SECTION WT
ROAD WHEELS & TIRES

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PRECAUTION

PRECAUTIONS

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

INFOID:0000000009641237

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

WARNING:

Always observe the following items for preventing accidental activation.

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “SRS AIR BAG”.**
- **Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

Always observe the following items for preventing accidental activation.

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

Service Notice and Precautions for TPMS

INFOID:0000000009236540

- Low tire pressure warning lamp blinks for 1min, then turns ON when occurring any malfunction except low tire pressure. Erase the self-diagnosis memories for low tire pressure warning control unit, or register the ID to turn low tire pressure warning lamp OFF. For ID registration, refer to WT-30, "Work Procedure".
- ID registration is required when replacing or rotating wheels, replacing tire pressure sensor or low tire pressure warning control unit. Refer to WT-30, "Work Procedure".
- Replace grommet seal, valve core and cap of tire pressure sensor in TPMS, when replacing each tire by reaching the wear limit. Refer to WT-64, "Exploded View".

Service Notice and Precautions for Road Wheel

INFOID:0000000009236541

- Genuine NISSAN aluminum wheel is designed for each type of vehicle. Use it on the specified vehicle only.
- Use Genuine NISSAN parts for the wheel nuts.
- Always use them after adjusting the wheel balance. For the balance weights, use Genuine NISSAN aluminum wheel weights.
- Use caution when handling the aluminum wheels, because they can be easily scratched. When removing dirt, do not use any abrasives, a wire brush, or other items that may scratch the coating. Use a neutral detergent if a detergent is needed.
- After driving on roads scattered with anti-icing salts, wash off the wheels completely.
- When installing road wheels onto the vehicle, always wipe off any dirt or foreign substances to prevent them from being trapped between the contact surfaces of wheel.
- Never apply oil to nut and bolt threads.

PREPARATION

PREPARATION

Special Service Tool

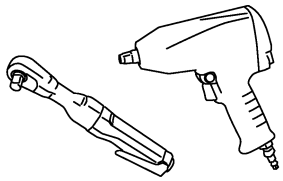
INFOID:0000000009641434

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-50190) Signal Tech II  ALEIA0131ZZ	• Activate and display TPMS transmitter IDs • Display tire pressure reported by the TPMS transmitter • Read TPMS DTCs • Register TPMS transmitter IDs • Test remote keyless entry keyfob relative signal strength
— (J-45295-A) Transmitter activation tool  ALEIA0183ZZ	Activate and display TPMS transmitter IDs

Commercial Service Tools

INFOID:0000000009236543

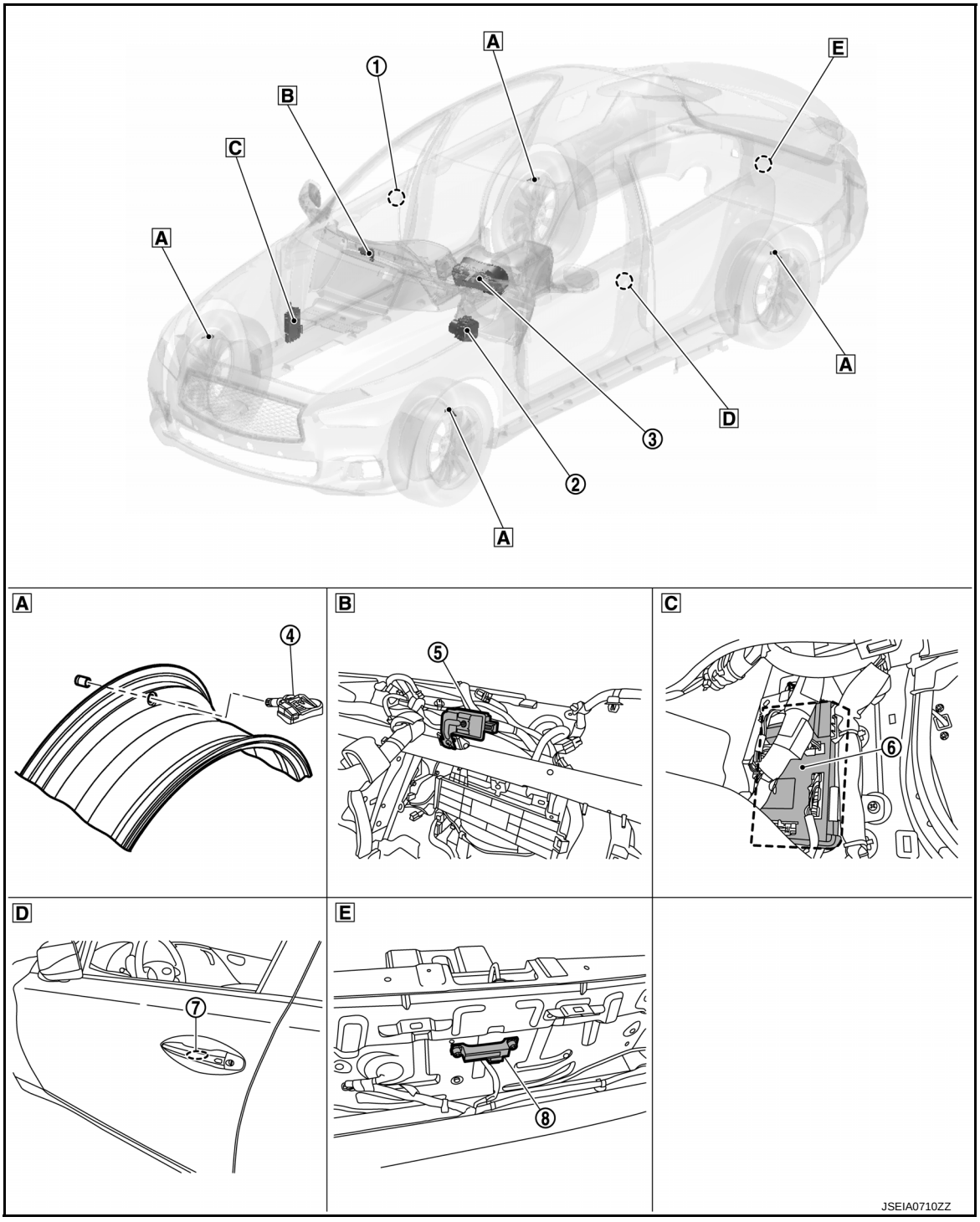
Tool name	Description
Power tool  PBIC0190E	Loosening wheel nuts

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000009641472



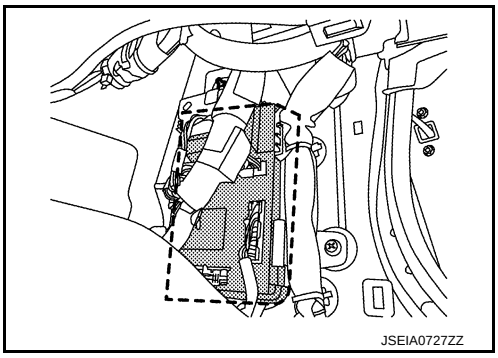
A Wheel
B View with instrument panel removed
C Behind of combination meter
D Part of outside door handle grip
E View with rear bumper fascia removed

No.	Component parts	Function
①	Outside key antenna (passenger side)	Refer to WT-7, "Outside Key Antennas".
②	ABS actuator and electric unit (control unit)	Mainly transmits the following signals to BCM via CAN communication. • Vehicle speed signal
③	Combination meter	Mainly receives the following signals from BCM via CAN communication. • Low tire pressure warning lamp signal • TPMS malfunction warning lamp signal The combination meter will display the low tire pressure warning lamp when a low tire pressure or system malfunction is detected by the BCM. A warning message will also be displayed in the information display.
④	Tire pressure sensor	Refer to WT-6, "Tire Pressure Sensor".
⑤	Remote keyless entry receiver (tire pressure receiver)	Refer to WT-7, "Remote Keyless Entry Receiver (Tire Pressure Receiver)".
⑥	BCM	Refer to WT-6, "BCM".
⑦	Outside key antenna (driver side)	Refer to WT-7, "Outside Key Antennas".
⑧	Outside key antenna (rear bumper)	Refer to WT-7, "Outside Key Antennas".

BCM

INFOID:0000000009641473

The BCM reads the tire pressure signal received by the remote keyless entry receiver (tire pressure receiver). In addition, the BCM also uses the outside key antennas (driver side, passenger side and rear bumper) to identify the location of the tire pressure sensors.
The BCM has a self-diagnosis function used to detect system malfunctions.

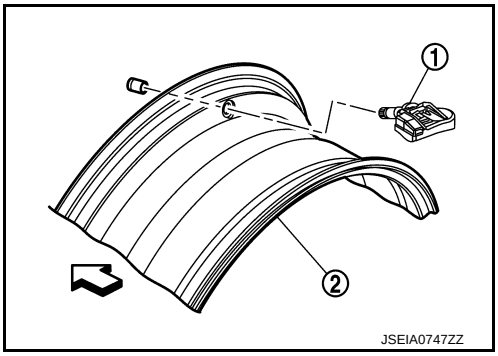

JSEIA0727ZZ

Tire Pressure Sensor

INFOID:0000000009641474

A tire pressure sensor ① integrated with a valve is installed in each wheel ②, and transmits a detected air pressure signal in the form of a radio wave. The radio signal is received by the remote keyless entry receiver (tire pressure receiver).

⇦ : Outside

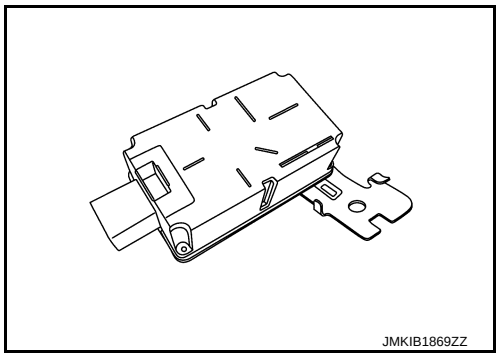


JSEIA0747ZZ

Remote Keyless Entry Receiver (Tire Pressure Receiver)

INFOID:0000000009641475

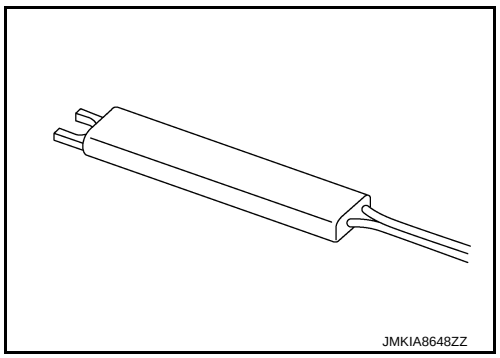
The remote keyless entry receiver receives (tire pressure receivers) the tire pressure signal transmitted by the tire pressure sensor in each wheel.



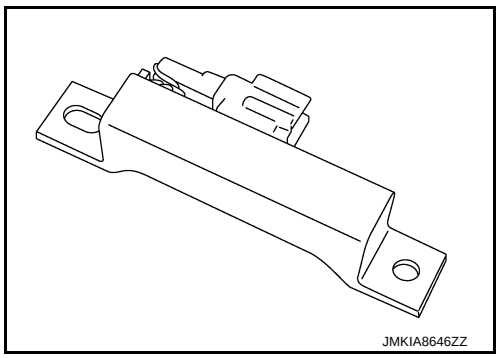
Outside Key Antennas

INFOID:0000000009641476

- For vehicles equipped with individual tire pressure display in the combination meter, the outside key antennas (driver side, passenger side and rear bumper) are used by the BCM to identify the location of the tire pressure sensor.
- Outside key antenna (driver side) and outside key antenna (passenger side) is installed in outside handle.



- Outside key antenna (rear bumper) is installed in the rear of rear bumper.



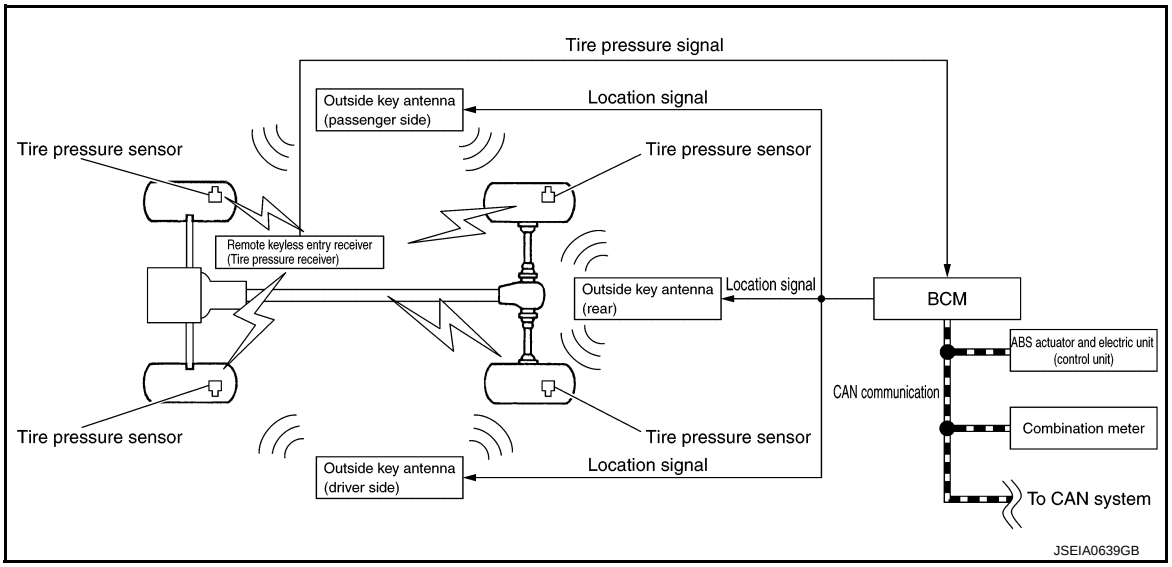
SYSTEM

System Description

INFOID:0000000009641637

When the vehicle has reached a speed of 40 km/h (25 MPH) or greater, the BCM receives a signal transmitted from the tire pressure sensors installed in each wheel. If the BCM detects low tire pressure or a system malfunction, it sends a signal to the combination meter via CAN communication to illuminate the low tire pressure warning lamp. In addition, a warning message will be displayed in the information display.

SYSTEM DIAGRAM



INPUT SIGNAL AND OUTPUT SIGNAL

Component	Signal description
Combination meter	Mainly receives the following signals from BCM via CAN communication. • Low tire pressure warning lamp signal • TPMS malfunction warning lamp signal • Tire pressure data signal • Buzzer output signal Transmits the vehicle speed signal via CAN communication for BCM.
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal via CAN communication for combination meter.

LOW TIRE PRESSURE WARNING LAMP AND INFORMATION DISPLAY INDICATIONS

Condition	Low tire pressure warning lamp	Information display
Ignition switch OFF	OFF	OFF
Ignition switch ON (system normal)	ON for 1 second then turns off	No TPMS message
Low tire pressure	ON	WT-11, "INFORMATION DISPLAY (COMBINATION METER) : Low Tire Pressure Warning"
TPMS malfunction	Blinks for 1 minute then stays ON	WT-11, "INFORMATION DISPLAY (COMBINATION METER) : Low Tire Pressure Warning"

HAZARD WARNING LAMP INDICATION CONDITION

The hazard warning lamp blinks under the following conditions.

- When ID registration is completed. Refer to WT-30, "Work Procedure".

BUZZER CONTROL CONDITION

The low tire pressure warning control unit transmits a buzzer request signal to BCM. Based on the signal, BCM sends a command to the combination meter to sound the buzzer.
The buzzer sounds under the following conditions.

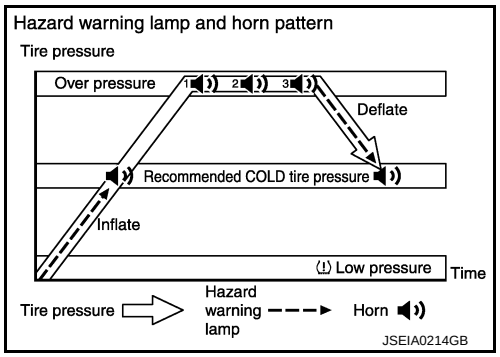
Condition of Sounding Buzzer
- When wake-up of registered wheel has been completed. Refer to WT-29, "Work Procedure".

