

A
B
C
D

WT

SECTION

ROAD WHEELS & TIRES

WT

CONTENTS

SERVICE INFORMATION	2		
PRECAUTIONS	2	Self-Diagnosis	15
Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	2	How to Perform Trouble Diagnosis for Quick and Accurate Repair	17
PREPARATION	3	Preliminary Check	18
Special Service Tool	3	Flash Code/Symptom Chart	18
Commercial Service Tool	3	TROUBLE DIAGNOSIS FOR SELF-DIAGNOSTIC ITEMS	20
NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING	4	Data from Transmitter Not Being Received	20
NVH Troubleshooting Chart	4	Transmitter Malfunction	20
WHEEL	5	Transmitter Pressure Malfunction	21
Inspection	5	Vehicle Speed Signal	21
WHEEL AND TIRE ASSEMBLY	6	Ignition Signal	22
Balancing Wheels	6	TROUBLE DIAGNOSIS FOR SYMPTOMS	23
Rotation	7	Low Tire Pressure Warning Lamp Does Not Come On When Ignition Switch Is Turned On	23
LOW TIRE PRESSURE WARNING SYSTEM	8	Low Tire Pressure Warning Lamp Stays On When Ignition Switch Is Turned On	23
System Component	8	Low Tire Pressure Warning Lamp Flashes When Ignition Switch Is Turned On	24
System Description	8	Hazard Warning Lamps Flash When Ignition Switch Is Turned On	25
CAN COMMUNICATION	10	"TIRE PRESSURE" Information in Display Unit Does Not Exist	25
System Description	10	ID Registration Cannot Be Completed	25
TROUBLE DIAGNOSIS	11	REMOVAL AND INSTALLATION	26
Wiring Diagram- T/WARN -	11	Transmitter (Pressure Sensor)	26
Terminal and Reference Value (BCM)	12	SERVICE DATA AND SPECIFICATIONS (SDS)	28
ID Registration Procedure	12	Road Wheel	28
Transmitter Wake Up Operation	14	Tire	28
CONSULT-II Function (BCM)	15		

F
G
H
I
J
K
L
M
N
O
P

PRECAUTIONS

< SERVICE INFORMATION >

SERVICE INFORMATION

PRECAUTIONS

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

INFOID:000000003532685

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 SRS 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 SRS 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.

PREPARATION

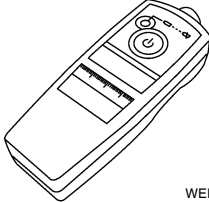
< SERVICE INFORMATION >

PREPARATION

Special Service Tool

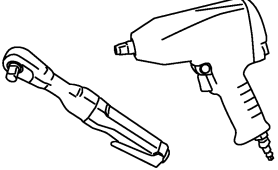
INFOID:000000003532686

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

Tool number (Kent-Moore No.) Tool name	Description
KV991B1000 (J-45295) Transmitter activation tool  WEIA0144E	<ul style="list-style-type: none">• Transmitter wake up operation• ID registration procedure

Commercial Service Tool

INFOID:000000003532687

Tool name	Description
Power tool  PBIC0190E	Removing wheel nuts

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

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

< SERVICE INFORMATION >

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:000000003532688

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

Symptom		Possible cause and SUSPECTED PARTS														Reference page		
Symptom	TIRES	Noise	x	x	x	x	x	x		x	x	x	x	x	x	x	x	WT-5 WT-6 WT-28 WT-7 — — WT-28 FFD-6, "NVH Troubleshooting Chart" (FFD), RFD-7, "NVH Troubleshooting Chart" (RFD) FAX-4, "NVH Troubleshooting Chart" (FAX), FSU-4, "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-4, "NVH Troubleshooting Chart" PS-5, "NVH Troubleshooting Chart"
		Shake	x	x	x	x	x	x	x		x	x	x	x	x	x	x	
		Vibration			x					x		x	x	x			x	
		Shimmy	x	x	x	x	x	x	x	x		x	x	x		x	x	
		Shudder	x	x	x	x	x	x		x		x	x	x		x	x	
	ROAD WHEEL	Poor quality ride or handling	x	x	x	x	x	x		x		x	x	x				
		Noise	x	x				x			x	x	x		x	x	x	
		Shake	x	x				x				x	x		x	x	x	
		Shimmy, shudder	x	x				x				x	x		x	x	x	
		Poor quality ride or handling	x	x				x				x	x		x			
		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			

x: Applicable

WHEEL

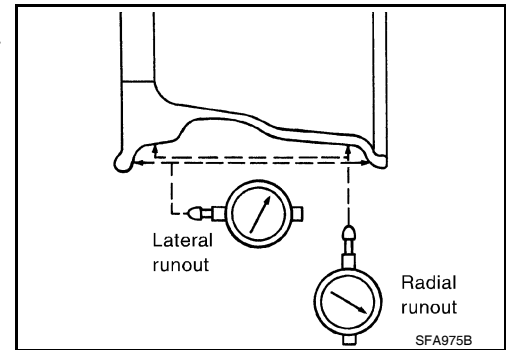
< SERVICE INFORMATION >

WHEEL

Inspection

INFOID:000000003532689

1. Check tires for wear and improper inflation.
2. Check wheels for deformation, cracks and other damage. If deformed, remove wheel and check wheel runout.
- a. Remove tire from wheel and mount wheel on a tire balance machine.
- b. Set dial indicator as shown. Refer to [WT-28, "Road Wheel"](#) .
3. Check front wheel bearings for looseness.
4. Check front suspension for looseness.



A

B

C

D

WT

F

G

H

I

J

K

L

M

N

O

P

WHEEL AND TIRE ASSEMBLY

< SERVICE INFORMATION >

WHEEL AND TIRE ASSEMBLY

Balancing Wheels

INFOID:000000003532690

Removal

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

CAUTION:

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

Wheel Balance Adjustment

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

1. Set wheel on wheel balancer using the center hole as a guide. Start the tire balance machine.
2. When inner and outer imbalance values are shown on the wheel balancer indicator, multiply outer imbalance value by 1.6 to determine balance weight that should be used. Select the outer balance weight with a value closest to the calculated value and install it to the designated outer position of, or at the designated angle in relation to the road wheel.

CAUTION:

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

Indicated imbalance value $\times 5/3 =$ balance weight to be installed

Calculation example:

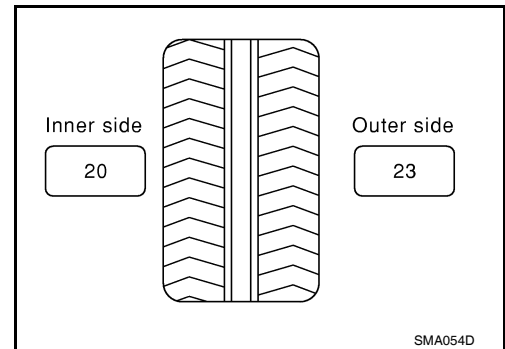
$23 \text{ g (0.81 oz)} \times 5/3 = 38.33 \text{ g (1.35 oz)} = 40 \text{ g (1.41 oz)}$ balance weight (closer to calculated balance weight value)

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

Example:

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

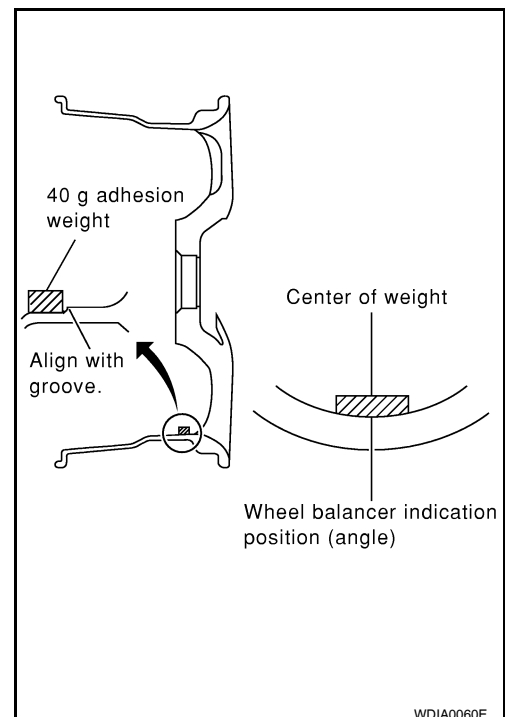
$37.5 \text{ g} = 40 \text{ g (1.41 oz)}$



- a. Install balance weight in the position shown.
- b. When installing balance weight to wheels, set it into the grooved area on the inner wall of the wheel as shown so that the balance weight center is aligned with the wheel balancer indication position (angle).

