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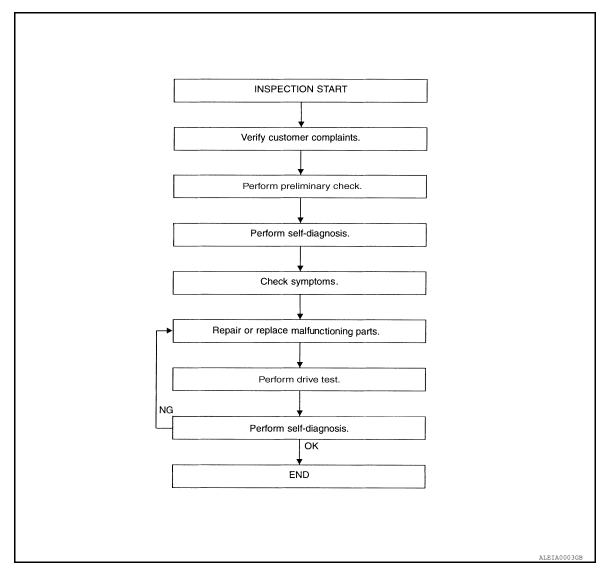
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Repair Work Flow

WORK FLOW



WT-5, "Preliminary Check"

WT-31, "Self-Diagnosis (With CONSULT-III)" WT-12, "Self-Diagnosis (Without CONSULT-III)" WT-37, "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

WT-3 Revision: March 2012 2011 Frontier

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

3.SELF-DIAGNOSIS

Perform self-diagnosis. Refer to <u>WT-31, "Self-Diagnosis (With CONSULT-III)"</u> or <u>WT-12, "Self-Diagnosis (Without CONSULT-III)"</u>.

>> GO TO 4

4.SYMPTOM

Check for symptoms. Refer to WT-37, "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 <u>WT-31, "Self-Diagnosis (With CONSULT-III)"</u> or <u>WT-12, "Self-Diagnosis (Without CONSULT-III)"</u>.

Are any DTCs displayed?

YES >> GO TO 5

NO >> Inspection End.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

INSPECTION AND ADJUSTMENT

Preliminary Check

INFOID:0000000006252195

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- · Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

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1. TIRE PRESSURE

Check all tire pressures. Refer to WT-51, "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 <u>WT-38</u>, "Low Tire Pressure Warning Lamp Does Not Come On When Ignition Switch Is <u>Turned On"</u>.

3.BCM CONNECTOR

- 1. Disconnect BCM harness connectors.
- 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-31, "Self-Diagnosis (With CONSULT-III)".

NO >> Replace battery in transmitter activation tool.

Transmitter Wake Up Operation

INFOID:0000000006252196

NOTE:

This procedure must be done after replacement of a TPMS transmitter or BCM. New replacement transmitters are provided "asleep" and must first be "woken up" using Transmitter Activation Tool J-45295 or Signal Tech II Tool J-50190 before ID registration can be performed. Use the following procedure when using the Transmitter Activation Tool J-45295.

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NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- · Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

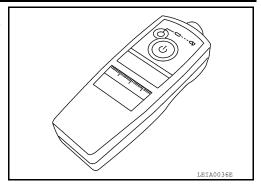
Revision: March 2012 WT-5 2011 Frontier

INSPECTION AND ADJUSTMENT

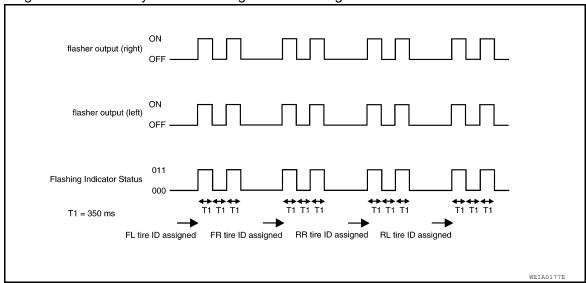
< BASIC INSPECTION >

 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.
- 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.



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

ID Registration Procedure

INFOID:0000000006252197

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- · Register TPMS transmitter IDs

ID REGISTRATION WITH TRANSMITTER ACTIVATION TOOL

NOTE:

This procedure must be done after replacement of a TPMS transmitter or BCM. New replacement transmitters are provided "asleep" and must first be "woken up" using Transmitter Activation Tool J-45295 or Signal Tech II Tool J-50190 before ID registration can be performed. Use the following procedure when using the Transmitter Activation Tool J-45295.

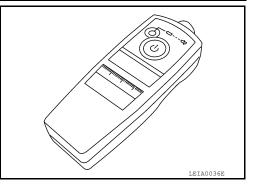
- 1. Connect CONSULT-III.
- Select ID REGIST under BCM.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

3. Push the transmitter activation tool against the tire near the front left transmitter. Press the button for 5 seconds.

Tool number : (J-45295)



4. 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	Front RH	2 times flashing	YET
3	Rear RH	2 times hashing	DONE
4	Rear LH		

5. 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:

This procedure must be done after replacement of a TPMS transmitter or BCM. New replacement transmitters are provided "asleep" and must first be "woken up" using Transmitter Activation Tool J-45295 or Signal Tech II Tool J-50190 before ID registration can be performed.

- 1. Connect CONSULT-III.
- 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	
Front RH	YET I
Rear RH	DONE
Rear LH	

5. Inflate all tires to proper pressure. Refer to WT-51, "Tire".

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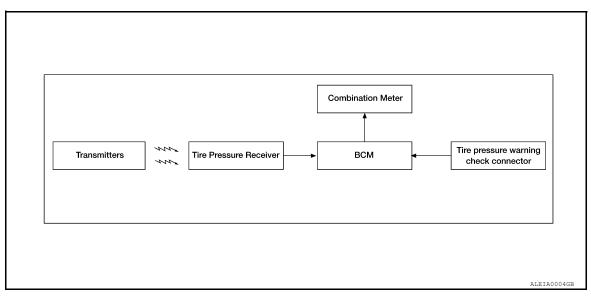
Revision: March 2012 WT-7 2011 Frontier

SYSTEM DESCRIPTION

TPMS

System Diagram

INFOID:0000000006252198



System Description

INFOID:0000000006252199

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.

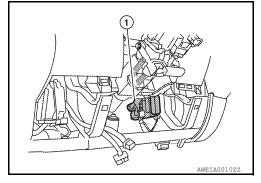
FUNCTION

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. A CHECK TIRE PRES warning message will also be displayed in the vehicle information display.

BODY CONTROL MODULE (BCM)

The BCM (1) 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.

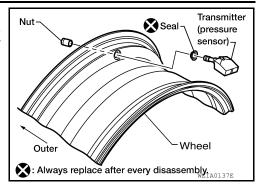
Condition	Low tire pressure warning lamp
System normal	On for 1 second after ignition ON
Tire less than 193 kPa (2.0 kg/cm ² , 28 psi) [Flat tire]	ON
Low tire pressure warning system malfunction	After key ON, flashes once per second for 1 minute, then stays ON



TRANSMITTER

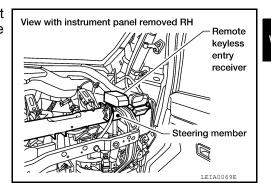
< SYSTEM DESCRIPTION >

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.



