SECTION WT
ROAD WHEELS & TIRES

CONTENTS

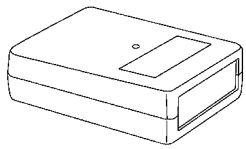
PREPARATION

PFP:00002

Special Service Tool

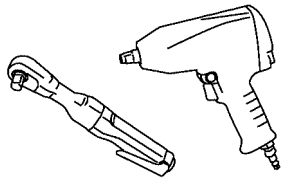
EES000OT

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  SEIA0051E	ID registration

Commercial Service Tools

EES000OU

Tool name	Description
Power tool  PBIC0190E	Removing wheel nuts

NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

PFP:00003

NVH Troubleshooting Chart

EES000OV

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

Reference page			FAX-5, FSU-6	WT-4	WT-5	WT-34	WT-6	—	—	WT-34	FAX-4, "NVH Troubleshooting Chart" (4 A/T), FAX-4, "NVH Troubleshooting Chart" (5 A/T)	FSU-5, "NVH Troubleshooting Chart" (FAX), FAX-4, "NVH Troubleshooting Chart" (FSU)	RAX-4, "NVH Troubleshooting Chart" (RAX), RSU-4, "NVH Troubleshooting Chart" (RSU)	Refer to TIRES in this chart.	Refer to ROAD WHEEL in this chart.	FAX-4, "NVH Troubleshooting Chart"	BR-5, "NVH Troubleshooting Chart"	PS-5, "NVH Troubleshooting Chart"
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	DIFFERENTIAL	FRONT AXLE AND FRONT SUSPENSION	REAR AXLE AND REAR SUSPENSION	TIRES	ROAD WHEEL	DRIVESHAFT	BRAKE	STEERING
Symptom	TIRES	Noise	×	×	×	×	×	×	×		×	×	×		×	×	×	×
		Shake	×	×	×	×	×	×		×		×	×		×	×	×	×
		Vibration				×				×		×	×			×		×
		Shimmy	×	×	×	×	×	×	×	×		×	×		×		×	×
		Shudder	×	×	×	×	×	×		×		×	×		×		×	×
		Poor quality ride or handling	×	×	×	×	×	×		×		×	×		×			
	ROAD WHEEL	Noise	×	×	×			×			×	×	×	×		×	×	×
		Shake	×	×	×			×				×	×	×		×	×	×
		Shimmy, shudder	×	×	×			×				×	×	×			×	×
		Poor quality ride or handling	×	×	×			×				×	×	×				

×: Applicable

WHEEL

PFP:40300

Inspection

EES000OW

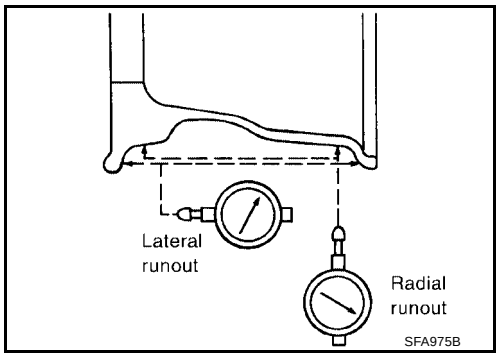
ALUMINUM WHEEL

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.

Wheel runout (dial indicator value) : **Refer to** **WT-34, "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 wheel on a tire balance machine.

b. Set two dial indicators as shown.

c. Set each dial indicator to zero.

d. Rotate wheel and check dial indicators at several points around the circumference of the wheel.

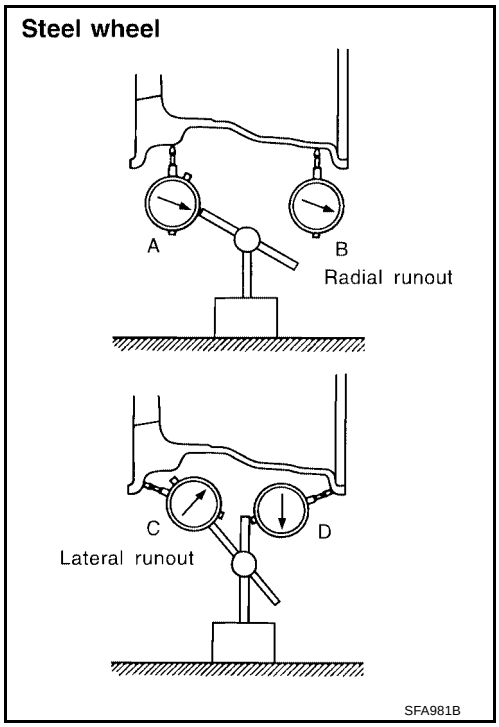
e. Calculate runout at each point as shown below.

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 (dial indicator value) : **Refer to** **WT-34, "SERVICE DATA AND SPECIFICATIONS (SDS)"** **.**



WHEEL AND TIRE ASSEMBLY

PFP:40300

Balancing Wheels (Bonding Weight Type)

EES000OX

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.

   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.**

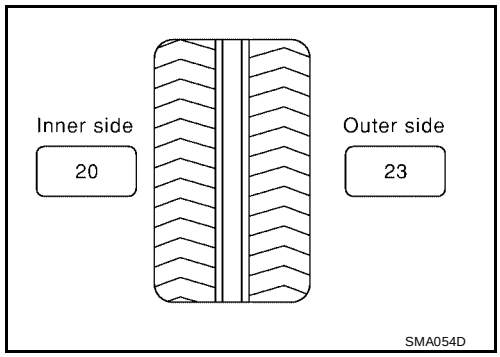
3. Set road wheel on wheel balancer using the center hole as a guide. Start the tire balance machine.
   - If a tire balance machine has adhesion balance weight mode settings and drive-in weight mode setting, select and adjust a drive-in weight mode suitable for road wheels.

4. When inner and outer unbalance values are shown on the wheel balancer indicator, multiply outer unbalance value by 1.6 to determine balance weight that should be used. Select the outer balance weight with a value closest to the calculated value 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.**

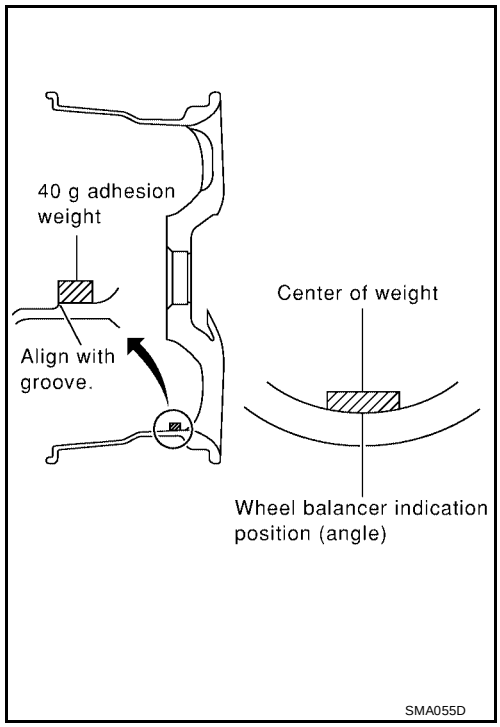
   Calculation:
   Indicated unbalance value × 1.6 = balance weight to be installed
   Calculation example:
   23 g (0.81 oz) × 1.6 = 38.33 g (1.35 oz) = 40 g (1.41 oz) balance weight (closer to calculated balance weight value)

   NOTE:
   The selected balance weight value must be the closest balance weight available 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 not reusable; always replace with new ones.**
   - **Do not install more than three pieces of balance weight.**



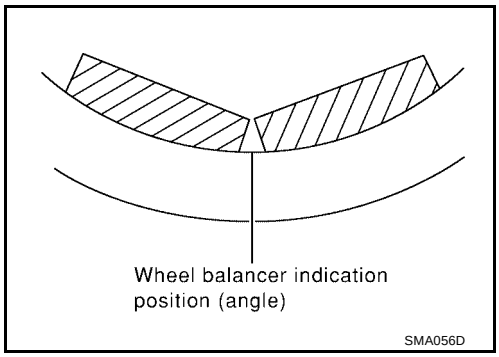
c. If calculated balance weight value exceeds 50 g (1.76 oz), install two balance weight pieces in line with each other as shown.

CAUTION:
Do not install one balance weight piece on top of another.

5. Start wheel balancer again.
6. 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.

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



Wheel balance (Maximum allowable unbalance):

Maximum allowable unbalance	Dynamic (At rim flange)	Less than 5 g (0.18 oz) (per side)
	Static (At rim flange)	Less than 10 g (0.35 oz.)

