## 2000-06 STEERING

## Electrical Power Steering (EPS) - Insight

# SPECIAL TOOLS

| Ref. No. | Tool Number | Description | Qty |
|---|---|---|---|
| ① | 07MAC-SL0A202 | Ball Joint Remover, 28 mm | 1 |

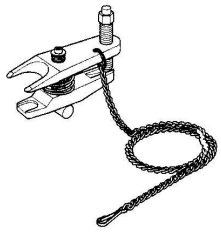


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**Fig. 1: Identifying Special Tools**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

# COMPONENT LOCATION INDEX

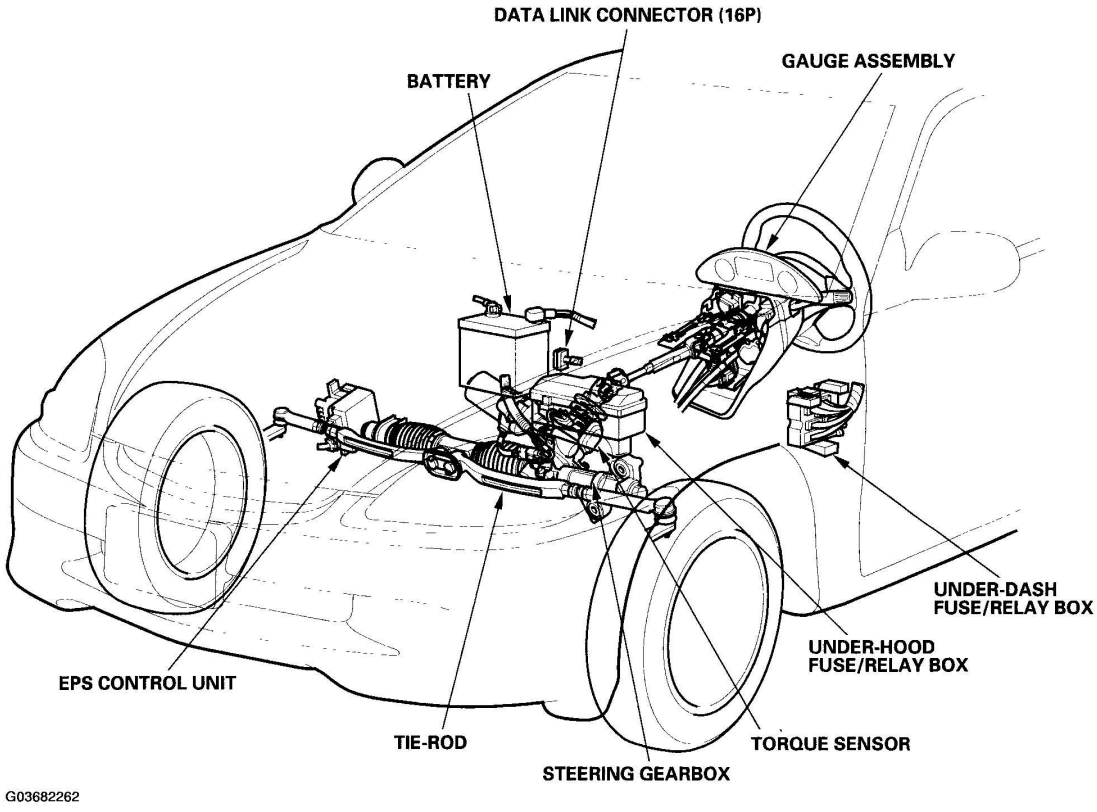



**Fig. 2: Locating Electrical Power Steering Components**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

## GENERAL TROUBLESHOOTING INFORMATION

### EPS INDICATOR

Under normal conditions, the EPS indicator comes on when the ignition switch is turned to the ON (II) position, then goes off after the engine is started. This indicates that the bulb and its circuit are operating correctly. If there is any trouble in the system after the engine is started, the EPS indicator will stay on, and the power assist is turned off.

When EPS indicator light comes on, the control unit memorizes the DTC. In this case, the control unit will not activate the EPS system after the engine starts again, but it keeps the EPS indicator on.

When DTC 11, 15, 16, 17, 18 or 67 is stored in the control unit, the EPS indicator

will stay on until the DTC is erased. When a problem is detected and the EPS indicator comes on, there are cases when the indicator stays on until the ignition switch is turned OFF, and cases when the indicator goes off automatically when the system returns to normal. Even though the system is operating normally, the EPS indicator will come on under the following conditions:

- When the vehicle is barely moving, 1 mph (1 km/h) or stopped, and the engine speed is 2,000 RPM or higher for above 6 minutes.
- When the engine speed is 280 RPM or less, and the vehicle is traveling at a speed of 6.2 mph (10 km/h) or more for 3 seconds.

To determine the actual cause of the problem, question the customer about the conditions during which the problem occurred, taking the above conditions into consideration.

**DIAGNOSTIC TROUBLE CODE (DTC)**

- If the CPU cannot be activated, or it fails, the EPS indicator comes on, but the DTC is not memorized.
- The memory can hold a large number of DTCs. However, when the same DTC is detected more than once, the most recent DTC is written over the prior DTC; therefore only one occurrence is memorized.
- The DTCs are indicated repeatedly until the ignition switch is turned OFF.
- If the DTC is not memorized, the EPS indicator will stay on.
- The DTCs are memorized in the EEPROM (nonvolatile memory) therefore the memorized DTCs cannot be erased by disconnecting the battery. Perform the specified procedures to clear DTCs.

**SELF-DIAGNOSIS**

Self-diagnosis can be classified into two categories:

- Initial diagnosis: Performed right after the engine starts and until the EPS indicator goes off.
- Regular diagnosis: Performed right after the initial diagnosis until the ignition switch is turned OFF.

The EPS control unit performs the following functions when a problem is detected by self-diagnosis:

1. Turns on the EPS indicator.
2. Memorizes the DTC.
3. Stops power assist and manual steering operation begins.

**NOTE:**

- **When DTC 23 (a problem with the circuit for engine speed signal) is detected, the power assist will return to normal when the vehicle speed is 1 mph (1 km/h) or above.**
- **For DTCs 22, 23, 46, 47, 50, 64, 66 or 68 the EPS indicator goes off automatically when the system returns to normal. For all other codes, the EPS indicator goes off when the system is OK after the ignition switch is turned from OFF to ON (II).**

#### RESTRICTION ON POWER ASSIST OPERATION

Repeated extreme steering force, such as turning the steering wheel continuously back-and-forth with the vehicle stopped, causes an increase of power consumption in the EPS motor. The increase of electric current causes the motor to heat up. Because this heat adversely affects the system, the control unit monitors the electric current of the motor.

When the control unit detects heat build-up in the motor, it reduces the electric current to the motor gradually to protect the system, and it restricts the power assist operation. The EPS indicator does not come on during this function.

When steering torque is not applied to the steering wheel, or when the ignition is turned off, the control unit will restore the power assist gradually until it's fully restored (after approximately 14 minutes maximum).

#### HOW TO TROUBLESHOOT DTCS

The troubleshooting flowchart procedures assume that the cause of the problem is still present and the EPS indicator is still on. Following the flowchart when the EPS

indicator does not come on can result in incorrect diagnosis.

The connector illustrations show the female terminal connectors with a single outline and the male terminal connectors with a double outline.

1. Question the customer about the conditions when the problem occurred, and try to reproduce the same conditions for troubleshooting. Find out when the EPS indicator came on, such as while turning, after turning, when the vehicle was at a certain speed, on start up, etc.
2. When the EPS indicator does not come on during the test-drive, but troubleshooting is done based on the DTC, check for loose connectors, poor terminal contact, etc., before you start troubleshooting.
3. After troubleshooting, clear the DTC and test-drive the vehicle. Be sure the EPS indicator does not come on.

**HOW TO RETRIEVE DTCS**

**HDS (Honda Diagnostic System) Method**

1. With the ignition switch OFF, connect the HDS to the 16P data link connector (DLC) (A).

**NOTE: The 16P data link connector (DLC) is located under the dash on the passenger's side for '2000 model, and on the driver's side for '2001-2006 models.**

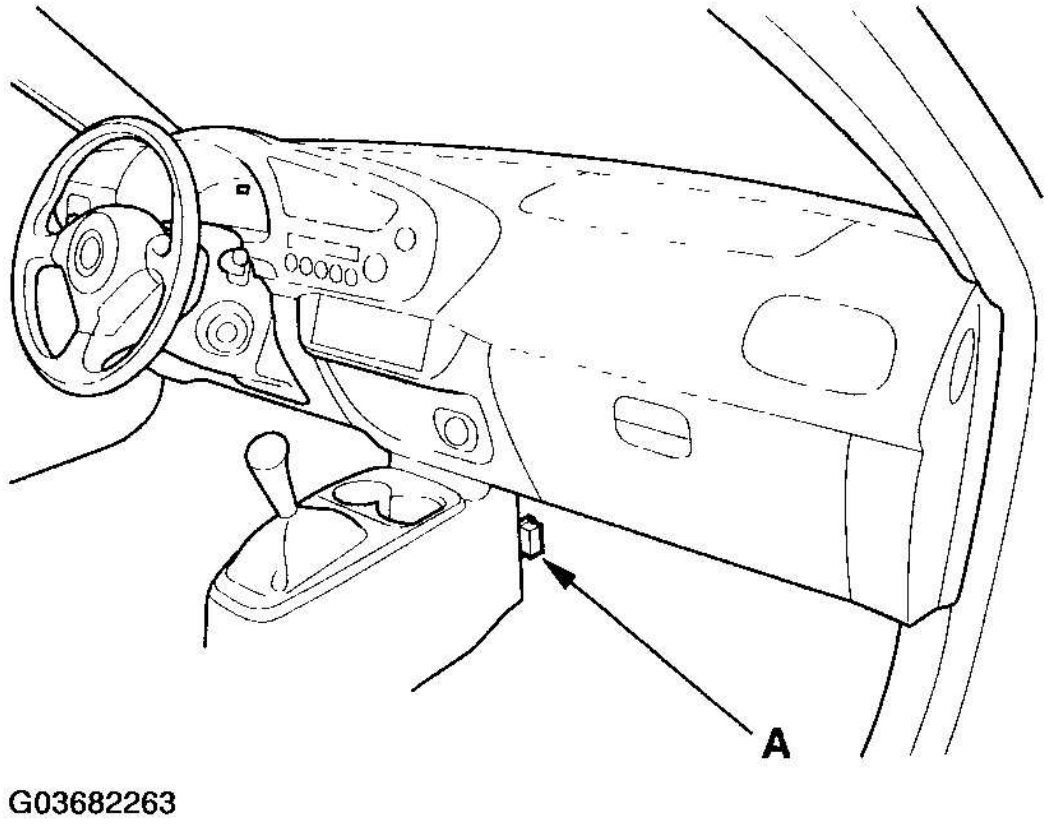



**Fig. 3: Locating 16P Data Link Connector (DLC)**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

2. Turn the ignition ON (II), and 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**

**Service Check Signal Circuit Method**

1. With the ignition switch OFF, connect the HDS to the 16P data link connector (DLC) (A).

**NOTE: The 16P data link connector (DLC) is located under the**

**dash on the passenger's side for '2000 model, and on the driver's side for '2001-2006 models.**

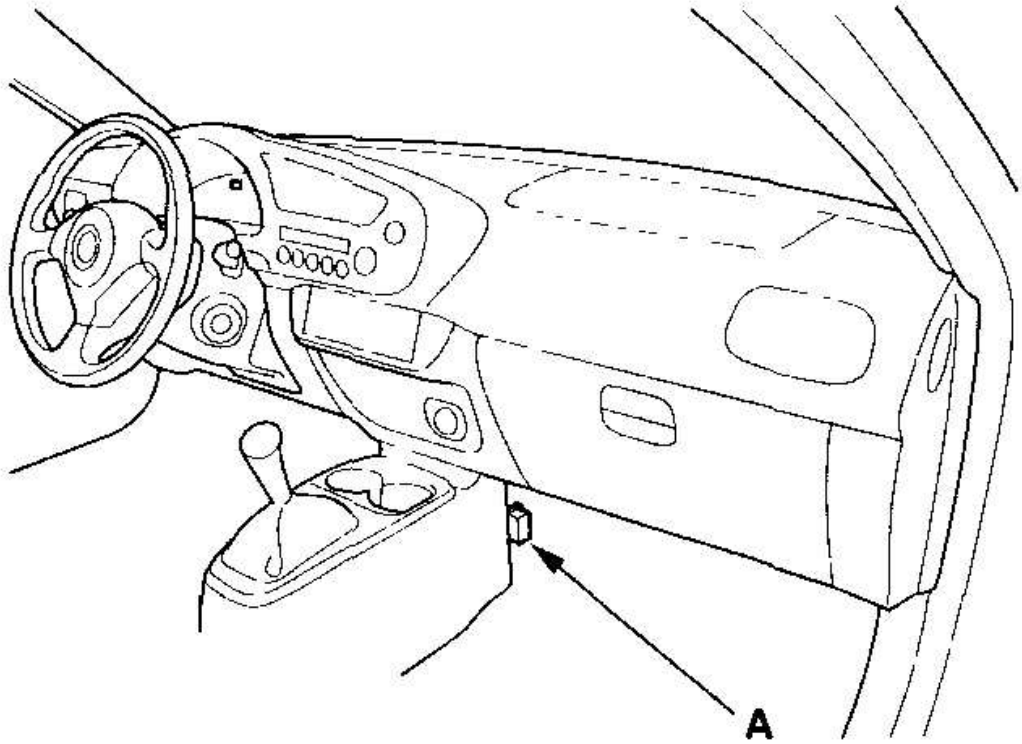



**Fig. 4: Locating 16P Data Link Connector (DLC)**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

2. Short the SCS circuit to body ground using the HDS.
3. Turn the ignition switch ON (II).
4. The blinking frequency indicates the DTC. DTCs are indicated by a series of long and short blinks. Add the long and short blinks together to determine the DTC. After determining the DTC, refer to the **DTC TROUBLESHOOTING** .

   The system will not indicate the DTC unless these conditions are met:

- Set the front wheels in the straight ahead driving position.
- The ignition switch is turned ON (II).
- The engine is stopped.
- The SCS circuit is shorted to body ground before the ignition switch is turned ON (II).