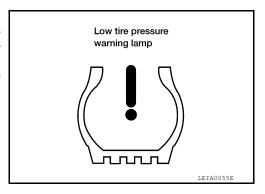
REMOTE KEYLESS ENTRY RECEIVER

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.



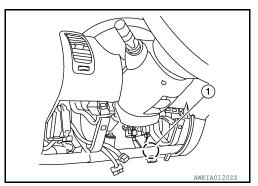
COMBINATION METER

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. A CHECK TIRE PRES warning message will also be displayed in the vehicle information display. Refer to the Owner's Manual for additional information.



TIRE PRESSURE WARNING CHECK CONNECTOR

The tire pressure warning check connector can be grounded in order to initiate self-diagnosis without a CONSULT-III. Refer to <u>WT-12</u>. <u>"Self-Diagnosis (Without CONSULT-III)"</u>. The tire pressure warning check connector (1) is located behind the lower portion of the instrument panel LH.



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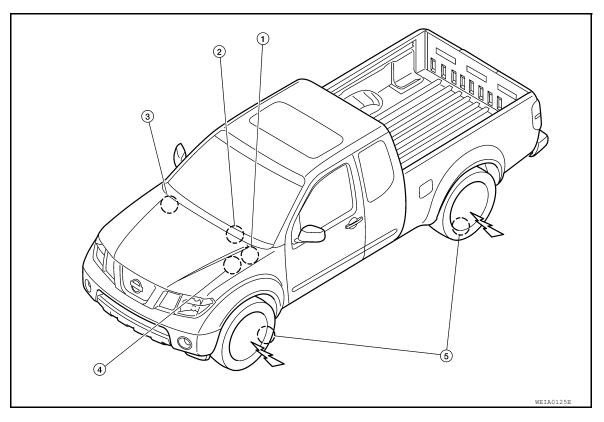
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System Component

INFOID:0000000006252200



- 1. BCM M18, M20
- 4. Tire pressure warning check connector M123
- 2. Combination meter M24
 - Transmitters
- B. Remote keyless entry receiver M120

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

CONSULT-III Function (BCM - COMMON ITEM)

INFOID:0000000006780448

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APPLICATION ITEM

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

Direct Diagnostic Mode	Description
Ecu Identification	The BCM part number is displayed.
Self Diagnostic Result	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	 The vehicle specification can be read and saved. The vehicle specification can be written when replacing BCM.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

SYSTEM APPLICATION

BCM can perform the following functions.

		Direct Diagnostic Mode						
System	Sub System	Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Door lock	DOOR LOCK		×	×	×	×		
Rear window defogger	REAR DEFOGGER			×	×			
Warning chime	BUZZER			×	×			
Interior room lamp timer	INT LAMP			×	×	×		
Remote keyless entry system	MULTI REMOTE ENT			×	×	×		
Exterior lamp	HEAD LAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×			
Air conditioner	AIR CONDITIONER			×				
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×	×	×			
Interior room lamp battery saver	BATTERY SAVER			×	×	×		
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×	×	×		
Signal buffer system	SIGNAL BUFFER			×	×			
TPMS	AIR PRESSURE MONITOR		×	×	×	×		
Panic alarm system	PANIC ALARM				×			

CONSULT-III Function (BCM - AIR PRESSURE MONITOR)

INFOID:0000000006780449

SELF DIAGNOSTIC RESULT

Revision: March 2012 WT-11 2011 Frontier

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

NOTE:

Before performing Self Diagnostic Result, be sure to register the ID, or else the actual malfunction may be different from that displayed on CONSULT-III.

Refer to BCS-43, "DTC Index".

DATA MONITOR

Monitor Item	Condition	Specification	
VEHICLE SPEED	Drive vehicle.	Vehicle speed (km/h or mph).	
AIR PRESS FL	Drive vehicle for a few minutes.		
AIR PRESS FR	or	T	
AIR PRESS RR	Ignition switch ON and activation tool is trans- - itim a still transfer of the st	Tire pressure (kPa, kg/cm ² or psi).	
AIR PRESS RL	mitting activation signals.		
ID REGST FL1			
ID REGST FR1	locitica socitale ON	Registration ID: Green. No registration: Red.	
ID REGST RR1	Ignition switch ON.		
ID REGST RL1			
WARNING LAMP	Ignition switch ON.	Low tire pressure warning lamp on: ON. Low tire pressure warning lamp off: OFF.	
BUZZER	Ignition switch ON.	Buzzer in combination meter on: ON. Buzzer in combination meter off: OFF.	

ACTIVE TEST

Test Item	Description
WARNING LAMP	This test is able to check tire pressure warning lamp operation [Off/On].
ID REGIST WARNING	This test is able to check ID regist warning chime operation [Off/On].
FLAT TIRE WARNING	This test is able to check flat tire warning chime operation [Off/On].
HORN	This test is able to check horn operation [On].
FLASHER	This test is able to check turn signal lamp operation [Off/LH/RH].

WORK SUPPORT

Support Item	Description
ID REGIST	Refer to WT-6, "ID Registration Procedure".
ID READ	The registered ID number is displayed.

Self-Diagnosis (Without CONSULT-III)

INFOID:0000000006252202

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

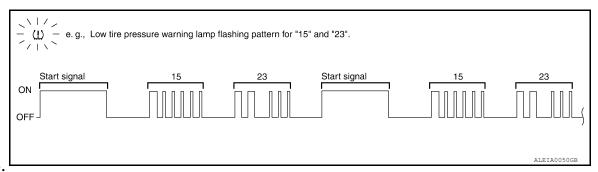
- · Activate and display TPMS transmitter IDs
- · Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

SELF DIAGNOSTIC PROCEDURE (WITHOUT CONSULT-III)

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

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >



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	Flash Code Malfunction part	
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)	<u>WT-14</u>
31 32 33 34	Transmitter checksum error (FL) Transmitter checksum error (FR) Transmitter checksum error (RR) Transmitter checksum error (RL)	<u>WT-16</u>
35 36 37 38	Transmitter pressure data error (FL) Transmitter pressure data error (FR) Transmitter pressure data error (RR) Transmitter pressure data error (RL)	<u>WT-18</u>
41 42 43 44	Transmitter function code error (FL) Transmitter function code error (FR) Transmitter function code error (RR) Transmitter function code error (RL)	<u>WT-16</u>
45 46 47 48	Transmitter battery voltage low (FL) Transmitter battery voltage low (FR) Transmitter battery voltage low (RR) Transmitter battery voltage low (RL)	<u>WT-16</u>
52	Vehicle speed signal	<u>WT-20</u>
54	Vehicle ignition signal	<u>WT-21</u>

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C1708 - C1711 DATA FROM TRANSMITTER NOT BEING RECEIVED

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

C1708 - C1711 DATA FROM TRANSMITTER NOT BEING RECEIVED

Description INFOID:000000006252203

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

DTC Logic

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- · Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

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.
- 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

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

INFOID:0000000006252205

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

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

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.

