SECTION WW
WIPER & WASHER

CONTENTS

PRECAUTION

PRECAUTIONS

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

INFOID:0000000009729240

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. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

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

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

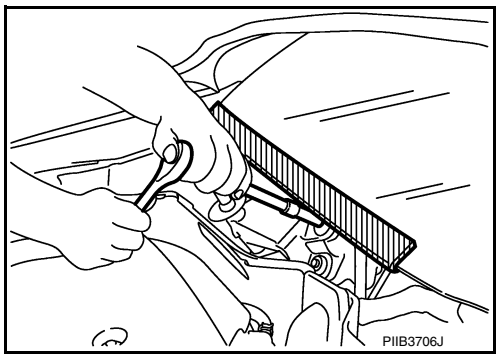
WARNING:

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

Precaution for Procedure without Cowl Top Cover

INFOID:0000000009175477

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



Precaution for Work

INFOID:0000000009175478

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components.

- Water soluble dirt:
- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
- Then rub with a soft, dry cloth.

- Oily dirt:

- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.

- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

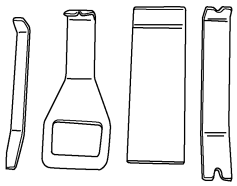
PREPARATION

PREPARATION

Special Service Tools

INFOID:0000000009175479

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
— (J-46534) Trim tool set  AWJIA0483ZZ	Removing trim components

SYSTEM DESCRIPTION

COMPONENT PARTS

FRONT WIPER AND WASHER SYSTEM

FRONT WIPER AND WASHER SYSTEM : Component Parts Location

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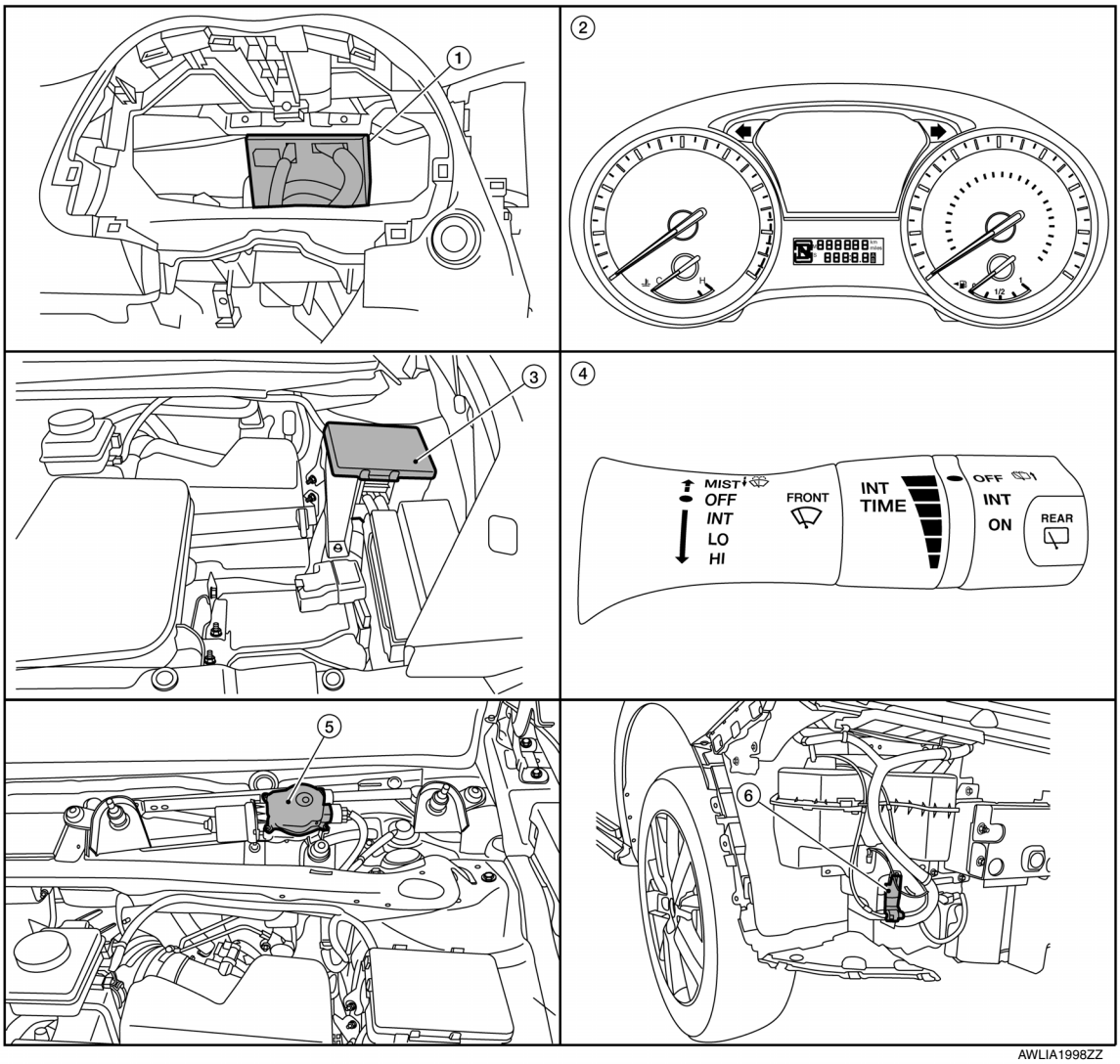


1. BCM (view with the combination meter removed)
2. Combination meter
3. IPDM E/R
4. Combination switch (wiper and washer switch)
5. Front wiper motor (view with the cowl top cover removed)
6. Front and rear washer motor (view with front bumper removed)

FRONT WIPER AND WASHER SYSTEM : Component Description

INFOID:0000000009175481

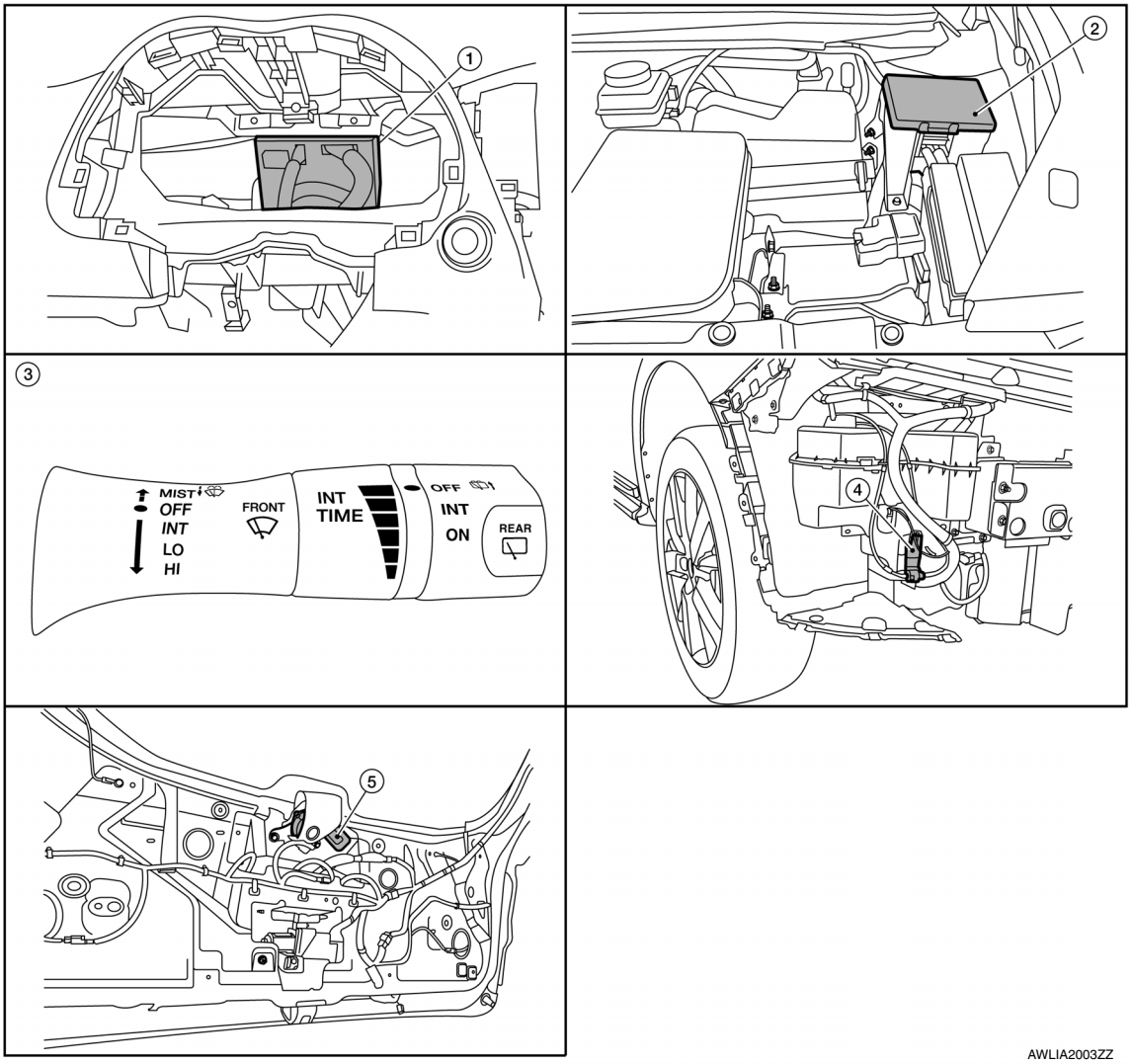
Part	Description
BCM	• Judges each switch status by the combination switch reading function. • Requests (via CAN communication) the front wiper relay and the front wiper high relay ON to IPDM E/R.
IPDM E/R	• Controls the integrated relay according to the request (via CAN communication) from BCM. • Performs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

Part	Description
Combination meter	Transmits vehicle speed signal to the BCM with CAN communication.
Combination switch (Wiper & Washer switch)	• Provides input for wiper and washer control to the BCM. • Refer to BCS-8, "COMBINATION SWITCH READING SYSTEM : System Description".
Front and rear washer motor	• Washer fluid is sprayed according to washer switch states. • Combination switch operates front washer or rear washer by changing voltage polarity to be supplied to washer pump.
Front wiper motor	• IPDM E/R controls front wiper operation. • Front wiper stop position signal is transmitted to IPDM E/R.

REAR WIPER AND WASHER SYSTEM

REAR WIPER AND WASHER SYSTEM : Component Parts Location

INFOID:0000000009175482



1. BCM (view with the combination meter removed)
2. IPDM E/R
3. Combination switch (wiper and washer switch)
4. Front and rear washer motor (view with the front bumper removed)
5. Rear wiper motor (view with back door lower finisher removed)

REAR WIPER AND WASHER SYSTEM : Component Description

INFOID:0000000009175483

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.
IPDM E/R	• Controls the integrated relay according to the request (via CAN communication) from BCM. • Performs the auto stop control of the front wiper.
Combination switch (Wiper & Washer switch)	• Provides input for wiper and washer control to the BCM. • Refer to BCS-8, "COMBINATION SWITCH READING SYSTEM : System Description".
Front and rear washer motor	• Washer fluid is sprayed according to washer switch states. • Combination switch operates front washer or rear washer by changing voltage polarity to be supplied to washer pump.
Rear wiper motor	• BCM controls rear wiper operation. • Rear wiper stop position signal is transmitted to BCM.

SYSTEM

FRONT WIPER AND WASHER SYSTEM

FRONT WIPER AND WASHER SYSTEM : System Diagram

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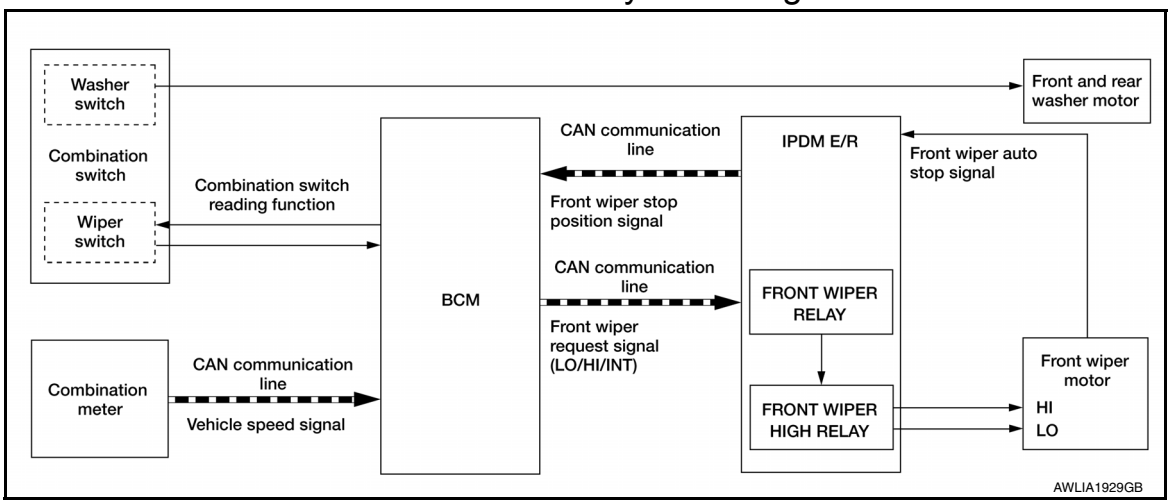


FRONT WIPER AND WASHER SYSTEM : System Description

INFOID:0000000009175485

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-9, "METER SYSTEM : 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.

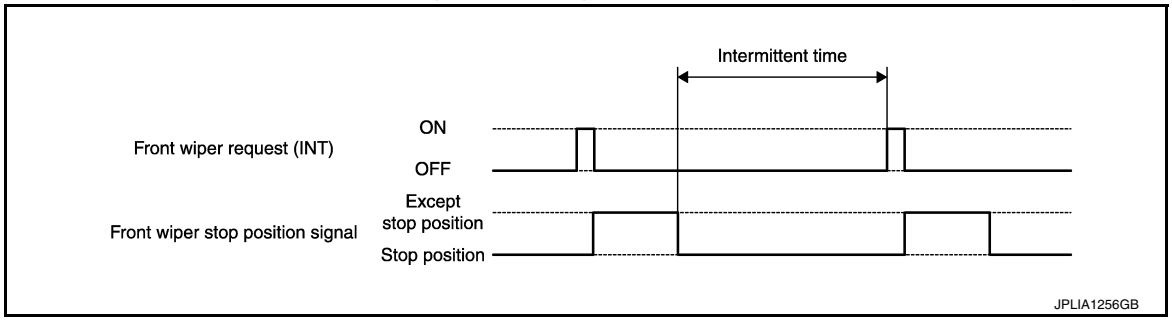
Front wiper HI operating condition
- Ignition switch ON
- Front wiper switch HI
- IPDM E/R turns ON the integrated front wiper relay and the front wiper high relay according to the front wiper request signal (HI).

FRONT WIPER 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:
Front wiper intermittent operation with speed (if equipped) can be turned ON and OFF from the Vehicle Settings menu on the information display.

