SECTION SEC
SECURITY CONTROL SYSTEM

CONTENTS

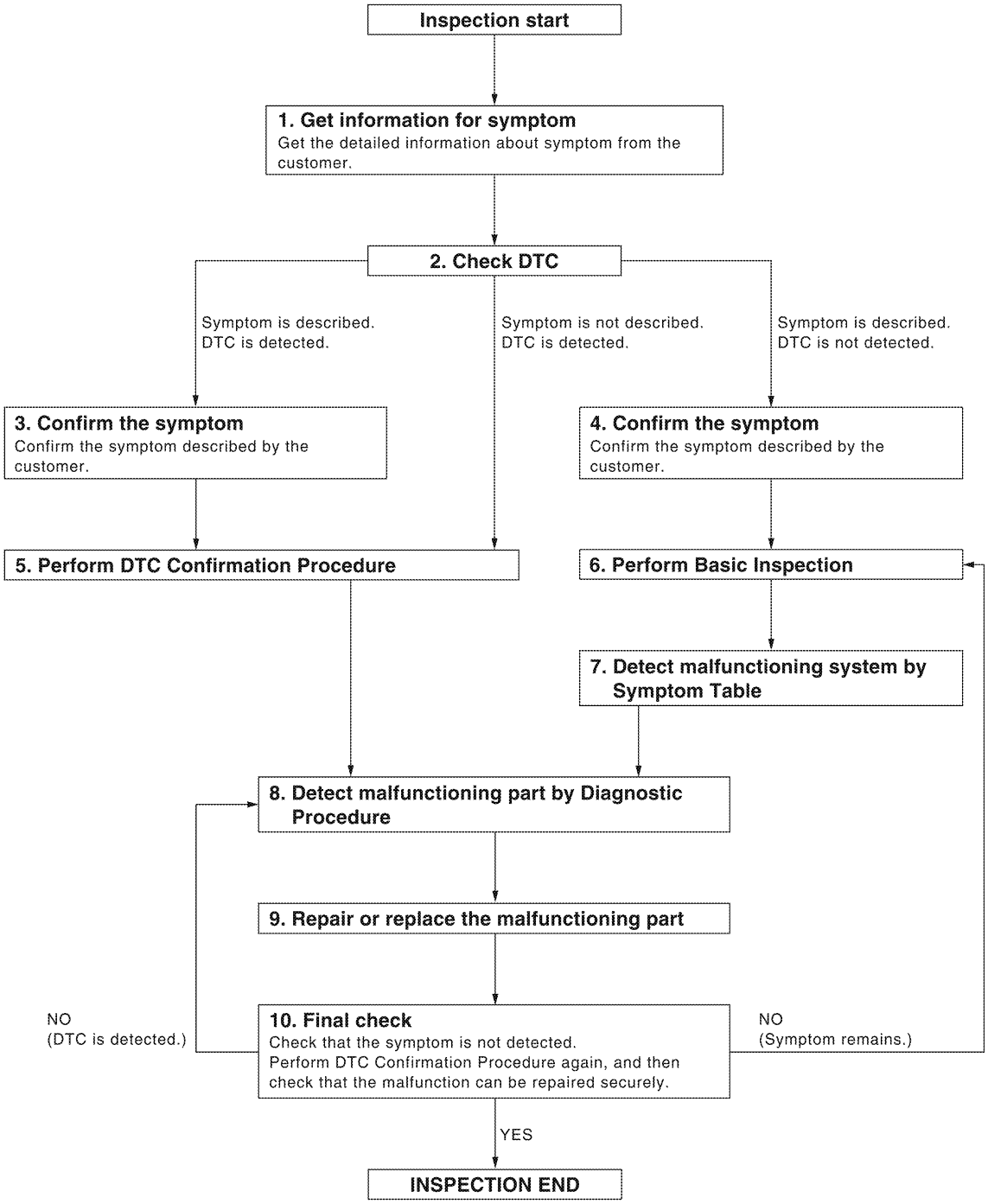
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000008792421

OVERALL SEQUENCE



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DETAILED FLOW

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

1. Check DTC for BCM.
2. Perform the following procedure if DTC is displayed.

- 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 to the vehicle in “DATA MONITOR” mode and check real-time diagnosis results.
Verify relation 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 to the vehicle in “DATA MONITOR ” mode and check real-time diagnosis results.
Verify relation 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.
If two or more DTCs are detected, refer to BCS-40, "DTC Inspection Priority Chart" (BCM) and determine trouble diagnosis order.

Is DTC detected?

YES >> GO TO 8
NO >> Refer to GI-49, "Intermittent Incident".

6.PERFORM BASIC INSPECTION

Perform Basic Inspection. Refer to SEC-6, "Basic Inspection".

>> GO TO 7

7.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to Symptom Table based on the confirmed symptom in step 4.

>> GO TO 8

8.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.
NOTE:
The Diagnostic Procedure is described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.

>> GO TO 9

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 and replacement.
3. Check DTC. If DTC is displayed, erase it.

>> GO TO 10

10.FINAL CHECK

When DTC was detected in step 9, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunctions have been fully repaired.
When symptom was described by the customer, refer to the confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Does the symptom reappear?

YES (DTC is detected)>>GO TO 8
YES (Symptom remains)>>GO TO 6
NO >> Inspection End.

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

INFOID:0000000008792422

1.INSPECTION START

Turn ignition switch OFF.
NOTE:
Before starting operation check, open front windows.

>> GO TO 2

2.CHECK SECURITY INDICATOR LAMP

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

Does the security indicator lamp illuminate?

YES >> GO TO 3
NO >> Perform diagnosis and repair. Refer to SEC-11, "System Description".

3.CHECK ALARM FUNCTION

1. After 30 seconds, security indicator lamp will start to blink.
2. Open any door before unlocking with keyfob or mechanical key.

Does the alarm function properly?

YES >> GO TO 4
NO >> Check the following.
- The vehicle security system does not phase in alarm mode. Refer to SEC-75, "Symptom Table".
- Alarm (horn and headlamps) does not operate. Refer to SEC-75, "Symptom Table".

4.CHECK ALARM CANCEL OPERATION

Unlock any door using keyfob or mechanical key.

Does the alarm (horn and headlamps) stop?

YES >> Inspection End.
NO >> Check door lock function. Refer to DLK-12, "DOOR LOCK AND UNLOCK SWITCH : System Description".

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:0000000008792423

Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

ECM RE-COMMUNICATING FUNCTION

ECM RE-COMMUNICATING FUNCTION : Description

INFOID:0000000008792424

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 is not necessary)

NOTE:

- **When registering new Key IDs or replacing the ECM that is not brand new, refer to CONSULT Immobilizer mode and follow the on-screen instructions.**
- **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:0000000008792425

1.PERFORM ECM RE-COMMUNICATING FUNCTION

1. Install ECM.
2. Using a registered 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?

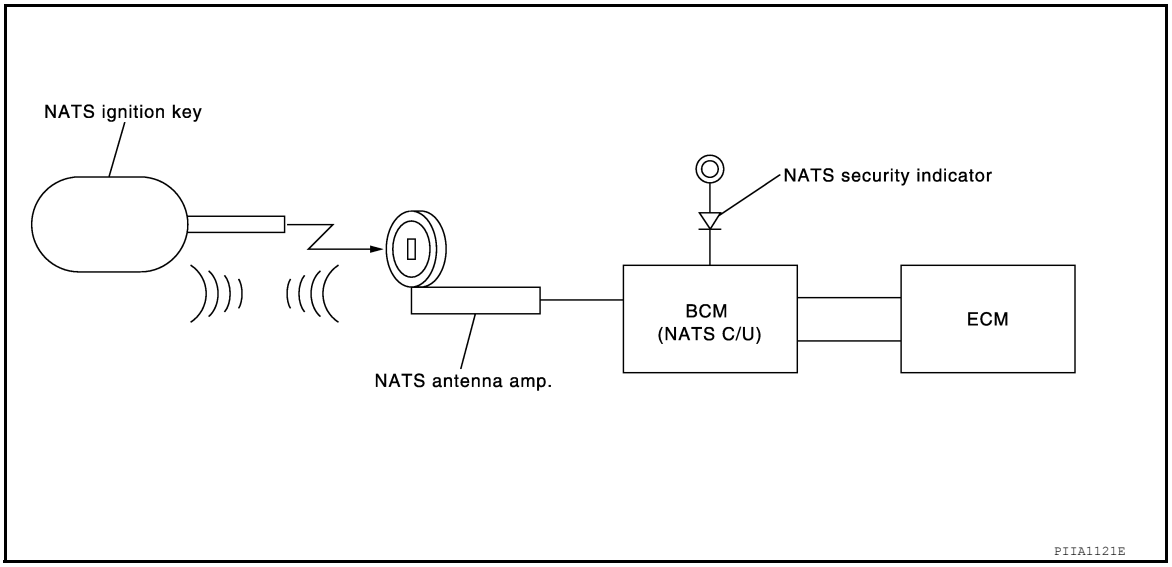
YES >> Procedure is completed.
NO >> Initialize control unit. Refer to CONSULT Immobilizer mode and follow the on-screen instructions.

SYSTEM DESCRIPTION

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS)

System Diagram

INFOID:0000000008792426



System Description

INFOID:0000000008792427

INPUT/OUTPUT SIGNAL CHART

BCM

Switch/Input signal	Input signal to BCM	BCM function	Actuator/Output signal
NATS antenna amp.	Key ID	NATS	• Security indicator lamp • Starter request
ECM	Engine status signal		

SYSTEM DESCRIPTION

NATS (Nissan Anti-Theft System) has the following immobilizer functions:

- Engine immobilizer shows high anti-theft performance to prevent engine from starting by other than the owner.
- Only a key with key ID registered in BCM and ECM can start engine, and shows high anti-theft performance to prevent key from being copied or stolen.
- Therefore, NATS warns outsiders that the vehicle is equipped with the anti-theft system. Refer to SEC-11, "System Description".
- If system detects malfunction, security indicator illuminates when ignition switch is turned to ON position.
- If the owner requires, ignition key ID or mechanical key ID can be registered for up to 5 keys.
- During trouble diagnosis or when the following parts have been replaced, and if ignition key is added, registration*1 is required.

  *1: All keys kept by the owner of the vehicle should be registered with mechanical key.

- ECM
- BCM
- Ignition key
- Remote keyless entry receiver

- NATS trouble diagnosis, system initialization and additional registration of other mechanical key IDs must be carried out using CONSULT.
  When NATS initialization has been completed, the ID of the inserted mechanical key or mechanical key IDs can be carried out.
- Possible symptom of NATS malfunction is “Engine cannot start”. Identify the possible causes according to “Work Flow”, Refer to SEC-3, "Work Flow".

- If ECM other than Genuine NISSAN is installed, the engine cannot be started. For ECM replacement procedure, refer to SEC-7, "ECM RE-COMMUNICATING FUNCTION : Description".

PRECAUTIONS FOR KEY REGISTRATION

- The key registration is a procedure that erases the current NATS ID once, and then re-registers a new ID. Therefore the registered key is necessary for this procedure. Before starting the registration operation collect all registered Keys from the customer.
- The NATS ID registration is the procedure that registers the ID stored into the transponder (integrated in mechanical key) to BCM.
  The key ID registration is the procedure that registers the ID to the BCM.
- When performing the key system registration only, the engine cannot be started by inserting the key into the key cylinder. When performing the NATS registration only, the engine cannot be started by using the ignition key.

SECURITY INDICATOR

- Always flashes with ignition key in the OFF position.

MAINTENANCE INFORMATION

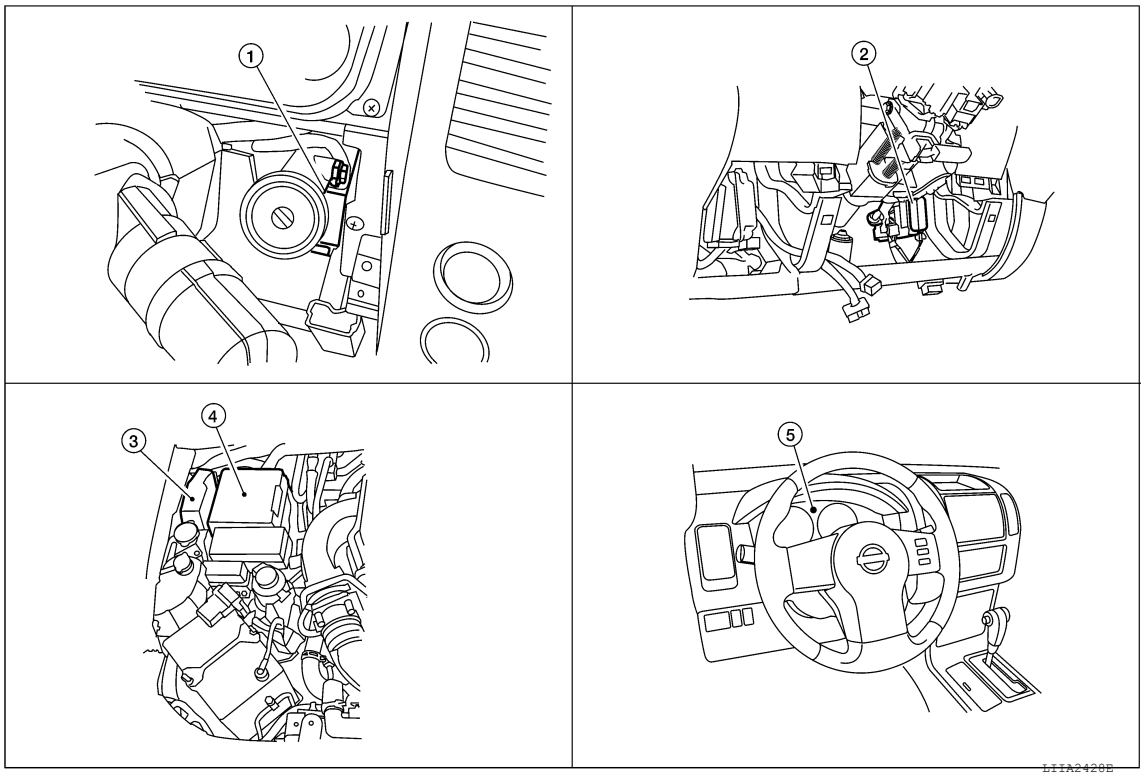
CAUTION:

It is necessary to perform NATS ID registration when replacing any of the following part.
If it's not (or fail to do so), the electrical system may not operate properly.

- **BCM**
- **ECM**
- **IPDM E/R**
- **Ignition key**
- **NATS antenna amp.**
- **Combination meter**

Component Parts Location

INFOID:0000000008792428



1. NATS antenna amp. M21 (view with cluster lid A removed)
2. BCM M18, M20 (view with lower instrument panel LH removed)
3. ECM E16
4. IPDM E/R E121
5. Combination meter M24

Component Description

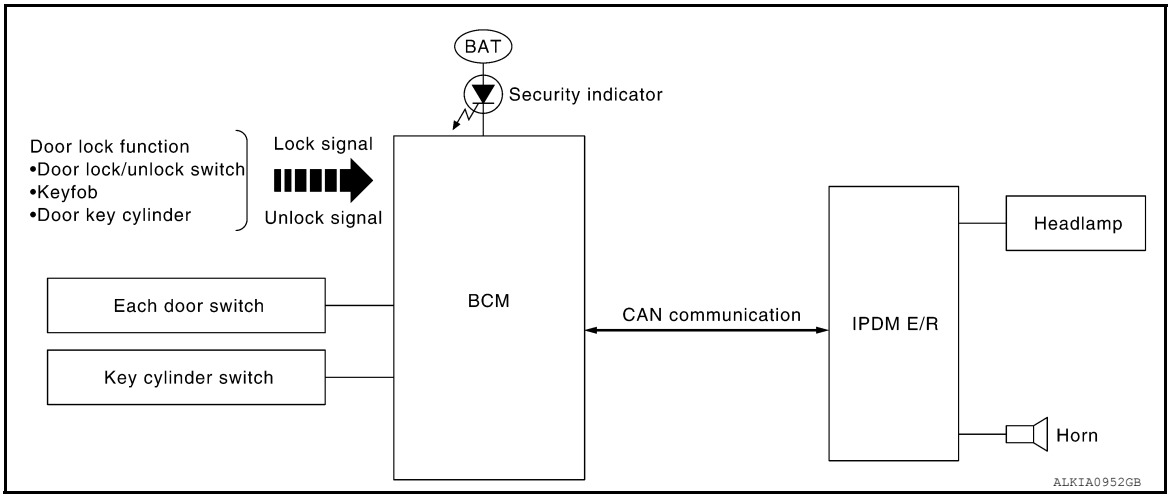
INFOID:0000000008792429

Item	Function
BCM	Verifies the received signal from the ignition key ID, then informs ECM whether to allow engine start.
Remote keyless entry receiver	Receives lock/unlock signal from the keyfob, and then transmits to the BCM.
A/T shift selector (detention key switch)	Detects whether the shift lever is in park.
NATS antenna amp.	Detects the ignition key presence in the ignition key cylinder.
Security indicator	Indicates the status of the security system.
IPDM E/R	Powers-up the horn and the headlamps in case of a security breach.

