SECTION HD
HOOD

CONTENTS

SECTION HD
HOOD

CONTENTS

SECTION HD
HOOD

CONTENTS

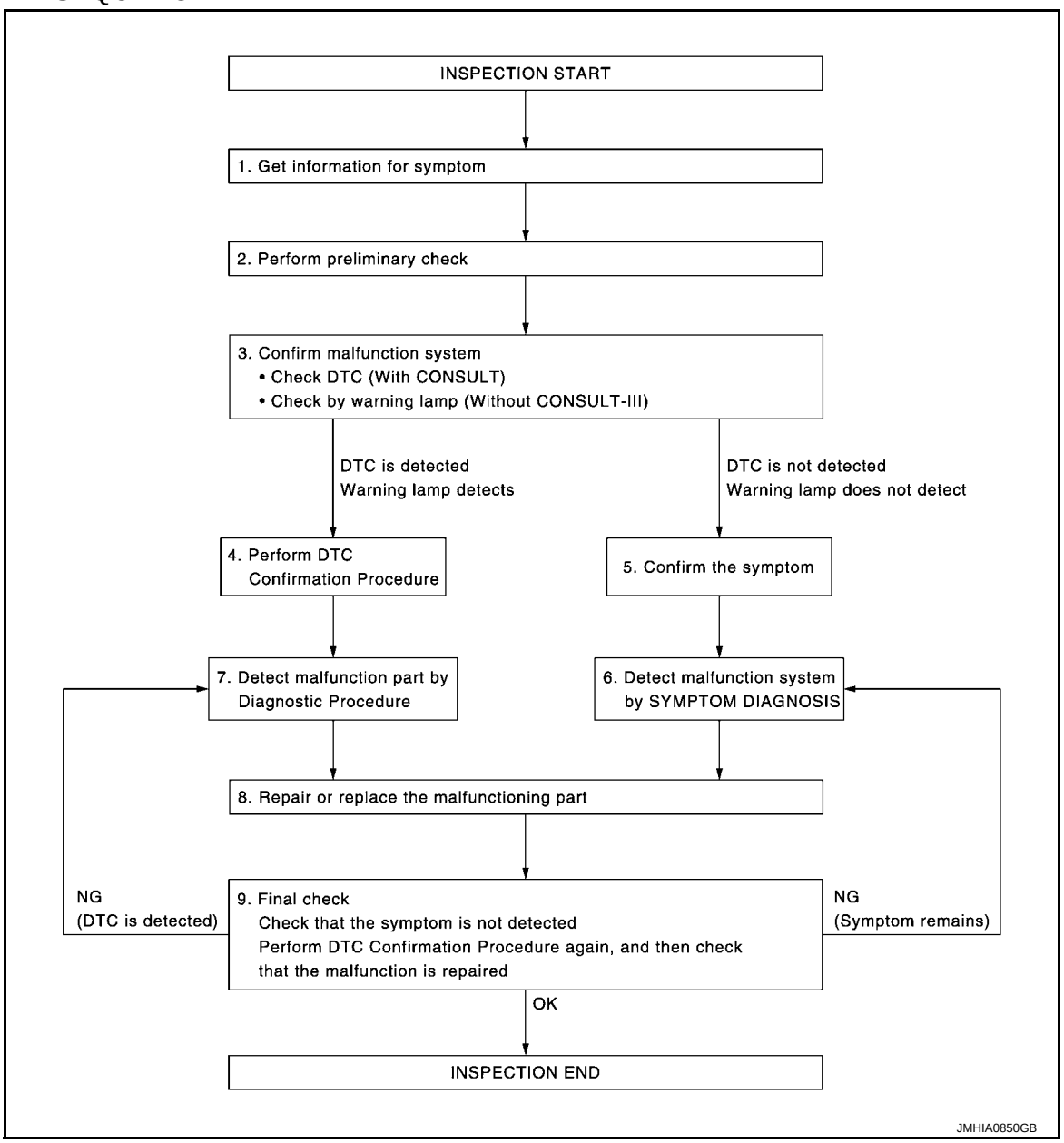
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000004931104

OVERALL SEQUENCE



DETAILED FLOW

1.GET INFORMATION FOR SYMPTOM

Get the detailed information from the customer for the symptom (the condition and the environment when the incident/malfunction occurs).

>> GO TO 2.

2.PERFORM PRELIMINARY CHECK

At the beginning of inspection, confirm the condition of power supply circuit, check that the battery is charged and fuses, and fusible links are not blown.

Is power supply circuit normal?

YES >> GO TO 3.
NO >> Repair or replace the battery and fuse/fusible links.

3.CONFIRM MALFUNCTIONING SYSTEM

1. Check DTC and warning lamp for Pop-up Engine Hood.
2. Perform the following procedure if DTC or warning lamp indicates a malfunction.
- Record DTC (Print them out using CONSULT-III.)
- Erase self-diagnosis result.
- Study the relationship between the malfunction that DTC or warning lamp indicates and the symptom that the customer describes.
3. Check related service bulletins for information.

Does DTC or warning lamp indicate any malfunction that may cause the symptom that the customer describes?

DTC is detected or warning lamp detects a malfunction.>>GO TO 4.
DTC is not detected or warning lamp does not detect a malfunction.>>GO TO 5.

4.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for DTC or warning lamp that indicates a malfunction, and then check that DTC is detected again.
At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time.

Is DTC detected?

YES >> GO TO 7.
NO >> Refer to GI-40, "Intermittent Incident".

5.CONFIRM THE SYMPTOM

Confirm the symptom that the customer describes.
Connect CONSULT-III to the vehicle in “DATA MONITOR” mode and check real time diagnosis results.
Verify relation between the symptom and the condition when the symptom occurs.

>> GO TO 6.

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

Detect malfunctioning system according to SYMPTOM DIAGNOSIS based on the symptom that is confirmed in step 5, and determine the trouble diagnosis order based on possible causes and the symptom.

>> GO TO 8.

7.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

>> GO TO 8.

8.REPAIR OR REPLACE THE MALFUNCTIONING PART

Repair or replace the malfunctioning part.

>> GO TO 9.

9.FINAL CHECK

When DTC is detected in step 2, perform DTC Confirmation Procedure again, and then check that the malfunction is repaired.
When symptom is described by the customer, refer to the symptom that is confirmed in step 5, and check that the symptom does not reappear.

Does the symptom reappear?

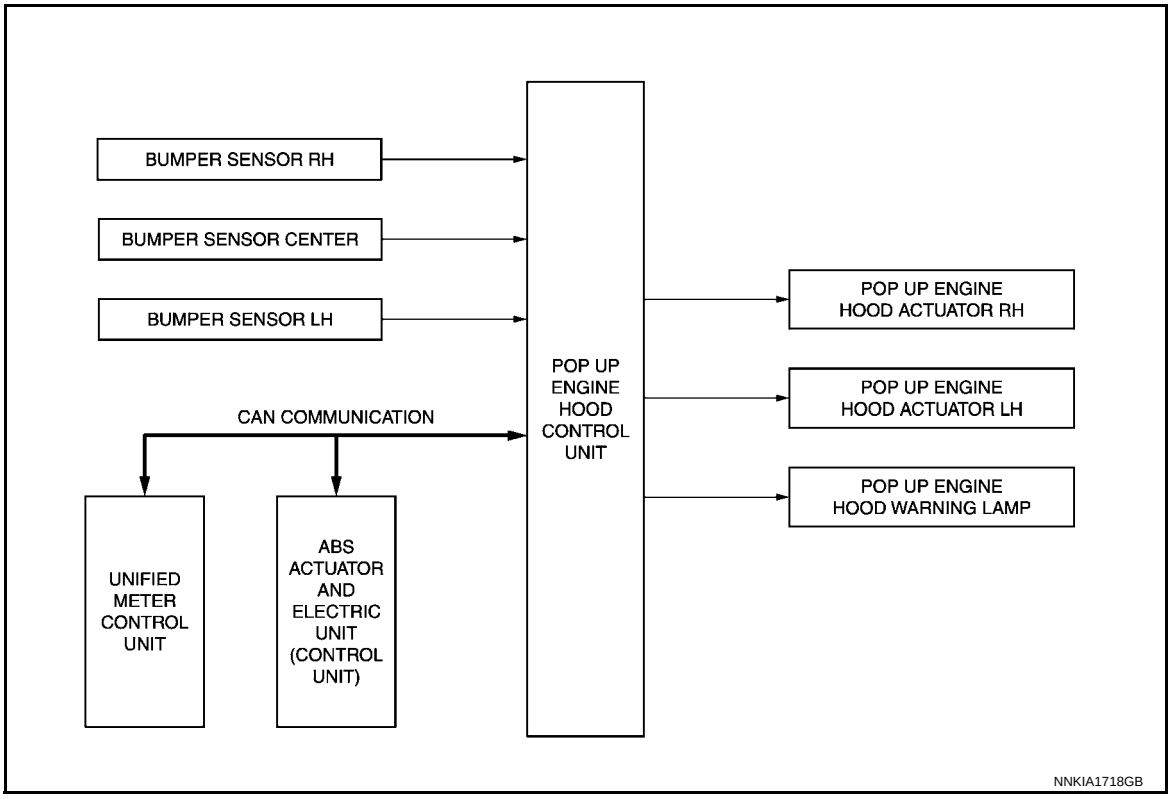
YES (DTC is detected)>>GO TO 7.
YES (Symptom remains)>>GO TO 6.
NO >> INSPECTION END

SYSTEM DESCRIPTION

POP-UP ENGINE HOOD SYSTEM

System Diagram

INFOID:0000000004931105



System Description

INFOID:0000000004931106

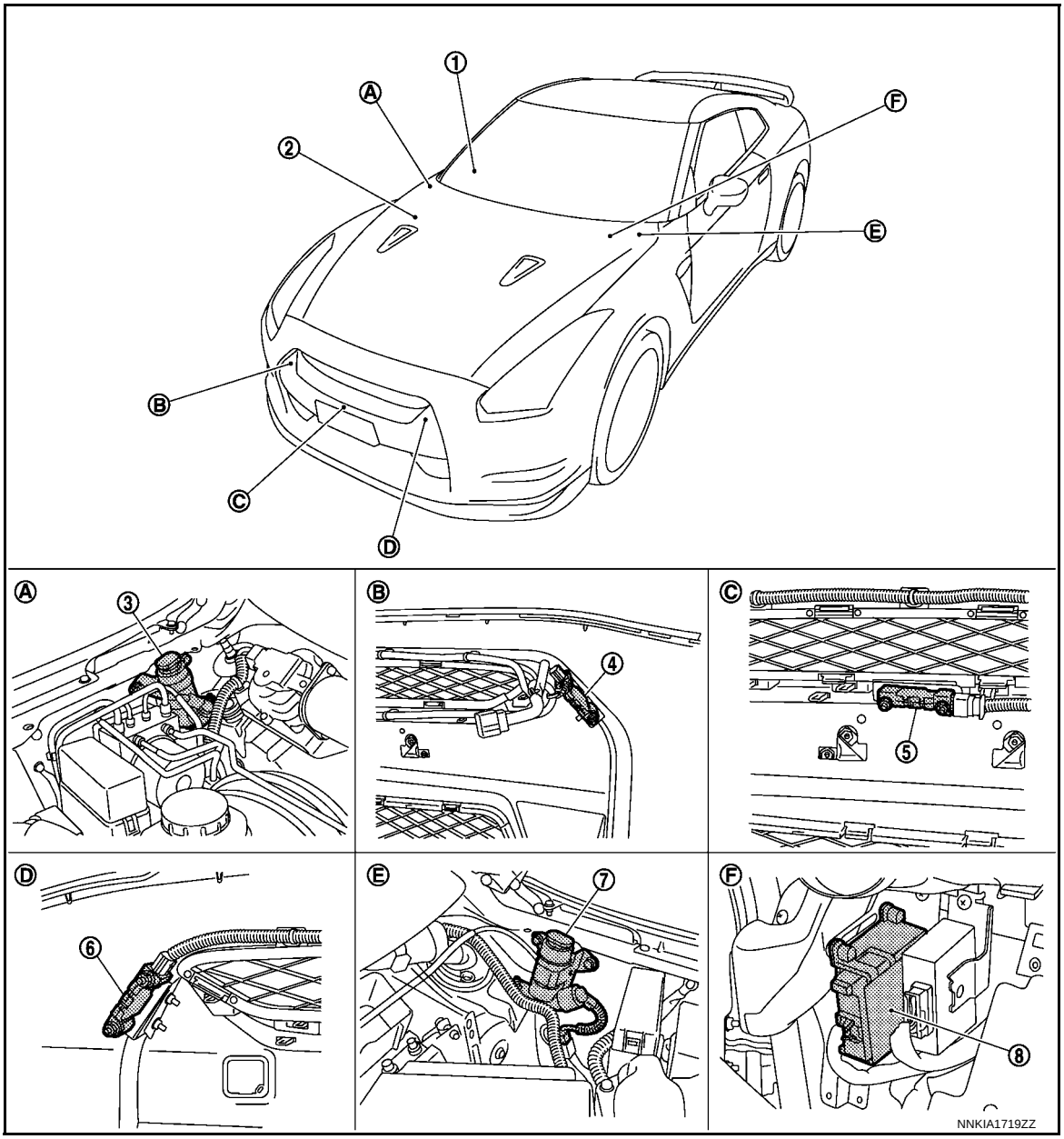
Pop-up Engine Hood detects frontal vehicle collision to pedestrian using 3 pedestrian detect sensors (G sensor) that are installed front bumper backside and vehicle speed information. When collision is detected, pop-up engine hood control unit activates pop-up engine hood actuator so that hood hinge is tilted up and impact to head of pedestrian can be reduced.

SELF-DIAGNOSIS FUNCTION AND WARNING FUNCTION

Pop-up Engine Hood control unit detects, records electrical system malfunction, and indicates malfunctioning system using Pop-up Engine Hood warning lamp and CONSULT-III. For detail, refer to HD-9, "Diagnosis Description".

Component Parts Location

INFOID:0000000004931107



1. Combination meter M53 Refer to MWI-12, "METER SYSTEM : Component Parts Location".	2. ABS actuator and electoric unit (control unit) E41 Refer to BRC-15, "Component Parts Location (NHPC)".	3. Pop-up Engine Hood actuator RH E45
4. Bumper sensor RH E152	5. Bumper sensor center E153	6. Bumper sensor LH E154
7. Pop-up Engine Hood actuator LH E15	8. Pop-up Engine Hood control unit M13	
A. Right side of engine room	B. Back of bumper fascia RH	C. Back of bumper fascia center
D. Back of bumper fascia LH	E. Left side of engine room	F. Behind instrument lower cover

Component Description

INFOID:0000000004931108

Component	Description
Pop-up Engine Hood warning lamp	It detects the electric system malfunction of Pop-up Engine Hood actuator and bumper sensor, and then prompts the repair by turning the Pop-up Engine Hood warning lamp ON.
Bumper sensor	It detects the front collision between a pedestrian and the vehicle, and then transmits the signal to the Pop-up Engine Hood control unit.
Pop-up Engine Hood control unit	It outputs the operation signal to the actuator according to the front collision detection information between the pedestrian and vehicle, and the vehicle speed information.
Pop-up Engine Hood actuator	It receives the operation signal from the Pop-up Engine Hood control unit, and then operates the actuator to lift up the hood.

