# В **ROAD WHEELS & TIRES** С

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ľ	TEMS	
	Transmitter or Control Unit (BCM)	
	MALFUNCTION CODE NO. 21, 22, 23 OR 24 35	
	Transmitter - 1	
	MALFUNCTION CODE NO. 31, 32, 33, 34, 41,	
	42, 43, 44, 45, 46, 47 OR 48	
	Transmitter - 2	
	MALFUNCTION CODE NO. 35, 36, 37 OR 38 36	
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# **APPLICATION NOTICE**

# APPLICATION NOTICE How to Check Vehicle Type

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Check the vehicle identification number (chassis number).

Identification number (chassis number)	Service information	В
For serial		
<ul> <li>JN1AZ34D300001 – JN1AZ34D330000</li> </ul>		С
<ul> <li>JN1AZ34E350001 – JN1AZ34E380000</li> </ul>	Туре 1	C
<ul> <li>JN1AZ36D400001 – JN1AZ36D430000</li> </ul>		
<ul> <li>JN1AZ36A450001 – JN1AZ36A480000</li> </ul>		D
From serial		
• JN1AZ34D330001 -		
• JN1AZ34E380001 -	Type 2	WT
• JN1AZ36D430001 -		
• JN1AZ36A480001 -		F

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# PRECAUTIONS

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

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

# **Precautions for Battery Service**

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

### **Service Notice or Precautions**

• Low tire pressure warning lamp flashes 1min., then turns ON when occurring any malfunction except low tire pressure.

Delete the memory with CONSULT-II, or register the ID to turn low tire pressure warning lamp OFF. Refer to <u>WT-28, "Erase Memory"</u>, <u>WT-25, "ID Registration Procedure"</u>.

- ID registration is required when replacing or rotating wheels, replacing transmitter or BCM. Refer to <u>WT-</u> <u>25, "ID Registration Procedure"</u>.
- Replace grommet seal, valve core and cap of the transmitter in TPMS every tire replacement by reaching wear limit of tire.

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# PREPARATION

PREPARATION		PFP:00002	
Special Service Tools The actual shapes of Kent-Moore tools may differ from those	se of special service tools illustrat	NES00014	А
Tool number (Kent-Moore No.) Tool name		cription	В
(J-45295) Transmitter activation tool	ID re	gistration	С
	SEIA0462E		D
Commercial Service Tools		NES00015	WT
Tool name	Desc	iption	
Power tool	Remo	oving wheel nuts	F
The second se			G
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# NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING NVH Troubleshooting Chart

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

Reference p	age		<u>FAX-4,FSU-5</u>	<u>WT-7</u>	I	I	I	I	I	I	NVH in PR section.	NVH in RFD section.	NVH in FAX and FSU sections.	NVH in RAX and RSU sections.	Refer to TIRES in this chart.	Refer to ROAD WHEEL in this chart.	NVH in RAX section.	NVH in BR section.	NVH in PS section.
Possible cause and SUSPECTED PARTS		Improper installation, looseness	Out-of-round	Imbalance	Incorrect tire pressure	Uneven tire wear	Deformation or damage	Non-uniformity	Incorrect tire size	PROPELLER SHAFT	DIFFERENTIAL	FRONT AXLE AND FRONT SUSPENSION	REAR AXLE AND REAR SUSPENSION	TIRES	ROAD WHEEL	DRIVE SHAFT	BRAKE	STEERING	
		Noise	×	×	×	×	×	×	×		×	×	×	×		×	×	×	×
		Shake	×	×	×	×	×	×		×	×		×	×		×	×	×	×
		Vibration				×				×	×		×	×			×		×
	TIRES	Shimmy	×	×	×	×	×	×	×	×			×	×		×		×	×
		Judder	×	×	×	×	×	×		×			×	×		×		×	×
Symptom		Poor quality ride or handling	×	×	×	×	×	×		×			×	×		×			
		Noise	×	×	×			×			×	×	×	×	×		×	×	×
		Shake	×	×	×			×			×		×	×	×		×	×	×
	ROAD WHEEL	Shimmy, judder	×	×	×			×					×	×	×			×	×
		Poor quality ride or handling	×	×	×			×					×	×	×				

×: Applicable

# **ROAD WHEEL**

### Inspection ALUMINUM WHEEL

- 1. Check tires for wear and improper inflation.
- 2. Check wheels for deformation, cracks and other damage. If deformed, remove wheel and check wheel runout.
- a. Remove tire from aluminum wheel and mount on a tire balance machine.
- b. Set dial indicator as shown in the figure.

### Wheel runout (Dial indicator value): Refer to <u>WT-44, "SERVICE DATA AND SPECIFICA-</u> <u>TIONS (SDS)"</u>.

### 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 wheel on a tire balance machine.
- b. Set two dial indicators as shown in the figure.
- 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 below.

Radial runout = (A+B)/2 Lateral runout = (C+D)/2

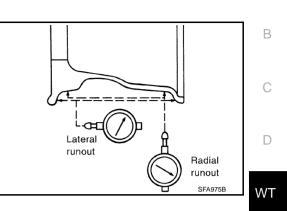
f. Select maximum positive runout value and the maximum negative value.

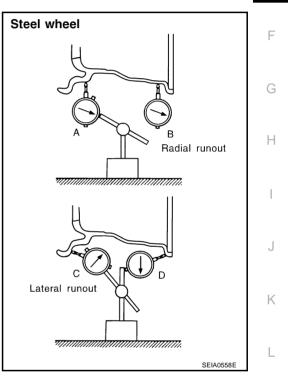
Add the two values to determine total runout.

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 steel wheel.

#### Wheel runout:

Refer to <u>WT-44, "SERVICE DATA AND SPECIFICA-</u> TIONS (SDS)".





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# ROAD WHEEL TIRE ASSEMBLY

# Balancing Wheels (Bonding Weight Type) REMOVAL

1. Remove inner and outer balance weights from the road wheel. **CAUTION:** 

### Be careful not to scratch the road wheel during removal.

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

### WHEEL BALANCE ADJUSTMENT

- If a tire balance machine has adhesion balance weight mode settings and drive-in weight mode setting, select and adjust a drive-in weight mode suitable for road wheels.
- 1. Set road wheel on wheel balancer using the center hole as a guide. Start the tire balance machine.
- 2. When inner and outer unbalance values are shown on the wheel balancer indicator, multiply outer unbalance value by 5/3 to determine balance weight that should be used. Select the outer balance weight with a value closest to the calculated value above and install 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 road wheel.

Indicated unbalance value  $\times$  5/3 = balance weight to be installed Calculation example:

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

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

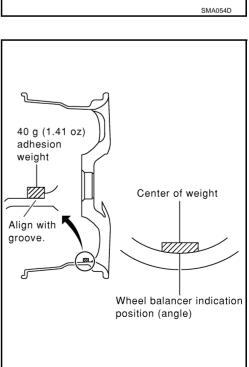
Example:

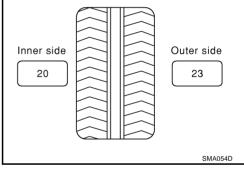
37.4 = 35 g (1.23 oz) 37.5 = 40 g (1.41 oz)

- a. Install balance weight in the position shown in the figure.
- b. When installing balance weight to road wheels, set it into the grooved area on the inner wall of the road wheel as shown in the figure 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 unreusable; always replace with new ones.
- Do not install more than three sheets of balance weight.





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

#### CAUTION:

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

- 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 unbalance values are 5 g (0.17 oz) each or below.
  - If either residual unbalance value exceeds 5 g (0.17 oz), repeat installation procedures.

# Wheel balance (Maximum allowable unbalance):

Maximum allowable	Dynamic (At rim flange)	5 g (0.17 oz) (one side)
unbalance	Static (At rim flange)	10 g (0.35 oz)

# Tire Rotation

## **CAUTION:**

## Do not include the T-type spare tire when rotating the tires.

## NOTE:

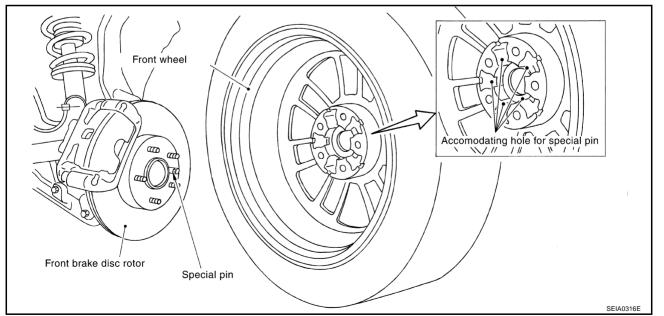
Tire cannot be rotated in vehicle, as front tire are different size from rear tire and the direction of wheel rotation H is fixed in each tire.

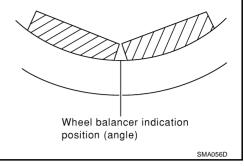
### DESCRIPTION

### Safety Device Preventing from Being Incorrectly Installed

Front brake disc rotor and front wheel

• Front and rear wheel size for this model differs, therefore a special pin has been installed on the front brake disc rotor. To accommodate this pin a hole has been provided on the front wheel (the rear wheel does not have this hole.) and in some case the rear wheel is being mistakenly installed on the front.