Example of DTC 23

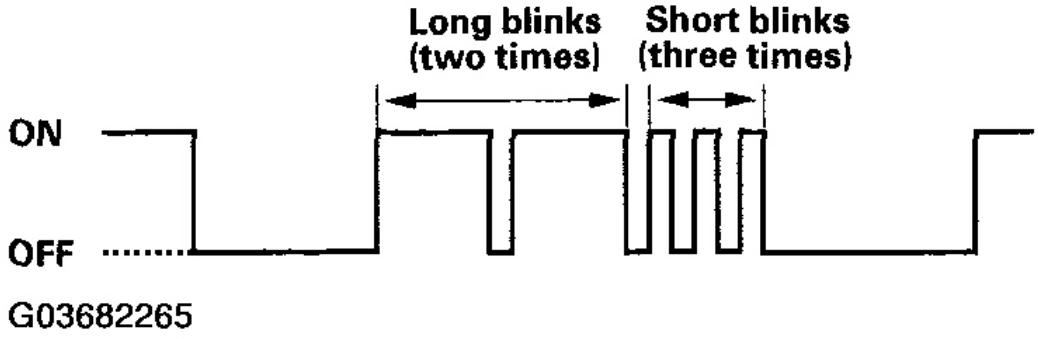



**Fig. 5: Identifying DTC Blinking Display**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

5. Turn the ignition switch OFF.
6. Disconnect the HDS from the DLC.

**HOW TO CLEAR DTCS**

**HDS (Honda Diagnostic System) Method**

1. With the ignition switch OFF, connect the HDS to the 16P data link connector (DLC) (A).

**NOTE: The 16P data link connector (DLC) is located under the dash on the passenger's side for '2000 model, and on the driver's side for '2001-2006 models.**

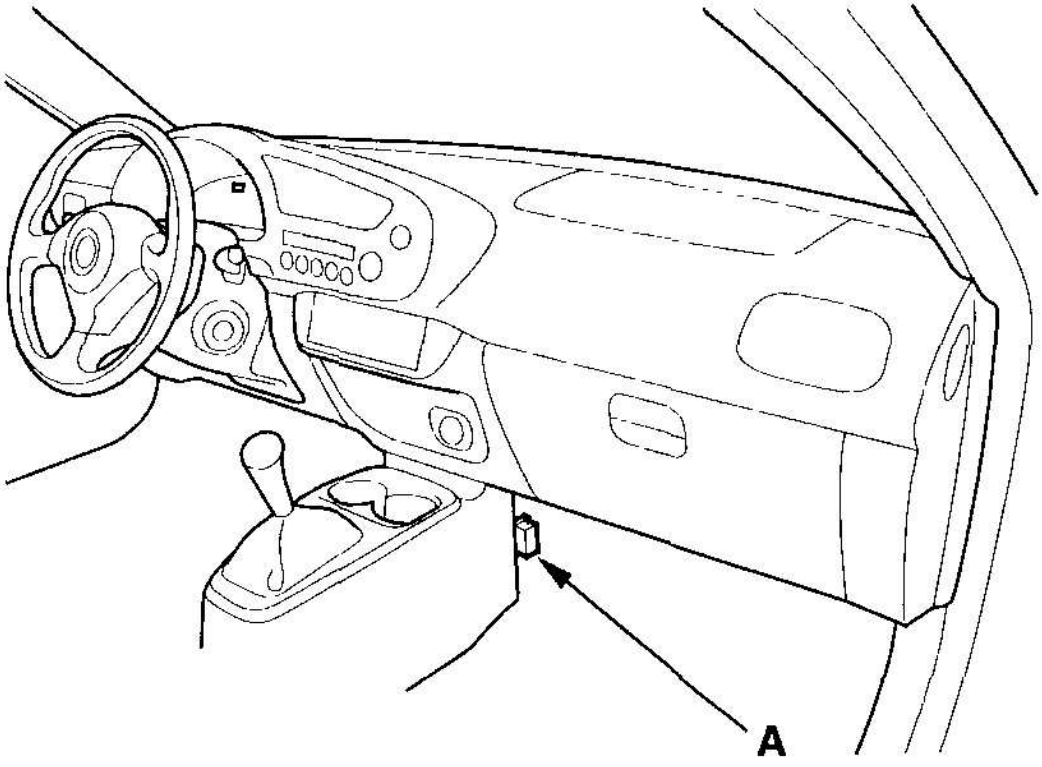



**Fig. 6: Locating 16P Data Link Connector (DLC)**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

2. Turn the ignition switch ON (II), and clear the DTC(s) by following the screen prompts on the HDS.

**NOTE: See the HDS Help menu for specific instructions.**

**Service Check Signal Circuit Method**

**NOTE: Use this procedure when the HDS software does not match the year/model vehicle you are working on.**

1. With the ignition switch OFF, connect the HDS to the 16P data link connector (DLC) (A).

**NOTE: The 16P data link connector (DLC) is located under the dash on the passenger's side for '2000 model, and on the driver's side for '2001-2006 models.**

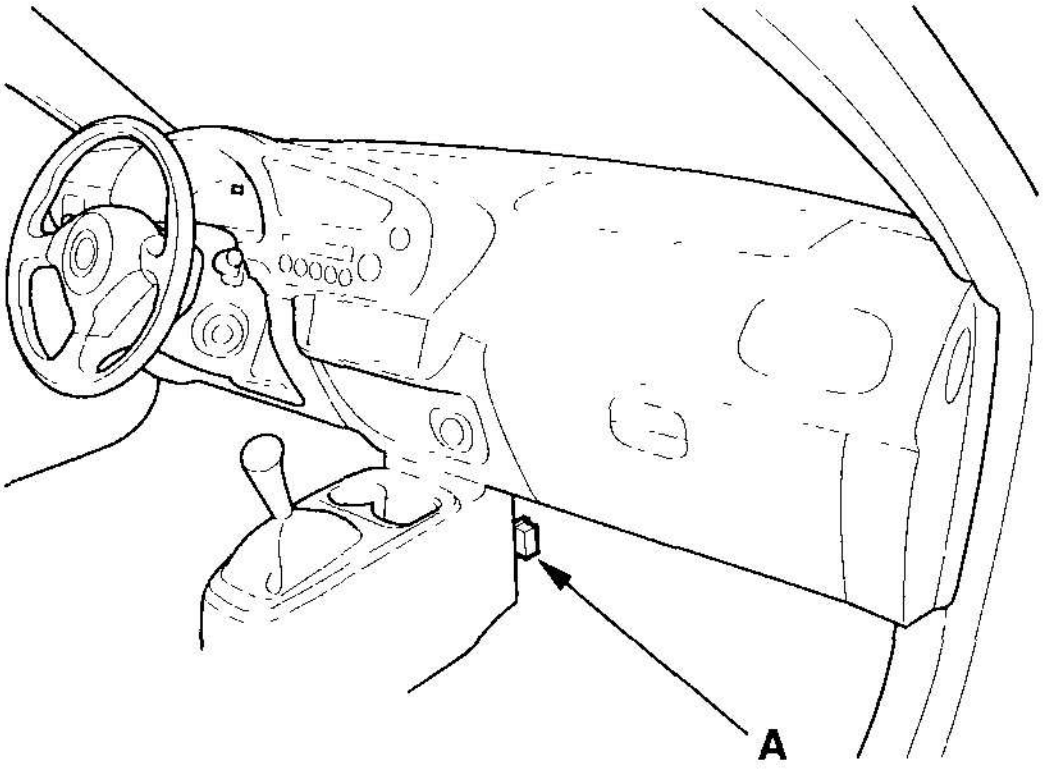



**Fig. 7: Locating 16P Data Link Connector (DLC)**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

2. With the vehicle on the ground, set the front wheels in the straight ahead driving position.
3. Short the SCS circuit to body ground using the HDS.
4. Turn the ignition switch ON (II). The EPS indicator comes on for about 6 seconds. Within 4 seconds of turning the switch ON, while the EPS indicator is on, turn the steering wheel 45 degrees to the left from the straight ahead driving position, and hold the steering wheel in that position until the EPS

indicator goes off.

5. Within 4 seconds after the EPS indicator goes off, return the steering wheel to the straight ahead driving position and release the steering wheel. The EPS indicator comes on again 4 seconds after releasing the steering wheel.
6. Within 4 seconds after the EPS indicator comes on, turn the steering wheel 45 degrees to the left again and hold it in that position.

   The EPS indicator goes off after 4 seconds.

7. Within 4 seconds after the EPS indicator goes off, return the steering wheel to the straight ahead driving position again and release the steering wheel. The EPS indicator blinks twice 4 seconds after releasing the steering wheel, indicating that the DTC was erased.

   **NOTE: If the EPS indicator does not blink twice, an error was made in the procedure and the DTC was not erased. Turn the ignition switch OFF, and repeat the operation from step 3.**

8. Turn the ignition switch OFF after the EPS indicator blinks twice.
9. Disconnect the HDS from the DLC.
10. Check for the DTC again to be sure that it was erased.

## DTC TROUBLESHOOTING INDEX

### TROUBLESHOOTING CHART

| DTC | Detection Item | Note |
|---|---|---|
| 11 | A problem with voltage for torque sensor VT3 | (see **DTC 11: TORQUE SENSOR VT3; DTC 15: TORQUE SENSOR VT6; DTC 16: TORQUE SENSOR VT3 AND VT6** ) |
| 15 | A problem with voltage for torque sensor VT6 | (see **DTC 11: TORQUE SENSOR VT3; DTC 15: TORQUE SENSOR VT6;** |

| | | |
|---|---|---|
| | | **DTC 16: TORQUE SENSOR VT3 AND VT6** ) |
| 16 | A problem with average of voltage for torque sensor VT3 and VT6 | (see **DTC 11: TORQUE SENSOR VT3; DTC 15: TORQUE SENSOR VT6; DTC 16: TORQUE SENSOR VT3 AND VT6** ) |
| 17 | A problem with the voltage for torque sensor 12 V power source Vcc1 | (see **DTC 17: TORQUE SENSOR VCC1; DTC 18: TORQUE SENSOR VCC2** ) |
| 18 | A problem with the voltage for torque sensor 5 V power source Vcc2 | (see **DTC 17: TORQUE SENSOR VCC1; DTC 18: TORQUE SENSOR VCC2** ) |
| 22 | A problem with the average vehicle speed and engine speed | (see **DTC 22: VEHICLE SPEED SENSOR SIGNAL; DTC 23: ENGINE SPEED SIGNAL** ) |
| | Excessive change of the vehicle speed sensor (VSS) signal | (see **DTC 22: VEHICLE SPEED SENSOR SIGNAL; DTC 23: ENGINE SPEED SIGNAL** ) |
| 23 | A problem with the engine speed signal circuit | (see **DTC 22: VEHICLE SPEED SENSOR SIGNAL; DTC 23: ENGINE SPEED SIGNAL** ) |
| 37 | A problem with the circuit for input motor voltage in the EPS control unit | (see **DTC 37: EPS CONTROL UNIT INTERNAL CIRCUIT (INPUT CIRCUIT FOR** |

| | | |
|---|---|---|
| | | **MOTOR VOLTAGE)** ) |
| 41 | A problem with the motor voltage | (see **DTC 37: EPS CONTROL UNIT INTERNAL CIRCUIT (INPUT CIRCUIT FOR MOTOR VOLTAGE)** ) |
| 42 | A problem with the motor driven current | (see **DTC 42, 45: MOTOR DRIVEN CURRENT** ) |
| 43 | A problem with the motor driven current | (see **DTC 43: MOTOR DRIVEN CURRENT IS EXCESSIVELY HIGH** ) |
| 45 | A problem with the motor driven current | (see **DTC 42, 45: MOTOR DRIVEN CURRENT** ) |
| 46 | A problem with the power relay (relay stuck ON or stuck OFF) | (see **DTC 46,47: POWER RELAY STUCK ON OR STUCK OFF** ) |
| 47 | A problem with the power relay | (see **DTC 46,47: POWER RELAY STUCK ON OR STUCK OFF** ) |
| 50 | A problem with the CPU or Microcomputer in the EPS control unit | (see **DTC 50: EPS CONTROL UNIT INTERNAL CIRCUIT (CPU OR MICROCOMPUTER** ) |
| 62 | Fail-safe relay stuck ON | (see **DTC 62: EPS CONTROL UNIT INTERNAL CIRCUIT (FAIL-SAFE RELAY STUCK ON)** ) |
| 64 | Low battery voltage | (see **DTC 64: BATTERY VOLTAGE IS EXCESSIVELY LOW (FAIL-SAFE RELAY CONTACT FAILURE** |

| | | |
|---|---|---|
| | | AND MOTOR VOLTAGE FALL OFF) ) |
| | Fail-safe relay contact failure | (see DTC 64: BATTERY VOLTAGE IS EXCESSIVELY LOW (FAIL-SAFE RELAY CONTACT FAILURE AND MOTOR VOLTAGE FALL OFF) ) |
| 66 | A problem with the motor driven voltage | (see DTC 66: MOTOR DRIVEN VOLTAGE; DTC 68: EPS CONTROL UNIT INTERNAL CIRCUIT ) |
| 67 | A problem with the torque sensor I/F circuit | (see DTC 67: TORQUE SENSOR I/F CIRCUIT ) |
| 68 | A problem with the interlock circuit | (see DTC 66: MOTOR DRIVEN VOLTAGE; DTC 68: EPS CONTROL UNIT INTERNAL CIRCUIT ) |

## SYMPTOM TROUBLESHOOTING INDEX

## SYMPTOM TROUBLESHOOTING CHART

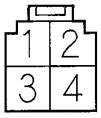
| Symptom | Diagnostic procedure | Also check for |
|---|---|---|
| EPS indicator does not come on | EPS Indicator Circuit Troubleshooting (see DTC 67: TORQUE SENSOR I/F CIRCUIT ) | |
| EPS indicator does not go off, and no DTCs are stored | EPS Indicator Circuit Troubleshooting (see DTC 67: TORQUE SENSOR I/F CIRCUIT ) | |
| EPS indicator is not on, | | |

| | | |
|---|---|---|
| no DTCs are stored, but there is no power assist | 1. Check the motor wires between the EPS control unit and the motor for a short to ground. Repair as needed.<br>2. If the motor wires are OK, replace the steering gearbox (short in the motor). | |

## SYSTEM DESCRIPTION

### EPS CONTROL UNIT INPUTS AND OUTPUTS FOR CONNECTOR A (4P)

EPS CONTROL UNIT CONNECTOR A (4P)




Wire side of female terminals

| Terminal number | Wire color | Terminal sign (Terminal name) | Description | Measurement | | |
|---|---|---|---|---|---|---|
| | | | | Terminals | Conditions Ignition switch ON (II) | Voltage |
| 1 | GRN | M− (Motor minus) | Drives the actuator motor | 1—GND | —— | —— |
| 2 | WHT | +B (Plus battery) | Power source for the actuator motor | 2—GND | Every time | Battery voltage |
| 3 | RED | M+ (Motor plus) | Drives the actuator motor | 3—GND | —— | —— |
| 4 | BLK | PG (Power ground) | Ground for the actuator motor | 4—GND | —— | —— |

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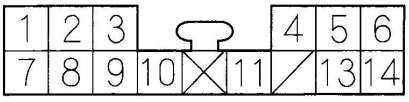
**Fig. 8: Identifying EPS Control Unit Inputs And Outputs For Connector A (4P)**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

### EPS CONTROL UNIT INPUTS AND OUTPUTS FOR CONNECTOR B (14P)

**EPS CONTROL UNIT CONNECTOR B (14P)**




Wire side of female terminals

| Terminal number | Wire color | Terminal sign (Terminal name) | Description | Measurement | | |
|---|---|---|---|---|---|---|
| | | | | Terminals | Conditions Ignition switch ON (II) | Voltage |
| 1 | WHT | Vcc1 (Voltage common 1) | Power source for torque sensor | 1—GND | Start the engine | Battery voltage |
| | | | | | Ignition switch OFF | 0 V |
| 2 | YEL | Vcc2 (Voltage common 2) | Drives the torque sensor | 2—GND | Start the engine | About 5 V |
| | | | | | Ignition switch OFF | 0 V |
| 3 | BRN | SCS (Service check signal) | Detects service check connector signal | ——— | ——— | ——— |
| 4 | BLU/WHT | VSP (Vehicle speed pulse) | Detects vehicle speed signal from the vehicle speed sensor (VSS) (4 pulse/rev) | 4—GND | Raise the vehicle off the ground and spin the front wheel | Alternating voltage about 0—5—0—5 V |
| 5 | LT BLU | DIAG-H (Diagnosis-H) | Communicates with HDS | ——— | ——— | ——— |
| 6 | YEL | IG1 (Ignition 1) | Power source for activating the system | 6—GND | Ignition switch ON (II) | Battery voltage |
| | | | | | Ignition switch OFF | 0 V |
| 7 | GRY/BLU | SG (Sealed ground) | Ground for the sealed line | 7—GND | ——— | ——— |
| 8 | RED | VT6 (Voltage torque 6) | Detects torque sensor signal | 8—GND | Start the engine and turn the steering wheel | About 3.5—1.5 V |
| 9 | BRN | T/S GND (Torque sensor ground) | Ground for the torque sensor | ——— | ——— | ——— |
| 10 | BLU | VT3 (Voltage torque 3) | Detects torque sensor signal | 10—GND | Start the engine and turn the steering wheel | About 3.5—1.5 V |
| 11 | PNK/BLU | RT+ (Relay trigger plus) | Drives the power relay (power relay is turned OFF when problem occurs) | 11—GND | Start the engine | Battery voltage |
| | | | | | Ignition switch OFF | 0 V |
| 13 | YEL/RED | WLP (Warning lamp) | Drives the EPS indicator light | 13—GND | EPS indicator ON | 0 V |
| | | | | | EPS indicator OFF | Battery voltage |
| 14 | BLU | NEP (Engine pulse) | Detect the engine pulse | 14—GND | Start the engine, and let it idle | About 6 V |

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**Fig. 9: Identifying EPS Control Unit Inputs And Outputs For Connector B (14P)**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