CAUTION:

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



WHEEL AND TIRE ASSEMBLY

< SERVICE INFORMATION >

- c. 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 of another.

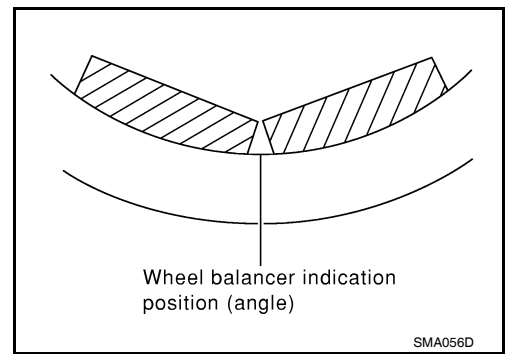
3. Start wheel balancer again.
4. Install drive-in balance weight on inner side of road wheel in the wheel balancer indication position (angle).

CAUTION:

Do not install more than two balance weights.

5. Start wheel balancer. Make sure that inner and outer residual imbalance values are 5 g (0.18 oz) each or below.
 - If either residual imbalance value exceeds 5 g (0.18 oz), repeat installation procedures.

Wheel balance (Maximum allowable imbalance):



Maximum allowable imbalance	Dynamic (At rim flange)	5 g (0.18 oz) (one side)
	Static	10 g (0.35 oz)

Rotation

INFOID:000000003532691

NOTE:

Follow the maintenance schedule for tire rotation service intervals. Refer to [MA-6](#).

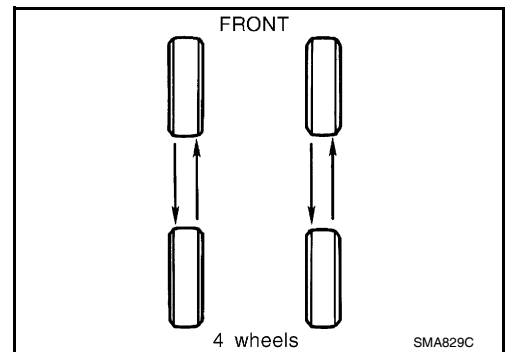
1. Rotate the tires on each side from front to back as shown. Do not include the spare tire when rotating the tires.

Wheel nut torque : 133 N·m (14 kg-m, 98 ft-lb)

CAUTION:

When installing wheels, tighten them diagonally by dividing the work two to three times in order to prevent the wheels from developing any distortion.

2. Adjust the tire pressure to specification. Refer to [WT-28. "Tire"](#).
3. After the tire rotation, retighten the wheel nuts after the vehicle has been driven for 1,000 km (600 miles), and also after every wheel and tire have been installed such as after repairing a flat tire.



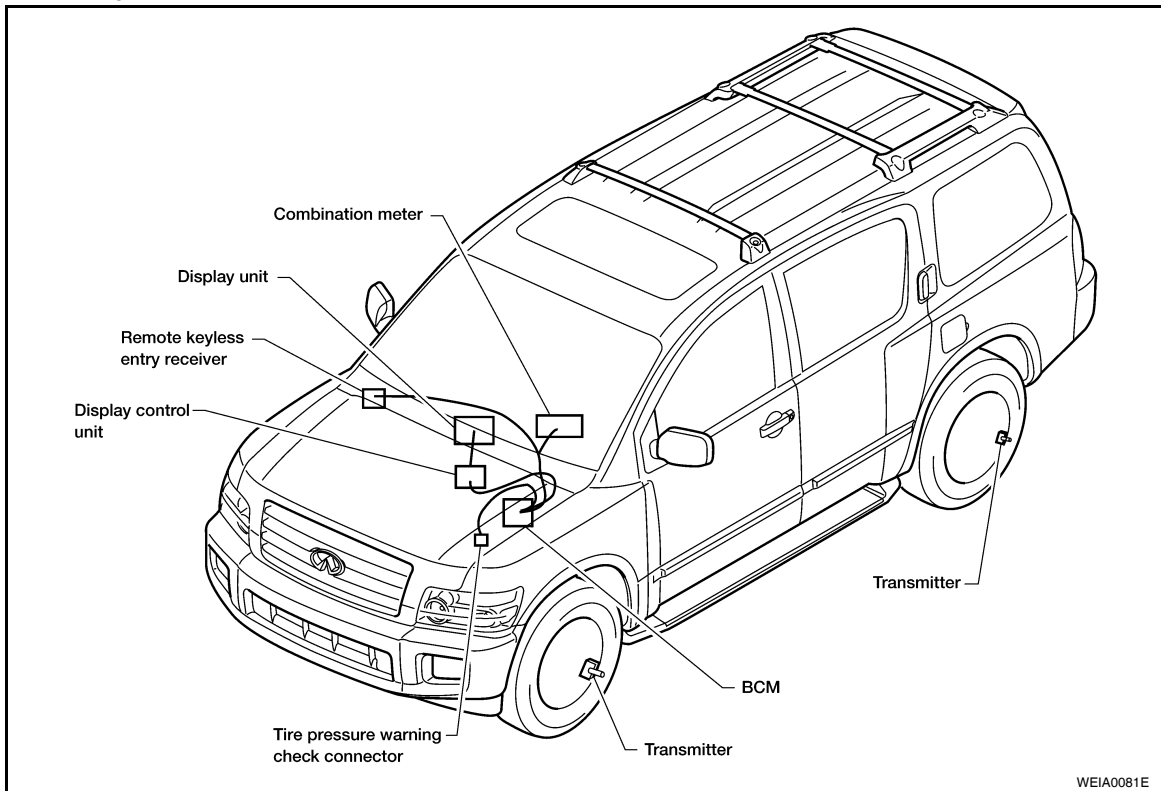
LOW TIRE PRESSURE WARNING SYSTEM

< SERVICE INFORMATION >

LOW TIRE PRESSURE WARNING SYSTEM

System Component

INFOID:000000003532692



WEIA0081E

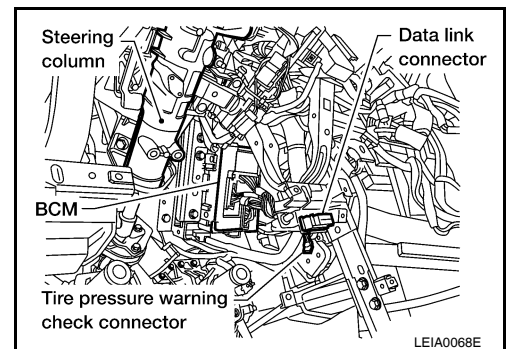
System Description

INFOID:000000003532693

BODY CONTROL MODULE (BCM)

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

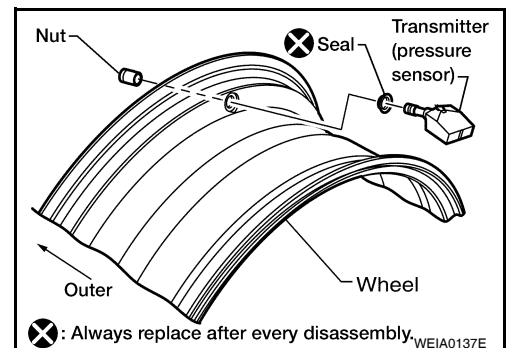
Condition	Low tire pressure warning lamp
System normal	On for 1 second after ignition ON
Tire less than 193 kPa (2.0 kg/cm ² , 28 psi) [Flat tire]	ON
Low tire pressure warning system malfunction	After key ON, flashes once per second for 1 minute, then stays ON



