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SECTION

WIPER, WASHER & HORN

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PRECAUTION

PRECAUTION

PFP:00011

Precautions for Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”

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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 SRS 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 SRS 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.

Wiring Diagrams and Trouble Diagnosis

EKS0011Q

When you read wiring diagrams, refer to the followings:

- Refer to [GI-14, "How to Read Wiring Diagrams"](#) .
- Refer to [PG-2, "POWER SUPPLY ROUTING"](#) for power distribution circuit.

When you perform trouble diagnosis, refer to the followings:

- Refer to [GI-10, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES"](#) .
- Refer to [GI-26, "How to Perform Efficient Diagnosis for an Electrical Incident"](#) .

FRONT WIPER AND WASHER SYSTEM

FRONT WIPER AND WASHER SYSTEM

PFPP:28810

System Description

EKS001IS

WIPER OPERATION

Description

With the ignition switch in the ON position, power is supplied

- through 20A fuse [No. 34, located in the fuse block (J/B)NO.2]
- to wiper motor terminal 4.

Ground is supplied to wiper switch terminal 17 and 20 through body grounds M115 and M25.

Low (MIST) and High Speed Wiper Operation

When the wiper switch is placed in the LO or MIST position, ground is supplied

- through terminal 14 of the wiper switch
- to wiper motor terminal 6.

With power and ground supplied, the wiper motor operates at low speed.

When the wiper switch is placed in the HI position, ground is supplied

- through terminal 16 of the wiper switch
- to wiper motor terminal 5.

With power and ground supplied, the wiper motor operates at high speed.

Auto Stop Operation

When the front wiper switch is placed in the OFF position, the front wiper motor will continue to operate until the wiper arms reach the base of the windshield (Auto stop). When the front wiper switch is placed in the OFF position, ground is supplied

- from terminal 14 of the wiper switch
- to wiper motor terminal 6, in order to continue wiper motor operation at low speed.

Ground is also supplied until the wiper arms reaches the base of the windshield

- through terminal 13 of the wiper switch
- to wiper relay terminal 3
- through terminal 4 of the wiper relay
- to wiper motor terminal 3
- through terminal 1 of the wiper motor, and
- through body grounds E62 and E42.

When the wiper arms reach the base of the windshield, the switch in the front wiper motor moves to the "STOP" position. The ground path is interrupted and the front wiper motor stops.

Intermittent Operation

Intermittent operation is controlled by the BCM. When the front wiper switch is placed in the INT position, ground is supplied

- to BCM terminal 9
- from front wiper switch terminal 15
- through body grounds M25 and m115.

The desired interval time is input

- to BCM terminal 48
- from front wiper switch terminal 19 and
- to BCM terminal 49
- from combination meter terminal q18 (vehicle speed pulse).

The desired interval time is input

- to front wiper relay terminal 2
- to BCM terminal 128

With power and ground supplied, the front wiper relay is activated. When activated, an intermittent ground is supplied

- to front wiper motor terminal 5

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FRONT WIPER AND WASHER SYSTEM

- through the front wiper switch terminal 14
- to front wiper switch terminal 13
- through front wiper relay terminal 3
- to front wiper relay terminal 5
- through body grounds E24 and E44.

Front wiper motor operates at desired interval with BCM terminal 9 grounded. Intermittent operation can be adjusted from: Approx.0.9 -45sec.: (when vehicle is stopped) Approx. 0.4 - 30 sec.: (when vehicle is moving)
Judgement on vehicle stopped or moving: Stopped, Moving: More than 5 km/h (3 MPH) Moving, Stopped: Less than 2 km/h (1 MPH)

WASHER OPERATION

With the ignition switch in the ON position, power is supplied

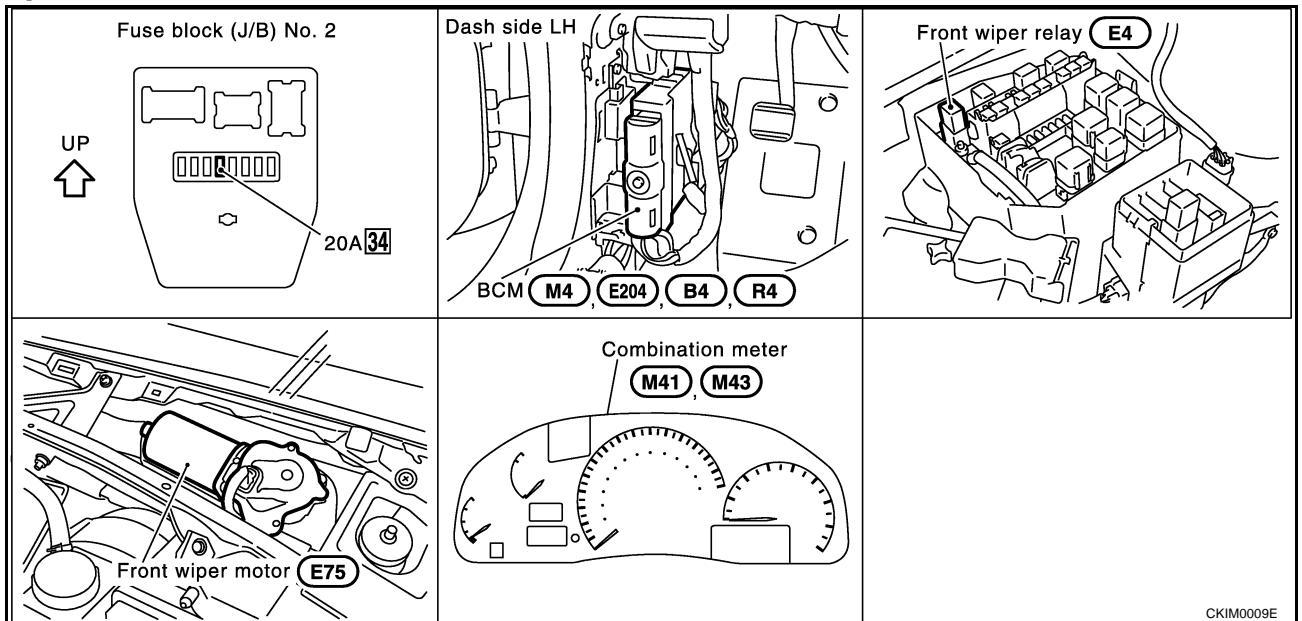
- through 20A fuse [No. 34, located in the fuse block (J/B)NO.2]
- to washer motor terminal 1.

When the lever is pulled to the WASH position, ground is supplied

- to washer motor terminal 2, and
- to BCM terminal 4
- from terminal 18 of the front wiper switch
- through terminal 17 of the front wiper switch, and
- through body grounds M25 and M115.

With power and ground supplied, the washer motor operates. The front wiper motor operates at low speed for about 3 seconds. This feature is controlled by the BCM in the same manner as the intermittent operation.

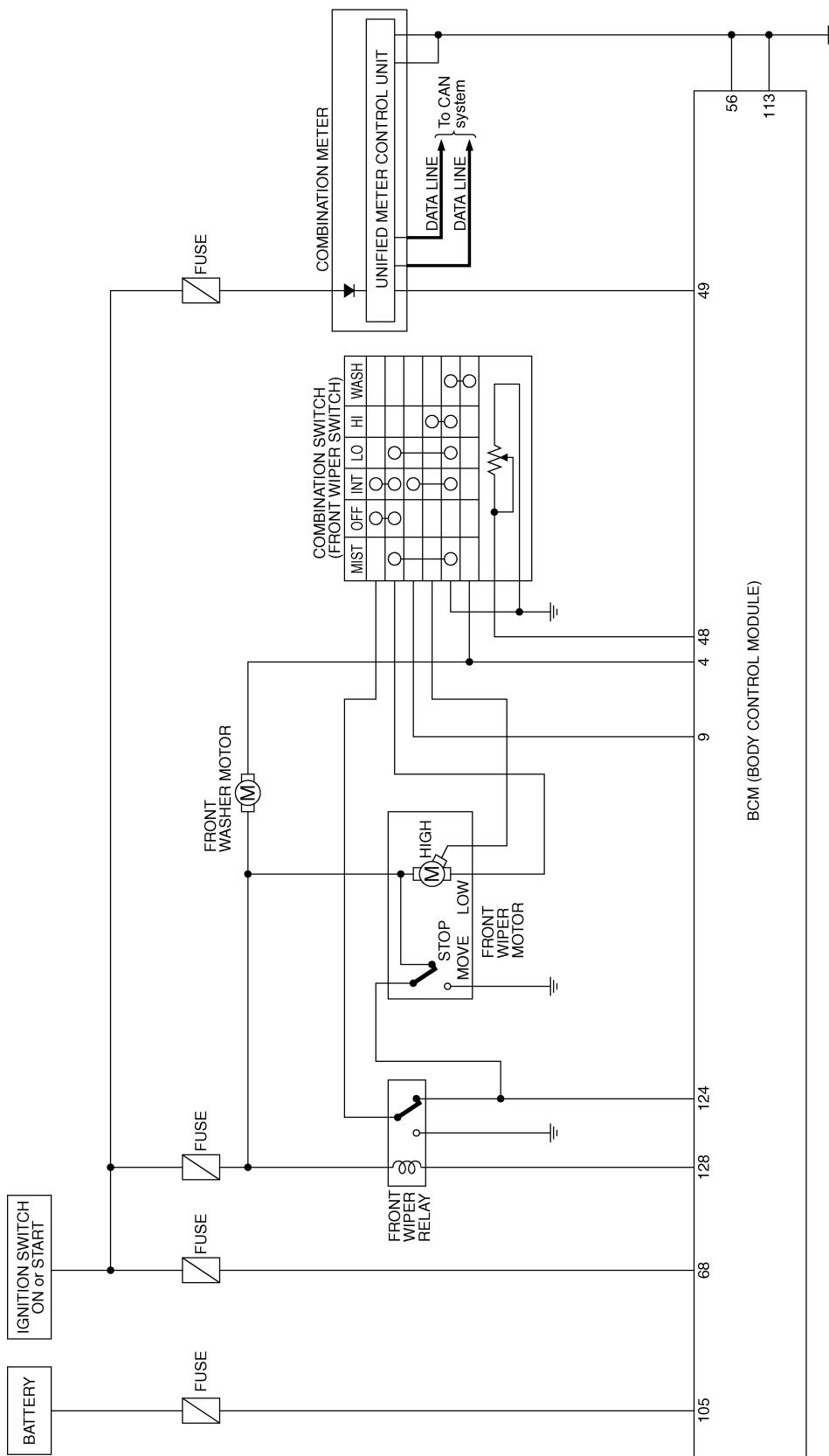
Component Parts and Harness Connector Location



