

WT
SECTION
ROAD WHEELS & TIRES

A
B
C
D

WT

CONTENTS

| | | |
|---|--|--|
| <p>BASIC INSPECTION 3</p> <p>DIAGNOSIS AND REPAIR WORKFLOW 3</p> <p style="padding-left: 20px;">Repair Work Flow3</p> <p>INSPECTION AND ADJUSTMENT 5</p> <p style="padding-left: 20px;">Preliminary Check5</p> <p style="padding-left: 20px;">Transmitter Wake Up Operation5</p> <p style="padding-left: 20px;">ID Registration Procedure6</p> <p>FUNCTION DIAGNOSIS 8</p> <p>TPMS 8</p> <p style="padding-left: 20px;">System Diagram8</p> <p style="padding-left: 20px;">System Description8</p> <p style="padding-left: 20px;">System Component10</p> <p>DIAGNOSIS SYSTEM (BCM)11</p> <p style="padding-left: 20px;">CONSULT-III Function (BCM)11</p> <p style="padding-left: 20px;">Self-Diagnosis (Without CONSULT-III)12</p> <p>COMPONENT DIAGNOSIS14</p> <p>C1708 - C1711 DATA FROM TRANSMITTER NOT BEING RECEIVED14</p> <p style="padding-left: 20px;">Description14</p> <p style="padding-left: 20px;">DTC Logic14</p> <p style="padding-left: 20px;">Diagnosis Procedure14</p> <p style="padding-left: 20px;">Special Repair Requirement15</p> <p>C1712 - C1715, C1720 - C1723, C1724 - C1727 TRANSMITTER MALFUNCTION16</p> <p style="padding-left: 20px;">Description16</p> <p style="padding-left: 20px;">DTC Logic16</p> <p style="padding-left: 20px;">Diagnosis Procedure16</p> <p style="padding-left: 20px;">Special Repair Requirement17</p> <p>C1716 - C1719 TRANSMITTER PRESSURE MALFUNCTION18</p> <p style="padding-left: 20px;">Description18</p> <p style="padding-left: 20px;">DTC Logic18</p> <p style="padding-left: 20px;">Diagnosis Procedure18</p> | <p style="padding-left: 20px;">Special Repair Requirement18</p> <p>C1729 VEHICLE SPEED SIGNAL19</p> <p style="padding-left: 20px;">Description19</p> <p style="padding-left: 20px;">DTC Logic19</p> <p style="padding-left: 20px;">Diagnosis Procedure19</p> <p style="padding-left: 20px;">Special Repair Requirement19</p> <p>C1735 IGNITION SIGNAL20</p> <p style="padding-left: 20px;">Description20</p> <p style="padding-left: 20px;">DTC Logic20</p> <p style="padding-left: 20px;">Diagnosis Procedure20</p> <p style="padding-left: 20px;">Special Repair Requirement20</p> <p>ECU DIAGNOSIS21</p> <p>BCM (BODY CONTROL MODULE)21</p> <p style="padding-left: 20px;">Reference Value21</p> <p style="padding-left: 20px;">Terminal Layout23</p> <p style="padding-left: 20px;">Physical Values23</p> <p style="padding-left: 20px;">Wiring Diagram29</p> <p style="padding-left: 20px;">Self-Diagnosis (With CONSULT-III)32</p> <p style="padding-left: 20px;">Self-Diagnosis (Without CONSULT-III)33</p> <p>SYMPTOM DIAGNOSIS35</p> <p>TPMS35</p> <p style="padding-left: 20px;">Symptom Table35</p> <p>LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN ON36</p> <p style="padding-left: 20px;">Low Tire Pressure Warning Lamp Does Not Come On When Ignition Switch Is Turned On36</p> <p>LOW TIRE PRESSURE WARNING LAMP STAYS ON37</p> <p style="padding-left: 20px;">Low Tire Pressure Warning Lamp Stays On When Ignition Switch Is Turned On37</p> <p>LOW TIRE PRESSURE WARNING LAMP BLINKS38</p> | <p>F G H I J K L M N O P</p> |
|---|--|--|

| | | | |
|--|-----------|--|-----------|
| Low Tire Pressure Warning Lamp Flashes When Ignition Switch Is Turned On | 38 | PREPARATION | 44 |
| HAZARD WARNING LAMPS FLASH | 39 | PREPARATION | 44 |
| Hazard Warning Lamps Flash When Ignition Switch Is Turned On | 39 | Special Service Tool | 44 |
| "TIRE PRESSURE" INFORMATION IN DISPLAY UNIT DOES NOT EXIST | 40 | Commercial Service Tool | 44 |
| "TIRE PRESSURE" Information in Display Unit Does Not Exist | 40 | ON-VEHICLE MAINTENANCE | 45 |
| ID REGISTRATION CANNOT BE COMPLETED | 41 | WHEEL | 45 |
| ID Registration Cannot Be Completed | 41 | Inspection | 45 |
| NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING | 42 | WHEEL AND TIRE ASSEMBLY | 46 |
| NVH Troubleshooting Chart | 42 | Adjustment | 46 |
| PRECAUTION | 43 | REMOVAL AND INSTALLATION | 48 |
| PRECAUTIONS | 43 | REMOVAL AND INSTALLATION | 48 |
| Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER" | 43 | Transmitter (Pressure Sensor) | 48 |
| Precaution for work | 43 | SERVICE DATA AND SPECIFICATIONS (SDS) | 50 |
| | | SERVICE DATA AND SPECIFICATIONS (SDS) | 50 |
| | | Road Wheel | 50 |
| | | Tire | 50 |

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

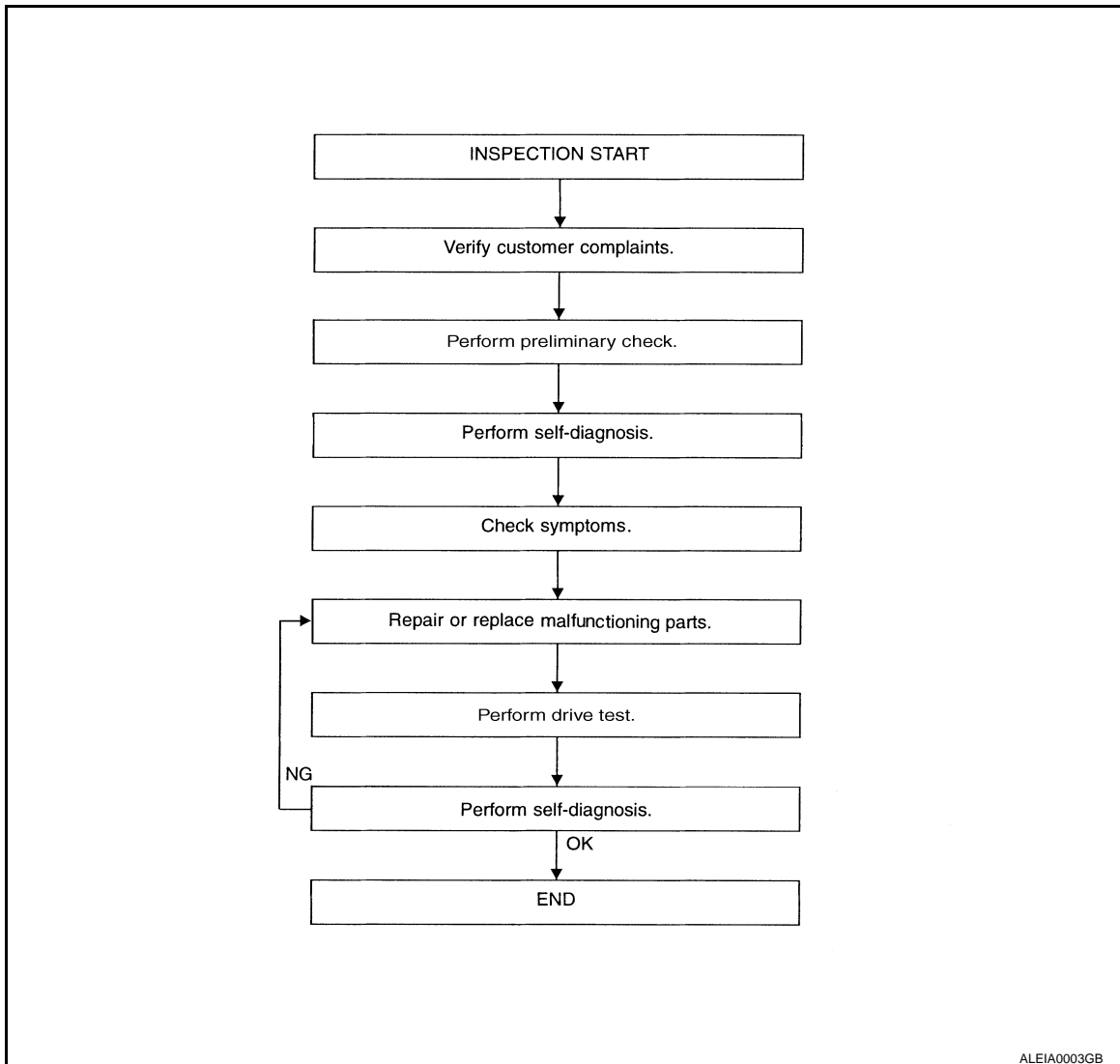
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Repair Work Flow

INFOID:000000005384345

WORK FLOW



[WT-5. "Preliminary Check"](#)

[WT-32. "Self-Diagnosis \(With CON-
SULT-III\)"](#)

[WT-35. "Symptom Table"](#)

DETAILED FLOW

1. CUSTOMER INFORMATION

Interview the customer to obtain detailed information about the symptom.

>> GO TO 2

2. PRELIMINARY CHECK

Perform preliminary check. Refer to [WT-5. "Preliminary Check"](#).

>> GO TO 3

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

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

3.SELF-DIAGNOSIS

Perform SELF-DIAGNOSIS. Refer to [WT-32. "Self-Diagnosis \(With CONSULT-III\)"](#) (with CONSULT-III) or [WT-33. "Self-Diagnosis \(Without CONSULT-III\)"](#) (without CONSULT-III).

>> GO TO 4

4.SYMPTOM

Check for symptoms. Refer to [WT-35. "Symptom Table"](#).

>> GO TO 5

5.MALFUNCTIONING PARTS

Repair or replace the applicable parts.

>> GO TO 6

6.DRIVE TEST

1. Perform a drive test.
2. Check the low tire pressure warning lamp.

>> GO TO 7

7.SELF-DIAGNOSIS

Perform SELF-DIAGNOSIS. Refer to [WT-32. "Self-Diagnosis \(With CONSULT-III\)"](#) (with CONSULT-III) or [WT-33. "Self-Diagnosis \(Without CONSULT-III\)"](#) (without CONSULT-III).

Are any DTC's displayed?

- YES >> GO TO 5
NO >> Inspection End.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

INSPECTION AND ADJUSTMENT

Preliminary Check

INFOID:000000005384346

1. TIRE PRESSURE

Check all tire pressures. Refer to [WT-50, "Tire"](#).

Do tire pressures match specification?

YES >> GO TO 2.

NO >> Adjust tire pressures to specified value.

2. LOW TIRE PRESSURE WARNING LAMP

Check low tire pressure warning lamp activation.

Does the low tire pressure warning lamp activate for one second when ignition switch is turned ON?

YES >> GO TO 3.

NO >> GO TO [WT-36, "Low Tire Pressure Warning Lamp Does Not Come On When Ignition Switch Is Turned On"](#).

3. BCM CONNECTOR

1. Disconnect BCM harness connectors.
2. Check terminals for damage or loose connections.
3. Reconnect harness connectors.

Are BCM connectors damaged or loose?

YES >> Repair or replace damaged parts.

NO >> GO TO 4.

4. TRANSMITTER ACTIVATION TOOL

Check battery in transmitter activation tool.

Is transmitter activation tool battery fully charged?

YES >> Perform self-diagnosis. Refer to [WT-11, "CONSULT-III Function \(BCM\)"](#).

NO >> Replace battery in transmitter activation tool.

Transmitter Wake Up Operation

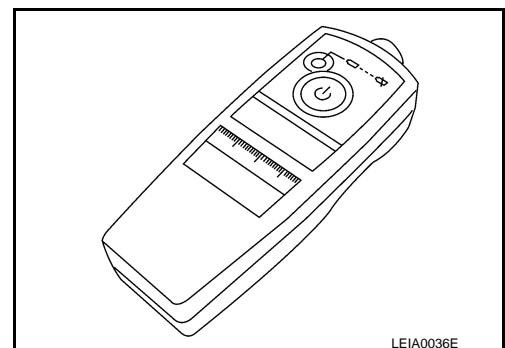
INFOID:000000005384347

NOTE:

This procedure must be done after replacement of a low tire pressure warning transmitter or BCM. New replacement transmitters are provided "asleep" and must first be "woken up" using Transmitter Activation Tool J-45295 before ID registration can be performed.

1. Turn ignition switch ON. Push the transmitter activation tool against the tire near the front left transmitter. Press the button for 5 seconds. The hazard warning lamps flash per the following diagram.

