SECTION WT
ROAD WHEELS & TIRES

CONTENTS

REGULAR GRADE

PRECAUTION

PRECAUTIONS

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

INFOID:0000000005722038

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:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the “SRS AIR BAG”.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

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

WARNING:

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, DO NOT 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.**

Precaution Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:0000000005722039

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

For vehicle with steering lock unit, if the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.
If turning the steering wheel is required with the battery disconnected or discharged, follow the operation procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Turn the push-button ignition switch to ACC position.
   (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.

5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

Service Notice or Precautions

INFOID:0000000005492994

- Low tire pressure warning lamp blinks for 1min, then turns ON when occurring any malfunction except low tire pressure. Delete the memory with CONSULT-III, or register the ID to turn low tire pressure warning lamp OFF. Refer to WT-13, "AIR PRESSURE MONITOR : Diagnosis Description", WT-28, "Special Repair Requirement".
- ID registration is required when replacing or rotating wheels, replacing transmitter or BCM. Refer to BCS-81, "Exploded View" (With intelligent key system), BCS-146, "Exploded View" (Without intelligent key system).
- Replace grommet seal, valve core and cap of transmitter in TPMS every tire replacement by reaching wear limit of tire. Refer to WT-63, "Exploded View".

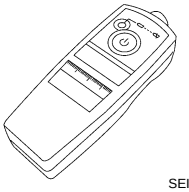
PREPARATION

PREPARATION

Special Service Tool

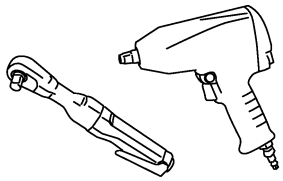
INFOID:0000000005492995

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
– (J-45295) Transmitter activation tool  SEIA0462E	ID registration

Commercial Service Tool

INFOID:0000000005492996

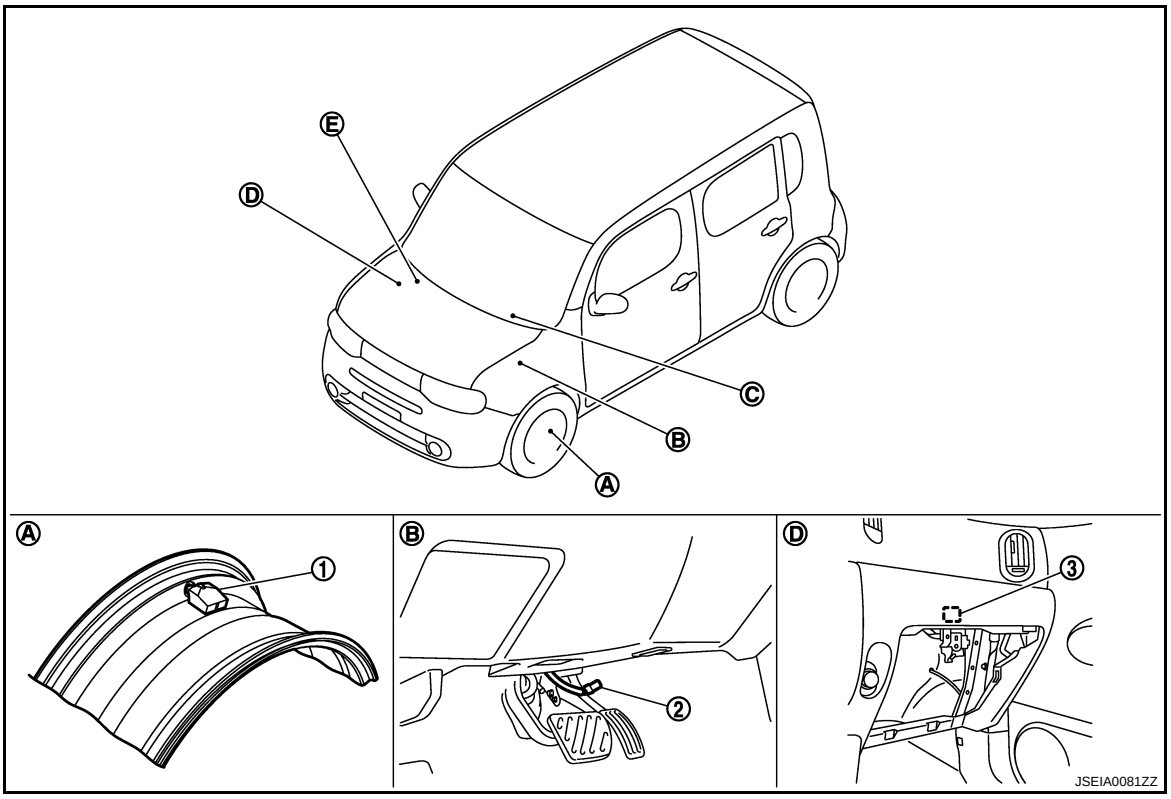
Tool name	Description
Power tool  PBIC0190E	Loosening wheel nuts

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000005492927



1. Transmitter
2. Tire pressure warning check switch
3. Tire pressure receiver
A. Wheel
B. Behind instrument lower panel LH
C. Low tire pressure warning lamp (On the combination meter)
D. BCM Refer to BCS-9, "Component Parts Location".
E. Glove box assembly

Component Description

INFOID:0000000005492928

Component parts	Function
BCM (Body Control Module)	WT-8, "BCM".
Transmitter	WT-8, "Transmitter".
Tire pressure receiver	WT-8, "Tire pressure receiver".
Tire pressure warning check switch	WT-8, "Tire pressure warning check switch".
Turn signal lamp	ID registration of each wheel has been completed, turn signal lamp flashes.
Combination meter	Transmits the vehicle speed signal via CAN communication to BCM.
	Receives the following signals via CAN communication for BCM. • Low tire pressure warning lamp signal • Hazard lamp signal • Buzzer signal
Low tire pressure warning lamp	WT-8, "Low tire pressure warning lamp"

BCM

INFOID:0000000005779301

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

Transmitter

INFOID:0000000005779302

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

Tire pressure receiver

INFOID:0000000005779303

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

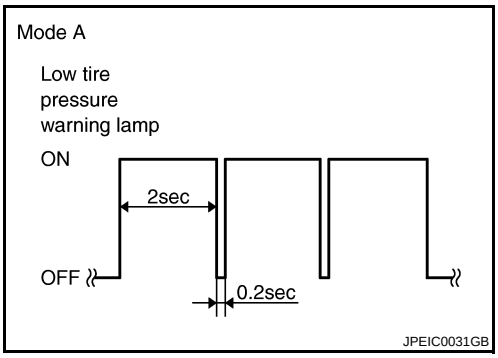
Tire pressure warning check switch

INFOID:0000000005779304

Self-diagnosis can be performed by short-circuiting the tire pressure warning check switch to the ground.(Self-diagnosis indicates the location of the malfunction by the blinking of the low tire pressure warning lamp on the combination meter.)

NOTE:
If low tire pressure warning lamp blinks as shown in the figure, the system is normal.

- This mode shows transmitter status is in OFF-mode.
  Perform transmitter wake up operation. Refer to WT-27, "Special Repair Requirement".



Low tire pressure warning lamp

INFOID:0000000005779305

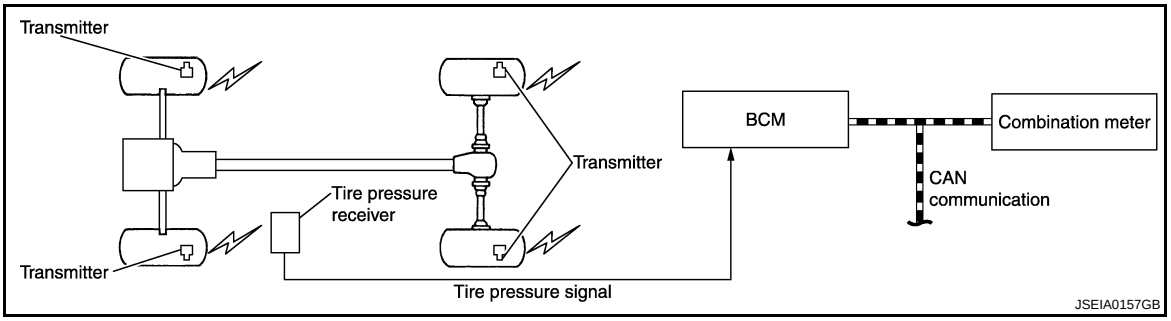
Uses CAN communication from the BCM to illuminate the low tire pressure warning lamp on the combination meter.

SYSTEM

TIRE PRESSURE MONITORING SYSTEM

TIRE PRESSURE MONITORING SYSTEM : System Diagram

INFOID:0000000005492925



TIRE PRESSURE MONITORING SYSTEM : System Description

INFOID:0000000005492926

DESCRIPTION

During driving, the TPMS (Tire Pressure Monitoring System) receives the signal transmitted from transmitter 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.

LOW TIRE PRESSURE WARNING LAMP

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.	Illuminates for 1 second, then turns OFF.
Less than 182.7 kPa (1.9 kg/cm^2, 26 psi) [NOTE]	ON
Tire pressure monitoring system malfunction [Other diagnostic item]	Flashes for 1 minute, then stays illuminated.

NOTE: Standard tire pressure is for 230 kPa (2.3 kg/cm^2, 33 psi) vehicles.

TIRE PRESSURE MONITORING SYSTEM : Fail-safe

INFOID:0000000005779308

FAIL-SAFE CONTROL BY DTC

BCM performs fail-safe control when any DTC are detected.

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2557: VEHICLE SPEED	Inhibit steering lock	When normal vehicle speed signals are received from ABS actuator and electric unit (control unit) for 500 ms

Display contents of CONSULT	Fail-safe	Cancellation
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent • Starter control relay signal • Starter relay status signal
B2601: SHIFT POSITION	Inhibit steering lock	500 ms after the following signal reception status becomes consistent • Selector lever P position switch signal • P range signal (CAN)
B2602: SHIFT POSITION	Inhibit steering lock	5 seconds after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Vehicle speed: 4 km/h (2.5 MPH) or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	500 ms after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions are fulfilled • Status 1 - Ignition switch is in the ON position - Selector lever P/N position signal: P and N position (battery voltage) - P range signal or N range signal (CAN): ON • Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: Except P and N positions (0 V) - P range signal and N range signal (CAN): OFF
B2605: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions are fulfilled • Status 1 - Ignition switch is in the ON position - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF • Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (battery voltage) - PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has becomes consistent • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent • Starter motor relay control signal • Starter relay status signal (CAN)
B2609: S/L STATUS	• Inhibit engine cranking • Inhibit steering lock	When the following steering lock conditions agree • BCM steering lock control status • Steering lock condition No. 1 signal status • Steering lock condition No. 2 signal status

Display contents of CONSULT	Fail-safe	Cancellation
B260A: IGNITION RELAY	Inhibit engine cranking	500 ms after the following conditions are fulfilled • IGN relay (IPDM E/R) control signal: OFF (Battery voltage) • Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) • Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions are fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
B2612: S/L STATUS	• Inhibit engine cranking • Inhibit steering lock	When any of the following conditions are fulfilled • Steering lock unit status signal (CAN) is received normally • The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
B26E8: CLUTCH SW	Inhibit engine cranking	When any of the following BCM recognition conditions are fulfilled • Status 1 - Clutch switch signal (CAN from ECM): ON - Clutch interlock switch signal: OFF (0 V) • Status 2 - Clutch switch signal (CAN from ECM): OFF - Clutch interlock switch signal: ON (Battery voltage)
B26E9: S/L STATUS	• Inhibit engine cranking • Inhibit steering lock	When BCM transmits the LOCK request signal to steering lock unit, and receives LOCK response signal from steering lock unit, the following conditions are fulfilled • Steering condition No. 1 signal: LOCK (0 V) • Steering condition No. 2 signal: LOCK (Battery voltage)

HIGH FLASHER OPERATION

BCM detects the turn signal lamp circuit status by the current value.
BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

NOTE:
The blinking speed is normal while activating the hazard warning lamp.

FAIL-SAFE CONTROL BY RAIN SENSOR MALFUNCTION

- BCM judges the rain sensor serial link error by the rain sensor serial link condition and detects the rain sensor malfunction by rain sensor malfunction signal.
- When BCM detects the rain sensor serial link error or the rain sensor malfunction while front wiper AUTO operation, BCM operates a fail-safe control.

NOTE:
If rain sensor malfunction is detected when ignition switch is turned OFF ⇒ ON and front wiper switch is INT position, BCM operates a fail-safe control.

