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# WT

## SECTION

### ROAD WHEELS & TIRES

WT

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# DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORK FLOW

#### Repair Work Flow

INFOID:000000003579693

#### DETAILED FLOW

#### 1. VERIFY CUSTOMER COMPLAINTS

Interview the customer to obtain detailed information about the symptom.

>> GO TO 2.

#### 2. DETERMINE REFERENCE ITEM RELATED TO SYMPTOM

Check the symptom on the vehicle from the information obtained. (cruise test, warning lamp illumination or blinking, etc.)

Is the symptom confirmed?

YES >> GO TO 3.

NO >> GO TO 4.

#### 3. PRELIMINARY INSPECTION

1. Check all tire pressures. Refer to [WT-104, "Tire Air Pressure"](#).

2. Check the low tire pressure warning lamp for illumination or blinking. Refer to [WT-84, "Symptom Table"](#).

Is the malfunction finished?

YES >> INSPECTION END

NO >> GO TO 4.

#### 4. PERFORM SELF-DIAGNOSIS

Perform self-diagnosis. Record any DTCs and data displayed on CONSULT-III.

Is there any DTC displayed?

YES >> GO TO 6.

NO >> GO TO 5.

#### 5. CHECK SYMPTOM

Perform troubleshooting by symptom. Refer to [WT-84, "Symptom Table"](#).

Is the causal factor identified?

YES >> GO TO 7.

NO >> GO TO 9.

#### 6. PERFORM THE SYSTEM DIAGNOSIS

Perform the diagnosis applicable to the displayed DTC. Refer to [WT-82, "DTC Index"](#).

>> GO TO 7.

#### 7. REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the applicable part.

>> GO TO 8.

#### 8. CHECK SELF-DIAGNOSIS RESULT

1. Erase DTCs. Refer to [WT-12, "AIR PRESSURE MONITOR : Diagnosis Description"](#).

2. Perform self-diagnosis again.

Is any DTC displayed?

YES >> GO TO 6.

NO >> GO TO 9.

# DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

---

## 9. FINAL CHECK

---

1. Perform a cruise test.
2. Check the warning lamp for illumination or blinking.

Is the malfunction corrected?

YES >> INSPECTION END  
NO >> GO TO 4.

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# INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

## INSPECTION AND ADJUSTMENT TRANSMITTER WAKE UP OPERATION

### TRANSMITTER WAKE UP OPERATION : Description

INFOID:000000003579694

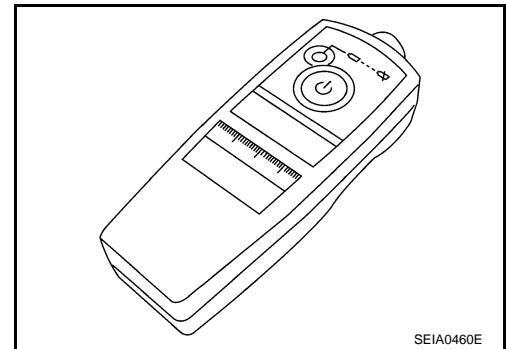
This procedure must be done after replacement of a transmitter, BCM, or rotation of wheels.

### TRANSMITTER WAKE UP OPERATION : Special Repair Requirement

INFOID:000000003579695

#### 1. TRANSMITTER WAKE UP OPERATION

1. With the transmitter activation tool (J-45295) pushed against the front-left transmitter, press and hold the button 5 seconds.



2. When ignition switch ON, as the low tire pressure warning lamp blinks per the follow diagram, the respective transmitter then must be woken up.

Low tire pressure warning lamp blinking timing		Activation tire position
ON OFF		a : 0.3 sec. b : 1.3 sec. Front LH
ON OFF		a : 0.3 sec. b : 1.3 sec. Front RH
ON OFF		a : 0.3 sec. b : 1.3 sec. Rear RH
ON OFF		a : 0.3 sec. b : 1.3 sec. Rear LH
ON OFF		a : 2 sec. b : 0.2 sec. All tires

SEIA0762E

3. Register the ID of wheel that low tire pressure warning lamp blinks. When wake up of registered wheel has been completed, turn lamp blinks two times.
4. After completing wake up all transmitters, check that the low tire pressure warning lamp goes out.

>> Perform ID registration procedure. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

## ID REGISTRATION PROCEDURE

### ID REGISTRATION PROCEDURE : Description

INFOID:000000003579696

This procedure must be done after replacing or rotating wheels, replacing transmitter or BCM.

### ID REGISTRATION PROCEDURE : Special Repair Requirement

INFOID:000000003579697

#### 1. ID REGISTRATION PREPARATION

1. Touch "WORK SUPPORT" on "SELECT DIAG MODE" screen, and select "ID REGIST".

Is the transmitter activation tool used for ID registration?

# INSPECTION AND ADJUSTMENT

## < BASIC INSPECTION >

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

## 2.ID REGISTRATION (WITH TRANSMITTER ACTIVATION TOOL)

1. With the transmitter activation tool (J-45295) pushed against the front-left transmitter position of the air valve, press and hold the button for 5 seconds.
2. Register the IDs in order from FR LH, FR RH, RR RH, to RR LH.  
When ID registration of each wheel has been completed, turn signal lamp blinks.

	Activation tire position	Turn signal lamp	CONSULT-III
1	Front LH	2 times blinks	"Red" ↓ "Green"
2	Front RH		
3	Rear RH		
4	Rear LH		

3. After completing all ID registrations, press "END" to complete the procedure.

**NOTE:**

Be sure to register the IDs in order from FR LH, FR RH, RR RH, to RR LH, or the self-diagnostic results display will not function properly.

Can ID registration of all transmitters be completed?

- YES >> ID registration END  
NO >> Inspect the tire pressure monitoring system. Refer to [WT-18, "Diagnosis Procedure"](#).

## 3.ID REGISTRATION (WITHOUT TRANSMITTER ACTIVATION TOOL)

1. Adjust the tire pressure to the values shown in the table below for ID registration, and drive the vehicle at 40 km/h (25 MPH) or more for several minutes.

**NOTE:**

If ID registration is unable, buzzer beeps.

Tire position	Tire pressure kPa (kg/cm <sup>2</sup> , psi)
Front LH	240 (2.4, 34)
Front RH	220 (2.2, 31)
Rear RH	200 (2.0, 29)
Rear LH	180 (1.8, 26)

2. After completing all ID registrations, press "END" to complete procedure.

Activation tire position	CONSULT-III
Front LH	"Red" ↓ "Green"
Front RH	
Rear RH	
Rear LH	

3. Inflate all tires to proper pressure. Refer to [WT-104, "Tire Air Pressure"](#).

Can ID registration of all transmitters be completed?

- YES >> ID registration END  
NO >> Inspect the tire pressure monitoring system. Refer to [WT-18, "Diagnosis Procedure"](#).

# TPMS

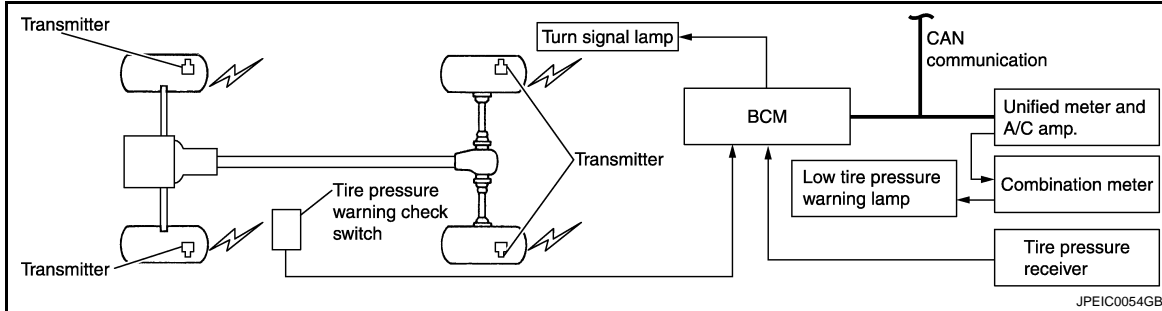
< FUNCTION DIAGNOSIS >

## FUNCTION DIAGNOSIS

### TPMS

#### System Diagram

INFOID:000000003579698



#### System Description

INFOID:000000003579699

#### DESCRIPTION

During driving, the TPMS (Tire Pressure Monitoring System) receives the signal transmitted from transmitter installed in each wheel. The BCM (Body Control Module) of this system has pressure judgment and trouble diagnosis functions. When the tire pressure monitoring system detects low inflation pressure or another unusual symptom, the low tire pressure warning lamps in the combination meter comes on.

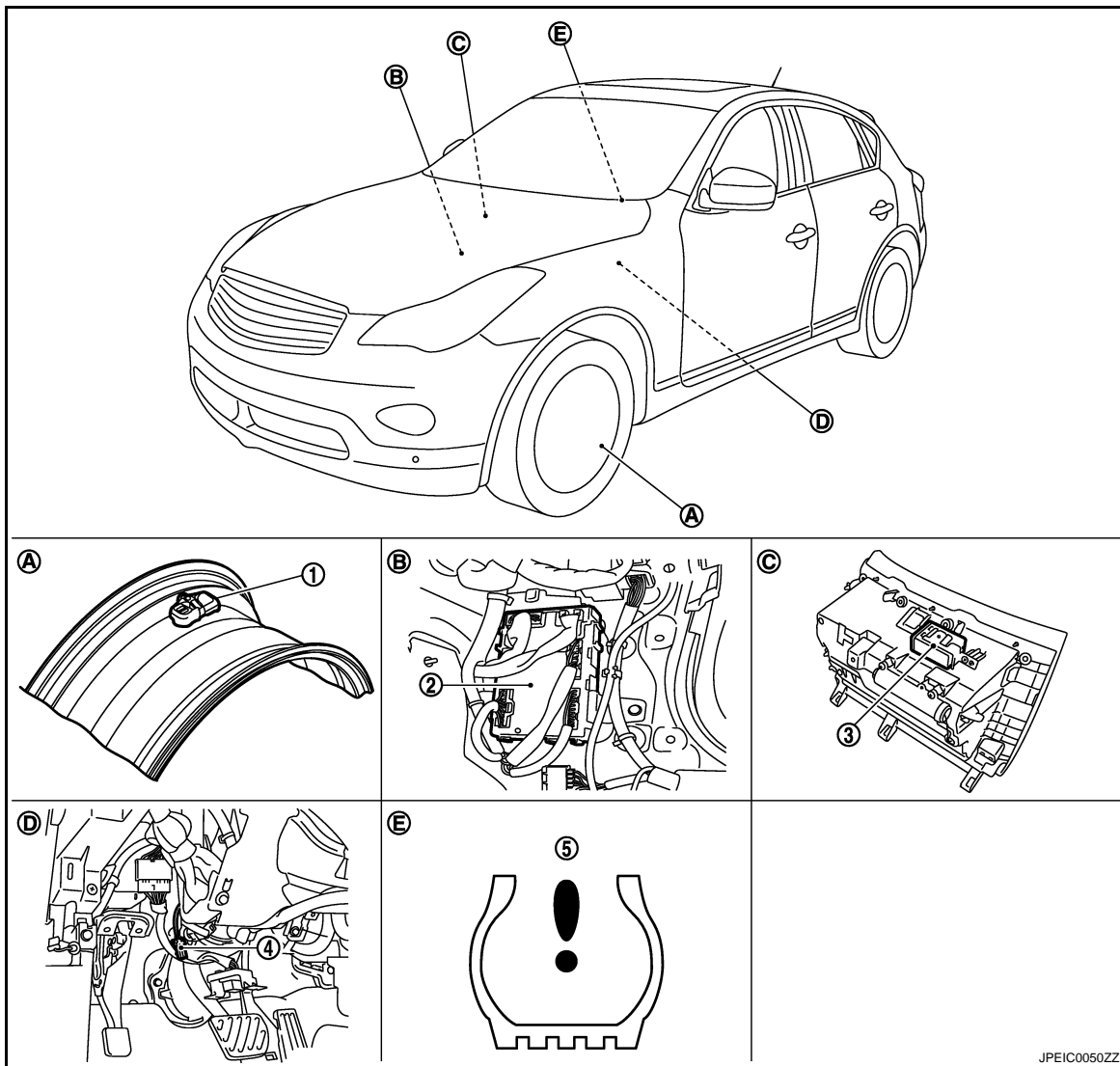


# TPMS

< FUNCTION DIAGNOSIS >

## Component Parts Location

INFOID:000000003579700



- |                                       |                                     |                              |
|---------------------------------------|-------------------------------------|------------------------------|
| 1. Transmitter                        | 2. BCM                              | 3. Tire pressure receiver    |
| 4. Tire pressure warning check switch | 5. Low tire pressure warning lamp   |                              |
| A. Wheel                              | B. Dash side lower (passenger side) | C. Instrument lower panel RH |
| D. Behind instrument lower panel LH   | E. Inside combination meter         |                              |

## Component Description

INFOID:000000003579701

Component parts	Function
BCM (Body Control Module)	<a href="#">WT-33. "Description".</a>
Transmitter	<a href="#">WT-18. "Description".</a>
Tire pressure receiver	<a href="#">WT-36. "Description".</a>
Tire pressure warning check switch	<a href="#">WT-39. "Description".</a>
Turn signal lamp	ID registration of each wheel has been completed, turn signal lamp flashes.

## TPMS

### < FUNCTION DIAGNOSIS >

Component parts	Function
Unified meter and A/C amp.	Transmits the vehicle speed signal via CAN communication to BCM.
	Receives the following signals via CAN communication for BCM. <ul style="list-style-type: none"><li>• Tire pressure warning lamp signal</li><li>• Hazard lamp signal</li><li>• Buzzer signal</li></ul>
Low tire pressure warning lamp	Illuminates if malfunction is detected in electrical system of TPMS.

# DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

## DIAGNOSIS SYSTEM (BCM)

### COMMON ITEM

### COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

INFOID:000000003774303

### APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III operation manual.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	<ul style="list-style-type: none"> <li>• Read and save the vehicle specification.</li> <li>• Write the vehicle specification when replacing BCM.</li> </ul>

### SYSTEM APPLICATION

BCM can perform the following functions for each system.

#### NOTE:

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

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER		×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
—	AIR CONDITONER*			
<ul style="list-style-type: none"> <li>• Intelligent Key system</li> <li>• Engine start system</li> </ul>	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
IVIS - NATS	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
—	TRUNK*		×	×
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×

#### NOTE:

\*: This item is displayed, but is not used.

### FREEZE FRAME DATA (FFD) AND IGN COUNTER

#### Freeze Frame Data

# DIAGNOSIS SYSTEM (BCM)

## < FUNCTION DIAGNOSIS >

The BCM records the following condition at the moment a particular DTC is detected.

- Vehicle Speed
- Odd Trip Meter
- Vehicle Condition (BCM detected condition)

CONSULT screen terms	Description
SLEEP>LOCK	While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK")
SLEEP>OFF	While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)
LOCK>ACC	While turning power supply position from "LOCK" to "ACC"
ACC>ON	While turning power supply position from "ACC" to "IGN"
RUN>ACC	While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)
CRANK>RUN	While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)
RUN>URGENT	While turning power supply position from "RUN" to "ACC" (Emergency stop operation)
ACC>OFF	While turning power supply position from "ACC" to "OFF"
OFF>LOCK	While turning power supply position from "OFF" to "LOCK"
OFF>ACC	While turning power supply position from "OFF" to "ACC"
ON>CRANK	While turning power supply position from "IGN" to "CRANKING"
OFF>SLEEP	While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode
LOCK>SLEEP	While turning BCM status from normal mode (Power supply position is "LOCK".) to low power consumption mode
LOCK	Power supply position is "LOCK" (Ignition switch OFF with steering is locked.)
OFF	Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.)
ACC	Power supply position is "ACC" (Ignition switch ACC)
ON	Power supply position is "IGN" (Ignition switch ON with engine stopped)
ENGINE RUN	Power supply position is "RUN" (Ignition switch ON with engine running)
CRANKING	Power supply position is "CRANKING" (At engine cranking)

### IGN Counter

IGN counter indicates the number of times that ignition switch is turned ON after DTC is detected.

- The number is 0 when a malfunction is detected now.
- The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON.
- The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

## AIR PRESSURE MONITOR

### AIR PRESSURE MONITOR : Diagnosis Description

INFOID:000000003579703

#### DESCRIPTION

During driving, the TPMS receives the signal transmitted from the transmitter installed in each wheel, when the tire pressure becomes low. The control unit (BCM) of this system has pressure judgment and trouble diagnosis functions.

When the TPMS detects low inflation pressure or another unusual symptom, the low tire pressure warning lamps in the combination meter comes on.

#### SELF DIAGNOSTIC PROCEDURE (WITH CONSULT-III)

④ With CONSULT-III

Touch "SELF-DIAG RESULT" display shows malfunction experienced since the last erasing operation. Refer to [WT-82, "DTC Index"](#).

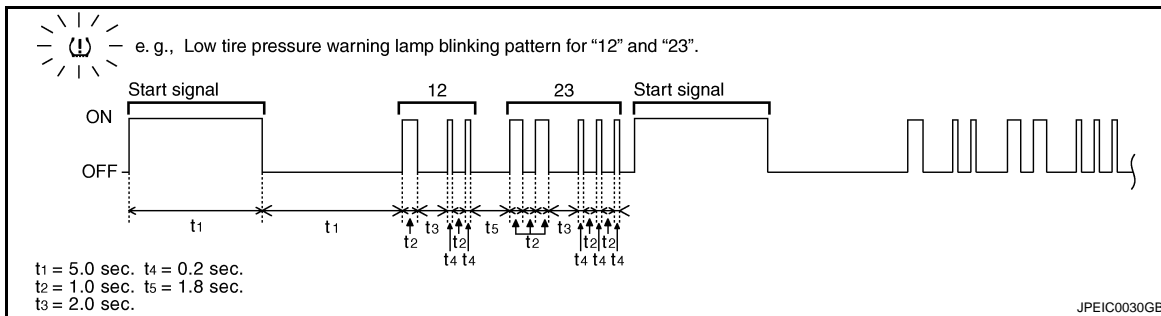
#### SELF DIAGNOSTIC PROCEDURE (WITHOUT CONSULT-III)

# DIAGNOSIS SYSTEM (BCM)

## < FUNCTION DIAGNOSIS >

⊗ Without CONSULT-III

To start the self-diagnostic results mode, ground terminal of the tire pressure warning check connector. The malfunction location is indicated by the low tire pressure warning lamp blinking.



### NOTE:

When the low tire pressure warning lamp blinks 5 Hz and continues repeating it, the system is normal.

Blinking pattern	Items	Diagnostic items detected when...	Check item
15	Tire pressure value (Front LH)	Front LH tire pressure drops to * kPa (* kg/cm <sup>2</sup> , * psi) or less. [NOTE]	
16	Tire pressure value (Front RH)	Front RH tire pressure drops to * kPa (* kg/cm <sup>2</sup> , * psi) or less. [NOTE]	<a href="#">WT-16</a>
17	Tire pressure value (Rear RH)	Rear RH tire pressure drops to * kPa (* kg/cm <sup>2</sup> , * psi) or less. [NOTE]	
18	Tire pressure value (Rear LH)	Rear LH tire pressure drops to * kPa (* kg/cm <sup>2</sup> , * psi) or less. [NOTE]	
21	Transmitter no data (Front LH)	Data from front LH transmitter can not be receive.	
22	Transmitter no data (Front RH)	Data from front RH transmitter can not be receive.	<a href="#">WT-18</a>
23	Transmitter no data (Rear RH)	Data from rear RH transmitter can not be receive.	
24	Transmitter no data (Rear LH)	Data from rear LH transmitter can not be receive.	
31	Transmitter checksum error (Front LH)	Checksum data from front LH transmitter is malfunctioning.	
32	Transmitter checksum error (Front RH)	Checksum data from front RH transmitter is malfunctioning.	<a href="#">WT-21</a>
33	Transmitter checksum error (Rear RH)	Checksum data from rear RH transmitter is malfunctioning.	
34	Transmitter checksum error (Rear LH)	Checksum data from rear LH transmitter is malfunctioning.	
35	Transmitter pressure data error (Front LH)	Air pressure data from front LH transmitter is malfunction.	
36	Transmitter pressure data error (Front RH)	Air pressure data from front RH transmitter is malfunction.	<a href="#">WT-24</a>
37	Transmitter pressure data error (Rear RH)	Air pressure data from rear RH transmitter is malfunction.	
38	Transmitter pressure data error (Rear LH)	Air pressure data from rear LH transmitter is malfunction.	
41	Transmitter function code error (Front LH)	Function code data from front LH transmitter is malfunction.	
42	Transmitter function code error (Front RH)	Function code data from front RH transmitter is malfunction.	<a href="#">WT-26</a>
43	Transmitter function code error (Rear RH)	Function code data from rear RH transmitter is malfunction.	
44	Transmitter function code error (Rear LH)	Function code data from rear LH transmitter is malfunction.	

# DIAGNOSIS SYSTEM (BCM)

## < FUNCTION DIAGNOSIS >

Blinking pattern	Items	Diagnostic items detected when...	Check item
45	Transmitter battery voltage low (Front LH)	Battery voltage of front LH transmitter drops.	<a href="#">WT-29</a>
46	Transmitter battery voltage low (Front RH)	Battery voltage of front RH transmitter drops.	
47	Transmitter battery voltage low (Rear RH)	Battery voltage of rear RH transmitter drops.	
48	Transmitter battery voltage low (Rear LH)	Battery voltage of rear LH transmitter drops.	
52	Vehicle speed signal error	Vehicle speed signal error.	<a href="#">WT-32</a>
53	Control unit	Tire pressure monitoring system malfunction in BCM.	<a href="#">WT-33</a>
No blinking	Tire pressure warning check switch	Tire pressure warning switch circuit is open.	-

### NOTE:

NOTE: 182.7 kPa (1.9 kg/cm<sup>2</sup>, 26 psi): Standard air pressure is for 230 kPa (2.3 kg/cm<sup>2</sup>, 33 psi) vehicles.

### ERASE SELF-DIAGNOSIS

#### With CONSULT-III

1. Perform applicable inspection of malfunctioning item and then repair or replace.
2. Turn ignition switch ON and select "SELF-DIAG RESULTS" mode for "AIR PRESSURE MONITOR" with CONSULT-III.
3. Touch "ERASE" on CONSULT-III screen to erase memory.

#### Without CONSULT-III

- In order to make it easier to find the cause of hard-to-duplicate malfunctions, malfunction information is stored into the control unit as necessary during use by the user. This memory is not erased no matter how many times the ignition switch is turned ON and OFF.
- However, this information is erased by turning ignition switch OFF after performing self-diagnostic or by erasing the memory using the CONSULT-III.

### AIR PRESSURE MONITOR : CONSULT-III Function (BCM - AIR PRESSURE MONITOR)

INFOID:000000003579704

### WORK SUPPORT MODE

#### ID Read

The registered ID number is displayed.

#### ID Regist

Refer to [WT-6. "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

### SELF-DIAG RESULTS MODE

#### Operation Procedure

Refer to [WT-82. "DTC Index"](#).

### DATA MONITOR MODE

Screen of data monitor mode is displayed.

#### NOTE:

When malfunction is detected, CONSULT-III perform REAL-TIME DIAGNOSIS. Also, any malfunction detected while in this mode will be displayed at real time.

