

2007 Honda Element EX

2007-2008 SUSPENSION TPMS (Tire Pressure Monitoring System) - Element

2007-2008 SUSPENSION

TPMS (Tire Pressure Monitoring System) - Element

COMPONENT LOCATION INDEX

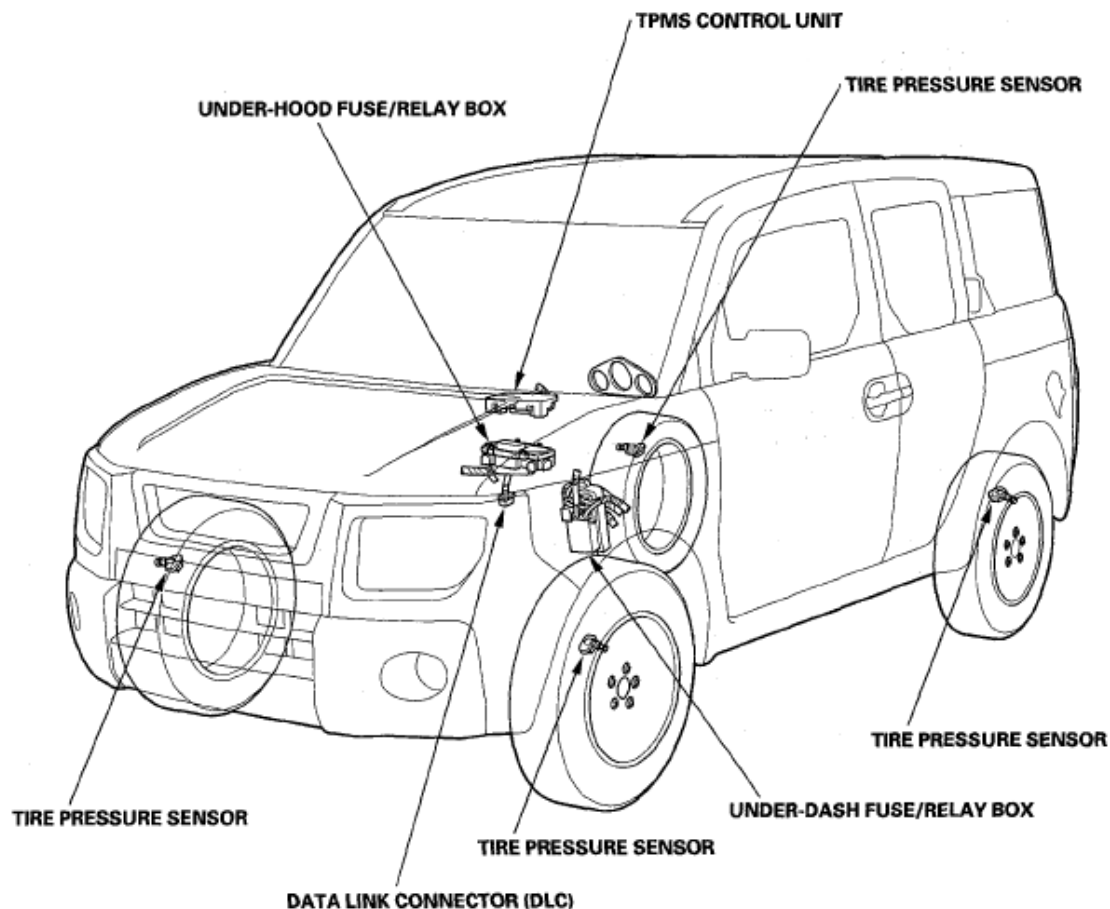


Fig. 1: Identifying TPMS (Tire Pressure Monitoring System) Component Location - ('08 USA Models)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

GENERAL TROUBLESHOOTING INFORMATION

SYSTEM INDICATOR LOCATIONS

The system has two indicators.

- The low tire pressure indicator (A)
- The TPMS indicator (B)

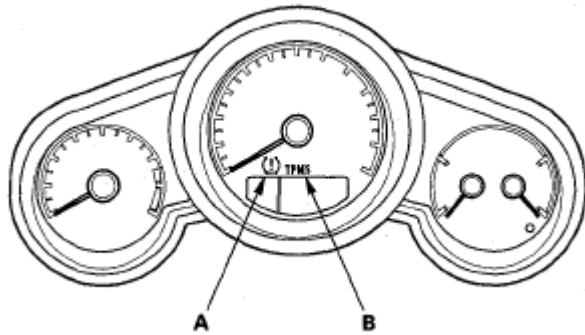


Fig. 2: Identifying Low Tire Pressure Indicator And TPMS Indicator
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

HOW TPMS WORKS

The TPMS (tire pressure monitoring system) has a low tire pressure indicator and a TPMS indicator. When the TPMS control unit detects low pressure in a tire, or a problem in the system, it turns on the appropriate indicator.

- If low tire pressure is detected in one or more tires, the low tire pressure indicator comes on.
- If a problem in the system is detected, the TPMS indicator comes on.
- If low tire pressure and a problem in the system are detected, only the TPMS indicator comes on.

If the system is OK, the TPMS indicator and the low tire pressure indicator should come on when you turn the ignition switch ON (II), and then go off 2 seconds later. If they don't, there is a problem with the system.

If the system detects low pressure in any of the four tires, the low tire pressure indicator comes on, and the control unit will set one or more of these codes: DTC 11,13,15,17. When the tire pressure returns to normal, the control unit turns off the indicators and stores the DTC(s). However, if the control unit detects a problem in the system during an indication of low tire pressure, it turns off the low tire pressure indicator, stores the DTC(s), and turns on the TPMS indicator(s).

NOTE: Tire pressures increases slightly as the temperature in the tires rises during driving at highway speeds. Pressures also increases or decreases slightly with changes in outside air temperature. A temperature change of about 18°F (10°C) changes tire pressure by about 10 kPa (0.1 kgf/cm², 1.5 psi). If the temperature drops, tire pressure could decrease just enough to turn on the low tire pressure indicator, but later, the tire temperature could increase enough to turn the indicator off. To resolve a complaint of such intermittent indications, confirm and clear the stored DTC(s) and check the tire pressures. Then explain to the customer how temperature changes can affect the system, especially when tire pressures are near the low end of the TPMS normal range- 168 to 220 kPa (1.7 to 2.2 kgf/cm², 24 to 32 psi).

If a problem is detected in the system, the TPMS indicator comes on and stays on until the system returns to

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normal with most DTCs. If DTC 81,83 or 85 is set, the TPMS indicator goes off only when the ignition switch is turned off.

When a flat tire is replaced with the spare tire, the TPMS indicator comes on (DTC 32,34,36 or 38) because the system is no longer receiving the signal from the tire's transmitter.

This is not a problem with the spare tire.

PROBLEMS THAT ARE NOT SYSTEM FAULTS

- Tire Sealant

Fluid sealant used to repair a punctured tire can damage the tire pressure sensor mounted on each wheel. It can prevent the system from detecting the correct tire pressure, which sets a DTC 11,13,15 or 17 even though the system is normal.

- Cold Weather

When the weather is extremely cold - about -40°F (-40°C) or colder - the output of the lithium battery in each tire pressure sensor may drop far enough that the control unit sets a DTC for low battery voltage (31, 33,35, or 37) even though the system is normal.

- Non-TPMS Wheels

Vehicles equipped with TPMS must use wheels made for the system. Every TPMS wheel has an exclusive mark; do not use any other type of wheel.

HOW A DIAGNOSTIC TROUBLE CODE (DTC) IS SET

- When the system detects a problem, the TPMS control unit sets a code, but shifts to fail-safe mode, and will not alert the driver to low tire pressures.
- If the TPMS control unit loses power, or fails, the TPMS indicator will come on, but no DTC are set.
- The memory can hold all the DTCs that could possibly be set. However, when the same DTC is detected more than once, the most recent one overwrites the previous one, so only the latest DTC of each type is stored.
- DTCs are indicated in ascending order, not in the order they occurred.
- Set DTCs are stored in the EEPROM (nonvolatile memory), they cannot be cleared by disconnecting the battery. To clear a DTC, connect the HDS (Honda Diagnostic System) to the data link connector (DLC), and follow the screen prompts.

HOW TO TROUBLESHOOT DTCS

DTC troubleshooting procedures assume the cause of the problem is still present and the TPMS indicator is still on. (NOTE: The TPMS indicator comes on for DTCs 11,13,15, and 17 only if the low tire pressure indication is false, caused by a problem in the system.) Do not use a troubleshooting procedure unless the system has set the DTC listed for it.

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1. Ask the customer to describe the conditions when the indicator came on, and try to reproduce the same conditions for troubleshooting. Find out if the customer checked and/or adjusted tire pressures since the indicator came on.
2. If an indicator does not come on during the test-drive, check for loose terminals, poor contact due to damaged terminals, etc. before you start troubleshooting.
3. After troubleshooting, repair and clear the DTCs, and test-drive the vehicle. Make sure no indicators come on.
4. Check for DTCs in from other control unit that are connected via F-CAN. If there are DTCs that are related to F-CAN, the most likely cause was that the ignition switch was turned ON (II) with the TPMS control unit connector disconnected. Clear the DTCs. Check for PGM-FI and TPMS codes, and troubleshoot those first.

