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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow INFOID:0000000009060584 В

OVERALL SEQUENCE

D Inspection start Е 1. Get information for symptom Get the detailed information about symptom from the customer 2. Check DTC Print out DTC and freeze frame data (or, write it down). Check related service bulletines. Symptom is described. Symptom is not described. Symptom is described. DTC is detected. DTC is detected. DTC is not detected. 3. Confirm the symptom 4. Confirm the symptom Try to confirm the symptom described Try to confirm the symptom described by the customer. by the customer. Also study the normal operation and failsafe related to the symptom. 5. Perform DTC CONFIRMATION PROCEDURE 6. Detect malfunctioning system by K SYMPTOM DIAGNOSIS 7. Detect malfunctioning part by Diagnosis Procedure Symptom is WW Symptom is not described. 8. Repair or replace the malfunctioning part Check input/output signal or voltage DTC is 9. Final check Ν Symptom remains. detected. Check that the symptom is not detected. Perform DTC Confirmation Procedure again, and then check that the malfunction is repaired. DTC is not detected. Symptom does not remain. Р INSPECTION END

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DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

1.GET INFORMATION FOR SYMPTOM

- 1. Get detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurs).
- 2. Check operation condition of the function that is malfunctioning.

>> GO TO 2.

2. CHECK DTC

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

Are any symptoms described and any DTC detected?

Symptom is described, DTC is detected>>GO TO 3.

Symptom is described, DTC is not detected>>GO TO 4.

Symptom is not described, DTC is detected>>GO TO 5.

3.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

Also study the normal operation and fail-safe related to the symptom.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5.

4. CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6.

5. PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC CONFIRMATION PROCEDURE for the detected DTC, and then check that DTC is detected again. At this time, always connect CONSULT to the vehicle, and check self diagnostic results in real time. If two or more DTCs are detected, refer to <u>BCS-89</u>, "DTC Inspection Priority Chart" (BCM) or <u>PCS-30</u>, "DTC Index" (IPDM E/R), and determine trouble diagnosis order.

NOTE:

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC CONFIRMATION PROCEDURE is not included on Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.

If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC CONFIR-MATION PROCEDURE.

Is DTC detected?

YES >> GO TO 7.

NO >> Check according to GI-42, "Intermittent Incident".

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

Is the symptom described?

YES >> GO TO 7.

NO >> Monitor input data from related sensors or check voltage of related module terminals using CON-SULT.

7. DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.

NO >> Check according to GI-42, "Intermittent Incident".

8.repair or replace the malfunctioning part

- Repair or replace the malfunctioning part.
- Reconnect parts or connectors disconnected during Diagnosis Procedure again after repair and replacement.
- Check DTC. If DTC is detected, erase it.

>> GO TO 9.

9. FINAL CHECK

When DTC is detected in step 2, perform DTC CONFIRMATION PROCEDURE again, and then check that the malfunction is repaired securely.

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

Is DTC detected and does symptom remain?

YES-1 >> DTC is detected: GO TO 7.

YES-2 >> Symptom remains: GO TO 4.

>> Before returning the vehicle to the customer, always erase DTC.

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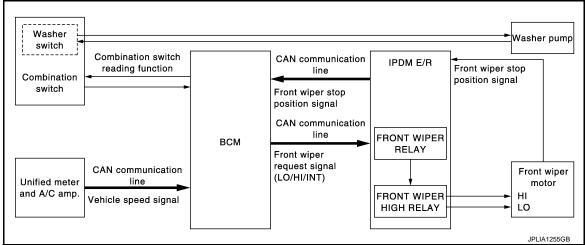
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SYSTEM DESCRIPTION

FRONT WIPER AND WASHER SYSTEM

System Diagram

INFOID:0000000009060585



System Description

INFOID:0000000009060586

OUTLINE

The front wiper is controlled by each function of BCM and IPDM E/R.

Control by BCM

- Combination switch reading function
- · Front wiper control function

Control by IPDM E/R

- Front wiper control function
- Relay control function

Combination meter indicates low washer fluid warning judged with the signal from the washer level switch. For details of low washer fluid warning, refer to MWI-30, "INFORMATION DISPLAY: System Description".

FRONT WIPER BASIC OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM transmits the front wiper request signal to IPDM E/R with CAN communication depending on each operating condition of the front wiper.
- IPDM E/R turns ON/OFF the integrated front wiper relay and the front wiper high relay according to the front wiper request signal. IPDM E/R provides the power supply to operate the front wiper HI/LO operation.

FRONT WIPER LO OPERATION

 BCM transmits the front wiper request signal (LO) to IPDM E/R with CAN communication according to the front wiper LO operating condition.

Front wiper LO operating condition

- Ignition switch ON
- Front wiper switch LO or front wiper switch MIST (while pressing)
- IPDM E/R turns ON the integrated front wiper relay according to the front wiper request signal (LO).

FRONT WIPER HI OPERATION

 BCM transmits the front wiper request signal (HI) to IPDM E/R with CAN communication according to the front wiper HI operating condition.

Front wiper HI operating condition

- Ignition switch ON
- Front wiper switch HI
- IPDM E/R turns ON the integrated front wiper relay and the front wiper high relay according to the front wiper request signal (HI).

FRONT WIPER AND WASHER SYSTEM

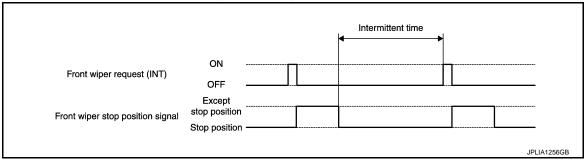
< SYSTEM DESCRIPTION >

FRONT WIPER INT OPERATION

 BCM transmits the front wiper request signal (INT) to IPDM E/R with CAN communication depending on the front wiper INT operating condition and intermittent operation delay interval according to the wiper intermittent dial position.

Front wiper INT operating condition

- Ignition switch ON
- Front wiper switch INT
- IPDM E/R turns ON the integrated front wiper relay so that the front wiper is operated only once according to the front wiper request signal (INT).
- BCM detects stop position/except stop position of the front wiper motor according to the front wiper stop position signal received from IPDM E/R with CAN communication.
- BCM transmits the front wiper request signal (INT) again after the intermittent operation delay interval.



NOTE:

Factory setting of the front wiper intermittent operation is the operation without vehicle speed. Front wiper intermittent operation can be set to the operation with vehicle speed by CONSULT. Refer to <a href="https://www.numer.consultr.number.consultr.n

Front wiper intermittent operation with vehicle speed

- BCM calculates the intermittent operation delay interval from the following
- Vehicle speed signal (received from the unified meter and A/C amp. with CAN communication)
- Wiper intermittent dial position

		Intermittent operation delay Interval (s)				
Wiper intermittent	Intermittent	Vehicle speed				
dial position	operation interval	Vehicle stopped or less than 5 km/h (3.1 MPH)	5 km/h (3.1MPH) or more or less than 35km/h (21.7 MPH)	35 km/h (21.7 MPH) or more or less than 65km/h (40.4 MPH)*	65 km/h (40.4MPH) or more	
1	Short	0.8	0.6	0.4	0.24	
2	↑	4	3	2	1.2	
3		10	7.5	5	3	
4		16	12	8	4.8	
5	•	24	18	12	7.2	
6	↓	32	24	16	9.6	
7	Long	42	31.5	21	12.6	

^{*:} When without vehicle speed setting

FRONT WIPER AUTO STOP OPERATION

- BCM stops transmitting the front wiper request signal when the front wiper switch is turned OFF.
- IPDM E/R detects the front wiper stop position signal from the front wiper motor and detects the front wiper motor position (stop position/except stop position).

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FRONT WIPER AND WASHER SYSTEM

< SYSTEM DESCRIPTION >

• When the front wiper request signal is stopped, IPDM E/R turns ON the front wiper relay until the front wiper motor returns to the stop position.

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Front wiper request (LO)	ON OFF	
Front wiper stop position signal	Except stop position Stop position	
Front wiper relay	ON OFF	
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NOTE:

- BCM stops the transmitting of the front wiper request signal when the ignition switch OFF.
- IPDM E/R turns the front wiper relay OFF when the ignition switch OFF.

FRONT WIPER OPERATION LINKED WITH WASHER

- BCM transmits the front wiper request signal (LO) to IPDM E/R with CAN communication according to the washer linked operating condition of the front wiper.
- BCM transmits the front wiper request signal (LO) so that the front wiper operates approximately 2 times
 when the front washer switch OFF is detected.

Washer linked operating condition of front wiper

- Ignition switch ON
- Front washer switch ON (0.4 second or more)
- IPDM E/R turns ON the integrated front wiper relay according to the front wiper request signal (LO).
- The washer pump is grounded through the combination switch when the front washer switch ON.

FRONT WIPER DROP WIPE OPERATION

BCM controls the front wiper to operate once according to the conditions of front wiper drop wipe operation.

Front wiper drop wipe operating condition

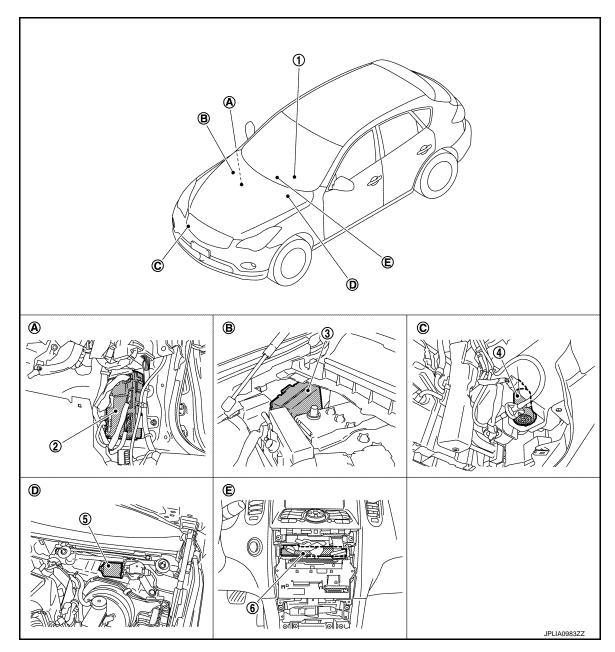
- Ignition switch ON
- Front wiper switch OFF
- Front washer switch OFF
- BCM transmits the front wiper request signal (LO) to IPDM E/R with CAN communication so that the front wiper operate once three seconds after front wiper operation linked with washer.
- IPDM E/R turns ON the integrated front wiper relay according to the front wiper request signal (LO).

FRONT WIPER FAIL-SAFE OPERATION

When the front wiper auto stop circuit is malfunctioning, IPDM E/R performs the fail-safe function. Refer to PCS-28, "Fail-safe".

Component Parts Location

INFOID:0000000009060587



- 1. Combination switch
- 4. Washer pump
- A. Dash side lower (Passenger side)
- D. Cowl top, left side of engine room
- 2. BCM
- 5. Front wiper motor
- B. Engine room dash panel (RH)
- E. Behind cluster lid C
- 3. IPDM E/R
- 6. Unified meter and A/C amp.
- C. Radiator core support (RH)

Component Description

INFOID:0000000009060588

Part	Description
BCM	 Judges the each switch status by the combination switch reading function. Requests (with CAN communication) the front wiper relay and the front wiper high relay ON to IPDM E/R.
IPDM E/R	 Controls the integrated relay according to the request (with CAN communication) from BCM. Performs the auto stop control of the front wiper.

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FRONT WIPER AND WASHER SYSTEM

< SYSTEM DESCRIPTION >

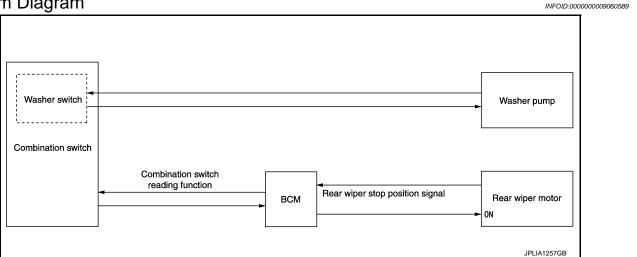
Part	Description
Combination switch (Wiper & washer switch)	Refer to BCS-10, "System Description".
Unified meter and A/C amp.	Transmits the vehicle speed signal to BCM with CAN communication.

REAR WIPER AND WASHER SYSTEM

< SYSTEM DESCRIPTION >

REAR WIPER AND WASHER SYSTEM

System Diagram



System Description

OUTLINE

The rear wiper is controlled by each function of BCM.

Control by BCM

- Combination switch reading function
- · Rear wiper control function

REAR WIPER BASIC OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM controls the rear wiper to start or stop.

REAR WIPER ON OPERATION

BCM supplies power to the rear wiper motor according to the rear wiper ON operating condition.

Rear wiper ON operating condition

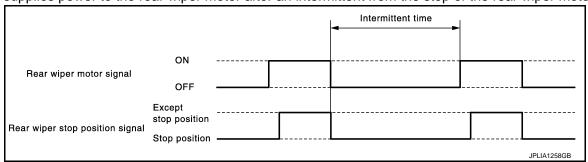
- Ignition switch ON
- Rear wiper switch ON

REAR WIPER INT OPERATION

BCM supplies power to the rear wiper motor according to the INT operating condition.

Rear wiper INT operating condition

- Ignition switch ON
- Rear wiper switch INT
- BCM controls the rear wiper to operate once.
- BCM detects the rear wiper motor stopping position.
- BCM supplies power to the rear wiper motor after an intermittent from the stop of the rear wiper motor.



REAR WIPER AUTO STOP OPERATION

BCM stops supplying power to the rear wiper motor when the rear wiper switch is turned OFF.

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REAR WIPER AND WASHER SYSTEM

< SYSTEM DESCRIPTION >

- BCM reads an stop position signal from the rear wiper motor to detect a rear wiper motor position.
- When the rear wiper motor is at other than the stopping position, BCM continues to supply power to the rear wiper motor until it returns to the stopping position.

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Rear wiper switch	ON -	
Rear wiper stop position signal	Except stop position Stop position	
Rear wiper motor power supply	ON -	Thurse see a s
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NOTE:

BCM stops supplying power to the rear wiper motor when the ignition switch is turned OFF.

REAR WIPER OPERATION LINKED WITH WASHER

 BCM supplies power to the rear wiper motor according to the washer linked operating condition of rear wiper. When the rear washer switch is turned OFF, BCM controls rear wiper to operate approximately 3 times.

Washer linked operating condition of rear wiper

- Ignition switch ON
- Rear washer switch ON (0.4 second or more)
- The washer pump is grounded through the combination switch with the rear washer switch ON.

REAR WIPER DROP WIPE OPERATION

• BCM controls the rear wiper to operate once according to the rear wiper drop wipe operating condition.

Rear wiper drop wipe operating condition

- Ignition switch ON
- Rear wiper switch OFF
- Rear washer switch OFF
- BCM controls the rear wiper so that it operates once approximately three seconds later after the washer interlocking operation of the rear wiper.

REAR WIPER FAIL-SAFE OPERATION

BCM performs the fail-safe function when the rear wiper auto stop circuit is malfunctioning. Refer to <u>BCS-88</u>, <u>"Fail-safe"</u>.

REAR WIPER AND WASHER SYSTEM

< SYSTEM DESCRIPTION >

Component Parts Location

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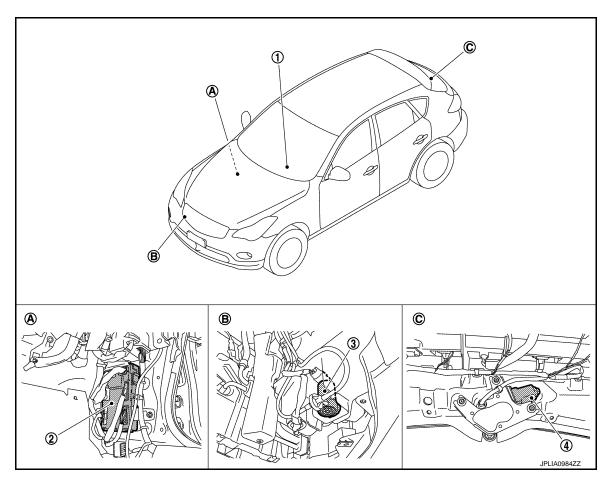
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- Combination switch
- 2. **BCM**

Washer pump

- Rear wiper motor
- Dash side lower (Passenger side)
- B. Radiator core support (RH)
- C. Back door trim finisher lower inside

Component Description

INFOID:0000000009060592

Part	Description
BCM	 Judges each switch status by the combination switch reading function. Supplies power to the rear wiper motor. Performs the auto stop control of the rear wiper.
Combination switch (Wiper & washer switch)	Refer to BCS-10, "System Diagram".

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DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000009354448

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	 Read and save the vehicle specification. Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

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

×: Applicable item

System	Sub system selection item	Diagnosis mode		
System	Sub system selection item	Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
_	AIR CONDITONER*			
Intelligent Key system Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
IVIS - NATS	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open system	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

NOTE

FREEZE FRAME DATA (FFD)

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

^{*:} This item is displayed, but is not used.

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

CONSULT screen item	Indication/Unit	Description			
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected			
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected			
	SLEEP>LOCK		While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK"*)		
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)		
	LOCK>ACC		While turning power supply position from "LOCK"* to "ACC"		
	ACC>ON		While turning power supply position from "ACC" to "IGN"		
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Except emergency stop operation)		
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)		
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emergency stop operation)		
	ACC>OFF		While turning power supply position from "ACC" to "OFF"		
	OFF>LOCK	Power supply position status of the moment a particular DTC is de- tected*	While turning power supply position from "OFF" to "LOCK"*		
Vehicle Condition	OFF>ACC		While turning power supply position from "OFF" to "ACC"		
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING"		
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode		
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK"*.) to low power consumption mode		
	LOCK		Power supply position is "LOCK"*		
	OFF		Power supply position is "OFF" (Ignition switch OFF)		
	ACC		Power supply position is "ACC" (Ignition switch ACC)		
	ON		Power supply position is "IGN" (Ignition switch ON with engine stopped)		
	ENGINE RUN		Power supply position is "RUN" (Ignition switch ON with engine running)		
	CRANKING		Power supply position is "CRANKING" (At engine cranking)		
IGN Counter	0 - 39	 The number of times that ignition switch is turned ON after DTC is detected The number is 0 when a malfunction is detected now. The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The number is fixed to 39 until the self-diagnosis results are erased if it is over 39. 			

NOTE:

*: Power supply position shifts to "LOCK" from "OFF", when ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met.

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

The power supply position shifts to "ACC" when the push-button ignition switch (push switch) is pushed at "LOCK".

WIPER

WIPER: CONSULT Function (BCM - WIPER)

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WORK SUPPORT

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

Service item	Setting item	Description	
WIPER SPEED SETTING	On	With vehicle speed (Front wiper intermittent time linked with the vehicle speed and wiper intermittent dial position)	
	Off*	Without vehicle speed (Front wiper intermittent time linked with the wiper intermittent dial position)	

^{*:}Factory setting

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item [Unit]	Description		
PUSH SW [Off/On]	The switch status input from push-button ignition switch.		
VEHICLE SPEED 1 [km/h]	The value of the vehicle speed signal received from unified meter and A/C amp. with CAN communication.		
FR WIPER HI [Off/On]			
FR WIPER LOW [Off/On]	Each quitab status that PCM judges from the combination quitab reading function		
FR WASHER SW [Off/On]	Each switch status that BCM judges from the combination switch reading function.		
FR WIPER INT [Off/On]			
FR WIPER STOP [Off/On]	Front wiper motor (stop position) status received from IPDM E/R with CAN communication.		
INT VOLUME [1 – 7]	Each switch status that BCM judges from the combination switch reading function.		
RR WIPER ON [Off/On]			
RR WIPER INT [Off/On]	Each switch status that BCM judges from the combination switch reading function.		
RR WASHER SW [Off/On]			
RR WIPER STOP [Off/On]	Rear wiper motor (stop position) status input from the rear wiper motor.		

ACTIVE TEST

Test item	Operation	Description		
FR WIPER	Hi	Transmits the front wiper request signal (HI) to IPDM E/R with CAN communication to operate the front wiper HI operation.		
	Lo	ransmits the front wiper request signal (LO) to IPDM E/R with CAN communication to operate the front wiper LO operation.		
	INT	Transmits the front wiper request signal (INT) to IPDM E/R with CAN communication to oper the front wiper INT operation.		
	Off	Stops transmitting the front wiper request signal to stop the front wiper operation.		
RR WIPER	On	Outputs the voltage to operate the rear wiper motor.		
KK WIF LK	Off	Stops the voltage to stop.		

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

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AUTO ACTIVE TEST

Description

In auto active test mode, the IPDM E/R sends a drive signal to the following systems to check their operation.

- Oil pressure warning lamp
- Front wiper (LO, HI)
- Parking lamps
- License plate lamps
- Side maker lamps
- Tail lamps
- Front fog lamps
- Headlamps (LO, HI)
- A/C compressor (magnet clutch)
- Cooling fan (cooling fan control module)

Operation Procedure

1. Close the hood and lift the wiper arms from the windshield. (Prevent windshield damage due to wiper operation)

NOTE:

When auto active test is performed with hood opened, sprinkle water on windshield beforehand.

- 2. Turn the ignition switch OFF.
- 3. Turn the ignition switch ON, and within 20 seconds, press the front door switch (driver side) 10 times. Then turn the ignition switch OFF.

CAUTION:

Close passenger door.

- 4. Turn the ignition switch ON within 10 seconds. After that the horn sounds once and the auto active test starts.
- The oil pressure warning lamp starts blinking when the auto active test starts.
- 6. After a series of the following operations is repeated 3 times, auto active test is completed.

NOTE:

When auto active test mode has to be cancelled halfway through test, turn the ignition switch OFF. **CAUTION:**

- If auto active test mode cannot be actuated, check door switch system. Refer to <u>DLK-63</u>, <u>"Component Function Check"</u>.
- Do not start the engine.

Inspection in Auto Active Test Mode

When auto active test mode is actuated, the following 6 steps are repeated 3 times.

Operation sequence	Inspection location	Operation		
1	Oil pressure warning lamp	Blinks continuously during operation of auto active test		
2	Front wiper	LO for 5 seconds → HI for 5 seconds		
3	 Parking lamps License plate lamps Side maker lamps Tail lamps Front fog lamps 	10 seconds		
4	Headlamps	LO 10 seconds HI ON ⇔ OFF 5 times		
5	A/C compressor (magnet clutch)	ON ⇔ OFF 5 times		
6*	Cooling fan	MID for 5 seconds → HI for 5 seconds		

st: Outputs duty ratio of 50% for 5 seconds ightarrow duty ratio of 100% for 5 seconds on the cooling fan control module.

