SECTION WT
ROAD WHEELS & TIRES

CONTENTS

PRECAUTION

PRECAUTIONS

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

INFOID:0000000006749884

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.**

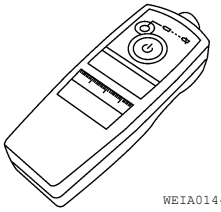
PREPARATION

PREPARATION

Special Service Tool

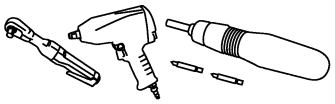
INFOID:0000000006749886

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

Commercial Service Tool

INFOID:0000000006749887

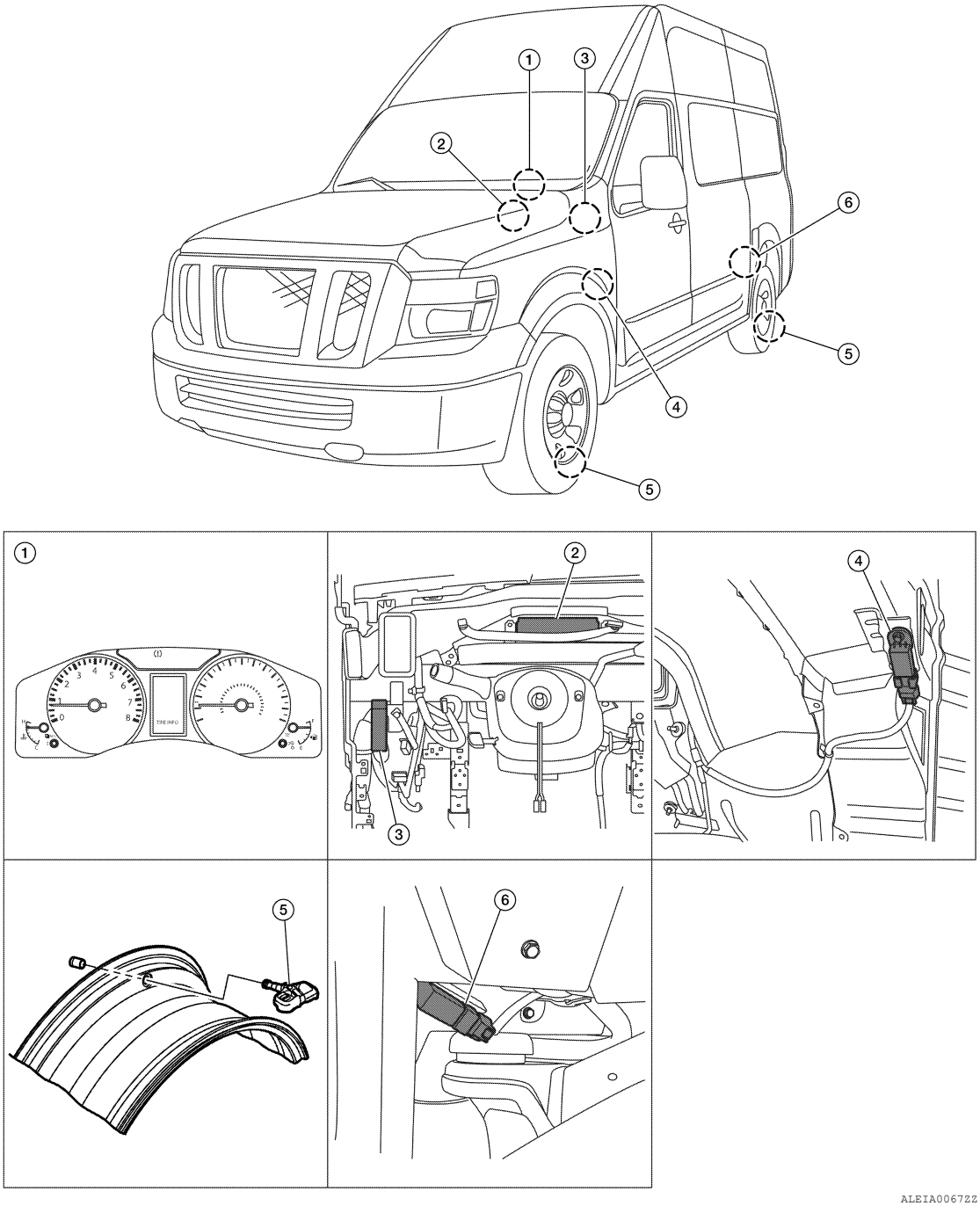
Tool name	Description
Power tool  PIIB1407E	Loosening nuts, screws and bolts.

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000006881090



1. Combination meter
2. BCM
3. Low tire pressure warning control unit
4. Tire pressure receiver front LH
   Tire pressure receiver front RH
5. Transmitter
6. Tire pressure receiver rear LH
   Tire pressure receiver rear RH

Component Description

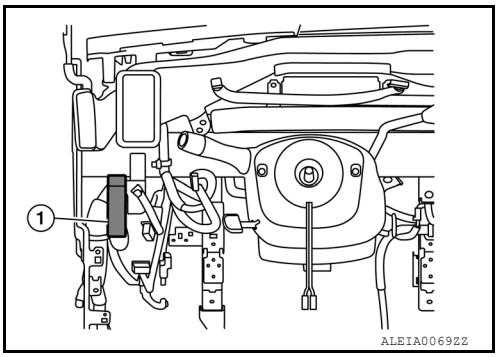
INFOID:0000000006881091

Component parts	Reference/Function
Transmitter	WT-6, "Transmitter"
Tire pressure receiver	WT-7, "Tire Pressure Receiver"
Low tire pressure warning control unit	WT-6, "Low Tire Pressure Warning Control Unit"
Low tire pressure warning light	WT-7, "Low Tire Pressure Warning Light"
BCM	BCS-6, "BODY CONTROL SYSTEM : System Description"
ABS actuator and electric unit (control unit)	BRC-12, "VDC/TCS/ABS : System Description"

Low Tire Pressure Warning Control Unit

INFOID:0000000006881092

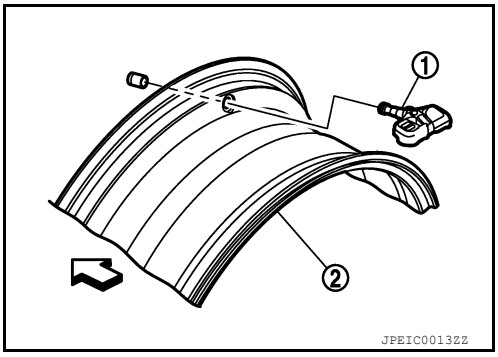
- The low tire pressure warning control unit (1) receives the tire pressure signal as an input from the tire pressure receiver. The tire pressure receiver receives the tire pressure signal from the transmitter in each wheel through a radio signal.
- The low tire pressure warning control unit uses CAN communication to Illuminate the low tire pressure warning light in the combination meter when low tire pressure or a system fault exists.
- The low tire pressure warning control unit has a self diagnosis function that allows it to detect system malfunctions.



Transmitter

INFOID:0000000006881093

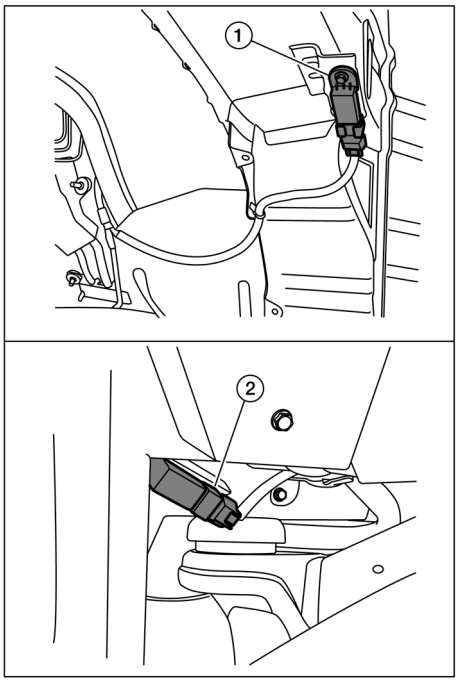
A transmitter (1) integrated with an air valve is installed in each wheel (2), and transmits the detected air pressure in the form of a radio signal to the tire pressure receivers.



Tire Pressure Receiver

INFOID:0000000006881094

The front tire pressure receiver (1) and rear tire pressure receiver (2) receive the air pressure through a radio signal from the transmitter at each wheel, and send the air pressure signal to the low tire pressure warning control unit.

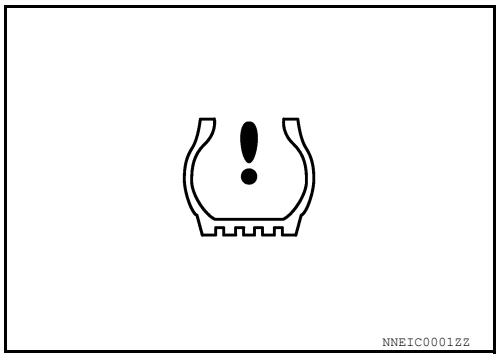


ALEIA0068ZZ

Low Tire Pressure Warning Light

INFOID:0000000006881095

The combination meter receives tire pressure status from the low tire pressure warning control unit using CAN communication. When a low tire pressure condition is sensed by the low tire pressure warning control unit, the combination meter low tire pressure warning light is activated.
A “CHECK TIRE” pressure warning will also be displayed in the vehicle information display. Refer to the Owner’s Manual for additional information.



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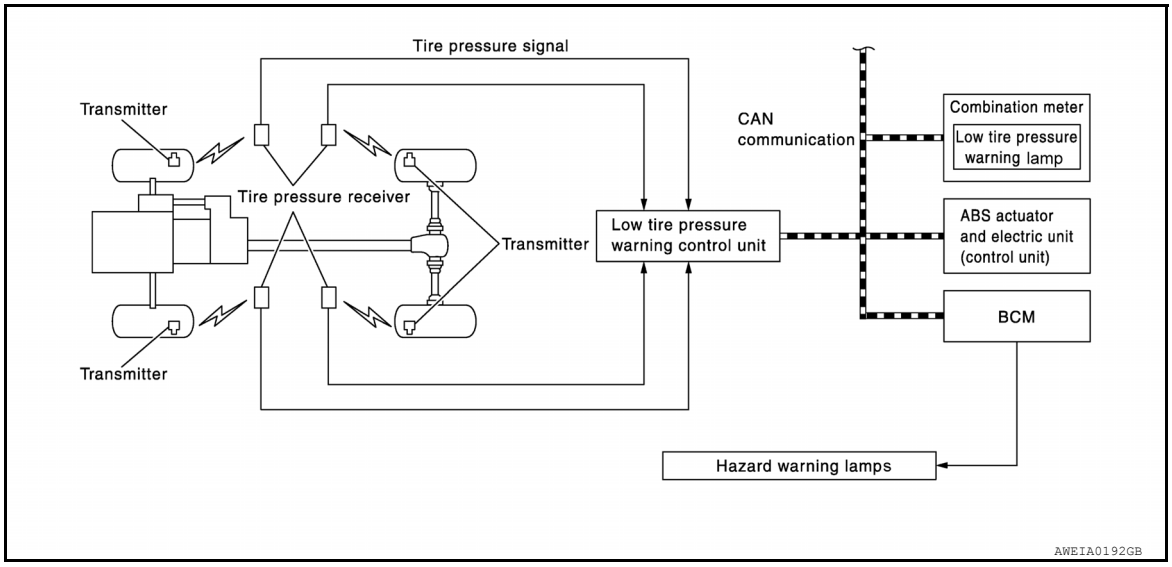
SYSTEM

System Description

INFOID:0000000006881096

- The low tire pressure warning control unit has pressure judgment and trouble diagnosis functions. When the low tire pressure warning control unit detects low inflation pressure or another unusual symptom, the low tire pressure warning lamp in the combination meter is illuminated.
- If the tire pressure is less than the specified value, the low tire pressure warning lamp illuminates.
- The TPMS (Tire Pressure Monitoring System) is activated when vehicle speed is 40 km/h (25 MPH) or more.
- The tire pressure information for each wheel is displayed in the vehicle information display.

SYSTEM DIAGRAM



INPUT/OUTPUT SIGNAL

Component	Signal Description
Low tire pressure warning control unit	Transmits the low tire pressure warning lamp signal via CAN communication to combination meter.
BCM	Receives the hazard request signal via CAN communication from the low tire pressure warning control unit.
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal (ABS) via CAN communication to low tire pressure warning control unit.

LOW TIRE PRESSURE WARNING LAMP CONTROL CONDITION

Low tire pressure warning control unit uses CAN communication to illuminate the low tire pressure warning lamp in the combination meter.

Condition	Low tire pressure warning lamp
Ignition switch: OFF	OFF
Ignition switch: ON (System normal)	Warning lamp turns on for 1second, then turns OFF.
When tire pressure is low	ON
Tire pressure monitoring system malfunction	Warning lamp blinks 1 minute, then turns ON.
When performing transmitter wake-up operation	Refer to WT-28, "Work Procedure".