Tire Inflation Indicator Function

INFOID:0000000009641446

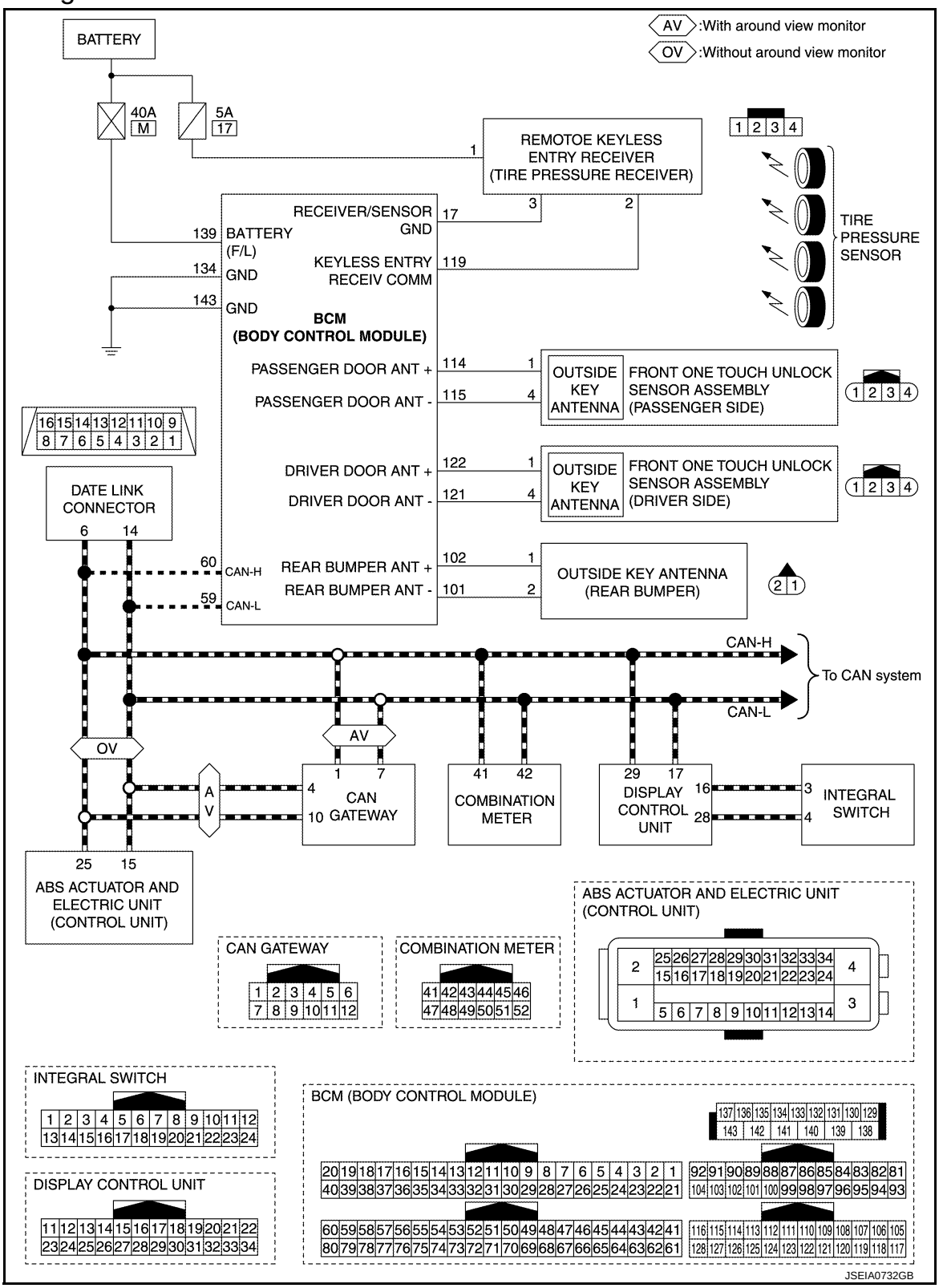
NOTE:
When beginning tire inflation, it takes a few seconds for the Tire inflation indicator function. If there is no response for approximately 15 seconds or more, cancel the Tire inflation indicator function and move the vehicle approximately 1 m (3.2 ft) backward or forward to try again.

- The Tire inflation indicator function operates only when the select lever position is in P-range with the ignition switch ON.
- This function informs the driver with a visual and audible indication that the recommended COLD tire pressure has been reached.
- The hazard warning lamps blink when the recommended COLD tire pressure has been reached. After the recommended COLD tire pressure has been reached, the horn sounds once and the hazard warning lamps stop blinking.
- If the tire pressure value is equal to or greater than 30 kPa (0.31 kg/cm^2, 4 psi) more than the recommended COLD tire pressure, the hazard warning lamps flash and horn sounds three times.
- To return the tire to the recommended COLD tire pressure, deflate the tire until the horn sounds once and the hazard warning lamps stop blinking.



Circuit Diagram

INFOID:0000000009724845



WARNING/INDICATOR/CHIME LIST

WARNING/INDICATOR/CHIME LIST : Warning Lamp/Indicator Lamp

INFOID:0000000009671049

Name	Design	Layout/Function
Low tire pressure warning lamp		For layout, refer to MWI-8, "METER SYSTEM : Design". For function, refer to MWI-31, "WARNING LAMPS/INDICATOR LAMPS : Low Tire Pressure Warning Lamp".

INFORMATION DISPLAY (COMBINATION METER)

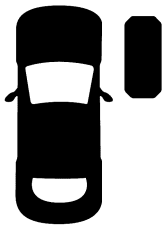
INFORMATION DISPLAY (COMBINATION METER) : Low Tire Pressure Warning

INFOID:0000000009641480

DESIGN/PURPOSE

The warning message is displayed in the vehicle information display with the low tire pressure warning lamp when following conditions;

- Tire pressure is low.
- TPMS detected the system malfunction.
- Tire pressure is extremely low (flat tire).

Symbol	Warning Message
 JSEIA0664ZZ	• Flat TireVisit dealer • Tire Pressure Low Add Air

Details for warning conditions, refer to MWI-31, "WARNING LAMPS/INDICATOR LAMPS : Low Tire Pressure Warning Lamp".

SYNCHRONIZATION WITH MASTER WARNING LAMP

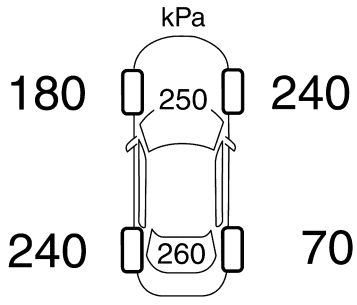
Applicable

Refer to MWI-34, "WARNING LAMPS/INDICATOR LAMPS : Master Warning Lamp".

INFORMATION DISPLAY (COMBINATION METER) : Tire Pressure Display

INFOID:0000000009641481

The adoption of this function allows tire pressure indication on the information display installed to the combination meter.

Design	Description
 JSEIA0711ZZ	The tire pressure of each tire is displayed.

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000009665965

APPLICATION ITEM
CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	• Read and save the vehicle specification. • Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION
BCM can perform the following functions for each system.
NOTE:
It can perform the diagnosis modes except the following for all sub system selection items.

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER	×	×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
—	AIR CONDITONER*		×	×
• Intelligent Key system • Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
IVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk lid open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR			×

*: This item is not used.

FREEZE FRAME DATA (FFD)
The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected*	While turning BCM status from low power consumption mode to normal mode (Power supply position is “LOCK”*)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is “OFF”.)
	LOCK>ACC		While turning power supply position from “LOCK” *to “ACC”
	ACC>ON		While turning power supply position from “ACC” to “IGN”
	RUN>ACC		While turning power supply position from “RUN” to “ACC” (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power supply position from “CRANKING” to “RUN” (From cranking up the engine to run it)
	RUN>URGENT		While turning power supply position from “RUN“ to “ACC” (Emergency stop operation)
	ACC>OFF		While turning power supply position from “ACC” to “OFF”
	OFF>LOCK		While turning power supply position from “OFF” to “LOCK”*
	OFF>ACC		While turning power supply position from “OFF” to “ACC”
	ON>CRANK		While turning power supply position from “IGN” to “CRANKING”
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is “OFF”.) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is “LOCK”*.) to low power consumption mode
	LOCK		Power supply position is “LOCK” (Ignition switch OFF)*
	OFF		Power supply position is “OFF” (Ignition switch OFF)
	ACC		Power supply position is “ACC” (Ignition switch ACC)
	ON		Power supply position is “IGN” (Ignition switch ON with engine stopped)
	ENGINE RUN		Power supply position is “RUN” (Ignition switch ON with engine running)
	CRANKING		Power supply position is “CRANKING” (At engine cranking)
IGN Counter	0 - 39	The number of times that ignition switch is turned ON after DTC is detected • The number is 0 when a malfunction is detected now. • The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. • The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.	

NOTE:
*: Power supply position shifts to “LOCK” from “OFF”, when ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met.
- Closing door
- Opening door
- Door is locked using door request switch
- Door is locked using Intelligent Key

The power supply position shifts to “ACC” when the push-button ignition switch (push switch) is pushed at “LOCK”.

AIR PRESSURE MONITOR

AIR PRESSURE MONITOR : CONSULT Function (BCM-AIR PRESSURE MONITOR)

INFOID:0000000009641246

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Active Test	Send the drive signal from CONSULT to the actuator. The operation check can be performed.

ACTIVE TEST

Test Item	Description
FLASHER	This test is able to check turn signal lamp operation [Off/LH/RH].
HORN	This test is able to check horn operation [On].
WARNING LAMP	This test is able to check tire pressure warning lamp operation [On/Off].
ID REGIST WARNING	This test is able to check ID regist warning chime operation [On/Off].
RUN FLAT TIRE W/L	This item is displayed, but cannot be use this item.
RUN FLAT/T WARN BUZZER	This test is able to run flat tire warning chime operation [On/Off].

CONSULT Function (TIRE PRESSURE MONITORING SYSTEM)

INFOID:0000000009641247

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
ECU identification	Parts number of BCM can be read.
Self Diagnostic Result	Retrieve DTC from ECU and display diagnostic items.
Self Diagnostic Result	Self-diagnostic results and freeze frame data can be read and erased quickly.*
Data Monitor	Monitor the input/output signal of the control unit in real time.
Work Support	This mode enables a technician to adjust some devices faster and more accurately.
Re/programming, Configuration	• Read and save the vehicle specification (TYPE ID). • Write the vehicle specification (TYPE ID) when replacing BCM.

ECU IDENTIFICATION

BCM part number can be read.

SELF DIAGNOSTIC RESULT

NOTE:

Before performing Self Diagnostic Result, be sure to register the tire pressure sensor ID or the actual malfunction may be different from that displayed on CONSULT.

Refer to BCS-62, "DTC Index".

FREEZE FRAME DATA (FFD)

The following vehicle status is recorded when DTC is detected and is displayed on CONSULT.

Item name	Display item
SET AIR PRESSURE 2 FL	Set air pressure 2 front left
SET AIR PRESSURE 2 FR	Set air pressure 2 front right
SET AIR PRESSURE 2 RR	Set air pressure 2 rear right
SET AIR PRESSURE 2 RL	Set air pressure 2 rear left
WARNING AIR PRESSURE FL	Warning air pressure front left
WARNING AIR PRESSURE FR	Warning air pressure front right
WARNING AIR PRESSURE RR	Warning air pressure rear right
WARNING AIR PRESSURE RL	Warning air pressure rear left
AIR PRESS FL	Air pressure front left
AIR PRESS RL	Air pressure front right
AIR PRESS RR	Air pressure rear right
AIR PRESS RL	Air pressure rear left

Item name	Display item
SET TEMPERATURE	Set temperature
TIRE TEMPERATURE FL	Tire temperature front left
TIRE TEMPERATURE FR	Tire temperature front right
TIRE TEMPERATURE RR	Tire temperature rear right
TIRE TEMPERATURE RL	Tire temperature rear left
IGN COUNTER (0 - 39)	The number of times that ignition switch is turned ON after the DTC is detected is displayed. • When “0” is displayed: It indicates that the system is presently malfunctioning. • When except “0” is displayed: It indicates that system malfunction in the past is detected, but the system is presently normal. **NOTE:** Each time when ignition switch is turned OFF to ON, numerical number increases in 1→2→3...38→39. When the operation number of times exceeds 39, the number do not increase and “39” is displayed until self diagnosis is erased.

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item (Unit)	Description
AIR PRESS FL (kPa, kg/cm^2 or Psi)	Indicates air pressure of front LH tire.
AIR PRESS FR (kPa, kg/cm^2 or Psi)	Indicates air pressure of front RH tire.
AIR PRESS RR (kPa, kg/cm^2 or Psi)	Indicates air pressure of rear RH tire.
AIR PRESS RL (kPa, kg/cm^2 or Psi)	Indicates air pressure of rear LH tire.
ID REGST FL1 (Done/Yet)	Indicates ID registration status of front LH transmitter.
ID REGST FR1 (Done/Yet)	Indicates ID registration status of front RH transmitter.
ID REGST RR1 (Done/Yet)	Indicates ID registration status of rear RH transmitter.
ID REGST RL1 (Done/Yet)	Indicates ID registration status of rear LH transmitter.
WARNING LAMP (Off/On)	Indicates condition of low tire pressure warning lamp in combination meter.
BUZZER (Off/On)	Indicates condition of buzzer in combination meter.
TIRE TEMPERATURE FL (°C)	Indicates tire temperature of front LH tire.
TIRE TEMPERATURE FR (°C)	Indicates tire temperature of front RH tire.
TIRE TEMPERATURE RR (°C)	Indicates tire temperature of rear RH tire.
TIRE TEMPERATURE RL (°C)	Indicates tire temperature of rear LH tire.
HAZARD (Off/On)	Indicates condition of hazard.
WARNING AIR PRESSURE FL (kPa, kg/cm^2 or Psi)	Indicates warning air pressure front LH tire.
WARNING AIR PRESSURE FR (kPa, kg/cm^2 or Psi)	Indicates warning air pressure front RH tire.
WARNING AIR PRESSURE RR (kPa, kg/cm^2 or Psi)	Indicates warning air pressure rear RH tire.
WARNING AIR PRESSURE RL (kPa, kg/cm^2 or Psi)	Indicates warning air pressure rear LH tire.
SET AIR PRESSURE 1 FL (kPa, kg/cm^2 or Psi)	Indicates set air pressure 1 front LH tire.
SET AIR PRESSURE 1 FR (kPa, kg/cm^2 or Psi)	Indicates set air pressure 1 front RH tire.
SET AIR PRESSURE 1 RR (kPa, kg/cm^2 or Psi)	Indicates set air pressure 1 rear RH tire.
SET AIR PRESSURE 1 RL (kPa, kg/cm^2 or Psi)	Indicates set air pressure 1 rear LH tire.
SET AIR PRESSURE 2 FL (kPa, kg/cm^2 or Psi)	Indicates set air pressure 2 front LH tire.
SET AIR PRESSURE 2 FR (kPa, kg/cm^2 or Psi)	Indicates set air pressure 2 front RH tire.
SET AIR PRESSURE 2 RR (kPa, kg/cm^2 or Psi)	Indicates set air pressure 2 rear RH tire.

Monitor Item (Unit)	Description
SET AIR PRESSURE 2 RL (kPa, kg/cm^2 or Psi)	Indicates set air pressure 2 rear LH tire.
SET TEMPERATURE (°C)	Indicates set temperature.
TPMS SET SWITCH (Off/On)	Indicates condition of tire puressure monitor system set switch.

WORK SUPPORT

Support Item	Description
ID READ	The registered ID number is displayed.
ID REGIST	Refer to WT-30, "Description".

