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SECTION

ROAD WHEELS & TIRES

CONTENTS

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PRECAUTIONS

PRECAUTIONS

PPF:00001

Precautions

NES000JK

ID registration is required when replacing or rotating wheels.

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PREPARATION

PREPARATION

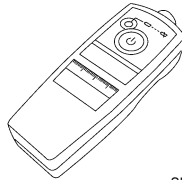
PFP:00002

Special Service Tools

NES000JL

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
(J-45295) Transmitter activation tool	ID registration

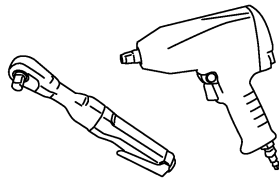


SEIA0462E

Commercial Service Tools

NES000JM

Tool name	Description
Power tool	Removing wheel nuts



PBIC0190E

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

PFP:00003

NVH Troubleshooting Chart

NES000JN

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

Reference page		FAX-5, RAX-5	WT-6	WT-7	WT-41	WT-8	—	—	WT-41	NVH in PR section.	NVH in FFD and 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 FAX, RAX section.	NVH in BR section.	NVH in PS section.	
Possible cause and SUSPECTED PARTS		Improper installation, looseness	Out-of-round	Unbalance	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 WHEELS	DRIVE SHAFT	BRAKE	STEERING	
Symptom	TIRES	Noise	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
		Shake	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		Vibration	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		Shimmy	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		Judder	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		Poor quality ride or handling	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	ROAD WHEEL	Noise	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		Shake	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Shimmy, Judder		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Poor quality ride or handling		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	

x: Applicable

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WT

ROAD WHEEL

ROAD WHEEL

PFP:40300

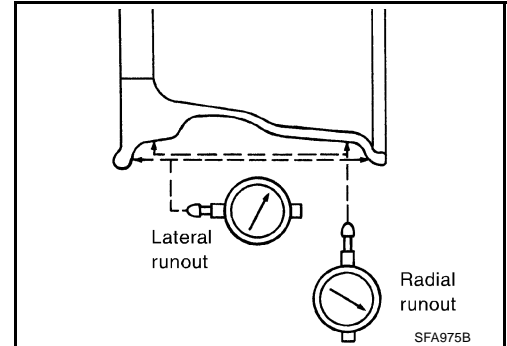
Inspection ALUMINUM WHEEL

NES000JO

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 [WT-41, "SERVICE DATA AND SPECIFICATIONS \(SDS\)"](#) .



STEEL WHEEL

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

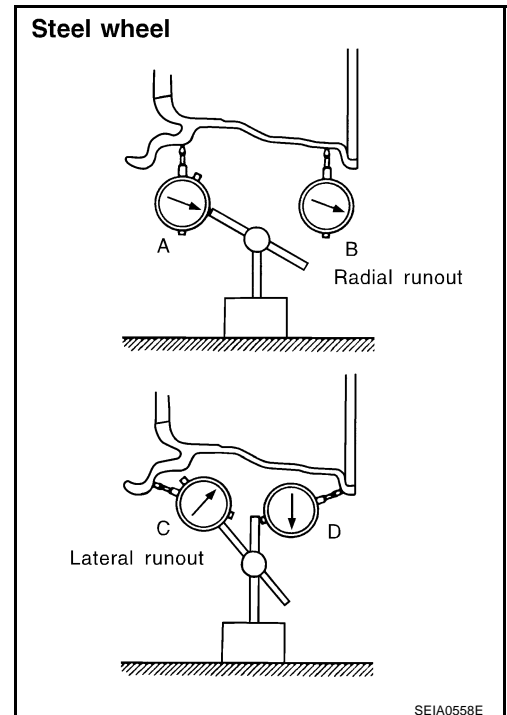
$$\text{Radial runout} = (A+B)/2$$

$$\text{Lateral runout} = (C+D)/2$$

- 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 [WT-41, "SERVICE DATA AND SPECIFICATIONS \(SDS\)"](#) .



ROAD WHEEL AND TIRE ASSEMBLY

ROAD WHEEL AND TIRE ASSEMBLY

PPF:40300

Balancing Wheels (Bonding Weight Type) REMOVAL

NES000JP

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

CAUTION:

- Be careful not to scratch the road wheel during removal.
- After removing double-faced adhesive tape, wipe clean 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 tire balance machine using the center hole as a guide. Start the tire balance machine.
2. When inner and outer unbalance values are shown on the tire balance machine 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:

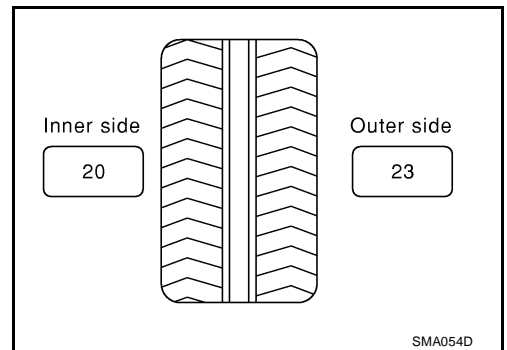
$23 \text{ g (0.81 oz)} \times 5/3 = 38.33 \text{ g (1.35 oz)} \Rightarrow 40 \text{ g (1.41 oz)}$ balance weight (closer to calculated balance weight value)

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

Example:

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

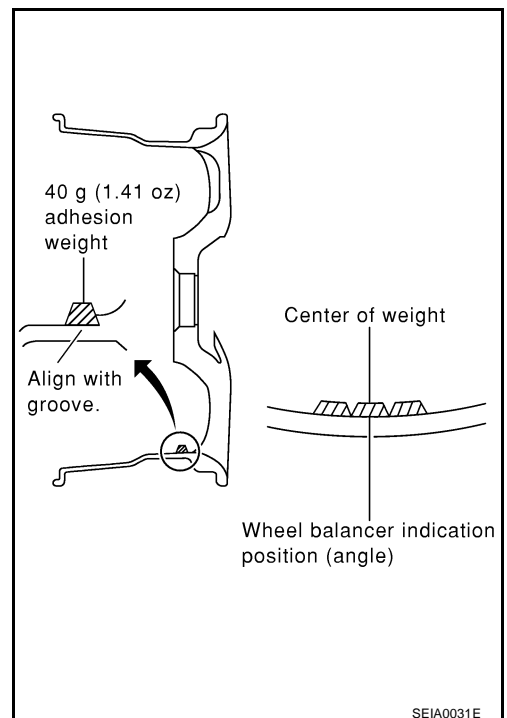
$37.5 \Rightarrow 40 \text{ g (1.41 oz)}$



- 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 tire balance machine indication position (angle).

CAUTION:

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



ROAD WHEEL AND TIRE ASSEMBLY

- 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:

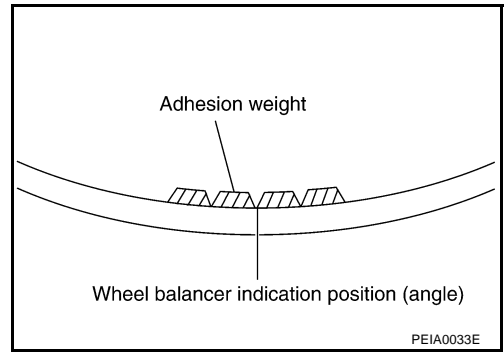
Do not install one balance weight sheet on top of another.

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

CAUTION:

Do not install more than two balance weights.

5. Start tire balance machine. Make sure that inner and outer residual unbalance value are 7 g (0.25 oz) each or below.
- If either residual unbalance value exceeds 7 g (0.25 oz), repeat installation procedures.



Maximum allowable unbalance	Dynamic (At rim flange)	Less than 7 g (0.25 oz) (one side)
	Static (At rim flange)	Less than 14 g (0.49 oz)

Rotation

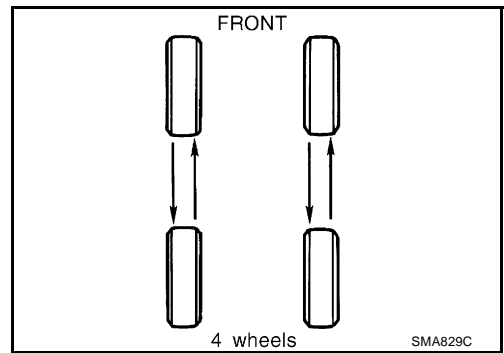
NES000JQ

- Follow the maintenance schedule for tire rotation service intervals. Refer to [MA-7, "PERIODIC MAINTENANCE"](#).
- Do not include the spare tire when rotating tires.

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.**
- **Be careful not to tighten wheel nut at torque exceeding the criteria for preventing strain of disc rotor.**

Tightening torque of wheel nut
: 108 N·m (11 kg·m, 80 ft·lb)