FRONT WIPER AND WASHER SYSTEM

Schematic

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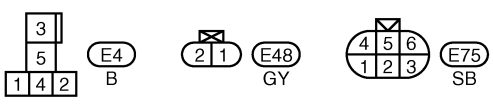
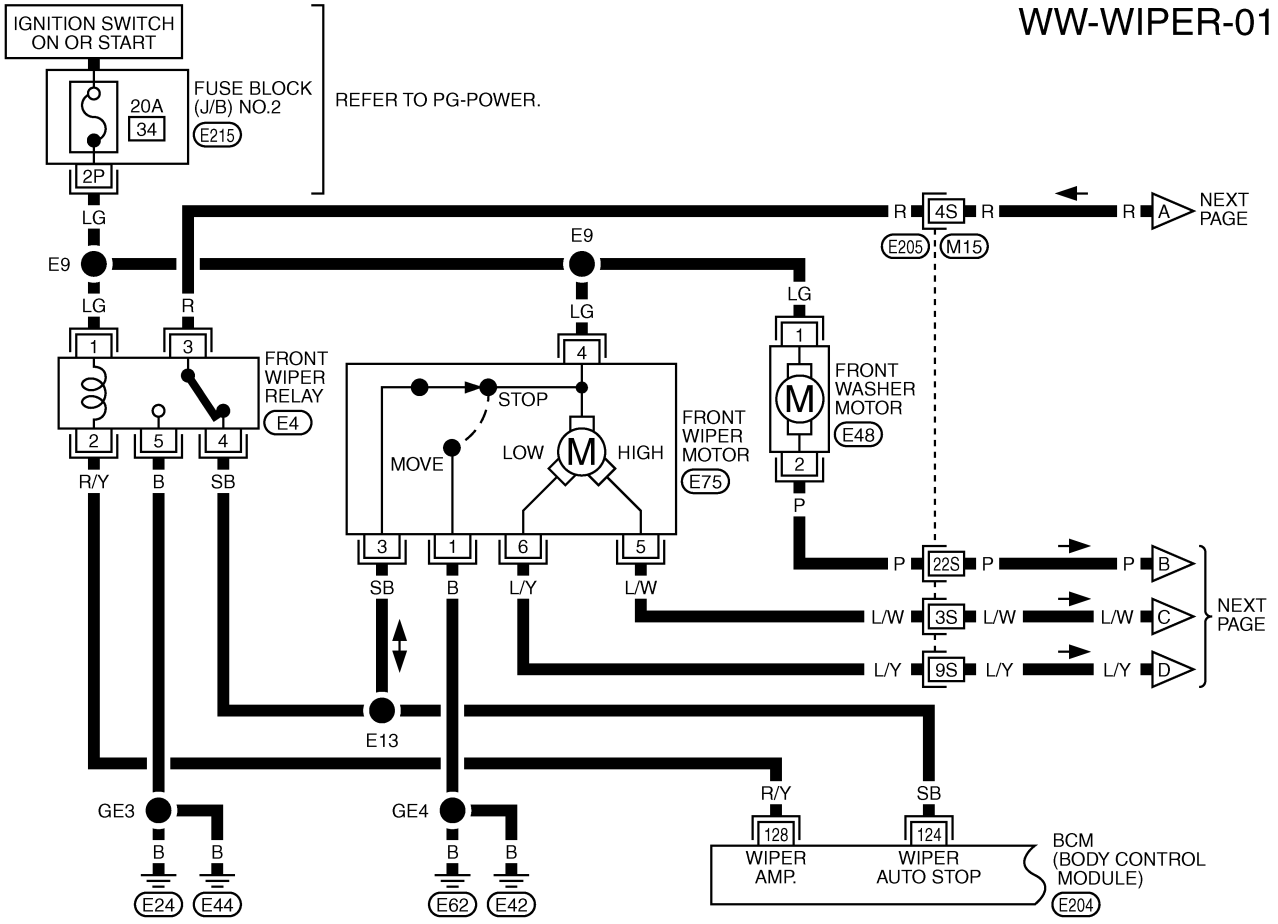
TKWM0105E

FRONT WIPER AND WASHER SYSTEM

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WW-WIPER-01

Wiring Diagram — WIPER —



REFER TO THE FOLLOWING.

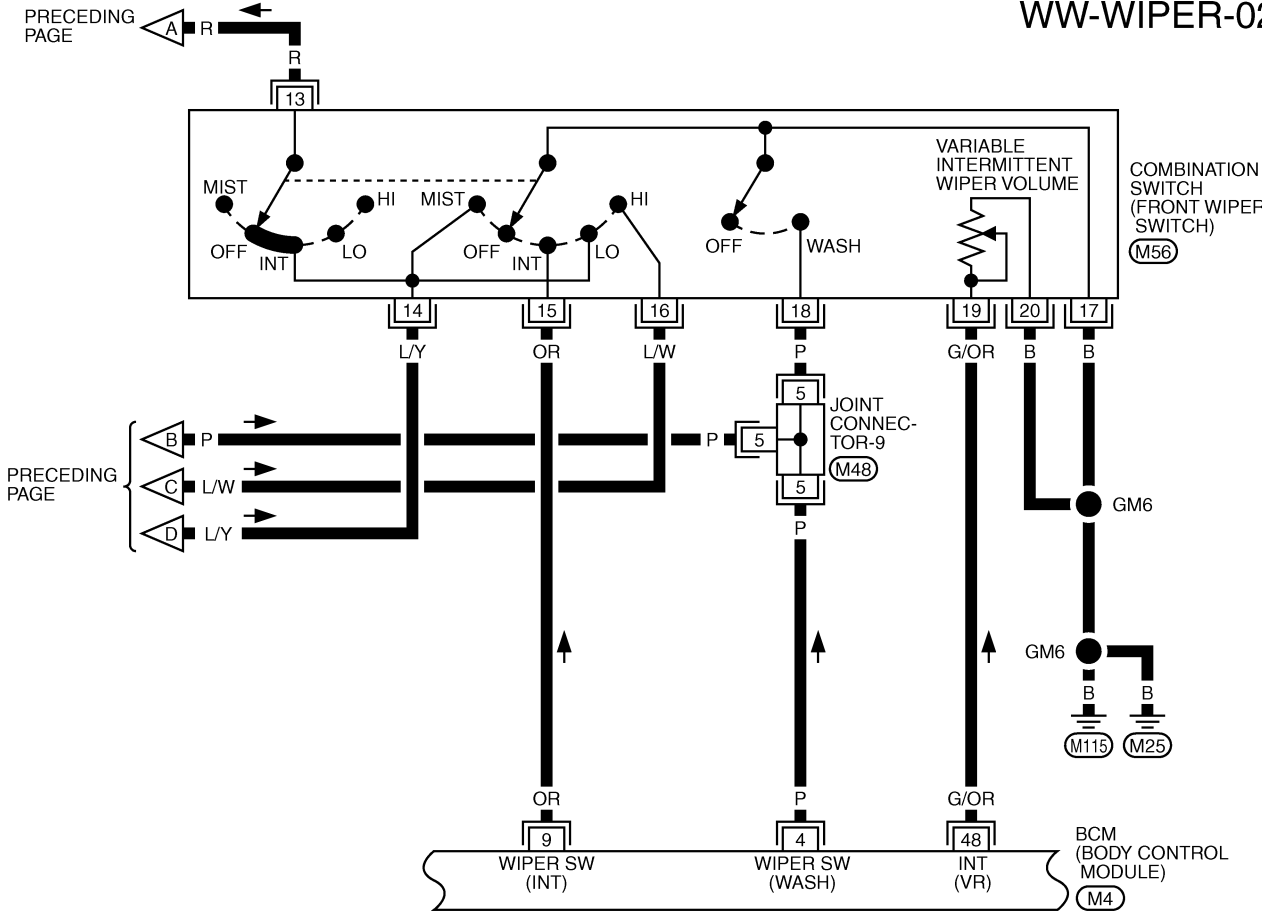
- (E205) -SUPER MULTIPLE JUNCTION (SMJ)
- (E215) -FUSE BLOCK-JUNCTION BOX (J/B) NO.2
- (E204) -ELECTRICAL UNITS

TKWM0106E

FRONT WIPER AND WASHER SYSTEM

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1	1	2	2	3	3	3
4	4	4	4	5	5	5

(M48) B

14		18			
20	19	16	17	13	15

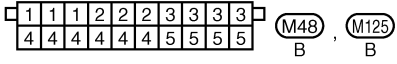
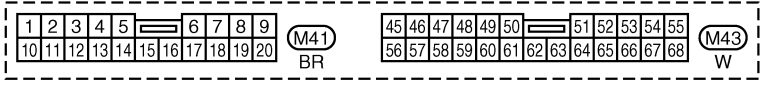
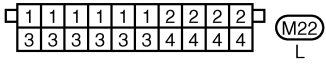
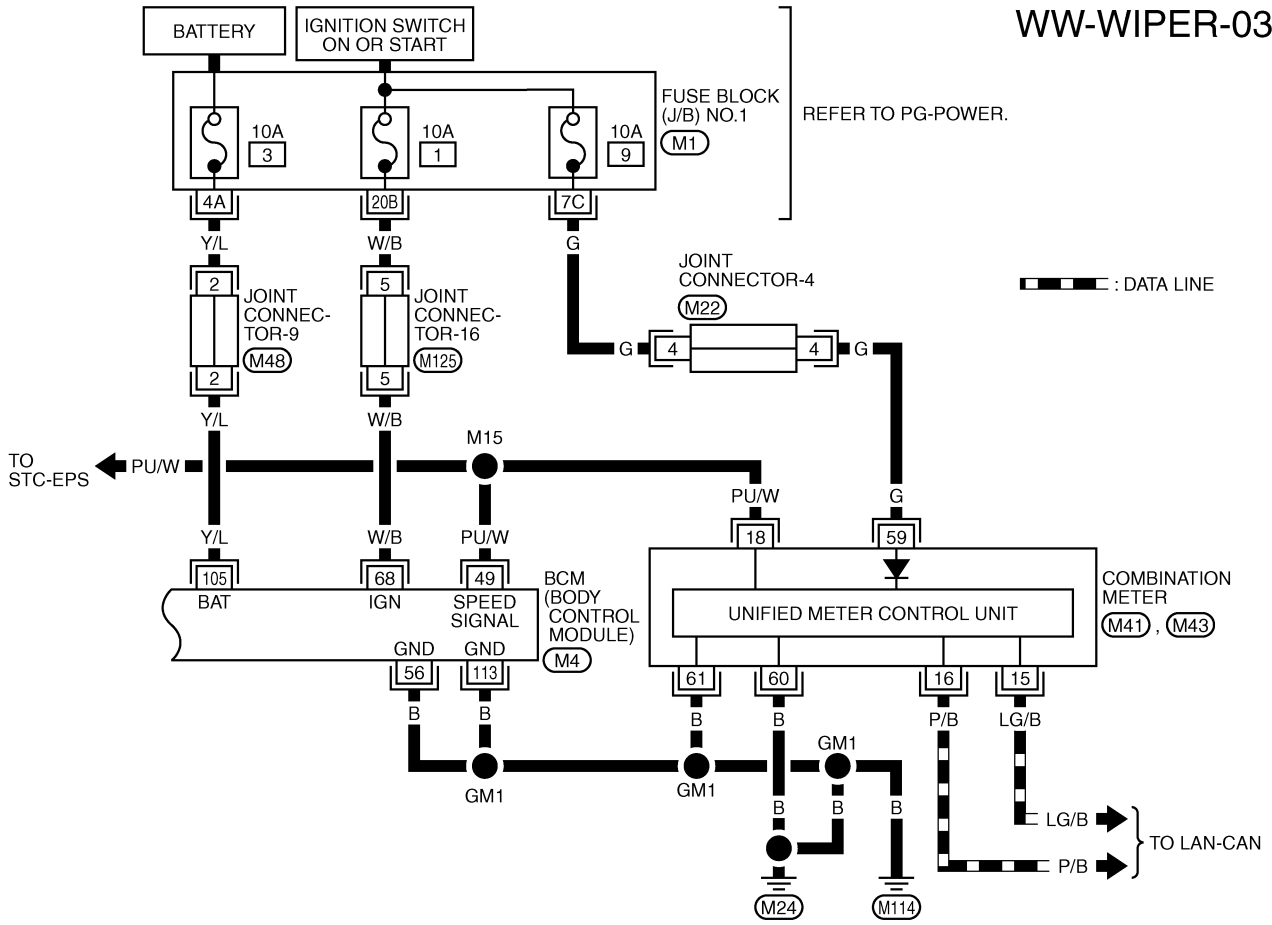
(M56) GY