Tool number : (J-45295)

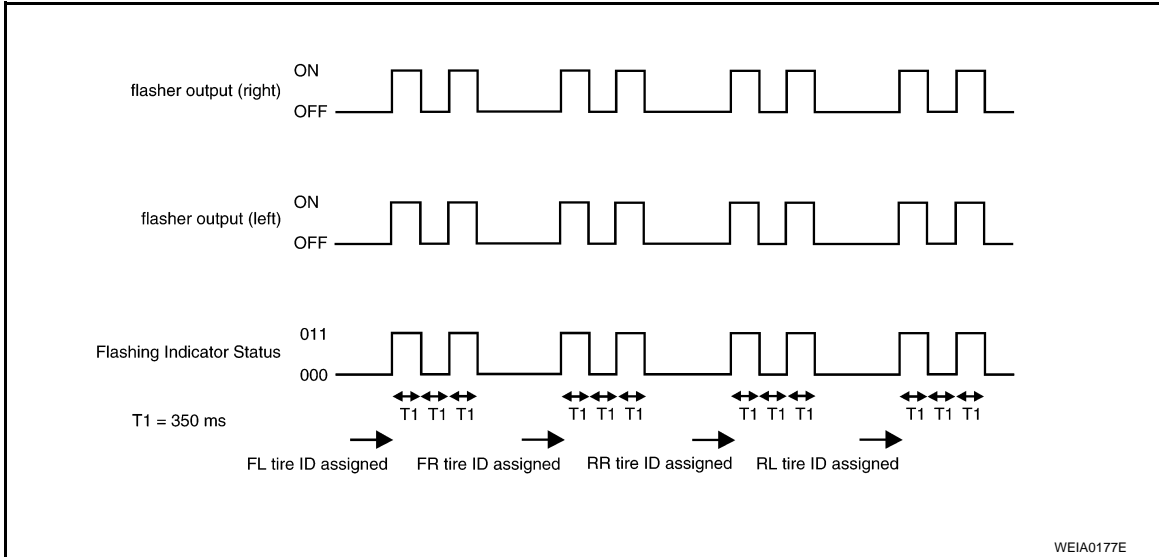


2. Repeat this procedure for each tire in the following order: FL, FR, RR, RL.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

- When the BCM finishes assigning each tire ID, the BCM flashes the hazard warning lamps and sends flashing indicator status by CAN according to the following time chart.



- After completing wake up of all transmitters, make sure low tire pressure warning lamp goes out.

ID Registration Procedure

INFOID:000000005384348

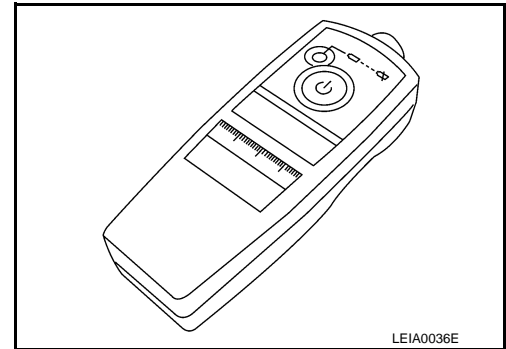
ID REGISTRATION WITH TRANSMITTER ACTIVATION TOOL

NOTE:

This procedure must be done after replacement of a low tire pressure warning transmitter or BCM. New replacement transmitters are provided "asleep" and must first be "woken up" using Transmitter Activation Tool J-45295 before ID registration can be performed.

- Connect CONSULT-III.
- Select "ID REGIST" under BCM.
- Push the transmitter activation tool against the tire near the front left transmitter. Press the button for 5 seconds.

Tool number : (J-45295)



- Register the IDs in order from FR LH, FR RH, RR RH and RR LH. When ID registration of each wheel has been completed, the hazard warning lamps flash.

| Step | Activation tire position | Hazard warning lamp | CONSULT-III |
|------|--------------------------|---------------------|----------------------|
| 1 | Front LH | 2 times flashing | "YET" ↓ "DONE" |
| 2 | Front RH | | |
| 3 | Rear RH | | |
| 4 | Rear LH | | |

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

NOTE:

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

ID REGISTRATION WITHOUT TRANSMITTER ACTIVATION TOOL

NOTE:

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

This procedure must be done after replacement of a low tire pressure warning transmitter or BCM. New replacement transmitters are provided "asleep" and must first be "woken up" using Transmitter Activation Tool J-45295 before ID registration can be performed.

1. Connect CONSULT-III.
2. Select "ID REGIST" under BCM.
3. Adjust the tire pressures to the values shown in the table and drive the vehicle at 40 km/h (25 MPH) or more for a few minutes.

| Tire position | Tire pressure kPa (kg/cm ² , psi) |
|---------------|--|
| Front LH | 250 (2.5, 36) |
| Front RH | 230 (2.3, 33) |
| Rear RH | 210 (2.1, 30) |
| Rear LH | 190 (1.9, 27) |

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

| Activation tire position | CONSULT-III |
|--------------------------|----------------------|
| Front LH | "YET" ↓ "DONE" |
| Front RH | |
| Rear RH | |
| Rear LH | |

5. Inflate all tires to proper pressure. Refer to [WT-50, "Tire"](#).

TPMS

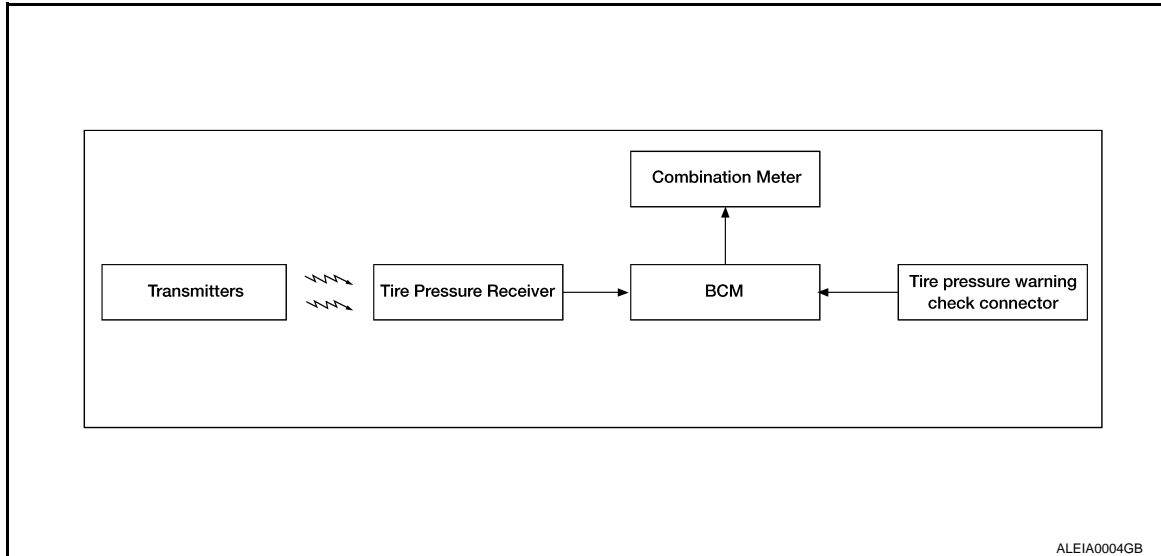
< FUNCTION DIAGNOSIS >

FUNCTION DIAGNOSIS

TPMS

System Diagram

INFOID:000000005384349



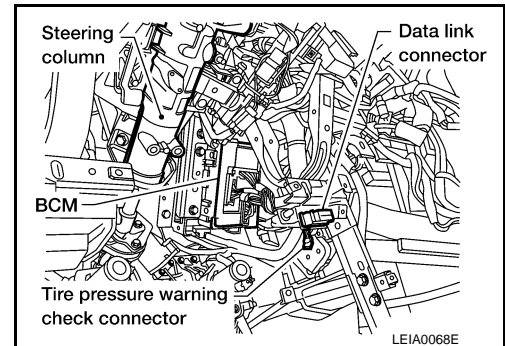
System Description

INFOID:000000005384350

BODY CONTROL MODULE (BCM)

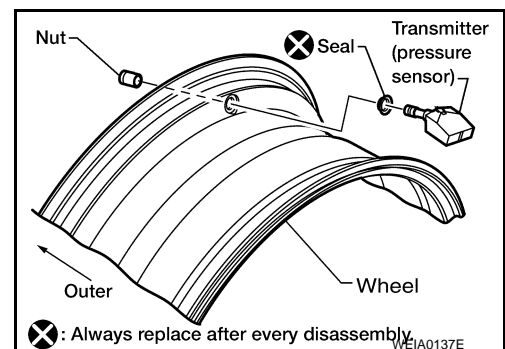
The BCM is shown with the lower instrument panel LH removed. The BCM reads the air pressure signal received by the remote keyless entry receiver, and controls the low tire pressure warning lamp as shown below. It also has a self-diagnosis function to detect a system malfunction.

| Condition | Low tire pressure warning lamp |
|---|---|
| System normal | On for 1 second after ignition ON |
| Tire less than 193 kPa (2.0 kg/cm ² , 28 psi) [Flat tire] | ON |
| TPMS malfunction | After key ON, flashes once per second for 1 minute, then stays ON |



TRANSMITTER

A sensor-transmitter integrated with a valve is installed in each wheel, and transmits a detected air pressure signal in the form of a radio wave. The radio signal is received by the remote keyless entry receiver.

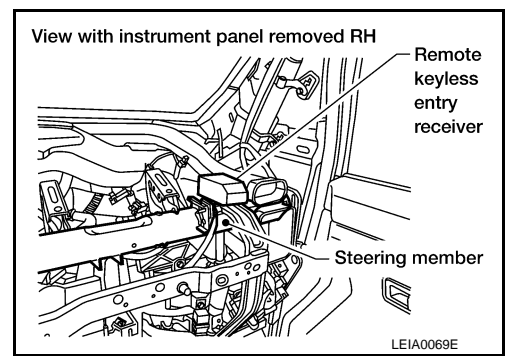


REMOTE KEYLESS ENTRY RECEIVER

TPMS

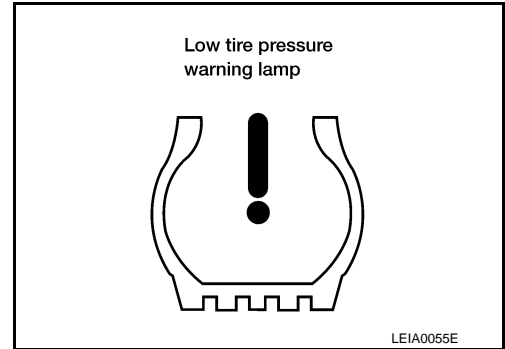
< FUNCTION DIAGNOSIS >

The remote keyless entry receiver is shown with the instrument panel RH removed. The remote keyless entry receiver receives the air pressure signal transmitted by the transmitter in each wheel.



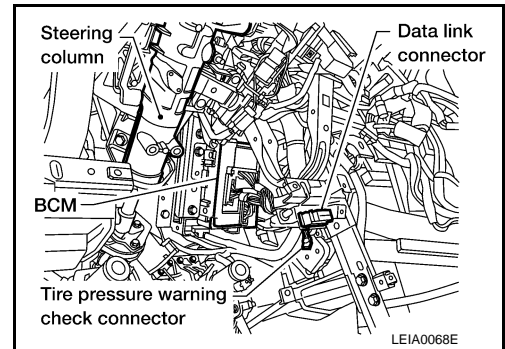
COMBINATION METER

The combination meter receives tire pressure status from the BCM using CAN communication. When a low tire pressure condition is sensed by the BCM, the combination meter low tire pressure warning lamp is activated.



TIRE PRESSURE WARNING CHECK CONNECTOR

The tire pressure warning check connector can be grounded in order to initiate self-diagnosis without CONSULT-III. Refer to [WT-12. "Self-Diagnosis \(Without CONSULT-III\)"](#). The tire pressure warning check connector is located behind the lower portion of the instrument panel LH.

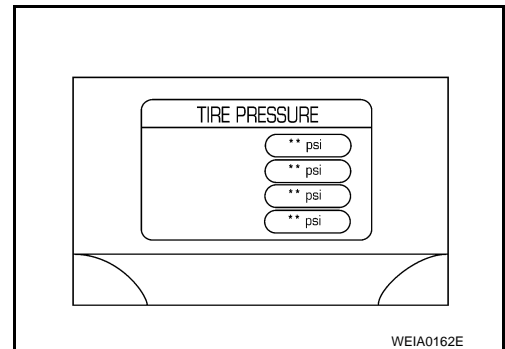


DISPLAY UNIT (with NAVI)

Displays the air pressure of each tire.

NOTE:

After the ignition switch is turned on, the pressure values will not be displayed until the data of each wheel is received.

