SECTION WT
ROAD WHEELS & TIRES

CONTENTS

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Repair Work Flow

INFOID:0000000004236595

DETAILED FLOW

1.VERIFY COSTOMER COMPLAINTS

Interview the customer to obtain detailed information about the symptom.

>> GO TO 2.

2.DETERMINE REFERENCE ITEM RELATED TO SYMPTOM

Check the symptom on the vehicle from the information obtained.
(cruise test, warning lamp illumination or blinking, etc.)

Is the symptom confirmed?

YES >> GO TO 3.
NO >> GO TO 4.

3.PRELIMINARY INSPECTION

1. Perform basic inspection.
2. Check all tire pressures. Refer to WT-81, "Tire".
3. Check the low tire pressure warning lamp for illumination or blinking. Refer to WT-62, "Symptom Table".

Is the malfunction corrected?

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

4.PERFORM SELF-DIAGNOSIS

1. Perform self-diagnosis. Record any DTCs and data displayed on CONSULT-III.
2. Perform inspection according to the displayed DTC. Refer to WT-60, "DTC Index".

Is the causal factor identified from DTC?

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

5.CHECK SYMPTOM

Perform troubleshooting by symptom. Refer to WT-62, "Symptom Table".

Is the causal factor identified?

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

6.REPAIR OR REPLACE MULFUNCTIONING PARTS

Repair or replace the applicable part.

>> GO TO 7.

7.CHECK SELF-DIAGNOSIS RESULT

1. Erase DTCs. Refer to WT-12, "AIR PRESSURE MONITOR : Diagnosis Description".
2. Perform self-diagnosis again.

Is any DTC displayed?

YES >> GO TO 4.
NO >> GO TO 8.

8.FINAL CHECK

1. Perform a cruise test.
2. Check the warning lamp for illumination or blinking.

Is the malfunction corrected?

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

INSPECTION AND ADJUSTMENT
TRANSMITTER WAKE UP OPERATION

TRANSMITTER WAKE UP OPERATION : Description

INFOID:0000000004236596

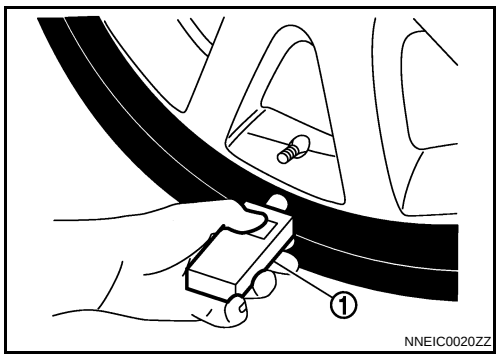
This procedure must be done after replacement of a transmitter, BCM, or rotation of wheels.

TRANSMITTER WAKE UP OPERATION : Special Repair Requirement

INFOID:0000000004236597

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, b — a : 0.3 sec. b : 1.3 sec.	Rear RH
ON / OFF: 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-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

NO >> Perform trouble diagnosis for the transmitter. Refer to WT-17, "Diagnosis Procedure".

ID REGISTRATION PROCEDURE

ID REGISTRATION PROCEDURE : Description

INFOID:0000000004236598

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

ID REGISTRATION PROCEDURE : Special Repair Requirement

INFOID:0000000004236599

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?

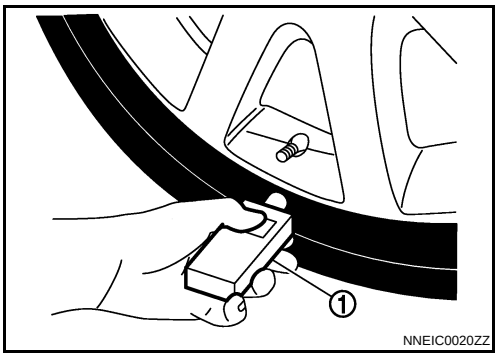
YES >> GO TO 2.
NO >> GO TO 3.

2. TRANSMITTER ID REGISTRATION PROCEDURE (WITH THE 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.

Se-quence	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-12, "AIR PRESSURE MONITOR : Diagnosis Description".

3. TRANSMITTER ID REGISTRATION PROCEDURE (WITHOUT THE 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, 31)
Rear RH	200 (2.0, 29)
Rear LH	180 (1.8, 26)

2. Drive the vehicle at a speed at more than 40 km/h (25 MPH) for 3 minutes or more, then perform the 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-81, "Tire".

Is ID registrations for all wheels completed?

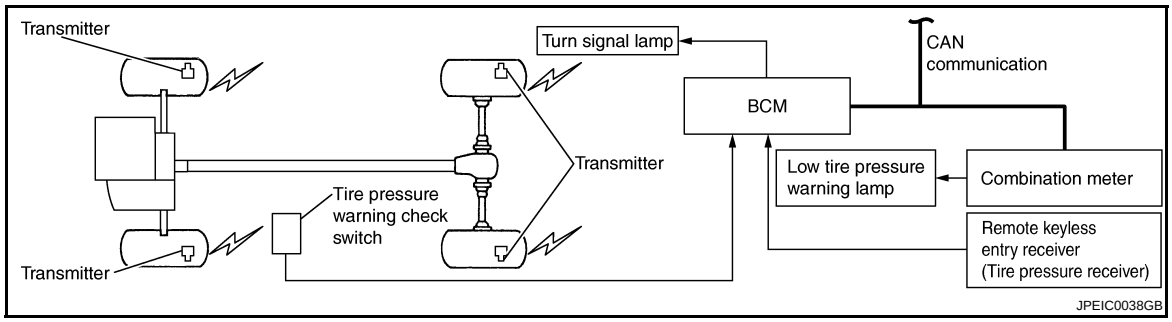
YES >> ID registration END.
NO >> Performs trouble-diagnosis of the Tire Pressure Monitoring System (TPMS). Refer to WT-12, "AIR PRESSURE MONITOR : Diagnosis Description".

FUNCTION DIAGNOSIS

TPMS

System Diagram

INFOID:0000000004236600



System Description

INFOID:0000000004236601

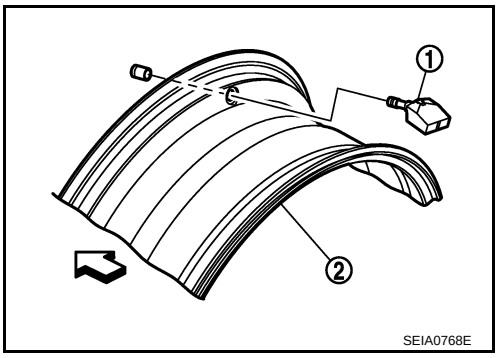
DISCRIPTION

During driving, the TPMS (Tire Pressure Monitoring System) receives the signal transmitted from transmitter installed in each wheel, when the tire pressure becomes low. 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.

TRANSMITTER

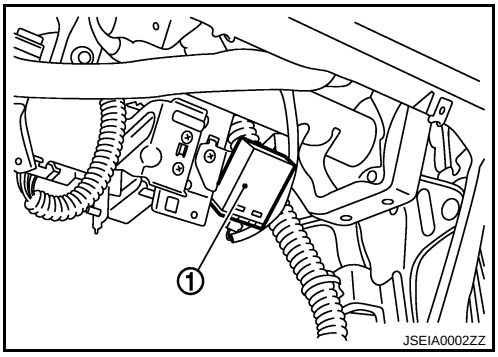
A sensor-transmitter (1) integrated with a valve is installed on a wheel (2), and transmits a detected air pressure signal by radio wave.

⇦ : Outside



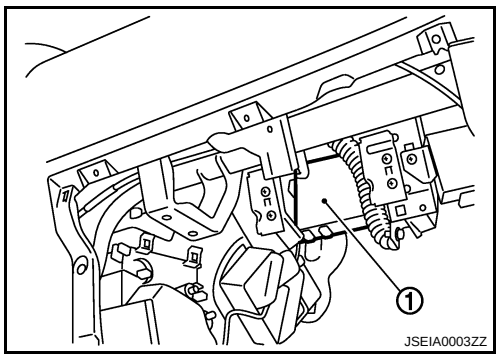
REMOTE KEYLESS ENTRY RECEIVER

The remote keyless entry receiver (tire pressure receiver) (1) receives the air pressure signal transmitted by the transmitter in each wheel.



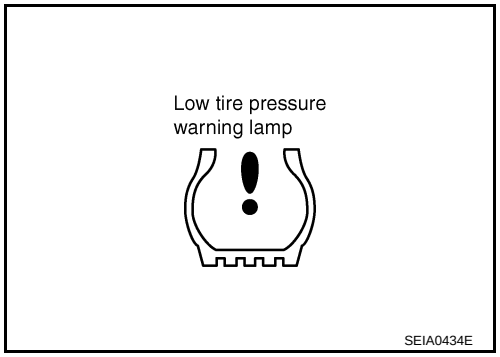
BCM (BODY CONTROL MODULE)

The BCM (1) reads the air pressure signal received by the remote keyless entry receiver (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.



LOW TIRE PRESSURE WARNING LAMP

The combination meter receives tire pressure status from the BCM using CAN communication. When BCM judges from a transmitter signal that tire pressure is insufficient, BCM transmits a signal to combination meter through CAN communication. combination meter turns on the low tire pressure warning lamp mounted on the combination meter.



Low tire pressure warning lamp indication

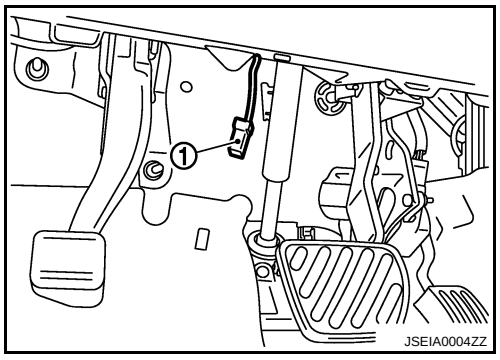
Condition	Low tire pressure warning lamp
Less than 182.7 kPa (1.9 kg/cm^2, 26 psi) [NOTE]	ON
Low tire pressure warning system malfunction [Other diagnostic item]	Warning lamp blinks 1 min, then turns ON.

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

TIRE PRESSURE WARNING CHECK SWITCH

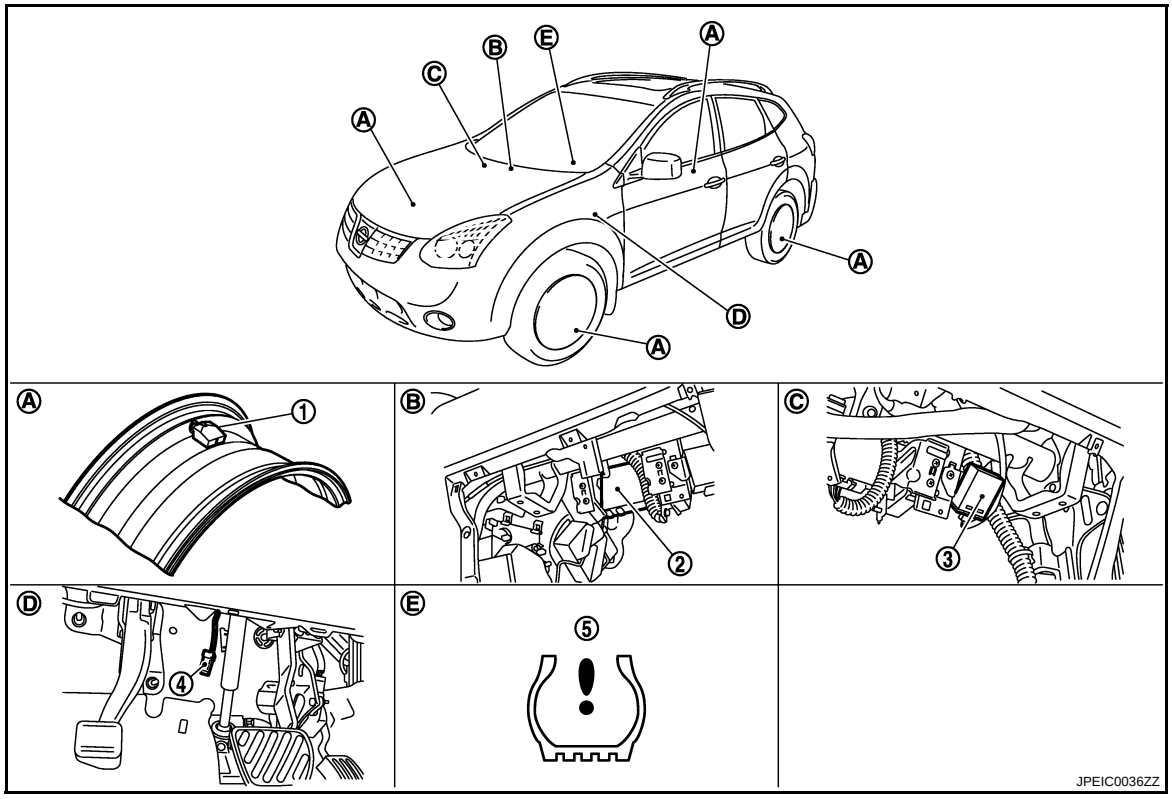
The following item can be checked by grounding the tire pressure warning check switch (1) harness connector terminal.

- The low tire pressure warning lamp in the combination meter will blinks according to the self-diagnostic results.



Component Parts Location

INFOID:0000000004236602



1. Transmitter
2. BCM
3. Remote keyless entry receiver (Tire pressure receiver)
4. Tire pressure warning check switch
5. Low tire pressure warning lamp
A. Wheel
B. Behind glove box cover assembly
C. Behind glove box cover assembly
D. Behind instrument driver lower cover
E. Inside combination meter

Component Description

INFOID:0000000004236603

Component parts	Function
BCM (Body Control Module)	BCS-7, "System Description".
Transmitter	WT-17, "Description".
Remote keyless entry receiver (Tire pressure receiver)	WT-33, "Description".
Tire pressure warning check switch	WT-35, "Description".
Turn signal lamp	ID registration of each wheel has been completed, turn signal lamp flashes.
Combination meter	Controls a low tire pressure warning lamp, turn signal lamp, and buzzer by signals from the BCM.
Low tire pressure warning lamp	Illuminates if malfunction is detected in electrical system of TPMS.

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

INFOID:0000000004236604

APPLICATION ITEM
CONSULT-III can display each diagnostic item using the diagnostic test modes shown following.

Diagnosis mode	Function description
ECU Identification	BCM part number is displayed.
Self-Diagnostic Result	Displays the diagnosis results judged by BCM. Refer to BCS-63, "DTC Index".
Data Monitor	BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Work Support	Changes the setting for each system function.
Configuration	• Read and save the vehicle specification. • Write the vehicle specification when replacing BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from 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	CONSULT-III 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 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		×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY		×	
Combination switch	COMB SW		×	
—	BCM	×		
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR	×	×	×
Signal buffer system	SIGNAL BUFFER		×	×
—	FUEL LID*			
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×
Panic alarm system	PANIC ALARM			×

*: This item is displayed, but is not function.

AIR PRESSURE MONITOR

AIR PRESSURE MONITOR : Diagnosis Description

INFOID:0000000004236605

DESCRIPTION

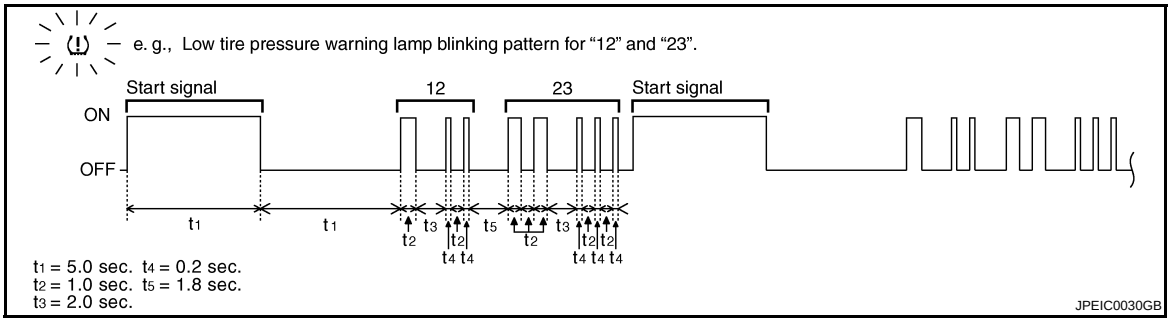
During driving, the TPMS receives the signal transmitted from the transmitter installed in each wheel, when the tire pressure becomes low. The control unit (BCM) of this system has pressure judgment and trouble diagnosis functions.
When the TPMS detects low inflation pressure or another unusual symptom, the low tire pressure warning lamps in the combination meter comes on.

