK KEY SLOT CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and key slot connector.

3. Check continuity between BCM connector and key slot connector.

BCM connector	Terminal	Key slot connector	Terminal	Continuity
A: M19	80	B: M40	6	Yes

4. Check continuity between BCM connector and ground.



ALKIA0420ZZ

BCM connector	Terminal	Ground	Continuity
A: M19	80	Gibuna	No

Is the inspection result normal?

YES >> GO TO 5

NO >> Repair or replace harness between BCM and key slot.

5.CHECK KEY SLOT

Refer to SEC-313, "Description".

Is the inspection result normal?

YES >> GO TO 6

NO >> Replace key slot. Refer to <u>SEC-409</u>, "Removal and Installation".

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

SEC-314

KEY CYLINDER SWITCH

Description

For vehicles equipped with LH and RH anti-pinch system, the main power window and door lock/unlock switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signal.

For vehicles equipped with LH anti-pinch system only, the front door lock assembly LH (key cylinder switch) (transmits the LOCK or UNLOCK signal directly to the BCM.

Component Function Check

INFOID:000000004206321

INFOID:000000004206322

INFOID:000000004206320

D

Н

Ρ

А

В

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check KEY CYL UN-SW, KEY CYL UN-SW in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" E with CONSULT-III. Refer to <u>DLK-231, "Work Flow"</u>.

Monitor item	Co	ondition	F
KEY CYL LK-SW	Lock	: ON	
KET GTL LK-SW	Neutral / Unlock	: OFF	
	Unlock	: ON	G
KEY CYL UN-SW	Neutral / Lock	: OFF	

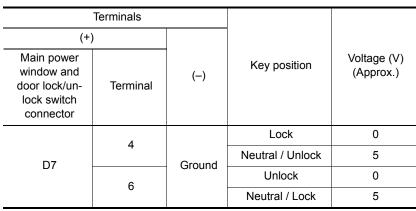
Is the inspection result normal?

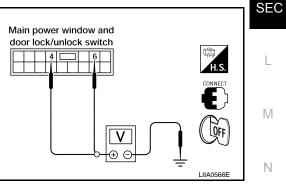
- YES >> Key cylinder switch is OK.
- NO >> With LH and RH anti-pinch, refer to <u>DLK-305</u>. "Diagnosis Procedure (With LH and RH Anti-<u>Pinch)"</u>.
- NO >> With LH anti-pinch only, refer to <u>DLK-306</u>, "Diagnosis Procedure (With LH Anti-Pinch Only)".

Diagnosis Procedure (With LH and RH Anti-Pinch)

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

- 1. Turn ignition switch ON.
- Check voltage between main power window and door lock/ unlock switch connector and ground.





Is the inspection result normal?

2.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.

[SEDAN WITH INTELLIGENT KEY]

YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-91, "Removal and Instal-lation"</u>.
 NO >> GO TO 2

KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

- 2. Disconnect main power window and door lock/unlock switch connector and front door lock assembly LH (key cylinder switch) connector.
- Check continuity between main power window and door lock/ unlock switch connector and front door lock assembly LH (key cylinder switch) connector.

Main power window and door lock/unlock switch connector	Terminal	Front door lock assembly LH (key cylinder switch) connector	Terminal	Continuity
A [.] D7	4	B: D10	6	Yes
A. D1	6	0.010	5	163

4. Check continuity between main power window and door lock/ unlock switch connector and ground.

Power window main switch connector	Terminal		Continuity
A: D7	4	Ground	No
A. D7	6	†	NU

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3.check door key cylinder switch ground circuit

Check continuity between front door lock assembly LH connector and ground.

connector	Ground	Continuity
D10 4		Yes

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4. CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to SEC-318, "Component Inspection".

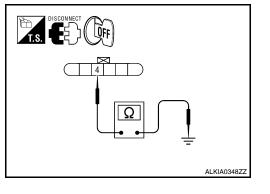
Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".
- NO >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-451</u>, "FRONT DOOR <u>LOCK : Removal and Installation"</u>.

Diagnosis Procedure (With LH Anti-Pinch Only)

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

1. Turn ignition switch ON.

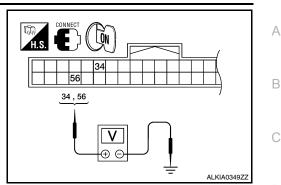


INFOID:000000004206323

KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

2. Check voltage between BCM connector and ground.



D

J

SEC

L

Terminals					
(+)		(-)	Key position	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)			
	50		Lock	0	
N440	56	Neutral / Unlock	Neutral / Unlock	5	
M18	0.4	Ground	Unlock	0	
	34		Neutral / Lock	5	

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-91, "Removal and Instal-</u> <u>lation"</u>.

NO >> GO TO 2

2. CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect front door lock assembly LH (key cylinder switch) connector.

3. Check continuity between front door lock assembly LH (key cylinder switch) connector and ground.

Front door lock assembly LH connector	Terminal	Ground	Continuity
D10	4	Ground	Yes

Is the inspection result normal?

YES >> GO TO 3

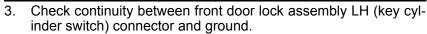
NO >> Repair or replace harness.

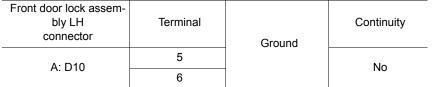
3.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

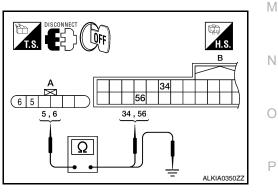
1. Disconnect BCM connector M18.

2. Check continuity between front door lock assembly LH (key cylinder switch) connector and BCM connector M18.

Front door lock assembly LH connector	Terminal	BCM connector	Terminal	Continuity
A: D10	5	B: M18	34	Yes
N. D10	6	D. MIO	56	165







SEC-317

[SEDAN WITH INTELLIGENT KEY]

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4. CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to SEC-318, "Component Inspection".

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-42. "Intermittent Incident".
- NO >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-451, "FRONT DOOR</u> <u>LOCK : Removal and Installation"</u>.

Component Inspection

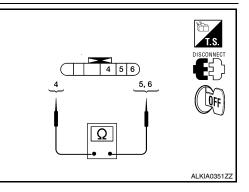
INFOID:000000004206324

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly LH (key cylinder switch).

Term	ninal		
Front door lock assembly LH (key cylinder switch) connector		Key position	Continuity
-	5	Unlock	Yes
5		Neutral / Lock	No
6	4	Lock	Yes
		Neutral / Unlock	No



Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-451, "FRONT DOOR</u> <u>LOCK : Removal and Installation"</u>.

[SEDAN WITH INTELLIGENT KEY]

Ρ

H	ORN			A	
De	escription			INFOID:00000004206326	
	rn (high/low) is located		mper and operates when theft	warning system is in alarm phase. B	
1.	CHECK FUNCTION			С	
1. 2.	Select HORN in "ACT Check the horn (high,		with CONSULT-III.	D	
-	Test iten	n	Des	scription	
-	HORN ON	N	Horn relay	ON (for 20 ms)	
Y N	the operation normal? ES >> Inspection Er O >> Refer to <u>SEC</u> agnosis Procedur	-319, "Diagnosis	Procedure".	INF0/D:00000004206328	
Ch Do Y N	CHECK HORN FUNC eck horn function with the horns sound? ES >> GO TO 2 O >> Refer to <u>HRN</u> CHECK HORN RELAY	horn switch I-7, "Wiring Diagra		G H	
1. 2. 3.	Turn ignition switch C Perform "ACTIVE TE)N. ST" ("HORN") with Itmeter or an osc	n CONSULT-III. silloscope, check voltage	SEC ALKIA0424ZZ	C
	IPDM E/R	Ground	Test item	Voltage (V) N (Approx.)	

IPD	M E/R	Ground		Test item	Voltage (V)	N
Connector	Terminal	Ground		lest tem	(Approx.)	
E17	44	Ground	HORN	ON	Battery voltage \rightarrow 0 \rightarrow Battery voltage	
	44	Gibunu	HORN	Other than above	Battery voltage	0

Is the inspection result normal?

< COMPONENT DIAGNOSIS >

YES >> Repair or replace harness between IPDM E/R and horn relay.

 $3. {\sf CHECK} {\sf HORN} {\sf RELAY} {\sf CIRCUIT}$

1. Turn ignition switch OFF.

2. Disconnect IPDM E/R and horn relay connector.

HORN

< COMPONENT DIAGNOSIS >

3. Check continuity between IPDM E/R harness connector and horn relay harness connector.

IPDI	IPDM E/R		Horn relay	
Connector	Terminal	Connector	Terminal	Continuity
A: E17	44	B: H-1	1	Yes

4. Check continuity between IPDM E/R harness connector and ground.

IPD	IPDM E/R		Continuity
Connector	Terminal	Ground	Continuity
A: E17	44	Ground	No

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace IPDM E/R.Refer to PCS-48, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

ALKIA0425ZZ

[SEDAN WITH INTELLIGENT KEY]

SEC-320

HEADLAMP	А		
Description INFOID:00000004206329	A		
Headlamp lighting when theft warning system is in alarm phase.	В		
Component Function Check			
1.CHECK HEADLAMP OPERATION	С		
Check if headlamps operate by lighting switch. Does headlamp come on when turning switch "ON"? YES >> Headlamp circuit is OK. NO >> Check headlamp system. Refer to SEC-321, "Diagnosis Procedure".	D		
Diagnosis Procedure	Е		
1.CHECK HEADLAMP OPERATION			
Refer to EXL-71, "Wiring Diagram - Sedan" (xenon type) or EXL-61, "Wiring Diagram - Sedan" (halogen type).			
<u>Is the inspection result normal?</u> YES >> GO TO 2 NO >> Repair or replace malfunctioning parts.	G		
2.CHECK INTERMITTENT INCIDENT			
Refer to <u>GI-42, "Intermittent Incident"</u> .	Η		
>> Inspection End.	I		

J

SEC

L

M

Ν

0

Ρ

WARNING LAMP

Description

- Warning lamp is built in combination meter.
- Intelligent Key system malfunction is reported to the driver by the warning lamp illumination.

Component Function Check

1.CHECK FUNCTION

- 1. Perform "INDICATOR" in the "Active Test" mode with CONSULT-III.
- 2. Check warning lamp operation.

Test	tem	Desci	iption
INDICATOR	ON	Worning lown	ON
INDICATOR	OFF	Warning lamp	OFF

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Refer to <u>SEC-322, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1.CHECK "COMBINATION METER."

Check combination meter function. Refer to MWI-4, "Work Flow".

Is the inspection result normal?

- YES >> GO TO 2
- NO >> Repair or replace the malfunctioning parts.

2. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

INFOID:000000004206332

INFOID:000000004206333

INFOID:000000004206334

VEHICLE SECURITY INDICATOR

< COMPONENT DIAGNOSIS >

VEHICLE SECURITY INDICATOR

Description

- Vehicle security indicator is built in combination meter.
- В · NVIS (Nissan Vehicle Immobilizer System-NATS) and vehicle security system conditions are indicated by blink or illumination of vehicle security indicator.

Component Function Check

1. CHECK FUNCTION

- 1. Perform "THEFT IND" in the "ACTIVE TEST" mode with CONSULT-III.
- 2. Check vehicle security indicator operation.

Test if	tem	Descrip	otion	Е
	ON	Mahiala ang wita indiantan	ON	
THEFT IND	OFF	Vehicle security indicator	OFF	
Is the inspection result norm	al?			F
YES >> Inspection End. NO >> Refer to <u>SEC-32</u>	23, "Diagnosis Procedur	<u>e"</u> .		G
Diagnosis Procedure			INFOID:0000000420633	-
1. CHECK COMBINATION	METER			Н
Check combination meter. R	efer to <u>MWI-4, "Work FI</u>	<u>ow"</u> .		
Is the inspection result normYES>> GO TO 2NO>> Repair or replace	<u>al?</u> e the malfunctioning pa	rts.		I
2. CHECK INTERMITTENT	INCIDENT			1
Refer to GI-42, "Intermittent	Incident".			J

>> Inspection End.

INFOID:000000004206335

INFOID:000000004206336

[SEDAN WITH INTELLIGENT KEY]

SEC

L

Μ

Ν

0

Ρ

А

С

D

ECU DIAGNOSIS BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000004498464

VALUES ON THE DIAGNOSIS TOOL

FR Other than front wiper switch HI OFF Front wiper switch HI ON OFF Front wiper switch LO OFF Front washer switch OFF OFF Front washer switch NT OFF Front wiper switch INT OFF Front wiper switch INT OFF Front wiper sit not INTOP ossition OFF Front wiper is not INTOP ossition OFF Turn wiper sit of INTOP ossition OFF Turn signal switch RH ON TURN SIGNAL R Other than turn signal switch RH ON Turn signal switch RH ON ON Turn signal switch ST and 2ND OFF ON Turn signal switch ST or 2ND ON ON Turn signal switch ST or 2ND ON ON HEAD LAMP SW 1 Other than lighting switch 2ND OFF Lighting switch 2ND OFF ON	Monitor Item	Condition	Value/Status
Front wiper switch HIONFR WIPER LOWOther than front wiper switch LOONFFront wiper switch LOONFR WASHER SWFront washer switch OFFOFFFront washer switch INTONFR WIPER INTOther than front wiper switch INTONFR WIPER STOPFront wiper switch INTONFront wiper switch INTONFR WIPER STOPFront wiper switch INTONFront wiper is in STOP positionONINT VOLUMEWiper intermittent dial is a dial position 1 - 7Wiper intermittent dial positionTURN SIGNAL ROther than turn signal switch RHOFFTurn signal switch RHONONTURN SIGNAL LOther than turn signal switch LHONTURN SIGNAL LOther than turn signal switch 1ST or 2NDONTAIL LAMP SWOther than lighting switch 1ST or 2NDONHEAD LAMP SW 1Other than lighting switch 2NDONHEAD LAMP SW 2Other than lighting switch 2NDONLighting switch 2NDONONHEAD LAMP SW 2Other than lighting switch PASSOFFLighting switch 2NDONONAUTO LIGHT SWOther than lighting switch PASSOFFLighting switch PASSOFFONDOOR SW-ASPassenger door openedONDOOR SW-ASRear door RH closedOFFPOOR SW-RLRear door RH closedOFFRear door Light Switch OpenedONDOOR SW-RLRear door Light Switch OpenedON <td< td=""><td></td><td>Other than front wiper switch HI</td><td>OFF</td></td<>		Other than front wiper switch HI	OFF
FR WIPER LOW Front washer switch LO ON FR WASHER SW Front washer switch OFF OFF FR WIPER INT Other than front wiper switch INT ON FR WIPER INT Other than front wiper switch INT ON FR WIPER STOP Front washer switch INT ON FR WIPER STOP Front wiper is In STOP position OFF TURN SIGNAL R Wiper intermittent dial is in a dial position 1-7 Wiper intermittent dial position TURN SIGNAL R Other than turn signal switch RH OFF TURN SIGNAL L Other than turn signal switch LH ON TAIL LAMP SW Other than lighting switch ST and 2ND OFF Lighting switch ST or 2ND ON ON HI BEAM SW Uighting switch AND ON Lighting switch SND OFF ON HEAD LAMP SW 2 Other than lighting switch AND ON HEAD LAMP SW 2 Other than lighting switch AND OFF Lighting switch AND ON ON ON PASSING SW Other than lighting switch ANTO ON ON Light		Front wiper switch HI	ON
Front washer switch OFFONFront washer switch OFFOFFFront washer switch OFFOFFFront washer switch ONONFR WIPER INTOther than front wiper switch INTOFFFront wiper switch INTONFR WIPER STOPFront wiper is in STOP positionOFFFront wiper is in STOP positionONINT VOLUMEWiper intermittent dial is in a dial position 1 - 7Wiper intermittent dial positionTURN SIGNAL ROther than turn signal switch RHONTURN SIGNAL LOther than turn signal switch LHOFFTurn signal switch RHONONTURN SIGNAL LOther than lighting switch 1ST and 2NDOFFTall LAMP SWOther than lighting switch 1HOFFLighting switch 1ST or 2NDONONHEAD LAMP SW 1Other than lighting switch 2NDOFFLighting switch 2NDOFFONHEAD LAMP SW 2Other than lighting switch 2NDOFFLighting switch 2NDOFFONHEAD LAMP SW 2Other than lighting switch 2NDOFFLighting switch PASSONONAutro LIGHT SWOther than lighting switch PASSONAutro LIGHT SWOther than lighting switch ONONPASSING SWOther than lighting switch AUTOOFFLighting switch PASSONONDOOR SW-ASPassenger door openedONDOOR SW-ASPassenger door openedONDOOR SW-RLRear door RH openedONDOOR SW-RL </td <td></td> <td>Other than front wiper switch LO</td> <td>OFF</td>		Other than front wiper switch LO	OFF
FR WASHER SW Front washer switch ON ON FR WIPER INT Other than front wiper switch INT OFF FR WIPER STOP Front wiper is not in STOP position OFF Front wiper is in STOP position ON ON INT VOLUME Wiper intermittent dial is in a dial position 1 - 7 Wiper intermittent dial position TURN SIGNAL R Other than turn signal switch RH OFF TURN SIGNAL L Other than turn signal switch LH ON TURN SIGNAL L Other than turn signal switch LH OFF Turn signal switch IST and 2ND OFF Tall LAMP SW Other than lighting switch 1ST and 2ND OFF HiBEAM SW Other than lighting switch PAS ON HEAD LAMP SW 1 Other than lighting switch 2ND OFF HEAD LAMP SW 2 Other than lighting switch 2ND OFF Lighting switch 2ND ON ON HEAD LAMP SW 2 Other than lighting switch PASS OFF Lighting switch 2ND OFF ON Lighting switch PASS ON OFF Lighting switch PASS ON ON PASSING SW Utpiting switch AUTO OFF Front fog lamp switch OFF OFF OFF Front fog lamp switch OFF OFF OFF <	FR WIPER LOW	Front wiper switch LO	ON
Front washer switch ONONFR WIPER INTOther than front wiper switch INTOFFFront wiper switch INTONFR WIPER STOPFront wiper is not in STOP positionOFFFront wiper is not in STOP positionONINT VOLUMEWiper intermittent dial is in a dial position 1 - 7Wiper intermittent dial positionTURN SIGNAL ROther than turn signal switch RHOFFTURN SIGNAL LOther than turn signal switch LHOFFTurn signal switch LHOFFOTHTurn signal switch LHONTAIL LAMP SWOther than lighting switch 1ST or 2NDONH BEAM SWOther than lighting switch 2NDOFFLighting switch 2NDOFFOTHLighting switch 2NDOFFLighting switch ANDOFFLighting switch ANDOFFLighting switch PASSONAutro LIGHT SWOther than lighting switch PASSLighting switch ATOONDOOR SW-ASPassenger door closedDOOR SW-ASPassenger door closedOFFPassenger door closedOFFPASSING SWRear door RH closedOFFDOOR SW-RERear door RH closedOFF <td></td> <td>Front washer switch OFF</td> <td>OFF</td>		Front washer switch OFF	OFF
FR WIPER INT Front wiper switch INT ON FR WIPER STOP Front wiper is not in STOP position OFF Front wiper is in STOP position ON INT VOLUME Wiper intermittent dial is in a dial position 1 - 7 Wiper intermittent dial position TURN SIGNAL R Other than turn signal switch RH OFF TURN SIGNAL L Other than turn signal switch LH ON TURN SIGNAL L Other than lighting switch 1ST and 2ND OFF Turn signal switch LH ON ON TAIL LAMP SW Uther than lighting switch 1ST or 2ND ON HI BEAM SW Other than lighting switch HI OFF Lighting switch 2ND OFF ON HEAD LAMP SW 1 Other than lighting switch 2ND OFF Lighting switch 2ND ON ON HEAD LAMP SW 2 Other than lighting switch PASS ON Autro LIGHT SW Lighting switch PASS ON Autro LIGHT SW Lighting switch AUTO OFF Lighting switch AUTO OFF OFF DoOR SW-DR Front fog lamp switch OFF OFF	FR WASHER SW	Front washer switch ON	ON
Front wiper switch NTONFR WIPER STOPFront wiper is not in STOP positionOFFFront wiper is not in STOP positionONINT VOLUMEWiper intermittent dial is in a dial position 1 - 7Wiper intermittent dial positionTURN SIGNAL ROther than turn signal switch RHOFFTURN SIGNAL LTurn signal switch RHONTURN SIGNAL LOther than turn signal switch LHONTURN SIGNAL LOther than lighting switch 1ST and 2NDOFFTall LAMP SWOther than lighting switch 1ST or 2NDONHI BEAM SWUther than lighting switch 2NDOFFLighting switch 2NDOFFONHEAD LAMP SW 1Other than lighting switch 2NDOFFLighting switch 2NDOFFONHEAD LAMP SW 2Other than lighting switch 2NDOFFLighting switch 2NDOFFONHEAD LAMP SW 2Other than lighting switch 2NDOFFLighting switch 2NDOFFONPASSING SWOther than lighting switch PASSOFFLighting switch 2NDOFFOFFLighting switch PASSOFFLighting switch AUTOOFFLighting switch PASSOFFDOOR SW-DRFront fog lamp switch OFFOFFDOOR SW-ARRear door RH cosedOFFRear door RH cosedOFFONDOOR SW-RERear door ClasedOFFDOOR SW-RERear door ClasedOFFRear door RH cosedOFFON <tr <td="">DOOR SW-RERear</tr>		Other than front wiper switch INT	OFF
FR WIPER STOP Front wiper is in STOP position ON INT VOLUME Wiper intermittent dial is in a dial position 1 - 7 Wiper intermittent dial position TURN SIGNAL R Other than turn signal switch RH OFF TURN SIGNAL L Other than turn signal switch LH OFF TURN SIGNAL L Other than turn signal switch LH OFF Turn signal switch LH ON ON TAIL LAMP SW Other than lighting switch 1ST and 2ND OFF Lighting switch 1ST or 2ND ON ON HI BEAM SW Other than lighting switch 2ND OFF Lighting switch 2ND OFF ON HEAD LAMP SW 1 Other than lighting switch 2ND OFF Lighting switch 2ND OFF ON HEAD LAMP SW 2 Other than lighting switch 2ND OFF Lighting switch 2ND OFF ON HEAD LAMP SW 2 Other than lighting switch PASS ON QUTO LIGHT SW Other than lighting switch AUTO OFF Lighting switch AUTO OFF OFF Lighting switch AUTO OFF OFF		Front wiper switch INT	ON
Front wiper is in STOP positionONINT VOLUMEWiper intermittent dial is in a dial position 1 - 7Wiper intermittent dial positionTURN SIGNAL ROther than turn signal switch RHOFFTURN SIGNAL LOther than turn signal switch LHOFFTurn signal switch LHONTAIL LAMP SWOther than turn signal switch LHOFFLighting switch 1ST or 2NDOFFLighting switch 1ST or 2NDOFFUther than lighting switch 2NDOFFHEAD LAMP SW 1Other than lighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDOFFLighting switch PASSOFFLighting switch PASSOFFLighting switch PASSOFFLighting switch PASSONAutro LIGHT SWOther than lighting switch AUTOOFFDOOR SW-DRDriver door closedOFFDOOR SW-ASPassenger door closedOFFPassenger door closedOFFONDOOR SW-RRRear door RH closedOFFPOOR SW-RLRear door RH closedOFFPOOR SW-RLRear door RH closedOFFPOOR SW-RLRear door LH closedOFF <td< td=""><td></td><td>Front wiper is not in STOP position</td><td>OFF</td></td<>		Front wiper is not in STOP position	OFF
TURN SIGNAL ROther than turn signal switch RHOFFTurn signal switch RHONTURN SIGNAL LOther than turn signal switch LHOFFTurn signal switch LHONTAIL LAMP SWOther than lighting switch 1ST and 2NDOFFLighting switch 1ST or 2NDONHI BEAM SWOther than lighting switch 1ST or 2NDONHI BEAM SWOther than lighting switch 1NDOFFLighting switch HIONONHEAD LAMP SW 1Other than lighting switch 2NDOFFLighting switch 2NDONONHEAD LAMP SW 2Other than lighting switch 2NDOFFLighting switch 2NDONONPASSING SWOther than lighting switch 2NDONAUTO LIGHT SWOther than lighting switch AUTOONFR FOG SWFront fog lamp switch OFFOFFFront fog lamp switch OFFOFFDOOR SW-ASPassenger door closedOFFDOOR SW-RLRear door RH closedOFFDOOR SW-RLRear door RH closedOFFDOOR SW-RLRear door LH closedOFF	FR WIPER STOP	Front wiper is in STOP position	ON
TURN SIGNAL RTurn signal switch RHONTURN SIGNAL LOther than turn signal switch LHOFFTurn signal switch LHONTAIL LAMP SWOther than lighting switch 1ST and 2NDOFFLighting switch 1ST or 2NDONHI BEAM SWOther than lighting switch HIOFFLighting switch 1ST or 2NDONHEAD LAMP SW 1Other than lighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDONHEAD LAMP SW 2Other than lighting switch 2NDOFFLighting switch 2NDONHEAD LAMP SW 2Other than lighting switch 2NDOFFLighting switch 2NDONONPASSING SWOther than lighting switch PASSOFFLighting switch PASSOFFILighting switch AUTOONONAUTO LIGHT SWLighting switch OFFOFFLighting switch ONONONDOOR SW-DRDriver door openedONDOOR SW-ASPassenger door closedOFFDOOR SW-RLRear door RH closedOFFRear door ClosedOFFONDOOR SW-RLRear door LH closedONDOOR SW-RLRear door LH closedOFF	INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
Turn signal switch RHONTURN SIGNAL LOther than turn signal switch LHOFFTurn signal switch LHONTAIL LAMP SWOther than lighting switch 1ST and 2NDOFFLighting switch 1ST or 2NDONHI BEAM SWOther than lighting switch HIOFFLighting switch HIOFFLighting switch HIOFFLighting switch 2NDOFFHEAD LAMP SW 1Other than lighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDOFFAUTO LIGHT SWOther than lighting switch PASSOFFLighting switch PASSONAUTO LIGHT SWFront fog lamp switch OFFOFFLighting switch AUTOONONDOOR SW-DRDriver door openedONDOOR SW-RRRear door RH closedOFFPOOR SW-RLRear door RH closedOFFPOOR SW-RLRear door LH closedOFF		Other than turn signal switch RH	OFF
TURN SIGNAL L Turn signal switch LH ON TAIL LAMP SW Other than lighting switch 1ST and 2ND OFF HIBEAM SW Lighting switch 1ST or 2ND ON HIBEAM SW Other than lighting switch HI OFF Lighting switch HI ON OFF HEAD LAMP SW 1 Other than lighting switch 2ND OFF Lighting switch 2ND ON ON HEAD LAMP SW 2 Other than lighting switch 2ND OFF Lighting switch 2ND ON ON HEAD LAMP SW 2 Other than lighting switch 2ND OFF Lighting switch 2ND ON ON PASSING SW Other than lighting switch 2ND OFF Lighting switch 2ND ON ON AUTO LIGHT SW Other than lighting switch AUTO OFF Lighting switch AUTO ON ON PASSING SW Front fog lamp switch OFF OFF Front go lamp switch ON ON ON DOOR SW-DR Driver door closed OFF DOOR SW-AS Passenger door closed OFF Passenger door closed OFF ON DOOR SW-RR Rear door RH opened ON DOOR SW-RL Rear door CH closed OFF <td>TURN SIGNAL R</td> <td>Turn signal switch RH</td> <td>ON</td>	TURN SIGNAL R	Turn signal switch RH	ON
Turn signal switch LHONTAIL LAMP SWOther than lighting switch 1ST and 2NDOFFLighting switch 1ST or 2NDONHI BEAM SWOther than lighting switch HIOFFLighting switch HIONHEAD LAMP SW 1Other than lighting switch 2NDOFFLighting switch 2NDONPASSING SWOther than lighting switch PASSOFFLighting switch PASSONAUTO LIGHT SWOther than lighting switch AUTOOFFLighting switch OFFOFFFront fog lamp switch OFFOFFFront fog lamp switch ONONDOOR SW-DRPassenger door closedOFFDOOR SW-ASRear door RH closedOFFPACOR SW-RRRear door RH closedOFFRear door LH closedOFFONDOOR SW-RLRear door LH closedOFF		Other than turn signal switch LH	OFF
TAIL LAMP SWLighting switch 1ST or 2NDONHI BEAM SWOther than lighting switch HIOFFLighting switch HIONHEAD LAMP SW 1Other than lighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDOFFHEAD LAMP SW 2Other than lighting switch 2NDHEAD LAMP SW 2Other than lighting switch 2NDOther than lighting switch 2NDOFFLighting switch 2NDONPASSING SWOther than lighting switch PASSAUTO LIGHT SWOther than lighting switch AUTOPR FOG SWFront fog lamp switch OFFFront fog lamp switch OFFOFFFront fog lamp switch ONONDOOR SW-DRDriver door closedDOOR SW-ASPassenger door closedDOOR SW-RRRear door RH closedOOR SW-RLRear door LH closedDOOR SW-RLRear door LH closedDOOR SW-RLRear door LH closed	TURN SIGNAL L	Turn signal switch LH	ON
Lighting switch 1ST or 2NDONHI BEAM SWOther than lighting switch HIOFFLighting switch HIONHEAD LAMP SW 1Other than lighting switch 2NDOFFLighting switch 2NDONHEAD LAMP SW 2Other than lighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDONPASSING SWOther than lighting switch PASSOFFLighting switch PASSONAUTO LIGHT SWOther than lighting switch AUTOOFFLighting switch PASSONONAUTO LIGHT SWOther than lighting switch AUTOOFFFront fog lamp switch OFFOFFOFFFront fog lamp switch ONONDOOR SW-DRDriver door openedONDOOR SW-ASPassenger door closedOFFPOOR SW-RRRear door RH closedOFFPOOR SW-RLRear door LH closedOFFDOOR SW-RLRear door LH closedOFF		Other than lighting switch 1ST and 2ND	OFF
HI BEAM SWLighting switch HIONHEAD LAMP SW 1Other than lighting switch 2NDOFFLighting switch 2NDONHEAD LAMP SW 2Other than lighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDONPASSING SWOther than lighting switch PASSOFFLighting switch PASSOFFAUTO LIGHT SWOther than lighting switch AUTOOFFLighting switch AUTOOFFLighting switch OFFOFFFR FOG SWFront fog lamp switch OFFOFFFront fog lamp switch ONONDOOR SW-DRDriver door closedOFFDOOR SW-ASPassenger door closedOFFDOOR SW-RRRear door RH closedOFFDOOR SW-RLRear door CLI closedOFFDOOR SW-RLRear door LH closedOFFDOOR SW-RLRear door LH closedOFF	TAIL LAWP SW	Lighting switch 1ST or 2ND	ON
Lighting switch HIONHEAD LAMP SW 1Other than lighting switch 2NDOFFLighting switch 2NDONHEAD LAMP SW 2Other than lighting switch 2NDOFFLighting switch 2NDONPASSING SWOther than lighting switch PASSOFFPASSING SWOther than lighting switch PASSONAUTO LIGHT SWOther than lighting switch AUTOOFFLighting switch AUTOOFFFR FOG SWFront fog lamp switch OFFOFFPOOR SW-DRDriver door closedOFFDOOR SW-ASPassenger door openedONDOOR SW-RRRear door RH closedOFFDOOR SW-RLRear door LH closedOFFDOOR SW-RLRear door LH closedOFF		Other than lighting switch HI	OFF
HEAD LAMP SW 1Lighting switch 2NDONHEAD LAMP SW 2Other than lighting switch 2NDOFFLighting switch 2NDONPASSING SWOther than lighting switch PASSOFFLighting switch PASSOFFAUTO LIGHT SWOther than lighting switch AUTOOFFLighting switch AUTOOFFLighting switch AUTOOFFLighting switch OFFOFFFR FOG SWFront fog lamp switch OFFOFFFront fog lamp switch ONONDOOR SW-DRDriver door closedOFFDOOR SW-ASPassenger door closedOFFDOOR SW-RRRear door RH closedOFFDOOR SW-RLRear door LH closedOFFDOOR SW-RLRear door LH closedOFF		Lighting switch HI	ON
Lighting switch 2NDONHEAD LAMP SW 2Other than lighting switch 2NDOFFLighting switch 2NDONPASSING SWOther than lighting switch PASSOFFLighting switch PASSONAUTO LIGHT SWOther than lighting switch AUTOOFFLighting switch AUTOOFFFR FOG SWFront fog lamp switch OFFOFFPOOR SW-DRDriver door openedONDOOR SW-ASPassenger door closedOFFDOOR SW-RRRear door RH closedOFFDOOR SW-RLRear door LH closedOFFDOOR SW-RLRear door LH closedOFF		Other than lighting switch 2ND	OFF
HEAD LAMP SW 2Lighting switch 2NDONPASSING SWOther than lighting switch PASSOFFLighting switch PASSONAUTO LIGHT SWOther than lighting switch AUTOOFFLighting switch AUTOOFFLighting switch AUTOONFR FOG SWFront fog lamp switch OFFOFFFront fog lamp switch ONONDOOR SW-DRDriver door closedOFFDOOR SW-ASPassenger door closedOFFDOOR SW-RRRear door RH closedOFFDOOR SW-RLRear door LH closedONDOOR SW-RLRear door LH closedOFF	HEAD LAWP SW 1	Lighting switch 2ND	ON
Lighting switch 2NDONPASSING SWOther than lighting switch PASSOFFAUTO LIGHT SWOther than lighting switch AUTOOFFAUTO LIGHT SWOther than lighting switch AUTOONFR FOG SWFront fog lamp switch OFFOFFFront fog lamp switch ONONDOOR SW-DRDriver door closedOFFDOOR SW-ASPassenger door openedONDOOR SW-RRRear door RH closedOFFDOOR SW-RLRear door LH closedOFFDOOR SW-RLRear door LH closedOFF		Other than lighting switch 2ND	OFF
PASSING SWLighting switch PASSONAUTO LIGHT SWOther than lighting switch AUTOOFFLighting switch AUTOONFR FOG SWFront fog lamp switch OFFOFFFront fog lamp switch ONONDOOR SW-DRDriver door closedOFFDOOR SW-ASPassenger door closedOFFDOOR SW-RRRear door RH closedOFFDOOR SW-RLRear door LH closedOFFDOOR SW-RLRear door LH closedOFF	HEAD LAWF SW 2	Lighting switch 2ND	ON
Lighting switch PASSONAUTO LIGHT SWOther than lighting switch AUTOOFFLighting switch AUTOONFR FOG SWFront fog lamp switch OFFOFFFront fog lamp switch ONONDOOR SW-DRDriver door closedOFFDOOR SW-ASPassenger door openedONDOOR SW-RRRear door RH closedOFFDOOR SW-RLRear door LH closedOFF		Other than lighting switch PASS	OFF
AUTO LIGHT SWLighting switch AUTOONFR FOG SWFront fog lamp switch OFFOFFFront fog lamp switch ONONDOOR SW-DRDriver door closedOFFDOOR SW-ASPassenger door openedONDOOR SW-RRRear door RH closedOFFDOOR SW-RLRear door LH closedOFFDOOR SW-RLRear door LH closedOFF	PASSING SW	Lighting switch PASS	ON
Lighting switch AUTOONFR FOG SWFront fog lamp switch OFFOFFFront fog lamp switch ONONDOOR SW-DRDriver door closedOFFDOOR SW-ASPassenger door closedONPOOR SW-ASPassenger door closedOFFDOOR SW-RRRear door RH closedOFFDOOR SW-RLRear door LH closedOFFDOOR SW-RLRear door LH closedOFF		Other than lighting switch AUTO	OFF
FR FOG SWFront fog lamp switch ONONDOOR SW-DRDriver door closedOFFDoor SW-ASPassenger door closedOFFPOOR SW-ASPassenger door closedOFFPOOR SW-RRRear door RH closedOFFRear door RH openedONDOOR SW-RLRear door LH closedOFF	AUTO LIGHT SW	Lighting switch AUTO	ON
Front fog lamp switch ONONDOOR SW-DRDriver door closedOFFDriver door openedONDOOR SW-ASPassenger door closedOFFPassenger door openedONDOOR SW-RRRear door RH closedOFFRear door RH openedONDOOR SW-RLRear door LH closedOFF		Front fog lamp switch OFF	OFF
DOOR SW-DRDriver door openedONDOOR SW-ASPassenger door closedOFFPassenger door openedONDOOR SW-RRRear door RH closedOFFRear door RH openedONDOOR SW-RLRear door LH closedOFF	FR FUG SW	Front fog lamp switch ON	ON
Driver door openedONDOOR SW-ASPassenger door closedOFFPassenger door openedONDOOR SW-RRRear door RH closedOFFRear door RH openedONDOOR SW-RLRear door LH closedOFF		Driver door closed	OFF
DOOR SW-AS Passenger door opened ON DOOR SW-RR Rear door RH closed OFF Rear door RH opened ON DOOR SW-RL Rear door LH closed OFF	DOOR SW-DR	Driver door opened	ON
Passenger door opened ON DOOR SW-RR Rear door RH closed OFF Rear door RH opened ON DOOR SW-RL Rear door LH closed OFF		Passenger door closed	OFF
DOOR SW-RR Rear door RH opened ON DOOR SW-RL Rear door LH closed OFF	DOOR SW-AS	Passenger door opened	ON
Rear door RH opened ON DOOR SW-RL Rear door LH closed OFF		Rear door RH closed	OFF
DOOR SW-RL	DOOK 211-KK	Rear door RH opened	ON
Rear door LH opened ON		Rear door LH closed	OFF
	DOOR SW-RL	Rear door LH opened	ON

SEC-324

< ECU DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

Monitor Item	Condition	Value/Status
DOOR SW-BK	NOTE: This item is displayed, but cannot be monitored.	OFF
	Other than power door lock switch LOCK	OFF
CDL LOCK SW	Power door lock switch LOCK	ON
	Other than power door lock switch UNLOCK	OFF
CDL UNLOCK SW	Power door lock switch UNLOCK	ON
	Other than driver door key cylinder LOCK position	OFF
KEY CYL LK-SW	Driver door key cylinder LOCK position	ON
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	OFF
KET CTL UN-SW	Driver door key cylinder UNLOCK position	ON
KEY CYL SW-TR	NOTE: This item is displayed, but cannot be monitored.	OFF
	When hazard switch is not pressed	OFF
HAZARD SW	When hazard switch is pressed	ON
REAR DEF SW	When rear window defogger switch is pressed	ON
TR CANCEL SW	Trunk lid opener cancel switch OFF	OFF
IR CANCEL SVV	Trunk lid opener cancel switch ON	ON
	Trunk lid opener switch OFF	OFF
TR/BD OPEN SW	While the trunk lid opener switch is turned ON	ON
TRNK/HAT MNTR	Trunk lid closed	OFF
	Trunk lid opened	ON
RKE-LOCK	When LOCK button of Intelligent Key is not pressed	OFF
	When LOCK button of Intelligent Key is pressed	ON
RKE-LOCK RKE-UNLOCK	When UNLOCK button of Intelligent Key is not pressed	OFF
	When UNLOCK button of Intelligent Key is pressed	ON
	When TRUNK OPEN button of Intelligent Key is not pressed	OFF
	When TRUNK OPEN button of Intelligent Key is pressed	ON
	When PANIC button of Intelligent Key is not pressed	OFF
RKE-PANIC	When PANIC button of Intelligent Key is pressed	ON
	When UNLOCK button of Intelligent Key is not pressed and held	OFF
	When UNLOCK button of Intelligent Key is pressed and held	ON
	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF
	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON
OPTICAL SENSOR	When outside of the vehicle is bright	Close to 5 V
OF HUAL SEINSUR	When outside of the vehicle is dark	Close to 0 V
	When driver door request switch is not pressed	OFF
REQ SW-DR	When driver door request switch is pressed	ON
	When passenger door request switch is not pressed	OFF
REQ SW-AS	When passenger door request switch is pressed	ON
	When trunk request switch is not pressed	OFF
REQ SW-BD/TR	When trunk request switch is pressed	ON
	When engine switch (push switch) is not pressed	OFF
PUSH SW	When engine switch (push switch) is pressed	ON

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
	Ignition switch OFF or ACC	OFF
IGN RETZ-F/B	Ignition switch ON	ON
	Ignition switch OFF	OFF
ACC REI-F/D	Ignition switch ACC or ON	ON
	When the clutch pedal is not depressed	OFF
CLUTCH SW	When the clutch pedal is depressed	ON
	When the brake pedal is not depressed	ON
BRARE SW I	When the brake pedal is depressed	OFF
	When selector lever is in P position	OFF
DETE/CANCE SW	When selector lever is in any position other than P	ON
	When selector lever is in any position other than P or N	OFF
SFT PIN/IN SW	When selector lever is in P or N position	ON
S/L L OCK	Electronic steering column lock LOCK status	OFF
S/L-LUCK	Electronic steering column lock UNLOCK status	ON
GN RLY2-F/BACC RLY-F/BCLUTCH SWBRAKE SW 1DETE/CANCL SWSFT PN/N SWS/L-LOCKS/L-LOCKS/L-UNLOCKS/L RELAY-F/BJNLK SEN-DRPUSH SW-IPDMGN RLY1 F/BDETE SW -IPDMSFT PN -IPDMSFT PN-METSFT N-METSFT N-METSFT N-METSIL LOCK-IPDMS/L LOCK-IPDMS/L RELAY-REQ	Electronic steering column lock UNLOCK status	OFF
	Electronic steering column lock LOCK status	ON
IGN RLY2-F/B ACC RLY-F/B CLUTCH SW BRAKE SW 1 DETE/CANCL SW SFT PN/N SW S/L-LOCK S/L-LOCK S/L-UNLOCK S/L-UNLOCK S/L RELAY-F/B UNLK SEN-DR PUSH SW-IPDM IGN RLY1 F/B DETE SW -IPDM SFT PN -IPDM SFT PN -IPDM SFT PN-MET SFT N-MET SFT N-MET SFT N-MET SFT N-MET SFT N-MET SFT N-MET S/L LOCK-IPDM S/L UNLCK-IPDM S/L UNLCK-IPDM	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
	Driver door UNLOCK status	OFF
UNLK SEN-DR	Driver door LOCK status	ON
	When engine switch (push switch) is not pressed	OFF
PUSH SW-IPDM	When engine switch (push switch) is pressed	ON
	Ignition switch OFF or ACC	OFF
IGN RLY1 F/B	Ignition switch ON	ON
	When selector lever is in P position	OFF
DETE SW -IPDM	When selector lever is in any position other than P	ON
	When selector lever is in any position other than P or N	OFF
SET PN -IPDM	When selector lever is in P or N position	ON
	When selector lever is in any position other than P	OFF
SEL P-MET	When selector lever is in P position	ON
S/L RELAY-F/B JNLK SEN-DR PUSH SW-IPDM GN RLY1 F/B DETE SW -IPDM SFT PN -IPDM SFT P-MET SFT N-MET	When selector lever is in any position other than N	OFF
SEL N-MET	When selector lever is in N position	ON
	Engine stopped	STOP
	While the engine stalls	STALL
ENGINE STATE	At engine cranking	CRANK
	Engine running	RUN
	Electronic steering column lock LOCK status	OFF
S/L LOCK-IPDM	Electronic steering column lock UNLOCK status	ON
	Electronic steering column lock UNLOCK status	OFF
S/L UNLCK-IPDM	Electronic steering column lock LOCK status	ON
	Ignition switch OFF or ACC	OFF
S/L RELAY-REQ	Ignition switch ON	ON
VEH SPEED 1	While driving	Equivalent to speedometer reading
	While driving	Equivalent to speedometer reading

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
	Driver door LOCK status	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door UNLOCK status	UNLK
	Passenger door LOCK status	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door UNLOCK status	UNLK
	Ignition switch ACC or ON	RESET
ID OK FLAG	Ignition switch OFF	SET
	When the engine start is prohibited	RESET
PRMT ENG STAT	When the engine start is permitted	SET
	NOTE:	DESET
PRMT RKE STAT	This item is displayed, but cannot be monitored.	RESET
KEY SW -SLOT	When Intelligent Key is not inserted into key slot	OFF
	When Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.	Operation frequency of Intelligent Key
	The key ID that the key slot receives does not accord with any key ID registered to BCM.	YET
CONFRM ID ALL	The key ID that the key slot receives accords with any key ID registered to BCM.	DONE
	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	YET
CONFIRM ID4	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	DONE
	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	YET
CONFIRM ID3	The key ID that the key slot receives accords with the third key ID registered to BCM.	DONE
	The key ID that the key slot receives does not accord with the sec- ond key ID registered to BCM.	YET
CONFIRM ID2	The key ID that the key slot receives accords with the second key ID registered to BCM.	DONE
	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	YET
CONFIRM ID1	The key ID that the key slot receives accords with the first key ID registered to BCM.	DONE
	The ID of fourth key is not registered to BCM	YET
TP 4	The ID of fourth key is registered to BCM	DONE
	The ID of third key is not registered to BCM	YET
°P 3	The ID of third key is registered to BCM	DONE
	The ID of second key is not registered to BCM	YET
°P 2	The ID of second key is registered to BCM	DONE
	The ID of first key is not registered to BCM	YET
ſP 1		
AIR PRESS FL	The ID of first key is registered to BCM Ignition switch ON (only when the signal from the transmitter is re- ceived)	DONE Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (only when the signal from the transmitter is re- ceived)	Air pressure of front RH tire

< ECU DIAGNOSIS >

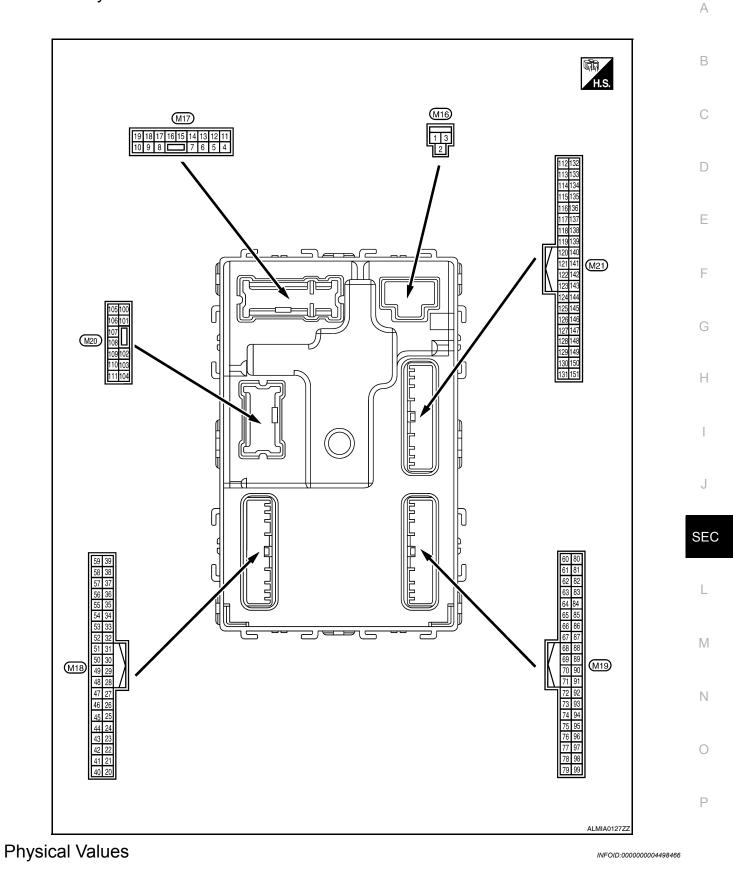
Monitor Item	Condition	Value/Status
AIR PRESS RR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	When ID of front LH tire transmitter is registered	DONE
ID REGSTIET	When ID of front LH tire transmitter is not registered	YET
ID REGST FR1	When ID of front RH tire transmitter is registered	DONE
ID REGGI FRI	When ID of front RH tire transmitter is not registered	YET
ID REGST RR1	When ID of rear RH tire transmitter is registered	DONE
ID REGGI KKI	When ID of rear RH tire transmitter is not registered	YET
ID REGST RL1	When ID of rear LH tire transmitter is registered	DONE
ID REGOT RET	When ID of rear LH tire transmitter is not registered	YET
WARNING LAMP	Tire pressure indicator OFF	OFF
	Tire pressure indicator ON	ON
BUZZER	Tire pressure warning alarm is not sounding	OFF
DULLER	Tire pressure warning alarm is sounding	ON

BCM (BODY CONTROL MODULE) [SEDAN WITH INTELLIGENT KEY]

< ECU DIAGNOSIS >

Terminal Layout

INFOID:000000004498465



< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE)

	inal No.	Description				Value
	e color)	Signal name	Input/ Output		Condition	(Approx.)
(+)	(-)		Output			
(W/B)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OF	F	Battery voltage
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON		Battery voltage
4	Ground	Interior room lamp	Outout	After passing the ir er operation time	nterior room lamp battery sav-	0V
(P/W)	Ground	power supply	Output	Any other time after lamp battery saver	er passing the interior room	Battery voltage
5		Front door RH UN-			UNLOCK (actuator is activated)	Battery voltage
(G/Y)	Ground	LOCK	Output	Front door RH	Other than UNLOCK (actuator is not activated)	0V
7	Oraciad	Oten lenen	Quitaut	Otan Jama	ON	0V
(R/W)	Ground	Step lamp	Output	Step lamp	OFF	Battery voltage
8	Cround	All doors LOCK	Output All doors	LOCK (actuator is activat- ed)	Battery voltage	
(V)	Ground	All doors LOCK		Other than LOCK (actuator is not activated)	0V	
9	Ground	Front door LH UN-	Output		UNLOCK (actuator is activated)	Battery voltage
(G)	Ground	LOCK	Output	Front door LH	Other than UNLOCK (actuator is not activated)	0V
10 ¹	Ground	Rear door RH and	Output	Rear door RH	UNLOCK (actuator is activated)	Battery voltage
(G/Y)	Ground	rear door LH UN- LOCK	Output	and rear door LH	Other than UNLOCK (actuator is not activated)	0V
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
13 (B)	Ground	Ground	_	Ignition switch ON		٥V
					OFF	0V
14 (R/Y)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	ON	NOTE: When the illumination brighten- ing/dimming level is in the neutral position
15	Ground	ACC indicator lamp	Output	Ignition switch	OFF	Battery voltage
(Y/L)	Ciound		Caiput	Sumon Switch	ACC or ON	0V

< ECU DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

	inal No.	Description) (alua	
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	Value (Approx.)	A
					Turn signal switch OFF	0V	D
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E 6.5 V	B C D
					Turn signal switch OFF	0V	Е
18 (G/Y)	Ground	Turn signal (LH)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s 1 s PKID0926E 6.5 V	F
19	Cround	Room lamp timer	Qutaut	Interior room	OFF	Battery voltage	Н
(Y)	Ground	control	Output	lamp	ON	0V	
21	21 (D) Ground	Optical sensor signal	Input	Input Ignition switch	When outside of the vehi- cle is bright	Close to 5V	I
(P/B)				ON	When outside of the vehi- cle is dark	Close to 0V	
22	Ground	Clutch interlock	Input	Clutch interlock	OFF (clutch pedal is not depressed)	0V	J
(R/Y)	0.00.00	switch	mpat	switch	ON (clutch pedal is de- pressed)	Battery voltage	SEC
24 (R/W)	Ground	Stop lamp switch 1	Input		_	Battery voltage	
26	Ground	Stop lamp switch 2	Innut	Stop lamp switch	OFF (brake pedal is not de- pressed)	0V	L
(O/L)	Ground	Stop lamp Switch 2	Input	Stop lamp Switch	ON (brake pedal is de- pressed)	Battery voltage	M
27 (G/W)	Ground	Front door lock as- sembly LH (unlock sensor)	Input	Front door LH	LOCK status	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V	N
					UNLOCK status	0V	Ρ
29	Ground	Key slot switch	Input		ey is inserted into key slot	Battery voltage	
(Y)	2.20.00	.,		When Intelligent K	ey is not inserted into key slot	0V	
30	Ground	ACC feedback signal	Input	Ignition switch	OFF	0	
(V/Y)					ACC or ON	Battery voltage	

< ECU DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

	inal No.	Description				Velue
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	Value (Approx.)
31	Cround	Rear window defog-	laput	Rear window de-	OFF	0V
(G)	Ground	ger feedback signal	Input	fogger switch	ON	Battery voltage
32 (R/B)	Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V
					opens)	
33 (SB)	Ground	Compressor ON sig- nal	Input	A/C switch	OFF	5V
(36)					ON	0V
34 ²	Ground	Front door lock as- sembly LH (key cylin-	Input	Front door lock assembly LH (key	OFF (neutral)	5V
(L/R)	0.00.00	der switch) (unlock)	mpar	cylinder switch)	ON (unlock)	0V
36 ²	Ground	Lock switch signal	Input	Door lock/unlock	Lock	Battery voltage
(GR)	Cround	Look ownon oighai	mput	switch	Unlock	0V
37 (O)	Ground	Trunk lid opener can- cel switch	Input	Trunk lid opener cancel switch	CANCEL	(V) 15 10 5 0 10 ms 10 ms JPMIA0012GB 1.1V
					ON	0V
38 (GR/	Ground	Rear window defog-	Input	Rear window de-	OFF	5V
(Urt	Cround	ger ON signal	mput	fogger switch	ON	0V
39 ²				Door lock/unlock	Unlock	Battery voltage
(GR/ R)	Ground	Unlock switch signal	Input	switch	Lock	0V
40 ³ (Y/G)	Ground	Power window serial link	Input/ Output	Ignition switch ON		(V) 15 0 0 10 ms JPMIA0013GB 10.2V
				Ignition switch OFI	F or ACC	0V
				Engine switch	ON	5.5V
41 (W)	Ground	Engine switch (push switch) illumination	Output	(push switch) illu-		
		,		mination	OFF	0V
42	Ground	LOCK indicator lamp	Output	LOCK indicator	ON	0V
(R)		p		lamp	OFF	Battery voltage

< ECU DIAGNOSIS >

[SEDÁN WITH INTELLIGENT KEY]

	inal No.	Description				Value	
	e color)	Signal name	Input/		Condition	Value (Approx.)	A
(+)	(-)	_	Output				
45 (P)	Ground	Receiver & sensor ground	Input	Ignition switch ON		0V	В
46	Ground	Receiver & sensor	Output	Ignition switch	OFF	0V	
(V/W)		power supply output		5	ACC or ON	5.0V	С
47	Ground	Tire pressure receiv- er signal Input/ Output	Ignition switch ON	Standby state	(V) 6 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	D	
(G/O)		er signal	ignal Output		When receiving the signal from the transmitter	(V) 6 4 2 0 	F G H
48	Ground	Selector lever P/N	loout	Selector lever	P or N position	12.0V	
(R/G)	Ground	position signal	Input	Selector level	Except P and N positions	0V	
49 (L/O)	Ground	Security indicator sig- nal	Output	Security indicator	ON Blinking	0V	J SEC
					OFF	Battery voltage	
					All switch OFF	0V	р. <i>П</i> .
					Lighting switch 1ST		Μ
50 (LG/ B)	(LG/ Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	Lighting switch high-beam Lighting switch 2ND		Ν
				tent dial 4)	Turn signal switch RH	2 ms JPMIA0031GB	0

Ρ

< ECU DIAGNOSIS >

	inal No.	Description				Value
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	Value (Approx.)
					All switch OFF (Wiper intermittent dial 4)	0V
					Front wiper switch HI (Wiper intermittent dial 4)	(<u>v)</u>
51 (L/W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	 Any of the conditions below with all switch OFF Wiper intermittent dial 1 Wiper intermittent dial 2 Wiper intermittent dial 3 Wiper intermittent dial 6 Wiper intermittent dial 7 	15 10 5 0 2 ms JPMIA0032GB 10.7V
					All switch OFF (Wiper intermittent dial 4)	٥V
					Front washer switch ON (Wiper intermittent dial 4)	(V)[]
52 (G/B)	Ground	d Combination switch OUTPUT 2	Output	Combination switch	Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • WIper intermittent dial 5 • Wiper intermittent dial 6	15 10 5 0 2 ms JPMIA0033GB 10.7V
					All switch OFF	0V
			ch Output	Combination switch (Wiper intermit- tent dial 4)	Front wiper switch INT	
		nd Combination switch OUTPUT 3			Front wiper switch LO	(V) 15
53 (LG/ R)	Ground				Lighting switch AUTO	JPMIA0034GB
					All switch OFF	10.7V
					Front fog lamp switch ON	
				a <i>u</i>	Lighting switch 2ND	
54 (G/Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	Lighting switch flash-to- pass	
					Turn signal switch LH	2 ms JPMIA0035GB 10.7V
55			_	Front blower mo-	ON	Battery voltage
(BR/ W)	Ground	Front blower monitor	Input	tor switch	OFF	0V
56 ² (L/B)	Ground	Front door lock as- sembly LH (key cylin-	Input	Front door lock assembly LH (key	OFF (neutral) ON (lock)	5V 0V
(22) 57 (W)	Ground	der switch) (lock) Tire pressure warn- ing check switch	Input	cylinder switch)		5V

< ECU DIAGNOSIS >

	inal No.	Description) (alua	
	e color)	Signal name	Input/	•	Condition	Value (Approx.)	A
(+)	(-)		Output				
58 (SB)	Ground	Front door LH switch	Input	Front door LH switch	OFF (front door LH CLOSE)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V	B C D
					ON (front door LH OPEN)	0V	
59	0 -	Rear window defog-	<u> </u>	Rear window de-	Active	Battery voltage	Е
(G/R)	Ground	ger relay	Output	fogger	Not activated	0V	
					When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 •••••••••••••••••••••••••••••	F
60				lauritien en itele		JMKIA0062GB	
60 (B/R)	Ground	Front console anten- na 2 (-)	Output	Ignition switch OFF			Н
		na 2 (-)			When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB	l
61	61	Center console an- tenna 2 (+) Output OFF		Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 50 1 s JMKIA0062GB	L M
(W/R)	Ground		OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB	N O P	

< ECU DIAGNOSIS >

	inal No. e color)	Description			Oredition	Value	
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)	
62 ⁴		Front outside handle		When the front door RH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 0 1 1 1 1 1 1 1 1 1 1 1 1 1	
(B/Y)	Ground	RH antenna (-)	Output		When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	
63 ⁴	Ground	Front outside handle	Output	ont outside handle	When the front door RH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(LG)	Ground	RH antenna (+)		switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 1 s JMKIA0063GB	
64 ⁴	Ground	Front outside handle	Output	When the front door LH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
(V)	Ground	LH antenna (-)	Catput	switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	