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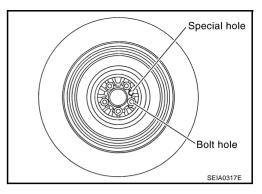


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T-type spare tire wheel

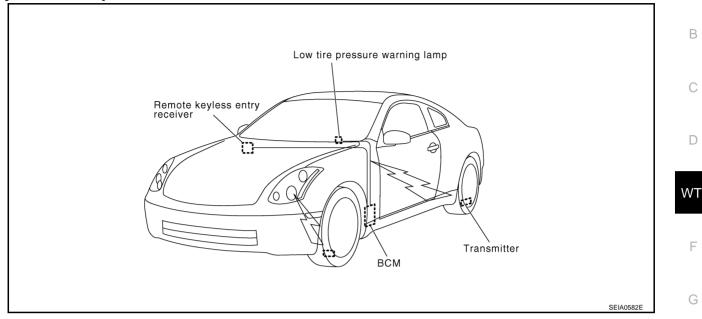
• T-type spare tire wheel for this model has a special hole designed to avoid the pin on front disc rotor.



# LOW TIRE PRESSURE WARNING SYSTEM

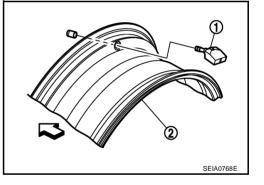
# LOW TIRE PRESSURE WARNING SYSTEM

### System Components



# System Description TRANSMITTER

A sensor-transmitter (1) integrated with a valve is installed on a wheel (2), and transmits a detected air pressure signal in the form of a radio wave.



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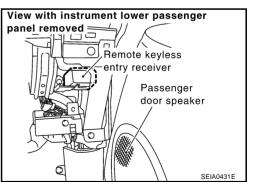
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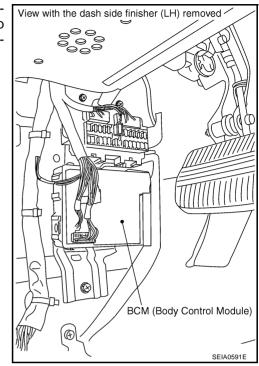
### **REMOTE KEYLESS ENTRY RECEIVER**

The remote keyless entry receiver receives the air pressure signal transmitted by the transmitter in each wheel.



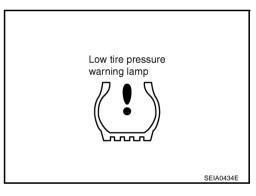
### **BCM (BODY CONTROL MODULE)**

The BCM reads the air pressure signal received by the remote keyless entry receiver, and controls the low tire pressure warning lamp operations. It also has a judgement function to detect a system malfunction.



### LOW TIRE PRESSURE WARNING LAMP

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 are activated.



### Low tire pressure warning lamp indication

Condition	Low tire pressure warning lamp
Less than 190 kPa (1.90 kg/cm <sup>2</sup> , 28 psi) [Note]	ON
Low tire pressure warning system malfunction [Other diagnostic item]	Warning lamp flashes 1 min, then turns ON.

#### NOTE:

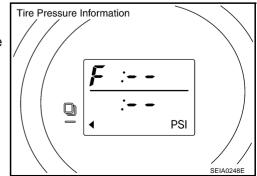
Standard air pressure is for 240 kpa (2.4 kg/cm<sup>2</sup>, 35 psi) vehicles.

### TRIPLE METER

Displays the air pressure of each tire.

#### NOTE:

After the ignition switch is turned ON, the pressure values are not be displayed until the data of all four wheels stabilizes.



### Can Communication SYSTEM DESCRIPTION

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 onto 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 transmits/receives data but selectively reads required data only. Refer to <u>LAN-8</u>, "TROUBLE <u>DIAGNOSIS</u>".

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### How to Perform Trouble Diagnosis BASIC CONCEPT

- To perform trouble diagnosis, it is the most important to have understanding about vehicle systems (control and mechanism) thoroughly.
- It is also important to clarify customer complaints before inspection.

First of all, reproduce symptoms, and understand them fully. Ask customer about his/her complaints carefully. In some cases, it will be necessary to check symptoms by driving vehicle with customer.

#### CAUTION:

Customers are not professional. It is dangerous to make an easy guess like "maybe the customer means that...," or "maybe the customer mentions this symptom".

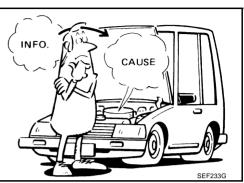
 It is essential to check symptoms right from the beginning in order to repair malfunctions completely.
 For intermittent malfunctions, reproduce symptoms based on interview with customer and past examples. Do not perform

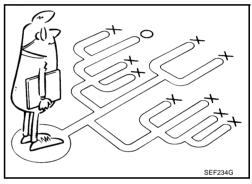
interview with customer and past examples. Do not perform inspection on ad hoc basis. Most intermittent malfunctions are caused by poor contacts. In this case, it will be effective to shake suspected harness or connector by hand. When repairing without any symptom diagnosis, you cannot judge if malfunctions have actually been eliminated.

- After completing diagnosis, always erase diagnostic memory. Refer to <u>WT-28, "Erase Memory"</u>.
- For intermittent malfunctions, move harness or harness connector by hand. Then check for poor contact or reproduced open circuit.

### 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.

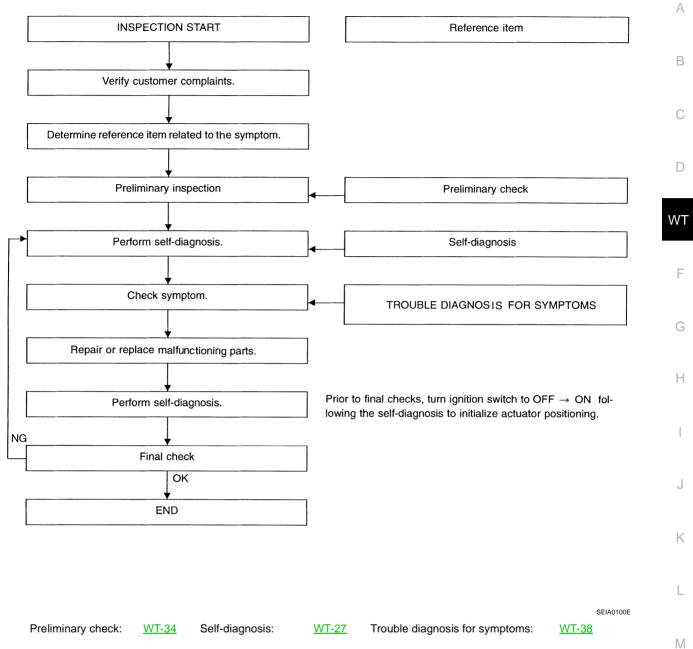




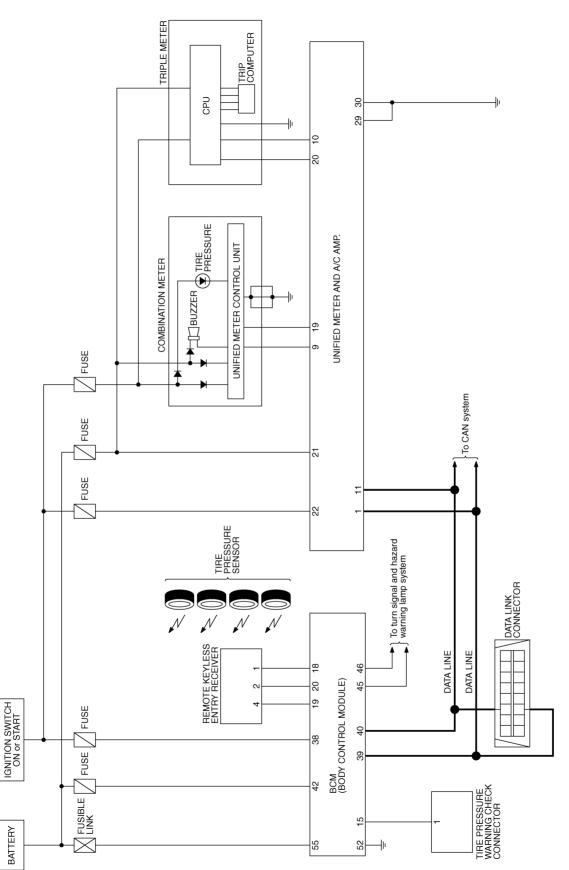
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### WORK FLOW