## CIRCUIT DIAGRAM

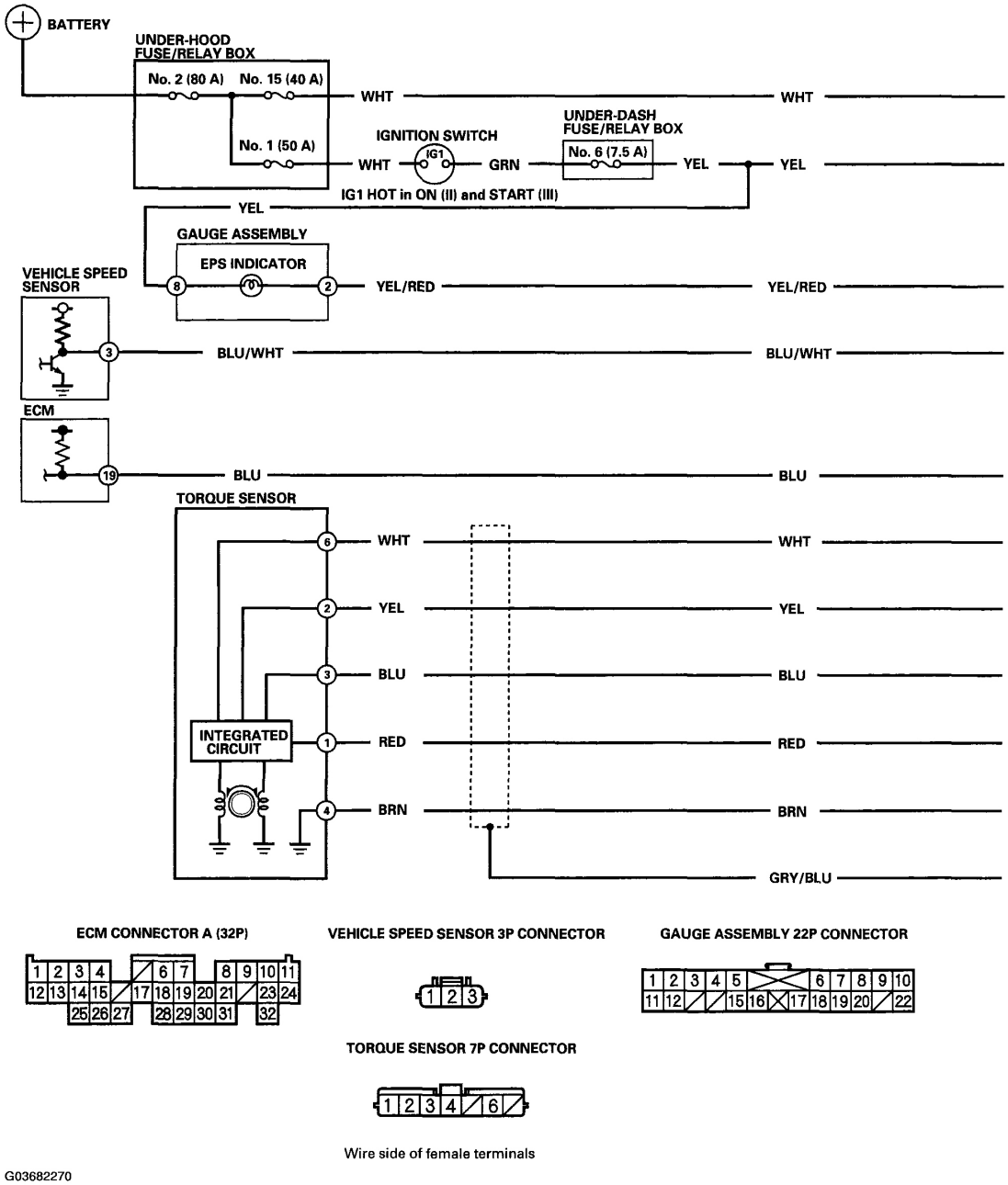


**Fig. 10: Identifying EPS Components Circuit Diagram (1 Of 2)**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

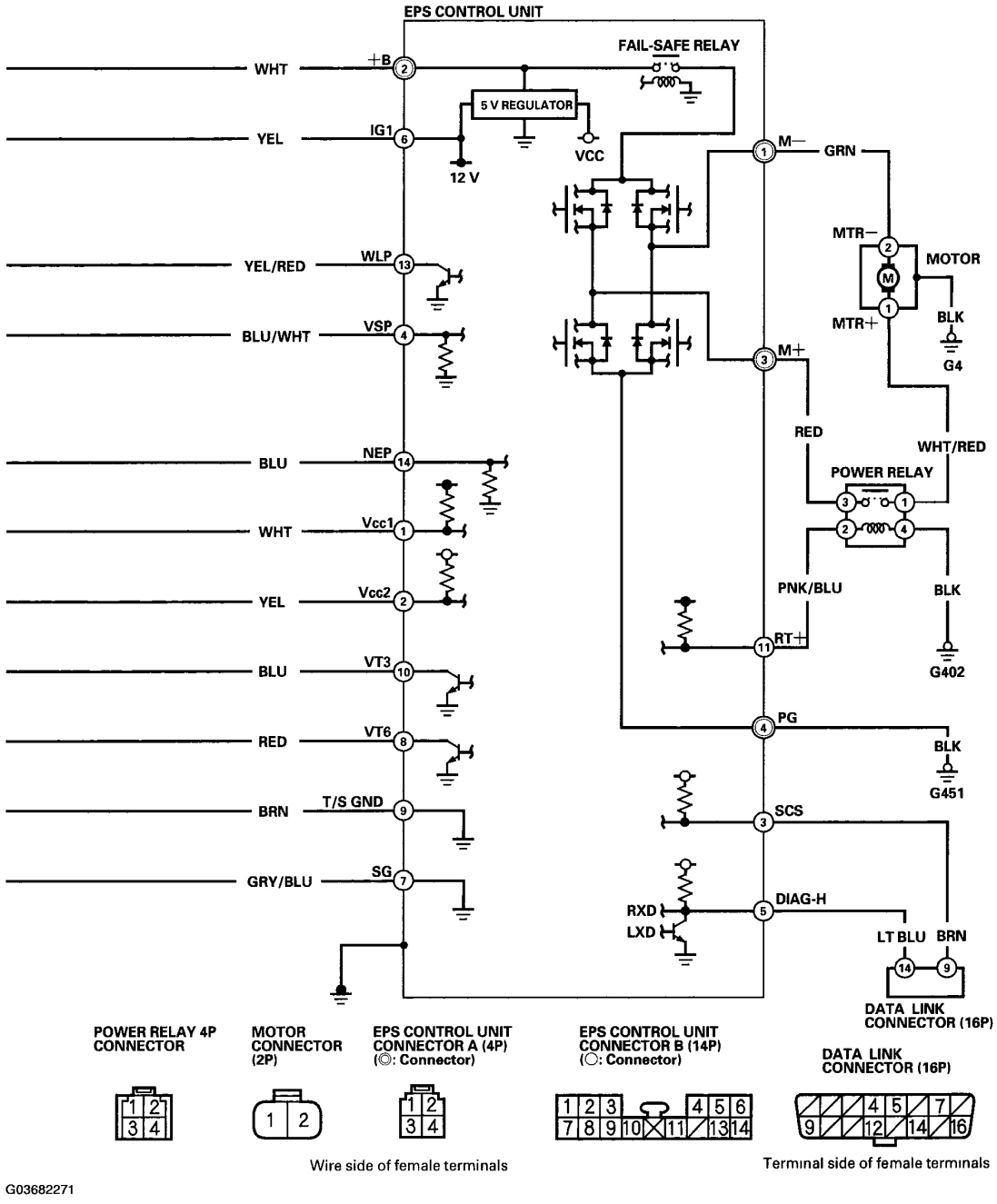


**Fig. 11: Identifying EPS Components Circuit Diagram (2 Of 2)**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

## DTC TROUBLESHOOTING

## DTC INDEX

| | |
|---|---|

| DTC | Description |
|---|---|
| **DTC 11** | Torque Sensor VT3 |
| **DTC 15** | Torque Sensor VT6 |
| **DTC 16** | Torque Sensor VT3 and VT6 |
| **DTC 17** | Torque Sensor Vcc1 |
| **DTC 18** | Torque Sensor Vcc2 |
| **DTC 22** | Vehicle Speed Sensor Signal |
| **DTC 23** | Engine Speed Signal |
| **DTC 37** | EPS Control Unit Internal Circuit (Input Circuit For Motor Voltage) |
| **DTC 41** | Voltage For Motor |
| **DTC 42, 45** | Motor Driven Current |
| **DTC 43** | Motor Driven Current is Excessively High |
| **DTC 46,47** | Power Relay Stuck ON or Stuck OFF |
| **DTC 50** | EPS Control Unit Internal Circuit (CPU or Microcomputer) |
| **DTC 62** | EPS Control Unit Internal Circuit (Fail-safe Relay Stuck ON) |
| **DTC 64** | Battery Voltage is Excessively Low (Fail-safe Relay Contact Failure and Motor Voltage Fall Off) |
| **DTC 66** | Motor Driven Voltage |
| **DTC 67** | Torque Sensor I/F Circuit |
| **DTC 68** | EPS Control Unit Internal Circuit |

**DTC 11: TORQUE SENSOR VT3; DTC 15: TORQUE SENSOR VT6; DTC 16: TORQUE SENSOR VT3 AND VT6**

1. Clear the DTC.
2. Start the engine.
3. Wait at least 10 seconds.

*Does the EPS indicator come on?*

**YES** -Go to step 4.

**NO** -Check for loose terminals or poor connections. If the connections are good, the system is OK at this time.

4. Stop the engine, and verify the DTC.

*Is DTC 11, DTC15 or DTC 16 indicated?*

**YES** -Go to step 5.

**NO** -Do the appropriate troubleshooting for the code indicated.

5. Make sure the ignition switch is OFF, then disconnect the EPS control unit connector B (14P) and the torque sensor 7P connector.
6. Check for continuity between the appropriate EPS control unit connector B (14P) terminal and body ground (see table).

**TERMINAL SPECIFICATION**

| Terminal name | EPS control unit connector B terminal No. |
|---|---|
| Vcc1 | 1 |
| Vcc2 | 2 |
| VT3 | 10 |
| VT6 | 8 |
| T/S GND | 9 |

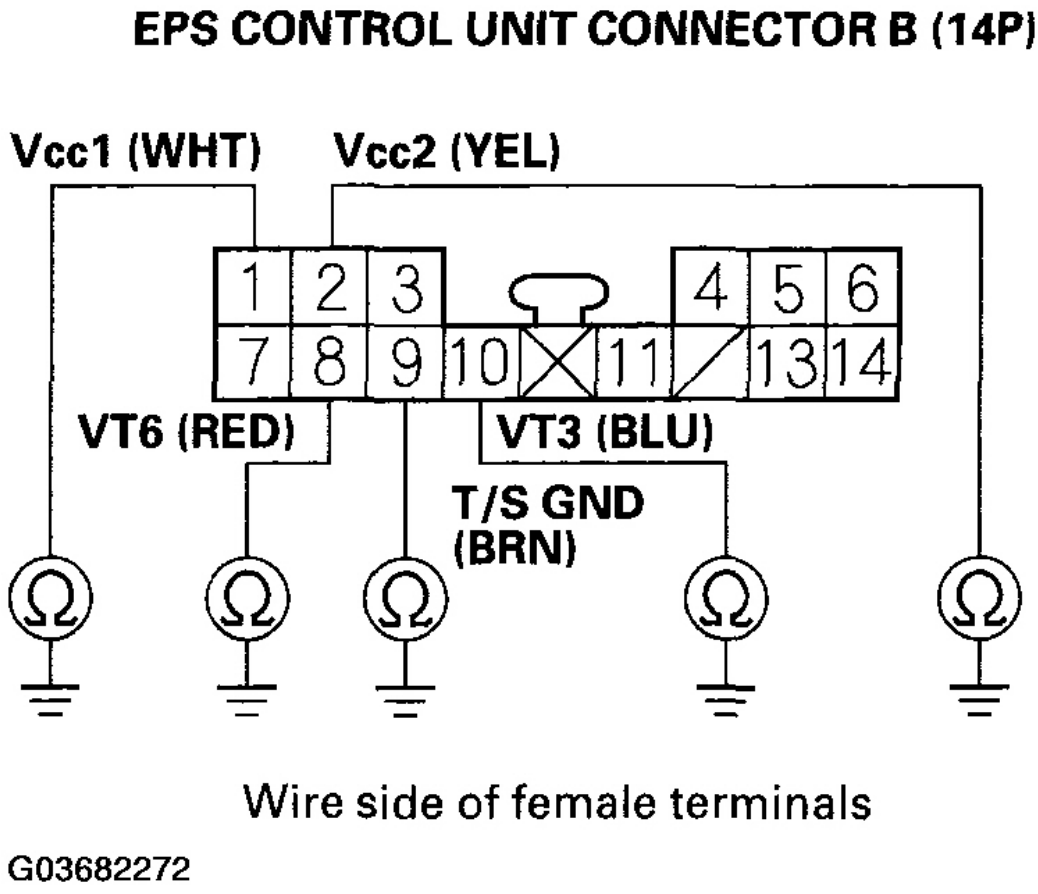


**Fig. 12: Identifying EPS Control Unit Connector Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short to body ground in the appropriate sensor circuit between the torque sensor and EPS control unit.

**NO** -Go to step 7.

7. Turn the ignition switch ON (II).
8. Measure the voltage between the appropriate EPS control unit connector B (14P) terminal and body ground (see table).

**TERMINAL SPECIFICATION**

| Terminal name | EPS control unit connector B terminal No. |
|---|---|
| Vcc1 | 1 |
| Vcc2 | 2 |
| VT3 | 10 |
| VT6 | 8 |
| T/S GND | 9 |

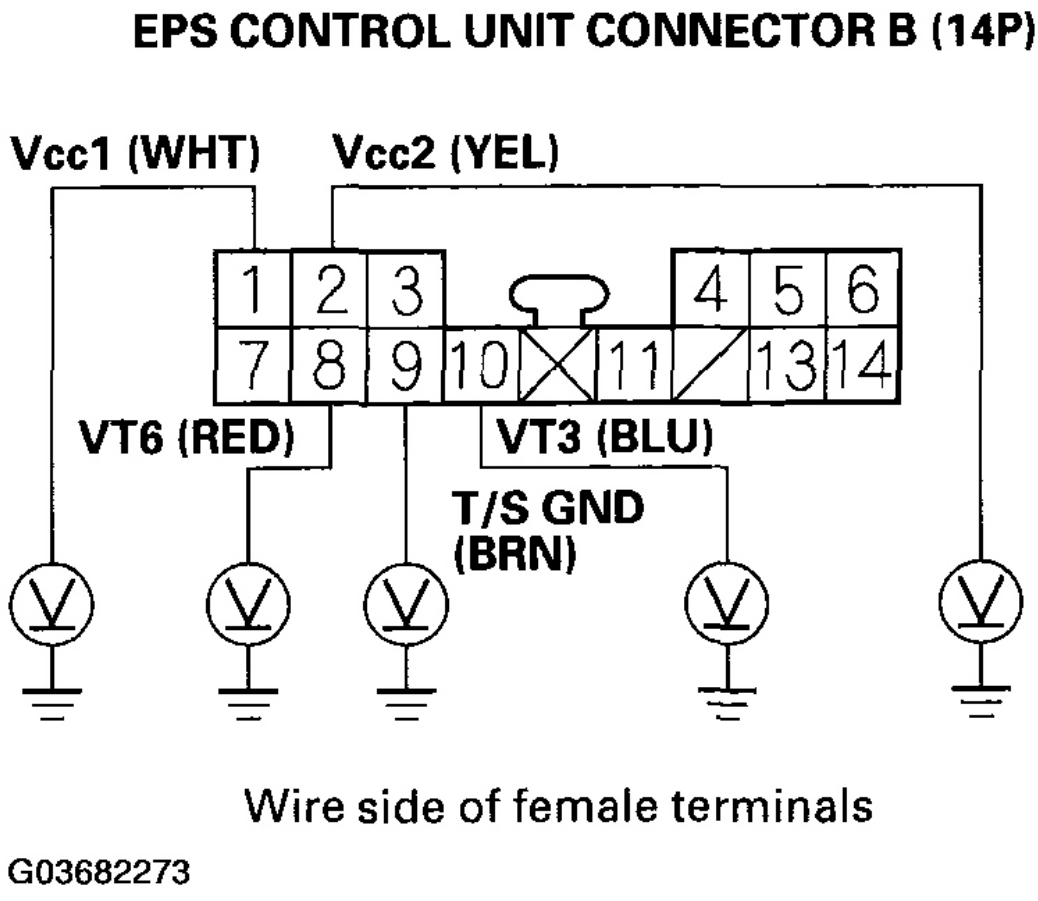


**Fig. 13: Measuring Voltage Between Appropriate EPS Control Unit Connector B**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage?*

**YES** -Repair short to power in the (+) circuit wire between the EPS control unit and torque sensor.

**NO** -Go to step 9.

9. Turn the ignition switch OFF.
10. Check for continuity between the appropriate EPS control unit connector B (14P) terminal and the torque sensor 7P connector terminal (see table).

