QUICK REFERENCE CHART: VERSA NOTE

Engine Tune-up Data

INFOID:0000000009809546

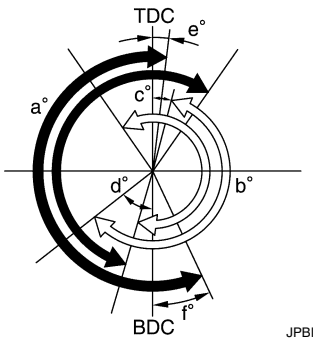
GENERAL SPECIFICATIONS

Engine type		HR16DE
Cylinder arrangement		In-line 4
Displacement cm^3 (cu in)		1,598 (97.51)
Bore and stroke mm (in)		78.0× 83.6 (3.071 ×3.291)
Valve arrangement		DOHC
Firing order		1-3-4-2
Number of piston rings	Compression	2
	Oil	1
Compression ratio		9.8:1
Compression pressure kPa (kg/cm^2, psi) / 200 rpm	Standard	1,510 (15.4, 219)
	Minimum	1,270 (12.95, 184)
	Differential limit between cylinders	100 (1.0, 14.5)

Valve Timing

Unit: degree

Valve timing
⇦: Intake valve
⬅: Exhaust valve



JPBIA4228ZZ

a	b	c	d	e	f
216	228	11 (–27) ATDC	59 (-21) ABDC	-1 (49) ATDC	37 (-13) BBDC

( ): Valve timing control “ON”

Drive Belt

INFOID:0000000009809547

DRIVE BELT

Belt Deflection

Location		Deflection adjustment *		Unit: mm (in)
		Used belt		New belt
		Limit	After adjusted	
Drive belt	With A/C	10.0 (0.39)	4.9 - 5.2 (0.19 - 0.20)	4.1 - 4.4 (0.16 - 0.17)
	Without A/C	9.1 (0.36)	4.3 - 4.7 (0.17 - 0.19)	3.7 - 3.9 (0.146 - 0.154)
Applied pushing force		98.1 N (10.0 kg-f, 22.0 lb-f)		

*: When engine is cold.

