

2007-2008 SUSPENSION

Rear Suspension - TL

KNUCKLE/HUB BEARING UNIT REPLACEMENT

EXPLODED VIEW

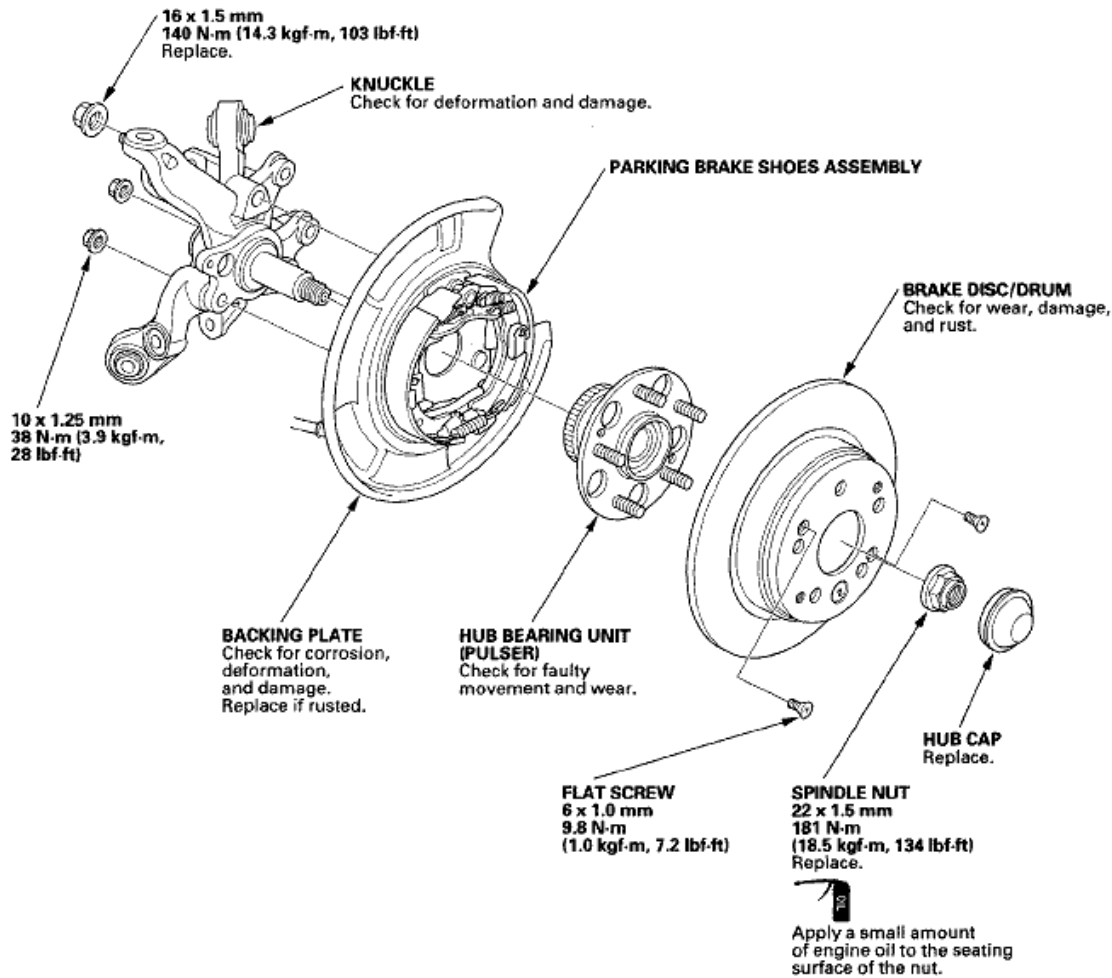


Fig. 1: Exploded View Of Knuckle And Hub Bearing Unit Components With Torque Specifications
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Special Tools Required

Ball joint remover, 28 mm 07MAC-SL0A202

HUB REPLACEMENT

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS**).
2. Remove the wheel nuts and rear wheel.

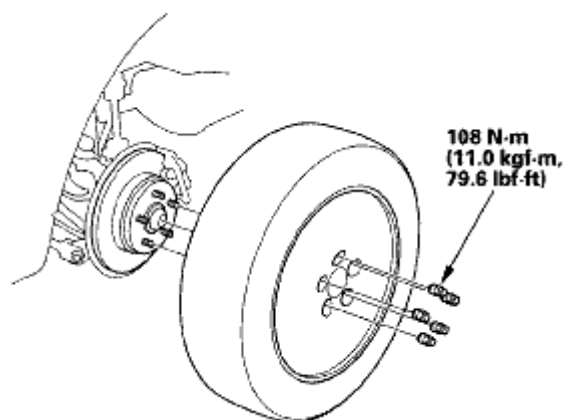


Fig. 2: Identifying Wheel Nuts And Rear Wheel With Torque Specification
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the brake hose mounting bracket (A).

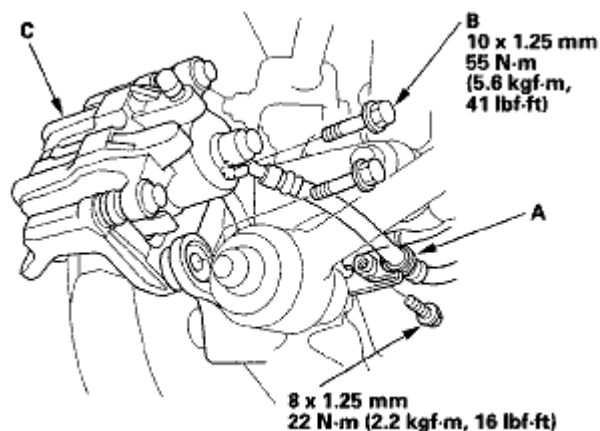


Fig. 3: Identifying Brake Hose Mounting Bracket With Torque Specifications
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the brake caliper bracket mounting bolts (B), then remove the caliper assembly (C) from the knuckle. To prevent damage to the caliper assembly or brake hose, use a short piece of wire to hang the caliper assembly from the undercarriage. Do not twist the brake hose excessively.
5. Remove the hub cap (A).

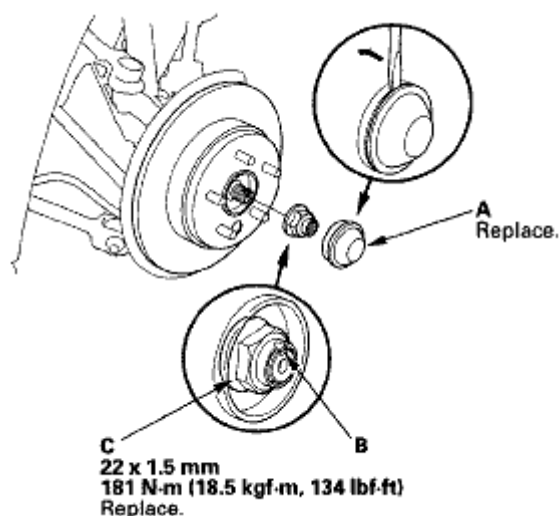


Fig. 4: Identifying Hub Cap With Torque Specification
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Raise the stake (B), then remove the spindle nut (C).
7. Release the parking brake, and remove the brake disc/drum (see **REAR BRAKE DISC REPLACEMENT**).
8. Remove the hub bearing unit (A).

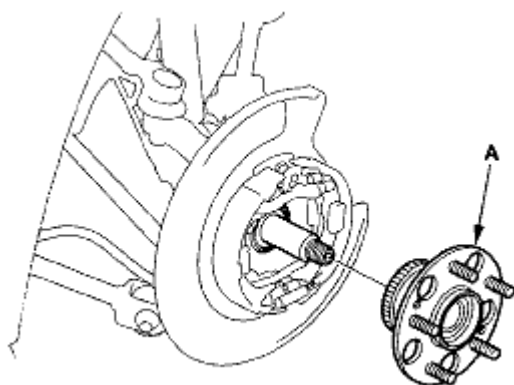


Fig. 5: Identifying Hub Bearing Unit
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Check the hub bearing unit for damage and cracks.
10. Install the hub bearing unit in the reverse order of removal, and note these items:
 - Use a new spindle nut on reassembly.
 - Wash the spindle thoroughly in high flash point solvent before reassembly.
 - Before installing the spindle nut, apply a small amount of engine oil to the seating surface of the nut. After tightening, use a drift to stake the spindle nut shoulder against the driveshaft.
 - Before installing the brake disc/drum, clean the mating surfaces of the hub bearing unit and brake disc/drum.
 - Before installing the wheel, clean the mating surfaces of the brake disc/drum and the inside of the wheel.

- Check the wheel alignment, and adjust it if necessary (see **WHEEL ALIGNMENT**).

KNUCKLE REPLACEMENT

1. Remove the hub bearing unit.
2. Remove the wheel sensor (A) from the knuckle. Do not disconnect the wheel sensor connector.

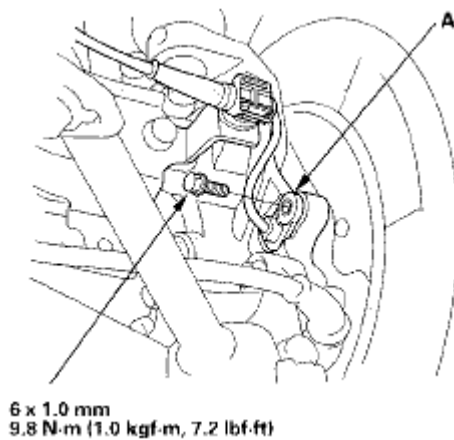


Fig. 6: Identifying Wheel Sensor With Torque Specification
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the lock pin (A) from the upper arm ball joint, then remove the castle nut (B).

NOTE: During installation, install the lock pin as shown after tightening the nut.

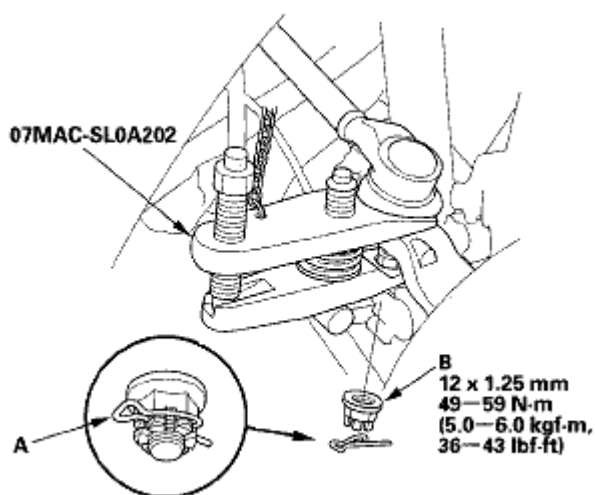


Fig. 7: Identifying Lock Pin From Upper Arm Ball Joint With Torque Specification
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Disconnect the upper arm ball joint from the knuckle using the ball joint remover (see **BALL JOINT REMOVAL**).
5. Remove the flange nut (A) while holding the joint pin (B) with a hex wrench (C), then disconnect the stabilizer link (D) from the stabilizer link bracket (E).

NOTE: Use a new flange nut on reassembly.

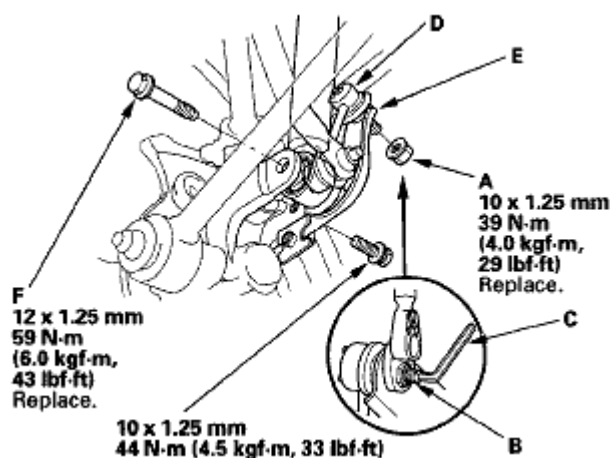


Fig. 8: Holding Joint Pin With Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the damper lower mounting bolt (F), and disconnect the damper from the knuckle.

NOTE: During installation, install a new damper lower mounting bolt.

7. Remove the bolt and the stabilizer link bracket from the knuckle.
8. Remove the self-locking nut (A) and washer (B) from the knuckle.

NOTE: During installation, install a new self-locking nut.

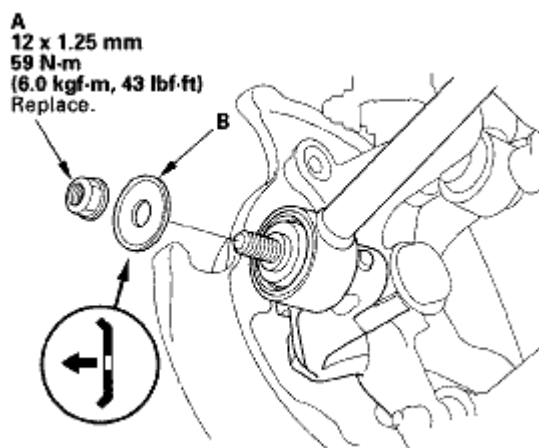


Fig. 9: Identifying Self-Locking Nut And Washer From Knuckle With Torque Specification
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Remove the leading arm mounting bolt (A) from the knuckle.

NOTE: During installation, install a new leading arm mounting bolt.

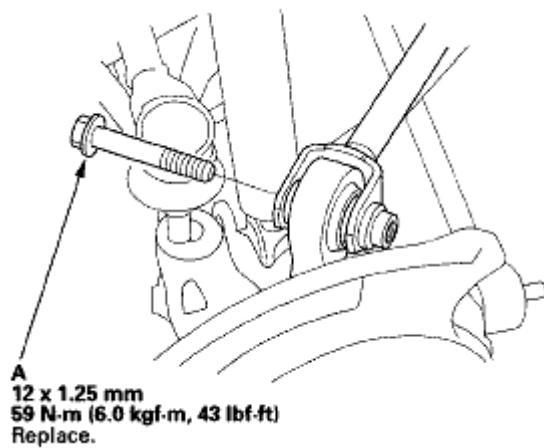


Fig. 10: Identifying Leading Arm Mounting Bolt With Torque Specification
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Remove the parking brake cable bracket (A).

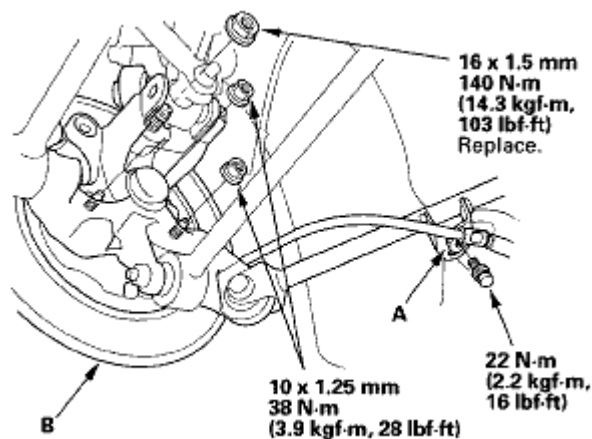


Fig. 11: Identifying Parking Brake Cable Bracket With Torque Specifications
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Remove the backing plate mounting nuts, then remove the backing plate (B). To prevent damage to the backing plate or parking brake shoes assembly and cable, use a short piece of wire to hang the backing plate from the undercarriage. Do not twist the parking brake cable excessively.

NOTE: During installation, install a new 16 mm mounting nut.

12. Remove the trailing arm mounting bolt (A) from the knuckle.

NOTE: During installation, install a new trailing arm mounting bolt.

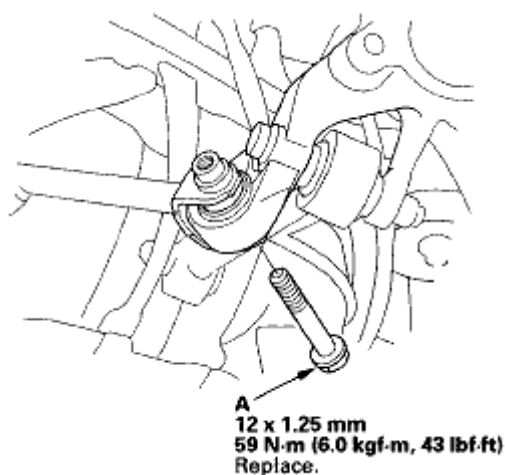


Fig. 12: Identifying Trailing Arm Mounting Bolt With Torque Specification
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Remove the lower arm mounting bolt (A), then remove the knuckle (B).

NOTE: During installation, install a new lower arm mounting bolt and a new nut.

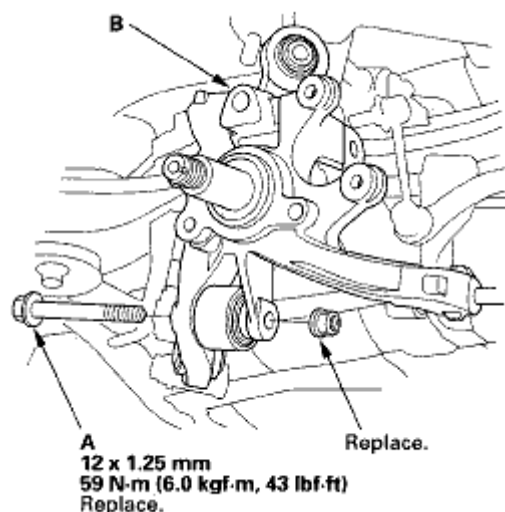


Fig. 13: Identifying Lower Arm Mounting Bolt With Torque Specification
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Install the knuckle in the reverse order of removal, and note these items:
 - First install all the components, and lightly tighten the bolts and nuts, then raise the suspension to load it with the vehicle's weight before fully tightening to the specified torque values.
 - Be careful not to damage the ball joint boot when connecting the knuckle.
 - Torque the castle nut to the lower torque specification, then tighten it only far enough to align the slot with the ball joint pin hole. Do not align the castle nut by loosening it.
 - Before installing the wheel, clean the mating surfaces on the brake disc/drum and the inside of the wheel.
 - Check the wheel alignment, and adjust it if necessary (see **WHEEL ALIGNMENT**).