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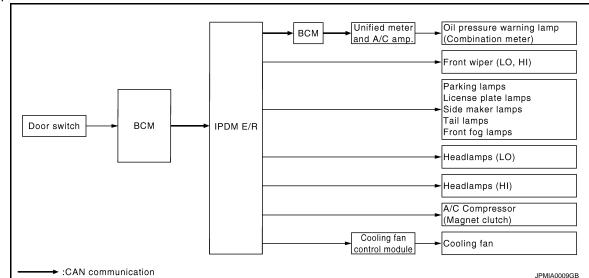
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< SYSTEM DESCRIPTION >

Concept of auto active test



- IPDM E/R starts the auto active test with the door switch signals transmitted by BCM via CAN communication. Therefore, the CAN communication line between IPDM E/R and BCM is considered normal if the auto active test starts successfully.
- The auto active test facilitates troubleshooting if any systems controlled by IPDM E/R cannot be operated.

Diagnosis chart in auto active test mode

Symptom	Inspection contents		Possible cause
Any of the following components do not operate		YES	BCM signal input circuit
 Parking lamps License plate lamps Side maker lamps Tail lamps Front fog lamps Headlamp (HI, LO) Front wiper (HI, LO) 	Perform auto active test. Does the applicable system operate?	NO	Lamp or motor Lamp or motor ground circuit Harness or connector between IPDM E/R and applicable system IPDM E/R
A/C compressor does not operate	Perform auto active test. Does the magnet clutch operate?	YES	 Unified meter and A/C amp. signal input circuit CAN communication signal between unified meter and A/C amp. and ECM CAN communication signal between ECM and IPDM E/R
			Magnet clutch Harness or connector between IPDM E/R and magnet clutch IPDM E/R
	Perform auto active test.	YES	Harness or connector between IPDM E/R and oil pressure switch Oil pressure switch IPDM E/R
Oil pressure warning lamp does not operate	Does the oil pressure warning lamp blink?	NO	CAN communication signal between IPDM E/R and BCM CAN communication signal between BCM and unified meter and A/C amp. Combination meter

< SYSTEM DESCRIPTION >

Symptom	Inspection contents		Possible cause
		YES	ECM signal input circuit CAN communication signal between ECM and IPDM E/R
Cooling fan does not operate	Perform auto active test. Does the cooling fan operate?	NO	 Cooling fan Harness or connector between cooling fan and cooling fan control module Cooling fan control module Harness or connector between IPDM E/R and cooling fan control module Cooling fan relay Harness or connector between IPDM E/R and cooling fan relay IPDM E/R

CONSULT Function (IPDM E/R)

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APPLICATION ITEM

CONSULT performs the following functions via CAN communication with IPDM E/R.

Diagnosis mode	Description
Ecu Identification	Allows confirmation of IPDM E/R part number.
Self Diagnostic Result	Displays the diagnosis results judged by IPDM E/R.
Data Monitor	Displays the real-time input/output data from IPDM E/R input/output data.
Active Test	IPDM E/R can provide a drive signal to electronic components to check their operations.
CAN Diag Support Monitor	The results of transmit/receive diagnosis of CAN communication can be read.

SELF DIAGNOSTIC RESULT

Refer to PCS-30, "DTC Index".

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item [Unit]	MAIN SIG- NALS	Description	
RAD FAN REQ [%]	×	Displays the value of the cooling fan speed signal received from ECM via CAN communication.	
AC COMP REQ [Off/On]	×	Displays the status of the A/C compressor request signal received from ECM via CAN communication.	
TAIL&CLR REQ [Off/On]	×	Displays the status of the position light request signal received from BCM via CAN communication.	
HL LO REQ [Off/On]	×	Displays the status of the low beam request signal received from BCM via CAN communication.	
HL HI REQ [Off/On]	×	Displays the status of the high beam request signal received from BCM via CAN communication.	
FR FOG REQ [Off/On]	×	Displays the status of the front fog light request signal received from BCM via CAN communication.	
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Displays the status of the front wiper request signal received from BCM via CAN communication.	
WIP AUTO STOP [STOP P/ACT P]	×	Displays the status of the front wiper auto stop signal judged by IPDM E/R.	

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< SYSTEM DESCRIPTION >

Monitor Item [Unit]	MAIN SIG- NALS	Description
WIP PROT [Off/BLOCK]	×	Displays the status of the front wiper fail-safe operation judged by IPDM E/R.
IGN RLY1 -REQ [Off/On]		Displays the status of the ignition switch ON signal received from BCM via CAN communication.
IGN RLY [Off/On]	×	Displays the status of the ignition relay judged by IPDM E/R.
PUSH SW [Off/On]		Displays the status of the push-button ignition switch judged by IPDM E/R.
INTER/NP SW [Off/On]		Displays the status of the shift position judged by IPDM E/R.
ST RLY CONT [Off/On]		Displays the status of the starter relay status signal received from BCM via CAN communication.
IHBT RLY -REQ [Off/On]		Displays the status of the starter control relay signal received from BCM via CAN communication.
ST/INHI RLY [Off/ ST ON/INHI ON/UNKWN]		Displays the status of the starter relay and starter control relay judged by IPDM E/R.
DETENT SW [Off/On]		Displays the status of the A/T shift selector (detention switch) judged by IPDM E/R.
S/L RLY -REQ [Off/On]		Displays the status of the steering lock relay request received from BCM via CAN communication. NOTE:
		For models without steering lock unit, this item is not monitored.
S/L STATE		Displays the status of the steering lock judged by IPDM E/R. NOTE:
[LOCK/UNLOCK/UNKWN]		For models without steering lock unit, this item is not monitored.
DTRL REQ [Off/On]		NOTE: The item is indicated, but not monitored.
OIL P SW [Open/Close]		Displays the status of the oil pressure switch judged by IPDM E/R.
HOOD SW [Off/On]		Displays the status of the hood switch judged by IPDM E/R.
HL WASHER REQ [Off/On]		NOTE: The item is indicated, but not monitored.
THFT HRN REQ [Off/On]		Displays the status of the theft warning horn request signal received from BCM via CAN communication.
HORN CHIRP [Off/On]		Displays the status of the horn reminder signal received from BCM via CAN communication.
CRNRNG LMP REQ [Off/On]		NOTE: The item is indicated, but not monitored.

ACTIVE TEST

Test item

Test item	Operation	Description		
	Off			
CORNERING LAMP	LH	NOTE: The item is indicated, but cannot be tested.		
	RH			
HORN	On	Operates horn relay 1 and horn relay 2 for 20 ms.		
	Off	OFF		
FRONT WIPER	Lo	Operates the front wiper relay.		
	Hi	Operates the front wiper relay and front wiper high relay.		

< SYSTEM DESCRIPTION >

Test item	Operation	Description
	1	OFF
MOTOR FAN	2	Outputs 50% pulse duty signal (PWM signal) to the cooling fan control module.
MOTOR FAIN	3	Outputs 80% pulse duty signal (PWM signal) to the cooling fan control module.
	4	Outputs 100% pulse duty signal (PWM signal) to the cooling fan control module.
HEAD LAMP WASHER	On	NOTE: The item is indicated, but cannot be tested.
	Off	OFF
	TAIL	Operates the tail lamp relay.
EXTERNAL LAMPS	Lo	Operates the headlamp low relay.
EXTENSE EXIMITO	Hi	Operates the headlamp low relay and ON/OFF the headlamp high relay at 1 second intervals.
	Fog	Operates the front fog lamp relay.

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WIPER AND WASHER FUSE

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

WIPER AND WASHER FUSE

Fuse list

Unit	Location	Fuse No.	Capacity
Front wiper motor	IPDM E/R	#60	30 A
Washer pump	IPDM E/R	#47	10 A

Diagnosis Procedure

INFOID:0000000009060598

1. CHECK FUSES

Check that the following fuses are not fusing.

Unit	Location	Fuse No.	Capacity
Front wiper motor	IPDM E/R	#60	30 A
Washer pump	IPDM E/R	#47	10 A

Is the fuse fusing?

YES >> Replace the fuse with a new one after repairing the applicable circuit.

NO >> The fuse is normal.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT **BCM (BODY CONTROL MODULE)**

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BCM (BODY CONTROL MODULE): Diagnosis Procedure

1. CHECK FUSE AND FUSIBLE LINK

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

Signal name	Fuse and fusible link No.
Battery power supply	К
battery power supply	10

Is the fuse fusing?

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

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect BCM connectors.
- Check voltage between BCM harness connector and ground.

(Voltage		
В	СМ		(Approx.)
Connector	Connector Terminal		
M118	1	Ground	Battery voltage
M119	11		Dattery Voltage

Is the measurement value normal?

>> GO TO 3. YES

NO >> Repair harness or connector.

3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

ВСМ			Continuity	
Connector Terminal		Ground	Continuity	
M119	13		Existed	

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Does continuity exist?

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 INFOID:0000000009060600

1. CHECK FUSES AND FUSIBLE LINK

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

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Signal name	Fuses and fusible link No.
	С
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

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

(+)		(-)	Voltage (Approx.)
IPDM E/R			
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		Existed
E6	41		LXISIEU

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

FRONT WIPER MOTOR LO CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

FRONT WIPER MOTOR LO CIRCUIT

Component Function Check

1. CHECK FRONT WIPER LO OPERATION

PIPDM E/R AUTO ACTIVE TEST

- 1. Start IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- Check that the front wiper operates at the LO operation.

(P)CONSULT ACTIVE TEST

- Select "FRONT WIPER" of IPDM E/R active test item.
- With operating the test item, check front wiper operation.

: Front wiper (LO) operation Lo

Off : Stop the front wiper.

Is front wiper (LO) operation normally?

YES >> Front wiper motor LO circuit is normal. >> Refer to WW-25, "Diagnosis Procedure". NO

Diagnosis Procedure

1.CHECK FRONT WIPER MOTOR (LO) OUTPUT VOLTAGE

- Turn the ignition switch OFF, and wait for 20 seconds or more.
- Disconnect front wiper motor connector.
- Turn the ignition switch ON, and wait for 10 seconds.
- Check voltage between IPDM E/R harness connector and ground.

(Voltage (Approx.)		
IPDN	M E/R		voltage (Approx.)
Connector	Terminal	Ground	
E5	4	- 3	Battery voltage (10 seconds)*

^{*:} According to front wiper protection function, IPDM E/R supplies voltage for 10 seconds (battery voltage) and then stops for 20 seconds (0 V). This operations repeats 5 times, and then IPDM E/R stops voltage supply. To perform the check again, turn ignition switch OFF, wait for 20 seconds or more, and then perform the check.

Is the measurement value normal?

YES >> GO TO 2.

NO >> Replace IPDM E/R.

2.CHECK FRONT WIPER MOTOR (LO) OPEN CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect IPDM E/R connector.
- Check continuity between IPDM E/R harness connector and front wiper motor harness connector.

IPDM E/R		Front wiper motor		Continuity
Connector	Terminal	Connector Terminal		Continuity
E5	4	E42	1	Existed

Does continuity exist?

YES >> GO TO 3.

NO >> Repair the harness or connector.

3.check front wiper motor (LO) short circuit

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

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FRONT WIPER MOTOR LO CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

IPDM E/R			Continuity	
Connector Terminal		Ground	Continuity	
E5	4		Not existed	

Does continuity exist?

YES >> Repair the harness or connector.

NO >> Replace front wiper motor.

FRONT WIPER MOTOR HI CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

FRONT WIPER MOTOR HI CIRCUIT

Component Function Check

INFOID:0000000009060603

PIPDM E/R AUTO ACTIVE TEST

1 . CHECK FRONT WIPER HI OPERATION

- 1. Start IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- Check that the front wiper operates at the HI operation.

PCONSULT ACTIVE TEST

- Select "FRONT WIPER" of IPDM E/R active test item.
- With operating the test item, check front wiper operation.

Ηi : Front wiper (HI) operation

Off : Stop the front wiper.

Is front wiper (HI) operation normally?

YES >> Front wiper motor HI circuit is normal. >> Refer to WW-27, "Diagnosis Procedure". NO

Diagnosis Procedure

1.CHECK FRONT WIPER MOTOR (HI) OUTPUT VOLTAGE

PCONSULT ACTIVE TEST

- Turn the ignition switch OFF, and wait for 20 seconds or more.
- Disconnect front wiper motor connector.
- Turn the ignition switch ON.
- Select "FRONT WIPER" of IPDM E/R active test item.
- With operating the test item, check voltage between IPDM E/R harness connector and ground.

Terminals			Test item		
(+)		(-)	rest item	Voltage (Approx.)	
IPDM E/R			FRONT WIPER		
Connector	Terminal	Ground	TRONT WILL		
E5	5		Hi	Battery voltage (10 seconds)*	

^{*:} According to front wiper protection function, IPDM E/R supplies voltage for 10 seconds (battery voltage) and then stops for 20 seconds (0 V). This operations repeats 5 times, and then IPDM E/R stops voltage supply. To perform the check again, turn ignition switch OFF, wait for 20 seconds or more, and then perform the check.

Is the measurement value normal?

YES >> GO TO 2.

NO >> Replace IPDM E/R.

2.CHECK FRONT WIPER MOTOR (HI) OPEN CIRCUIT

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector.
- Check continuity between IPDM E/R harness connector and front wiper motor harness connector.

_	IPDM E/R		Front wiper motor		Continuity
_	Connector	Terminal	Connector Terminal		Continuity
	E5	5	E42	4	Existed

Does continuity exist?

YES >> GO TO 3.

NO >> Repair the harness or connector.

3.check front wiper motor (HI) short circuit

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FRONT WIPER MOTOR HI CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

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

IPDN	/I E/R		Continuity
Connector	Terminal	Ground	Continuity
E5	5		Not existed

Does continuity exist?

YES >> Repair the harness or connector.

NO >> Replace front wiper motor.

FRONT WIPER STOP POSITION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

FRONT WIPER STOP POSITION SIGNAL CIRCUIT

Component Function Check

1. CHECK FRONT WIPER STOP POSITION SIGNAL

(P)CONSULT DATA MONITOR

- 1. Select "WIP AUTO STOP" of IPDM E/R data monitor item.
- Operate the front wiper.
- 3. With the front wiper operation, check the monitor status.

Monitor item	Condition		Monitor status
WIP AUTO STOP	Front wiper	Stop position	STOP P
WII AUTOSTOF	motor	Except stop position	ACT P

Is the status of item normal?

YES >> Front wiper stop position signal circuit is normal.

NO >> Refer to <u>WW-29</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

1.CHECK FRONT WIPER MOTOR (AUTO STOP) OUTPUT VOLTAGE

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

(+)	(-)	Voltage
IPDI	M E/R		(Approx.)
Connector Terminal		Ground	
E5	16		Battery voltage

Is the measurement value normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK FRONT WIPER MOTOR (AUTO STOP) SHORT CIRCUIT

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

IPDN	ЛE/R		Continuity	
Connector Terminal		Ground	Continuity	
E5	16		Not existed	

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace IPDM E/R.

${f 3.}$ CHECK FRONT WIPER MOTOR (AUTO STOP) CIRCUIT CONTINUITY

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

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FRONT WIPER STOP POSITION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

IPDM E/R		Front wiper motor		Continuity
Connector	Terminal	Connector Terminal		Continuity
E5	16	E42	5	Existed

Does continuity exist?

YES >> Replace front wiper motor.

NO >> Repair the harnesses or connectors.

FRONT WIPER MOTOR GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

FRONT WIPER MOTOR GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000009060607

1. CHECK FRONT WIPER MOTOR (GND) OPEN CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect front wiper motor connector.
- 3. Check continuity between front wiper motor harness connector and ground.

Front wiper motor			Continuity
Connector Terminal		Ground	Continuity
E42	2		Existed

Does continuity exist?

YES >> Front wiper motor ground circuit is normal.

NO >> Repair the harnesses or connectors.

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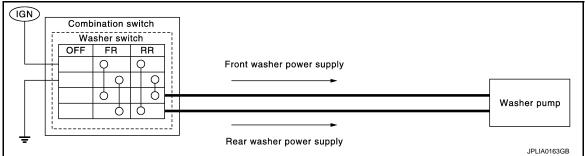
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WASHER SWITCH

- Washer switch is integrated with combination switch.
- Combination switch operates front washer or rear washer by changing voltage polarity to be supplied to washer pump.



Component Inspection

INFOID:0000000009060609

1. CHECK WIPER SWITCH

- 1. Turn the ignition switch OFF.
- 2. Disconnect combination switch connector.
- 3. Check continuity between the combination switch terminals.

A : Terminal 4
B : Terminal 6
C : Terminal 3

D : Terminal 1

	OFF	FR			RF	}
Α		?			?	
В			7			Q
С		5				Р
D		(5	(5	

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Combination switch		Condition	Continuity
Terr	minal	Condition	Continuity
1	6	Front washer switch ON	
3	4	TION WASHEL SWILCH ON	Existed
1	4	Rear washer switch ON	LXISIGU
3	6	iveal washer switch ON	

Does continuity exist?

YES >> Wiper and washer switch is normal.

NO >> Replace combination switch (Wiper and washer switch).

REAR WIPER MOTOR CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

REAR WIPER MOTOR CIRCUIT

Component Function Check

1. CHECK REAR WIPER ON OPERATION

©CONSULT ACTIVE TEST

- 1. Select "RR WIPER" of BCM active test item.
- With operating the test item, check rear wiper operation.

On : Rear wiper ON operation

Off : Stop the rear wiper.

Is rear wiper operation normally?

YES >> Rear wiper motor circuit is normal.

NO >> Refer to <u>WW-33</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

1. CHECK REAR WIPER MOTOR OUTPUT VOLTAGE

©CONSULT ACTIVE TEST

- 1. Turn rear wiper switch OFF, and wait for 1 minute or more.
- Turn the ignition switch OFF.
- 3. Disconnect rear wiper motor connector.
- Turn the ignition switch ON.
- 5. Select "RR WIPER" of BCM active test item.
- 6. With operating the test item, check voltage between BCM harness connector and ground.

Terminals			Test item		
(+)		(-)	rest item	Voltage (Ap-	
В	CM		REAR WIPER	prox.)	
Connector	Terminal	Ground	INLAIN WIF LIN		
M120	26		On	Battery voltage (5 seconds)*	

^{*:} When "REAR WIPER" is "On" for 5 seconds or more during active test of CONSULT, BCM stops the power supply according to rear wiper motor protection function. To perform the check again, turn "REAR WIPER" to "Off", wait for 1 minute or more, and then perform the check.

Is the measurement value normal?

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

2. CHECK REAR WIPER MOTOR SHORT CIRCUIT

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

В	CM		Continuity	
Connector Terminal		Ground	Continuity	
M120	26		Not existed	

Does continuity exist?

YES >> Repair the harness or connector.

NO >> Replace BCM. Refer to BCS-96, "Exploded View".

3.CHECK REAR WIPER MOTOR OPEN CIRCUIT

- 1. Turn the ignition switch OFF.
- Disconnect BCM connector.

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REAR WIPER MOTOR CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

3. Check continuity between BCM harness connector and rear wiper motor harness connector.

ВСМ		Rear wiper motor		Continuity
Connector	Terminal	Connector Terminal		Continuity
M120	26	D115	2	Existed

Does continuity exist?

YES >> GO TO 4.

NO >> Repair the harness or connector.

4. CHECK REAR WIPER MOTOR GROUND OPEN CIRCUIT

Check continuity between rear wiper motor harness connector and ground.

Rear wip	per motor		Continuity
Connector Terminal		Ground	Continuity
D115	4		Existed

Does continuity exist?

YES >> Replace rear wiper motor.

NO >> Repair the harness or connector.

REAR WIPER STOP POSITION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

REAR WIPER STOP POSITION SIGNAL CIRCUIT

Component Function Check

1. CHECK REAR WIPER (AUTO STOP) OPERATION

(E)CONSULT DATA MONITOR

- 1. Select "WIPER" of BCM data monitor item.
- Operate the rear wiper.
- 3. Check that "RR WIPER STOP" changes to "ON" and "OFF" linked with the wiper operation.

Monitor item	Condition		Monitor status
RR WIPER STOP	Rear wiper motor	Stop position	Off
		Except stop position	On

Is the status of item normal?

YES >> Rear wiper stop position signal circuit is normal.

>> Refer to WW-35, "Diagnosis Procedure". NO

Diagnosis Procedure

1. CHECK REAR WIPER MOTOR (AUTO STOP) OUTPUT VOLTAGE

- Turn the ignition switch OFF.
- 2. Disconnect rear wiper motor connector.
- 3. Turn the ignition switch ON.
- Check voltage between BCM harness connector and ground.

Terminals				
(+)		(-)	Value	
BCM			(Approx.)	
Connector	Terminal			
M121	65	Ground	(V) 15 10 5 0 10 ms JPMIA0016GB 1.0 V	

Is the measurement value normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK REAR WIPER MOTOR (AUTO STOP) SHORT CIRCUIT

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

BCM			Continuity	
Connector	Terminal	Ground	Continuity	
M121	65		Not existed	

Does continuity exist?

YES >> Repair the harness or connector.

NO >> Replace BCM. Refer to BCS-96, "Exploded View". В

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REAR WIPER STOP POSITION SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

3. CHECK REAR WIPER MOTOR (AUTO STOP) OPEN CIRCUIT

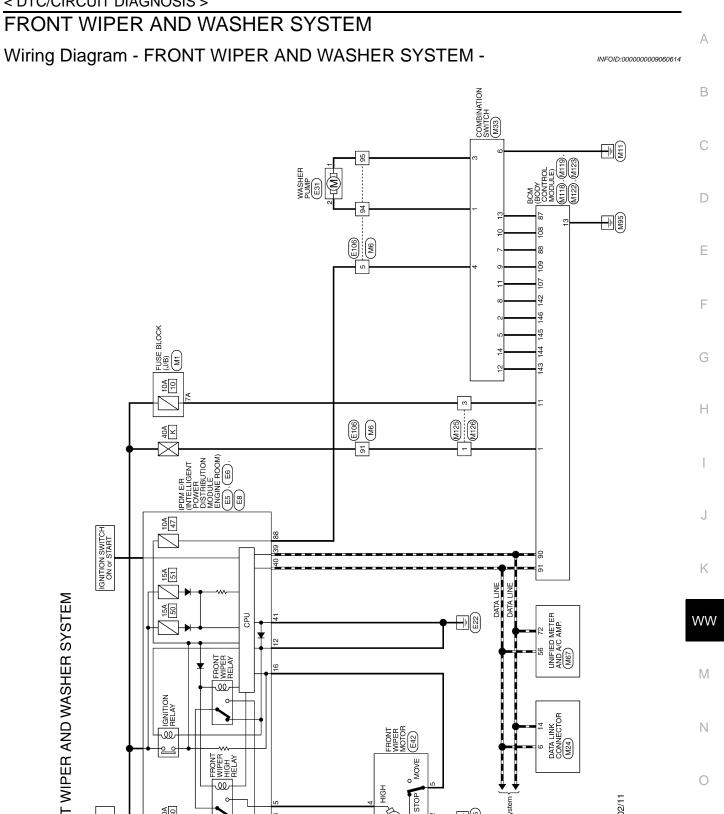
- 1. Turn the ignition switch OFF.
- 2. Disconnect BCM connector.
- 3. Check continuity between BCM harness connector and rear wiper motor harness connector.