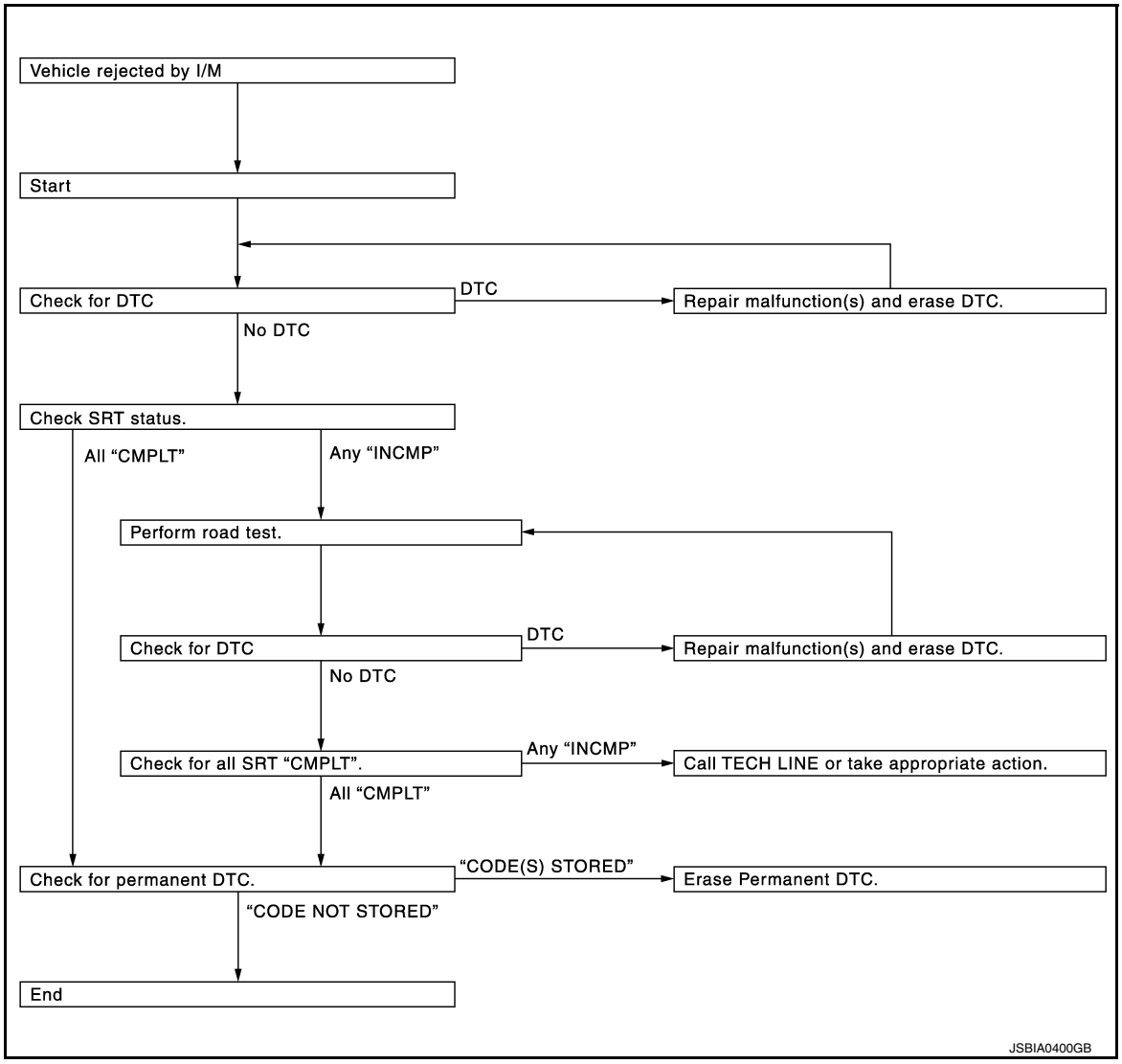
SYMPTOM DIAGNOSIS

OVERHEATING CAUSE ANALYSIS

Troubleshooting Chart

INFOID:0000000009444790

	Symptom		Check items	
Cooling system parts malfunction	Poor heat transfer	Water pump malfunction	Worn or loose drive belt	—
		Thermostat stuck closed	Thermostat	
		Damaged fins	Dust contamination or paper clogging	
			Physical damage	
		Clogged radiator cooling tube	Excess foreign material (rust, dirt, sand, etc.)	
	Reduced air flow	Cooling fan does not operate	Fan assembly	—
		High resistance to fan rotation		
		Damaged fan blades		
	Damaged radiator shroud	—	Radiator shroud	—
	Improper engine coolant mixture ratio	—	Engine coolant viscosity	—
	Poor engine coolant quality	—	Periodic maintenance	—
	Insufficient engine coolant	Engine coolant leaks	Cooling hose	Loose clamp
				Cracked hose
			Water pump	Poor sealing
			Radiator cap	Loose
				Poor sealing
			Radiator	O-ring for damage, deterioration or improper fitting
				Cracked radiator tank
				Cracked radiator core
			Reservoir tank	Cracked reservoir tank
		Overflowing reservoir tank	Exhaust gas leaking into cooling system	Cylinder head deterioration
				Cylinder head gasket deterioration



SRT Set Driving Pattern

INFOID:0000000009020663

CAUTION:

P0222, P0223 TP SENSOR

DTC Logic

INFOID:0000000009020767

DTC DETECTION LOGIC

NOTE:
If DTC P0222 or P0223 is displayed with DTC P0643, first perform the trouble diagnosis for DTC P0643. Refer to EC-352, "DTC Logic".

DTC No.	Trouble diagnosis content	DTC detecting condition	Possible cause
P0222	Throttle position sensor 1 circuit low input	An excessively low voltage from the TP sensor 1 is sent to ECM.	• Harness or connectors (TP sensor 1 circuit is open or shorted.) • Electric throttle control actuator (TP sensor 1)
P0223	Throttle position sensor 1 circuit high input	An excessively high voltage from the TP sensor 1 is sent to ECM.	

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If DTC Confirmation Procedure has been previously conducted, always turn ignition switch OFF and wait at least 10 seconds before conducting the next test.
TESTING CONDITION:
Before performing the following procedure, confirm that battery voltage is more than 10 V at idle.

>> GO TO 2.

2.PERFORM DTC CONFIRMATION PROCEDURE

1. Start engine and let it idle for 1 second.
2. Check DTC.

Is DTC detected?

YES >> Go to EC-264, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000009020768

1.CHECK GROUND CONNECTION

1. Turn ignition switch OFF.
2. Check ground connection E15. Refer to Ground Inspection in GI-44, "Circuit Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace ground connection.

2.CHECK THROTTLE POSITION SENSOR 1 POWER SUPPLY CIRCUIT

1. Disconnect electric throttle control actuator harness connector.
2. Turn ignition switch ON.
3. Check the voltage between electric throttle control actuator harness connector and ground.