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C1708 - C1711 DATA FROM TRANSMITTER NOT BEING RECEIVED

< DTC/CIRCUIT DIAGNOSIS > >> Replace BCM, then GO TO 3. Refer to BCS-51, "Removal and Installation". NO 3.PERFORM ID REGISTRATION Α Carry out ID registration of all transmitters. Refer to WT-6, "ID Registration Procedure". Is there a tire that cannot register ID? В YES >> Replace malfunctioning transmitter, then GO TO 5. Refer to WT-49, "Transmitter (Pressure Sen-<u>sor)"</u>. NO >> GO TO 4 4. DRIVE VEHICLE Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping. 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? WT YES >> Inspection End. NO >> GO TO 5 5.ID REGISTRATION AND VEHICLE DRIVING Carry out ID registration of all transmitters. 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. Н NO >> Proceed to the inspection applicable to DTC. Special Repair Requirement INFOID:0000000006252206 Perform preliminary check. Refer to WT-5, "Preliminary Check". K L Ν

WT-15 Revision: March 2012 2011 Frontier

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

< DTC/CIRCUIT DIAGNOSIS >

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

Description INFOID:0000000062522207

One or more transmitters are malfunctioning internally.

DTC Logic

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- · Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

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

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

INFOID:0000000006252209

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

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

Revision: March 2012 WT-16 2011 Frontier

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

< DTC/CIRCUIT DIAGNOSIS >

- 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.

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>> GO TO 2 2.REPLACE TRANSMITTER

- 1. Check low tire pressure warning lamp again for flashing, replace malfunctioning transmitter. Refer to <u>WT-49</u>, "Transmitter (Pressure Sensor)".
 - C

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".

3. DRIVE VEHICLE

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- 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.

INFOID:0000000006780443

Special Repair Requirement

Perform preliminary check. Refer to WT-5, "Preliminary Check".

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C1716 - C1719 TRANSMITTER PRESSURE MALFUNCTION

< DTC/CIRCUIT DIAGNOSIS >

C1716 - C1719 TRANSMITTER PRESSURE MALFUNCTION

Description INFOID:0000000062522211

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

DTC Logic

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- · Register TPMS transmitter IDs

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

${f 1}$.ID REGISTRATION AND VEHICLE DRIVING

- Carry out ID registration of all transmitters.
- 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.

<u>Does DATA MONITOR ITEM display tire pressure as normal without any warning lamp?</u>

YES >> Inspection End.

NO >> Refer to WT-18, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006252213

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- · Activate and display TPMS transmitter IDs
- · Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

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-51, "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

- Carry out ID registration of all transmitters. Refer to <u>WT-6, "ID Registration Procedure"</u>.
- Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping.
- 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?

C1716 - C1719 TRANSMITTER PRESSURE MALFUNCTION

< DTC/CIRCUIT DIAGNOSIS >

YES >> Replace transmitter. Refer to <u>WT-49, "Transmitter (Pressure Sensor)"</u>. GO TO 3. >> 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

Perform preliminary check. Refer to WT-5, "Preliminary Check".

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C1729 VEHICLE SPEED SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

C1729 VEHICLE SPEED SIGNAL

Description INFOID:000000006252215

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

DTC Logic

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- · Register TPMS transmitter IDs

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-20, "Diagnosis Procedure".

NO >> Inspection end.

Diagnosis Procedure

INFOID:0000000006252217

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

MALFUNCTION CODE NO. 52 (DTC C1729)

1. CHECK SELF-DIAGNOSTIC RESULTS

- On SELECT DIAG MODE, select the SELF-DIAG RESULT screen.
- 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. Refer to <u>LAN-14</u>, "Trouble <u>Diagnosis</u> <u>Flow Chart"</u>.

NO >> Check combination meter. Refer to MWI-27, "CONSULT-III Function (METER/M&A)".

Special Repair Requirement

INFOID:0000000006780445

Perform preliminary check. Refer to WT-5, "Preliminary Check".

C1735 IGNITION SIGNAL

Description INFOID:0000000006252219

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

DTC Logic INFOID:0000000006252220

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

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

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

Is C1735 displayed in the self-diagnosis display?

>> Refer to WT-21, "Diagnosis Procedure". YES

NO >> Inspection End.

Diagnosis Procedure

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- · Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

MALFUNCTION CODE NO. 54 (DTC C1735)

1.CAN IGNITION SIGNAL

Check BCM IGN RLY signal with CONSULT-III. Refer to WT-23, "Reference Value".

Are the inspection results normal with the ignition switch ON?

YES >> GO TO 2.

NO >> Check CAN system. Refer to LAN-14, "Trouble Diagnosis Flow Chart".

2.BCM POWER SUPPLY

Check BCM power supply (ignition ON). Refer to BCS-26, "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.

>> Replace BCM. Refer to BCS-51, "Removal and Installation". NO

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C1735 IGNITION SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

Special Repair Requirement

INFOID:0000000006780446

Perform preliminary check. Refer to WT-5, "Preliminary Check".

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< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs
- Test remote keyless entry keyfob relative signal strength

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
ACC ON SW	Ignition switch OFF or ON	Off
ACC ON SW	Ignition switch ACC	On
AIR COND SW	A/C switch OFF	Off
AIR COND SW	A/C switch ON	On
AIR PRESS FL	Front left tire air pressure value	kPa, kg/cm², psi
AIR PRESS FR	Front right tire air pressure value	kPa, kg/cm², psi
AIR PRESS RL	Rear left tire air pressure value	kPa, kg/cm², psi
AIR PRESS RR	Rear right tire air pressure value	kPa, kg/cm², psi
BRAKE SW	Brake pedal released	Off
BRAKE SW	Brake pedal applied	On
BUCKLE SW	Seat belt buckle unfastened	Off
BUCKLE SW	Seat belt buckle fastened	On
BUZZER	Buzzer in combination meter OFF	Off
DUZZER	Buzzer in combination meter ON	On
CARGO LAMP SW	Cargo lamp switch OFF	Off
CARGO LAWF 3W	Cargo lamp switch ON	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
CDL LOCK SW	Press door lock/unlock switch to the LOCK side	On
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
CDL UNLOCK 3W	Press door lock/unlock switch to the UNLOCK side	On
DOOR SW-AS	Front door RH closed	Off
DOON SW-AS	Front door RH opened	On
DOOR SW-DR	Front door LH closed	Off
DOOK SW-DK	Front door LH opened	On
DOOR SW-RL	Rear door LH closed	Off
DOOK OW-IVE	Rear door LH opened	On
DOOR SW-RR	Rear door RH closed	Off
DOOK GW-KK	Rear door RH opened	On
FAN ON SIG	Blower motor fan switch OFF	Off
I AN ON SIG	Blower motor fan switch ON	On

