SECTION WT
ROAD WHEELS & TIRES

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PRECAUTION

PRECAUTIONS

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

INFOID:0000000011153021

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

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

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

WARNING:

- **When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.**

Service Notice and Precautions for TPMS

INFOID:0000000011153022

WARNING:

Radio waves could adversely affect electric medical equipment. Those who use a pacemaker should contact the electrical medical equipment manufacturer for the possible influences before use.

- Low tire pressure warning lamp blinks for 1 minute, then turns ONWT-30, "Work Procedure" when any malfunction occurs except low tire pressure. Erase the self-diagnosis memories for Tire Pressure Monitoring System (TPMS), or register the ID to turn low tire pressure warning lamp OFF. For ID registration, refer to WT-30, "Work Procedure".
- ID registration is required when replacing or rotating wheels, replacing tire pressure sensor or BCM. Refer to WT-30, "Work Procedure".
- For easy fill tire alert function, refer to the following.

- When inflating the tires, park the vehicle in the safe area and ensure the safety of the working area.
- Read and understand the easy fill tire alert function prior to use.
- Inflate the tires one at a time.
- If there is no response for approximately 15 seconds or more after inflating the tires, cancel the use of the easy fill tire alert function or move the vehicle approximately 1 m (3.2 ft) backward or forward to try again. The air filler pressure may be weak or out of service area.
- Despite the high-precision TPMS pressure sensor, an indicated value may differ from that of the pressure gauge.
- Air pressure is measured rather high due to the rise in tire air temperature after driving.
- If TPMS is malfunctioning, the easy fill tire alert is unusable.

- Replace grommet seal, valve core and valve cap of tire pressure sensor in TPMS when replacing each tire by reaching the wear limit. Refer to WT-61, "Exploded View".
- Because the tire pressure sensor conforms to North America radio law, the following items must be observed.

- The sensor may be used only in North America.
- It may not be used in any method other than the specified method.
- It must not be disassembled or modified.

Precautions for Road Wheel

INFOID:0000000011153023

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

PREPARATION

PREPARATION

Special Service Tool

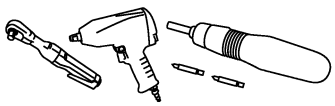
INFOID:0000000011153024

The actual shape of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name	Description
— (J-50190) Signal Tech II  ALEIA0131ZZ	• Activate and display TPMS transmitter IDs • Display tire pressure reported by the TPMS transmitter • Read TPMS DTCs • Register TPMS transmitter IDs • Test remote keyless entry keyfob relative signal strength • Check Intelligent Key relative signal strength • Confirm vehicle Intelligent Key antenna signal strength • Compatible with future sensors • Equipped with a display
KV48105501 (J-45295-A) Transmitter activation tool  ALEIA0183ZZ	• Activate TPMS transmitter IDs • Compatible with future sensors • Equipped with a display (KV48105501 only)

Commercial Service Tool

INFOID:0000000011153025

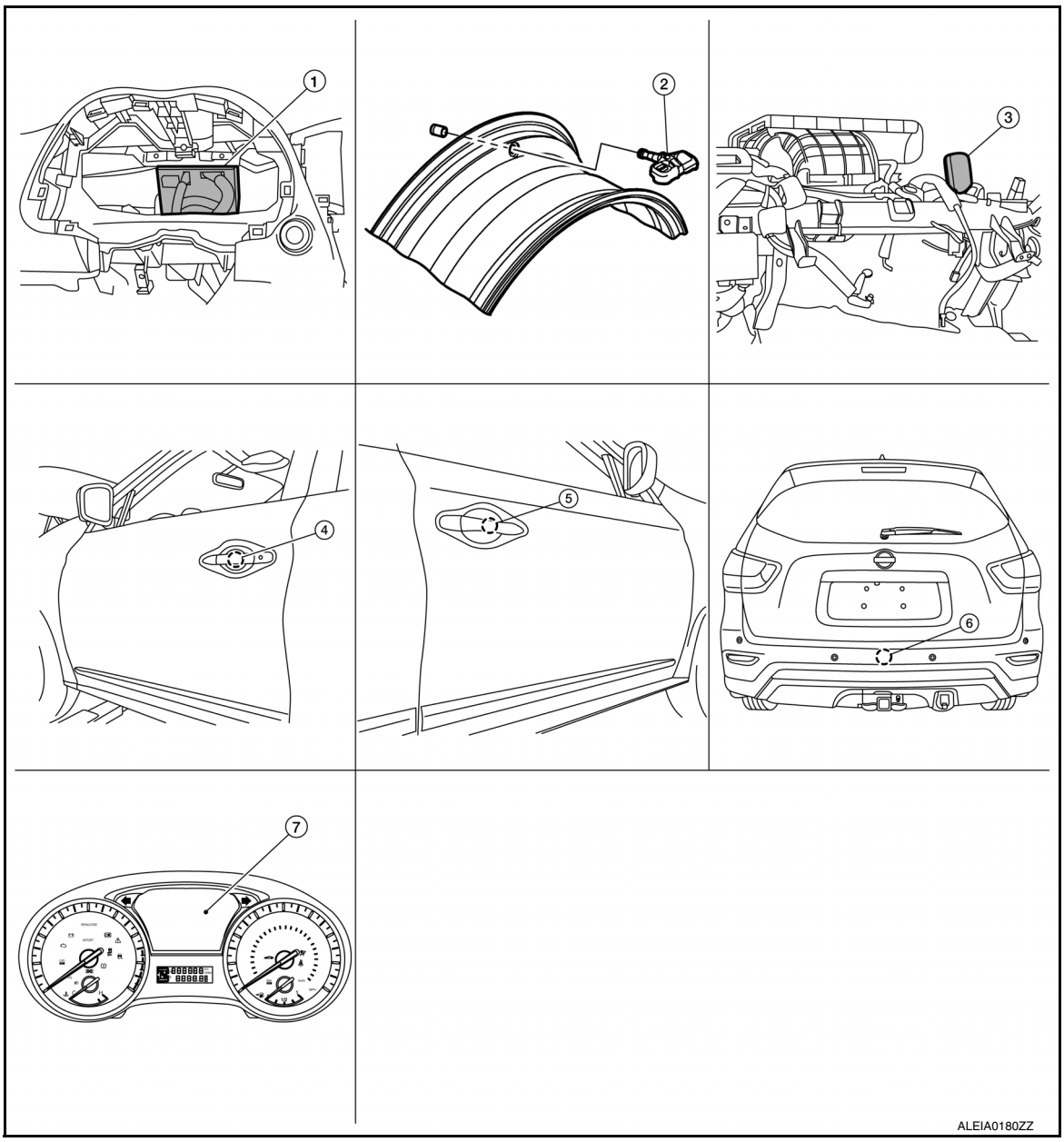
Tool name	Description
Power tool  PIIB1407E	Loosening nuts, screws and bolts.

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000011153026



1. BCM (view with combination meter removed)
2. Transmitter
3. Remote keyless entry receiver (view with instrument panel removed)
4. Front outside handle assembly LH (outside key antenna)
5. Front outside handle assembly RH (outside key antenna)
6. Outside key antenna (rear bumper)
7. Combination Meter

Component Description

INFOID:0000000011153027

Component parts	Reference/Function
BCM	WT-7, "BCM"
Transmitter	WT-7, "Transmitter"
Remote keyless entry receiver	WT-7, "Remote Keyless Entry Receiver"
Outside key antennas	WT-7, "Outside Key Antennas"
Combination meter	WT-7, "Combination Meter"

BCM

INFOID:0000000011153028

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

Transmitter

INFOID:0000000011153029

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

Remote Keyless Entry Receiver

INFOID:0000000011153030

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

Outside Key Antennas

INFOID:0000000011153031

On vehicles equipped with individual tire pressure display, the outside key antennas (driver side, passenger side and rear bumper) are used by the BCM to identify the location of the transmitters.

Combination Meter

INFOID:0000000011153032

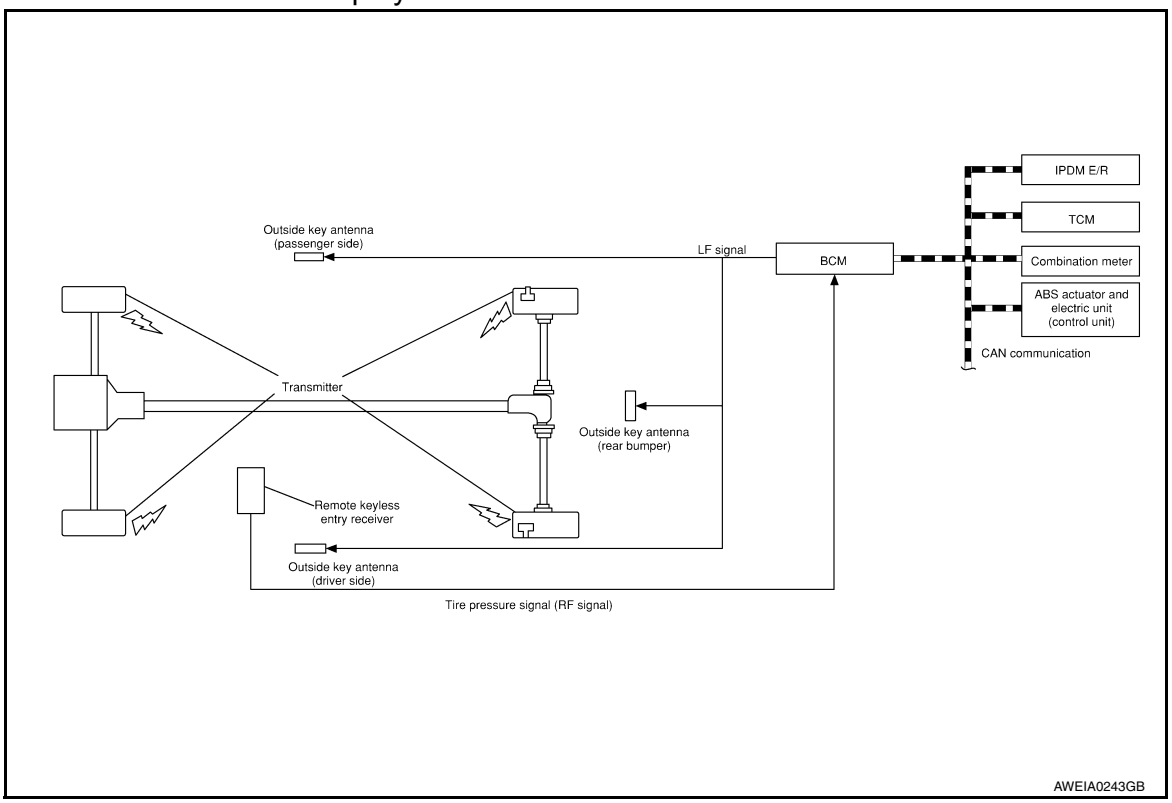
The combination meter receives tire pressure status from the BCM via CAN communication. The combination meter will display the low tire pressure warning lamp when a low tire pressure or system malfunction is detected by the BCM. A warning message will also be displayed in the vehicle information display. Refer to the Owner's Manual for additional information.

SYSTEM

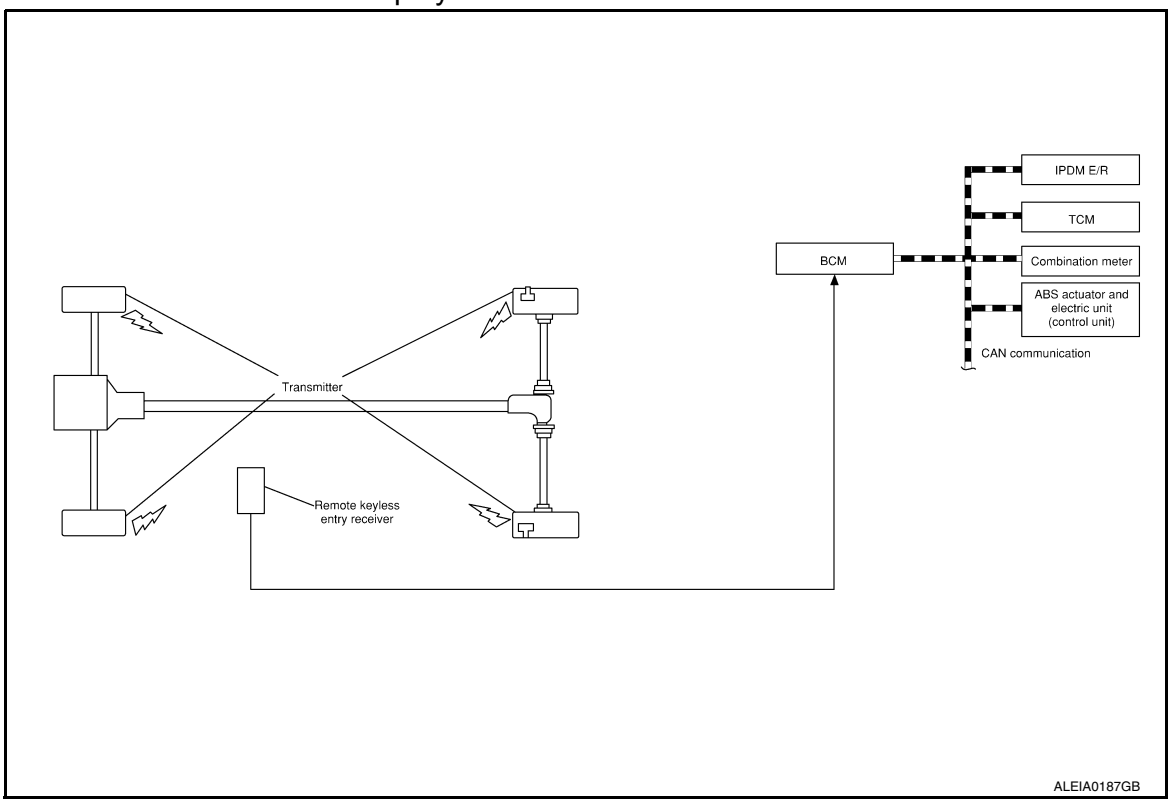
System Diagram

INFOID:0000000011153033

With Individual Tire Pressure Display



Without Individual Tire Pressure Display



System Description

INFOID:0000000011153034

When the vehicle has reached a speed of 40 km/h (25 MPH) or greater, the BCM receives a signal transmitted from the tire pressure sensors/transmitters installed in each wheel. If the BCM detects low inflation pressure or a system malfunction, it sends a signal to the combination meter via CAN communication to illuminate the low tire pressure warning lamp. In addition, a warning message will be displayed in the vehicle information display. Refer to the Owner's Manual for additional information.
The tire pressure monitoring system (TPMS) has a tire inflation indicator function to aid in tire inflation. Refer to WT-9, "Easy Fill Tire Alert Function".