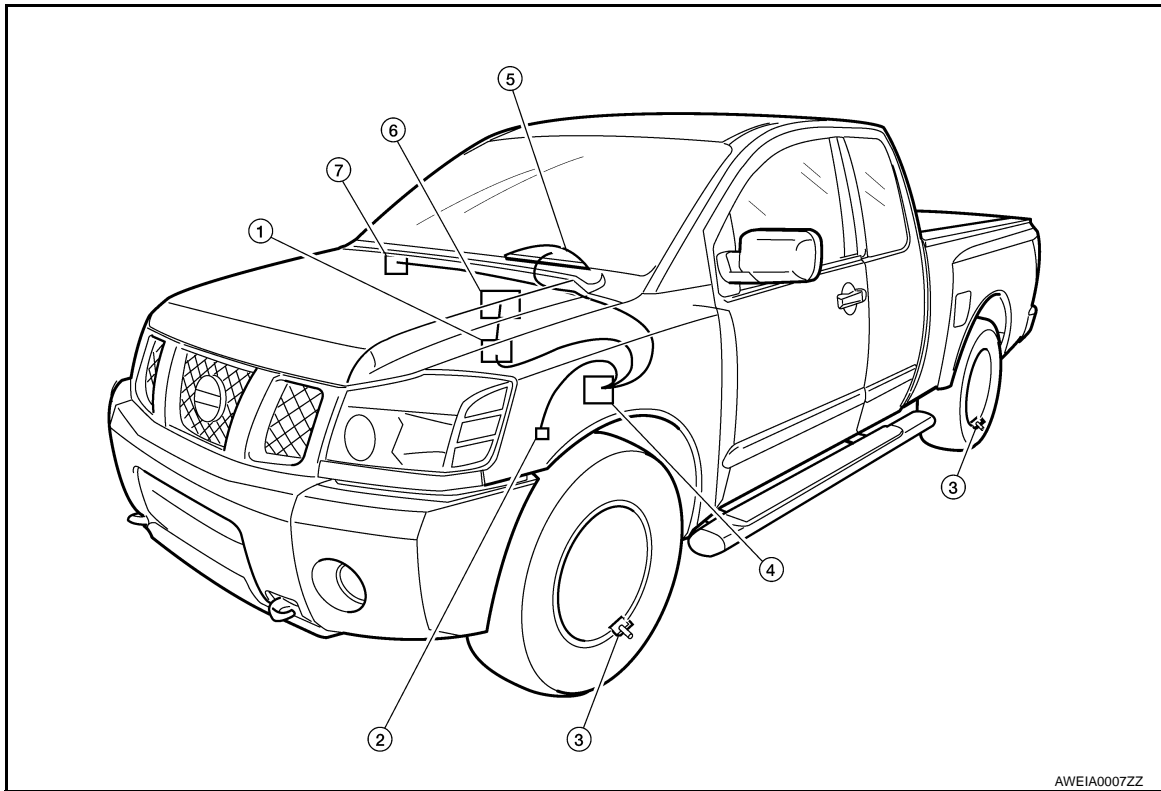


TPMS

< FUNCTION DIAGNOSIS >

System Component

INFOID:000000005384351



AWEIA0007ZZ

- | | | |
|--|--|------------------------------------|
| 1. Display control unit M95 (with NAVI) | 2. Tire pressure warning check connector M123 | 3. Transmitter |
| 4. BCM M18, M20 | 5. Combination meter M24 | 6. Display unit M93 (with NAVI) |
| 7. Remote keyless entry receiver M120 | | |

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (BCM)

CONSULT-III Function (BCM)

INFOID:000000005384352

CONSULT-III DIAGNOSTIC MODES

CONSULT-III can display each diagnostic item using the diagnostic test modes shown following.

| Diagnostic mode | Description |
|--------------------------|--|
| Work Support | Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received data is displayed. |
| Data Monitor | Displays BCM input/output data in real time. |
| Active Test | Operation of electrical loads can be checked by sending drive signal to them. |
| Self-Diagnostic Results | Displays BCM self-diagnosis results. |
| CAN Diag Support Monitor | The result of transmit/receive diagnosis of CAN communication can be read. |
| ECU Identification | BCM part number can be read. |
| Configuration | Performs BCM configuration read/write functions. |

DESCRIPTION

During driving, the tire pressure monitoring system receives the signal transmitted from the transmitter installed in each wheel, and turns on the low tire pressure warning lamp when the tire pressure becomes low. The control unit (BCM) for this system has pressure judgement and self-diagnosis functions.

FUNCTION

When the tire pressure monitoring system detects low inflation pressure or an internal malfunction, the low tire pressure warning lamp in the combination meter comes on. The malfunction is indicated by the low tire pressure warning lamp flashing.

CONSULT-III Application to Tire Pressure Monitoring System

| ITEM | SELF-DIAGNOSTIC RESULTS | DATA MONITOR |
|---------------------------|-------------------------|--------------|
| Front - Left transmitter | × | × |
| Front - Right transmitter | × | × |
| Rear - Left transmitter | × | × |
| Rear - Right transmitter | × | × |
| Warning lamp | — | × |
| Vehicle speed | × | × |
| CAN Communication | × | × |

× : Applicable

— : Not applicable

Data Monitor Mode

| MONITOR | CONDITION | SPECIFICATION |
|--|--|-----------------------------|
| VHCL SPEED | Drive vehicle. | Vehicle speed (km/h or MPH) |
| AIR PRESS FL AIR PRESS FR AIR PRESS RR AIR PRESS RL | <ul style="list-style-type: none"> Drive vehicle for a few minutes. or <ul style="list-style-type: none"> Ignition switch ON and activation tool is transmitting activation signals. | Tire pressure (kPa or psi) |

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

| MONITOR | CONDITION | SPECIFICATION |
|--|--------------------|--|
| ID REGST FL1 ID REGST FR1 ID REGST RR1 ID REGST RL1 | Ignition switch ON | ID not registered: YET ID registered: DONE |
| WARNING LAMP | | Low tire pressure warning lamp on: ON Low tire pressure warning lamp off: OFF |
| BUZZER | Ignition switch ON | Low tire pressure buzzer on: On Low tire pressure buzzer off: Off |

NOTE:

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

Active Test

| Test item | Content |
|----------------------------|--|
| WARNING LAMP [On/Off] | Activates the low tire pressure warning lamp (On/Off). |
| ID REGIST WARNING [On/Off] | Activates the low tire pressure warning buzzer (On/Off). |
| FLAT TIRE WARNING [On/Off] | Activates the low tire pressure warning buzzer (On/Off). |

Work Support

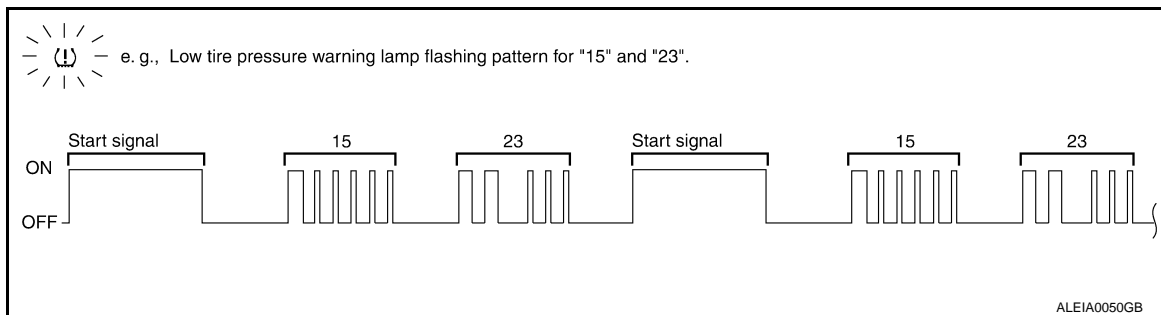
| Test item | Content |
|-----------|---|
| ID REGIST | The identification number of the transmitter is registered in the BCM. |
| ID READ | The identification registration number of the transmitter is read by the BCM. |

Self-Diagnosis (Without CONSULT-III)

INFOID:000000005682763

SELF DIAGNOSTIC PROCEDURE (WITHOUT CONSULT-III)

1. Turn ignition switch ON.
2. Ground the tire pressure warning check connector to initiate self diagnosis.
3. Compare the flashing pattern with the flash code chart below.



NOTE:

The system is normal when the low tire pressure warning lamp flashes 5 times and continues repeating. Self-diagnosis results are erased automatically by turning the ignition switch "OFF".

| Flash Code | Malfunction part | Reference page |
|----------------------|--|-----------------------|
| 15 16 17 18 | Tire pressure dropped below specified value. Refer to WT-8, "System Description" . | — |
| 21 22 23 24 | Transmitter no data (FL) Transmitter no data (FR) Transmitter no data (RR) Transmitter no data (RL) | WT-14 |

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

| Flash Code | Malfunction part | Reference page |
|------------|--------------------------------------|-----------------------|
| 31 | Transmitter checksum error (FL) | WT-16 |
| 32 | Transmitter checksum error (FR) | |
| 33 | Transmitter checksum error (RR) | |
| 34 | Transmitter checksum error (RL) | |
| 35 | Transmitter pressure data error (FL) | WT-18 |
| 36 | Transmitter pressure data error (FR) | |
| 37 | Transmitter pressure data error (RR) | |
| 38 | Transmitter pressure data error (RL) | |
| 41 | Transmitter function code error (FL) | WT-16 |
| 42 | Transmitter function code error (FR) | |
| 43 | Transmitter function code error (RR) | |
| 44 | Transmitter function code error (RL) | |
| 45 | Transmitter battery voltage low (FL) | WT-16 |
| 46 | Transmitter battery voltage low (FR) | |
| 47 | Transmitter battery voltage low (RR) | |
| 48 | Transmitter battery voltage low (RL) | |
| 52 | Vehicle speed signal | WT-19 |
| 54 | Vehicle ignition signal | WT-20 |

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

C1708 - C1711 DATA FROM TRANSMITTER NOT BEING RECEIVED

< COMPONENT DIAGNOSIS >

COMPONENT DIAGNOSIS

C1708 - C1711 DATA FROM TRANSMITTER NOT BEING RECEIVED

Description

INFOID:000000005384354

Tire pressure data for one or more transmitters is not being received by the BCM.

DTC Logic

INFOID:000000005384355

DTC DETECTION LOGIC

| DTC | CONSULT-III | DTC detecting condition |
|-------|------------------|--|
| C1708 | [NO - DATA] - FL | Data from FL transmitter cannot be received. |
| C1709 | [NO - DATA] - FR | Data from FR transmitter cannot be received. |
| C1710 | [NO - DATA] - RR | Data from RR transmitter cannot be received. |
| C1711 | [NO - DATA] - RL | Data from RL transmitter cannot be received. |

DTC CONFIRMATION PROCEDURE

1.ID REGISTRATION AND VEHICLE DRIVING

1. Carry out ID registration of all transmitters.
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 within 5 minutes.

Does "DATA MONITOR ITEM" display tire pressure as normal without any warning lamp?

- YES >> Inspection End.
NO >> Refer to [WT-14, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000005384356

MALFUNCTION CODE NO. 21, 22, 23 OR 24 (DTC C1708, C1709, C1710 OR C1711)

1.CHECK BCM

Drive for several minutes. Check all tire pressures with CONSULT-III.

Are all tire pressures displayed as 0 kPa?

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

2.CHECK TIRE PRESSURE RECEIVER CONNECTOR

Check tire pressure receiver connector for damage or loose connection.

Is tire pressure receiver connector damaged or loose?

- YES >> Repair or replace tire pressure receiver connector.
NO >> Replace BCM, then GO TO 3. Refer to [BCS-53, "Removal and Installation"](#).

3.PERFORM ID REGISTRATION

Carry out ID registration of all transmitters. Refer to [WT-6, "ID Registration Procedure"](#).

Is there a tire that cannot register ID?

- YES >> Replace malfunctioning transmitter, then GO TO 5. Refer to [WT-48, "Transmitter \(Pressure Sensor\)"](#).
NO >> GO TO 4

4.DRIVE VEHICLE

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 within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).

Does "DATA MONITOR ITEM" display tire pressure as normal without any warning lamp?

C1708 - C1711 DATA FROM TRANSMITTER NOT BEING RECEIVED

< COMPONENT DIAGNOSIS >

YES >> Inspection End.

NO >> GO TO 5

5.ID REGISTRATION AND VEHICLE DRIVING

1. Carry out ID registration of all transmitters.
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 within 5 minutes.

Does "DATA MONITOR ITEM" display tire pressure as normal without any warning lamp?

YES >> Inspection End.

NO >> Proceed to the inspection applicable to DTC.

Special Repair Requirement

INFOID:000000005384357

Perform preliminary check. Refer to [WT-5. "Preliminary Check"](#).

A

B

C

D

WT

F

G

H

I

J

K

L

M

N

O

P

C1712 - C1715, C1720 - C1723, C1724 - C1727 TRANSMITTER MALFUNCTION

< COMPONENT DIAGNOSIS >

C1712 - C1715, C1720 - C1723, C1724 - C1727 TRANSMITTER MALFUNCTION

Description

INFOID:000000005384358

One or more transmitters are malfunctioning internally.