DIAGNOSIS SYSTEM (BCM) (WITH INTELLIGENT KEY SYSTEM)
COMMON ITEM

COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

INFOID:0000000005779352

APPLICATION ITEM

CONSULT-III 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. Refer to CONSULT-III operation manual.
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	×	×	×
Automatic air conditioner	AIR CONDITONER		×	×
• Intelligent Key system • Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×

FREEZE FRAME DATA (FFD)

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

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 with steering is locked.)
	OFF		Power supply position is “OFF” (Ignition switch OFF with steering is unlocked.)
	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.	

AIR PRESSURE MONITOR

AIR PRESSURE MONITOR : Diagnosis Description

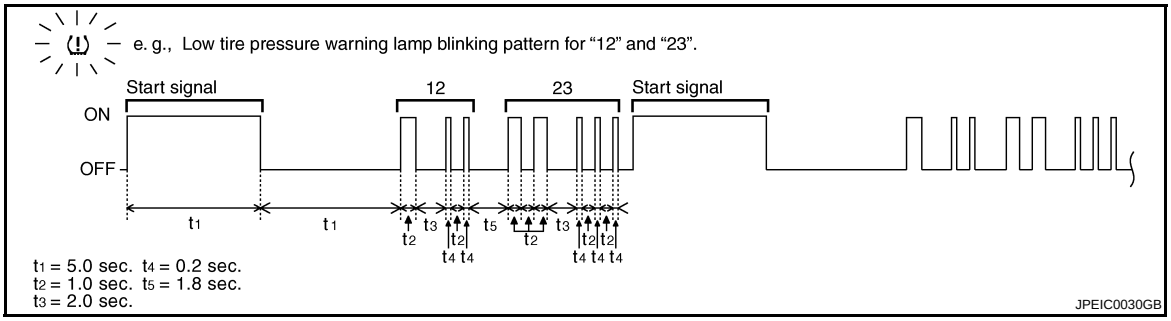
INFOID:0000000005492930

DESCRIPTION

During driving, the transmitter installed at each road wheel transmits the tire pressure information signal to the receiver. The receiver receives the tire pressure signal and transmits it to the BCM. The BCM judges whether or not the tire pressure is OK based on the tire pressure information signal, and if it judges that the tire pressure is low, it transmits the information via CAN communication to the combination meter.
After receiving the tire pressure information via CAN communication from the BCM, the combination meter illuminates the low tire pressure warning lamp and displays.

SELF DIAGNOSTIC PROCEDURE

1. Initiate diagnosis mode by short-circuiting the low tire pressure warning check switch to the ground.
2. The blinking pattern of the low tire pressure warning lamp indicates the conditions of the malfunction.



NOTE:
If the low tire pressure warning lamp is blinking repeatedly at 5 Hz, there is no malfunction occurring in the system.

Blinking pattern	Items	Diagnostic items detected when···	Check item
15	Tire pressure value (Front LH)	Front LH tire pressure drops to 182.7 kPa (1.9 kg/cm^2, 26 psi) or less.	WT-30
16	Tire pressure value (Front RH)	Front RH tire pressure drops to 182.7 kPa (1.9 kg/cm^2, 26 psi) or less.	
17	Tire pressure value (Rear RH)	Rear RH tire pressure drops to 182.7 kPa (1.9 kg/cm^2, 26 psi) or less.	
18	Tire pressure value (Rear LH)	Rear LH tire pressure drops to 182.7 kPa (1.9 kg/cm^2, 26 psi) or less.	
21	Transmitter no data (Front LH)	Data from front LH transmitter cannot be received.	WT-32
22	Transmitter no data (Front RH)	Data from front RH transmitter cannot be received.	
23	Transmitter no data (Rear RH)	Data from rear RH transmitter cannot be received.	
24	Transmitter no data (Rear LH)	Data from rear LH transmitter cannot be received.	
35	Transmitter pressure data error (Front LH)	Air pressure data from front LH transmitter is malfunction.	WT-35
36	Transmitter pressure data error (Front RH)	Air pressure data from front RH transmitter is malfunction.	
37	Transmitter pressure data error (Rear RH)	Air pressure data from rear RH transmitter is malfunction.	
38	Transmitter pressure data error (Rear LH)	Air pressure data from rear LH transmitter is malfunction.	
52	Vehicle speed signal error	Vehicle speed signal error.	WT-37
53	Control unit	Tire pressure monitoring system malfunction in BCM.	WT-39
No blinking	Tire pressure warning check switch	Tire pressure warning switch circuit is open.	–

ERASE SELF-DIAGNOSIS

After performing self-diagnosis by short-circuiting the tire pressure warning check switch to the body, turn the ignition switch OFF.

AIR PRESSURE MONITOR : CONSULT-III Function

INFOID:0000000005492931

FUNCTION

The diagnosis functions (main functions) include the following: “WORK SUPPORT”, “SELF DIAGNOSTIC RESULT”, “DATA MONITOR” and “ACTIVE TEST”.

Diagnostic test mode	Function
Work support	In this mode, it is possible to make quick and accurate adjustments by following the instructions on the CONSULT-III display.
Self diagnostic result	Receives self-diagnosis results from the low tire pressure warning control unit, and indicates DTCs and the number of malfunctions.

Diagnostic test mode	Function
Data monitor	Receives input/output signals from the low tire pressure warning control unit and indicates and stores them to facilitate locating the causes of malfunctions.
Active test	Transmits command to the low tire pressure warning control unit to change output signals and check operation of output system.

WORK SUPPORT MODE

Refer to WT-28, "Special Repair Requirement".

SELF-DIAG RESULTS MODE

Refer to BCS-76, "DTC Index".

DATA MONITOR MODE

Screen of data monitor mode is displayed.

NOTE:

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

Monitor item (Unit)	Remark
AIR PRESS FL (kPa), (kg/cm^2), (Psi)	Air pressure of tires
AIR PRESS FR (kPa), (kg/cm^2), (Psi)	
AIR PRESS RR (kPa), (kg/cm^2), (Psi)	
AIR PRESS RL (kPa), (kg/cm^2), (Psi)	
ID REGST FL1	ID is registered: Done ID is not registered: Yet
ID REGST FR1	
ID REGST RR1	
ID REGST RL1	
WARNING LAMP	Low tire pressure warning lamp ON: On Low tire pressure warning lamp OFF: Off
BUZZER	Combination meter buzzer ON: On Combination meter buzzer OFF: Off

NOTE:

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

ACTIVE TEST MODE

NOTE:

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

TEST ITEM LIST

Test item	Content
WARNING LAMP	This test is able to check to check that the low tire pressure warning lamp turns on.
ID REGIST WARNING	This test is able to check to check that the buzzer sounds or the low tire pressure warning lamp turns on.
RUN FLAT TIRE W/L	**NOTE:** This item is displayed, but cannot be use this item.
FLASHER	This test is able to check to check that each turn signal lamp turns on.
HORN	This test is able to check to check that the horn sounds.

DIAGNOSIS SYSTEM (BCM) (WITHOUT INTELLIGENT KEY SYSTEM)
COMMON ITEM

COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

INFOID:0000000005779353

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
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CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III operation manual.
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		
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Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp control	INT LAMP	×	×	×
Remote keyless entry system	MULTI REMOTE ENT	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER		×	×
• Automatic air conditioner • Manual air conditioner	AIR CONDITONER		×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	×
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×
Panic alarm system	PANIC ALARM			×

AIR PRESSURE MONITOR

AIR PRESSURE MONITOR : Diagnosis Description

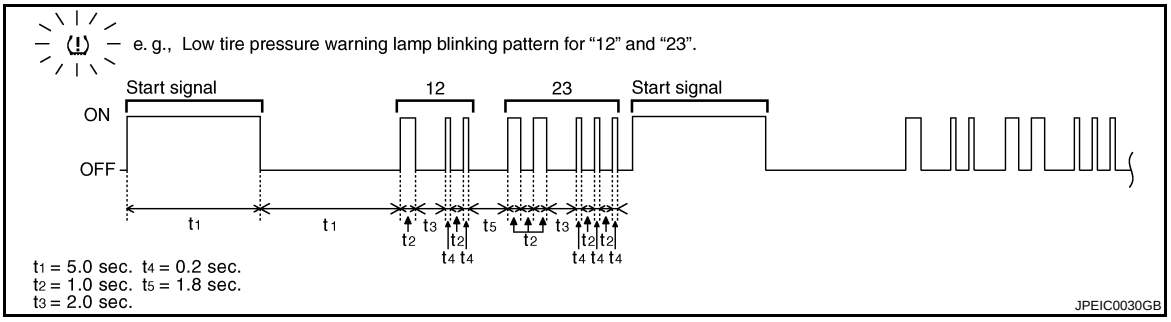
INFOID:0000000005779354

DESCRIPTION

During driving, the transmitter installed at each road wheel transmits the tire pressure information signal to the receiver. The receiver receives the tire pressure signal and transmits it to the BCM. The BCM judges whether or not the tire pressure is OK based on the tire pressure information signal, and if it judges that the tire pressure is low, it transmits the information via CAN communication to the combination meter.
After receiving the tire pressure information via CAN communication from the BCM, the combination meter illuminates the low tire pressure warning lamp and displays.

SELF DIAGNOSTIC PROCEDURE

1. Initiate diagnosis mode by short-circuiting the low tire pressure warning check switch to the ground.
2. The blinking pattern of the low tire pressure warning lamp indicates the conditions of the malfunction.



NOTE:
If the low tire pressure warning lamp is blinking repeatedly at 5 Hz, there is no malfunction occurring in the system.

Blinking pattern	Items	Diagnostic items detected when···	Check item
15	Tire pressure value (Front LH)	Front LH tire pressure drops to 182.7 kPa (1.9 kg/cm^2, 26 psi) or less.	WT-30
16	Tire pressure value (Front RH)	Front RH tire pressure drops to 182.7 kPa (1.9 kg/cm^2, 26 psi) or less.	
17	Tire pressure value (Rear RH)	Rear RH tire pressure drops to 182.7 kPa (1.9 kg/cm^2, 26 psi) or less.	
18	Tire pressure value (Rear LH)	Rear LH tire pressure drops to 182.7 kPa (1.9 kg/cm^2, 26 psi) or less.	
21	Transmitter no data (Front LH)	Data from front LH transmitter cannot be received.	WT-32
22	Transmitter no data (Front RH)	Data from front RH transmitter cannot be received.	
23	Transmitter no data (Rear RH)	Data from rear RH transmitter cannot be received.	
24	Transmitter no data (Rear LH)	Data from rear LH transmitter cannot be received.	
35	Transmitter pressure data error (Front LH)	Air pressure data from front LH transmitter is malfunction.	WT-35
36	Transmitter pressure data error (Front RH)	Air pressure data from front RH transmitter is malfunction.	
37	Transmitter pressure data error (Rear RH)	Air pressure data from rear RH transmitter is malfunction.	
38	Transmitter pressure data error (Rear LH)	Air pressure data from rear LH transmitter is malfunction.	
52	Vehicle speed signal error	Vehicle speed signal error.	WT-37
53	Control unit	Tire pressure monitoring system malfunction in BCM.	WT-39
No blinking	Tire pressure warning check switch	Tire pressure warning switch circuit is open.	–

ERASE SELF-DIAGNOSIS

After performing self-diagnosis by short-circuiting the tire pressure warning check switch to the body, turn the ignition switch OFF.

AIR PRESSURE MONITOR : CONSULT-III Function

INFOID:0000000005779355

FUNCTION

The diagnosis functions (main functions) include the following: “WORK SUPPORT”, “SELF DIAGNOSTIC RESULT”, “DATA MONITOR” and “ACTIVE TEST”.

Diagnostic test mode	Function
Work support	In this mode, it is possible to make quick and accurate adjustments by following the instructions on the CONSULT-III display.
Self diagnostic result	Receives self-diagnosis results from the low tire pressure warning control unit, and indicates DTCs and the number of malfunctions.
Data monitor	Receives input/output signals from the low tire pressure warning control unit and indicates and stores them to facilitate locating the causes of malfunctions.
Active test	Transmits command to the low tire pressure warning control unit to change output signals and check operation of output system.

WORK SUPPORT MODE

Refer to WT-28, "Special Repair Requirement".

SELF-DIAG RESULTS MODE

Refer to BCS-142, "DTC Index".

DATA MONITOR MODE

Screen of data monitor mode is displayed.