VEHICLE SECURITY SYSTEM

System Diagram

INFOID:0000000008792430



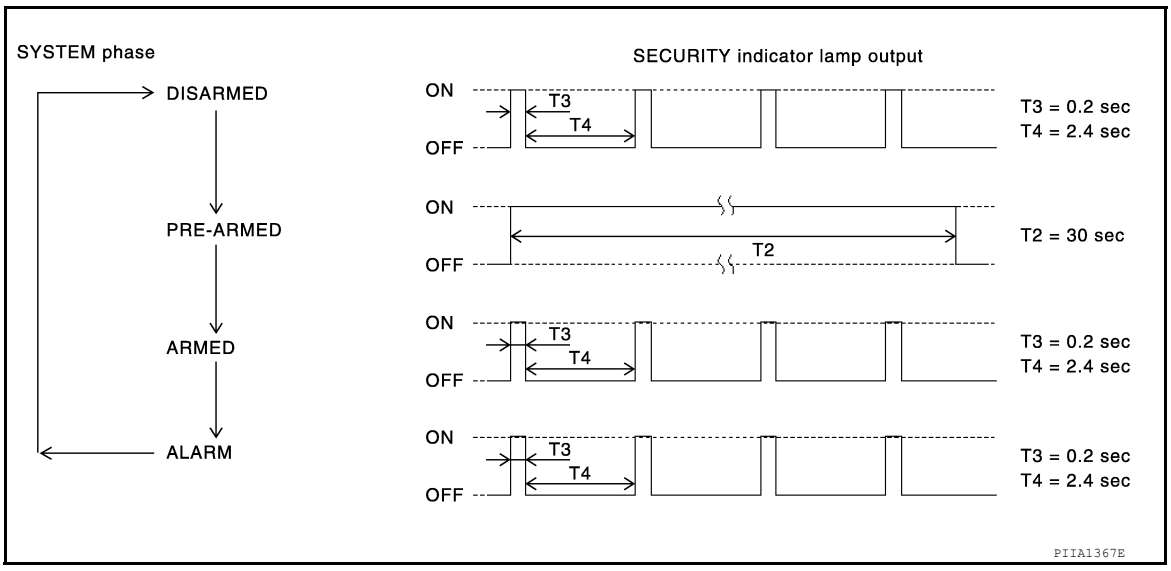
System Description

INFOID:0000000008792431

DESCRIPTION

The security system provides an audible and visual alarm when an unauthorized access to the vehicle is detected while the system is in armed phase.
The security system consist of the BCM managing the audible alarm (horn) and the visual alarm (headlamps).

OPERATION FLOW



Disarmed Phase

When the vehicle is being driven or when doors are open, the theft warning system is set in the disarmed phase on the assumption that the owner is inside or near the vehicle.

Pre-Armed Phase And Armed Phase

The vehicle security system turns into the pre-armed phase when ignition switch is in OFF position, all doors are closed and locked (using keyfob, door lock/unlock switch, driver key cylinder or auto relock function). The system automatically shifts into the armed phase.

Condition of Activating The System

When the following condition is performed in armed phase, the system sounds the horns and flashes the headlamps for approximately 50 seconds.

- Any door is opened.

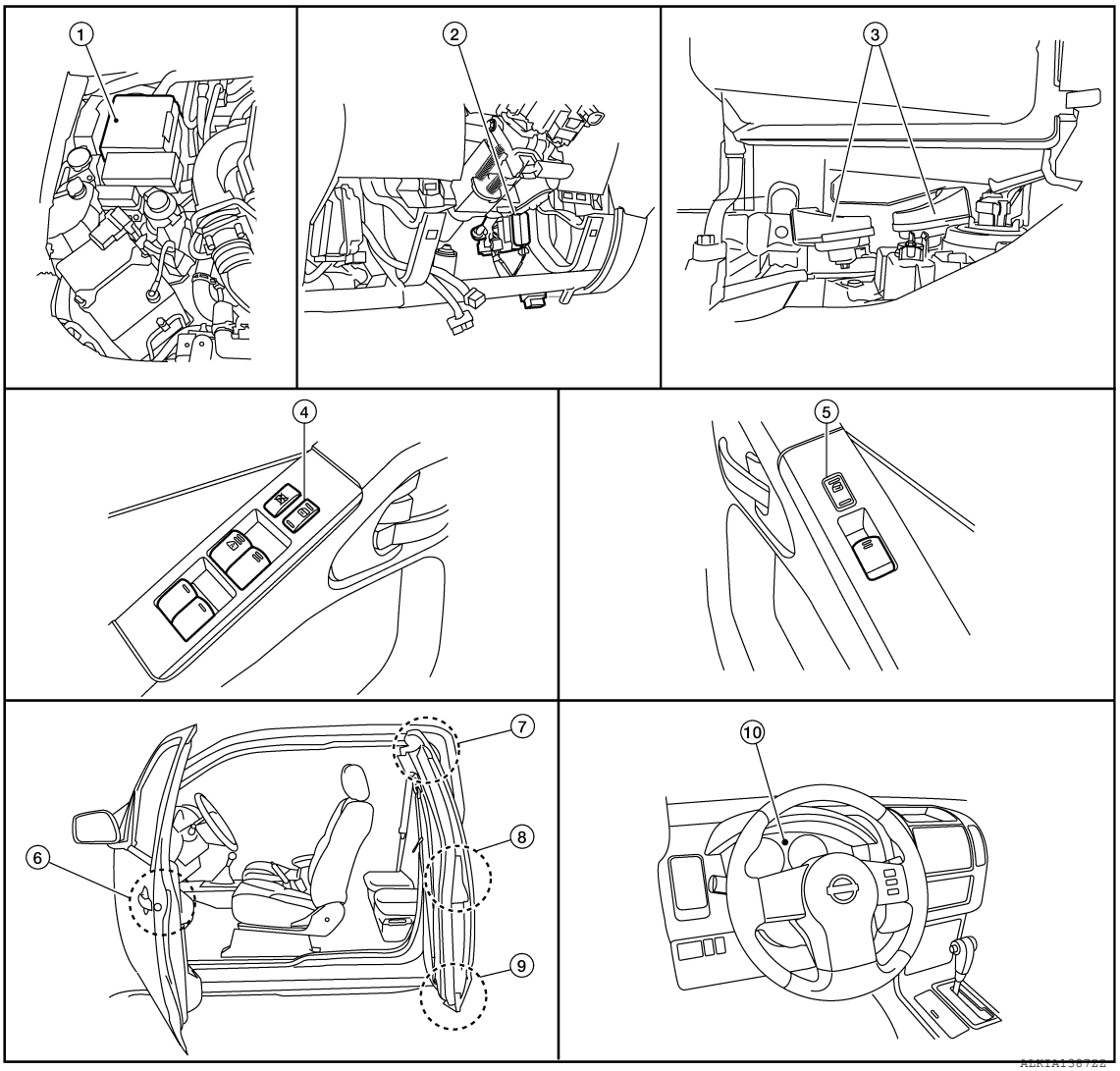
Condition of Deactivating The System

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

- Unlock the doors with keyfob.
- Use the mechanical key to unlock the driver door using the door key cylinder.

Component Parts Location - King Cab

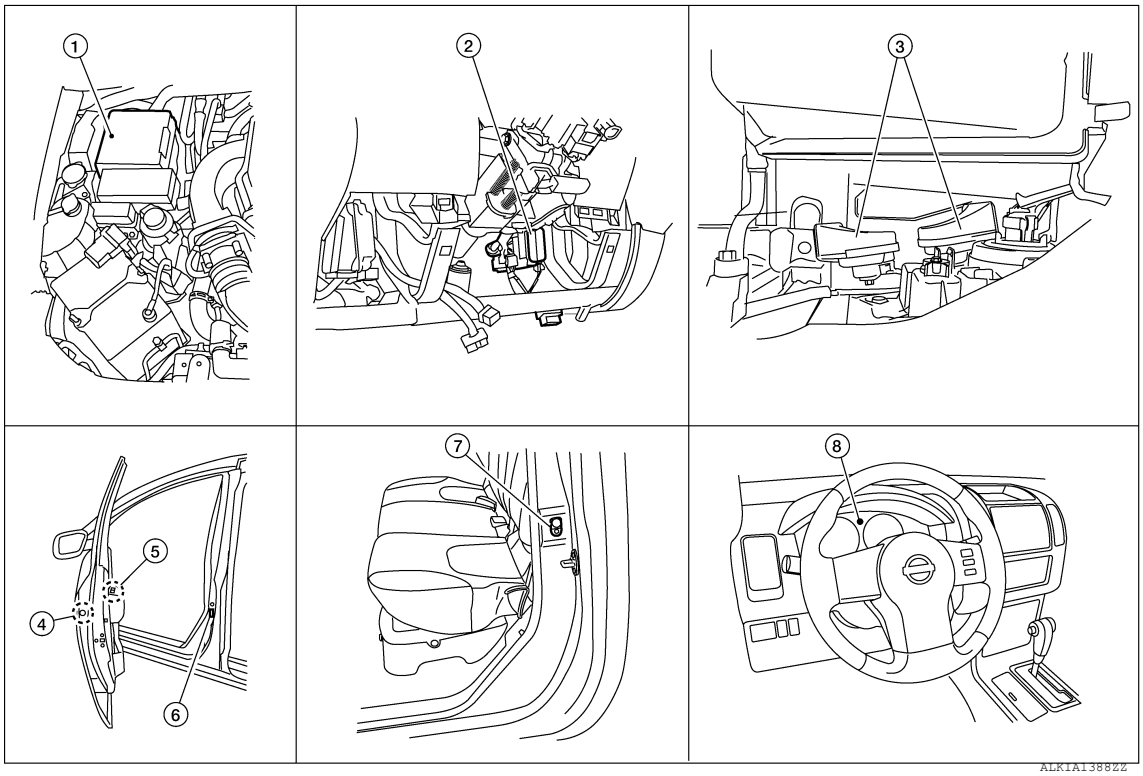
INFOID:0000000008792432



1. IPDM E/R E122, E123, E124
2. BCM M18, M19, M20 (view with lower instrument panel LH removed)
3. Horn E6 (behind front combination lamp LH)
4. Main power window and door lock/unlock switch D7
5. Power window and door lock/unlock switch RH D105
6. Front door lock assembly LH (key cylinder switch) D14
7. Rear door switch upper LH D211 RH D312
8. Front door switch LH D213 RH D314
9. Rear door switch lower LH D212 RH D313
10. Combination meter M24

Component Parts Location - Crew Cab

INFOID:0000000008792433



1. IPDM E/R E122, E123, E124
2. BCM M18, M19, M20 (view with lower instrument panel LH removed)
3. Horn E6 (behind front combination lamp LH)
4. Front door lock assembly LH (key cylinder switch) D14
5. Main power window and door lock/unlock switch D7 Power window and door lock/unlock switch RH D105
6. Front door switch LH B8 RH B108
7. Rear door switch LH B18 RH B116
8. Combination meter M24

Component Description

INFOID:0000000008792434

Item	Function
BCM	Verifies the received signal from ignition key, then informs ECM whether to allow engine start.
Door switch	Provides the BCM with the status of each monitored door.
Security indicator	Indicates the status of the security system.
IPDM E/R	Controls the horn and headlamps operation.
Horn	Sounds when the vehicle security system is triggered.

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000009233143

APPLICATION ITEM
CONSULT performs the following functions via CAN communication with BCM.

Direct Diagnostic Mode	Description
Ecu Identification	The BCM part number is displayed.
Self Diagnostic Result	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	• The vehicle specification can be read and saved. • The vehicle specification can be written when replacing BCM.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

SYSTEM APPLICATION
BCM can perform the following functions.

System	Sub System	Direct Diagnostic Mode						
		Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Door lock	DOOR LOCK			×	×	×		
Rear window defogger	REAR DEFOGGER			×	×			
Warning chime	BUZZER			×	×			
Interior room lamp timer	INT LAMP			×	×	×		
Remote keyless entry system	MULTI REMOTE ENT			×	×	×		
Exterior lamp	HEAD LAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×			
Air conditioner	AIR CONDITIONER			×				
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×	×	×			
Interior room lamp battery saver	BATTERY SAVER			×	×	×		
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×	×	×		
Signal buffer system	SIGNAL BUFFER			×	×			
TPMS	AIR PRESSURE MONITOR		×	×	×	×		
Panic alarm system	PANIC ALARM				×			

IMMU

IMMU : CONSULT Function (BCM - IMMU)

INFOID:0000000009233144

SELF DIAGNOSTIC RESULT

Refer to BCS-41, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [On/Off]	Indicates condition of ignition switch ON position.

ACTIVE TEST

Test Item	Description
THEFT IND	This test is able to check security indicator operation [Off/On].

THEFT ALM

THEFT ALM : CONSULT Function (BCM - THEFT ALM)

INFOID:0000000009233145

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [On/Off]	Indicates condition of ignition switch ON position.
ACC ON SW [On/Off]	Indicates condition of ignition switch ACC position.
KEYLESS LOCK [On/Off]	Indicates condition of lock signal from keyfob.
KEYLESS UNLOCK [On/Off]	Indicates condition of unlock signal from keyfob.
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.

ACTIVE TEST

Test Item	Description
THEFT IND	This test is able to check security indicator lamp operation [Off/On].
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation [On].
HEADLAMP(HI)	This test is able to check vehicle security lamp operation [On].

WORK SUPPORT

Support Item	Setting	Description
SECURITY ALARM SET	Off	Security alarm OFF.
	On*	Security alarm ON.
THEFT ALM TRG	Off/On	The switch which triggered vehicle security alarm is recorded [On]. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching [CLEAR].
	CLEAR	

*: Initial setting

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000009233295

Refer to LAN-58, "CAN Communication Signal Chart".

DTC Logic

INFOID:0000000009233296

DTC DETECTION LOGIC

DTC	CONSULT display description	DTC Detection Condition	Possible cause
U1000	CAN COMM CIRCUIT	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more.	Any item (or items) of the following listed below is malfunctioning in CAN communication system. • Transmission • Receiving (ECM) • Receiving (METER/M&A) • Receiving (TCM) • Receiving (IPDM E/R)

Diagnosis Procedure

INFOID:0000000009233297

1. PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Check “Self Diagnostic Result” of BCM.

Is “CAN COMM CIRCUIT” displayed?

YES >> Refer to LAN-14, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-49, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

Description

INFOID:0000000008792441

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-58, "CAN Communication Signal Chart".

DTC Logic

INFOID:0000000008792442

DTC DETECTION LOGIC

DTC	CONSULT display description	DTC Detection Condition	Possible cause
U1010	CONTROL UNIT (CAN)	When detecting error during the initial diagnosis of CAN controller of BCM.	BCM

Diagnosis Procedure

INFOID:0000000008792443

1.REPLACE BCM

When DTC [U1010] is detected, replace BCM.

>> Replace BCM. Refer to BCS-49, "Removal and Installation".

Special Repair Requirement

INFOID:0000000008792444

1.REQUIRED WORK WHEN REPLACING BCM

Initialize BCM. Refer to CONSULT Immobilizer mode and follow the on-screen instructions.

>> Inspection End.

B2190, P1614 NATS ANTENNA AMP.

Description

INFOID:0000000008792445

Performs ID verification through BCM and NATS antenna amplifier when ignition key is inserted and ignition switch turned ON.
Prohibits the start of engine when an unregistered ID of ignition key is used.