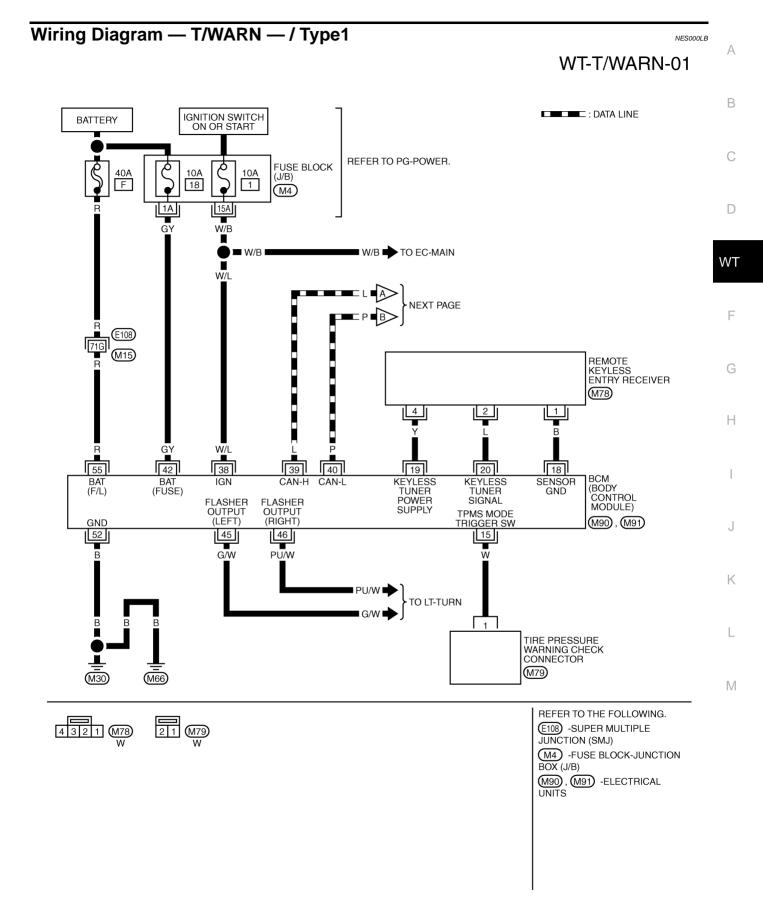


# Schematic

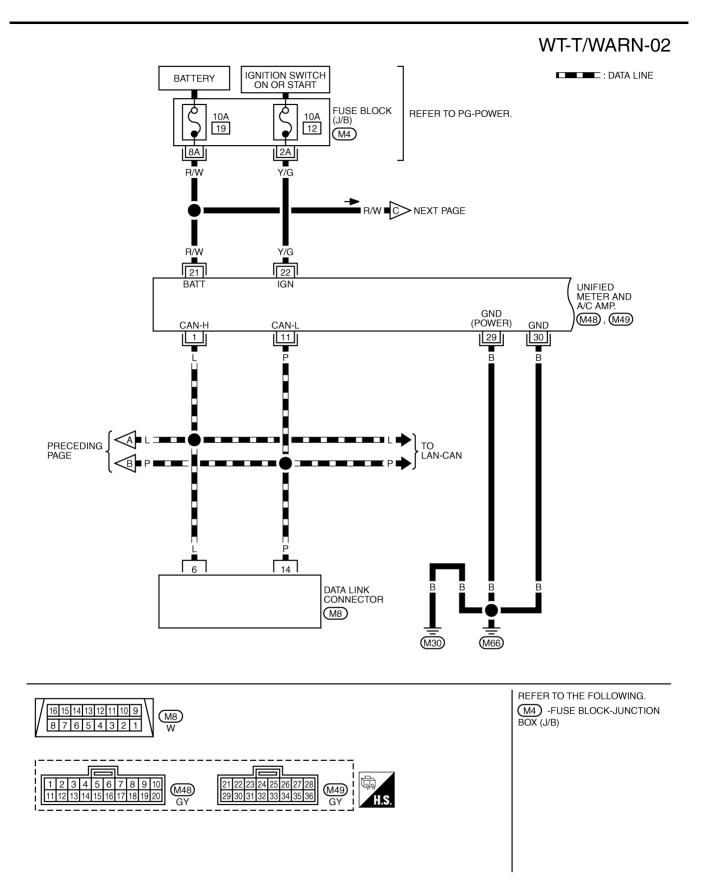


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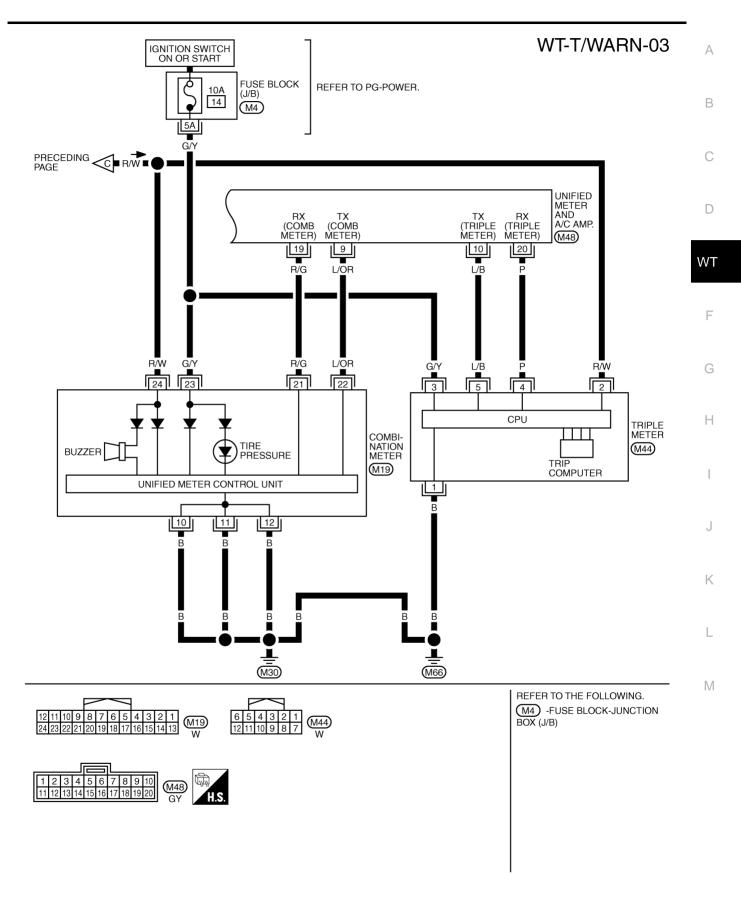
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TEWT0039E