ECU DIAGNOSIS INFORMATION

BCM

List of ECU Reference

INFOID:0000000009641447

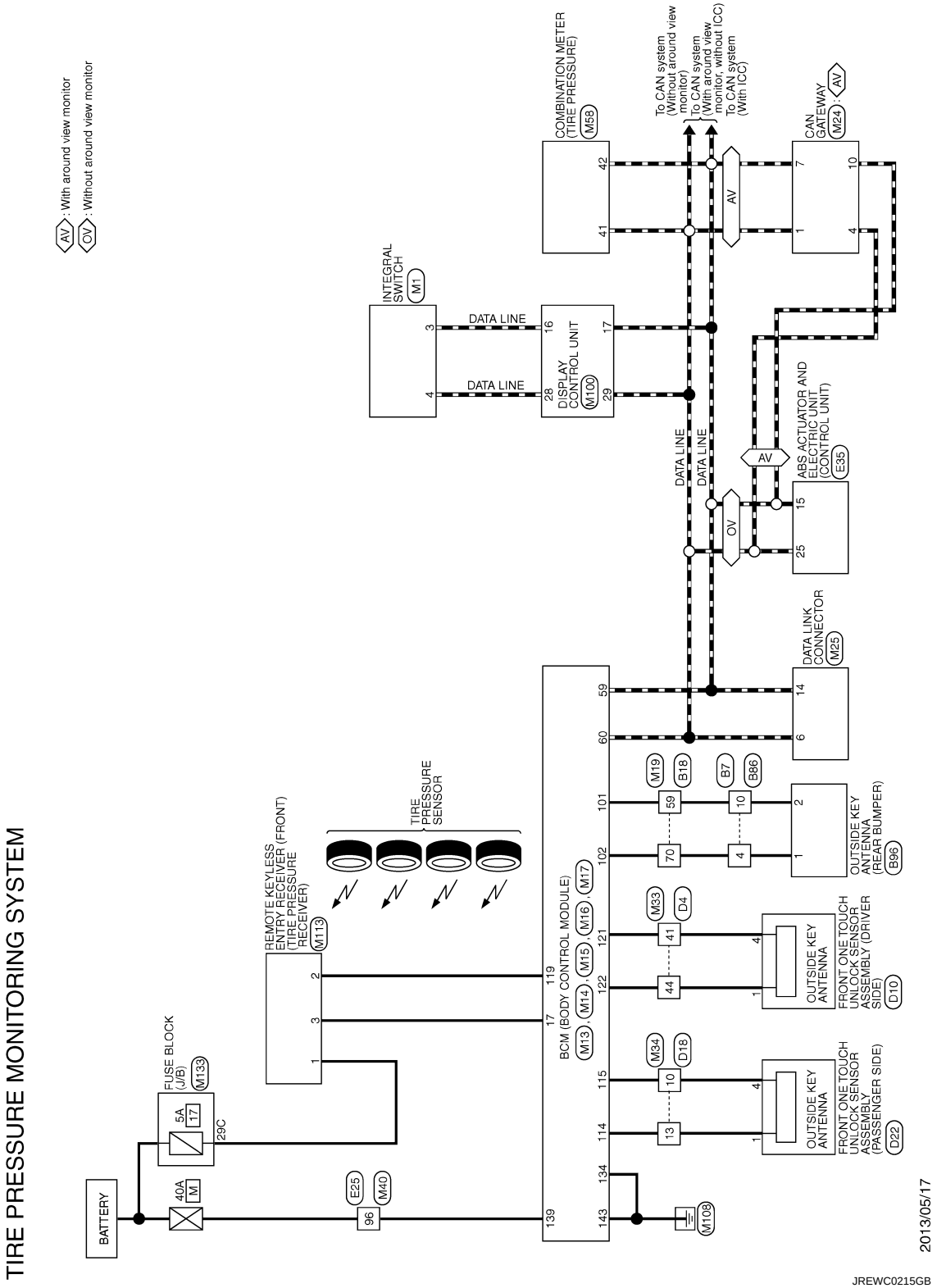
ECU	Reference
BCM	BCS-35, "Reference Value"
	BCS-60, "Fail-safe"
	BCS-61, "DTC Inspection Priority Chart"
	BCS-62, "DTC Index"

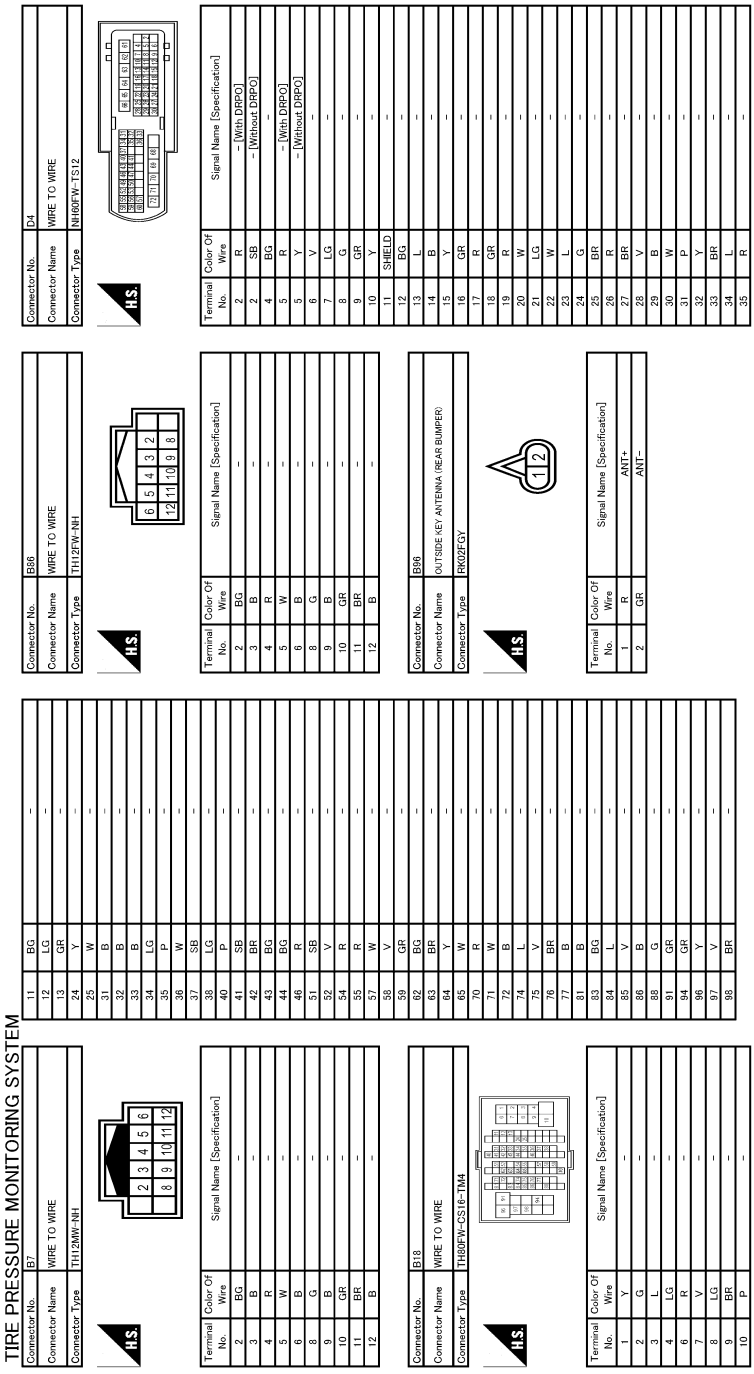
WIRING DIAGRAM

TIRE PRESSURE MONITORING SYSTEM

Wiring Diagram

INFOID:0000000009236555





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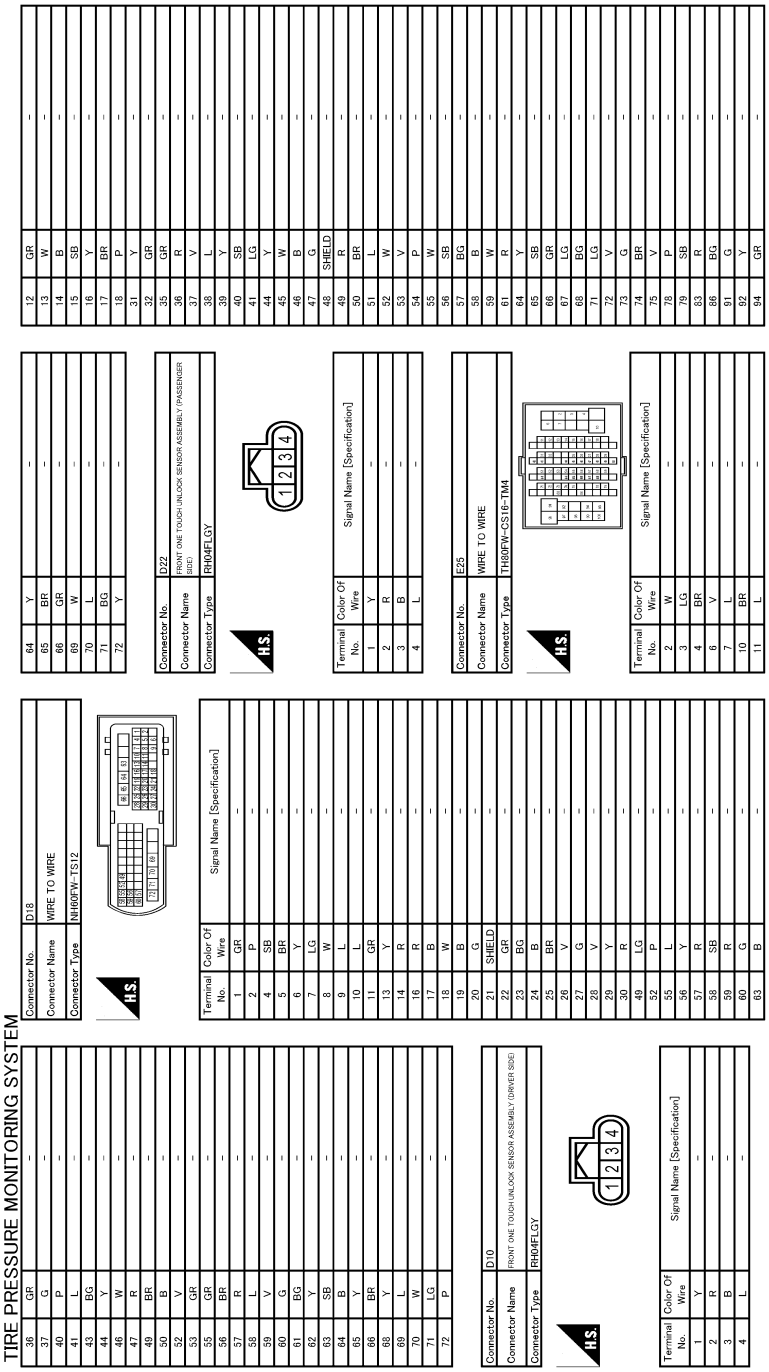

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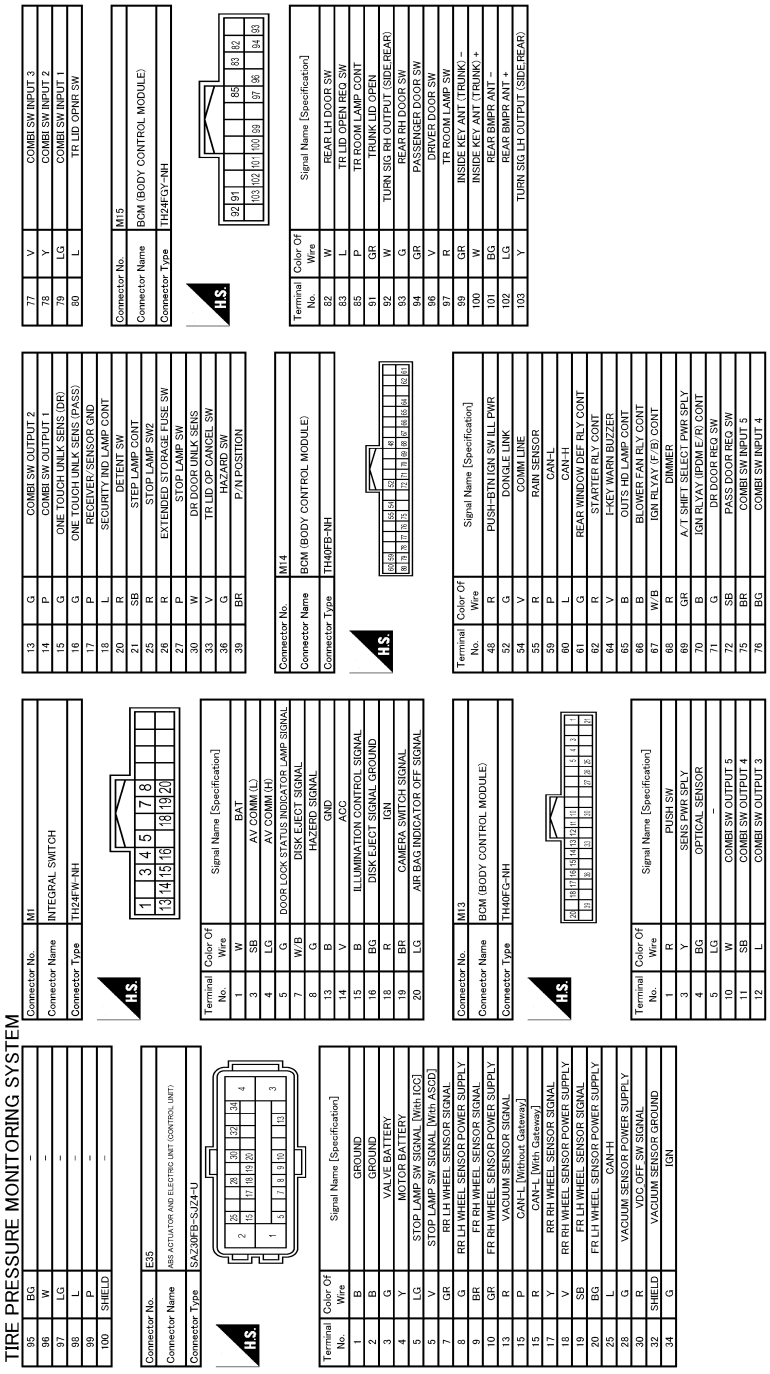

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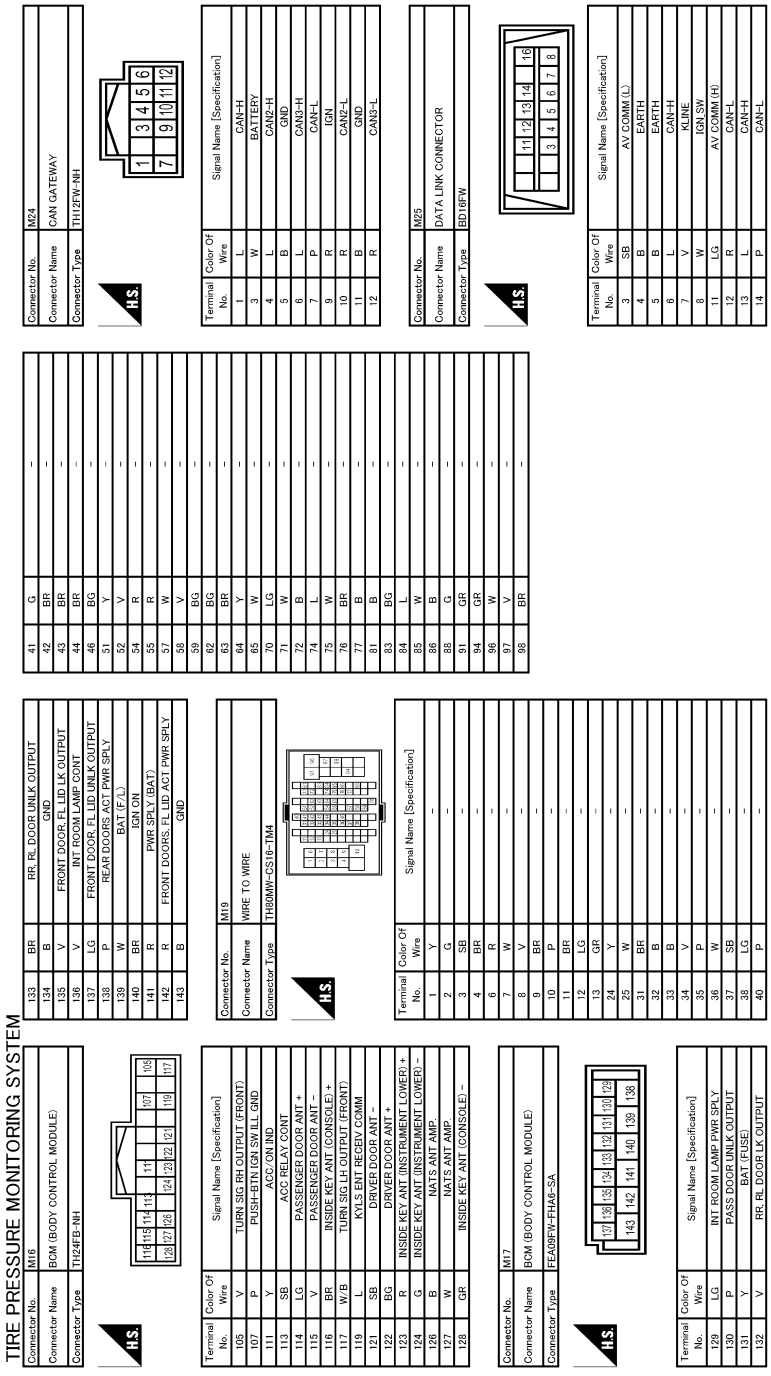