**TERMINAL SPECIFICATION**

| Terminal name | Torque Sensor terminal No. | EPS control unit connector B terminal No. |
|---|---|---|
| Vcc1 | 6 | 1 |
| Vcc2 | 2 | 2 |
| VT3 | 3 | 10 |
| VT6 | 1 | 8 |
| T/S GND | 4 | 9 |

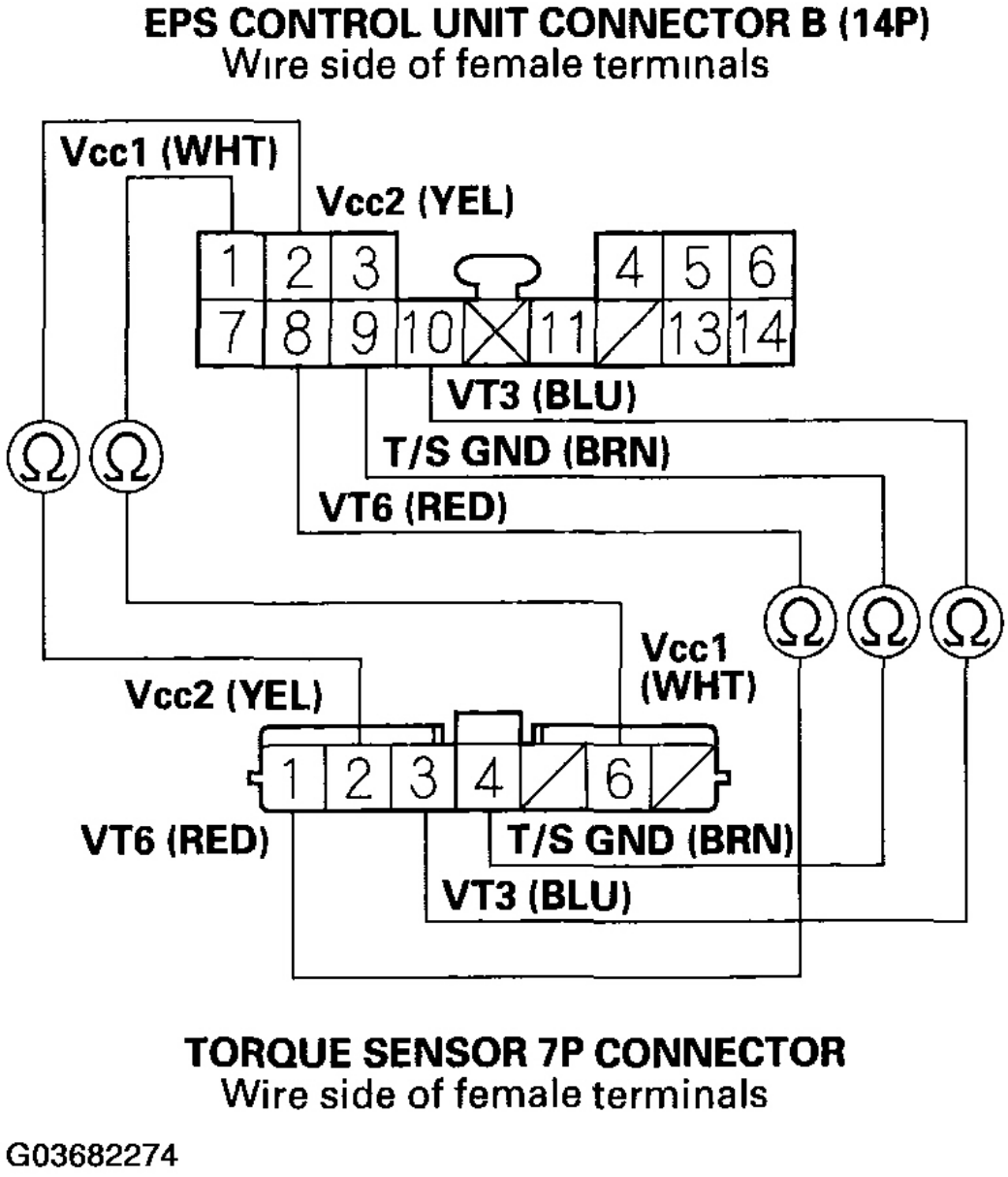


**Fig. 14: Identifying EPS Control Unit Connector Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Go to step 10.

**NO** -Repair open in the appropriate torque sensor wire circuit between the EPS control unit and the torque sensor.

11. Check for loose terminals or poor connections. If the connections are good, substitute a known-good EPS control unit, and connect the all disconnected connectors.
12. Start the engine.

*Does the EPS indicator come on?*

**YES** -Go to step 13.

**NO** -Check for poor connections or loose terminals at the EPS control unit. If necessary, replace the EPS control unit and retest.

13. Stop the engine, and verify the DTC.

*Is DTC11, DTC15 or DTC16 indicated?*

**YES** -Check for poor connections or loose terminals at the torque sensor. If necessary, substitute a known-good steering gearbox and recheck.

**NO** -Do the appropriate troubleshooting for the code indicated.

**DTC 17: TORQUE SENSOR VCC1; DTC 18: TORQUE SENSOR VCC2**

1. Clear the DTC.
2. Start the engine.
3. Wait at least 10 seconds.

*Does the EPS indicator come on?*

**YES** -Go to step 4.

**NO** -Check for loose terminals or poor connections. If the connections are good, the system is OK at this time.

4. Stop the engine, and verify the DTC.

*Is DTC17 or DTC18 indicated?*

**YES** -Go to step 5.

**NO** -Do the appropriate troubleshooting for the code indicated.

5. Make sure the ignition switch is OFF, then disconnect the EPS control unit connector B (14P) and torque sensor 7P connector.
6. Check for continuity between the EPS control unit connector B (14P) terminal No. 1 and body ground.

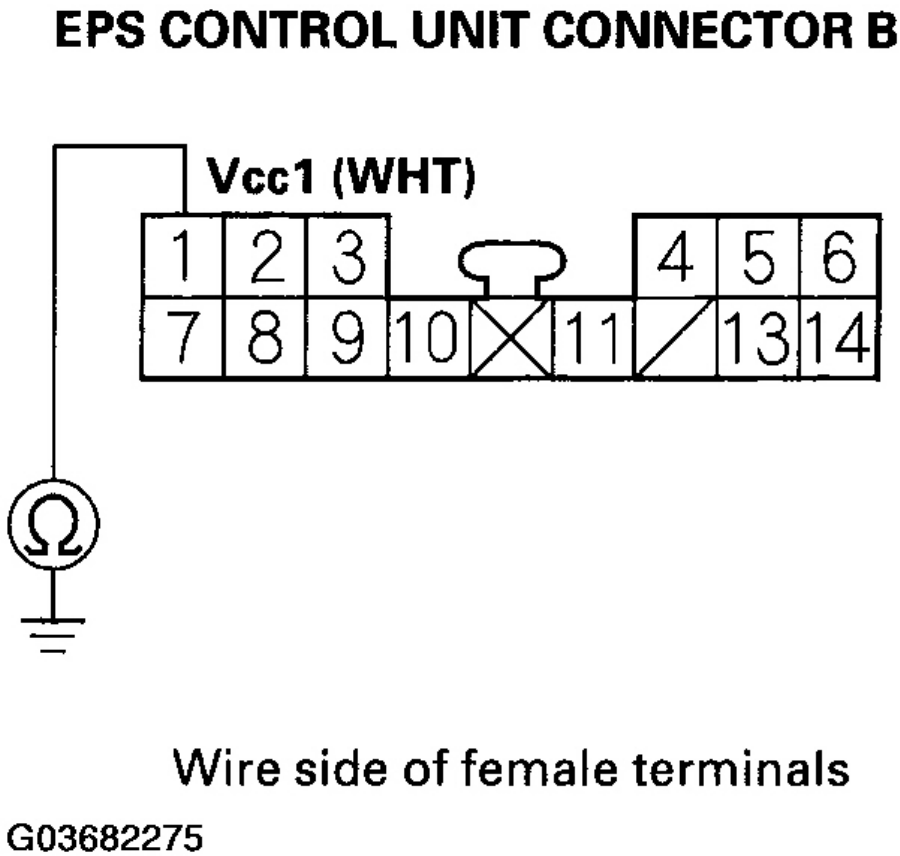


**Fig. 15: Identifying EPS Control Unit Connector**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short to body ground in the wire between the torque sensor and EPS control unit.

**NO** -Go to step 7.

7. Check for continuity between the EPS control unit connector B (14P) terminal No. 1 and the torque sensor 7P connector terminal No. 6.

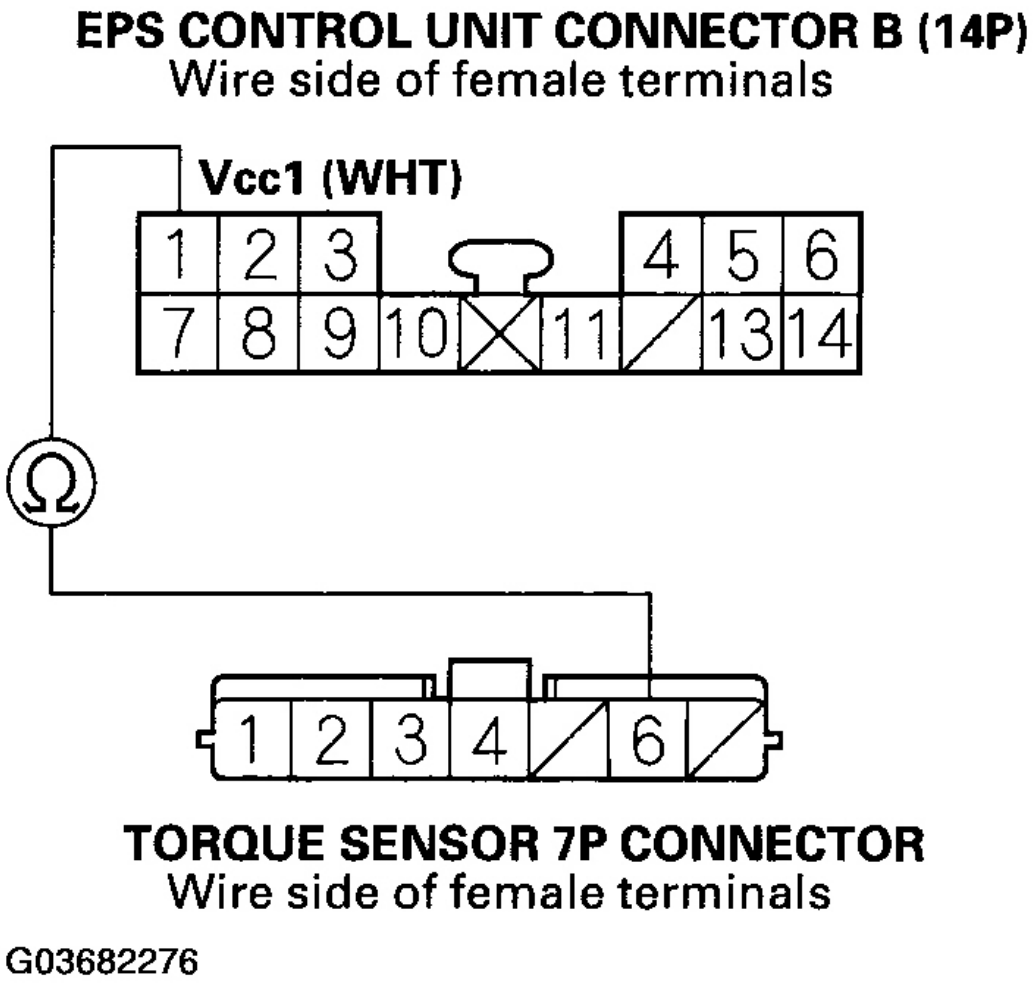


**Fig. 16: Identifying EPS Control Unit Connector Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Go to step 8.

**NO** -Repair open in the wire between the torque sensor and EPS control unit.

8. Check for continuity between the EPS control unit connector B (14P) terminal No. 2 and body ground.

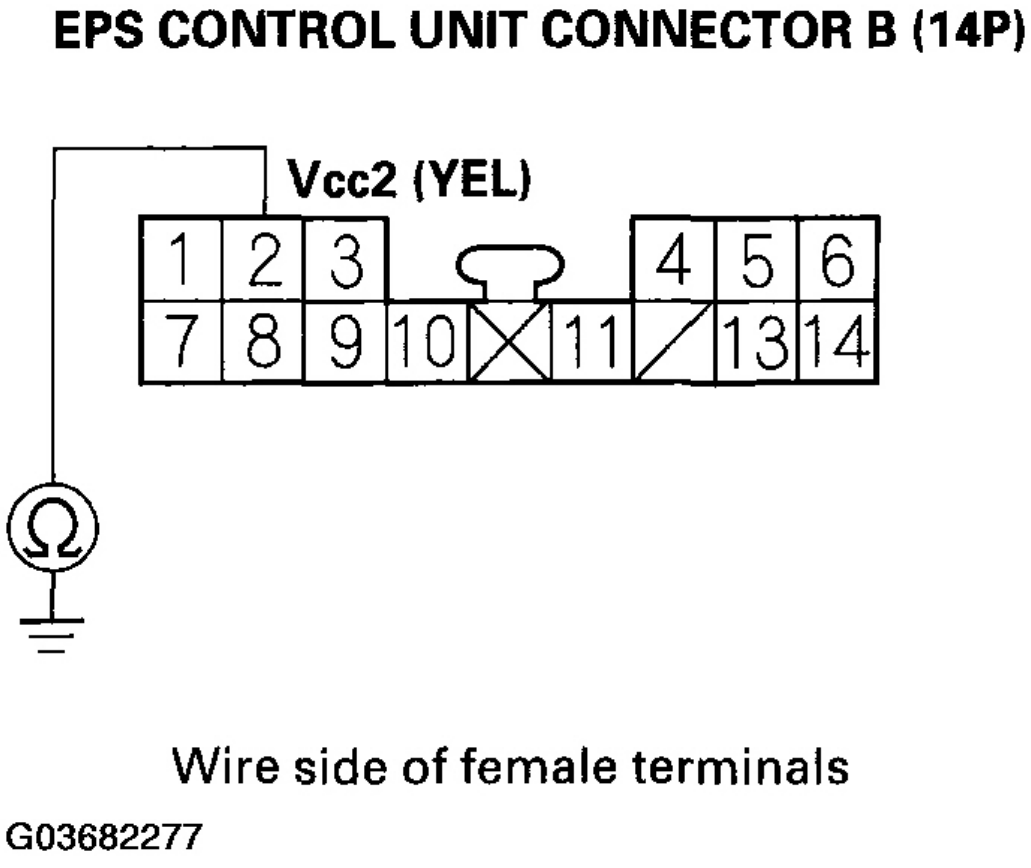


**Fig. 17: Checking Continuity Between EPS Control Unit Connector (14P) Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short to body ground in the wire between the torque sensor and EPS control unit.

**NO** -Go to step 9.

9. Check for continuity between the EPS control unit connector B (14P) terminal No. 2 and the torque sensor 7P connector terminal No. 2.