Front wiper intermittent operation with vehicle speed

• BCM calculates the intermittent operation delay interval from the following:
- Vehicle speed signal (received from the combination meter with CAN communication)
- Wiper intermittent dial position

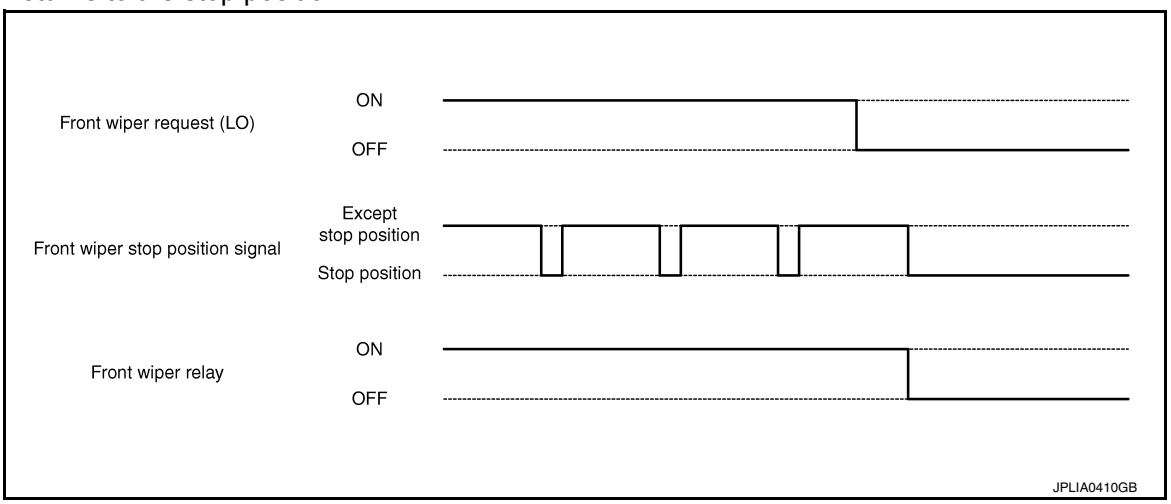
Wiper intermittent dial position	Intermittent operation interval	Intermittent operation delay Interval (s)			
		Vehicle speed			
		0 – 5 km/h (0 – 3.1 MPH)	5 – 35 km/h (3.1 – 21.7 MPH)	35 – 65 km/h* (21.7 – 40 MPH)	65 km/h (40.4 MPH) or more
1	Short ↑	0.8	0.6	0.4	0.24
2		4	3	2	1.2
3		10	7.5	5	3
4		16	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).

- 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.



NOTE:
- BCM stops the transmitting of the front wiper request signal when the ignition switch is OFF.
- IPDM E/R turns the front wiper relay OFF when the ignition switch is 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 seconds 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 with the front washer switch ON.

FRONT WIPER FAIL-SAFE OPERATION

IPDM E/R performs the fail-safe function when the front wiper stop position circuit is malfunctioning.

FRONT WIPER AND WASHER SYSTEM : Fail-Safe

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FAIL–SAFE OPERATION

IPDM E/R performs the fail-safe function when the front wiper auto stop circuit is malfunctioning. Refer to PCS-19, "Fail Safe".

REAR WIPER AND WASHER SYSTEM

REAR WIPER AND WASHER SYSTEM : System Diagram

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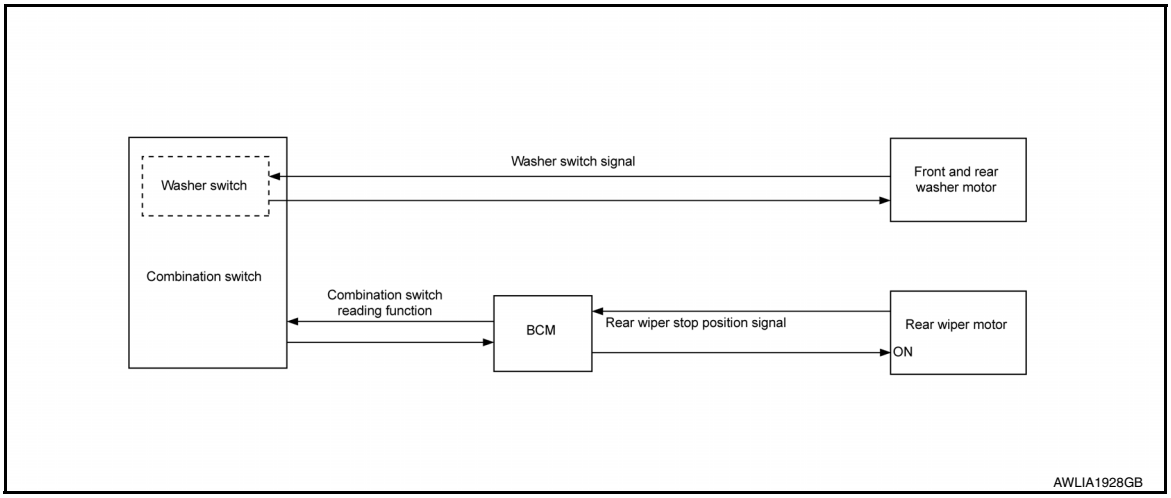


REAR WIPER AND WASHER SYSTEM : System Description

INFOID:0000000009175488

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

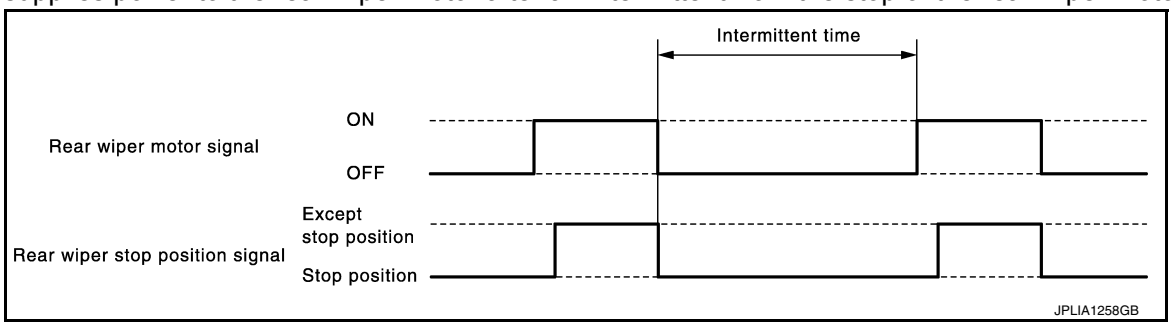
- BCM supplies power to the rear wiper motor according to the rear wiper ON operating condition.

Rear wiper ON operating condition
- Ignition switch ON
- Rear wiper switch ON

REAR WIPER INT OPERATION

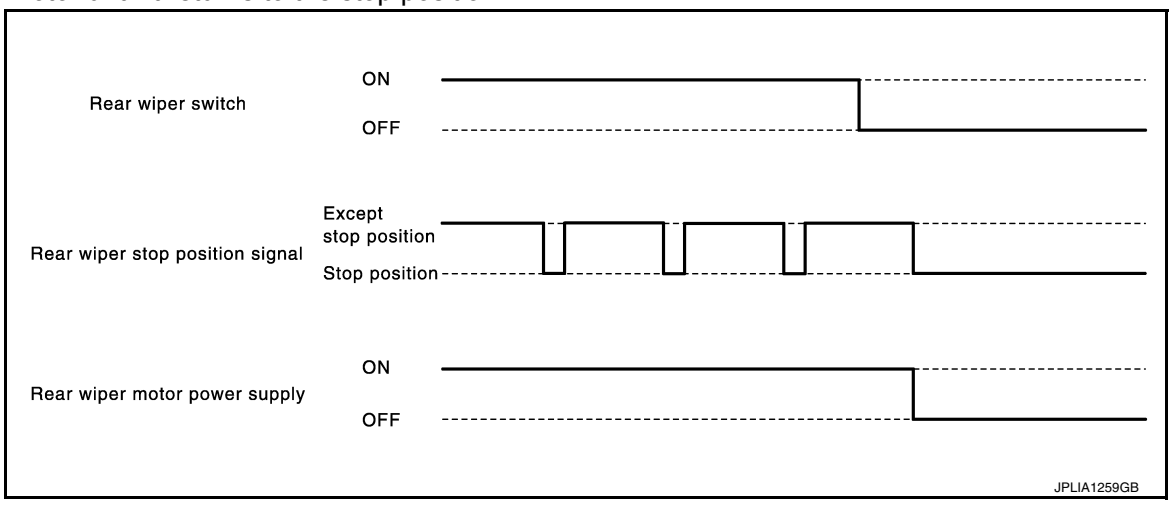
- BCM supplies power to the rear wiper motor according to the INT operating condition.

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 stop 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.
- BCM reads a rear wiper 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 stop position, BCM continues to supply power to the rear wiper motor until it returns to the stop position.



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 the rear wiper to operate approximately 3 times.

Washer linked operating condition of the rear wiper
- Ignition switch ON
- Rear washer switch ON (0.4 seconds or more)

- The washer pump is grounded through the combination switch with the rear washer switch ON.

REAR WIPER AND WASHER SYSTEM : Fail-Safe

INFOID:0000000009175489

FAIL−SAFE OPERATION

IPDM E/R performs the fail-safe function when the front wiper auto stop circuit is malfunctioning. Refer to PCS-19, "Fail Safe".

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

INFOID:0000000009764021

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

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

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

SYSTEM APPLICATION
BCM can perform the following functions.

System	Sub System	Direct Diagnostic Mode						
		Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Door lock	DOOR LOCK		×	×	×	×		
Rear window defogger	REAR DEFOGGER			×	×	×		
Warning chime	BUZZER			×	×			
Interior room lamp timer	INT LAMP			×	×	×		
Exterior lamp	HEADLAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×			
Air conditioner	AIR CONDITIONER			×				
Intelligent Key system	INTELLIGENT KEY		×	×	×	×		
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×	×	×			
Interior room lamp battery saver	BATTERY SAVER			×	×			
Back door open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				

System	Sub System	Direct Diagnostic Mode						
		Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Signal buffer system	SIGNAL BUFFER			×				
TPMS	AIR PRESSURE MONITOR		×	×	×	×		

WIPER

WIPER : CONSULT Function (BCM - WIPER)

INFOID:0000000009764024

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
VEH SPEED 1 [km/h]	Indicates vehicle speed signal received from ABS on CAN communication line.
FR WIPER HI [On/Off]	Indicates condition of wiper operation of combination switch.
FR WIPER LOW [On/Off]	
FR WASHER SW [On/Off]	
FR WIPER INT [On/Off]	
FR WIPER STOP [On/Off]	Indicates front wiper auto stop signal received from IPDM E/R on CAN communication line.
INT VOLUME [1 – 7]	Indicates condition of intermittent wiper operation of combination switch.
RR WIPER ON [On/Off]	Indicates condition of rear wiper operation of combination switch.
RR WIPER INT [On/Off]	
RR WASHER SW [On/Off]	
RR WIPER STOP [On/Off]	Indicates rear wiper motor auto stop input from rear wiper motor.

ACTIVE TEST

Test Item	Description
FR WIPER	This test is able to check front wiper operation [Hi/Lo/INT/Off].
RR WIPER	This test is able to check rear wiper operation [On/Off].

WORK SUPPORT

Support Item	Setting	Description
WIPER SPEED SETTING	On	Front wiper intermittent time linked with vehicle speed and wiper intermittent dial position.
	Off*	Front wiper intermittent time is not linked with vehicle speed and wiper intermittent dial position.

*: Initial Setting

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:0000000009764025

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.

- Front wiper (LO, HI)
- Front fog lamps
- Parking lamps
- Side marker lamps
- Tail lamps
- License plate lamps
- Daytime running lamps
- Headlamps (LO, HI)
- A/C compressor
- Cooling fans (LO, HI)

Operation Procedure

CAUTION:

Do not start the engine.

NOTE:

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

NOTE:

- If auto active test mode cannot be actuated, check door switch system. Refer to DLK-170, "Component Function Check".
- When auto active test mode has to be cancelled halfway through test, turn ignition switch OFF.

1. Close the hood and lift the wiper arms from the windshield. (Prevent windshield damage due to wiper operation)
2. Turn ignition switch OFF.
3. Turn the ignition switch ON, and within 20 seconds, press the front door switch LH 10 times. Then turn the ignition switch OFF.
4. Turn the ignition switch ON within 10 seconds. After that the horn sounds once, and the auto active test starts.
5. After a series of the following operations is repeated 3 times, auto active test is completed.

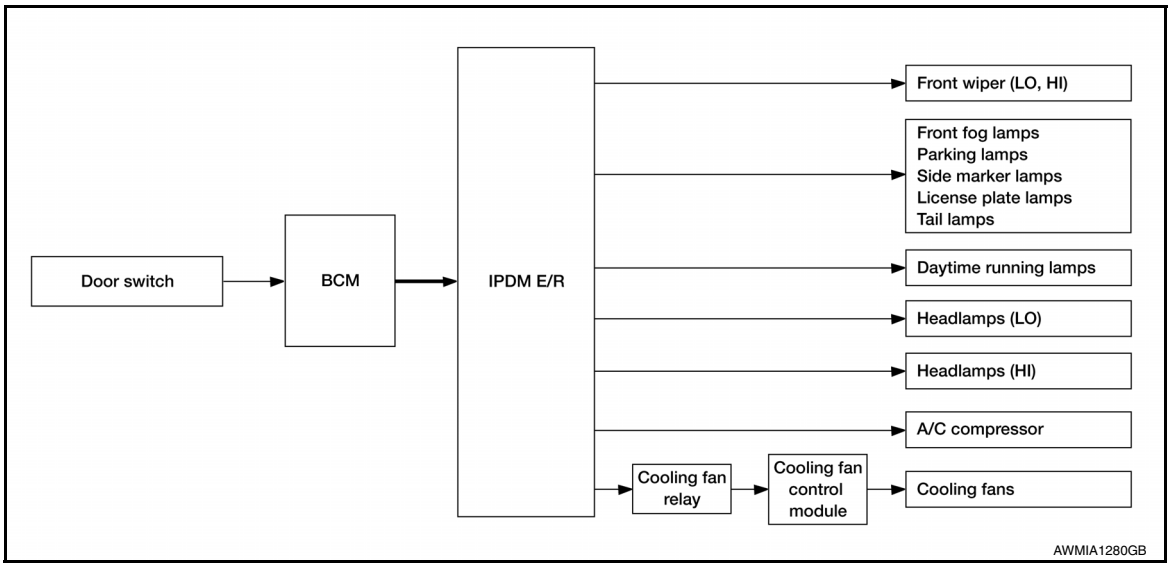
Inspection in Auto Active Test Mode

When auto active test mode is actuated, the following operation sequence is repeated 3 times.

Operation sequence	Inspection Location	Operation
1	Front wiper	LO for 3 seconds → HI for 3 seconds
2	• Front fog lamps • Parking lamps • Side marker lamps • Tail lamps • License plate lamps	10 seconds
3	Daytime running lamps	10 seconds
4	Headlamps	LO ⇔ HI 5 times
5	A/C compressor	ON ⇔ OFF 5 times
6*	Cooling fans	LO for 5 seconds → HI for 5 seconds

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

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 • Front fog lamps • Parking lamps • Side marker lamps • License plate lamps • Tail lamps • Daytime running lamps • Headlamp (HI, LO) • Front wiper	Perform auto active test. Does the applicable system operate?	YES	BCM signal input circuit
		NO	• Lamp or motor • Lamp or motor ground circuit • Harness or connector between IPDM E/R and applicable system • IPDM E/R
Cooling fans do not operate	Perform auto active test. Do the cooling fans operate?	YES	• ECM signal input circuit • CAN communication signal between ECM and IPDM E/R
		NO	• Cooling fans • Harness or connectors between cooling fans and cooling fan control module • Cooling fan control module • Harness or connectors between cooling fan relay and cooling fan control module • Cooling fan relay • Harness or connectors between IPDM E/R and cooling fan relay • IPDM E/R

CONSULT Function (IPDM E/R)

INFOID:0000000009764026

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

APPLICATION ITEM

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

Direct Diagnostic Mode	Description
Ecu Identification	The IPDM E/R part number is displayed.
Self Diagnostic Result	The IPDM E/R self diagnostic results are displayed.
Data Monitor	The IPDM E/R input/output data is displayed in real time.
Active Test	The IPDM E/R activates outputs to test components.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

ECU IDENTIFICATION

The IPDM E/R part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to PCS-20, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Main Signals	Description
RAD FAN REQ [%]	×	Indicates cooling fan speed signal received from ECM on CAN communication line
AC COMP REQ [On/Off]	×	Indicates A/C compressor request signal received from ECM on CAN communication line
TAIL&CLR REQ [On/Off]	×	Indicates position light request signal received from BCM on CAN communication line
HL LO REQ [On/Off]	×	Indicates low beam request signal received from BCM on CAN communication line
HL HI REQ [On/Off]	×	Indicates high beam request signal received from BCM on CAN communication line
FR FOG REQ [On/Off]	×	Indicates front fog light request signal received from BCM on CAN communication line
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Indicates front wiper request signal received from BCM on CAN communication line
WIP AUTO STOP [STOP P/ACT P]	×	Indicates condition of front wiper auto stop signal
WIP PROT [Off/BLOCK]	×	Indicates condition of front wiper fail-safe operation
IGN RLY1 -REQ [On/Off]		Indicates ignition switch ON signal received from BCM on CAN communication line
IGN RLY [On/Off]	×	Indicates condition of ignition relay
PUSH SW [On/Off]		Indicates condition of push-button ignition switch
INTER/NP SW [On/Off]		Indicates condition of CVT shift position
ST RLY CONT [On/Off]		Indicates starter relay status signal received from BCM on CAN communication line
IHBT RLY -REQ [On/Off]		Indicates starter control relay signal received from BCM on CAN communication line
ST/INHI RLY [Off/ ST /INHI]		Indicates condition of starter relay and starter control relay
DETENT SW [On/Off]		Indicates condition of CVT shift selector (park position switch)
DTRL REQ [Off]		Indicates daytime light request signal received from BCM on CAN communication line
HOOD SW [On/Off]		Indicates condition of hood switch
THFT HRN REQ [On/Off]		Indicates theft warning horn request signal received from BCM on CAN communication line

Monitor Item [Unit]	Main Signals	Description
HORN CHIRP [On/Off]		Indicates horn reminder signal received from BCM on CAN communication line
HOOD SW 2 [On/Off]		Indicates condition of hood switch

ACTIVE TEST

Test item	Description
HORN	This test is able to check horn operation [On].
FRONT WIPER	This test is able to check wiper motor operation [Hi/Lo/Off].
MOTOR FAN	This test is able to check cooling fan operation [4/3/2/1].
EXTERNAL LAMPS	This test is able to check external lamp operation [Fog/Hi/Lo/Tail/Off].