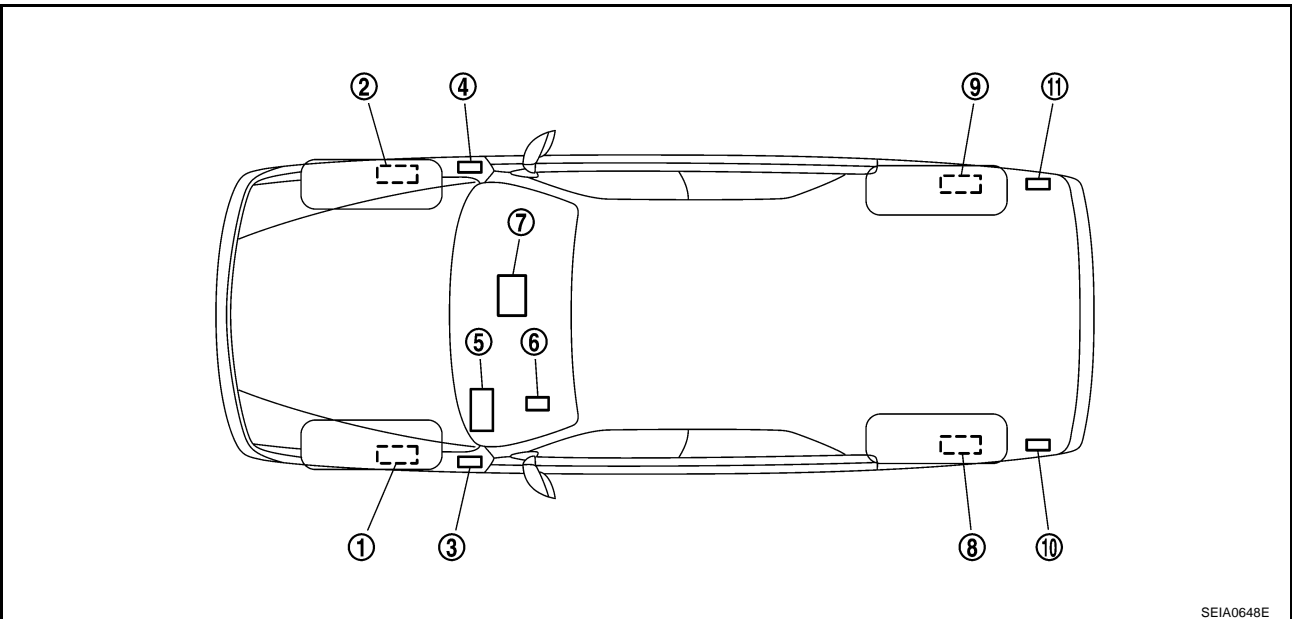
TIRE PRESSURE MONITORING SYSTEM

TIRE PRESSURE MONITORING SYSTEM

PFP:40720

System Components

NES000JR



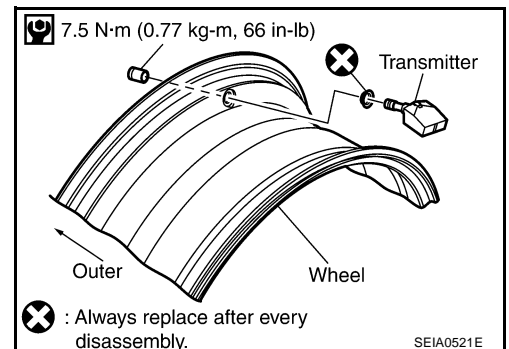
- | | | |
|---------------------------------------|---|--------------------------------------|
| 1. Tire pressure transmitter front LH | 2. Tire pressure transmitter front RH | 3. Tire pressure receiver front LH |
| 4. Tire pressure receiver front RH | 5. Low tire pressure warning control unit | 6. Low tire pressure warning lamp |
| 7. Display unit | 8. Tire pressure transmitter rear LH | 9. Tire pressure transmitter rear RH |
| 10. Tire pressure receiver rear LH | 11. Tire pressure receiver rear RH | |

System Description

TRANSMITTER

NES000JS

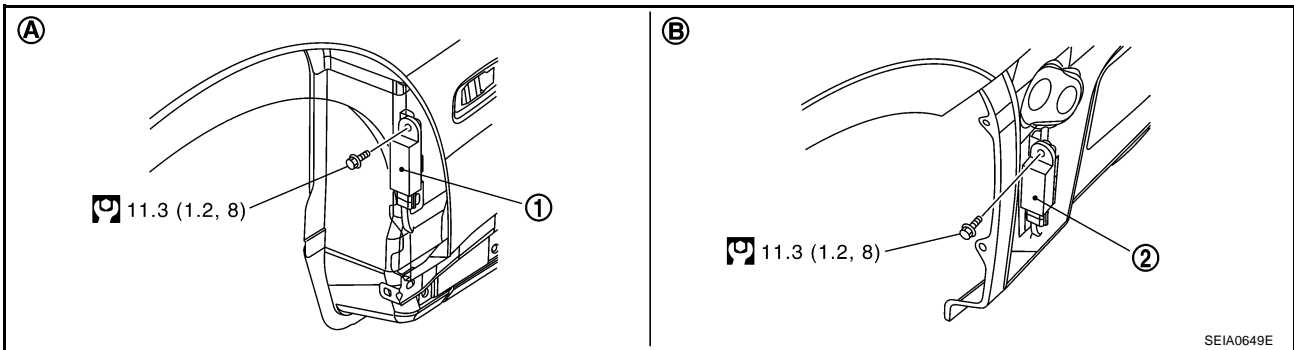
A sensor-transmitter integrated with a valve is installed on a wheel, and transmits a detected air pressure signal in the form of a radio wave.



TIRE PRESSURE MONITORING SYSTEM

RECEIVER

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

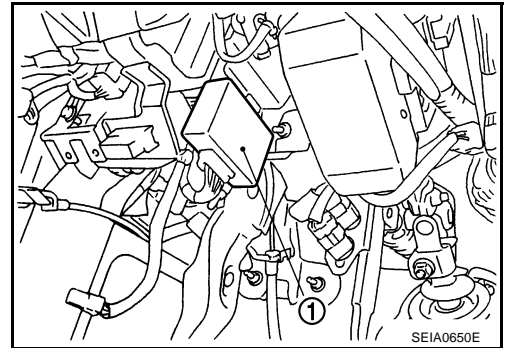


1. Tire pressure receiver front 2. Tire pressure receiver rear A. Front wheel house
 A. Front wheel house
 B. Rear wheel house

Refer to [GI-11, "Components"](#), for the symbols in the figure.

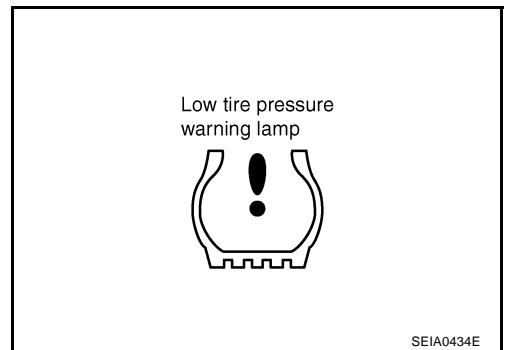
LOW TIRE PRESSURE WARNING CONTROL UNIT

The low tire pressure warning control unit (1) reads the air pressure signal received by the 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 low tire pressure warning control unit using CAN communication. When a low tire pressure condition is sensed by the low tire pressure warning control unit, the combination meter low tire pressure warning lamp is activated.



Low Tire Pressure Warning Lamp Indication

Condition	Low tire pressure warning lamp
Less than 182 kPa (1.82 kg/cm ² , 26.5 psi) [Flat tire]*	ON
Low tire pressure warning system malfunction [Other diagnostic item]	Warning lamp blinks 1 min, then turns ON

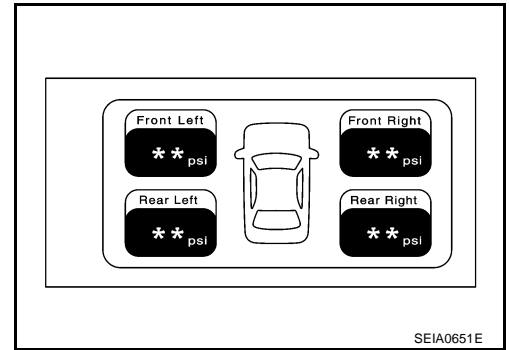
*: Standard air pressure is for 230 kpa (2.3 kg/cm², 33 psi) vehicle.

TIRE PRESSURE MONITORING SYSTEM

DISPLAY UNIT

Display the air pressure of each tire.

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



Can Communication

NES000KV

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.

For details, refer to [LAN-50, "CAN System Specification Chart"](#) .

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TROUBLE DIAGNOSES

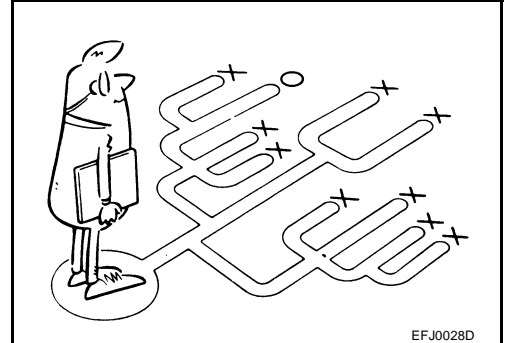
How to Perform Trouble Diagnoses BASIC CONCEPT

NES000JU

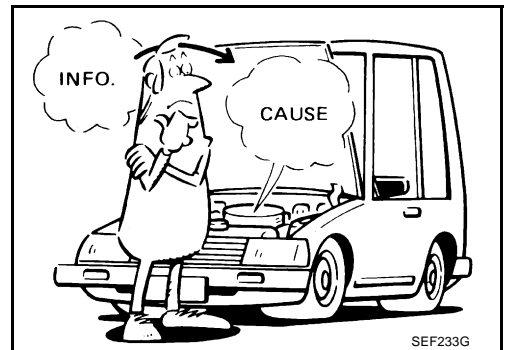
- The most important point to perform trouble diagnosis is to understand systems (control and mechanism) in vehicle thoroughly.
- It is also important to clarify customer complaints before inspection.
First of all, reproduce symptom, and understand it fully.
Ask customer about his/her complaints carefully. In some cases, they will be necessary to check symptom by driving vehicle with customer.

CAUTION:

Customers are not professionals. Do not assume “maybe customer means...” or “maybe the customer mentioned this symptom”.



- It is essential to check symptoms right from beginning in order to repair a malfunction completely.
For an intermittent malfunction, it is important to reproduce symptom based on 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 repairs are performed without any symptom check, no one can judge if malfunction has actually been eliminated.
- Always diagnosis, make sure to perform “ERASE MEMORY”.
- Always read “GI General information” to confirm general precautions. Refer to [GI-4. "General Precautions"](#).



