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PRECAUTION

PRECAUTIONS

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

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

Precautions for Removing Battery Terminal

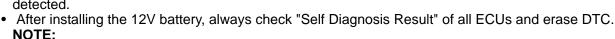
 When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.

NOTE:

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

• For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.



The removal of 12V battery may cause a DTC detection error.

Service Notice and Precautions for TPMS

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 Tire Pressure Monitoring System (TPMS), or register
the ID to turn low tire pressure warning lamp OFF. For ID registration, refer to <u>WT-20</u>, "Work Procedure".

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PRECAUTIONS

< PRECAUTION >

- ID registration is required when replacing or rotating wheels, replacing tire pressure sensor or BCM. Refer to WT-20, "Work Procedure".
- Replace grommet seal, valve core and valve cap of tire pressure sensor in TPMS, when replacing each tire by reaching the wear limit. Refer to <u>WT-40</u>, "Exploded View".
- Because the tire pressure sensor conforms to North America radio law, the following items must be observed.
- The sensor may be used only in North America.
- It may not be used in any method other than the specified method.
- It must not be disassembled or modified.

Service Notice and Precautions for Road Wheel

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- Genuine NISSAN aluminum wheel is designed for each type of vehicle. Use it on the specified vehicle only.
- Use Genuine NISSAN parts for the road wheels, valve caps and 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.
- When tightening the valve cap there is a risk of damaging the valve cap if a tool is used. Tighten by hand.

PREPARATION

PREPARATION

Special Service Tool

The actual shapes of TechMate tools may differ from those of special service tools illustrated here.

Tool number (TechMate No.) Tool name		Description
— (J-50190) Signal tech II	ALEIA0131ZZ	Activate and display TPMS tire pressure sensor IDs Display tire pressure reported by the TPMS tire pressure sensor Read TPMS DTCs Register TPMS tire pressure sensor IDs Test remote keyless entry keyfob relative signal strength Compatible with future sensors Equipped with a display
KV48105501 (J-45295-A) Tire pressure sensor activation tool	ALEIA0183ZZ	Activate TPMS tire pressure sensor IDs Compatible with future sensors Equipped with a display (KV48105501 only)

Commercial Service Tool

INFOID:0000000011464007

Tool name		Description	
Power tool		Loosening bolts and nuts	
	PBIC0190E		

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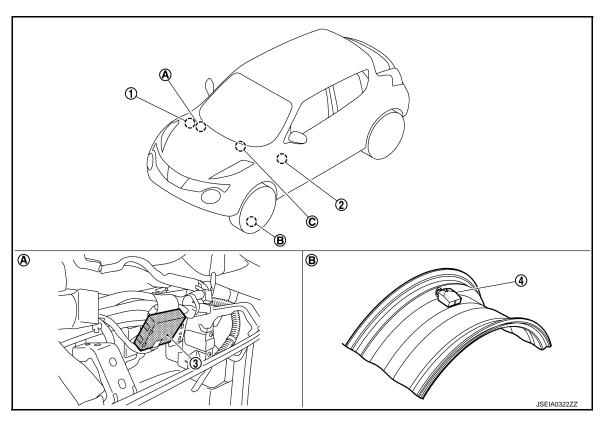
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SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000011464008



- ABS actuator and electric unit (control 2. unit)
 Refer to <u>BRC-9</u>, "Component Parts Location".
- 4. Tire pressure sensor
- View with the glove box assembly removed
- BCM
 Refer to BCS-4, "BODY CONTROL
 SYSTEM: Component Parts Location".
- . Wheel

- Remote keyless entry receiver (tire pressure receiver)
- C. Low tire pressure warning lamp, information display (in combination meter)

Component Description

INFOID:0000000011464009

Component parts	Function
BCM (Body Control Module)	<u>WT-7, "BCM"</u> .
Tire pressure sensor	WT-7, "Tire Pressure Sensor".
Tire pressure receiver	WT-7, "Tire Pressure Receiver".
Turn signal lamp	ID registration of each wheel has been completed, turn signal lamp flashes.
Combination meter	Mainly receives the following signals from BCM via CAN communication. Low tire pressure warning lamp signal TPMS malfunction warning lamp signal
ABS actuator and electric unit (control unit)	Mainly transmits the following signals to BCM via CAN communication. • Vehicle speed signal (ABS)
Low tire pressure warning lamp	WT-8, "System Description"
Information display	WT-7, "Information Display"

COMPONENT PARTS

< SYSTEM DESCRIPTION >

BCM INFOID:0000000011464010

The BCM reads the air pressure signal received by the tire pressure receiver, and controls the low tire pressure warning lamp operation. It also has a judgment function to detect a system malfunction.

Tire Pressure Sensor

INFOID:0000000011464011

The tire pressure sensor integrated with a valve is installed on a wheel, and transmits a detected air pressure signal by radio wave.

Tire Pressure Receiver

INFOID:0000000011464012

- The tire pressure receiver is incorporated into remote keyless entry receiver.
- The tire pressure receiver receives the air pressure signal transmitted by the tire pressure sensor in each wheel.

Information Display

INFOID:0000000011464013

The vehicle information display is shown when a low tire pressure warning lamp signal is transmitted from BCM to combination meter via CAN communication.

Condition		Vehicle information display
Ignition switch OFF		Not indicated
Ignition switch ON	Low tire pressure warning lamp remains ON after blinking for one minute. [Tire Pressure Monitoring System (TPMS) malfunction.]	Not indicated
Ignition switch ON	Low tire pressure warning lamp remains ON. (low tire pressure)	Indicated

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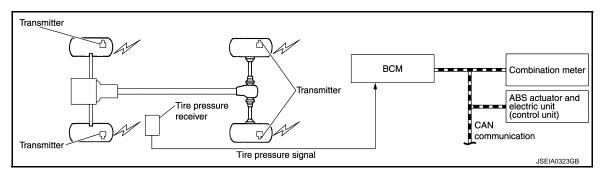
SYSTEM

System Description

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- During driving, the TPMS (Tire Pressure Monitoring System) receives the signal transmitted from tire pressure sensor installed in each wheel. The BCM (Body Control Module) of this system has pressure judgment and trouble diagnosis functions. When the tire pressure monitoring system detects low inflation pressure or another unusual symptom, the low tire pressure warning lamps in the combination meter comes on.
- If the tire pressure is less than the specified value, the low tire pressure warning lamp illuminates that the tire pressure is less than the specified value.
- Activates the TPMS (Tire Pressure Monitoring System) when the vehicle speed is 40 km/h (25 MPH) or more.