SELF DIAGNOSTIC PROCEDURE (WITH CONSULT-III)

With CONSULT-III
Touch “SELF-DIAG RESULT” display shows malfunction experienced since the last erasing operation. Refer to WT-60, "DTC Index".

SELF DIAGNOSTIC PROCEDURE (WITHOUT CONSULT-III)

Without CONSULT-III
To start the self-diagnostic results mode, ground terminal of the tire pressure warning check connector. The malfunction location is indicated by the low tire pressure warning lamp blinking.



NOTE:
When the low tire pressure warning lamp blinks 5 Hz and continues repeating it, the system is normal.

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. [NOTE]	–
16	Tire pressure value (Front RH)	Front RH tire pressure drops to 182.7 kPa (1.9 kg/cm^2, 26 psi) or less. [NOTE]	
17	Tire pressure value (Rear RH)	Rear RH tire pressure drops to 182.7 kPa (1.9 kg/cm^2, 26 psi) or less. [NOTE]	
18	Tire pressure value (Rear LH)	Rear LH tire pressure drops to 182.7 kPa (1.9 kg/cm^2, 26 psi) or less. [NOTE]	
21	Transmitter no data (Front LH)	Data from front LH transmitter can not be receive.	WT-17
22	Transmitter no data (Front RH)	Data from front RH transmitter can not be receive.	
23	Transmitter no data (Rear RH)	Data from Rear RH transmitter can not be receive.	
24	Transmitter no data (Rear LH)	Data from Rear LH transmitter can not be receive.	
31	Transmitter checksum error (Front LH)	Checksum data from front LH transmitter is malfunctioning.	WT-20
32	Transmitter checksum error (Front RH)	Checksum data from front RH transmitter is malfunctioning.	
33	Transmitter checksum error (Rear RH)	Checksum data from rear RH transmitter is malfunctioning.	
34	Transmitter checksum error (Rear LH)	Checksum data from rear RH transmitter is malfunctioning.	

Blinking pattern	Items	Diagnostic items detected when···	Check item
35	Transmitter pressure data error (Front LH)	Air pressure data from front LH transmitter is malfunction.	WT-23
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.	
41	Transmitter function code error (Front LH)	Function code data from front LH transmitter is malfunction.	WT-25
42	Transmitter function code error (Front RH)	Function code data from front RH transmitter is malfunction.	
43	Transmitter function code error (Rear RH)	Function code data from rear RH transmitter is malfunction.	
44	Transmitter function code error (Rear LH)	Function code data from rear LH transmitter is malfunction.	
45	Transmitter battery voltage low (Front LH)	Battery voltage of front LH transmitter drops.	WT-28
46	Transmitter battery voltage low (Front RH)	Battery voltage of front RH transmitter drops.	
47	Transmitter battery voltage low (Rear RH)	Battery voltage of rear RH transmitter drops.	
48	Transmitter battery voltage low (Rear LH)	Battery voltage of rear LH transmitter drops.	
52	Vehicle speed signal error	Speed signal is not detected.	WT-31
54	Ignition line	BCM ignition line is malfunction.	BCS-36
No blinking	Tire pressure warning check switch	Tire pressure warning switch circuit is open.	–

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

ERASE SELF-DIAGNOSIS

With CONSULT-III
1. Perform applicable inspection of malfunctioning item and then repair or replace.
2. Turn ignition switch “ON” and select “SELF-DIAG RESULTS” mode for “AIR PRESSURE MONITOR” with CONSULT-III.
3. Touch “ERASE” on CONSULT-III screen to erase memory.

Without CONSULT-III
- In order to make it easier to find the cause of hard-to-duplicate malfunctions, malfunction information is stored into the control unit as necessary during use by the user. This memory is not erased no matter how many times the ignition switch is turned “ON” and “OFF”.
- However, this information is erased by turning ignition switch “OFF” after performing self-diagnostic or by erasing the memory using the CONSULT-III.

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

INFOID:0000000004236606

WORK SUPPORT MODE

ID Read
The registered ID number is displayed.

ID Regist
Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

SELF-DIAG RESULTS MODE

Operation Procedure
Refer to WT-60, "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.

Display item list

Monitor	Condition	Specification
VEHICLE SPEED	Drive vehicle	Vehicle speed (km/h or MPH)
AIR PRESS FL AIR PRESS FR AIR PRESS RR AIR PRESS RL	• Drive vehicle for a few minutes. or • Ignition switch ON and transmitter activation tool is transmitting activation signals.	Tire pressure (kPa or Psi)
ID REGST FL ID REGST FR ID REGST RR ID REGST RL	Ignition switch ON	Registration ID: Done No registration: Yet
WARNING LAMP		Low tire pressure warning lamp ON: On Low tire pressure warning lamp OFF: Off
BUZZER		Buzzer in combination meter ON: On Buzzer in combination meter OFF: Off

NOTE:
Before performing the self-diagnosis, be sure to register the ID, or 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.
FLAT TIRE WARNING	This test is able to check to check that the buzzer sounds.
HORN	This test is able to check to check that the horn sounds.
FLASHER	This test is able to check to check that each turn signal lamp turns on.
RUNFLAT TIRE W/L	**NOTE:** This item is displayed, but cannot be use this item.

COMPONENT DIAGNOSIS

C1704, C1705, C1706, C1707 LOW TIRE PRESSURE

Description

INFOID:0000000004236607

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:0000000004236608

DTC DETECTION LOGIC

DTC number	Trouble diagnosis name	DTC detecting 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]	Tire pressure is low
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]	

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

DTC CONFIRMATION PROCEDURE

1.CHECK ID REGISTRATION AND VEHICLE DRIVING

With CONSULT-III
Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes. Then check all tire pressure with CONSULT-III “DATA MONITOR” within 5 minutes.

Monitored item	Condition	Display value
AIR PRESS FL	Start engine and drive at 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

YES >> INSPECTION END
NO >> Go to diagnosis procedure. Refer to WT-15, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000004236609

1.ADJUST TIRE AIR PRESSURE

1. Adjust all tire air pressures. Refer to WT-81, "Tire".
2. Check all tire air pressures.

Does all tire pressure data meet the specification?

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

2.CHECK AIR PRESSURE SIGNAL

Drive at a speed of 40 km/h (25 MPH) or more 3 minutes, and then drive the vehicle at any speed for 10 minutes. Then check all tire pressure with CONSULT-III “DATA MONITOR” within 5 minutes.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

YES >> INSPECTION END
NO >> Inspect or replace the tire or wheels. Refer to WT-73, "Service Notice or Precautions".

C1708, C1709, C1710, C1711 TRANSMITTER (NO DATA)

Description

INFOID:0000000004236610

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

DTC Logic

INFOID:0000000004236611

DTC DETECTION LOGIC

DTC number	Trouble diagnosis name	DTC detecting condition	Possible cause
C1708	[NO DATA] FL	Data from front-LH transmitter can not receive.	• Harness or connector (Remote keyless entry receiver, BCM) • ID registration is not finished • Transmitter malfunction
C1709	[NO DATA] FR	Data from front-RH transmitter can not receive.	
C1710	[NO DATA] RR	Data from rear-RH transmitter can not receive.	
C1711	[NO DATA] RL	Data from rear-LH transmitter can not receive.	

DTC CONFIRMATION PROCEDURE

1.CHECK ID REGISTRATION AND VEHICLE DRIVING

With CONSULT-III

1. Perform ID registration of all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".
2. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes. Then check all tire pressure with CONSULT-III “DATA MONITOR” within 5 minutes.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

YES >> INSPECTION END
NO >> Go to diagnosis procedure. Refer to WT-17, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000004236612

1.CHECK AIR PRESSURE SIGNAL

With CONSULT-III

1. Start the engine
2. Select “DATA MONITOR” mode for “AIR PRESSURE MONITOR” with CONSULT-III.
3. Read out the value of “AIR PRESS FL”, “AIR PRESS FR”, “AIR PRESS RR”, “AIR PRESS RL”.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Are all tire pressures displayed 0 kPa?

YES >> GO TO 2.
NO >> GO TO 4.

2.CHECK HARNESS BETWEEN BCM AND REMOTE KEYLESS ENTRY RECEIVER

1. Turn the ignition switch “OFF”.

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

BCM		Remote keyless entry receiver (Tire pressure receiver)		Continuity
Connector	Terminal	Connector	Terminal	
M65	18	M91	1	Existed
	19		4	
	20		2	

Also check harness for short to ground and short to power.

Is the inspection result normal?

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

3.CHECK REMOTE KEYLESS ENTRY RECEIVER

Check remote keyless entry receiver (tire pressure receiver). Refer to WT-33, "Diagnosis Procedure".

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 damage parts.
NO >> Replace the remote keyless entry receiver (tire pressure receiver).

4.CHECK ID REGISTRATION

Perform ID registration of all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

Can ID registration of all transmitters be completed?

YES >> GO TO 5.
NO >> Replace malfunctioning transmitter, then GO TO 6.

5.CHECK TIRE PRESSURE MONITORING SYSTEM

With CONSULT-III

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

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

YES >> INSPECTION END
NO >> Replace BCM. Refer to BCS-67, "Removal and Installation".

6.CHECK ID REGISTRATION

With CONSULT-III

1. Perform ID registration of all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".
2. Drive at a speed 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes. Then check all tire pressures with CONSULT-III “DATA MONITOR” within 5 minutes.

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

YES >> INSPECTION END
NO >> Perform the self-diagnosis, inspect detected malfunction.

Special Repair Requirement

INFOID:0000000004236613

1.CHECK TIRE AIR PRESSURE

Check all tire air pressures. Refer to WT-81, "Tire".

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-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

Can ID registration of all transmitters be completed?

YES >> END
NO >> GO TO 1.

C1712, C1713, C1714, C1715 TRANSMITTER (CHECKSUM)

Description

INFOID:0000000004236614

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

DTC Logic

INFOID:0000000004236615

DTC DETECTION LOGIC

DTC	Trouble diagnosis name	DTC detecting condition	Possible case
C1712	[CHECKSUM ERR] FL	Checksum data from front-LH transmitter is malfunction.	• Remote keyless entry receiver (Tire pressure receiver) malfunction • Transmitter malfunction • BCM malfunction
C1713	[CHECKSUM ERR] FR	Checksum data from front-RH transmitter is malfunction.	
C1714	[CHECKSUM ERR] RR	Checksum data from rear-RH transmitter is malfunction.	
C1715	[CHECKSUM ERR] RL	Checksum data from rear-LH transmitter is malfunction.	

DTC CONFIRMATION PROCEDURE

1.VEHICLE DRIVING

With CONSULT-III

1. Driving at a speed 40 km/h (25 MPH) or more for 3 minutes, and then driving the vehicle at any speed for 10 minutes.
2. Check all tire pressure with CONSULT-III “DATA MONITOR” within 5 minutes.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

YES >> INSPECTION END
NO >> Go to diagnosis procedure. Refer to WT-20, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000004236616

1.CHECK ID REGISTRATION

With CONSULT-III

1. Perform the ID registration of all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".
2. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes. Then check all tire pressure with CONSULT-III “DATA MONITOR” within 5 minutes.

Can ID registration of all transmitters be completed?

YES >> GO TO 6.
NO >> GO TO 2.

2.CHECK AIR PRESSURE SIGNAL

With CONSULT-III

1. Start the engine.
2. Select “DATA MONITOR” mode for “AIR PRESSURE MONITOR” with CONSULT-III.
3. Read out the value of “AIR PRESS FL”, “AIR PRESS FR”, “AIR PRESS RR” and “AIR PRESS RL”.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Are all tire pressures displayed 0 kPa?

YES >> GO TO 3.
NO >> GO TO 5.

3.CHECK HARNESS BETWEEN BCM AND REMOTE KEYLESS ENTRY RECEIVER

1. Turn the ignition switch “OFF”.
2. Disconnect BCM harness connector and remote keyless entry receiver (tire pressure receiver) harness connector.
3. Check continuity between BCM harness connector and remote keyless entry receiver (tire pressure receiver) harness connector.

BCM		Remote keyless entry receiver (Tire pressure receiver)		Continuity
Connector	Terminal	Connector	Terminal	
M65	18	M91	1	Existed
	19		4	
	20		2	

Also check harness for short to ground and short to power.

Is the inspection result normal?

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

4.CHECK REMOTE KEYLESS ENTRY RECEIVER

Check remote keyless entry receiver (tire pressure receiver). Refer to WT-33, "Diagnosis Procedure".

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.
NO >> Replace the remote keyless entry receiver (tire pressure receiver).

5.CHECK ID REDGISTRATION

Perform ID registration of all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

Can ID registration of all transmitters be completed?

YES >> GO TO 6.
NO >> GO TO 7 after malfunctioning transmitter replacement.

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. Check all tire pressure with CONSULT-III “DATA MONITOR” within 15 minutes after vehicle speed becomes 17 km/h (11 MPH).

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

YES >> INSPECTION END
NO >> Replace BCM. Refer to BCS-67, "Removal and Installation".

7.CHECK ID REGISTRATION

With CONSULT-III

1. Perform ID registration of all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".
2. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes. Then check all tire pressure with CONSULT-III “DATA MONITOR” within 5 minutes.

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

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

Special Repair Requirement

INFOID:0000000004236617

1.CHECK TIRE AIR PRESSURE

Check all tire air pressures. Refer to WT-81, "Tire".

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-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

Can ID registration of all transmitters be completed?

YES >> END
NO >> GO TO 1.

C1716, C1717, C1718, C1719 TRANSMITTER (PRESSDATA)

Description

INFOID:0000000004236618

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

DTC Logic

INFOID:0000000004236619

DTC DETECTION LOGIC

DTC number	Trouble diagnosis name	DTC detecting condition	Possible case
C1716	[PRESSDATA ERR] FL	Air pressure data from front-LH transmitter malfunction	• ID registration is not finished • Transmitter malfunction
C1717	[PRESSDATA ERR] FR	Air pressure data from front-RH transmitter malfunction	
C1718	[PRESSDATA ERR] RR	Air pressure data from rear-RH transmitter malfunction	
C1719	[PRESSDATA ERR] RL	Air pressure data from rear-LH transmitter malfunction	

DTC CONFIRMATION PROCEDURE

1.VEHICLE DRIVING

With CONSULT-III

1. Drive at a speed 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes. Then check all tire pressure with CONSULT-III “DATA MONITOR” within 5 minutes.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at 40 km/h (25MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

YES >> INSPECTION END
NO >> Go to Diagnosis procedure. Refer to WT-23, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000004236620

1.CHECK TIRE PRESSURE

With CONSULT-III

1. Adjust tire pressure to specified value. Refer to WT-81, "Tire".
2. Perform the ID registration of all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".
3. Drive at a speed of 40 km/h (25 MPH) or more for several minutes without stopping.
4. Check all tire pressure with CONSULT-III “DATA MONITOR” within 15 minutes after vehicle speed become 17 km/h (11 MPH).

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FL		
AIR PRESS FL		
AIR PRESS FL		

Is tire pressure indicated as 438.60 kPa (4.47kg/cm^2, 63.60 psi) on the “DATA MONITOR” screen?

YES >> Replace malfunctioning transmitter.
NO >> GO TO 2.

2.CHECK TIRE PRESSURE MONITORING SYSTEM

With CONSULT-III
1. Perform the ID registration of all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".
2. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes. Then check all tire pressures with CONSULT-III “DATA MONITOR” within 5 minutes.

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

YES >> INSPECTION END
NO >> Perform the self-diagnosis, inspect detected malfunction. Refer to WT-12, "AIR PRESSURE MONITOR : Diagnosis Description".

Component Inspection

INFOID:0000000004236621

1.CHECK TRANSMITTER

With CONSULT-III
1. Adjust tire pressure to specified value. Refer to WT-81, "Tire".
2. Perform ID registration of all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".
3. Drive at a 40 km/h (25 MPH) or more for several minutes without stopping.
4. Check all tire pressure with CONSULT-III “DATA MONITOR” within 15 minutes after vehicle speed become 17 km/h (11 MPH).

Is tire pressure indicated as 438.60 kPa (4.47 kg/cm^2, 63.60 psi) on the “DATA MONITOR” screen?