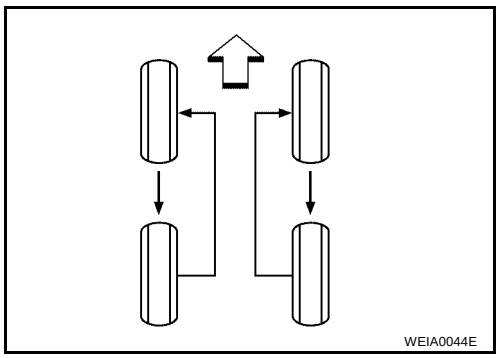
Rotation

EES000OY

- After rotating the tires, adjust the tire pressure.
- Retighten the wheel nuts when the vehicle has been driven for 1,000 km (600 miles) (also in cases of a flat tire, etc.).

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.

Tightening torque of wheel nut : 112 N·m (11 kg-m, 83 ft-lb)

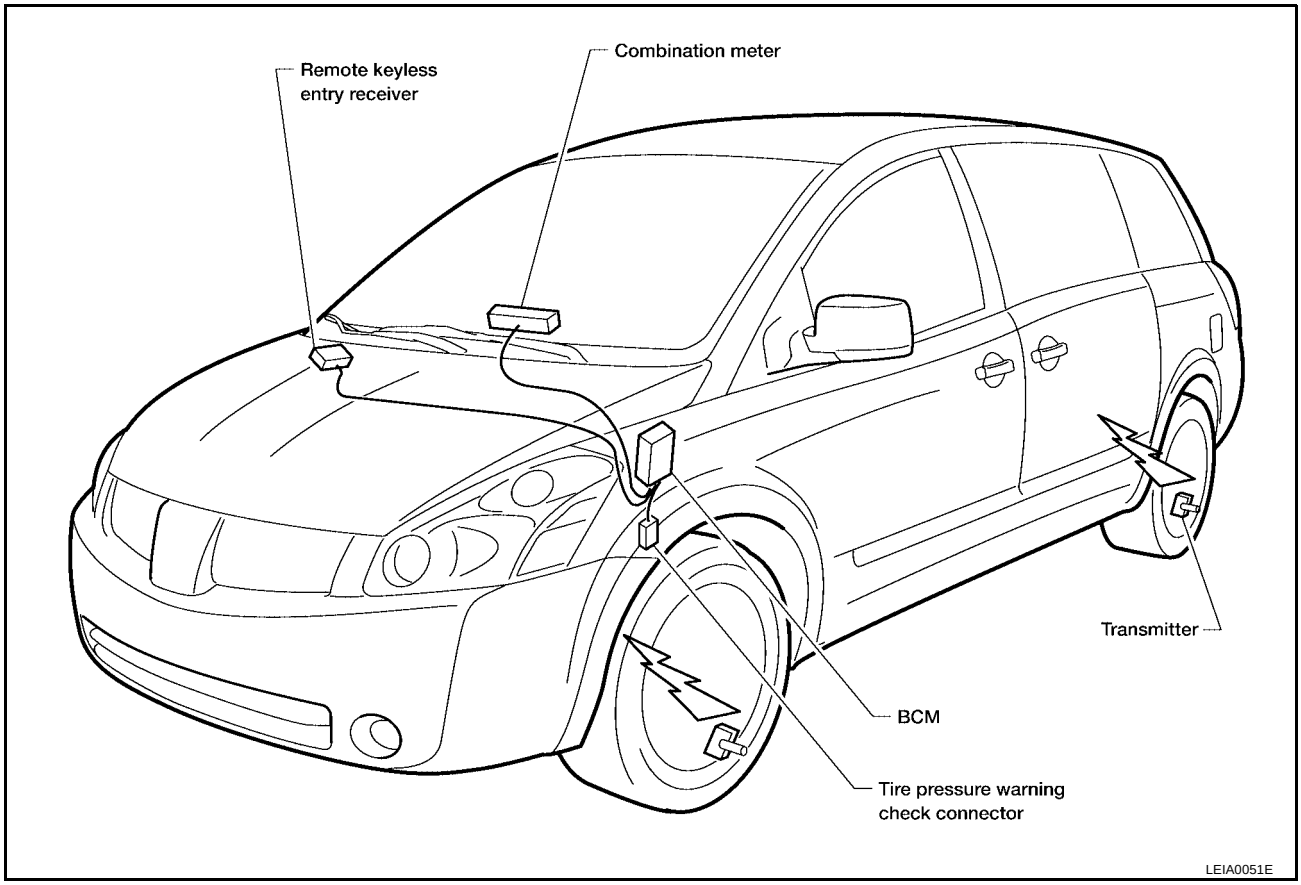


LOW TIRE PRESSURE WARNING SYSTEM

PFP:40300

System Components

EES000OZ

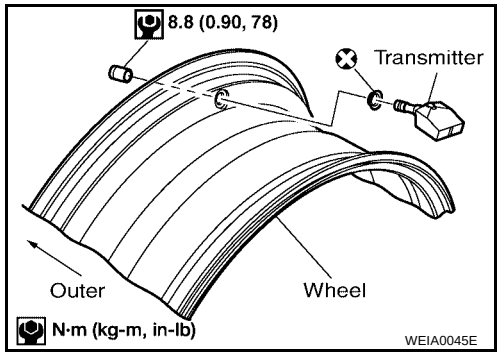


System Description

EES000P0

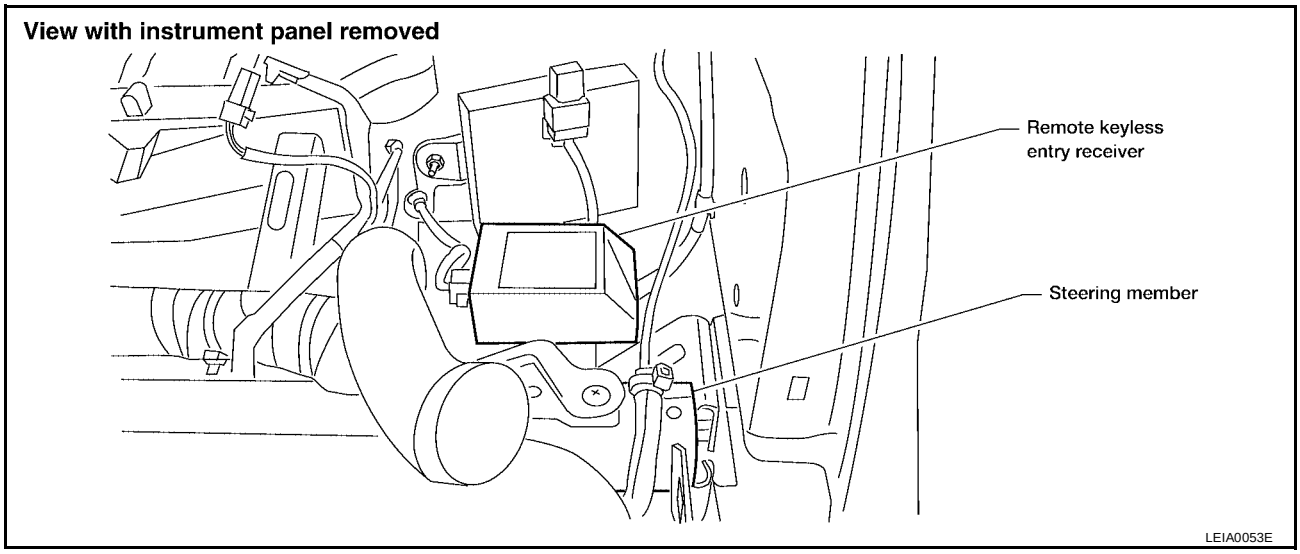
TRANSMITTER

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.



REMOTE KEYLESS ENTRY RECEIVER

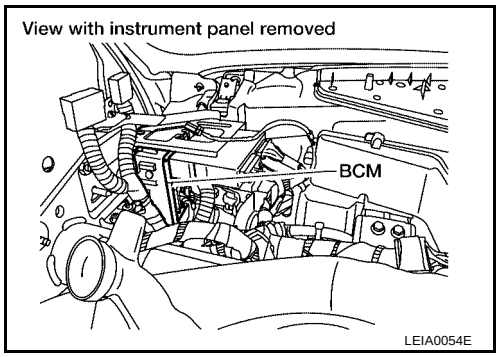
The remote keyless entry receiver receives the air pressure signal transmitted by the transmitter in each wheel.