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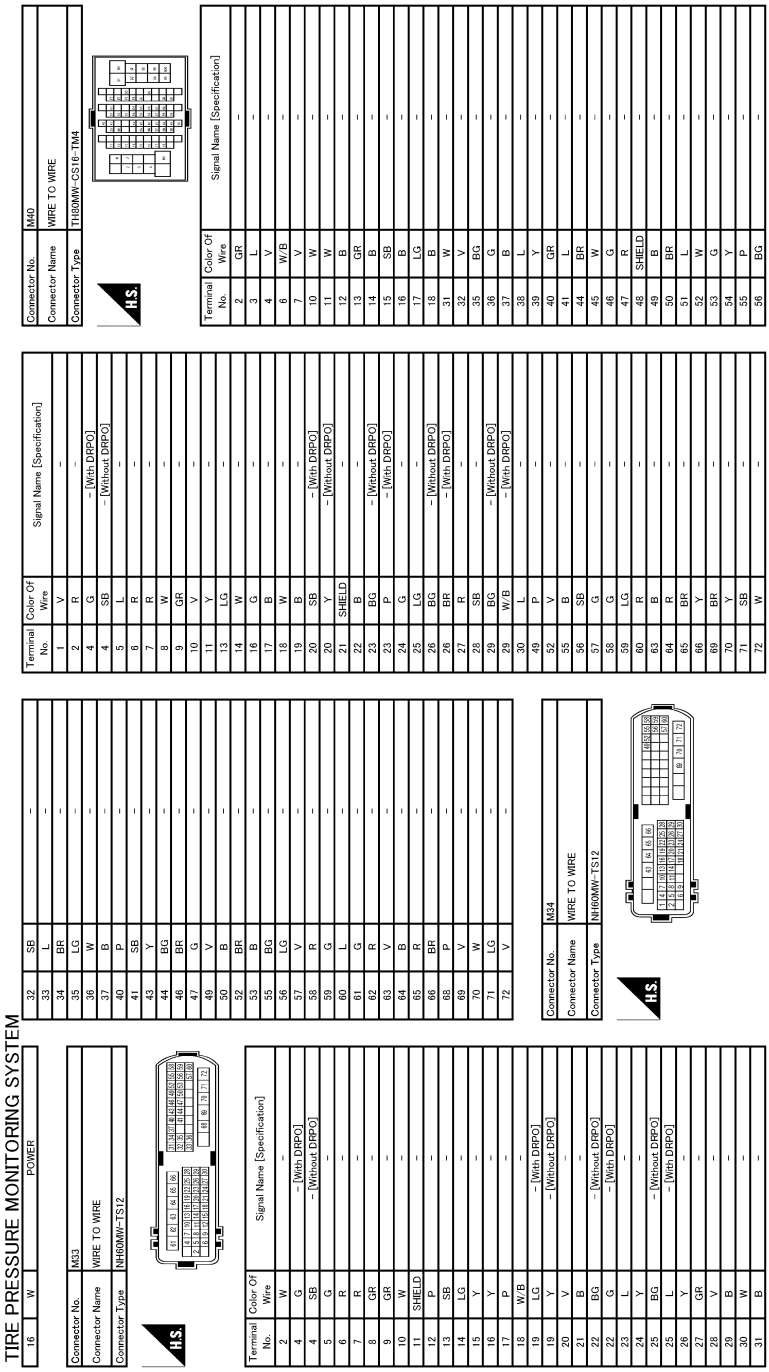

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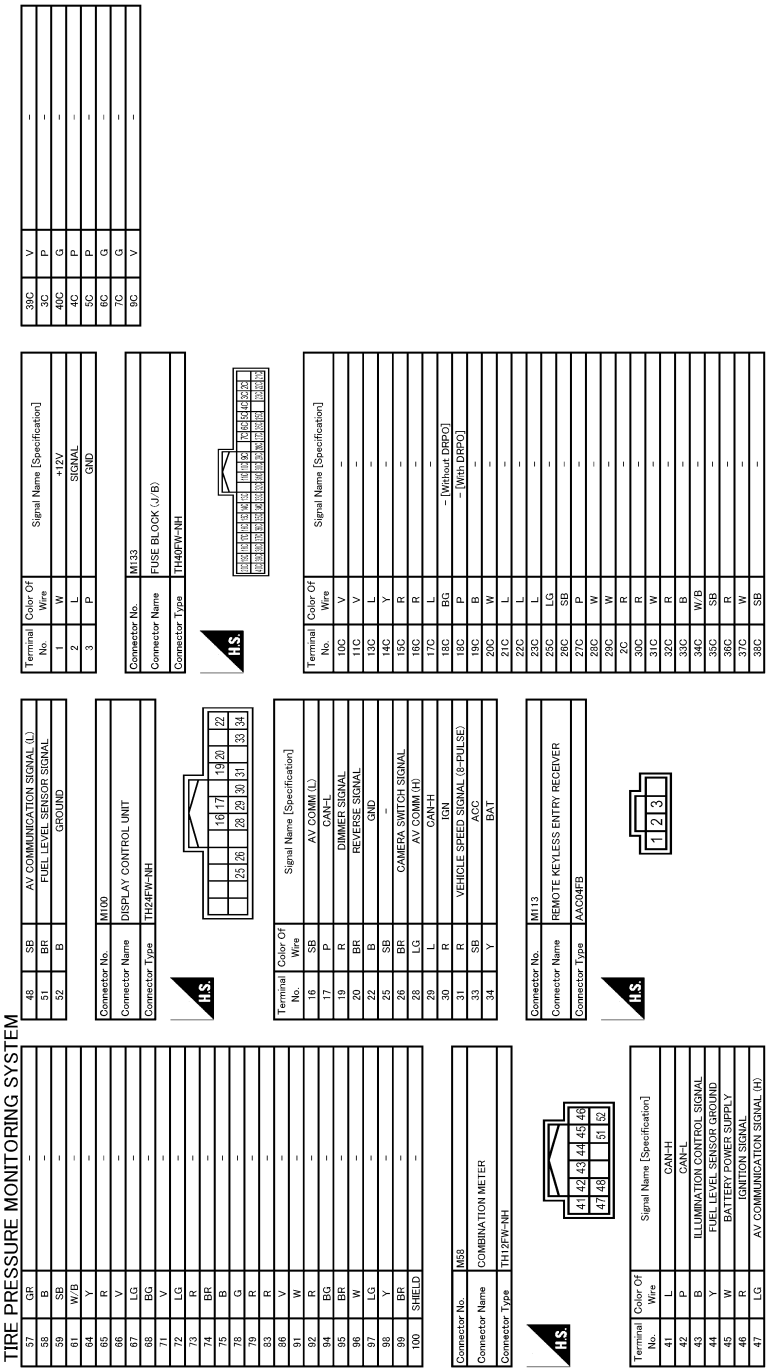


JREWC0221GB

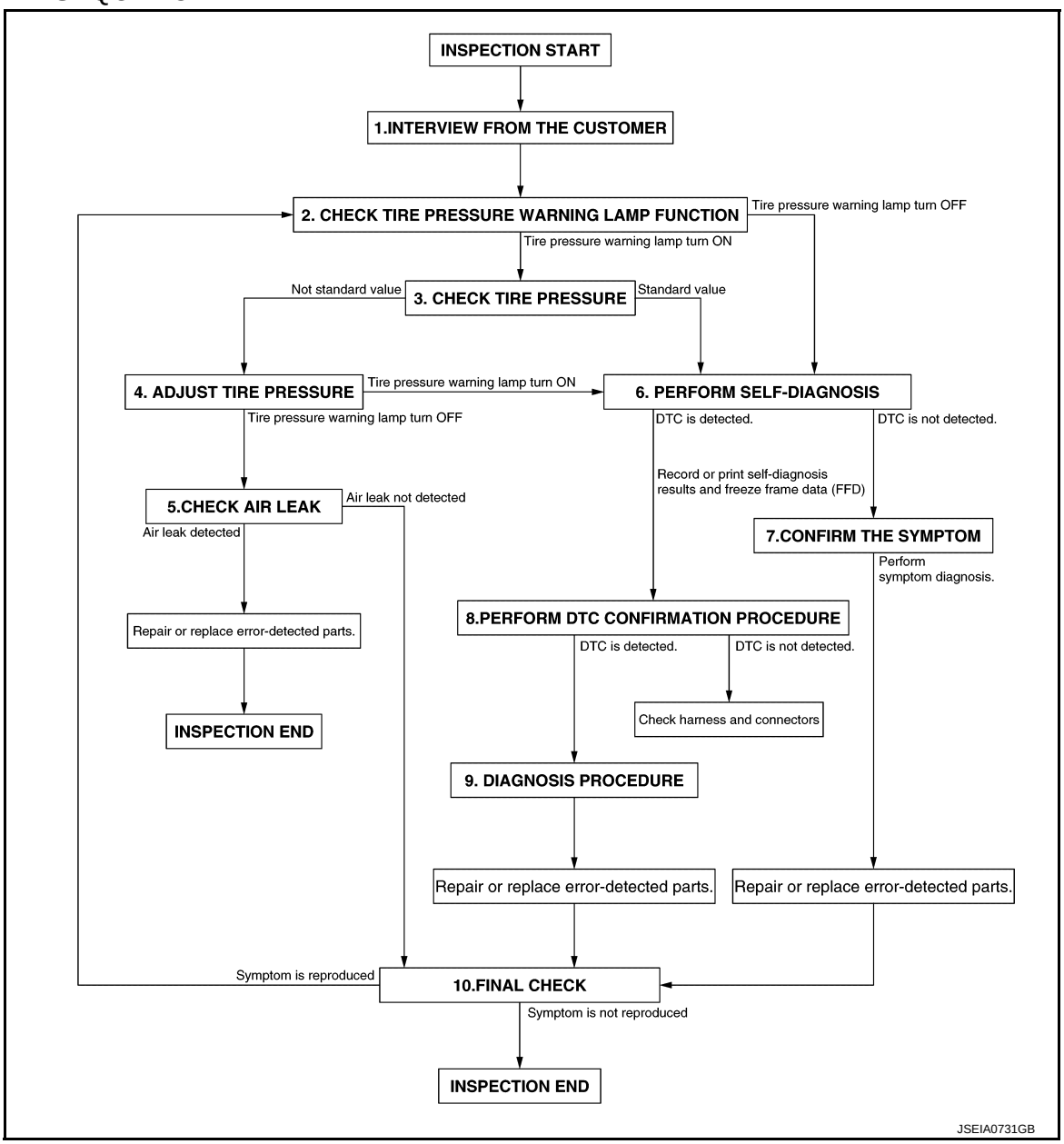
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000009641549

OVERALL SEQUENCE



DETAILED FLOW

1.INTERVIEW FROM THE CUSTOMER

Clarify customer complaints before inspection. First of all, perform an interview utilizing and reproduce the symptom as well as fully understand it. Ask customer about his/her complaints carefully. Check symptoms by driving vehicle with customer, if necessary.

CAUTION:

Customers are not professional. Never guess easily like “maybe the customer means that...,” or “ maybe the customer mentions this symptom”.

>> GO TO 2.

2.CHECK TIRE PRESSURE WARNING LAMP FUNCTION

Check that tire pressure warning lamp in combination meter.

Tire pressure warning lamp turn ON?

YES >> GO TO 3.
NO >> GO TO 6.

3.CHECK TIRE PRESSURE

Check the tire pressure of all wheels. Refer to WT-68, "Tire Air Pressure".

NOTE:
Check the tire pressure of cold condition.

Is the inspection standard value?

YES >> GO TO 6.
NO >> GO TO 4.

4.ADJUST TIRE PRESSURE

1. Check and adjust the tire pressure for all wheels specified to the value. Refer to WT-68, "Tire Air Pressure".
2. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the wehicle at any speed for 10 minutes.

Tire pressure warning lamp turn OFF?

YES >> GO TO 5.
NO >> GO TO 6.

5.CHECK AIR LEAK

Using soapsuds etc., check air leak.

NOTE:
Check air valve.

Is air leak detected?

YES >> Repair or replace error-detected parts. Replace the grommet seal. Perform tire pressure sensor ID registration. Refer to WT-30, "Work Procedure".
NO >> INSPECTION END

6.PERFORM SELF-DIAGNOSIS

With CONSULT
Perform self-diagnosis for “TPMS”.

Is DTC detected?

YES >> Record or print self-diagnosis results and freeze frame data (FFD). GO TO 8.
NO >> GO TO 7.

7.CONFIRM THE SYMPTOM

Perform symptom diagnosis. refer to WT-50, "Symptom Table".

>> Repair or replace error-detected parts. GO TO 10.

8.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT
Perform DTC CONFIRMATION PROCEDURE for the detected DTC, and then check that DTC is detected again.

Is DTC detected?

YES >> GO TO 9.
NO >> Check harness and connectors based on the information obtained by interview. Refer to GI-43, "Intermittent Incident".

9.DIAGNOSIS PROCEDURE

Perform DTC Diagnosis Procedure.

>> Repair or replace error-detected parts. GO TO 10.

10. FINAL CHECK

Recheck the symptom and check that the symptom is not reproduced on the same conditions.

Is the symptom reproduced?

YES >> GO TO 2.
NO >> INSTPECTION END

ADDITIONAL SERVICE WHEN REPLACING BCM

Description

INFOID:0000000009641550

When replacing BCM, configuration (BCM and TPMS) and then tire pressure sensor ID registration is required.

Work Procedure

INFOID:0000000009641551

1.PERFORM CONFIGURATION (BCM)

Perform configuration BCM. Refer to BCS-82, "Work Procedure".

>> GO TO 2.

2.PERFORM CONFIGURATION (TIRE PRESSURE MONITORING SYSTEM)

Perform configuration tire pressure monitoring system. Refer to WT-32, "Work Procedure".

>> GO TO 3.

3.PERFORM TIRE PRESSURE SENSOR ID REGISTRATION

Perform tire pressure sensor ID registration. Refer to WT-30, "Work Procedure".

>> WORK END

TIRE PRESSURE SENSOR WAKE UP OPERATION

Description

INFOID:0000000009236559

When replacing tire pressure sensor, always tire pressure sensor wake-up is required.

Work Procedure

INFOID:0000000009236560

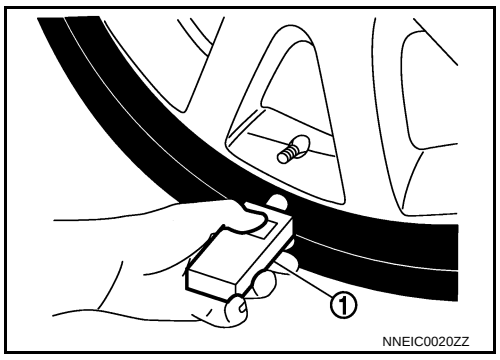
1. TIRE PRESSURE SENSOR WAKE-UP PROCEDURE

1. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
   NOTE:
   The position of an inactive tire pressure sensor can be identified by checking the blinking timing of the low tire pressure warning lamp.