YES >> Replace malfunctioning transmitter.
NO >> Check BCM and remote keyless entry receiver (tire pressure receiver).

Special Repair Requirement

INFOID:0000000004236622

1.CHECK TIRE AIR PRESSURE

Check all tire air pressures. Refer to WT-81, "Tire".

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-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

Can ID registration of all transmitters be completed?

YES >> END
NO >> GO TO 1.

C1720, C1721, C1722, C1723 TRANSMITTER (CODE)

Description

INFOID:0000000004236623

A sensor-transmitter integrated with a valve is installed on a wheel, and detected air pressure signal by radio wave.

DTC Logic

INFOID:0000000004236624

DTC DETECTION LOGIC

DTC number	Trouble diagnosis name	DTC detecting condition	Possible case
C1720	[CODE ERR] FL	function code data from front-LH transmitter is malfunction.	• Remote keyless entry receiver (Tire pressure receiver) malfunction • Transmitter malfunction • BCM malfunction
C1721	[CODE ERR] FR	function code data from front-RH transmitter is malfunction.	
C1722	[CODE ERR] RR	function code data from rear-RH transmitter is malfunction.	
C1723	[CODE ERR] RL	function code data from rear-LH transmitter is malfunction.	

DTC CONFIRMATION PROCEDURE

1.VEHICLE DRIVING

With CONSULT-III

1. Driving at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
2. Check all tire pressure with CONSULT-III “DATA MONITOR” within 5 minutes.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

YES >> INSPECTION END
NO >> Go to diagnosis procedure. Refer to WT-25, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000004236625

1.CHECK ID REGISTRATION

With CONSULT-III

1. Perform the ID registration of all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".
2. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes. Then check all tire pressure with CONSULT-III “DATA MONITOR” within 5 minutes.

Can ID registration of all transmitters be completed?

YES >> GO TO 6.
NO >> GO TO 2.

2.CHECK ALL TIRE PRESSURE SIGNAL

With CONSULT-III

1. Start the engine.
2. Select “DATA MONITOR” mode for “AIR PRESSUR MONITOR” with CONSULT-III.
3. Read out the value of “AIR PRESS FL”, “AIR PRESS FR”, “AIR PRESS RR” and “AIR PRESS RL”.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Are all tire pressure displayed 0 kPa?

YES >> GO TO 3.
NO >> GO TO 5.

3.CHECK HARNESS BETWEEN BCM AND REMOTE KEYLESS ENTRY RECEIVER

1. Turn the ignition switch “OFF”.
2. Disconnect BCM harness connector and remote keyless entry receiver (tire pressure receiver) harness connector.
3. Check continuity between BCM harness connector and remote keyless entry receiver (tire pressure receiver) harness connector.

BCM		Remote keyless entry receiver (Tire pressure receiver)		Continuity
Connector	Terminal	Connector	Terminal	
M65	18	M91	1	Existed
	19		4	
	20		2	

Also check harness for short to ground and short to power.

Is the inspection result normal?

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

4.CHECK REMOTE KEYLESS ENTRY RECEIVER

Check remote keyless entry receiver (tire pressure receiver). Refer to WT-33, "Diagnosis Procedure".

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.
NO >> Replace the remote keyless entry receiver (tire pressure receiver).

5.CHECK ID REGISTRATION

Perform ID registration of all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

Can ID registration of all transmitters be completed?

YES >> GO TO 6.
NO >> GO TO 7 after malfunctioning transmitter replacement.

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. Check all tire pressures with CONSULT-III “DATA MONITOR” within 15 minutes after vehicle speed become 17 km/h (11 MPH).

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

YES >> INSPECTION END.
NO >> Replace BCM. Refer to BCS-67, "Removal and Installation".

7.CHECK ID REGISTRATION

With CONSULT-III

1. Perform ID registration of all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

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

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

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

Special Repair Requirement

INFOID:0000000004236626

1. CHECK TIRE AIR PRESSURE

Check all tire air pressures. Refer to WT-81, "Tire".

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-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

Can ID registration of all transmitters be completed?

YES >> END
NO >> GO TO 1.

C1724, C1725, C1726, C1727 TRANSMITTER (BATT VOLT)

Description

INFOID:0000000004236627

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

DTC Logic

INFOID:0000000004236628

DTC DETECTION LOGIC

DTC number	Trouble diagnosis name	DTC detecting condition	Possible case
C1724	[BATT VOLT LOW] FL	Battery voltage of front-LH transmitter drops.	• Transmitter malfunction • Remote keyless entry receiver (Tire pressure receiver) malfunction • BCM malfunction
C1725	[BATT VOLT LOW] FR	Battery voltage of front-RH transmitter drops.	
C1726	[BATT VOLT LOW] RR	Battery voltage of rear-RH transmitter drops.	
C1727	[BATT VOLT LOW] RL	Battery voltage of rear-LH transmitter drops.	

DTC CONFIRMATION PROCEDURE

1.VEHICLE DRIVING

With CONSULT-III

Driving at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed 10minutes. Then check all tire pressure with CONSULT-III “DATA MONITOR” within 5 minutes.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FL		
AIR PRESS FL		
AIR PRESS FL		

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

YES >> INSPECTION END
NO >> Go to diagnosis procedure. Refer to WT-28, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000004236629

1.CHECK ID REGISTRATION

With CONSULT-III

1. Perform the ID registration of all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".
2. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes. Then check all tire pressures with CONSULT-III “DATA MONITOR” within 5 minutes.

Can ID registration of all transmitters be completed?

YES >> GO TO 6.
NO >> GO TO 2.

2.CHECK AIR PRESSURE SIGNAL

With CONSULT-III

1. Start the engine.
2. Select “DATA MONITOR” mode for “AIR PRESSURE MONITOR” with CONSULT-III.
3. Read out the value of “AIR PRESS FL”, “AIR PRESS FR”, “AIR PRESS RR” and “AIR PRESS RL”.

Monitored item	Condition	Display value
AIR PRESS FL	Start the engine and drive at 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Are all tire pressures displayed 0 kPa?

YES >> GO TO 3.
NO >> GO TO 5.

3. CHECK HARNESS BETWEEN BCM AND TIRE PRESSURE RECEIVER

1. Turn the ignition switch “OFF”.
2. Disconnect BCM harness connector and remote keyless entry receiver (tire pressure receiver) harness connector.
3. Check continuity between BCM harness connector and remote keyless entry receiver (tire pressure receiver) harness connector.

BCM		Remote keyless entry receiver (Tire pressure receiver)		Continuity
Connector	Terminal	Connector	Terminal	
M65	18	M91	1	Existed
	19		4	
	20		2	

Also check harness for short to ground and short to power.

Is the inspection result normal?

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

4. CHECK REMOTE KEYLESS ENTRY RECEIVER

Check remote keyless entry receiver (tire pressure receiver). Refer to WT-33, "Diagnosis Procedure".

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 damage parts.
NO >> Replace the remote keyless entry receiver (tire pressure receiver).

5. CHECK ID REGISTRATION

Perform ID registration of all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

Can ID registration of all transmitters be completed?

YES >> GO TO 6.
NO >> GO TO 7 after malfunctioning transmitter replacement.

6. CHECK TIRE PRESSURE MONITORING SYSTEM

With CONSULT-III

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

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

YES >> INSPECTION END
NO >> Replace BCM. Refer to BCS-67, "Removal and Installation".

7. CHECK ID REGISTRATION

With CONSULT-III

1. Perform ID registration of all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

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

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

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

Special Repair Requirement

INFOID:0000000004236630

1.CHECK TIRE AIR PRESSURE

Check all tire air pressures. Refer to WT-81, "Tire".

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-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

Can ID registration of all transmitters be completed?

YES >> END
NO >> GO TO 1.

C1729 VEHICLE SPEED SIG ERR

Description

INFOID:0000000004236631

BCM detects no vehicle speed signal.

DTC Logic

INFOID:0000000004236632

DTC DETECTION LOGIC

DTC number	Trouble diagnosis name	DTC detecting condition	Possible case
C1729	VHCL SPEED SIG ERR	Vehicle speed signal is not detected	• CAN communication error • Combination meter malfunction Refer to MWI-38, "Diagnosis Procedure"

DTC CONFIRMATION PROCEDURE

1.VEHICLE DRIVING

With CONSULT-III

Drive at speed 40 km/h (25 MPH) or more for several minutes without stopping.

Does “DATA MONITOR” displayed the standardized value without turning low pressure warning lamp ON?

YES >> INSPECTION END

NO >> Go to diagnosis procedure. Refer to WT-31, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000004236633

1.CHECK SELF-DIAGNOSTIC RESULTS

With CONSULT-III

1. On “SELECT DIAG MODE”, select the “SELF-DIAG RESULT” screen.
2. Check display contents in self-diagnostic results.

Is the “CAN COMM CIRCUIT” displayed in the self-diagnosis display?

YES >> Perform trouble diagnosis for CAN communication system. Refer to LAN-24, "CAN System Specification Chart".

NO >> Check combination meter. Refer to MWI-38, "Diagnosis Procedure".

Special Repair Requirement

INFOID:0000000004236634

1.CHECK TIRE AIR PRESSURE

Check all tire air pressures. Refer to WT-81, "Tire".

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-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

Can ID registration of all transmitters be completed?

YES >> END

NO >> GO TO 1.

POWER SUPPLY AND GROUND CIRCUIT
BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:0000000004236635

1.CHECK FUSES AND FUSIBLE LINK

Check that the following fuses and fusible link are not fusing.

Signal name	Fuses and fusible link No.
Battery power supply	10
	J
ACC power supply	20
Ignition power supply	1

Is the fuse fusing?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link is blown.
NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

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

BCM		—	Ignition switch position		
Connector	Terminal		OFF	ACC	ON
M67	70	Ground	Battery voltage	Battery voltage	Battery voltage
	57				
M65	11		Approx. 0 V	Battery voltage	Battery voltage
	38		Approx. 0 V	Approx. 0 V	Battery voltage

Is the measurement value normal?

YES >> GO TO 3.
NO >> Repair the harness or connector.

3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and the ground.

BCM		—	Continuity
Connector	Terminal	Ground	
M67	67		Existed

Does continuity exist?

YES >> INSPECTION END
NO >> Repair the harness or connector.

REMOTE KEYLESS ENTRY RECEIVER

Description

INFOID:0000000004236638

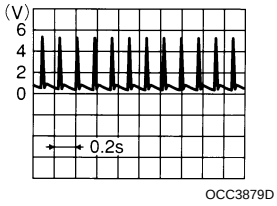
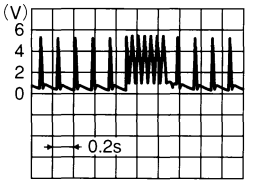
The remote keyless entry receiver (tire pressure receiver) receives the air pressure signal transmitted by the transmitter in each wheel.

Diagnosis Procedure

INFOID:0000000004236639

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

1. Turn the ignition OFF.
2. Check remote keyless entry receiver (tire pressure receiver) connector M91 terminal 2 and ground signal with oscilloscope.

remote keyless entry receiver (Tire pressure receiver)		—	Condition	Voltage (Approx.)
Connector	Terminal			
M91	2	Ground	Standby state	 OCC3879D
			When receiving signal from transmitter	 OCC3880D

Is the reference signal inputted?

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

2.CHECK REMOTE KEYLESS ENTRY RECEIVER (TIRE PRESSURE RECEIVER) INPUT VOLTAGE

1. Disconnect remote keyless entry receiver (tire pressure receiver) connector.
2. Check voltage between remote keyless entry receiver (tire pressure receiver) connector M91 terminal 4 and ground.

remote keyless entry receiver (Tire pressure receiver)		—	Voltage (Approx.)
Connector	Terminal		
M91	4	Ground	5.0 V

Is the reference voltage inputted?

YES >> GO TO 3.
NO >> Check BCM harness and connector.

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

1. Disconnect BCM harness connector and remote keyless entry receiver (tire pressure receiver) connector.
2. Check continuity between BCM harness connector M65 terminal 18 and remote keyless entry receiver (tire pressure receiver) connector M91 terminal 1.

BCM		Remote keyless entry receiver (Tire pressure receiver)		Continuity
Connector	Terminal	Connector	Terminal	
M65	18	M91	1	Existed

Also check harness for short to ground.

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 BCS-37, "Diagnosis Procedure".

Is the BCM circuit normal?

YES >> Replace remote keyless entry receiver (tire pressure receiver).
NO >> Repair or replace BCM circuit. Replace BCM. Refer to BCS-67, "Removal and Installation".

TIRE PRESSURE WARNING CHECK SWITCH

Description

INFOID:0000000004236640

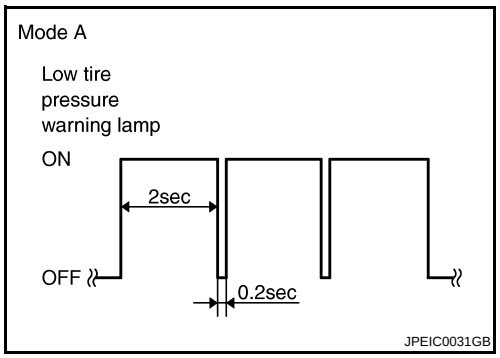
The following item can be checked by grounding the tire pressure warning check switch harness connector terminal.

- The low tire pressure warning lamp in the combination meter blink according to the self-diagnostic results.

NOTE:

If low tire pressure warning lamp blinks below, the system is normal.

- This mode shows transmitter status is in OFF-mode.
  Perform transmitter wake up operation. Refer to WT-5, "TRANSMITTER WAKE UP OPERATION : Special Repair Requirement".

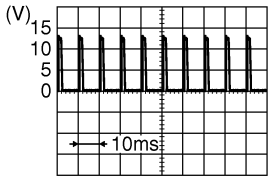


Diagnosis Procedure

INFOID:0000000004236641

1. CHECK TIRE PRESSURE WARNING CHECK SWITCH POWER SUPPLY

1. Turn the ignition switch “OFF”.
2. Check signal between tire pressure warning check switch connector M92 terminal 1 and ground with oscilloscope.

Tire pressure warning check switch		—	Condition	Voltage (Approx.)
Connector	Terminal			
M92	1	Ground	Ignition switch OFF	 JPMIA0588GB 1.5 V

Is the reference voltage outputted?

YES >> Repair or replace BCM circuit. Replace BCM. Refer to BCS-67, "Removal and Installation".
NO >> GO TO 2.

2. CHECK TIRE PRESSURE WARNING CHECK SWITCH CIRCUIT

1. Disconnect BCM harness connector
2. Check continuity between BCM harness connector M65 terminal 15 and tire pressure warning check switch connector M92 terminal 1.
3. Check harness for short to ground.

BCM		Tire pressure warning check switch		Continuity
Connector	Terminal	Connector	Terminal	Existed
M65	15	M92	1	

Is the inspection result normal?

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

3. CHECK BCM

Check BCM input/output signal. Refer to WT-40, "Reference Value".

Is the inspection result normal?

YES >> INSPECTION END
NO >> 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-67, "Removal and Installation".