BCM (BODY CONTROL MODULE)

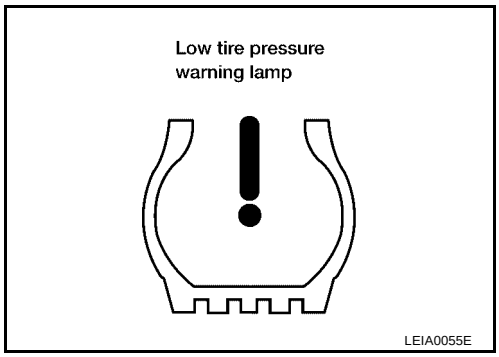
The BCM reads the air pressure signal received by the remote keyless entry receiver, and controls the combination meter warning lamp and the buzzer operations as shown below. It also has a judgement function to detect a system malfunction.

Condition	Warning lamp	Buzzer
Less than 193 kPa (2.0 kg/cm^2 , 28 psi) [Flat tire]	ON	Sounds for 10 sec.
System malfunction	ON	OFF



COMBINATION METER

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

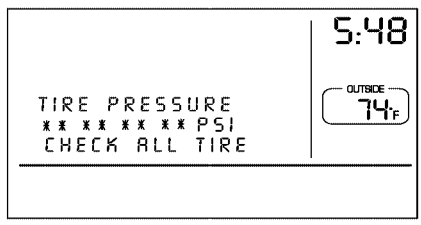


DISPLAY UNIT

Displays the air pressure of each tire.

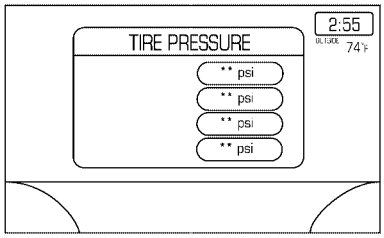
- After the ignition switch is turned ON, the pressure values are not displayed until the data of each wheel is received.

Without NAVI



LEIA0056E

With NAVI



LEIA0067E

CAN COMMUNICATION

PFP:23710

System Description

EES000P1

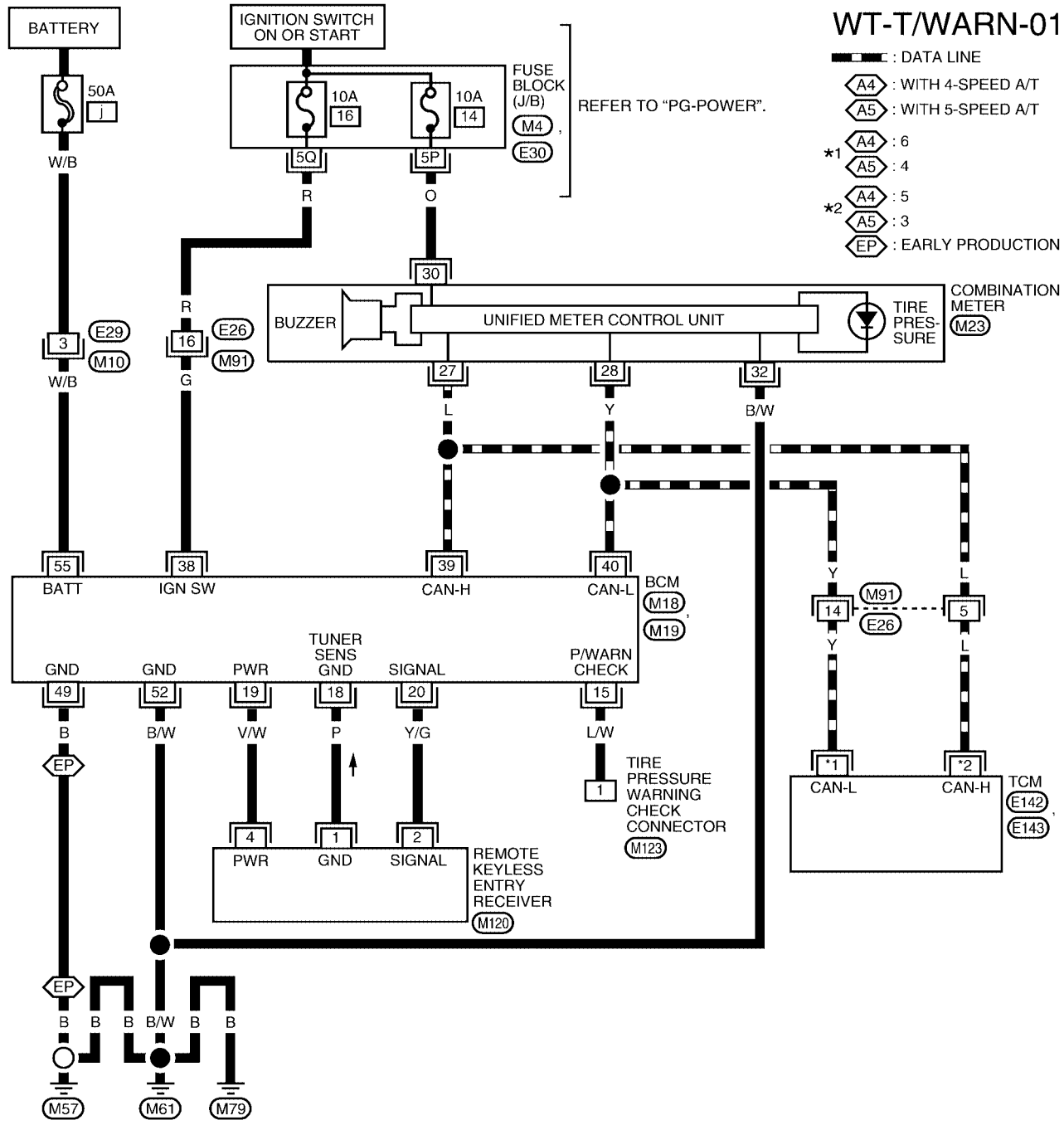
Refer to LAN-6, "CAN COMMUNICATION" .

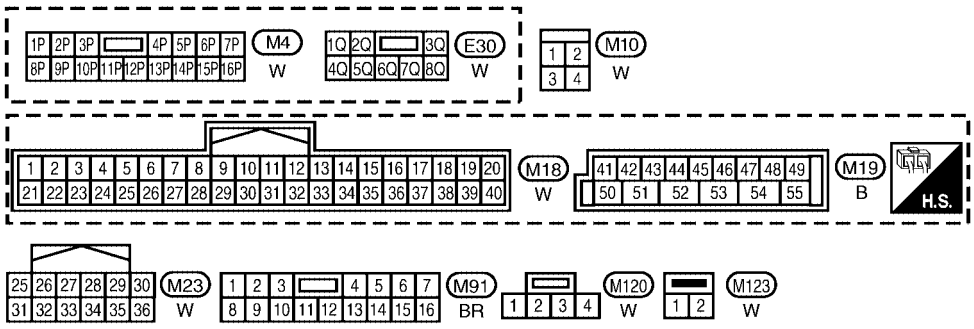
TROUBLE DIAGNOSES

PFP:00004

Wiring Diagram — T/WARN —

EES000P5



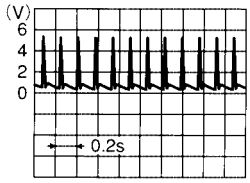
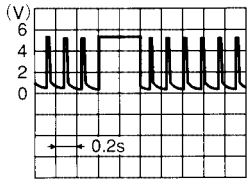
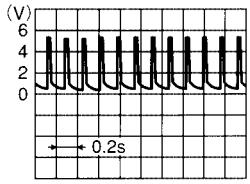
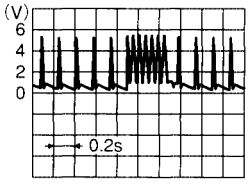


REFER TO THE FOLLOWING.
E142, E143 - ELECTRICAL UNITS.