CAN DIAG SUPPORT MNTR

Refer to LAN-17, "CAN Diagnostic Support Monitor".

ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

INFOID:0000000009175494

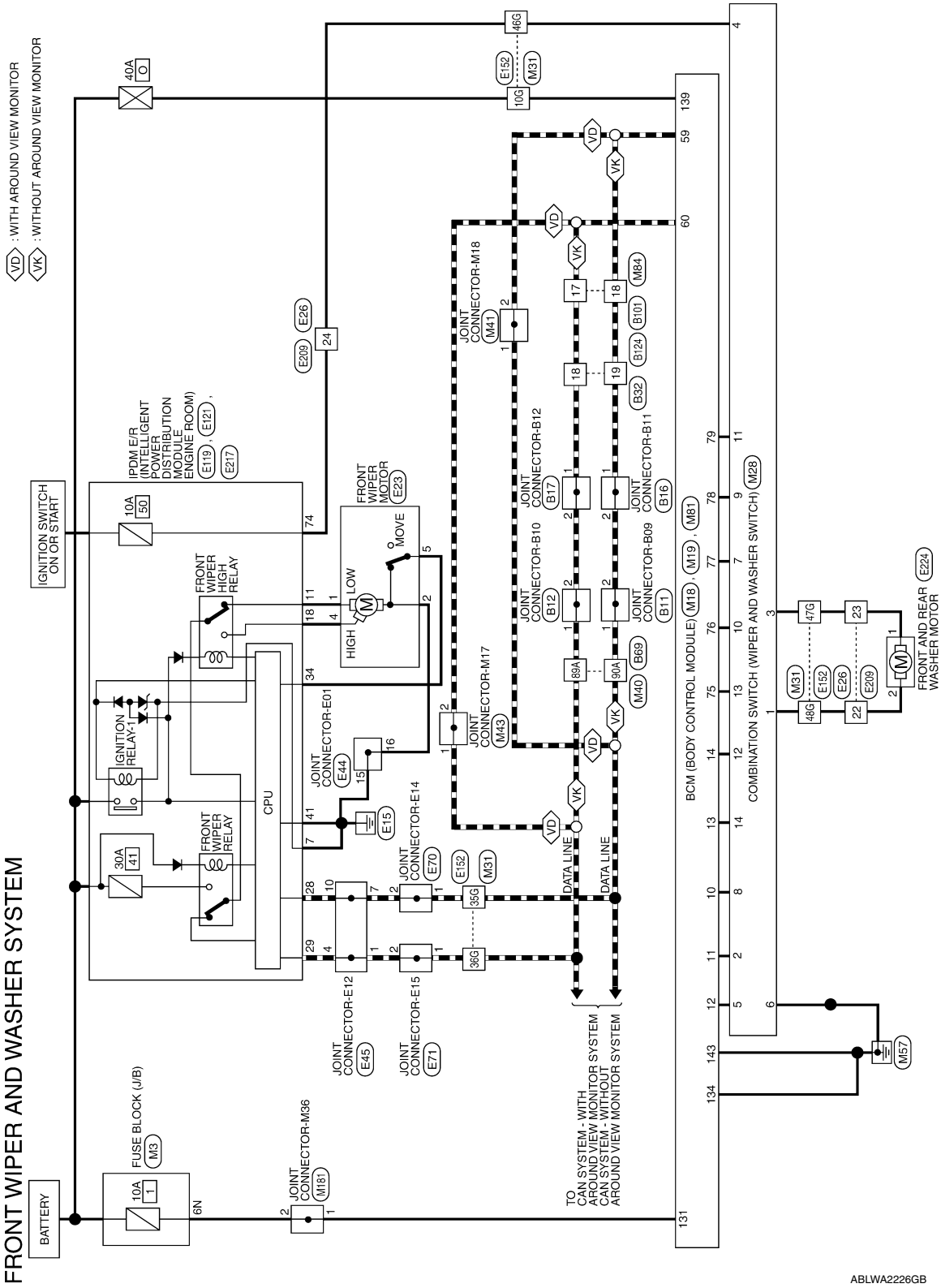
ECU	Reference
BCM	BCS-30, "Reference Value"
	BCS-50, "Fail Safe"
	BCS-50, "DTC Inspection Priority Chart"
	BCS-52, "DTC Index"
IPDM E/R	PCS-12, "Reference Value"
	PCS-19, "Fail Safe"
	PCS-20, "DTC Index"

WIRING DIAGRAM

FRONT WIPER AND WASHER SYSTEM

Wiring Diagram

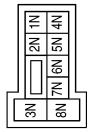
INFOID:0000000009175495



FRONT WIPER AND WASHER SYSTEM CONNECTORS

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

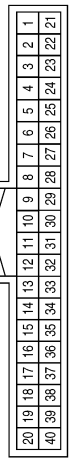
H.S.



Terminal No.	Color of Wire	Signal Name
6N	W	–

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

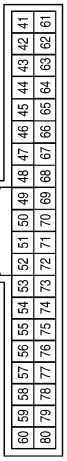
H.S.



Terminal No.	Color of Wire	Signal Name
10	W	COMBI SW IN 5
11	BG	COMBI SW IN 4
12	R	COMBI SW IN 3
13	G	COMBI SW IN 2
14	P	COMBI SW IN 1

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

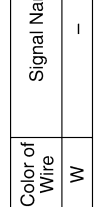
H.S.



Terminal No.	Color of Wire	Signal Name
59	P	CAN-L
60	L	CAN-H
75	BG	COMBI SW OUT 5
76	P	COMBI SW OUT 4
77	R	COMBI SW OUT 3
78	G	COMBI SW OUT 2
79	W	COMBI SW OUT 1

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	LG	–
2	BG	–
3	Y	–
4	Y	–
5	R	–

Terminal No.	Color of Wire	Signal Name
6	B	–
7	R	–
8	W	–
9	G	–
10	P	–
11	W	–
12	P	–
13	BG	–
14	G	–

AALIA0849GB

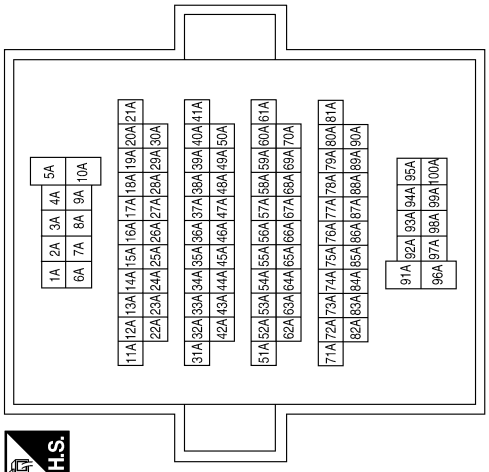
Connector No.	M41
Connector Name	JOINT CONNECTOR-M18
Connector Color	WHITE

H.S.

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

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

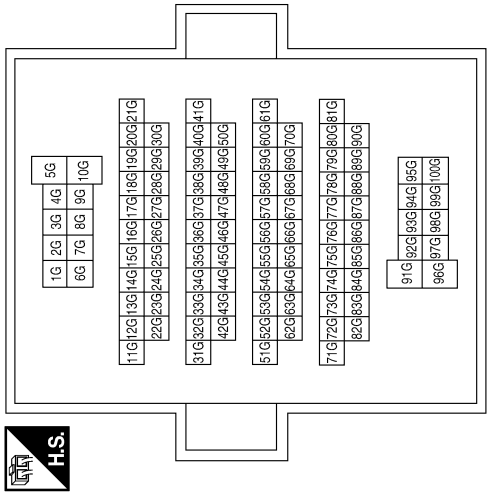
H.S.



Terminal No.	Color of Wire	Signal Name
89A	L	–
90A	P	–

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

H.S.



Terminal No.	Color of Wire	Signal Name
10G	W	–
35G	P	–
36G	L	–
46G	Y	–
47G	Y	–
48G	LG	–

ABLIA5093GB

Connector No.	M43
Connector Name	JOINT CONNECTOR-M17
Connector Color	WHITE

H.S.

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

Connector No.	M81
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
131	W	BAT BCM FUSE
134	B	GND 2
139	W	BAT POWER F/L
143	B	GND 1

Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
17	L	–
18	P	–

Connector No.	M181
Connector Name	JOINT CONNECTOR-M36
Connector Color	WHITE

H.S.

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

Connector No.	E23
Connector Name	FRONT WIPER MOTOR
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	Y	–
2	B	–
3	–	–
4	L	–
5	GR	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
22	BR	–
23	V	–
24	SB	–

ABLIA5094GB

Connector No.	E70
Connector Name	JOINT CONNECTOR-E14
Connector Color	BLACK

H.S.

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

Connector No.	E45
Connector Name	JOINT CONNECTOR-E12
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
4	L	–
7	P	–
10	P	–

Connector No.	E44
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
15	GR	–
16	B	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
7	B	GND (POWER)
11	Y	FR WIPER LO
18	L	FR WIPER HI

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
28	P	CAN-L
29	L	CAN-H
34	GR	WIPER AUTOSTOP
41	B	GND (SIGNAL)

Connector No.	E71
Connector Name	JOINT CONNECTOR-E15
Connector Color	BLACK

H.S.

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

ABLIA5095GB

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

5G	4G	3G	2G	1G
10G	9G	8G	7G	6G

21G	20G	19G	18G	17G	16G	15G	14G	13G	12G	11G
30G	29G	28G	27G	26G	25G	24G	23G	22G		

41G	40G	39G	38G	37G	36G	35G	34G	33G	32G	31G
50G	49G	48G	47G	46G	45G	44G	43G	42G		

61G	60G	59G	58G	57G	56G	55G	54G	53G	52G	51G
70G	69G	68G	67G	66G	65G	64G	63G	62G		

81G	80G	79G	78G	77G	76G	75G	74G	73G	72G	71G
90G	89G	88G	87G	86G	85G	84G	83G	82G		

95G	94G	93G	92G	91G
100G	99G	98G	97G	96G

Terminal No.	Color of Wire	Signal Name
10G	P	–
35G	P	–
36G	L	–
46G	SB	–
47G	V	–
48G	BR	–

Connector No.	E209
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
22	L	–
23	G	–
24	R	–

Connector No.	E217
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

74		75	76
77	78	79	80	81

Terminal No.	Color of Wire	Signal Name
74	R	WASH MTR

Connector No.	E224
Connector Name	FRONT AND REAR WASHER MOTOR
Connector Color	BLACK

H.S.

2	1

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

Connector No.	B11
Connector Name	JOINT CONNECTOR-B09
Connector Color	WHITE

H.S.

4	3	2	1

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

AALIA0853GB

Connector No.	B12
Connector Name	JOINT CONNECTOR-B10
Connector Color	WHITE

H.S.

4	3	2	1	0

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

Connector No.	B16
Connector Name	JOINT CONNECTOR-B11
Connector Color	WHITE

H.S.

4	3	2	1	0

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

Connector No.	B17
Connector Name	JOINT CONNECTOR-B12
Connector Color	WHITE

H.S.

4	3	2	1	0

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

Connector No.	B32
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
18	L	–
19	P	–

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

H.S.

5A	4A	3A	2A	1A
10A	9A	8A	7A	6A

21A	20A	19A	18A	17A	16A	15A	14A	13A	12A	11A
	30A	29A	28A	27A	26A	25A	24A	23A	22A	

41A	40A	39A	38A	37A	36A	35A	34A	33A	32A	31A
	50A	49A	48A	47A	46A	45A	44A	43A	42A	

61A	60A	59A	58A	57A	56A	55A	54A	53A	52A	51A
	70A	69A	68A	67A	66A	65A	64A	63A	62A	

81A	80A	79A	78A	77A	76A	75A	74A	73A	72A	71A
	90A	89A	88A	87A	86A	85A	84A	83A	82A	

95A	94A	93A	92A	91A
100A	99A	98A	97A	96A

Terminal No.	Color of Wire	Signal Name
89A	L	–
90A	P	–

ABLIA5096GB

Connector No.	B124
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
18	L	–
19	P	–

Connector No.	B101
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

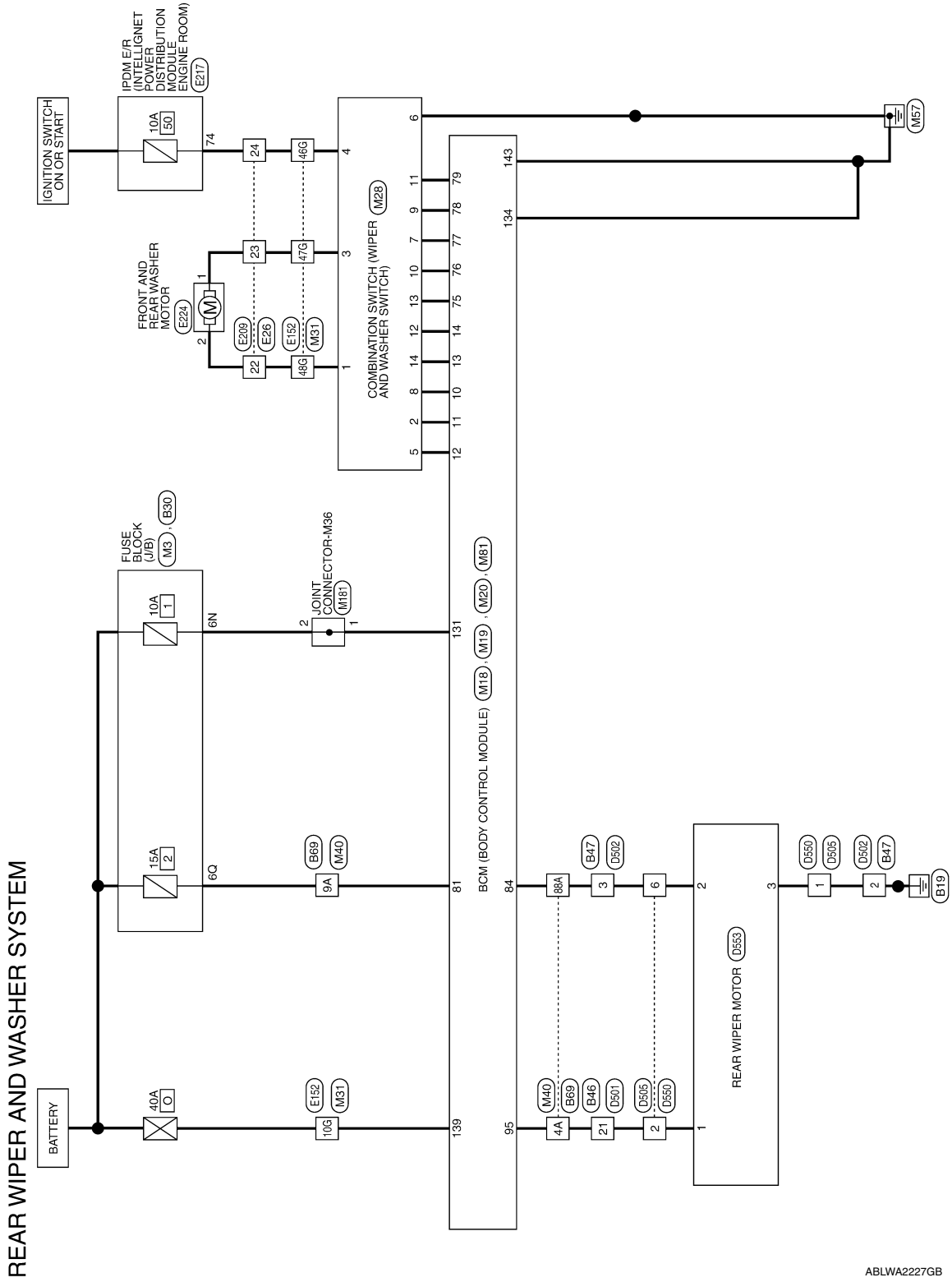
Terminal No.	Color of Wire	Signal Name
17	L	–
18	P	–

AALIA0855GB

REAR WIPER AND WASHER SYSTEM

Wiring Diagram

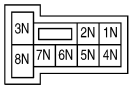
INFOID:0000000009175496



REAR WIPER AND WASHER SYSTEM CONNECTORS

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

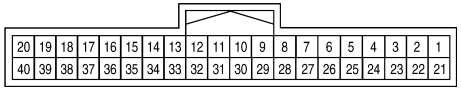
H.S.