UPPER ARM REMOVAL/INSTALLATION

Special Tools Required

Ball joint remover, 28 mm 07MAC-SL0A202

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS**).
2. Remove the rear wheel.
3. Remove the wheel sensor (A) from the knuckle. Do not disconnect the wheel sensor connector.

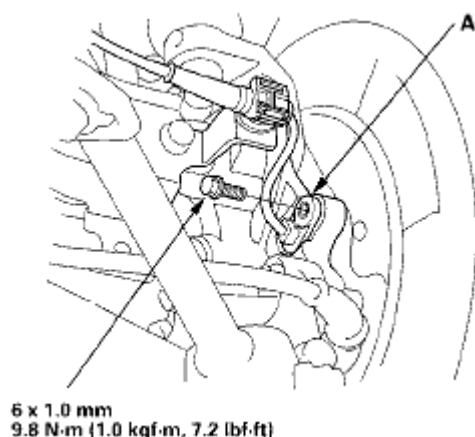


Fig. 14: Identifying Wheel Sensor With Torque Specification
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the lock pin (A) from the upper arm ball joint, then remove the castle nut (B).

NOTE: During installation, install the lock pin as shown after tightening the nut.

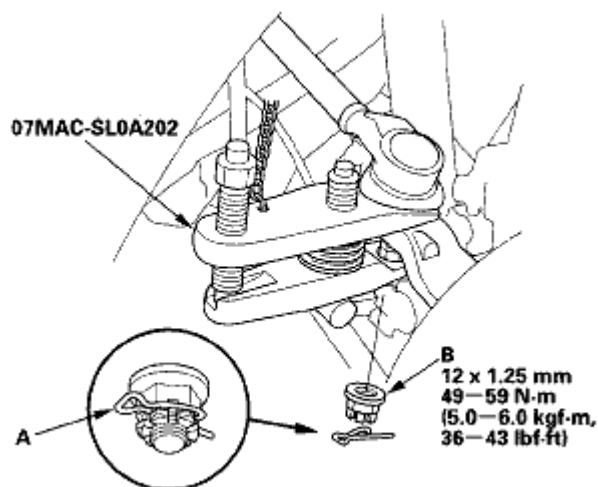


Fig. 15: Identifying Lock Pin From Upper Arm Ball Joint With Torque Specification
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Disconnect the upper arm ball joint from the knuckle using the ball joint remover (see **BALL JOINT REMOVAL**).
6. Remove the brake hose mounting bracket (A). Do not disconnect the brake line.

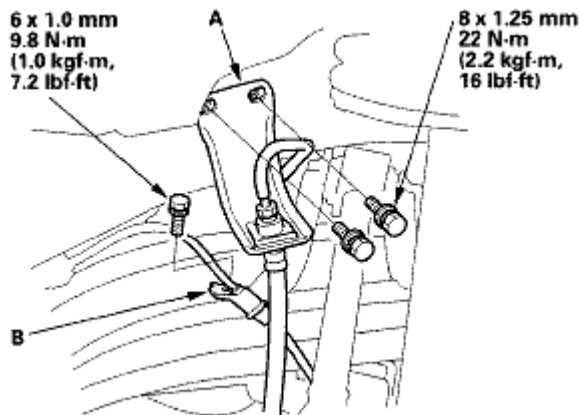


Fig. 16: Identifying Brake Hose Mounting Bracket With Torque Specifications
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Remove the wheel sensor harness mounting bracket (B).
8. Remove the flange bolt (A), then remove the upper arm (B).

NOTE: During installation, install a new flange bolt.

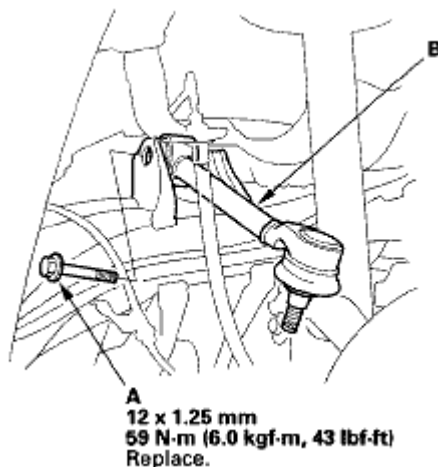


Fig. 17: Identifying Wheel Sensor Harness Mounting Bracket With Torque Specification
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Install the upper arm in the reverse order of removal, and note these items:
 - First install all the components, and lightly tighten the bolts and nuts, then raise the suspension to load it with the vehicle's weight before fully tightening to the specified torque values.
 - Be careful not to damage the ball joint boot when connecting the knuckle.
 - Torque the castle nut to the lower torque specification, then tighten it only far enough to align the slot with the ball joint pin hole. Do not align the castle nut by loosening it.
 - Before installing the wheel, clean the mating surfaces on the brake disc/drum and the inside of

the wheel.

- Check the wheel alignment, and adjust it if necessary (see **WHEEL ALIGNMENT**).

LOWER ARM REPLACEMENT

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS**).
2. Remove the rear wheel.
3. Remove the lower arm mounting nut (A) and mounting bolt (B) from the knuckle side.

NOTE: During installation, install a new lower arm mounting bolt and a new nut.

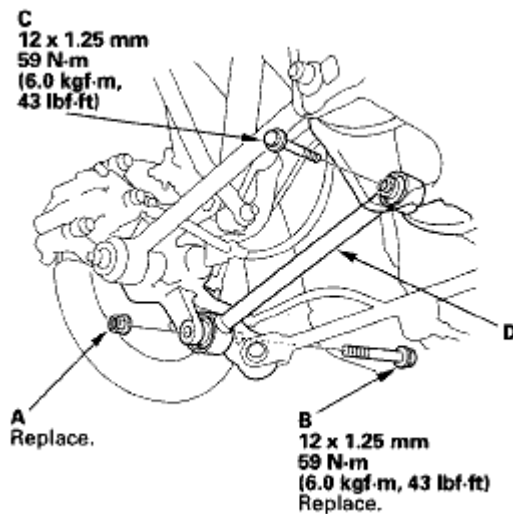


Fig. 18: Identifying Lower Arm Mounting Nut And Mounting Bolt With Torque Specifications
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the flange bolt (C), then remove the lower arm (D).
5. Install the lower arm in the reverse order of removal, and note these items:
 - First install all the components, and lightly tighten the bolts and nuts, then raise the suspension to load it with the vehicle's weight before fully tightening to the specified torque values.
 - Before installing the wheel, clean the mating surfaces on the brake disc/drum and the inside of the wheel.
 - Check the wheel alignment, and adjust it if necessary (see **WHEEL ALIGNMENT**).

CONTROL ARM REPLACEMENT

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS**).
2. Remove the rear wheel.
3. Remove the control arm mounting nut (A) and washer (B) from the knuckle side.

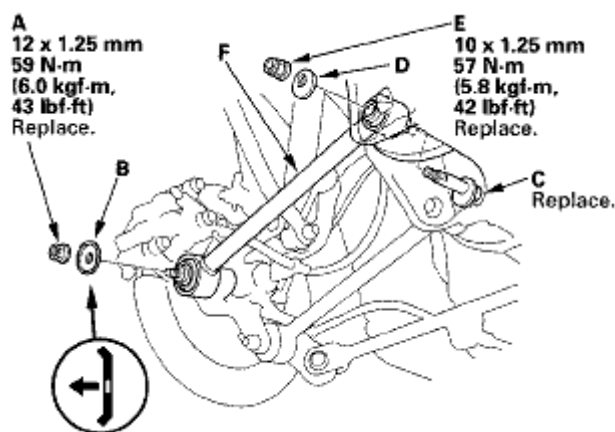


Fig. 19: Identifying Control Arm Mounting Nut And Washer With Torque Specifications
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Mark the cam positions of the adjusting bolt (C) and adjusting cam plate (D), then remove the self-locking nut (E), adjusting cam plate, and adjusting bolt. Discard the self-locking nut and control arm mounting nut.
5. Remove the control arm (F).
6. Install the control arm in the reverse order of removal, and note these items:
 - First install all the components, and lightly tighten the bolts and nuts, then raise the suspension to load it with the vehicle's weight before fully tightening to the specified torque values.
 - Align the cam positions of the adjusting bolt and the adjusting cam plate with the marked positions when tightening.
 - Use a new self-locking nut, a new adjusting bolt, and a new control arm mounting nut during reassembly.
 - Before installing the wheel, clean the mating surfaces on the brake disc/drum and the inside of the wheel.
 - Check the wheel alignment, and adjust it if necessary (see **WHEEL ALIGNMENT**).

TRAILING ARM REMOVAL/INSTALLATION

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS**).
2. Remove the rear wheel.
3. Remove the parking brake cable bracket (A) from the trailing arm (B).

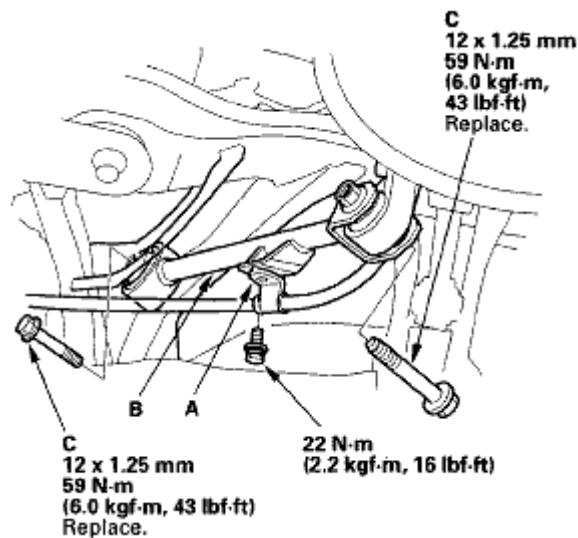


Fig. 20: Identifying Parking Brake Cable Bracket From Trailing Arm With Torque Specifications

Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the mounting bolts (C), then remove the trailing arm.

NOTE: During installation, install new mounting bolts.

5. Install the trailing arm in the reverse order of removal, and note these items:
 - First install all the components, and lightly tighten the bolts and nuts, then raise the suspension to load it with the vehicle's weight before fully tightening to the specified torque values.
 - Before installing the wheel, clean the mating surfaces on the brake disc/drum and the inside of the wheel.
 - Check the wheel alignment, and adjust it if necessary (see **WHEEL ALIGNMENT**).

LEADING ARM REPLACEMENT

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS**).
2. Remove the rear wheel.
3. Remove the mounting bolts, then remove the leading arm (A).

NOTE: During installation, install new mounting bolts.

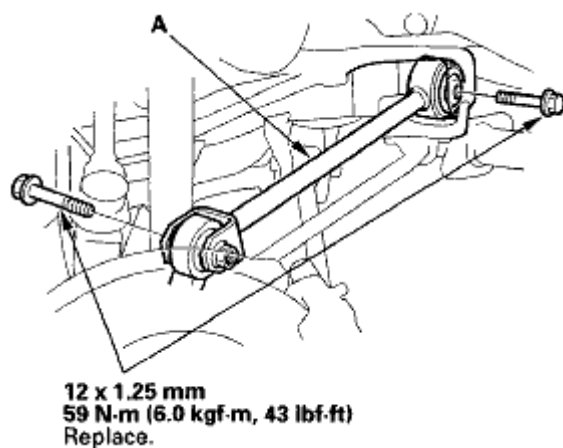


Fig. 21: Identifying Leading Arm With Torque Specification
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the leading arm in the reverse order of removal, and note these items:
 - First install all the components, and lightly tighten the bolts, then raise the suspension to load it with the vehicle's weight before fully tightening to the specified torque values.
 - Before installing the wheel, clean the mating surfaces on the brake disc/drum and the inside of the wheel.
 - Check the wheel alignment, and adjust it if necessary (see **WHEEL ALIGNMENT**).

STABILIZER LINK REMOVAL/INSTALLATION

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS**).
2. Remove the rear wheel.
3. Remove the self-locking nut (A) and flange nut (B) while holding the respective joint pin (C) with a hex wrench (D), then remove the stabilizer link (E).

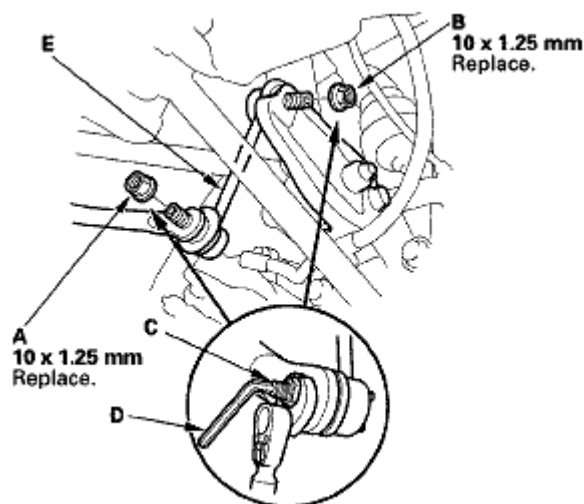


Fig. 22: Holding Respective Joint Pin With Hex Wrench
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the stabilizer link (A) on the stabilizer bar (B) and stabilizer link bracket (C) with the joint pins set at the center of their range of movement.

NOTE: The left stabilizer link has a yellow paint mark (D), while the right stabilizer link has a white paint mark.

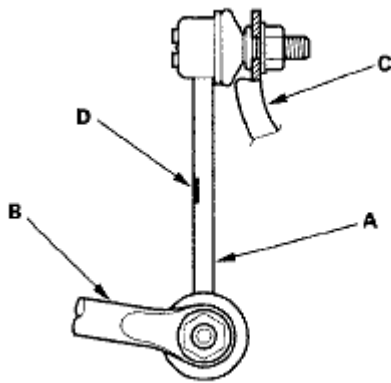


Fig. 23: Identifying Stabilizer Link On Stabilizer Bar And Stabilizer Link Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install a new self-locking nut and a new flange nut, and lightly tighten them.
6. Place a jack under the knuckle, and raise the suspension to load it with the vehicle's weight.
7. Tighten the self-locking nut (A) and flange nut (B) to the specified torque values while holding the respective joint pins (C) with a hex wrench (D).

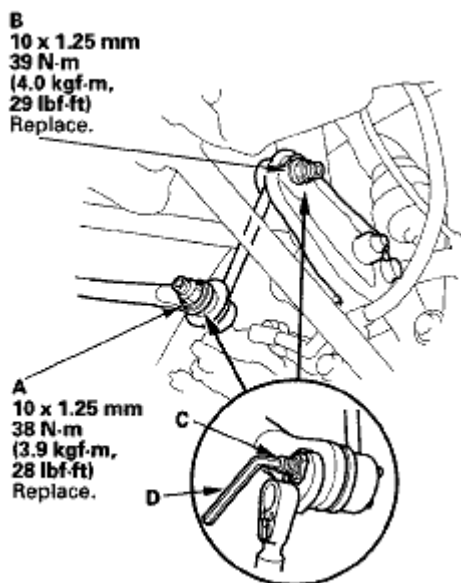


Fig. 24: Holding Respective Joint Pins With Hex Wrench With Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Clean the mating surfaces of the brake disc/drum and the inside of the wheel, then install the rear wheel, and test-drive the vehicle.
9. After 5 minutes of driving, tighten the self-locking nut again to the specified torque value.

STABILIZER BAR REPLACEMENT

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS**).
2. Remove the rear wheels.
3. Disconnect the stabilizer links from the stabilizer bar (A) on the right and left sides (see **STABILIZER LINK REMOVAL/INSTALLATION**).

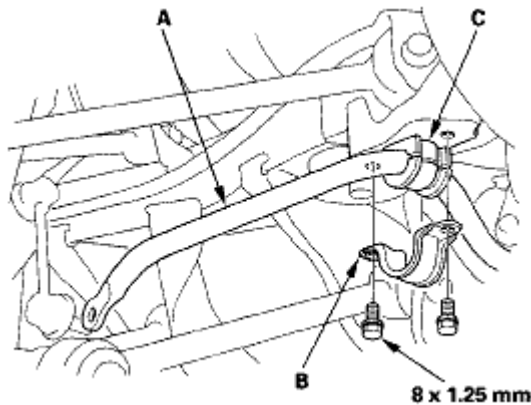


Fig. 25: Identifying Bushings And Stabilizer Bar
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the flange bolts and the bushing holders (B), then remove the bushings (C) and the stabilizer bar.
5. Install the stabilizer bar in the reverse order of removal; and note these items:
 - Note the right and left direction of the stabilizer bar.
 - Do not set the bushings (A) on the bent or curved part of the stabilizer bar (B).
 - Note the direction of installation for the bushings.
 - Refer to **STABILIZER LINK REMOVAL/INSTALLATION** to connect the stabilizer to the links (see **STABILIZER LINK REMOVAL/INSTALLATION**).
 - Before installing the wheel, clean the mating surfaces of the brake disc/drum and the inside of the wheel.
 - Check the wheel alignment, and adjust it if necessary (see **WHEEL ALIGNMENT**).