< ECU DIAGNOSIS >

	inal No.	Description				Value	Δ
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	А
65 ⁴		Front outside handle		When the front door LH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5	B C D
(P)		LH antenna (+)	Output	switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 0 1 s JMKIA0063GB	E
66	Cround	Instrument panel an-		utaut Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 15 10 5 0 15 15 15 10 5 0 15 15 15 15 15 15 15 15 15 15 15 15 15	G H I
66 (R) Ground	tenna (-)	Output	OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 0 0 1 s JMKIA0063GB	J Se	
67 (G) Ground	d Instrument panel an- tenna (+) Ou	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB	M	
				When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB	O	

< ECU DIAGNOSIS >

[SEDÁN WITH INTELLIGENT KEY]

	inal No.	Description				Value
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
68 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelli- gent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
69 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelli- gent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
70 (R/B)	Ground	Ignition relay-2 con- trol	Output	Ignition switch	OFF or ACC ON	0V Battery voltage
71		Remote keyless entry	Input/	During waiting		(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1
(L/O)	Ground	receiver signal	Output	When operating e	ther button on Intelligent Key	(V) 15 10 5 0 1 ms JMKIA0065GB
	Ground	Combination switch INPUT 5	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	(V) 15 0 2 ms 10 2 ms JPMIA0041GB 1.4V
75 (R/Y)					Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0037GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 15 0 2 ms JPMIA0040GB 1.3V

< ECU DIAGNOSIS >

	inal No.	Description				Value	
	e color)	Signal name	Input/		Condition	(Approx.)	А
(+)	(-)		Output				
					All switch OFF (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0041GB	B
						1.4V	D
					Lighting switch high-beam (Wiper intermittent dial 4)	0 2 ms JPMIA0036GB	F
76 (R/G)	Ground	Combination switch INPUT 3	Input	Combination switch		1.3V	G
					Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0	Η
						2 ms	I
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	(V) 15 10 5 0 2 ms JPMIA0040GB	J SEC
						1.3V	L
77 (BR)	Ground	Engine switch (push switch)	Input	Engine switch (push switch)	Pressed Not pressed	0V Battery voltage	D. 4
78 (P)	Ground	CAN-L	Input/ Output			_	Μ
79 (L)	Ground	CAN-H	Input/ Output		_	_	Ν
					OFF	0V	
80 (R/L)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 1 s JPMIA0015GB 6.5V	O
					ON	Battery voltage	
						Ballory Vollage	

< ECU DIAGNOSIS >

	inal No.	Description				Value	
	e color)	Signal name	Input/		Condition	(Approx.)	
(+)	(-)		Output		055	0V	
81 (LG)	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC		
					ON OFF	Battery voltage	
83 (L)	Ground	ACC relay control	Output	Ignition switch	ACC or ON	Battery voltage	
84							
(Y/R)	Ground	CVT device	Output		—	Battery voltage	
85	Oreverd	Electronic steering	la a d	Electronic steer-	Lock status	0V	
(L/O)	Ground	column lock condition No. 1	Input	ing column lock	Unlock status	Battery voltage	
86	Ground	Electronic steering column lock condition	Input	Electronic steer-	Lock status	Battery voltage	
(G/R)	Giouna	No. 2	input	ing column lock	Unlock status	0V	
87	Ground	Selector lever P posi-	Input	Selector lever	P position	0V	
(G/B)	Cround	tion switch	mpat		Any position other than P	Battery voltage	
					ON (pressed)	0V	
88 ⁴ (P/L)	Ground Front door RH re- quest switch Input Front door R quest switch	Front door RH re- quest switch	OFF (not pressed)	(V) 15 10 10 10 10 10 10 10 10 10 10			
					ON (pressed)	0V	
89 ⁴ (B/W)	(fround	Front door LH re- quest switch	Input	t Front door LH re- quest switch	OFF (not pressed)	(V) 15 0 5 0 10 ms J JPMIA0016GB 1.0V	
90	Cround	Blower fan motor re-	Outout	lapition switch	OFF or ACC	0V	
(Y)	Ground	lay control	Output	Ignition switch	ON	Battery voltage	
91 (L/R)	Ground	Remote keyless entry receiver power sup- ply	Output	Ignition switch OFF		Battery voltage	
94	Ground	Steering wheel lock	Output	Ignition switch	OFF or ACC	Battery voltage	
(G/Y)	Ciband	unit power supply	Caipat	-ginder owner	ON	0V	

BCM (BODY CONTROL MODULE) [SEDAN WITH

< ECU DIAGNOSIS >

[SEDÁN WITH INTELLIGENT KEY]

Term	inal No.	Description				Value	
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	А
					All switch OFF	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4V	B C D
					Turn signal switch LH	(V) 15 0 2 ms 10 2 ms 10 10 10 10 10 10 10 10 10 10 10 10 10	E
95 (R/W)	Ground Combination switch INPUT 1 Input	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 0 0 2 ms JPMIA0036GB 1.3V	G H
				Front wiper switch LO	(V) 15 10 2 ms JPMIA0038GB 1.3V	J SEC	
					Front washer switch ON	(V) 15 0 2 ms JPMIA0039GB	M
						1.3V	0

Ρ

< ECU DIAGNOSIS >

	inal No.	Description				Value
(vvire (+)	e color) (-)	Signal name	Input/ Output	Condition		(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 0 2 ms JPMIA0041GB 1.4V
96	Ground	Combination switch INPUT 4	Input	Combination	Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 0 0 2 ms JPMIA0038GB 1.3V
(P/B)				switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0036GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	(V) 15 10 0 2 ms JPMIA0039GB 1.3V

< ECU DIAGNOSIS >

	inal No.	Description				Value	٥
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	А
			Cutput		All switch OFF	(V) 15 10 0 2 ms JPMIA0041GB 1.4V	B C D
					Lighting switch flash-to- pass	(V) 15 10 2 ms JPMIA0037GB 1.3V	E
97 (R/B)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 0 2 ms JPMIA0036GB 1.3V	G H I
				Front wiper switch INT	(V) 15 0 2 ms 10 2 ms JPMIA0038GB 1.3V	J SEC	
					Front wiper switch HI	(V) 15 0 2 ms JPMIA0040GB	M
					Pressed	1.3V 0 V	0
98 (G/O)	Ground	Hazard switch	Input	Hazard switch	Not pressed	(V) 15 10 5 10 10 10 1.1V	Ρ

< ECU DIAGNOSIS >

	inal No.	Description					
(Wire (+)	e color) (-)	Signal name	Input/ Output	Condition		Value (Approx.)	
					LOCK status	Battery voltage	
99 (L/Y)	Ground	Electronic steering column lock unit com- munication	Input/ Output	Electronic steer- ing column lock	LOCK or UNLOCK	(V) 15 10 50 50 ms JMKIA0066GB	
					For 15 seconds after UN- LOCK	Battery voltage	
					15 seconds or later after UNLOCK	0V	
103	Ground	Trunk lid opening	Output	ut Trunk lid (Open (trunk lid opener ac- tuator is activated)	Battery voltage	
(V)	Ground	Trank lid openling	Output		Close (trunk lid opener ac- tuator is not activated)	0V	
110	Ground		Output	Trunk room lamp	ON	0V	
(V/W)	Ground	Trunk room lamp	Output		OFF	Battery voltage	
114	Ground	Rear parcel shelf an-	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB	
(B)	Ground	Ground Rear parcel shelf an- tenna 1 (-)	Output	OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB	

< ECU DIAGNOSIS >

	inal No.	Description		Condition		Value	
(Wire (+)	e color) (-)	Signal name	Input/ Output			value (Approx.)	A
115	Ground	Rear parcel shelf an-	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 0 0 1 s JMKIA0062GB	B C D
(W)	Ground	tenna 1 (+)		OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 0 5 0 1 s JJKIA0063GB	E
118 ⁴	Ground	Ground Rear bumper anten- na (-)	Output	When the trunk lid request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	G H I
(L/O)	Ground				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	J SEC
119 ⁴	Ground	Rear bumper anten-	Outout	When the trunk lid request switch	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	M
	Ground	Rear bumper anten- na (+)	Output	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 15 10 10 10 10 10 10 10 10 10 10 10 10 10	O P

< ECU DIAGNOSIS >

	inal No.	Description				Value
(Wire	e color)	Signal name	Input/		Condition	Value (Approx.)
(+)	(-)	Signal name	Output			V FF - 7
127		Ignition relay (IPDM	_		OFF or ACC	Battery voltage
(BR/ W)	Ground	E/R) control	Output	Ignition switch	ON	0V
•••)						
130 (Y/G)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	(V) 15 10 10 10 11.8V
					ON (trunk is open)	0V
				Ignition switch OFF (M/T vehi-	When the clutch pedal is depressed	Battery voltage
		Starter motor relay control		cle)	When the clutch pedal is not depressed	0V
132 (R)	Ground		Output	Ignition switch ON (other than M/	When selector lever is in P or N position and the brake is depressed	Battery voltage
				T vehicle)	When selector lever is in P or N position and the brake is not depressed	0V
					ON (pressed)	0V
141 (G/R)	Ground	Trunk request switch	Input	Trunk request switch	OFF (not pressed)	(V) 15 10 5 0 10 ms J J J J J J J J MIA0016GB 1.0V
144 ⁴	<u> </u>	Intelligent Key warn-		Request switch	Sounding	0V
(GR)	Ground	ing buzzer	Output	buzzer	Not sounding	Battery voltage
144 ⁵		Outside warning		Outside warning	Sounding	0V
(GR)	Ground	buzzer	Output	buzzer	Not sounding	Battery voltage
147		Trunk lid opener		Trunk lid opener	Pressed	0V
(L/R)	Ground	switch	Input	switch	Not pressed	Battery voltage
148 ¹ (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V
					ON (when rear door RH opens)	0V

< ECU DIAGNOSIS >

[SEDÁN WITH INTELLIGENT KEY]

	inal No.	Description				Value	٨
(Wire (+)	e color) (-)	Signal name	Input/ Output				A
	()					(V) 15	В
149 ¹ (R/B) Ground Rea	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes)	10 5 0 •> <		
						JPMIA0011GB 11.8V	D
					ON (when rear door LH opens)	0V	_
1. Seda	n only						E

1: Sedan only

2: With LH front window anti-pinch

3: With LH and RH front window anti-pinch

4: With Intelligent Key

5: Without Intelligent Key

F

G

Н

L

Μ

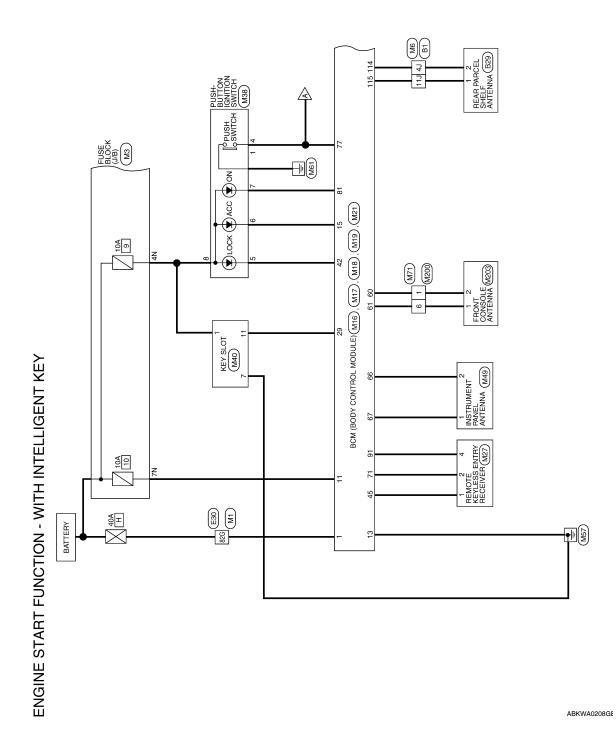
Ν

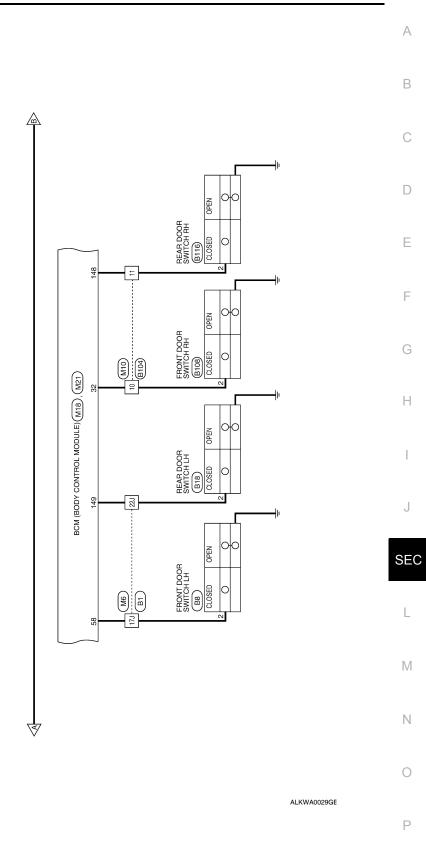
Ο

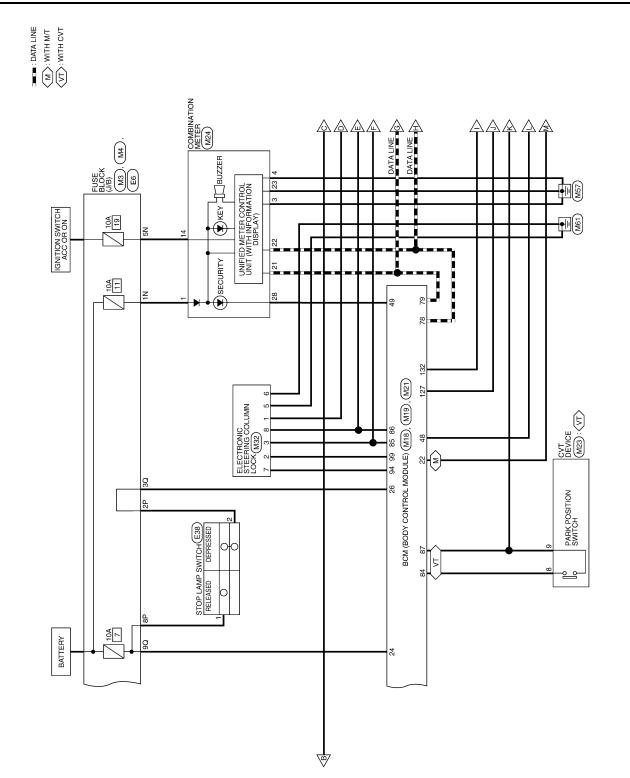
Ρ

[SEDAN WITH INTELLIGENT KEY]

Wiring Diagram - ENGINE START FUNCTION - WITH INTELLIGENT KEY INFOLD:0000004206341



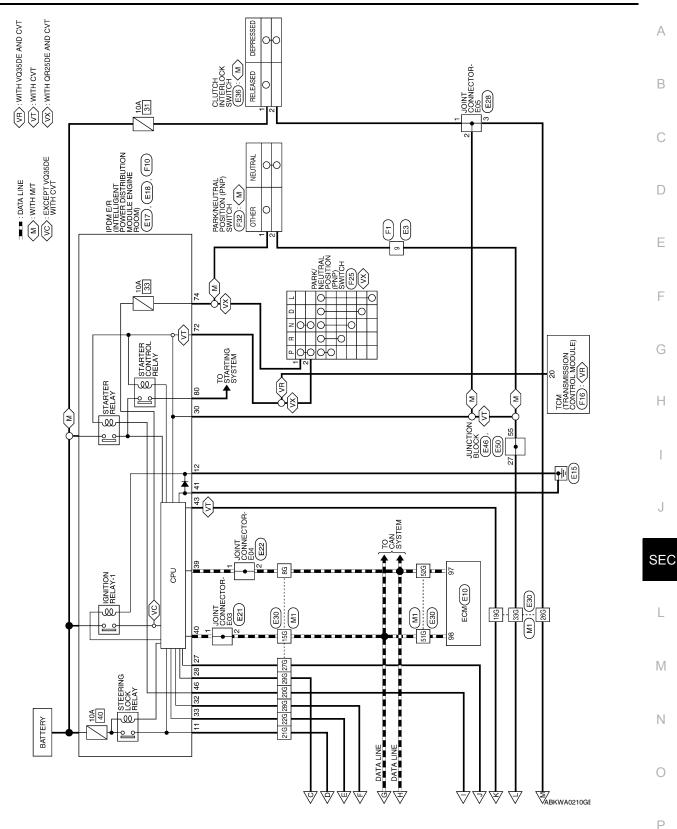




ABKWA0209GE

< ECU DIAGNOSIS >

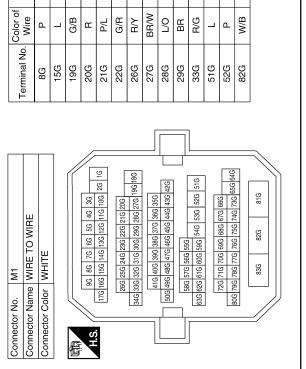




Signal Name

Т Т L Т T I. Т T Ĭ. Т Т I. T

1



Connector No.	M3
Connector Name	Connector Name FUSE BLOCK (J/B)
Connector Color WHITE	WHITE
际 A.S.H	3N2N 11N 8N 4N 8N 4N

Signal Name	I	I	I	I	
Color of Wire	W/L	G/Y	٨٧	Y/R	
Terminal No.	۱N	4N	5N	NŹ	

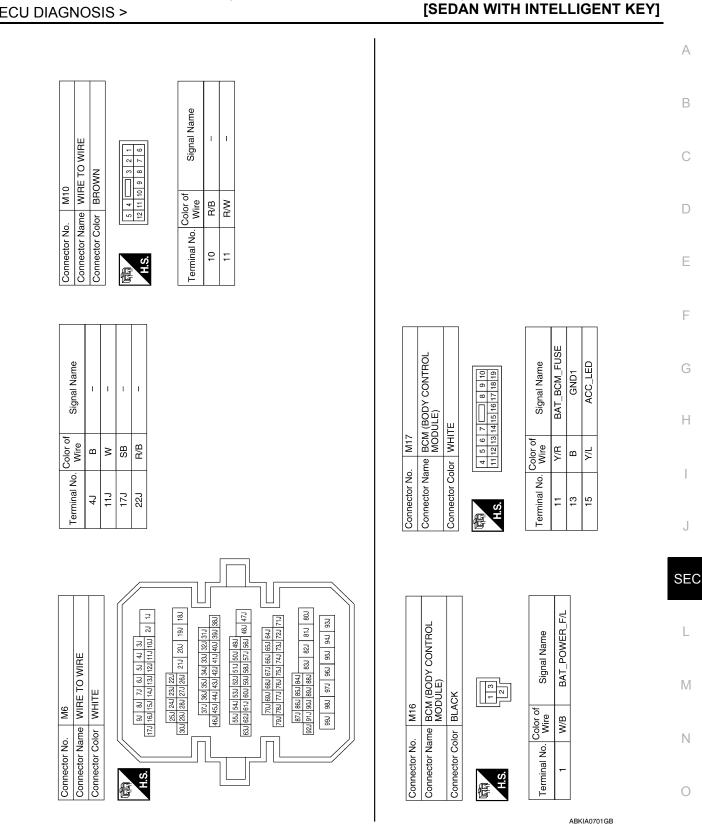
Connector No. M4 Connector Name FUSE BLOCK (J/B) Connector Color WHITE		M4 The FUSE BLOCK (J/B) or WHITE	Connector No. Connector Nar Connector Col
3	Connector No. M4 Connector Name FUSE BLOCK (J/B) Connector Color WHITE	40 30 20 30 10	N-TH-TH-TH-TH-TH-TH-TH-TH-TH-TH-TH-TH-TH-

H.S.

Signal Name	1	
Color of Wire	O/L	
Terminal No.	30	

I МM g

ABKIA0678GB



< ECU DIAGNOSIS >

< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE)
[SEDAN WITH INTELLIGENT KEY]

										≻		
Signal Name	RF1_TUNER_SIGNAL	ENG_START_SW	CAN-L	CAN-H	IGN_ON_LED	AT_DEVICE_OUT	S/L_CONDITION_1	S/L_CONDITION_2	SHIFT_P	RF1_POWER_SUPPLY	S/L_POWER SUPPLY_12V	S/L_K-LINE
Color of Wire	Г/О	BR	٩	_	ГG	Y/R	L/0	G/R	G/B	L/R	G/Y	ΓΛ
Terminal No.	12	22	78	62	81	84	85	86	87	91	94	66

					61 60 81 80					
0	BCM (BODY CONTROL MODULE)	BLACK		R	71 70 69 68 67 66 65 64 63 62 6 91 90 89 88 87 86 85 84 83 82 8	Signal Name	ROOM_ANT_2_B	ROOM_ANT_2_A	ROOM_ANT_1_B	ROOM_ANT_1_A
. M19					74 73 72 7 94 93 92 9	Color of Wire	B/R	W/R	щ	U
Connector No.	Connector Name	Connector Color	雨 H.S.		79 78 77 76 75 99 98 97 96 95 9	Terminal No.	60	61	66	67

Connector Name BCM (BODY CONTROL MODULE)

M18

Connector No.

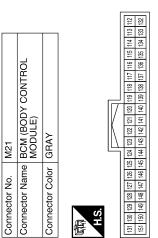
GREEN

Connector Color

	25 24 23 22 21 20 45 44 43 42 41 40												
	32 31 30 29 28 27 26 52 51 50 49 48 47 46		Signal Name	CLUTCH_SW	STOP_LAMP_LOW_SW	STOP_LAMP_HIGH_SW	FOB_IN_SW	AS_DOOR_SW	S/L_LOCK_LED	GND_RF2_A/L	SHIFT_N/P	IMMO_LED	DR_DOOR_SW
	38 37 36 35 34 33 58 57 56 55 54 53		Color of Wire	R/Y	R/W	O/L	≻	R/B	щ	٩	R/G	Г0	SB
E	H.S.]	Terminal No.	22	24	26	29	32	42	45	48	49	58

	CVT DEVICE	ITE	3 <u>7</u> 7 9 4 5 6 8 10	Signal Name	DETENT_KEY_SW	DETENT_KEY_SW
. M23		lor WHITE		Color of Wire	Y/R	G/B
Connector No.	Connector Name	Connector Color	园 H.S.	Terminal No.	8	6

Signal Name	TRUNK_ANT_1_B	TRUNK_ANT_1_A	IGN_USM_CONT1	ST_CONT_USM	RR_DOOR_SW	RL_DOOR_SW	
Color of Wire	В	M	BR/W	щ	R/W	R/B	
Terminal No.	114	115	127	132	148	149	



ABKIA0702GB

ABKIA0679GB

Ρ

А

В

С

D

Е

F

G

Н

J

SEC

L

Μ

Ν

0

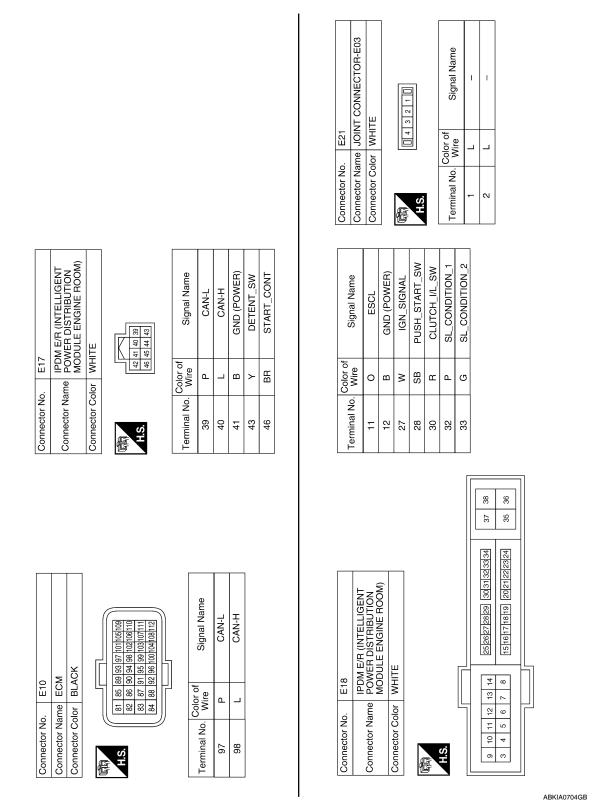
< ECU DIAGNOSIS >

Connector No. MT Connector Name Connector Name Connector Name Connector Name (mHE TO WIRE Connector Name (mHE TO WIRE Connector Name (mHE TO WIRE (mHE TO W	Connector No. M/T1 Connector No. Connector No. Minite TO WIRE Connector No. Connector No. Connector No. <	Connector Name M200 Connector Name WIRE TC Terminal No. Wire Minal No. Wire Minal No. Color of Minal No. Wire Minal No. Color of Minal No. Wire			ше				9P 8P	me		
	Connector No. M71 Connector Name WIFE TO WIRE Connector Name WIE Connector Name Mie Signal Name	Connector No. M71 Connector Name WITE TO WIRE Connector Name WIRE TO WIRE Minal No. Signal Name End Signal Name	M200 WIRE TO WIRE WHITE	10 9 8 7	Signal I		E6 E167 E1020X 4	WHITE	90 100	vlor of Signal Name	R/G –	
Connector Name M71 Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Image: State of the	Connector No. M71 Connector Name WIRE TO Connector Name WIRE TO Connector Name WIRE TO Connector No. M71 6 W/R TO Connector No. E3 Connector No. E3 Connector No. E3 Connector No. E3 Connector No. E3 Connector No. E3 Connector No. Color WHITE Connector No. Color WHITE Connector No. E3 Connector No. E3 Connector No. Color WHITE BR	Connector No. MTTE Connector Name WIRE TO Connector Name WIRE TO Connector Name WIRE TO Connector No. MTTE 6 W/R TO Connector No. E3 Connector No. Color of BR	Connector No. Connector Name Connector Color	्रम् H.S.	Terminal No. Co		Connector No.	Connector Name Connector Color	Ś	Terminal No. V		_
Connector No. M71 Connector Name WIRE Gonorector Name WIRE Connector Name WIRE Connector Name Wire B/H B/H I I I I I I I I I I I <td>Connector Name Connector Name Connector Name Connector Name Connector Name Connector Name Connector Name Connector Name Connector Name</td> <td>Connector No. Connector Name Connector Name</td> <td>E TO WIRE</td> <td>9 10 11</td> <td>Signal Name</td> <td>1 1</td> <td></td> <td>E IO WIRE</td> <td>1 1 5 6 7 1</td> <td>Signal Name</td> <td>I</td> <td></td>	Connector Name Connector Name Connector Name Connector Name Connector Name Connector Name Connector Name Connector Name Connector Name	Connector No. Connector Name Connector Name	E TO WIRE	9 10 11	Signal Name	1 1		E IO WIRE	1 1 5 6 7 1	Signal Name	I	
		149 USTRUMENT PANEL NITENNA RAY RAY RAY RAY RAY RAY RAY RA	Connector No. M71 Connector Name WIRE Connector Color WHIT	0 0			Connector No. E3	Connector Name WIHE Connector Color WHIT	ر م	Terminal No. Wire		

ABKIA0703GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >



< ECU DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

Ρ

А

В

С

D

Ε

F

Н

J

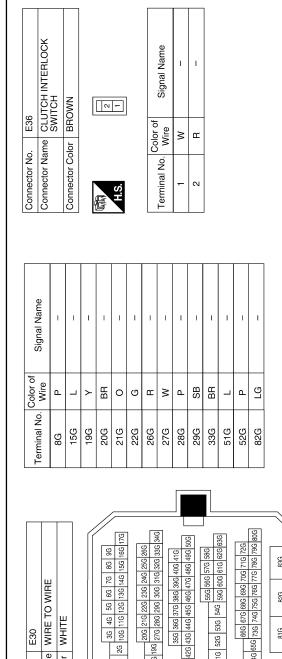
SEC

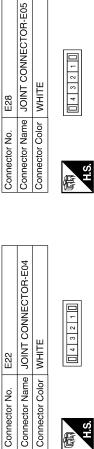
L

Μ

Ν

Ο



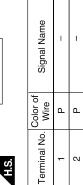


Connector Color WHITE

E

E22

Connector No.



Signal Name	-	I
Color of Wire	Р	д.
ö		

S.

Signal Name	1	1	1	
Color of Wire	ш	æ	н	
Terminal No.	1	2	£	

			/	/ _									$\overline{}$
E30	WIRE TO WIRE	WHITE		26 106 116 126 136 146 156 166 176	-	206 216 226 236 246 256 266 36 276 286 306 316 326 336 346	35G 36G 37G 38G 39G 40G 41G	G 43G 44G 45G 46G 47G 48G 49G 50G	556 566 576 586	52G 53G 54G 59G 60G 61G 62G 63G	666 676 686 696 706 716 726		81G 82G 83G
Connector No.	Connector Name	Connector Color	F	H.S.]	18G 19G		426		51G		64G 65G	

ABKIA0680GB

< ECU DIAGNOSIS >

Connector No. E46 Connector Name JUNCTION BLOCK Connector Color WHITE	Terminal No. Color of Wire Signal Name 27 BR - 27 BR F10 Connector Name POWER DISTRIBUTION Connector Name POWER DISTRIBUTION Connector Color WHITE Connector Color WHITE Connector Color WHITE 7 5 5 5 5 5 5 5 5 6 5 5 7 5 5 7 5 7 7 5 5 80 5 5 80 5 5 7 7 7 7 7 7 7 7 5 <th>A B C D E F</th>	A B C D E F
Connector No. E38 Connector Name STOP LAMP SWITCH (WITH M/T) Connector Color BLACK	Terminal No. Color of Wire Signal Name 1 R B+ 2 LG HIGH_SW 2 LG NIE 2 LG NIE 2 LG MIGH_SW	G H J SEC
Connector No. E38 Connector Name STOP LAMP SWITCH (WITH CVT) Connector Color WHITE	Terminal No. Color of Signal Name 1 R B+ 2 LG HIGH_SW Connector No. E50 Connector Name JUNCTION BLOCK Connector Name JUNCTION BLOCK	L M N O
		BKIA0681GB

Connector No. F32 Connector Name PARK/NEUTRAL POSITION (PNP) SWITCH Connector Color BLACK	HIS I I I I I I I I I I I I I I I I I I	Terminal No. Color of Wire Signal Name 1 Y - 2 R/B -	Connector No. B8 Connector Name FRONT DOOR SWITCH LH Connector Color WHITE Connector Color WHITE Image: Signal Name Signal Name 2 Sb DOOR SW (DR)
Connector No. F25 Connector Name PARK/NEUTRAL POSITION (PNP) SWITCH Connector Color BLACK	H.S.	Terminal No. Color of Wire Signal Name 1 Y IGN_P_N 2 R/B P_N_OUTPUT	Terminal No. Color of Wire Signal Name 4J B - 11J W - 17J SB - 22J R/B -
Connector No. F16 Connector Name TCM (TRANSMISSION Connector Color CONTROL MODULE) Connector Color BLACK	H.S. 1 2 2 22 24 25 26 27 28 29 30 45 46 1 1 12 13 14 15 16 17 18 19 20 43 44 1 2 3 4 5 6 7 8 9 10 41 42	Terminal No. Color of Wire Signal Name 20 R/B ST_RLY	Connector No. B1 Connector Name WIRE TO WIRE Connector Color WHITE Name 1, 12, 130, 141, 151, 161, 151, 15

GNOSIS >			ITH INTELLIGENT KEY
HR (192)	Signal Name		
B104 B104 BROWN 6 7 8 9 10 11 12	Color of Wire Si		
nector No. nector Name nector Color	Terminal No. Col 10 F 11 A		
B29 REAR PARCEL SHELF ANTENNA GRAY	Signal Name ANT+ ANT-	Connector No. B116 Connector Name REAR DOOR SWITCH RH Connector Color WHITE	Signal Name DOOR SW (RR)
	Vo. Color of Wire B B	r No. B116 r Name REAR D r Color WHITE	No. Color of Wire R/W
Connector No. Connector Name Connector Color	Terminal No. 1 2	Connector No. Connector Name Connector Color	Terminal No.
		H	
B18 REAR DOOR SWITCH LH WHITE	Signal Name DOOR SW (RL)	B108 FRONT DOOR SWITCH RH	Signal Name DOOR SW (AS)
	40. Color of Wire R/B		lo. Color of R/B R/B
Connector No. Connector Name Connector Color	Terminal No. 2	Connector No. Connector Name Connector Color	Terminal No.

ABKIA0705GB

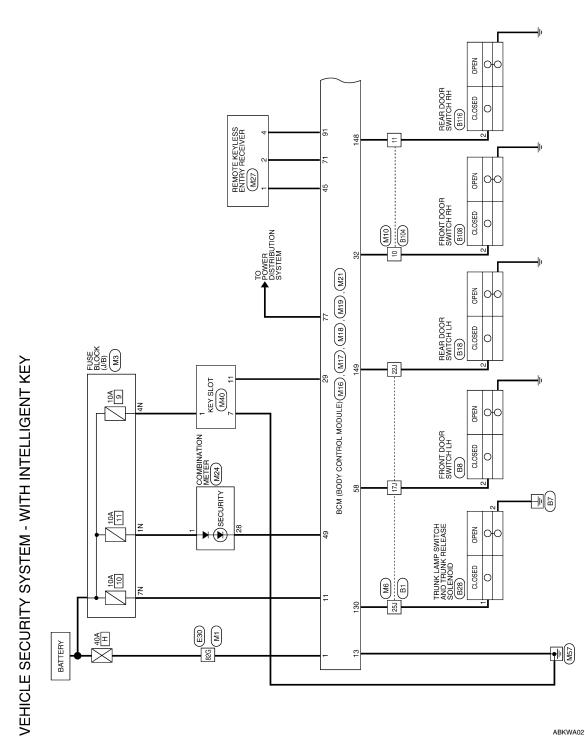
< ECU DIAGNOSIS >

Р

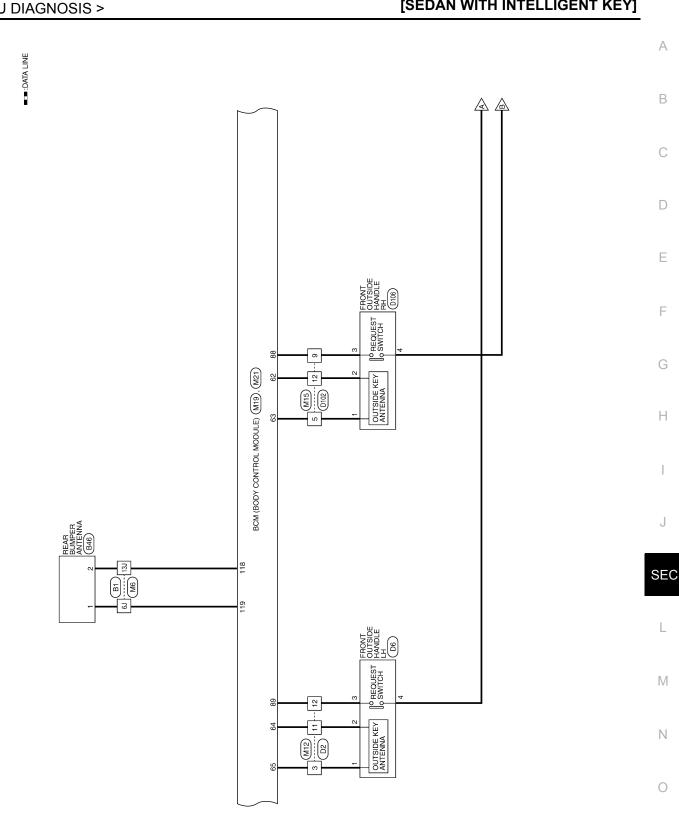
[SEDAN WITH INTELLIGENT KEY]

Wiring Diagram - VEHICLE SECURITY SYSTEM - WITH INTELLIGENT KEY

INFOID:000000004206342



ABKWA0211GE



С D

Е

Н

J

L

Μ

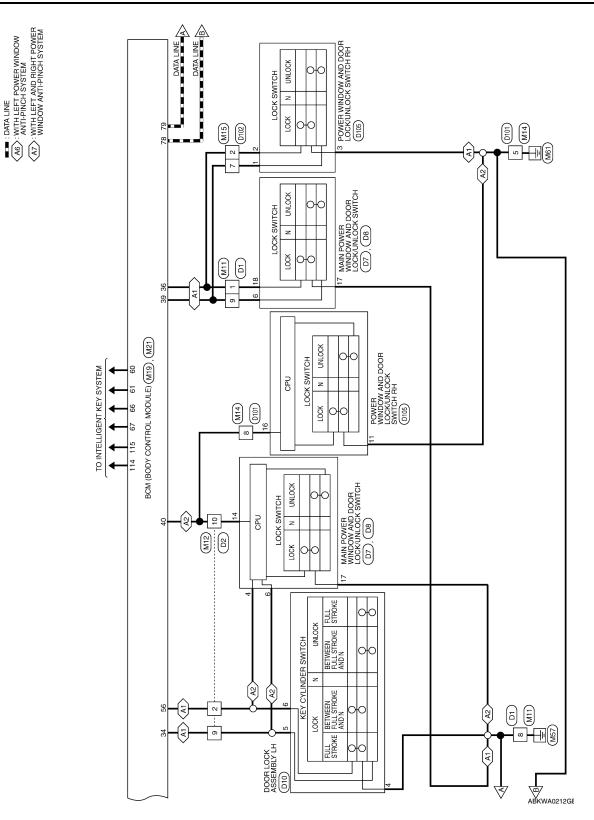
Ν

0

ABKWA0250GE

Ρ

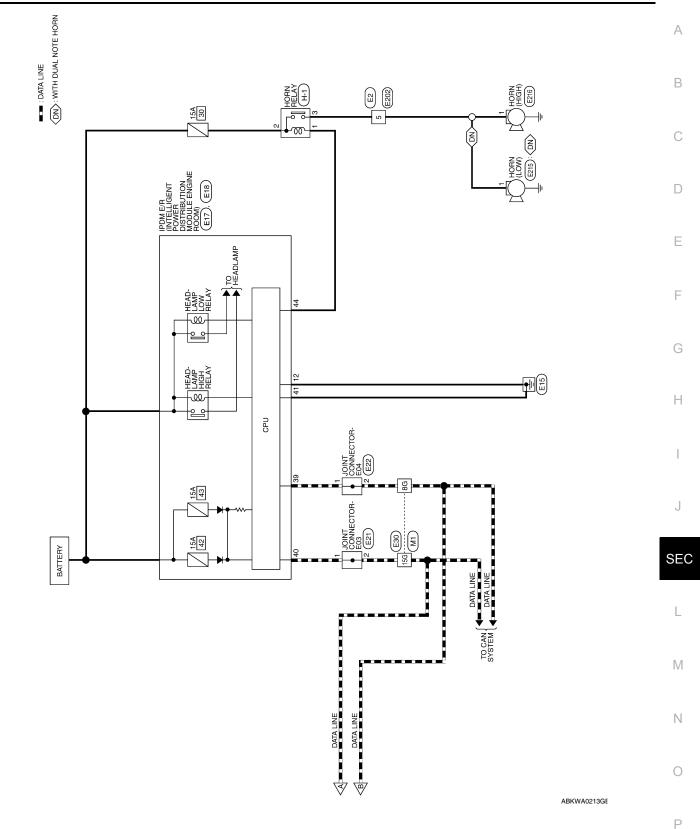
< ECU DIAGNOSIS >

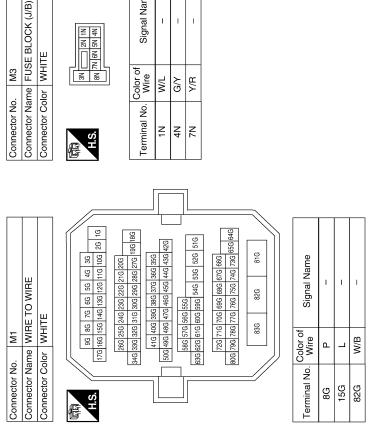


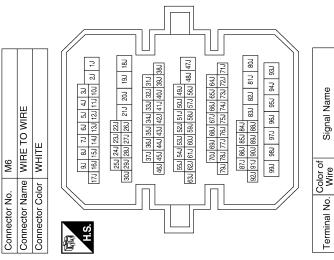












Signal Name

L Т

T

Signal Name	I	I	I	1	1
Color of Wire	BR/W	Г/О	SB	R/B	Y/G
Terminal No. Color of Wire	6J	13J	17J	22J	25J

BCM (BODY CONTROL MODULE)

[SEDAN WITH INTELLIGENT KEY]

ABKIA0683GB

<pre>ECU DIAGNOSIS ></pre>	ONTROL MODULE) [SEDAN WITH INTELLIGENT KE	Y]
Connector No. M12 Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Color WHITE Minimum Signal Name Z L/B - Z B/W - -	Connector No. M16 Connector Name BCM (BODY CONTROL Connector Color BLACK Connector Color BLACK Image: State of the state of	A B C D E
		F
M11 M11 WIRE TO WIRE WHIE WHIE Monor 8 00r of 8 6 8 - 8 -	M15 WIRE TO WIRE WHITE WHITE WHITE M15 M15 M15 M15 M15 M15 M15 M15	Н
ctor No.	2 B/ P/	I
Conne Conne Conne Conne Conne		J
D WIRE B 2 1 1 B 2 1 1 B 2 1 1 B 2 1 1 C 2 1 B 2 1 1 C 2 1	Signal Name	SEC
		Μ
Connector No. M1(Connector Name WIF Connector Color BR Connector Color BR 10 R/B 11 R/W	al No. Color No.	Ν
Conne Conne Lami	Conne Conne HIS	0

Ρ

ABKIA0684GB

<

BCM (BODY CC

Connector No. M21 Connector Name BCM (BODY CONTROL MODULE)

GRAY

Connector Color

< ECU DIAGNOSIS >

ONTROL MOL	DULE)
	[SEDAN WITH INTELLIGENT KEY]

134

H.S. 佢

Signal Name	FOB_IN_SW_1	AS_DOOR_SW	DOOR_KEY/C_ UNLOCK_SW	CENTRAL_LOCK_SW	CENTRAL_UNLOCK_	PW_K-LINE	GND_RF2_A/L	IMMO_LED	DOOR_KEY/C_LOCK_	DR_DOOR_SW
Color of Wire	≻	R/B	L/R	GR	GR/R	γ/G	٩	Г/О	L/B	SB
Terminal No.	29	32	34	36	39	40	45	49	56	58

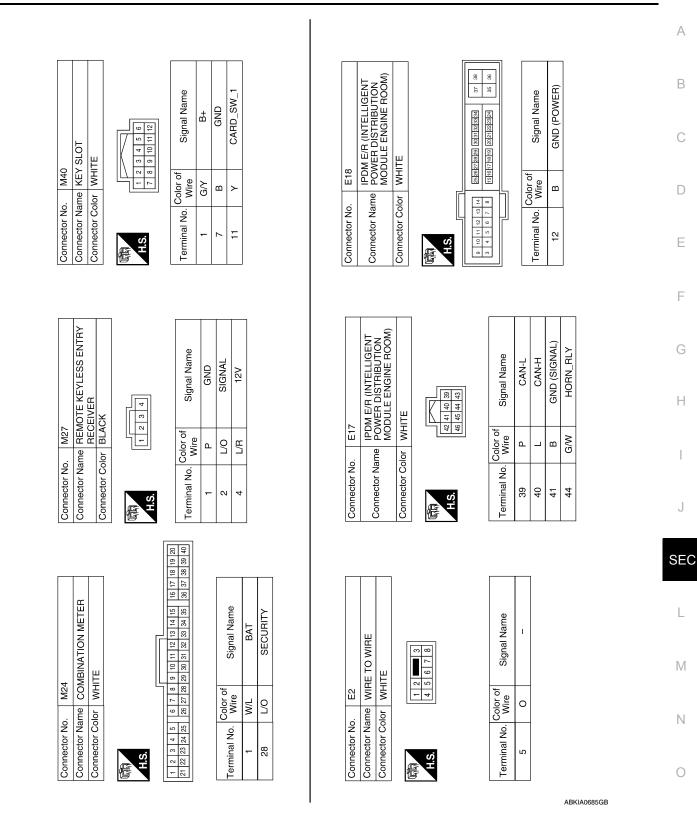
Connector No.	. M17	
Connector Na	MOI MOI	Connector Name BCM (BODY CONTROL MODULE)
Connector Color WHITE	lor WHI	TE
H.S.	4 5 6 11 12 13	4 5 6 7
Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT_BCM_FUSE
13	ш	GND1

Tei	<u> </u>	<u> </u>			 	
M19	Connector Name BCM (BODY CONTROL MODULE)	BLACK			79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60	99 98 97 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 80
Connector No.	Connector Name	Connector Color BLACK	Æ	H.S.	79 78 77 76 75 74 73	99 98 97 96 95 94 90

ABKIA0713GB	

Signal Name	TRUNK_ANT_1_B	TRUNK_ANT_1_A	BACK_DOOR_ANT_B	BACK_DOOR_ANT_A	TRUNK_SW	RR_DOOR_SW	RL_DOOR_SW
Color of Wire	В	M	۲o	BR/W	Y/G	R/W	R/B
Terminal No.	114	115	118	119	130	148	149

Signal Name	ROOM_ANT_2_B	ROOM_ANT_2_A	AS_DOOR_ANT_B	AS_DOOR_ANT_A	DR_DOOR_ANT_B	DR_DOOR_ANT_A	ROOM_ANT_1_B	ROOM_ANT_1_A	RF1_TUNER_SIGNAL	ENG_START_SW	CAN-L	CAN-H	AS REQUEST SWITCH	DR REQUEST SWITCH	RF1_POWER_SUPPLY
Color of Wire	B/R	W/R	B∕Y	ГG	>	٩	щ	U	L/O	BR	٩	_	P/L	B/W	L/R
Terminal No.	60	61	62	63	64	65	66	67	71	77	78	79	88	89	91



< ECU DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

А

В

С

D

Ε

F

Н

J

L

Μ

Ν

0

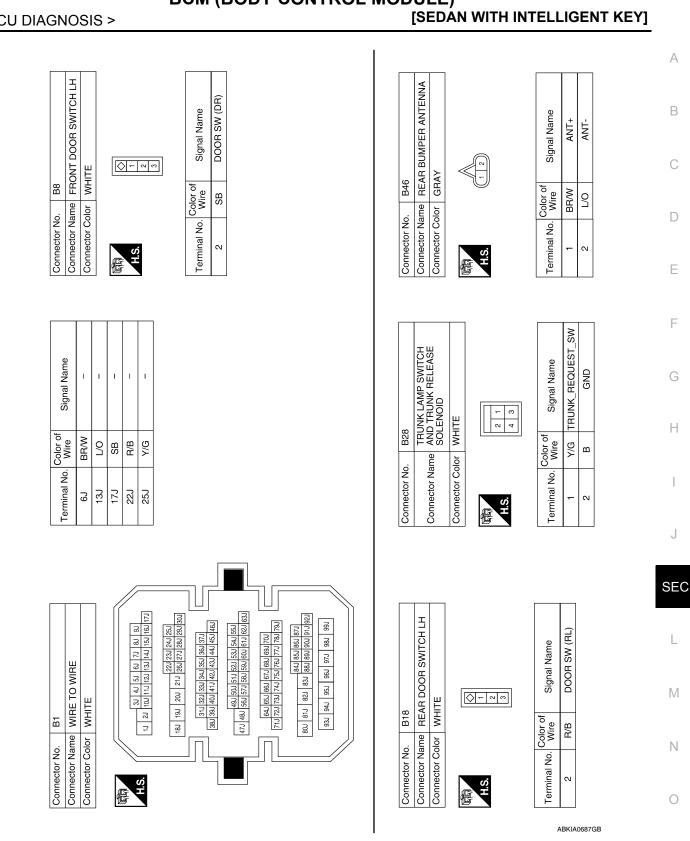
Ρ

< ECU DIAGNOSIS >

Connector No. E30 Connector Name WIRE TO WIRE Connector Color WHITE	HALS. 16 26 100 110 120 130 144 150 160 170 100 110 120 130 144 150 160 170 200 210 220 230 240 250 280	186 1995 276 286 296 306 316 326 336 346 336 386 376 386 396 416 426 436 446 456 466 476 486 496 506	51G 32G 54G 55G 55G 56G 57G 58G 51G 32G 54G 58G 56G 56G	666 670 686 680 700 716 720 640 666 726 746 726 766 776 786 796 800	81G 82G 83G	Terminal No. Color of Signal Name	۵.	82G LG -	Connector No. E216		Connector Color BLACK	H.S.	Terminal No. Color of Signal Name
Connector No.E22Connector NameJOINT CONNECTOR-E04Connector ColorWHITE	(11) H.S.	Terminal No. Wire Signal Name							Connector No. E215		Connector Color BLACK	H.S.	Terminal No. Wire Signal Name
Connector No. E21 Connector Name JOINT CONNECTOR-E03 Connector Color WHITE	ぼう H.S.	Terminal No. Color of Signal Name	2 L -						Connector No. E202	Connector Name WIRE TO WIRE	Connector Color WHITE	(京) HS	Terminal No. Color of Signal Name 5 G –

[SEDAN WITH INTELLIGENT KEY]

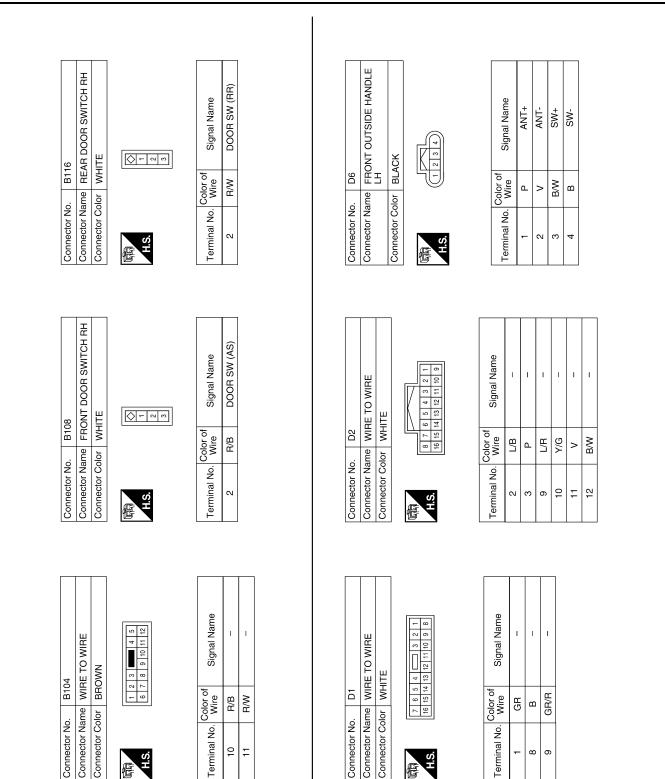
ABKIA0686GB



Ρ

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >



BCM (BODY CONTROL MODULE) [SEDAN WITH INTELLIGENT KEY]

< ECU DIAGNOSIS >

E

SEC-372

佢

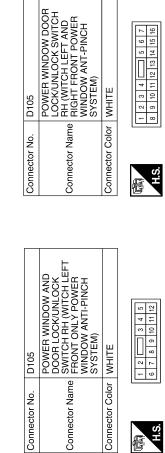
ABKIA0688GB

Connector No. D8 MAIN POWER WINDOW AND DOOR LOCKUNLOCK SWITCH (WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM) Connector Color WHITE	Terminal No. Color of Wire Signal Name 17 B GND 17 B GND Connector No. D101 Connector No. D101 Connector Name WIRE TO WIRE Connector No. MHITE Connector No. MHITE Connector No. MHITE Connector No. MITE Connector No. MHITE Connector No. MITE Connector No. MITE Connector No. MITE Connector No. MITE	
Conne Conne H.S.	Termin Termin Termin B B B	
D7 MAIN POWER WINDOW AND DOOR LOCKUNLOCK SWITCH (WITH LEFT FRONT ONLY POWER WINDOW ANT-PINCH SYSTEM) WHITE 2 3 4 1 3 4 3 5 6 7 9 10 11 12 13 14 15 16	rof Blank Name Blank Name D10 D10 ERONT DOOR LOCK ASSEMBLY LH ASSEMBLY LH ASSE	
Connector No. Connector Name Connector Color	Terminal No. Col 6 G 6 G 6 Connector No. Connector No. Connector No. 1 4 5 L 6 L	
× I		
D7 MAIN POWER WINDOW AND DOOR LOCKUNLOCK SWITCH (WITH LEFT AND RIGHT FRONT POWER WINDOW ANT-PINCH SYSTEM) WHITE 2 3 4 5 6 7 9 10 11 12 13 14 15 16 9 10 11 12 13 14 15 16	Britie Lock Britie Lock AB UNLOCK VG COM MAIN D08 MAIN D00RLOCKUNLOCK SYSTEM) WINDOW WITCH WITH LEFT FRONT ONLY POWER NNDOW Signal Name Integration Integration Integration	
Connector No. Connector Name	Terminal No. Columnation 4 L 6 L 14 Y 14 Y Connector No. Connector No. Connector Name Connector Color 17 V	

< ECI

SEC-373

Ρ



Signal Name	LOCK	NNLOCK	GND
Color of Wire	GR	GR/R	В
Terminal No.	÷	2	с

H.S. E

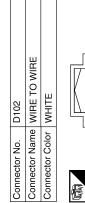
Signal Name

Color of Wire

Terminal No. Ξ 16

COM GND

> Ϋ́G ш

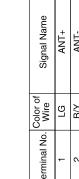




Signal Name	I	I	I	I	I
Color of Wire	GR	ГG	GR/R	P/L	B/Y
Terminal No. Wire	2	5	7	6	12

D106	Connector Name FRONT OUTSIDE HANDL RH	BLACK	
Connector No.	Connector Name	Connector Color BLACK	

щ



H.S.H

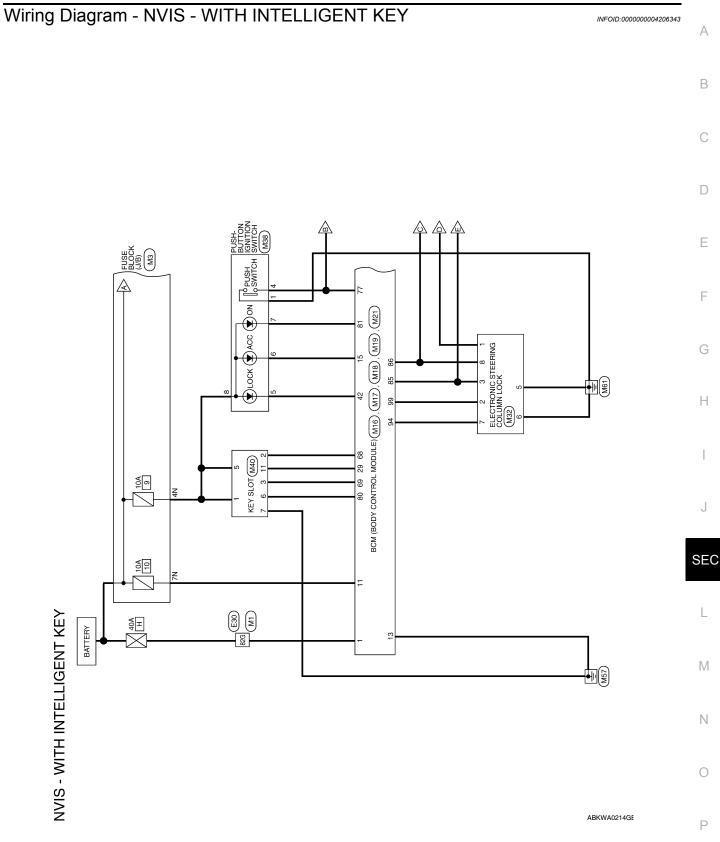
佢

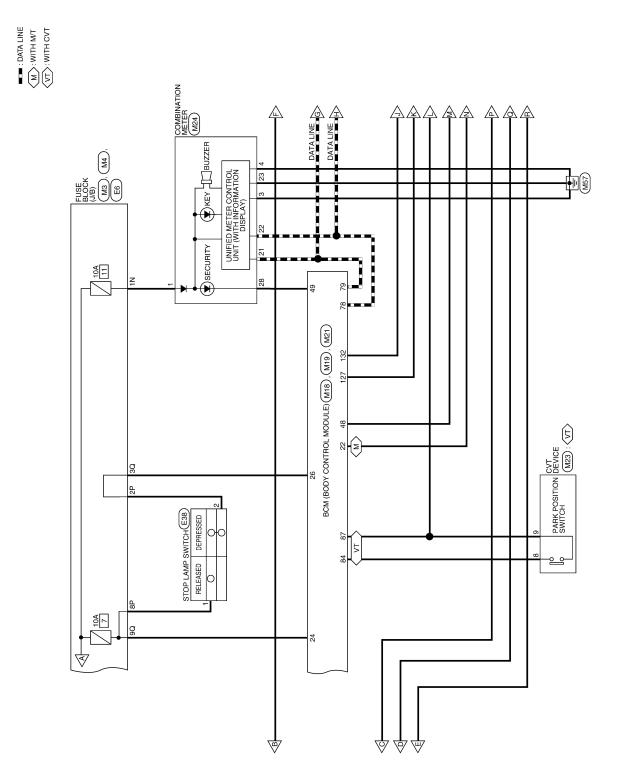
Signal Name	ANT+	ANT-	SW+	SW-
Color of Wire	ГG	B/Y	P/L	в
Terminal No.	Ţ	2	3	4

ABKIA0737GB

< ECU DIAGNOSIS >

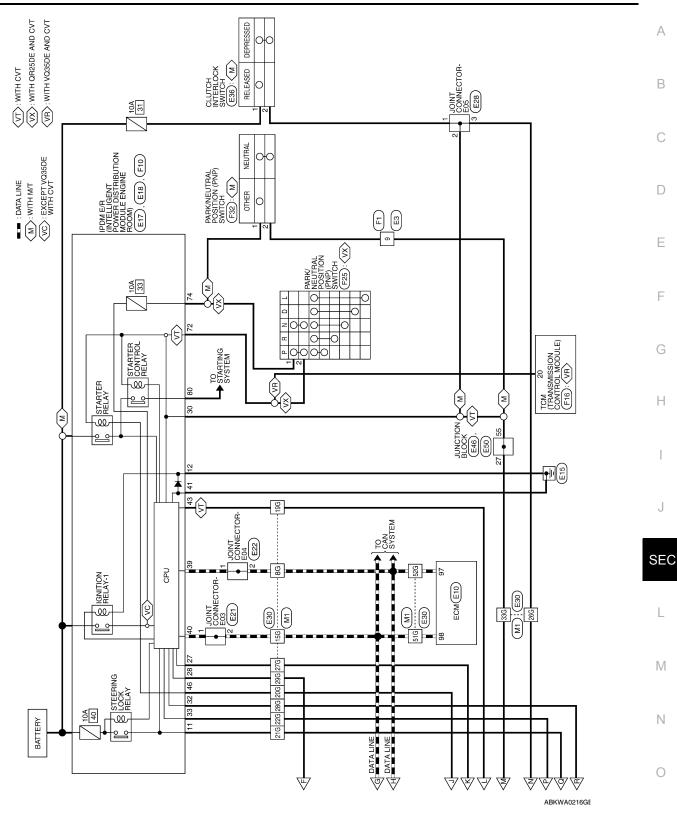
[SEDAN WITH INTELLIGENT KEY]





ABKWA0215GE

< ECU DIAGNOSIS >



Ρ

Connector Name WIRE U WIRE	Terminal No.	al No. Wire		Signal Name	Connector No. Connector Name		MJ FUSE BLOCK (J/B)
Connector Color WHITE	80	□		1	Connector Color		μ
	15G			1			
	20G		æ	1	f		
H C 96 86 76 66 56 46 36	21G	B/L	۲ ۲	1	S.H.		2N 1N
176 166 156 146 136 126 116	22G		G/R	1			
	26G	R/Y	×	1			
200 200 240 240 200 210 200	27G		BR/W	1		Color of	
	28G		0	1	l erminal No.		Signal Name
41G 40G 39G 38G 37G 36G 35G FOC 48G 48G 47G 46G 44G 49G 43G	596		BR	1	1N	W/L	I
	33G	B/R	ŋ	1	4N	G∖	I
586 576 566 556 546 536 516	516			1	۸۲	Y/R	I
	52G	<u>م</u>		1			
726 716 706 696 886 676 666 666 806 736 786 776 766 756 746 736 656 646	82G	W/B	B	I			
Connector No. M4	Connector No.		M16		Connector No.	o. M17	
Connector Name FUSE BLOCK (J/B) Connector Color WHITE	Connec	Connector Name	BCM (BOD MODULE)	BCM (BODY CONTROL MODULE)	Connector Name		BCM (BODY CONTROL MODULE)
	Connec	Connector Color	BLACK		Connector Color	olor WHITE	щ
대대 140 30 <u>10</u> 20 10 H.S.	同 H.S.		13		园 H.S.	4 5 6 7 1112 13 14	4 5 6 7 <u>8 9 10</u> 111213141516171819
Terminal No. Kolor of Signal Name	Terminal No.	al No. Wire		Signal Name	Terminal No.	Color of Wire	Signal Name
30 O/L –		W/B		BAT_POWER_F/L	=	Y/R	BAT_BCM_FUSE
9Q R/W –			-		13	B	GND1
					15	٨٦	ACC_LED

CONTRECTOR NALLIE									
	MOD	MODÙLE)			MODÚLE)		22	BR	ENG_START_SW
Connector Color	r GREEN	Z	Connector Color	olor BLACK	CK		78	٩	CAN-L
			q				62	_	CAN-H
E			٥H E				80	R/L	FOB_SLOT ILLUMINATION
Ŋ.			<u>9</u>				81	ГG	IGN_ON_LED
39 38 37 36 35 34 3	33 32 31	30 29 28 27 26 25 24 23 22 21 20	115	7 27 27 77	70 R0 R8 R7 R8 RF R4 R3 R9	61 BU	84	Y/R	AT_DEVICE_OUT
59 58 57 56 55 54 53	53 52 51	52 51 50 49 48 47 46 45 44 43 42 41 40	98 97 96	93 92 91	88 87 86 85 84 83 82	81	85	Г0	S/L_CONDITION_1
	Color of]	86	G/R	S/L_CONDITION_2
Terminal No.	Wire	Signal Name		\square			87	G/B	SHIFT_P
		11	Terminal No.	Wire	Signal Name		94	G∕	S/L POWER SUPPLY_12V
24 26		STOP_LAMP_LOW_SW	68);j	FOB_HEADEH_CLOCK		66	5	S/L_K-LINE
		- 107	8			_			
	ш	S/L_LOCK_LED							
48 R/	R/G	SHIFT_N/P							
49 L/	0/1	IMMO_LED							
Connector No.	M21		Connector No.	o. M23		_			
Connector Name		BCM (BODY CONTROL MODULE)	Connector Name		CVT DEVICE	T T			
Connector Color					<u> </u>				
цП 			品.S.H	5 4 3	1 3 7 9 2 4 5 6 8 10				
0. L									
131 130 129 128 127 126 125 124 122 121 120 119 148 151 150 149 146 145 144 143 142 140 138 138	125 124 123 145 144 143	22 121 120 119 118 117 116 115 114 113 112 142 141 140 139 138 137 136 135 134 133 122	Terminal No.	Color of Wire	Signal Name				
			8	Y/R	DETENT_KEY_SW	1			
Terminal No. V	Color of Wire	Signal Name	თ	G/B	DETENT_KEY_SW	T1			
127 BF	BR/W	IGN_USM_CONT1							
132	æ	ST_CONT_USM							

7212	>		

[SEDAN WITH INTELLIGENT KEY]

А

В

С

D

Е

F

G

Н

J

SEC

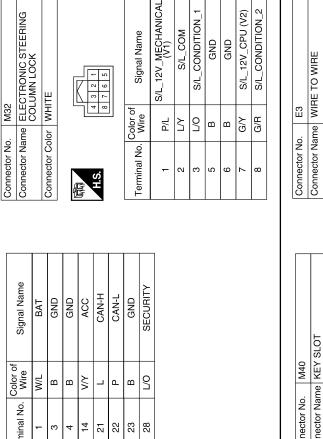
L

Μ

Ν

0

Ρ



0)									
Color of Wire	M/L	В	В	λ/Λ	Γ	٩	В	P P	
Terminal No.	-	6	4	14	12	22	23	28	
~	_					10 10 10 10	37 38 39		

- 12

H.S.