WEWA0039E

Control Unit Input/Output Signal Standard

EES000PU

Terminal +	Terminal –	Item	Condition	Voltage (V) (Approx.)
15 (L/W)	Ground	Tire pressure warning check connector	—	5V
18 (P)		Remote keyless entry receiver (Ground)	—	0V
19 (V/W)		Remote keyless entry receiver (Power supply)	Stand-by	 OCC3879D
			Press any of the electronic switches	 OCC3882D
20 (Y/G)		Remote keyless entry receiver (Signal)	Stand-by	 OCC3881D
			Press any of the electronic switches	 OCC3880D
38 (G)		Ignition switch	Igntion switch ON or START	Battery voltage
39 (L)		Data line (CAN - H)	—	—
40 (Y)		Data line (CAN - L)	—	—
49 (B) (early production)		GND	—	0V
52 (B/W)				
55 (W/B)		Battery power supply	—	Battery voltage

( ) : Wire color

ID Registration Procedure

EES000P7

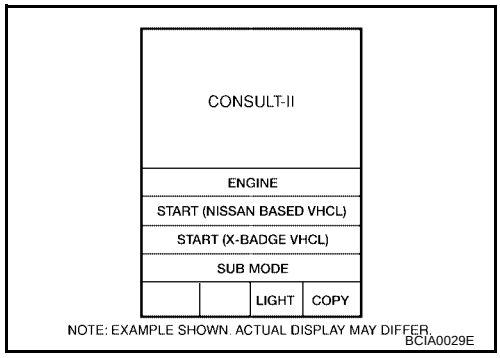
ID REGISTRATION WITH TRANSMITTER ACTIVATION TOOL

This procedure must be done after replacement of a low tire pressure warning transmitter or BCM.

CAUTION:

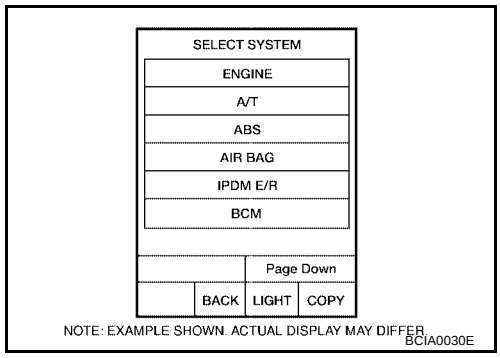
If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunction might be detected during self-diagnosis depending on control unit which carries out CAN communication.

1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn the ignition switch ON.
2. Select "START (NISSAN BASED VHCL)".

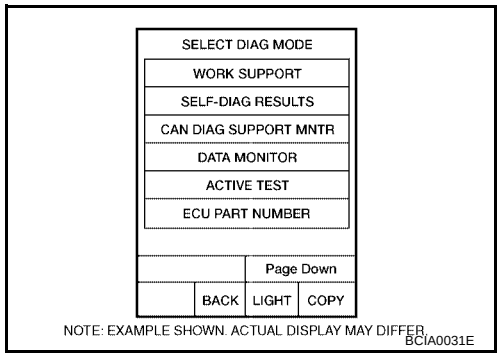


3. Touch “BCM” on "SELECT SYSTEM" screen.

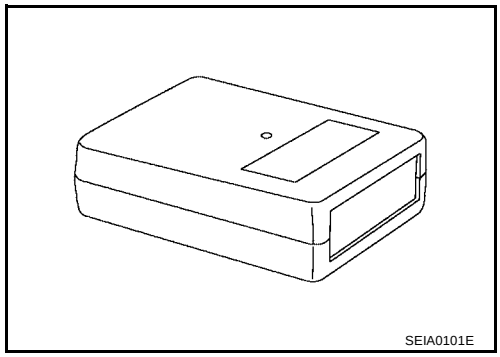
   NOTE:
   If "BCM" is not indicated, go to LAN-6, "CAN COMMUNICATION" .



4. Select “AIR PRESSURE MONITOR” on "SELECT TEST ITEM" screen.
5. Select “WORK SUPPORT” on "SELECT DIAG MODE" screen, and select "ID REGIST".



6. With the transmitter activation tool (J-45295) pushed against the front left transmitter position of the tire air valve, press the button for 5 seconds.



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

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

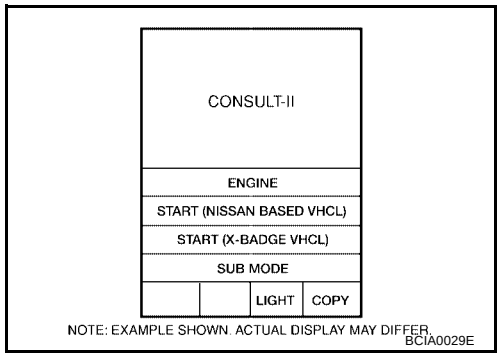
8. After completing all ID registrations, press “END” to complete the procedure.

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

ID REGISTRATION WITHOUT TRANSMITTER ACTIVATION TOOL

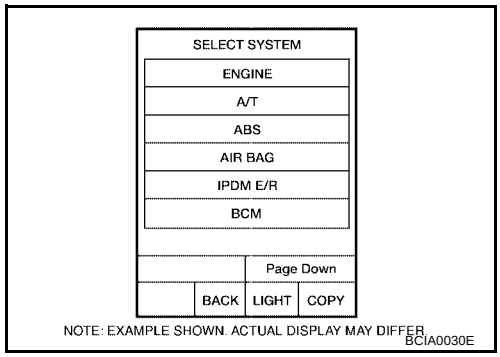
This procedure must be done after replacement of a low tire pressure warning transmitter or BCM.

1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn the ignition switch ON.
2. Select "START (NISSAN BASED VHCL)".

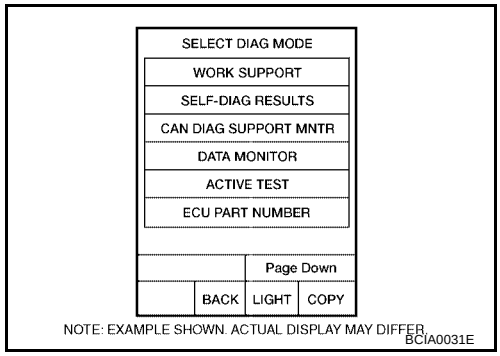


3. Touch “BCM” on "SELECT SYSTEM" screen.

   NOTE:
   If "BCM" is not indicated, go to LAN-6, "CAN COMMUNICATION" .
4. Select “AIR PRESSURE MONITOR” on “SELECT TEST ITEM" screen.



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



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

7. 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	

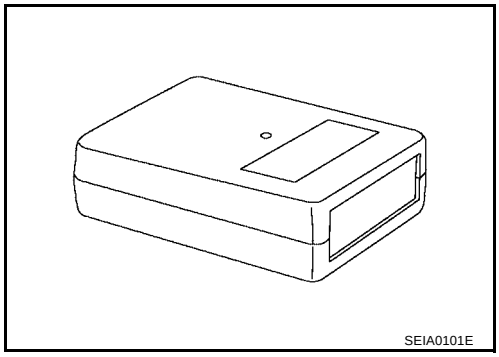
8. Inflate all tires to proper pressure. Refer to WT-34, "Tire" .