Low Tire Pressure Warning Lamp and Display Indications

Condition	Low tire pressure warning lamp	Vehicle information display*
Ignition switch OFF	OFF	OFF
Ignition switch ON (system normal)	ON for 1 second then turns off	No TPMS message
Low tire pressure	ON	"Tire Pressure Low - Add Air"
Tire pressure sensor/transmitter ID not registered in BCM		"TPMS Error, See Owners Manual"
TPMS malfunction	Blinks for 1 minute then stays ON	

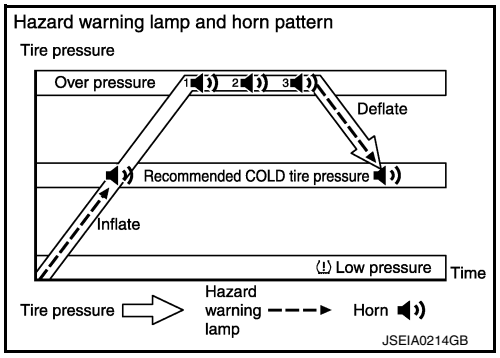
*: With individual tire pressure display.

Easy Fill Tire Alert Function

INFOID:0000000011153035

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

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



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

INFOID:0000000011573512

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

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

Direct Diagnostic Mode	Description
Ecu Identification	The BCM part number is displayed.
Self Diagnostic Result	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	• The vehicle specification can be read and saved. • The vehicle specification can be written when replacing BCM.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

SYSTEM APPLICATION
BCM can perform the following functions.

System	Sub System	Direct Diagnostic Mode						
		Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Door lock	DOOR LOCK		×	×	×	×		
Rear window defogger	REAR DEFOGGER			×	×	×		
Warning chime	BUZZER			×	×			
Interior room lamp timer	INT LAMP			×	×	×		
Exterior lamp	HEADLAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×			
Air conditioner	AIR CONDITIONER			×				
Intelligent Key system	INTELLIGENT KEY		×	×	×	×		
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×	×	×			
Interior room lamp battery saver	BATTERY SAVER			×	×			
Back door open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				

System	Sub System	Direct Diagnostic Mode						
		Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Signal buffer system	SIGNAL BUFFER			×				
TPMS	AIR PRESSURE MONITOR		×	×	×	×		

AIR PRESSURE MONITOR

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

INFOID:0000000011573513

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and no-start condition.

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs
- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

SELF DIAGNOSTIC RESULT

NOTE:
Before performing Self Diagnostic Result, be sure to register the transmitter ID or the actual malfunction may be different from that displayed on CONSULT.
Refer to BCS-52, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description
AIR PRESS FL [kPa, kg/cm^2 or Psi]	Indicates air pressure of front LH tire.
AIR PRESS FR [kPa, kg/cm^2 or Psi]	Indicates air pressure of front RH tire.
AIR PRESS RR [kPa, kg/cm^2 or Psi]	Indicates air pressure of rear RH tire.
AIR PRESS RL [kPa, kg/cm^2 or Psi]	Indicates air pressure of rear LH tire.
ID REGST FL1 [Done/Yet]	Indicates ID registration status of front LH transmitter.
ID REGST FR1 [Done/Yet]	Indicates ID registration status of front RH transmitter.
ID REGST RR1 [Done/Yet]	Indicates ID registration status of rear RH transmitter.
ID REGST RL1 [Done/Yet]	Indicates ID registration status of rear LH transmitter.
WARNING LAMP [Off/On]	Indicates condition of low tire pressure warning lamp in combination meter.
BUZZER [Off/On]	Indicates condition of buzzer in combination meter.

ACTIVE TEST

Test Item	Description
FLASHER	This test is able to check turn signal lamp operation [Off/LH/RH].
HORN	This test is able to check horn operation [On].
WARNING LAMP	This test is able to check tire pressure warning lamp operation [On/Off].
ID REGIST WARNING	This test is able to check ID regist warning chime operation [On/Off].

WORK SUPPORT

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

ECU DIAGNOSIS INFORMATION

BCM

List of ECU Reference

INFOID:0000000011153038

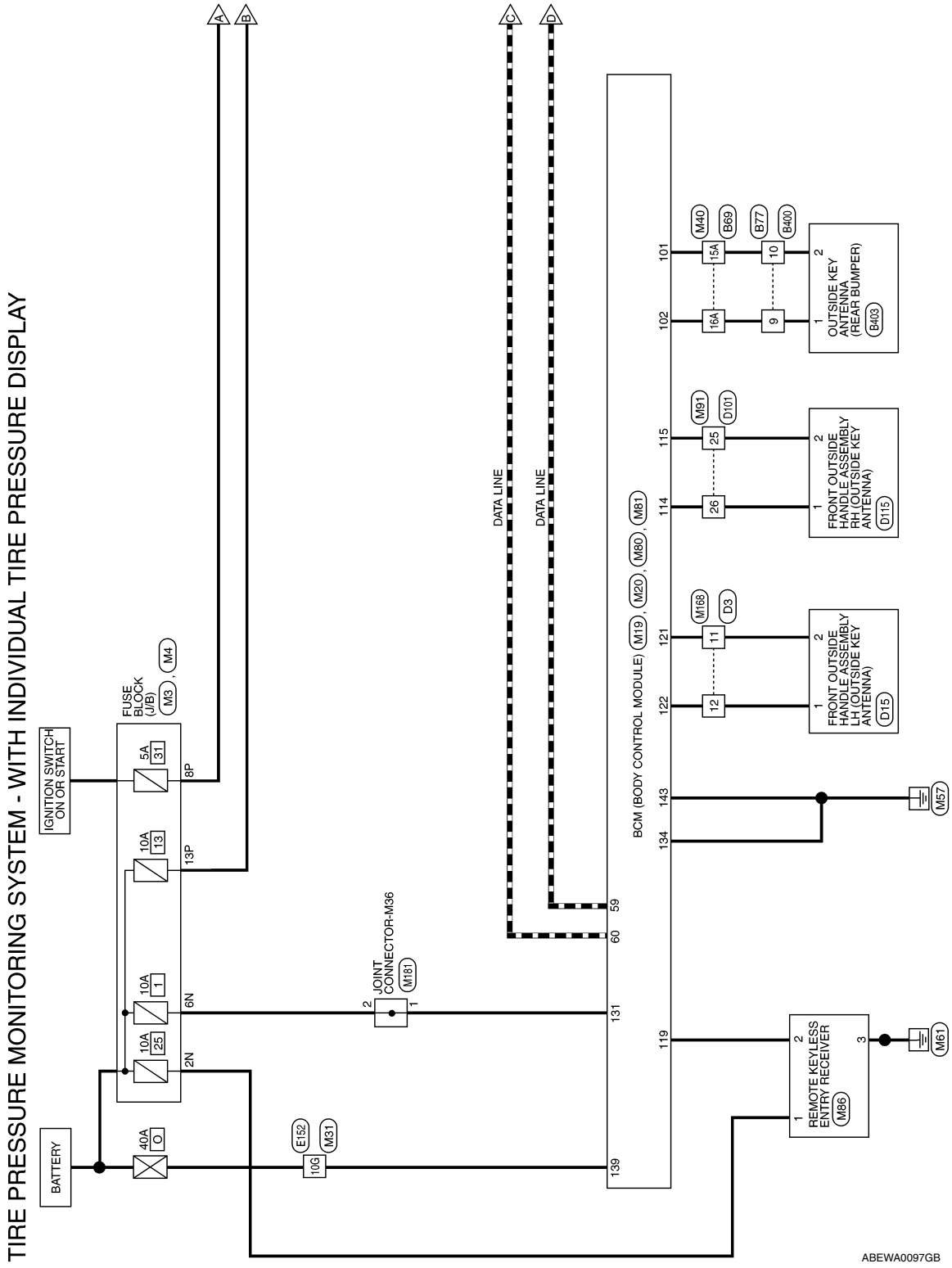
ECU	Reference
BCM	BCS-30, "Reference Value"
	BCS-50, "Fail Safe"
	BCS-50, "DTC Inspection Priority Chart"
	BCS-52, "DTC Index"

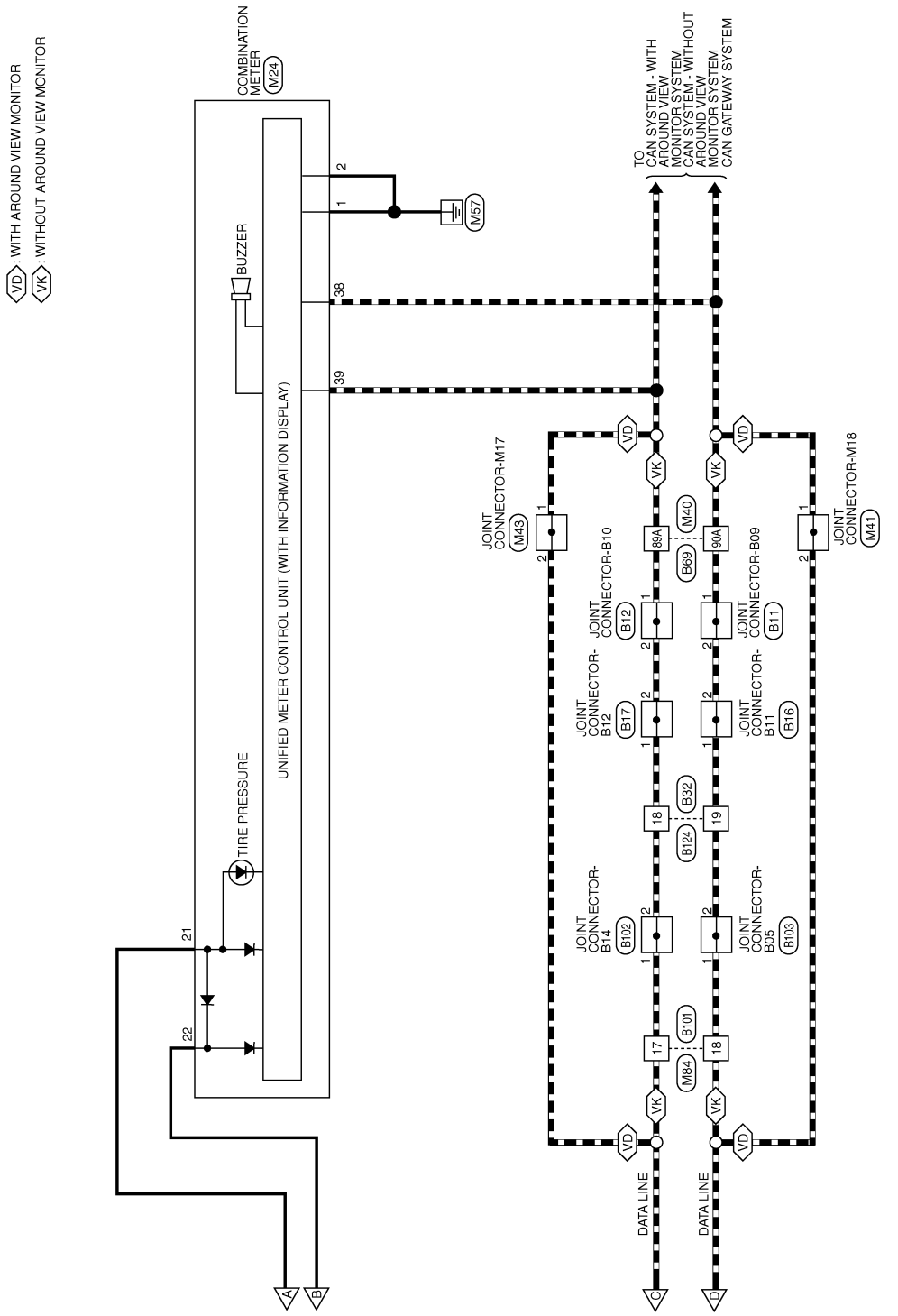
WIRING DIAGRAM

TIRE PRESSURE MONITORING SYSTEM

Wiring Diagram - With Individual Tire Pressure Display

INFOID:0000000011153039





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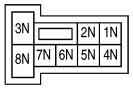
TIRE PRESSURE MONITORING SYSTEM CONNECTORS - WITH INDIVIDUAL TIRE PRESSURE DISPLAY

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

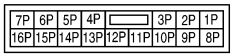
H.S.



Terminal No.	Color of Wire	Signal Name
2N	BG	–
6N	W	–

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

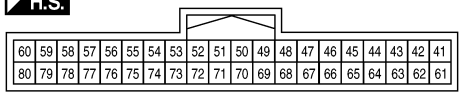
H.S.



Terminal No.	Color of Wire	Signal Name
8P	BG	–
13P	W	–

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

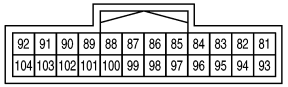
H.S.



Terminal No.	Color of Wire	Signal Name
59	P	CAN-L
60	L	CAN-H

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY

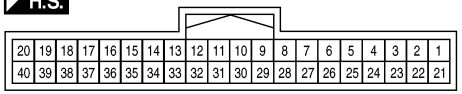
H.S.