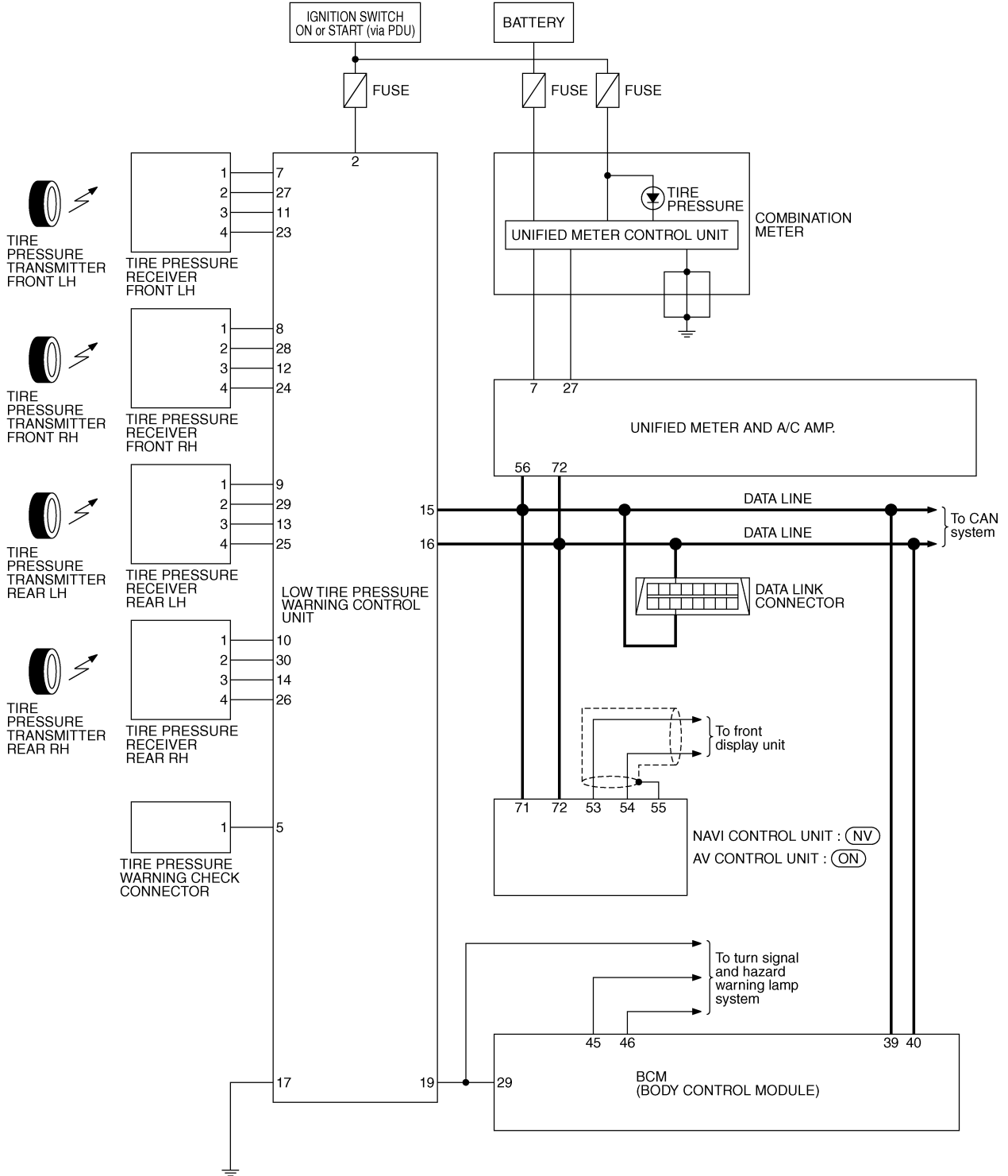
TROUBLE DIAGNOSES

Schematic

NES000JV

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(NV) : With navigation system
(ON) : Without navigation system



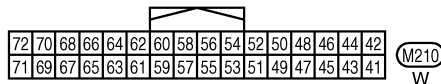
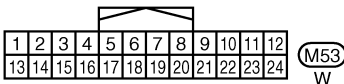
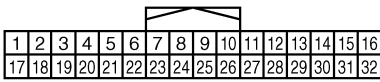
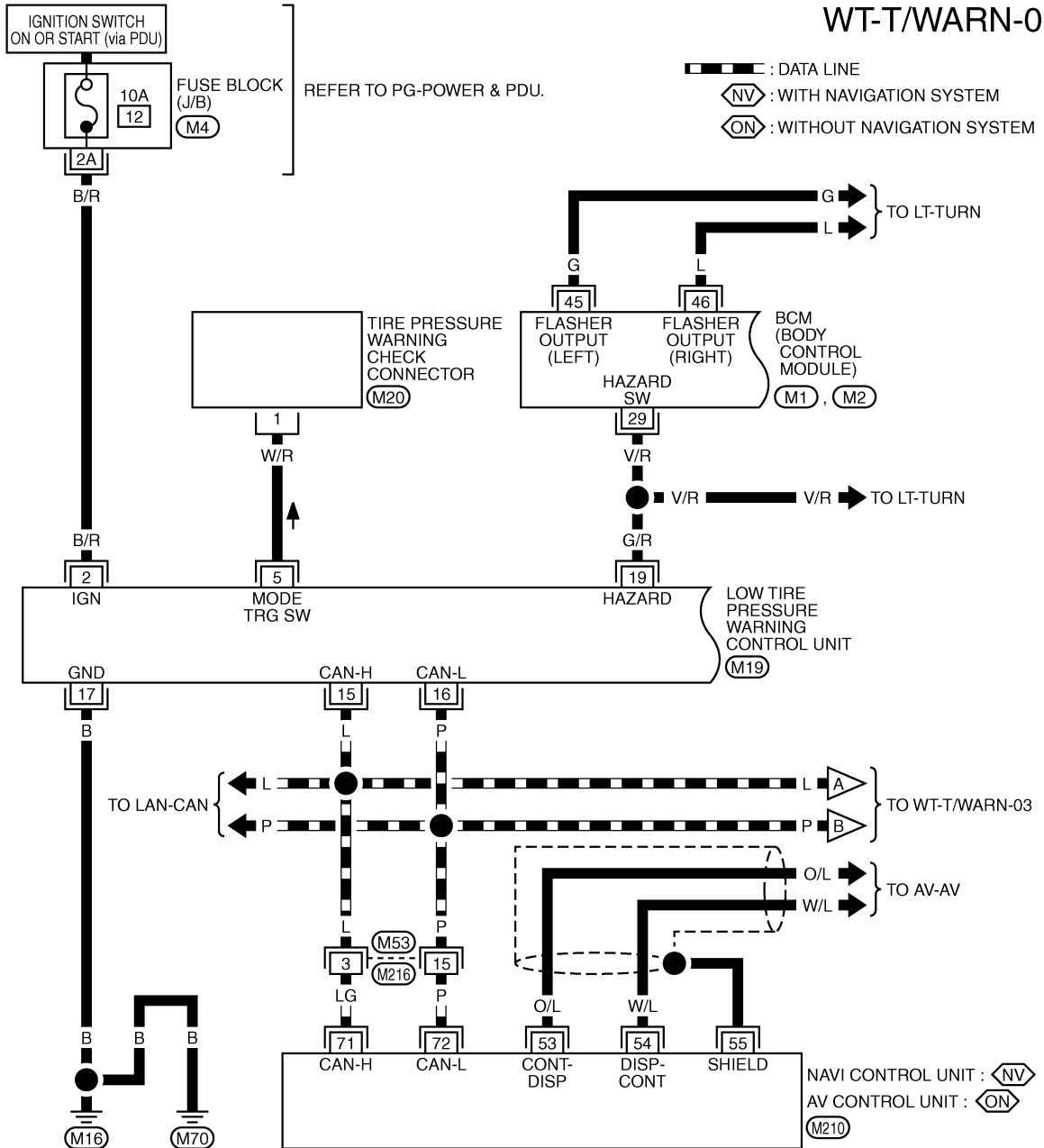
TEWB0007E

TROUBLE DIAGNOSES

Wiring Diagram — T/WARN —

NES000JW

WT-T/WARN-01



REFER TO THE FOLLOWING.

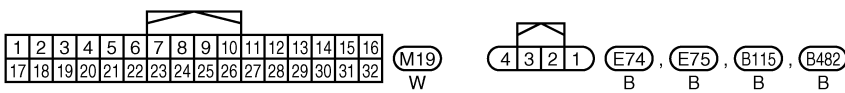
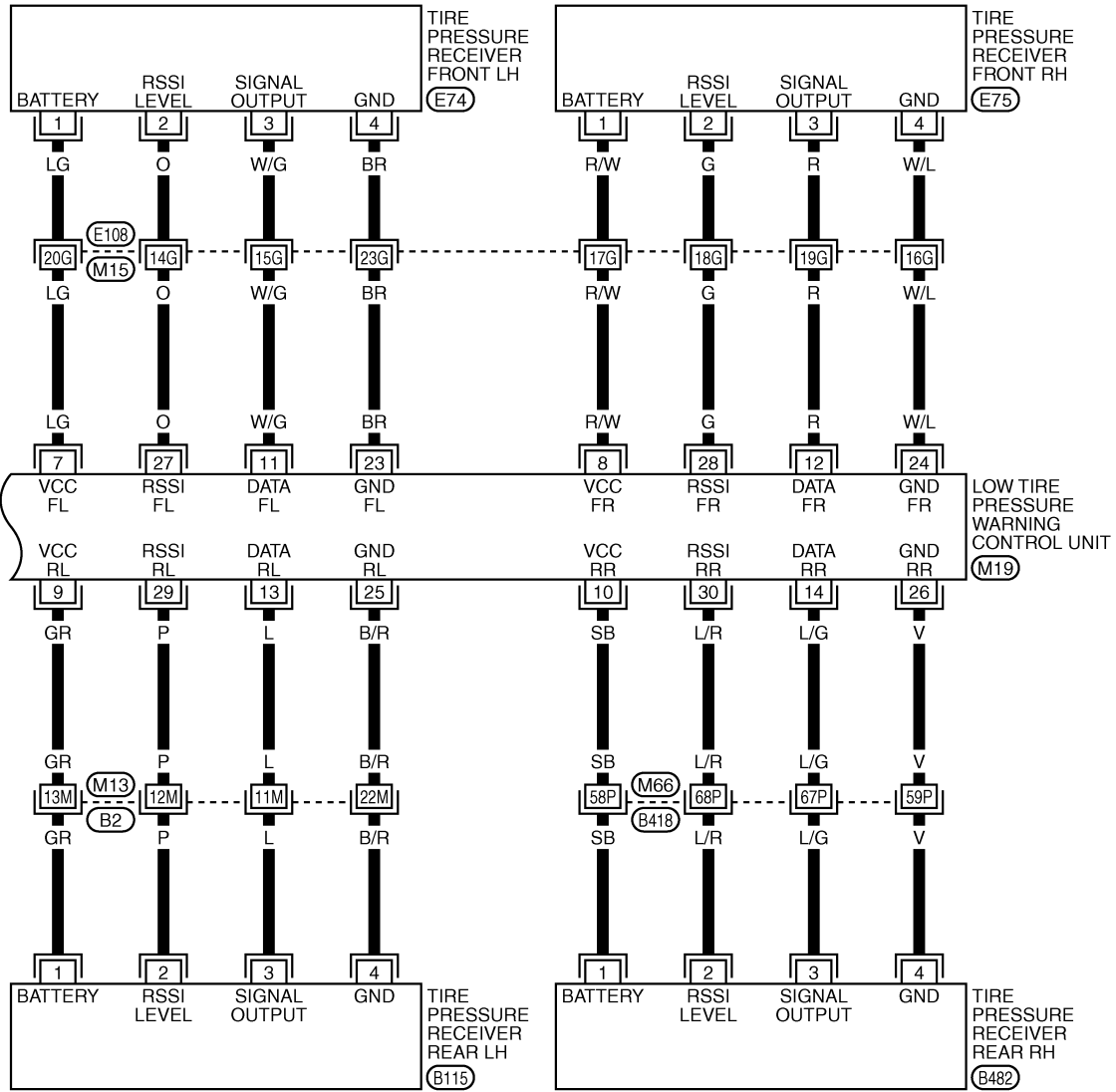
M4 - FUSE BLOCK-JUNCTION BOX (J/B)