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

JPEIC0089GB

2. Contact the tire pressure sensor activation tool (J-45295-A) ① to the side of the tire at the location to the tire pressure sensor.
3. Press and hold the tire pressure sensor activation tool button while pushing the tool to the tire surface. (approximately for 5 seconds)
   CAUTION:
   Perform the wake-up procedure starting from the vehicle front left wheel, then repeat the procedure in the order of the front right wheel, rear right wheel, and rear left wheel.
4. Check that the turn signal lamps blink twice when the tire pressure sensor wake-up procedure for all wheels is completed.
5. Check that the low tire pressure warning lamp turns OFF, after the tire pressure sensor wake-up procedure is completed for all wheels and turns OFF.



Is the tire pressure sensor wake-up procedure completed?

YES >> Perform the tire pressure sensor ID registration procedure. Refer to WT-29, "Work Procedure".
NO >> Perform trouble diagnosis for the tire pressure sensor. Refer to WT-36, "Diagnosis Procedure".

TIRE PRESSURE SENSOR ID REGISTRATION

Description

INFOID:0000000009641553

This procedure must be performed:
- after replacement of a tire pressure sensor or BCM.

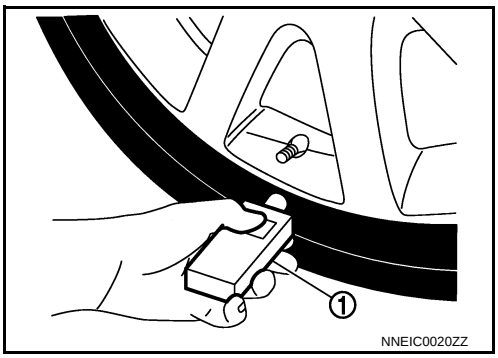
Work Procedure

INFOID:0000000009671052

TPMS ID registration can be performed using one of the following procedures:
- Transmitter Activation tool (J-45295-A) with CONSULT (preferred method)
- Signal Tech II tool (J-50190) with CONSULT (preferred method)
- Signal Tech II tool (J-50190) without CONSULT
- CONSULT only

TPMS REGISTRATION WITH TRANSMITTER ACTIVATION TOOL (J-45295-A)

With CONSULT
1. Turn the ignition switch ON.
2. Using CONSULT, select “WORK SUPPORT” in BCM (AIR PRESSURE MONITOR). Then, select “ID REGIST.”
3. Select “Start” on “ID REGIST” screen.
4. Hold the transmitter activation tool (J-45295-A) ① against the side of the left front tire, near the valve stem.
5. With the tool held at a 0 to 15 degree angle to the tire, press and hold the transmitter activation tool button until the indicator lamp turns OFF (approximately 5 seconds).
6. Repeat steps 4 and 5 for the remaining tires in this order: right front, right rear and left rear.



7. When ID registration is complete, check the following pattern at each wheel.

Sequence	ID registration position	Turn signal lamp	CONSULT
1	Front LH	2 blinks	“Yet (red)” ↓ “Done (green)”
2	Front RH		
3	Rear RH		
4	Rear LH		

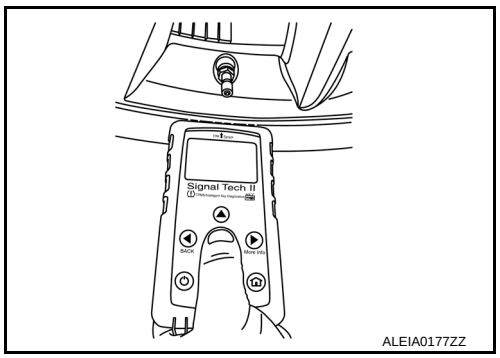
8. After the ID registration procedure for all wheels is complete, press “End” on the CONSULT to finish ID registration.
9. Test drive the vehicle to ensure that the TPMS lamp is OFF and no warning messages are present.

TPMS REGISTRATION WITH SIGNAL TECH II TOOL (J-50190)

NOTE:
The Signal Tech II must be updated with software version 1.1.48 or newer in order to perform the below procedures. The Signal Tech II software updates can only be downloaded from a CONSULT unit with ASIST. Other versions of ASIST will not show the updates.

With CONSULT
1. Adjust the tire pressure for all tires to the recommended value. Refer to WT-68, "Tire Air Pressure".
2. Turn the ignition switch ON.
3. Using CONSULT, select “WORK SUPPORT” in BCM (AIR PRESSURE MONITOR). Then, select “ID REGIST.”
4. Select “Start” on “ID REGIST” screen.
5. Turn on the Signal Tech II tool (J-50190).

6. Hold the Signal Tech II against the side of the left front tire, near the valve stem.
7. With the tool held at a 0 to 15 degree angle to the tire, select “Activate Sensor” from the main menu, then press and release the “OK” button to activate the sensor. Once the sensor is activated, the vehicle parking lamps will flash and the sensor ID will appear on the CONSULT screen.
8. Repeat steps 6 and 7 for the remaining tires in this order: right front, right rear and left rear.
9. When ID registration is complete, check the following pattern at each wheel.

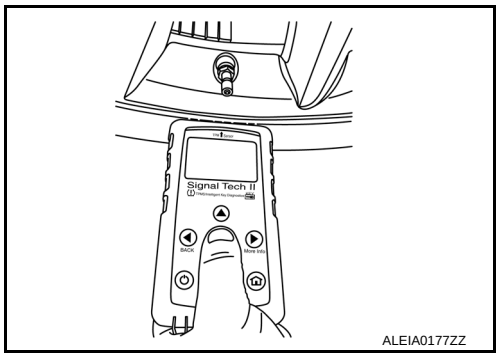


Sequence	ID registration position	Turn signal lamp	CONSULT
1	Front LH	2 blinks	“Yet (red)” ↓ “Done (green)”
2	Front RH		
3	Rear RH		
4	Rear LH		

10. Once all sensors have been activated, select “End” on the CONSULT to finish ID registration.
11. Test drive the vehicle to ensure that the TPMS lamp is OFF and no warning messages are present.

Without CONSULT

1. Adjust the tire pressure for all tires to the recommended value. Refer to WT-68, "Tire Air Pressure".
2. Turn on the Signal Tech II tool (J-50190) and select “TPMS Check” from the main menu.
3. Select vehicle model and year.
4. When prompted, hold the Signal Tech II against the side of the left front tire, near the valve stem.
5. With the tool held at a 0 to 15 degree angle to the tire, press and release the “OK” button to activate the sensor. Once the sensor is activated, the tool will sound a tone and the tire pressure will be displayed.
6. Repeat steps 4 and 5 for the remaining tires in this order: right front, right rear and left rear.
7. When prompted, connect the tool to the data link connector. The tool will connect to the BCM, read the VIN, read sensor IDs and check for TPMS DTCs. Along with DTCs detected, one of the following will be displayed next to each wheel:



- N/A - Not applicable because no ID found by the tool
- OK - Wheel and sensor are in original position
- NEW - New ID found compared to BCM
- RT - Wheel has been rotated
- Low Press - Low tire pressure

8. If no DTC is present or the repair has been completed, press the “OK” button to register the IDs and clear DTCs.
9. Test drive the vehicle to ensure that the TPMS lamp is OFF and no warning messages are present.
10. Print a Signal Tech II Audit Report for your records. Refer to the Signal Tech II User Guide for instructions.

CONFIGURATION (TIRE PRESSURE MONITORING SYSTEM)

Work Procedure

INFOID:0000000009641449

CAUTION:

- **Use “Manual Configuration” only when “TYPE ID” of BCM cannot be read.**
- **After configuration, turn the ignition switch from OFF to ON and check that the low tire pressure warning lamp turns OFF after staying illuminated for approximately two seconds.**
- **If an error occurs during configuration, start over from the beginning.**

1.CHECKING TYPE ID (1)

Use FAST (service parts catalogue) to search BCM of the parts number and find “Type ID”.

Is “Type ID” displayed?

YES >> Print out “Type ID” and GO TO 2.
NO >> “Configuration” is not required for BCM. Replace in the usual manner. Refer to BCS-98, "Removal and Installation".

2.CHECKING TYPE ID (2)

CONSULT Configuration

1. Select “TPMS”
2. Select “Before Replace ECU” of “Read/Write Configuration”.
3. Check that “Type ID” is displayed on the CONSULT screen.

Is “Type ID” displayed?

YES >> GO TO 3.
NO >> GO TO 7.

3.VERIFYING TYPE ID (1)

CONSULT Configuration

Compare a “Type ID” displayed on the CONSULT screen with the one searched by using FAST (service parts catalogue) to check that these “Type ID” agree with each other.

NOTE:

For the “Type ID” searched by using FAST (service parts catalog), use the last five digits of the “Type ID”.

>> GO TO 4.

4.SAVING TYPE ID

CONSULT Configuration

Save “Type ID” on CONSULT.

>> GO TO 5.

5.REPLACING BCM (1)

Replace BCM. Refer to BCS-98, "Removal and Installation".

>> GO TO 6.

6.WRITING (AUTOMATIC WRITING)

CONSULT Configuration

1. Select “After Replace ECU” of “Re/programming, Configuration” or that of “Read / Write Configuration”.
2. Select the “Type ID” agreeing with the one stored on CONSULT and the one searched by using FAST (service parts catalogue) to write the “Type ID” into the BCM.
   NOTE:
   For the “Type ID” searched by using FAST (service parts catalog), use the last five digits of the “Type ID”.

>> GO TO 9.

7.REPLACING BCM (2)

Replace BCM. Refer to BCS-98, "Removal and Installation".

>> GO TO 8.

8. WRITING (MANUAL WRITING)

CONSULT Configuration
1. Select “Manual Configuration”.
2. Select the “Type ID” searched by using FAST (service parts catalogue) to write the “Type ID” into the BCM.
   NOTE:
   For the “Type ID” searched by using FAST (service parts catalog), use the last five digits of the “Type ID”.

>> GO TO 9.

9. VERIFYING TYPE ID (2)

Compare “Type ID” written into the BCM with the one searched by using FAST (service parts catalogue) to check that these “Type ID” agree with each other.
NOTE:
For the “Type ID” searched by using FAST (service parts catalog), use the last five digits of the “Type ID”.

>> GO TO 10.

10. CHECKING LOW TIRE PRESSURE WARNING LAMP

1. Turn the ignition switch OFF.
2. Turn the ignition switch ON and check that the low tire pressure warning lamp turns OFF after staying illuminated for approximately two seconds.
   CAUTION:
   Never start the engine.

Is the inspection result normal?

YES >> GO TO 11.
NO >> Perform the self-diagnosis of “AIR PRESSURE MONITOR” of “BCM”. Refer to WT-13, "AIR PRESSURE MONITOR : CONSULT Function (BCM-AIR PRESSURE MONITOR)".

11. PERFORMING SUPPLEMENTARY WORK

1. Perform the tire air pressure. Refer to WT-68, "Tire Air Pressure".
2. Perform tire pressure sensor ID registration. Refer to WT-30, "Work Procedure".
3. Perform the self-diagnosis of all systems.
4. Erase self-diagnosis results.

>> End of work.

DTC/CIRCUIT DIAGNOSIS

C1704, C1705, C1706, C1707 LOW TIRE PRESSURE

DTC Description

INFOID:0000000009641489

DTC DETECTION LOGIC

DTC No.	CONSULT screen item (Trouble diagnosis content)	DTC Detection Condition
C1704	LOW PRESSURE FL (Low tire pressure front left)	Front LH tire pressure drops to 193.1 kPa (1.93 bar, 1.9 kg/cm^2, 28 psi) or less.
C1705	LOW PRESSURE FR (Low tire pressure front right)	Front RH tire pressure drops to 193.1 kPa (1.93 bar, 1.9 kg/cm^2, 28 psi) or less.
C1706	LOW PRESSURE RR (Low tire pressure rear right)	Rear RH tire pressure drops to 193.1 kPa (1.93 bar, 1.9 kg/cm^2, 28 psi) or less.
C1707	LOW PRESSURE RL (Low tire pressure rear left)	Rear LH tire pressure drops to 193.1 kPa (1.93 bar, 1.9 kg/cm^2, 28 psi) or less.

POSSIBLE CAUSE

- Low tire pressure (natural air leak)
- Air leak because of wheel change

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT

1. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
2. Check tire pressure for all wheels and adjust to the specified value. Refer to WT-68, "Tire Air Pressure".
3. Perform self-diagnosis for “AIR PRESSURE MONITOR” of “BCM”.
4. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.

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

YES >> Proceed to WT-34, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000009641490

1.TIRE PRESSURE SENSOR ID REGISTRATION

Perform tire pressure sensor ID registration. Refer to WT-30, "Work Procedure".

Can the tire pressure sensor ID registration be completed?

YES >> GO TO 2.
NO >> Replace applicable tire pressure sensor. Refer to WT-64, "Removal and Installation".

2.CHECK TIRE PRESSURE

Check the tire pressure of all wheels. Refer to WT-68, "Tire Air Pressure".

CAUTION:
If the checked value is close to the standard, reduce the tire pressure, and then with the ignition switch ON, adjust the tire pressure again so that it is within the standard.

Is the inspection result normal?

YES >> Perform DTC CONFIRMATION PROCEDURE again. Refer to WT-34, "DTC Description".
NO >> GO TO 3.

3.CHECK TIRE PRESSURE SIGNAL

With CONSULT

1. Adjust tire pressure for all wheels to the specified value. Refer to WT-68, "Tire Air Pressure".
2. Select “Data Monitor” from “AIR PRESSURE MONITOR” of “BCM”.

3. Check that the tire pressures match the specified value.

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

Is the inspection result normal?

YES >> After erasing DTC record, INSPECTION END.
NO >> Repair or replace error-detected parts.

C1708, C1709, C1710, C1711 TIRE PRESSURE SENSOR

DTC Description

INFOID:0000000009641491

DTC DETECTION LOGIC

DTC No.	CONSULT screen item (Trouble diagnosis content)	DTC Detection Condition
C1708	[NO - DATA] - FL (No data front left)	Tire pressure data signal from the front LH wheel tire pressure sensor cannot be detected.
C1709	[NO - DATA] - FR (No data front right)	Tire pressure data signal from the front RH wheel tire pressure sensor cannot be detected.
C1710	[NO - DATA] - RR (No data rear right)	Tire pressure data signal from the rear RH wheel tire pressure sensor cannot be detected.
C1711	[NO - DATA] - RL (No data rear left)	Tire pressure data signal from the rear LH wheel tire pressure sensor cannot be detected.

POSSIBLE CAUSE

- Driving in area with radio interference.
- Tire pressure sensor ID registration incomplete
- Tire pressure sensor
- Harness or connectors
- Remote keyless entry receiver
- BCM

DTC CONFIRMATION PROCEDURE

1.TIRE PRESSURE SENSOR ID REGISTRATION

Perform tire pressure sensor ID registration. Refer to WT-30, "Work Procedure".

>> GO TO 2.

2.PERFORM DTC CONFIRMATION

With CONSULT

1. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
   NOTE:
   Avoid driving in areas with radio interference.
2. Perform self-diagnosis for “AIR PRESSURE MONITOR” of “BCM”.

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

YES >> Proceed to WT-36, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000009641492

1.CHECK REMOTE KEYLESS ENTRY RECEIVER (TIRE PRESSURE RECEIVER) POWER CIRCUIT

1. Turn the ignition switch OFF.
2. Check 5 A fuse (#17).
3. Disconnect fuse block (J/B) harness connector.
4. Check continuity between remote keyless entry receiver (tire pressure receiver) harness connector and fuse block (J/B) harness connector.

Remote keyless entry receiver (Tire pressure receiver)		Ground	Voltage
Connector	Terminal		
M113	1	—	9 – 16 V

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connectors.

2. CHECK REMOTE KEYLESS ENTRY RECEIVER (TIRE PRESSURE RECEIVER) CIRCUIT

1. Disconnect BCM harness connector and remote keyless entry receiver (tire pressure receiver) harness connector.
2. Check the continuity between BCM harness connector and remote keyless entry receiver (tire pressure receiver) harness connector.

BCM		Remote keyless entry receiver (tire pressure receiver)		Continuity
Connector	Terminal	Connector	Terminal	
M13	17	M113	3	Existed
M16	119		2	

3. Check the continuity between BCM harness connector and ground.

BCM		—	Continuity
Connector	Terminal		
M13	17	Ground	Not existed
M16	119		

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace error-detected parts.