SYSTEM DIAGRAM



INPUT/OUTPUT SIGNAL

Major signal transmission between each unit via communication lines is shown in the following table.

Component parts	Signal item
Combination meter	Mainly receives the following signals from BCM via CAN communication. Low tire pressure warning lamp signal TPMS malfunction warning lamp signal
ABS actuator and electric unit (control unit)	Mainly transmits the following signals to BCM via CAN communication. • Vehicle speed signal (ABS)

LOW TIRE PRESSURE WARNING LAMP INDICATION CONDITION

Uses CAN communication from the BCM to illuminate the low tire pressure warning lamp on the combination meter.

Condition	Low tire pressure warning lamp	
Ignition switch OFF	OFF	
Ignition switch ON (system normal)	Warning lamp turns on for 1second, then turns off.	
Low tire pressure	ON	
Tire pressure sensor ID not registered in BCM	ON	
Tire pressure monitoring system malfunction (Other diagnostic item)	Warning lamp blinks 1 min, then turns on.	

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

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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	Cub sustam calcation item	Diagnosis mode		
System	Sub system selection item	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 conditioning system	AIR CONDITONER		×	×*
Intelligent Key systemEngine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	ВСМ	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	
Theft warning alarm	THEFT ALM	×	×	×
RAP	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	X

NOTE

FREEZE FRAME DATA (FFD)

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

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^{*:} For models with automatic A/C, this diagnosis mode is not used.

< SYSTEM DESCRIPTION >

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		
	SLEEP>LOCK		While turning BCM status from low power consumption mode to normal mode (Power position is "LOCK"*.)	
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power position is "OFF".)	
	LOCK>ACC		While turning power position from "LOCK"* *to "ACC"	
	ACC>ON		While turning power position from "ACC" to "IGN"	
	RUN>ACC		While turning power position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)	
	CRANK>RUN		While turning power position from "CRANKING" to "RUN" (From cranking up the engine to run it)	
	RUN>URGENT		While turning power position from "RUN" to "ACC" (Emergency stop operation)	
	ACC>OFF	Power position status of the moment a particular DTC is detected	While turning power position from "ACC" to "OFF"	
Vehicle Condition	OFF>LOCK		While turning power position from "OFF" to "LOCK"*	
	OFF>ACC		While turning power position from "OFF" to "ACC"	
	ON>CRANK		While turning power position from "IGN" to "CRANKING"	
	OFF>SLEEP		While turning BCM status from normal mode (Power position is "OFF".) to low power consumption mode	
	LOCK>SLEEP		While turning BCM status from normal mode (Power position is "LOCK"*.) to low power consumption mode	
	LOCK		Power position is "LOCK"*	
	OFF		Power position is "OFF" (Ignition switch OFF)	
	ACC		Power position is "ACC" (Ignition switch ACC)	
	ON		Power position is "IGN" (Ignition switch ON with engine stopped)	
	ENGINE RUN		Power position is "RUN" (Ignition switch ON with engine running)	
	CRANKING		Power 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 → 338 → 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 position shifts to "LOCK" from "OFF", when ignition switch is in the OFF position, selector lever is in the P position (A/T models and CVT models), 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 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)

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

< SYSTEM DESCRIPTION >

Diagnosis mode	Function Description	
Self Diagnostic Result	Displays the diagnosis results judged by BCM.	
Data Monitor	The BCM input/output signals are displayed.	
Active Test	The signals used to activate each device are forcibly supplied from BCM.	
Work Support	Components can be quickly and accurately adjusted.	

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SELF DIAGNOSTIC RESULT

Refer to BCS-62, "DTC Index".

DATA MONITOR MODE

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)	Remarks
AIR PRESS FL (kPa, kg/cm2 or Psi)	
AIR PRESS FR (kPa, kg/cm2 or Psi)	Tire pressure
AIR PRESS RR (kPa, kg/cm2 or Psi)	The pressure
AIR PRESS RL (kPa, kg/cm2 or Psi)	
ID REGST FL1 (Yet, Done)	
ID REGST FR1 (Yet, Done)	Posicitation ID
ID REGST RR1 (Yet, Done)	Registration ID
ID REGST RL1 (Yet, Done)	
WARNING LAMP (On/Off)	Low tire pressure warning lamp
BUZZER (On/Off)	NOTE: This item is displayed, but cannot be use this item.

ACTIVE TEST MODE

NOTE:

After completing the work below, perform an active test.

- 1. Check ID registration state and perform self-diagnosis.
- 2. Erase the self-diagnosis result history.

Item	Description	
WARNING LAMP	Low tire pressure warning lamp can be turned ON arbitrarily.	
ID REGIST WARNING	NOTE: Displayed but not used in TPMS.	
RUN FLAT TIRE W/L	NOTE: Displayed but not used in TPMS.	
RUN FLAT/T WARN BUZZER	NOTE: Displayed but not used in TPMS.	
FLASHER	Turn signal lamps can be turned ON arbitrarily.	
HORN	This test is able to check to check that the horn sounds.	

WORK SUPPORT

< SYSTEM DESCRIPTION >

Item	Description
ID READ	Registered tire pressure sensor ID can be displayed.
ID REGIST	Tire pressure sensor ID can be registered.