Terminal No.	Color of Wire	Signal Name
101	R	REAR BUMPER ANT B
102	G	REAR BUMPER ANT A

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	B	GND1
2	B	GND2
21	BG	IGN
22	W	BAT
38	P	CAN-L
39	L	CAN-H

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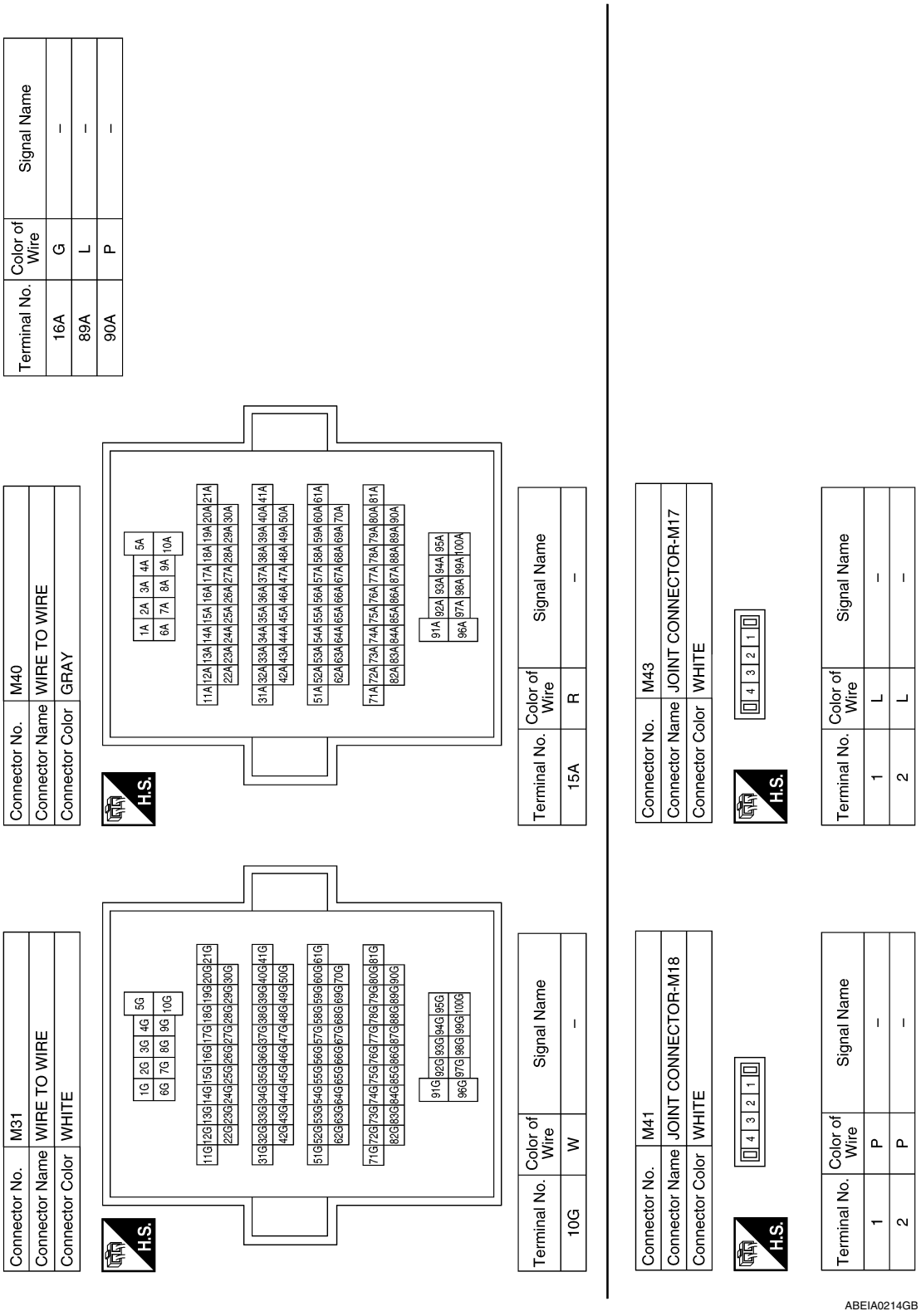

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Connector No.	M80
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

116	115	114	113	112	111	110	109	108	107	106	105
128	127	126	125	124	123	122	121	120	119	118	117

Terminal No.	Color of Wire	Signal Name
114	W	AS DOOR ANT A
115	BG	AS DOOR ANT B
119	R	RF NIMOCO
121	G	DR DOOR ANT B
122	P	DR DOOR ANT A

Connector No.	M81
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

137	136	135	134	133	132	131	130	129
145	142	141	140	139	138			

Terminal No.	Color of Wire	Signal Name
131	W	BAT BCM FUSE
134	B	GND 2
139	W	BAT POWER F/L
143	B	GND 1

Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17

Terminal No.	Color of Wire	Signal Name
17	L	–
18	P	–

Connector No.	M86
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Color	BLACK

H.S.

1	2	3	4

Terminal No.	Color of Wire	Signal Name
1	BG	–
2	R	–
3	GR	–

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
25	BG	–
26	W	–

Connector No.	M168
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

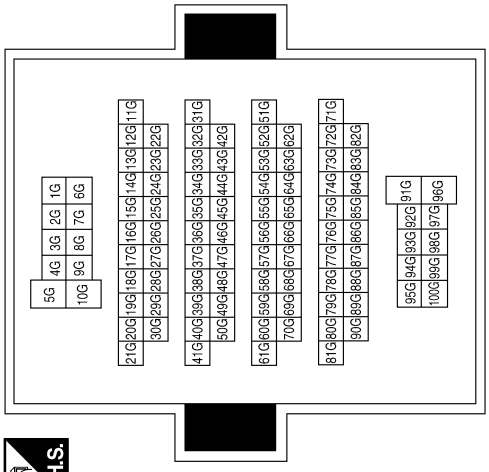
Terminal No.	Color of Wire	Signal Name
11	G	–
12	P	–

ABEIA0215GB

Terminal No.	Color of Wire	Signal Name
10G	P	–

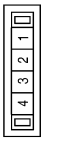
Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Connector No.	M181
Connector Name	JOINT CONNECTOR-M36
Connector Color	WHITE

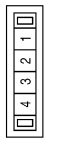
H.S.



Terminal No.	Color of Wire	Signal Name
1	W	–
2	W	–

Connector No.	B16
Connector Name	JOINT CONNECTOR-B11
Connector Color	WHITE

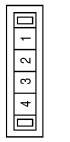
H.S.



Terminal No.	Color of Wire	Signal Name
1	P	–
2	P	–

Connector No.	B12
Connector Name	JOINT CONNECTOR-B10
Connector Color	WHITE

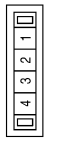
H.S.



Terminal No.	Color of Wire	Signal Name
1	L	–
2	L	–

Connector No.	B11
Connector Name	JOINT CONNECTOR-B09
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	P	–
2	P	–

AAEIA0035GB

Connector No.	B17
Connector Name	JOINT CONNECTOR-B12
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	–
2	L	–

Connector No.	B32
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17

Terminal No.	Color of Wire	Signal Name
18	L	–
19	P	–

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

5A	4A	3A	2A	1A
10A	9A	8A	7A	6A

21A	20A	19A	18A	17A	16A	15A	14A	13A	12A	11A
	30A	29A	28A	27A	26A	25A	24A	23A	22A	

41A	40A	39A	38A	37A	36A	35A	34A	33A	32A	31A
	50A	49A	48A	47A	46A	45A	44A	43A	42A	

61A	60A	59A	58A	57A	56A	55A	54A	53A	52A	51A
	70A	69A	68A	67A	66A	65A	64A	63A	62A	

81A	80A	79A	78A	77A	76A	75A	74A	73A	72A	71A
	90A	89A	88A	87A	86A	85A	84A	83A	82A	

95A	94A	93A	92A	91A
100A	99A	98A	97A	96A

Terminal No.	Color of Wire	Signal Name
15A	G	–
16A	W	–
89A	L	–
90A	P	–

Connector No.	B77
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
9	W	–
10	G	–

AAEIA0036GB

Connector No.	B101
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
17	L	–
18	P	–

Connector No.	B102
Connector Name	JOINT CONNECTOR-B14
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	–
2	L	–

Connector No.	B103
Connector Name	JOINT CONNECTOR-B05
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	P	–
2	P	–

Connector No.	B124
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

Terminal No.	Color of Wire	Signal Name
18	L	–
19	P	–

Connector No.	B400
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17

Terminal No.	Color of Wire	Signal Name
9	W	–
10	G	–

Connector No.	B403
Connector Name	OUTSIDE KEY ANTENNA (REAR BUMPER)
Connector Color	GRAY

H.S.

1	2

Terminal No.	Color of Wire	Signal Name
1	W	–
2	G	–

ABEIA0291GB

Connector No.	D3
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
11	Y	–
12	LG	–

Connector No.	D15
Connector Name	FRONT OUTSIDE HANDLE ASSEMBLY LH
Connector Color	BLACK

H.S.

1	2	3	4

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	Y	–

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17

Terminal No.	Color of Wire	Signal Name
25	Y	–
26	LG	–

Connector No.	D115
Connector Name	FRONT OUTSIDE HANDLE ASSEMBLY RH
Connector Color	BLACK

H.S.