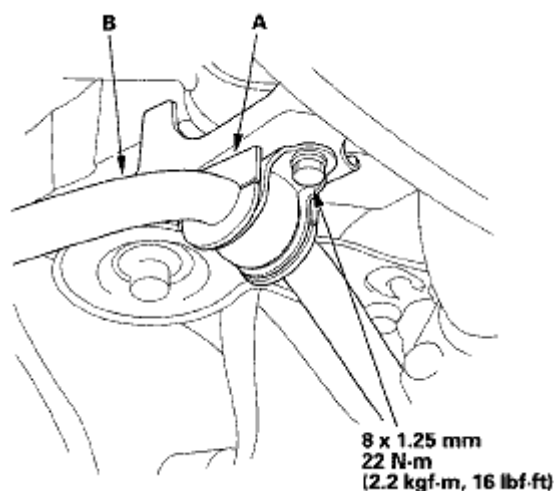


Fig. 26: Identifying Bushings And Stabilizer Bar With Torque Specification
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

DAMPER/SPRING REMOVAL AND INSTALLATION

REMOVAL

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS**).
2. Remove the rear wheel.
3. Remove the rear shelf (see **TRIM REMOVAL/INSTALLATION - REAR SHELF AREA**).
4. Remove the flange nuts (A) from the top of the damper.

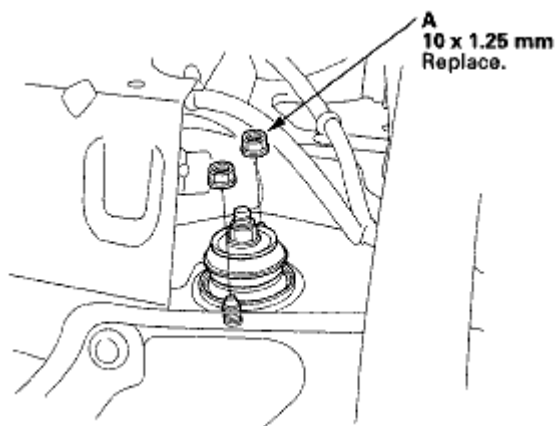


Fig. 27: Identifying Flange Nuts
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Remove the flange nut (A) while holding the joint pin (B) with a hex wrench (C), then disconnect the stabilizer link (D) from the stabilizer link bracket (E).

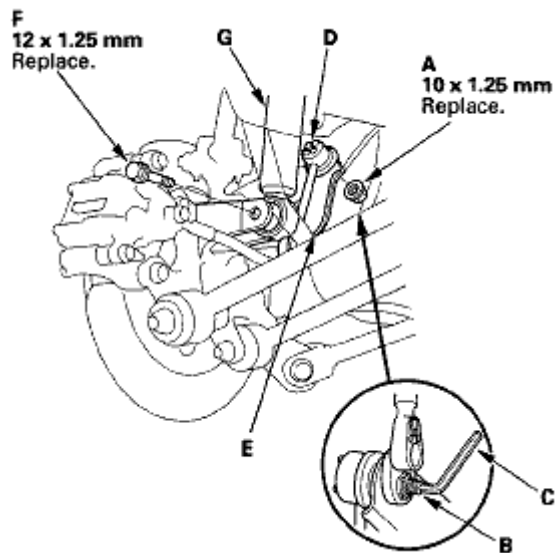


Fig. 28: Holding Joint Pin

Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the damper lower mounting bolt (F), and disconnect the damper from the knuckle.
7. Lower the rear suspension, then remove the damper (G) from the vehicle. Mark the damper springs left and right before you continue.

INSTALLATION

1. Lower the rear suspension, and position the damper (A) in the body.

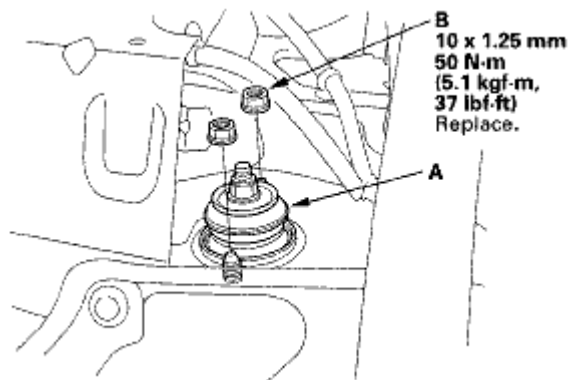


Fig. 29: Identifying Damper Flange Nuts With Torque Specification

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Loosely install the new flange nuts (B) onto the top of the damper.
3. Loosely install a new damper lower mounting bolt (A) on the bottom of the damper. Connect the stabilizer link (B) on the bracket (C), then loosely install a new flange nut (D).

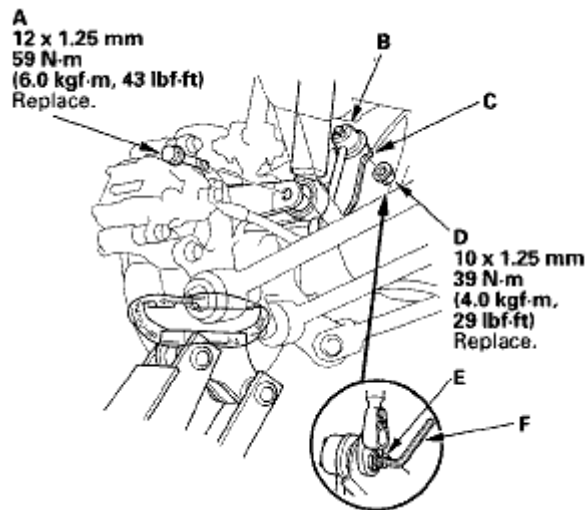
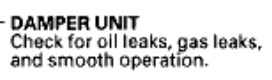


Fig. 30: Holding Joint Pin With Hex Wrench With Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Raise the rear suspension with a jack to load the vehicle weight, and tighten the damper lower mounting bolt to the specified torque value.
5. Tighten the flange nut while holding the joint pin (E) with a hex wrench (F).
6. Tighten the flange nuts on top of the damper to the specified torque value.
7. Install the rear shelf (see **TRIM REMOVAL/INSTALLATION - REAR SHELF AREA**).
8. Clean the mating surfaces of the brake disc/drum and the inside of the wheel, then install the rear wheel.
9. Check the wheel alignment, and adjust it if necessary (see **WHEEL ALIGNMENT**).

DAMPER/SPRING DISASSEMBLY, INSPECTION, AND REASSEMBLY

EXPLODED VIEW



1. Compress the damper spring, then remove the self-locking nut (A) while holding the damper shaft with a hex wrench (B). Do not compress the spring more than necessary to remove the nut.

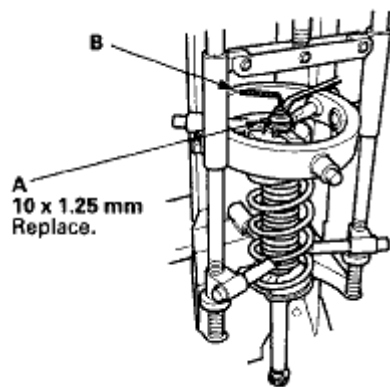


Fig. 32: Compressing Damper Spring
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Release the pressure from the strut spring compressor, then disassemble the damper as shown in the Exploded View.

INSPECTION

1. Reassemble all the parts, except for the damper spring mounting cushion and the damper spring.
2. Compress the damper assembly by hand, and check for smooth operation through a full stroke, both compression and extension. The damper should extend smoothly and constantly when compression is released. If it does not, the gas is leaking and the damper should be replaced.

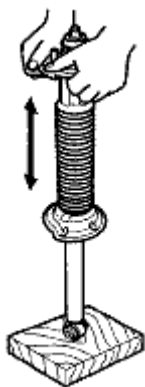


Fig. 33: Compressing Damper Assembly By Hand
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Check for oil leaks, abnormal noises, and binding during these tests.

REASSEMBLY

1. Install all parts except the self-locking nut and washer onto the damper unit by referring to the **EXPLODED VIEW**. Align the bottom of the damper spring (A) and the stepped part of the lower spring seat (B), and align the damper mounting base (C) as shown.

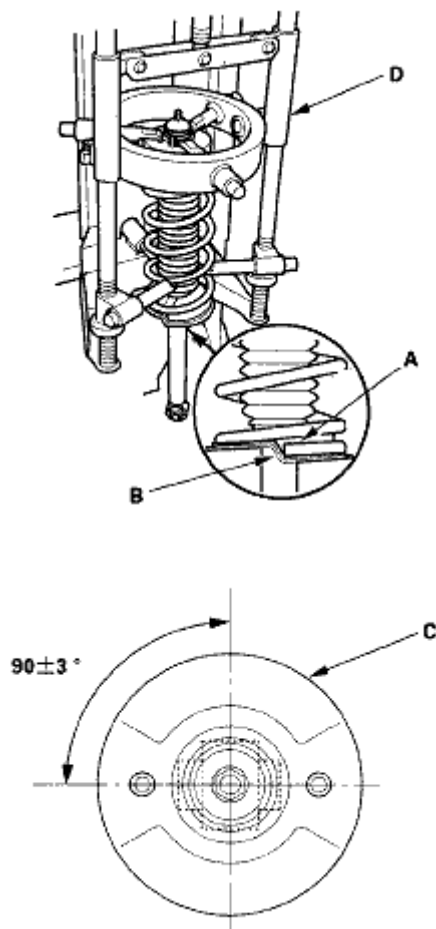


Fig. 34: Aligning Bottom Of Damper Spring
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the damper assembly on a commercially available strut spring compressor (D).
3. Compress the damper spring. Do not compress the spring excessively.
4. Install the washer (A) and loosely install a new self-locking nut(B).

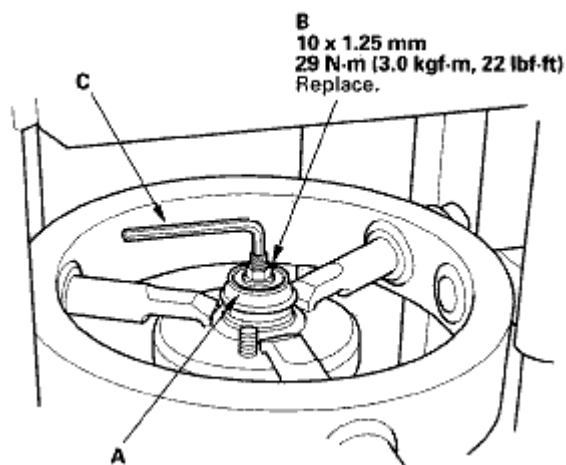


Fig. 35: Holding Damper Shaft With Hex Wrench With Torque Specification
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Hold the damper shaft with a hex wrench (C), and tighten the self-locking nut to the specified torque value.
6. Remove the damper assembly from the strut spring compressor.

KNUCKLE BUSHING REPLACEMENT

Special Tools Required

Bushing driver 30-40 07NAD-SS00100 or 07NAD-SS00101

1. Position the knuckle (A) on the press with the machined surface (B) facing down.

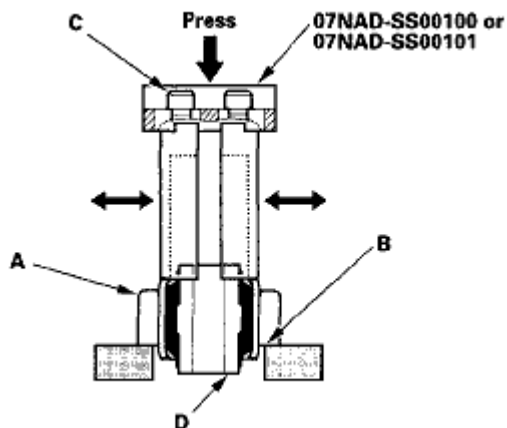


Fig. 36: Positioning Knuckle On Press With Machined Surface Facing Down
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Adjust the bushing driver so it matches the inner diameter of the bushing hole, then tighten the socket bolts (C) securely.
3. Position the bushing driver on the bushing (D).
4. Remove the bushing by pressing on the bushing driver with a press as shown.

NOTE: Be careful not to damage the inside of the bushing hole while pressing on the bushing.

5. Position the knuckle (A) on the press with the machined surface (B) facing up.

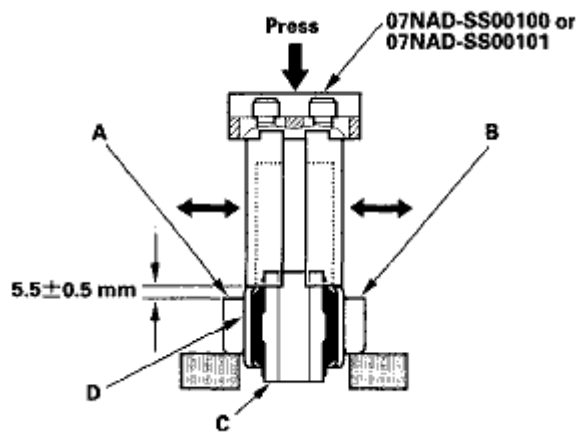


Fig. 37: Positioning Knuckle On Press With Machined Surface Facing Up
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Adjust the bushing driver so it matches with the outer diameter of the bushing (C).
7. Position the bushing driver on the outer sleeve (D) of the bushing.
8. Press the bushing into the knuckle using the bushing driver as shown.

2007-08 SUSPENSION

TPMS (Tire Pressure Monitoring System) - TL

COMPONENT LOCATION INDEX

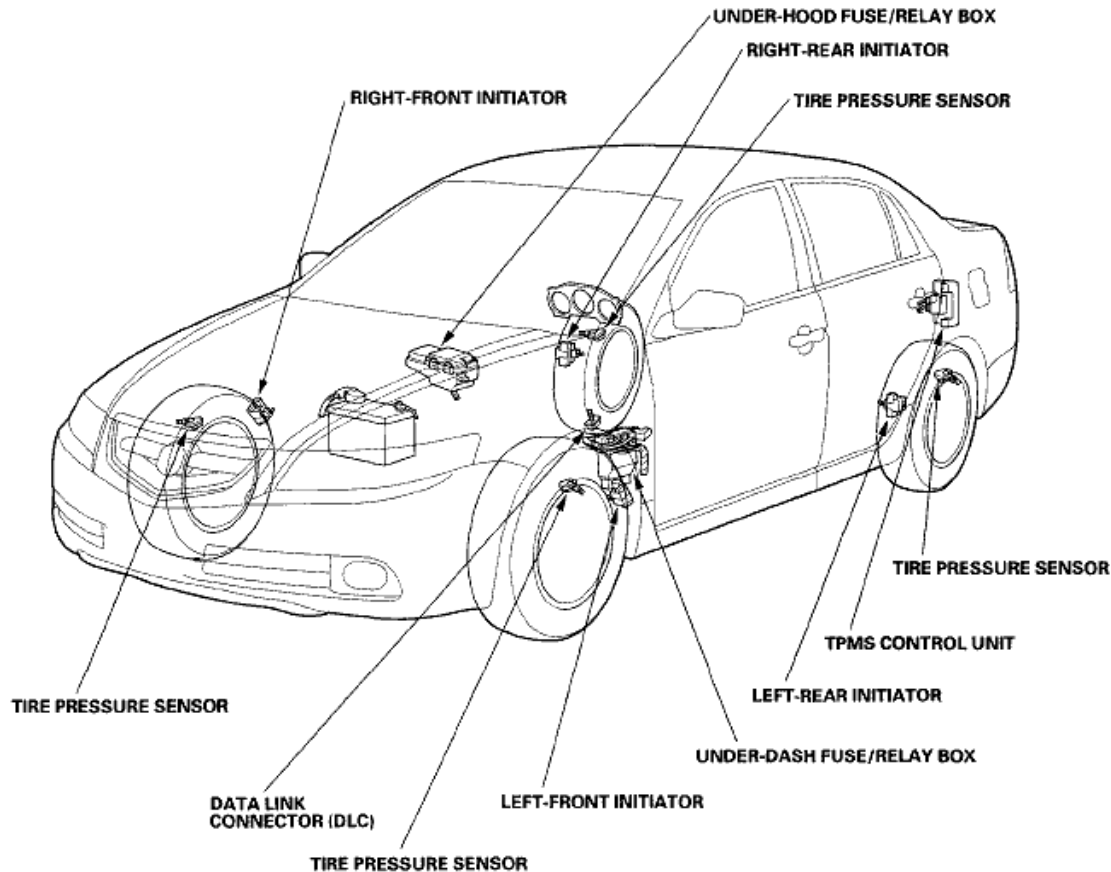


Fig. 1: Identifying TPMS Component Location

Courtesy of AMERICAN HONDA MOTOR CO., INC.

GENERAL TROUBLESHOOTING INFORMATION

SYSTEM INDICATOR LOCATION

The system has seven indicators.