LEIA0068E

TRANSMITTER

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



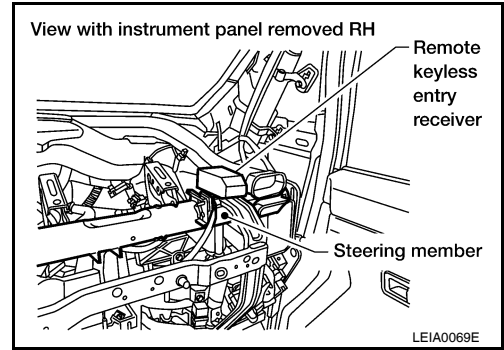
WEIA0137E

LOW TIRE PRESSURE WARNING SYSTEM

< SERVICE INFORMATION >

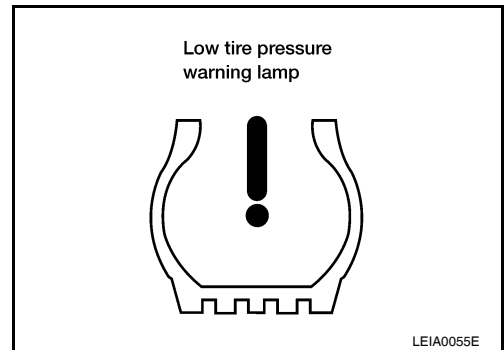
REMOTE KEYLESS ENTRY RECEIVER

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



COMBINATION METER

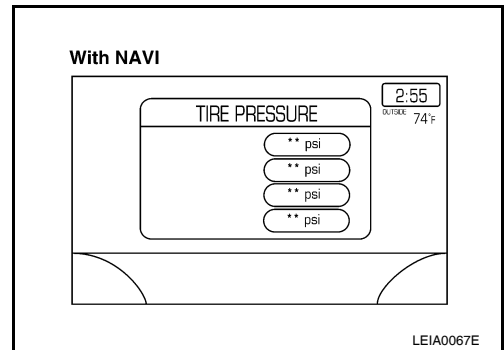
The combination meter receives tire pressure status from the BCM using CAN communication. When a low tire pressure condition is sensed by the BCM, the combination meter low tire pressure warning lamp is activated.



DISPLAY UNIT

Displays the air pressure of each tire.

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



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

CAN COMMUNICATION

< SERVICE INFORMATION >

CAN COMMUNICATION

System Description

INFOID:000000003532694

Refer to [LAN-4](#) .

TROUBLE DIAGNOSIS

< SERVICE INFORMATION >

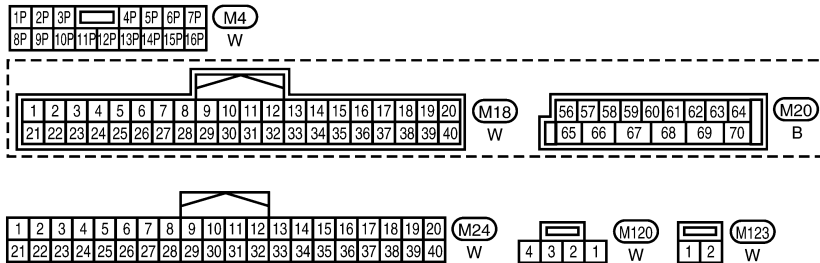
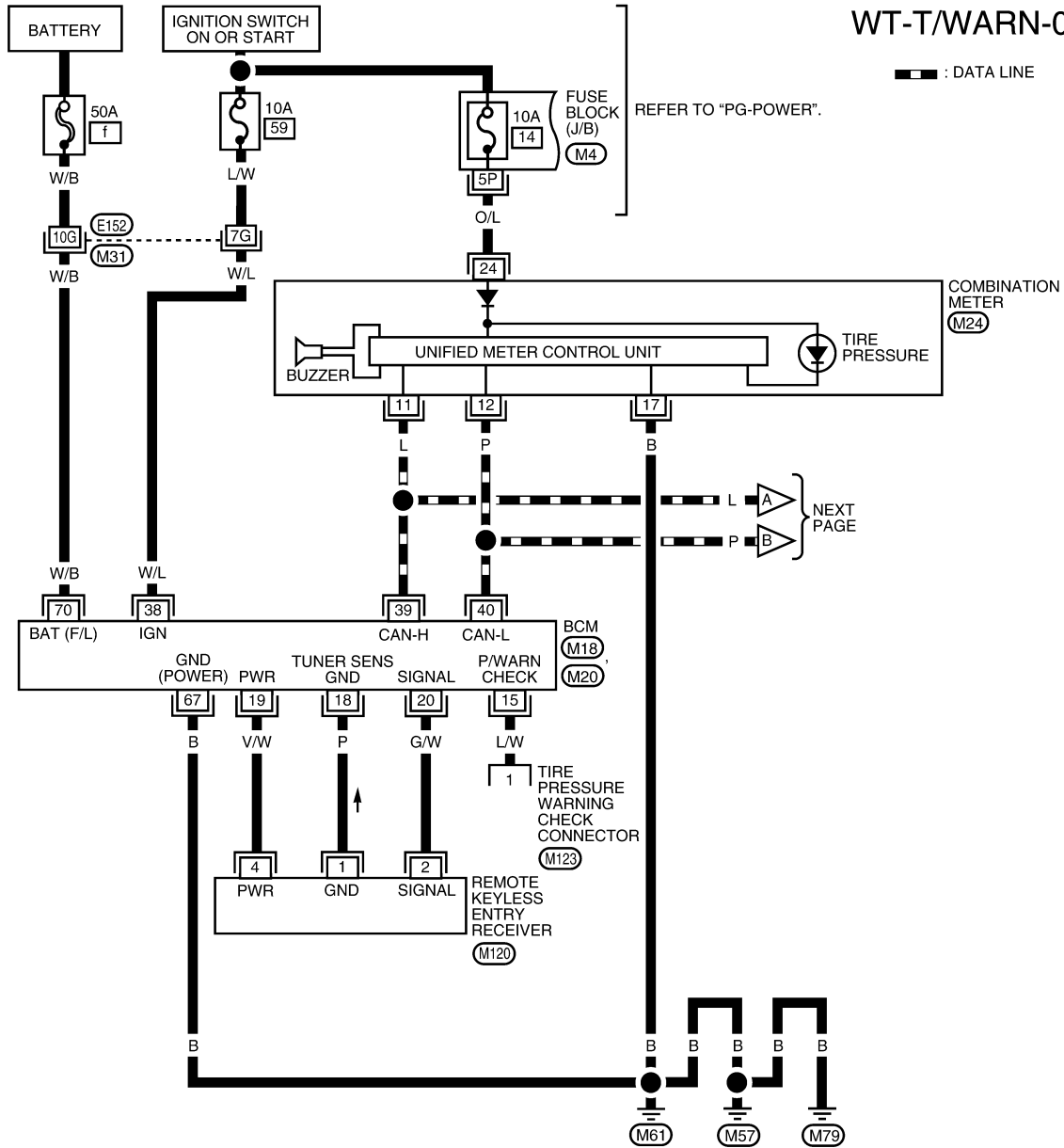
TROUBLE DIAGNOSIS