E

COMBINATION METER

M24

Connector Color WHITE

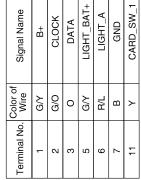
Connector Name Connector No.

	M40	KEY SLO	WHITE	
	Connector No. M40	Connector Name KEY SLC	Connector Color WHITE	
	M38	Connector Name PUSH-BUTTON IGNITION	SWILCH	BROWN
	Connector No.	Connector Name		Connector Color BROWN

Signal Name	GND	START_SW	LOCK	ACC	NO	B+	
Color of Wire	В	BR	В	٨/٢	ГG	G∕Y	
Terminal No. Color of Wire	-	4	5	9	7	8	

ABKIA0691GB

Signal Name	B+	CLOCK	DATA	LIGHT_BAT+	LIGHT_A	GND	CARD_SW_1
Color of Wire	G∕	G/O	0	G∕	B/L	В	۲
Ferminal No. Wire	÷	2	3	5	9	7	11



[SEDAN WITH INTELLIGENT KEY]

Signal Name

Color of Wire

Terminal No.

BR

თ

H.S.

H.S. 佢

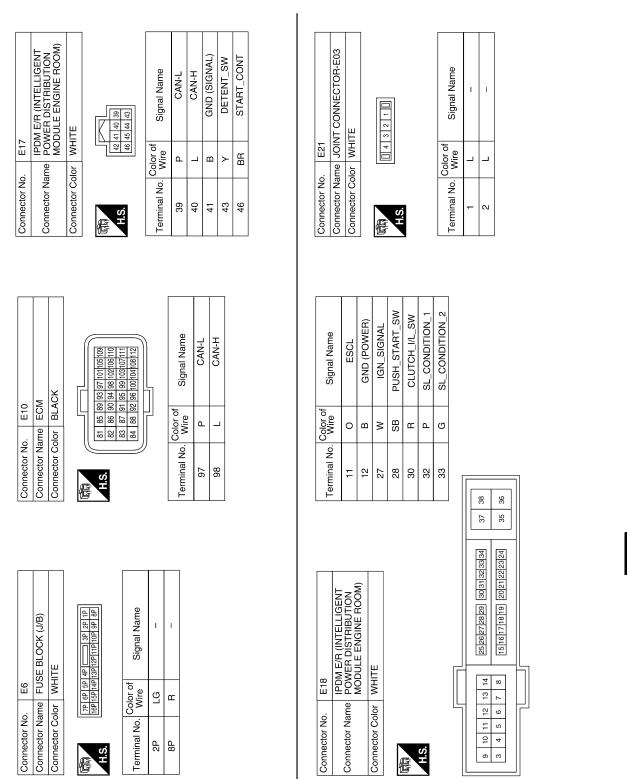
45678

H.S.

F

Æ

Connector Color WHITE



ABKIA0706GB

Ρ

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

В

А

С

D

Е

F

Н

J

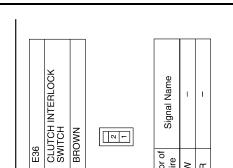
SEC

L

Μ

Ν

0



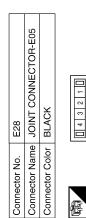
- 10

H.S. 悟

Color of Wire ≥ ш

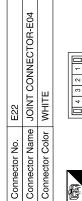
Terminal No.

N -



Signal Name	I	I	I
Color of Wire	н	œ	н
Terminal No.	-	2	3

Signal Name	I	I	I	I	I	I	I	I	-	I	I	-	I	1
Color of Wire	Ч		≻	BR	P/L	თ	В	N	٩	SB	BR	Γ	٩	ГG
Terminal No.	98	15G	19G	20G	21G	22G	26G	27G	28G	29G	33G	51G	52G	82G

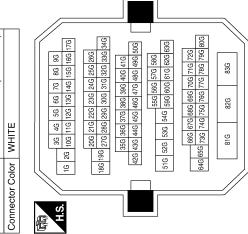




H.S.

Signal Name	I	I	
Color of Wire	Ь	Ь	
Terminal No.	1	2	

Connector No.	E30
Connector Name	Connector Name WIRE TO WIRE (WITH M/T)
Connector Color WHITE	WHITE



ABKIA0692GB

BROWN

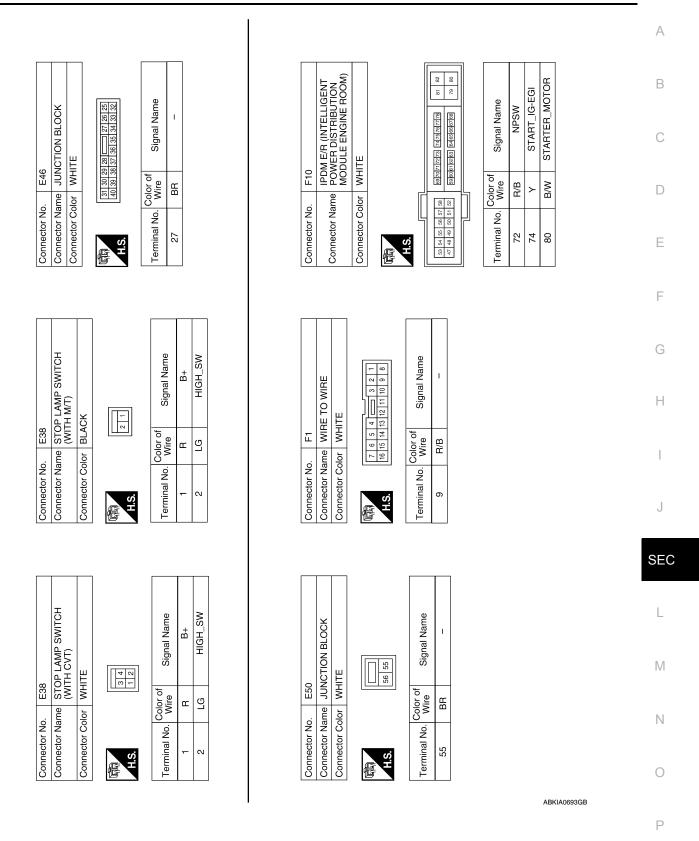
E36

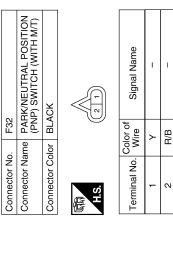
Connector No.

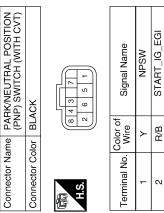
Connector Name Connector Color

< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE) [SEDAN WITH INTELLIGENT KEY]

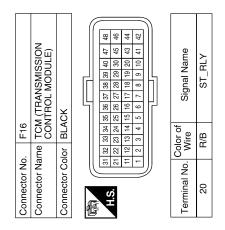






F25

Connector No.



Fail Safe

ABKIA0694GB

INFOID:000000004498467

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC

< ECU DIAGNOSIS >

[SEDÁN WITH INTELLIGENT KEY]

Display contents of CONSULT	Fail-safe	Cancellation
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit electronic steering column lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has become consistent Starter control relay signal Starter relay status signal
B2562: LO VOLTAGE	 Inhibit engine cranking Inhibit electronic steering column lock 	100 ms after the power supply voltage increases to more than 8.8 V
B2601: SHIFT POSITION	Inhibit electronic steering column lock	 500 ms after the following signal reception status becomes consistent Selector lever P position switch signal P range signal (CAN)
B2602: SHIFT POSITION	Inhibit electronic steering column lock	 5 seconds after the following BCM recognition conditions are ful- filled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Vehicle speed: 4 /h or more
B2603: SHIFT POSI STATUS	Inhibit electronic steering column lock	 500 ms after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit electronic steering column lock	 500 ms after any of the following BCM recognition conditions is fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P and N position (battery voltage) P range signal or N range signal (CAN): ON Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) P range signal and N range signal (CAN): OFF
B2605: PNP SW	Inhibit electronic steering column lock	 500 ms after any of the following BCM recognition conditions is fulfilled Ignition switch is in the ON position Power position: IGN Selector lever P/N position signal: Except P and N positions (0 V) Interlock/PNP switch signal (CAN): OFF Status 2 Ignition switch is in the ON position Selector lever P/N position signal: P or N position (battery voltage) PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has become consistent Electronic steering column lock relay signal (Request signal) Electronic steering column lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has become consistent Electronic steering column lock relay signal (Request signal) Electronic steering column lock relay signal (Condition signal)

< ECU DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

Display contents of CONSULT	Fail-safe	Cancellation
B2608: STARTER RELAY	Inhibit engine cranking	 500 ms after the following signal communication status becomes consistent Starter motor relay control signal Starter relay status signal (CAN)
B2609: S/L STATUS	 Inhibit engine cranking Inhibit electronic steering column lock 	 When the following electronic steering column lock conditions agree BCM electronic steering column lock control status Electronic steering column lock condition No. 1 signal status Electronic steering column lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit engine cranking	 500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (Battery voltage) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilledPower position changes to ACCReceives engine status signal (CAN)
B2612: S/L STATUS	 Inhibit engine cranking Inhibit electronic steering column lock 	 When any of the following conditions is fulfilled Electronic steering column lock unit status signal (CAN) is received normally The BCM electronic steering column lock control status matches the electronic steering column lock status recognized by the electronic steering column lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM be- comes normal
B2619: BCM	Inhibit engine cranking	1 second after the electronic steering column lock unit power sup- ply output control inside BCM becomes normal
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions is fulfilledPower position changes to ACCReceives engine status signal (CAN)

DTC Inspection Priority Chart

INFOID:000000004498468

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC
1	B2562: LOW VOLTAGE
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
3	 B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM

< ECU DIAGNOSIS >

Priority	DTC
	 B2013: ID DISCORD BCM-S/L B2014: CHAIN OF S/L-BCM B2553: IGNITION RELAY B2555: STOP LAMP B2556: PUSH-BTN IGN SW B2557: VEHICLE SPEED
	 B2560: STARTER CONT RELAY B2601: SHIFT POSITION B2602: SHIFT POSITION B2603: SHIFT POSI STATUS B2604: PNP SW
,	 B2605: PNP SW B2606: S/L RELAY B2607: S/L RELAY B2608: STARTER RELAY B2609: S/L STATUS
4	 B260A: IGNITION RELAY B260B: STEERING LOCK UNIT B260C: STEERING LOCK UNIT B260D: STEERING LOCK UNIT B260F: ENG STATE SIG LOST
	 B2612: S/L STATUS B2614: ACC RELAY CIRC B2615: BLOWER RELAY CIRC B2616: IGN RELAY CIRC B2617: STARTER RELAY CIRC
	 B2617: STARTER RELATIONCE B2618: BCM B2619: BCM B2614: PUSH-BTN IGN SW B26E1: ENG STATE NO RECIV C1729: VHCL SPEED SIG ERR
	U0415: VEHICLE SPEED SIG C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL
	 C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RL C1712: [CHECKSUM ERR] FL
5	 C1713: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR C1715: [CHECKSUM ERR] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR
	 C1719: [PRESSDATA ERR] RL C1720: [CODE ERR] FL C1721: [CODE ERR] FR C1722: [CODE ERR] RR C1723: [CODE ERR] RL
	 C1724: [BATT VOLT LOW] FL C1725: [BATT VOLT LOW] FR C1726: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RL C1734: CONTROL UNIT
6	B2621: INSIDE ANTENNA B2622: INSIDE ANTENNA B2623: INSIDE ANTENNA

NOTE:

INFOID:000000004498469

< ECU DIAGNOSIS >

Details of time display

- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1
 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter
 remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch
 OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	_	_	_	BCS-38
U1010: CONTROL UNIT (CAN)		_	—	BCS-39
U0415: VEHICLE SPEED SIG	_	_	_	<u>BCS-40</u>
B2013: ID DISCORD BCM-S/L	×	_	_	<u>SEC-38</u>
B2014: CHAIN OF S/L-BCM	×	_	_	<u>SEC-39</u>
B2190: NATS ANTENNA AMP	×	_	_	<u>SEC-64</u>
B2191: DIFFERENCE OF KEY	×	_	_	<u>SEC-67</u>
B2192: ID DISCORD BCM-ECM	×	_	_	<u>SEC-68</u>
B2193: CHAIN OF BCM-ECM	×	_	_	<u>SEC-69</u>
B2553: IGNITION RELAY	_	_	_	PCS-60
B2555: STOP LAMP	_	_	_	<u>SEC-70</u>
B2556: PUSH-BTN IGN SW	_	×	_	<u>SEC-72</u>
B2557: VEHICLE SPEED	×	×	_	<u>SEC-74</u>
B2560: STARTER CONT RELAY	×	×	_	<u>SEC-75</u>
B2562: LOW VOLTAGE	_	_	_	BCS-41
B2601: SHIFT POSITION	×	×	_	<u>SEC-76</u>
B2602: SHIFT POSITION	×	×	_	<u>SEC-79</u>
B2603: SHIFT POSI STATUS	×	×	_	<u>SEC-81</u>
B2604: PNP SW	×	×		<u>SEC-84</u>
B2605: PNP SW	×	×	_	<u>SEC-86</u>
B2606: S/L RELAY	×	×	_	<u>SEC-88</u>
B2607: S/L RELAY	×	×	_	<u>SEC-89</u>
B2608: STARTER RELAY	×	×	_	<u>SEC-91</u>
B2609: S/L STATUS	×	×	_	<u>SEC-93</u>
B260A: IGNITION RELAY	×	×	_	PCS-62
B260B: STEERING LOCK UNIT	_	×	_	<u>SEC-97</u>
B260C: STEERING LOCK UNIT	_	×	_	<u>SEC-98</u>
B260D: STEERING LOCK UNIT	_	×	_	<u>SEC-99</u>
B260F: ENG STATE SIG LOST	×	×	_	<u>SEC-100</u>
B2612: S/L STATUS	×	×		<u>SEC-101</u>
B2614: ACC RELAY CIRC		×		PCS-65
B2615: BLOWER RELAY CIRC		×		PCS-68
B2616: IGN RELAY CIRC		×		PCS-71
B2617: STARTER RELAY CIRC	×	×		SEC-105
B2618: BCM	×	×		PCS-74

BCM (BODY CONTROL MODULE) [SEDAN WITH INTELLIGENT KEY]

Tire pressure Intelligent Key monitor warning CONSULT display Fail-safe Reference page warning lamp ON lamp ON B2619: BCM SEC-107 х х ____ B261A: PUSH-BTN IGN SW х SEC-108 **B2621: INSIDE ANTENNA** ____ DLK-59 _ _ **B2622: INSIDE ANTENNA** _ _ DLK-62 ____ **B2623: INSIDE ANTENNA** DLK-65 ____ ____ _ B26E1: ENG STATE NO RES **SEC-110** х х ____ C1704: LOW PRESSURE FL <u>WT-52</u> ____ ____ х C1705: LOW PRESSURE FR × <u>WT-52</u> C1706: LOW PRESSURE RR _ _ х <u>WT-52</u> C1707: LOW PRESSURE RL <u>WT-52</u> ____ ____ × C1708: [NO DATA] FL <u>WT-14</u> _ _ \times WT-14 C1709: [NO DATA] FR × ____ ____

C1710: [NO DATA] RR	_	_	×	<u>WT-14</u>	_
C1711: [NO DATA] RL	_	_	×	<u>WT-14</u>	_
C1712: [CHECKSUM ERR] FL	_	_	×	<u>WT-16</u>	G
C1713: [CHECKSUM ERR] FR	_	_	×	<u>WT-16</u>	_
C1714: [CHECKSUM ERR] RR	_	_	×	<u>WT-16</u>	Н
C1715: [CHECKSUM ERR] RL	_	_	×	<u>WT-16</u>	_
C1716: [PRESSDATA ERR] FL	_	_	×	<u>WT-18</u>	_
C1717: [PRESSDATA ERR] FR	_	_	×	<u>WT-18</u>	
C1718: [PRESSDATA ERR] RR	—	_	×	<u>WT-18</u>	
C1719: [PRESSDATA ERR] RL	_	_	×	<u>WT-18</u>	J
C1720: [CODE ERR] FL	_	_	×	<u>WT-16</u>	
C1721: [CODE ERR] FR	—	—	×	<u>WT-16</u>	
C1722: [CODE ERR] RR	_	_	×	<u>WT-16</u>	SEC
C1723: [CODE ERR] RL	_	_	×	<u>WT-16</u>	
C1724: [BATT VOLT LOW] FL	_		×	<u>WT-16</u>	
C1725: [BATT VOLT LOW] FR	—	_	×	<u>WT-16</u>	
C1726: [BATT VOLT LOW] RR	—	_	×	<u>WT-16</u>	
C1727: [BATT VOLT LOW] RL	—	_	×	<u>WT-16</u>	M
C1729: VHCL SPEED SIG ERR	—	_	×	<u>WT-19</u>	_
C1734: CONTROL UNIT	—	—	×	<u>WT-20</u>	
					- N

0

А

В

С

D

Ε

F

Ρ

< ECU DIAGNOSIS >

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) < ECU DIAGNOSIS > [SEDAN WITH INTELLIGENT KEY]

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Reference Value

INFOID:000000004498470

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	(Condition			
RADFAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	0 - 100 %		
		A/C switch OFF	Off		
AC COMP REQ	Engine running	A/C switch ON (Compressor is operating)	On		
	Lighting switch OFF				
TAIL&CLR REQ	Lighting switch 1ST, 2ND, HI or a	Lighting switch 1ST, 2ND, HI or AUTO (Light is illuminated)			
	Lighting switch OFF		Off		
HL LO REQ	Lighting switch 2ND HI or AUTO	(Light is illuminated)	On		
	Lighting switch OFF		Off		
HL HI REQ	Lighting switch HI		On		
		Front fog lamp switch OFF	Off		
FR FOG REQ	Lighting switch 2ND or AUTO (Light is illuminated)	 Front fog lamp switch ON Daytime running light activated (Only for Canada models) 	On		
		Front wiper switch OFF	STOP		
FR WIP REQ	Ignition switch ON	Front wiper switch INT	1LOW		
		Front wiper switch LO	Low		
		Front wiper switch HI	Hi		
		Front wiper stop position	STOP P		
WIP AUTO STOP	Ignition switch ON				
		Front wiper operates normally	Off		
WIP PROT	Ignition switch ON				
	Ignition switch OFF or ACC		Off		
IGN RLY1 -REQ	Ignition switch ON		On		
	Ignition switch OFF or ACC		Off		
IGN RLY	Ignition switch ON		On		
	Release the push-button ignition	i switch	Off		
PUSH SW	Press the push-button ignition sv	Press the push-button ignition switch			
INTER/NP SW	Ignition switch ON	CVT selector lever in any position other than P or N (CVT models)	Off		
		Release clutch pedal (M/T models)			
	Ignition switch ON	CVT selector lever in P or N posi- tion (CVT models) Depress clutch pedal (M/T models)	On		
	Ignition switch ON		Off		
ST RLY CONT	At engine cranking	On			

< ECU DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

Monitor Item	Condition	Value/Status
	Ignition switch ON	Off A
IHBT RLY -REQ	At engine cranking	On
	Ignition switch ON	Off
	At engine cranking	ST →INHI
ST/INHI RLY	The status of starter relay or starter control relay cannot be recognized by the battery voltage malfunction, etc. when the starter relay is ON and the starter control relay is OFF	UNKWN
DETENT SW	Ignition switch ON• Press the selector button with CVT selector lever in P position • CVT selector lever in any posi- tion other than P	Off
	Release the CVT selector button with CVT selector lever in P position NOTE: The lever is fixed ON for M/T	On
	None of the conditions below are present	Off
S/L RLY -REQ	 Open the driver door after the ignition switch is turned OFF (for a few seconds) Press the push-button ignition switch when the steering lock is activated Depress the clutch pedal when the steering lock is activated 	On
	Steering lock is activated	LOCK
S/L STATE	Steering lock is deactivated	UNLK
	[DTC B210A] is detected	UNKWN
DTRL REQ	NOTE: This item is displayed, but cannot be monitored.	Off
OIL P SW	Ignition switch OFF, ACC or engine running	Open
OIL P SW	Ignition switch ON	Close
	Not operated	Off
THFT HRN REQ	 Panic alarm is activated Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYS- TEM 	On
	Not operated	Off
HORN CHIRP	Door locking with Intelligent Key (horn chirp mode)	On
CRNRNG LMP REQ	NOTE: This item is displayed, but cannot be monitored.	Off

M

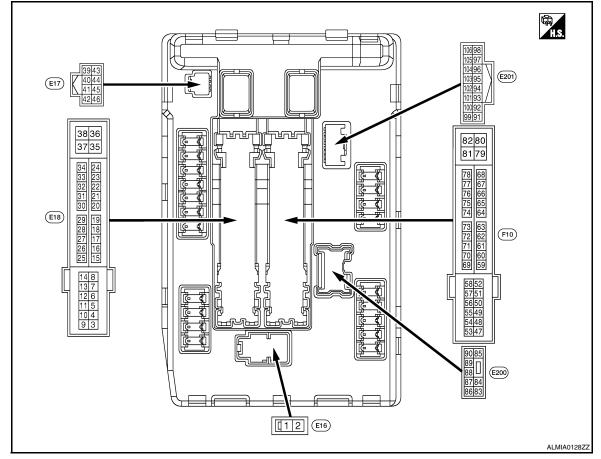
Ν

Ο

< ECU DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No.		Description				Value	
(Wire +	color)	Signal name	Input/ Output	Condition		(Approx.)	
1 (R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage	
2 (L)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage	
4	Cround	Frank invelo	0.1.1	Ignition switch ON	Front wiper switch OFF	0V	
(L/R)	Ground	Front wiper LO	Output		Front wiper switch LO	Battery voltage	
5	Ground		Output	Ignition	Front wiper switch OFF	0V	
(L/B)	Ground	round Front wiper HI Output Switch	switch ON	Front wiper switch HI	Battery voltage		
6 (SB)	Ground	Daytime light relay power supply (Canada models only)	Output	Ignition switch OFF		Battery voltage	
7	Ground	Tail, license plate lamps &	Output	Ignition	Lighting switch OFF	0V	
(R/L)	Ground	interior lamps	Output	switch ON	Lighting switch 1ST	Battery voltage	
10				Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0V	
(R/B)	Ground ECM relay power supply Output	Output	 Ignition s (More th) 	switch ON switch OFF an a few seconds after turn- on switch OFF)	Battery voltage		

< ECU DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

Terminal No.		Description				Value						
(Wire +	color)	Signal name	Input/ Output	Condition		(Approx.)	ŀ					
									lgnition switch OFF	A few seconds after open- ing the driver door	Battery voltage	E
11 Ground Steering lock supply	Ground	Steering lock unit power supply	Output	lgnition switch LOCK	Press the push-button ig- nition switch	Battery voltage	(
				Ignition swi	tch ACC or ON	0V						
12 (B)	Ground	Ground	_	Ignition swi	tch ON	0V						
13					tely 1 second or more after ignition switch ON	0V	I					
(W)	Ground	Fuel pump power supply	Output		nately 1 second after turning on switch ON unning	Battery voltage	F					
15	Ground	Ignition relay-1 power sup-	Output	Ignition swi	tch OFF	0V						
(G/W)	Cround	ply	Output	Ignition swi	tch ON	Battery voltage						
16				Ignition	Front wiper stop position	0V	(
(L/Y)	Ground	Front wiper auto stop	Input	switch ON	Any position other than front wiper stop position	Battery voltage						
19	Ground	Ignition relay-1 power sup-	Output	Ignition switch OFF		0V						
(L/Y)	Cround	ply	Output	Ignition switch ON		Battery voltage						
20 (B/Y)	Ground	Ambient sensor ground	—	Ignition switch ON		0V						
21 (O/B)	Ground	Ambient sensor	—	Ignition switch ON		5V						
22 (W/R)	Ground	Refrigerant pressure sen- sor ground	_	Ignition switch ON		0V						
23 (B/R)	Ground	Refrigerant pressure sen- sor	_	 Ignition switch ON (READY) Both A/C switch and blower motor switch ON (electric compressor oper- ates) 		1.0 - 4.0V	S					
24 (BR/W)	Ground	Refrigerant pressure sen- sor power supply	_	Ignition swi	tch ON	5V						
25	Ground	Ignition relay-1 power sup-	Output	Ignition swi	tch OFF	0V						
(GR)	Cround	ply	Sulpui	Ignition switch ON		Battery voltage						
27	Ground	gnition relay monitor Input	Battery voltage									
(BR/W)				Ignition swi		0V						
28	Ground	Push-button ignition	Input	Press the push-button ignition switch Release the push-button ignition switch		0V						
(BR)		switch	1			Battery voltage						
30 (R/B) Ground			CVT mod- els	CVT selector lever in any position other than P or N (ignition switch ON)	0V							
	Ground	ound Starter relay control	Input	615	CVT selector lever P or N (ignition switch ON)	Battery voltage						
				M/T mod-								
				els	Depress the clutch pedal	Battery voltage						

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) < ECU DIAGNOSIS > [SEDAN WITH INTELLIGENT KEY]

Terminal No.		Description				Value
(Wire +	color)	Signal name	Input/ Output	Condition		(Approx.)
32	(-round		Input	Electronic steering column lock is activated		0V
(L/O)	lock unit condition-1	input	Electronic steering column lock is deac- tivated		Battery voltage	
33	Ground	Electronic steering column	Input	Electronic steering column lock is activated		Battery voltage
(G/R)	Cround	lock unit condition-2	mpar	Input Electronic steering column lock is deac- tivated		0V
34 (O/L)	Ground	Cooling fan relay-3 control	Input	-	tch OFF or ACC	0V
				Ignition swi		0.7V
35 (L/B)	Ground	Cooling fan motor control	Output	Ignition swi	itch OFF or ACC itch ON	0V 0.7V
36 (G)	Ground	Battery power supply	Input	Ignition swi	tch OFF	Battery voltage
38	Ground	Cooling fan motor control	Output	-	tch OFF or ACC	0V
(R/W)			•	Ignition swi	tch ON	0.7V
39 (P)	_	CAN - L	Input/ Output	-		_
40 (L)	_	CAN - H	Input/ Output	-		_
41 (B)	Ground	Ground	—	Ignition switch ON		0V
42	Ground	Cooling fan relay-2 control	Input	Ignition switch OFF or ACC		0V
(SB)	Clound		mput	Ignition switch ON		0.7V
					Press the CVT selector button (CVT selector lever P)	Battery voltage
43 (G/B)	Ground	CVT device (Detention switch)	Input	lgnition switch ON	 CVT selector lever in any position other than P Release the CVT selec- tor button (CVT selector lever P) 	٥V
44	Ground	Horn relay control	Input	The horn is	deactivated	Battery voltage
(G/W)				The horn is	activated	0V
45	Ground	Anti theft horn relay control	Input	The horn is deactivated		Battery voltage
(L/O)				The horn is activated		0V
		Ind Starter relay control		CVT mod-	CVT selector lever in any position other than P or N (ignition switch ON)	0V
46 (R)	Ground		Input	els	CVT selector lever P or N (ignition switch ON)	Battery voltage
				M/T mod- els	Release the clutch pedal	0V
					Depress the clutch pedal	Battery voltage
					A/C switch OFF	0V
48 (Y/R)	Ground	A/C relay power supply	Output	Engine running	A/C switch ON (A/C compressor is oper- ating)	Battery voltage

< ECU DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

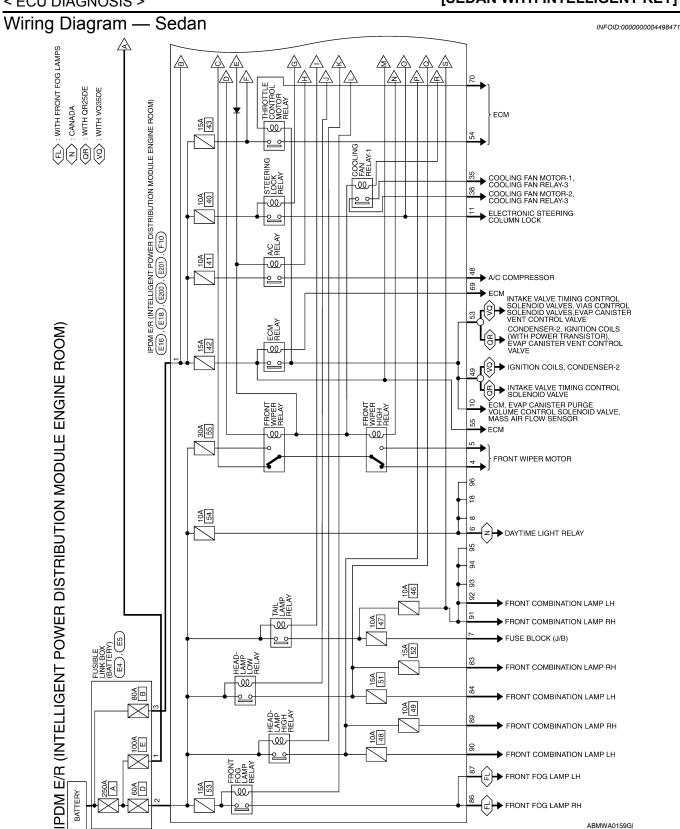
Terminal No.		Description			Value				
(Wire color) + _ Signal name		Signal name	Input/ Output	Condition	(Approx.)				
49 (R/B) Ground ECM relay power so (with VQ35DE)	Fround ECM relay power supply (with VQ35DE)		Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0V	E				
				Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 	Battery voltage	(
	ECM relay power supply		Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0V	I				
49 (B/R)	Ground	(without VQ35DE)	Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 	Battery voltage	I			
51	Ground	Ignition relay power supply	Output	Ignition switch OFF	0V				
(LG)	Cround	ignition relay power supply	Juipui	Ignition switch ON	Battery voltage				
52	Ground	Ignition relay power supply	Output	Ignition switch OFF	0V				
(Y/G)		ignition relay power supply	Juiput	Ignition switch ON	Battery voltage				
50			Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0V					
(B/R)	53 (B/R) Ground ECM relay power supply (with VQ35DE)	Ground			Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 	Battery voltage		
52	Ground ECM relay power supply (without VQ35DE)						Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0V	
53 (R/B)					Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 	Battery voltage	S	
- 4	Ground	Throttle control motor re- lay power supply			Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0V			
54 (G/W)			Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 	Battery voltage				
55 (W/L)	Ground	ECM power supply	Output	Ignition switch OFF	Battery voltage				
56 (R/Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF Ignition switch ON	0V Battery voltage				
				Ignition switch OFF	OV				
57 (O)	Ground	Ignition relay power supply	Output	Ignition switch ON	Battery voltage				
				Ignition switch OFF	0V				
58 (Y) Ground	Ignition relay power supply	ly Output	Output Ignition switch ON	Battery voltage					

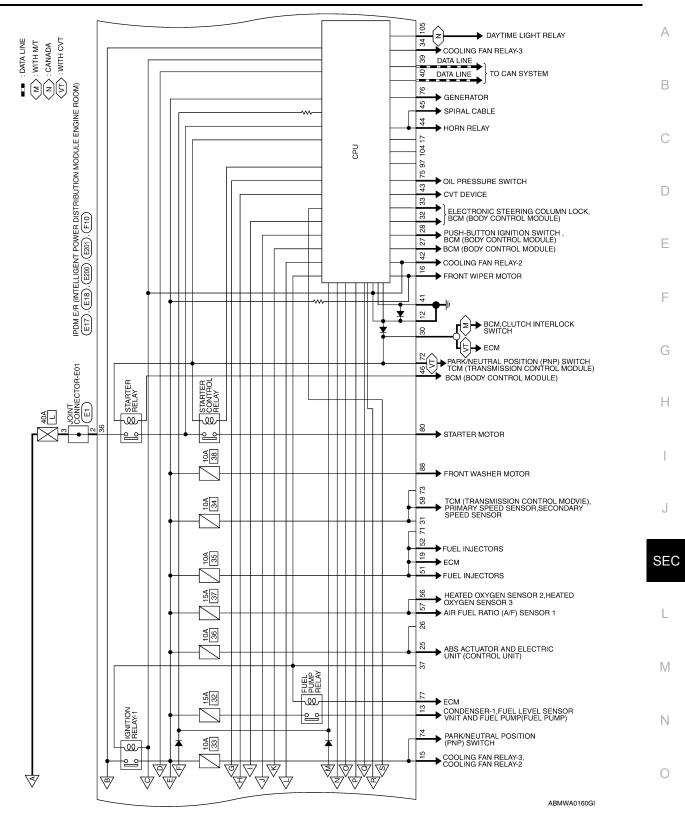
< ECU DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

Terminal No. (Wire color)		Description				Value				
(VVire +		Signal name	Input/ Output	Condition		(Approx.)				
69				Ignition switch OFF (For a few seconds after turning ignition switch OFF)		Battery voltage				
(W/B) Ground		ECM relay control	Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 		0 - 1.5V				
				lgnition switch ON \rightarrow OFF		0 -1.0V				
70 (O)	Ground	Throttle control motor re- lay control	Output			↓ Battery voltage ↓ 0V				
				Ignition swi	itch ON	0 - 1.0V				
70				Ignition	CVT selector lever in P or N position	Battery voltage				
72 (R/B)	Ground	PNP switch signal	Input	Ignition switch ON	CVT selector lever in any position other than P or N position	0V				
74	Ground	Ignition relay power supply	Output	Ignition swi	itch OFF	0V				
(Y)	Croana	ignition relay power supply	Ουίραι	Ignition swi	itch ON	Battery voltage				
75	Ground	Oil pressure switch	Input	Ignition	Engine stopped	0V				
(P/L)				switch ON	Engine running	Battery voltage				
								Ignition swi	itch ON	(V) 6 4 0 0 1 1 1 2 0 1 1 1 1 1 1 1 1 1 1 1 1 1
76 (GR)		Power generation com- mand signal	Output	Output		on "Active test", "ALTERNA- ⁄" of "ENGINE"	(V) 6 4 0 1 2 2 2 2 2 2 2 3.8V			
				80% is set on "Active test", "ALTERNA- TOR DUTY" of "ENGINE"		(V) 6 4 2 0 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓				
77	Ground		Output	 Approximately 1 second after turning the ignition switch ON Engine running 		0 - 1.0V				
(B/R)	Ground	Ground Fuel pump relay control Or		Approximately 1 second or more after turning the ignition switch ON		Battery voltage				

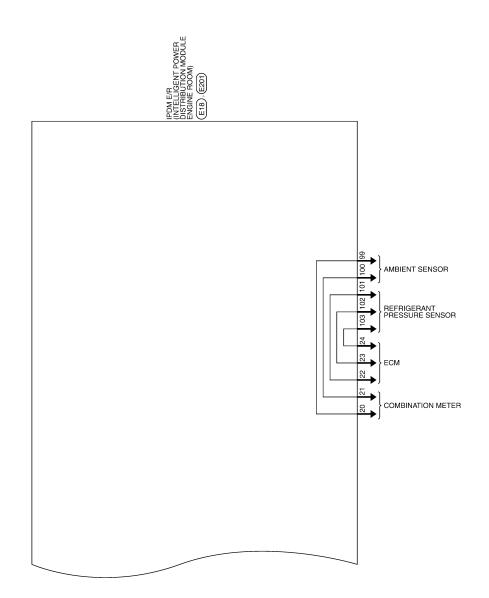
	nal No.	Description				Value	А
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)	A
80 (B/W)	Ground	Starter motor	Output	At engine o	ranking	Battery voltage	В
83	0		0.1.1	Ignition	Lighting switch OFF	٥V	_
(R/Y)	Ground	Headlamp LO (RH)	Output	switch ON	Lighting switch 2ND	Battery voltage	C
84	Ground	Headlamp LO (LH)	Output	Ignition	Lighting switch OFF	0V	0
(L)	Ground		Output	switch ON	Lighting switch 2ND	Battery voltage	_
86 (W/R)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND	 Front fog lamp switch ON Daytime running light activated (Only for Can- ada models) 	Battery voltage	D
					Front fog lamp switch OFF	0V	_
87 (L/Y)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	 Front fog lamp switch ON Daytime running light activated (Only for Can- ada models) 	Battery voltage	F
					Front fog lamp switch OFF	0V	0
88 (R/W)	Ground	Washer pump power sup- ply	Output	Ignition swi	tch ON	Battery voltage	H
89 (L/W)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	Lighting switch HIlighting switch PASS	Battery voltage	_
(Ľ/11)					Lighting switch OFF	0V	
90 (G)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	Lighting switch HILighting switch PASS	Battery voltage	_
(0)					Lighting switch OFF	0V	J
91	Ground	Parking lamp (RH)	Output	Ignition	Lighting switch 1ST	Battery voltage	_
(LG/R)	Cround		output	switch ON	Lighting switch OFF	0V	SEC
92	Ground	Parking lamp (LH)	Output	Ignition	Lighting switch 1ST	Battery voltage	
(LG/B)		0 1 ()	•	switch ON	Lighting switch OFF	0V	_
99 (BR/W)	Ground	Ambient sensor ground	_	Ignition swi	tch ON	0V	L
100 (SB)	Ground	Ambient sensor	_	Ignition swi	tch ON	5V	M
101 (O/L)	Ground	Refrigerant pressure sen- sor ground	_	Ignition swi	tch ON	0V	
102 (R/B)	Ground	Refrigerant pressure sen- sor	_	Both A/C	witch ON (READY) switch and blower motor N (electric compressor oper-	1.0 - 4.0V	N
103 (P)	Ground	Refrigerant pressure sen- sor power supply	—	Ignition swi	tch ON	5V	- ()
105	Ground	Daytime light relay control	Output	Ignition switch ON	Daytime light system ac- tive	Battery voltage	P
(V)	Ground	Daytime light relay control	Ουιραί	Ignition switch ON	Daytime light system inac- tive	0V	_



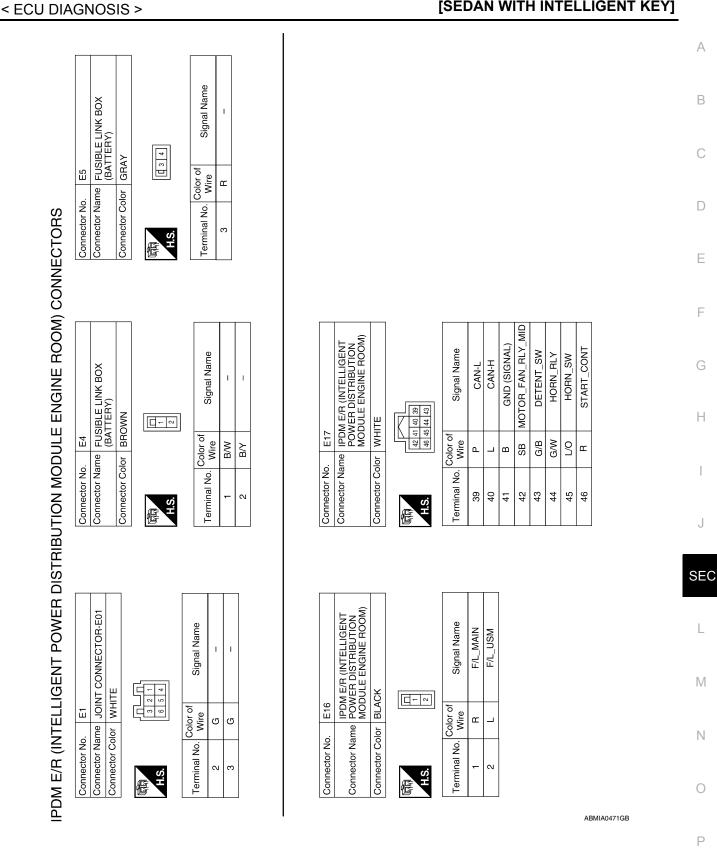


SEC-399

Ρ



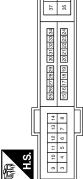
ABMWA0161GI



IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [SEDAN WITH INTELLIGENT KEY] < ECU DIAGNOSIS >

Signal Name	1	I	ECM_VB	ESCL	GND (POWER)	FUEL_PUMP	1	START_IG-E/R	WIPER_AUTOSTOP	I	I	BCM_IGNSW	AMB_SENS_GND-E/R	AMB_SENS_SIG-E/R	PD_SENS_GND-E/R
Color of Wire	I	I	R/B	P/L	в	N	I	G/W	Σ	I	I	ΓΛ	В/Υ	O/B	W/R
Terminal No.	8	ი	10	11	12	13	14	15	16	17	18	19	20	21	22





36 38

Signal Name	I	FR_WIPER_LO	FR_WIPER_HI	DTRL	TAIL/ILLUMI	
Color of Wire	-	L/R	L/B	SB	R/L	
Terminal No.	3	4	5	9	7	

Т

	E200	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	WHITE	
	Connector No.	Connector Name	Connector Color WHITE	4

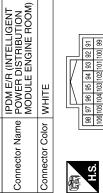
or WHITE	85 1 84 83 90 89 87 86
onnector Color	E.S.

MODULE ENGINE HOOM)	ITE	84 83	89 88 87 86	Signal Name	HEADLAMP_LO_RH	HEADLAMP_LO_LH	Ι	FR_FOG_LAMP_RH	FR_FOG_LAMP_LH	WASHER_MTR	HEADLAMP_HI_RH	HEADLAMP_H_LH
	lor WHITE	85	06	Color of Wire	R/Y	J	I	W/R	Γ	R/W	Γ	g
	Connector Color	Æ	H.S.	Terminal No.	83	84	85	86	87	88	89	06

ABMIA0472GB

Signal Name	-	AMB_SENS_GND-FEM	AMB_SENS_SIG-FEM	PD_SENS_GND-FEM	PD_SENS_SIG-FEM	PD_SENS_PWR-FEM	I	DTRL_RLY	I
Color of Wire	Ι	BR/W	SB	O/L	R/B	Р	I	>	I
Terminal No.	86	66	100	101	102	103	104	105	106

					-				
L	88 07 08 93 92 91 106 105 104 100 102 101 100 99	Signal Name	CLEARANCE_RH	CLEARANCE_LH	I	I	I	I	I
	98 97 96 106 105 104	Color of Wire	LG/R	LG/B	I	I	I	I	I
	雨 H.S.	Terminal No.	91	92	93	94	95	96	67



E201

Connector No.

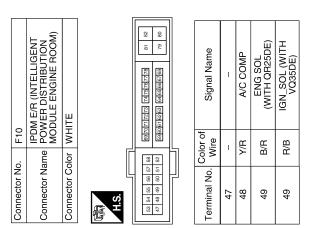
Г Т

T ٦ I

Т

Signal Name	I	I	I	I	SSOF	MOTRLY	I	NPSW	I	START_IG-EGI	OIL_PRESSURE_SW	ALT_C	FPR	I	I	STARTER_MOTOR	I	I
Color of Wire	I	I	I	I	W/B	0	I	R/B	I	Y	P/L	GR	B/R	I	I	B/W	I	I
Terminal No.	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82

Terminal No. Vire Signal Name	50	51 LG INJECTOR_#1	52 Y/G INJECTOR_#2	53 R/B IGN_SOL (WITH QR25DE)	53 B/R ENG_SOL (WITH VQ35DE)	54 G/W ETC	55 W/L ECM_BAT	56 R/Y 02_SENS_#1	57 0 02_SENS_#2	58 Y AT_ECU		09	61	62		
Termina	50	51	52	53	23	54	55	56	57	58	29	09	61	62	63	64



ABMIA0473GB

INFOID:000000004498472

А

В

С

D

Ε

F

Н

J

SEC

L

Μ

Ν

Ο

Fail Safe

CAN COMMUNICATION CONTROL

When CAN communication with ECM and BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With ECM

Control part Fail-safe in operation Cooling fan • Signals cooling fans ON when the ignition switch is turned ON • Signals cooling fans OFF when the ignition switch is turned OFF A/C compressor A/C relay OFF Generator Outputs the power generation command signal (PWM signal) 0%

If No CAN Communication Is Available With BCM

Control part	Fail-safe in operation
Headlamp	 Turns ON the headlamp low relay when the ignition switch is turned ON Turns OFF the headlamp low relay when the ignition switch is turned OFF Headlamp high relay OFF
 Parking lamps License plate lamps Illumination Tail lamps 	 Turns ON the tail lamp relay when the ignition switch is turned ON Turns OFF the tail lamp relay when the ignition switch is turned OFF
Front wiper	 The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.
Front fog lamps (if equipped)	Front fog lamp relay OFF
Horn	Horn OFF
Ignition relay	The status just before activation of fail-safe is maintained.
Starter motor	Starter control relay OFF
Electronic steering column lock unit	Electronic steering column lock relay OFF

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

• IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay inside it.

 IPDM E/R judges the ignition relay error if the voltage differs between the contact circuit and the excitation coil circuit.

• If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

DTC	Ignition switch	Ignition relay	Tail lamp relay
—	ON	ON	_
_	OFF	OFF	_
B2098: IGN RELAY ON	OFF	ON	ON (10 minutes)
B2099: IGN RELAY OFF	ON	OFF	—

NOTE:

The tail lamp turns OFF when the ignition switch is turned ON.

FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper auto stop signal.

When a front wiper auto stop signal is in the conditions listed below, IPDM E/R stops power supply to wiper after repeating a front wiper 10 second activation and 20 second stop five times.

Ignition switch	Front wiper switch	Auto stop signal
ON	OFF	Front wiper stop position signal cannot be input 10 seconds.
	ON	The signal does not change for 10 seconds.

NOTE:

This operation status can be confirmed on the IPDM E/R "Data Monitor" that displays "BLOCK" for the item "WIP PROT" while the wiper is stopped.

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

[SEDAN WITH INTELLIGENT KEY]

STARTER MOTOR PROTECTION FUNCTION

IPDM E/R turns OFF the starter control relay to protect the starter motor when the starter control relay remains А active for 90 seconds.

DTC Index

INFOID:000000004498473

В

CONSULT-III display	Fail-safe	TIMI		Refer to	
No DTC is detected. further testing may be required.	_	_	_	_	
U1000: CAN COMM CIRCUIT	×	CRNT	1 – 39	PCS-20	
B2098: IGN RELAY ON	×	CRNT	1 – 39	PCS-21	
B2099: IGN RELAY OFF	_	CRNT	1 – 39	PCS-22	
B2108: STRG LCK RELAY ON	_	CRNT	1 – 39	<u>SEC-42</u>	
B2109: STRG LCK RELAY OFF	_	CRNT	1 – 39	<u>SEC-43</u>	
B210A: STRG LCK STATE SW	_	CRNT	1 – 39	<u>SEC-44</u>	
B210B: START CONT RLY ON	_	CRNT	1 – 39	<u>SEC-48</u>	
B210C: START CONT RLY OFF	_	CRNT	1 – 39	<u>SEC-49</u>	
B210D: STARTER RELAY ON	—	CRNT	1 – 39	<u>SEC-50</u>	
B210E: STARTER RELAY OFF	—	CRNT	1 – 39	<u>SEC-51</u>	_
B210F: INTRLCK/PNP SW ON	—	CRNT	1 – 39	<u>SEC-54</u>	
B2110: INTRLCK/PNP SW OFF	_	CRNT	1 – 39	<u>SEC-59</u>	

NOTE:

The details of TIME display are as follows.

· CRNT: The malfunctions that are detected now

• 1 - 39: The number is indicated when it is normal at present and a malfunction was detected in the past. It increases like $0 \rightarrow 1 \rightarrow 2 \cdots 38 \rightarrow 39$ after returning to the normal condition whenever IGN OFF \rightarrow ON. It is fixed to 39 until the self-diagnosis results are erased if it is over 39. It returns to 0 when a malfunction is detected again in the process.

SEC

L

Μ

Ν

Ο

Ρ

J

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS < SYMPTOM DIAGNOSIS > [SEDAN WITH INTELLIGENT KEY]

SYMPTOM DIAGNOSIS

INTELLIGENT KEY SYSTEM/ENGINE START FUNCTION SYMPTOMS

Symptom Table

INFOID:000000004206350

Engine cannot be started with all Intelligent Keys. **CAUTION:**

- Follow Trouble Diagnosis Flowchart referring to "<u>SEC-209, "Work Flow"</u>". Determine malfunctioning condition before performing this diagnosis.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis.
- Check systems shown in the "Diagnosis/service procedure" column in this order.

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

- Engine start function is ON when setting on CONSULT-III.
- Use Intelligent Key with registered Intelligent Key ID.
- One or more of Intelligent Keys with registered Intelligent Key ID is in the passenger compartment.

Diagnosis/service procedure		Reference page
1. Check now of annual size it	BCM	<u>BCS-42</u>
1. Check power supply and ground circuit	IPDM E/R	PCS-23
2. Check push button ignition switch		<u>SEC-307</u>
3. Check Intermittent Incident		<u>GI-42</u>

VEHICLE SECURITY SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

VEHICLE SECURITY SYSTEM SYMPTOMS

Symptom Table

INFOID:000000004206351

	Proced	dure	Diagnostic procedure	Refer to page	
Symptom		tom		Relei to page	
		Door switch	Check door switch	DLK-293	
Vehicle	Vehicle security sys-	Trunk	Check trunk room lamp switch	_DLK-316	
	tem cannot be set by	Door outside key	Check key cylinder switch	SEC-315	
1		Intelligent Key	Check Intelligent Key.	DLK-340	
		_	Check Intermittent Incident	GI-42	
	Security indicator does not turn ON.		Check vehicle security indicator	<u>SEC-323</u>	
			Check Intermittent Incident	<u>GI-42</u>	
	* Vehicle security system does not sound alarm when ····		Check door switch	DLK-293	
		Any door is opened.	Check Intermittent Incident	<u>GI-42</u>	
		Horn alarm	Check horn	<u>DLK-344</u>	
	Vehicle security	Vehicle security		Check Intermittent Incident	<u>GI-42</u>
-	vate.	Hoad Jamp alarm	Check head lamp alarm	<u>SEC-321</u>	
		Head lamp alarm	Check Intermittent Incident	<u>GI-42</u>	
		Door outsido kov	Check key cylinder switch	<u>SEC-315</u>	
4	venicle security sys-	Door outside key	Check Intermittent Incident	<u>GI-42</u>	
-	tem cannot be can- celed by ····	Intelligent Koy	Check Intelligent Key	DLK-340	
	-	-	Intelligent Key	Check Intermittent Incident	<u>GI-42</u>

*: Check that the system is in the armed phase.

J

<u>SEC</u>

L

Μ

Ν

Ο

Ρ

А

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

< SYMPTOM DIAGNOSIS >

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

Symptom Table

INFOID:000000004206352

[SEDAN WITH INTELLIGENT KEY]

Security indicator does not turn ON or flash. CAUTION:

- Follow Trouble Diagnosis Flowchart referring to "<u>SEC-209, "Work Flow"</u>". Determine malfunctioning condition before performing this diagnosis.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis.
- Check systems shown in the "Action" column in this order.

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

- Intelligent Key is not inserted into key slot.
- Engine switch is not depressed.

Action	Reference page
1. Check vehicle security indicator	<u>SEC-323</u>
2. Check Intermittent Incident	<u>GI-42</u>

< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR KEY SLOT

Removal and Installation

REMOVAL

- 1. Remove the instrument lower panel LH. Refer to IP-12. "Removal and Installation".
- 2. Disconnect key slot connector.
- 3. Remove the key slot screw (A), and then remove key slot (1) from instrument lower panel LH (2).

INSTALLATION Installation is in the reverse order of removal.



SEC

L

Μ

Ν

Ο

Ρ

Н

А

В

С

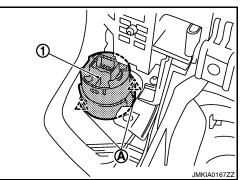
INFOID:000000004206355

PUSH BUTTON IGNITION SWITCH

Removal and Installation

REMOVAL

- 1. Remove the cluster lid A assembly. Refer to IP-12. "Removal and Installation".
- 2. Release the pawls (A) and remove the push-button ignition
 - switch (1) from cluster lid A.