HOW TO RETRIEVE DTCS

1. With the ignition switch OFF, connect the HDS (Honda Diagnostic System) to the data link connector (DLC) (A) located under the driver's side of the dashboard.

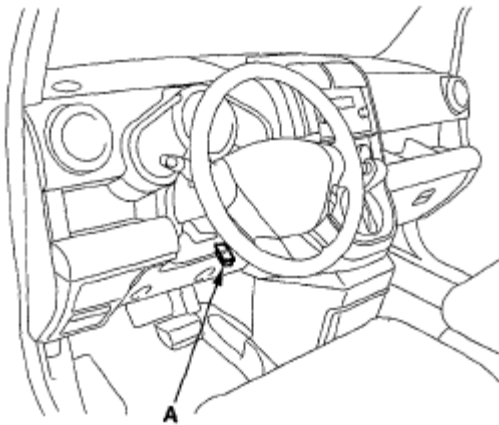


Fig. 3: Identifying Data Link Connector (DLC)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Turn the ignition switch ON (II).
3. Make sure the HDS communicates with the vehicle and the TPMS control unit. If it doesn't, troubleshoot the DLC circuit (see **DLC CIRCUIT TROUBLESHOOTING**).
4. Follow the prompts on the HDS to display the DTC(s) on the screen. After determining the DTC, refer to the **DTC TROUBLESHOOTING**.

NOTE: See the HDS Help menu for specific instructions.

5. Turn the ignition switch OFF.

HOW TO CLEAR DTCS

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1. With the ignition switch OFF, connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.

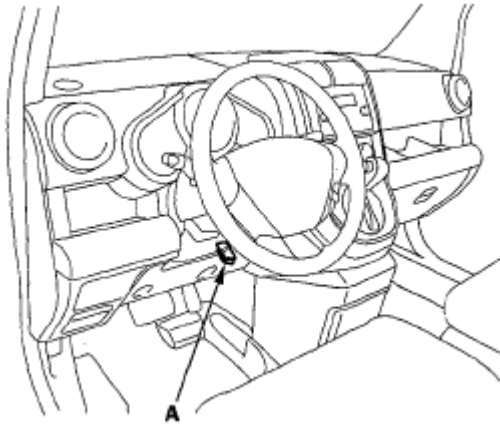


Fig. 4: Identifying Data Link Connector (DLC)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Turn the ignition switch ON (II).
3. Make sure the HDS communicates with the vehicle and the TPMS control unit. If it doesn't, troubleshoot the DLC circuit (see **DLC CIRCUIT TROUBLESHOOTING**).
4. Clear the DTC(s) by following the screen prompts on the HDS.

NOTE: See the HDS Help menu for specific instructions.

5. Turn the ignition switch OFF.

MEMORIZING THE TIRE PRESSURE SENSOR ID

Special Tools Required

TPMS sensor initializer tool AKS0620006

Available through the American Honda Tool and Equipment Program; call 888-424-6857

All four tire pressure sensor IDs must be memorized to the TPMS control unit whenever you do any of these actions:

- Replace the TPMS control unit.
- Replace the tire pressure sensor.
- Substitute a known-good wheel with tire pressure sensor.

NOTE: • To ensure the control unit memorizes the correct ID, the vehicle with the

new sensor must be at least 10 ft (3 m) away from other vehicles that have tire pressure sensors.

- **When doing a tire rotation, memorizing the sensors is not needed.**

1. With the ignition switch OFF, and wait 5 minutes or more for the TPMS sensors to go to sleep mode. Connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.

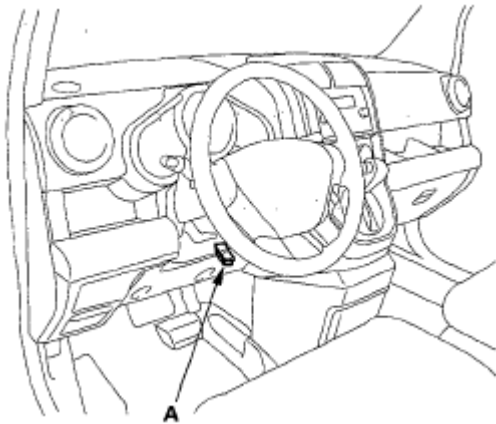


Fig. 5: Identifying Data Link Connector (DLC)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Turn the ignition switch ON (II).
3. Make sure the HDS communicates with the vehicle and the TPMS control unit. If it doesn't, troubleshoot the DLC circuit (see **DLC CIRCUIT TROUBLESHOOTING**).
4. Select Sensor ID Learning from the mode menu on the HDS.
5. Turn on the TPMS sensor initializer tool (A) by pressing the power button (B).

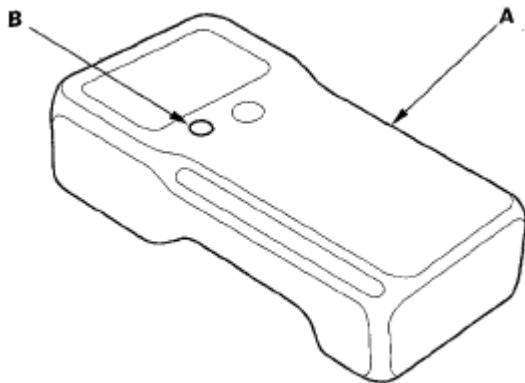


Fig. 6: Identifying TPMS Sensor Initializer Tool And Power Button
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Hold the TPMS sensor initializer tool near one wheel, memorize the pressure sensor ID by following the screen prompts on the HDS.

NOTE:

- If you turn the ignition switch OFF before memorize all four sensor IDs, the memorizing ID is canceled.
- See the HDS Help menu for specific instructions.

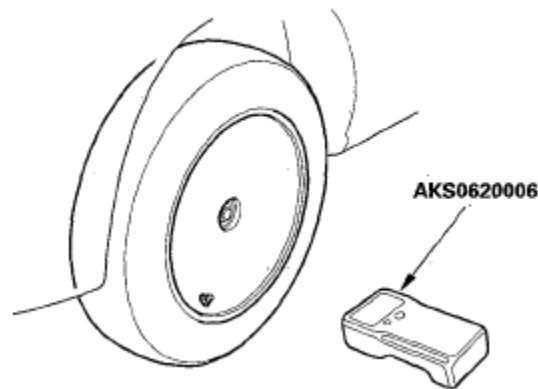


Fig. 7: Identifying TPMS Sensor Initializer Tool
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Repeat step 6 for each wheel until all four sensor IDs are memorized. When all four IDs are memorized, the low tire pressure indicator blinks.
8. Turn the ignition switch OFF.
9. Disconnect the HDS from the DLC.
10. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.
11. Make sure the low tire pressure indicator does not blink.
12. Turn the ignition switch OFF.
13. Reduce the pressure in one tire until it is less than the appropriate specification.
14. Turn the ignition switch ON (II).
15. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.
16. Make sure the low tire pressure indicator turns on, then inflate the tire (see **WHEEL ALIGNMENT**).
17. Repeat step 12 to 16 for all the other tires.
18. Clear any DTCs with the HDS.

TIRE PRESSURE SENSOR LOCATION

Special Tools Required

TPMS sensor initializer tool AKS0620006

Available through the American Honda Tool and Equipment Program; call 888-424-6857

NOTE: This procedure locates where the tire pressure sensors number 1, 2, 3, 4 are mounted when activated by the TPMS sensor initializer tool.

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- Memorizing tire pressure sensor IDs (including replacing the TPMS control unit, or the tire pressure sensors).
 - Wheel rotation.
1. With the ignition switch OFF, connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.

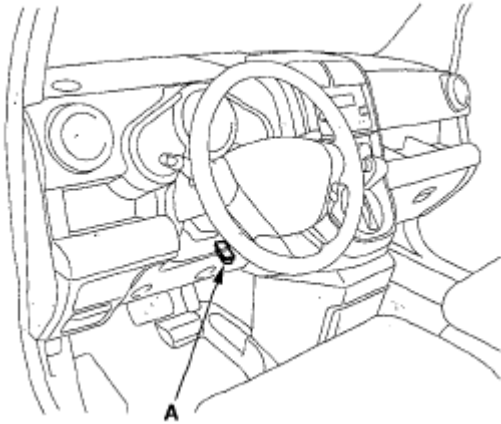


Fig. 8: Identifying Data Link Connector (DLC)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Turn the ignition switch ON (II).
3. Make sure the HDS communicates with the vehicle and the TPMS control unit. If it doesn't, troubleshoot the DLC circuit (see **DLC CIRCUIT TROUBLESHOOTING**).
4. Select Function Test from the mode menu, then select Sensor Position Check on the HDS.
5. Turn on the TPMS sensor initializer tool.
6. Follow the prompts on the HDS to activate the tire pressure sensors using the TPMS sensor initializer tool. Start with the left-front (LF) wheel.

NOTE:

- See the HDS Help menu for specific instructions.
- Initialize the wheel in the sequence shown.

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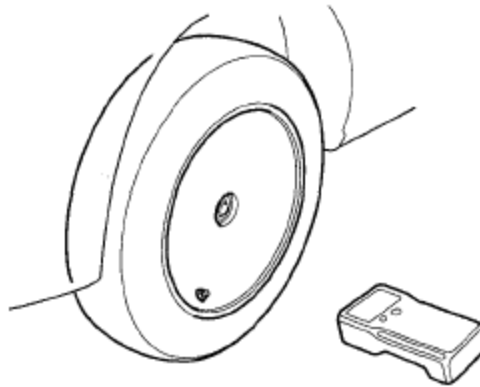


Fig. 9: Identifying TPMS Sensor Initializer Tool
Courtesy of AMERICAN HONDA MOTOR CO., INC.