Wiring Diagram- T/WARN -

INFOID:000000003532695

WT-T/WARN-01

— : DATA LINE



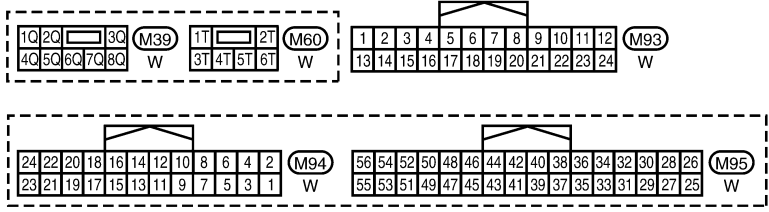
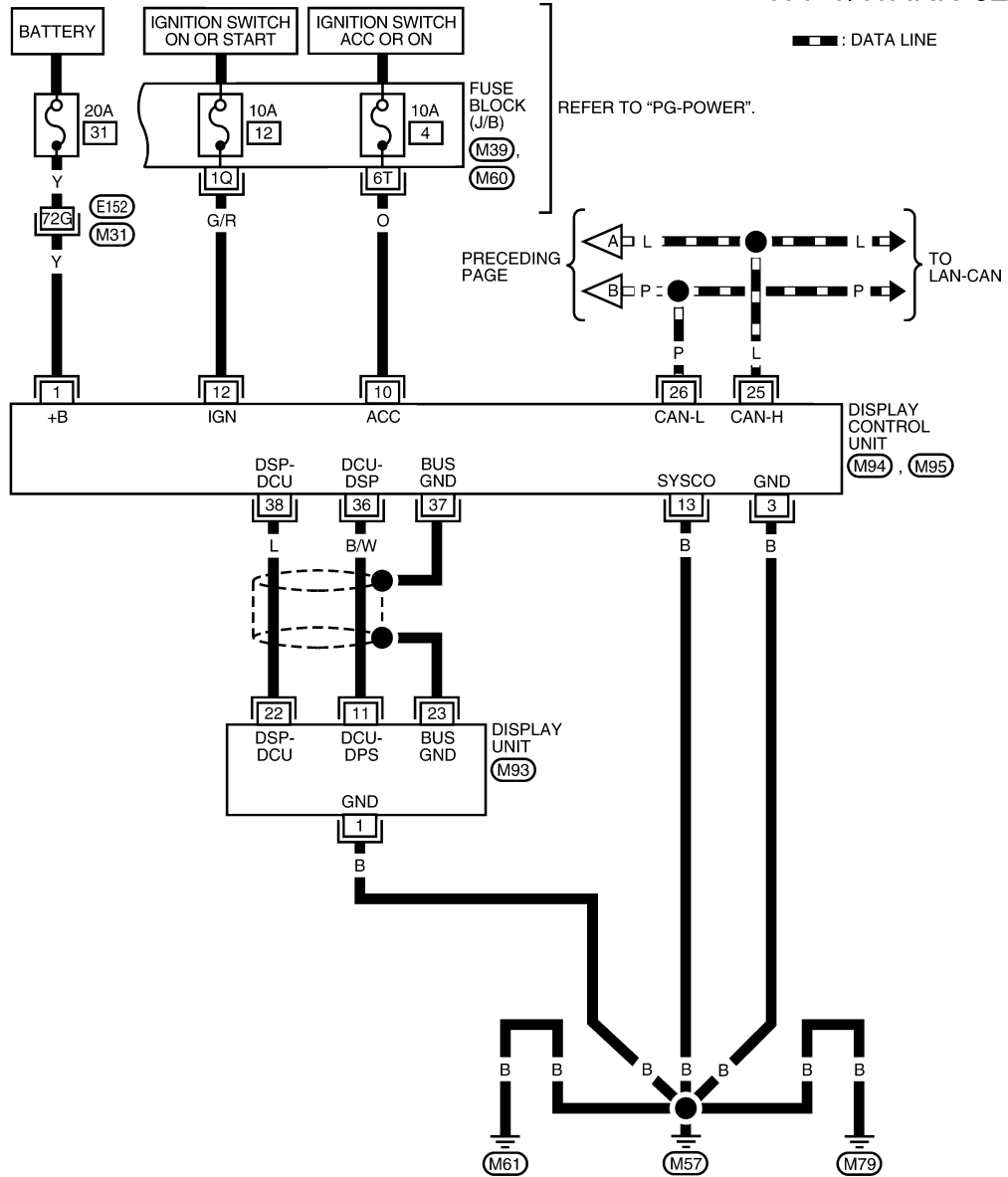
REFER TO THE FOLLOWING.
 (M31) - SUPER
 MULTIPLE JUNCTION (SMJ)

WEWA0047E

TROUBLE DIAGNOSIS

< SERVICE INFORMATION >

WT-T/WARN-02



REFER TO THE FOLLOWING
(M31) - SUPER MULTIPLE
JUNCTION (SMJ)

Terminal and Reference Value (BCM)

Refer to [BCS-11, "Terminal and Reference Value for BCM"](#).

ID Registration Procedure

ID REGISTRATION WITH TRANSMITTER ACTIVATION TOOL

NOTE:

WEWA0048E

INFOID:000000003532696

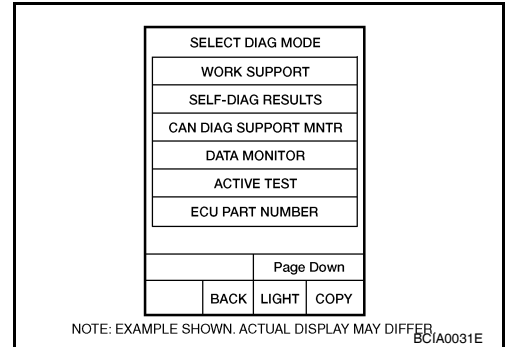
INFOID:000000003532697

TROUBLE DIAGNOSIS

< SERVICE INFORMATION >

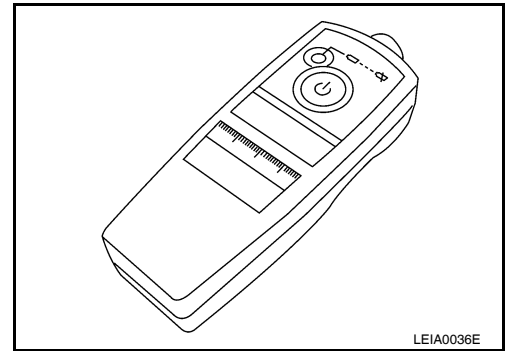
This procedure must be done after replacement of a low tire pressure warning transmitter or BCM. New replacement transmitters are provided "asleep" and must first be "woken up" using Transmitter Activation Tool J-45295 before ID registration can be performed.

1. Connect CONSULT-II. Refer to [GI-36, "CONSULT-II Start Procedure"](#).
2. Select "AIR PRESSURE MONITOR" on "SELECT TEST ITEM" screen.
3. Select "WORK SUPPORT" on "SELECT DIAG MODE" screen, and select "ID REGIST".



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

Tool number : (J-45295)



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

Activation tire position		Buzzer	Hazard warning lamp	CONSULT-II
1	Front LH	Once	2 times flashing	"YET" ↓ "DONE"
2	Front RH	2 times		
3	Rear RH	3 times		
4	Rear LH	4 times		

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

NOTE:

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

ID REGISTRATION WITHOUT TRANSMITTER ACTIVATION TOOL

NOTE:

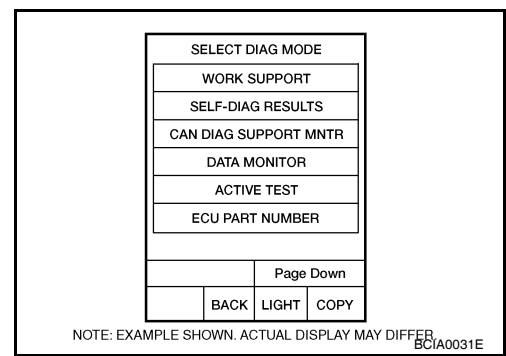
This procedure must be done after replacement of a low tire pressure warning transmitter or BCM. New replacement transmitters are provided "asleep" and must first be "woken up" using Transmitter Activation Tool J-45295 before ID registration can be performed.

1. Connect CONSULT-II. Refer to [GI-36, "CONSULT-II Start Procedure"](#).
2. Select "AIR PRESSURE MONITOR" on "SELECT TEST ITEM" screen.

TROUBLE DIAGNOSIS

< SERVICE INFORMATION >

3. Select "WORK SUPPORT" on "SELECT DIAG MODE" screen, and select "ID REGIST".
4. Adjust the tire pressure to the values shown in the table below and drive the vehicle at 15 km/h (9.4 MPH) or more for a few minutes.