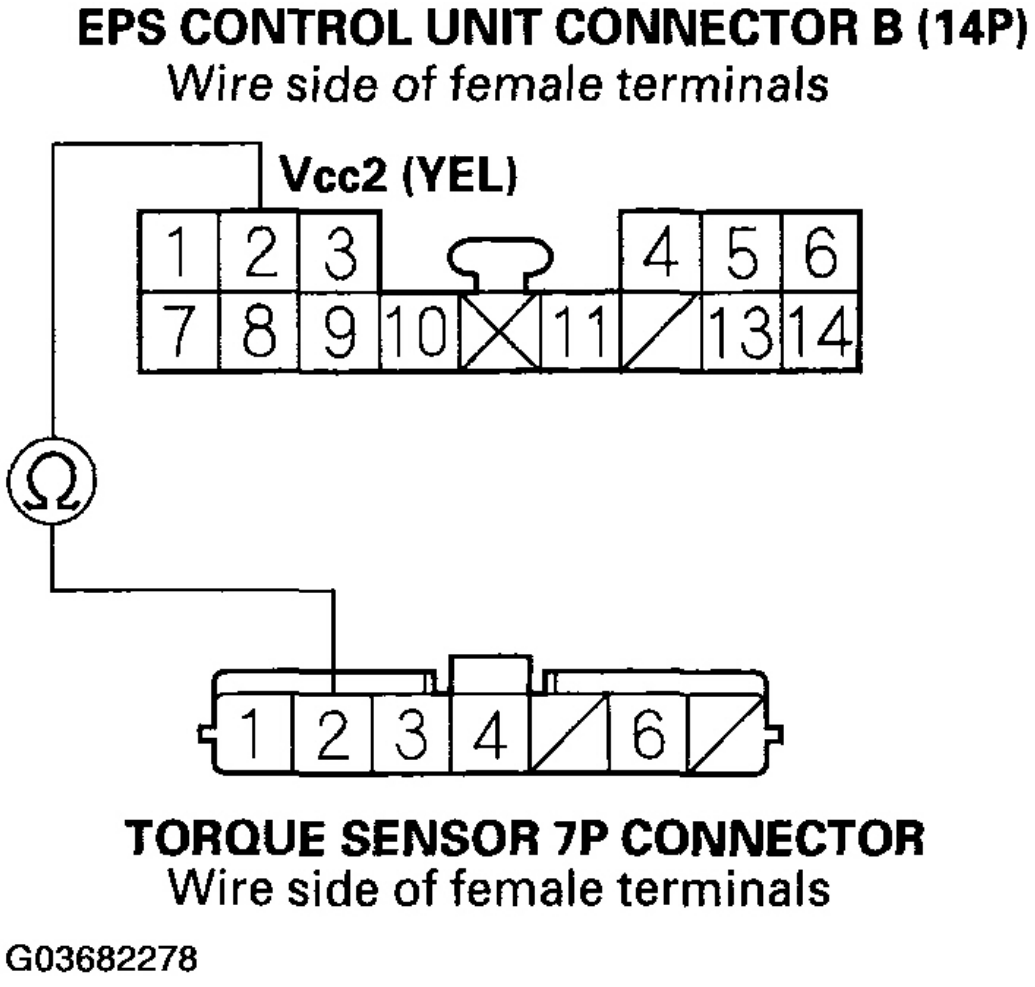


**Fig. 18: Checking Continuity Between EPS Control Unit Connector Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Go to step 10.

**NO** -Repair open in the wire between the torque sensor and EPS control unit.

10. Check for loose terminals or poor connections. If the connections are good, substitute a known-good EPS control unit, and connect the all disconnected connectors.
11. Start the engine.

    *Does the EPS indicator come on?*

    **YES** -Go to step 12.

    **NO** -Check for poor connections or loose terminals at the EPS control unit. If necessary, replace the EPS control unit and retest.
12. Stop the engine, and verify the DTC.

    *Is DTC17 or DTC18 indicated?*

    **YES** -Check for poor connections or loose terminals at the torque sensor. If necessary, substitute a known-good steering gearbox and recheck.

    **NO** -Do the appropriate troubleshooting for the code indicated.

**DTC 22: VEHICLE SPEED SENSOR SIGNAL; DTC 23: ENGINE SPEED SIGNAL**

**NOTE:**

- **If the MIL indicator is ON, troubleshoot the PGM-FI system first.**
- **When the engine is running at 2,000 RPM or above and the vehicle speed is 1 mph (1 km/h) or below for 6 minutes the EPS indicator comes on.**
- **When the vehicle speed is 6.2 mph (10 km/h) or more and the engine is running at 280 RPM or below for 3 seconds, the EPS indicator comes on.**

1. Start the engine and check the tachometer.

   *Is the tachometer working correctly?*

**YES** -Go to step 2.

**NO** -Go to step 9 .

2. Test-drive the vehicle above 9.3 mph (15 km/h).

   *Is the speedometer working correctly?*

   **YES** -Go to step 3.

   **NO** -Do the speedometer system troubleshooting (see **VEHICLE SPEED SIGNAL CIRCUIT TROUBLESHOOTING** ).

3. Block the rear wheels and raise the vehicle, and support it with safety stands in the proper locations (see **SAFETY STANDS** ).
4. Turn the ignition switch ON (II).
5. Block the right front wheel, and slowly rotate the left front wheel, and measure the voltage between the EPS control unit connector B (14P) terminal No. 4 and body ground.

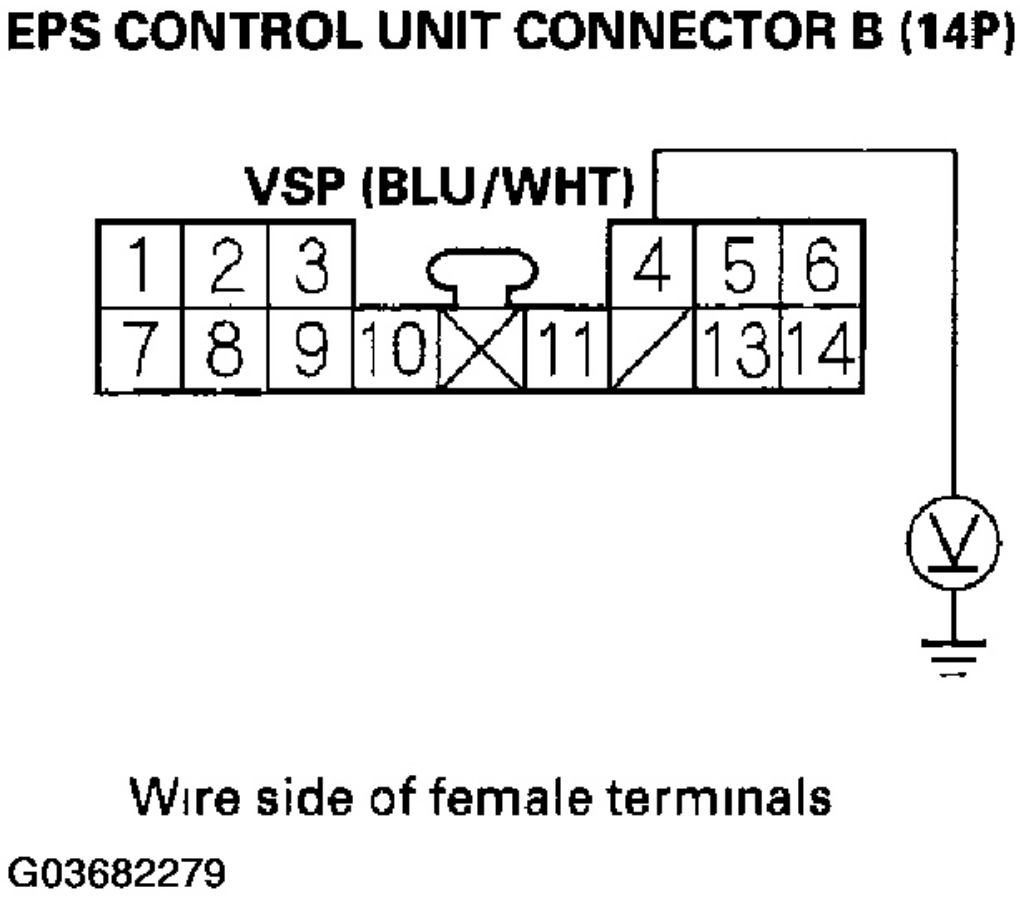


**Fig. 19: Measuring Voltage Between EPS Control Unit Connector B (14P) Terminal No. 4 And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Does the voltage pulse 0 V and 5 V?*

**YES** -Go to step 6.

**NO** -Repair open in the wire between the EPS control unit and VSS. If the wire is OK, check for a loose or poor connection at the EPS control unit. If necessary, substitute a known-good EPS control unit and recheck.

6. Turn the ignition switch OFF, and disconnect the EPS control unit connector B (14P).

7. Start the engine, and let it idle.
8. Measure the voltage between the EPS control unit connector B (14P) terminal No.14 and body ground.

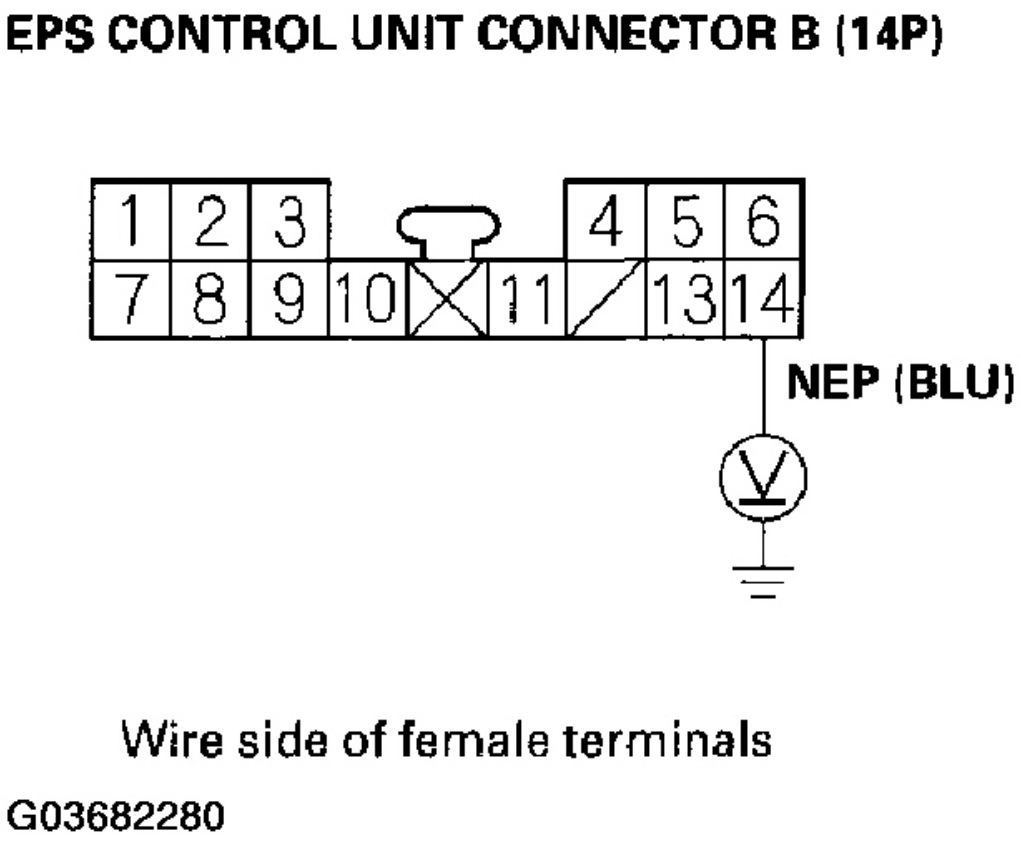


**Fig. 20: Measuring Voltage Between EPS Control Unit Connector Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there about 6 V at idle?*

**YES** -Check for poor connections or loose terminals at the EPS control unit. If necessary, substitute a known-good EPS control unit and recheck.

**NO** -Repair open in the wire between the EPS control unit and the ECM.

9. Turn the ignition switch OFF, and disconnect the EPS control unit connector B (14P).
10. Start the engine, and let it idle.
11. Measure the voltage between the EPS control unit connector B (14P) terminal IMo.14 and body ground.

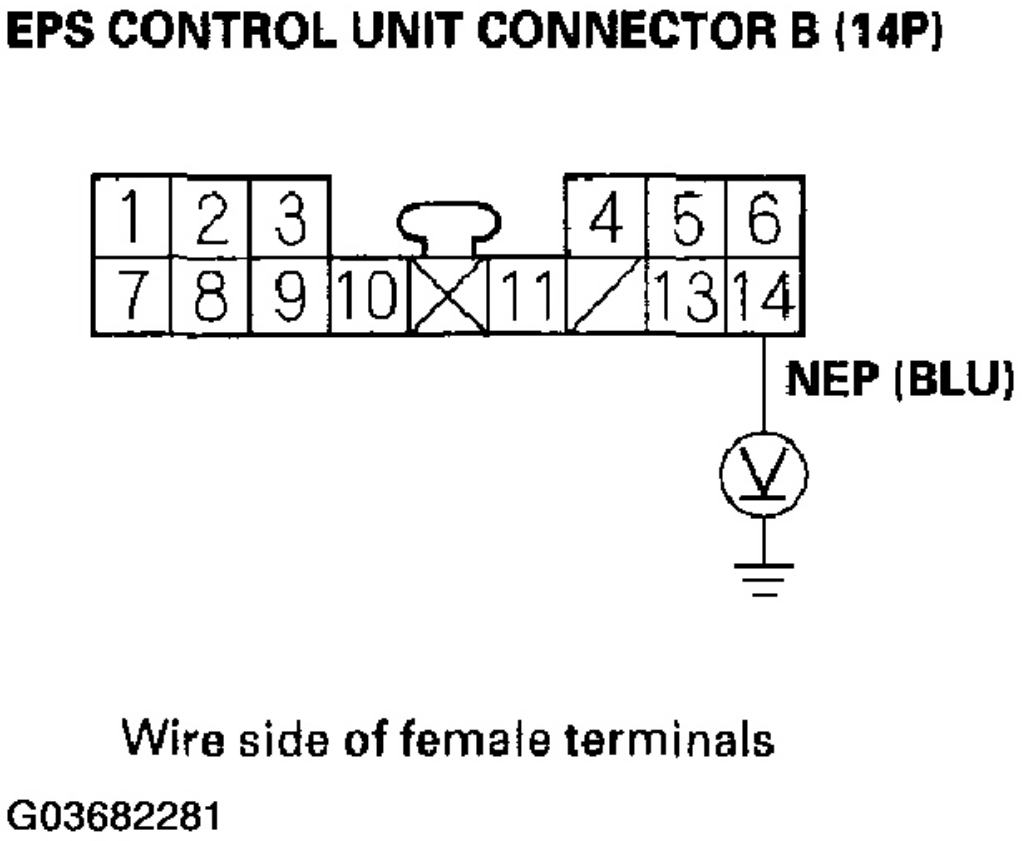


**Fig. 21: Measuring Voltage Between EPS Control Unit Connector Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there about 6 V at idle?*

**YES** -Check for poor connections or loose terminals at the EPS control

unit. If necessary, substitute a known-good EPS control unit and recheck.

**NO** -Go to step 12.

12. Turn the ignition switch OFF.
13. Disconnect the ECM connector A (32P).
14. Check for continuity between the EPS control unit connector B (14P) terminal No.14 and the ECM connector A (32P) terminal No.19.