DTC Logic

INFOID:0000000008792446

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2190 P1614	NATS ANTENNA AMP	• Inactive communication between NATS antenna amp. and BCM. • Ignition key is malfunctioning.	• Harness or connectors (The NATS antenna amp. circuit is open or shorted) • Ignition key • NATS antenna amp. • BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Insert ignition key into the key cylinder.
2. Turn ignition switch ON.
3. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-18, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000008792447

Regarding Wiring Diagram information, refer to SEC-71, "Wiring Diagram".

1.CHECK NATS ANTENNA AMP. INSTALLATION

Check NATS antenna amp. installation. Refer to SEC-78, "Removal and Installation".

Is the inspection result normal?

YES >> GO TO 2
NO >> Reinstall NATS antenna amp. correctly.

2.CHECK NVIS (NATS) IGNITION KEY ID CHIP

Start engine with another registered NATS ignition key.

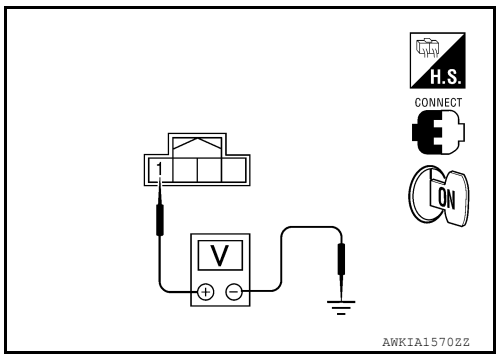
Does the engine start?

YES >> • Ignition key ID chip is malfunctioning.
• Replace the ignition key.
• Perform initialization with CONSULT.
For initialization, refer to CONSULT Immobilizer mode and follow the on-screen instructions.
NO >> GO TO 3

3.CHECK POWER SUPPLY FOR NATS ANTENNA AMP.

1. Turn ignition switch ON.
2. Check voltage between NATS antenna amp. connector M21 terminal 1 and ground.

1 - Ground : Battery voltage



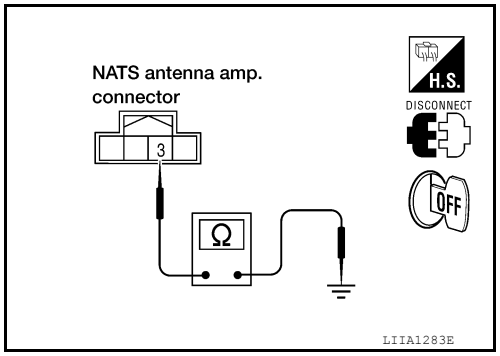
Is the inspection result normal?

YES >> GO TO 4
NO >> Repair or replace fuse or harness.

4. CHECK NATS ANTENNA AMP. GROUND LINE CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect NATS antenna amp. connector.
3. Check continuity between NATS antenna amp. connector M21 terminal 3 and ground.

3 - Ground : Continuity should exist.

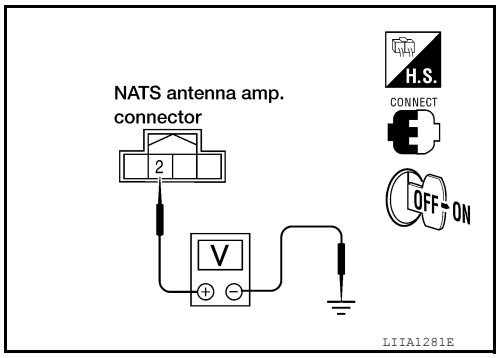


Is the inspection result normal?

YES >> GO TO 5
NO >> • Repair or replace harness.
NOTE:
If harness is OK, replace BCM BCS-49, "Removal and Installation". Perform initialization with CONSULT. For initialization, refer to CONSULT Immobilizer mode and follow the on-screen instructions.

5. CHECK NATS ANTENNA AMP. SIGNAL LINE- 1

1. Connect NATS antenna amp. connector.
2. Turn ignition switch ON.
3. Check voltage between NATS antenna amp. connector M21 terminal 2 and ground with analog tester.



Terminals		Position of ignition key cylinder	Voltage (V) (Approx.)
(+)	(-)		
2	Ground	Before inserting ignition key	Battery voltage
		After inserting ignition key	Pointer of tester should move for approx. 30 seconds, then return to battery voltage
		Just after turning ignition switch ON	Pointer of tester should move for approx. 1 second, then return to battery voltage

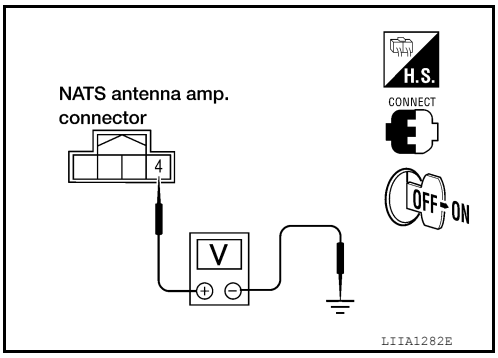
Is the inspection result normal?

YES >> GO TO 6
NO >> • Repair or replace harness.
NOTE:

If harness is OK, replace BCM BCS-49, "Removal and Installation". Perform initialization with CONSULT. For initialization, refer to CONSULT Immobilizer mode and follow the on-screen instructions.

6. CHECK NATS ANTENNA AMP. SIGNAL LINE- 2

Check voltage between NATS antenna amp. connector M21 terminal 4 and ground with analog tester.



Terminals		Position of ignition key cylinder	Voltage (V) (Approx.)
(+)	(-)		
4	Ground	Before inserting ignition key	Battery voltage
		After inserting ignition key	Pointer of tester should move for approx. 30 seconds, then return to battery voltage
		Just after turning ignition switch ON	Pointer of tester should move for approx. 1 second, then return to battery voltage

Is the inspection result normal?

YES >> NATS antenna amp. is malfunctioning.

NO >> • Repair or replace harness.

NOTE:

If harness is OK, replace BCM, refer to BCS-49, "Removal and Installation". Perform initialization with CONSULT. For initialization, refer to CONSULT Immobilizer mode and follow the on-screen instructions.

B2191, P1615 DIFFERENCE OF KEY

Description

INFOID:0000000008792448

Performs ID verification through BCM when key is inserted in key cylinder.
Prohibits the release of steering lock or start of engine when an unregistered ID of mechanical key is used.

DTC Logic

INFOID:0000000008792449

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2191 P1615	DIFFERENCE OF KEY	The ID verification results between BCM and mechanical key are NG. The registration is necessary.	Mechanical key

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Insert mechanical key into the key cylinder.
2. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Refer toSEC-21, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000008792450

1.PERFORM INITIALIZATION

Perform initialization with CONSULT. Re-register all mechanical keys.
For initialization and registration of mechanical key. Refer to CONSULT Immobilizer mode and follow the on-screen instructions.

Can the system be initialized and can the engine be started with re-registered mechanical key?

YES >> Mechanical key was unregistered.
NO >> BCM is malfunctioning.
- Replace BCM. Refer to BCS-49, "Removal and Installation".
- Perform initialization again

B2192, P1611 ID DISCORD, IMMU-ECM

Description

INFOID:0000000008792451

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

DTC Logic

INFOID:0000000008792452

DTC DETECTION LOGIC

NOTE:

- If DTC B2192 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-26, "DTC Logic".
- If DTC B2192 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-17, "DTC Logic".

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-22, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000008792453

1.PERFORM INITIALIZATION

Perform initialization with CONSULT. Re-register all mechanical keys.
For initialization and registration of mechanical key. Refer to CONSULT Immobilizer mode and follow the on-screen instructions.

Can the system be initialized and can the engine be started with re-registered mechanical key?

YES >> ID was unregistered.
NO >> GO TO 2

2.REPLACE BCM

1. Replace BCM. Refer to BCS-49, "Removal and Installation".
2. Perform initialization with CONSULT. Re-register all mechanical keys.
   For initialization and registration of mechanical key. Refer to CONSULT Immobilizer mode and follow the on-screen instructions.

Can the system be initialized and can the engine be started with re-registered mechanical key?

YES >> BCM is malfunctioning.
NO >> GO TO 3

3.REPLACE ECM

1. Replace ECM. Refer to Removal and Installation.
2. Perform initialization with CONSULT. Re-register all mechanical keys.
   For initialization and registration of mechanical key. Refer to CONSULT Immobilizer mode and follow the on-screen instructions.

Can the system be initialized and can the engine be started with re-registered mechanical key?

YES >> ECM is malfunctioning.
NO >> GO TO 4

4.CHECK INTERMITTENT INCIDENT

Refer to GI-49, "Intermittent Incident".

>> Inspection End.

B2193, P1612 CHAIN OF ECM-IMMU

Description

INFOID:0000000008792454

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

DTC Logic

INFOID:0000000008792455

DTC DETECTION LOGIC

NOTE:

- If DTC B2193 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to BCS-26, "DTC Logic".
- If DTC B2193 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to SEC-17, "DTC Logic".

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2193 P1612	CHAIN OF BCM-ECM	Inactive communication between ECM and BCM	• Harness or connectors (The CAN communication line is open or short) • BCM • ECM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-24, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000008792456

1.REPLACE BCM

1. Replace BCM. Refer to BCS-49, "Removal and Installation".
2. Perform initialization with CONSULT.
   For initialization, refer to CONSULT Immobilizer mode and follow the on-screen instructions.

Does the engine start?

YES >> BCM was malfunctioning.
NO >> ECM is malfunctioning.
- Replace ECM.
- Perform ECM re-communicating function.

P1610 LOCK MODE

Description

INFOID:0000000008792457

When the starting operation is carried more than five times consecutively under the following conditions, NATS will shift to the mode which prevents the engine from being started.
- Unregistered mechanical key is used.
- BCM or ECM's malfunctioning.

DTC Logic

INFOID:0000000008792458

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P1610	LOCK MODE	When the starting operation is carried out five or more times consecutively under the following conditions. • Unregistered mechanical key • BCM or ECM's malfunctioning.	—

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

1. Turn ignition switch ON.
2. Check “Self diagnostic result” with CONSULT.

Is DTC detected?

YES >> Refer to SEC-25, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000008792459

1.CHECK ENGINE START FUNCTION

1. Perform the check for DTC except DTC P1610.
2. Use CONSULT to erase DTC after fixing.
3. Check that engine can start with registered mechanical key.

Does the engine start?

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

2.CHECK INTERMITTENT INCIDENT

Refer to GI-49, "Intermittent Incident".

>> Inspection End.

POWER SUPPLY AND GROUND CIRCUIT
BCM
BCM : Diagnosis Procedure

INFOID:0000000009233298

Regarding Wiring Diagram information, refer to BCS-43, "Wiring Diagram".

1. CHECK FUSES AND FUSIBLE LINK

Check that the following fuses and fusible link are not blown.

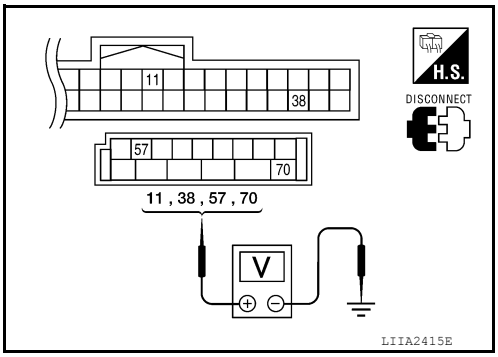
Terminal No.	Signal name	Fuses and fusible link No.
57	Battery power supply	21 (10A)
70		G (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	1 (10A)

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 BCM.
3. Check voltage between BCM harness connector and ground.



Connector	Terminals (+)	Terminals (-)	Power source	Condition	Voltage (V) (Approx.)
M18	11	Ground	ACC power supply	Ignition switch ACC or ON	Battery voltage
	38	Ground	Ignition power supply	Ignition switch ON or START	Battery voltage
M20	57	Ground	Battery power supply	Ignition switch OFF	Battery voltage
	70	Ground	Battery power supply	Ignition switch OFF	Battery voltage

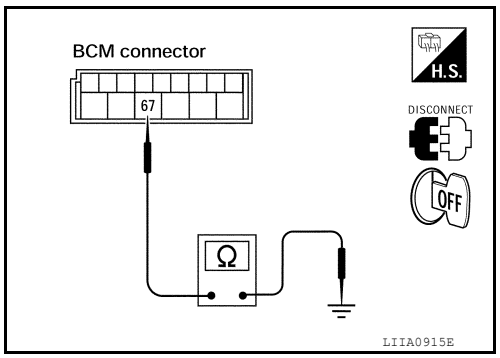
Is the measurement value normal?

YES >> GO TO 3
NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	67		Yes



Does continuity exist?

YES >> Inspection End.
NO >> Repair or replace harness.

KEY CYLINDER SWITCH
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000008792461

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.

DRIVER SIDE : Component Function Check

INFOID:0000000008792462

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check "KEY CYL LK-SW" AND "KEY CYL UN-SW" in DATA MONITOR mode for “POWER DOOR LOCK SYSTEM” with CONSULT.

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

Is the inspection result normal?

YES >> Key cylinder switch is OK.
NO >> Refer to SEC-28, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000008792463

Regarding Wiring Diagram information, refer to SEC-52, "Wiring Diagram - King Cab" or SEC-62, "Wiring Diagram - Crew Cab".

1.CHECK DOOR KEY CYLINDER SWITCH LH

With CONSULT

Check front door lock assembly LH (key cylinder switch) ("KEY CYL LK-SW") and ("KEY CYL UN-SW) in DATA MONITOR mode in CONSULT. Refer to BCS-15, "DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)".

- When key inserted in front key cylinder is turned to LOCK:

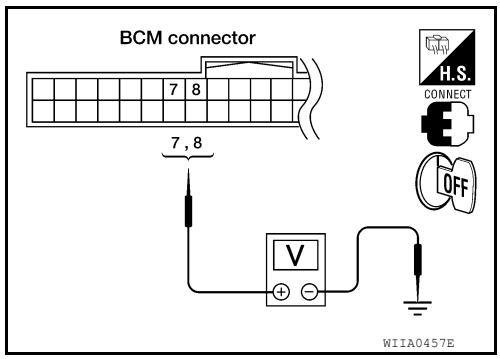
KEY CYL LK-SW : ON

- When key inserted in front key cylinder is turned to UNLOCK:

KEY CYL UN-SW : ON

Without CONSULT

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M18 terminals 7, 8 and ground.



Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(–)		

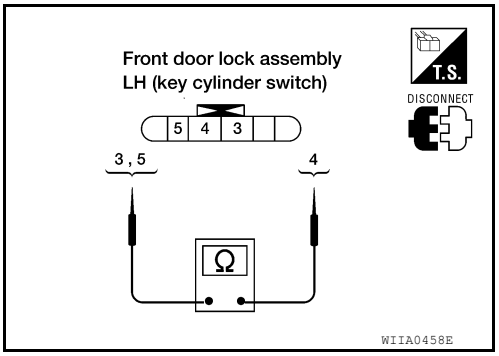
M18	7	Ground	Neutral/Lock	0
			Unlock	Momentary 1.5
	8		Neutral/Unlock	0
			Lock	Momentary 1.5

Is the inspection result normal?

YES >> Front door lock assembly LH (key cylinder switch) signal is OK.
NO >> GO TO 2.

2.CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)

1. Turn ignition switch OFF.
2. Disconnect front door lock assembly LH (key cylinder switch).
3. Check continuity between front door lock assembly LH (key cylinder switch) connector D14 terminals 3, 4 and 5.



Terminals	Condition	Continuity
4 – 5	Key is turned to LOCK.	Yes
	Key is in N position or turned to UNLOCK	No
3 – 4	Key is turned to UNLOCK.	Yes
	Key is in N position or turned to LOCK	No

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace front door lock assembly LH (key cylinder switch). Refer to DLK-136, "Removal and Installation".

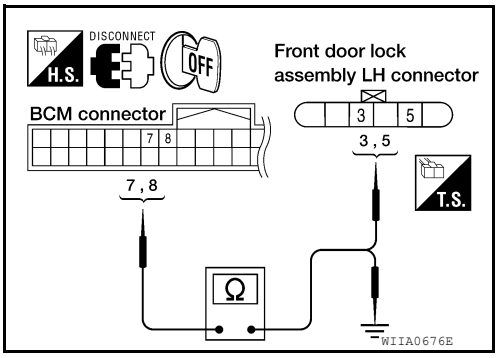
3.CHECK FRONT DOOR LOCK ASSEMBLY LH HARNESS

1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminals 7, 8 and front door lock assembly LH connector D14 terminals 3, 5.