REFER TO THE FOLLOWING.
(M4) -ELECTRICAL UNITS

WW

FRONT WIPER AND WASHER SYSTEM

WW-WIPER-03



REFER TO THE FOLLOWING.
 (M1) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1
 (M4) - ELECTRICAL UNITS

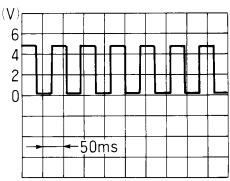
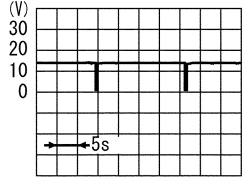
TKWM0108E

EKS0011W

Terminal and Reference Values for BCM

TER-MINAL	WIRE COLOR	ITEM	CONDITION		DATA(DC)	
			IGNITION SWITCH	CONDITION OR OPERATION		
4	P	Washer switch signal	ON	Wiper switch	WASH	Approx. 0
					OFF	Approx. 12
9	OR	Wiper switch INT signal	ON	Wiper switch	INT	Approx. 0
					OFF	Approx. 8
48	G/OR	Intermittent wiper volume signal	ON	Wiper intermittent interval	Long.	Approx. 3.6
					Short.	Approx. 0

FRONT WIPER AND WASHER SYSTEM

TER-MINAL	WIRE COLOR	ITEM	CONDITION		DATA(DC)
			IGNITION SWITCH	CONDITION OR OPERATION	
49	PU/W	Vehicle speed signal (2-pulse)	ON	Vehicle speed approx. 40 km/h	 ELF1080D
56	B	Ground	ON	-	Approx. 0
68	W/B	ignition on signal	ON	-	Approx. 12
105	Y/L	Battery Power supply	OFF	-	Approx. 12
113	B	Ground	ON	-	Approx. 0
124	SB	Wiper auto Stop signal	ON	Wiper is moving	Approx. 0
				Wiper while the vehicle is stopped	Approx. 12
128	R/Y	Wiper motor Operation signal	ON	Wiper switch: INT position	 SKIA0209J

Work Flow

EKS0011X

1. Confirm the trouble symptom or customer complaint.
2. Understand the system description, refer to [WW-3, "System Description"](#) .
3. Perform preliminary inspection, refer to [WW-9, "Preliminary Inspection"](#) .
4. According to the trouble diagnosis chart, repair or replace the cause of the malfunction.
5. Does wiper function operate normally? If it operates normally, GO TO 6. If not, GO TO 4.
6. End

Preliminary Inspection

SETTING CHANGE FUNCTIONS

EKS0011Y

- With CONSULT-II, each function can be changed in setting, refer to [WW-12, "WORK SUPPORT"](#) .

CAUTION:

After the setting was changed, the new setting will be maintained even if the battery was disconnected.

Setting change mode	CONSULT-II (WORK SUPPORT)	Description
Wiper intermittent speed control by vehicle speed	ON	Activated
	OFF	Disactivated

FRONT WIPER AND WASHER SYSTEM

INSPECTION FOR POWER SUPPLY AND GROUND CIRCUIT

Inspection procedure

1. CHECK FUSE

- Check wiper and washer fuse is blown.

Unit	Power source	Fuse No.
Front wiper motor, Front washer motor, Front wiper relay	Ignition ON or START	34

CAUTION:

For fuse number, refer to [WW-4, "Component Parts and Harness Connector Location"](#) .

OK or NG?

OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of problem before installing new fuse, refer to [PG-2, "POWER SUPPLY ROUTING"](#)

2. POWER SUPPLY CIRCUIT INSPECTION

1. Disconnect front wiper motor, front washer motor and Front wiper relay.
2. Check voltage between terminals listed in the chart below of connector and body ground.

Unit (Connector)	Terminals (wire color)		Ignition switch condition	Voltage
	(+)	(-)		
Front wiper motor (E75)	4 (LG)	Body ground	ON	Battery voltage
Front washer motor (E48)	1 (LG)			
Front wiper relay (E4)	1 (LG)			

OK or NG?

OK >> GO TO 3.

NG >> Replace harness of wiper and washer power supply circuit.

3. GROUND CIRCUIT INSPECTION (BCM)

Check for continuity between the following terminals on BCM connector and body ground.

Unit (Connector)	Terminals (wire color)		Ignition switch condition	Continuity
	(+)	(-)		
BCM (E204)	56 (B)	Body ground	OFF	Continuity should exist
	113 (B)			

OK or NG?

OK >> Inspection end

NG >> Replace the harness BCM ground circuit.

FRONT WIPER AND WASHER SYSTEM

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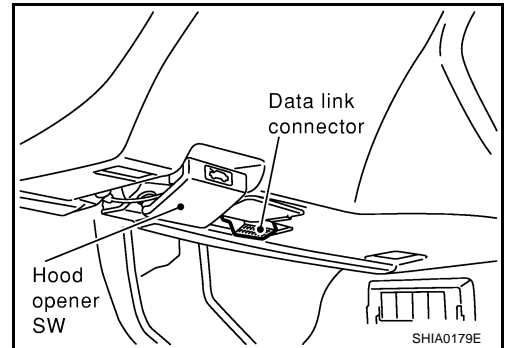
CONSULT-II Function

- CONSULT-II executes the following functions by combining data received and command transmitted via the communication line from the IVMS control unit. IVMS communication inspection, work support by part, self-diagnosis, data monitor, and active test display.

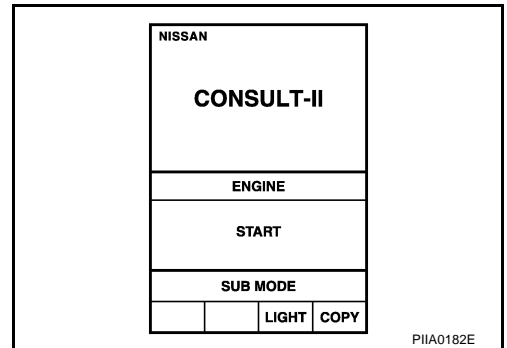
IVMS diagnosis position	Check item and diagnosis mode	Description
WIPER	WORK SUPPORT	Changes the setting for each function.
	DATA MONITOR	Displays data relative to BCM input signals and various control related data for each system.
	ACTIVE TEST	Turn on/off actuators, relay and according to the commands transmitted by the CONSULT-II.
BCM PART NUMBER.		Displays BCM part No.

CONSULT-II BASIC OPERATION

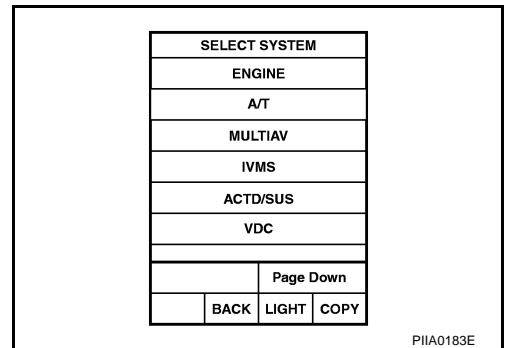
- With the ignition switch OFF, connect CONSULT-II to Data Link Connector, and turn the ignition switch ON.



- Touch "START".

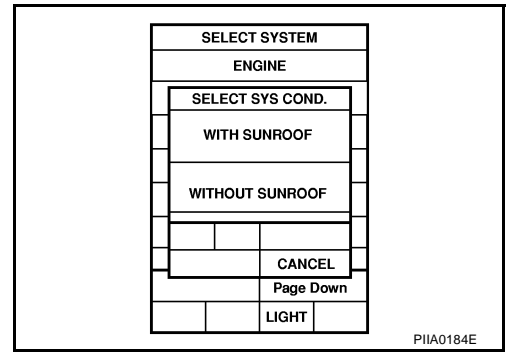


- Touch "IVMS".



FRONT WIPER AND WASHER SYSTEM

4. Check the model specification, and touch either "WITH SUNROOF" or "WITHOUT SUNROOF" on the "SELECT SYS COND" SCREEN.
5. Touch "OK". If the selection is wrong, touch "CANCEL".
6. Select the desired part to be diagnosed on the "SELECT TEST ITEM" screen.



WORK SUPPORT

Operation Procedure

1. Touch "WIPER" on the "SELECT TEST ITEM" screen.
2. Touch "WORK SUPPORT" on the "SELECT DIAG MODE" screen.
3. Touch "WIP INT VHCL SPD ADJ" on the "SELECT WORK ITEM" screen.
4. Touch "START".
 - Wiper intermittent speed control by vehicle speed can be canceled or resumed.
5. Touch "CURRENT SETTING" for changing "CURRENT SETTING". For no changing "CURRENT SETTING", touch "END".

"CURRENT SETTING"	Wiper intermittent speed control.
"ON"	Activated
"OFF"	Disactivated

6. Touch "END" after customizing is completed.

DATA MONITOR

Operation Procedure

1. Touch "WIPER" on the "SELECT TEST ITEM" screen
2. Touch "DATA MONITOR" on the "SELECT DIAG MODE" screen.
3. Touch either "ALL SIGNALS" or "SELECTION FROM MENU" on the "DATA MONITOR" screen.
4. Touch "START".