HAZARD WARNING LAMP CONTROL CONDITION

The low tire pressure warning control unit transmits a hazard request signal to the BCM. The BCM flashes the hazard warning lamps under the following conditions:

- When the transmitter wake-up procedure for all wheels has been completed. Refer to WT-28, "Work Procedure".
- When ID registration of each wheel has been completed. Refer to WT-29, "Work Procedure".

DIAGNOSIS SYSTEM (LOW TIRE PRESSURE WARNING CONTROL UNIT)

CONSULT Function

INFOID:0000000006881098

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

CONSULT can display each diagnostic item using the following direct diagnostic modes.

Direct Diagnostic Mode	Description
Ecu Identification	The low tire pressure warning control unit part number is displayed.
Self Diagnostic Result	The low tire pressure warning control unit self diagnostic results are displayed.
Data Monitor	The low tire pressure warning control unit input/output data is displayed in real time.
Active Test	The low tire pressure warning control unit activates outputs to test components.
Work support	The settings for low tire pressure warning control unit functions can be changed.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

ECU IDENTIFICATION

Part number of low tire pressure warning control unit is displayed.

SELF DIAGNOSTIC RESULT

Refer to WT-18, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description
VHCL SPEED SE [km/h or mph]	Indicates vehicle speed signal received from ABS actuator and electric unit (control unit) on CAN communication line.
AIR PRESS FL [kPa, kg/cm^2 or Psi]	Indicates air pressure of front LH tire.
AIR PRESS FR [kPa, kg/cm^2 or Psi]	Indicates air pressure of front RH tire.
AIR PRESS RR [kPa, kg/cm^2 or Psi]	Indicates air pressure of rear RH tire.
AIR PRESS RL [kPa, kg/cm^2 or Psi]	Indicates air pressure of rear LH tire.
ID REGST FL1 [Done/Yet]	Indicates ID registration status of front LH transmitter.
ID REGST FR1 [Done/Yet]	Indicates ID registration status of front RH transmitter.
ID REGST RR1 [Done/Yet]	Indicates ID registration status of rear RH transmitter.
ID REGST RL1 [Done/Yet]	Indicates ID registration status of rear LH transmitter.
WARNING LAMP [Off/On]	Indicates condition of low tire pressure warning light in combination meter.
BUZZER [Off/On]	Indicates condition of buzzer in combination meter.

ACTIVE TEST

Test Item	Description
BUZZER	This test is able to check buzzer operation [Off/On].
WARN LAMP	This test is able to check low tire pressure warning light operation [Off/On].

WORK SUPPORT

Support Item	Description
ID REGIST	Refer to WT-29, "Description".

CAN DIAG SUPPORT MNTR

Refer to LAN-15, "Trouble Diagnosis Flow Chart".

Self Diagnosis Without CONSULT

INFOID:0000000006881134

Diagnosis items	Symptom (Ignition switch ON)	Low tire pressure warning lamp	Cause	Action
Low tire pressure warning lamp	The low tire pressure warning lamp illuminates for 1 second, then turns OFF.	 ON 1 sec > stays OFF SEIA0592E	Wake-up operation for all transmitters at wheels is completed.	No procedure. (No system malfunctions)
	The low tire pressure warning lamp repeats blinking ON for 2 seconds and OFF for 0.2 seconds.	 Blinks: ON 2 sec > OFF 0.2 sec SEIA0593E	Wake-up operation for all transmitters at wheels is not completed.	Perform the wake-up operation for all transmitters at wheels. Refer to WT-28, "Work Procedure".
	The low tire pressure warning lamp blinks once.	 Blinks 1 time ON 0.3 sec > OFF 1.0 sec JPEIC0090GB	The front LH wheel transmitter is not activated.	Perform the wake-up operation for the transmitter at front LH wheel. Refer to WT-28, "Work Procedure".
	The low tire pressure warning lamp repeats blinking twice.	 Blinks 2 times ON 0.3 sec > OFF 0.3 sec SEIA0595E	The front right wheel transmitter is not activated.	Perform the wake-up operation for the transmitter at front right wheel. Refer to WT-28, "Work Procedure".
	The low tire pressure warning lamp repeats blinking for 3 times.	 Blinks 3 times ON 0.3 sec > OFF 0.3 sec SEIA0596E	The rear right wheel transmitter is not activated.	Perform the wake-up operation for the transmitter at rear right wheel. Refer to WT-28, "Work Procedure".
	The low tire pressure warning lamp repeats blinking for 4 times.	 Blinks 4 times ON 0.3 sec > OFF 0.3 sec SEIA0597E	The rear LH wheel transmitter is not activated.	Perform the wake-up operation for the transmitter at rear LH wheel. Refer to WT-28, "Work Procedure".
	The low tire pressure warning lamp turns ON and stays illuminated.	 Comes ON and stays ON SEIA0598E	Low tire pressure	Check the tire pressure for all wheels and adjust to the specified value. Refer to WT-70, "Tire".

Diagnosis items	Symptom (Ignition switch ON)	Low tire pressure warning lamp	Cause	Action
Low tire pressure warning lamp	The low tire pressure warning lamp repeats blinking at 0.5-second intervals for 1 minute, and then stays illuminated.	 Blinks 1 min ON 0.5 sec > OFF 0.5 sec and stays ON SEIA0788E	The combination meter fuse is open or removed (or pulled out).	Check and install the combination meter fuse. If necessary, replace the fuse.
			The low tire pressure warning control unit harness connector is removed.	Check the connection conditions of the low tire pressure warning control unit harness connector, and repair if necessary.
			Tire Pressure Monitoring System (TPMS) malfunction.	• Perform self-diagnosis. • If necessary, perform transmitter ID registration. Refer to WT-29, "Work Procedure".
Hazard warning lamp	The hazard warning lamp does not blink twice when the transmitter is activated.	—	The transmitter activation tool does not activate.	Replace the battery in the transmitter activation tool.
			The ignition switch is OFF when the transmitter wake-up operation is performed.	Turn the ignition switch ON when performing the transmitter wake-up operation.
			The transmitter activation tool is not used in the correct position.	Operate the transmitter activation tool in the correct position when performing the wake-up operation.
			The transmitter is already awake.	No procedure.

NOTE:
If transmitter wake-up operation is not completed for two or more transmitters, the applicable low tire pressure warning lamp blinking patterns are displayed continuously.
(Example: Blinks once/OFF/blinks 3 times = Wake-up operation is not completed at the front LH wheel and rear RH wheel transmitters.)

ECU DIAGNOSIS INFORMATION

LOW TIRE PRESSURE WARNING CONTROL UNIT

Reference Value

INFOID:0000000006881099

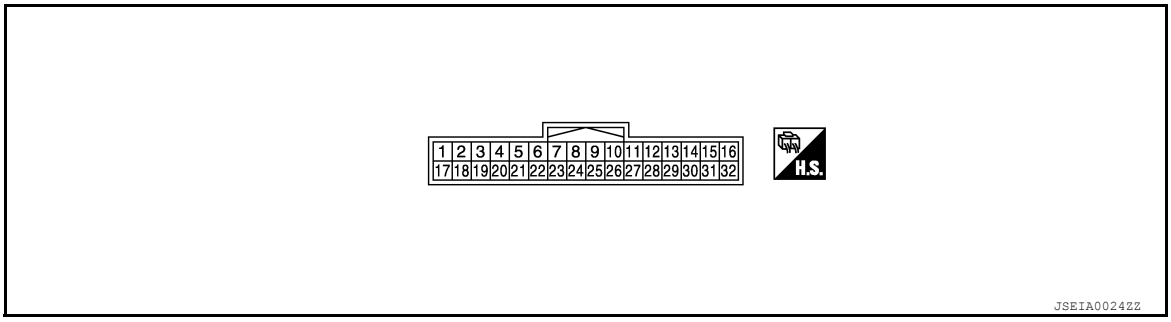
NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

VALUES ON THE DIAGNOSIS TOOL

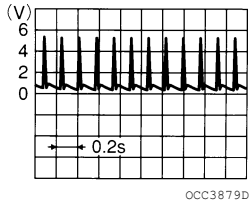
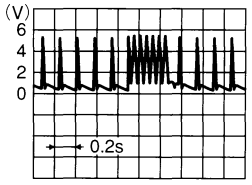
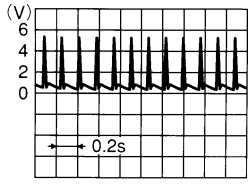
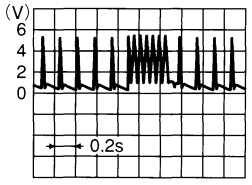
Monitor item	Condition	Value/Status
VHCL SPEED SE	While driving	Equivalent to speedometer reading
AIR PRESS FL	Front left tire air pressure value*	kPa, kg/cm^2, psi
AIR PRESS FR	Front right tire air pressure value*	kPa, kg/cm^2, psi
AIR PRESS RL	Rear left tire air pressure value*	kPa, kg/cm^2, psi
AIR PRESS RR	Rear right tire air pressure value*	kPa, kg/cm^2, psi
ID REGST FL1	Front LH transmitter ID is registered	Done
	Front LH transmitter ID is not registered	Yet
ID REGST FR1	Front RH transmitter ID is registered	Done
	Front RH transmitter ID is not registered	Yet
ID REGST RR1	Rear RH transmitter ID is registered	Done
	Rear RH transmitter ID is not registered	Yet
ID REGST RL1	Rear LH transmitter ID is registered	Done
	Rear LH transmitter ID is not registered	Yet
BUZZER	Buzzer in combination meter OFF	Off
	Buzzer in combination meter ON	On
WARNING LAMP	Low tire pressure warning light ON	On
	Low tire pressure warning light OFF	Off

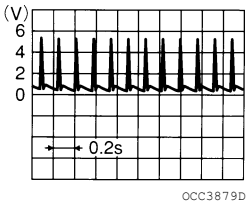
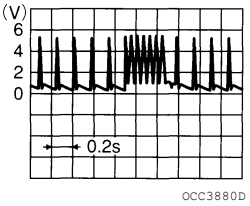
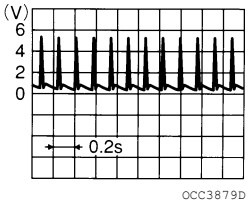
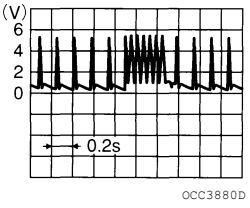
*: Vehicle must be driven at 40 km/h (25 mph) or more for 10 minutes.

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
1 (P)	—	CAN-L	Input/ Output	—		—
2 (L)	—	CAN-H	Input/ Output	—		—
3 (Y)	Ground	Tire pressure receiver rear RH signal	Input	Ignition switch ON	Standby status	 OCC3879D Approx. 4.5 V
					When signal is received	 OCC3880D Approx. 4.5 V
4 (L)	Ground	Tire pressure receiver rear LH signal	Input	Ignition switch ON	Standby status	 OCC3879D Approx. 4.5 V
					When signal is received	 OCC3880D Approx. 4.5 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
5 (R)	Ground	Tire pressure receiver front RH signal	Input	Ignition switch ON	Standby status	 Approx. 4.5 V
					When signal is received	 Approx. 4.5 V
6 (W)	Ground	Tire pressure receiver front LH signal	Input	Ignition switch ON	Standby status	 Approx. 4.5 V
					When signal is received	 Approx. 4.5 V
7 (SB)	Ground	Tire pressure receiver rear RH power supply	Output	Ignition switch ON		Approx. 9 - 16 V
				Ignition switch OFF		0 V
8 (GR)	Ground	Tire pressure receiver rear LH power supply	Output	Ignition switch ON		Approx. 9 - 16 V
				Ignition switch OFF		0 V
9 (BR)	Ground	Tire pressure receiver front RH power supply	Output	Ignition switch ON		Approx. 9 - 16 V
				Ignition switch OFF		0 V
10 (LG)	Ground	Tire pressure receiver front LH power supply	Output	Ignition switch ON		Approx. 9 - 16 V
				Ignition switch OFF		0 V
15 (R)	Ground	Power supply	Input	Ignition switch ON		Battery voltage
				Ignition switch OFF		0 V
19 (R)	Ground	Tire pressure receiver rear RH signal (sensitivity)	Input	Ignition switch ON		Approx. 0.7 V
				Ignition switch OFF		0 V
20 (P)	Ground	Tire pressure receiver rear LH signal (sensitivity)	Input	Ignition switch ON		Approx. 0.7 V
				Ignition switch OFF		0 V