BCM		Rear wiper motor		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M121	65	D115	3	Existed

Does continuity exist?

YES >> Replace rear wiper motor.

NO >> Repair the harness or connector.



- Till (48)

FRONT WIPER AND WASHER SYSTEM

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FRONT WIPER AND WASHER SYSTEM	Σ						
Г	46 R -	Connector No.	E42	18	> \		
PDM E/R (NTELLIGENT POWER DISTRIBUTION MODULE				20) BG		
Connector Name Engine ROOM)		Connector Nam	Connector Name FRONI WIPER MOTOR	21		,	
_ _	Connector No. E8	Connector Type	e HS05FGY	22	>		
	т			23	9	,	
100	Connector Name ENGINE ROOM)	_		24	╀	,	
	Connector Type NS08FW-CS	`	[[25			
		•		56	>		
		Ę	12.1	27	M 2		
			(2 4)	28	9		
)	31	H	•	
	1			35	-		
<u>a</u>	90, 88, 88, 80, 80	a	Of Sinnal Name (Snexification)	3		-	
No. Wire		No. Wire		8		-	
		٠ >	-	3			
	la I	2 B/W	N	36	S SHIELD	-	
		4		37			
B/W	83 BG -	5 LG	-	38	_	-	
13 Y				39	9 BC		
. 91	- M 98			41	W		
19 W	87 L	Connector No.	E106	42	9	•	
	88			43	F	,	
	+	Connector Name	ne WIRE TO WIRE	45	+		
: 6	i a	T. Constitution	TI IDOCINI OCAS TMAA	1	+		
2 -	-	COLLECTOL 19P	_	5		,	
+				۱ ا	+		
- GK	ſ			G :	+	,	
. 9	Connector No. E31		2 0 2 0 3 0 4 0 7 0 7 0 8 0	\$	+		
3	Connector Name WASHER PLIMP	•	3 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	22	\exists		
		S E N		29	\dashv		
Connector No. E6 Con	Connector Type E02FGY-RS		- 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9	$\overline{}$		
POM E/R (NTELLIGENT POWER DISTRIBUTION MODULE				61	9	,	
CONTROCION INGINE ENGINE ROOM)				62	SB Z	-	
Connector Type TH08FW-NH		Terminal Color Of	JO.	63	M 8	,	
		No. Wire		9	4 B		
	((1 5)) E	۲	,	9	9		
		2 W		0	86 R		
		3 B		9	2 SHIELD		
41 40 39		4 GR		89	>	,	
07 07 07	Terminal Color Of	5 GR		69	97 6		
40 40 44 40	No. Wire Signal Name [Specification]	8		_	W 02	1	
	1 BG -	9 BR		71	ч		
Terminal Color Of	2 LG -	10 BG		_	72 Y		
No. Wire Signal Name (Specification)		11 SB		_	73 B		
- d		12 BG		74	F	- IWith ICCI	
40		ł		<u> </u>	╀	- [Without ICC]	
B/W		14		75	ď	- IWith ICCI	
: 0		1			+	(Mitheut ICC)	
25 25		+		2 6	+	- [without loop	
+		۸ وا		1	M :	- [with ICC]	
4		17 SB	,			- [without ICC]	

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					M24	DATA LINK CONNECTOR	The state of the s	BUIDEW				11 14 16		3 4 5 6 7 8			Signal Name [Specification]	orginal realine [opeculication]	-											M33	HOLING NOTION		TH16FW-NH		<u> </u>		1 2 3 4 5 6	7 0 0 10 11 10 12	0 3 10 11 17						FR WASHER(+)	IGN	OUTPUT 3	GROUND	
98 SHIELD	^ 66	100 SB			Connector No.	Connector Name		connector Type	•			•	٧ :				la D	No. Wire	3 ΓΘ	4 B	9 2	- Р	^	8	H	╀	ł			Connector No.	Compositor Namo	OOI ROOM	Connector Type	_		•	Ę	į.			Terminal Color Of	No. Wire	1 P	2 SB	3 GR	Н	\dashv	9 9	
		,			T.							T.	•	,	-				•			- [With ICC]	- [Without ICC]		- [Without ICC]	- [With ICC]	- [Without ICC]	- [With ICC]	- [With ICC]	- [Without ICC]	- [Without ICC]	- [With ICC]							,	1			•		-				
BG	>	-	Ь	BR	.	<u>و</u>		١,	<u>و</u>	3	ם פ	9	3	œ	SHIELD	Υ	GR.	PC	D.	٨	88	BR	-	g	GR	>		œ	7	ď	Μ	>	SB	9 8	g >	ی د	, -	1 0	*	GR.	SHIELD	W	λ	BR	Ь	GR	Μ	_	
43	45	49	20	21	24	24	e e	8 ;	LQ S	79	20	64	99	╛		68	69	20	7.1	7.5	73	74	74	22	9/	92	11	-22	78	78	62	79	8 3	120 63	33 68	3 2	8.	3 %	87	68	Н	91	95	63	94	92	96	26	
Me	Г	me WIKE IO WIKE	De TH80MW-CS16-TM4			8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	÷				rr Of Signal Name [Specification]	_		В .	В .	SHIELD -	. 9	-	BR .			BG .				. >	SB .	^				-	. ·					,				SHIELD -		BG .	R .			
Connector No.	:	Connector Name	Connector Type		•		Į	7	l			<u>a</u>	4	>			╛	_	۸ 8	Н	10	1 B	12 B	H	14	╀	t	┝	╀	o BC	Н	\dashv	+	24 B	+	+	+	+	╀	╀	34	35 F	П	Н	Н	Н	H	2 BG	
	L	5	Con					•	•		L	Terr	2		2	.,	4	2		6	_	-	_	_	_	-	_	1	_	2	2	2	2 0	2	7 0	1	1	1 6	32	e	e	3	8	37	88	3	4	45	
	- [With ICC]	- [Without ICC]	- [With ICC]	- [Without ICC]	- [With ICC]							Ţ	4		-		1			-								M1	0.000	Connector Name FUSE BLOCK (J/B)	Connector Type NS06FW-M2			3A 74 1A		8A 74 6A 5A 4A]			Signal Name [Specification]	1			-	-	-		-	
3	œ	R	٦	7	> {	93 (۲ (200	3 0	. e	، ا	a :	>	SR.	SHIELD	W	≻	>	97	BG	۵	œ	SHIELD	-	۵			Connector No.		or Name	or Type		1	1	ļ	į			Color Of	Wire	GR	9	7	Ь	2A V	Υ	ĸ	٦	
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Connector No. M123	Connector Name BCM (BODY CONTROL MODULE)	Connector Type TH40FG-NH	•		201	20, 100, 101, 101, 101, 101, 101, 101, 1		Tourstool Onlos Of			116 SB STOP LAMP SW 1		SB DR DO	BR	× :	9]	# :	W PUSH-BULLON	GR	BG	→	L TIRE PRESS	GR	9	4	a 0	144 G COMBI SW OUTPUL 2	- 88	97	151 G REAR WINDOW DEFOGGER RELAY CONT										
Connector No. M122	Connector Name BCM (BODY CONTROL MODULE)	Connector Type TH40FB-NH	•		2 2 2 2 3 4 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	22			Signal Name [Specification]	74 SB PASSENGER DOOR ANT-	/d	76 V DRIVER DOOR ANT-	77 LG DRIVER DOOR ANT+	>-	# H	S.S.	M	¥	Y KEYLES	R	V COMB	Ь	7	LG KEYS	ONINO V See	- 0	GR A/T SHIFT	+	100 G PASSENGER DOOR REQUEST SW	SB	BG	103 LG KEYLESS ENTRY RECEIVER POWER SUPPLY		۷ >	- 0	,				
STEM M118	Connector Name BCM (BODY CONTROL MODULE)	Connector Type M03FB-LC	•		13	H.S.		Tomorpho Octor Of	Frmirtal Color Of Signal Name [Specification]	1 W BAT (F/L)	2 W POWER WINDOW POWER SUPPLY(BAT)	3 Y POWER WINDOW POWER SUPPLY(RAP)		- 1	Connector No. M119	Connector Name BCM (BODY CONTROL MODULE)		Connector Type NS16FW-CS				4 5 7 8 9 10	T 13 14 15 17 18 19				Frminal Color Of Signal Name [Specification]	t	t	7 Y STEP LAMP CONT	>	9 G DRIVER DOOR, FUEL LID UNLOCK OUTPUT	ć a	< 0	W PIRHBIRTO	; >	W TIBNSI	: BG	>	
FRONT WIPER AND WASHER SYSTEM	OUTPUT 5 INPLIT 2	INPUT 4	INPUT 1	INPUT 5	OUTPUT 2		M67	UNIFIED METER AND A/C AMP.	TH32FW-NH	1			#		57 58 59 60 61 62 63 66 6 69 70 71 72			Of Signal Name (Specification)			FUEL LEVEL SENSOR SIGNAL	1111	IN-VEHICLE SENSOR SIGNAL	AMBIENT SENSOR SIGNAL	SUNLOAD SENSOR SIGNAL	EXHAUST GAS / OUTSIDE ODOR DETECTING SENSOR SIGNAL	BATTERY POWER SUPPLY	GROUND	CAN-H			INTAKE SENSOR GROUND	AMBIENT SENSOR GROUND	SI NI DAD SENSON GROUND	SUNLOAD SENSON GROUND	I NO SIGNAL		EACH DOOR MOTOR POWER SUPPLY	GROUND	CAN-L
FRONT \	8 BG	Н	11 LG	13 P	Н		Connector No.	Connector Name	Connector Type		_		•	٧ :				g E	No. Wire	41 \	4	Н	_	_	+	+	54 c	55 B	╁	Н	58 BR	59 GR	64 BB	Va 6	+	+	+	70 R	┝	72 P

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REAR WIPER AND WASHER SYSTEM

Wiring Diagram - REAR WIPER AND WASHER SYSTEM -

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) (E5), (E8) COMBINATION SWITCH 10A 47 GNITION SWITCH ON or START M6 F106 44 4 WASHER PUMP E31 (E100) ,(M123) 91 90 BCM (BODY CONTROL MODULE) (M118), (M129), (M122), (M122), B28 D102 9 (B27) MOVE 0101 DATA LINK CONNECTOR (M24) FUSE BLOCK (J/B) (M1) REAR WIPER AND WASHER SYSTEM 10A 91 M6 M126 M126 404 ▼ 2013/02/11 JRLWC3480GB

Connector No. B1 Connector No. B1 Connector No. B2 Connector No. B3 Connector No. B4 Connector No. Con	2		H.S. H.S. Radio Color Of B B B B B B B B B B B B B B B B B B	WIRE TO WIRE MOBINIV-LC 123 45	20 EG
11480FM			Connector Name Witke	1 2 2 5	8 d R R
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			H.S. Terminal Color Of No. Wire 1 2 2 G G G G G G G G G G G G G G G G G	1 2 3 4 5 5	£ &
			Terminal Coby Of No. Wive I R R S S G G G G G G G G G G G G G G G G	1 2 3	-
			Terminal Color Of No. Wire No. 2 2 G G G G G G G G G G G G G G G G G	1 2 3 4 5	
			Terminal Color Of Wire Wire 2 G G G G G G G G G G G G G G G G G G	4 5 3	
			Terminal Color Of No. Wine No. 2 G G S S S S S S S S S S S S S S S S S	4 5	Connector No. D101
			Terminal Color Of No. Wire 1 R 2 G 3 B		TOTAL OF TOTAL
			Terminal Color Of No. Wire 1 R 2 G 3 B		
			Terminal Color Of No. Wire 1 R 2 G 3 B 3 B 2 C C 2 C C C C C C C C C C C C C C C		Connector Type M06FW-LC
			No. Wire 2 G G 3 B B	9	
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6 6 SB 1 1	 		Н		
7 7 V	 		t		321
8 L 112 LSB 114 GR 115 LG 116 LG 117 W 20 BR 21 SYELD 22 SYELD 24 P 24 P 25 W 26 W 27 W 28 R 29 SYELD 30 SYELD			A S		
12 SB	 		t		
13 15 15 15 15 15 15 15 15 15 15 15 15 15	 				
14 GR 15 LG 16 SB 22 SHELD 24 P 27 Y 28 R 29 SHELD 21 SHELD 24 P 25 R 26 R 27 Y 27 SB R 28 R 31 SHELD	 				
14 GR	+++++		-		Terminal Color Of Signal Name [Specification]
116 LG 118 SB 119 LG 120 RHELD 24 P P 24 P P 27 V 24 P W 24 P W 25 R R 26 R 27 W 28 R 29 W 31 SHELD	++++		Connector No. B28		Wire
147 W	++++	í	TOTAL OF TOTAL	LOWINGE	- R
148 SS	+++		Connector Name WIRE	E IO WIRE	
19 LG 20 BR 21 SHELD 22 Y 24 P 24 P 25 W 29 W 29 W 31 SHELD 31 SHELD 31 SHELD	₩		Connector Type TH24	TH24MW-NH	- G
22 BR	+				>
22 Y SHELD	+		•		>
24 PY			•		
24 P P P P P P P P P P P P P P P P P P P	200		-		
227 B	+		•	· ·	- 1
287 B	+		7	0 0 #	Connector No. D102
28 R	-	,	€2	14 15 16 17 18 19 20 21 22 23 24	Competer Name TO WIRE
29 W	W 86]]		
30 SHIELD	H				Connector Type TH24FW-NH
31 SHIELD -	ł		Terminal Color Of		1
			Wire	Signal Name [Specification]	•
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33 SB			- 1		
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				 [With around view monitor] 	Terminal Color Of
39 Y -			14 SHIELD	 [Without around view monitor] 	No. Wire orginal value [opecification]
				 [Without around view monitor] 	1 GR
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88 83			_	 [With around view monitor] 	œ
SB			- 0	- [With around view monitor]	2 0
S.B S.B S.B			- R	- [With around view monitor] - [Without around view monitor]	ж О :

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	Connector No. E31		Connector Name VVASHEK FUMP	Connector Type E02FGY-RS					(115)) E				Terminal Color Of	No. Wire Signal Name [Specification]	1 BG -	2 LG -		- 1	Connector No. E106	Connector Name WIRE TO WIRE	Connector Type TH80FW-0S16-TMA	7						5			la La	o o	+	+	m	+	5 GR	\dashv	\dashv		Н	12 BG -	13 L -	14 R	15 P	16 V	17 SB -	18 V	20 BG -	21 L -
Ш	Terminal Color Of Signal Name (Specification)	No. Wire olgital rafile [opecification]		·	7 R	12 B/W -	13 Y -	16 LG -	19 W	25 G	H	27 BG -	28 L	30 GR			- [Connector No. E8	Connector Name Program Power DISTRIBUTION MODULE	_	٦.					- 00	ne R			Terminal Color Of Signal Namo [Specification]	Wire	4	+		\dashv	88 GR		- d 06												
REAR WIPER AND WASHER SYSTEM	7	14 SHIELD - [Without around view monitor]	15 Y	16 G - [With around view monitor]	7		17 W - [With around view monitor]	SHIELD	19 LG -	20 0	21 V -	H	23 BR -	24 R .		- 1	Connector No. D115	Connector Name REAR WIPER MOTOR		Connector Type CJ04FW-1V					<u>د</u> ا	F			ā	No. Wire ognariednog		\dashv	4 B		١	Connector No. E5	Connector Name PDM E/R (INTELLISENT POWER DISTRIBUTION MODILE		Connector Type TH20FW-CS12-M4-1V				8888	*						

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	Connector No.	2		4 -	ć				SHELD
- [With ICC]		Т		42	} ≥		т Т	66	- A
80 SB - Connecto	Connector Name		IKE IO WIKE	49	_		Γ	L	- BS
	Connector Type		TH80MW-CS16-TM4	20	Ь	-			
1				51	BR				
		1		54	>			Connector No.	p. M7
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	מי	20		89	-				
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	ď	ď		4	-		T	2	Wire Signal Name [Specification]
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	12	BG		74	7	- [Without ICC]			- M
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Connector Name ELISE BLOCK / I/B)	14	r		٥	5	- [without ICC]	1	71.	SB -
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Connector Type INSOBFW-M2	16	>		77	۵	- [Without ICC]	L	14	
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46	PT	-	Č	Connactor Name	DATA LINK CONNECTOR	13	H	INPUT 5			
	SB		5	OTTO I		14	9	OUTPUT 2			
Н	>	-	Conne	Connector Type	BD16FW				Connector No.	M120	
20	В								Connector Name	BCM (BODY CONTROL MODILLE)	
09	Ь	1		1		Connector No.		M118	enilector regile		
	1	1		•		Condes Nome		GENOOM TORENOO AGOO! WOO	Connector Type	NS12FW-CS	
	SHIELD				10,	Collinector		CM (BODT CONTROL MUDDULE)			
63	ĸ			V ∃		Connector Type	П	M03FB-LC	_		
	9			į	3 4 5 6 7 8						
П	SHIELD					_	1			20	
-	SB	1				_	•	<u></u>	Ę	27	
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L	9		ည	В					No. Wire	orginal realine [openingation]	
74	В	1	9	٦		Terminal Color Or	Color Of	Complete Com	20 V	TURN SIGNAL RH (REAR)	
H	W		7	۸		ō Q	Wire	oignai ivanne [opecinication]	23 G	BACK DOOR OPEN OUTPUT	
H	W		80	H		-	٨	BAT (F/L)	25 G	TURN SIGNAL LH (REAR)	
2.2	В	1	-	SB		2	M P	POWER WINDOW POWER SUPPLY(BAT)	26 G	REAR WIPER OUTPUT	
78	<u>a</u>	1	14	۵		e	<u>⊢</u>	POWER WINDOW POWER SUPPLY(RAP)			
H	GR		16	>							
H	98								Connector No.	M121	
82	97	1				Connector No.		M119			
98	2		Conne	Connector No.	M33				Connector Name	BCM (BODY CONIROL MODULE)	
87	>	1	L			Connector Name		BCM (BODY CONTROL MODULE)	Connector Type TH40FGY-NH	TH40FGY-NH	
88	W		<u> </u>	Connector Name	COMBINALION SWITCH	Connector Type	Г	NS16FW-CS			
88	BR.	1	Comic	Connector Type	TH16FW-NH				_		
06	BG					_	7				
H	9			1		_	•				
95	^	1		•	<u> </u> 			4 5 7 6 8 9 10	Ę	# 88	
┝	BR				\(\frac{1}{2}\)	Ę	ď	11 12 14 15 17 18 10	Ċ.		
94	^	1		Ě	4		đ	0 11 10			
98	9			ì	7 8 9 10 11 12 13 14						
96	*								Terminal Color Of		
86	W	1				Terminal Color Of	Solor Of	9	No. Wire	orginal realine [openinoation]	
66	R		Termi	nal	F Simpl Name [Specification]	O	Wire	ogner varne [opecification]	34 SB	LUGGAGE ROOM ANT-	
			ġ S	Wire	ognal rame [openingator]	4	I.G	INTERIOR ROOM LAMP POWER SUPPLY	35 V	LUGGAGE ROOM ANT+	
			-	۵	FR WASHER(-)	2		PASSENGER DOOR UNLOCK OUTPUT		BACK DOOR ANT-	
			2	SB	OUTPUT 4	7	Υ	STEP LAMP CONT	39 W	BACK DOOR ANT+	
			3	GR	FR WASHER(+)	8	۸	ALL DOOR, FUEL LID LOCK OUTPUT	47 Y	IGN RELAY (IPDM E/R) CONT	
			4	G	NOI	6	9	DRIVER DOOR, FUEL LID UNLOCK OUTPUT	52 SB	STARTER RELAY CONT	
			2	_	OUTPUT 3	10	BR	REAR DOOR UNLOCK OUTPUT	60 BR	PUSH SW	
			9	В	GROUND	11	ď	BAT (FUSE)	61 W	BACK DOOR OPENER REQUEST SW	
			7	۸	INPUT 3	13	В	GROUND	64 V	I-KEY WARN BUZZER (ENG ROOM)	
			8	BG	OUTPUT 5	14	W	PUSH-BUTTON IGNITION SW ILL GND	65 BG	REAR WIPER STOP POSITION	
			6	Υ	INPUT 2	15	Υ	ACC IND	66 R	BACK DOOR SW	
			10	Н	INPUT 4	17	Μ	TURN SIGNAL RH (FRONT)	Н	BACK DOOR OPENER SW	
			=	Pl	INPUT 1	18	BG	TURN SIGNAL LH (FRONT)	68 BR	REAR RH DOOR SW	
			İ								