DIAGNOSIS SYSTEM (POP-UP ENGINE HOOD)

Diagnosis Description

INFOID:0000000004931109

WARNING:

- **Never use an electric tester such as a circuit tester on any circuits related to the Pop-up Engine Hood unless it is instructed in this Service Manual. The Pop-up Engine Hood connector can be distinguished from other connectors by their yellow connectors.**
- **Never solder the Pop-up Engine Hood wire harness when making repairs. If harness is damaged, replace with a new one.**
- **Always keep the ground clean.**

DIAGNOSIS FUNCTION

- The self-diagnosis results of Pop-up Engine Hood can read by the Pop-up Engine Hood warning lamp or CONSULT-III.
- The USER MODE is prepared exclusively for the customer (driver). This mode warns the Pop-up Engine Hood malfunction to the customer (driver) by illuminating the Pop-up Engine Hood warning lamp.
- The Diagnosis mode is prepared for the person in charge of detecting and checking the malfunctioning parts.
- The application of Pop-up Engine Hood warning lamp and CONSULT-III is shown in the table below.

Diagnosis tool	User mode	Diagnosis mode	Display type
Pop-up Engine Hood warning lamp	×	×	Illuminates/Blinks
CONSULT-III	—	×	Monitor screen

Diagnosis with Pop-up Engine Hood Warning Lamp

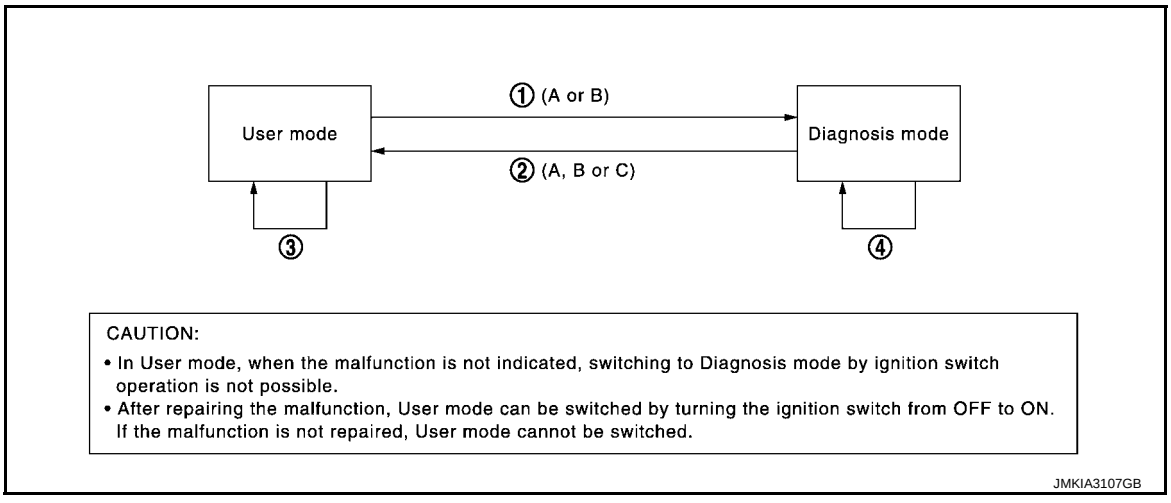
INFOID:0000000004931959

SELF DIAGNOSIS FUNCTION

There are two self diagnosis functions with Pop-up Engine Hood warning lamp per the following items.

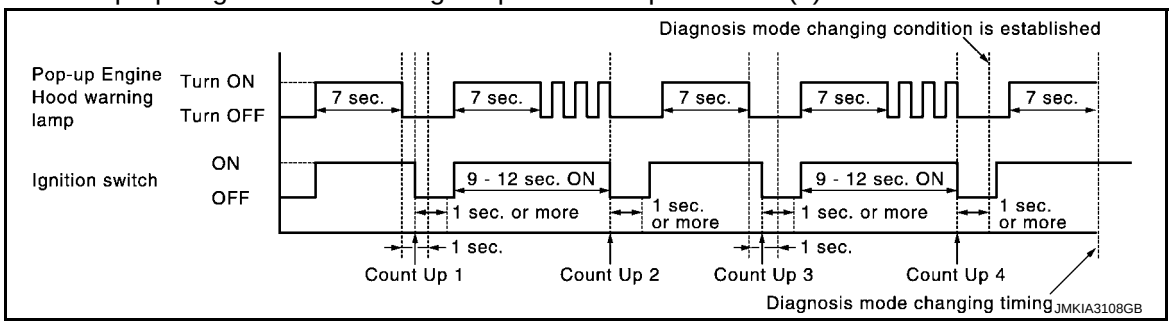
- USER MODE
- DIAGNOSIS MODE

HOW TO CAHNGE SELF DIAGNOSIS MODE WITHOUT CONSULT-III



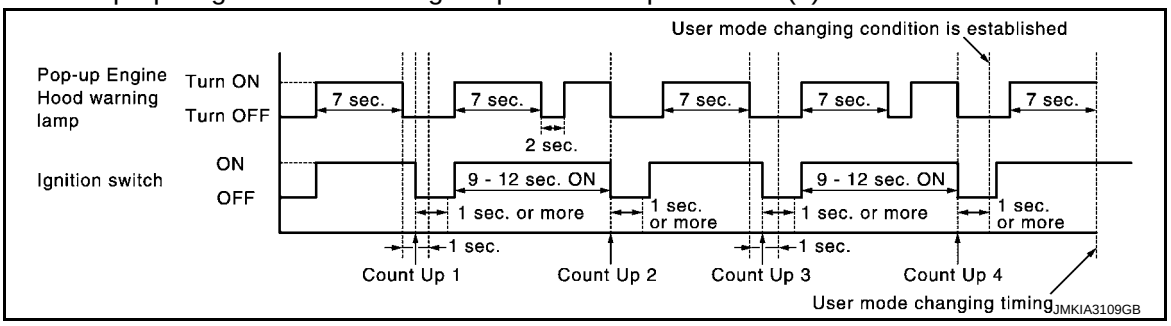
Condition	Operation procedure
(1) A	1. Turn the ignition switch OFF to ON when illuminating the Pop-up Engine Hood warning lamp in the USER MODE.
	2. The Pop-up Engine Hood warning lamp illuminates for 7 seconds and turns OFF. Within 1 second after the lamp turns OFF, turn ignition switch OFF. ("Count up 1" in the figure 1)
	3. Wait for 1 second or more after turning ignition switch OFF.
	4. Turn the ignition switch from OFF to ON.
	5. The Pop-up Engine Hood warning lamp illuminates for 7 seconds. Within 2 seconds after blinking 3 times, turn the ignition switch OFF. ("Count up 2" in the figure 1)
	6. Wait for 1 second or more after turning ignition switch OFF.
	7. Turn the ignition switch from OFF to ON.
	8. The Pop-up Engine Hood warning lamp illuminates for 7 seconds and turns OFF. Within 1 second after the lamp turns OFF, turn ignition switch OFF. ("Count up 3" in the figure 1)
	9. Wait for 1 second or more after turning ignition switch OFF.
	10. Turn the ignition switch from OFF to ON.
	11. The Pop-up Engine Hood warning lamp illuminates for 7 seconds. Within 2 seconds after blinking 3 times, turn the ignition switch OFF. ("Count up 4" in the figure 1)
	12. Wait for 1 second or more after turning ignition switch OFF. ("DIAGNOSIS MODE changing condition is established" in the figure 1)
	13. Turning the ignition switch from OFF to ON changes the mode to DIAGNOSIS MODE. ("DIAGNOSIS MODE changing timing" in the figure 1)
(1) B	The mode is changes to DIAGNOSIS MODE after starting CONSULT-III communication.

Time chart of Pop-up Engine Hood warning lamp and IGN operation of (1) A



Condition	Operation procedure
(2) A	1. Turn the ignition switch OFF to ON when the Pop-up Engine Hood warning lamp illuminates in DIAGNOSIS MODE.
	2. The Pop-up Engine Hood warning lamp illuminates for 7 seconds and turns OFF. Turn the ignition switch OFF while the next warning lamp is illuminating for 3 seconds. ("Count up 1" in the figure 2)
	3. Wait for 1 second or more after turning ignition switch OFF.
	4. Turn the ignition switch from OFF to ON.
	5. The Pop-up Engine Hood warning lamp illuminates for 7 seconds and turns OFF for 2 seconds. Within 2 seconds after that, turn the ignition switch OFF. ("Count up 2" in the figure 2)
	6. Wait for 1 second or more after turning ignition switch OFF.
	7. Turn the ignition switch from OFF to ON.
	8. The Pop-up Engine Hood warning lamp illuminates for 7 seconds and turns OFF. Within 1 second after the lamp turns OFF, turn ignition switch OFF. ("Count up 3" in the figure 2)
	9. Wait for 1 second or more after turning ignition switch OFF.
	10. Turn the ignition switch from OFF to ON.
	11. The Pop-up Engine Hood warning lamp illuminates for 7 seconds and turns OFF for 2 seconds. Turn the ignition switch OFF while the next warning lamp is illuminating for 3 seconds. ("Count up 4" in the figure 2)
	12. Wait for 1 second or more after turning ignition switch OFF. ("USER MODE changing condition is established" in the figure 2)
	13. Turning the ignition switch from OFF to ON changes the mode to the USER MODE. ("USER MODE changing timing" in the figure 2)
(2) B	The mode is changes to the USER MODE after CONSULT-III communication is complete.
(2) C	The mode changes to the USER MODE when the Pop-up Engine Hood warning lamp is displayed normally in the DIAGNOSIS MODE and the ignition switch turns OFF to ON.

Time chart of Pop-up Engine Hood warning lamp and IGN operation of (2) A



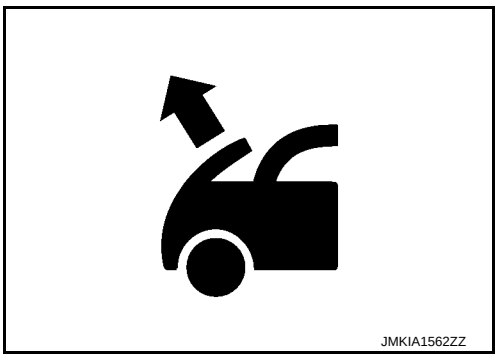
Condition	Operation procedure
(3)	When the ignition switch turning OFF to ON operation does not satisfy the condition of (1).
(4)	When the Pop-up Engine Hood warning lamp indicates DTCs in the DIAGNOSIS MODE and the ignition switch turns OFF to ON.

USER MODE

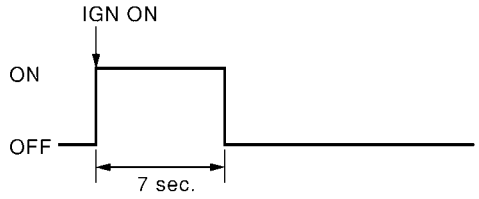
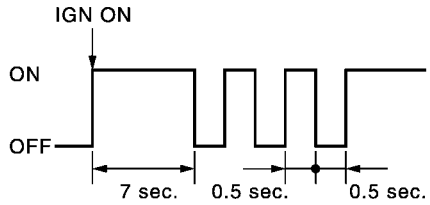
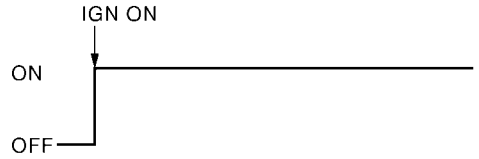
In USER MODE, Pup-up Engine Hood warning lamp on combination meter blinks when a malfunction is detected and warns the driver.

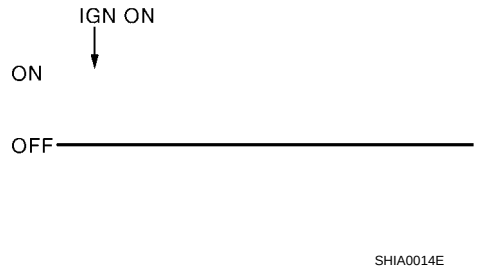
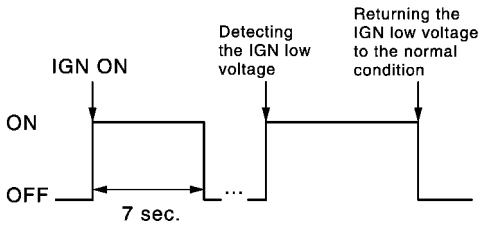
1. Check that the Pop-up Engine Hood warning lamp illuminates by switching the ignition switch from OFF to ON.

2. Compare the blinking pattern of Pop-up Engine Hood warning lamp with the following “Pop-up Engine Hood warning lamp mode indication example”.


JMKIA1562ZZ

Pop-up Engine Hood warning lamp mode indication example

Warning lamp mode indication example	System status
 SHIA0011E	Normal
 JMKIA3105GB	While system malfunction is being occurred or the system malfunction (intermittent error) in the past is being detected.
	The Pop-up Engine Hood operation is complete.
 SHIA0013E	• Malfunction of warning lamp control circuit of the Pop-up Engine Hood control unit inside. • Blown fuse of Pop-up Engine Hood. (always illuminates)

Warning lamp mode indication example	System status
 SHIA0014E	• Blown meter fuse • Malfunction of warning lamp control circuit of the Pop-up Engine Hood control unit inside. (always OFF)
 JMKIA3106GB	Detecting the IGN low voltage/Returning the IGN low voltage to the normal condition.

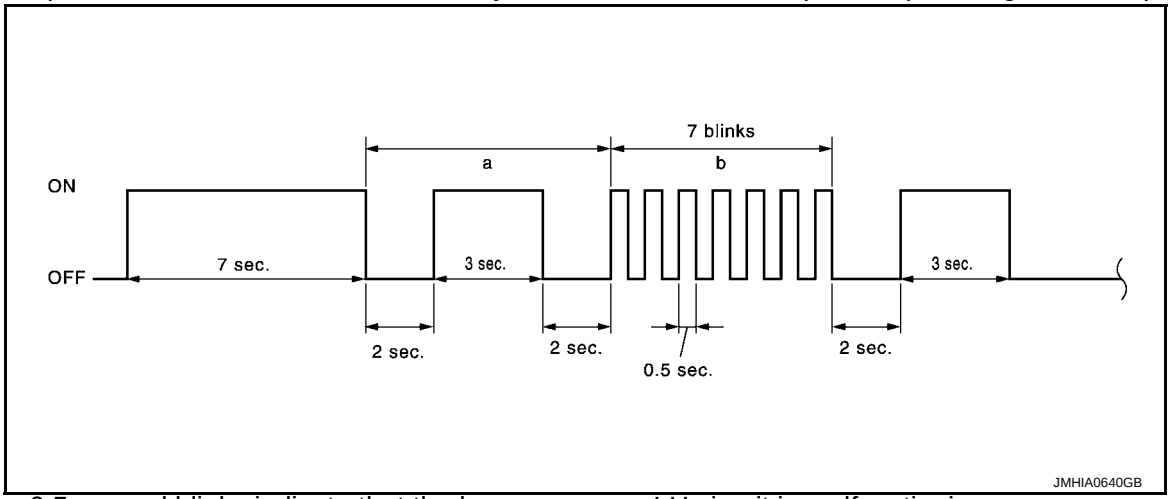
DIAGNOSIS MODE

The DIADNOSIS MODE can only be switched when a malfunction is detected in the USER MODE. Malfunctioning system is indicated according to blinking pattern of Pup-up Engine Hood warning lamp.