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Monitor Item	Condition	Value/Status
FR FOG SW	Front fog lamp switch OFF	Off
FR FOG SW	Front fog lamp switch ON	On
FR WASHER SW	Front washer switch OFF	Off
FR WASHER SW	Front washer switch ON	On
ED WIDED LOW	Front wiper switch OFF	Off
FR WIPER LOW	Front wiper switch LO	On
ED WIDED HI	Front wiper switch OFF	Off
FR WIPER HI	Front wiper switch HI	On
FR WIPER INT	Front wiper switch OFF	Off
FR WIPER INT	Front wiper switch INT	On
FR WIPER STOP	Any position other than front wiper stop position	Off
FR WIPER STOP	Front wiper stop position	On
HAZARD SW	When hazard switch is not pressed	Off
HAZARD SW	When hazard switch is pressed	On
LICAD LAMD CV// 4	Headlamp switch OFF	Off
HEAD LAMP SW 1	Headlamp switch 1st	On
LIEAD LAMB OW	Headlamp switch OFF	Off
HEAD LAMP SW 2	Headlamp switch 1st	On
LU DEAM OW	High beam switch OFF	Off
HI BEAM SW	High beam switch HI	On
ID DECOT EL 4	ID registration of front left tire incomplete	YET
ID REGST FL1	ID registration of front left tire complete	DONE
ID REGST FR1	ID registration of front right tire incomplete	YET
ID REGOT FRI	ID registration of front right tire complete	DONE
ID REGST RL1	ID registration of rear left tire incomplete	YET
ID REGGI KLI	ID registration of rear left tire complete	DONE
ID REGST RR1	ID registration of rear right tire incomplete	YET
ID REGGI KKI	ID registration of rear right tire complete	DONE
IGN ON SW	Ignition switch OFF or ACC	Off
IGN ON SW	Ignition switch ON	On
IGN SW CAN	Ignition switch OFF or ACC	Off
IGN SW CAN	Ignition switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
KEY CYL LK-SW	Door key cylinder LOCK position	Off
RET CTL LR-SW	Door key cylinder other than LOCK position	On
KEN CAL TIM C/M	Door key cylinder UNLOCK position	Off
KEY CYL UN-SW	Door key cylinder other than UNLOCK position	On
KEY ON SW	Mechanical key is removed from key cylinder	Off
NET ON SW	Mechanical key is inserted to key cylinder	On
KEALESS I OUR	LOCK button of key fob is not pressed	Off
KEYLESS LOCK	LOCK button of key fob is pressed	On
KENI EGG DANIO	PANIC button of key fob is not pressed	Off
KEYLESS PANIC	PANIC button of key fob is pressed	On

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
KEYLESS UNLOCK	UNLOCK button of key fob is not pressed	Off
KETLESS UNLOCK	UNLOCK button of key fob is pressed	On
LIGHT SW 1ST	Lighting switch OFF	Off
LIGHT SW 151	Lighting switch 1st	On
OIL PRESS SW	Ignition switch OFF or ACC Engine running	Off
	Ignition switch ON	On
PASSING SW	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
REAR DEF SW	Rear window defogger switch OFF	Off
REAR DEF SW	Rear window defogger switch ON	On
TURN SIGNAL L	Turn signal switch OFF	Off
TURN SIGNAL L	Turn signal switch LH	On
TURN SIGNAL R	Turn signal switch OFF	Off
TURN SIGNAL R	Turn signal switch RH	On
VEHICLE SPEED	While driving	Equivalent to speedometer reading
WARNING LAMP	Low tire pressure warning lamp in combination meter OFF	Off
WARNING LAWF	Low tire pressure warning lamp in combination meter ON	On

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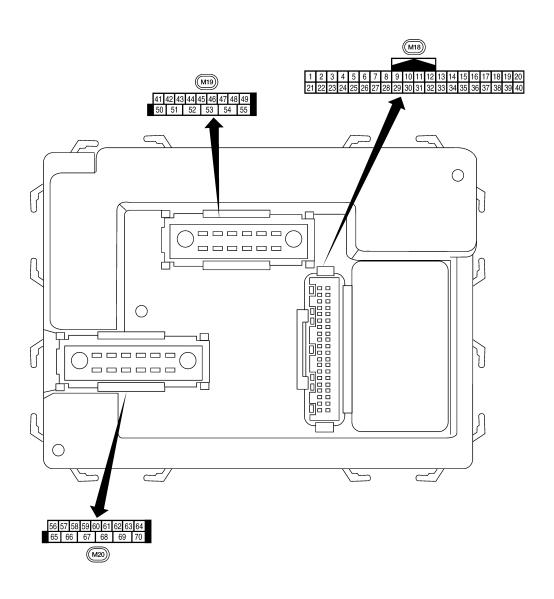
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Terminal Layout



LIIA2443E

Physical Values

	Wire		Signal		Measuring condition	Reference value or waveform
Terminal	color	Item	input/ output	Ignition switch	Operation or condition	(Approx.)
1	BR	Ignition keyhole illumi-	Output	OFF	Door is locked (SW OFF)	Battery voltage
'	БК	nation	Output	OFF	Door is unlocked (SW ON)	0V
2	Р	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 + 5ms SKIA5291E
3	SB	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 4 2 0 + 5 ms skia5292E
4	V	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 2 0 ++5ms skta5291E
5	L	Combination switch input 2				(V)
6	R	Combination switch input 1	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	5ms SKIA5292E
		Front door lock as-			ON (open, 2nd turn)	Momentary 1.5V
7	GR	sembly LH (key cylin- der switch) unlock	Input	OFF	OFF (closed)	0V
8	SB	Front door lock as- sembly LH (key cylin- der switch) lock	Input	OFF.	On (open) OFF (closed)	Momentary 1.5V 0V
•		Rear window defogger	ı	ON:	Rear window defogger switch ON	0V
9	Y	switch	Input	ON	Rear window defogger switch OFF	5V
11	G/B	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
		Front door switch RH (All)			ON (open)	0V
12	LG	Rear door switch up- per RH (King Cab) Rear door switch low- er RH (King Cab)	Input	Input OFF	OFF (closed)	Battery voltage

	\\/:==		Signal		Measuring condition	Deference value as waveform			
Terminal	Wire color	Item	input/ output	Ignition switch	Operation or condition	Reference value or waveform (Approx.)			
13	L	Rear door switch RH	Input	OFF -	ON (open)	0V			
13	L	(Crew Cab)	iliput		OFF (closed)	Battery voltage			
15	W	Tire pressure warning check connector	Input	OFF	_	5V			
18	BR	Remote keyless entry receiver (Ground)	Output	OFF	<u> </u>	0V			
19	V	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	(V) 6 4 2 0 			
20		Remote keyless entry	Input	OFF	Stand-by (keyfob buttons released)	(V) 6 4 2 0 + 50 ms			
20	G	receiver signal (Signal)							
21	GR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF \rightarrow ON)	Just after turning ignition switch ON: Pointer of tester should move.			
23	G	Security indicator lamp	Output	OFF	Goes OFF \rightarrow 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.			
27	W	Compressor ON sig-	Input	ON	A/C switch OFF	5V			
	٧٧	nal	прис	CIN	A/C switch ON	0V			
28	28 R	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage			
	1	From blower monitor	input	ON	Front blower motor ON	0V			
29	G	Hazard switch	Input	OFF	ON	0V			
					OFF	5V			
31	GR	Cargo lamp switch	Input	OFF	ON	0V			
31 GR	Cargo famp switch	прис		OFF	Battery voltage				