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REA	R WIF	REAR WIPER AND WASHER SYSTEM	_ ₩ 			ſ
69	ď	REAR LH DOOR SW	Connector No.	ō.	M123	Connector No. M125
			Connector Name	r Name	BCM (BODY CONTROL MODULE)	Connector Name WIRE TO WIRE
Connector No.	П	M122	Connector Type	r Type	TH40FG-NH	Connector Type M03FW-LC
Connect	or Name	Connector Name BCM (BODY CONTROL MODULE)		•		
Connect	Connector Type	TH40FB-NH	•	1		
_	7		7	U	CLI SLI SKI SKI IZZ 22 PZ.	
	1		1	1	131 153 H 151 152 H 151 152 H 151 151 H 151 152 H 151 15	76
7	Ľ					
	2	112 123 124 125 125 125 125 125 125 125 125 125 125	Terminal No.	Ferminal Color Of No. Wire	Signal Name [Specification]	Terminal Color Of Signal Name [Specification]
			113	۵	OPLICAL SENSOR	۲
Termina	Ferminal Color Of		116	SB	STOP LAMP SW 1	2 Y -
No.	Wire	ogna Name [opecinication]	118	Д	STOP LAMP SW 2	3 R
74	SB	PASSENGER DOOR ANT-	119	SB	DR DOOR UNLOCK SENSOR	
75	GR	PASSENGER DOOR ANT+	121	BR	KEY SLOT SW	
92	>	DRIVER DOOR ANT-	123	W	IGN F/B	Connector No. M126
22	re	DRIVER DOOR ANT+	124	ΓC	PASSENGER DOOR SW	Connector Name AVIDE TO WIDE
78	>	ROOM ANT1-	132	BR	POWER WINDOW SW COMM	
79	BR	ROOM ANT1+	133	W	PUSH-BUTTON IGNITION SW ILL POWER	Connector Type M03MW-LC
80	GR	NATS ANT AMP.	134	GR	LOCK IND	
81	Α	NATS ANT AMP.	137	BG	RECEIVER/SENSOR GND	
82	ч	IGN RELAY (F/B) CONT	138	٨	RECEIVER/SENSOR POWER SUPPLY	
83	Υ.	KEYLESS ENTRY RECEIVER COMM	139	٦	TIRE PRESSURE RECEIVER COMM	
87	BR	COMBI SW INPUT 5	140	GR	SHIFT N/P	<u>ر</u>
88	>	COMBI SW INPUT 3	141	O	SECURITY IND LAMP CONT	1.3.
06	Д	CAN-L	142	BG	COMBI SW OUTPUT 5	
91	_	CAN-H	143	۵	COMBI SW OUTPUT 1	
95	97	KEY SLOT ILL CONT	144	9	COMBI SW OUTPUT 2	Terminal Color Of Signal Many (Specification)
93	>	ON IND	145	٦	COMBI SW OUTPUT 3	No. Wire Signal realine [Specimeation]
94	Υ	PUDDLE LAMP CONT	146	SB	COMBI SW OUTPUT 4	1 W
96	BG	ACC RELAY CONT	150	97	DRIVER DOOR SW	2 Y .
96	GR	A/T SHIFT SELECTOR POWER SUPPLY	151	O	REAR WINDOW DEFOGGER RELAY CONT	3 8
66	ч	SHIFT P				
100	9	PASSENGER DOOR REQUEST SW				
101	SB	DRIVER DOOR REQUEST SW				
102	BG	BLOWER FAN MOTOR RELAY CONT				
103	PI	KEYLESS ENTRY RECEIVER POWER SUPPLY				
107	PT	COMBI SW INPUT 1				
108	Я	COMBI SW INPUT 4				
109	>	COMBI SW INPUT 2				
110	9	HAZARD SW				

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BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

CONSULT MONITOR ITEM

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
FR WIPER III	Front wiper switch HI	On
FR WIPER LOW	Other than front wiper switch LO	Off
FR WIPER LOW	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
FR WASHER SW	Front washer switch ON	On
ED WIDED INT	Other than front wiper switch INT	Off
FR WIPER INT	Front wiper switch INT	On
FR WIPER STOP	Front wiper is not in STOP position	Off
FR WIPER STOP	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
DD WIDED ON	Other than rear wiper switch ON	Off
RR WIPER ON	Rear wiper switch ON	On
DD WIDED INT	Other than rear wiper switch INT	Off
RR WIPER INT	Rear wiper switch INT	On
	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
DD WIDED CTOD	Rear wiper is in STOP position	Off
RR WIPER STOP	Rear wiper is not in STOP position	On
TUDNI CIONAL D	Other than turn signal switch RH	Off
TURN SIGNAL R	Turn signal switch RH	On
TUDNI CIONIAL I	Other than turn signal switch LH	Off
TURN SIGNAL L	Turn signal switch LH	On
TAIL LAMP OW	Other than lighting switch 1ST and 2ND	Off
TAIL LAMP SW	Lighting switch 1ST or 2ND	On
LILDE AM CW/	Other than lighting switch HI	Off
HI BEAM SW	Lighting switch HI	On
	Other than lighting switch 2ND	Off
HEAD LAMP SW 1	Lighting switch 2ND	On
LIEAD LAMB CW/ O	Other than lighting switch 2ND	Off
HEAD LAMP SW 2	Lighting switch 2ND	On
DA CCINIC CIVI	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
ALITO LICHT CM	Other than lighting switch AUTO	Off
AUTO LIGHT SW	Lighting switch AUTO	On

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Monitor Item	Condition	Value/Status
FR FOG SW	Front fog lamp switch OFF	Off
1 K 1 OG 3W	Front fog lamp switch ON	On
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off
DOOR SW-DR	Driver door closed	Off
DOOK SW-DK	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
DOOR SW-AS	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
DOOK SW-KK	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
DOOR SW-RL	Rear LH door opened	On
DOOR SW-BK	Back door closed	Off
DOOR SW-BK	Back door opened	On
SDL LOCK SW	Other than power door lock switch LOCK	Off
CDL LOCK SW	Power door lock switch LOCK	On
	Other than power door lock switch UNLOCK	Off
CDL UNLOCK SW	Power door lock switch UNLOCK	On
VEV CVI LIX CW	Other than driver door key cylinder LOCK position	Off
KEY CYL LK-SW	Driver door key cylinder LOCK position	On
VEV OVI LINI OVI	Other than driver door key cylinder UNLOCK position	Off
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	On
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off
IAZADD CM	Hazard switch is OFF	Off
HAZARD SW	Hazard switch is ON	On
REAR DEF SW	NOTE: The item is indicated, but not monitored.	Off
TR CANCEL SW	NOTE: The item is indicated, but not monitored.	Off
TR/BD OPEN SW	Back door opener switch OFF	Off
III/BD OF LIN SW	While the back door opener switch is turned ON	On
TRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off
REVERSE SW	NOTE: The item is indicated, but not monitored.	Off
RKE-LOCK	LOCK button of the key is not pressed	Off
	LOCK button of the key is pressed	On
RKE-UNLOCK	UNLOCK button of the key is not pressed	Off
	UNLOCK button of the key is pressed	On
RKE-TR/BD	NOTE: The item is indicated, but not monitored.	Off
DKE DVIIC	PANIC button of the key is not pressed	Off
RKE-PANIC	PANIC button of the key is pressed	On
DVE DAM ODEN	UNLOCK button of the key is not pressed	Off
RKE-P/W OPEN	UNLOCK button of the key is pressed and held	On

Monitor Item	Condition	Value/Status
RKE-MODE CHG	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of the key is pressed and held simultaneously	On
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V
OF HOAL SENSOR	Dark outside of the vehicle	Close to 0 V
REQ SW -DR	Driver door request switch is not pressed	Off
REQ SW -DR	Driver door request switch is pressed	On
REQ SW -AS	Passenger door request switch is not pressed	Off
REQ 3W -A3	Passenger door request switch is pressed	On
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off
REQ SW -BD/TR	Back door request switch is not pressed	Off
IVER OW -DD/ LK	Back door request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
- USIT SVV	Push-button ignition switch (push switch) is pressed	On
IGN RLY2 -F/B	NOTE: The item is indicated, but not monitored.	Off
ACC RLY -F/B	NOTE: The item is indicated, but not monitored.	Off
CLUCH SW	NOTE: The item is indicated, but not monitored.	Off
	The brake pedal is depressed when No. 7 fuse is blown	Off
BRAKE SW 1	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
BRAKE SW 2	The brake pedal is not depressed	Off
BRARE SW 2	The brake pedal is depressed	On
DETE/CANCL SW	Selector lever in P position	Off
DETE/CANCL SVV	Selector lever in any position other than P	On
CET DN/N CW	Selector lever in any position other than P and N	Off
SFT PN/N SW	Selector lever in P or N position	On
S/L -LOCK	NOTE: The item is indicated, but not monitored.	Off
S/L -UNLOCK	NOTE: The item is indicated, but not monitored.	Off
S/L RELAY-F/B	NOTE: The item is indicated, but not monitored.	Off
UNLK SEN -DR	Driver door is unlocked	Off
UINLIN SEIN FUR	Driver door is locked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
TUSH SVV -IPDIVI	Push-button ignition switch (push-switch) is pressed	On
GN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
ON INLI I -F/D	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in any position other than P	Off
DE LE GVV -IFDIVI	Selector lever in P position	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
OLIFIN TIFUIVI	Selector lever in P or N position	On

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Monitor Item	Condition	Value/Status
SFT P -MET	Selector lever in any position other than P	Off
SFI P-WEI	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
SELIN-MET	Selector lever in N position	On
	Engine stopped	Stop
ENGINE STATE	While the engine stalls	Stall
ENGINE STATE	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	NOTE: The item is indicated, but not monitored.	Off
S/L UNLK-IPDM	NOTE: The item is indicated, but not monitored.	Off
S/L RELAY-REQ	NOTE: The item is indicated, but not monitored.	Off
VEH SPEED 1	While driving	Equivalent to speed- ometer reading
VEH SPEED 2	While driving	Equivalent to speed- ometer reading
	Driver door is locked	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
	Passenger door is locked	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLOCK
D OK FLAG	Driver side door is open after ignition switch is turned OFF (Shift position is in the P position)	Reset
	Ignition switch ON	Set
PRMT ENG STRT	The engine start is prohibited	Reset
FRWIT LING STRT	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
KEN SIM SIMT	The key is not inserted into key slot	Off
KEY SW -SLOT	The key is inserted into key slot	On
RKE OPE COUN1	During the operation of the key	Operation frequency of the key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	_
CONFRM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	Yet
OOM NWID ALL	The key ID that the key slot receives accords with any key ID registered to BCM.	Done
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	Yet
	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	Done
CONFIRM ID3	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	Yet
COM INWIED	The key ID that the key slot receives accords with the third key ID registered to BCM.	Done

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Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	Yet
CONFIRM ID2	The key ID that the key slot receives accords with the second key ID registered to BCM.	Done
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	Yet
CONFIRMIDI	The key ID that the key slot receives accords with the first key ID registered to BCM.	Done
TD 4	The ID of fourth key is not registered to BCM	Yet
TP 4	The ID of fourth key is registered to BCM	Done
TD 0	The ID of third key is not registered to BCM	Yet
TP 3	The ID of third key is registered to BCM	Done
TD o	The ID of second key is not registered to BCM	Yet
TP 2	The ID of second key is registered to BCM	Done
TD 4	The ID of first key is not registered to BCM	Yet
TP 1	The ID of first key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	ID of front LH tire transmitter is registered	Done
ID REGST PLT	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
ID REGST FRT	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
ID REGST KKT	ID of rear RH tire transmitter is not registered	Yet
ID DECCT DI 1	ID of rear LH tire transmitter is registered	Done
ID REGST RL1	ID of rear LH tire transmitter is not registered	Yet
WARNING LAMP	Tire pressure indicator OFF	Off
WARNING LAWP	Tire pressure indicator ON	On
DUZZED	Tire pressure warning alarm is not sounding	Off
BUZZER	Tire pressure warning alarm is sounding	On

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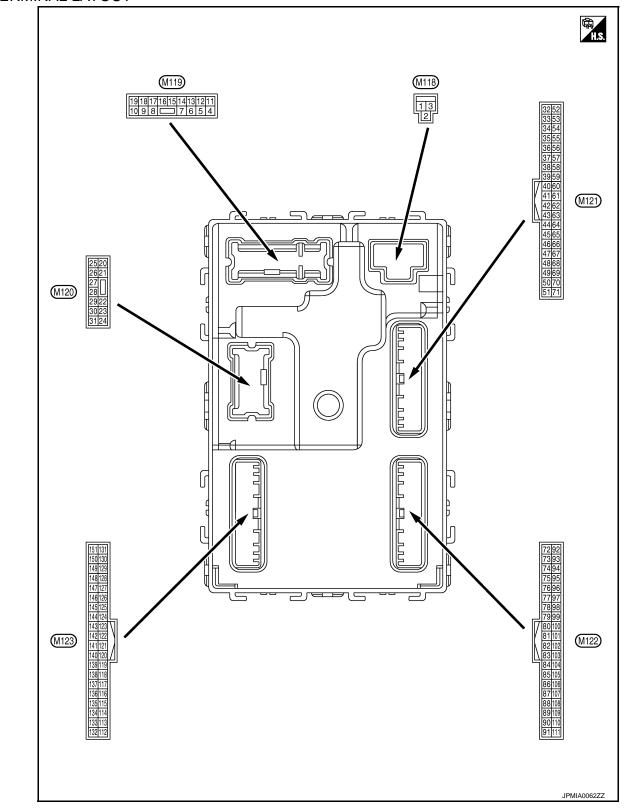
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TERMINAL LAYOUT



PHYSICAL VALUES

Revision: 2013 March **WW-53** 2014 QX50

	inal No.	Description				Value
+ (VVire	e color)	Signal name	Input/ Output		Condition	(Approx.)
1 (W)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
2 (W)	Ground	P/W power supply (BAT)	Output	Ignition switch OF	F	Battery voltage
3 (Y)	Ground	P/W power supply (RAP)	Output	Ignition switch ON	1	Battery voltage
4		Interior record laws			battery saver is activated.	0 V
4 (LG)	Ground	Interior room lamp power supply	Output	ed.	battery saver is not activator room lamp power supply)	Battery voltage
5	Ground	Passenger door UN-	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage
(L)	Ground	LOCK	Output	rassenger door	Other than UNLOCK (Actuator is not activated)	0 V
7	Ground	Step lamp	Output	Step lamp	ON	0 V
(Y)	Ground	эсер іапір	Output	Step lamp	OFF	Battery voltage
8	8 (V) Ground All doors, fuel lid LOCK		Output	t All doors	LOCK (Actuator is activated)	Battery voltage
(V)		LOCK			Other than LOCK (Actuator is not activated)	0 V
9	9 Ground Driver door, fuel	Driver door, fuel lid	Output	Driver door	UNLOCK (Actuator is activated)	Battery voltage
(G)	Ground	UNLOCK	Output	Bilver door	Other than UNLOCK (Actuator is not activated)	0 V
10	Ground	Rear RH door and rear LH door UN-	Output	Rear RH door	UNLOCK (Actuator is activated)	Battery voltage
(BR)	Ground	LOCK	Output	and rear LH door	Other than UNLOCK (Actuator is not activated)	0 V
11 (R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
13 (B)	Ground	Ground	_	Ignition switch ON	l	0 V
					OFF	0 V
		Push-button ignition				NOTE: When the illumination brightening/dimming level is in the neutral position
14 (W)	Ground	switch illumination ground	Output	Tail lamp	ON	(V) 10 0 2 ms JSNIA0010GB
15	Ground	ACC indicator lamp	Output	Ignition switch	OFF or ON	Battery voltage
(Y)	Ground	7.00 mulcator lamp	Output	igilition switch	ACC	0 V

	inal No.	Description				Value	Λ
(Wire	e color) –	Signal name	Input/ Output		Condition	(Approx.)	А
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch OFF Turn signal switch RH	0 V (V) 15 10 1 1 1 1 1 1 1 1 1 1	B C
					Turn signal switch OFF	6.5 V 0 V	E
18 (BG)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V	F
19	Ground	Room lamp timer	Output	Interior room	OFF	Battery voltage	Н
(V)		control		lamp	ON Turn signal switch OFF	0 V 0 V	
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E 6.5 V	J K
23					OPEN (Back door opener actuator is activated)	Battery voltage	W۱
(G)	Ground	Back door open	Output	Back door	Other than OPEN (Back door opener actuator is not activated)	0 V	M
					Turn signal switch OFF	0 V	
25 (G)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s	N 0
26					OFF (Stopped)	6.5 V 0 V	
26 (G)	Ground	Rear wiper	Output	Rear wiper	ON (Operated)	Battery voltage	

	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
34	Ground	Luggage room anten-	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(SB)	Glound	na (–)			When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB
35	Ground	d Luggage room anten- na (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(V)	Glodina				When Intelligent Key is not in the passenger compartment	(V) 15 10 5 11 1 s JMKIA0063GB
38	Ground	Ground Back door antenna (–)	Output	When the back door opener re- quest switch is operated with ig- nition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(B)	Ground				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB

	inal No.	Description				Value	Λ
(Wire	e color) –	Signal name	Input/ Output		Condition	(Approx.)	А
39		Back door antenna		When the back door opener re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	B C D
(W)	Ground	(+)	Output	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	E
47		Ignition relay (IPDM			OFF or ACC	Battery voltage	G
(Y)	Ground	E/R) control	Output	Ignition switch	ON	0 V	
52	01	On the state of the	Output Ig	Ignition switch	When selector lever is in P or N position	Battery voltage	Н
(SB)		Starter relay control	Output	ŎN	When selector lever is not in P or N position	0 V	
60		Push-button ignition		Push-button igni- tion switch (push switch)	Pressed	0 V	I
(BR)	Ground	switch (Push switch)	Input		Not pressed	Battery voltage	
					ON (Pressed)	0 V	J
61 (W)	Ground	Back door opener request switch	Input	Back door opener request switch	OFF (Not pressed)	(V) 15 10 5 10 ms JPMIA0016GB	WW
						1.0 V	M
64	Ground	Intelligent Key warn- ing buzzer (Engine	Output	Intelligent Key warning buzzer	Sounding	0 V	1 V I
(V)	Giound	room)	Output	(Engine room)	Not sounding	Battery voltage	N.I
65 (BG)	Ground	Rear wiper stop position	Input	Rear wiper	In stop position	(V) 15 10 5 0 10 ms JPMIA0016GB	N O
						1.0 V	
					Not in stop position	0 V	

	inal No. e color)	Description	ı		O Eff	Value
+	- COIOT)	Signal name	Input/ Output		Condition	(Approx.)
66 (R)	Ground	Back door switch	Input	Back door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (Door open)	0 V
					Pressed	0 V
67 (GR)	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	(V) 15 10 5 0 10 ms JPMIA0011GB
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (Door open)	0 V
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (Door open)	0 V

	inal No. e color)	Description			O a little a	Value	А
+	-	Signal name	Input/ Output		Condition	(Approx.)	, ,
74		Passenger door an-		When the pas- senger door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	B C D
(SB)	Ground	tenna (-)	Output	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	E F
75	Ground	Passenger door an-	Output	When the passenger door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	G H
(GR)	Ground	tenna (+)	Output	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	J K
76	0	Driver door antenna	0.4.4	When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	M
(V)	Ground	(-)	Output	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 1	O P

	inal No. e color)	Description			On a disting	Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
77		Driver door antenna		When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	
(LG)	Ground	(+)	Output	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 1	
78	Ground	d Room antenna 1 (–) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB	
(Y)	Glodina				When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	
79	Ground	Room antenna 1 (+) (Instrument panel) Output		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 11 1 s JMKIA0062GB	
(BR)	Giodila		OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB		

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
80 (GR)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (W)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82	Ground	Ignition relay [Fuse	Output	Ignition switch	OFF or ACC	0 V
(R)	Giodila	block (J/B)] control	Output	ignition switch	ON	Battery voltage
83	Ground	Remote keyless entry receiver communica-	Input/	During waiting		(V) 15 10 5 0 1 ms JMKIA0064GB
(Y)	Clound	tion	Output	When operating e	either button on the key	(V) 15 10 5 0 1 ms JMKIA0065GB

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	inal No.	Description				Value
(VVire	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V
87	Ground	Combination switch	Input	Combination	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 2 ms JPMIA0037GB
(BK)	(BR) Ground IN	INFUT 5		switch	Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0039GB
					Any of the conditions below with all switches OFF Wiper intermittent dial 1 Wiper intermittent dial 2 Wiper intermittent dial 6 Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB

	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V
					Rear washer switch ON (Wiper intermittent dial 4)	(V) 15 10 2 ms JPMIA0039GB 1.3 V
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V
90 (P)	Ground	CAN-L	Input/ Output	_		_
91 (L)	Ground	CAN-H	Input/ Output	_		_

	inal No.	Description				Value	
+ (VVir	e color)	Signal name	Input/ Output		Condition	(Approx.)	
					OFF	Battery voltage	
92 (LG)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 1 s 1 s JPMIA0015GB	
					ON	0 V	
93 (V)	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	Battery voltage	
					OFF	Battery voltage	
94 (Y)	Ground	Puddle lamp control	Output	Puddle lamp	ON	0 V	
95					OFF	0 V	
(BG)	Ground	ACC relay control	Output	Ignition switch	ACC or ON	Battery voltage	
96 (GR)	Ground	A/T shift selector (Detention switch) power supply	Output	_		Battery voltage	
99	99 Ground Selector lever P position switch	Input	Selector lever	P position	0 V		
(R)			Input	Selector lever	Any position other than P	Battery voltage	
					ON (Pressed)	0 V	
100 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB	
					ON (Pressed)	0 V	
101 (SB)	Ground	Driver door request switch	Input	Driver door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB 1.0 V	
102	Ground	Blower fan motor re-	Output	Ignition switch	OFF or ACC	0 V	
(BG)	Ground	lay control	Output	ignition switch	ON	Battery voltage	
103 (LG)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OF	F	Battery voltage	

Terminal No. (Wire color)		Description				Value	А
+	e color) _	Signal name	Input/ Output	Condition		(Approx.)	/
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	B C
					Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB	E
107 (LG)	Ground	Combination switch INPUT 1	Input	tent dial 4)	Turn signal switch RH	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V	G H
					Front wiper switch LO	(V) 15 10 5 0 2 ms JPMIA0038GB	J K
					Front washer switch ON	(V) 15 10 5 0 2 ms	N N
						1.3 V	

	Terminal No. Description (Wire color)		0		Value	
+	e color)	Signal name	Input/ Output	Condition		(Approx.)
		Combination switch INPUT 4 Input	Input		All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 2 ms JPMIA0041GB 1.4 V
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 2 ms JPMIA0038GB 1.3 V
108 (R)	Ground			Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB
					Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0040GB
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V

	inal No.	Description				Value	
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	Α
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB	B C
					Lighting switch PASS	(V) 15 10 5 0 2 ms JPMIA0037GB	E F
109 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB	G H
					Front wiper switch INT	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3 V	J K
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V	M
					ON	0 V	0
110 (G)	Ground	Hazard switch	Input	Hazard switch	OFF	(V) 15 10 5 0 10 ms JPMIA0012GB 1.1 V	Р

Terminal No. (Wire color)		Description			0 1111	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
113	Ground	Optical sensor	Input	Ignition switch	When bright outside of the vehicle	Close to 5 V
(P)	Cround	Option scribor	Прис	ON	When dark outside of the vehicle	Close to 0 V
116 (SB)	Ground	Stop lamp switch 1	Input	_		Battery voltage
		Stop lamp switch 2		Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
118	Ground	(Without ICC)	Input	Otop ramp ownor	ON (Brake pedal is depressed)	Battery voltage
(P)	Ground	Stop lamp switch 2	mpat		OFF (Brake pedal is not de- brake hold relay OFF	0 V
		(With ICC)			ON (Brake pedal is de- rake hold relay ON	Battery voltage
119 (SB)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	(V) 15 10 10 10 10 11 11 11 11 11 11 11 11 11
					UNLOCK status (Unlock switch sensor ON)	0 V
121 (BR)	Ground	Key slot switch	Input	When the key is inserted into key slot		Battery voltage
123				when the key is n	ot inserted into key slot OFF or ACC	0 V
(W)	Ground	IGN feedback	Input	Ignition switch	ON	Battery voltage
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close) ON (Door open)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V 0 V
132 (BR)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		(V) 15 10 5 0 JPMIA0013GB 10.2 V Battery voltage