Terminal No.	Color of Wire	Signal Name
6N	W	–

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

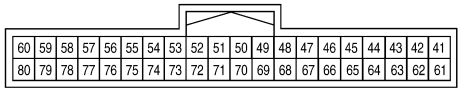
H.S.



Terminal No.	Color of Wire	Signal Name
10	W	COMBI SW IN 5
11	BG	COMBI SW IN 4
12	R	COMBI SW IN 3
13	G	COMBI SW IN 2
14	P	COMBI SW IN 1

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

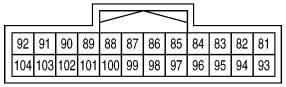
H.S.



Terminal No.	Color of Wire	Signal Name
75	BG	COMBI SW OUT 5
76	P	COMBI SW OUT 4
77	R	COMBI SW OUT 3
78	G	COMBI SW OUT 2
79	W	COMBI SW OUT 1

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

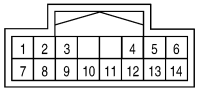
H.S.



Terminal No.	Color of Wire	Signal Name
81	L	BAT REAR WIPER FUSE
84	BR	R WIPER AUTOSTOP SW
95	V	REAR WIPER OUT

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

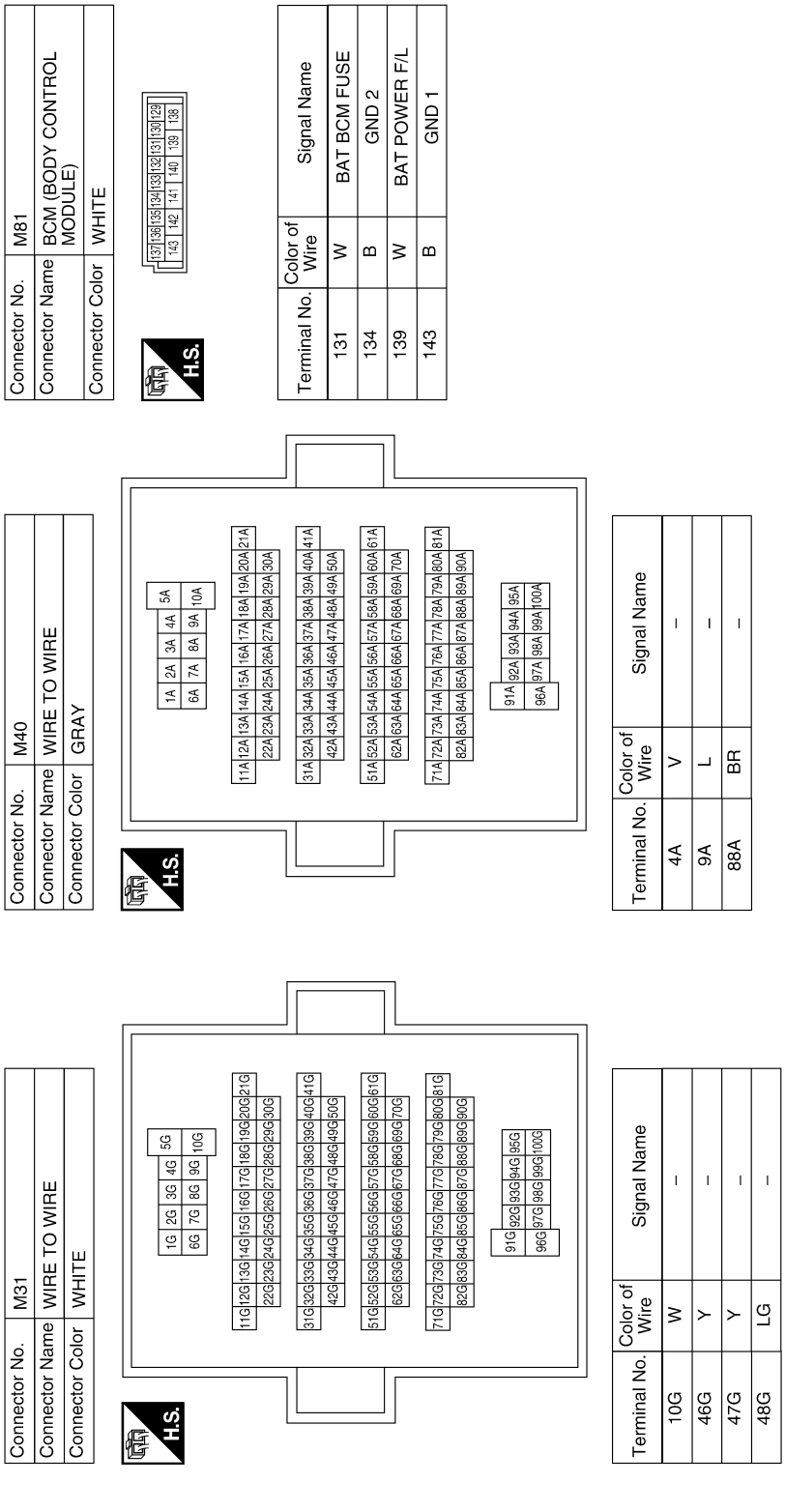
H.S.



Terminal No.	Color of Wire	Signal Name
1	LG	–
2	BG	–
3	Y	–
4	Y	–

Terminal No.	Color of Wire	Signal Name
5	R	–
6	B	–
7	R	–
8	W	–
9	G	–
10	P	–
11	W	–
12	P	–
13	BG	–
14	G	–

ABLIA5097GB



ABLIA5098GB

Connector No.	M181
Connector Name	JOINT CONNECTOR-M36
Connector Color	WHITE

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
22	BR	–
23	V	–
24	SB	–

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
10G	P	–
46G	SB	–
47G	V	–
48G	BR	–

Connector No.	E209
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
22	L	–
23	G	–
24	R	–

AALIA0845GB

Connector No.	E217
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

74	75	76
77	78	79	80	81

Terminal No.	Color of Wire	Signal Name
74	R	WASH MTR

Connector No.	B46
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
21	G	–

Connector No.	E224
Connector Name	FRONT AND REAR WASHER MOTOR
Connector Color	BLACK

H.S.

2	1

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

Connector No.	B47
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

1	2	3	4
5	6	7	8

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

Connector No.	B30
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

3Q	2Q	1Q
8Q	7Q	6Q	5Q	4Q

Terminal No.	Color of Wire	Signal Name
6Q	P	–

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

H.S.

5A	4A	3A	2A	1A
10A	9A	8A	7A	6A

21A	20A	19A	18A	17A	16A	15A	14A	13A	12A	11A
30A	29A	28A	27A	26A	25A	24A	23A	22A

41A	40A	39A	38A	37A	36A	35A	34A	33A	32A	31A
50A	49A	48A	47A	46A	45A	44A	43A	42A

61A	60A	59A	58A	57A	56A	55A	54A	53A	52A	51A
70A	69A	68A	67A	66A	65A	64A	63A	62A

81A	80A	79A	78A	77A	76A	75A	74A	73A	72A	71A
90A	89A	88A	87A	86A	85A	84A	83A	82A

95A	94A	93A	92A	91A
100A	99A	98A	97A	96A

Terminal No.	Color of Wire	Signal Name
4A	G	–
9A	P	–
88A	BG	–

ABLIA5099GB

Connector No.	D501
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
21	W	–

Connector No.	D502
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

4	3	2	1
8	7	6	5

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

Connector No.	D505
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

2		1
6	5	4	3

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

Connector No.	D550
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1		2
3	4	5	6

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

Connector No.	D553
Connector Name	REAR WIPER MOTOR
Connector Color	WHITE

H.S.

1	2	3

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

ABLIA5100GB

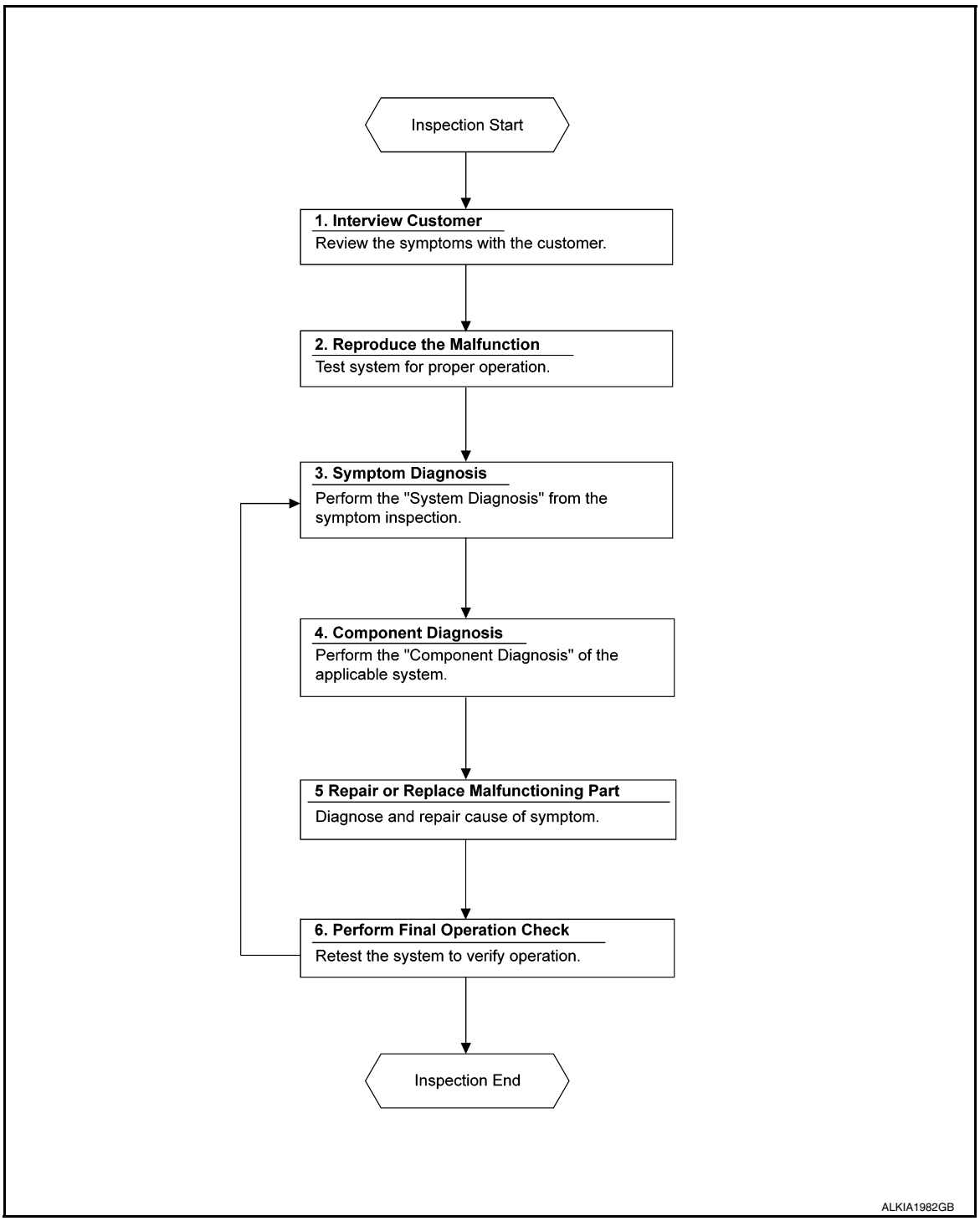
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000009175497

OVERALL SEQUENCE



DETAILED FLOW

1. OBTAIN INFORMATION ABOUT SYMPTOM

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

>> GO TO 2.

2. CONFIRM THE SYMPTOM

Check the malfunction on the vehicle that the customer describes.
Inspect the relation of the symptoms and the condition when the symptoms occur.

>> GO TO 3.

3. IDENTIFY THE MALFUNCTIONING SYSTEM WITH SYMPTOM DIAGNOSIS

Use Symptom diagnosis from the symptom inspection result in step 2 and then identify where to start performing the diagnosis based on possible causes and symptoms. Refer to WW-48, "Symptom Table".

>> GO TO 4.

4. PERFORM THE COMPONENT DIAGNOSIS OF THE OF THE APPLICABLE SYSTEM

Perform the diagnosis with Component diagnosis of the applicable system.

>> GO TO 5.

5. REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

6. FINAL CHECK

Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 2.

Are the malfunctions corrected?

YES >> Inspection End.
NO >> GO TO 3.

DTC/CIRCUIT DIAGNOSIS

WIPER AND WASHER FUSE

Description

INFOID:0000000009175498

Component	Capacity	Fuse No.	Location
Front wiper motor	30 A	41	IPDM E/R
Front and rear washer motor	10 A	1	Fuse block (J/B)

Diagnosis Procedure

INFOID:0000000009175499

1. CHECK FUSES

Check that the following fuses are not blown.

Component	Capacity	Fuse No.	Location
Front wiper motor	30 A	41	IPDM E/R
Front and rear washer motor	10 A	1	Fuse block (J/B)

Is the fuse blown?

YES >> Replace the fuse after repairing the affected circuit.
NO >> Inspection End.

FRONT WIPER MOTOR LO CIRCUIT

Component Function Check

INFOID:0000000009175500

1.CHECK FRONT WIPER LO OPERATION

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

Lo : Front wiper (LO) operation
Off : Stop the front wiper.

Is front wiper (LO) operation normal?

YES >> Front wiper motor LO circuit is normal.
NO >> Refer to WW-38, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009175501

Regarding Wiring Diagram information, refer to WW-21, "Wiring Diagram".

1.CHECK FRONT WIPER MOTOR (LO) OUTPUT VOLTAGE

1. Turn ignition switch OFF.
2. Disconnect front wiper motor connector.
3. Turn ignition switch ON.
4. Select FRONT WIPER of IPDM E/R active test item.
5. While operating the test item, check voltage between front wiper motor harness connector and ground.

(+)		(–)	Condition		Voltage (Approx.)
Front wiper motor					
Connector	Terminal				
E23	1	Ground	FRONT WIPER	Lo	Battery voltage
				Off	0 V

Is the inspection result normal?

YES >> Replace front wiper motor. Refer to WW-65, "Removal and Installation".
NO >> GO TO 2.

2.CHECK FRONT WIPER MOTOR (LO) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. 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	
E121	11	E23	1	Yes

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E121	11		No

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace harness.

FRONT WIPER MOTOR HI CIRCUIT

Component Function Check

INFOID:0000000009175502

1.CHECK FRONT WIPER HI OPERATION

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

Hi : Front wiper (HI) operation
Off : Stop the front wiper.

Is the inspection result normal?

YES >> Front wiper motor HI circuit is normal.
NO >> Refer to WW-39, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009175503

Regarding Wiring Diagram information, refer to WW-21, "Wiring Diagram".