INITIALIZATION SEQUENCE:

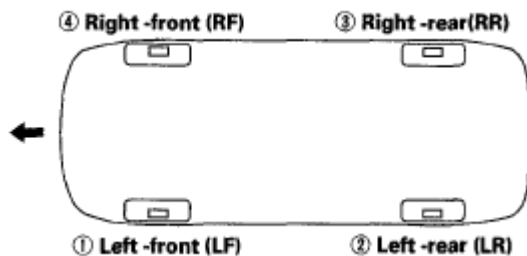


Fig. 10: Identifying Initialization Sequence
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Check the HDS screen, and note the active sensor reception order of the tire pressure sensor 1,2,3, 4.

NOTE: If the sensor does not respond to TPMS initializer, rotate the tire 1/4 turn and retry. If the sensor still does not respond after one full rotation of the tire, swap the tire to a known-good location and retry. If the sensor still does not respond after one full rotation of the tire, replace the tire pressure sensor.

8. Note the sensor location for reference.
9. Turn the ignition switch OFF.

DTC TROUBLESHOOTING INDEX

DTC TROUBLESHOOTING CHART

DTC	Detection Item
<u>11</u>	Tire 1 low air pressure
<u>13</u>	Tire 2 low air pressure

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<u>15</u>	Tire 3 low air pressure
<u>17</u>	Tire 4 low air pressure
<u>21</u>	Tire 1 pressure sensor abnormally high temperature
<u>22</u>	Tire 2 pressure sensor abnormally high temperature
<u>23</u>	Tire 3 pressure sensor abnormally high temperature
<u>24</u>	Tire 4 pressure sensor abnormally high temperature
<u>31</u>	Tire 1 pressure sensor low battery voltage
<u>32</u>	Tire 1 pressure sensor transmission failure
<u>33</u>	Tire 2 pressure sensor low battery voltage
<u>34</u>	Tire 2 pressure sensor transmission failure
<u>35</u>	Tire 3 pressure sensor low battery voltage
<u>36</u>	Tire 3 pressure sensor transmission failure
<u>37</u>	Tire 4 pressure sensor low battery voltage
<u>38</u>	Tire 4 pressure sensor transmission failure
<u>41</u>	Abnormal signal reception error
<u>51</u>	Tire 1 pressure sensor registration error
<u>53</u>	Tire 2 pressure sensor registration error
<u>55</u>	Tire 3 pressure sensor registration error
<u>57</u>	Tire 4 pressure sensor registration error
<u>81</u>	TPMS control unit failure
<u>83</u>	No VSP signal
<u>85</u>	F-CAN communication failure
<u>91</u>	Tire 1 pressure sensor internal error
<u>93</u>	Tire 2 pressure sensor internal error
<u>95</u>	Tire 3 pressure sensor internal error
<u>97</u>	Tire 4 pressure sensor internal error

SYMPTOM TROUBLESHOOTING INDEX

SYMPTOM TROUBLESHOOTING CHART

Symptom	Diagnostic procedure	Also check for
HDS does not communicate with the TPMS control unit or the vehicle	Troubleshooting the DLC circuit (see <u>DLC CIRCUIT TROUBLESHOOTING</u>)	
Low tire pressure indicator does not come on, and no DTCs are stored	Symptom Troubleshooting (see <u>LOW TIRE PRESSURE INDICATOR DOES NOT COME ON, AND NO DTCS ARE STORED</u>)	
Low tire pressure indicator does not go off, and no DTCs are stored	Symptom Troubleshooting (see <u>LOW TIRE PRESSURE INDICATOR DOES NOT GO OFF, AND NO DTCS ARE STORED</u>)	

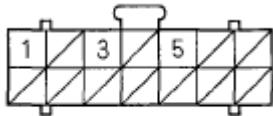
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TPMS indicator does not come on, and no DTCs are stored	Symptom Troubleshooting (see <u>TPMS INDICATOR DOES NOT COME ON, AND NO DTCS ARE STORED</u>)	
TPMS indicator does not go off, and no DTCs are stored	Symptom Troubleshooting (see <u>TPMS INDICATOR DOES NOT GO OFF, AND NO DTCS ARE STORED</u>)	

SYSTEM DESCRIPTION

TPMS CONTROL UNIT INPUTS AND OUTPUTS FOR CONNECTOR A (14P)



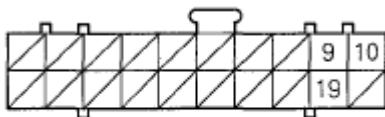
Wire side of female terminals

Fig. 11: Identifying TPMS Control Unit Inputs And Outputs Connector Terminals (14P)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

VOLTAGE SPECIFICATION

Terminal number	Wire color	Terminal sign (Terminal name)	Description	Signal		
				Terminal	Conditions	Voltage
1	RED/BLU	+B (Battery positive)	Power source for the TPMS control unit	1-GND	At all times	Battery voltage
3	BLK	GND (Ground)	Ground for the TPMS control unit	3-GND	At all times	Less than 0.1V
5	YEL	IG1 (Ignition 1)	Power source for activating the system	5-GND	Ignition switch ON (II)	Battery voltage
					Ignition switch OFF	Less than 0.1V

TPMS CONTROL UNIT INPUTS AND OUTPUTS FOR CONNECTOR B (20P)



Wire side of female terminals

Fig. 12: Identifying TPMS Control Unit Inputs And Outputs Connector Terminals (20P)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

VOLTAGE SPECIFICATION

Terminal number	Wire color	Terminal sign (Terminal name)	Description	Signal		
				Terminal	Conditions	Voltage

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9	LT BLU	K-LINE (Data link connector)	Communications with HDS	-	-	-
10	RED	CANL (CAN communication signal low)	Sends the communication signal	-	Ignition switch ON (II)	Pulses
19	WHT	CANH (CAN communication signal high)	Sends the communication signal	-	Ignition switch ON (II)	Pulses

SYSTEM STRUCTURE

Once the vehicle speed exceeds 28 mph (45 km/h), the TPMS control unit monitors all four tires and the system. If it detects low pressure in a tire, it alerts the driver by turning on the low tire pressure indicator. If it detects a problem in the system, it turns on the TPMS indicator.

Control unit

Mounted inside of the dash, the TPMS control unit receives pressure sensor ID signals every time the vehicle speeds exceeds 28 mph (45 km/h). It also receives signals from the transmitters for tire pressure and the sensor condition, and it continuously monitors and controls the system.

Indicators

Two indicators are in the gauge control module: The low tire pressure indicator comes on when any tire pressure is low, and the TPMS indicator that comes on only if there's a problem with the system.

The low tire pressure indicator alerts the driver that a tire(s) pressure is low, but does not specify the tire(s) location.

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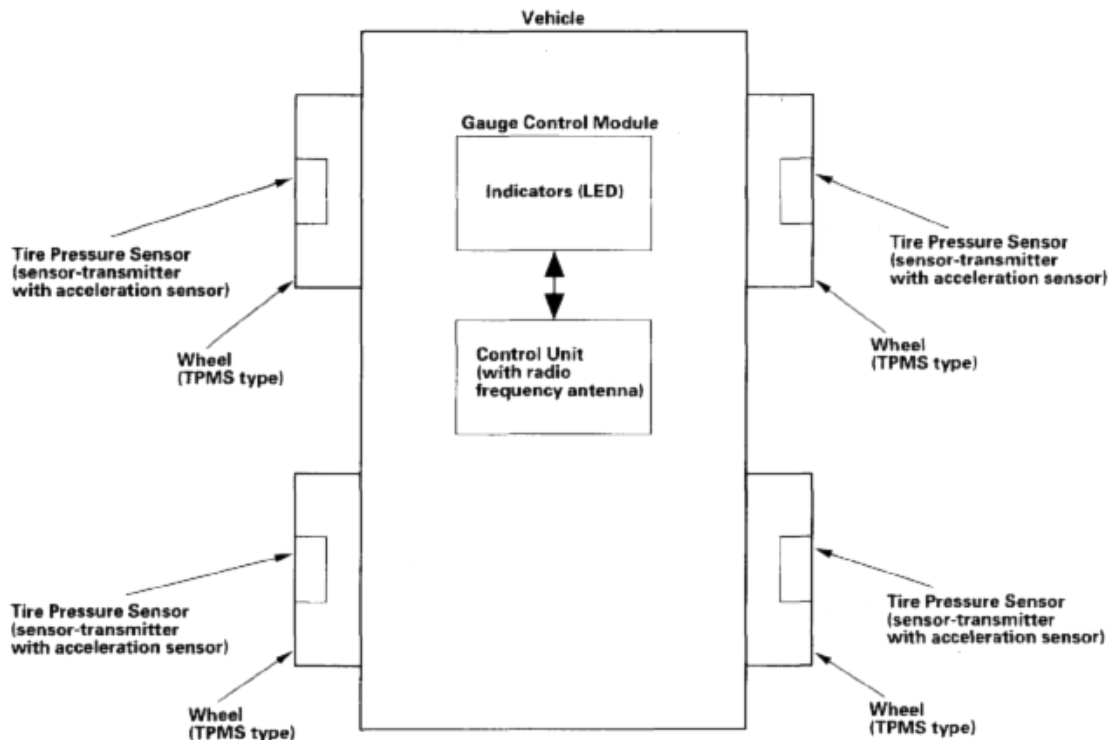


Fig. 13: TPMS System Structure Diagram

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Tire pressure sensor

Each sensor is an integrated unit made up of the tire valve stem, a pressure sensor, and a transmitter. The unit is attached to the inside of the wheel, around the valve stem. The sensor transmits the internal tire information to the control unit once every 60 seconds when the vehicle speed exceeds 28 mph (45 km/h). When the TPMS control unit receives a tire pressure signal that is less than: Except SC model 190 kPa (1.9 kgf/cm², 28 psi), SC model 175 kPa (1.8 kgf/cm², 25 psi), the control unit then turns on the low tire pressure indicator. When that tire's pressure is increased to more than: Except SC model 210 kPa (2.1 kgf/cm², 30 psi), SC model 200 kPa (2.0 kgf/cm², 29 psi), and the vehicle is driven above 28 mph (45 km/h) the transmitter sends the tire pressure signal to the control unit, and then the control unit turns the indicator off.