- The low tire pressure indicator (A)
- The message indicator (B)
- The TPMS indicator (C)
- The right-front (RF) tire indicator (D)
- The left-front (LF) tire indicator (E)
- The right-rear (RR) tire indicator (F)
- The left-rear (LR) tire indicator (G)

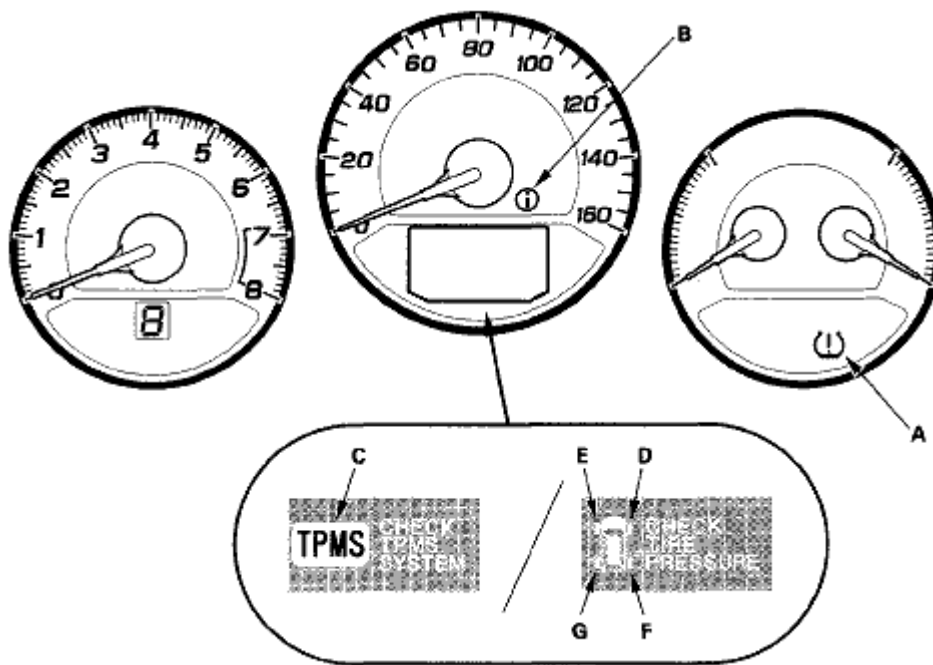


Fig. 2: Tire Pressure Indicator Screen Display
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

HOW TPMS WORKS ('07 MODEL)

The TPMS (tire pressure monitoring system) has many indicators; four tire indicators (on the multi-information display), a low tire pressure indicator (LED indicator), the message indicator (LED indicator), and a TPMS indicator (on the multi-information display). When the TPMS control unit detects low pressure in a tire, or a problem in the system, it turns on the appropriate indicator(s), as well as the message indicator.

- If low tire pressure is detected, the low tire pressure indicator and the appropriate tire indicator come on, as well as the message indicator.
- If a problem in the system is detected, the TPMS indicator comes on, as well as the message indicator.
- If low tire pressure and a problem in the system are detected, the TPMS indicator comes on, as well as the message indicator.

If the system is OK, the low tire pressure indicator and the message 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 and the appropriate tire(s) indicator will show on the multi-information display, the message indicator will come 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 will turn off the indicators and store the DTC(s). However, if the control unit detects a problem in the system during an indication of low tire pressure, it will turn off the low tire pressure indicator and tire(s) indicators, store the DTC(s), and turn on the TPMS indicator.

NOTE: Tire pressures will increase slightly as the temperature in the tires rises during driving at highway speeds. Pressures will also increase or decrease slightly with changes in outside air temperature. A temperature change of about 18°F (10°C) will change 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 client 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 message indicator and the TPMS indicator will come on and stay on until the system returns to normal with most DTCs. If DTC 45, 81, 83, or 85 is set, the TPMS indicator will go off only when the ignition switch is turned off.

If a flat tire is replaced with the spare tire, and the flat tire is stored in the trunk area or the cabin, the low tire pressure indicator will stay on but the appropriate tire indicator will go off. This prevents the client from thinking there is a problem with the spare tire. When the flat tire is taken out of the vehicle for repair, the TPMS indicator will come on (DTC 32, 34, 36, or 38) because the system is no longer receiving the signal from the tire's transmitter.

HOW TPMS WORKS ('08 MODEL)

The TPMS (tire pressure monitoring system) has many indicators; four tire indicators (on the multi-information display), a low tire pressure indicator (LED indicator), the message indicator (LED indicator), and a TPMS indicator (on the multi-information display). When the TPMS control unit detects low pressure in a tire, or a problem in the system, it turns on, or blinks the appropriate indicator(s), as well as the message indicator.

- If low tire pressure is detected, the low tire pressure indicator and the appropriate tire indicator come on, as well as the message indicator.
- If a problem in the system is detected, the TPMS indicator comes on, as well as the message indicator, and the low tire pressure indicator comes on after blinking for about 75 seconds.
- If low tire pressure and a problem in the system are detected, the TPMS indicator comes on, as well as the message indicator, and the low tire pressure indicator comes on after blinking for about 75 seconds. In this case the low tire pressure indicator will be warning of a system failure.

If the system is OK, the low tire pressure indicator and the message 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 and the appropriate tire(s) indicator will show on the multi-information display, the message indicator will come 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 will turn off the indicators and store the DTC(s). However, if the control unit detects a problem in the system during an indication of low tire pressure, it will turn off the tire(s) indicator, store the DTC(s), and turn on the TPMS indicator and the low tire pressure indicator after blinking.

NOTE: Tire pressures will increase slightly as the temperature in the tires rises during driving at highway speeds. Pressures will also increase or decrease slightly with changes in outside air temperature. A temperature change of about 18°F (10°C) will change 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 client 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 message indicator, the TPMS indicator, and the low tire pressure indicator (starts blinking) will come on and stay on until the system returns to normal with most DTCs. If DTC 45, 81, 83, or 85 is set, the TPMS indicator and the low tire pressure indicator will go off only when the ignition switch is turned off.

If a flat tire is replaced with the spare tire, and the flat tire is stored in the trunk area or the cabin, the low tire pressure indicator will stay on but the appropriate tire indicator will go off. This prevents the client from thinking there is a problem with the spare tire. When the flat tire is taken out of the vehicle for repair, the TPMS indicator and the low tire pressure indicator (starts blinking) will come on (DTC 32, 34, 36, or 38) because the system is no longer receiving the signal from the tire's transmitter.

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 ('07 MODEL)

- 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 will be 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 A DIAGNOSTIC TROUBLE CODE (DTC) IS SET ('08 MODEL)

- 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.
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HOW TO TROUBLESHOOT DTCS ('07 MODEL)

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.

1. Ask the client to describe the conditions when the indicator came on, and try to reproduce the same conditions for troubleshooting. Find out if the client 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 from other control units DTCs 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 TROUBLESHOOT DTCS ('08 MODEL)

DTC troubleshooting procedures assume the cause of the problem is still present and the TPMS indicator and the low tire pressure indicator (starts blinking) are still on. (NOTE: The TPMS indicator comes on and the low tire pressure indicator starts blinking then turn 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.

1. Ask the client to describe the conditions when the indicators came on or blinked, and try to reproduce the same conditions for troubleshooting. Find out if the client 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 from other control units DTCs 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.

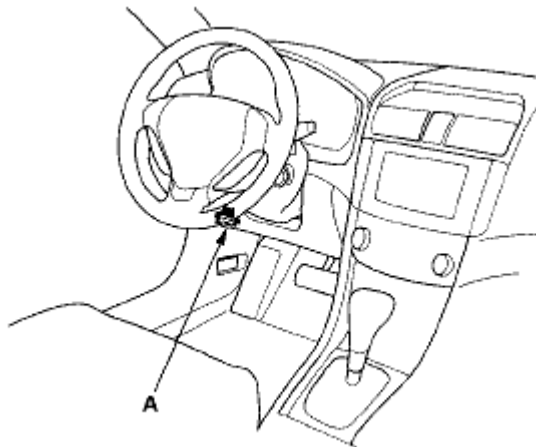


Fig. 3: Identifying Data Link Connector
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 (PART 2)**).
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

NOTE: You cannot clear the DTCs manually.

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.

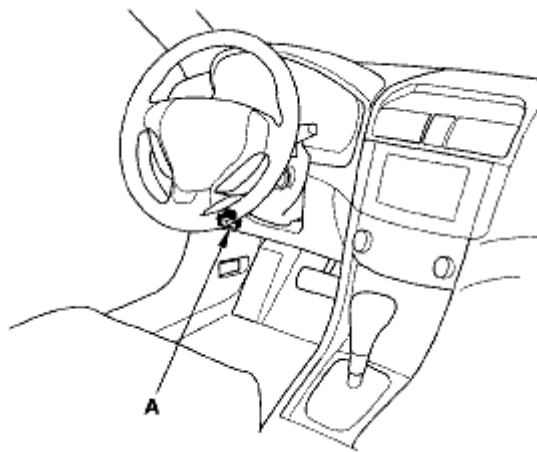


Fig. 4: Identifying Data Link Connector

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 (PART 2)**).
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

MEMORIZING A TIRE PRESSURE SENSOR ID

When a tire pressure sensor is replaced, the sensor ID must be memorized by the TPMS control unit.

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.

MEMORIZING A SENSOR ID AUTOMATICALLY

After rotating the tires or replacing a tire pressure sensor, drive the vehicle for at least 40 seconds at a speed of 15 mph (24 km/h) or more, and all the sensor IDs will be memorized automatically.

NOTE:

- When replacing the TPMS control unit, use the HDS to memorize IDs.
- After the IDs are memorized, reduce the pressure in all four tires to less than the appropriate specification, and check to see that the four tire indicators come on.

MEMORIZE THE ID WITH THE HDS

The HDS can memorize the ID of a new tire pressure sensor or a previously memorized ID.

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.

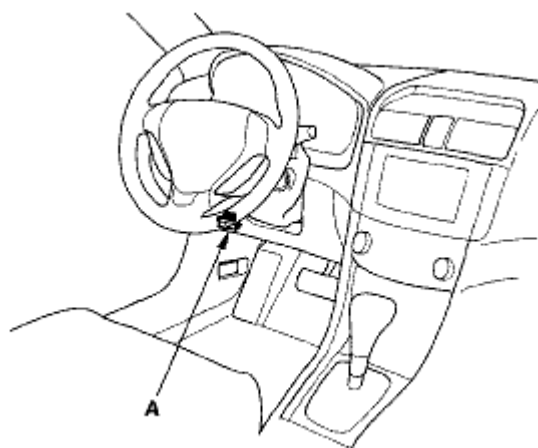


Fig. 5: Identifying Data Link Connector

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 (PART 2)**).
4. Memorize the ID of the tire pressure sensor by following the screen prompts on the HDS.

NOTE:

- See the HDS Help menu for specific instructions.
- When replacing the TPMS control unit, use the HDS to memorize IDs.
- After the IDs are memorized, reduce the pressure in all four tires to less than the appropriate specification, and check to see that the four tire indicators come on.

5. Turn the ignition switch OFF.

DTC TROUBLESHOOTING INDEX

DTC TROUBLESHOOTING INDEX

DTC	Detection Item
<u>11</u>	Right-front tire low air pressure
<u>13</u>	Left-front tire low air pressure
<u>15</u>	Right-rear tire low air pressure
<u>17</u>	Left-rear tire low air pressure
<u>21</u>	Right-front tire pressure sensor abnormally high temperature
<u>22</u>	Left-front tire pressure sensor abnormally high temperature
<u>23</u>	Right-rear tire pressure sensor abnormally high temperature

<u>24</u>	Left-rear tire pressure sensor abnormally high temperature
<u>31</u>	Right-front tire pressure sensor low battery voltage
<u>32</u>	Right-front tire pressure sensor transmission failure
<u>33</u>	Left-front tire pressure sensor low battery voltage
<u>34</u>	Left-front tire pressure sensor transmission failure
<u>35</u>	Right-rear tire pressure sensor low battery voltage
<u>36</u>	Right-rear tire pressure sensor transmission failure
<u>37</u>	Left-rear tire pressure sensor low battery voltage
<u>38</u>	Left-rear tire pressure sensor transmission failure
<u>41</u>	Abnormal signal reception error
<u>45</u>	Initiator circuit short detection
<u>51</u>	Right-front tire pressure sensor registration error
<u>53</u>	Left-front tire pressure sensor registration error
<u>55</u>	Right-rear tire pressure sensor registration error
<u>57</u>	Left-rear tire 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>	Right-front tire pressure sensor internal error
<u>93</u>	Left-front tire pressure sensor internal error
<u>95</u>	Right-rear tire pressure sensor internal error
<u>97</u>	Left-rear tire pressure sensor internal error

SYMPTOM TROUBLESHOOTING INDEX

SYMPTOM TROUBLESHOOTING INDEX

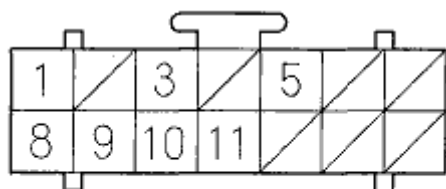
Symptom	Diagnostic procedure
HDS does not communicate with the TPMS control unit or the vehicle	Troubleshoot the DLC circuit (see <u>DLC CIRCUIT TROUBLESHOOTING (PART 2)</u>)
Low tire pressure indicator does not come on, and no DTCs are stored ('07 model)	Symptom Troubleshooting (see <u>SYMPTOM TROUBLESHOOTING</u>)
Low tire pressure indicator does not come on, and no DTCs are stored ('08 model)	Symptom Troubleshooting (see <u>LOW TIRE PRESSURE INDICATOR DOES NOT COME ON, AND NO DTCS ARE STORED ('08 MODEL)</u>)
Low tire pressure indicator does not go off, and no DTCs are stored ('07 model)	Symptom Troubleshooting (see <u>LOW TIRE PRESSURE INDICATOR DOES NOT GO OFF, AND NO DTCS ARE STORED ('07 MODEL)</u>)
Low tire pressure indicator does not go off, and no DTCs are stored ('08 model)	Symptom Troubleshooting (see <u>LOW TIRE PRESSURE INDICATOR DOES NOT GO OFF, AND NO DTCS ARE STORED ('07 MODEL)</u>)
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	Symptom Troubleshooting (see <u>TPMS</u>

are stored

**INDICATOR DOES NOT COME ON, AND NO
DTCS ARE STORED)**

SYSTEM DESCRIPTION

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



Wire side of female terminals

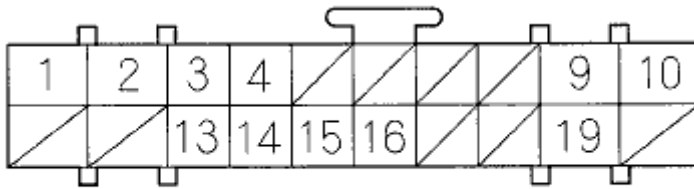
Fig. 6: Identifying TPMS Control Unit Inputs And Outputs For Connector Terminal (14P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CONNECTOR TERMINAL REFERENCE

Terminal number	Wire color	Terminal sign (Terminal name)	Description	Signal		
				Terminal	Conditions	Voltage
1	RED/WHT	+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 0.1 V
5	YEL	IG1 (Ignition 1)	Power source for activating the system	5-GND	Ignition switch ON (II)	Battery voltage
					Ignition switch OFF	Less than 0.1 V
8	PUR	LF LF PWR. (LF low frequency power)	Power source for the left-front initiator	8-GND	For 5 seconds with ignition switch ON (II)	About 7 V
					After 5 seconds with ignition switch ON (II)	-
9	PNK	RF LF PWR. (RF low frequency power)	Power source for the right-front initiator	9-GND	For 5 seconds with ignition switch ON (II)	About 7 V
					After 5 seconds with ignition switch ON (II)	-
10	GRN/ORN	LR LF PWR. (LR low frequency power)	Power source for the left-rear initiator	10-GND	For 5 seconds with ignition switch ON (II)	About 7 V
					After 5 seconds	

					with ignition switch ON (II)	-
11	BLU	RR LF PWR. (RR low frequency power)	Power source for the right-rear initiator	11-GND	For 5 seconds with ignition switch ON (II)	About 7 V
					After 5 seconds with ignition switch ON (II)	-

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



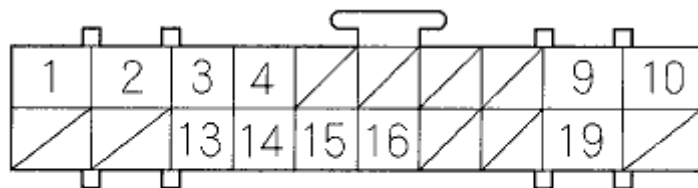
Wire side of female terminals

Fig. 7: Identifying TPMS Control Unit Inputs And Outputs For Connector Terminal (20P)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

CONNECTOR TERMINAL REFERENCE

Terminal number	Wire color	Terminal sign (Terminal name)	Description	Signal		
				Terminal	Conditions	Voltage
1	BLU	RF LF SIG. (RF low frequency signal)	Detects the signal from the right-front initiator	1-GND	For the first 5 seconds after turning the ignition switch ON (II)	Pulses 0-2 V
					With ignition switch ON (II) for more than 5 seconds	Less than 0.1 V
2	WHT/RED	RR LF SIG. (RR low frequency signal)	Detects the signal from the right-rear initiator	2-GND	For the first 5 seconds after turning the ignition switch ON (II)	Pulses 0-2 V
					With ignition switch ON (II) for more than 5 seconds	Less than 0.1 V
3	ORN	LF LF SIG. (LF low frequency	Detects the signal from the left-front	3-GND	For the first 5 seconds after turning the ignition switch ON (II)	Pulses 0-2 V

		signal)	initiator		With ignition switch ON (II) for more than 5 seconds	Less than 0.1 V
4	PNK/BLK	LR LF SIG. (LR low frequency signal)	Detects the signal from the left-rear initiator	4-GND	For the first 5 seconds after turning the ignition switch ON (II)	Pulses 0-2 V
					With ignition switch ON (II) for more than 5 seconds	Less than 0.1 V
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



Wire side of female terminals

Fig. 8: Identifying TPMS Control Unit Inputs And Outputs For Connector Terminal (20P)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

CONNECTOR TERMINAL REFERENCE

Terminal number	Wire color	Terminal sign (Terminal name)	Description	Signal		
				Terminal	Conditions	Voltage
13	GRN	LF LF GND (LF low frequency ground)	Ground for the left-front initiator	13-GND	Ignition switch ON (II)	Less than 0.1 V
14	RED	RF LF GND (RF low frequency ground)	Ground for the right-front initiator	14-GND	Ignition switch ON (II)	Less than 0.1 V
15	YEL/GRN	LR LF GND (LR low frequency ground)	Ground for the left-rear initiator	15-GND	Ignition switch ON (II)	Less than 0.1 V
16	YEL	RR LF GND (RR low frequency ground)	Ground for the right-rear initiator	16-GND	Ignition switch ON (II)	Less than 0.1 V
19	WHT	CAN H (CAN communication signal high)	Sends the communication signal	-	Ignition switch ON (II)	Pulses

SYSTEM STRUCTURE

Whenever the engine is running, the TPMS control unit continuously 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 and the appropriate tire(s) indicator shown on the multi-information display. If it detects a problem in the system, it turns on the TPMS indicator.