7 - 3 : Continuity should exist.
8 - 5 : Continuity should exist.

3. Check continuity between BCM connector M18 terminals 7, 8 and ground.

7 - Ground : Continuity should not exist.
8 - Ground : Continuity should not exist.



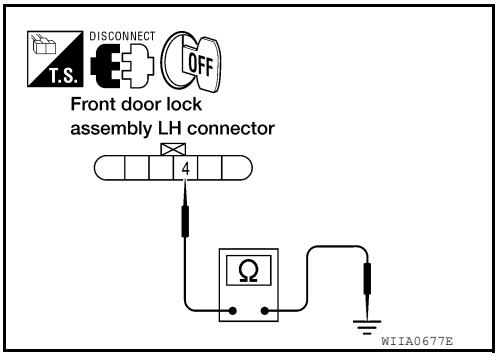
Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness.

4.CHECK FRONT DOOR LOCK ASSEMBLY LH GROUND

Check continuity between front door lock assembly LH connector D14 terminal 4 and ground.

4 - Ground : Continuity should exist.

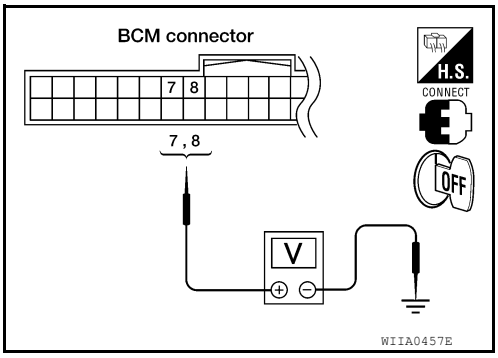


Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace harness.

5. CHECK BCM OUTPUT VOLTAGE

1. Connect BCM.
2. Check voltage between BCM connector M18 terminals 7, 8 and ground.



7 - Ground	**: Approx. 5V**
8 - Ground	**: Approx. 5V**

Is the inspection result normal?

YES >> Check condition of the harness and connector.
NO >> Replace BCM. Refer to BCS-49, "Removal and Installation".

HORN FUNCTION

Symptom Table

INFOID:0000000008792464

HAZARD AND HORN REMINDER FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Work flow”. Refer to SEC-3, "Work Flow".
- If the following symptoms” are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- “ANSWER BACK FUNCTION” is ON when setting on CONSULT.
- Ignition switch is in OFF position.
- All doors are closed.

Symptom	Diagnosis/service procedure	Reference page
Hazard reminder does not operate by keyfob. (Horn reminder operate.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	BCS-17
	2. Check hazard function.	DLK-56
	3. Check keyfob battery inspection.	DLK-51
Horn reminder does not operate by keyfob. (Hazard reminder operate.)	1. Check “HORN WITH KEYLESS LOCK” setting in “WORK SUPPORT”.	BCS-17
	2. Check horn function.	DLK-53
	3. Check Intermittent Incident.	GI-49

VEHICLE SECURITY INDICATOR

Description

INFOID:0000000008792465

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

Component Function Check

INFOID:0000000008792466

1.CHECK FUNCTION

1. Perform “THEFT IND” in the “Active Test” mode with CONSULT.
2. Check vehicle security indicator operation.

Test item		Description	
THEFT IND	ON	Vehicle security indicator	ON
	OFF		OFF

Is the inspection result normal?

YES >> Inspection End.
NO >> Refer to SEC-32, "Diagnosis Procedure".

Diagnosis Procedure

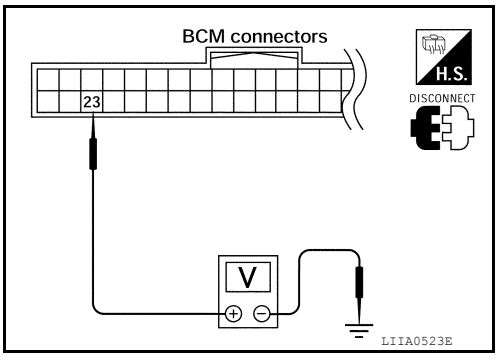
INFOID:0000000008792467

Regarding Wiring Diagram information, refer to SEC-52, "Wiring Diagram - King Cab" or SEC-62, "Wiring Diagram - Crew Cab".

1.SECURITY INDICATOR LAMP ACTIVE TEST

With CONSULT
Check "THEFT IND” in "ACTIVE TEST" mode with CONSULT.

Without CONSULT
1. Disconnect BCM.
2. Check voltage between BCM harness connector M18 terminal 23 and ground.



Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M18	23	Ground	ON	0
			OFF	Battery voltage

Is the inspection result normal?

YES >> Security indicator lamp is OK.
NO >> GO TO 2

2.SECURITY INDICATOR LAMP CHECK

Check security indicator lamp condition.

Is the inspection result normal?

YES >> GO TO 3
NO >> Replace combination meter. Refer to MWI-88, "Removal and Installation".

3.CHECK HARNESS CONTINUITY

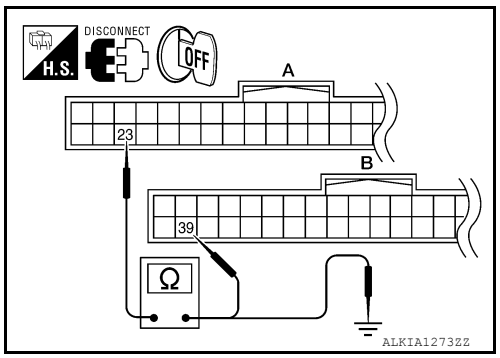
1. Turn ignition switch OFF.
2. Disconnect BCM and security indicator lamp connector.

3. Check continuity between BCM connector M18 (A) terminal 23 and combination meter connector M24 (B) terminal 39.

23 - 39 : Continuity should exist.

4. Check continuity between BCM connector M18 (A) terminal 23 and ground.

23 - Ground : Continuity should not exist.



Is the inspection result normal?

YES >> Check the following:
- 10A fuse [No. 19, located in fuse block (J/B)]
- Harness for open or short between security indicator lamp and fuse

NO >> Repair or replace harness.

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000009233299

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs
- Test remote keyless entry keyfob relative signal strength

VALUES ON THE DIAGNOSIS TOOL

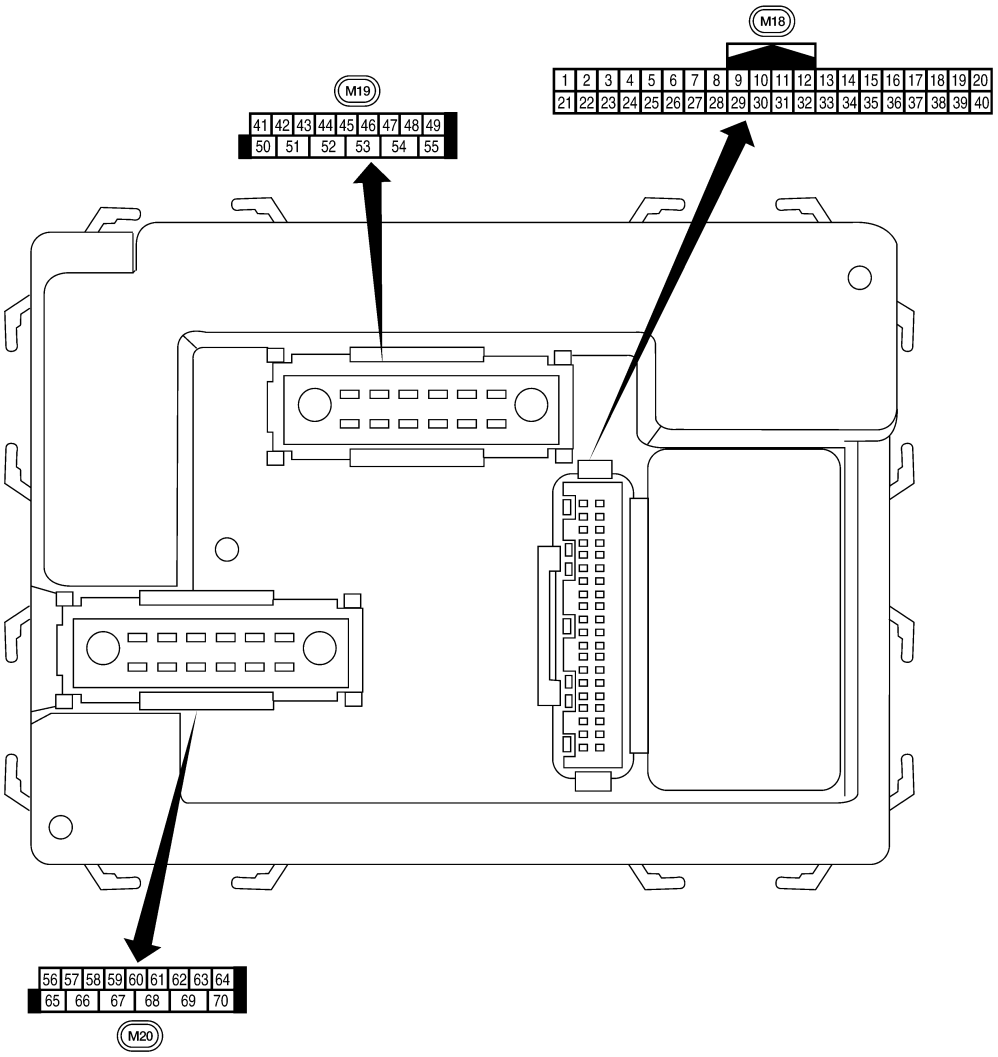
Monitor Item	Condition	Value/Status
ACC ON SW	Ignition switch OFF or ON	Off
	Ignition switch ACC	On
AIR COND SW	A/C switch OFF	Off
	A/C switch ON	On
AIR PRESS FL	Front left tire air pressure value	kPa, kg/cm^2, psi
AIR PRESS FR	Front right tire air pressure value	kPa, kg/cm^2, psi
AIR PRESS RL	Rear left tire air pressure value	kPa, kg/cm^2, psi
AIR PRESS RR	Rear right tire air pressure value	kPa, kg/cm^2, psi
BRAKE SW	Brake pedal released	Off
	Brake pedal applied	On
BUCKLE SW	Seat belt buckle unfastened	Off
	Seat belt buckle fastened	On
BUZZER	Buzzer in combination meter OFF	Off
	Buzzer in combination meter ON	On
CARGO LAMP SW	Cargo lamp switch OFF	Off
	Cargo lamp switch ON	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the LOCK side	On
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the UNLOCK side	On
DOOR SW-AS	Front door RH closed	Off
	Front door RH opened	On
DOOR SW-DR	Front door LH closed	Off
	Front door LH opened	On
DOOR SW-RL	Rear door LH closed	Off
	Rear door LH opened	On
DOOR SW-RR	Rear door RH closed	Off
	Rear door RH opened	On
FAN ON SIG	Blower motor fan switch OFF	Off
	Blower motor fan switch ON	On

Monitor Item	Condition	Value/Status
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
FR WIPER LOW	Front wiper switch OFF	Off
	Front wiper switch LO	On
FR WIPER HI	Front wiper switch OFF	Off
	Front wiper switch HI	On
FR WIPER INT	Front wiper switch OFF	Off
	Front wiper switch INT	On
FR WIPER STOP	Any position other than front wiper stop position	Off
	Front wiper stop position	On
HAZARD SW	When hazard switch is not pressed	Off
	When hazard switch is pressed	On
HEAD LAMP SW 1	Headlamp switch OFF	Off
	Headlamp switch 1st	On
HEAD LAMP SW 2	Headlamp switch OFF	Off
	Headlamp switch 1st	On
HI BEAM SW	High beam switch OFF	Off
	High beam switch HI	On
ID REGST FL1	ID registration of front left tire incomplete	YET
	ID registration of front left tire complete	DONE
ID REGST FR1	ID registration of front right tire incomplete	YET
	ID registration of front right tire complete	DONE
ID REGST RL1	ID registration of rear left tire incomplete	YET
	ID registration of rear left tire complete	DONE
ID REGST RR1	ID registration of rear right tire incomplete	YET
	ID registration of rear right tire complete	DONE
IGN ON SW	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
IGN SW CAN	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
KEY CYL LK-SW	Door key cylinder LOCK position	Off
	Door key cylinder other than LOCK position	On
KEY CYL UN-SW	Door key cylinder UNLOCK position	Off
	Door key cylinder other than UNLOCK position	On
KEY ON SW	Mechanical key is removed from key cylinder	Off
	Mechanical key is inserted to key cylinder	On
KEYLESS LOCK	LOCK button of key fob is not pressed	Off
	LOCK button of key fob is pressed	On
KEYLESS PANIC	PANIC button of key fob is not pressed	Off
	PANIC button of key fob is pressed	On

Monitor Item	Condition	Value/Status
KEYLESS UNLOCK	UNLOCK button of key fob is not pressed	Off
	UNLOCK button of key fob is pressed	On
LIGHT SW 1ST	Lighting switch OFF	Off
	Lighting switch 1st	On
OIL PRESS SW	• Ignition switch OFF or ACC • Engine running	Off
	Ignition switch ON	On
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
REAR DEF SW	Rear window defogger switch OFF	Off
	Rear window defogger switch ON	On
TURN SIGNAL L	Turn signal switch OFF	Off
	Turn signal switch LH	On
TURN SIGNAL R	Turn signal switch OFF	Off
	Turn signal switch RH	On
VEHICLE SPEED	While driving	Equivalent to speedometer reading
WARNING LAMP	Low tire pressure warning lamp in combination meter OFF	Off
	Low tire pressure warning lamp in combination meter ON	On

Terminal Layout

INFOID:0000000009233300



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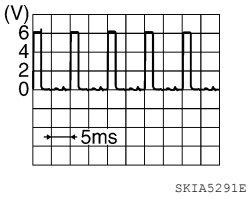
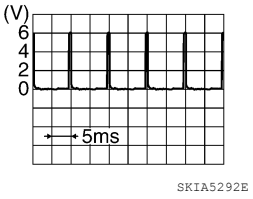
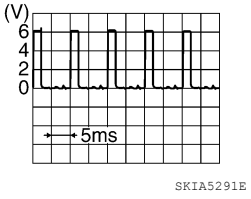
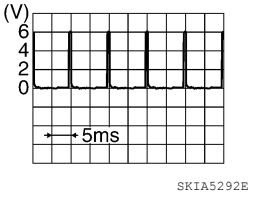
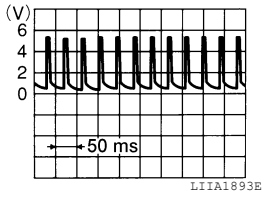
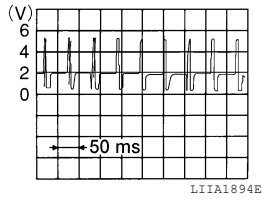
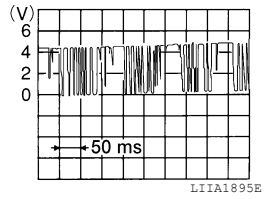
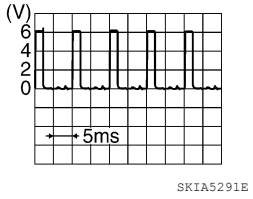
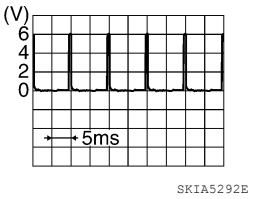
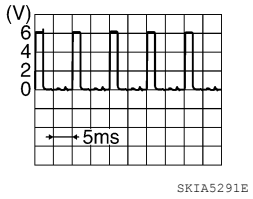
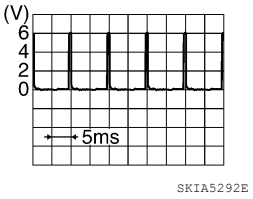
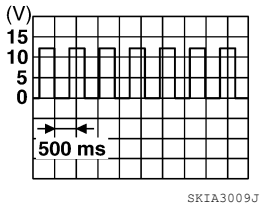
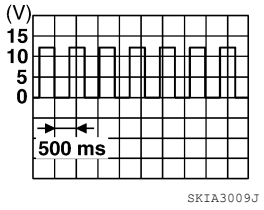
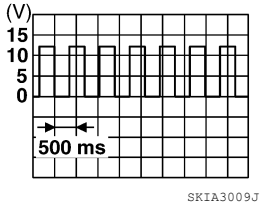
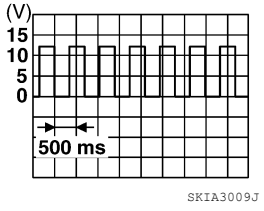
Physical Values