M1, M2 - ELECTRICAL UNITS

TEWB0008E

TROUBLE DIAGNOSES

WT-T/WARN-02

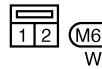
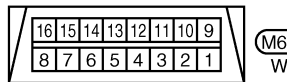
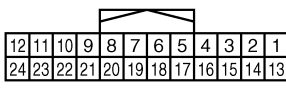
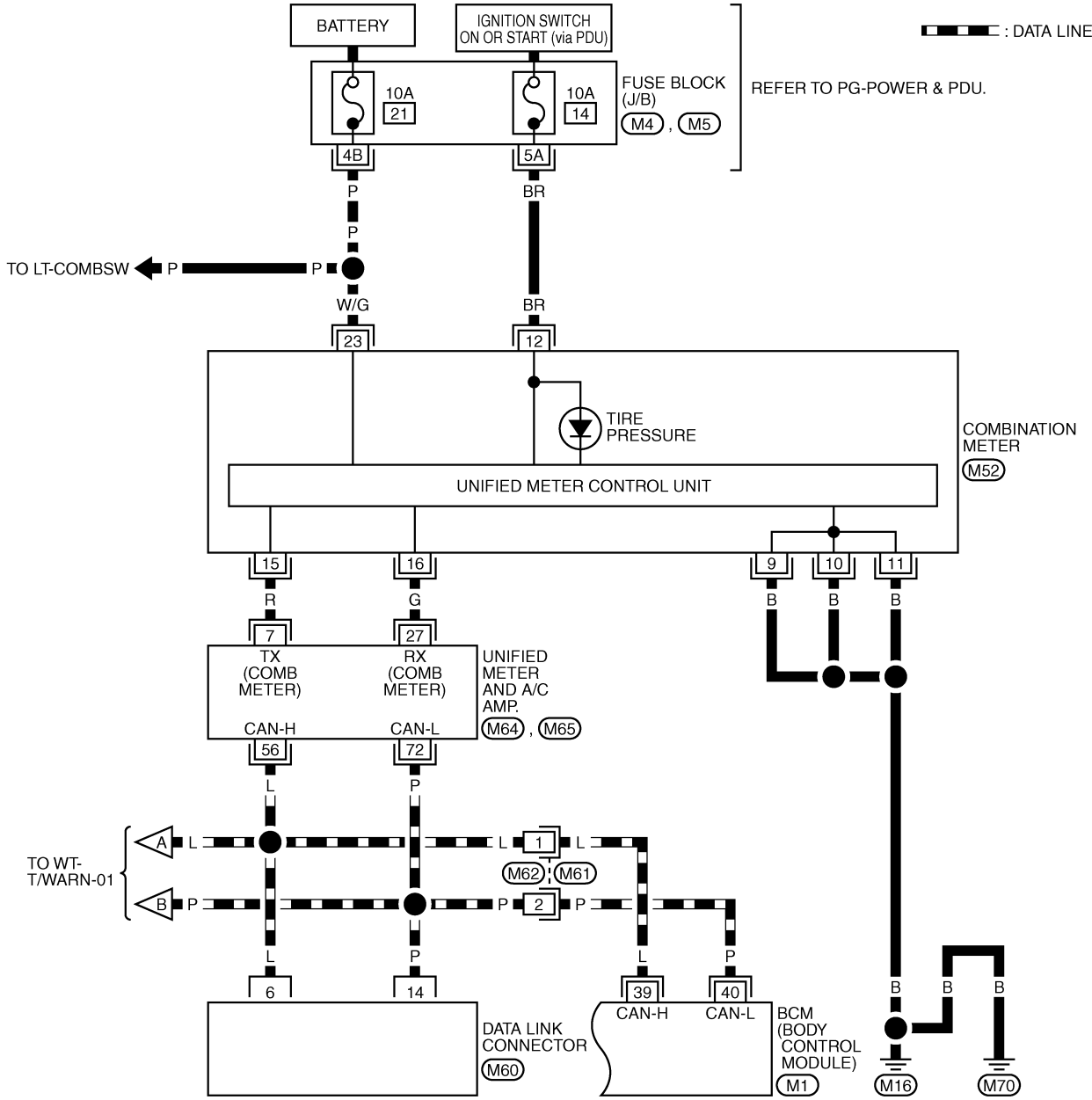


REFER TO THE FOLLOWING.
 (E108), (B2), (B418) -SUPER
 MULTIPLE JUNCTION (SMJ)

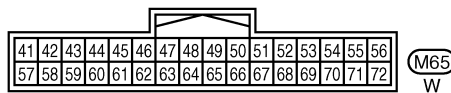
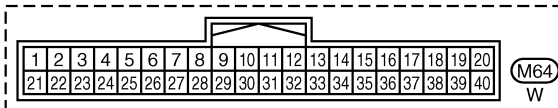
TEWT0048E

TROUBLE DIAGNOSES

WT-T/WARN-03



REFER TO THE FOLLOWING.
(M4), **(M5)** - FUSE BLOCK-JUNCTION BOX (J/B)
(M1) - ELECTRICAL UNITS



TROUBLE DIAGNOSES

Low Tire Pressure Warning Control Unit Input/Output Signal Standard

NES000JX

CAUTION:

When checked using a circuit tester for voltage measurement, connector terminals should not be forcefully extended.

Terminal		Measuring point	Measuring condition	Standard
+	-			
2 (B/R)	Ground	Ignition switch	Ignition switch ON	Battery voltage (12 V)
5 (W/R)		Tire pressure warning check connector	Always	Approx. 5 V
7 (LG)		Battery power supply	Ignition switch ON	Battery voltage (12 V)
8 (R/W)				
9 (GR)				
10 (SB)				
11 (W/G)				
12 (R)		Signal Input	—	Approx. 4.5 V
13 (L)				
14 (L/G)		CAN-H	—	—
15 (L)				
16 (P)				
17 (B)		Ground	—	0 V
19 (G/R)				
23 (BR)		Hazard	Hazard lamp switch OFF	Battery voltage (Approx. 12 V)
			Hazard lamp switch ON	0 V
24 (W/L)		Ground	—	0 V
25 (B/R)			—	0 V
26 (V)			—	0 V
27 (O)			—	0 V
28 (G)	Analog signal	Ignition switch ON	Approx. 0.7 V	
29 (P)				
30 (L/R)				

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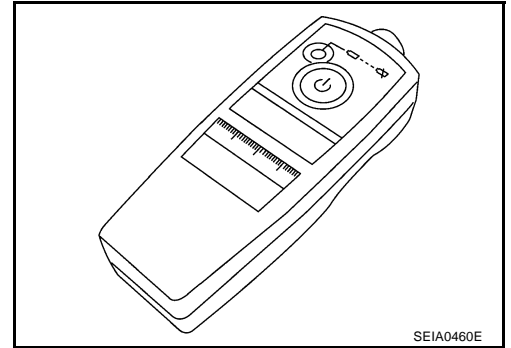
TROUBLE DIAGNOSES

NES000JY

ID Registration Procedure ID REGISTRATION WITH ACTIVATION TOOL

This procedure must be done after replacement of a tire pressure transmitter, low tire pressure warning control unit, or tire rotation.

1. Perform "CONSULT-II Start Procedure". Refer to [GI-38, "CONSULT-II Start Procedure"](#).
2. Touch "WORK SUPPORT" on "SELECT DIAG MODE" screen.
3. Touch "ID REGIST" on "SELECT WORK ITEM".
4. With the activation tool (J-45295) pushed against the front-left tire pressure transmitter position of the tire air valve, press and hold the button for 5 seconds.
5. Register the IDs in order from FR LH, FR RH, RR RH, RR LH. When ID registration of each wheel has been completed, turn signal lamp blinks.



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

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-diagnosis results display will not function properly.

ID REGISTRATION WITHOUT ACTIVATION TOOL

This procedure must be done after replacement of a tire pressure transmitter, low tire pressure warning control unit, or tire rotation.

1. Perform "CONSULT-II Start Procedure". Refer to [GI-38, "CONSULT-II Start Procedure"](#).
2. Touch "WORK SUPPORT" on "SELECT DIAG MODE" screen.
3. Touch "ID REGIST" on "SELECT WORK ITEM".
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 ² , psi)
Front LH	240 (2.4, 34)
Front RH	220 (2.2, 31)
Rear RH	200 (2.0, 29)
Rear LH	180 (1.8, 26)

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	

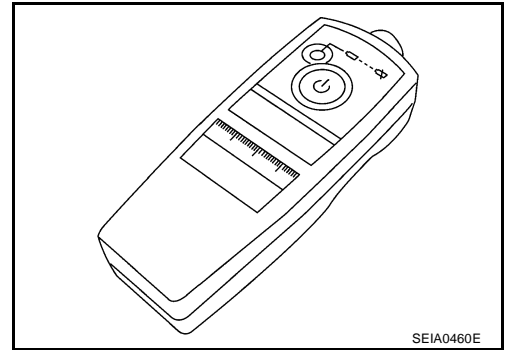
6. Inflate all tires to proper pressure. Refer to [WT-41, "SERVICE DATA AND SPECIFICATIONS \(SDS\)"](#).

TROUBLE DIAGNOSES

Transmitter Wake Up Operation WITH TRANSMITTER ACTIVATION TOOL

NES000JZ

- With the activation tool (J-45295) pushed against the front-left transmitter, press and hold 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 wake up.



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WT

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

F
G
H
I

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

SEIA0378E

CONSULT-II Function (AIR PRESSURE MONITOR) DESCRIPTION

NES000K0

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

Diagnostic test mode	Function	Reference
WORK SUPPORT	This mode enables a technician to adjust some devices faster and more accurately by following the indications on CONSULT-II.	WT-20. "WORK SUPPORT MODE"
SELF-DIAG RESULTS	Receives self-diagnosis results from low tire pressure warning control unit and indicates DTCs.	WT-20. "SELF-DIAG RESULT MODE"
DATA MONITOR	Receives input/output signals from low tire pressure warning control unit and indicates and stores them to facilitate locating cause of malfunctions.	WT-21. "DATA MONITOR MODE"
CAN DIAG SUPPORT MNTR	Monitors transmitting/receiving status of CAN communication.	LAN-44. "CAN Diagnostic Support Monitor"
ACTIVE TEST	Diagnostic Test Mode in with CONSULT-II drives some actuators apart from the low tire pressure warning control unit and also shifts some parameters in a specified range.	WT-22. "ACTIVE TEST MODE"
ECU PART NUMBER	Displays low tire pressure warning control unit part number.	WT-22. "LOW TIRE PRES-SURE WARNING CON-TROL UNIT PART NUMBER"

L
M

CONSULT-II SETTING PROCEDURE

Refer to [GI-38. "CONSULT-II Start Procedure"](#) .

TROUBLE DIAGNOSES

WORK SUPPORT MODE

Operation Procedure

1. Perform "CONSULT-II Start Procedure". Refer to [GI-38, "CONSULT-II Start Procedure"](#) .
2. Perform the "ID Regist". Refer to [WT-18, "ID Registration Procedure"](#) .