Initiators

Mounted on each wheel well, each initiator sends a start/stop signal to the tire pressure sensor in the tire below it.

Control unit

Mounted back of the rear seat, the control unit sends signals to the initiators and receives signals from them to verify pressure sensor IDs every time the engine starts. It also receives signals from the transmitters in the tire pressure sensors, and it continuously monitors and controls the system.

Indicators

All indicators are in the gauge control module: The low tire pressure indicator (LED indicator), four tire(s) indicator (on the multi-information display) to show which tire is affected, and the TPMS indicator (on the multi-information display) that comes on only if there's a problem with the system. The message indicator (LED indicator) comes on when there is one or more indication in the multi-information display. When two or more tire pressures are low, the low tire pressure indicator comes on about 5 seconds before the appropriate tire(s) indicator. Once low pressure is detected, the system scans all four pressure sensors to ensure that it turns on the correct tire indicator.

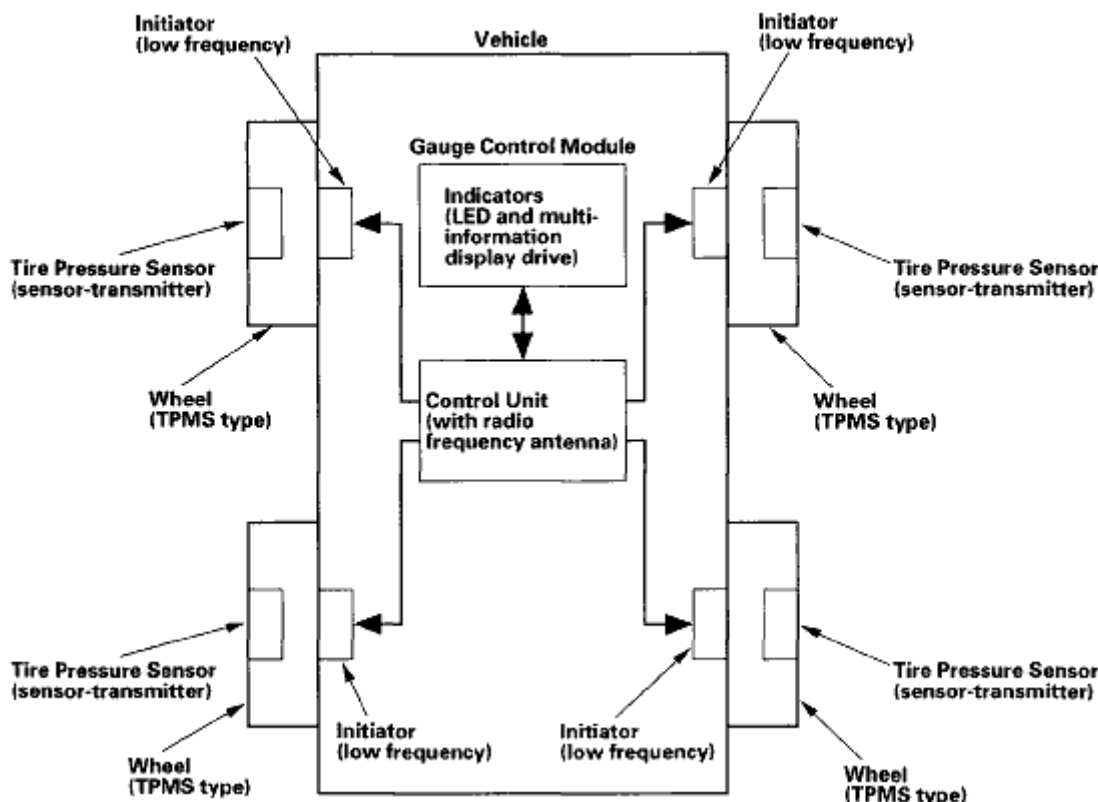


Fig. 9: System Structure Diagram

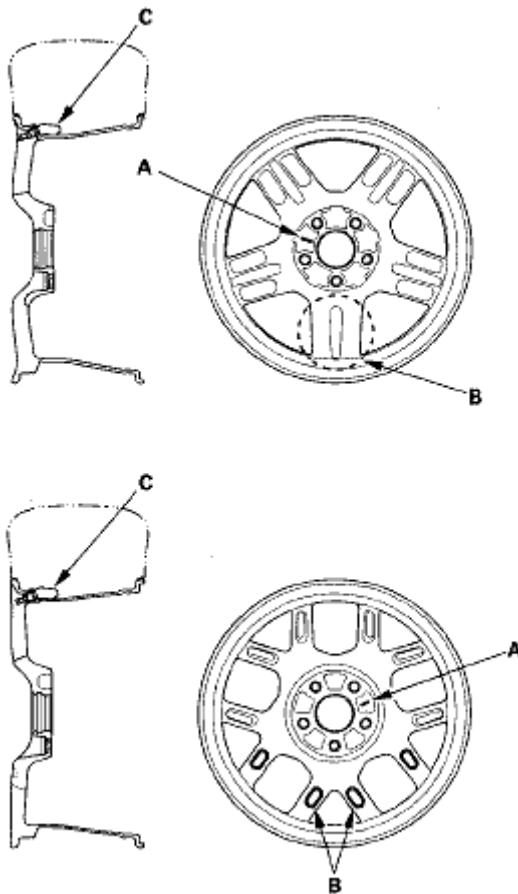
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 internal tire information one time every 60 seconds to the control unit. When the TPMS control unit receives tire pressure that is less than: Front 190 kPa (1.9 kgf/cm², 28 psi), rear 175 kPa (1.8 kgf/cm², 25 psi), the TPMS control unit then turns on the low tire pressure indicator and the appropriate tire(s) indicator. When that tire's pressure is increased to more than: Front 210 kPa (2.1 kgf/cm², 30 psi), rear 200 kPa (2.0 kgf/cm², 29 psi), the transmitter sends tire pressure to the control unit, and then the control unit turns the indicators off.

Wheels

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

**Fig. 10: Identifying Tire Pressure Sensor And Wheels**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

- When the vehicle is running, an RF (radio frequency) band wave signal is continuously transmitted from each tire pressure sensor to the control unit.
- When the ignition switch is turned ON (II), the initiators send an LF (low frequency) band wave signal to the tire pressure sensors, switching them from sleep mode to normal function mode. When the ignition switch is turned OFF, 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 can be memorized manually or automatically. Each initiator is hardwired to the control unit. Every time the ignition is turned ON (II), the control unit asks each initiator for a sensor ID. The initiators then transmit the sensor IDs, and the control unit receives and memorizes them. The control unit then knows which ID belongs to each tire location. 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 and front/rear initiators: Misalignment of the control unit and initiators could interfere with sending and receiving signals.

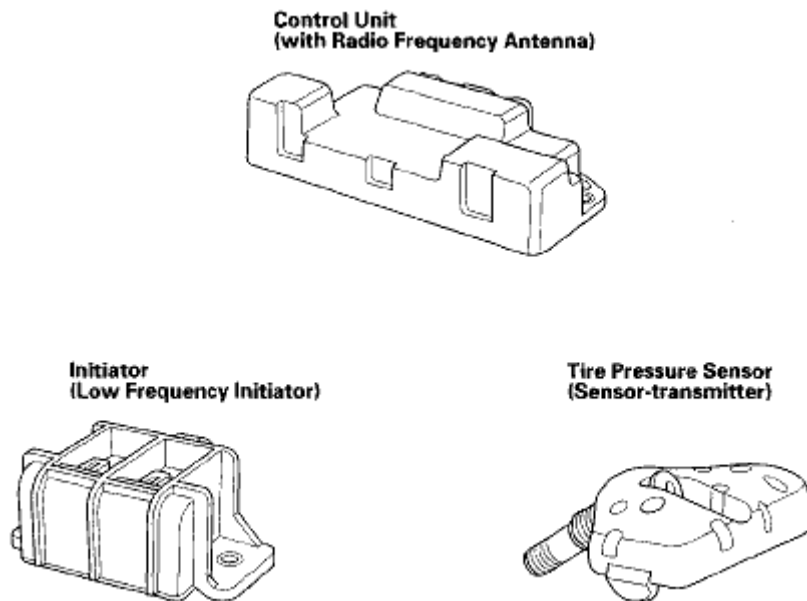


Fig. 11: Identifying TPMS Control Unit
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

CIRCUIT DIAGRAM

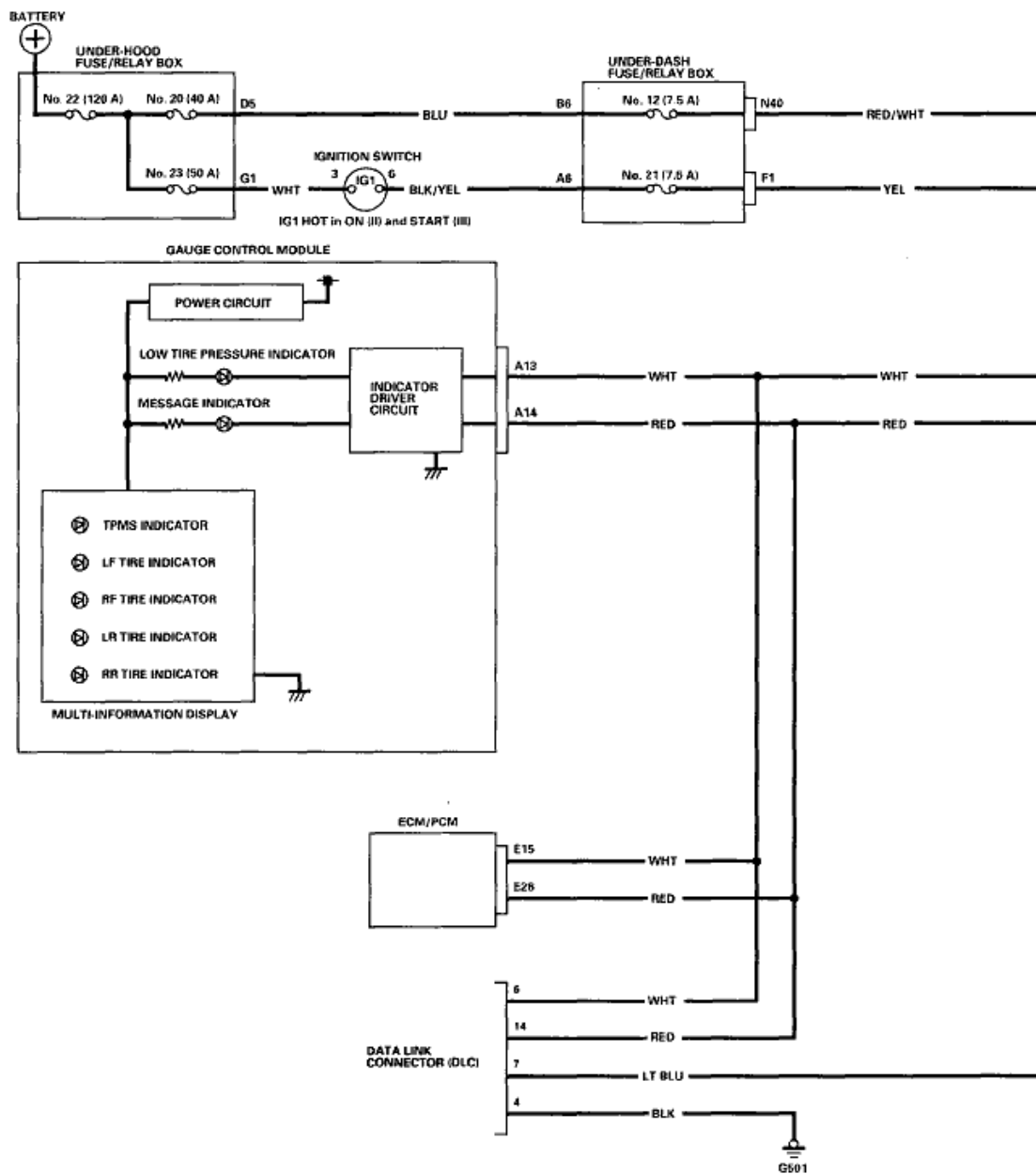


Fig. 12: TPMS - Circuit Diagram (1 Of 3)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

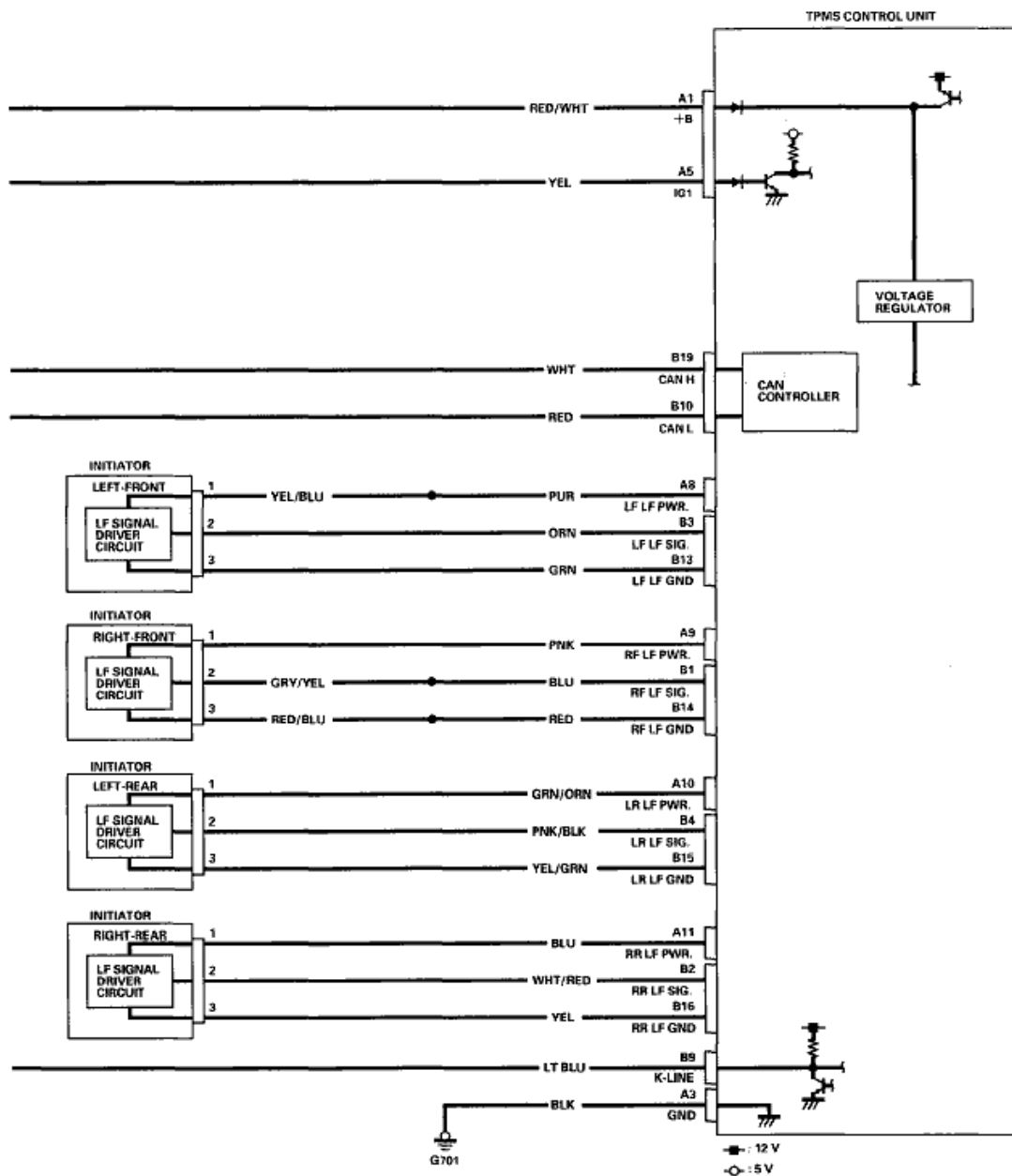
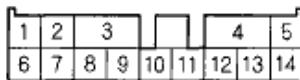
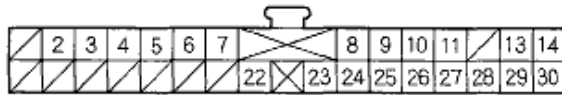
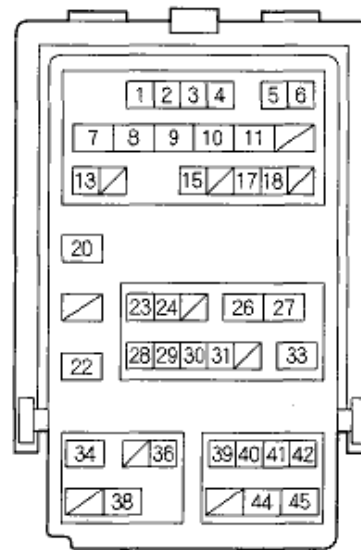
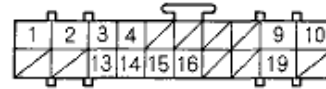
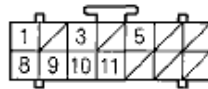
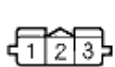
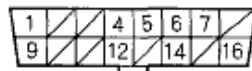


Fig. 13: TPMS - Circuit Diagram (2 Of 3)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

**UNDER-DASH FUSE/RELAY BOX
CONNECTOR F (14P)****GAUGE CONTROL MODULE CONNECTOR A (30P)****ECM/PCM CONNECTOR E (31P)****UNDER-DASH FUSE/RELAY BOX
CONNECTOR N (45P)****INITIATOR 3P CONNECTOR TPMS CONTROL UNIT CONNECTOR A (14P) TPMS CONTROL UNIT CONNECTOR B (20P)**

Wire side of female terminals

DATA LINK CONNECTOR (DLC)

Terminal side of female terminals

Fig. 14: TPMS - Circuit Diagram (3 Of 3)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

DTC TROUBLESHOOTING

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

NOTE: If low tire pressure is detected, the control unit will set one or more of these DTCs, and turn on the low tire pressure indicator and the appropriate tire indicator(s). If the low tire pressure and tire indicator(s) come on due to true low tire pressure, and the client corrects it before bringing the vehicle in, the DTCs will have been stored, but all the indicators will be off.