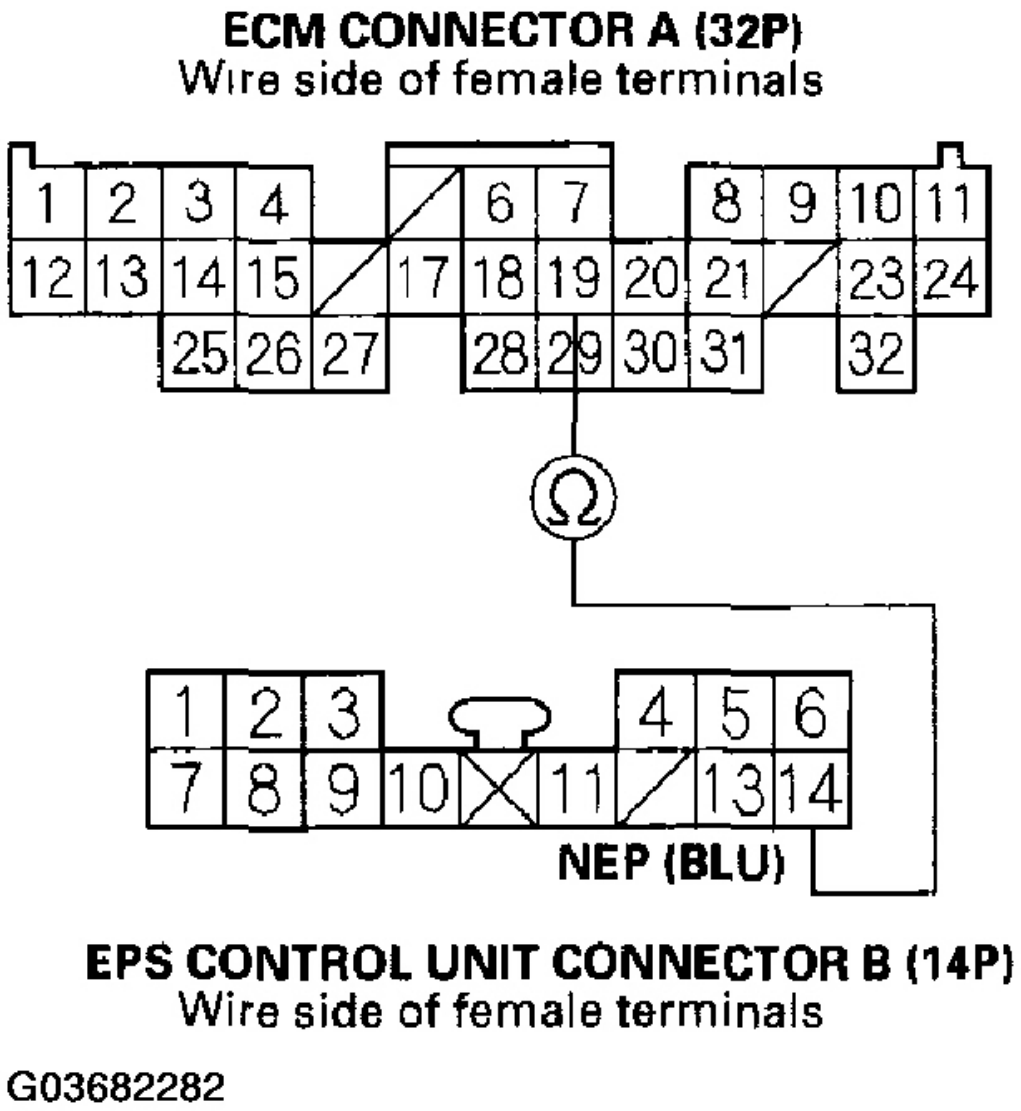

**Fig. 22: Checking Continuity At EPS Control Unit Connector B (14P)**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Go to step 15.

**NO** -Repair open in the BLU wire between the EPS control unit and ECM.

15. Disconnect the gauge assembly 22P connector.
16. Check for continuity between the EPS control unit connector B (14P) terminal No.14 and body ground.

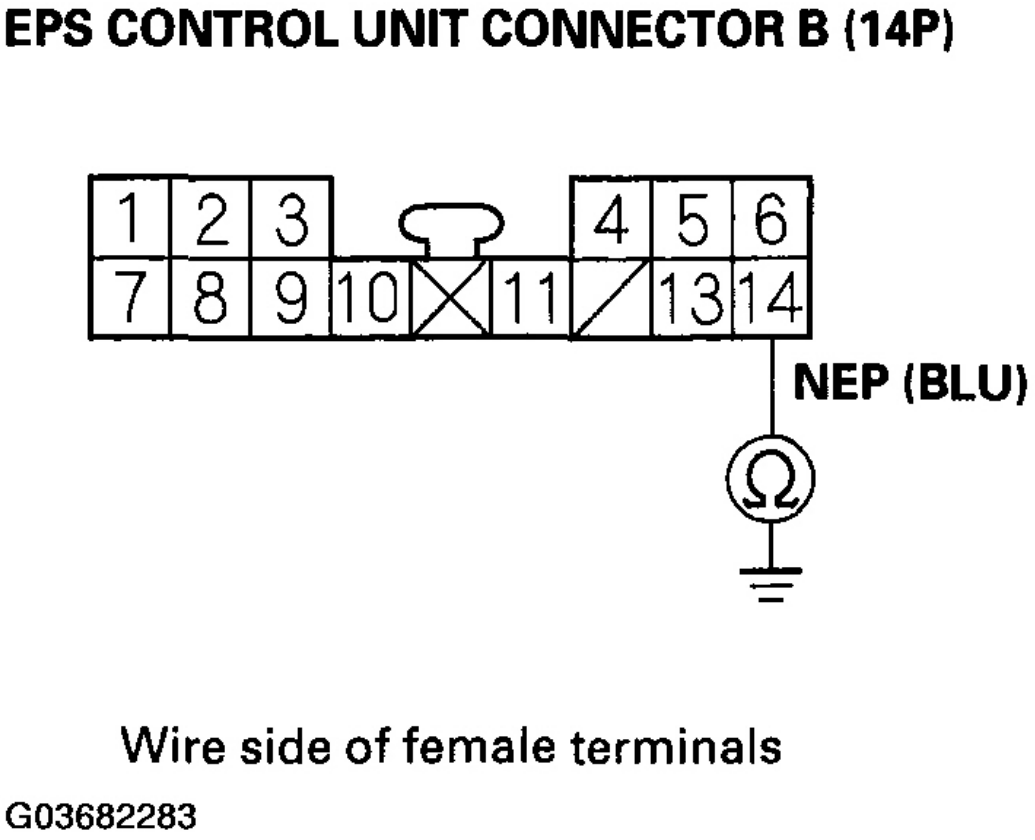


**Fig. 23: Checking Continuity At EPS Control Unit Connector B (14P)**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short to body ground in the wire between the EPS control unit, the test tachometer connector (see **CIRCUIT DIAGRAM** ), the gauge assembly, and the ECM.

**NO** -Check for poor connections or loose terminals at the ECM. If necessary, substitute a known-good ECM and recheck.

**DTC 37: EPS CONTROL UNIT INTERNAL CIRCUIT (INPUT CIRCUIT FOR MOTOR VOLTAGE)**

1. Clear the DTC.
2. Start the engine.
3. Turn the steering wheel from lock-to-lock several times, and wait 10 seconds or more.

*Does the EPS indicator come on?*

**YES** -Go to step 4.

**NO** -Check for loose terminals or poor connections. If the connections are good, the system is OK at this time.

4. Stop the engine, and verify the DTC.

*Is DTC 37 indicated?*

**YES** -Check for poor connections or loose terminals at the EPS control unit. If necessary, substitute a known-good EPS control unit and recheck.

**NO** -Do the appropriate troubleshooting for the code indicated.

**DTC 41: VOLTAGE FOR MOTOR**

1. Clear the DTC.
2. Start the engine.
3. Turn the steering wheel from lock-to-lock several times, and wait 10 seconds or more.

*Does the EPS indicator come on?*

**YES** -Go to step 4.

**NO** -Check for loose terminals or poor connections. If the connections are good, the system is OK at this time.

4. Stop the engine, and verify the DTC.

   *Is DTC 41 indicated?*

   **YES** -Go to step 5.

   **NO** -Do the appropriate troubleshooting for the code indicated.

5. Make sure the ignition switch is OFF, then disconnect the EPS control unit connector A (4P), power relay 4P connector, and motor connector (2P).
6. Check for continuity between the EPS control unit connector A (4P) terminal No. 3 and body ground.

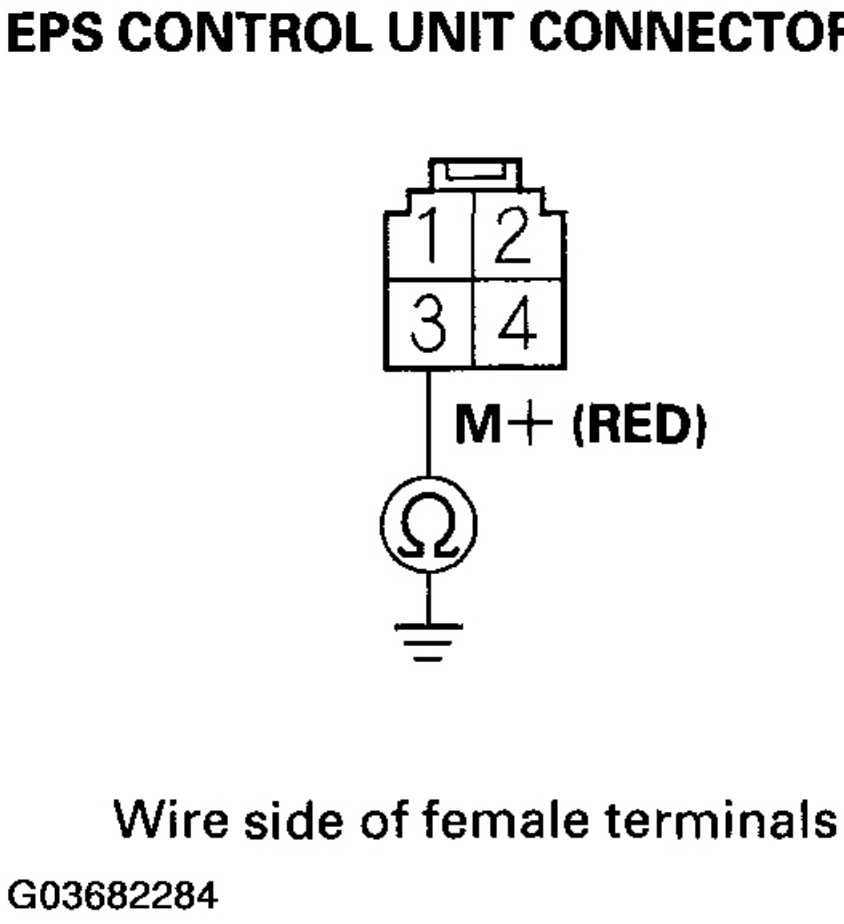


**Fig. 24: Checking Continuity Between EPS Control Unit Connector Terminal And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short to body ground in the RED wire between the EPS control unit and power relay.

**NO** -Go to step 7.

7. Check for continuity between the power relay 4P connector terminal No.1 and body ground.

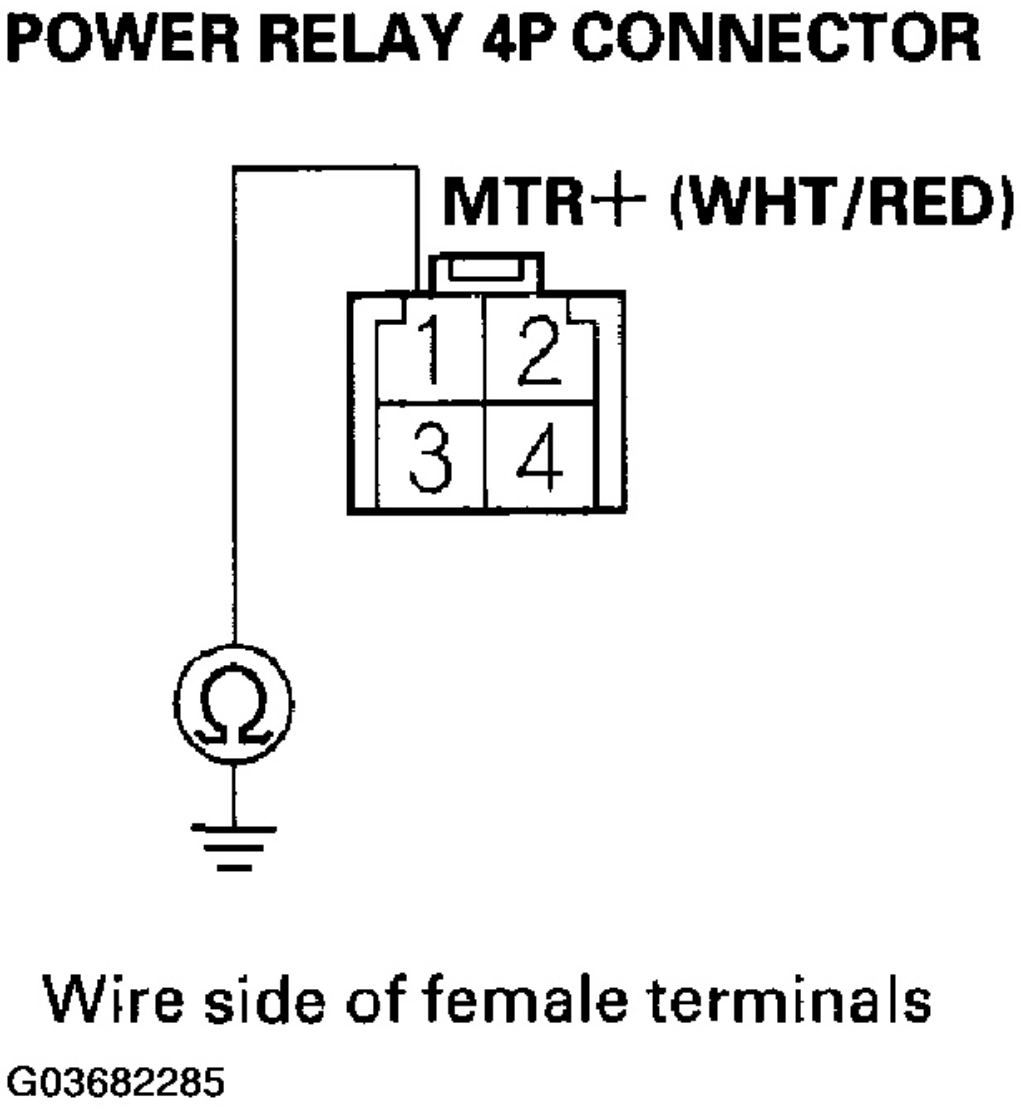


**Fig. 25: Checking Continuity Between Power Relay 4P Connector Terminal And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short to body ground in the WHT/RED wire between the motor and power relay.

**NO** -Go to step 8.

8. Check for continuity between the EPS control unit connector A (4P) terminal No. 1 and body ground.

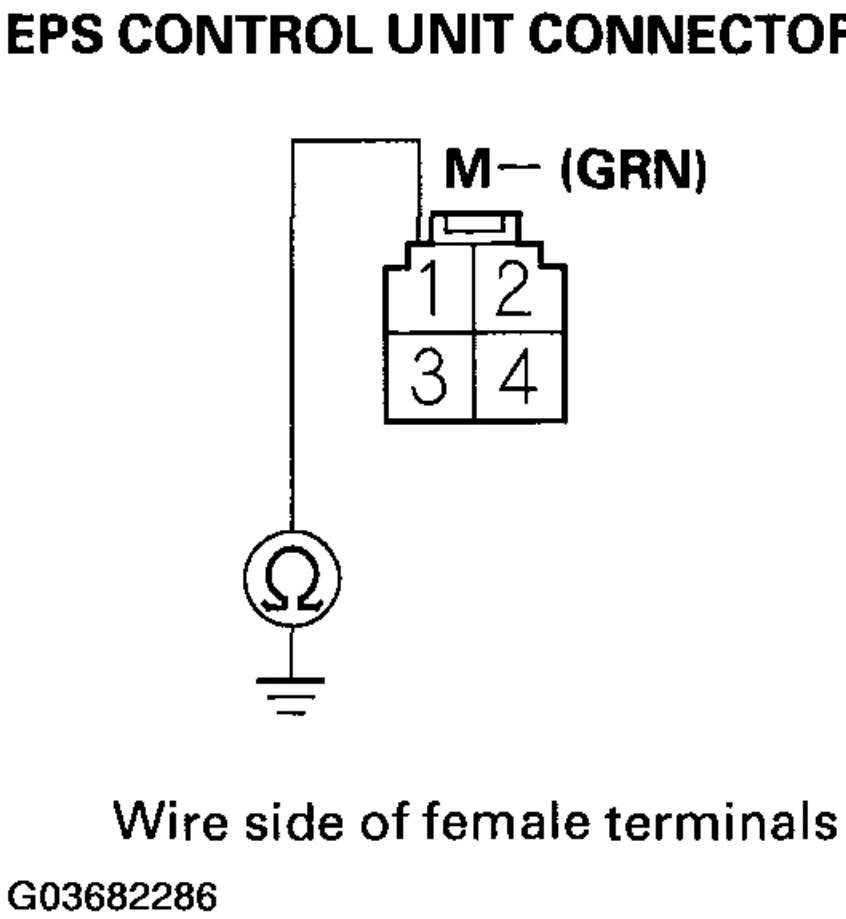


**Fig. 26: Checking Between EPS Control Unit Connector A (4P) Terminal No And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short to body ground in the GRN wire between the EPS control unit and motor.