How to Read Pop-up Engine Hood Warning Lamp

1. Follow the procedures of “HOW TO CHANGE SELF DIAGNOSIS MODE WITHOUT CONSULT-III”, and switch to the diagnosis mode.
2. Turn ignition switch ON. Check the blinking pattern of Pup-up Engine Hood warning lamp. (3 second blink followed by a 0.5 second blink repeated.)

An Example of a 3-second Blink Followed by a 0.5-second Blink Repeated (a through b are repeated)



JMHIA0640GB

b: Seven 0.5-second blinks indicate that the bumper sensor LH circuit is malfunctioning.

Number of 0.5-second blinks after a 3-second blink indicates malfunctioning items

Number of 0.5-second blinks	Malfunctioning items	Reference page
0	• Intermittent malfunction in the past is detected • Self-diagnosis result is not deleted	—
2	Pop-up Engine Hood actuator RH	Refer to the following items • HD-19, "DTC Logic" • HD-21, "DTC Logic" • HD-22, "DTC Logic" • HD-24, "DTC Logic"
3	Pop-up Engine Hood actuator LH	Refer to the following items • HD-26, "DTC Logic" • HD-28, "DTC Logic" • HD-29, "DTC Logic" • HD-31, "DTC Logic"
5	Bumper sensor RH	Refer to the following items • HD-33, "DTC Logic" • HD-34, "DTC Logic" • HD-36, "DTC Logic"
6	Bumper sensor center	Refer to the following items • HD-37, "DTC Logic" • HD-38, "DTC Logic" • HD-40, "DTC Logic"
7	Bumper sensor LH	Refer to the following items • HD-41, "DTC Logic" • HD-42, "DTC Logic" • HD-44, "DTC Logic"
9	Pop-up Engine Hood control unit	Refer to the following items • HD-46, "DTC Logic" • HD-47, "DTC Logic" • HD-48, "DTC Logic"
12	CAN communication line	Refer to the following items HD-17, "DTC Logic"

How to Erase Self Diagnosis Result

Check the system status in the DIAGNOSIS MODE after repairing the malfunctioning parts. Turn the ignition switch OFF. The system returns to the User mode from the Diagnosis mode by turning the ignition switch ON after waiting for 1 second. Then, the diagnosis record is erased.

CONSULT-III Function

INFOID:0000000004931110

Diagnosis mode	Description
Ecu Identification	The Pop-up Engine Hood control unit for each vehicle model has its own individual classification number. This number is displayed on CONSULT-III screen, as shown. When replacing the Pop-up Engine Hood control unit, refer to the part number for the compatibility. After installation, replacement with a correct unit can be checked by confirming this classification number on CONSULT-III screen. After repair, check that the discriminated number of Pop-up Engine Hood control unit installed to vehicle are the same. Refer to HD-73, "Removal and Installation".
Self Diagnostic Result	Trouble-diagnosis result (intermittent incident* and others) that is recorded by Pop-up Engine Hood control unit is saved. When malfunction is detected, malfunctioning system is displayed until “ERASE MEMORY” is preformed.
Data Monitor	Displays the Pop-up Engine Hood control unit input data in real time.

Diagnosis mode		Description
Special Function	CAUSE OF WARNING	It displays the cause of warning lamp illumination that is not recorded in memory.
	SELF DIAG [CURRENT]	• Current diagnosis results are displayed. • All DTCs are displayed if 2 or more circuits return an error. **CAUTION:** **Always erase the memory in "Self Diagnostic Result", if "NO DTC" is displayed after repairing.** **If this is not done, when the USER MODE is resumed, the Pop-up Engine Hood warning lamp still illuminates.**
	SELF DIAG RECORD	• The malfunction recorded in the past is displayed. • "NO DTC" is displayed, if the malfunction is never detected in the past. • "ERASE MEMORY" cannot be performed on the malfunctioning parts record in DTC RECORD.
CAN DIAG SUPPORT MNTR		Monitors communication status of CAN communication.

*: The intermittent error means that the malfunction that occurred once returns to normal. The Pop-up Engine Hood warning lamp in the USER MODE remains illuminated because there is DTC memory if this intermittent error occurs, but "NO DTC" is displayed even when SELF-DIAG RESULTS [CURRENT] of CONSULT-III is selected because the system is presently normal. Refer to GI-40, "Intermittent Incident" for diagnosis of the malfunctioning parts displayed in SELF-DIAGNOSIS [CURRENT] when "NO DTC" is displayed even if the repair operation is never performed.

SELF-DIAGNOSTIC RESULTS

Refer to HD-53, "DTC Index".

Erasing Self diagnostic Results Using CONSULT-III

- SELF DIAGNOSTIC RESULTS
  Return to the CONSULT-III system selection screen, and then press ERASE MEMORY of self-diagnostic results.
- SELF DIAG RESULTS [CURRENT]
- The current diagnosis results are displayed on the CONSULT-III screen immediately.
- The malfunction is not displayed on the self diagnostic results after repairing the malfunctioning parts completely.
  NOTE:
  If DTCs are not erased from the "Self Diagnostic Result", the Pop-up Engine Hood warning lamp illuminates in USER MODE to indicate a malfunction even though the malfunctioning parts are repaired.
- SELF DIAG RECORD
  The memory in the DTC record cannot be erased.

CAUTION:

- **When malfunctions are detected in several systems, including the CAN communication [U1000], troubleshoot the CAN communication system.**
- **Always perform "ERASE MEMORY" on all displayed malfunctioning parts after performing check and repair.**
- **The results recorded in "CAUSE OF WARNING" are erased at the same time when erasing the self-diagnostic results.**

DATA MONITOR

Monitor item		Measuring condition
CONNECT COND	LOCK	When the Pop-up Engine Hood control unit connector is locked
	UNLOC	When the Pop-up Engine Hood control unit is in partial joint condition or not connected
	WAIT	During Pop-up Engine Hood control unit lock diagnosis

SPECIAL FUNCTION

Cause of Warning

The Pop-up Engine Hood warning lamp illuminates when the battery voltage is lowered to the voltage value (less than 9 V) at which the Pop-up Engine Hood cannot be operated normally. The Pop-up Engine Hood warning lamp turns OFF after the battery voltage returns to normal status after illuminating. In such a case, the DTC memory is not performed. Changing to the DIAGNOSIS MODE by IGN operation cannot be performed while the Pop-up Engine Hood warning lamp illuminates because of this cause. "NO DTC" is displayed even if the malfunctioning parts are checked by CONSULT-III.

This “Battery voltage drop” records the current status, frequency of low voltage, and times of IGN ON while battery voltage is low (times of IGN ON are reset after the battery voltage recovers).

Item name	Display item	Actions
IGN VOLT COND	Ignition voltage recognized by Pop-up Engine Hood control unit is displayed. • OK: Voltage is normal. • LOW: Voltage is low.	• Charge battery when ignition voltage condition “LOW” is displayed. • Check battery voltage when ignition voltage condition is “OK” but low voltage is detected for 1 time or more in the past.
LOW VOLT TIME	Detected number of times of ignition low voltage is displayed. (Detection history is deleted when memory deletion is performed in “Self-diagnosis Result” using CONSULT-III. Counter returns to “0”.)	
LOW V RECORED	Number of times of ignition switch ON while ignition low voltage is detected. (When low voltage is returned to normal, counter returns to “0”.)	

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000004931176

- CAN communication is a multiplex communication system with multiple control units that are connected by 2 communication lines (CAN-L-line, CAN-H-line) allowing the sharing of many communication signals and high-speed communication.
- Each control unit on the CAN network transmits the signal with CAN communication control circuit in the control unit and receives only the required signal from another control unit, and then performs various control.
- The CAN communication line consists of a twisted pair line with 2 lines that are twisted. This has a strong noise resistance.

DTC Logic

INFOID:0000000004931177

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
U1000	CAN COMM CIRCUIT	Pop-up Engine Hood control unit cannot transmit or receive CAN communication signal for 2 seconds or more	CAN communication system

Diagnosis Procedure

INFOID:0000000004931178

1.PERFORM THE SELF-DIAGNOSIS

1. Turn the ignition switch ON and hold it for 2 seconds or more.
2. Check “Self diagnostic result” with CONSULT-III.

Is DTC detected?

YES >> Refer to LAN-19, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-40, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000004931179

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
U1010	CONTROL UNIT (CAN)	When the Pop-up Engine Hood control unit detects the CAN communication internal circuit malfunction	Pop-up Engine Hood control unit

Diagnosis Procedure

INFOID:0000000004931180

1.REPLACE POP-UP ENGINE HOOD CONTROL UNIT

If DTC [U1010] is detected, replace the Pop-up Engine Hood control unit.

>> Replace the Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".

B2670 POP-UP ENGINE HOOD ACTUATOR RH

Description

INFOID:0000000004931111

- The Pop-up Engine Hood actuator RH operates by receiving the operation signal from the Pop-up Engine Hood control unit.
- The Pop-up Engine Hood actuator RH is installed to the right side of engine room.

DTC Logic

INFOID:0000000004931112

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2670	ACTUATOR RH [OPEN]	Open circuit of Pop-up Engine Hood actuator RH circuit	• Open circuit of harness or intermediate connector between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator RH • Poor connection of Pop-up Engine Hood control unit connector • Poor connection of Pop-up Engine Hood actuator RH connector • Internal malfunction in Pop-up Engine Hood actuator RH • Internal malfunction in Pop-up Engine Hood control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-19, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931113

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.CHECK HARNESS CONNECTOR

Check connections of harness or intermediate connector between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator RH, Pop-up Engine Hood control unit connector and Pop-up Engine Hood actuator RH connector.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Connect the harness connector normally, and then perform DTC CONFIRMATION PROCEDURE again. Refer to HD-19, "DTC Logic".

2.REPLACE POP-UP ENGINE HOOD ACTUATOR RH

1. Replace the Pop-up Engine Hood actuator RH. Refer to HD-66, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 3.

3. REPLACE POP-UP ENGINE HOOD CONTROL UNIT

1. Replace the Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2671 POP-UP ENGINE HOOD ACTUATOR RH

Description

INFOID:0000000004931114

- The Pop-up Engine Hood actuator RH operates by receiving the operation signal from the Pop-up Engine Hood control unit.
- The Pop-up Engine Hood actuator RH is installed to the right side of engine room.

DTC Logic

INFOID:0000000004931115

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2671	ACTUATOR RH [VB-SHORT]	Short circuit to power supply circuit of Pop-up Engine Hood actuator RH circuit	• Short circuit to power supply of harness between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator RH • Internal malfunction in Pop-up Engine Hood control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-21, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931116

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.CHECK HARNESS CONNECTOR

Check connections of harness between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator RH, Pop-up Engine Hood control unit connector and Pop-up Engine Hood actuator RH connector.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Connect the harness connector normally, and then perform DTC CONFIRMATION PROCEDURE again. Refer to HD-21, "DTC Logic".

2.REPLACE POP-UP ENGINE HOOD ACTUATOR RH

1. Replace the Pop-up Engine Hood actuator RH. Refer to HD-66, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 3.

3.REPLACE POP-UP ENGINE HOOD CONTROL UNIT

1. Replace the Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2672 POP-UP ENGINE HOOD ACTUATOR RH

Description

INFOID:0000000004931117

- The Pop-up Engine Hood actuator RH operates by receiving the operation signal from the Pop-up Engine Hood control unit.
- The Pop-up Engine Hood actuator RH is installed to the right side of engine room.

DTC Logic

INFOID:0000000004931118

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2672	ACTUATOR RH [GND-SHORT]	Short circuit to ground circuit of Pop-up Engine Hood actuator RH circuit	• Short circuit to ground of harness between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator RH • Internal malfunction in Pop-up Engine Hood actuator RH • Internal malfunction in Pop-up Engine Hood control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-22, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931119

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.CHECK HARNESS CONNECTOR

Check connections of harness between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator RH, Pop-up Engine Hood control unit connector and Pop-up Engine Hood actuator RH connector.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Connect the harness connector normally, and then perform DTC CONFIRMATION PROCEDURE again. Refer to HD-22, "DTC Logic".

2.REPLACE POP-UP ENGINE HOOD ACTUATOR RH

1. Replace the Pop-up Engine Hood actuator RH. Refer to HD-66, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 3.

3.REPLACE POP-UP ENGINE HOOD CONTROL UNIT

1. Replace the Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2673 POP-UP ENGINE HOOD ACTUATOR RH

Description

INFOID:0000000004931120

- The Pop-up Engine Hood actuator RH operates by receiving the operation signal from the Pop-up Engine Hood control unit.
- The Pop-up Engine Hood actuator RH is installed to the right side of engine room.

DTC Logic

INFOID:0000000004931121

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2673	ACTUATOR RH [SHORT]	Short circuit between lines of Pop-up Engine Hood actuator RH circuit	• Short circuit of harness or intermediate connector between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator RH • Poor connection of Pop-up Engine Hood actuator RH connector • Internal malfunction in Pop-up Engine Hood actuator RH • Internal malfunction in Pop-up Engine Hood control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-24, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931122

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.CHECK HARNESS CONNECTOR

Check connections of harness or intermediate connector between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator RH, Pop-up Engine Hood control unit connector and Pop-up Engine Hood actuator RH connector.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Connect the harness connector normally, and then perform DTC CONFIRMATION PROCEDURE again. Refer to HD-24, "DTC Logic".

2.REPLACE POP-UP ENGINE HOOD ACTUATOR RH

1. Replace the Pop-up Engine Hood actuator RH. Refer to HD-66, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 3.

3.REPLACE POP-UP ENGINE HOOD CONTROL UNIT

1. Replace the Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".

2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2674 POP-UP ENGINE HOOD ACTUATOR LH

Description

INFOID:0000000004931123

- The Pop-up Engine Hood actuator LH operates by receiving the operation signal from the Pop-up Engine Hood control unit.
- The Pop-up Engine Hood actuator LH is installed to the left side of engine room.

DTC Logic

INFOID:0000000004931124

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2674	ACTUATOR LH [OPEN]	Open circuit of Pop-up Engine Hood actuator LH circuit	• Open circuit of harness or intermediate connector between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator LH • Poor connection of Pop-up Engine Hood control unit connector • Poor connection of Pop-up Engine Hood actuator LH connector • Internal malfunction in Pop-up Engine Hood actuator LH • Internal malfunction in Pop-up Engine Hood control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-26, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931125

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.CHECK HARNESS CONNECTOR

Check connections of harness or intermediate connector between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator LH, Pop-up Engine Hood control unit connector and Pop-up Engine Hood actuator LH connector.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Connect the harness connector normally, and then perform DTC CONFIRMATION PROCEDURE again. Refer to HD-26, "DTC Logic".