DTC Logic

INFOID:000000005384359

DTC DETECTION LOGIC

| DTC | CONSULT-III | DTC detecting condition |
|-------|--------------------------|---|
| C1712 | [CHECKSUM - ERR] - FL | Checksum data from FL transmitter is malfunctioning. |
| C1713 | [CHECKSUM - ERR] - FR | Checksum data from FR transmitter is malfunctioning. |
| C1714 | [CHECKSUM - ERR] - RR | Checksum data from RR transmitter is malfunctioning. |
| C1715 | [CHECKSUM - ERR] - RL | Checksum data from RL transmitter is malfunctioning. |
| C1720 | [CODE - ERR] - FL | Function code data from FL transmitter is malfunctioning. |
| C1721 | [CODE - ERR] - FR | Function code data from FR transmitter is malfunctioning. |
| C1722 | [CODE - ERR] - RR | Function code data from RR transmitter is malfunctioning. |
| C1723 | [CODE - ERR] - RL | Function code data from RL transmitter is malfunctioning. |
| C1724 | [BATT - VOLT - LOW] - FL | Battery voltage of FL transmitter drops. |
| C1725 | [BATT - VOLT - LOW] - FR | Battery voltage of FR transmitter drops. |
| C1726 | [BATT - VOLT - LOW] - RR | Battery voltage of RR transmitter drops. |
| C1727 | [BATT - VOLT - LOW] - RL | Battery voltage of RL transmitter drops. |

DTC CONFIRMATION PROCEDURE

1. DRIVE VEHICLE

1. 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.
2. Check all tire pressures with CONSULT-III within 5 minutes.

Does "DATA MONITOR ITEM" display tire pressure as normal without any warning lamp?

YES >> Inspection End.

NO >> Refer to [WT-16, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000005384360

MALFUNCTION CODE NO. 31, 32, 33, 34, 41, 42, 43, 44, 45, 46, 47 OR 48 (DTC C1712, C1713, C1714, C1715, C1720, C1721, C1722, C1723, C1724, C1725, C1726 OR C1727)

1. PERFORM ID REGISTRATION

1. Carry out ID registration of all transmitters. Refer to [WT-6, "ID Registration Procedure"](#).
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.

>> GO TO 2

2. REPLACE TRANSMITTER

1. Check low tire pressure warning lamp again for flashing, replace malfunctioning transmitter. Refer to [WT-48, "Transmitter \(Pressure Sensor\)"](#).
2. Carry out ID registration of all transmitters.

Can ID registration of all transmitters be completed?

YES >> GO TO 3

NO >> GO TO [WT-14, "Diagnosis Procedure"](#).

C1712 - C1715, C1720 - C1723, C1724 - C1727 TRANSMITTER MALFUNCTION

< COMPONENT DIAGNOSIS >

3. DRIVE VEHICLE

1. 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.
2. Check all tire pressures with CONSULT-III within 5 minutes.

Does "DATA MONITOR ITEM" display tire pressure as normal without any warning lamp?

YES >> Inspection End.

NO >> Replace malfunctioning transmitter, and perform Step 3 again.

Special Repair Requirement

INFOID:000000005384361

Perform preliminary check. Refer to [WT-5. "Preliminary Check"](#).

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

WT

C1716 - C1719 TRANSMITTER PRESSURE MALFUNCTION

< COMPONENT DIAGNOSIS >

C1716 - C1719 TRANSMITTER PRESSURE MALFUNCTION

Description

INFOID:000000005384362

Air pressure data from one or more transmitters is out of range.

DTC Logic

INFOID:000000005384363

DTC DETECTION LOGIC

| DTC | CONSULT - III | DTC detecting condition |
|-------|----------------------|--|
| C1716 | [PRESSDATA - ERR] FL | Air pressure data from FL transmitter is malfunctioning. |
| C1717 | [PRESSDATA - ERR] FR | Air pressure data from FR transmitter is malfunctioning. |
| C1718 | [PRESSDATA - ERR] RR | Air pressure data from RR transmitter is malfunctioning. |
| C1719 | [PRESSDATA - ERR] RL | Air pressure data from RL transmitter is malfunctioning. |

DTC CONFIRMATION PROCEDURE

1.ID REGISTRATION AND VEHICLE DRIVING

1. Carry out ID registration of all transmitters.
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 within 5 minutes.

Does "DATA MONITOR ITEM" display tire pressure as normal without any warning lamp?

- YES >> Inspection End.
NO >> Refer to [WT-18. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000005384364

MALFUNCTION CODE NO. 35, 36, 37 OR 38 (DTC C1716, C1717, C1718 OR C1719)

1.CHECK ALL TIRE PRESSURES

Check all tire pressures. Refer to [WT-50. "Tire"](#).

Are there any tires with pressure of 64 psi or more?

- YES >> Adjust tire pressure to specified value.
NO >> GO TO 2

2.ID REGISTRATION AND VEHICLE DRIVING

1. Carry out ID registration of all transmitters. Refer to [WT-6. "ID Registration Procedure"](#).
2. Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping.
3. Check all tire pressures with CONSULT-III within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).

Does "DATA MONITOR ITEM" display 64 psi or more?

- YES >> Replace transmitter. Refer to [WT-48. "Transmitter \(Pressure Sensor\)"](#). GO TO 3.
NO >> GO TO 3

3.ID REGISTRATION AND VEHICLE DRIVING

1. Carry out ID registration of all transmitters.
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 within 5 minutes.

Does "DATA MONITOR ITEM" display tire pressure as normal without any warning lamp?

- YES >> Inspection End.
NO >> Proceed to the inspection applicable to DTC.

Special Repair Requirement

INFOID:000000005384365

Perform preliminary check. Refer to [WT-5. "Preliminary Check"](#).

C1729 VEHICLE SPEED SIGNAL

< COMPONENT DIAGNOSIS >

C1729 VEHICLE SPEED SIGNAL

Description

INFOID:000000005384366

The vehicle speed signal is not being detected by the BCM.

DTC Logic

INFOID:000000005384367

DTC DETECTION LOGIC

| DTC | CONSULT - III | DTC detecting condition |
|-------|--------------------|-----------------------------------|
| C1729 | VHCL SPEED SIG ERR | Vehicle speed signal is in error. |

DTC CONFIRMATION PROCEDURE

1. CHECK SELF-DIAGNOSTIC RESULTS

1. On "SELECT DIAG MODE", select the "SELF-DIAG RESULT" screen.
2. Check display contents on "SELF DIAG RESULT" screen.

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

YES >> Refer to [WT-19, "Diagnosis Procedure"](#).

NO >> Inspection End.

Diagnosis Procedure

INFOID:000000005384368

MALFUNCTION CODE NO. 52 (DTC C1729)

1. CHECK SELF-DIAGNOSTIC RESULTS

1. On "SELECT DIAG MODE", select the "SELF-DIAG RESULT" screen.
2. Check display contents on "SELF DIAG RESULT" screen.

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

YES >> Perform trouble diagnosis for CAN communication system.

NO >> Check combination meter. Refer to [MWI-28, "CONSULT-III Function \(METER/M&A\)"](#).

Special Repair Requirement

INFOID:000000005682764

Perform preliminary check. Refer to [WT-5, "Preliminary Check"](#).

C1735 IGNITION SIGNAL

< COMPONENT DIAGNOSIS >

C1735 IGNITION SIGNAL

Description

INFOID:000000005384369

The BCM monitors the IGN ON signal on the CAN line and compares it to its direct IGN ON signal. When these two signals do not match, the BCM sets C1735.

DTC Logic

INFOID:000000005384370

DTC DETECTION LOGIC

| DTC | CONSULT - III | DTC detecting condition |
|-------|---------------------------------|---|
| C1735 | IGNITION SIGNAL LINE - BCM/TPMS | BCM has detected a mismatch between IGN ON signals. |

DTC CONFIRMATION PROCEDURE

1. CHECK SELF-DIAGNOSTIC RESULTS

1. On SELECT DIAG MODE, select the SELF-DIAG RESULT screen.
2. Check display contents on SELF DIAG RESULT screen.

Is C1735 displayed in the self-diagnosis display?

- YES >> Refer to [WT-20, "Diagnosis Procedure"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000005384371

MALFUNCTION CODE NO. 54 (DTC C1735)

1. CAN IGNITION SIGNAL

Check BCM IGN RLY signal with CONSULT-III. Refer to [BCS-36, "Reference Value"](#).

Are the inspection results normal with the ignition switch ON?

- YES >> GO TO 2.
NO >> Check CAN system. Refer to [LAN-50, "CAN System Specification Chart"](#).

2. BCM POWER SUPPLY

Check BCM power supply (ignition ON). Refer to [BCS-30, "Diagnosis Procedure"](#).

Is the power supply with the ignition switch ON normal?

- YES >> GO TO 3.
NO >> Repair power supply as necessary.

3. DRIVE VEHICLE

Clear DTC and then test drive the vehicle and check the low tire pressure warning lamp.

Does the vehicle operate without any low tire pressure warning lamp?

- YES >> Inspection End.
NO >> Replace BCM. Refer to [BCS-53, "Removal and Installation"](#).

Special Repair Requirement

INFOID:000000005682765

Perform preliminary check. Refer to [WT-5, "Preliminary Check"](#).

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000005682766

VALUES ON THE DIAGNOSIS TOOL

| Monitor Item | Condition | Value/Status |
|----------------|---|--------------|
| AIR COND SW | A/C switch OFF | OFF |
| | A/C switch ON | ON |
| AUT LIGHT SYS | Outside of the room is dark | OFF |
| | Outside of the room is bright | ON |
| AUTO LIGHT SW | Lighting switch OFF | OFF |
| | Lighting switch AUTO | ON |
| CDL LOCK SW | Door lock/unlock switch does not operate | OFF |
| | Press door lock/unlock switch to the LOCK side | ON |
| CDL UNLOCK SW | Door lock/unlock switch does not operate | OFF |
| | Press door lock/unlock switch to the UNLOCK side | ON |
| DOOR SW-AS | Front door RH closed | OFF |
| | Front door RH opened | ON |
| DOOR SW-DR | Front door LH closed | OFF |
| | Front door LH opened | ON |
| DOOR SW-RL | Rear door LH closed | OFF |
| | Rear door LH opened | ON |
| DOOR SW-RR | Rear door RH closed | OFF |
| | Rear door RH opened | ON |
| ENGINE RUN | Engine stopped | OFF |
| | Engine running | ON |
| FR FOG SW | Front fog lamp switch OFF | OFF |
| | Front fog lamp switch ON | ON |
| FR WASHER SW | Front washer switch OFF | OFF |
| | Front washer switch ON | ON |
| FR WIPER LOW | Front wiper switch OFF | OFF |
| | Front wiper switch LO | ON |
| FR WIPER HI | Front wiper switch OFF | OFF |
| | Front wiper switch HI | ON |
| FR WIPER INT | Front wiper switch OFF | OFF |
| | Front wiper switch INT | ON |
| FR WIPER STOP | Any position other than front wiper stop position | OFF |
| | Front wiper stop position | ON |
| HAZARD SW | When hazard switch is not pressed | OFF |
| | When hazard switch is pressed | ON |
| LIGHT SW 1ST | Lighting switch OFF | OFF |
| | Lighting switch 1st | ON |
| HEAD LAMP SW 1 | Headlamp switch OFF | OFF |
| | Headlamp switch 1st | ON |