Date Monitor Item

Monitored item	Description
IGN ON SW	Indicates "IGN [ON] / ACC or OFF [OFF]" condition of ignition switch signal.
INT SW	Indicates " INT Position [ON] / Others [OFF]" condition of wiper switch signal.
WASH SW	Indicates "WASH Position [ON] / Others [OFF]" condition of wiper switch signal.
VHCL SPEED SE	Indicates "Vehicle is moving [RUN] / Vehicle Stopped [STOP]" condition of vehicle speed signal.
WIPR AUTO STP	Indicates "INT or OFF Position [IGN] / LO or HI Position [OFF]" condition of wiper switch signal.
INTRESIST	Indicates " Intermittent Resistance Value [approx. 0 to 1]" condition wiper switch signal.

ACTIVE TEST

Operation Procedure

1. Touch "WIPER" on the "SELECT TEST ITEM" screen.
2. Touch "ACTIVE TEST" on the "SELECT DIAG MODE" screen.
3. Touch the item to be tested, and check the operation.

Test item "WIPER AMP"	Wiper motor operation
"ON"	Operate
"OFF"	Stop

4. During the operation check, touching "OFF" deactivates the operation.

FRONT WIPER AND WASHER SYSTEM

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On Board Diagnosis

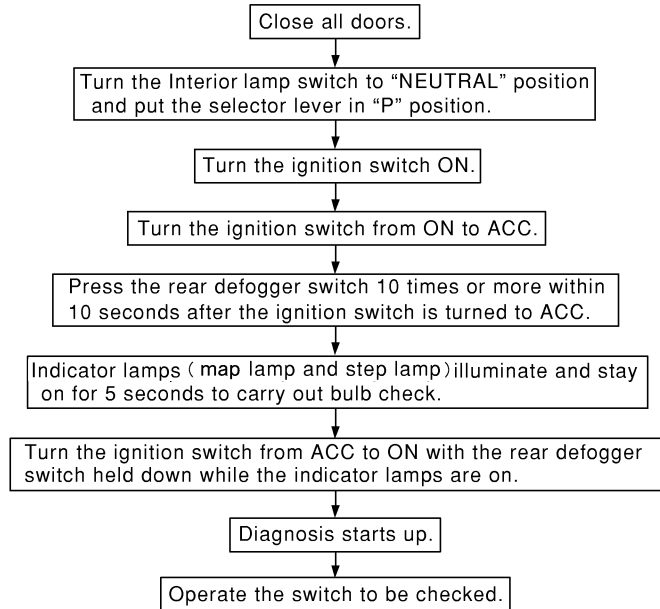
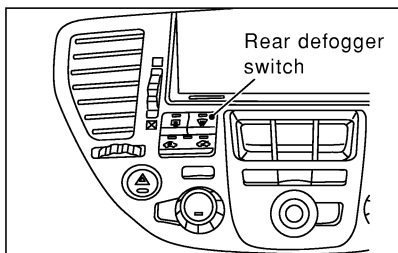
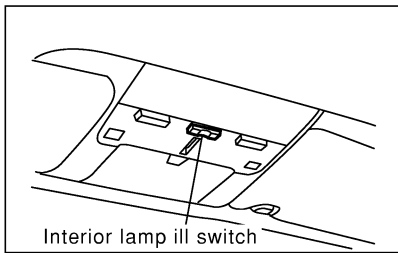
- IVMS can check communication diagnosis, switch monitor, and central locking system self diagnosis using On board diagnosis.
- Front map lamps and step lamps (all seats) act as the indicators for the on board diagnosis.

DIAGNOSIS ITEM FOR FRONT WIPER AND WASHER SYSTEM

Diagnosis item	Description
Switch monitor	It can checks wiper and washer switch.

SWITCH MONITOR

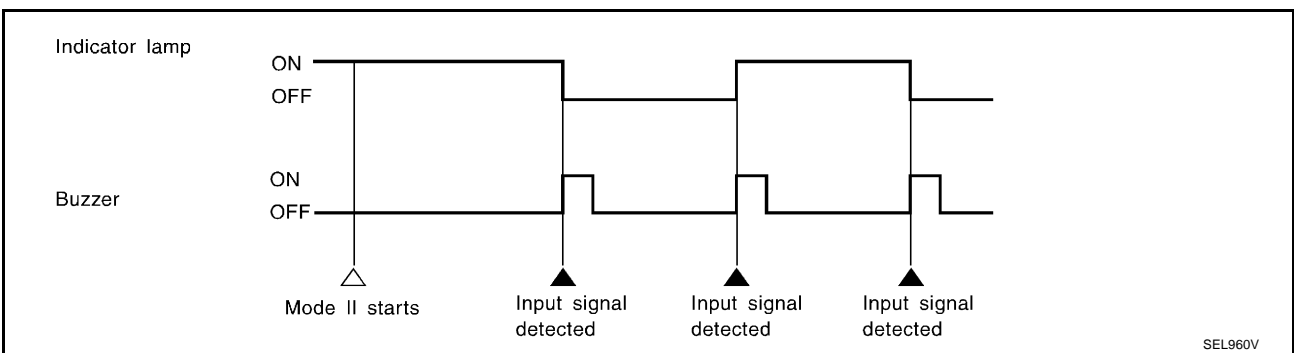
How to Perform Switch Monitor



S1IA0411E

Diagnosis Result Display

- Detects the status change (switch ON/OFF operation) of the switch to be checked, and turns on/off the indicator lamps (the map lamp and step lamp). Also sounds the buzzer for 0.5 seconds.
- If a malfunction is detected, no indicator lamp and buzzer react.



SEL960V

Cancel of Switch Monitor

- The ignition switch is turned OFF.
- Drive the vehicle at more than 7 km/h(4MPH).

FRONT WIPER AND WASHER SYSTEM

EKS001J1

Intermittent wiper does not operate

1. CHECK INTERMITTENT WIPER SWITCH INPUT SIGNAL.

CONSULT-II

See "INT SW" in DATA MONITOR mode.

When wiper switch is in INT position:

INT SW : ON

When wiper switch is in OFF position:

INT SW :OFF

NOTE:

When "Data monitor" is operating, intermittent wiper do not operate.

ON BOARD

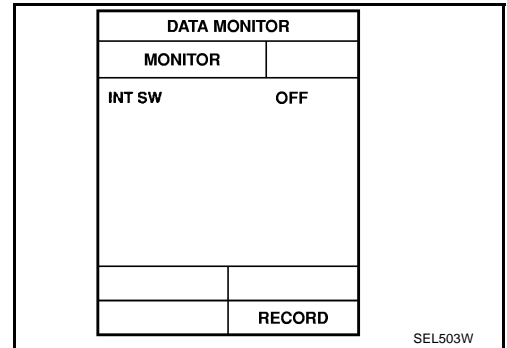
Check wiper switch (INT) in Switch monitor mode, refer to [WW-13](#), "[SWITCH MONITOR](#)".

OK or NG?

OK >> GO TO 2

NG >> Check the following

- Front wiper switch.
- Harness for open or short between BCM and wiper switch.
- Front wiper switch ground circuit.



2. CHECK WIPER AUTO STOP SIGNAL.

CONSULT-II

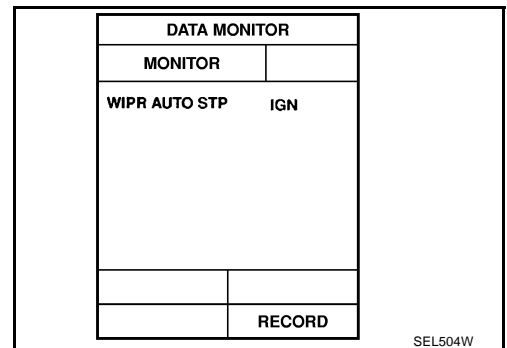
See "WIPR AUTO STOP" in DATA MONITOR mode, and turn wiper switch to LO or HI position.

When wiper switch is in INT or OFF position:

WIPR AUTO STOP :IGN

When wiper switch is in LO or HI:

WIPR AUTO STOP :GND



TESTER

1. Turn ignition switch to ON.
2. Turn wiper switch to LO or HI position.
3. Check voltage between BCM connector E204 terminal 124(SB) and ground.

Wiper is moving : 0V

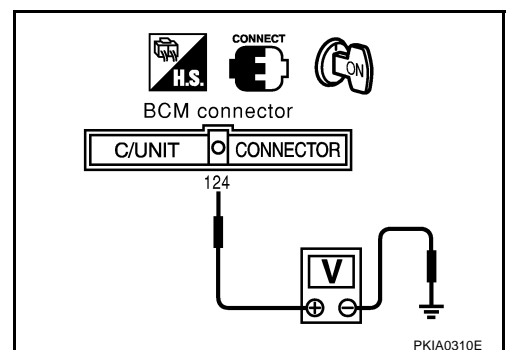
Wiper is stopped : Approx. 12V

OK or NG?

OK >> GO TO 3

NG >> Check the following

- Wiper motor.
- Wiper ground circuit.
- Harness for open or short between BCM and wiper motor.



FRONT WIPER AND WASHER SYSTEM

3. CHECK IGNITION SWITCH ON SIGNAL.



CONSULT-II

See "IGN ON SW" in DATA MONITOR mode.

When ignition switch is ON:

IGN ON SW : ON

When ignition switch is OFF:

IGN ON SW :OFF

DATA MONITOR	
MONITOR	
IGN ON SW	ON
RECORD	

PKIA0311E



TESTER

Check voltage between BCM connector E204 terminal 68(W/B) and ground.

Ignition switch is ON : Approx. 12V

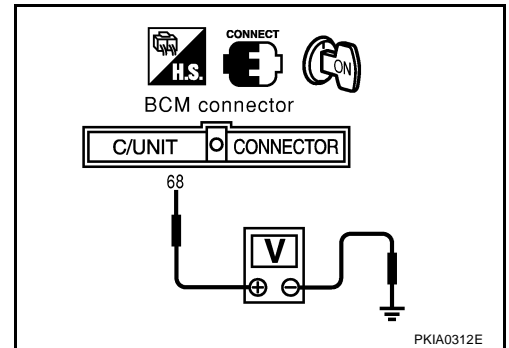
Ignition switch is OFF : 0V

OK or NG?

OK >> GO TO 4

NG >> Check the following

- 10A fuse [No. 1, located in the fuse block (J/B)NO.1].
- Harness for open or short between fuse and BCM.



4. CHECK WIPER OPERATION.



CONSULT-II

See "WIPER AMP" in ACTIVE TEST mode. Perform operation shown on display.

Wiper motor should operate.