TPMS

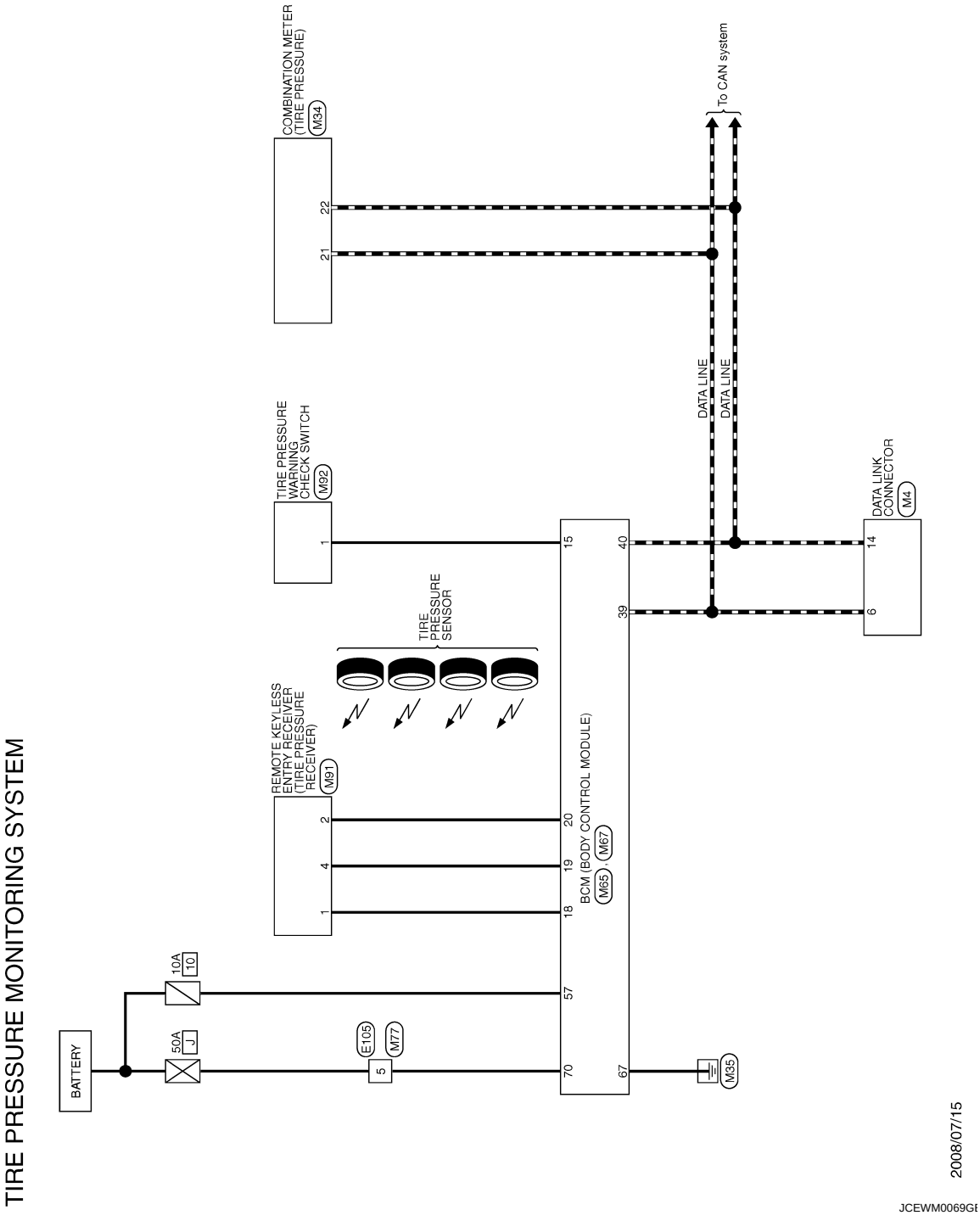
Description

INFOID:0000000004236636

During driving, the TPMS receives the signal transmitted from the transmitter installed in each wheel, when the tire pressure becomes low. The control unit (BCM) of this system has pressure judgment and trouble diagnosis functions.
When the TPMS detects low inflation pressure or another unusual symptom, the low tire pressure warning lamps in the combination meter comes on.

Wiring Diagram - TIRE PRESSURE MONITORING SYSTEM -

INFOID:0000000004236637



TIRE PRESSURE MONITORING SYSTEM

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
5	Y	–

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

Terminal No.	Color of Wire	Signal Name [Specification]
6	L	–
14	P	–

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	SAB40FW

Terminal No.	Color of Wire	Signal Name [Specification]
21	L	CAN-H
22	P	CAN-L

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

Terminal No.	Color of Wire	Signal Name [Specification]
15	O	TPMS MODE TRIGGER SW
18	O	KEYLESS TUNER SENS GND
19	V	KEYLESS TUNER POWER
20	GR	KEYLESS TUNER SIGNAL
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]
57	G	BAT FUSE
67	B	GND
70	Y	BAT FL

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
5	Y	–

Connector No.	M91
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Type	TK04FW

Terminal No.	Color of Wire	Signal Name [Specification]
1	O	GND
2	GR	SIGNAL
4	V	POWER

Connector No.	M92
Connector Name	TIRE PRESSURE WARNING CHECK SWITCH
Connector Type	TK02FW

Terminal No.	Color of Wire	Signal Name [Specification]
1	O	–

JCEWM0070GB

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000004513738

VALUES ON THE DIAGNOSIS TOOL

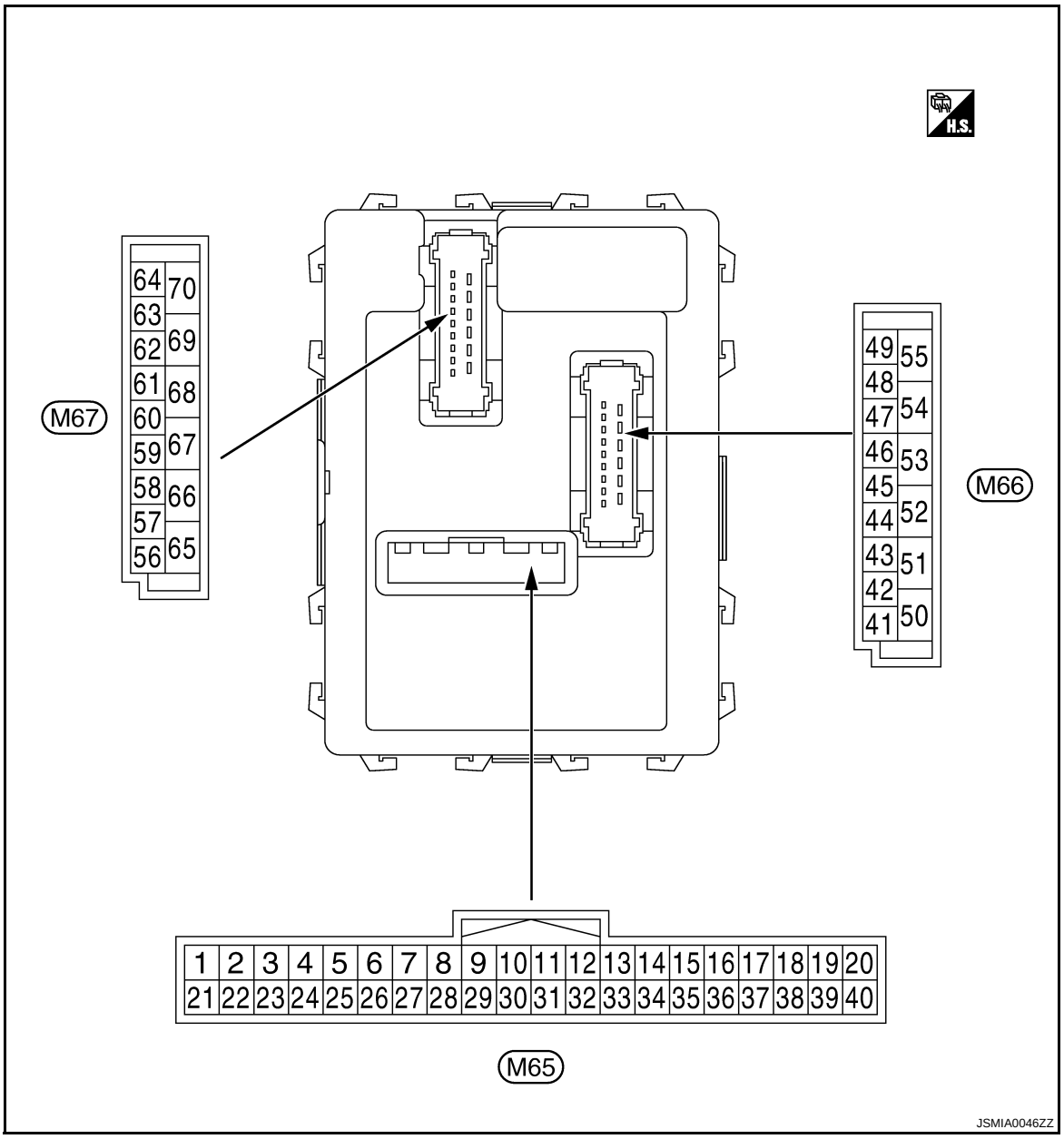
Monitor Item	Condition	Value/Status
IGN ON SW	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
KEY ON SW	Mechanical key is removed from key cylinder	Off
	Mechanical key is inserted to key cylinder	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the lock side	On
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the unlock side	On
DOOR SW-DR	Driver's door closed	Off
	Driver's door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
	Rear LH door opened	On
BACK DOOR SW	Back door closed	Off
	Back door opened	On
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off
	Driver door key cylinder LOCK position	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off
	Driver door key cylinder UNLOCK position	On
KEYLESS LOCK	“LOCK” button of key fob is not pressed	Off
	“LOCK” button of key fob is pressed	On
KEYLESS UNLOCK	“UNLOCK” button of key fob is not pressed	Off
	“UNLOCK” button of key fob is pressed	On
I-KEY LOCK	“LOCK” button of Intelligent Key or door request switch are not pressed	Off
	“LOCK” button of Intelligent Key or door request switch are pressed	On
I-KEY UNLOCK	“UNLOCK” button of Intelligent Key or door request switch are not pressed	Off
	“UNLOCK” button of Intelligent Key or door request switch are pressed	On
ACC ON SW	Ignition switch OFF	Off
	Ignition switch ACC or ON	On
REAR DEF SW	Rear window defogger switch OFF	Off
	Rear window defogger switch ON	On
LIGHT SW 1ST	Lighting switch OFF	Off
	Lighting switch 1ST	On

Monitor Item	Condition	Value/Status
BUCKLE SW	The seat belt (driver side) is unfastened. [Seat belt switch (driver side) OFF]	Off
	The seat belt (driver side) is fastened. [Seat belt switch (driver side) ON]	On
KEYLESS PANIC	PANIC button of key fob is not pressed	Off
	PANIC button of key fob is pressed	On
KEYLESS TRUNK	**NOTE:** The item is indicated, but not monitored.	Off
TRNK OPN MNTR	**NOTE:** The item is indicated, but not monitored.	Off
RKE LCK-UNLCK	LOCK/UNLOCK button of key fob is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of key fob is pressed and held simultaneously	On
RKE KEEP UNLK	UNLOCK button of key fob is not pressed	Off
	UNLOCK button of key fob is pressed and held	On
HI BEAM SW	Lighting switch OFF	Off
	Lighting switch HI	On
HEAD LAMP SW 1	Lighting switch OFF	Off
	Lighting switch 2ND	On
HEAD LAMP SW 2	Lighting switch OFF	Off
	Lighting switch 2ND	On
AUTO LIGHT SW	**NOTE:** The item is indicated, but not monitored.	Off
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On
RR FOG SW	**NOTE:** The item is indicated, but not monitored.	Off
TURN SIGNAL R	Turn signal switch OFF	Off
	Turn signal switch RH	On
TURN SIGNAL L	Turn signal switch OFF	Off
	Turn signal switch LH	On
ENGINE RUN	Engine stopped	Off
	Engine running	On
PKB SW	Parking brake switch is OFF	Off
	Parking brake switch is ON	On
CARGO LAMP SW	**NOTE:** The item is indicated, but not monitored.	Off
OPTICAL SENSOR	**NOTE:** The item is indicated, but not monitored.	0 V
IGN SW CAN	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
FR WIPER HI	Front wiper switch OFF	Off
	Front wiper switch HI	On
FR WIPER LOW	Front wiper switch OFF	Off
	Front wiper switch LO	On

Monitor Item	Condition	Value/Status
FR WIPER INT	Front wiper switch OFF	Off
	Front wiper switch INT	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
FR WIPER STOP	Any position other than front wiper stop position	Off
	Front wiper stop position	On
VEHICLE SPEED	While driving	Equivalent to speedometer reading
RR WIPER ON	Rear wiper switch OFF	Off
	Rear wiper switch ON	On
RR WIPER INT	Rear wiper switch OFF	Off
	Rear wiper switch INT	On
RR WASHER SW	Rear washer switch OFF	Off
	Rear washer switch ON	On
RR WIPER STOP	Rear wiper stop position	Off
	Other than rear wiper stop position	On
RR WIPER STP2	**NOTE:** The item is indicated, but not monitored.	Off
H/L WASH SW	**NOTE:** The item is indicated, but not monitored.	Off
HAZARD SW	Hazard switch OFF	Off
	Hazard switch ON	On
BRAKE SW	Brake pedal is not depressed	Off
	Brake pedal is depressed	On
FAN ON SIG	Blower fan motor switch OFF	Off
	Blower fan motor switch ON (other than OFF)	On
AIR COND SW	Compressor ON is not requested from auto amp. (A/C indicator OFF, blower fan motor switch OFF or etc.)	Off
	Compressor ON is requested from auto amp. (A/C indicator ON and blower fan motor switch ON).	On
I-KEY TRUNK	**NOTE:** The item is indicated, but not monitored.	Off
I-KEY PW DWN	UNLOCK button of Intelligent Key is not pressed	Off
	UNLOCK button of Intelligent Key is pressed and held	On
I-KEY PANIC	PANIC button of Intelligent Key is not pressed	Off
	PANIC button of Intelligent Key is pressed	On
PUSH SW	Return to ignition switch to “LOCK” position	Off
	Press ignition switch	On
TRNK OPNR SW	When back door opener switch is not pressed	Off
	When back door opener switch is pressed	On
TRUNK CYL SW	**NOTE:** The item is indicated, but not monitored.	Off
HOOD SW	Close the hood **NOTE:** Vehicles of except for Mexico are OFF-fixed	Off
	Open the hood	On

Monitor Item	Condition	Value/Status
OIL PRESS SW	• Ignition switch OFF or ACC • Engine running	Off
	Ignition switch ON	On
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	ID of front LH tire transmitter is registered	Done
	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
	ID of rear RH tire transmitter is not registered	Yet
ID REGST RL1	ID of rear LH tire transmitter is registered	Done
	ID of rear LH tire transmitter is not registered	Yet
WARNING LAMP	Tire pressure indicator OFF	Off
	Tire pressure indicator ON	On
BUZZER	Tire pressure warning alarm is not sounding	Off
	Tire pressure warning alarm is sounding	On

TERMINAL LAYOUT

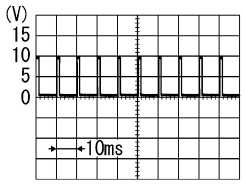
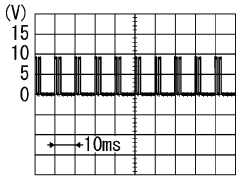
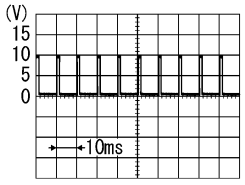
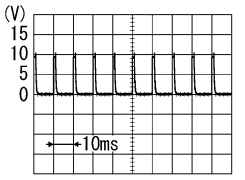
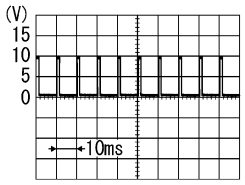


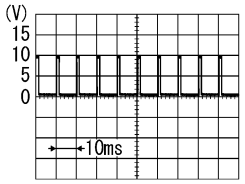
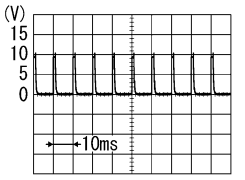
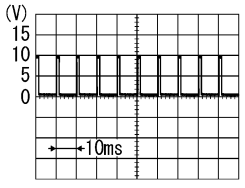
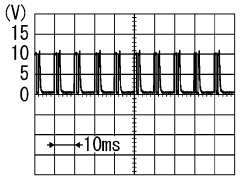
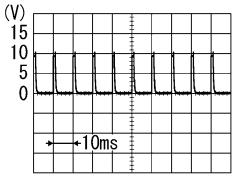
PHYSICAL VALUES

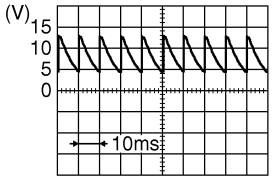
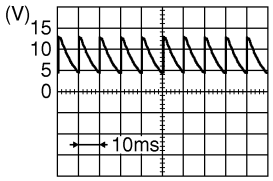
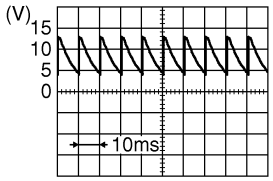
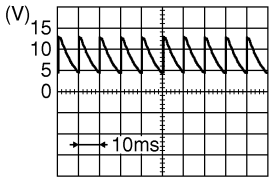
CAUTION:

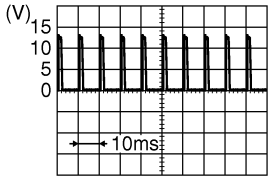
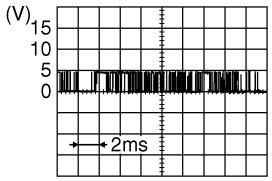
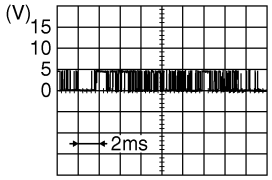
- **Check combination switch system terminal waveform under the loaded condition with lighting switch, turn signal switch and wiper switch OFF is not to be fluctuated by being overloaded.**
- **Turn wiper intermittent dial position to 4 except when checking waveform or voltage of wiper intermittent dial position. Wiper intermittent dial position can be confirmed on CONSULT-III. Refer to BCS-27, "COMB SW : CONSULT-III Function (BCM - COMB SW)".**
- **BCM reads the status of the combination switch at 10 ms internal normally. Refer to BCS-9, "System Diagram".**

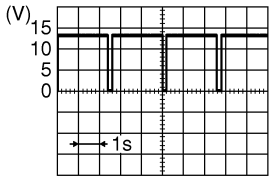
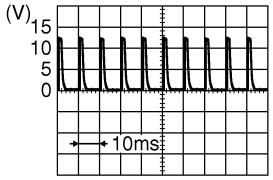
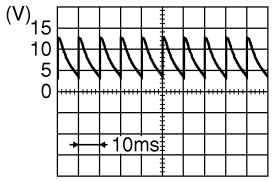
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
1 (V)	Ground	Ignition key hole illumination control	Output	Ignition key hole illumination	OFF	Battery voltage
					ON	0 V

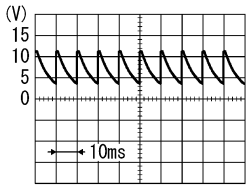
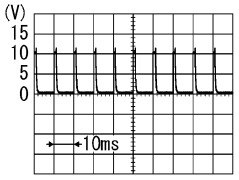
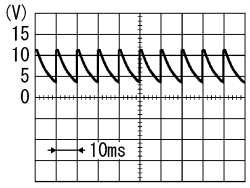
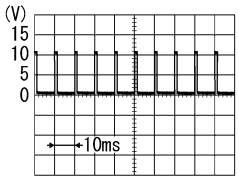
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
2 (G)	Ground	Combination switch INPUT 5	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V
					Turn signal switch RH Lighting switch HI Lighting switch 1ST	 PKIB4959J 1.0 V
					Lighting switch 2ND	 PKIB4953J 2.0 V
3 (Y)	Ground	Combination switch INPUT 4	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V
					Turn signal switch LH Lighting switch PASS Lighting switch 2ND	 PKIB4959J 1.0 V
					Front fog lamp switch ON	 PKIB4955J 0.8 V
4 (W)	Ground	Combination switch INPUT 3	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V
					Front wiper switch LO Front wiper switch MIST Front wiper switch INT	 PKIB4959J 1.0 V

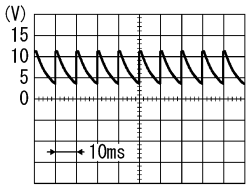
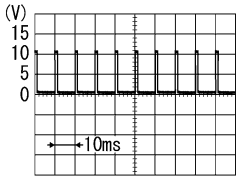
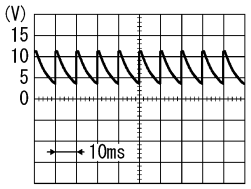
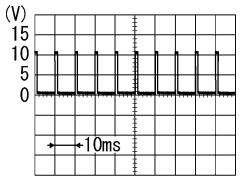
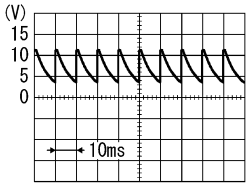
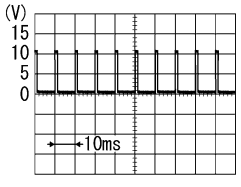
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
5 (R)	Ground	Combination switch INPUT 2	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch (Wiper intermittent dial 4)	 PKIB4959J 1.0 V
					Rear washer ON (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	
					Rear wiper switch ON (Wiper intermittent dial 4)	 PKIB4955J 0.8 V
6 (P)	Ground	Combination switch INPUT 1	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	 PKIB4959J 1.0 V
					Rear wiper switch INT (Wiper intermittent dial 4)	
					Wiper intermittent dial 3 (All switch OFF)	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2	 PKIB4952J 1.7 V
					Any of the condition below with all switch OFF • Wiper intermittent dial 6 • Wiper intermittent dial 7	 PKIB4955J 0.8 V

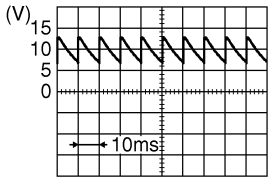
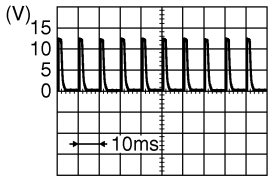
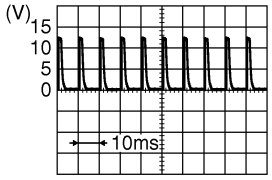
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
7 (L)	Ground	Door key cylinder switch UNLOCK signal	Input	Door key cylinder switch	NEUTRAL position	 JPMIA0587GB 8.0 - 8.5 V
					UNLOCK position	0 V
8 (R)	Ground	Door key cylinder switch LOCK signal	Input	Door key cylinder switch	NEUTRAL position	 JPMIA0587GB 8.0 - 8.5 V
					LOCK position	0 V
9 (R)	Ground	Stop lamp switch	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is depressed)	Battery voltage
10 (SB)	Ground	Rear window defogger switch	Input	Rear window defogger switch	Not pressed	Battery voltage
					Pressed	0 V
11 (SB)	Ground	Ignition switch ACC	Input	Ignition switch OFF		0 V
				Ignition switch ACC or ON		Battery voltage
12 (P)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	 JPMIA0586GB 7.5 - 8.0 V
					ON (When passenger door opened)	0 V
13 (LG)	Ground	Rear door switch RH	Input	Rear door switch RH	OFF (When rear door RH closed)	 JPMIA0587GB 8.0 - 8.5 V
					ON (When rear door RH opened)	0 V

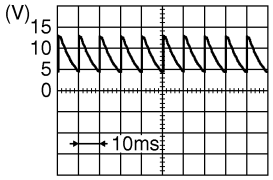
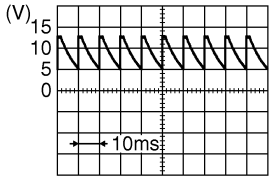
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
15* (O)	Ground	Tire pressure warning check switch	Input	Ignition switch OFF		 JPMIA0588GB 1.5 V
18* (O)	Ground	Remote keyless entry receiver ground	Input	Ignition switch ON		0 V
19* (V)	Ground	Remote keyless entry receiver power supply	Input	Without Intelligent Key system	At any condition	5 V
				With Intelligent Key system	• Ignition switch OFF • For 3 seconds after ignition switch OFF to ON	0 V
					3 seconds or later after ignition switch OFF to ON	5 V
20* (GR)	Ground	Remote keyless entry receiver signal	Input	Without Intelligent Key system	At any condition	 JPMIA0589GB **NOTE:** The wave form changes according to signal-receiving condition.
				With Intelligent Key system	• Ignition switch OFF • For 3 seconds after ignition switch OFF to ON	0 V
					3 seconds or later after ignition switch OFF to ON	 JPMIA0589GB **NOTE:** The wave form changes according to signal-receiving condition.
21 (G)	Ground	Immobilizer antenna signal (Clock)	Input/ Output	Ignition switch OFF		Battery voltage

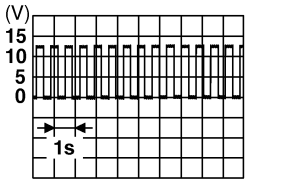
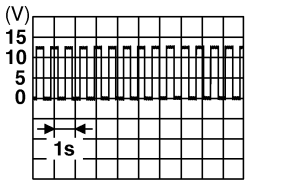
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
23 (B)	Ground	Security indicator signal	Input	Security indicator	ON	0 V
					Blinking (Ignition switch OFF)	 JPMIA0590GB 12.0 V
					OFF	Battery voltage
25 (BR)	Ground	Immobilizer antenna signal (Rx, Tx)	Input/ Output	Ignition switch OFF		Battery voltage
27 (Y)	Ground	A/C switch	Input	Ignition switch OFF		
				Ignition switch ON	A/C switch OFF	 JPMIA0591GB 1.6 V
					A/C switch ON	0 V
28 (LG)	Ground	Blower fan switch	Input	Ignition switch OFF		
				Ignition switch ON	Blower fan switch OFF	 JPMIA0592GB 7.0 - 7.5 V
					Blower fan switch ON	0 V
29 (W)	Ground	Hazard switch	Input	Hazard switch	OFF	Battery voltage
					ON	0 V
30 (G)	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	Battery voltage
					Pressed	0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
32 (BR)	Ground	Combination switch OUTPUT 5	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 PKIB4960J 7.2 V
					Front fog lamp switch ON (Wiper intermittent dial 4) Rear wiper switch ON (Wiper intermittent dial 4) Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	 PKIB4956J 1.0 V
33 (GR)	Ground	Combination switch OUTPUT 4	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 PKIB4960J 7.2 V
					Lighting switch 1ST (Wiper intermittent dial 4) Rear wiper switch INT (Wiper intermittent dial 4) Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	 PKIB4958J 1.2 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
34 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 PKIB4960J 7.2 V
					Lighting switch 2ND (Wiper intermittent dial 4)	 PKIB4958J 1.2 V
					Lighting switch HI (Wiper intermittent dial 4)	
					Rear washer switch ON (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	
35 (B)	Ground	Combination switch OUTPUT 2	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	 PKIB4960J 7.2 V
					Lighting switch 2ND	 PKIB4958J 1.2 V
					Lighting switch PASS	
					Front wiper switch INT	
					Front wiper switch HI	
36 (V)	Ground	Combination switch OUTPUT 1	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	 PKIB4960J 7.2 V
					Turn signal switch RH	 PKIB4958J 1.2 V
					Turn signal switch LH	
					Front wiper switch LO (Front wiper switch MIST)	
					Front washer switch ON	

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
37 (LG)	Ground	Key switch	Input	Insert mechanical key into ignition key cylinder		Battery voltage
				Remove mechanical key from ignition key cylinder		0 V
38 (G)	Ground	Ignition switch ON	Input	Ignition switch OFF or ACC		0 V
				Ignition switch ON or START		Battery voltage
39 (L)	Ground	CAN-H	Input/ Output	—		—
40 (P)	Ground	CAN-L	Input/ Output	—		—
43 (V)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	 JPMIA0593GB 9.5 - 10.0 V
					ON (When back door opened)	0 V
44 (B)	Ground	Rear wiper auto stop	Input	Ignition switch ON	Rear wiper stop position	0 V
					Any position other than rear wiper stop position	Battery voltage
45 (P)	Ground	Door lock and unlock switch LOCK signal	Input	Door lock and unlock switch	NEUTRAL position	 JPMIA0591GB 1.6 V
					LOCK position	0 V
46 (BR)	Ground	Door lock and unlock switch UNLOCK signal	Input	Door lock and unlock switch	NEUTRAL position	 JPMIA0591GB 1.6 V
					UNLOCK position	0 V

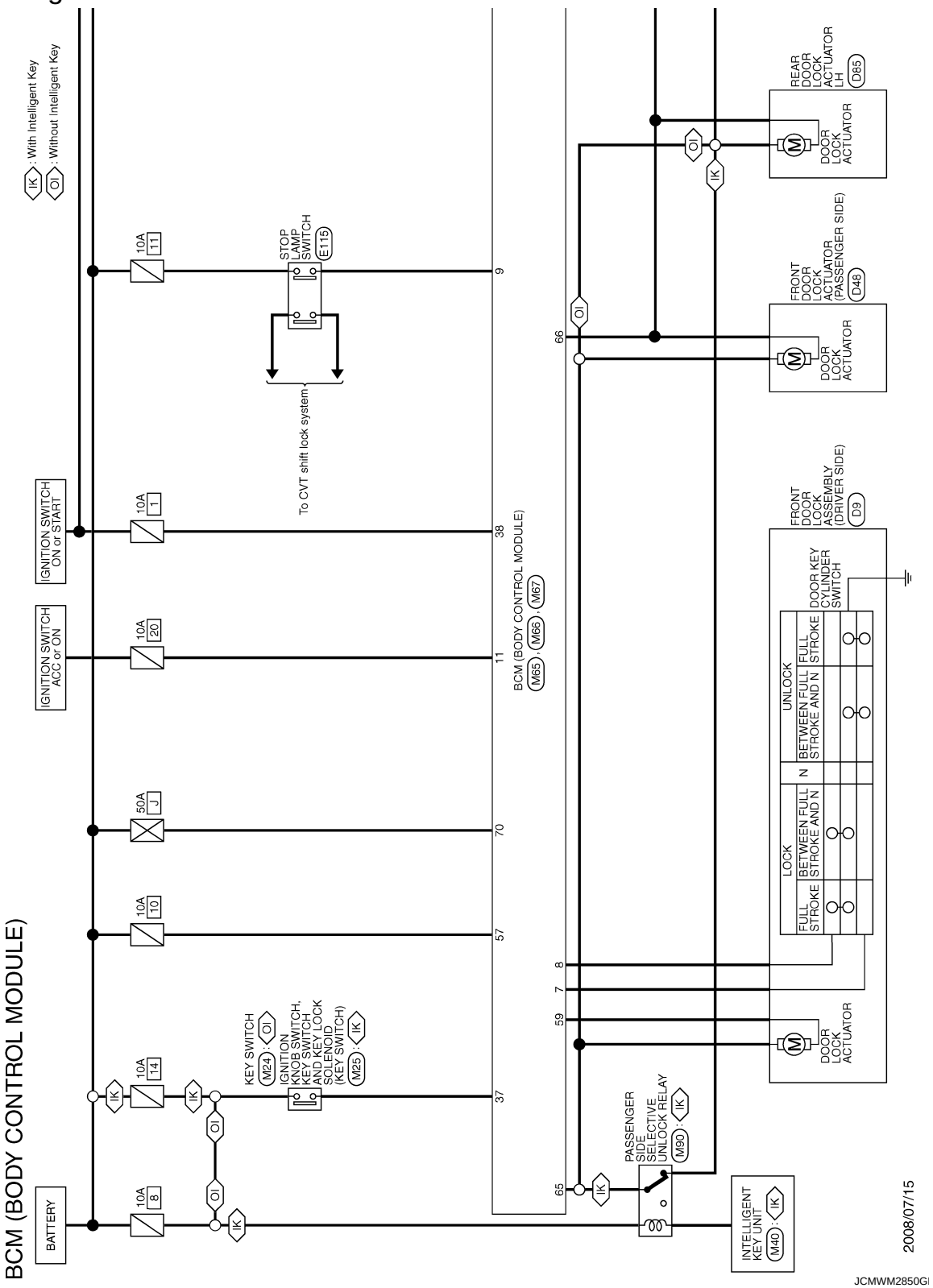
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
47 (W)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	 JPMIA0587GB 8.0 - 8.5 V
					ON (When driver door opened)	0 V
48 (GR)	Ground	Rear door switch LH	Input	Rear door switch LH	OFF (When rear door LH closed)	 JPMIA0594GB 8.5 - 9.0 V
					ON (When rear door LH opened)	0 V
49 (L)	Ground	Back door lamp control	Output	Back door lamp switch DOOR position	Back door is closed (Back door lamp turns OFF)	Battery voltage
					Back door is opened (Back door lamp turns ON)	0 V
53 (V)	Ground	Back door open	Output	Back door opener switch	Not pressed (Back door actuator is activated)	0 V
					Pressed (Back door actuator is activated)	Battery voltage
55 (SB)	Ground	Rear wiper motor	Output	Ignition switch ON	Rear wiper switch OFF	0 V
					Rear wiper switch ON	Battery voltage
56 (Y)	Ground	Interior room lamp power supply	Output	After passing the interior room lamp battery saver operation time		0 V
				Any other time after passing the interior room lamp battery saver operation time		Battery voltage
57 (G)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
59 (L)	Ground	Driver door UNLOCK	Output	Driver door	UNLOCK (Actuator is activated)	Battery voltage
					Other then UNLOCK (Actuator is not activated)	0 V

