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CONTENTS

BASIC INSPECTION4						
DIAGNOSIS AND REPAIR WORKFLOW4 Work flow4						
SYSTEM DESCRIPTION6						
METER SYSTEM 6						
METER SYSTEM						
SPEEDOMETER						
TACHOMETER						
ENGINE COOLANT TEMPERATURE GAUGE16 ENGINE COOLANT TEMPERATURE GAUGE : System Diagram						
FUEL GAUGE						

ODO/TRIP METER ODO/TRIP METER : System Diagram ODO/TRIP METER : System Description ODO/TRIP METER : Component Parts Location ODO/TRIP METER : Component Description	.20 .20 .21
SHIFT POSITION INDICATOR SHIFT POSITION INDICATOR: System Diagram SHIFT POSITION INDICATOR: System Description SHIFT POSITION INDICATOR: Component Parts Location SHIFT POSITION INDICATOR: Component Description	.22 .22 .24
WARNING LAMPS/INDICATOR LAMPS : System Diagram WARNING LAMPS/INDICATOR LAMPS : System Description WARNING LAMPS/INDICATOR LAMPS : Component Parts Location WARNING LAMPS/INDICATOR LAMPS : Component Description	.25 .25 .26
METER ILLUMINATION CONTROL : System Diagram	.27 .27 .29
METER EFFECT FUNCTION	.30

METER EFFECT FUNCTION : Component De-		POWER SUPPLY AND GROUND CIRCUIT	. 58
scription	33	COMBINATION METER	50
INFORMATION DISPLAY	33	COMBINATION METER : Diagnosis Procedure	
INFORMATION DISPLAY: System Diagram		•	
INFORMATION DISPLAY: System Description	33	UNIFIED METER AND A/C AMP	
INFORMATION DISPLAY: Component Parts Lo	D-	UNIFIED METER AND A/C AMP. : Diagnosis Pro-	
cation	37	cedure	. 58
INFORMATION DISPLAY: Component Descrip	-	IPDM E/R (INTELLIGENT POWER DISTRIBU-	
tion	38	TION MODULE ENGINE ROOM)	5 0
00117100		IPDM E/R (INTELLIGENT POWER DISTRIBU-	. 39
COMPASS		TION MODULE ENGINE ROOM): Diagnosis Pro-	
Description		cedure	
Component Parts Location		cedule	. 59
Special Repair Requirement	41	FUEL LEVEL SENSOR SIGNAL CIRCUIT	. 61
CLOCK	42	Description	
Component Parts Location		Component Function Check	
Component Faits Location	42	Diagnosis Procedure	
DIAGNOSIS SYSTEM (METER)	43	Component Inspection	
Diagnosis Description		·	
		METER CONTROL SWITCH SIGNAL CIR-	
DIAGNOSIS SYSTEM (UNIFIED METER ANI		CUIT	
A/C AMP.)		Description	
CONSULT-III Function (METER/M&A)	45	Diagnosis Procedure	
		Component Inspection	65
DTC/CIRCUIT DIAGNOSIS	49	TOID A/D DECET CWITCH CIONAL CIDCUIT	
U1000 CAN COMM CIRCUIT	40	TRIP A/B RESET SWITCH SIGNAL CIRCUIT.	
		Description	
Description		Diagnosis Procedure	
DTC Logic		Component Inspection	. 66
Diagnosis Procedure	49	OIL PRESSURE SWITCH SIGNAL CIRCUIT	68
U1010 CONTROL UNIT (CAN)	50	Description	
Description		Component Function Check	
DTC Logic		Diagnosis Procedure	
Diagnosis Procedure		Component Inspection	
		Component inspection	. 00
B2201 COMMUNICATION ERROR 1	51	PARKING BRAKE SWITCH SIGNAL CIR-	
Description	51	CUIT	. 69
DTC Logic	51	Description	69
Diagnosis Procedure	51	Diagnosis Procedure	69
DOGGO COMMUNICATION EDDOD O		Component Inspection	69
B2202 COMMUNICATION ERROR 2			
Description		WASHER LEVEL SWITCH SIGNAL CIRCUIT	
DTC Logic		Description	
Diagnosis Procedure	53	Diagnosis Procedure	
B2205 VEHICLE SPEED	55	Component Inspection	71
Description		COMPASS	72
DTC Logic			
Diagnosis Procedure		Wiring Diagram - COMPASS	. 72
Diagnosis i locedure	55	CLOCK	. 74
B2267 ENGINE SPEED	56	Wiring Diagram - CLOCK	
Description			
DTC Logic		ECU DIAGNOSIS INFORMATION	. 76
Diagnosis Procedure			
-		COMBINATION METER	. 76
B2268 WATER TEMP		Reference Value	
Description		Wiring Diagram - METER	
DTC Logic		Fail-Safe	
Diagnosis Procedure	57	DTC Index	. 95

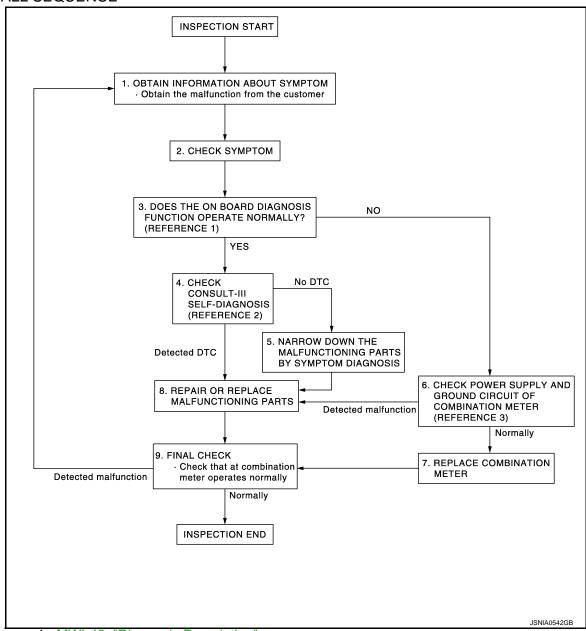
UNIFIED METER AND A/C AMP96	Description		
Reference Value96	Diagnosis Procedure	141	Α
Wiring Diagram - METER103	THE AMDIENT TEMPEDATURE DIODI AVIA	_	
Fail-Safe118	THE AMBIENT TEMPERATURE DISPLAY IS		
DTC Index119	INCORRECT		В
	Description		
IPDM E/R (INTELLIGENT POWER DISTRI-	Diagnosis Procedure	142	
BUTION MODULE ENGINE ROOM)121	NODIAL ODEDATING CONDITION		
Reference Value121	NORMAL OPERATING CONDITION	143	С
Wiring Diagram - IPDM E/R128	COMPASS	442	
Fail-safe	COMPASS : Description		
DTC Index133	COMPASS Description	143	D
	INFORMATION DISPLAY	143	
SYMPTOM DIAGNOSIS134	INFORMATION DISPLAY : Description		
	·		_
THE FUEL GAUGE POINTER DOES NOT	PRECAUTION	144	Е
MOVE134			
Description134	PRECAUTIONS	144	
Diagnosis Procedure134	Precaution for Supplemental Restraint System		F
	(SRS) "AIR BAG" and "SEAT BELT PRE-TEN-		
THE METER CONTROL SWITCH IS INOPER-	SIONER"	144	
ATIVE135			
Description135	PREPARATION	145	G
Diagnosis Procedure135			
	PREPARATION		
THE TRIP A/B RESET SWITCH IS INOPERA-	Commercial Service Tools	145	Н
TIVE136	REMOVAL AND INSTALLATION	4.40	
Description	REMOVAL AND INSTALLATION	146	
Diagnosis Procedure136	COMBINATION METER	146	1
	Exploded View		
THE OIL PRESSURE WARNING LAMP	Removal and Installation	140	
DOES NOT TURN ON137			
Description137	Disassembly and Assembly	146	J
Diagnosis Procedure137	UNIFIED METER AND A/C AMP	147	
	Exploded View		
THE OIL PRESSURE WARNING LAMP	Removal and Installation		K
DOES NOT TURN OFF138	ixemoval and installation	147	
Description138	METER CONTROL SWITCH	148	
Diagnosis Procedure138	Exploded View		
	Removal and Installation	148	L
THE PARKING BRAKE RELEASE WARNING	Terrioval and installation	170	
CONTINUES DISPLAYING, OR DOES NOT	TRIP A/B RESET SWITCH	149	
DISPLAY 139	Exploded View		\mathbb{N}
Description139	Removal and Installation		
Diagnosis Procedure			
•	COMPASS	150	MW
THE LOW WASHER FLUID WARNING CON-	Exploded View		IVIVV
TINUES DISPLAYING, or DOES NOT DIS-	Removal and Installation		
PLAY140			
Description	CLOCK	151	0
Diagnosis Procedure	Exploded View	151	
Diagnosis Fiocedule140	Removal and Installation		
THE DOOR OPEN WARNING CONTINUES		- *	Р
DISPLAYING, OR DOES NOT DISPLAY 141			Р
DIGITATING, OR DOLONOT DIGITAL 141			

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work flow

OVERALL SEQUENCE



- Reference 1...MWI-43, "Diagnosis Description".
- Reference 2...MWI-119, "DTC Index".
- Reference 3...MWI-58, "COMBINATION METER: Diagnosis Procedure".

DETAILED FLOW

${f 1}$.OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain as much information as possible about the conditions and environment under which the malfunction occurred.

>> GO TO 2.

2.check symptom

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

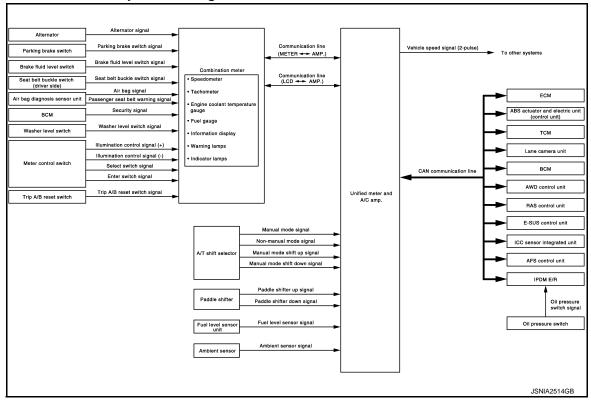
 Check the symptom based on the information obtained from the customer. Check that any other malfunctions are present. 	А
>> GO TO 3.	
3.CHECK ON BOARD DIAGNOSIS OPERATION	В
Check that the on board diagnosis function operates. Refer to MWI-43, "Diagnosis Description".	
Does the on board diagnosis function operate normally?	С
YES >> GO TO 4. NO >> GO TO 6.	
4. CHECK CONSULT-III SELF-DIAGNOSIS RESULTS	D
Connect CONSULT-III and perform self-diagnosis. Refer to MWI-45, "CONSULT-III Function (METER/M&/	<u>A)"</u> .
Are self-diagnosis results normal?	Е
YES >> GO TO 5. NO >> GO TO 8.	_
5. NARROW DOWN THE MALFUNCTIONING PARTS BY SYMPTOM DIAGNOSIS	_
Perform symptom diagnosis and narrow down the malfunctioning parts.	F
>> GO TO 8.	G
6. CHECK COMBINATION METER POWER SUPPLY AND GROUND CIRCUITS	
Inspect combination meter power supply and ground circuits. Refer to <u>MWI-58</u> , " <u>COMBINATION METE</u> <u>Diagnosis Procedure</u> ".	R: H
Is the inspection result normal?	
YES >> GO TO 7.	1
NO >> GO TO 8. 7. REPLACE COMBINATION METER	
	— ј
Replace combination meter.	
>> GO TO 9.	I/
8. REPAIR OR REPLACE MALFUNCTIONING PARTS	K
Repair or replace the malfunctioning parts.	
NOTE: If DTC is displayed, erase DTC after repair or replace malfunctioning parts.	L
o .o .o.p.e., o.a.oo o .a.oop.a.oa.a.a.o	
>> GO TO 9.	M
9. FINAL CHECK	
Check that the combination meter operates normally.	MW
Do they operate normally?	
YES >> INSPECTION END NO >> GO TO 1.	
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SYSTEM DESCRIPTION

METER SYSTEM METER SYSTEM

METER SYSTEM: System Diagram

INFOID:0000000005524549



METER SYSTEM: System Description

INFOID:0000000005524550

COMBINATION METER

- The combination meter retrieves the information required for controlling the operations of the meters, indicator lamps/warning lamps and information display from the communication signals from the unified meter and A/C amp. and the signals from various switches and sensors.
- The combination meter incorporates a trip computer that displays warnings and messages on the information display according to the information received from various units.
- The combination meter incorporates a buzzer function that sounds an audible alarm with the integrated buzzer device. Refer to WCS-5, "WARNING CHIME SYSTEM: System Description" for further details.
- The combination meter integrates the meter circuit check function and the segment check function that checks the information display operation.

UNIFIED METER AND A/C AMP.

- Receives information required by the combination meter from various units via CAN communication line and transmits it to the combination meter with communication line.
- The unified meter and A/C amp. incorporates a power saving control function that reduces the power consumption according to the vehicle status. Refer to BCS-14, "System Description" for details.
- The unified meter and A/C amp. incorporates a diagnosis function that allows the technician to perform diagnoses with CONSULT-III.

< SYSTEM DESCRIPTION >

	d meter and A/C amp. and		Outratta continuis and
Unit	Communication line	Input from combination meter	Output to combination meter
Inified meter nd A/C amp.	Communication line (METER <-> AMP.)	Parking brake switch signal Washer level switch signal Meter day/night condition signal Illumination control switch signal Refuel status signal Low fuel warning lamp signal Odo data signal	Vehicle speed signal Turn indicator signal High beam request signal Position light request signal Engine speed signal Fuel level sensor signal Engine coolant temperature signal A/T CHECK indicator signal Oil pressure switch signal Door switch signal Buzzer output signal Key warning lamp signal AFS OFF indicator lamp signal Tire pressure signal AWD warning lamp signal VDC OFF indicator lamp signal SLIP indicator lamp signal BBA OFF indicator lamp signal BBA OFF indicator lamp signal BBA OFF indicator lamp signal CBAS warning lamp signal ABS warning lamp signal
	 Travel time reset signal Possible driving distance reset signal Average vehicle speed reset signal Select switch signal Enter switch signal Trip A/B reset switch signal 	 Possible driving distance reset signal Average vehicle speed reset signal Select switch signal Enter switch signal 	 Shift position signal Meter display signal Door switch signal Fuel level sensor signal Parking brake switch signal Washer level switch signal Charge warning signal Instantaneous fuel consumption display signal Ambient air temperature display signal Average fuel consumption display signal Average vehicle speed display signal Possible driving distance display signal
			Engine speed signalVehicle speed signalMeter effect signal

IPDM E/R

- IPDM E/R reads the ON/OFF signals of the oil pressure switch and transmits the oil pressure switch signal to the unified meter and A/C amp. via BCM with the CAN communication line.
- IPDM E/R is equipped with the diagnosis function. It can perform the operation check of oil pressure warning lamp with the auto active test and the diagnosis with CONSULT-III.

METER CONTROL FUNCTION LIST

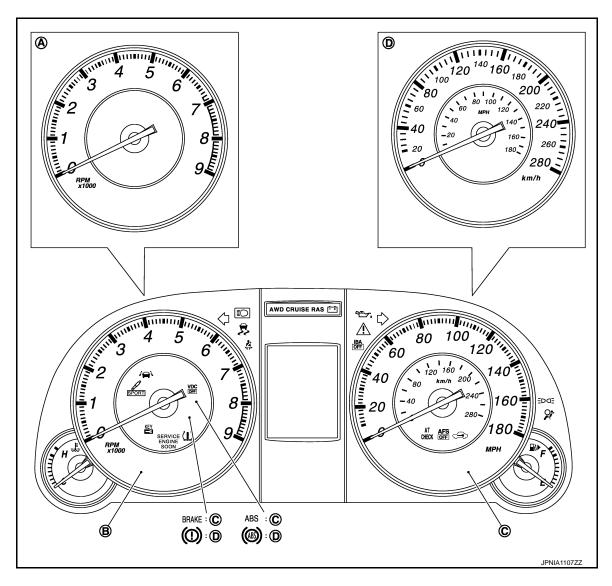
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				X: Applicable
	System	Description	Signal source	Via unified meter and A/C amp.
Speedometer		Receives vehicle speed signal and indicates vehicle speed.	ABS actuator and electric unit (control unit)	Х
D4-4/	Tachometer	Receives engine speed signal and indicates engine speed.	ECM	Х
Meter/gauge	Fuel gauge	Receives fuel level sensor signal and indicates fuel level.	Fuel level sensor unit	Х
	Engine coolant tem- perature gauge	Receives engine coolant temperature signal and indicates coolant temperature.	ECM	Х
Warning lamp/	Oil pressure warning lamp	Receives oil pressure warning lamp signal and illuminates warning lamp.	IPDM E/R	Х
indicator lamp	Master warning	Illuminates according to warning output on information display.	_	Х
	Darking broke to	Descrives parking brake switch signal and vehicle	Parking brake switch	
	Parking brake re- lease warning	Receives parking brake switch signal and vehicle speed signal and displays warnings.	ABS actuator and electric unit (control unit)	Х
	Low fuel warning	Receives fuel gauge signal and displays warning if fuel level decreases to 14 ℓ (3 - 5/7 US gal, 3 - 1/10 Imp gal) or less.	Fuel level sensor unit	Х
	Low washer fluid warning	Receives washer level switch signal and displays warning.	Washer level switch	
	Low outside tempera- ture warning	Monitors ambient sensor signal and displays warning if ambient temperature decreases to 3°C (37°F) or less. (If enabled)	Ambient sensor	Х
	Door open warning	Receives door switch signals and displays warning.	ВСМ	Х
	Instantaneous fuel	Calculates instantaneous fuel consumption based	ECM	Х
	consumption	on received vehicle speed signals and fuel consumption monitor signal and displays it.	ABS actuator and electric unit (control unit)	Х
Information	Average fuel con	Calculates average fuel consumption in a reset-	ECM	Х
display	Average fuel consumption	to-reset interval based on received vehicle speed signals and fuel consumption monitor signal and displays it.	ABS actuator and electric unit (control unit)	Х
	Average vehicle speed	Calculates average vehicle speed in a reset-to-re- set interval based on received vehicle speed sig- nals and displays it.	ABS actuator and electric unit (control unit)	Х
	Travel time	Displays accumulated key switch ON time from reset to reset.	_	Х
	Travel distance Calculates accumulated travel distance in a reset to-reset interval based on received vehicle speed signals and displays it.		ABS actuator and electric unit (control unit)	Х
		Calculates possible driving distance based on re-	ECM	X
	Possible driving distance	ceived fuel consumption monitor signal, vehicle speed signals and fuel level sensor signal and dis-	ABS actuator and electric unit (control unit)	Х
		plays it.	Fuel level sensor unit	X
	Ambient air temperature	Corrects ambient air temperature value based on received ambient sensor signals and displays it.	Ambient sensor	Х

ARRANGEMENT OF COMBINATION METER



- A. VK50VE engine models
- D. Except for U.S.A.
- B. VQ35HR engine models
- C. For U.S.A.

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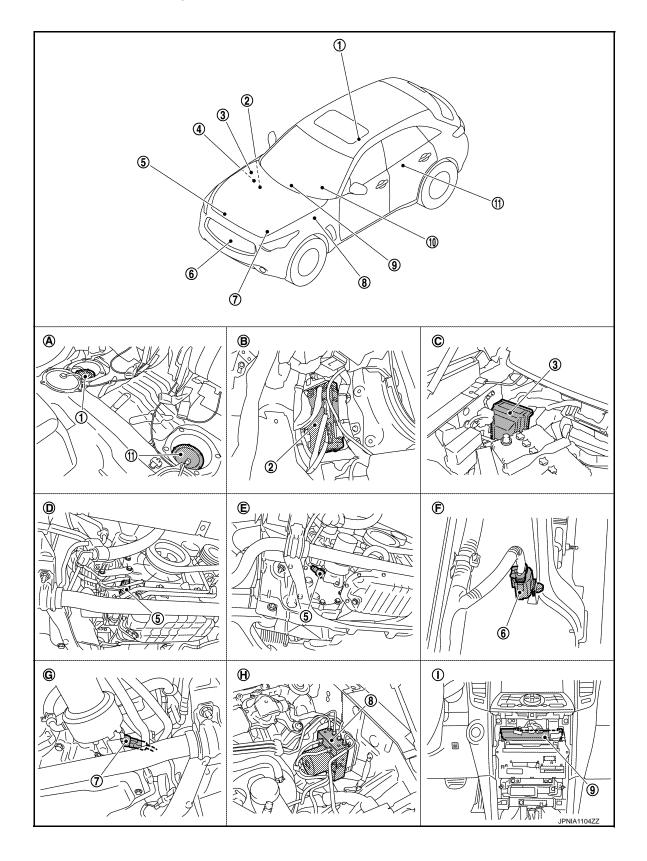
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METER SYSTEM : Component Parts Location



< SYSTEM DESCRIPTION >

1.	Fuel level sensor unit and fuel pump (main)	2.	BCM	3.	IPDM E/R	
4.	ECM: EC-589, "Component Parts <u>Location"</u> (VQ35HR engine models) ECM: EC-589, "Component Parts <u>Location"</u> (VK50VE engine models)	5.	Oil pressure switch (VQ35HR engine models)	6.	Ambient sensor	
7.	Oil pressure switch (VK50VE engine models)	8.	ABS actuator and electric unit (control unit)	9.	Unified meter and A/C amp.	
10.	Combination meter	11.	Fuel level sensor unit (sub)			
A.	Rear seat (bottom)	B.	Dash side finisher (passenger side)	C.	Hoodledge cover (RH)	
D.	2WD [oil pan (upper) RH side]	E.	AWD [oil filter bracket part (VQ35HR engine models)]	F.	Condenser (front)	
G.	AWD [oil filter bracket part (VK50VE engine models)]	H.	Hoodledge cover (LH)	I.	Behind cluster lid C	

METER SYSTEM : Component Description

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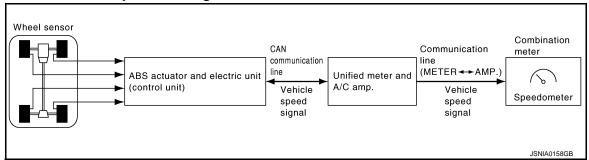
Unit	Description						
	Controls the following with the signals from the unified meter and A/C amp, switches and sensors.						
	• Speedometer • Tachometer						
Combination meter	Engine coolant temperature gauge Fuel gauge						
	Warning lamps Indicator lamps						
	Information display						
Unified meter and A/C amp.	 The combination meter receives the necessary information from various units via CAN communication line and transmits them to the unified meter and A/C amp. with the communication line that connects both of them. Transmits the fuel gauge signal from the fuel gauge unit with the communication line that connects the unified meter and A/C amp. and the combination meter. Reads the signals from the A/T shift selector and paddle shifter transmits them to TCM with CAN communication line. 						
IPDM E/R	IPDM E/R reads the ON/OFF signals of the oil pressure switch and transmits the oil pressure switch signal to the unified meter and A/C amp. via BCM with CAN communication line.						
Fuel level sensor unit	Refer to MWI-61, "Description".						
Oil pressure switch	Refer to MWI-68, "Description".						
	Transmits the following signals to the unified meter and A/C amp. with CAN communication line.						
ECM	Engine speed signal Engine coolant temperature signal						
	Fuel consumption monitor signal						
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to the unified meter and A/C amp. with CAN communication line.						
ВСМ	 Transmits signals provided by various units to the unified meter and A/C amp. with CAN communication line. Transmits the security signal to the combination meter. 						
	Transmits the following signals to the unified meter and A/C amp.						
A/T shift selector	Manual mode signal Non-manual mode signal						
	Manual mode shift up signal Manual mode shift down signal						
Paddle shifter	Transmits the paddle shifter up signal and paddle shifter down signal to the unified meter and A/C amp.						
TCM	Transmits shift position signal to the unified meter and A/C amp.						
Meter control switch	Refer to MWI-64, "Description".						
Trip A/B reset switch	Refer to MWI-66, "Description".						
Washer level switch	Transmits the washer level signal to the combination meter.						
Parking brake switch	Refer to MWI-69, "Description".						

MWI-11 Revision: 2009 August 2010 FX35/FX50

SPEEDOMETER

SPEEDOMETER: System Diagram

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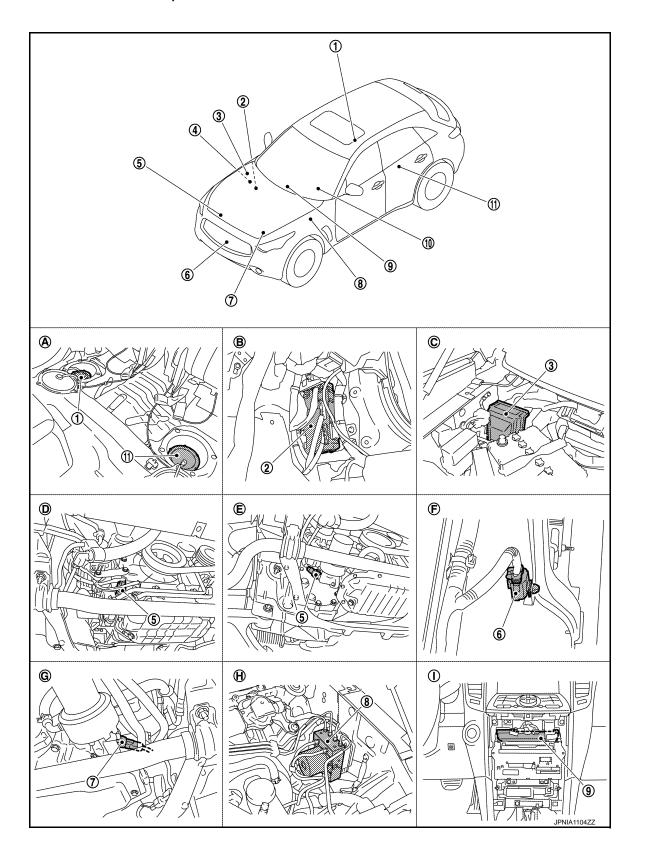


SPEEDOMETER: System Description

- The ABS actuator and electric unit (control unit) converts the pulse signal provided by the wheel sensor to a vehicle speed signal and transmits it to the unified meter and A/C amp. with CAN communication line.
- The unified meter and A/C amp. receives the vehicle speed signal from the ABS actuator and electric unit (control unit) with CAN communication line and transmits it to the combination meter by means of communication line.
- The combination meter indicates the vehicle speed according to the vehicle speed signal received from the unified meter and A/C amp. by means of communication line.

SPEEDOMETER: Component Parts Location

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< SYSTEM DESCRIPTION >

engine models)]

1.	fuel level sensor unit and fuel pump (main)	2.	ВСМ	3.	IPDM E/R
4.	ECM: EC-589, "Component Parts Location" (VQ35HR engine models) ECM: EC-589, "Component Parts Location" (VK50VE engine models)	5.	Oil pressure switch (VQ35HR engine models)	6.	Ambient sensor
7.	Oil pressure switch (VK50VE engine models)	8.	ABS actuator and electric unit (control unit)	9.	Unified meter and A/C amp.
10.	Combination meter	11.	Fuel level sensor unit (sub)		
A.	Rear seat (bottom)	B.	Dash side finisher (passenger side)	C.	Hoodledge cover (RH)
D.	2WD [oil pan (upper) RH side]	E.	AWD [oil filter bracket part (VQ35HR engine models)]	F.	Condenser (front)
G.	AWD [oil filter bracket part (VK50VE	H.	Hoodledge cover (LH)	I.	Behind cluster lid C

SPEEDOMETER: Component Description

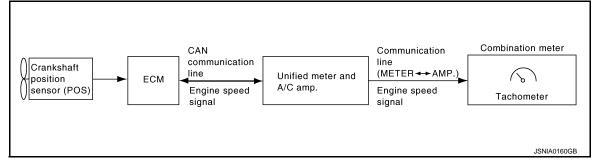
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Unit	Description			
Combination meter	Indicates the vehicle speed according to the vehicle speed signal received from the unified meter and A/C amp. by means of communication line.			
Unified meter and A/C amp.	Transmits the vehicle speed signal received from ABS actuator and electric unit (control unit) with CAN communication line to the combination meter by means of communication line.			
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to the unified meter and A/C amp. with CAN communication line.			