NOTE:

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

Monitor item (Unit)	Remark
AIR PRESS FL (kPa), (kg/cm^2), (Psi)	Air pressure of tires
AIR PRESS FR (kPa), (kg/cm^2), (Psi)	
AIR PRESS RR (kPa), (kg/cm^2), (Psi)	
AIR PRESS RL (kPa), (kg/cm^2), (Psi)	
ID REGST FL1	ID is registered: Done ID is not registered: Yet
ID REGST FR1	
ID REGST RR1	
ID REGST RL1	
WARNING LAMP	Low tire pressure warning lamp ON: On Low tire pressure warning lamp OFF: Off
BUZZER	Combination meter buzzer ON: On Combination meter buzzer OFF: Off

NOTE:

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

ACTIVE TEST MODE

NOTE:

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

TEST ITEM LIST

Test item	Content
WARNING LAMP	This test is able to check to check that the low tire pressure warning lamp turns on.
ID REGIST WARNING	This test is able to check to check that the buzzer sounds or the low tire pressure warning lamp turns on.
RUN FLAT TIRE W/L	**NOTE:** This item is displayed, but cannot be use this item.
FLASHER	This test is able to check to check that each turn signal lamp turns on.
HORN	This test is able to check to check that the horn sounds.

ECU DIAGNOSIS INFORMATION

BCM

WITH INTELLIGENT KEY

WITH INTELLIGENT KEY : List of ECU Reference

INFOID:0000000005779309

ECU	Reference
BCM	BCS-48, "Reference Value"
	BCS-73, "Fail-safe"
	BCS-75, "DTC Inspection Priority Chart"
	BCS-76, "DTC Index"

WITHOUT INTELLIGENT KEY

WITHOUT INTELLIGENT KEY : List of ECU Reference

INFOID:0000000005779349

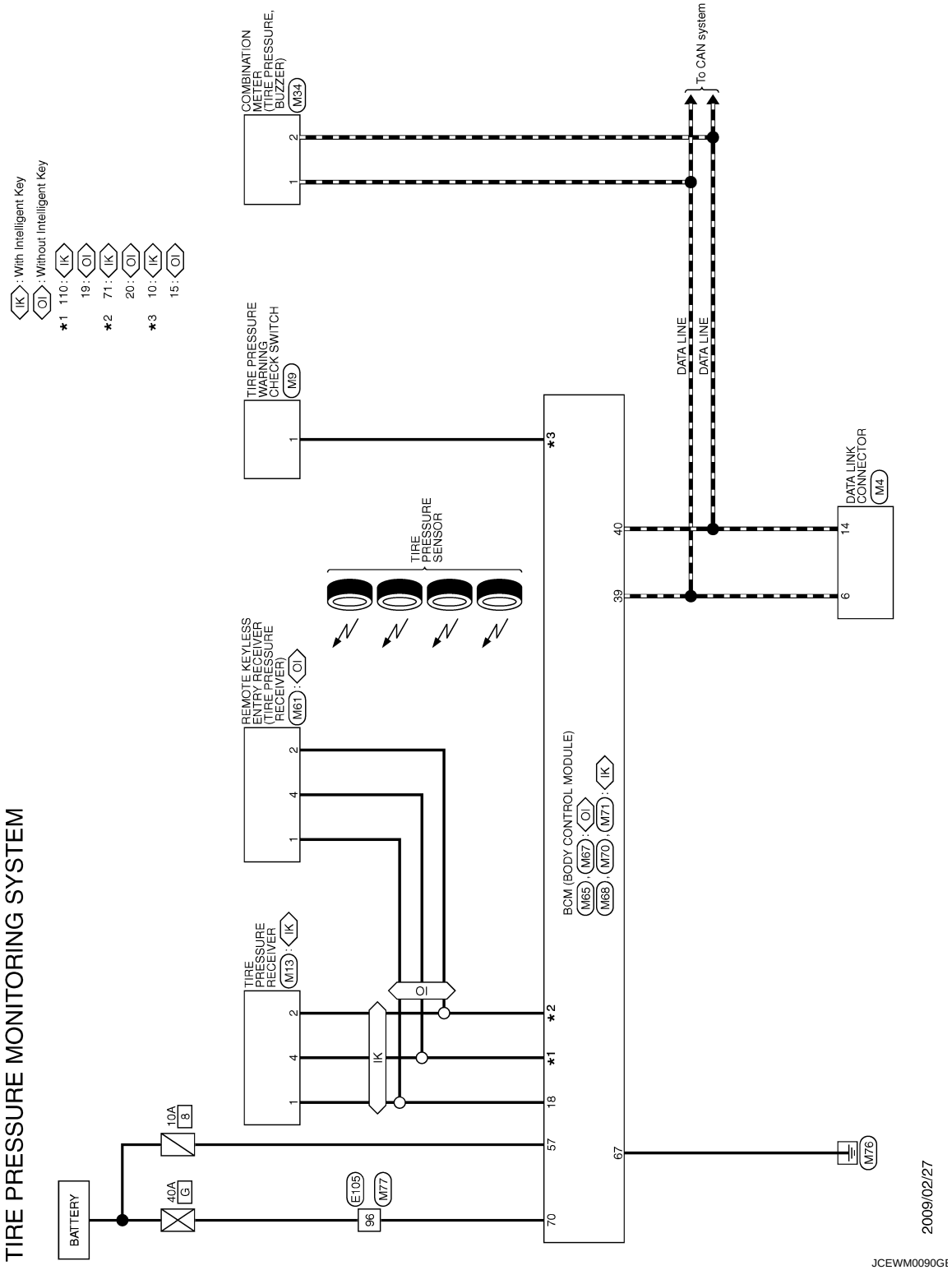
ECU	Reference
BCM	BCS-123, "Reference Value"
	BCS-141, "Fail-safe"
	BCS-142, "DTC Inspection Priority Chart"
	BCS-142, "DTC Index"

WIRING DIAGRAM

TIRE PRESSURE MONITORING SYSTEM

Wiring Diagram

INFOID:0000000005492974



TIRE PRESSURE MONITORING SYSTEM

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
2	W	–
3	SB	–
4	G	–
5	P	–
6	R	–
7	Y	–
8	O	–
9	W	–
10	SB	–
31	V	–
32	R	–
33	GR	–
34	P	–
35	Y	–
36	BR	–
39	SB	–
44	R	–
45	V	–
46	P	–
47	W	–
48	L	–
49	Y	–
50	W	–
51	BR	– [With CVT]
51	B	– [With M/T]
53	SB	–
54	W	– [With CVT]
54	O	– [With M/T]
57	LG	–
59	L	–
60	O	–
61	G	–
62	W	–
63	L	–
67	GR	– [With CVT]
67	V	– [With M/T]
69	P	–
70	SHIELD	–
71	GR	–
72	LG	–
73	P	–
74	V	–
76	Y	–
77	LG	–
78	O	–
79	G	–
80	P	–
81	L	–
82	W	–
83	BR	–
84	B	–
87	GR	–
91	W	–
92	Y	–
93	Y	–
94	R	–
95	V	–
96	LG	–
97	R	–
98	SB	–
99	G	–
100	P	–

Connector No.	M4
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW

Terminal No.	Color of Wire	Signal Name [Specification]
4	B	–
5	B	–
6	L	–
7	GR/R	–
8	O	–
14	P	–
16	LG/R	–

Connector No.	M9
Connector Name	TIRE PRESSURE WARNING CHECK SWITCH
Connector Type	TK02FW

Terminal No.	Color of Wire	Signal Name [Specification]
1	V/W	–

Connector No.	M13
Connector Name	TIRE PRESSURE RECEIVER
Connector Type	TK04FW

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
2	R	–
4	BR/W	–

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	CAN-H
2	P	CAN-L
3	V	VEHICLE SPEED SIGNAL (2-PULSE)
4	L	VEHICLE SPEED SIGNAL (8-PULSE)
6	BR/Y	FUEL LEVEL SENSOR SIGNAL
7	R/G	AIR BAG SIGNAL
8	P	OVERDRIVE CONTROL SWITCH SIGNAL
9	O	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
10	SB	PARKING BRAKE SWITCH SIGNAL
11	G/R	BRAKE FLUID LEVEL SWITCH SIGNAL
13	B/R	ILLUMINATION CONTROL SIGNAL
15	L/Y	ACC POWER SUPPLY
17	G	WASHER LEVEL SWITCH SIGNAL
18	R/Y	SECURITY SIGNAL
19	V/W	AMBIENT SENSOR SIGNAL
20	R/W	AMBIENT SENSOR GROUND
21	B	GROUND
22	B	GROUND
23	B	GROUND
24	V	FUEL LEVEL SENSOR GROUND
25	B	VDC GROUND
27	LG	BATTERY POWER SUPPLY
28	GR	IGNITION SIGNAL
29	BR	PASSENGER SEAT BELT WARNING SIGNAL
31	R	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL
35	BR	ENGINE COOLANT TEMPERATURE SIGNAL
38	GR	ALTERNATOR SIGNAL

Connector No.	M61
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	TK04FW

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	–
2	G/Y	–
4	BR	–

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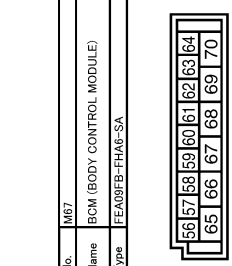
TIRE PRESSURE MONITORING SYSTEM

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FW-NH

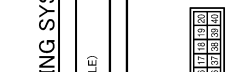
Terminal No.	Color of Wire	Signal Name [Specification]
2	BR/W	COMBI SW INPUT 5
3	GR	COMBI SW INPUT 4
4	L/Y	COMBI SW INPUT 3
5	G	COMBI SW INPUT 2
6	L/R	COMBI SW INPUT 1
7	W/R	KEY CYL UNLOCK SW
8	W/B	KEY CYL LOCK SW
9	R	STOP LAMP SW
10	W/L	REAR WINDOW DEFOGGER SW
11	L/Y	ACC
12	SB	PASSENGER DOOR SW
13	GR/L	REAR RH DOOR SW
14	L/B	OPTICAL SENSOR
15	V/W	TIRE PRESS WARNING CHECK SW
17	R/G	OPTICAL SENSOR POWER SUPPLY
18	V	RECEIVER/SENSOR GND
19	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY
20	G/Y	KEYLESS ENTRY RECEIVER COMM
21	P/L	NATS ANTENNA AMP.
23	R/Y	SECURITY INDICATOR LAMP
24	GR/R	DONGLE LINK
25	LG	NATS ANTENNA AMP.
26	GR	THERMO CONTROL AMP.
27	Y/G	A/C SW [With auto A/C]
27	Y/R	A/C SW [With manual A/C]
28	G/W	BLOWER FAN SW
29	L/W	HAZARD SW
31	G/Y	FR DEFROSTER SW
32	LG	COMBI SW OUTPUT 5
33	Y/L	COMBI SW OUTPUT 4
34	W	COMBI SW OUTPUT 3
35	R/L	COMBI SW OUTPUT 2
36	L/O	COMBI SW OUTPUT 1
37	R/W	KEY SWITCH
38	O	IGN
39	L	CAN-H
40	P	CAN-L

Connector No.	M67
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA09FB-FHA6-SA



Terminal No.	Color of Wire	Signal Name [Specification]
56	L	INTERIOR ROOM LAMP POWER SUPPLY
57	Y	BAT (FUSE)
59	L/B	DRIVER DOOR UNLOCK OUTPUT
60	W/B	TURN SIGNAL LH OUTPUT
61	W/L	TURN SIGNAL RH OUTPUT
63	BR	ROOM LAMP TIMER CONTROL
65	V	ALL DOOR LOCK OUTPUT
66	G	PASSENGER DOOR, REAR DOOR UNLOCK OUTPUT
67	B	GND
68	L	POWER WINDOW POWER SUPPLY (IGN)
69	L/W	POWER WINDOW POWER SUPPLY (BAT)
70	Y	BAT (F/L)

Connector No.	M68
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color of Wire	Signal Name [Specification]
2	BR/W	COMBI SW INPUT 5
3	GR	COMBI SW INPUT 4
4	L/Y	COMBI SW INPUT 3
5	G	COMBI SW INPUT 2
6	L/R	COMBI SW INPUT 1
7	W/R	KEY CYL UNLOCK SW
8	W/B	KEY CYL LOCK SW
9	R	STOP LAMP SW 1
10	V/W	TIRE PRESS WARNING CHECK SW
11	L/Y	ACC F/B
12	SB	PASSENGER DOOR SW
13	GR/L	REAR RH DOOR SW
14	L/B	OPTICAL SENSOR
15	W/L	REAR WINDOW DEFOGGER SW
17	R/G	OPTICAL SENSOR POWER SUPPLY
18	V	RECEIVER / SENSOR GND
19	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY
20	G/Y	KEYLESS ENTRY RECEIVER COMM
21	P/L	NATS ANTENNA AMP.
22	W/G	KEYLESS ENTRY RECEIVER RSSI
23	R/Y	SECURITY INDICATOR LAMP
24	GR/R	DONGLE LINK
25	LG	NATS ANTENNA AMP.
27	Y/R	A/C SW
28	G/W	BLOWER FAN SW
29	L/W	HAZARD SW
31	G/Y	COMBI SW INPUT 1
32	LG	COMBI SW OUTPUT 5
33	Y/L	COMBI SW OUTPUT 4
34	W	COMBI SW OUTPUT 3
35	R/L	COMBI SW OUTPUT 2
36	L/O	COMBI SW OUTPUT 1
37	R/W	SHIFT P
38	O	IGN F/B
39	L	CAN-H
40	P	CAN-L