Transmitter Wake Up Operation

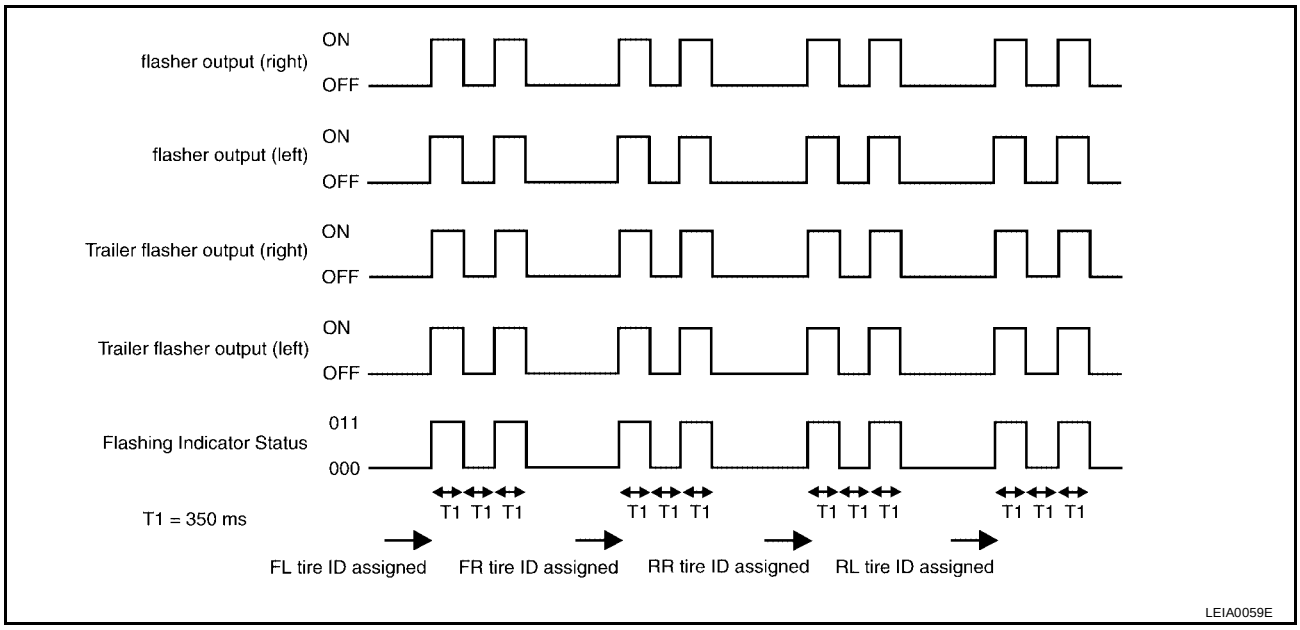
EES000P8

WITH TRANSMITTER ACTIVATION TOOL

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



2. When the BCM finishes assigning each tire ID, the BCM flashes the hazard warning lamps and trailer flasher lamps (if equipped) and sends flashing indicator status by CAN according to the following time chart. Please see trailer flasher specification details of trailer flashing lamps since the BCM controls trailer flasher lamps as brake lamps. Refer to LT-125, "TRAILER TOW" .



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

Self-Diagnosis

EES000P9

DESCRIPTION

During driving, the low tire pressure warning system receives the signal transmitted from the transmitter installed in each wheel, and gives alarms when the tire pressure becomes low. The control unit (BCM) for 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 lamp and buzzer in the combination meter comes on. To start the self-diagnostic results mode, ground the terminal of the tire pressure warning check connector. The malfunction location is indicated by the warning lamp flashing and the buzzer sounds.

CONSULT-II MAIN FUNCTION

CONSULT-II can display each diagnostic item using the following diagnostic test modes: work support, self-diagnostic results, data monitor and CAN diagnostic support monitor through data reception and command transmission via the BCM communication line.

Test mode	Function
WORK SUPPORT	This mode enables a technician to adjust some devices faster and more accurately by following the indications on CONSULT-II.
SELF-DIAGNOSTIC RESULTS	Self-diagnostic results can be read and erased quickly.
DATA MONITOR	Input/Output data in the control unit can be read.
CAN DIAGNOSTIC SUPPORT MONITOR	The results of transmit/receive diagnosis of CAN communication can be read.

CONSULT-II Application to Low Tire Pressure Warning System

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

× : Applicable
– : Not applicable

Self-Diagnostic Results Mode

Diagnostic item	Diagnostic item is detected when …
FLAT - TIRE - FL	Front-left tire pressure drops to 193 kPa (2.0 kg/cm^2 , 28 psi) or less
FLAT - TIRE - FR	Front-right tire pressure drops to 193 kPa (2.0 kg/cm^2 , 28 psi) or less
FLAT - TIRE - RR	Rear-right tire pressure drops to 193 kPa (2.0 kg/cm^2 , 28 psi) or less
FLAT - TIRE - RL	Rear-left tire pressure drops to 193 kPa (2.0 kg/cm^2 , 28 psi) or less
[NO-DATA] - FL	Data from front-left transmitter cannot be received.
[NO-DATA] - FR	Data from front-right transmitter cannot be received.
[NO-DATA] - RR	Data from rear-right transmitter cannot be received.
[NO-DATA] - RL	Data from rear-left transmitter cannot be received.
[CHECKSUM- ERR] - FL	Checksum data from front-left transmitter is malfunctioning.
[CHECKSUM- ERR] - FR	Checksum data from front-right transmitter is malfunctioning.
[CHECKSUM- ERR] - RR	Checksum data from rear-right transmitter is malfunctioning.
[CHECKSUM- ERR] - RL	Checksum data from rear-left transmitter is malfunctioning.

Diagnostic item	Diagnostic item is detected when ···
[PRESSDATA- ERR] - FL [PRESSDATA- ERR] - FR [PRESSDATA- ERR] - RR [PRESSDATA- ERR] - RL	Air pressure data from front-left transmitter is malfunctioning. Air pressure data from front-right transmitter is malfunctioning. Air pressure data from rear-right transmitter is malfunctioning. Air pressure data from rear-left transmitter is malfunctioning.
[CODE- ERR] - FL [CODE- ERR] - FR [CODE- ERR] - RR [CODE- ERR] - RL	Function code data from front-left transmitter is malfunctioning. Function code data from front-right transmitter is malfunctioning. Function code data from rear-right transmitter is malfunctioning. Function code data from rear-left transmitter is malfunctioning.
[BATT - VOLT - LOW] - FL [BATT - VOLT - LOW] - FR [BATT - VOLT - LOW] - RR [BATT - VOLT - LOW] - RL	Battery voltage of front-left transmitter drops. Battery voltage of front-right transmitter drops. Battery voltage of rear-right transmitter drops. Battery voltage of rear-left transmitter drops.
VHCL_SPEED_SIG_ERR	Vehicle speed signal is in error.

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

Data Monitor Mode

MONITOR	CONDITION	SPECIFICATION
VHCL SPEED	Drive vehicle.	Vehicle speed (km/h or MPH)
AIR PRESS FL AIR PRESS FR AIR PRESS RR AIR PRESS RL	● Drive vehicle for a few minutes. or ● Ignition switch ON and activation tool is transmitting activation signals.	Tire pressure (kPa or psi)
ID REGST FL1 ID REGST FR1 ID REGST RR1 ID REGST RL1	Ignition switch ON	Registration ID: DONE No registration ID: YET
WARNING LAMP		Low tire pressure warning lamp on: ON Low tire pressure warning lamp off: OFF
BUZZER		Buzzer in combination meter on: ON Buzzer in combination meter off : OFF

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

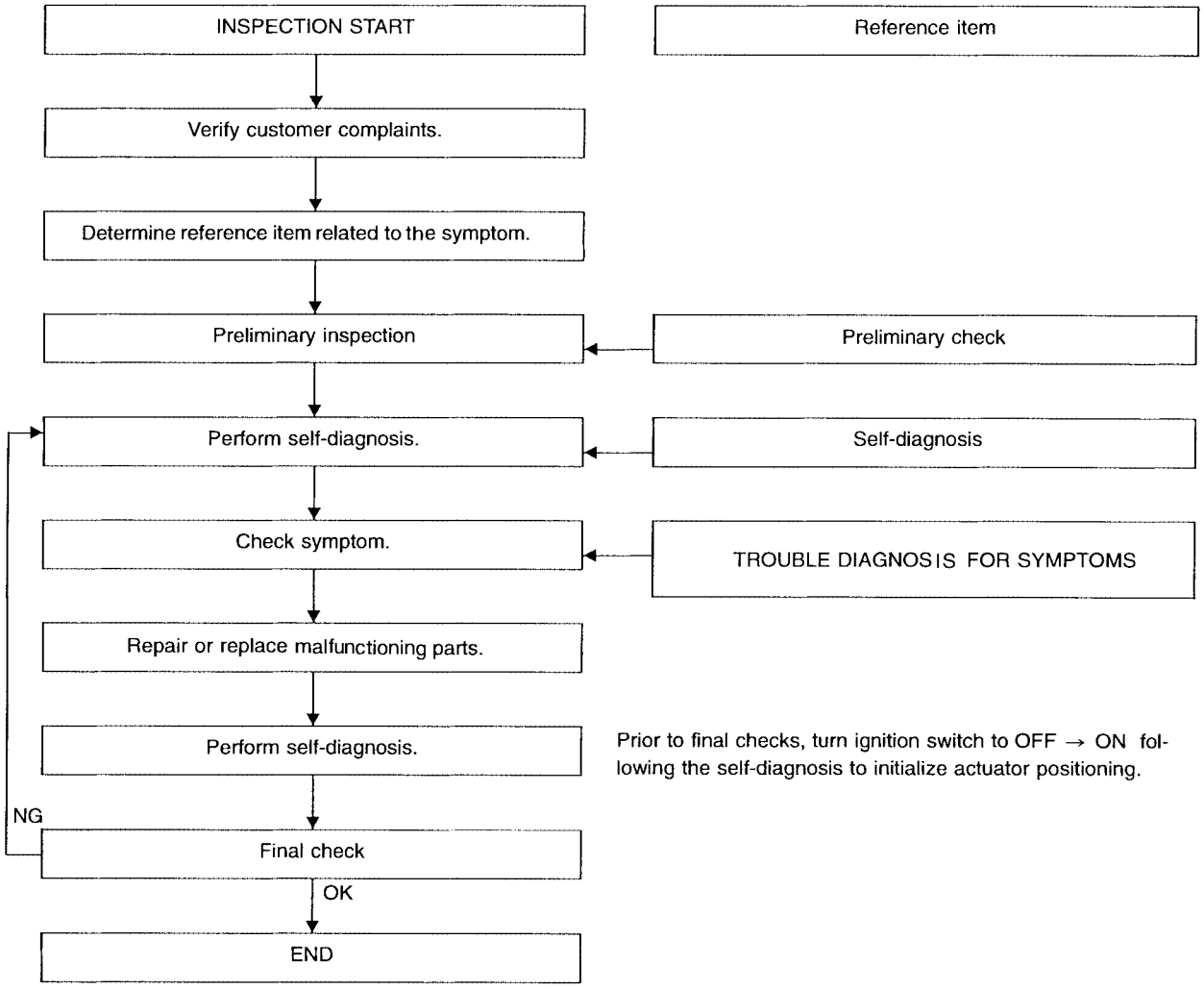
How to Perform Trouble Diagnosis for Quick and Accurate Repair