NOTE:

If CONSULT-II is not available, skip this procedure and go to [WW-17](#), "Wiper and washer activate individually but intermittent wiper and washer combination does not operate."

OK or NG?

OK >> Replace BCM.

NG >> GO TO [WW-17](#), "Wiper and washer activate individually but intermittent wiper and washer combination does not operate."

ACTIVE TEST	
WIPER AMP	OFF
ON	

SEL494W

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FRONT WIPER AND WASHER SYSTEM

Intermittent time of wiper cannot be adjusted

EKS001J2

1. CHECK INTERMITTENT WIPER VOLUME INPUT SIGNAL.

CONSULT-II

See "INT RESIST" in DATA MONITOR mode while turning intermittent wiper volume.

Short interval : Approx. 0Ω

Long interval : Approx. 1Ω

DATA MONITOR	
MONITOR	
INT RESIST	XXX kohm
RECORD	

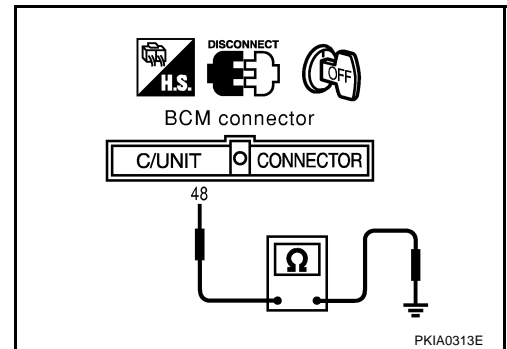
SEL506W

TESTER

Measure resistance between BCM connector E204 terminal 48(G/OR) and ground while turning intermittent wiper volume.

Short interval : Approx. 0Ω

Long interval : Approx. 1Ω



OK or NG?

- OK >> Replace BCM.
- NG >> GO TO 2

2. CHECK FRONT WIPER SWITCH.

Check front wiper switch, refer to [WW-21, "Wiper and Washer Switch Circuit Check"](#).

OK or NG

- OK >> Check the following
 - Harness for open or short between BCM and intermittent wiper volume.
 - Intermittent wiper volume ground circuit.
- NG >> Replace front wiper switch.

Wiper and washer activate individually but not in combination

EKS001J3

1. CHECK WASHER SWITCH INPUT SIGNAL.

CONSULT-II

See "WASH SW" in DATA MONITOR mode.

When washer switch is ON:

WASH SW : ON

When washer switch is OFF:

WASH SW :OFF

ON BOARD

Check wiper switch (WASH) in Switch monitor mode, refer to [WW-13, "SWITCH MONITOR"](#)

OK or NG?

- OK >> Replace BCM.
- NG >> Check the following
 - Harness for open or short between BCM and wiper switch.

DATA MONITOR	
MONITOR	
WASH SW	OFF
RECORD	

SEL507W

FRONT WIPER AND WASHER SYSTEM

Intermittent wiper operates, but there is no change in intermittent time between when vehicle is stopped and moving.

EKS001J4

A

1. CHECK SPEEDOMETER OPERATE

Does speedometer operate normally?

YES or NO?

YES >> GO TO 2

NO >> Check vehicle speed sensor circuit.

B

C

2. CHECK VEHICLE SPEED SENSOR PULL UP VOLTAGE.

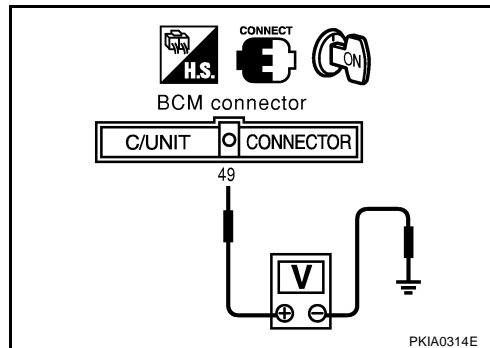
1. Turn ignition switch to ON.
2. Check voltage between BCM connector E204 terminal 49(PU/W) and ground.

Approx. 5V should exist.

OK or NG?

OK >> Replace BCM.

NG >> Check harness for open or short between BCM terminal 49(PU/W) and combination meter connector M41 terminal 18(PU/W).



D

E

F

G

Wiper and washer activate individually but intermittent wiper and washer combination does not operate.

EKS001J5

H

1. CHECK POWER SUPPLY CIRCUIT FOR FRONT WIPER RELAY.

1. Disconnect front wiper relay.
2. Turn wiper switch to OFF or INT position.
3. Turn ignition switch to ON position.
4. Check voltage between front wiper relay connector E4 terminal 1 (LG) or 3 (R) and ground.

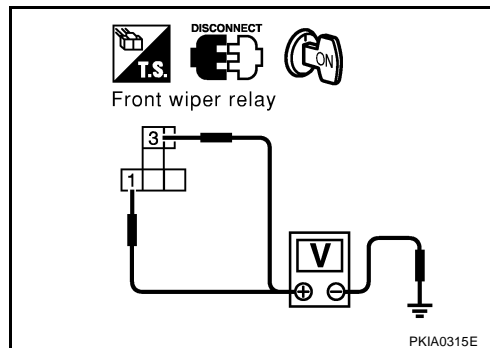
Battery voltage should exist.

OK or NG?

OK >> GO TO 2

NG >> Check the following

- 20A fuse [No. 34, located in the fuse block (J/B) NO.1
- Harness for open or short.



WW

L

M

2. CHECK GROUND CIRCUIT FOR FRONT WIPER RELAY.

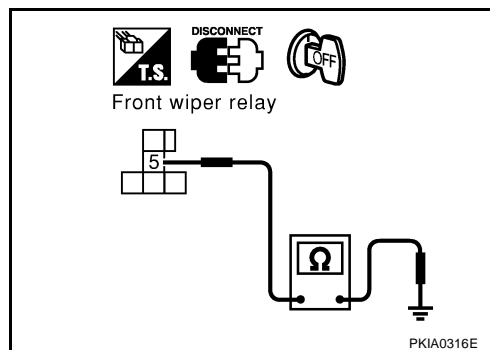
Check continuity between front wiper relay connector E4 terminal 5(B) and ground.

Continuity should exist.

OK or NG?

OK >> GO TO 3

NG >> Repair harness



FRONT WIPER AND WASHER SYSTEM

3. CHECK FRONT WIPER RELAY.

Check front wiper relay.

OK or NG?

- OK >> GO TO 4
- NG >> Replace relay.

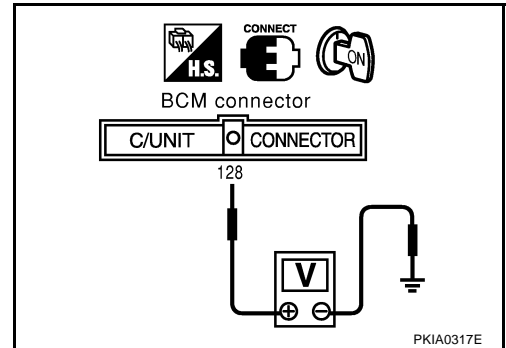
4. CHECK BCM OUTPUT SIGNAL.

1. Connect front wiper relay.
2. Turn ignition switch to ON.
3. Check voltage between BCM connector E204 terminal 128(R/Y) and ground.

Wash : 0(for 0.7 sec.)V
OFF : Approx. 12V

OK or NG?

- OK >> Check harness for open or short between front wiper relay and BCM.
- NG >> Replace BCM.



Removal and Installation for Front Wiper Arms, Adjustment for Wiper Arms Stop Location

EKS001J6

1. Prior to wiper arm installation, turn on wiper switch to operate wiper motor and then turn it "OFF" (Auto Stop).
2. Lift the blade up and then set it down onto glass surface to set the blade center to clearance "L1" & "L2" immediately before tightening nut.
3. Eject washer fluid. Turn on wiper switch to operate wiper motor and then turn it "OFF".
4. Ensure that wiper blades stop within clearance "L1" & "L2".

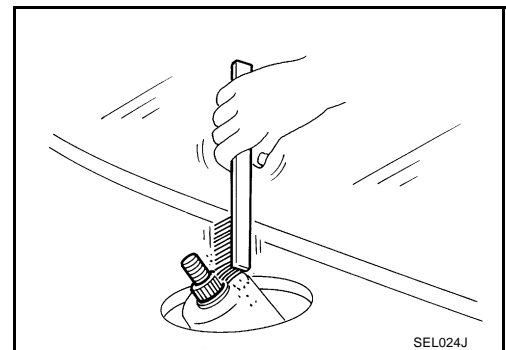
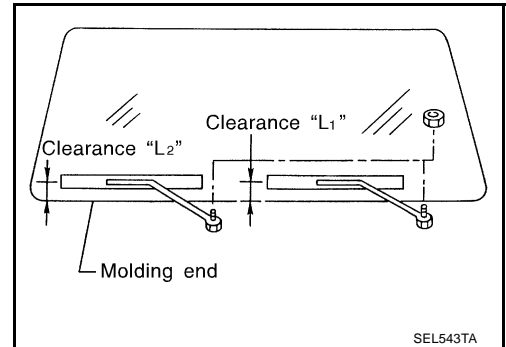
Clearance "L1": 24.5 - 39.5 mm (0.965 - 1.555 in)

Clearance "L2": 32.5 - 47.5 mm (1.280 - 1.870 in)

- Tighten wiper arm nuts to specified torque.

Front wiper: 20.6 - 26.5 N-m (2.1 - 2.7 kg-m, 16 - 19 ft-lb)

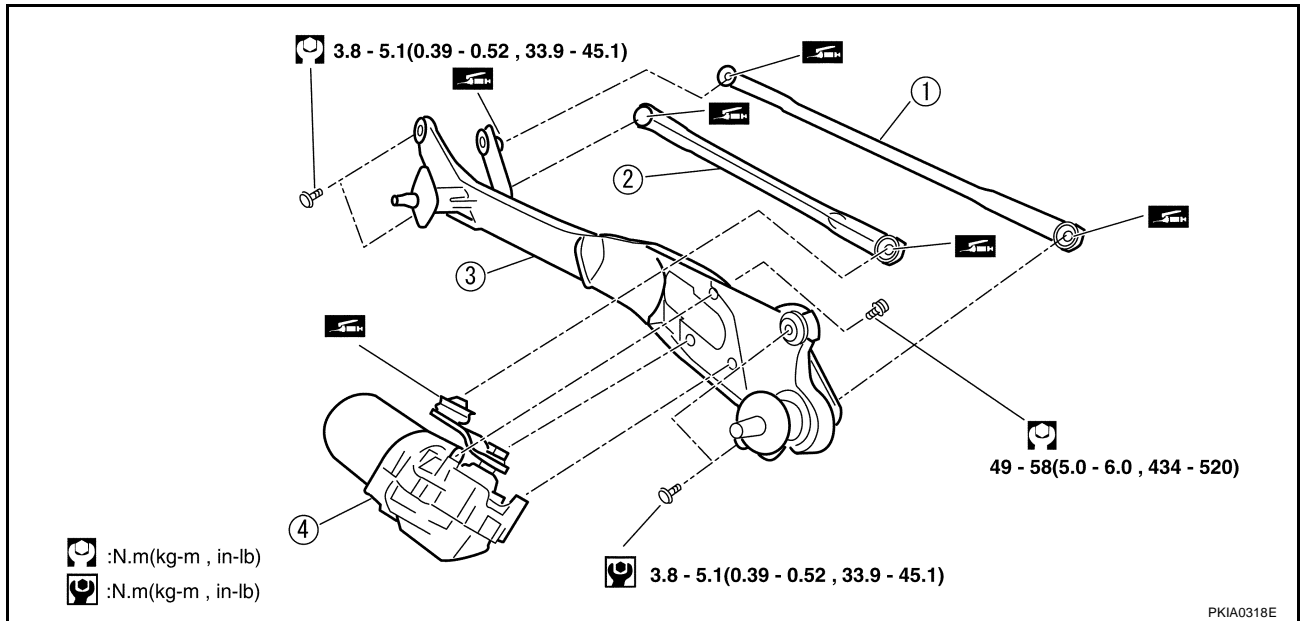
- Before reinstalling wiper arm, clean up the pivot area as illustrated. This will reduce possibility of wiper arm looseness.