INSTALLATION Installation is in the reverse order of removal. INFOID:000000004206356

[SEDAN WITHOUT INTELLIGENT KEY]

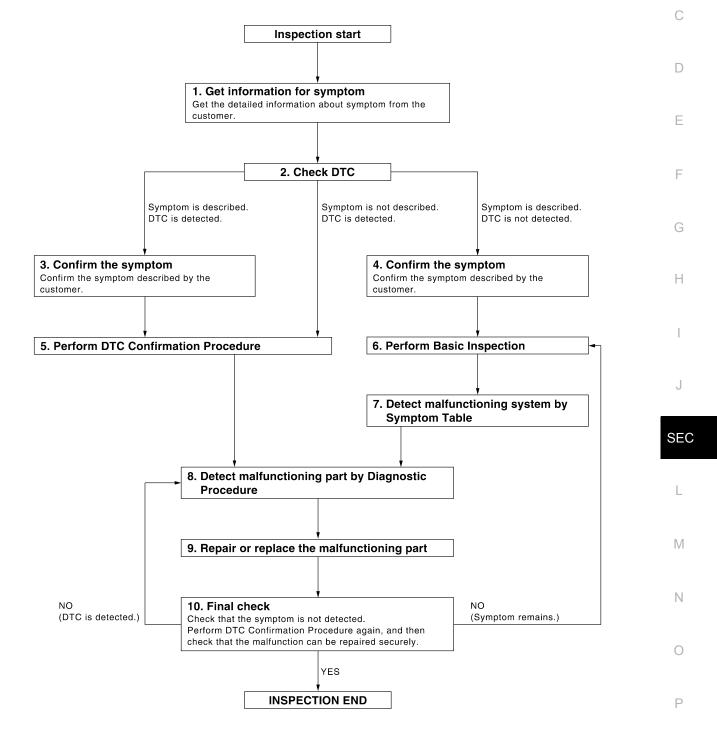
BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000004499046

А

OVERALL SEQUENCE



ALKIA0246GB

< BASIC INSPECTION >

1.GET INFORMATION FOR SYMPTOM

Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2

2.CHECK DTC WITH BCM AND IPDM E/R

- 1. Check "Self Diagnostic Result" with CONSULT-III.
- 2. Perform the following procedure if DTC is displayed.
- Record DTC and freeze frame data (Print them out with CONSULT-III.)
- Erase DTC.
- Study the relationship between the cause detected by DTC and the symptom described by the customer.
- 3. Check related service bulletins for information.

Is any symptom described and any DTC detected?

Symptom is described, DTC is displayed>>GO TO 3 Symptom is described, DTC is not displayed>>GO TO 4 Symptom is not described, DTC is displayed>>GO TO 5

3.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "Data Monitor" mode and check real time diagnosis results. Verify relation ship between the symptom and the condition when the symptom is detected.

>> GO TO 5

4.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "Data Monitor" mode and check real time diagnosis results. Verify relation ship between the symptom and the condition when the symptom is detected.

>> GO TO 6

5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always keep CONSULT-III connected to the vehicle, and check diagnostic results in real time. If two or more DTCs are detected, refer to <u>SEC-573</u>, "<u>DTC Inspection Priority Chart</u>" and determine trouble diagnosis order.

NOTE:

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. This
 simplified check procedure is an effective alternative though DTC cannot be detected during this check.
 If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC Confirmation Procedure.

Is DTC detected?

YES >> GO TO 8

NO >> Refer to <u>GI-42, "Intermittent Incident"</u>.

6.PERFORM BASIC INSPECTION

Perform SEC-414, "Basic Inspection".

Inspection End >>GO TO 7

7. DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to following symptom tables based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptoms.

• Engine start function: <u>SEC-593</u>, "Symptom Table".

Vehicle security system: <u>SEC-594</u>, "Symptom Table".

DIAGNOSIS AND REPAIR WORKFLOW < BASIC INSPECTION > [SEDAN WITHOUT INTELLIGENT KEY]	
Nissan vehicle immobilizer system-NATS: <u>SEC-595, "Symptom Table"</u> .	
	А
>> GO TO 8	
8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE	В
Inspect according to Diagnostic Procedure of the system.	D
NOTE: The Diagnostic Procedure described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.	С
Is malfunctioning part detected?	
YES >> GO TO 9 NO >> Check voltage of related BCM terminals using CONSULT-III.	D
9. REPAIR OR REPLACE THE MALFUNCTIONING PART	
1. Repair or replace the malfunctioning part.	Е
 Reconnect parts or connectors disconnected during Diagnostic Procedure again after repair or replace- 	
ment. 3. Check DTC. If DTC is displayed, erase it.	
5. Check DTC. II DTC is displayed, erase it.	F
>> GO TO 10	
10.final check	G
When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check	
again, and then check that the malfunction have been fully repaired.	Н
When symptom was described from the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.	
Is the inspection result normal?	
NO (DTC is detected) >> GO TO 8	
NO (Symptom remains) >>GO TO 6 YES >> Inspection End.	
	J
	SEC

L

M

Ν

Ο

Ρ

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

INFOID:000000004499247

The engine start function, door lock function, power distribution system and NATS-IVIS/NMS in the Remote Keyless Entry system are closely related to each other regarding control. Narrow down the functional area in question by performing basic inspection to identify which function is malfunctioning. The vehicle security function can operate only when the door lock and power distribution systems are operating normally. Therefore, it is easy to identify any factor unique to the vehicle security system by performing the vehicle security operation check after basic inspection.

1.CHECK DOOR LOCK OPERATION

1. Check the door lock for normal operation with the keyfob.

Successful door lock operation with the keyfob indicates that the remote keyless entry receiver is functioning normally.

Identify the malfunctioning point by referring to the DLK section if the door cannot be unlocked.

Can the door be locked with the keyfob?

YES >> GO TO 2

NO >> Refer to <u>DLK-415</u>, "INTELLIGENT KEY : Symptom Table".

2. CHECK ENGINE STARTING

1. Checks that the engine starts when operating the keyfob inserted into the key slot.

Does the engine start?

YES >> GO TO 3

NO >> Refer to <u>SEC-593</u>, "Symptom Table".

- **3.**CHECK STEERING LOCKING
- 1. Does the steering lock when operating door switch after switching the power supply from ON position (or ACC position) to LOCK position?

If door switch is malfunctioning, BCM cannot lock the steering. If BCM does not detect DTC, steering lock unit is normal.

Does steering lock?

- YES >> GO TO 4
- NO >> Refer to <u>DLK-293</u>, "Component Function Check".
- **4.**CHECK POWER SUPPLY INDICATOR SWITCHING
- 1. Press push-button ignition switch and position indicator will switch from LOCK, ACC to ON gradually when steering is locked. Check that the position indicator is illuminated at different positions of the circuit.

Is each position indicator illuminating?

YES >> GO TO 5

NO >> Refer to <u>SEC-499</u>, "Description".

5.CHECK VEHICLE SECURITY SYSTEM

1. Check the vehicle security system for normal operation.

The vehicle security function can operate only when the door lock and power distribution functions are operating normally.

Therefore, it is easy to identify any factor unique to the vehicle security by performing the vehicle security operation check after this basic inspection.

>> Refer to SEC-414, "Vehicle Security Operation Check".

Vehicle Security Operation Check

INFOID:000000004499248

1.INSPECTION START

Turn ignition switch "OFF" and pull out keyfob from key slot. **NOTE:**

Before starting operation check, open front windows.

PRE-INSPECTION FOR DIAGNOSTIC

< BASIC INSPECTION >

[SEDAN WITHOUT INTELLIGENT KEY]

>> GO TO 2	
2. CHECK SECURITY INDICATOR LAMP	А
 Lock doors using keyfob or mechanical key. Check that security indicator lamp illuminates for 30 seconds. 	В
Security indicator lamp should illuminate.	
OK >> GO TO 3 NG >> Perform diagnosis and repair. Refer to <u>SEC-514, "Component Function Check"</u> .	С
3. CHECK ALARM FUNCTION	
 After 30 seconds, security indicator lamp will start to blink. Open any door or hood before unlocking with keyfob or mechanical key, or open trunk lid without keyfob or mechanical key. 	D
Do alarm function properly.	
OK >> GO TO 4	Е
 NG >> Check the following. The vehicle security system does not phase in alarm mode. Refer to <u>SEC-594, "Symptom Table"</u>. Alarm (horn, headlamp and hazard lamp) do not operate. Refer to <u>SEC-594, "Symptom Table"</u>. 	F
4. CHECK ALARM CANCEL OPERATION	
	0
Unlock any door or open trunk lid using keyfob or mechanical key.	G
Alarm (horn, headlamp and hazard lamp) should stop.	
 OK >> Inspection End. NG >> Check door lock function. Refer to <u>DLK-246, "INTELLIGENT KEY : System Description"</u>. 	Η

J

SEC

L

Μ

Ν

0

Ρ

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

INSPECTION AND ADJUSTMENT

ECM RE-COMMUNICATING FUNCTION

ECM RE-COMMUNICATING FUNCTION : Description

INFOID:000000004499047

Performing following procedure can automatically perform re-communication of ECM and BCM, but only when the ECM has been replaced with a new one (*1).

*1: New one means an ECM which has never been energized on-board.

(In this step, initialization procedure by CONSULT-III is not necessary)

NOTE:

- When registering new Key IDs or replacing the ECM that is not brand new, refer to CONSULT-III Operation Manual.
- If multiple keys are attached to the key holder, separate them before work.
- Distinguish keys with unregistered key ID from those with registered ID.

ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement

INFOID:000000004499048

1.PERFORM ECM RE-COMMUNICATING FUNCTION

1. Install ECM.

- Insert the registered keyfob (*2), turn ignition switch to "ON".
 *2: To perform this step, use the key that has been used before performing ECM replacement.
- 3. Maintain ignition switch in "ON" position for at least 5 seconds.
- 4. Turn ignition switch to "OFF".
- 5. Start engine.

Can engine be started?

- YES >> Procedure is completed.
- NO >> Initialize control unit. Refer to CONSULT-III Operation Manual.

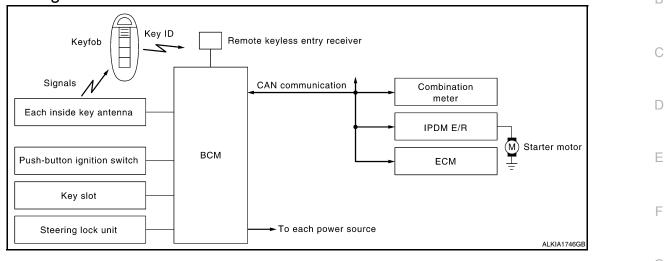
[SEDAN WITHOUT INTELLIGENT KEY]

< FUNCTION DIAGNOSIS > FUNCTION DIAGNOSIS

А



System Diagram



System Description

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator	-
Push-button ignition switch	Push switch			-
CVT device (park position switch)	P range	-		
PNP switch	N, P range	=	Steering lock relaySteering lock unit	
Stop lamp switch	Brake ON/OFF	- Engine start function	 Starter relay (IPDM E/R) Starter control relay (IPDM E/R) 	
Each inside key antenna	Request signal			
Remote keyless entry receiver	Key ID	=	Starter motor	
Each door switch	Door open/close	=	 KEY warning lamp 	
ECM	Engine status signal	-		

SYSTEM DESCRIPTION

 The engine start function of remote keyless entry system is a system that makes it possible to start and stop the engine without removing the key. It verifies the electronic ID using two-way communications when pressing the push-button ignition switch while carrying the keyfob, which operates based on the results of electronic ID verification for keyfob using two-way communications between the keyfob and the vehicle.
 NOTE:

The driver should carry the keyfob at all times.

- keyfob has 2 IDs [for keyfob and for NVIS (NATS)]. It can perform the door lock/unlock operation and the push-button ignition switch operation when the registered keyfob is carried.
- When the keyfob battery is discharged, it can be used as emergency back-up by inserting the keyfob to the key slot. At that time, perform the NVIS (NATS) ID verification. If it is used when the keyfob is carried, perform the keyfob ID verification.
- If the ID is successfully verified, and when push-button ignition switch is pressed, steering lock will be released and initiating the engine will be possible.
- If the door lock/unlock operation is performed when the keyfob battery is discharged, all doors lock/unlock can be performed by operating the driver door key cylinder using the mechanical key set in the keyfob.
- keyfob can be registered up to 4 keys (Including the standard keyfob) on request from the owner.
 NOTE:
 - Refer to <u>DLK-246, "INTELLIGENT KEY : System Description"</u> for any functions other than engine start function of remote keyless entry system.

Н

EC

Μ

Ν

Ρ

INFOID:000000004499049

INFOID:000000004499050

ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

PRECAUTIONS FOR REMOTE KEYLESS ENTRY SYSTEM

In the remote keyless entry system of model L32, the transponder [the chip for NVIS (NATS) ID verification] is integrated into the keyfob. (For the conventional models, it is integrated into the mechanical key.) Therefore, the mechanical key cannot perform the ID verification, and thus it cannot start the engine. Instead, the NVIS (NATS) ID verification can be performed by inserting the keyfob into the key slot, and then it can start the engine.

OPERATION WHEN KEYFOB IS CARRIED

- 1. When the push-button ignition switch is pressed and brake pedal is depressed, the BCM signals the inside key antenna and transmits the request signal to the keyfob.
- 2. The keyfob sends the request signal and transmits the keyfob ID signal to the BCM via the remote keyless entry receiver.
- 3. The BCM receives the keyfob ID signal and verifies it with the registered ID.
- 4. BCM transmits the steering lock unlock signal to steering lock unit and IPDM E/R if the verification results are OK.
- 5. IPDM E/R turns the steering lock relay ON and supplies power to the steering lock unit.
- 6. Release of the steering lock.
- 7. BCM transmits the power supply stop signal to IPDM E/R when it confirms that the steering lock is in the unlock condition.
- 8. IPDM E/R turns the steering lock relay OFF and stops power supply to the steering lock unit.
- 9. BCM turns ACC relay ON and transmits the ignition power supply ON signal to IPDM E/R.
- 10. IPDM E/R turns the ignition relay ON and starts the ignition power supply.
- 11. BCM confirms that the shift position is P or N.
- 12. BCM transmits the starter request signal via CAN communication to IPDM E/R and turns the starter relay in IPDM E/R ON if BCM judges that the engine start condition is satisfied.
- 13. IPDM E/R turns the starter control relay ON when receiving the starter request signal.
- 14. Battery power is supplied through the starter relay and the starter control relay to operate the starter motor and to start the cranking.

CAUTION:

If a malfunction is detected in the remote keyless entry system, the "KEY" warning lamp in the combination meter illuminates. At that time, the engine cannot be started.

15. When BCM received feedback signal from ECM acknowledging the engine has been initiated, the BCM transmits a stop signal to IPDM E/R and stops the cranking by turning OFF the starter motor relay. (If the engine initiating has failed, the cranking will stop automatically within 5 seconds.) CAUTION:

When the keyfob is carried outside of the vehicle (inside key antenna detection area) with the power supply in ACC or ON position, even if the engine start condition* is satisfied, the engine cannot be started.

*: For the engine start condition, refer to "PUSH-BUTTON IGNITION SWITCH OPERATION PROCEDURE".

OPERATION RANGE

Engine can be started when keyfob is inside the vehicle. However, sometimes engine might not start when keyfob is on instrument panel or in glove box.

OPERATION WHEN KEY SLOT IS USED

When the keyfob battery is discharged, it performs the NVIS (NATS) ID verification between the integrated transponder and BCM by inserting the keyfob into the key slot, and then the engine can be started. For details relating to starting the engine using key slot, refer to SEC-417, "System Description".

BATTERY SAVER SYSTEM

When all the following conditions are met for 60 minutes, the battery saver system will cut off the power supply to prevent battery discharge.

- The ignition switch is in the ACC position
- All doors are closed
- CVT selector lever is in the P position
- No remote keyless entry system failures (keyfob warning indicator is not ON)

Reset Condition of Battery Saver System

ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

Ρ

	0010 -	•	•
doors are closed, the s any of the following cor matically to lock positionOpening any doorOperating with keyfol	·	and the ignition switch is left aver system is released and t	on ACC position for 1 hour. If he steering will change auto-
STEERING LOCK O Steering is locked by s	-	n switch is in the OFF positior	·
Closing doorDoor is locked with keep	eyfob		
	ITION SWITCH OPERATIOn tion changing operation can be		ng operations.
 When an keyfob is w equivalent to the ope 	gine, the BCM monitors unde	-	s inserted to the key slot, it is
 CVT selector lever per Vehicle speed Steering lock condition 	osition		
	ndition is fulfilled, the engine that time, illumination repeats		
Power supply position	Engine start/	stop condition	Push-button ignition switch op-
	Brake pedal	CVT selector lever position	eration frequency

Dower eventy position	Engine start	Push-button ignition switch op-	
Power supply position	Brake pedal	CVT selector lever position	eration frequency
$LOCK \rightarrow ACC$	Not depressed	Any position	1
$LOCK \rightarrow ACC \rightarrow ON$	Not depressed	Any position	2
$\begin{array}{c} LOCK \to ACC \to ON \to \\ OFF \end{array}$	Not depressed	Any position	3
LOCK \rightarrow START ACC \rightarrow START ON \rightarrow START (Engine start)	Depressed	P or N position (*1)	1 [If the switch is pressed once, the engine starts from any pow- er supply position (LOCK, ACC, and ON)]
Engine is running → OFF (Engine stop)	_	Any position Vehicle speed < 4 km/h (2 MPH)	1
Engine is running → ACC (Engine stop)	_	Any position other than P (*2)	1
Engine stall return oper- ation while driving	_	P position	1

*1: When the CVT selector lever position is N position, the engine start condition is different according to the vehicle speed.

• At vehicle speed of 4 km/h (2 MPH) or less, the engine can start only when the brake pedal is depressed.

• At vehicle speed of 4 km/h (2 MPH) or more, the engine can start even if the brake pedal is not depressed. (It is the same as "Engine stall return operation while driving".)

*2: When the CVT selector lever position is in any position other than P position and when the vehicle speed is 5 km/h (3 MPH) or more, the engine stop condition is different.

• Press and hold the push-button ignition switch for 2 seconds or more. (When the push-button ignition switch is pressed for too short a time, the operation may be invalid, so properly press and hold to prevent an incorrect operation.)

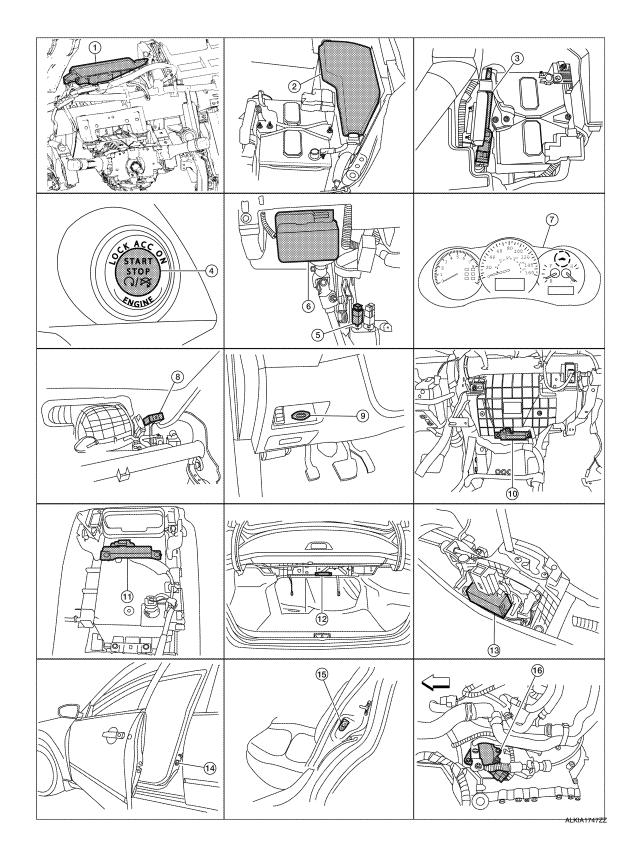
• Press the push-button ignition switch 3 times or more within 1.5 seconds. (Emergency stop operation)

ENGINE START FUNCTION

[SEDAN WITHOUT INTELLIGENT KEY]

Component Parts Location

INFOID:000000004499051



ENGINE START FUNCTION

< FUNCTION DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

-							
	1.	Body control module M16, M17, M18, M19, M21 (view with instrument panel removed)	2.	IPDM E/R E17, E18, F10	3.	ECM E10	А
	4.	Push button ignition switch M38	5.	Stop lamp switch E38 (view with lower driver instrument pan- el removed)	6.	Electronic steering column lock M32	В
	7.	Combination meter M24	8.	Remote keyless entry receiver M27 (view with instrument panel removed)	9.	Key slot M40	С
	10.	Instrument panel antenna M49 (view with instrument panel removed)	11.	Front console antenna M203 (bottom view of center console)	12.	Rear parcel shelf antenna B29	
	13.	CVT device (park position switch) M23	14.	Front door switch LH B8 RH B108	15.	Rear door switch LH B18 RH B116	D
	16.	Park neutral position (PNP) switch F25					

Component Description

INFOID:000000004499052

Е

Component	Reference	F
BCM	<u>SEC-498</u>	
Steering lock unit	<u>SEC-488</u>	G
Push-button ignition switch	<u>SEC-463</u>	
Door switch	DLK-293	
CVT device (park position switch)	<u>SEC-467</u>	Н
Inside key antenna	DLK-283	
Remote keyless entry receiver	DLK-337	
Stop lamp switch	<u>SEC-461</u>	
Park/neutral position switch	<u>SEC-475</u>	
Steering lock relay	<u>SEC-440</u>	J
Starter relay	<u>SEC-447</u>	
Starter control relay	<u>SEC-445</u>	05
Security indicator	<u>SEC-514</u>	SE0
Key warning lamp	<u>SEC-513</u>	

L

M

Ν

0

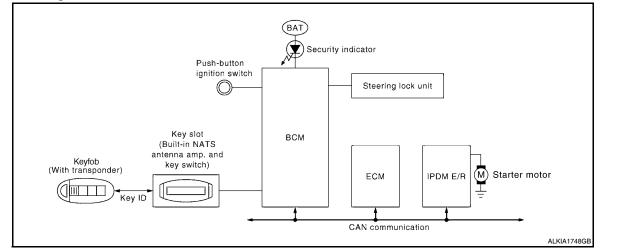
Ρ

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS) IAGNOSIS > [SEDAN WITHOUT INTELLIGENT KEY]

< FUNCTION DIAGNOSIS >

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

System Diagram



System Description

INFOID:000000004499054

INFOID:000000004499053

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM function	Actuator		
Push-button ignition switch	Push switch	NVIS (NATS)			
CVT device (park position switch)	P range		 Steering lock relay Steering lock unit Starter relay (IPDM E/R) Starter control relay (IPDM E/R) Starter motor KEY warning lamp 		
PNP switch	N, P range				
Stop lamp switch	Brake ON/OFF				
Key slot	Key ID				
Each door switch	Door open/close		Security indicator lamp		
ECM	Engine status signal				

SYSTEM DESCRIPTION

- The NVIS (NATS) is an anti-theft system by registering a keyfob ID in to the vehicle and prevents the engine being started by an unregistered keyfob. It has a higher protection against auto thefts that duplicate mechanical key.
- It performs the ID verification when starting the engine in the same way as the remote keyless entry system. But, it performs the NVIS (NATS) ID verification when inserting the keyfob and performs the keyfob ID verification when carrying the keyfob.
- The remote keyless entry system of L32 is not the same as the conventional models. The mechanical key integrated in the keyfob cannot start the engine. When the keyfob battery is discharged, the NVIS (NATS) ID verification memorized to the transponder integrated with keyfob is performed by inserting the keyfob into the key slot. If the verification results are OK, the engine start operation can be performed by the push-button ignition switch operation.
- Locate the security indicator and apply the anti-theft system equipment sticker, forewarn that the NVIS (NATS) is onboard with the model.
- The security indicator always blinks when the keyfob is removed from the key slot and when the power supply position is in LOCK position.
- Keyfob can be registered up to 4 keys (Including the standard ignition key) on request from the owner.
- The specified registration is required when replacing ECM, BCM or keyfob. The registrations procedure for NVIS (NATS) and registration procedure for keyfob when installing the BCM, refer to CONSULT-III Operation Manual.
- Possible symptom of NVIS (NATS) malfunction is "Engine cannot start". In L32, the engine can be started with the remote keyless entry system and NVIS (NATS). Identify the possible causes according to "Work Flow", Refer to <u>SEC-411, "Work Flow"</u>.
- If ECM other than Genuine NISSAN is installed, the engine cannot be started. For ECM replacement procedure, refer to <u>SEC-416. "ECM RE-COMMUNICATING FUNCTION : Special Repair Requirement"</u>.

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

< FUNCTION DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

D

F

INFOID 000000004499055

PRECAUTIONS FOR KEY REGISTRATION

- The key registration is a procedure that erases the current NVIS (NATS) ID once, and then re-registers a А new ID operation. Therefore the registered keyfob is necessary for this procedure. Before starting the registration operation collect all registered keyfobs from the customer
- When registering the keyfob, performs only one procedure to register simultaneously both ID (NVIS "NATS" В ID registration and keyfob ID registration). The NVIS (NATS) ID registration is the procedure that registers the ID stored into the transponder (integrated in keyfob) to BCM. The keyfob ID registration is the procedure that registers the ID to BCM.
- When performing the keyfob registration only, the engine cannot be started by inserting the key into the key slot. When performing the NVIS (NATS) registration only, the engine cannot be started by the operation when carrying the key. The registrations of both systems should be performed.

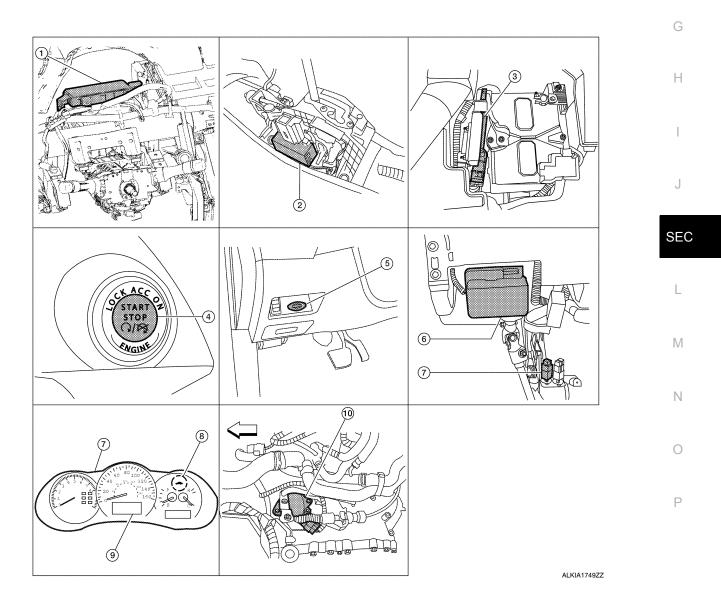
SECURITY INDICATOR

- Warns that the vehicle is equipped with NVIS (NATS).
- The security indicator always blinks when the keyfob is removed from the key slot and when the ignition Ε switch is in LOCK position.

NOTE:

Because security indicator is highly efficient, the battery is barely affected.

Component Parts Location



NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS) [SEDAN WITHOUT INTELLIGENT KEY] < FUNCTION DIAGNOSIS >

- 1. Body control module M16, M17, M18, M19, M21 2. (view with instrument panel removed)
- Push button ignition switch M38 4.
- Stop lamp switch E38 7. (view with lower LH instrument panel removed)
- 10. Park neutral position switch F25

Component Description

CVT device (park position switch) 3. ECM E10

- Electronic steering column lock M32 6. (steering column)
- Information display 9.

INFOID:000000004499056

Component	Reference
BCM	<u>SEC-498</u>
Steering lock unit	<u>SEC-488</u>
Push-button ignition switch	<u>SEC-499</u>
Door switch	DLK-293
CVT device (park position switch)	<u>SEC-467</u>
Inside key antenna	DLK-283
Remote keyless entry receiver	DLK-337
Stop lamp switch	<u>SEC-461</u>
Park/neutral position switch	<u>SEC-475</u>
Steering lock relay	<u>SEC-439</u>
Starter relay	<u>SEC-482</u>
Starter control relay	<u>SEC-466</u>
Security indicator	<u>SEC-514</u>
Key warning lamp	<u>SEC-513</u>

M23

Security indicator lamp

5. Key slot M40

8.

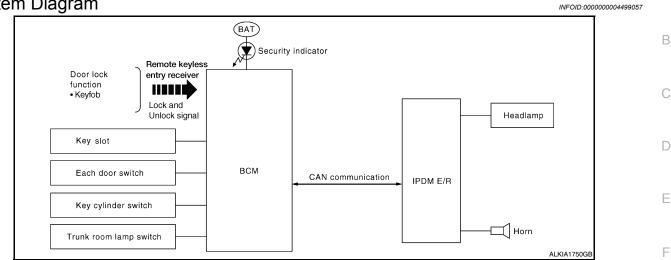
VEHICLE SECURITY SYSTEM

< FUNCTION DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

VEHICLE SECURITY SYSTEM

System Diagram



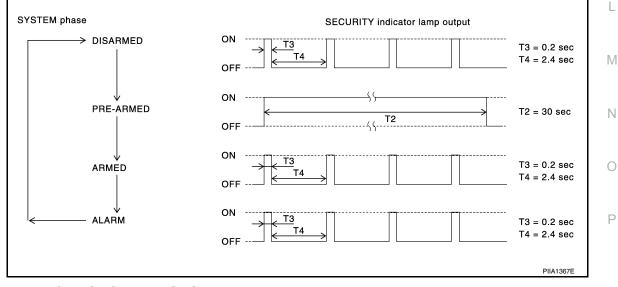
System Description

INFOID:000000004499058

INPUT/OUTPUT SIGNAL CHART

Switch	Input signal to BCM	BCM system	Actuator	Н
All door switch	Open or close			
Trunk room lamp switch				1
Door key cylinder switch	Lock or unlock			I
Door lock and unlock switch			IPDM E/RHead lamp	
Door request switch		Vehicle security system	HornSecurity indicator lamp	J
Keyfob	Lock or unlock			
	Panic alarm	-		
Key slot	Keyfob sensing			SEC

OPERATION FLOW



SETTING THE VEHICLE SECURITY SYSTEM

Initial Condition

• Ignition switch is in OFF position.

А

Disarmed Phase

- When doors or trunk is open, the vehicle security system is set in the disarmed phase on the assumption that the owner is inside or near the vehicle.
- When the vehicle security system is in the disarmed phase, the security indicator lamp blinks every 2.4 seconds.

Pre-armed Phase and Armed Phase

When the following operation 1 or 2 is performed, the vehicle security system turns into the "pre-armed" phase. (The security indicator lamp illuminates.)

- 1. BCM receives LOCK signal from front door key cylinder switch or keyfob, after trunk and all doors are closed.
- Trunk and all doors are closed after front doors are locked by key or door lock and unlock switch. The security indicator lamp illuminates for 30 seconds. Then, the system automatically shifts into the "armed" phase.

CANCELING THE SET VEHICLE SECURITY SYSTEM

When one of the following operations is performed, the armed phase is canceled.

- 1. Unlock the doors with the key or keyfob.
- 2. Turn ignition switch "ON" or "ACC" position.

CANCELING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM When unlocking the door with the key or keyfob the alarm operation is canceled.

ACTIVATING THE ALARM OPERATION OF THE VEHICLE SECURITY SYSTEM

Check that the system is in the armed phase. (The security indicator lamp blinks every 2.4 seconds.) When the following operation 1 or 2 is performed, the system sounds the horns and flashes the headlamps for about 50 seconds.

- 1. Trunk or any door is opened during armed phase.
- 2. Disconnecting and connecting the battery connector before canceling armed phase.

PANIC ALARM OPERATION

Keyfob will not operate horn and headlamps if the ignition switch is in the ACC or ON position.

When the vehicle security system is triggered, ground is supplied intermittently to both headlamp relay and horn relay.

When headlamp relay and horn relay are energized, then power is supplied to headlamps (LH and RH) and horns (HIGH and LOW).

The headlamp flashes and the horn sounds intermittently.

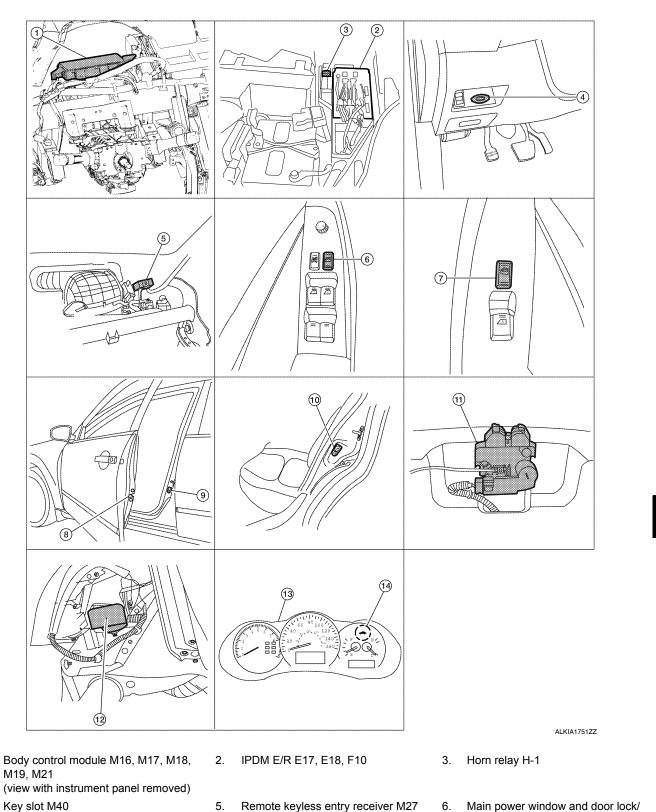
The alarm automatically turns off after 50 seconds or when BCM receives any signal from keyfob.

VEHICLE SECURITY SYSTEM

[SEDAN WITHOUT INTELLIGENT KEY]

Component Parts Location

INFOID:000000004499059



7. Power window and door lock/unlock switch RH D105

1.

4.

- Remote keyless entry receiver M27 (view with instrument panel removed)
- Front door lock assembly LH (key cyl- 9. 8. inder switch) D10
- Main power window and door lock/ unlock switch D7, D8
 - Front door switch LH B8 RH B108

А

В

С

D

Ε

F

Н

J

SEC

L

Μ

Ν

Ο

Ρ

VEHICLE SECURITY SYSTEM

- 11. Trunk lamp switch and trunk release solenoid B28
- [SEDAN WITHOUT INTELLIGENT KEY] 12. Horn E216
 - (view with front fender protector LH removed)

13. Combination meter M24

Component Description

10. Rear door switch LH B18

RH B108

14. Security indicator lamp

INFOID:000000004499060

Component	Reference
BCM	<u>SEC-425</u>
Horn relay	<u>SEC-510</u>
Security indicator	<u>SEC-514</u>
Door switch	<u>DLK-293</u>
Door lock actuator	<u>DLK-326</u>
Trunk lid lock assembly	<u>DLK-330</u>
Door key cylinder switch	<u>DLK-305</u>
Door lock and unlock switch	<u>DLK-296</u>
Key slot	<u>DLK-303</u>
Remote keyless entry receiver	DLK-337

DIAGNOSIS SYSTEM (BCM) COMMON ITEM

COMMON ITEM : Diagnosis Description

BCM CONSULT-III FUNCTION

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description	
WORK SUPPORT	Changes the setting for each system function.	
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM.	
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.	
DATA MONITOR	The BCM input/output signals are displayed.	
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.	
ECU IDENTIFICATION	The BCM part number is displayed.	
CONFIGURATION	This function is not used even though it is displayed.	

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

Custom	Cub sustam aslastian itam	Diagnosis mode		
System	Sub system selection item	WORK SUPPORT	DATA MONITOR	ACTIVE TEST
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Remote keyless entry system	MUTI REMOTE ENT	×	×	×
Exterior lamp	HEADLAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
BCM	BCM	×		
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	

COMMON ITEM : CONSULT-III Function

ECU IDENTIFICATION Displays the BCM part No.

SELF-DIAG RESULT Refer to <u>BCS-91, "DTC Index"</u>. А

В

С

1.1

INFOID:000000004499061

INFOID:000000004499062

DIAGNOSIS SYSTEM (BCM)

[SEDAN WITHOUT INTELLIGENT KEY]

MULTI REMOTE ENT

MULTI REMOTE ENT : CONSULT-III Function (BCM - MULTIREMOTE ENT)

INFOID:000000004507210

DATA MONITOR

Monitor Item	Condition
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-BK	NOTE: This item is displayed, but cannot be monitored.
CDL LOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of door lock and unlock switch.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from keyfob.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from keyfob.
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from keyfob.
RKE-PANIC	Indicates [ON/OFF] condition of PANIC button of keyfob.
RKE-P/W OPEN	Indicates [ON/OFF] condition of P/W DOWN signal from keyfob.
RKE-MODE CHG	Indicates [ON/OFF] condition of MODE CHANGE signal from keyfob.
KEY CYL LK-SW	Indicated [ON/OFF] condition of lock signal from door key cylinder.
KEY CYL UN-SW	Indicated [ON/OFF] condition of unlock signal from door key cylinder.
KEY CYL SW-TR	NOTE: This item is displayed, but cannot be monitored.

ACTIVE TEST

Test item	Description
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
LUGGAGE LAMP TEST	NOTE: This item is displayed, but cannot be tested.
DOOR LOCK	 This test is able to check door lock/unlock operation. The all door lock actuators are locked when "ALL LCK" on CONSULT-III screen is touched. The all door lock actuators are unlocked when "ALL UNLK" on CONSULT-III screen is touched. The door lock actuator (driver side) is unlocked when "DR UNLK" on CONSULT-III screen is touched. The door lock actuator (passenger side) is unlocked when "AS UNLK" on CONSULT-III screen is touched. The door lock actuator (passenger side) is unlocked when "AS UNLK" on CONSULT-III screen is touched. The door lock actuator (rear LH and RH) is unlocked when "OTR ULK" on CONSULT-III screen is touched.
FLASHER	This test is able to check flasher operation [LH/RH/OFF].
HORN	This test is able to check horn operation [ON/OFF].
TRUNK/GLASS HATCH	This test is able to check trunk lid opener actuator open operation. This actuator opens when "ON" on CONSULT-III screen is touched.
TRUNK/BACK DOOR	NOTE: This item is displayed, but cannot be tested.
AUTOMATIC BACK DOOR	NOTE: This item is displayed, but cannot be tested.

DIAGNOSIS SYSTEM (BCM)

[SEDAN WITHOUT INTELLIGENT KEY]

Н

ΞC

L

INFOID:000000004499064

Test item	Description
DOOR LOCK-UNLOCK SET	Selective unlock function mode can be changed to operate (WITH) or not operate (WITHOUT) with this mode.
HORN CHIRP SET	Answer back function (horn) mode can be changed in this mode. For the detail of the setting.
HAZARD LAMP SET	 Answer back function (hazard) mode can be changed in this mode. MODE1: Non-operation MODE2: Lock (non-operation) Unlock (blink once) MODE3: Lock (blink towice) Unlock (non-operation) MODE4: Lock (blink towice) Unlock (blink once)
AUTO LOCK SET	Auto door lock time can be changed in this mode.MODE 1: 1 minuteMODE 2: 5 minutes
PANIC ALARM SET	 Panic alarm button pressing time on keyfob remote control button can be selected from the following with this mode. MODE1: 0.5 sec. MODE2: 1.5 sec. MODE3: Non-operation
PW DOWN SET	 Unlock button pressing time on keyfob button can be selected from the following with this mode. MODE 1: 3 sec. MODE 2: Non-operation MODE 3: 5 se

THEFT ALM

THEFT ALM : CONSULT-III Function (BCM - THEFT ALM)

WORK SUPPORT

Test Item	Description	J
SECURITY ALARM SET	This mode is able to confirm and change security alarm ON-OFF setting.	
THEFT ALM TRG	The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching "CLEAR" on CONSULT-III screen.	SEC

DATA MONITOR

Monitored Item	Description	
REQ SW -DR	Indicates [ON/OFF] condition of front door request switch (driver side).	
REQ SW -AS	Indicates [ON/OFF] condition of front door request switch (passenger side).	M
REQ SW -RR	Indicates [ON/OFF] condition of rear door request switch (passenger side.	
REQ SW -RL	Indicates [ON/OFF] condition of rear door request switch (driver side).	N
REQ SW -BD/TR	Indicates [ON/OFF] condition of trunk request switch.	
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch	
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.	0
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.	
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.	D
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.	
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.	
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.	
DOOR SW-BK	NOTE: This is displayed even when it is not equipped.	
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.	

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

INFOID:000000004499065

Monitored Item	Description
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from front door key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from front door key cylinder switch.
KEY CYL SW-TR	NOTE: This is displayed even when it is not equipped.
TR/BD OPEN SW	Indicates [ON/OFF] condition of trunk opener switch.
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk lid.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.

ACTIVE TEST

Test Item	Description
THEFT IND	This test is able to check security indicator lamp operation. The lamp will be turned on when "ON" on CONSULT-III screen is touched.
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation. The horns will be activated for 0.5 sec- onds after "ON" on CONSULT-III screen is touched.
HEADLAMP(HI)	This test is able to check vehicle security lamp operation. The headlamps will be activated for 0.5 seconds after "ON" on CONSULT-III screen is touched.
FLASHER	This test is able to check vehicle security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.

IMMU

IMMU : CONSULT-III Function (BCM - IMMU)

DATA MONITOR

Monitor item	Content
CONFRM ID ALL	Indicates [YET] at all time. Switch to [DONE] when a registered Intelligent Key is inserted into the key slot.
CONFIRM ID4	
CONFIRM ID3	
CONFIRM ID2	
CONFIRM ID1	
TP 4	Indicates the number of ID which has been registered.
TP 3	
TP 2	
TP 1	
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.

ACTIVE TEST

Test Item	Description
THEFT IND	This test is able to check security indicator operation [ON/OFF].

COMPONENT DIAGNOSIS U1000 CAN COMM CIRCUIT

Description

INFOID:000000004499071 B

INFOID:000000004499072

INFOID:000000004499073

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H line, CAN-L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

DTC Logic

DTC DETECTION LOGIC

CONSULT-III dis- play description	DTC Detection Condition	Possible cause	F
CAN COMM CIR- CUIT [U1000]	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more.	In CAN communication system, any item (or items) of the following listed below is malfunctioning. • Transmission • Receiving (ECM) • Receiving (ABS) • Receiving (METER/M&A) • Receiving (TCM) • Receiving (IPDM E/R)	G H

Diagnosis Procedure

1.PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 seconds or more.

2. Check "Self Diagnostic Result".

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to LAN-8, "CAN Communication Control Circuit".
- NO >> Refer to GI-42, "Intermittent Incident".

Μ

Ν

Ρ

[SEDAN WITHOUT INTELLIGENT KEY]

А

Ε

U1010 CONTROL UNIT (CAN)

DTC Logic

DTC DETECTION LOGIC

CONSULT-III display description	DTC Detection Condition	Possible cause
CAN COMM CIRCUIT [U1010]	BCM detected internal CAN communication circuit malfunction.	ВСМ

Diagnosis Procedure

INFOID:000000004499075

INFOID:000000004499074

1. REPLACE BCM

When DTC U1010 is detected, replace BCM.

>> Replace BCM. Refer to BCS-96, "Removal and Installation".

B2013 ID DISCORD, IMMU-STRG

Description

BCM performs the ID verification with the steering lock unit and releases the steering lock if both BCM and В steering lock unit ID are same. BCM starts the communication with the steering lock unit when keyfob is carried into the passenger compartment and the push-button ignition switch is pressed.

DTC Logic

INFOID:000000004499077

INFOID:000000004499076

А

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis	DTC detecting condition	Possible cause
DIC NO.	name	DTC detecting condition	Possible cause
B2013	ID DISCORD, IMMU- STRG	The ID verification results between BCM and steer- ing control unit are NG. The registration is neces- sary.	Steering wheel lock unit
TC CONFI	RMATION PROC	EDURE	
1.perform	M DTC CONFIRMA	TION PROCEDURE	
1. Lock stee 2. Press the	ering. e push-button ignitic	n switch.	
		ilt" with CONSULT-III.	
s DTC detec	ted?		
		<u>Diagnosis Procedure"</u> .	
	nspection End.		
Jiagnosis	Procedure		INFOID:00000004499078
1.PERFORM	INITIALIZATION		
		JLT-III. Re-register all keyfobs.	
	-	of keyfob, refer to "CONSULT-III Operation	
-		<u>I can steering lock be released with re-regised</u>	stered keyfob?
	Steering lock unit wa		
	Replace steering wh		

Μ

Ν

Ο

Ρ

SEC-435

B2014 CHAIN OF STRG-IMMU

Description

INFOID:000000004499079

[SEDAN WITHOUT INTELLIGENT KEY]

BCM performs the ID verification with the steering lock unit to release the steering. BCM starts the communication with the steering lock unit when keyfob is carried into the passenger compartment and the push-button ignition switch is pressed.

DTC Logic

INFOID:000000004499080

INFOID:000000004499081

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2014	CHAIN OF STRG- IMMU	Inactive communication between steering control unit and BCM	 Harness or connectors (steering lock unit circuit is open or short- ed) Steering lock unit BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Lock steering.
- 2. Press the push-button ignition switch.
- 3. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-436</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK STEERING LOCK UNIT POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect steering lock unit harness connector.
- 3. Check voltage between steering lock unit harness connector and ground while turning ignition switch from OFF to ACC.

Steering lock unit		Ground	Ignition switch	Voltage [V]	
Connector	Terminal	Cround	position	voltage [v]	
M32	7	$OFF \to ACC$	Battery volt- age		
			OFF or ON	0	

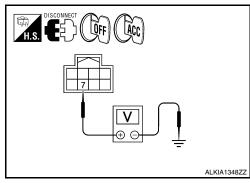
Is the inspection result normal?

NO >> GO TO 2

2.CHECK STEERING LOCK UNIT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect BCM harness connector.



B2014 CHAIN OF STRG-IMMU

< COMPONENT DIAGNOSIS >

 Check continuity between steering lock unit harness connector M32 (A) terminal 7 and BCM harness connector M19 (B) terminal 94.

Steering	lock unit	B	CM	Continuity
Connector	Terminal	connector Terminal		Continuity
A: M32	7	B: M19	94	Yes

4. Check continuity between steering lock unit harness connector M32 (A) terminal 7 and ground.

Steering	lock unit	Ground	Continuity	
Connector Terminal		Ground	Continuity	
A: M32	7	Ground	No	

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

$\mathbf{3}$.check steering lock unit ground circuit

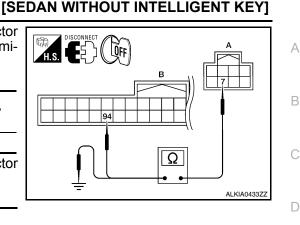
- 1. Turn ignition switch OFF.
- 2. Check continuity between steering lock unit and ground.

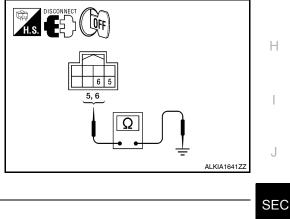
Steering lock unit		Ground	Continuity	
Connector	Connector Terminal		Continuity	
M32	5	Ground	Yes	
WIGE	6	Cround	163	

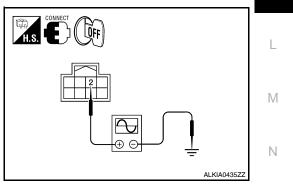
Is the inspection result normal?

YES >> GO TO 4

- NO >> Repair harness or connector.
- 4. CHECK STEERING LOCK UNIT COMMUNICATION SIGNAL
- 1. Connect steering lock unit harness connector.
- 2. Using an oscilloscope, read voltage signal between steering lock unit harness connector and ground.







0

Ρ

Е

F

Steering lock unit		Ground	Steering lock unit condi-	Value
Connector	Terminal	Cicana	tion	
			Lock	Battery voltage
M32	2	Ground	Lock or unlock	(V) 15 10 5 0 50 ms JMKIA0066GB
			For 15 seconds after un- lock	Battery voltage
			15 seconds or later after unlock.	0 V

Steering is locked Steering is unlocked

- : Opening the door when ignition switch is ON to OFF.
- : Ignition switch is OFF to ACC.

Is the inspection result normal?

YES >> Replace steering lock unit.

NO >> GO TO 5

5. CHECK STEERING LOCK UNIT COMMUNICATION CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect BCM harness connector.

 Check continuity between BCM harness connector M19 (A) terminal 99 and steering lock unit harness connector M32 (B) terminal 2.

BCM		Steering	Continuity	
Connector	Terminal	connector Terminal		Continuity
A: M19	99	B: M32	2	Yes

4. Check continuity between BCM harness connector M19 (A) terminal 99 and ground.

B	СМ	Ground	Continuity	
Connector Terminal		Ground	Continuity	
A: M19	99	Ground	No	

Is the inspection normal?

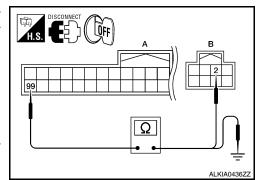
YES >> GO TO 6

NO >> Repair harness or connector.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.



B2108 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

B2108 STEERING LOCK RELAY

Description

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID-000000004499083

INFOID:000000004499084

INFOID:000000004499082

А

В

Е

Н

SEC

L

Μ

DTC DETECTION LOGIC

NOTE:

- If DTC B2108 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to D SEC-433, "DTC Logic".
- If DTC B2108 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-434, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2108	STRG LCK RELAY ON	IPDM E/R detects that the relay is stuck at ON po- sition for about 1 second even if the IPDM E/R re- ceives steering lock relay ON/OFF signal from BCM.	• IPDM E/R	F

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Press the push-button ignition switch under the following conditions and wait for at least 1 second. 1.
- CVT selector lever is in the P position
- Do not depress the brake pedal.
- Check "Self diagnostic result" with CONSULT-III. 2.

Is DTC detected?

- >> Refer to SEC-439, "Diagnosis Procedure". YES
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK FUSE

- 1. Turn ignition switch OFF.
- Check 10A fuse (No. 40, located in IPDM E/R). 2.
- Is the inspection result normal?

>> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation". YES NO

>> Check the following.

Harness for open or short between IPDM E/R and battery

Fuse

Ν

[SEDAN WITHOUT INTELLIGENT KEY]

B2109 STEERING LOCK RELAY

Description

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID-000000004499086

INFOID:000000004499087

INFOID:000000004499085

DTC DETECTION LOGIC

NOTE:

- If DTC B2109 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-433, "DTC Logic".
- If DTC B2109 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-434, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2109	STRG LCK RELAY OFF	IPDM E/R detects that the relay is stuck at OFF po- sition for about 1 second even if the IPDM E/R re- ceives steering lock relay ON/OFF signal from BCM.	 Harness or connector (power supply circuit) IPDM E/R Battery

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- Press the push-button ignition switch under the following conditions and wait for at least 1 second. 1.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- Check "Self diagnostic result" with CONSULT-III. 2.

Is DTC detected?

- >> Refer to SEC-440, "Diagnosis Procedure". YES
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK POWER SUPPLY CIRCUIT

Check IPDM E/R power supply circuit. Refer to PCS-23, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2

- NO >> Repair the malfunctioning parts
- 2.CHECK FUSE
- Turn ignition switch OFF. 1.
- Check 10A fuse (No. 40, located in IPDM E/R). 2.

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation". NO
 - >> Check the following.
 - Harness for open or short between IPDM E/R and battery
 - Fuse

< COMPONENT DIAGNOSIS >

B210A STEERING LOCK CONDITION SWITCH

Description

There are 2 switches in the electronic steering column lock. IPDM E/R compares those 2 switches conditions by to judge the present steering status and transmit the result to BCM via CAN communication.

DTC Logic

INFOID:000000004499089

INFOID:000000004499088

DTC DETECTION LOGIC

NOTE:

- If DTC B210A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B210A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210A	STRG LCK STATE SW	 BCM detects the mismatch between the following for 1 second Steering lock or unlock Feedback of steering lock status from IPDM E/R (CAN) 	 Harness or connectors [electronic steering column lock circuit (BCM side) is open or shorted] Harness or connectors [electronic steering column lock circuit (IPDM E/R side) is open or shorted.] Electronic steering column lock IPDM E/R

DTC CONFIRMATION PROCEDURE

PERFORM DTC CONFIRMATION PROCEDURE Press the push-button ignition switch under the following conditions and wait for at least 1 second. CVT selector lever is in the P or N position

Do not depress the brake pedal 2. Check "Self diagnostic result" with CONSULT-III. SEC Is DTC detected? YES >> Refer to SEC-441, "Diagnosis Procedure". NO >> Inspection End. Diagnosis Procedure INFOID:000000004499090 **1**.INSPECTION START Μ Check the case in which DTC is detected. Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed · Case2: It is detected after ignition switch is changed from ON to OFF Ν In which case is DTC detected? Case1 >> GO TO 2 Case2 >> GO TO 7 Ο 2.CHECK BCM OUTPUT SIGNAL Turn ignition switch OFF. 1. Ρ 2. Disconnect electronic steering column lock harness connector and IPDM E/R harness connector.

SEC-441

Α

Е

J

< COMPONENT DIAGNOSIS >

3. Check voltage between electronic steering column lock harness connector and ground.

Electronic steer	ing column lock	Ground	Voltage [V]
Connector Terminal		Ground	voltage [v]
M32	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4 NO >> GO TO 3

3. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 85 and electronic steering column lock harness connector M32 (B) terminal 3.

B	CM	Electronic stee	ring column lock	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	85	B: M32	3	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 85 and ground.

B 3

B	СМ	Ground	Continuity	
Connector	Connector Terminal		Continuity	
A: M19	85	Ground	No	

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

4.CHECK IPDM E/R OUTPUT SIGNAL

- 1. Connect IPDM E/R harness connector.
- 2. Disconnect BCM harness connector.
- 3. Check voltage between electronic steering column lock harness connector and ground.

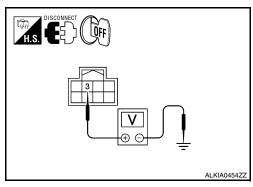
Electronic stee	ring column lock	Ground	Voltage [V]
Connector Terminal		Cround	voltage [v]
M32	3	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 5

5. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II





٧

ALKIA0454ZZ

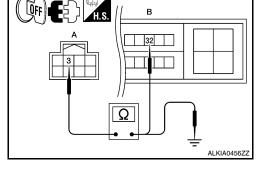
< COMPONENT DIAGNOSIS >

 Check continuity between electronic steering column lock harness connector M32 (A) terminal 3 and IPDM E/R harness connector E18 (B) terminal 32.

Electronic steering column lock		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	3	B: E18	32	Yes

 Check continuity between electronic steering column lock harness connector M32 (A) terminal 3 and ground.

Electronic stee	ring column lock	Ground	Continuity
Connector	Connector Terminal		Continuity
A: M32	3	Ground	No



А

В

D

Ε

F

Н

SEC

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

7.CHECK BCM OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect electronic steering column lock harness connector and IPDM E/R harness connector E5.
- 3. Check voltage between electronic steering column lock harness connector and ground.

Electronic stee	ring column lock	Ground	Voltage [V]
Connector Terminal		Ground	voltage [v]
M32	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 9

NO >> GO TO 8

8. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

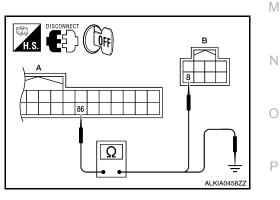
1. Disconnect BCM harness connector M122.

 Check continuity between BCM harness connector M19 (A) terminal 86 and electronic steering column lock harness connector M32 (B) terminal 8.

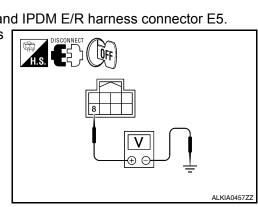
B	CM	electronic steer	ring column lock	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	86	B: M32	8	Yes

 Check continuity between BCM harness connector M19 (A) terminal 86 and ground.

В	CM	Ground	Continuity	
Connector Terminal		Cround	Continuity	
A: M19	86	Ground	No	



Is the inspection result normal?



[SEDAN WITHOUT INTELLIGENT KEY]

< COMPONENT DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

OFF

YES >> GO TO 11

NO >> Repair harness or connector.

9.CHECK IPDM E/R OUTPUT SIGNAL

1. Connect IPDM E/R harness connector.

- 2. Disconnect BCM harness connector.
- 3. Check voltage between electronic steering column lock harness connector and ground.

Electronic steer	Electronic steering column lock		Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	8	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace electronic steering column lock.

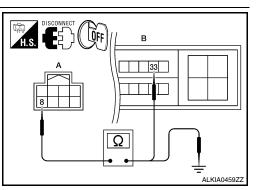
NO >> GO TO 10

10. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

 Check continuity between electronic steering column lock harness connector M32 (A) terminal 8 and IPDM E/R harness connector E18 (B) terminal 33.

Electronic steering column lock		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	8	B: E18	33	Yes

2. Check continuity between electronic steering column lock harness connector and ground.



 $\oplus \in$

ALKIA0457ZZ

Electronic steer	Electronic steering column lock		Continuity	
Connector	Terminal	Ground	Continuity	
A: M32	8	Ground	No	

Is the inspection result normal?

YES >> GO TO 11

NO >> Repair harness or connector.

11.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

B210B STARTER CONTROL RELAY

< COMPONENT DIAGNOSIS >

B210B STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000004499092

INFOID:000000004499091

DTC DETECTION LOGIC

NOTE:

- If DTC B210B is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B210B is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210B	START CONT RLY ON	 IPDM E/R detects that the relay is stuck at ON position even if the following conditions are met for about 1 second. Starter control relay ON/OFF signal from BCM Shift park neutral position (PNP) switch input signal 	• IPDM E/R
DTC CONFI	RMATION PROC	EDURE	
1.PERFORM	M DTC CONFIRMA	TION PROCEDURE	
 CVT sele Depress 	ector lever is in the l the brake pedal	on to start under the following conditions ar P or N position. t" with CONSULT-III.	nd wait for at least 1 second.
Is DTC detec	•		
	Refer to <u>SEC-445. "</u> nspection End.	<u>Diagnosis Procedure"</u> .	
Diagnosis	Procedure		INFOID:00000004499093
1.INSPECT	ION START		

1. Turn ignition switch ON.

2. Check "Self diagnostic result" with CONSULT-III.

3. Touch "ERASE".

4. Perform DTC Confirmation Procedure. See <u>PCS-45, "DTC Index"</u>.

Is the DTC B210B displayed again?

- YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation".
- NO >> Inspection End.

SEC-445

[SEDAN WITHOUT INTELLIGENT KEY]

А

Е

L

Μ

Ν

Ο

Ρ

B210C STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000004499095

INFOID:000000004499096

INFOID:000000004499094

DTC DETECTION LOGIC

NOTE:

- If DTC B210C is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B210C is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210C	START CONT RLY OFF	 IPDM E/R detects that the relay is stuck at ON position even if the following conditions are met for about 1 second. Starter control relay ON/OFF signal from BCM Shift park neutral position (PNP) switch input signal 	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn the power supply position to start under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position.
- Depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-446</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. Refer to <u>PCS-45, "DTC Index"</u>.