3. TIRE PRESSURE SENSOR ID REGISTRATION

Perform tire pressure sensor ID registration. Refer to WT-30, "Work Procedure".

Can the tire pressure sensor ID registration be completed?

YES >> GO TO 4.
NO >> Replace applicable tire pressure sensor. Refer to WT-64, "Removal and Installation".

4. RECHECK TIRE PRESSURE SIGNAL

With CONSULT

1. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
   NOTE:
   Avoid driving in areas with radio interference.
2. Select “DATA MONITOR” from “AIR PRESSURE MONITOR” of “BCM”.
3. Check that the air pressures match the specified value.

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

Is the inspection result normal?

YES >> After erasing DTC record, INSPECTION END.
NO >> Replace BCM. Refer to BCS-98, "Removal and Installation".

C1716, C1717, C1718, C1719 TIRE PRESSURE SENSOR

DTC Description

INFOID:0000000009641557

DTC DETECTION LOGIC

DTC No.	CONSULT screen item (Trouble diagnosis content)	DTC Detection Condition
C1716	[PRESSDATA ERR] FL (Pressure data error front left)	Malfunction in the tire pressure data from the front LH wheel tire pressure sensor.
C1717	[PRESSDATA ERR] FR (Pressure data error front right)	Malfunction in the tire pressure data from the front RH wheel tire pressure sensor.
C1718	[PRESSDATA ERR] RR (Pressure data error rear right)	Malfunction in the tire pressure data from the rear RH wheel tire pressure sensor.
C1719	[PRESSDATA ERR] RL (Pressure data error rear left)	Malfunction in the tire pressure data from the rear LH wheel tire pressure sensor.

POSSIBLE CAUSE

- Excessive tire pressure
- Tire pressure sensor ID registration incomplete
- Tire pressure sensor
- BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT

1. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
2. Check tire pressure for all wheels and adjust to the specified value. Refer to WT-68, "Tire Air Pressure".
3. Perform self-diagnosis for “AIR PRESSURE MONITOR” of “BCM”.

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

YES >> Proceed to WT-38, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009641558

1.TIRE PRESSURE SENSOR ID REGISTRATION

Perform tire pressure sensor ID registration. Refer to WT-30, "Work Procedure".

Can the tire pressure sensor ID registration be completed?

YES >> GO TO 2.
NO >> Replace applicable tire pressure sensor. Refer to WT-64, "Removal and Installation".

2.CHECK TIRE PRESSURE SIGNAL

With CONSULT

1. Adjust tire pressure for all wheels to the specified value. Refer to WT-68, "Tire Air Pressure".
2. Select “DATA MONITOR” from “AIR PRESSURE MONITOR” of “BCM”.
3. Check the values that are displayed for “AIR PRESS FL”, “AIR PRESS FR”, “AIR PRESS RR”, and “AIR PRESS RL”.

Which tire pressures is displayed as 438.60 kPa (4.47 kg/cm2, 63.60 psi)?

YES >> Replace tire pressure sensor the tire pressure as 438.60 kPa (4.386 bar, 4.47 kg/cm^2, 63.60 psi) displayed. Refer to WT-64, "Removal and Installation".
NO >> Perform “DTC CONFIRMATION PROCEDURE” (self-diagnosis) again. Refer to WT-44, "DTC Description".

C1729 VEHICLE SPEED SIGNAL

DTC Description

INFOID:0000000009641562

DTC DETECTION LOGIC

DTC No.	CONSULT screen item (Trouble diagnosis content)	DTC Detection Condition
C1729	VHCL SPEED SIG ERR (Vehicle speed signal error)	Vehicle speed signal not detected.

POSSIBLE CAUSE

- CAN communication
- Combination meter
- BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT

1. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
2. Perform self-diagnosis for “AIR PRESSURE MONITOR” of “BCM”.

Is DTC C1729 detected?

YES >> Proceed to WT-39, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009641563

1.PERFORM SELF DIAGNOSTIC RESULT FOR COMBINATION METER

With CONSULT

Perform self-diagnosis for “METER M&A”. Refer to MWI-64, "CONSULT Function".

Are any DTCs detected?

YES >> Refer to MWI-80, "DTC Index".
NO >> GO TO 2.

2.CHECK BCM INPUT/OUTPUT SIGNAL

Check BCM input/output signal values. Refer to BCS-35, "Reference Value".

Is the inspection result normal?

YES >> Check pin terminal and connection of each harness connector for malfunctioning conditions.
NO >> Replace the BCM. Refer to BCS-98, "Removal and Installation".

C1730, C1731, C1732, C1733 FLAT TIRE

DTC Description

INFOID:0000000009697226

If the tire pressure drops below the specified value, the tire pressure monitoring control unit judges that a flat tire occurs and displays a message on the information display.

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1730	FLAT TIRE FL	Front left wheel pressure is 70 kPa (0.7 kg/cm^2, 10 psi) or less	Low tire pressure
C1731	FLAT TIRE FR	Front right wheel pressure is 70 kPa (0.7 kg/cm^2, 10 psi) or less	
C1732	FLAT TIRE RR	Rear right wheel pressure is 70 kPa (0.7 kg/cm^2, 10 psi) or less	
C1733	FLAT TIRE RL	Rear left wheel pressure is 70 kPa (0.7 kg/cm^2, 10 psi) or less	

NOTE:

Specified tire pressure: Refer to WT-68, "Tire Air Pressure".

DTC REPRODUCTION PROCEDURE

1.CHECK DTC DETECTION

With CONSULT

1. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
2. Check the tire pressure for all wheels and adjust to the specified value. Refer to WT-68, "Tire Air Pressure".
3. Perform self-diagnosis of the low tire pressure warning control unit.

Is DTC “C1730”, “C1731”, “C1732”, or “C1733” detected?

YES >> Perform trouble diagnosis. Refer to WT-40, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000009697227

1.CHECK TIRE PRESSURE

Check the for pressure of all wheels. Refer to WT-68, "Tire Air Pressure".

Is the inspection result normal?

YES >> GO TO 2.
NO >> After adjusting the tire pressure, GO TO 3.

2.TRANSMITTER ID REGISTRATION

Perform transmitter ID registration. Refer to WT-30, "Work Procedure".

Is transmitter ID registration completed?

YES >> Perform “DTC REPRODUCTION PROCEDURE” (self-diagnosis) again. Refer to WT-40, "DTC Description".
NO >> Refer to WT-29, "Work Procedure".

3.ADJUST TIRE PRESSURE

Check and adjust the tire pressure for all wheels specified to the value. Refer to WT-68, "Tire Air Pressure".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Check or replace the road wheels and tires, and adjust the tire pressures.

4. CHECK TIRE PRESSURE SIGNAL

With CONSULT
1. Select “DATA MONITOR” to display the tire pressure for all wheels.
2. Check that the tire pressure is the specified value.

Check items	Condition
AIR PRESS FL	Approximately equal to the indication on tire gauge value for each tires.
AIR PRESS FR	
AIR PRESS RR	
AIR PRESS RL	

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace error-detected part.

C1734 CONTROL UNIT

DTC Description

INFOID:0000000009641493

DTC DETECTION LOGIC

DTC No.	CONSULT screen item (Trouble diagnosis content)	DTC Detection Condition
C1734	CONTROL UNIT (Control unit)	TPMS malfunction in BCM.

POSSIBLE CAUSE

- BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT

Perform self-diagnosis for “AIR PRESSURE MONITOR” of “BCM”.

Is DTC C1734 detected?

YES >> Proceed to WT-42, "Diagnosis Procedure".
NO-1 >> To check malfunction symptom before repair: Refer to GI-43, "Intermittent Incident".
NO-2 >> Confirmation after repair: INSPECTION END

Diagnosis Procedure

INFOID:0000000009641494

1.CHECK BCM HARNESS CONNECTORS

Check BCM harness connectors for damage or loose connections.

Is the inspection result normal?

YES >> Repair or replace connectors.
NO >> GO TO 2.

2.CHECK BCM POWER SUPPLY AND GROUND

Check BCM power supply and ground. Refer to BCS-91, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace harness or connectors.

3.CHECK REMOTE KEYLESS ENTRY RECEIVER (TIRE PRESSURE RECEIVER) POWER CIRCUIT

1. Turn the ignition switch OFF.
2. Check 5 A fuse (#17).
3. Disconnect fuse block (J/B) harness connector.
4. Check continuity between remote keyless entry receiver (tire pressure receiver) harness connector and fuse block (J/B) harness connector.

Remote keyless entry receiver (Tire pressure receiver)		Ground	Voltage
Connector	Terminal		
M113	1	—	9 – 16 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness or connectors.

4.CHECK REMOTE KEYLESS ENTRY RECEIVER (TIRE PRESSURE RECEIVER) CIRCUIT

1. Disconnect BCM harness connector and remote keyless entry receiver (tire pressure receiver) harness connector.

2. Check the continuity between BCM harness connector and remote keyless entry receiver (tire pressure receiver) harness connector.

BCM		Remote keyless entry receiver (tire pressure receiver)		Continuity
Connector	Terminal	Connector	Terminal	
M13	17	M113	3	Existed
M16	119		2	

3. Check the continuity between BCM harness connector and ground.

BCM		—	Continuity
Connector	Terminal		
M13	17	Ground	Not existed
M16	119		

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace error-detected parts.

5. CHECK BCM INPUT/OUTPUT SIGNALS

Check BCM input/output signals. Refer to BCS-35, "Reference Value".

Is the inspection result normal?

YES >> After erasing DTC record, INSPECTION END.
NO >> Replace BCM. Refer to BCS-98, "Removal and Installation".

C1761, C1762, C1763, C1764 TIRE PRESSURE SENSOR

DTC Description

INFOID:0000000009641569

DTC DETECTION LOGIC

DTC No.	CONSULT screen item (Trouble diagnosis content)	DTC Detection Condition
C1761	TEMPERATURE DATA FL (Temperature data front left)	Malfunction in the tire temperture data from the front LH wheel tire pressure sensor.
C1762	TEMPERATURE DATA FR (Temperature data front right)	Malfunction in the tire temperture data from the front RH wheel tire pressure sensor.
C1763	TEMPERATURE DATA RR (Temperature data rear right)	Malfunction in the tire temperture data from the rear RH wheel tire pressure sensor.
C1764	TEMPERATURE DATA RL (Temperature data rear left)	Malfunction in the tire temperture data from the rear LH wheel tire pressure sensor.

POSSIBLE CAUSE

- Tire pressure sensor
- BCM

Diagnosis Procedure

INFOID:0000000009670833

1.REPLACE TIRE PRESSURE SENSOR

When DTC "C1761, C1762, C1763, C1764" is detected, replace tire pressure sensor.

>> Replace tire pressure sensor. Refer to WT-64, "Removal and Installation".

C1769 CONFIGURATION SETTING

DTC Description

INFOID:0000000009642371

This procedure must be performed:
- after replacement of BCM.

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition
C1769	CONFIG SETTING (Configuration setting)	Recever ID registration cannot be performed.

Diagnosis Procedure

INFOID:0000000009662403

1.TIRE PRESSURE SENSOR ID REGISTRATION

Perform tire pressure sensor ID registration. Refer to WT-30, "Work Procedure".

Does low tire pressure warning lamp turn OFF?

YES >> INSPECTION END
NO >> Configration setting tire pressure monitoring system. Refer to WT-32, "Work Procedure".

C1770, C1771, C1772, C1773 G SENSOR

DTC Description

INFOID:0000000009641577

DTC DETECTION LOGIC

DTC No.	CONSULT screen item (Trouble diagnosis content)	DTC Detection Condition
C1770	G SENSOR FL (G sensor front left)	Malfunction in the G sensor data from front LH wheel sensor.
C1771	G SENSOR FR (G sensor front right)	Malfunction in the G sensor data from front RH wheel sensor.
C1772	G SENSOR RR (G sensor rear right)	Malfunction in the G sensor data from rear RH wheel sensor.
C1773	G SENSOR RL (G sensor rear left)	Malfunction in the G sensor data from rear LH wheel sensor.

POSSIBLE CAUSE

- Tire pressure sensor
- BCM

Diagnosis Procedure

INFOID:0000000009670834

1.

When DTC "C1770, C1771, C1772, C1773" is detected, replace tire pressure sensor.

>> Replace tire pressure sensor. Refer to WT-64, "Removal and Installation".

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000009236579

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 communicates data but selectively reads required data only.

DTC Logic

INFOID:0000000009236580

DTC DETECTION LOGIC

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

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION

With CONSULT

1. Drive for several minutes at a speed of 40 km/h (25 MPH) or more.
2. Stop the vehicle.
3. Perform self-diagnosis for “AIR PRESSURE MONITOR”.

Is DTC “U1000” detected?

YES >> Proceed to WT-47, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000009236581

Proceed to LAN-42, "CAN COMMUNICATION SYSTEM : CAN System Specification Chart".

U1010 CONTROL UNIT (CAN)

Description

INFOID:0000000009236582

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 communicates data but selectively reads required data only.

DTC Logic

INFOID:0000000009236583

DTC DETECTION LOGIC

DTC	Display item	Malfunction detected condition	Possible cause
U1010	CONTROL UNIT (CAN)	Detecting error during the initial diagnosis of CAN controller of BCM.	Malfunction of BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION

With CONSULT

1. Drive for several minutes at a speed of 40 km/h (25 MPH) or more.
2. Stop the vehicle.
3. Perform self-diagnosis for “AIR PRESSURE MONITOR”.

Is DTC “U1010” detected?

YES >> Proceed to WT-48, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000009236584

1.CHECK BCM

Check BCM harness connector for disconnection or deformation.

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-98, "Removal and Installation".
NO >> Repair or replace error-detected parts.

LOW TIRE PRESSURE WARNING LAMP

Component Function Check

INFOID:0000000009641505

1.CHECK THE ILLUMINATION OF THE LOW TIRE PRESSURE WARNING LAMP

Check that the low tire pressure warning lamp is turned OFF after illuminating for approximately 1 second, when the ignition switch is turned ON.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Perform trouble diagnosis. Refer to WT-49, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009641506

1.POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit. Refer to BCS-91, "Diagnosis Procedure".

Is the inspection result normal?

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

2.PERFORM SELF-DIAGNOSIS

With CONSULT
Perform “SELF-DIAG RESULTS” in “AIR PRESSURE MONITOR” of “BCM”.

Is any DTC detected?

YES >> Check the DTC. Refer to BCS-62, "DTC Index".
NO >> GO TO 3.

3.CHECK LOW TIRE PRESSURE WARNING LAMP SIGNAL

With CONSULT
1. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
2. Perform “DATA MONITOR” in “AIR PRESSURE MONITOR” of “BCM”.
3. Select “BCM” in “DATA MONITOR”, and check that the low tire pressure warning lamp is turned OFF after illuminating for approximately 1 second, when the ignition switch is turned ON.

Is the inspection result normal?

YES >> Check the combination meter. Refer to MWI-104, "COMBINATION METER : Diagnosis Procedure".
NO >> Replace the BCM. Refer to BCS-98, "Removal and Installation".

SYMPTOM DIAGNOSIS

TPMS

Symptom Table

INFOID:0000000009641511

LOW TIRE PRESSURE WARNING LAMP SYMPTOM CHART

Diagnosis items	Symptom (Ignition switch ON)	Low tire pressure warning lamp	Cause	Action
Low tire pressure warning lamp	The low tire pressure warning lamp illuminates for 1 second, then turns OFF.	 ON 1 sec > stays OFF SEIA0592E	Wake-up operation for all tire pressure sensors at wheels is completed.	No system malfunctions
	The low tire pressure warning lamp repeats blinking ON for 2 seconds and OFF for 0.2 seconds.	 Blinks: ON 2 sec > OFF 0.2 sec SEIA0593E	Wake-up operation for all tire pressure sensors at wheels is not completed.	Perform the ID registration for all tire pressure sensors at wheels. Refer to WT-30, "Work Procedure".
	The low tire pressure warning lamp blinks once.	 Blinks 1 time ON 0.3 sec > OFF 1.0 sec JPEIC0090GB	The front left tire pressure sensor is not activated.	Perform the ID registration for the tire pressure sensor at front left wheel. Refer to WT-30, "Work Procedure".
	The low tire pressure warning lamp repeats blinking twice.	 Blinks 2 times ON 0.3 sec > OFF 0.3 sec SEIA0595E	The front right tire pressure sensor is not activated.	Perform the ID registration for the tire pressure sensor at front right wheel. Refer to WT-30, "Work Procedure".
	The low tire pressure warning lamp repeats blinking for 3 times.	 Blinks 3 times ON 0.3 sec > OFF 0.3 sec SEIA0596E	The rear right tire pressure sensor is not activated.	Perform the ID registration for the tire pressure sensor at rear right wheel. Refer to WT-30, "Work Procedure".
	The low tire pressure warning lamp repeats blinking for 4 times.	 Blinks 4 times ON 0.3 sec > OFF 0.3 sec SEIA0597E	The rear left tire pressure sensor is not activated.	Perform the ID registration for the tire pressure sensor at rear left wheel. Refer to WT-30, "Work Procedure".
	The low tire pressure warning lamp turns ON and stays illuminated.	 Comes ON and stays ON SEIA0598E	Low tire pressure	Check the tire pressure for all wheels and adjust to the specified value. Refer to WT-68, "Tire Air Pressure".