# DIAGNOSIS SYSTEM (BCM)

## < FUNCTION DIAGNOSIS >

### Display item list

Monitor	Condition	Specification	A
AIR PRESS FL AIR PRESS FR AIR PRESS RR AIR PRESS RL	<ul style="list-style-type: none"> <li>• Drive vehicle for a few minutes. or</li> <li>• Ignition switch ON and transmitter activation tool is transmitting activation signals.</li> </ul>	Tire pressure (kPa, kg/cm <sup>2</sup> or Psi)	B
ID REGST FL1 ID REGST FR1 ID REGST RR1 ID REGST RL1	Ignition switch ON	Registration ID: Green No registration: Red	C
WARNING LAMP		Low tire pressure warning lamp ON: on Low tire pressure warning lamp OFF: off	D
BUZZER		Buzzer in combination meter ON: on Buzzer in combination meter OFF: off	WT

**NOTE:**

Before performing the self-diagnosis, be sure to register the ID, or erase the actual malfunction location may be different from that displayed on CONSULT-III.

### ACTIVE TEST MODE

**NOTE:**

Before performing the self-diagnosis, be sure to register the ID, or erase the actual malfunction may be different from that displayed on CONSULT-III.

### TEST ITEM LIST

Test item	Content	H
WARNING LAMP	This test is able to check to check that the low tire pressure warning lamp turns on.	I
ID REGIST WARNING	This test is able to check to check that the buzzer sounds or the low tire pressure warning lamp turns on.	J
FLASHER	This test is able to check to check that each turn signal lamp turns on.	K
HORN	This test is able to check to check that the horn sounds.	L

# C1704, C1705, C1706, C1707 LOW TIRE PRESSURE

< COMPONENT DIAGNOSIS >

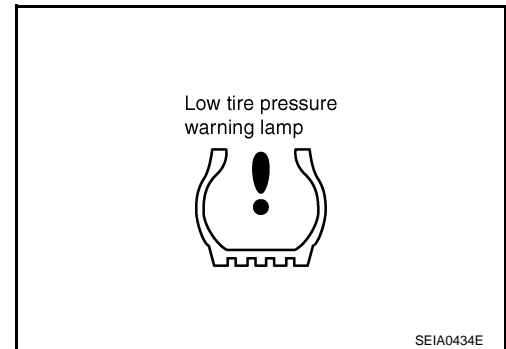
## COMPONENT DIAGNOSIS

### C1704, C1705, C1706, C1707 LOW TIRE PRESSURE

#### Description

INFOID:000000003579705

When the tire pressure monitoring system detects low inflation pressure, the low tire pressure warning lamps in the combination meter comes on.



#### DTC Logic

INFOID:000000003579706

#### DTC DETECTION LOGIC

DTC	Display item	Malfunction detected condition	Possible cause
C1704	LOW PRESSURE FL	Front LH tire pressure drops to * kPa (* kg/cm <sup>2</sup> , * psi) or less. [NOTE]	Tire pressure is low
C1705	LOW PRESSURE FR	Front RH tire pressure drops to * kPa (* kg/cm <sup>2</sup> , * psi) or less. [NOTE]	
C1706	LOW PRESSURE RR	Rear RH tire pressure drops to * kPa (* kg/cm <sup>2</sup> , * psi) or less. [NOTE]	
C1707	LOW PRESSURE RL	Rear LH tire pressure drops to * kPa (* kg/cm <sup>2</sup> , * psi) or less. [NOTE]	

NOTE: 182.7 kPa (1.9 kg/cm<sup>2</sup>, 26 psi): Standard air pressure is for 230 kPa (2.3 kg/cm<sup>2</sup>, 33 psi) vehicles.

#### DTC CONFIRMATION PROCEDURE

##### 1. DTC REPRODUCTION PROCEDURE

Ⓜ With CONSULT-III

1. Drive at a speed of 40 km/h (25 MPH) or more for 10 minutes.
2. Perform BCM self-diagnosis.

Is DTC "C1704", "C1705", "C1706", "C1707" detected?

- YES >> Proceed to diagnosis procedure. Refer to [WT-16, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

#### Diagnosis Procedure

INFOID:000000003579707

##### 1. CHECK TIRE AIR PRESSURE

1. Check all tire air pressures.
2. Adjust all tire air pressures. Refer to [WT-104, "Tire Air Pressure"](#).

Does all tire pressure data meet the specification?

- YES >> GO TO 2.  
NO >> Inspect or replace malfunctioning parts.

##### 2. CHECK AIR PRESSURE SIGNAL

1. Drive at a speed of 40 km/h (25 MPH) or more for 10 minutes.
2. Check all tire pressure with CONSULT-III "DATA MONITOR" within 5 minutes.



# C1704, C1705, C1706, C1707 LOW TIRE PRESSURE

## < COMPONENT DIAGNOSIS >

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at a 40 km/h (25 MPH) or more for 10 minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Is inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace damaged parts (tire or wheel). Refer to [WT-95, "Service Notice or Precautions"](#).

### Special Repair Requirement

INFOID:000000003579708

#### 1. CHECK TIRE AIR PRESSURE

Check all tire air pressures. Refer to [WT-104, "Tire Air Pressure"](#).

Does all tire pressure data meet the specification?

YES >> GO TO 2.

NO >> Inspect or repair the tires or wheels and adjust the tire pressure to the specification.

#### 2. PERFORM ID REGISTRATION

Perform ID registration. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

>> END

# C1708, C1709, C1710, C1711 TRANSMITTER

< COMPONENT DIAGNOSIS >

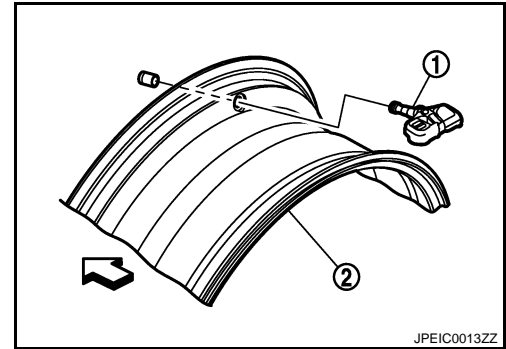
## C1708, C1709, C1710, C1711 TRANSMITTER

### Description

INFOID:000000003579709

The transmitter (1) integrated with a valve is installed on a wheel (2), and transmits a detected air pressure signal by radio wave.

↔ : Outside



### DTC Logic

INFOID:000000003579710

#### DTC DETECTION LOGIC

DTC	Display item	Malfunction detected condition	Possible cause
C1708	[NO DATA] FL	Data from front LH transmitter can not receive.	<ul style="list-style-type: none"> <li>• Harness or connector (Tire pressure receiver, BCM)</li> <li>• ID registration is not finished</li> <li>• Transmitter malfunction</li> <li>• BCM malfunction</li> </ul>
C1709	[NO DATA] FR	Data from front RH transmitter can not receive.	
C1710	[NO DATA] RR	Data from rear RH transmitter can not receive.	
C1711	[NO DATA] RL	Data from rear LH transmitter can not receive.	

#### DTC CONFIRMATION PROCEDURE

##### 1. DTC REPRODUCTION PROCEDURE

Ⓜ With CONSULT-III

1. Drive at a speed of 40 km/h (25 MPH) or more for 10 minutes.
2. Perform BCM self-diagnosis.

Is DTC "C1708", "C1709", "C1710", "C1711" detected?

- YES >> Proceed to diagnosis procedure. Refer to [WT-18. "Diagnosis Procedure"](#).  
 NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000003579711

##### 1. CHECK AIR PRESSURE SIGNAL

Ⓜ With CONSULT-III

1. Start the engine.
2. Select "DATA MONITOR" mode for "AIR PRESSURE MONITOR" with CONSULT-III.
3. Read out the value of "AIR PRESS FL", "AIR PRESS FR", "AIR PRESS RR", "AIR PRESS RL".

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at a 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Are all tire pressures displayed 0 kPa?

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

##### 2. CHECK HARNESS BETWEEN BCM AND TIRE PRESSURE RECEIVER

1. Turn the ignition switch OFF.
2. Disconnect BCM harness connector and tire pressure receiver harness connector.

# C1708, C1709, C1710, C1711 TRANSMITTER

## < COMPONENT DIAGNOSIS >

3. Check continuity between BCM harness connector and tire pressure receiver harness connector.

BCM		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M123	137	M101	1	Existed
	138		4	
	139		2	

4. Check continuity between BCM harness connector and ground.

BCM		—	Continuity
Connector	Terminal		
M123	137	Ground	Not existed
	138		
	139		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace damaged parts.

### 3.CHECK TIRE PRESSURE RECEIVER

Check tire pressure receiver. Refer to [WT-36, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Check BCM pin terminals for damage or loose connection with harness connector. If any items are damaged, repair or replace damaged parts.

NO >> Replace the tire pressure receiver.

### 4.CHECK ID REGISTRATION

Perform ID registration of all transmitters. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

Can ID registration of all transmitters be completed?

YES >> GO TO 5.

NO >> Replace malfunctioning transmitter.

### 5.CHECK TIRE PRESSURE MONITORING SYSTEM

 With CONSULT-III

1. Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping.

2. Check all tire pressures with CONSULT-III "DATA MONITOR" within 15 minutes after stopped vehicle.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at 40 km/h (25MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace BCM.

### Special Repair Requirement

INFOID:000000003579712

### 1.CHECK TIRE AIR PRESSURE

Check all tire air pressures. Refer to [WT-104, "Tire Air Pressure"](#).

Does all tire pressure data meet the specification?

YES >> GO TO 2.

## C1708, C1709, C1710, C1711 TRANSMITTER

### < COMPONENT DIAGNOSIS >

---

NO >> Inspect or repair the tires or wheels and adjust the tire pressure to the specification.

### 2.PERFORM ID REGISTRATION

---

Perform ID registration. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

>> END

# C1712, C1713, C1714, C1715 TRANSMITTER

< COMPONENT DIAGNOSIS >

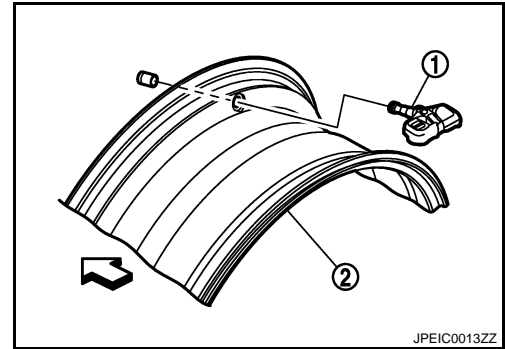
## C1712, C1713, C1714, C1715 TRANSMITTER

### Description

INFOID:000000003664596

The transmitter (1) integrated with a valve is installed on a wheel (2), and transmits a detected air pressure signal by radio wave.

↔ : Outside



### DTC Logic

INFOID:000000003579714

#### DTC DETECTION LOGIC

DTC	Display item	Malfunction detected condition	Possible case
C1712	[CHECKSUM ERR] FL	Checksum data from front LH transmitter is malfunction.	<ul style="list-style-type: none"> <li>• Tire pressure receiver malfunction</li> <li>• Transmitter malfunction</li> <li>• BCM malfunction</li> <li>• Harness or connector</li> </ul>
C1713	[CHECKSUM ERR] FR	Checksum data from front RH transmitter is malfunction.	
C1714	[CHECKSUM ERR] RR	Checksum data from rear RH transmitter is malfunction.	
C1715	[CHECKSUM ERR] RL	Checksum data from rear LH transmitter is malfunction.	

#### DTC CONFIRMATION PROCEDURE

##### 1. DTC REPRODUCTION PROCEDURE

Ⓜ With CONSULT-III

1. Driving at a speed of 40 km/h (25 MPH) or more for 10 minutes.
2. Perform BCM self-diagnosis.

Is DTC "C1712", "C1713", "C1714", "C1715" detected?

- YES >> Proceed to diagnosis procedure. Refer to [WT-21. "Diagnosis Procedure"](#).  
 NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000003579715

##### 1. CHECK ID REGISTRATION

Ⓜ With CONSULT-III

1. Perform the ID registration of all transmitters. Refer to [WT-6. "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).
2. Drive at a speed of 40 km/h (25 MPH) or more for 10 minutes.
3. Check all tire pressure with CONSULT-III "DATA MONITOR" within 5 minutes.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at a 40 km/h (25 MPH) or more for 10 minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Is the inspection result normal?

- YES >> GO TO 6.  
 NO >> GO TO 2.

##### 2. CHECK AIR PRESSURE SIGNAL

## C1712, C1713, C1714, C1715 TRANSMITTER

### < COMPONENT DIAGNOSIS >

④ With CONSULT-III

1. Start the engine.
2. Select "DATA MONITOR" mode for "AIR PRESSURE MONITOR" with CONSULT-III.
3. Read out the value of "AIR PRESS FL", "AIR PRESS FR", "AIR PRESS RR" and "AIR PRESS RL".

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at a 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Are all tire pressures displayed 0 kPa?

- YES >> GO TO 3.  
 NO >> GO TO 5.

### 3. CHECK HARNESS BETWEEN BCM AND TIRE PRESSURE RECEIVER

1. Turn the ignition switch OFF.
2. Disconnect BCM harness connector and tire pressure receiver harness connector.
3. Check continuity between BCM harness connector and tire pressure receiver harness connector.

BCM		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M123	137	M101	1	Existed
	138		4	
	139		2	

4. Check continuity between BCM harness connector and ground.

BCM		—	Continuity
Connector	Terminal		
M123	137	Ground	Not existed
	138		
	139		

Is the inspection result normal?

- YES >> GO TO 4.  
 NO >> Repair or replace damaged parts.

### 4. CHECK TIRE PRESSURE RECEIVER

Check tire pressure receiver. Refer to [WT-36. "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> Check BCM pin terminals for damage or loose connection with harness connector. If any items are damaged, repair or replace damaged parts.  
 NO >> Replace the tire pressure receiver.

### 5. CHECK ID REGISTRATION

Perform ID registration of all transmitters. Refer to [WT-6. "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

Can ID registration of all transmitters be completed?

- YES >> GO TO 6.  
 NO >> Replace malfunctioning transmitter.

### 6. CHECK TIRE PRESSURE MONITORING SYSTEM

④ With CONSULT-III

1. Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping.
2. Check all tire pressure with CONSULT-III "DATA MONITOR" within 15 minutes after stopped vehicle.

# C1712, C1713, C1714, C1715 TRANSMITTER

## < COMPONENT DIAGNOSIS >

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at a 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace BCM. Refer to [BCS-84, "Removal and Installation"](#).

### Special Repair Requirement

INFOID:000000003579716

#### 1. CHECK TIRE AIR PRESSURE

Check all tire air pressures. Refer to [WT-104, "Tire Air Pressure"](#).

Does all tire pressure data meet the specification?

YES >> GO TO 2.

NO >> Inspect or repair the tires or wheels and adjust the tire pressure to the specification.

#### 2. PERFORM ID REGISTRATION

Perform ID registration. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

>> END

A  
B  
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WT

# C1716, C1717, C1718, C1719 TRANSMITTER

< COMPONENT DIAGNOSIS >

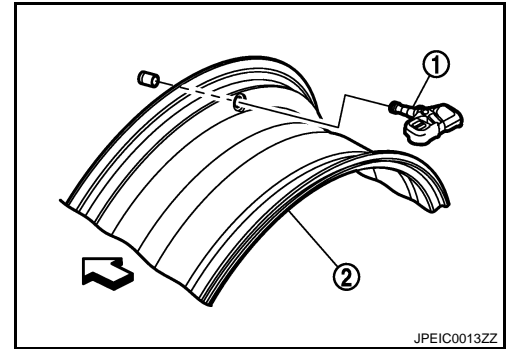
## C1716, C1717, C1718, C1719 TRANSMITTER

### Description

INFOID:000000003664597

The transmitter (1) integrated with a valve is installed on a wheel (2), and transmits a detected air pressure signal by radio wave.

↔ : Outside



### DTC Logic

INFOID:000000003579718

#### DTC DETECTION LOGIC

DTC	Display item	Malfunction detected condition	Possible case
C1716	[PRESSDATA ERR] FL	Air pressure data from front LH transmitter malfunction.	<ul style="list-style-type: none"> <li>ID registration is not finished</li> <li>Transmitter malfunction</li> </ul>
C1717	[PRESSDATA ERR] FR	Air pressure data from front RH transmitter malfunction.	
C1718	[PRESSDATA ERR] RR	Air pressure data from rear RH transmitter malfunction.	
C1719	[PRESSDATA ERR] RL	Air pressure data from rear LH transmitter malfunction.	

#### DTC CONFIRMATION PROCEDURE

##### 1. DTC REPRODUCTION PROCEDURE

Ⓜ With CONSULT-III

1. Drive at a speed of 40 km/h (25 MPH) or more for 10 minutes.
2. Perform BCM self- diagnosis.

Is DTC "C1716", "C1717", "C1718", "C1719" detected?

- YES >> Proceed to diagnosis procedure. Refer to [WT-24, "Diagnosis Procedure"](#).  
 NO >> INSPECTION END

#### Diagnosis Procedure

INFOID:000000003579719

##### 1. CHECK TIRE PRESSURE

Ⓜ With CONSULT-III

1. Adjust tire pressure to specified value. Refer to [WT-104, "Tire Air Pressure"](#).
2. Perform the ID registration of all transmitters. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).
3. Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping.
4. Check all tire pressure with CONSULT-III "DATA MONITOR" within 15 minutes after stopped vehicle.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at a 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Is tire pressure indicated as 438.60 kPa (4.47kg/cm<sup>2</sup>, 63.60 psi) on the "DATA MONITOR" screen?

- YES >> Replace malfunctioning transmitter.  
 NO >> GO TO 2.

##### 2. CHECK TIRE PRESSURE MONITORING SYSTEM



# C1716, C1717, C1718, C1719 TRANSMITTER

## < COMPONENT DIAGNOSIS >

④ With CONSULT-III

1. Perform the ID registration of all transmitters. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).
2. Drive at a speed of 40 km/h (25 MPH) or more for 10 minutes.
3. Check all tire pressures with CONSULT-III "DATA MONITOR" within 5 minutes.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at a 40 km/h (25 MPH) or more for 10 minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Perform the self-diagnosis, inspect detected malfunction. Refer to [WT-12, "AIR PRESSURE MONITOR : Diagnosis Description"](#).

## Component Inspection

INFOID:000000003579720

### 1. CHECK TRANSMITTER

④ With CONSULT-III

1. Adjust tire pressure to specified value. Refer to [WT-104, "Tire Air Pressure"](#).
2. Perform ID registration of all transmitters. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).
3. Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping.
4. Check all tire pressure with CONSULT-III "DATA MONITOR" within 15 minutes after stopped vehicle.

Monitored item	Condition	Display value
AIR PRESSURE FL	Start the engine and drive at a 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESSURE FR		
AIR PRESSURE RR		
AIR PRESSURE RL		

Is tire pressure indicated as 438.60 kPa (4.47 kg/cm<sup>2</sup>, 63.60 psi) on the "DATA MONITOR" screen?

YES >> Replace malfunctioning transmitter.

NO >> INSPECTION END

## Special Repair Requirement

INFOID:000000003579721

### 1. CHECK TIRE AIR PRESSURE

Check all tire air pressures. Refer to [WT-104, "Tire Air Pressure"](#).

Does all tire pressure data meet the specification?

YES >> GO TO 2.

NO >> Inspect or repair the tires or wheels and adjust the tire pressure to the specification.

### 2. PERFORM ID REGISTRATION

Perform ID registration. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

>> END

# C1720, C1721, C1722, C1723 TRANSMITTER

< COMPONENT DIAGNOSIS >

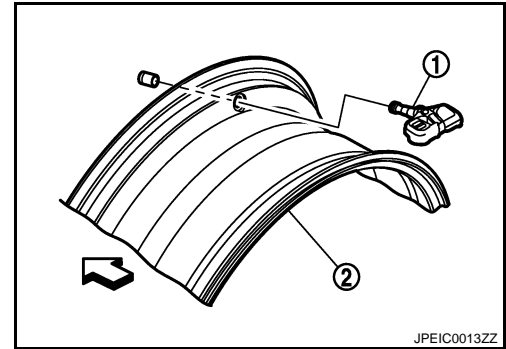
## C1720, C1721, C1722, C1723 TRANSMITTER

### Description

INFOID:000000003664598

The transmitter (1) integrated with a valve is installed on a wheel (2), and transmits a detected air pressure signal by radio wave.

↔ : Outside



### DTC Logic

INFOID:000000003579723

#### DTC DETECTION LOGIC

DTC	Display item	Malfunction detected condition	Possible case
C1720	[CODE ERR] FL	Function code data from front LH transmitter is malfunction.	<ul style="list-style-type: none"> <li>• Tire pressure receiver malfunction</li> <li>• Transmitter malfunction</li> <li>• BCM malfunction</li> <li>• Harness or connector</li> </ul>
C1721	[CODE ERR] FR	Function code data from front RH transmitter is malfunction.	
C1722	[CODE ERR] RR	Function code data from rear RH transmitter is malfunction.	
C1723	[CODE ERR] RL	Function code data from rear LH transmitter is malfunction.	

#### DTC CONFIRMATION PROCEDURE

##### 1. DTC REPRODUCTION PROCEDURE

Ⓟ With CONSULT-III

1. Driving at a speed of 40 km/h (25 MPH) or more for 10 minutes.
2. Perform BCM self-diagnosis.

Is DTC "C1720", "C1721", "C1722", "C1723" detected?

- YES >> Proceed to diagnosis procedure. Refer to [WT-26. "Diagnosis Procedure"](#).  
 NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000003579724

##### 1. CHECK ID REGISTRATION

Ⓟ With CONSULT-III

1. Perform the ID registration of all transmitters. Refer to [WT-6. "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).
2. Drive at a speed of 40 km/h (25 MPH) or more for 10 minutes.
3. Check all tire pressure with CONSULT-III "DATA MONITOR" within 5 minutes.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at a 40 km/h (25 MPH) or more for 10 minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Is the inspection result normal?

- YES >> GO TO 6.  
 NO >> GO TO 2.

##### 2. CHECK ALL TIRE PRESSURE SIGNAL

Ⓟ With CONSULT-III

# C1720, C1721, C1722, C1723 TRANSMITTER

## < COMPONENT DIAGNOSIS >

1. Start the engine.
2. Select "DATA MONITOR" mode for "AIR PRESSURE MONITOR" with CONSULT-III.
3. Read out the value of "AIR PRESS FL", "AIR PRESS FR", "AIR PRESS RR" and "AIR PRESS RL".

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at a 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Are all tire pressure displayed 0 kPa?

- YES >> GO TO 3.  
NO >> GO TO 5.

### 3. CHECK HARNESS BETWEEN BCM AND TIRE PRESSURE RECEIVER

1. Turn the ignition switch "OFF".
2. Disconnect BCM harness connector and tire pressure receiver harness connector.
3. Check continuity between BCM harness connector and tire pressure receiver harness connector.

BCM		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M123	137	M101	1	Existed
	138		4	
	139		2	

4. Check continuity between BCM harness connector and ground.

BCM		—	Continuity
Connector	Terminal		
M123	137	Ground	Not existed
	138		
	139		

Is the inspection result normal?

- YES >> GO TO 4.  
NO >> Repair or replace damage parts.

### 4. CHECK TIRE PRESSURE RECEIVER

Check tire pressure receiver. Refer to [WT-36, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> Check BCM pin terminals for damage or loose connection with harness connector. If any items are damaged, repair or replace damaged parts.  
NO >> Replace the tire pressure receiver.