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
		Signal name	Input/ Output		
21 (GR)	Ground	Tire pressure receiver front RH signal (sensitivity)	Input	Ignition switch ON	Approx. 0.7 V
				Ignition switch OFF	0 V
22 (O)	Ground	Tire pressure receiver front LH signal (sensitivity)	Input	Ignition switch ON	Approx. 0.7 V
				Ignition switch OFF	0 V
23 (LG)	Ground	Tire pressure receiver rear RH ground	Input	Always	0 V
24 (L)	Ground	Tire pressure receiver rear LH ground	Input	Always	0 V
25 (W)	Ground	Tire pressure receiver front RH ground	Input	Always	0 V
26 (G)	Ground	Tire pressure receiver front LH ground	Input	Always	0 V
30 (O)	Ground	Hazard	Output	When transmitter wake-up procedure for all wheels or ID registration of each wheel has been completed.	12 V
32 (B)	Ground	Ground	—	Always	0 V

DTC Inspection Priority Chart

INFOID:0000000006881100

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

Priority	Detected items (DTC)
1	• U1000 CAN COMM CIRCUIT • U1010 CONTROL UNIT (CAN)
2	• C1704 LOW PRESSURE FL • C1705 LOW PRESSURE FR • C1706 LOW PRESSURE RR • C1707 LOW PRESSURE RL
3	• C1755 PR RECEIV COND FL • C1756 PR RECEIV COND FR • C1757 PR RECEIV COND RR • C1758 PR RECEIV COND RL
4	• C1708 [NO DATA] FL • C1709 [NO DATA] FR • C1710 [NO DATA] RR • C1711 [NO DATA] RL
5	• C1716 [PRESSDATA ERR] FL • C1717 [PRESSDATA ERR] FR • C1718 [PRESSDATA ERR] RR • C1719 [PRESSDATA ERR] RL
7	• C1728 RECEIVER ID NO REG
8	• C1729 VHCL SPEED SIG ERR
9	• C1750 [RECEIVER ERR] FL • C1751 [RECEIVER ERR] FR • C1752 [RECEIVER ERR] RR • C1753 [RECEIVER ERR] RL
10	• C1754 CONT UNIT (EEPROM)

DTC Index

INFOID:0000000006881101

DTC	Items (CONSULT screen terms)	Reference
C1704	LOW PRESSURE FL	WT-31, "DTC Logic"
C1705	LOW PRESSURE FR	
C1706	LOW PRESSURE RR	
C1707	LOW PRESSURE RL	
C1708	[NO DATA] FL	WT-33, "DTC Logic"
C1709	[NO DATA] FR	
C1710	[NO DATA] RR	
C1711	[NO DATA] RL	
C1716	[PRESSDATA ERR] FL	WT-37, "DTC Logic"
C1717	[PRESSDATA ERR] FR	
C1718	[PRESSDATA ERR] RR	
C1719	[PRESSDATA ERR] RL	
C1728	RECEIVER ID NO REG	WT-39, "DTC Logic"
C1729	VHCL SPEED SIG ERR	WT-42, "DTC Logic"
C1750	[RECEIVER ERR] FL	WT-44, "DTC Logic"
C1751	[RECEIVER ERR] FR	
C1752	[RECEIVER ERR] RR	
C1753	[RECEIVER ERR] RL	
C1754	CONT UNIT (EEPROM)	WT-47, "DTC Logic"
C1755	PR RECEIV COND FL	WT-50, "DTC Logic"
C1756	PR RECEIV COND FR	
C1757	PR RECEIV COND RR	
C1758	PR RECEIV COND RL	
U1000	CAN COMM CIRCUIT	WT-52, "DTC Logic"
U1010	CONTROL UNIT (CAN)	WT-53, "DTC Logic"

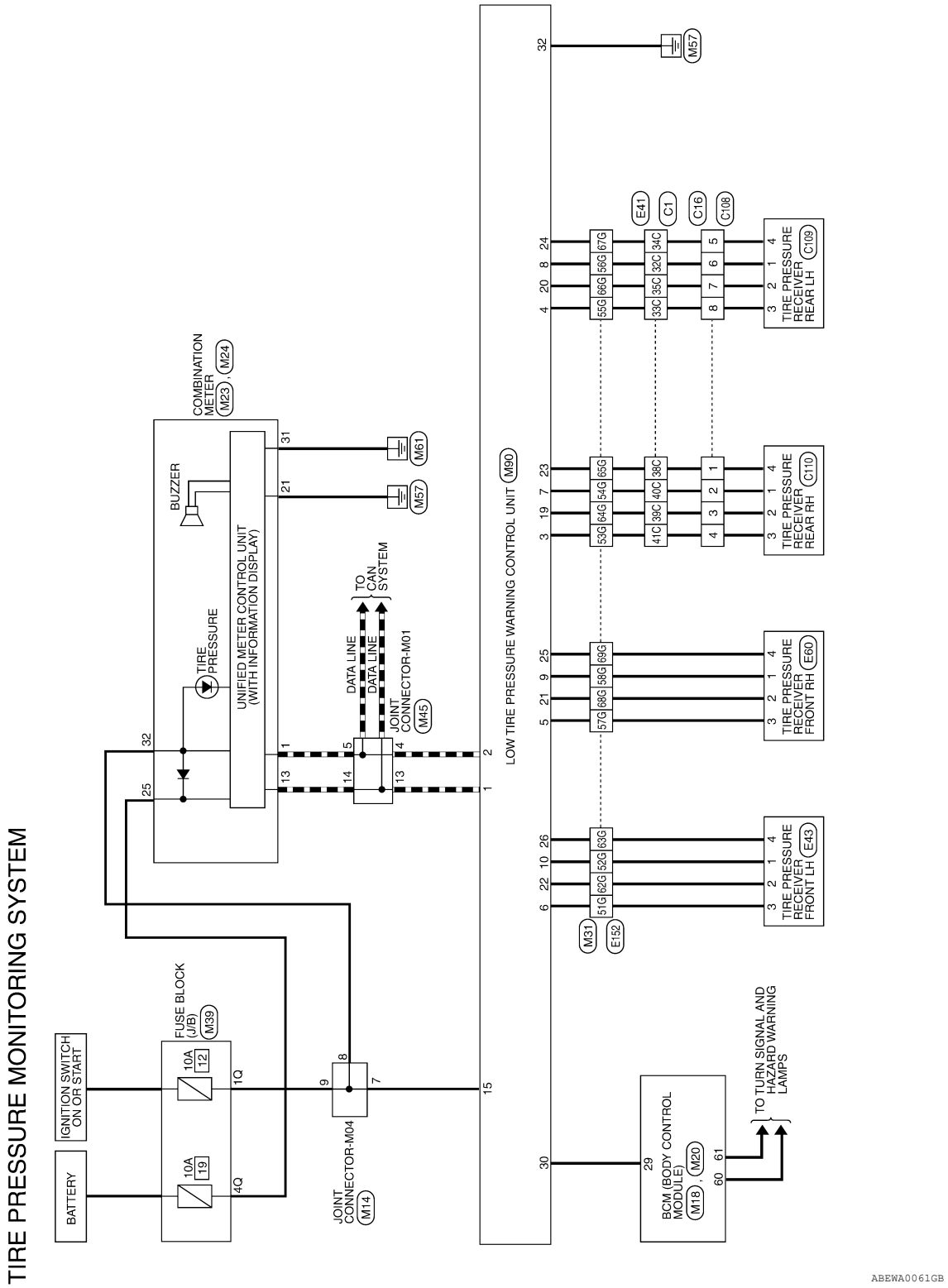
NOTE:
If more than one DTC is displayed, refer to WT-17, "DTC Inspection Priority Chart".

WIRING DIAGRAM

TIRE PRESSURE MONITORING SYSTEM

Wiring Diagram

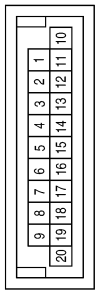
INFOID:0000000006749875



TIRE PRESSURE MONITORING SYSTEM CONNECTORS

Connector No.	M14
Connector Name	JOINT CONNECTOR-M04
Connector Color	BLUE

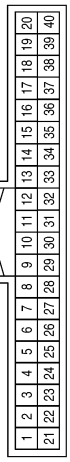
H.S.



Terminal No.	Color of Wire	Signal Name
7	R	–
8	R	–
9	R	–

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

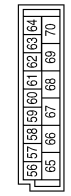
H.S.



Terminal No.	Color of Wire	Signal Name
29	O	HAZARD SW

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

H.S.



Terminal No.	Color of Wire	Signal Name
60	Y	FLASHER OUTPUT (LEFT)
61	G	FLASHER OUTPUT (RIGHT)

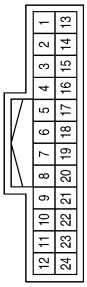
Connector No.	M23
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
25	Y	BATTERY
31	B	GND (POWER)
32	R	RUN START

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

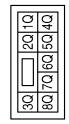


Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
13	P	CAN-L
21	B	GND (ILL)

ABEIA0113GB

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

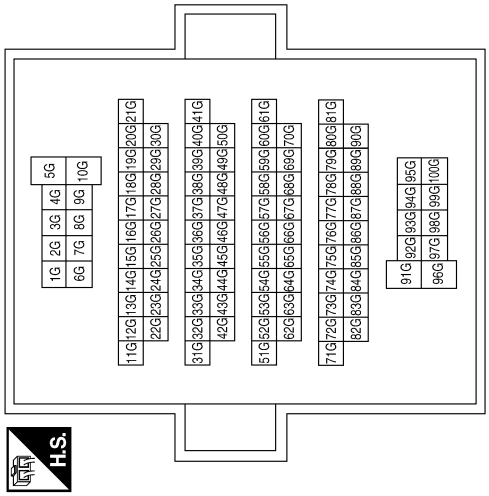


Terminal No.	Color of Wire	Signal Name
1Q	R	–
4Q	Y	–

Terminal No.	Color of Wire	Signal Name
51G	W	–
52G	LG	–
53G	Y	–
54G	SB	–
55G	L	–
56G	P	–
57G	R	–
58G	BR	–
62G	O	–
63G	G	–
64G	R	–
65G	LG	–
66G	P	–
67G	L	–
68G	GR	–
69G	W	–

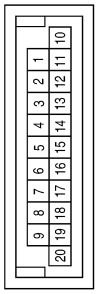
Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Connector No.	M45
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE

H.S.



Terminal No.	Color of Wire	Signal Name
4	L	–
5	L	–
13	P	–
14	P	–

ABEIA0110GB

Connector No.	M90
Connector Name	LOW TIRE PRESSURE WARNING CONTROL UNIT
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	CAN-L
2	L	CAN-H
3	Y	DATA RR
4	L	DATA RL
5	R	DATA FR
6	W	DATA FL

Terminal No.	Color of Wire	Signal Name
7	SB	VCC RR
8	GR	VCC RL
9	BR	VCC FR
10	LG	VCC FL
11	–	–
12	–	–
13	–	–
14	–	–
15	R	IGN
16	–	–
17	–	–
18	–	–
19	R	RSSI RR
20	P	RSSI RL

Terminal No.	Color of Wire	Signal Name
21	GR	RSSI FR
22	O	RSSI FL
23	LG	GND RR
24	L	GND RL
25	W	GND FR
26	G	GND FL
27	–	–
28	–	–
29	–	–
30	O	HAZARD
31	–	–
32	B	GND

Connector No.	E41
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
32C	GR	–
33C	L	–
34C	L	–
35C	P	–
38C	GR	–
39C	R	–
40C	SB	–
41C	Y	–

Connector No.	E43
Connector Name	TIRE PRESSURE RECEIVER FRONT LH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	VCC
2	O	RSSI
3	W	SIG
4	G	GND

ABEIA0111GB

Terminal No.	Color of Wire	Signal Name
51G	W	–
52G	LG	–
53G	Y	–
54G	SB	–
55G	L	–
56G	P	–
57G	R	–
58G	BR	–
62G	O	–
63G	G	–
64G	R	–
65G	GR	–
66G	P	–
67G	L	–
68G	GR	–
69G	W	–

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

H.S.

Connector No.	C16
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	GR	–
2	SB	–
3	R	–
4	Y	–
5	L	–
6	GR	–
7	P	–
8	L	–

Terminal No.	Color of Wire	Signal Name
32C	GR	–
33C	L	–
34C	L	–
35C	P	–
38C	GR	–
39C	R	–
40C	SB	–
41C	Y	–

Connector No.	E60
Connector Name	TIRE PRESSURE RECEIVER FRONT RH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	BR	VCC
2	GR	RSSI
3	R	SIG
4	W	GND

Connector No.	C1
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

ABEIA0112GB

Connector No.	C108
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	GR	–
2	SB	–
3	R	–
4	Y	–
5	L	–
6	GR	–
7	P	–
8	L	–

Connector No.	C109
Connector Name	TIRE PRESSURE RECEIVER REAR LH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	GR	VCC
2	P	RSSI
3	L	SIG
4	L	GND

Connector No.	C110
Connector Name	TIRE PRESSURE RECEIVER REAR RH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	SB	VCC
2	R	RSSI
3	Y	SIG
4	GR	GND

ABEIA0115GB

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000006881102

1.COLLECT INFORMATION FROM CUSTOMER

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

>> GO TO 2.