Connector No.	M70
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA09FB-FHA6-SA

Terminal No.	Color of Wire	Signal Name [Specification]
56	L	INTERIOR ROOM LAMP POWER SUPPLY
57	Y	BAT (FUSE)
59	G	PASSENGER DOOR UNLOCK OUTPUT
60	W/B	TURN SIGNAL LH OUTPUT
61	W/L	TURN SIGNAL RH OUTPUT
63	BR	ROOM LAMP TIMER CONTROL
65	V	ALL DOOR LOCK OUTPUT
66	L/B	DRIVER DOOR UNLOCK OUTPUT
67	B	GND
68	L	POWER WINDOW POWER SUPPLY (IGN)
69	L/W	POWER WINDOW POWER SUPPLY (BAT)
70	Y	BAT (F/L)

Connector No.	M71
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FW-NH

Terminal No.	Color of Wire	Signal Name [Specification]
71	R	TIRE PRESS RECEIVER COMM
72	R/W	BK DR LOCK ACT RELAY CONT
75	SB	DRIVER DOOR REQUEST SW
76	G	PASSENGER DOOR REQUEST SW
77	W	BACK DOOR REQUEST SW
78	LG	DRIVER DOOR ANT+
79	V	DRIVER DOOR ANT−
80	BR/Y	PASSENGER DOOR ANT+
81	L/Y	PASSENGER DOOR ANT−
82	W/B	BACK DOOR ANT+
83	B/W	BACK DOOR ANT−
84	Y/G	ROOM ANT+
85	Y/L	ROOM ANT−
86	P	LUGGAGE ROOM ANT+
87	L	LUGGAGE ROOM ANT−
90	W/L	PUSH−BUTTON IGNITION SW ILL POWER
91	Y	ACC/ON IND
92	BR/R	PUSH−BUTTON IGNITION SW ILL GND
93	GR/W	I-KEY WARN BUZZER
94	Y/R	S/L UNIT COMM
95	W/G	S/L UNIT POWER SUPPLY
96	G	ACC RELAY CONT
97	L/R	STARTER RELAY CONT
98	BR	IGN RELAY (PDM E/R) CONT
99	W/R	IGN RELAY CONT
100	L/O	PUSH SW
102	G	SHIFT N/P
104	Y/R	CVT SHIFT SELECTOR POWER SUPPLY
105	B/O	STOP LAMP SW 2
106	Y/B	BLOWER FAN MOTOR RELAY CONT
107	L/W	S/L CONDITION 1
108	P/L	S/L CONDITION 2
110	BR/W	TIRE PRESS POWER SUPPLY

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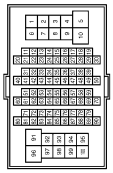
TIRE PRESSURE MONITORING SYSTEM

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
1	B/O	–
2	R	–
3	G/R	–
4	G/B	–
5	L	–
6	L	–
7	W/R	–
8	G/W	–
9	Y/L	–
10	W	–
31	GR/L	–
32	L/B	–
33	R/Y	–
34	SB	–
35	BR	–
36	G	–
39	L/R	–
44	G/O	–
45	LG/R	–
46	GR/W	–
47	BR/Y	–
48	L/O	–
49	L/W	–
50	P/L	–
51	B/W	–
53	R/L	–
54	O	–
57	GR	–
59	V	–
60	R/W	–
61	V/W	–
62	W/L	–
63	W/B	–
67	Y/R	–
69	LG	–
70	SHIELD	–
71	P/B	–
72	R/G	–
73	R	–
74	L/Y	–
76	W/G	–
77	GR/R	–
78	O	–
79	LG	–
80	P	–
81	L	–
82	GR	–
83	G/R	–
84	B	–
87	G	–
91	R	–
92	O	–
93	Y	–
94	R/B	–
95	L/W	–
96	Y	–
97	L	–
98	BR/W	–
99	W	–
100	G/R	–

JCEWM0144GB

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000005779311

DETAILED FLOW

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

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-66, "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 >> INSPECTION END

4.CRUISE TEST

Start the engine and drive the vehicle.

>> GO TO 5.

5.PERFORM SELF-DIAGNOSIS

With CONSULT-III

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

Is any DTC detected?

YES >> GO TO 7.
NO >> GO TO 6.

6.CHECK SYMPTOM

Perform trouble diagnosis for the applicable symptom. Refer to WT-47, "Symptom Table".

Is the cause of the malfunction detected?

YES >> GO TO 8.
NO >> GO TO 10.

7.CIRCUIT DIAGNOSIS

Inspect the malfunctioning system indicated by the DTC code that is detected during self-diagnosis. Refer to BCS-76, "DTC Index" (With intelligent key system), BCS-142, "DTC Index" (Without intelligent key system).

>> GO TO 8.

8.REPAIR WORK

Repair or replace the malfunctioning part.

>> GO TO 9.

9.PERFORM SELF-DIAGNOSIS

1. Select “SELF-DIAG RESULTS” in “AIR PRESSURE MONITOR” of “BCM”.
2. Touch “ERASE” on CONSULT-III screen to erase memory of the low tire pressure warning control unit.
3. Drive the vehicle.
4. Perform “SELF-DIAG RESULTS” in “AIR PRESSURE MONITOR” of “BCM”.

Is any DTC detected?

YES >> GO TO 7.
NO >> GO TO 10.

10.FINAL CHECK

1. Perform a cruise test.
2. Check that the low tire pressure warning lamp turn OFF.

Dose the tire pressure warning lamp turn OFF?

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

TRANSMITTER WAKE UP OPERATION

Description

INFOID:0000000005492921

This procedure must be done after replacement of a transmitter, BCM, or rotation of wheels.

Special Repair Requirement

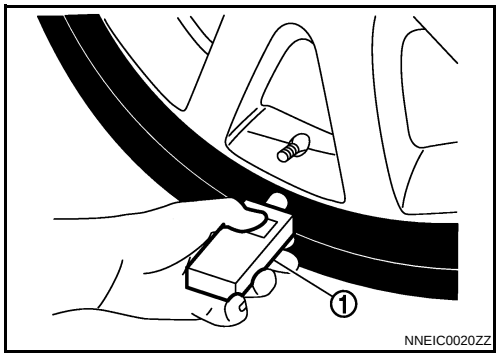
INFOID:0000000005492922

1. TRANSMITTER WAKE-UP PROCEDURE

1. Turn the ignition switch ON.
2. Contact the transmitter activation tool (J-45295) (1) to the side of the tire at the location to the transmitter.
3. Press and hold the 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 low tire pressure warning lamp blinks in the pattern shown as per the following. The pattern indicates that the transmitter wake-up procedure for the wheel is completed.

Low tire pressure warning lamp blinking timing	Activation tire position
ON / OFF: a, b — a : 0.3 sec., b : 1.3 sec.	Front LH
ON / OFF: a, a, a, b — a : 0.3 sec., b : 1.3 sec.	Front RH
ON / OFF: a, a, a, a, a, b — a : 0.3 sec., b : 1.3 sec.	Rear RH
ON / OFF: a, a, a, a, a, a, a, b — a : 0.3 sec., b : 1.3 sec.	Rear LH
ON / OFF: a, b — a : 2 sec., b : 0.2 sec.	All tires

SEIA0762E

5. Check that the turn signal lamps blink twice when the transmitter wake-up procedure for all wheels is completed.
6. Check that the low tire pressure warning lamp turns OFF, after the transmitter wake-up procedure is completed for all wheels and turns OFF.

Is the transmitter wake-up procedure completed?

YES >> Perform the transmitter ID registration procedure. Refer to WT-28, "Special Repair Requirement".
NO >> Perform trouble diagnosis for the transmitter. Refer to WT-32, "Diagnosis Procedure".

ID REGISTRATION PROCEDURE

Description

INFOID:0000000005492923

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

Special Repair Requirement

INFOID:0000000005492924

1. TRANSMITTER ID REGISTRATION PROCEDURE

With CONSULT-III.

1. Display the “WORK SUPPORT” screen and select “ID REGIST”.

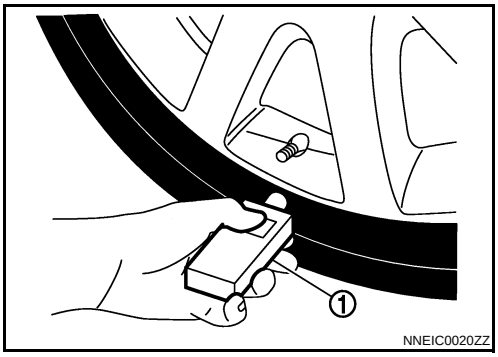
Is the transmitter activation tool (J-45295) used for the transmitter ID registration procedure?

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

2. TRANSMITTER ID REGISTRATION PROCEDURE (WITH TRANSMITTER ACTIVATION TOOL)

1. Turn the ignition switch ON.
2. Select the start button on the “ID REGIST” screen.
3. Contact the transmitter activation tool (J-45295) (1) to the side of the tire at the location to the transmitter.
4. Press and hold the 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-III
1	Front left wheel	2 blinks	“Red” ↓ “Green”
2	Front right wheel		
3	Rear right wheel		
4	Rear left wheel		

6. 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 >> Performs trouble-diagnosis of the Tire Pressure Monitoring System (TPMS). Refer to WT-13, "AIR PRESSURE MONITOR : Diagnosis Description".

3. TRANSMITTER ID REGISTRATION PROCEDURE (WITHOUT TRANSMITTER ACTIVATION TOOL)

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

Tire position	Tire pressure kPa (kg/cm^2, psi)
Front LH	240 (2.4, 35)
Front RH	220 (2.2, 32)
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 transmitter ID registration procedure.
3. After ID registration for all wheels is completed, press “END” to end ID registration.

ID registration position	CONSULT-III
Front LH	“Red” ↓ “Green”
Front RH	
Rear RH	
Rear LH	

4. Adjust the tire pressures for all wheels to the specified value. Refer to WT-66, "Tire Air Pressure".

Is ID registrations for all wheels completed?

YES >> ID registration END.
NO >> Performs trouble-diagnosis of the Tire Pressure Monitoring System (TPMS). Refer to WT-13, "AIR PRESSURE MONITOR : Diagnosis Description".

DTC/CIRCUIT DIAGNOSIS

C1704, C1705, C1706, C1707 LOW TIRE PRESSURE

Description

INFOID:0000000005779312

When the tire pressure monitoring system detects low inflation pressure, the low tire pressure warning lamps in the combination meter comes on.

DTC Logic

INFOID:0000000005779313

DTC DETECTION LOGIC

DTC	Display item	Malfunction detected condition	Possible cause
C1704	LOW PRESSURE FL	Front LH tire pressure drops to 182.7 kPa (1.9 kg/cm^2, 26 psi) or less. [NOTE]	• Low tire pressure • Transmitter malfunction
C1705	LOW PRESSURE FR	Front RH tire pressure drops to 182.7 kPa (1.9 kg/cm^2, 26 psi) or less. [NOTE]	
C1706	LOW PRESSURE RR	Rear RH tire pressure drops to 182.7 kPa (1.9 kg/cm^2, 26 psi) or less. [NOTE]	
C1707	LOW PRESSURE RL	Rear LH tire pressure drops to 182.7 kPa (1.9 kg/cm^2, 26 psi) or less. [NOTE]	

DTC CONFIRMATION PROCEDURE

1.DTC REPRODUCTION PROCEDURE

With CONSULT-III

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-66, "Tire Air Pressure".
3. Perform “SELF-DIAG RESULTS” in “AIR PRESSURE MONITOR” of “BCM”.

Is DTC “C1704”, “C1705”, “C1706”, “C1707” detected?

YES >> Perform trouble diagnosis. Refer to WT-30, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000005779314

1.CHECK TIRE PRESSURE

Check the internal pressure of all wheels. Refer to WT-66, "Tire Air Pressure".

Is the inspection result normal?

YES >> Replace the DTC-detected malfunctioning transmitter. Refer to WT-63, "Exploded View".
NO >> After adjusting the air pressure, GO TO 2.

2.CHECK TIRE PRESSURE SIGNAL

With CONSULT-III

1. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.
2. Perform “DATA MONITOR” in “AIR PRESSURE MONITOR” of “BCM”.
3. Select “BCM” in “DATA MONITOR”, and check that the tire pressures match the standard value.