### 5. CHECK TIRE PRESSURE MONITORING SYSTEM

Ⓜ With CONSULT-III

1. Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping.
2. Check all tire pressures with CONSULT-III "DATA MONITOR" within 15 minutes after stopped vehicle.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at a 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Is the inspection result normal?

## C1720, C1721, C1722, C1723 TRANSMITTER

### < COMPONENT DIAGNOSIS >

---

YES >> GO TO 6.

NO >> Replace BCM. Refer to [BCS-84, "Removal and Installation"](#).

### 6.CHECK TRANSMITTER

---

 With CONSULT-III

1. Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping.
2. Check all tire pressures with CONSULT-III "DATA MONITOR" within 5 minutes after stopped vehicle.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at a 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace malfunction transmitter.

### Special Repair Requirement

INFOID:000000003579725

### 1.CHECK TIRE AIR PRESSURE

---

Check all tire air pressures. Refer to [WT-104, "Tire Air Pressure"](#).

Does all tire pressure data meet the specification?

YES >> GO TO 2.

NO >> Inspect or repair the tires or wheels and adjust the tire pressure to the specification.

### 2.PERFORM ID REGISTRATION

---

Perform ID registration. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

>> END

# C1724, C1725, C1726, C1727 TRANSMITTER

< COMPONENT DIAGNOSIS >

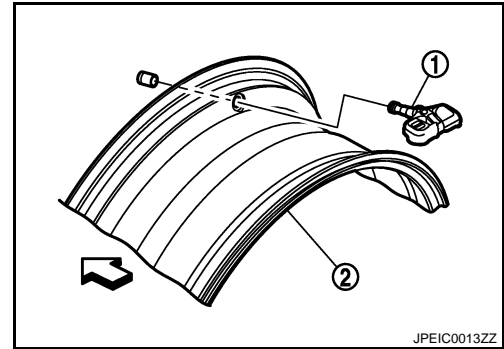
## C1724, C1725, C1726, C1727 TRANSMITTER

### Description

INFOID:000000003664599

The transmitter (1) integrated with a valve is installed on a wheel (2), and transmits a detected air pressure signal by radio wave.

↔ : Outside



### DTC Logic

INFOID:000000003579727

#### DTC DETECTION LOGIC

DTC	Display item	Malfunction detected condition	Possible case
C1724	[BATT VOLT LOW] FL	Battery voltage of front LH transmitter drops.	<ul style="list-style-type: none"> <li>• Transmitter malfunction</li> <li>• Tire pressure receiver malfunction</li> <li>• BCM malfunction</li> <li>• Harness or connector</li> </ul>
C1725	[BATT VOLT LOW] FR	Battery voltage of front RH transmitter drops.	
C1726	[BATT VOLT LOW] RR	Battery voltage of rear RH transmitter drops.	
C1727	[BATT VOLT LOW] RL	Battery voltage of rear LH transmitter drops.	

#### DTC CONFIRMATION PROCEDURE

##### 1. DTC REPRODUCTION PROCEDURE

Ⓜ With CONSULT-III

1. Driving at a speed of 40 km/h (25 MPH) or more for 10 minutes.
2. Perform BCM self-diagnosis.

Is DTC "C1724", "C1725", "C1726", "C1727" detected?

- YES >> Proceed to diagnosis procedure. Refer to [WT-29, "Diagnosis Procedure"](#).  
 NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000003579728

##### 1. CHECK ID REGISTRATION

Ⓜ With CONSULT-III

1. Perform the ID registration of all transmitters. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).
2. Drive at a 40 km/h (25 MPH) or more for 10 minutes.
3. Check all tire pressure with CONSULT-III "DATA MONITOR" within 5 minutes.

Can ID registration of all transmitters be completed?

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

##### 2. CHECK AIR PRESSURE SIGNAL

Ⓜ With CONSULT-III

1. Start the engine.
2. Select "DATA MONITOR" mode for "AIR PRESSURE MONITOR" with CONSULT-III.
3. Read out the value of "AIR PRESS FL", "AIR PRESS FR", "AIR PRESS RR" and "AIR PRESS RL".

# C1724, C1725, C1726, C1727 TRANSMITTER

## < COMPONENT DIAGNOSIS >

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at a 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Are all tire pressures displayed 0 kPa?

YES >> GO TO 3.

NO >> GO TO 5.

### 3. CHECK HARNESS BETWEEN BCM AND TIRE PRESSURE RECEIVER

1. Turn the ignition switch OFF.
2. Disconnect BCM harness connector and tire pressure receiver harness connector.
3. Check continuity between BCM harness connector and tire pressure receiver harness connector.

BCM		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M123	137	M101	1	Existed
	138		4	
	139		2	

4. Check continuity between BCM harness connector and ground.

BCM		—	Continuity
Connector	Terminal		
M123	137	Ground	Not existed
	138		
	139		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace damaged parts.

### 4. CHECK TIRE PRESSURE RECEIVER

Check tire pressure receiver. Refer to [WT-36. "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Check BCM pin terminals for damage or loose connection with harness connector. If any items are damaged, repair or replace damaged parts.

NO >> Replace the tire pressure receiver.

### 5. CHECK ID REGISTRATION

Perform ID registration of all transmitters. Refer to [WT-6. "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

Can ID registration of all transmitters be completed?

YES >> GO TO 6.

NO >> Replace malfunctioning transmitter.

### 6. CHECK TIRE PRESSURE MONITORING SYSTEM

 With CONSULT-III

1. Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping.
2. Check all tire pressures with CONSULT-III "DATA MONITOR" within 15 minutes after stopped vehicle.

# C1724, C1725, C1726, C1727 TRANSMITTER

## < COMPONENT DIAGNOSIS >

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at a 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace BCM. Refer to [BCS-84, "Removal and Installation"](#).

### Special Repair Requirement

INFOID:000000003579729

#### 1.CHECK TIRE AIR PRESSURE

Check all tire air pressures. Refer to [WT-104, "Tire Air Pressure"](#).

Does all tire pressure data meet the specification?

YES >> GO TO 2.

NO >> Inspect or repair the tires or wheels and adjust the tire pressure to the specification.

#### 2.PERFORM ID REGISTRATION

Perform ID registration. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

>> END

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# C1729 VEHICLE SPEED SIGNAL

< COMPONENT DIAGNOSIS >

## C1729 VEHICLE SPEED SIGNAL

### Description

INFOID:000000003579730

BCM detects no vehicle speed signal.

### DTC Logic

INFOID:000000003579731

### DTC DETECTION LOGIC

DTC number	Trouble diagnosis name	DTC detecting condition	Possible case
C1729	VHCL SPEED SIG ERR	Vehicle speed signal error.	<ul style="list-style-type: none"><li>CAN communication error</li><li>Unified meter and A/C amp. malfunction</li></ul>

### DTC CONFIRMATION PROCEDURE

#### 1. DTC REPRODUCTION PROCEDURE

Ⓜ With CONSULT-III

- Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping.
- Perform BCM self-diagnosis.

Is DTC "C1729" detected?

- YES >> Proceed to diagnosis procedure. Refer to [WT-32, "Diagnosis Procedure"](#).  
NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000003579732

#### 1. CHECK UNIFIED METER AND A/C AMP. SELF-DIAGNOSIS

Ⓜ With CONSULT-III

Perform unified meter and A/C amp. self-diagnosis.

Is any DTC detected?

- YES >> Check the DTC.  
NO >> Check unified meter and A/C amp. [HAC-104, "Diagnosis Procedure"](#).

### Special Repair Requirement

INFOID:000000003579733

#### 1. CHECK TIRE AIR PRESSURE

Check all tire air pressures. Refer to [WT-104, "Tire Air Pressure"](#).

Does all tire pressure data meet the specification?

- YES >> GO TO 2.  
NO >> Inspect or repair the tires or wheels and adjust the tire pressure to the specification.

#### 2. PERFORM ID REGISTRATION

Perform ID registration. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

>> END



# C1734 BCM

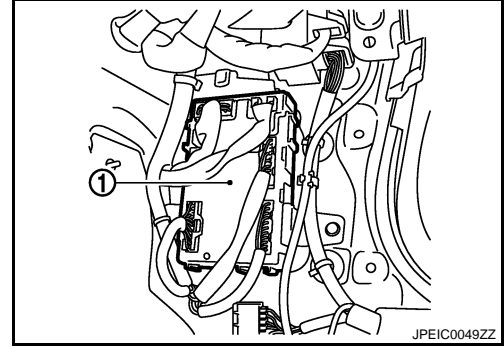
< COMPONENT DIAGNOSIS >

## C1734 BCM

### Description

INFOID:000000003579734

The BCM (1) reads the air pressure signal received by the tire pressure receiver, and controls the low tire pressure warning lamp and the buzzer operations. It also has a judgment function to detect a system malfunction.



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### DTC Logic

INFOID:000000003579735

#### DTC DETECTION LOGIC

DTC	Display item	Malfunction detected condition	Possible case
C1734	CONTROL UNIT	Tire pressure monitoring system malfunction in BCM	BCM malfunction

#### DTC CONFIRMATION PROCEDURE

##### 1. DTC REPRODUCTION PROCEDURE

Ⓜ With CONSULT-III

1. Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping.
2. Perform BCM self-diagnosis with CONSULT-III "DATA MONITOR" within 15 minutes after stopped vehicle.

Is DTC "C1734" detected?

- YES >> Proceed to diagnosis procedure. Refer to [WT-33, "Diagnosis Procedure"](#).  
 NO >> INSPECTION END

### Diagnosis Procedure

INFOID:000000003579736

##### 1. CHECK SELF-DIAGNOSTIC RESULTS

Ⓜ With CONSULT-III

1. On "SELECT DIAG" mode, select the "SELF-DIAG RESULT" screen.
2. Check display contents in self-diagnostic results.

Does self-diagnostic results indicate any malfunction?

- YES >> Perform trouble diagnosis. Refer to [WT-82, "DTC Index"](#).  
 NO >> GO TO 2.

##### 2. CHECK BCM POWER SUPPLY CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect BCM harness connector.
3. Check voltage between BCM harness connector terminals and ground.

BCM		—	Voltage
Connector	Terminal		
M118	1	Ground	Battery voltage
M119	11		

Is the power supply normal?

- YES >> GO TO 3.  
 NO >> Check the following. If any items are damaged, repair or replace damage parts.
  - 40A fusible link [No. K located in the fuse block]. Refer to [PG-99, "Fuse and Fusible Link Arrangement"](#).

# C1734 BCM

## < COMPONENT DIAGNOSIS >

- 10A fuse [No. 10 located in the fuse block (J/B)]. Refer to [PG-98, "Fuse, Connector and Terminal Arrangement"](#).
- Harness for short or open between battery and BCM harness connector M118 terminal 1.
- Harness for short or open between battery and BCM harness connector M119 terminal 11.
- Check Battery voltage.

### 3.CHECK BCM GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		—	Continuity
Connector	Terminal		
M119	13	Ground	Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair open circuit or short to power in harness or connectors.

### 4.CHECK HARNESS BETWEEN BCM AND TIRE PRESSURE RECEIVER

1. Disconnect tire pressure receiver harness connector.
2. Check continuity between BCM harness connector and tire pressure receiver harness connector.

BCM		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M123	137	M101	1	Existed
	138		4	
	139		2	

3. Check continuity between BCM harness connector and ground.

BCM		—	Continuity
Connector	Terminal		
M123	137	Ground	Not existed
	138		
	139		

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace damaged parts.

### 5.CHECK BCM

Check BCM input/output signal. Refer to [WT-48, "Reference Value"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 6.

### 6.CHECK BCM HARNESS CONNECTOR

Check BCM pin terminals for damage or loose connection with harness connector.

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-84, "Removal and Installation"](#).

NO >> Repair or replace damaged parts.

## Special Repair Requirement

INFOID:000000003579737

### 1.CHECK TIRE AIR PRESSURE

Check all tire air pressures. Refer to [WT-104, "Tire Air Pressure"](#).

Does all tire pressure data meet the specification?

## C1734 BCM

### < COMPONENT DIAGNOSIS >

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YES >> GO TO 2.

NO >> Inspect or repair the tires or wheels and adjust the tire pressure to the specification.

### 2.PERFORM ID REGISTRATION

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Perform ID registration. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

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# TIRE PRESSURE RECEIVER

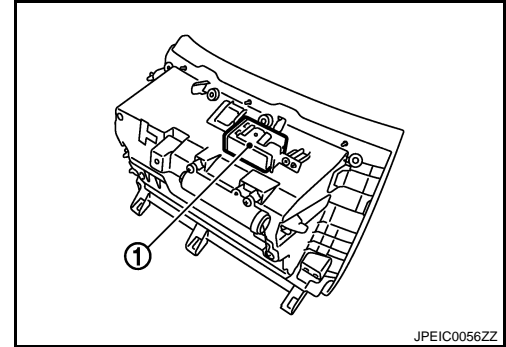
< COMPONENT DIAGNOSIS >

## TIRE PRESSURE RECEIVER

### Description

INFOID:000000003579738

The tire pressure receiver (1) receives the air pressure signal transmitted by the transmitter in each wheel.



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### Component Function Check

INFOID:000000003579739

#### 1. TIRE PRESSURE MONITORING SYSTEM OPERATION

Ⓟ With CONSULT-III

1. Drive at a speed 40 km/h (25 MPH) or more for 10 minutes.
2. Check tire pressure with CONSULT-III "DATA MONITOR" within 5 minutes.

Monitored item	Condition	Display value
AIR PRESS FL	Start engine and drive at a 40 km/h (25MPH) or more for 10 minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Is the inspection result normal?

YES >> INSPECTION END

NO-1 >> Perform BCM self-diagnosis. Refer to [WT-82, "DTC Index"](#).

NO-2 >> Proceed to diagnosis procedure. Refer to [WT-36, "Diagnosis Procedure"](#).

### Diagnosis Procedure

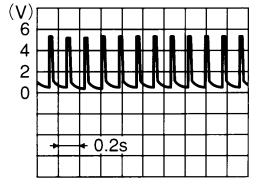
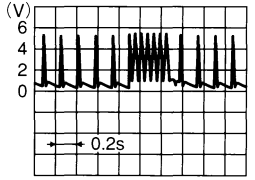
INFOID:000000003579740

#### 1. CHECK TIRE PRESSURE RECEIVER SIGNAL

1. Turn the ignition switch ON.  
**CAUTION:**  
**Never start the engine.**
2. Check tire pressure receiver connector and ground signal with oscilloscope.

# TIRE PRESSURE RECEIVER

## < COMPONENT DIAGNOSIS >

Tire pressure receiver		—	Condition	Voltage (Approx.)
Connector	Terminal			
M101	2	Ground	Standby state	 OCC3881D
			When receiving the signal from the transmitter	 OCC3880D

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

### 2. CHECK TIRE PRESSURE RECEIVER INPUT VOLTAGE

1. Disconnect tire pressure receiver connector.
2. Check voltage between tire pressure receiver connector and ground.

Tire pressure receiver		—	Voltage (Approx.)
Connector	Terminal		
M101	4	Ground	5.0 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check BCM harness and connector.

### 3. CHECK TIRE PRESSURE RECEIVER GROUND CIRCUIT

1. Disconnect BCM harness connector.
2. Check continuity between BCM harness connector and tire pressure receiver connector.

BCM		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M123	137	M101	1	Existed

3. Check continuity between BCM harness connector and ground.

BCM		—	Continuity
Connector	Terminal		
M123	137	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace damaged parts.

### 4. CHECK BCM CIRCUIT

Inspect the BCM circuit. Refer to [BCS-41, "Diagnosis Procedure"](#).

Is the BCM circuit normal?

YES >> Replace tire pressure receiver.

## TIRE PRESSURE RECEIVER

### < COMPONENT DIAGNOSIS >

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NO >> Repair or replace BCM circuit. Replace BCM. Refer to [BCS-84. "Removal and Installation"](#).

# TIRE PRESSURE WARNING CHECK SWITCH

< COMPONENT DIAGNOSIS >

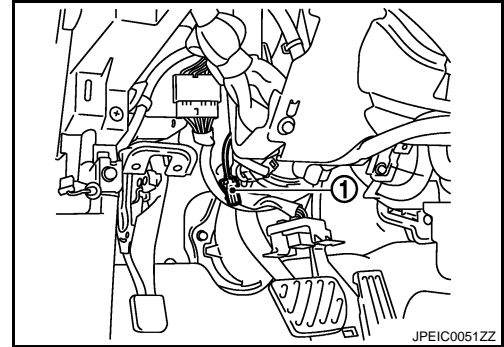
## TIRE PRESSURE WARNING CHECK SWITCH

### Description

INFOID:000000003579741

The following item can be checked by grounding the tire pressure warning check switch harness connector terminal (1).

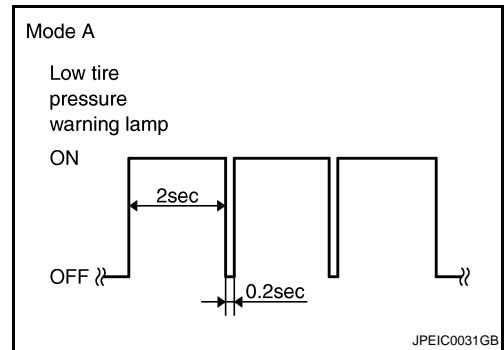
- The low tire pressure warning lamp in the combination meter blink according to the self-diagnostic results.



### NOTE:

If low tire pressure warning lamp blinks as shown in the figure, the system is normal.

- This mode shows transmitter status is in OFF-mode. Perform transmitter wake up operation. Refer to [WT-6, "TRANSMITTER WAKE UP OPERATION : Special Repair Requirement"](#).



### Component Function Check

INFOID:000000003579742

#### 1. CHECK LOW TIRE PRESSURE WARNING LAMP OPERATION

Check if low tire pressure warning lamp blinks 1 second and then goes off after turning ignition switch ON.

Is inspection result normal?

YES >> GO TO 2.

NO >> Check low tire pressure warning lamp. Refer to [WT-41, "Diagnosis Procedure"](#).

#### 2. CHECK TIRE PRESSURE WARNING CHECK SWITCH OPERATION

1. Ground the tire pressure warning check switch harness connector terminal.
2. Check the low tire pressure warning lamp blinks.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Proceed to diagnosis procedure. Refer to [WT-39, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000003579743

#### 1. CHECK TIRE PRESSURE WARNING CHECK SWITCH POWER SUPPLY CIRCUIT

1. Turn the ignition switch ON.

#### CAUTION:

**Never start the engine.**

2. Check voltage between tire pressure warning check switch connector and ground.

Tire pressure warning check switch		—	Voltage (Approx.)
Connector	Terminal		
M23	1	Ground	11.8 V

Is the inspection result normal?

# TIRE PRESSURE WARNING CHECK SWITCH

## < COMPONENT DIAGNOSIS >

- YES >> Repair or replace BCM circuit. Replace BCM. Refer to [BCS-84. "Removal and Installation"](#).  
NO >> GO TO 2.

### 2. CHECK TIRE PRESSURE WARNING CHECK SWITCH CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect BCM harness connector
3. Check continuity between BCM harness connector and tire pressure warning check switch connector.

BCM		Tire pressure warning check switch		Continuity
Connector	Terminal	Connector	Terminal	
M123	149	M23	1	Existed

4. Check continuity between BCM harness connector and ground.

BCM		—	Continuity
Connector	Terminal		
M123	149	Ground	Not existed

#### Is the inspection result normal?

- YES >> GO TO 3.  
NO >> Repair or replace damaged parts.

### 3. CHECK BCM

Check BCM input/output signal. Refer to [WT-48. "Reference Value"](#).

#### Is the inspection result normal?

- YES >> INSPECTION END  
NO >> Check BCM pin terminals for damage or loose connection with harness connector. If any items are damaged, repair or replace damaged parts. Replace BCM. Refer to [BCS-84. "Removal and Installation"](#).



# LOW TIRE PRESSURE WARNING LAMP

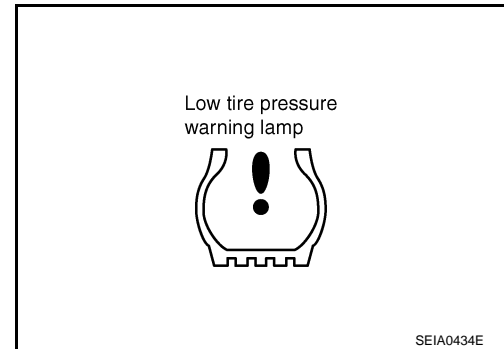
< COMPONENT DIAGNOSIS >

## LOW TIRE PRESSURE WARNING LAMP

### Description

INFOID:000000003579744

The combination meter receives tire pressure status from the unified meter and A/C amp. via CAN communication.  
When BCM judges from a transmitter signal that tire pressure is insufficient, BCM transmits a signal to unified meter and A/C amp. via CAN communication. unified meter and A/C amp. turns on the low tire pressure warning lamp mounted on the combination meter.



Condition	Low tire pressure warning lamp
Ignition switch OFF	OFF
Ignition switch ON	Warning lamp turns on for 1second, then turns off.
Less than 182.7 kPa (1.9 kg/cm <sup>2</sup> , 26 psi) [NOTE]	ON
Tire pressure monitoring system malfunction [Other diagnostic item]	Warning lamp blinks 1 min, then turns on.

NOTE: Standard air pressure is for 230 kPa (2.3 kg/cm<sup>2</sup>, 33 psi) vehicles.

### Component Function Check

INFOID:000000003579745

#### 1.CHECK LOW TIRE PRESSURE WARNING LAMP

Check if low tire pressure warning lamp blinks for 1 second and then goes off after turning the ignition switch ON.

Is inspection result normal?

YES >> INSPECTION END

NO >> Proceed to diagnosis procedure. Refer to [WT-41. "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000003579746

#### 1.CHECK SELF DIAGNOSTIC RESULTS

Perform self-diagnosis of tire pressure monitoring system.

Is inspection result normal?

YES >> GO TO 2.

NO >> Check the DTC.

#### 2.CHECK LOW TIRE PRESSURE WARNING LAMP

Check if low tire pressure warning lamp blinks 1 second and then goes off after turning the ignition switch ON.

Is inspection result normal?

YES >> INSPECTION END

NO >> Check combination meter.

# POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

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

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000003773753

### 1. CHECK FUSE AND FUSIBLE LINK

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

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

Is the fuse fusing?

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

### 2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connectors.
3. Check voltage between BCM harness connector and ground.

Terminals		Voltage (Approx.)
(+)	(-)	
BCM		Ground  Battery voltage
Connector	Terminal	
M118	1	
M119	11	

Is the measurement value normal?

- YES >> GO TO 3.  
NO >> Repair harness or connector.

### 3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		Existed
M119	13		

Does continuity exist?

- YES >> INSPECTION END  
NO >> Repair harness or connector.

## UNIFIED METER AND A/C AMP.

UNIFIED METER AND A/C AMP. : Diagnosis Procedure

INFOID:000000003773754

### 1. CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	6
Ignition switch ACC or ON	19
Ignition switch ON or START	3

# POWER SUPPLY AND GROUND CIRCUIT

## < COMPONENT DIAGNOSIS >

Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

## 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between unified meter and A/C amp. harness connector and ground.

Terminals			Ignition switch position	Value (Approx.)
(+)		(-)		
Unified meter A/C amp.	Terminal		Signal name	
M67	54	Battery power supply	OFF	Battery voltage
	41	ACC power supply	ACC	Battery voltage
	53	Ignition signal	ON	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between unified meter and A/C amp. and fuse.