FRONT WIPER AND WASHER SYSTEM

Removal and Installation for Wiper Motor and Linkage

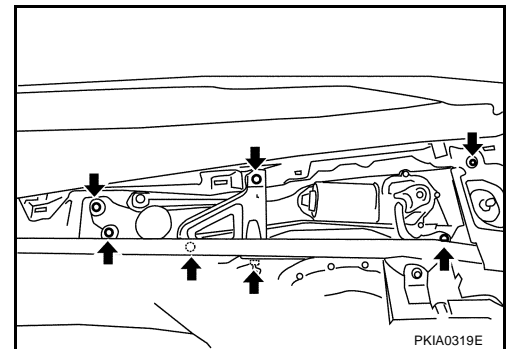
EKS001J7



1. Wiper link
2. Wiper link
3. Wiper frame
4. Wiper motor

REMOVAL

1. Operate the wiper motor, and stop it at the auto stop position.
2. Remove wiper arm from the vehicle.
3. Remove the cowl top cover, refer to [EI-21, "COWL TOP"](#).
4. Disconnect wiper motor connector.
5. Remove bracket and wiper motor assembly.



6. Remove wiper link from wiper frame.
7. Remove wiper motor from the wiper frame.

INSTALLATION

1. Connect wiper motor to connector. Turn the wiper switch ON to operate wiper motor, then turn the wiper switch OFF (auto stop).
2. Disconnect wiper motor connector.
3. Install wiper motor to the wiper frame.
4. Install wiper link to the wiper frame and motor arm.
5. Install wiper motor assembly to the vehicle.
6. Connect wiper motor connector. Turn the wiper switch ON to operate the wiper motor, then turn wiper switch OFF (auto stop)
7. Install bracket to the vehicle.
8. Install cowl top cover, refer to [EI-21, "COWL TOP"](#).
9. Install wiper arm.

FRONT WIPER AND WASHER SYSTEM

CAUTION:

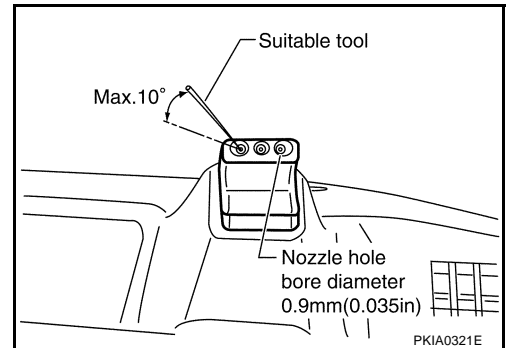
- Do not drop the wiper motor or cause it to contact other parts.
- Check the grease conditions of the motor arm and wiper link joint (at retainer). Apply grease if necessary.

Washer Nozzle Adjustment

EKS001J8

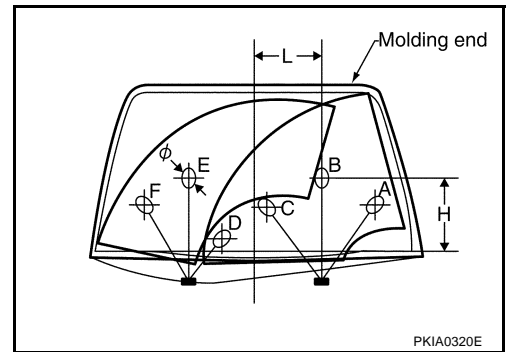
- Adjust washer nozzle with suitable tool as shown in the figure at left.

Adjustable range: $\pm 10^\circ$



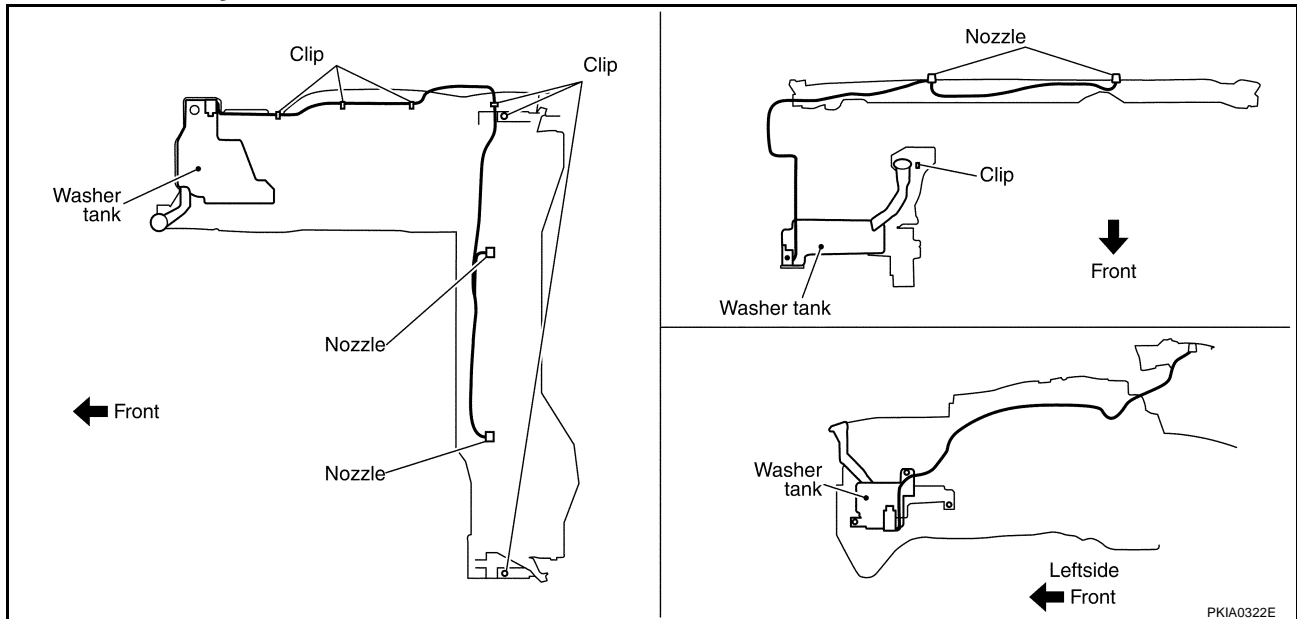
Unit:mm (in)

Spray position	H (height)	L (length)	ϕ (spray point area)
A	202(7.95)	548(21.57)	80(3.15)
B	313(12.32)	301(11.85)	80(3.15)
C	260(10.24)	27(1.06)	80(3.15)
D	172(6.77)	146(5.75)	80(3.15)
E	339(13.35)	302(11.89)	80(3.15)
F	181(7.13)	500(19.69)	80(3.15)



Washer Tube Layout

EKS001J9



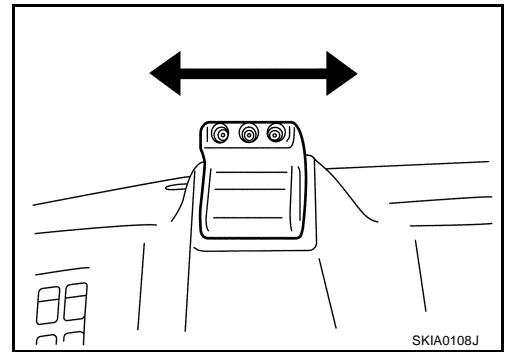
FRONT WIPER AND WASHER SYSTEM

Removal and Installation for Washer Nozzle

EKS001JA

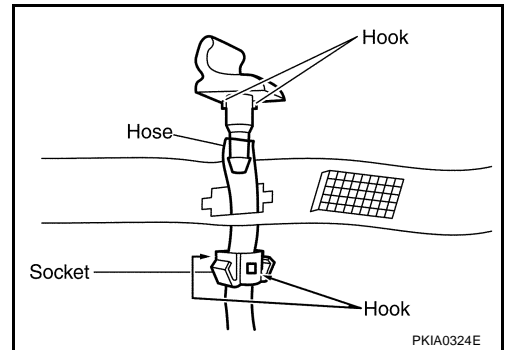
REMOVAL

1. Push washer nozzle firmly toward either left or right to pull out.
2. Remove washer hose from washer nozzle.



INSTALLATION

1. After connecting washer hose, press nozzle from cowl top cover surface.
2. Assemble nozzle and socket.
3. Adjust nozzle injection position.

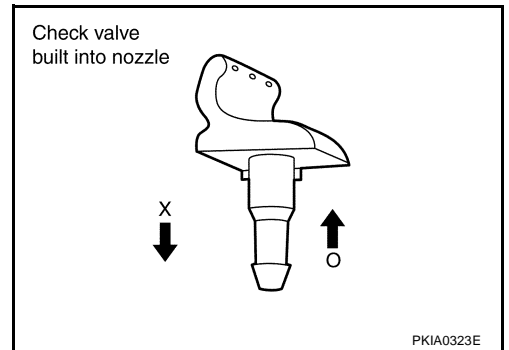


Inspection for Washer Nozzle

CHECK VALVE

- Blow air in the injection direction, and check that air flows only one way. Make sure that the reverse direction (inhale) is not possible.