2.REPLACE POP-UP ENGINE HOOD ACTUATOR LH

1. Replace the Pop-up Engine Hood actuator LH. Refer to HD-66, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 3.

3. REPLACE POP-UP ENGINE HOOD CONTROL UNIT

1. Replace the Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2675 POP-UP ENGINE HOOD ACTUATOR LH

Description

INFOID:0000000004931126

- The Pop-up Engine Hood actuator LH operates by receiving the operation signal from the Pop-up Engine Hood control unit.
- The Pop-up Engine Hood actuator LH is installed to the left side of engine room.

DTC Logic

INFOID:0000000004931127

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2675	ACTUATOR LH [VB-SHORT]	Short circuit to power supply circuit of Pop-up Engine Hood actuator LH circuit	• Short circuit to power supply of harness between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator LH • Internal malfunction in Pop-up Engine Hood control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-28, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931128

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.CHECK HARNESS CONNECTOR

Check connections of harness or intermediate connector between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator LH, Pop-up Engine Hood control unit connector and Pop-up Engine Hood actuator LH connector.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Connect the harness connector normally, and then perform DTC CONFIRMATION PROCEDURE again. Refer to HD-28, "DTC Logic".

2.REPLACE POP-UP ENGINE HOOD ACTUATOR LH

1. Replace the Pop-up Engine Hood actuator LH. Refer to HD-66, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 3.

3.REPLACE POP-UP ENGINE HOOD CONTROL UNIT

1. Replace the Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2676 POP-UP ENGINE HOOD ACTUATOR LH

Description

INFOID:0000000004931129

- The Pop-up Engine Hood actuator LH operates by receiving the operation signal from the Pop-up Engine Hood control unit.
- The Pop-up Engine Hood actuator LH is installed to the left side of engine room.

DTC Logic

INFOID:0000000004931130

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2676	ACTUATOR LH [GND-SHORT]	Short circuit to ground circuit of Pop-up Engine Hood actuator LH circuit	• Short circuit to ground of harness between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator LH • Internal malfunction in Pop-up Engine Hood actuator LH • Internal malfunction in Pop-up Engine Hood control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-29, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931131

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.CHECK HARNESS CONNECTOR

Check connections of harness or intermediate connector between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator LH, Pop-up Engine Hood control unit connector and Pop-up Engine Hood actuator LH connector.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Connect the harness connector normally, and then perform DTC CONFIRMATION PROCEDURE again. Refer to HD-29, "DTC Logic".

2.REPLACE POP-UP ENGINE HOOD ACTUATOR LH

1. Replace the Pop-up Engine Hood actuator LH. Refer to HD-66, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 3.

3.REPLACE POP-UP ENGINE HOOD CONTROL UNIT

1. Replace the Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2677 POP-UP ENGINE HOOD ACTUATOR LH

Description

INFOID:0000000004931132

- The Pop-up Engine Hood actuator LH operates by receiving the operation signal from the Pop-up Engine Hood control unit.
- The Pop-up Engine Hood actuator LH is installed to the left side of engine room.

DTC Logic

INFOID:0000000004931133

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2677	ACTUATOR LH [SHORT]	Short circuit between lines of Pop-up Engine Hood actuator LH circuit	• Short circuit of harness or intermediate connector between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator LH • Poor connection of Pop-up Engine Hood actuator LH connector • Internal malfunction in Pop-up Engine Hood actuator LH • Internal malfunction in Pop-up Engine Hood control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-31, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931134

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.CHECK HARNESS CONNECTOR

Check connections of harness or intermediate connector between Pop-up Engine Hood control unit and Pop-up Engine Hood actuator LH, Pop-up Engine Hood control unit connector and Pop-up Engine Hood actuator LH connector.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Connect the harness connector normally, and then perform DTC CONFIRMATION PROCEDURE again. Refer to HD-31, "DTC Logic".

2.REPLACE POP-UP ENGINE HOOD ACTUATOR LH

1. Replace the Pop-up Engine Hood actuator LH. Refer to HD-66, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 3.

3.REPLACE POP-UP ENGINE HOOD CONTROL UNIT

1. Replace the Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".

2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2680 BUMPER SENSOR RH

Description

INFOID:0000000004931135

- It detects the collision between pedestrians and vehicle front using G sensor signal.
- The bumper sensor RH is installed to the back of front bumper fascia RH.

DTC Logic

INFOID:0000000004931136

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2680	PEDEST SENSOR RH [UNIT MALFUNCTION]	Internal malfunction of bumper sensor RH	Internal malfunction of bumper sensor RH

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-33, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931137

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.REPLACE BUMPER SENSOR RH

1. Replace the bumper sensor RH. Refer to HD-70, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2681 BUMPER SENSOR RH

Description

INFOID:0000000004931138

- It detects the collision between pedestrians and vehicle using G sensor signal.
- The bumper sensor RH is installed to the back of front bumper fascia RH.

DTC Logic

INFOID:0000000004931139

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2681	PEDEST SENSOR RH [COMM MALFUNCTION]	Communication error of bumper sensor RH	• Open circuit of harness or intermediate connector between Pop-up Engine Hood control unit and bumper sensor RH • Short circuit to power supply, short circuit to ground, or short circuit between lines of harness between Pop-up Engine Hood control unit and bumper sensor RH • Poor connection of Pop-up Engine Hood control unit connector • Poor connection of bumper sensor RH connector • Internal malfunction of bumper sensor RH • Internal malfunction in Pop-up Engine Hood control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-34, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931140

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.CHECK HARNESS CONNECTOR

Check connections of harness or intermediate connector between Pop-up Engine Hood control unit and bumper sensor RH, Pop-up Engine Hood control unit connector and bumper sensor RH connector.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Connect the harness connector normally, and then perform DTC CONFIRMATION PROCEDURE again. Refer to HD-34, "DTC Logic".

2.REPLACE BUMPER SENSOR RH

1. Replace the bumper sensor RH. Refer to HD-70, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 3.

3. REPLACE POP-UP ENGINE HOOD CONTROL UNIT

1. Replace the Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2682 BUMPER SENSOR RH

Description

INFOID:0000000004931141

- It detects the collision between pedestrians and vehicle using G sensor signal.
- The bumper sensor RH is installed to the back of front bumper fascia RH.

DTC Logic

INFOID:0000000004931142

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2682	PEDEST SENSOR RH [UNMATCH]	Accumulation of foreign matter in bumper sensor RH	Accumulation of foreign matter in bumper sensor RH

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-36, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931143

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.REPLACE BUMPER SENSOR RH

1. Replace the bumper sensor RH. Refer to HD-70, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2683 BUMPER SENSOR CTR

Description

INFOID:0000000004931144

- It detects the collision between pedestrians and vehicle front using G sensor signal.
- The bumper sensor center is installed to the bottom of radiator core support center.

DTC Logic

INFOID:0000000004931145

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2683	PEDEST SENSOR CTR [UNIT MALFUNCTION]	Internal malfunction of bumper sensor center	Internal malfunction of bumper sensor center

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-37, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931146

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.REPLACE BUMPER SENSOR CENTER

1. Replace the bumper sensor center. Refer to HD-70, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2684 BUMPER SENSOR CTR

Description

INFOID:0000000004931147

- It detects the collision between pedestrians and vehicle front using G sensor signal.
- The bumper sensor center is installed to the bottom of radiator core support center.

DTC Logic

INFOID:0000000004931148

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2684	PEDEST SENSOR CTR [COMM MALFUNCTION]	Communication error of bumper sensor center	• Open circuit of harness or intermediate connector between Pop-up Engine Hood control unit and bumper sensor center • Short circuit to power supply, short circuit to ground, or short circuit between lines of harness between Pop-up Engine Hood control unit and bumper sensor center • Poor connection of Pop-up Engine Hood control unit connector • Poor connection of bumper sensor center connector • Internal malfunction of bumper sensor center • Internal malfunction in Pop-up Engine Hood control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-38, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931149

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.CHECK HARNESS CONNECTOR

Check connections of harness or intermediate connector between Pop-up Engine Hood control unit and bumper sensor center, Pop-up Engine Hood control unit connector and bumper sensor center connector.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Connect the harness connector normally, and then perform DTC CONFIRMATION PROCEDURE again. Refer to HD-38, "DTC Logic".

2.REPLACE BUMPER SENSOR CENTER

1. Replace the bumper sensor center. Refer to HD-70, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 3.

3. REPLACE POP-UP ENGINE HOOD CONTROL UNIT

1. Replace the Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2685 BUMPER SENSOR CTR

Description

INFOID:0000000004931150

- It detects the collision between pedestrians and vehicle front using G sensor signal.
- The bumper sensor center is installed to the bottom of radiator core support center.

DTC Logic

INFOID:0000000004931151

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2685	PEDEST SENSOR CTR [UNMATCH]	Accumulation of foreign matter in bumper sensor center	Accumulation of foreign matter in bumper sensor center

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-37, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931152

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.REPLACE BUMPER SENSOR CENTER

1. Replace the bumper sensor center. Refer to HD-70, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2686 BUMPER SENSOR LH

Description

INFOID:0000000004931153

- It detects the collision between pedestrians and vehicle front using G sensor signal.
- The bumper sensor LH is installed to the back of front bumper fascia LH.

DTC Logic

INFOID:0000000004931154

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2686	PEDEST SENSOR LH [UNIT MALFUNCTION]	Internal malfunction of bumper sensor LH	Internal malfunction of bumper sensor LH

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-41, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931155

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.REPLACE BUMPER SENSOR LH

1. Replace the bumper sensor LH. Refer to HD-70, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2687 BUMPER SENSOR LH

Description

INFOID:0000000004931156

- It detects the collision between pedestrians and vehicle front using G sensor signal.
- The bumper sensor LH is installed to the back of front bumper fascia LH.

DTC Logic

INFOID:0000000004931157

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2687	PEDEST SENSOR LH [COMM MALFUNCTION]	Communication error of bumper sensor LH	• Open circuit of harness or intermediate connector between Pop-up Engine Hood control unit and bumper sensor LH • Short circuit to power supply, short circuit to ground, or short circuit between lines of harness between Pop-up Engine Hood control unit and bumper sensor LH • Poor connection of Pop-up Engine Hood control unit connector • Poor connection of bumper sensor LH connector • Internal malfunction of bumper sensor LH • Internal malfunction in Pop-up Engine Hood control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-42, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931158

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.CHECK HARNESS CONNECTOR

1. Check connections of harness or intermediate connector between Pop-up Engine Hood control unit and bumper sensor LH, Pop-up Engine Hood control unit connector and bumper sensor LH connector.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Connect the harness connector normally, and then perform DTC CONFIRMATION PROCEDURE again. Refer to HD-42, "DTC Logic".

2.REPLACE BUMPER SENSOR LH

1. Replace the bumper sensor LH. Refer to HD-70, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 3.

3. REPLACE POP-UP ENGINE HOOD CONTROL UNIT

1. Replace the Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2688 BUMPER SENSOR LH

Description

INFOID:0000000004931159

- It detects the collision between pedestrians and vehicle front using G sensor signal.
- The bumper sensor LH is installed to the back of front bumper fascia LH.

DTC Logic

INFOID:0000000004931160

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2688	PEDEST SENSOR LH [UNMATCH]	Accumulation of foreign matter in bumper sensor LH	Accumulation of foreign matter in bumper sensor LH

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-37, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931161

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.REPLACE BUMPER SENSOR LH

1. Replace the bumper sensor LH. Refer to HD-70, "Removal and Installation".
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2691 COLLISION DETECTION

Description

INFOID:0000000004931162

- The Pop-up Engine Hood operates by detecting the collision between pedestrians and vehicle front.
- Keep the Pop-up Engine Hood warning lamp illuminated after the system operation to prevent the Pop-up Engine Hood control unit from being reused.
- For procedures after Pop-up Engine Hood activation, refer to HD-65, "How to open pop-up engine hood after activation".

DTC Logic

INFOID:0000000004931163

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2691	DEPLOY INFOMATION	Pop-up Engine Hood operation	Pop-up Engine Hood operation

Diagnosis Procedure

INFOID:0000000004931164

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

Replace parts after Pop-up Engine Hood activation, refer to HD-65, "Replace parts after pop-up engine hood activation".

B2692, B2693, B2694, B2695, B2696 POP-UP ENGINE HOOD CONTROL UNIT

Description

INFOID:0000000004931165

- It outputs the operation signal to the actuator according to the collision detection information between pedestrians and vehicle front, and the vehicle speed information using the G sensor signal.
- The boosting circuit and additional power supply circuit that can operate the Pop-up Engine Hood even if the battery power supply circuit is broken by a collision are occured.
- The Pop-up Engine Hood control unit is installed to the floor in the trunk room.

DTC Logic

INFOID:0000000004931166

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2692 B2693 B2694 B2695 B2696	POP UP ENGINE HOOD ECU [UNIT MALFUNCTION]	Internal malfunction in Pop-up Engine Hood control unit	Internal malfunction in Pop-up Engine Hood control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-46, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931167

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.REPLACE POP-UP ENGINE HOOD CONTROL UNIT

1. Replace the Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".
   (Check that the identification number of installed Pop-up Engine Hood control unit is correct when replacing.)
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B2697, B2698, B2699, B269A, B269B POP-UP ENGINE HOOD CONTROL UNIT

Description

INFOID:0000000004931168

- It outputs the operation signal to the actuator according to the collision detection information between pedestrians and vehicle front, and the vehicle speed information using the G sensor signal.
- The boosting circuit and additional power supply circuit that can operate the Pop-up Engine Hood even if the battery power supply circuit is broken by a collision are occured.
- The Pop-up Engine Hood control unit is installed to the floor in the trunk room.

DTC Logic

INFOID:0000000004931169

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B2697 B2698 B2699 B269A B269B	POP UP ENGINE HOOD ECU [UNIT MALFUNCTION]	Internal malfunction in Pop-up Engine Hood control unit	Internal malfunction in Pop-up Engine Hood control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to HD-47, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931170

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.REPLACE POP-UP ENGINE HOOD CONTROL UNIT

1. Replace the Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation". (Check that the identification number of installed Pop-up Engine Hood control unit is correct when replacing.)
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B269C, B269D, B269E, B269F, B268A POP-UP ENGINE HOOD CONTROL UNIT

Description

INFOID:0000000004931171

- It outputs the operation signal to the actuator according to the collision detection information between pedestrians and vehicle front, and the vehicle speed information using the G sensor signal.
- The boosting circuit and additional power supply circuit that can operate the Pop-up Engine Hood even if the battery power supply circuit is broken by a collision are occured.
- The Pop-up Engine Hood control unit is installed to the floor in the trunk room.

DTC Logic

INFOID:0000000004931172

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B269C B269D B269E B269F B268A	POP UP ENGINE HOOD ECU [UNIT MALFUNCTION]	Internal malfunction in Pop-up Engine Hood control unit	Internal malfunction in Pop-up Engine Hood control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Can the malfunctioning parts be identified?