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

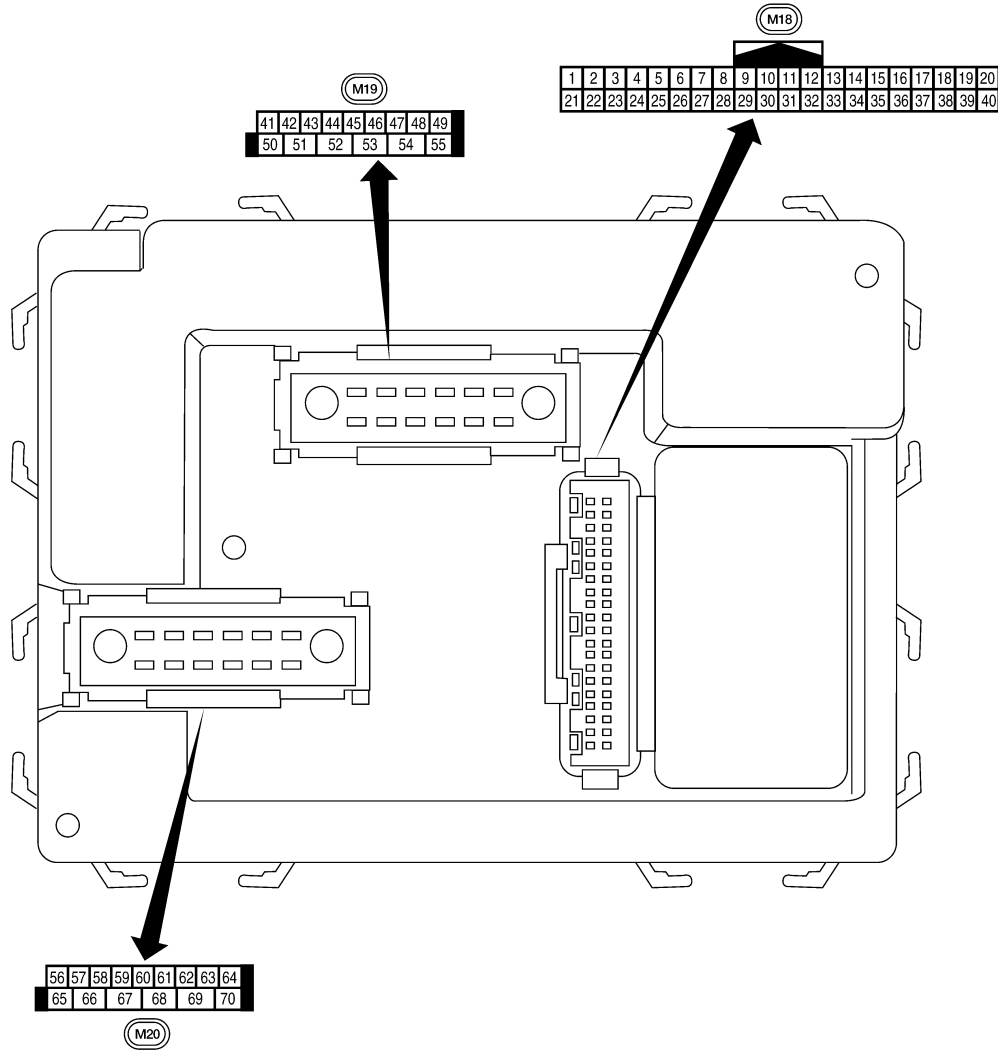
| Monitor Item | Condition | Value/Status |
|----------------|--|-----------------------------------|
| HEAD LAMP SW 2 | Headlamp switch OFF | OFF |
| | Headlamp switch 1st | ON |
| HI BEAM SW | High beam switch OFF | OFF |
| | High beam switch HI | ON |
| IGN ON SW | Ignition switch OFF or ACC | OFF |
| | Ignition switch ON | ON |
| IGN SW CAN | Ignition switch OFF or ACC | OFF |
| | Ignition switch ON | ON |
| INT VOLUME | Wiper intermittent dial is in a dial position 1 - 7 | 1 - 7 |
| KEY ON SW | Key is removed from key cylinder | OFF |
| | Key is inserted to key cylinder | ON |
| KEYLESS LOCK | LOCK button of key fob is not pressed | OFF |
| | LOCK button of key fob is pressed | ON |
| KEYLESS UNLOCK | UNLOCK button of key fob is not pressed | OFF |
| | UNLOCK button of key fob is pressed | ON |
| OIL PRESS SW | <ul style="list-style-type: none"> • Ignition switch OFF or ACC • Engine running | OFF |
| | Ignition switch ON | ON |
| PASSING SW | Other than lighting switch PASS | OFF |
| | Lighting switch PASS | ON |
| REAR DEF SW | Rear window defogger switch OFF | OFF |
| | Rear window defogger switch ON | ON |
| TAIL LAMP SW | Lighting switch OFF | OFF |
| | Lighting switch 1ST | ON |
| TURN SIGNAL L | Turn signal switch OFF | OFF |
| | Turn signal switch LH | ON |
| TURN SIGNAL R | Turn signal switch OFF | OFF |
| | Turn signal switch RH | ON |
| VEHICLE SPEED | While driving | Equivalent to speedometer reading |

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal Layout

INFOID:000000005682767



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


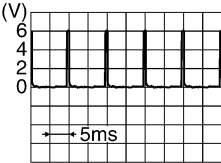

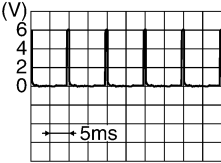
Physical Values

LIA2443E

INFOID:000000005682768

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

| Terminal | Wire color | Signal name | Signal input/output | Measuring condition | | Reference value or waveform (Approx.) |
|----------|------------|--|---------------------|---------------------|--|---|
| | | | | Ignition switch | Operation or condition | |
| 1 | BR/W | Ignition keyhole illumination | Output | OFF | Door is locked (SW OFF) | Battery voltage |
| | | | | | Door is unlocked (SW OFF) | 0V |
| 2 | SB | Combination switch input 5 | Input | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5291E</p> |
| 3 | G/Y | Combination switch input 4 | Input | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5292E</p> |
| 4 | Y | Combination switch input 3 | Input | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5291E</p> |
| 5 | G/B | Combination switch input 2 | Input | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5292E</p> |
| 6 | V | Combination switch input 1 | | | | |
| 9 | Y/B | Rear window defogger switch (Crew Cab) | Input | ON | Rear window defogger switch ON | 0V |
| | | | | | Rear window defogger switch OFF | 5V |
| 11 | O | Ignition switch (ACC or ON) | Input | ACC or ON | Ignition switch ACC or ON | Battery voltage |
| 12 | R/L | Front door switch RH (All) | Input | OFF | ON (open) | 0V |
| | | Rear door switch lower RH (King Cab) | | | OFF (closed) | Battery voltage |
| | | Rear door switch upper RH (King Cab) | | | | |
| 13 | GR | Rear door switch RH (Crew Cab) | Input | OFF | ON (open) | 0V |
| | | | | | OFF (closed) | Battery voltage |
| 15 | L/W | Tire pressure warning check connector | Input | OFF | — | 5V |

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

| Terminal | Wire color | Signal name | Signal input/output | Measuring condition | | Reference value or waveform (Approx.) |
|----------|------------|---|---------------------|---------------------|---|--|
| | | | | Ignition switch | Operation or condition | |
| 18 | P | Remote keyless entry receiver and optical sensor (ground) | Output | OFF | — | 0V |
| 19 | V/W | Remote keyless entry receiver (power supply) | Output | OFF | Ignition switch OFF | |
| 20 | G/W | Remote keyless entry receiver (signal) | Input | OFF | Stand-by (keyfob buttons released) | |
| | | | | | When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed) | |
| 21 | G | NATS antenna amp. | Input | OFF → ON | Ignition switch (OFF → ON) | Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage. |
| 22 | G | BUS | — | — | Ignition switch ON or power window timer operates | |
| 23 | G/O | Security indicator lamp | Output | OFF | Goes OFF → illuminates (Every 2.4 seconds) | Battery voltage → 0V |
| 25 | BR | NATS antenna amp. | Input | OFF → ON | Ignition switch (OFF → ON) | Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage. |
| 27 | W/R | Compressor ON signal | Input | ON | A/C switch OFF | 5V |
| | | | | | A/C switch ON | 0V |
| 28 | L/R | Front blower monitor | Input | ON | Front blower motor OFF | Battery voltage |
| | | | | | Front blower motor ON | 0V |
| 29 | W/B | Hazard switch | Input | OFF | ON | 0V |
| | | | | | OFF | 5V |
| 31 | P/L | Cargo lamp switch | Input | OFF | Cargo lamp switch ON | 0 |
| | | | | | Cargo lamp switch OFF | Battery voltage |

A

B

C

D

WT

F

G

H

I

J

K

L

M

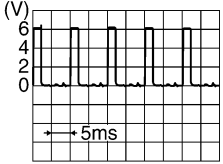
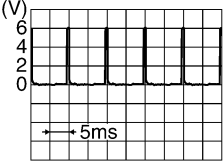
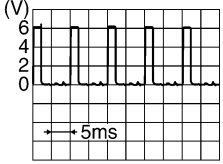
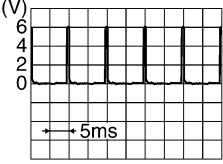
N

O

P

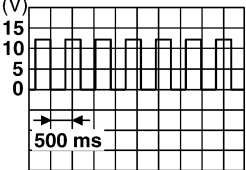
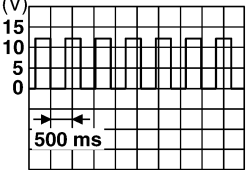
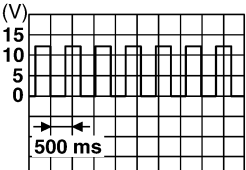
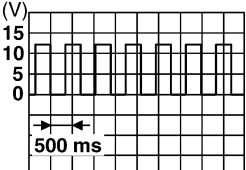
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

| Terminal | Wire color | Signal name | Signal input/output | Measuring condition | | Reference value or waveform (Approx.) |
|----------|------------|--------------------------------------|---------------------|---------------------|--|---|
| | | | | Ignition switch | Operation or condition | |
| 32 | R/G | Combination switch output 5 | Output | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5291E</p> |
| 33 | R/Y | Combination switch output 4 | Output | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5292E</p> |
| 34 | L | Combination switch output 3 | Output | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5291E</p> |
| 35 | O/B | Combination switch output 2 | Output | ON | Lighting, turn, wiper OFF Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5292E</p> |
| 36 | R/W | Combination switch output 1 | | | | |
| 37 | B/R | Key switch and key lock solenoid | Input | OFF | Key inserted | Battery voltage |
| | | | | | Key inserted | 0V |
| 38 | W/L | Ignition switch (ON) | Input | ON | — | Battery voltage |
| 39 | L | CAN-H | — | — | — | — |
| 40 | P | CAN-L | — | — | — | — |
| 47 | SB | Front door switch LH (All) | Input | OFF | ON (open) | 0V |
| | | Rear door switch lower LH (King Cab) | | | OFF (closed) | Battery voltage |
| 48 | R/Y | Rear door switch LH (Crew Cab) | Input | OFF | ON (open) | 0V |
| | | | | | OFF (closed) | Battery voltage |
| 50 | R/Y | Cargo bed lamp control | Output | OFF | Cargo lamp switch (ON) | 0V |
| | | | | | Cargo lamp switch (OFF) | Battery voltage |

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

| Terminal | Wire color | Signal name | Signal input/output | Measuring condition | | Reference value or waveform (Approx.) |
|----------|------------|---|---------------------|---------------------|--|---|
| | | | | Ignition switch | Operation or condition | |
| 51 | G/Y | Trailer turn signal (right) | Output | ON | Turn right ON |  <p style="text-align: right; font-size: small;">SKIA3009J</p> |
| 52 | G/B | Trailer turn signal (left) | Output | ON | Turn left ON |  <p style="text-align: right; font-size: small;">SKIA3009J</p> |
| 56 | R/G | Battery saver output | Output | OFF | 30 minutes after ignition switch is turned OFF | 0V |
| | | | | ON | — | Battery voltage |
| 57 | Y/R | Battery power supply | Input | OFF | — | Battery voltage |
| 58 | W/R | Optical sensor | Input | ON | When optical sensor is illuminated | 3.1V or more |
| | | | | | When optical sensor is not illuminated | 0.6V or less |
| 59 | G | Front door lock assembly LH actuator (unlock) | Output | OFF | OFF (neutral) | 0V |
| | | | | ON | ON (unlock) | Battery voltage |
| 60 | G/B | Turn signal (left) | Output | ON | Turn left ON |  <p style="text-align: right; font-size: small;">SKIA3009J</p> |
| 61 | G/Y | Turn signal (right) | Output | ON | Turn right ON |  <p style="text-align: right; font-size: small;">SKIA3009J</p> |
| 62 | R/W | Step lamp LH and RH | Output | OFF | ON (any door open) | 0V |
| | | | | | OFF (all doors closed) | Battery voltage |
| 63 | L | Interior room/map lamp | Output | OFF | Any door switch ON (open) | 0V |
| | | | | | OFF (closed) | Battery voltage |
| 65 | V | All door lock actuators (lock) | Output | OFF | OFF (neutral) | 0V |
| | | | | ON | ON (lock) | Battery voltage |
| 66 | G/Y | Front door lock actuator RH and rear door lock actuators LH/RH (unlock) | Output | OFF | OFF (neutral) | 0V |
| | | | | ON | ON (unlock) | Battery voltage |

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

| Terminal | Wire color | Signal name | Signal input/output | Measuring condition | | Reference value or waveform (Approx.) |
|----------|------------|---------------------------------|---------------------|---------------------|---|---------------------------------------|
| | | | | Ignition switch | Operation or condition | |
| 67 | B | Ground | Input | ON | — | 0V |
| 68 | W/L | Power window power supply (RAP) | Output | — | Ignition switch ON | Battery voltage |
| | | | | | Within 45 seconds after ignition switch OFF | Battery voltage |
| | | | | | More than 45 seconds after ignition switch OFF | 0V |
| | | | | | When front door LH or RH is open or power window timer operates | 0V |
| 69 | W/R | Power window power supply | Output | — | — | Battery voltage |
| 70 | W/B | Battery power supply | Input | OFF | — | Battery voltage |

BCM (BODY CONTROL MODULE)