Terminal No. (Wire color)		Description		0		Value
+ (VVIr	e color)	Signal name	Input/ Output		Condition	(Approx.)
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON (Tail lamps OFF) ON (Tail lamps ON)	9.5 V NOTE: The pulse width of this wave is varied by the illumination brightening/dimming level. (V) 15 10 5 0
134				LOCK indicator	OFF OFF	0 V Battery voltage
(GR)	Ground	LOCK indicator lamp	Output	lamp	ON	0 V
137 (BG)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
138	Ground	Receiver and sensor	Output	Ignition switch	OFF	0 V
(Y)		power supply			ACC or ON	5.0 V
139	Ground	Tire pressure receiv-	Input/		Standby state	(V) 6 4 2 0 + 0.2s OCC3881D
(L)		er communication	Output		When receiving the signal from the transmitter	(V) 6 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
140 (GR)	Ground	Selector lever P/N position	Input	Selector lever	P or N position Except P and N positions	Battery voltage 0 V
					ON	0 V
141 (G)	Ground	Security indicator	Output	Security indicator	Blinking	(V) 15 10 5 0
(0)						JPMIA0014GB 11.3 V

	inal No.	Description				
	e color)		Input/		Condition	Value (Approx.)
+	_	Signal name	Output			(, , , , , , , , , , , , , , , , , , ,
					All switches OFF	0 V
					Lighting switch 1ST	0.0
				Combination	Lighting switch HI	(V) 15
142	Ground	Combination switch	Output	switch	Lighting switch 2ND	10
(BG)		OUTPUT 5	·	(Wiper intermit- tent dial 4)	Turn signal switch RH	2 ms JPMIA0031GB 10.7 V
					All switches OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	
143	Ground	Combination switch OUTPUT 1	Output	Combination switch	Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10 5
(P)	Ground				Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	5 0 2 ms 10.7 V
		d Combination switch OUTPUT 2	Output	Combination	All switches OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	
144	0				Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15
(G)	Ground			switch	Rear washer switch ON (Wiper intermittent dial 4)	10 5 0
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	2 ms JPMIA0033GB
					All switches OFF	0 V
					Front wiper switch INT	(1.0)
		Ground Combination switch Output 3		Combination	Front wiper switch LO	(V) 15
145 (L)	Ground		switch (Wiper intermit- tent dial 4)	Lighting switch AUTO	10 5 0 2 ms	
						10.7 V

< ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				Value	Δ
(Wir	e color)	Signal name	Input/ Output		Condition	(Approx.)	
					All switches OFF	0 V	
					Front fog lamp switch ON		E
				Combination	Lighting switch 2ND	(V) 15	
146	Ground	Combination switch OUTPUT 4	Output	switch	Lighting switch PASS	10	(
(SB)	Ground				Turn signal switch LH	0 2 ms JPMIA0035GB	
		Driver door switch Input				(V) 15 10	Е
150 (LG)	Ground		Input	Driver door switch	OFF (Door close)	0	F
						JPMIA0011GB 11.8 V	(
					ON (Door open)	0 V	
151	0	Rear window defog-	0	Rear window de-	Active	0 V	-
(G)	Ground	ger relay control	Output	fogger	Not activated	Battery voltage	

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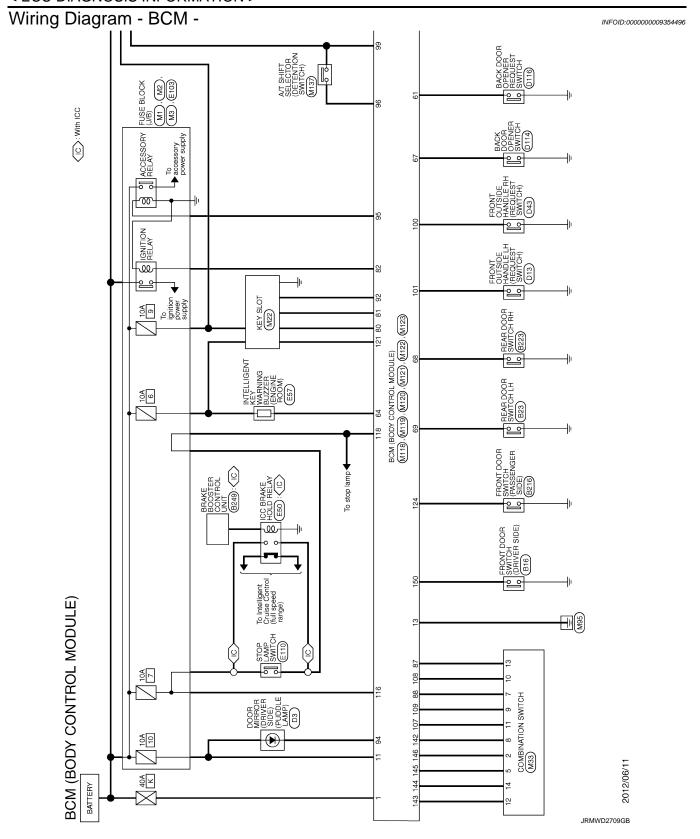
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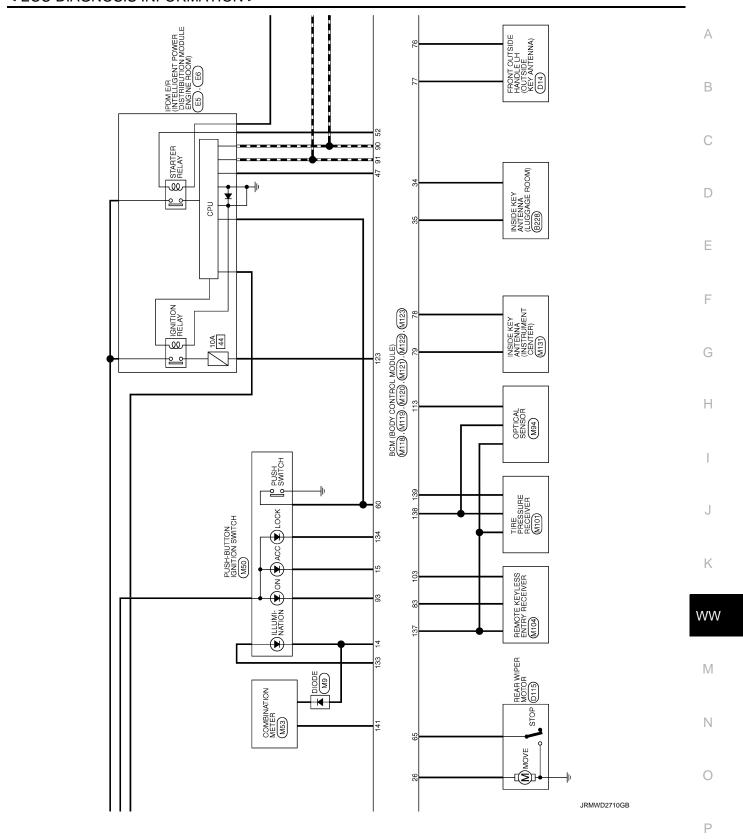
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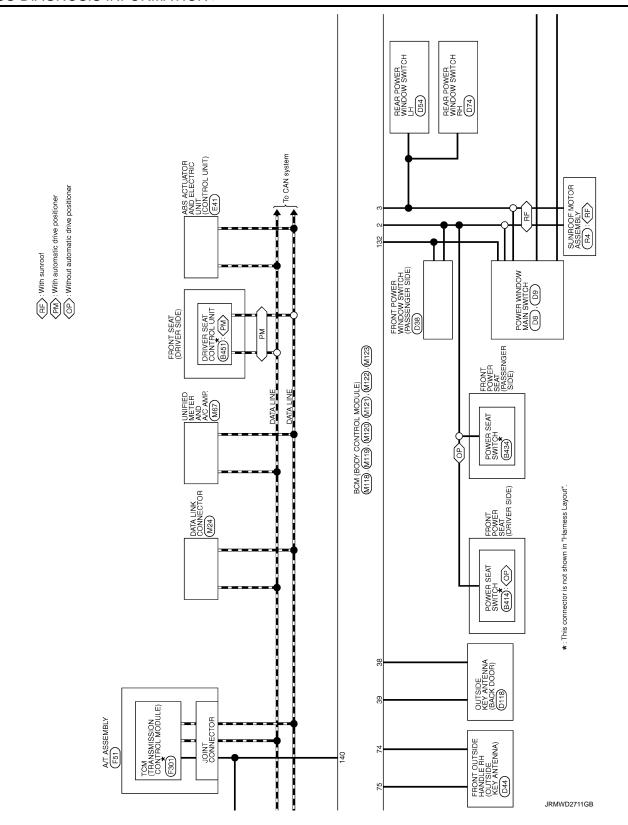
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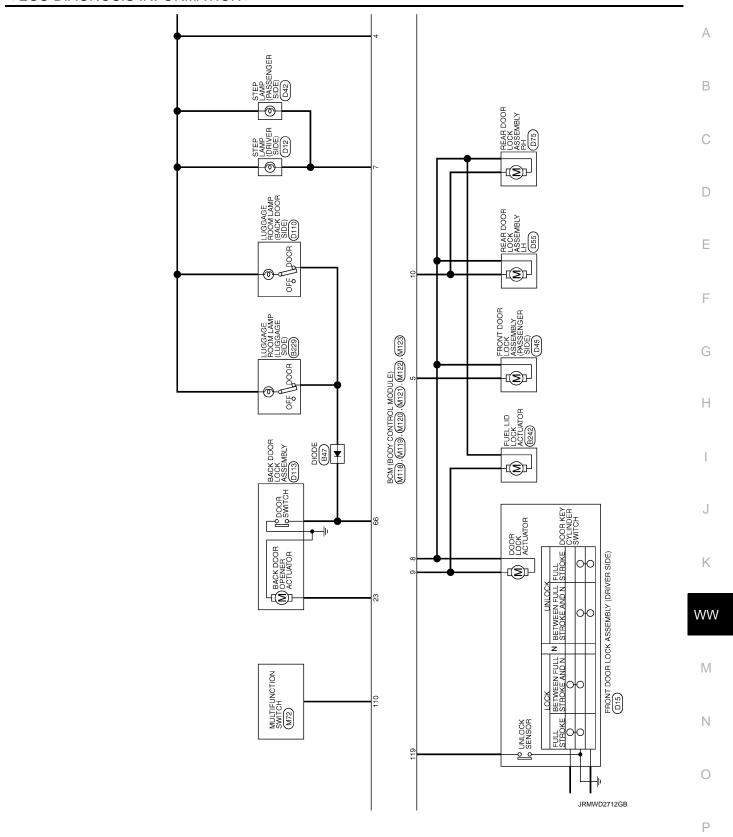
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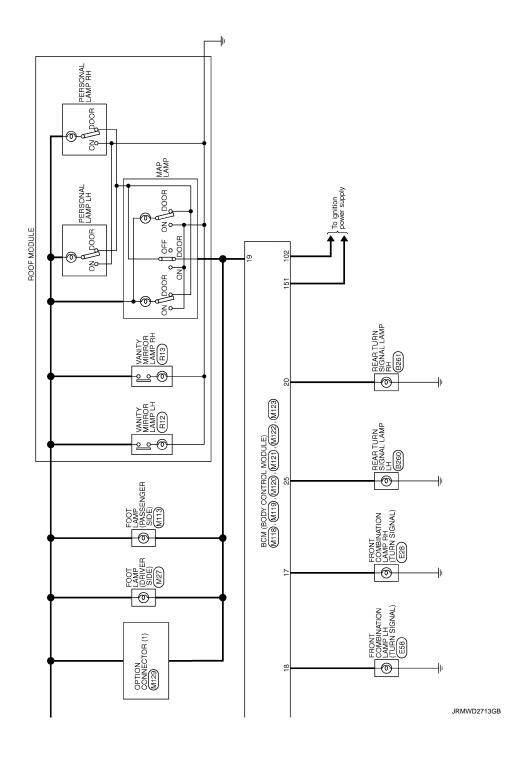
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< ECU DIAGNOSIS INFORMATION >

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ATOR		pecification]	VTROL UNIT	40 42 42 45 47	pecification]	ON ND DRIVE SIGNAL			В
B242 FUEL LID LOCK ACTUATOR M04FW-LC	7	Signal Name [Specification]	B249 BRAKE BOOSTER CONTROL UNIT TK24FGY			IGNOTION IGNOTION GROUND GROVE SIGNAL			С
Connector No. E	H.S.	Terminal Color Of No. Wire 1 R R 2 V	Connector No. E	H.S.	Terminal Color Of No. Wire 33 BR	42 G G 46 B 47 V			D
ROOM)		cation]	E SIDE)		cation]				Е
B228 NSDE KEYANTENNA (LUGGAGE ROOM) RKOZFGY		Signal Name [Specification]	B229 LUGGAGE ROOM LAMP (LUGGAGE SIDE) TK03FW	2 1	Signal Name [Specification]				F
Connector No. B228 Connector Name NSDE KEY Connector Type RK02FG)	E.S.	Terminal Color Of No. Wire 1 V 2 SB	Connector No. B229 Connector Name LUGGAGE Connector Type TK03FW	E.S.	0 > 0	, _			G
Conne		Termin No.	Conne	<i>y</i>	Terming No.				Н
Signal Name [Specification]	B216 FRONT DOOR SWITCH (PASSENGER SIDE) A03FW		Signal Name [Specification]	WITCH RH		Signal Name [Specification]			I
				B223 ne REAR DOOR SWITCH RH e A03FW					J
Terminal Color Of No. Wife 1 B	Connector No. Connector Name	H.S.	Terminal Color Of No. Wire 2 L	Connector No. Connector Name Connector Type	HS	Terminal Color Of No. Wire 2 BR			К
MODULE)		pecification]	3		pecification]				WW
DY CONTROL MODULE B16 FRONT DOOR SWITCH (DRIVER SIDE) A03FW		Signal Name (Specification)	R DOOR SWI		Signal Name [Specification]	B47 DIODE 24335_C9900			M
BCM (BODY CONTROL MODULE) Corrector No. 816 Corrector Name FRONT DORN SWITCH (DRIVER SIDE) Corrector Type AGSFW	H.S.	Terminal Color Of No. Wire 2 V	Connector No. B23 Connector Name REA Connector Type A03	H.S.	Terminal Color Of No. Wire 2 LG	Connector No. B47 Connector Name DIOI Connector Type 2433	H.S.		N
			<u> </u>	•					0
								JRMWD8153GB	

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BCM (BODY CONTROL MODULE)	Connector No. B414	Connector No.	B451	Connector No.		D3	
Connector Name REAR TURN SIGNAL LAMP LH	Connector Name POWER SEAT SWITCH	Connector Name	Connector Name DRIVER SEAT CONTROL UNIT	Connector	Name	Connector Name DOOR MIRROR (DRIVER SIDE)	
Connector Type HS02FG-W	Connector Type NS10FW-CS	Connector Type T	TH32FW	Connector Type	Type	TH24MW-NH	
	2 1 5 7				T		
H.S.	H.S.	H.S.	7 19 21 24 55 26 27 28 29 31 32	₹	Z.	24 23 22 21 19 16 17 14	
Terminal Color Of Signal Name (Specification)	Terminal Color Of Signal Name [Specification]	Terminal Color Of No. Wire	Signal Name [Specification]	Terminal Color Of No. Wire	Color Of Wire	Signal Name [Specification]	
H	az i	Н	X	2	0	-	
2 B -	2 B	× ×	CAN-H	m 4	90 >	SIDE CAMERA LH COMM	
	+	+	PULSE (RECLINING)	n 9	- œ	SIDE CAMERA LH POWER SUPPLY	
Connector No. B261	Н	Н	SLIDING SW (BACKWARD)	7	Μ	,	
Connector Name REAR TURN SIGNAL LAMP RH	> > >	12 SB	RECLINING SW (BACKWARD)	10	0	1	
Connector Type HS02FG-W		+	REAR LIFTING SW (DOWNWARD)	12	. 0		
	9 L/R	16 0	VCC	4	P		
	10 G/W -	17 Y/R	ΧŁ	17	9	SIDE CAMERA LH IMAGE GND	
		Н	CAN-L	18	Μ	SIDE CAMERA LH GND	
		\exists	P RANGE SW	19	В		
	Connector No. B434	+	PULSE (SLIDING)	21	GR.	1	
	Connector Name POWER SEAT SWITCH	7/B	PULSE (FR LIFTING)	3 5	ž >		
	Connector Type NS10FW-CS	27 R/G	RECLINING SW (FORWARD)	24	- >		
Terminal Color Of		+	FRONT LIFTING SW (UPWARD)				
No. Wire Signal Name [Specification]		H	REAR LIFTING SW (UPWARD)				
1 V		Н	SENSOR GND	Connector No.	П	D8	
2 B -	7	32 B/W	GND (SIGNAL)	Connector Name		POWER WINDOW MAIN SWITCH	
	6591034			Connector	Type	Connector Type NS16FW-CS	
				_	•		
	Terminal Color Of Signal Name [Specification]				4	1 2 3 4 7 5 6 7	
	Н			Ę	V	8 9 10 11 13 14 15	
	В 3				j		
	5 W						
	· ^ 9			Terminal Color Of	Color Of	Signal Name [Specification]	
	7 L/Y -			ġ,	Wire	ogical water [opcompanie]	
	+			- c	> 0		
	10 GW			n 6	R R		
	┨			4	>		

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GER SIDE) Pecification) Pecification)	В
Signal Name (Specification)	С
Corrector No. Corrector Type Terminal Color Of No. Wire 2 SB Corrector No. Corrector No. Corrector No. Corrector No. Terminal Color Of No. Wire 1 No. Wire 1 No. Wire 2 B 1 No. Wire 1 No. No. No. No. No. No. No.	D
Pec'(DRIVER SDE) Secffication) Decification	E
FRONT DOOR LOCK ASSENBLY (DRIVER SIDE) FRONT DOOR LOCK ASSENBLY (DRIVER SIDE) Signal Name (Specification) Signal Name (Specification) Signal Name (Specification) Signal Name (Specification) Signal Name (Specification)	F
Connector No. Connector No	G H
PECULEST SWITCH) BE KEY ANTERWA) BE KEY ANTERWA)	
Provincial Precure Symmony RKOZPI. Signal Name [Specification]	J
HS. Terminal Corrector Name Fit No. Wire In No. Wire	К
NODULE)	WW
SCAM BODY CONTROL MODULE	M
BCM (BODY CONTROL M	N
	0
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BCM (BODY CONTROL MODULE) Connector No. D44	Connector No.	D54	Connector No.	No. D74		Connector No. D110	
Connector Name FRONT OUTSIDE HANDLE RH (OUTSIDE KEY ANTENNA)	Connector Name	B REAR POWER WINDOW SWITCH LH	Connector Name		REAR POWER WINDOW SWITCH RH	Connector Name LUGGAGE ROOM LAMP (BACK DOOR SIDE)	
Connector Type RK02MGY	Connector Type	NS08FW-CS	Connector Type		NS08FW-CS	Connector Type TK03FW	
H.S.	H.S.	2 3 4 5 1		vi.	2 3 4 5 1	H.S.	
Terminal Color Of Signal Name [Specification]	Terminal Color Of No. Wire	Of Signal Name [Specification]	Terminal Color Of No. Wire	Solor Of Wire	Signal Name [Specification]	Terminal Color Of Signal Name [Specification]	
	1		-	*		1 v	
2 V -	2 V	-	2	^	-	2 P -	
	3 G		3	9			
			4	а.			
Connector No. D45	2 M		2	0		Connector No. D113	
Connector Name FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE)	7 B	-	7	В	-	Connector Name BACK DOOR LOCK ASSEMBLY	
Connector Type E06FGY-RS						Connector Type NS04FW-CS	
	Connector No.	D55	Connector No.	No. D75			
	Connector Name	B REAR DOOR LOCK ASSEMBLY LH	Connector Name		REAR DOOR LOCK ASSEMBLY RH		
	Connector Type	E06FGY-RS	Connector Type	ıı	E06FGY-RS		
H.S.				_		H.S. 4321	
				_			
Terminal Color Of Signal Name [Specification] No. Wire	H.S.		Ę	κį		Terminal Color Of Signal Name [Specification]	
2 LG						2 B	
	Terminal Color Of No. Wire	Of Signal Name [Specification]	Terminal Color Of No. Wire	Solor Of Wire	Signal Name [Specification]	3 V	
	+		- 0	o :			
	2 2		7	>			

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< ECU DIAGNOSIS INFORMATION >

Corrector No. E28 Corrector Name FRONT COMBINATION LAMP RH Corrector Type RS08FB-PR	H.S. (5878)	Terminal Color Of Nove Signal Name (Specification) 2	Terminal Color Of No. Wate Signal Name [Specification] 1
Corrector No. E5 Corrector Name Parent Entertainment Fourst Corrector Name Counted Corrector Type IT-ROIFWCS12-MA-1V	H.S.	Terminal Color Of No. Wire Signal Name [Specification] V V V V V V V V V	Corrector Type TH-DB-PW-NH Formerator Type TH-DB-PW-NH F
Corrector No. D116 Corrector Name BACK DOOR OPENER REQUEST Corrector Type IRQ2MBR-P	H.S.	Terminal Cobr Of Signal Name Specification	Terminal Color Off Signal Name (Specification) 10. Write 2 R
BCM (BODY CONTROL MODULE) Conrector Name BACK DOOR OPENER SWITCH Conrector Type TKIZMBR-P	H.S.	Terminal Color Of Signal Name Specification	Terminal Cadro of Mine Signal Name Specification Mine Signal Name Specification Signal Name Signal Name Specification Signal Name Specification Signal Name Signal Name Specification Signal Name Specification Signal Name Signal Name Signal Name Signal Name Specification Signal Name Signal Nam

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BCM (BODY CONTROL MODULE)	0	O TOTAL DESIGNATION OF THE PERSON	2002
- <u>-</u>	Connector No. E38	Connector No. E110	Compector No.
	Connector Name FRONT COMBINATION LAMP LH	Connector Name STOP LAMP SWITCH	Connector Name TCM (TRANSMISSION CONTROL MODULE)
9	Connector Type RS08FB-PR	Connector Type M04FW-LC	Connector Type SP10FG
91			
SB			<
31 R VDC OFF SW		Ī	
		3.4	1000
45 B BUS-H	H.S. ((5 2 3 4))	H.S.	r c
			ь
Connector No. E50			
Connector Name ICC BRAKE HOLD RELAY	Terminal Color Of Signal Name [Specification]	Terminal Color Of Signal Name [Specification]	Terminal Color Of Signal Name [Specification]
	a AMILE	- Wife	AVILE
Commercial type Micor ST-17-03	Ť	N C	S BATTEDY DOWER SUIDDLY
	B0W	* >	
- TI-C	t	- SB	
Ti		+	
	╀		OLUMI
L.V.	8 BG	Connector No. F51	
	┨		8 - CAN-L
		Connector Name A/T ASSEMBLY	
:	Connector No. E103	Connector Type RK10FG-DGY	10 - GROUND
No. Wire Signal Name [Specification]	(GI) XOO (G LO) LO COMPANDO CO	_	
1 V		<	
2 B -	Connector Type NS16FW-CS		Connector No. M1
a. 8	•	5 4 3 2 1	Connector Name FUSE BLOCK (J/B)
83 4			
7 W			Connector Type NSU6FW-MZ
	66 44 25 11		
	13. SE	Terminal Color Of	
Connector No. E57		No. Wire Signal Name [Specification]	3A 1 1 2A 1A
Connector Name INTELLIGENT KEY WARNING RIZZER JENGNE BOOM			1 C
	la O	BATTERY	
Connector Type RK03FBR	Wire	0]
	SB	> 0	
		S GROUND STANDS	Terminal Color Of Signal Name [Specification]
<	۵ د	1 PACK LID AND BELAS	Wire
	žo -	r 9	¥5 (
		CTAB	+
_	+	jα	1 0
		-	. >
Terminal Color Of			· >-
No. Wire Signal Name [Specification]			7A R
			8A L -
3 \			

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< ECU DIAGNOSIS INFORMATION >

Cornector No. M33 Cornector Name COMBINATION SWITCH Cornector Type THIGFW-NH	H.S. 7 8 9 10 11 12 13 14	Terminal Color Of Signal Name Specification No. Wire FR WASHER(+) A G G COLPDIT 4 A G G COLPDIT 4 A G G COLPDIT 5 B G COLPDIT 5
Corrector No. M24 Corrector Name DATA LINK CONNECTOR Corrector Type BD16FW	H.S. 14 14 14 15 15 15 15 15	Terminal Color Of Signal Name [Specification Name Specification Name Name Specification Name Nam
Corrector No. M9 Corrector Name DIODE Corrector Type 24335_C9900	H.S.	Terminal Color Of Signal Name [Specification] No. Wire Signal Name [Specification] Corrector No. M22 Corrector No. M22 Corrector Name KFV SLOT Corrector Name KFV SLOT Corrector Name
BCM (BODY CONTROL MODULE) Connector Name FUSE BLOCK (J/B) Connector Type NSTOFW-CS	H.S. (44 34 (17) (18) (18) (18) (18) (18) (18) (18) (18	Terminal Color Of National Signal Name (Specification) No. Wire Signal Name (Specification) No. Wire Signal Name (Specification) No. Wire Signal Name (Specification) No.