Do not mix the tire pressure sensor with another TPMS type.

Sensor active:

- When the wheel rotates over 28 mph (45 km/h), the sensor detects the momentum, switches the sensor to the normal function mode.
- The LF (low frequency) signal of the TPMS initializer tool makes the sensor active even though the vehicle is stopped. The tire pressure sensor goes into sleep mode when the acceleration sensor detects the wheel is stationary for 5 minutes or more continuously.

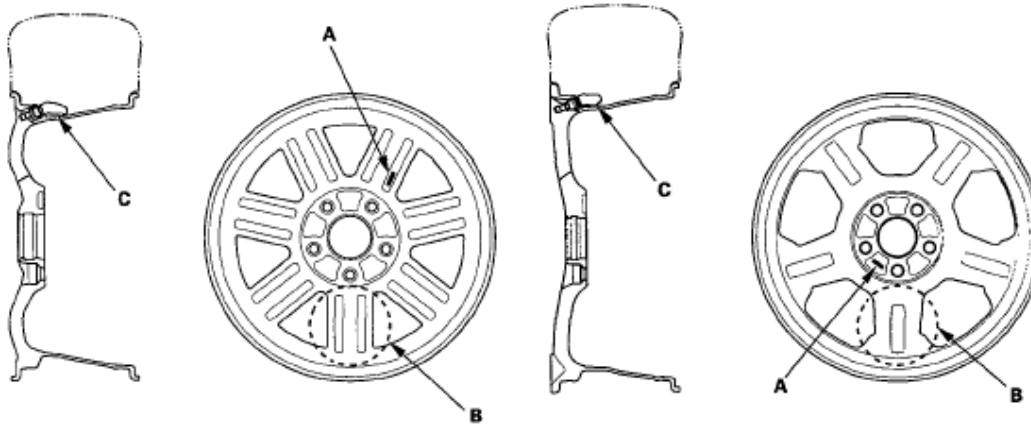
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Wheels

TPMS will not work unless TPMS type wheels are installed on the vehicle. There are three different type wheels used. The original equipment wheels have a "TPMS" mark (A) on them and counterweights (B) cast into the opposite side of the spoke to counter balance the weight of the tire pressure sensor (C).

Aluminum wheel



Steel wheel

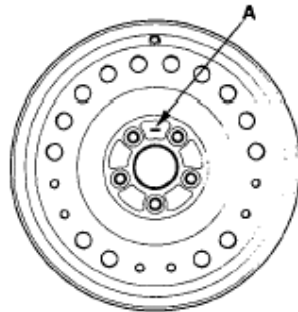


Fig. 14: Sectional View Of Wheels

Courtesy of AMERICAN HONDA MOTOR CO., INC.

SYSTEM COMMUNICATION

- When the vehicle is traveling more than 28 mph (45 km/h), an RF (radio frequency) band wave signal is continuously transmitted from each tire pressure sensor to the control unit.
- When the wheels rotate; and the tire pressure sensors momentum is detected, switching them from sleep mode to normal function mode. After the vehicle is stationary for 5 minutes, the sensors switch from normal function mode back to sleep mode to extend their battery life.
- Each tire pressure sensor has its own ID to prevent jamming by similar systems on other vehicles. After memorizing all the sensor IDs, the control unit receives only those specific signals.
- An ID cannot be memorized automatically. The control unit knows which ID belongs to each tire pressure sensor. This recurring ID confirmation prevents any confusion in the system as a result of normal tire rotation.

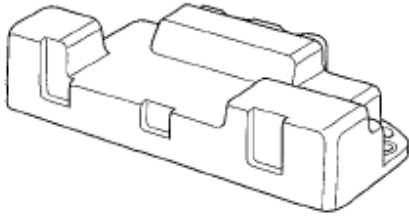
NOTE: Be careful not to bend the brackets on the TPMS control unit: Misalignment of

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the control unit could interfere with sending and receiving signals.

**Control Unit
(with Radio Frequency Antenna)**



**Tire Pressure Sensor
(Sensor-transmitter with acceleration sensor)**



Fig. 15: Identifying Control Unit And Tire Pressure Sensor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CIRCUIT DIAGRAM

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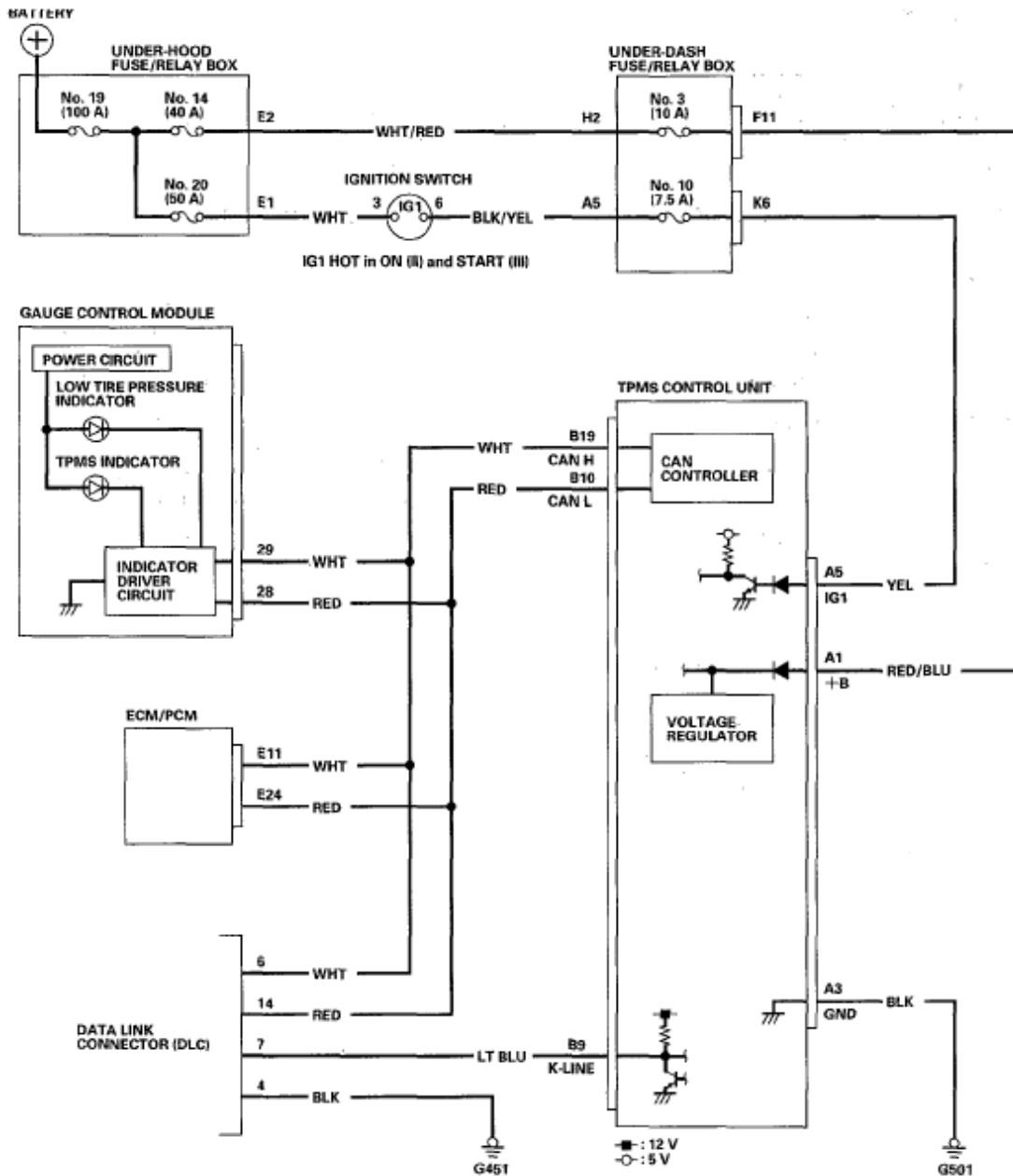


Fig. 16: TPMS (Tire Pressure Monitoring System) Circuit Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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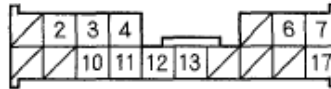
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**UNDER-DASH FUSE/RELAY BOX
CONNECTOR F (12P)**



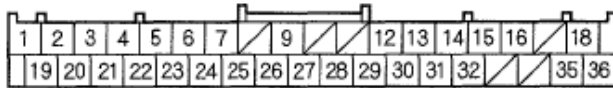
Wire side of female terminals

**UNDER-DASH FUSE/RELAY BOX
CONNECTOR K (17P)**



Wire side of female terminals

GAUGE CONTROL MODULE 36P CONNECTOR



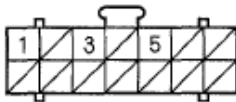
Wire side of female terminals

ECM/PCM CONNECTOR E (31P)



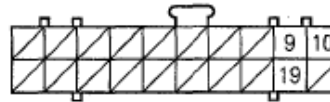
Wire side of female terminals

TPMS CONTROL UNIT CONNECTOR A (14P)



Wire side of female terminals

TPMS CONTROL UNIT CONNECTOR B (20P)



Wire side of female terminals

DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

Fig. 17: Identifying TPMS (Tire Pressure Monitoring System) Connector Terminals
Courtesy of AMERICAN HONDA MOTOR CO., INC.