Monitor item	Condition	Displayed value
AIR PRESS FL	Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.	Internal pressure of tires
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

CAUTION:
Stop the vehicle and within 5 minutes, use “DATA MONITOR” in “AIR PRESSURE MONITOR” of “BCM” to display the tire pressure for all wheels.

Is the inspection result normal?

YES >> Inspect or repair the tires or wheels and adjust the tire pressure to the specification.
NO >> GO TO 1.

Special Repair Requirement

INFOID:0000000005779315

1. CHECK TIRE PRESSURE

Check all tires for tire pressures. Refer to WT-66, "Tire Air Pressure".

Does all tire pressure data meet the specification?

YES >> GO TO 2.
NO >> Inspect or repair the tires or wheels and adjust the tire pressure to the specification.

2. PERFORM ID REGISTRATION

Perform ID registration. Refer to WT-28, "Special Repair Requirement".

>> END

C1708, C1709, C1710, C1711 TRANSMITTER

DTC Logic

INFOID:0000000005779316

DTC DETECTION LOGIC

DTC	Display item	Malfunction detected condition	Possible cause
C1708	[NO DATA] FL	Tire pressure data signal from the front left wheel transmitter cannot be detected.	• Harness or connector (Tire pressure receiver, BCM) • ID registration is not finished • Transmitter malfunction • BCM malfunction
C1709	[NO DATA] FR	Tire pressure data signal from the front right wheel transmitter cannot be detected.	
C1710	[NO DATA] RR	Tire pressure data signal from the rear right wheel transmitter cannot be detected.	
C1711	[NO DATA] RL	Tire pressure data signal from the rear left wheel transmitter cannot be detected.	

DTC CONFIRMATION PROCEDURE

1.DTC REPRODUCTION PROCEDURE

With CONSULT-III
1. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.
2. Perform “SELF-DIAG RESULTS” in “AIR PRESSURE MONITOR” of “BCM”.

Is DTC “C1708”, “C1709”, “C1710”, “C1711” detected?

YES >> Perform trouble diagnosis. Refer to WT-32, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000005779317

1.CHECK TIRE PRESSURE SIGNAL

With CONSULT-III
1. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.
2. Perform “DATA MONITOR” in “AIR PRESSURE MONITOR” of “BCM”.
3. Select “BCM” in “DATA MONITOR”, and check that the tire pressures match the standard value.

Monitor item	Condition	Displayed value
AIR PRESS FL	Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.	Internal pressure of tires
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

CAUTION:
Stop the vehicle and within 5 minutes, use “DATA MONITOR” in “AIR PRESSURE MONITOR” of “BCM” to display the tire pressure for all wheels.

Is a tire pressure of 0 kPa (0 Psi) displayed for all wheels?

YES >> GO TO 2.
NO >> GO TO 5.

2.CHECK HARNESS BETWEEN BCM AND TIRE PRESSURE RECEIVER

1. Turn the ignition switch OFF.
2. Disconnect BCM harness connector and tire pressure receiver harness connector.
3. Check the continuity between BCM harness connector and tire pressure receiver harness connector.

BCM		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M68	18	M13	1	Existed
M71	110*1 19*2		4	
	71*1 20*2		2	

*1: With inteligent key

*2: Without inteligent key

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

BCM		—	Continuity
Connector	Terminal		
M68	18	Ground	Not existed
M71	110*1 19*2		
	71*1 20*2		

*1: With inteligent key

*2: Without inteligent key

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3. CHECK TIRE PRESSURE RECEIVER POWER SUPPLY CIRCUIT

1. Connect the BCM harness connector.
2. Turn the ignition switch ON.

CAUTION:
Never start the engine.

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

BCM		—	Voltage
Connector	Terminal		
M68	110*1 19*2	Ground	5 V

*1: With inteligent key

*2: Without inteligent key

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK TIRE PRESSURE RECEIVER

Check tire pressure receiver. Refer to WT-41, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace tire pressure receiver. Refer to WT-65, "Removal and Installation".

5. CHECK ID REGISTRATION

Perform ID registration of all transmitters. Refer to WT-28, "Special Repair Requirement".

Can ID registration of all transmitters be completed?

YES >> GO TO 6.
NO >> Replace transmitter. Refer to WT-63, "Exploded View".

6. CHECK TIRE PRESSURE MONITORING SYSTEM

With CONSULT-III
1. Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping.
2. Perform “DATA MONITOR” in “AIR PRESSURE MONITOR” of “BCM”.
3. Select “BCM” in “DATA MONITOR”, and check that the tire pressures match the standard value.

Monitor item	Condition	Displayed value
AIR PRESS FL	Drive at a speed of 40 km/h (25 MPH) or more, for several minutes without stopping.	Internal pressure of tires
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

CAUTION:
Stop the vehicle and within 15 minutes, use “DATA MONITOR” in “AIR PRESSURE MONITOR” of “BCM” to read the tire pressure for all wheels.

Is the inspection result normal?

YES >> Replace the DTC-detected malfunctioning transmitter. Refer to WT-63, "Exploded View".
NO >> Replace BCM. Refer to BCS-81, "Exploded View" (With intelligent key system), BCS-146, "Exploded View" (Without intelligent key system).

Special Repair Requirement

INFOID:0000000005779363

1. CHECK TIRE PRESSURE

Check all tires for tire pressures. Refer to WT-66, "Tire Air Pressure".

Does all tire pressure data meet the specification?

YES >> GO TO 2.
NO >> Inspect or repair the tires or wheels and adjust the tire pressure to the specification.

2. PERFORM ID REGISTRATION

Perform ID registration. Refer to WT-28, "Special Repair Requirement".

>> END

C1716, C1717, C1718, C1719 TRANSMITTER

DTC Logic

INFOID:0000000005779319

DTC DETECTION LOGIC

DTC	Display item	Malfunction detected condition	Possible case
C1716	[PRESSDATA ERR] FL	Malfunction in the tire pressure data from the front left wheel transmitter.	• ID registration is not finished • Transmitter malfunction
C1717	[PRESSDATA ERR] FR	Malfunction in the tire pressure data from the front right wheel transmitter.	
C1718	[PRESSDATA ERR] RR	Malfunction in the tire pressure data from the rear right wheel transmitter.	
C1719	[PRESSDATA ERR] RL	Malfunction in the tire pressure data from the rear left wheel transmitter.	

DTC CONFIRMATION PROCEDURE

1.DTC REPRODUCTION PROCEDURE

With CONSULT-III

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-66, "Tire Air Pressure".
3. Perform “SELF-DIAG RESULTS” in “AIR PRESSURE MONITOR” of “BCM”.

Is DTC “C1716”, “C1717”, “C1718”, “C1719” detected?

YES >> Perform trouble diagnosis. Refer to WT-35, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000005779320

1.CHECK TIRE PRESSURE

Check the internal pressure of all wheels. Refer to WT-66, "Tire Air Pressure".

Is the inspection result normal?

YES >> Replace the DTC-detected malfunctioning transmitter. Refer to WT-63, "Exploded View".
NO >> After adjusting the tire pressure, GO TO 2.

2.CHECK TIRE PRESSURE SIGNAL

With CONSULT-III

1. Check and adjust the tire pressure for all wheels. Refer to WT-66, "Tire Air Pressure".
2. Perform transmitter ID registration for all wheels. Refer to WT-28, "Special Repair Requirement".
3. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.
4. Perform “DATA MONITOR” in “AIR PRESSURE MONITOR” of “BCM”.
5. Select “BCM” in “DATA MONITOR”, and check that the tire pressures match the standard value.
   CAUTION:
   Stop the vehicle and within 15 minutes, use CONSULT-III “DATA MONITOR” to display the tire pressure for all wheels.
6. Check that “DATA MONITOR” displays tire pressure of 438.60 kPa (4.47 kg/cm^2, 63.60 Psi).

Is the inspection 438.60 kPa (4.47 kg/cm^2, 63.60 Psi)?

YES >> Replace transmitter the tire pressure 438.60 kPa (4.386 bar, 4.47 kg/cm^2, 63.60 Psi) displayed. Refer to WT-63, "Exploded View".
NO >> GO TO 1.

Special Repair Requirement

INFOID:0000000005779373

1.CHECK TIRE PRESSURE

Check all tires for tire pressures. Refer to WT-66, "Tire Air Pressure".

Does all tire pressure data meet the specification?

YES >> GO TO 2.
NO >> Inspect or repair the tires or wheels and adjust the tire pressure to the specification.

2.PERFORM ID REGISTRATION

Perform ID registration. Refer to WT-28, "Special Repair Requirement".

>> END

C1729 VEHICLE SPEED SIGNAL

Description

INFOID:0000000005779322

BCM detects no vehicle speed signal.

DTC Logic

INFOID:0000000005779323

DTC DETECTION LOGIC

DTC number	Trouble diagnosis name	DTC detecting condition	Possible case
C1729	VHCL SPEED SIG ERR	Vehicle speed signal not detected.	• CAN communication error • Combination meter malfunction

DTC CONFIRMATION PROCEDURE

1.DTC REPRODUCTION PROCEDURE

With CONSULT-III
1. Drive for several minutes at a speed of 40 km/h (25 MPH) or more, then stop the vehicle.
2. Perform “SELF-DIAG RESULTS” in “AIR PRESSURE MONITOR” of “BCM”.

Is DTC “C1729” detected?

YES >> Perform trouble diagnosis. Refer to WT-37, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000005779324

1.PERFORM COMBINATION METER SELF-DIAGNOSIS

With CONSULT-III
Perform “SELF-DIAG RESULTS” of “METER/M&A”.

Is any DTC detected?

YES >> Check the DTC. Refer to MWI-63, "DTC Index".
NO >> GO TO 2.

2.PERFORM SELF-DIAGNOSIS

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

Is DTC “C1729” detected?

YES >> Replace BCM. Refer to WT-12, "COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)" (With intelligent key system), WT-16, "COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)" (Without intelligent key system).
NO >> GO TO 3.

3.CHECK INFORMATION

With CONSULT-III
1. Perform “DATA MONITOR” in “AIR PRESSURE MONITOR” of “BCM”.
2. Select “BCM” in “DATA MONITOR”, and check the input/output values. Refer to BCS-48, "Reference Value" (With intelligent key system), BCS-123, "Reference Value" (Without intelligent key system).

Is the inspection result normal?

YES >> Check pin terminal and connection of each harness connector for malfunctioning conditions.
NO >> Replace BCM. Refer to BCS-81, "Exploded View" (With intelligent key system), BCS-146, "Exploded View" (Without intelligent key system).

Special Repair Requirement

INFOID:0000000005779416

1.CHECK TIRE PRESSURE

Check all tires for tire pressures. Refer to WT-66, "Tire Air Pressure".

Does all tire pressure data meet the specification?

YES >> GO TO 2.
NO >> Inspect or repair the tires or wheels and adjust the tire pressure to the specification.

2. PERFORM ID REGISTRATION

Perform ID registration. Refer to WT-28, "Special Repair Requirement".

>> END

C1734 BCM

DTC Logic

INFOID:0000000005779326

DTC DETECTION LOGIC

DTC	Display item	Malfunction detected condition	Possible case
C1734	CONTROL UNIT	Tire pressure monitoring system malfunction in BCM	BCM malfunction

DTC CONFIRMATION PROCEDURE

1.DTC REPRODUCTION PROCEDURE

With CONSULT-III

1. Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping.
2. Perform “SELF-DIAG RESULTS” in “AIR PRESSURE MONITOR” of “BCM”.

CAUTION:

Perform within 15 minutes after stop the vehicle.

Is DTC “C1734” detected?

YES >> Perform trouble diagnosis. Refer to WT-39, "Diagnosis Procedure".
NO >> INSPECTION END

Diagnosis Procedure

INFOID:0000000005779327

1.CHECK BCM POWER SUPPLY

1. Turn the ignition switch OFF.
2. Disconnect BCM harness connector.
3. Check voltage between BCM harness connector terminals and ground.

BCM		—	Voltage
Connector	Terminal		
M70	57	Ground	Battery voltage
	70		

Is the power supply normal?

YES >> GO TO 2.
NO >> Check the following. If any items are damaged, repair or replace damage parts.
- 40A fusible link [No. G located in the fuse block]. Refer to PG-98, "Fuse and Fusible Link Arrangement".
- 10A fuse [No. 8 located in the fuse block (J/B)]. Refer to PG-97, "Fuse, Connector and Terminal Arrangement".
- Harness for short or open between battery and BCM harness connector M70 terminal 1 and 11.
- Check the Battery voltage.

2.CHECK BCM GROUND

Check the continuity between BCM harness connector and ground.