## 3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect unified meter and A/C amp. connector.
3. Check continuity between unified meter and A/C amp. harness connector and ground.

Unified meter A/C amp.		Ground	Continuity
Connector	Terminal		
M67	55		Existed
	71		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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# TPMS

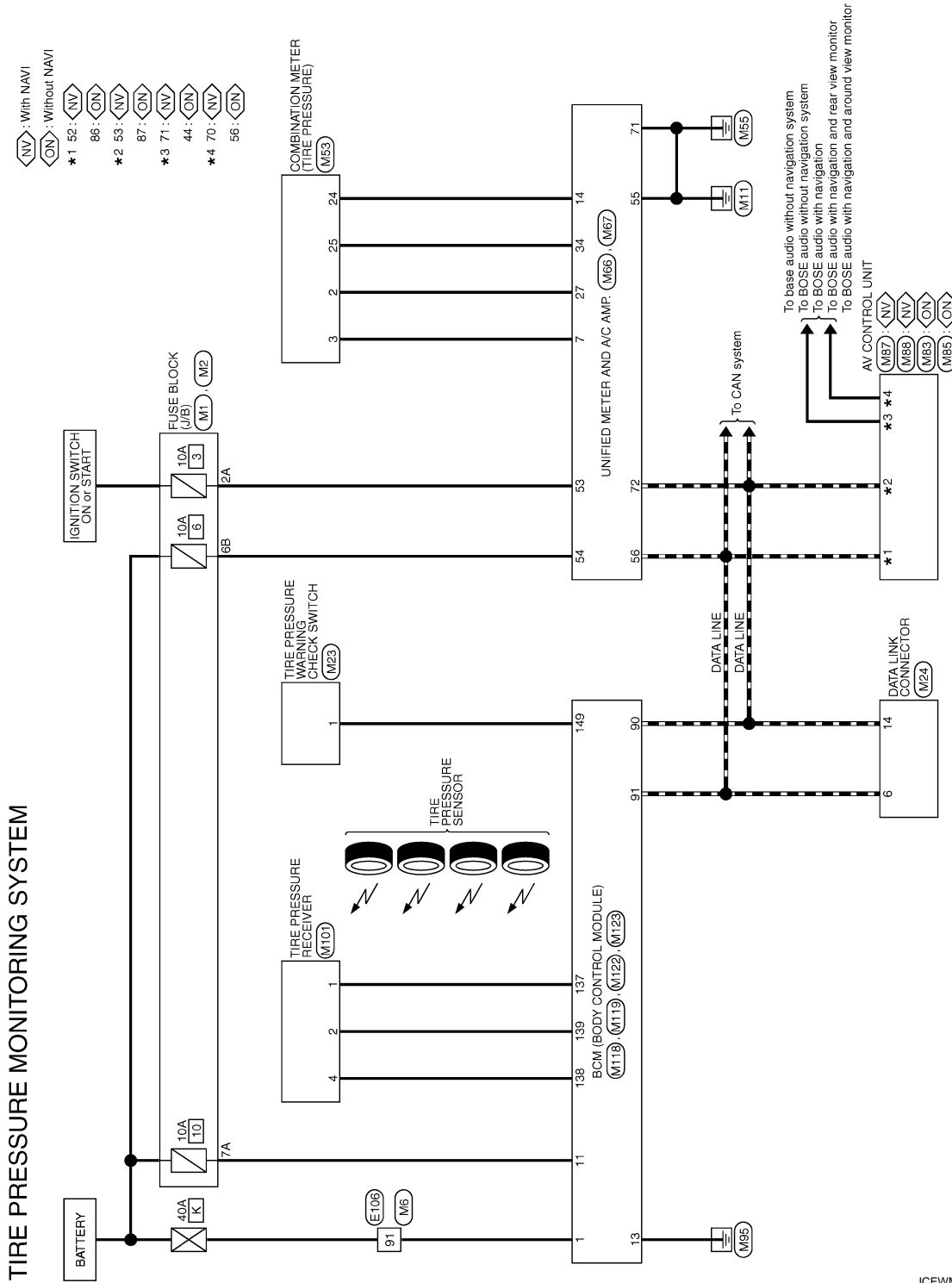
< COMPONENT DIAGNOSIS >

## TPMS

### Wiring Diagram - TIRE PRESSURE MONITORING SYSTEM -

INFOID:000000003579749

Click here to view the eWD.





2007/10/26

JCEWM0024GI



TIRE PRESSURE MONITORING SYSTEM

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MP-CS16-TM4



Terminal No.	91	Color of Wire	W	Signal Name [Specification]	
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Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	MSJFW-CS


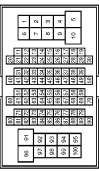
Terminal No.	8B	Color of Wire	Y	Signal Name [Specification]	
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Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NSGFW-M2


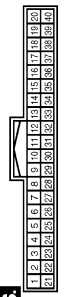
Terminal No.	2A	Color of Wire	G	Signal Name [Specification]	
	7A		R		

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4


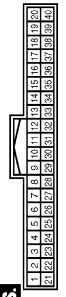
Terminal No.	91	Color of Wire	W	Signal Name [Specification]	
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Connector No.	M66
Connector Name	UNIFIED METER AND A/C AMP.
Connector Type	TH40FW-NH


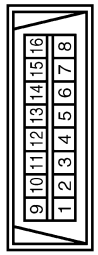
Terminal No.	7	Color of Wire	GR	Signal Name [Specification]	COMM (AMP->METER)
	14		BR		COMM (LCD->AMP.)
	27		LG		COMM (METER->AMP.)
	34		Y		COMM (AMP->LCD)

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH



Terminal No.	2	Color of Wire	LG	Signal Name [Specification]	COMM (METER->AMP.)
	3		GR		COMM (AMP->METER)
	24		BR		COMM (LCD->AMP.)
	25		Y		COMM (AMP->LCD)

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD1FW

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

Connector No.	M23
Connector Name	TIRE PRESSURE WARNING CHECK SWITCH
Connector Type	TK02FW

Terminal No.	1	Color of Wire	W	Signal Name [Specification]	
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K  
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TIRE PRESSURE MONITORING SYSTEM

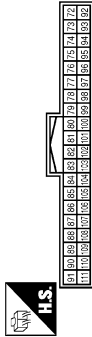
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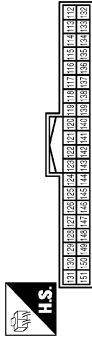
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TIRE PRESSURE MONITORING SYSTEM

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FC-NH



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

Terminal No.	Color of Wire	Signal Name [Specification]
137	O	RECEIVER/SENSOR GND
138	Y	RECEIVER/SENSOR POWER SUPPLY
139	L	TIRE PRESS RECEIVER SIGNAL
149	W	TIRE PRESS WARNING CHECK SW

JCEWM0027GI

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## ECU DIAGNOSIS

### BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000003774304

#### VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
	Front wiper switch HI	On
FR WIPER LOW	Other than front wiper switch LO	Off
	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT	Off
	Front wiper switch INT	On
FR WIPER STOP	Front wiper is not in STOP position	Off
	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
RR WIPER ON	Other than rear wiper switch ON	Off
	Rear wiper switch ON	On
RR WIPER INT	Other than rear wiper switch INT	Off
	Rear wiper switch INT	On
RR WASHER SW	Rear washer switch OFF	Off
	Rear washer switch ON	On
RR WIPER STOP	Rear wiper is in STOP position	Off
	Rear wiper is not in STOP position	On
TURN SIGNAL R	Other than turn signal switch RH	Off
	Turn signal switch RH	On
TURN SIGNAL L	Other than turn signal switch LH	Off
	Turn signal switch LH	On
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off
	Lighting switch 1ST or 2ND	On
HI BEAM SW	Other than lighting switch HI	Off
	Lighting switch HI	On
HEAD LAMP SW 1	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
HEAD LAMP SW 2	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
AUTO LIGHT SW	Other than lighting switch AUTO	Off
	Lighting switch AUTO	On
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On



## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status	
RR FOG SW	<b>NOTE:</b> The item is indicated, but not monitored.	Off	A
DOOR SW-DR	Driver door closed	Off	B
	Driver door opened	On	
DOOR SW-AS	Passenger door closed	Off	C
	Passenger door opened	On	
DOOR SW-RR	Rear RH door closed	Off	D
	Rear RH door opened	On	
DOOR SW-RL	Rear LH door closed	Off	D
	Rear LH door opened	On	
DOOR SW-BK	Back door closed	Off	WT
	Back door opened	On	
CDL LOCK SW	Other than power door lock switch LOCK	Off	F
	Power door lock switch LOCK	On	
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off	G
	Power door lock switch UNLOCK	On	
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off	H
	Driver door key cylinder LOCK position	On	
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off	H
	Driver door key cylinder UNLOCK position	On	
KEY CYL SW-TR	<b>NOTE:</b> The item is indicated, but not monitored.	Off	I
HAZARD SW	Hazard switch is OFF	Off	J
	Hazard switch is ON	On	
REAR DEF SW	<b>NOTE:</b> The item is indicated, but not monitored.	Off	K
TR CANCEL SW	<b>NOTE:</b> The item is indicated, but not monitored.	Off	K
TR/BD OPEN SW	Back door opener switch OFF	Off	L
	While the back door opener switch is turned ON	On	
TRNK/HAT MNTR	<b>NOTE:</b> The item is indicated, but not monitored.	Off	M
RKE-LOCK	LOCK button of the key is not pressed	Off	M
	LOCK button of the key is pressed	On	
RKE-UNLOCK	UNLOCK button of the key is not pressed	Off	N
	UNLOCK button of the key is pressed	On	
RKE-TR/BD	<b>NOTE:</b> The item is indicated, but not monitored.	Off	O
RKE-PANIC	PANIC button of the key is not pressed	Off	O
	PANIC button of the key is pressed	On	
RKE-P/W OPEN	UNLOCK button of the key is not pressed	Off	P
	UNLOCK button of the key is pressed and held	On	
RKE-MODE CHG	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off	P
	LOCK/UNLOCK button of the key is pressed and held simultaneously	On	

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V
	Dark outside of the vehicle	Close to 0 V
REQ SW -DR	Driver door request switch is not pressed	Off
	Driver door request switch is pressed	On
REQ SW -AS	Passenger door request switch is not pressed	Off
	Passenger door request switch is pressed	On
REQ SW -RR	<b>NOTE:</b> The item is indicated, but not monitored.	Off
REQ SW -RL	<b>NOTE:</b> The item is indicated, but not monitored.	Off
REQ SW -BD/TR	Back door request switch is not pressed	Off
	Back door request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
	Push-button ignition switch (push switch) is pressed	On
IGN RLY2 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
CLUCH SW	<b>NOTE:</b> The item is indicated, but not monitored.	Off
BRAKE SW 1	The brake pedal is not depressed	On
	The brake pedal is depressed	Off
DETE/CANCL SW	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN/N SW	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
S/L -LOCK	Steering is locked	Off
	Steering is unlocked	On
S/L -UNLOCK	Steering is unlocked	Off
	Steering is locked	On
S/L RELAY-F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
UNLK SEN -DR	Driver door is unlocked	Off
	Driver door is locked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
	Push-button ignition switch (push-switch) is pressed	On
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
SFT P -MET	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
	Selector lever in N position	On

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status	
ENGINE STATE	Engine stopped	Stop	A
	While the engine stalls	Stall	
	At engine cranking	Crank	B
	Engine running	Run	
S/L LOCK-IPDM	Steering is locked	Off	
	Steering is unlocked	On	C
S/L UNLK-IPDM	Steering is unlocked	Off	
	Steering is locked	On	D
S/L RELAY-REQ	Ignition switch in OFF or ACC position	Off	
	Ignition switch in ON position	On	
VEH SPEED 1	While driving	Equivalent to speedometer reading	WT
VEH SPEED 2	While driving	Equivalent to speedometer reading	
DOOR STAT-DR	Driver door is locked	LOCK	
	Wait with selective UNLOCK operation (5 seconds)	READY	F
	Driver door is unlocked	UNLOCK	
DOOR STAT-AS	Passenger door is locked	LOCK	G
	Wait with selective UNLOCK operation (5 seconds)	READY	
	Passenger door is unlocked	UNLOCK	H
ID OK FLAG	Ignition switch in ACC or ON position	Reset	
	Ignition switch in OFF position	Set	I
PRMT ENG STRT	The engine start is prohibited	Reset	
	The engine start is permitted	Set	J
PRMT RKE STRT	<b>NOTE:</b> The item is indicated, but not monitored.	Reset	
KEY SW -SLOT	The key is not inserted into key slot	Off	
	The key is inserted into key slot	On	K
RKE OPE COUN1	During the operation of the key	Operation frequency of the key	
RKE OPE COUN2	<b>NOTE:</b> The item is indicated, but not monitored.	—	L
CONFIRM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	Yet	
	The key ID that the key slot receives accords with any key ID registered to BCM.	DONE	M
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	Yet	
	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	DONE	N
CONFIRM ID3	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	Yet	O
	The key ID that the key slot receives accords with the third key ID registered to BCM.	DONE	
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	Yet	P
	The key ID that the key slot receives accords with the second key ID registered to BCM.	DONE	

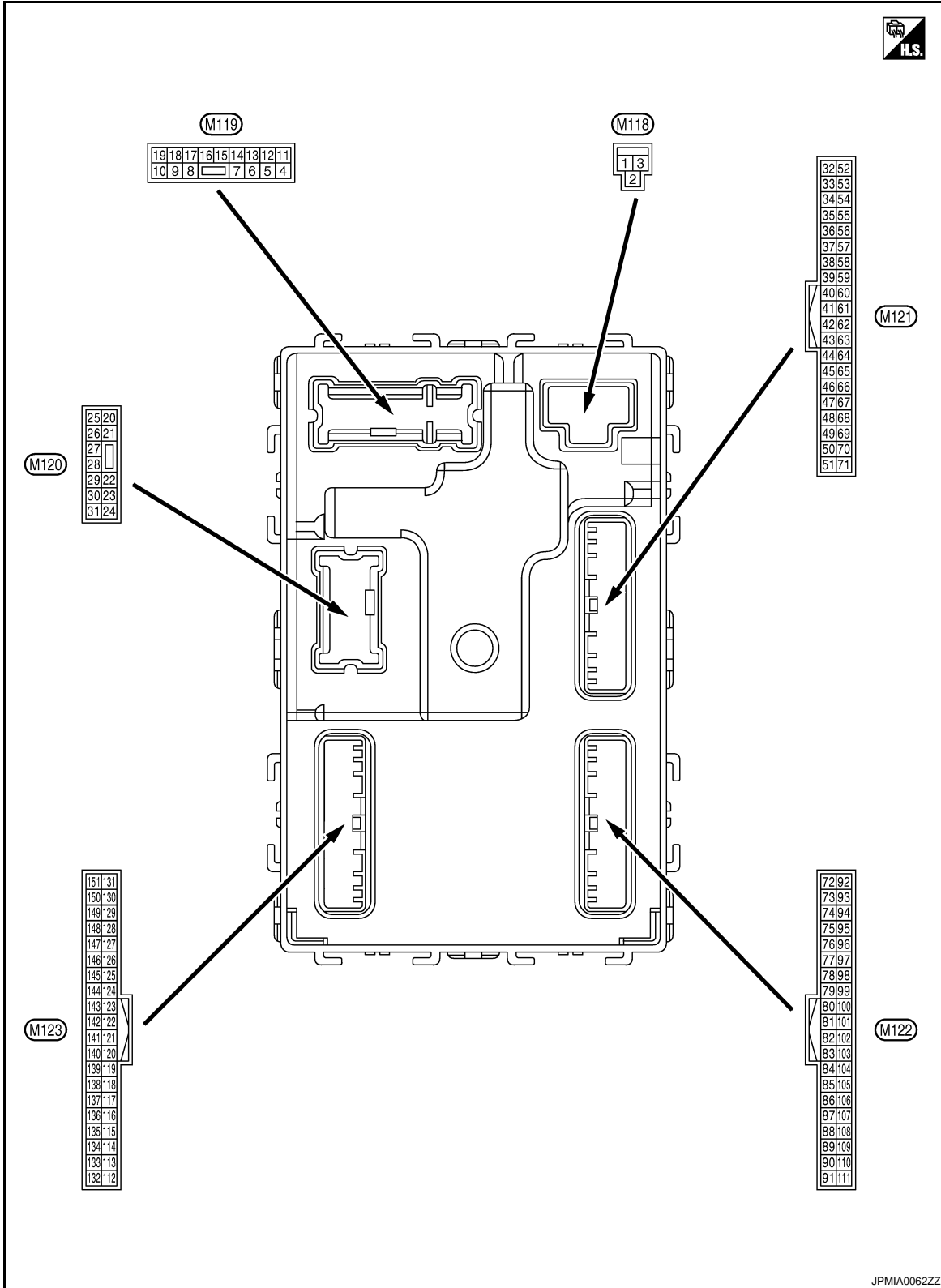
## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

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

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >  
 TERMINAL LAYOUT

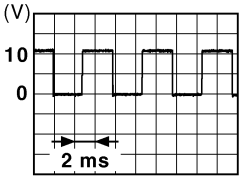


PHYSICAL VALUES

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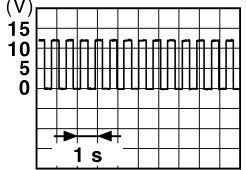
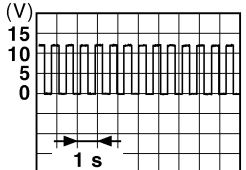
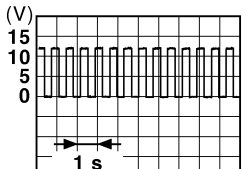
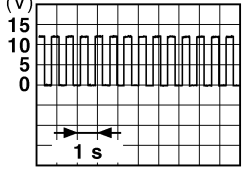
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		Battery voltage
3 (O)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		Battery voltage
4 (LG)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
				Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		Battery voltage
5 (L)	Ground	Passenger door UN- LOCK	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
7 (Y)	Ground	Step lamp	Output	Step lamp	ON	0 V
					OFF	Battery voltage
8 (V)	Ground	All doors, fuel lid LOCK	Output	All doors	LOCK (Actuator is activated)	Battery voltage
					Other than LOCK (Actuator is not activated)	0 V
9 (G)	Ground	Driver door, fuel lid UNLOCK	Output	Driver door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
10 (BR)	Ground	Rear RH door and rear LH door UN- LOCK	Output	Rear RH door and rear LH door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
11 (R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0 V
14 (W)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	OFF	0 V
					ON	<p><b>NOTE:</b> When the illumination brightening/dimming level is in the neutral position</p>  <p style="text-align: right; font-size: small;">JSNIA0010GB</p>
15 (Y)	Ground	ACC indicator lamp	Output	Ignition switch	OFF or ON	Battery voltage
					ACC	0 V

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch OFF
				Turn signal switch RH	0 V
					 <p style="text-align: center;">6.5 V</p>
18 (O)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch OFF
				Turn signal switch LH	0 V
					 <p style="text-align: center;">6.5 V</p>
19 (V)	Ground	Room lamp timer control	Output	Interior room lamp	OFF
					ON
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch OFF
				Turn signal switch RH	0 V
					 <p style="text-align: center;">6.5 V</p>
23 (G)	Ground	Back door opening	Output	Back door	OPEN (Back door opener actuator is activated)
					Other than OPEN (Back door opener actuator is not activated)
					0 V
25 (G)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch OFF
				Turn signal switch LH	0 V
					 <p style="text-align: center;">6.5 V</p>
26 (G)	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)
					ON (Operated)

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# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
34 (SB)	Ground	Luggage room antenna 1 (-)	Output	Ignition switch OFF	<p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compartment	<p style="text-align: right; font-size: small;">JMKIA0063GB</p>
35 (V)	Ground	Luggage room antenna 1 (+)	Output	Ignition switch OFF	<p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compartment	<p style="text-align: right; font-size: small;">JMKIA0063GB</p>
38 (B)	Ground	Rear bumper antenna (-)	Output	When the back door request switch is operated with ignition switch OFF	<p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	<p style="text-align: right; font-size: small;">JMKIA0063GB</p>



# BCM (BODY CONTROL MODULE)

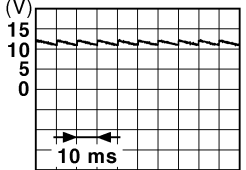
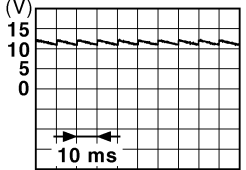
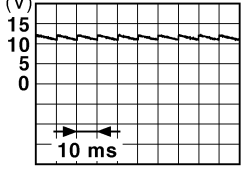
## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
39 (W)	Ground	Rear bumper antenna (+)	Output	When the back door request switch is operated with ignition switch OFF	<p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is in the antenna detection area	<p style="text-align: right; font-size: small;">JMKIA0063GB</p>
47 (Y)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC Battery voltage ON 0 V
				52 (SB)	Ground
When selector lever is not in P or N position 0 V					
61 (W)	Ground	Back door opener request switch	Input	Back door request switch	ON (Pressed) 0 V
				OFF (Not pressed)	<p style="text-align: right; font-size: small;">JPMIA0016GB</p> <p style="text-align: center;">1.0 V</p>
64 (V)	Ground	Request switch buzzer	Output	Request switch buzzer	Sounding 0 V Not sounding Battery voltage
				65 (O)	Ground
Not in stop position 0 V	<p style="text-align: right; font-size: small;">JPMIA0016GB</p> <p style="text-align: center;">1.0 V</p>				

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# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
		Signal name	Input/ Output		
+	-				
66 (R)	Ground	Back door switch	Input	Back door switch	OFF (Door close)  <small>JPMIA0011GB</small> 11.8 V
					ON (Door open)
67 (GR)	Ground	Back door opener switch	Input	Back door opener switch	Pressed 0 V
					Not pressed
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (Door close)  <small>JPMIA0011GB</small> 11.8 V
					ON (Door open)
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (Door close)  <small>JPMIA0011GB</small> 11.8 V
					ON (Door open)

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
72 (R)	Ground	Room antenna 2 (-) (Center console)	Output	Ignition switch OFF	<p>JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compart- ment	<p>JMKIA0063GB</p>
73 (G)	Ground	Room antenna 2 (+) (Center console)	Output	Ignition switch OFF	<p>JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compart- ment	<p>JMKIA0063GB</p>
74 (SB)	Ground	Passenger door an- tenna (-)	Output	When the pas- senger door re- quest switch is operated with ig- nition switch OFF	<p>JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	<p>JMKIA0063GB</p>

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# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
75 (GR)	Ground	Passenger door antenna (+)	Output	When Intelligent Key is in the antenna detection area	<p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	<p style="text-align: right; font-size: small;">JMKIA0063GB</p>
76 (V)	Ground	Driver door antenna (-)	Output	When Intelligent Key is in the antenna detection area	<p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	<p style="text-align: right; font-size: small;">JMKIA0063GB</p>
77 (LG)	Ground	Driver door antenna (+)	Output	When Intelligent Key is in the antenna detection area	<p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	<p style="text-align: right; font-size: small;">JMKIA0063GB</p>

# BCM (BODY CONTROL MODULE)

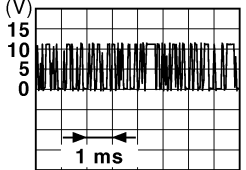
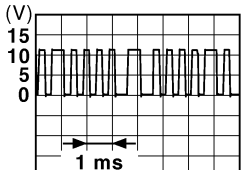