2.TIRE PRESSURE INSPECTION

Check the tire pressure for all wheels. Refer to WT-70, "Tire".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace tire(s) or wheel(s).

3.CHECK LOW TIRE PRESSURE WARNING LIGHT

Check that the low tire pressure warning light illuminates for approximately 1 second after the ignition switch is turned ON, then turns OFF.

Does the low tire pressure warning light turn OFF?

YES >> GO TO 4.
NO >> GO TO 5.

4.CHECK VEHICLE INFORMATION DISPLAY TIRE PRESSURE INFORMATION

Check that the tire pressure displayed in vehicle information display matches tire pressure inspection from step 2.

Does the vehicle information display match tire pressure inspection?

YES >> Inspection End.
NO >> Refer to MWI-13, "INFORMATION DISPLAY : System Description".

5.CHECK VEHICLE INFORMATION DISPLAY PRESSURE WARNING

Check the vehicle information display for a “CHECK TIRE” pressure warning.

Is “CHECK TIRE” displayed in the vehicle information display?

YES >> GO TO 7.
NO >> GO TO 6.

6.CHECK VEHICLE INFORMATION DISPLAY ERROR WARNING

Check the vehicle information display for a “TPMS ERROR” warning.

Is “TPMS ERROR” displayed in the vehicle information display?

YES >> GO TO 7.
NO >> GO TO 8.

7.PERFORM SELF DIAGNOSTIC RESULT

Perform self diagnostic result. Refer to WT-9, "CONSULT Function".

Are any DTCs displayed?

YES >> Refer to WT-18, "DTC Index". If two or more DTCs are displayed, refer to WT-17, "DTC Inspection Priority Chart".
NO >> GO TO 8.

8.PERFORM DIAGNOSIS APPLICABLE TO THE SYMPTOM

Perform diagnosis applicable to the symptom. Refer to WT-55, "Symptom Table".

>> GO TO 9.

9.FINAL CHECK

Perform self diagnostic result again, and check that the malfunction is repaired. After checking, erase the self diagnosis memory. Refer to WT-9, "CONSULT Function".

>> Inspection End.

ADDITIONAL SERVICE WHEN REPLACING LOW TIRE PRESSURE WARNING CONTROL UNIT

Description

INFOID:0000000006881103

When replacing low tire pressure warning control unit, transmitter ID registration is required.

Work Procedure

INFOID:0000000006881104

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

1.PERFORM TRANSMITTER ID REGISTRATION

Perform transmitter ID registration.

>> Refer to WT-29, "Work Procedure".

TRANSMITTER WAKE UP OPERATION

Description

INFOID:0000000006881105

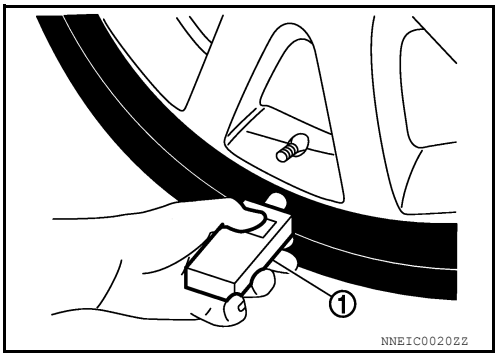
When replacing transmitter, transmitter wake-up operation is required.

Work Procedure

INFOID:0000000006881106

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

1. Turn the ignition switch ON.
2. Press transmitter activation tool (J-45295) (1) against side of tire at location closest to transmitter.
3. Wait until indicator lamp turns OFF (approximately 5 seconds).
   NOTE:
   Perform wake-up procedure starting from front left wheel, then repeat procedure for front right wheel, rear right wheel, and rear left wheel.



4. Check that low tire pressure warning light blinks in pattern in following illustration. The pattern indicates that transmitter wake-up procedure for the wheel is completed.

Low tire pressure warning lamp blinking timing	Activation tire position
ON / OFF: a, b — a : 0.3 sec. b : 1.0 sec.	Front LH
ON / OFF: a, a, a, b — a : 0.3 sec. b : 1.0 sec.	Front RH
ON / OFF: a, a, a, a, a, b — a : 0.3 sec. b : 1.0 sec.	Rear RH
ON / OFF: a, a, a, a, a, a, b — a : 0.3 sec. b : 1.0 sec.	Rear LH
ON / OFF: a, b — a : 2 sec. b : 0.2 sec.	All tires

JPEIC0089GB

5. Check that hazard warning lamps blink twice when transmitter wake-up procedure for all wheels is completed.
6. Check that low tire pressure warning light turns OFF, after transmitter wake-up procedure is completed for all wheels.
7. Perform the transmitter ID registration procedure. Refer to WT-29, "Work Procedure".

ID REGISTRATION

Description

INFOID:0000000006881107

When replacing or rotating wheels, replacing transmitter or replacing low tire pressure warning control unit, transmitter ID registration is required.

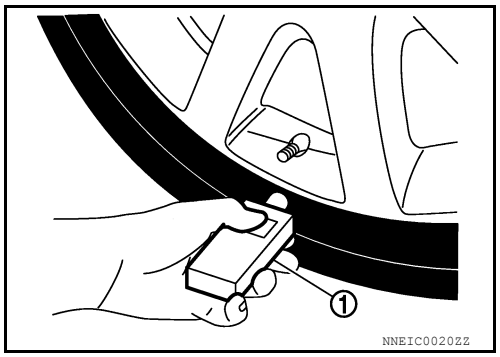
Work Procedure

INFOID:0000000006881108

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

WITH TRANSMITTER ACTIVATION TOOL

With CONSULT
1. Turn ignition switch ON.
2. On “WORK SUPPORT” select “ID REGIST”.
3. Press transmitter activation tool (J-45295) (1) against side of tire at location closest to transmitter.
4. Wait until indicator lamp turns OFF (approximately 5 seconds).
   NOTE:
   Perform ID registration procedure starting from front left wheel, then repeat procedure for front right wheel, rear right wheel, and rear left wheel.



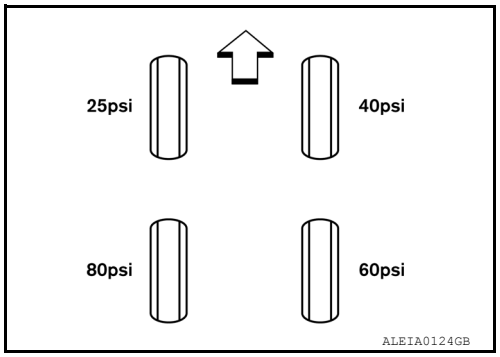
5. When ID registration is completed, check the following pattern at each wheel.

Sequence	ID registration position	Hazard warning lamp	CONSULT
1	Front LH	2 blinks	“Red” ↓ “Green”
2	Front RH		
3	Rear RH		
4	Rear LH		

6. After ID registration procedure for all wheels is completed, press “End” to end ID registration, and check that ID registration for all wheels is completed.

WITHOUT TRANSMITTER ACTIVATION TOOL

After rotating the tires, the TPMS sensor position needs to be relearned.
1. Decrease air pressure for at least 30 seconds continuously for each tire [more than 10 psi (34.5 kPa) within 30 seconds] to place the TPMS system into relearn mode for 30 minutes.
2. Adjust the tire pressure to the levels shown in the illustration.
3. On the combination meter, start the relearn procedure using the INFO knob as follows: SETTINGS→TPMS MENU→RE-LEARN→CONFIRM→LEARNING.
   The TPMS warning lamp flashes continuously when the system is relearning the tire positions.
   NOTE:
   The relearn procedure can be cancelled by placing the ignition switch in the OFF position or by driving the vehicle over 3 mph (5 km/h).
4. When the relearn procedure is successfully completed:



- the message “RELEARN OK” is displayed in the combination meter.
- the hazard lamps flash once.
- the horn chirps once.
- the combination meter chimes 3 times

5. Adjust the tire pressures to the cold tire pressure specification. Refer to WT-70, "Tire".

- If the tire pressures are correct, the TPMS warning lamp turns OFF.
- If the tires are not inflated to the correct cold tire pressure, the TPMS warning lamp illuminates. Recheck the tire pressures and adjust as necessary.

If a different message is displayed or if the relearn procedure is stopped before completion, the new tire positions are not learned. Repeat the complete relearn procedure to reset the tire positions.

If “NOT READY→SEE MANUAL” is displayed, the tire sensors did not enter learn mode properly. Decrease the air pressure for at least 30 seconds continuously for each tire [more than 10 psi (34.5 kPa) within 30 seconds] to enter the proper mode. If the tire pressure cannot be reduced at least 10 psi (34.5 kPa) to adjust them to the relearn pressures, inflate the tires to at least 10 psi (34.5 kPa) above the specified pressures. Readjust the tire pressures according to the learn mode in step 2 and then select TPMS MENU→RE-LEARN→CONFIRM from the combination meter SETTINGS menu to complete the relearn procedure.

If “INCOMPLETE→SEE MANUAL” is displayed, the system could not detect the specific tire pressures shown in the learn mode diagram in step 2. Ensure each tire is set to its proper pressure according to the diagram and select TPMS MENU→RE-LEARN→CONFIRM from the combination meter SETTINGS menu to complete the relearn procedure.

If the relearn procedure does not work, check the following and retry the procedure:

- Devices which emit electronic interference should be turned OFF before starting the relearn procedure. The interference may prevent the system from learning the new tire positions. Turn OFF or remove sources of electrical interference. If necessary, move the vehicle to another location, then perform the complete relearn procedure to reset the tire positions.
- Use an air pump that is capable of inflating the tires to the required pressure specifications. The air pump must be capable of inflating a tire at least 10 psi (34.5 kPa) in 30 seconds.
- If the reset TPMS function is unintentionally selected, place the ignition switch in the OFF position, then to the ON position to end the relearn procedure.
- If the vehicle is not recognizing the new tire pressure levels, move the vehicle forward 40 inches (1 meter). Place the ignition switch in the OFF position, then to the ON position. Perform the relearn procedure beginning at step 1. Make sure that the tire pressures are increased or decreased at least 10 psi (34.5 kPa).

DTC/CIRCUIT DIAGNOSIS

C1704, C1705, C1706, C1707 LOW TIRE PRESSURE

DTC Logic

INFOID:0000000006881109

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	Display item	Malfunction detected condition	Possible causes
C1704	LOW PRESSURE FL	Front LH wheel pressure drops to 283 kPa (2.89 kg/cm^2, 41 psi) or less	Low tire pressure
C1705	LOW PRESSURE FR	Front RH wheel pressure drops to 283 kPa (2.89 kg/cm^2, 41 psi) or less	
C1706	LOW PRESSURE RR	Rear RH wheel pressure drops to 431 kPa (4.39 kg/cm^2, 62.5 psi) or less	
C1707	LOW PRESSURE RL	Rear LH wheel pressure drops to 431 kPa (4.39 kg/cm^2, 62.5 psi) or less	

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Turn the ignition switch ON.
2. Check the tire pressure for all wheels and adjust to the specified value. Refer to WT-70, "Tire".
3. Perform “SELF DIAGNOSTIC RESULT”.

Is DTC “C1704”, “C1705”, “C1706”, or “C1707” detected?

YES >> Proceed to WT-31, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000006881110

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

1.CHECK DATA MONITOR

With CONSULT
1. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.
2. Stop the vehicle.
3. On “DATA MONITOR” select “AIR PRESS FL”, “AIR PRESS FR”, “AIR PRESS RR” and “AIR PRESS RL”.
4. Within 5 minutes after vehicle stopped, check that the tire pressures are within specification. Refer to WT-70, "Tire".

Monitor item	Displayed value
AIR PRESS FL	Approximately equal to the indication on tire gauge value for front LH tire
AIR PRESS FR	Approximately equal to the indication on tire gauge value for front RH tire
AIR PRESS RR	Approximately equal to the indication on tire gauge value for rear RH tire
AIR PRESS RL	Approximately equal to the indication on tire gauge value for rear LH tire

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair or replace error-detected parts.

C1708, C1709, C1710, C1711 TRANSMITTER (NO DATA)

DTC Logic

INFOID:0000000006881111

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	Display Item	Malfunction detected condition	Possible causes
C1708	[NO DATA] FL	Tire pressure data signal from the front LH wheel transmitter cannot be detected.	• Harness or connector connection malfunction • Transmitter ID registration incomplete • Transmitter malfunction
C1709	[NO DATA] FR	Tire pressure data signal from the front RH wheel transmitter cannot be detected.	
C1710	[NO DATA] RR	Tire pressure data signal from the rear RH wheel transmitter cannot be detected.	
C1711	[NO DATA] RL	Tire pressure data signal from the rear LH wheel transmitter cannot be detected.	

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.
2. Stop the vehicle.
3. Perform “SELF DIAGNOSTIC RESULT”.

Is DTC “C1708”, “C1709”, “C1710” or “C1711” detected?

YES >> Proceed to WT-33, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000006881112

Regarding Wiring Diagram information, refer to WT-19, "Wiring Diagram".