TEWT0022E

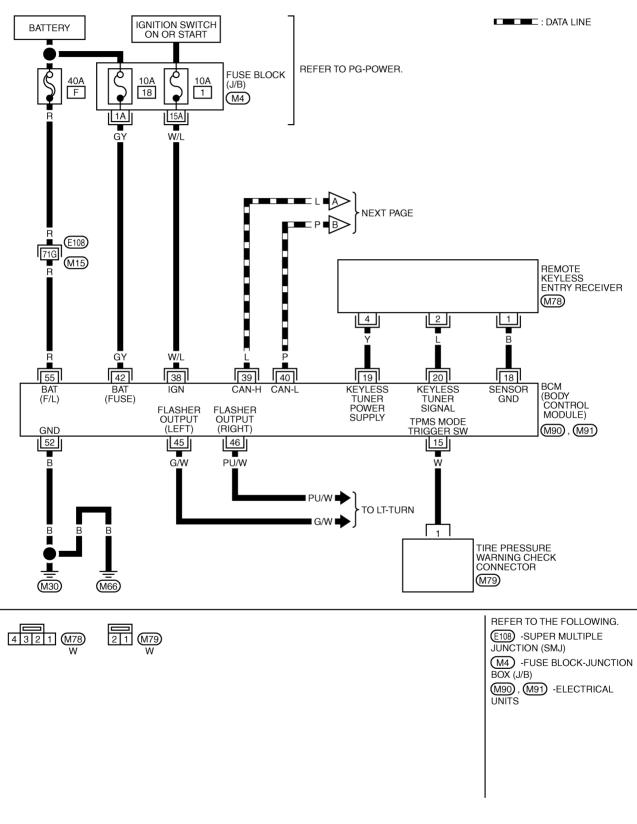


TEWT0023E

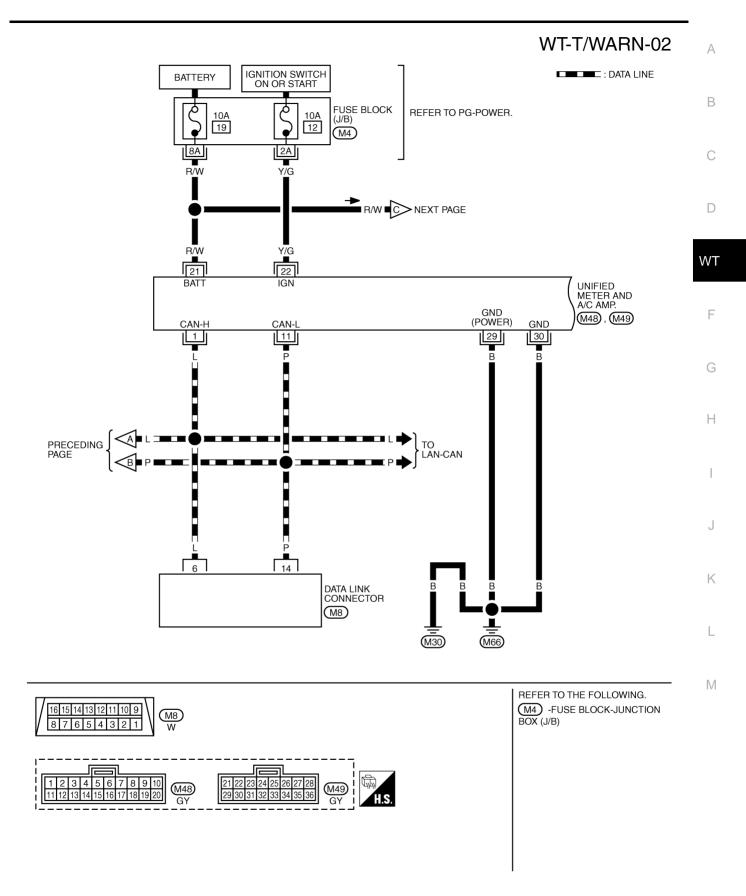
# Wiring Diagram — T/WARN — / Type2

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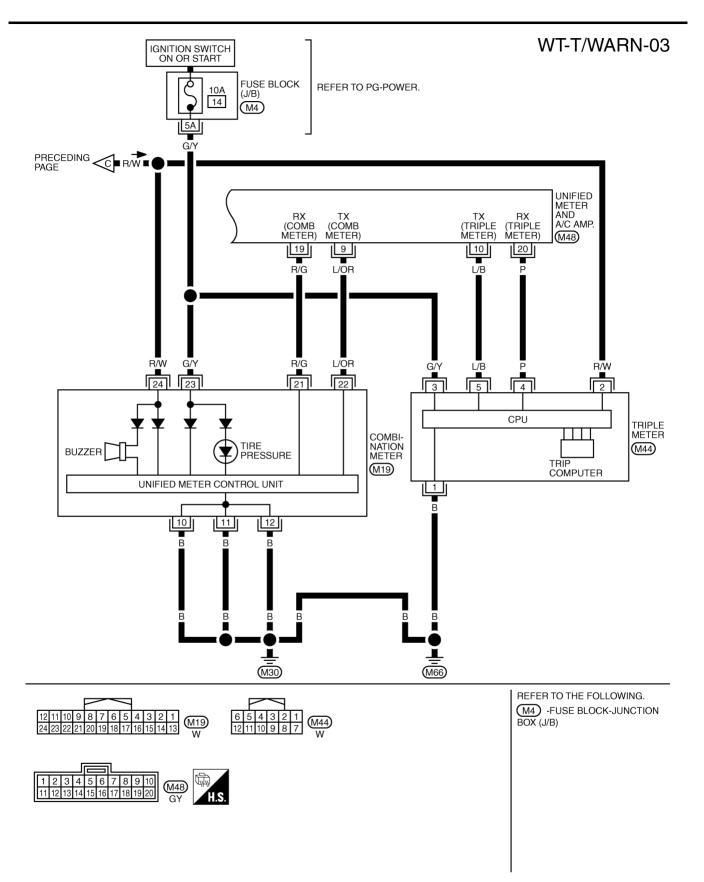
WT-T/WARN-01



TEWT0054E



TEWT0022E



TEWT0023E

Symptom	Check item	Reference page	
Symptom		Reference page	
Warning lamp does not come on when ignition switch is turned on.	CAN communication line		
	Combination meter	<u>WT-38</u>	
	BCM		
	ID registration		
Warning lamp stays on when ignition switch is turned on.	BCM connector or circuit	<u>WT-38</u>	
	BCM		
Noming lower blinks when ignition switch is tweed on	BCM connector or circuit	WT-40	
Warning lamp blinks when ignition switch is turned on.	BCM	<u>vv1-40</u>	
Turn signal lamp blinks when ignition switch is turned	BCM connector or circuit	WT-41	
on.	BCM	<u>vv1-41</u>	
	Transmitter		
	Remote keyless entry receiver connector or circuit		
ID registration can not be operated.	Remote keyless entry receiver	<u>WT-41</u>	
	BCM connector or circuit		
	BCM		

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# Control Unit Input/Output Signal Standard

Standards using a circuit tester and oscilloscope

Terminal (Wire color)	Item	Condition	Voltage (V) Approx. value
15 (W)	Tire pressure warning check con- nector	Always	5V
18 (B)	Remote keyless entry receiver (Ground)	_	0V
19 (Y)	Remote keyless entry receiver	Stand-by	(V) 4 2 0 + 0.25 OCC3879D
	(Power supply)	Press any of the keyfob switches	(V) 4 2 0 + 0.2s OCC3882D
	Remote keyless entry receiver	Stand-by	(V) 4 2 0 + 0.2s OCC3881D
20 (L)	(Signal)	Press any of the keyfob switches	(V) 6 4 2 0 + 0.2s OCC3880D
38 (W/L)	Ignition switch	Ignition switch ON or START	Battery voltage (12V)
39 (L)	Data line (CAN H)	_	
40 (P)	Data line (CAN L)	_	
42 (GY)	Battery power supply (Fuse)	Always	Battery voltage (12V)
45 (G/W)	Turn signal (left)	<ul> <li>Ignition switch ON</li> <li>Combination switch is turn left ON</li> </ul>	(V) 15 10 5 0 • • • • 500 ms SKIA3009J

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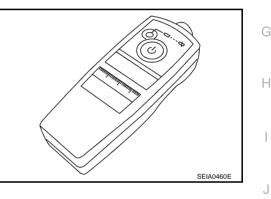
Terminal (Wire color)	Item	Condition	Voltage (V) Approx. value	А
46 (PU/W)	Turn signal (right)	<ul> <li>Ignition switch ON</li> <li>Combination switch is turn right ON</li> </ul>	(V) 15 10 5 5 5 0 5 5 0 5 5 5 5 5 5 5 5 5 5 5 5 5	B
52 (B)	GND	_	0V	
55 (R)	Battery power supply (F/L)	Always	Battery voltage (12V)	D

### ID Registration Procedure ID REGISTRATION WITH ACTIVATION TOOL

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

- 1. Perform "CONSULT-II Start Procedure". Refer to GI-36, "CONSULT-II Start Procedure" .
- 2. Select "AIR PRESSURE MONITOR" on "SELECT WORK ITEM".
- 3. Touch "WORK SUPPORT" on "SELECT DIAG MODE" screen, and select "ID REGIST".
- 4. With the activation tool (J-45295) pushed against the front-left transmitter position of the tire air valve, press the button then keep 5 seconds.
- 5. Register the IDs in order from FR LH, FR RH, RR RH to RR LH. When ID registration of each wheel has been completed, a buzzer sounds and turn signal lamp (LH/ RH) blinks.

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



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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 ACTIVATION TOOL**

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

- 1. Perform "CONSULT-II Start Procedure". Refer to GI-36, "CONSULT-II Start Procedure" .
- 2. Select "AIR PRESSURE MONITOR" on "SELECT WORK ITEM".
- 3. Touch "WORK SUPPORT" on "SELECT DIAG MODE" screen, and select "ID REGIST".
- 4. Adjust the tire pressure to the values shown in the table below for ID registration, and drive the vehicle at 40 km/h (25 MPH) or more for a few minutes.

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

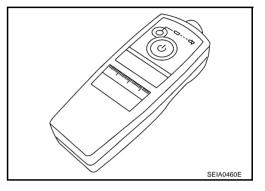
5. After completing all ID registrations, press "END" to complete the procedure.

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

6. Inflate all tires to proper pressure. Refer to WT-44, "SERVICE DATA AND SPECIFICATIONS (SDS)" .

# Transmitter Wake Up Operation WITH ACTIVATION TOOL

- 1. With the activation tool (J-45295) pushed against the front-left transmitter, press the button for 5 seconds.
  - When ignition switch ON, as the low tire pressure warning lamp blinks per the follow diagram, the respective transmitter then must be woken up.



Warning lamp blinking timing		Need to activation tire position
ON a b	a : 0.3sec b : 1.3sec	Front LH
ON a a b	a : 0.3sec b : 1.3sec	Front RH
ON a a a a b	a : 0.3sec b : 1.3sec	Rear RH
ON a a a a a b	a : 0.3sec b : 1.3sec	Rear LH
ON a b	a : 2sec b : 0.2sec	All tire

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- 2. Register the ID of wheel that warning lamp flashes. When wake up of registered wheel has been completed, turn signal lamp flashes two times.
- 3. After completing wake up of all transmitters, make sure low tire pressure warning lamp goes out.

### CONSULT-II Function (BCM) CONSULT-II MAIN FUNCTION

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

BCM diagno- sis part	Mode	Function	Reference	A
	Work support	This mode enables a technician to adjust some devices faster and more accurately by following the indications on CONSULT-II.	WT-27, "WORK SUP- PORT MODE".	E
Air pressure monitor	Self-diagnostic results	Self-diagnostic results can be read and erased quickly.	WT-27, "SELF-DIAG RESULTS MODE".	
monitor	Data monitor	Input/Output data in the control unit can be read.	WT-28, "DATA MONITOR MODE".	C
	Active test	Diagnostic Test Mode in with CONSULT-II drives some actua- tors apart from the control unit (BCM) and also shifts some parameters in a specified range.	WT-30, "ACTIVE TEST MODE".	D

### CONSULT-II SETTING PROCEDURE

Perform "CONSULT-II Start Procedure". Refer to GI-36, "CONSULT-II Start Procedure" .

### WORK SUPPORT MODE

### **Operation Procedure**

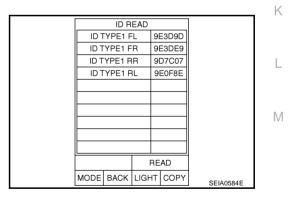
- 1. Perform "CONSULT-II Start Procedure". Refer to GI-36, "CONSULT-II Start Procedure" .
- 2. Touch "AIR PRESSURE MONITOR" on "SELECT TEST ITEM".
- 3. Touch "WORK SUPPORT".
- 4. Select from "SELECT WORK ITEM", screen of work support made is displayed

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SE	LECT W	ORK IT	EM			
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### ID Read

The registered ID number is displayed.



### **ID Regist**

Refer to WT-25, "ID Registration Procedure" .

### SELF-DIAG RESULTS MODE

#### **Operation Procedure**

- 1. Perform "CONSULT-II Start Procedure". Refer to GI-36, "CONSULT-II Start Procedure" .
- 2. Touch "SELF-DIAG RESULTS". Display shows malfunction experienced since the last erasing operation.