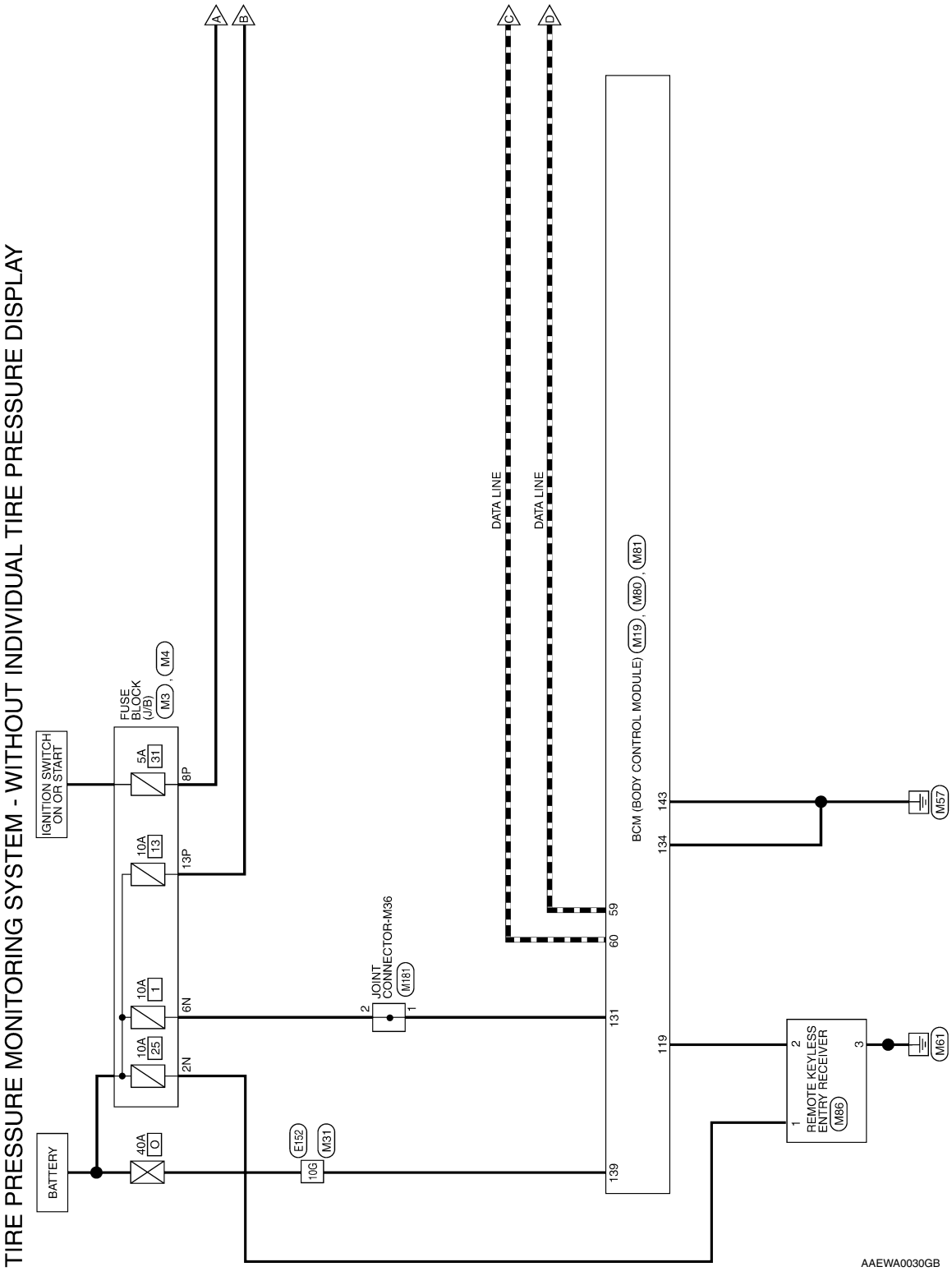
1	2	3	4

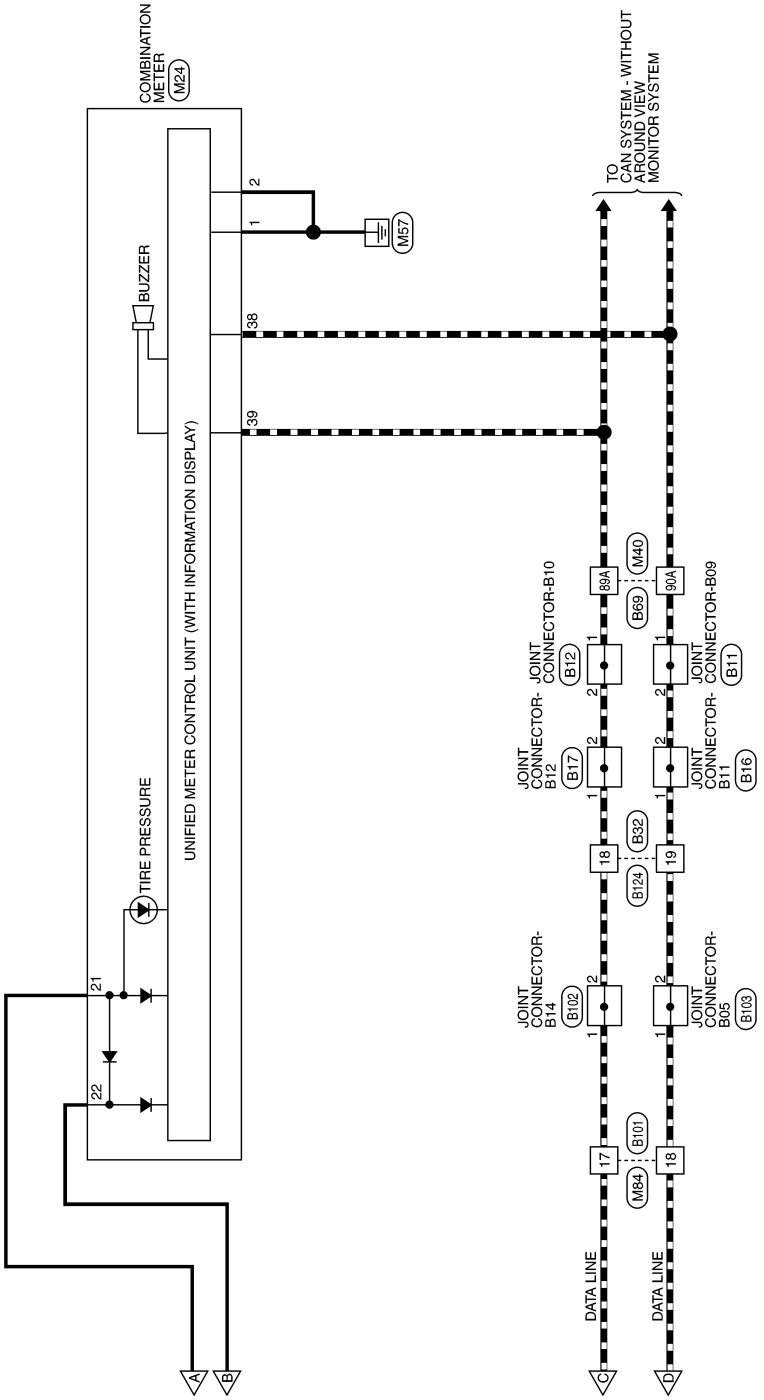
Terminal No.	Color of Wire	Signal Name
1	LG	–
2	Y	–

ABEIA0292GB

Wiring Diagram - Without Individual Tire Pressure Display

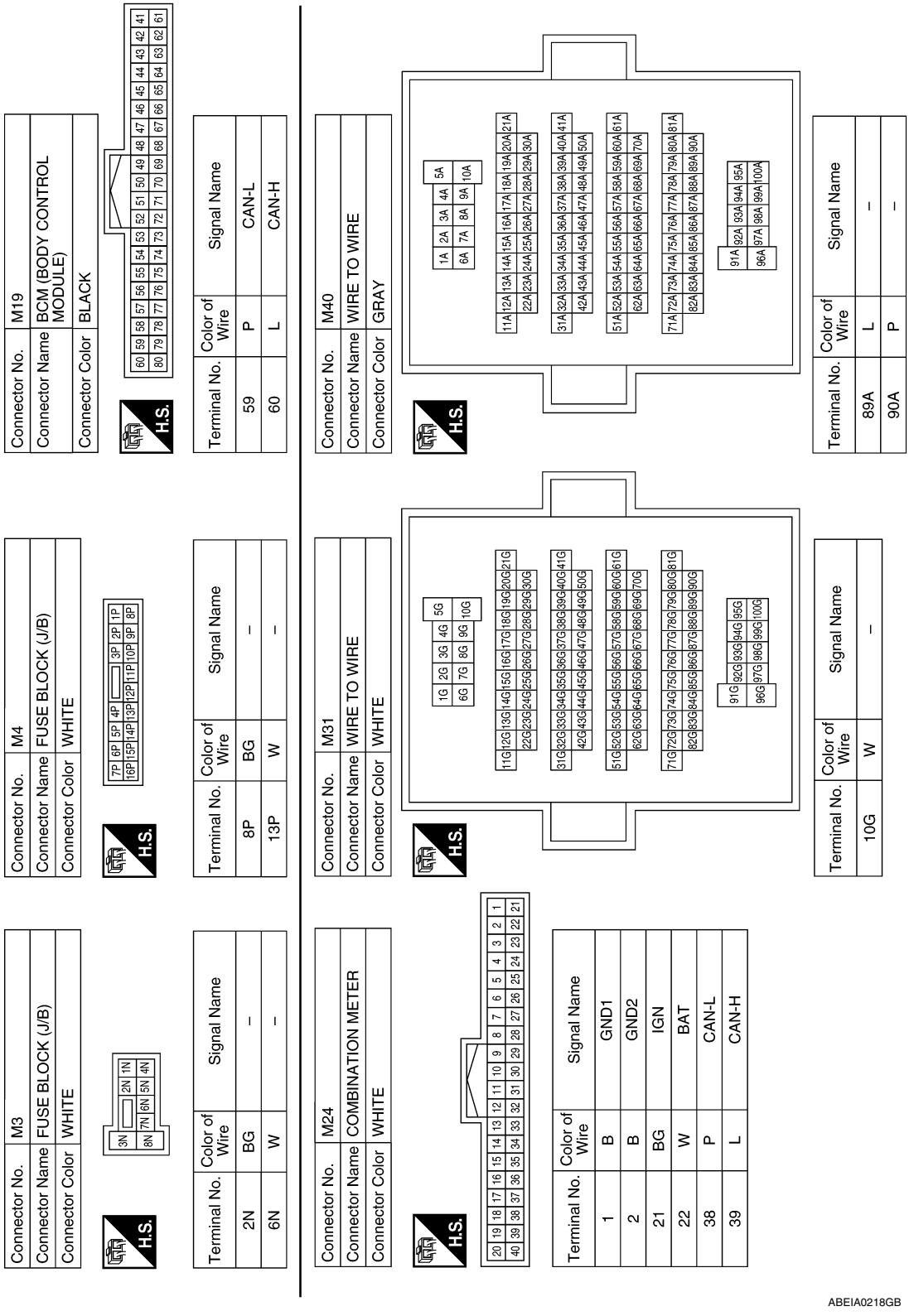
INFOID:0000000011153040





ABEWA0135GB

TIRE PRESSURE MONITORING SYSTEM CONNECTORS - WITHOUT INDIVIDUAL TIRE PRESSURE DISPLAY



Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17

Terminal No.	Color of Wire	Signal Name
17	L	–
18	P	–

Connector No.	M81
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

137	136	135	134	133	132	131	130	129
143	142	141	140	139	138			

Terminal No.	Color of Wire	Signal Name
131	W	BAT BCM FUSE
134	B	GND 2
139	W	BAT POWER F/L
143	B	GND 1

Connector No.	M80
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

116	115	114	113	112	111	110	109	108	107	106	105
128	127	126	125	124	123	122	121	120	119	118	117

Terminal No.	Color of Wire	Signal Name
119	R	RF NIMOCO

Connector No.	M181
Connector Name	JOINT CONNECTOR-M36
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	W	–
2	W	–

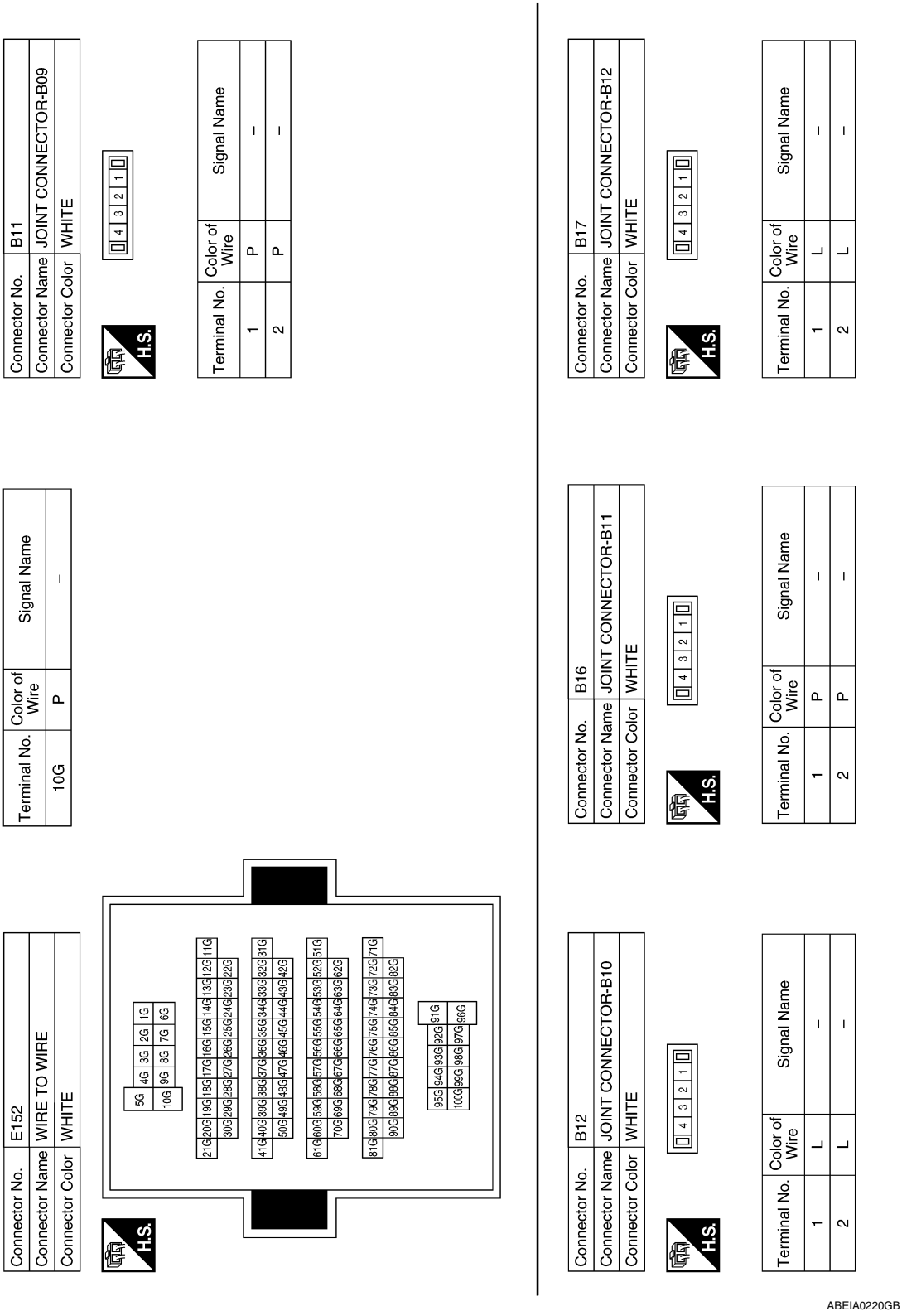
Connector No.	M86
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Color	BLACK

H.S.