TACHOMETER

TACHOMETER: System Diagram

INFOID:0000000005524557

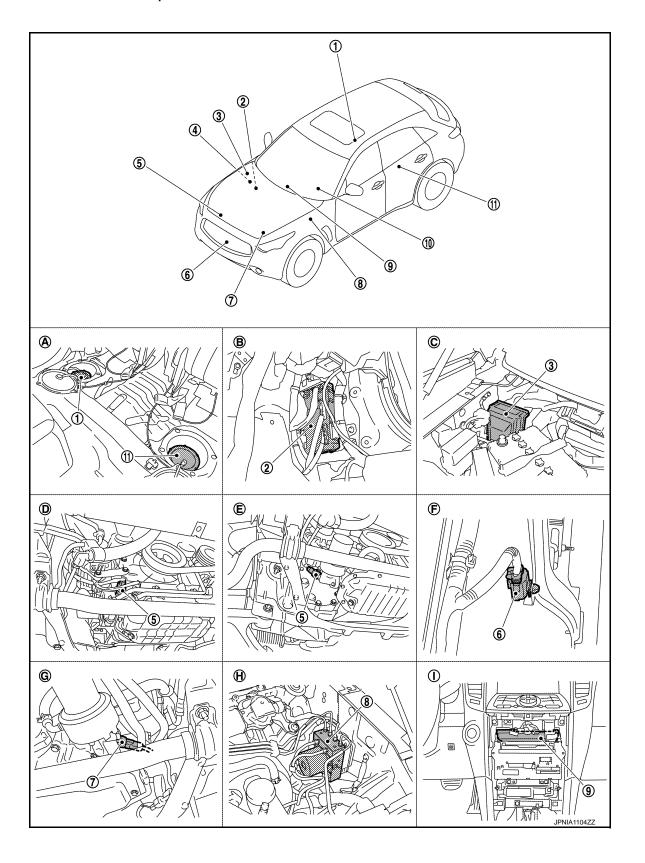


TACHOMETER: System Description

- ECM converts the pulse signal provided by the crankshaft position sensor to an engine speed signal and transmits it to the unified meter and A/C amp. with CAN communication line.
- The unified meter and A/C amp. receives the engine speed signal from ECM with CAN communication line and transmits it to the combination meter by means of communication line.
- Combination meter converses engine speed signal to the angle signal, and commands to tachometer.

TACHOMETER: Component Parts Location

INFOID:0000000005524559



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< SYSTEM DESCRIPTION >

1.	Fuel level sensor unit and fuel pump (main)	2.	BCM	3.	IPDM E/R
4.	ECM: EC-589, "Component Parts Location" (VQ35HR engine models) ECM: EC-589, "Component Parts Location" (VK50VE engine models)	5.	Oil pressure switch (VQ35HR engine models)	6.	Ambient sensor
7.	Oil pressure switch (VK50VE engine models)	8.	ABS actuator and electric unit (control unit)	9.	Unified meter and A/C amp.
10.	Combination meter	11.	Fuel level sensor unit (sub)		
A.	Rear seat (bottom)	B.	Dash side finisher (passenger side)	C.	Hoodledge cover (RH)
D.	2WD [oil pan (upper) RH side]	E.	AWD [oil filter bracket part (VQ35HR engine models)]	F.	Condenser (front)
G.	AWD [oil filter bracket part (VK50VE engine models)]	H.	Hoodledge cover (LH)	I.	Behind cluster lid C

TACHOMETER: Component Description

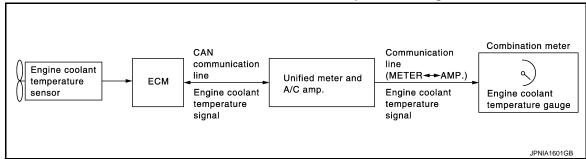
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Unit	Description					
Combination meter	Indicates the engine speed according to the engine speed signal received from the unified meter and A/C amp. by means of communication line.					
Unified meter and A/C amp.	Transmits the engine speed signal received from ECM with CAN communication line to the combination meter by means of communication line.					
ECM	Transmits the engine speed signal to the unified meter and A/C amp. with CAN communication line.					

ENGINE COOLANT TEMPERATURE GAUGE

ENGINE COOLANT TEMPERATURE GAUGE: System Diagram

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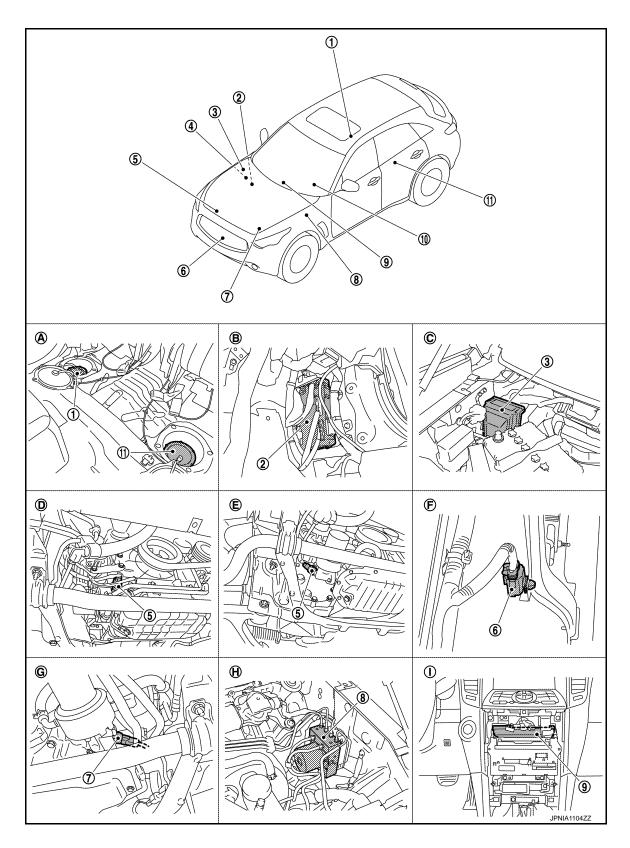


ENGINE COOLANT TEMPERATURE GAUGE : System Description

- ECM converses a signal from engine coolant temperature sensor to engine coolant temperature signal, and transmits to unified meter and A/C amp. with CAN communication line.
- Unified meter and A/C amp. transmits engine coolant temperature signal to combination meter with communication line.
- Combination meter converses engine coolant temperature signal to the angle signal, and commands to engine coolant temperature gauge.

ENGINE COOLANT TEMPERATURE GAUGE : Component Parts Location

INFOID:0000000005524563



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< SYSTEM DESCRIPTION >

1.	Fuel level sensor unit and fuel pump (main)	2.	BCM	3.	IPDM E/R
4.	ECM: EC-589, "Component Parts <u>Location"</u> (VQ35HR engine models) ECM: EC-589, "Component Parts <u>Location"</u> (VK50VE engine models)	5.	Oil pressure switch (VQ35HR engine models)	6.	Ambient sensor
7.	Oil pressure switch (VK50VE engine models)	8.	ABS actuator and electric unit (control unit)	9.	Unified meter and A/C amp.
10.	Combination meter	11.	Fuel level sensor unit (sub)		
A.	Rear seat (bottom)	B.	Dash side finisher (passenger side)	C.	Hoodledge cover (RH)
D.	2WD [oil pan (upper) RH side]	E.	AWD [oil filter bracket part (VQ35HR engine models)]	F.	Condenser (front)
G.	AWD [oil filter bracket part (VK50VE engine models)]	H.	Hoodledge cover (LH)	I.	Behind cluster lid C

ENGINE COOLANT TEMPERATURE GAUGE: Component Description

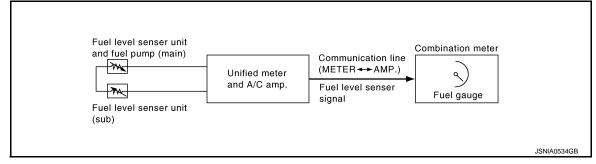
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Unit	Description					
Combination meter	Indicates the engine coolant temperature gauge according to the engine coolant temperature signal received from the unified meter and A/C amp. by means of communication line.					
Unified meter and A/C amp.	Transmits the engine coolant temperature signal received from ECM with CAN communication line to the combination meter by means of communication line.					
ECM	Transmits the engine coolant temperature signal to the unified meter and A/C amp. with CAN communication line.					

FUEL GAUGE

FUEL GAUGE : System Diagram

INFOID:0000000005524565



FUEL GAUGE: System Description

INFOID:0000000005524566

CONTROL OUTLINE

- The unified meter and A/C amp. reads the fuel level sensor signal from the fuel gauge unit and transmits it to the combination meter with the communication line.
- The combination meter indicates the fuel level on the fuel gauge according to the received fuel level sensor signal.

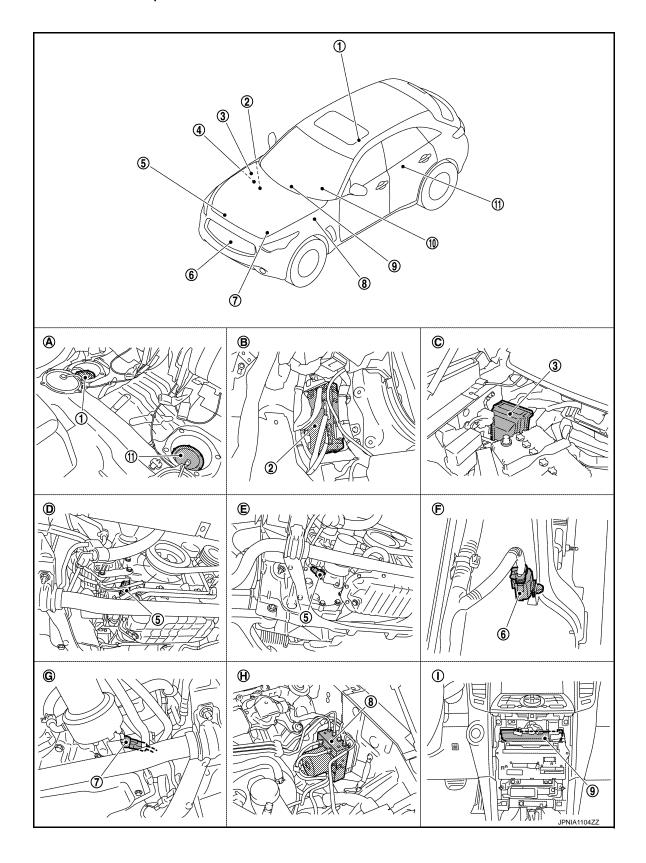
REFUEL CONTROL

The combination meter accelerates the fuel gauge segment if the all conditions listed below are met, or the ignition switch is ON from OFF.

- Ignition switch is ON position.
- · The vehicle is not moving.
- The fuel level change by 15 ℓ (4 US gal, 3-3/10 Imp gal) or more.

FUEL GAUGE : Component Parts Location

INFOID:0000000005524567



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< SYSTEM DESCRIPTION >

1.	(main)	2.	BCM	3.	IPDM E/R
4.	ECM: EC-589, "Component Parts Location" (VQ35HR engine models) ECM: EC-589, "Component Parts Location" (VK50VE engine models)	5.	Oil pressure switch (VQ35HR engine models)	6.	Ambient sensor
7.	Oil pressure switch (VK50VE engine models)	8.	ABS actuator and electric unit (control unit)	9.	Unified meter and A/C amp.
10.	Combination meter	11.	Fuel level sensor unit (sub)		
A.	Rear seat (bottom)	B.	Dash side finisher (passenger side)	C.	Hoodledge cover (RH)
D.	2WD [oil pan (upper) RH side]	E.	AWD [oil filter bracket part (VQ35HR engine models)]	F.	Condenser (front)
G.	AWD [oil filter bracket part (VK50VE engine models)]	H.	Hoodledge cover (LH)	I.	Behind cluster lid C

FUEL GAUGE: Component Description

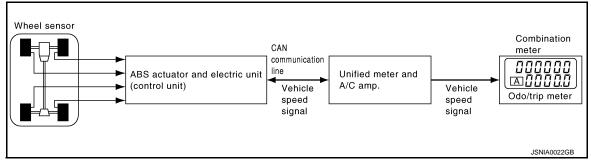
INFOID:0000000005524568

Unit	Description
Combination meter	Indicates the fuel gauge according to the fuel level sensor signal received from the unified meter and A/C amp. by means of communication line.
Unified meter and A/C amp.	Transmits the fuel level sensor signal from the fuel level sensor unit to the combination meter by means of communication line.
Fuel level sensor unit	Refer to MWI-61, "Description".

ODO/TRIP METER

ODO/TRIP METER: System Diagram

INFOID:0000000005524569

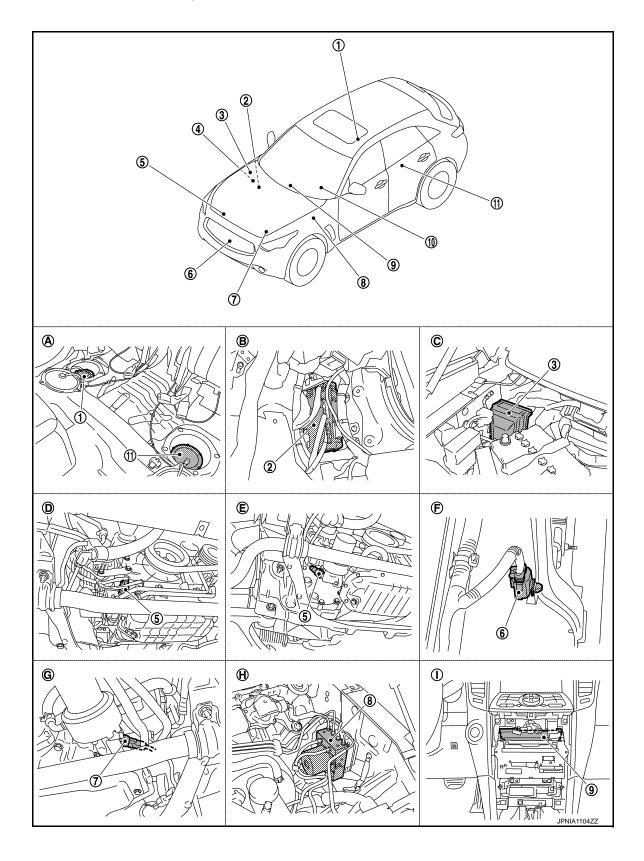


ODO/TRIP METER: System Description

- The unified meter and A/C amp. transmits the vehicle speed signal from ABS actuator and electric unit (control unit) to the combination meter.
- The combination meter calculates the vehicle distance according to the vehicle speed signal. The vehicle distance is displayed.

ODO/TRIP METER : Component Parts Location

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< SYSTEM DESCRIPTION >

1.	Fuel level sensor unit and fuel pump (main)	2.	BCM	3.	IPDM E/R
4.	ECM: EC-589, "Component Parts Location" (VQ35HR engine models) ECM: EC-589, "Component Parts Location" (VK50VE engine models)	5.	Oil pressure switch (VQ35HR engine models)	6.	Ambient sensor
7.	Oil pressure switch (VK50VE engine models)	8.	ABS actuator and electric unit (control unit)	9.	Unified meter and A/C amp.
10.	Combination meter	11.	Fuel level sensor unit (sub)		
A.	Rear seat (bottom)	B.	Dash side finisher (passenger side)	C.	Hoodledge cover (RH)
D.	2WD [oil pan (upper) RH side]	E.	AWD [oil filter bracket part (VQ35HR engine models)]	F.	Condenser (front)
G.	AWD [oil filter bracket part (VK50VE engine models)]	H.	Hoodledge cover (LH)	I.	Behind cluster lid C

ODO/TRIP METER: Component Description

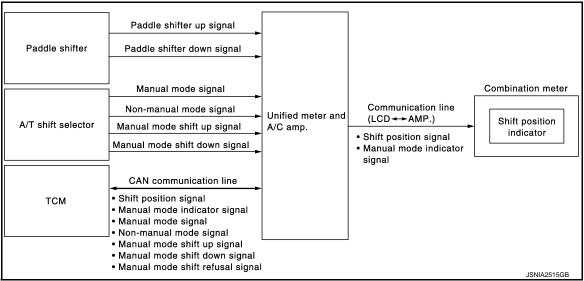
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Unit	Description
Combination meter	The combination meter calculates the vehicle distance according to the vehicle speed signal. The vehicle distance is displayed.
Unified meter and A/C amp.	The unified meter and A/C amp. transmits the vehicle speed signal from ABS actuator and electric unit (control unit) to the combination meter.
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to the unified meter and A/C amp. with CAN communication line.

SHIFT POSITION INDICATOR

SHIFT POSITION INDICATOR: System Diagram

INFOID:0000000005531172



SHIFT POSITION INDICATOR: System Description

INFOID:0000000005531173

Shift position is displayed in the information display LCD in the combination meter.

MANUAL MODE

When Operated with A/T Shift Selector

- Unified meter and A/C amp. inputs manual mode signal and manual mode shift-up/down signal from A/T shift selector (manual mode switch), and transmits the signals to TCM with CAN communication line.
- TCM processes manual mode signal and manual mode shift-up/down signal, and transmits manual mode indicator signal and shift position signal to unified meter and A/C amp. with CAN communication line.

Revision: 2009 August **MWI-22** 2010 FX35/FX50

< SYSTEM DESCRIPTION >

- Unified meter and A/C amp. transmits manual mode indicator signal and shift position signal to combination meter with the communication line.
- Combination meter indicates A/T gear position and manual mode indicator, when receiving manual mode indicator signal and shift position signal.

When Operated with Paddle Shifter

- Unified meter and A/C amp. inputs manual mode signal from A/T shift selector (manual mode switch) or the paddle shifter-up/down signal from the paddle shifter.
- Unified meter and A/C amp. transmits manual mode signal and manual mode shift-up/down signal to TCM with the CAN communication line.
- TCM processes manual mode signal and manual mode shift-up/down signal, and transmits manual mode indicator signal and shift position signal to unified meter and A/C amp. with CAN communication line.
- Unified meter and A/C amp. transmits manual mode indicator signal and shift position signal to combination meter with the communication line.
- Combination meter indicates A/T gear position and manual mode indicator, when receiving manual mode indicator signal and shift position signal.

NON-MANUAL MODE

- Unified meter and A/C amp. inputs non-manual mode signal from A/T shift selector (manual mode switch), and transmits the signals to TCM with CAN communication line.
- TCM transmits shift position signal to unified meter and A/C amp. with CAN communication line.
- Unified meter and A/C amp. transmits shift position signal to combination meter with the communication line.
- Combination meter indicates shift position when receiving shift position signal.

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Revision: 2009 August MWI-23 2010 FX35/FX50

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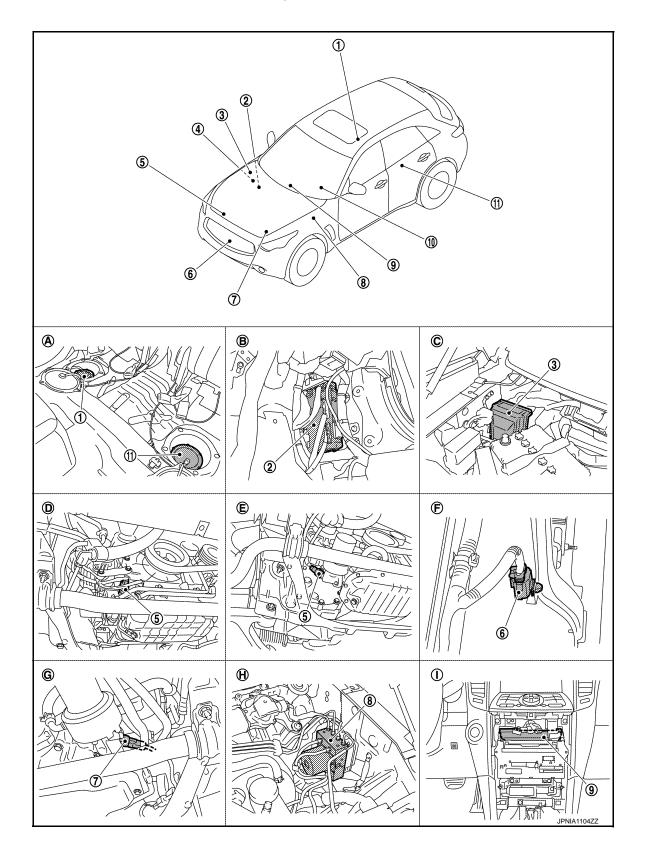
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SHIFT POSITION INDICATOR: Component Parts Location



< SYSTEM DESCRIPTION >

1.	Fuel level sensor unit and fuel pump	2.	BCM	3.	IPDM E/R	
	(main)					
4.	ECM: EC-589, "Component Parts Location" (VQ35HR engine models) ECM: EC-589, "Component Parts Location" (VK50VE engine models)	5.	Oil pressure switch (VQ35HR engine models)	6.	Ambient sensor	
7.	Oil pressure switch (VK50VE engine models)	8.	ABS actuator and electric unit (control unit)	9.	Unified meter and A/C amp.	(
10.	Combination meter	11.	Fuel level sensor unit (sub)			
A.	Rear seat (bottom)	B.	Dash side finisher (passenger side)	C.	Hoodledge cover (RH)	
D.	2WD [oil pan (upper) RH side]	E.	AWD [oil filter bracket part (VQ35HR engine models)]	F.	Condenser (front)	
G.	AWD [oil filter bracket part (VK50VE engine models)]	H.	Hoodledge cover (LH)	I.	Behind cluster lid C	

SHIFT POSITION INDICATOR: Component Description

INFOID:0000000005531174

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Unit	Description							
Combination meter		Displays the shift position on the information display with shift position signal and manual mode indicator signal received from unified meter and A/C amp.						
Unified meter and A/C amp.	 Transmits the signals from the A/T shift selector and paddle shifter to TCM with CAN co cation line. Transmits shift position signal and manual mode indicator signal received from TCM wit communication line to the combination meter by means of communication line. 							
	Transmits the following signals to the	unified meter and A/C amp.						
VT shift selector	Manual mode signal	 Non-manual mode signal 						
	Manual mode shift up signal	 Manual mode shift down signal 						
Paddle shifter	Transmits the paddle shifter up signal and paddle shifter down signal to the unified meter a amp.							
TCM	Transmits shift position signal and ma	nual mode indicator signal to the unified meter and A/C amp.						

WARNING LAMPS/INDICATOR LAMPS

WARNING LAMPS/INDICATOR LAMPS: System Diagram

INFOID:0000000005524577 **BCM** CAN Communication Combination meter communication (METER → AMP.) line Unified meter Oil pressure Oil pressure IPDM E/R switch and A/C amp. warning lamp Oil pressure Oil pressure Oil pressure switch signal switch signal switch signal JPNIA0969GB

WARNING LAMPS/INDICATOR LAMPS: System Description

OIL PRESSURE WARNING LAMP

- IPDM E/R inputs oil pressure switch signal from oil pressure switch, and transmits the signal to unified meter and A/C amp. through BCM with CAN communication line.
- Unified meter and A/C amp, transmits oil pressure switch signal to combination meter with communication
- Let the combination meter turn oil pressure warning lamp ON with received oil pressure switch signal.

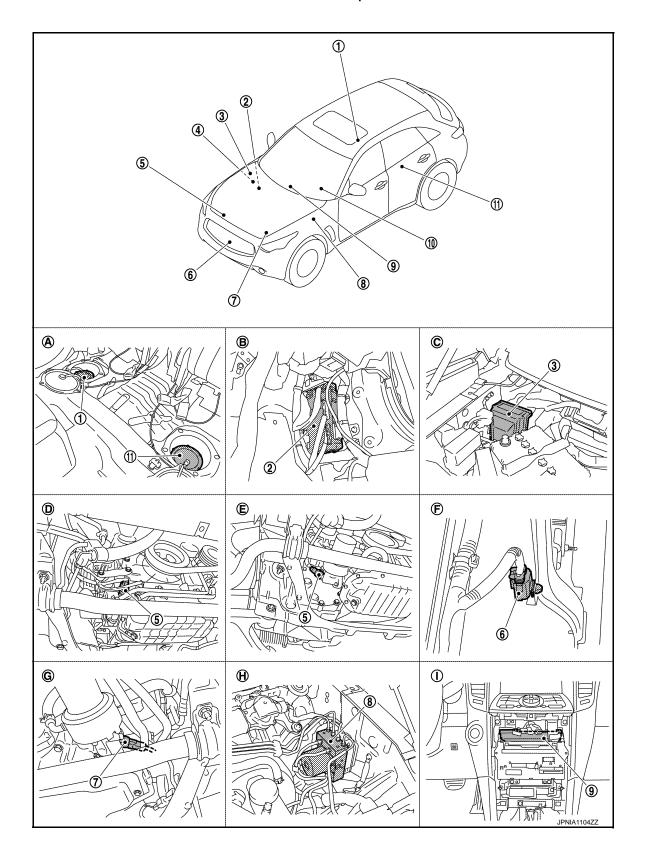
MWI-25 Revision: 2009 August 2010 FX35/FX50

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WARNING LAMPS/INDICATOR LAMPS : Component Parts Location



< SYSTEM DESCRIPTION >

1.	Fuel level sensor unit and fuel pump (main)	2.	ВСМ	3.	IPDM E/R					
4.	ECM: EC-589, "Component Parts <u>Location"</u> (VQ35HR engine models) ECM: EC-589, "Component Parts <u>Location"</u> (VK50VE engine models)	5.	Oil pressure switch (VQ35HR engine models)	6.	Ambient sensor					
7.	Oil pressure switch (VK50VE engine models)	8.	ABS actuator and electric unit (control unit)	9.	Unified meter and A/C amp.					
10.	Combination meter	11.	Fuel level sensor unit (sub)							
A.	Rear seat (bottom)	B.	Dash side finisher (passenger side)	C.	Hoodledge cover (RH)					
D.	2WD [oil pan (upper) RH side]	E.	AWD [oil filter bracket part (VQ35HR engine models)]	F.	Condenser (front)					
G.	AWD [oil filter bracket part (VK50VE engine models)]	H.	Hoodledge cover (LH)	I.	Behind cluster lid C					
A / A D	WARNING LAMBO (NIRIOATOR LAMBO O									

WARNING LAMPS/INDICATOR LAMPS: Component Description

INFOID:0000000005524580

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Unit	Description
Combination meter	Turns the oil pressure warning lamp ON/OFF according to the oil pressure switch signal received from the unified meter and A/C amp. by means of communication line.
Unified meter and A/C amp.	Transmits the oil pressure switch signal received from the IPDM E/R with BCM to the combination meter by means of communication line.
IPDM E/R	IPDM E/R reads the ON/OFF signals from the oil pressure switch and transmits the oil pressure switch signal to the unified meter and A/C amp. via BCM with the CAN communication line.
Oil pressure switch	Refer to MWI-68, "Description".
BCM	Transmits the oil pressure switch signal received from IPDM E/R via CAN communication to the unified meter and A/C amp. via CAN communication line.

METER ILLUMINATION CONTROL

METER ILLUMINATION CONTROL: System Diagram

INFOID:0000000005524581 CAN Combination meter communication Communication line (METER< ►AMP.) line Combination switch Unified meter всм (Light switch) and A/C amp. Position light Position light Meter illumination request signal request signal Meter ring illumination Meter ring illumination request signal request signal Meter control Illumination control switch signal JPNIA1076GB

METER ILLUMINATION CONTROL: System Description

INFOID:0000000005524582

SYSTEM DESCRIPTION

The combination meter receives an illumination control switch signal from the meter control switch, and a position light request signal and a meter ring illumination request signal from BCM through the unified meter and A/C amp. to control meter illumination.

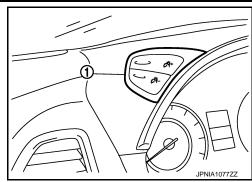
Daytime Mode

MWI-27 Revision: 2009 August 2010 FX35/FX50

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< SYSTEM DESCRIPTION >

Meter illumination is adjusted to 5 steps by illumination control switch (1) in daytime mode.



Nighttime Mode

- Combination meter is transferred to nighttime mode with position light request signal from BCM with CAN communication line.
- Meter illumination is adjusted to 22 steps by illumination control switch in nighttime.

Driver Welcome Function

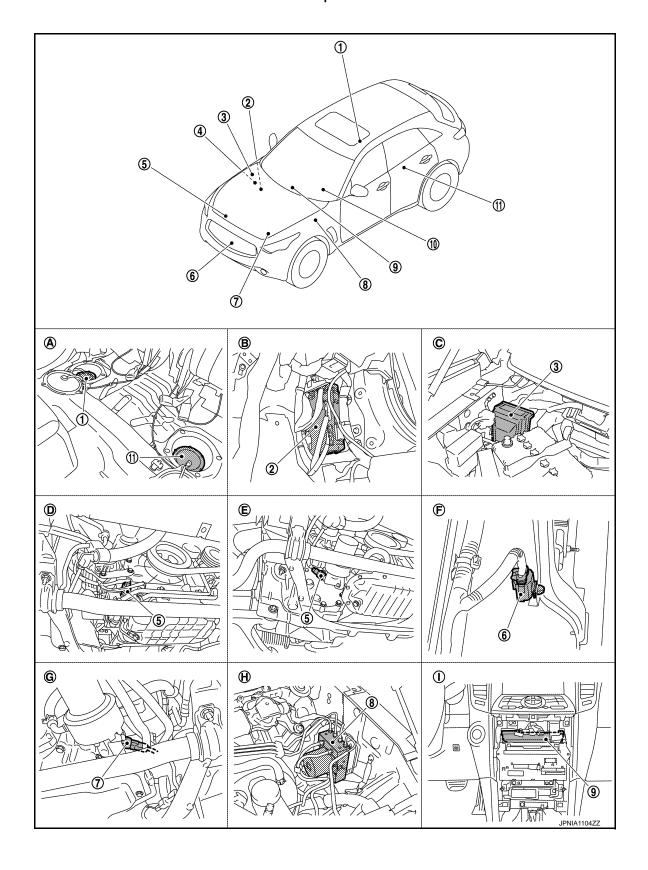
- BCM transmits a meter ring illumination request signal to the unified meter and A/C amp. through the CAN
 communication when the intelligent key is inside the vehicle and the door on the driver side is recognized as
 closed.
- The unified meter and A/C amp. receives a meter ring illumination request signal through the CAN communication and transmits the signal to the combination meter with communication line.
- The combination meter turns on meter ring illumination is stages by receiving a meter ring illumination request signal from the unified meter and A/C amp. through the communication line.