Tire position	Tire pressure kPa (kg/cm ² , psi)
Front – Left	250 (2.5, 36)
Front – Right	230 (2.3, 33)
Rear – Right	210 (2.1, 30)
Rear – Left	190 (1.9, 27)

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

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

6. Inflate all tires to proper pressure. Refer to [WT-28. "Tire"](#).

Transmitter Wake Up Operation

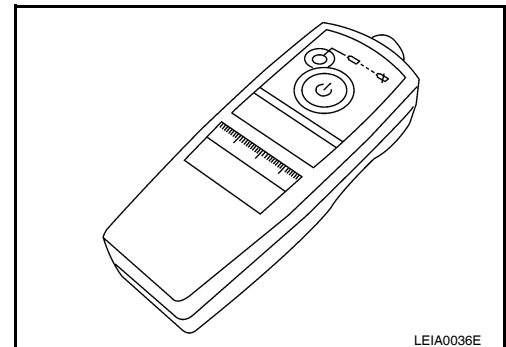
INFOID:000000003532698

NOTE:

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

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

Tool number : (J-45295)

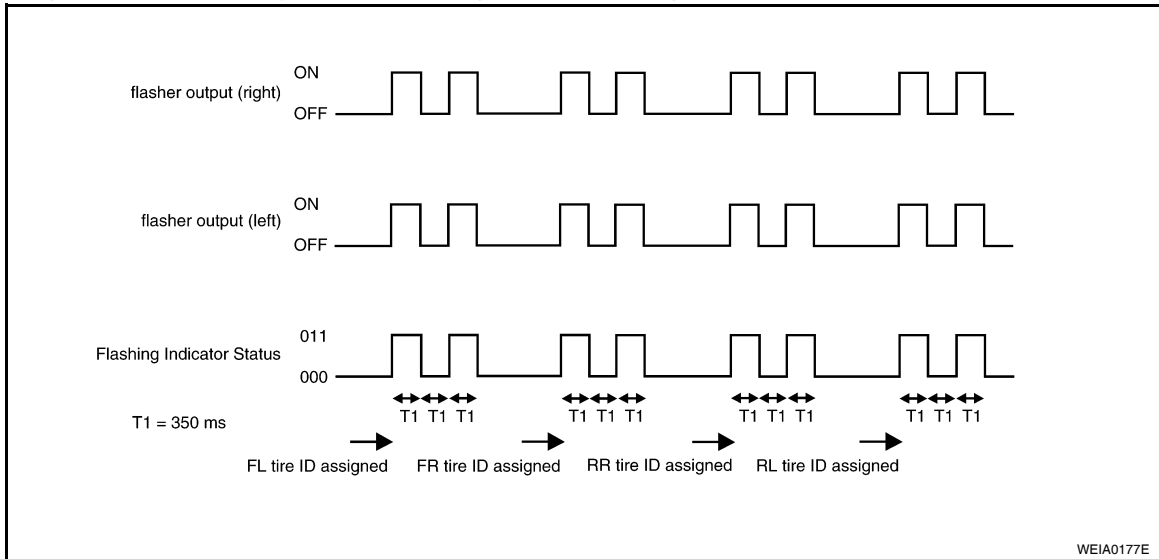


2. Repeat this procedure for each tire in the following order: FL, FR, RR, RL.

TROUBLE DIAGNOSIS

< SERVICE INFORMATION >

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



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

CONSULT-II Function (BCM)

INFOID:000000003532699

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

BCM diagnostic test item	Diagnostic mode	Description
Inspection by part	WORK SUPPORT	Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received data is displayed.
	DATA MONITOR	Displays BCM input/output data in real time.
	ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.
	SELF-DIAG RESULTS	Displays BCM self-diagnosis results.
	CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.
	ECU PART NUMBER	BCM part number can be read.
	CONFIGURATION	Performs BCM configuration read/write functions.

Self-Diagnosis

INFOID:000000003532700

DESCRIPTION

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

FUNCTION

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

CONSULT-II Application to Low Tire Pressure Warning System

ITEM	SELF-DIAGNOSTIC RESULTS	DATA MONITOR
Front - Left transmitter	×	×
Front - Right transmitter	×	×

TROUBLE DIAGNOSIS

< SERVICE INFORMATION >

ITEM	SELF-DIAGNOSTIC RESULTS	DATA MONITOR
Rear - Left transmitter	×	×
Rear - Right transmitter	×	×
Warning lamp	—	×
Vehicle speed	×	×
Buzzer (in combination meter)	—	×
CAN Communication	×	×

× : Applicable

— : Not applicable

Self-Diagnostic Results Mode

Diagnostic item		Diagnostic item is detected when ...	Reference page
Program card UED06A or earlier	Program card UED06B or later		
FLAT - TIRE - FL [C1704] FLAT - TIRE - FR [C1705] FLAT - TIRE - RR [C1706] FLAT - TIRE - RL [C1707]	LOW - PRESSURE - FL [C1704] LOW - PRESSURE - FR [C1705] LOW - PRESSURE - RR [C1706] LOW - PRESSURE - RL [C1707]	FL tire pressure 193 kPa (2.0 kg/cm ² , 28 psi) or less FR tire pressure 193 kPa (2.0 kg/cm ² , 28 psi) or less RR tire pressure 193 kPa (2.0 kg/cm ² , 28 psi) or less RL tire pressure 193 kPa (2.0 kg/cm ² , 28 psi) or less	—
[NO-DATA] - FL [C1708] [NO-DATA] - FR [C1709] [NO-DATA] - RR [C1710] [NO-DATA] - RL [C1711]		Data from FL transmitter cannot be received. Data from FR transmitter cannot be received. Data from RR transmitter cannot be received. Data from RL transmitter cannot be received.	WT-20
[CHECKSUM- ERR] - FL [C1712] [CHECKSUM- ERR] - FR [C1713] [CHECKSUM- ERR] - RR [C1714] [CHECKSUM- ERR] - RL [C1715]		Checksum data from FL transmitter is malfunctioning. Checksum data from FR transmitter is malfunctioning. Checksum data from RR transmitter is malfunctioning. Checksum data from RL transmitter is malfunctioning.	WT-20
[PRESSDATA- ERR] - FL [C1716] [PRESSDATA- ERR] - FR [C1717] [PRESSDATA- ERR] - RR [C1718] [PRESSDATA- ERR] - RL [C1719]		Air pressure data from FL transmitter is malfunctioning. Air pressure data from FR transmitter is malfunctioning. Air pressure data from RR transmitter is malfunctioning. Air pressure data from RL transmitter is malfunctioning.	WT-21
[CODE- ERR] - FL [C1720] [CODE- ERR] - FR [C1721] [CODE- ERR] - RR [C1722] [CODE- ERR] - RL [C1723]		Function code data from FL transmitter is malfunctioning. Function code data from FR transmitter is malfunctioning. Function code data from RR transmitter is malfunctioning. Function code data from RL transmitter is malfunctioning.	WT-20
[BATT - VOLT - LOW] - FL [C1724] [BATT - VOLT - LOW] - FR [C1725] [BATT - VOLT - LOW] - RR [C1726] [BATT - VOLT - LOW] - RL [C1727]		Battery voltage of FL transmitter drops. Battery voltage of FR transmitter drops. Battery voltage of RR transmitter drops. Battery voltage of RL transmitter drops.	WT-20
VHCL_SPEED_SIG_ERR [C1729]		Vehicle speed signal is in error.	WT-21
IGN_CIRCUIT_OPEN [C1735]		Vehicle ignition signal is in error.	WT-22

NOTE:

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

Data Monitor Mode

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

TROUBLE DIAGNOSIS

< SERVICE INFORMATION >

MONITOR	CONDITION	SPECIFICATION
ID REGST FL1 ID REGST FR1 ID REGST RR1 ID REGST RL1	Ignition switch ON	Registration ID: DONE No registration ID: YET
WARNING LAMP		Low tire pressure warning lamp on: ON Low tire pressure warning lamp off: OFF
BUZZER		Buzzer in combination meter on: ON Buzzer in combination meter off: OFF

NOTE:

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

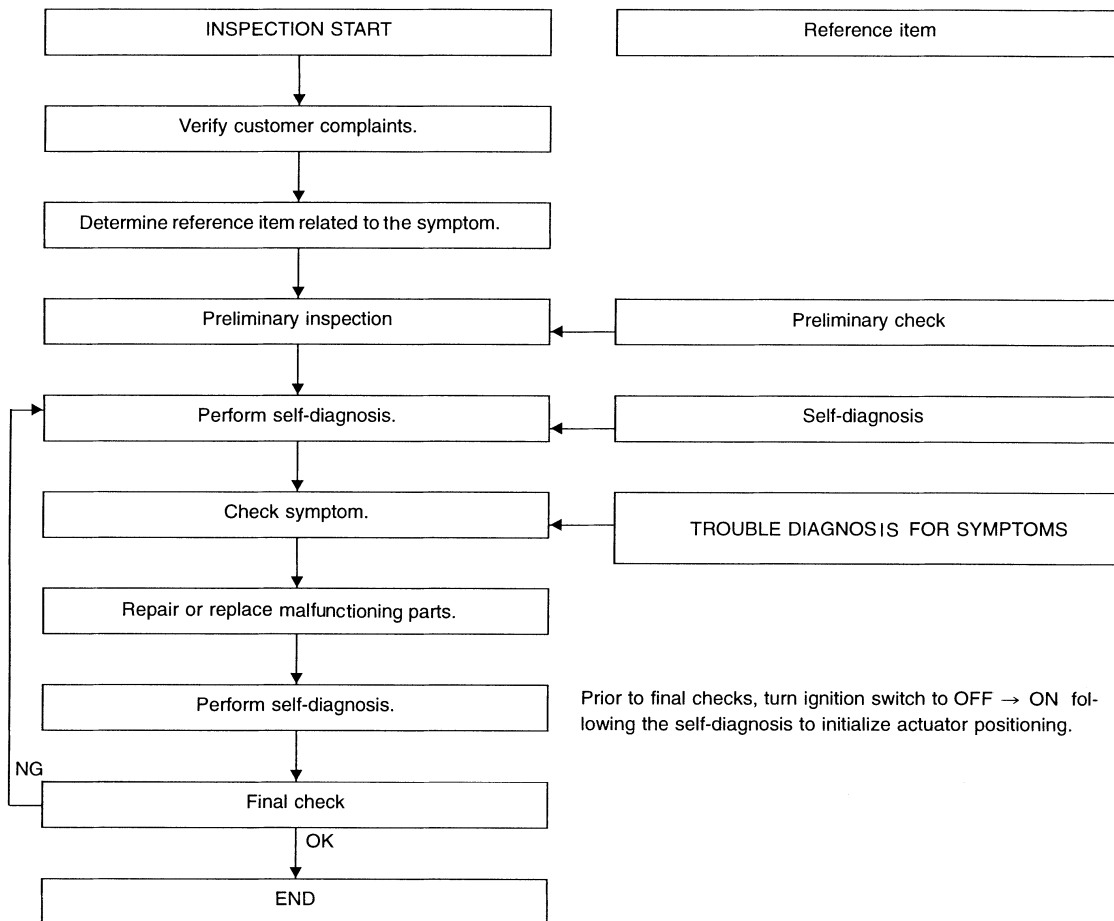
How to Perform Trouble Diagnosis for Quick and Accurate Repair

INFOID:000000003532701

INTRODUCTION

- Before troubleshooting, verify customer complaints.
- If a vehicle malfunction is difficult to reproduce, harnesses, harness connectors or terminals may be malfunctioning. Hold and shake these parts to make sure they are securely connected.
- When using a circuit tester to measure voltage or resistance of each circuit, be careful not to damage or deform connector terminals.

WORK FLOW



TROUBLE DIAGNOSIS

< SERVICE INFORMATION >

Preliminary check: [WT-18](#) Self-diagnosis: [WT-15](#) Trouble diagnosis for symptoms: [WT-23](#)

Preliminary Check

INFOID:000000003532702

BASIC INSPECTION

1.CHECK ALL TIRE PRESSURES

Check all tire pressures. Refer to [WT-28, "Tire"](#).

OK or NG

OK >> GO TO 2.

NG >> Adjust tire pressure to specified value.

2.CHECK LOW TIRE PRESSURE WARNING LAMP ACTIVATION

Check low tire pressure warning lamp activation.

Does warning lamp activate for 1 second when ignition switch is turned ON?

YES >> GO TO 3.

NO >> GO TO [WT-23, "Low Tire Pressure Warning Lamp Does Not Come On When Ignition Switch Is Turned On"](#).

3.CHECK BCM CONNECTOR

1. Disconnect BCM harness connector.
2. Check terminals for damage or loose connection.
3. Reconnect harness connector.

OK or NG

OK >> GO TO 4.

NG >> Repair or replace damaged parts.

4.CHECK TRANSMITTER ACTIVATION TOOL

Check transmitter activation tool battery.

OK or NG

OK >> Carry out self-diagnosis.

NG >> Replace battery in transmitter activation tool.

Flash Code/Symptom Chart

INFOID:000000003532703

Flash Code or Symptom	Malfunction part	Reference page
15 16 17 18	FL tire pressure drops to 193 kPa (2.0 kg/cm ² , 28 psi) or less FR tire pressure drops to 193 kPa (2.0 kg/cm ² , 28 psi) or less RR tire pressure drops to 193 kPa (2.0 kg/cm ² , 28 psi) or less RL tire pressure drops to 193 kPa (2.0 kg/cm ² , 28 psi) or less	—
21 22 23 24	Transmitter no data (FL) Transmitter no data (FR) Transmitter no data (RR) Transmitter no data (RL)	WT-20
31 32 33 34	Transmitter checksum error (FL) Transmitter checksum error (FR) Transmitter checksum error (RR) Transmitter checksum error (RL)	WT-20
35 36 37 38	Transmitter pressure data error (FL) Transmitter pressure data error (FR) Transmitter pressure data error (RR) Transmitter pressure data error (RL)	WT-21

TROUBLE DIAGNOSIS

< SERVICE INFORMATION >

Flash Code or Symptom	Malfunction part	Reference page
41	Transmitter function code error (FL)	WT-20
42	Transmitter function code error (FR)	
43	Transmitter function code error (RR)	
44	Transmitter function code error (RL)	
45	Transmitter battery voltage low (FL)	WT-20
46	Transmitter battery voltage low (FR)	
47	Transmitter battery voltage low (RR)	
48	Transmitter battery voltage low (RL)	
52	Vehicle speed signal	WT-21
54	Vehicle ignition signal	WT-22
Low tire pressure warning lamp does not come on when ignition switch is turned on.	<ul style="list-style-type: none"> • Fuse or combination meter • BCM connector or circuit • BCM 	WT-23
Low tire pressure warning lamp stays on when ignition switch is turned on.	<ul style="list-style-type: none"> • Combination meter • BCM connector or circuit • BCM 	WT-23
Low tire pressure warning lamp flashes when ignition switch is turned on.	<ul style="list-style-type: none"> • BCM harness connector or circuit • BCM • Transmitter's mode off • ID registration not completed yet 	WT-24
Hazard warning lamps flash when ignition switch is turned on.	<ul style="list-style-type: none"> • BCM harness connector or circuit • BCM 	WT-25
ID registration cannot be completed.	<ul style="list-style-type: none"> • Transmitter • Remote keyless entry receiver harness connector or circuit • Remote keyless entry receiver • BCM harness connector or circuit • BCM 	WT-25

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

TROUBLE DIAGNOSIS FOR SELF-DIAGNOSTIC ITEMS

< SERVICE INFORMATION >

TROUBLE DIAGNOSIS FOR SELF-DIAGNOSTIC ITEMS

Data from Transmitter Not Being Received

INFOID:000000003532704

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

1. CHECK BCM

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

Are all tire pressures displayed as 0 kPa?

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

2. CHECK REMOTE KEYLESS ENTRY RECEIVER CONNECTOR

Check remote keyless entry receiver connector for damage or loose connections.

OK or NG

- OK >> Replace BCM, then GO TO 3. Refer to [BCS-24, "BCM"](#).
- NG >> Repair or replace remote keyless entry receiver connector.

3. PERFORM ID REGISTRATION

Carry out ID registration of all transmitters. Refer to [WT-12, "ID Registration Procedure"](#).

Is there a tire that cannot register ID?

- YES >> Replace transmitter of the tire, then GO TO 5. Refer to [WT-26, "Transmitter \(Pressure Sensor\)"](#).
- NO >> GO TO 4.

4. DRIVE VEHICLE

1. Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping.
2. Check all tire pressures with CONSULT-II within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).

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

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

5. ID REGISTRATION AND VEHICLE DRIVING

1. Carry out ID registration of all transmitters. Refer to [WT-12, "ID Registration Procedure"](#).
2. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
3. Check all tire pressures with CONSULT-II within 5 minutes.

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

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

Transmitter Malfunction

INFOID:000000003532705

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

1. PERFORM ID REGISTRATION

1. Carry out ID registration of all transmitters. Refer to [WT-12, "ID Registration Procedure"](#).
2. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.

>> GO TO 2.

2. REPLACE TRANSMITTER

1. Check low tire pressure warning lamp again for flashing, replace malfunctioning transmitter. Refer to [WT-26, "Transmitter \(Pressure Sensor\)"](#).
2. Carry out ID registration of all transmitters. Refer to [WT-12, "ID Registration Procedure"](#).

TROUBLE DIAGNOSIS FOR SELF-DIAGNOSTIC ITEMS

< SERVICE INFORMATION >

Can ID registration of all transmitters be completed?

YES >> GO TO 3.

NO >> GO TO [WT-20. "Data from Transmitter Not Being Received"](#).