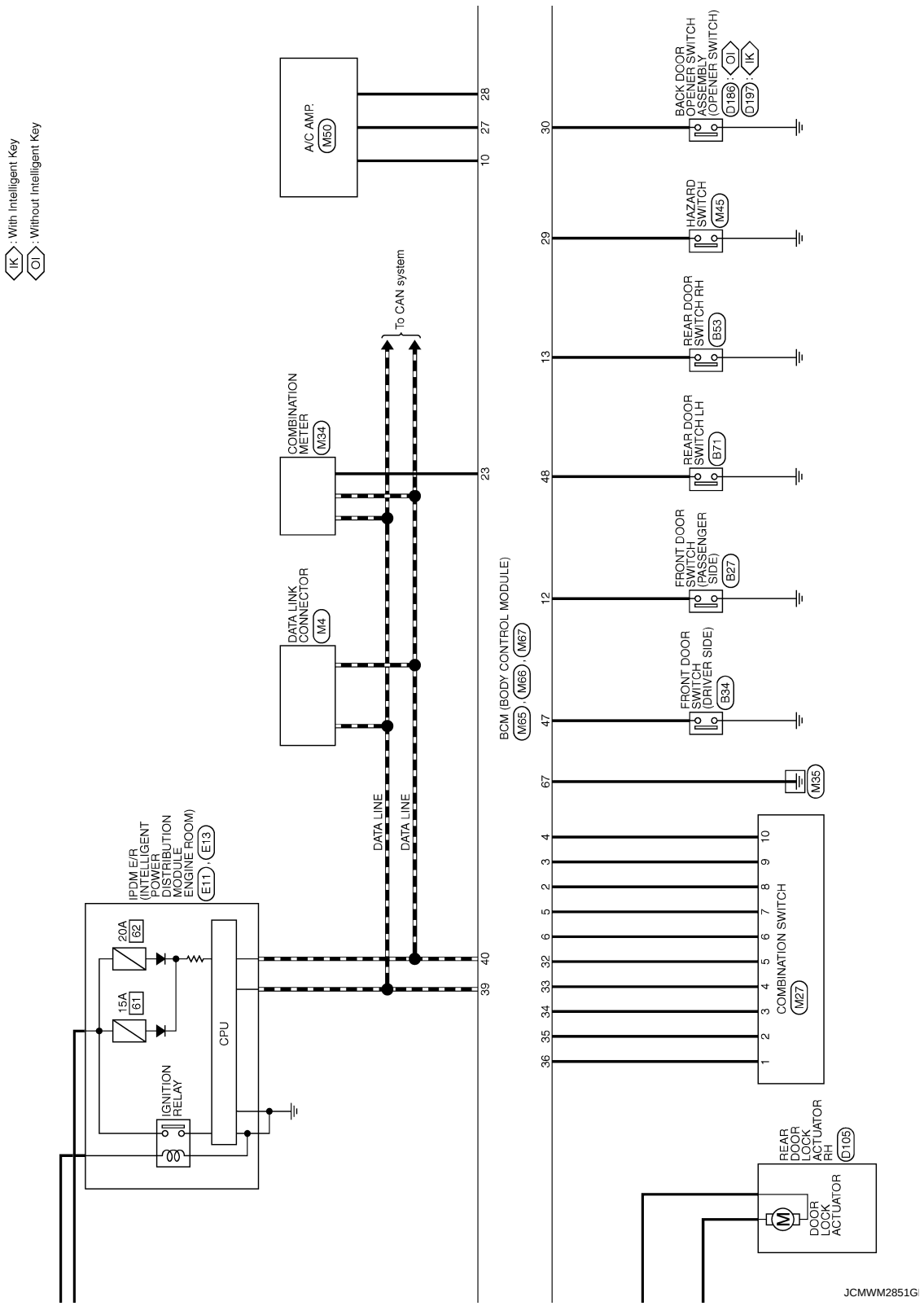
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
60 (BR)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKIC6370E 6.0 V
61 (GR)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKIC6370E 6.0 V
63 (R)	Ground	Interior room lamp timer control	Output	Interior room lamp	OFF	Battery voltage
					ON	0 V
65 (V)	Ground	All doors LOCK	Output	All doors	LOCK (Actuator is activated)	Battery voltage
					Other then LOCK (Actuator is not activated)	0 V
66 (G)	Ground	Passenger door and rear door UNLOCK	Output	Passenger door and rear door	UNLOCK (Actuator is activated)	Battery voltage
					Other then UNLOCK (Actuator is not activated)	0 V
67 (B)	Ground	Ground	Output	Ignition switch ON		0 V
68 (L)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		Battery voltage
69 (P)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		Battery voltage
70 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage

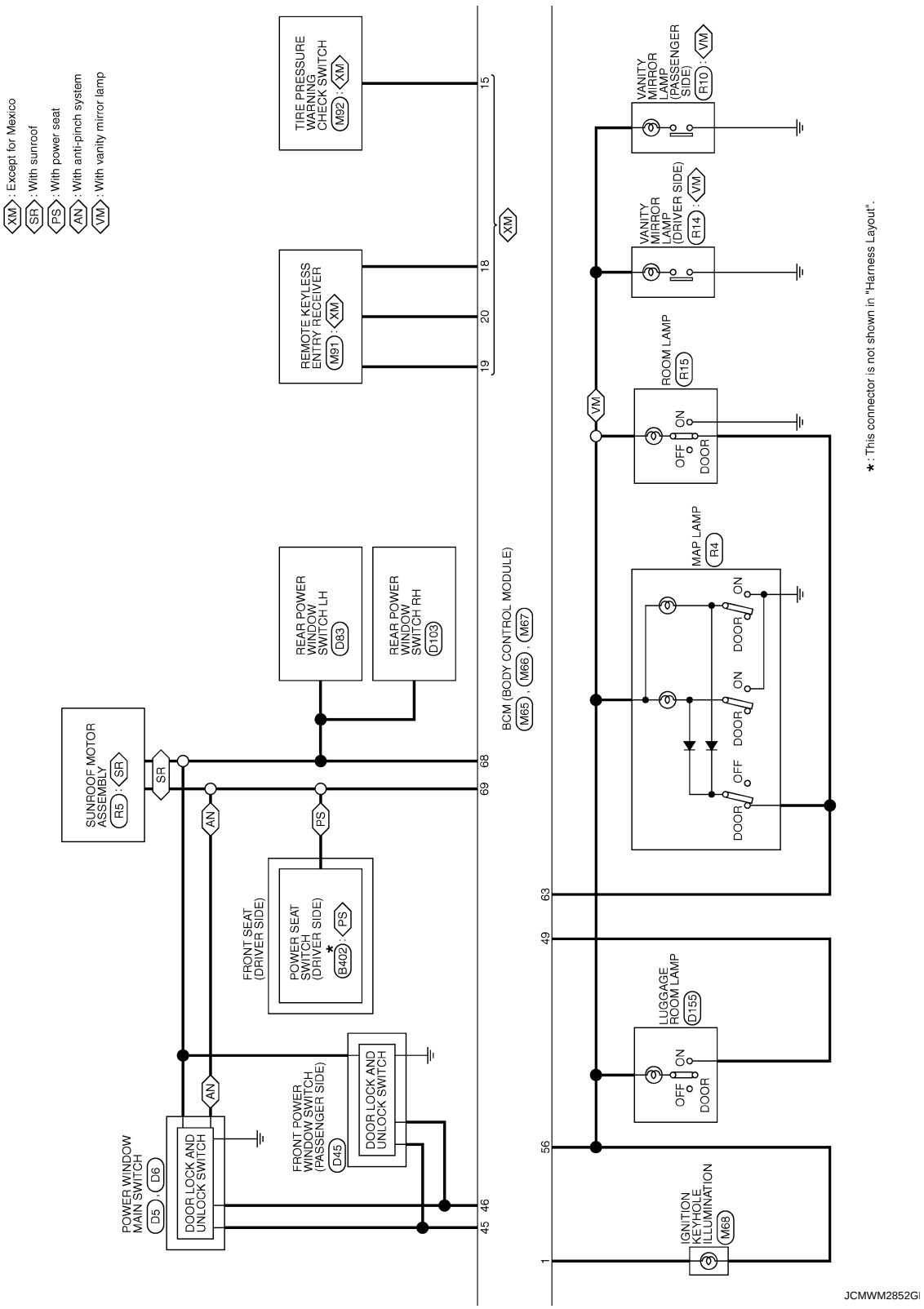
*: Except for Mexico

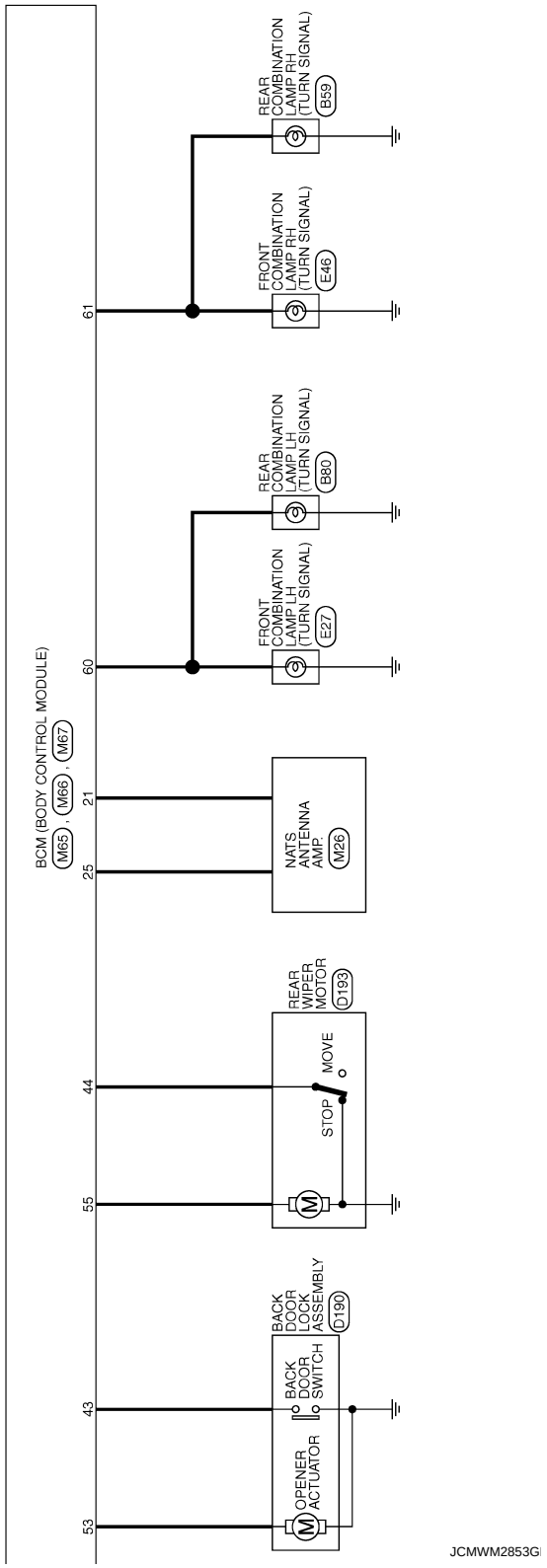
Wiring Diagram - BCM -

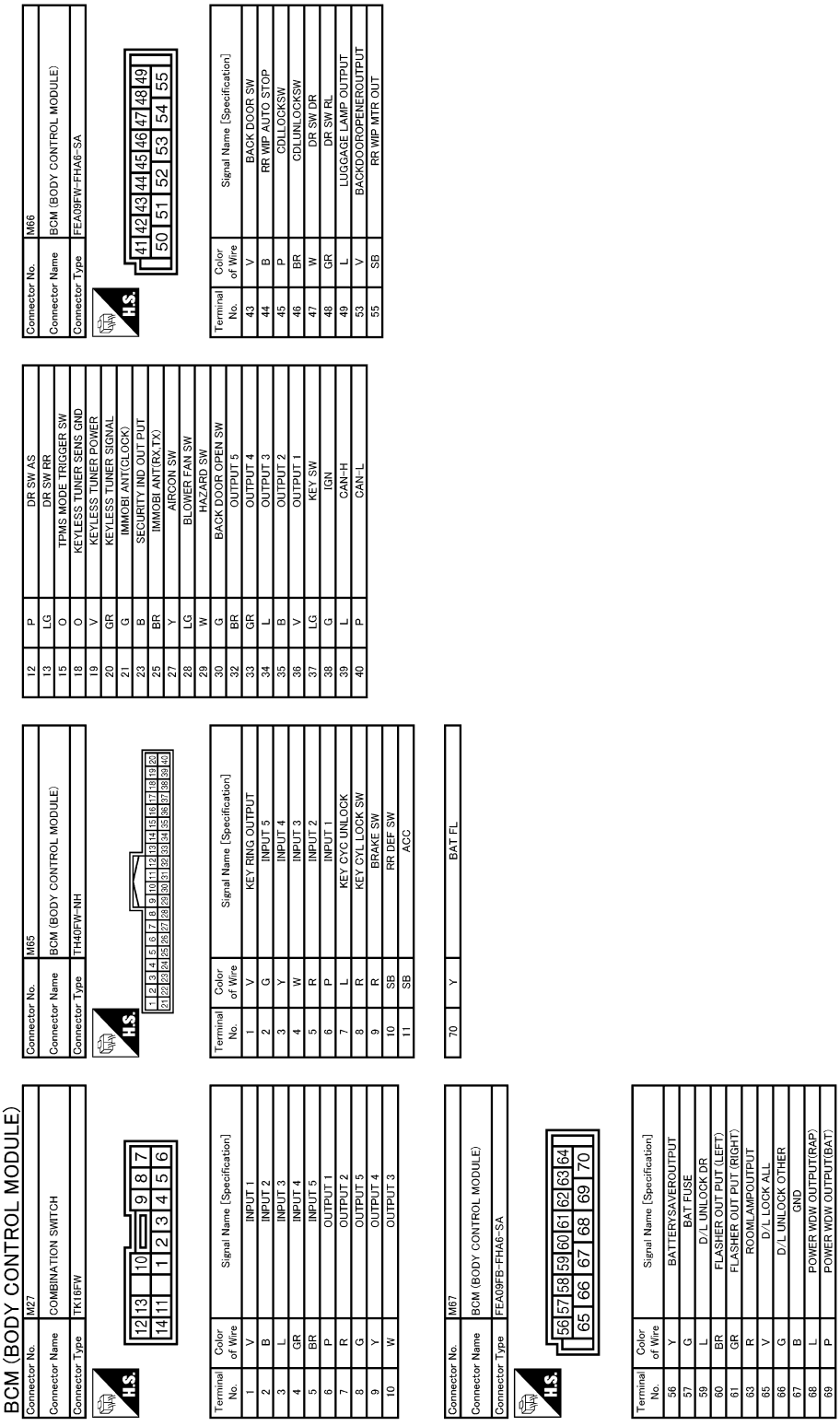
INFOID:0000000004513739




IK : With Intelligent Key
OI : Without Intelligent Key
A/C AMP. (M50)
28
27
10
To CAN system
COMBINATION METER (M34)
23
DATA LINK CONNECTOR (M4)
DATA LINE
DATA LINE
40
39
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) (E11), (E13)
20A 62
15A 61
IGNITION RELAY
CPU
BCM (BODY CONTROL MODULE) (M65), (M66), (M67)
30
29
13
48
12
47
67
BACK DOOR OPENER SWITCH ASSEMBLY (OPENER SWITCH) (D186): OI (D197): IK
HAZARD SWITCH (M45)
REAR DOOR SWITCH RH (B53)
REAR DOOR SWITCH LH (B71)
FRONT DOOR SWITCH (PASSENGER SIDE) (B27)
FRONT DOOR SWITCH (DRIVER SIDE) (B34)
M35
COMBINATION SWITCH (M27)
REAR DOOR LOCK ACTUATOR RH (D105)
DOOR LOCK ACTUATOR
JCMWM2851G


XM : Except for Mexico
SR : With sunroof
PS : With power seat
AN : With anti-pinch system
VM : With vanity mirror lamp
TIRE PRESSURE WARNING CHECK SWITCH M92 : XM
REMOTE KEYLESS ENTRY RECEIVER M91 : XM
REAR POWER WINDOW SWITCH LH D83
REAR POWER WINDOW SWITCH RH D103
SUNROOF MOTOR ASSEMBLY R5 : SR
POWER SEAT SWITCH (DRIVER SIDE) B402 : PS
FRONT SEAT (DRIVER SIDE)
FRONT POWER WINDOW SWITCH (PASSENGER SIDE) D45
DOOR LOCK AND UNLOCK SWITCH
POWER WINDOW MAIN SWITCH D5 : D6
BCM (BODY CONTROL MODULE) M65 : M66 : M67
VANITY MIRROR LAMP (PASSENGER SIDE) R10 : VM
VANITY MIRROR LAMP (DRIVER SIDE) R14 : VM
ROOM LAMP R15
MAP LAMP R4
LUGGAGE ROOM LAMP D155
IGNITION KEYHOLE ILLUMINATION M68
ON
OFF
DOOR
* : This connector is not shown in "Harness Layout".
JCMWM2852GI


BCM (BODY CONTROL MODULE)
(M65), (M66), (M67)
61
60
21
25
44
55
43
53
REAR COMBINATION LAMP RH (TURN SIGNAL) B59
FRONT COMBINATION LAMP RH (TURN SIGNAL) E46
REAR COMBINATION LAMP LH (TURN SIGNAL) B80
FRONT COMBINATION LAMP LH (TURN SIGNAL) E27
NATS ANTENNA AMP. M26
REAR WIPER MOTOR D193
MOVE
STOP
BACK DOOR LOCK ASSEMBLY D190
BACK DOOR SWITCH
OPENER ACTUATOR
JCMWM2853G



JCMWM2854GI

Fail-safe

INFOID:0000000004513740

REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper stop position signal.
When the rear wiper stop position signal does not change more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation

1. Pass more than 1 minute after the rear wiper stop.
2. Turn the rear wiper switch OFF.
3. Operate the rear wiper switch or rear washer switch.