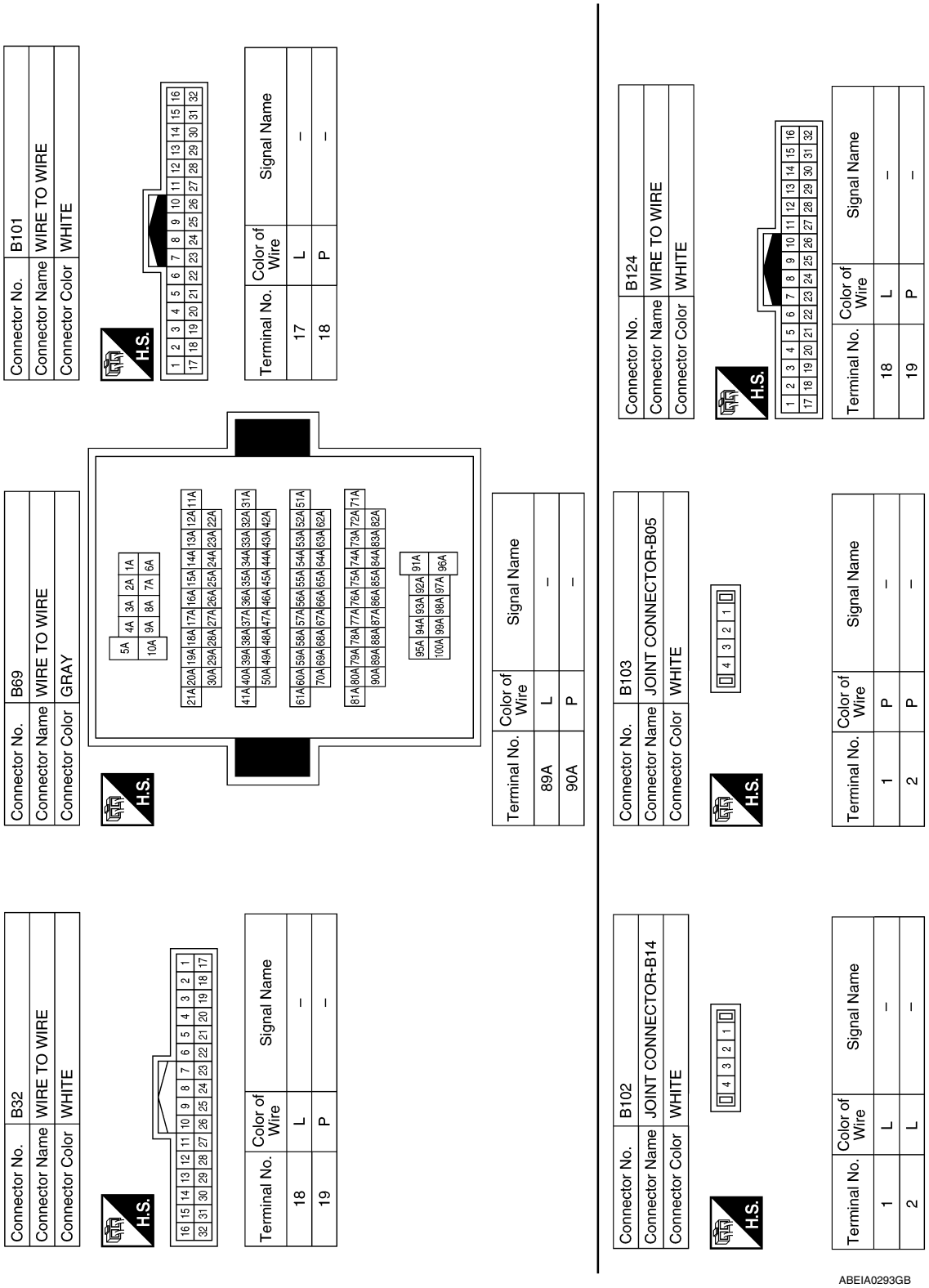
1	2	3	4

Terminal No.	Color of Wire	Signal Name
1	BG	–
2	R	–
3	GR	–

ABEIA0219GB



ABEIA0220GB


Connector No. B32
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17
Terminal No. Color of Wire Signal Name
18 L –
19 P –
Connector No. B69
Connector Name WIRE TO WIRE
Connector Color GRAY
H.S.
5A 4A 3A 2A 1A
10A 9A 8A 7A 6A
21A 20A 19A 18A 17A 16A 15A 14A 13A 12A 11A
30A 29A 28A 27A 26A 25A 24A 23A 22A
41A 40A 39A 38A 37A 36A 35A 34A 33A 32A 31A
50A 49A 48A 47A 46A 45A 44A 43A 42A
61A 60A 59A 58A 57A 56A 55A 54A 53A 52A 51A
70A 69A 68A 67A 66A 65A 64A 63A 62A
81A 80A 79A 78A 77A 76A 75A 74A 73A 72A 71A
90A 89A 88A 87A 86A 85A 84A 83A 82A
95A 94A 93A 92A 91A
100A 99A 98A 97A 96A
Terminal No. Color of Wire Signal Name
89A L –
90A P –
Connector No. B101
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
Terminal No. Color of Wire Signal Name
17 L –
18 P –
Connector No. B102
Connector Name JOINT CONNECTOR-B14
Connector Color WHITE
H.S.
4 3 2 1
Terminal No. Color of Wire Signal Name
1 L –
2 L –
Connector No. B103
Connector Name JOINT CONNECTOR-B05
Connector Color WHITE
H.S.
4 3 2 1
Terminal No. Color of Wire Signal Name
1 P –
2 P –
Connector No. B124
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
Terminal No. Color of Wire Signal Name
18 L –
19 P –
ABEIA0293GB

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000011153041

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

1.COLLECT INFORMATION FROM CUSTOMER

Get detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2.

2.TIRE PRESSURE INSPECTION

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

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace tire(s) or wheel(s).

3.CHECK LOW TIRE PRESSURE WARNING LAMP

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

Does the low tire pressure warning lamp turn OFF?

YES >> Inspection End.
NO >> GO TO 4.

4.PERFORM SELF DIAGNOSTIC RESULT

Perform self diagnostic result. Refer to WT-11, "AIR PRESSURE MONITOR : CONSULT Function (BCM-AIR PRESSURE MONITOR)".

Are any DTCs displayed?

YES >> Refer to BCS-52, "DTC Index". If two or more DTCs are displayed, refer to BCS-50, "DTC Inspection Priority Chart".
NO >> GO TO 5.

5.PERFORM DIAGNOSIS APPLICABLE TO THE SYMPTOM

Perform diagnosis applicable to the symptom. Refer to WT-52, "Symptom Table".

>> GO TO 6.

6.FINAL CHECK

Perform self diagnostic result again, and check that the malfunction is repaired. After checking, erase the self diagnosis memory. Refer to WT-11, "AIR PRESSURE MONITOR : CONSULT Function (BCM-AIR PRESSURE MONITOR)".

>> Inspection End.

ID REGISTRATION PROCEDURE

Description

INFOID:0000000011153042

This procedure must be performed:
- after replacement of a transmitter or BCM (with individual tire pressure display).
- after replacement of a transmitter, BCM or rotation of the wheels (without individual tire pressure display).

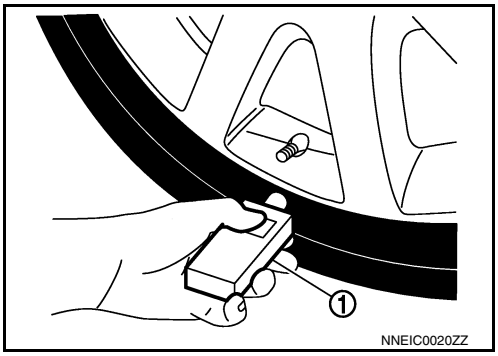
Work Procedure

INFOID:0000000011153043

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

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

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



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

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

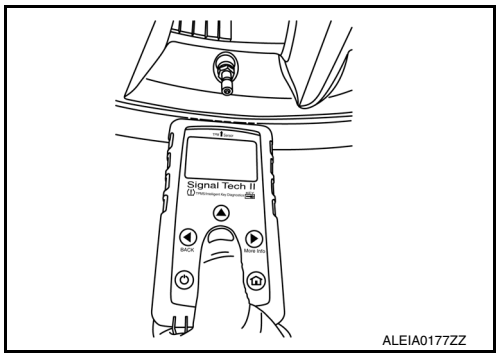
8. After the ID registration procedure for all wheels is complete, press “End” on the CONSULT to finish ID registration.
9. Test drive the vehicle to ensure that the TPMS lamp is OFF and no warning messages are present.

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

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

With CONSULT
1. Adjust the tire pressure for all tires to the recommended value. Refer to WT-66, "Tire Air Pressure".
2. Turn the ignition switch ON.
3. Using CONSULT, select “WORK SUPPORT” in BCM (AIR PRESSURE MONITOR). Then, select “ID REGIST.”
4. Select “Start” on “ID REGIST” screen.

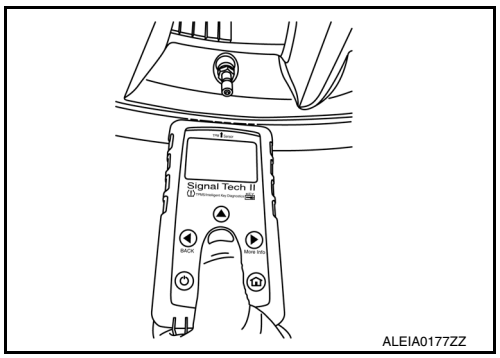
5. Turn on the Signal Tech II tool (J-50190).
6. Hold the Signal Tech II against the side of the left front tire, near the valve stem.
7. With the tool held at a 0 to 15 degree angle to the tire, select “Activate Sensor” from the main menu, then press and release the “OK” button to activate the sensor. Once the sensor is activated, the vehicle parking lamps will flash and the sensor ID will appear on the CONSULT screen.
8. Repeat steps 6 and 7 for the remaining tires in this order: right front, right rear and left rear.
9. When ID registration is complete, check the following pattern at each wheel.



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

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

Without CONSULT
1. Adjust the tire pressure for all tires to the recommended value. Refer to WT-66, "Tire Air Pressure".
2. Turn on the Signal Tech II tool (J-50190) and select “TPMS Check” from the main menu.
3. Select vehicle model and year.
4. When prompted, hold the Signal Tech II against the side of the left front tire, near the valve stem.
5. With the tool held at a 0 to 15 degree angle to the tire, press and release the “OK” button to activate the sensor. Once the sensor is activated, the tool will sound a tone and the tire pressure will be displayed.
6. Repeat steps 4 and 5 for the remaining tires in this order: right front, right rear and left rear.
7. When prompted, connect the tool to the data link connector. The tool will connect to the BCM, read the VIN, read sensor IDs and check for TPMS DTCs. Along with DTCs detected, one of the following will be displayed next to each wheel:



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

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

TPMS REGISTRATION WITH CONSULT ONLY

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

Tire position	Tire pressure kPa (kg/cm^2, psi)
Front LH	240 (2.4, 35)
Front RH	220 (2.2, 32)

Tire position	Tire pressure kPa (kg/cm^2, psi)
Rear RH	200 (2.0, 29)
Rear LH	180 (1.8, 26)

2. Turn the ignition switch ON.
3. Using CONSULT, select “WORK SUPPORT” in BCM (AIR PRESSURE MONITOR). Then, select “ID REGIST.”
4. Select “Start” on “ID REGIST” screen.
5. Drive the vehicle at a speed greater than 40 km/h (25 MPH) for 3 minutes or more.
6. After ID registration for all wheels is complete, press “End” on the CONSULT to finish ID registration.

ID registration position	CONSULT
Front LH	“Yet (red)” ↓ “Done (green)”
Front RH	
Rear RH	
Rear LH	

7. Adjust the tire pressures for all tires to the recommended value. Refer to WT-66, "Tire Air Pressure".
8. Test drive the vehicle to ensure that the TPMS lamp is OFF and no warning messages are present.

DTC/CIRCUIT DIAGNOSIS

C1704, C1705, C1706, C1707 LOW TIRE PRESSURE

DTC Logic

INFOID:0000000011153044

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
LOW PRESSURE FL [C1704]	Front LH tire pressure drops to 189.6 kPa (1.9 kg/cm^2, 27 psi) or less.	• Low tire pressure • Tire pressure sensor
LOW PRESSURE FR [C1705]	Front RH tire pressure drops to 189.6 kPa (1.9 kg/cm^2, 27 psi) or less.	
LOW PRESSURE RR [C1706]	Rear RH tire pressure drops to 189.6 kPa (1.9 kg/cm^2, 27 psi) or less.	
LOW PRESSURE RL [C1707]	Rear LH tire pressure drops to 189.6 kPa (1.9 kg/cm^2, 27 psi) or less.	

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Check tire pressure for all wheels and adjust to the specified value. Refer to WT-66, "Tire Air Pressure".
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.
3. Perform Self Diagnostic Result.

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

YES >> Proceed to WT-33, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000011153045

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

1.TIRE PRESSURE SENSOR ID REGISTRATION

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

Can the tire pressure sensor ID registration be completed?

YES >> GO TO 2.
NO >> Replace applicable tire pressure sensor. Refer to WT-61, "Removal and Installation".

2.CHECK TIRE PRESSURE

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

Is the inspection result normal?

YES >> Perform DTC CONFIRMATION PROCEDURE again. Refer to WT-33, "DTC Logic".
NO >> GO TO 3.

3. CHECK TIRE PRESSURE SIGNAL

With CONSULT

1. Adjust tire pressure for all wheels to the specified value. Refer to WT-66, "Tire Air Pressure".
2. Select Data Monitor from AIR PRESSURE MONITOR of BCM.
3. Check that the air pressures match the specified value.

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

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair or replace malfunctioning components.

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

DTC Logic

INFOID:0000000011153046

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
[NO - DATA] - FL [C1708]	Data signal from the front LH wheel sensor cannot be detected.	• Driving in area with radio interference. • ID registration incomplete • Tire pressure sensor • Harness or connectors • Remote keyless entry receiver • BCM
[NO - DATA] - FR [C1709]	Data signal from the front RH wheel sensor cannot be detected.	
[NO - DATA] - RR [C1710]	Data signal from the rear RH wheel sensor cannot be detected.	
[NO - DATA] - RL [C1711]	Data signal from the rear LH wheel sensor cannot be detected.	

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Perform tire pressure sensor ID registration. Refer to WT-30, "Work Procedure".
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.
   NOTE:
   Avoid driving in areas with radio interference.
3. Perform Self Diagnostic Result.

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

YES >> Proceed to WT-35, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000011153047

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

Regarding Wiring Diagram information, refer to WT-14, "Wiring Diagram - With Individual Tire Pressure Display" or WT-23, "Wiring Diagram - Without Individual Tire Pressure Display".

1.CHECK TIRE PRESSURE SIGNAL

With CONSULT
1. Select Data Monitor from AIR PRESSURE MONITOR of BCM.
2. Check that the air pressures match the specified value.

Monitor item	Displayed value
AIR PRESS FL	Approximately equal to specified value. Refer to WT-66, "Tire Air Pressure".
AIR PRESS FR	
AIR PRESS RR	
AIR PRESS RL	

Are all tire pressures displayed 0 kPa (psi)?

YES >> GO TO 2.
NO >> Replace applicable tire pressure sensor. Refer to WT-61, "Removal and Installation".

2.CHECK REMOTE KEYLESS ENTRY RECEIVER POWER CIRCUIT

Check voltage between remote keyless entry receiver connector M86 terminal 1 and ground.

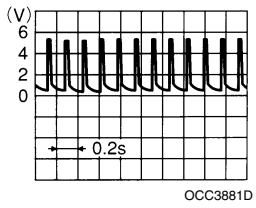
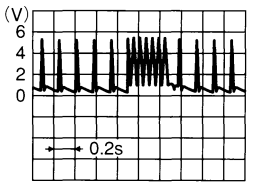
Remote keyless entry receiver		Ground	Voltage (Approx.)
Connector	Terminal		
M86	1	—	Battery voltage

Is the inspection result normal?

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

3.CHECK REMOTE KEYLESS ENTRY RECEIVER SIGNAL

1. Turn ignition switch ON.
2. Check signal between remote keyless entry receiver connector M86 terminal 2 and ground with an oscilloscope.

Remote keyless entry receiver		Condition	Voltage (Approx.)
Connector	Terminal		
M86	2	Standby state	 OCC3881D
		When receiving the signal from the transmitter	 OCC3880D

Is the inspection result normal?