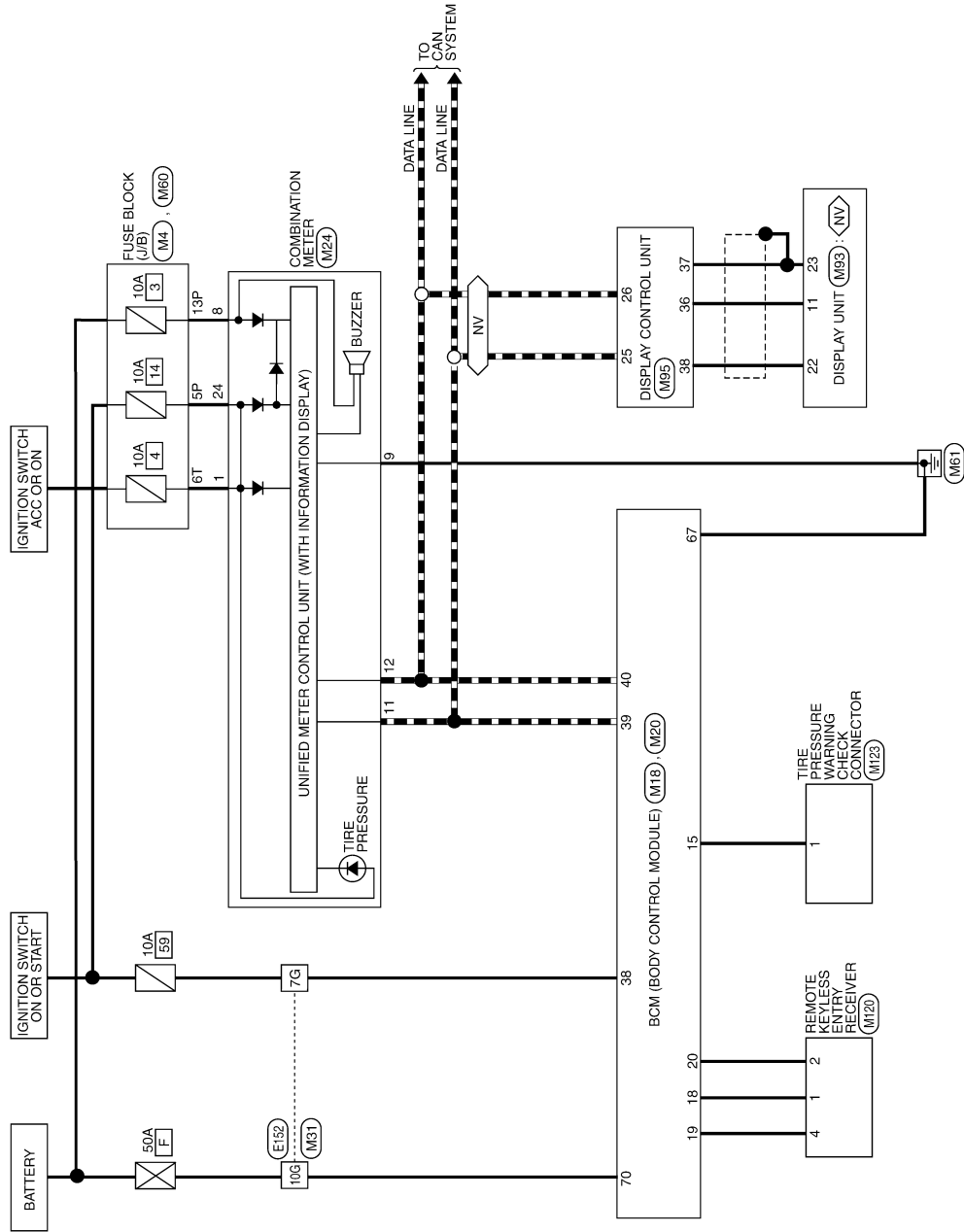
< ECU DIAGNOSIS >

Wiring Diagram

INFOID:000000005384375

TIRE PRESSURE MONITORING SYSTEM

(NV) : WITH NAVI



ABEWA0024GB

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

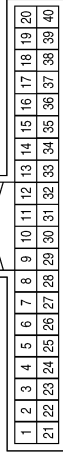
TIRE PRESSURE MONITORING SYSTEM CONNECTORS

| | |
|-----------------|------------------|
| Connector No. | M4 |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Color | WHITE |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 5P | O/L | - |
| 13P | P | - |

| | |
|-----------------|---------------------------|
| Connector No. | M18 |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Color | WHITE |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-----------------------------------|
| 15 | L/W | TPMS MODE TRIGGER SW |
| 18 | P | KEYLESS AND AUTO LIGHT SENSOR GND |
| 19 | V/W | KEYLESS TUNER POWER SUPPLY OUTPUT |
| 20 | G/W | KEYLESS TUNER SIGNAL |
| 38 | W/L | IGN SW |
| 39 | L | CAN-H |
| 40 | P | CAN-L |

| | |
|-----------------|---------------------------|
| Connector No. | M20 |
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Color | BLACK |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 67 | B | GND (POWER) |
| 70 | W/B | BAT (F/L) |

| | |
|-----------------|-------------------|
| Connector No. | M24 |
| Connector Name | COMBINATION METER |
| Connector Color | WHITE |

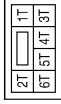


| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1 | O | ACCESSORY |
| 8 | P | BATTERY |
| 9 | B | GND (POWER) |
| 11 | L | CAN-H |
| 12 | P | CAN-L |
| 24 | O/L | RUN/START |

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

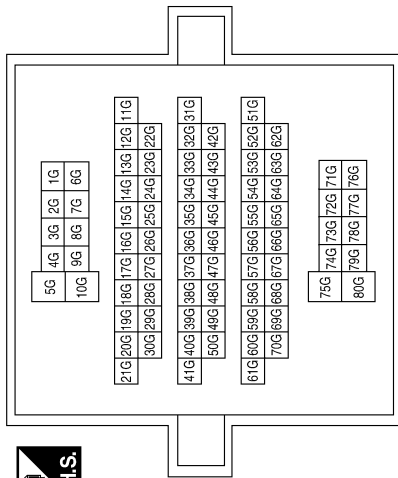
| | |
|-----------------|------------------|
| Connector No. | M60 |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Color | WHITE |



| | | | | | |
|--------------|----|---------------|---|-------------|---|
| Terminal No. | 6T | Color of Wire | O | Signal Name | - |
|--------------|----|---------------|---|-------------|---|

| | | |
|--------------|---------------|-------------|
| Terminal No. | Color of Wire | Signal Name |
| 7G | W/L | - |
| 10G | W/B | - |

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

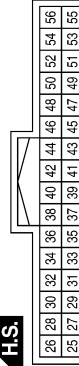


| | |
|-----------------|-------------------------------|
| Connector No. | M120 |
| Connector Name | REMOTE KEYLESS ENTRY RECEIVER |
| Connector Color | WHITE |



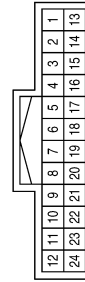
| | | |
|--------------|---------------|-------------|
| Terminal No. | Color of Wire | Signal Name |
| 1 | P | GND |
| 2 | GW | SIGNAL |
| 4 | V/W | POWER |

| | |
|-----------------|----------------------|
| Connector No. | M95 |
| Connector Name | DISPLAY CONTROL UNIT |
| Connector Color | WHITE |



| | | |
|--------------|---------------|-------------|
| Terminal No. | Color of Wire | Signal Name |
| 25 | L | CAN-H |
| 26 | P | CAN-L |
| 36 | B/W | DCU-DSP |
| 37 | SHIELD | BUS_GND |
| 38 | L | DSP-DCU |

| | |
|-----------------|--------------|
| Connector No. | M93 |
| Connector Name | DISPLAY UNIT |
| Connector Color | WHITE |



| | | |
|--------------|---------------|-------------|
| Terminal No. | Color of Wire | Signal Name |
| 11 | B/W | DCU-DPS |
| 22 | L | DSP-DCU |
| 23 | SHIELD | BUS_GND |

ABEIA0012GB

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

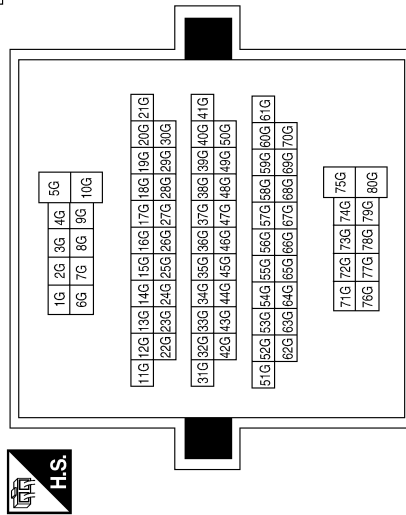
WT

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 7G | L/W | - |
| 10G | W/B | - |

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



| | |
|-----------------|---------------------------------------|
| Connector No. | M123 |
| Connector Name | TIRE PRESSURE WARNING CHECK CONNECTOR |
| Connector Color | WHITE |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-----------------|
| 1 | L/W | TPMS TRIGGER SW |

Self-Diagnosis (With CONSULT-III)

FUNCTION

Self-Diagnostic Results Mode

ABEIA0068GB

INFOID:000000005384376

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

| Diagnostic item | Diagnostic item is detected when ... | Reference page |
|--|--|-----------------------|
| LOW - PRESSURE - FL [C1704] LOW - PRESSURE - FR [C1705] LOW - PRESSURE - RR [C1706] LOW - PRESSURE - RL [C1707] | Tire pressures dropped below specified value. Refer to WT-8 , " System Description ". | — |
| [NO-DATA] - FL [C1708] [NO-DATA] - FR [C1709] [NO-DATA] - RR [C1710] [NO-DATA] - RL [C1711] | Data from FL transmitter cannot be received. Data from FR transmitter cannot be received. Data from RR transmitter cannot be received. Data from RL transmitter cannot be received. | WT-14 |
| [CHECKSUM- ERR] - FL [C1712] [CHECKSUM- ERR] - FR [C1713] [CHECKSUM- ERR] - RR [C1714] [CHECKSUM- ERR] - RL [C1715] | Checksum data from FL transmitter is malfunctioning. Checksum data from FR transmitter is malfunctioning. Checksum data from RR transmitter is malfunctioning. Checksum data from RL transmitter is malfunctioning. | WT-16 |
| [PRESSDATA- ERR] - FL [C1716] [PRESSDATA- ERR] - FR [C1717] [PRESSDATA- ERR] - RR [C1718] [PRESSDATA- ERR] - RL [C1719] | Air pressure data from FL transmitter is malfunctioning. Air pressure data from FR transmitter is malfunctioning. Air pressure data from RR transmitter is malfunctioning. Air pressure data from RL transmitter is malfunctioning. | WT-18 |
| [CODE- ERR] - FL [C1720] [CODE- ERR] - FR [C1721] [CODE- ERR] - RR [C1722] [CODE- ERR] - RL [C1723] | Function code data from FL transmitter is malfunctioning. Function code data from FR transmitter is malfunctioning. Function code data from RR transmitter is malfunctioning. Function code data from RL transmitter is malfunctioning. | WT-16 |
| [BATT - VOLT - LOW] - FL [C1724] [BATT - VOLT - LOW] - FR [C1725] [BATT - VOLT - LOW] - RR [C1726] [BATT - VOLT - LOW] - RL [C1727] | Battery voltage of FL transmitter drops. Battery voltage of FR transmitter drops. Battery voltage of RR transmitter drops. Battery voltage of RL transmitter drops. | WT-16 |
| VHCL_SPEED_SIG_ERR [C1729] | Vehicle speed signal is in error. | WT-19 |
| IGN_CIRCUIT_OPEN [C1735] | Ignition signal is in error. | WT-20 |

NOTE:

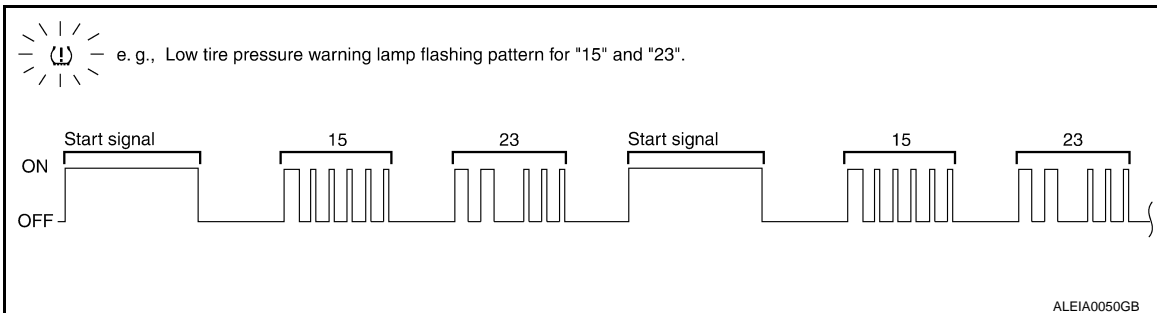
Before performing the self-diagnosis, be sure to register the ID or else the actual malfunction location may be different from that displayed on CONSULT-III.

Self-Diagnosis (Without CONSULT-III)

INFOID:000000005384377

SELF DIAGNOSTIC PROCEDURE (WITHOUT CONSULT-III)

1. Turn ignition switch ON.
2. Ground the tire pressure warning check connector to initiate self diagnosis.
3. Compare the flashing pattern with the flash code chart below.



NOTE:

The system is normal when the low tire pressure warning lamp flashes 5 times and continues repeating. Self-diagnosis results are erased automatically by turning the ignition switch "OFF".