1.CHECK FRONT WIPER MOTOR (HI) OUTPUT VOLTAGE

1. Turn ignition switch OFF.
2. Disconnect front wiper motor connector.
3. Turn ignition switch ON.
4. Select FRONT WIPER of IPDM E/R active test item.
5. While operating the test item, check voltage between front wiper motor harness connector and ground.

(+)		(−)	Condition		Voltage (Approx.)
Front wiper motor					
Connector	Terminal				
E23	4	Ground	FRONT WIPER	Hi	Battery voltage
				Off	0 V

Is the inspection result normal?

YES >> Replace front wiper motor. Refer to WW-65, "Removal and Installation".
NO >> GO TO 2.

2.CHECK FRONT WIPER MOTOR (HI) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. 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	
E121	18	E23	4	Yes

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E121	18		No

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer PCS-32, "Removal and Installation".
NO >> Repair or replace harness.

FRONT WIPER STOP POSITION SIGNAL CIRCUIT

Component Function Check

INFOID:0000000009175504

1.CHECK FRONT WIPER STOP POSITION SIGNAL

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

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

Is the inspection result normal?

YES >> Front wiper stop position signal circuit is normal.
NO >> Refer to WW-40, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009175505

Regarding Wiring Diagram information, refer to WW-21, "Wiring Diagram".

1.CHECK IPDM E/R OUTPUT VOLTAGE

1. Turn ignition switch OFF.
2. Disconnect front wiper motor connector.
3. Turn ignition switch ON.
4. Check voltage between front wiper motor harness connector and ground.

(+)		(–)	Voltage (Approx.)
Front wiper motor			
Connector	Terminal		
E23	5	Ground	12 V

Is the inspection result normal?

YES >> Replace front wiper motor. Refer to WW-65, "Removal and Installation".
NO >> GO TO 2.

2.CHECK FRONT WIPER STOP POSITION SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. 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	
E119	34	E23	5	Yes

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E119	34		No

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace harness.

FRONT WIPER MOTOR GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000009175506

Regarding Wiring Diagram information, refer to WW-21, "Wiring Diagram".

1.CHECK FRONT WIPER MOTOR GROUND CIRCUIT

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

Front wiper motor		Ground	Continuity
Connector	Terminal		
E23	2		Yes

Is the inspection result normal?

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

WASHER MOTOR CIRCUIT

Diagnosis Procedure

INFOID:0000000009175507

Regarding Wiring Diagram information, refer to WW-21, "Wiring Diagram".

1. CHECK FRONT WASHER MOTOR FUSE

1. Turn the ignition switch OFF.
2. Check the following fuse is not blown.

Component	Capacity	Fuse No.	Location
Front washer motor	10A	1	Fuse block (J/B)

Is the fuse blown?

YES >> Replace the fuse after repairing the affected circuit.
NO >> GO TO 2.

2. CHECK FRONT AND REAR WASHER MOTOR POWER SUPPLY

1. Disconnect the front and rear washer motor.
2. Turn ignition switch ON.
3. Check voltage between front washer motor harness connector and ground.

Terminals			Washer switch	Voltage (Approx.)
(+)		(-)		
Front and rear washer motor		Ground		
Connector	Terminal			
E224	1		ON	Battery voltage
			OFF	0 V

Front washer operation

Terminals			Washer switch	Voltage (Approx.)
(+)		(-)		
Front and rear washer motor		Ground		
Connector	Terminal			
E224	2		ON	Battery voltage
			OFF	0 V

Rear washer operation

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 3.

3. CHECK WASHER SWITCH

Check washer switch. Refer to WW-43, "Component Inspection".

Is the inspection result normal?

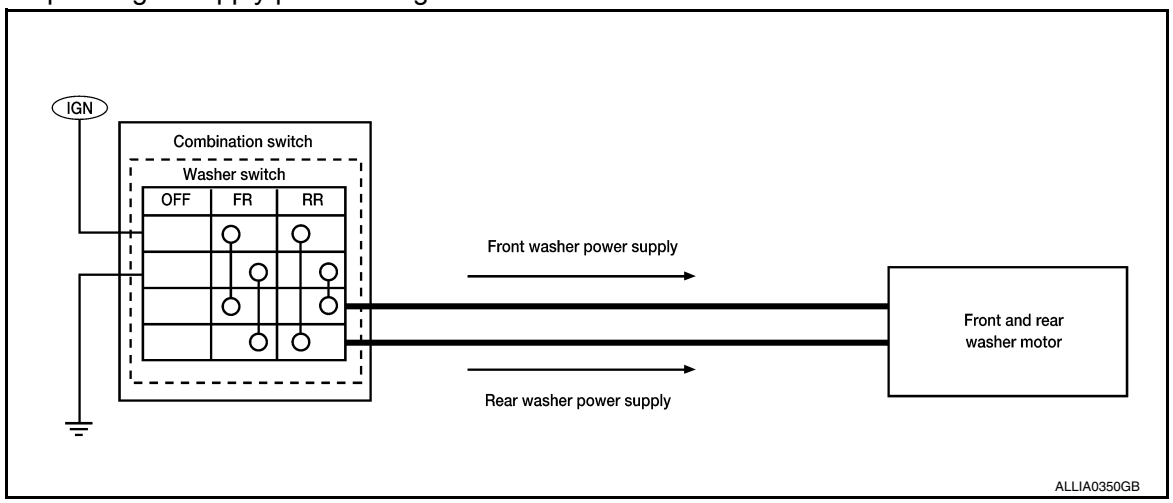
YES >> Repair harness between fuse and the front and rear washer motor.
NO >> Replace washer switch. Refer to WW-66, "Removal and Installation".

WASHER SWITCH

Description

INFOID:0000000009175508

- Washer switch is integrated with the combination switch.
- Combination switch (wiper and washer switch) switches polarity between front washer operating and rear washer operating to supply power and ground to the front and rear washer motor.



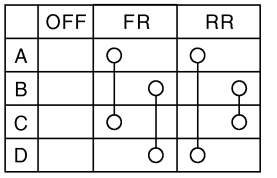
Component Inspection

INFOID:0000000009175509

1. CHECK FRONT WASHER SWITCH

1. Turn the ignition switch OFF.
2. Disconnect combination switch (wiper and washer switch).
3. Check continuity between the combination switch (wiper and washer switch) terminals.

A: Terminal 4
B: Terminal 6
C: Terminal 3
D: Terminal 1



Combination switch (wiper and washer switch)		Condition	Continuity
Terminal			
1	6	Front washer switch ON	Yes
3	4		

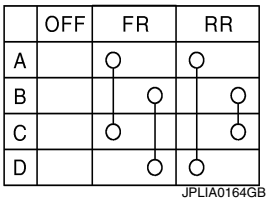
Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace combination switch (wiper and washer switch). Refer to WW-66, "Removal and Installation".

2. CHECK REAR WASHER SWITCH

1. Check continuity between the combination switch (wiper and washer switch) terminals.

A: Terminal 4
B: Terminal 6
C: Terminal 3
D: Terminal 1



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Combination switch (wiper and washer switch)		Condition	Continuity
Terminal			
1	4	Rear washer switch ON	Yes
6	3		

Is the inspection result normal?

YES >> Wiper and washer switch is normal.
NO >> Replace combination switch (wiper and washer switch). Refer to WW-66, "Removal and Installation".

REAR WIPER MOTOR CIRCUIT

Component Function Check

INFOID:0000000009175510

1.CHECK REAR WIPER ON OPERATION

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

On : Rear wiper ON operation
Off : Stop the rear wiper.

Is the inspection result normal?

YES >> Rear wiper motor circuit is normal.
NO >> Refer to WW-45, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009175511

Regarding Wiring Diagram information, refer to WW-29, "Wiring Diagram".

1.CHECK REAR WIPER MOTOR OUTPUT VOLTAGE

1. Turn ignition switch OFF.
2. Disconnect rear wiper motor connector.
3. Turn ignition switch ON.
4. Select RR WIPER of BCM active test item.
5. While operating the test item, check voltage between rear wiper motor harness connector and ground.

(+)		(–)	Condition		Voltage (Approx.)
Rear wiper motor					
Connector	Terminal				
D553	1	Ground	REAR WIPER	On	12 V
				Off	0 V

Is the inspection result normal?

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

2.CHECK REAR WIPER MOTOR CIRCUIT

1. Turn 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	
M20	95	D553	1	Yes

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	95		No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> Repair or replace harness.

3.CHECK REAR WIPER MOTOR GROUND OPEN CIRCUIT

Check continuity between rear wiper motor harness connector and ground.

Rear wiper motor		Ground	Continuity
Connector	Terminal		
D553	3		Yes

Is the inspection result normal?

YES >> Replace rear wiper motor. Refer to WW-69, "Removal and Installation".
NO >> Repair or replace harness.

REAR WIPER STOP POSITION SIGNAL CIRCUIT

Component Function Check

INFOID:0000000009175512

1.CHECK REAR WIPER STOP POSITION SIGNAL

1. Select WIPER of BCM data monitor item.
2. 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	On
		Except stop position	Off

Is the inspection result normal?

YES >> Rear wiper stop position signal circuit is normal.
NO >> Refer to WW-47, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009175513

Regarding Wiring Diagram information, refer to WW-29, "Wiring Diagram".

1.CHECK BCM OUTPUT VOLTAGE

1. Turn ignition switch OFF.
2. Disconnect rear wiper motor connector.
3. Turn ignition switch ON.
4. Check voltage between rear wiper motor harness connector and ground.

(+)		(–)	Voltage (Approx.)
Rear wiper motor			
Connector	Terminal		
D553	2	Ground	12 V

Is the inspection result normal?

YES >> Replace rear wiper motor.
NO >> GO TO 2.

2.CHECK REAR WIPER STOP POSITION SIGNAL CIRCUIT

1. Turn 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	
M20	84	D553	2	Yes

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	84		No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> Repair or replace harness.

SYMPTOM DIAGNOSIS

WIPER AND WASHER SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000009175514

Symptom		Probable malfunction location	Inspection item
Front wiper does not operate in . . .	HI only	• Combination switch (wiper and washer switch) • Harness between combination switch and BCM • BCM	Combination switch (wiper and washer switch) Refer to BCS-79, "Symptom Table".
		• IPDM E/R • Harness between IPDM E/R and front wiper motor • Front wiper motor	Front wiper motor (HI) circuit Refer to WW-39, "Component Function Check".
		Front wiper request signal • BCM • IPDM E/R	BCM DATA MONITOR “FR WIPER HI” Refer to BCS-19, "WIPER : CONSULT Function (BCM - WIPER)".
	LO and INT	• Combination switch (wiper and washer switch) • Harness between combination switch wiper and washer switch) and BCM • BCM	Combination switch (wiper and washer switch) Refer to BCS-79, "Symptom Table"
		• IPDM E/R • Harness between IPDM E/R and front wiper motor • Front wiper motor	Front wiper motor (LO) circuit Refer to WW-38, "Component Function Check".
		Front wiper request signal • BCM • IPDM E/R	BCM DATA MONITOR “FR WIPER LOW” Refer to BCS-19, "WIPER : CONSULT Function (BCM - WIPER)".
	INT only	• Combination switch (wiper and washer switch) • Harness between combination switch (wiper and washer switch) and BCM • BCM	Combination switch (wiper and washer switch) Refer to BCS-79, "Symptom Table".
		Front wiper request signal • BCM • IPDM E/R	BCM DATA MONITOR “FR WIPER LOW” Refer to BCS-19, "WIPER : CONSULT Function (BCM - WIPER)".
	HI, LO and INT	SYMPTOM DIAGNOSIS “FRONT WIPER DOES NOT OPERATE” Refer to WW-52, "Diagnosis Procedure"	

Symptom		Probable malfunction location	Inspection item
Front wiper does not stop in . . .	HI only	• Combination switch • BCM	Combination switch (wiper and washer switch) Refer to BCS-79, "Symptom Table".
		Front wiper request signal • BCM • IPDM E/R	BCM DATA MONITOR “FR WIPER HI” Refer to BCS-19, "WIPER : CONSULT Function (BCM - WIPER)".
		IPDM E/R	—
	LO only	• Combination switch • BCM	Combination switch (wiper and washer switch) Refer to BCS-79, "Symptom Table".
		Front wiper request signal • BCM • IPDM E/R	BCM DATA MONITOR “FR WIPER LOW” Refer to BCS-19, "WIPER : CONSULT Function (BCM - WIPER)".
		IPDM E/R	—
	INT only	• Combination switch (wiper and washer switch) • BCM	Combination switch (wiper and washer switch) Refer to BCS-79, "Symptom Table".
		• BCM • IPDM E/R	BCM DATA MONITOR “FR WIPER LOW” Refer to BCS-19, "WIPER : CONSULT Function (BCM - WIPER)".
Front wiper does not operate normally in. . .	Intermittent adjustment cannot be performed.	• Combination switch • Harness between combination switch and BCM • BCM	Combination switch (wiper and washer switch) Refer to BCS-79, "Symptom Table"
		BCM	—
	Intermittent control linked with vehicle speed cannot be performed.	Check the vehicle speed detection wiper setting. Refer to BCS-19, "WIPER : CONSULT Function (BCM - WIPER)".	
	Wiper is not linked to the washer operation.	• Combination switch • Harness between combination switch and BCM • BCM	Combination switch (wiper and washer switch) Refer to BCS-79, "Symptom Table"
		BCM	—
	Does not return to stop position. [Repeatedly operates for 10 seconds and then stops for 20 seconds. (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 WW-40, "Component Function Check"

Symptom		Probable malfunction location	Inspection item
Rear wiper does not operate in. . .	ON only	• Combination switch • Harness between combination switch and BCM • BCM	Combination switch (wiper and washer switch) Refer to BCS-79, "Symptom Table"
	INT only	• Combination switch • Harness between combination switch and BCM • BCM	Combination switch (wiper and washer switch) Refer to BCS-79, "Symptom Table"
	ON and INT	• Combination switch • Harness between combination switch and BCM • BCM	Combination switch (wiper and washer switch) Refer to BCS-79, "Symptom Table"
		• BCM • Harness between rear wiper motor and BCM • Harness between rear wiper motor and ground • Rear wiper motor	Rear wiper motor circuit Refer to WW-45, "Component Function Check"
Rear wiper does not stop in. . .	ON only	• Combination switch • BCM	Combination switch (wiper and washer switch) Refer to BCS-79, "Symptom Table"
	INT only	• Combination switch • BCM	Combination switch (wiper and washer switch) Refer to BCS-79, "Symptom Table"
Rear wiper does not operate normally in. . .	Wiper is not linked to the washer operation.	• Combination switch • Harness between rear wiper motor and BCM • BCM	Combination switch (wiper and washer switch) Refer to BCS-79, "Symptom Table"
		BCM	—
	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 WW-47, "Component Function Check"

NORMAL OPERATING CONDITION

Description

INFOID:0000000009175515

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

FRONT WIPER DOES NOT OPERATE

Description

INFOID:0000000009175516

The front wiper does not operate under any operation conditions.

Diagnosis Procedure

INFOID:0000000009175517

Regarding Wiring Diagram information, refer to WW-29, "Wiring Diagram".

1.CHECK WIPER RELAY OPERATION

CONSULT ACTIVE TEST
1. Select “FRONT WIPER” of IPDM E/R active test item.
2. When operating the test item, check front wiper operation.

Lo : Front wiper LO operation
Hi : Front wiper HI operation
Off : Stop the front wiper.

Is front wiper operating normally?

YES >> GO TO 5.
NO >> GO TO 2.

2.CHECK FRONT WIPER MOTOR FUSE

1. Turn ignition switch OFF.
2. Check the following fuse.

Unit	Location	No.	Capacity
Front wiper motor	IPDM E/R	41	30 A

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace the fuse after repairing the applicable circuit.

3.CHECK FRONT WIPER MOTOR GROUND CIRCUIT

Check front wiper motor ground circuit. Refer to WW-41, "Diagnosis Procedure".

Is the inspection result normal?

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

4.CHECK FRONT WIPER MOTOR INPUT VOLTAGE

CONSULT ACTIVE TEST
1. Turn ignition switch OFF.
2. Disconnect front wiper motor connector.
3. Turn ignition switch ON.
4. Select “FRONT WIPER” of IPDM E/R active test item.
5. While operating the test item, check voltage between front wiper motor harness connector and ground.