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

4.CHECK REMOTE KEYLESS ENTRY RECEIVER SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M80 and remote keyless entry receiver connector.
3. Check continuity between BCM connector M80 terminal 119 and remote keyless entry receiver connector M86 terminal 2.

BCM		Remote keyless entry receiver		Continuity
Connector	Terminal	Connector	Terminal	
M80	119	M86	2	Yes

4. Check continuity between BCM connector M80 terminal 119 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M80	119	—	No

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace harness or connectors.

5. CHECK REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT

Check continuity between remote keyless entry receiver connector M86 terminal 3 and ground.

Remote keyless entry receiver		Ground	Continuity
Connector	Terminal		
M86	3	—	Yes

Is the inspection result normal?

YES >> Replace the remote keyless entry receiver. Refer to WT-65, "Removal and Installation".
NO >> Repair or replace harness or connectors.

6. TIRE PRESSURE SENSOR ID REGISTRATION

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

Can the tire pressure sensor ID registration be completed?

YES >> GO TO 7.
NO >> Replace applicable tire pressure sensor. Refer to WT-61, "Removal and Installation".

7. RECHECK TIRE PRESSURE SIGNAL

With CONSULT

1. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
2. Select Data Monitor from AIR PRESSURE MONITOR of BCM.
3. Check that the air pressures match the specified value.

Monitor item	Displayed value
AIR PRESS FL	Approximately equal to specified value. Refer to WT-66, "Tire Air Pressure".
AIR PRESS FR	
AIR PRESS RR	
AIR PRESS RL	

Does Data Monitor display specified value without turning tire pressure warning lamp ON?

YES >> Inspection End.
NO >> Replace BCM. Refer to BCS-80, "Removal and Installation".

C1712, C1713, C1714, C1715 TRANSMITTER (CHECKSUM)

DTC Logic

INFOID:0000000011153048

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
[CHECKSUM - ERR] - FL [C1712]	Checksum data signal from front LH wheel sensor is malfunctioning.	• ID registration incomplete • Tire pressure sensor • BCM
[CHECKSUM - ERR] - FR [C1713]	Checksum data signal from front RH wheel sensor is malfunctioning.	
[CHECKSUM - ERR] - RR [C1714]	Checksum data signal from rear RH wheel sensor is malfunctioning.	
[CHECKSUM - ERR] - RL [C1715]	Checksum data signal from rear LH wheel sensor is malfunctioning.	

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
2. Perform Self Diagnostic Result.

Is DTC C1712, C1713, C1714, or C1715 detected?

YES >> Proceed to WT-38, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000011153049

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

1.TIRE PRESSURE SENSOR ID REGISTRATION

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

Can the tire pressure sensor ID registration be completed?

YES >> GO TO 2.
NO >> Replace applicable tire pressure sensor. Refer to WT-61, "Removal and Installation".

2.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
2. Perform Self Diagnostic Result.

Is DTC C1712, C1713, C1714, or C1715 detected?

YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> Inspection End.

C1716, C1717, C1718, C1719 TRANSMITTER (PRESSURE DATA)

DTC Logic

INFOID:0000000011153050

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
[PRESSDATA ERR] FL [C1716]	Malfunction in the tire pressure data from the front LH wheel tire pressure sensor.	• Excessive tire pressure • ID registration incomplete • Tire pressure sensor • BCM
[PRESSDATA ERR] FR [C1717]	Malfunction in the tire pressure data from the front RH wheel tire pressure sensor.	
[PRESSDATA ERR] RR [C1718]	Malfunction in the tire pressure data from the rear RH wheel tire pressure sensor.	
[PRESSDATA ERR] RL [C1719]	Malfunction in the tire pressure data from the rear LH wheel tire pressure sensor.	

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT

1. Check tire pressure for all wheels and adjust to the specified value. Refer to WT-66, "Tire Air Pressure".
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.
3. Perform Self Diagnostic Result.

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

YES >> Proceed to WT-40, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000011153051

1.TIRE PRESSURE SENSOR ID REGISTRATION

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

Can the tire pressure sensor ID registration be completed?

YES >> GO TO 2.
NO >> Replace applicable tire pressure sensor. Refer to WT-61, "Removal and Installation".

2.CHECK TIRE PRESSURE SIGNAL

With CONSULT

1. Adjust tire pressure for all wheels to the specified value. Refer to WT-66, "Tire Air Pressure".
2. Select Data Monitor from AIR PRESSURE MONITOR of BCM.
3. Check that the air pressures match the specified value.

Monitor item	Displayed value
AIR PRESS FL	Approximately equal to specified value. Refer to WT-66, "Tire Air Pressure".
AIR PRESS FR	
AIR PRESS RR	
AIR PRESS RL	

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace BCM. Refer to BCS-80, "Removal and Installation".

C1720, C1721, C1722, C1723 TRANSMITTER

DTC Logic

INFOID:0000000011153052

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
[CODE - ERR] - FL [C1720]	Function code data from front LH wheel sensor is malfunctioning.	• ID registration incomplete • Tire pressure sensor • BCM
[CODE - ERR] - FR [C1721]	Function code data from front RH wheel sensor is malfunctioning.	
[CODE - ERR] - RR [C1722]	Function code data from rear RH wheel sensor is malfunctioning.	
[CODE - ERR] - RL [C1723]	Function code data from rear LH wheel sensor is malfunctioning.	

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
2. Perform Self Diagnostic Result.

Is DTC C1720, C1721, C1722, or C1723 detected?

YES >> Proceed to WT-41, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000011153053

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

1.TIRE PRESSURE SENSOR ID REGISTRATION

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

Can the tire pressure sensor ID registration be completed?

YES >> GO TO 2.
NO >> Replace applicable tire pressure sensor. Refer to WT-61, "Removal and Installation".

2.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
2. Perform Self Diagnostic Result.

Is DTC C1720, C1721, C1722, or C1723 detected?

YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> Inspection End.

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

DTC Logic

INFOID:0000000011153054

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
[BATT - VOLT - LOW] - FL [C1724]	Battery voltage of front LH wheel sensor drops.	• Tire pressure sensor • BCM
[BATT - VOLT - LOW] - FR [C1725]	Battery voltage of front RH wheel sensor drops.	
[BATT - VOLT - LOW] - RR [C1726]	Battery voltage of rear RH wheel sensor drops.	
[BATT - VOLT - LOW] - RL [C1727]	Battery voltage of rear LH wheel sensor drops.	

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
2. Perform Self Diagnostic Result.

Is DTC C1724, C1725, C1726, or C1727 detected?

YES >> Proceed to WT-43, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000011153055

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

1.TIRE PRESSURE SENSOR ID REGISTRATION

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

Can the tire pressure sensor ID registration be completed?

YES >> GO TO 2.
NO >> Replace applicable tire pressure sensor. Refer to WT-61, "Removal and Installation".

2.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
2. Perform Self Diagnostic Result.

Is DTC C1724, C1725, C1726, or C1727 detected?

YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> Inspection End.

C1729 VEHICLE SPEED SIGNAL

DTC Logic

INFOID:0000000011153056

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
VHCL SPEED SIG ERR [C1729]	Vehicle speed signal not detected.	• CAN communication • BCM • Combination meter

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT

1. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
2. Perform Self Diagnostic Result.

Is DTC C1729 detected?

YES >> Proceed to WT-45, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000011153057

1.PERFORM SELF DIAGNOSTIC RESULT FOR COMBINATION METER

With CONSULT

Perform Self Diagnostic Result for METER M&A. Refer to MWI-18, "CONSULT Function (METER/M&A)".

Are any DTCs detected?

YES >> Refer to MWI-29, "DTC Index".
NO >> Replace the BCM. Refer to BCS-80, "Removal and Installation".

C1730, C1731, C1732, C1733 FLAT TIRE

DTC Logic

INFOID:0000000011153058

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
FLAT TIRE FL [C1730]	Front LH tire pressure is 70 kPa (0.7 kg/cm^2, 10 psi) or less.	• Low tire pressure • Tire pressure sensor
FLAT TIRE FR [C1731]	Front RH tire pressure is 70 kPa (0.7 kg/cm^2, 10 psi) or less.	
FLAT TIRE RR [C1732]	Rear RH tire pressure is 70 kPa (0.7 kg/cm^2, 10 psi) or less.	
FLAT TIRE RL [C1733]	Rear LH tire pressure is 70 kPa (0.7 kg/cm^2, 10 psi) or less.	

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
1. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
2. Perform Self Diagnostic Result.

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

YES >> Proceed to WT-46, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000011153059

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

1.TIRE PRESSURE SENSOR ID REGISTRATION

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

Can the tire pressure sensor ID registration be completed?

YES >> GO TO 2.
NO >> Replace applicable tire pressure sensor. Refer to WT-61, "Removal and Installation".

2.CHECK TIRE PRESSURE

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

Is the inspection result normal?

YES >> Perform DTC CONFIRMATION PROCEDURE again. Refer to WT-46, "DTC Logic".
NO >> GO TO 3.

3. CHECK TIRE PRESSURE SIGNAL

With CONSULT

1. Adjust tire pressure for all wheels to the specified value. Refer to WT-66, "Tire Air Pressure".
2. Select Data Monitor from AIR PRESSURE MONITOR of BCM.
3. Check that the air pressures match the specified value.

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

Is the inspection result normal?

YES >> Inspection End.
NO >> Repair or replace malfunctioning components.

C1734 BCM

DTC Logic

INFOID:0000000011153060

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CONTROL UNIT [C1734]	TPMS malfunction in BCM.	BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
Perform Self Diagnostic Result.

Is DTC C1734 detected?

YES >> Proceed to WT-48, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000011153061

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

Regarding Wiring Diagram information, refer to WT-14, "Wiring Diagram - With Individual Tire Pressure Display" or WT-23, "Wiring Diagram - Without Individual Tire Pressure Display".

1.CHECK BCM HARNESS CONNECTORS

Check BCM harness connectors for damage or loose connections.

Is the inspection result normal?

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

2.CHECK BCM POWER SUPPLY AND GROUND

Check BCM power supply and ground. Refer to BCS-74, "Diagnosis Procedure".

Is the inspection result normal?

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

3.CHECK REMOTE KEYLESS ENTRY RECEIVER POWER CIRCUIT

Check voltage between remote keyless entry receiver connector M86 terminal 1 and ground.

Remote keyless entry receiver		Ground	Voltage (Approx.)
Connector	Terminal		
M86	1	—	Battery voltage

Is the inspection result normal?

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

4. CHECK REMOTE KEYLESS ENTRY RECEIVER SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M80 and remote keyless entry receiver connector.
3. Check continuity between BCM connector M80 terminal 119 and remote keyless entry receiver connector M86 terminal 2.

BCM		Remote keyless entry receiver		Continuity
Connector	Terminal	Connector	Terminal	
M80	119	M86	2	Yes

4. Check continuity between BCM connector M80 terminal 119 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M80	119	—	No

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace harness or connectors.

5. CHECK REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT

Check continuity between remote keyless entry receiver connector M86 terminal 3 and ground.

Remote keyless entry receiver		Ground	Continuity
Connector	Terminal		
M86	3	—	Yes

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace harness or connectors.

6. CHECK BCM INPUT/OUTPUT SIGNALS

Check BCM input/output signals. Refer to BCS-30, "Reference Value".

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace BCM. Refer to BCS-80, "Removal and Installation".

C1735 IGNITION SIGNAL

DTC Logic

INFOID:0000000011153062

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
IGNITION SIGNAL LINE - BCM/TPMS [C1735]	BCM has detected a mismatch between IGN ON signals.	BCM

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
Perform Self Diagnostic Result.
Is DTC C1735 detected?

YES >> Proceed to WT-50, "Diagnosis Procedure".
NO >> Inspection End.

Diagnosis Procedure

INFOID:0000000011153063

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

1.CHECK CAN IGNITION SIGNAL

With CONSULT
1. Select Data Monitor from INTELLIGENT KEY of BCM.
2. Check IGN RLY1-F/B value.

Monitor item	Displayed value
IGN RLY1-F/B	On with ignition in ON position

Is the inspection result normal?

YES >> GO TO 2.
NO >> Check CAN system. Refer to LAN-21, "Trouble Diagnosis Flow Chart".

2.CHECK BCM POWER SUPPLY AND GROUND

Check BCM power supply and ground. Refer to BCS-74, "Diagnosis Procedure".
Is the inspection result normal?

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

3.DRIVE VEHICLE

Clear DTC and test drive vehicle to check for low tire pressure warning lamp.
Does the vehicle operate without any low tire pressure warning lamp?

YES >> Inspection End.
NO >> Replace BCM. Refer to BCS-80, "Removal and Installation".

SYMPTOM DIAGNOSIS

TPMS

Symptom Table

INFOID:0000000011153064

Symptom	Reference
Low tire pressure warning lamp does not come on when ignition switch is turned ON.	WT-53
Low tire pressure warning lamp stays on when ignition switch is turned ON.	WT-54
Easy fill tire alert does not activate.	WT-55

LOW TIRE PRESSURE WARNING LAMP DOES NOT TURN ON

Low Tire Pressure Warning Lamp Does Not Come On When Ignition Switch Is Turned On

INFOID:0000000011153065

NOTE:
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.
- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

1.PERFORM SELF DIAGNOSTIC RESULT

With CONSULT
Perform Self Diagnostic Result.

Is DTC U1000 detected?

YES >> Refer to LAN-21, "Trouble Diagnosis Flow Chart".
NO >> GO TO 2

2.CHECK COMBINATION METER

Check combination meter operation. Refer to MWI-18, "CONSULT Function (METER/M&A)".

Is the inspection result normal?

YES >> GO TO 3
NO >> Replace combination meter. Refer to MWI-85, "Removal and Installation".

3.CHECK LOW TIRE PRESSURE WARNING LAMP

Disconnect BCM harness connector.

Does the low tire pressure warning lamp activate?

YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> Check combination meter operation.