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

| Flash Code | Malfunction part | Reference page |
|----------------------|--|-----------------------|
| 15 16 17 18 | Tire pressure dropped below specified value. Refer to WT-8, "System Description" . | — |
| 21 22 23 24 | Transmitter no data (FL) Transmitter no data (FR) Transmitter no data (RR) Transmitter no data (RL) | WT-14 |
| 31 32 33 34 | Transmitter checksum error (FL) Transmitter checksum error (FR) Transmitter checksum error (RR) Transmitter checksum error (RL) | WT-16 |
| 35 36 37 38 | Transmitter pressure data error (FL) Transmitter pressure data error (FR) Transmitter pressure data error (RR) Transmitter pressure data error (RL) | WT-18 |
| 41 42 43 44 | Transmitter function code error (FL) Transmitter function code error (FR) Transmitter function code error (RR) Transmitter function code error (RL) | WT-16 |
| 45 46 47 48 | Transmitter battery voltage low (FL) Transmitter battery voltage low (FR) Transmitter battery voltage low (RR) Transmitter battery voltage low (RL) | WT-16 |
| 52 | Vehicle speed signal | WT-19 |
| 54 | Vehicle ignition signal | WT-20 |

TPMS

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

TPMS

Symptom Table

INFOID:000000005384378

| Symptom | Reference |
|--|-----------------------|
| Low tire pressure warning lamp does not come on when ignition switch is turned ON. | WT-36 |
| Low tire pressure warning lamp stays on when ignition switch is turned ON. | WT-37 |
| Low tire pressure warning lamp flashes when ignition switch is turned ON. | WT-38 |
| Hazard warning lamps flash when ignition switch is turned ON. | WT-39 |
| Tire pressure information in display unit does not exist. | WT-41 |
| ID registration cannot be completed. | WT-41 |

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

Low Tire Pressure Warning Lamp Does Not Come On When Ignition Switch Is Turned On

INFOID:000000005384379

DIAGNOSTIC PROCEDURE

1. SELF-DIAGNOSTIC RESULT CHECK

Using CONSULT-III, check display contents of BCM in SELF-DIAGNOSIS.

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

YES >> Malfunction in CAN communication system. Refer to [LAN-50. "CAN System Specification Chart"](#).

NO >> GO TO 2

2. CHECK COMBINATION METER

Check combination meter operation. Refer to [MWI-28. "CONSULT-III Function \(METER/M&A\)"](#).

Is the inspection result normal?

YES >> GO TO 3

NO >> Replace combination meter. Refer to [MWI-101. "Removal and Installation"](#).

3. CHECK LOW TIRE PRESSURE WARNING LAMP

Disconnect BCM harness connector.

Does the low tire pressure warning lamp activate?

YES >> Replace BCM. Refer to [BCS-53. "Removal and Installation"](#).

NO >> Check combination meter operation.

LOW TIRE PRESSURE WARNING LAMP STAYS ON

< SYMPTOM DIAGNOSIS >

LOW TIRE PRESSURE WARNING LAMP STAYS ON

Low Tire Pressure Warning Lamp Stays On When Ignition Switch Is Turned On

INFOID:000000005384380

DIAGNOSTIC PROCEDURE

1. BCM CONNECTORS

1. Turn ignition switch OFF.
2. Disconnect BCM harness connectors.
3. Check terminals for damage or loose connections.

Is the inspection result normal?

- YES >> GO TO 2
NO >> Repair or replace damaged parts.

2. BCM POWER SUPPLY AND GROUND CIRCUITS

Check BCM power supply and ground circuits. Refer to [BCS-30. "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-53. "Removal and Installation"](#).
NO >> Repair BCM circuits.

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

LOW TIRE PRESSURE WARNING LAMP BLINKS

< SYMPTOM DIAGNOSIS >

LOW TIRE PRESSURE WARNING LAMP BLINKS

Low Tire Pressure Warning Lamp Flashes When Ignition Switch Is Turned On

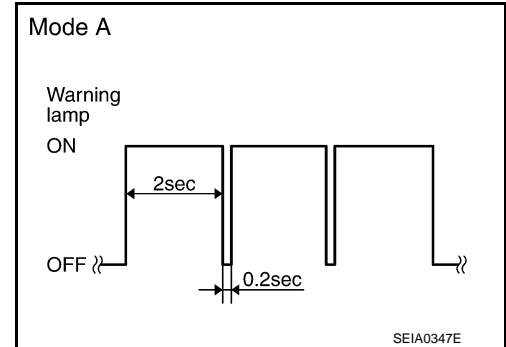
INFOID:000000005384381

NOTE:

If low tire pressure warning lamp flashes as shown, the system is normal.

Flash Mode A

- This mode shows transmitter status is OFF-mode.
Carry out transmitter wake up operation. Refer to [WT-5, "Transmitter Wake Up Operation"](#).



Regarding Wiring Diagram information, refer to [WT-29, "Wiring Diagram"](#).

DIAGNOSTIC PROCEDURE

1. CHECK BCM CONNECTORS

1. Turn ignition switch OFF.
2. Disconnect BCM harness connectors.
3. Check terminals for damage or loose connections.

Is the inspection result normal?

- YES >> GO TO 2
NO >> Repair or replace damaged parts.

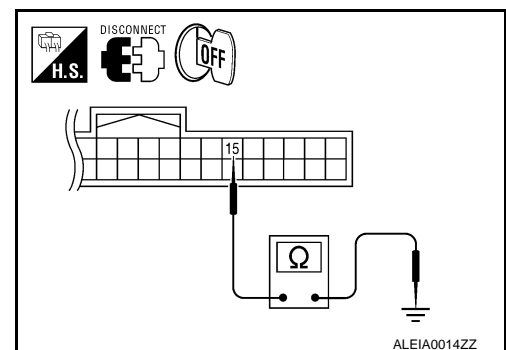
2. CHECK TIRE PRESSURE WARNING CHECK CONNECTOR CIRCUIT

Check continuity between BCM harness connector M18 terminal 15 and ground.

Continuity should not exist.

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-53, "Removal and Installation"](#).
NO >> Repair circuit for short to ground.



HAZARD WARNING LAMPS FLASH

< SYMPTOM DIAGNOSIS >

HAZARD WARNING LAMPS FLASH

Hazard Warning Lamps Flash When Ignition Switch Is Turned On

INFOID:000000005384382

DIAGNOSTIC PROCEDURE

1. CHECK BCM GROUND CIRCUIT

Check BCM ground circuit. Refer to [BCS-30, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-53, "Removal and Installation"](#).

NO >> Repair BCM ground circuit.

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

WT

"TIRE PRESSURE" INFORMATION IN DISPLAY UNIT DOES NOT EXIST

< SYMPTOM DIAGNOSIS >

"TIRE PRESSURE" INFORMATION IN DISPLAY UNIT DOES NOT EXIST

"TIRE PRESSURE" Information in Display Unit Does Not Exist

INFOID:000000005384383

DIAGNOSTIC PROCEDURE

1. SELF-DIAGNOSTIC RESULT CHECK

Using CONSULT-III, check display contents in self-diagnostic results.

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

YES >> Malfunction in CAN communication system.

NO >> GO TO 2.

2. CHECK DISPLAY UNIT

Perform display unit self-diagnosis. Refer to [AV-187. "AUDIO UNIT : Diagnosis Description"](#).

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-53. "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

ID REGISTRATION CANNOT BE COMPLETED

< SYMPTOM DIAGNOSIS >

ID REGISTRATION CANNOT BE COMPLETED

ID Registration Cannot Be Completed

INFOID:000000005384384

DIAGNOSTIC PROCEDURE

1. PERFORM ID REGISTRATION OF ALL TRANSMITTERS

Carry out ID registration of all transmitters. Refer to [WT-6, "ID Registration Procedure"](#).

Can ID registration of all transmitters be completed?

YES >> Inspection End.

NO >> GO TO [WT-14, "Diagnosis Procedure"](#).

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

WT

NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:000000005384385

Use the 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 | | |
|-------------------------------|------------|------------------------------------|-----------|-------------------------|------------------|-----------------------|----------------|---------------------|--------------|---------------------------------|-------------------------------|-------|------------|-------|----------------|--|-------|
| | | Out-of-round | Imbalance | Incorrect tire pressure | Uneven tire wear | Deformation or damage | Non-uniformity | Incorrect tire size | DIFFERENTIAL | FRONT AXLE AND FRONT SUSPENSION | REAR AXLE AND REAR SUSPENSION | TIRES | ROAD WHEEL | BRAKE | | STEERING | |
| Noise | TIRES | × | × | × | × | × | × | | × | × | × | × | | × | × | WT-45 | |
| | | × | × | × | × | × | × | × | | × | × | × | | × | × | WT-46 | |
| | | | | × | | | | × | | × | × | × | | | | | WT-50 |
| | | × | × | × | × | × | × | × | | × | × | × | | × | × | FSU-5, "Front Wheel Alignment" | |
| | × | × | × | × | × | × | | | | | | | | | — | | |
| | × | × | | | | | | | | | | | | | | — | |
| | × | × | | | | | | | | | | | | | | WT-50 | |
| | × | × | | | | | | | | | | | | | | FAX-4, "NVH Troubleshooting Chart" (FFD), DLN-190, "NVH Troubleshooting Chart" (RFD) M226, DLN-215, "NVH Troubleshooting Chart" (RFD) M226 ELD | |
| Shake | TIRES | × | × | | | | | | | | | | | | | | |
| | | × | × | | | | | | | | | | | | | | |
| | | × | × | | | | | | | | | | | | | | |
| | | × | × | | | | | | | | | | | | | | |
| Vibration | TIRES | × | × | | | | | | | | | | | | | | |
| | | × | × | | | | | | | | | | | | | | |
| | | × | × | | | | | | | | | | | | | | |
| | | × | × | | | | | | | | | | | | | | |
| Shimmy, shudder | TIRES | × | × | | | | | | | | | | | | | | |
| | | × | × | | | | | | | | | | | | | | |
| | | × | × | | | | | | | | | | | | | | |
| | | × | × | | | | | | | | | | | | | | |
| Poor quality ride or handling | TIRES | × | × | | | | | | | | | | | | | | |
| | | × | × | | | | | | | | | | | | | | |
| | | × | × | | | | | | | | | | | | | | |
| | | × | × | | | | | | | | | | | | | | |
| Noise | ROAD WHEEL | × | × | | | × | | | × | × | × | | × | × | × | | |
| | | × | × | | | × | | | × | × | × | | × | × | × | | |
| | | × | × | | | × | | | × | × | × | | × | × | × | | |
| | | × | × | | | × | | | × | × | × | | × | × | × | | |
| Shake | ROAD WHEEL | × | × | | | × | | | × | × | × | | × | × | × | | |
| | | × | × | | | × | | | × | × | × | | × | × | × | | |
| | | × | × | | | × | | | × | × | × | | × | × | × | | |
| | | × | × | | | × | | | × | × | × | | × | × | × | | |
| Shimmy, shudder | ROAD WHEEL | × | × | | | × | | | × | × | × | | × | × | × | | |
| | | × | × | | | × | | | × | × | × | | × | × | × | | |
| | | × | × | | | × | | | × | × | × | | × | × | × | | |
| | | × | × | | | × | | | × | × | × | | × | × | × | | |
| Poor quality ride or handling | ROAD WHEEL | × | × | | | × | | | × | × | × | | × | × | × | | |
| | | × | × | | | × | | | × | × | × | | × | × | × | | |
| | | × | × | | | × | | | × | × | × | | × | × | × | | |
| | | × | × | | | × | | | × | × | × | | × | × | × | | |
| TIRES | | Refer to TIRES in this chart. | | | | | | | | | | | | | | | |
| | | Refer to ROAD WHEEL in this chart. | | | | | | | | | | | | | | | |
| | | BR-5, "NVH Troubleshooting Chart" | | | | | | | | | | | | | | | |
| | | ST-5, "NVH Troubleshooting Chart" | | | | | | | | | | | | | | | |

x: Applicable

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000005682769

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

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

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

WARNING:

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

Precaution for work

INFOID:000000005384387

- After removing and installing the opening/closing parts, be sure to carry out fitting adjustments to check their operation.
- Check the lubrication level, damage, and wear of each part. If necessary, grease or replace it.

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

PREPARATION

< PREPARATION >

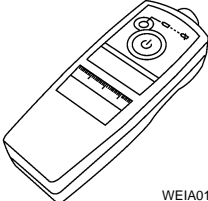
PREPARATION

PREPARATION

Special Service Tool

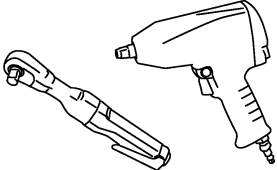
INFOID:000000005384388

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 |
|--|---|
| KV991B1000 (J-45295) Transmitter activation tool  WEIA0144E | <ul style="list-style-type: none">• Transmitter wake up operation• ID registration procedure |

Commercial Service Tool

INFOID:000000005384389

| Tool name | Description |
|---|---------------------|
| Power tool  PBIC0190E | Removing wheel nuts |

WHEEL

< ON-VEHICLE MAINTENANCE >

ON-VEHICLE MAINTENANCE

WHEEL

Inspection

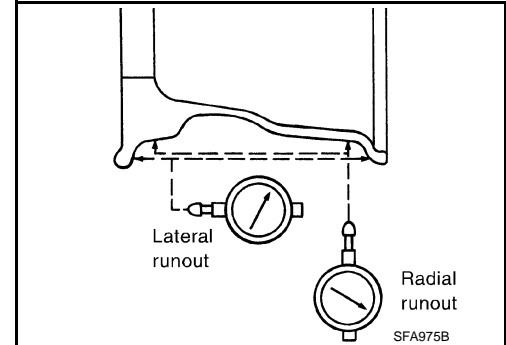
INFOID:000000005384390

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.