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.

DTC Inspection Priority Chart

INFOID:0000000004513741

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC
1	U1000: CAN COMM CIRCUIT
2	C1735: IGN CIRCUIT OPEN
3	• C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • C1712: [CHECKSUM ERR] FL • C1713: [CHECKSUM ERR] FR • C1714: [CHECKSUM ERR] RR • C1715: [CHECKSUM ERR] RL • C1716: [PRESS DATA ERR] FL • C1717: [PRESS DATA ERR] FR • C1718: [PRESS DATA ERR] RR • C1719: [PRESS DATA ERR] RL • C1720: [CODE ERR] FL • C1721: [CODE ERR] FR • C1722: [CODE ERR] RR • C1723: [CODE ERR] RL • C1724: [BATT VOLT LOW] FL • C1725: [BATT VOLT LOW] FR • C1726: [BATT VOLT LOW] RR • C1727: [BATT VOLT LOW] RL • C1729: VHCL SPEED SIG ERR

DTC Index

INFOID:0000000004513742

NOTE:
Details of time display
- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 - 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Tire pressure monitor warning lamp ON	Reference
U1000: CAN COMM CIRCUIT	—	BCS-35

CONSULT display	Tire pressure monitor warning lamp ON	Reference
C1704: LOW PRESSURE FL	×	WT-15
C1705: LOW PRESSURE FR	×	
C1706: LOW PRESSURE RR	×	
C1707: LOW PRESSURE RL	×	
C1708: [NO DATA] FL	×	WT-17
C1709: [NO DATA] FR	×	
C1710: [NO DATA] RR	×	
C1711: [NO DATA] RL	×	
C1712: [CHECKSUM ERR] FL	×	WT-20
C1713: [CHECKSUM ERR] FR	×	
C1714: [CHECKSUM ERR] RR	×	
C1715: [CHECKSUM ERR] RL	×	
C1716: [PRESS DATA ERR] FL	×	WT-23
C1717: [PRESS DATA ERR] FR	×	
C1718: [PRESS DATA ERR] RR	×	
C1719: [PRESS DATA ERR] RL	×	
C1720: [CODE ERR] FL	×	WT-25
C1721: [CODE ERR] FR	×	
C1722: [CODE ERR] RR	×	
C1723: [CODE ERR] RL	×	
C1724: [BATT VOLT LOW] FL	—	WT-28
C1725: [BATT VOLT LOW] FR	—	
C1726: [BATT VOLT LOW] RR	—	
C1727: [BATT VOLT LOW] RL	—	
C1729: VHCL SPEED SIG ERR	×	WT-31
C1735: IGN CIRCUIT OPEN	—	BCS-36

SYMPTOM DIAGNOSIS

TPMS

Symptom Table

INFOID:0000000004236647

LOW TIRE PRESSURE WARNING LAMP SYMPTOM CHART

Diagnosis Item	Symptom (Ignition switch ON)	Low tire pressure warning lamp	Cause	Action
Low tire pressure warning lamp	Low tire pressure warning lamp comes on immediately and turns off after 1 second.	 ON 1 sec > stays OFF SEIA0592E	All wheel transmitters are “activated” (working).	None (system OK)
	Low tire pressure warning lamp blinks on for 2 seconds, then turns off for 0.2 seconds-repeats.	 ON 2 sec > OFF 0.2 sec SEIA0593E	All wheel transmitters are not activated.	Activate all wheel tire pressure transmitters. Refer to WT-5, "TRANSMITTER WAKE UP OPERATION : Special Repair Requirement".
	Low tire pressure warning lamp blinks 1 time.	 Blinks 1 time ON 0.3 sec > OFF 1.3 sec SEIA0594E	Tire pressure transmitter front LH is not activated.	Activate tire pressure transmitter front LH. Refer to WT-5, "TRANSMITTER WAKE UP OPERATION : Special Repair Requirement".
	Low tire pressure warning lamp blinks 2 times.	 Blinks 2 times ON 0.3 sec > OFF 0.3 sec SEIA0595E	Tire pressure transmitter front RH is not activated.	Activate tire pressure transmitter front RH. Refer to WT-5, "TRANSMITTER WAKE UP OPERATION : Special Repair Requirement".
	Low tire pressure warning lamp blinks 3 times.	 Blinks 3 times ON 0.3 sec > OFF 0.3 sec SEIA0596E	Tire pressure transmitter rear RH is not activated.	Activate tire pressure transmitter rear RH. Refer to WT-5, "TRANSMITTER WAKE UP OPERATION : Special Repair Requirement".

Diagnosis Item	Symptom (Ignition switch ON)	Low tire pressure warning lamp	Cause	Action
Low tire pressure warning lamp	Low tire pressure warning lamp blinks 4 times.	 Blinks 4 times ON 0.3 sec > OFF 0.3 sec SEIA0597E	Tire pressure transmitter rear LH is not activated.	Activate tire pressure transmitter rear LH. Refer to WT-5, "TRANSMITTER WAKE UP OPERATION : Special Repair Requirement".
	Low tire pressure warning lamp comes on and does not turn off.	 Comes ON and stays ON SEIA0598E	Tire pressure is low.	Check tire pressure with CONSULT-III. Refer to WT-13, "AIR PRESSURE MONITOR : CONSULT-III Function (BCM - AIR PRESSURE MONITOR)".
	Low tire pressure warning lamp blinks on for 0.5 seconds then turns off for 0.5 seconds-repeats for 1 minute, and then stays on.	 Blinks 1 min ON 0.5 sec > OFF 0.5 sec and stays ON SEIA0788E	The fuse for combination meter from battery is pulled out.	Check the fuse for combination meter from battery. Install or replace (if needed).
			BCM connector pulled out.	Check BCM connector. Reconnect if needed.
			Low tire pressure or tire pressure monitoring system malfunction.	• Perform CONSULT-III Self-Diagnosis. Refer to WT-13, "AIR PRESSURE MONITOR : CONSULT-III Function (BCM - AIR PRESSURE MONITOR)". - Perform ID Registration if needed. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".
Turn signal lamp	Turn signal lamp does not blink 2 times or buzzer does not sound after transmitter activation.	—	1. Tool J-45295 [SST] 2. Ignition OFF during activation. 3. Tool J-45295 [SST] not positioned correctly. 4. Transmitters already activated.	1. Install new battery. 2. Check ignition is ON during activation. 3. Position tool correctly during activation. 4. Nothing.

NOTE:

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

LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN ON

Description

INFOID:0000000004236648

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:0000000004236649

1.CHECK SELF-DIAGNOSIS RESULTS

With CONSULT-III
1. On the “SELECT DIAG” mode, select the “SELF-DIAG RESULTS” screen.
2. Check display contents in self-diagnostic results.

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

YES >> Perform trouble diagnosis for CAN communication system. Refer to LAN-24, "CAN System Specification Chart".
NO >> GO TO 2.

2.CHECK COMBINATION METER

Check combination meter function. Refer to MWI-33, "CONSULT-III Function (METER/M&A)".

Is the inspection result normal?

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

3.CHECK LOW TIRE PRESSURE WARNING LAMP

1. Turn the ignition switch “OFF”.
2. Disconnect BCM harness connectors.
3. Turn ignition switch “ON”. (Never start engine.)

Does low tire pressure warning lamp turn on?

YES >> GO TO 4.
NO >> Check combination meter and repair or replace. Refer to MWI-32, "Diagnosis Description".

4.CHECK SYMPTOM

Check again.

Is the inspection result normal?

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

5.CHECK BCM

Check BCM input/output signal. Refer to WT-40, "Reference Value".

Is the inspection result normal?

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

6.CHECK BCM HARNESS CONNECTOR

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

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-67, "Removal and Installation".
NO >> Repair or replace damaged parts.

LOW TIRE PRESSURE WARNING LAMP STAYS ON

Description

INFOID:0000000004236650

DESCRIPTION

The tire pressure monitoring system is checked and the warning lamp is illuminated for approximately 1 second when the ignition switch is turned ON. The low tire pressure warning lamp turns OFF after the system check finishes.
The system may be malfunctioning if the low tire pressure warning lamp does not turn off approximately 1 second after the ignition switch is turned ON.

Diagnosis Procedure

INFOID:0000000004236651

1.CHECK SYSTEM FOR BCM

With CONSULT-III
1. On “SELF-DIAG” mode, select the “SELF-DIAG RESULTS” screen.
2. Check display contents in self-diagnostic results.

Does self-diagnostic results indicate any malfunction?

YES >> Perform trouble diagnosis. Refer to WT-13, "AIR PRESSURE MONITOR : CONSULT-III Function (BCM - AIR PRESSURE MONITOR)".
NO >> GO TO 2.

2.CHECK ID REGISTRATION

Perform ID registration all transmitters. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

Does low tire pressure warning lamp turn OFF?

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

3.CHECK POWER SUPPLY CIRCUIT

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

BCM		—	Voltage (Approx.)
Connector	Terminal		
M67	57	Ground	Battery voltage
	70		

Is the power supply normal?

YES >> GO TO 4.
NO >> Check the following. If any items are damaged, repair or replace damage parts.
- 50 A fusible link [No. J located in the fuse block]. Refer to PG-88, "Fuse and Fusible Link Arrangement".
- 10 A fuse [No. 10 located in the fuse block (J/B)]. Refer to PG-87, "Fuse, Connector and Terminal Arrangement".
- Harness for short or open between battery and BCM harness connector M67 terminal 57.
- Harness for short or open between battery and BCM harness connector M67 terminal 70.
- Check battery voltage.

4.CHECK GROUND CIRCUIT

1. Turn the ignition switch “OFF”.
2. Disconnect BCM harness connector.
3. Check continuity between BCM harness connector M67 terminal 67 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M67	67		Existed

Also check harness for short to power.

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair open circuit or short to power in harness or connectors.

5.CHECK SYMPTOM

Check again.

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 6.

6.CHECK BCM

Check BCM input/output signal. Refer to WT-40, "Reference Value".

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 7.

7.CHECK BCM HARNESS CONNECTOR

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

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-67, "Removal and Installation".
NO >> Repair or replace damaged parts.

LOW TIRE PRESSURE WARNING LAMP BLINKS

Description

INFOID:0000000004236652

DESCRIPTION

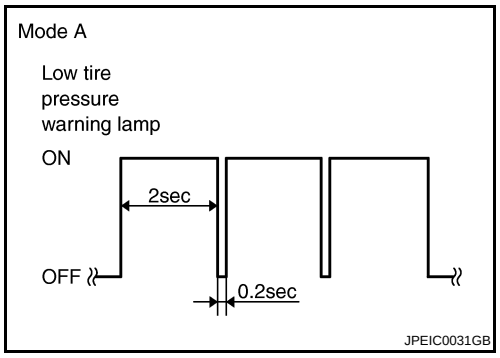
The low tire pressure warning lamp illuminates or blinks.
However, a check is necessary because the symptom may not be caused by a system malfunction. For example, the transmitter may not be initialized.

NOTE:

If low tire pressure warning lamp blinks below, the system is normal.

Blink Mode A

- This mode shows transmitter status is in OFF- mode.
  Perform transmitter wake up operation. Refer to WT-5, "TRANSMITTER WAKE UP OPERATION : Special Repair Requirement".

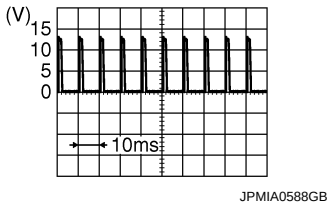


Diagnosis Procedure

INFOID:0000000004236653

1. CHECK TIRE PRESSURE WARNING CHECK SWITCH POWER SUPPLY

1. Turn the ignition switch “OFF”.
2. Check signal between tire pressure warning check switch connector M92 terminal 1 and ground with oscilloscope.

Tire pressure warning check switch		—	Condition	Voltage (Approx.)
Connector	Terminal			
M92	1	Ground	Ignition switch OFF	 1.5 V

Is the reference voltage outputted?

YES >> Repair or replace BCM circuit. Replace BCM. Refer to BCS-67, "Removal and Installation".
NO >> GO TO 2.

2. CHECK TIRE PRESSURE WARNING CHECK SWITCH CIRCUIT

1. Disconnect BCM harness connector
2. Check continuity between BCM harness connector M65 terminal 15 and tire pressure warning check switch connector M92 terminal 1.
3. Check harness for short to ground.

BCM		Tire pressure warning check switch		Continuity
Connector	Terminal	Connector	Terminal	
M65	15	M92	1	Existed

Is the inspection result normal?

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

3. CHECK BCM

Check BCM input/output signal. Refer to WT-40, "Reference Value".

Is the inspection result normal?

YES >> GO TO 1.
NO >> GO TO 4.

4. CHECK BCM HARNESS CONNECTOR

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

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-67, "Removal and Installation".
NO >> repair or replace damaged parts.

TURN SIGNAL LAMP BLINKS

Description

INFOID:0000000004236654

DESCRIPTION

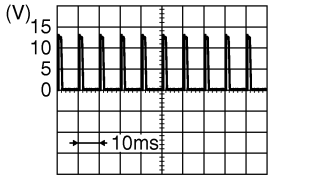
The turn signal lamp blinks when the ignition switch is turned ON.
The BCM connector or circuit may have a malfunction.

Diagnosis Procedure

INFOID:0000000004236655

1.CHECK TIRE PRESSURE WARNING CHECK SWITCH POWER SUPPLY

1. Turn the ignition switch “OFF”.
2. Check signal between tire pressure warning check switch connector M92 terminal 1 and ground with oscilloscope.

Tire pressure warning check switch		—	Condition	Voltage (Approx.)
Connector	Terminal			
M92	1	Ground	Ignition switch OFF	 JPMIA0588GB 1.5 V

Is the reference voltage outputted?

YES >> Repair or replace BCM circuit. Replace BCM. Refer to BCS-67, "Removal and Installation".
NO >> GO TO 2.

2.CHECK TIRE PRESSURE WARNING CHECK SWITCH CIRCUIT

1. Disconnect BCM harness connector
2. Check continuity between BCM harness connector M65 terminal 15 and tire pressure warning check switch connector M92 terminal 1.
3. Check harness for short to ground.

BCM		Tire pressure warning check switch		Continuity
Connector	Terminal	Connector	Terminal	
M65	15	M92	1	Existed

Is the inspection result normal?

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

3.CHECK SYMPTOM

Check again.

Does the turn signal lamp remain blinking?

YES >> Check turn signal lamp operation. Refer to BCS-26, "FLASHER : CONSULT-III Function (BCM - FLASHER)".
NO >> INSPECTION END

ID REGISTRATION CANNOT BE COMPLETED

Description

INFOID:0000000004236656

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:0000000004236657

1.CHECK ID REGISTRATION

1. Perform ID registration of all transmitter. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".
2. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes. Then check all tire pressures with CONSULT-III “DATA MONITOR” within 5 minutes.