1. Turn the ignition switch ON (II).
2. If no tire indicators are on, retrieve the DTC(s).

DTC CHART

DTC	Tire location
11	Right-front

13	Left-front
15	Right-rear
17	Left-rear

- Turn the ignition switch OFF.
- Check the pressure of the indicated tire(s).

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

YES -Go to step 5.

NO -Go to step 7.

- Check for and repair the cause of air loss, and then inflate the tire (see **WHEEL ALIGNMENT**).
- Turn the ignition switch ON (II).

Do the tire indicators go off within 1 minute?

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

NO -Go to step 8.

- Turn the ignition switch ON (II).
- Check pressure of the appropriate tire with the HDS.

NOTE: If **UNDEFINED** is shown on sensor transmitter status, turn the ignition switch OFF, rotate the tire 1/4 turn, then turn the ignition switch ON (II), and try again. If **UNDEFINED** is still displayed, repeat the procedure in the previous sentence until a response is shown.

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

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 tire pressure sensor (see **TIRE PRESSURE SENSOR REPLACEMENT**).

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

- Turn the ignition switch ON (II).
- Check the tire indicated by the DTCs you retrieved.

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 (front tires only)
- Improper assembly of a wheel and tire

DTC CHART

DTC	Tire location
21	Right-front
22	Left-front
23	Right-rear
24	Left-rear

3. Turn the ignition switch OFF.
4. Make sure the tires have cooled down.
5. Turn the ignition switch ON (II).

Does the TPMS indicator go off within 1 minute?

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

NO -Go to step 6.

6. Read the internal temperature of the tire with the HDS.

NOTE: If **UNDEFINED** is shown on sensor transmitter status, turn the ignition switch OFF, rotate the tire 1/4 turn, then turn the ignition switch ON (II), and try again. If **UNDEFINED** is still displayed, repeat the procedure in the previous sentence until a response is shown.

Is the internal temperature shown on the HDS 176°F (80°C) or more?

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 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 lower. Note that the diagnosis must be made in a place where ambient temperature is -4°F (-20°C) or higher.

1. Turn the ignition switch ON (II).

Does the TPMS indicator go off within 1 minute?

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

NO -Go to step 2.

2. Read the tire pressure sensor voltage with the HDS.

NOTE: If **UNDEFINED** is shown on sensor transmitter status, turn the ignition switch **OFF**, rotate the tire 1/4 turn, then turn the ignition switch **ON (II)**, and try again. If **UNDEFINED** is still displayed, repeat the procedure in the previous sentence until **NORMAL** is shown.

DTC CHART

DTC	Tire location
31	Right-front
33	Left-front
35	Right-rear
37	Left-rear

Is the sensor transmitter battery low?

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:**
- The vehicle must be driven for 3 minutes at a speed above 15 mph (24 km/h) for DTC 32, 34, 36, or 38 to set.
 - Inspect for an aftermarket electrical device interfering with the RF signal from the sensors when the ignition switch is **ON (II)**.

1. Turn the ignition switch **OFF**.
2. Check the indicated location to make sure the wheel is a TPMS type with the tire pressure sensor properly mounted in it.

DTC CHART

DTC	Tire location
32	Right-front
34	Left-front
36	Right-rear
38	Left-rear

Is the tire pressure sensor mounted properly?

YES -Go to step 5.

NO -Go to step 3.

3. Install a known-good TPMS wheel.
4. To memorize the sensor ID, drive the vehicle above 15 mph (24 km/h) for 40 continuous seconds, or memorize the ID with the HDS (see **MEMORIZING THE TIRE PRESSURE SENSOR ID**).
5. Test-drive the vehicle, and check the VEHICLE SPEED in the TPMS DATA LIST with the HDS.

Is the vehicle speed indicated?

YES -Go to step 9.

NO -Go to step 6.

6. Turn the ignition switch OFF.
7. Turn the ignition switch ON (II).
8. Check for DTCs with the HDS.

Is DTC 85 indicated?

YES -Go to the DTC 85 troubleshooting (see **DTC 85: F-CAN COMMUNICATION FAILURE**).

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.

9. Turn the ignition switch OFF.
10. Turn the ignition switch ON (II).
11. Check the indicated tire for sensor transmitter status changing to "Normal" with the HDS.

NOTE: If **UNDEFINED** is shown on sensor transmitter status, turn the ignition switch OFF, rotate the tire 1/4 turn, then turn the ignition switch ON (II), and try again. If **UNDEFINED** is still displayed, repeat the procedure in the previous sentence until **NORMAL** is shown.

DTC CHART

DTC	Tire location
32	Right-front
34	Left-front
36	Right-rear
38	Left-rear

Is there at least one response in one full turn of the tire?

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

NO -Go to step 12.

12. Turn the ignition switch OFF.
13. Install a wheel with a known-good tire pressure sensor on the vehicle.
14. Turn the ignition switch ON (II).

15. Memorize the sensor ID and check that wheel location again for normal sensor signal (repeat the procedure in step 11).

Is there a response this time?

YES -Replace the tire pressure sensor on the customer's wheel (see **TIRE PRESSURE SENSOR REPLACEMENT**).

NO -Go to step 16.

16. Turn the ignition switch OFF.
17. Disconnect TPMS control unit connectors A (14P) and B (20P) and the appropriate initiator 3P connector.

DTC CHART

DTC	Tire location
32	Right-front
34	Left-front
36	Right-rear
38	Left-rear

18. Check for continuity between the appropriate terminal in TPMS control unit connector A (14P) and the corresponding terminal in the initiator 3P connector (see table).

DTC CHART

DTC	TPMS control unit terminal No.	Initiator name/terminal No.
32	9	RIGHT-FRONT/1
34	8	LEFT-FRONT/1
36	11	RIGHT-REAR/1
38	10	LEFT-REAR/1

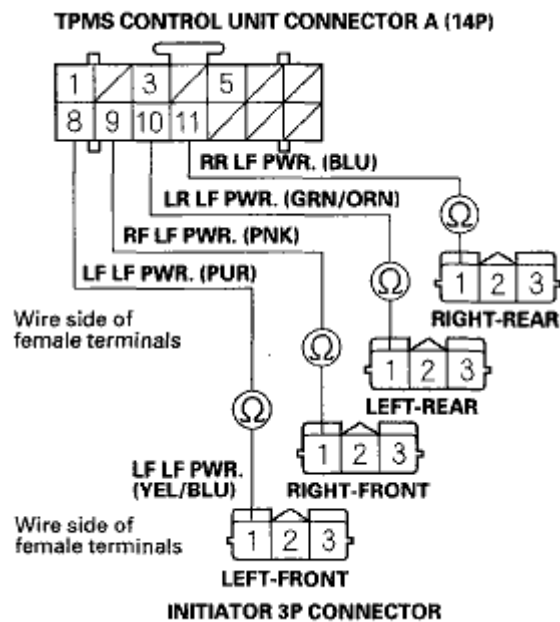


Fig. 15: Checking Continuity Between TPMS Control Unit Connector (14P) And Initiator 3P Connector

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 19

NO -Repair the open in the appropriate wire between the TPMS control unit and the initiator.

19. Check for continuity between the appropriate terminal in TPMS control unit connector B (20P) and the corresponding terminal in the initiator 3P connector (see table).

DTC CHART

DTC	TPMS control unit terminal No.	Initiator name/terminal No.
32	14	RIGHT-FRONT/3
34	13	LEFT-FRONT/3
36	16	RIGHT-REAR/3
38	15	LEFT-RE AR/3

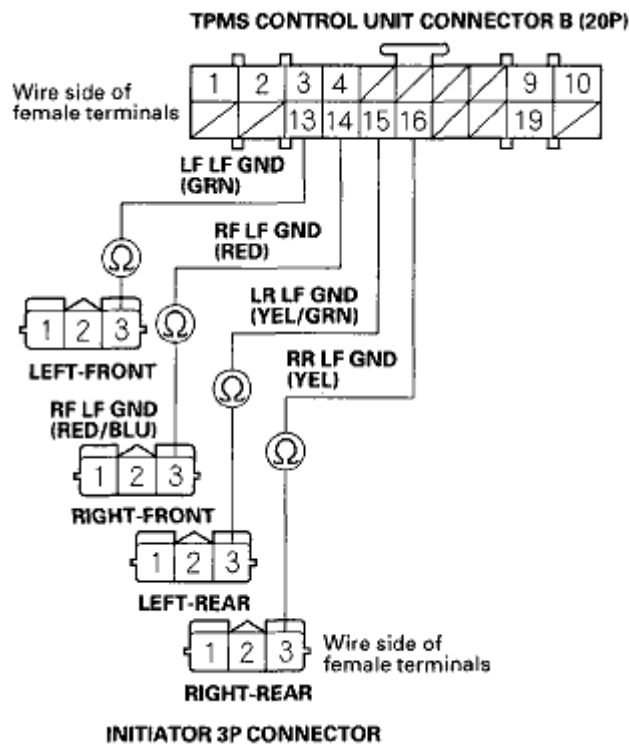


Fig. 16: Checking Continuity Between TPMS Control Unit Connector (20P) And Initiator 3P Connector

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 20.

NO -Repair the open in the appropriate wire between the TPMS control unit and the initiator.

20. Check for continuity between the appropriate terminal in TPMS control unit connector B (20P) and the corresponding terminal in the initiator 3P connector (see table).

DTC CHART

DTC	TPMS control unit terminal No.	Initiator name/terminal No.
32	1	RIGHT-FRONT/2
34	3	LEFT-FRONT/2
36	2	RIGHT-REAR/2
38	4	LEFT-REAR/2

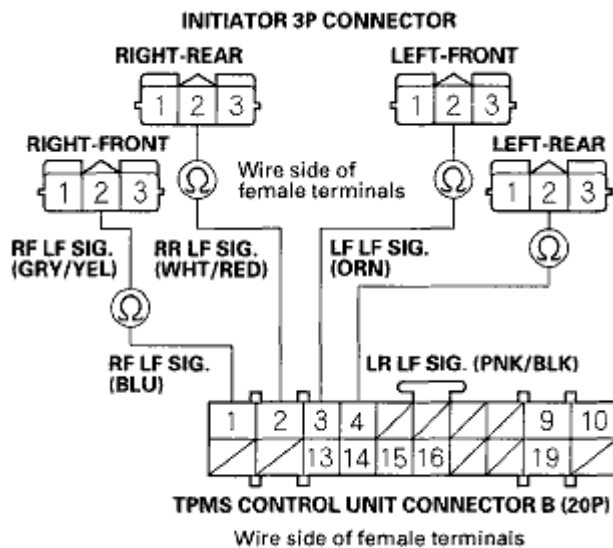


Fig. 17: Checking Continuity Between TPMS Control Unit Connector (20P) And Initiator 3P Connector

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 21.

NO -Repair the open in the appropriate wire between the TPMS control unit and the initiator.

21. Check for continuity between the appropriate terminal in TPMS control unit connector B (20P) and body ground (see table).

DTC CHART

DTC	TPMS control unit terminal No.
32	1
34	3
36	2
38	4

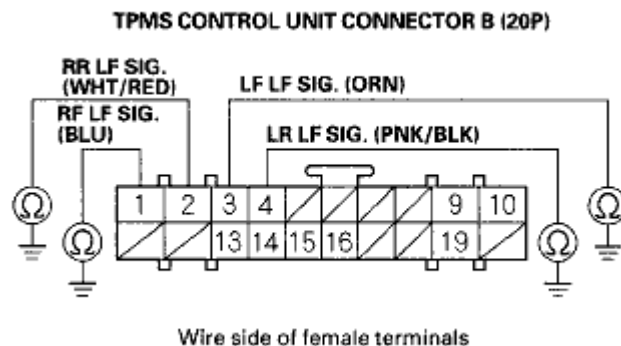


Fig. 18: Checking Continuity Between TPMS Control Unit Connector (20P) And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair the short to body ground in the appropriate wire between the TPMS control unit and the initiator.

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 41: ABNORMAL SIGNAL RECEPTION ERROR

NOTE: **Inspect for an aftermarket electrical device that may produce RF signals. This may interfere with the signals from sensors.**

1. Turn the ignition switch OFF.
2. Check all four wheels to make sure they are the TPMS type with the tire pressure sensor properly mounted in each one.

Is each tire pressure sensor mounted properly?

YES -Go to step 10.

NO -Go to step 3.

3. Install known-good TPMS wheel(s).
4. To memorize the new sensor ID(s), drive the vehicle above 15 mph (24 km/h) for 40 continuous seconds, or memorize the ID(s) with the HDS (see **MEMORIZING THE TIRE PRESSURE SENSOR ID**).
5. Test-drive the vehicle, and check the VEHICLE SPEED in the TPMS DATA LIST with the HDS.

Is the vehicle speed indicated?

YES -Go to Step 9.

NO -Go to Step 6.

6. Turn the ignition switch OFF.
7. Turn the ignition switch ON (II).
8. Check for DTCs with the HDS.

Is DTC 85 indicated?

YES -Go to the DTC 85 troubleshooting (see **DTC 85: F-CAN COMMUNICATION FAILURE**).

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.

9. Turn the ignition switch OFF.
10. Turn the ignition switch ON (II).

11. Check that all the wheels are transmitting signals with the HDS.

NOTE: If **UNDEFINED** is shown on sensor transmitter status, turn the ignition switch **OFF**, rotate the appropriate tire 1/4 turn, then turn the ignition switch **ON (II)**, and try again. If **UNDEFINED** is still displayed, repeat the procedure in the previous sentence until a response is shown.

Is there at least one response from each wheel, in one full turn of the tire?

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

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 45: INITIATOR CIRCUIT SHORT DETECTION

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 45 indicated?

YES -Go to step 5.

NO -The system is OK at this time.

5. Turn the ignition switch **OFF**.
6. Disconnect TPMS control unit connectors A (14P) and B (20P).
7. Check for continuity between the appropriate terminal in TPMS control unit connector A (14P) and body ground (see table).

CONTINUITY SPECIFICATIONS

Terminal name	TPMS control unit terminal No.
RF LF PWR.	9
LF LF PWR.	8
RR LF PWR.	11
LR LF PWR.	10

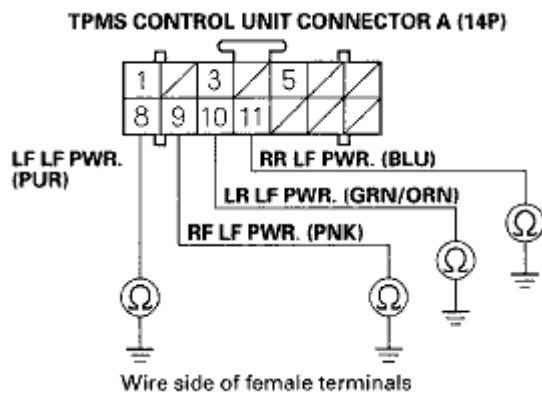


Fig. 19: Checking Continuity Between TPMS Control Unit Connector (14P) And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 8.

NO -Go to step 10.

8. Disconnect the appropriate initiator 3P connector.
9. Check for continuity between the appropriate terminal in TPMS control unit connector A (14P) and body ground (see table).

CONTINUITY SPECIFICATIONS

Terminal name	TPMS control unit terminal No.
RF LF PWR.	9
LF LF PWR.	8
RR LF PWR.	11
LR LF PWR.	10

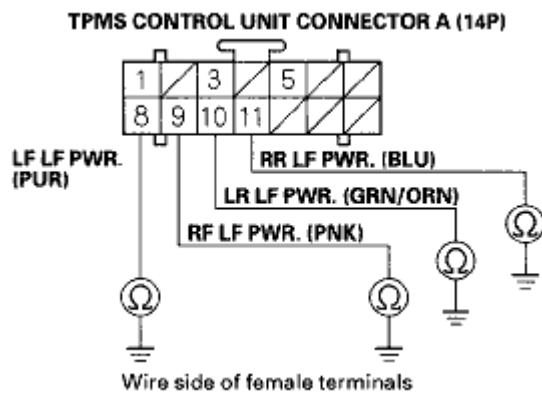


Fig. 20: Checking Continuity Between TPMS Control Unit Connector (14P) And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair the short to body ground in the appropriate wire between the TPMS control unit and the

initiator.

NO -Replace the initiator (see **INITIATOR REPLACEMENT**).

10. Check for continuity between the appropriate terminal in TPMS control unit connector A (14P) and connector B (20P) terminals (see table).