(+)		(–)	Condition		Voltage (Approx.)
Front wiper motor					
Connector	Terminal				
E23	1	Ground	FRONT WIPER	Lo	Battery voltage
				Off	0 V
	4			Hi	Battery voltage
				Off	0 V

Is the inspection result normal?

YES >> Replace front wiper motor.
NO >> Replace IPDM E/R.

5. CHECK FRONT WIPER REQUEST SIGNAL INPUT

CONSULT DATA MONITOR

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

Monitor item	Condition		Monitor status
FR WIP REQ	Front wiper switch HI	On	Hi
		Off	Stop
	Front wiper switch LO	On	Low
		Off	Stop

Is the inspection result normal?

YES >> Replace IPDM E/R.
NO >> GO TO 6.

6. CHECK COMBINATION SWITCH

Perform the inspection of the combination switch. Refer to BCS-79, "Symptom Table".

Is combination switch normal?

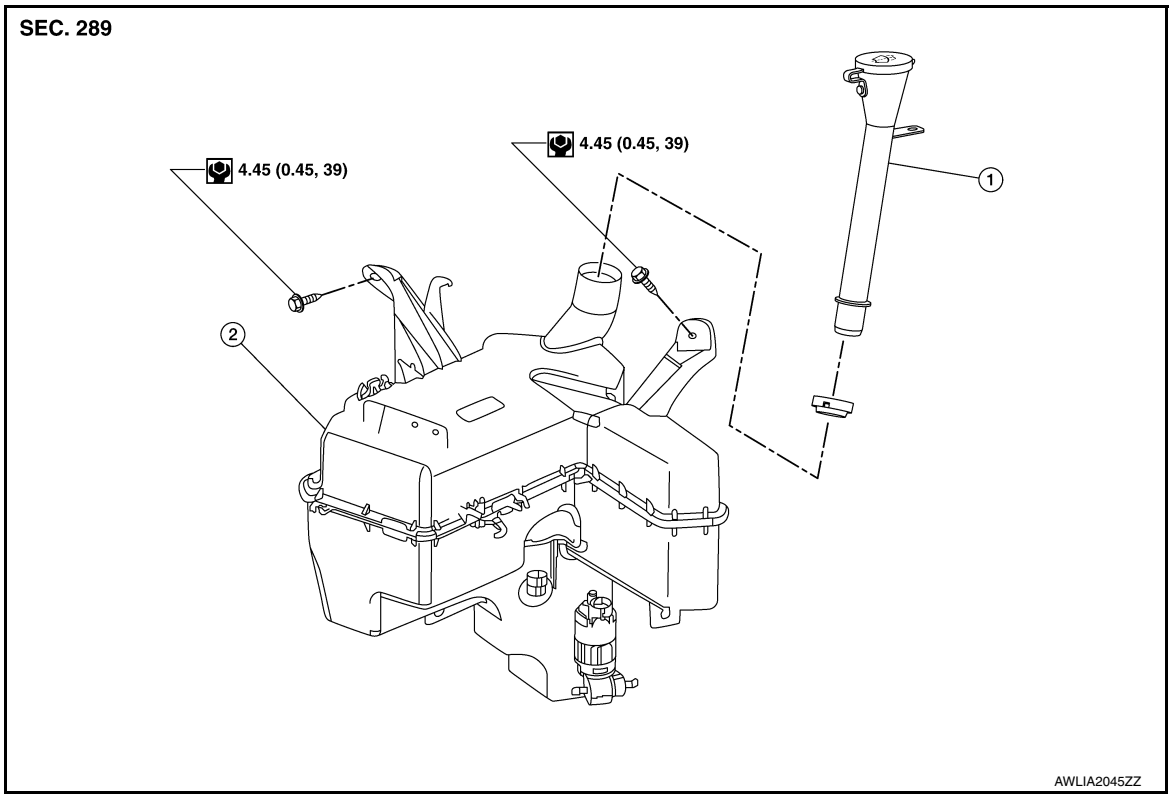
YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> Repair or replace the applicable parts.

REMOVAL AND INSTALLATION

WASHER TANK

Exploded View

INFOID:0000000009175518



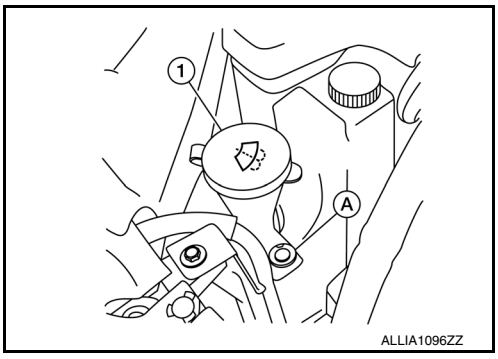
1. Washer tank inlet
2. Washer tank

Removal and Installation

INFOID:0000000009175519

REMOVAL

1. Fully open the hood.
2. Remove the washer tank inlet clip (A) from the coolant reservoir and pull the washer tank inlet tube (1) from the washer tank.



3. Remove the front fender protector (RH). Refer to EXT-28, "FENDER PROTECTOR : Removal and Installation".
4. Disconnect the harness connector from the washer pump.
5. Disconnect the harness connector from the washer level switch.
6. Disconnect the front washer tube and rear washer tube.
7. Remove the washer tank bolts.
8. Remove the washer tank.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Add water to the top of washer tank inlet after installing. Check that no leaks exist.

WASHER PUMP

Removal and Installation

INFOID:0000000009175520

The washer pump is serviced as an assembly with the washer tank. Refer to WW-54, "Removal and Installation".

WASHER LEVEL SWITCH

Removal and Installation

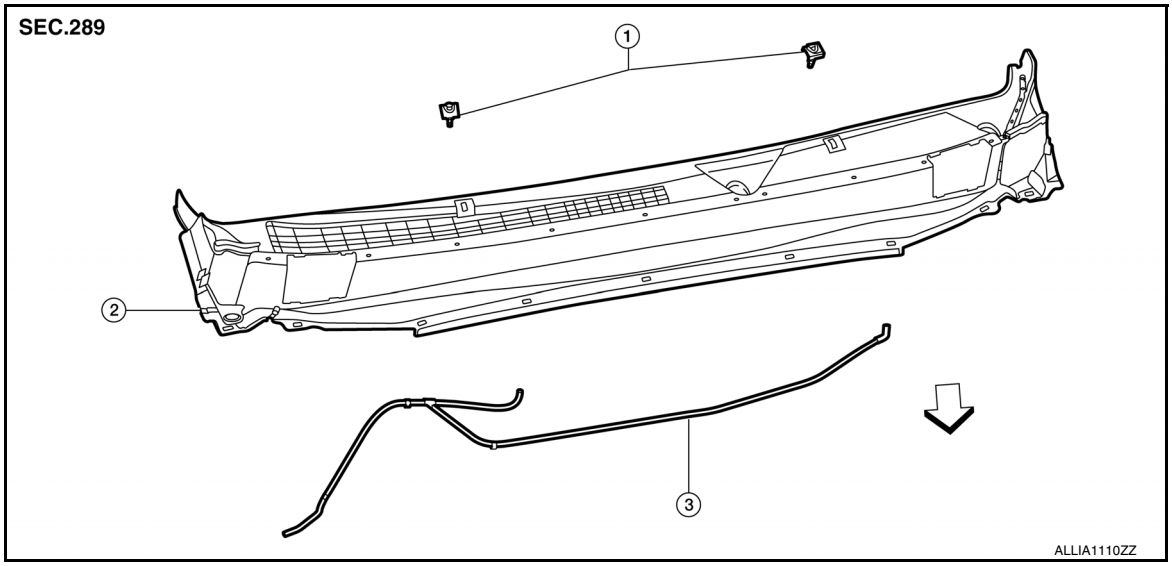
INFOID:0000000009175521

The washer level switch is serviced as an assembly with the washer tank. Refer to WW-54, "Removal and Installation".

FRONT WASHER NOZZLE AND TUBE

Exploded View

INFOID:0000000009175522



1. Front washer nozzle
2. Cowl top cover
3. Front washer tube

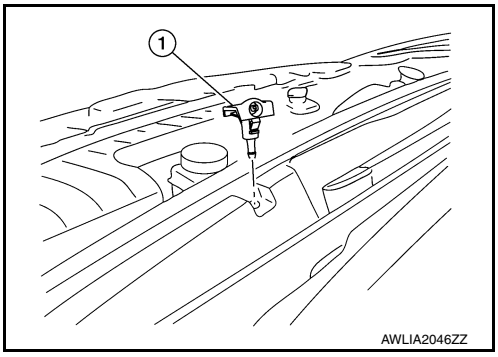
⇦ Front

Removal and Installation - Front Washer Nozzle

INFOID:0000000009175523

REMOVAL

1. Remove the cowl top cover. Refer to EXT-25, "Removal and Installation".
2. Disconnect the front washer tube from the front washer nozzle.
3. While releasing the pawls on the sides of the front washer nozzle (1), remove front washer nozzle from cowl top cover.



INSTALLATION

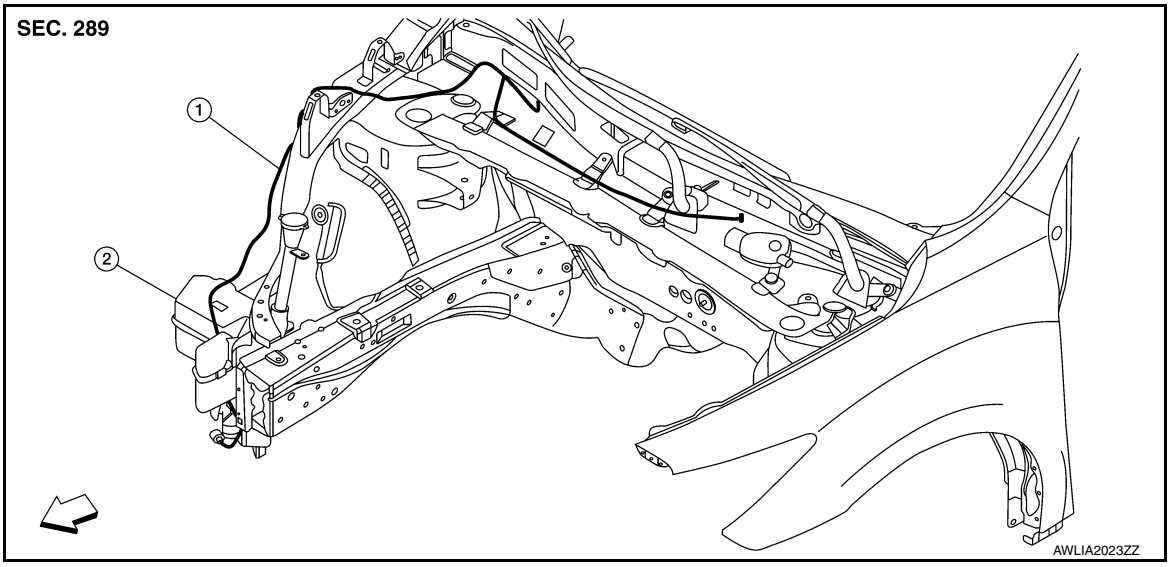
Installation is in the reverse order of removal.

CAUTION:

Adjust the nozzles to their proper position. Refer to WW-59, "Adjustment".

Washer Tube Layout

INFOID:0000000009175524



1. Front washer tube
2. Washer tank
⇦ Front

Removal and Installation - Front Washer Tube

INFOID:0000000009175525

REMOVAL

1. Remove the cowl top cover. Refer to EXT-25, "Removal and Installation".
2. Remove the fender protector (RH). Refer to EXT-28, "FENDER PROTECTOR : Removal and Installation".
3. Disconnect the front washer tube from the washer tank.
4. Remove the front washer tube.

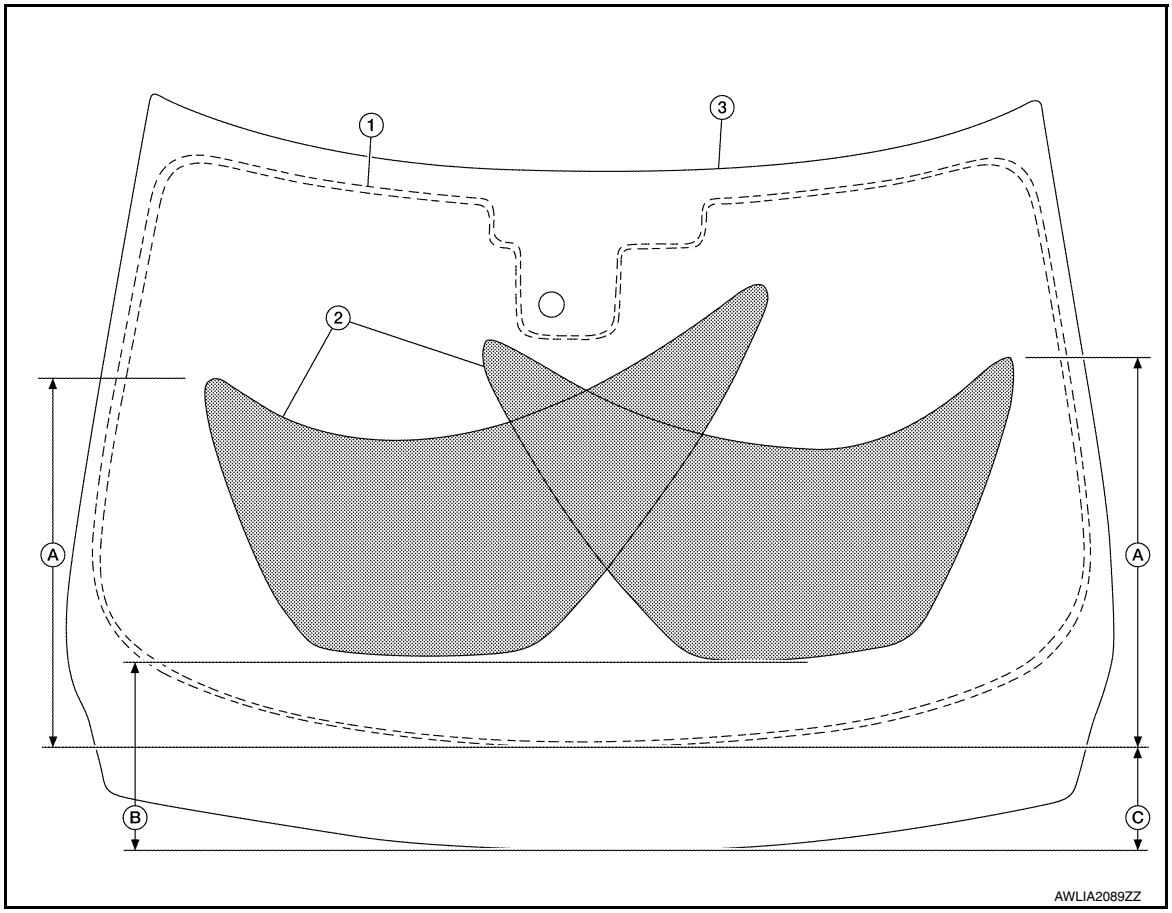
INSTALLATION

Installation is in the reverse order of removal.