Monitored item	Condition	Display value
AIR PRESS FL	Start engine and drive at 40 km/h (25 MPH) or more for several minutes.	Approximately equal to the indication on vehicle information display.
AIR PRESS FR		
AIR PRESS RR		
AIR PRESS RL		

Does “DATA MONITOR” displayed the standardized value without turning low tire pressure warning lamp ON?

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

2.CHECK TRANSMITTER

1. Perform trouble diagnosis for transmitter. Refer to WT-17, "Diagnosis Procedure".
2. Perform ID registration of all transmitter. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

Can ID registration of all transmitters be completed?

YES >> INSPECTION END
NO >> Repair or replace the malfunctioning connector. Repair or replace the malfunctioning part. GO TO 1.

NORMAL OPERATING CONDITION

Description

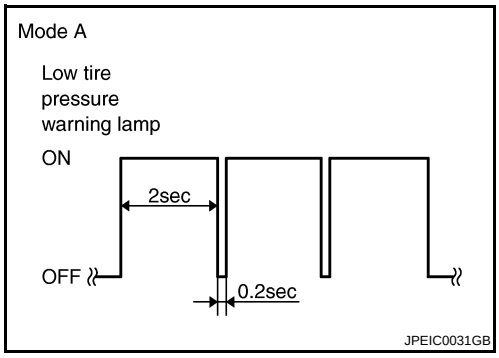
INFOID:0000000004236658

LOW TIRE PRESSURE WARNING LAMP BLINKS

The tire pressure monitoring system is not malfunctioning if the low tire pressure warning lamp blinks in the pattern as shown in the figure.

The incident occurs because the transmitter of each wheel is not wake up.

Perform transmitter wake up operation. Refer to WT-5, "TRANSMITTER WAKE UP OPERATION : Special Repair Requirement".



NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:0000000004236659

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

Reference page			FSU-9, FSU-7.	WT-75, "Inspection"	WT-76, "Adjustment"	WT-81, "Tire"	WT-76, "Adjustment"	—	—	WT-81, "Tire"	NVH in DLN section.	NVH in DLN section.	NVH in FAX and FSU sections.	NVH in RAX and RSU sections.	Refer to TIRES in this chart.	Refer to ROAD WHEEL in this chart.	NVH in FAX, RAX section.	NVH in BR section.	NVH in ST section.
Possible cause and SUSPECTED PARTS			Improper installation, looseness	Out-of-round	unbalance	Incorrect tire pressure	Uneven tire wear	Deformation or damage	Non-uniformity	Incorrect tire size	PROPELLER SHAFT	DIFFERENTIAL	FRONT AXLE AND FRONT SUSPENSION	REAR AXLE AND REAR SUSPENSION	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

PRECAUTION

PRECAUTIONS

Service Notice or Precautions

INFOID:0000000004236660

- Low tire pressure warning lamp blinks 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-12, "AIR PRESSURE MONITOR : Diagnosis Description", WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".
- ID registration is required when replacing or rotating wheels, replacing transmitter or BCM. Refer to
- Replace grommet seal, valve core and cap of transmitter in TPMS every tire replacement by reaching wear limit of tire. Refer to WT-79, "Exploded View".

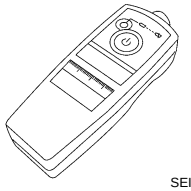
PREPARATION

PREPARATION

Special Service Tools

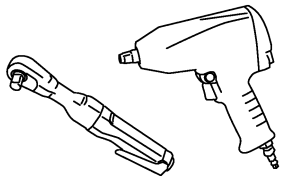
INFOID:0000000004236661

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 Tools

INFOID:0000000004236662

Tool name	Description
Power tool  PBIC0190E	Loosening bolts and nuts

ON-VEHICLE MAINTENANCE

ROAD WHEEL

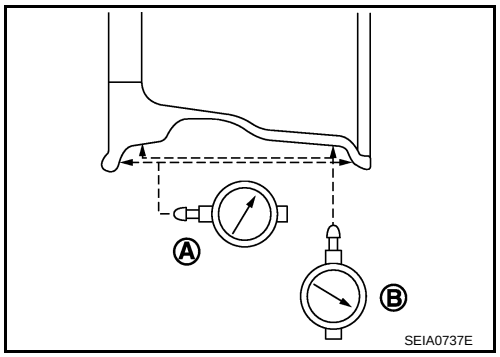
Inspection

INFOID:0000000004236663

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 total runout value exceeds the limit, replace aluminum wheel.

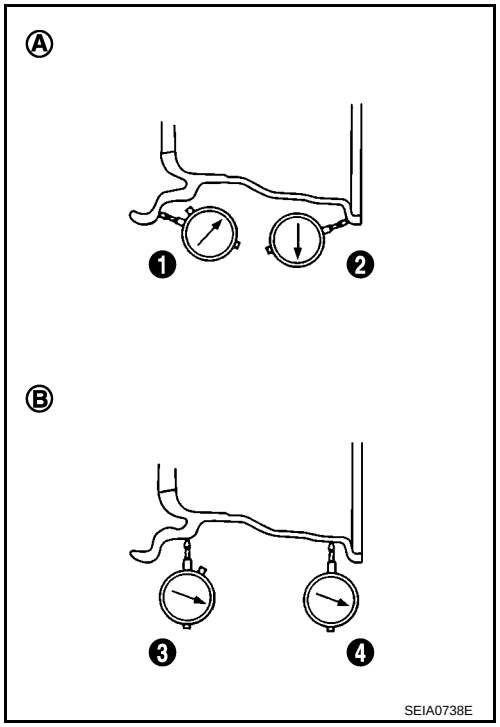


Lateral runout limit (A) **Refer to WT-81, "Road Wheel".**
Vertical runout limit (B) **Refer to WT-81, "Road Wheel".**

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-81, "Road Wheel".
B: Refer to WT-81, "Road Wheel".

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

ON-VEHICLE REPAIR

ROAD WHEEL TIRE ASSEMBLY

Adjustment

INFOID:0000000004236664

BARANCING WHEELS (BONDING WEIGHT TYPE)

Preparation Before Adjustment

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

CAUTION:

- **Be careful not 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

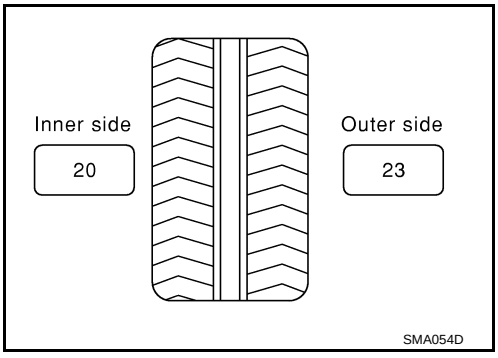
- If a tire balance machine has adhesion balance weight mode settings and drive-in weight mode setting, select and adjust a drive-in weight mode suitable for road wheels.

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 in 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.**

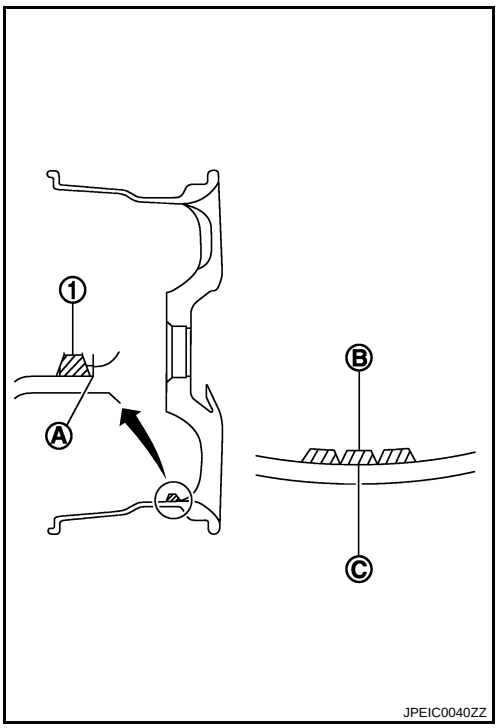
a. Indicated unbalance value × 5/3 = balance weight to be installed
Calculation example:
23 g (0.81 oz) × 5/3 = 38.33 g (1.35 oz) ⇒ 40 g (1.41 oz) balance weight (closer to calculated balance weight value)
NOTE:
Note that balance weight value must be closer to the calculated balance weight value.
Example: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



b. Installed balance weight in the position.

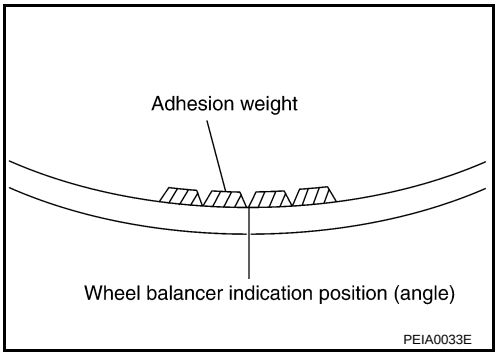
- When installing balance weight (1) to road wheels, set it into the grooved area (A) on the inner wall of the road wheel as shown in the figure so that the balance weight center (B) is aligned with the tire balance machine indication position (angle) (C).

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 another.



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

CAUTION:
Do not install more than two balance weight.

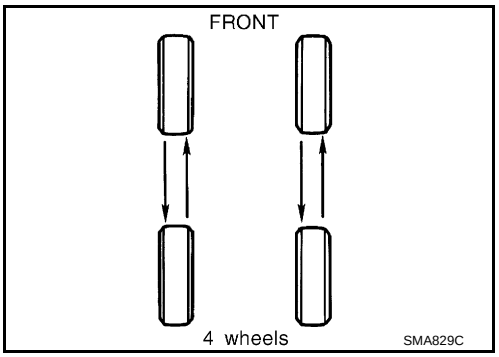
5. Start tire balance machine. Make sure that inner and outer residual unbalance values are 5 g (0.17 oz) each or below.
6. If either residual unbalance value exceeds 5 g (0.17 oz), repeat installation procedures.

Wheel balance	Dynamic (At flange)	Static (At flange)
Maximum allowable unbalance	Refer to WT-81, "Road Wheel".	

TIRE ROTATION

- Follow the maintenance schedule for tire rotation service intervals. Refer to MA-10, "FOR NORTH AMERICA : Schedule 1".
- When installing the wheel, tighten wheel nuts to the specified torque.

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



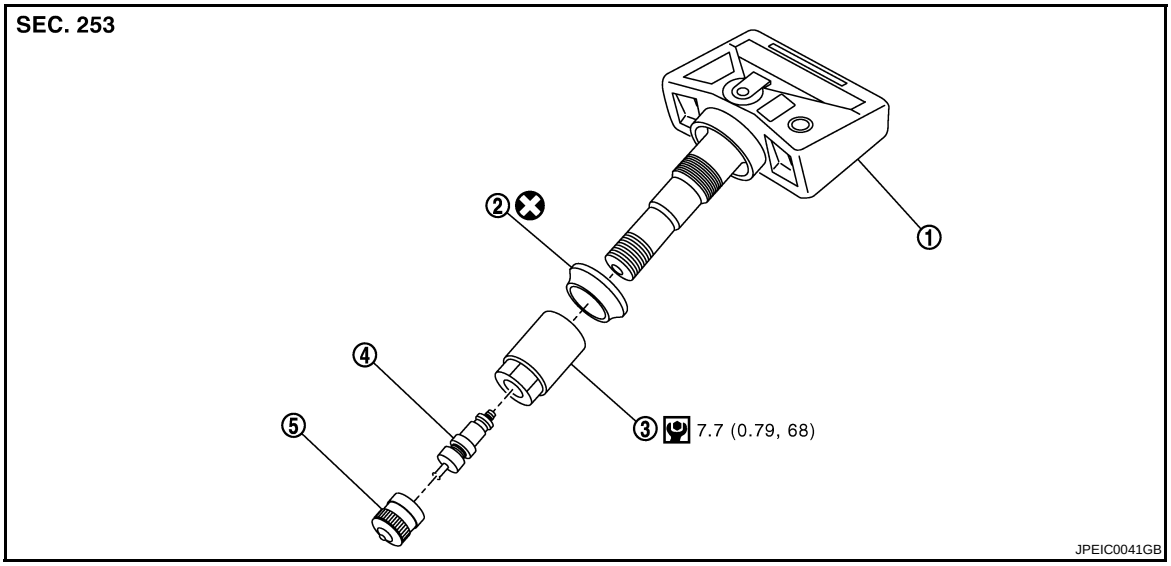
Wheel nuts tighting torque : Refer to WT-81, "Road Wheel".

- Perform the ID registration, after tire rotation. Refer to WT-5, "ID REGISTRATION PROCEDURE : Special Repair Requirement".

TRANSMITTER

Exploded View

INFOID:0000000004236665



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

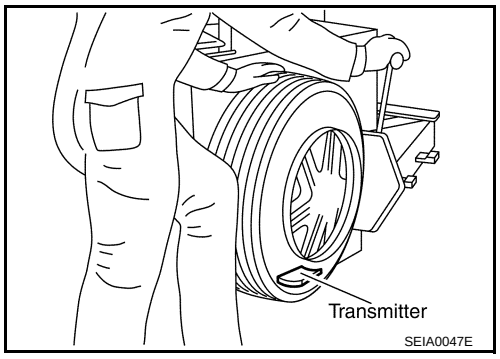
Refer to GI-4, "Components" for symbols in figure.

Removal and Installation

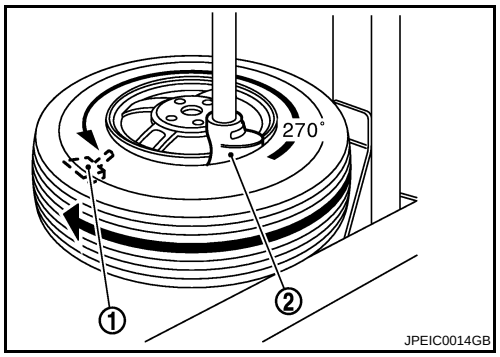
INFOID:0000000004236666

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.

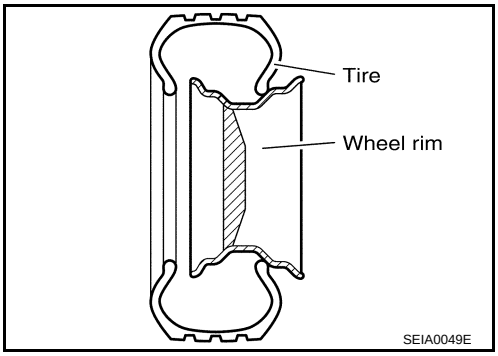


3. Turn tire so that valve hole is at bottom and bounce so that transmitter (1) is near valve hole. Carefully lift tire onto turntable and position valve hole (and transmitter) 270 degree from mounting/dismounting head (2).
4. Lubricate tire well and remove first side of the tire. Reach inside the tire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



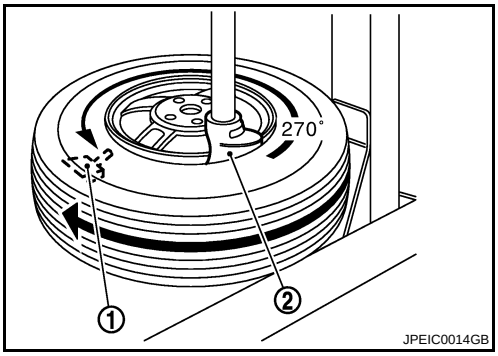
INSTALLATION

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.



SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Road Wheel

INFOID:0000000004236667

Kind of wheel		Aluminum	Steel
Maximum radial runout limit	Lateral deflection	Less than 0.3 mm (0.012 in)	Less than 0.8 mm (0.031)
	Vertical deflection	Less than 0.3 mm (0.012 in)	Less than 0.5 mm (0.020)
Maximum allowable unbalance limit	Dynamic (At flange)	Less than 5 g (0.17 oz) (one side)	
	Static (At flange)	Less than 10 g (0.35 oz)	
Wheel nuts tighting torque		108 N·m (11 kg-m, 80 ft-lb)	

Tire

INFOID:0000000004236668

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

Tire size	Air pressure	
	Front	Rear
P215/70R16 99H	230 (2.3, 33)	230 (2.3, 33)
P225/60R17 98H	230 (2.3, 33)	230 (2.3, 33)
T155/90R16 110M	420 (4.2, 60)	420 (4.2, 60)