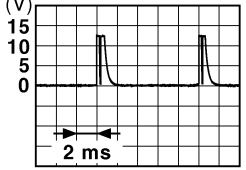

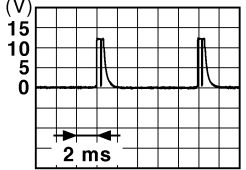
## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
78 (Y)	Ground	Room antenna (-) (Instrument panel)	Output	Ignition switch OFF	<p style="text-align: right; font-size: small;">JMKIA0062GB</p>	
				When Intelligent Key is not in the passenger compart- ment	<p style="text-align: right; font-size: small;">JMKIA0063GB</p>	
79 (BR)	Ground	Room antenna (+) (Instrument panel)	Output	Ignition switch OFF	<p style="text-align: right; font-size: small;">JMKIA0062GB</p>	
				When Intelligent Key is not in the passenger compart- ment	<p style="text-align: right; font-size: small;">JMKIA0063GB</p>	
80 (GR)	Ground	NATS antenna amp (Built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (W)	Ground	NATS antenna amp (Built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82 (R)	Ground	Ignition relay [Fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V
				ON	Battery voltage	

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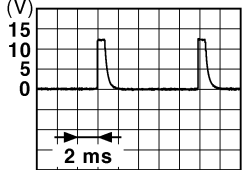
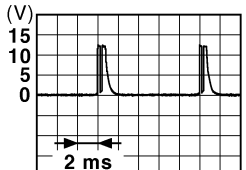
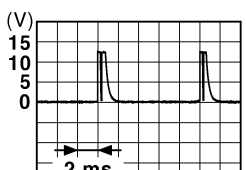
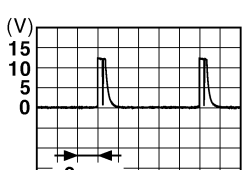

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
83 (Y)	Ground	Remote keyless entry receiver signal	Input/ Output	During waiting	 <p style="text-align: right; font-size: small;">JMKIA0064GB</p>	
				When operating either button on the key	 <p style="text-align: right; font-size: small;">JMKIA0065GB</p>	
87 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0041GB</p> <p style="text-align: center;">1.4 V</p>
					Front fog lamp switch ON (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0037GB</p> <p style="text-align: center;">1.3 V</p>
					Rear wiper switch ON (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0039GB</p> <p style="text-align: center;">1.3 V</p>
					Any of the conditions below with all switch OFF <ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 2</li> <li>• Wiper intermittent dial 6</li> <li>• Wiper intermittent dial 7</li> </ul>	 <p style="text-align: right; font-size: small;">JPMIA0040GB</p> <p style="text-align: center;">1.3 V</p>

# BCM (BODY CONTROL MODULE)

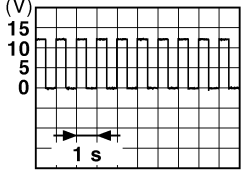
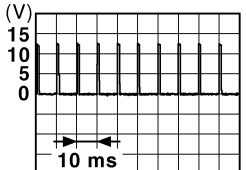
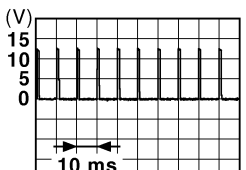
## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0041GB</p> <p style="text-align: center;">1.4 V</p>
					Lighting switch HI (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0036GB</p> <p style="text-align: center;">1.3 V</p>
					Lighting switch 2ND (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0037GB</p> <p style="text-align: center;">1.3 V</p>
					Rear washer switch ON (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0039GB</p> <p style="text-align: center;">1.3 V</p>
					Any of the conditions below with all switch OFF	 <p style="text-align: right; font-size: small;">JPMIA0040GB</p> <p style="text-align: center;">1.3 V</p>
89 (BR)	Ground	Push-button ignition switch (Push switch)	Input	Push-button igni- tion switch (push switch)	Pressed	0 V
				Not pressed	Battery voltage	
90 (P)	Ground	CAN-L	Input/ Output	—	—	
91 (L)	Ground	CAN-H	Input/ Output	—	—	

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# BCM (BODY CONTROL MODULE)

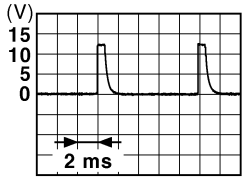
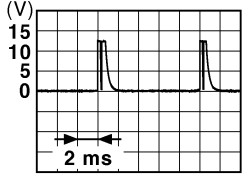
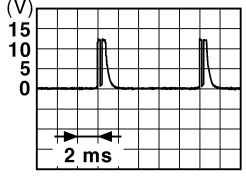
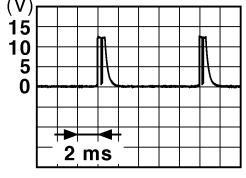
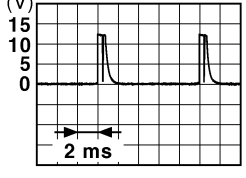
## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
92 (LG)	Ground	Key slot illumination	Output	Key slot illumination	OFF	Battery voltage
					Blinking	 <p style="text-align: center;">6.5 V</p> <p style="text-align: right; font-size: small;">JPMIA0015GB</p>
93 (V)	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0 V
94 (Y)	Ground	Puddle lamp control	Output	Puddle lamp	OFF	Battery voltage
					ON	0 V
95 (O)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	Battery voltage
96 (GR)	Ground	Control device (Detention switch) power supply	Output	—	Battery voltage	
97 (L)	Ground	Steering lock condition No. 1	Input	Steering lock	LOCK status	0 V
					UNLOCK status	Battery voltage
98 (P)	Ground	Steering lock condition No. 2	Input	Steering lock	LOCK status	Battery voltage
					UNLOCK status	0 V
99 (R)	Ground	Selector lever P position switch	Input	Selector lever	P position	0 V
					Any position other than P	Battery voltage
100 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 <p style="text-align: center;">1.0 V</p> <p style="text-align: right; font-size: small;">JPMIA0016GB</p>
101 (SB)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 <p style="text-align: center;">1.0 V</p> <p style="text-align: right; font-size: small;">JPMIA0016GB</p>
102 (O)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage



# BCM (BODY CONTROL MODULE)

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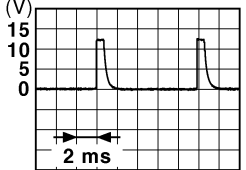
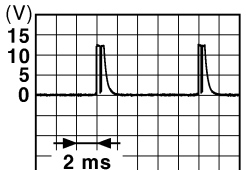
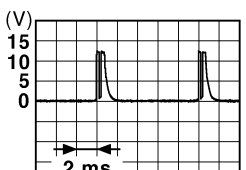
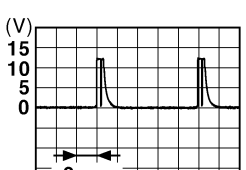
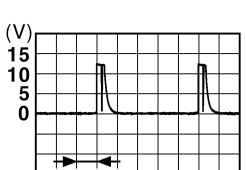
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
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103 (LG)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF	Battery voltage	
106 (W)	Ground	Steering wheel lock unit power supply	Output	Ignition switch	OFF or ACC	
					ON	0 V
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 <p style="text-align: center;">1.4 V</p>
					Turn signal switch LH	 <p style="text-align: center;">1.3 V</p>
					Turn signal switch RH	 <p style="text-align: center;">1.3 V</p>
					Front wiper switch LO	 <p style="text-align: center;">1.3 V</p>
					Front washer switch ON	 <p style="text-align: center;">1.3 V</p>

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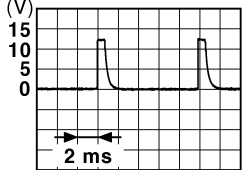
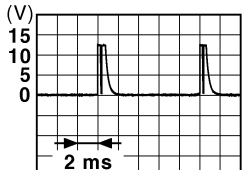

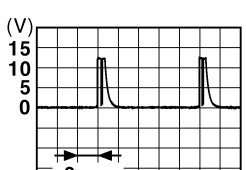

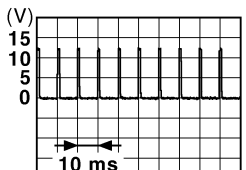
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
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108 (R)	Ground	Combination switch INPUT 4	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0041GB</p> <p style="text-align: center;">1.4 V</p>
					Lighting switch AUTO (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0038GB</p> <p style="text-align: center;">1.3 V</p>
					Lighting switch 1ST (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0036GB</p> <p style="text-align: center;">1.3 V</p>
					Rear wiper switch INT (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0040GB</p> <p style="text-align: center;">1.3 V</p>
					Any of the conditions below with all switch OFF	 <p style="text-align: right; font-size: small;">JPMIA0039GB</p> <p style="text-align: center;">1.3 V</p>

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
109 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	 <p style="text-align: right;">1.4 V</p>
					Lighting switch PASS	 <p style="text-align: right;">1.3 V</p>
					Lighting switch 2ND	 <p style="text-align: right;">1.3 V</p>
					Front wiper switch INT	 <p style="text-align: right;">1.3 V</p>
					Front wiper switch HI	 <p style="text-align: right;">1.3 V</p>
					ON	0 V
110 (G)	Ground	Hazard switch	Input	Hazard switch	 <p style="text-align: right;">1.1 V</p>	
				OFF		

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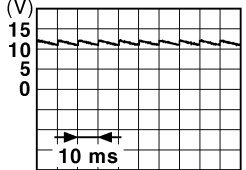
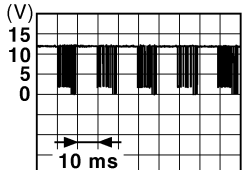
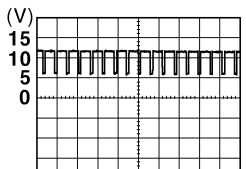
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
111 (Y)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK status	Battery voltage
					LOCK or UNLOCK	<p style="text-align: right; font-size: small;">JMkia0066GB</p>
					For 15 seconds after UN- LOCK	Battery voltage
				15 seconds or later after UNLOCK	0 V	
113* (P)	Ground	Optical sensor signal	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V
					When dark outside of the vehicle	Close to 0 V
116 (SB)	Ground	Fuse check [Stop lamp switch, ICC brake hold relay (With ICC)]	Input	—	Battery voltage	
118 (P)	Ground	Stop lamp switch (Without ICC)	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is de- pressed)	Battery voltage
		Stop lamp switch and ICC brake hold relay (With ICC)		Stop lamp switch OFF (Brake pedal is not de- pressed) and ICC brake hold relay OFF	0 V	
				Stop lamp switch ON (Brake pedal is de- pressed) or ICC brake hold relay ON	Battery voltage	
119 (SB)	Ground	Front door lock as- sembly driver side (unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	<p style="text-align: right; font-size: small;">JPMIA0012GB</p>
						1.1 V
					UNLOCK status (Unlock switch sensor ON)	0 V
121 (BR)	Ground	Key slot switch	Input	When the key is inserted into key slot	Battery voltage	
				When the key is not inserted into key slot	0 V	
122 (V)	Ground	ACC feedback signal	Input	Ignition switch	OFF	0 V
					ACC or ON	Battery voltage
123 (W)	Ground	IGN feedback signal	Input	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage

# BCM (BODY CONTROL MODULE)

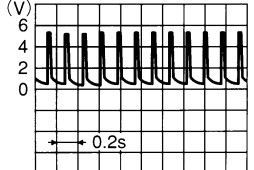

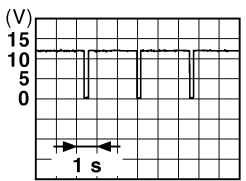
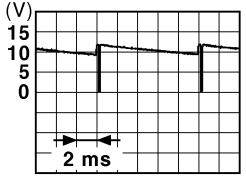
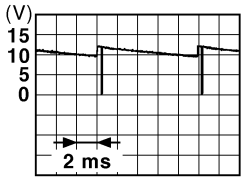
## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	 <p style="text-align: right; font-size: small;">JPMIA0011GB</p> <p style="text-align: center;">11.8 V</p>
					ON (Door open)	0 V
132 (V)	Ground	Power window switch communication	Input/ Output	Ignition switch ON	 <p style="text-align: right; font-size: small;">JPMIA0013GB</p> <p style="text-align: center;">10.2 V</p>	
					Ignition switch OFF or ACC	Battery voltage
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button igni- tion switch illumina- tion	ON (Tail lamps OFF)	9.5 V
					ON (Tail lamps ON)	<p><b>NOTE:</b> The pulse width of this wave is varied by the illumination bright- ening/dimming level.</p>  <p style="text-align: right; font-size: small;">JPMIA0159GB</p>
134 (GR)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF	Battery voltage
					ON	0 V
137 (O)	Ground	Receiver and sensor ground	Input	Ignition switch ON	0 V	
138 (Y)	Ground	Sensor power supply	Output	Ignition switch	OFF	0 V
					ACC or ON	5.0 V

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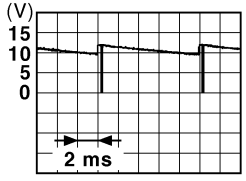
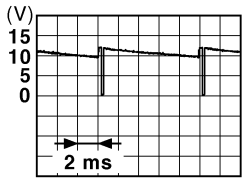
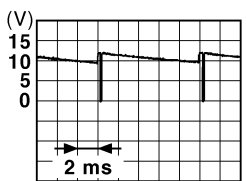
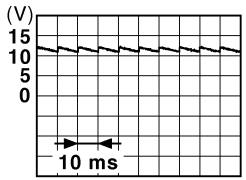
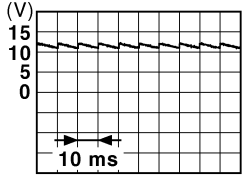
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
139 (L)	Ground	Tire pressure receiver signal	Input/ Output	Ignition switch ON	Standby state  OCC3881D
				When receiving the signal from the transmitter  OCC3880D	
140 (GR)	Ground	Selector lever P/N position signal	Input	Selector lever	P or N position Battery voltage
				Except P and N positions	0 V
141 (G)	Ground	Security indicator signal	Output	Security indicator	ON 0 V
				Blinking  JPMIA0014GB 11.3 V	
				OFF	Battery voltage
142 (O)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF 0 V
				Lighting switch 1ST	 JPMIA0031GB 10.7 V
				Lighting switch HI	
				Lighting switch 2ND	
				Turn signal switch RH	
143 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4) 0 V
				Front wiper switch HI (Wiper intermittent dial 4)	 JPMIA0032GB 10.7 V
				Rear wiper switch INT (Wiper intermittent dial 4)	
				Any of the conditions below with all switch OFF <ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 2</li> <li>• Wiper intermittent dial 3</li> <li>• Wiper intermittent dial 6</li> <li>• Wiper intermittent dial 7</li> </ul>	

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)		
		Signal name	Input/ Output				
+	-						
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V	
					Front washer switch ON (Wiper intermittent dial 4)		
					Rear wiper switch ON (Wiper intermittent dial 4)		
					Rear washer switch ON (Wiper intermittent dial 4)		
					Any of the conditions below with all switch OFF <ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 5</li> <li>• Wiper intermittent dial 6</li> </ul>		10.7 V
145 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V	
					Front wiper switch INT		
					Front wiper switch LO		
					Lighting switch AUTO		10.7 V
146 (SB)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V	
					Front fog lamp switch ON		
					Lighting switch 2ND		
					Lighting switch PASS		
					Turn signal switch LH		10.7 V
149 (W)	Ground	Tire pressure warn- ing check switch	Input	Ignition switch ON		11.8 V	
150 (LG)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)		11.8 V
					ON (Door open)	0 V	
151 (G)	Ground	Rear window defog- ger relay	Output	Rear window de- fogger	Active	0 V	
					Not activated	Battery voltage	

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# BCM (BODY CONTROL MODULE)

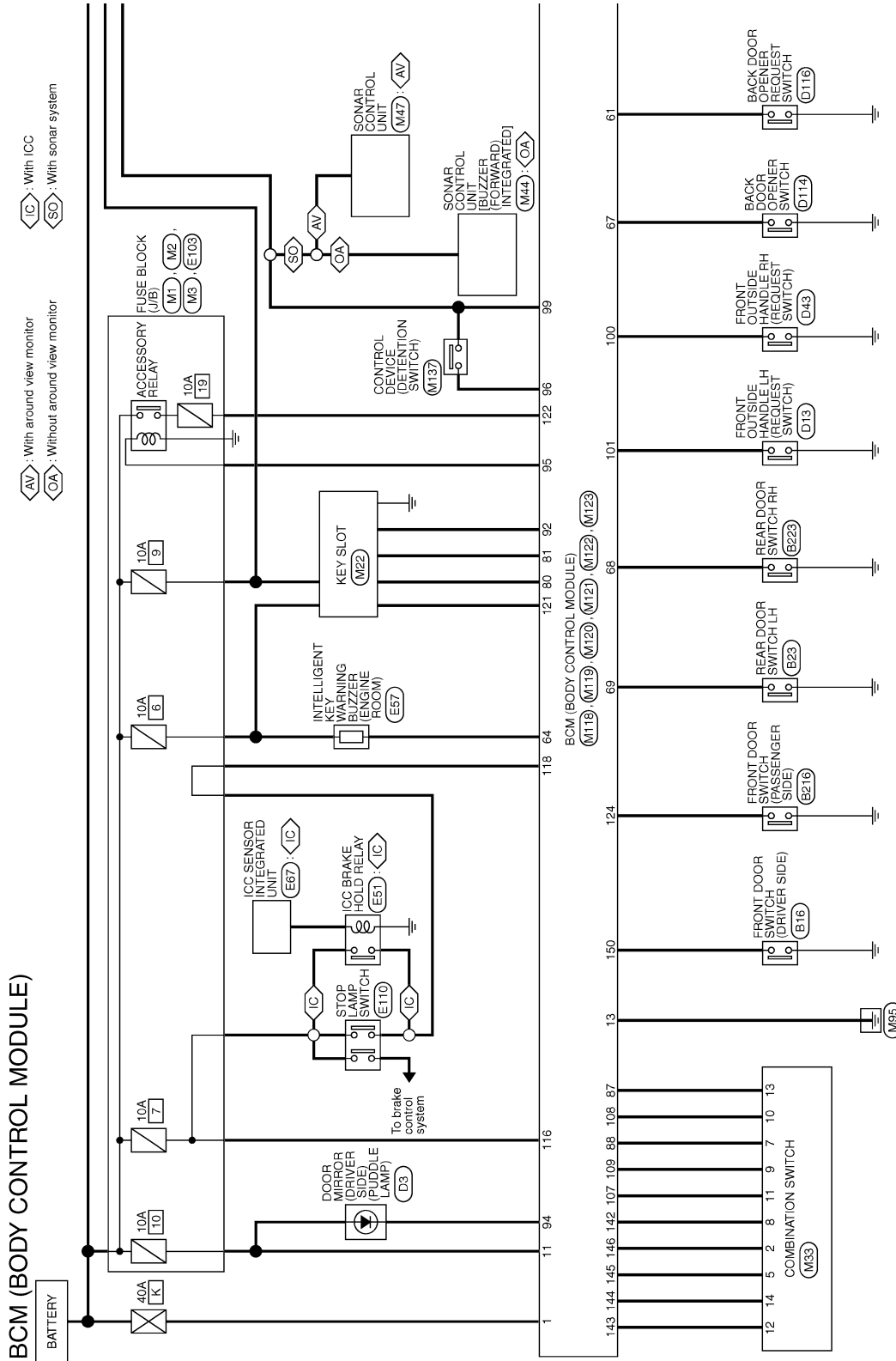
< ECU DIAGNOSIS >

NOTE:

\*: With auto light system

## Wiring Diagram - BCM -

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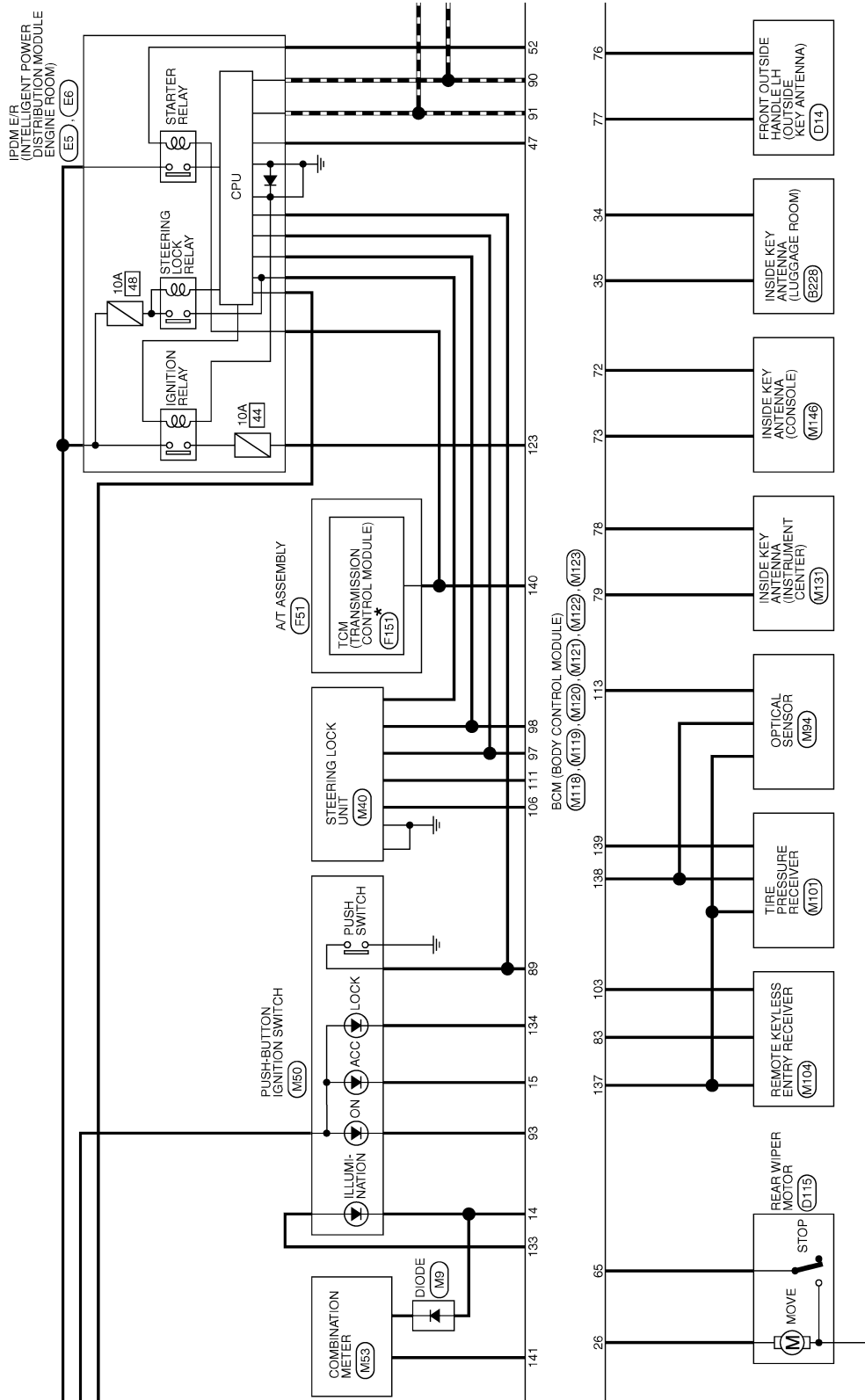


2007/10/26  
JCMWM1398G



# BCM (BODY CONTROL MODULE)

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\*: This connector is not shown in "Harness Layout".