ECU DIAGNOSIS INFORMATION

BCM

List of ECU Reference

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ECU	Reference	
	BCS-38, "Reference Value"	
BCM	BCS-60, "Fail-safe"	
BCIVI	BCS-61, "DTC Inspection Priority Chart"	
	BCS-62, "DTC Index"	

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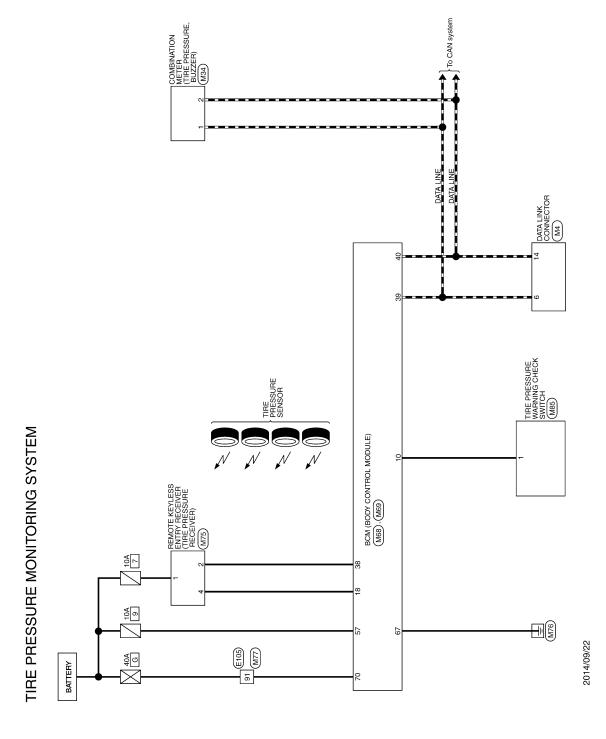
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WIRING DIAGRAM

TIRE PRESSURE MONITORING SYSTEM

Wiring Diagram



JREWC1534GB

TIRE PRESSURE MONITORING SYSTEM

Connector No. M/8	Terminal Color Of Signal Name (Specification)	
Connector No. M34 Connector Name COMBINATION METER Connector Type TH40FN-14H	Terminal Color Of Signal Name (Specification)	
Second P Second Second	Connector Name M4 Convector Name Convector Name Convector Name Convector Name Connector Type BDI 6FW Connector Type BDI 6FW Connector Type BDI 6FW Connector Type Con	
TIRE PRESSURE MONITORING SYSTEM Connector Name Wife TO WIRE Connector Type Hellow CSIS-TM4 H.S. H.S.	Ferminal Color Of Signal Name (Specification) Wee V Wee	

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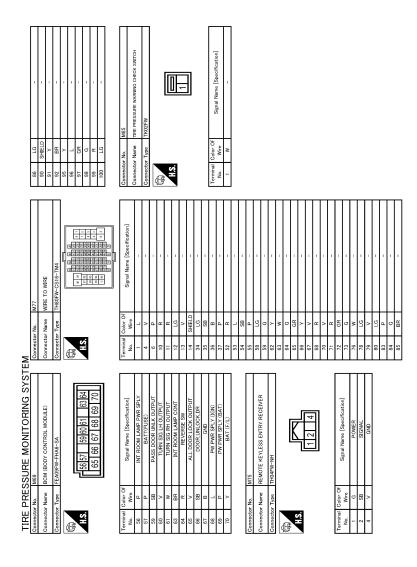
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DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow INFOID:0000000011464022

DETAILED FLOW

${f 1}$.collect the information from the customer

It is also important to clarify customer concerns before starting the inspection. Reproduce the symptom, and understand it fully. Interview the customer about the concerns carefully. In some cases, it is necessary to check the symptoms by driving the vehicle with the customer.

CAUTION:

Customers are not professionals. Never assume "maybe the customer means..." or "maybe the customer mentioned this symptom.

>> GO TO 2.

2.BASIC INSPECTION

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-43, "Tire Air Pressure".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Inspect or repair the tires or wheels.

3.CHECK LOW TIRE PRESSURE WARNING LAMP

Check low tire pressure warning lamp display.

Does not low tire pressure warning lamp turn OFF?

YES >> GO TO 4.

NO >> GO TO 8.

4.PERFORM SELF-DIAGNOSIS

(P)With CONSULT

Perform "SELF-DIAG RESULTS".

Is any DTC detected?

YES >> Record or print DTC and freeze frame data (FFD). GO TO 5.

NO >> GO TO 7.

5.RECHECK THE SYMPTOM

(P)With CONSULT

Perform "DTC CONFIRMATION PROCEDURE" with recorded DTC.

If two or more DTCs are detected, refer to BCS-62, "DTC Index" and determine trouble diagnosis order.

Is any DTC detected?

YES >> GO TO 6.

NO >> GO TO 7.

6 REPAIR OR REPLACE ERROR-DETECTED PART

- Repair or replace error-detected parts.
- Reconnect part or connector after repairing or replacing.
- When DTC is detected, erase self-diagnostic result in "AIR PRESSURE MONITOR" of "BCM".

>> GO TO 9.

7. CRUISE FOR SYMPTOM CHECK

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DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

- 1. Start the engine.
- 2. Drive for 10 minutes at a speed of 40 km/h (25 MPH) or more, then stop the vehicle.

CAUTION:

Total time driving at a speed of 40 km/h (25 MPH) or more must be 10 minutes.

>> GO TO 8.

8. IDENTIFY ERROR-DETECTED SYSTEM BY SYMPTOM DIAGNOSIS

Estimate error-detected system based on symptom diagnosis.

>> GO TO 10.

$9. {\sf FINAL\ CHECK\ (WHEN\ DTC\ WAS\ DETECTED)}$

(P)With CONSULT

Perform "DTC CONFIRMATION PROCEDURE" with displayed DTC.

Is any DTC detected?

YES >> GO TO 6.

NO >> INSPECTION END

10. FINAL CHECK (WHEN SYMPTOM OCCURRED)

Make sure that the symptom is not detected.

Does symptom remain?

YES >> GO TO 8.