NOTE:

Meter ring illumination turns off in stages after a set period of time.

METER ILLUMINATION CONTROL : Component Parts Location

INFOID:0000000005524583



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< SYSTEM DESCRIPTION >

engine models)]

1.	(main)	2.	ВСМ	3.	IPDM E/R
4.	ECM: EC-589, "Component Parts Location" (VQ35HR engine models) ECM: EC-589, "Component Parts Location" (VK50VE engine models)	5.	Oil pressure switch (VQ35HR engine models)	6.	Ambient sensor
7.	Oil pressure switch (VK50VE engine models)	8.	ABS actuator and electric unit (control unit)	9.	Unified meter and A/C amp.
10.	Combination meter	11.	Fuel level sensor unit (sub)		
A.	Rear seat (bottom)	B.	Dash side finisher (passenger side)	C.	Hoodledge cover (RH)
D.	2WD [oil pan (upper) RH side]	E.	AWD [oil filter bracket part (VQ35HR engine models)]	F.	Condenser (front)
G.	AWD [oil filter bracket part (VK50VE	H.	Hoodledge cover (LH)	I.	Behind cluster lid C

METER ILLUMINATION CONTROL: Component Description

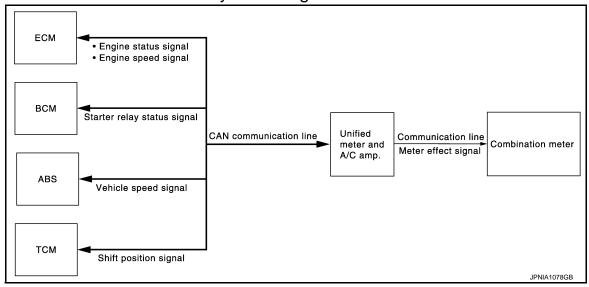
INFOID:0000000005524584

Unit	Description		
Combination meter	Controls the meter illumination with the illumination control switch signal from the meter control switch and the position light request signal and the meter ring illumination request signal from unified meter and A/C amp.		
Unified meter and A/C amp.	Transmits the position light request signal and meter ring illumination request signal received from BCM via CAN communication to the combination meter by means of communication.		
DOM	Transmits the following signals to the unified meter and A/C amp.		
BCM	Position light request signal	Meter ring illumination request signal	
Meter control switch	Transmits the following signals to the combination meter.		
	• Illumination control switch signal (+)	 Illumination control switch signal (–) 	

METER EFFECT FUNCTION

METER EFFECT FUNCTION : System Diagram

INFOID:0000000005524585



METER EFFECT FUNCTION: System Description

INFOID:0000000005524586

SYSTEM DESCRIPTION

Engine-start Effect function

• The unified meter and A/C amp. receives an engine speed signal and engine status signal from ECM, a starter relay status signal from BCM, a shift position signal from TCM, a vehicle speed signal from ABS actu-

Revision: 2009 August **MWI-30** 2010 FX35/FX50

< SYSTEM DESCRIPTION >

ator and electric unit (control unit) through the use of the CAN communication. After the end of cranking and recognition of engine revolution, the unified meter and A/C amp. transmits a meter effect signal to the combination meter through the communication line.

• Receiving a meter effect signal, the combination meter illuminates the meter light in stages and sweeps the needles of the speedometer and the tachometer.

NOTE:

The engine-start effect function enables ON/OFF with an operation of information display.

Cancel Conditions

- Meter effect is not performed during driving.
- Meter effect is not performed except when in P-range.

NOTE:

Meter effect is cancelled when the vehicle is moved during meter effect or the shift lever is shifted to the range except for P-range.

Ignition Switch OFF Effect Function

The unified meter and A/C amp. transmits a meter effect signal to the combination meter through the communication line when ignition switch is turned from ON to OFF. Receiving a meter effect signal, the combination meter turns off the meter illumination in stages. Illumination for the needle is turned off after the meter illumination is turned off.

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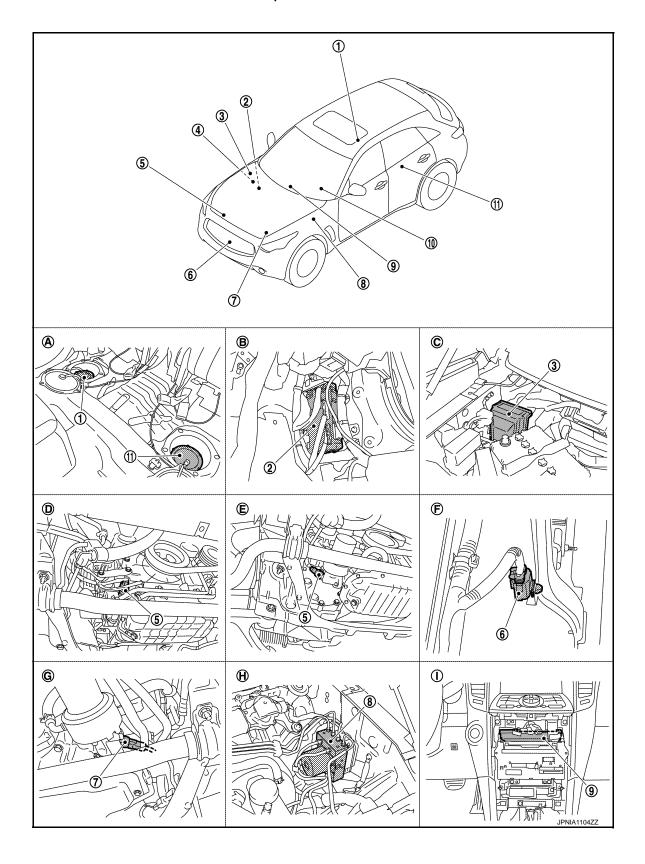
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METER EFFECT FUNCTION : Component Parts Location



< SYSTEM DESCRIPTION >

1.	Fuel level sensor unit and fuel pump (main)	2.	ВСМ	3.	IPDM E/R
4.	ECM: EC-589, "Component Parts <u>Location"</u> (VQ35HR engine models) ECM: EC-589, "Component Parts <u>Location"</u> (VK50VE engine models)	5.	Oil pressure switch (VQ35HR engine models)	6.	Ambient sensor
7.	Oil pressure switch (VK50VE engine models)	8.	ABS actuator and electric unit (control unit)	9.	Unified meter and A/C amp.
10.	Combination meter	11.	Fuel level sensor unit (sub)		
A.	Rear seat (bottom)	B.	Dash side finisher (passenger side)	C.	Hoodledge cover (RH)
D.	2WD [oil pan (upper) RH side]	E.	AWD [oil filter bracket part (VQ35HR engine models)]	F.	Condenser (front)
G.	AWD [oil filter bracket part (VK50VE engine models)]	H.	Hoodledge cover (LH)	I.	Behind cluster lid C

METER EFFECT FUNCTION: Component Description

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Unit	Description	
Combination meter	Receives a meter effect signal through the unified meter and A/C amp. and performs meter eff	
Unified meter and A/C amp.	Receives signals from each unit with the CAN communication and transmits a meter effect signal to the combination meter through the communication line.	
ECM	Transmits an engine speed signal and an engine status signal to the unified meter and A/C amp. with the CAN communication.	
ВСМ	Transmits a starter relay status signal to the unified meter and A/C amp. with the CAN communication.	
ABS actuator and electric unit (control unit)	Transmits a vehicle speed signal to the unified meter and A/C amp. with the CAN communication.	
TCM	Transmits a shift position signal to the unified meter and A/C amp. with the CAN communication.	

INFORMATION DISPLAY

INFORMATION DISPLAY: System Diagram

INFOID:0000000005524589 Ambient sensor Washer level switch Ambient sensor signal Unified meter and A/C amp. Communication lin (LCD ← AMP.) Meter control switch Information display Enter switch signal Select switch signa всм Parking brake switch signal Fuel level sensor signal Door switch Fuel level sensor unit Parking brake switch

INFORMATION DISPLAY: System Description

INFOID:0000000005524590

DESCRIPTION

The combination meter retrieves the information required for controlling the operations of the information display from the communication signals from the unified meter and A/C amp., etc.

MWI-33 Revision: 2009 August 2010 FX35/FX50

< SYSTEM DESCRIPTION >

• The combination meter incorporates a trip computer that displays the warning / information according to the information received from various units.

PARKING BRAKE RELEASE WARNING

The combination meter indicates parking brake release warning judged with the vehicle speed signal received from the unified meter and A/C amp. by means of communication line and the parking brake switch signal from the parking brake switch.

Warning Operation Condition

Parking brake release warning is judged if all of the following conditions are fulfilled

- Vehicle speed is 7 km/h (4.3 MPH) or higher
- Parking brake switch ON

LOW FUEL WARNING

The combination meter indicates low fuel warning judged with the fuel level sensor signal received from the unified meter and A/C amp.

Warning Operation Condition

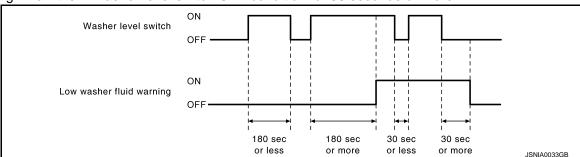
• Fuel level: Approx. 14 ℓ (3 - 5/7 US gal, 3 - 1/10 Imp gal) or less

LOW WASHER FLUID WARNING

The combination meter indicates low washer fluid warning judged with the signal from the washer level switch.

Warning Operation Condition

 Indicates the warning when it is in washer level switch ON condition for 180 seconds or more. Release the warning when it is in washer level switch OFF condition for 30 seconds or more.



LOW OUTSIDE TEMPERATURE WARNING

The combination meter indicates low outside temperature warning judged with the ambient sensor signal received from the unified meter and A/C amp. by means of communication line.

DOOR OPEN WARNING

The combination meter indicates door open warning judged with each door switch signal received from the unified meter and A/C amp. by means of communication line.

INSTANTANEOUS FUEL CONSUMPTION

- The unified meter and A/C amp. receives the fuel consumption monitor signal from ECM and the vehicle speed signal from the ABS actuator and electric unit (control unit) with CAN communication line.
- The unified meter and A/C amp. calculates the instantaneous fuel consumption according to the fuel consumption monitor signal and the vehicle speed signal received with CAN communication line, and transmits it to the combination meter.

AVERAGE FUEL CONSUMPTION

- The unified meter and A/C amp. receives the fuel consumption monitor signal from ECM and the vehicle speed signal from the ABS actuator and electric unit (control unit) with CAN communication line.
- The unified meter and A/C amp. calculates the average fuel consumption according to the fuel consumption monitor signal and the vehicle speed signal received with CAN communication line, and transmits it to the combination meter.
- The average fuel consumption displayed on the information display is uploaded at approximately 30-second intervals.

NOTE:

When turning ON the ignition switch after triggering a reset or removing/installing the battery, "——" is indicated until 30 seconds/500 m (0.31 mile) of driving.

AVERAGE VEHICLE SPEED

< SYSTEM DESCRIPTION >

- The unified meter and A/C amp. receives the vehicle speed signal from the ABS actuator and electric unit (control unit) via CAN communication line.
- Measures the time during the ignition switch ON with the unified meter and A/C amp.
- The unified meter and A/C amp. calculates the average vehicle speed according to the above signals. These signals are transmitted to the combination meter with the communication line.
- The average vehicle speed displayed on the information display is uploaded at approximately 30-second intervals.

NOTE:

When turning ON the ignition switch after triggering a reset or removing/installing the battery, "——" is indicated until 30 seconds/500 m (0.31 mile) of driving.

TRAVEL TIME

Measures the time during the ignition switch ON with the unified meter and A/C amp, and transmits it to the combination meter by means of communication line.

TRAVEL DISTANCE

- The unified meter and A/C amp. transmits the vehicle speed signal from ABS actuator and electric unit (control unit) to the combination meter.
- The combination meter calculates the vehicle distance according to the vehicle speed signal. The vehicle distance is displayed.

POSSIBLE DRIVING DISTANCE

The unified meter and A/C amp. calculates possible driving distance according to the vehicle speed signal and fuel consumption monitor signal transmitted via CAN communication and the fuel level sensor signal transmitted from the fuel level sensor. These signals are transmitted to the combination meter with the communication line.

NOTE:

- When turning ON the ignition switch after removing/installing the battery, "——" is indicated until 30 seconds.
- The indicated values may not match each other when filling the fuel with the ignition switch ON. Refer to MWI-143, "INFORMATION DISPLAY: Description".

AMBIENT AIR TEMPERATURE

- The unified meter and A/C amp. receives the ambient sensor signal from the ambient sensor.
- The unified meter and A/C amp. calculates the ambient temperature according to the ambient sensor signal, and transmits it to the combination meter.
- The indicated temperature does not increase if the vehicle speed is less than 20 km/h (12 MPH).

NOTE:

- The ambient sensor input value that is displayed on "Data Monitor" of CONSULT-III is the value before the correction. It may not match the indicated temperature on the information display.
- Ambient temperature may be indicated higher than an actual temperature, depending on heat in the engine, a road surface temperature, and so on.

SETTING

Setting item list

Items		Setting range	Setting unit	Description
ALERT	TIME TO REST	No setting - 6 hours	30 minutes, [60 minutes]*	Time to rest is displayed on the information display if the vehicle reached the set travel distance.
	ICY	ON/OFF	_	Low outside temp is displayed on the information display if the ambient temperature is 3°C (37°F) or less.

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Revision: 2009 August MWI-35 2010 FX35/FX50

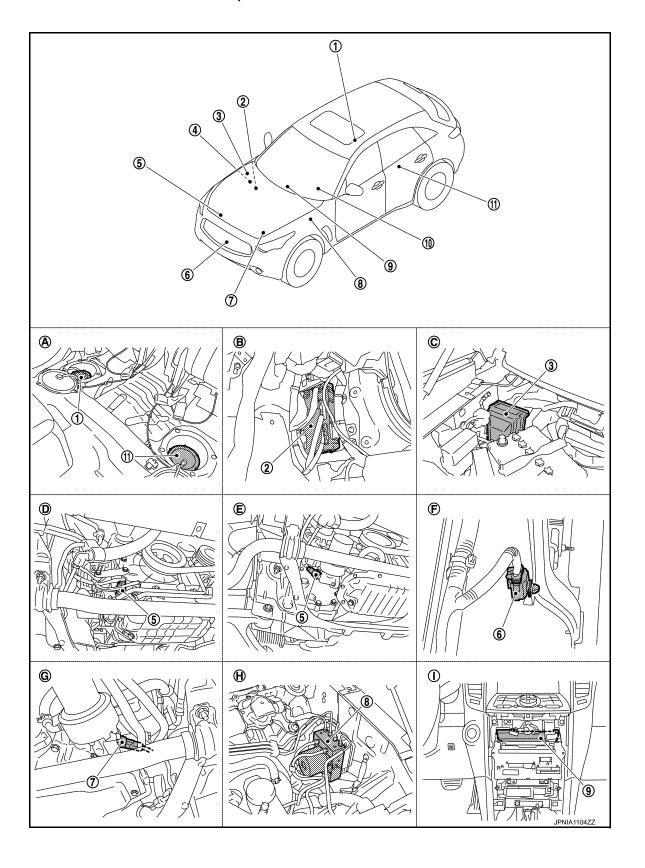
< SYSTEM DESCRIPTION >

Ite	ems	Setting range	Setting unit	Description
MAINTENANCE	ENGINE OIL	No setting - 18,500 miles, (No setting - 30,000 km)	250 miles (500 km), [500 miles (1000 km)]*	The engine oil replacement interval is displayed on the information display if the vehicle reached the set distance.
	OIL FILTER	No setting - 18,500 miles, (No setting - 30,000 km)	250 miles (500 km), [500 miles (1000 km)]*	The oil filter replacement interval is displayed on the information display if the vehicle reached the set distance.
	TIRE	No setting - 18,500 miles, (No setting - 30,000 km)	250 miles (500 km), [500 miles (1000 km)]*	The tire replacement interval is displayed on the information display if the vehicle reached the set distance.
	OTHER	No setting - 18,500 miles, (No setting - 30,000 km)	250 miles (500 km), [500 miles (1000 km)]*	The other replacement interval is displayed on the information display if the vehicle reached the set distance.
CUSTOMIZE	LANGUAGE	ENGLISH/FRANCAIS	_	Changing the language setting can be performed.
	UNIT	US/METRIC	_	Changing the unit setting can be performed.
	METER EF- FECT	ON/OFF	_	Changing the meter effect setting can be performed.

^{*:} Press and hold the switch (1 second or more).

INFORMATION DISPLAY: Component Parts Location

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METER SYSTEM

< SYSTEM DESCRIPTION >

1.	Fuel level sensor unit and fuel pump (main)	2.	ВСМ	3.	IPDM E/R
4.	ECM: EC-589, "Component Parts Location" (VQ35HR engine models) ECM: EC-589, "Component Parts Location" (VK50VE engine models)	5.	Oil pressure switch (VQ35HR engine models)	6.	Ambient sensor
7.	Oil pressure switch (VK50VE engine models)	8.	ABS actuator and electric unit (control unit)	9.	Unified meter and A/C amp.
10.	Combination meter	11.	Fuel level sensor unit (sub)		
A.	Rear seat (bottom)	B.	Dash side finisher (passenger side)	C.	Hoodledge cover (RH)
D.	2WD [oil pan (upper) RH side]	E.	AWD [oil filter bracket part (VQ35HR	F.	Condenser (front)

engine models)]
G. AWD [oil filter bracket part (VK50VE H. Hoodledge cover (LH) I. Behind cluster lid C

engine models)]
INFORMATION DISPLAY : Component Description

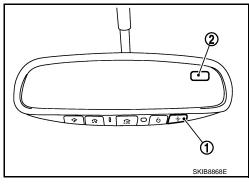
INFOID:0000000005524592

Unit	Description		
Combination meter	Controls the information display with the signals received from the unified meter and A/C amp. by means of communication and the signals from various switches and sensors.		
Unified meter and A/C amp.	Transmits signals received from various units to the combination meter by means of communication.		
Fuel level sensor unit	Refer to MWI-61, "Description".		
FOM	Transmits the following signals to the unified meter and A/C amp. via CAN communication.		
ECM	Engine speed signal Fuel consumption monitor signal		
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to the unified meter and A/C amp. via CAN communication.		
ВСМ	Transmits signals provided by various units to the unified meter and A/C amp. via CAN communication.		
Mater control cuitals	Transmits the following signals to the combination meter.		
Meter control switch	Enter switch signal Select switch signal		
Washer level switch	Transmits the washer level signal to the combination meter.		
Parking brake switch	Refer to MWI-69, "Description".		
Door switch	Transmits the door switch signals to BCM.		
Ambient sensor Detects the ambient air temperature and transmits the ambient sensor signal to the unified and A/C amp.			

Description INFOID:0000000005524593

DESCRIPTION

- This electronic compass is able to display 8 primary directions: N, NE, E, SE, S, SW, W, NW.
- The compass switch (1) is used to operate the compass.



Switch Operation

Press	Compass is turned ON/OFF	
Press and hold (for 3- 9 sec.)	Compass display (2) turns to zone variation change mode Compass	
Press and hold (for more than 9 sec.)	Compass display turns to calibration mode	

- All standard compasses determine direction relative to magnetic north; however, this electronic compass is designed to display direction relative to true north.
- The difference between magnetic north and true north varies from place to place across the surface of the earth.
- This electronic compass must be "told" approximately where it is on the earth's surface so that the magnetic north reading can be properly converted into a true north display.
- To tell the electronic compass where it's at, the earth is separated into numbered "zone variances". The zone variance number in which the compass is to function must be entered into this electronic compass.
- Each zone is magnetically about 4.2° wide. Typically, anything under 22.5° total zone change is not noticed on the electronic compass display. However, over 22.5°, a reading may be off by one or more primary directions.
- On long trips, a vehicle may leave its original zone and enter one or more new zones. Generally, you do not
 need to reset the compass zone if you travel between 3 or 4 zones, such as business travel or vacation. The
 typical driver will not notice any difference on the display within 3 or 4 zones. However, if the vehicle is "permanently" moved to a new location, it is recommended that the compass zone be reset.

ZONE VARIATION SETTING PROCEDURE

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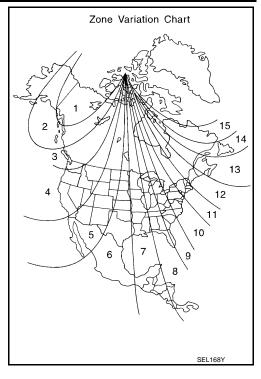
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Revision: 2009 August **MWI-39** 2010 FX35/FX50

< SYSTEM DESCRIPTION >

- Press and hold the compass switch for 3 9 seconds.
- The current zone setting appears on the compass display.
- Find the current geographical location number in the zone variation chart.
- 4. Select the new zone number. (Press the compass switch until the new zone number appears on the compass display.)
- 5. After select the new zone number, the compass display will automatically shows a direction within a few seconds.
- Perform the following calibration procedure for more accurate indications.



CALIBRATION PROCEDURE

NOTE:

The compass calibrates itself under normal driving conditions. However, occasional circumstances may cause the compass to operate inaccurately. Example: Driving from rural (wide open) areas to crowded city areas, or if an aftermarket (i.e., non original equipment) antenna with a magnetic base is attached to the vehicle. Calibrate the mirror compass if the display shows only one direction or a limited number of directions.

NOTE:

- If "magnetic hats" are used in the dealership for vehicle identification, remove the hat from the vehicle before performing the following steps. Do not put the hat back on the vehicle after the procedure is completed.
- Drive the vehicle to an open level area; away from large metallic objects, structures, and overhead power lines.
- Turn off "non-essential" electrical accessories (rear window defrost, heater/air conditioning, wipers) and close the doors.
- Verify the correct compass zone setting for the geographical location.
- 2. Press and hold the compass switch for more than 9 seconds.
- 3. "C" is displayed on the compass display, when calibration starts.
- Drive slowly [less than 8 km/h (5 MPH)] in a circle until the "C / CAL" is replaced with primary headings (N, NE, E, SE, S, SW, W, or NW).

NOTE:

This will require driving at least 2 complete 360 degree circles; 3 complete circles may be required.

The compass calibration procedure is now complete. The compass should operate normally.NOTE:

If at any time the compass continually displays the incorrect direction or the reading is erratic or locked, repeat the calibration procedure.

< SYSTEM DESCRIPTION >

Component Parts Location

INFOID:0000000005524594

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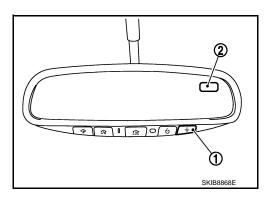
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: Compass switch
 : Compass display



Special Repair Requirement

INFOID:0000000005524595

1. PERFORM ZONE VARIATION SETTING

Perform the zone variation setting. Refer to MWI-39, "Description".

>> GO TO 2.

2.PERFORM CALIBRATION

Perform the calibration. Refer to MWI-39, "Description".

>> Setting completion

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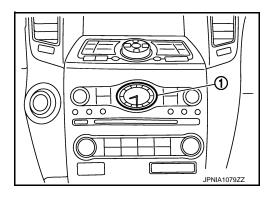
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CLOCK

Component Parts Location

1 : Clock



INFOID:0000000005524596

DIAGNOSIS SYSTEM (METER)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (METER)

Diagnosis Description

INFOID:0000000005524597

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SELF-DIAGNOSIS MODE

- Information display LCD segment operation can be checked in self-diagnosis mode.
- Meters/gauges can be checked in self-diagnosis mode.

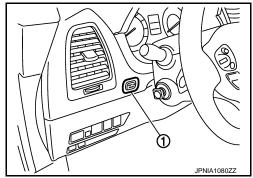
OPERATION PROCEDURE

1. Turn ignition switch ON, and switch the trip meter to "trip A" or "trip B".

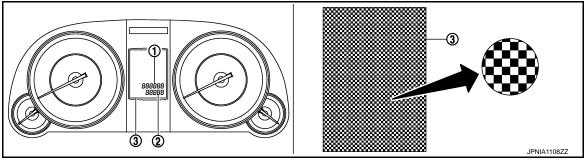
NOTE:

If the diagnosis function is activated with "trip A" displayed, the mileage on "trip A" is reset to "0000.0". (The same way for "trip B".)

- 2. Turn ignition switch OFF.
- 3. While pressing the trip A/B reset switch (1), turn ignition switch ON again.
- 4. Make sure that the trip meter displays "0000.0".
- Press the trip A/B reset switch at least 3 times. (Within 7 seconds after the ignition switch is turned ON.)



- 6. The unified meter control unit is turned to self-diagnosis mode.
 - Displays "888888" (1) and "8888.8" (2) in the information display LCD (3) for approximately 5 seconds and then blinks the segment dots of the information display LCD alternately.
 - Engine coolant temperature gauge and fuel gauge return to zero, and at the same time.



NOTE:

- Check combination meter power supply and ground circuit when self-diagnosis mode of combination meter does not start. Replace combination meter if normal.
- If any of the segments is not displayed, replace combination meter.

MWI

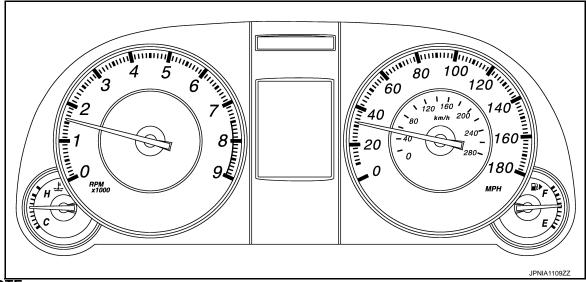
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DIAGNOSIS SYSTEM (METER)

< SYSTEM DESCRIPTION >

7. Each meter activates during pressing trip A/B reset switch.



NOTE:

If any of the meter and gages is not activated, replace combination meter.

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (UNIFIED METER AND A/C AMP.)

CONSULT-III Function (METER/M&A)

INFOID:0000000005524598

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CONSULT-III APPLICATION ITEMS

CONSULT-III can perform the following diagnosis modes with CAN communication with the unified meter and A/C amp.

System	Diagnosis mode	Description
	Self Diagnostic Result	Unified meter and A/C amp. checks the conditions and displays memorized error.
METER/M&A	Data Monitor	Displays unified meter and A/C amp. input/output data in real time.
	Ecu Identification	The unified meter and A/C amp. part number is displayed.

SELF DIAG RESULT

Refer to MWI-119, "DTC Index".

DATA MONITOR

Display Item List

X. Applicable

Display item [Unit]	MAIN SIGNALS	Description	
SPEED METER [km/h] or [mph]	Х	Value of vehicle speed signal received from ABS actuator and electric unit (control unit) with CAN communication line. NOTE: 655.35 is displayed when the malfunction signal is received.	
SPEED OUTPUT [km/h] or [mph]	Х	Vehicle speed signal value transmitted to other units with CAN communication line. NOTE: 655.35 is displayed when the malfunction signal is received.	
ODO OUTPUT [km/h]		Odometer signal value transmitted to other units with CAN communication line.	
TACHO METER [rpm]	х	Value of the engine speed signal received from ECM with CAN communication line. NOTE: 8191.875 is displayed when the malfunction signal is received.	
FUEL METER [L]	Х	Fuel level indicated on combination meter.	
W TEMP METER [°C] or [°F]	×	Value of engine coolant temperature signal received from ECM with CAN communication line. NOTE: 215 is displayed when the malfunction signal is input.	
ABS W/L [On/Off]		Status of ABS warning lamp judged from ABS warning lamp signal received from ABS actuator and electric unit (control unit) with CAN communication line.	
VDC/TCS IND [On/Off]		Status of VDC OFF indicator lamp judged from VDC OFF indicator lamp signal received from ABS actuator and electric unit (control unit) with CAN communication line.	
SLIP IND [On/Off]		Status of SLIP indicator lamp judged from SLIP indicator lamp signal received from ABS actuator and electric unit (control unit) with CAN communication line.	
BRAKE W/L [On/Off]		Status of brake warning lamp judged from brake warning lamp signal received from ABS actuator and electric unit (control unit) with CAN communication line. NOTE: Displays "Off" if the brake warning lamp is illuminated when the valve check starts, the parking brake switch is turned ON or the brake fluid level switch is turned ON.	
DOOR W/L [On/Off]		Status of door warning judged from door switch signal received from BCM with CAN communication line.	
HI-BEAM IND [On/Off]		Status of high beam indicator lamp judged from high beam request signal received from BCM with CAN communication line.	