DTC TROUBLESHOOTING

DTC 11,13,15,17: LOW AIR PRESSURE

NOTE: If low tire pressure is detected, the control unit sets one or more of these DTCs, and turns on the low tire pressure indicator. If the low tire pressure indicator comes on due to true low tire pressure, and the customer corrects it before bringing the vehicle in, the DTCs will have been stored, but the indicator will be off.

1. Turn the ignition switch OFF.
2. Check the pressure of all four tires.

Is there: Except SC model 190 kPa (1.9 kgf/cm² , 28 psi), SC model 175 kPa (1.8 kgf/cm² , 25 psi) or less?

YES -Go to step 3.

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NO -Go to step 5.

3. Check for and repair the cause of air loss, and then inflate the tire (see **WHEEL ALIGNMENT**).
4. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.

Does the low tire pressure indicator go off?

YES -The system is OK at this time. Clear the DTC with the HDS.

NO -Go to step 6.

5. Turn the ignition switch ON (II).
6. Check for DTCs with the HDS.
7. Note the tire pressure sensor(s) number by the indicated DTC.

DTC CHART

DTC	Tire pressure sensor
11	No. 1
13	No. 2
15	No. 3
17	No. 4

8. Determine the affected tire location by the tire pressure sensor number (see **TIRE PRESSURE SENSOR LOCATION**).
9. Check the Tire 1, Tire 2, Tire 3, or Tire 4 Air Pressure in the TPMS DATA LIST with the HDS, and compare it with the actual measured tire pressure.

Is the indicated tire pressure on the HDS within 40 kPa (0.4 kgf/cm² , 6 psi) of the actual tire pressure?

YES -Go to step 10.

NO -Replace the appropriate tire pressure sensor (see **TIRE PRESSURE SENSOR REPLACEMENT**).

10. Clear the DTC with the HDS.
11. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.
12. Check for DTCs with the HDS.

Is DTC 11, 13, 15, or 17 indicated?

YES -Go to step 13.

NO -If any other DTCs are indicated, troubleshoot the appropriate DTC. If no DTCs are indicated, the system is OK at this time.

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13. Clear the DTC with the HDS.
14. Turn the ignition switch OFF.
15. Install a known-good TPMS wheel.
16. Memorize the tire pressure sensor ID with the HDS (see **MEMORIZING THE TIRE PRESSURE SENSOR ID**).
17. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.
18. Check for DTCs with the HDS.

Is DTC 11, 13, 15, or 17 indicated?

YES -Replace the TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**).

NO -Replace the original tire pressure sensor (see **TIRE PRESSURE SENSOR REPLACEMENT**).

DTC 21,22,23,24: TIRE PRESSURE SENSOR ABNORMALLY HIGH TEMPERATURE

1. Turn the ignition switch OFF.
2. Make sure the tires have cooled down.

NOTE: An abnormal rise in the internal temperature of the tires can be caused by

- Excessive braking
- Failure to release the parking brake (rear tires only)
- Leaving the vehicle running while parked
- Improper assembly of a wheel and tire

3. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.

Does the TPMS indicator go off?

YES -The system is OK at this time. Clear the DTC with the HDS.

NO -Go to step 4.

4. Check for DTCs with the HDS.
5. Note the tire pressure sensor(s) number by the indicated DTC.

DTC CHART

DTC	Tire pressure sensor
21	No. 1
22	No. 2
23	No. 3
24	No. 4

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- Determine the affected tire location by the tire pressure sensor number (see **TIRE PRESSURE SENSOR LOCATION**).
- Check the Tire 1, Tire 2, Tire 3, or Tire 4 Air Temperature in the TPMS DATA LIST with the HDS.

Is 176°F (80°C) or more indicated?

YES -Replace the appropriate tire pressure sensor (see **TIRE PRESSURE SENSOR REPLACEMENT**).

NO -Go to step 8.

- Clear the DTC with the HDS.
- Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.
- Check for DTCs with the HDS.

Is DTC 21,22,23, or 24 indicated?

YES -Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**), and recheck.

NO -If any other DTCs are indicated, troubleshoot the appropriate DTC. If no DTC are indicated, the system is OK at this time.

DTC 31,33,35,37: TIRE PRESSURE SENSOR LOW BATTERY VOLTAGE

NOTE: This problem occurs when the temperature around the sensor is -40°F (-40°C) or less. Note that the diagnosis must be made in a place where ambient temperature is -40°F (-40°C) or more.

- Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.

Does the TPMS indicator go off?

YES -The system is OK at this time. Clear the DTC with the HDS.

NO -Go to step 2.

- Check for DTCs with the HDS.
- Note the tire pressure sensor(s) number by the indicated DTC.

DTC CHART

DTC	Tire pressure sensor
31	No.1
33	No. 2

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35	No. 3
37	No. 4

- Determine the affected tire location by the tire pressure sensor number (see **TIRE PRESSURE SENSOR LOCATION**).

Did each tire pressure sensor respond to the TPMS initializer tool?

YES -Go to step 5.

NO -Check that the tire pressure sensor is properly mounted. If necessary, replace the appropriate tire pressure sensor (see **TIRE PRESSURE SENSOR REPLACEMENT**).

- Check the Tire 1, Tire 2, Tire 3, or Tire 4 Pressure Sensor Transmitter Battery in the TPMS DATA LIST with the HDS.

Is LOW indicated?

YES -Replace the appropriate tire pressure sensor (see **TIRE PRESSURE SENSOR REPLACEMENT**).

NO -Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**), and recheck.

DTC 32,34,36,38: TIRE PRESSURE SENSOR TRANSMISSION FAILURE

NOTE: **Inspect for an aftermarket electrical device interfering with the RF signal from the sensors when driving the vehicle.**

- Turn the ignition switch ON (II).
- Check for DTCs with the HDS.
- Note the tire pressure sensor(s) number by the indicated DTC.

DTC CHART

DTC	Tire pressure sensor
32	No. 1
34	No. 2
36	No. 3
38	No. 4

- Turn the ignition switch OFF.
- Make sure all four wheels are TPMS wheels with the properly mounted tire pressure sensors.

Are TPMS type wheels with a tire pressure sensor mounted on the vehicle?

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YES -Go to step 8.

NO -Go to step 6.

6. Install a known-good TPMS wheel.
7. Memorize the tire pressure sensor ID with the HDS (see **MEMORIZING THE TIRE PRESSURE SENSOR ID**).

Did the TPMS control unit memorize the tire pressure sensors?

YES -Replace the original tire pressure sensor (see **TIRE PRESSURE SENSOR REPLACEMENT**).

NO -Go to step 9.

8. Turn the ignition switch ON (II).
9. Determine the affected tire location by the tire pressure sensor number (see **TIRE PRESSURE SENSOR LOCATION**).

Did each tire sensor respond to the TPMS initializer tool?

YES -Go to step 10.

NO -Check for an aftermarket electrical device interfering with the RF signals from the sensors. If there are no electrical devices causing interference, replace the appropriate tire pressure sensor (see **TIRE PRESSURE SENSOR REPLACEMENT**).

10. Turn the ignition switch OFF, and wait 5 minutes.
11. Turn the ignition switch ON (II).
12. Identify the affected tire sensor number from the DTC list on step 3.
13. Locate the affected tire pressure sensor on the DATA LIST with the HDS.

Is the default pressure of 145 psi displayed?

YES -Go to step 14.

NO -Repeat steps 10 through 13 until the default pressure (145 psi) is displayed. If the default pressure is never displayed, replace the TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**).

14. Drive the vehicle over 28 mph (45 km/h), and monitor the affected tire pressure sensor with the HDS.

Did the affected tire pressure sensor change from the default pressure (145 psi) to the correct tire pressure?

YES -The system is OK at this time. Clear the DTC with the HDS.

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NO -Replace the appropriate tire pressure sensor (see **TIRE PRESSURE SENSOR REPLACEMENT**).

DTC 41: ABNORMAL SIGNAL RECEPTION ERROR

NOTE: **Inspect for an aftermarket device interfering with the RF signal from the sensors when driving the vehicle.**

1. Turn the ignition switch OFF.
2. Make sure all four wheels are TPMS wheels with tire pressure sensors.

Are TPMS type wheels with tire pressure sensors mounted on the vehicle?