SELF-DIAG RESULT MODE

Operation Procedure

1. Perform "CONSULT-II Start Procedure". Refer to [GI-38, "CONSULT-II Start Procedure"](#) .
2. The self-diagnostic results are displayed. (Touch "PRINT" to print out the self-diagnostic results if necessary.) Check low tire pressure warning lamp if "NO FAILURE" is displayed.
3. Perform the appropriate inspection from the display item list, and repair or replace the malfunctioning component. Refer to [WT-20, "Display Item List"](#) .

Display Item List

DTC	Items (CONSULT-II screen terms)	Diagnostic item is detected when ...	Check items
C1704	LOW PRESSURE FL	Front LH tire pressure drops to * kPa (* kg/cm ² , * psi) or less. (Notice)	—
C1705	LOW PRESSURE FR	Front RH tire pressure drops to * kPa (* kg/cm ² , * psi) or less. (Notice)	
C1706	LOW PRESSURE RR	Rear RH tire pressure drops to * kPa (* kg/cm ² , * psi) or less. (Notice)	
C1707	LOW PRESSURE RL	Rear LH tire pressure drops to * kPa (* kg/cm ² , * psi) or less. (Notice)	
C1708	[NO DATA] FL	Data from front LH transmitter cannot be received.	WT-29
C1709	[NO DATA] FR	Data from front RH transmitter cannot be received.	
C1710	[NO DATA] RR	Data from rear RH transmitter cannot be received.	
C1711	[NO DATA] RL	Data from rear LH transmitter cannot be received.	
C1716	[PRESSDATA ERR] FL	Air pressure data from front LH transmitter is malfunctioning.	WT-31
C1717	[PRESSDATA ERR] FR	Air pressure data from front RH transmitter is malfunctioning.	
C1718	[PRESSDATA ERR] RR	Air pressure data from rear RH transmitter is malfunctioning.	
C1719	[PRESSDATA ERR] RL	Air pressure data from rear LH transmitter is malfunctioning.	
C1720	[CODE ERROR] FL	Function code data from front LH transmitter is malfunctioning.	WT-32
C1721	[CODE ERROR] FR	Function code data from front RH transmitter is malfunctioning.	
C1722	[CODE ERROR] RR	Function code data from rear RH transmitter is malfunctioning.	
C1723	[CODE ERROR] RL	Function code data from rear LH transmitter is malfunctioning.	
C1724	[BATT VOLT LOW] FL	Battery voltage of front LH transmitter drops.	WT-32
C1725	[BATT VOLT LOW] FR	Battery voltage of front RH transmitter drops.	
C1726	[BATT VOLT LOW] RR	Battery voltage of rear RH transmitter drops.	
C1727	[BATT VOLT LOW] RL	Battery voltage of rear LH transmitter drops.	
C1728	RECEIVER ID NO REG	ID registration of receiver is not completed.	WT-33
C1729	VHCL SPEED SIG ERR	Vehicle speed signal is error.	WT-33
C1750	[RECEIVER ERR] FL	Data from front LH receiver cannot be received.	WT-30
C1751	[RECEIVER ERR] FR	Data from front RH receiver cannot be received.	
C1752	[RECEIVER ERR] RR	Data from rear RH receiver cannot be received.	
C1753	[RECEIVER ERR] RL	Data from rear LH receiver cannot be received.	
C1754	CONTROL UNIT (EEPROM)	When the malfunction is detected in low tire pressure warning control unit memory [CONTROL UNIT (EEPROM)] function.	WT-34
U1000	CAN COMM CIRCUIT	When a low tire pressure warning control unit is not transmitting or receiving CAN communication signal 2 seconds or more.	WT-34
U1010	CONTROL UNIT [CAN]	When detecting error during the initial diagnosis of CAN controller of low tire pressure warning control unit.	WT-34

TROUBLE DIAGNOSES

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. A

NOTICE:

182 kPa (1.82 kg/cm² , 26.5 psi): Standard air pressure is for 230 kpa (2.3 kg/cm² , 33 psi) vehicles. B

How to Erase Self-Diagnostic Results

1. Perform applicable inspection of malfunctioning item and then repair or replace.
2. Start engine, and touch "START (NISSAN BASED VHCL)" "AIR PRESSURE MONITOR" "SELF-DIAG RESULTS" "ERASE" in this order to erase the diagnostic memory. C

CAUTION:

If memory cannot be erased, repeat step 1, 2. D

3. Perform self-diagnosis again, and make sure that DTC memory is erased.

DATA MONITOR MODE

Operation Procedure

1. Perform "CONSULT-II Start Procedure". Refer to [GI-38, "CONSULT-II Start Procedure"](#).
2. Touch "DATA MONITOR".
3. Select from "SELECT MONITOR ITEM", screen of data monitor is displayed. F

NOTE:

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

Display Item List

MONITOR	CONDITION	SPECIFICATION	H
VEHICLE SPEED SE	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)	I J
ID REGST FL ID REGST FR ID REGST RR ID REGST RL	Ignition switch ON	Registration ID: DONE No registration ID: YET	K
WARNING LAMP		Low tire pressure warning lamp on: ON Low tire pressure warning lamp off: OFF	L
BUZZER		Buzzer in combination meter on: ON Buzzer in combination meter off: OFF	M

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.

TROUBLE DIAGNOSES

ACTIVE TEST MODE

Operation Procedure

1. Perform "CONSULT-II Start Procedure". Refer to [GI-38, "CONSULT-II Start Procedure"](#) .
2. "ACTIVE TEST" is displayed.

Display Item List

Test item	Content
BUZZER	This test is able to check to make sure that the buzzer sounds.
WARNING LAMP	This test is able to check to make sure that the warning lamp turns on.

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.

LOW TIRE PRESSURE WARNING CONTROL UNIT PART NUMBER

Operation Procedure

1. Perform "CONSULT-II Start Procedure". Refer to [GI-38, "CONSULT-II Start Procedure"](#) .
2. The part number described on low tire pressure warning control unit sticker is displayed.

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

NES000K6

DESCRIPTION






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

FUNCTION

When the tire pressure monitoring 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. Regarding location of tire pressure warning check connector, refer to [PG-62, "HARNESS"](#) .




TROUBLE DIAGNOSES

LOW TIRE PRESSURE WARNING LAMP DIAGNOSTIC CHART

Diagnosis Item	Symptom (Ignition switch ON)	Low tire pressure warning lamp	Cause	Action
Low tire pressure warning lamp	Warning light comes on immediately and turns off after 1 second.	 ON 1 sec > stays OFF <small>SEIA0592E</small>	All wheel transmitters are "activated" (working).	None (system OK)
	Warning light blinks on for 2 seconds, then turns off for 0.2 seconds-repeats.	 Blinks: ON 2 sec > OFF 0.2 sec <small>SEIA0593E</small>	All wheel transmitters are not activated.	Activate all wheel tire pressure transmitters. Refer to WT-19, "Transmitter Wake Up Operation" .
	Warning light blinks 1 time.	 Blinks 1 time ON 0.3 sec > OFF 1.3 sec <small>SEIA0594E</small>	Tire pressure transmitter front LH is not activated.	Activate tire pressure transmitter front LH. Refer to WT-19, "Transmitter Wake Up Operation" .
	Warning light blinks 2 times.	 Blinks 2 times ON 0.3 sec > OFF 0.3 sec <small>SEIA0595E</small>	Tire pressure transmitter front RH is not activated.	Activate tire pressure transmitter front RH. Refer to WT-19, "Transmitter Wake Up Operation" .
	Warning light blinks 3 times.	 Blinks 3 times ON 0.3 sec > OFF 0.3 sec <small>SEIA0596E</small>	Tire pressure transmitter rear RH is not activated.	Activate tire pressure transmitter rear RH. Refer to WT-19, "Transmitter Wake Up Operation" .

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TROUBLE DIAGNOSES

Diagnosis Item	Symptom (Ignition switch ON)	Low tire pressure warning lamp	Cause	Action
Low tire pressure warning lamp	Warning light blinks 4 times.	 Blinks 4 times ON 0.3 sec > OFF 0.3 sec <small>SEIA0597E</small>	Tire pressure transmitter rear LH is not activated.	Activate tire pressure transmitter rear LH. Refer to WT-19, "Transmitter Wake Up Operation" .
	Warning light comes on and does not turn off.	 Comes ON and stays ON <small>SEIA0598E</small>	Tire pressure is low.	Check tire pressure with CONSULT-II. Refer to WT-21, "DATA MONITOR MODE" .
	Warning light blinks on for 0.5 seconds then turns off for 0.5 seconds-repeats for 1 minute, and then stays on	 Blinks 1 min ON 0.5 sec > OFF 0.5 sec and stays ON <small>SEIA0788E</small>	The fuse for low tire pressure warning control unit from battery is pulled out. Low tire pressure warning control unit connector pulled out Tire pressure monitoring system malfunction.	Check the fuse for low tire pressure warning control unit from battery. Install or replace (if needed). Check low tire pressure warning control unit connector. Reconnect if needed. ● Perform CONSULT-II Self-Diagnosis. Refer to WT-20, "SELF-DIAG RESULT MODE" . – Perform ID Registration if needed. Refer to WT-18, "ID Registration Procedure" .
Turn signal lamp	Turn signal lamp does not flash 2 times after transmitter activation.	—	1. Tool J-45295 [SST] 2. Ignition OFF during activation. 3. Tool J-45295 [SST] not positioned correctly. 4. Transmitters already activated.	1. Install new battery. 2. Make sure ignition is ON during activation. 3. Position tool correctly during activation. 4. None

NOTE:

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

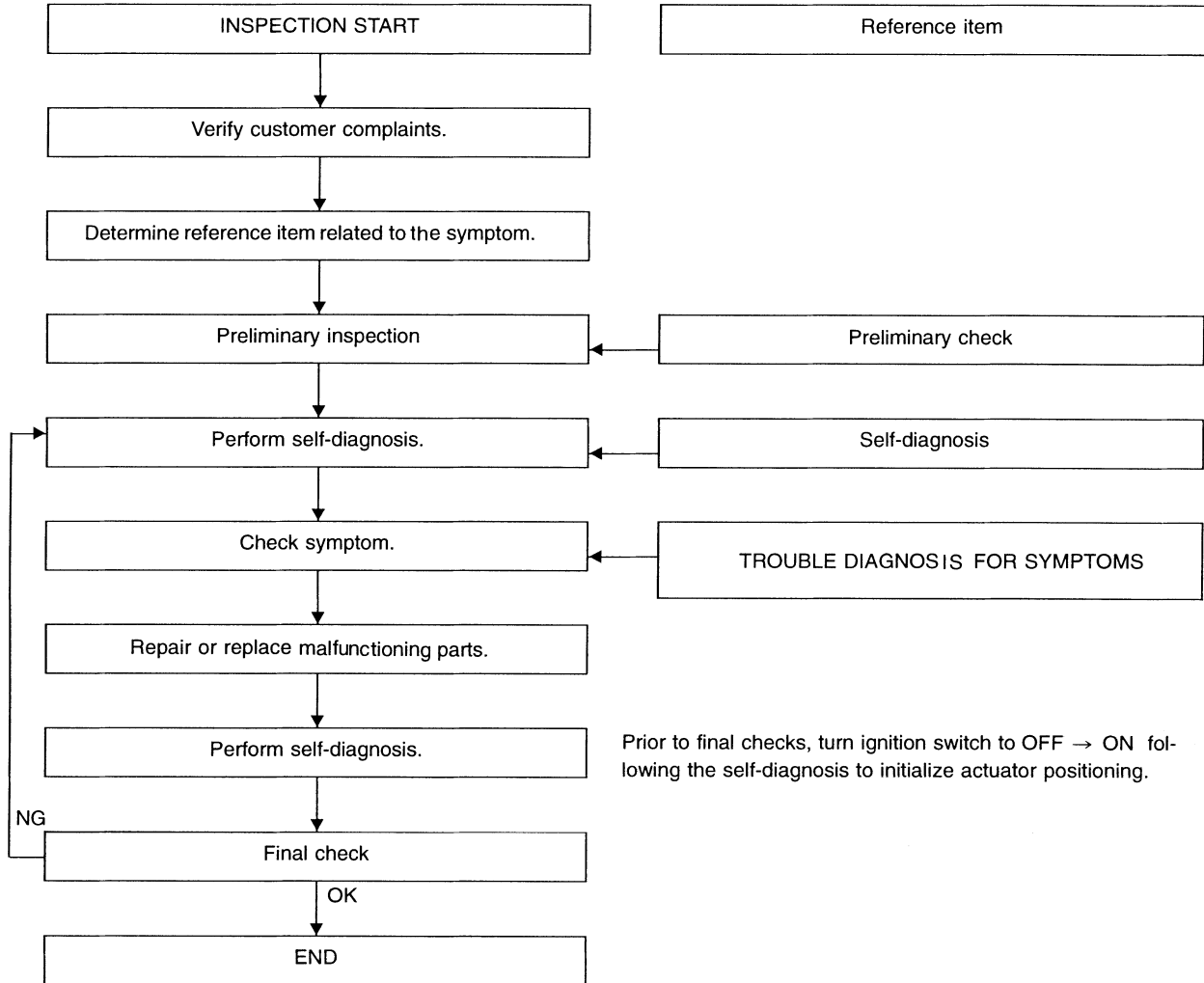
TROUBLE DIAGNOSES

How to Perform Trouble Diagnosis for Quick and Accurate Repair INTRODUCTION

NES000K7

- 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



Preliminary check: [WT-26](#)

Self-diagnosis: [WT-20](#)

Trouble diagnosis for symptoms: [WT-35](#)

SEIA0100E

TROUBLE DIAGNOSES

NES000K8

Preliminary Check

BASIC INSPECTION

1. CHECK ALL TIRE PRESSURES

Check all tire pressures. Refer to [WT-41, "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

1. Check low tire pressure warning lamp activation.
2. Does low tire pressure warning lamp activate for 1 second when ignition switch is turned "ON".

Does warning lamp activate?

YES >> GO TO 3.

NO >> Check fuse and combination meter. Refer to [DI-5, "COMBINATION METERS"](#) .

3. CHECK CONNECTOR

1. Disconnect low tire pressure warning control unit harness connectors M19.
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.

TROUBLE DIAGNOSES

Trouble Diagnosis Chart SELF-DIAGNOSIS

NES000K9

Item		CONSULT-II		Reference
Self-diagnosis function		Diagnosis item		
DTC (warning lamp blinks)	Diagnosis item	Diagnosis item		
15	Front LH tire pressure drops to * kPa (* kg/cm ² , * psi) or less. (Notice)	LOW PRESSURE FL		—
16	Front RH tire pressure drops to * kPa (* kg/cm ² , * psi) or less. (Notice)	LOW PRESSURE FR		
17	Rear RH tire pressure drops to * kPa (* kg/cm ² , * psi) or less. (Notice)	LOW PRESSURE RR		
18	Rear LH tire pressure drops to * kPa (* kg/cm ² , * psi) or less. (Notice)	LOW PRESSURE RL		
21	Transmitter no data (front LH)	[NO DATA] FL		WT-29
22	Transmitter no data (front RH)	[NO DATA] FR		
23	Transmitter no data (rear RH)	[NO DATA] RR		
24	Transmitter no data (rear LH)	[NO DATA] RL		
25	Receiver data error (front LH)	[RECEIVER ERR] FL		WT-30
26	Receiver data error (front RH)	[RECEIVER ERR] FR		
27	Receiver data error (rear RH)	[RECEIVER ERR] RR		
28	Receiver data error (rear LH)	[RECEIVER ERR] RL		
35	Transmitter pressure data error (front LH)	[PRESSDATA ERR] FL		WT-31
36	Transmitter pressure data error (front RH)	[PRESSDATA ERR] FR		
37	Transmitter pressure data error (rear RH)	[PRESSDATA ERR] RR		
38	Transmitter pressure data error (rear LH)	[PRESSDATA ERR] RL		
41	Transmitter function code error (front LH)	[CODE ERROR] FL		WT-32
42	Transmitter function code error (front RH)	[CODE ERROR] FR		
43	Transmitter function code error (rear RH)	[CODE ERROR] RR		
44	Transmitter function code error (rear LH)	[CODE ERROR] RL		
45	Transmitter battery voltage low (front LH)	[BATT VOLT LOW] FL		WT-32
46	Transmitter battery voltage low (front RH)	[BATT VOLT LOW] FR		
47	Transmitter battery voltage low (rear RH)	[BATT VOLT LOW] RR		
48	Transmitter battery voltage low (rear LH)	[BATT VOLT LOW] RL		
51	Receiver ID no registration	RECEIVER ID NO REG		WT-33
52	Vehicle speed signal	VHCL SPED SIG ERR		WT-33
54	Control unit (EEPROM) malfunction	CONTROL UNIT (EEPROM)		WT-34
	—	CAN COMM CIRCUIT		WT-34
	—	CONTROL UNIT [CAN]		WT-34

NOTICE:

182 kPa (1.82 kg/cm², 26.5 psi): Standard air pressure is for 230 kPa (2.3 kg/cm², 33 psi) vehicles.

TROUBLE DIAGNOSES

DIAGNOSIS CHART BY SYMPTOM

Symptom	Reference
Warning lamp does not come on when ignition switch is turned on.	WT-35. "Warning Lamp Does Not Come On When Ignition Switch Is Turned ON"
Warning lamp stay on when ignition switch turned on.	WT-35. "Warning Lamp Stay On When Ignition Switch Is Turned ON"
Warning lamp blinks 1 min and then turns on when ignition switch is turned on.	WT-36. "Warning Lamp Blinks 1 Minute and Then Turns ON When Ignition Switch Is Turned ON"
Warning lamp blinks when ignition switch is turned on.	WT-37. "Warning Lamp Blinks When Ignition Switch Is Turned ON"
Turn signal lamp blinks when ignition switch is turned on.	WT-38. "Turn Signal Lamp Blinks When Ignition Switch Is Turned ON"
ID registration can not be operated.	WT-38. "ID Registration Can Not Be Completed"

TROUBLE DIAGNOSIS FOR SYSTEM

TROUBLE DIAGNOSIS FOR SYSTEM

PPF:00000

Transmitter no Data MALFUNCTION CODE NO. 21, 22, 23, 24

NES000KA

1. CHECK CONTROL UNIT

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

Are all tire pressures displayed 0 kPa?

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

2. CHECK TIRE PRESSURE RECEIVER CONNECTOR

1. Disconnect tire pressure receiver harness connector E74 (FR-LH), E75 (FR-RH), B482 (RR-RH), B115 (RR-LH).
2. Check terminals for damage or loose connection.
3. Reconnect harness connector.

OK or NG

- OK >> Replace low tire pressure warning control unit. Refer to [WT-40, "Low Tire Pressure Warning Control Unit"](#), then GO TO 3.
- NG >> Repair or replace tire pressure receiver harness connector.

3. ID REGISTRATION

Perform ID registration of all transmitters.

Are there any tires that ID can not 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 >> GO TO 5.

5. 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 SYSTEM

NES000KB

Receiver Data Error

MALFUNCTION CODE NO. 25, 26, 27, 28

1. CHECK LOW TIRE PRESSURE WARNING CONTROL UNIT AND RECEIVER CONNECTOR

1. Turn ignition switch OFF, disconnect low tire pressure warning control unit harness connector and receiver harness connector, and check terminal for deformation, disconnection, looseness, and so on. If there is a malfunction, repair or replace the terminal.
2. Reconnect harness connector securely, and perform self-diagnosis.

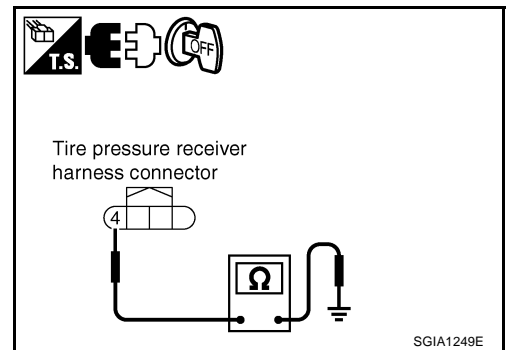
Does "SELF-DIAG RESULTS" display as normal without any warning lamp?

- YES >> Connector terminal connection is loose, damaged, open, or shorted.
NO >> GO TO 2.

2. CHECK TIRE PRESSURE RECEIVER POWER SUPPLY AND GROUND CIRCUIT

1. Turn ignition switch OFF, and disconnect tire pressure receiver harness connector E74, E75, B115, B482.
2. Check continuity between tire pressure receiver harness connector E74, E75, B115, B482 and ground.

Terminal 4 – Ground : Continuity should exist.

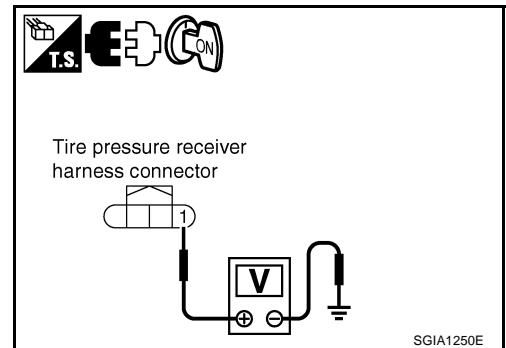


3. Turn ignition switch ON, and then check voltage between tire pressure receiver harness connector E74, E75, B115, B482 and ground.

1 – Ground : Battery voltage (Approx. 12 V)

OK or NG

- OK >> GO TO 3.
NG >> GO TO 4.