Diagnosis items	Symptom (Ignition switch ON)	Low tire pressure warning lamp	Cause	Action
Low tire pressure warning lamp	The low tire pressure warning lamp repeats blinking at 0.5-second intervals for 1 minute, and then stays illuminated.	 Blinks 1 min ON 0.5 sec > OFF 0.5 sec and stays ON SEIA0788E	The combination meter fuse is open or removed (or pulled out).	Check and install the combination meter fuse. If necessary, replace the fuse.
			The BCM harness connector is removed.	Check the connection conditions of the BCM harness connector, and repair if necessary.
			Tire Pressure Monitoring System (TPMS) malfunction.	• Perform CONSULT self-diagnosis. Refer to WT-13, "AIR PRESSURE MONITOR : CONSULT Function (BCM-AIR PRESSURE MONITOR)". • If necessary, perform tire pressure sensor ID registration. Refer to WT-30, "Work Procedure".
	The low tire pressure warning lamp blinks once.	 Blinks 4 times ON 0.3 sec > OFF 0.3 sec and stays ON JSEIA0734GB	Wake-up operation for all tire pressure sensors at wheels is not completed.	Perform the ID registration for all tire pressure sensors at wheels. Refer to WT-30, "Work Procedure".
Hazard warning lamp	The hazard warning lamp does not blink twice when the tire pressure sensor is activated. Or the buzzer does not sound.	—	The tire pressure sensor activation tool does not activate.	Replace the battery in the tire pressure sensor activation tool.
			The ignition switch is OFF when the tire pressure sensor wake-up operation is performed.	Turn the ignition switch ON when performing the tire pressure sensor wake-up operation.
			The tire pressure sensor activation tool is not used in the correct position.	Operate the tire pressure sensor activation tool in the correct position when performing the wake-up operation.
			The tire pressure sensor is already waked up.	No procedure.

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

LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN ON

Description

INFOID:0000000009641512

The low tire pressure warning lamp does not illuminate when the ignition switch is turned ON.

NOTE:

The low tire pressure warning lamp illuminates for approximately 1 second and then turns OFF when the ignition switch is turned ON. This is to check that no abnormal condition is present in the tire pressure monitoring system.

The lamp bulb may be burnt out or the tire pressure monitoring system may be malfunctioning if the low tire pressure warning lamp does not illuminate when the ignition switch is turned ON.

Diagnosis Procedure

INFOID:0000000009641513

1. CHECK LOW TIRE PRESSURE WARNING LAMP SIGNAL

With CONSULT

1. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
2. Select “ACTIVE TEST” in “AIR PRESSURE MONITOR” of “BCM”.
3. Touch “WARNING LAMP” to turn ON the low tire pressure warning lamp.

When “ACTIVE TEST” is performed, does the low tire pressure warning lamp in the combination meter turn ON?

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

2. CHECK LOW TIRE PRESSURE WARNING LAMP OPERATION

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

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".
NO >> Replace the BCM. Refer to BCS-98, "Removal and Installation".

3. CHECK COMBINATION METER POWER SUPPLY CIRCUIT

Perform the trouble diagnosis for combination meter power supply circuit. Refer to MWI-104, "COMBINATION METER : Diagnosis Procedure".

Is the inspection result normal?

YES-1 >> INSPECTION END
NO >> Repair or replace error-detected parts.

LOW TIRE PRESSURE WARNING LAMP STAYS ON

Description

INFOID:0000000009641579

The low tire pressure warning lamp does not turn OFF after several seconds is passed after engine starts.

Diagnosis Procedure

INFOID:0000000009641580

1.CHECK TIRE PRESSURE

1. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
2. Check the tire pressure for all wheels and adjust to the specified value. Refer to WT-68, "Tire Air Pressure".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Inspect or repair the tires or wheels.

2.CHECK LOW TIRE PRESSURE WARNING LAMP

Check low tire pressure warning lamp display.

Does not low tire pressure warning lamp turn OFF?

YES >> INSPECTION END
NO >> GO TO 3.

3.CHECK BCM

With CONSULT

Perform “SELF-DIAG RESULTS” in “AIR PRESSURE MONITOR” of “BCM”.

Is any DTC detected?

YES >> Check the DTC. Refer to BCS-62, "DTC Index".
NO >> GO TO 4.

4.CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Perform the trouble diagnosis for power supply and ground circuit. Refer to BCS-91, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace the BCM. Refer to BCS-98, "Removal and Installation".
NO >> Repair or replace error-detected parts.

LOW TIRE PRESSURE WARNING LAMP BLINKS

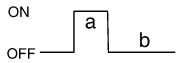
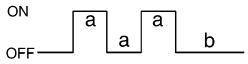
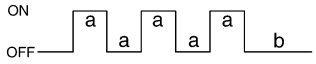
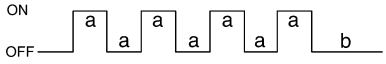
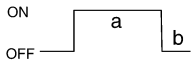
Description

INFOID:0000000009641514

The low tire pressure warning lamp blinks when the ignition switch is turned ON.

NOTE:

The position of an inactive tire pressure sensor can be identified by checking the blinking timing of the low tire pressure warning lamp.

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

JPEIC0089GB

Diagnosis Procedure

INFOID:0000000009641515

1. TIRE PRESSURE SENSOR ID REGISTRATION

Perform tire pressure sensor ID registration. Refer to WT-30, "Work Procedure".

Is tire pressure sensor ID registration completed?

YES >> INSPECTION END

NO >> Perform the self-diagnosis for “AIR PRESSURE MONITOR”. Refer to BCS-62, "DTC Index".

ID REGISTRATION CANNOT BE COMPLETED

Description

INFOID:0000000009236595

The ID of the tire pressure sensor installed in each wheel cannot be registered in the tire pressure monitoring system.
Inspect the tire pressure sensor or the tire pressure monitoring system circuit.

Diagnosis Procedure

INFOID:0000000009236596

1.TIRE PRESSURE SENSOR WAKE-UP

Perform the tire pressure sensor wake-up. Refer to WT-29, "Work Procedure".

Is the tire pressure sensor wake-up completed?

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

2.CHECK TIRE PRESSURE SENSOR ACTIVATION TOOL

Check tire pressure sensor activation tool.

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace the battery of tire pressure sensor activation tool or repair/replace the tire pressure sensor activation tool.

3.TIRE PRESSURE SENSOR ID REGISTRATION

Perform tire pressure sensor ID registration. Refer to WT-30, "Work Procedure".

CAUTION:

To perform ID registration, observe the following points:

- **Never register ID in a place where radio waves are interfered (e.g. radio tower).**
- **Never register ID in a place close to vehicles including TPMS.**

Is tire pressure sensor ID registration completed?

YES >> INSPECTION END
NO >> GO TO 4.

4.CHECK TIRE PRESSURE SIGNAL

Change the work location and perform ID registration again.

NOTE:

Depending on the tire pressure sensor position*, a blind spot exists, and the tire pressure receiver gets a poor reception. If an ID registration is performed under this condition, the registration may not be completed. In such case, follow the instructions below to improve the radio wave receiving environment.

- Rotate tire by 90°, 180°, or 270°. (This Step is to change tire pressure sensor position.)
- Open the door close to the tire of which ID registration is ongoing.

*: Radio wave reception condition depends on vehicle architecture (e.g. body harness layout, tire wheel design) or environment.

When ID registration is performed, which wheels do not react?

All wheels react and ID registration is possible.>>INSPECTION END
Only certain wheel(s) do not react.>>Replace applicable tire pressure sensor. Refer to WT-64, "Removal and Installation".
All wheels do not react.>>Check the tire pressure receiver (remote keyless entry receiver). Refer to DLK-122, "Diagnosis Procedure".

HAZARD WARNING LAMP REMAINS ON

Description

INFOID:0000000009236597

The hazard warning lamp remains on.

Diagnosis Procedure

INFOID:0000000009236598

1.CHECK HAZARD WARNING LAMP OPERATION

Check hazard warning lamp operation with hazard switch.

Is the operation normal?

YES >> GO TO 2.
NO >> Perform trouble diagnosis for the hazard warning lamp. Refer to EXL-158, "Diagnosis Procedure".

2.CHECK HAZARD REQUEST SIGNAL CIRCUIT

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

BCM		—	Continuity
Connector	Terminal		
M43	30	Ground	Not existed

Is the inspection result normal?

YES >> Repair or replace the malfunctioning harness or connector.
NO >> Replace the BCM. Refer to BCS-98, "Removal and Installation".

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:0000000009641516

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

Reference page			WT-62	WT-62	WT-59	WT-68	WT-62	—	—	WT-68	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 section.	NVH in FAX BR section.	NVH in ST section.
Possible cause and SUSPECTED PARTS			Improper installation, looseness	Out-of-round	Imbalance	Incorrect tire pressure	Uneven tire wear	Deformation or damage	Non-uniformity	Incorrect tire size	FRONT AXLE AND FRONT SUSPENSION	REAR AXLE AND REAR SUSPENSION	TIRES	ROAD WHEELS	DRIVE SHAFT	BRAKE	STEERING
Symptom	TIRES	Noise	×	×	×	×	×	×	×		×	×		×	×	×	×
		Shake	×	×	×	×	×	×		×	×	×		×	×	×	×
		Vibration				×				×	×	×			×		×
		Shimmy	×	×	×	×	×	×	×	×	×	×		×		×	×
		Shudder	×	×	×	×	×	×		×	×	×		×		×	×
		Poor quality ride or handling	×	×	×	×	×	×		×	×		×	×			
	ROAD WHEEL	Noise	×	×	×			×			×	×	×		×	×	×
		Shake	×	×	×			×			×	×	×		×	×	×
		Shimmy, Shudder	×	×	×			×			×	×	×			×	×
		Poor quality ride or handling	×	×	×			×			×	×	×				

×: Applicable

PERIODIC MAINTENANCE

ROAD WHEEL

Inspection

INFOID:0000000009641517

APPEARANCE

Road Wheel
- Check road wheel for deformation, cracks, corrosion and other damage.
- Check wheel nuts for looseness by using torque wrench.

Wheel nut tightening torque : Refer to WT-62, "Exploded View".

Tire
- Check entire circumference and both sides of each tire for deformation, cracks, scratch and other damage.
- Check tire tread for wear and foreign matter such as nails and small rock.
- Check that tire pressure is the specified value.

Tire pressure : Refer to WT-68, "Tire Air Pressure".

Wheel Balance Adjustment (Aluminum Wheel)

INFOID:0000000009641518

PREPARATION BEFORE ADJUSTMENT

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

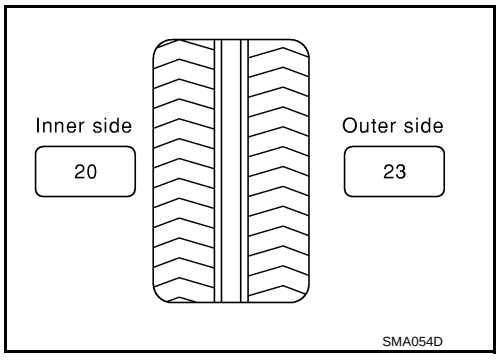
CAUTION:
- **Be careful not to scratch the road wheel during removal.**
- **After removing double-faced adhesive tape, wipe clean traces of releasing agent from the road wheel.**

ADJUSTMENT

- The details of the adjustment procedure are different for each model of wheel balancer. Therefore, refer to each instruction manual.
- 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 aluminum 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 to the designated outer position of, or at the designated angle in relation to the road wheel.
   CAUTION:
   - **Never install the inner balance weight before installing the outer balance weight.**
   - **Before installing the balance weight, always to clean the mating surface of the road wheel.**

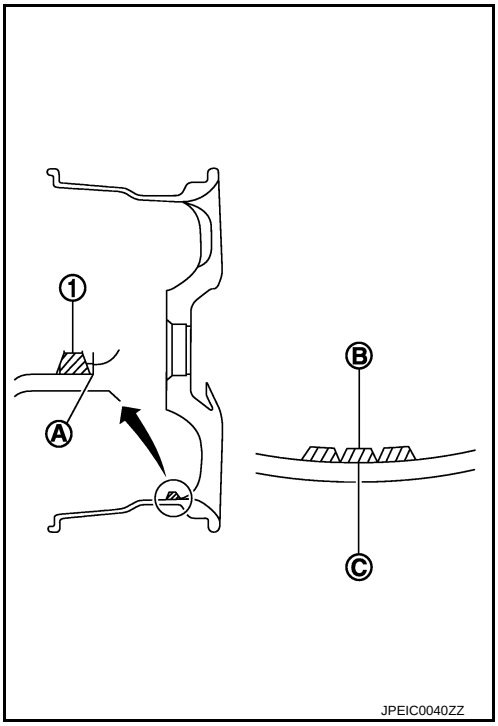
a. Indicated unbalance value × 5/3 = balance weight to be installed
Calculation example:
23 g (0.81 oz) × 5/3 = 38.33 g (1.35 oz) ⇒ 40 g (1.41 oz) balance weight (closer to calculated balance weight value)
NOTE:
Note that balance weight value must be closer to the calculated balance weight value.
Example: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



b. Installed balance weight in the position.

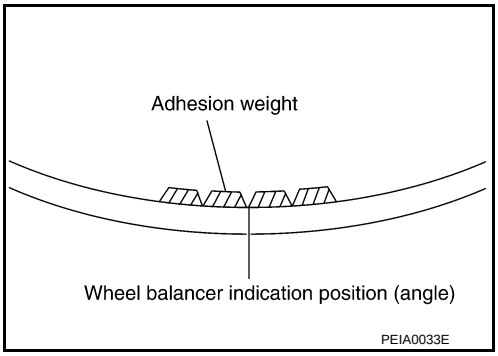
- When installing balance weight ① to road wheels, set it into the grooved area Ⓐ on the inner wall of the road wheel as shown in the figure so that the balance weight center Ⓑ is aligned with the tire balance machine indication position (angle) Ⓒ.

CAUTION:
- **Always use genuine NISSAN balance weights.**
- **Balance weights are non-reusable; always replace with new ones.**
- **Never install three or more sheets of balance weight.**



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:
Never install one balance weight sheet on top of another.



3. Start the 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:
Never install three or more balance weight.

5. Start the tire balance machine. Check that the inner and outer residual unbalance value is within the allowable unbalance value.

CAUTION:
If either residual unbalance value exceeds limit, repeat installation procedures.

Allowable unbalance value

Dynamic (At flange) : Refer to WT-68, "Road Wheel".

Static (At flange) : Refer to WT-68, "Road Wheel".

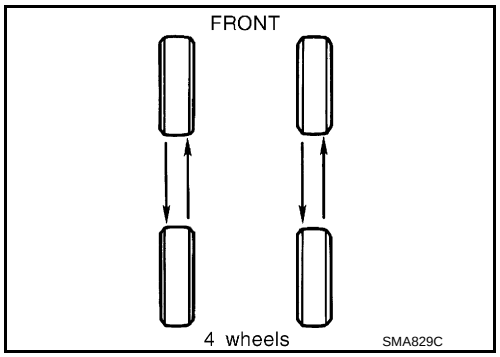
Tire Rotation

INFOID:0000000009641520

- Follow the maintenance schedule for tire rotation service intervals. Refer to MA-4, "FOR NORTH AMERICA : Explanation of General Maintenance".
- When installing the wheel, tighten wheel nuts to the specified torque. Refer to WT-62, "Exploded View".