NO >> INSPECTION END

ADDITIONAL SERVICE WHEN REPLACING BCM

< BASIC INSPECTION >

ADDITIONAL SERVICE WHEN REPLACING BCM Description When replacing BCM, tire pressure sensor ID registration is required. Work Procedure 1.PERFORM TIRE PRESSURE SENSOR ID REGISTRATION Perform tire pressure sensor ID registration. >> Refer to WT-20, "Work Procedure".

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TIRE PRESSURE SENSOR ID REGISTRATION

< BASIC INSPECTION >

TIRE PRESSURE SENSOR ID REGISTRATION

Description INFOID:000000011464025

This procedure must be done after replacing or rotating wheels, replacing tire pressure sensor or BCM.

Work Procedure

1. TIRE PRESSURE SENSOR ID REGISTRATION 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.

(P)With CONSULT

Display the "WORK SUPPORT" screen and select "ID REGIST".

<u>Is the tire pressure sensor activation tool (J-50190 or J-45295-A) used for the tire pressure sensor ID registration procedure?</u>

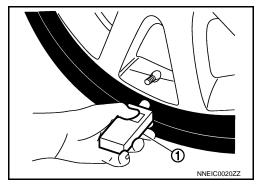
YES >> GO TO 2. NO >> GO TO 3.

2.tire pressure sensor id registration procedure (with tire pressure sensor activation tool)

- Turn the ignition switch ON.
- Select the start button on the "ID REGIST" screen.
- Contact the tire pressure sensor activation tool (J-50190 or J-45295-A) (1) to the side of the tire at the location to the tire pressure sensor.
- 4. 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 ID registration 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.



5. When ID registration is completed, check the following pattern at each wheel.

Sequence	ID registration position	Turn signal lamp	CONSULT
1	Front left wheel		
2	Front right wheel	2 blinks	"Red"
3	Rear right wheel	2 DIII IKS	Ψ "Green"
4	Rear left wheel		

After the ID registration procedure for all wheels is completed, press "END" to end ID registration, and check that ID registration for all wheels is completed.

Is the check result normal?

YES >> ID registration END.

NO >> Refer to WT-35, "Diagnosis Procedure".

3.tire pressure sensor id registration procedure (without tire pressure sensor activation tool)

1. Adjust the tire pressure for all wheels to match the list below.

TIRE PRESSURE SENSOR ID REGISTRATION

< BASIC INSPECTION >

T W	
Tire position	Tire pressure kPa (kg/cm ² , psi)
Front LH	240 (2.4, 35)
Front RH	220 (2.2, 31)
Rear RH	200 (2.0, 29)
Rear LH	180 (1.8, 26)

2. Drive the vehicle at a speed at more than 40 km/h (25 MPH) for 3 minutes or more, then perform the tire pressure sensor ID registration procedure.

3. After ID registration for all wheels is completed, press "END" to end ID registration.

ID registration position	CONSULT
Front LH	
Front RH	"Red"
Rear RH	"Green"
Rear LH	

4. Adjust the tire pressures for all wheels to the specified value. Refer to <u>WT-43, "Tire Air Pressure"</u>. <u>Is ID registrations for all wheels completed?</u>

YES >> ID registration END.

NO >> Performs trouble-diagnosis of the Tire Pressure Monitoring System (TPMS). Refer to <u>BCS-62.</u> "<u>DTC Index"</u>.

Revision: 2014 October WT-21 2015 JUKE

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C1704, C1705, C1706, C1707 LOW TIRE PRESSURE

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

C1704, C1705, C1706, C1707 LOW TIRE PRESSURE

DTC Logic

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1704	LOW PRESSURE FL	Front LH tire pressure drops to * kPa (* kg/cm², * psi) or less.	
C1705	LOW PRESSURE FR	Front RH tire pressure drops to * kPa (* kg/cm², * psi) or less.	Low tire pressure
C1706	LOW PRESSURE RR	Rear RH tire pressure drops to * kPa (* kg/cm², * psi) or less.	Low the pressure
C1707	LOW PRESSURE RL	Rear LH tire pressure drops to * kPa (* kg/cm², * psi) or less.	

^{*:182.7} kPa (1.9 kg/cm², 26 psi) [Standard air pressure is for 230 kPa (2.3 kg/cm²,33 psi) vehicles.]

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION

(P)With CONSULT

1. Turn the ignition switch ON.

CAUTION:

Never start the engine.

- Check the tire pressure for all wheels and adjust to the specified value. Refer to <u>WT-43. "Tire Air Pressure"</u>.
- 3. Perform self-diagnosis for "AIR PRESSURE MONITOR".

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

YES >> Proceed to WT-22, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011464028

1. TIRE PRESSURE SENSOR ID REGISTRATION

Perform tire pressure sensor ID registration. Refer to WT-20, "Work Procedure".

Is tire pressure sensor ID registration completed?

YES >> GO TO 2.

NO >> Replace applicable tire pressure sensor. Refer to WT-40, "Removal and Installation".

2.CHECK TIRE PRESSURE

Check the air pressure of all wheels. Refer to WT-43, "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" (self-diagnosis) again. Refer to WT-22, "DTC Logic".

NO >> After adjusting the air pressure, GO TO 3

3.CHECK TIRE PRESSURE SIGNAL

(I) With CONSULT

- Select "DATA MONITOR" in "AIR PRESSURE MONITOR" of "BCM".
- Check that the tire pressures match the standard value.

^{*:189.6} kPa (1.9 kg/cm², 27 psi) [Standard air pressure is for 240 kPa (2.4 kg/cm²,35 psi) vehicles.]

^{*:196.5} kPa (2.0 kg/cm², 28 psi) [Standard air pressure is for 250 kPa (2.5 kg/cm²,36 psi) vehicles.]

C1704, C1705, C1706, C1707 LOW TIRE PRESSURE

< DTC/CIRCUIT DIAGNOSIS >

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 >> Repair or replace error-detected parts.