YES >> Refer to HD-48, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000004931173

WARNING:

- **Before removal and installation, turn ignition switch OFF and disconnect battery cable from negative terminal, then wait for 3 minutes or more. (This discharges electricity held in the Pop-up Engine Hood additional power supply circuit of the control unit.)**
- **Never use an electric tester such as a circuit tester when checking. (This is to prevent accidental triggering caused by the weak electric current of a tester.)**

1.REPLACE POP-UP ENGINE HOOD CONTROL UNIT

1. Replace the Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".
   (Check that the identification number of installed Pop-up Engine Hood control unit is correct when replacing.)
2. Check “Self diagnostic result” with CONSULT-III.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

B26AF VEHICLE SPEED SIGNAL

Description

INFOID:0000000004931174

Vehicle speed signal (ABS/VDC) data information.

DTC Logic

INFOID:0000000004931175

DTC DETECTION LOGIC

DTC	Self-diagnosis name	DTC Detection Condition	Possible causes
B26AF	VEHICLE SPEED SEN DATA	Vehicle speed signal malfunction	Vehicle speed signal malfunction

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

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

Is DTC detected?

YES >> Refer to BRC-6, "Work Flow (NHPC)".
NO >> Check the intermittent incident. Refer to GI-40, "Intermittent Incident".

POWER SUPPLY AND GROUND CIRCUIT
POP-UP ENGINE HOOD CONTROL UNIT

POP-UP ENGINE HOOD CONTROL UNIT : Diagnosis Procedure

INFOID:0000000004931928

1.CHECK FUSE

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
1	Battery power supply	2 (10A)

Is the fuse fusing?

YES >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.
NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Pop-up Engine Hood control unit connector.
3. Turn ignition switch ON.
4. Check voltage between Pop-up Engine Hood control unit harness connector and ground.

(+)		(–)	Voltage (Approx.)
Pop-up Engine Hood control unit			
Connector	Terminal		
M13	1	Ground	Battery voltage

Is the measurement value normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between Pop-up Engine Hood control unit harness connector and ground.

Pop-up Engine Hood control unit		Ground	Continuity
Connector	Terminal		
M13	2		Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace harness.

POP-UP ENGINE HOOD WARNING LAMP

Description

INFOID:0000000004931935

When malfunction of Pop-up Engine Hood control unit, Pop-up Engine Hood actuator or bumper sensor is detected, Pop-up Engine Hood warning lamp turns ON or blinks so that malfunctioning system is indicated.

Diagnosis Procedure

INFOID:0000000004931937

1.CHECK POP-UP ENGINE HOOD WARNING LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector.
3. Turn ignition switch ON.
4. Check voltage between combination meter harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
Combination meter			
Connector	Terminal		
M53	2	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 2.
NO-1 >> Check 10 A fuse [No. 4, located in the fuse block (J/B)].
NO-2 >> Check harness for open or short between combination meter and fuse.

2.CHECK POP-UP ENGINE HOOD WARNING LAMP SIGNAL

1. Turn ignition switch OFF.
2. Connect combination meter connector.
3. Disconnect Pop-up Engine Hood control unit connector.
4. Turn ignition switch ON.
5. Check voltage between Pop-up Engine Hood control unit harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
Pop-up Engine Hood control unit			
Connector	Terminal		
M13	15	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".
NO >> GO TO 3.

3.CHECK COMBINATION METER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector.
3. Check continuity between combination meter harness connector and Pop-up Engine Hood control unit harness connector.

Combination meter		Pop-up Engine Hood control unit		Continuity
Connector	Terminal	Connector	Terminal	
M53	10	M13	15	Existed

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

Combination meter		Ground	Continuity
Connector	Terminal		
M53	10		Not existed

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-124, "Removal and Installation".
NO >> Repair or replace harness.

ECU DIAGNOSIS INFORMATION

POP-UP ENGINE HOOD CONTROL UNIT

Reference Value

INFOID:0000000004931181

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
CONNECT COND	When the connector is locked	LOCK
	When the connector is in partial joint condition or not connected	UNLOC
	During connector lock diagnosis	WAIT

DTC Index

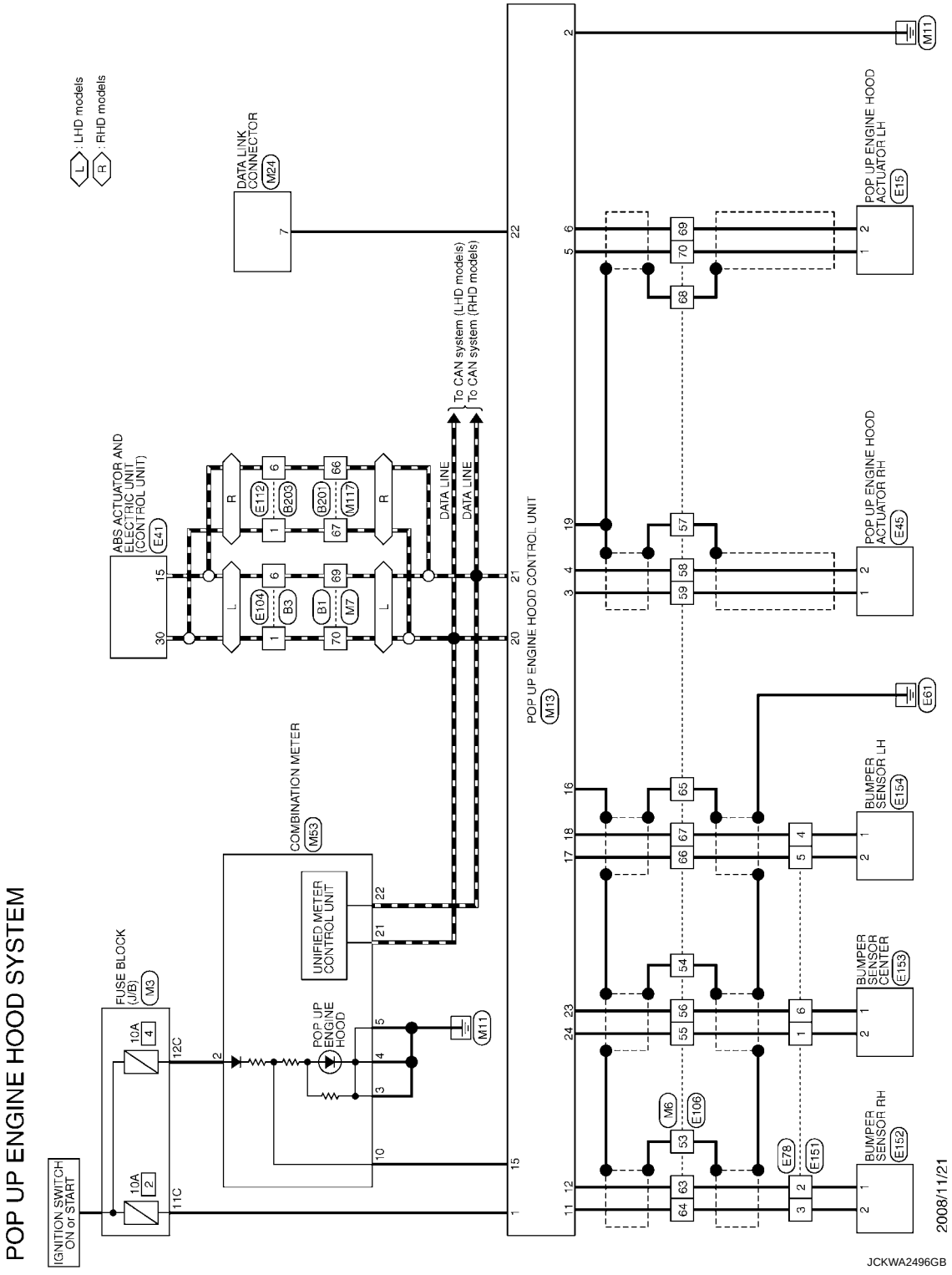
INFOID:0000000004931182

CONSULT-III Display		DTC Detection Condition		Reference
No malfunction detected		Pop-up engine hood warning lamp indicates an error while in the USER MIODE	• After completing repairs, trouble diagnosis results recorded in “SELF-DIAG RESULTS [MEMORY]” before the repair are not erased. • An intermittent error is occurred.	Refer to HD-9, "Diagnosis Description".
			Low battery voltage (approximately 9 V or less)	Charge the battery, and then check the Pop-up Engine Hood warning lamp again.
		System normal		—
U1000	CAN COMM CIRCUIT	Pop-up Engine Hood control unit cannot transmit and receive CAN communication signal for 2 seconds or more		HD-17
U1010	CONTROL UNIT (CAN)	When the Pop-up Engine Hood control unit detects the CAN communication internal circuit malfunction		HD-18
B2670	ACTUATOR RH [OPEN]	Open circuit of Pop-up Engine Hood actuator RH circuit		HD-19
B2671	ACTUATOR RH [VB-SHORT]	Short circuit to power supply circuit of Pop-up Engine Hood actuator RH circuit		HD-21
B2672	ACTUATOR RH [GND-SHORT]	Short circuit to ground circuit of Pop-up Engine Hood actuator RH circuit		HD-22
B2673	ACTUATOR RH [SHORT]	Short circuit between lines of Pop-up Engine Hood actuator RH circuit		HD-24
B2674	ACTUATOR LH [OPEN]	Open circuit of Pop-up Engine Hood actuator LH circuit		HD-26
B2675	ACTUATOR LH [VB-SHORT]	Short circuit to power supply circuit of Pop-up Engine Hood actuator LH circuit		HD-28
B2676	ACTUATOR LH [GND-SHORT]	Short circuit to ground circuit of Pop-up Engine Hood actuator LH circuit		HD-29
B2677	ACTUATOR LH [SHORT]	Short circuit between lines of Pop-up Engine Hood actuator LH circuit		HD-31
B2680	PEDEST SENSOR RH [UNIT MALFUNCTION]	Internal malfunction of bumper sensor RH		HD-33
B2681	PEDEST SENSOR RH [COMM MALFUNCTION]	Communication error of bumper sensor RH		HD-34

CONSULT-III Display		DTC Detection Condition	Reference
B2682	PEDEST SENSOR RH [UNMATCH]	Accumulation of foreign matter in bumper sensor RH	HD-36
B2683	PEDEST SENSOR CTR [UNIT MALFUNC-TION]	Internal malfunction of bumper sensor center	HD-37
B2684	PEDEST SENSOR CTR [COMM MALFUNC-TION]	Communication error of bumper sensor center	HD-38
B2685	PEDEST SENSOR CTR [UNMATCH]	Accumulation of foreign matter in bumper sensor center	HD-40
B2686	PEDEST SENSOR LH [UNIT MALFUNC-TION]	Internal malfunction of bumper sensor LH	HD-41
B2687	PEDEST SENSOR LH [COMM MALFUNC-TION]	Communication error of bumper sensor LH	HD-42
B2688	PEDEST SENSOR LH [UNMATCH]	Accumulation of foreign matter in bumper sensor LH	HD-44
B268A	POP UP ENGINE HOOD ECU [UNIT MALFUNC-TION]	Internal malfunction in Pop-up Engine Hood control unit	HD-48
B2691	DEPLOY INFOMA-TION	Pop-up Engine Hood operation	HD-45
B2692-B2696	POP UP ENGINE HOOD ECU [UNIT MALFUNC-TION]	Internal malfunction in Pop-up Engine Hood control unit	HD-46
B2697-B269B			HD-47
B269C-B269F			HD-48
B26AF	VEHICLE SPEED SEN DATA	Vehicle speed signal malfunction	HD-49

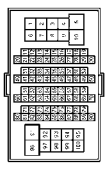
Wiring Diagram - POP-UP ENGINE HOOD SYSTEM -

INFOID:0000000004931183



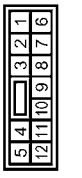
POP UP ENGINE HOOD SYSTEM

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



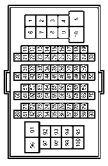
Terminal No.	Color of Wire	Signal Name [Specification]
69	P	–
70	L	–

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS



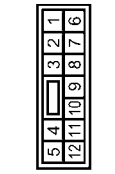
Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
6	P	–

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
66	P	–
67	L	–

Connector No.	B203
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	–
6	P	–

Connector No.	E15
Connector Name	POP UP ENGINE HOOD ACTUATOR LH
Connector Type	HK02FY-3V-EX

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	ACTUATOR FLH+
2	LG	ACTUATOR FLH-

Connector No.	E41
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	AEZ43FB-AJZ4

Terminal No.	Color of Wire	Signal Name [Specification]
15	P	CAN-L
30	L	CAN-H

Connector No.	E45
Connector Name	POP UP ENGINE HOOD ACTUATOR RH
Connector Type	HK02FY-3V-EX

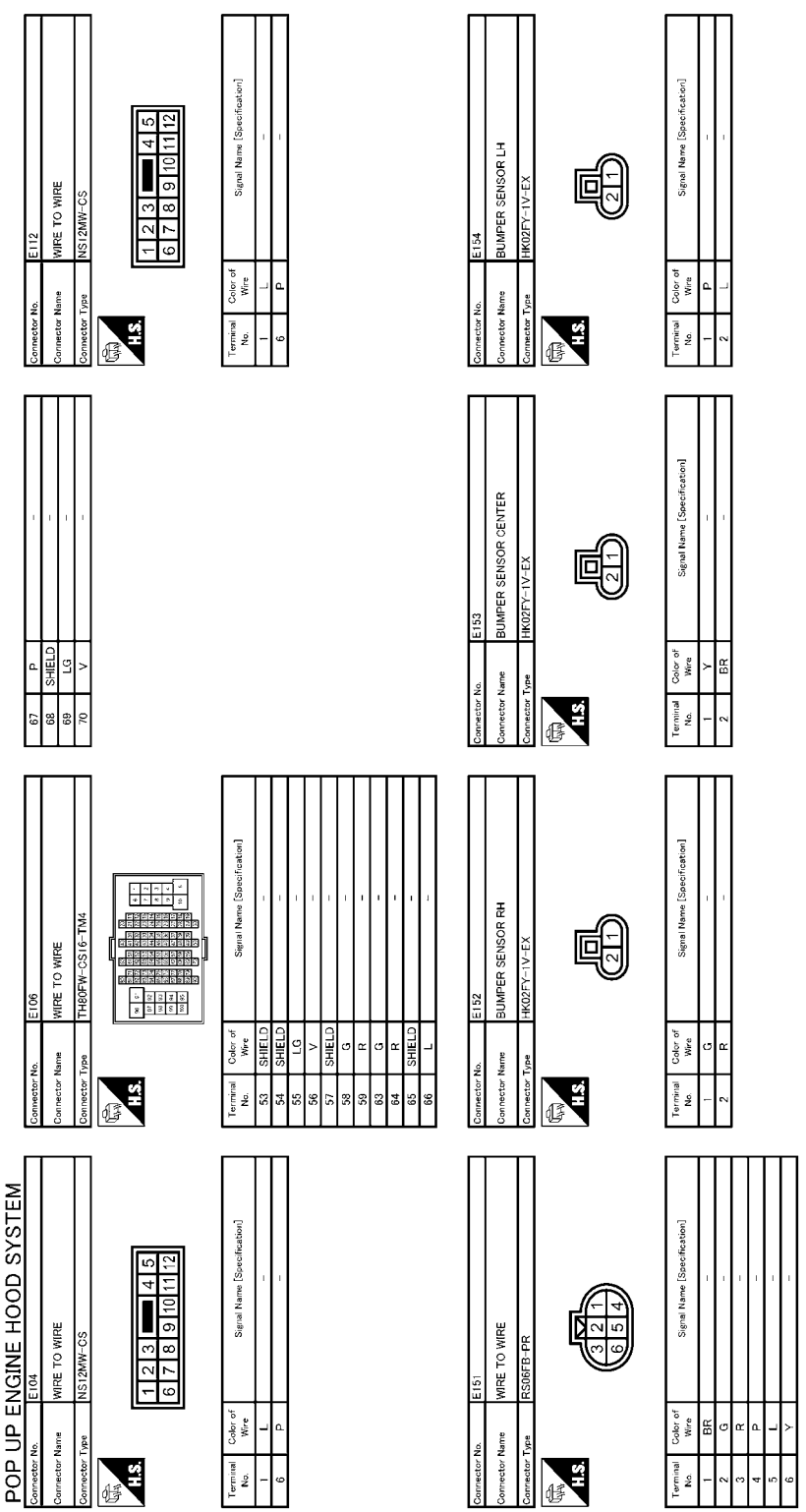
Terminal No.	Color of Wire	Signal Name [Specification]
1	R	ACTUATOR FRH+
2	G	ACTUATOR FRH-