**NO** -Go to step 9.

9. Check for continuity between the EPS control unit connector A (4P) terminal No. 1 and No. 3.

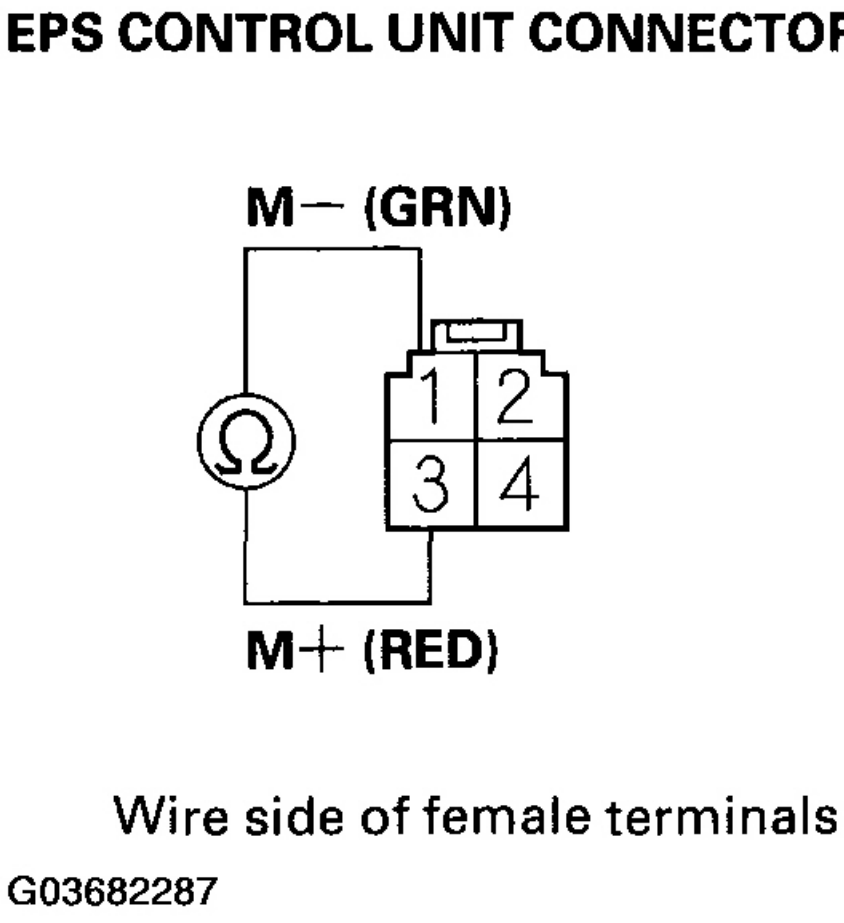


**Fig. 27: Checking Continuity Between EPS Control Unit Connector (4P) Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short between the RED and GRN wires in the motor circuit between the EPS control unit and motor.

**NO** -Go to step 10.

10. Check for continuity between the EPS control unit connector A (4P) terminal No. 3 and the power relay 4P connector terminal No. 1.

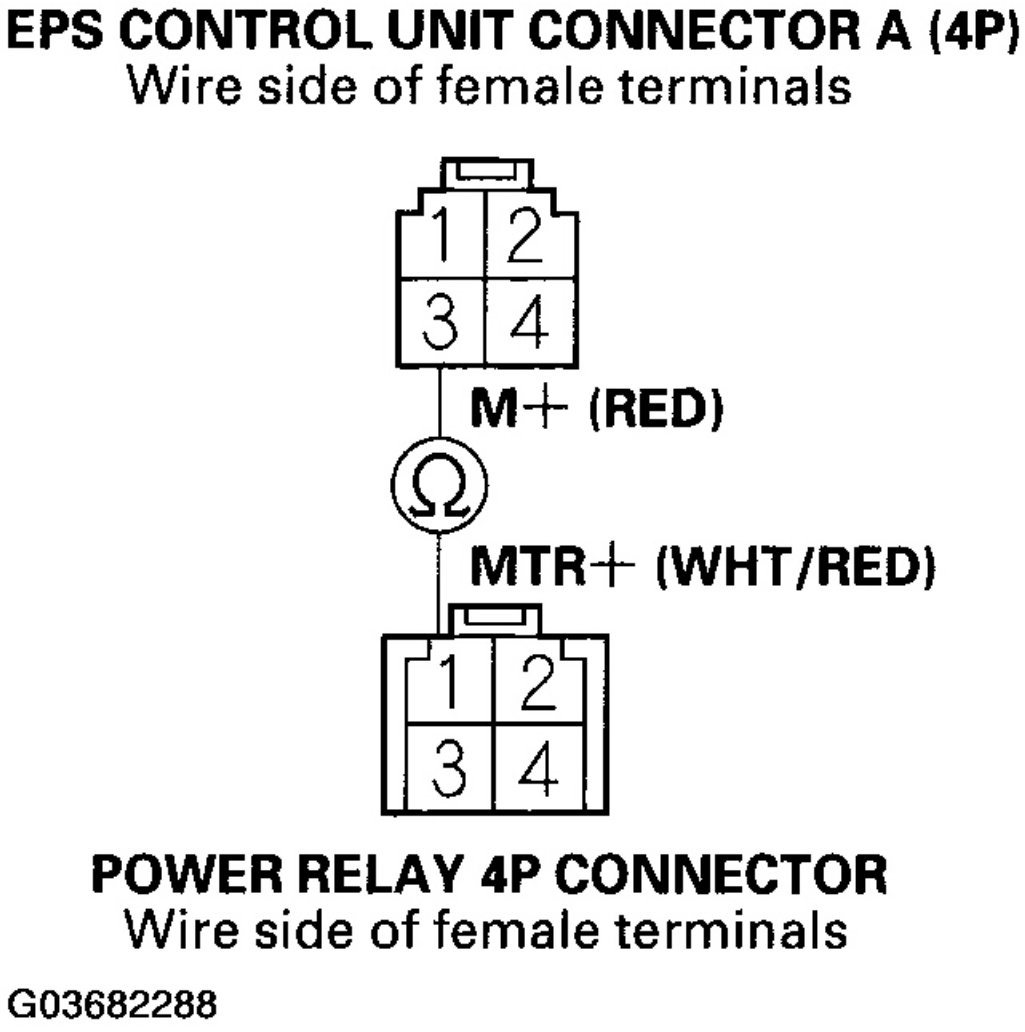


**Fig. 28: Checking Continuity Between EPS Control Unit Connector A (4P) Terminal No. 3**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short between the RED and WHT/RED wires in the motor circuit between the EPS control unit and motor.

**NO** -Go to step 11.

11. Check for continuity between the EPS control unit connector A (4P) terminal No. 1 and the power relay 4P connector terminal No. 1.

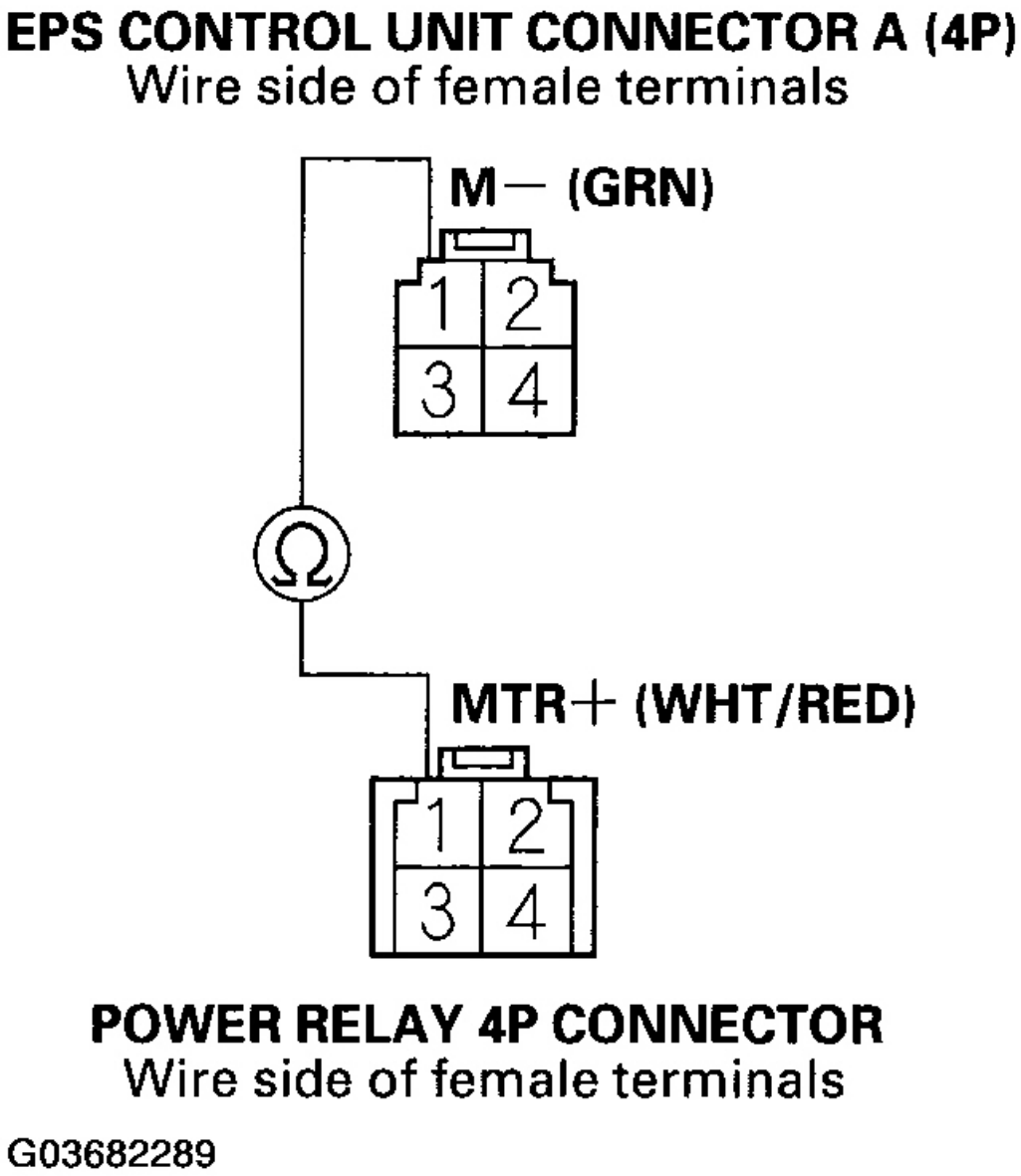

**Fig. 29: Checking Continuity Between EPS Control Unit Connector A (4P) Terminal And Power Relay Connector Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short between the GRN and WHT/RED wires in the motor circuit between the EPS control unit and motor.

**NO** -Go to step 12.

12. Turn the ignition switch ON (II), and measure the voltage between the EPS control unit connector A (4P) terminal No. 3 and body ground.