MWI-45 Revision: 2009 August 2010 FX35/FX50

< SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description	
TURN IND [On/Off]		Status of turn indicator lamp judged from turn indicator signal received from BCM with CAN communication line.	
FR FOG IND [On/Off]		This item is displayed, but cannot be monitored.	
RR FOG IND [On/Off]		This item is displayed, but cannot be monitored.	
LIGHT IND [On/Off]		Status of tail lamp indicator lamp judged from position light request signal received from BCM with CAN communication line.	
OIL W/L [On/Off]		Status of oil pressure warning lamp judged from oil pressure switch signal received from IPDM E/R with CAN communication line.	
MIL [On/Off]		Status of malfunction indicator lamp judged from malfunctioning indicator lamp signal received from ECM with CAN communication line.	
GLOW IND [On/Off]		This item is displayed, but cannot be monitored.	
C-ENG2 W/L [On/Off]		This item is displayed, but cannot be monitored.	
CRUISE IND [On/Off]		 Status of CRUISE indicator judged from ASCD status signal received from ECM with CAN communication line. Status of CRUISE indicator judged from meter display signal received from ICC sensor integrated unit with CAN communication line. 	
SET IND [On/Off]		 Status of SET indicator judged from ASCD status signal received from ECM with CAN communication line. Status of SET indicator judged from meter display signal received from ICC sensor integrated unit with CAN communication line. 	
CRUISE W/L [On/Off]		Status of CRUISE warning lamp judged from ICC warning lamp signal received from ICC sensor integrated unit with CAN communication line.	
BA W/L [On/Off]		Status of IBA OFF indicator lamp judged from IBA OFF indicator signal received from ICC sensor integrated unit with CAN communication line.	
ATC/T-AMT W/L [On/Off]		Status of A/T check warning lamp judged from A/T check indicator lamp signal r ceived from TCM with CAN communication line.	
4WD W/L [On/Off]		Status of AWD warning lamp judged from AWD warning lamp signal received from AWD control unit with CAN communication line.	
4WD LOCK IND [On/Off]		This item is displayed, but cannot be monitored.	
FUEL W/L [On/Off]		Low-fuel warning status judged by the identified fuel level.	
WASHER W/L [On/Off]		Status of washer warning judged from washer level switch input to combination meter.	
AIR PRES W/L [On/Off]		Status of low tire pressure warning lamp judged from tire pressure signal received from BCM with CAN communication line.	
KEY G/Y W/L [On/Off]		Status of key warning lamp (G/Y) judged from key warning signal received from BCM with CAN communication line.	
AFS OFF IND [On/Off]		Status of AFS OFF indicator lamp judged from AFS OFF indicator lamp signal received from AFS control unit with CAN communication line.	
4WAS/RAS W/L [On/Off]		Status of RAS warning lamp judged from RAS warning lamp signal received from RAS control unit with CAN communication line.	
DDS W/L [On/Off]		This item is displayed, but cannot be monitored.	
LANE W/L [On/Off]		Status of lane departure warning lamp judged from lane departure warning lamp signal received from lane camera unit with CAN communication line.	
LDP IND [On/Off]		Status of LDP ON indicator lamp judged from LDP ON indicator lamp signal received from lane camera unit with CAN communication line.	

< SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description	
E-SUS IND [On/Off]		Status of sports mode indicator lamp judged from sports mode indicator lamp signal received from E-SUS control unit with CAN communication line.	
DCA IND [On/Off]		Status of DCA switch indicator judged from meter display signal received from ICC sensor integrated unit with CAN communication line.	
LCD [B&P N, B&P I, ID NG, ROTAT, SFT P, INSRT, BATT, NO KY,OUTKY, LK WN]		Displays status of Intelligent Key system warning judged from meter display signal received from BCM with CAN communication line.	
ACC TARGET [On/Off]		Status of vehicle ahead detection indicator judged from meter display signal received from ICC sensor integrated unit with CAN communication line.	
ACC DISTANCE [Off, SHOR, MID, LONG]		Status of set distance indicator judged from meter display signal received from ICC sensor integrated unit with CAN communication line.	
ACC OWN VHL [On/Off]		Status of own vehicle indicator judged from meter display signal received from ICC sensor integrated unit with CAN communication line.	
ACC SET SPEED		Status of set vehicle speed indicator judged from meter display signal received from ICC sensor integrated unit with CAN communication line.	
ACC UNIT [On/Off]		Status of display unit judged from meter display signal received from ICC sensor integrated unit with CAN communication line.	
SHIFT IND [P, R, N, D, L, M1, M2, M3, M4, M5, M6, M7]		Status of shift position indicator judged from shift position signal and manual mode indicator signal received from TCM with CAN communication line.	
O/D OFF SW [On/Off]		This item is displayed, but cannot be monitored.	
AT S MODE SW [On/Off]		Status of snow mode switch.	
AT P MODE SW [On/Off]		This item is displayed, but cannot be monitored.	
M RANGE SW [On/Off]		Status of manual mode switch.	
NM RANGE SW [On/Off]		Status of non-manual mode switch.	
AT SFT UP SW [On/Off]		Status of A/T shift up switch.	
AT SFT DWN SW [On/Off]		Status of A/T shift down switch.	
ST SFT UP SW [On/Off]		Status of paddle shifter up switch.	
ST SFT DWN SW [On/Off]		Status of paddle shifter down switch.	
COMP F/B SIG [On/Off]		A/C compressor activation condition that ECM judges according to the water temperature and the acceleration degree.	
4WD LOCK SW [On/Off]		This item is displayed, but cannot be monitored.	
PKB SW [On/Off]		Status of parking brake switch.	
BUCKLE SW [On/Off]		Status of seat belt buckle switch.	
BRAKE OIL SW [On/Off]		Status of brake fluid level switch.	
DISTANCE [km/h]		Value of possible driving distance calculated by unified meter and A/C amp.	

< SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description	
OUTSIDE TEMP [°C] or [°F]		Ambient air temperature value converted from ambient sensor signal received from ambient sensor. NOTE: This may not match with the temperature value indicated on the information display. (Because the information display value is a corrected value from the ambient sensor input value.)	
FUEL LOW SIG [On/Off]		Status of fuel level low warning signal to output to AV control unit with CAN communication line.	
BUZZER [On/Off]	Х	Buzzer status (in the combination meter) is judged with the buzzer output signal received from each unit with CAN communication line and the warning output condition of the combination meter.	

NOTE:

Some items are not available according to vehicle specification.

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description INFOID:0000000005524599

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with two 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-19, "How to Use CAN Communication Signal Chart".

DTC Logic

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	Diagnostic item is detected when	Probable malfunction location
U1000	CAN COMM CIRCUIT	When unified meter and A/C amp. is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system

Diagnosis Procedure

INFOID:0000000005524601

1.PERFORM SELF DIAGNOSTIC

- 1. Turn ignition switch ON and wait for 2 seconds or more.
- Check "Self Diagnostic Result" of "METER/M&A".

Is "CAN COMM CIRCUIT" displayed?

YES >> Refer to LAN-20, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-36, "Intermittent Incident".

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Revision: 2009 August MWI-49 2010 FX35/FX50

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

U1010 CONTROL UNIT (CAN)

Description INFOID:000000005524602

Initial diagnosis of unified meter and A/C amp.

DTC Logic

DTC DETECTION LOGIC

DTC	Display contents of CON- SULT-III	Diagnostic item is detected when	Probable malfunction location	
U1010	CONTROL UNIT (CAN)	If any malfunction is detected during initial diagnosis of unified meter and A/C amp. CAN controller	Unified meter and A/C amp.	

Diagnosis Procedure

INFOID:0000000005524604

1.REPLACE UNIFIED METER AND A/C AMP.

When DTC "U1010" is detected, replace unified meter and A/C amp.

>> INSPECTION END

B2201 COMMUNICATION ERROR 1

< DTC/CIRCUIT DIAGNOSIS >

B2201 COMMUNICATION ERROR 1

Description

The communication line (LCD <-> AMP.) is used to communicate signals between the combination meter and the unified meter and A/C amp. in order to control the information display.

DTC Logic

DTC DETECTION LOGIC

DTC	TC Display contents of CONSULT-III Diagnostic item is detected when		Probable malfunction location	
B2201	COMM ERROR 1	If a communication error is present in the communication line (LCD <-> AMP.) for 2 seconds or more	Communication line (LCD <-> AMP.) circuit	

Diagnosis Procedure

1. CHECK CONNECTOR

Check combination meter, unified meter and A/C amp. and terminals (combination meter side, unified meter and A/C amp. side, and harness side) for looseness or bent.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair terminal or connector.

2.check continuity communication circuit

- 1. Turn ignition switch OFF.
- Disconnect combination meter connector and unified meter and A/C amp. connector.
- 3. Check continuity between combination meter harness connector and unified meter and A/C amp. harness connector.

Combination meter		Unified meter and A/C amp.		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M53	24	M66	14	Existed
IVIOS	25	IVIOO	34	Existed

4. Check continuity between combination meter harness connector and ground.

Combination meter			Continuity
Connector	Terminal		Continuity
MEQ	24	- Ground	Not existed
M53	25		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK UNIFIED METER AND A/C AMP. OUTPUT VOLTAGE

- Connect unified meter and A/C amp. connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between unified meter and A/C amp. harness connector and ground.

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INFOID:0000000005524607

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Revision: 2009 August **MWI-51** 2010 FX35/FX50

B2201 COMMUNICATION ERROR 1

< DTC/CIRCUIT DIAGNOSIS >

Terminals			
(+)			Voltage (Approx.)
Unified meter A/C amp.		(-)	(Approx.)
Connector	Terminal	Ground	
M66	14	Ground	12 V

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace unified meter and A/C amp.

4. CHECK COMBINATION METER OUTPUT VOLTAGE

- Turn ignition switch OFF.
 Disconnect unified meter and A/C amp. connector.
- 3. Connect combination meter connector.
- Turn ignition switch ON.
- 5. Check voltage between combination meter harness connector and ground.

Terminal			
	(+) Combination meter		Voltage (Approx.)
Connector	Connector Terminal		
M53	25	Ground	5 V

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace combination meter.

B2202 COMMUNICATION ERROR 2

< DTC/CIRCUIT DIAGNOSIS >

B2202 COMMUNICATION ERROR 2

Description INFOID:000000005524608

The communication line (METER <-> AMP.) is used to communicate signals between the combination meter and the unified meter and A/C amp. in order to control the information display.

DTC Logic

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	Diagnostic item is detected when	Probable malfunction location
B2202	COMM ERROR 2	If a communication error is present in the communication line (METER <-> AMP.) for 2 seconds or more	Communication line (METER <-> AMP.) circuit

Diagnosis Procedure

1. CHECK CONNECTOR

Check combination meter, unified meter and A/C amp. and terminals (combination meter side, unified meter and A/C amp. side, and harness side) for looseness or bent.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair terminal or connector.

2.check continuity communication circuit

- Turn ignition switch OFF.
- 2. Disconnect combination meter connector and unified meter and A/C amp. connector.
- Check continuity between combination meter harness connector and unified meter and A/C amp. harness connector.

Combination meter		Unified meter and A/C amp.		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M53	2	M66	27	Existed	
IVIOS	3		7	Existed	

4. Check continuity between combination meter harness connector and ground.

Combination meter			Continuity
Connector	Terminal	Ground	Continuity
M53	2	Ground	Not existed
	3		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.check unified meter and a/c amp. Output voltage

- Turn ignition switch OFF.
- 2. Disconnect combination meter connector.
- Connect unified meter and A/C amp. connector.
- Turn ignition switch ON.
- 5. Check voltage between unified meter and A/C amp. harness connector and ground.

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B2202 COMMUNICATION ERROR 2

< DTC/CIRCUIT DIAGNOSIS >

Terminals			
(+)		(-)	Voltage (Approx.)
Unified meter A/C amp.			
Connector	Terminal	Ground	
M66	27	Ground	5 V

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace unified meter and A/C amp.

4. CHECK COMBINATION METER OUTPUT VOLTAGE

- Turn ignition switch OFF.
 Disconnect unified meter and A/C amp. connector.
- 3. Connect combination meter connector.
- Turn ignition switch ON.
- 5. Check voltage between combination meter harness connector and ground.

Terminals			
	(+) Combination meter		Voltage (Approx.)
Connector	Terminal	Ground	
M53	3	Ground	5 V

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace combination meter.

B2205 VEHICLE SPEED

< DTC/CIRCUIT DIAGNOSIS >

B2205 VEHICLE SPEED

Description INFOID:0000000005524611

Vehicle speed signal is transmitted from ABS actuator and electric unit (control unit) via CAN communication to unified meter and A/C amp.

DTC Logic

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	Diagnostic item is detected when	Probable malfunction location
B2205	VEHICLE SPEED	If the abnormal vehicle speed signal is input from ABS actuator and electric unit (control unit) for 2 seconds or more	Wheel sensor ABS actuator and electric unit (control unit)

Diagnosis Procedure

 $1.\mathsf{perform}$ self-diagnosis of abs actuator and electric unit (control unit)

Perform "Self Diagnostic Result" of ABS actuator and electric unit (control unit), and repair or replace malfunctioning parts.

>> Refer to BRC-44, "CONSULT-III Function".

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B2267 ENGINE SPEED

< DTC/CIRCUIT DIAGNOSIS >

B2267 ENGINE SPEED

Description INFOID:0000000005524614

The engine speed signal is transmitted from ECM to the unified meter and A/C amp. with CAN communication.

DTC Logic

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	Diagnostic item is detected when	Probable malfunction location
B2267	ENGINE SPEED	If ECM continuously transmits abnormal engine speed signals for 2 seconds or more	Crankshaft position sensor (POS)ECM

Diagnosis Procedure

INFOID:0000000005524616

1.PERFORM SELF-DIAGNOSIS OF ECM

Perform "Self Diagnostic Result" of ECM, and repair or replace malfunctioning parts.

- >> EC-124. "CONSULT-III Function" (VQ35HR models)
 - EC-718, "CONSULT-III Function" (VK50VE models)

B2268 WATER TEMP

< DTC/CIRCUIT DIAGNOSIS >

B2268 WATER TEMP

Description INFOID:0000000005524617

The engine coolant temperature signal is transmitted from ECM to the unified meter and A/C amp. via CAN communication.

DTC Logic INFOID:0000000005524618

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	Diagnostic item is detected when	Probable malfunction location
B2268	WATER TEMP	If ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more	Engine coolant temperature sensor ECM

Diagnosis Procedure

INFOID:0000000005524619

1. PERFORM SELF-DIAGNOSIS OF ECM

Perform "Self Diagnosis Result" of ECM, and repair or replace malfunctioning parts.

>> • EC-124. "CONSULT-III Function" (VQ35HR models)

• EC-718, "CONSULT-III Function" (VK50VE models)

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT COMBINATION METER

COMBINATION METER: Diagnosis Procedure

INFOID:0000000005524620

1. CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	11
Ignition switch ON or START	4

Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

2. CHECK POWER SUPPLY CIRCUIT

Check voltage between combination meter harness connector and ground.

	Т				
	(+)		()	Ignition switch position	Value (Approx.)
Combination meter	Terminal	Signal name	(-)		
M53	1	Battery power supply	Ground	OFF	Battery voltage
IVIOS	21	Ignition signal	(-)	ON	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between combination meter and fuse.

3. CHECK GROUND CIRCUIT

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

Combination meter			Continuity
Connector	Terminal	Ground	Continuity
	5		Existed
M53	15		Existed
	22		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

UNIFIED METER AND A/C AMP.

UNIFIED METER AND A/C AMP. : Diagnosis Procedure

INFOID:0000000005524621

1. CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	11
Ignition switch ACC or ON	19
Ignition switch ON or START	3

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

2. CHECK POWER SUPPLY CIRCUIT

Check voltage between unified meter and A/C amp. harness connector and ground.

	Te					
	(+)		()	Ignition switch position	Value (Approx.)	
Unified meter A/C amp.	Terminal	Signal name	(-) Ground			
	54	Battery power supply		OFF	Battery voltage	
M67	41	ACC power supply	Ground	ACC	Battery voltage	
	53	Ignition signal		ON	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between unified meter and A/C amp. and fuse.

3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect unified meter and A/C amp. connector.
- 3. Check continuity between unified meter and A/C amp. harness connector and ground.

Unified meter A/C amp.			Continuity
Connector	Terminal	Ground	Continuity
M67	55		Existed
IVIO7	71		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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

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

1. CHECK FUSES AND FUSIBLE LINK

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

Signal name	Fuses and fusible link No.	
	D	
Battery power supply	50	
	51	

Is the fuse fusing?

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

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

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

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Revision: 2009 August **MWI-59** 2010 FX35/FX50

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

(1	+)	(-)	Voltage
IPDN	И E/R		(Approx.)
Connector	Terminal	Ground	
E4	1	Giodila	Battery voltage

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

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

IPDM E/R			Continuity
Connector	Terminal	Ground	Continuity
E5	12	Giodila	Existed
E6	41		Existed

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

FUEL LEVEL SENSOR SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

FUEL LEVEL SENSOR SIGNAL CIRCUIT

Description INFOID:0000000005524624

The fuel level sensor unit and fuel pump (main) and the fuel level sensor unit (sub) detect the fuel level in the fuel tank and transmit the fuel gauge signal to the unified meter and A/C amp.

Component Function Check

1. CHECK UNIFIED METER AND A/C AMP. OUTPUT SIGNAL

Select the "Data Monitor" for the "METER/M&A" and compare the "FUEL METER" monitor value with the fuel gauge reading on the combination meter.

Fuel gauge pointer	Reference value of data monitor [L]
Full	Approx. 85.3
Three quarters	Approx. 67.3
Half	Approx. 45.4
A quarter	Approx. 22.0
Empty	Approx. 8.7

Does monitor value match fuel gauge reading?

YES >> INSPECTION END

NO >> Replace combination meter.

Diagnosis Procedure

INFOID:0000000005524626

INFOID:0000000005524625

1. CHECK UNIFIED METER AND A/C AMP. INPUT SIGNAL

- 1. Turn ignition switch ON.
- Check voltage between unified meter and A/C amp. harness connector and ground.

	Terminals			
(+)	(-)	Voltage	
Unified meter a	Unified meter and A/C amp.		Voltage (Approx.)	
Connector	Terminal			
M67	42	Ground	(V) 5 4 3 2 1 0 E 1/4 1/2 3/4 F SKIB8867E	

Does it match fuel gauge reading?

YES >> GO TO 2.

NO >> Replace the unified meter and A/C amp.

2.CHECK FUEL LEVEL SENSOR (SUB) CIRCUIT

- Turn ignition switch OFF.
- Disconnect unified meter and A/C amp. connector and fuel level sensor unit (sub) connector.
- Check continuity between unified meter and A/C amp. harness connector and fuel level sensor unit (sub) harness connector.

Unified met	Unified meter A/C amp.		Fuel level sensor unit (sub)		
Connector	Terminal	Connector	terminal	Continuity	
M67	42	B21	1	Existed	

MWI-61 Revision: 2009 August 2010 FX35/FX50

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FUEL LEVEL SENSOR SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

4. Check continuity between unified meter and A/C amp. harness connector and ground.

Unified met	er A/C amp.		Continuity
Connector	Terminal	Ground	Continuity
M67	42		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.check fuel level sensor (main-sub) circuit

- 1. Disconnect fuel level sensor unit and fuel pump (main) connector.
- Check continuity between fuel level sensor unit (sub) harness connector and fuel level sensor unit and fuel pump (main) harness connector.

Fuel level sensor unit (sub)		Fuel level sensor unit	Continuity		
Connector	Terminal	Connector terminal		Continuity	
B21	2	B22	2	Existed	

Check continuity between fuel level sensor unit (sub) harness connector and ground.

Fuel level ser	nsor unit (sub)		Continuity
Connector	Terminal	Ground	Continuity
B21	2		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4.CHECK FUEL LEVEL SENSOR (MAIN) CIRCUIT

Check continuity between fuel level sensor unit and fuel pump (main) harness connector and unified meter and A/C amp. harness connector.

Fuel level sensor unit	and fuel pump (main)	Unified met	Continuity	
Connector	Terminal	Connector	Continuity	
B22	5	M67	58	Existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair harness or connector.

5.CHECK INSTALLATION CONDITION

Check fuel level sensor unit installation, and check whether the float arm interferes or binds with any of the internal components in the fuel tank.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Install the fuel level sensor unit properly.

Component Inspection

INFOID:0000000005524627

$1.\mathsf{REMOVE}$ FUEL LEVEL SENSOR UNIT

Remove the fuel level sensor unit. Refer to FL-5, "Removal and Installation".

>> GO TO 2.

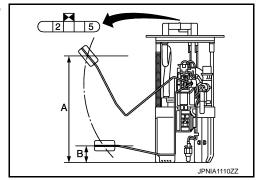
2.CHECK FUEL LEVEL SENSOR UNIT AND FUEL PUMP (MAIN)

FUEL LEVEL SENSOR SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Check the resistance between fuel level sensor unit and fuel pump (main).

(m	unit and fuel pump ain) ninal	Condition	Resistance (Approx.)
2	5	Full (A)	3 Ω
2	3	Empty (B)	80 Ω



Standard float position

Standard float position [mm (in)]*					
Full (A) Approx. 223.8 (8.81)					
Empty (B)	Approx. 29.4 (1.16)				

^{*:} When float rod is contact with stopper.

Is the inspection result normal?

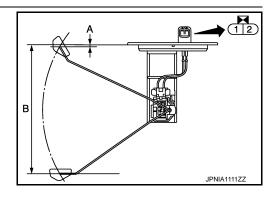
YES >> GO TO 3.

NO >> Replace fuel level sensor unit and fuel pump (main).

3.CHECK FUEL LEVEL SENSOR UNIT (SUB)

Inspect the resistance of fuel level sensor unit (sub).

Fuel level ser	nsor unit (sub)	Condition	Resistance (Approx.)
Terr	ninal		
1	2	Full (A)	3 Ω
		Empty (B)	40 Ω



Standard float position

Standard float position [mm (in)]*					
Full (A) Approx. 4.7 (0.19)					
Empty (B)	Approx. 202.4 (7.97)				

^{*:} When float rod is contact with stopper.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace fuel level sensor unit (sub).

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METER CONTROL SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

METER CONTROL SWITCH SIGNAL CIRCUIT

Description

Transmits the following signals to the combination meter.

• 65 (Illumination control) switch signal (+) • 65 (Illumination control) switch signal (-)

• (select) switch signal • (enter) switch signal

Diagnosis Procedure

INFOID:0000000005524629

1. CHECK METER CONTROL SWITCH INPUT SIGNAL

- 1. Turn the ignition switch ON.
- 2. Check voltage between the following terminals of the combination meter.

Combination meter		eter		
Connector	Terminal		Condition	Voltage
Connector	(+)	(-)		
	36 16		When (select) switch is pressed	0 V
	00		Other than the above	5 V
37	37 16	When 🗖 (enter) switch is pressed	0 V	
			Other than the above	5 V
M53		16	When 📆 (illumination control) switch is pressed	0 V
			Other than the above	5 V
	40	40 16	When 😚 (illumination control) switch is pressed	0 V
			Other than the above	5 V

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

2.CHECK METER CONTROL SWITCH SIGNAL CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect the combination meter and meter control switch connectors.
- 3. Check continuity between combination meter harness connector and meter control switch harness connector.

Combina	tion meter	Meter control switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	16		2	Existed
	36	M54	6	Existed
M53	37		7	Existed
	39		3	Existed
	40		1	Existed

4. Check continuity between combination meter harness connector and ground.

METER CONTROL SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Combinat	ion meter		Continuity
Connector	Terminal		Continuity
	16		Not existed
	36	Ground	Not existed
M53	37		Not existed
	39		Not existed
	40		Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

Component Inspection

1. CHECK METER CONTROL SWITCH UNIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect the meter control switch connector.
- Check continuity between the following terminals of the meter control switch.

Combination meter		er	Operation and status	Continuity
Connector	Terr	ninal	Operation and status	Continuity
	6	2	Press (select) switch	Existed
			Other than the above	Not existed
	7	2	Press 🗖 (enter) switch	Existed
M54			Other than the above	Not existed
IVI34	3	2	Press 📆 (illumination control) switch	Existed
			Other than the above	Not existed
	1 2		Press 👣 + (illumination control) switch	Existed
			Other than the above	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the meter control switch.

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Revision: 2009 August **MWI-65** 2010 FX35/FX50

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TRIP A/B RESET SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

TRIP A/B RESET SWITCH SIGNAL CIRCUIT

Description INFOID:000000005524631

Transmits the trip A/B reset switch signals to the combination meter.

Diagnosis Procedure

INFOID:0000000005524632

1. CHECK TRIP A/B RESET SWITCH INPUT SIGNAL

- 1. Turn the ignition switch ON.
- 2. Check voltage between the combination meter harness connector terminals.

Combination meter		neter		Voltage
Connec-	Connec- Terminal		Condition	
tor	(+)	(-)		
M53	30	16	When trip A/B reset switch is pressed	0 V
IVIOS	38 16		Other than the above	5 V

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

2.CHECK TRIP A/B RESET SWITCH SIGNAL CIRCUIT

- 1. Turn the ignition switch OFF.
- Disconnect the combination meter and meter control switch connectors.
- Check continuity between combination meter harness connector and trip A/B reset switch harness connector.

Combina	Combination meter		Trip A/B reset switch		
Connector	Terminal	Connector Terminal		Continuity	
M53	38	M56	1	Existed	
IVIOO	16	IVISO	2	Existed	

4. Check continuity between combination meter harness connector and ground.

Combination meter			Continuity
Connector	Terminal	Ground	Continuity
MES	38	- Ground	Not existed
M53	16		Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

Component Inspection

INFOID:0000000005524633

1. CHECK TRIP A/B RESET SWITCH UNIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect the trip A/B reset switch connector.
- 3. Check continuity between the trip A/B reset switch connector terminals.

Combination meter		er	Operation and status	Continuity	
Connector	Terr	ninal	Operation and status	Continuity	
M56 1 2		2	Press trip A/B reset switch	Existed	
		2	Other than the above	Not existed	

TRIP A/B RESET SWITCH SIGNAL CIRCUIT

< DTC/C	RCUIT DIAGNOSIS >	
Is inspec	tion result normal?	
YES	>> INSPECTION END	Α
NO	>> Replace the trip A/B reset switch.	
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OIL PRESSURE SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

OIL PRESSURE SWITCH SIGNAL CIRCUIT

Description INFOID:000000005524634

Detects the engine oil pressure and transmits the oil pressure switch signal to IPDM E/R.

Component Function Check

INFOID:0000000005524635

1. CHECK UNIFIED METER AND A/C AMP. INPUT SIGNAL

Select the "Data Monitor" for the "METER/M&A" and check the "OIL W/L" monitor value.

"OIL W/L"

Ignition switch ON : On Engine running : Off

>> INSPECTION END

Diagnosis Procedure

INFOID:0000000005524636

1. CHECK OIL PRESSURE SWITCH CIRCUIT

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

IPDM E/R		Oil pressure switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
E7	75	F37	1	Existed

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

IPDI	M E/R		Continuity
Connector	Terminal	Ground	Continuity
E7	75		Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

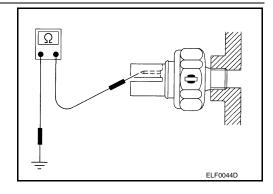
Component Inspection

INFOID:0000000005524637

1. CHECK OIL PRESSURE SWITCH UNIT

Check continuity between oil pressure switch and ground.

Condition	Continuity
Engine stopped	Existed
Engine running	Not existed



Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the oil pressure switch.

PARKING BRAKE SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

PARKING BRAKE SWITCH SIGNAL CIRCUIT

Description INFOID:0000000005524638

Transmits the parking brake switch signal to the combination meter.

Diagnosis Procedure

INFOID:0000000005524639

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1. CHECK COMBINATION METER INPUT SIGNAL

- Turn ignition switch ON.
- Check the voltage and waveform between combination meter harness connector and ground.

Terminals				
(+)		(-)	Condition	Voltage and waveform
Combination meter			Condition	voltage and wavelorm
Connector	Terminal			
			Parking brake applied	Approx. 0 V
M53	27	Ground	Parking brake released	(V) 8 4 0 10 ms JSNIA0007GB

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

2.check parking brake switch signal circuit

- Turn ignition switch OFF.
- 2. Disconnect combination meter connector and parking brake switch connector.
- Check continuity between combination meter harness connector and parking brake switch harness connector.

Combination meter		Parking brake switch		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M53	27	E107	1	Existed	

Check continuity between combination meter harness connector and ground.

Combina	tion meter		Continuity
Connector	Terminal	Ground	Continuity
M53	M53 27		Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

Component Inspection

INFOID:0000000005524640

1. CHECK PARKING BRAKE SWITCH

Check parking brake switch. Refer to BRC-99, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END.

MWI-69 Revision: 2009 August 2010 FX35/FX50

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PARKING BRAKE SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS	; >
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NO >> Replace parking brake switch.

WASHER LEVEL SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

WASHER LEVEL SWITCH SIGNAL CIRCUIT

Description INFOID:0000000005524641

Transmits the washer level switch signal to the combination meter.

Diagnosis Procedure

INFOID:0000000005524642

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1. CHECK WASHER LEVEL SWITCH SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect combination meter connector and washer level switch connector.
- Check continuity between combination meter harness connector and washer level switch harness connector.

Combination meter		Washer level switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M53	31	E32	1	Existed

4. Check continuity between combination meter harness connector and ground.

Combination meter			Continuity
Connector	Terminal	Ground	Continuity
M53	31		Not existed

5. Check continuity between washer level switch harness connector and ground.

Washer level switch			Continuity
Connector	Terminal	Ground	Continuity
E32	2		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

Component Inspection

INFOID:0000000005524643

1. CHECK WASHER LEVEL SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect washer level switch connector.
- 3. Check washer level switch.