3.DRIVE VEHICLE

1. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.

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

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

YES >> Inspection End.

NO >> Replace malfunctioning transmitter, and perform Step 3 again. Refer to [WT-26. "Transmitter \(Pressure Sensor\)"](#).

Transmitter Pressure Malfunction

INFOID:000000003532706

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

1.CHECK ALL TIRE PRESSURES

Check all tire pressures. Refer to [WT-28. "Tire"](#).

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

YES >> Adjust tire pressure to specified value.

NO >> GO TO 2.

2.ID REGISTRATION AND VEHICLE DRIVING

1. Carry out ID registration of all transmitters. Refer to [WT-12. "ID Registration Procedure"](#).

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

3. Check all tire pressures with CONSULT-II within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).

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

YES >> Replace transmitter. Refer to [WT-26. "Transmitter \(Pressure Sensor\)"](#). GO TO 3.

NO >> GO TO 3.

3.ID REGISTRATION AND VEHICLE DRIVING

1. Carry out ID registration of all transmitters. Refer to [WT-12. "ID Registration Procedure"](#).

2. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.

3. Check all tire pressures with CONSULT-II within 5 minutes.

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

YES >> Inspection End.

NO >> GO TO the inspection applicable to DTC.

Vehicle Speed Signal

INFOID:000000003532707

MALFUNCTION CODE NO. 52 (DTC C1729)

1.SELF-DIAGNOSTIC RESULT CHECK

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

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

YES >> Malfunction in CAN communication system. GO TO [LAN-40](#).

NO >> GO TO 2.

2.CHECK BCM

Perform BCM diagnosis. Refer to [BCS-16. "CONSULT-II Function \(BCM\)"](#).

Inspection results OK?

OK >> Perform Vehicle Speed Sensor Inspection. Refer to [AT-107. "Diagnosis Procedure"](#).

NG >> Replace BCM. Refer to [BCS-24. "BCM"](#).

TROUBLE DIAGNOSIS FOR SELF-DIAGNOSTIC ITEMS

< SERVICE INFORMATION >

Ignition Signal

INFOID:000000003585170

MALFUNCTION CODE NO. 54 (DTC C1735)

1.CAN IGNITION SIGNAL

Check BCM IGN RLY signal with CONSULT-II.

Are the inspection results normal with the ignition switch ON?

YES >> GO TO 2.

NO >> Check CAN system.

2.BCM POWER SUPPLY

Check BCM power supply (ignition ON). Refer to [BCS-15. "BCM Power Supply and Ground Circuit Inspection"](#).

Is the power supply with the ignition switch ON normal?

YES >> GO TO 3.

NO >> Repair power supply as necessary.

3.DRIVE VEHICLE

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

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

YES >> Inspection End.

NO >> Replace BCM. Refer to [BCS-24. "BCM"](#).

TROUBLE DIAGNOSIS FOR SYMPTOMS

< SERVICE INFORMATION >

TROUBLE DIAGNOSIS FOR SYMPTOMS

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

INFOID:000000003532708

DIAGNOSTIC PROCEDURE

1.SELF-DIAGNOSTIC RESULT CHECK

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

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

- YES >> Malfunction in CAN communication system. GO TO [LAN-40](#).
- NO >> GO TO 2.

2.CHECK COMBINATION METER

Check combination meter operation. Refer to [DI-12, "Self-Diagnosis Mode of Combination Meter"](#).

Inspection results OK?

- OK >> GO TO 3.
- NG >> Replace combination meter. Refer to [IP-10, "Removal and Installation"](#).

3.CHECK LOW TIRE PRESSURE WARNING LAMP

Disconnect BCM harness connector.

Does the low tire pressure warning lamp activate?

- YES >> Replace BCM. Refer to [BCS-24, "BCM"](#).
- NO >> Check combination meter operation. Refer to [DI-12, "Self-Diagnosis Mode of Combination Meter"](#).

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

INFOID:000000003532709

DIAGNOSTIC PROCEDURE

1.CHECK BCM CONNECTORS

1. Turn ignition switch OFF.
2. Disconnect BCM harness connectors M18 and M20.
3. Check terminals for damage or loose connections.

Inspection results OK?

- OK >> GO TO 2.
- NG >> Repair or replace damaged parts.

2.CHECK BCM POWER SUPPLY CIRCUIT (BAT)

Check voltage between BCM harness connector M20 terminal 70 and ground.

1.

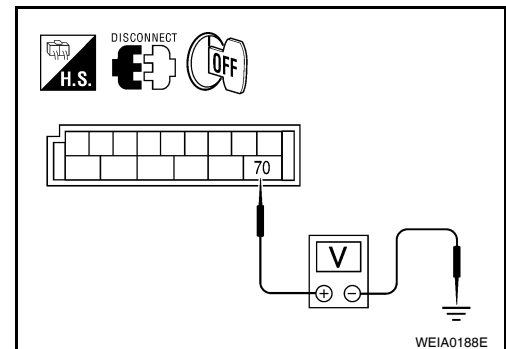
Terminals		Voltage (Approx.)
(+)	(-)	
Connector	Terminal	Ground
M20	70	Battery voltage

OK or NG

- OK >> GO TO 3.
- NG >> Check BCM power supply circuit for open or short.

3.CHECK BCM POWER SUPPLY CIRCUIT (IGN)

1. Turn ignition switch ON.
2. Check voltage between BCM harness connector M18 terminal 38 and ground.



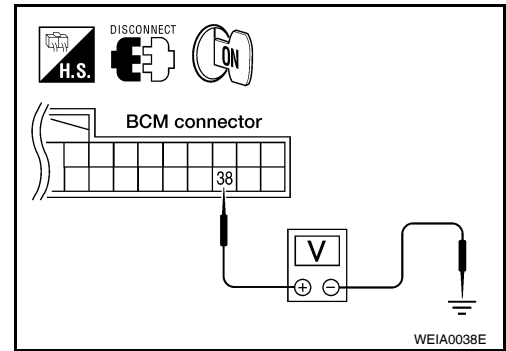
TROUBLE DIAGNOSIS FOR SYMPTOMS

< SERVICE INFORMATION >

Terminals		Voltage (Approx.)
(+)	(-)	
Connector	Terminal	Ground
M18	38	
		Battery voltage

OK or NG

- OK >> GO TO 4.
- NG >> Check BCM power supply circuit for open or short.



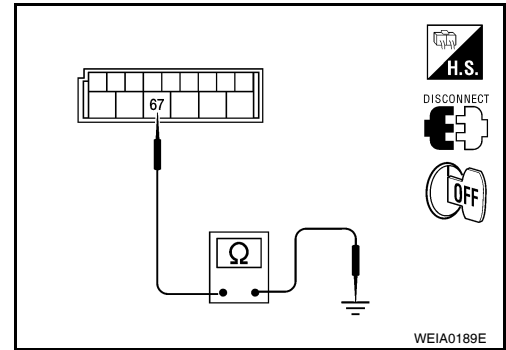
4.CHECK BCM GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between BCM harness connector M20 terminal 67 and ground.

Terminals		Continuity
(+)	(-)	
Connector	Terminal	Ground
M20	67	
		Yes

OK or NG

- OK >> Replace BCM. Refer to [BCS-24, "BCM"](#).
- NG >> Repair BCM ground circuit.



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

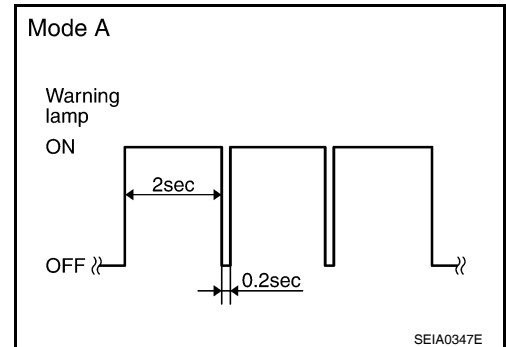
INFOID:000000003532710

NOTE:

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

Flash Mode A

- This mode shows transmitter status is OFF-mode. Carry out transmitter wake up operation. Refer to [WT-14, "Transmitter Wake Up Operation"](#).



DIAGNOSTIC PROCEDURE

1.CHECK BCM CONNECTORS

1. Turn ignition switch OFF.
2. Disconnect BCM harness connectors M18 and M20.
3. Check terminals for damage or loose connections.