INFOID:0000000009233301

Terminal	Wire color	Item	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
1	BR	Ignition keyhole illumination	Output	OFF	Door is locked (SW OFF)	Battery voltage
					Door is unlocked (SW ON)	0V
2	P	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
3	SB	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
4	V	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
5	L	Combination switch input 2	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
6	R	Combination switch input 1				
7	GR	Front door lock assembly LH (key cylinder switch) unlock	Input	OFF	ON (open, 2nd turn)	Momentary 1.5V
					OFF (closed)	0V
8	SB	Front door lock assembly LH (key cylinder switch) lock	Input		On (open)	Momentary 1.5V
					OFF (closed)	0V
9	LG	Brake sw	Input	OFF	OFF (brake pedal is not depressed)	0V
					ON (brake pedal is depressed)	Battery voltage
11	G/B	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	LG	Front door switch RH (All)	Input	OFF	ON (open)	0V
		Rear door switch upper RH (King Cab)			OFF (closed)	Battery voltage
		Rear door switch lower RH (King Cab)				

Terminal	Wire color	Item	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
13	L	Rear door switch RH (Crew Cab)	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
15	W	Tire pressure warning check connector	Input	OFF	—	5V
18	BR	Remote keyless entry receiver (Ground)	Output	OFF	—	0V
19	V	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	
20	G	Remote keyless entry receiver signal (Signal)	Input	OFF	Stand-by (keyfob buttons released)	
					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	
21	GR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move.
23	G	Security indicator lamp	Output	OFF	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0V
25	BR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move.
27	W	Compressor ON signal	Input	ON	A/C switch OFF	5V
					A/C switch ON	0V
28	R	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
					Front blower motor ON	0V
29	G	Hazard switch	Input	OFF	ON	0V
					OFF	5V
31	GR	Cargo lamp switch	Input	OFF	ON	0V
					OFF	Battery voltage

Terminal	Wire color	Item	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
32	O	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	
33	GR	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	
34	G	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	
35	BR	Combination switch output 2	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	
36	LG	Combination switch output 1				
37	B	Key switch	Input	OFF	Key inserted	Battery voltage
					Key removed	0V
38	W/R	Ignition switch (ON)	Input	ON	—	Battery voltage
39	L	CAN-H	—	—	—	—
40	P	CAN-L	—	—	—	—
41	Y	Rear window defogger switch	Input	ON	Rear window defogger switch ON	0V
					Rear window defogger switch OFF	5V
45	V	Lock switch	Input	OFF	ON (lock)	0V
					OFF	Battery voltage
46	LG	Unlock switch	Input	OFF	ON (unlock)	0V
					OFF	Battery voltage
47	GR	Front door switch LH (All)	Input	OFF	ON (open)	0V
		Rear door switch upper LH (King Cab)			OFF (closed)	Battery voltage
		Rear door switch lower LH (King Cab)				

Terminal	Wire color	Item	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
48	P	Rear door switch LH (Crew Cab)	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
50	P	Cargo lamp	Output	OFF	Any door open (ON)	0V
					All doors closed (OFF)	Battery voltage
51	O	Trailer turn signal (right)	Output	ON	Turn right ON	
52	LG	Trailer turn signal (left)	Output	ON	Turn left ON	
56	R/Y	Battery saver output	Output	OFF	15 minutes after ignition switch is turned OFF	0V
				ON	—	Battery voltage
57	R/Y	Battery power supply	Input	—	—	Battery voltage
58	W	Optical sensor	Input	ON	When optical sensor is illuminated	3.1V or more
					When optical sensor is not illuminated	0.6V or less
59	GR	Front door lock assembly LH (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
60	LG	Turn signal (left)	Output	ON	Turn left ON	
61	G	Turn signal (right)	Output	ON	Turn right ON	
63	BR	Interior room/map lamp	Output	OFF	Any door switch: ON (open)	0V
					Any door switch: OFF (closed)	Battery voltage
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral)	0V
					ON (lock)	Battery voltage

Terminal	Wire color	Item	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
66	L	Front door lock actuator RH, rear door lock actuators LH/RH (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
67	B	Ground	Input	ON	—	0V
68[1]	O	Power window power supply (RAP)	Output	—	Ignition switch ON	Battery voltage
					Within 45 seconds after ignition switch OFF	Battery voltage
					More than 45 seconds after ignition switch OFF	0V
					When front door LH or RH is open or power window timer operates	0V
68[2]	SB	Power window power supply (RAP)	Output	—	Ignition switch ON	Battery voltage
					Within 45 seconds after ignition switch OFF	Battery voltage
					More than 45 seconds after ignition switch OFF	0V
					When front door LH or RH is open or power window timer operates	0V
69	P	Power window power supply (BAT)	Output	OFF	—	Battery voltage
70	W	Battery power supply	Input	OFF	—	Battery voltage

1: King cab (with power door lock system)

2: Crew cab (without power door lock system)

Fail Safe

INFOID:0000000009233302

Fail-safe index

BCM performs fail-safe control when any DTC listed below is detected.

Display contents of CONSULT	Fail-safe	Cancellation
U1000: CAN COMM CIRCUIT	Inhibit engine cranking	When the BCM re-establishes communication with the other modules.

DTC Inspection Priority Chart

INFOID:0000000009233303

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

Priority	DTC
1	• U1000: CAN COMM CIRCUIT
2	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM

Priority	DTC
3	• C1729: VHCL SPEED SIG ERR • C1735: IGNITION SIGNAL
4	• 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 • 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

DTC Index

INFOID:0000000009233304

NOTE:

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	Low tire pressure warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—
U1000: CAN COMM CIRCUIT	—	—	BCS-26
B2190: NATS ANTTENA AMP	—	—	SEC-18
B2191: DIFFERENCE OF KEY	—	—	SEC-21
B2192: ID DISCORD BCM-ECM	—	—	SEC-22
B2193: CHAIN OF BCM-ECM	—	—	SEC-24
C1708: [NO DATA] FL	—	X	WT-15
C1709: [NO DATA] FR	—	X	WT-15
C1710: [NO DATA] RR	—	X	WT-15
C1711: [NO DATA] RL	—	X	WT-15
C1712: [CHECKSUM ERR] FL	—	X	WT-17
C1713: [CHECKSUM ERR] FR	—	X	WT-17
C1714: [CHECKSUM ERR] RR	—	X	WT-17
C1715: [CHECKSUM ERR] RL	—	X	WT-17

CONSULT display	Fail-safe	Low tire pressure warning lamp ON	Reference page
C1716: [PRESSDATA ERR] FL	—	X	WT-19
C1717: [PRESSDATA ERR] FR	—	X	WT-19
C1718: [PRESSDATA ERR] RR	—	X	WT-19
C1719: [PRESSDATA ERR] RL	—	X	WT-19
C1720: [CODE ERR] FL	—	X	WT-17
C1721: [CODE ERR] FR	—	X	WT-17
C1722: [CODE ERR] RR	—	X	WT-17
C1723: [CODE ERR] RL	—	X	WT-17
C1724: [BATT VOLT LOW] FL	—	X	WT-17
C1725: [BATT VOLT LOW] FR	—	X	WT-17
C1726: [BATT VOLT LOW] RR	—	X	WT-17
C1727: [BATT VOLT LOW] RL	—	X	WT-17
C1729: VHCL SPEED SIG ERR	—	X	WT-21
C1735: IGNITION SIGNAL	—	X	WT-22

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

Reference Value

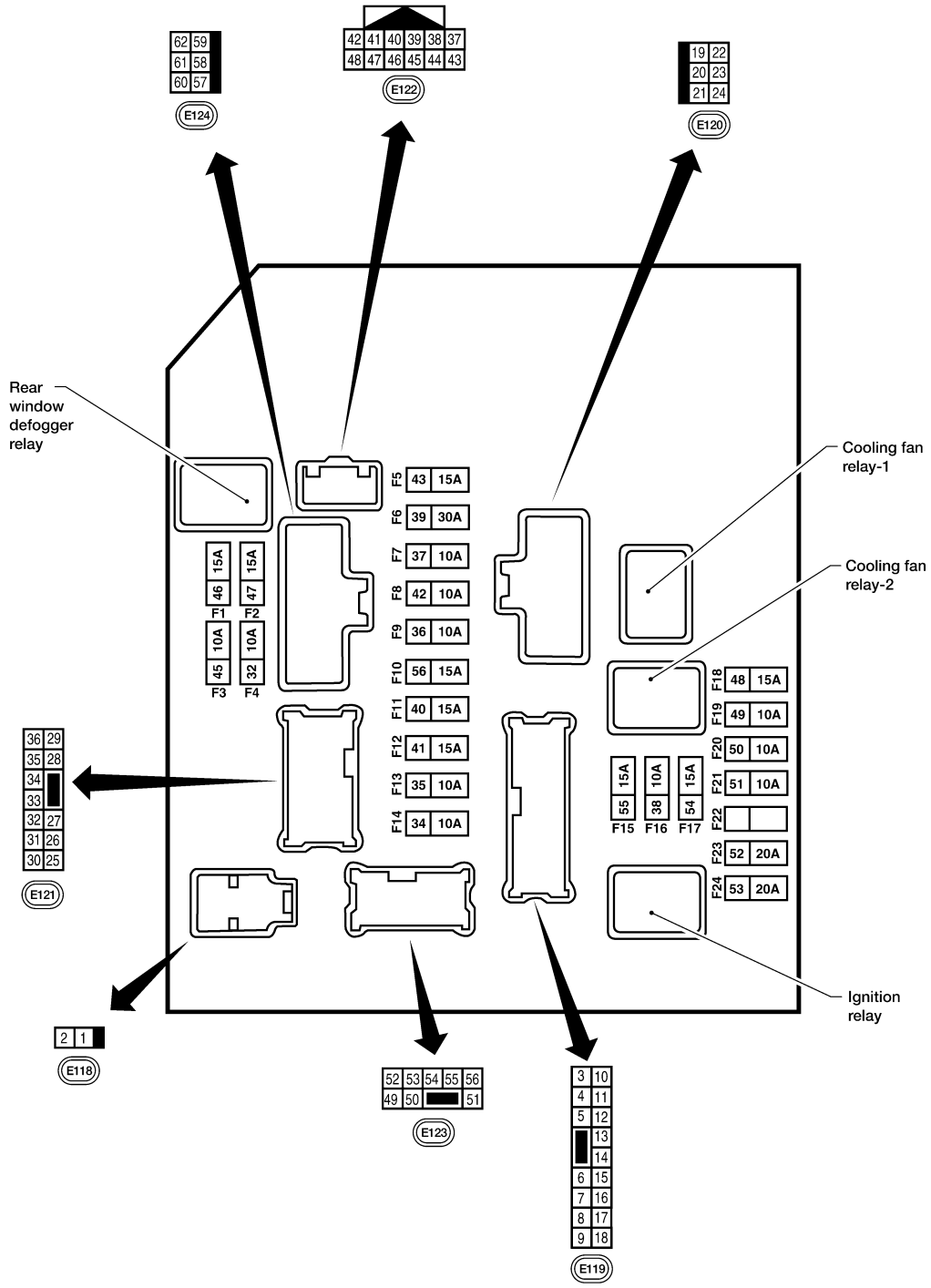
INFOID:0000000009233305

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition		Value/Status
MOTOR FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	1, 2, 3, 4
A/C COMP REQ	A/C switch OFF		Off
	A/C switch ON		On
TAIL&CLR REQ	Lighting switch OFF		Off
	Lighting switch 1ST, 2ND, HI or AUTO (Light is illuminated)		On
HL LO REQ	Lighting switch OFF		Off
	Lighting switch 2ND HI or AUTO (Light is illuminated)		On
HL HI REQ	Lighting switch OFF		Off
	Lighting switch HI		On
FR FOG REQ	Lighting switch 2ND	Front fog lamp switch OFF	Off
		Front fog lamp switch ON	On
FR WIP REQ	Ignition switch ON	Front wiper switch OFF	Stop
		Front wiper switch INT	1LOW
		Front wiper switch LO	Low
		Front wiper switch HI	HI
WIP AUTO STOP	Ignition switch ON	Front wiper stop position	STOP P
		Any position other than front wiper stop position	ACT P
WIP PROT	Ignition switch ON	Front wiper operates normally	Off
		Front wiper stops at fail-safe operation	BLOCK
ST RLY REQ	Ignition switch OFF or ACC		Off
	Ignition switch START		On
IGN RLY	Ignition switch OFF or ACC		Off
	Ignition switch ON		On
RR DEF REQ	Rear defogger switch OFF		Off
	Rear defogger switch ON		On
OIL P SW	Ignition switch OFF, ACC or engine running		Open
	Ignition switch ON		Close
DTRL REQ	Daytime light system requested OFF with CONSULT.		Off
	Daytime light system requested ON with CONSULT.		On
THFT HRN REQ	Not operated		Off
	• Panic alarm is activated • Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYSTEM		On
HORN CHIRP	Not operated		Off
	Door locking with keyfob (horn chirp mode)		On

Terminal Layout

INFOID:0000000009233306



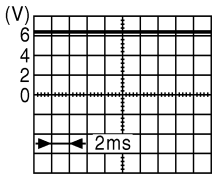
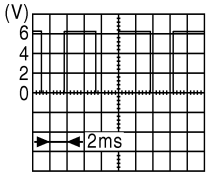
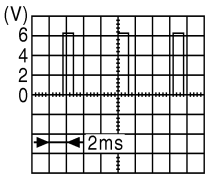
AAMIA0386GB

Physical Values

INFOID:0000000009233307

PHYSICAL VALUES

Terminal	Wire color	Signal name	Signal input/ output	Measuring condition		Reference value (Approx.)
				Ignition switch	Operation or condition	
1	W	Battery power supply	Input	OFF	—	Battery voltage
2	R	Battery power supply	Input	OFF	—	Battery voltage
3	G	ECM relay	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
4	P[1] R[2]	ECM relay	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
6	V	Throttle control motor relay	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
7	BR	ECM relay control	Input	—	Ignition switch ON or START	0V
					Ignition switch OFF or ACC	Battery voltage
8	W/R	Fuse 54	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
10	R/B	Fuse 45	Output	ON	Daytime light system active	0V
					Daytime light system inactive	Battery voltage
11	Y	A/C compressor	Output	ON or START	A/C switch ON or defrost A/C switch	Battery voltage
					A/C switch OFF or defrost A/C switch	0V
12	W/G	Ignition switch supplied power	Input	—	OFF or ACC	0V
					ON or START	Battery voltage
13	R	Fuel pump relay	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
14	W/G	Fuse 49	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
15	W/R	Fuse 50 (ABS)	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
16	W/G	Fuse 51	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
17	W/G	Fuse 55	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
19	W	Starter motor	Output	START	—	Battery voltage
20	BR	Cooling fan motor (low)	Output	ON or START	—	Battery voltage
21	GR	Ignition switch supplied power	Input	—	OFF or ACC	0V
					START	Battery voltage
22	G	Battery power supply	Output	OFF	—	Battery voltage
23	LG	Door mirror defogger output signal	Output	—	When rear defogger switch is ON	Battery voltage
					When raker defogger switch is OFF	0V