	Wire		Signal		Measuring condition	Reference value or waveform
Terminal	color	Item	input/ output	Ignition switch	Operation or condition	(Approx.)
32	0	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 + 5ms SKIA5291E
33	GR	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 **5ms SKIA5292E
34	G	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 ***5ms
35	BR	Combination switch output 2				(V)
36	LG	Combination switch output 1	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	6 4 2 0
37	В	Key switch	Input	OFF	Key inserted	Battery voltage
					Key removed	0V
38	W/R	Ignition switch (ON)	Input	ON	_	Battery voltage
39 40	L P	CAN-H CAN-L		_		
+∪	Г	OAIN-L	<u> </u>	_	ON (lock)	
45	V	Lock switch	Input	OFF	OFF	Battery voltage
				~=-	ON (unlock)	OV
46	LG	Unlock switch	Input	OFF	OFF	Battery voltage
		Front door switch LH (All)			ON (open)	0V
47 GR	Rear door switch up- per LH (King Cab)	Input	OFF		Battery voltage	
		Rear door switch low- er LH (King Cab)			OFF (closed)	Battery voltage
48	Р	Rear door switch LH	Innut	OFF	ON (open)	0V
+∪	F	(Crew Cab)	Input	OI F	OFF (closed)	Battery voltage
50	Р	Cargo lamp	Output	OFF	Any door open (ON)	0V
30 P	g			All doors closed (OFF)	Battery voltage	

Section Color New Color Colo		Wire		Signal		Measuring condition	Reference value or waveform
51 O Trailer turn signal (left) Output ON Turn right ON 52 LG Trailer turn signal (left) Output ON Turn left ON 53 R/Y Battery saver output Output ON ON OPE OFF (neutral) 54 Output ON Turn left ON 55 One Description over supply Input ON ON ON (neutral) 56 R/Y Battery power supply Input ON ON OPE OFF (neutral) 57 R/Y Battery power supply Input ON Turn left ON 58 W Optical sensor Input ON ON OPE OFF (neutral) 59 GR Front door lock assembly LH (unlock) 59 GR Front signal (left) Output ON Turn left ON 60 LG Turn signal (left) Output ON Turn left ON 61 GR Interior room/map Output OFF OPE	Terminal		Item	input/ output		Operation or condition	
Section Company Comp	51	Ο		Output	ON	Turn right ON	15 10 5 0 500 ms
Section of Part Section Sectio	52	LG	Trailer turn signal (left)	Output	ON	Turn left ON	15 10 5 0 500 ms
State Stat	56	R/Y	Battery saver output	Output	OFF		0V
Section of the content of the cont					ON	_	Battery voltage
Section of the latter of the	57	R/Y	Battery power supply	Input	_	_	Battery voltage
Section Sect	58	50 W	Ontical consor	Input	ON		3.1V or more
Sembly LH (unlock) GR Sembly LH (unlock) Output OFF ON (unlock) Battery voltage ON (unlock) ON (open) OFF (closed) Battery voltage OFF (neutral) ON (unlock) ON (unlock) ON (unlock) ON (open) OFF (closed) Battery voltage OFF (neutral) ON (unlock) ON (unlock) ON (open) OFF (closed) Battery voltage OFF (neutral) ON (unlock) ON (unlock) ON (unlock) Battery voltage	30	**	Optical scrisor				0.6V or less
60 LG Turn signal (left) Output ON Turn left ON 61 G Turn signal (right) Output ON Turn right ON 63 BR Interior room/map lamp 65 V All door lock actuators (lock) 66 L E Front door lock actuators or RH, rear door lock actuators LH/RH (unlock) 67 Turn signal (right) 68 Output OFF Any door switch OFF (closed) 69 OFF (neutral) 60 ON (unlock) 60 ON (unlock) 61 OV 62 ON (unlock) 63 Battery voltage 64 OFF (neutral) 65 OV 66 ON (unlock) 67 ON (unlock) 68 Battery voltage 68 OFF (neutral) 69 OFF (neutral) 60 ON (unlock) 60 ON (unlock) 60 ON (unlock) 60 ON (unlock) 61 ON (unlock) 62 Battery voltage 63 OFF (neutral) 64 ON (unlock) 65 ON (unlock) 66 ON (unlock) 67 ON (unlock) 68 Battery voltage	59	GR		Output	OFF	OFF (neutral)	0V
60 LG Turn signal (left) Output ON Turn left ON Turn right ON Turn right ON Turn right ON Turn right ON OFF (closed) Battery voltage Front door lock actuators (lock) COFF (neutral) OV ON (unlock) ON (unlock) ON (unlock) ON (unlock) DON (unlock) ON (unlock)	00	0.1	sembly LH (unlock)	Catput	0	ON (unlock)	Battery voltage
61 G Turn signal (right) Output ON Turn right ON 63 BR Interior room/map lamp 64 Output OFF 65 V All door lock actuators (lock) 65 L Front door lock actuators actuators LH/RH (unlock) 66 COFF (neutral) 67 OFF (neutral) 68 OFF (neutral) 69 OFF (neutral) 60 OFF (neutral) 60 OFF (neutral) 60 OFF (neutral) 61 OV 62 OFF (neutral) 63 OFF (neutral) 64 OFF (neutral) 65 ON (unlock) 66 OFF (neutral) 67 ON (unlock) 68 OFF (neutral) 69 OFF (neutral) 60 OFF (neutral) 60 ON (unlock) 61 ON (unlock)	60	LG	Turn signal (left)	Output	ON	Turn left ON	15 10 50 0
BR Interior room/map lamp Output OFF Any door switch OFF (closed) OFF (closed) OFF (closed) OFF (closed) OFF (closed) OV OFF (closed) OV OFF (closed) OV OFF (neutral) OV ON (lock) Battery voltage OFF (neutral) OV ON (lock) OFF (neutral) OV ON (lock) Battery voltage OFF (neutral) OV ON (unlock) OFF (neutral) OV ON (unlock)	61	G	Turn signal (right)	Output	ON	Turn right ON	15 10 5 0 500 ms
65 V (lock) Output OFF ON (lock) Battery voltage 66 L Front door lock actuators LH/RH (unlock) Output OFF ON (unlock) Battery voltage OFF (neutral) OV ON (unlock) Battery voltage	63	BR		Output	OFF	7 my door	0V
66 L tor RH, rear door lock actuators LH/RH (unlock) Output OFF ON (unlock) Battery voltage	65	V		Output	OFF		
66 L tor RH, rear door lock actuators LH/RH (unlock) Output OFF ON (unlock) Battery voltage			Front door lock actua-				
	66	L	actuators LH/RH (un-	Output	OFF		Battery voltage
	67	В	Ground	Input	ON		0V