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C1708, C1709, C1710, C1711 TIRE PRESSURE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

C1708, C1709, C1710, C1711 TIRE PRESSURE SENSOR

DTC Logic INFOID:000000011464029

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1708	[NO DATA] FL	Tire pressure data signal from the front LH wheel tire pressure sensor cannot be detected.	Harness or connector (Tire pressure receiver, BCM)
C1709	[NO DATA] FR	Tire pressure data signal from the front RH wheel tire pressure sensor cannot be detected.	Tire pressure sensor ID registration incomplete Tire pressure sensor
C1710	[NO DATA] RR	Tire pressure data signal from the rear RH wheel tire pressure sensor cannot be detected.	Tire pressure sensor battery voltage Driving in area where radio wave cannot be transmitted/received.
C1711	[NO DATA] RL	Tire pressure data signal from the rear LH wheel tire pressure sensor cannot be detected.	

DTC CONFIRMATION PROCEDURE

1. TIRE PRESSURE SENSOR ID REGISTRATION

Perform tire pressure sensor ID registration. Refer to WT-20, "Work Procedure".

>> GO TO 2.

2. PERFORM DTC CONFIRMATION

(P)With CONSULT

1. Drive the vehicle at 40 km/h (25 MPH) or more for 10 minutes.

CAUTION:

Total time driving at a speed of 40 km/h (25 MPH) or more must be 10 minutes. NOTE:

Avoid driving in area where radio wave cannot be transmitted/received.

- 2. Stop the vehicle.
- 3. Perform self-diagnosis for "AIR PRESSURE MONITOR" of "BCM".

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

YES >> Proceed to WT-24, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011464030

1. CHECK TIRE PRESSURE SIGNAL

(P)With CONSULT

- Select "DATA MONITOR" in "AIR PRESSURE MONITOR" of "BCM".
- 2. Check the values that are displayed for "AIR PRESS FL", "AIR PRESS FR", "AIR PRESS RR", and "AIR PRESS RL".

Are all tire pressures displayed 0 kPa (psi)?

YES >> GO TO 2.

NO >> Replace applicable tire pressure sensor. Refer to <u>WT-40, "Removal and Installation"</u>.

2. CHECK RECEIVER CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Check 10A fuse (#7).

CAUTION:

Check that the fuse is not blown, that there are no other abnormalities, and that the fuse is of the specified capacity.

- 3. Disconnect BCM harness connector and tire pressure receiver harness connector.
- 4. Check the continuity between BCM harness connector and tire pressure receiver harness connector.

C1708, C1709, C1710, C1711 TIRE PRESSURE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

ВС	CM	Tire pressi	Continuity			
Connector	Terminal	Connector	Connector Terminal			
M68	18	M75	4	Existed		
IVIOO	38	IVI75	2	Existed		

Check the continuity between BCM harness connector and ground.

В	CM	_	Continuity			
Connector	Terminal	_	Continuity			
M68	18	Ground	Not existed			
IVIOO	38	Giodila	Not existed			

Is the inspection result normal?

>> GO TO 3. YES

NO >> Repair or replace error-detected parts.

3.CHECK TIRE PRESSURE RECEIVER POWER SUPPLY CIRCUIT

1. Connect tire pressure receiver harness connector.

2. Check the voltage between tire pressure receiver harness connector and the ground when the ignition switch is turned ON and OFF.

CAUTION:

Never start the engine.

Tire pressi	ure receiver	_	Voltago		
Connector	Terminal	_	Voltage		
M75	1	Ground	9 – 16 V		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace error-detected parts.

f 4.CHECK TIRE PRESSURE SIGNAL

Check the function tire pressure receiver. Refer to DLK-86, "Component Function Check".

Is the inspection result normal?

YES >> Replace the BCM.

NO >> Repair or replace error-detected parts.

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C1716, C1717, C1718, C1719 TIRE PRESSURE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

C1716, C1717, C1718, C1719 TIRE PRESSURE SENSOR

DTC Logic INFOID:0000000011464031

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1716	[PRESSDATA ERR] FL	Malfunction in the tire pressure data from the front LH wheel tire pressure sensor.	
C1717	[PRESSDATA ERR] FR	Malfunction in the tire pressure data from the front RH wheel tire pressure sensor.	Excessive tire pressure Tire pressure sensor ID reg-
C1718	[PRESSDATA ERR] RR	Malfunction in the tire pressure data from the rear RH wheel tire pressure sensor.	istration incomplete Tire pressure sensor
C1719	[PRESSDATA ERR] RL	Malfunction in the tire pressure data from the rear LH wheel tire pressure sensor.	

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION

(P)With CONSULT

1. Turn the ignition switch ON.

CAUTION:

Never start the engine.

Check the tire pressure for all wheels and adjust to the specified value. Refer to <u>WT-43, "Tire Air Pressure"</u>.

CAUTION:

If the tire pressure before adjustment 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.

3. Perform self-diagnosis in "AIR PRESSURE MONITOR" of "BCM".

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

YES >> GO TO 2.

NO >> INSPECTION END

2.CHECK LOW TIRE PRESSURE WARNING LAMP

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

Is the inspection result normal?

YES >> After erase DTC, INSPECTION END.

NO >> Leave the ignition switch ON and proceed to WT-26, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011464032

1. PERFORM TIRE PRESSURE SENSOR ID REGISTRATION

Perform tire pressure sensor ID registration for all wheels. Refer to WT-20, "Work Procedure".

Is tire pressure sensor ID registration completed?

YES >> GO TO 2.

NO >> Replace tire pressure sensor. Refer to WT-40, "Removal and Installation".

2.CHECK TIRE PRESSURE SIGNAL

With CONSULT

- Check the tire pressure for all wheels and adjust to the specified value. Refer to <u>WT-43, "Tire Air Pressure"</u>.
- Stop the vehicle.
- 3. Select "DATA MONITOR" in "AIR PRESSURE MONITOR" of "BCM".
- 4. Within 15 minutes after vehicle stopped, read the values that are displayed for "AIR PRESS FL", "AIR PRESS RR", and "AIR PRESS RL".

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

C1716, C1717, C1718, C1719 TIRE PRESSURE SENSOR

< DTC/CIRCUIT DIAGNOSIS >

YES >> Replace tire pressure sensor the tire pressure as 438.60 kPa (4.47 kg/cm², 63.60 psi) displayed. Refer to WT-40, "Removal and Installation".