Connector No.	E78
Connector Name	WIRE TO WIRE
Connector Type	RS06MB

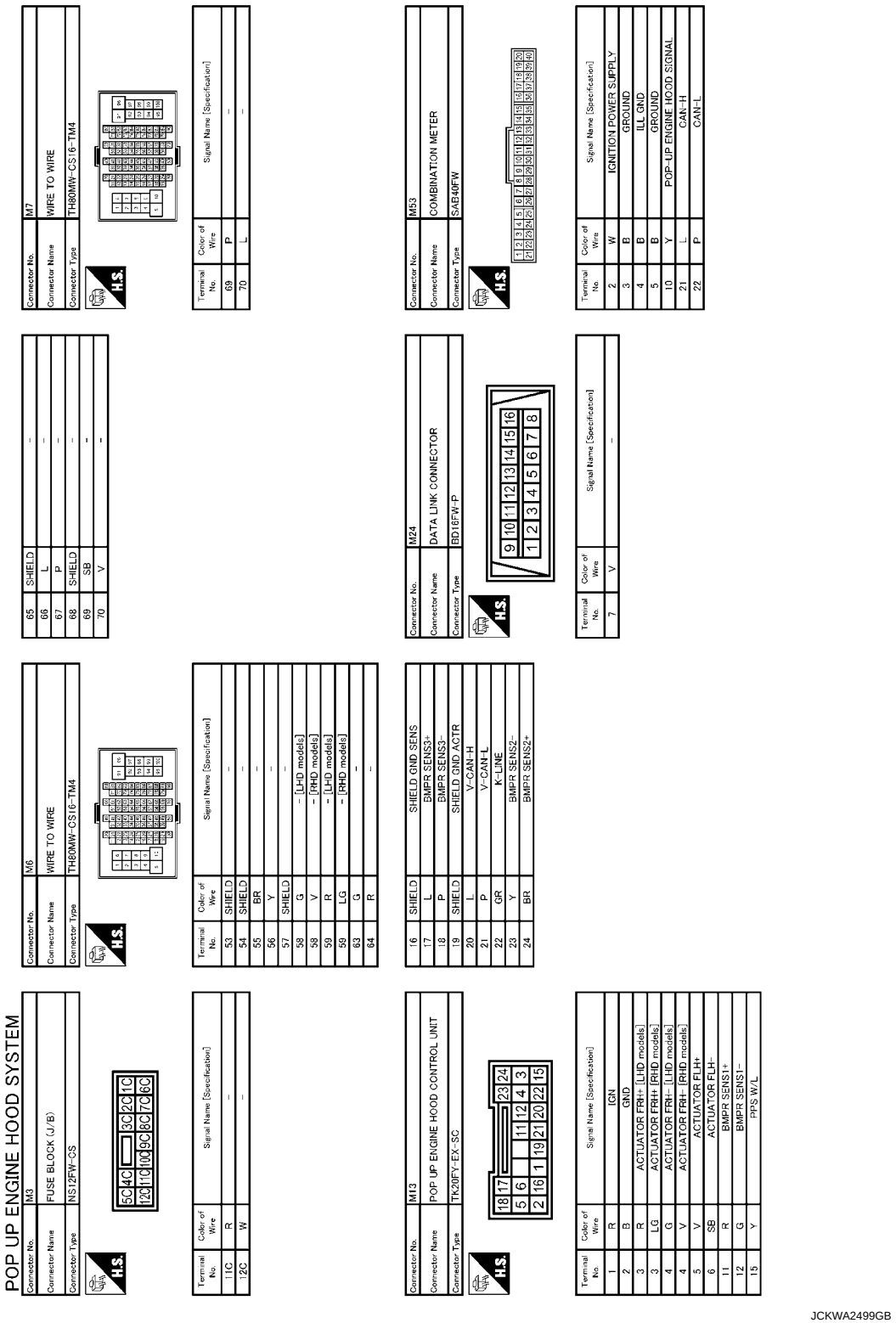
Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	–
2	G	–
3	R	–
4	P	–
5	L	–
6	V	–

JCKWA2497GB

POP UP ENGINE HOOD SYSTEM



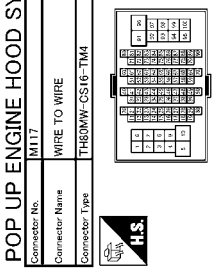
JCKWA2498GB



JCKWA2499GB

POP UP ENGINE HOOD SYSTEM

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
66	P	–
67	L	–

JCKWA2500GB

SYMPTOM DIAGNOSIS

POP-UP ENGINE HOOD WARNING LAMP DOES NOT TURN OFF WHEN IGNITION SWITCH IS ON

Description

INFOID:0000000004931185

WARNING:

Always disconnect the harness connector of Pop-up Engine Hood actuator in advance to prevent accidental triggering caused by static when disconnecting the Pop-up Engine Hood control unit harness connector.

Diagnosis Procedure

INFOID:0000000004931186

1.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit for Pop-up Engine Hood control unit. Refer to HD-50, "POP-UP ENGINE HOOD CONTROL UNIT : Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace Pop-up Engine Hood control unit. Refer to HD-73, "Removal and Installation".
NO >> Repair or replace malfunction part.

POP-UP ENGINE HOOD WARNING LAMP DOES NOT TURN ON WHEN IGNITION SWITCH IS ON

Description

INFOID:0000000004931187

WARNING:

Always disconnect the harness connector of Pop-up Engine Hood actuator in advance to prevent accidental triggering caused by static when disconnecting the Pop-up Engine Hood control unit harness connector.

Diagnosis Procedure

INFOID:0000000004931188

1.CHECK POP-UP ENGINE HOOD WARNING LAMP

Check Pop-up Engine Hood warning lamp. Refer to HD-51, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> Repair or replace malfunction part.

PRECAUTION

PRECAUTIONS

Precaution for Pop Up Engine Hood

INFOID:0000000004931189

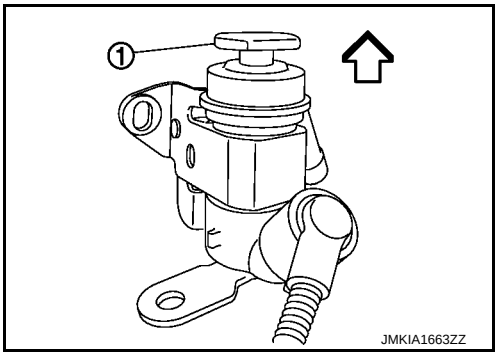
WARNING:

- **Before removal or installation of the pop-up engine hood and harness, always turn OFF the key switch, disconnect the battery negative terminal, and wait for 3 minutes or more. (To discharge the accumulated electricity in the pop-up engine hood control unit auxiliary power supply circuit)**
- **Never use pneumatic or electric tools, etc., to remove or install components of the pop-up engine hood.**
- **Never repair the harness for the pop-up engine hood with a solder. Also, always avoid contact or interference between the harness and other parts.**
- **Never use an electric tester like a circuit tester, etc., when inspecting the pop-up engine hood circuit or other individual parts. (To prevent activation due to the low voltage of the tester)**
- **Never allow foreign materials like a screwdriver, etc., to enter the pop-up engine hood harness connector. (To prevent activation due to static electricity)**
- **The yellow harness connector is used with the pop-up engine hood for identification purposes compared to other harnesses.**

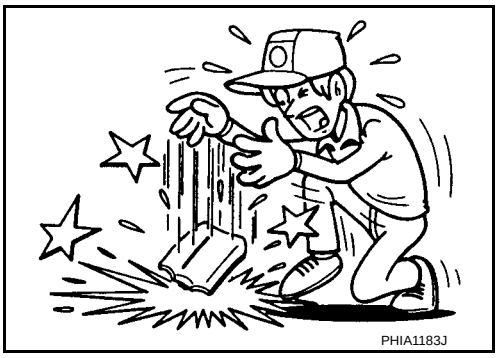
Caution

INFOID:0000000004931190

- Never disassemble the Pop-up Engine Hood component parts. (not disassembled)
- Face the actuator head (1) up when the Pop-up Engine Hood actuator is placed on a surface as a unit. (to prevent accidental deployment)
- Never hold the actuator head, harness, or connector when handling the Pop-up Engine Hood actuator.



- Never subject the Pop-up Engine Hood component parts to impact by dropping. If it is subjected to impact, replace it.



- Always to protect the Pop-up Engine Hood component parts from oil, grease, solvents, and water.
- Always replace non-reusable parts with new ones.
- Always tighten nuts and bolts to the specified torque.
- Perform the Pop-up Engine Hood circuit diagnosis using CONSULT-III or Pop-up Engine Hood warning lamp diagnosis. (Never use an electric tester such as a circuit tester.)

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

INFOID:0000000004931191

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain

types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted.
Information necessary to service the system safely is included in the “SRS AIR BAG” and “SEAT BELT” of this Service Manual.

WARNING:

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

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

WARNING:

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

Precaution Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:0000000005409889

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.
If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.
If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Turn the push-button ignition switch to ACC position.
   (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

Precaution for Battery Service

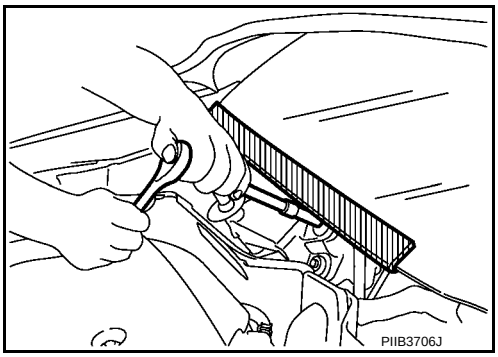
INFOID:0000000004931192

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

Precaution for Procedure without Cowl Top Cover

INFOID:0000000004931193

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



Precaution for Disposal

INFOID:0000000004931194

- Always operate the pop up engine hood actuator when disposing the pop up engine hood actuator. Refer to HD-75, "Disposal Method" when disposing of activated pop up engine hood actuator.
- Check that there are no people within 5.0 m (16.4 ft) of pop up engine hood actuator, and then start the operation.
- The operation occurs with a fairly loud noise. Be sure to announce the occurrence of the sound before the operation. Avoid deploying in a residential area or downtown as much as possible.
- At the moment of deployment/activation and afterward, a considerable amount of smoke is generated. Be sure to work in a well-ventilated area. Never work near a fire alarm or smoke detector.
- Be sure to wait for 10 minutes or more because the pop up engine hood actuator is very hot after activation.
- Wear gloves to handle the activated pop up engine hood actuator.
  (Never touch it with bare hands.)
- Never splash water on the activated pop up engine hood actuator.
- After work is complete, always wash hands.
- Prepare a fully-charged battery.
- Never dispose of an inactivated pop up engine hood actuator.

REMOVAL AND INSTALLATION

HOW TO OPEN POP-UP ENGINE HOOD AFTER ACTIVATION

How to open pop-up engine hood after activation

INFOID:0000000004931195

1. Pull hood lock lever and unlock primary lock.
2. Remove metal clips from hood side stud ball portion on LH/RH hood stay and disconnect connection of hood stay and hood side stud ball while 2 workers hold both sides of hood rear end.
   CAUTION:
   Always perform the operation with 2 workers. Each worker must hold both sides of hood rear end because hood falls down when disconnecting connection of hood side stud ball.
3. While 2 workers hold both sides of hood rear end, another workers must unlock secondary lock lever. If secondary lock lever cannot unlock, lightly push down hood front end while laying hand on the lever, pull secondary lock lever in the upward direction, and then unlock.
   CAUTION:
   2 workers must always hold both sides of hood rear, otherwise, hood may become unbalanced, and damage fender after unlocking secondary lock.
4. Open hood while holding both sides of hood rear end.
   CAUTION:
   Always open hood while 2 workers hold both sides of hood rear end, otherwise, hood rear end may damage fender.