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< ECU DIAGNOSIS INFORMATION >

	Wire		Signal		Measuring condition	Reference value or waveform		
Terminal	color	Item	input/ output	Ignition switch	Operation or condition	(Approx.)		
					Ignition switch ON	Battery voltage		
					Within 45 seconds after ignition switch OFF	Battery voltage		
68 ¹	0	Power window power supply (RAP)	Output	_	More than 45 seconds after ignition switch OFF	0V		
					When front door LH or RH is open or power window timer operates	0V		
					Ignition switch ON	Battery voltage		
					Within 45 seconds after ignition switch OFF	Battery voltage		
68 ²	SB	Power window power supply (RAP)	Output	_	More than 45 seconds after ignition switch OFF	0V		
					When front door LH or RH is open or power window timer operates	0V		
69	Р	Power window power supply (BAT)	Output	OFF	_	Battery voltage		
70	W	Battery power supply	Input	OFF	_	Battery voltage		

^{1:} King cab (with power door lock system)

Self-Diagnosis (With CONSULT-III)

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- · Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

FUNCTION

Self-Diagnostic Results Mode

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 <u>WT-8</u> . "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.	<u>WT-14</u>
[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.	<u>WT-16</u>
[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.	<u>WT-18</u>

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^{2:} Crew cab (with power door lock system)

< ECU DIAGNOSIS INFORMATION >

Diagnostic item	Diagnostic item is detected when ···	Reference page
[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.	<u>WT-16</u>
[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.	<u>WT-20</u>
IGN_CIRCUIT_OPEN [C1735]	Vehicle ignition signal is in error.	<u>WT-21</u>

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:0000000006780447

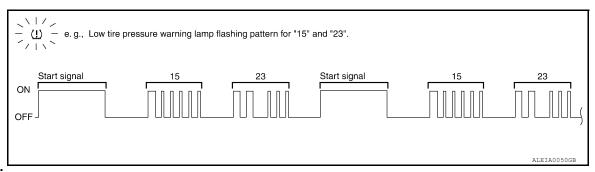
NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

SELF DIAGNOSTIC PROCEDURE (WITHOUT CONSULT-III)

- Turn ignition switch ON.
- 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)	<u>WT-14</u>
31 32 33 34	Transmitter checksum error (FL) Transmitter checksum error (FR) Transmitter checksum error (RR) Transmitter checksum error (RL)	<u>WT-16</u>

< ECU DIAGNOSIS INFORMATION >

Flash Code	Malfunction part	Reference page
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)	<u>WT-16</u>
52	Vehicle speed signal	<u>WT-20</u>
54	Vehicle ignition signal	<u>WT-21</u>

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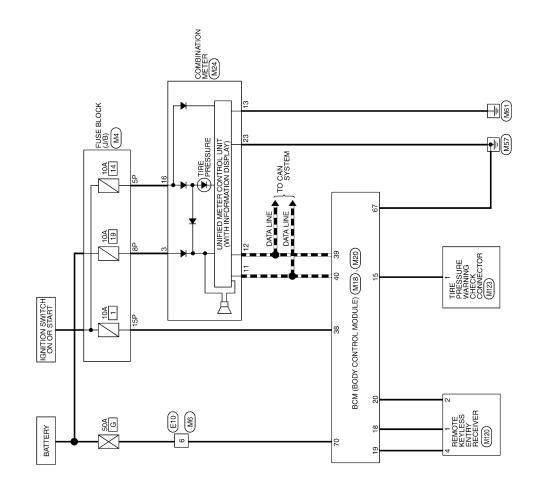
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WIRING DIAGRAM

TIRE PRESSURE MONITORING SYSTEM

Wiring Diagram



TIRE PRESSURE MONITORING SYSTEM

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Connector Name | BCM (BODY CONTROL | MODULE)

M18

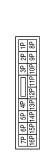
Connector No.

WHITE

Connector Color

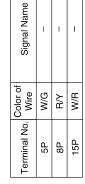
TIRE PRESSURE MONITORING SYSTEM CONNECTORS

M6	WIRE TO WIRE	WHITE	
Connector No.	Connector Name	Connector Color \	
	FUSE BLOCK (J/B)	IE	
M4	FUS	onnector Color WHITE	



3 2 1





Signal Name

Color of Wire ≥

Terminal No.

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 14 15 16 17 18 14 15 18 17 18 14 15 18 17 18 14 15 18 17 18 14 15 18 17 18 14 15 18 17 18 18 18 18 18 18	19 20 39 40								
S	12 13 14 15 16 17 18 32 33 34 35 36 37 38		TMPS MODE TRIGGER SW	KEYLESS & AUTO LIGHT SENSOR GND	KEYLESS TUNER POWER SUPPLY OUTPUT	KEYLESS TUNER SIGNAL	IGN SW	CAN-H	CAN-L
Minal No. 20 20 38 8 38 39 8 40 40 40 40 40 40 40 40 40 40 40 40 40	6 7 8 26 27 28	Color of Wire	×	BR	>	g	W/R	٦	Ь
	S. 23 4 5 23 4 5 2 25 25 25 25 25 25 25 25 25 25 25 25	Terminal No.	15	18	19	20	38	39	40

Signal Name	BATTERY	CAN-L	CAN-H	GROUND	RUN START
Color of Wire	R/Υ	۵	٦	GR	W/G
Terminal No.	3	=	12	13	16

POWER GND

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<u>3</u>	Connector No.	မ	ō	ž		-	MZ4	4										_
ŭ	Connector Name COMBINATION METER	ec	ō	ž	Ĕ	0	8	⅀	冒	≱	≌	Z	≥	١Ē	띮			
ŭ	Connector Color WHITE	ec.	ğ	ပြ	ē	-	∣≶	≒	ш									
TE \	H.S.	(i							I IN	l I/	l 17							
2	20 19 18 17 16 15 14 13 12 11 10 9	28	17	16	15	4	13	12	Ξ	10	6	8	7	9	r0	4	6	2
40	40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24	88	37	36	35	34	g	32	31	30	29	28	27	26	25	24	23 22	22

	ပိ	E	6	Ö	ž	ΙĔ	d)	18	Ĭ	Connector Name COMBINATION ME	I'≰	≌	Z	Ĭ	Lin
	ပိ	딭	6 E	ğ	Connector Color	<u>ē</u>		WHITE	≒	ш					
		H.S.	(6							I IN	l I/	l 17			
	20	19	18	17	19 18 17 16 15 14 13 12 11	15	14	13	12	=	10	6	8	7	6
	40	40 39 38 37 36	38	37	36	35 34 33 32 31	뚕	æ	32	31	೫	83	30 29 28 27 26	27	N
_									11	1	1	1	1	1	П