Electric throttle control actuator		Ground	Voltage
Connector	Terminal		
F7	2	Ground	Approx. 5 V

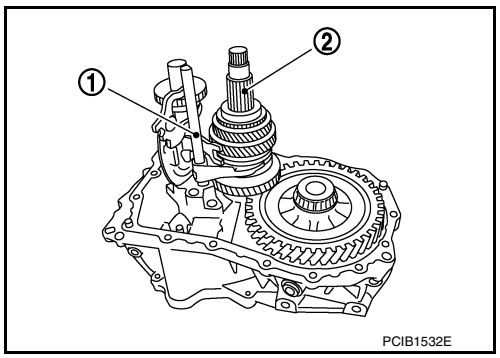
Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair open circuit or short to ground or short to power in harness or connectors.

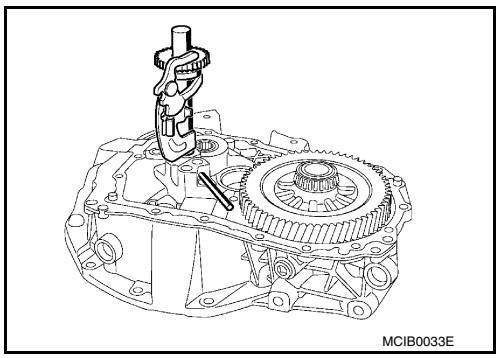
3.CHECK THROTTLE POSITION SENSOR 1 GROUND CIRCUIT FOR OPEN AND SHORT

1. Turn ignition switch OFF.
2. Disconnect ECM harness connector.

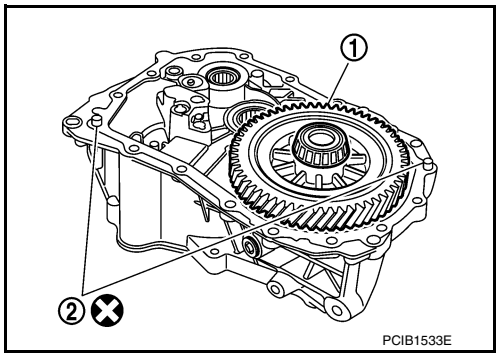
18. Remove 1st-2nd fork rod assembly (1) and mainshaft assembly (2) from clutch housing at the same time.
19. Remove retaining pin from 1st-2nd shift fork, using suitable tool.
20. Remove 1st-2nd shift fork from 1st-2nd shift fork rod.



21. Remove retaining pin from reverse gear, using suitable tool.
22. Remove reverse gear from clutch housing.

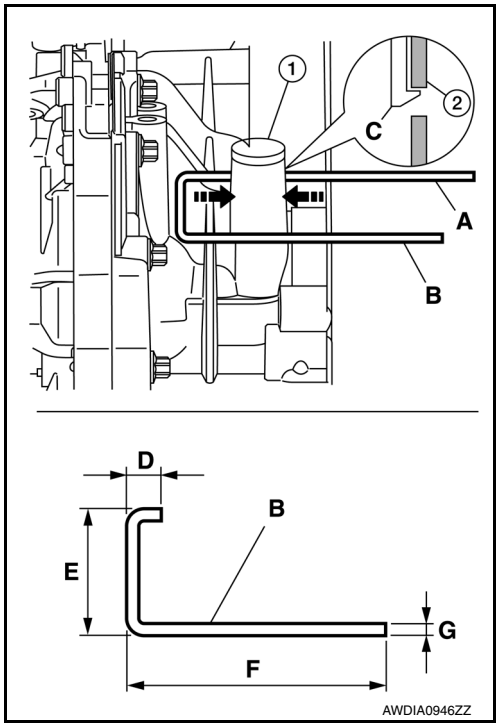


23. Remove final drive (1) from clutch housing.
24. Remove magnet and dowel pins (2) from clutch housing.



25. Remove plug (1) from clutch housing (2).
    - (C): Plug
    - (D): 15 mm (0.59 in)
    - (E): 45 mm (1.77 in)
    - (F): 95 mm (3.74 in) or more
    - (G): 4 mm (0.16 in)

a. Install suitable tool (A) and (B) to the holes of clutch housing as shown.
b. While pressing the suitable tool (A) and (B) in the direction of the arrows shown, remove plug from clutch housing.



U1002 SYSTEM COMM (CAN)

DTC Logic

INFOID:0000000009637535

DTC DETECTION LOGIC

DTC	Display item	Malfunction detected condition	Possible cause
U1002	SYSTEM COMM(CAN)	When ABS actuator and electric unit (control unit) is not transmitting or receiving CAN communication signal for 2 seconds or less.	• CAN communication line • ABS actuator and electric unit (control unit)

DTC CONFIRMATION PROCEDURE

1.PRECONDITIONING

If “DTC CONFIRMATION PROCEDURE” has been previously conducted, always turn ignition switch OFF and wait at least 10 seconds before conducting the next test.