Is the DTC B210C displayed again?

- YES >> Replace IPDM E/R. Refer to PCS-48. "Removal and Installation".
- NO >> Inspection End.

SEC-446

B210D STARTER RELAY

Description

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000004499098

INFOID:000000004499097

[SEDAN WITHOUT INTELLIGENT KEY]

DTC DETECTION LOGIC

NOTE:

- If DTC B210D is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B210D is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.
- If DTC B210D is displayed with DTC B2617, first perform the trouble diagnosis for DTC B2617. Refer to <u>SEC-496, "DTC Logic"</u>.

B210D STA ON	ARTER RELAY	 IPDM E/R detects that the relay is stuck at ON position even if the following conditions are met for about 1 second. Starter control relay ON/OFF signal from BCM Shift park neutral position (PNP) switch input 	• IPDM E/R	G

DTC CONFIRMATION PROCEDURE

- **1.**PERFORM DTC CONFIRMATION PROCEDURE
- 1. Ignition switch ON under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-447</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK STARTER RELAY POWER SUPPLY CIRCUIT

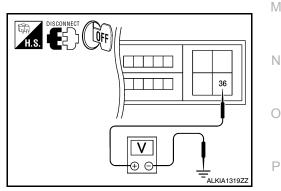
1. Turn ignition switch OFF.

- 2. Disconnect IPDM E/R harness connector.
- Check voltage between IPDM E/R harness connector and ground.

IPDN	IPDM E/R		Voltage (V)
Connector	Terminal	Ground	voltage (v)
E18	36	Ground	Battery voltage

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to <u>PCS-48</u>, "Removal and <u>Installation"</u>.
- NO >> Check harness for open or short between IPDM E/R and battery.



А

В

Ε

SEC

L

INFOID:000000004499099

B210E STARTER RELAY

Description

INFOID:000000004499100

[SEDAN WITHOUT INTELLIGENT KEY]

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000004499101

INFOID:000000004499102

DTC DETECTION LOGIC

NOTE:

- If DTC B210E is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B210E is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210E	STARTER RELAY OFF	 IPDM E/R detects that the relay is stuck at ON position even if the following conditions are met for about 1 second. Starter control relay ON/OFF signal from BCM Shift park neutral position (PNP) switch input 	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

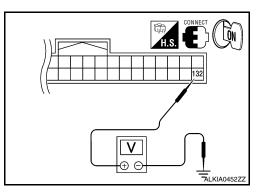
Is DTC detected?

- YES >> Refer to <u>SEC-448</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK STARTER RELAY OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- 3. Check voltage between BCM harness connector and ground.



BCM co	onnector	Ground	Condition		Voltage (V)	
Connector	Terminal	Ground	Ignition switch	Brake pedal	CVT selector lever	voltage (v)
M21	132	Ground	ON	Depressed	P or N	Battery voltage
1712 1	152	Ground	ON	Depressed	Other than above	0

SEC-448

B210E STARTER RELAY

< COMPONENT DIAGNOSIS > Is the inspection result normal?

YES >> GO TO 3

NO >> GO TO 2

2.CHECK STARTER RELAY OUTPUT SIGNAL CIRCUIT

- 1. Disconnect IPDM E/R harness connector.
- 2. Check continuity between IPDM E/R harness connector and BCM harness connector.

IPDN	IPDM E/R		BCM	
Connector	Terminal	Connector	Terminal	Continuity
A: E17	46	B: M21	132	Yes

Check continuity between BCM harness connector and ground. 3.

IPDN	M E/R	Ground	Continuity	
Connector	Terminal	Clound	Continuity	
A: E17	46	Ground	No	

YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation". >> Repair harness connector. $\mathbf{3}$.check starter relay power supply circuit

1. Turn ignition switch OFF.

Is the inspection result normal?

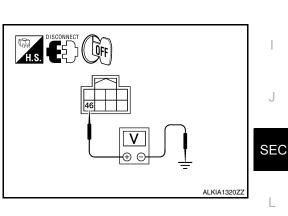
NO

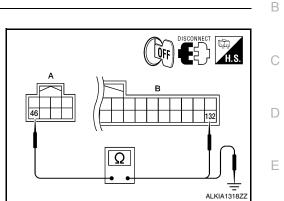
- 2. Disconnect IPDM E/R harness connector.
- 3. Check voltage between IPDM E/R harness connector and ground.

IPDN	IPDM E/R		Voltage (V)
Connector	Terminal	Ground	voltage (v)
E17	46	Ground	Battery voltage

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation".
- NO >> Check harness for open or short between IPDM E/R and battery.





Μ

Ν

Ο

Ρ

Н

F

А

[SEDAN WITHOUT INTELLIGENT KEY]

B210F PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

B210F PNP/CLUTCH INTERLOCK SWITCH

Description

IPDM E/R confirms the shift position with the following signals.

- Park/neutral position (PNP) switch
- Shift position signal from BCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B210F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>
- If DTC B210F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-433, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B210F	INTER LOCK/PNP SW ON	IPDM E/R detects a mismatch between the signals below for 1 second or more.Shift PNP switch input signalShift position signal from BCM (CAN)	 Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted] Park/neutral position (PNP) switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-450</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH BCM

Refer to BCS-91, "DTC Index".

Is the inspection result normal?

- YES >> GO TO 2
- NO >> Repair or replace malfunctioning parts.

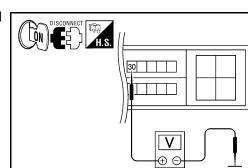
2.CHECK PNP SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R harness connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between IPDM E/R harness connector and ground under following condition.

IPDM E/R		Ground	Cond	lition	Voltage (V)
Connector	Terminal	Orbuna	Condition		voltage (v)
			CVT selector	P or N	0
E18	30	Ground	lever	Other than above	Battery voltage

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-48</u>, "Removal and Installation".



INFOID:000000004499103

[SEDAN WITHOUT INTELLIGENT KEY]

INFOID:000000004499104

INFOID:000000004499105

ALKIA1308ZZ

SEC-450

B210F PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

NO >> GO TO 3 **3.**CHECK PNP SWITCH CIRCUIT FOR CONTINUITY А 1. Turn ignition switch OFF. Check continuity between IPDM E/R harness connector termi-2. В nals 72 and 74. QFF IPDM E/R Condition Continuity 72 74 Connector Terminals P or N Yes PNP switch 72 F10 74 position Other No D Ω Is the inspection result normal? YES >> GO TO 4 ALKIA1313ZZ Е NO >> GO TO 5 4.CHECK PNP SWITCH CIRCUIT FOR SHORT Check continuity between IPDM E/R harness connector terminals F 72, 74 and ground. ŨFF IPDM E/R Ground Continuity 72 74 Terminal Connector 72 F10 Ground No 72,74 74 Н Is the inspection result normal? Ω YES >> Replace the IPDM E/R. Refer to PCS-48, "Removal and ALKIA1314Z Installation". NO >> Repair or replace harness. 5. CHECK PNP SWITCH INPUT SIGNAL CIRCUIT Disconnect PNP switch harness connector. 1. Check continuity between PNP switch and IPDM E/R harness 2. connectors. SEC IPDM E/R Park/neutral position switch Continuity 72 74 Connector Terminal Connector Terminal 2 L 1,2 74 1 A: F25 B: F10 Yes 72,74 2 72 Μ 3 Check continuity between PNP switch harness connector and Ω ground. ALKIA1315ZZ Ν Park/neutral position switch Ground Continuity Connector Terminal 1 A: F25 Ground No 2

Is the inspection result normal?

YES >> Replace PNP switch.

NO >> Repair harness or connector.

Ρ

B2110 PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

B2110 PNP/CLUTCH INTERLOCK SWITCH

Description

IPDM E/R confirms the shift position with the following signals.

- Park/neutral position (PNP) switch
- Shift position signal from BCM (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2110 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B2110 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2110	INTER LOCK/PNP SW	IPDM E/R detects mismatch between the signals below for 1 second or more. • Shift NP switch input signal	 Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted] Park/neutral position (PNP) switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn the ignition switch ON under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position
- Do not depress the brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-452</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH BCM

Refer to BCS-91, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2

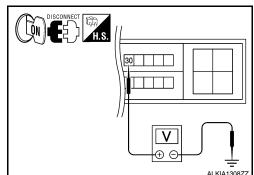
NO >> Repair or replace malfunctioning parts.

2.CHECK PNP SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R harness connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between IPDM E/R harness connector and ground under following condition.

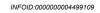
IPDM E/R		Ground	Cond	lition	Voltage (V)
Connector	Terminal	Ground	Condition		voltage (v)
			CVT selector	P or N	0
E18	30	Ground	lever	Other than above	Battery voltage

Is the inspection result normal?



INFOID:000000004499107

[SEDAN WITHOUT INTELLIGENT KEY]



INFOID:000000004499108

B2110 PNP/CLUTCH INTERLOCK SWITCH

< COMPONENT DIAGNOSIS >

YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation".

NO >> GO TO 3

3.CHECK PNP SWITCH CIRCUIT FOR CONTINUITY

- 1. Turn ignition switch OFF.
- Check continuity between IPDM E/R harness connector termi-2. nals 72 and 74.

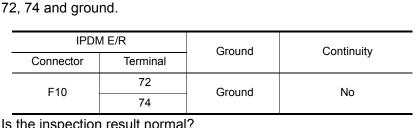
IPDM E/R			Condition		Continuity
Connector	Terminals		Condition		Continuity
F10	72	74	PNP switch	P or N	Yes
110	72 74		position	Other	No

Is the inspection result normal?

YES >> GO TO 4

NO >> GO TO 5

${f 4}$. CHECK PNP SWITCH CIRCUIT FOR SHORT



Check continuity between IPDM E/R harness connector terminals

Is the inspection result normal?

YES >> Replace the IPDM E/R. Refer to PCS-48, "Removal and Installation".

NO >> Repair or replace harness.

5. CHECK PNP SWITCH INPUT SIGNAL CIRCUIT

- Disconnect PNP switch harness connector. 1.
- 2. Check continuity between PNP switch and IPDM E/R harness connectors.

Park/neutral position switch		IPDM E/R		Continuity
Connector	Connector Terminal		Terminal	Continuity
A: F25	1	B: F10	74	Yes
A. 1 23	2	B.110	72	163

3. Check continuity between PNP switch harness connector and ground.

Park/neutral	position switch	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: F25	1	Ground	No	
A. 1 25	2	Ground	NO	

Is the inspection result normal?

YES >> Replace PNP switch.

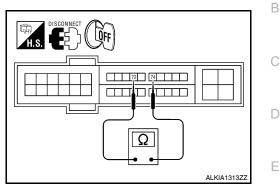
NO >> Repair harness or connector.

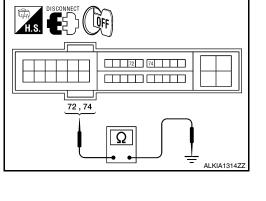
Component Inspection

1. CHECK CLUTCH INTERLOCK SWITCH

1. Turn ignition switch OFF.

[SEDAN WITHOUT INTELLIGENT KEY]







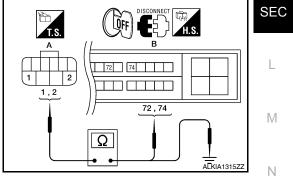
Ο

Ρ

F

Н

А



INFOID:000000004499110

B2110 PNP/CLUTCH INTERLOCK SWITCH

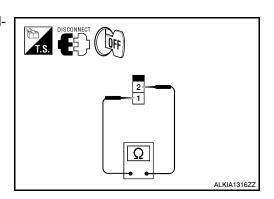
< COMPONENT DIAGNOSIS >

- 2. Disconnect clutch interlock switch harness connector.
- 3. Check continuity between clutch interlock switch under the following conditions.

Clutch interlock switch		Condition		Continuity
Terminal				
1	1 0		Not depressed	No
		Clutch pedal	Depressed	Yes

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Replace clutch interlock switch.



[SEDAN WITHOUT INTELLIGENT KEY]

B2190, P1610 NATS ANTENNA AMP

Description

Performs ID verification through BCM and keyfob when push-button ignition switch is pressed. Prohibits the release of steering lock or start of engine when an unregistered ID of keyfob is used.

DTC Logic

INFOID:000000004499112

INFOID:000000004499111

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC de	etecting condition	Possible cause
B2190 P1610	NATS ANTENNA AMP	Inactive communica BCM.	tion between key slot and	 Harness or connectors (The key slot circuit is open or shorted) Key slot BCM
•	RMATION PROC			
	I DTC CONFIRMA		RE	
	/fob into the key slo elf Diagnostic Resu ted?		Γ-ΙΙΙ.	
NO >> G	efer to <u>SEC-455, "</u> 60 TO 2			
	1 DTC CONFIRMA		RE	
2. Check "S Is DTC detect YES >> R	efer to <u>SEC-455, "</u>	Ilt" with CONSUL		
Diagnosis	nspection End. Procedure			INFOID:00000004499113
1. INSPECT				_
Case1: It is	se in which DTC is detected when key detected after keyf	fob is inserted into		n ignition switch is pressed.
	is DTC detected?			
Case1. >> C Case2. >> C				
2. СНЕСК К	EY SLOT INPUT S	GNAL		
2. Disconne	ion switch OFF. ct key slot harness Itage between key		nector and ground.	
	Key slot	Ground	Voltage [V]	
Connector	Terminal	Giouna	(approx.)	
M40	2	Ground	Battery voltage	
Is the inspect	ion result normal?			

YES >> Replace key slot. Refer to SEC-596, "Removal and Installation".

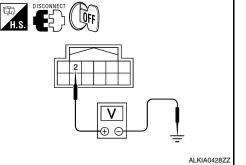
NO >> GO TO 3



А

В

С



B2190, P1610 NATS ANTENNA AMP

< COMPONENT DIAGNOSIS >

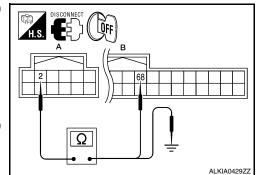
[SEDAN WITHOUT INTELLIGENT KEY]

3. CHECK KEY SLOT CIRCUIT

- 1. Disconnect BCM harness connector.
- 2. Check continuity between key slot harness connector M40 (A) terminal 2 and BCM harness connector M19 (B) terminal 68.

Key	Key slot		BCM		
Connector	Terminal	rminal Connector Termin		Continuity	
A: M40	2	B: M19	68	Yes	

3. Check continuity between key slot harness connector M40 (A) terminal 2 and ground.



Key	slot	Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M40	2	Ground	No

Is the inspection result normal?

YES >> GO TO 8

NO >> Repair harness or connector.

4.CHECK PUSH-IGNITION SWITCH OPERATION

Press push-button ignition switch and check if it turns ON.

Does ignition switch turn to ON?

YES >> GO TO 5

NO >> GO TO 7

5. CHECK KEY SLOT COMMUNICATION SIGNAL

1. Turn ignition switch OFF.

- 2. Disconnect key slot harness connector.
- 3. Check voltage between key slot harness connector and ground.

Key	' slot	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M40	3	Ground	Yes	

Is the inspection result normal?

YES >> Replace key slot. Refer to <u>SEC-596. "Removal and</u> Installation".

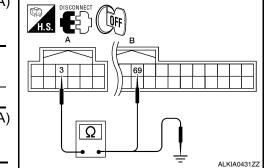
NO >> GO TO 6

6.CHECK KEY SLOT COMMUNICATION SIGNAL CIRCUIT

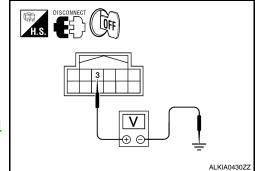
- 1. Disconnect BCM harness connector.
- 2. Check continuity between key slot harness connector M40 (A) terminal 3 and BCM harness connector M19 (B) terminal 69.

Key slot		BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M40	3	B: M19	69	Yes

3. Check continuity between key slot harness connector M40 (A) terminal 3 and ground.



Key slot		Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M40	3	Ground	No



B2190, P1610 NATS ANTENNA AMP

< COMPONENT DIAGNOSIS >

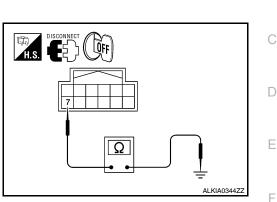
Is the inspection result normal?

- YES >> GO TO 8
- NO >> Repair harness or connector.

7. CHECK KEY SLOT GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect key slot harness connector.
- 3. Check continuity between key slot harness connector and ground.

Key slot		Ground	Continuity
Connector	Terminal	Ciouna	Continuity
M40	7	Ground	Yes



8. CHECK INTERMITTENT INCIDENT

>> Repair harness or connector.

Is the inspection result normal?

>> GO TO 8

YES

NO

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

J

Н

SEC

L

Μ

Ν

Ο

Ρ

SEC-457

[SEDAN WITHOUT INTELLIGENT KEY]

А В

B2191, P1615 DIFFERENCE OF KEY

Description

Performs ID verification through BCM and keyfob when push-button ignition switch is pressed. Prohibits the release of steering lock or start of engine when an unregistered ID of keyfob is used.

DTC Logic

INFOID-000000004499115

INFOID:000000004499116

INFOID:000000004499114

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2191	DIFFERENCE OF	The ID verification results between BCM and key-	Kevfob
P1615	KEY	fob are NG. The registration is necessary.	Reylob

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

Press the push-button ignition switch. 1.

Check "Self Diagnostic Result" with CONSULT-III. 2.

Is DTC detected?

>> Refer to SEC-458, "Diagnosis Procedure". YES NO >> Inspection End.

Diagnosis Procedure

1.PERFORM INITIALIZATION

Perform initialization with CONSULT-III. Re-register all keyfobs. For initialization and registration of keyfob, refer to CONSULT-III Operation Manual.

Can the system be initialized and can the engine be started with re-registered keyfob?

- YES >> Keyfob was unregistered. NO
 - >> BCM is malfunctioning.
 - Replace BCM. Refer to <u>BCS-96, "Removal and Installation"</u>.
 - Perform initialization again.

B2192, P1611 ID DISCORD, IMMU-ECM

Description

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

DTC DETECTION LOGIC

< COMPONENT DIAGNOSIS >

NOTE:

- D If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-433, "DTC Logic"
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to Е SEC-434, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	F
B2192	ID DISCORD, IMMU-	The ID verification results between BCM and ECM	• BCM	
P1611	ECM	are NG. The registration is necessary.	• ECM	
	1			G

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

Н 1. Turn ignition switch ON under the following conditions: CVT selector lever is in the P or N position. Do not depress the brake pedal. 2. Check "Self Diagnostic Result" with CONSULT-III. Is DTC detected? >> Refer to SEC-459, "Diagnosis Procedure". YES NO >> Inspection End. Diagnosis Procedure INFOID:000000004499119 SEC **1.**PERFORM INITIALIZATION Perform initialization with CONSULT-III. Re-register all keyfobs. For initialization and registration of keyfob, refer to CONSULT-III Operation Manual. L Can the system be initialized and can the engine be started with re-registered keyfob? YES >> ID was unregistered. >> BCM is malfunctioning. NO Μ · Replace BCM. Refer to BCS-96, "Removal and Installation". · Perform initialization again. · Replace ECM. Ν

Ρ

[SEDAN WITHOUT INTELLIGENT KEY]

INFOID:000000004499117

INFOID:000000004499118

А

В

B2193, P1612 CHAIN OF ECM-IMMU

Description

BCM performs the ID verification with ECM that allows the engine to start. Start the engine if the ID is OK. ECM prevents the engine from starting if the ID is not registered. BCM starts the communication with ECM if ignition switch is turned ON.

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2193			Harness or connectors
P1612	CHAIN OF ECM- IMMU	Inactive communication between ECM and BCM.	(The CAN communication line is open or shorted)BCMECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions:
- CVT selector lever is in the P or N position.
- Do not depress brake pedal.
- 2. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-460, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1.REPLACE BCM

- 1. Replace BCM. Refer to <u>BCS-96, "Removal and Installation"</u>.
- Perform initialization with CONSULT-III. For initialization, refer to "CONSULT-III Operation Manual.

Does the engine start?

NO

- YES >> BCM is malfunctioning.
 - Replace BCM. Refer to BCS-96, "Removal and Installation".
 - Perform initialization again.
 - >> ECM is malfunctioning.
 - Replace ECM.
 - Perform ECM re-communicating function.

INFOID:000000004499120

INFOID:000000004499121

INFOID:000000004499122

B2555 STOP LAMP

Description

BCM detects the stop lamp status and confirms the stop lamp switch ON/OFF status. BCM confirms the В engine start condition according to the stop lamp switch ON/OFF status.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagno- sis name	DTC detecting condition	Possible cause	
B2555	STOP LAMP	BCM makes a comparison between the upper voltage and lower voltage of stop lamp switch. It judges from their values to detect the malfunctioning circuit.	 Harness or connectors (stop lamp switch circuit is open or shorted) Stop lamp switch Fuse 	E

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Depress the brake pedal and wait for at least 1 second.
- Check "Self Diagnostic Result" with CONSULT-III. 2.

Is DTC detected?

- >> Refer to SEC-461, "Diagnosis Procedure". YES
- >> Inspection End. NO

Diagnosis Procedure

1. CHECK STOP LAMP SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- Check voltage between BCM harness connector and ground. 3.

B	CM	Ground	Stop lamp	Voltage [V]
Connector	Terminal	Ground	switch position	voltage [v]
M18	26	Ground	Depressed	Battery volt- age
			Released	0

Is the inspection result normal?

YES >> Stop lamp switch is OK.

NO >> GO TO 2

2.CHECK STOP LAMP SWITCH POWER SUPPLY CIRCUIT

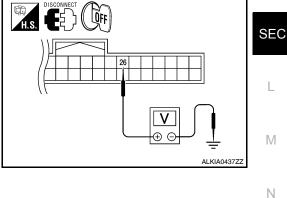
- 1. Disconnect stop lamp switch harness connector.
- 2. Check voltage between stop lamp harness connector and ground.

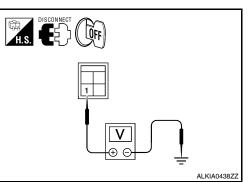
Stop lamp switch		Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
E38	1	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3

NO >> Check harness for open or short between stop lamp switch and fuse.



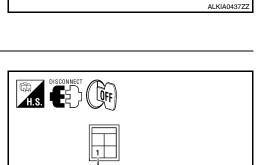


[SEDAN WITHOUT INTELLIGENT KEY]

INFOID:000000004499123

INFOID:000000004499124

INFOID:000000004499125



Н

Ρ

А

B2555 STOP LAMP

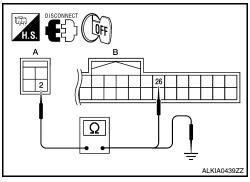
< COMPONENT DIAGNOSIS >

3.CHECK STOP LAMP SWITCH CIRCUIT

 Check continuity between stop lamp switch harness connector E38 (A) terminal 2 and BCM harness connector M18 (B) terminal 26.

Stop lamp switch		BCM		Continuity
Connector	Terminal	Connector Terminal		Continuity
A: E38	2	B: M18	26	Yes

2. Check continuity between stop lamp switch harness connector E38 (A) terminal 2 and ground.



Stop lamp switch		Ground	Continuity
Connector	Terminal	Ground	Continuity
A: E38	2	Ground	No

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair harness or connector.

4.CHECK STOP LAMP SWITCH

Refer to SEC-462, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5

NO >> Replace stop lamp switch.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

Component Inspection

1. CHECK STOP LAMP SWITCH

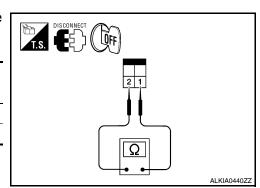
- 1. Turn ignition switch OFF.
- 2. Disconnect stop lamp switch harness connector.
- 3. Check continuity between stop lamp switch terminals under the following conditions.

Stop lan	np switch	Condition		Continuity	
Terr	ninal		Condition		
1	2	Brake pedal	Not depressed	No	
I	2	Brake pedal Depressed		biake pedal	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace stop lamp switch.



INFOID:000000004499126

B2556 PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

B2556 PUSH-BUTTON IGNITION SWITCH

Description

The switch that changes the power supply position. BCM maintains the power supply position status. BCM changes the power supply position with the operation of the push-button ignition switch.

DTC Logic

INFOID:000000004499128

INFOID-000000004499129

INFOID:000000004499127

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	C
B2556	PUSH-BUTTON IG- NITION SWITCH	BCM detects the push-button ignition switch stuck to ON for 100 seconds or more.	 Harness or connectors (Push-button ignition switch circuit is shorted.) Push-button ignition switch 	E

H.S.

ACC

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine and wait for at least 100 seconds.
- 2. Check "Self Diagnostic Result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-463</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK PUSH-BUTTON IGNITION SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect push-button ignition switch harness connector.
- Check voltage between push-button ignition switch harness connector and ground.

Push-button	ignition switch	Ground	Voltage [V]
Connector Terminal		Ground	voltage [v]
M38	4	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 2 NO >> GO TO 4

NO >> GO 10 4

2. CHECK PUSH-BUTTON IGNITION SWITCH

Refer to SEC-464. "Component Inspection".

Is the inspection result normal?

YES >> GO TO 3

NO >> Replace push-button ignition switch. Refer to <u>SEC-597, "Removal and Installation"</u>.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

4.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT FOR SHORT

1. Disconnect BCM harness connector and IPDM E/R harness connector.

SEC-463

[SEDAN WITHOUT INTELLIGENT KEY]

В

А

Н

SEC

M

Ν

Ρ

ALKIA1350Z

B2556 PUSH-BUTTON IGNITION SWITCH

< COMPONENT DIAGNOSIS >

2. Check continuity between push-button ignition switch harness connector and ground.

Push-button	ignition switch	Ground	Continuity
Connector	Connector Terminal		Continuity
M38	4	Ground	No

Is the inspection result normal?

- >> Replace BCM. Refer to BCS-96, "Removal and Installa-YES tion".
- NO >> Repair harness or connector.

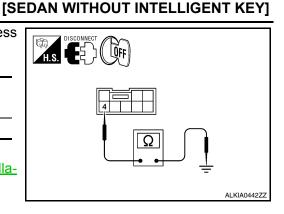
Component Inspection

- **1**. CHECK PUSH-BUTTON IGNITION SWITCH
- Turn ignition switch OFF. 1.
- 2. Disconnect push-button ignition switch harness connector.
- 3. Check continuity between push-button ignition switch terminals under the following conditions.

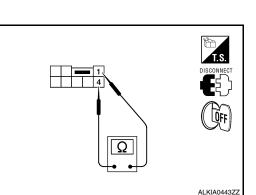
Push-button ignition switch		Condition	Continuity
Terr	Terminal		Continuity
1	4	Pressed	Yes
I	4	Not pressed	No

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Replace push-button ignition switch. Refer to SEC-597. "Removal and Installation".



INFOID:000000004499130



B2557 VEHICLE SPEED

Description

BCM receives the 2 vehicle speed signals via CAN communication. One signal is transmitted by the "unified В meter". Another signal is transmitted by "ABS actuator and electric unit (control unit)". BCM compares both signals to detect the vehicle speed.

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2557 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to SEC-433, "DTC Logic"
- If DTC B2557 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to Е SEC-434, "DTC Logic".

	DTC	Self-diagnosis name	DTC detecting condition	Possible causes	F
	B2557	VEHICLE SPEED	BCM detects the following difference between the vehicle speed from "unified meter" and the one from "ABS actuator and electric unit" for 10 seconds continuously • One is 10 km/h or more and the other is 4 km/h or less.	 Wheel sensor Unified meter ABS actuator and electric unit (control unit) 	G
D٦	C CONFIR	MATION PRO	CEDURE		
1	PERFORM	DTC CONFIRM	ATION PROCEDURE		Н
1. 2.	Check "Sel	If Diagnostic Re	nicle speed of 10 km/h or more and wait for at leas sult" with CONSULT-III.	t 10 seconds.	Ι
Ŷ			"Diagnosis Procedure".		J
Di	agnosis P	rocedure		INFOID:000000004499133	
1	CHECK DTO	C WITH "ABS A	CTUATOR AND ELECTRIC UNIT (CONTROL UN	IT)"	SEC
		-	with CONSULT-III. Refer to BRC-51, "DTC No. In	dex".	
	•	n result normal?	-		L
	'ES >> GC IO >> Re		nalfunctioning parts.		
2		IFIED METER.			M
Cł	neck unified r	neter.Refer to <u>N</u>	/WI-4, "Work Flow".		
	>> Ins	nection End			Ν

>> Inspection End.

INFOID:000000004499132

А

D

Ο

Ρ

B2560 STARTER CONTROL RELAY

Description

Starter control relay, integrated in IPDM E/R, permits the starter relay operation when in N or P position and the steering is locked or unlocked. It is installed in parallel with the starter relay.

DTC Logic

INFOID:000000004499135

INFOID:000000004499136

INFOID:000000004499134

DTC DETECTION LOGIC

NOTE:

- If DTC B2560 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B2560 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2560	STARTER CONTROL RELAY	BCM detects a mismatch between the OFF re- quest of starter control relay to IPDM E/R and the feedback. (The feedback is ON instead of OFF.)	• IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 2 seconds:
- CVT selector lever is in the P position.
- Depress the brake pedal.
- 2. Check "Self Diagnostic Result" with CONSULT-III.
- Is DTC detected?
- YES >> Refer to <u>SEC-466, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self Diagnostic Result" with CONSULT-III. Refer to PCS-45, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace malfunctioning parts.

2. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

B2601 SHIFT POSITION

Description

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- P position signal from IPDM E/R (CAN)

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2601 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B2601 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.
- If DTC B2601 is displayed with DTC B2605, first perform the trouble diagnosis for DTC B2605. Refer to <u>SEC-477, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2601	SHIFT POSITION	BCM detects when a difference between the shift P input signal and the shift position signal received from IPDM E/R via CAN communication continues for 2 seconds or more	 Harness or connectors (CVT device circuit is open or shorted.) CVT device 	G

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions, and wait for at least 2 seconds.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Turn ignition switch ON under the following conditions, and wait for at least 2 seconds.
- CVT selector lever is in other than P position.
- Do not depress the brake pedal.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-467, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK CVT DEVICE POWER SUPPLY

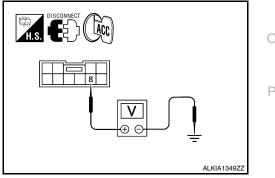
- 1. Turn ignition switch to ACC.
- 2. Disconnect CVT device (park position switch) harness connector.
- Check voltage between CVT device (park position switch) harness connector and ground.

CVT device (par	k position switch)	Ground	Voltage [V]		
Connector Terminal		Ground	voltage [v]		
M23 8		Ground	Battery voltage		
Is the inspection result normal?					

YES >> GO TO 3 NO >> GO TO 2

2.CHECK CVT DEVICE POWER SUPPLY CIRCUIT

1. Disconnect BCM harness connector.



Ν

M

INFOID:000000004499139

SEC

А

В

D

F

INFOID:000000004499137

INFOID:000000004499138

B2601 SHIFT POSITION

< COMPONENT DIAGNOSIS >

Terminal

84

Connector

A: M19

 Check continuity between BCM harness connector M19 (A) terminal 84 and CVT device (park position switch) harness connector M23 (B) terminal 8.

		Δ		L	
position switch)	Continuity		Τ		Г
Terminal	Continuity		B4		
8	Yes		Í.		
rness connect	or M19 (A) ter-		Ī		Ω

3. Check continuity between BCM harness connector M19 (A) terminal 84 and ground.

Connector

B: M23

B	СМ	Ground	Continuity	
Connector Terminal		Cround	Continuity	
A: M19	84	Ground	No	

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-96, "Removal and Installation".

NO >> Repair harness or connector.

3.CHECK CVT DEVICE CIRCUIT (BCM)

- 1. Disconnect BCM harness connector and IPDM E/R harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 87 and CVT device (park position switch) harness connector M23 (B) terminal 9.

r- C-	
r-	
	ALKIA0446ZZ

BCM		CVT device (par	Continuity	
Connector Terminal		Connector	Terminal	Continuity
A: M19	87	B: M23	9	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 87 and ground.

_	B	CM	Ground	Continuity
_	Connector	Terminal		
_	A: M19	87	Ground	No

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair harness or connector.

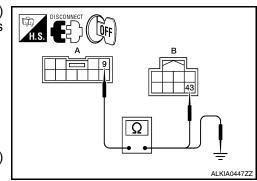
4.CHECK CVT DEVICE CIRCUIT (IPDM E/R)

1. Disconnect BCM harness connector.

 Check continuity between CVT device (park position switch) harness connector M23 (A) terminal 9 and IPDM E/R harness connector E17 (B) terminal 43.

-	CVT device (park position switch)		IPDM E/R	
Connector	Terminal	Connector	Terminal	
A: M23	9	B: E17	43	Yes

3. Check continuity between CVT device (park position switch) harness connector M23 (A) terminal 9 and ground.



[SEDAN WITHOUT INTELLIGENT KEY]

ALKIA04452

B2601 SHIFT POSITION

< COMPONENT DIAGNOSIS >

CV (park po	T device		Ground	Contin	uity					A
Connector		Terminal								
A: M23		9	Ground	No						В
Is the inspectio	n resu	<u>lt normal?</u>								
YES >> GC NO >> Re		arness or connect	or							С
5. CHECK CV ⁻	-		01.							
Refer to SEC-4	69, "C	omponent Inspec	tion".							D
Is the inspectio										
YES >> GC										E
•	•	CVT device. Refe		<u>, "Remova</u>	and Insta	allation".				E
		TTENT INCIDENT								
Refer to <u>GI-42.</u>	"Interr	<u>mittent Incident"</u> .								F
>> Inc	pectio	n End								
										G
Component	inspe	ection						INFOID:000000)004499140	
1. CHECK CV ⁻	T DEV	ICE (PARK POSI	TION SWIT	CH)						
1. Turn ignitio				_						11
		device (park posit between CVT dev								
minals as f			nee (park pe	Solution Swit				ř	Ì	
							9	Disc	T.S.	
CVT device (park position sy		0.00	diti e e	0.5					Ę)	J
Terminal	witony	Con	dition	Co	ntinuity		ŢĮ	C	OFF	
			P positio	on	No				37	SE
8	9	CVT selector lever	Other than a	above	Yes		Ω			SEV
Is the inspectio	n resu	It normal?		1						
YES >> Ins					L			ALK	KIA0448ZZ	L
NO >> Re	place (CVT device. Refe	r to <u>11vi-431</u>	<u>, "Remova</u>	and Insta	<u>allation"</u> .				
										M

Ν

0

B2602 SHIFT POSITION

Description

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- Speed signal from meter

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2602 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B2602 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2602	SHIFT POSITION	 BCM detects the following status for 10 seconds. Shift position is in P position Vehicle speed is 4km/h (2 MPH) or more Ignition switch is in the ON position 	 Harness or connectors (CVT drive circuit is open or short- ed) CVT device (park position switch) Combination meter

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine under the following conditions and wait for at least 10 seconds.
- CVT selector lever is in the P or N position
- Depress the brake pedal.
- 2. Drive the vehicle for at least 10 seconds at a speed greater than 4 km/h (2 MPH).
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-470, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH "COMBINATION METER"

Check "Self diagnostic result" with CONSULT-III. Refer to MWI-95, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace malfunctioning parts.

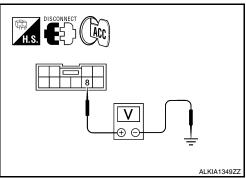
2. CHECK CVT DEVICE POWER SUPPLY

- 1. Turn ignition switch to ACC.
- 2. Disconnect CVT device (park position switch) harness connector.
- Check voltage between CVT device (park position switch) harness connector and ground.

CVT device (par	k position switch)	Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M23	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4 NO >> GO TO 3



INFOID:000000004499141

INFOID:000000004499142

INFOID:000000004499143

B2602 SHIFT POSITION

< COMPONENT DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

$\overline{\mathbf{3.}}$ CHECK CVT DEVICE POWER SUPPLY CIRCUIT А 1. Disconnect BCM harness connector. 2. Check continuity between BCM harness connector M19 (A) terminal 84 and CVT device (park position switch) harness connec-В tor M23 (B) terminal 8. BCM CVT device (park position switch) Continuity Connector Terminal Connector Terminal A: M19 B: M23 8 84 Yes D 3. Check continuity between BCM harness connector M19 (A) ter-Ω minal 84 and ground. ALKIA0445Z Е BCM Ground Continuity Terminal Connector A: M19 84 Ground No F Is the inspection result normal? YES >> Replace BCM. Refer to BCS-96, "Removal and Installation". NO >> Repair harness or connector. CHECK CVT DEVICE CIRCUIT 1. Disconnect BCM harness connector. Н 2. Check continuity between CVT device (park position switch) harness connector and BCM harness connector. ŨFF BCM CVT device (park position switch) Continuity Connector Terminal Connector Terminal A: M19 87 B: M23 9 Yes Check continuity between CVT device (park position switch) 3. Ω harness connector and ground. SEC BCM Ground Continuity Connector Terminal A: M19 87 Ground No Is the inspection result normal? YES >> GO TO 5 Μ NO >> Repair harness or connector. **5.**CHECK CVT DEVICE Refer to SEC-469, "Component Inspection". Ν Is the inspection result normal? YES >> GO TO 6 NO >> Replace CVT device. Refer to TM-431, "Removal and Installation". 6.CHECK INTERMITTENT INCIDENT Refer to GI-42, "Intermittent Incident". Ρ

>> Inspection End.

B2603 SHIFT POSITION STATUS

Description

BCM confirms the shift position with the following 2 signals.

- CVT selector lever
- P/N position switch

DTC Logic

DTC DETECTION LOGIC

NOTE:

- If DTC B2603 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B2603 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2603	SHIFT POSITION STATUS	 BCM detects the followings status for 500 ms or more when shift is in P position and, ignition switch is in ON position. Park/neutral position (PNP) switch: approx. 0V CVT device (park position switch): approx 0V 	 Harness or connector (CVT device circuit is open or shorted.) Harness or connectors [Park/neutral position (PNP) switch circuit is open or shorted.] CVT device (park position switch) Park/neutral position (PNP) switch

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Start the engine under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Shift to N and wait for at least 1 second.
- 3. Shift to any gear other than P or N and wait for at least 1 second.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-472</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to PCS-45. "DTC Index".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace malfunctioning parts.

2. CHECK PNP SWITCH CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect TCM harness connector and BCM harness connector.

INFOID:000000004499145

[SEDAN WITHOUT INTELLIGENT KEY]

B2603 SHIFT POSITION STATUS [SEDAN WITHOUT INTELLIGENT KEY]

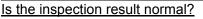
< COMPONENT DIAGNOSIS >

3. Check continuity between TCM harness connector F16 (A) terminal 20 and BCM harness connector M18 (B) terminal 48.

T	СМ	B	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
A: F16	20	B: M18	48	Yes

Check continuity between TCM harness connector F16 (A) ter-4 minal 20 and ground.

т	СМ	Ground	Continuity	
Connector	Terminal			
A: F16	20	Ground	No	



>> GO TO 3 YES

NO >> Repair harness or connector.

3. CHECK CVT DEVICE POWER SUPPLY

1. Turn ignition switch OFF.

- 2. Disconnect CVT device (park position switch) harness connector.
- 3. Check voltage between CVT device (park position switch) harness connector and ground.

CVT device (par	k position switch)	Ground	Voltage [V]	
Connector	Terminal	Giouna	vollage [v]	
M23	8	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 5

NO >> GO TO 4

4. CHECK CVT DEVICE POWER SUPPLY CIRCUIT

- 1. Disconnect BCM harness connector.
- 2. Check continuity between BCM harness connector M19 (A) terminal 84 and CVT device (park position switch) harness connector M23 (B) terminal 8.

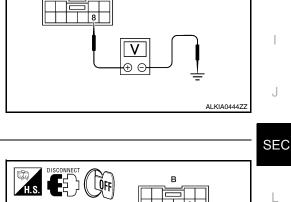
B	СМ	CVT device (par	Continuity	
Connector	Terminal	Connector Terminal		Continuity
A: M19	84	B: M23	8	Yes

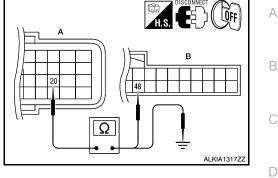
3. Check continuity between BCM harness connector M19 (A) terminal 84 and ground.

B	CM	Ground	Continuity	
Connector	Connector Terminal		Continuity	
A: M19	84	Ground	No	

Is the inspection result normal?

- >> Replace BCM. Refer to BCS-96, "Removal and Installation". YES
- NO >> Repair harness or connector.
- **5.**CHECK CVT DEVICE CIRCUIT
- Disconnect BCM harness connector. 1.



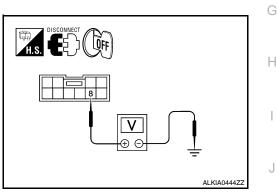


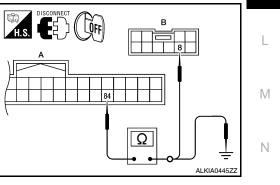
Е

F

Ο

Ρ





B2603 SHIFT POSITION STATUS > [SEDAN WITHOUT INTELLIGENT KEY]

< COMPONENT DIAGNOSIS >

 Check continuity between BCM harness connector M19 (A) terminal 87 and CVT device (park position switch) harness connector M23 (B) terminal 9.

-	
-	

ALKIA0446ZZ

B	СМ	CVT device (park position switch)		Continuity
Connector	Terminal	Connector	Terminal	
A: M19	87	B: M23	9	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 87 and ground.

 B	CM	Ground	Continuity	
 Connector	Terminal	Ground		
 A: M19	87	Ground	No	

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

6.CHECK CVT DEVICE

Refer to SEC-469. "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7

NO >> Replace CVT device. Refer to <u>TM-431, "Removal and Installation"</u>.

7.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

< COMPONENT DIAGNOSIS > B2604 PNP SWITCH

Description

BCM confirms the shift position with the following 4 signals.

- CVT selector lever
- P/N position switch
- P position signal from IPDM E/R (CAN)
- P position signal from TCM (CAN)

DTC Logic

INFOID:0000000004499148

INFOID:000000004499147

DTC DETECTION LOGIC

NOTE:

- If DTC B2604 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B2604 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2604	PNP SWITCH	 BCM detects the following status for 500 ms or more when the ignition switch is in the ON position. P/N switch indicates vehicle is in P or N shift position. Signal from TCM indicates vehicle is in forward or reverse gear. P/N switch indicates vehicle is in forward or reverse gear. Signal from TCM indicates vehicle is in P or N. 	 Harness or connectors [The park/neutral position (PNP) switch circuit is open or shorted.] Park/ neutral position (PNP) switch TCM 	C H

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Start the engine under the following conditions and wait for at least 1 second.

- CVT selector lever is in the P position
- Do not depress the brake pedal
- 2. Use CVT selector lever to select each gear one at a time. Wait at each gear for at least 1 second.
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-475, "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000004499149

M

Ρ

SEC

 1.CHECK DTC WITH TCM

 Check "Self diagnostic result" with CONSULT-III. Refer to TM-399, "DTC Index".

 Is the inspection result normal?

 YES
 >> GO TO 2

 NO
 >> Repair or replace malfunctioning parts.

 2.CHECK PNP SWITCH CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect TCM harness connector and BCM harness connector.

А

В

D

Е

B2604 PNP SWITCH [SEDAN WITHOUT INTELLIGENT KEY]

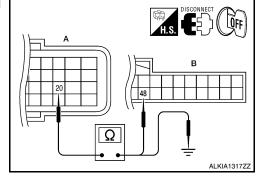
< COMPONENT DIAGNOSIS >

3. Check continuity between TCM harness connector and BCM harness connector.

ТСМ		B	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
A: F16	20	B: M18	48	Yes

4. Check continuity between TCM harness connector and ground.

т	CM	Ground	Continuity	
Connector	Terminal	Ground		
A: F16	20	Ground	No	



Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

INFOID:000000004499152

M

Ν

Ρ

< COMPONENT DIAGNOSIS > B2605 PNP SWITCH А Description INFOID:000000004499150 BCM confirms the shift position with the following 4 signals. В CVT selector lever P/N position switch P position signal from IPDM E/R (CAN) P position signal from TCM (CAN) DTC Logic INFOID 000000004499151 D DTC DETECTION LOGIC NOTE: If DTC B2605 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to Е SEC-433, "DTC Logic" If DTC B2605 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-434, "DTC Logic". F Trouble diagnosis DTC No. DTC detecting condition Possible cause name BCM detects the following status for 500 ms or Harness or connectors more when the ignition switch is in ON position [The park/neutral position (PNP) • N position input signal exists. Shift position signal B2605 **PNP SWITCH** switch circuit is open or shorted.] from IPDM E/R does not exist. · Park/neutral position (PNP) switch Н · N position input signal does not exist. Shift posi- IPDM E/R tion signal from IPDM E/R exists. DTC CONFIRMATION PROCEDURE 1.PERFORM DTC CONFIRMATION PROCEDURE Turn ignition switch ON under the following conditions and wait for at least 1 second. 1. CVT selector lever is in the P or N position Do not depress the brake pedal. 2. Check "Self diagnostic result" with CONSULT-III. Is DTC detected? SEC

YES >> Refer to SEC-477, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to PCS-45, "DTC Index". Is the inspection result normal? YES >> GO TO 2

NO >> Repair or replace malfunctioning parts.

2.CHECK PNP SWITCH CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect TCM harness connector and BCM harness connector.

B2605 PNP SWITCH [SEDAN WITHOUT INTELLIGENT KEY]

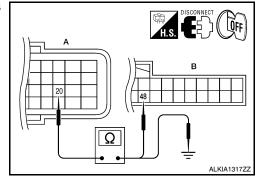
< COMPONENT DIAGNOSIS >

3. Check continuity between TCM connector and BCM harness connector.

ТСМ		B	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
A: F16	20	B: M18	48	Yes

4. Check continuity between TCM harness connector and ground.

т	CM	Ground	Continuity	
Connector	Terminal	Ground	Continuity	
A: F16	A: F16 20		No	



Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

SEC-478

B2606 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

B2606 STEERING LOCK RELAY

Description

The steering lock relay ON signal is transmitted to IPDM E/R by BCM via CAN communication. IPDM E/R turns the steering lock relay ON and transmits the release of the steering to BCM.

DTC Logic

INFOID:000000004499154

INFOID:000000004499153

А

В

Е

Н

SEC

L

Μ

Ν

Ο

Ρ

INFOID:000000004499155

DTC DETECTION LOGIC

NOTE:

- If DTC B2606 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B2606 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B2606	STEERING LOCK RELAY	 BCM detects that there is a mismatch between the following statuses. Steering lock unit ON signal transmitted by IPDM E/R The steering lock unit status feedback 	Steering lock relay (in IPDM E/R)	F

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions.
- CVT selector lever is in the P or N position.
- Do not depress the brake pedal.
- 2. Steering is locked.
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-479</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to <u>PCS-45, "DTC Index"</u>. <u>Is the inspection result normal?</u>

- YES >> GO TO 2
- NO >> Repair or replace malfunctioning parts.

2. INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

[SEDAN WITHOUT INTELLIGENT KEY]

B2607 STEERING LOCK RELAY

Description

BCM requests to IPDM E/R to supply power to electronic steering column lock. IPDM E/R sends status of electronic steering column lock back to BCM.

DTC Logic

INFOID:000000004499157

INFOID:000000004499158

INFOID:000000004499156

DTC DETECTION LOGIC

NOTE:

- If DTC B2607 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B2607 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2607	STEERING LOCK RELAY	 BCM detects that there is a difference between the following statuses. BCM request for electronic steering column lock power supply (ON/OFF) IPDM E/R status of electronic steering column lock power supply (ON/OFF) 	 Harness or connectors (electronic steering column lock power supply circuit is open or shorted) Steering lock relay (in IPDM E/R)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions.
- CVT selector lever is in the P position
- Do not depress brake pedal
- 2. Steering lock is locked.
- 3. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-480, "Diagnosis Procedure"</u>.

NO >> Inspection End.

Diagnosis Procedure

1.CHECK DTC WITH IPDM E/R

Check "Self diagnostic result" with CONSULT-III. Refer to PCS-45, "DTC Index".

Is the inspection result normal?

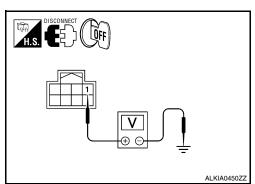
YES >> GO TO 2

NO >> Repair or replace malfunctioning parts.

2.CHECK ELECTRONIC STEERING COLUMN LOCK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect electronic steering column lock harness connector.
- Check voltage between electronic steering column lock and ground under the following conditions.

Electronic steering col- umn lock		Ground	Condition	Voltage (V)
Connector	Terminal			
M32	1	Ground	Press push-button igni- tion switch when steering lock is in lock condition.	Battery voltage



Is the inspection result normal?



B2607 STEERING LOCK RELAY

< COMPONENT DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

А

YES >> GO TO 4 NO >> GO TO 3

 $\mathbf{3}$.check electronic steering column lock power supply circuit

1. Turn ignition switch OFF.

2. Disconnect IPDM E/R harness connector.

3. Check continuity between electronic steering column lock and IPDM E/R harness connector.

	Electronic steering column lock		IPDM E/R		Continuity
-	Connector	Terminal	Connector Terminal		
-	A: M32	1	B: E18	11	Yes

Check continuity between electronic steering column lock and ground.

Electronic stee	ring column lock	Ground	Continuity	
Connector	Terminal	Cround	Continuity	
A: M32	1	Ground	No	

Is the inspection result normal?

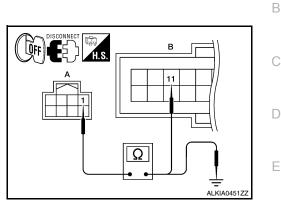
YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation".

NO >> Repair harness or connector.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.



J

Н

F

SEC

L

Μ

Ν

0

Ρ

B2608 STARTER RELAY

Description

INFOID:000000004499159

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000004499160

INFOID:000000004499161

DTC DETECTION LOGIC

NOTE:

- If DTC B2608 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B2608 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2608	STARTER RELAY	BCM receives starter relay ON signal (CAN) from IPDM E/R even if BCM turns the starter relay OFF	 Harness or connectors (starter relay circuit is open or shorted.) IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions.
- CVT selector lever is in the P or N position.
- Depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

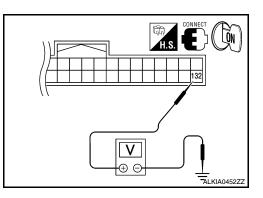
Is DTC detected?

- YES >> Refer to <u>SEC-482. "Diagnosis Procedure"</u>.
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK STARTER RELAY

- 1. Turn ignition switch ON.
- Check voltage between BCM harness connector and ground under the following condition.



BCM		Ground C		Condition	Voltage (V)
Connector	Terminal	Ground	Condition		Voltage (V)
M21	132	Ground	CVT selector lever	N or P position	Battery voltage
IVIZ I	132	Ground	CVT Selector level	Other than above	0

Is the measurement value within the specification?

SEC-482

B2608 STARTER RELAY

< COMPONENT DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

NO >> GO TO 2 2. CHECK STARTER RELAY CIRCUIT А 1. Turn ignition switch OFF. Disconnect BCM harness connector M21 and IPDM E/R harness connector E17. 2. В Check continuity between IPDM E/R harness connector and 3. BCM harness connector. **O**FF С IPDM E/R BCM Continuity Connector Connector Terminal Terminal B: M21 132 A: E17 46 Yes D 4. Check continuity between IPDM E/R harness connector and Ω ground. Е ALKIA1318ZZ IPDM E/R Ground Continuity Connector Terminal F A: E17 46 Ground No Is the inspection result normal? YES >> Replace IPDM E/R. Refer to PCS-48, "Removal and Installation". NO >> Repair harness or connector. 3. CHECK INTERMITTENT INCIDENT Н Refer to GI-42, "Intermittent Incident". >> Inspection End.

J

SEC

L

Μ

Ν

Ο

Ρ

B2609 STEERING STATUS

Description

There are 2 switches in the electronic steering column lock (steering lock/unlock switch 1 and 2). BCM compares those two switches conditions to judge the present steering status.

DTC Logic

INFOID:000000004499163

INFOID:000000004499162

DTC DETECTION LOGIC

NOTE:

- If DTC B2609 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B2609 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2609	STEERING STATUS	BCM detects the malfunction of electronic steering column lock switches for 1 second.	 Harness or connectors [electronic steering column lock circuit (BCM side) is open or short- ed] Harness or connectors [electronic steering column lock circuit (IPDM E/R side) is open or shorted.] Electronic steering column lock IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.

- CVT selector lever is in the P position.
- Do not depress brake pedal
- Steering is locked
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-484</u>, "Diagnosis Procedure". NO >> GO TO 2

NO >> GO 10 2

2. PERFORM DTC CONFIRMATION PROCEDURE 2

- 1. Turn ignition switch ON.
- 2. Turn ignition switch OFF.
- 3. Press door switch.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-484, "Diagnosis Procedure"</u>.

NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed
- Case2: It is detected after ignition switch is changed from ON to OFF

In which case is DTC detected?

Case1 >> GO TO 2 Case2 >> GO TO 7

SEC-484

INFOID:000000004499164

B2609 STEERING STATUS

< COMPONENT DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

H.S.

А

В

D

Е

F

ALKIA0454ZZ

2.CHECK BCM OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- Disconnect electronic steering column lock harness connector and IPDM E/R harness connector. 2.
- Check voltage between electronic steering column lock harness 3. connector and ground. Electronic steering column lock Voltage [V] Ground Connotor Torminal

Connector	Terminal		
M32	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4 >> GO TO 3

3. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

- 1. Disconnect BCM harness connector.
- 2. Check continuity between BCM harness connector M19 (A) terminal 85 and electronic steering column lock harness connector M32 (B) terminal 3.

BO	CM	Electronic stee	ring column lock	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	85	B: M32	3	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 85 and ground.

B	CM	Ground	Continuity
 Connector Terminal		Ground	Continuity
A: M19	85	Ground	No

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

4.CHECK IPDM E/R OUTPUT SIGNAL

- 1. Connect IPDM E/R harness connector.
- Disconnect BCM harness connector. 2.

Check voltage between electronic steering column lock harness 3. connector and ground.

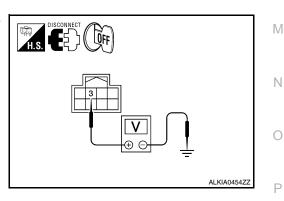
Electronic stee	ring column lock	Ground	Voltage [V]
Connector	Connector Terminal		voltage [v]
M32	3	Ground	Battery voltage

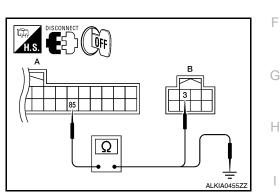
Is the inspection result normal?

YES >> Replace electronic steering column lock.

NO >> GO TO 5

5. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II





SEC

B2609 STEERING STATUS

< COMPONENT DIAGNOSIS >

1. Check continuity between electronic steering column lock harness connector M32 (A) terminal 3 and IPDM E/R harness connector E18 (B) terminal 32.

Electronic stee	ring column lock	IPDI	M E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	3	B: E18	32	Yes

2. Check continuity between electronic steering column lock harness connector M32 (A) terminal 3 and ground.

Electronic steer	ring column lock	Ground	Continuity	
Connector	Terminal	Ground		
A: M32	3	Ground	No	

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

7.CHECK BCM OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- Disconnect electronic steering column lock harness connector and IPDM E/R harness connector E5. 2.
- Check voltage between electronic steering column lock harness 3. connector and ground.

Electronic steering column lock		Ground	Voltage [V]
Connector	Terminal	Cibuna	voltage [v]
M32	8	Ground	Battery voltage

Is the inspection result normal?

Is the inspection result normal?

YES >> GO TO 9

NO >> GO TO 8

8. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

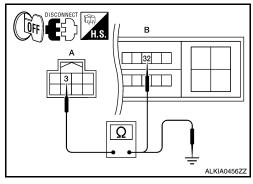
1. Disconnect BCM harness connector M19.

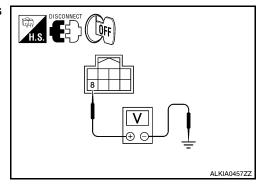
2. Check continuity between BCM harness connector M19 (A) terminal 86 and electronic steering column lock harness connector M32 (B) terminal 8.

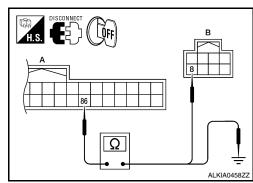
B	CM	Electronic stee	ring column lock	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	86	B: M32	8	Yes

3. Check continuity between BCM harness connector M19 (A) terminal 86 and ground.

B	CM	Ground	Continuity	
Connector	Connector Terminal		Continuity	
A: M19	86	Ground	No	







[SEDAN WITHOUT INTELLIGENT KEY]

SEC-486

B2609 STEERING STATUS

< COMPONENT DIAGNOSIS >

>> GO TO 11

YES

- [SEDAN WITHOUT INTELLIGENT KEY]
- NO >> Repair harness or connector. 9.CHECK IPDM E/R OUTPUT SIGNAL 1. Connect IPDM E/R harness connector. 2. Disconnect BCM harness connector M19. 3. Check voltage between electronic steering column lock harness H.S. connector and ground. Electronic steering column lock Ground Voltage [V] Terminal Connector M32 8 Ground Battery voltage Is the inspection result normal?
 - YES >> Replace electronic steering column lock.

NO >> GO TO 10

10. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II

 Check continuity between electronic steering column lock harness connector M32 (A) terminal 8 and IPDM E/R harness connector E18 (B) terminal 33.

Electronic steer	ring column lock	IPDN	/I E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	8	B: E18	33	Yes

Check continuity between electronic steering column lock harness connector and ground.

Electronic steel	ring column lock	Ground	Continuity
Connector	Connector Terminal		Continuity
A: M32	8	Ground	No

Is the inspection result normal?

YES >> GO TO 11

NO >> Repair harness or connector.

11. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

V

θE



L

Μ

Ν

Ο

Ρ

А

В

D

Е

F

Н

AI KIA045977

B260B STEERING LOCK UNIT

Description

The electronic steering column lock performs the check by itself according to the steering status.