Terminal	Wire color	Signal name	Signal input/ output	Measuring condition			Reference value (Approx.)
				Ignition switch	Operation or condition		
24	P	Cooling fan motor (high)	Output	—	Conditions correct for cooling fan operation		Battery voltage
					Conditions not correct for cooling fan operation		0V
27	W/G	Fuse 38	Output	—	Ignition switch ON or START		Battery voltage
					Ignition switch OFF or ACC		0V
28	R	LH front parking and front side marker lamp	Output	OFF	Lighting switch 1st position	OFF	0V
						ON	Battery voltage
29	G	Trailer tow relay	Output	ON	Lighting switch 1st position	OFF	0V
						ON	Battery voltage
30	R/B	Fuse 53	Output	—	Ignition switch ON or START		Battery voltage
					Ignition switch OFF or ACC		0V
32	GR	Wiper low speed signal	Output	ON or START	Wiper switch	OFF	Battery voltage
						LO or INT	0V
35	L	Wiper high speed signal	Output	ON or START	Wiper switch	OFF, LO, INT	Battery voltage
						HI	0V
37	Y	Power generation command signal	Output	—	Ignition switch ON		 JPMIA0001GB 6.3 V
					40% is set on "Active test," "ALTERNATOR DUTY" of "ENGINE"		 JPMIA0002GB 3.8 V
					40% is set on "Active test," "ALTERNATOR DUTY" of "ENGINE"		 JPMIA0003GB 1.4 V
38	B	Ground	Input	—	—		0V
39	L	CAN-H	—	ON	—		—
40	P	CAN-L	—	ON	—		—
42	GR	Oil pressure switch	Input	—	Engine running		Battery voltage
					Engine stopped		0V

Terminal	Wire color	Signal name	Signal input/ output	Measuring condition			Reference value (Approx.)
				Ignition switch	Operation or condition		
43	G	Wiper auto stop signal	Input	ON or START	Wiper switch	OFF, LO, INT	Battery voltage
44	R	Daytime light relay control (Canada only)	Input	ON	Daytime light system active		0V
					Daytime light system inactive		Battery voltage
45	LG	Horn relay control	Input	ON	When door locks are operated using keyfob (OFF → ON)[3]		Battery voltage → 0V
46	V	Fuel pump relay control	Input	—	Ignition switch ON or START		0V
					Ignition switch OFF or ACC		Battery voltage
47	O	Throttle control motor relay control	Input	—	Ignition switch ON or START		0V
					Ignition switch OFF or ACC		Battery voltage
48	R	Starter relay (inhibit switch)	Input	ON or START	Selector lever in "P" or "N"		0V
					Selector lever any other position		Battery voltage
49	GR	Front RH parking and front side marker lamp	Output	OFF	Lighting switch 1st position	OFF	0V
						ON	Battery voltage
50	W	Front fog lamp (LH)	Output	ON or START	Lighting switch must be in the 2nd position (LOW beam is ON) and the front fog lamp switch	OFF	0V
						ON	Battery voltage
51	V	Front fog lamp (RH)	Output	ON or START	Lighting switch must be in the 2nd position (LOW beam is ON) and the front fog lamp switch	OFF	0V
						ON	Battery voltage
52	P	LH low beam headlamp	Output	—	Lighting switch in 2nd position		Battery voltage
54	R	RH low beam headlamp	Output	—	Lighting switch in 2nd position		Battery voltage
55	G	LH high beam headlamp	Output	—	Lighting switch in 2nd position and placed in HIGH or PASS position		Battery voltage
56	L	RH high beam headlamp	Output	—	Lighting switch in 2nd position and placed in HIGH or PASS position		Battery voltage
57	GR	Parking, license, and tail lamp	Output	ON	Lighting switch 1st position	OFF	0V
						ON	Battery voltage
59	B	Ground	Input	—	—		0V
60	GR	Rear window defogger relay	Output	ON or START	Rear defogger switch ON		Battery voltage
					Rear defogger switch OFF		0V
61	R/B	Fuse 32	Output	OFF	—		Battery voltage

[1]: For Mexico

[2]: Except for Mexico

[3]: When horn reminder is ON

Fail Safe

INFOID:0000000009233308

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	• Turns ON the cooling fan relay when the ignition switch is turned ON • Turns OFF the cooling fan relay when the ignition switch is turned OFF

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 (LH/RH) high relays OFF
• Parking lamps • License plate lamps • 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.
Rear window defogger	Rear window defogger relay OFF
A/C compressor (if equipped)	A/C relay OFF
Front fog lamps (if equipped)	Front fog lamp 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.

Ignition switch	Ignition relay	Tail lamp relay
ON	ON	—
OFF	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.

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:0000000009233309

CONSULT display	Fail-safe	TIME[NOTE]		Refer to
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	×	CRNT	1 – 39	PCS-13

NOTE:

The details of TIME display are as follows.

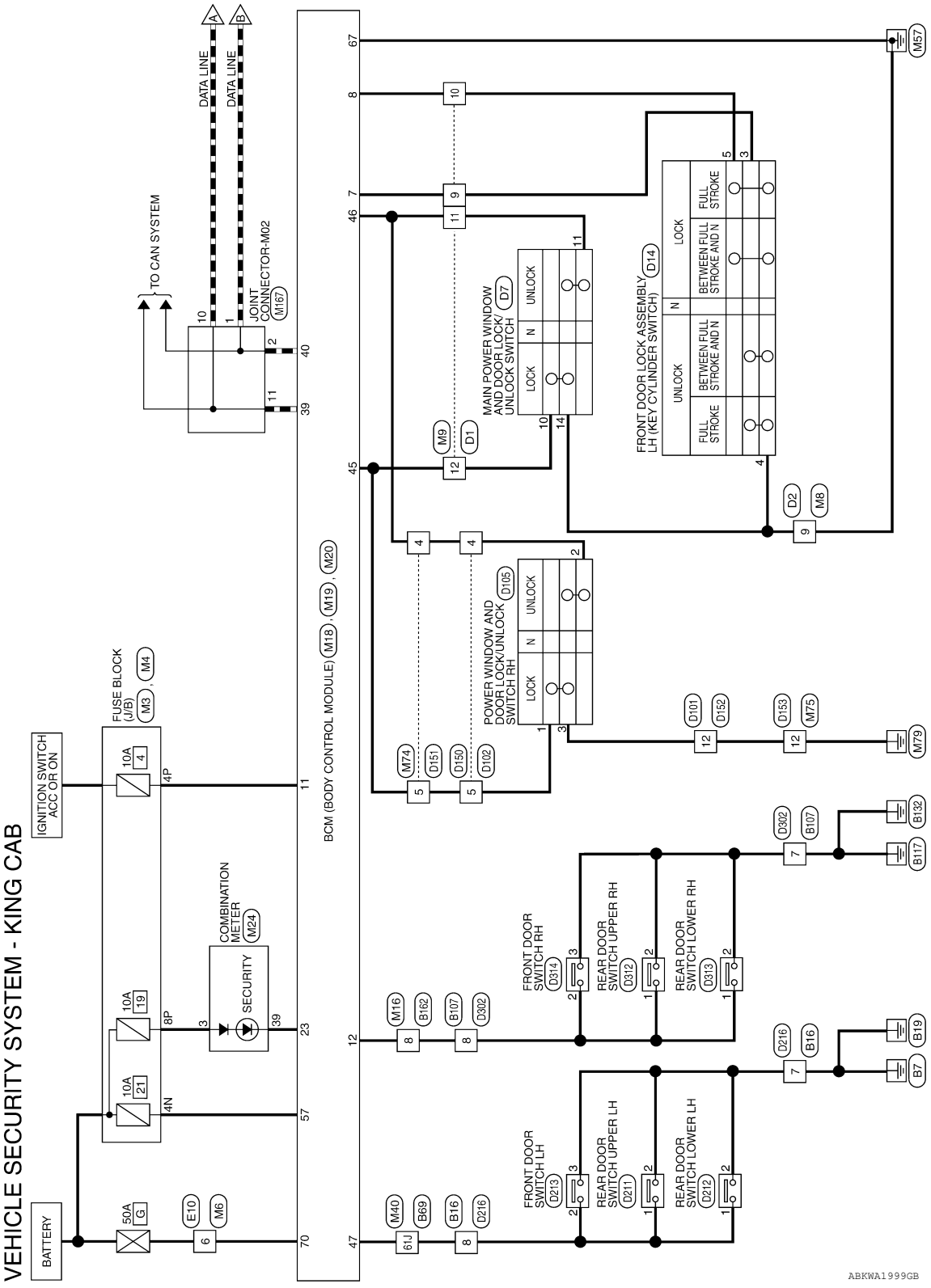
- CRNT: The malfunctions that are detected now
- 1 - 39: The number is indicated when it is normal at present and a malfunction was detected in the past. It increases like 0 → 1 → 2 ··· 38 → 39 after returning to the normal condition whenever IGN OFF → ON. It is fixed to 39 until the self-diagnosis results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

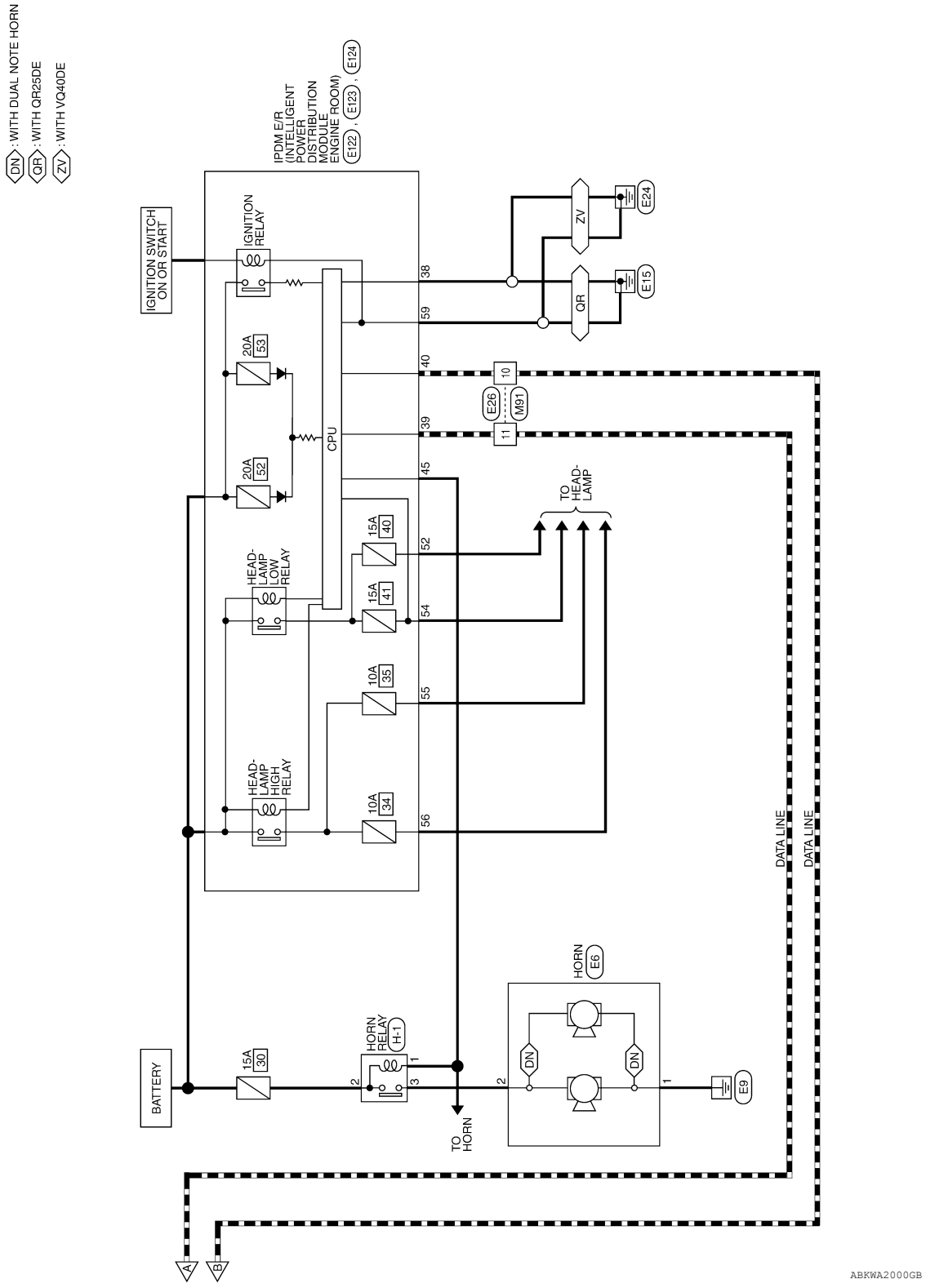
WIRING DIAGRAM

VEHICLE SECURITY SYSTEM

Wiring Diagram - King Cab

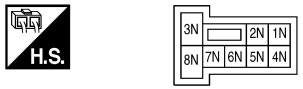
INFOID:0000000008792479




DN : WITH DUAL NOTE HORN
QR : WITH QR25DE
ZV : WITH VQ40DE
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E122 , E123 , E124
IGNITION SWITCH ON OR START
IGNITION RELAY
CPU
20A 53
20A 52
HEAD-LAMP LOW RELAY
HEAD-LAMP HIGH RELAY
15A 40
15A 41
10A 35
10A 34
15A 30
HORN RELAY H-1
BATTERY
ZV
QR
E24
E15
E26
M91
10
11
TO HEAD-LAMP
TO HORN
HORN E6
E9
DATA LINE
DATA LINE
A
B
ABKWA2000GB

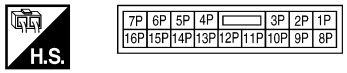
VEHICLE SECURITY SYSTEM CONNECTORS - KING CAB

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4N	R/Y	–

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

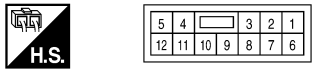


Terminal No.	Color of Wire	Signal Name
4P	G/B	–
8P	R/Y	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

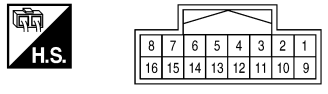
Terminal No.	Color of Wire	Signal Name
6	W	–

Connector No.	M8
Connector Name	WIRE TO WIRE
Connector Color	BROWN



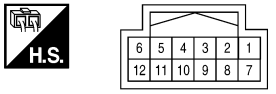
Terminal No.	Color of Wire	Signal Name
9	B	–

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	GR	–
10	SB	–
11	LG	–
12	V	–

Connector No.	M16
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8	LG	–

AWKIA0351GB

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
7	GR	KEY CYLINDER UNLOCK SW
8	SB	KEY CYLINDER LOCK SW
11	G/B	ACC SW
12	LG	DOOR SW (AS)
23	G	SECURITY INDICATOR OUTPUT
39	L	CAN-H
40	P	CAN-L

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

41	42	43	44	45	46	47	48	49
50	51	52	53	54	55			

Terminal No.	Color of Wire	Signal Name
45	V	CDL LOCK SW
46	LG	CDL UNLOCK SW
47	GR	DOOR SW (DR)

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

56	57	58	59	60	61	62	63	64
65	66	67	68	69	70			

Terminal No.	Color of Wire	Signal Name
57	R/Y	BAT(FUSE)
67	B	GND (POWER)
70	W	BAT (F/L)

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
3	R/Y	BATTERY
39	G	SECURITY

Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

				5J	4J	3J	2J	1J											
				10J	9J	8J	7J	6J											
2TJ	20J	19J	18J	17J	16J	15J	14J	13J	12J	11J									
	30J	29J	28J	27J	26J	25J	24J	23J	22J										
41J	40J	39J	38J	37J	36J	35J	34J	33J	32J	31J									
	50J	49J	48J	47J	46J	45J	44J	43J	42J										
61J	60J	59J	58J	57J	56J	55J	54J	53J	52J	51J									
	70J	69J	68J	67J	66J	65J	64J	63J	62J										
				75J	74J	73J	72J	71J											
					80J	79J	78J	77J	76J										

Terminal No.	Color of Wire	Signal Name
61J	GR	–

ABKIA0532GB

Connector No.	M74
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

8	7	6	5	4	3	2	1
16	15	14	13	12	11	10	9

Terminal No.	Color of Wire	Signal Name
4	LG	–
5	P	–

Connector No.	M75
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

5	4	3	2	1
12	11	10	9	8	7	6

Terminal No.	Color of Wire	Signal Name
12	B	–

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

7	6	5	4	3	2	1
16	15	14	13	12	11	10	9	8

Terminal No.	Color of Wire	Signal Name
10	P	–
11	L	–

Connector No.	M167
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE

H.S.

9	8	7	6	5	4	3	2	1
20	19	18	17	16	15	14	13	12	11	10

Terminal No.	Color of Wire	Signal Name
1	P	–
2	P	–
10	L	–
11	L	–

Connector No.	E6
Connector Name	HORN
Connector Color	BLACK

H.S.