EES000PA

INTRODUCTION

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

WORK FLOW



SEIA0100E

Preliminary check : WT-20, "Preliminary Check"

Self-diagnosis : WT-17, "Self-Diagnosis"

Trouble diagnosis for symptoms : WT-26, "TROUBLE DIAGNOSIS FOR SYMPTOMS"

Preliminary Check

EES000PB

BASIC INSPECTION

1. CHECK ALL TIRE PRESSURES

Check all tire pressures. Refer to WT-34, "Tire" .

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.

3. CHECK CONNECTOR

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

OK or NG

OK >> GO TO 4.
NG >> Repair or replace damaged parts.

4. CHECK TRANSMITTER ACTIVATION TOOL

Check transmitter activation tool battery.

OK or NG

OK >> Carry out self-diagnosis.
NG >> Replace transmitter activation tool battery.

Malfunction Code/Symptom Chart

EES000PC

Code/Symptom	Malfunction part	Reference page
15 16 17 18	Front-left tire pressure drops to 193 kPa (2.0 kg/cm^2 , 28 psi) or less Front-right tire pressure drops to 193 kPa (2.0 kg/cm^2 , 28 psi) or less Rear-right tire pressure drops to 193 kPa (2.0 kg/cm^2 , 28 psi) or less Rear-left tire pressure drops to 193 kPa (2.0 kg/cm^2 , 28 psi) or less	—
21 22 23 24	Transmitter no data (front - left) Transmitter no data (front - right) Transmitter no data (rear - right) Transmitter no data (rear - left)	WT-23, "Inspection 1: Transmitter or BCM"
31 32 33 34	Transmitter checksum error (front - left) Transmitter checksum error (front - right) Transmitter checksum error (rear - right) Transmitter checksum error (rear - left)	WT-23, "Inspection 2: Transmitter - 1"
35 36 37 38	Transmitter pressure data error (front - left) Transmitter pressure data error (front - right) Transmitter pressure data error (rear - right) Transmitter pressure data error (rear - left)	WT-24, "Inspection 3: Transmitter - 2"
41 42 43 44	Transmitter function code error (front - left) Transmitter function code error (front - right) Transmitter function code error (rear - right) Transmitter function code error (rear - left)	WT-23, "Inspection 2: Transmitter - 1"
45 46 47 48	Transmitter battery voltage low (front - left) Transmitter battery voltage low (front - right) Transmitter battery voltage low (rear - right) Transmitter battery voltage low (rear - left)	WT-23, "Inspection 2: Transmitter - 1"
52	Vehicle speed signal	WT-25, "Inspection 4: Vehicle Speed Signal"
Low tire pressure warning lamp does not come on when ignition switch is turned on.	Fuse or combination meter BCM connector or circuit BCM	WT-26, "Inspection 1: Warning Lamp Does Not Come On When Ignition Switch Is Turned On."
Low tire pressure warning lamp stays on when ignition switch is turned on.	Fuse or combination meter BCM connector or circuit BCM	WT-27, "Inspection 2: Warning Lamp Stays On When Ignition Switch Is Turned On."
Low tire pressure warning lamp flashes when ignition switch is turned on.	BCM harness connector or circuit BCM Transmitter's mode off ID registration not yet completed	WT-29, "Inspection 3: Warning Lamp Flashes When Ignition Switch Is Turned On."WT-29

Code/Symptom	Malfunction part	Reference page
Hazard warning lamp flashes when ignition switch is turned on.	BCM harness connector or circuit BCM	WT-30, "Inspection 4: Hazard Warning Lamp Flashes When Ignition Switch Is Turned On."
“TIRE PRESSURE” information in display does not exist.	Fuse Display unit BCM	WT-31, "Inspection 5: “TIRE PRESSURE” Information In Display Unit Does Not Exist."
ID registration cannot be completed.	Transmitter Remote keyless entry receiver harness connector or circuit Remote keyless entry receiver	WT-31, "Inspection 6: ID Registration Cannot Be Completed"

TROUBLE DIAGNOSIS FOR SELF-DIAGNOSTIC ITEMS

PFP:00000

Inspection 1: Transmitter or BCM

EES000PD

MALFUNCTION CODE NO. 21, 22, 23 OR 24

1. CHECK CONTROL UNIT

Drive for several minutes. Check all tire pressures with CONSULT-II “DATA MONITOR ITEM”.

Are all tire pressures displayed as 0 kPa (0 psi)?

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

2. CHECK REMOTE KEYLESS ENTRY RECEIVER CONNECTOR

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

OK or NG

OK >> Replace BCM, then GO TO 3. Refer to BCS-19, "Removal and Installation of BCM" .
NG >> Repair or replace remote keyless entry receiver connector.

3. ID REGISTRATION

Carry out ID registration of all transmitters.

Is there a tire that cannot register ID?

YES >> Replace transmitter of the tire, then GO TO 5.
NO >> GO TO 4.

4. VEHICLE DRIVING

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

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

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

5. ID REGISTRATION AND VEHICLE DRIVING

1. Carry out ID registration of all transmitters.
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 ITEM” within 5 minutes.

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

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

Inspection 2: Transmitter - 1

EES000PE

MALFUNCTION CODE NO. 31, 32, 33, 34, 41, 42, 43, 44, 45, 46, 47 OR 48

1. ID REGISTRATION (CORRECTION OF TRANSMITTER LOCATION)

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

>> GO TO 2.

2. REPLACE TRANSMITTER

1. Check low tire pressure warning lamp again for flashing, replace malfunctioning transmitter.
2. Carry out ID registration of all transmitters.

Can ID registration of all transmitters be completed?

YES >> GO TO 3.
NO >> GO TO Inspection 1. Refer to WT-23, "Inspection 1: Transmitter or BCM"

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 ITEM” within 5 minutes.

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

YES >> Inspection End.
NO >> Replace malfunctioning transmitter, and perform “Step 3” again.

Inspection 3: Transmitter - 2

EES000PF

MALFUNCTION CODE NO. 35, 36, 37 OR 38

1. CHECK ALL TIRE PRESSURES

Check all tire pressures. Refer to WT-34, "Tire" .

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

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

2. VEHICLE DRIVING

1. Carry out 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 ITEM” within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).

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

3. ID REGISTRATION AND VEHICLE DRIVING

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

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

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

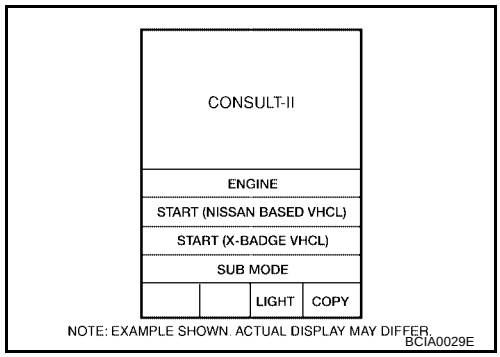
Inspection 4: Vehicle Speed Signal

EES000PG

MALFUNCTION CODE NO. 52

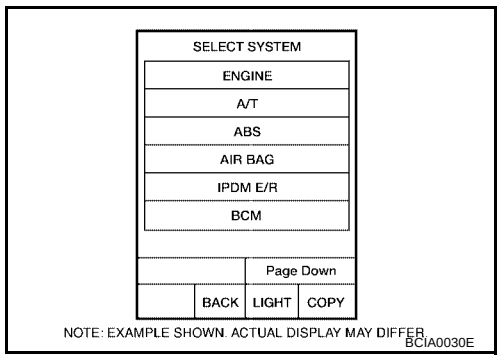
1. SELF-DIAGNOSTIC RESULT CHECK

1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn the ignition switch ON.
2. Select “START (NISSAN BASED VHCL)”.