>> GO TO 2.

2.DTC REPRODUCTION PROCEDURE

With CONSULT
1. Turn the ignition switch ON.
2. Perform self diagnosis for “ABS”.

Is DTC “U1002” detected?

YES >> Proceed to BRC-87, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000009637536

CAUTION:
- **Never apply 7.0 V or more to the measurement terminal.**
- **Use a tester with open terminal voltage of 7.0 V or less.**
- **Turn the ignition switch OFF and disconnect the battery cable from the negative terminal when checking the harness.**

1.CHECK CAN DIAGNOSIS SUPPORT MONITOR

1. Select “ABS” and “CAN Diagnosis Support Monitor” in order with CONSULT.
2. Check malfunction history between each control unit connected to ABS actuator and electric unit (control unit).

Check the result of “PAST”?

All items are “OK”>>Refer to GI-41, "Intermittent Incident".
“TRANSMIT DIAG” is other than “OK”>>GO TO 2.
A control unit other than ABS actuator and electric unit (control unit) is anything other than “OK”>>GO TO 3.

2.CHECK TRANSMITTING SIDE UNIT

Check the ABS actuator and electric unit (control unit) harness connector terminals 10 and 11 for damage or loose connection.

Is the inspection result normal?

YES >> Erase self-diagnosis results. Then perform self-diagnosis for “ABS” with CONSULT.
NO >> Recheck terminals for damage or loose connection.

3.CHECK APPLICABLE CONTROL UNIT

Check damage or loose connection of each CAN communication line harness connector terminals.

Is the inspection result normal?

YES >> Erase self-diagnosis results. Then perform self-diagnosis for applicable control unit with CONSULT.
NO >> Recheck terminals for damage or loose connection.

3.CHECK A/C SWITCH POWER SUPPLY CIRCUIT FOR OPEN

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between front air control harness connector and BCM harness connector.

Front air control		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M33	13	M18 (without Intelligent Key)	27	Yes
		M97 (with Intelligent Key)		

Is the inspection result normal?

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

4.CHECK A/C SWITCH POWER SUPPLY CIRCUIT FOR SHORT

Check continuity between front air control harness connector and ground.

Front air control		—	Continuity
Connector	Terminal		
M33	13	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-70, "Removal and Installation" (with Intelligent Key) or BCS-127, "Removal and Installation" (without Intelligent Key).
NO >> Repair harness or connector.

Component Inspection

INFOID:0000000009540999

1.CHECK A/C CONTROL

Check continuity front air control terminals.

Terminal		Condition	Continuity
13	6	A/C switch: ON	Yes

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace front air control. Refer to HAC-56, "Removal and Installation".

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description

INFOID:0000000009760388

BEFORE REPLACEMENT

When replacing BCM, save or print current vehicle specification with CONSULT configuration before replacement.

NOTE:

If “READ CONFIGURATION” can not be used, use the “WRITE CONFIGURATION - Manual selection” after replacing BCM.

AFTER REPLACEMENT

CAUTION:

When replacing BCM, always perform “WRITE CONFIGURATION” with CONSULT. Or not doing so, BCM control function does not operate normally.

- **Complete the procedure of “WRITE CONFIGURATION” in order.**
- **Configuration is different for each vehicle model. Confirm configuration of each vehicle model.**
- **If you set incorrect “WRITE CONFIGURATION”, incidents might occur.**

NOTE:

When replacing BCM, perform the system initialization (NATS) (if equipped).

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure

INFOID:0000000009760389

1. SAVING VEHICLE SPECIFICATION

Ⓐ CONSULT Configuration

Perform “READ CONFIGURATION” to save or print current vehicle specification. Refer to BCS-58, "Description".

NOTE:

If “READ CONFIGURATION” can not be used, use the “WRITE CONFIGURATION - Manual selection” after replacing BCM.

>> GO TO 2.

2. REPLACE BCM

Replace BCM. Refer to BCS-70, "Removal and Installation".

>> GO TO 3.

3. WRITING VEHICLE SPECIFICATION

Ⓐ CONSULT Configuration

Perform “WRITE CONFIGURATION - Config file” or “WRITE CONFIGURATION - Manual selection” to write vehicle specification. Refer to BCS-58, "Work Procedure".

>> GO TO 4.