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

1.CHECK DATA MONITOR

With CONSULT
1. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.
2. Stop the vehicle.
3. On “DATA MONITOR” select “AIR PRESS FL”, “AIR PRESS FR”, “AIR PRESS RR” and “AIR PRESS RL”.
4. Within 5 minutes after vehicle is stopped, read the values displayed on CONSULT.

Are all tire pressures displayed 0 kPa (psi)?

YES >> GO TO 2.
NO >> GO TO 8.

2.CHECK RECEIVER POWER CIRCUIT CONTINUITY

1. Turn the ignition switch OFF.
2. Disconnect low tire pressure warning control unit and tire pressure receivers connectors.
3. Check continuity between low tire pressure warning control unit connector and tire pressure receiver connectors.

Low tire pressure warning control unit		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M90	10	E43 (Front LH)	1	Yes
	9	E60 (Front RH)		
	8	C109 (Rear LH)		
	7	C110 (Rear RH)		

4. Check continuity between low tire pressure warning control unit connector and ground.

Low tire pressure warning control unit		—	Continuity
Connector	Terminal		
M90	10	Ground	No
	9		
	8		
	7		

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning harness or connector.

3.CHECK RECEIVER SIGNAL CIRCUIT

1. Check continuity between low tire pressure warning control unit connector and tire pressure receiver connectors.

Low tire pressure warning control unit		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M90	6	E43 (Front LH)	2	Yes
	5	E60 (Front RH)		
	4	C109 (Rear LH)		
	3	C110 (Rear RH)		

2. Check the continuity between low tire pressure warning control unit connector and ground.

Low tire pressure warning control unit		—	Continuity
Connector	Terminal		
M90	6	Ground	No
	5		
	4		
	3		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace the malfunctioning harness or connector.

4.CHECK RECEIVER SIGNAL SENSITIVITY CIRCUIT

1. Check continuity between low tire pressure warning control unit connector and tire pressure receiver connectors.

Low tire pressure warning control unit		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M90	22	E43 (Front LH)	2	Yes
	21	E60 (Front RH)		
	20	C109 (Rear LH)		
	19	C110 (Rear RH)		

2. Check the continuity between low tire pressure warning control unit harness connector and ground.

Low tire pressure warning control unit		—	Continuity
Connector	Terminal		
M90	22	Ground	No
	21		
	20		
	19		

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace the malfunctioning harness or connector.

5. CHECK RECEIVER GROUND CIRCUIT

1. Check continuity between low tire pressure warning control unit connector and tire pressure receiver connectors.

Low tire pressure warning control unit		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M90	26	E43 (Front LH)	4	Yes
	25	E60 (Front RH)		
	24	C109 (Rear LH)		
	23	C110 (Rear RH)		

2. Check the continuity between low tire pressure warning control unit harness connector and ground.

Low tire pressure warning control unit		—	Continuity
Connector	Terminal		
M90	26	Ground	No
	25		
	24		
	23		

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace the malfunctioning harness or connector.

6. CHECK TIRE PRESSURE RECEIVER POWER SUPPLY CIRCUIT

1. Connect low tire pressure warning control unit harness connector.
2. Turn the ignition switch ON.
3. Check voltage between tire pressure receiver connector and ground.

Tire pressure receiver		—	Voltage
Connector	Terminal		
E43 (Front LH)	1	Ground	Approx. 9 - 16 V
E60 (Front RH)			
C109 (Rear LH)			
C110 (Rear RH)			

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace the low tire pressure warning control unit. Refer to WT-65, "Removal and Installation".

7. TIRE PRESSURE RECEIVER SIGNAL

Check tire pressure receiver signal. Refer to WT-44, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace error-detected parts.

8. TRANSMITTER ID REGISTRATION

Perform transmitter ID registration. Refer to WT-29, "Work Procedure".

Is transmitter ID registration completed?

YES >> GO TO 9.
NO >> Replace applicable transmitter. Refer to WT-66, "Removal and Installation".

9. CHECK TIRE PRESSURE SIGNAL

With CONSULT

1. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.
2. Stop the vehicle.
3. On “DATA MONITOR” select “AIR PRESS FL”, “AIR PRESS FR”, “AIR PRESS RR” and “AIR PRESS RL”.
4. Within 5 minutes after vehicle stopped, check that the tire pressures are within specification. Refer to WT-70, "Tire".

Monitor item	Displayed value
AIR PRESS FL	Approximately equal to the indication on tire gauge value for front LH tire
AIR PRESS FR	Approximately equal to the indication on tire gauge value for front RH tire
AIR PRESS RR	Approximately equal to the indication on tire gauge value for rear RH tire
AIR PRESS RL	Approximately equal to the indication on tire gauge value for rear LH tire

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace the low tire pressure warning control unit. Refer to WT-65, "Removal and Installation".

C1716, C1717, C1718, C1719 TRANSMITTER (PRESSURE DATA)

DTC Logic

INFOID:0000000006881113

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	Display Item	Malfunction detected condition	Possible causes
C1716	[PRESSDATA ERR] FL	Malfunction in the tire pressure data* from the front LH wheel transmitter.	• Transmitter ID registration incomplete • Transmitter malfunction
C1717	[PRESSDATA ERR] FR	Malfunction in the tire pressure data* from the front RH wheel transmitter.	
C1718	[PRESSDATA ERR] RR	Malfunction in the tire pressure data* from the rear RH wheel transmitter.	
C1719	[PRESSDATA ERR] RL	Malfunction in the tire pressure data* from the rear LH wheel transmitter.	

*: In this case the low tire pressure warning control unit judges that the tire pressure is 879.08 kPa (8.96 kg/cm^2, 127.5 psi).

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Turn the ignition switch ON.
2. Check the tire pressure for all wheels and adjust to the specified value. Refer to WT-70, "Tire".
3. Perform “SELF DIAGNOSTIC RESULT”.

Is DTC “C1716”, “C1717”, “C1718”, or “C1719” detected?

YES >> Proceed to WT-37, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000006881114

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

1.CHECK TIRE PRESSURE

Check the air pressure of all wheels. Refer to pressure observed during “DTC CONFIRMATION PROCEDURE”.

Is the inspection result normal?

YES >> Replace the DTC-detected malfunctioning transmitter. Refer to WT-66, "Removal and Installation".
NO >> GO TO 2.

2.CHECK TIRE PRESSURE SIGNAL

With CONSULT
1. Perform transmitter ID registration for all wheels. Refer to WT-29, "Work Procedure".

2. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.
3. Stop the vehicle.
4. On “DATA MONITOR” select “AIR PRESS FL”, “AIR PRESS FR”, “AIR PRESS RR” and “AIR PRESS RL”.
5. Within 5 minutes after vehicle is stopped, read the values displayed on CONSULT.

Are tire pressures displayed as 879.08 kPa (8.96 kg/cm^2, 127.5 psi)?

YES >> Replace transmitter that tire pressure is displayed as 879.08 kPa (8.96 kg/cm^2, 127.5 psi). Refer to WT-66, "Removal and Installation".

NO >> Perform “DTC CONFIRMATION PROCEDURE” again. Refer to WT-37, "DTC Logic".

C1728 RECEIVER ID

DTC Logic

INFOID:0000000006881115

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	Display Item	Malfunction detected condition	Possible causes
C1728	RECEIVER ID NO REG	Receiver ID registration cannot be performed.	• Tire pressure receiver malfunction • Low tire pressure warning control unit malfunction

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.
2. Stop the vehicle.
3. Perform “SELF DIAGNOSTIC RESULT”.

Is DTC “C1728” detected?

YES >> Proceed to WT-39, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000006881116

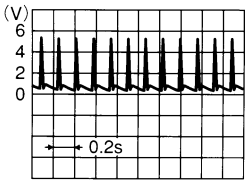
Regarding Wiring Diagram information, refer to WT-19, "Wiring Diagram".

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

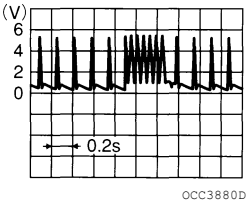
1.CHECK TIRE PRESSURE RECEIVER INPUT SIGNAL

1. Turn ignition switch ON.
2. Check the input signal waveform between the low tire pressure warning control unit connector and ground.

STANDBY STATUS

Low tire pressure warning control unit		—	Value (Approx.)
Connector	Terminal		
M96	3	Ground	 Approx. 4.5 V
	4		
	5		
	6		

WHEN SIGNAL IS RECEIVED

Low tire pressure warning control unit		—	Value (Approx.)
Connector	Terminal		
M96	3	Ground	 Approx. 4.5 V
	4		
	5		
	6		

Is the inspection result normal?

YES >> Check connector for loose connection, then perform “DTC CONFIRMATION PROCEDURE” again. Refer to WT-39, "DTC Logic".

NO >> GO TO 2.

2.CHECK TIRE PRESSURE RECEIVER POWER SUPPLY CIRCUIT

1. Disconnect the tire pressure receiver connector.
2. Turn ignition switch ON.
3. Check voltage between tire pressure receiver connector and ground.

Tire pressure receiver		—	Voltage
Connector	Terminal		
E43 (Front LH)	1	Ground	Approx. 9 - 16 V
E60 (Front RH)			
C109 (Rear LH)			
C110 (Rear RH)			

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning harness or connector.

3.CHECK TIRE PRESSURE RECEIVER GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect low tire pressure warning control unit connector and tire pressure receiver connector.
3. Check continuity between low tire pressure warning control unit connector and tire pressure receiver connector.

Low tire pressure warning control unit		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M90	26	E43 (Front LH)	4	Yes
	25	E60 (Front RH)		
	24	C109 (Rear LH)		
	23	C110 (Rear RH)		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace the malfunctioning harness or connector.

4. CHECK LOW TIRE PRESSURE WARNING CONTROL UNIT CIRCUIT

Check the low tire pressure warning control unit circuit. Refer to WT-47, "Diagnosis Procedure".

Is the low tire pressure warning control unit circuit normal?

YES >> Replace the tire pressure receiver. Refer to WT-68, "FRONT TIRE PRESSURE RECEIVER : Removal and Installation" (Front), WT-69, "REAR TIRE PRESSURE RECEIVER : Removal and Installation" (Rear).
NO >> Repair or replace error-detected parts.

C1729 VEHICLE SPEED SIGNAL

DTC Logic

INFOID:0000000006881117

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	Display Item	Malfunction detected condition	Possible causes
C1729	VHCL SPEED SIG ERR	Vehicle speed signal not detected.	• CAN communication malfunction • Low tire pressure warning control unit malfunction • ABS actuator and electric unit (control unit) malfunction

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more without stopping.
2. Stop the vehicle.
3. Perform “SELF DIAGNOSTIC RESULT”.

Is DTC “C1729” detected?

YES >> Proceed to WT-42, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000006881118

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

1.PERFORM ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF DIAGNOSTIC RESULT

With CONSULT
Perform “SELF DIAGNOSTIC RESULT” for “ABS”. Refer to BRC-32, "CONSULT Function (ABS)".

Are any DTCs detected?

YES >> Refer to BRC-44, "DTC Index".
NO >> GO TO 2.

2.PERFORM LOW TIRE PRESSURE WARNING CONTROL UNIT SELF DIAGNOSTIC RESULT

With CONSULT
Perform “SELF DIAGNOSTIC RESULT” for “LOW TIRE PRESSURE WARNING CONTROL UNIT”.

Is DTC “C1729” detected?

YES >> Replace the low tire pressure warning control unit. Refer to WT-65, "Removal and Installation".
NO >> GO TO 3.

3.CHECK LOW TIRE PRESSURE WARNING CONTROL UNIT INPUT/OUTPUT SIGNAL

Check the low tire pressure warning control unit input/output signal values. Refer to WT-14, "Reference Value".

Is the inspection result normal?

YES >> Check pin terminal and connection of each harness connector for malfunctioning conditions.
NO >> Replace the low tire pressure warning control unit. Refer to WT-65, "Removal and Installation".

C1750, C1751, C1752, C1753 RECEIVER

DTC Logic

INFOID:0000000006881119

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	Display Item	Malfunction detected condition	Possible causes
C1750	[RECEIVER ERR] FL	The front LH tire pressure receiver does not receive a signal.	Tire pressure receiver malfunction
C1751	[RECEIVER ERR] FR	The front RH tire pressure receiver does not receive a signal.	
C1752	[RECEIVER ERR] RR	The rear RH tire pressure receiver does not receive a signal.	
C1753	[RECEIVER ERR] RL	The rear LH tire pressure receiver does not receive a signal.	

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.
2. Stop the vehicle.
3. Perform “SELF DIAGNOSTIC RESULT”.

Is DTC “C1750”, “C1751”, “C1752”, or “C1753” detected?

YES >> Proceed to WT-44, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000006881120

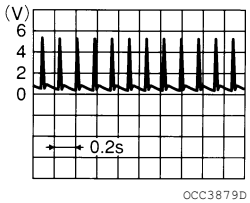
Regarding Wiring Diagram information, refer to WT-19, "Wiring Diagram".