YES -Go to step 5.

NO -Go to step 3.

3. Install known-good TPMS wheels.
4. Do the tire pressure sensor ID memorization (see **MEMORIZING THE TIRE PRESSURE SENSOR ID**).

Did each tire pressure sensor location respond to the TPMS initializer tool?

YES -Replace the original TPMS wheels.

NO -Replace TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**).

5. Do the tire pressure sensor ID memorization (see **MEMORIZING THE TIRE PRESSURE SENSOR ID**).

Did each tire pressure sensor location respond to the TPMS initializer tool?

YES -The system is OK at this time, clean the DTC with the HDS.

NO -Replace the TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**).

DTC 51,53,55,57: TIRE PRESSURE SENSOR REGISTRATION ERROR

1. Turn the ignition switch ON (II).
2. Check for DTCs with the HDS.
3. Note the tire pressure sensor(s) number by the indicated DTC.

DTC CHART

DTC	Tire pressure sensor
51	No. 1

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53	No. 2
55	No. 3
57	No. 4

4. Turn the ignition switch OFF.
5. Make sure all four wheels are TPMS wheels with the properly mounted tire pressure sensors. If necessary substitute known-good TPMS wheels.
6. Turn the ignition switch ON (II).
7. Clear the DTC with the HDS.
8. Memorize the tire pressure sensor ID with the HDS (see **MEMORIZING THE TIRE PRESSURE SENSOR ID**).
9. Test-drive the vehicle. Drive the vehicle at 28 mph (45 km/h) for 1 minute or more.
10. Check for DTCs with the HDS.

Is DTC 51, 53, 55, or 57 indicated?

YES -Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**), and recheck.

NO -Replace the appropriate tire pressure sensor (see **TIRE PRESSURE SENSOR REPLACEMENT**).

DTC 81: TPMS CONTROL UNIT FAILURE

NOTE: **Low battery voltage can cause this DTC. Make sure the battery is fully charged and in good condition.**

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Turn the ignition switch OFF, then turn it ON (II) again.
4. Check for DTCs with the HDS.

Is DTC 81 indicated?

YES -Replace the TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**).

NO -The system is OK at this time.

DTC 83: NO VSP SIGNAL

NOTE: **If DTC 85 is also set, troubleshoot DTC 85 first.**

1. Turn the ignition switch ON (II).

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2. Clear the DTC with the HDS.
3. Test-drive the vehicle at 7 mph (10 km/h) or more.
4. Check the speedometer.

Does the speedometer register speed?

YES -Go to step 5.

NO -Substitute a know-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM**), and retest. If no codes are shown, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT**).

5. Check the Vehicle Speed in the TPMS DATA LIST with the HDS.

Is the vehicle speed indicated?

YES -The system is OK at this time.

NO -Substitute a known-good TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**), and recheck.

DTC 85: F-CAN COMMUNICATION FAILURE

1. Turn the ignition switch ON (II).
2. Check for DTCs in the ECM/PCM with the HDS.

Are there any DTCs indicated?

YES -Go to the indicated ECM/PCM troubleshooting.

NO -Go to step 3.

3. Clear the DTC with the HDS.
4. Turn the ignition switch OFF, then turn the ignition switch ON (II) again.
5. Wait about 5 seconds.
6. Check for DTCs with the HDS.

Is DTC 85 indicated?

YES -Go to step 7.

NO -The system is OK at this time.

7. Test-drive the vehicle.

Does the speedometer work?

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YES -Go to step 11.

NO -Go to step 8.

8. Turn the ignition switch OFF.
9. Disconnect TPMS control unit connector A (14P), and connector B (20P).
10. Test-drive the vehicle.

Does the speedometer work?

YES -Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**), and recheck.

NO -Substitute a known-good ECM/PCM and recheck.

11. Turn the ignition switch OFF.
12. Short the SCS line with the HDS.
13. Disconnect ECM/PCM connector E (31P).
14. Disconnect TPMS control unit connector B (20P).
15. Check for continuity between TPMS control unit connector B (20P) terminals and ECM/PCM connector E (31P) terminals individually, (see table).

TPMS CONTROL UNIT TERMINAL REFERENCE

Terminal name	TPMS control unit B terminal	ECM/PCM E terminal
CANL	No. 10	No. 24
CANH	No. 19	No. 11

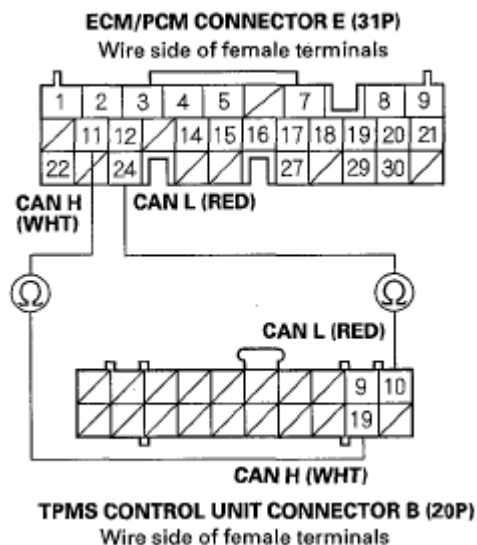


Fig. 18: Checking Continuity Between TPMS Control Unit Connector B (20P) Terminals And ECM/PCM Connector E (31P) Terminals

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Is there continuity?

YES -Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**), and recheck.

NO -Repair open in the wire between TPMS control unit and the ECM/PCM.

DTC 91,93,95,97: TIRE PRESSURE SENSOR INTERNAL ERROR

1. Turn the ignition switch ON (II).
2. Check for DTCs with the HDS.
3. Note the tire pressure sensor(s) number by the indicated DTC.

DTC CHART

DTC	Tire Pressure Sensor
91	No. 1
93	No. 2
95	No. 3
97	No. 4

4. Determine the affected tire location by the tire pressure sensor number (see **TIRE PRESSURE SENSOR LOCATION**).

Did the sensors respond to the TPMS initializer tool?

YES -Go to step 5.

NO -Check that the tire pressure sensor is properly mounted. If necessary, replace the appropriate tire pressure sensor (see **TIRE PRESSURE SENSOR REPLACEMENT**).

5. Clear the DTC with the HDS.
6. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.
7. Check for DTCs with the HDS.

Is DTC 91, 93, 95, or 97 indicated?

YES -Replace the appropriate tire pressure sensor (see **TIRE PRESSURE SENSOR REPLACEMENT**) and retest. If DTCs are still present, substitute a known-good TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**), and retest.

NO -If any other DTCs are indicated, troubleshoot the appropriate DTC. If no DTCs are indicated, the system is OK at this time.

SYMPTOM TROUBLESHOOTING

LOW TIRE PRESSURE INDICATOR DOES NOT COME ON, AND NO DTCS ARE STORED

1. Turn the ignition switch ON (II).
2. Check the low tire pressure indicator for several seconds when the ignition switch is turned ON (II).

Did the indicator come on and then go off?

YES -Go to step 3.

NO -Go to step 8.

3. Turn the ignition switch OFF.
4. Check the pressure in all four tires.

Is the tire pressure Except SC model: 190 kPa (1.9 kgf/cm² , 28 psi), SC model 175 kPa (1.8 kgf/cm² , 25 psi) or less?

YES -Go to step 5.

NO -The system is OK at this time.

5. Turn the ignition switch ON (II).
6. Determine the affected tire location by the tire pressure sensor number (see **TIRE PRESSURE SENSOR LOCATION**).

Did the sensors respond to the TPMS initializer tool?

YES -Go to step 7.

NO -Check that the tire pressure sensor is properly mounted. If necessary, replace the appropriate tire pressure sensor (see **TIRE PRESSURE SENSOR REPLACEMENT**).

7. Check the Tire 1, Tire 2, Tire 3, or Tire 4 Air Pressure in the TPMS DATA LIST with the HDS, and compare with the actual measured tire pressure.

Is the indicated tire pressure on the HDS within 40 kPa (0.4 kgf/cm² , 6 psi) of the actual tire pressure?

YES -Go to step 8.

NO -Replace the appropriate tire pressure sensor (see **TIRE PRESSURE SENSOR REPLACEMENT**).

8. Wait about 5 seconds with the ignition switch turned ON (II).

9. Check for gauges DTC with the HDS (see **WIRE COLOR CODES**).

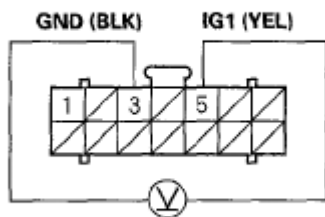
Is any gauge DTC indicated?

YES -Troubleshoot the indicated gauge DTC.

NO -Go to step 10.

10. Turn the ignition switch OFF.
11. Disconnect TPMS control unit connector A (14P).
12. Measure voltage between TPMS control unit connector A (14P) terminals No. 3 and No. 5.

TPMS CONTROL UNIT CONNECTOR A (14P)



Wire side of female terminals

Fig. 19: Measuring Voltage Between TPMS Control Unit Connector A (14P) Terminals No. 3 And 5
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Repair short to power in the wire between the TPMS control unit and the No. 10 (7.5 A) fuse in the under-dash fuse/relay box.