4. INITIALIZE BCM (NATS) (IF EQUIPPED)

Perform BCM initialization. (NATS)

>> WORK END

BACK DOOR HINGE

BACK DOOR HINGE : Removal and Installation

INFOID:0000000009645192

REMOVAL

1. Remove back door assembly. Refer to DLK-279, "BACK DOOR ASSEMBLY : Removal and Installation".
2. Partially remove back door weatherstrip. Refer to DLK-284, "BACK DOOR WEATHER-STRIP : Removal and Installation".
3. Remove back door hinge nuts and bolts (body side) and then remove back door hinge.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- **Apply anticorrosive agent onto the surface between hinge and body side.**
- **After installation, perform the back door assembly adjustment procedure. Refer to DLK-281, "BACK DOOR ASSEMBLY : Adjustment".**

BACK DOOR STAY

BACK DOOR STAY : Removal and Installation

INFOID:0000000009645194

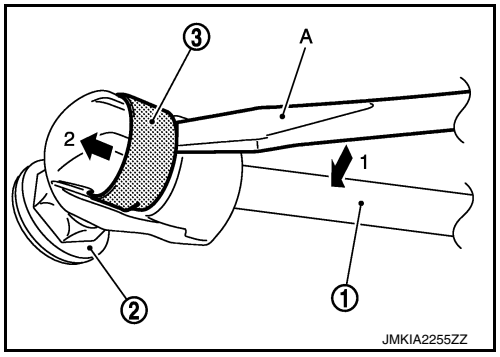
REMOVAL

1. Support the back door with a suitable tool too prevent it from falling.

   WARNING:

   Body injury may occur if no supporting rod is holding the back door open when removing the back door stay.

2. Remove the metal clip (3) located on the connection between the back door stay (1) and the stud ball (2) (back door side) by using a flat blade screwdriver (A).
3. Remove the back door stay (back door side).



4. In the same way, remove the back door stay from the body side.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Check the back door open/close operation after installation.

BACK DOOR STAY : Disposal

INFOID:0000000009645195

BACK DOOR STAY DISPOSAL

WARNING:

When performing disposal procedure, wear protective gloves and glasses.

Connector No.	E39
Connector Name	HORN RELAY
Connector Color	WHITE

H.S.

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

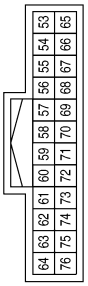
Connector No.	E42
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
2	Y	F/L MAIN (+B2)

Connector No.	E46
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
60	B	GND (SIGNAL)
61	P	CAN-L
62	L	CAN-H
64	LG	HOOD SW
73	SB	HORN RLY

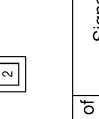
Connector No.	B6
Connector Name	REAR DOOR SWITCH LH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	V	–

Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE

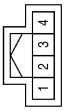
H.S.



Terminal No.	Color of Wire	Signal Name
3	LG	–

Connector No.	B16
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE

H.S.



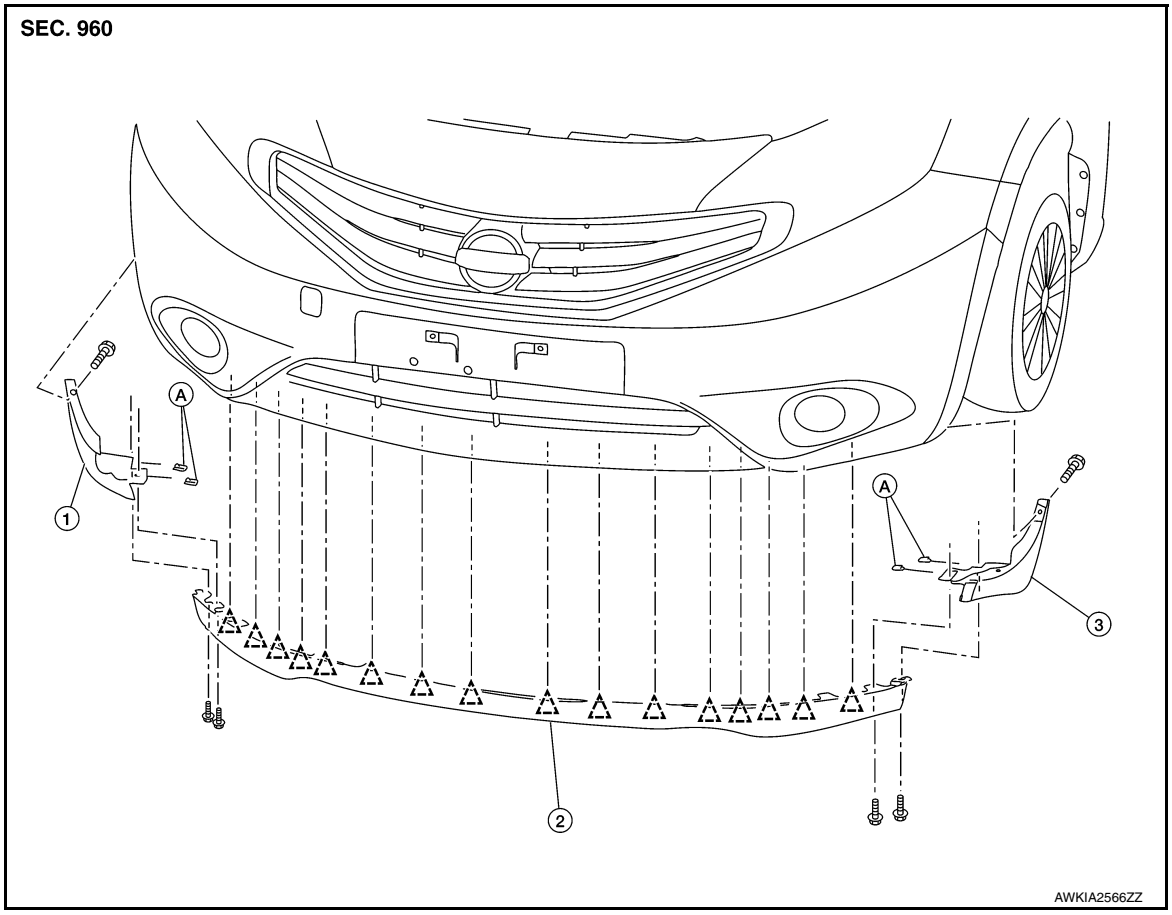
Terminal No.	Color of Wire	Signal Name
3	L	–