3. CHANGE THE TIRE PRESSURE RECEIVER POSITION (EXAMPLE OF FRONT LH SIDE)

1. Replace right from left for front and rear receivers.
2. Perform self-diagnosis.

Is the initial indication of self-diagnosis displayed?

- YES >> GO TO 4
NO >> Replace tire pressure receiver front RH when indicating RH tire pressure receiver malfunction.

TROUBLE DIAGNOSIS FOR SYSTEM

4. CHECK RECEIVER HARNESS (EXAMPLE OF FRONT LH SIDE)

1. Turn ignition switch OFF, disconnect low tire pressure warning control unit harness connector M19 (A) and receiver harness connector E74 (B).
2. Check continuity between low tire pressure warning control unit harness connector M19 (A) and receiver harness connector E74 (B).

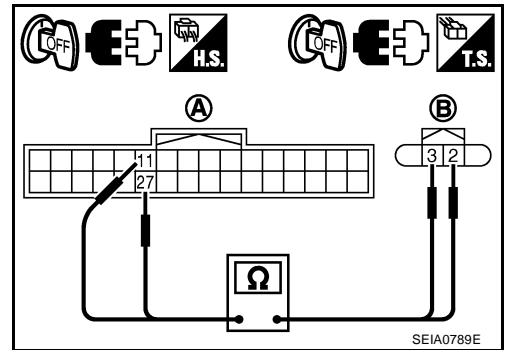
Terminal 27 – 2 : Continuity should exist.

Terminal 11 – 3 : Continuity should exist.

OK or NG

OK >> Replace low tire pressure warning control unit.

NG >> Harness between Low tire warning control unit and receiver open or shorted. Repair or replace harness.



Transmitter Pressure Data Error MALFUNCTION CODE NO. 35, 36, 37, 38

NES000KC

1. CHECK ALL TIRE PRESSURES

Check all tire pressures. Refer to [WT-41, "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.
2. 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 tire pressure transmitter with new one if "DATA MONITOR" display 64 psi or more. Then GO TO 3.

3. ID REGISTRATION AND VEHICLE DRIVING

1. Perform ID registration of all tire pressure 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 SYSTEM

Transmitter Function Code Error MALFUNCTION CODE NO. 41, 42, 43, 44

NES000KD

1. ID REGISTRATION (CORRECTION OF TRANSMITTER LOCATION)

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.

>> GO TO 2.

2. REPLACE TIRE PRESSURE TRANSMITTER

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

Can ID registration of all pressure transmitters be completed?

YES >> GO TO 3.

NO >> GO TO [WT-29, "Transmitter no Data"](#) .

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 Battery Voltage Low MALFUNCTION CODE NO. 45, 46, 47, 48

NES000KE

1. ID REGISTRATION (CORRECTION OF TRANSMITTER LOCATION)

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.

>> GO TO 2.

2. REPLACE TIRE PRESSURE TRANSMITTER

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

Can ID registration of all tire pressure transmitters be completed?

YES >> GO TO 3.

NO >> GO TO [WT-29, "Transmitter no Data"](#) .

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.

TROUBLE DIAGNOSIS FOR SYSTEM

Receiver ID No Registration MALFUNCTION CODE NO. 51

NES000KF

1. ID REGISTRATION

1. Perform ID registration of all tire pressure transmitters. Refer to [WT-18, "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 TIRE PRESSURE TRANSMITTER

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

Can ID registration of all tire pressure transmitters be completed?

YES >> GO TO 3.

NO >> GO TO [WT-29, "Transmitter no Data"](#) .

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.

Vehicle Speed Signal MALFUNCTION CODE NO. 52

NES000KG

1. CHECK SELF-DIAGNOSIS RESULTS

1. Perform "CONSULT-II Start Procedure". Refer to [GI-38, "CONSULT-II Start Procedure"](#) .
2. Touch "SELF-DIAG RESULTS" on "SELECT DIAG MODE" screen.
3. Check display contents in self-diagnostic results.

Self-diagnostic results

CAN COMM CIRCUIT [U1000]

CONTROL UNIT [CAN] [U1010]

Is above displayed on self-diagnosis display?

YES >> ● If "CAN COMM CIRCUIT [U1000]" is displayed, print out self-diagnosis. And then, go to [LAN-50, "CAN System Specification Chart"](#) .

● Replace low tire pressure warning control unit if "CONTROL UNIT [CAN] [U1010]" is displayed.

NO >> Check combination meter refer to [DI-18, "Trouble Diagnosis"](#) .

TROUBLE DIAGNOSIS FOR SYSTEM

Control Unit (EEPROM) Malfunction MALFUNCTION CODE NO. 54

NES000KT

1. CHECK SELF-DIAGNOSIS RESULTS

1. Turn ignition switch "ON". (Do not start engine.)
2. Select "SELF-DIAG RESULT" mode for "AIR PRESSURE MONITOR" with CONSULT-II.
3. Touch "ERASE".
4. Turn ignition switch OFF, and wait at least 10 seconds.
5. Start engine.
6. Perform the self-diagnosis again.

Is the "CONTROL UNIT (EEPROM) [C1754]" displayed?

- YES >> Replace low tire pressure warning control unit. Refer to [WT-40, "Low Tire Pressure Warning Control Unit"](#).
- NO >> **INSPECTION END**

CAN Communication System Malfunction

NES000KS

1. CHECK LOW TIRE PRESSURE WARNING CONTROL UNIT CONNECTOR

1. Turn ignition switch OFF, disconnect low tire pressure warning control unit harness connector, and check terminal for deformation, disconnection, looseness, etc.
2. Reconnect harness connector securely, and perform CONSULT-II self-diagnosis.

Self-diagnostic results

CAN COMM CIRCUIT [U1000]

CONTROL UNIT [CAN] [U1010]

Is above displayed on self-diagnosis display?

- YES >> ● If "CAN COMM CIRCUIT [U1000]" is displayed, print out self-diagnosis. And then, go to [LAN-50, "CAN System Specification Chart"](#).
- Replace low tire pressure warning control unit if "CONTROL UNIT [CAN] [U1010]" is displayed.
- NO >> Connector terminal connection is loose, damaged, open, or shorted. Repair or replace the terminal.

TROUBLE DIAGNOSIS FOR SYMPTOMS

TROUBLE DIAGNOSIS FOR SYMPTOMS

PF0:00007

Warning Lamp Does Not Come On When Ignition Switch Is Turned ON

NES000KH

1. CHECK SELF-DIAGNOSIS RESULTS

1. Perform "CONSULT-II Start Procedure". Refer to [GI-38, "CONSULT-II Start Procedure"](#).
2. Touch "SELF-DIAG RESULTS".
3. Check display contents in self-diagnostic results.

Self-diagnostic results

CAN COMM CIRCUIT [U1000]

CONTROL UNIT [CAN] [U1010]

Is above displayed on self-diagnosis display?

- YES >> ● If "CAN COMM CIRCUIT [U1000]" is displayed, print out self-diagnosis. And then, go to [LAN-50, "CAN System Specification Chart"](#).
- Replace low tire pressure warning control unit if "CONTROL UNIT [CAN] [U1010]" is displayed.
- 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 [DI-18, "Trouble Diagnosis"](#).

3. CHECK LOW TIRE PRESSURE WARNING LAMP

Disconnect low tire pressure warning control unit harness connector M19.

Does the warning lamp activate?

- YES >> Replace low tire pressure warning control unit. Refer to [WT-40, "Low Tire Pressure Warning Control Unit"](#).
- NO >> Check combination meter and repair or replace.

Warning Lamp Stay On When Ignition Switch Is Turned ON

NES000KW

1. CHECK ALL TIRE PRESSURES

Check all tire pressures. Refer to [WT-41, "SERVICE DATA AND SPECIFICATIONS \(SDS\)"](#).

OK or NG

- OK >> Check combination meter. Refer to [DI-5, "COMBINATION METERS"](#).
- NG >> Adjust tire pressure to specified value.

TROUBLE DIAGNOSIS FOR SYMPTOMS

Warning Lamp Blinks 1 Minute and Then Turns ON When Ignition Switch Is Turned ON

NES000KI

1. CHECK CONNECTOR

1. Disconnect low tire pressure warning control unit harness connectors M19.
2. Check terminals for damage or loose connections.

OK or NG

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

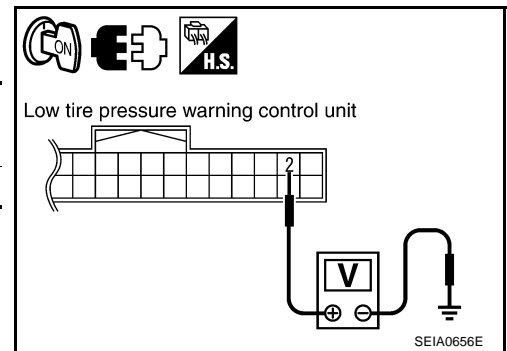
2. CHECK POWER SUPPLY CIRCUIT (IGN)

1. Turn ignition switch ON.
2. Measure voltage between low tire pressure warning control unit harness connector M19 and ground.

Terminal		Voltage
(+)	(-)	
2	Ground	12 V

OK or NG

- OK >> GO TO 3.
 NG >> Check low tire pressure warning control unit power supply circuit for open or short.



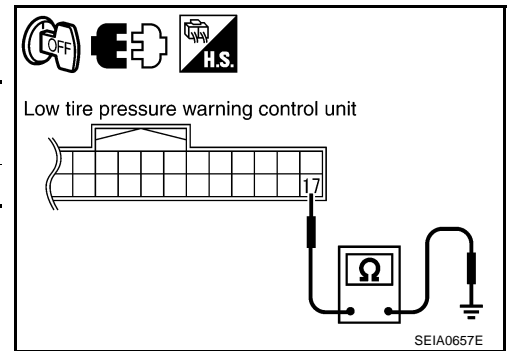
3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between low tire pressure warning control unit harness connector M19 and ground.

Terminal		Continuity
(+)	(-)	
17	Ground	Yes

OK or NG

- OK >> Replace low tire pressure warning control unit. Refer to [WT-40, "Low Tire Pressure Warning Control Unit"](#) .
 NG >> Repair or replace low tire pressure warning control unit ground circuit.



TROUBLE DIAGNOSIS FOR SYMPTOMS

Warning Lamp Blinks When Ignition Switch Is Turned ON

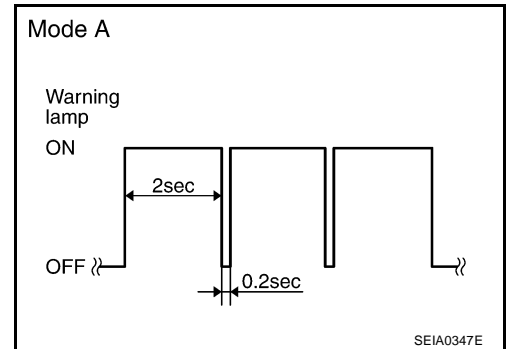
NES000KJ

NOTE:

If warning lamp blinks below, the system is normal.