Terminal	Condition	Continuity
1 - 2	Washer fluid level is low (washer level switch ON)	Existed
	Washer fluid level is normal (washer level switch OFF)	Not existed

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Is the inspection result normal?

YES >> INSPECTION END

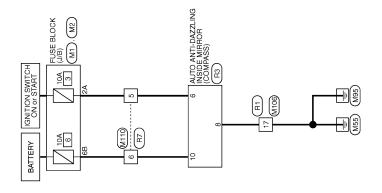
NO >> Replace washer level switch. Refer to <a href="https://www.nc.nc/www.nc.nc/www.nc.nc/www.nc.nc/www.nc.nc/www.nc.nc/www.nc.nc/www.nc.nc/www.nc.nc/ww.nc/ww.nc

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Revision: 2009 August MWI-71 2010 FX35/FX50

Wiring Diagram - COMPASS -

INFOID:0000000005524644



COMPASS

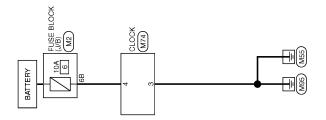
	А
Signal Name [Specification] IGND GND BAT A 13 12 11 10 9 Signal Name [Specification] Signal Name [Specification]	В
NWR TO N	С
Color Colo	D
Costion of the cost of the cos	Е
RI	F
N N N N N N N N N N	G
1 0 0 0 0 0 0 0 0 0	Н
Specification] 5 6 19 20 15 16	I
CS10 CS10 Signal Name [112 [17] 11 12 17 17 17 17 17 17	J
Name	K
Commetted Comm	L
OCK (J/B) Signal Name [Specification] CS Signal Name [Specification] Signal Name [Specification]	M
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Revision: 2009 August **MWI-73** 2010 FX35/FX50

CLOCK

Wiring Diagram - CLOCK -

INFOID:0000000005524645



SLOCK



M2 NSTOFW-CS 48\text{CB} \text{CB}	Signal Name [Specification]	M74 CLOOK THOGEW-NH 1 2 3 4	Signal Name [Specification] ILLUMINATION (+) ILLUMINATION (+) GROUN BATTERY POWER SUPPLY
No. Name	Color of Wire LG C O O O V V V V R R R R R R	ПаП	Color of Wire B
CLOCK Connector No. Connector Type H.S.	Terminal No. 118 38 38 58 68 68 78 88 88 88 98	Connector No. Connector Name Connector Type	Terminal No.

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< ECU DIAGNOSIS INFORMATION >

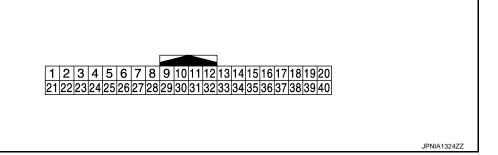
ECU DIAGNOSIS INFORMATION

COMBINATION METER

Reference Value

VALUES ON THE DIAGNOSIS TOOL Refer to MWI-96, "Reference Value".

TERMINAL LAYOUT

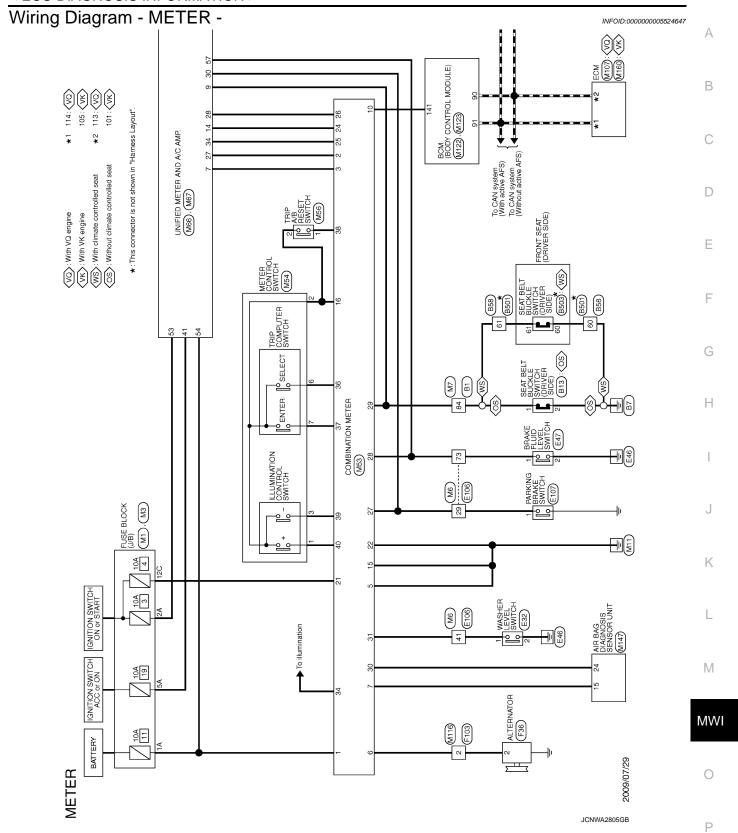


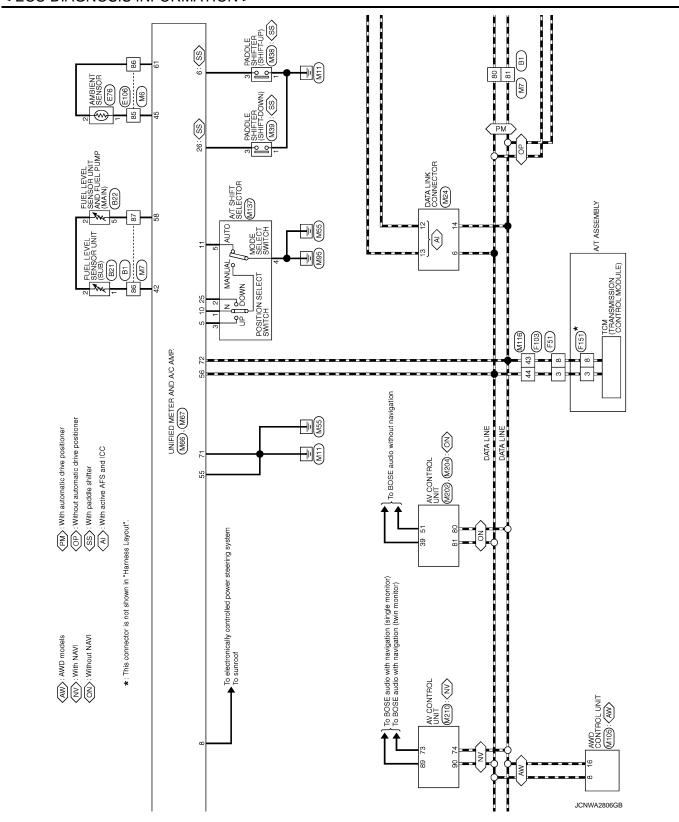
PHYSICAL VALUES

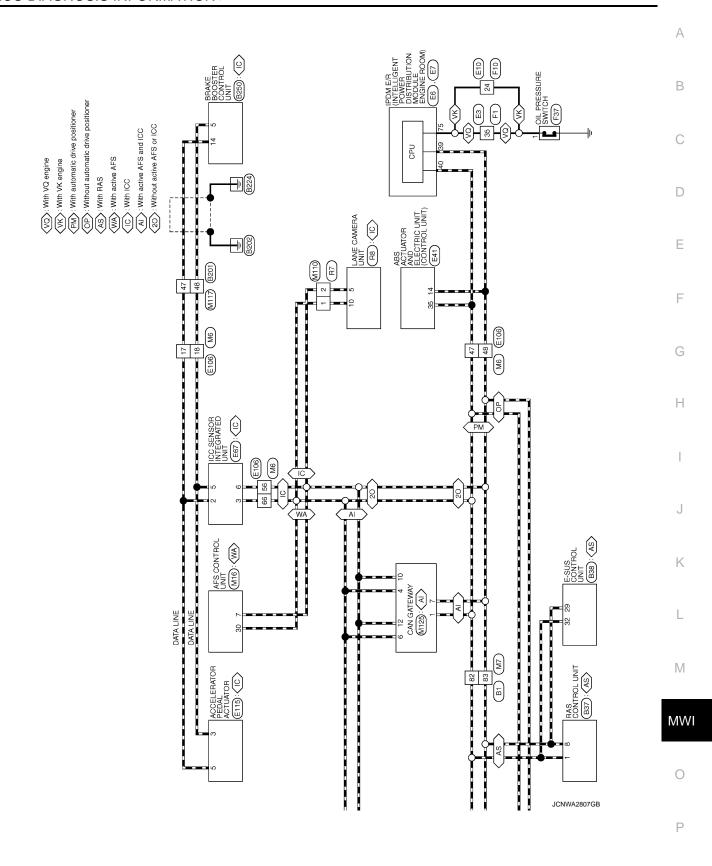
	nal No. color)	Description			Condition	Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (O)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
2 (LG)	Ground	Communication signal (METER→ AMP.)	Output	Ignition switch ON	_	(V) 6 4 2 0 ■ 200 µs JSNIA0027GB
3 (GR)	Ground	Communication signal (AMP.→ METER)	Input	Ignition switch ON	_	(V) 6 4 2 0 200 µs JSNIA0027GB
5 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
6	Ground	Alternator signal	Input	Ignition switch	Charge warning lamp ON	0 V
(W)		<u> </u>	·	ON	Charge warning lamp OFF	Battery voltage
7	Ground	Air bag signal	Input	Ignition switch	Air bag warning lamp ON	4 V
(P)			·	ON	Air bag warning lamp OFF	0 V
10	Ground	Security indicator signal	Input	Ignition switch	Security warning lamp ON	0 V
(G)		.,		OFF	Security warning lamp OFF	12 V

	nal No. color)	Description			Condition	Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
15 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
16 (B)	Ground	Meter control switch ground	-	Ignition switch ON	_	0 V
21 (R)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage
22 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
24 (BR)	Ground	Communication signal (LCD→ AMP.)	Output	Ignition switch ON	_	(V) 15 10 5 0 → 400 µs JSNIA0028GB
25 (Y)	Ground	Communication signal (AMP.→ LCD)	Input	Ignition switch ON	_	(V) 6 4 2 0 ■ 200 µs JSNIA0027GB
26 (R)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	Speedometer operated [When vehicle speed is approx. 40 km/h (25 MPH)]	NOTE: The maximum voltage varies depending on the specification (destination unit).
					Parking brake ON	0 V
27 (V)	Ground	Parking brake switch signal	Input	Ignition switch ON	Parking brake OFF	(V) 8 4 0 10 ms JSNIA0007GB
28		Brake fluid level switch sig-	1	Ignition	Brake fluid level is normal.	5 V
(W)	Ground	nal	Input	switch ON	The brake fluid level is lower than the low level	0 V

Termi	nal No.	Description			O Ni	Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
29	Ground	Seat belt buckle switch sig-	Input	Ignition switch	When driver seat belt is fastened	12 V
(SB)	Cidana	nal (driver side)	mpat	ON	When driver seat belt is un- fastened	0 V
30	Ground	Passenger seat belt warn-	Input	Ignition switch	When getting in the passenger seatWhen passenger seat belt is fastened	12 V
(G)	Cidana	ing signal	При	ON	When getting in the passenger seatWhen passenger seat belt is unfastened	0 V
31		Manhaulaudaudah airual		Ignition	Washer level switch ON	0 V
(L)	Ground	Washer level switch signal	Input	switch ON	Washer level switch OFF	5 V
34 (O)	Ground	Illumination control signal	Output	Ignition switch ON	Lighting switch ON, then operate the illumination control switch.	When brightness level is midway (V) 10 0 2 ms JSNIA0010GB
36	16	Select switch signal	Input	Ignition switch	When is pressed	0 V
(LG)	(B)	Select Switch Signal	iriput	ON	Other than the above	5 V
37 (SB)	16 (B)	Enter switch signal	Input	Ignition switch	When 🔲 is pressed	0 V
	(2)			ON	Other than the above	5 V
38 (L)	16 (B)	Trip A/B reset switch signal	Input	Ignition switch	When trip A/B reset switch is pressed	0 V
	(-)			ON	Other than the above	5 V
39 (P)	16 (B)	Illumination control switch signal (–)	Input	Ignition switch	When 🥳 switch is pressed	0 V
	(-)			ON	Other than the above	5 V
40 (O)	16 (B)	Illumination control switch signal (+)	Input	Ignition switch	When 🔥 + switch is pressed	0 V
ν-/	, ,			ON	Other than the above	5 V







	2 W	SEAT BELT BUCKLE SWITCH (DRIVER SIDE) 3 G - [With VK engine] 3 B - [With VQ engine]	4 R	- B 9	K	Connector No. 1837		Connector Name KAS CON I KOL UNI I	Connector Type A36FW-M4			Signal Name [Specification]	W V 0 E 3 V C V	- C C C C C C C C C C C C C C C C C C C				Terminal Color Cimal Mana [Sanation is a series of the cimal Mana [Sanation]]	No. of Wire	E02FGY-RS 1 L CAN-H	4 Y R-ANG SEN MAIN SIG	5 W R-ANG SEN VCC	7 R R-ANG SEN SUB SIG	8 P CAN-L	((1 2)) 15 G R-ANG SEN GND	22 GR STOP LAMP SW	25 SB R-MTRRLY	27 G IGN		EF EF	H	- R-MTR (RH)	39 G/R R-MTR (LH)	40 B		FUEL LEYEL SENSOR UNIT AND FUEL PUMP (MAIN)		E09Fd7-K5			[]] . X •	1 2 3 4 5				Signal Name [Specification]	- [With VK engine]	- [With VQ engine]
	Connector No. B13	Connector Name SEA	Connector Type A03FW	<u>4</u>		21	Τ	Τ	Γ	Τ	Terminal Color	Ť	1 SB	2 B			Connector No. B21	ameN votoscoo		Connector Type E02	đ	匿	3						Terminal Color	_	>	2 W			Connector No. B22	Connector Name FUEL	т	٦	1	Arts .	S. T.	T	T	T	1	Terminal Color	No. of Wire	T	-
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Ī	7	54	Н	57	200	+	9	62	63	94	65	99	. 67	89	69	70	7.1	72	73	74	75	9/	77	78	79	80	81	82	83	84	82	98	87	88	88	06	16	35	93	94	95	96	/6	86	86				
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ſ	Connector No.	Connector Name	Connector Type		ć	5					inal Color	_	ß	٦	W	g	G	Д	0	W	H	SB	8	L	۵.	L	SHIELD	7	۵	H	L	W	>	Д.	4	+	+	†	5	+	+	7	+	g 8	+	Ť	╀	Ł	Ĥ
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< ECU DIAGNOSIS INFORMATION >

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		OL UNIT			17 18 19 20 22 24 25 28 27 29 30 32 12 2 3 4 5 6 7 19 9 10 11 12 14		Signal Name [Specification]	IGN2	ACTUATOR FR-	ACTUATOR FL-	ACTUATOR FL+	ACTUATOR RL+	ACTUATOR RR+	ACTUATOR RR-	HEEL G SENSOR SIG	SODY G SENSOR SIG L	BODY G SENSOR SIG	IGNI	GND2	MODE SW SIG	MODE LAMP SIG	FRONT WHEEL G SENSOR SIG RH	RODY G SENSOR-	FRONT G SENSOR+	CAN-I	REAR BODY G SENSOR+	CAN-H																					M
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Revision: 2009 August **MWI-83** 2010 FX35/FX50

ŀ	55 BR	+	- 57 LG	- M 69	П	PIPOM E/R ONTENDED FOWER DISTRIBUTION MODULE 75 P - [With VK engine]	>	77 B = [With VK engine] 77 I. = [With VQ ensine]	W	42 41 40 39	46 45 44 43		Signal Name [Specification]									IPOM E/R UNTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	TH20FW-CS12-M4			582 SRINGT/17473 74135/947778 81 82 SRINGT/1788 82 SRINGT/1788 8485/8867788 7.9 80				Signal Name [Specification]		- [With VK engine]	- [With VQ engine]	
ŀ	$^{\rm H}$	+	42 V 43 W		Connector No. E6	Connector Name ENGI	Connector Type TH	E	S				Terminal Color	T	Н	41 PB	43 SB	44 W	46 BR		Connector No. E7	Connector Name ENGI	Connector Type TH	昏	\$ 1	53 54 55 56 57 58 47 48 49 50 51 52		· ·	Touming	_	48 L	-	88 c	_
		B/Y = -	Connector No. B503	Connector Name SEAT BELT BUCKLE SWITCH (DRIVER SIDE)	Connector Type A03FW			61	00	ea ea	Color Signal Name [Specification]	- \	R/Y -	- 1/0		Т	Sonnector Name WIRE TO WIRE	Connector Type SAA36MB-RS10-SJZ2	TISTS ALERTHON	1	19 26 27 28 29 30	51 52 53 54 55 58 57 58 58 40 41 42 44 54 54 45 48 47 48	ı,	al Golor Signal Name [Specification]		¥5 0	- T@		BR			-	> -	
8	80 3	9	Connec	Connec	Connec	E	H.S.				Terminal	29	09	5		Connec	Connec	Connec	偃	H.S.				Terminal No.	10	21	22	23	25	27	28	29	8 5	,
	BEAKE BOOSTER CONTROL UNIT	Connector Type TK24FW		2 5 6 8	12 14 15 17	19 20 21		Signal Name [Specification]	BATTERY	BATTERY ITS COMM-I	RELEASE SW PWR	BRANE PRESSURE SEN PWR BOOSTER SOL PWR	BOOSTER SOL GND	RELEASE SW (NC)	BRAKE PRESSURE SEN SIGNAL	GND	CHIME SIGNAL	RELEASE SW (NO)	DAME PRESSONE SEN GND	DEO!	WIRE TO WIRE	SO-MW01SN			e 61	16 15 21 59 60 56			Signal Name [Specification]	ı	1	-		

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Γ		Connector Name WIRE TO WIRE	Connector Type SAA36FB-RS10-SJZ2	4	手	H.S. [1] 13171613141312111	25 24 23 22 21 20 19	Car La Car Car Car Car Car Car Car Car Car Ca	48 477 488 458 448 458 458 448 4		Terminal Color Sized Manage Constitution	No. of Wire Signal Name Lopecincation	19 W –	20 GR –	21 P -	22		25 P –	26 BR -		28 R -			31 V	32 LG –	+	+	→	+	+	43 RP] 	eomeationj	Z	<i></i>	N-L		H_W										
7.	- A CB	: >		Γ	_	Connector Name PARKING BRAKE SWITCH	Connector Type TB01FW			v.		1				Terminal Color Simpl Nama [Spacification]		- LG -			Connector No. E115	Connector Name ACCEL FRATOR PEDAL ACTUATOR		Connector Type KDZ06FB	1	MATI		T	(12)		Τ	Terminal Color	No. of Wire Signal Name [Specification]	1 R IGNITION	0	P	GNU GTI											
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ŀ	8 6	38 GR	Н	+	+	24 43 X G	45	╀	╀	48 P	H	50 BR	51 B	52 Y	\dashv			56 P	59 P	60 SB	61 V	Н	\dashv	64 L	65 0	P 99	7	b	+	5 0	+	ł	W 77	Н	80 SB	+	82 W	+	╁	98 P	-	H	89 F.G	90 BR	Н	92 BR	93 S	94 W
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MWI-89 Revision: 2009 August 2010 FX35/FX50

METER		M53	Connector No	M5a	Connector No	Mes	45	۵	AMBIENT SENSOB SIGNAL	_
	т						9	.	STINI OAD SENSOB SIGNAL	
Connector Name		COMBINATION METER	Connector Name	METER CONTROL SWITCH	Connector Name	UNIFIED METER AND A/C AMP.	? 5	>	GAS SENSOR SIGNAL	
Connector Type	Ť	TH40FW-NH	Connector Type	TH1 284W-NH	Connector Type	THADEW-NH	23		IGNITION DOWED SLIDDI Y	
	1						24	0	BATTERY POWER SUPPLY	
厚	_		厚		厚		22	ш	GROUND	
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	0 0	11/21/21/21/21/21/21/21/21/21/21/21/21/2		10315		4 5 6 7 8 0 10111 11415 15	22	>	BRAKE FLUID LEVEL SWITCH SIGNAL	
	21 22 23 24	14 25 26 27 28 29 30 31 33 34 36 37 38 39 40) - -	21 22 23	25 26 27 28 30 34 36 38 40	28	a (FUEL LEVEL SENSOR GROUND	
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	Ŀ		Н		Ŀ		٥	¥ 6	AMBIENT SENSOR GROUND	
lerminal		Signal Name [Specification]	Color	Signal Name [Specification]	l erminal Color	Signal Name [Specification]	62	9	SUNLOAD SENSOR GROUND	
Ö,	or wire	V Edito dimon vontes a	No. of Wire		No. of Wire		63	~ (ION MODE SIGNAL	
- -	<u>-</u>	BALLERY POWER SUPPLY	o (4	STOP LAMP SWITCH SIGNAL	çg :	⇒ .	ECV SIGNAL	
7	2 8	COMMUNICATION SIGNAL (METER-)AMP.)	2 0	1	+	MANUAL MODE SHIFT UP SIGNAL	69	، اـ	A/C LAN SIGNAL	
n u	¥ .	COMMUNICATION SIGNAL (AMPZMETEK)	n -		9 6	COMMUNICATION SIGNAL	2 5	× 0	EACH DOOK MOTOR POWER SUPPLY	
n «	n≥	AI TERNATOR SIGNAL	4 m		¥ -	VEHICLE SDEED SIGNAL (A-DLILSE)	- 62	• •	GROUND	
-	٥	AID BAG SIGNAL	Ŧ		a o	FRONT SEAT BELT BLICKLE SWITCH SIGNAL (DRIVED SIDE)	7,		7 300	_
. 2	د د	SECLIPITY INDICATOR SIGNAL	t		$^{+}$	MANITAL MODE SIGNAL				
, <u>, , , , , , , , , , , , , , , , , , </u>	, a	GROUND			╀	NON-MANITAL MODE SIGNAL	Connector No	or No	M105	_
2 9		METER CONTROL SWITCH GROUND			╀	COMMUNICATION SIGNAL (LCD->AMP)			2011	
21.2	α	IGNITION DOWER SUPPLY	Connector No.	M56	╀	ION SENSOR SIGNAL	Connect	Connector Name	AWD CONTROL UNIT	
20	: a	GROUND			A 86	AT SNOW SWITCH SIGNAL	Connect	Connector Type	THIGEN-NH	
24	. E	COMMUNICATION SIGNAL (LCD->AMP.)	Connector Name	TRIP A/B RESET SWITCH	25 \	MANUAL MODE SHIFT DOWN SIGNAL				_
25	>	COMMUNICATION SIGNAL (AMP>LCD)	Connector Type	TH04MW-NH	. 26 G	PADDLE SHIFTER DOWN SIGNAL	6			
56	ď	VEHICLE SPEED SIGNAL (8-PULSE)			ľ	COMMUNICATION SIGNAL (METER->AMP.)	× =			
27	>	PARKING BRAKE SWITCH SIGNAL	厚		F	VEHICLE SPEED SIGNAL (8-PULSE)		-		
28	Μ	BRAKE FLUID LEVEL SWITCH SIGNAL	Si		30 ^	PARKING BRAKE SWITCH SIGNAL			3	
29	as.	SEAT BELT BUCKLE SW (DRIVER SIDE)			34 Y	COMMUNICATION SIGNAL (AMP>LCD)			9 10 11 13 15 16	
30	ŋ	PASSENGER SEAT BELT WARNING SIGNAL		1 2	38 L	BLOWER MOTOR CONTROL SIGNAL				
31	7	WASHER LEVEL SWITCH SIGNAL					١	ŀ		_
34	o :	ILL CON OUI					ermina	Color	Signal Name [Specification]	
36	2 8	SELECT SWITCH SIGNAL	Ŀ		Connector No.	Mb/	ý,	o wile	(2) 100 date	
8	3 -	TED A /D DESET SWITCH SIGNAL	No of Wire	Signal Name [Specification]	Connector Name	UNIFIED METER AND A/C AMP.	- c	ž >	AWD SOL (+)	
9 6	٥	THINKING TON CONTENT SMITCH SIGNAL	+		Connector Type	TUSSEM-NIU	7 0	- 3	OII TEMB (=)	
8 6	T	ILLIMINATION CONTROL SWITCH SIGNAL (+)	- 6	1	odf. mooning	12011		9	() IIII	
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					nal	Signal Name [Specification]				
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					41	ACC POWER SUPPLY				
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					44	IN-VEHICLE SENSOR SIGNAL				

JCNWA2816GB

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Signal Name [Specification] 36 36 36 37 37 37 37 37 37 37 37 37 37 37 37 37	Signal Name [Specification] 36 36 37 37 38 38 38 38 38 38 38 38 38 38 38 38 38	Signal Name [Specification] 36 36 36 37 37 37 37 37 37 37 37 37 37 37 37 37	88 69 88 44 48 48	
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TRAGAMA-NS 10 TRAGAMA-NS 10 TO 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	जिन्हान्त्राची । स्थापना स्थापना स्थापना । स्	र 8 to 10 साम्यास्य प्रमाणकार्यकार्यक्षात्र । अस्ति सम्बन्धात्र । १ to 10 साम्यास्य सम्बन्धात्र । समित्र		
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TK39MW-NS10	Signal Name [Specification]	s to in transfer or the second		
1 K.38MW-NS10 1 E 10 Entragarant representation in a E 10 Entragarant representation representation in a E 10 Entragarant representation repr	Signal Name (Specification)	1 i o i intraparational propertional in a constant in a co		Ш
TK38MW-NS10 Signal Name [Specification]	Signal Name (Specification)	s of signal Name (Specification) Signal Name (Specification)		
TK38MW-NSI 0	Signal Name [Specification] - [With We engine] - [With Wo or signal]	Signal Name (Specification)		
TASBAW-NS10 TOTAL	1 1 CTUTOT COUNTY FEBRUARY	1 1 1 1 1 1 1 1 1 1		
Tr. 304W-NS.10 Signal Name (Specification)	1 1	olor Signal Name (Specification) We See Signal Name (Specification) W See Signal Name (Specification) W See Signal Name (Specification) W See Signal Name (Specification)		
Trigonya-NS:10	lor Signal Name (Specification) Nive Signal Name (Specification)	1 1 1 1 1 1 1 1 1 1		L - [With VK engine]