#### **Display Item List**

DTC	Diagnostic item Diagnostic item is detected when …				
C1704	FLAT_TIRE_FL	Front-left tire pressure drops to 190 kPa (1.90 kg/cm <sup>2</sup> , 28 psi) or less.			
C1705	FLAT_TIRE_FR	Front-right tire pressure drops to 190 kPa (1.90 kg/cm <sup>2</sup> , 28 psi) or less.			
C1706	FLAT_TIRE_RR	Rear-right tire pressure drops to 190 kPa (1.90 kg/cm <sup>2</sup> , 28 psi) or less.	_		
C1707	FLAT_TIRE_RL	Rear-left tire pressure drops to 190 kPa (1.90 kg/cm <sup>2</sup> , 28 psi) or less.			
C1708	[NO_DATA]_FL	Data from front-left transmitter cannot be received.			
C1709	[NO_DATA]_FR	Data from front-right transmitter cannot be received.	WT-35		
C1710	[NO_DATA]_RR	Data from rear-right transmitter cannot be received.	<u>vv1-55</u>		
C1711	[NO_DATA]_RL	Data from rear-left transmitter cannot be received.			
C1712	[CHECKSUM_ERR]_FL	Checksum data from front-left transmitter is malfunctioning.			
C1713	[CHECKSUM_ERR]_FR	Checksum data from front-right transmitter is malfunctioning.			
C1714	[CHECKSUM_ERR]_RR	Checksum data from rear-right transmitter is malfunctioning.	<u>WT-35</u>		
C1715	[CHECKSUM_ERR]_RL	Checksum data from rear-left transmitter is malfunctioning.			
C1716	[PRESSDATA_ERR]_FL	Air pressure data from front-left transmitter is malfunctioning.			
C1717	[PRESSDATA_ERR]_FR	Air pressure data from front-right transmitter is malfunctioning.			
C1718	[PRESSDATA_ERR]_RR	Air pressure data from rear-right transmitter is malfunctioning.	<u>WT-36</u>		
C1719	[PRESSDATA_ERR]_RL	Air pressure data from rear-left transmitter is malfunctioning.			
C1720	[CODE_ERROR]_FL	Function code data from front-left transmitter is malfunctioning.			
C1721	[CODE_ERROR]_FR	Function code data from front-right transmitter is malfunctioning.			
C1722	[CODE_ERROR]_RR	Function code data from rear-right transmitter is malfunctioning.	<u>WT-35</u>		
C1723	[CODE_ERROR]_RL Function code data from rear-left transmitter is malfunctioning.				
C1724	[BATT_VOLT_LOW]_FL	Battery voltage of front-left transmitter drops.			
C1725	[BATT_VOLT_LOW]_FR	Battery voltage of front-right transmitter drops.	WT-35		
C1726	[BATT_VOLT_LOW]_RR	Battery voltage of rear-right transmitter drops.	<u>vv 1-30</u>		
C1727	[BATT_VOLT_LOW]_RL	ATT_VOLT_LOW]_RL Battery voltage of rear-left transmitter drops.			
C1729	VHCL_SPEED_SIG_ERR	Vehicle speed signal is error.	<u>WT-37</u>		

#### NOTE:

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

#### **Erase Memory**

- 1. Turn ignition switch OFF to erase memory.
- 2. Start engine and select "SELF-DIAG RESULTS" mode for "AIR PRESSURE MONITOR" in BCM with CONSULT-II.
- 3. Touch "ERASE" on CONSULT-II screen to erase memory.

### DATA MONITOR MODE

#### **Operation Procedure**

- 1. Perform "CONSULT-II Start Procedure". Refer to GI-36, "CONSULT-II Start Procedure" .
- 2. Touch "DATA MONITOR".
- Select from "SELECT MONITOR ITEM", screen of data monitor mode is displayed. NOTE:

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

#### **Display Item List**

	SELECT MC	NITOR ITEM		
Monitor item (Unit)	ALL SIGNALS	SELECTION FROM MENU	Remarks	
VEHICLE SPEED [km/h] or [mph]	×	×	Vehicle speed is displayed.	
AIR PRESS FL [kpa] or [psi]	kpa] or [psi] × × Tire pressure is displayed.		Tire pressure is displayed.	
AIR PRESS FR [kPa] or [psi]	×	×	Tire pressure is displayed.	
AIR PRESS RR [kpa] or [psi]	×	×	Tire pressure is displayed.	
AIR PRESS RL [kpa] or [psi]	×	×	Tire pressure is displayed.	
ID REGST FL 1 [DONE/YET]	×	×	Registration ID is displayed.	
ID REGST FR 1 [DONE/YET]	×	×	Registration ID is displayed.	
ID REGST RR 1 [DONE/YET]	×	×	Registration ID is displayed.	
ID REGST RL 1 [DONE/YET]	×	×	Registration ID is displayed.	
WARNING LAMP [ON/OFF]	×	×	Control status of low tire pressure warning lamp is displayed.	
BUZZER [ON/OFF]	×	×	Buzzer in combination meter is displayed.	
Voltage [V]	_	×	The value measured by the voltage probe is displayed.	
Frequency [Hz]	-	×		
DUTY-HI (high) [%]	-	×	1	
DUTY-LOW (low) [%]	-	×	The value measured by the pulse probe is displayed.	
PLS WIDTH-HI [msec]	-	×		
PLS WIDTH-LOW [msec]	-	×	1	

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## ACTIVE TEST MODE

#### 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.

#### **Operation Procedure**

- 1. Perform CONSULT-II SETTING PROCEDURE. Refer to <u>WT-27</u>, <u>"CONSULT-II SETTING PROCEDURE"</u>.
- 2. Touch "ACTIVE TEST".
- 3. Select from "SELECT TEST ITEM", screen of active test mode is displayed.

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MODE	BACK	LIGHT	COPY	SEIA0585E

#### **TEST ITEM LIST**

Test item	Content
FLASHER	This test is able to check to make sure that each turn signal lamp turns on.
HORN	This test is able to check to make sure that the horn sounds.
WARNING LAMP	This test is able to check to make sure that the warning lamp turns on.
ID REGIST WARNING	This test is able to check to make sure that the buzzer sounds or the warning lamp turns on.
FLAT TIRE WARNING	This test is able to check to make sure that the buzzer sounds or the warning lamp turns on.

### Diagnosis Procedure with Warning Lamp Function (Without CONSULT-II) DESCRIPTION

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

### FUNCTION

When the low tire pressure warning system detects low inflation pressure or another unusual symptom, the warning lamps in the combination meter comes on. To start the self-diagnostic results mode, ground terminal of the tire pressure warning check connector. The malfunction location is indicated by the warning lamp flashing. Refer to <u>PG-73</u>, "HARNESS".

### MALFUNCTION CODE CHART

Code (warning lamp blinks)	Diagnosis item	Reference	
15	Front-left tire pressure drops to 190 kPa (1.90 kg/cm <sup>2</sup> , 28 psi) or less.		WT
16	Front-right tire pressure drops to 190 kPa (1.90 kg/cm <sup>2</sup> , 28 psi) or less.		
17	Rear-right tire pressure drops to 190 kPa (1.90 kg/cm <sup>2</sup> , 28 psi) or less.		F
18	Rear-left tire pressure drops to 190 kPa (1.90 kg/cm <sup>2</sup> , 28 psi) or less.		
21	Transmitter no data (front - left)		
22	Transmitter no data (front - right)		G
23	Transmitter no data (rear - right)	<u>WT-35</u>	
24	Transmitter no data (rear - left)		Н
31	Transmitter checksum error (front - left)		
32	Transmitter checksum error (front - right)		
33	Transmitter checksum error (rear - right)	<u>WT-35</u>	
34	Transmitter checksum error (rear - left)		
35	Transmitter pressure data error (front - left)		-
36	Transmitter pressure data error (front - right)		0
37	Transmitter pressure data error (rear - right)	<u>WT-36</u>	
38	Transmitter pressure data error (rear - left)		Κ
41	Transmitter function code error (front - left)		
42	Transmitter function code error (front - right)		1
43	Transmitter function code error (rear - right)	<u>WT-35</u>	L
44	Transmitter function code error (rear - left)		
45	Transmitter battery voltage low (front - left)		M
46	Transmitter battery voltage low (front - right)		
47	Transmitter battery voltage low (rear - right)	<u>WT-35</u>	
48	Transmitter battery voltage low (rear - left)		
52	Vehicle speed signal	<u>WT-37</u>	

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Diagnosis Item	Symptom (Ignition switch ON)			Action
	Warning light comes on immediately and turns off after 1 sec- ond.	ON 1 sec > stays OFF SEIA0592E	All wheel transmit- ters are "activated" (working).	None (system OK)
	Warning light blinks on for 2 seconds, then turns off for 0.2 seconds-repeats.	ON 2 sec > OFF 0.2 sec	All wheel transmit- ters are not acti- vated.	Activate all wheel transmit- ters. Refer to <u>WT-26,</u> <u>"Transmitter Wake Up Oper-</u> ation" .
Low tire pres- sure warning lamp	Warning light blinks 1 time.	Blinks 1 time ON 0.3 sec > OFF 1.0 sec PEIA0073E	Front LH wheel transmitter is not activated.	Activate front LH wheel transmitter. Refer to <u>WT-26.</u> <u>"Transmitter Wake Up Oper- ation"</u> .
	Warning light blinks 2 times.	Blinks 2 times ON 0.3 sec > OFF 0.3 sec SEIA0595E	Front RH wheel transmitter is not activated.	Activate front RH wheel transmitter. Refer to <u>WT-26,</u> <u>"Transmitter Wake Up Oper-</u> ation".
	Warning light blinks 3 times.	Blinks 3 times ON 0.3 sec > OFF 0.3 sec SEIA0596E	Rear RH wheel transmitter is not activated.	Activate rear RH wheel transmitter. Refer to <u>WT-26,</u> <u>"Transmitter Wake Up Oper- ation"</u> .