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

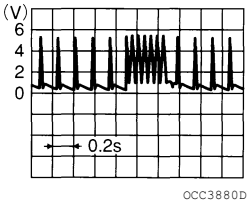
1.CHECK TIRE PRESSURE RECEIVER INPUT SIGNAL

1. Turn ignition switch ON.
2. Check the input signal waveform between the low tire pressure warning control unit connector and ground.

STANDBY STATUS

Low tire pressure warning control unit		—	Value (Approx.)
Connector	Terminal		
M90	3	Ground	 Approx. 4.5 V
	4		
	5		
	6		

WHEN SIGNAL IS RECEIVED

Low tire pressure warning control unit		—	Value (Approx.)
Connector	Terminal		
M90	3	Ground	 Approx. 4.5 V
	4		
	5		
	6		

Is the inspection result normal?

YES >> Check connector for loose connection, then perform “DTC CONFIRMATION PROCEDURE” again. Refer to WT-44, "DTC Logic".

NO >> GO TO 2.

2.CHECK TIRE PRESSURE RECEIVER POWER SUPPLY CIRCUIT

1. Disconnect tire pressure receiver connector.
2. Turn ignition switch ON.
3. Check voltage between tire pressure receiver connector and ground.

Tire pressure receiver		—	Voltage
Connector	Terminal		
E43 (Front LH)	1	Ground	Approx. 9 - 16 V
E60 (Front RH)			
C109 (Rear LH)			
C110 (Rear RH)			

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning harness or connector.

3.CHECK TIRE PRESSURE RECEIVER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect low tire pressure warning control unit connector and tire pressure receiver connector.
3. Check continuity between low tire pressure warning control unit connector and tire pressure receiver connector.

Low tire pressure warning control unit		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M90	26	E43 (Front LH)	4	Yes
	25	E60 (Front RH)		
	24	C109 (Rear LH)		
	23	C110 (Rear RH)		

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace the malfunctioning harness or connector.

4. CHECK FOR CHANGE TO THE TIRE PRESSURE RECEIVER INSTALLATION POSITION

NOTE:
Example: Front LH tire pressure receiver OK/NG judgment when DTC “C1750” is detected.

With CONSULT

1. Exchange the positions of the front LH tire pressure receiver and the front RH tire pressure receiver.
2. Perform “DTC CONFIRMATION PROCEDURE” again. Refer to WT-44, "DTC Logic".

Is DTC “C1751” detected?

YES >> Replace the exchanged front RH tire pressure receiver.
NO >> Check the low tire pressure warning control unit circuit. Refer to WT-47, "Diagnosis Procedure".

C1754 LOW TIRE PRESSURE WARNING CONTROL UNIT

DTC Logic

INFOID:0000000006881121

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	Display Item	Malfunction detected condition	Possible causes
C1754	CONT UNIT (EEPROM)	Memory (EEPROM) system malfunction is detected in the low tire pressure warning control unit	Low tire pressure warning control unit malfunction

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more without stopping.
2. Stop the vehicle.
3. Perform “SELF DIAGNOSTIC RESULT”.

Is DTC “C1754” detected?

YES >> Proceed to WT-47, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000006881122

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

1.CHECK LOW TIRE PRESSURE WARNING CONTROL UNIT POWER SUPPLY AND GROUND CIRCUIT

Perform the trouble diagnosis for power supply and ground circuit. Refer to WT-54, "Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK TIRE PRESSURE RECEIVER CIRCUIT

1. Disconnect the tire pressure receiver connector.
2. Check the continuity between the low tire pressure warning control unit connector and tire pressure receiver connector.

Low tire pressure warning control unit		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M90	6	E43 (Front LH)	3	Yes
	22		2	
	10		1	
	26		4	
	5	E60 (Front RH)	3	
	21		2	
	9		1	
	25		4	
	4	C109 (Rear LH)	3	
	20		2	
	8		1	
	24		4	
	3	C110 (Rear RH)	3	
	19		2	
	7		1	
	23		4	

3. Check the continuity between the low tire pressure warning control unit connector and ground.

Low tire pressure warning control unit		—	Continuity
Connector	Terminal		
M90	6	Ground	No
	22		
	10		
	26		
	5		
	21		
	9		
	25		
	4		
	20		
	8		
	24		
	3		
	19		
	7		
	23		

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning harness or connector.

3. PERFORM SELF DIAGNOSTIC RESULT AGAIN

With CONSULT

1. Check the tire pressure for all wheels and adjust to the specified value. Refer to WT-70, "Tire".
2. Perform transmitter ID registration for all wheels. Refer to WT-29, "Work Procedure".
3. Perform “SELF DIAGNOSTIC RESULT”.

Is DTC “C1754” detected?

YES >> Replace the low tire pressure warning control unit. Refer to WT-65, "Removal and Installation".

NO >> Check for looseness or damage at the harness connector pins of the low tire pressure warning control unit. Repair or replace if necessary.

C1755, C1756, C1757, C1758 POOR RECEIVING CONDITIONS

DTC Logic

INFOID:0000000006881123

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

NOTE:
If DTC C1755, C1756, C1757 or C1758 is detected along with C1708, C1709, C1710 or C1711, first diagnose C1755, C1756, C1757 or C1758.

DTC	Display Item	Malfunction detected condition	Possible causes
C1755	PR RECEIV COND FL	The data signal from the front LH wheel transmitter cannot be detected due to external electromagnetic interference for 10 minutes or more (DTC C1708 is displayed at the same time).	External electromagnetic interference
C1756	PR RECEIV COND FR	The data signal from the front RH wheel transmitter cannot be detected due to external electromagnetic interference for 10 minutes or more (DTC C1709 is displayed at the same time).	
C1757	PR RECEIV COND RR	The data signal from the rear RH wheel transmitter cannot be detected due to external electromagnetic interference for 10 minutes or more (DTC C1710 is displayed at the same time).	
C1758	PR RECEIV COND RL	The data signal from the rear LH wheel transmitter cannot be detected due to external electromagnetic interference for 10 minutes or more (DTC C1711 is displayed at the same time).	

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.
2. Stop the vehicle.
3. Perform “SELF DIAGNOSTIC RESULT”.

Is DTC “C1755”, “C1756”, “C1757”, or “C1758 ” detected?

YES >> Proceed to WT-50, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000006881124

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

1.TRANSMITTER ID REGISTRATION

Perform transmitter ID registration. Refer to WT-29, "Work Procedure".

Is transmitter ID registration completed?

YES >> GO TO 2.
NO >> Change the work location and perform ID registration again.

2.CHECK TIRE PRESSURE SIGNAL

With CONSULT

1. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.
2. Stop the vehicle.
3. On “DATA MONITOR” select “AIR PRESS FL”, “AIR PRESS FR”, “AIR PRESS RR” and “AIR PRESS RL”.
4. Within 5 minutes after vehicle stopped, check that the tire pressures are within specification. Refer to WT-70, "Tire".

Monitor item	Displayed value
AIR PRESS FL	Approximately equal to the indication on tire gauge value for front LH tire
AIR PRESS FR	Approximately equal to the indication on tire gauge value for front RH tire
AIR PRESS RR	Approximately equal to the indication on tire gauge value for rear RH tire
AIR PRESS RL	Approximately equal to the indication on tire gauge value for rear LH tire

Is the inspection result normal?

YES >> GO TO 3.
NO >> Change the work location, then GO TO 1.

3.CHECK SELF DIAGNOSIS RESULT

With CONSULT

1. Erase self-diagnosis memory for the low tire pressure warning control unit.
2. Turn ignition switch OFF, and wait for 10 seconds or more.
3. Perform “DTC CONFIRMATION PROCEDURE” again. Refer to WT-50, "DTC Logic".

Are DTC “C1755”, “C1756”, “C1757”, or “C1758” and “C1708”, “C1709”, “C1710”, or “C1711” detected?

YES >> Change the work location, then GO TO 1.
NO >> Check the input/output signal values. Refer to WT-14, "Reference Value".

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000006881125

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped on a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H line, CAN-L line) allowing a high rate of information transmission with less wiring. Each control unit communicates data but selectively reads required data only.

DTC Logic

INFOID:0000000006881126

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	Display item	Malfunction detected condition	Possible cause
U1000	CAN COMM CIRCUIT	Low tire pressure warning control unit is not communicating CAN communication signal for 2 seconds or more.	• CAN communication malfunction • Malfunction of low tire pressure warning control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Drive for several minutes at a speed of 40 km/h (25 MPH) or more.
2. Stop the vehicle.
3. Perform “SELF DIAGNOSTIC RESULT”.

Is DTC “U1000” detected?

YES >> Proceed to WT-52, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000006881127

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

Proceed to LAN-15, "Trouble Diagnosis Flow Chart".

U1010 CONTROL UNIT (CAN)

Description

INFOID:0000000006881128

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped on a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN-H line, CAN-L line) allowing a high rate of information transmission with less wiring. Each control unit communicates data but selectively reads required data only.

DTC Logic

INFOID:0000000006881129

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	Display item	Malfunction detected condition	Possible cause
U1010	CONTROL UNIT (CAN)	Detecting error during the initial diagnosis of CAN controller of low tire pressure warning control unit.	Malfunction of low tire pressure warning control unit

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Drive for several minutes at a speed of 40 km/h (25 MPH) or more.
2. Stop the vehicle.
3. Perform “SELF DIAGNOSTIC RESULT”.

Is DTC “U1010” detected?

YES >> Proceed to WT-53, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000006881130

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

1.CHECK LOW TIRE PRESSURE WARNING CONTROL UNIT

Check low tire pressure warning control unit connector for disconnection or deformation.

Is the inspection result normal?

YES >> Replace low tire pressure warning control unit. Refer to WT-65, "Removal and Installation".
NO >> Repair or replace error-detected parts.

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000006881131

Regarding Wiring Diagram information, refer to WT-19, "Wiring Diagram".

1.CHECK FUSE/FUSIBLE LINK

1. Turn ignition switch OFF.
2. Check the 10 A fuse [No. 12 in fuse block (J/B)].

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the fuse after repairing the affected circuit.

2.CHECK LOW TIRE PRESSURE WARNING CONTROL UNIT POWER SUPPLY CIRCUIT

1. Disconnect low tire pressure warning control unit connector.
2. Turn ignition switch ON.
3. Check voltage between low tire pressure warning control unit connector and ground.

Low tire pressure warning control unit		—	Voltage
Connector	Terminal		
M90	15	Ground	Battery voltage

4. Turn ignition switch OFF.
5. Check voltage between low tire pressure warning control unit connector and ground.

Low tire pressure warning control unit		—	Voltage
Connector	Terminal		
M90	15	Ground	0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Check the following. If any items are damaged, repair or replace damaged parts.
- Harness for short or open between ignition switch and low tire pressure warning control unit harness connector
- Battery voltage.

3.CHECK LOW TIRE PRESSURE WARNING CONTROL UNIT GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between low tire pressure warning control unit connector and ground.

Low tire pressure warning control unit		—	Continuity
Connector	Terminal		
M90	32	Ground	Yes

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair open circuit in harness or connectors.

SYMPTOM DIAGNOSIS

TPMS SYMPTOMS

Symptom Table

INFOID:0000000006915170

Symptom	Reference
Low tire pressure warning light does not turn ON.	WT-56
Low tire pressure warning light does not turn OFF.	WT-57
Low tire pressure warning light blinks.	WT-58
Tire pressure information in vehicle information display does not exist.	WT-60
ID registration cannot be completed.	WT-60

LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN ON

Diagnosis Procedure

INFOID:0000000006915171

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

1.PERFORM SELF DIAGNOSTIC RESULT

Perform “SELF DIAGNOSTIC RESULT”.

Is DTC “U1000” detected?

YES >> Malfunction in CAN communication system. Refer to LAN-15, "Trouble Diagnosis Flow Chart".
NO >> GO TO 2

2.CHECK COMBINATION METER

Check combination meter operation. Refer to MWI-8, "METER SYSTEM : System Description".

Is the inspection result normal?

YES >> Replace low tire pressure warning control unit. Refer to WT-65, "Removal and Installation".
NO >> Replace combination meter. Refer to MWI-64, "Removal and Installation".

LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN OFF

Diagnosis Procedure

INFOID:0000000006915172

1.INSPECT LOW TIRE PRESSURE WARNING CONTROL UNIT CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect low tire pressure warning control unit connector.
3. Check terminals for damage or loose connections.

Is the inspection result normal?

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

2.LOW TIRE PRESSURE WARNING CONTROL UNIT POWER SUPPLY AND GROUND CIRCUITS

Check low tire pressure warning control unit power supply and ground circuits. Refer to WT-54, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace low tire pressure warning control unit. Refer to WT-65, "Removal and Installation".
NO >> Repair low tire pressure warning control unit circuits.