BCM		—	Continuity
Connector	Terminal		
M70	67	Ground	Existed

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3.CHECK HARNESS BETWEEN BCM AND TIRE PRESSURE RECEIVER

1. Disconnect tire pressure receiver harness connector.
2. Check the continuity between BCM harness connector and tire pressure receiver harness connector.

BCM		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M68	18	M13	1	Existed
M71	110*1 19*2		4	
	71*1 20*2		2	

*1: With inteligent key

*2: Without inteligent key

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

BCM		—	Continuity
Connector	Terminal		
M68	18	Ground	Not existed
M71	110*1 19*2		
	71*1 20*2		

*1: With inteligent key

*2: Without inteligent key

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4.CHECK BCM

Check the BCM input/output signal. Refer to BCS-48, "Reference Value" (with intelligent key system), BCS-123, "Reference Value" (Without intelligent key system).

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 5.

5.CHECK BCM HARNESS CONNECTOR

Check the BCM pin terminals for damage or loose connection with harness connector.

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Exploded View" (with intelligent key system), BCS-146, "Exploded View" (Without intelligent key system).
NO >> Check for looseness or damage at the harness connector pins of the low tire pressure warning control unit. Repair or replace if necessary.

Special Repair Requirement

INFOID:0000000005779747

1.CHECK TIRE PRESSURE

Check all tires for tire pressures. Refer to WT-66, "Tire Air Pressure".

Does all tire pressure data meet the specification?

YES >> GO TO 2.
NO >> Inspect or repair the tires or wheels and adjust the tire pressure to the specification.

2.PERFORM ID REGISTRATION

Perform ID registration. Refer to WT-28, "Special Repair Requirement".

>> END

TIRE PRESSURE RECEIVER

Component Function Check

INFOID:0000000005779329

1. TIRE PRESSURE MONITORING SYSTEM OPERATION

With CONSULT-III

1. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.
2. On “DATA MONITOR”, select “AIR PRESS FL”, “AIR PRESS FR”, “AIR PRESS RR” and “AIR PRESS RL”, and check that the tire pressures match the standard value.

Monitor item	Condition	Displayed value
AIR PRESS FL	Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.	Internal pressure of tires
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

CAUTION:

Stop the vehicle and within 5 minutes, use CONSULT-III “DATA MONITOR” to display the tire pressure for all wheels.

Is the inspection result normal?

YES >> INSPECTION END

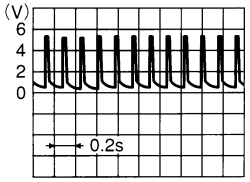
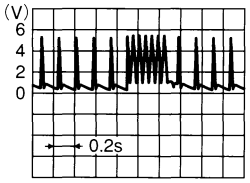
NO >> Perform trouble diagnosis. Refer to WT-41, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005779330

1. CHECK TIRE PRESSURE RECEIVER SIGNAL

1. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
2. Check tire pressure receiver connector and ground signal with oscilloscope.

Tire pressure receiver		—	Condition	Voltage (Approx.)
Connector	Terminal			
M13	2	Ground	Stand by state	 OCC3881D
			When receiving the signal from the transmitter	 OCC3880D

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

2. CHECK TIRE PRESSURE RECEIVER INPUT VOLTAGE

1. Disconnect tire pressure receiver connector.
2. Check voltage between tire pressure receiver connector and ground.

Tire pressure receiver		—	Voltage (Approx.)
Connector	Terminal		
M13	4	Ground	5.0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace damaged parts.

3. CHECK TIRE PRESSURE RECEIVER GROUND CIRCUIT

1. Disconnect BCM harness connector.
2. Check continuity between BCM harness connector and tire pressure receiver connector.

BCM		Tire pressure receiver		Continuity
Connector	Terminal	Connector	Terminal	
M68	18	M13	1	Existed

3. Check continuity between BCM harness connector and ground.

BCM		—	Continuity
Connector	Terminal		
M68	18	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace damaged parts.

4. CHECK BCM CIRCUIT

Inspect the BCM circuit. Refer to WT-39, "Diagnosis Procedure".

Is the BCM circuit normal?

YES >> Replace tire pressure receiver. Refer to WT-65, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-81, "Exploded View" (With intelligent key system), BCS-146, "Exploded View" (Without intelligent key system).

TIRE PRESSURE WARNING CHECK SWITCH

Component Function Check

INFOID:0000000005779331

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

1. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
2. Short-circuit the tire pressure warning check switch connector terminal to the ground.
3. Check that the low tire pressure warning lamp blinking.

Is inspection result normal?

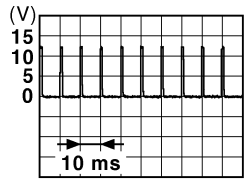
YES >> INSPECTION END
NO >> Perform diagnosis. Refer to WT-43, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005779332

1.CHECK TIRE PRESSURE WARNING CHECK SWITCH SIGNAL

1. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
2. Check the voltage between tire pressure warning check switch connector and ground.

Tire pressure warning check switch		—	Condition	Voltage (Approx.)
Connector	Terminal			
M9	1	Ground	Ignition switch OFF	 JPMIA0012GB 1.0 - 1.5 V

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Exploded View" (With intelligent key system), BCS-146, "Exploded View" (Without intelligent key system).
NO >> GO TO 2.

2.CHECK TIRE PRESSURE WARNING CHECK SWITCH CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect BCM harness connector
3. Check the continuity between BCM harness connector and tire pressure warning check switch connector.

BCM		Tire pressure warning check switch		Continuity
Connector	Terminal	Connector	Terminal	
M68	10*1 15*2	M9	1	Existed

*1: With inteligent key

*2: Without inteligent key

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

BCM		—	Continuity
Connector	Terminal		
M68	10*1 15*2	Ground	Not existed

*1: With inteligent key

*2: Without inteligent key

Is the inspection result normal?

YES >> Check BCM pin terminals for damage or loose connection with harness connector. If any items are damaged, repair or replace damaged parts. Replace BCM. Refer to BCS-81, "Exploded View" (With intelligent key system), BCS-146, "Exploded View" (Without intelligent key system).

NO >> Repair or replace damaged parts.

LOW TIRE PRESSURE WARNING LAMP

Component Function Check

INFOID:0000000005779333

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-45, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005779334

1.POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit. Refer to WT-46, "Diagnosis Procedure".

Is the inspection result normal?

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

2.PERFORM SELF-DIAGNOSIS

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

Is any DTC detected?

YES >> Check the DTC. Refer to BCS-76, "DTC Index" (With intelligent key system), BCS-142, "DTC Index" (Without intelligent key system).
NO >> GO TO 3.

3.CHECK LOW TIRE PRESSURE WARNING LAMP SIGNAL

With CONSULT-III
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-39, "COMBINATION METER : Diagnosis Procedure".
NO >> Replace the BCM. Refer to BCS-81, "Exploded View" (With intelligent key system), BCS-146, "Exploded View" (Without intelligent key system).

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:0000000005779335

1.POWER SUPPLY SYSTEM CHECK

1. Turn the ignition switch OFF.
2. Disconnect the BCM harness connector.
3. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
4. Check the voltage between the BCM harness connector and the ground.

BCM		—	Voltage
Connector	Terminal		
M70	57	Ground	Battery voltage
	70		

Is the inspection result normal?

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

2.GROUND SYSTEM INSPECTION

1. Turn the ignition switch OFF.
2. Check the continuity between the BCM harness connector and the ground.

BCM		—	Continuity
Connector	Terminal		
M70	67	Ground	Existed

Is the inspection result normal?

YES >> • Check the 10 A fuse [No. 8 in fuse block (J/B)].
• Check the 40 A fusible link [No. G in fuse block].
NO >> Repair or replace damaged parts.

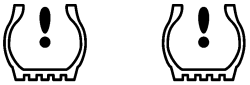
SYMPTOM DIAGNOSIS

TPMS

Symptom Table

INFOID:0000000005779336

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 transmitters 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 transmitters at wheels is not completed.	Perform the wake-up operation for all transmitters at wheels. Refer to WT-27, "Special Repair Requirement".
	The low tire pressure warning lamp blinks once.	 Blinks 1 time ON 0.3 sec > OFF 1.3 sec SEIA0594E	The front left transmitter is not activated.	Perform the wake-up operation for the transmitter at front left wheel. Refer to WT-27, "Special Repair Requirement".
	The low tire pressure warning lamp repeats blinking twice.	 Blinks 2 times ON 0.3 sec > OFF 0.3 sec SEIA0595E	The front right transmitter is not activated.	Perform the wake-up operation for the transmitter at front right wheel. Refer to WT-27, "Special Repair Requirement".
	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 transmitter is not activated.	Perform the wake-up operation for the transmitter at rear right wheel. Refer to WT-27, "Special Repair Requirement".
	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 transmitter is not activated.	Perform the wake-up operation for the transmitter at rear left wheel. Refer to WT-27, "Special Repair Requirement".
	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-66, "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 low tire pressure warning control unit harness connector is removed.	Check the connection conditions of the low tire pressure warning control unit harness connector, and repair if necessary.
			Tire Pressure Monitoring System (TPMS) malfunction.	• Perform CONSULT-III self-diagnosis. Refer to WT-12, "COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)". • If necessary, perform transmitter ID registration. Refer to WT-28, "Special Repair Requirement".
Turn signal lamp	The turn signal lamps do not blink twice when the transmitter is activated. Or the buzzer does not sound.	—	1. The transmitter activation tool (J-45295) does not activate. 2. The ignition switch is OFF when the transmitter wake-up operation is performed. 3. The transmitter activation tool (J-45295) is not used in the correct position. 4. The transmitter is already waked up.	1. Replace the battery in the transmitter activation tool (J-45295). 2. Turn the ignition switch ON when performing the transmitter wake-up operation. 3. Operate the transmitter activation tool (J-45295) in the correct position when performing the wake-up operation. 4. No procedure.

NOTE:
If transmitter wake-up operation is not completed for two or more transmitters, 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 transmitters.)

LOW TIRE PRESSURE WARNING LAMP DOES NOT BLINKS

Description

INFOID:0000000005779337

DESCRIPTION

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:0000000005779338

1. CHECK LOW TIRE PRESSURE WARNING LAMP

Perform trouble diagnosis of the low tire pressure warning lamp. Refer to WT-45, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Check pin terminal and connection of each connector for damage and loose connection.
NO >> Repair or replace damaged parts.

LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN OFF

Description

INFOID:0000000005779339

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

Diagnosis Procedure

INFOID:0000000005779340

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-66, "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 >> GO TO 3.
NO >> INSPECTION END

3.CHECK BCM

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

Is any DTC detected?

YES >> Check the DTC. Refer to BCS-76, "DTC Index" (With intelligent key system), BCS-142, "DTC Index" (Without intelligent key system).
NO >> GO TO 4.

4.CHECK BCM POWER SUPPLY AND GROUND

1. Turn the ignition switch OFF.
2. Disconnect the BCM harness connector.
3. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
4. Check the voltage between the BCM harness connector and the ground.

BCM		—	Voltage
Connector	Terminal		
M70	57	Ground	Battery voltage
	70		

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Exploded View" (With intelligent key system), BCS-146, "Exploded View" (Without intelligent key system).
NO >> Repair or replace damaged parts.

LOW TIRE PRESSURE WARNING LAMP BLINKS

Description

INFOID:0000000005779341

DESCRIPTION

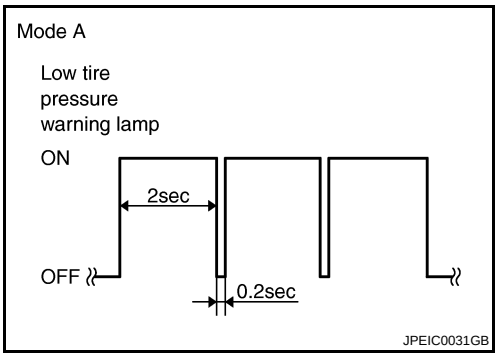
The low tire pressure warning lamp illuminates or blinks.
However, a check is necessary because the symptom may not be caused by a system malfunction. For example, the transmitter may not be initialized.

NOTE:

If low tire pressure warning lamp blinks as shown in the figure, the system is normal.

Blink Mode A

- This mode shows transmitter status is in OFF- mode.
  Perform transmitter wake up operation. Refer to WT-27, "Special Repair Requirement".

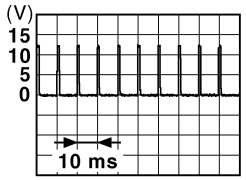


Diagnosis Procedure

INFOID:0000000005779342

1. CHECK TIRE PRESSURE WARNING CHECK SWITCH POWER SUPPLY

1. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
2. Check voltage between tire pressure warning check switch connector and ground.