Connector No.	o. M20	0
Connector Name		BCM (BODY CONTROL MODULE)
Connector Color	olor BLACK	4CK
H.S.	56 57 58 59 60 61 65 66 67 68	65 56 67 68 69 70
Terminal No.	Color of Wire	Signal Name
29	В	GND (POWER)
70	8	BAT (F/L)

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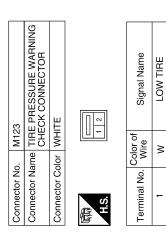
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Connector No.	. E10	
Connector Name WIRE TO WIRE	me WIR	E TO WIRE
Connector Color WHITE	lor WHI	TE
间 H.S.	- 4	2 S S S
Terminal No.	Color of Wire	Signal Name
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Connector No.	o. M120	20
Connector Name		RECEIVER
Connector Color WHITE	olor WH	ПЕ
H.S.		2 3 4
Terminal No.	Color of Wire	Signal Name
-	BR	GND
2	9	SIGNAL
4	>	POWER

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TPMS

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

TPMS

Symptom Table

INFOID-0000000006252220	

Symptom	Reference
Low tire pressure warning lamp does not come on when ignition switch is turned ON.	<u>WT-38</u>
Low tire pressure warning lamp stays on when ignition switch is turned ON.	<u>WT-39</u>
Low tire pressure warning lamp flashes when ignition switch is turned ON.	<u>WT-40</u>
Hazard warning lamps flash when ignition switch is turned ON.	<u>WT-41</u>
ID registration cannot be completed.	<u>WT-42</u>
NVH troubleshooting chart.	<u>WT-43</u>

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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

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- · Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

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.

NO >> GO TO 2

2.CHECK COMBINATION METER

Check combination meter operation. Refer to MWI-27, "CONSULT-III Function (METER/M&A)".

Is the inspection result normal?

YES >> GO TO 3

NO >> Replace combination meter. Refer to MWI-90, "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-51, "Removal and Installation".

NO >> Check combination meter operation.

LOW TIRE PRESSURE WARNING LAMP STAYS ON

< SYMPTOM DIAGNOSIS > LOW TIRE PRESSURE WARNING LAMP STAYS ON Α Low Tire Pressure Warning Lamp Stays On When Ignition Switch Is Turned On В DIAGNOSTIC PROCEDURE 1.BCM CONNECTORS Turn ignition switch OFF. Disconnect BCM harness connectors. Check terminals for damage or loose connections. D Is the inspection result normal? YES >> GO TO 2 NO >> Repair or replace damaged parts. WT 2.BCM POWER SUPPLY AND GROUND CIRCUITS Check BCM power supply and ground circuits. Refer to BCS-26, "Diagnosis Procedure". Is the inspection result normal? F YES >> Replace BCM. Refer to BCS-51, "Removal and Installation". NO >> Repair BCM circuits. Н K L M

Revision: March 2012 WT-39 2011 Frontier

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LOW TIRE PRESSURE WARNING LAMP BLINKS

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LOW TIRE PRESSURE WARNING LAMP BLINKS

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

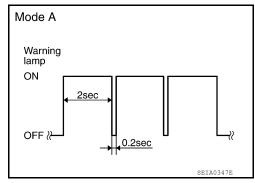
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Regarding Wiring Diagram information, refer to WT-34, "Wiring Diagram".

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".



DIAGNOSTIC PROCEDURE

1. CHECK BCM CONNECTORS

- 1. Turn ignition switch OFF.
- 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

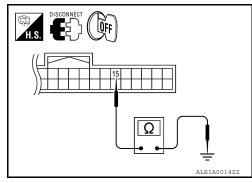
Check continuity between BCM harness connector M18 terminal 15 and ground.

Continuity should not exist.

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-51, "Removal and Installation"</u>.

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 DIAGNOSTIC PROCEDURE 1. CHECK BCM GROUND CIRCUIT Check BCM ground circuit. Refer to BCS-26, "Diagnosis Procedure". Is the inspection result normal? YES >> Replace BCM. Refer to BCS-51, "Removal and Installation". NO >> Repair BCM ground circuit.

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ID REGISTRATION CANNOT BE COMPLETED

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ID REGISTRATION CANNOT BE COMPLETED

ID Registration Cannot Be Completed

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NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- · Register TPMS transmitter IDs

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".

NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

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< SYMPTOM DIAGNOSIS >

NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

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

Reference page			<u>WT-46</u>	WT-47, "Adjustment"	WT-51	WT-47, "Adjustment"	I	F	<u>WT-51</u>	DLN-186, "NVH Troubleshooting Chart" (R180A), DLN-220, "NVH Troubleshooting Chart" (C200), DLN-255, "NVH Troubleshooting Chart" (M226)	ESU-5. "NVH Troubleshooting Chart",	RAX-5. "NVH Troubleshooting Chart", RSU-4, "NVH Troubleshooting Chart".	Refer to TIRES in this chart.	Refer to ROAD WHEEL in this chart.	BR-6, "NVH Troubleshooting Chart"	ST-5, "NVH Troubleshooting Chart"
Possible cause and SUSPECTED PARTS		Out-of-round	Imbalance	Incorrect tire pressure	Uneven tire wear	Deformation or damage	Non-uniformity	Incorrect tire size	FRONT AND REAR FINAL DRIVE	FRONT AXLE AND FRONT SUSPENSION	REAR AXLE AND REAR SUSPENSION	TIRES	ROAD WHEEL	BRAKE	STEERING	
		Noise	×	×	×	×	×	×		×	×	×	×		×	×
		Shake	×	×	×	×	×		×		×	×	×		×	×
	TIRES	Vibration			×				×		×	×	×			×
		Shimmy	×	×	×	×	×	×	×		×	×	×		×	×
		Shudder	×	×	×	×	×		×		×	×	×		×	×
Symptom		Poor quality ride or handling	×	×	×	×	×		×		×	×	×			
	ROAD WHEEL	Noise	×	×			×			×	×	×		×	×	×
		Shake	×	×			×				×	×		×	×	×
		Shimmy, shudder	×	×			×				×	×		×	×	×
		Poor quality ride or handling	×	×			×				×	×		×		

^{×:} Applicable

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PRECAUTIONS

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PRECAUTION

PRECAUTIONS

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

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

- 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.

PREPARATION

< PREPARATION >

PREPARATION

PREPARATION

Special Service Tool

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	Transmitter wake up operation ID registration procedure
— (J-50190) Signal Tech II	ALEIA0131ZZ	Activate and display TPMS transmitter IDs Display tire pressure reported by the TPMS transmitter Read TPMS DTCs Register TPMS transmitter IDs Test remote keyless entry keyfob relative signal strength

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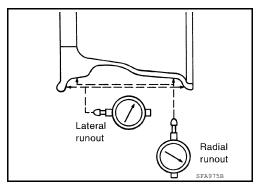
PERIODIC MAINTENANCE

WHEEL

Inspection INFOID:000000006252239

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 wheel and mount wheel on a tire balance machine.
- b. Set dial indicator as shown. Refer to WT-51, "Road Wheel".
- 3. Check front wheel bearings for looseness.
- 4. Check front suspension for looseness.