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BCM	(BOL	BCM (BODY CONTROL MODULE)								
	>		Connector No.	or No.	M67	Connector No.	M72	Connector No. M101		
80	۵		Connecto	Connector Name	INFIED METER AND A/C AMP	Connector Na	Connector Name Mili Tiel INCTION SWITCH	Connector Name TIRE PRESSURE RECEIVER	E BECEIVER	
								- 1		
			Connector Type	r Type	TH32FW-NH	Connector Type	e TH16FW-NH	Connector Type TK04FW		
Connector No.	ي چ	M53		,			,	•		
Connector Name	Name	COMBINATION METER		1						
Connector Type		HN-WHOHILL	_	Į] / \ 			
			4	Ĕ	41 42 43 44 45 46 47 33 54 55 56		4 6 8 14 16	i i		
- 2	7		1	į	57 58 59 60 61 62 63 65 69 70 71 72		13		4 7	
	Ţ							a		
Ŧ	-	1 2 3 5 6 7 10	Torminol	Jordan John		Torminal Color Of		Townson October Of		
. ·	į	71 27 24 25 27 73 29 20 31 33 33 77 38 38 48	e 2	Wire	Signal Name [Specification]	No. Wire	Signal Name [Specification]	No. Wire	Signal Name [Specification]	
			41	>	ACC POWER SUPPLY	-	B GROUND	1 BG	GROUND	
			42	>	FUEL LEVEL SENSOR SIGNAL	9	/ ACC	2 F	SIGNAL	
Terminal Color Of	Solor Of	footeoffication	43	٣	INTAKE SENSOR SIGNAL	4	R ILL	4 Y	BATTERY	
Ö.	Wire		44	PC	IN-VEHICLE SENSOR SIGNAL	+				
-	GR	BATTERY POWER SUPPLY	45	۵	AMBIENT SENSOR SIGNAL	9				
T			46	BG	SUNLOAD SENSOR SIGNAL		A	Connector No. M104		
┪		COMMUNICATION SI	47	ŋ	EXHAUST GAS / OUTSIDE COOR DETECTING SENSOR SIGNAL	\dashv	B SW GND	Connector Name BEMOTE KEYLE	REMOTE KEVIESS ENTRY RECEIVER	
2	В	GROUND	53	9	IGNITION POWER SUPPLY		DIS			
9	Ь	ALTERNATOR SIGNAL	54	>	BATTERY POWER SUPPLY	16 (G HAZARD ON	Connector Type JAB04FB		
	BR	AIR BAG SIGNAL	22	В	GROUND					
10	9	SECURITY SIGNAL	26	7	CAN-H					
15	В	GROUND	25	Μ	BRAKE FLUID LEVEL SWITCH SIGNAL	Connector No.	M94			
16	В	METER CONTROL SWITCH GROUND	28	BR	FUEL LEVEL SENSOR GROUND	Complex Momo	GOSINGS INCIDEN			
19	В	ILL GND	29	GR	INTAKE SENSOR GROUND		OF HOSE SENSON		7 4	
20	В	ITT	09	٦	IN-VEHICLE SENSOR GROUND	Connector Type TK03FW	e TK03FW		1	
21	BG	IGNITION SIGNAL	19	BR	AMBIENT SENSOR GROUND					
22	В	GROUND	62	SB	SUNLOAD SENSOR GROUND	_				
24	BR	COMMUNICATION SIGNAL (LCD-AMP.)	63	œ	-			nal Color Of	Signal Name [Specification]	
25	>	COMMUNICATION SIGNAL (AMPLCD)	65	BG	ECV SIGNAL	•			and lepeomorani	
56	æ	VEHICLE SPEED SIGNAL (8-PULSE)	69	٦	A/C LAN SIGNAL	S I	1 2 3	1 BG	GROUND	
27	^	PARKING BRAKE SWITCH SIGNAL	20	œ	EACH DOOR MOTOR POWER SUPPLY			2 Y SIG	SIGNAL OUTPUT	
28	W	BRAKE FLUID LEVEL SWITCH SIGNAL	7.1	В	GROUND			4 LG	BATTERY	
59	SB	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)	72	Ь	CAN-L					
30	9	II				Terminal Color Of	r Of			
31	٦					No. Wire				
33	В	ILLUMINATION CONTROL SIGNAL				-	POWER			
36	FIG	SELECT SWITCH SIGNAL				2				
37	SB	= I				3	B GROUND			
38	٦	TRIP A/B RESET SWITCH SIGNAL								
39	Д	ILLUMINATION CONTROL SWITCH SIGNAL (-)								
40	BG	ILLUMINATION CONTROL SWITCH SIGNAL (+)								

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< ECU DIAGNOSIS INFORMATION >

BCM (BODY CONTROL MODULE)	Commoditor No. M440	Composition No.	MACA	S	9	GWA THA STAIN
COLLEGE INC.	Τ	T		8 8	6	MATCHAIN AME.
Connector Name FOOT LAMP (PASSENGER SIDE)	Connector Name BCM (BODY CONTROL MODULE)	Connector Name B	BCM (BODY CONTROL MODULE)	- C	۵ د	ION DELAY (E/B) CONT
Connector Type AO2EW	Connector Type NS18EW-CS	Connector Type	HACHORY-NH	83	۷ >	KEYLESS ENTRY RECEIVER COMM
				87	BR	COMBI SW INPUT 5
	•	_		88	>	COMBI SW INPUT 3
				06	Ь	CAN-L
K	4 5 7 8 9 10		7	91	_	CAN-H
21	11 13 14 15 17 18 19	Ē	88 88 88 88 88 88 88 88 88 88 88 88 88	95	97	KEY SLOT ILL CONT
	2		88 88 87 86 65 84 81 82 82 82	93	>	ON IND
				97	>	PUDDLE LAMP CONT
	-			+	+	ACC RELAY CONT
Terminal Color Of Signal Name [Specification]	Terminal Color Of Signal Name [Specification]	Terminal Color Of	Signal Name [Specification]	8 8	†	A/T SHIFT SELECTOR POWER SUPPLY
Wife	WITE	+	LUGGAGE ROOM ANT-	100	r G	PASSENGER DOOR REQUEST SW
2 BR	+	ł	LUGGAGE ROOM ANT+	101	SB	DRIVER DOOR REQUEST SW
┨	7 Y STEP LAMP CONT	88 88	BACK DOOR ANT-	102	+	BLOWER FAN MOTOR RELAY CONT
	8 V ALL DOOR, FUEL LID LOCK OUTPUT	39 M	BACK DOOR ANT+	103	9	KEYLESS ENTRY RECEIVER POWER SUPPLY
Connector No. M118	9 G DRIVER DOOR, FUEL LID UNLOCK OUTPUT	47 Y	IGN RELAY (IPDM E/R) CONT	107	FC	COMBI SW INPUT 1
Connector Name BCM (BODY CONTROL MODILE)	BR REAR DO	\dashv	STARTER RELAY CONT	108	œ	COMBI SW INPUT 4
	œ	\exists	PUSH SW	109	>	COMBI SW INPUT 2
Connector Type M03FB-LC	В	61 W	BACK DOOR OPENER REQUEST SW	110	g	HAZARD SW
,	W PUSHBUTTON	\dashv	I-KEY WARN BUZZER (ENG ROOM)			
	>	_	REAR WIPER STOP POSITION		- 1	
I	Μ	\dashv	BACK DOOR SW	Connector No.	- 1	M123
1 3	BG	\dashv	BACK DOOR OPENER SW	Connector Name		BCM (BODY CONTROL MODILIE)
	19 V INT ROOM LAMP CONT	\exists	REAR RH DOOR SW			(2002)
7		69 R	REAR LH DOOR SW	Connector Type	Π	TH40FG-NH
l	Connector No M120			_	•	
Terminal Color Of	_	Connector No.	M122	_	•	
No. Wire Signal Name [Specification]	Connector Name BCM (BODY CONTROL MODULE)	_		\	L	
×	Connector Type NS12FW-CS	Connector Name B	BCM (BODY CONTROL MODULE)			20, 28, 21, 110, 118, 118
2 W POWER WINDOW POWER SUPPLY(BAT)	•	Connector Type T	TH40FB-NH		≅ .	18 18 18 18 18 18 18 18
		_				
				la	Color Of	Signal Nama [Spacification]
			7	No.	Wire	orginal realite [opecification]
	92 \$2		X 12 12 12 12 12 12 12 12 12 12 12 12 12	113	۵	OPLICAL SENSOR
			15 159 150 155 155 155 155 155 155 155 155 155	116	SB	STOP LAMP SW 1
				118	۵	STOP LAMP SW 2
	la D			119	88	DR DOOR UNLOCK SENSOR
	Wire	a E	Signal Name [Specification]	121	¥ :	KEY SLOT SW
	>	4		123	8	IGN F/B
	e O	+	PASSENGER DOOR ANT-	124	S S	PASSENGER DOOR SW
	9	4	PASSENGER DOOR ANT+	132	1	POWER WINDOW SW COMM
	26 G REAR WIPER OUTPUT	-	DRIVER DOOR ANT-	+	7	PUSH-BUTTON IGNITION SW ILL POWER
		17 LG	DRIVER DOOR ANT+	+	GR	LOCK IND
		+	ROOM ANT1-	+	9g	RECEIVER/SENSOR GND
		/9 BK	KOOM ANIT+	28	<u>-</u>	KECEIVEK/SENSOR POWER SUPPLY

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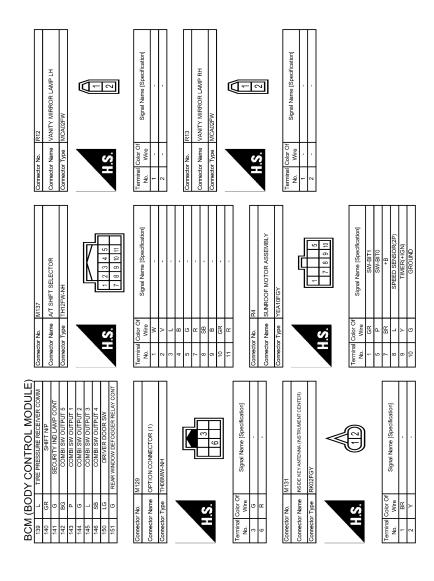
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Fail-safe

FAIL-SAFE CONTROL BY DTC

BCM performs fail-safe control when any DTC are detected.

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Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent • Starter control relay signal • Starter relay status signal
B2608: STARTER RELAY	Inhibit engine cranking	 500 ms after the following signal communication status becomes consistent Starter motor relay control signal Starter relay status signal (CAN)
B260A: IGNITION RELAY	Inhibit engine cranking	 500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (Battery voltage) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions are fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization

REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper stop position signal.

When the rear wiper stop position signal does not change for more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation

1. More than 1 minute is passed after the rear wiper stops.

- 2. Turn rear wiper switch OFF.
- 3. Operate the rear wiper switch or rear washer switch.

DTC Inspection Priority Chart

INFOID:0000000009354498

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

Priority	DTC	A.1
1	B2562: LOW VOLTAGE	N
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)	0
3	B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI SCANNING	P

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Priority	DTC
4	 B2553: IGNITION RELAY B2555: STOP LAMP B2556: PUSH-BTN IGN SW B2557: VEHICLE SPEED B2560: STARTER CONT RELAY B2601: SHIFT POSITION B2602: SHIFT POSITION B2603: SHIFT POSI STATUS B2604: PNP SW B2605: PNP SW B2606: STARTER RELAY B2607: ENG STATE SIG LOST B2607: ENG STATE SIG LOST B2614: ACC RELAY CIRC B2615: BLOWER RELAY CIRC B2616: IGN RELAY CIRC B2617: STARTER RELAY CIRC B2618: BCM B261A: PUSH-BTN IGN SW B261A: VEHICLE TYPE B26EA: KEY REGISTRATION C1729: VHCL SPEED SIG ERR U0415: VEHICLE SPEED SIG
5	 C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1734: CONTROL UNIT
6	B2621: INSIDE ANTENNA B2623: INSIDE ANTENNA

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 Freeze Frame Data. For details of Freeze Frame Data, refer to <u>BCS-18</u>, "COM-MON ITEM: CONSULT Function (BCM - COMMON ITEM)".

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	_	_
U1000: CAN COMM CIRCUIT	_	_	_	_	BCS-41
U1010: CONTROL UNIT (CAN)	_	_	_	_	BCS-42
U0415: VEHICLE SPEED SIG	_	_	_	_	BCS-43
B2190: NATS ANTENNA AMP	×	_		_	SEC-40

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2191: DIFFERENCE OF KEY	×	_	_	_	<u>SEC-43</u>
B2192: ID DISCORD BCM-ECM	×	_	_	_	SEC-44
B2193: CHAIN OF BCM-ECM	×	_	_	_	SEC-45
B2195: ANTI SCANNING	×	_	_	_	SEC-46
B2553: IGNITION RELAY	_	×	_	_	PCS-48
B2555: STOP LAMP	_	×	_	_	SEC-47
B2556: PUSH-BTN IGN SW	_	×	×	_	SEC-49
B2557: VEHICLE SPEED	×	×	×	_	SEC-51
B2560: STARTER CONT RELAY	×	×	×	_	SEC-52
B2562: LOW VOLTAGE	_	×	_	_	BCS-44
B2601: SHIFT POSITION	×	×	×	_	SEC-53
B2602: SHIFT POSITION	×	×	×	_	SEC-56
B2603: SHIFT POSI STATUS	×	×	×	_	SEC-59
B2604: PNP SW	×	×	×	_	SEC-62
B2605: PNP SW	×	×	×	_	SEC-64
B2608: STARTER RELAY	×	×	×	_	SEC-66
B260A: IGNITION RELAY	×	×	×	_	PCS-50
B260F: ENG STATE SIG LOST	×	×	×	_	SEC-68
B2614: ACC RELAY CIRC	_	×	×	_	PCS-52
B2615: BLOWER RELAY CIRC	_	×	×	_	PCS-55
B2616: IGN RELAY CIRC	_	×	×	_	PCS-58
B2617: STARTER RELAY CIRC	×	×	×	_	SEC-71
B2618: BCM	×	×	×	_	PCS-61
B261A: PUSH-BTN IGN SW	_	×	×	_	SEC-73
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	_	SEC-76
B2621: INSIDE ANTENNA	_	×	_	_	DLK-58
B2623: INSIDE ANTENNA	_	×	_	_	DLK-60
B26E1: ENG STATE NO RES	×	×	×	_	SEC-69
326EA: KEY REGISTRATION	_	×	× (Turn ON for 15 seconds)	_	<u>SEC-70</u>
C1704: LOW PRESSURE FL	_	_	_	×	
C1705: LOW PRESSURE FR	_	_	_	×	MIT OO
C1706: LOW PRESSURE RR	_	_	_	×	<u>WT-23</u>
C1707: LOW PRESSURE RL	_	_	_	×	
C1708: [NO DATA] FL	_	_	_	×	
C1709: [NO DATA] FR	_	_	_	×	VACE OF
C1710: [NO DATA] RR	_	_	_	×	<u>WT-25</u>
C1711: [NO DATA] RL	_	_	_	×	

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
C1716: [PRESSDATA ERR] FL	_	_	_	×	
C1717: [PRESSDATA ERR] FR	_	_	_	×	WT-28
C1718: [PRESSDATA ERR] RR	_	_	_	×	<u> </u>
C1719: [PRESSDATA ERR] RL	_	_	_	×	
C1729: VHCL SPEED SIG ERR	_	_	_	×	<u>WT-30</u>
C1734: CONTROL UNIT	_	_	_	×	<u>WT-32</u>

< ECU DIAGNOSIS INFORMATION >

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

Reference Value

VALUES ON THE DIAGNOSIS TOOL

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item		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 SOLD DEO	Lighting switch OFF		Off
TAIL&CLR REQ	Lighting switch 1ST, 2ND, HI or	AUTO (Light is illuminated)	On
III 10 DEO	Lighting switch OFF		Off
HL LO REQ	Lighting switch 2ND HI or AUTO	(Light is illuminated)	On
	Lighting switch OFF		Off
HL HI REQ	Lighting switch HI		On
		Front fog lamp switch OFF	Off
FR FOG REQ	Lighting switch 2ND or AUTO (Light is illuminated)	 Front fog lamp switch ON Daytime running light activated (Only for Canada) 	On
		Front wiper switch OFF	Stop
	Lauritia a assitata ONI	Front wiper switch INT	1LOW
FR WIP REQ	Ignition switch ON	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 RLTT-REQ	Ignition switch ON	On	
ICN DI V	Ignition switch OFF or ACC		Off
IGN RLY	Ignition switch ON		On
DITCH C/V	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 DLV CONT	Ignition switch ON		Off
ST RLY CONT	At engine cranking		On

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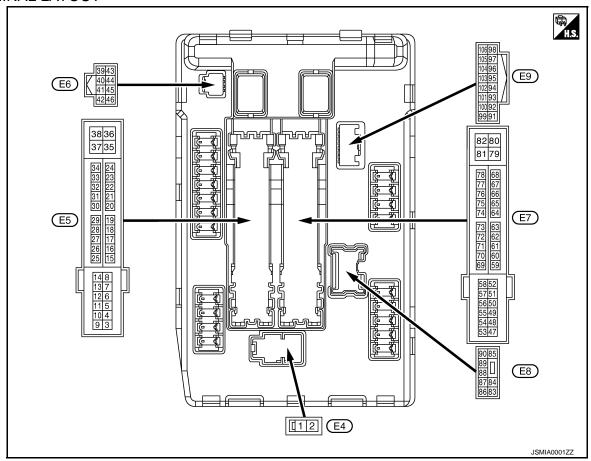
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Monitor Item	Cor	Value/Status	
IHBT RLY -REQ	Ignition switch ON	Off	
INBI KLY -KEQ	At engine cranking		On
	Ignition switch ON		Off
	At engine cranking		INHI ON \rightarrow ST ON
ST/INHI RLY		control relay cannot be recognized by . when the starter relay is ON and the	UNKWN
DETENT SW	Ignition switch ON	Ignition switch ON • Press the selector button with selector lever in P position • Selector lever in any position other than P	
	Release the selector button with se	lector lever in P position	On
S/L RLY -REQ	NOTE: The item is indicated, but not monit	Off	
S/L STATE	NOTE: The item is indicated, but not monit	UNLOCK	
DTRL REQ	NOTE: The item is indicated, but not monit	Off	
OIL D CW	Ignition switch OFF, ACC or engine	running	Open
OIL P SW	Ignition switch ON		Close
HOOD CW	Close the hood		Off
HOOD SW	Open the hood	On	
HL WASHER REQ	NOTE: The item is indicated, but not monit	ored.	Off
	Not operation		Off
THFT HRN REQ	 Panic alarm is activated Horn is activated with VEHICLE STEM 	On	
LIODAL CLUDE	Not operating		Off
HORN CHIRP	Door locking with Intelligent Key (he	orn chirp mode)	On
CRNRNG LMP REQ	NOTE: The item is indicated, but not monit	ored.	Off