CONTINUITY SPECIFICATIONS

Tire location	TPMS control unit terminal name/No.	
	Connector A (14P)	Connector B (20P)
Right-front	RF LF PWR./9	RF LF GND/14
Left-front	LF LF PWR./8	LF LF GND/13
Right-rear	RR LF PWR./11	RR LF GND/16
Left-rear	LR LF PWR./10	LR LF GND/15

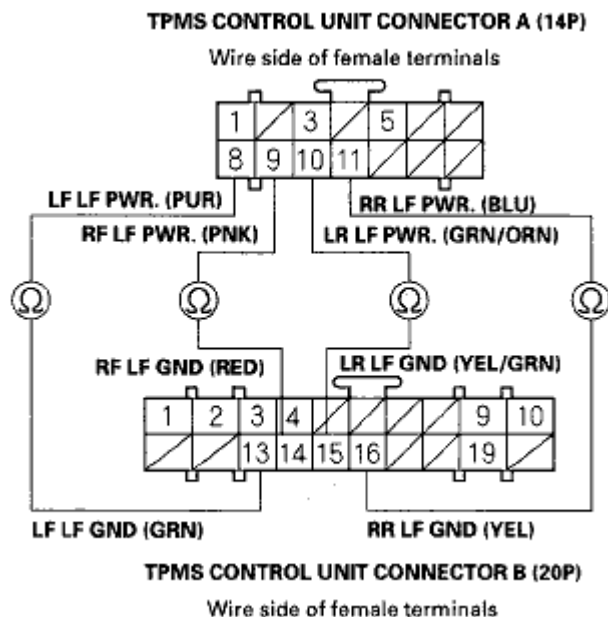


Fig. 21: Checking Continuity Between TPMS Control Unit Connector (14P) And Connector (20P) Terminals

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to Step 11.

NO -Go to Step 13.

11. Disconnect the appropriate initiator 3P connector.
12. Check for continuity between the appropriate terminal in TPMS control unit connector A (14P) and connector B (20P) terminals (see table).

CONTINUITY SPECIFICATIONS

TPMS control unit terminal name/No.	
-------------------------------------	--

Tire location	Connector A (14P)	Connector B (20P)
Right-front	RF LF PWR./9	RF LF GND/14
Left-front	LF LF PWR./8	LF LF GND/13
Right-rear	RR LF PWR./11	RR LF GND/16
Left-rear	LR LF PWR./10	LR LF GND/15

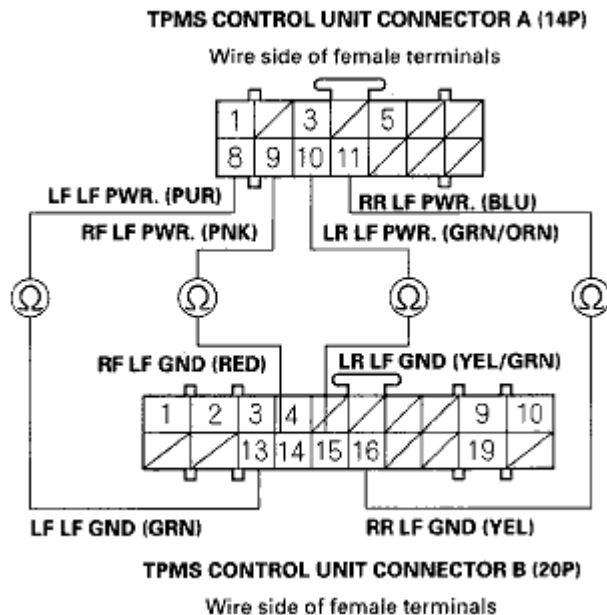


Fig. 22: Checking Continuity Between TPMS Control Unit Connector (14P) And Connector (20P) Terminals

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair the short in the appropriate wire between the TPMS control unit and the initiator.

NO -Replace the initiator (see **INITIATOR REPLACEMENT**).

13. Turn the ignition switch ON (II).
14. Measure voltage between the appropriate terminal in TPMS control unit connector B (20P) and body ground individually.

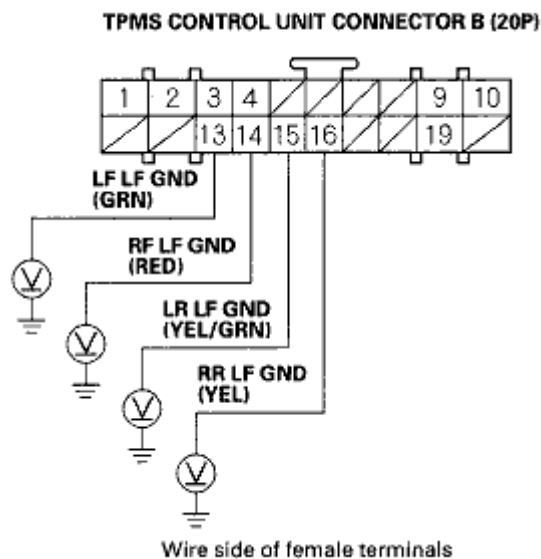


Fig. 23: Measuring Voltage Between TPMS Control Unit Connector (20P) And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Repair the short to power in the appropriate wire between the TPMS control unit and the initiator.

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

1. Turn the ignition switch OFF.
2. Check the indicated location to make sure the wheel is a TPMS type with the tire pressure sensor.

DTC CHART

DTC	Tire location
51	Right-front
53	Left-front
55	Right-rear
57	Left-rear

Is a TPMS type wheel with a tire pressure sensor mounted on the vehicle?

YES -Go to Step 8.

NO -Go to Step 3.

3. Install a known-good TPMS wheel.
4. To memorize the sensor ID, drive the vehicle above 15 mph (24 km/h) for 40 continuous seconds, or memorize the ID with the HDS (see **MEMORIZING THE TIRE PRESSURE SENSOR ID**).

5. Turn the ignition switch OFF.
6. Turn the ignition switch ON (II).
7. With the HDS, check the indicated tire for the tire sensor transmitter status changing to "Normal".

NOTE: If **UNDEFINED** is shown on sensor transmitter status, turn the ignition switch OFF, rotate the tire 1/4 turn, then turn the ignition switch ON (II), and try again. If **UNDEFINED** is still displayed, repeat the procedure in the previous sentence until a response is shown.

DTC CHART

DTC	Tire location
51	Right-front
53	Left-front
55	Right-rear
57	Left-rear

Is there at least one response in one full turn of the tire?

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

NO -Go to step 13.

8. Install a wheel with a known-good tire pressure sensor on the vehicle.
9. To memorize the sensor ID, drive the vehicle above 15 mph (24 km/h) for 40 continuous seconds, or memorize the ID with the HDS (see **MEMORIZING THE TIRE PRESSURE SENSOR ID**).
10. Turn the ignition switch OFF.
11. Turn the ignition switch ON (II).
12. With the HDS, check the indicated tire for the tire sensor transmitter status changing to "Normal".

NOTE: If **UNDEFINED** is shown on sensor transmitter status, turn the ignition switch OFF, rotate the tire 1/4 turn, then turn the ignition switch ON (II), and try again. If **UNDEFINED** is still displayed, repeat the procedure in the previous sentence until a response is shown.

DTC CHART

DTC	Tire location
51	Right-front
53	Left-front
55	Right-rear
57	Left-rear

Is there a response this time?

YES -Replace the tire pressure sensor on the customer's wheel (see **TIRE PRESSURE SENSOR REPLACEMENT**).

NO -Go to step 13.

13. Turn the ignition switch OFF.
14. Disconnect TPMS control unit connectors A (14P) and B (20P) and the appropriate initiator 3P connector.

DTC CHART

DTC	Tire location
51	Right-front
53	Left-front
55	Right-rear
57	Left-rear

15. Check for continuity between the appropriate terminal in TPMS control unit connector A (14P) and the corresponding terminal in the initiator 3P connector (see table).

DTC CHART

DTC	TPMS control unit terminal No.	Initiator name/terminal No.
51	9	RIGHT-FRONT/1
53	8	LEFT-FRONT/1
55	11	RIGHT-REAR/1
57	10	LEFT-REAR/1

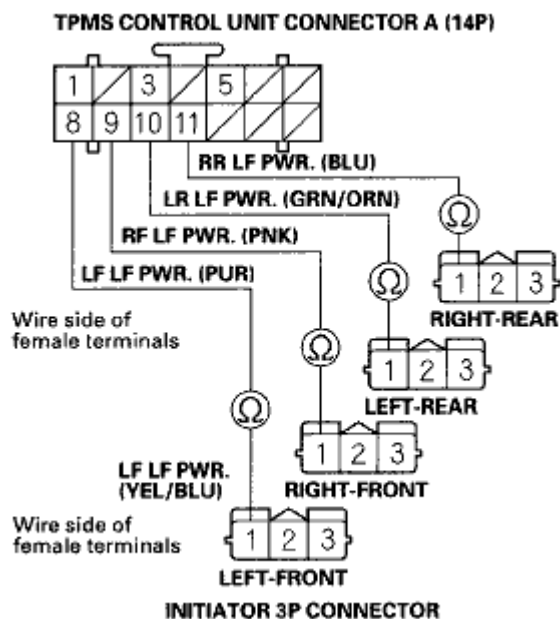


Fig. 24: Checking Continuity Between TPMS Control Unit Connector (14P) And Initiator 3P Connector

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 16.

NO -Repair the open in the appropriate wire between the TPMS control unit and the initiator.

16. Check for continuity between the appropriate terminal in TPMS control unit connector B (20P) and the corresponding terminal in the initiator 3P connector (see table).

DTC CHART

DTC	TPMS control unit terminal No.	Initiator name/terminal No.
51	14	RIGHT-FRONT/3
53	13	LEFT-FRONT/3
55	16	RIGHT-REAR/3
57	15	LEFT-REAR/3

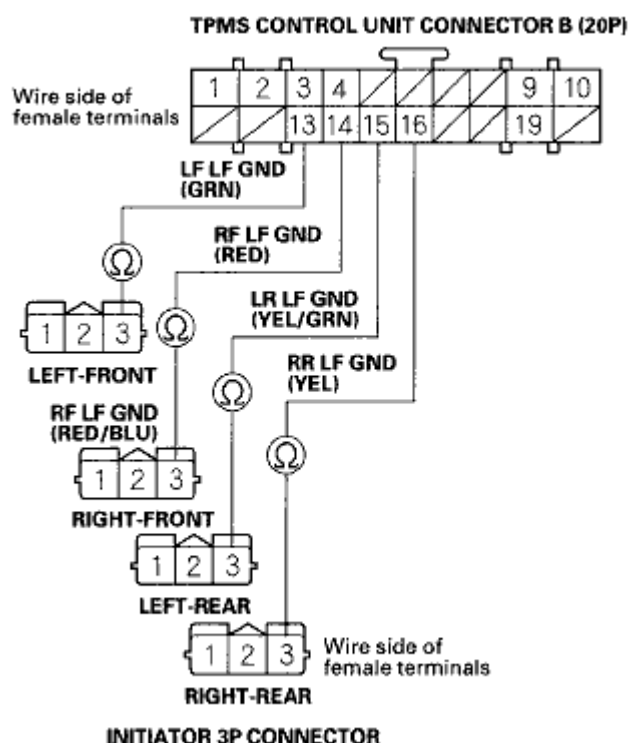


Fig. 25: Checking Continuity Between TPMS Control Unit Connector (20P) And Initiator 3P Connector

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 17.

NO -Repair the open in the appropriate wire between the TPMS control unit and the initiator.

17. Check for continuity between the appropriate terminal in TPMS control unit connector B (20P) and the corresponding terminal in the initiator 3P connector (see table).

DTC CHART

DTC	TPMS control unit terminal No.	Initiator name/terminal No.
51	1	RIGHT-FRONT/2

53	3	LEFT-FRONT/2
55	2	RIGHT-REAR/2
57	4	LEFT-REAR/2

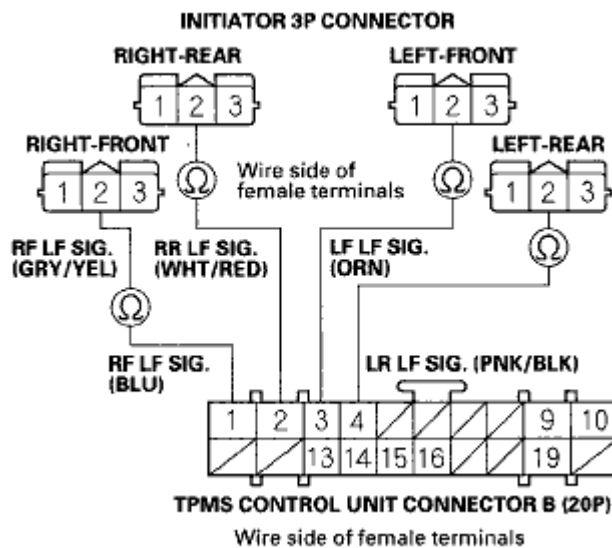


Fig. 26: Checking Continuity Between TPMS Control Unit Connector (20P) And Initiator 3P Connector

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Go to step 18.

NO -Repair the open in the appropriate wire between the TPMS control unit and the initiator.

18. Check for continuity between the appropriate terminal in TPMS control unit connector B (20P) and body ground (see table).

DTC CHART

DTC	TPMS control unit terminal No.
51	1
53	3
55	2
57	4

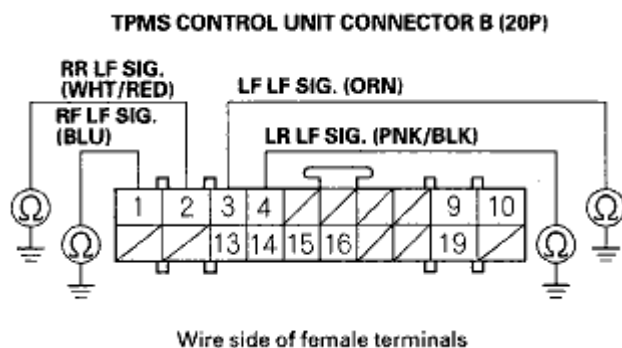


Fig. 27: Checking Continuity Between TPMS Control Unit Connector (20P) And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES -Repair the short to body ground in the appropriate wire between the TPMS control unit and the initiator.

NO -Go to step 19.

19. Turn the ignition switch ON (II).
20. Measure voltage between the appropriate terminal in TPMS control unit connector B (20P) and body ground (see table).

DTC CHART

DTC	TPMS control unit terminal No.
51	1
53	3
55	2
57	4

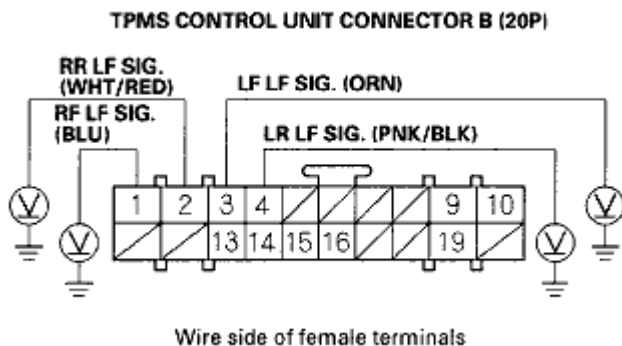


Fig. 28: Measuring Voltage Between TPMS Control Unit Connector (20P) And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Repair the short to power in the appropriate wire between the TPMS control unit and the initiator.

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 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

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Test-drive the vehicle. Drive the vehicle 7 mph (10 km/h) or more.
4. 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 -Go to Step 5.

5. Check for DTCs with the HDS.

Is DTC 85 indicated?

YES -Go to DTC 85 troubleshooting (see **DTC 85: F-CAN COMMUNICATION FAILURE**).

NO -Go to Step 6.

6. Check the speedometer.

Does the speedometer register speed?

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 (see **SUBSTITUTING THE ECM/PCM**) and retest. If no codes are shown, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT**).

DTC 85: F-CAN COMMUNICATION FAILURE

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

Is DTC 85 indicated?

YES -Go to step 6.

NO -The system is OK at this time.

6. Test-drive the vehicle.

Does the speedometer work?

YES -Go to step 10.

NO -Go to step 7.

7. Turn the ignition switch OFF.
8. Disconnect TPMS control unit connector B (20P).
9. 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 -Turn the ignition switch OFF, then reconnect all connectors, then check and troubleshoot the fuel and emissions system (see **GENERAL TROUBLESHOOTING INFORMATION**).

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

CONTINUITY SPECIFICATIONS

Terminal name	TPMS control unit B terminal	ECM/PCM E terminal

CANL	No. 10	No. 26
CANH	No. 19	No. 15

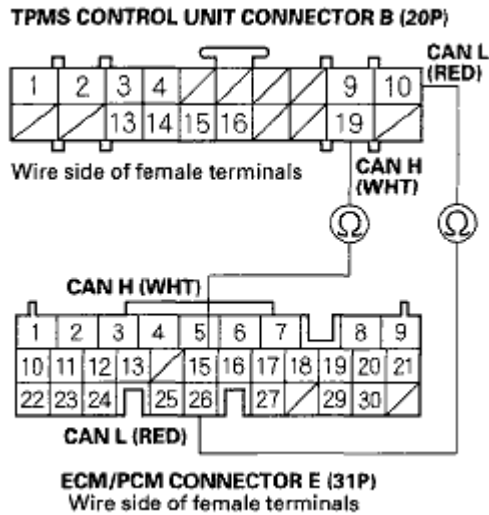


Fig. 29: Checking Continuity Between TPMS Control Unit Connector (20P) Terminals And ECM/PCM Connector (31P) Terminals

Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 appropriate wire between the 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. 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.

DTC CHART

DTC	Tire location
91	Right-front
93	Left-front
95	Right-rear
97	Left-rear

Is DTC 91, 93, 95 or 97 indicated?

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

NO -The system is OK at this time.