Replace parts after pop-up engine hood activation

INFOID:0000000004931196

○:Replace, △:Replace depending on damage

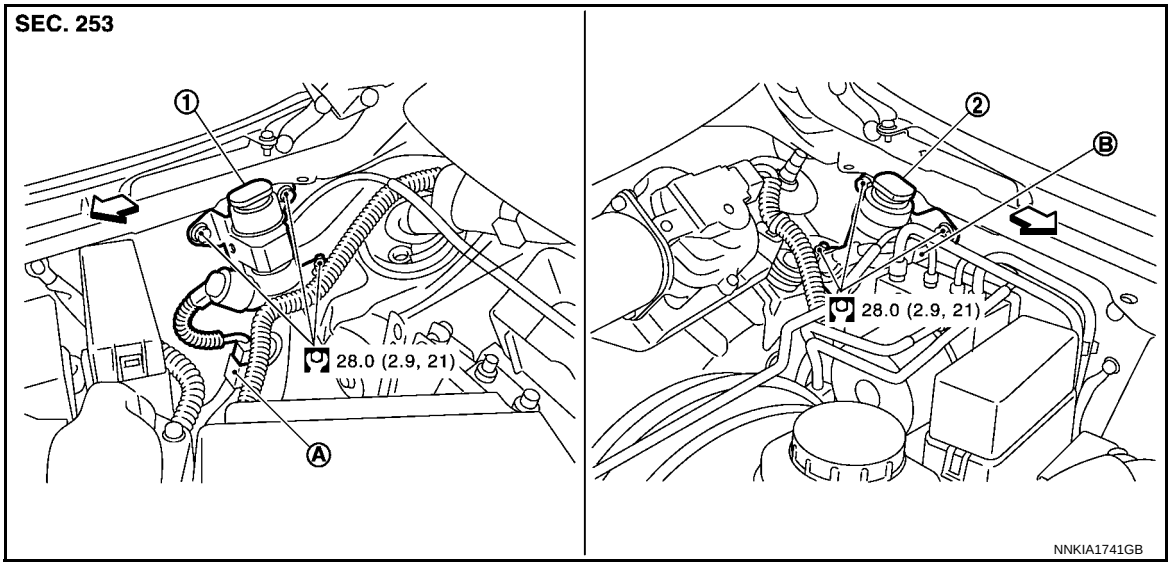
	System components	Replace parts	Reference page
1.	Pop-up engine hood actuator (LH/RH)	○	HD-66
2.	Hood hinge (LH/RH)	○	DLK-306, "HOOD HINGE : Removal and Installation"
3.	Pop-up engine hood control unit	○	HD-73
4.	Hood lock stay	○	DLK-333, "HOOD LOCK : Removal and Installation (NHPC)"
5.	Front bumper facia	△	EXT-15, "Removal and Installation"
6.	Bumper sensor (LH,Center, and RH)	○	HD-70
7.	Hood	△	DLK-303, "HOOD ASSEMBLY : Removal and Installation"
8.	Energy absorber	△	EXT-15, "Removal and Installation"
9.	Bumper reinforcement	△	EXT-15, "Removal and Installation"
10.	Front corner sensor harness	△	—

POP-UP ENGINE HOOD ACTUATOR

Exploded View

INFOID:0000000004931197

LHD models



1. Pop up engine hood actuator RH
2. Pop up engine hood actuator LH
A. Pop up engine hood actuator RH harness connector
B. Pop up engine hood actuator LH harness connector

⇦ : Vehicle front

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

Removal and Installation

INFOID:0000000004931198

WARNING:

- **Before removal and installation, be sure to turn the ignition switch OFF and disconnect the battery cable from the negative terminal, then wait for 3 minutes or more.**
- **Never use pneumatic or electric tools to remove or install components.**
- **Never turn the ignition switch ON because DTC is recorded in the pop up engine hood control unit when the ignition switch turns ON under the condition that the pop up engine hood actuator connector is disconnected.**

REMOVAL

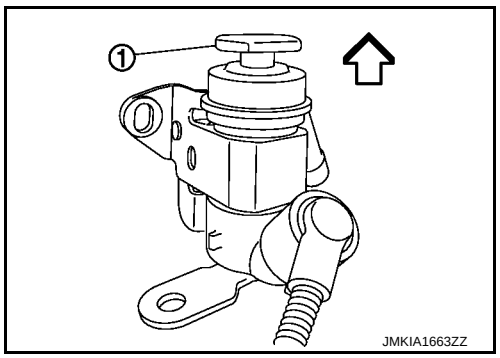
1. Fully open hood assembly.
2. Remove front wiper arm (LH/RH). Refer to WW-138, "Removal and Installation".
3. Remove hoodledge cover and cowl top cover. Refer to EXT-26, "Removal and Installation".
4. Remove IPDM E/R from the mounting bracket. Refer to PCS-36, "Removal and Installation".
5. Remove pop up engine hood actuator (LH/RH) mounting bolts/nuts.
6. Disconnect pop up engine hood actuator (LH/RH) harness connector.
7. Remove pop up engine hood actuator (LH/RH).

CAUTION:

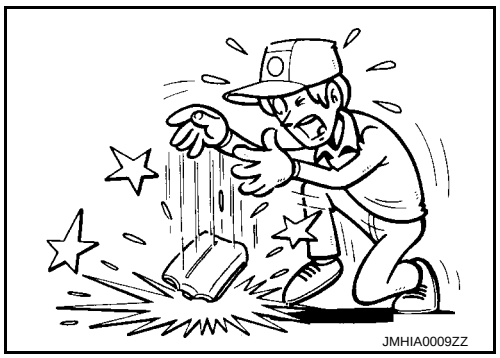
- **Never check the pop up engine hood actuator harness connector for power distribution using a tester.**
- **Never insert foreign materials such as a screwdriver into the pop up engine hood actuator harness connector.**

- **Face the actuator head (1) up when the pop up engine hood actuator is placed on a surface as a unit.**
- **Never hold the actuator head, harness, or connector when handling the pop up engine hood actuator.**

⇦ : Vehicle upper side



- **Never disassemble the pop up engine hood actuator.**
- **Never subject the pop up engine hood actuator to impact by dropping. If it is dropped or subjected to impact, replace it.**



- **Be sure to protect the pop up engine hood actuator from oil, grease, solvents, and water.**
- **Replace the pop up engine hood actuator if the pop up engine hood is activated.**

INSTALLATION

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

CAUTION:

- **For installation of pop up engine hood actuator, temporarily tighten the mounting bolts on the front and rear of the vehicle, and then tighten the mounting nut on the bottom of the actuator. Tighten the mounting bolt on the front of the vehicle, and then tighten the mounting bolt on the rear of the vehicle.**
- **Be careful not to damage any harnesses when installing.**
- **If the pop up engine hood warning lamp detects a DTC, check the malfunctioning parts, reset with a self-diagnosis after repairing, or erase the memory using CONSULT-III. Refer to HD-9, "Diagnosis Description".**
- **After finishing the work, use the pop up engine hood warning lamp to confirm that the system operates properly.**

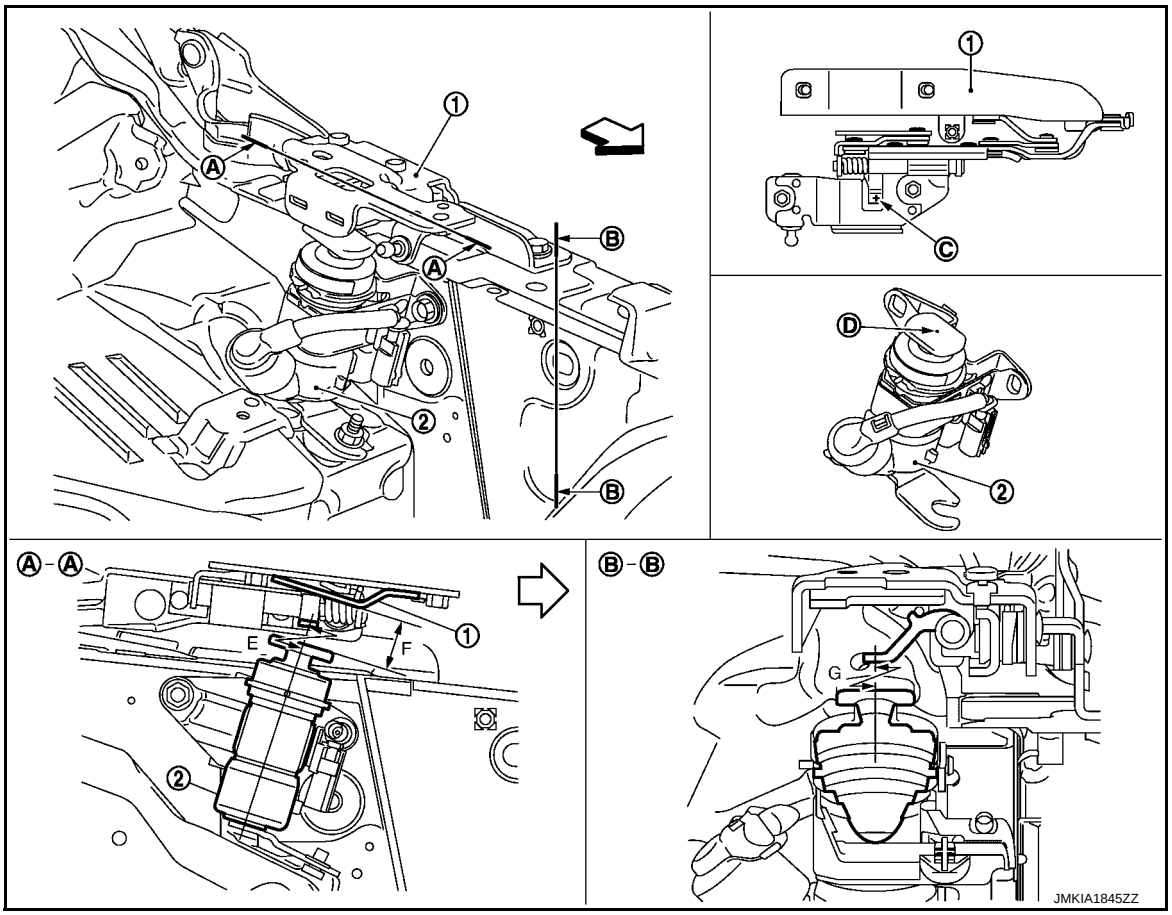
Inspection

INFOID:0000000004931199

INSPECTION DESCRIPTION

Remove hood hinge cover, and then check that the center position and clearance for hood hinge and actuator are within the specified value.

LHD models



1. Hood hinge
2. Pop up engine hood actuator
C. Hood hinge lever center marking-off (+)
D. Punch mark
E. Center position in longitudinal direction of actuator – hood hinge lever center marking-off (+)
F. Clearance in vertical direction of actuator – hood hinge
G. Center position in horizontal direction of actuator – hood hinge lever center marking-off (+)

⇦ : Vehicle front

SPECIFIED DIMENSION

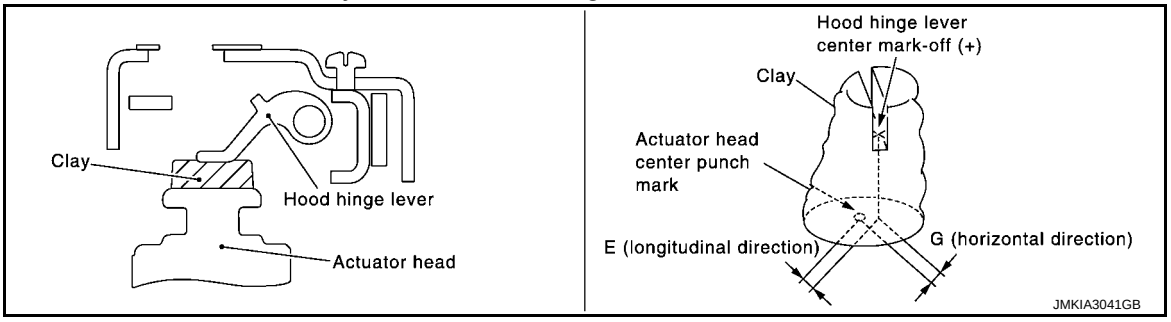
Location		Dimension
E	**Vehicle longitudinal direction center position (hood hinge lever & actuator head portion)**	**–5.0 – 5.0 mm (–0.197 – 0.197 in)**
F	**Vehicle vertical direction clearance (hood hinge & actuator head portion)**	**20.9 – 22.3 mm (0.823 – 0.878 in)**
G	**Vehicle horizontal direction center position (hood hinge lever & actuator head portion)**	**–5.0 – 5.0 mm (–0.197 – 0.197 in)**

INSPECTION PROCEDURE

Check the Vehicle Longitudinal and Horizontal Direction Center Position

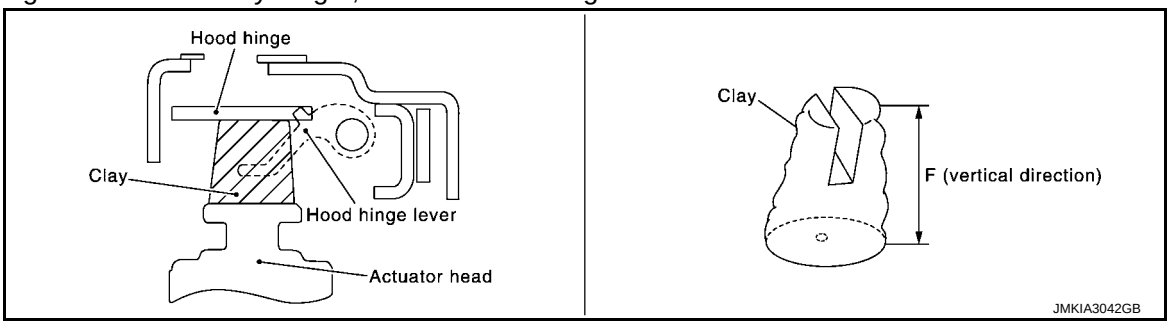
1. Fully open hood assembly.
2. Set the clay on the punch mark that is on actuator head.
   NOTE:
   Set the clay so that the hood hinge lever center marking-off comes contact to the clay while hood assembly is being fully closed.

3. Fully close hood assembly to the lock position, and then fully open hood assembly again.
4. Put two confirmation marks on side surface of the deformed clay. (Put one confirmation mark using white paint, etc. to indicate vehicle longitudinal direction and the other to indicate vehicle horizontal direction)
   NOTE:
   Each confirmation mark is to indicate vehicle longitudinal and horizontal direction correctly, after the deformed clay is being removed.
5. Remove the deformed clay from actuator head.
   NOTE:
   Check that the actuator punch mark is traced to the deformed clay back surface, and the hood hinge lever center marking-off is traced to the deformed clay top surface.
6. Check the vehicle longitudinal direction center position (E) and horizontal direction center position (G) by measuring distance between the actuator punch mark and the hood hinge lever center marking-off that are traced on the deformed clay, as shown in the figure.