< ECU DIAGNOSIS INFORMATION >

TERMINAL LAYOUT



PHYSICAL VALUES

Tormi	inal No.	Description				
	(Wire color)		,	Input/ Condition		Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
1 (W)	Ground	Battery power supply	Input	Ignition swi	itch OFF	Battery voltage
2 (L)	Ground	Battery power supply	Input	Ignition swi	itch OFF	Battery voltage
4	0	Frank win and O	0	Ignition	Front wiper switch OFF	0 V
(V)	Ground	Front wiper LO	Output	switch ON	Front wiper switch LO	Battery voltage
5	Ground	Front wiper HI	Outrant Ignition		Front wiper switch OFF	0 V
(L)	Ground	Front wiper mi	Output	switch ON	Front wiper switch HI	Battery voltage
7	Craund	Tail, license plate lamps &	Outrout	Ignition	Lighting switch OFF	0 V
(R)	Ground	interior lamps	Output	switch ON	Lighting switch 1ST	Battery voltage
12 (B/W)	Ground	Ground	_	Ignition swi	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
16				Ignition	Front wiper stop position	0 V
(LG)	Ground	Front wiper auto stop	Input	Ignition switch ON	Any position other than front wiper stop position	Battery voltage

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	Terminal No. Description (Wire color)			-	Value	
+	- COIOT)	Signal name	Input/ Output		Condition	(Approx.)
19	Ground	Ignition relay power supply	Output	Ignition swi		0 V
(W)		3 71 117		Ignition swi	itch ON	Battery voltage
25	Ground	Ignition relay power supply	Output	Ignition swi		0 V
(G)		3 71 113		Ignition swi		Battery voltage
26*	Ground	Ignition relay power supply	Output	Ignition swi		0 V
(R)				Ignition swi		Battery voltage
27 (BC)	Ground	Ignition relay monitor	Input	-	itch OFF or ACC	Battery voltage
(BG)		-		Ignition swi		0 V
28 (L)	Ground	Push-button ignition switch	Input		bush-button ignition switch	0 V
(L)		SWILCIT		Release the	e push-button ignition switch	Battery voltage
30 (GR)	Ground	Starter relay control	Input	Ignition switch ON	Selector lever in any position other than P or N	0 V
					Selector lever P or N	Battery voltage
36 (G)	Ground	Battery power supply	Input	Ignition swi	itch OFF	Battery voltage
39 (P)	_	CAN-L	Input/ Output	_		_
40 (L)	_	CAN-H	Input/ Output	_		_
41 (B/W)	Ground	Ground	_	Ignition switch ON		0 V
42	Ground	Cooling fan relay control	Input	Ignition switch OFF or ACC		0 V
(Y)	Cround	Cooling lan rolay control	mpat	Ignition switch ON		0.7 V
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
(BR)	Giodila	Tioni relay control	при	The horn is	activated	0 V
45	Ground	Anti theft horn relay control	Input	The horn is	deactivated	Battery voltage
(G)	Giodila	And their norm letay control	при	The horn is	activated	0 V
46 (R)	Ground	Starter relay control	Input	Ignition switch ON	Selector lever in any position other than P or N	0 V
(11)				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
(BG)	Ground	ECM relay power supply	Output	Ignition sIgnition s(For a fetion switch	switch OFF w seconds after turning igni-	Battery voltage

< ECU DIAGNOSIS INFORMATION >

Terminal No. Description (Wire color)					Value		
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	
51	Ground	Ignition relay power supply	Output	Ignition swi	tch OFF	0 V	
(Y)	Ground	Ignition relay power supply	Output	Ignition swi	tch ON	Battery voltage	
53				Ignition swi (More than ignition swi	a few seconds after turning	0 V	
(W)	Ground	ECM relay power supply	Output	Ignition sIgnition s(For a fewtion switch	witch OFF w seconds after turning igni-	Battery voltage	
54		Throttle central mater re		Ignition swi (More than ignition swi	a few seconds after turning	0 V	
(P)	Ground	Throttle control motor re- lay power supply	Output	Ignition sIgnition s(For a fewtion switch	witch OFF w seconds after turning igni-	Battery voltage	
55 (SB)	Ground	ECM power supply	Output	Ignition swi	tch OFF	Battery voltage	
56	Ground	Ignition relay power supply	Output	Ignition swi	tch OFF	0 V	
(LG)	Cround	igilition relay power supply		Ignition swi	tch ON	Battery voltage	
57	Ground	Ignition relay power supply	Output	Ignition swi	tch OFF	0 V	
(G)	Ground	ignition relay power supply	Output	Ignition switch ON		Battery voltage	
58	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V	
(V)	Ground	ignition relay power supply	Output	Ignition swi	tch ON	Battery voltage	
60				Ignition swi (More than ignition swi	a few seconds after turning	Battery voltage	
69 (BR)	(BR) Ground ECM relay control		Output	Ignition sIgnition s(For a fevition switch	witch OFF w seconds after turning igni-	0 – 1.5 V	
						0 – 1.0 V	_
70 (BG)			Output	Ignition swi	tch ON → OFF	Battery voltage ↓ 0 V	
				Ignition swi	tch ON	0 V 0 – 1.0 V	
74				Ignition swi		0 - 1.0 V	
74 (P)	Ground	Ignition relay power supply	Output	Ignition swi		Battery voltage	
					Engine stopped	0 V	
75 (SB)	Ground	Oil pressure switch	Input	Ignition switch ON	Engine running	Battery voltage	

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	Terminal No. Description (Wire color)				Value	
+ (Wire	e color)	Signal name	Input/ Output		Condition	value (Approx.)
				Ignition swi	tch ON	(V) 6 4 2 0 2 ms JPMIA0001GB
76 (Y)			Output	40% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"		(V) 6 4 2 0 2 ms JPMIA0002GB 3.8 V
				80% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"		(V) 6 4 2 0 2 ms JPMIA0003GB 1.4 V
77 (B)	Ground	Fuel pump relay control	Output	Approximately 1 second after turning the ignition switch ON Engine running		0 – 1.0 V
(R)			·		tely 1 second or more after ignition switch ON	Battery voltage
80 (W)	Ground	Starter motor	Output	At engine of	ranking	Battery voltage
83	Ground	Headlamp LO (RH)	Output	Ignition	Lighting switch OFF	0 V
(BG)		. ,		switch ON	Lighting switch 2ND	Battery voltage
84 (V)	Ground	Headlamp LO (LH)	Output	Ignition switch ON	Lighting switch OFF Lighting switch 2ND	0 V Battery voltage
					Front fog lamp switch OFF	0 V
86 (W)	Ground	Front fog lamp (RH)	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
87 (L)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	 Front fog lamp switch ON Daytime running light activated (Only for Canada) 	Battery voltage
88 (GR)	Ground	Washer pump power supply	Output	Ignition swi	tch ON	Battery voltage

< ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				Value	
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	
00				Lawition	Lighting switch OFF	0 V	
89 (BR)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	Lighting switch HI Lighting switch PASS	Battery voltage	
00				Lawition	Lighting switch OFF	0 V	
90 (P)	Ground	Headlamp HI (LH)	Output Ignition switch 0	switch ON	Lighting switch HI Lighting switch PASS	Battery voltage	
91	Cround	Darking Jamp (DU)	Output	Ignition	Lighting switch OFF	0 V	
(P)	Ground	Parking lamp (RH)	Output	switch ON	Lighting switch 1ST	Battery voltage	
92	Craund	Doubing Laws (LLI)	Outrout	Ignition	Lighting switch OFF	0 V	
(BG)	Ground	Parking lamp (LH)	Output	switch ON	Lighting switch 1ST	Battery voltage	
97 (V)	Ground	Cooling fan control	Output	Engine idling		0 – 5 V	
104	Ground	Hood switch	Input	Close the h	nood	Battery voltage	
(LG)	Giodila	1 1000 SWILGIT	input	Open the hood		0 V	

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

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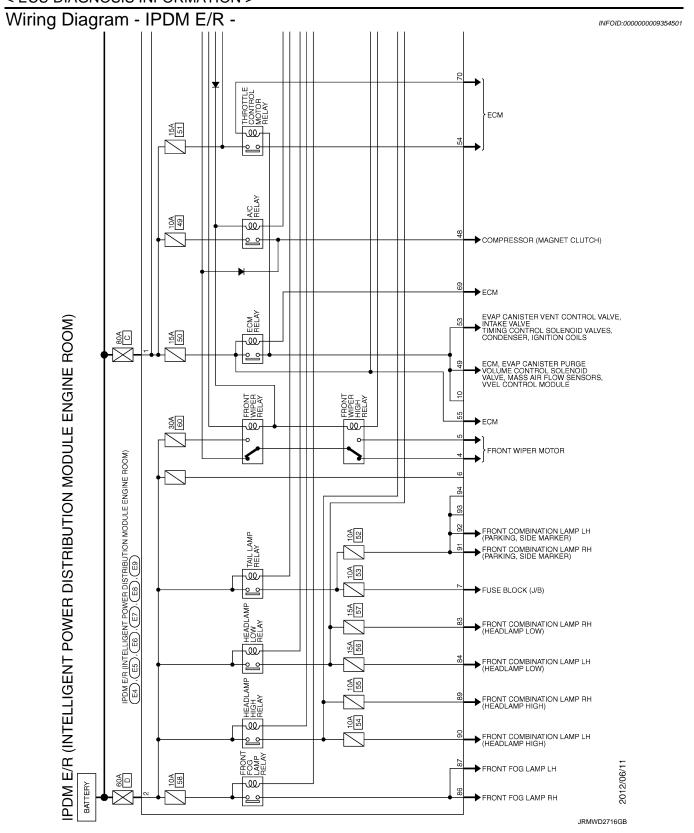
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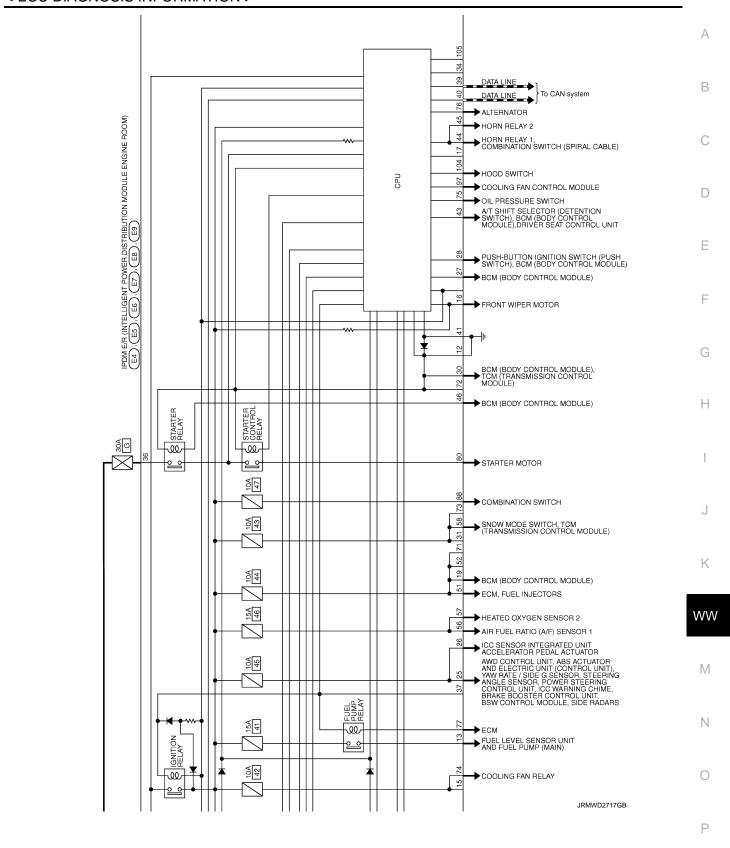
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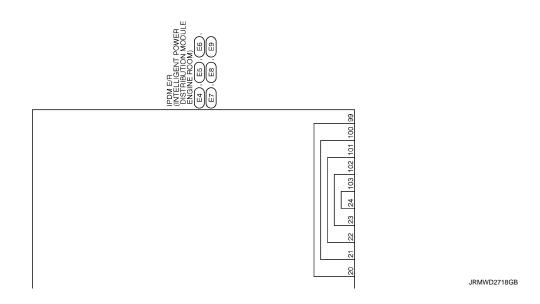
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N	H.S. 90 88 87 86	Parameter Color Of Signal Name Specification No. Wire Start Mare Specification Specificati	Cornector Na. E9 Cornector Na. E9 Cornector Name Pour en instruction consume Pour en instruction or consume Pour en instruction Pour en
PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	lal Color Of Signal Name Wire P P L L BW	A POWER DETREUTION MODULE	H.S.
IPDM E/R (INTELLIGENT POWER Corrector No. Ed. Corrector No. Ed. Corrector Name Involve Income	Terminal Color Of Signal Name (Specification) No Wire	Connector No. E5 Connector Name Review (returnation review or resurror worker Connector Type TH20PW-CS12.M4-1V	Terminal Color Of No. Whree Signal Name (Specification) No. Whree Signal Name (Specification) Signal Name (Specification) No. 1

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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

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< 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 maker 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 relay OFF
Ignition relay	The status just before activation of fail-safe is maintained.
Starter motor	Starter control 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				
Ignition relay contact side	Ignition relay excitation coil side	IPDM E/R judgment	Operation	
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.

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.

< ECU DIAGNOSIS INFORMATION >

NOTE:

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

STARTER MOTOR PROTECTION FUNCTION

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

DTC Index INFOID:0000000009354503

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 ightarrow 2 \cdots 38 ightarrow 39 after returning to the normal condition whenever IGN OFF ightarrow
- The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

CONSULT display	Fail-safe	Reference
No DTC is detected. further testing may be required.	_	_
U1000: CAN COMM CIRCUIT	×	PCS-14
B2098: IGN RELAY ON	×	PCS-15
B2099: IGN RELAY OFF	_	PCS-16
B210B: START CONT RLY ON	_	<u>SEC-77</u>
B210C: START CONT RLY OFF	_	<u>SEC-78</u>
B210D: STARTER RELAY ON	-	<u>SEC-79</u>
B210E: STARTER RELAY OFF	_	<u>SEC-80</u>
B210F: INTRLCK/PNP SW ON	_	<u>SEC-82</u>
B2110: INTRLCK/PNP SW OFF	_	SEC-84

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WIPER AND WASHER SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

WIPER AND WASHER SYSTEM SYMPTOMS

Symptom Table

CAUTION:

Perform the self-diagnosis with CONSULT before performing the diagnosis by symptom. Perform the diagnosis by DTC if DTC is detected.

Symptom		Probable malfunction location	Inspection item
Front wiper does not operate.	HI only	Combination switch Harness between combination switch and BCM BCM	Combination switch Refer to BCS-93, "Symptom Table".
		IPDM E/R Harness between IPDM E/R and front wiper motor Front wiper motor	Front wiper motor (HI) circuit Refer to <u>WW-27, "Compo-</u> nent Function Check".
		Front wiper request signal BCM IPDM E/R	IPDM E/R DATA MONITOR "FR WIP REQ"
	LO and INT	Combination switch Harness between combination switch and BCM BCM	Combination switch Refer to BCS-93, "Symptom Table".
		IPDM E/R Harness between IPDM E/R and front wiper motor Front wiper motor	Front wiper motor (LO) circuit Refer to <u>WW-25, "Compo-</u> nent Function Check".
		Front wiper request signal BCM IPDM E/R	IPDM E/R DATA MONITOR "FR WIP REQ"
	INT only	Combination switch Harness between combination switch and BCM BCM	Combination switch Refer to BCS-93, "Symptom Table".
		Front wiper request signal BCM IPDM E/R	IPDM E/R DATA MONITOR "FR WIP REQ"
	HI, LO and INT	SYMPTOM DIAGNOSIS "FRONT WIPER DOES NOT OPERATE" Refer to <a <="" href="https://www.nos." td="" www.nos."=""><td></td>	

WIPER AND WASHER SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

Symptom		Probable malfunction location	Inspection item	
		Combination switch BCM	Combination switch Refer to BCS-93. "Symptom Table".	
Front wiper does not stop.	HI only	Front wiper request signal BCM IPDM E/R	IPDM E/R DATA MONITOR "FR WIP REQ"	
		IPDM E/R	_	
		Combination switch BCM	Combination switch Refer to BCS-93, "Symptom Table".	
	LO only	Front wiper request signal BCM IPDM E/R	IPDM E/R DATA MONITOR "FR WIP REQ"	
		IPDM E/R	_	
	INT only	Combination switchBCM	Combination switch Refer to <u>BCS-93</u> , "Symptom <u>Table"</u> .	
	INT only	Front wiper request signal BCM IPDM E/R	IPDM E/R DATA MONITOR "FR WIP REQ"	
	Intermittent adjustment cannot be performed.	 Combination switch Harness between combination switch and BCM BCM 	Combination switch Refer to BCS-93, "Symptom Table".	
		BCM	_	
Front wiper does not operate normally. Wipe the w Does positi opera onds for 20 that, i	Intermittent control linked with vehicle speed cannot be performed.	Check the vehicle speed detection wiper setting. Refer to <a "="" (bcm="" -="" consult="" function="" href="https://www.15, " wiper)"="" wiper:="">WIPER: CONSULT Function (BCM - WIPER)"/ . NOTE: Factory setting of the front wiper intermitted operation is the operation without vehicle speed.		
	Wiper is not linked to the washer operation.	 Combination switch Harness between combination switch and BCM BCM 	Combination switch Refer to BCS-93, "Symptom Table".	
		ВСМ	_	
	Does not return to stop position [Repeatedly operates for 10 sec- onds and then stops for 20 seconds. After that, it stops the opera- tion. (Fail-safe)]	IPDM E/R Harness between IPDM E/R and front wiper motor Front wiper motor	Front wiper stop position signal circuit Refer to <u>WW-29</u> , "Component Function Check".	
	position [Repeatedly operates for 10 seconds and then stops for 20 seconds. After that, it stops the opera-	IPDM E/R Harness between IPDM E/R and front wiper motor	nal circuit Refer to <u>WW-29, "Compo-</u>	
	position [Repeatedly operates for 10 sec- onds and then stops for 20 seconds. After that, it stops the opera- tion. (Fail-safe)]	IPDM E/R Harness between IPDM E/R and front wiper motor Front wiper motor Combination switch Harness between combination switch and BCM	nal circuit Refer to <u>WW-29, "Component Function Check"</u> . Combination switch Refer to <u>BCS-93, "Symptom</u>	
Rear wiper does not operate.	position [Repeatedly operates for 10 seconds and then stops for 20 seconds. After that, it stops the operation. (Fail-safe)]	IPDM E/R Harness between IPDM E/R and front wiper motor Front wiper motor Combination switch Harness between combination switch and BCM BCM Combination switch Harness between combination switch and BCM	nal circuit Refer to <u>WW-29</u> , "Component Function Check". Combination switch Refer to <u>BCS-93</u> , "Symptom Table". Combination switch Refer to <u>BCS-93</u> , "Symptom	

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WIPER AND WASHER SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

Syr	nptom	Probable malfunction location	Inspection item
Rear wiper does not	ON only	Combination switch BCM	Combination switch Refer to BCS-93, "Symptom Table".
stop.	INT only	Combination switch BCM	Combination switch Refer to BCS-93, "Symptom Table".
	Wiper is not linked to the washer operation.	Combination switch Harness between rear wiper motor and BCM BCM	Combination switch Refer to BCS-93, "Symptom Table".
		BCM	_
operate normally.	Rear wiper does not return to the stop position [Stops after a five-second operation. (Fail-safe)]	BCM Harness between rear wiper motor and BCM Rear wiper motor	Rear wiper stop position signal circuit Refer to <u>WW-35</u> , "Component Function Check".

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

NORMAL OPERATING CONDITION

Description A

FRONT WIPER MOTOR PROTECTION FUNCTION

- IPDM E/R may stop the front wiper to protect the front wiper motor if any obstruction (operation resistance) such as a large amount of snow is detected during the front wiper operation.
- At that time turn OFF the front wiper and remove the foreign object. Then wait for approximately 20 seconds or more and reactivate the front wiper. The wiper will operate normally.

REAR WIPER MOTOR PROTECTION FUNCTION

- BCM may stop rear wiper to protect the rear wiper motor when the rear wiper is stopped for 5 seconds or more due to a snowfall.
- Rear wiper operates normally one minute after the obstacles are removed with rear wiper OFF.

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FRONT WIPER DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

FRONT WIPER DOES NOT OPERATE

The front wiper does not operate under any operating conditions.

Diagnosis Procedure

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1. CHECK WIPER RELAY OPERATION

PIPDM E/R AUTO ACTIVE TEST

- 1. Start IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- 2. Check that the front wiper operates at the LO/HI operation.

(P)CONSULT ACTIVE TEST

- 1. Select "FRONT WIPER" of IPDM E/R active test item.
- 2. With operating the test item, check that front wiper LO/HI operation and OFF.

Lo : Front wiper LO operation

Hi : Front wiper HI operation

Off : Stop the front wiper.

Does the front wiper operate?

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

2. CHECK FRONT WIPER MOTOR FUSE

- 1. Turn the ignition switch OFF.
- 2. Check that the front wiper motor 30A (#60) fuse is not fusing.

Is the fuse fusing?

YES >> Replace the fuse after repairing the applicable circuit.

NO >> GO TO 3.

3.CHECK FRONT WIPER MOTOR (GND) OPEN CIRCUIT

- 1. Disconnect front wiper motor connector.
- Check continuity between front wiper motor harness connector and ground.

Front wiper motor			Continuity
Connector Terminal		Ground	Continuity
E42 2			Existed

Does continuity exist?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

4. CHECK FRONT WIPER REQUEST SIGNAL INPUT

(P)CONSULT DATA MONITOR

- 1. Select "FR WIP REQ" of IPDM E/R data monitor item.
- Switch the front wiper switch to HI and LO.
- 3. With operating the front wiper switch, check the monitor status.

Monitor item	Condition		Monitor status
FR WIPER REQ	Front wiper switch HI	ON	Hi
	Tront wiper switch th	OFF	Stop
	Front wiper switch LO	ON	Low
	1 TOTIL WIPET SWITCH LO	OFF	Stop

Is the status of item normal?

YES >> Replace IPDM E/R.

FRONT WIPER DOES NOT OPERATE
SYMPTOM DIAGNOSIS >
NO >> GO TO 5.
5. CHECK COMBINATION SWITCH
Perform the inspection of the combination switch. Refer to BCS-93, "Symptom Table".
Is combination switch normal?
YES >> Replace BCM. Refer to BCS-96, "Exploded View".
NO >> Repair or replace the applicable parts.

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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:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that 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 "SRS AIR BAG".
- Never 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

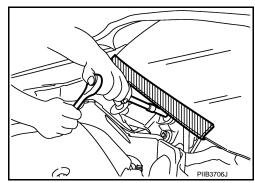
WARNING:

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the
 ignition ON or engine running, never 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.

Precaution for Procedure without Cowl Top Cover

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.