1
2

Terminal No.	Color of Wire	Signal Name
1	B	–
2	G	–

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3
4	5	6

Terminal No.	Color of Wire	Signal Name
6	W	–

ABKIA3346GB

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3		4	5	6	7
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
10	P	–
11	L	–

Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

42	41	40	39	38	37
48	47	46	45	44	43

Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L
45	LG	ANTI THEFT HORN

Connector No.	E123
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

51				50	49
56	55	54	53	52	

Terminal No.	Color of Wire	Signal Name
52	P	H/LAMP LO LH
54	R	H/LAMP LO RH
55	G	H/LAMP HI LH
56	L	H/LAMP HI RH

Connector No.	E124
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

59	58	57
62	61	60

Terminal No.	Color of Wire	Signal Name
59	B	GND (POWER)

Connector No.	B16
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
7	B	–
8	GR	–

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

				5J		
	1J	2J	3J	4J		
	6J	7J	8J	9J	10J	
11J	12J	13J	14J	15J	16J	17J	18J	19J	20J	21J
	22J	23J	24J	25J	26J	27J	28J	29J	30J	
31J	32J	33J	34J	35J	36J	37J	38J	39J	40J	41J
	42J	43J	44J	45J	46J	47J	48J	49J	50J	
51J	52J	53J	54J	55J	56J	57J	58J	59J	60J	61J
	62J	63J	64J	65J	66J	67J	68J	69J	70J	
			71J	72J	73J	74J	75J			
			76J	77J	78J	79J	80J			

Terminal No.	Color of Wire	Signal Name
61J	GR	–

ABKIA3347GB

Connector No.	B107
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
7	B	–
8	LG	–

Connector No.	B162
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6
7	8	9	10	11	12

Terminal No.	Color of Wire	Signal Name
8	LG	–

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
9	R/W	–
10	SB	–
11	W	–
12	LG	–

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	BROWN

H.S.

1	2	3		4	5
6	7	8	9	10	11	12

Terminal No.	Color of Wire	Signal Name
9	B	–

Connector No.	D7
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE

H.S.

1	2	3	4		5	6	7
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
10	LG	–
11	W	–
14	B	–

Connector No.	D14
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	GRAY

H.S.

6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
3	R/W	–
4	B	–
5	SB	–

ABKIA3348GB

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

H.S.

1	2	3		4	5
6	7	8	9	10	11	12

Terminal No.	Color of Wire	Signal Name
12	B	–

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
4	W	–
5	LG	–

Connector No.	D105
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color	WHITE

H.S.

1	2		3	4	5
6	7	8	9	10	11	12

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	W	–
3	B	–

Connector No.	D150
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

8	7	6	5	4	3	2	1
16	15	14	13	12	11	10	9

Terminal No.	Color of Wire	Signal Name
4	LG	– (WITH KING CAB)
5	P	– (WITH KING CAB)

Connector No.	D151
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
4	LG	– (WITH KING CAB)
5	P	– (WITH KING CAB)

Connector No.	D152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

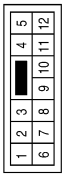
5	4		3	2	1
12	11	10	9	8	7	6

Terminal No.	Color of Wire	Signal Name
12	B	–

ABKIA4357GB

Connector No.	D153
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
12	B	–

Connector No.	D211
Connector Name	REAR DOOR SWITCH UPPER LH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
2	B	–

Connector No.	D212
Connector Name	REAR DOOR SWITCH LOWER LH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
2	B	–

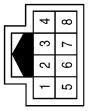
Connector No.	D213
Connector Name	FRONT DOOR SWITCH LH (KING CAB)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	LG	–
3	B	–

Connector No.	D216
Connector Name	WIRE TO WIRE
Connector Color	WHITE

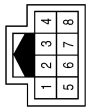
H.S.



Terminal No.	Color of Wire	Signal Name
7	B	–
8	LG	–

Connector No.	D302
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
7	B	–
8	LG	–

ABKIA4358GB

Connector No.	D312
Connector Name	REAR DOOR SWITCH UPPER RH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
2	B	–

Connector No.	D313
Connector Name	REAR DOOR SWITCH LOWER RH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
2	B	–

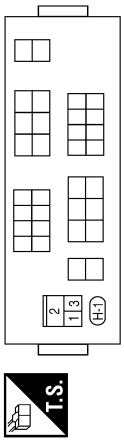
Connector No.	D314
Connector Name	FRONT DOOR SWITCH RH (KING CAB)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	LG	–
3	B	–

Connector No.	H-1
Connector Name	FUSE AND FUSIBLE LINK BOX (HORN RELAY)
Connector Color	–

T.S.

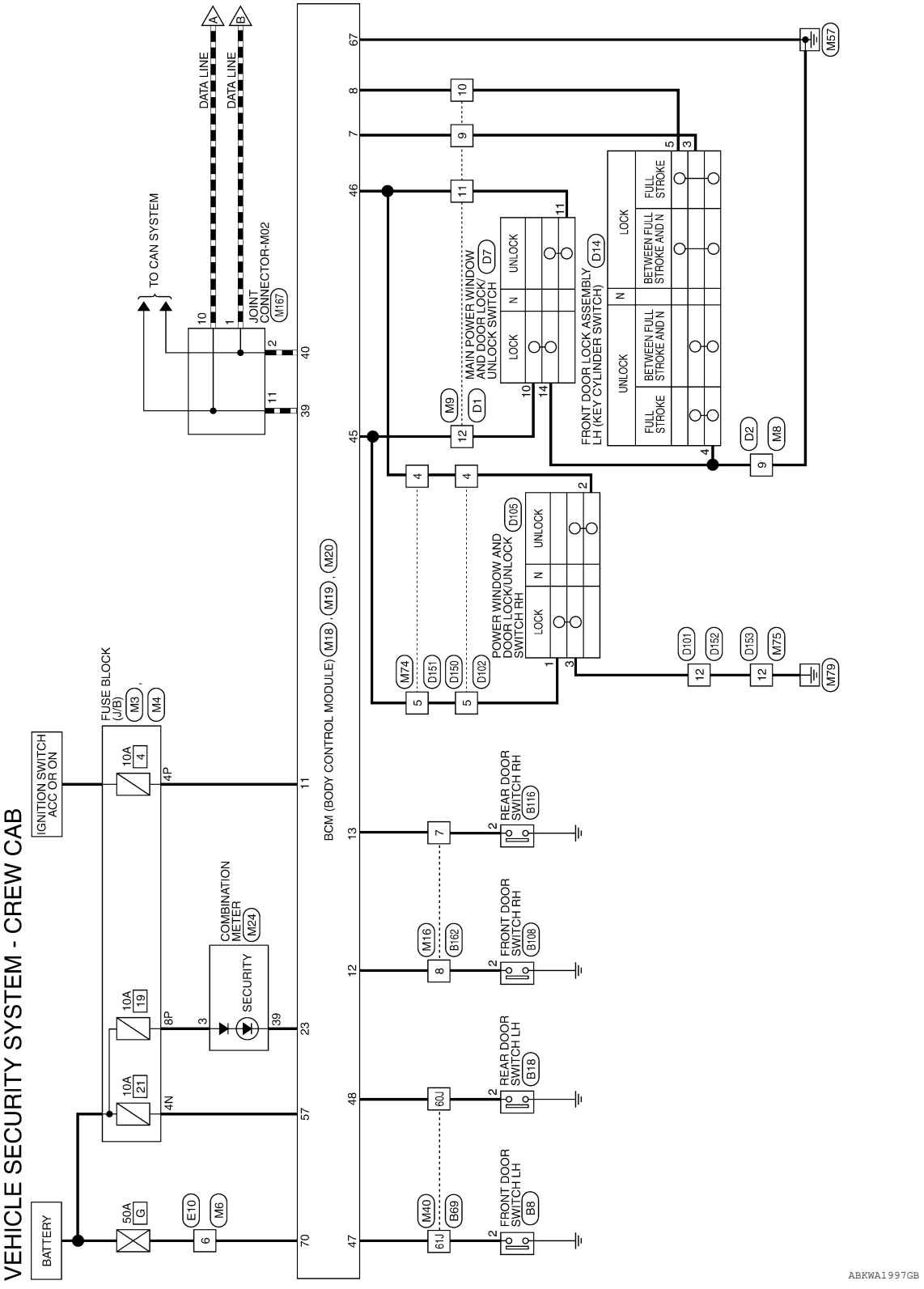


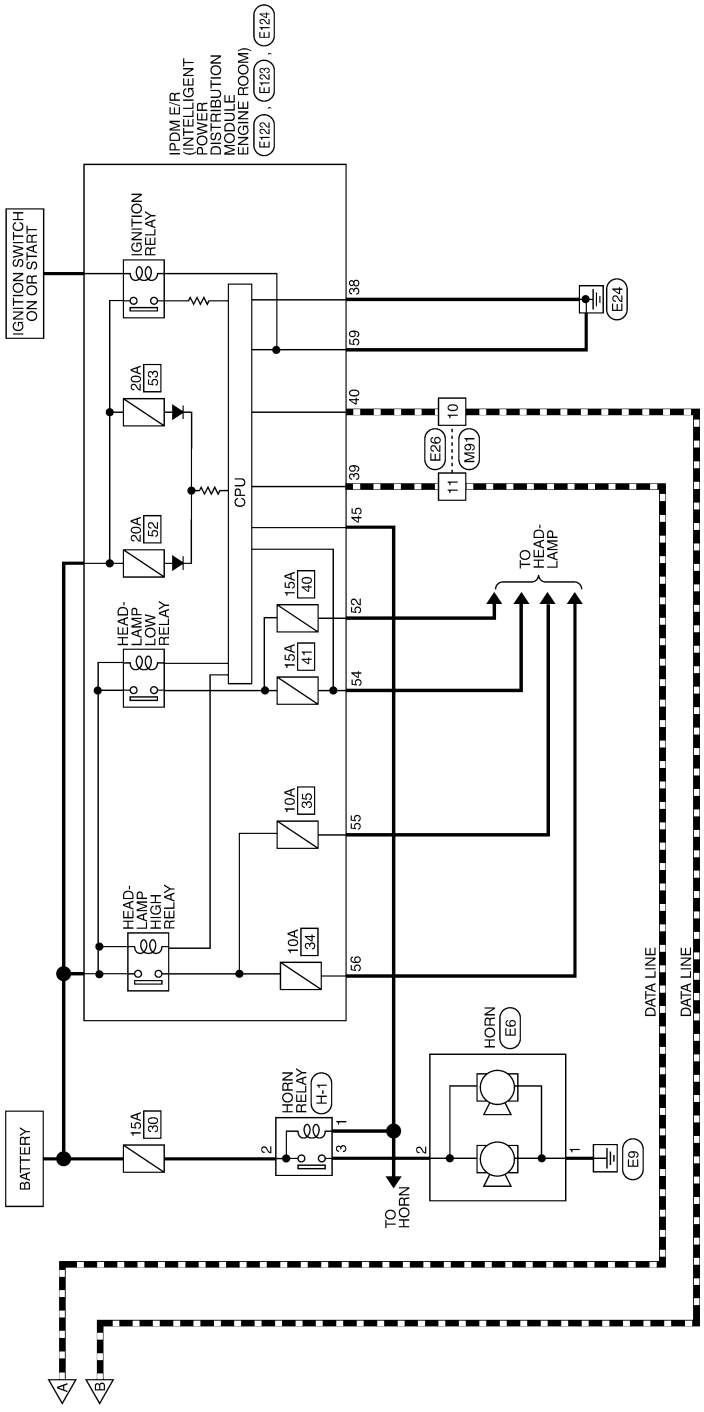
Terminal No.	Color of Wire	Signal Name
1	R	–
2	O	–
3	G	–

ABKIA4359GB

Wiring Diagram - Crew Cab

INFOID:0000000008792480

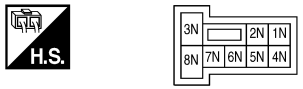




ABKWA1998GB

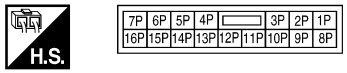
VEHICLE SECURITY SYSTEM CONNECTORS - CREW CAB

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4N	R/Y	–

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

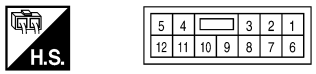


Terminal No.	Color of Wire	Signal Name
4P	G/B	–
8P	R/Y	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

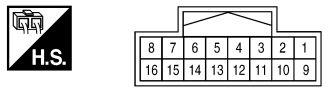
Terminal No.	Color of Wire	Signal Name
6	W	–

Connector No.	M8
Connector Name	WIRE TO WIRE
Connector Color	BROWN



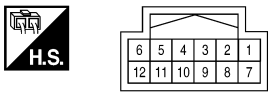
Terminal No.	Color of Wire	Signal Name
9	B	–

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	GR	–
10	SB	–
11	LG	–
12	V	–

Connector No.	M16
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	L	–
8	LG	–

AWKIA0358GB

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
7	GR	KEY CYLINDER UNLOCK SW
8	SB	KEY CYLINDER LOCK SW
11	G/B	ACC SW
12	LG	DOOR SW (AS)
13	L	DOOR SW (RR)
23	G	SECURITY INDICATOR OUTPUT
39	L	CAN-H
40	P	CAN-L

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

41	42	43	44	45	46	47	48	49
50	51	52	53	54	55			

Terminal No.	Color of Wire	Signal Name
45	V	CDL LOCK SW
46	LG	CDL UNLOCK SW
47	GR	DOOR SW (DR)
48	P	DOOR SW (RL)

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

56	57	58	59	60	61	62	63	64
1	65	66	67	68	69	70		

Terminal No.	Color of Wire	Signal Name
57	R/Y	BAT (FUSE)
67	B	GND (POWER)
70	W	BAT (F/L)

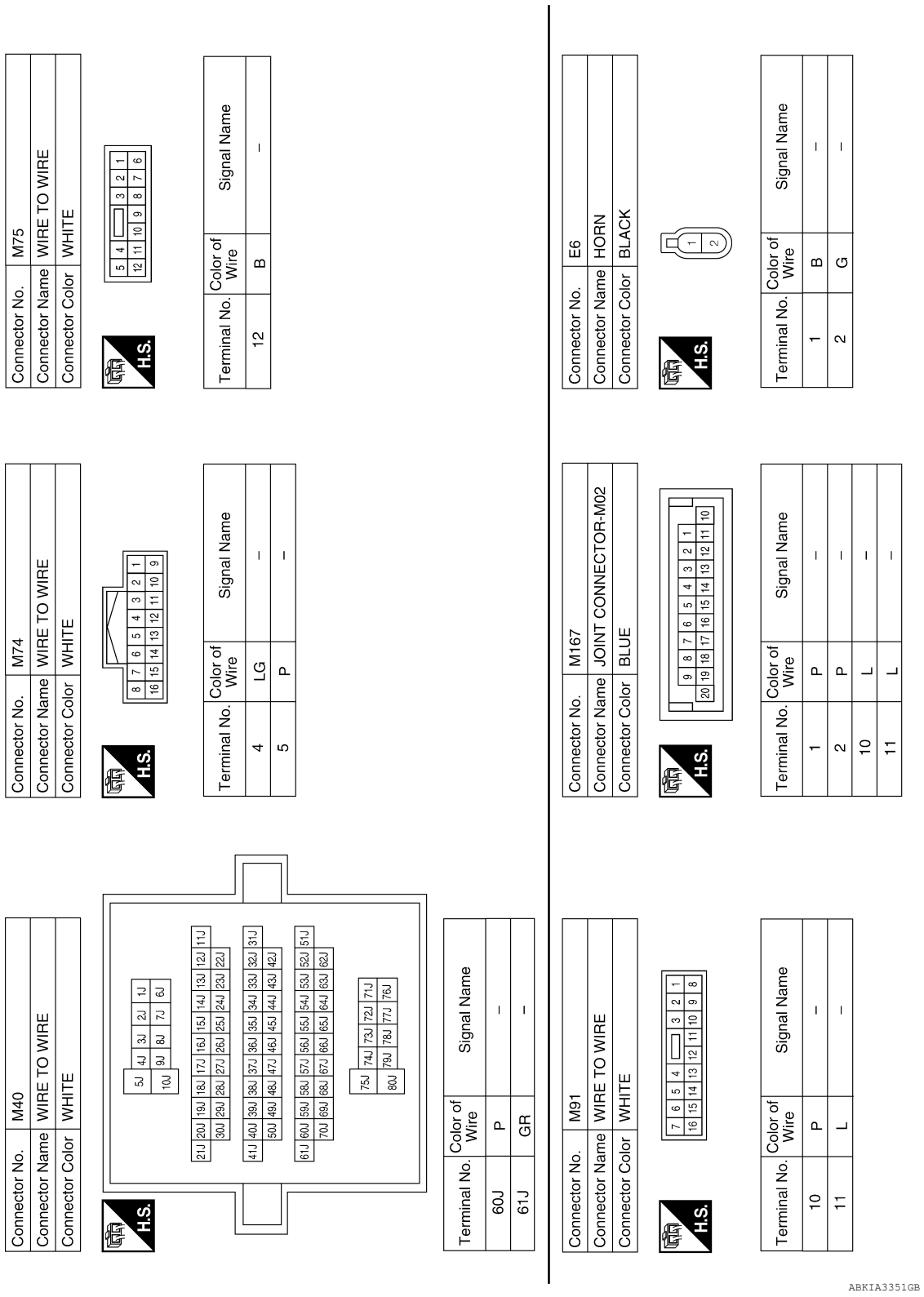
Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
3	R/Y	BATTERY
39	G	SECURITY

ABKIA0527GB



ABKIA3351GB

Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

42	41	40	39	38	37
48	47	46	45	44	43

Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L
45	LG	ANTI THEFT HORN

Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH (CREW CAB)
Connector Color	WHITE

H.S.