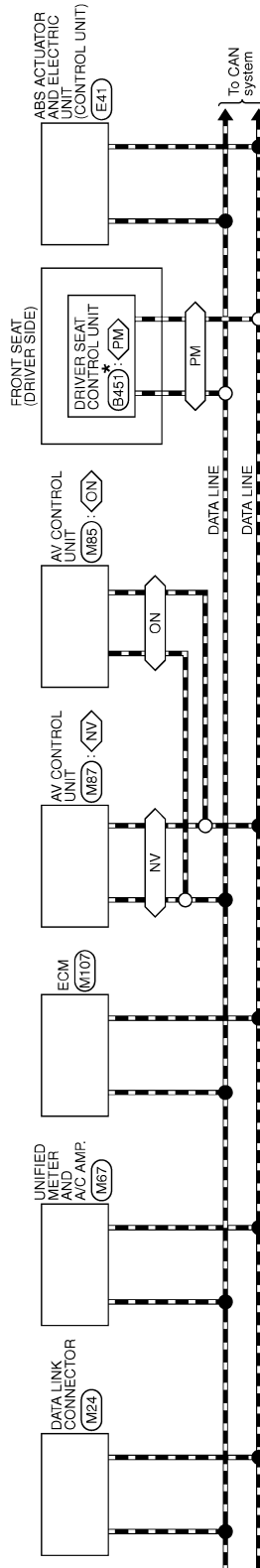
JCMWM1399G1

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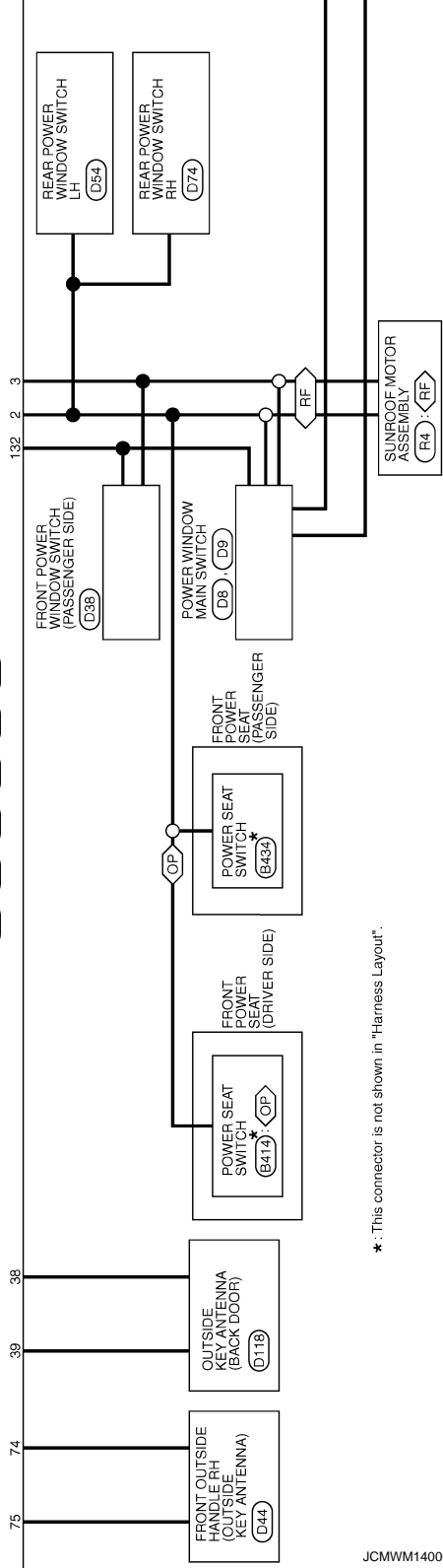
# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

- ◀NV▶ : With NAVI
- ◀ON▶ : Without NAVI
- ◀RF▶ : With sunroof
- ◀PM▶ : With automatic drive positioner
- ◀OP▶ : Without automatic drive positioner



BCM (BODY CONTROL MODULE)

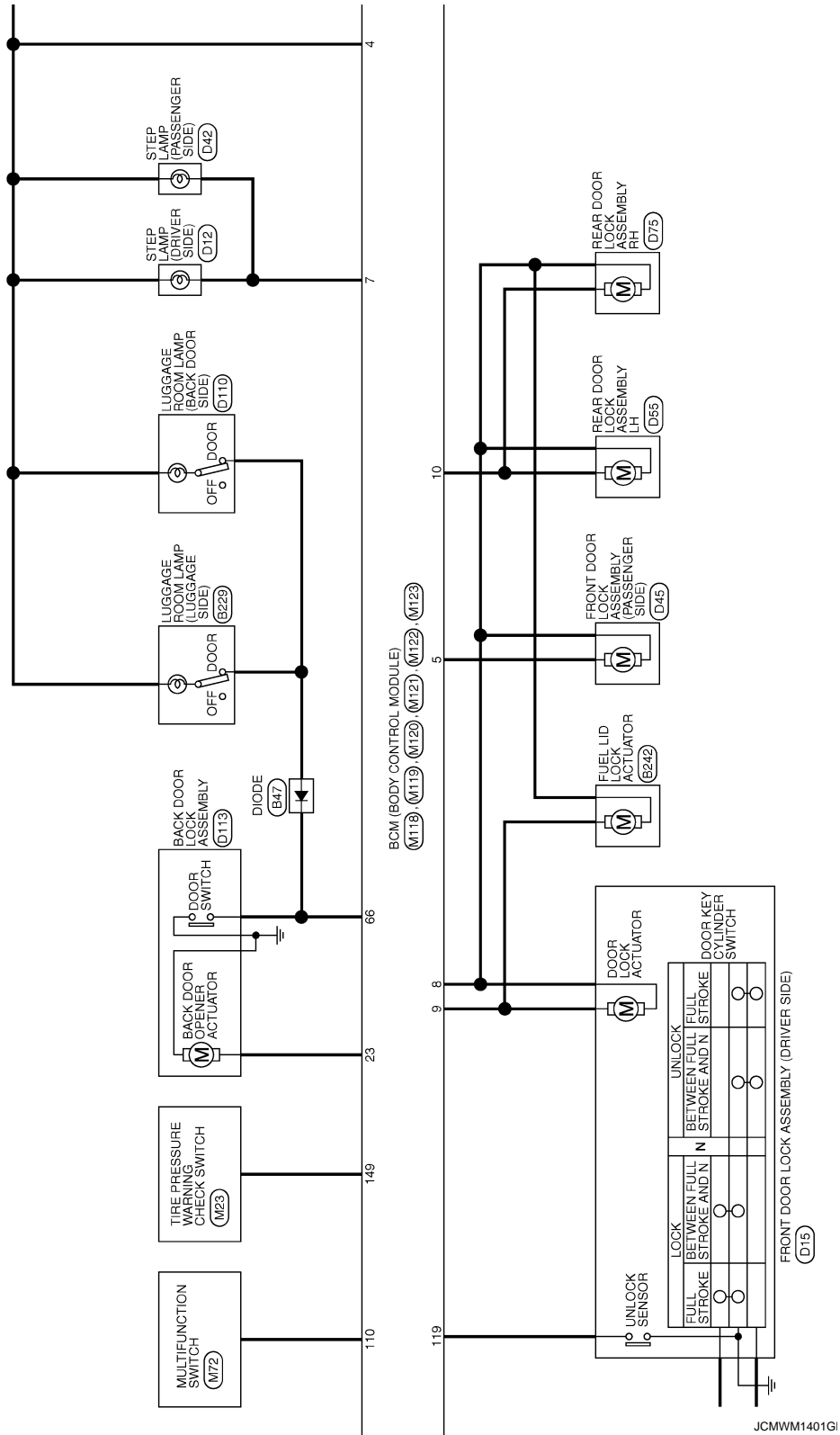


\* : This connector is not shown in "Harness Layout".

JCMWM1400G

# BCM (BODY CONTROL MODULE)

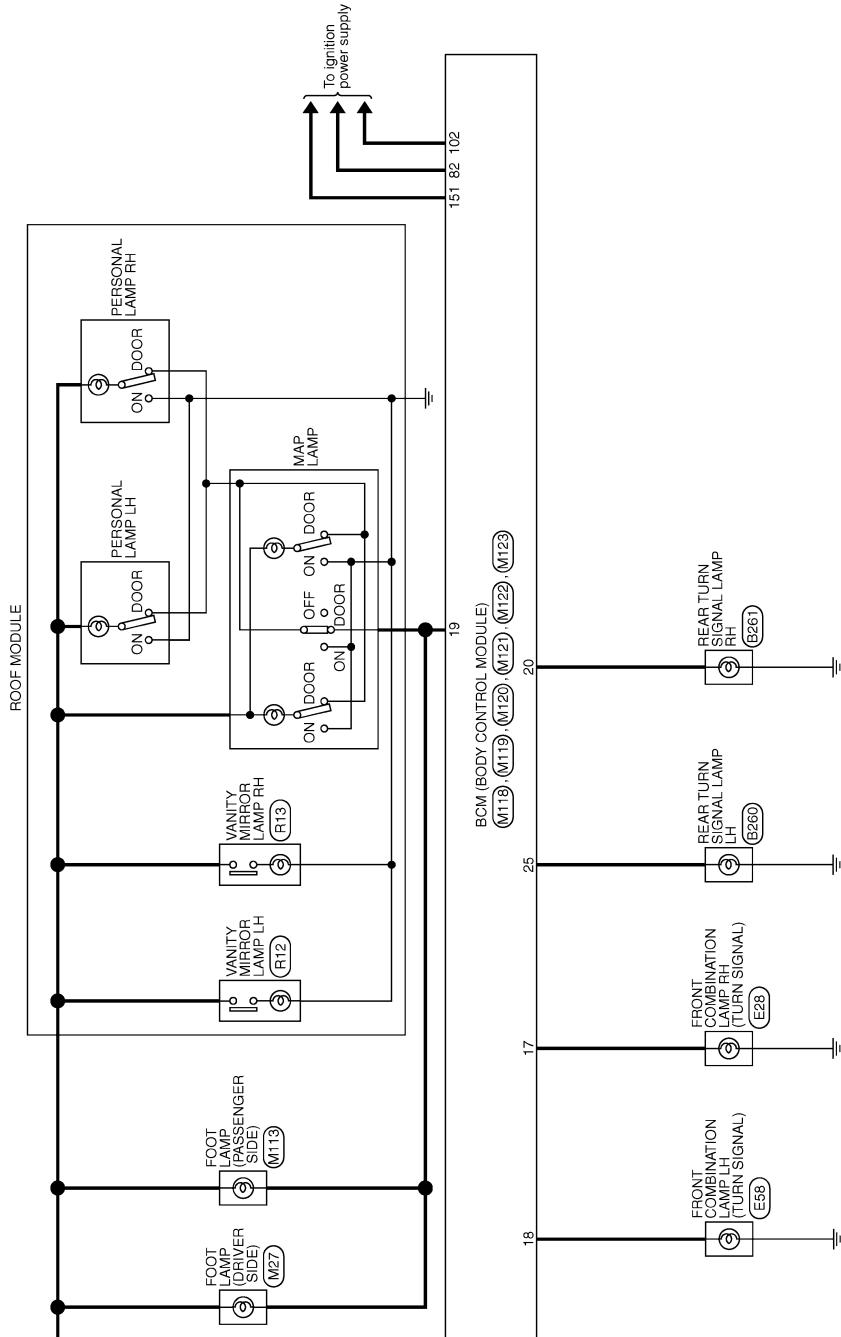
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# BCM (BODY CONTROL MODULE)

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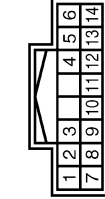
JCMWM1402G

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## BCM (BODY CONTROL MODULE)

Connector No.	M33
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	OUTPUT 4
4	L	OUTPUT 3
5	L	INPUT 3
7	O	OUTPUT 5
8	Y	INPUT 2
10	R	INPUT 4
11	LG	INPUT 1
12	P	OUTPUT 1
13	BR	INPUT 5
14	G	OUTPUT 2

Connector No.	M120
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS12FW-CS



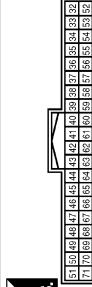
Terminal No.	Color of Wire	Signal Name [Specification]
20	V	TURN SIGNAL RH (REAR)
23	G	BACK DOOR OPEN OUTPUT
25	G	TURN SIGNAL LH (REAR)
26	G	REAR WIPER OUTPUT

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC



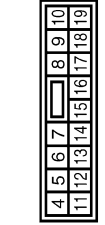
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (F/L)
2	Y	POWER WINDOW POWER SUPPLY(BAT)
3	O	POWER WINDOW POWER SUPPLY(RAP)

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH



Terminal No.	Color of Wire	Signal Name [Specification]
34	SB	LUGGAGE ROOM ANTI-
35	V	LUGGAGE ROOM ANTI+
38	B	REAR BUMPER ANTI-
39	W	REAR BUMPER ANTI+
47	Y	IGN RELAY (PDM L/R CONT)
52	SB	STARTER RELAY CONT
61	W	BACK DOOR OPENER REQUEST SW
64	V	REQUEST SW BUZZER
65	O	REAR WIPER STOP POSITION
66	R	BACK DOOR SW
67	GR	BACK DOOR OPENER SW

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
4	LG	INTERIOR ROOM LAMP POWER SUPPLY
5	L	PASSANGER DOOR UNLOCK OUTPUT
7	Y	STEP LAMP OUTPUT
8	V	ALL DOOR FUEL LID LOCK OUTPUT
9	G	DRIVER DOOR UNLOCK OUTPUT
10	BR	REAR DOOR UNLOCK OUTPUT
11	R	BAT (RUSE)
13	B	GND
14	W	PUSH-BUTTON IGNITION SW ILL GND
15	Y	ACC IND
17	W	TURN SIGNAL RH (FRONT)

68	BR	REAR RH DOOR SW
69	R	REAR LH DOOR SW

18	O	TURN SIGNAL LH (FRONT)
19	V	ROOM LAMP TIMER CONTROL

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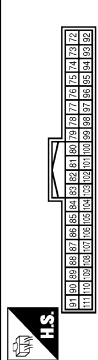
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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## BCM (BODY CONTROL MODULE)

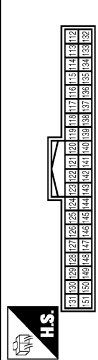
Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color of Wire	Signal Name [Specification]
72	R	ROOM ANT2-
73	G	ROOM ANT2+
74	SB	PASSENGER DOOR ANT-
75	GR	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT-
77	LG	DRIVER DOOR ANT+
78	Y	ROOM ANT1-
79	BR	ROOM ANT1+
80	GR	IMMOBI ANTENNA CONTROL
81	W	IMMOBI ANTENNA SIGNAL
82	R	IGN RELAY (F/B) CONT

83	Y	KEYLESS TUNER SIGNAL
87	BR	COMBI SW INPUT 5
88	V	COMBI SW INPUT 3
89	BR	PUSH SW
90	P	CAN-L
91	L	CAN-H
92	LG	KEY SLOT ILL
93	Y	ON IND
94	V	PUDDLE LAMP CONT
95	O	ACC RELAY CONT
96	GR	A/T DEVICE POWER SUPPLY
97	L	S/L CONDITION 1
98	P	S/L CONDITION 2
99	R	SHIFT P
100	G	PASSENGER DOOR REQUEST SW
101	SB	DRIVER DOOR REQUEST SW
102	O	BLOWER FAN MOTOR RELAY CONT
103	LG	KEYLESS ENTRY RECEIVER POWER SUPPLY
106	W	S/L POWER SUPPLY
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2
110	G	HAZARD SW
111	Y	S/L COMM

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name [Specification]
113	P	OPTICAL SENSOR
116	SB	FUSE CHECK
118	P	STOP LAMP SW
119	SB	DR DOOR UNLOCK SENSOR
121	BR	KEY SLOT SW
122	V	ACC F/B
123	W	IGN F/B
124	LG	PASSENGER DOOR SW
132	V	POWER WINDOW SW COMM
133	W	PUSH-BUTTON IGNITION SW ILL POWER
134	GR	LOCK IND

137	O	RECEIVER/SENSOR GND
138	Y	RECEIVER/SENSOR POWER SUPPLY
139	L	TIRE PRESS RECEIVER SIGNAL
140	GR	SHIFT N/P
141	G	SECURITY INDICATOR OUTPUT
142	O	COMBI SW OUTPUT 5
143	P	COMBI SW OUTPUT 1
144	G	COMBI SW OUTPUT 2
145	L	COMBI SW OUTPUT 3
146	SB	COMBI SW OUTPUT 4
149	W	TIRE PRESS WARNING CHECK SW
150	LG	DRIVER DOOR SW
151	G	REAR WINDOW DEFOGGER RELAY

## Fail-safe

### FAIL-SAFE CONTROL BY DTC

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

JCMWM1404G

INFOID:000000003774306

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation	
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC	A
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC	
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC	B
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC	
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC	C
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC	
B2557: VEHICLE SPEED	Inhibit steering lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms	D
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> <li>• Starter control relay signal</li> <li>• Starter relay status signal</li> </ul>	WT
B2601: SHIFT POSITION	Inhibit steering lock	500 ms after the following signal reception status becomes consistent <ul style="list-style-type: none"> <li>• Selector lever P position switch signal</li> <li>• P range signal (CAN)</li> </ul>	F
B2602: SHIFT POSITION	Inhibit steering lock	5 seconds after the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> <li>• Ignition switch is in the ON position</li> <li>• Selector lever P position switch signal: Except P position (battery voltage)</li> <li>• Vehicle speed: 4 km/h (2.5 MPH) or more</li> </ul>	G
B2603: SHIFT POSI STATUS	Inhibit steering lock	500 ms after the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> <li>• Ignition switch is in the ON position</li> <li>• Selector lever P position switch signal: Except P position (battery voltage)</li> <li>• Selector lever P/N position signal: Except P and N positions (0 V)</li> </ul>	H
B2604: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions is fulfilled <ul style="list-style-type: none"> <li>• Status 1               <ul style="list-style-type: none"> <li>- Ignition switch is in the ON position</li> <li>- Selector lever P/N position signal: P and N position (battery voltage)</li> <li>- P range signal or N range signal (CAN): ON</li> </ul> </li> <li>• Status 2               <ul style="list-style-type: none"> <li>- Ignition switch is in the ON position</li> <li>- Selector lever P/N position signal: Except P and N positions (0 V)</li> <li>- P range signal and N range signal (CAN): OFF</li> </ul> </li> </ul>	I
B2605: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions is fulfilled <ul style="list-style-type: none"> <li>• Status 1               <ul style="list-style-type: none"> <li>- Ignition switch is in the ON position</li> <li>- Power position: IGN</li> <li>- Selector lever P/N position signal: Except P and N positions (0 V)</li> <li>- Interlock/PNP switch signal (CAN): OFF</li> </ul> </li> <li>• Status 2               <ul style="list-style-type: none"> <li>- Ignition switch is in the ON position</li> <li>- Selector lever P/N position signal: P or N position (battery voltage)</li> <li>- PNP switch signal (CAN): ON</li> </ul> </li> </ul>	J
B2606: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> <li>• Steering lock relay signal (Request signal)</li> <li>• Steering lock relay signal (Condition signal)</li> </ul>	K
B2607: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> <li>• Steering lock relay signal (Request signal)</li> <li>• Steering lock relay signal (Condition signal)</li> </ul>	L

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent <ul style="list-style-type: none"> <li>• Starter motor relay control signal</li> <li>• Starter relay status signal (CAN)</li> </ul>
B2609: S/L STATUS	<ul style="list-style-type: none"> <li>• Inhibit engine cranking</li> <li>• Inhibit steering lock</li> </ul>	When the following steering lock conditions agree <ul style="list-style-type: none"> <li>• BCM steering lock control status</li> <li>• Steering lock condition No. 1 signal status</li> <li>• Steering lock condition No. 2 signal status</li> </ul>
B260A: IGNITION RELAY	Inhibit engine cranking	500 ms after the following conditions are fulfilled <ul style="list-style-type: none"> <li>• IGN relay (IPDM E/R) control signal: OFF (Battery voltage)</li> <li>• Ignition ON signal (CAN to IPDM E/R): OFF (Request signal)</li> <li>• Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)</li> </ul>
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilled <ul style="list-style-type: none"> <li>• Power position changes to ACC</li> <li>• Receives engine status signal (CAN)</li> </ul>
B2612: S/L STATUS	<ul style="list-style-type: none"> <li>• Inhibit engine cranking</li> <li>• Inhibit steering lock</li> </ul>	When any of the following conditions is fulfilled <ul style="list-style-type: none"> <li>• Steering lock unit status signal (CAN) is received normally</li> <li>• The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)</li> </ul>
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions is fulfilled <ul style="list-style-type: none"> <li>• Power position changes to ACC</li> <li>• Receives engine status signal (CAN)</li> </ul>
B26E9: S/L STATUS	<ul style="list-style-type: none"> <li>• Inhibit engine cranking</li> <li>• Inhibit steering lock</li> </ul>	When BCM transmits the LOCK request signal to steering lock unit, and receives LOCK response signal from steering lock unit, the following conditions is fulfilled <ul style="list-style-type: none"> <li>• Steering condition No. 1 signal: LOCK (0V)</li> <li>• Steering condition No. 2 signal: LOCK (Battery voltage)</li> </ul>

### HIGH FLASHER OPERATION

BCM detects the turn signal lamp circuit status by the current value.

BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

#### NOTE:

The blinking speed is normal while activating the hazard warning lamp.