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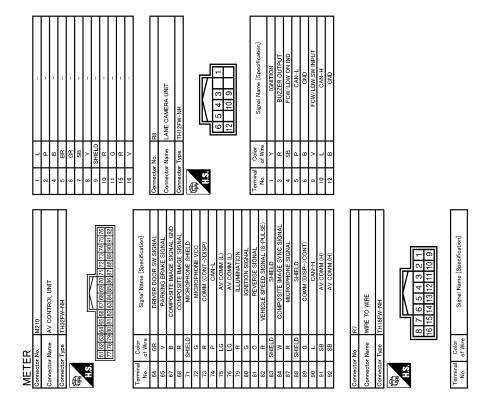
MELEK	_					[
Connector No	o. M117		45	>	– [With ICC]	92	+	T	108	œ	COMBI SW INPUT 4
Connector Name	ame WIRE TO WIRE		42	≥ a	- [Without ICG] - [With ICC]	96	υ <u>υ</u>		110	≻ ©	COMBI SW INPUT 2 HAZARD SW
Connector Type	ype TH80MW-CS16-TM4		43	Н	- [Without ICC]	86	Н	-	Ξ	GR	S/L UNIT COMM
đ.			44	<u>~</u>	1	66	Pl	1			
事	0000		45	+	- [With ICC]	<u></u>	> 	-	Machanan	No.	2014
2		96	9	5 C	- [With ICC]	_			200	7	MIZS
		8	94	S.		Conne	Connector No.	M122	Connecto	Connector Name	BCM (BODY CONTROL MODULE)
			47	Н	– [With ICC]	Conne	Connector Name	BCM (BODY CONTROL MODULE)	Connector Type	or Type	TH40FG-NH
		7	47	+	- [Without ICC]	<u></u>			Œ		
Tarminal	3000		84 8	م م	= [With ICC] = [With art ICC]	Conne	Connector Type	TH40FB-NH	事		
	of Wire Signal Name [Specification]	pecification]	g ç	$^{+}$	- Date ICC	€ -	_		į		
+	GR		49	╁	- [Without ICC]	S II	Į ć			131 130 129	28 127 128 125 124 129 129 129 139 119 118 117 118 115 114 118 112
2	BR		20	SHIELD		•	_ [<u> </u>		151 151 148	48 H/J H/g H/g HH/J H/Z H/J
3	^		51	0	-	_	91 90 89	88 87 86 85 84 83 82 81 80 79 78 77 76 75 74 73 72 88 87 86 85 84 83 82 81 80 78 88 87 86 85 84 83 82			
4			25	В	-	_					
9 1	· ·		53	σ.	'	_			Terminal	Color	Signal Name [Specification]
, ,	0 3		ŧ.	+		ŀ	⊢			5	AND TRACES GOODING THE
» <u>c</u>	M M		8 8	<u>ء</u>		So.	of Wire	Signal Name [Specification]	113	<u> </u>	OPLICAL SENSOR
╀	1		9	╀		2	t	BOOM ANT2-	119	. 2	STOP I AMP SW 1
ł	GR		62	SB	1	73	ł	ROOM ANT2+	118	۵	STOP LAMP SW 2
t	SHIELD -		63	H	1	74	Ë	PASSENGER DOOR ANT-	119	SB	DR DOOR UNLOCK SENSOR
t	-		64	>	ſ	75	┞	PASSENGER DOOR ANT+	121	æ	KEY SLOT SW
15	- -		69	æ	1	92	>	DRIVER DOOR ANT-	123	×	IGN F/B
Н			99	0	-	77	FG	DRIVER DOOR ANT+	124	PT	PASSENGER DOOR SW
1.1	- A		49	M	-	78	Υ	ROOM ANTI-	132	0	POWER WINDOW SW COMM
18	- A		89	SHIELD		79	BR	ROOM ANTI+	134	GR	LOCK IND
19	TG		69	ŋ	-	80	GR	NATS ANT AMP.	137	В	RECEIVER/SENSOR GND
20	- SB		71	SB	1	81	W	NATS ANT AMP.	138	\	SENSOR POWER SUPPLY
21			72	>	-	82		IGN RELAY (F/B) CONT	140	œ	SHIFT N/P
		ment system]	73		-	83		KEYLESS ENTRY RECEIVER SIGNAL	141	g	SECURITY INDICATOR OUTPUT
+		nment system	74	+	-	87	7	COMBI SW INPUT 5	142	٥	COMBI SW OUTPUT 5
23	+	ment system]	75	+	- [With VK engine]	88	+	COMBI SW INPUT 3	143	۵.	COMBI SW OUTPUT 1
23		nment system]	75	# :	- [With VQ engine]	88	+	PUSH SW	144		COMBI SW OUTPUT 2
54	+	ment system]	۽ اڳ	+	-	3	1	CAN-L	145	1	COMBLSW CUTPUL 3
24	W - [Without entertainment system	nment system	2 8	១	-	5	+	CAN-H	146	8S 6	COMBI SW OUTPUT 4
Ť		ment system]	8 5	+		36	2 >	ON IND	151	5	DEAD WINDOW DEFOCUED BELAN CONT
92	+	IIII elic systemi	8	>		8 8	+	ACC RELAY CONT	2	9	NEAR WINDOW DEI OGGEN REEAT CONT
27	3 >		88	0		96	ľ	A/T SHIFT SELECTOR POWER SUPPLY			
28 SF	SHIELD -		84	┝	1	97	╀	S/L CONDITION 1			
29	- 0		82	SB	-	86	۵	S/L CONDITION 2			
30			98	В	-	66	ď	SHIFT P			
31			87	Ф	-	100	g G	PASSENGER DOOR REQUEST SW			
32	- W		91	<u>-</u>	1	101	H	DRIVER DOOR REQUEST SW			
33	- SB		92	<u>-</u>	-	102	+	BLOWER FAN MOTOR RELAY CONT			
+			93	+	1	103	4	KEYLESS ENTRY RECEIVER POWER SUPPLY			
+			94	+	- [With VK engine]	106	+	S/L UNIT POWER SUPPLY			
41	Y - [Without ICC]	t loc]	94	0	- [With VQ engine]	107	EG.	COMBI SW INPUT 1			

JCNWA2818GB

< ECU DIAGNOSIS INFORMATION >

		ПП			Ī	107				T				T'SE)								А
	INVERTER VCC INVERTER GND VP	SHIELD SHIELD	iL UNIT			99 100 101 102 103 104 105 106		Signal Name [Specification]	AV COMM (L) AV COMM (H)	AV COMM (L) AV COMM (H)	CAN-L CAN-H	SW GND SHIELD	TEL VOICE SIGNAL (+) TEL VOICE SIGNAL (-)	VEHICLE SPEED SIGNAL (8-PULSE) PARKING BRAKE SIGNAL REVERSE SIGNAL	IGNITION SIGNAL DISK EJECT SIGNAL	AUX SOUND SIGNAL GND AUX SOUND SIGNAL LH (+) AUX SOUND SIGNAL RH (+)						В
	≻ & B ×	Y SHELD SHELD	m204 AV CONTROL UNIT	pe TH32FW-NH		76 77 78 79 80 81 82 92 93 94 95 96		_ e	LG SB	LG	L P	BR SHIELD	Ш	R VEHICLE V PA	H	W AUX						С
	НН	52 52 52 88 53 64 64	Connector No.	Connector Type	ω	92		Terminal C No. of	$^{\rm H}$	+	80	Ħ	88	93	Н	102						D
	out ICC]	[00]	SW	h ICC] out ICC]										44 45 46 47 57 58		fication]	O ONT) IGNAL	1	GNAL GNAL GNAL GNAL GND	SIGNAL		Е
	AVCC-APS1[Withc VEHCAN-L ASCDSW	APSI VEHCAN-H IGNSW APS2 [With ICC] APS2 [Without ICC] DDAKE	GNDA-ASCDSW FPCMCK K-LINE	GNDA-APS2 [With ICC] GNDA-APS2 [Without ICC] NEUT-H	BNCSW	GNDA-APS TF	VBR	FPCM	GND		AV CONTROL UNIT	HN-	V	40 41 42 43 44 4 52 53 5		Signal Name [Specification] SIGNAL VCC	SIGNAL GND HP COMM (DISP->CONT) RGB AREA (YS) SIGNAL	SHIELD RGB SYNC	RGB (G:GREEN) SIGNAL RGB (B:BLUE) SIGNAL COMPOSITE IMAGE SIGNAL GND	COMPOSITE IMAGE SIGNAL		F
	J d SB	x -1 -1 >- G 0		BR GR		× ×	GR B	R LG	9	. No. M202		Type TH24FW-NH		36 37 38 39 4 48 49 50 51 5		Color of Wire O	LG R BR	SHIELD	₩	SB		G
	00 10 2	401 00 01 00 00 00 00 00 00 00 00 00 00 0	1112	115	117	119	121	125 127	128	Connector No.	Connector Name	Connector Type	是 HS			Terminal No. 36		14 24 24	44 44	47		Н
	S SENSOR UNIT	24 49 1 3 4 6 5	18	Signal Name [Specification]	GND DRI (+)	(-) DR2 (-) AS1 (+)	ASI (-) CZS (+)	ECZS (-) AIR BAG W/L	GND CUTOFF TELLTALE	CAN-H SEAT BELT	DR2 (+) CAN-L	AS2 (+) AS2 (-)	ODS INPUT		H-Z	108 104	106 100 108 101 97	Signal Name [Specification]	TACHO AVCC2-APS2 [With ICC] AVCC2-APS2 [Without ICC]	PS1[With ICC]		I
	M147 AIR BAG DIAGNOSIS SENSOR UNIT	46 48 47 45	15	Signal Nan		DRI		E AIR	CUTOF	SE			00	M160	ECIM RH24FGY-RZ8-R-LH-Z	181 1901181181	123 118 118 118 118	Signal Nam	AVGC2-4	AVCC-A		J
	Connector No. M	5.	16 12	Terminal Color No. of Wire	3 × BB	y × ×	y 88 11	ш	16 SHIELD 18 P	21 L 24 G	45 Y	47 Y	49 L	Connector No.	7	\ <u>\</u>		Terminal Color		Н		К
	5 5 5			Ter Ter	П	П			Ш Т	П	1	Ш. П	Ц	ő á	8 8	[F			<u>ППТ</u> ПП			L
		4 7 8 8 9	10 11 12	Signal Name [Specification] CAN-H	BATTERY CAN-H	GND CAN-H	CAN-L IGNITION	CAN-L GND	CAN-L		LECTOR		F	4 5 10 11		Signal Name [Specification] -	1 1 1 1	1 1 1	1 1			М
	M125 CAN GATEWAY		7 9	Signa						M137	A/T SHIFT SELECTOR	TH12FW-NH	4	1 2 3 7 8 9		Signa						MW
METER	92	7		Terminal Color No. of Wire	3 GR	2 9 9	₩	10 H	12 P	Connector No.	Connector Name	ector Type	子 Fish			Terminal Color No. of Wire	2 8 4 3 C	7 88 0	10 CR			0
																					JCNWA2819GB	Р

Revision: 2009 August **MWI-93** 2010 FX35/FX50



JCNWA2820GB

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Fail-Safe

FAIL-SAFE

Combination meter performs fail-safe operation when unified meter and A/C amp. communication is malfunction.

Solution for communication error between the unified meter and A/C amp. and combination meter.

< ECU DIAGNOSIS INFORMATION >

	Function	Specifications				
Speedometer						
Tachometer		Poset to zero by supposding communication				
Fuel gauge		Reset to zero by suspending communication.				
Engine coolant temperatur	e gauge					
Illumination control		When suspending communication, change to nighttime mode.				
Information display		The display turns off by suspending communication.				
Buzzer		The buzzer turns off by suspending communication.				
	ABS warning lamp					
Speedometer Tachometer Fuel gauge Engine coolant temperature gauge Illumination control Information display Buzzer ABS warning lamp VDC OFF indicator lamp SLIP indicator lamp Brake warning lamp CRUISE warning lamp CRUISE warning lamp High beam indicator lamp High beam indicator lamp Tail lamp indicator lamp Oil pressure warning lamp Oil pressure warning lamp A/T CHECK warning lamp AWD warning lamp AWD warning lamp AWD warning lamp						
	SLIP indicator lamp					
	Brake warning lamp	The lamp turns on by suspending communication.				
	RAS warning lamp	The famp turns on by suspending communication.				
	CRUISE warning lamp					
RAS warning lamp CRUISE warning lamp IBA OFF indicator lamp Malfunction indicator lamp High beam indicator Turn signal indicator lamp Tail lamp indicator lamp Oil pressure warning lamp A/T CHECK warning lamp						
	Oil pressure warning lamp					
	AWD warning lamp					
	Low tire pressure warning lamp	The lamp turns off by suspending communication.				
	Key warning lamp					
	AFS OFF indicator lamp					
	Lane departure warning lamp					
	LDP ON indicator lamp					
	Sports mode indicator lamp					
	Master warning lamp					

DTC Index

Refer to MWI-119, "DTC Index".

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< ECU DIAGNOSIS INFORMATION >

UNIFIED METER AND A/C AMP.

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item		Condition	Value/Status
SPEED METER [km/h] or [mph]	Ignition switch ON	While driving	Equivalent to speedometer reading NOTE: 655.35 is displayed when the malfunction signal is received
SPEED OUTPUT [km/h] or [mph]	Ignition switch ON	While driving	Equivalent to speedometer reading NOTE: 655.35 is displayed when the malfunction signal is received
ODO OUTPUT [km/h]	Ignition switch ON	_	Equivalent to odometer reading in combination meter
TACHO METER [rpm]	Ignition switch ON	While driving	Equivalent to tachometer reading NOTE: 8191.875 is displayed when the malfunction signal is received
FUEL METER [L]	Ignition switch ON	_	Values according to fuel level
W TEMP METER [°C] or [°F]	Ignition switch ON	_	Values according to engine coolant temperature NOTE: 215 is displayed when the malfunction signal is input
ADC W/I	Ignition switch	ABS warning lamp ON	On
ABS W/L	ON	ABS warning lamp OFF	Off
VDC/TCS IND	Ignition switch	VDC OFF indicator lamp ON	On
VDC/TC3 IND	ON	VDC OFF indicator lamp OFF	Off
SLIP IND	Ignition switch	SLIP indicator lamp ON	On
SLIF IND	ON	SLIP indicator lamp OFF	Off
BRAKE W/L	Ignition switch	Brake warning lamp ON	On
DIVAILE W/L	ON	Brake warning lamp OFF	Off
DOOR W/L	Ignition switch	Door warning displayed	On
DOOK W/L	ON	Door warning not displayed	Off
HI-BEAM IND	Ignition switch	Hi-beam indicator lamp ON	On
TH BEAW IND	ON	Hi-beam indicator lamp OFF	Off
TURN IND	Ignition switch	Turn indicator lamp ON	On
TOTAL	ON	Turn indicator lamp OFF	Off
FR FOG IND	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off
RR FOG IND	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off
LIGHT IND	Ignition switch	Tail lamp indicator lamp ON	On
LIGHT IND	ON	Tail lamp indicator lamp OFF	Off
OII W/I	Ignition switch	Oil pressure warning lamp ON	On
OIL W/L	ON	Oil pressure warning lamp OFF	Off

Monitor Item		Condition	Value/Status	Λ
MII	Ignition switch	Malfunction warning lamp ON	On	- A
MIL	ON	Malfunction warning lamp OFF	Off	_
GLOW IND	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off	В
C-ENG2 W/L	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off	С
ODLUGE IND	Ignition switch	CRUISE indicator displayed	On	_
CRUISE IND	ON	CRUISE indicator not displayed	Off	- D
CET IND	Ignition switch	SET indicator displayed ON	On	_
SET IND	ON	SET indicator not displayed OFF	Off	E
0011105.14//	Ignition switch	CRUISE warning lamp ON	On	_
CRUISE W/L	ŎN	CRUISE warning lamp OFF	Off	_
D A 14/4	Ignition switch	IBA OFF indicator lamp ON	On	F
BA W/L	ŎN	IBA OFF indicator lamp OFF	Off	_
ATO/T AB/T 14/"	Ignition switch	A/T check warning lamp ON	On	- C
ATC/T-AMT W/L	ON	A/T check warning lamp OFF	Off	_
	Ignition switch	AWD warning lamp ON	On	=
4WD W/L	ON	AWD warning lamp OFF	Off	Н
4WD LOCK IND	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off	-
	Ignition switch	Low-fuel warning displayed	On	=
FUEL W/L	ŎN	Low-fuel warning not displayed	Off	_
	Ignition switch	Washer warning displayed	On	- J
WASHER W/L	ŎN	Washer warning not displayed	Off	_
ALD DDEG W/	Ignition switch	Low tire pressure lamp ON	On	K
AIR PRES W/L	ŎN	Low tire pressure lamp OFF	Off	_
	Ignition switch	Key warning lamp ON	On	_
KEY G/Y W/L	ŎN	Key warning lamp OFF	Off	
	Ignition switch	AFS OFF indicator lamp ON	On	_
AFS OFF IND	ON	AFS OFF indicator lamp OFF	Off	M
	Ignition switch	RAS warning lamp ON	On	IVI
4WAS/RAS W/L	ON	RAS warning lamp OFF	Off	_
DDS W/L	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off	MW
1 AND \A//	Ignition switch	Lane departure warning lamp ON	On	0
LANE W/L	ON	Lane departure warning lamp OFF	Off	_
I DD IND	Ignition switch	LDP ON indicator lamp ON	On	_
LDP IND	ON	LDP ON indicator lamp OFF	Off	P
5 0110 INIS	Ignition switch	Sports mode indicator lamp ON	On	=
E-SUS IND	ON	Sports mode indicator lamp OFF	Off	=
	Ignition switch	DCA switch indicator displayed	On	_
DCA IND	ON	DCA switch indicator not displayed	Off	_

Monitor Item		Condition	Value/Status
	Ignition switch ON	Engine start information display	B&P I
	Ignition switch ACC	Engine start information display	B&P N
	Ignition switch LOCK	Key ID warning display	ID NG
	Ignition switch LOCK	Steering lock information display	ROTAT
LCD	Ignition switch LOCK	P position warning display	SFT P
LOD	Ignition switch LOCK	Intelligent Key insert information display	INSRT
	Ignition switch LOCK	Intelligent Key low battery warning display	BATT
	Ignition switch ON	Take away warning display	NO KY
	Ignition switch LOCK	Key warning display	OUTKY
	Ignition switch ON	ACC warning display	LK WN
	Ignition switch	Vehicle ahead detection indicator displayed	On
ACC TARGET	Ignition switch ON	Vehicle ahead detection indicator not displayed	Off
		When following distance set to "LONG"	Long
ACC DISTANCE ACC OWN VHL ACC SET SPEED	Ignition switch	When following distance set to "MIDDLE"	Middle
	ON	When following distance set to "SHORT"	Short
		Set distance indicator not displayed	Off
	Ignition switch	Own vehicle indicator displayed	On
	ON	Own vehicle indicator not displayed	Off
4.00.0ET.0DEED	Ignition switch	Set vehicle speed indicator not displayed	Off
ACC SET SPEED	ŎN	Set vehicle speed indicator displayed	Indicates the set vehicle speed
A 0.0 LINUT	Ignition switch	Set vehicle speed indicator unit display ON	On
ACC UNIT	ŎN	Set vehicle speed indicator unit display OFF	Off
		Shift position indicator P display	Р
ACC UNIT		Shift position indicator R display	R
		Shift position indicator N display	N
		Shift position indicator D display	D
		Shift position indicator DS display	L
	Ignition switch	Shift position indicator M1 display	M1
SHIFT IND	ON	Shift position indicator M2 display	M2
		Shift position indicator M3 display	M3
		Shift position indicator M4 display	M4
		Shift position indicator M5 display	M5
		Shift position indicator M6 display	M6
		Shift position indicator M7 display	M7
O/D OFF SW	Ignition switch	NOTE: This item is displayed, but cannot be monitored.	Off

< ECU DIAGNOSIS INFORMATION >

Monitor Item		Condition	Value/Status
AT C MODE CW	Ignition switch	Snow mode switch pressed	On
AT S MODE SW	ON	Snow mode switch not pressed	Off
AT P MODE SW	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off
M RANGE SW	Ignition switch	Selector lever manual mode position	On
W RANGE SW	ON	Other than the above	Off
NM RANGE SW	Ignition switch	Selector lever manual mode position	Off
NIVI KANGE SVV	ON	Other than the above	On
AT CET LID CW/	Ignition switch	Selector lever + position	On
AT SFT UP SW	ON	Other than the above	Off
AT CET DIAMI CIA	Ignition switch	Selector lever – position	On
AT SFT DWN SW	ON	Other than the above	Off
OT OFT UP OW	Ignition switch	Paddle shifter switch up operation	On
ST SFT UP SW	ŎN	Other than the above	Off
OT OFT DIAM ON	Ignition switch	Paddle shifter switch down operation	On
ST SFT DWN SW	ŎN	Other than the above	Off
00110 5/0 010	Ignition switch	A/C compressor activation condition	On
COMP F/B SIG	ŎN	A/C compressor deactivation condition	Off
4WD LOCK SW	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off
DIAD ON	Ignition switch	Parking brake switch ON	On
PKB SW	ŎN	Parking brake switch OFF	Off
DUOM E OW	Ignition switch	Seat belt not fastened	On
BUCKLE SW	ŎN	Seat belt fastened	Off
	Ignition switch	Brake fluid level switch ON	On
BRAKE OIL SW	ŎN	Brake fluid level switch OFF	Off
DISTANCE [km/h]	Ignition switch ON	_	Possible driving distance calculated by unified meter and A/C amp.
OUTSIDE TEMP [°C] or [°F]	Ignition switch ON	_	Equivalent to ambient temperature NOTE: This may not match the indicated value on the information display.
FUEL LOW C:C	Ignition switch	Low-fuel warning signal output	On
FUEL LOW SIG	ON	Low-fuel warning signal not output	Off
DU775D	Ignition switch	Buzzer ON	On
BUZZER	ŎN	Buzzer OFF	Off

NOTE:

Some items are not available according to vehicle specification.

TERMINAL LAYOUT

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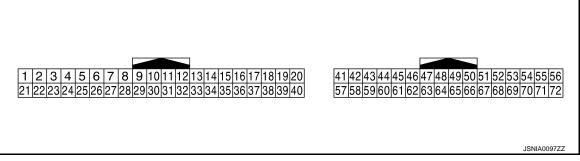
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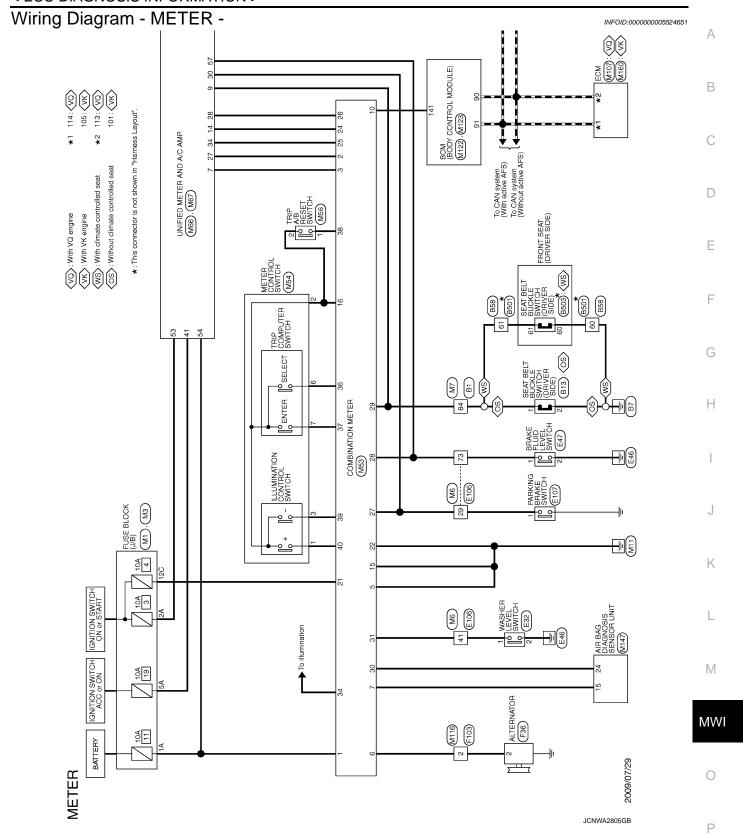


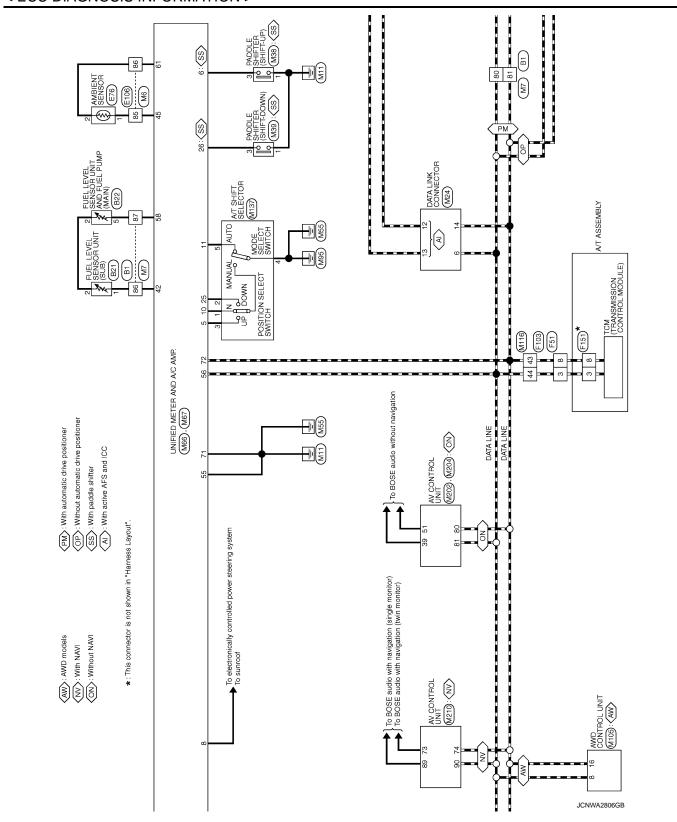
PHYSICAL VALUES

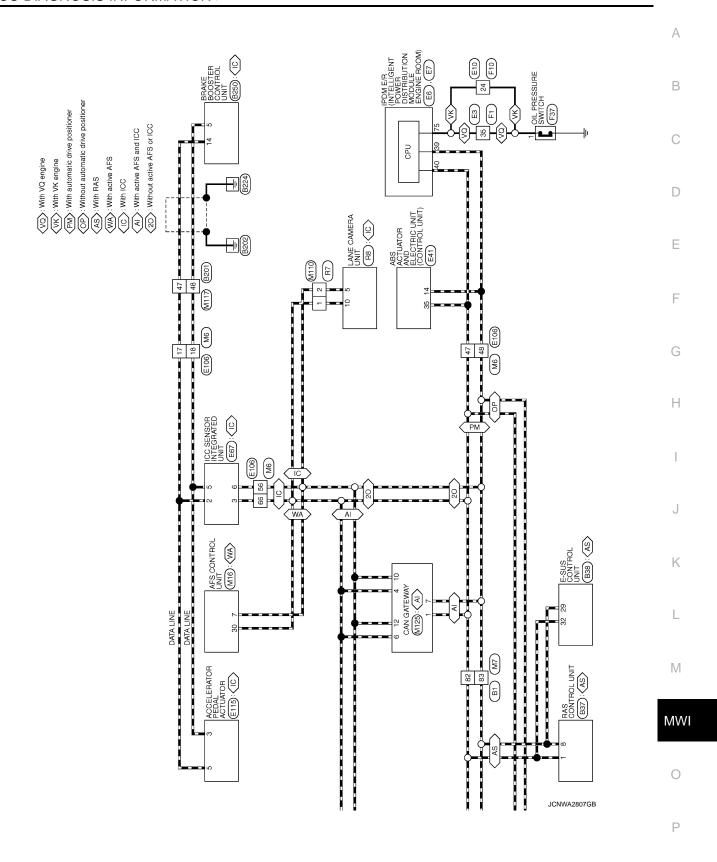
	nal No. color)	Description			Condition	Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
5	0	Manual mode shift up sig-	1	Ignition	Selector lever UP operation	0 V
(L)	Ground	Signal name Manual mode shift up signal Paddle shifter up signal Communication signal (AMP. → METER) Vehicle speed signal output (2-pulse) Manual mode signal Manual mode signal	Input	switch ON	Other than the above	12 V
6	Craund	Daddla skifter un sienel	lanus	Ignition	Paddle shifter up operation	0 V
(O)	Ground	Paddie snifter up signal	Input	switch ON	Other than the above	12 V
7 (GR)	Ground		Output	Ignition switch ON	_	(V) 6 4 2 0 µs JSNIA0027GB
8 (L)	Ground	Vehicle speed signal output (2-pulse)	Output	Ignition switch ON	Speedometer operated [When vehicle speed is ap- prox. 40 km/h (25 MPH)]	NOTE: The maximum voltage varies depending on the specification (destination unit).
9		Seat helt buckle switch sig-		Ignition	When seat belt is fastened	12 V
(SB)	Ground	_	Input	switch ON	When seat belt is not fastened	0 V
10	Cround	Manual made sizzal	lo~··t	Ignition	Selector lever DS position	0 V
(W)	Ground	iviariuai mode signai	Input	switch ON	Other than the above	12 V
11	Craun -	Non manual made size -!	lanut	Ignition	Selector lever DS position	12 V
(G)	Ground	ivon-manuai mode signal	Input	switch ON	Other than the above	0 V

	inal No. e color)	Description			Condition	Value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
14 (BR)	Ground	Communication signal (LCD → AMP.)	Input	Ignition switch ON	_	(V) 15 10 5 0 400 µs JSNIA0028GB	
25 (V)	Ground	Manual mode shift down signal	Input	Ignition switch	Selector lever down operation	0 V	
(*)		oignai		ON	Other than the above	12 V	
26 (G)	Ground	Paddle shifter down signal	Input	Ignition switch	Paddle shifter down operation	0 V	
				ON	Other than the above	12 V	
27 (LG)	Ground	Communication signal (METER → AMP.)	Input	Ignition switch ON	_	(V) 6 4 2 0 us JSNIA0027GB	
28 (R)	Ground	Vehicle speed signal output (8-pulse)	Output	Ignition switch ON	Speedometer operated [When vehicle speed is approx. 40 km/h (25 MPH)]	NOTE: The maximum voltage varies depending on the specification (destination unit).	
					Parking brake ON	0 V	
30 (V)	Ground	Parking brake switch signal	Input	Ignition switch ON	Parking brake OFF	(V) 8 4 0 10 ms JSNIA0007GB	N
34 (Y)	Ground	Communication signal (AMP. → LCD)	Output	Ignition switch ON	_	(V) 6 4 2 0 SNIA0027GB	
41 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	

	nal No. color)	Description			Condition	Value (Approx.)						
+	_	Signal name	Input/ Output		Condition							
42 (Y)	Ground	Fuel level sensor signal	Input	Ignition switch ON		(V) 5 4 3 2 1 0 E 1/4 1/2 3/4 F SKIB8867E						
45 (P)	Ground	Ambient sensor signal	Input	_	_	(V) 4 3 2 1 0 -10 0 10 20 30 40 [*C] (14) (32) (50) (68) (86) (104) [*F] JSNIA0014GB						
53 (G)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage						
54 (O)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage						
55 (B)	Ground	Ground	_	Ignition switch ON	_	0 V						
56 (L)	Ground	CAN-H	_	_	_	_						
57	_	Brake fluid level switch sig-		Ignition	Brake fluid level is normal.	5 V						
(W)	Ground	nal	Input	switch ON	The brake fluid level is low- er than the low level	0 V						
58 (B)	Ground	Fuel level sensor signal ground	_	Ignition switch ON	_	0 V						
61 (BR)	Ground	Ambient sensor signal ground	_	Ignition switch ON	_	0 V						
71 (B)	Ground	Ground	_	Ignition switch ON	_	0 V						
72 (P)	Ground	CAN-L	_	_	_	_						