Adjustment

INFOID:0000000009175526

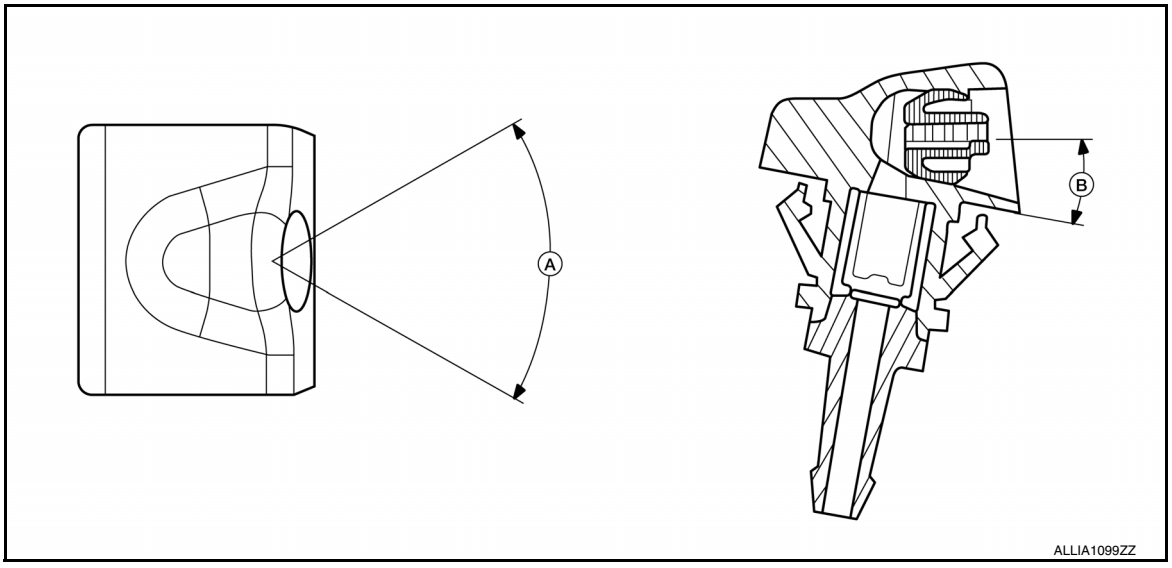
WASHER NOZZLE SPRAY PATTERN



1. Black print area
2. Washer fluid spray pattern
3. Windshield glass

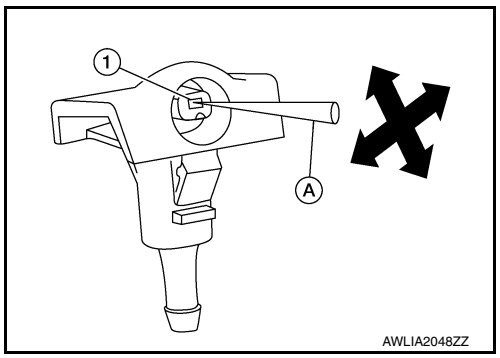
A. 445.0 mm (17.5 in)
B. 274 mm (10.8 in)
C. 148 mm (5.8 in)

WASHER NOZZLE ADJUSTMENT



A. 60°± 7.5°
B. 11.0°± 1.0°

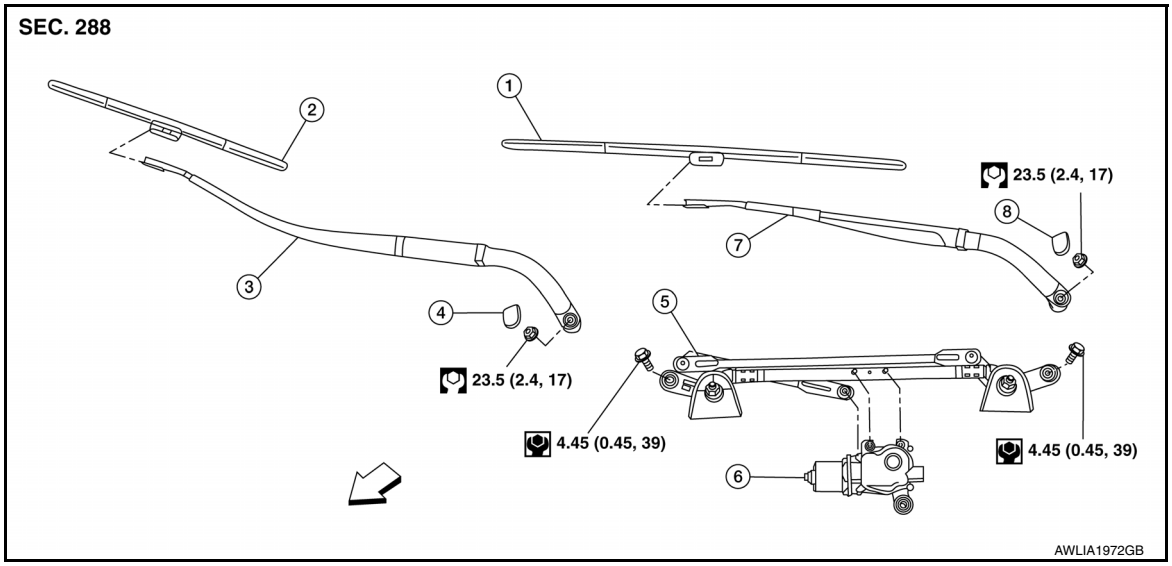
1. Insert a suitable tool (A) into the spray opening (1) and move up/down and left/right to adjust the spray position.
   NOTE:
   If wax or dust gets into the nozzle, remove wax or dust with a suitable tool (A).



FRONT WIPER ARM

Exploded View

INFOID:0000000009175527



1. Front wiper blade (LH)
2. Front wiper blade (RH)
3. Front wiper arm (RH)
4. Front wiper arm cap (RH)
5. Front wiper drive assembly
6. Front wiper motor
7. Front wiper arm (LH)
8. Front wiper arm cap (LH)

⇦ Front

Removal and Installation

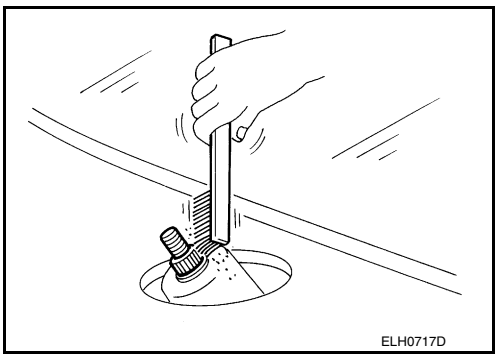
INFOID:0000000009175528

REMOVAL

1. Operate the front wiper to move it to the auto stop position.
2. Open the hood.
3. Remove the front wiper arm cap.
4. Remove the front wiper arm nut.
5. Raise the front wiper arm, then remove the front wiper arm.

INSTALLATION

1. Clean the front wiper arm mount as shown. This will reduce the possibility of wiper arm looseness.



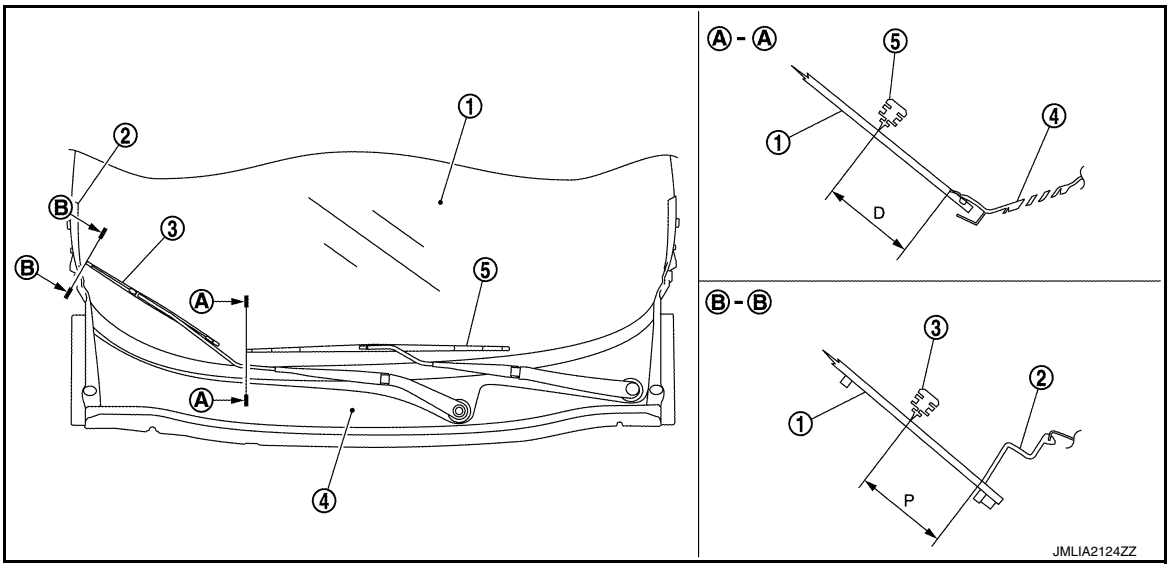
2. Operate front wiper motor to move the front wiper to the auto stop position.
3. Adjust the front wiper blade position. Refer to WW-63, "Adjustment".
4. Install the front wiper arm and the front wiper arm nut.
5. Install the front wiper arm cap.
6. Check that the wiper blades stop at the specified position. Refer to WW-63, "Adjustment".

Adjustment

INFOID:0000000009175529

WIPER BLADE POSITION ADJUSTMENT

Clearance between the end of cowl top cover/ front fender cover and the top of front wiper blade center.



1. Windshield glass
2. Front fender cover
3. Front wiper blade (RH)
4. Cowl top cover
5. Front wiper blade (LH)

Standard clearance

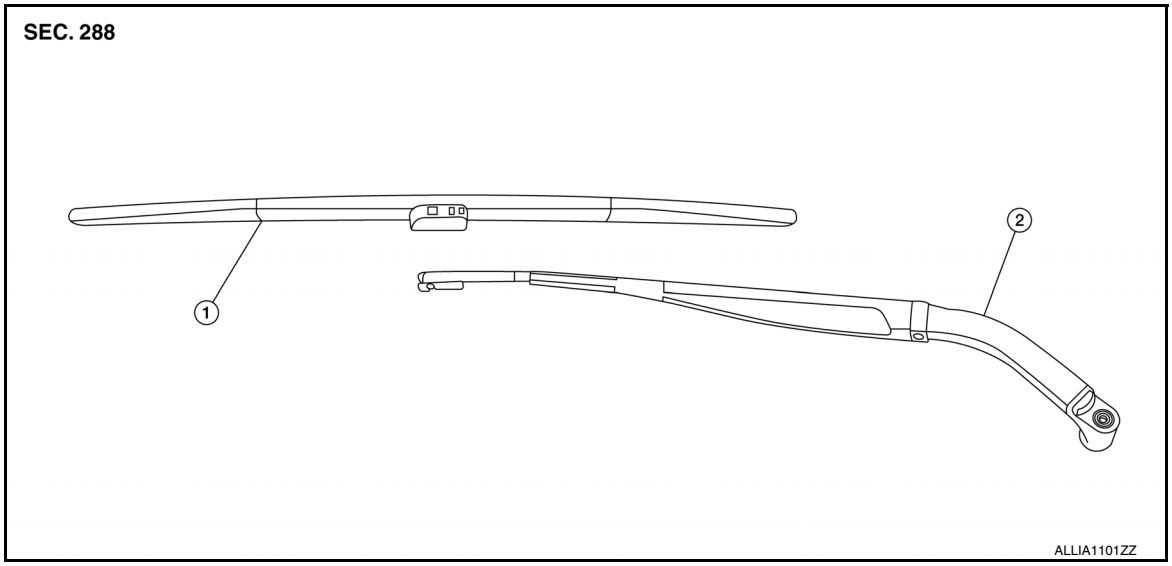
D : 72.0 ± 7.5 mm (2.05 ± 0.30 in)

P : 52.0 ± 7.5 mm (2.83 ± 0.30 in)

FRONT WIPER BLADE

Exploded View

INFOID:0000000009175530



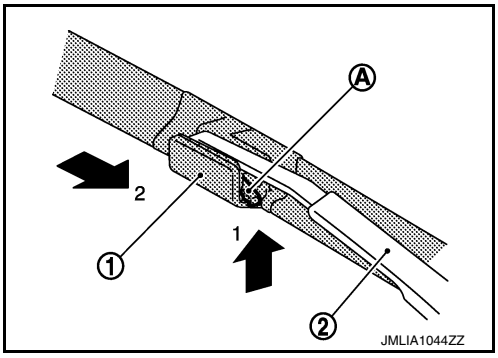
1. Front wiper blade
2. Front wiper arm

Removal and Installation

INFOID:0000000009175531

REMOVAL

1. Lift the front wiper arm and blade assembly away from the windshield glass.
2. Push the release tab (A) of the front wiper blade (1), then move the front wiper blade down the front wiper arm (2) to remove.
   CAUTION:
   Be careful not to drop the wiper blade onto the windshield glass.



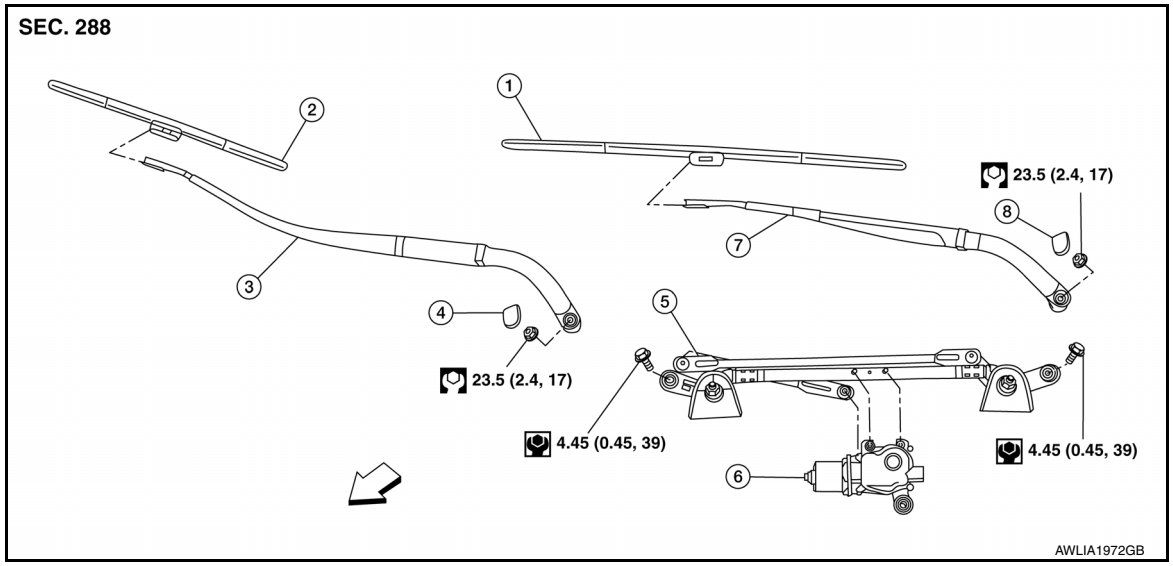
INSTALLATION

1. Insert the front wiper blade onto the front wiper arm until it clicks into place.
2. Rotate wiper blade so the dimple is in the groove.

FRONT WIPER DRIVE ASSEMBLY

Exploded View

INFOID:0000000009175532



1. Front wiper blade (LH)
2. Front wiper blade (RH)
3. Front wiper arm (RH)
4. Front wiper arm cap (RH)
5. Front wiper drive assembly
6. Front wiper motor
7. Front wiper arm (LH)
8. Front wiper arm cap (LH)
⇦ Front

Removal and Installation

INFOID:0000000009175533

REMOVAL

1. Remove the cowl top cover. Refer to EXT-25, "Removal and Installation".
2. Disconnect the harness connector from the front wiper motor.
3. Remove the bolts from the front wiper drive assembly.
4. Remove the front wiper drive assembly.

INSTALLATION

1. Install the front wiper drive assembly and retain with the front wiper drive assembly bolts.
2. Connect the harness connector to the front wiper motor.
3. Operate the front wiper to move it to the auto stop position.
4. Install the cowl top cover. Refer to EXT-25, "Removal and Installation".