### DTC Inspection Priority Chart

INFOID:000000003774307

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

Priority	DTC
1	B2562: LOW VOLTAGE
2	<ul style="list-style-type: none"> <li>• U1000: CAN COMM CIRCUIT</li> <li>• U1010: CONTROL UNIT (CAN)</li> </ul>
3	<ul style="list-style-type: none"> <li>• B2190: NATS ANTENNA AMP</li> <li>• B2191: DIFFERENCE OF KEY</li> <li>• B2192: ID DISCORD BCM-ECM</li> <li>• B2193: CHAIN OF BCM-ECM</li> </ul>



# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Priority	DTC	A	
4	<ul style="list-style-type: none"> <li>• B2013: ID DISCORD BCM-S/L</li> <li>• B2014: CHAIN OF S/L-BCM</li> <li>• B2553: IGNITION RELAY</li> <li>• B2555: STOP LAMP</li> <li>• B2556: PUSH-BTN IGN SW</li> <li>• B2557: VEHICLE SPEED</li> <li>• B2560: STARTER CONT RELAY</li> <li>• B2601: SHIFT POSITION</li> <li>• B2602: SHIFT POSITION</li> <li>• B2603: SHIFT POSI STATUS</li> <li>• B2604: PNP SW</li> <li>• B2605: PNP SW</li> <li>• B2606: S/L RELAY</li> <li>• B2607: S/L RELAY</li> <li>• B2608: STARTER RELAY</li> <li>• B2609: S/L STATUS</li> <li>• B260A: IGNITION RELAY</li> <li>• B260B: STEERING LOCK UNIT</li> <li>• B260C: STEERING LOCK UNIT</li> <li>• B260D: STEERING LOCK UNIT</li> <li>• B260F: ENG STATE SIG LOST</li> <li>• B2612: S/L STATUS</li> <li>• B2614: ACC RELAY CIRC</li> <li>• B2615: BLOWER RELAY CIRC</li> <li>• B2616: IGN RELAY CIRC</li> <li>• B2617: STARTER RELAY CIRC</li> <li>• B2618: BCM</li> <li>• B2619: BCM</li> <li>• B261A: PUSH-BTN IGN SW</li> <li>• B261E: VEHICLE TYPE</li> <li>• B26E1: ENG STATE NO RECIV</li> <li>• B26E9: S/L STATUS</li> <li>• B26EA: KEY REGISTRATION</li> <li>• C1729: VHCL SPEED SIG ERR</li> <li>• U0415: VEHICLE SPEED SIG</li> </ul>	A  B  C  D  <b>WT</b>  F  G  H  I  J	
	<ul style="list-style-type: none"> <li>• C1704: LOW PRESSURE FL</li> <li>• C1705: LOW PRESSURE FR</li> <li>• C1706: LOW PRESSURE RR</li> <li>• C1707: LOW PRESSURE RL</li> <li>• C1708: [NO DATA] FL</li> <li>• C1709: [NO DATA] FR</li> <li>• C1710: [NO DATA] RR</li> <li>• C1711: [NO DATA] RL</li> <li>• C1712: [CHECKSUM ERR] FL</li> <li>• C1713: [CHECKSUM ERR] FR</li> <li>• C1714: [CHECKSUM ERR] RR</li> <li>• C1715: [CHECKSUM ERR] RL</li> <li>• C1716: [PRESSDATA ERR] FL</li> <li>• C1717: [PRESSDATA ERR] FR</li> <li>• C1718: [PRESSDATA ERR] RR</li> <li>• C1719: [PRESSDATA ERR] RL</li> <li>• C1720: [CODE ERR] FL</li> <li>• C1721: [CODE ERR] FR</li> <li>• C1722: [CODE ERR] RR</li> <li>• C1723: [CODE ERR] RL</li> <li>• C1724: [BATT VOLT LOW] FL</li> <li>• C1725: [BATT VOLT LOW] FR</li> <li>• C1726: [BATT VOLT LOW] RR</li> <li>• C1727: [BATT VOLT LOW] RL</li> <li>• C1734: CONTROL UNIT</li> </ul>	K  L  M  N  O  P	
	6	<ul style="list-style-type: none"> <li>• B2621: INSIDE ANTENNA</li> <li>• B2622: INSIDE ANTENNA</li> <li>• B2623: INSIDE ANTENNA</li> </ul>	

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## DTC Index

INFOID:000000003774308

### NOTE:

The details of time display are as follows.

- CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data and IGN Counter, refer to [BCS-16, "COMMON ITEM : CONSULT-III Function \(BCM - COMMON ITEM\)"](#).

CONSULT display	Fail-safe	Freeze Frame Data	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	—	<a href="#">BCS-37</a>
U1010: CONTROL UNIT (CAN)	—	—	—	—	<a href="#">BCS-38</a>
U0415: VEHICLE SPEED SIG	—	—	—	—	<a href="#">BCS-39</a>
B2013: ID DISCORD BCM-S/L	×	×	—	—	<a href="#">SEC-48</a>
B2014: CHAIN OF S/L-BCM	×	×	—	—	<a href="#">SEC-49</a>
B2190: NATS ANTENNA AMP	×	—	—	—	<a href="#">SEC-42</a>
B2191: DIFFERENCE OF KEY	×	—	—	—	<a href="#">SEC-45</a>
B2192: ID DISCORD BCM-ECM	×	—	—	—	<a href="#">SEC-46</a>
B2193: CHAIN OF BCM-ECM	×	—	—	—	<a href="#">SEC-47</a>
B2553: IGNITION RELAY	—	×	—	—	<a href="#">PCS-49</a>
B2555: STOP LAMP	—	×	—	—	<a href="#">SEC-52</a>
B2556: PUSH-BTN IGN SW	—	×	×	—	<a href="#">SEC-54</a>
B2557: VEHICLE SPEED	×	×	×	—	<a href="#">SEC-56</a>
B2560: STARTER CONT RELAY	×	×	×	—	<a href="#">SEC-57</a>
B2562: LOW VOLTAGE	—	×	—	—	<a href="#">BCS-40</a>
B2601: SHIFT POSITION	×	×	×	—	<a href="#">SEC-58</a>
B2602: SHIFT POSITION	×	×	×	—	<a href="#">SEC-61</a>
B2603: SHIFT POSI STATUS	×	×	×	—	<a href="#">SEC-63</a>
B2604: PNP SW	×	×	×	—	<a href="#">SEC-66</a>
B2605: PNP SW	×	×	×	—	<a href="#">SEC-68</a>
B2606: S/L RELAY	×	×	×	—	<a href="#">SEC-70</a>
B2607: S/L RELAY	×	×	×	—	<a href="#">SEC-71</a>
B2608: STARTER RELAY	×	×	×	—	<a href="#">SEC-73</a>
B2609: S/L STATUS	×	×	×	—	<a href="#">SEC-75</a>
B260A: IGNITION RELAY	×	×	×	—	<a href="#">PCS-51</a>
B260B: STEERING LOCK UNIT	—	×	×	—	<a href="#">SEC-79</a>
B260C: STEERING LOCK UNIT	—	×	×	—	<a href="#">SEC-80</a>
B260D: STEERING LOCK UNIT	—	×	×	—	<a href="#">SEC-81</a>
B260F: ENG STATE SIG LOST	×	×	×	—	<a href="#">SEC-82</a>
B2612: S/L STATUS	×	×	×	—	<a href="#">SEC-86</a>
B2614: ACC RELAY CIRC	—	×	×	—	<a href="#">PCS-53</a>
B2615: BLOWER RELAY CIRC	—	×	×	—	<a href="#">PCS-57</a>
B2616: IGN RELAY CIRC	—	×	×	—	<a href="#">PCS-59</a>
B2617: STARTER RELAY CIRC	×	×	×	—	<a href="#">SEC-90</a>

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

CONSULT display	Fail-safe	Freeze Frame Data	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page	
B2618: BCM	×	×	×	—	<a href="#">PCS-61</a>	A
B2619: BCM	×	×	×	—	<a href="#">SEC-92</a>	B
B261A: PUSH-BTN IGN SW	—	×	×	—	<a href="#">SEC-93</a>	
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	—	<a href="#">SEC-96</a>	C
B2621: INSIDE ANTENNA	—	×	—	—	<a href="#">DLK-56</a>	
B2622: INSIDE ANTENNA	—	×	—	—	<a href="#">DLK-58</a>	D
B2623: INSIDE ANTENNA	—	×	—	—	<a href="#">DLK-60</a>	
B26E1: ENG STATE NO RES	×	×	×	—	<a href="#">SEC-83</a>	
B26E9: S/L STATUS	×	×	× (Turn ON for 15 seconds)	—	<a href="#">SEC-84</a>	WT
B26EA: KEY REGISTRATION	—	×	× (Turn ON for 15 seconds)	—	<a href="#">SEC-85</a>	F
C1704: LOW PRESSURE FL	—	—	—	×	<a href="#">WT-16</a>	
C1705: LOW PRESSURE FR	—	—	—	×		G
C1706: LOW PRESSURE RR	—	—	—	×		
C1707: LOW PRESSURE RL	—	—	—	×		
C1708: [NO DATA] FL	—	—	—	×	<a href="#">WT-18</a>	H
C1709: [NO DATA] FR	—	—	—	×		
C1710: [NO DATA] RR	—	—	—	×		I
C1711: [NO DATA] RL	—	—	—	×		
C1712: [CHECKSUM ERR] FL	—	—	—	×	<a href="#">WT-21</a>	
C1713: [CHECKSUM ERR] FR	—	—	—	×		J
C1714: [CHECKSUM ERR] RR	—	—	—	×		
C1715: [CHECKSUM ERR] RL	—	—	—	×		
C1716: [PRESSDATA ERR] FL	—	—	—	×	<a href="#">WT-24</a>	K
C1717: [PRESSDATA ERR] FR	—	—	—	×		
C1718: [PRESSDATA ERR] RR	—	—	—	×		L
C1719: [PRESSDATA ERR] RL	—	—	—	×		
C1720: [CODE ERR] FL	—	—	—	×	<a href="#">WT-26</a>	
C1721: [CODE ERR] FR	—	—	—	×		M
C1722: [CODE ERR] RR	—	—	—	×		
C1723: [CODE ERR] RL	—	—	—	×		
C1724: [BATT VOLT LOW] FL	—	—	—	×	<a href="#">WT-29</a>	N
C1725: [BATT VOLT LOW] FR	—	—	—	×		
C1726: [BATT VOLT LOW] RR	—	—	—	×		O
C1727: [BATT VOLT LOW] RL	—	—	—	×		
C1729: VHCL SPEED SIG ERR	—	—	—	×	<a href="#">WT-32</a>	
C1734: CONTROL UNIT	—	—	—	×	<a href="#">WT-33</a>	P

# TPMS

< SYMPTOM DIAGNOSIS >











## SYMPTOM DIAGNOSIS

### TPMS

#### Symptom Table




INFOID:000000003579755

#### LOW TIRE PRESSURE WARNING LAMP SYMPTOM CHART

Diagnosis Item	Symptom (Ignition switch ON)	Low tire pressure warning lamp	Cause	Action
Low tire pressure warning lamp	Low tire pressure warning lamp comes on immediately and turns off after 1 second.	  ON 1 sec > stays OFF <small>SEIA0592E</small>	All wheel transmitters are "activated" (working).	None (system OK)
	Low tire pressure warning lamp blinks on for 2 seconds, then turns off for 0.2 seconds-repeats.	 Blinks:  ON 2 sec > OFF 0.2 sec <small>SEIA0593E</small>	All wheel transmitters are not activated.	Activate all wheel tire pressure transmitters. Refer to <a href="#">WT-6</a> , " <a href="#">TRANSMITTER WAKE UP OPERATION : Special Repair Requirement</a> ".
	Low tire pressure warning lamp blinks 1 time.	 Blinks 1 time ON 0.3 sec > OFF 1.3 sec <small>SEIA0594E</small>	Tire pressure transmitter front LH is not activated.	Activate tire pressure transmitter front LH. Refer to <a href="#">WT-6</a> , " <a href="#">TRANSMITTER WAKE UP OPERATION : Special Repair Requirement</a> ".
	Low tire pressure warning lamp blinks 2 times.	  Blinks 2 times ON 0.3 sec > OFF 0.3 sec <small>SEIA0595E</small>	Tire pressure transmitter front RH is not activated.	Activate tire pressure transmitter front RH. Refer to <a href="#">WT-6</a> , " <a href="#">TRANSMITTER WAKE UP OPERATION : Special Repair Requirement</a> ".
	Low tire pressure warning lamp blinks 3 times.	   Blinks 3 times ON 0.3 sec > OFF 0.3 sec <small>SEIA0596E</small>	Tire pressure transmitter rear RH is not activated.	Activate tire pressure transmitter rear RH. Refer to <a href="#">WT-6</a> , " <a href="#">TRANSMITTER WAKE UP OPERATION : Special Repair Requirement</a> ".

# TPMS

## < SYMPTOM DIAGNOSIS >

Diagnosis Item	Symptom (Ignition switch ON)	Low tire pressure warning lamp	Cause	Action
Low tire pressure warning lamp	Low tire pressure warning lamp blinks 4 times.	 Blinks 4 times ON 0.3 sec > OFF 0.3 sec <small>SEIA0597E</small>	Tire pressure transmitter rear LH is not activated.	Activate tire pressure transmitter rear LH. Refer to <a href="#">WT-6</a> , " <a href="#">TRANSMITTER WAKE UP OPERATION : Special Repair Requirement</a> ".
	Low tire pressure warning lamp comes on and does not turn off.	 Comes ON and stays ON <small>SEIA0598E</small>	Tire pressure is low.	Check tire pressure with CONSULT-III. Refer to <a href="#">WT-14</a> , " <a href="#">AIR PRESSURE MONITOR : CONSULT-III Function (BCM - AIR PRESSURE MONITOR)</a> ".
	Low tire pressure warning lamp blinks on for 0.5 seconds then turns off for 0.5 seconds-repeats for 1 minute, and then stays on.	 Blinks 1 min ON 0.5 sec > OFF 0.5 sec and stays ON <small>SEIA0788E</small>	The fuse for combination meter from battery is pulled out. BCM connector pulled out. Low tire pressure or tire pressure monitoring system malfunction.	Check the fuse for combination meter from battery. Install or replace (if needed). Check BCM connector. Reconnect if needed. • Perform CONSULT-III Self-Diagnosis. Refer to <a href="#">WT-14</a> , " <a href="#">AIR PRESSURE MONITOR : CONSULT-III Function (BCM - AIR PRESSURE MONITOR)</a> ". - Perform ID Registration if needed. Refer to <a href="#">WT-6</a> , " <a href="#">ID REGISTRATION PROCEDURE : Special Repair Requirement</a> ".
Turn signal lamp	Turn signal lamp does not blink 2 times or buzzer does not sound after transmitter activation.	—	<ol style="list-style-type: none"> <li>1. Tool J-45295 [SST] does not activated.</li> <li>2. Ignition OFF during activation.</li> <li>3. Tool J-45295 [SST] not positioned correctly.</li> <li>4. Transmitters already activated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Install new battery.</li> <li>2. Check ignition is ON during activation.</li> <li>3. Position tool correctly during activation.</li> <li>4. Nothing.</li> </ol>

**NOTE:**

If more than one wheel transmitter is NOT activated, the low tire pressure warning lamp blinking patterns for those wheels will combine. (Example: one blink/OFF/three blinks = Tire pressure transmitter rear LH and rear RH are not activated.)

A  
B  
C  
D  
WT  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P

# LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN ON

< SYMPTOM DIAGNOSIS >

---

## LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN ON

### Description

INFOID:000000003579756

#### DESCRIPTION

The low tire pressure warning lamp illuminates for approximately 1 second and then turns OFF when the ignition switch is turned ON. This is to check that no abnormal condition is present in the tire pressure monitoring system.

The lamp bulb may be burnt out or the tire pressure monitoring system may be malfunctioning if the low tire pressure warning lamp does not illuminate when the ignition switch is turned ON.

### Diagnosis Procedure

INFOID:000000003579757

---

#### 1. CHECK SELF-DIAGNOSIS RESULTS

Ⓜ With CONSULT-III

1. On the "SELECT DIAG" mode, select the "SELF-DIAG RESULTS" screen.
2. Check display contents in self-diagnostic results.

Is "CAN COMM CIRCUIT" displayed in the self-diagnosis display items?

YES >> Perform trouble diagnosis for CAN communication system. Refer to [LAN-18, "Trouble Diagnosis Flow Chart"](#).

NO >> GO TO 2.

---

#### 2. CHECK COMBINATION METER

Check combination meter function. Refer to [MWI-40, "CONSULT-III Function \(METER/M&A\)"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace damaged parts.

---

#### 3. CHECK LOW TIRE PRESSURE WARNING LAMP

1. Turn the ignition switch OFF.
2. Disconnect BCM harness connectors.
3. Turn the ignition switch ON.

**CAUTION:**

**Never start the engine.**

Does low tire pressure warning lamp turn ON?

YES >> GO TO 4.

NO >> Check combination meter and repair or replace. Refer to [MWI-38, "Diagnosis Description"](#).

---

#### 4. CHECK SYMPTOM

Check symptom again.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 5.

---

#### 5. CHECK BCM

Check BCM input/output signal. Refer to [WT-48, "Reference Value"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 6.

---

#### 6. CHECK BCM HARNESS CONNECTOR

Check BCM pin terminals for damage or loose connection with harness connector.

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-84, "Removal and Installation"](#).

NO >> Repair or replace damaged parts.

# LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

## LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN OFF

### Description

INFOID:000000003579758

### DESCRIPTION

The tire pressure monitoring system is checked and the warning lamp is illuminated for approximately 1 second when the ignition switch is turned ON. The low tire pressure warning lamp turns OFF after the system check finishes.

The system may be malfunctioning if the low tire pressure warning lamp does not turn off approximately 1 second after the ignition switch is turned ON.

### Diagnosis Procedure

INFOID:000000003579759

#### 1. CHECK SYSTEM FOR BCM

④ With CONSULT-III

1. On "SELF-DIAG" mode, select the "SELF-DIAG RESULTS" screen.
2. Check display contents in self-diagnostic results.

Does self-diagnostic results indicate any malfunction?

YES >> Perform trouble diagnosis. Refer to [WT-14, "AIR PRESSURE MONITOR : CONSULT-III Function \(BCM - AIR PRESSURE MONITOR\)"](#).

NO >> GO TO 2.

#### 2. CHECK ID REGISTRATION

Perform ID registration of all transmitters. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

Does low tire pressure warning lamp turn OFF?

YES >> INSPECTION END

NO >> GO TO 3.

#### 3. CHECK BCM POWER SUPPLY CIRCUIT

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

BCM		—	Voltage (Approx.)
Connector	Terminal		
M118	1	Ground	Battery voltage
M119	11		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the following. If any items are damaged, repair or replace damaged parts.

- 40 A fusible link [No. K located in the fuse block]. Refer to [PG-99, "Fuse and Fusible Link Arrangement"](#).
- 10 A fuse [No. 10 located in the fuse block (J/B)]. Refer to [PG-98, "Fuse, Connector and Terminal Arrangement"](#).
- Harness for short or open between battery and BCM harness connector M118 terminal 1.
- Harness for short or open between battery and BCM harness connector M119 terminal 11.
- Check battery voltage.

#### 4. CHECK BCM GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		—	Continuity
Connector	Terminal		
M119	13	Ground	Existed

Is the inspection result normal?

## LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN OFF

### < SYMPTOM DIAGNOSIS >

---

- YES >> GO TO 5.
- NO >> Repair or replace damaged parts.

### 5.CHECK SYMPTOM

---

Check symptom again.

Is the inspection result normal?

- YES >> INSPECTION END
- NO >> GO TO 6.

### 6.CHECK BCM

---

Check BCM input/output signal. Refer to [WT-48, "Reference Value"](#).

Is the inspection result normal?

- YES >> GO TO 5.
- NO >> GO TO 7.

### 7.CHECK BCM HARNESS CONNECTOR

---

Check BCM pin terminals for damage or loose connection with harness connector.

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-84, "Removal and Installation"](#).
- NO >> Repair or replace damaged parts.



# LOW TIRE PRESSURE WARNING LAMP BLINKS

< SYMPTOM DIAGNOSIS >

## LOW TIRE PRESSURE WARNING LAMP BLINKS

### Description

INFOID:000000003579760

### DESCRIPTION

The low tire pressure warning lamp illuminates or blinks.

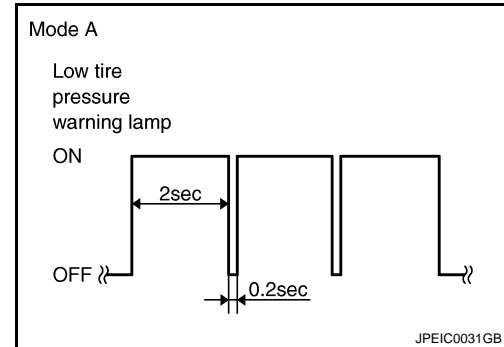
However, a check is necessary because the symptom may not be caused by a system malfunction. For example, the transmitter may not be initialized.

#### NOTE:

If low tire pressure warning lamp blinks as shown in the figure, the system is normal.

Blink Mode A

- This mode shows transmitter status is in OFF- mode. Perform transmitter wake up operation. Refer to [WT-6, "TRANSMITTER WAKE UP OPERATION : Special Repair Requirement"](#).



### Diagnosis Procedure

INFOID:000000003579761

#### 1. CHECK TIRE PRESSURE WARNING CHECK SWITCH POWER SUPPLY

- Turn the ignition switch ON.

#### CAUTION:

**Never start the engine.**

- Check voltage between tire pressure warning check switch connector and ground.

Tire pressure warning check switch		—	Voltage (Approx.)
Connector	Terminal		
M23	1	Ground	11.8 V

Is the inspection result normal?

YES >> GO TO 2.

NO >> Riper or replace damaged parts.

#### 2. CHECK TIRE PRESSURE WARNING CHECK SWITCH CIRCUIT

- Turn the ignition switch OFF.
- Disconnect BCM harness connector.
- Check continuity between BCM harness connector and tire pressure warning check switch connector.

BCM		Tire pressure warning check switch		Continuity
Connector	Terminal	Connector	Terminal	
M123	149	M23	1	Existed

- Check continuity between BCM harness connector and ground.

BCM		—	Continuity
Connector	Terminal		
M123	149	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace damaged parts.

## LOW TIRE PRESSURE WARNING LAMP BLINKS

< SYMPTOM DIAGNOSIS >

---

### 3.CHECK BCM

---

Check BCM input/output signal. Refer to [WT-48. "Reference Value"](#).

Is the inspection result normal?

- YES >> Check tire pressure warning check switch. Refer to [WT-39. "Diagnosis Procedure"](#).
- NO >> Repair or replace the BCM.

# TURN SIGNAL LAMP BLINKS

< SYMPTOM DIAGNOSIS >

## TURN SIGNAL LAMP BLINKS

### Description

INFOID:000000003579762

### DESCRIPTION

The turn signal lamp blinks when the ignition switch is turned ON.  
The BCM connector or circuit may have a malfunction.

### Diagnosis Procedure

INFOID:000000003579763

#### 1. CHECK TIRE PRESSURE WARNING CHECK SWITCH POWER SUPPLY CIRCUIT

1. Turn the ignition switch ON.

**CAUTION:**

**Never start the engine.**

2. Check voltage between tire pressure warning check switch connector and ground.

Tire pressure warning check switch		—	Voltage (Approx.)
Connector	Terminal		
M23	1	Ground	11.8 V

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace damaged parts.

#### 2. CHECK TIRE PRESSURE WARNING CHECK SWITCH CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect BCM harness connector.
3. Check continuity between BCM harness connector and tire pressure warning check switch connector.

BCM		Tire pressure warning check switch		Continuity
Connector	Terminal	Connector	Terminal	
M123	149	M23	1	Existed

4. Check continuity between BCM harness connector and ground.

BCM		—	Continuity
Connector	Terminal		
M123	149	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace damaged parts.

#### 3. CHECK SYMPTOM

Check again.

Does the turn signal lamp remain blinking?

YES >> Check turn signal lamp operation. Refer to [EXL-35. "FLASHER : CONSULT-III Function \(BCM - FLASHER\)"](#).

NO >> INSPECTION END

# ID REGISTRATION CANNOT BE COMPLETED

< SYMPTOM DIAGNOSIS >

## ID REGISTRATION CANNOT BE COMPLETED

### Description

INFOID:000000003579764

#### DESCRIPTION

The ID of the transmitter installed in each wheel cannot be registered in the tire pressure monitoring system. Inspect the transmitter or the tire pressure monitoring system circuit.

### Diagnosis Procedure

INFOID:000000003579765

#### 1. CHECK ID REGISTRATION

1. Perform ID registration of all transmitters. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).
2. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
3. Check all tire pressures with CONSULT-III "DATA MONITOR" within 5 minutes.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Is the inspection result normal?

- YES >> INSPECTION END  
NO >> GO TO 2.

#### 2. CHECK TRANSMITTER

1. Perform trouble diagnosis for transmitters. Refer to [WT-18, "Diagnosis Procedure"](#).
2. Perform ID registration of all transmitters. Refer to [WT-6, "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

Can ID registration of all transmitters be completed?