NO >> Perform "DTC CONFIRMATION PROCEDURE" (self-diagnosis) again. Refer to WT-26, "DTC Logic".

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C1729 VEHICLE SPEED SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

C1729 VEHICLE SPEED SIGNAL

DTC Logic

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1729	VHCL SPEED SIG ERR	Vehicle speed signal not detected.	 CAN communication BCM ABS actuator and electric unit (control unit) malfunction

DTC CONFIRMATION PROCEDURE

1.DTC CONFIRMATION PROCEDURE

(P)With CONSULT

- 1. Drive the vehicle.
- Stop the vehicle.
- Perform self-diagnosis in "AIR PRESSURE MONITOR" of "BCM".

Is DTC "C1729" detected?

YES >> Proceed to WT-28, "Diagnosis Procedure".

NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000011464034

1.perform abs actuator and electric unit (control unit) self-diagnosis

(P)With CONSULT

Perform self-diagnosis for "ABS".

Is any DTCs detected?

YES >> Check the DTCs.

NO >> GO TO 2.

2.CHECK BCM INPUT/OUTPUT SIGNAL

Check BCM input/output signal values. Refer to BCS-38, "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-93, "Removal and Installation".

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

NO

INFOID:0000000011464036

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground. Refer to <u>BCS-86, "Diagnosis Procedure"</u>. <u>Is the inspection result normal?</u>

YES >> INSPECTION END

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>> Repair open circuit or short to ground or short to power in harness or connectors.

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SYMPTOM DIAGNOSIS

TPMS

Symptom Table

LOW TIRE PRESSURE WARNING LAMP SYMPTOM CHART

Diagnosis items	Symptom (Ignition switch ON)	Low tire pressure warning lamp	Cause	Action	
Low tire pressure warning	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	
lamp	The low tire pressure warning lamp repeats blinking ON for 2 seconds and OFF for 0.2 seconds.	ON 2 sec > OFF 0.2 sec	Wake-up operation for all tire pressure sensors at wheels is not completed.	at wheels Refer to WT-20	
	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-20, "Work Procedure".	
Low tire pressure warning	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-20, "Work Procedure".	
lamp	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-20, "Work Procedure".	
	The low tire pressure warning lamp repeats blinking for 4 times.	Blinks 4 times ON 0.3 sec > OFF 0.3 sec SEIAO597E	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-20, "Work Procedure".	

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< SYMPTOM DIAGNOSIS >

Diagnosis items	Symptom (Ignition switch ON)	Low tire pressure warning lamp	Cause	Action		
	The low tire pressure warning lamp turns ON and stays illuminated.	Comes ON and stays ON	Low tire pressure	Check the tire pressure for all wheels and adjust to the specified value. Refer to WT-43, "Tire Air Pressure".		
			The combination meter fuse is open or removed (or pulled out).	Check and install the combination meter fuse. If necessary, replace the fuse.		
sure w repeat 0.5-se vals fo and th	The low tire pressure warning lamp		The BCM harness connector is removed.	Check the connection conditions of the BCM harness connector, and repair if necessary.		
	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	Tire Pressure Monitoring System (TPMS) mal- function.	Perform CONSULT self-diagnosis. Refer to WT-10, "AIR PRESSURE MONITOR: CONSULT Function (BCM - AIR PRESSURE MONITOR)". If necessary, perform tire pressure sensor ID registration. Refer to WT-20, "Work 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

< SYMPTOM DIAGNOSIS >

LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN ON

Description INFOID:0000000011464038

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:0000000011464039

1. CHECK LOW TIRE PRESSURE WARNING LAMP SIGNAL

(P)With CONSULT

1. Turn the ignition switch ON.

CAUTION:

Never start the engine.

- 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-44, "Intermittent Incident".

NO >> Replace the BCM. Refer to BCS-93, "Removal and Installation".

3.CHECK COMBINATION METER POWER SUPPLY CIRCUIT

Perform the trouble diagnosis for combination meter power supply circuit. Refer to <u>MWI-49</u>, <u>"COMBINATION METER</u>: <u>Diagnosis Procedure"</u>.

Is the inspection result normal?

YES-1 >> INSPECTION END

NO >> Repair or replace error-detected parts.

LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

< SYMPTOM DIAGNOSIS > LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN OFF	
Description INFOID:0000000011464040	Α
The low tire pressure warning lamp does not turn OFF after several seconds is passed after engine starts.	В
Diagnosis Procedure	
1.check tire pressure	С
Turn the ignition switch ON. CAUTION: Output Description:	
Never start the engine. 2. Check the tire pressure for all wheels and adjust to the specified value. Refer to WT-43 , "Tire Air Pressure".	D
Is the inspection result normal?	WT
YES >> GO TO 2. NO >> Inspect or repair the tires or wheels.	
2.CHECK LOW TIRE PRESSURE WARNING LAMP	F
Check low tire pressure warning lamp display. Does not low tire pressure warning lamp turn OFF?	
YES >> GO TO 3.	G
NO >> INSPECTION END 3.CHECK BCM	
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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	J
Perform the trouble diagnosis for power supply and ground circuit. Refer to <u>BCS-86, "Diagnosis Procedure"</u> .	1.6
Is the inspection result normal? YES >> Replace BCM. Refer to BCS-93, "Removal and Installation".	K
NO >> Repair or replace error-detected parts.	
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LOW TIRE PRESSURE WARNING LAMP BLINKS

< SYMPTOM DIAGNOSIS >

LOW TIRE PRESSURE WARNING LAMP BLINKS

Description INFOID:0000000011464042

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
ON a b	a : 0.3 sec. b : 1.0 sec.	Front LH
ON a a b b	a : 0.3 sec. b : 1.0 sec.	Front RH
ON a a a a b	a : 0.3 sec. b : 1.0 sec.	Rear RH
ON a a a a a b	a : 0.3 sec. b : 1.0 sec.	Rear LH
ON a b	a : 2 sec. b : 0.2 sec.	All tires

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Diagnosis Procedure

INFOID:0000000011464043

1. TIRE PRESSURE SENSOR ID REGISTRATION

Perform tire pressure sensor ID registration. Refer to WT-20, "Work Procedure".