SYMPTOM TROUBLESHOOTING

LOW TIRE PRESSURE INDICATOR DOES NOT COME ON, AND NO DTCS ARE STORED ('07 MODEL)

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

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 -Do the troubleshooting for the gauge control module (see SELF-DIAGNOSTIC FUNCTION). If necessary, substitute a known-good gauge control module (see REWRITING THE ODO DATA ON A NEW GAUGE CONTROL MODULE), and recheck.

3. Lower the pressure in any tire until the low tire pressure indicator comes on.

NOTE: If 5 minutes has passed since the ignition switch has been turned ON (II), turn the ignition switch OFF and wait 2 minutes, then turn back on again.

Does the indicator come on when the pressure drops below: Front 190 kPa (1.9 kgf/cm² , 28 psi), rear 175 kPa (1.8 kgf/cm² , 25 psi) or less?

YES -The system is OK at this time.

NO -Go to step 4.

4. Check the TIRE PRESSURE in the TPMS DATA LIST with the HDS, and compare with measured actual tire pressure.

NOTE: If UNDEFINED is shown on sensor transmitter status, turn the ignition switch OFF, rotate the tire 1/4 turn, then turn the ignition switch ON (II), and try again. If UNDEFINED is still displayed, repeat the procedure in the previous sentence until a response is shown.

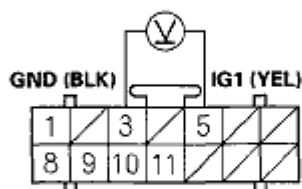
Is the tire pressure shown on the HDS monitor within 40 kPa (0.4 kgf/cm² , 6 psi) of the actual tire pressure?

YES -Go to step 5.

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

REPLACEMENT).

5. Turn the ignition switch OFF.
6. Disconnect TPMS control unit connector A (14P).
7. 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. 30: Measuring Voltage Between TPMS Control Unit Connector (14P) Terminals No. 3 And No. 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. 21 (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 COME ON, AND NO DTCS ARE STORED ('08 MODEL)

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 -Do the troubleshooting for the gauge control module (see **SELF-DIAGNOSTIC FUNCTION**). If necessary, substitute a known-good gauge control module (see **REWRITING THE ODO DATA ON A NEW GAUGE CONTROL MODULE**), and recheck.

3. Lower the pressure in any tire until the low tire pressure indicator comes on.

NOTE: If 5 minutes has passed since the ignition switch has been turned ON (II), turn the ignition switch OFF and wait 2 minutes, then turn back on again.

Does the indicator come on when the pressure drops below: Front 190 kPa (1.9 kgf/cm² , 28 psi), rear

175 kPa (1.8 kgf/cm² , 25 psi) or less?

YES -The system is OK at this time.

NO -Go to step 4.

4. Check the TIRE PRESSURE in the TPMS DATA LIST with the HDS, and compare with measured actual tire pressure.

NOTE: If the HDS screen shows **UNDEFINED** for sensor transmitter status, turn the ignition switch **OFF**, rotate the appropriate tire 1/4 turn, then turn the ignition switch **ON (II)**, and try again. If **UNDEFINED** is still shown, repeat the procedure in the previous sentence until **NORMAL** is shown.

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

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 tire pressure sensor (see **TIRE PRESSURE SENSOR REPLACEMENT**).

LOW TIRE PRESSURE INDICATOR DOES NOT GO OFF, AND NO DTCS ARE STORED ('07 MODEL)

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.

NO -Do the troubleshooting for the gauge control module (see **SELF-DIAGNOSTIC FUNCTION**). If necessary, substitute a known-good gauge control module (see **REWRITING THE ODO DATA ON A NEW GAUGE CONTROL MODULE**), and recheck.

LOW TIRE PRESSURE INDICATOR DOES NOT GO OFF, AND NO DTCS ARE STORED ('08 MODEL)

NOTE: If the low tire pressure indicator is turned on at the same time as the TPMS indicator, go to troubleshoot the TPMS indicator does not go off, and no DTCS are stored in the TPMS symptom troubleshooting (see **TPMS INDICATOR DOES NOT COME ON, AND NO DTCS ARE STORED**) first.

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 blink for about 75 seconds?

YES -Check for gauge DTCs with the HDS (see **WIRE COLOR CODES**) and go to the indicated gauge DTCs troubleshooting.

NO -Go to step 3

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

Did the indicator come on and then blink for about 75 seconds?

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

NO -Do the troubleshooting for the gauge control module (see **SELF-DIAGNOSTIC FUNCTION**). If necessary, substitute a known-good gauge control module (see **REWRITING THE ODO DATA 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 when the ignition switch is turned ON (II).

Did the indicator come on?

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 **SELF-DIAGNOSTIC FUNCTION**). If necessary, substitute a known-good gauge control module (see **REWRITING THE ODO DATA ON A NEW GAUGE CONTROL MODULE**), and recheck.

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

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

1. Turn the ignition switch OFF.
2. Check the No. 12 (7.5 A) fuse in the under-dash fuse/relay box.

Is the fuse blown?

YES -Replace the No. 12 (7.5 A) fuse, and recheck.

NO -Reinstall the fuse, then go to step 3.

3. Check the No. 21 (7.5 A) fuse in the under-dash fuse/relay box.

Is the fuse blown?

YES -Replace the No. 21 (7.5 A) fuse, and recheck.

NO -Reinstall the fuse, then go to step 4.

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

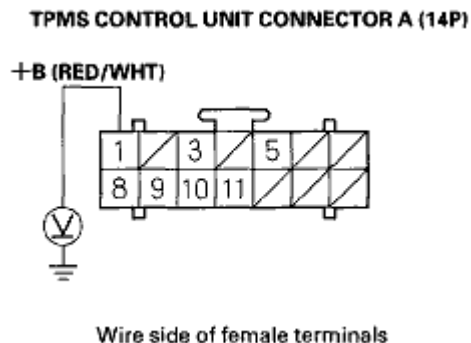


Fig. 31: Measuring Voltage Between Body Ground And TPMS Control Unit Connector A (14P) Terminal No. 1

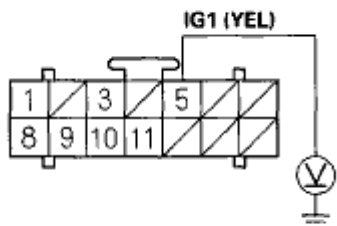
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES -Go to step 6.

NO -Repair open in the wire between the TPMS control unit and the No. 12 (7.5 A) fuse in the under-dash fuse/relay box.

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

TPMS CONTROL UNIT CONNECTOR A (14P)

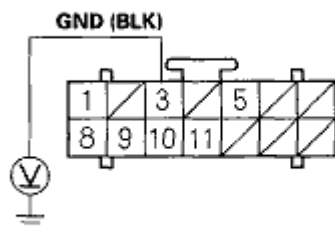
Wire side of female terminals

Fig. 32: 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 8.**NO** -Repair open in the wire between the TPMS control unit and the No. 21 (7.5 A) fuse in the under-dash fuse/relay box.

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

TPMS CONTROL UNIT CONNECTOR A (14P)

Wire side of female terminals

Fig. 33: Measuring Voltage Between Body Ground And TPMS Control Unit Connector A (14P) Terminal No. 3

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there 0.1 V or more?***YES** -Repair open or high resistance in the wire between the TPMS control unit and body ground (G701).

NO -Do the troubleshooting for the gauge control module (see **SELF-DIAGNOSTIC FUNCTION**). 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 base is not bent or twisted as this may effect communication with the indicators and the tire pressure sensors.

1. Turn the ignition switch OFF.
2. Remove the rear seat-back (see REAR SEAT REMOVAL/INSTALLATION).
3. Disconnect the TPMS control unit connectors (A).

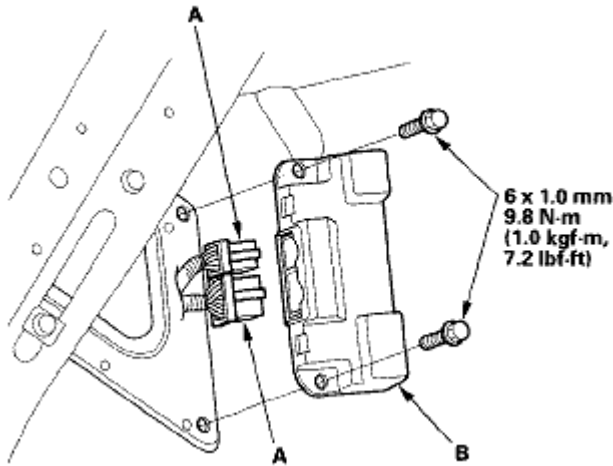


Fig. 34: Identifying TPMS Control Unit Connectors With Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the TPMS control unit (B).
5. Install the TPMS control in the reverse order of removal.
6. Connect the HDS, and memorize the pressure sensor IDs (see MEMORIZING THE TIRE PRESSURE SENSOR ID). Do not memorize the IDs automatically.

INITIATOR REPLACEMENT

FRONT

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

1. Turn the ignition switch OFF.
2. Raise the front of the vehicle, and support it with safety stands in the proper locations (see LIFT AND SUPPORT POINTS).
3. Remove the front wheel.
4. Remove the front inner fender (see FRONT INNER FENDER REPLACEMENT).
5. Disconnect the initiator connector (A).

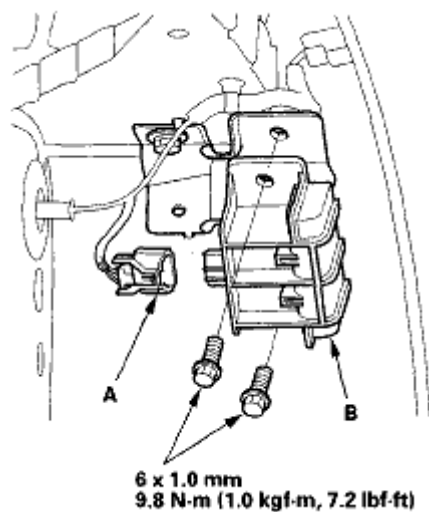


Fig. 35: Identifying Initiator Connector With Torque Specifications
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the initiator (B) from the inner side of the wheel well.
7. Install the initiator in the reverse order of removal.

REAR

1. Turn the ignition switch OFF.
2. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS**).
3. Remove the rear wheel.
4. Remove the rear inner fender (see **REAR INNER FENDER REPLACEMENT**).
5. Disconnect the initiator connector (A).

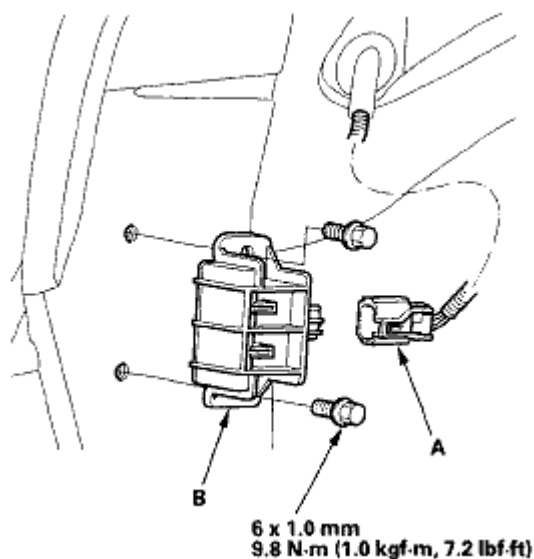


Fig. 36: Identifying Initiator Connector With Bolt With Torque Specifications
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the initiator (B) from the inner side of the wheel well.
7. Install the initiator in the reverse order of removal.

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.**

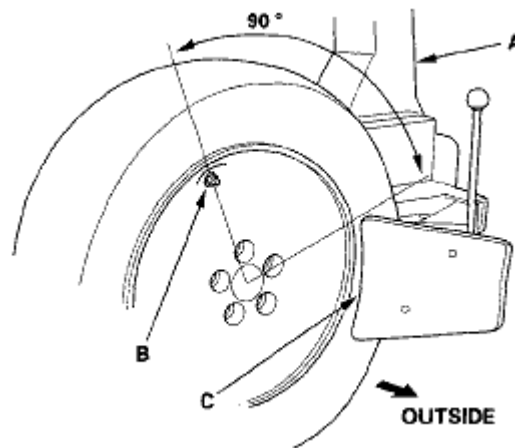


Fig. 37: Identifying Wheel Position
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

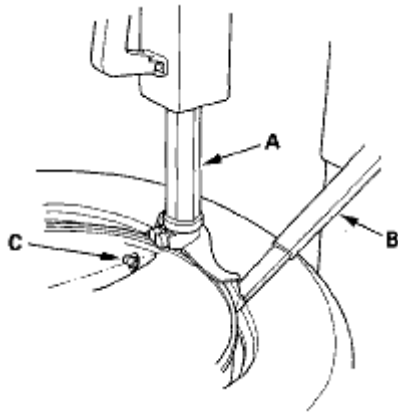


Fig. 38: Positioning Wheel So Tire Machine
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

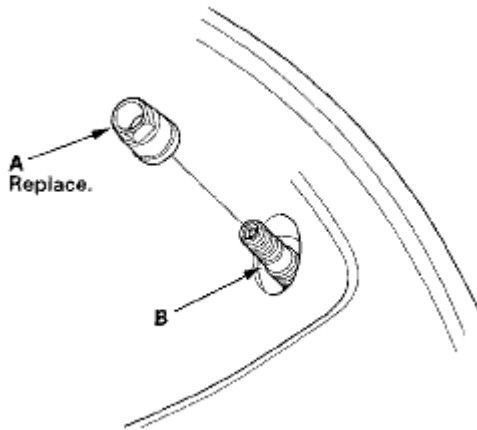


Fig. 39: Identifying Tire Pressure Sensor And Valve Stem From Wheel
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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.

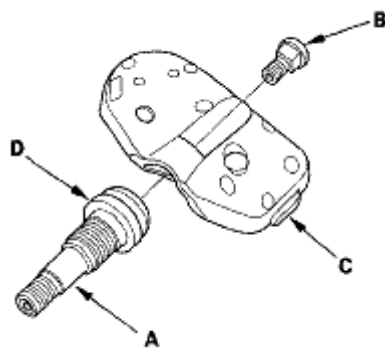


Fig. 40: Identifying Valve Stem And Screw From Tire Pressure Sensor
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

INSTALLATION

NOTE:

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

TYPE 1

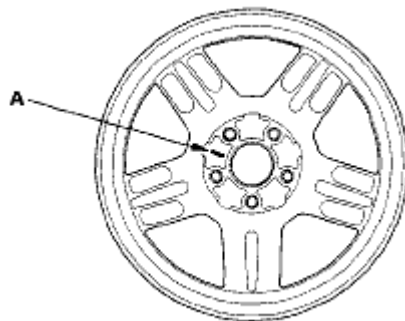


Fig. 41: Identifying Valve Stem - Type 1
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

TYPE 2

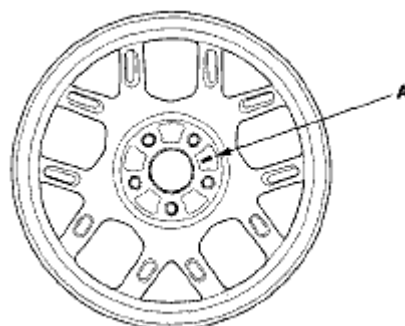


Fig. 42: Identifying Valve Stem - Type 2
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

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

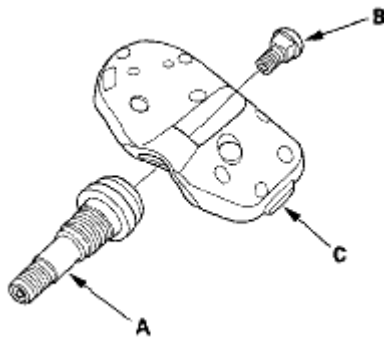


Fig. 43: Identifying Valve Stem, Screw And Sensor-Transmitter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 nut (C) finger tight. Make sure the pressure sensor is resting on the wheel.

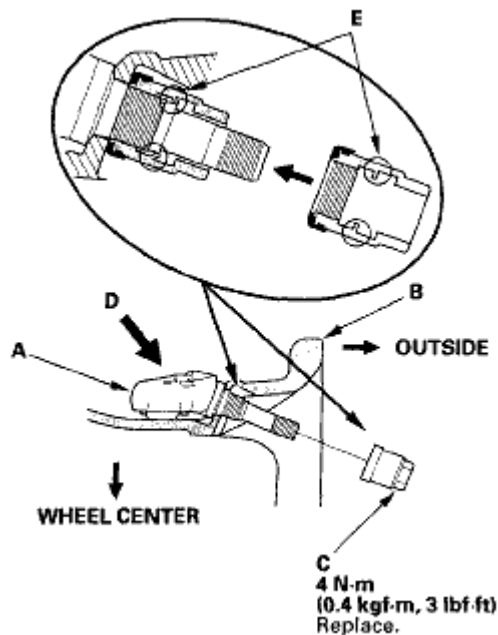


Fig. 44: Identifying Tire Pressure Sensor With Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Tighten the valve 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.

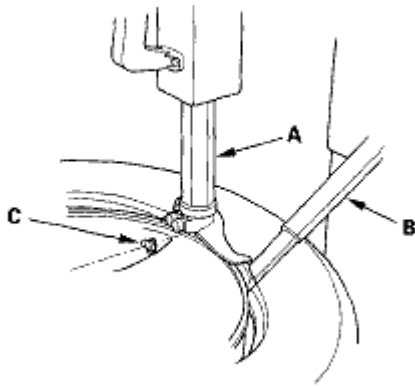


Fig. 45: Positioning Wheel Tire Machine Tire Iron
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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 ID(s) (see **MEMORIZING THE TIRE PRESSURE SENSOR ID**).