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.**
- **Use NISSAN genuine wheel nut.**

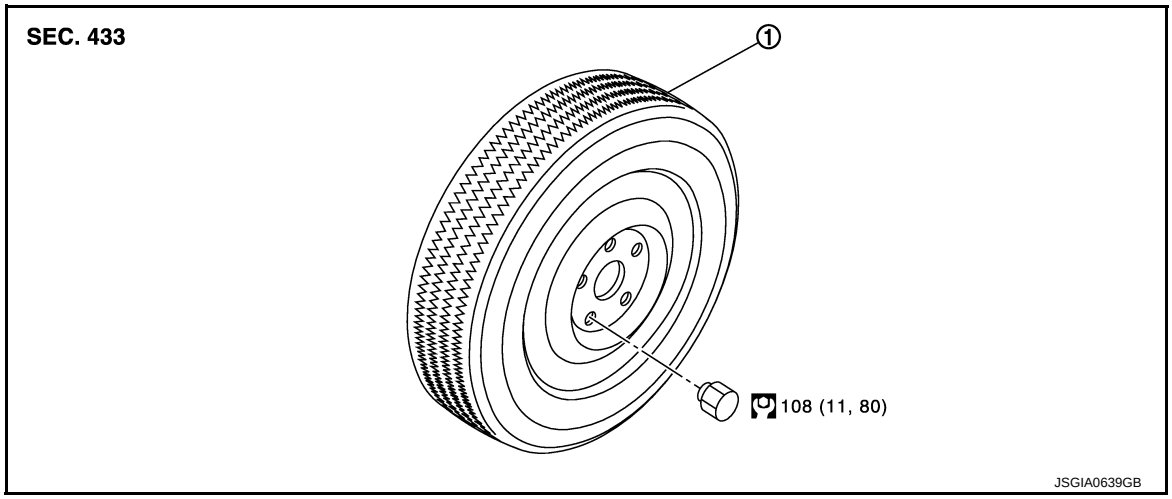


REMOVAL AND INSTALLATION

ROAD WHEEL TIRE ASSEMBLY

Exploded View

INFOID:0000000009236601



① Tire assembly

: N·m (kg-m, ft-lb)

Removal and Installation

INFOID:0000000009236602

REMOVAL

1. Remove wheel nuts.
2. Remove tire assembly.

INSTALLATION

Note the following, install in the reverse order of removal.

- When replacing or rotating wheels, perform the ID registration. Refer to WT-30, "Work Procedure".
- When replacing wheels, install tire pressure sensor. Refer to WT-64, "Removal and Installation".

CAUTION:

Never reuse grommet seal.

Inspection

INFOID:0000000009236603

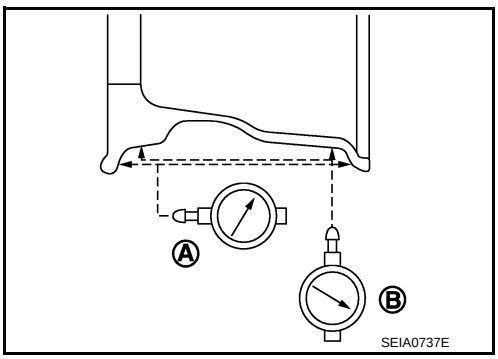
ALUMINUM WHEEL

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

a. Remove tire from aluminum wheel and mount on a tire balance machine.

b. Set dial indicator as shown in the figure.

c. Check runout, if the axial runout Ⓐ or radial runout Ⓑ exceeds the limit, replace aluminum wheel.



Limit

Axial runout Ⓐ : **Refer to WT-68, "Road Wheel".**

Radial runout Ⓑ : **Refer to WT-68, "Road Wheel".**

REMOTE KEYLESS ENTRY RECEIVER (TIRE PRESSURE RECEIVER)

Removal and Installation

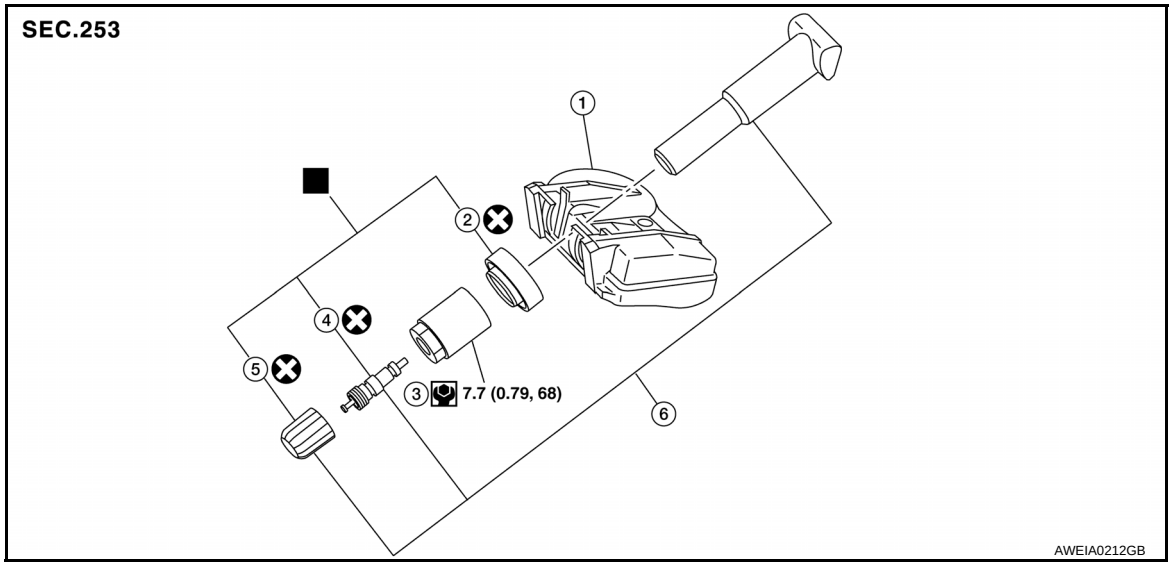
INFOID:0000000009641647

The tire pressure receiver is an integral part of the remote keyless entry receiver. Refer to DLK-253, "Removal and Installation".

TIRE PRESSURE SENSOR

Exploded View

INFOID:0000000009641649



①	Tire pressure sensor	②	Grommet seal	③	Valve nut
④	Valve core	⑤	Valve cap	⑥	Valve stem assembly

: N·m (kg-m, in-lb)

: Always replace after every disassembly.

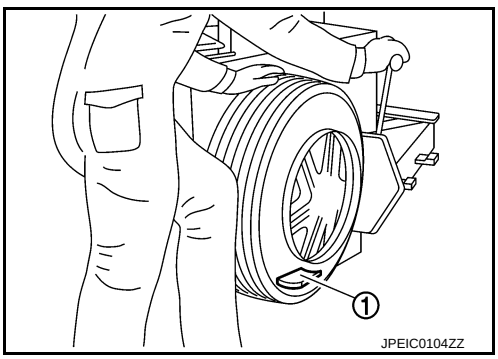
■: Parts that are replaced as a set when the tire is replaced.

Removal and Installation

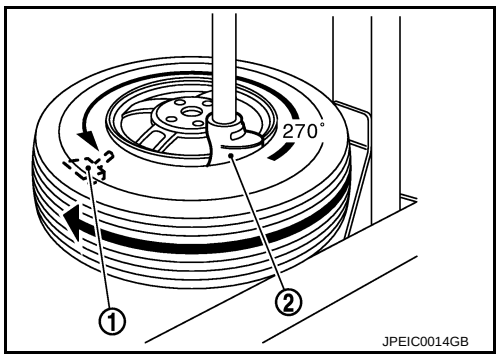
INFOID:0000000009641650

REMOVAL

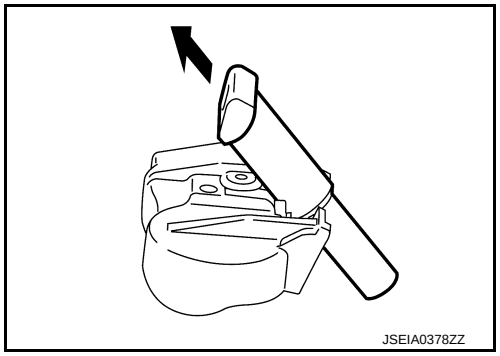
1. Remove tire assembly. Refer to WT-62, "Removal and Installation".
2. Remove valve cap, valve core and then deflate tire.
   NOTE:
   If the tire is reused, apply a matching mark to the position of the tire road wheel valve hole for the purpose of wheel balance adjustment after installation.
3. Remove valve nut retaining tire pressure sensor and allow tire pressure sensor to fall into tire.
4. Use the tire changer and disengage the tire beads.
   CAUTION:
   - **Verify that the tire pressure sensor ① is at the bottom of the tire while performing the above.**
   - **Be sure not to damage the road wheel or tire pressure sensor.**
5. Apply bead cream or an equivalent to the tire beads.
6. Set tire onto the tire changer turntable so that the tire pressure sensor inside the tire is located close to the road wheel valve hole.



7. Turn tire so that valve hole is at bottom and bounce so that tire pressure sensor ① is near valve hole. Carefully lift tire onto turn-table and position valve hole (and tire pressure sensor) 270 degree from mounting/dismounting head ②.
   CAUTION:
   Be sure not to damage the road wheel and tire pressure sensor.
8. Remove tire pressure sensor from tire.
9. Remove the grommet seal.



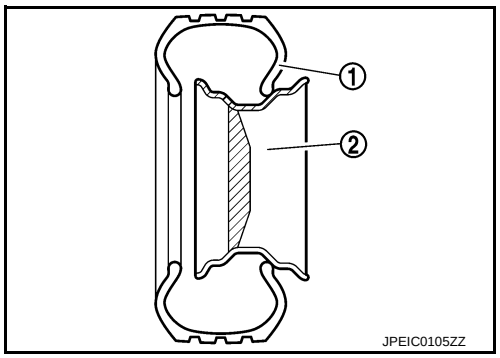
10. Remove valve stem in the direction (⬅).



INSTALLATION

CAUTION:
Replace valve stem assembly if the valve stem has deformations, cracks, damage or corrosion.

1. Apply bead cream or an equivalent to the tire beads.
2. Install the tire inside beads ① onto the road wheel ② in the position shown in the figure.
3. Install valve stem to tire pressure sensor.
4. Install grommet seal to the tire pressure sensor assembly.
   CAUTION:
   - **Never reuse grommet seal.**
   - **Insert grommet seal all the way to the base.**

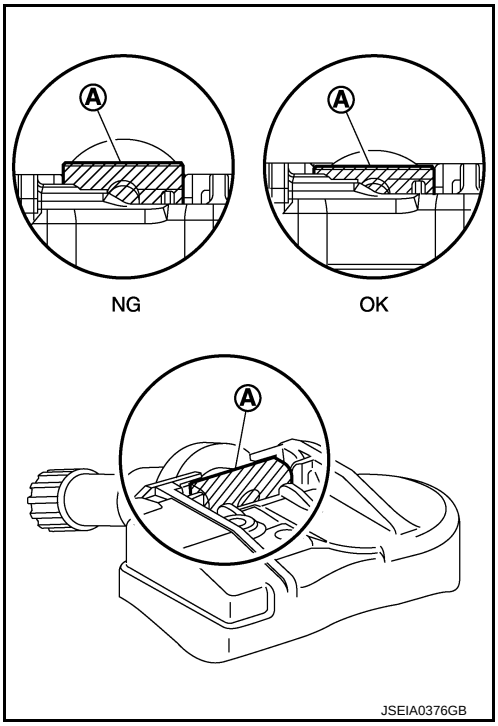


5. Follow the procedure below and install the tire pressure sensor to the road wheel.

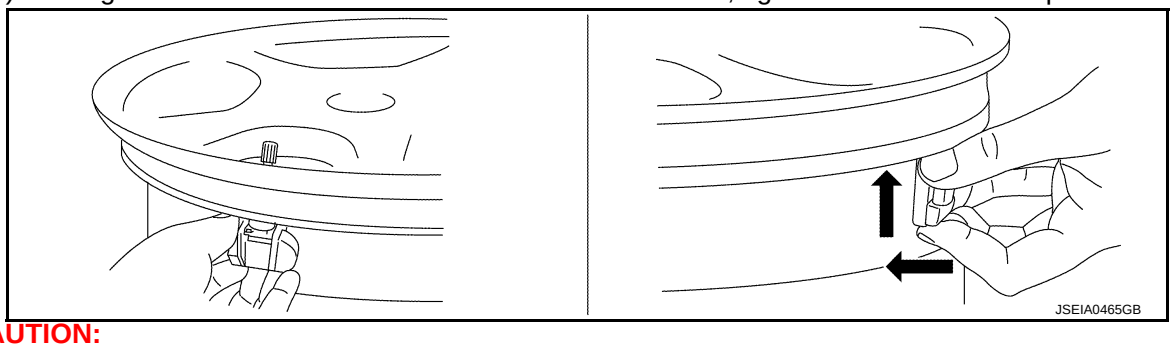
a. Check the condition of valve stem before installing tire pressure sensor to road wheel.

CAUTION:

The base of valve stem Ⓐ must be positioned in the groove of the metal plate as shown in the figure.



b. Hold tire pressure sensor as shown in the figure, and press the sensor in the direction shown by arrow (⬅) to bring it into absolute contact with road wheel. After this, tighten valve nut to the specified torque.



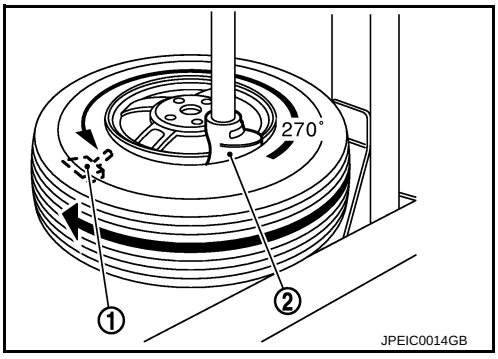
CAUTION:

- **Never reuse valve core and valve cap.**
- **Check that grommet seal is free of foreign matter.**
- **Check that grommet seal contacts horizontally with road wheel.**
- **Check again that the base of valve stem is positioned in the groove of the metal plate.**
- **Manually tighten valve nut all the way to the wheel. (Never use a power tool to avoid impact.)**

6. Set the tire onto the turntable so that the tire changer arm ② is at a position approximately 270° from the tire pressure sensor ①.

CAUTION:

Be sure that the arm does not contact the tire pressure sensor.



7. Install the tire outer side beads onto the road wheel.

CAUTION:

When installing, check that the tire does not turn together with the road wheel.

8. Check the tire pressure for all wheels and adjust to the specified value. Refer to WT-68, "Tire Air Pressure".

NOTE:

Before adding air, align the tire with the position of the matching mark applied at the time of removal.

9. Install tire to the vehicle. Refer to WT-62, "Removal and Installation".
10. Perform tire pressure sensor ID registration. Refer to WT-30, "Work Procedure".

OUTSIDE KEY ANTENNA

Removal and Installation

INFOID:0000000009641648

Remove the outside key antenna. Refer to DLK-250, "OUTSIDE HANDLE : Removal and Installation" (outside handle) or DLK-250, "REAR BUMPER : Removal and Installation" (rear bumper).

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Road Wheel

INFOID:0000000009236611

CONVENTIONAL

Item		Limit
Runout	Axial runout	Less than 0.3 mm (0.012 in)
	Radial runout	
Allowable unbalance	Dynamic (At flange)	Less than 5 g (0.17 oz) (one side)
	Static (At flange)	Less than 10 g (0.35 oz)

Tire Air Pressure

INFOID:0000000009236612

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

Tire size	Air pressure	
	Front	Rear
P225/55RF17 95V	240 (2.4, 35)	
P245/40RF19 94V	240 (2.4, 35)	
245/40RF19 94W	240 (2.4, 35)	
T145/70R18 107M*	420 (4.2, 60)	

*: If equipped models