AAKIA1388GB

FRONT SPOILER

Exploded View

INFOID:0000000008969519



1. Front fascia side deflector (RH)
2. Front air spoiler
3. Front fascia side deflector (LH)
A. J nut
Clip

Removal and Installation

INFOID:0000000008969520

REMOVAL

1. Remove front fascia side deflector screws from each front fascia side deflector (LH/RH) and remove.
2. Remove front air spoiler clips and front air spoiler.

INSTALLATION

Installation is in the reverse order of removal.

NOTE:

When installing front fascia side deflectors (LH/RH), install parts as shown to front bumper fascia.

PARKING, LICENSE PLATE AND TAIL LAMPS CONNECTERS

Connector No.	M8
Connector Name	JOINT CONNECTOR-M02
Connector Color	GREEN

H.S.

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

Terminal No.	Color of Wire	Signal Name
8	L	–
9	L	–
19	P	–
20	P	–

Connector No.	M10
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
4	L	–
7	L	–
8	L	–
13	P	–
16	P	–
17	P	–

Connector No.	M16
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
3	R	–

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
2	BR	COMBINATION SW INPUT 5
3	Y	COMBINATION SW INPUT 4
4	L	COMBINATION SW INPUT 3
5	G	COMBINATION SW INPUT 2
6	R	COMBINATION SW INPUT 1
32	P	COMBINATION SW OUTPUT 5
33	V	COMBINATION SW OUTPUT 4
34	W	COMBINATION SW OUTPUT 3
35	GR	COMBINATION SW OUTPUT 2
36	LG	COMBINATION SW OUTPUT 1
39	L	CAN-H
40	P	CAN-L

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

41	42	43	44	45	46	47	48	49
50	51	52	53	54	55
---	---	---	---	---	---

Terminal No.	Color of Wire	Signal Name
42	Y	BATTERY (FUSE)
50	G	BATTERY (F/L)
55	B	GND