LOW TIRE PRESSURE WARNING LAMP STAYS ON

Low Tire Pressure Warning Lamp Stays On When Ignition Switch Is Turned On

INFOID:0000000011153066

1.CHECK BCM CONNECTORS

1. Turn ignition switch OFF.
2. Disconnect BCM connectors.
3. Check terminals for damage or loose connections.

Is the inspection result normal?

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

2.BCM POWER SUPPLY AND GROUND CIRCUITS

Check BCM power supply and ground circuits. Refer to BCS-74, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> Repair BCM circuits.

EASY FILL TIRE ALERT DOES NOT ACTIVATE

Description

INFOID:0000000011153067

The easy fill tire alert does not function while inflating a tire when the select lever position is in P-range with the ignition switch ON. Refer to WT-9, "Easy Fill Tire Alert Function".

Diagnosis Procedure

INFOID:0000000011153068

1. LOCATION CHANGE

Move the vehicle to another area and repeat the procedure of the tire inflation indicator function. Refer to WT-9, "Easy Fill Tire Alert Function".

Is the function normal?

YES >> Inspection End.
NO >> GO TO 2.

2. PERFORM SELF DIAGNOSTIC RESULT

With CONSULT

Perform Self Diagnostic Result.

Are any DTCs detected?

YES >> Refer to BCS-52, "DTC Index".
NO >> GO TO 3.

3. CHECK HAZARD WARNING LAMP OPERATION

Check hazard warning lamp operation with hazard switch.

Do the hazard warning lamps operate?

YES >> GO TO 4.
NO >> Refer to DLK-208, "Diagnosis Procedure".

4. PERFORM SELF DIAGNOSTIC RESULT FOR TCM

With CONSULT

Perform Self Diagnostic Result for TRANSMISSION.

Are any DTCs detected?

YES >> Refer to TM-47, "CONSULT Function" (RE0F10E) or TM-261, "CONSULT Function" (RE0F10J).
NO >> GO TO 5.

5. CHECK HORN OPERATION

Check horn operation. Refer to SEC-142, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace malfunctioning components.

6. PERFORM SELF DIAGNOSTIC RESULT

With CONSULT

1. Drive at a speed of 40 km/h (25 MPH) or more for 3 minutes, and then drive the vehicle at any speed for 10 minutes.
2. Perform Self Diagnostic Result.

Are any DTCs detected?

YES >> Refer to BCS-52, "DTC Index".
NO >> Replace BCM. Refer to BCS-80, "Removal and Installation".

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:0000000011153069

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

Reference page			WT-58, "Adjustment"	WT-58, "Adjustment"	WT-58, "Adjustment"	WT-66, "Tire Air Pressure"	WT-58, "Adjustment"	—	—	WT-66, "Tire Air Pressure"	DLN-100, "NVH Troubleshooting Chart"	DLN-113, "NVH Troubleshooting Chart"	FAX-5, "NVH Troubleshooting Chart" or FAX-5, "NVH Troubleshooting Chart"	RAX-4, "NVH Troubleshooting Chart" or RSU-4, "NVH Troubleshooting Chart"	WT-56, "NVH Troubleshooting Chart"	WT-56, "NVH Troubleshooting Chart"	FAX-5, "NVH Troubleshooting Chart" or RAX-4, "NVH Troubleshooting Chart".	BR-6, "NVH Troubleshooting Chart"	ST-42, "NVH Troubleshooting Chart"
Possible cause and SUSPECTED PARTS			Improper installation, looseness	Out-of-round	Imbalance	Incorrect tire pressure	Uneven tire wear	Deformation or damage	Non-uniformity	Incorrect tire size	PROPELLER SHAFT	DIFFERENTIAL	FRONT AXLE AND FRONT SUSPENSION	REAR AXLE AND REAR SUSPENSION	TIRE	ROAD WHEELS	DRIVE SHAFT	BRAKE	STEERING
Symptom	TIRE	Noise	×	×	×	×	×	×	×		×	×	×	×		×	×	×	×
		Shake	×	×	×	×	×	×		×	×		×	×		×	×	×	×
		Vibration				×				×	×		×	×			×		×
		Shimmy	×	×	×	×	×	×	×	×			×	×		×		×	×
		Shudder	×	×	×	×	×	×		×			×	×		×		×	×
		Poor quality ride or handling	×	×	×	×	×	×		×			×		×	×			
	ROAD WHEEL	Noise	×	×	×			×			×	×	×	×	×		×	×	×
		Shake	×	×	×			×			×		×	×	×		×	×	×
		Shimmy, Shudder	×	×	×			×					×	×	×			×	×
		Poor quality ride or handling	×	×	×			×					×	×	×				

×: Applicable

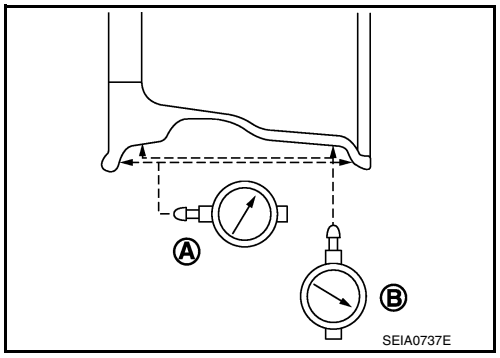
PERIODIC MAINTENANCE

WHEEL

Inspection

INFOID:0000000011153070

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.
3. Remove tire from wheel and mount wheel on a tire balance machine.
   CAUTION:
   DO NOT use center hole cone-type clamping machines to hold the wheel assembly during tire removal/installation or balancing or damage to the wheel paint, cladding or chrome may result. Use only rim-type or universal lug-type clamping machines to hold the wheel assembly during servicing.



a. Set dial indicator as shown.
b. Check runout, if the lateral runout (A) or radial runout (B) exceeds the limit, replace wheel.

Lateral runout (A)	**Refer to** WT-66, "Road Wheel"
Radial runout (B)	**Refer to** WT-66, "Road Wheel"

WHEEL AND TIRE ASSEMBLY

Adjustment

INFOID:0000000011153071

BALANCING WHEELS (ADHESIVE WEIGHT TYPE)

Preparation Before Adjustment

Remove inner and outer balance weights from the road wheel. Using releasing agent, remove double-faced adhesive tape from the road wheel.

CAUTION:

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

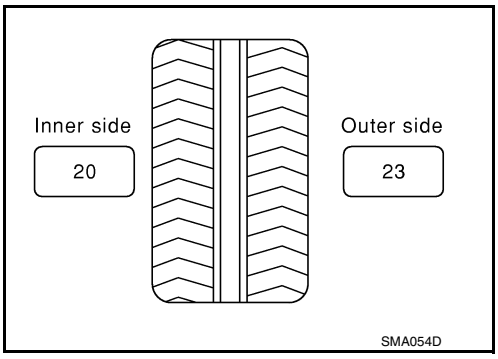
Wheel Balance Adjustment

CAUTION:

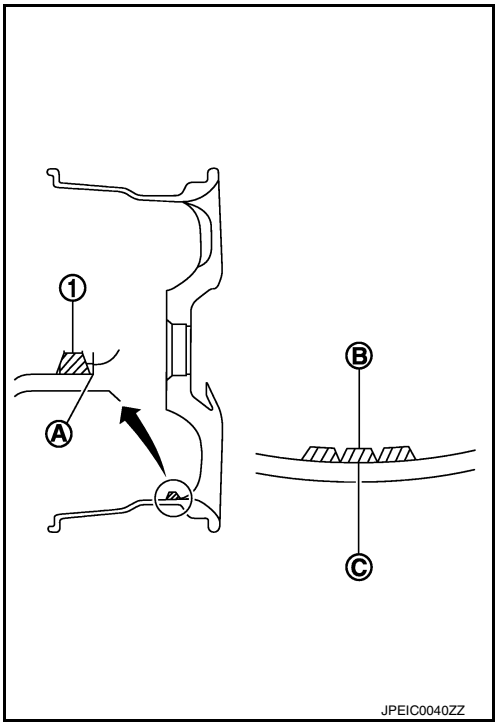
- **DO NOT use center hole cone-type clamping machines to hold the wheel assembly during tire removal/installation or balancing or damage to the wheel paint, cladding or chrome may result. Use only rim-type or universal lug-type clamping machines to hold the wheel assembly during servicing.**
- If a balancer machine has an adhesive weight mode setting, select the adhesive weight mode setting and skip Step 2 below. If a balancer machine only has the clip-on (rim flange) weight mode setting, follow Step 2 to calculate the correct size adhesive weight.

1. Set road wheel on balancer machine using the center hole as a guide. Start the balancer machine.
2. For balancer machines that only have a clip-on (rim flange) weight mode setting, follow this step to calculate the correct size adhesive weight to use. When inner and outer imbalance values are shown on the balancer machine indicator, multiply outer imbalance value by 5/3 (1.67) 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.

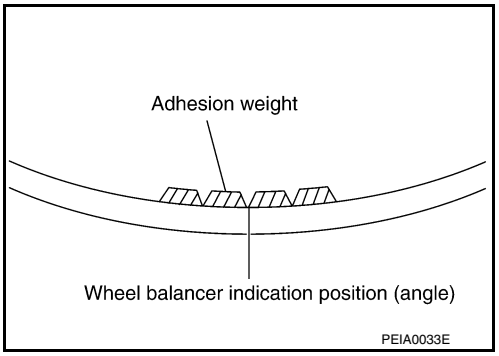
a. Indicated imbalance value × 5/3 (1.67) = balance weight to be installed
Calculation example:
23 g (0.81 oz) × 5/3 (1.67) = 38.33 g (1.35 oz) ⇒ 40 g (1.41 oz) balance weight (closer to calculated balance weight value)
NOTE:
Note that balance weight value must be closer to the calculated balance weight value.
Example:
37.4 ⇒ 35 g (1.23 oz)
37.5 ⇒ 40 g (1.41 oz)



3. Install balance weight in the position shown.
   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.**
   - When installing balance weight (1) to road wheel, set it into the grooved area (A) on the inner wall of the road wheel as shown so that the balance weight center (B) is aligned with the balancer machine indication position (angle) (C).
     CAUTION:
     - **Always use Genuine NISSAN adhesive balance weights.**
     - **Balance weights are non-reusable; always replace with new ones.**
     - **Do not install more than three sheets of balance weights.**



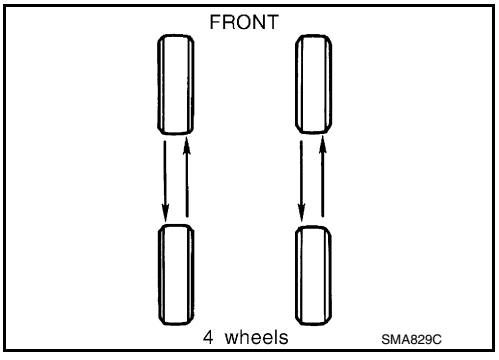
4. If calculated balance weight value exceeds 50 g (1.76 oz), install two balance weight sheets in line with each other as shown.
   CAUTION:
   Do not install one balance weight sheet on top of another.
5. Start balancer machine again.
6. Install balance weight on inner side of road wheel in the balancer machine indication position (angle).
   CAUTION:
   Do not install more than two balance weights.
7. Start balancer machine. Make sure that inner and outer residual imbalance values are 5 g (0.17 oz) each or below.
8. If either residual imbalance value exceeds 5 g (0.17 oz), repeat installation procedures.



Wheel balance	Dynamic (At flange)	Static (At flange)
Maximum allowable imbalance	Refer to WT-66, "Road Wheel".	

TIRE ROTATION

- Follow the maintenance schedule for tire rotation service intervals. Refer to MA-9, "FOR USA AND CANADA : Introduction of Periodic Maintenance" (United States and Canada), or MA-12, "FOR MEXICO : Periodic Maintenance" (Mexico).
- Rotate the wheel and tires front to back in the pattern as shown.
- When installing the wheel, tighten wheel nuts to the specified torque.
  CAUTION:
  - **Do not include the 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 the wheel nuts to a torque exceeding specification to prevent strain on the disc rotor.**
  - **Use Genuine NISSAN wheel nuts for aluminum wheels.**



Wheel nut tightening torque : **113 N·m (12 kg-m, 83 ft-lb)**

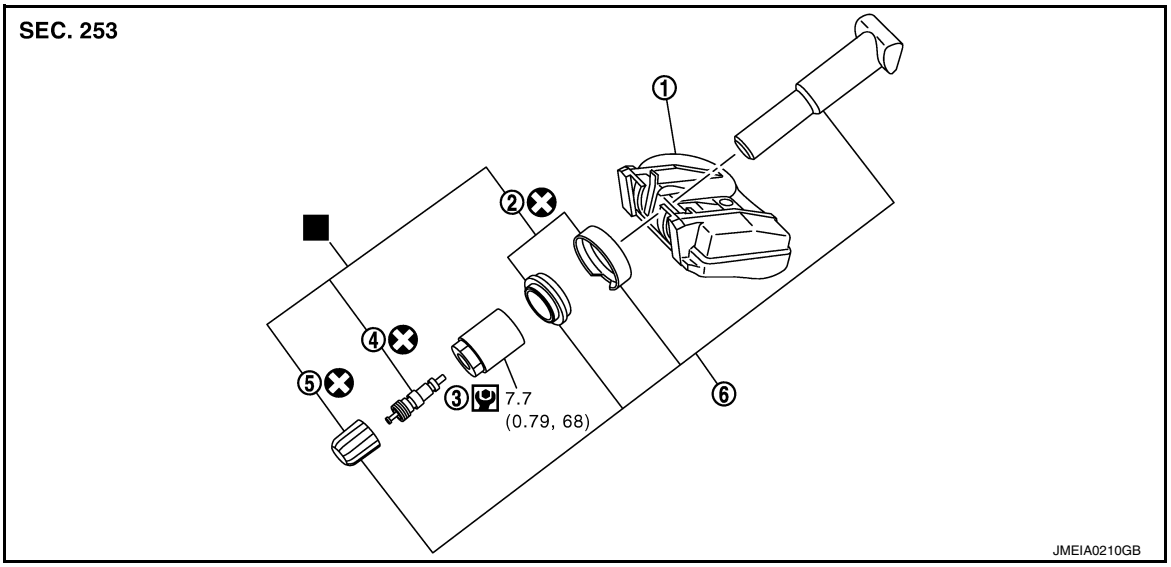
- Perform the ID registration after tire rotation. Refer to WT-30, "Work Procedure".