Tire pressure warning check switch		—	Condition	Voltage (Approx.)
Connector	Terminal			
M9	1	Ground	Ignition switch OFF	 JPMIA0012GB 1.0 - 1.5 V

Is the inspection result normal?

YES >> GO TO 2.
NO >> Riper or replace error-detected damaged parts.

2. CHECK TIRE PRESSURE WARNING CHECK SWITCH CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect BCM harness connector.
3. Check the continuity between BCM harness connector and tire pressure warning check switch connector.

BCM		Tire pressure warning check switch		Continuity
Connector	Terminal	Connector	Terminal	
M68	10*1 15*2	M9	1	Existed

*1: With inteligent key

*2: Without inteligent key

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

BCM		—	Continuity
Connector	Terminal		
M68	10*1 15*2	Ground	Not existed

*1: With inteligent key

*2: Without inteligent key

Is the inspection result normal?

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

3.CHECK BCM

Check the BCM input/output signal. Refer to BCS-48, "Reference Value" (With intelligent key system), BCS-123, "Reference Value" (Without intelligent key system).

Is the inspection result normal?

YES >> Check the tire pressure warning check switch. Refer to WT-43, "Diagnosis Procedure".
NO >> Repair or replace the BCM.

TURN SIGNAL LAMP BLINKS

Description

INFOID:0000000005779343

DESCRIPTION

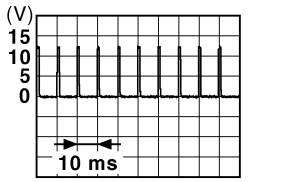
The turn signal lamp blinks when the ignition switch is turned ON.
The BCM connector or circuit may have a malfunction.

Diagnosis Procedure

INFOID:0000000005779344

1.CHECK TIRE PRESSURE WARNING CHECK SWITCH POWER SUPPLY CIRCUIT

1. Turn the ignition switch ON.
   CAUTION:
   Never start the engine.
2. Check voltage between tire pressure warning check switch connector and ground.

Tire pressure warning check switch		—	Condition	Voltage (Approx.)
Connector	Terminal			
M9	1	Ground	Ignition switch OFF	 JPMIA0012GB 1.0 - 1.5 V

Is the inspection result normal?

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

2.CHECK TIRE PRESSURE WARNING CHECK SWITCH CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect BCM harness connector.
3. Check the continuity between BCM harness connector and tire pressure warning check switch connector.

BCM		Tire pressure warning check switch		Continuity
Connector	Terminal	Connector	Terminal	
M68	10*1 15*2	M9	1	Existed

*1: With inteligent key

*2: Without inteligent key

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

BCM		—	Continuity
Connector	Terminal		
M68	10*1 15*2	Ground	Not existed

*1: With inteligent key

*2: Without inteligent key

Is the inspection result normal?

YES >> Check the turn signal lamp operation. Refer to BCS-35, "SIGNAL BUFFER : CONSULT-III Function (BCM - SIGNAL BUFFER)" (With intelligent key system), BCS-111, "SIGNAL BUFFER : CONSULT-III Function (BCM - SIGNAL BUFFER)" (Without intelligent key system).

NO >> Repair or replace damaged parts.

ID REGISTRATION CANNOT BE COMPLETED

Description

INFOID:0000000005779345

DESCRIPTION

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

Diagnosis Procedure

INFOID:0000000005779346

1.CHECK TRANSMITTER ID REGISTRATION

1. Perform transmitter ID registration for all wheels. Refer to WT-28, "Special Repair Requirement".
2. Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.
3. Perform “DATA MONITOR” in “AIR PRESSURE MONITOR” of “BCM”.
4. Select “BCM” in “DATA MONITOR”, and check that the tire pressures match the standard value.

Monitor item	Measuring condition	Displayed value
AIR PRESS FL	Drive for 3 minutes at a speed of 40 km/h (25 MPH) or more, then drive normally for 10 minutes.	Internal pressure of tires
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

CAUTION:

Stop the vehicle and within 5 minutes, use “DATA MONITOR” in “AIR PRESSURE MONITOR” of “BCM” to display the tire pressure for all wheels.

Is the inspection result normal?

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

2.CHECK TRANSMITTERS

1. Perform trouble diagnosis for the transmitter. Refer to WT-32, "Diagnosis Procedure".
2. Perform transmitter ID registration for all wheels. Refer to WT-28, "Special Repair Requirement".
3. Check that transmitter ID registration is completed for all wheels.

Is transmitter ID registration for all wheels been completed?

YES >> INSPECTION END
NO >> Replace the transmitter. Refer to WT-63, "Exploded View".

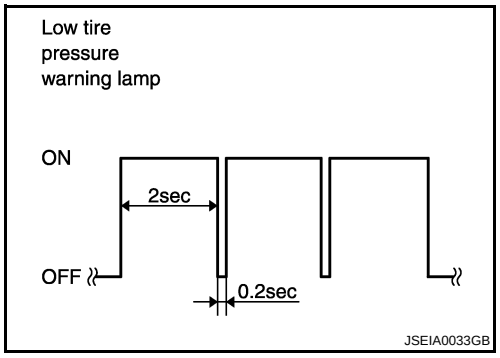
NORMAL OPERATING CONDITION

Description

INFOID:0000000005779347

LOW TIRE PRESSURE WARNING LAMP BLINKS

If the low tire pressure warning lamp blinks as shown in the figure after the ignition switch is turned ON, the transmitter is not waked up. Perform the transmitter wake-up operation. Refer to WT-27, "Special Repair Requirement".



NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:0000000005779348

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

			Reference page	FSU-8, FSU-10	WT-61, "Inspection"	WT-59, "Adjustment"	WT-66, "Tire Air Pressure"	WT-59, "Adjustment"	—	—	WT-66, "Tire Air Pressure"	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 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	FRONT AXLE AND FRONT SUSPENSION	REAR AXLE AND REAR SUSPENSION	TIRES	ROAD WHEELS	DRIVE SHAFT	BRAKE	STEERING
Symptom	TIRES		Noise	×	×	×	×	×	×	×		×	×		×	×	×	×
			Shake	×	×	×	×	×	×		×	×	×		×	×	×	×
			Vibration				×				×	×	×			×		×
			Shimmy	×	×	×	×	×	×	×	×	×	×		×		×	×
			Judder	×	×	×	×	×	×		×	×	×		×		×	×
			Poor quality ride or handling	×	×	×	×	×	×		×	×		×	×			
	ROAD WHEEL		Noise	×	×	×			×			×	×	×		×	×	×
			Shake	×	×	×			×			×	×	×		×	×	×
			Shimmy, Judder	×	×	×			×			×	×	×			×	×
			Poor quality ride or handling	×	×	×			×			×	×	×				

×: Applicable

PERIODIC MAINTENANCE

ROAD WHEEL

Adjustment

INFOID:0000000005493000

BALANCING WHEELS (BONDING WEIGHT TYPE)

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.**

Wheel Balance Adjustment

If a tire balance machine has adhesion balance weight mode settings and drive-in weight mode setting, select and adjust a drive-in weight mode suitable for road wheels.

1. Set road wheel on tire balance machine using the center hole as a guide. Start the tire balance machine.
2. When inner and outer unbalance values are shown on the tire balance machine indicator, multiply outer unbalance value by 5/3 to determine balance weight that should be used. Select the outer balance weight with a value closest to the calculated value above and install to the designated outer position of, or at the designated angle in relation to the road wheel.

   CAUTION:

   - **Do not install the inner balance weight before installing the outer balance weight.**
   - **Before installing the balance weight, be sure to clean the mating surface of the road wheel.**

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)

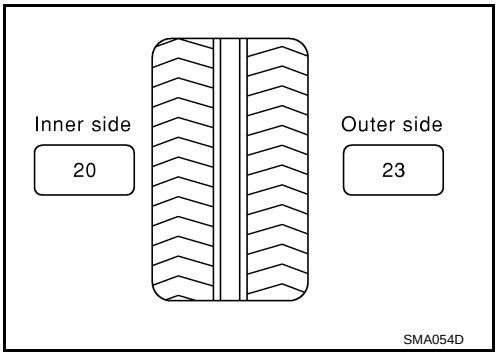
NOTE:

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)

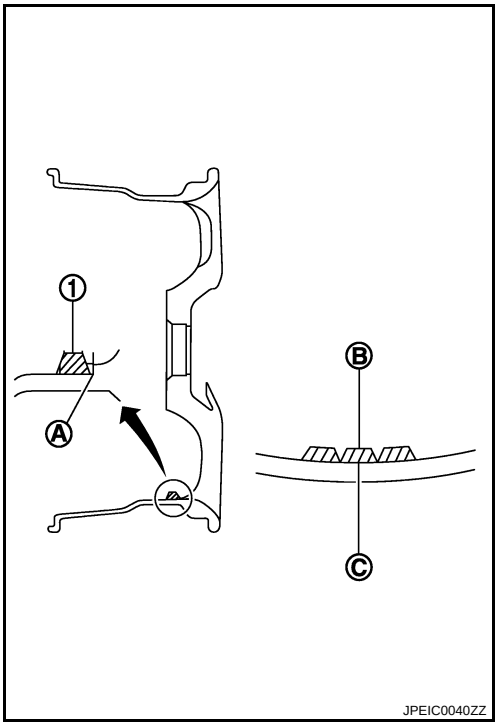


b. Installed balance weight in the position.

- When installing balance weight (1) to road wheels, set it into the grooved area (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 adhesion balance weights.**
- **Balance weights are non-reusable; always replace with new ones.**
- **Do not install more than three 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.

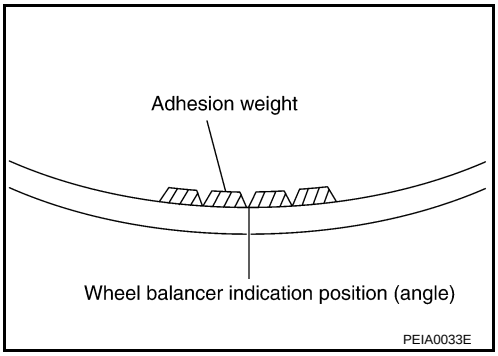
CAUTION:

Do not 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:

Do not install more than two balance weight.



5. Start the tire balance machine. Make sure that inner and outer residual unbalance values are 10 g (0.35 oz) each or below.
6. If either residual unbalance value exceeds 10 g (0.35 oz), repeat installation procedures.

Limit

Dynamic (At flange) : Refer to WT-66, "Road Wheel".

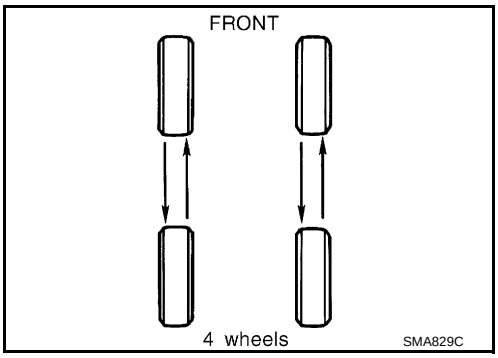
Static (At flange) : Refer to WT-66, "Road Wheel".

TIRE ROTATION

- Follow the maintenance schedule for tire rotation service intervals. Refer to MA-4, "Explanation of General Maintenance".
- When installing the wheel, tighten wheel nuts to the specified torque.

CAUTION:

- **When installing wheels, tighten them diagonally by dividing the work two to three times in order to prevent the wheels from developing any distortion.**
- **Be careful not to tighten wheel nut at torque exceeding the criteria for preventing strain of disc rotor.**
- **Use NISSAN genuine wheel nuts for aluminum wheels.**



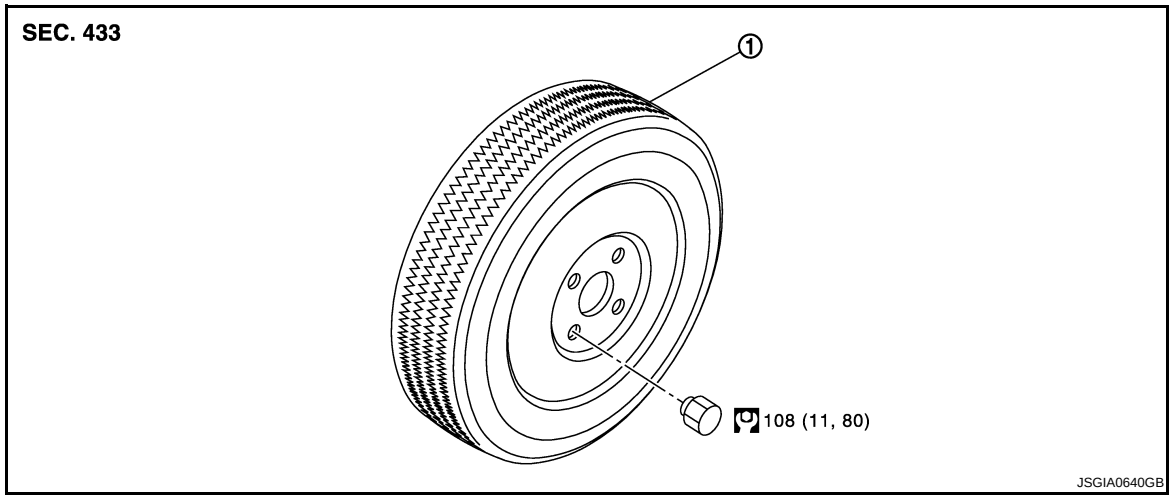
Wheel nuts tighting torque : Refer to WT-61, "Exploded View".