Inspection results OK?

- OK >> GO TO 2.
- NG >> Repair or replace damaged parts.

2.CHECK TIRE PRESSURE WARNING CHECK CONNECTOR CIRCUIT

Check continuity between BCM harness connector M18 terminal 15 and check connector M123 terminal 1.

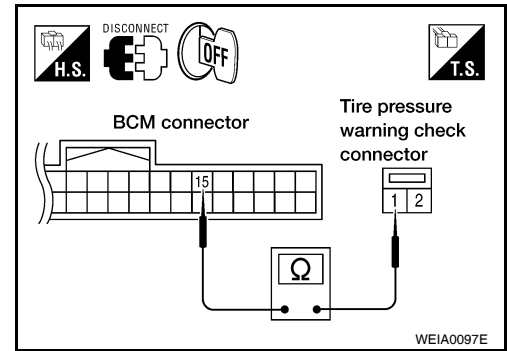
TROUBLE DIAGNOSIS FOR SYMPTOMS

< SERVICE INFORMATION >

Continuity should exist.

OK or NG

- OK >> Replace BCM. Refer to [BCS-24, "BCM"](#).
- NG >> Repair or replace harness connector.



Hazard Warning Lamps Flash When Ignition Switch Is Turned On

INFOID:000000003532711

DIAGNOSTIC PROCEDURE

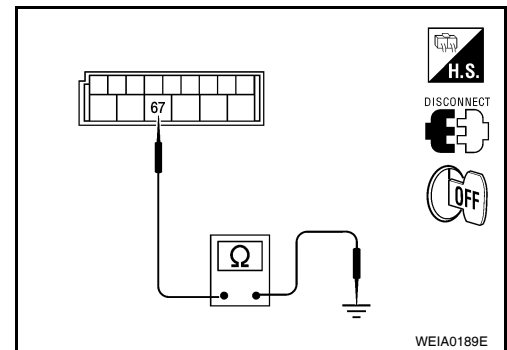
1. CHECK BCM GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM harness connector M20.
3. Check continuity between BCM harness connector M20 terminal 67 and ground.

Terminals		Continuity
(+)	(-)	
Connector	Terminal	Yes
M20	67	
	Ground	

OK or NG

- OK >> Replace BCM. Refer to [BCS-24, "BCM"](#).
- NG >> Repair BCM ground circuit.



"TIRE PRESSURE" Information in Display Unit Does Not Exist

INFOID:000000003532712

DIAGNOSTIC PROCEDURE

1. SELF-DIAGNOSTIC RESULT CHECK

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

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

- YES >> Malfunction in CAN communication system. GO TO [LAN-40](#).
- NO >> GO TO 2.

2. CHECK DISPLAY UNIT

Perform display unit self-diagnosis. Refer to [AV-101, "Self-Diagnosis Mode \(NAVI\)"](#).

Inspection results OK?

- OK >> Replace BCM. Refer to [BCS-24, "BCM"](#).
- NG >> Repair or replace malfunctioning parts.

ID Registration Cannot Be Completed

INFOID:000000003532713

DIAGNOSTIC PROCEDURE

1. PERFORM ID REGISTRATION OF ALL TRANSMITTERS

Carry out ID registration of all transmitters. Refer to [WT-12, "ID Registration Procedure"](#).

Can ID registration of all transmitters be completed?

- YES >> Inspection End.
- NO >> GO TO [WT-20, "Data from Transmitter Not Being Received"](#).

REMOVAL AND INSTALLATION

< SERVICE INFORMATION >

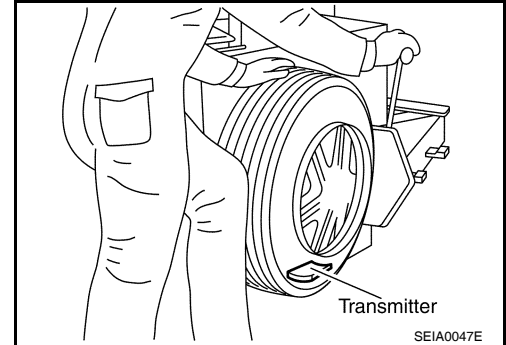
REMOVAL AND INSTALLATION

Transmitter (Pressure Sensor)

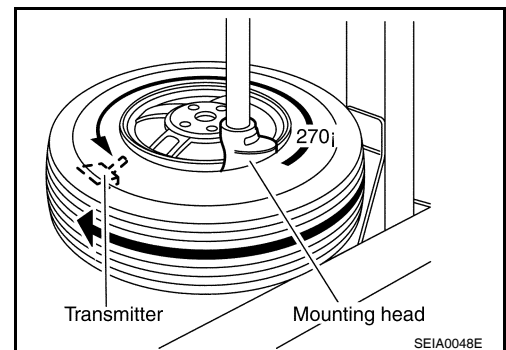
INFOID:000000003532714

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 wheel and tire assembly on tire changing machine and break both tire beads. Ensure that the transmitter remains at the bottom of the tire while breaking the bead.

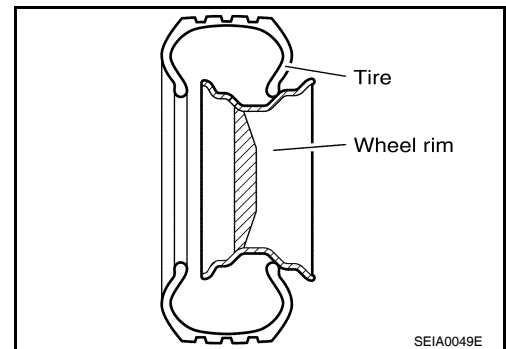


3. Turn tire so that valve hole is at bottom, and gently bounce the tire to ensure transmitter is near valve hole. Carefully lift tire onto turntable and position valve hole (and transmitter) 270 degrees from mounting/dismounting head.
4. Lubricate tire well, and remove top side of tire. Reach inside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



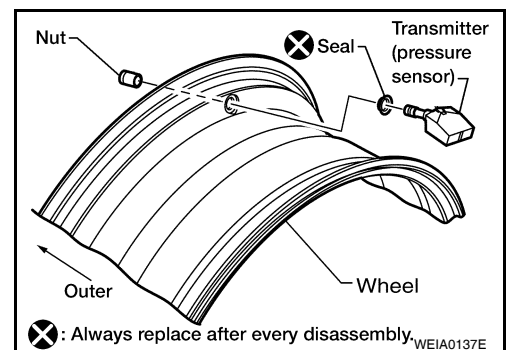
INSTALLATION

1. Place first side of tire onto rim.



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

Transmitter nut : 5.5 N·m (0.56 kg-m, 49 in-lb)



REMOVAL AND INSTALLATION

< SERVICE INFORMATION >

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

NOTE:

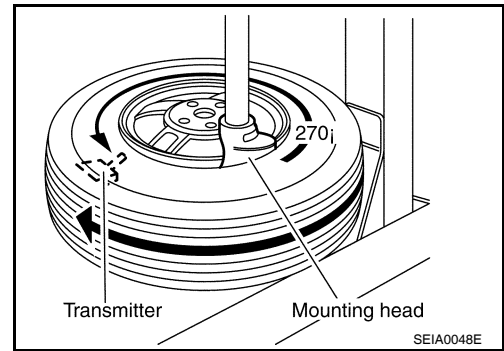
Do not touch transmitter with mounting head.

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

NOTE:

If replacing the transmitter, then transmitter wake up operation must be performed. Refer to [WT-14, "Transmitter Wake Up Operation"](#).

- Adjust neutral position of steering angle sensor. Refer to [BRC-54, "Adjustment of Steering Angle Sensor Neutral Position"](#).



A

B

C

D

WT

F

G

H

I

J

K

L

M

N

O

P

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE INFORMATION >

SERVICE DATA AND SPECIFICATIONS (SDS)

Road Wheel

INFOID:000000003532715

Wheel type		Aluminum
Maximum radial runout limit	Lateral mm (in)	0.3 (0.012) or less
	Radial mm (in)	0.3 (0.012) or less
Maximum residual 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:000000003532716

Unit: kPa (kg/cm², psi)

Tire size	Air pressure	
	Conventional tire	Spare tire
Full size spare tire	—	240 (2.4, 35)
P265/70R18	240 (2.4, 35)	—