NO -Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**), and recheck.

LOW TIRE PRESSURE INDICATOR DOES NOT GO OFF, AND NO DTCS ARE STORED

1. Turn the ignition switch OFF.
2. Disconnect TPMS control unit connector B (20P).
3. Turn the ignition switch ON (II).
4. Check the low tire pressure indicator for several seconds when the ignition switch is turned ON (II).

Did the indicator come on and then go off?

YES -Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**), and recheck.

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NO -Do the troubleshooting for the gauge control module (see **WIRE COLOR CODES**). If necessary, substitute a known-good gauge control module (see **REWRITING THE ODO DATA AND TRANSFERRING MAINTENANCE MINDER ON A NEW GAUGE CONTROL MODULE**), and recheck.

TPMS INDICATOR DOES NOT COME ON, AND NO DTCS ARE STORED

1. Turn the ignition switch OFF.
2. Disconnect TPMS control unit connector B (20P).
3. Turn the ignition switch ON (II).
4. Check the TPMS indicator for several seconds when the ignition switch is turned ON (II).

Did the indicator come on and then go off?

YES -Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**), and recheck.

NO -Do the troubleshooting for the gauge control module (see **WIRE COLOR CODES**). If necessary, substitute a known-good gauge control module (see **REWRITING THE ODO DATA AND TRANSFERRING MAINTENANCE MINDER ON A NEW GAUGE CONTROL MODULE**), and recheck.

TPMS INDICATOR DOES NOT GO OFF, AND NO DTCS ARE STORED

NOTE: Check for gauges DTCS with the HDS (see **WIRE COLOR CODES**). If gauges DTCS are stored, troubleshoot those DTCS first.

1. Turn the ignition switch ON (II).
2. Check the TPMS indicator for several seconds when the ignition switch is turned ON (II).

Did the indicator come on and then go off?

YES -The system is OK at this time.

NO -Go to step 3.

3. Turn the ignition switch OFF.
4. Check the No. 3(10 A) fuse in the under-dash fuse/relay box.

Is the fuse blown?

YES -Replace the No. 3 (10 A) fuse, and recheck.

NO -Reinstall the fuse, then go to step 5.

5. Check the No. 10 (7.5 A) fuse in the under-dash fuse/relay box.

Is the fuse blown?

YES -Replace the No. 10 (7.5 A) fuse, and recheck.

NO -Reinstall the fuse, then go to step 6.

6. Disconnect TPMS control unit connector A (14 A).
7. Measure voltage between body ground and TPMS control unit connector A (14P) terminal No. 1.

TPMS CONTROL UNIT CONNECTOR A (14P)

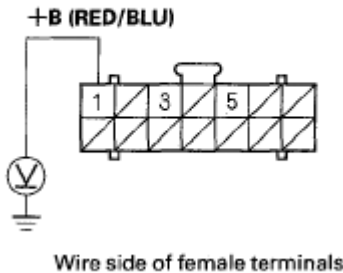


Fig. 20: Measuring Voltage Between Body Ground And TPMS Control Unit Connector A (14P) Terminal No. 1
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 8.

NO -Repair open in the wire between the TPMS control unit and the No. 3 (10 A) fuse in the under-dash fuse/relay box.

8. Turn the ignition switch ON (II).
9. Measure voltage between body ground and TPMS control unit connector A (14P) terminal No. 5.

TPMS CONTROL UNIT CONNECTOR A (14P)

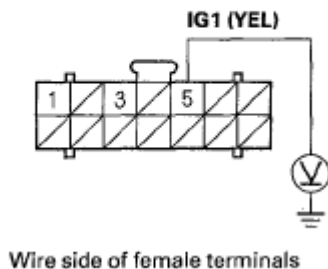


Fig. 21: Measuring Voltage Between Body Ground And TPMS Control Unit Connector A (14P) Terminal No. 5

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 10.

NO -Repair open in the wire between the TPMS control unit and the No. 10 (7.5 A) fuse in the under-dash fuse/relay box.

10. Turn the ignition switch OFF.
11. Reconnect TPMS control unit connector A (14P).
12. Turn the ignition switch ON (II).
13. Measure voltage between body ground and TPMS control unit connector A (14P) terminal No. 3.

TPMS CONTROL UNIT CONNECTOR A (14P)

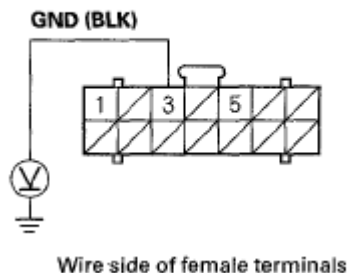


Fig. 22: Measuring Voltage Between Body Ground And TPMS Control Unit Connector A (14P) Terminal No. 3

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Is there 0.1 V or more?

YES -Repair open or high resistance in the wire between the TPMS control unit and body ground (G501).

NO -Do the troubleshooting for the gauge control module (see **WIRE COLOR CODES**). If the gauge control module is OK, check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see **TPMS CONTROL UNIT REPLACEMENT**), and recheck.

TPMS CONTROL UNIT REPLACEMENT

NOTE: Make sure the TPMS control unit mounting bracket is not bent or twisted as this may affect its communication with the tire pressure sensors.

1. Turn the ignition switch OFF.

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2. Remove the center panel (see **CENTER PANEL REMOVAL/INSTALLATION**).
3. Remove the audio unit with the bracket (see **AUDIO UNIT REMOVAL/INSTALLATION**).
4. Disconnect the TPMS control unit subharness connector (A).

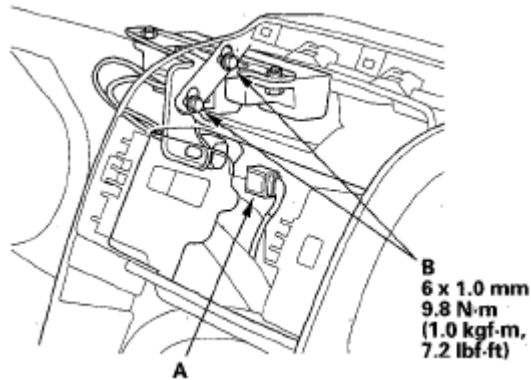


Fig. 23: Identifying TPMS Control Unit Subharness Connector With Torque Specification
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Loosen the bracket mount bolts (B). Do not remove the bolts from the bracket.
6. Remove the TPMS control unit (A) with the bracket and the subharness.

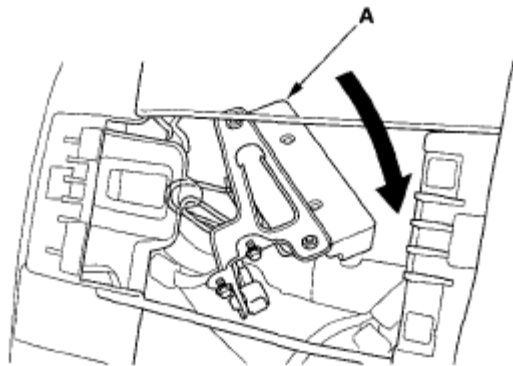


Fig. 24: Removing TPMS Control Unit
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Disconnect the TPMS control unit connectors (A), and remove the TPMS control unit subharness (B).

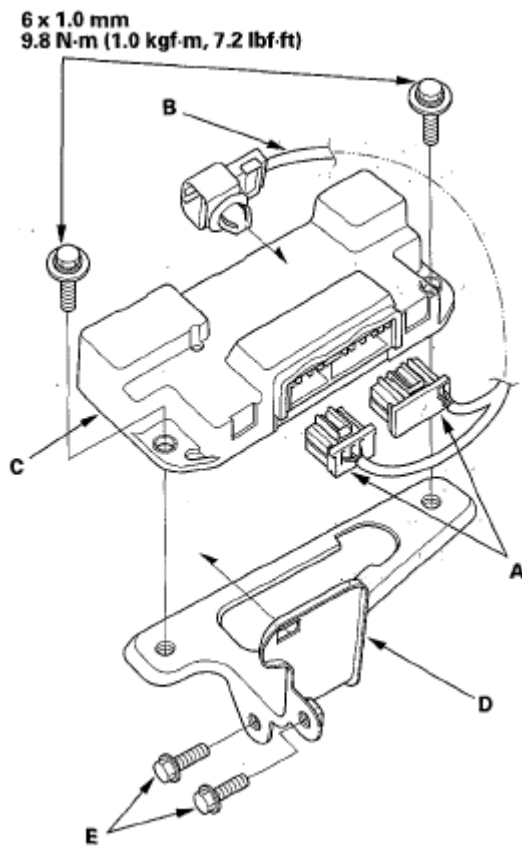


Fig. 25: Identifying TPMS Control Unit Connectors And TPMS Control Unit Subharness With Torque Specification

Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Remove the TPMS control unit (C) from the bracket (D).

NOTE: Remove the bracket mount bolts (E) if it is necessary.

9. Install the TPMS control unit in the reverse order of removal.
10. Connect the HDS and memorize the pressure sensor IDs using the TPMS sensor initializer tool (see **MEMORIZING THE TIRE PRESSURE SENSOR ID**).

TIRE PRESSURE SENSOR REPLACEMENT

REMOVAL

1. Raise the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS**).
2. Remove the wheel with the faulty sensor.
3. Remove the tire valve stem cap and the valve stem core, and let the tire deflate.
4. Remove any balance weights, and then break the bead loose from the wheel with a commercially

available tire changer (A).