Blink Mode A

- This mode shows transmitter status is in OFF-mode. Perform transmitter wake up operation. Refer to [WT-19, "Transmitter Wake Up Operation"](#).



1. CHECK CONNECTOR

- Disconnect low tire pressure warning control unit harness connector M19.
- Check terminals for damage or loose connections.

OK or NG

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

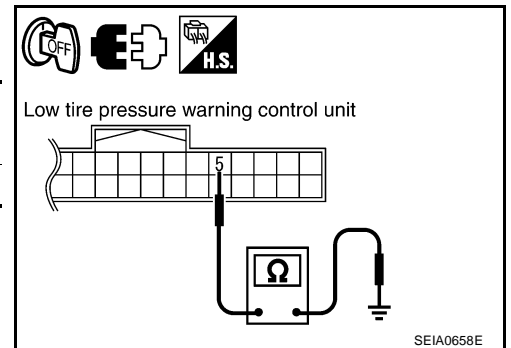
2. CHECK TIRE PRESSURE WARNING CHECK SWITCH CIRCUIT

Check continuity between low tire pressure warning control unit harness connector M19 and ground.

Terminal		Continuity
(+)	(-)	
5	Ground	No

OK or NG

- OK >> Replace low tire pressure warning control unit. Refer to [WT-40, "Low Tire Pressure Warning Control Unit"](#).
- NG >> Repair or replace harness connector.



TROUBLE DIAGNOSIS FOR SYMPTOMS

Turn Signal Lamp Blinks When Ignition Switch Is Turned ON

NES000KK

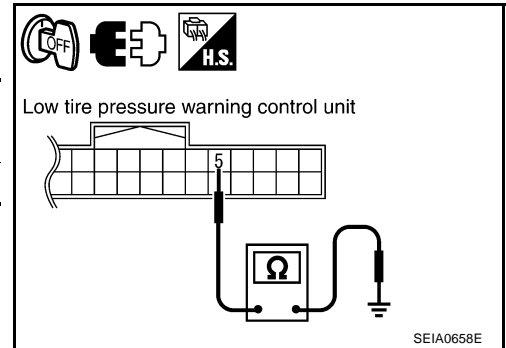
1. CHECK TIRE PRESSURE WARNING CHECK SWITCH CIRCUIT

Check continuity between low tire pressure warning control unit harness connector M19 and ground.

Terminal		Continuity
(+)	(-)	
5	Ground	No

OK or NG

- OK >> Check turn signal lamp operation. Refer to [LT-212, "System Description"](#).
- NG >> Repair or replace harness connector.



ID Registration Can Not Be Completed

NES000KL

1. ID REGISTRATION (ALL)

Perform ID registration of all transmitter.

Can ID registration of all transmitters be completed?

- YES >> INSPECTION END
- NO >> GO TO [WT-29, "Transmitter no Data"](#).

REMOVAL AND INSTALLATION

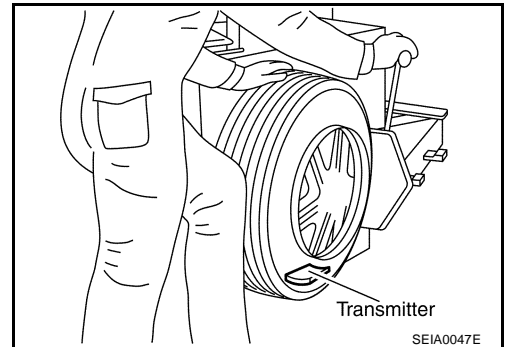
REMOVAL AND INSTALLATION

PFP:00000

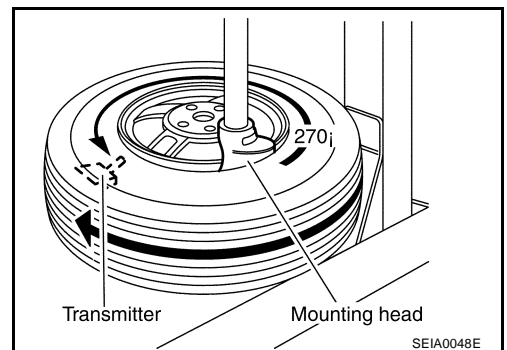
Transmitter REMOVAL

NES000KM

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.

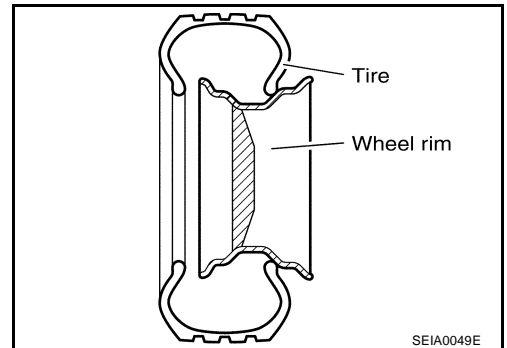


3. Turn tire so that valve hole is at bottom and bounce so that transmitter is near valve hole. Carefully lift tire onto turntable and position valve hole (and transmitter) 270 degree from mounting/dismounting head.
4. Lubricate tire well and remove first side of the tire. Reach inside the tire and remove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



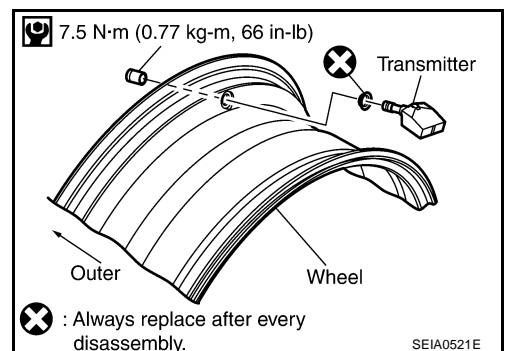
INSTALLATION

1. Put first side of tire onto rim.



2. Mount transmitter on rim and tighten nut.

CAUTION:
Speed for tightening nut should be less than 10 rpm.



A
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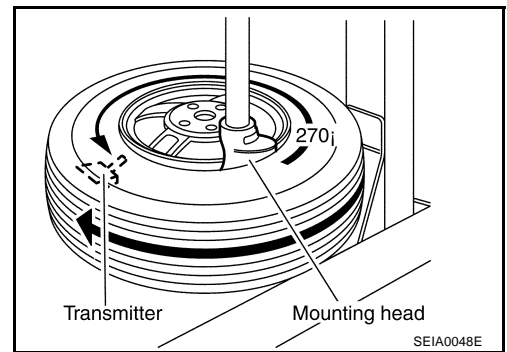
REMOVAL AND INSTALLATION

- 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.

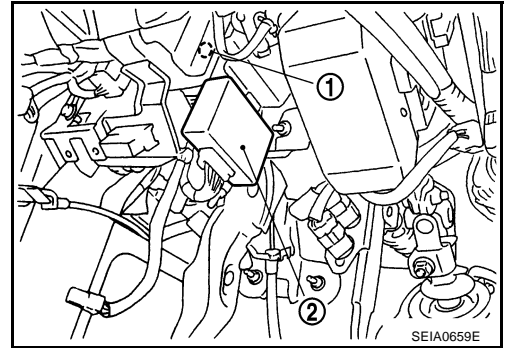
- Lubricate tire well and fit second side of tire as normal. Ensure that tire does not rotate relative to rim.
- Inflate tire and fit to appropriate wheel position.



Low Tire Pressure Warning Control Unit REMOVAL

NES000KN

- Remove instrument driver lower panel. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#).
- Remove fixing bolt (1), and then remove low tire pressure warning control unit (2) from vehicle.

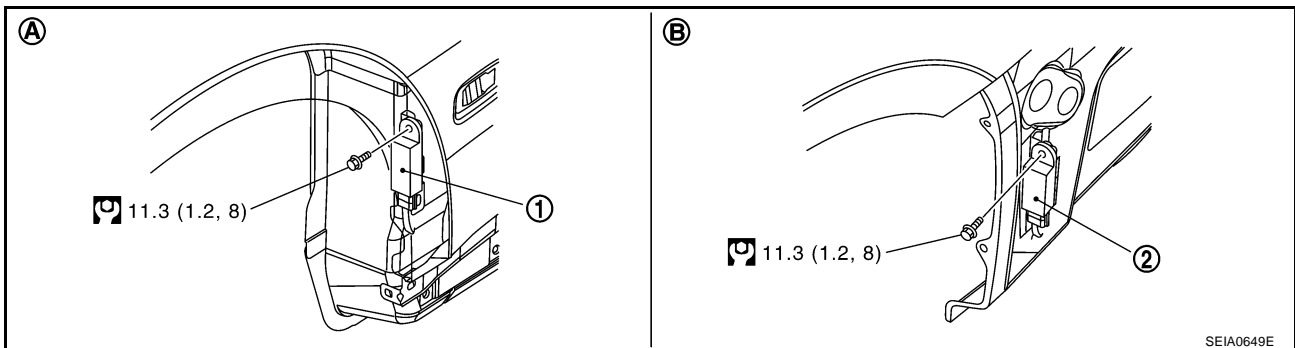


INSTALLATION

Installation is the reverse order of removal.

Receiver REMOVAL

NES000KO



- Tire pressure receiver front
- Tire pressure receiver rear

A. Front wheel house

B. Rear wheel house

Refer to [GI-11, "Components"](#), for the symbols in the figure.

- Remove tire from vehicle with a power tool.
- Remove fender protector from vehicle. Refer to [EI-20, "FENDER PROTECTOR"](#).
- Remove fixing bolt, then remove tire pressure receiver from vehicle.

INSTALLATION

Installation is the reverse order of removal. For tightening torque, refer to [WT-40, "REMOVAL"](#).

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

PPF:00030

Road Wheel

NES000KP

Kind of wheel		Aluminum	For temporary use
Maximum radial runout limit	Lateral deflection	Less than 0.3 mm (0.012 in)	Less than 1.5 mm (0.059 in)
	Vertical deflection	Less than 0.3 mm (0.012 in)	Less than 1.5 mm (0.059 in)
Maximum allowable unbalance	Dynamic (At rim flange)	Less than 7 g (0.25 oz) (one side)	
	Static (At rim flange)	Less than 14 g (0.49 oz)	

Tire

NES000KQ

Unit: kPa (kg/cm², psi)

Tire size	Air pressure	
	Front	Rear
245/40R19 94W	230 (2.3, 33)	230 (2.3, 33)
P245/45R18 96V	230 (2.3, 33)	230 (2.3, 33)
T145/80D17 107M	420 (4.2, 61)	420 (4.2, 61)

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M

SERVICE DATA AND SPECIFICATIONS (SDS)