Check clearance for vehicle vertical direction

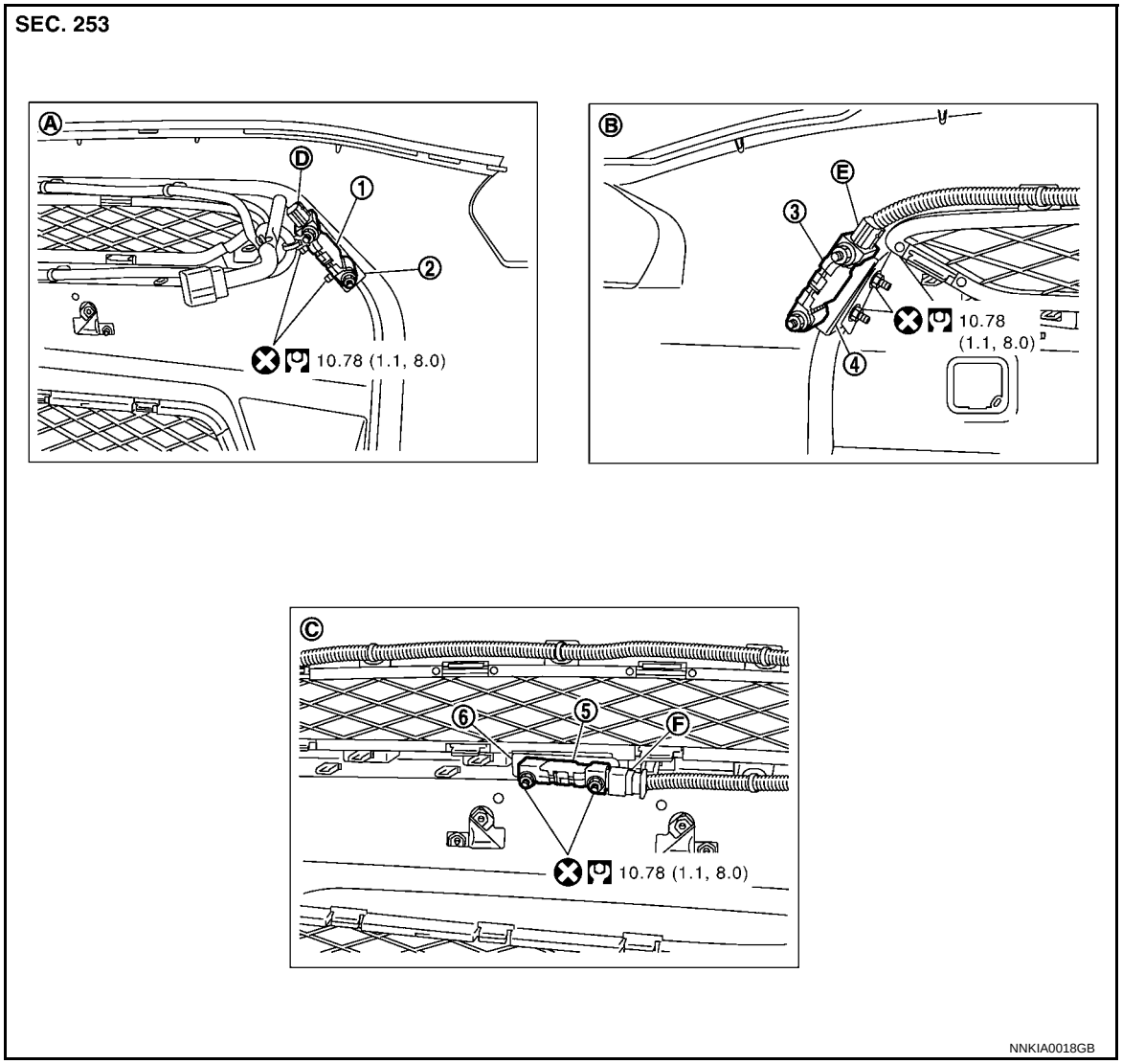
1. Fully open hood assembly.
2. Set the clay on the punch mark that is on actuator head.
   NOTE:
   Set the clay so that the hood hinge contact surface to actuator comes contact to the clay while hood assembly is being fully closed.
3. Fully close hood assembly to the lock position, and then fully open hood assembly again.
4. Remove the deformed clay from actuator head. Check the vehicle vertical direction clearance (F) by measuring the deformed clay height, as shown in the figure.



BUMPER SENSOR

Exploded View

INFOID:0000000004931200



1.	Bumper sensor (RH)	2.	Sensor bracket (RH) (Bumper sensor assembly parts)	3.	Bumper sensor (LH)
4.	Sensor bracket (LH) (Bumper sensor assembly parts)	5.	Bumper sensor (CENTER)	6.	Sensor bracket (CENTER) (Bumper sensor assembly parts)
A.	Back of front bumper fascia RH	B.	Back of front bumper fascia LH	C.	Back of front bumper fascia center
D.	Bumper sensor (RH) harness connector	E.	Bumper sensor (LH) harness connector	F.	Bumper sensor (CENTER) harness connector

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

Removal and Installation

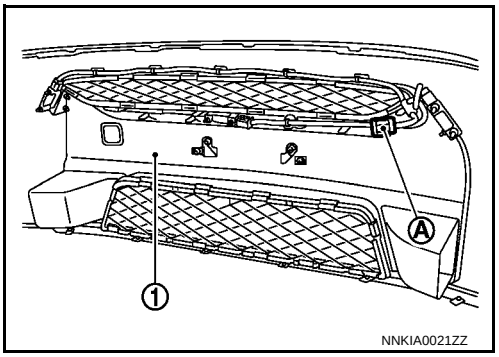
INFOID:0000000004931201

WARNING:

- **Before removal or installation, be sure to turn the ignition switch OFF and disconnect the battery cable from the negative terminal, then wait for 3 minutes or more.**
- **Never use pneumatic or electric tools to remove or install components.**
- **Never turn the ignition switch ON because DTC is recorded in the pop up engine hood control unit when the ignition switch turns ON under the condition that the bumper sensor connector is disconnected.**

REMOVAL

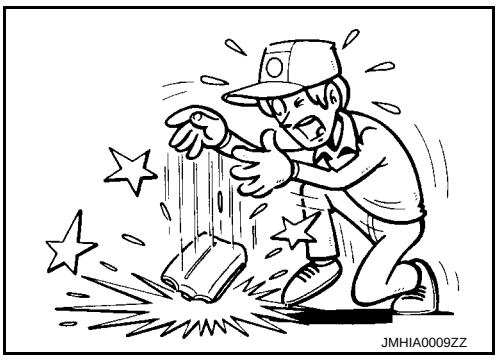
1. Remove the front bumper. Refer to EXT-15, "Removal and Installation".
2. Disconnect the bumper sensor harness connector (A) from bumper fascia (1).



3. Remove the bumper sensor (LH,CENTER, and RH).

CAUTION:

- **Never insert foreign materials such as a screwdriver into the bumper sensor harness connector.**
- **Never subject bumper sensor to impact by dropping. If it is dropped or subjected to impact, replace it.**



- **Never disassemble the bumper sensor.**
- **Be sure to protect the bumper sensor from oil, grease, solvents, and water.**
- **The bumper sensor mounting nuts are not reusable. Always use new ones and tighten them to the specified torque.**
- **Always replace new front bumper and the bumper sensor (LH, CENTER, and RH) as a set if there are dents, cracks, or deformation in the front bumper.**
- **Replace the bumper sensor if the pop up engine hood is activated.**

INSTALLATION

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

CAUTION:

- **Be careful not to damage any harnesses when installing.**
- **If the pop up engine hood warning lamp detects a DTC, check the malfunctioning parts, reset with a self-diagnosis after repairing, or erase the memory using CONSULT-III. Refer to HD-9, "Diagnosis Description".**
- **After finishing the work, use the pop up engine hood warning lamp to confirm that the system operates properly.**

FRONT BUMPER REPLACEMENT STANDARD (GUIDELINE) BY EXTERNAL INPUT

Judge whether the parts should be replaced or not according to the following reference table when the bumper sensor is judged as " NO DTC " by pop up engine hood warning lamp or CONSULT-III diagnosis.

O: Replacement is not necessary.X: Replacement is necessary. (Replace the front bumper and bumper sensor LH, CENTER, and RH as a set.)

Reference table

		Degree of bumper damage					
		Scratches, dents	Gaps, clearance, or distortion caused by the mounting bolt looseness	Gaps or clearance caused by the mounting clip being disassembled	Concave, restoration (back surface whitening)	Buckling (back surface whitening)	Cracks, deformation
Bumper damaged parts	Around the bumper sensor RH mounting position	○	○	X	X	X	X
	Around the bumper sensor (CENTER) mounting position	○	○	X	X	X	X
	Around the bumper sensor (LH) mounting position	○	○	X	X	X	X
	Around both ends of bumper	○	○	○	X	X	X
	Around bottom of bumper	○	○	○	X	X	X

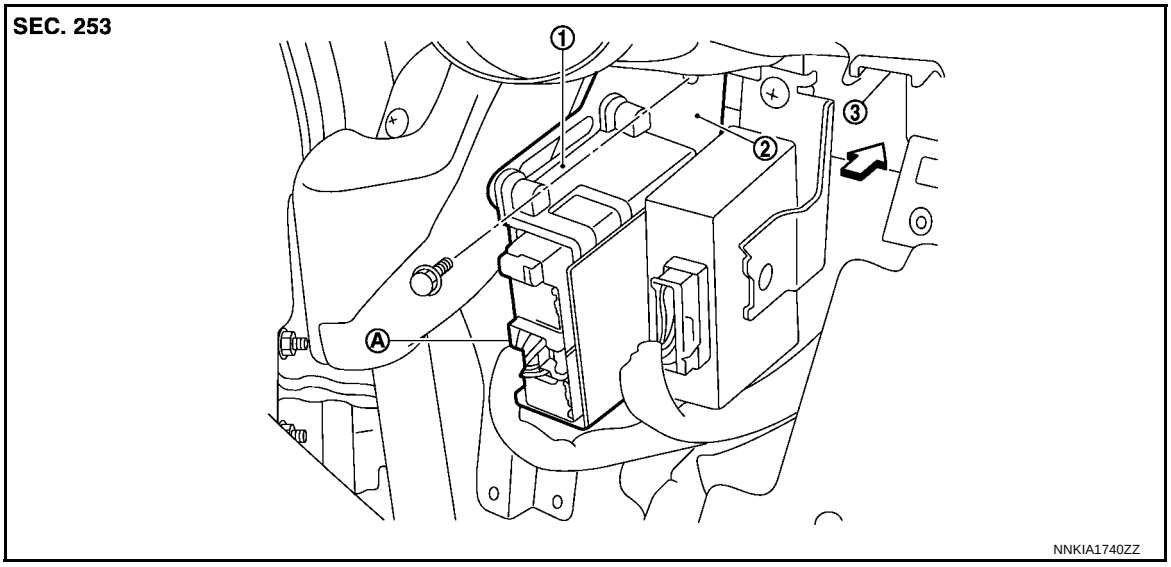
NOTE:
Reasons for replacing the front bumper and bumper sensor LH, CENTER, and RH as a set.
- The entire front bumper acts as the bumper sensor.
- The entire bumper sensor is influenced even if only one of front bumper is damaged.

POP-UP ENGINE HOOD CONTROL UNIT

Exploded View

INFOID:0000000004931202

LHD models



1. Pop up engine hood control unit
2. Pop up engine hood control unit mounting bracket
3. Instrument panel assembly

A. Pop up engine hood control unit harness connector

⇦ : Vehicle front

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

Removal and Installation

INFOID:0000000004931203

WARNING:

- **Before removal or installation, be sure to turn the ignition switch OFF and disconnect the battery cable from the negative terminal, then wait for 3 minutes or more.**
- **Always disconnect the harness connector of pop up engine hood actuator in advance to prevent accidental triggering caused by static when disconnecting the pop up engine hood control unit harness connector.**

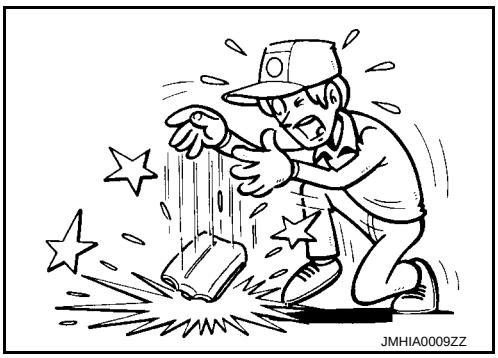
REMOVAL

1. Remove the instrument lower panel (LH) and instrument pad B. Refer to IP-12, "Removal and Installation".
2. Remove the pop up engine hood mounting bolt.
3. Disconnect the pop up engine hood harness connector, and then remove the pop up engine hood control unit.

CAUTION:

- **Never insert foreign materials such as a screwdriver into the pop up engine hood harness connector.**

- **Never subject the pop up engine hood control unit to impact by dropping. If it is dropped or subjected to impact, replace it.**


JMHIA0009ZZ

- **Never disassemble the pop up engine hood control unit.**
- **Be sure to protect the pop up engine hood control unit from oil, grease, solvents, and water.**
- **Replace the pop up engine hood control unit if the pop up engine hood is deployed.**

INSTALLATION

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

CAUTION:

- **Be careful not to damage any harnesses when installing.**
- **If the pop up engine hood warning lamp detects a DTC, check the malfunctioning parts, reset with a self-diagnosis after repairing, or erase the memory using CONSULT-III.**
- **After finishing the work, use the pop up engine hood warning lamp to confirm that the system operates properly. Refer to HD-9, "Diagnosis Description".**

CHECK ITEMS AFTER INSTALLATION OF POP UP ENGINE HOOD CONTROL UNIT

- Check the connector lock status of pop up engine hood control unit on DATA MONITOR. Securely connect the connector if necessary.
- Confirm the pop up engine hood control unit identification number using CONSULT-III.

WARNING:

If the pop up engine hood control unit of an incorrect specification is assembled, the pop up engine hood may not be activated normally in case of an emergency.

Specification	Pop up engine hood control unit identification number
LHD and RHD models	C011

DISPOSAL OF POP-UP ENGINE HOOD COMPONENT PARTS

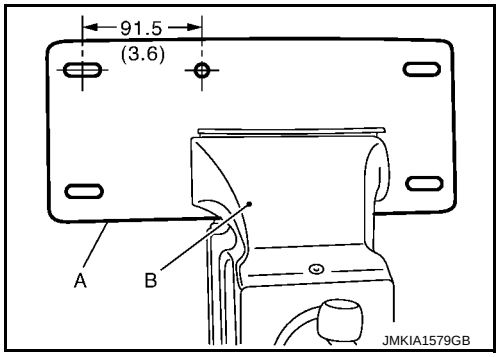
Actuator (Deployed as a Unit)

INFOID:0000000004931204

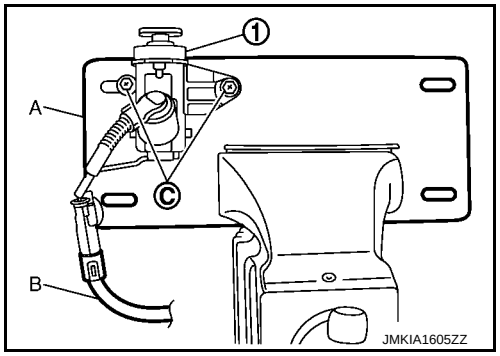
POP UP ENGINE HOOD ACTUATOR

1. Prepare a fully-charged battery.
2. Secure the fixing bracket (SST: KV99105300) (A) with a vise, and then drill an 8.5 mm (0.335 in) diameter hole as shown in the figure.

Unit: mm (in.)

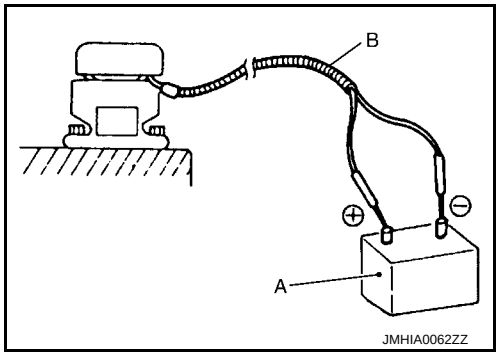


3. Fix the pop up engine hood actuator (1) to the fixing bracket (SST: KV99105300) (A) using bolt/nut (C).
4. Connect the deployment tool (SST: KV99104600) (B) and the pop up engine hood actuator harness connector.



5. Connect the test pin on the tip of the deployment tool (SST: KV99104600) (B) to the battery (A) terminal, and then operate it.

CAUTION:
Check that there are no people within a 5.0 m (16.4 ft) radius of pop up engine hood actuator and be sure to give warning of operation start.



Disposal Method

INFOID:0000000004931205

Dispose the activated pop up engine hood actuator in a tightly closed plastic bag after waiting 10 minutes or more.