Is tire pressure sensor ID registration completed?

YES >> INSPECTION END

NO >> Perform the self-diagnosis for "AIR PRESSURE MONITOR". Refer to <u>BCS-62, "DTC_Index".</u>

TIRE PRESSURE SENSOR ID REGISTRATION CANNOT BE COMPLETED

< SYMPTOM DIAGNOSIS >

TIRE PRESSURE SENSOR ID REGISTRATION CANNOT BE COMPLETED

Description INFOID:0000000011464044

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:0000000011464045

CHECK TIRE PRESSURE SENSOR ACTIVATION TOOL

Check tire pressure sensor activation tool.

Is the inspection result normal?

>> GO TO 2. YES

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

2.TIRE PRESSURE SENSOR ID REGISTRATION

Perform tire pressure sensor ID registration. Refer to WT-20, "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 3.

3.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-40, "Removal and Installation".

All wheels do not react.>>Check the tire pressure receiver (Remote keyless entry receiver). Refer to DLK-86, "Component Function Check".

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NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:0000000011464046

Use the chart	Jse the chart below to find the cause of the symptom. If necessary, repair or replace these parts.																		
Reference	page		WT-39, "Exploded View"	WT-39, "Inspection"	WT-37, "Wheel Balance Adjustment"	WT-43, "Tire Air Pressure"	WT-37, "Wheel Balance Adjustment"	I	I	WT-43, "Tire Air Pressure"	NVH in DLN section.	NVH in DLN section.	NVH in FAX and FSU sections.	NVH in RAX and RSU sections.	Refer to TIRE in this chart.	Refer to ROAD WHEEL in this chart.	NVH in FAX, RAX section.	NVH in BR section.	NVH in ST section.
Possible cause and SUSPECTED PARTS		Improper installation, looseness	Out-of-round	Unbalance	Incorrect tire pressure	Uneven tire wear	Deformation or damage	Non-uniformity	Incorrect tire size	PROPELLER SHAFT	DIFFERENTIAL	FRONT AXLE AND FRONT SUSPENSION	REAR AXLE AND REAR SUSPENSION	TIRE	ROAD WHEELS	DRIVE SHAFT	BRAKE	STEERING	
		Noise	×	×	×	×	×	×	×		×	×	×	×		×	×	×	×
		Shake	×	×	×	×	×	×		×	×		×	×		×	×	×	×
		Vibration				×				×	×		×	×			×		×
	TIRE	Shimmy	×	×	×	×	×	×	×	×			×	×		×		×	×
		Judder	×	×	×	×	×	×		×			×	×		×		×	×
Symptom		Poor quality ride or handling	×	×	×	×	×	×		×			×		×	×			
		Noise	×	×	×			×			×	×	×	×	×		×	×	×
	BOAD	Shake	×	×	×			×			×		×	×	×		×	×	×
	ROAD WHEEL	Shimmy, Judder	×	×	×			×					×	×	×			×	×
		Poor quality ride or handling	×	×	×			×					×	×	×				

^{×:} Applicable

PERIODIC MAINTENANCE

ROAD WHEEL

Inspection INFOID:0000000011464047

APPEARANCE

Check the road wheel for bend, damage, crack or wear.

Wheel Balance Adjustment

INFOID:0000000011464048

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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 \times 5/3 = balance weight to be installed **Calculation example:**

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

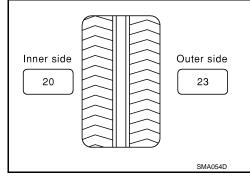
NOTE:

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

Example:

37.4 ⇒ 35 g (1.23 oz)

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



b. Installed balance weight in the position.

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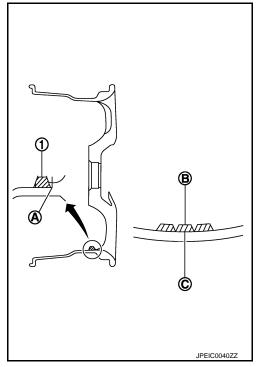
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< PERIODIC MAINTENANCE >

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

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.



Adhesion weight

Wheel balancer indication position (angle)

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

CAUTION:

Never install one balance weight sheet on top of another.

- 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.

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.



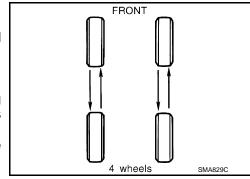
Dynamic (At flange) : Refer to <u>WT-43, "Road Wheel"</u>. Static (At flange) : Refer to <u>WT-43, "Road Wheel"</u>.

Tire Rotation

- Follow the maintenance schedule for tire rotation service intervals. Refer to MA-5, "Explanation of General Maintenance".
- When installing the wheel, tighten wheel nuts to the specified torque. Refer to <u>WT-39</u>, "Exploded View".

CAUTION:

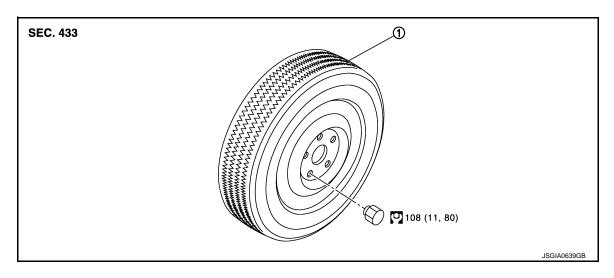
- Never include the T-type spare tire when rotating the tires.
- When installing wheels, tighten them diagonally by dividing the work two to three times in order to prevent the wheels from developing any distortion.
- Be careful not to tighten wheel nut at torque exceeding the criteria.
- Use NISSAN genuine wheel nut.
- Perform the ID registration, after tire rotation. Refer to <u>WT-20, "Work Procedure"</u>.