DTC Logic

INFOID:000000004499166

INFOID:000000004499167

INFOID:000000004499165

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260B	STEERING LOCK UNIT	BCM detects malfunctioning of electronic steering column lock before steering unlocking.	Electronic steering column lock

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch, when steering is locked.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-488, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-488, "DTC Logic"</u>.

Is the DTC B260B displayed again?

- YES >> Replace electronic steering column lock.
- NO >> Inspection End.

B260C STEERING LOCK UNIT

< COMPONENT DIAGNOSIS >

B260C STEERING LOCK UNIT

Description

The electronic steering column lock performs the check by itself according to the steering status.

DTC Logic

INFOID:000000004499169

INFOID:000000004499168

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260C	STEERING LOCK UNIT	BCM detects malfunctioning of electronic steering column lock before steering locking.	Electronic steering column lock
TC CONFI	RMATION PROC	EDURE	
.PERFORM	I DTC CONFIRMA	TION PROCEDURE	
. Turn ignit	ion switch ON. ion switch OFF.		
 Press doo Check "S DTC detect 	elf diagnostic result	" with CONSULT-III.	
YES >> R		<u>Diagnosis Procedure"</u> .	
Diagnosis	Procedure		INFOID:000000004499170
	ON START		
2. Check [®] "S 3. Touch "El	RASE".	" with CONSULT-III.	
	DTC Confirmation -489, "DTC Logic".	Procedure.	
	260C displayed aga	<u>iin?</u>	
	eplace electronic s	teering column lock.	

[SEDAN WITHOUT INTELLIGENT KEY]

А

В

С

Ν

Ο

Ρ

B260D STEERING LOCK UNIT

Description

The electronic steering column lock performs the check by itself according to the steering lock status (before lock, after lock and unlock).

DTC Logic

INFOID:000000004499172

INFOID:000000004499173

INFOID:000000004499171

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B260D	STEERING LOCK UNIT	BCM detects malfunctioning of electronic steering column lock after steering locking.	Electronic steering column lock

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.

- 2. Turn ignition switch OFF.
- 3. Press door switch.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to SEC-490, "Diagnosis Procedure".

NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- 3. Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-490</u>, "DTC Logic".

Is the DTC B260D displayed again?

- YES >> Replace electronic steering column lock.
- NO >> Inspection End.

B260F ENGINE STATUS

< COMPONENT DIAGNOSIS >

B260F ENGINE STATUS

Description

BCM receives the engine status signal from ECM via CAN communication.

DTC Logic

INFOID:000000004499175

INFOID:000000004499174

DTC DETECTION LOGIC

NOTE:

- If DTC B260F is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B260F is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

				E
DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B260F	INTERRUPTION OF ENGINE STATUS SIGNAL	BCM has not yet received the engine status signal from ECM when ignition switch is in ON position	• ECM	F
DTC CONFI	RMATION PROC	EDURE		G
1.PERFORM	M DTC CONFIRMA	TION PROCEDURE		0
 CVT sele Do not de 	ector lever is in the F epress the brake pe			Η
<u>Is DTC detec</u> YES >> F	ted?	<u>Diagnosis Procedure"</u> .		I
Diagnosis	Procedure		INFOID:000000004499176	J
1.INSPECTI	ON START			050
 Check "S Touch "E Perform 		t" with CONSULT-III.		SEC
YES >> 6	260F displayed aga GO TO 2 nspection End.	in?		Μ
1. Replace				Ν
2. Refer to	EC-560, "BASIC IN	<u> NSPECTION : Special Repair Requiremen</u> <u>N : Special Repair Requirement"</u> (QR25DE		0
>>	nspection End.			

Ρ

A

В

С

D

B2612 STEERING STATUS

Description

INFOID:000000004499177

[SEDAN WITHOUT INTELLIGENT KEY]

There are 2 switches in the electronic steering column lock. IPDM E/R compares those 2 switches conditions to judge the present steering status and transmit the result to BCM via CAN communication.

DTC Logic

INFOID:000000004499178

INFOID:000000004499179

DTC DETECTION LOGIC

NOTE:

- If DTC B2612 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B2612 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC	Self-diagnosis name	DTC detecting condition	Possible causes
B2612	STEERING STA- TUS	 BCM detects the mismatch between the following status for 1 second Steering lock or unlock Feedback of steering lock status from IPDM E/R (CAN) 	 Harness or connectors [electronic steering column lock circuit (BCM side) is open or shorted] Harness or connectors [electronic steering column lock circuit (IP-DM E/R side) is open or shorted.] Electronic steering column lock IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE 1

- 1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P or N position.
- Do not depress brake pedal.
- Steering is locked.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-492</u>, "Diagnosis Procedure".

NO >> GO TO 2

2. PERFORM DTC CONFIRMATION PROCEDURE 2

- 1. Turn ignition switch ON.
- 2. Turn ignition switch OFF.
- 3. Press door switch.
- 4. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

- YES >> Refer to <u>SEC-492</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1.INSPECTION START

Check the case in which DTC is detected.

- Case1: It is detected after ignition switch is changed from ON to OFF and door switch is pressed.
- Case2: It is detected after ignition switch is changed from ON to OFF

In which case is DTC detected?

Case1 >> GO TO 2 Case2 >> GO TO 7

2.CHECK BCM OUTPUT SIGNAL

B2612 STEERING STATUS [SEDAN WITHOUT INTELLIGENT KEY]

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.

- 2. Disconnect electronic steering column lock harness connector and IPDM E/R harness connector.
- 3. Check voltage between electronic steering column lock harness connector and ground.

Electronic steering column lock		Ground	
Connector	Terminal	Ground	Voltage [V]
M32	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4

3. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

- 1. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M19 (A) terminal 85 and electronic steering column lock harness connector M32 (B) terminal 3.

Connector Terminal Connector Terminal	B	CM	Electronic stee	ring column lock	Continuity
Δ· M19 85 B· M32 3 Yes	Connector	Terminal	Connector	Terminal	Continuity
D. WIZ 3 163	A: M19	85	B: M32	3	Yes

 Check continuity between BCM harness connector M19 (A) terminal 85 and ground.

B	CM	Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M19	85	Ground	No

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

4.CHECK IPDM E/R OUTPUT SIGNAL

- 1. Connect IPDM E/R harness connector.
- 2. Disconnect BCM harness connector.
- Check voltage between electronic steering column lock harness connector and ground.

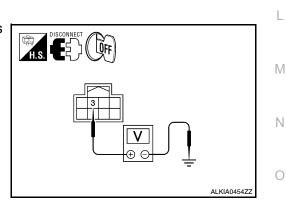
Electronic steer	ring column lock	Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	3	Ground	Battery voltage

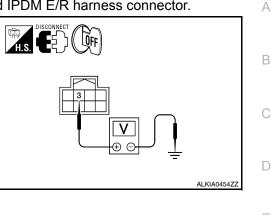
Is the inspection result normal?

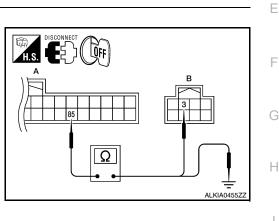
YES >> Replace electronic steering column lock.

NO >> GO TO 5

5.CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II









SEC

Ρ

B2612 STEERING STATUS

< COMPONENT DIAGNOSIS >

 Check continuity between electronic steering column lock harness connector M32 (A) terminal 3 and IPDM E/R harness connector E18 (B) terminal 32.

Electronic stee	ring column lock	IPDI	M E/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M32	3	B: E18	32	Yes

2. Check continuity between electronic steering column lock harness connector M32 (A) terminal 3 and ground.

Electronic steer	ring column lock	Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M32	3	Ground	No

Is the inspection result normal?

YES >> GO TO 6

NO >> Repair harness or connector.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

7.CHECK BCM OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect electronic steering column lock harness connector and IPDM E/R harness connector.
- 3. Check voltage between electronic steering column lock harness connector and ground.

Electronic steer	ring column lock	Ground	Voltage [V]
Connector	Terminal	Ground	voltage [v]
M32	8	Ground	Battery voltage

Is the inspection result normal?

Is the inspection result normal?

YES >> GO TO 9

NO >> GO TO 8

8. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-I

1. Disconnect BCM harness connector.

 Check continuity between BCM harness connector M19 (A) terminal 86 and electronic steering column lock harness connector M32 (B) terminal 8.

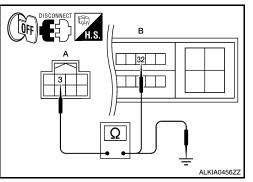
B	CM	Electronic stee	ring column lock	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M19	86	B: M32	8	Yes

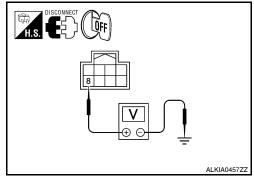
 Check continuity between BCM harness connector M19 (A) terminal 86 and ground.

В	CM	Ground Continuity	Continuity
Connector	Terminal	Ground	Continuity
A: M19	86	Ground	No

ALKIA04582







B2612 STEERING STATUS

< COMPONENT DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

YES >> GO TO 11 NO >> Repair harness or connector. А 9.CHECK IPDM E/R OUTPUT SIGNAL 1. Connect IPDM E/R harness connector. В 2. Disconnect BCM harness connector. 3. Check voltage between electronic steering column lock harness connector and ground. Electronic steering column lock Ground Voltage [V] Connector Terminal D M32 8 Ground Battery voltage Is the inspection result normal? YES >> Replace electronic steering column lock. Е >> GO TO 10 NO ALKIA0457ZZ 10. CHECK ELECTRONIC STEERING COLUMN LOCK CIRCUIT-II F Check continuity between electronic steering column lock har-1 ness connector M32 (A) terminal 8 and IPDM E/R harness conв nector E18 (B) terminal 33. 33 Electronic steering column lock IPDM E/R Continuity Connector Connector Terminal Terminal Н 8 B: E18 A: M32 33 Yes Ω 2. Check continuity between electronic steering column lock harness connector and ground. AI KIA045977 Electronic steering column lock Ground Continuity Connector Terminal A: M32 8 Ground No Is the inspection result normal? SEC YES >> GO TO 11 NO >> Repair harness or connector. 11. CHECK INTERMITTENT INCIDENT L Refer to GI-42, "Intermittent Incident". Μ >> Inspection End. Ν

Ρ

B2617 STARTER RELAY CIRCUIT

Description

INFOID:000000004499180

[SEDAN WITHOUT INTELLIGENT KEY]

Located in IPDM E/R, it runs the starter motor. The starter relay is turned ON by the BCM when the ignition switch is in START position. IPDM E/R transmits the starter relay ON signal to BCM via CAN communication.

DTC Logic

INFOID:000000004499181

DTC DETECTION LOGIC

NOTE:

- If DTC B2617 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B2617 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.
- If DTC B2617 is displayed with DTC B210E, first perform the trouble diagnosis for DTC B210E. Refer to <u>SEC-496, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2617	STARTER RELAY CIRCUIT	 An immediate operation of starter relay is requested by BCM, but there is no response for more than 1 second BCM is not commanding starter relay activation, but BCM detects starter relay output is active 	 Harness or connectors (Starter relay circuit is open or short- ed.) IPDM E/R

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position.
- Do not depress the brake pedal.
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-496</u>, "Diagnosis Procedure".

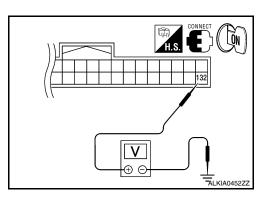
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000004499182

1.CHECK STARTER RELAY

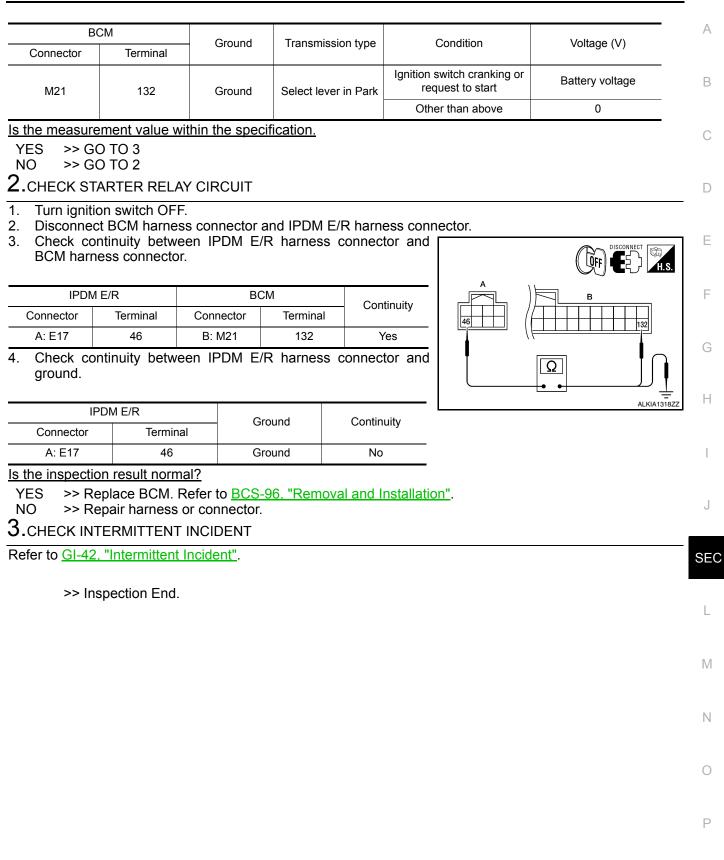
- 1. Turn ignition switch ON.
- 2. Check voltage between BCM harness connector and ground under the following condition.



B2617 STARTER RELAY CIRCUIT

< COMPONENT DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]



B2619 BCM

Description

BCM requests IPDM E/R to supply power to steering lock unit. After receiving the power, the steering lock unit transmits an ON signal to BCM.

DTC Logic

INFOID:000000004499184

INFOID:000000004499183

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2619	BCM	BCM detects a mismatch between the power sup- plied to the steering lock unit and the feedback for one second or more.	• BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.

- CVT selector lever is in the P position
- Do not depress brake pedal
- 2. Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

YES >> Refer to <u>SEC-498, "Diagnosis Procedure"</u>.

NO >> Inspection End.

Diagnosis Procedure

INFOID:000000004499185

- **1**.INSPECTION START
- 1. Turn ignition switch ON.
- 2. Check "Self diagnostic result" with CONSULT-III.
- Touch "ERASE".
- 4. Perform DTC Confirmation Procedure. See <u>SEC-498, "DTC Logic"</u>.

Is the DTC B2619 displayed again?

- YES >> Replace BCM. Refer to <u>BCS-96. "Removal and Installation"</u>.
- NO >> Inspection End.

B261A PUSH-BUTTON IGNITION SWITCH

Description

IPDM E/R transmits the push-button ignition switch status via CAN communication to BCM. BCM receives push-button ignition switch status by hardwire input. BCM compares the 2 signals for mismatch.

DTC Logic

INFOID:000000004499187

INFOID:000000004499186

DTC DETECTION LOGIC

NOTE:

- If DTC B261A is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B261A is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
B261A	PUSH-BUTTON IGNITION SWITCH	 BCM detects the mismatch between the following for 1 second or more Push-button ignition switch status Push-button ignition switch status from IPDM E/R (CAN) 	 Harness or connectors (Push-button ignition switch circuit is open or shorted) Between BCM and push-button igni- tion switch Between IPDM E/R and push-button ignition switch 	F

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

- 1. Press the push-button ignition switch under the following conditions and wait for at least 1 second.
- CVT selector lever is in the P position
 Do not depress brake pedal.
- Check "Self diagnostic result" with CONSULT-III.

Is DTC detected?

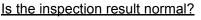
- YES >> Refer to <u>SEC-499</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK PUSH-BUTTON IGNITION SWITCH OUTPUT SIGNAL 1

- 1. Turn ignition switch OFF.
- 2. Disconnect push-button ignition switch harness connector and IPDM E/R harness connector.
- Check voltage between push-button ignition switch harness connector and ground.

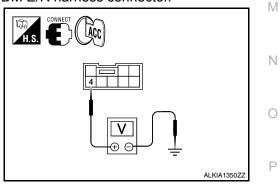
Push-button i	ignition switch	Ground	Voltage (V)	
Connector	Terminal	Ground	voltage (v)	
M38	4	Ground	Battery voltage	



YES >> GO TO 4 NO >> GO TO 2

2.CHECK PUSH-BUTTON IGNITION SWITCH CIRCUIT

1. Disconnect BCM harness connector.



[SEDAN WITHOUT INTELLIGENT KEY]

А

Е

Н

SEC

L

INFOID:000000004499188

B261A PUSH-BUTTON IGNITION SWITCH OSIS > [SEDAN WITHOUT INTELLIGENT KEY]

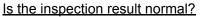
< COMPONENT DIAGNOSIS >

 Check continuity between push-button ignition switch harness connector M38 (A) terminal 4 and BCM harness connector M19 (B) terminal 77.

Push-button	ignition switch	B	BCM	
Connector	Terminal	Connector	Terminal	Continuity
A: M38	4	B: M19	77	Yes

3. Check continuity between push-button ignition switch harness connector M38 (A) terminal 4 and ground.

Push-button	ignition switch	Ground	Continuity	
Connector Terminal		Ground	Continuity	
A: M38	4	Ground	No	



YES >> GO TO 3

NO >> Repair harness or connector.

 $\mathbf{3}$.check push-button ignition switch

- 1. Disconnect IPDM E/R harness connector.
- Check continuity between push-button ignition switch harness connector M38 (A) terminal 4 and IPDM E/R harness connector E18 (B) terminal 28.

Push-button	ignition switch	IPDN	/IE/R	Continuity
Connector	Terminal	Connector	Terminal	Continuity
A: M38	4	B: E18	28	Yes

3. Check continuity between push-button ignition switch harness connector and ground.

s	H.S. DISCONNECT
	В
S	

Push-button i	ignition switch	Ground	Continuity
Connector	Terminal	Ground	Continuity
A: M38	4	Ground	No

Is the inspection result normal?

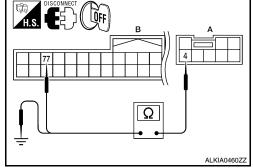
YES >> GO TO 4

NO >> Repair harness or connector.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.



B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

< COMPONENT DIAGNOSIS >

B26E1 NO RECEPTION OF ENGINE STATUS SIGNAL

Description

BCM receives the engine status signal from ECM via CAN communication.

DTC Logic

INFOID:000000004499192

INFOID:000000004499193

DTC DETECTION LOGIC

NOTE:

- If DTC B26E1 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>SEC-433, "DTC Logic"</u>.
- If DTC B26E1 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>SEC-434, "DTC Logic"</u>.

				E
DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	
	NO RECEPTION OF ENGINE STATUS SIGNAL	BCM does not receive the engine status signal from ECM when ignition switch is in the ON position	• ECM	F
TC CONFIF	RMATION PROCI	EDURE		G
.PERFORM	DTC CONFIRMAT	TION PROCEDURE		0
CVT select Do not de	ctor lever is in the F press the brake pe			Н
		Diagnosis Procedure".		
iagnosis F	Procedure		INFOID:00000004499194	J
.INSPECTIO	ON START			
Check "Se Touch "ER Perform I		" with CONSULT-III. Procedure.		SE
the DTC B2 YES >> G	<u>6E1 displayed aga</u> O TO 2 spection End.	in?		M
	<u>EC-560, "BASIC IN</u>	<u>ISPECTION : Special Repair Requiremen</u> N : Special Repair Requirement" (QR25DE		N 0
>> In:	spection End.			

Ρ

[SEDAN WITHOUT INTELLIGENT KEY]

А

В

С

D

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT BCM

BCM : Diagnosis Procedure

1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuse or fusible link are blown.

Terminal No.	Signal name	Fuse and fusible link No.
1	Battery power supply	Н
11	Dattery power supply	10

Is the fuse or fusible link blown?

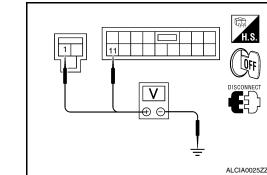
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM.
- 3. Check voltage between BCM harness connector and ground.

Terminals			
(+)	(-)	Voltage
BCM			(Approx.)
Connector	Terminal	Ground	
M16	1	Ground	Battery voltage
M17	11	†	



Is the measurement normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector	Terminal	Ground	Continuity
M17	13	*	Yes

Does continuity exist?

YES >> Inspection End.

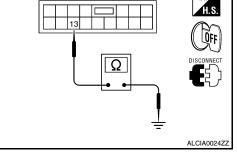
NO >> Repair or replace harness.

BCM : Special Repair Requirement

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to BCS-6, "CONFIGURATION (BCM) : Special Repair Requirement".

>> Work End. IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Di-



INFOID:000000004499196

[SEDAN WITHOUT INTELLIGENT KEY]

INFOID:000000004499195

POWER SUPPLY AND GROUND CIRCUIT DSIS > [SEDAN WITHOUT INTELLIGENT KEY]

< COMPONENT DIAGNOSIS >

agnosis Procedure

1. CHECK FUSES AND FUSIBLE LINK

Check that the following IPDM E/R fuses or fusible link are not blown.

Terminal No.	Signal name	Fuses and fusible link No.	
1, 2		B, D	
	Battery power supply	42	
—		43	

Is the fuse blown?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

- NO >> GO TO 2
- 2. CHECK POWER SUPPLY CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R connectors.
- 3. Check voltage between IPDM E/R harness connector and ground.

Terminals			
(+)		(-)	Voltage (V) (Approx.)
IPDI	IPDM E/R		
Connector	Terminal		
E16	1	Ground	Battery voltage
L 10	2		

Is the measurement value normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

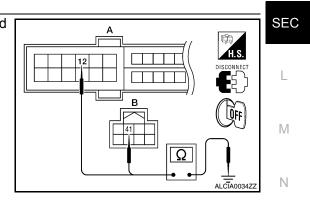
Check continuity between IPDM E/R harness connectors and ground.

IPDM E/R			Continuity
Connector	Terminal	Ground	Continuity
A: E18	12		Yes
B: E17	41		

Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.



0



INFOID:000000004499198

А

В

D

Е

F

Н

J

KEY SLOT

Diagnosis Procedure

1. CHECK KEY SLOT POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect key slot connector.
- Check voltage between slot connector and ground. 3.

Key	Key slot		Voltage (V)
Connector	Terminal	Ground	(Approx.)
M40	1 5	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace key slot power supply circuit.

2. CHECK KEY SLOT GROUND CIRCUIT

Check continuity between key slot connector and ground.

Key	Key slot		Oracliavity	
Connector	Terminal	Ground	Continuity	
M40	7	Ground	Yes	

Is the inspection result normal?

>> GO TO 3 YES

NO >> Repair or replace key slot ground circuit.

3. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

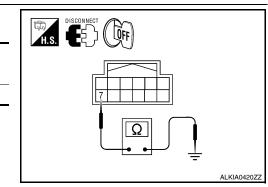
OFF

1, 5

H.S.

INFOID:000000004499200

ALKIA0419ZZ



6

KEY SLOT ILLUMINATION

< COMPONENT DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

	OMPONENT DIAGNOSIS >					
KEY SLOT	ILLUMIN	ATION				
Description						INFOID:0000000044992
links when key	vfob insertion i	is required.				
Component		-				INFOID:0000000044992
Check key slot	illumination ("	KEY SLOT II	LLUMI")	Active Test mod	de.	
s the inspection	<u>n result n</u> orma	<u> ?</u>				
YES >> Key	y slot function	is OK.	- Dec - C	du une ll		
	fer to <u>SEC-505</u> rocedure	<u>o, Diagnosis</u>	<u>s mroce(</u>	<u>uure</u> .		
Diagnosis Pi						INFOID:0000000044992
.CHECK KEY						
Check voltage t	between key s	lot connecto	or and gr	round.	H.S.	QFF
						ALKIA0418Z
	Terminals					
(+	Terminals			Condition	Key slot	
(+ Key slot connector		()		Condition	Key slot illumination	ALKIA0418Z
Key slot)	(–) Ground	Ke	yfob inserted	orf	Voltage (V) (Approx.) Battery voltage
Key slot connector M40) Terminal 6	Ground	Ke		illumination	ALKIA0418Z
Key slot connector M40 s the inspection YES >> GO) Terminal 6 <u>n result norma</u> 0 TO 6	Ground	Ke	yfob inserted	orf	Voltage (V) (Approx.) Battery voltage
Key slot connector M40 s the inspection YES >> GO NO >> GO) Terminal 6 <u>n result norma</u>) TO 6) TO 2	Ground	Ke Key	yfob inserted yfob removed	orf	Voltage (V) (Approx.) Battery voltage
Key slot connector M40 s the inspection YES >> GO NO >> GO CHECK KEY	Terminal 6 <u>n result norma</u> 7 TO 6 7 TO 2 7 SLOT POWE	Ground	Ke Key	yfob inserted yfob removed	orf	Voltage (V) (Approx.) Battery voltage
Key slot connector M40 <u>s the inspection</u> YES >> GO NO >> GO CHECK KEY . Turn ignitio . Disconnect	Terminal 6 n result norma TO 6 TO 2 (SLOT POWE n switch OFF. key slot conne	Ground I? ER SUPPLY ector.	Ke Key CIRCU	yfob inserted yfob removed	orf	Voltage (V) (Approx.) Battery voltage
Key slot connector M40 <u>s the inspection</u> YES >> GO NO >> GO CHECK KEY . Turn ignitio . Disconnect	Terminal 6 n result norma 0 TO 6 0 TO 2 7 SLOT POWE n switch OFF.	Ground I? ER SUPPLY ector.	Ke Key CIRCU	yfob inserted yfob removed	illumination OFF ON	Voltage (V) (Approx.) Battery voltage
Key slot connector M40 <u>s the inspection</u> YES >> GO NO >> GO CHECK KEY . Turn ignitio . Disconnect	Terminal 6 n result norma TO 6 TO 2 (SLOT POWE n switch OFF. key slot conne	Ground I? ER SUPPLY ector.	Ke Key CIRCU	yfob inserted yfob removed	illumination OFF ON	Voltage (V) (Approx.) Battery voltage
Key slot connector M40 Sthe inspection YES >> GO NO >> GO CHECK KEY . Turn ignitio . Disconnect . Check volta	Terminal 6 n result norma 0 TO 6 0 TO 2 (SLOT POWE n switch OFF. key slot conne age between s Terminals (+)	Ground I? ER SUPPLY ector. lot connecto	Ke Key CIRCU	yfob inserted yfob removed	illumination OFF ON	Voltage (V) (Approx.) Battery voltage
Key slot connector M40 Sthe inspection YES >> GO NO >> GO CHECK KEY . Turn ignitio . Disconnect . Check volta	Terminal Terminal 6 1 result norma 1 TO 6 1 TO 2 7 SLOT POWE n switch OFF. key slot conne age between s Terminals (+) r Terminal	Ground I? ER SUPPLY ector. lot connecto	Ke Key CIRCU	yfob inserted yfob removed IT round.	Illumination OFF ON	Voltage (V) (Approx.) Battery voltage 0
Key slot connector M40 Sthe inspection YES >> GO NO >> GO CHECK KEY . Turn ignitio . Disconnect . Check volta	Terminal 6 n result norma 0 TO 6 0 TO 2 (SLOT POWE n switch OFF. key slot conne age between s Terminals (+)	Ground I? ER SUPPLY ector. lot connecto	Ke Key CIRCU	yfob inserted yfob removed IT round.	Illumination OFF ON	Voltage (V) (Approx.) Battery voltage 0
Key slot connector M40 s the inspection YES >> GO NO >> GO CHECK KEY . Turn ignitio . Disconnect . Check volta Key slot connecto	Terminal 6 1 Terminal 6 1 To 6 TO 6 TO 2 C SLOT POWE Storm switch OFF. key slot conneage between s Terminals (+) Terminal 1 5	Ground I? ER SUPPLY ector. lot connecto	CIRCU	yfob inserted yfob removed IT round. Voltage (V) (Approx.)	Illumination OFF ON	Voltage (V) (Approx.) Battery voltage 0

KEY SLOT ILLUMINATION

< COMPONENT DIAGNOSIS >

NO >> Repair or replace key slot power supply circuit.

3.CHECK KEY SLOT GROUND CIRCUIT

Check continuity between key slot connector and ground.

Key slot connec- tor	Terminal	Ground	Continuity
M40	7		Yes

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace key slot ground circuit.

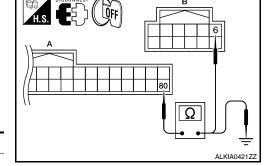
4.CHECK KEY SLOT CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and key slot connector.

3. Check continuity between BCM connector and key slot connector.

BCM connector	Terminal	Key slot connector	Terminal	Continuity
A: M19	80	B: M40	6	Yes

4. Check continuity between BCM connector and ground.



BCM connector	Terminal	Ground	Continuity
A: M19	80	Gibuna	No

Is the inspection result normal?

YES >> GO TO 5

NO >> Repair or replace harness between BCM and key slot.

5.CHECK KEY SLOT

Refer to SEC-505, "Description".

Is the inspection result normal?

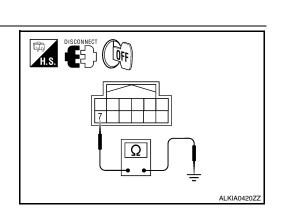
YES >> GO TO 6

NO >> Replace key slot. Refer to <u>SEC-596</u>, "Removal and Installation".

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.



[SEDAN WITHOUT INTELLIGENT KEY]

< COMPONENT DIAGNOSIS >

KEY CYLINDER SWITCH

Description

For vehicles equipped with LH and RH anti-pinch system, the main power window and door lock/unlock switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signal.

For vehicles equipped with LH anti-pinch system only, the front door lock assembly LH (key cylinder switch) transmits the LOCK or UNLOCK signal directly to the BCM.

Component Function Check

INFOID:000000004499205

INFOID:000000004499204

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Ε Check KEY CYL UN-SW, KEY CYL UN-SW in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to DLK-231, "Work Flow".

Monitor item	Cc	Condition		
KEY CYL LK-SW	Lock	: ON		
KET CTLLK-SW	Neutral / Unlock	: OFF		
	Unlock	: ON	G	
KEY CYL UN-SW	Neutral / Lock	: OFF		

Is the inspection result normal?

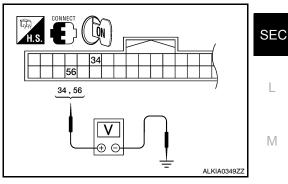
YES >> Key cylinder switch is OK.

NO >> Refer to DLK-306, "Diagnosis Procedure (With LH Anti-Pinch Only)".

Diagnosis Procedure

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

- Turn ignition switch ON. 1.
- 2. Check voltage between BCM connector and ground.



Ν

Μ

Terminals					
(+)			Key position	Voltage (V) (Approx.)	
BCM connector	Terminal	- (-)		(
	56		Lock	0	
M40	50	Ground	Neutral / Unlock	5	
IW 18	M18 34		Unlock	0	
	34		Neutral / Lock	5	

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-186, "Removal and Installation".

SEC-507

[SEDAN WITHOUT INTELLIGENT KEY]

А

В

D

Н

INFOID:000000004499207

KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

NO >> GO TO 2

2. CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front door lock assembly LH (key cylinder switch) connector.
- 3. Check continuity between front door lock assembly LH (key cylinder switch) connector and ground.

Front door lock assembly LH connector	Terminal	Ground	Continuity
D10	4	Cround	Yes

Is the inspection result normal?

YES >> GO TO 3

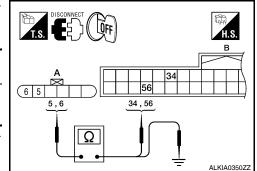
NO >> Repair or replace harness.

 $\mathbf{3}$. CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

- 1. Disconnect BCM connector M18.
- Check continuity between front door lock assembly LH (key cylinder switch) connector and BCM connector M18.

Front door lock assembly LH connector	Terminal	BCM connector	Terminal	Continuity
A: D10	5	B: M18	34	Yes
A. 010	6	D. MITO	56	163

3. Check continuity between front door lock assembly LH (key cylinder switch) connector and ground.



Front door lock assem- bly LH connector	Terminal	Ground	Continuity	
A: D10	5		No	
A. D10	6		NO	

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to SEC-508, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-42. "Intermittent Incident"</u>.

NO >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-451. "FRONT DOOR</u> <u>LOCK : Removal and Installation"</u>.

Component Inspection

INFOID:000000004499208

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

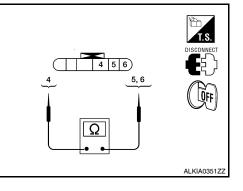
KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

Check front door lock assembly LH (key cylinder switch).

Term	inal			
Front door lock assembly LH (key cylinder switch) connector		Key position	Continuity	
5		Unlock	Yes	
5	4	Neutral / Lock	No	
6	4	Lock	Yes	
0		Neutral / Unlock	No	



Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-451, "FRONT DOOR</u> <u>LOCK : Removal and Installation"</u>.

G

А

В

С

D

Е

F

J

SEC

L

Μ

Ν

Ο

Ρ

[SEDAN WITHOUT INTELLIGENT KEY]

HORN

Description

Horn (high/low) is located inside of front bumper and operates when theft warning system is in alarm phase.

Component Function Check

< COMPONENT DIAGNOSIS >

1.CHECK FUNCTION

1. Select HORN in "ACTIVE TEST" mode with CONSULT-III.

2. Check the horn (high/low) operation.

Test item		Description	
HORN	ON	Horn relay	ON (for 20 ms)

Is the operation normal?

YES >> Inspection End. NO >> Refer to SEC-510, "Diagnosis Procedure".

Diagnosis Procedure

1.CHECK HORN FUNCTION

Check horn function with horn switch

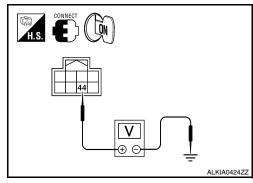
Do the horns sound?

YES >> GO TO 2

>> Refer to HRN-7, "Wiring Diagram - Sedan". NO

2. CHECK HORN RELAY POWER SUPPLY

- 1. Turn ignition switch ON.
- 2. Perform "ACTIVE TEST" ("HORN") with CONSULT-III.
- Using an analog voltmeter or an oscilloscope, check voltage 3. between IPDM E/R connector E17 terminal 44 and ground.



IPDI	M E/R	Ground		Test item	Voltage (V)
Connector	Terminal	Ground	iest item		(Approx.)
E17	44	Ground	HORN	ON	Battery voltage $\rightarrow 0 \rightarrow$ Battery voltage
		Crodina	HORN	Other than above	Battery voltage

Is the inspection result normal?

YES >> Repair or replace harness between IPDM E/R and horn relay. 3

3. CHECK HORN RELAY CIRCUIT

Turn ignition switch OFF. 1.

Disconnect IPDM E/R and horn relay connector. 2.

INFOID:000000004499210

INFOID:000000004499211

INFOID:000000004499212

< COMPONENT DIAGNOSIS >

3. Check continuity between IPDM E/R harness connector and horn relay harness connector.

HORN

IPDI	M E/R	Horn	Continuity	
Connector	Connector Terminal		Terminal	Continuity
A: E17	44	B: H-1	1	Yes

4. Check continuity between IPDM E/R harness connector and ground.

IPD	M E/R	Ground	Continuity	
Connector	Terminal	Ground		
A: E17	44	Ground	No	

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace IPDM E/R.Refer to PCS-48, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

[SEDAN WITHOUT INTELLIGENT KEY]

Ω

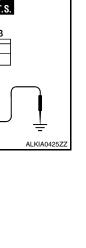
OFF

Γ¢)

44

GF.

H.S.



А

В

С

D

Е

F

|

Н

J

SEC

L

Μ

Ν

Ο

Ρ

< COMPONENT DIAGNOSIS >

HEADLAMP

Description

Headlamp lighting when theft warning system is in alarm phase.

Component Function Check

1.CHECK HEADLAMP OPERATION

Check if headlamps operate by lighting switch.

Does headlamp come on when turning switch "ON"?

YES >> Headlamp circuit is OK.

NO >> Check headlamp system. Refer to <u>SEC-512</u>, "Diagnosis Procedure".

Diagnosis Procedure

1.CHECK HEADLAMP OPERATION

Refer to EXL-61, "Wiring Diagram - Sedan".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace malfunctioning parts.

2. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

[SEDAN WITHOUT INTELLIGENT KEY]

INFOID:000000004499213

INFOID:000000004499214

INFOID:000000004499215

WARNING LAMP

< COMPONENT DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

Μ

Ν

0

Ρ

WARNING LAMP				А	
Description			INFOID:00000004499216	A	
 Warning lamp is built in cor Remote keyless entry system 		ed to the driver by the warn	ing lamp illumination.	В	
Component Function	Check		INFOID:000000004499217		
1. CHECK FUNCTION				С	
 Perform "INDICATOR" in Check warning lamp operation 	n the "Active Test" mode v eration.	with CONSULT-III.		D	
Test	item	Des	cription		
INDICATOR	ON	Warning lamp	ON	E	
	OFF		OFF		
	al? 3. "Diagnosis Procedure"	<u>"</u> .		F	
Diagnosis Procedure			INFOID:000000004499218	G	
1.CHECK "COMBINATION	METER."				
Check combination meter fur		<u>Work Flow"</u> .		Н	
Is the inspection result norma YES >> GO TO 2	<u>ai :</u>				
	e the malfunctioning parts	S.			
2. CHECK INTERMITTENT	INCIDENT				
Refer to GI-42, "Intermittent	Incident".			J	
>> Inspection End.				SEC	
				L	

VEHICLE SECURITY INDICATOR

< COMPONENT DIAGNOSIS >

VEHICLE SECURITY INDICATOR

Description

- Vehicle security indicator is built in combination meter.
- NVIS (Nissan Vehicle Immobilizer System-NATS) and vehicle security system conditions are indicated by blink or illumination of vehicle security indicator.

Component Function Check

1.CHECK FUNCTION

- 1. Perform "THEFT IND" in the "ACTIVE TEST" mode with CONSULT-III.
- 2. Check vehicle security indicator operation.

Test it	em	Description		
THEFT IND	ON	Vahiala acquirity indicator	ON	
	OFF	Vehicle security indicator	OFF	

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to <u>SEC-514, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1.CHECK COMBINATION METER

Check combination meter. Refer to MWI-4, "Work Flow".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> Inspection End.

INFOID:000000004499219

INFOID:000000004499220

INFOID:000000004499221

ECU DIAGNOSIS BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status	0
	Other than front wiper switch HI	OFF	
FR WIPER HI	Front wiper switch HI	ON	D
FR WIPER LOW	Other than front wiper switch LO	OFF	
FR WIPER LOW	Other than front wiper switch HIOFFFront wiper switch HIONWOther than front wiper switch LOOFFFront waper switch OFONSWFront washer switch OFFOFFFront washer switch ONONTOther than front wiper switch INTOFFFront wiper switch INTOFFTFront wiper switch INTOFFOPFront wiper switch INTOFFFront wiper switch INTOFFOPFront wiper is in STOP positionOFFTorn wiper is in STOP positionOFFTurn signal switch RHOFFUther than turn signal switch LHONUther than turn signal switch LHOFFTurn signal switch LHOFFUther than lighting switch 1ST and 2NDOFFUther than lighting switch 1ST and 2NDOFFUther than lighting switch AUTOOFFUther than lighting switch AUTOOFFUther than lighting switch AUTOOFFUther than lighting switch OFFOFFFront type and cor closedOFFDriver door openedONONOFFPassenger door closedOFFDriver door openedONONOFFPassenger door closedOFFDriver door openedO		
	Front washer switch OFF	OFF	— C
FR WASHER SW	Front washer switch ON	ON	
	Other than front wiper switch INT	OFF	F
	Front wiper switch INT	ON	
	Front wiper is not in STOP position	OFF	
TR WFERSTOP	Front wiper is in STOP position	ON	G
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position	
	Other than turn signal switch RH	OFF	Н
TORN SIGNAL IX	Turn signal switch RH	ON	
TURN SIGNAL I	Other than turn signal switch LH	OFF	
TORN SIGNAL L	Turn signal switch LH	ON	
FR WIPER INTFront wiper switch INTONFR WIPER STOPFront wiper is not in STOP positionOFFFront wiper is in STOP positionONINT VOLUMEWiper intermittent dial is in a dial position 1 - 7Wiper intermitTURN SIGNAL ROther than turn signal switch RHOFFTURN SIGNAL LOther than turn signal switch LHONTURN SIGNAL LOther than turn signal switch LHONTURN SIGNAL LOther than turn signal switch 1ST and 2NDOFFTurn signal switch 1ST or 2NDONONHI BEAM SWOther than lighting switch 1ST and 2NDOFFLighting switch HIOFFONHEAD LAMP SW 1Other than lighting switch 2NDOFFLighting switch 2NDONONHEAD LAMP SW 2Other than lighting switch 2NDOFFLighting switch 2NDONOFFLighting switch 2NDOFFONHEAD LAMP SW 2Other than lighting switch 2NDOFFLighting switch 2NDONOFFLighting switch 2NDOFFONHEAD LAMP SW 2Other than lighting switch 2NDOFFLighting switch 2NDOFFLighting switch 2NDOFFLighting switch PASSOFFLighting switch PASSONAUTO LIGHT SWOther than lighting switch AUTOOFFONLighting switch AUTOONONON	Other than lighting switch 1ST and 2ND	OFF	
	ON	J	
TURN SIGNAL LTurn signal switch LHONTAIL LAMP SWOther than lighting switch 1ST and 2NDOFFLighting switch 1ST or 2NDONHI BEAM SWOther than lighting switch HIOFFLighting switch HIONHEAD LAMP SW 1Other than lighting switch 2NDOFFLighting switch 2NDONOther than lighting switch 2NDOFFOther than lighting switch 2NDOFFHEAD LAMP SW 2Other than lighting switch 2NDOFF	Other than lighting switch HI	OFF	
	ON		
HEAD LAMP SW/ 1	Other than lighting switch 2ND	OFF	SEC
	Lighting switch 2ND	ON	
FR WIPER STOP INT VOLUME TURN SIGNAL R TURN SIGNAL L TAIL LAMP SW HI BEAM SW HEAD LAMP SW 1 HEAD LAMP SW 2 PASSING SW	Other than lighting switch 2ND	OFF	
	Lighting switch 2ND	ON	
PASSING SW	Other than lighting switch PASS	OFF	
	Lighting switch PASS	ON	M
AUTO LIGHT SW	Other than lighting switch AUTO	OFF	
	Lighting switch AUTO	ON	N
FR FOG SW	Front fog lamp switch OFF	OFF	N
11(100.5W	RLOWFront wiper switch LOONHER SWFront washer switch OFFOFFFront washer switch ONONR INTOther than front wiper switch INTOFFFront wiper switch INTOFFFront wiper sint in STOP positionONIMEFront wiper is in STOP positionONIMEWiper intermittent dial is in a dial position 1 - 7Wiper intermittent dial positionGNAL ROther than turn signal switch RHOFFTurn signal switch LHOFFOTHGNAL LOther than turn signal switch LHOFFTurn signal switch 1ST and 2NDOFFGNAL LOther than lighting switch 1ST and 2NDOFFLighting switch 1ST or 2NDONSWOther than lighting switch 2NDOFFLighting switch 2NDOFFONMP SW 1Lighting switch 2NDOFFLighting switch 2NDOFFONMP SW 2Other than lighting switch 2NDOFFLighting switch 2NDOFFONSWChter than lighting switch 2NDOFFLighting switch 2NDOFFONSWFront fog lamp switch AUTOOFFLighting switch AUTOOFFOFFFront fog lamp switch OFFOFFFront fog l		
	Driver door closed	OFF	0
DOOK SW-DIX	Driver door opened	ON	
	Passenger door closed	OFF	
DOOR SW-AS	Passenger door opened	ON	P
DOOR SW-RR	Rear door RH closed	OFF	
	Rear door RH opened	ON	
DOOR SW-RL	Rear door LH closed	Wiper intermittent dial position OFF ON OFF ON	
DOON OW-INL	Rear door LH opened	ON	

INFOID:000000004499225

А

< ECU DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

Monitor Item	Condition	Value/Status
DOOR SW-BK	NOTE: This item is displayed, but cannot be monitored.	OFF
	Other than power door lock switch LOCK	OFF
CDL LOCK SW	Power door lock switch LOCK	ON
	Other than power door lock switch UNLOCK	OFF
CDL UNLOCK SW	Power door lock switch UNLOCK	ON
	Other than driver door key cylinder LOCK position	OFF
KEY CYL LK-SW	Driver door key cylinder LOCK position	ON
	Other than driver door key cylinder UNLOCK position	OFF
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	ON
KEY CYL SW-TR	NOTE: This item is displayed, but cannot be monitored.	OFF
	When hazard switch is not pressed	OFF
HAZARD SW	When hazard switch is pressed	ON
REAR DEF SW	When rear window defogger switch is pressed	ON
TR CANCEL SW	Trunk lid opener cancel switch OFF	OFF
TR CANCEL SW	Trunk lid opener cancel switch ON	ON
TR/BD OPEN SW	Trunk lid opener switch OFF	OFF
TR/BD OPEN SW	While the trunk lid opener switch is turned ON	ON
TRNK/HAT MNTR	Trunk lid closed	OFF
	Trunk lid opened	ON
RKE-LOCK	When LOCK button of Intelligent Key is not pressed	OFF
RRE-LOCK	When LOCK button of Intelligent Key is pressed	ON
RKE-UNLOCK	When UNLOCK button of Intelligent Key is not pressed	OFF
INC-ONLOCK	When UNLOCK button of Intelligent Key is pressed	ON
RKE-TR/BD	When TRUNK OPEN button of Intelligent Key is not pressed	OFF
	When TRUNK OPEN button of Intelligent Key is pressed	ON
RKE-PANIC	When PANIC button of Intelligent Key is not pressed	OFF
INC-FANIC	When PANIC button of Intelligent Key is pressed	ON
RKE-P/W OPEN	When UNLOCK button of Intelligent Key is not pressed and held	OFF
	When UNLOCK button of Intelligent Key is pressed and held	ON
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF
INC-WODE CHO	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON
OPTICAL SENSOR	When outside of the vehicle is bright	Close to 5 V
OF HEAL BENGON	When outside of the vehicle is dark	Close to 0 V
REQ SW-DR	When driver door request switch is not pressed	OFF
	When driver door request switch is pressed	ON
REQ SW-AS	When passenger door request switch is not pressed	OFF
	When passenger door request switch is pressed	ON
REQ SW-BD/TR	When trunk request switch is not pressed	OFF
	When trunk request switch is pressed	ON
PUSH SW	When engine switch (push switch) is not pressed	OFF
	When engine switch (push switch) is pressed	ON

< ECU DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

Monitor Item	Condition	Value/Status
	Ignition switch OFF or ACC	OFF
GN RLTZ-F/D	Ignition switch ON	OFF ON OFF ON OFF ON OFF ON OFF OFF OFF OFF OFF ON OFF ON
	Ignition switch OFF	OFF
ACC RET-F/B	Ignition switch ACC or ON	ON
	When the clutch pedal is not depressed	OFF
	When the clutch pedal is depressed	ON
	nition switch OFF or ACC OFF onition switch ON ON nition switch ACC or ON ON hen the switch ACC or ON ON hen the dutch pedal is not depressed OFF hen the brake pedal is not depressed ON hen the brake pedal is depressed ON hen selector lever is in any position other than P ON hen selector lever is in any position other than P or N OFF hen selector lever is in any position other than P or N OFF hen selector lever is in any position other than P or N OFF ectronic steering column lock LOCK status ON ectronic steering column lock UNLOCK status ON nition switch OFF or ACC OFF nition switch ON ON hen engine switch (push switch) is not pressed OFF hen engine switch (push switch) is not pressed ON hen selector lever is in any position other than P ON hen selector lever is in	
DRAKE SW I	When the brake pedal is depressed	OFF
	When selector lever is in P position	OFF
DETE/CANCE SW	Ignition switch OFF or ACC OFF Ignition switch ON ON 7B Ignition switch OFF OFF ignition switch ACC or ON ON W When the clutch pedal is not depressed OFF When the clutch pedal is not depressed ON V1 When the brake pedal is not depressed ON V1 When selector lever is in any position other than P ON When selector lever is in P position OFF When selector lever is in P or N position other than P ON SW When selector lever is in P or N position ON Electronic steering column lock LOCK status OFF Electronic steering column lock LOCK status ON CK Electronic steering column lock LOCK status ON CK Ignition switch ON ON CK Ignition switch ON ON LPDR Driver door UNLOCK status OFF Ignition switch ON ON ON LPDR Ignition switch (push switch) is not pressed OFF Ignition switch ON ON ON	ON
SN RLY2-F/B CC RLY-F/B LUTCH SW RAKE SW 1 ETE/CANCL SW FT PN/N SW /L-LOCK /L-UNLOCK /L RELAY-F/B NLK SEN-DR USH SW-IPDM SN RLY1 F/B ETE SW -IPDM FT PN -IPDM FT PN -IPDM FT P-MET FT N-MET NGINE STATE /L LOCK-IPDM /L UNLCK-IPDM	When selector lever is in any position other than P or N	OFF
SFT PIN/IN SVV	When selector lever is in P or N position	ON
	Electronic steering column lock LOCK status	OFF
GN RLY2-F/B GC RLY-F/B CLUTCH SW RAKE SW 1 PETE/CANCL SW GT PN/N SW GL-LOCK GL-LOCK GL-UNLOCK GL-UNLOCK GL-UNLOCK GL-UNLOCK GL RELAY-F/B INLK SEN-DR PUSH SW-IPDM GN RLY1 F/B PETE SW -IPDM GT PN -IPDM GT PN -IPDM GT PN-IPDM GT P-MET GT N-MET GL LOCK-IPDM GL LOCK-IPDM GL UNLCK-IPDM GL NGINE STATE GL LOCK-IPDM GL NGINE STATE GL LOCK-IPDM GL NGINE STATE GL LOCK-IPDM GL NGINE STATE GL LOCK-IPDM GL NGINE STATE CL N	Electronic steering column lock UNLOCK status	ON
GN RLY2-F/B	Electronic steering column lock UNLOCK status	OFF
	Electronic steering column lock LOCK status	ON
IGN RLY2-F/B	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
S/L RELAY-F/B JNLK SEN-DR PUSH SW-IPDM GN RLY1 F/B	Driver door UNLOCK status	OFF
	Driver door LOCK status	ON
	When engine switch (push switch) is not pressed	OFF
PUSH SW-IPDM	When engine switch (push switch) is pressed	ON
S/L RELAY-F/B JNLK SEN-DR PUSH SW-IPDM GN RLY1 F/B DETE SW -IPDM	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
	When selector lever is in P position	OFF
DETE SW -IPDM	When selector lever is in any position other than P	ON
	When selector lever is in any position other than P or N	OFF
SN RLY2-F/B CC RLY-F/B LUTCH SW RAKE SW 1 ETE/CANCL SW ET PN/N SW L-LOCK L-UNLOCK L-UNLOCK L RELAY-F/B NLK SEN-DR JSH SW-IPDM SN RLY1 F/B ETE SW -IPDM FT PN -IPDM FT PN -IPDM FT P-MET FT N-MET NGINE STATE L LOCK-IPDM L UNLCK-IPDM L UNLCK-IPDM L RELAY-REQ EH SPEED 1	When selector lever is in P or N position	ON
GN RLY2-F/B CC RLY-F/B CC RLY-F/B CC RLY-F/B CC RLY-F/B CC RLY-F/B RAKE SW 1 PETE/CANCL SW FT PN/N SW FT PN/N SW /L-LOCK /L-UNLOCK /L-UNLOCK /L-UNLOCK /L RELAY-F/B INLK SEN-DR USH SW-IPDM GN RLY1 F/B PETE SW -IPDM FT PN -IPDM FT PN -IPDM FT P-MET FT N-MET FT N-MET NGINE STATE /L LOCK-IPDM /L UNLCK-IPDM /L RELAY-REQ EH SPEED 1	When selector lever is in any position other than P	OFF
SFTP-MET	When selector lever is in P position	ON
Identition switch OFF or ACC Ignition switch OFF Ignition switch ACC or ON When the clutch pedal is on When the clutch pedal is de RAKE SW 1 When the brake pedal is de When the brake pedal is de When selector lever is in P It-LOCK Electronic steering column I It-LOCK Ignition switch OFF or ACC Ignition switch ON NLK SEN-DR Driver door UNLOCK status USH SW-IPDM When selector lever is in P When selector lever is in P When selector lever is in an FT P-MET When selector lever is in an	When selector lever is in any position other than N	OFF
SFT N-MET		
	RLY2-F/B Ignition switch OFF or ACC Ignition switch ON Ignition switch OFF Ignition switch ACC or ON Ignition switch ACC or ON rCH SW When the clutch pedal is not depressed When the clutch pedal is depressed When the brake pedal is not depressed KE SW 1 When selector lever is in any position other than P PN/N SW When selector lever is in any position other than P or N When selector lever is in P or N position Electronic steering column lock LOCK status Electronic steering column lock UNLOCK status Electronic steering column lock UNLOCK status Electronic steering column lock LOCK status Electronic steering column lock LOCK status Ignition switch OFF or ACC Ignition switch OFF or ACC Ignition switch OFF or ACC Ignition switch OFF or ACC Ignition switch OFF or ACC Ignition switch OFF or ACC Ignition switch OFF or ACC Ignition switch OFF or ACC Ignition switch OFF or ACC Ignition switch OFF or ACC Ignition switch OFF or ACC Ignition switch OFF or ACC Ignition switch OFF or ACC Ignition switch OFF or ACC Ignition switch OFF or ACC Ignition switch OFF or ACC	
		STALL
ENGINE STATE		CRANK
S/L LOCK-IPDM		
5/L UNLCK-IPDM		
S/L RELAY-REQ		
VEH SPEFD 1		
		Equivalent to speedometer reading

< ECU DIAGNOSIS >

[SEDAN ŴITHOUT INTELLIGENT KEY]

Monitor Item	Condition	Value/Status
	Driver door LOCK status	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door UNLOCK status	UNLK
	Passenger door LOCK status	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door UNLOCK status	UNLK
ID OK FLAG	Ignition switch ACC or ON	RESET
ID OILT EAG	Ignition switch OFF	SET
PRMT ENG STAT	When the engine start is prohibited	RESET
	When the engine start is permitted	SET
PRMT RKE STAT	NOTE: This item is displayed, but cannot be monitored.	RESET
KEY SW -SLOT	When Intelligent Key is not inserted into key slot	OFF
KET 5W-5LOT	When Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.	Operation frequency of Intelligent Key
CONFRM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	YET
	The key ID that the key slot receives accords with any key ID registered to BCM.	DONE
	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	YET
CONFIRM ID4	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	DONE
	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	YET
CONFIRM ID3	The key ID that the key slot receives accords with the third key ID registered to BCM.	DONE
CONFIRM ID2	The key ID that the key slot receives does not accord with the sec- ond key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the second key ID registered to BCM.	DONE
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the first key ID registered to BCM.	DONE
TP 4	The ID of fourth key is not registered to BCM	YET
16.4	The ID of fourth key is registered to BCM	DONE
	The ID of third key is not registered to BCM	YET
TP 3	The ID of third key is registered to BCM	DONE
TP 2	The ID of second key is not registered to BCM	YET
11. 2	The ID of second key is registered to BCM	DONE
TP 1	The ID of first key is not registered to BCM	YET
11-1	The ID of first key is registered to BCM	DONE
AIR PRESS FL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front RH tire

< ECU DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

Monitor Item	Condition	Value/Status	
AIR PRESS RR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear RH tire	
AIR PRESS RL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear LH tire	
ID REGST FL1	When ID of front LH tire transmitter is registered	DONE	_
ID REGGI FLI	When ID of front LH tire transmitter is not registered	YET	_
ID REGST FR1	When ID of front RH tire transmitter is registered	DONE	_
	When ID of front RH tire transmitter is not registered	YET	_
ID REGST RR1	When ID of rear RH tire transmitter is registered	DONE	_
ID REGGI KKI	When ID of rear RH tire transmitter is not registered	YET	_
ID REGST RL1	When ID of rear LH tire transmitter is registered	DONE	_
ID REGOT RET	When ID of rear LH tire transmitter is not registered	YET	_
	Tire pressure indicator OFF	OFF	
WARNING LAMP	Tire pressure indicator ON	ON	
	Tire pressure warning alarm is not sounding	OFF	
BUZZER	Tire pressure warning alarm is sounding	ON	_

Н

J

L

Μ

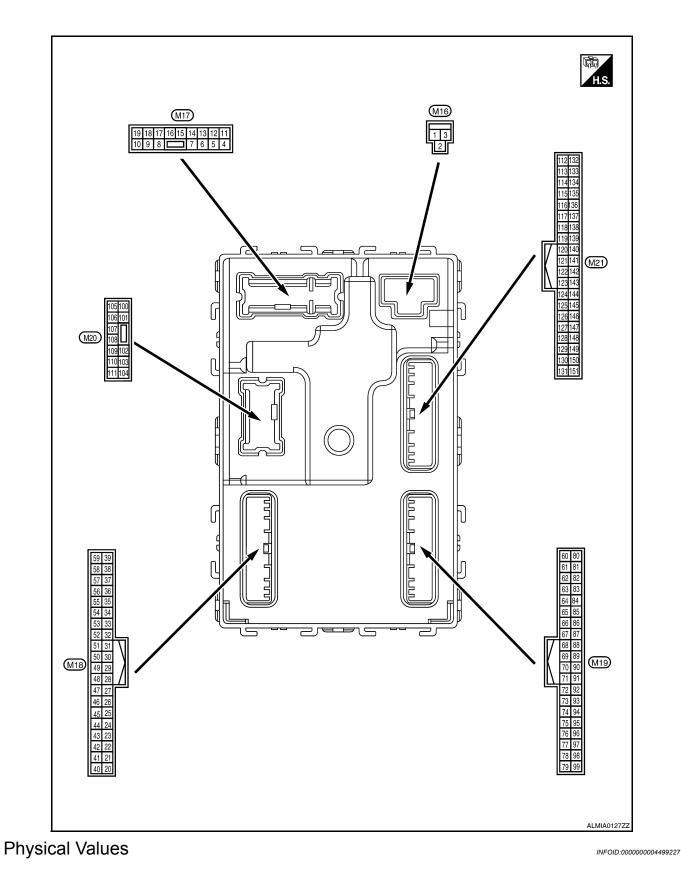
Ν

0

Ρ

Terminal Layout

INFOID:000000004499226



BCM (BODY CONTROL MODULE)