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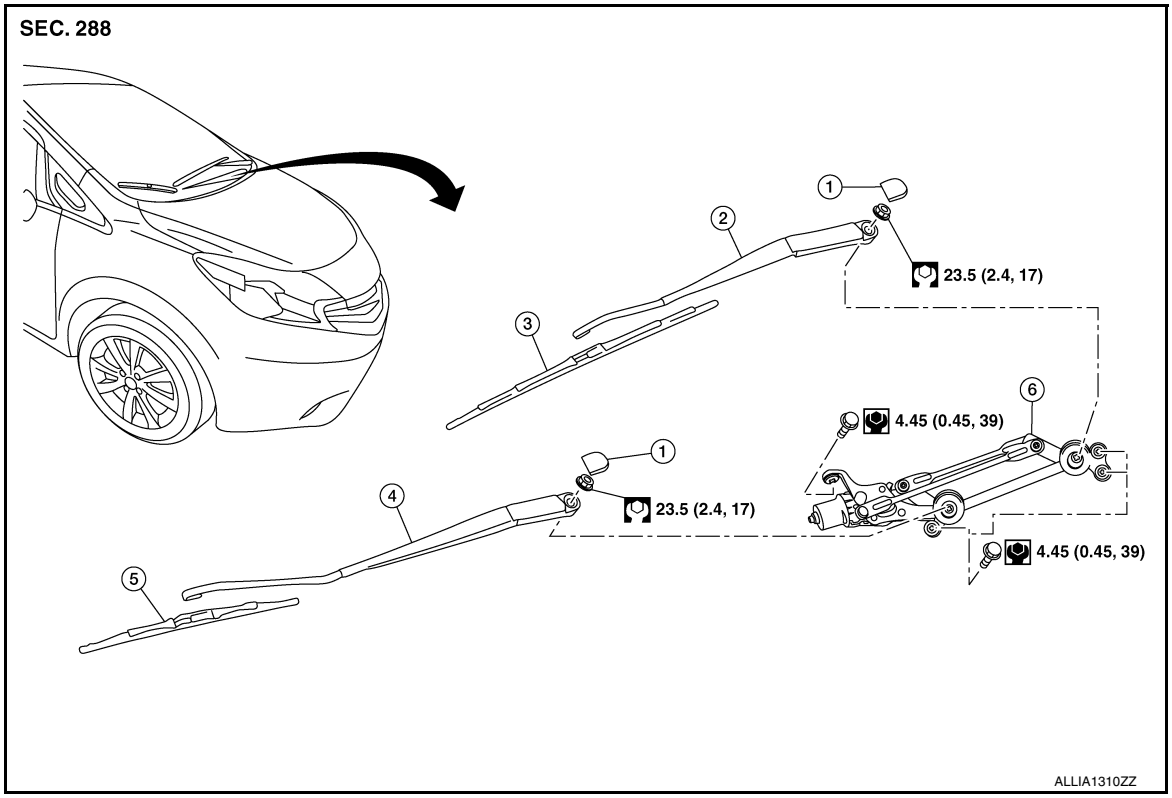
FRONT WIPER ARM

Exploded View

INFOID:0000000009578782



1. Wiper arm cap (LH/RH)
2. Wiper arm (LH)
3. Wiper blade (LH)
4. Wiper arm (RH)
5. Wiper blade (RH)
6. Front wiper drive

Removal and Installation

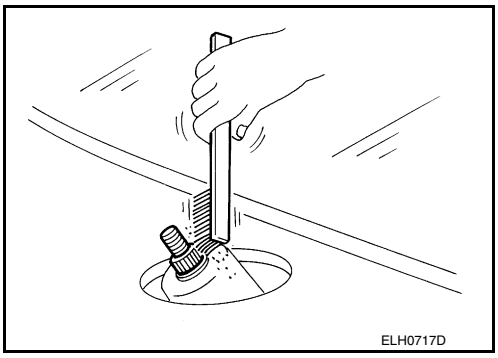
INFOID:0000000009578783

REMOVAL

1. Open hood.
2. Operate wiper to move it to the auto stop position.
3. Remove wiper arm cap.
4. Remove wiper arm nut and wiper arm.

INSTALLATION

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



2. Operate wiper motor to move the wiper to the auto stop position.
3. Adjust the front wiper blade position. Refer to WW-69, "Adjustment".

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
103 (LG)	Ground	Front defrost switch	Input	—		—
104 (V)	Ground	CVT shift selector (park position switch) power supply	Output	Push-button ignition switch ON		9 – 16 V
105 (SB)	Ground	Stop lamp switch 2	Input	Push-button ignition switch OFF		Battery voltage
106 (Y)	Ground	Blower relay control	Output	Push-button ignition switch	OFF or ACC	0 – 0.5 V
					ON	Battery voltage