NOTE: Note these items to avoid damaging the tire pressure sensor:

- Do the outside of the wheel first.
- Position the wheel as shown so the valve stem (B) is 90 degrees from the bead breaker (C) as shown.
- Do not position the bead breaker of the tire changer too close to the rim.

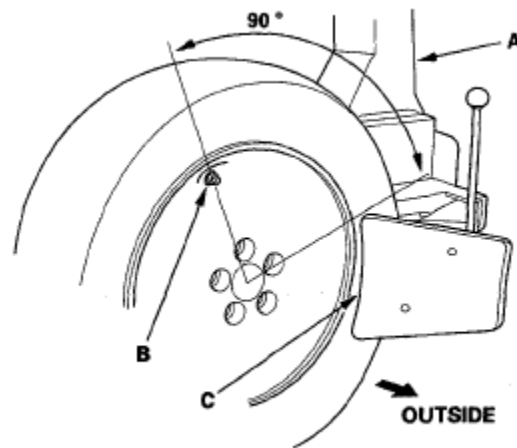


Fig. 26: Removing Balance Weights
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Position the wheel so the tire machine (A) and tire iron (B) are next to the valve stem (C) and will move away from it when the machine starts. Then remove the tire from the wheel.

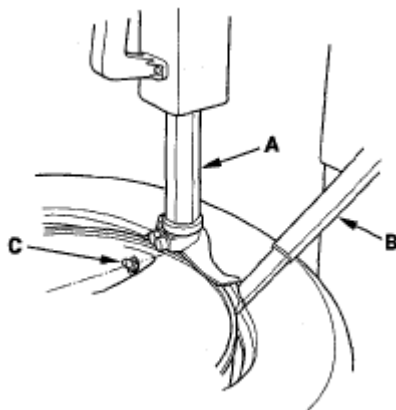


Fig. 27: Positioning Wheel On Tire Machine And Tire Iron
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove and discard the valve stem nut (A), then remove the tire pressure sensor and valve stem (B) from

the wheel.

NOTE: Use a new nut and a new valve stem on reassembly.

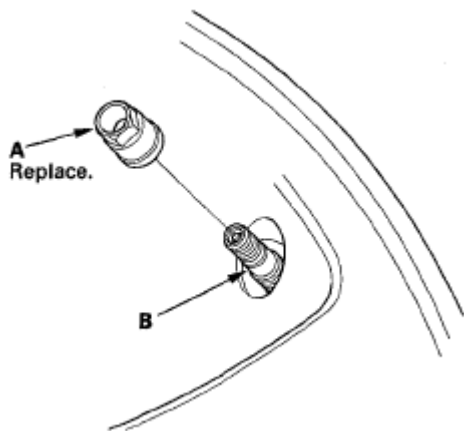


Fig. 28: Identifying Valve Stem Nut, Tire Pressure Sensor And Valve Stem
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Remove and discard the valve stem (A), and the screw (B) from the tire pressure sensor (C).

NOTE: The valve stem grommet (D) might stay in the wheel; make sure you remove it.

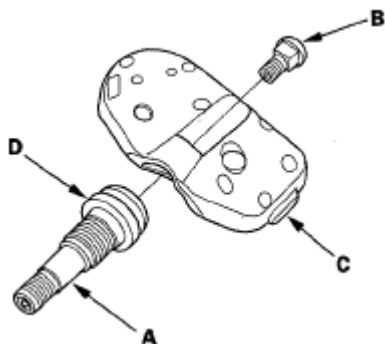


Fig. 29: Identifying Valve Stem, Screw And Tire Pressure Sensor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

INSTALLATION

- NOTE:**
- Use only wheels that have a "TPMS" mark (A) on them.
 - The vehicle may be equipped with one of the three types of wheels.

2007 Honda Element EX

2007-2008 SUSPENSION TPMS (Tire Pressure Monitoring System) - Element

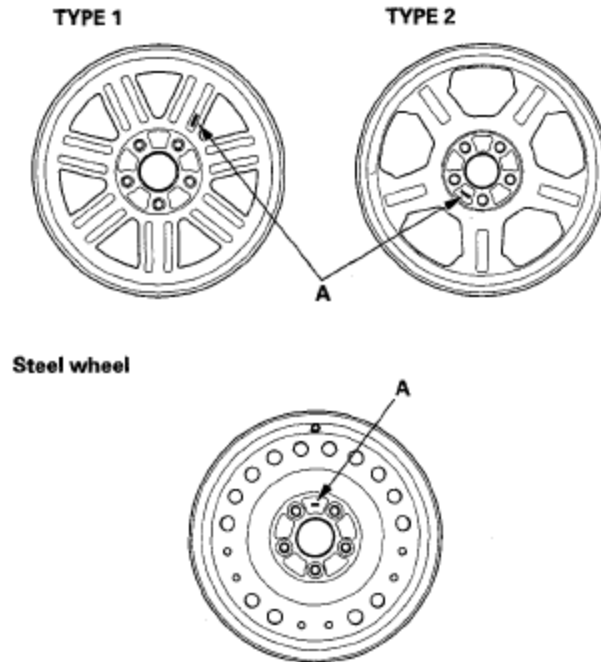


Fig. 30: Identifying Aluminum Wheel And Steel Wheel
Courtesy of AMERICAN HONDA MOTOR CO., INC.

1. Assemble the new valve stem (A), new screw (B), and the tire pressure sensor (C).

NOTE: Always use a new valve stem and new screw.

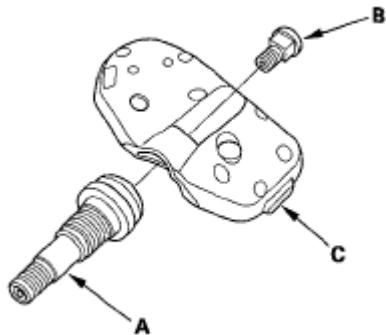


Fig. 31: Identifying Valve Stem, Screw And Tire Pressure Sensor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Before installing the tire pressure sensor, clean the mating surfaces on the sensor and the wheel.
3. Install the tire pressure sensor (A) to the wheel (B), and tighten the valve stem nut (C) finger tight. Make sure the pressure sensor is resting on the wheel.

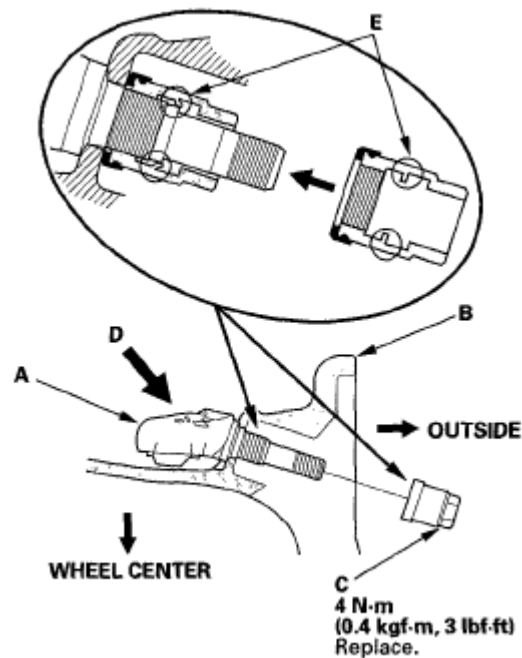


Fig. 32: Installing Tire Pressure Sensor To Wheel With Torque Specification
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Tighten the valve stem nut to the specified torque while holding the tire pressure sensor toward (D) the wheel. You may hear a snap or pop as you tighten the nut. This is normal.

NOTE:

- Do not reuse any nut that has been tightened, even one time, to the specified torque, as it is deformed inside (E).
 - Do not use air or electric impact tools to tighten a valve stem nut.
 - Tightening the nut above the specified torque can damage the nut.
 - Make sure that there is no space between the sensor and the wheel.
5. Lube the tire bead sparingly, and position the wheel so the tire machine (A) and tire iron (B) are next to the valve stem (C) and will move away from it when the machine starts. Then install the tire onto the wheel.

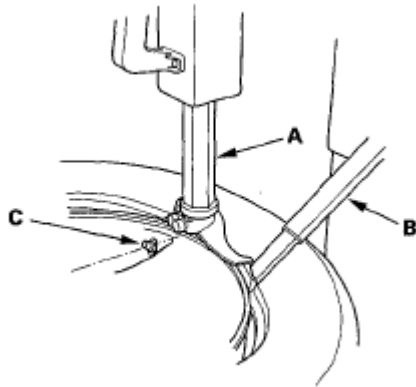


Fig. 33: Positioning Wheel On Tire Machine And Tire Iron
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Inflate the tire to 300 kPa (3.1 kgf/cm², 44 psi) to seat the tire bead to the rim, then adjust the tire pressure (see WHEEL ALIGNMENT), and install the valve stem cap.

NOTE: Make sure the tire bead is seated on both sides of the rim uniformly.

7. Check and adjust the wheel balance, then install the wheels on the vehicle. Torque the wheel nuts to specifications.
8. Remove the jack stands, and lower the jack.
9. Connect the HDS and memorize the pressure sensor IDs using the TPMS sensor initializer tool (see MEMORIZING THE TIRE PRESSURE SENSOR ID).