[SEDAN WITHOUT INTELLIGENT KEY]

	inal No.	Description				Value
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OF	F	Battery voltage
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON		Battery voltage
4	Ground	Interior room lamp	Output	After passing the in er operation time	nterior room lamp battery sav-	٥V
(P/W)	Ground	power supply	Output	Any other time after lamp battery save	er passing the interior room r operation time	Battery voltage
5	Ground	Front door RH UN-	Output	Front door RH	UNLOCK (actuator is activated)	Battery voltage
(G/Y)	Ground	LOCK	Output		Other than UNLOCK (actuator is not activated)	٥V
7	Ground	Sten Jamn	Output	Step Jamp	ON	0V
(R/W)	Ground	Step lamp	Output	Step lamp	OFF	Battery voltage
8	Crownel		0,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	All doors	LOCK (actuator is activat- ed)	Battery voltage
(V)	Ground	All doors LOCK	Output	O is	Other than LOCK (actuator is not activated)	OV
9	Ground	Front door LH UN-	Output	t Front do co l l l	UNLOCK (actuator is activated)	Battery voltage
(G)	Ground	LOCK	Output	Front door LH	Other than UNLOCK (actuator is not activated)	0V
10 ¹	Ground	Rear door RH and	Outout	Rear door RH	UNLOCK (actuator is activated)	Battery voltage
(G/Y)	Ground	rear door LH UN- LOCK	Output	and rear door LH	Other than UNLOCK (actuator is not activated)	0V
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
13 (B)	Ground	Ground	_	Ignition switch ON		0V
					OFF	0V
14 (R/Y)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	ON	NOTE: When the illumination brighten- ing/dimming level is in the neutral position (V) 10 0 10 0 10 10 10 10 10 10 10 10 10 10
15	0		Out to t	legiting of the	OFF	Battery voltage
	Ground	ACC indicator lamp	Output	Ignition switch	ACC or ON	0V

BCM (BODY CONTROL MODULE) ISEDAN WITHO

[SEDAN WITHOUT INTELLIGENT KEY]

Terminal No. (Wire color)		Description		Condition		Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
()	()				Turn signal switch OFF	0V
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 0 1 s 1 s 1 s 1 s 1 s 1 s 1 s 1 s
					Turn signal switch OFF	0V
18 (G/Y)	Ground	Turn signal (LH)	Output	lgnition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5
19	Ground	Room lamp timer	Output	Interior room	OFF	Battery voltage
(Y)		control	•	lamp	ON	0V
21 (P/B)	Ground	Optical sensor signal	Input	Ignition switch ON	When outside of the vehi- cle is bright	Close to 5V
(Г/В)				ON	When outside of the vehi- cle is dark	Close to 0V
22	Ground	Clutch interlock	Input	Clutch interlock	OFF (clutch pedal is not depressed)	0V
(R/Y)		switch		switch	ON (clutch pedal is de- pressed)	Battery voltage
24 (R/W)	Ground	Stop lamp switch 1	Input		_	Battery voltage
26	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (brake pedal is not de- pressed)	0V
(O/L)					ON (brake pedal is de- pressed)	Battery voltage
27 (G/W)	Ground	Front door lock as- sembly LH (unlock sensor)	Input	Front door LH	LOCK status	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V 0V
29				When Intelligent K	ey is inserted into key slot	Battery voltage
(Y)	Ground	Key slot switch	Input		ey is not inserted into key slot	0V
30	0				OFF	0
(V/Y)	Ground	ACC feedback signal	Input	Ignition switch	ACC or ON	Battery voltage

BCM (BODY CONTROL MODULE)

[SEDAN WITHOUT INTELLIGENT KEY]

	inal No.	Description				Value	
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	value (Approx.)	A
31	Cround	Rear window defog-	Innut	Rear window de-	OFF	0V	D
(G)	Ground	ger feedback signal	Input	fogger switch	ON	Battery voltage	В
32 (R/B)	Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V	C D E
					ON (when front door RH opens)	0V	
33		Compressor ON sig-			OFF	5V	F
(SB)	Ground	nal	Input	A/C switch	ON	0V	F
34 ²		Front door lock as-		Front door lock	OFF (neutral)	5V	
34- (L/R)	Ground	sembly LH (key cylin- der switch) (unlock)	Input	assembly LH (key cylinder switch)	ON (unlock)	0V	G
36 ²				Door lock/unlock	Lock	Battery voltage	
(GR)	Ground	Lock switch signal	Input	switch	Unlock	0V	Н
37 (O)	Ground	Trunk lid opener can- cel switch	Input	Trunk lid opener cancel switch	CANCEL	(V) 15 10 10 10 10 1.1V	J
					ON	0V	SEC
38 (GR/	Ground	Rear window defog-	Innut	Rear window de-	OFF	5V	
(GR/ W)	Giouna	ger ON signal	Input	fogger switch	ON	0V	L
39 ²				Door lock/unlock	Unlock	Battery voltage	
(GR/ R)	Ground	Unlock switch signal	Input	switch	Lock	0V	M
40 ³ (Y/G)	Ground	Power window serial link	Input/ Output	Ignition switch ON	1	(V) 15 10 10 10 10 10 10 10 10 10 10	N
				Ignition switch OF	F or ACC	0V	Р
41 (W)	Ground	Engine switch (push switch) illumination	Output	Engine switch (push switch) illu-	ON	5.5V	
,				mination	OFF	0V	
42	Ground	LOCK indicator lamp	Output	LOCK indicator	ON	0V	
(R)	C. Guild		Carpor	lamp	OFF	Battery voltage	

BCM (BODY CONTROL MODULE)

[SEDAN WITHOUT INTELLIGENT KEY]

	inal No.	Description				Value
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
45 (P)	Ground	Receiver & sensor ground	Input	Ignition switch ON		0V
46 (V/W)	Ground	Receiver & sensor power supply output	Output	Ignition switch	OFF ACC or ON	0V 5.0V
47	Ground	d Tire pressure receiv- er signal	Input/ Output	lgnition switch ON	Standby state	(V) 4 2 0 + + 0.2s OCC3881D
(G/O) G	Glound				When receiving the signal from the transmitter	(V) 6 4 2 0 ••• 0.25 OCC3380D
48 (R/G)	Ground	Selector lever P/N position signal	Input	Selector lever	P or N position	12.0V
(100)					Except P and N positions ON	0V 0V
49 (L/O)	Ground	Security indicator sig- nal	Output	Security indicator	Blinking	(V) 15 10 5 0 15 15 15 15 15 15 15 15 15 15
					OFF	Battery voltage
50 (LG/ B)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Lighting switch 1ST Lighting switch high-beam Lighting switch 2ND Turn signal switch RH	0V (V) 15 10 5 0 2 ms JPMIA0031GB
						10.7V

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

	inal No.	Description				Value
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4) Front wiper switch HI	0V
51 (L/W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	 (Wiper intermittent dial 4) Any of the conditions below with all switch OFF Wiper intermittent dial 1 Wiper intermittent dial 2 Wiper intermittent dial 3 Wiper intermittent dial 6 Wiper intermittent dial 7 	(V) 15 10 5 0 2 ms JPMIA0032GB 10.7V
					All switch OFF (Wiper intermittent dial 4)	٥V
					Front washer switch ON (Wiper intermittent dial 4)	(<u>v)</u>
	Combination switch OUTPUT 2	Output	Combination switch	Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	15 10 5 0 2 ms JPMIA0033GB 10.7V	
					All switch OFF	0V
53 (LG/ R)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	Front wiper switch INT Front wiper switch LO Lighting switch AUTO	(V) 15 10 5 0 2 ms
						JPMIA0034GB 10.7V
					All switch OFF Front fog lamp switch ON	0V
54 (G/Y)	Ground	Combination switch	Output	Combination switch (Wiper intermit-	Lighting switch 2ND Lighting switch flash-to- pass	(V) 15 10 5
				tent dial 4)	Turn signal switch LH	2 ms JPMIA0035GB
55				Front blower mo-	ON	Battery voltage
(BR/ W)	Ground	Front blower monitor	Input	tor switch	OFF	0V
56 ² (L/B)	Ground	Front door lock as- sembly LH (key cylin- der switch) (lock)	Input	Front door lock assembly LH (key cylinder switch)	OFF (neutral) ON (lock)	5V 0V
57 (W)	Ground	Tire pressure warn- ing check switch	Input		·	5V

BCM (BODY CONTROL MODULE) ISEDAN WITH

[SEDAN WITHOUT INTELLIGENT KEY]

	inal No.	Description				Value
(+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
58 (SB)	Ground	Front door LH switch	Input	Front door LH switch	OFF (front door LH CLOSE)	(V) 15 10 10 10 11.8V
					ON (front door LH OPEN)	0V
59	Ground	Rear window defog-	Output	Rear window de-	Active	Battery voltage
(G/R)		ger relay		fogger	Not activated	0V
60 (B/R)	Ground	Front console anten- na 2 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
(=,					When Intelligent Key is not in the passenger compart- ment	(V) 15 10 0 1 1 1 1 1 1 1 1 1 1 1 1 1
61	Ground	Center console an-	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
(W/R)	Ground	tenna 2 (+)	Output		When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 – – – – – – – – – – – – – – – – – – –

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

	inal No.	Description				Value	٨
(VVire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	A
624		Front outside handle	Output	When the front door RH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 15 1 15 10 15 15 10 15 15 10 15 115 1	B C D
(B/Y)	() Ground RH antenna (-)		switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	E	
63 ⁴	Ground	Front outside handle	Output d s e	When the front door RH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	G H I
(LG)	63 ⁴ (LG)	RH antenna (+)			When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	J SEC
64 ⁴	Front outside handle	Output	When the front door LH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	M	
(V)	Ground	LH antenna (-)	Jouput	ed with is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	O

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT

[SEDAN WITHOUT INTELLIGENT KEY]

	inal No.	Description				Value
(+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
65 ⁴	65 ⁴ (P) Ground Front outside handle LH antenna (+) Outp	Output	When the front door LH request	When Intelligent Key is in the antenna detection area	(V) 15 0 1 s JMKIA0062GB	
(P)		LH antenna (+)	Cutput	switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 1 s JMKIA0063GB
66		Instrument panel an- tenna (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 0 0 1 s JMKIA0062GB
(R)					When Intelligent Key is not in the passenger compart- ment	(V) 15 0 0 1 s JMKIA0063GB
67	Ground	bund Instrument panel an- tenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 0 1 s JMKIA0062GB
67 Gro	Ground				When Intelligent Key is not in the passenger compart- ment	(V) 15 0 1 1 1 1 1 5 0 JMKIA0063GB

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

< ECU DIAGNOSIS > -

....

	inal No.	Description) (eluce	
(Wire	e color)	Signal name	Input/		Condition	Value (Approx.)	А
(+)	(-)	NATS antenna amp	Output Input/		Ignition switch is pressed	Just after pressing ignition	В
(G/O)	Ground	(built in key slot)	Output	During waiting	while inserting the Intelli- gent Key into the key slot.	switch. Pointer of tester should move.	D
69 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelli- gent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	С
70 (R/B)	Ground	Ignition relay-2 con- trol	Output	Ignition switch	OFF or ACC ON	0V Battery voltage	D
71	71 (L/O) Ground Remote keyless entry receiver signal	Input/	During waiting		(V) 15 10 5 0 1 ms JMKIA0064GB	E	
(L/O)		receiver signal	Output	When operating e	ither button on Intelligent Key	(V) 15 10 5 0 1 ms JMKIA0065GB	G H I
		Combination switch INPUT 5	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0041GB 1.4V	J SEC
75 (R/Y)	Ground				Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0037GB 1.3V	M
				Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 15 0 0 2 ms JPMIA0040GB 1.3V	O P	

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

	inal No.	Description	•			Value
(+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
	Ground		Input		All switch OFF (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0041GB 1.4V
76 (R/G)		Combination switch INPUT 3		Combination switch	Lighting switch high-beam (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3V
(R/G)					Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 0 2 ms 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	(V) 15 0 2 ms JPMIA0040GB 1.3V
77 (BR)	Ground	Engine switch (push switch)	Input	Engine switch (push switch)	Pressed Not pressed	0V Battery voltage
78 (P)	Ground	CAN-L	Input/ Output		_	_
79 (L)	Ground	CAN-H	Input/ Output		_	_
					OFF	0V
80 (R/L)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 0 1 1 1 1 1 1 1 1 1 1 1 1 1
					ON	6.5V Battery voltage

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

	inal No.	Description		_		Value
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
81					OFF or ACC	0V
(LG)	Ground	ON indicator lamp	Output	Ignition switch	ON	Battery voltage
83	Cround		Output	lapition awitch	OFF	0V
(L)	Ground	ACC relay control	Output	Ignition switch	ACC or ON	Battery voltage
84 (Y/R)	Ground	CVT device	Output		—	Battery voltage
85		Electronic steering	1	Electronic steer-	Lock status	0V
(L/O)	Ground	column lock condition No. 1	Input	ing column lock	Unlock status	Battery voltage
86		Electronic steering		Electronic steer-	Lock status	Battery voltage
(G/R)	Ground	column lock condition No. 2	Input	ing column lock	Unlock status	0V
87	Cround	Selector lever P posi-	Incut	Selector lever	P position	0V
(G/B) Ground tion switch	Input		Any position other than P	Battery voltage		
		Front door RH re- quest switch	Input	Front door RH re- quest switch	ON (pressed)	0V
88 ⁴ (P/L)					OFF (not pressed)	(V) 15 10 10 ms JPMIA0016GB 1.0V
		Front door LH re- quest switch		Input Front door LH re- quest switch	ON (pressed)	0V
89 ⁴ (B/W)			Input		OFF (not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB 1.0V
90	Ground	Blower fan motor re-	Output	Ignition switch	OFF or ACC	0V
(Y)	Ground	lay control	Output	Ignition Switch	ON	Battery voltage
91 (L/R)	Ground	Remote keyless entry receiver power sup- ply	Output	Ignition switch OFF	=	Battery voltage
94	Ground	Steering wheel lock	Output	Ignition switch	OFF or ACC	Battery voltage
(G/Y)	Ground	unit power supply	Sulput	Ignition Switch	ON	0V

Ρ

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

	inal No.	Description				Value
(VVire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4V
					Turn signal switch LH	(V) 15 0 2 ms 1.3V
95 (R/W)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 0 2 ms JPMIA0036GB 1.3V
					Front wiper switch LO	(V) 15 0 0 2 ms JPMIA0038GB 1.3V
					Front washer switch ON	(V) 15 10 0 2 ms JPMIA0039GB 1.3V

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

	inal No.	Description				Value	А
(VVIr (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	A
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 2 ms JPMIA0041GB 1.4V	B C D
96	Ground	Combination switch	Input	Combination	Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 0 2.ms JPMIA0038GB 1.3V	E F
(P/B)		INPUT 4		switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 0 2 ms 10 2 ms JPMIA0036GB 1.3V	G H
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	(V) 15 0 2.ms JPMIA0039GB 1.3V	J SEC

M

Ν

0

Ρ

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

	inal No.	Description				Value
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
				All switch OFF	(V) 15 10 2 ms JPMIA0041GB 1.4V	
					Lighting switch flash-to- pass	(V) 15 0 2 ms JPMIA0037GB 1.3V
97 (R/B)	Ground	nd Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3V
					Front wiper switch INT	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3V
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3V
					Pressed	0 V
98 (G/O)	Ground	Hazard switch	Input	Hazard switch	Not pressed	(V) 15 10 5 0 10 ms JPMIA0012GB 1.1V

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT

[SEDAN WITHOUT INTELLIGENT KEY]

	Terminal No. Description (Wire color)				Value		
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	A
99 (L/Y)	Ground	Electronic steering column lock unit com- munication	Input/ Output	Electronic steer- ing column lock	LOCK status	Battery voltage	B C D
				For 15 seconds after UN- LOCK 15 seconds or later after UNLOCK	Battery voltage	E	
103 (V)	Ground	Trunk lid opening	Output	Trunk lid	Open (trunk lid opener ac- tuator is activated) Close (trunk lid opener ac- tuator is not activated)	Battery voltage 0V	F
110 (V/W)	Ground	Trunk room lamp	Output	Trunk room lamp	ON OFF	0V Battery voltage	
114		Rear parcel shelf an-		Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB	H I J
(B)	Ground	tenna 1 (-)	Output	OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB	SE L

Ν

0

Ρ

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

Terminal No. (Wire color)		Description				Value	
(Wire (+)	e color) (-)	Signal name	Input/ Output	Condition		(Approx.)	
115 (W)	Ground	Rear parcel shelf an- tenna 1 (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 0 1 s JMKIA0062GB	
					When Intelligent Key is not in the passenger compart- ment	(V) 15 0 0 1 s JMKIA0063GB	
118 ⁴ (L/O)	Ground	Rear bumper anten- na (-)	Output	When the trunk lid request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 0 5 0 1 s JMKIA0062GB	
					When Intelligent Key is not in the antenna detection area	(V) 15 0 1 s JMKIA0063GB	
119 ⁴ (BR/ W)	Ground	Rear bumper anten- na (+)	Output	When the trunk lid request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 0 0 1 s JMKIA0062GB	
					When Intelligent Key is not in the antenna detection area	(V) 15 0 1 s JMKIA0063GB	

BCM (BODY CONTROL MODULE)

[SEDAN WITHOUT INTELLIGENT KEY]

Terminal No.		Description				Velue	А
(Wire color)		Signal name Input/		Condition		Value (Approx.)	
(+)	(-)		Output				
127 (BR/	Ground	Ignition relay (IPDM	Output	Ignition switch	OFF or ACC	Battery voltage	В
(D11) W)	oround	E/R) control			ON	0V	
130 (Y/G)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V	C D
				·	ON (trunk is open)	0V	
	Ground	Starter motor relay control	Output	Ignition switch OFF (M/T vehi- cle)	When the clutch pedal is depressed	Battery voltage	F
					When the clutch pedal is not depressed	0V	
132 (R)				Ignition switch ON (other than M/ T vehicle)	When selector lever is in P or N position and the brake is depressed	Battery voltage	G
					When selector lever is in P or N position and the brake is not depressed	0V	Η
					ON (pressed)	0V	I
141 (G/R)	Ground	Trunk request switch	Input	Trunk request switch	OFF (not pressed)	(V) 15 10 5 10 10 ms JPMIA0016GB 1.0V	J SEC
144 ⁴	Ground	Intelligent Key warn- ing buzzer	Output	Request switch buzzer	Sounding	OV	I
(GR)					Not sounding	Battery voltage	
144 ⁵	Ground	Outside warning buzzer	Output	Outside warning buzzer	Sounding	0V	
(GR)					Not sounding	Battery voltage	Μ
147	<u> </u>	Trunk lid opener		Trunk lid opener	Pressed	0V	
(L/R)	Ground	switch	Input	switch	Not pressed	Battery voltage	Ν
148 ¹ (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes)	(V) 15 10 50 10 ms JPMIA0011GB 11.8V	0
					ON (when rear door RH opens)	0V	

BCM (BODY CONTROL MODULE) ISEDAN WITHOU

[SEDAN WITHOUT INTELLIGENT KEY]

Terminal No.		Description				Value
(Wire color) (+) (-)		Signal name	Input/ Output	Condition		(Approx.)
(+) 149 ¹ (R/B)	(-) Ground	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes)	(V) 15 0 10 10 10 10 10 11.8V
					ON (when rear door LH opens)	0V

1: Sedan only

2: With LH front window anti-pinch

3: With LH and RH front window anti-pinch

4: With Intelligent Key

5: Without Intelligent Key

ENGINE START FUNCTION - WITH REMOTE KEYLESS ENTRY

[SEDAN WITHOUT INTELLIGENT KEY]

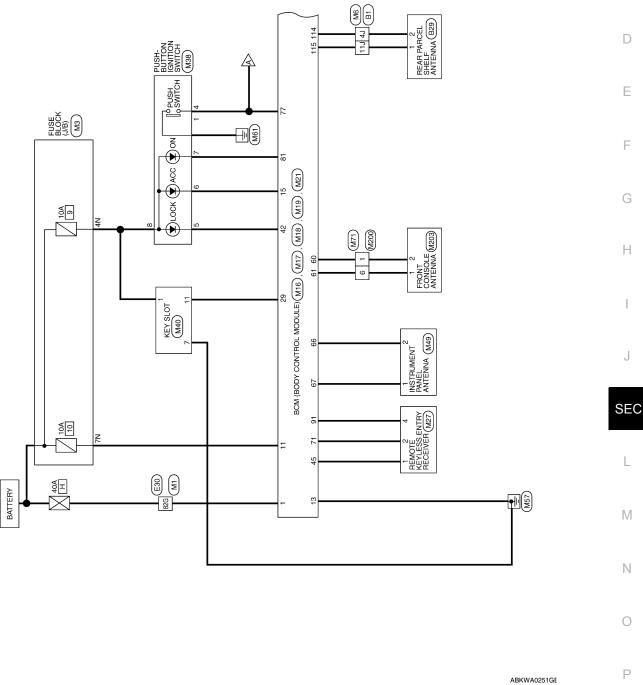
Wiring Diagram - ENGINE START FUNCTION - WITH REMOTE KEYLESS ENTRY

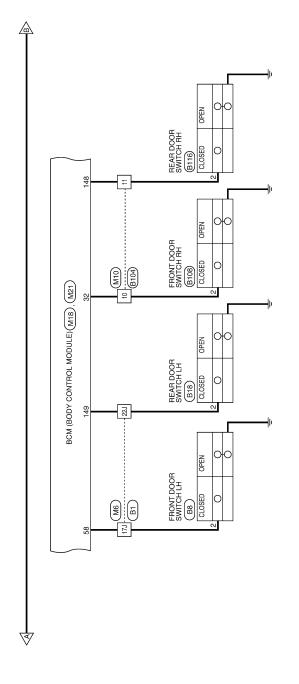




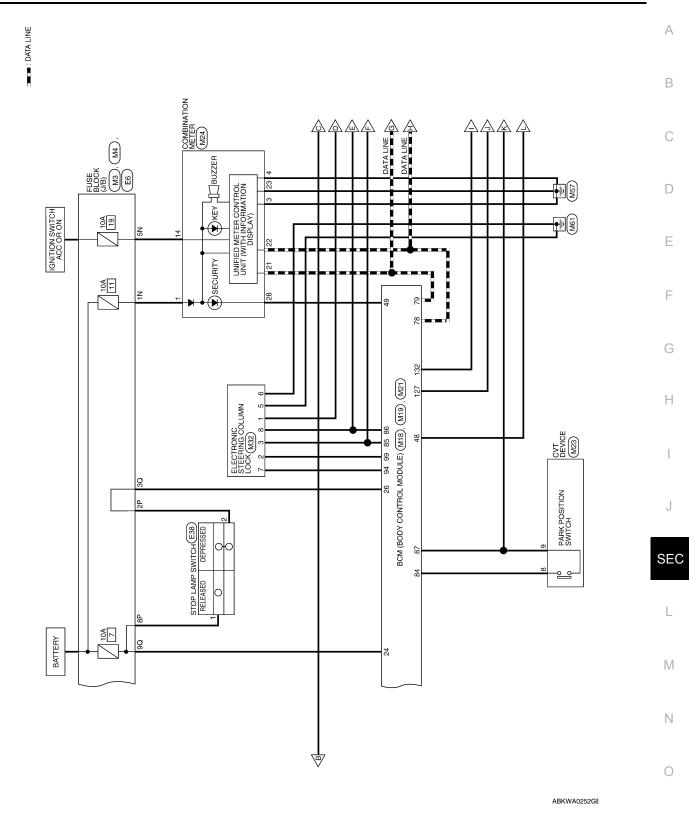
А

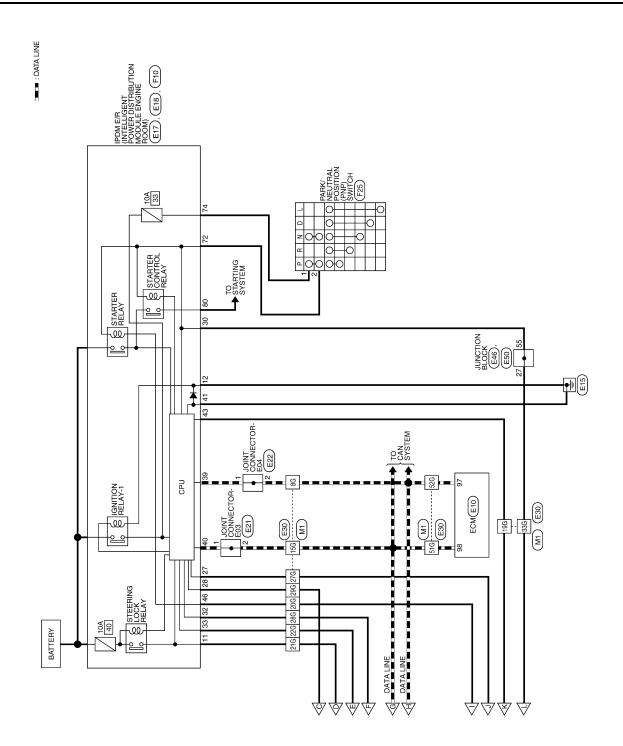






ALKWA0029GE





ABKWA0253GE

Connector No. M3 Connector Name FUSE BLOCK (J/B)		_]		Color of	al No.		4N G/Y –	5N V/Y –	7N Y/R –										
Signal Name	1	1	1	1	1	1	1	1	1	1	1	1	1									
Terminal No. Wire	8G P	15G L	19G G/B	20G R	21G P/L	22G G/R	27G BR/W	28G L/O	29G BR	33G R/G	51G L	52G P	82G W/B									
Connector No. M1 Connector Name WIRF TO WIRF	Connector Color WHITE			96 86 76 66 56 46 36	176 166 156 146 136 126 116 106 26 16	266 256 246 236 226 216 206	34G 33G 32G 31G 30G 29G 28G 27G ^{19G} 18G	41G 40G 38G 38G 38G	50G 49G 48G 47G 46G 45G 44G 43G 42G		53G 52G 61G 60G 59G 54G 53G 52G 51G		72G 71G 70G 69G 68G 67G 65G ann min min min min min min min min min m			M4	Connector Name FUSE BLOCK (J/B)	Connector Color WHITE	40 30 20 10	3 <u>0</u> 70 60		Color of Signal Name Wire

А

В

С

D

Е

F

G

Н

J

SEC

L

Μ

Ν

Ο

SEC-543

- 9

H.S. E

I. Т

R/B B/B

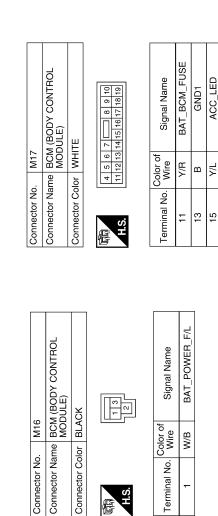
I.

Signal Name

Color of Wire R/B МM

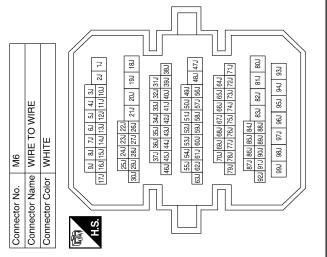
Terminal No. 9 ÷

L L



	o. M17	ector Name BCM (BODY CONTROL MODULE)	ector Color WHITE	
	ector No.	tor Name	tor Color	

Signal Name	BAT_BCM_FUSE	GND1	ACC_LED	
Color of Wire	Y/R	в	٦/٨	
Terminal No.	11	13	15	



ABKIA0855GB

-

ALS.

E

WIRE TO WIRE

Connector Name Connector No.

Signal Name

Color of Wire

Terminal No.

L

_ ≥

15 17J 22J

4

M10

Connector Color WHITE

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]



M19

Connector No.

Connector Name BCM (BODY CONTROL MODULE)

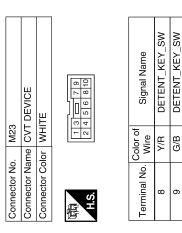
M18

Connector No.

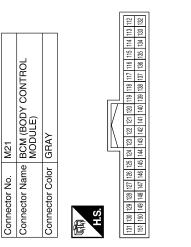
											-	
Signal Name	RF1_TUNER_SIGNAL	ENG_START_SW	CAN-L	CAN-H	IGN_ON_LED	AT_DEVICE_OUT	S/L_CONDITION_1	S/L_CONDITION_2	SHIFT_P	RF1_POWER_SUPPLY	S/L_POWER SUPPLY_12V	S/L_K-LINE
Color of Wire	Г/0	ВВ	٩	_	ГG	Y/R	L/0	G/R	G/B	L/R	G/Y	ΓΛ
Terminal No.	71	77	78	62	81	84	85	86	87	91	94	66

				61 60 81 80					
BCM (BODY CONTROL MODULE)	BLACK		R	70 69 68 67 66 65 64 63 62 90 89 87 86 85 84 83 82	Signal Name	ROOM_ANT_2_B	ROOM_ANT_2_A	ROOM_ANT_1_B	ROOM_ANT_1_A
				75 74 73 72 71 95 94 93 92 91	Color of Wire	B/R	W/R	æ	σ
Connector Name	Connector Color	品.S.H		79 78 77 76 75 99 98 97 96 95 95	Terminal No.	60	61	66	67

	24 23 22 21 20 44 43 42 41 40											
GREEN	34 33 32 51 50 49 48 47 46 45	Signal Name	STOP_LAMP_LOW_SW	STOP_LAMP_HIGH_SW	FOB_IN_SW	AS_DOOR_SW	S/L_LOCK_LED	GND_RF2_A/L	SHIFT_N/P	IMMO_LED	DR_DOOR_SW	
	38 37 36 35 58 57 56 55	Color of Wire	R/W	O/L	۲	R/B	н	Ч	R/G	L/O	SB	
Connector Color	頃 H.S. ^{59 51}	Terminal No.	24	26	29	32	42	45	48	49	58	



Signal Name	TRUNK_ANT_1_B	TRUNK_ANT_1_A	IGN_USM_CONT1	ST_CONT_USM	RR_DOOR_SW	RL_DOOR_SW
Color of Wire	в	M	BR/W	æ	R/W	R/B
Terminal No.	114	115	127	132	148	149



	F
(G
	Η
	J
S	EC

А

В

С

D

Ε

L Μ Ν 0

ABKIA0856GB

SS ENTRY								Signal Name		IAL									lame		0	SW_1				
	RECEIVER	Color BLACK			1 2 3 4		Color of	Wire	P GND	L/O SIGNAL	L/R 12V		4o. M40		JOIOR WHILE		7 8 9 10 11 12		D. Color of Signal Name	G/Y B+	BGND	Y CARD_SW_1				
Connector No. Connector Name		Connector Color		E	H.S.			Terminal No.	-	2	4		Connector No.	Connector N	Connector Color	Ą	uquer. H.S.		Terminal No.	- -	2					
Signal Name	BAT	GND	GND	ACC	CAN-H	CAN-L	GND	SECURITY						PUSH-BUTTON IGNITION SWITCH	NM		5678		Signal Name	GND	START_SW	LOCK	ACC	NO	B+	
Color of Wire	W/L	в	в	٨٧	_	٩.	m	Г/О					o. M38		-	-			Color of Wire	в	BR	æ	٨/L	ГG	G∖Y	
Terminal No.	-	ო	4	14	21	22	23	28					Connector No.	Connector Name	Connector Color		品. H.S.		Terminal No.		4	5	9	7	8	
M24 COMBINATION METER	TE					9 10 11 12 13 14 15 16 17 18 19 20	33 34 35							Connector Name ELECTRONIC STEERING		I			Signal Name	S/L_12V_MECHANICAL					S/L_12V_CPU (V2)	
	_	-			Ľ	8 2 8							. M32		occo.			×	Color of Wire	P/L S	2	- (ç d	0 0	G∖Y	
Connector No. Connector Name	Connector Color		E		5	1 2 3 4 5	23 24						Connector No.	Connector Na	Connector Color		品 H.S.		Terminal No.		c	1 0		n u	2	

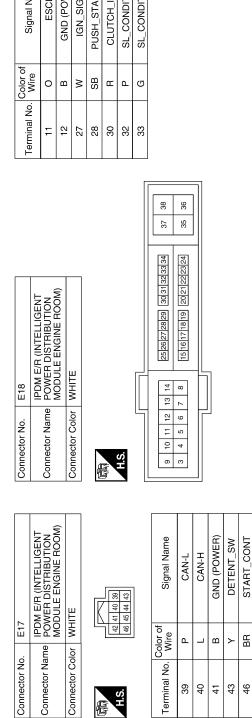
ABKIA0857GB

J DIAGNOSIS >	[SEDAN WITHOUT INTELLIGEN]	KEY]
Connector No. M200 Connector Name WIRE TO WIRE Connector Color WHITE Image: State of the state of t	Terminal No. Color of Wire Signal Name 1 B/R - 6 W/R - 6 W/R - 7 Connector No. E10 7 Connector Name ECM 7 Connector Name ECM 8 99 1000000000000000000000000000000000000	E C E
r No. M71 r Name WIRE TO WIRE r Color WHITE	No. Color of Signal Name B/R	F
Connector No. Connector Name Connector Color	Terminal No. Color 6 W 6 W 6 W 7 Connector No. 7 Connector No. 8 L	SI
M49 INSTRUMENT PANEL ANTENNA GRAY	Professional Name	L
Connector No. M49 Connector Name INSTR ANTEN Connector Color GRAY	Terminal No. Color of Wire 2 1 G 2 R N 2 R N 2 R N 2 R N 2 R N 2 M203 Connector Name FRONT Connector Color M203 MITE W/R 1 W/R 2 B/R	ľ
	ABKIA0858GB	

Ρ

BCM (BODY CONTROL MODULE)

< E



佢

Connector No.	E21	Connector No.	E22
Connector Name	Connector Name JOINT CONNECTOR-E03	Connector Name JOINT CO	JOINT CO
Connector Color WHITE	WHITE	Connector Color WHITE	WHITE
配 H.S.		品. H.S.	4 3 2

DNNECTOR-E04

Signal Name

Color of Wire

Terminal No.

I. T

_

_

-N

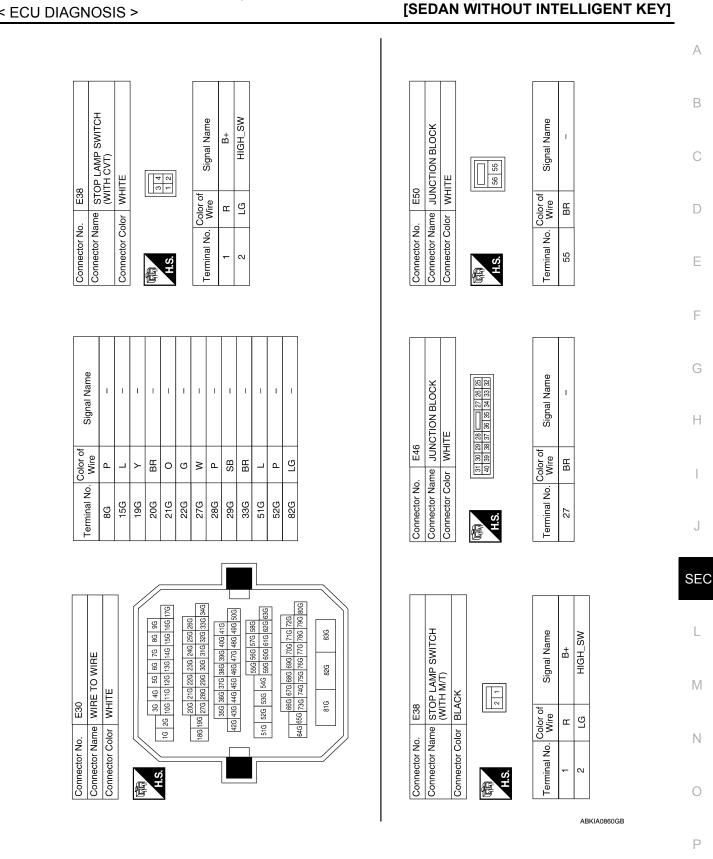
4 3 2 1	Signal Nam	I
	Color of Wire	Ч
H.S.	Terminal No.	F

	Signal Name	I	1
	Color of Wire	Ь	0
H.S.	Terminal No.	۰,	c

Signal Name	ESCL	GND (POWER)	IGN_SIGNAL	PUSH_START_SW	CLUTCH_I/L_SW	SL_CONDITION_1	SL_CONDITION_2	
Color of Wire	0	В	M	SB	щ	٩	ŋ	
Terminal No.	11	12	27	28	30	32	33	

Т Т

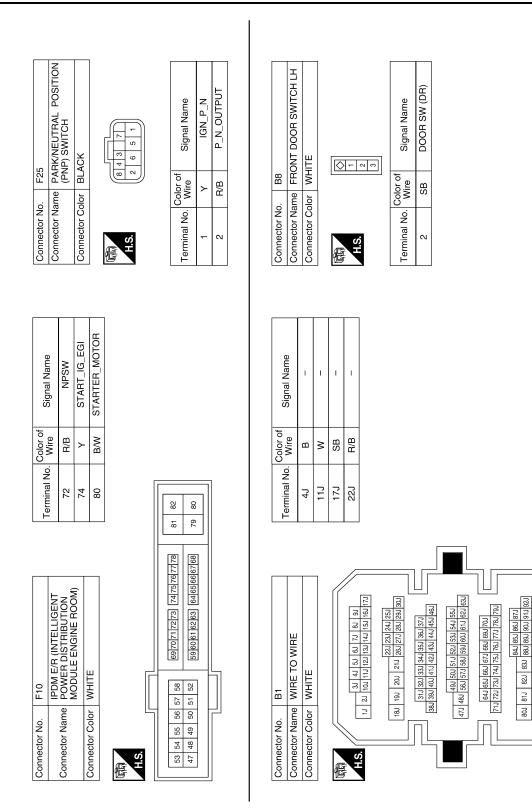
ABKIA0859GB



BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >





ABKIA0861GB

93J 94J 95J 96J 97J 98J 99J

GNOSIS >		[SEDAN ŴITHOUT INTELLIGENT KE	<u>. T</u>]
O WIRE ■ 1 11 12	Signal Name -		
rr No. B104 Pr Name WIRE TO WIRE Color BROWN rr Color 1 2 3 1 4 5 6 7 8 9 10 11 12	No. Color of Wire R/B R/W		
Connector No. Connector Name Connector Color	Terminal No. 10 11		
B29 REAR PARCEL SHELF ANTENNA GRAY	Signal Name ANT+ ANT-	B116 REAR DOOR SWITCH RH WHITE	
nector No. nector Name nector Color	Terminal No. Color of Wire 2 B	nector No. nector Color 2 R/V	
B18 REAR DOOR SWITCH LH WHITE	Signal Name DOOR SW (RL)	B108 FRONT DOOR SWITCH RH WHITE a signal Name a BOOR SW (AS)	
inector No. Inector Name Inector Color	Terminal No. Color of Wire 2 R/B	Connector No. B108 Connector Name FRONT Connector Color WHITE	
Con	Τe		

< ECU

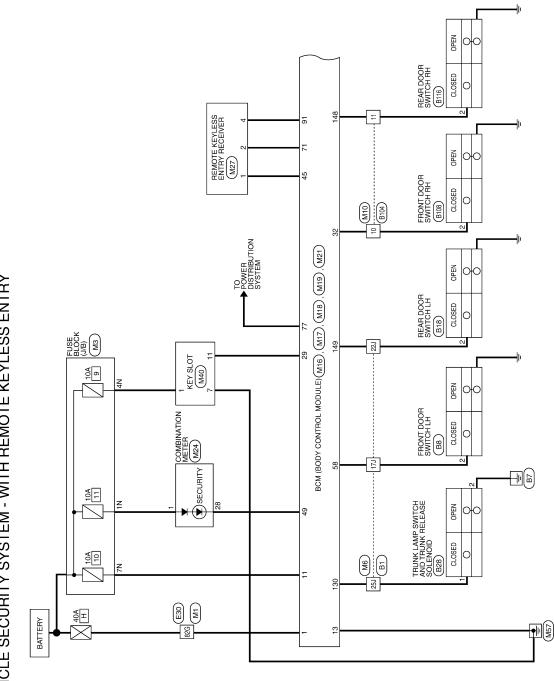
BCM (BODY CONTROL MODULE)

OUT INTELLIGENT KEVI

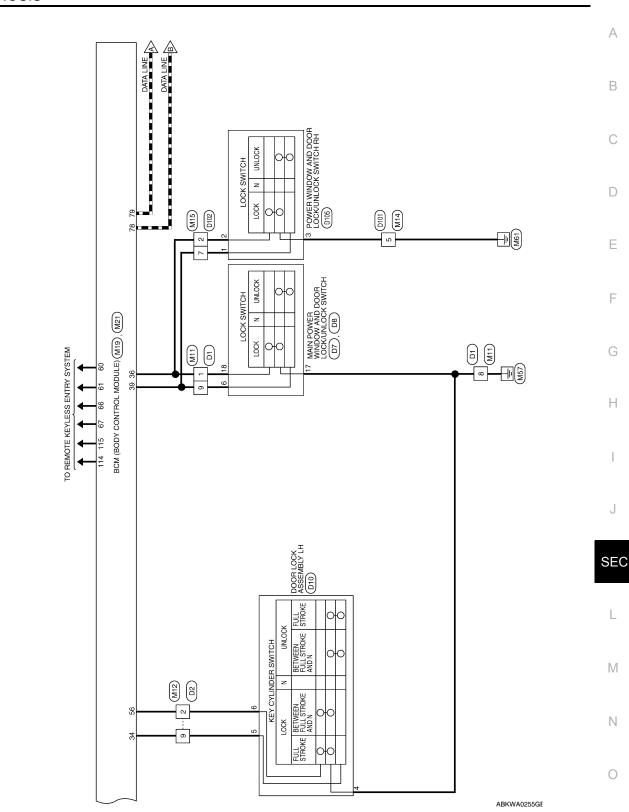
[SEDAN WITHOUT INTELLIGENT KEY]

Wiring Diagram - VEHICLE SECURITY SYSTEM - WITH REMOTE KEYLESS ENTRY

INFOID:000000004499229



ABKWA0254GE



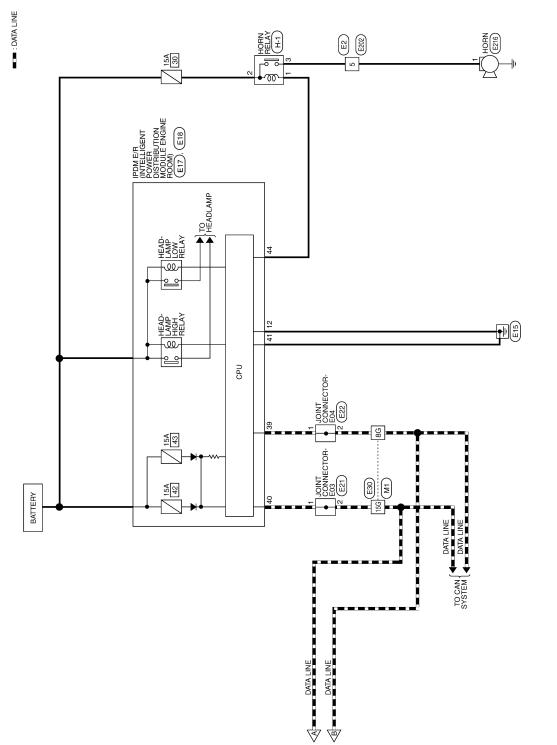
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

DATA LINE

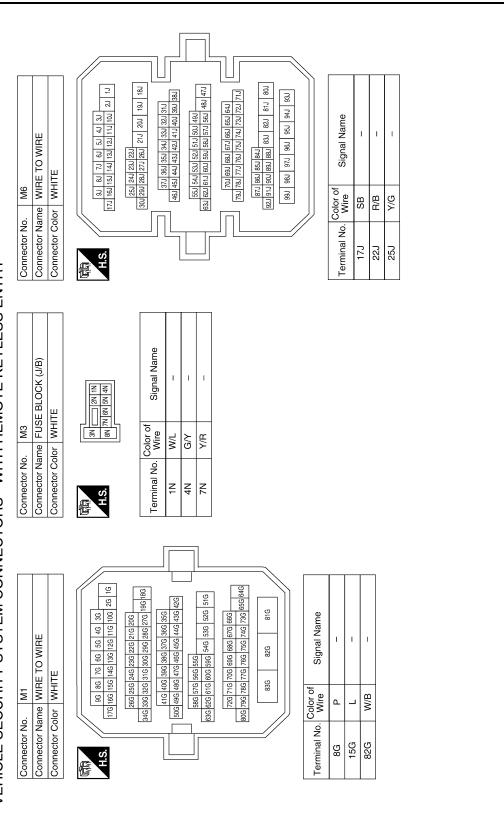
SEC-553

[SEDAN WITHOUT INTELLIGENT KEY]



ABKWA0256GE





BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

Ρ

ABKIA0864GB

А

В

С

D

Ε

F

Н

J

SEC

L

Μ

Ν

0

Connector No. M12 Connector Name WIRE TO WIRE Connector Color WHITE	国 H.S. 9 10 11 12 13 14 15 16	Terminal No.Color of WireSignal Name2L/B-	9 L/R -	Connector No. M16 Connector Name BCM (BODY CONTROL Connector Color BLACK	Terminal No. Color of Signal Name
Connector No. M11 Connector Name WIRE TO WIRE Connector Color WHITE	대학 H.S.	Terminal No. Wire Signal Name 1 GR –	8 B 9 GR/R -	Connector No. M15 Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No. Color of Signal Name 2 GR –
Connector No.M10Connector NameWIRE TO WIREConnector ColorBROWN	国 111111111111111111111111111111111111	Terminal No. Color of Wire Signal Name 10 R/B - 11 R/W -		Connector No. M14 Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No. Color of Wire Signal Name 5 B -

ABKIA0865GB

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

Connector Name BCM (BODY CONTROL MODULE)

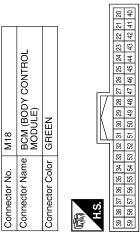
M21

Connector No.

GRAY

Connector Color

Signal Name	FOB_IN_SW_1	AS_DOOR_SW	DOOR_KEY/C_ UNLOCK_SW_	CENTRAL_LOCK_SW	CENTRAL_UNLOCKSW	GND_RF2_A/L	IMMO_LED	DOOR_KEY/C_LOCK_	DR_DOOR_SW
Color of Wire	٢	R/B	L/R	GR	GR/R	٩	L/O	L/B	SB
Terminal No.	29	32	34	36	39	45	49	56	58



Connector Color WHITE	olor WHI	TE
国 H.S.	4 5 6 7 1 11 12 13 14 1	4 5 6 7 <u>11 12 13 14 15 16 17 18 19</u>
Terminal No.	Color of Wire	Signal Name
11	Я/Y	BAT_BCM_FUSE
13	В	GND1

BCM (BODY CONTROL MODULE)

Connector Name

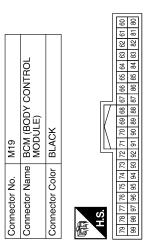
M17

Connector No.

Signal Name	ROOM_ANT_2_B	ROOM_ANT_2_A	ROOM_ANT_1_B	ROOM_ANT_1_A	RF1_TUNER_SIGNAL	ENG_START_SW	CAN-L	CAN-H	RF1_POWER_SUPPLY
Color of Wire	B/B	W/R	œ	U	Ŋ	ВВ	٩	_	L/R
Terminal No.	60	61	66	67	71	77	78	79	91

H.S.

E



Terminal No. Wire	Color of Wire	Signal Name	
114	В	TRUNK_ANT_1_B	
115	Μ	TRUNK_ANT_1_A	
130	Y/G	TRUNK_SW	
148	R/W	RR_DOOR_SW	
149	B/B	RL_DOOR_SW	





SEC

А

В

С

D

Ε

F

G

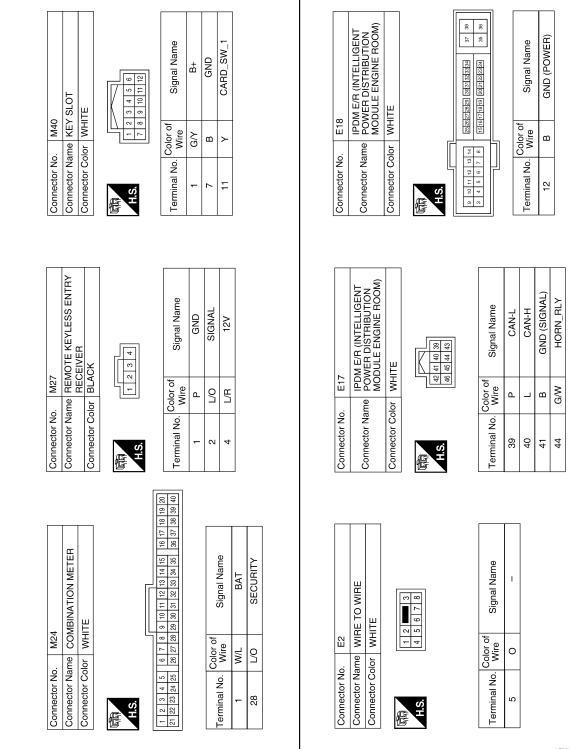
Н

L Μ

Ν

Ο

ABKIA0866GB



ABKIA0867GB

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

< ECU DIAGNOSIS >

Connector Color WHITE

H.S. 佢

H.S. E

E22

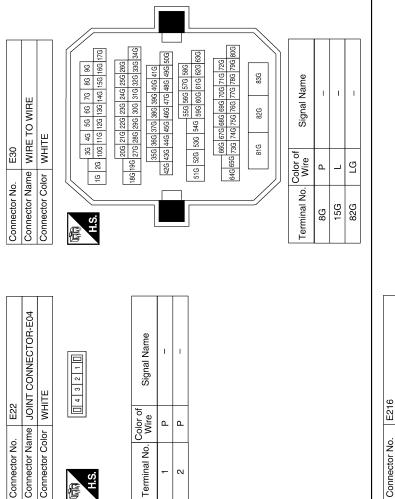
Connector No.

Connector Name JOINT CONNECTOR-E03

E21

Connector No.

Connector Color WHITE



Color of Wire ٩ ٩

Terminal No.

Signal Name Т I.

Color of Wire _ _

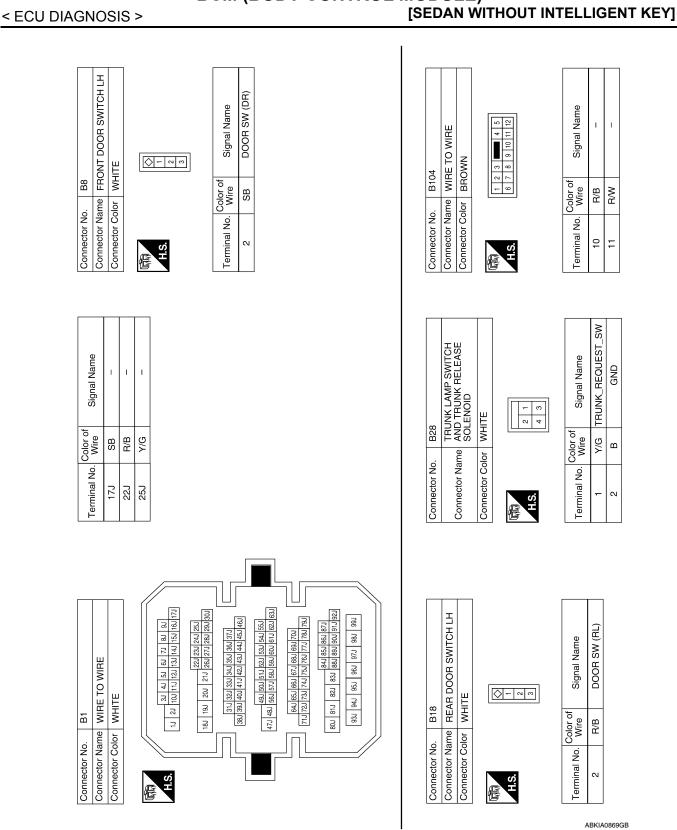
Terminal No.