3. Select "BCM" on “SELECT SYSTEM” screen.

   NOTE:
   If the BCM is not indicated, refer to LAN-6, "CAN COMMUNICATION" .
4. Select "BCM" on "SELECT TEST ITEM" screen, and select "SELF-DIAG RESULTS".
5. Check display contents in self-diagnostic results.



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

YES >> Malfunction in CAN communication system. GO TO LAN-6, "CAN COMMUNICATION"

NO >> GO TO 2.

2. CHECK BCM

Perform BCM diagnosis. Refer to BCS-11, "CONSULT–II INSPECTION PROCEDURE" .

Inspection results OK?

OK >> Perform Vehicle Speed Sensor Inspection. Refer to AT-121, "Diagnostic Procedure" for 4-speed A/T or AT-481, "Diagnostic Procedure" for 5-speed A/T.

NG >> Replace BCM. Refer to BCS-19, "Removal and Installation of BCM" .

TROUBLE DIAGNOSIS FOR SYMPTOMS

PFP:00007

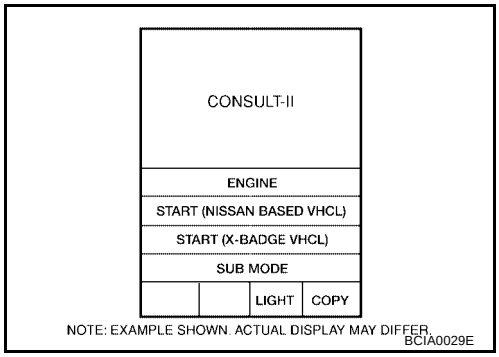
Inspection 1: Warning Lamp Does Not Come On When Ignition Switch Is Turned On.

EES000PH

DIAGNOSTIC PROCEDURE

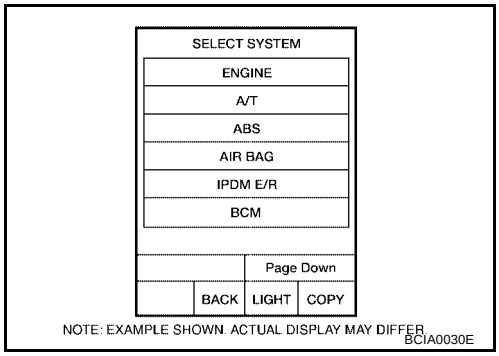
1. SELF-DIAGNOSTIC RESULT CHECK

1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn the ignition switch ON.
2. Select “START (NISSAN BASED VHCL)”.



3. Select "BCM" on “SELECT SYSTEM” screen.

   NOTE:
   If the BCM is not indicated, refer to LAN-6, "CAN COMMUNICATION" .
4. Select "BCM" on "SELECT TEST ITEM" screen, and select "SELF-DIAG RESULTS".
5. Check display contents in self-diagnostic results.



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

YES >> Malfunction in CAN communication system. GO TO LAN-6, "CAN COMMUNICATION" .
NO >> GO TO 2.

2. CHECK COMBINATION METER

Check combination meter operation.

Inspection results OK?

OK >> GO TO 3.
NG >> Check combination meter. Refer to DI-8, "Combination Meter" .

3. CHECK LOW TIRE PRESSURE WARNING LAMP

Disconnect BCM harness connector.

Does the low tire pressure warning lamp activate?

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

Inspection 2: Warning Lamp Stays On When Ignition Switch Is Turned On.

EES000PI

DIAGNOSTIC PROCEDURE

1. CHECK CONNECTOR

1. Disconnect BCM harness connectors M18, M19 and M20.
2. Check terminals for damage or loose connections.

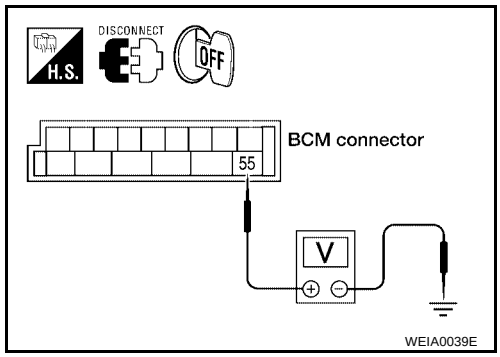
Inspection results OK?

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

2. CHECK POWER SUPPLY CIRCUIT (BAT)

Check voltage between BCM harness connector M19 terminal 55 (W/B) and ground.

Terminals			Voltage (Approx.)
(+)		(–)	
Connector	Terminal (Wire color)	Ground	12 V
M19	55 (W/B)		



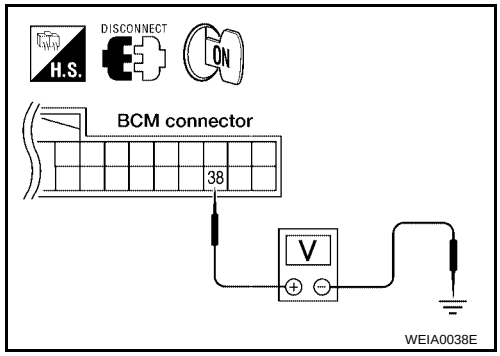
OK or NG

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

3. CHECK POWER SUPPLY CIRCUIT (IGN)

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

Terminals			Voltage (Approx.)
(+)		(–)	
Connector	Terminal (Wire color)	Ground	12 V
M18	38 (G)		



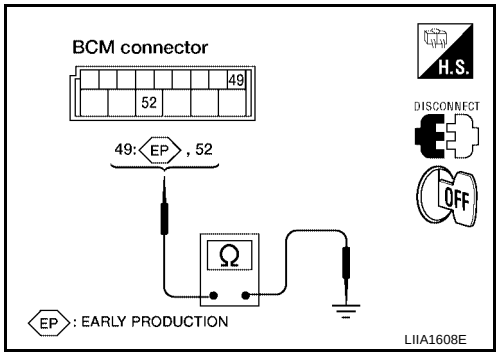
OK or NG

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

4. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector M19 terminals 49 (B) (early production), 52 (B/W) and ground.

Terminals			Continuity
(+)		(–)	
Connector	Terminal (Wire color)	Ground	Yes
M19	49 (B) (early production)		
	52 (B/W)		



OK or NG

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

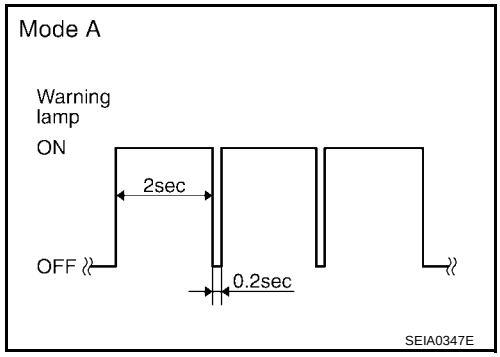
Inspection 3: Warning Lamp Flashes When Ignition Switch Is Turned On.

EES000PJ

NOTE:
If warning lamp flashes as shown, the system is normal.

Flash Mode A

- This mode shows transmitter status is OFF-mode.
  Carry out transmitter wake up operation. Refer to WT-16, "Transmitter Wake Up Operation" .



DIAGNOSTIC PROCEDURE

1. CHECK CONNECTOR

1. Disconnect BCM harness connectors M18, M19 and M20.
2. Check terminals for damage or loose connections.

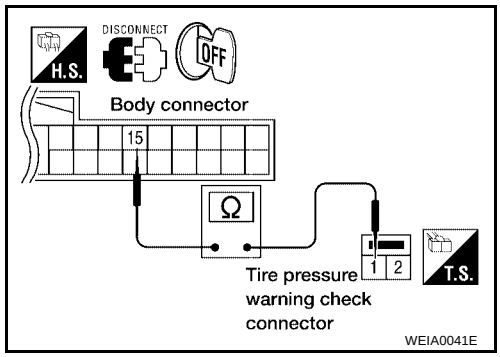
Inspection results OK?