### LOW TIRE PRESSURE WARNING LAMP SYMPTOM CHART

Diagnosis Item	Symptom (Ignition switch ON)	Low tire pressure warning lamp	Cause	Action	A
Low tire pres-	Warning light blinks 4 times.	Blinks 4 times ON 0.3 sec > OFF 0.3 sec SEIA0597E	Rear LH wheel trans- mitter is not acti- vated.	Activate rear LH wheel transmitter. Refer to <u>WT-26.</u> <u>"Transmitter Wake Up Oper- ation"</u> .	B
	Warning light comes on and does not turn off.		Tire pressure is low.	Check tire pressure with CONSULT-II. Refer to <u>WT-</u> <u>28. "DATA MONITOR</u> <u>MODE"</u> .	D
sure warning lamp		Comes ON and stays ON SEIA0598E	The fuse for combi- nation meter from battery is pulled out.	Check the fuse for combina- tion meter from battery. Install or replace (if needed).	WT
			BCM connector pulled out.	Check BCM connector. Re- connect if needed.	F
			Low tire pressure or low tire pressure warning system mal- function.	<ul> <li>Perform CONSULT-II Self- Diagnosis. Refer to WT-27, "SELF-DIAG <u>RESULTS MODE"</u>.</li> <li>Perform ID Registration if needed. Refer to <u>WT-25.</u></li> </ul>	G
				<u>"ID Registration Proce-</u> dure" .	
Turn signal Iamp	Turn signal lamp does not flash 2 times or horn does not sound after trans- mitter activation.		1. Tool J-45295 (spe- cial service tool) battery low.	1. Install new battery.	I
			2. Ignition OFF dur- ing activation.	2. Make sure ignition is ON during activation.	J
			3. Tool J-45295 (spe- cial service tool) not positioned cor- rectly.	3. Position tool correctly dur- ing activation.	K
			4. Transmitters already activated.	4. None	L

#### NOTE:

If more than one wheel transmitter is NOT activated, the warning light blinking patterns for those wheels will combine. (Example: one blink/OFF/three blinks = Rear LH and Rear RH transmitters are not activated.)

## Preliminary Check BASIC INSPECTION

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# 1. CHECK ALL TIRE PRESSURES

• Check all tire pressures. Refer to WT-44, "SERVICE DATA AND SPECIFICATIONS (SDS)".

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.

Dose low tire pressure warning lamp activate for 1 second when ignition switch is turned "ON"?

YES >> GO TO 3.

NO >> Check fuse and combination meter.

# $3. \ \mathsf{CHECK} \ \mathsf{CONNECTOR}$

1. Disconnect BCM harness connectors M90 and M91.

2. Check terminals for damage or loose connection.

#### OK or NG

OK >> GO TO 4.

NG >> Repair or replace damaged parts.

### 4. CHECK ACTIVATION TOOL

• Check activation tool battery.

OK or NG

- OK >> Perform self-diagnosis.
- NG >> Replace activation tool battery.