N

N -

	В
	С
	D
	E
	F
L N	G
Signal	Н
Connector No. E216 Connector Name HORN Connector Color BLACK Terminal No. Color of Terminal No. Color of	I
Connector No. Connector Name Connector Color H.S. Terminal No. Color 1 0	J
	SEC
u V u	L
O WIRE 0 WIRE 0 Signal	Μ
	Ν
Connector No. Connector Cold H.S. Terminal No. 5	0
ABKIA0868GB	

А



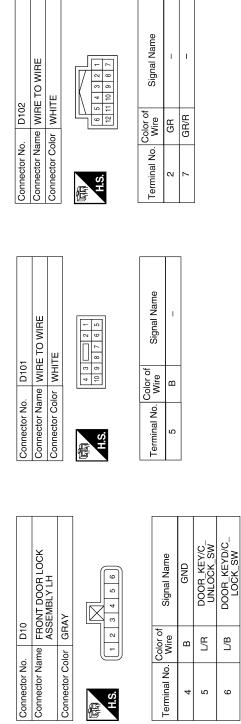
BCM (BODY CONTROL MODULE)

SEC-560

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

			A
D1 MIRE TO WIRE WHITE 16 5 4 1 3 2 1 16 15 14 3 2 11 10 9 8	Signal Name	MAIN POWER WINDOW SWITCH WHITE e GND GND	B
D. D1 ame WIRE TO blor WHITE 7 6 15 4	Color of Wire B B GR/R		D
Connector No. Connector Name Connector Color H.S.	Terminal No.	Connector No. Connector Name Connector Color H.S. Terminal No. Ook	E
			F
B116 REAR DOOR SWITCH RH WHITE	Signal Name DOOR SW (RR)	D7 MAIN POWER WINDOW SWITCH WHITE WHITE a <u><u><u></u></u> <u><u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> </u></u>	G
B116 WHITE 3 3		D7 D7 MAIN POWER MAIN POWER MAIN POWER 9 wHITE 10 g 10 g 11 g 11	Н
	o. Color of R/W		Ι
Connector No. Connector Name H.S.	Terminal No. 2	Connector No. Connector Name Connector Color Terminal No. Col	J
			SEC
B108 FRONT DOOR SWITCH RH WHITE	Signal Name DOOR SW (AS)	Signal Name	L
B108 WHITE			Μ
2 3	L No. Color of Wire R/B		Ν
Connector No. Connector Colo Connector Colo H.S.	Terminal No. 2	Connector No. Connector Nan Connector Cole His His His	0

ABKIA0870GB

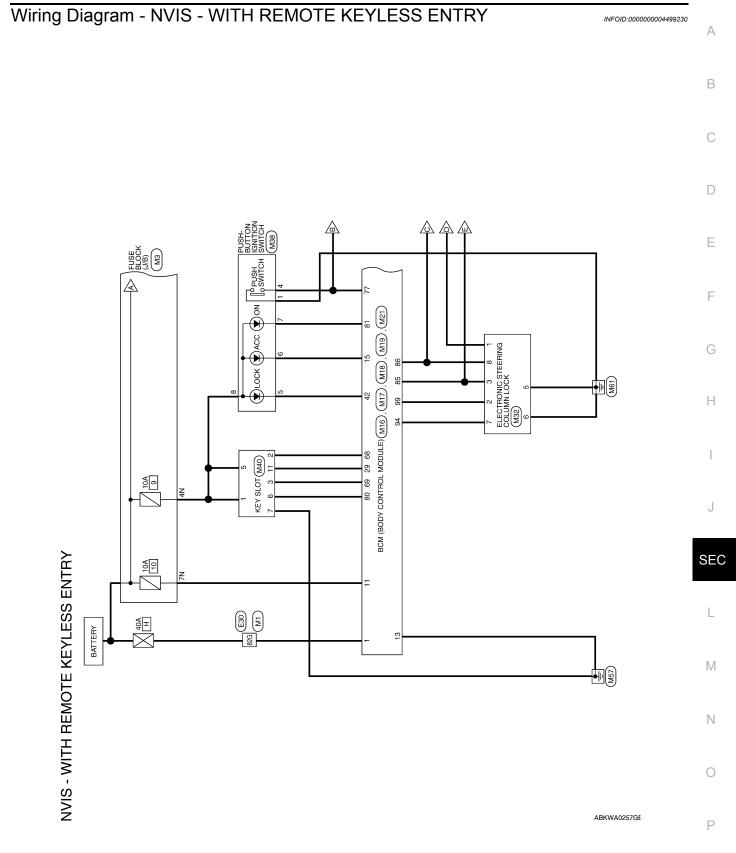


Connector No.	D105
Connector Name	Connector Name DOOR LOCK/UNLOCK SWITCH RH
Connector Color WHITE	WHITE
。 で SH	1 2 3 4 5 6 7 8 9 10 11 12

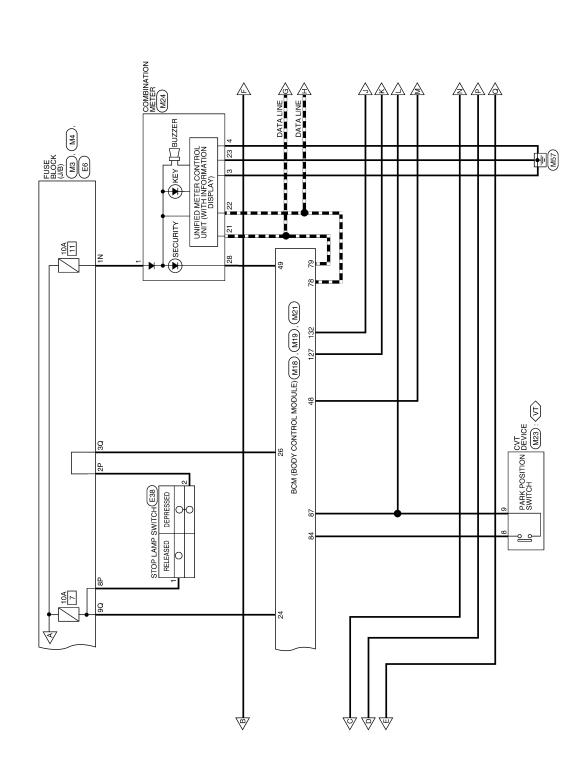
Signal Name	LOCK	NLOCK	GND
Color of Wire	GR	GR/R	В
Terminal No. Color of Wire	ł	2	3

ABKIA0871GB

9

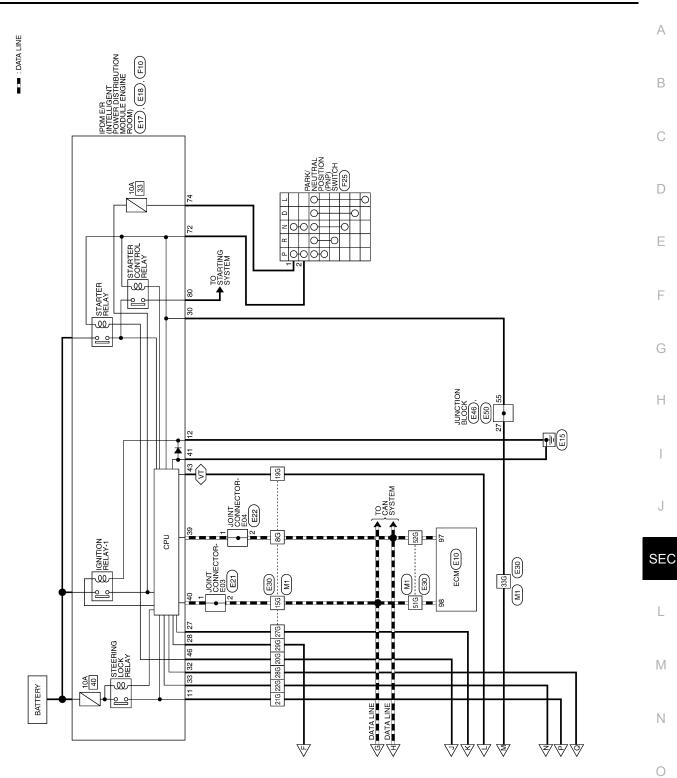


■ : DATA LINE

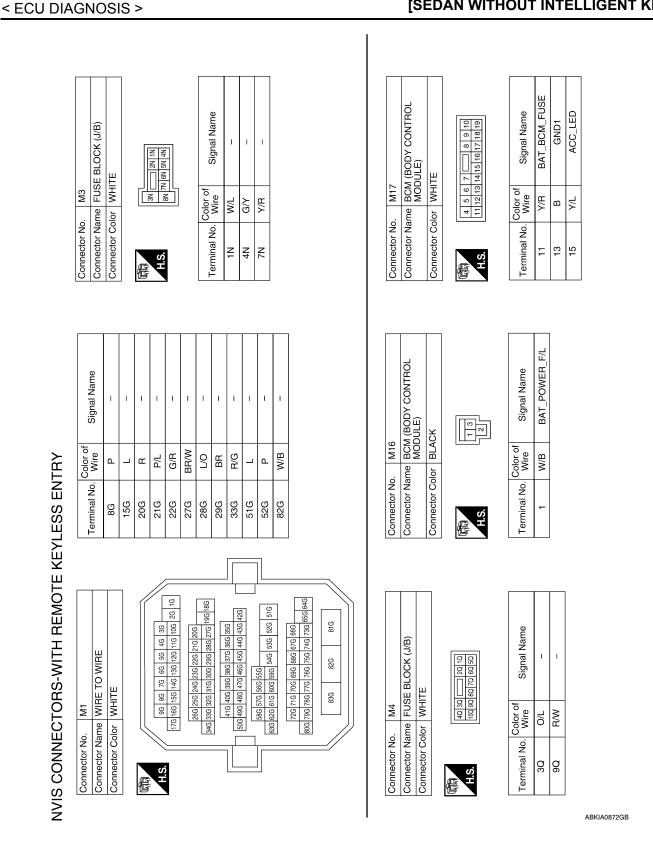


ABKWA0258GE

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]



ABKWA0259GE



BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

Terminal No. Color of Signal Name	77 BR ENG_START_SW	78 P CAN-L	79 L CAN-H	80 R/L FOB SLOT	81 TC IGN_ON_LED	의 의 의 에 의 N/R AT_DEVICE_OUT	82 81	86 G/R S/L_CONDITION_2	87 G/B SHIFT_P	94 G/Y S/L POWER SUPPLY_12V		
Connector No. M19 Connector Name BCM (BODY CONTROL		Connector Color BLACK	ģ				10 1/1 1/2 1/2 1/1 1/0 0/3 0/4 0/3 0/4 0/3 0/4 0/3 0/4 0/3 0/4 0/3 0/4 0/3 0/4 0/3 0/4 0/4 0/3 0/4		Color of	al No. Wire		
Connector No. M18 Connector Nome BCM (BODY CONTROL	MODULE)	Connector Color GREEN					3/ 30 30 34 33 32 31 30 29 28 2/ 20 57 56 55 54 53 52 51 50 49 48 47 46		of	24 R/W STOP LAMP LOW SW	O/L	29 Y FOB_IN_SW_1 42 R S/L_LOCK_LED 48 R/G SHIFT_N/P 49 L/O IMMO_LED

BCM (BODY CONTROL MODULE)

[SEDAN WITHOUT INTELLIGENT KEY]

А

В

С

D

Е

F

G

Н

J

SEC

L

Μ

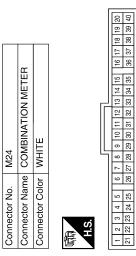
Ν

0

Р

F

Signal Name	BAT	GND	GND	ACC	CAN-H	CAN-L	GND	SECURITY	
Color of Wire	W/L	в	m	۲/Y	_	Ч	в	Ŋ	
Terminal No.	-	e	4	14	21	22	23	28	



M24

C	PUSH-BUTTON IGNITION	Co		Signal Name
Connector No.	Connector Name KEY SLOT	Connector Color WHITE	H.S.	Terminal No. Color o
M40	KEY SLOT	WHITE	7 8 9 10 11	Color of Sign

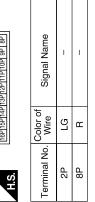
Signal Name	GND	START_SW	LOCK	ACC	NO	B+	
Color of Wire	в	BR	н	λ/٢	ГG	G/Y	
Terminal No. Wire	1	4	5	9	7	8	

ABKIA0874GB

Signal Name	B+	CLOCK	DATA	LIGHT_BAT+		GND	CARD_SW_1
Color of Wire	G/Y	G/O	0	G/Y	R/L	В	Y
Terminal No.	Ţ.	2	3	5	9	7	11





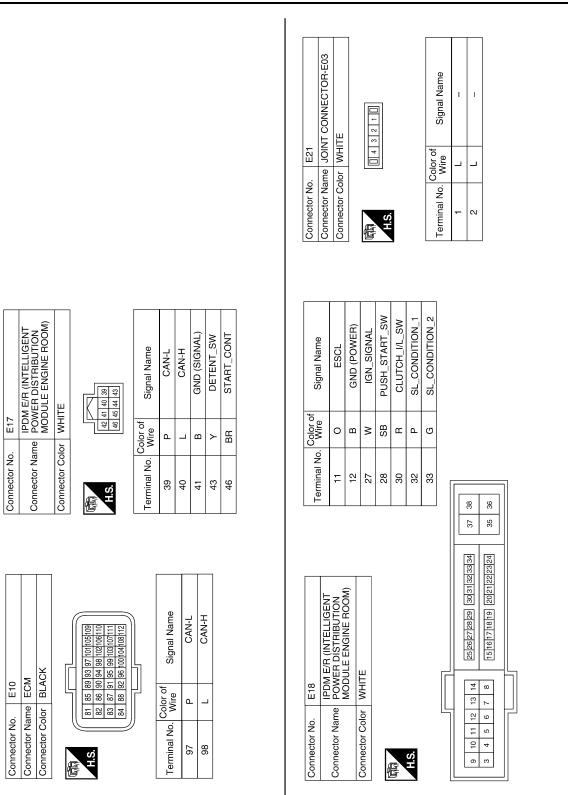


Connector Name

Connector No.

Connector Color

H.S. e



[SEDAN WITHOUT INTELLIGENT KEY]

А

В

С

D

Ε

F

Н

J

SEC

L

Μ

Ν

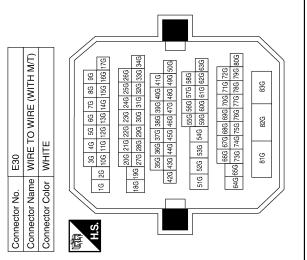
Ο

Ρ

ABKIA0875GB



Signal Name	I	I	I	Ι	Ι	I	-	-	I	-	I	-	
Color of Wire	Р	Γ	Y	BR	0	G	M	Р	SB	BR	Γ	Ρ	ГG
Terminal No.	8G	15G	19G	20G	21G	22G	27G	28G	29G	33G	51G	52G	82G

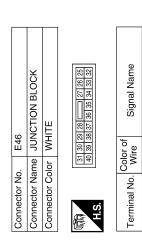


I

٩

N

Connector No.). E22	
Connector Name		JOINT CONNECTOR-E04
Connector Color	olor WHITE	ITE
国 H.S.		4 3 2 1 1
Terminal No.	Color of Wire	Signal Name
-	٩	I



1

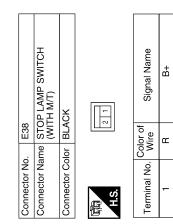
ΒВ

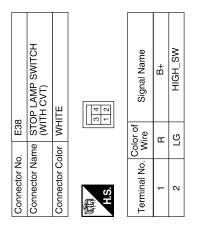
27

HIGH_SW

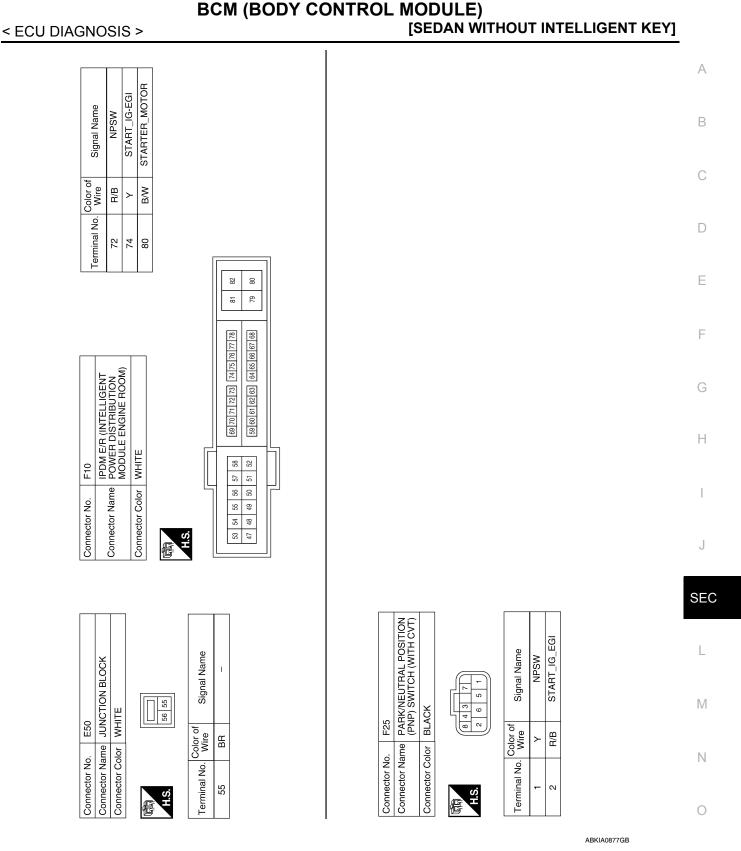
ŋ

N





ABKIA0876GB



Fail Safe

INFOID:000000004499231

Ρ

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC

SEC-571

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

Sector Diagnosis > Display contents of CONSULT	Fail-safe	Cancellation
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2191: DI T ERENCE OF RET	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit electronic steering column lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has become consistent Starter control relay signal Starter relay status signal
B2562: LO VOLTAGE	 Inhibit engine cranking Inhibit electronic steering column lock 	100 ms after the power supply voltage increases to more than 8.8 V
B2601: SHIFT POSITION	Inhibit electronic steering column lock	 500 ms after the following signal reception status becomes consistent Selector lever P position switch signal P range signal (CAN)
		5 seconds after the following BCM recognition conditions are ful-
B2602: SHIFT POSITION	Inhibit electronic steering column lock	 filled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Vehicle speed: 4 /h or more
B2603: SHIFT POSI STATUS	Inhibit electronic steering column lock	 500 ms after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit electronic steering column lock	 500 ms after any of the following BCM recognition conditions is fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P and N position (battery voltage) P range signal or N range signal (CAN): ON Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) P range signal and N range signal (CAN): OFF
B2605: PNP SW	Inhibit electronic steering column lock	 500 ms after any of the following BCM recognition conditions is fulfilled Ignition switch is in the ON position Power position: IGN Selector lever P/N position signal: Except P and N positions (0 V) Interlock/PNP switch signal (CAN): OFF Status 2 Ignition switch is in the ON position Selector lever P/N position signal: P or N position (battery voltage) PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has become consistent Electronic steering column lock relay signal (Request signal) Electronic steering column lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has become consistent Electronic steering column lock relay signal (Request signal) Electronic steering column lock relay signal (Condition signal)

SEC-572

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

Display contents of CONSULT	Fail-safe	Cancellation	
B2608: STARTER RELAY	Inhibit engine cranking	 500 ms after the following signal communication status becomes consistent Starter motor relay control signal Starter relay status signal (CAN) 	
B2609: S/L STATUS	 Inhibit engine cranking Inhibit electronic steering column lock 	 When the following electronic steering column lock conditions agree BCM electronic steering column lock control status Electronic steering column lock condition No. 1 signal status Electronic steering column lock condition No. 2 signal status 	
B260A: IGNITION RELAY	Inhibit engine cranking	 500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (Battery voltage) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal) 	
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilledPower position changes to ACCReceives engine status signal (CAN)	
B2612: S/L STATUS	 Inhibit engine cranking Inhibit electronic steering column lock 	 When any of the following conditions is fulfilled Electronic steering column lock unit status signal (CAN) is received normally The BCM electronic steering column lock control status matches the electronic steering column lock status recognized by the electronic steering column lock unit status signal (CAN from IPDM E/R) 	
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal	
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM be- comes normal	
B2619: BCM	Inhibit engine cranking	1 second after the electronic steering column lock unit power sup- ply output control inside BCM becomes normal	
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions is fulfilledPower position changes to ACCReceives engine status signal (CAN)	

DTC Inspection Priority Chart

INFOID:000000004499232

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC	
1	B2562: LOW VOLTAGE	
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)	M
3	 B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM 	Ν

0

SEC

L

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

INFOID:000000004499233

Priority	DTC
4	 B2013: ID DISCORD BCM-S/L B2014: CHAIN OF S/L-BCM B2555: IGNITION RELAY B2555: STOP LAMP B2555: FUSH-BTN IGN SW B2557: VEHICLE SPEED B2560: STARTER CONT RELAY B2601: SHIFT POSITION B2602: SHIFT POSITION B2603: SHIFT POSITION B2604: PNP SW B2605: PNP SW B2606: STARTER RELAY B2607: S/L RELAY B2608: STARTER RELAY B2609: S/L STATUS B2609: S/L STATUS B2609: S/L STATUS B26009: S/L STATUS B26009: S/L STATUS B26009: S/L STATUS B26009: S/L STATUS B26010000 B26010000 STEERING LOCK UNIT B260200000 B260200000 STEERING LOCK UNIT B260200000000 B2604: ACC RELAY CIRC B2614: ACC RELAY CIRC B2615: BLOWER RELAY CIRC B2615: BLOWER RELAY CIRC B2616: IGN RELAY CIRC B2616: IGN RELAY CIRC B2616: IGN RELAY CIRC B2617: STARTER RELAY CIRC B2618: BCM B2619: BCM B2619: BCM B2614: ACC BLAY CIRC B2615: BLOWER RELAY CIRC B2616: IGN RELAY CIRC B2616: IGN RELAY CIRC B2617: STARTER RELAY CIRC B2618: BCM B2619: BCM B2614: ACC RELAY CIRC B2615: BLOWER RELAY CIRC B2616: IGN RELAY CIRC B2616: IGN RELAY CIRC B2617: STARTER RELAY CIRC B2618: BCM B2619: BCM B261000000000000000000000000000000000000
5	 C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RR C1711: [CHECKSUM ERR] FL C1713: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR C1715: [CHECKSUM ERR] RR C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] FR C1719: [PRESSDATA ERR] FR C1719: [PRESSDATA ERR] RR C1712: [CODE ERR] FR C1720: [CODE ERR] FR C1722: [CODE ERR] RR C1723: [CODE ERR] RR C1724: [BATT VOLT LOW] FR C1725: [BATT VOLT LOW] FR C1727: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RL C1734: CONTROL UNIT
6	 B2621: INSIDE ANTENNA B2622: INSIDE ANTENNA B2623: INSIDE ANTENNA

DTC Index

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

Details of time display

- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1
 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter
 remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch
 OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	-	_	_
U1000: CAN COMM CIRCUIT	—	—	_	<u>BCS-38</u>
U1010: CONTROL UNIT (CAN)	_	—	_	<u>BCS-39</u>
U0415: VEHICLE SPEED SIG	_	—	_	<u>BCS-40</u>
B2013: ID DISCORD BCM-S/L	×	—		<u>SEC-38</u>
B2014: CHAIN OF S/L-BCM	×	—	_	<u>SEC-39</u>
B2190: NATS ANTENNA AMP	×	—	_	<u>SEC-64</u>
B2191: DIFFERENCE OF KEY	×	—	_	<u>SEC-67</u>
B2192: ID DISCORD BCM-ECM	×	—	_	<u>SEC-68</u>
B2193: CHAIN OF BCM-ECM	×	_	—	<u>SEC-69</u>
B2553: IGNITION RELAY	—	—	_	PCS-60
B2555: STOP LAMP	—	—	—	<u>SEC-70</u>
B2556: PUSH-BTN IGN SW	—	×	_	<u>SEC-72</u>
B2557: VEHICLE SPEED	×	×	_	<u>SEC-74</u>
B2560: STARTER CONT RELAY	×	×	_	<u>SEC-75</u>
B2562: LOW VOLTAGE	_	—	_	BCS-41
B2601: SHIFT POSITION	×	×	_	<u>SEC-76</u>
B2602: SHIFT POSITION	×	×	_	SEC-79
B2603: SHIFT POSI STATUS	×	×	_	SEC-81
B2604: PNP SW	×	×	_	<u>SEC-84</u>
B2605: PNP SW	×	×	_	<u>SEC-86</u>
B2606: S/L RELAY	×	×	_	<u>SEC-88</u>
B2607: S/L RELAY	×	×	_	<u>SEC-89</u>
B2608: STARTER RELAY	×	×	_	<u>SEC-91</u>
B2609: S/L STATUS	×	×	_	<u>SEC-93</u>
B260A: IGNITION RELAY	×	×	_	PCS-62
B260B: STEERING LOCK UNIT	_	×	_	<u>SEC-97</u>
B260C: STEERING LOCK UNIT	_	×	_	<u>SEC-98</u>
B260D: STEERING LOCK UNIT	_	×	_	<u>SEC-99</u>
B260F: ENG STATE SIG LOST	×	×	_	<u>SEC-100</u>
B2612: S/L STATUS	×	×	_	<u>SEC-101</u>
B2614: ACC RELAY CIRC		×	_	PCS-65
B2615: BLOWER RELAY CIRC	_	×	_	PCS-68
B2616: IGN RELAY CIRC	_	×	_	PCS-71
B2617: STARTER RELAY CIRC	×	×	_	<u>SEC-105</u>
B2618: BCM	×	×		PCS-74

BCM (BODY CONTROL MODULE) [SEDAN WITHOUT INTELLIGENT KEY]

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2619: BCM	×	×	_	<u>SEC-107</u>
B261A: PUSH-BTN IGN SW	_	×	_	<u>SEC-108</u>
B2621: INSIDE ANTENNA	_	_	_	<u>DLK-59</u>
B2622: INSIDE ANTENNA	_	_	_	DLK-62
B2623: INSIDE ANTENNA	_	_	_	DLK-65
B26E1: ENG STATE NO RES	×	×	_	<u>SEC-110</u>
C1704: LOW PRESSURE FL	_	_	×	<u>WT-52</u>
C1705: LOW PRESSURE FR	_	_	×	<u>WT-52</u>
C1706: LOW PRESSURE RR	_	_	×	<u>WT-52</u>
C1707: LOW PRESSURE RL	_	_	×	<u>WT-52</u>
C1708: [NO DATA] FL	_	_	×	<u>WT-14</u>
C1709: [NO DATA] FR	_	_	×	<u>WT-14</u>
C1710: [NO DATA] RR	_	_	×	<u>WT-14</u>
C1711: [NO DATA] RL	_	_	×	<u>WT-14</u>
C1712: [CHECKSUM ERR] FL	_	_	×	<u>WT-16</u>
C1713: [CHECKSUM ERR] FR	_	_	×	<u>WT-16</u>
C1714: [CHECKSUM ERR] RR	_	_	×	<u>WT-16</u>
C1715: [CHECKSUM ERR] RL	_	_	×	<u>WT-16</u>
C1716: [PRESSDATA ERR] FL	_	_	×	<u>WT-18</u>
C1717: [PRESSDATA ERR] FR	—	_	×	<u>WT-18</u>
C1718: [PRESSDATA ERR] RR	_	_	×	<u>WT-18</u>
C1719: [PRESSDATA ERR] RL	_	_	×	<u>WT-18</u>
C1720: [CODE ERR] FL	_	_	×	<u>WT-16</u>
C1721: [CODE ERR] FR	_	_	×	<u>WT-16</u>
C1722: [CODE ERR] RR	_	_	×	<u>WT-16</u>
C1723: [CODE ERR] RL	_	_	×	<u>WT-16</u>
C1724: [BATT VOLT LOW] FL	—	—	×	<u>WT-16</u>
C1725: [BATT VOLT LOW] FR	_	_	×	<u>WT-16</u>
C1726: [BATT VOLT LOW] RR	—	—	×	<u>WT-16</u>
C1727: [BATT VOLT LOW] RL	—	_	×	<u>WT-16</u>
C1729: VHCL SPEED SIG ERR	—	—	×	<u>WT-19</u>
C1734: CONTROL UNIT	_	_	×	<u>WT-20</u>

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Reference Value

INFOID:000000004499237

А

В

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	(Condition	Value/Status	- C			
RADFAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	0 - 100 %	D			
		A/C switch OFF	Off	_			
AC COMP REQ	Engine running	A/C switch ON (Compressor is operating)	On	E			
TAIL&CLR REQ	Lighting switch OFF		Off	-			
IAILOULK REQ	Lighting switch 1ST, 2ND, HI or	AUTO (Light is illuminated)	On	F			
	Lighting switch OFF	ing switch OFF					
HL LO REQ	Lighting switch 2ND HI or AUTC	(Light is illuminated)	On	G			
	Lighting switch OFF		Off	_ 0			
HL HI REQ	Lighting switch HI		On	-			
	Front fog lamp switch OFF		Off	H			
FR FOG REQ	Lighting switch 2ND or AUTO (Light is illuminated)	 Front fog lamp switch ON Daytime running light activated (Only for Canada models) 	On	-			
		Front wiper switch OFF	STOP	-			
		Front wiper switch INT	1LOW	-			
FR WIP REQ	Ignition switch ON	Front wiper switch LO	Low	– J			
		Front wiper switch HI	Hi	-			
		Front wiper stop position	STOP P	SE			
WIP AUTO STOP	Ignition switch ON	Any position other than front wiper stop position	ACT P	-			
		Front wiper operates normally	Off	L			
WIP PROT	Ignition switch ON	Front wiper stops at fail-safe opera- tion	BLOCK	-			
IGN RLY1 -REQ	Ignition switch OFF or ACC		Off	M			
IGN RLY I -REQ	Ignition switch ON		On	-			
	Ignition switch OFF or ACC		Off	- N			
IGN RLY	Ignition switch ON		On	- IN			
	Release the push-button ignition	n switch	Off	-			
PUSH SW	Press the push-button ignition sy	witch	On	0			
	Ignition switch ON	CVT selector lever in any position other than P or N (CVT models)	Off	-			
	-	Release clutch pedal (M/T models)		Ρ			
INTER/NP SW	Ignition switch ON	CVT selector lever in P or N posi- tion (CVT models)	On	-			
		Depress clutch pedal (M/T models)		_			
ST RLY CONT	Ignition switch ON		Off				
	At engine cranking		On				

< ECU DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

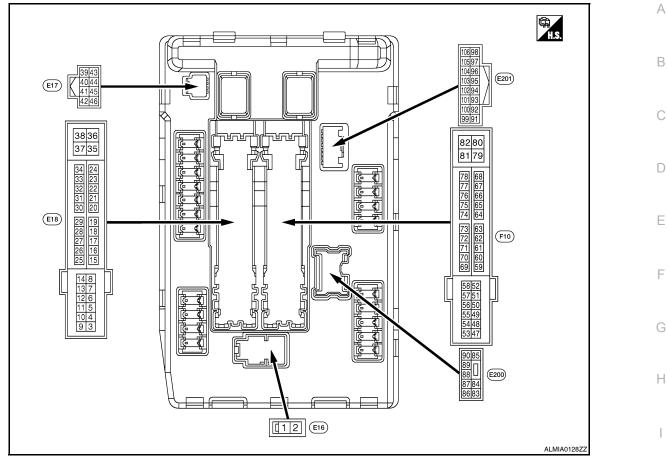
Monitor Item	Con	dition	Value/Status
	Ignition switch ON	Off	
IHBT RLY -REQ	At engine cranking		On
	Ignition switch ON		Off
	At engine cranking		ST →INHI
ST/INHI RLY		control relay cannot be recognized by when the starter relay is ON and the	UNKWN
DETENT SW	Ignition switch ON	Off	
	Release the CVT selector button wi NOTE: The lever is fixed ON for M/T	On	
	None of the conditions below are pr	Off	
S/L RLY -REQ	 Open the driver door after the ign seconds) Press the push-button ignition sw ed Depress the clutch pedal when the second second	On	
	Steering lock is activated		LOCK
S/L STATE	Steering lock is deactivated		UNLK
	[DTC B210A] is detected		UNKWN
DTRL REQ	NOTE: This item is displayed, but cannot b	e monitored.	Off
	Ignition switch OFF, ACC or engine	running	Open
OIL P SW	Ignition switch ON		Close
	Not operated		Off
THFT HRN REQ	 Panic alarm is activated Horn is activated with VEHICLE S TEM 	On	
	Not operated	Off	
HORN CHIRP	Door locking with Intelligent Key (ho	On	
CRNRNG LMP REQ	NOTE: This item is displayed, but cannot b	e monitored.	Off

< ECU DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

J

TERMINAL LAYOUT



PHYSICAL VALUES

	inal No.	Description				Value	
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	SEC
1 (R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage	
2 (L)	Ground	Battery power supply	Input	Ignition swi	tch OFF	Battery voltage	- L
4	Ground	FrontwinerLO	Output	Ignition	Front wiper switch OFF	0V	_
(L/R)	Ground	Front wiper LO	Output	switch ON	Front wiper switch LO	Battery voltage	M
5	Ground	Front wiper HI	Output	Ignition	Front wiper switch OFF	0V	
(L/B)	Ground		Output	switch ON Front wiper switch HI		Battery voltage	N
6 (SB)	Ground	Daytime light relay power supply (Canada models only)	Output	Ignition switch OFF		Battery voltage	0
7	Cround	Tail, license plate lamps &	Output	Ignition	Lighting switch OFF	0V	_ 0
(R/L)	Ground	interior lamps	Output	switch ON	Lighting switch 1ST	Battery voltage	_
10				Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0V	Ρ
(R/B)	Ground	ECM relay power supply	Output	•		Battery voltage	

< ECU DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

	nal No.	Description) (alua
(Wire +	color) _	Signal name	Input/ Output		Condition	Value (Approx.)
				Ignition switch OFF	A few seconds after open- ing the driver door	Battery voltage
11 (P/L)	Ground	Steering lock unit power supply	Output	Ignition switch LOCK	Press the push-button ig- nition switch	Battery voltage
				Ignition sw	itch ACC or ON	0V
12 (B)	Ground	Ground	_	Ignition sw	itch ON	0V
10					tely 1 second or more after ignition switch ON	0V
13 (W)	Ground	Fuel pump power supply	Output	 Approximately 1 second after turning the ignition switch ON Engine running 		Battery voltage
15	Ground	Ignition relay-1 power sup-	Output	Ignition sw	itch OFF	0V
(G/W)	Ground	ply	Output	Ignition switch ON		Battery voltage
16				Ignition Front wiper stop position		0V
(L/Y)	Ground	Front wiper auto stop	Input	switch ON Any position other than front wiper stop position		Battery voltage
19	Ground	Ignition relay-1 power sup-	Output	Ignition switch OFF		0V
(L/Y)	Glound	ply	Output	Ignition sw	itch ON	Battery voltage
20 (B/Y)	Ground	Ambient sensor ground	_	Ignition sw	itch ON	0V
21 (O/B)	Ground	Ambient sensor	_	Ignition sw	itch ON	5V
22 (W/R)	Ground	Refrigerant pressure sen- sor ground	_	Ignition sw	itch ON	0V
23 (B/R)	Ground	Refrigerant pressure sen- sor	_	Both A/C	switch ON (READY) switch and blower motor N (electric compressor oper-	1.0 - 4.0V
24 (BR/W)	Ground	Refrigerant pressure sen- sor power supply	_	Ignition sw	itch ON	5V
25	Ground	Ignition relay-1 power sup-	Output	Ignition sw	itch OFF	0V
(GR)	Ground	ply	Output	Ignition sw	itch ON	Battery voltage
27	Ground	Ignition relay monitor	Input	Ignition switch OFF or ACC		Battery voltage
(BR/W)	Cround		mput	Ignition switch ON		0V
28	Ground	Push-button ignition	Input	Press the push-button ignition switch		0V
(BR)		switch	F	Release the push-button ignition switch		Battery voltage
				CVT selector lever in any position other than P or N (ignition switch ON)		0V
30 (R/B)	Ground	Starter relay control	Input	els CVT selector lever P or N (ignition switch ON)		Battery voltage
				M/T mod- Release the clutch pedal	0V	
				els	Depress the clutch pedal	Battery voltage

	nal No.	Description				Value	
(Wire +	e color) _	Signal name	Input/ Output		Condition	(Approx.)	
32	0	Electronic steering column		Electronic s	steering column lock is acti-	0V	
(L/O)	Ground	lock unit condition-1	Input	Electronic s tivated	steering column lock is deac-	Battery voltage	
33	Ground	Electronic steering column	Input	Electronic s	steering column lock is acti-	Battery voltage	
(G/R)	Cround	lock unit condition-2	mpar	Electronic s tivated	steering column lock is deac-	0V	
34	Ground	Cooling fan relay-3 control	Input	Ignition switch OFF or ACC		0V	
(O/L)	croand	_ some some of the second of t	mput	Ignition switch ON		0.7V	
35	Ground	Cooling fan motor control	Output	Ignition swi	itch OFF or ACC	0V	
(L/B)	Sround		Supur	Ignition swi	itch ON	0.7V	_
36 (G)	Ground	Battery power supply	Input	Ignition swi	itch OFF	Battery voltage	
38	Ground	Cooling fan motor control	Output	Ignition swi	itch OFF or ACC	0V	
(R/W)	Cround			Ignition swi	itch ON	0.7V	
39 (P)	_	CAN - L	Input/ Output	_		_	
40 (L)	_	CAN - H	Input/ Output	_		_	
41 (B)	Ground	Ground	_	Ignition switch ON		0V	
42	Ground	Cooling fan relay-2 control	Input	-	itch OFF or ACC	0V	
(SB)		<u> </u>		Ignition swi	itch ON	0.7V	
					Press the CVT selector button (CVT selector lever P)	Battery voltage	
43 (G/B)	Ground	CVT device (Detention switch)	Input	Ignition switch ON	 CVT selector lever in any position other than P Release the CVT selec- tor button (CVT selector lever P) 	0V	
44	Ground	Horn relay control	Input	The horn is	deactivated	Battery voltage	_
(G/W)	croand		mput	The horn is	activated	0V	
45	Ground	Anti theft horn relay control	Input	The horn is	deactivated	Battery voltage	
(L/O)	Cround	, and monthorn roldy control	input	The horn is	activated	0V	_
				CVT mod-	CVT selector lever in any position other than P or N (ignition switch ON)	0V	_
46 (R)	Ground	Starter relay control	Input	els	CVT selector lever P or N (ignition switch ON)	Battery voltage	
				M/T mod- Release the clutch pedal		0V	_
				els Depress the clutch pedal		Battery voltage	
				A/C switch OFF		0V	
48 (Y/R)	Ground	A/C relay power supply	Output	Engine running	A/C switch ON (A/C compressor is oper- ating)	Battery voltage	

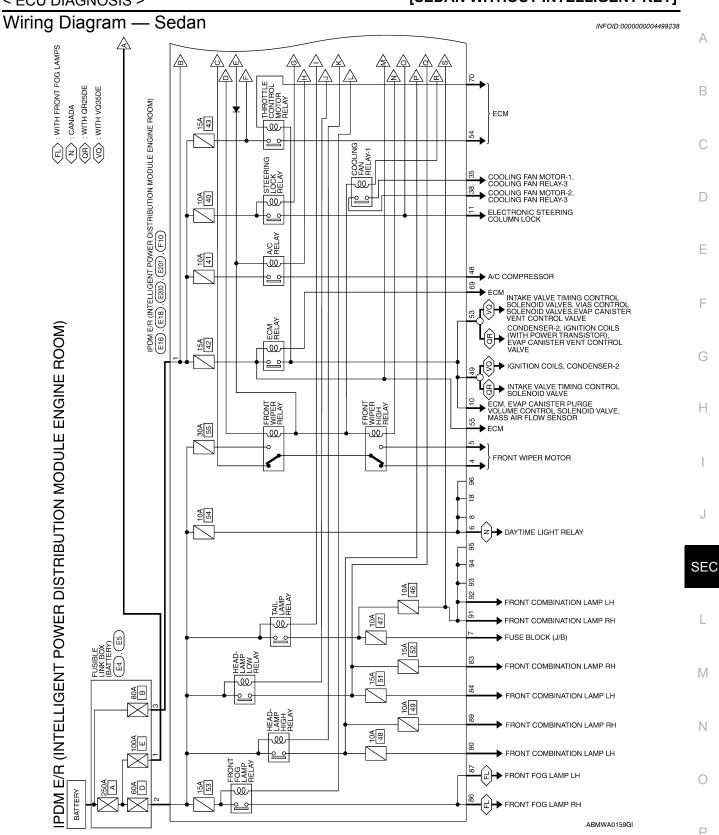
< ECU DIAGNOSIS >

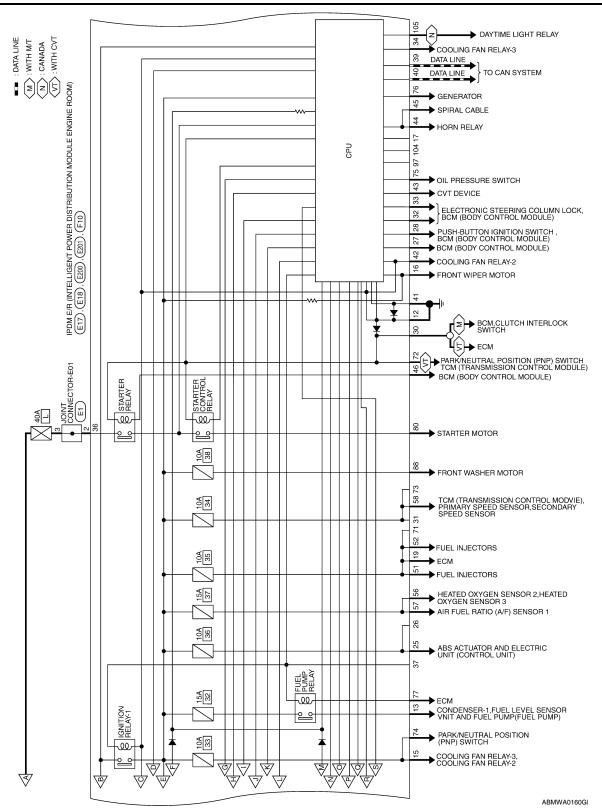
[SEDAN WITHOUT INTELLIGENT KEY]

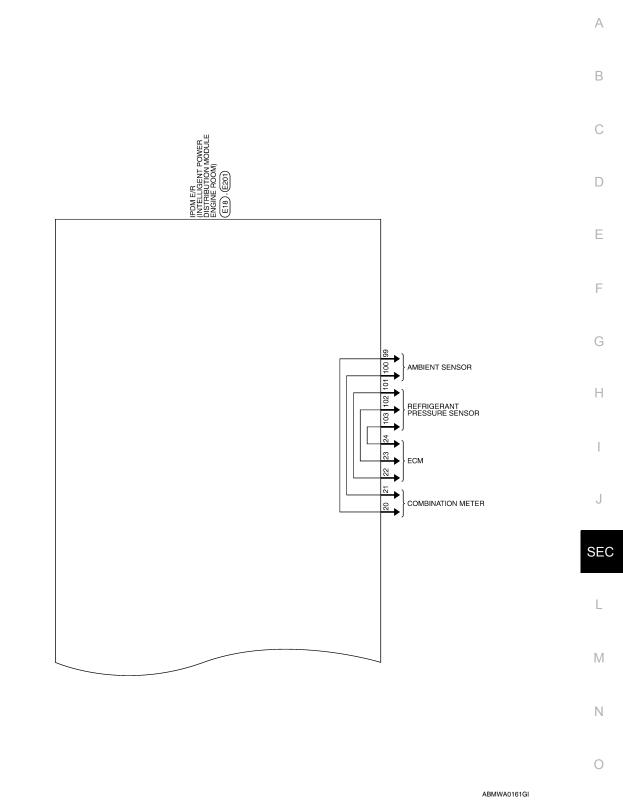
Terminal No. (Wire color) + _		Description			Value
	-	Signal name	Input/ Output	Condition	(Approx.)
40				Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0V
49 (R/B)	Ground	ECM relay power supply (with VQ35DE)	Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 	Battery voltage
49		ECM relay power supply		Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0V
(B/R)	Ground	(without VQ35DE)	Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 	Battery voltage
51	Ground	Ignition relay power supply	Output	Ignition switch OFF	0V
(LG)	Ciouna	ignition relay power supply	Output	Ignition switch ON	Battery voltage
52	Ground	Ignition relay power supply	Output	Ignition switch OFF	0V
(Y/G)	Clound	ignition relay power suppry	Output	Ignition switch ON	Battery voltage
50				Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0V
53 (B/R)	Ground	ECM relay power supply (with VQ35DE)	Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 	Battery voltage
50				Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0V
53 (R/B)	Ground	ECM relay power supply (without VQ35DE)	Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 	Battery voltage
54		Throttle control motor re		Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0V
54 (G/W)	Ground	Throttle control motor re- lay power supply	Output	 Ignition switch ON Ignition switch OFF (More than a few seconds after turn- ing ignition switch OFF) 	Battery voltage
55 (W/L)	Ground	ECM power supply	Output	Ignition switch OFF	Battery voltage
56	Ground	Ignition relay power supply	Output	Ignition switch OFF	0V
(R/Y)		C		Ignition switch ON	Battery voltage
57	Ground	Ignition relay power supply	Output	Ignition switch OFF	0V
(O)		5 · · · · · · · · · · · · · · · · · · ·		Ignition switch ON	Battery voltage
58	Ground	Ignition relay power supply	Output	Ignition switch OFF	0V
(Y)				Ignition switch ON	Battery voltage

Terminal No. Description Value А (Wire color) Condition Input/ (Approx.) Signal name + Output Ignition switch OFF В (For a few seconds after turning ignition Battery voltage switch OFF) 69 Ground ECM relay control Output • Ignition switch ON (W/B) · Ignition switch OFF 0 - 1.5V (More than a few seconds after turning ignition switch OFF) 0 -1.0V D T Ignition switch $ON \rightarrow OFF$ Battery voltage 70 Throttle control motor re-Ground Output lav control (O) 0V Ε Ignition switch ON 0 - 1.0V CVT selector lever in P or Battery voltage N position F 72 Ignition Ground PNP switch signal Input CVT selector lever in any (R/B) switch ON position other than P or N 0V position Ignition switch OFF 0V 74 Output Ground Ignition relay power supply (Y) Ignition switch ON Battery voltage Н 0V Engine stopped 75 Ignition Ground Oil pressure switch Input (P/L) switch ON Engine running Battery voltage (V 0 Ignition switch ON JPMIA0001GB SEC 6.3V 40% is set on "Active test", "ALTERNA-76 Power generation com-Ground Output TOR DUTY" of "ENGINE' (GR) mand signal Μ JPMIA0002GB 3.8V Ν 80% is set on "Active test", "ALTERNA-TOR DUTY" of "ENGINE" Ρ JPMIA0003GB 1.4V · Approximately 1 second after turning the ignition switch ON 0 - 1.0V 77 Engine running Output Ground Fuel pump relay control (B/R) Approximately 1 second or more after Battery voltage turning the ignition switch ON

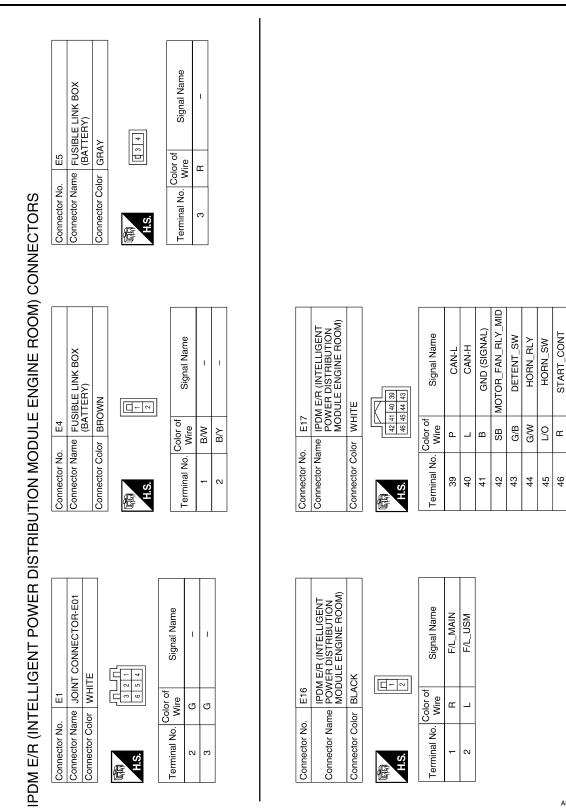
Terminal No. (Wire color)		Description				Value
(Wire +	color)	Signal name	Input/ Output		Condition	Value (Approx.)
80 (B/W)	Ground	Starter motor	Output	At engine o	cranking	Battery voltage
83			<u> </u>	Ignition Lighting switch OFF		0V
(R/Y)	Ground	Headlamp LO (RH)	Output	switch ON Lighting switch 2ND		Battery voltage
84	Ground	Headlamp LO (LH)	Output	Ignition	Lighting switch OFF	0V
(L)	Ground		Output	switch ON	Lighting switch 2ND	Battery voltage
86 (W/R)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND • Front fog lamp switch ON • Daytime running light activated (Only for Can- ada models)		Battery voltage
				Front fog lamp switch OFF		0V
87 (L/Y)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	 Front fog lamp switch ON Daytime running light activated (Only for Can- ada models) 	Battery voltage
				Front fog lamp switch OFF		0V
88 (R/W)	Ground	Washer pump power sup- ply	Output	Ignition swi	itch ON	Battery voltage
89 (L/W)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	Lighting switch HIlighting switch PASS	Battery voltage
(L/VV)				SWITCH ON	Lighting switch OFF	0V
90 (G)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	Lighting switch HILighting switch PASS	Battery voltage
(8)				SWIICH ON	Lighting switch OFF	0V
91	Ground	Parking lamp (RH)	Output	Ignition	Lighting switch 1ST	Battery voltage
(LG/R)			Output	switch ON	Lighting switch OFF	0V
92	Ground	Parking lamp (LH)	Output	Ignition	Lighting switch 1ST	Battery voltage
(LG/B)		- 3 - F(7		switch ON	Lighting switch OFF	0V
99 (BR/W)	Ground	Ambient sensor ground		Ignition swi	itch ON	0V
100 (SB)	Ground	Ambient sensor		Ignition swi	tch ON	5V
101 (O/L)	Ground	Refrigerant pressure sen- sor ground	_	Ignition swi	itch ON	0V
102 (R/B)	Ground	Refrigerant pressure sen- sor	_	Both A/C	witch ON (READY) switch and blower motor N (electric compressor oper-	1.0 - 4.0V
103 (P)	Ground	Refrigerant pressure sen- sor power supply	—	Ignition swi	itch ON	5V
105	Crownel	Doutimo light roles control	Outrout	Ignition switch ON	Daytime light system ac- tive	Battery voltage
(V)	Ground	Daytime light relay control	Output	Ignition switch ON	Daytime light system inac- tive	0V







Ρ



SEC-588

ABMIA0471GB

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) [SEDAN WITHOUT INTELLIGENT KEY] < ECU DIAGNOSIS >

Signal Name

Color of Wire

Terminal No.

E201

Connector No.

BR/W

L

98

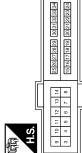
SB Ы

99 101

Signal Name	PD_SENS_SIG-E/R	PD_SENS PWR-E/R	ABS_ECU	-	IGN_SIGNAL	PUSH_START_SW	I	CLUTCH_I/L_SW	I	SL_CONDITION_1	SL_CONDITION_2	MOTOR_FAN_RLY_HI	MOTOR_FAN_LO	F/L_IGNSW	I	F/L_MOTOR_FAN
Color of Wire	B/R	BR/W	GR	I	BR/W	BR	I	R/B	I	Г/О	G/R	O/L	L/B	ŋ	I	R/W
Terminal No.	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38

Signal Name	I	I	ECM_VB	ESCL	GND (POWER)	FUEL_PUMP	1	START_IG-E/R	WIPER_AUTOSTOP	I	I	BCM_IGNSW	AMB_SENS_GND-E/R	AMB_SENS_SIG-E/R	PD_SENS_GND-E/R
Color of Wire	I	I	R/B	P/L	в	N	I	G/W	ΓΛ	I	I	ΓΛ	В/Υ	O/B	W/R
Terminal No.	8	6	10	1	12	13	14	15	16	17	18	19	20	21	22

Connector No.	E18
Connector Name	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	WHITE

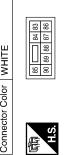


88 36

37

Signal Name	I	FR_WIPER_LO	FR_WIPER_HI	DTRL	TAIL/ILLUMI	
Color of Wire	I	L/R	L/B	SB	R/L	
Terminal No.	8	4	5	9	2	

	E200	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	WHITE	
	Connector No.	Connector Name	Connector Color WHITE	1



Signal Name	HEADLAMP_LO_RH	HEADLAMP_LO_LH	-	FR_FOG_LAMP_RH	FR_FOG_LAMP_LH	WASHER_MTR	HEADLAMP_HI_RH	HEADLAMP_HI_LH
Color of Wire	R/Y	Γ	I	W/R	ΓΛ	R/W	ΓM	თ
Terminal No.	83	84	85	86	87	88	89	06

I	1	
Ι	I	
96	67	

А

В

С

D

Ε

F

G

Н

J

SEC

L

Μ

Ν

Ο

HEADLAMP_HI_LH		
ŋ		
06		

ABMIA0472GB

Ρ

SEC-589

AMB_SENS_GND-FEM PD_SENS_GND-FEM AMB_SENS_SIG-FEM PD_SENS_SIG-FEM PD_SENS_PWR-FEM DTRL_RLY T L

R/B

102 103 104

٩

> I

105

I

WHITE	88 97 98 95 94 93 92 94 106 105 104 102 100 100 99
Connector Color WHITE	98 100

	_			_	
		6	8		
		8	100		
	7	93	101		
		8	103 102 101		
l		95	103		
		96	105 104		-
		97	105		Color of
-		86	106 1		1
					C
		(5		
	æ	U I			
	r ig				

Connector Name	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Color WHITE	WHITE
	98 97 96 94 93 94 94 94 94 94 94 94 94 94 94 94 94 94

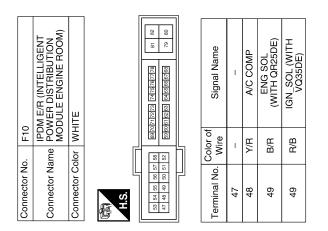
_			_	Ciccol Nome
	6	66		
	93 92 91	100		3
7	93			
	95 94	06 105 104 103 102 101		0
	95	103		
	96	104		f
	98 97	105		L L
	86	106		Color of
L			_	0
				4
		5		
æ	U I	1		Tominal No.
r C				F

Signal Name	CLEARANCE_F	CLEARANCE_L	I	Ι	I	
Color of Wire	LG/R	LG/B	I	I	Ι	
Terminal No.	91	92	63	94	95	

ᇎᆿ

Signal Name	1	I	1	I	SSOF	MOTRLY	I	NPSW	I	START_IG-EGI	OIL_PRESSURE_SW	ALT_C	FPR	I	I	STARTER_MOTOR	I	1
Color of Wire	I	I	I	I	W/B	0	I	R/B	Ι	Y	P/L	GR	B/R	I	I	B/W	I	I
Terminal No.	65	99	67	68	69	70	12	72	23	74	22	76	22	78	62	80	81	82

Signal Name	I	INJECTOR_#1	INJECTOR_#2	IGN_SOL (WITH QR25DE)	ENG_SOL (WITH VQ35DE)	ETC	ECM_BAT	O2_SENS_#1	O2_SENS_#2	AT_ECU	I	I	I	I	I	I
Color of Wire	I	ГG	Y/G	R/B	B/R	G/W	M/L	Rγ	0	≻	I	I	I	I	I	I
Terminal No.	50	51	52	53	53	54	55	56	57	58	59	60	61	62	63	64



Fail Safe

ABMIA0473GB

INFOID:000000004499239

CAN COMMUNICATION CONTROL

When CAN communication with ECM and BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With ECM

Control partFail-safe in operationACooling fan• Signals cooling fans ON when the ignition switch is turned ON
• Signals cooling fans OFF when the ignition switch is turned OFFAA/C compressorA/C relay OFFBGeneratorOutputs the power generation command signal (PWM signal) 0%

If No CAN Communication Is Available With BCM

Control part	Fail-safe in operation
Headlamp	 Turns ON the headlamp low relay when the ignition switch is turned ON Turns OFF the headlamp low relay when the ignition switch is turned OFF Headlamp high relay OFF
 Parking lamps License plate lamps Illumination Tail lamps 	 Turns ON the tail lamp relay when the ignition switch is turned ON Turns OFF the tail lamp relay when the ignition switch is turned OFF
Front wiper	 The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.
Front fog lamps (if equipped)	Front fog lamp relay OFF
Horn	Horn OFF
Ignition relay	The status just before activation of fail-safe is maintained.
Starter motor	Starter control relay OFF
Electronic steering column lock unit	Electronic steering column lock relay OFF

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

• IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay inside it.

 IPDM E/R judges the ignition relay error if the voltage differs between the contact circuit and the excitation coil circuit.

• If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

_					
	DTC	Ignition switch	Ignition relay	Tail lamp relay	
	_	ON	ON	—	L
	_	OFF	OFF	_	
E	32098: IGN RELAY ON	OFF	ON	ON (10 minutes)	N
E	32099: IGN RELAY OFF	ON	OFF	_	1.4

NOTE:

The tail lamp turns OFF when the ignition switch is turned ON.

FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper auto stop signal.

When a front wiper auto stop signal is in the conditions listed below, IPDM E/R stops power supply to wiper after repeating a front wiper 10 second activation and 20 second stop five times.

Ignition switch	Front wiper switch	Auto stop signal	
ON	OFF	Front wiper stop position signal cannot be input 10 seconds.	
	ON	The signal does not change for 10 seconds.	

NOTE:

This operation status can be confirmed on the IPDM E/R "Data Monitor" that displays "BLOCK" for the item "WIP PROT" while the wiper is stopped.

SEC-591

- Ν
- M

J

SEC

< ECU DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

STARTER MOTOR PROTECTION FUNCTION

IPDM E/R turns OFF the starter control relay to protect the starter motor when the starter control relay remains active for 90 seconds.

DTC Index

INFOID:000000004499240

CONSULT-III display	Fail-safe	TIME	NOTE	Refer to
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	×	CRNT	1 – 39	PCS-20
B2098: IGN RELAY ON	×	CRNT	1 – 39	PCS-21
B2099: IGN RELAY OFF	_	CRNT	1 – 39	PCS-22
B2108: STRG LCK RELAY ON	_	CRNT	1 – 39	<u>SEC-42</u>
B2109: STRG LCK RELAY OFF	_	CRNT	1 – 39	<u>SEC-43</u>
B210A: STRG LCK STATE SW	_	CRNT	1 – 39	<u>SEC-44</u>
B210B: START CONT RLY ON	_	CRNT	1 – 39	<u>SEC-48</u>
B210C: START CONT RLY OFF	—	CRNT	1 – 39	<u>SEC-49</u>
B210D: STARTER RELAY ON	-	CRNT	1 – 39	<u>SEC-50</u>
B210E: STARTER RELAY OFF	—	CRNT	1 – 39	<u>SEC-51</u>
B210F: INTRLCK/PNP SW ON	_	CRNT	1 – 39	<u>SEC-54</u>
B2110: INTRLCK/PNP SW OFF	—	CRNT	1 – 39	<u>SEC-59</u>

NOTE:

The details of TIME display are as follows.

CRNT: The malfunctions that are detected now

• 1 - 39: The number is indicated when it is normal at present and a malfunction was detected in the past. It increases like $0 \rightarrow 1 \rightarrow 2 \cdots 38 \rightarrow 39$ after returning to the normal condition whenever IGN OFF \rightarrow ON. It is fixed to 39 until the self-diagnosis results are erased if it is over 39. It returns to 0 when a malfunction is detected again in the process.

3. Check Intermittent Incident

[SEDAN WITHOUT INTELLIGENT KEY]

SYMPTOM DIAGNOSIS А ENGINE START FUNCTION SYMPTOMS Symptom Table INFOID:000000004499244 В Engine cannot be started with all keyfobs. **CAUTION:** Follow Trouble Diagnosis Flowchart referring to "SEC-411, "Work Flow"". Determine malfunctioning condition before performing this diagnosis. Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis. D Check systems shown in the "Diagnosis/service procedure" column in this order. CONDITIONS OF VEHICLE (OPERATING CONDITIONS) · Engine start function is ON when setting on CONSULT-III. Ε Use keyfob with registered keyfob ID. One or more of keyfobs with registered keyfob ID is in the passenger compartment. F Diagnosis/service procedure Reference page BCM **BCS-42** 1. Check power supply and ground circuit IPDM E/R **PCS-23** 2. Check push button ignition switch **SEC-499**

Н

<u>GI-42</u>

J

SEC

L

Μ

Ν

Ο

Ρ

VEHICLE SECURITY SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[SEDAN WITHOUT INTELLIGENT KEY]

VEHICLE SECURITY SYSTEM SYMPTOMS

Symptom Table

INFOID:000000004499245

Procedure		dure	Diagnostic procedure	Refer to page
	Symptom			itelei to page
1 .	Vehicle security sys- tem cannot be set by	Door switch	Check door switch	<u>DLK-293</u>
		Trunk	Check trunk room lamp switch	<u>DLK-316</u>
		Door outside key	Check key cylinder switch	<u>DLK-305</u>
		Keyfob	Check keyfob.	<u>DLK-526</u>
			Check Intermittent Incident	<u>GI-42</u>
	Security indicator does not turn ON.		Check vehicle security indicator	<u>SEC-514</u>
			Check Intermittent Incident	<u>GI-42</u>
2	* Vehicle security		Check door switch	DLK-293
	system does not sound alarm when ····	Any door is opened.	Check Intermittent Incident	<u>GI-42</u>
	Vehicle security alarm does not acti- vate.	Horn alarm	Check horn	<u>DLK-344</u>
			Check Intermittent Incident	<u>GI-42</u>
3		Head lamp alarm	Check head lamp alarm	<u>SEC-512</u>
			Check Intermittent Incident	<u>GI-42</u>
4	Vehicle security sys- tem cannot be can- celed by ····	Door outside key	Check key cylinder switch	<u>SEC-507</u>
			Check Intermittent Incident	<u>GI-42</u>
		Keyfob	Check keyfob	<u>DLK-526</u>
			Check Intermittent Incident	<u>GI-42</u>

*: Check that the system is in the armed phase.

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

< SYMPTOM DIAGNOSIS >

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

Symptom Table

INFOID:000000004499246

[SEDAN WITHOUT INTELLIGENT KEY]

Security indicator does not turn ON or flash. CAUTION:

- Follow Trouble Diagnosis Flowchart referring to "<u>SEC-411, "Work Flow"</u>". Determine malfunctioning condition before performing this diagnosis.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagno ^C sis.
- Check systems shown in the "Action" column in this order.

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

- · Keyfob is not inserted into key slot.
- Engine switch is not depressed.

Action	Reference page	
1. Check vehicle security indicator	<u>SEC-514</u>	
2. Check Intermittent Incident	<u>GI-42</u>	F

Н

J

SEC

L

Μ

Ν

Ο

Ρ

А

В

D

F

< ON-VEHICLE REPAIR >

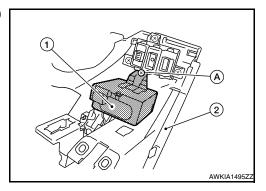
ON-VEHICLE REPAIR KEY SLOT

Removal and Installation

INFOID:000000004499249

REMOVAL

- 1. Remove the instrument lower panel LH. Refer to IP-12. "Removal and Installation".
- 2. Disconnect key slot connector.
- 3. Remove the key slot screw (A), and then remove key slot (1) from instrument lower panel LH (2).



INSTALLATION Installation is in the reverse order of removal.

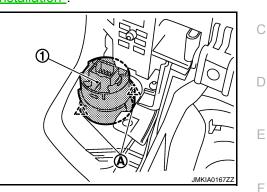
PUSH BUTTON IGNITION SWITCH

PUSH BUTTON IGNITION SWITCH

Removal and Installation

REMOVAL

- 1. Remove the cluster lid A assembly. Refer to IP-12, "Removal and Installation".
- 2. Release the pawls (A) and remove the push-button ignition
 - switch (1) from cluster lid A.



INSTALLATION Installation is in the reverse order of removal.

SEC

L

Μ

Ν

Ο

Ρ

G

Н

[SEDAN WITHOUT INTELLIGENT KEY]

INFOID:000000004499250

А

В