CAUTION:

DO NOT use center hole cone-type clamping machines to hold the wheel assembly during tire removal/installation or balancing or damage to the wheel paint, cladding or chrome may result. Use only rim-type or universal lug-type clamping machines to hold the wheel assembly during servicing.

- a. Remove tire from wheel and mount wheel on a tire balance machine.
- b. Set dial indicator as shown in the illustration. Refer to [WT-50](#), "[Road Wheel](#)".
3. Check front wheel bearings for looseness.
4. Check front suspension for looseness.



A

B

C

D

WT

F

G

H

I

J

K

L

M

N

O

P

WHEEL AND TIRE ASSEMBLY

< ON-VEHICLE MAINTENANCE >

WHEEL AND TIRE ASSEMBLY

Adjustment

INFOID:000000005712952

BALANCING WHEELS (ADHESIVE WEIGHT TYPE)

Preparation Before Adjustment

Remove inner and outer balance weights from the road wheel using releasing agent, remove double-faced adhesive tape from the road wheel.

CAUTION:

- **Be careful not 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 balancer machine has an adhesive weight mode setting, select the adhesive weight mode setting and skip Step 2. below. If a balancer machine only has the clip-on (rim flange) weight mode setting, follow Step 2. to calculate the correct size adhesive weight.

1. Set road wheel on balancer machine using the center hole as a guide. Start the balancer machine.
2. For tire balance machines that only have a clip-on (rim flange) weight mode setting, follow this step to calculate the correct size adhesive weight to use. When inner and outer imbalance values are shown on the balancer machine indicator, multiply outer imbalance value by 5/3 (1.67) to determine balance weight that should be used. Select the outer balance weight with a value closest to the calculated value above and install in to the designated outer position of, or at the designated angle in relation to the road wheel.

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

Calculation example:

$23 \text{ g (0.81 oz)} \times 5/3 (1.67) = 38.33 \text{ g (1.35 oz)} \Rightarrow 40 \text{ g (1.41 oz)}$
balance weight (closer to calculated balance weight value)

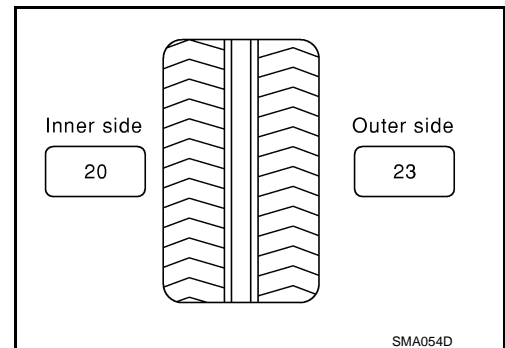
NOTE:

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

Example:

$37.4 \Rightarrow 35 \text{ g (1.23 oz)}$

$37.5 \Rightarrow 40 \text{ g (1.41 oz)}$



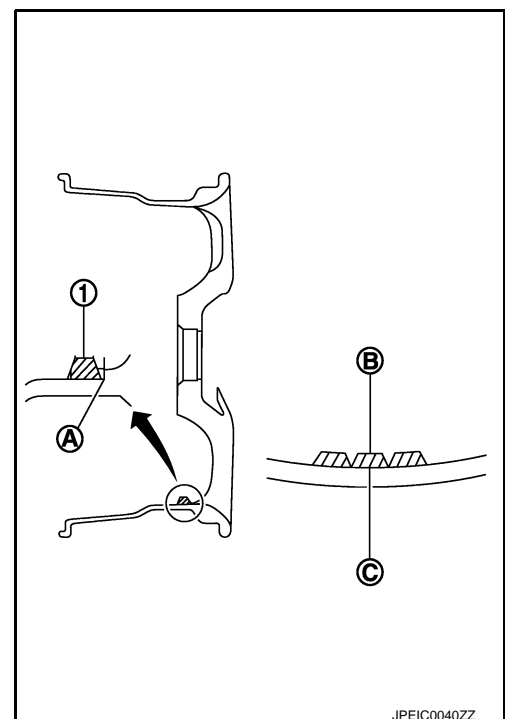
3. Install balance weight in the position shown.

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

CAUTION:

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



WHEEL AND TIRE ASSEMBLY

< ON-VEHICLE MAINTENANCE >

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

CAUTION:

Do not install one balance weight sheet on top another.

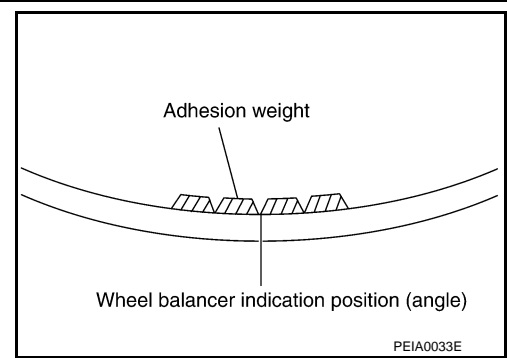
- Start balancer machine again.
- Install balance weight on inner side of road wheel in the balancer machine indication position (angle).

CAUTION:

Do not install more than two balance weight.

- Start balancer 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.



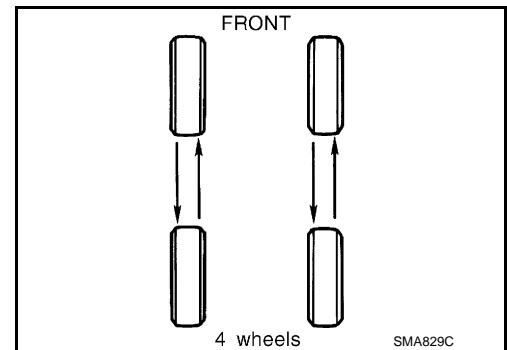
| Wheel balance | Dynamic (At flange) | Static (At flange) |
|-----------------------------|--|--------------------|
| Maximum allowable unbalance | Refer to WT-50, "Road Wheel" . | |

TIRE ROTATION

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

CAUTION:

- Do not include the 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 nut tightening torque : 133 N-m (14 kg-m, 98 ft-lb)

- Perform the ID registration, after tire rotation. Refer to [WT-6, "ID Registration Procedure"](#).

REMOVAL AND INSTALLATION

< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

REMOVAL AND INSTALLATION

Transmitter (Pressure Sensor)

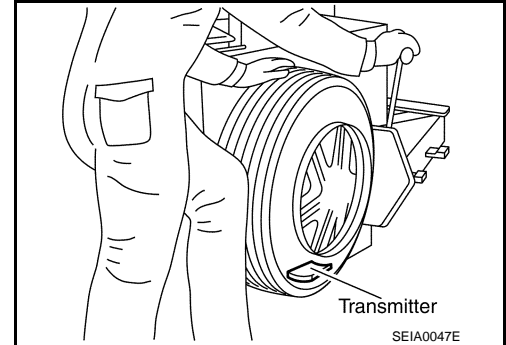
INFOID:000000005384393

REMOVAL

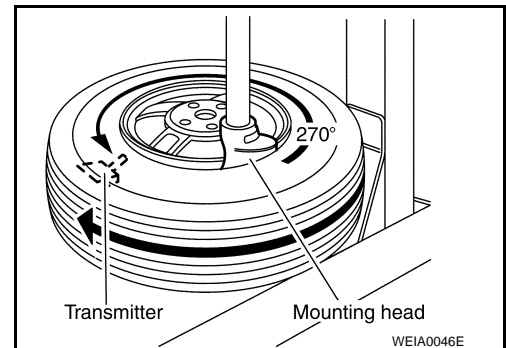
CAUTION:

DO NOT use center hole cone-type clamping machines to hold the wheel assembly during tire removal/installation or balancing or damage to the wheel paint, cladding or chrome may result. Use only rim-type or universal lug-type clamping machines to hold the wheel assembly during servicing.

1. Deflate tire. Unscrew transmitter nut and allow transmitter to fall into tire.
2. Gently bounce tire so that transmitter falls to bottom of tire. Place wheel and tire assembly on tire changing machine and break both tire beads. Ensure that the transmitter remains at the bottom of the tire while breaking the bead.



3. Turn tire so that valve hole is at bottom, and gently bounce the tire to ensure transmitter is near valve hole. Carefully lift tire onto turntable and position valve hole (and transmitter) 270 degrees from mounting/dismounting head.
4. Lubricate tire well, and remove top side of tire. Reach inside the tire and remove the transmitter.
5. Remove the second side of the tire as normal.

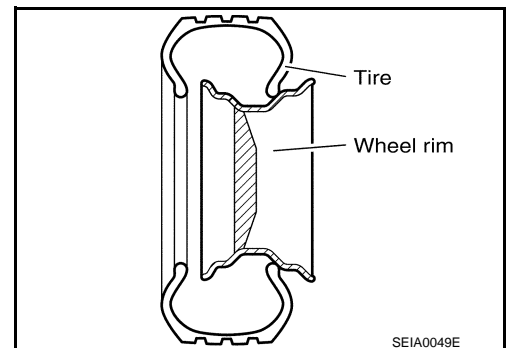


INSTALLATION

CAUTION:

DO NOT use center hole cone-type clamping machines to hold the wheel assembly during tire removal/installation or balancing or damage to the wheel paint, cladding or chrome may result. Use only rim-type or universal lug-type clamping machines to hold the wheel assembly during servicing.

1. Place first side of tire onto rim.



REMOVAL AND INSTALLATION

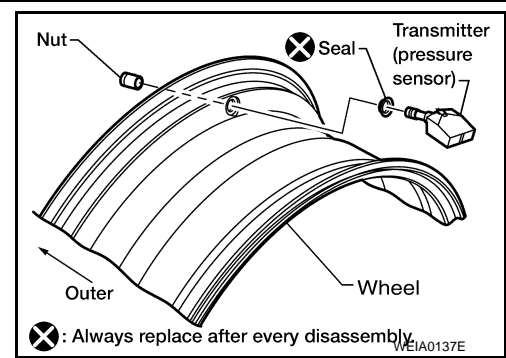
< REMOVAL AND INSTALLATION >

2. Mount transmitter on rim and slowly tighten transmitter nut to specification.

CAUTION:

Do not over tighten transmitter nut.

Transmitter nut : 7.7 N·m (0.79 kg·m, 68 in·lb)



3. Place wheel on turntable of tire machine. Ensure that transmitter is 270 degrees from mounting/dismounting head.

NOTE:

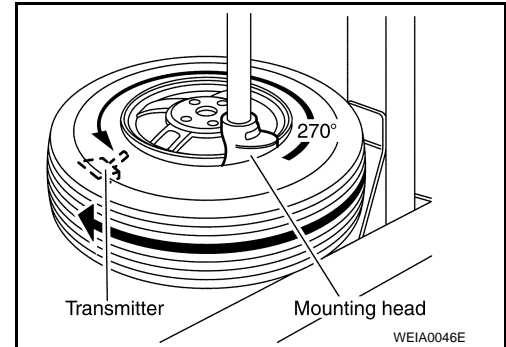
Do not touch transmitter with mounting head.

4. Lubricate tire well, and install second side of tire as normal. Ensure that tire does not rotate relative to rim.
5. Inflate tire and balance wheel and tire assembly. Refer to [WT-46, "Adjustment"](#).
6. Install wheel and tire assembly in appropriate wheel position on vehicle.

NOTE:

If replacing the transmitter, then transmitter wake up operation must be performed. Refer to [WT-5, "Transmitter Wake Up Operation"](#).

7. Adjust neutral position of steering angle sensor. Refer to [BRC-8, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement"](#).



SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Road Wheel

INFOID:000000005384394

| Wheel type | | Aluminum | Steel | |
|-----------------------------|-------------------------|------------------------------------|---------------------|---------------------|
| | | | Inside | Outside |
| Maximum radial runout limit | Lateral mm (in) | 0.3 (0.012) or less | 1.0 (0.039) or less | 0.9 (0.035) or less |
| | Radial mm (in) | 0.3 (0.012) or less | 0.8 (0.031) or less | 0.4 (0.016) or less |
| Maximum allowable imbalance | Dynamic (at rim flange) | Less than 5 g (0.18 oz) (per side) | | |
| | Static (at rim flange) | Less than 10 g (0.35 oz) | | |

Tire

INFOID:000000005384395

Unit: kPa (kg/cm², psi)

| Tire size | Air pressure | |
|------------|-------------------|---------------|
| | Conventional tire | Spare tire |
| P265/70R18 | 240 (2.4, 35) | 240 (2.4, 35) |
| P275/70R18 | 240 (2.4, 35) | 240 (2.4, 35) |
| P275/60R20 | 240 (2.4, 35) | 240 (2.4, 35) |