[1]: With CVT

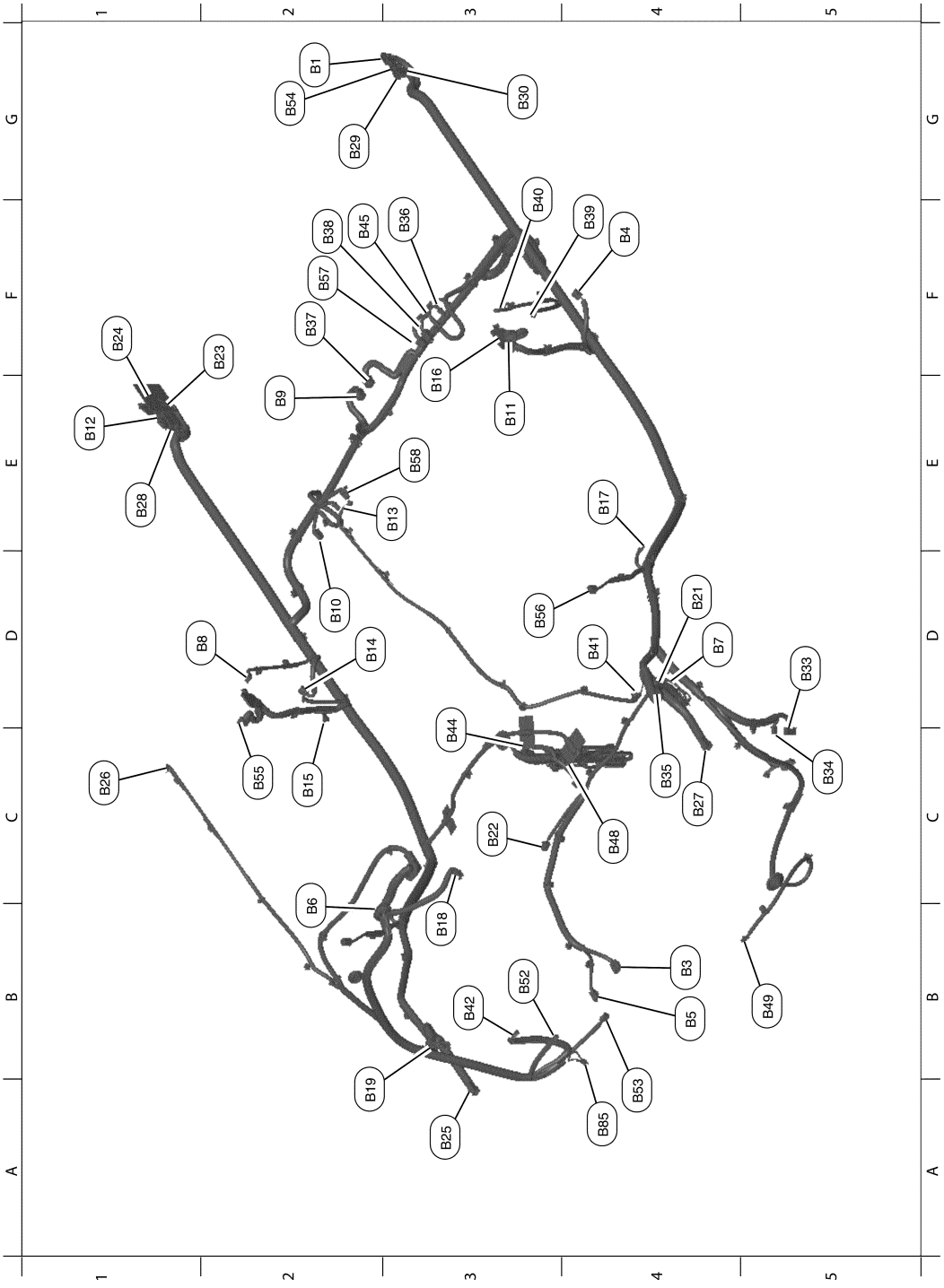
[2]: With M/T

Fail-safe

INFOID:0000000009693584

BCM performs fail-safe control when the following DTCs are detected.

CONSULT Display	Fail-safe	Cancellation
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC
B2198: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2557: VEHICLE SPEED	—	When the following CAN signal status (vehicle speed signal) becomes consistent • Vehicle speed signal (ABS) • Vehicle speed signal (Meter)
B2601: SHIFT P SIGNAL	—	500 ms after the following signal reception status becomes consistent • Park position switch signal • P range signal (CAN)
B2602: SHIFT P DIAG	—	5 seconds after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Park position switch signal: P position (push selector button) or except P position (9 – 16 V) • Vehicle speed: 4 km/h (2.5 MPH) or more
B2603: SHIFT POSITION	—	500 ms after any of the following BCM recognition conditions are fulfilled • Status 1 - Ignition switch is in the ON position - Park position switch signal: P position (push selector button) or except P position (9 – 16 V) - P/N position signal: Except P and N positions (0 – 1.5 V) • Status 2 - Ignition switch is in the ON position - Park position switch signal: P position (release selector button) (0 – 1.5 V) - P/N position signal: P or N positions (9 – 16 V)



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G2	B1	W/24	: To M49	E1	B28	W/2	: To M11
B4	B3	GR/3	: Evap control system pressure sensor	G2	B29	W/16	: To M12
F4	B4	W/10	: To D201	G3	B30	W/24	: To M113
B4	B5	B/2	: Evap canister vent control valve	D5	B33	W/32	: Bluetooth® control unit
C2	B6	W/4	: Rear door switch LH	C5	B34	W/8	: Bluetooth® control unit