- YES >> INSPECTION END  
NO >> Replace the transmitter.

# NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

## NORMAL OPERATING CONDITION

### Description

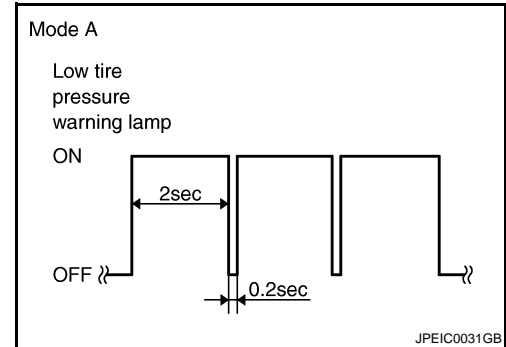
INFOID:000000003579766

#### LOW TIRE PRESSURE WARNING LAMP BLINKS

The tire pressure monitoring system is not malfunctioning if the low tire pressure warning lamp blinks in the pattern as shown in the figure.

The incident occurs because the transmitter of each wheel is not wake up.

Perform transmitter wake up operation. Refer to [WT-6, "TRANSMITTER WAKE UP OPERATION : Special Repair Requirement"](#).



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# NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

## NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

### NVH Troubleshooting Chart

INFOID:000000003579767

Use chart below to help you find the cause of the symptom. If necessary, repair or replace these parts.

Symptom		Possible cause and SUSPECTED PARTS													Reference page						
		Improper installation, looseness	Out-of-round	unbalance	Incorrect tire pressure	Uneven tire wear	Deformation or damage	Non-uniformity	Incorrect tire size	PROPELLER SHAFT	DIFFERENTIAL	FRONT AXLE AND FRONT SUSPENSION	REAR AXLE AND REAR SUSPENSION	TIRES	ROAD WHEELS	DRIVE SHAFT	BRAKE	STEERING	2WD models: <a href="#">FSU-9</a> , <a href="#">FSU-7</a> AWD models: <a href="#">FSU-28</a> , <a href="#">FSU-26</a>	<a href="#">WT-97</a> , "Inspection" <a href="#">WT-98</a> , "Adjustment" <a href="#">WT-104</a> , "Tire Air Pressure" <a href="#">WT-98</a> , "Adjustment"	— — <a href="#">WT-104</a> , "Tire Air Pressure" NVH in DLN section. NVH in DLN section. NVH in FAX and FSU sections. NVH in RAX and RSU sections. Refer to TIRES in this chart. Refer to ROAD WHEEL in this chart. NVH in FAX, RAX section. NVH in BR section. NVH in ST section.
TIRES	Noise	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
	Shake	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
	Vibration				x					x	x		x	x			x		x		
	Shimmy	x	x	x	x	x	x	x	x	x			x	x		x		x	x		
	Judder	x	x	x	x	x	x			x			x	x		x		x	x		
	Poor quality ride or handling	x	x	x	x	x	x			x			x		x	x					
ROAD WHEEL	Noise	x	x	x				x			x	x	x	x		x	x	x	x		
	Shake	x	x	x				x			x		x	x	x		x	x	x		
	Shimmy, Judder	x	x	x				x				x	x	x				x	x		
	Poor quality ride or handling	x	x	x				x					x	x	x						

x: Applicable

# PRECAUTIONS

< PRECAUTION >

## PRECAUTION

### PRECAUTIONS

#### Service Notice or Precautions

INFOID:000000003579768

- Low tire pressure warning lamp blinks for 1min, then turns ON when occurring any malfunction except low tire pressure. Delete the memory with CONSULT-III, or register the ID to turn low tire pressure warning lamp OFF. Refer to [WT-12. "AIR PRESSURE MONITOR : Diagnosis Description"](#), [WT-6. "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).
- ID registration is required when replacing or rotating wheels, replacing transmitter or BCM. Refer to [BCS-84. "Exploded View"](#).
- Replace grommet seal, valve core and cap of transmitter in TPMS every tire replacement by reaching wear limit of tire. Refer to [WT-101. "Exploded View"](#).

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# PREPARATION

< PREPARATION >

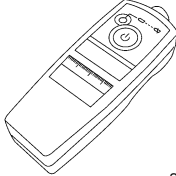
## PREPARATION

### PREPARATION

#### Special Service Tool

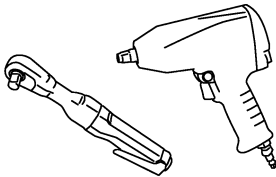
INFOID:000000003579769

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

Tool number (Kent-Moore No.) Tool name	Description
— (J-45295) Transmitter activation tool  SEIA0462E	ID registration

#### Commercial Service Tool

INFOID:000000003579770

Tool name	Description
Power tool  PBIC0190E	Loosening wheel nuts



# ROAD WHEEL

< ON-VEHICLE MAINTENANCE >

## ON-VEHICLE MAINTENANCE

### ROAD WHEEL

#### Inspection

INFOID:000000003579771

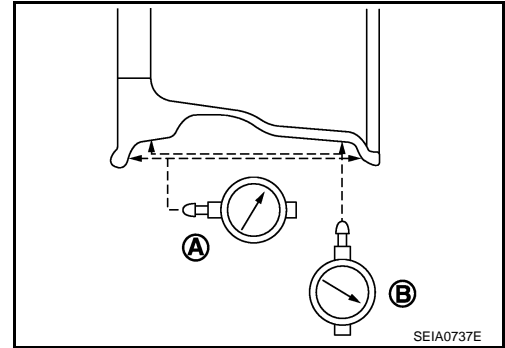
#### ALUMINUM WHEEL

1. Check tires for wear and improper inflation.
2. Check wheels for deformation, cracks and other damage. If deformed, remove wheel and check wheel runout.
  - a. Remove tire from aluminum wheel and mount on a tire balance machine.
  - b. Set dial indicator as shown in the figure.
  - c. If the lateral deflection (A) or vertical deflection (B) for radial runout value exceeds the limit, replace aluminum wheel.

#### Limit

**A:** Refer to [WT-104, "Road Wheel"](#).

**B:** Refer to [WT-104, "Road Wheel"](#).



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# ROAD WHEEL TIRE ASSEMBLY

< ON-VEHICLE REPAIR >

## ON-VEHICLE REPAIR

### ROAD WHEEL TIRE ASSEMBLY

#### Adjustment

INFOID:000000003579772

#### BALANCING WHEELS (BONDING WEIGHT TYPE)

##### Preparation Before Adjustment

Using releasing agent, remove double-faced adhesive tape from the road wheel.

##### CAUTION:

- **Be careful not to scratch the road wheel during removal.**
- **After removing double-faced adhesive tape, wipe clean traces of releasing agent from the road wheel.**

##### Wheel Balance Adjustment

If a tire balance machine has adhesion balance weight mode settings and drive-in weight mode setting, select and adjust a drive-in weight mode suitable for road wheels.

1. Set road wheel on tire balance machine using the center hole as a guide. Start the tire balance machine.
2. When inner and outer unbalance values are shown on the tire balance machine indicator, multiply outer unbalance value by  $5/3$  to determine balance weight that should be used. Select the outer balance weight with a value closest to the calculated value above and install to the designated outer position of, or at the designated angle in relation to the road wheel.

##### CAUTION:

- **Do not install the inner balance weight before installing the outer balance weight.**
- **Before installing the balance weight, be sure to clean the mating surface of the road wheel.**

- a. Indicated unbalance value  $\times 5/3$  = balance weight to be installed

##### Calculation example:

$23 \text{ g (0.81 oz)} \times 5/3 = 38.33 \text{ g (1.35 oz)} \Rightarrow 37.5 \text{ g (1.32 oz)}$  balance weight (closer to calculated balance weight value)

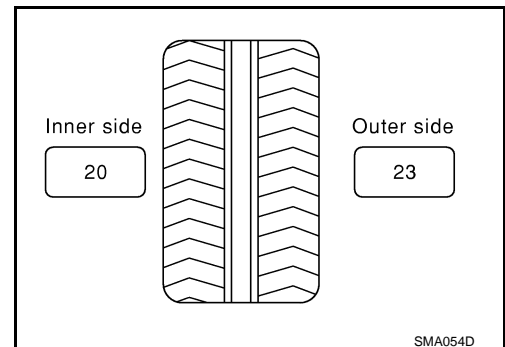
##### NOTE:

Note that balance weight value must be closer to the calculated balance weight value.

##### Example:

$36.2 \Rightarrow 35 \text{ g (1.23 oz)}$

$36.3 \Rightarrow 37.5 \text{ g (1.32 oz)}$



- b. Installed balance weight in the position.

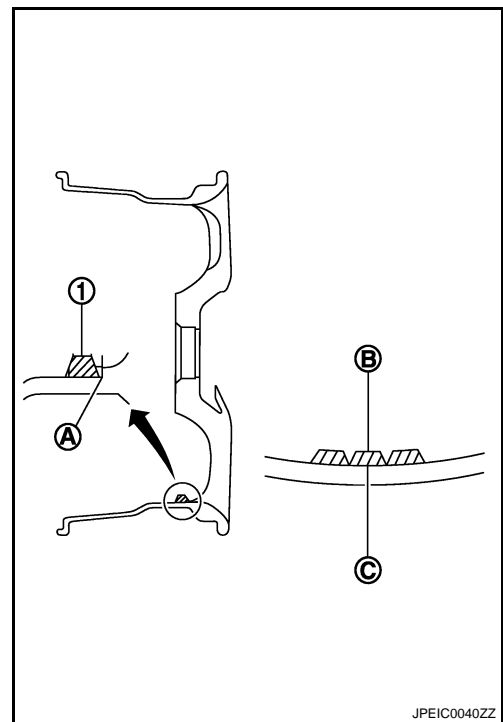
# ROAD WHEEL TIRE ASSEMBLY

## < ON-VEHICLE REPAIR >

- When installing balance weight (1) to road wheels, set it into the grooved area (A) on the inner wall of the road wheel as shown in the figure so that the balance weight center (B) is aligned with the tire balance machine indication position (angle) (C).

### CAUTION:

- Always use genuine NISSAN adhesion balance weights.
- Balance weights are non-reusable; always replace with new ones.
- Do not install more than three sheets of balance weight.



- If calculated balance weight value exceeds 50 g (1.76 oz), install two balance weight sheets in line with each other as shown in the figure.

### CAUTION:

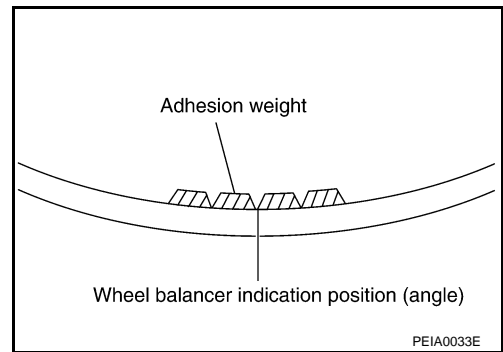
**Do not install one balance weight sheet on top of another.**

- Start the tire balance machine again.
- Install drive-in balance weight on inner side of road wheel in the tire balance machine indication position (angle).

### CAUTION:

**Do not install more than two balance weight.**

- Start the tire balance machine. Make sure that inner and outer residual unbalance values are 5 g (0.17 oz) each or below.
- If either residual unbalance value exceeds 5 g (0.17 oz), repeat installation procedures.



### Limit

**Dynamic (At flange):** Refer to [WT-104, "Road Wheel"](#).

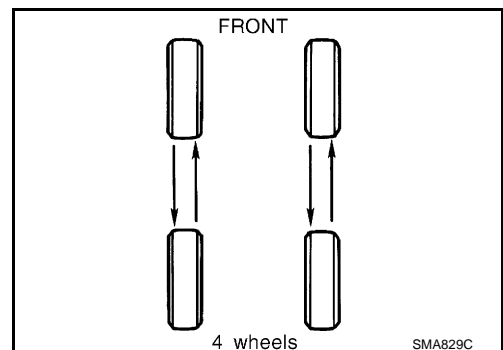
**Static (At flange):** Refer to [WT-104, "Road Wheel"](#).

## TIRE ROTATION

- Follow the maintenance schedule for tire rotation service intervals. Refer to [MA-4, "Explanation of General Maintenance"](#).
- When installing the wheel, tighten wheel nuts to the specified torque.

### CAUTION:

- Do not include the T-type spare tire when rotating the tires.
- When installing wheels, tighten them diagonally by dividing the work two to three times in order to prevent the wheels from developing any distortion.
- Be careful not to tighten wheel nut at torque exceeding the criteria for preventing strain of disc rotor.
- Use NISSAN genuine wheel nuts for aluminum wheels.



**Wheel nuts tightening torque :** Refer to [WT-104, "Road Wheel"](#).

## ROAD WHEEL TIRE ASSEMBLY

< ON-VEHICLE REPAIR >

- 
- Perform the ID registration, after tire rotation. Refer to [WT-6. "ID REGISTRATION PROCEDURE : Special Repair Requirement"](#).

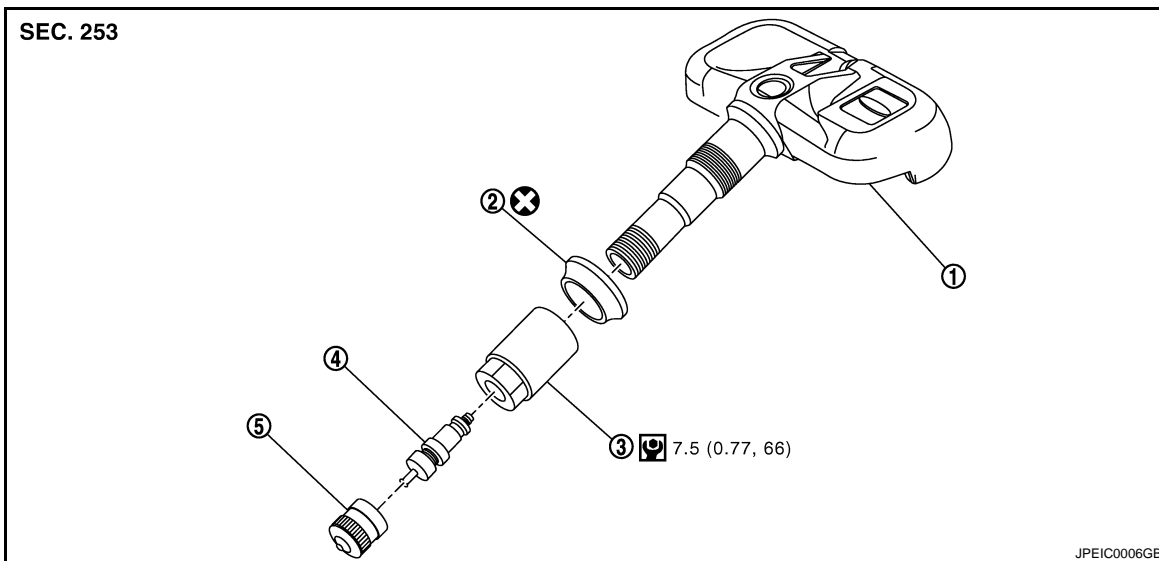
# TRANSMITTER

< REMOVAL AND INSTALLATION >

## REMOVAL AND INSTALLATION

### TRANSMITTER

#### Exploded View



- |                |                 |              |
|----------------|-----------------|--------------|
| 1. Transmitter | 2. Grommet seal | 3. Valve nut |
| 4. Valve core  | 5. Cap          |              |

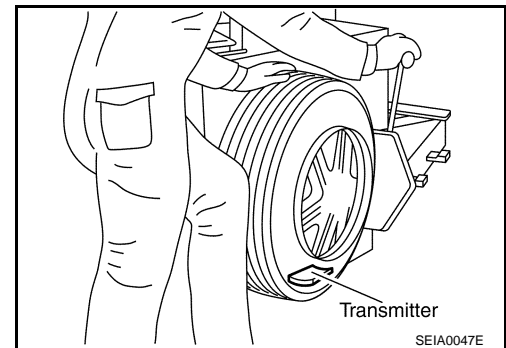
Refer to [GI-4, "Components"](#) for symbols in figure.

#### Removal and Installation

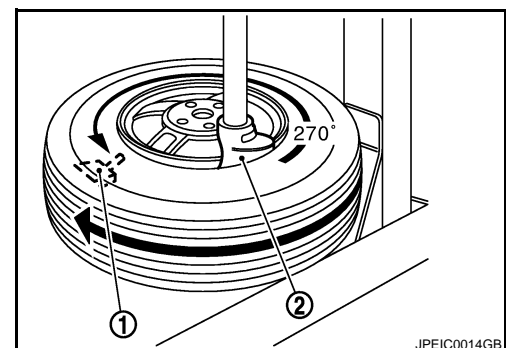
INFOID:000000003579774

##### REMOVAL

1. Deflate tire. Unscrew transmitter retaining nut and allow transmitter to fall into tire.
2. Gently bounce tire so that transmitter falls to bottom of tire. Place on tire changing machine and break both tire beads ensuring that the transmitter remains at the bottom of the tire.



3. Turn tire so that valve hole is at bottom and bounce so that transmitter (1) is near valve hole. Carefully lift tire onto turntable and position valve hole (and transmitter) 270 degree from mounting/dismounting head (2).
4. Lubricate tire well and remove first side of the tire. Reach inside the tire and remove the transmitter.

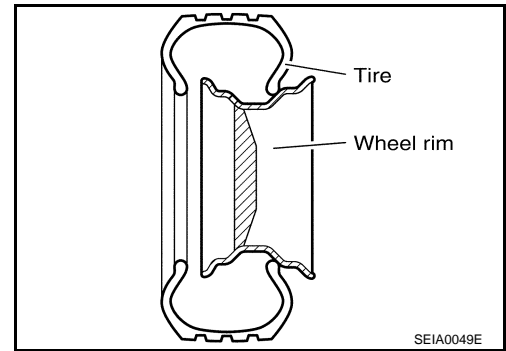


##### INSTALLATION

# TRANSMITTER

## < REMOVAL AND INSTALLATION >

1. Put first side of tire onto rim.



2. Mount transmitter on rim and tighten nut.

**CAUTION:**

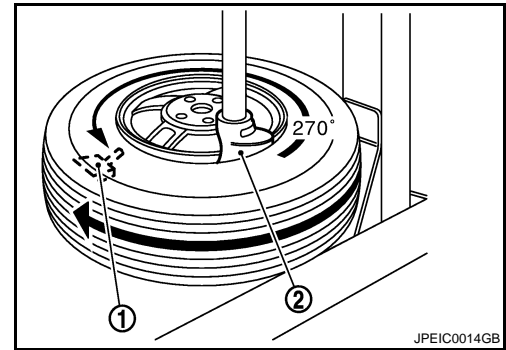
**Speed for tightening nut should be less than 10 rpm.**

3. Place wheel on turntable of tire machine. Ensure that transmitter (1) is 270 degree from mounting head (2) when second side of tire is fitted.

**NOTE:**

Do not touch transmitter at mounting head.

4. Lubricate tire well and fit second side of tire as normal. Ensure that tire does not rotate relative to rim.
5. Inflate tire and fit to appropriate wheel position.



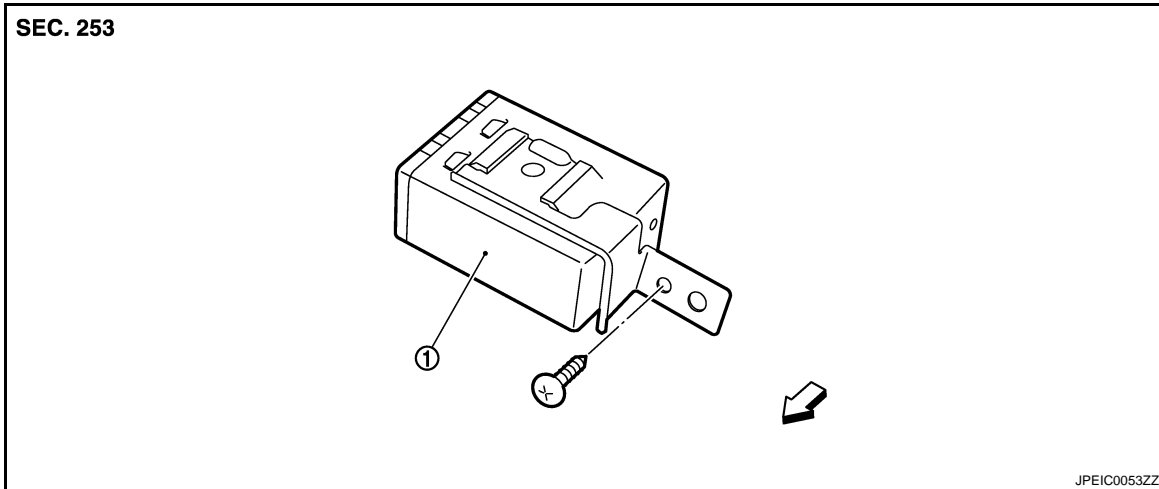
# TIRE PRESSURE RECEIVER

< REMOVAL AND INSTALLATION >

## TIRE PRESSURE RECEIVER

### Exploded View

INFOID:000000003579775



1. Tire pressure receiver

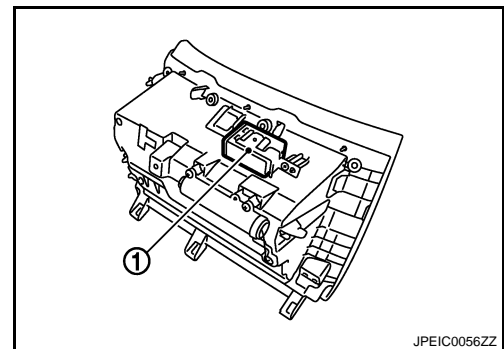
←: Vehicle front

### Removal and Installation

INFOID:000000003579776

#### REMOVAL

1. Remove the instrument lower cover. Refer to [IP-11. "Exploded View"](#).
2. Remove the glove box assembly.
3. Remove the instrument lower panel RH.
4. Disconnect tire pressure receiver (1) harness connector.
5. Remove Tire pressure receiver mounting screw.
6. Remove tire pressure receiver.



#### INSTALLATION

Install is the reverse order of removal.

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## SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

## SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

#### Road Wheel

INFOID:000000003579777

#### ALUMINUM WHEEL (CONVENTIONAL)

Item		Limit
Radial runout	Lateral deflection	Less than 0.3 mm (0.012 in)
	Vertical deflection	
Allowable unbalance	Dynamic (At flange)	Less than 5 g (0.17 oz) (one side)
	Static (At flange)	Less than 10 g (0.35 oz)

#### ALUMINUM WHEEL (FOR TEMPORALLY USE)

Item		Limit
Radial runout	Lateral deflection	Less than 1.5 mm (0.059 in)
	Vertical deflection	
Allowable unbalance	Dynamic (At flange)	Less than 5 g (0.17 oz) (one side)
	Static (At flange)	Less than 10 g (0.35 oz)

#### Wheel Nut

INFOID:000000003664585

Item	Standard
Wheel nut tightening torque	108 N·m (11 kg-m, 80 ft-lb)

#### Tire Air Pressure

INFOID:000000003579778

Unit: kPa (kg/cm<sup>2</sup>, psi)

Item	Standard	
	Front	Rear
P225/60R17 98V	230 (2.3, 33)	
P225/55R18 97V	230 (2.3, 33)	
T165/80R17	420 (4.2, 60)	