EKS001JB



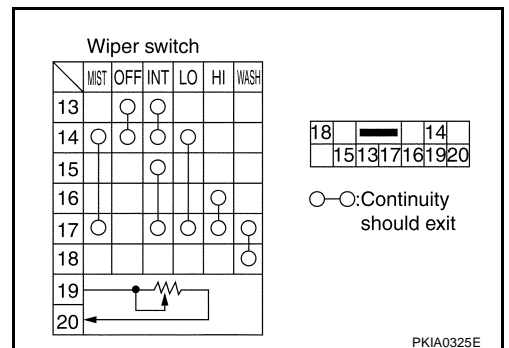
Wiper and Washer Switch Circuit Check

INSPECTION OF SWITCH CIRCUIT

Check continuity between each terminal when wiper washer switch is operating using a circuit tester.

EKS001JC

Operation interval (intermittent wiper with vehicle speed detection function)	Resistance value (kΩ)
1, interval (Max.)	0.964
2,	0.659
3,	0.325
4, interval (Min.)	0.008



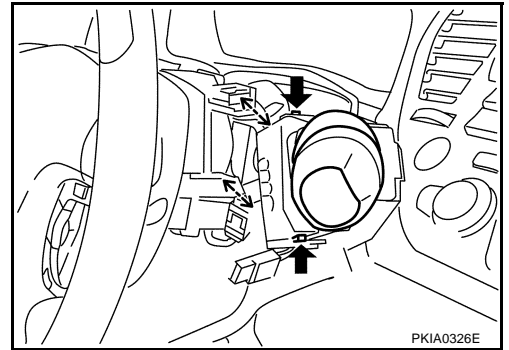
FRONT WIPER AND WASHER SYSTEM

Removal and Installation for Wiper and Washer Switch

EKS001JD

REMOVAL

1. Remove steering column cover.
2. Remove wiper washer switch connector.
3. Remove two screws then remove wiper washer switch from the base.



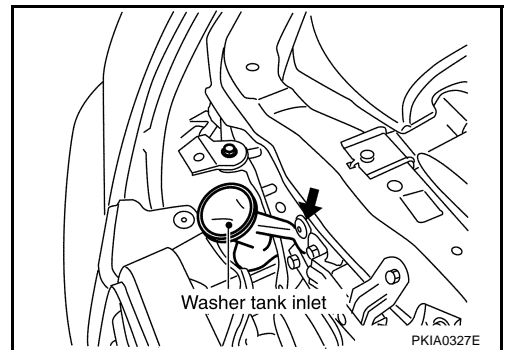
INSTALLATION

Installation is in the reverse order of removal.

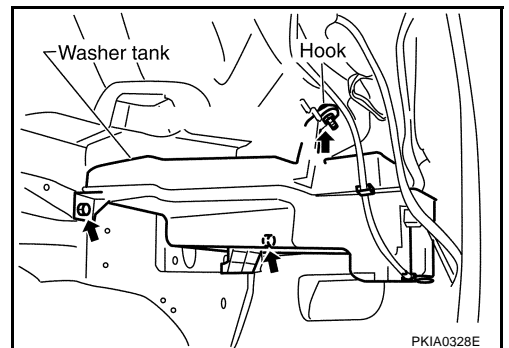
Removal and Installation for Washer Tank

EKS001JE

1. Pull out washer tank inlet.



2. Remove fender protector, refer to [EI-22, "FENDER PROTECTOR"](#).
3. Remove washer pump connector.
4. Remove washer tank installation screw and pawl.
5. Remove washer hose, and remove the washer tank from the vehicle.



CAUTION:

After installation, add water up to the upper level of the washer tank inlet, and check for water leaks.

Washer tank installation screw

Tightening torque: 3.9 - 5.0 N-m (0.39 - 0.52 kg-m)

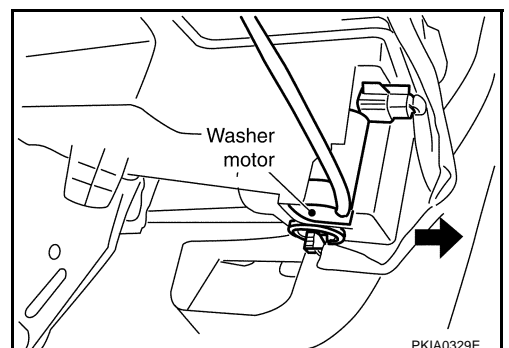
Removal and Installation for Washer Pump

EKS001JF

1. Remove fender protector, refer to [EI-22, "FENDER PROTECTOR"](#).
2. Remove washer pump connector and hose.
3. Pull out washer pump in the direction of the arrow in the figure, and remove the washer pump from the washer tank.

CAUTION:

When installing washer pump, there should be no packing twists, etc.



CIGARETTE LIGHTER

PFP:35330

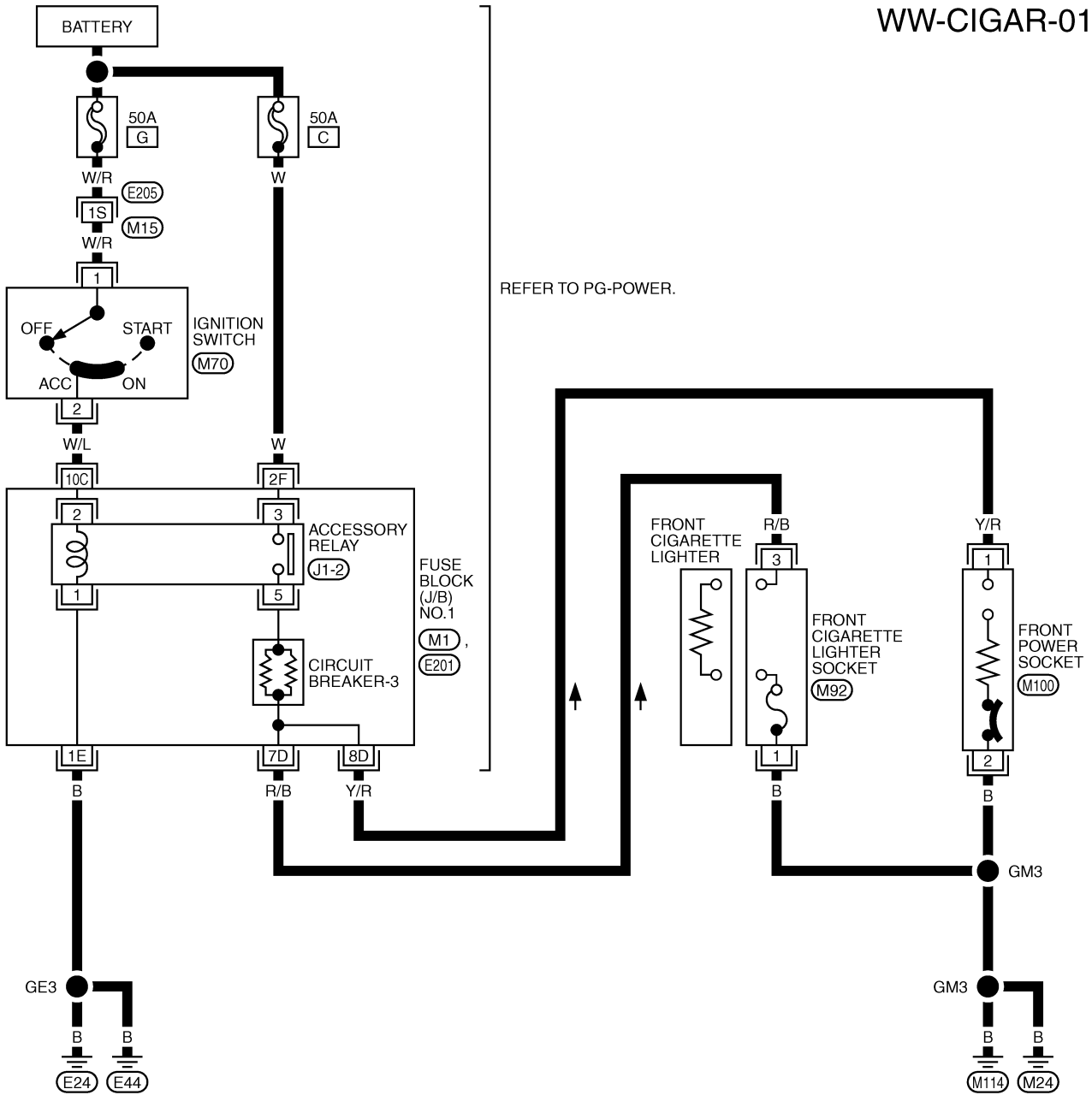
A
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M

WW-CIGAR-01

EKS001JG

CIGARETTE LIGHTER

Wiring Diagram — CIGAR —



WW



REFER TO THE FOLLOWING.
 (E205) -SUPER MULTIPLE JUNCTION (SMJ)
 (M1) , (E201) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

*: THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT", PG SECTION.

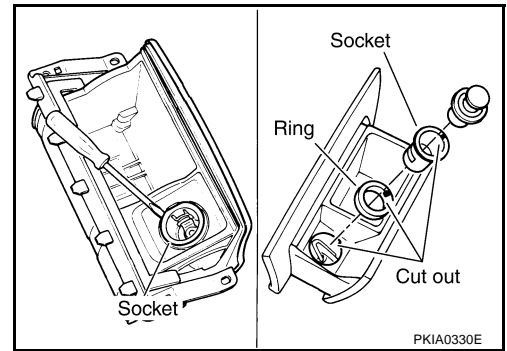
TKWM0110E

CIGARETTE LIGHTER

Removal and Installation

1. Remove the A/T finisher, refer to [IP-14, "A/T FINISHER"](#) .
2. Pull out the cigarette lighter.
3. Remove socket.
4. Press out ring from the back of ashtray.