REMOVAL AND INSTALLATION

TIRE PRESSURE SENSOR

Exploded View

INFOID:0000000011153072



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

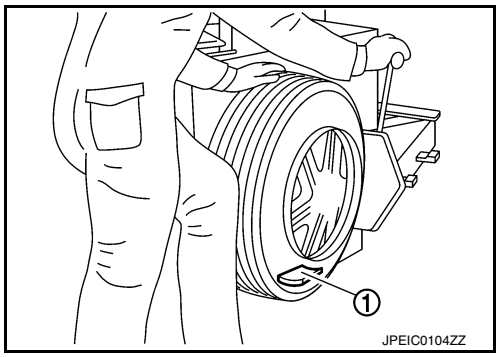
■: Parts that are replaced as a set when the tire is replaced.

Removal and Installation

INFOID:0000000011153073

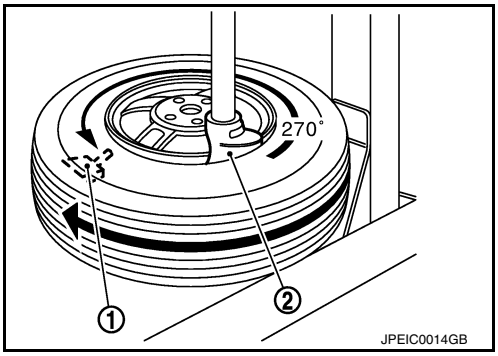
REMOVAL

1. Remove wheel and tire using power tool. Refer to WT-58, "Adjustment".
2. Remove valve cap and valve core to deflate the tire.
   NOTE:
   If the tire is to be reused, apply a matching mark on the tire in line with the position of the valve stem assembly for the purpose of wheel and tire balance adjustment after installation.
3. Remove the valve stem nut and allow tire pressure sensor (1) to fall into tire.
4. Lubricate the tire outside bead well with a suitable non-silicone lubricant, and remove outside of tire from the wheel.
   CAUTION:
   - **Do not use silicone lubricant. Use of silicone lubricant will deteriorate the tire and wheel.**
   - **Be sure not to damage the wheel or tire pressure sensor.**
   - **Do not allow lubricant to make contact with tire pressure sensor.**
   - **Verify that the tire pressure sensor is at the bottom of the tire while performing the above.**

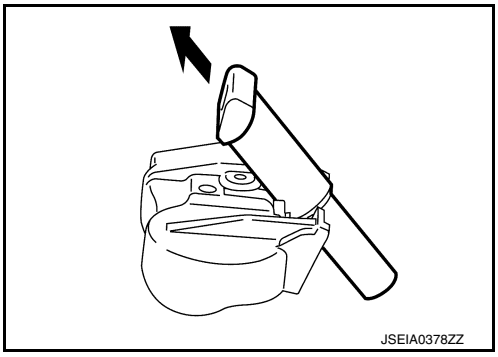


5. Lubricate the tire inside bead well with a suitable non-silicone lubricant, and remove inside of tire from the wheel.
   CAUTION:
   - **Do not use silicone lubricant. Use of silicone lubricant will deteriorate the tire and wheel.**
   - **Be sure not to damage the wheel.**
6. Set tire onto the tire changer turntable so that the tire pressure sensor inside the tire is located close to the valve stem hole in the wheel.

7. Turn tire so that the valve stem hole in the wheel is at the bottom and bounce so that the tire pressure sensor (1) inside the tire is near the valve stem hole in the wheel. Carefully lift tire onto turn table and position the valve stem hole in the wheel (and tire pressure sensor) 270 degrees from mounting/dismounting head (2).
CAUTION:
Do not damage the wheel or tire pressure sensor.



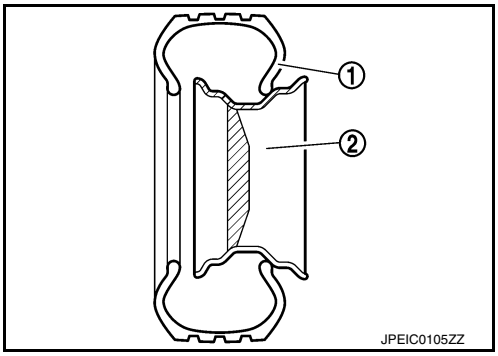
8. Remove the tire pressure sensor from the tire.
9. Remove the grommet seal and washer.
10. Remove the valve stem in the direction shown by the arrow (⬅).



INSTALLATION

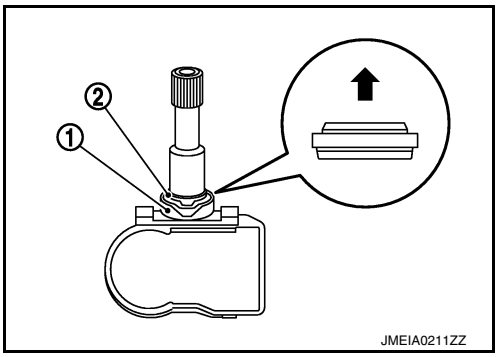
1. Apply a suitable non-silicone lubricant to the tire inside bead.
CAUTION:
- **Replace the valve stem assembly if the valve stem has deformations, cracks, damage, or corrosion.**
- **Do not use silicone lubricant. Use of silicone lubricant will deteriorate the tire and wheel.**
- **Do not drop or strike the tire pressure sensor. Replace the tire pressure sensor if it has been dropped from higher than one meter.**

2. Install the tire inside bead (1) onto the wheel (2) in the position shown.

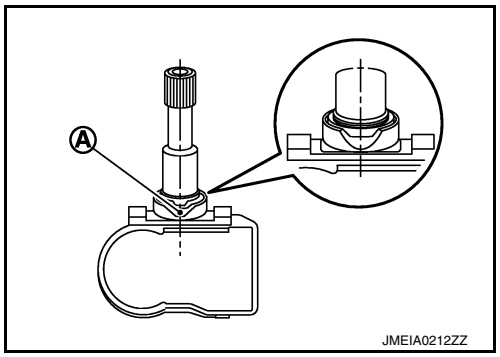


3. Install the valve stem to the tire pressure sensor.
4. Install the washer (1) onto the valve stem, and then install the grommet seal (2) onto the valve stem.
CAUTION:
- **Do not reuse grommet seal or washer.**
- **Check the direction of the grommet seal.**
- **Insert the grommet seal all the way to the base.**

⬆ : Outside



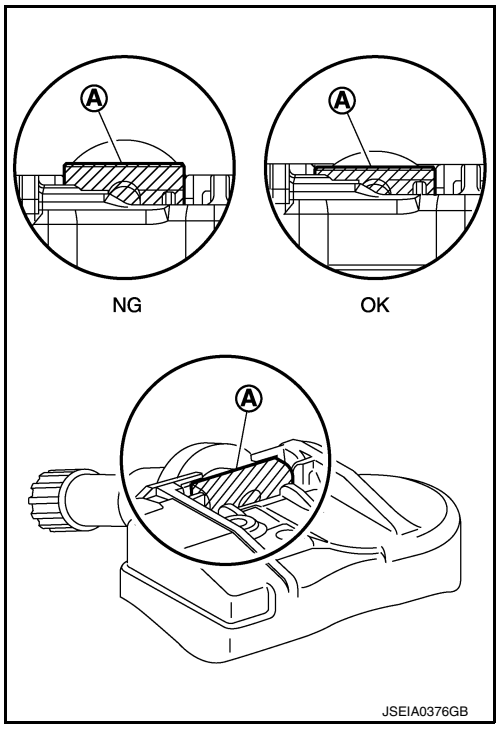
CAUTION:
Direct the cut part (A) of the washer to the center of the valve stem as shown.



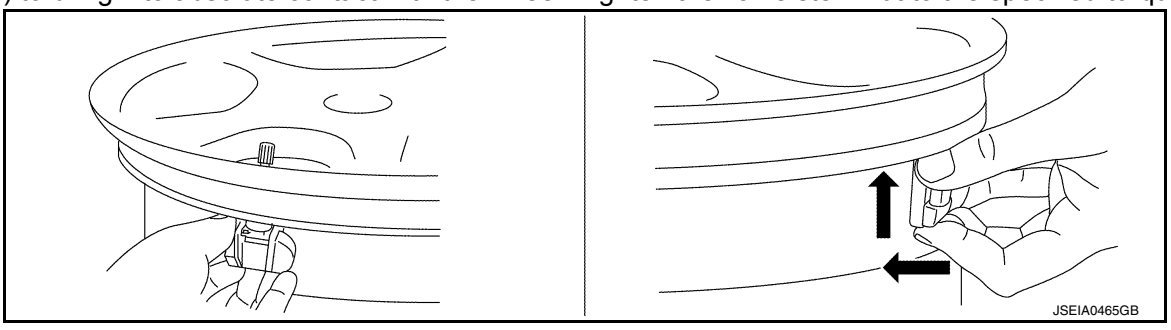
5. Follow the procedure below and install the tire pressure sensor to the wheel.

a. Check the position of the valve stem (A) before installing tire pressure sensor to the wheel.

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



b. Hold tire pressure sensor as shown and press the tire pressure sensor in the direction shown by the arrow (⬅) to bring into absolute contact with the wheel. Tighten the valve stem nut to the specified torque.

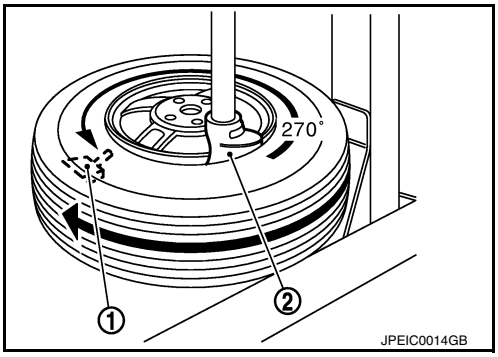


Valve stem nut tightening torque **: Refer to WT-61, "Exploded View".**

CAUTION:
- **Do not reuse valve core and valve cap.**
- **Check that grommet seal is free of foreign matter.**
- **Check that grommet seal contacts horizontally with wheel.**
- **Check again that the base of valve stem is positioned in the groove of the metal plate.**

- **Manually tighten valve stem nut all the way to the wheel. (Do not use a power tool to avoid impact.)**
- **Do not tighten valve stem nut to more than the specified torque. It may cause grommet seal damage.**
- **Do not tighten valve stem nut to less than the specified torque. It may cause an air leak.**

6. Place wheel on turntable of tire machine. Ensure that tire pressure sensor (1) is 270 degrees from mounting/dismounting head (2).
   CAUTION:
   Do not touch tire pressure sensor with mounting head.



7. Apply a suitable non-silicone lubricant to the tire outside bead.
   CAUTION:
   - **Do not use silicone lubricant. Use of silicone lubricant will deteriorate the tire and wheel.**
   - **Do not allow lubricant to make contact with tire pressure sensor.**
   - **When installing, check that the tire does not turn together with the wheel.**
8. Install the tire outside bead onto the wheel as normal.
   NOTE:
   If the tire is being reused, align the matching mark applied on the tire with the position of the valve stem assembly for the purpose of wheel and tire balance adjustment after installation. Make sure that the tire does not rotate relative to wheel.
9. Install the valve core and inflate tire. Refer to WT-66, "Tire Air Pressure".
   CAUTION:
   Do not reuse valve core.
10. Install the valve cap.
    CAUTION:
    Do not reuse valve cap.
11. Balance the wheel and tire. Install wheel and tire in the appropriate position on vehicle. Refer to WT-58, "Adjustment".
12. Perform the ID registration procedure. Refer to WT-30, "Work Procedure".

NOTE:
If replacing the tire pressure sensor, then the ID registration procedure must be performed.

Disposal

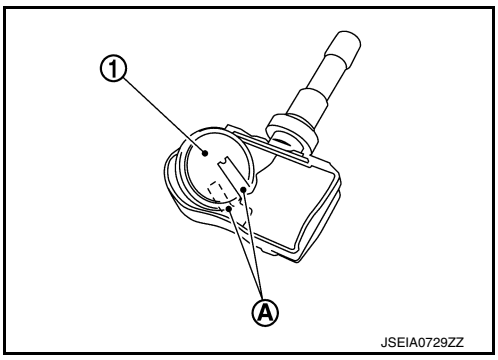
INFOID:0000000011554105

CAUTION:
- **When discarding tire pressure sensor, remove battery (1) from tire pressure sensor.**
- **Dispose of battery according to the law and local regulations.**

1. Remove battery from tire pressure sensor.
   NOTE:
   The battery is sealed to the tire pressure sensor with urethane.

a. Remove urethane from tire pressure sensor.

b. Using a suitable tool cut battery terminal (A), then remove battery from tire pressure sensor.



TIRE PRESSURE RECEIVER

Removal and Installation

INFOID:0000000011153074

The Tire Pressure Receiver is an integral part of the remote keyless entry receiver. Refer to DLK-321, "Removal and Installation".

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Road Wheel

INFOID:0000000011153075

Item		Limit
Radial runout	Lateral runout mm (in)	Less than 0.3 mm (0.012 in)
	Radial runout mm (in)	
Maximum allowable imbalance	Dynamic (at rim flange)	Less than 5 g (0.18 oz) (one side)
	Static (at rim flange)	Less than 10 g (0.35 oz)
Wheel nut torque		113 Nm (12 kg-m, 83 ft-lb)

Tire Air Pressure

INFOID:0000000011153076

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

Item	Standard	
	Front	Rear
235/65R18 (Conventional)	230 (2.35, 33)	
235/55R20 (Conventional)	240 (2.45, 35)	
T165/90D18 (Spare)	420 (4.28, 60)	