	2 W	SEAT BELT BUCKLE SWITCH (DRIVER SIDE) 3 G - [With VK engine] 3 B - [With VQ engine]	4 R	- B 9	K	Connector No. 1837		Connector Name KAS CON I KOL UNI I	Connector Type A36FW-M4			olgnar Name Lopecincation	W V 0 E 3 V C V	- C C C C C C C C C C C C C C C C C C C				Terning Color Circuity Color	No. of Wire	E02FGY-RS 1 L CAN-H	4 Y R-ANG SEN MAIN SIG	5 W R-ANG SEN VCC	7 R R-ANG SEN SUB SIG	8 P CAN-L	((1 2)) 15 G R-ANG SEN GND	22 GR STOP LAMP SW	25 SB R-MTRRLY	27 G IGN		EF EF	H	- R-MTR (RH)	39 G/R R-MTR (LH)	40 B		FUEL LEYEL SENSOR UNIT AND FUEL PUMP (MAIN)		EUSFGY-KS			[]] . X •	1 2 3 4 5				Signal Name [Specification]	- [With VK engine]	- [With VQ engine]
	Connector No. B13	Connector Name SEA	Connector Type A03FW	<u>4</u>		21	Τ	Τ	Γ	Τ	Terminal Color	No. of Wire	1 SB	2 B			Connector No. B21	N		Connector Type E02	đ	匿	3						Terminal Color	_	>	2 W			Connector No. B22	Connector Name FUEL	т	٦	1	Arts.	S. T.	T	T	T	1	Terminal Color	No. of Wire	Т	-
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	B1	WIRE TO WIRE	TH80FW-CS16-TM4		20 00 00 00 00 00 00 00 00 00 00 00 00 0	- 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		# 10 27 17 17 10 10 10 10 10 10 10 10 10 10 10 10 10				Signal Name [Specification]		-	-		1	-	-		1	-	ı	ſ	1	1	1	1	1	1	1	-	-	1	1	1	1		1	ſ	ſ	1	1		1				-
METER	Connector No.	Connector Name	Connector Type		ę	5					inal Color	_	В	٦	W	g	G	А	0	W	H	SB	8	L	۳	L	SHIELD	_	۵	H	L	W	^	. Р	4	+	+	†	5	+	+	7	+	g 8	$^{+}$	Ť	╀	╀	Ĥ
闄	Conne	Conne	Conne	ą <u>l</u>	Ţ	2					Terminal	Š	_	2	3	2	9	7	8	6	10	11	12	-2	14	12	91	17	2	19	20	21	23	24	25	26	27	87	29	8	6g	9	4	42	3 :	45	202	21	25

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W	77 B - [With VK events] 77 L - [With VK events] 80 W - [With VK events]			
34 G		40 L	4 9 6 6	Terminal Color Signal Name [Specification]
L/Y	1	Connector No. E3 Connector Type SAA36MB-RS10-SJ22 (A) Connector Type	Terminal Color Signal Name [Specification]	++++++
METER Connector No. 8250 Connector Name BRAKE BOOSTER CONTROL UNIT Connector Type TIZ2FW 1 2 5 6 8 1 10 12 1415 17 19 20 21 14 15 17 19 10 12 14 15 17 10 10 12 14 15 17 10 10 10 10 10 10 10 10 10 10 10 10 10	Of Wire of Wire SB SB P P P P P P P P P P P P P P P P P	17 G BRAKE PRESSURE SEN SIGNAL 19 B GND GN	H.S. 7 6 6 61 55 1615 21 59 60 56 1615 21 59 60 56	

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< ECU DIAGNOSIS INFORMATION >

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Revision: 2009 August **MWI-109** 2010 FX35/FX50

Γ	Connector Name WIRE TO WIRE		1003	PARKING BRAKE SWITCH			कि पार्ट के कि		Terminal Color Signal Name [Specification]	61	20 GR -	21	Signal Name [Specification]	23	+	20 BK =	╀	ACCELEDATOR DEDAIL ACTUATOR 29		KDZ06FB 31	\dashv	_		S S	╀	H		Signal Name [Specification]	NOILING	BATTERY	ITS COMM-L	GND	IIS COMMA-H									
ŀ	W 96	100 Y	Connector No.	Connector Name	Connector Type		修	HS				- 1	Terminal Color	No. of Wire	l LG		Connector No.	N and a second	Collinector Idallie	Connector Type	þ	李	H.S.				Ŀ	No of Wire	t	2 0	H	4 r	6									
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907.2	WIRE TO WIRE	TH80FW-CS16-TM4							Signal Name [Specification]	1	-	-	1	-	1	1 1	1	-	-	ſ	ı	I	-	1 1	1	1	- [With ICC]	- [Without ICG]	- [With IGG]	- [Without ICG]	1	- [With ICC]	- [Without ICC] - [With ICC]	- [Without ICC]		-	-	1	1 1	1	-	. 1
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Connector Name Conn	0
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MWI-113 Revision: 2009 August 2010 FX35/FX50

MIS4 Connector No. M66 45 P METER CONTROL SWITCH Connector Name UNIFIED METER AND A/C AMP. 46 O	TH12MW-N	8 B J N	Color Signal Name [Specification] Terminal Color Signal Name [Specification] 62 SB Color Col	B - 5 L MANUAL MODE SHIFT DP SIGNAL 69 L A P - 6 0 PADDLE SHIFTER UP SIGNAL 70 R EACH DOOR	4 R - 7 GR COMMUNICATION SIGNAL (3-MP-)-METER) 71 B GROUND 5 B - 8 L VEHICLE SPEED SIGNAL (2-PULSE) 72 P CAN-L	LG - 9 SB FROM - 9 SB FROM - 10 W	П	M56	TRIP A/B RESET SWITCH 23 Y AT SNOW SWITCH SIGNAL 25 V MANUAL MODE SHIFT DOWN SIGNAL	TH04MW-NH 26 G PADDLE SHIFTER DOWN SIGNAL	S .	20 V FARMIG BANK SWITCH SIGNAL	34 Y COMMUNICATION SIGNAL (AMP—).CD) [9] 10[11] 13 [15] 6	4	Territor Color Signal Name (Specification)	Color Miles Color	of Wire Signal Name [Specimoation] Connector Name Unit-IED MELIER AND A/O AMP. 2 Y	- Connector Type TH32FW-NH 3 W OIL*	2 B 7 GR 13N	MA C	53 54 55 56 11 B	[57/28/59/60/61/62/63] [65] [169/70/71/72] 13 LG OIL TEMP (+)	*	L	emma	41 V ACC POWER SUPPLY	
	Connector Type TH12MM-NH	3 4		3 B B	5 B B	- 88 <i>1</i>		Connector No. M56	Connector Name TRIP A/B RESET SWITCH	Connector Type TH04MW-NH		Si H		112				- 1	2 B = -								
MS3 COMBINATION METER	TH40FW-NH	5 6 7 10 20 20 31 32 24 50 50 50 50 50 50 50 50 50 50 50 50 50	Signal Name [Specification]	COMMUNICATION SIGNAL (METER->AMP.) COMMUNICATION SIGNAL (AMP>METER)	GROUND ALTERNATOR SIGNAL	AIR BAG SIGNAL SECURITY INDICATOR SIGNAL	GROUND GATED CONTED CONTED	IGNITION POWER SUPPLY	GROUND COMMUNICATION SIGNAL (LCD->AMP.)	COMMUNICATION SIGNAL (AMP>LCD)	VEHICLE SPEED SIGNAL (8-PULSE)	BRAKE FLUID LEVEL SWITCH SIGNAL	SEAT BELT BUCKLE SW (DRIVER SIDE) DASSENGED SEAT BELT WARNING SIGNAL	WASHER LEVEL SWITCH SIGNAL	ILL CON OUT	ENTER SWITCH SIGNAL	TRIP A/B RESET SWITCH SIGNAL	ILLUMINATION CONTROL SWITCH SIGNAL (=)	ILLUMINATION CONTROL SWITCH SIGNAL (+)								
	Connector Type	1 2 3 21 22 23 24	Terminal Color No. of Wire	2 LG 3 GR	2 N B	7 P	H	+	22 B 24 BR	Н	26 K	28 W	29 SB	╀	+	37 SB	38 L	39 P	0 0								

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	M110	WIRE TO WIRE	TH16MW-NH		2 3 4 5 6 7	9 10 11 12 13 14 15 16	Signal Name [Specification]	1	1	1		-	-	1		1	1			MIT6	WIRE TO WIRE	TK36MW-NS10				1 2 3 4 5 1112131以1511的1719143 到到15128733 34351738				Signal Name [Specification]	1	1	1	- [With VK engine]	- [With VQ engine]	- [With VK engine]	- [with vo engine]	1	- [With VK engine]		
	. No.	· Name	. Type				Color of Wire	7	۵	a 8	GR	SB	ΓG	SHIELD	צומ	2	۸				- Name	· Type				1 2 3 4				Color of Wire	В	W	L	В	۵ (۵ ۲	n a	9 6	Ĺ		
	Connector No.	Connector Name	Connector Type	图			Terminal No.	-	2	4	9	7	8	6	2 =	12	91			Connector No.	Connector Name	Connector Type	q	唐	Š		_		ĺ	Terminal No.	-	2	3	4	4 1	۵,		2	. 6		
	M107	ECM	RH24FGY-RZ8-R-LH-Z	1 128 124 128	123 1191151111107108 122 118114110106102	125 121 117 118 108 108 101 97	Signal Name [Specification]	APSI	APS2 [With ICC]	APS2 [Without ICC]	AVCC-APST [With ICC]	GND-A(APS1)	ASCDSW	FTPRS	AVGC-APSZ [With ICC]	GND-A(APS2) [With ICC]	GND-A(APS2) [Without ICC]	PDPRESS		AVCC-FTPRS			ESS		VEHCAN-L1	GNDA-PDPRES	KLINE	CDCV	BRAKE	QND	VBR	BNC SW	GND	GND			1			ı	
띪	r No.	or Name	r Type			_	Color of Wire	œ	≻	٥	5 _	W	SB	<u>.</u> د	ی ر	, K	GR	٦	≥ (H >	> 0	œ	0	>	۵.	≼ ا	: E	PT	۵	m m	g B	BR	В	В							
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Connecto	Connector Name M	WIRE TO WIRE	45	> (- [Without ICC]	96	+	1	109	>	COMBI SW INPUT 2	
	7		43	۵	- [With ICC]	97	o L	-	110	g	HAZARD SW	
Connector Type	٦	TH80MW-CS16-TM4	43	<u>_</u>	- [Without ICC]	86	4	ı	Ξ	æ	S/L UNIT COMM	
4			44	۳	1	66	EG 0	1				
李		2 P	45	4	- [With ICC]	100	≻ 0	1		Ī		
H.S.		10 00 00 00 00 00 00 00 00 00 00 00 00 0	42	g	- [Without ICC]				Connector No.		M123	
		8	46	٥		l			Connector Name		BCM (BODY CONTROL MODULE)	
		2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	46	SHELD	1	Son	Connector No.	M122		П	(11000)	
		2	47	4	- [With ICC]	Con	Connector Name	BCM (BODY CONTROL MODULE)	Connector Type		TH40FG-NH	
			47	۵	- [Without ICC]			Т	4			
	Ļ		48	۵	- [With ICC]	S S	Connector Type	TH40FB-NH	手作力			
Terminal		Signal Name [Specification]	48	۳	- [Without ICC]	Q.			E.S.			
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16	. 5		69	c		8	H	NATS ANT AMP	137		RECEIVER/SENSOR GND	
20	8	1	17	g	1	18	H	NATS ANT AMP.	138	>	SENSOR POWER SUPPLY	
21	97	1	72	>		82	H	IGN RELAY (F/B) CONT	140	œ	SHIFT N/P	
22	В	- [With entertainment system]	73	^	-	83	B GR	KEYLESS ENTRY RECEIVER SIGNAL	141	Ð	SECURITY INDICATOR OUTPUT	
22	GR	 [Without entertainment system] 	74	LG	1	87	, BR	COMBI SW INPUT 5	142	0	COMBI SW OUTPUT 5	
23	W	- [With entertainment system]	75	œ	- [With VK engine]	88	\dashv	COMBI SW INPUT 3	143	۵	COMBI SW OUTPUT 1	
23	>	[Without entertainment system]	75	BR	- [With VQ engine]	88	+	PUSH SW	144	ŋ	COMBI SW OUTPUT 2	
24	œ	 [With entertainment system] 	9.6	>	1	8	۵	CAN-L	145	7	COMBI SW OUTPUT 3	
24	>	 [Without entertainment system] 	77	۳ اد	1	6	+	CAN-H	146	SB	COMBI SW OUTPUT 4	
25	SHELD	 [With entertainment system] 	80	۳	1	95	១	KEY SLOT ILL	120	æ	DRIVER DOOR SW	
25	r ;	 [Without entertainment system] 	81	1	-	93	+	QNI NO	151	5	REAR WINDOW DEFOGGER RELAY CONT	
26	SB:	1	82	<u>- </u>	1	95	+	+				
2/	>	1	20	٥	1	96	£	A/I SHIFT				
28	SHIELD	-	84	>	1	97	+	S/L CONDITION 1				
29	0	1	82	SB	1	86	+	S/L CONDITION 2				
30	۵	1	98	В	ı	66	4	SHIFT P				
31	*	1	87	۵	1	8	+	PASSENGER DOOR REQUEST SW				
32	>		91	1	í	101	+	DRIVER DOOR REQUEST SW				
33	SS :	1	92	1	1	102	+	BLOWER FAN MOTOR RELAY CONT				
04 5	> 8	[Oot rand	93	σ <u>۽</u>	Factors vol.	5 3	+	KEYLESS ENTRY RECEIVER POWER SUPPLY				
14	SS :	- [With ICC]	94	≥ (- [With VK engine]	106	+	S/L UNIT POWER SUPPLY				
41	<u>_</u>	- [Without ICC]	94	0	- [With VQ engine]		7 LG	COMBI SW INPUT 1				

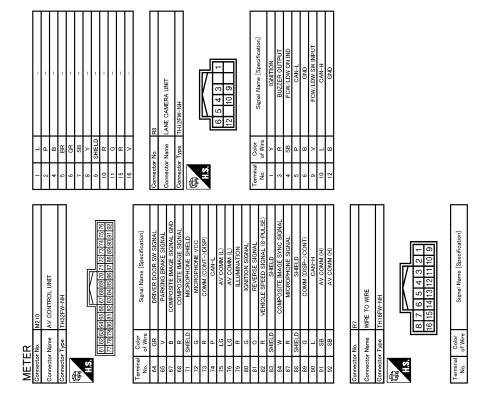
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Signal Name [Specification] Signal Name [Specification] CAN-H CAN-H CAN-H CAN-L	I	M
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Scient Name Color Name Cotor Name		0
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2010 FX35/FX50

Revision: 2009 August



JCNWA2820GB

INFOID:0000000005524652

Fail-Safe

FAIL-SAFE

The unified meter and A/C amp. activates the fail-safe control if CAN communication with each unit is malfunctioning.

< ECU DIAGNOSIS INFORMATION >

	Function	Specifications
Speedometer		
Tachometer		Recet to zero by augrending communication
Fuel gauge		Reset to zero by suspending communication.
Engine coolant temperatur	re gauge	
Illumination control		When suspending communication, change to nighttime mode.
Information display		The display turns off by suspending communication.
Buzzer		The buzzer turns off by suspending communication.
	ABS warning lamp	
	VDC OFF indicator lamp	
	SLIP indicator lamp	
	Brake warning lamp	
	CRUISE warning lamp	
	IBA OFF indicator lamp	The lamp turns on by suspending communication.
	AWD warning lamp	
	Low tire pressure warning lamp	
	RAS warning lamp	
Marie Control Control	Master warning lamp	
Warning lamp/indicator lamp	Malfunction indicator lamp	
•	AFS OFF indicator lamp	The lamp blinking caused by communication malfunction
	High beam indicator	
	Turn signal indicator lamp	
	Tail lamp indicator lamp	
	Oil pressure warning lamp	
	A/T CHECK warning lamp	The lamp turns off by suspending communication.
	Key warning lamp	
	Lane departure warning lamp	
	LDP ON indicator lamp	
	Sports mode indicator lamp	

DTC Index

Display contents of CON- SULT-III	Time	Diagnostic item is detected when	Refer to
CAN COMM CIRCUIT [U1000]	CRNT, 1 - 39	When unified meter and A/C amp. is not transmitting or receiving CAN communication signal for 2 seconds or more.	MWI-49
CONTROL UNIT (CAN) [U1010]	CRNT, 1 - 39	When detecting error during the initial diagnosis of CAN controller of unified meter and A/C amp.	MWI-50
COMM ERROR 1 [B2201]	CRNT, 1 - 39	If a communication error is present in the communication line between unified meter and A/C amp. and combination meter for 2 seconds or more.	MWI-51
COMM ERROR 2 [B2202]	CRNT, 1 - 39	If a communication error is present in the communication line between unified meter and A/C amp. and combination meter for 2 seconds or more.	MWI-53
VEHICLE SPEED [B2205]	CRNT, 1 - 39	The abnormal vehicle speed signal is input from ABS actuator and electric unit (control unit) for 2 seconds or more.	<u>MWI-55</u>

Revision: 2009 August **MWI-119** 2010 FX35/FX50

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< ECU DIAGNOSIS INFORMATION >

Display contents of CON- SULT-III	Time	Diagnostic item is detected when	Refer to
ENGINE SPEED [B2267]	CRNT, 1 - 39	If ECM continuously transmits abnormal engine speed signals for 2 seconds or more.	<u>MWI-56</u>
WATER TEMP [B2268]	CRNT, 1 - 39	If ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more.	<u>MWI-57</u>

< ECU DIAGNOSIS INFORMATION >

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

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item		Condition	Value/Status
RAD FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	0 – 100 %
		A/C switch OFF	Off
AC COMP REQ	Engine running	A/C switch ON (Compressor is operating)	On
TAIL OCL D DEC	Lighting switch OFF		Off
TAIL&CLR REQ	Lighting switch 1ST, 2ND, HI or	AUTO (light is illuminated)	On
HI LO BEO	Lighting switch OFF		Off
HL LO REQ	Lighting switch 2ND HI or AUTO	(light is illuminated)	On
LII LII DEO	Lighting switch OFF		Off
HL HI REQ	Lighting switch HI		On
		Front fog lamp switch OFF	Off
FR FOG REQ	Lighting switch 2ND or AUTO (light is illuminated)	Front fog lamp switch ON Daytime running light activated (Only for Canada)	On
	Ignition switch ON	Front wiper switch OFF	Stop
ED MID DEO		Front wiper switch INT	1LOW
FR WIP REQ		Front wiper switch LO	Low
		Front wiper switch HI	Hi
		Front wiper stop position	STOP P
WIP AUTO STOP	Ignition switch ON	Any position other than front wiper stop position	ACT P
		Front wiper operates normally	Off
WIP PROT	Ignition switch ON	Front wiper stops at fail-safe operation	BLOCK
IGN RLY1 -REQ	Ignition switch OFF or ACC		Off
IGN KLT I -KEQ	Ignition switch ON		On
ICN DLV	Ignition switch OFF or ACC		Off
IGN RLY	Ignition switch ON		On
DUCH CW	Release the push-button ignition	n switch	Off
PUSH SW	Press the push-button ignition s	witch	On
INTER/NP SW	Ignition switch ON	Selector lever in any position other than P or N	Off
		Selector lever in P or N position	On
ST DI V CONT	Ignition switch ON		Off
ST RLY CONT	At engine cranking		On
ILIDT DLV DEO	Ignition switch ON		Off
IHBT RLY -REQ	At engine cranking		On

Revision: 2009 August **MWI-121** 2010 FX35/FX50

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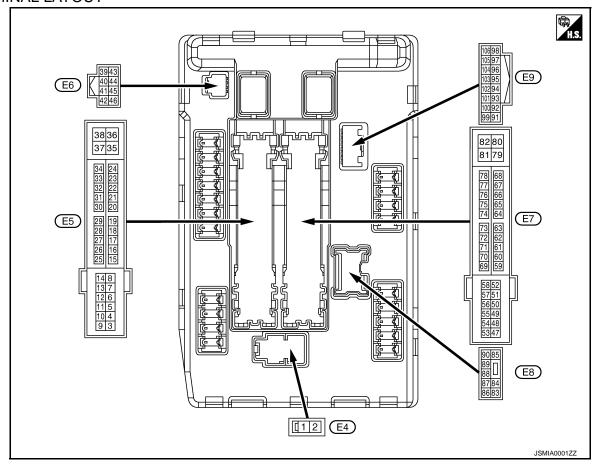
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< ECU DIAGNOSIS INFORMATION >

Monitor Item	Co	Value/Status	
	Ignition switch ON		Off
	At engine cranking		$INHI \to ST$
ST/INHI RLY		r control relay cannot be recognized by c. when the starter relay is ON and the	UNKWN
DETENT SW	Ignition switch ON	Press the selector button with selector lever in P position Selector lever in any position other than P	Off
	Release the selector button with se	elector lever in P position	On
	None of the conditions below are p	present	Off
S/L RLY -REQ	Open the driver door after the ignition switch is turned OFF (for a few seconds) Press the push-button ignition switch when the steering lock is activated		On
	Steering lock is activated	LOCK	
S/L STATE	Steering lock is deactivated		UNLOCK
	[DTC: B210A] is detected	UNKWN	
DTRL REQ	NOTE: The item is indicated, but not mon	Off	
OIL P SW	Ignition switch OFF, ACC or engine	e running	Open
OIL P SVV	Ignition switch ON		Close
HOOD SW	Close the hood		Off
HOOD SW	Open the hood		On
HL WASHER REQ	NOTE: The item is indicated, but not monitorial	itored.	Off
	Not operation		Off
THFT HRN REQ	Panic alarm is activated Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYSTEM		On
HORN CHIRP	Not operating		Off
HONN CHIRP	Door locking with Intelligent Key (h	norn chirp mode)	On
CRNRNG LMP REQ	NOTE: The item is indicated, but not mon	itored.	Off

< ECU DIAGNOSIS INFORMATION >

TERMINAL LAYOUT



PHYSICAL VALUES

	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
1 (W)	Ground	Battery power supply	Input	Ignition swi	tch OFF	Battery voltage
2 (L)	Ground	Battery power supply	Input	Ignition swi	tch OFF	Battery voltage
4	Ground	Front wiper LO	Output Ignition		Front wiper switch OFF	0 V
(V)	Giodila	Front wiper LO	Output	switch ON	Front wiper switch LO	Battery voltage
5	Ground	Front wiper HI	Output	Ignition	Front wiper switch OFF	0 V
(L)	Giodila	Tront wiper rii	Output	switch ON	Front wiper switch HI	Battery voltage
7	Ground	Tail, license plate lamps &	Output	Ignition	Lighting switch OFF	0 V
(R)	Ground	interior lamps	Output	switch ON	Lighting switch 1ST	Battery voltage
10 ^{*1}				Ignition switch OFF (More than a few seconds after turning ignition switch OFF) Ignition switch ON Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0 V
(SB)	Ground	ECM relay power supply	Output			Battery voltage

Revision: 2009 August **MWI-123** 2010 FX35/FX50

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< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	Value (Approx.)
44		Chapting lack unit page		Ignition switch OFF	A few seconds after opening the driver door	Battery voltage
11 (BR)	Ground	Steering lock unit power supply	Output	Ignition switch LOCK	Press the push-button ig- nition switch	Battery voltage
				Ignition sw	itch ACC or ON	0 V
12 (B)	Ground	Ground	_	Ignition sw	itch ON	0 V
40					tely 1 second or more after ignition switch ON	0 V
13 (Y)	Ground	Fuel pump power supply	Output		nately 1 second after turning on switch ON unning	Battery voltage
10				lamiti	Front wiper stop position	0 V
16 (LG)	Ground	Front wiper stop position	Input	Ignition switch ON	Any position other than front wiper stop position	Battery voltage
19	0	Indian relative	0.44	Ignition sw	itch OFF	0 V
(W)	Ground	Ignition relay power supply	Output	Ignition sw	itch ON	Battery voltage
25	C	lanition relations	O 4 4	Ignition sw	itch OFF	0 V
(G)	Ground	Ignition relay power supply	Output	Ignition sw	itch ON	Battery voltage
26 ^{*2}	0	In Sign and a second as a second as	0	Ignition sw	itch OFF	0 V
(R)	Ground	Ignition relay power supply	Output	Ignition switch ON		Battery voltage
27	Cround	lanition valou monitor	lmmt	Ignition sw	itch OFF or ACC	Battery voltage
(Y)	Ground	Ignition relay monitor	Input	Ignition sw	itch ON	0 V
28	Ground	Push-button ignition	Innut	Press the p	oush-button ignition switch	0 V
(O)	Ground	switch	Input	Release th	e push-button ignition switch	Battery voltage
30	Ground	Starter relay control	Input	Ignition	Selector lever in any position other than P or N	0 V
(GR)			·	switch ON	Selector lever P or N	Battery voltage
32	Ground	Steering lock unit condi-	Innut	Steering lo	ck is activated	0 V
(SB)	Giourid	tion-1	Input	Steering lo	ck is deactivated	Battery voltage
33	Ground	Steering lock unit condi-	Innut	Steering lo	ck is activated	Battery voltage
(P)	Giouria	tion-2	Input	Steering lo	ck is deactivated	0 V
36 (G)	Ground	Battery power supply	Input	Ignition sw	itch OFF	Battery voltage
39 (P)	_	CAN-L	Input/ Output		_	_
40 (L)	_	CAN-H	Input/ Output		_	_
41 (B)	Ground	Ground	_	Ignition sw	itch ON	0 V
42	Ground	Cooling fan relay control	Input	Ignition sw	itch OFF or ACC	0 V
(Y)	Ciound	Cooming fair relay control	mput	Ignition sw	itch ON	0.7 V

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	
43 (SB)	Ground	A/T shift selector (Detention switch)	Input	Ignition switch ON	Press the selector button (Selector lever P) Selector lever in any position other than P	Battery voltage	
					Release the selector but- ton (selector lever P)	0 V	
44	Ground	Horn relay control	Input	The horn is	deactivated	Battery voltage	
(W)	Ground	Tiom relay control	Прис	The horn is	s activated	0 V	
45	Ground	Anti theft horn relay control	Input	The horn is	s deactivated	Battery voltage	
(G)	0.00	,		The horn is	activated	0 V	
46 (BR)	Ground	Starter relay control	Input	Ignition switch ON	Selector lever in any position other than P or N	0 V	
(DIX)				SWILCH ON	Selector lever P or N	Battery voltage	
					A/C switch OFF	0 V	_
48 (L)	Ground	A/C relay power supply	Output	Engine running	A/C switch ON (A/C compressor is operating)	Battery voltage	
49				Ignition swi (More than ignition swi	a few seconds after turning	0 V	
(W)*1 (SB)*3	Ground	ECM relay power supply	Output	Ignition sIgnition s(For a fetion switch	switch OFF w seconds after turning igni-	Battery voltage	
51	Cround	I amitian relevanever eventu	Outrout	Ignition swi	itch OFF	0 V	
(G)	Ground	Ignition relay power supply	Output	Ignition sw	itch ON	Battery voltage	
52	Ground	Ignition relay power supply	Output	Ignition swi	itch OFF	0 V	
(W)	Cround	igilition rolay power supply	Cutput	Ignition swi	itch ON	Battery voltage	
FO				Ignition swi (More than ignition swi	a few seconds after turning	0 V	
53 (W)	Ground	ECM relay power supply	Output	Ignition s Ignition s (For a fe tion swite)	switch OFF w seconds after turning igni-	Battery voltage	
54		Throttle control motor re-		Ignition swi (More than ignition swi	a few seconds after turning	0 V	_
(R)	Ground	lay power supply	Output	 Ignition switch ON Ignition switch OFF (For a few seconds after turning ignition switch OFF) 		Battery voltage	
55 (BR)	Ground	ECM power supply	Output	Ignition swi	itch OFF	Battery voltage	_
56				Ignition swi	itch OFF	0 V	
(O) ^{*1} (V) ^{*3}	Ground	Ignition relay power supply	Output	Ignition swi	itch ON	Battery voltage	
57	Ground	Ignition relay power supply	Output	Ignition swi	itch OFF	0 V	
(LG)	Cround	iginilori rolay power supply	Julput	Ignition sw	itch ON	Battery voltage	_

Revision: 2009 August **MWI-125** 2010 FX35/FX50

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description			Value				
+	e color)	Signal name	Input/ Output	Condition	(Approx.)				
58	Ground	Ignition relay power supply	Output	Ignition switch OFF	0 V				
(Y)	Ground	ignition relay power supply	Output	Ignition switch ON	Battery voltage				
69			_	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)	ng Battery voltage				
(W)	Ground	ECM relay control	Output	 Ignition switch ON Ignition switch OFF (For a few seconds after turning ig tion switch OFF) 	ni-				
70 (O)	Ground	Throttle control motor re- lay control	Output	Ignition switch ON $ ightarrow$ OFF	0 − 1.0 V ↓ Battery voltage ↓ 0 V				
				Ignition switch ON	0 – 1.0 V				
74			_	Ignition switch OFF	0 V				
(G)	Ground	Ignition relay power supply	Output	Ignition switch ON	Battery voltage				
75		0.1		Ignition Engine stopped	0 V				
(Y)	Ground	Oil pressure switch	Input	switch ON Engine running	Battery voltage				
					Ignition switch ON	2 2ms JPMIA0001GB 6.3 V			
76 (P)*1 (V)*3	Ground	Power generation command signal	Output	Output	Output	Output	Output	40% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"	(V) 6 4 2 0 → 2ms JPMIA0002GB 3.8 V
				80% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"	(V) 6 4 2 0 				
77 (B)*1	Ground	Fuel pump relay control	Output	 Approximately 1 second after turning the ignition switch ON Engine running 	0 – 1.0 V				
(L)*3				Approximately 1 second or more after turning the ignition switch ON	Battery voltage				
80 (W)	Ground	Starter motor	Output	At engine cranking	Battery voltage				