EKS001JH



POWER SOCKET

PFP:253A2

POWER SOCKET

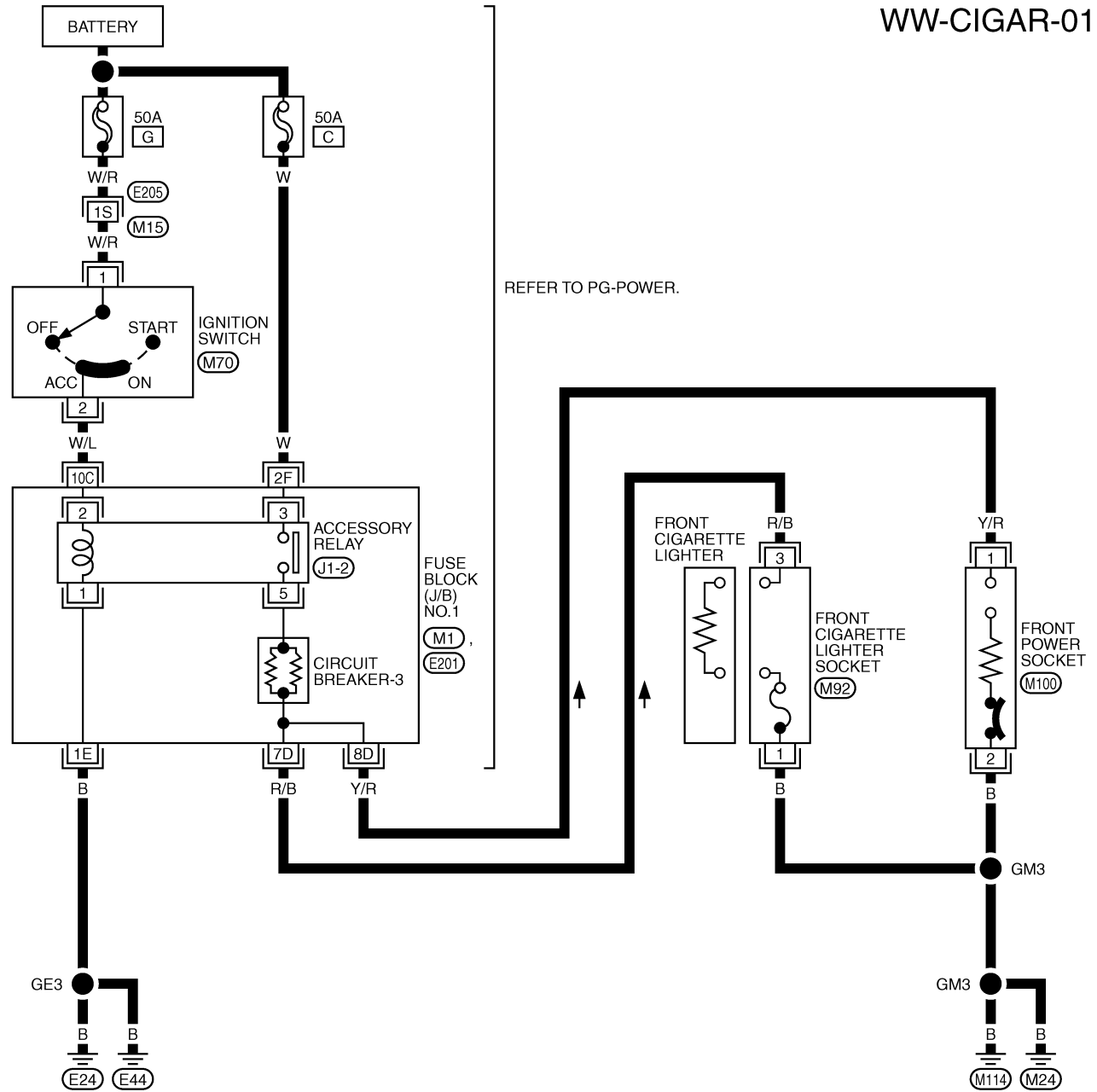
Wiring Diagram — CIGAR —

EKS001JI

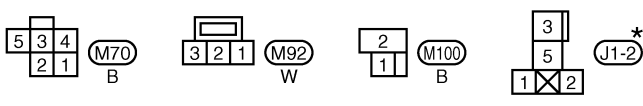
WW-CIGAR-01

A
B
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WW



REFER TO PG-POWER.



REFER TO THE FOLLOWING.
 (E205) -SUPER MULTIPLE JUNCTION (SMJ)
 (M1), (E201) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

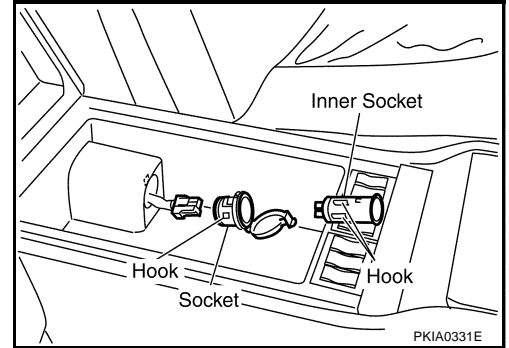
TKWM0110E

POWER SOCKET

Removal and Installation

EKS00145

1. Remove the console finisher, refer to [IP-14, "CONSOLE BOX ASSEMBLY"](#).
2. Disconnect power socket connector.
3. Remove inner socket and socket from the console finisher while pressing hook on inner socket.
4. Remove socket from inner socket while pressing hook.



HORN

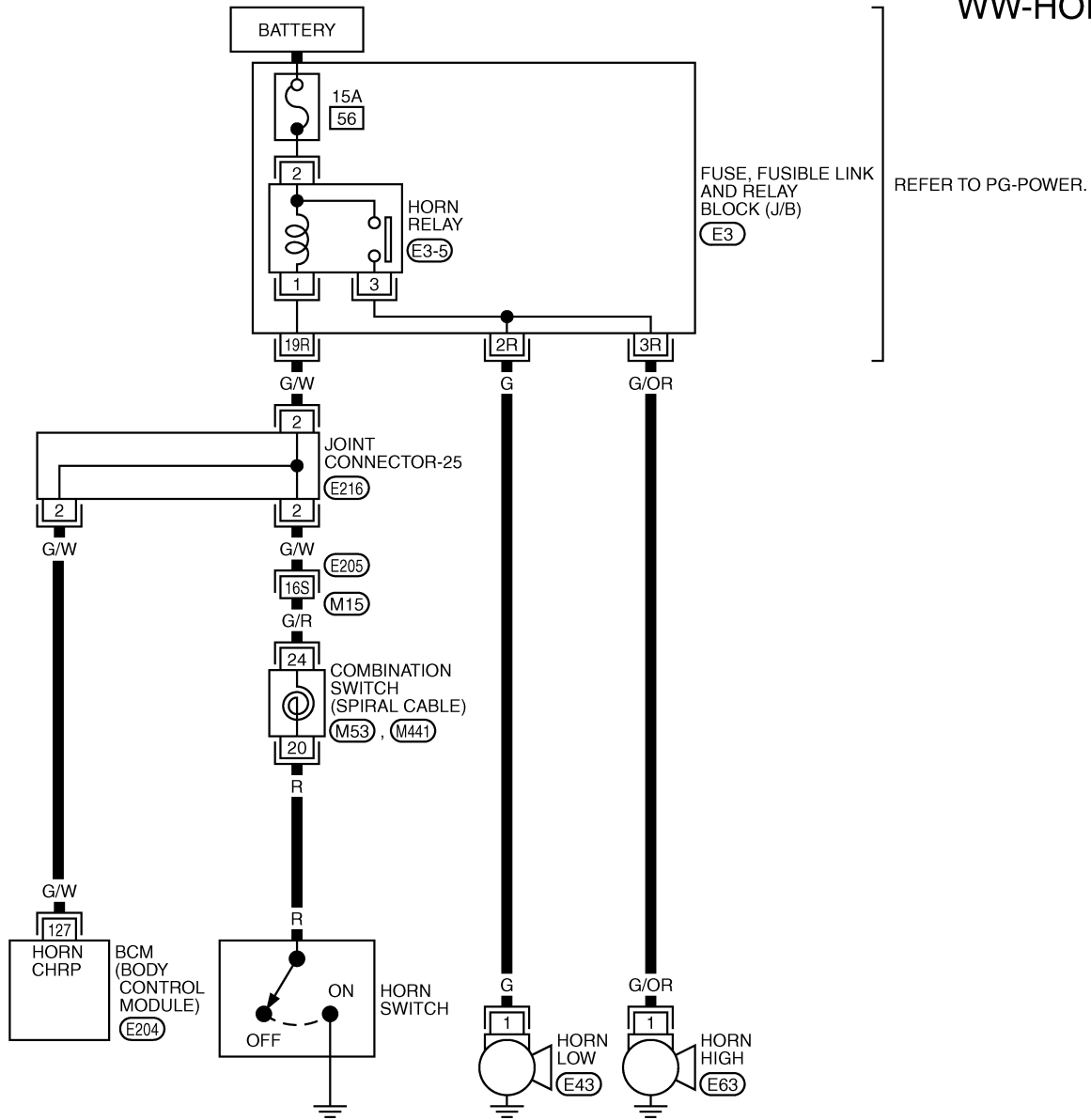
PPF:25610

HORN

Wiring Diagram — HORN —

EKS001JK

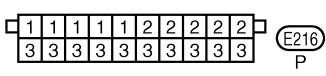
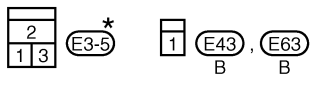
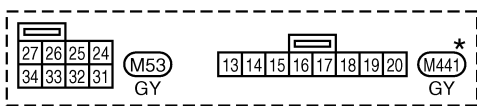
WW-HORN-01



REFER TO PG-POWER.

A
B
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L
M

WW



- REFER TO THE FOLLOWING.
- (E205) -SUPER MULTIPLE JUNCTION (SMJ)
 - (E3) -FUSE,FUSIBLE LINK AND RELAY BLOCK (J/B)
 - (E204) -ELECTRICAL UNITS

*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWM0109E

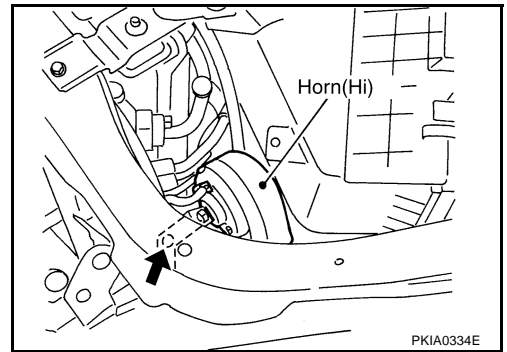
HORN

EKS001JL

Removal and installation

REMOVAL (HORN HI)

1. Remove the mass air flow sensor cover, refer to [EM-11, "ENGINE ROOM COVER"](#).
2. Disconnect horn connector.
3. Remove horn.



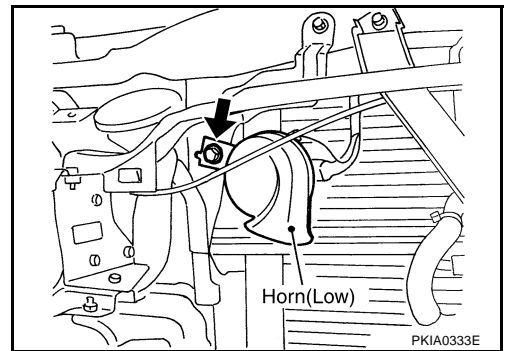
INSTALLATION (HORN HI)

Tighten horn bolt to specified torque.

Horn bolt : 16 – 18 N·m(1.6 – 1.8kg·m, 12 – 13ft·lb)

REMOVAL (HORN LOW)

1. Remove the front grille, refer to [EI-20, "FRONT GRILLE"](#).
2. Disconnect horn connector.
3. Remove horn.



INSTALLATION (HORN LOW)

Tighten horn bolt to specified torque.

Horn bolt : 16 – 18 N·m(1.6 – 1.8kg·m, 12 – 13ft·lb)