LOW TIRE PRESSURE WARNING LAMP BLINKS

Diagnosis Procedure

INFOID:0000000006915173

NOTE:
If low tire pressure warning light repeats blinking ON for 2 seconds and OFF for 0.2 seconds, wake-up operation for all transmitters is not complete.
Carry out transmitter wake-up operation. Refer to WT-28, "Work Procedure".

1. CHECK LOW TIRE PRESSURE WARNING CONTROL UNIT CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect low tire pressure warning control unit connector.
3. Check terminals for damage or loose connections.

Is the inspection result normal?

YES >> Replace low tire pressure warning control unit. Refer to WT-65, "Removal and Installation".
NO >> Repair or replace damaged parts.

"TIRE PRESSURE" INFORMATION IN DISPLAY UNIT DOES NOT EXIST

Diagnosis Procedure

INFOID:0000000006915175

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

1.PERFORM SELF DIAGNOSTIC RESULT

Perform “SELF DIAGNOSTIC RESULT”.

Is DTC “U1000” detected?

YES >> Malfunction in CAN communication system. Refer to LAN-15, "Trouble Diagnosis Flow Chart".
NO >> Check combination meter operation. Refer to MWI-8, "METER SYSTEM : System Description".

ID REGISTRATION CANNOT BE COMPLETED

Diagnosis Procedure

INFOID:0000000006915174

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

1.PERFORM ID REGISTRATION OF ALL TRANSMITTERS

Carry out ID registration of all transmitters. Refer to WT-29, "Work Procedure".

Can ID registration of all transmitters be completed?

YES >> Inspection End.
NO >> Refer to WT-11, "Self Diagnosis Without CONSULT".

NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:0000000006749883

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

Reference page			WT-62	WT-63	WT-70	FSU-8, "Front Wheel Alignment"	—	—	WT-70	DLN-31, "NVH Troubleshooting Chart"	FAX-4, "NVH Troubleshooting Chart" (FAX), FSU-5, "NVH Troubleshooting Chart" (FSU)	RAX-4, "NVH Troubleshooting Chart" (RAX), RSU-4, "NVH Troubleshooting Chart" (RSU)	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	DIFFERENTIAL	FRONT AXLE AND FRONT SUSPENSION	REAR AXLE AND REAR SUSPENSION	TIRES	ROAD WHEEL	BRAKE	STEERING
Symptom	TIRES	Noise	×	×	×	×	×	×		×	×	×	×		×	×
		Shake	×	×	×	×	×		×		×	×	×		×	×
		Vibration			×				×		×	×	×			×
		Shimmy	×	×	×	×	×	×	×		×	×	×		×	×
		Shudder	×	×	×	×	×		×		×	×	×		×	×
		Poor quality ride or handling	×	×	×	×	×		×		×	×	×			
	ROAD WHEEL	Noise	×	×			×			×	×	×		×	×	×
		Shake	×	×			×				×	×		×	×	×
		Shimmy, shudder	×	×			×				×	×		×	×	×
		Poor quality ride or handling	×	×			×				×	×		×		

×: Applicable

PERIODIC MAINTENANCE

WHEEL

Inspection

INFOID:0000000006749888

STEEL WHEEL

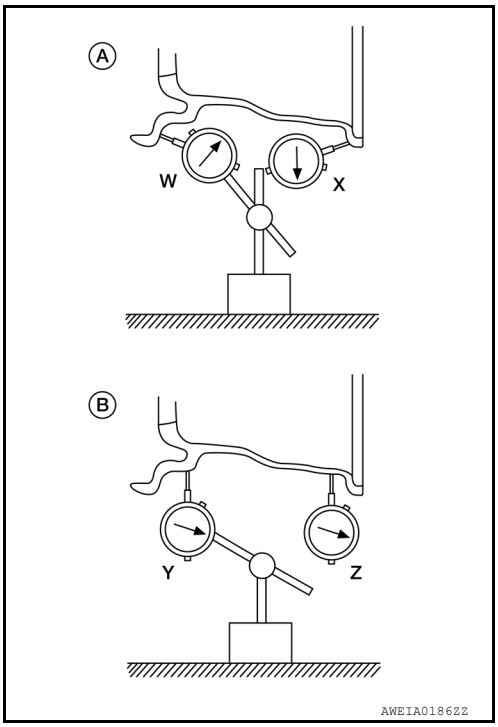
1. Check tires for wear and improper inflation.
2. Check wheels for deformation, cracks, and other damage. If deformed, remove wheel and check wheel runout.

a. Remove tire from steel wheel and mount on a balancer machine.
b. Set two dial indicators as shown.
c. 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.

Lateral deflection = (W+X)/2
Vertical deflection = (Y+Z)/2

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.

Radial runout
Lateral deflection (A) : Refer to WT-70, "Road Wheel".
Vertical deflection (B) : Refer to WT-70, "Road Wheel".



WHEEL AND TIRE ASSEMBLY

Adjustment

INFOID:0000000006749889

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:

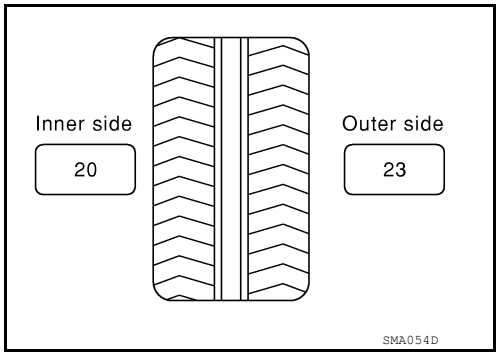
- **Be careful not to scratch the road wheel during removal.**
- **After removing double-faced adhesive tape, wipe clean all traces of releasing agent from the road wheel.**

Wheel Balance Adjustment

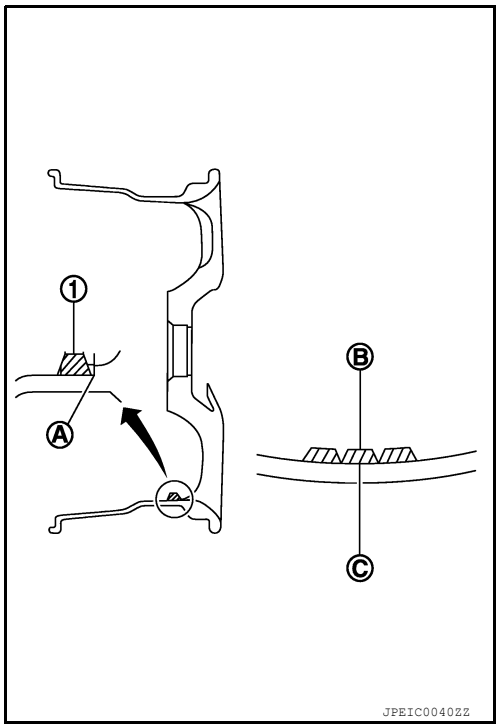
- If a balancer machine has an adhesive weight mode setting, select the adhesive weight mode setting and skip Step 2. below. If a balancer machine only has the clip-on (rim flange) weight mode setting, follow Step 2. to calculate the correct size adhesive weight.

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.

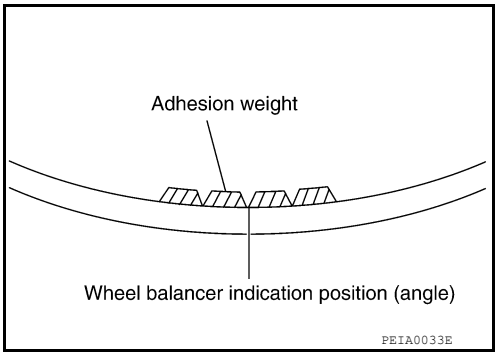
a. Indicated imbalance value × 5/3 (1.67) = balance weight to be installed
Calculation example:
23 g (0.81 oz) × 5/3 (1.67) = 38.33 g (1.35 oz) ⇒ 40 g (1.41 oz) balance weight (closer to calculated balance weight value)
NOTE:
Note that balance weight value must be closer to the calculated balance weight value.
Example:
37.4 ⇒ 35 g (1.23 oz)
37.5 ⇒ 40 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.**



4. 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.
6. 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.

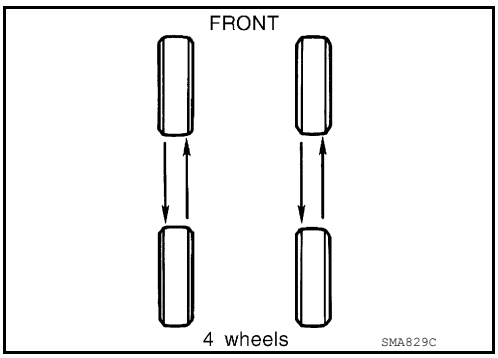


8. If either residual imbalance value exceeds 5 g (0.17 oz), repeat installation procedures.

Wheel balance	Dynamic (At flange)	Static (At flange)
Maximum allowable imbalance	Refer to WT-70, "Road Wheel".	

TIRE ROTATION

- Follow the maintenance schedule for tire rotation service intervals. Refer to MA-7, "Introduction of Periodic 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.**



Wheel nut tightening torque : 187 N·m (19 kg-m, 138 ft-lb)

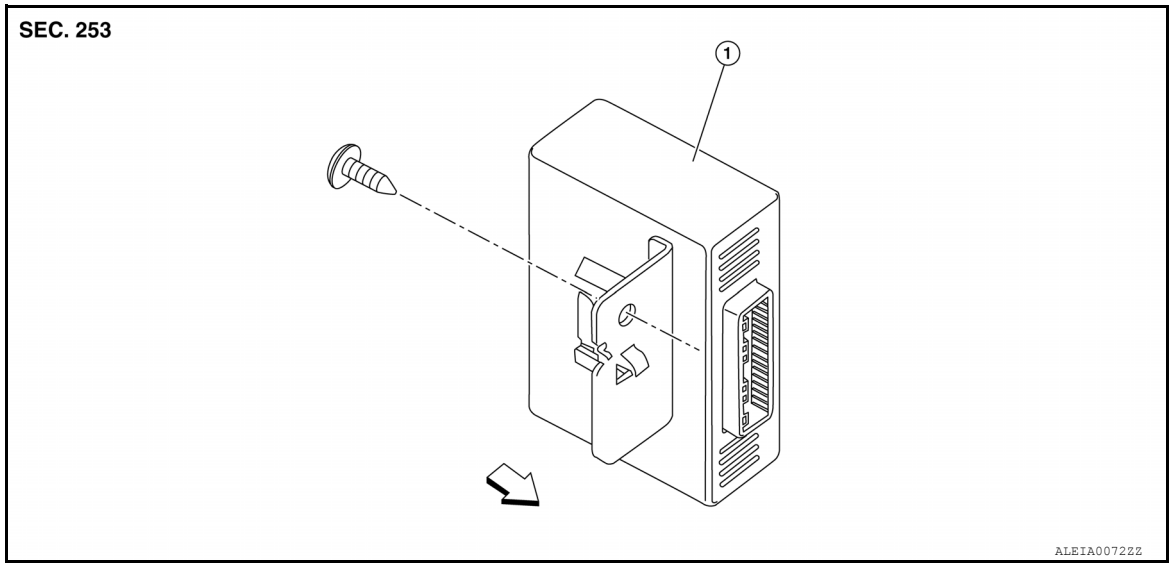
- Perform the transmitter ID registration, after tire rotation. Refer to WT-29, "Work Procedure".

UNIT REMOVAL AND INSTALLATION

LOW TIRE PRESSURE WARNING CONTROL UNIT

Exploded View

INFOID:0000000006918413



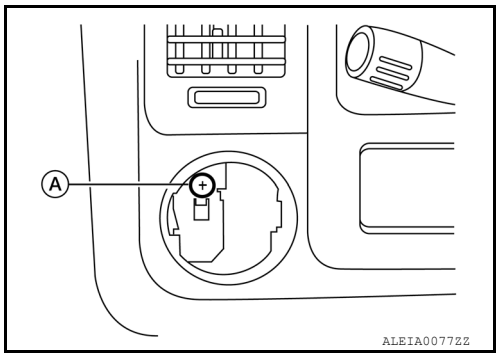
1. Low tire pressure warning control unit ⇦ Front

Removal and Installation

INFOID:0000000006918414

REMOVAL

1. Remove the instrument lower panel LH. Refer to IP-18, "Removal and Installation".
2. Disconnect low tire pressure warning control unit electrical connector.
3. Remove the lighting switch. Refer to EXL-119, "Removal and Installation".
4. Remove the low tire pressure warning control unit screw (A), using the access hole that was created by the removal of the lighting switch.
5. Remove the low tire pressure warning control unit.