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

2. CHECK TIRE PRESSURE WARNING CHECK CONNECTOR CIRCUIT

Check continuity between BCM harness connector M18 terminal 15 (L/W) and check connector M123 terminal 1 (L/W).

Continuity should exist.



OK or NG

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

Inspection 4: Hazard Warning Lamp Flashes When Ignition Switch Is Turned On.

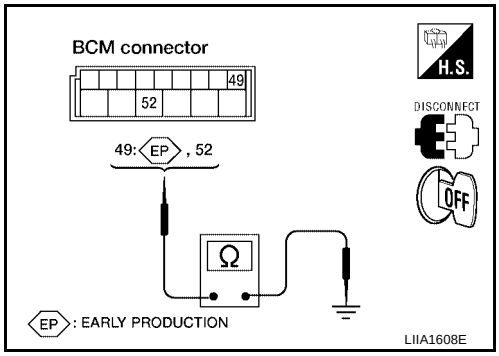
EES000PK

DIAGNOSTIC PROCEDURE

1. CHECK GROUND CIRCUIT

1. Disconnect BCM harness connector M19.
2. Check continuity between BCM harness connector M19 terminal 49 (B) (early production), 52 (B/W) and ground.

Terminals			Continuity
(+)		(–)	
Connector	Terminal (Wire color)		
M19	49 (B) (early production)	Ground	Yes
	52 (B/W)		



OK or NG

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

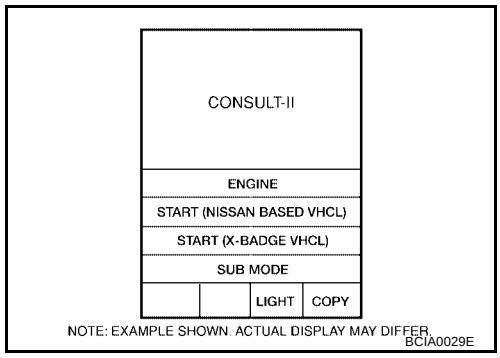
Inspection 5: “TIRE PRESSURE” Information In Display Unit Does Not Exist.

EES000PL

DIAGNOSTIC PROCEDURE

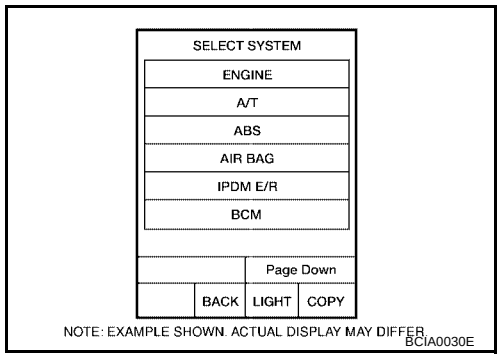
1. SELF-DIAGNOSTIC RESULT CHECK

1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn the ignition switch ON.
2. Select “START (NISSAN BASED VHCL)”.



3. Select "BCM" on “SELECT SYSTEM” screen.

   NOTE:
   If the BCM is not indicated, refer to LAN-6, "CAN COMMUNICATION" .
4. Select "BCM" on "SELECT TEST ITEM" screen, and select "SELF-DIAG RESULTS".
5. Check display contents in self-diagnostic results.



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

YES >> Malfunction in CAN communication system. GO TO LAN-6, "CAN COMMUNICATION" .
NO >> GO TO 2.

2. CHECK DISPLAY UNIT

Perform display unit self-diagnosis. Refer to AV-105, "Self-Diagnosis Mode" without NAVI or AV-161, "Self-Diagnosis Mode (NAVI)" with NAVI.

Inspection results OK?

OK >> Replace BCM. Refer to BCS-19, "Removal and Installation of BCM" .
NG >> Repair or replace malfunctioning parts.

Inspection 6: ID Registration Cannot Be Completed

EES000PM

DIAGNOSTIC PROCEDURE

1. ID REGISTRATION (ALL)

Carry out ID registration of all transmitters.

Can ID registration of all transmitters be completed?

YES >> Inspection End.
NO >> Go To WT-23, "Inspection 1: Transmitter or BCM" .

REMOVAL AND INSTALLATION

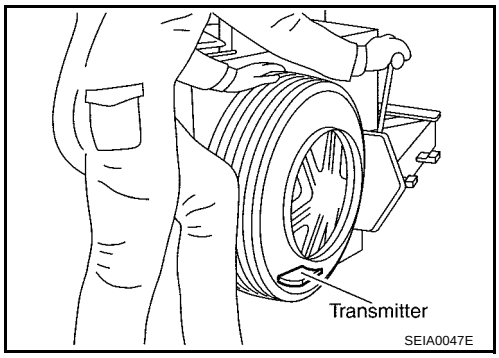
PFP:00000

Transmitter

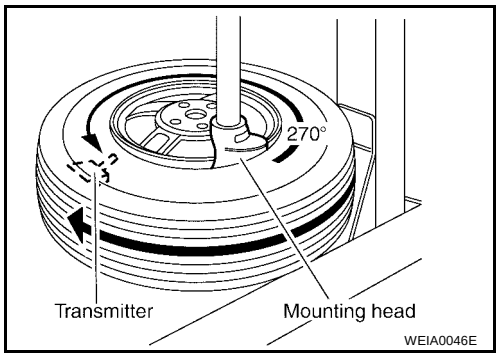
EES000PN

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.

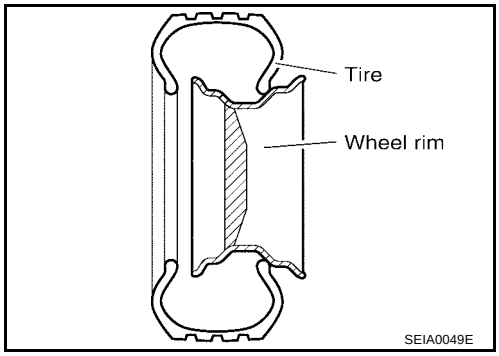


3. Turn tire so that valve hole is at bottom and bounce so that transmitter is near valve hole. Carefully lift tire onto turntable and position valve hole (and transmitter) 270 degrees from mounting/dismounting head.
4. Lubricate tire well and remove first side of the tire. Reach inside the tire and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

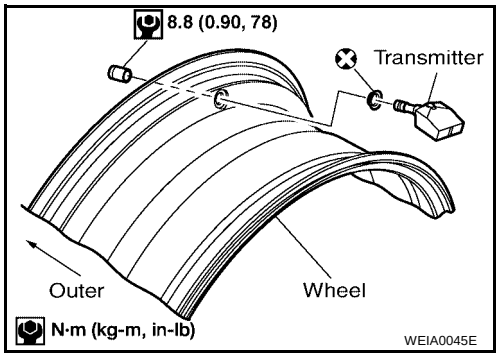


INSTALLATION

1. Put first side of tire onto rim.

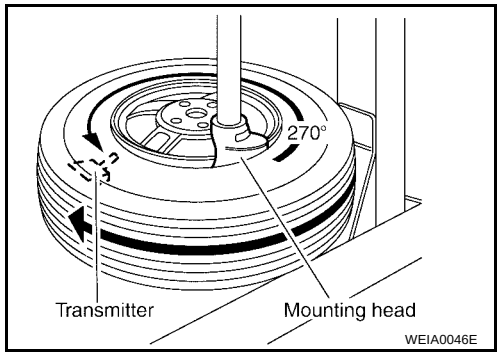


2. Mount transmitter on rim and tighten nut to the specification shown.



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

   NOTE:
   Do not touch transmitter at mounting head.



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

SERVICE DATA AND SPECIFICATIONS (SDS)

PFP:00030

Road Wheel

EES000PR

Wheel type		Aluminum	Steel	
			Inside	Outside
Maximum radial runout limit	Lateral mm (in)	0.3 (0.012) or less	1.0 (0.039) or less	0.9 (0.035) or less
	Radial mm (in)	0.3 (0.012) or less	0.8 (0.031) or less	0.4 (0.016) or less
Maximum allowable un-balance	Dynamic (At rim flange)	Less than 5 g (0.18 oz.) (per side)		
	Static (At rim flange)	Less than 10 g (0.35 oz.)		

Tire

EES000PS

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

Tire size	Air pressure	
	Conventional tire	Spare tire
T135/80*16	—	420 (4.2, 60)
P225/65R16	240 (2.4, 35)	—
P225/60R17	240 (2.4, 35)	—
Speed Rating	H	—

*: D or R depending on manufacturer.