Transmitter or Control Unit (BCM)       MALFUNCTION CODE NO. 21, 22, 23 OR 24         1. CHECK CONTROL UNIT <ul> <li>Drive for several minutes. Check all tire pressures with CONSULT-II "DATA MONITOR".</li> <li>Are all tire pressures displayed 0 kPa?</li> <li>YES &gt;&gt; GO TO 2.</li> <li>NO &gt;&gt; GO TO 3.</li> </ul> <ul> <li>CHECK REMOTE KEYLESS ENTRY RECEIVER CONNECTOR</li> <li>Disconnect remote keyless entry receiver harness connector M78.</li> <li>Check terminals for damage or loose connection.</li> <li>Reconnect harness connector.</li> </ul> <ul> <li>Mo &gt;&gt; Replace BCM refer to BCS-19, "Removal and Installation of BCM", then GO TO 3.</li> <li>Reconnect harness connector.</li> </ul> <ul> <li>Perform ID registration of all transmitters.</li> <li>Is there any tire that ID cannot be registered to?</li> <li>YES &gt;&gt; Replace transmitter of the tire, then GO TO 5.</li> <li>NO &gt;&gt; GO TO 4.</li> </ul> <ul> <li>Perform ID registration of all transmitters.</li> <li>Is there any tire that ID cannot be registered to?</li> <li>YES &gt;&gt; GO TO 4.</li> </ul> <ul> <li>VENICLE DRIVING</li> <li>Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping. Check all tire pressures with CONSULT-II "DATA MONITOR" within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).</li> <li>Does "DATA MONITOR" display tire pressure as normal without any warning lamp?</li> <li>YES &gt;&gt; INSPECTION END NO &gt;&gt; GO TO 5.</li> <li>Di REGISTRATION AND VEHICLE DRIVING</li></ul>
<ul> <li>1. CHECK CONTROL UNIT</li> <li>Drive for several minutes. Check all tire pressures with CONSULT-II "DATA MONITOR". Are all tire pressures displayed 0 kPa? YES &gt;&gt; GO TO 2. NO &gt;&gt; GO TO 3.</li> <li>2. CHECK REMOTE KEYLESS ENTRY RECEIVER CONNECTOR</li> <li>1. Disconnect remote keyless entry receiver harness connector M78.</li> <li>2. Check terminals for damage or loose connection.</li> <li>3. Reconnect harness connector. <u>OK or NG</u> OK &gt;&gt; Replace BCM refer to <u>BCS-19. "Removal and Installation of BCM"</u>, then GO TO 3. NG &gt;&gt; Repair or replace remote keyless entry receiver harness connector.</li> <li>3. ID REGISTRATION</li> <li>Perform ID registration of all transmitters. Is there any tire that ID cannot be registered to? YES &gt;&gt; Replace transmitter of the tire, then GO TO 5. NO &gt;&gt; GO TO 4.</li> <li>Prive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping. Check all tire pressures with CONSULT-II "DATA MONITOR" within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).</li> <li>Does "DATA MONITOR" display tire pressure as normal without any warning lamp? YES &gt;&gt; INSPECTION END NO &gt;&gt; GO TO 5.</li> <li>5. ID REGISTRATION AND VEHICLE DRIVING</li> </ul>
<ul> <li>Drive for several minutes. Check all tire pressures with CONSULT-II "DATA MONITOR". Are all tire pressures displayed 0 kPa? YES &gt;&gt; GO TO 2. NO &gt;&gt; GO TO 3.</li> <li>2. CHECK REMOTE KEYLESS ENTRY RECEIVER CONNECTOR <ol> <li>Disconnect remote keyless entry receiver harness connector M78.</li> <li>Check terminals for damage or loose connection.</li> <li>Reconnect harness connector. DK or NG</li> <li>OK &gt;&gt; Replace BCM refer to <u>BCS-19. "Removal and Installation of BCM</u>", then GO TO 3. NG &gt;&gt; Repair or replace remote keyless entry receiver harness connector.</li> </ol> </li> <li>Disconnect remote have been been been been been been been be</li></ul>
Are all tire pressures displayed 0 kPa?         YES       >> GO TO 2.         NO       >> GO TO 3.         2. CHECK REMOTE KEYLESS ENTRY RECEIVER CONNECTOR         1. Disconnect remote keyless entry receiver harness connector M78.         2. Check terminals for damage or loose connection.         3. Reconnect harness connector.         OK or NG         OK       >> Replace BCM refer to BCS-19. "Removal and Installation of BCM", then GO TO 3.         NG       >> Repair or replace remote keyless entry receiver harness connector.         3. ID REGISTRATION         • Perform ID registration of all transmitters.         Is there any tire that ID cannot be registered to?         YES       >> Replace transmitter of the tire, then GO TO 5.         NO       >> GO TO 4.         4. VEHICLE DRIVING         • Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping. Check all tire pressures with CONSULT-II "DATA MONITOR" within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).         Does "DATA MONITOR" display tire pressure as normal without any warning lamp?         YES       >> INSPECTION END NO         NO       >> GO TO 5.         5. ID REGISTRATION AND VEHICLE DRIVING
YES       >> GO TO 2.         NO       >> GO TO 3.         2. CHECK REMOTE KEYLESS ENTRY RECEIVER CONNECTOR         1. Disconnect remote keyless entry receiver harness connector M78.         2. Check terminals for damage or loose connection.         3. Reconnect harness connector.         OK or NG         OK >> Replace BCM refer to <u>BCS-19. "Removal and Installation of BCM"</u> , then GO TO 3.         NG       >> Repair or replace remote keyless entry receiver harness connector.         3. ID REGISTRATION         Perform ID registration of all transmitters.         Is there any tire that ID cannot be registered to?         YES       >> Replace transmitter of the tire, then GO TO 5.         NO       >> GO TO 4.         4. VEHICLE DRIVING         Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping. Check all tire pressures with CONSULT-II "DATA MONITOR" within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).         Does "DATA MONITOR" display tire pressure as normal without any warning lamp?         YES       >> INSPECTION END NO         NO       >> GO TO 5.         5. ID REGISTRATION AND VEHICLE DRIVING
<ul> <li>NO &gt;&gt; GO TO 3.</li> <li>2. CHECK REMOTE KEYLESS ENTRY RECEIVER CONNECTOR</li> <li>1. Disconnect remote keyless entry receiver harness connector M78.</li> <li>2. Check terminals for damage or loose connection.</li> <li>3. Reconnect harness connector.</li> <li>OK or NG</li> <li>OK &gt;&gt; Replace BCM refer to <u>BCS-19. "Removal and Installation of BCM"</u>, then GO TO 3.</li> <li>NG &gt;&gt; Repair or replace remote keyless entry receiver harness connector.</li> <li>3. ID REGISTRATION</li> <li>Perform ID registration of all transmitters.</li> <li><u>s there any tire that ID cannot be registered to?</u></li> <li>YES &gt;&gt; Replace transmitter of the tire, then GO TO 5.</li> <li>NO &gt;&gt; GO TO 4.</li> <li><b>4. VEHICLE DRIVING</b></li> <li>Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping. Check all tire pressures with CONSULT-II "DATA MONITOR" within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).</li> <li>Does "DATA MONITOR" display tire pressure as normal without any warning lamp?</li> <li>YES &gt;&gt; INSPECTION END</li> <li>NO &gt;&gt; GO TO 5.</li> <li><b>5. ID REGISTRATION AND VEHICLE DRIVING</b></li> </ul>
<ol> <li>Disconnect remote keyless entry receiver harness connector M78.</li> <li>Check terminals for damage or loose connection.</li> <li>Reconnect harness connector.</li> <li><u>OK or NG</u></li> <li>OK &gt;&gt; Replace BCM refer to <u>BCS-19. "Removal and Installation of BCM"</u>, then GO TO 3.</li> <li>NG &gt;&gt; Repair or replace remote keyless entry receiver harness connector.</li> <li><b>1. DREGISTRATION</b></li> <li>Perform ID registration of all transmitters.</li> <li>Is there any tire that ID cannot be registered to?</li> <li>YES &gt;&gt; Replace transmitter of the tire, then GO TO 5.</li> <li>NO &gt;&gt; GO TO 4.</li> <li><b>4. VEHICLE DRIVING</b></li> <li>Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping. Check all tire pressures with CONSULT-II "DATA MONITOR" within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).</li> <li>Does "DATA MONITOR" display tire pressure as normal without any warning lamp?</li> <li>YES &gt;&gt; INSPECTION END NO &gt;&gt; GO TO 5.</li> <li><b>5. ID REGISTRATION AND VEHICLE DRIVING</b></li> </ol>
<ul> <li>2. Check terminals for damage or loose connection.</li> <li>3. Reconnect harness connector.</li> <li>OK or NG</li> <li>OK &gt;&gt; Replace BCM refer to <u>BCS-19, "Removal and Installation of BCM"</u>, then GO TO 3. NG &gt;&gt; Repair or replace remote keyless entry receiver harness connector.</li> <li>3. ID REGISTRATION</li> <li>Perform ID registration of all transmitters. Is there any tire that ID cannot be registered to? YES &gt;&gt; Replace transmitter of the tire, then GO TO 5. NO &gt;&gt; GO TO 4.</li> <li>4. VEHICLE DRIVING</li> <li>Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping. Check all tire pressures with CONSULT-II "DATA MONITOR" within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).</li> <li>Does "DATA MONITOR" display tire pressure as normal without any warning lamp? YES &gt;&gt; INSPECTION END NO &gt;&gt; GO TO 5.</li> <li>5. ID REGISTRATION AND VEHICLE DRIVING</li> </ul>
<ul> <li>Reconnect harness connector.</li> <li><u>OK or NG</u></li> <li>OK &gt;&gt; Replace BCM refer to <u>BCS-19</u>, "<u>Removal and Installation of BCM</u>", then GO TO 3.</li> <li>NG &gt;&gt; Repair or replace remote keyless entry receiver harness connector.</li> <li><b>3. ID REGISTRATION</b></li> <li>Perform ID registration of all transmitters.</li> <li><u>Is there any tire that ID cannot be registered to?</u></li> <li>YES &gt;&gt; Replace transmitter of the tire, then GO TO 5.</li> <li>NO &gt;&gt; GO TO 4.</li> <li><b>4. VEHICLE DRIVING</b></li> <li>Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping. Check all tire pressures with CONSULT-II "DATA MONITOR" within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).</li> <li>Does "DATA MONITOR" display tire pressure as normal without any warning lamp?</li> <li>YES &gt;&gt; INSPECTION END NO &gt;&gt; GO TO 5.</li> <li><b>5. ID REGISTRATION AND VEHICLE DRIVING</b></li> </ul>
OK or NG         OK       >> Replace BCM refer to BCS-19, "Removal and Installation of BCM", then GO TO 3.         NG       >> Repair or replace remote keyless entry receiver harness connector.         3. ID REGISTRATION         • Perform ID registration of all transmitters.         Is there any tire that ID cannot be registered to?         YES       >> Replace transmitter of the tire, then GO TO 5.         NO       >> GO TO 4.         4. VEHICLE DRIVING         • Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping. Check all tire pressures with CONSULT-II "DATA MONITOR" within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).         Does "DATA MONITOR" display tire pressure as normal without any warning lamp?         YES       >> INSPECTION END NO         NO       >> GO TO 5.         5. ID REGISTRATION AND VEHICLE DRIVING
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<ul> <li>NO &gt;&gt; GO TO 4.</li> <li>VEHICLE DRIVING</li> <li>Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping. Check all tire pressures with CONSULT-II "DATA MONITOR" within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).</li> <li>Does "DATA MONITOR" display tire pressure as normal without any warning lamp? YES &gt;&gt; INSPECTION END NO &gt;&gt; GO TO 5.</li> <li>ID REGISTRATION AND VEHICLE DRIVING</li> </ul>
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Does "DATA MONITOR" display tire pressure as normal without any warning lamp?         YES       >> INSPECTION END         NO       >> GO TO 5.         5. ID REGISTRATION AND VEHICLE DRIVING
YES >> INSPECTION END NO >> GO TO 5. 5. ID REGISTRATION AND VEHICLE DRIVING
NO >> GO TO 5. <b>5. ID REGISTRATION AND VEHICLE DRIVING</b>
Perform ID registration of all transmitters
2. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for
10 minutes. Then check all tire pressures with CONSULT-II "DATA MONITOR" within 5 minutes. Does "DATA MONITOR" display tire pressure as normal without any warning lamp?
YES >> INSPECTION END
NO >> GO TO the inspection applicable to DTC.
ransmitter - 1 MALFUNCTION CODE NO. 31, 32, 33, 34, 41, 42, 43, 44, 45, 46, 47 OR 48
1. ID REGISTRATION (CORRECTION OF TRANSMITTER LOCATION)

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.

# TROUBLE DIAGNOSIS FOR SELF-DIAGNOSTIC ITEMS

# $\overline{2}$ . REPLACE TRANSMITTER

- 1. Check low tire pressure warning condition again, and replace malfunctioning transmitter.
- 2. Perform ID registration of all transmitters.

Can ID registration of all transmitters be completed?

YES >> GO TO 3.

NO >> GO TO the inspection 1. Refer to <u>WT-35, "Transmitter or Control Unit (BCM)"</u>.

# 3. VEHICLE DRIVING

 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. Then check all tire pressures with CONSULT-II "DATA MONITOR" within 5 minutes.

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

YES >> INSPECTION END

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

### Transmitter - 2 MALFUNCTION CODE NO. 35, 36, 37 OR 38

NES00010

## 1. CHECK ALL TIRE PRESSURE

• Check all tire pressures. Refer to WT-44, "SERVICE DATA AND SPECIFICATIONS (SDS)" .

Are there any tires whose pressure is "64 psi" or more?

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

# 2. VEHICLE DRIVING

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

>> Replace transmitter with new one if "DATA MONITOR" displays 64 psi or more. Then GO TO 3.

# 3. ID REGISTRATION AND VEHICLE DRIVING

- 1. Perform ID registration of all transmitters.
- 2. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes. Then check all tire pressures with CONSULT-II "DATA MONITOR" within 5 minutes.

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

- YES >> INSPECTION END
- NO >> GO TO the inspection applicable to DTC.

# TROUBLE DIAGNOSIS FOR SELF-DIAGNOSTIC ITEMS

# Vehicle Speed Signal NES0001P **MALFUNCTION CODE NO. 52** А 1. CHECK SELF-DIAGNOSTIC RESULTS В Perform "CCONSULT-II Start procedure". Refer to GI-36, "CONSULT-II Start Procedure" 1. Touch "BCM C/U" on "SELECT SYSTEM" screen. 2. 3. Touch "SELF-DIAG RESULTS" on "SELECT DIAG MODE" screen. С 4. Check display contents in self-diagnostic results. Is the "CAN COMM CIRCUIT" displayed in the self-diagnosis display? YES >> Perform trouble diagnosis for CAN communication system. Refer toLAN-4, "Precautions When D Using CONSULT-II" . NO >> Check combination meter. Refer to DI-58, "SELF-DIAGNOSTIC RESULTS" . WΤ F G Н J Κ

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# TROUBLE DIAGNOSIS FOR SYMPTOMS

# Warning Lamp Does Not Come On When Ignition Switch Is Turned On DIAGNOSTIC PROCEDURE

PFP:00007

#### NES0001Q

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

- 1. Perform "CONSULT-II Start Procedure". Refer to GI-36, "CONSULT-II Start Procedure"
- 2. Touch "BCM C/U" on "SELECT SYSTEM" screen.
- 3. Touch "SELF-DIAG RESULTS" on "SELECT DIAG MODE" screen.
- 4. Check display contents in self-diagnostic results.