PREPARATION

< PREPARATION >

PREPARATION

PREPARATION

Commercial Service Tool

	Tool name	Description
Washer nozzle adjuster	JSLIA0149ZZ	Adjusting washer nozzle. (Available in SEC. 289 of PARTS CATALOG: Part No. 28949 1EA0A) NOTE: Washer nozzle adjuster is included with shipment of nozzle.

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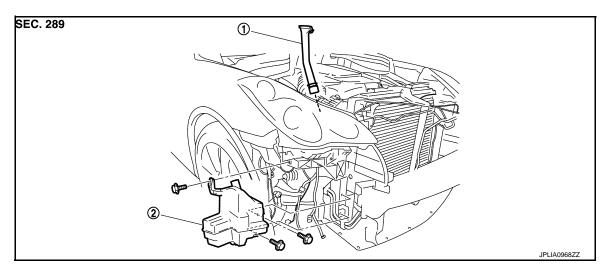
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REMOVAL AND INSTALLATION

WASHER TANK

Exploded View



1. Washer tank inlet

2. Washer tank

Removal and Installation

REMOVAL

Remove the clip (A).

<□ : Vehicle front

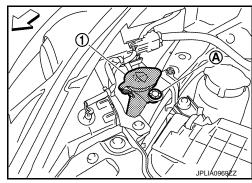
- 2. Pull out the washer tank inlet (1) from the washer tank.
- 3. Remove the fender protector RH (front). Refer to <u>EXT-25</u>, <u>"FENDER PROTECTOR: Exploded View"</u>.
- 4. Remove the engine lower cover. Refer to <u>EXT-31</u>, "<u>Exploded View</u>".
- 5. Disconnect washer pump connector.
- 6. Disconnect the washer level switch connector.
- 7. Remove front washer tube and rear washer tube.
- 8. Remove washer tank mounting bolts.
- 9. Remove washer tank from the vehicle.

INSTALLATION

Note the following, and install in the reverse order of removal.

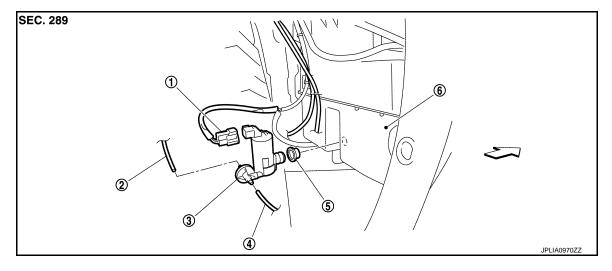
CAUTION:

Add water up to the top of the washer tank inlet after installing. Check that there is no leakage.



FRONT WASHER PUMP

Exploded View



- 1. Washer pump connector
- 4. Front washer tube

- 2. Rear washer tube
- 5. Packing

- 3. Washer pump
- 6. Washer tank

Removal and Installation

REMOVAL

1. Remove the fender protector RH (front). Refer to <u>EXT-25</u>, "<u>FENDER PROTECTOR</u>: Removal and <u>Installation</u>".

- 2. Disconnect the washer pump connector.
- 3. Remove front washer tube and rear washer tube.
- 4. Remove washer pump from the washer tank.
- 5. Remove the packing from the washer tank.

INSTALLATION

Note the following, and install in the reverse order of removal.

CAUTION:

Never twist the packing when installing the washer pump.

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WASHER LEVEL SWITCH

< REMOVAL AND INSTALLATION >

WASHER LEVEL SWITCH

Removal and Installation

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The washer level switch must be replaced together with the washer tank as an assembly. Refer to <u>WW-112</u>, <u>"Removal and Installation"</u>.

FRONT WASHER NOZZLE AND TUBE

Hydraulic Layout

SEC. 289 **(1)** 4 JPLIA0971ZZ

- Front washer tube
- Front washer nozzle
- Front washer tube 3.

Washer tank

: Clip [] : Clip

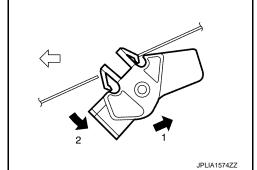
Removal and Installation

REMOVAL

- Fully open hood assembly.
- Remove the front washer nozzle in numerical order as shown in the figure.

: Vehicle front

Disconnect the front washer tube from the front washer nozzle.



INSTALLATION

- 1. Connect the front washer tube into the front washer nozzle.
- Install the front washer nozzle to the hood.
- Adjust the front washer nozzle spray position. Refer to <u>WW-115</u>, "Inspection and Adjustment". **CAUTION:**

The spray positions differ. Check that left and right nozzles are installed correctly.

Inspection and Adjustment

INSPECTION

Washer Nozzle Inspection

WW-115 Revision: 2013 March 2014 QX50

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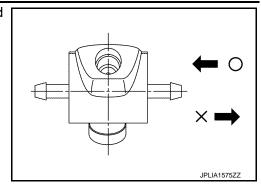
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FRONT WASHER NOZZLE AND TUBE

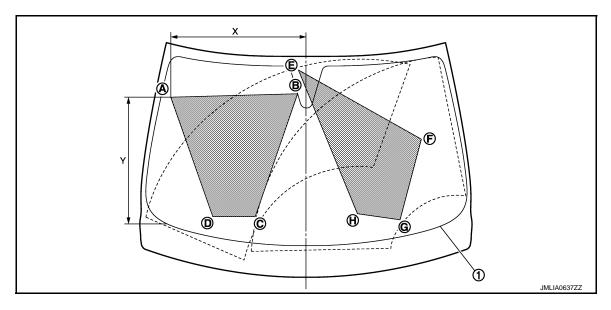
< REMOVAL AND INSTALLATION >

Check that air can pass through the hose by blowing forward (toward the nozzle), and check that air cannot pass through by sucking.



ADJUSTMENT

Washer Nozzle Spray Position Adjustment Adjust spray positions to match the positions shown in the figure.



1. Black printed frame line

: Spray area

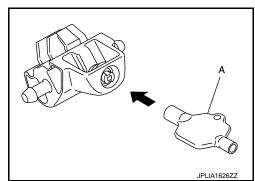
Unit:	mm	(in
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	Passenger side			Driver side				
	А	В	С	D	E	F	G	Н
X	569 (22.40)	45 (1.77)	216 (8.50)	392 (15.43)	39 (1.54)	469 (18.46)	379 (14.92)	203 (7.99)
Υ	523 (20.59)	623 (24.53)	108 (4.25)	81 (3.19)	723 (28.46)	379 (14.92)	73 (2.87)	123 (4.84)

CAUTION:

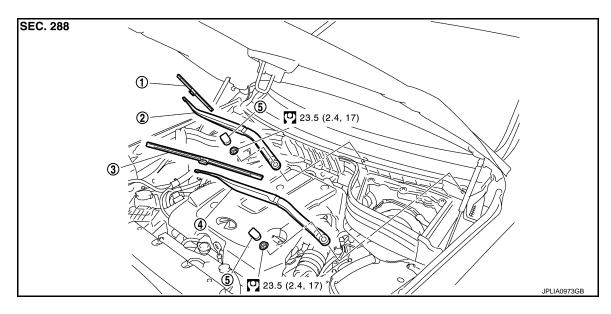
- Use washer nozzle adjuster* (A) for nozzle adjustment.
- Never use needle or small pin.
- *: Washer nozzle adjuster is included with shipment of nozzle. NOTE:

If wax or dust gets into the nozzle, remove wax or dust with a needle or small pin.



FRONT WIPER ARM

Exploded View



- Front wiper blade (RH)
 Front wiper arm (LH)
- 2. Front wiper arm (RH)
- 5. Front wiper arm cap
- 3. Front wiper blade (LH)

Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

REMOVAL

- 1. Operate the front wiper to move it to the auto stop position.
- 2. Open the hood.
- 3. Remove front wiper arm caps.
- 4. Remove the front wiper arm mounting nuts.
- 5. Raise front wiper arm, and remove front wiper arm from the vehicle.

INSTALLATION

- 1. Clean wiper arm mount as shown in the figure to prevent nuts from being loosened.
- 2. Operate the front wiper motor to move the front wiper to the auto stop position.
- Adjust the front wiper blade position. Refer to <u>WW-117</u>, "Adjustment".
- 4. Install the front wiper arm by tightening the mounting nuts.
- 5. Inject the washer fluid.
- 6. Operate the front wiper to move it to the auto stop position.
- 7. Check that the front wiper blades stop at the specified position.
- Install front wiper arm caps.

Adjustment

WIPER BLADE POSITION ADJUSTMENT

Clearance between the end of cowl top cover and the top of wiper blade

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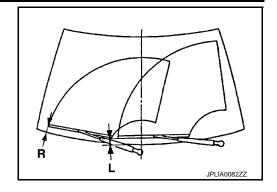
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FRONT WIPER ARM

< REMOVAL AND INSTALLATION >

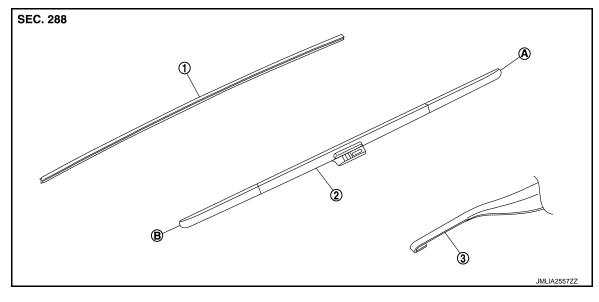
Standard clearance

R : 48.0 ± 7.5 mm $(1.890 \pm 0.295$ in) L : 76.5 ± 7.5 mm $(3.012 \pm 0.295$ in)



WIPER BLADE

Exploded View



Wiper refill

A : Wiper blade end

2. Wiper blade

B : Wiper blade tip

3. Wiper arm

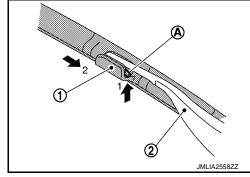
Removal and Installation

REMOVAL

1. Push up the lever (A) of wiper blade (1), while sliding wiper blade toward the direction of the arrow, to remove it from wiper arm (2).

CAUTION:

Be careful not to drop the wiper blade onto the windshield glass to prevent damege to the windshield glass.

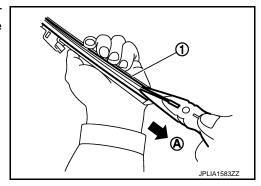


INSTALLATION

- 1. Install wiper blade into wiper arm.
- 2. Install wiper arm.

Replacement

 Hold the rip of old wiper refill (1) at the rear end of the wiper blade with long-nose pliers, and pull out the wiper refill to the direction (A).



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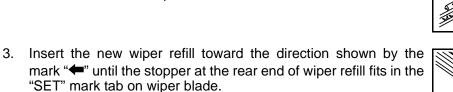
WIPER BLADE

< REMOVAL AND INSTALLATION >

 Insert the tip of new wiper refill (1) into the rear end of wiper blade (2). Slide the new wiper refill to the direction shown by the arrow while pressing the new wiper refill onto the wiper blade rear end.

NOTE:

- Insert the wiper refill to be held securely by tab of wiper blade as shown in section.
- After the wiper refill is fully inserted, remove the holder (3).
- *: Attached to service parts.

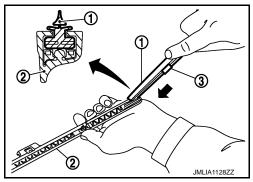


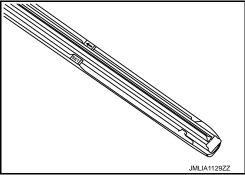
- 4. Untwist the twisted wiper refill at the rear end of wiper blade, if any.
- 5. Check the following items after replacing wiper refill.
 - Wiper refill is not twisted at all.
 - Wiper refill thoroughly fits in the tab on wiper blade.
 - Wiper refill is inserted from the proper direction.

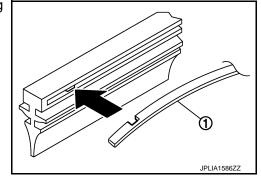
NOTE:

When the vertebra is detached.

- Insert the vertebra (1) into the wiper blade to the same bending direction.
- If a vertebra has a notch, fit it to a protrusion inside the wiper refill.



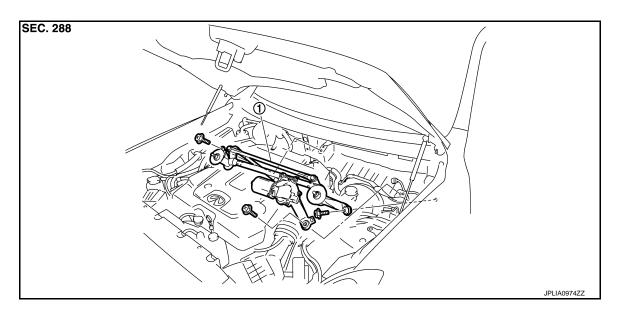




FRONT WIPER DRIVE ASSEMBLY

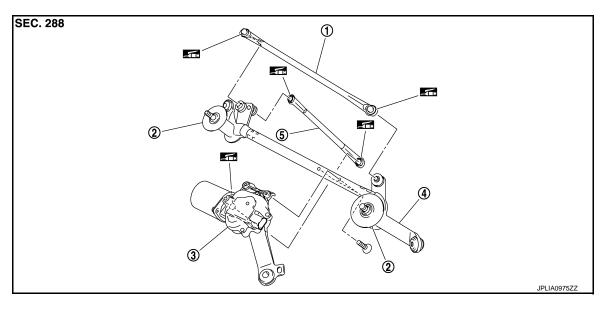
Exploded View

REMOVAL



1. Front wiper drive assembly

DISASSEMBLY



- 1. Front wiper linkage 1
- 2. Shaft seal

3. Front wiper motor

4. Front wiper frame

5. Front wiper linkage 2

: Multi-purpose grease or an equivalent.

Removal and Installation

REMOVAL

- 1. Remove front wiper arm. Refer to WW-117, "Removal and Installation".
- 2. Remove cowl top cover. Refer to EXT-23, "Removal and Installation".
- 3. Remove bolts from the front wiper drive assembly.

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FRONT WIPER DRIVE ASSEMBLY

< REMOVAL AND INSTALLATION >

- Disconnect the front wiper motor connector.
- 5. Remove front wiper drive assembly from the vehicle.

INSTALLATION

- 1. Install the front wiper drive assembly to the vehicle.
- 2. Connect the front wiper motor connector.
- 3. Operate the front wiper to move it to the auto stop position.
- 4. Install the cowl top cover. Refer to EXT-23, "Removal and Installation".
- 5. Install front wiper arms. Refer to WW-117, "Removal and Installation".

Disassembly and Assembly

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DISASSEMBLY

1. Remove the front wiper linkage 1 and 2 from the front wiper drive assembly.

CAUTION:

Never bend the linkage or damage the plastic part of the ball joint when removing the wiper linkage.

Remove the front wiper motor mounting screws, and then remove the front wiper motor from the front wiper frame.

ASSEMBLY

- Connect the front wiper motor connector.
- 2. Operate the front wiper to move it to the auto stop position.
- 3. Disconnect the front wiper motor connector.
- Install front wiper motor to front wiper frame.
- 5. Install the front wiper linkage 2 to the front wiper motor and the front wiper frame.
- 6. Install the front wiper linkage 1 to the front wiper frame.

CAUTION:

- Never drop front wiper motor or cause it to come into contact with other parts.
- Be careful for the grease condition at the front wiper motor and front wiper linkage joint (retainer). Apply Multi-purpose grease or an equivalent if necessary.

WIPER AND WASHER SWITCH

< REMOVAL AND INSTALLATION >

WIPER AND WASHER SWITCH

Exploded View

Refer to BCS-97, "Exploded View".

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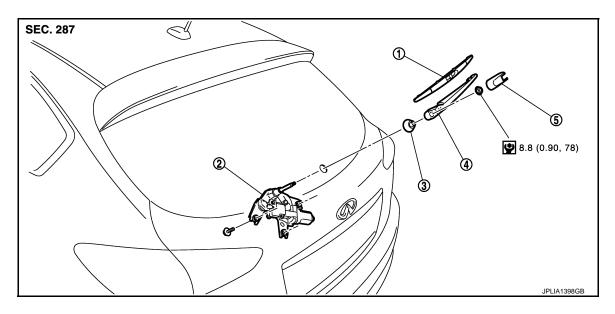
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REAR WIPER ARM

Exploded View



- Rear wiper blade
 Rear wiper arm
- 2. Rear wiper motor
- 5. Rear wiper arm cover
- 3. Pivot seal

Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

REMOVAL

- 1. Operate the rear wiper to the auto stop position.
- 2. Remove the rear wiper arm cover.
- 3. Remove the rear wiper arm mounting nut.
- 4. Raise rear wiper arm, and remove wiper arm from the vehicle.

INSTALLATION

- 1. Clean wiper arm mount as shown in the figure to prevent nut from being loosened.
- 2. Operate the rear wiper motor to the auto stop position.
- 3. Adjust the rear wiper blade position. Refer to <u>WW-124, "Adjust-ment".</u>
- 4. Install the rear wiper arm by tightening the mounting nut.
- 5. Inject the washer fluid.
- 6. Operate the rear wiper to the auto stop position.
- 7. Check that the rear wiper blades stop at the specified position.
- 8. Install the rear wiper arm cover.



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Adjustment

REAR WIPER BLADE POSITION ADJUSTMENT

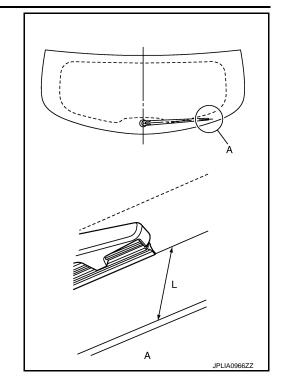
Clearance between the end of back door glass and the top of wiper blade center.

REAR WIPER ARM

< REMOVAL AND INSTALLATION >

Standard clearance

L : 35.0 \pm 7.5 mm (1.378 \pm 0.295 in)



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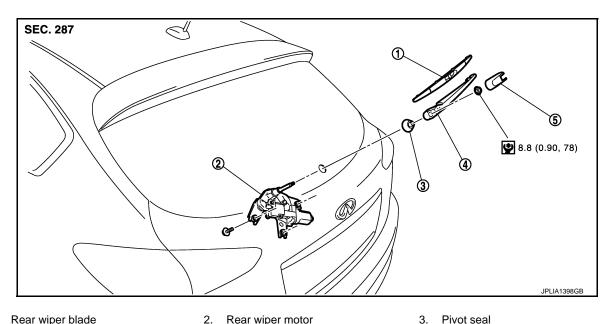
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REAR WIPER MOTOR

Exploded View INFOID:0000000009060653



- 1. Rear wiper blade
- 2. Rear wiper motor

4. Rear wiper arm

5. Rear wiper arm cover

Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

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REMOVAL

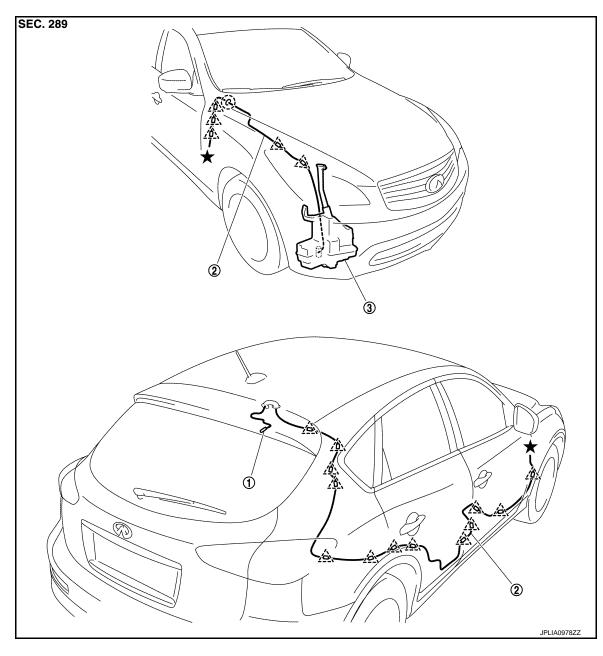
- 1. Remove rear wiper arm cover and rear wiper arm. Refer to WW-124, "Removal and Installation".
- 2. Remove back door finisher inner. Refer to INT-40, "Exploded View".
- 3. Disconnect the rear wiper motor connector.
- 4. Remove rear wiper motor mounting bolts.
- 5. Remove rear wiper motor from the vehicle.
- 6. Remove pivot seal.

INSTALLATION

- 1. Install the pivot seal.
- 2. Install the rear wiper motor to the vehicle.
- 3. Connect the rear wiper motor connector.
- 4. Operate the rear wiper to the auto stop position.
- 5. Install the back door finisher inner. Refer to INT-40, "Exploded View".
- 6. Install rear wiper arm cover and rear wiper arm. Refer to WW-124, "Removal and Installation".

REAR WASHER NOZZLE AND TUBE

Hydraulic Layout



- 1. Rear washer nozzle
- 2. Rear washer tube
- Washer tank

^ : Clip

(): Grommet

Removal and Installation

REMOVAL

- Remove the high-mounted stop lamp. Refer to <u>EXL-222, "Exploded View"</u>.
- 2. Remove the rear washer tube from the rear washer nozzle.

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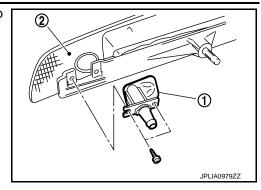
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REAR WASHER NOZZLE AND TUBE

< REMOVAL AND INSTALLATION >

3. Remove the rear washer nozzle (1) from the high-mounted stop lamp (2).



INSTALLATION

Install in the reverse order of removal.

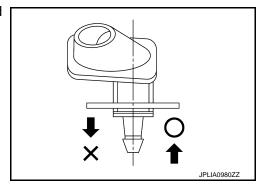
Inspection and Adjustment

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INSPECTION

Washer Nozzle Inspection

Check that air can pass through the hose by blowing forward (toward the nozzle), and check that air cannot pass through by sucking.



ADJUSTMENT

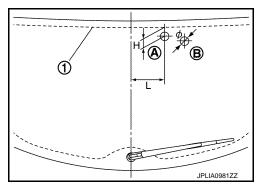
Washer Nozzle Spray Position adjustment

Adjust spray positions to match the positions shown in the figure.

1 : Black printed frame line

Unit: mm (in)

Spray position	H: Height	L: Length	φ : Spray position area
Α	32.0 (1.26)	120.5 (4.74)	30 (1.18)
В	49.6 (1.95)	189.7 (7.47)	30 (1.18)



Insert a needle or similar object (A) into the spray opening (1) and move up/down and left/right to adjust the spray position.

NOTE:

If wax or dust gets into the nozzle, remove wax or dust with a needle or small pin.