REMOVAL AND INSTALLATION

ROAD WHEEL TIRE ASSEMBLY

Exploded View

INFOID:0000000005492998



1. Tire assembly

Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

INFOID:0000000005492999

REMOVAL

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

INSTALLATION

Install in the reverse order of removal.

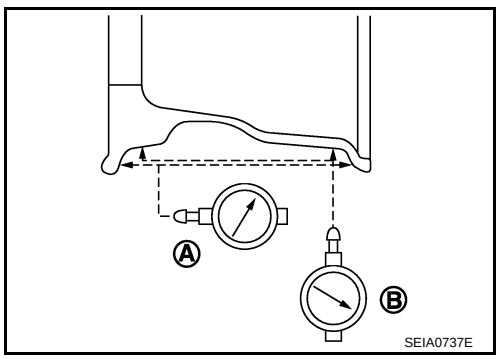
Inspection

INFOID:0000000005492997

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. If the lateral deflection (A) or vertical deflection (B) for radial runout value exceeds the limit, replace aluminum wheel.



Limit

A: Refer to WT-66, "Road Wheel".

B: Refer to WT-66, "Road Wheel".

STEEL WHEEL

1. Check tires for were and improper inflation.

2. Check wheels for deformation, clacks and other damage. If deformed, remove wheel and check wheel runout.

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

b. Set two dial indicators as shown in the illustration.

c. Set each dial indicator to “0”.

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

e. Calculate runout at each point as shown below.

Lateral runout limit (A): (❶+❷)/2

Radial runout limit (B): (❸+❹)/2

f. Select maximum positive runout value and the maximum negative value. Add the two values to determine total runout.

CAUTION:

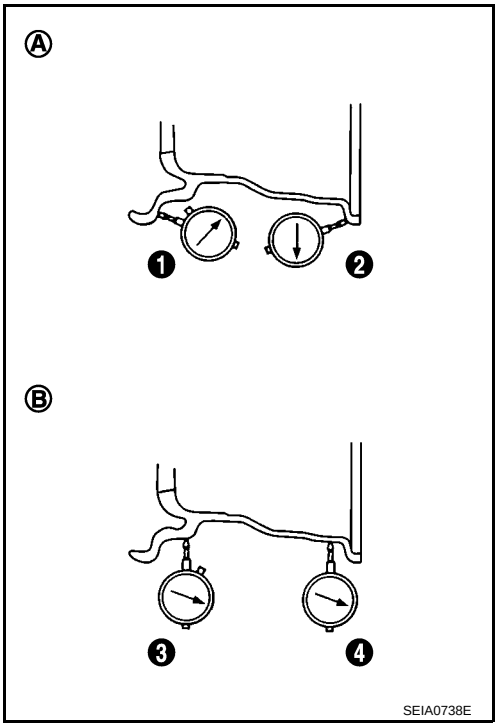
In case a positive or negative value is not available, use the maximum value (negative or positive) for total runout.

Limit

A: Refer to WT-66, "Road Wheel".

B: Refer to WT-66, "Road Wheel".

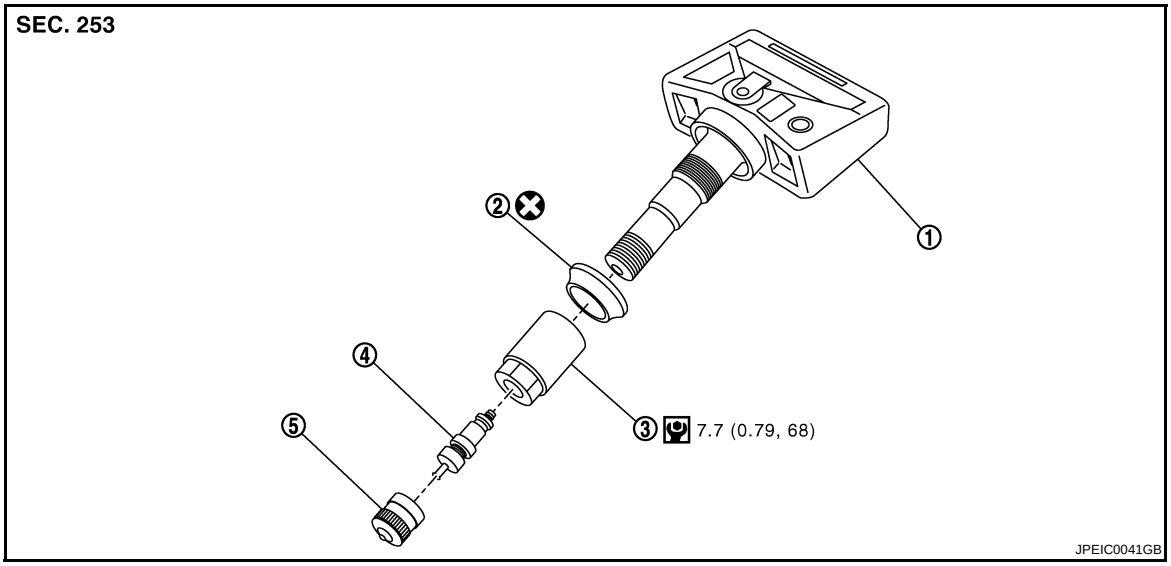
g. If the total runout value exceeds limit, replace steel wheel.



TRANSMITTER

Exploded View

INFOID:0000000005493001



1. Transmitter
2. Grommet seal
3. Valve nut
4. Valve core
5. Cap

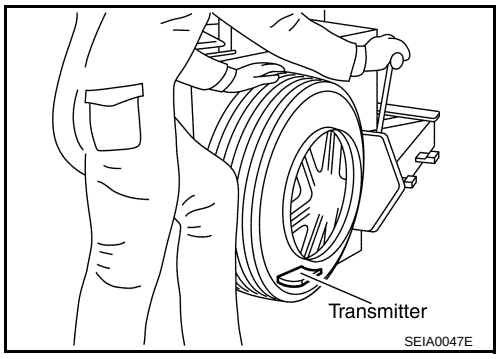
Refer to GI-4, "Components" for symbols in figure.

Removal and Installation

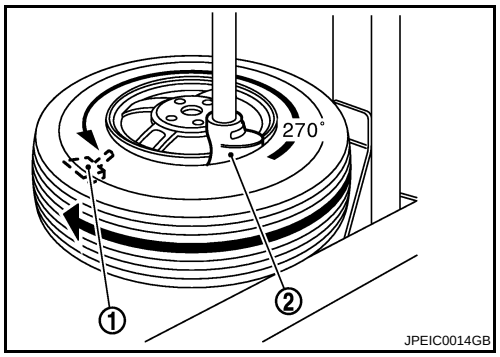
INFOID:0000000005493002

REMOVAL

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

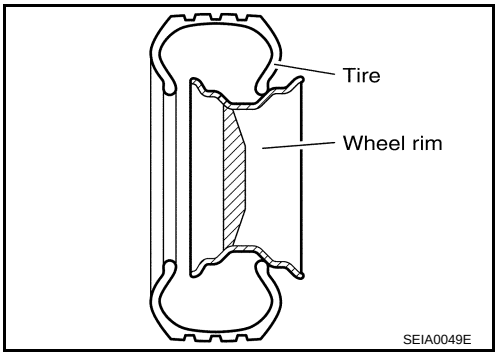


3. Turn tire so that valve hole is at bottom and bounce so that transmitter (1) is near valve hole. Carefully lift tire onto turntable and position valve hole (and transmitter) 270 degree from mounting/dismounting head (2).
4. Lubricate tire well and remove first side of the tire. Reach inside the tire and remove the transmitter.



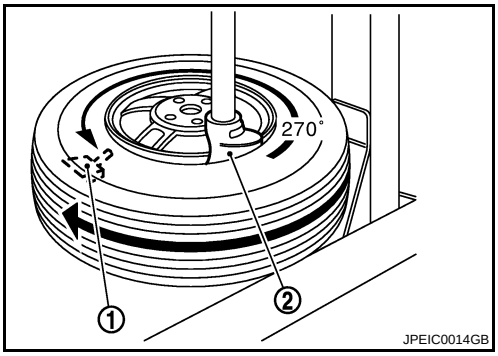
INSTALLATION

1. Put first side of tire onto rim.



2. Mount transmitter on rim and tighten nut.
   CAUTION:
   Speed for tightening nut should be less than 10 rpm.

3. Place wheel on turntable of tire machine. Ensure that transmitter (1) is 270 degree from mounting head (2) when second side of tire is fitted.
   NOTE:
   Do not touch transmitter at mounting head.
4. Lubricate tire well and fit second side of tire as normal. Ensure that tire does not rotate relative to rim.
5. Inflate tire and fit to appropriate wheel position.



TIRE PRESSURE RECEIVER

Removal and Installation

INFOID:0000000005493004

REMOVAL

1. Remove the glove box assembly. Refer to IP-12, "Exploded View".
2. Remove the glove box cover. Refer to IP-12, "Exploded View".
3. Disconnect tire pressure receiver harness connector.
4. Remove tire pressure receiver mounting screw.
5. Remove tire pressure receiver.

INSTALLATION

Install is the reverse order of removal.

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Road Wheel

INFOID:0000000005493005

ALUMINUM WHEEL

Item		Limit
Radial runout	Lateral deflection	Less than 0.3 mm (0.012 in)
	Vertical deflection	
Allowable unbalance	Dynamic (At flange)	Less than 10 g (0.35 oz) (one side)
	Static (At flange)	Less than 20 g (0.70 oz)

STEEL WHEEL

Item			Limit
Radial runout	Conventional	Lateral deflection	Less than 0.8 mm (0.031 in)
		Vertical deflection	Less than 0.5 mm (0.020 in)
	Emergency	Lateral deflection	Less than 1.2 mm (0.031 in)
		Vertical deflection	Less than 1.0 mm (0.020 in)
Allowable unbalance		Dynamic (At flange)	Less than 10 g (0.35 oz) (one side)
		Static (At flange)	Less than 20 g (0.70 oz)

Tire Air Pressure

INFOID:0000000005493006

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

Tire size	Air pressure	
	Front	Rear
P195/60R15 87H	230 (2.3, 33)	230 (2.3, 33)
P195/55R16 86V	230 (2.3, 33)	230 (2.3, 33)
T125/70D15 95M	420 (4.2, 60)	420 (4.2, 60)

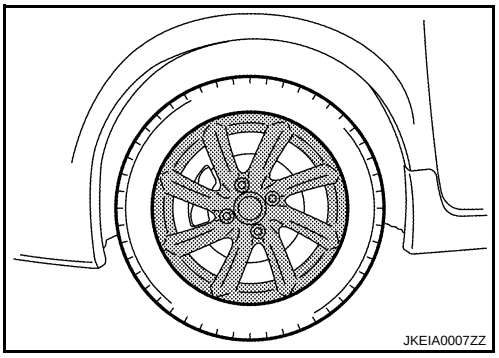
SPEC CHANGE INFORMATION

ROAD WHEEL TIRE ASSEMBLY

Road Wheel Tire Assembly

INFOID:0000000005493007

The wheels are made of specifically-designed bright aluminum with their surface treated with sputtering coating.



Z12 Krom	Item	Data
Aluminum road wheels	Size	16 × 6J
	Offset	+ 1.65 in (+42 mm)
	P. C. D.	4.5 in (114.3 mm)
Tires	Tire size	195/ 55R16 86V

CAUTION:

- **Wheels with sputtering coating are not plated wheels. Never use a cleaner for plating, abrasive cleanser, and brush. (Since sputtering is one of the methods of metallic coating, the surface treatment may be subject to damage, peel, or corrosion.)**
- **Wash regularly with a sponge dampened in a mild soap solution, especially during winter months in areas where road salt is used. Salt could discolor the wheels if not removed.**