1
2
3

Terminal No.	Color of Wire	Signal Name
2	GR	–

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3		4	5	6	7
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
10	P	–
11	L	–

Connector No.	E124
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

59	58	57
62	61	60

Terminal No.	Color of Wire	Signal Name
59	B	GND (POWER)

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3
4	5	6

Terminal No.	Color of Wire	Signal Name
6	W	–

Connector No.	E123
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

51				50	49
56	55	54	53	52	

Terminal No.	Color of Wire	Signal Name
52	P	H/LAMP LO LH
54	R	H/LAMP LO RH
55	G	H/LAMP HI LH
56	L	H/LAMP HI RH

ABKIA3352GB

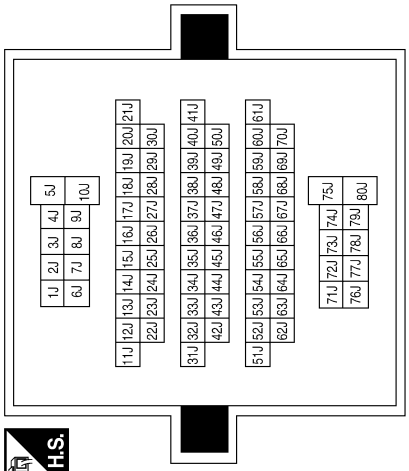
Connector No.	B18
Connector Name	REAR DOOR SWITCH LH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	P	–

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE

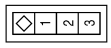
H.S.



Terminal No.	Color of Wire	Signal Name
60J	P	–
61J	GR	–

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH (CREW CAB)
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
2	LG	–

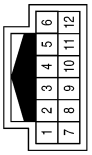
Connector No.	B116
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	L	–

Connector No.	B162
Connector Name	WIRE TO WIRE
Connector Color	WHITE

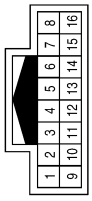
H.S.



Terminal No.	Color of Wire	Signal Name
7	L	–
8	LG	–

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

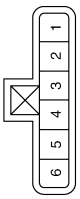


Terminal No.	Color of Wire	Signal Name
9	R/W	–
10	SB	–
11	W	–
12	LG	–

ABKIA3353GB

Connector No.	D14
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	GRAY

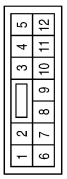
H.S.



Terminal No.	Color of Wire	Signal Name
3	R/W	–
4	B	–
5	SB	–

Connector No.	D105
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color	WHITE

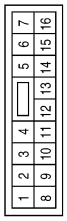
H.S.



Terminal No.	Color of Wire	Signal Name
1	LG	–
2	W	–
3	B	–

Connector No.	D7
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE

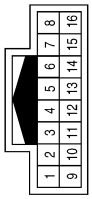
H.S.



Terminal No.	Color of Wire	Signal Name
10	LG	–
11	W	–
14	B	–

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	WHITE

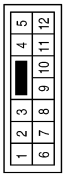
H.S.



Terminal No.	Color of Wire	Signal Name
4	W	–
5	LG	–

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	BROWN

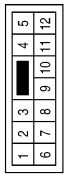
H.S.



Terminal No.	Color of Wire	Signal Name
9	B	–

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

H.S.



Terminal No.	Color of Wire	Signal Name
12	B	–

ABKIA3354GB

Connector No.	D150
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
4	P	– (WITH CREW CAB)
5	W	– (WITH CREW CAB)

Connector No.	D151
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
4	P	– (WITH CREW CAB)
5	W	– (WITH CREW CAB)

Connector No.	D152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
12	B	–

Connector No.	D153
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
12	B	–

Connector No.	H-1
Connector Name	FUSE AND FUSIBLE LINK BOX (HORN RELAY)
Connector Color	–

T.S.

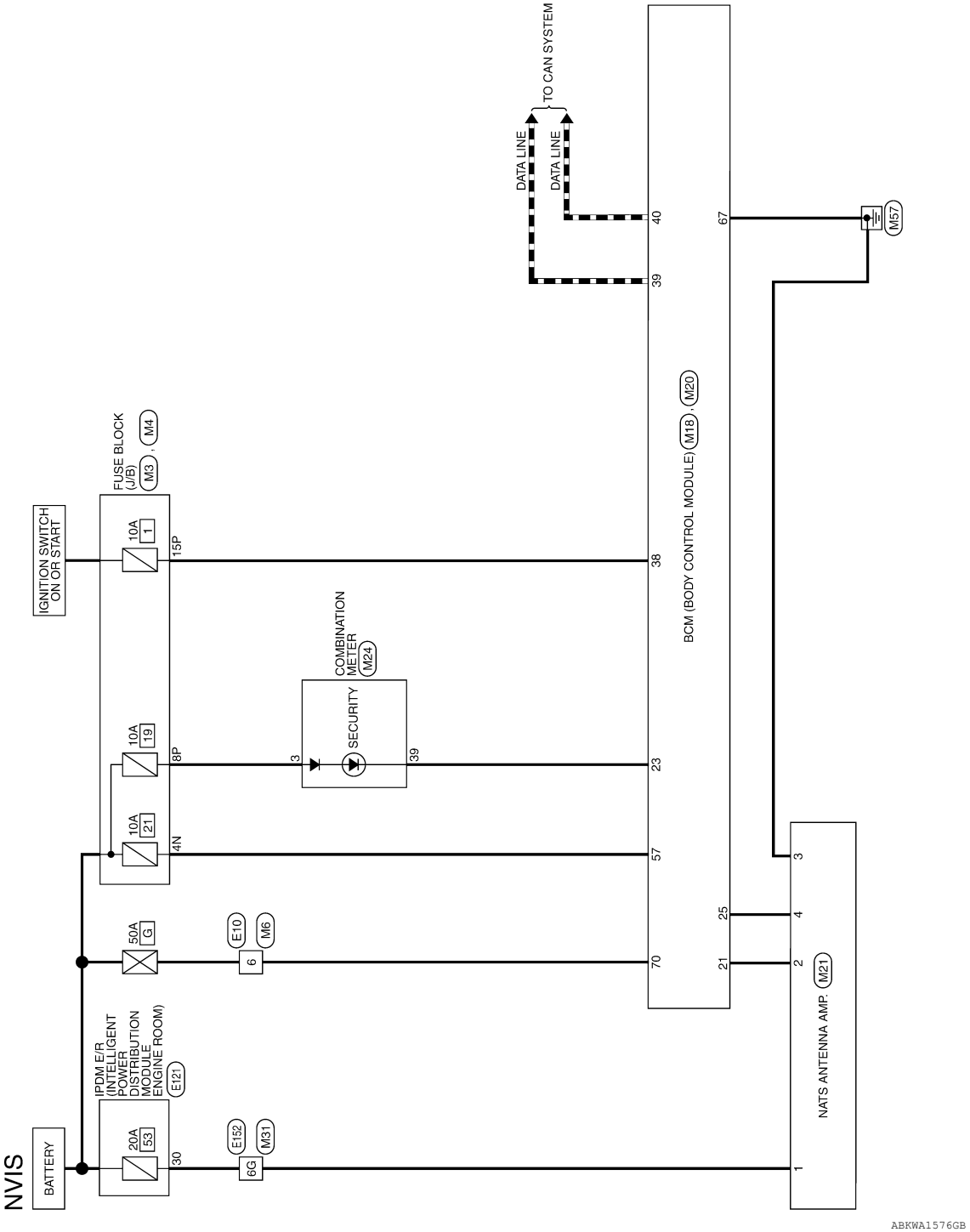
Terminal No.	Color of Wire	Signal Name
1	R	–
2	O	–
3	G	–

ABKIA4356GB

NVIS

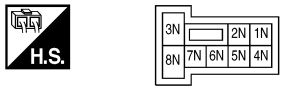
Wiring Diagram

INFOID:0000000008792481



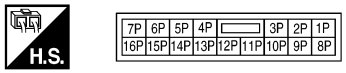
NVIS CONNECTORS

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



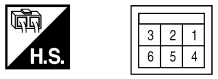
Terminal No.	Color of Wire	Signal Name
4N	R/Y	–

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



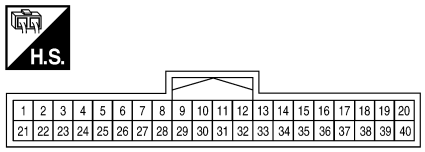
Terminal No.	Color of Wire	Signal Name
8P	R/Y	–
15P	W/R	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



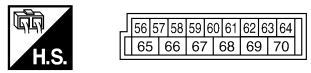
Terminal No.	Color of Wire	Signal Name
6	W	–

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21	GR	IMMOBILIZER ANTENNA SIGNAL (CLOCK)
23	G	SECURITY INDICATOR OUTPUT
25	BR	IMMOBILIZER ANTENNA SIGNAL (RX, TX)
38	W/R	IGN SW
39	L	CAN-H
40	P	CAN-L

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
57	R/Y	BAT (FUSE)
67	B	GND (POWER)
70	W	BAT (F/L)

ABKIA4354GB

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
6G	R/B	–

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	R/Y	BATTERY
39	G	SECURITY

Connector No.	M21
Connector Name	NATS ANTENNA AMP.
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	R/B	–
2	GR	–
3	B	–
4	BR	–

Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

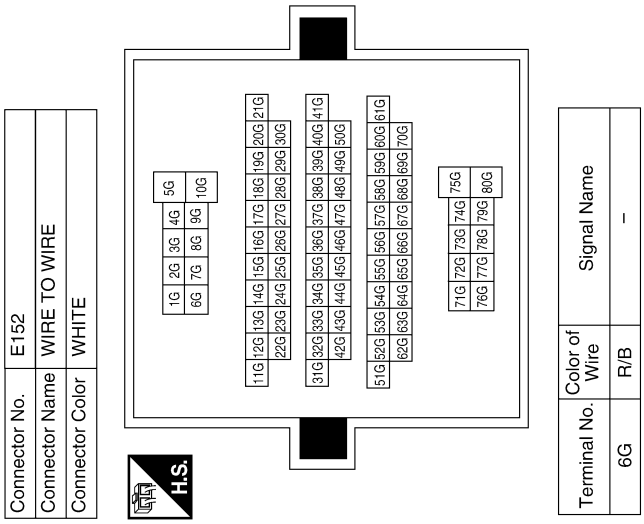
Terminal No.	Color of Wire	Signal Name
30	R/B	ECM BAT

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
6	W	–

ABKIA4355GB



ABKIA1867GB

SYMPTOM DIAGNOSIS

VEHICLE SECURITY SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000008792482

Procedure	Symptom		Diagnostic procedure	Refer to page
1	Vehicle security system cannot be set by ····	All items	Check door switch (king cab)	DLK-27
			Check door switch (crew cab)	DLK-29
			Replace BCM	BCS-49
		Door lock/unlock switch	Check door lock/unlock switch (king cab)	DLK-32
			Check door lock/unlock switch (crew cab)	DLK-35
		Key cylinder switch	Check key cylinder switch (driver)	SEC-28
		—	Check Intermittent Incident	GI-49
	Security indicator does not turn ON.		Check vehicle security indicator	SEC-32
			Check Intermittent Incident	GI-49
2	* Vehicle security system does not sound alarm when ····	Any door is opened.	Check door switch (king cab)	DLK-27
			Check door switch (crew cab)	DLK-35
		—	Check Intermittent Incident	GI-49
3	Vehicle security alarm does not activate.	Horn alarm	Check horn operation	SEC-31
			Check Intermittent Incident	GI-49
		Headlamp alarm	Check headlamp function	DLK-57
			Check Intermittent Incident	GI-49
4.	Vehicle security system cannot be cancelled by ····	Key cylinder switch	Check key cylinder switch (driver)	SEC-28
			Check Intermittent Incident	GI-49
		Keyfob	Check RKE function	DLK-49
			Replace BCM	BCS-49

*: Check the system is in the armed phase.

NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS SYMPTOMS

Symptom Table

INFOID:0000000008792483

NOTE:

- Before performing the diagnosis in the following table, check “SEC-3, "Work Flow"”.
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

CONDITIONS OF VEHICLE (OPERATING CONDITIONS)

- Mechanical key is not inserted into key cylinder.

Symptom	Diagnosis/service procedure	Reference page
Security indicator does not turn ON or flash.	1. Check vehicle security indicator	SEC-32
	2. Check Intermittent Incident	GI-49

PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:0000000008792484

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

- **When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

REMOVAL AND INSTALLATION

NATS ANTENNA AMP.

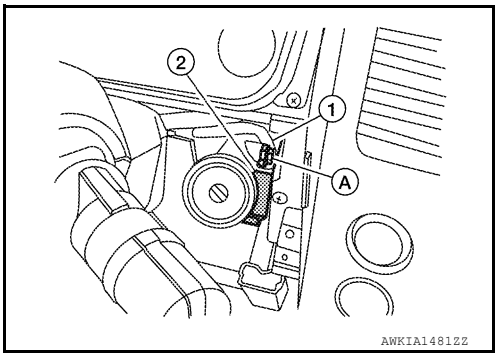
Removal and Installation

INFOID:0000000008792485

NOTE:
- If NATS antenna amp. is not installed correctly, NVIS (NATS) system will not operate properly and "SELF-DIAG RESULTS" on CONSULT screen will show "LOCK MODE" or "CHAIN OF IMMU-KEY".
- Initialization is not necessary when only the NATS antenna amp. is replaced with a new one.

REMOVAL

1. Disconnect the battery negative terminal. Refer to PG-82, "Removal and Installation".
2. Remove the instrument lower panel LH. Refer to IP-18, "Removal and Installation".
3. Remove the NATS antenna amp bolt (A).
4. Disconnect the harness connector (1) from the NATS antenna amp (2) and remove.



INSTALLATION

Installation is in the reverse order of removal.

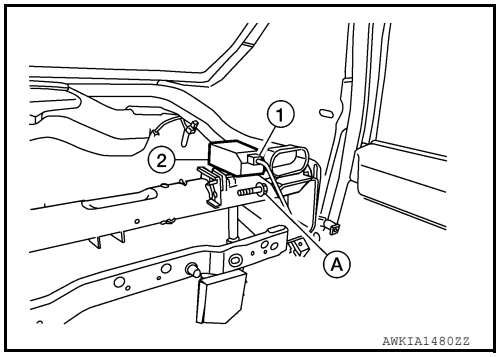
REMOTE KEYLESS ENTRY RECEIVER

Removal and Installation

INFOID:0000000008792486

REMOVAL

1. Remove the front pillar upper finisher (RH). Refer to INT-19, "Removal and Installation".
2. Remove the side ventilator grille (RH). Refer to VTL-26, "Removal and Installation".
3. Remove the upper glove box. Refer to IP-23, "Removal and Installation".
4. Remove cluster lid D. Refer to IP-21, "Removal and Installation".
5. Remove the remote keyless entry receiver bolt (A).
6. Disconnect the harness connector (1) from the remote keyless entry receiver (2) and remove.



INSTALLATION

Installation is in the reverse order of removal.