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
83	Ground	Hoodlamp I O (PH)	Output	Ignition	Lighting switch OFF	0 V
(R)	Ground	Headlamp LO (RH)	Output	switch ON	Lighting switch 2ND	Battery voltage
84	Ground	Headlamp LO (LH)	Output	Ignition	Lighting switch OFF	0 V
(P)	Ground	neadiamp LO (Ln)	Output	switch ON	Lighting switch 2ND	Battery voltage
86 (W)	Ground	Front fog lamp	Output	Lighting switch 2ND	Front fog lamp switch ON Daytime running light activated (Only for Canada)	Battery voltage
					Front fog lamp switch OFF	0 V
88 (G)	Ground	Washer pump power supply	Output	Ignition swi	itch ON	Battery voltage
89	Ground	Headlamp HI (RH)	Output	Ignition	Lighting switch HI Lighting switch PASS	Battery voltage
(BR)		. ,		switch ON	Lighting switch OFF	0 V
90	Ground	Headlamp HI (LH)	Output	Ignition switch ON	Lighting switch HI Lighting switch PASS	Battery voltage
(Y)			-	SWILCH ON	Lighting switch OFF	0 V
91	Cround	Darking Jama (DH)	Output	Ignition	Lighting switch 1ST	Battery voltage
(P)	Ground	Parking lamp (RH)	Output	switch ON	Lighting switch OFF	0 V
92	Ground	Parking lamp (LH)	Output	Ignition	Lighting switch 1ST	Battery voltage
(O)	Giodila	raiking lamp (LFI)	Output	switch ON	Lighting switch OFF	0 V
97 (V)	Ground	Cooling fan control	Output	Engine idlir	ng	0 – 5 V
104	Ground	Hood switch	lpput	Close the h	nood	Battery voltage
(LG)	Ground	TIOOG SWILGIT	Input	Open the h	ood	0 V

^{*1:} VK engine models

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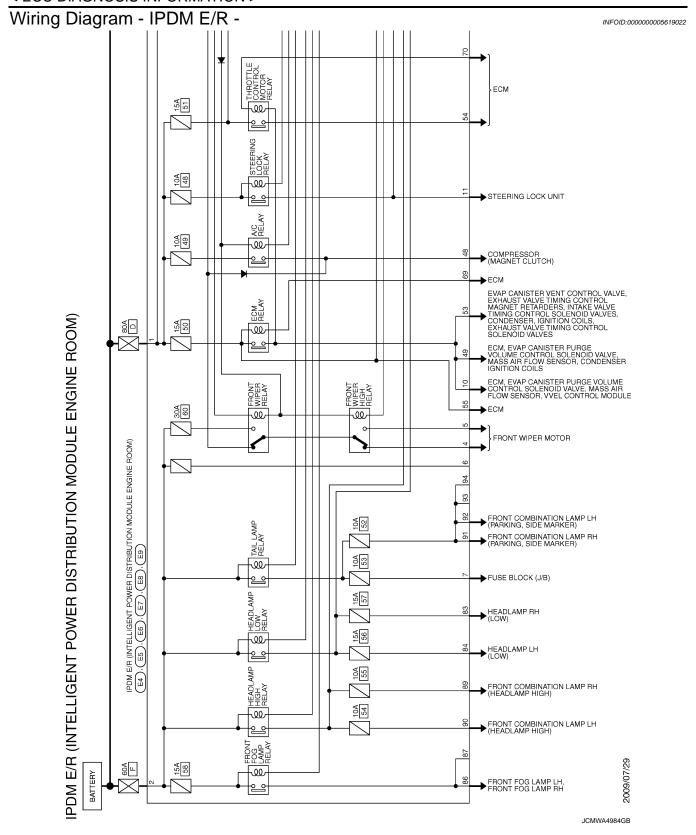
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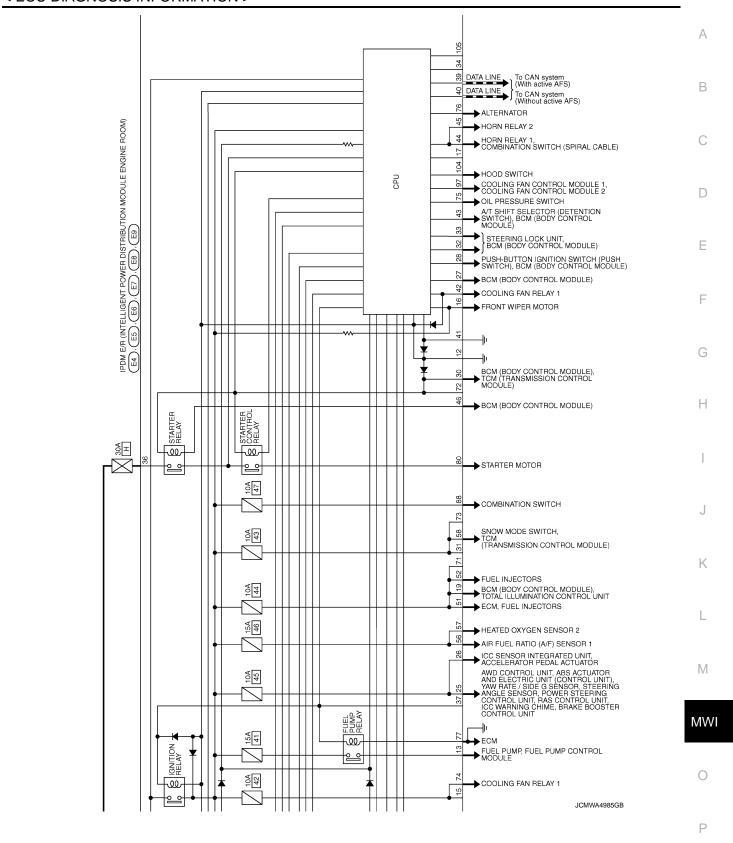
^{*2:} Only for the models with ICC system

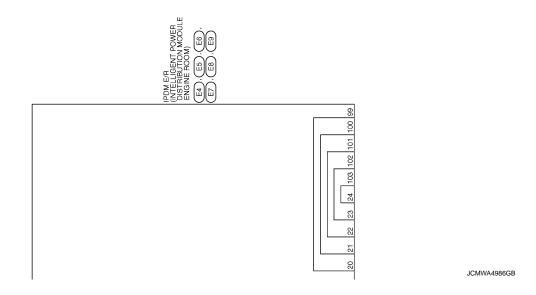
^{*3:} VQ engine models

< ECU DIAGNOSIS INFORMATION >



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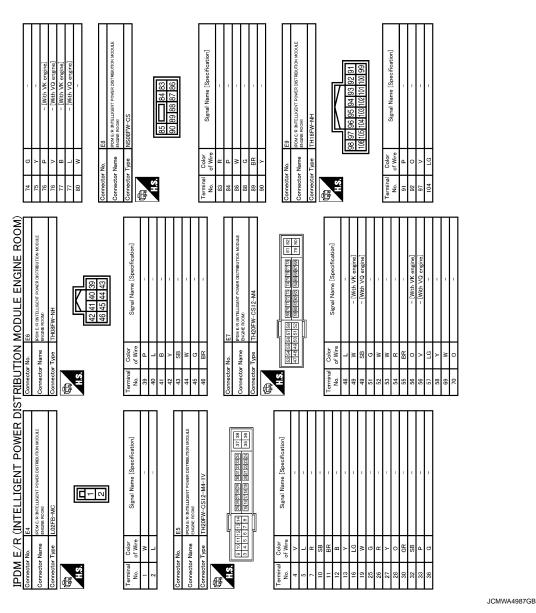
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Fail-safe

CAN COMMUNICATION CONTROL

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

If No CAN Communication Is Available With ECM

Revision: 2009 August **MWI-131** 2010 FX35/FX50

< ECU DIAGNOSIS INFORMATION >

Control part	Fail-safe operation
Cooling fan	 Outputs the pulse duty signal (PWM signal) 100% when the ignition switch is turned ON Outputs the pulse duty signal (PWM signal) 0% when the ignition switch is turned OFF
A/C compressor	A/C relay OFF
Alternator	Outputs the power generation command signal (PWM signal) 0%

If No CAN Communication Is Available With BCM

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

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay inside it.
- IPDM E/R judges the ignition relay error if the voltage differs between the contact circuit and the excitation coil circuit.
- If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

Voltage	judgment		Operation	
Ignition relay contact side	Ignition relay excitation coil side	IPDM E/R judgment		
ON	ON	Ignition relay ON normal	_	
OFF	OFF	Ignition relay OFF normal	_	
ON	OFF	Ignition relay ON stuck	Detects DTC "B2098: IGN RELAY ON" Turns ON the tail lamp relay for 10 minutes	
OFF	ON	Ignition relay OFF stuck	Detects DTC "B2099: IGN RELAY OFF"	

FRONT WIPER CONTROL

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

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

< ECU DIAGNOSIS INFORMATION >

Ignition switch	Front wiper switch	Front wiper stop position signal
ON	OFF	The front wiper stop position signal (stop position) cannot be input for 10 seconds.
ON	ON	The front wiper stop position 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

NOTE:

- The details of time display are as follows.
- CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.
- IGN counter is displayed on FFD (Freeze Frame data).
- The number is 0 when is detected now.
- The number increases like 1 \rightarrow 2 \cdots 38 \rightarrow 39 after returning to the normal condition whenever IGN OFF \rightarrow ON.
- The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

		×: Applicable
CONSULT display	Fail-safe	Reference
No DTC is detected. further testing may be required.	_	_
U1000: CAN COMM CIRCUIT	×	PCS-16
B2098: IGN RELAY ON	×	PCS-17
B2099: IGN RELAY OFF	_	PCS-18
B2108: STRG LCK RELAY ON	_	SEC-99
B2109: STRG LCK RELAY OFF	_	<u>SEC-100</u>
B210A: STRG LCK STATE SW	_	<u>SEC-101</u>
B210B: START CONT RLY ON	_	<u>SEC-105</u>
B210C: START CONT RLY OFF	_	SEC-106
B210D: STARTER RELAY ON	_	<u>SEC-107</u>
B210E: STARTER RELAY OFF	_	<u>SEC-108</u>
B210F: INTRLCK/PNP SW ON	_	SEC-110
B2110: INTRLCK/PNP SW OFF	_	<u>SEC-112</u>

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THE FUEL GAUGE POINTER DOES NOT MOVE

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

THE FUEL GAUGE POINTER DOES NOT MOVE

Description INFOID:0000000005524663

Fuel gauge needle will not move from a certain position.

Diagnosis Procedure

INFOID:0000000005524664

1. CHECK UNIFIED METER AND A/C AMP. OUTPUT SIGNAL

- Connect CONSULT-III.
- 2. Select the "Data Monitor" for the "METER/M&A" and compare the "FUEL METER" monitor value with the fuel gauge reading on the combination meter. Refer to MWI-61, "Component Function Check".

Does monitor value match fuel gauge reading?

YES >> GO TO 2.

NO >> Replace combination meter.

2. CHECK FUEL LEVEL SENSOR SIGNAL CIRCUIT

Check the fuel level sensor signal circuit. Refer to MWI-61. "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK FUEL LEVEL SENSOR UNIT

Perform a unit check for the fuel level sensor unit. Refer to MWI-62, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace fuel level sensor unit. Refer to FL-5, "Removal and Installation".

4. CHECK FLOAT INTERFERENCE

Check that the float arm interferes with or binds to other components in the fuel tank.

Is the inspection result normal?

YES >> Replace unified meter and A/C amp.

NO >> Repair or replace malfunctioning parts.

THE METER CONTROL SWITCH IS INOPERATIVE

< SYMPTOM DIAGNOSIS > THE METER CONTROL SWITCH IS INOPERATIVE Α Description INFOID:0000000005524665 If any of the following malfunctions is found for the meter control switch operation. В All switches are inoperative · The specified switch cannot be operated Diagnosis Procedure INFOID:0000000005524666 1. CHECK METER CONTROL SWITCH SIGNAL CIRCUIT Check the meter control switch signal circuit. Refer to MWI-64, "Diagnosis Procedure". D Is the inspection result normal? YFS >> GO TO 2. Е NO >> Repair harness or connector. 2.CHECK METER CONTROL SWITCH UNIT Perform a unit check for the meter control switch. Refer to MWI-65, "Component Inspection". F Is the inspection result normal? YES >> Replace combination meter. NG >> Replace meter control switch. Н K M

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THE TRIP A/B RESET SWITCH IS INOPERATIVE

< SYMPTOM DIAGNOSIS >

THE TRIP A/B RESET SWITCH IS INOPERATIVE

Description INFOID:0000000005524667

The trip A/B reset switch is inoperative.

Diagnosis Procedure

INFOID:0000000005524668

1. CHECK TRIP A/B RESET SWITCH SIGNAL CIRCUIT

Check the trip A/B reset switch signal circuit. Refer to MWI-66, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK TRIP A/B RESET SWITCH UNIT

Perform a unit check for the trip A/B reset switch. Refer to MWI-66. "Component Inspection".

Is the inspection result normal?

YES >> Replace combination meter.

NG >> Replace trip A/B reset switch.

THE OIL PRESSURE WARNING LAMP DOES NOT TURN ON

< SYMPTOM DIAGNOSIS >	i
THE OIL PRESSURE WARNING LAMP DOES NOT TURN ON	А
Description INFOID:0000000005524669	
The oil pressure warning lamp stays off when the ignition switch is turned ON	В
Diagnosis Procedure	
1. CHECK OIL PRESSURE WARNING LAMP	С
Perform auto active test. Refer to PCS-11, "Diagnosis Description".	
Does oil pressure warning lamp blink?	D
YES >> GO TO 2. NO >> Replace combination meter.	
2.CHECK OIL PRESSURE SWITCH SIGNAL CIRCUIT	Е
Check the oil pressure switch signal circuit. Refer to MWI-68, "Diagnosis Procedure".	_
Is the inspection result normal?	
YES >> GO TO 3. NO >> Repair harness or connector.	F
3.CHECK OIL PRESSURE SWITCH UNIT	
Perform a unit check for the oil pressure switch. Refer to MWI-68, "Component Inspection".	G
Is the inspection result normal?	
YES >> Replace IPDM E/R. Refer to <u>PCS-34, "Removal and Installation"</u> . NO >> Replace oil pressure switch.	Н
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THE OIL PRESSURE WARNING LAMP DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

THE OIL PRESSURE WARNING LAMP DOES NOT TURN OFF

Description INFOID:000000005524671

The oil pressure warning lamp remains illuminated while the engine is running (normal oil pressure)

Diagnosis Procedure

INFOID:0000000005524672

1. CHECK OIL PRESSURE WARNING LAMP

Perform auto active test. Refer to PCS-11, "Diagnosis Description".

Does oil pressure warning lamp blink?

YES >> GO TO 2.

NO >> Replace combination meter.

2.CHECK IPDM E/R OUTPUT VOLTAGE

- 1. Disconnect the oil pressure switch connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between the oil pressure switch harness connector and ground.

Terminals			
(+)		(-)	Voltage
Oil pressure switch			voltage
Connector	Terminal	Ground	
F37	1		Approx. 12 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 4.

3.CHECK OIL PRESSURE SWITCH UNIT

Perform a unit check for the oil pressure switch. Refer to MWI-68, "Component Inspection".

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".

NO >> Replace oil pressure switch.

4. CHECK OIL PRESSURE SWITCH SIGNAL CIRCUIT

Check the oil pressure switch signal circuit. Refer to MWI-68, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".

NO >> Repair harness or connector.

THE PARKING BRAKE RELEASE WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

< SYMPTOM DIAGNOSIS >

THE PARKING BRAKE RELEASE WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

Description INFOID:000000005524673

- The parking brake warning is displayed during vehicle travel even though the parking brake is released
- The parking brake warning is not displayed even though driving the vehicle with the parking brake applied

Diagnosis Procedure

1. CHECK PARKING BRAKE WARNING LAMP OPERATION

- Start engine.
- 2. Check the operation of the parking brake warning lamp when operating the parking brake.

Condition	Warning lamp status	
Parking brake applied	ON	
Parking brake released	OFF	

Is the inspection result normal?

YES >> Replace combination meter.

NO >> GO TO 2.

2.CHECK PARKING BRAKE SWITCH SIGNAL CIRCUIT

- Turn ignition switch OFF.
- Check the parking brake switch signal circuit. Refer to <u>MWI-69</u>. "<u>Diagnosis Procedure</u>".

Is the inspection result normal?

YES >> GO TO 3.

NG >> Repair harness or connector.

3.CHECK PARKING BRAKE SWITCH UNIT

Perform a unit check for the parking brake switch. Refer to BRC-99, "Component Inspection".

Is the inspection result normal?

YES >> Replace combination meter.

NO >> Replace parking brake switch.

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Revision: 2009 August MWI-139 2010 FX35/FX50

THE LOW WASHER FLUID WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

< SYMPTOM DIAGNOSIS >

THE LOW WASHER FLUID WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

Description INFOID.000000005524675

- The warning is still displayed even after washer fluid is added
- The warning is not displayed even though the washer tank is empty

Diagnosis Procedure

INFOID:0000000005524676

1. CHECK WASHER LEVEL SWITCH SIGNAL CIRCUIT

Check the washer level switch signal circuit. Refer to MWI-71, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2. CHECK WASHER LEVEL SWITCH UNIT

Perform a unit check for the washer level switch. Refer to MWI-71, "Component Inspection".

Is the inspection result normal?

YES >> Replace combination meter.

Revision: 2009 August **MWI-140** 2010 FX35/FX50

THE DOOR OPEN WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

< SYMPTOM DIAGNOSIS >

THE DOOR OPEN WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY Description INFOID:0000000005524677 В The door ajar warning is displayed even though all of the doors are closed. The door ajar warning is not displayed even though a door is ajar. Diagnosis Procedure INFOID:0000000005524678 1. CHECK BCM INPUT/OUTPUT SIGNAL D Connect CONSULT-III and check the BCM input signals. Refer to DLK-69, "Component Function Check". Is the inspection result normal? YES >> GO TO 2. Е NO >> GO TO 3. 2.CHECK UNIFIED METER AND A/C AMP. INPUT SIGNAL Select the "Data Monitor" for the "METER/M&A" and check the "DOOR W/L" monitor value. "DOOR W/L" Door open : On Door closed : Off Is the inspection result normal? Н YES >> Replace combination meter. NO >> Replace BCM. Refer to BCS-83, "Removal and Installation". 3.CHECK DOOR SWITCH SIGNAL CIRCUIT Check the door switch signal circuit. Refer to DLK-69, "Diagnosis Procedure". Is the inspection result normal? YES >> GO TO 4. NO >> Repair harness or connector. 4. CHECK DOOR SWITCH UNIT Perform a unit check for the door switch. Refer to <u>DLK-71</u>, "Component Inspection". Is the inspection result normal? YES >> Replace combination meter. NO >> Replace applicable door switch. Refer to DLK-280, "Removal and Installation". M

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THE AMBIENT TEMPERATURE DISPLAY IS INCORRECT

< SYMPTOM DIAGNOSIS >

THE AMBIENT TEMPERATURE DISPLAY IS INCORRECT

Description INFOID:000000005524679

- The displayed ambient air temperature is higher than the actual temperature.
- The displayed ambient air temperature is lower than the actual temperature.

Diagnosis Procedure

INFOID:0000000005524680

NOTE:

Check that the symptom is not applicable to the normal operating condition before starting diagnosis. Refer to MWI-143, "INFORMATION DISPLAY: Description".

1. CHECK AMBIENT SENSOR SIGNAL CIRCUIT

Check the ambient sensor signal circuit. Refer to HAC-88, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK AMBIENT SENSOR UNIT

Perform a unit check for the ambient sensor. Refer to HAC-89, "Component Inspection".

Is the inspection result normal?

YES >> Replace unified meter and A/C amp.

NO >> Replace ambient sensor. Refer to HAC-180, "Removal and Installation".

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

NORMAL OPERATING CONDITION COMPASS

INFOID:0000000005524681

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COMPASS : Description

COMPASS

- The electronic compass is highly protected from changes in most magnetic fields. However, some large changes in magnetic fields can affect it. Some examples are (but not limited to): high tension power lines, large steel buildings, subways, steel bridges, automatic car washes, large piles of scrap metal, etc. While this does not happen very often, it is possible.
- During normal operation, the compass mirror will continuously update the compass calibration to adjust for gradual changes in the vehicle's magnetic "remnant" field. If the vehicle is subjected to high magnetic influences, the compass may appear to indicate false headings, become locked, or appear that it is unable to be calibrated. If this occurs, perform the calibration procedure.
- If at any time the compass continually displays the incorrect direction or the reading is erratic or locked, verify the correct zone variance.

Symptom Chart

Symptom	Cause	Solution / Reference	
The compass display reads "C".	Large change in magnetic field (Steel bridges, subways, concentrations of metal, carwashes, etc.) Compass was calibrated incorrectly or in the presence of a strong magnetic field.		
Compass shows the wrong direction.			
Compass does not change direction appears "Locked".		Perform calibration. Refer to MWI-39, "De-	`
Compass does not show all the directions, one or more is missing.		scription".	
The compass was calibrated but it "loses" calibration.			
On long trips the compass shows the wrong direction.		Perform zone variation setting if correct reading is desired in that location. Refer to MWI-39, "Description".	

INFORMATION DISPLAY

INFORMATION DISPLAY: Description

INFOID:0000000005524682

AMBIENT AIR TEMPERATURE

The displayed ambient air temperature on the information display may differ from the actual temperature because it is a corrected value calculated from the ambient sensor signal by the unified meter and A/C amp. Refer to MWI-33, "INFORMATION DISPLAY: System Description" for details on the correction process.

POSSIBLE DRIVING DISTANCE

The calculated possible driving distance may differ from the actual distance to empty if the refueling amount is approximately 15 ℓ (4 US gal, 3-3/10 Imp gal) or less. This is because the refuel control (moves the fuel gauge needle quicker than normal judging that the driver is refueling the vehicle) is not performed in such a case.

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PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

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 "SRS AIR BAG" and "SEAT BELT" 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 "SRS AIR BAG".
- 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 Air Bag Diagnosis Sensor Unit or other Air Bag 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.

PREPARATION

< PREPARATION >

PREPARATION

PREPARATION

Commercial Service Tools

Tool name		Description
Power tool	PBIC0191E	Loosening screws

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REMOVAL AND INSTALLATION

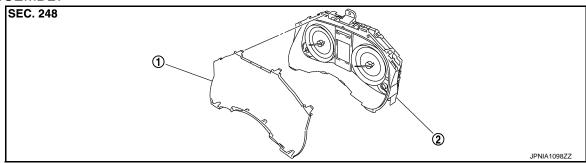
COMBINATION METER

Exploded View

REMOVAL

Refer to IP-11, "Exploded View".

DISASSEMBLY



1. Front cover

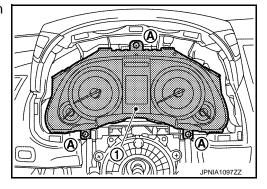
2. Unified meter control unit

Removal and Installation

INFOID:0000000005524685

REMOVAL

- 1. Remove the cluster lid A. Refer to IP-22, "Removal and Installation".
- 2. Remove the combination switch. Refer to BCS-84, "Removal and Installation".
- 3. Remove screw (A) and connector, and then remove combination meter (1).



INSTALLATION

Install in the reverse order of removal.

Disassembly and Assembly

INFOID:0000000005524686

DISASSEMBLY

Disengage the tabs to separate front cover.

ASSEMBLY

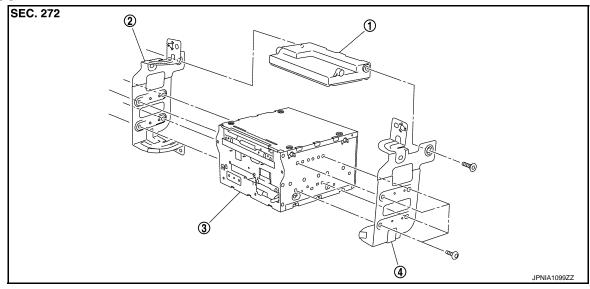
Assemble in the reverse order of disassembly.

Exploded View

REMOVAL

Refer to IP-11, "Exploded View".

DISASSEMBLY



- 1. Unified meter and A/C amp.
- 2. Bracket (LH)

3. AV control unit

4. Bracket (RH)

Removal and Installation

REMOVAL

- 1. Remove the display unit. Refer to <u>AV-138, "Removal and Installation"</u> (without navigation), <u>AV-335, "Removal and Installation"</u> [navigation (twin monitor)], or <u>AV-565, "Removal and Installation"</u> [navigation (twin monitor)].
- 2. Remove the unified meter and A/C amp. and AV control unit as an assembly.
- 3. Remove the bracket screws and remove the unified meter and A/C amp.

INSTALLATION

Install in the reverse order of removal.

NOTE:

- Unified meter and A/C amp. screws are different from other screws. Never confuse them when installing.
- Since AV control unit connector and unified meter and A/C amp. connector have the same from, be careful not insert them wrongly.

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Revision: 2009 August **MWI-147** 2010 FX35/FX50

METER CONTROL SWITCH

< REMOVAL AND INSTALLATION >

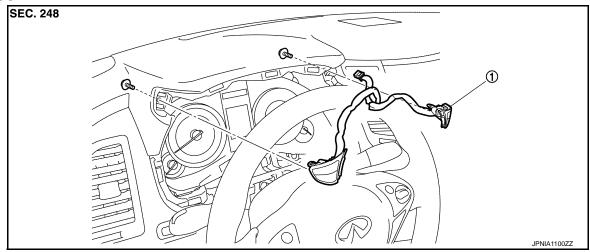
METER CONTROL SWITCH

Exploded View

REMOVAL

Refer to IP-11, "Exploded View".

DISASSEMBLY



1. Meter control switch

Removal and Installation

INFOID:0000000005524690

REMOVAL

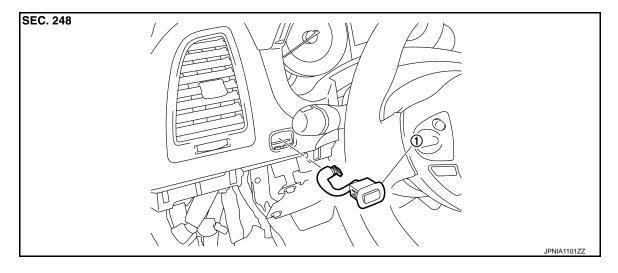
- 1. Remove cluster lid A. Refer to IP-22, "Removal and Installation".
- 2. Remove screws and remove meter control switch.
- 3. Remove meter control switch from instrument panel assembly.

INSTALLATION

Install in the reverse order of removal.

TRIP A/B RESET SWITCH

Exploded View



1. Trip A/B reset switch

Removal and Installation

REMOVAL

- 1. Remove instrument lower panel LH. Refer to IP-22, "Removal and Installation".
- 2. Press pawls and remove trip A/B reset switch.

INSTALLATION

Install in the reverse order of removal.

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COMPASS

< REMOVAL AND INSTALLATION >

COMPASS

Exploded View

Refer to MIR-98, "Exploded View".

Removal and Installation

Refer to MIR-99, "Removal and Installation".

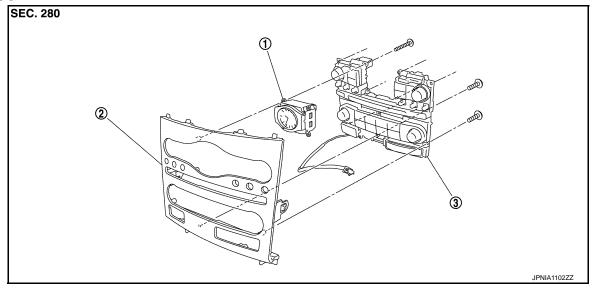
CLOCK

Exploded View

REMOVAL

Refer to IP-11, "Exploded View".

DISASSEMBLY



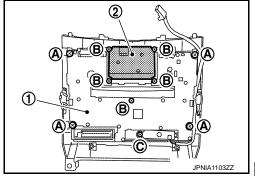
1. Clock 2. Cluster lid C 3. Preset switch

Removal and Installation

REMOVAL

Remove cluster lid C assembly. Refer to <u>IP-22, "Removal and Installation"</u>.

- 2. Remove screws (A), (B), (C) and remove clock (2) in conjunction with preset switch (1) from cluster lid C.
- 3. Disengage the tabs to separate clock (2).



INSTALLATION

Install in the reverse order of removal.

NOTE:

Never confuse screws when installing.

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