REMOVAL AND INSTALLATION

ROAD WHEEL TIRE ASSEMBLY

Exploded View



1. Tire assembly

: N·m (kg-m, ft-lb)

Removal and Installation

REMOVAL

- 1. Remove wheel nuts.
- 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-20, "Work Procedure".

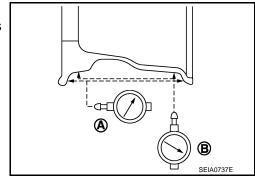
Inspection INFOID:000000011464052

- 1. Check tires for wear and improper inflation.
- 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 (A) or radial runout (B) exceeds the limit, replace aluminum wheel.

Limit

Axial runout (A) : Refer to <u>WT-43, "Road Wheel"</u>.

Radial runout (B) : Refer to <u>WT-43, "Road Wheel"</u>.



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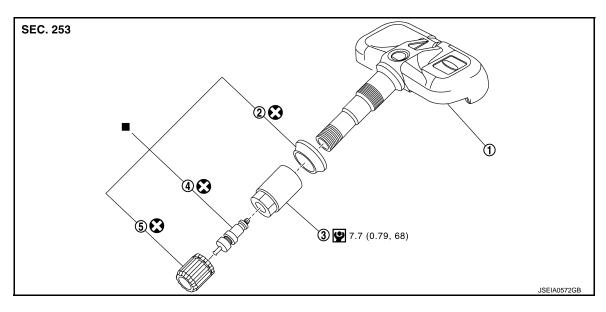
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TIRE PRESSURE SENSOR

Exploded View



- 1. Tire pressure sensor
- 2. Grommet seal

3. Valve nut

4. Valve core

5. Valve cap

- : N·m (kg-m, in-lb)
- : Always replace after every disassembly.
- : Parts that are replaced as a set when the tire is replaced.

Refer to GI-4, "Components" for symbols not described above.

Removal and Installation

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REMOVAL

- Remove tire assembly. Refer to <u>WT-39</u>, "Removal and Installation".
- 2. Remove valve cap, valve core and then deflate tire.

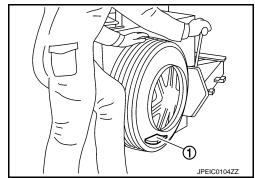
NOTE:

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.
- 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.



TIRE PRESSURE SENSOR

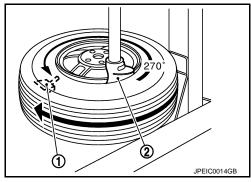
< REMOVAL AND INSTALLATION >

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 turntable 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.
- Remove the grommet seal.

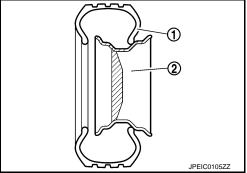


INSTALLATION

- 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 grommet seal to the tire pressure sensor.

CAUTION:

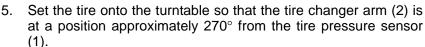
- Never reuse grommet seal.
- Insert grommet seal all the way to the base.



4. 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 valve hole. 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.
- Manually tighten valve nut all the way to the wheel. (Never use a power tool to avoid impact.)



CAUTION:

Be sure that the arm does not contact the tire pressure sen-

Install the tire outer side beads onto the road wheel.

CAUTION:

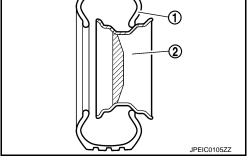
When installing, check that the tire does not turn together with the road wheel.

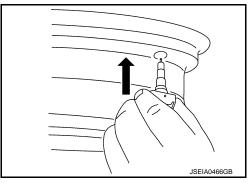
7. Check the tire pressure for all wheels and adjust to the specified value. Refer to WT-43, "Tire Air Pressure".

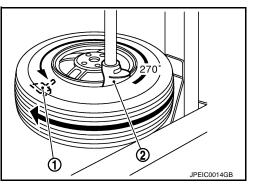
NOTE:

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

- Install tire to the vehicle, Refer to WT-39, "Removal and Installation".
- 9. Perform tire pressure sensor ID registration. Refer to WT-20, "Work Procedure".







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TIRE PRESSURE RECEIVER

< REMOVAL AND INSTALLATION >

TIRE PRESSURE RECEIVER

Removal and Installation

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REMOVAL

1. Remove the remote keyless entry receiver. (The tire pressure receiver is incorporated into keyless entry receiver.) Refer to DLK-175, "Removal and Installation".

INSTALLATION

Install in the reverse order of removal.

SERVICE DATA AND SPECIFICATIONS (SDS)

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SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Road Wheel

CONVENTIONAL

ļ	em	Limit
Runout	Axial runout	Less than 0.3 mm (0.012 in)
Kullout	Radial runout	Less tildii 0.3 min (0.012 m)
Allowable unbalance	Dynamic (At flange)	Less than 5 g (0.17 oz) (one side)
Allowable unbalance	Static (At flange)	Less than 10 g (0.35 oz)

EMERGENCY

Except NISMO RS

	Item	Limit		
Runout	Axial runout (Average)	Less than 1.2 mm (0.047 in)		
Kullout	Radial runout (Average	e) Less than 1.3 mm (0.051 in)		
NISMO RS				
Item		Limit		
Runout	Axial runout (Average)	Less than 1.5 mm (0.059 in)		
Kullout	Radial runout (Average	e) Less than 1.5 mm (0.059 in)		

Tire Air Pressure

Unit: kPa (kgf/cm², psi)

ltem		Standard	
		Front	Rear
P215/55R17 93V	M/T	230 (2.3, 33)	
	CVT(2WD)	250 (2.5, 36)	
	CVT(AWD)	240 (2.4, 35)	
225/45R18 95Y	2WD	230 (2.3, 33)	
	AWD	240 (2.4, 35)	
T135/80D16 101M	2WD	420 (4.2, 60)	
T135/90D16 102M	AWD		
T135/70D17 92M	NISMO RS		

Revision: 2014 October WT-43 2015 JUKE

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