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

YES >> Perform trouble diagnosis for CAN communication system. Refer to<u>LAN-4, "Precautions When</u> <u>Using CONSULT-II"</u>.

NO >> GO TO 2.

## 2. CHECK COMBINATION METER

Check combination meter function.

### OK or NG

OK >> GO TO 3.

NG >> Check combination meter. Refer to <u>DI-58, "SELF-DIAGNOSTIC RESULTS"</u>.

## 3. CHECK LOW TIRE PRESSURE WARNING LAMP

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connectors M90 and M91.

### Does the warning lamp activate?

- YES >> Replace BCM. Refer to <u>BCS-19, "Removal and Installation of BCM"</u>.
- NO >> Check combination meter and repair or replace.

# Warning Lamp Stays On When Ignition Switch Is Turned On DIAGNOSTIC PROCEDURE

NES0001R

## 1. PERFORM SELF-DIAGNOSIS

- 1. Turn ignition switch ON. (Do not start engine.)
- 2. Select "SELF-DIAG RESULTS" mode for "AIR PRESSURE MONITOR" with CONSULT-II.
- 3. Touch "ERASE".
- 4. Turn ignition switch OFF.
- 5. Start engine.

Does low tire pressure warning lamp turn OFF?

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

## 2. PERFORM ID REGISTRATION

Perform ID registration all transmitters. Refer to <u>WT-25, "ID Registration Procedure"</u>. Does low tire pressure warning lamp turn OFF?

YES >> INSPECTION END

NO >> GO TO 3.

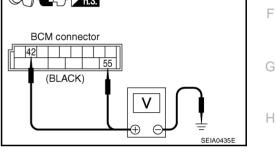
# TROUBLE DIAGNOSIS FOR SYMPTOMS

#### 3. CHECK CONNECTOR А 1. Turn ignition switch OFF. 2. Disconnect BCM harness connectors M90 and M91. В 3. Check terminals for damage or loose connections. OK or NG OK >> GO TO 4. С NG >> Repair or replace damaged parts. 4. CHECK POWER SUPPLY CIRCUIT (BATTERY) D

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- 3. Check voltage between BCM harness connector M91 terminals 42, 55 and ground.

Connector	Terminal	Voltage (Approx.)		
M91	42 - Ground	Potton / voltage		F
IVI9 I	55 - Ground	<ul> <li>Battery voltage</li> </ul>	BCM connector	
OK or NG				
				G

NG >> Check BCM power supply circuit for open or short.



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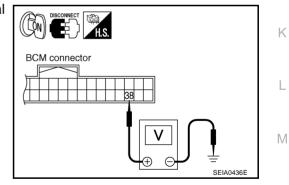
# 5. CHECK POWER SUPPLY CIRCUIT (IGN)

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between BCM harness connector M90 terminal 38 and ground.

Connector	Terminal	Voltage (Approx.)
M90	38 - Ground	Battery voltage

### OK or NG

- OK >> GO TO 6.
- NG >> Check BCM power supply circuit for open or short.



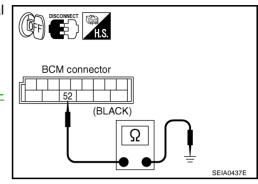
# 6. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- Check continuity between BCM harness connector M91 terminal 52 and ground.

### Continuity should exist.

#### OK or NG

- OK >> Replace BCM. Refer to <u>BCS-19</u>, "Removal and Installation of <u>BCM</u>".
- NG >> Repair or replace BCM ground circuit.



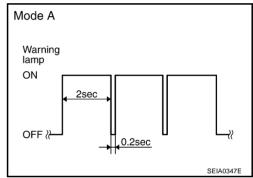
# Warning Lamp Blinks When Ignition Switch Is Turned On

NES0001S

### NOTE:

If warning lamp blinks below, the system is normal. Blink Mode A

• This mode shows transmitter status is OFF-mode. Perform transmitter wake up operation. Refer to <u>WT-26, "Trans-</u> <u>mitter Wake Up Operation"</u>.



# DIAGNOSTIC PROCEDURE

# 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector M90.
- 3. Check terminals for damage or loose connections.

#### OK or NG

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

# TROUBLE DIAGNOSIS FOR SYMPTOMS

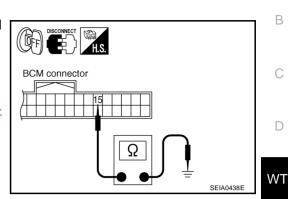
# $\overline{2}$ . CHECK TIRE PRESSURE WARNING CHECK SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- 3. Check continuity between BCM harness connector M90 terminal 15 and ground.

#### Continuity should exist.

#### OK or NG

- OK >> Replace BCM. Refer to <u>BCS-19</u>, "Removal and Installation of <u>BCM</u>".
- NG >> Repair or replace harness connector.



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# Turn Signal Lamp Blinks When Ignition Switch Is Turned On DIAGNOSTIC PROCEDURE

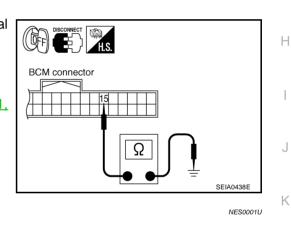
- 1. CHECK TIRE PRESSURE WARNING CHECK SWITCH CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect BCM harness connector.
- 3. Check continuity between BCM harness connector M90 terminal 15 and ground.

#### Continuity should exist.

#### OK or NG

- OK >> Check turn signal lamp operation. Refer to <u>LT-71,</u> <u>"TURN SIGNAL AND HAZARD WARNING LAMPS"</u>.
- NG >> Repair or replace harness connector.

ID Registration Can Not Be Completed



### 1. ID REGISTRATION (ALL)

DIAGNOSTIC PROCEDURE

• Perform ID registration of all transmitters.

Can ID registration of all transmitters be completed?

YES >> INSPECTION END

NO >> GO TO WT-35, "TROUBLE DIAGNOSIS FOR SELF-DIAGNOSTIC ITEMS".

# **REMOVAL AND INSTALLATION**

### Transmitter REMOVAL

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

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

# INSTALLATION

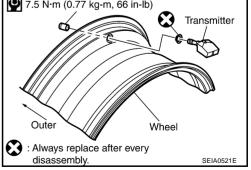
**CAUTION:** 

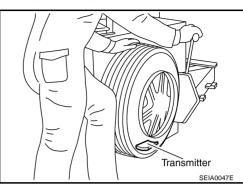
1. Put first side of tire onto rim.

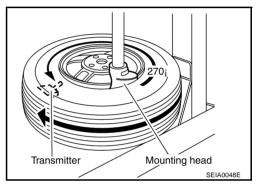
2. Mount transmitter on rim and tighten nut.

Speed for tightening nut should be less than 40 rpm.









Tire

Wheel rim

SEIA0049E

PFP:00000

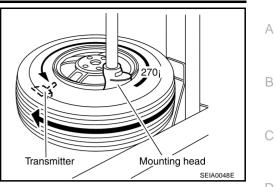
NES0001V

# **REMOVAL AND INSTALLATION**

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

### NOTE:

Do not touch transmitter at mounting head.



4. 5.		
RE		WT
Re	moval	
1.	Remove the front kicking plate LH. Refer to <u>EI-35, "BODY SIDE TRIM"</u> .	_
2.	Remove the dash side finisher LH. Refer to EI-35, "BODY SIDE TRIM".	F
3.	Remove the instrument lower cover. Refer to IP-10, "INSTRUMENT PANEL ASSEMBLY".	
4.	Remove the glove box assembly. Refer to IP-10, "INSTRUMENT PANEL ASSEMBLY".	G
5.	Disconnect keyless entry receiver connector.	0
Ins	stallation	
Ins	stall in the reverse order of removal.	Н
BC	CM (BODY CONTROL MODULE)	
Re	moval	1
Re	move the BCM. Refer to BCS-19, "Removal and Installation of BCM".	
Ins	stallation	
Ins	tall in the reverse order of removal.	J
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# SERVICE DATA AND SPECIFICATIONS (SDS)

# SERVICE DATA AND SPECIFICATIONS (SDS)

# **Road Wheel**

Kind of wheel		Aluminum	Steel (for tenporary tire)	
Maximum radial runout limit	Lateral deflection	Loss than 0.2 mm (0.012 in)		
	Vertical deflection	Less than 0.3 mm (0.012 in)	Less than 1.5 mm (0.059 in)	
	Dynamic (At rim flange)	Less than 5g (0.	14 oz) (one side)	
Maximum Allowable unbalance	Static (At rim flange)	Less than 10g (0.35 oz)		
Wheel size		Offset mn		
18 >	< 8JJ	30 (1.18)		
18 × 8	3 1/2JJ	33 (1.30)		
18 >	< 9JJ	30 (1.18)		
19 ×	10JJ	30 (1.18)		
17 >	× 4T	30 (1.18)		

# Tire

NES0001X

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

	Air pressure			
Tire size	Front		Rear	
	Coupe	Roadster	Coupe	Roadster
225/45R18 91W	240 (2.4, 35)			
245/40R18 93W			_	
245/45R18 96W			- 240 (2.4, 35)	
265/35R19 94W				
T145/80 D17		420	(4.2, 60)	
Tightening Torque				NES0001 Y

Wheel nut	108 N.m (11 kg-m, 80 ft-lb)

NES0001W