INSTALLATION

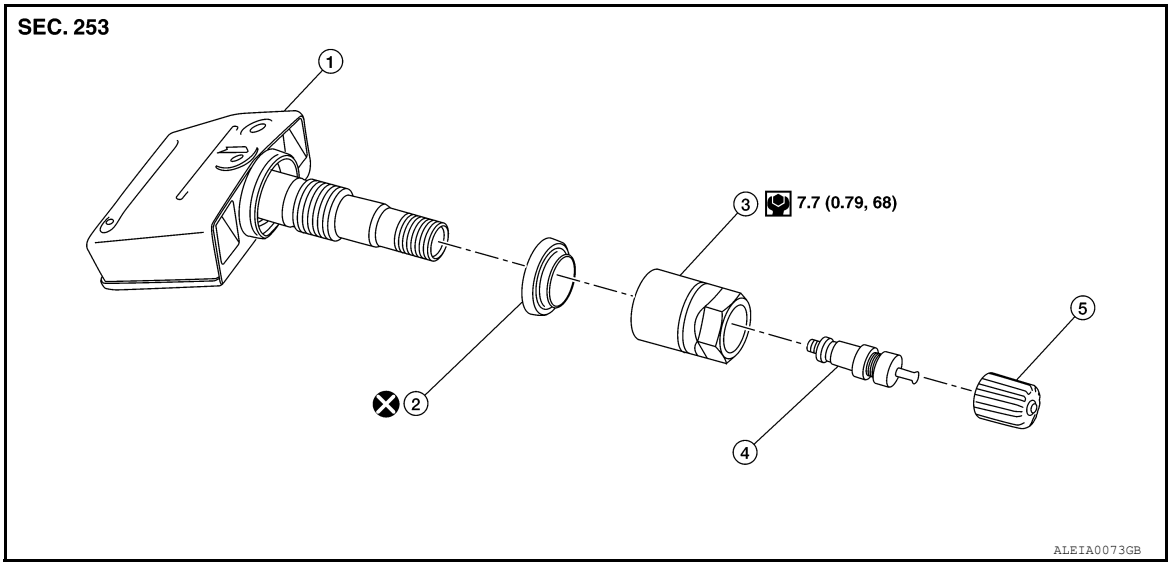
Installation is in the reverse order of removal.

- Perform transmitter ID registration after replacing low tire pressure warning control unit. Refer to WT-29, "Work Procedure".

TRANSMITTER

Exploded View

INFOID:0000000006918415



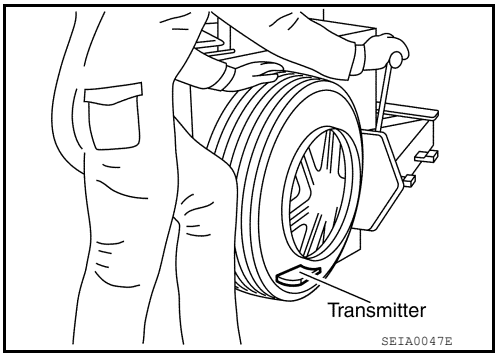
1. Transmitter
2. Grommet seal
3. Valve nut
4. Valve core
5. Cap

Removal and Installation

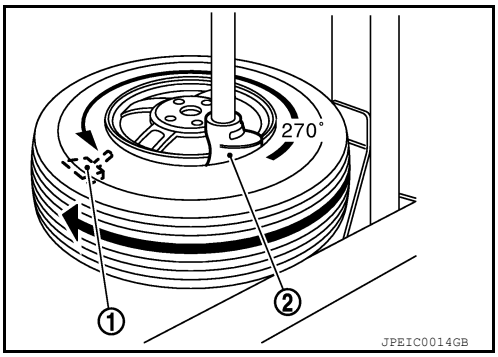
INFOID:0000000006918416

REMOVAL

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

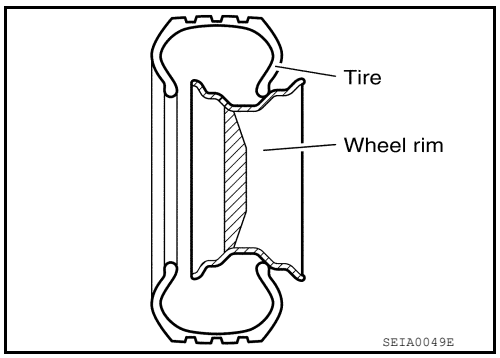


3. Turn tire so that valve hole is at bottom and bounce tire so that transmitter (1) is near valve hole. Carefully lift tire onto turntable and position valve hole (and transmitter) 270° from mounting/dismounting head (2).
4. Lubricate the tire well with a suitable non-silicone lubricant, and remove first side of the 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.

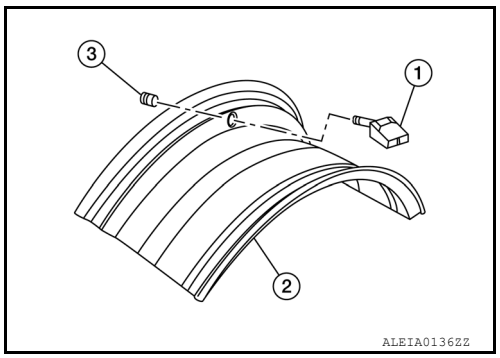


INSTALLATION

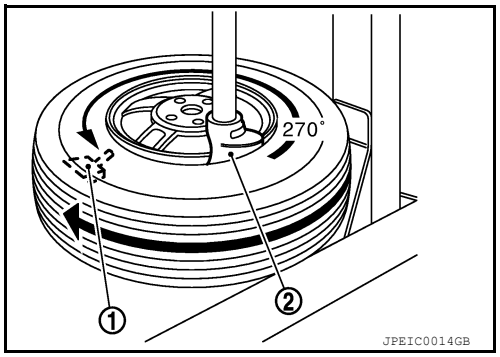
1. Put first side of tire onto rim.



2. Mount transmitter (1) on rim (2) and tighten nut (3).
CAUTION:
Do not reuse seal.



3. Place wheel on turntable of tire machine. Ensure that transmitter (1) is 270° from mounting head (2) when second side of tire is fitted.
NOTE:
Do not touch transmitter at mounting head.
4. Lubricate the tire well with a suitable non-silicone lubricant, and fit 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.
5. Inflate tire and fit to appropriate wheel position.



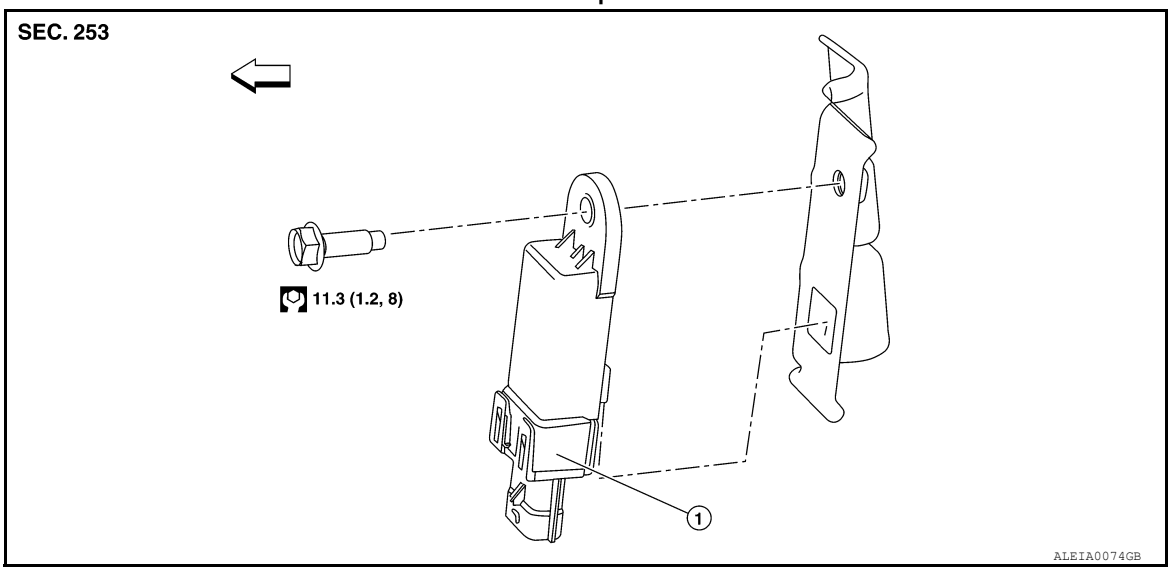
6. Perform the transmitter wake-up operation after replacing transmitter. Refer to WT-28, "Work Procedure".

TIRE PRESSURE RECEIVER

FRONT TIRE PRESSURE RECEIVER

FRONT TIRE PRESSURE RECEIVER : Exploded View

INFOID:0000000007257546



1. Front tire pressure receiver
⇦ Front

FRONT TIRE PRESSURE RECEIVER : Removal and Installation

INFOID:0000000006918418

REMOVAL

1. Remove the front fender protector. Refer to EXT-33, "Removal and Installation".
2. Disconnect front tire pressure receiver harness electrical connector.
3. Remove the front tire pressure receiver bolt.
4. Remove front tire pressure receiver.

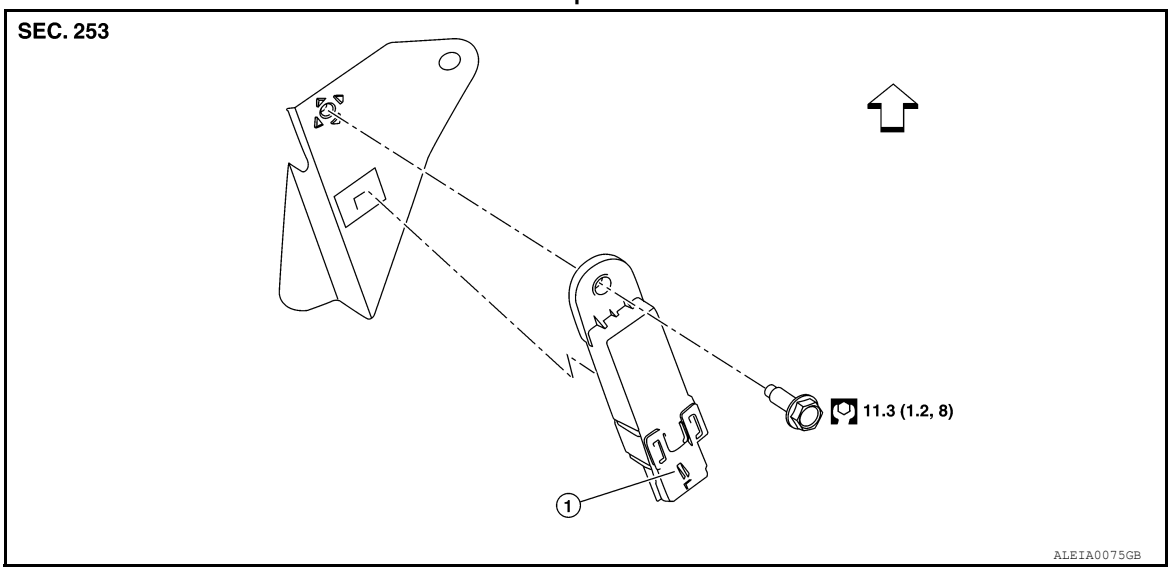
INSTALLATION

Installation is in the reverse order of removal.

REAR TIRE PRESSURE RECEIVER

REAR TIRE PRESSURE RECEIVER : Exploded View

INFOID:0000000007257547



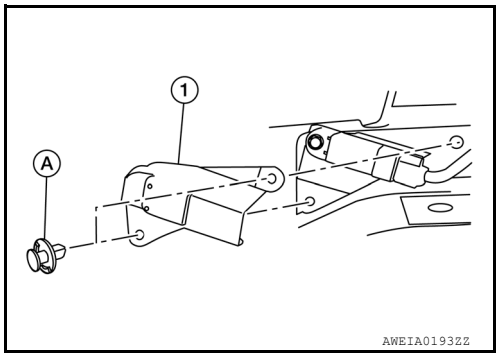
1. Rear tire pressure receiver
⇦ Front

REAR TIRE PRESSURE RECEIVER : Removal and Installation

INFOID:0000000006918419

REMOVAL

1. Remove the two clips (A) and the rear tire pressure receiver cover (1).
2. Disconnect the rear tire pressure receiver harness electrical connector.
3. Remove the rear tire pressure receiver bolt.
4. Remove rear tire pressure receiver.



INSTALLATION

Installation is in the reverse order of removal.

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Road Wheel

INFOID:0000000006749891

Item		Inside	Outside
Radial runout	Lateral mm (in)	0.8 (0.031) or less	0.8 (0.031) or less
	Vertical mm (in)	0.8 (0.031) or less	0.8 (0.031) or less
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:0000000006749892

Unit: kPa (kg/cm^2, psi)

Tire size	Air pressure			
	Conventional tire		Spare tire	
	Front	Rear	Front	Rear
LT245/70R17	350 (3.6, 50)	550 (5.6, 80)	350 (3.6, 50)	550 (5.6, 80)
LT245/75R17	350 (3.6, 50)	550 (5.6, 80)	350 (3.6, 50)	550 (5.6, 80)

* Maintain spare tire pressure at 550 (5.6, 80) and adjust pressure according to the mounting position on the vehicle.