WIPER AND WASHER SWITCH

Removal and Installation

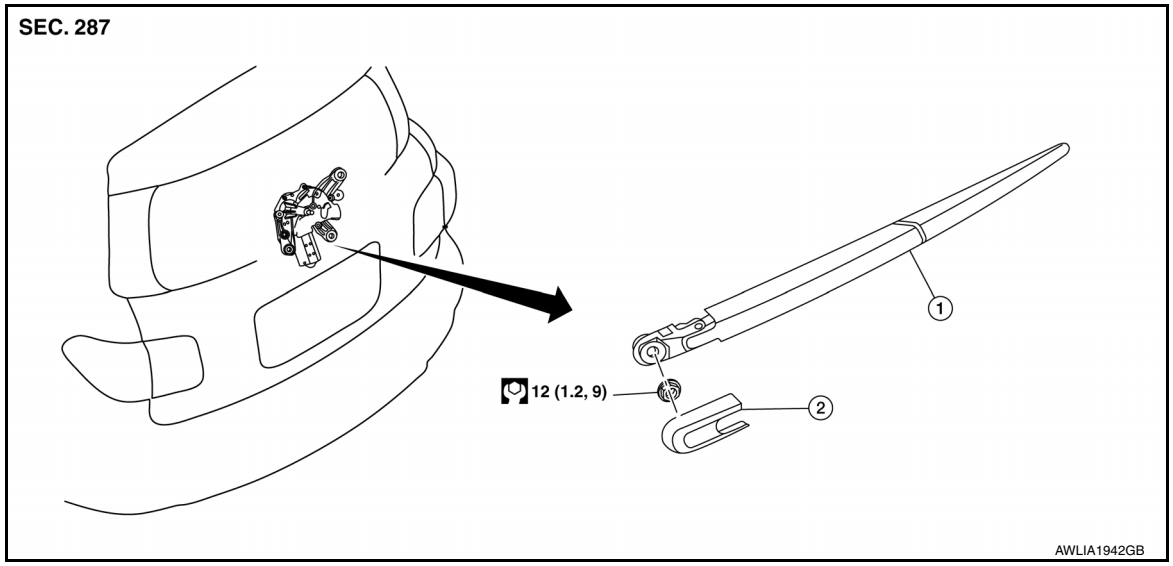
INFOID:0000000009175534

The wiper and washer switch are serviced as part of the combination switch assembly. Refer to BCS-81, "Removal and Installation".

REAR WIPER ARM

Exploded View

INFOID:0000000009175535



1. Rear wiper arm
2. Rear wiper arm cover

Removal and Installation

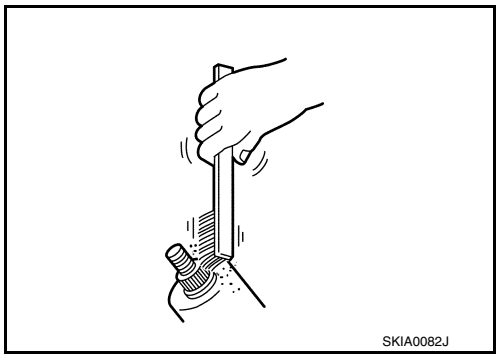
INFOID:0000000009175536

REMOVAL

1. Operate the rear wiper to move it to the auto stop position.
2. Remove the rear wiper arm cover.
3. Remove the rear wiper arm nut.
4. Remove the rear wiper arm.

INSTALLATION

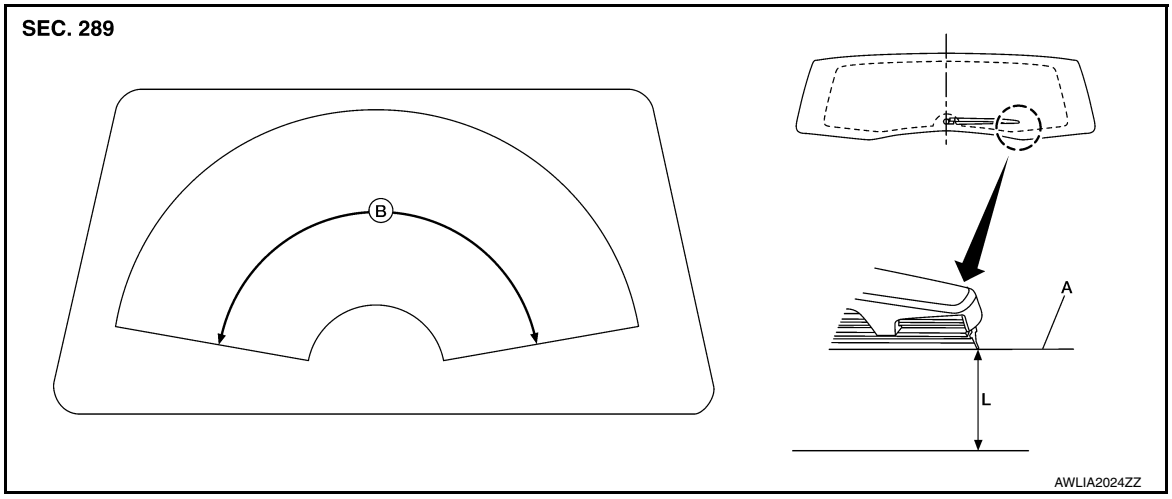
1. Clean the rear wiper arm mount as shown. This will reduce the possibility of wiper arm looseness.



2. Operate the rear wiper motor to move it to the auto stop position.
3. Adjust the rear wiper blade position. Refer to WW-68, "Adjustment".
4. Install the rear wiper arm and the rear wiper nut.
5. Install the rear wiper arm cover.
6. Check that the rear wiper blade stops at the specified position.

Adjustment

INFOID:0000000009175537



A. Defrosting wire B. 163°± 3°

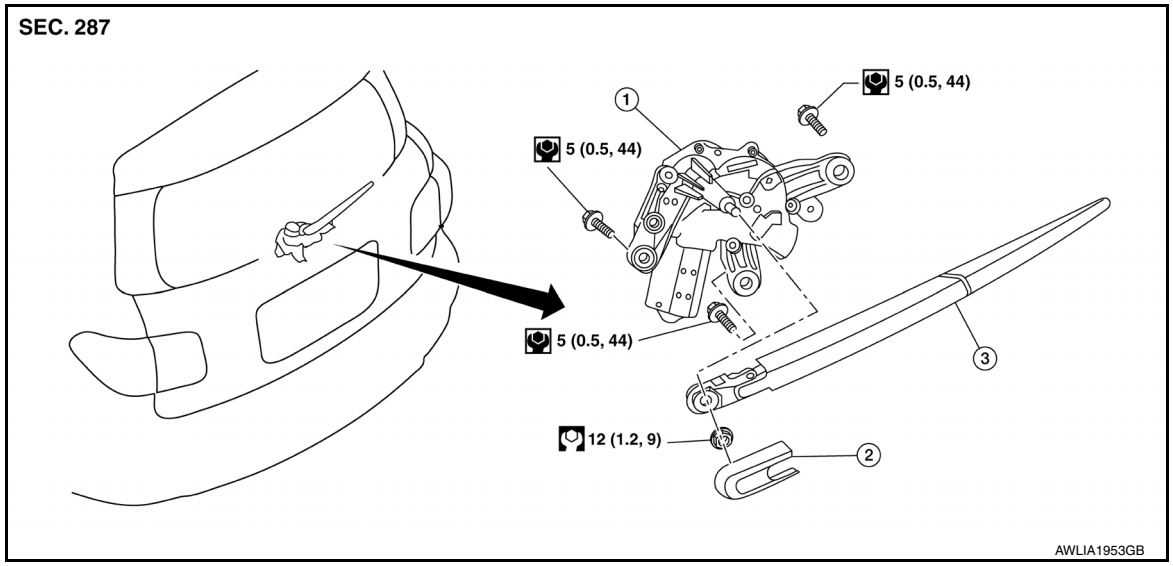
Position the wiper blade on top of the defrosting wire (A).

L: 50 ± 7.5 mm (2.0 ± 0.30 in)

REAR WIPER MOTOR

Exploded View

INFOID:0000000009175538



1. Rear wiper motor
2. Rear wiper arm cover
3. Rear wiper arm

Removal and Installation

INFOID:0000000009175539

REMOVAL

1. Remove the rear wiper arm. Refer to WW-67, "Removal and Installation".
2. Remove the back door finisher. Refer to INT-35, "BACK DOOR LOWER FINISHER : Removal and Installation".
3. Disconnect the harness connector from the rear wiper motor.
4. Remove the rear wiper motor bolts.
5. Remove the rear wiper motor.

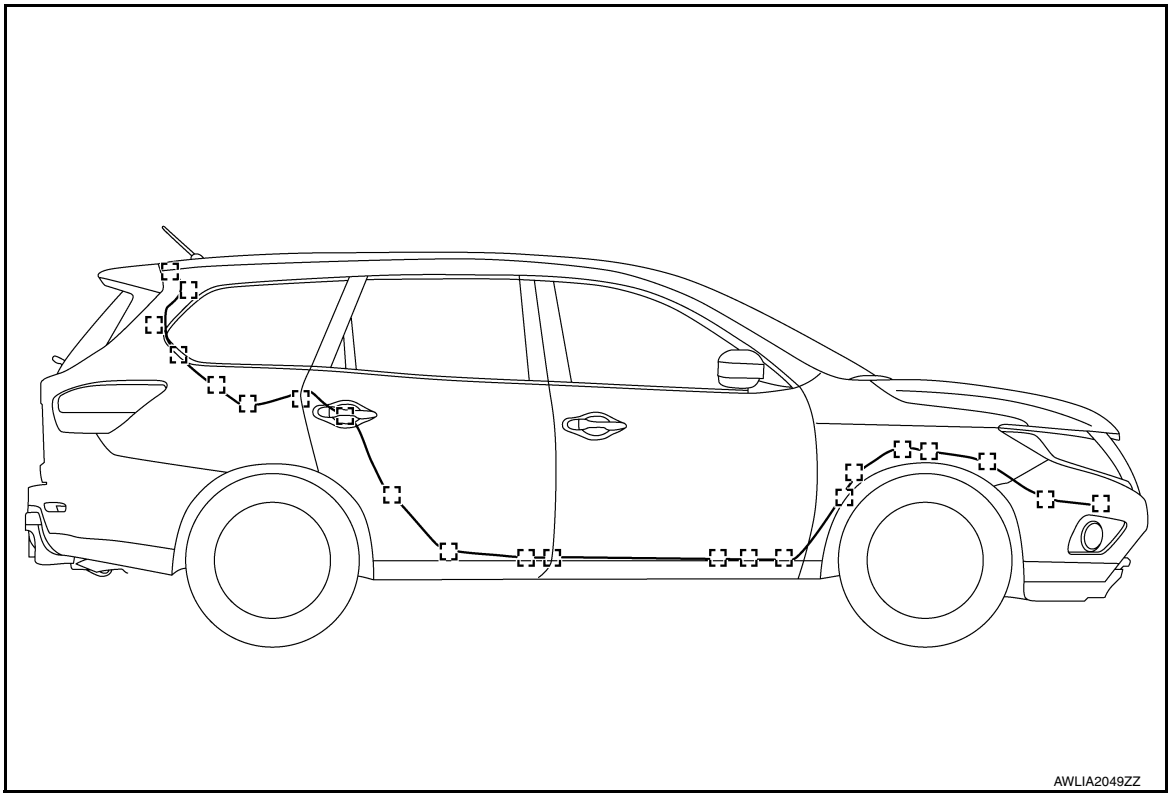
INSTALLATION

Installation is in the reverse order of removal.

REAR WASHER NOZZLE AND TUBE

Washer Tube Layout

INFOID:0000000009175540



Removal and Installation - Rear Washer Tube

INFOID:0000000009175541

REMOVAL

1. Remove the luggage side lower finisher (RH). Refer to INT-31, "LUGGAGE SIDE LOWER FINISHER : Removal and Installation".
2. Remove the storage box side finisher (LH/RH). Refer to INT-33, "STORAGE BOX SIDE FINISHER : Removal and Installation".
3. Remove the back door kicking plate. Refer to INT-36, "BACK DOOR KICKING PLATE : Removal and Installation".
4. Remove the fender protector (RH). Refer to EXT-28, "FENDER PROTECTOR : Removal and Installation".
5. Remove the front kicking plate (RH). Refer to INT-22, "KICKING PLATE : Removal and Installation - Front Kicking Plate".
6. Remove the rear kicking plate (RH). Refer to INT-22, "KICKING PLATE : Removal and Installation - Rear Kicking Plate".
7. Remove the third row seat. Refer to SE-107, "Removal and Installation".
8. Remove the back pillar finisher (RH). Refer to INT-32, "BACK PILLAR FINISHER : Removal and Installation".
   CAUTION:
   Do not reuse back pillar finisher.
9. Remove the high-mounted stop lamp. Refer to EXL-151, "Removal and Installation".
10. Disconnect the rear washer tube from the rear washer nozzle.
11. Remove the rear washer tube.

INSTALLATION

Installation is in the reverse order of removal.

Removal and Installation - Rear Washer Nozzle

INFOID:0000000009175542

REMOVAL

1. Remove the high-mounted stop lamp. Refer to EXL-151, "Removal and Installation".
2. Remove the rear washer nozzle from the rear spoiler.

INSTALLATION

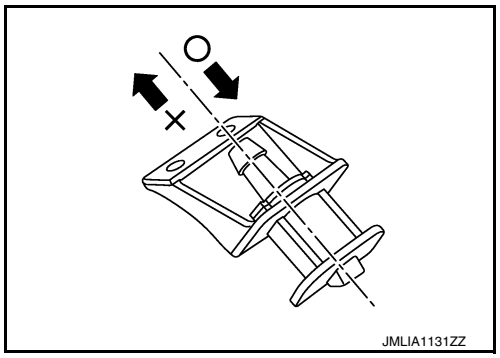
Installation is in the reverse order of removal.

Inspection

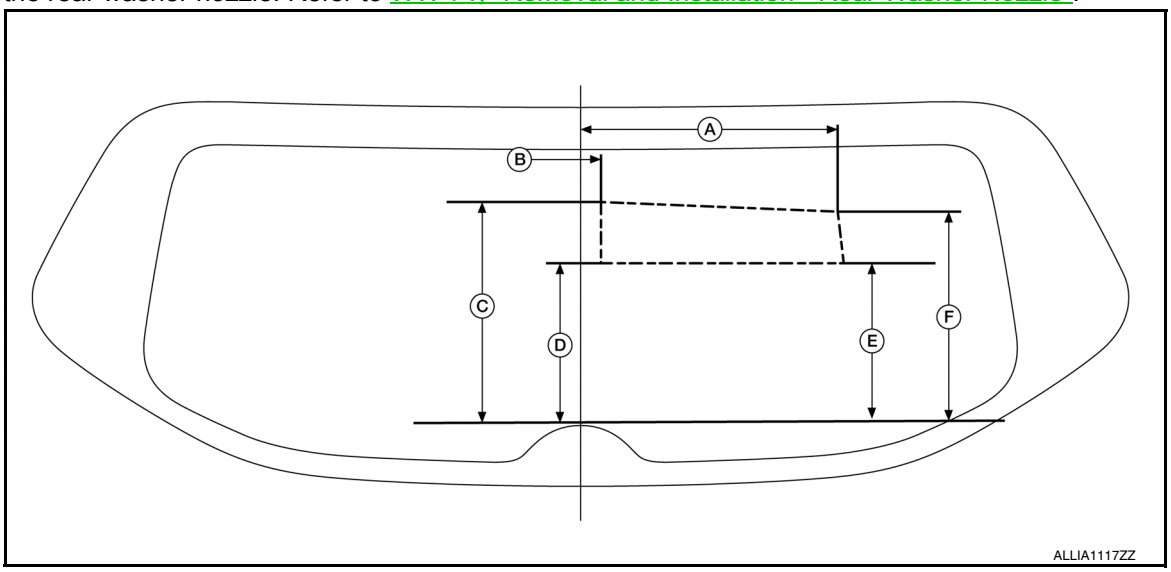
INFOID:0000000009175543

INSPECTION

Check that air can pass through the nozzle by blowing into the nozzle and that air cannot flow in the opposite direction.



If operating properly, spray positions should match the positions shown. If spray positions do not match, confirm the rear washer nozzle is properly seated and working properly. If the spray positions still do not match as shown, then replace the rear washer nozzle. Refer to WW-71, "Removal and Installation - Rear Washer Nozzle".



A. 328 mm (12.9 in)
B. 26 mm (1.0 in)
C. 290 mm (11.4 in)
D. 208 mm (8.2 in)
E. 208 mm (8.2 in)
F. 275 mm (10.8 in)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Specifications

INFOID:0000000009175544

WINDSHIELD WASHER FLUID

Windshield washer fluid capacity	4.6 ℓ (4-7/8 US qt, 4 Imp qt)
Windshield washer fluid specification	Refer to MA-15, "FOR USA AND CANADA : Fluids and Lubricants" or MA-16, "FOR MEXICO : Fluids and Lubricants".