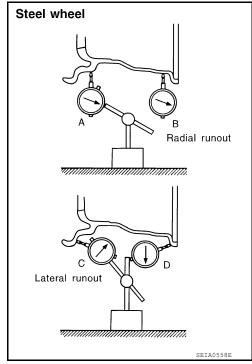
STEEL WHEEL

- 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 steel wheel and mount on a tire balance machine.
- b. Set two dial indicators as shown.
- Set each dial indicator to 0.
- d. Rotate wheel and check dial indicators at several points around the circumference of the wheel.
- e. Calculate runout at each point as shown.

f. Select maximum positive runout value and the maximum negative value.

Add the two values to determine total runout. In case a positive or negative value is not available, use the maximum value (negative or positive) for total runout. If the total runout value exceeds the limit, replace the steel wheel.

Wheel runout : Refer to WT-51, "Road Wheel".



WHEEL AND TIRE ASSEMBLY

< PERIODIC MAINTENANCE >

WHEEL AND TIRE ASSEMBLY

Adjustment INFOID:0000000006822380

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 to scratch the road wheel during removal.
- After removing double-faced adhesive tape, wipe clean all 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 balancer 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 imbalance value \times 5/3 = balance weight to be installed **Calculation example:**

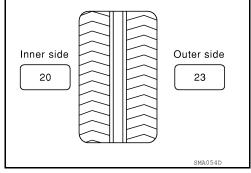
23 g (0.81 oz) \times 5/3 (1.67) = 38.33 g (1.35 oz) \Rightarrow 40 g (1.41 oz) balance weight (closer to calculated balance weight value)

NOTE:

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

Example:

 $37.4 \Rightarrow 35 \text{ g } (1.23 \text{ oz})$ $37.5 \Rightarrow 40 \text{ g } (1.41 \text{ oz})$



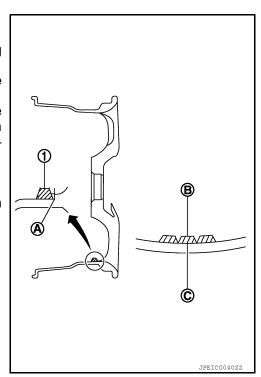
3. Install balance weight in the position shown.

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.



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WHEEL AND TIRE ASSEMBLY

< PERIODIC 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.

- 5. 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 weights.

- 7. Start balancer machine. Make sure that inner and outer residual imbalance values are 5 g (0.17 oz) each or below.
- 8. If either residual imbalance value exceeds 5 g (0.17 oz), repeat installation procedures.

Wheel balance	Dynamic (At flange)	Static (At flange)			
Maximum allowable imbalance	Refer to WT-51	, "Road Wheel".			

TIRE ROTATION

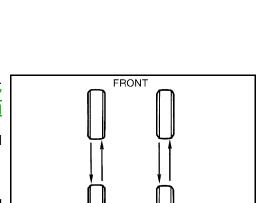
- Follow the maintenance schedule for tire rotation service intervals. Refer to MA-6, "FOR USA AND CANADA: General Maintenance" (United States and Canada), or MA-8, "FOR MEXICO: General Maintenance" (Mexico).
- When installing the wheel, tighten wheel nuts to the specified torque.

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 : 133 N·m (14 kg-m, 98 ft-lb) torque

• Perform the ID registration, after tire rotation. Refer to WT-6, "ID Registration Procedure".



4 wheels

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Adhesion weight

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Wheel balancer indication position (angle)

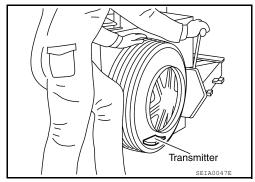
UNIT REMOVAL AND INSTALLATION

REMOVAL AND INSTALLATION

Transmitter (Pressure Sensor)

REMOVAL

- 1. Remove wheel and tire using power tool.
- 2. Deflate tire. Unscrew transmitter retaining nut and allow transmitter to fall into tire.
- 3. 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.



- 4. 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.
- 5. Lubricate tire well, and remove top side of tire. Reach inside the tire and remove the transmitter.

CAUTION:

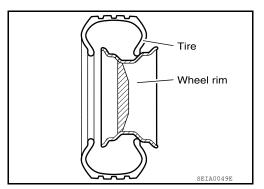
Do not use silicone lubricant. Use of silicone lubricant will deteriorate the tire and wheel.

6. Remove the second side of the tire as normal.

Transmitter Mounting head WEIA0046E

INSTALLATION

1. Place first side of tire onto rim.



2. Apply suitable silicone lubricant to new transmitter seal then install seal on transmitter.

CAUTION:

- Do not use silicone lubricant. Use of silicone lubricant will deteriorate the tire and wheel.
- Do not reuse seal.

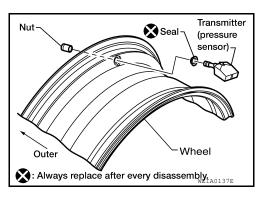
NOTE:

Always replace the seal after every disassembly.

3. Mount transmitter on wheel rim and tighten nut.

NOTE:

Make sure no burrs exist in the valve stem hole of the wheel.



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REMOVAL AND INSTALLATION

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

 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.

5. Lubricate tire well, and install second side of tire as normal. Ensure that tire does not rotate relative to rim.

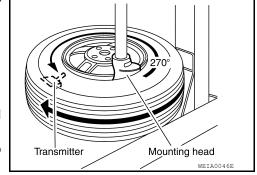
CAUTION:

Do not use silicone lubricant. Use of silicone lubricant will deteriorate the tire and wheel.

- 6. Inflate tire and balance the wheel and tire assembly. Refer to WT-47, "Adjustment".
- 7. Install wheel and tire assembly in appropriate wheel position on vehicle.



If replacing the transmitter, then transmitter wake up operation must be performed. Refer to <u>WT-5</u>, <u>"Transmitter Wake Up Operation"</u>.



SERVICE DATA AND SPECIFICATIONS (SDS)

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SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Road Wheel

Wheel type		Aluminum	Steel				
vvneei type		Aluminum	Inside	Outside			
Maximum radial	Lateral mm (in)	0.3 (0.012) or less	0.8 (0.031) or less	0.8 (0.031) or less			
runout limit	Radial mm (in)	0.3 (0.012) or less	0.6 (0.024) or less	0.6 (0.024) or less			
Maximum allowable	Dynamic (at rim flange)	Less than 5 g (0.18 oz) (per side)					
imbalance	Static (at rim flange)	Less than 10 g (0.35 oz)					

Tire (NFOID:000000006252244

Unit: kPa (kg/cm², psi)

Tire size	Air pressure						
Tile Size	Conventional tire	Spare tire					
P235/75R15	240 (2.4, 35)	240 (2.4, 35)					
P265/70R16	240 (2.4, 35)	240 (2.4, 35)					
P265/75R16	240 (2.4, 35)	240 (2.4, 35)					
P265/60R18	240 (2.4, 35)	240 (2.4, 35)					

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