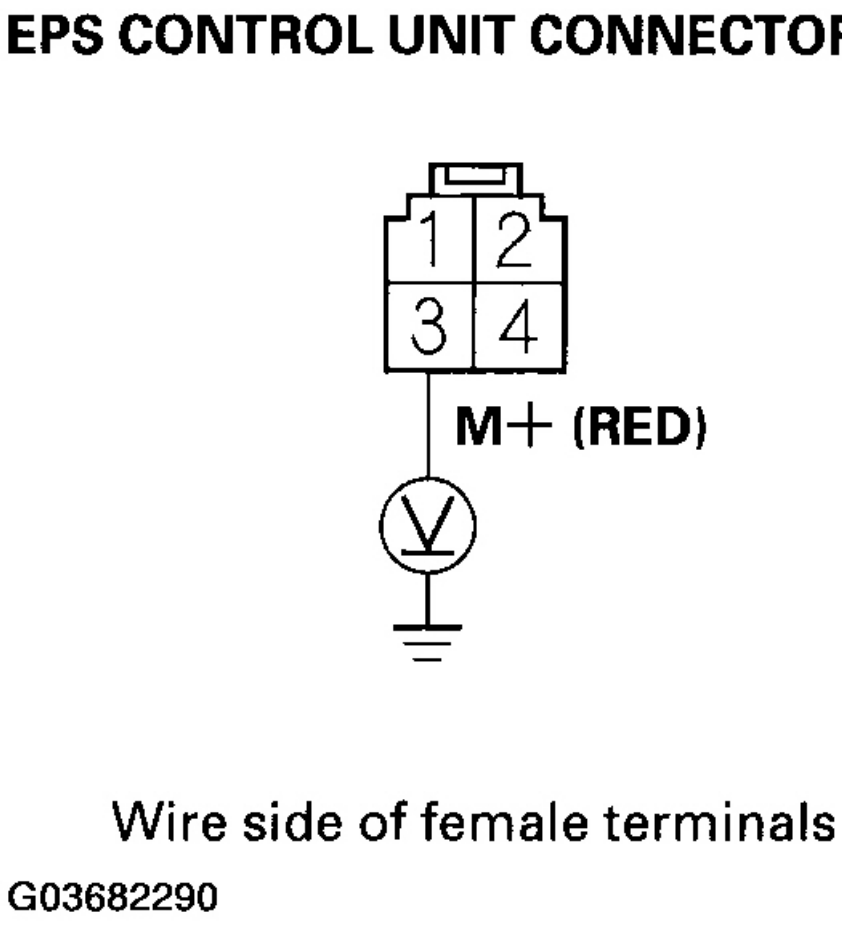

**Fig. 30: Identifying EPS Control Unit Connector**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage?*

**YES** -Repair short to power in the RED wire between the EPS control unit and power relay.

**NO** -Go to step 13.

13. Measure the voltage between the EPS control unit connector A (4P) terminal No. 1 and body ground.

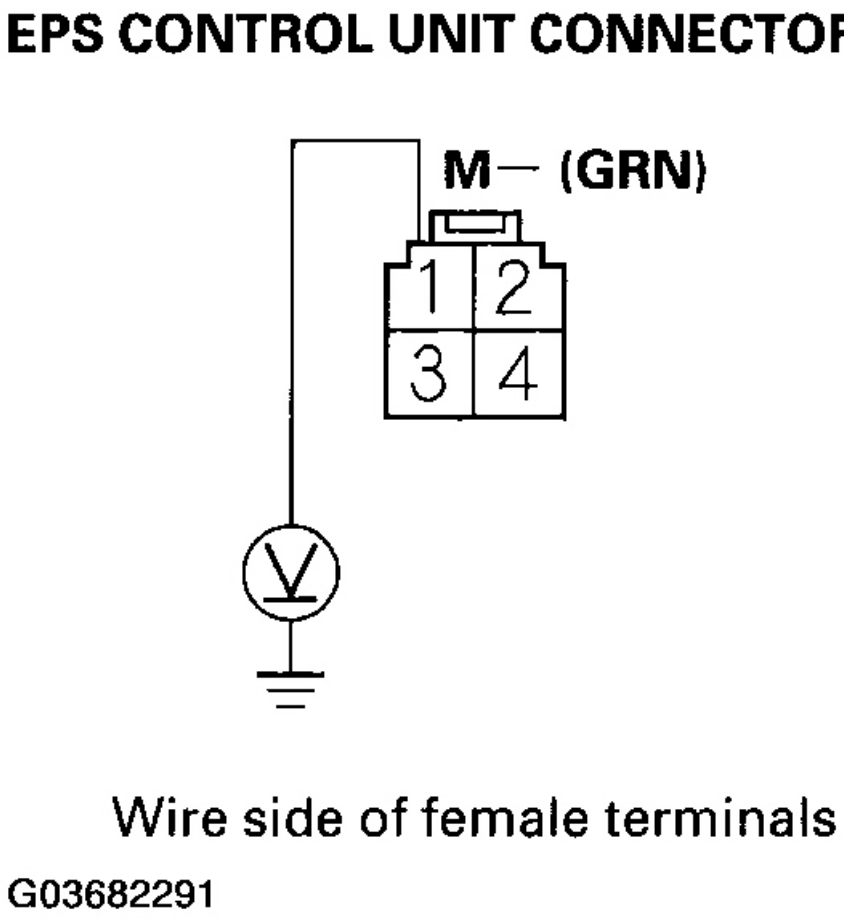


**Fig. 31: Measuring Voltage Between EPS Control Unit Connector A (4P)**

**Terminal No And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage?*

**YES** -Repair short to power in the GRN wire between the EPS control unit and motor.

**NO** -Go to step 14.

14. Measure the voltage between the power relay 4P connector terminal No. 1 and body ground.

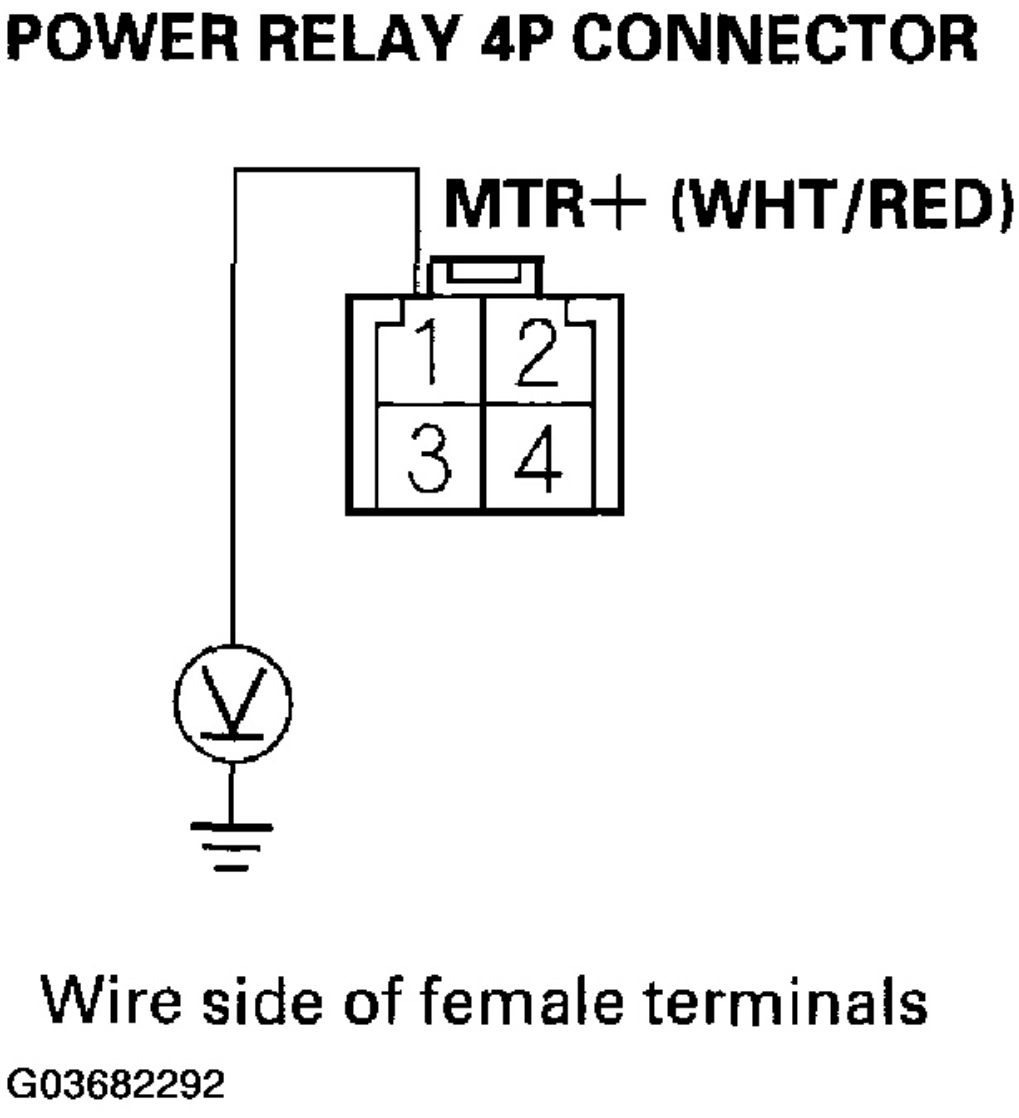


**Fig. 32: Measuring Voltage Between Power Relay 4P Connector Terminal No And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage?*

**YES** -Repair short to power in the WHT/RED wire between the power relay and motor.

**NO** -Go to step 15.

15. Turn the ignition switch is OFF.
16. Check for loose terminals or poor connections. If the connections are good, substitute a known-good EPS control unit, and connect the all disconnected connectors.
17. Start the engine.

*Does the EPS indicator come on?*

**YES** -Go to step 18.

**NO** -Check for poor connections or loose terminals at the EPS control unit. If necessary, replace the EPS control unit and retest.

18. Stop the engine, and verify the DTC.

*Is DTC 41 indicated?*

**YES** -Check for poor connections or loose terminals at the EPS control unit, motor, and the power relay. If necessary, substitute a known-good steering gearbox and recheck.

**NO** -Do the appropriate troubleshooting for the code indicated.

**DTC 42, 45: MOTOR DRIVEN CURRENT**

1. Clear the DTC.
2. Start the engine.
3. Turn the steering wheel from lock-to-lock several times, and wait 10 seconds or more.

*Does the EPS indicator come on?*

**YES** -Go to step 4.

**NO** -Check for loose terminals or poor connections. If the connections are good, the system is OK at this time.

4. Stop the engine, and verify the DTC.

*Is DTC 42 or 45 indicated?*

**YES** -Go to step 5.

**NO** -Do the appropriate troubleshooting for the code indicated.

5. Make sure the ignition switch is OFF, then disconnect the EPS control unit A connector (4P), power relay 4P connector and motor connector (2P).
6. Check for continuity between the EPS control unit connector A (4P) terminal No. 3 and body ground.

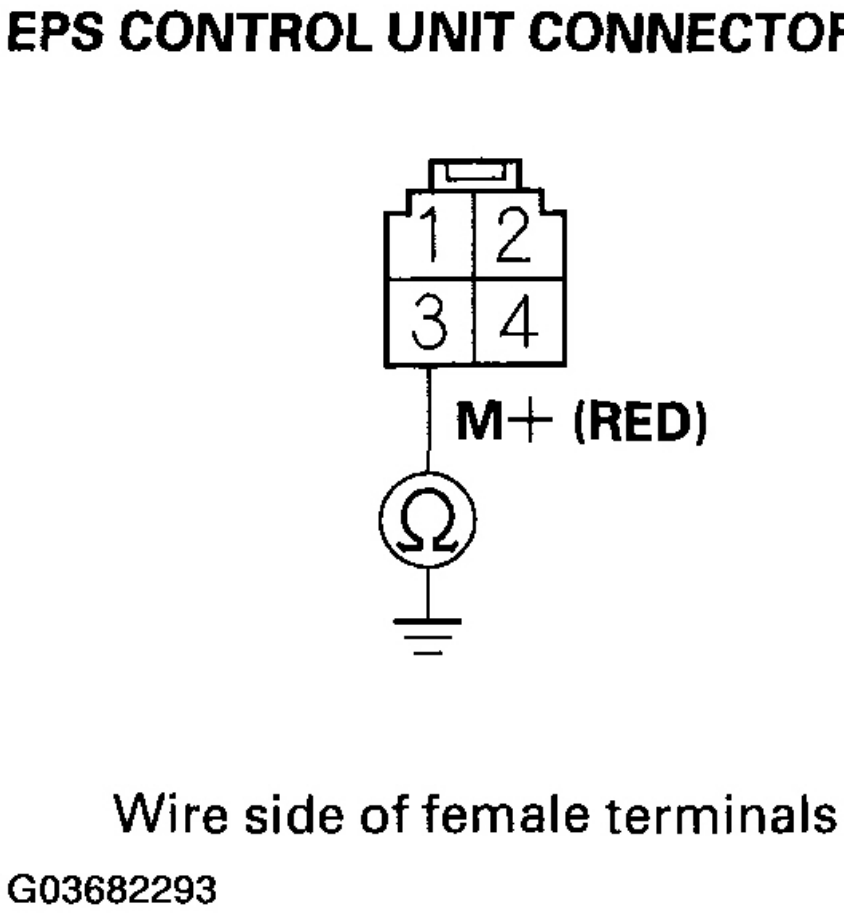


**Fig. 33: Checking Continuity EPS Control Unit Connector A (4P) Terminal And Body Ground**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short to body ground in the RED wire between the EPS control unit and power relay.

**NO** -Go to step 7.

7. Check for continuity between the power relay 4P connector terminal No. 1 and body ground.

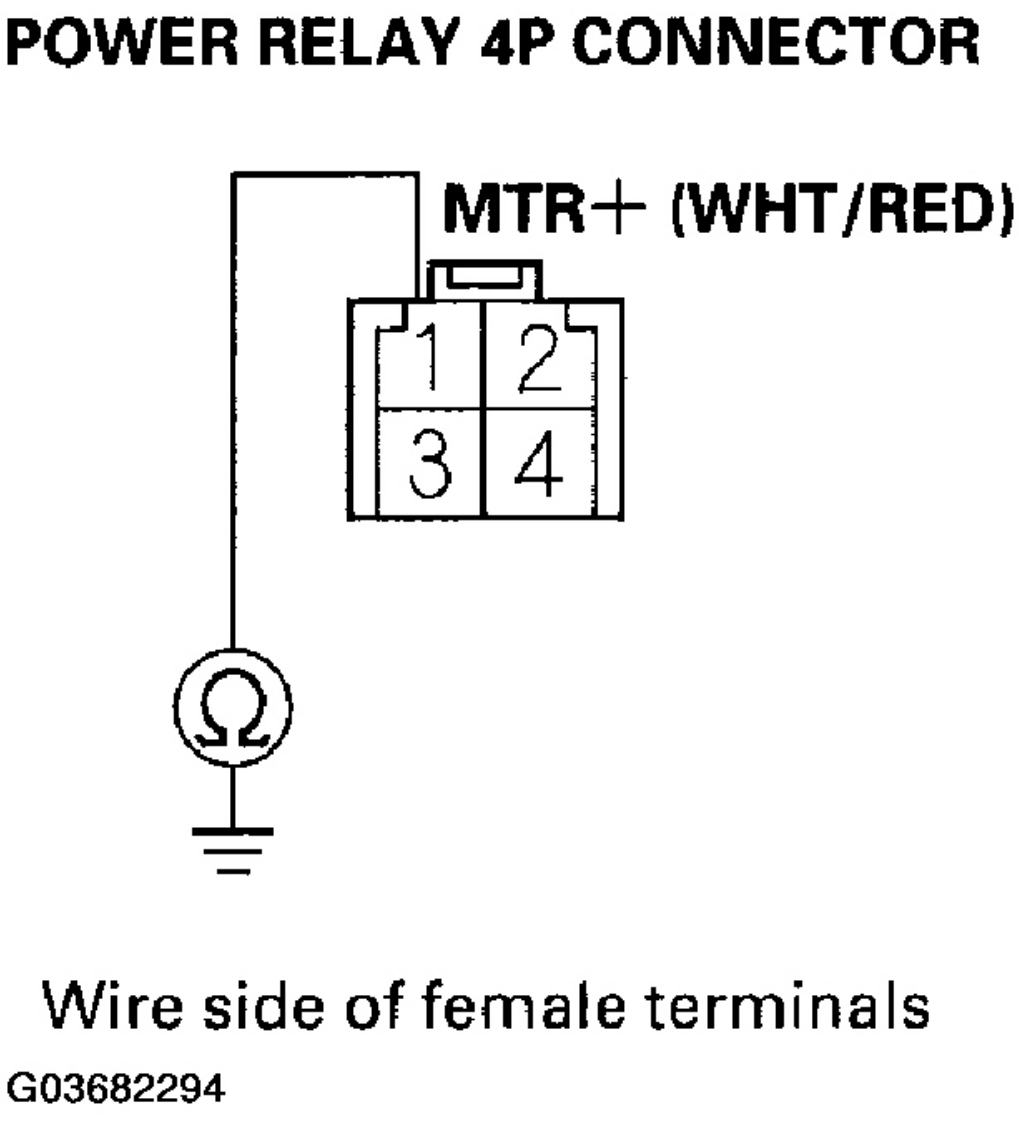


**Fig. 34: Checking Continuity Between Power Relay 4P Connector Terminal No And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short to body ground in the WHT/RED wire between the motor and power relay.

**NO** -Go to step 8.

8. Check for continuity between the EPS control unit connector A (4P) terminal No. 1 and body ground.

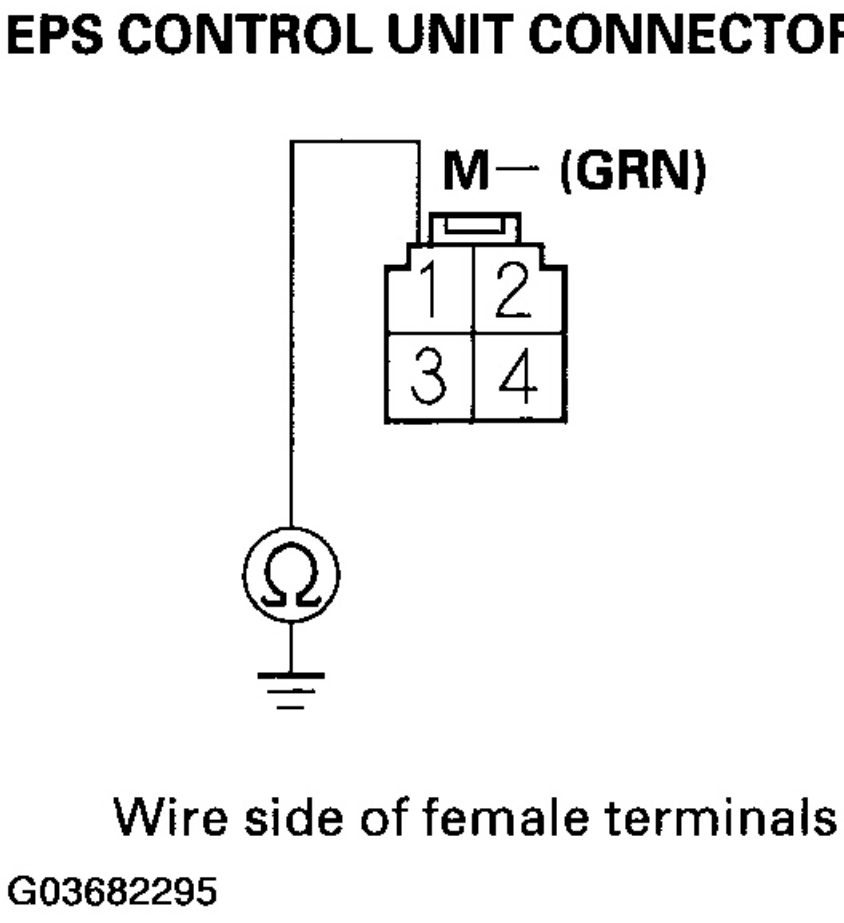


**Fig. 35: Checking Continuity Between EPS Control Unit Connector A (4P) Terminal And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short to body ground in the GRN wire between the EPS control unit and motor.

**NO** -Go to step 9.

9. Check for continuity between the EPS control unit connector A (4P) terminal No. 1 and No. 3.

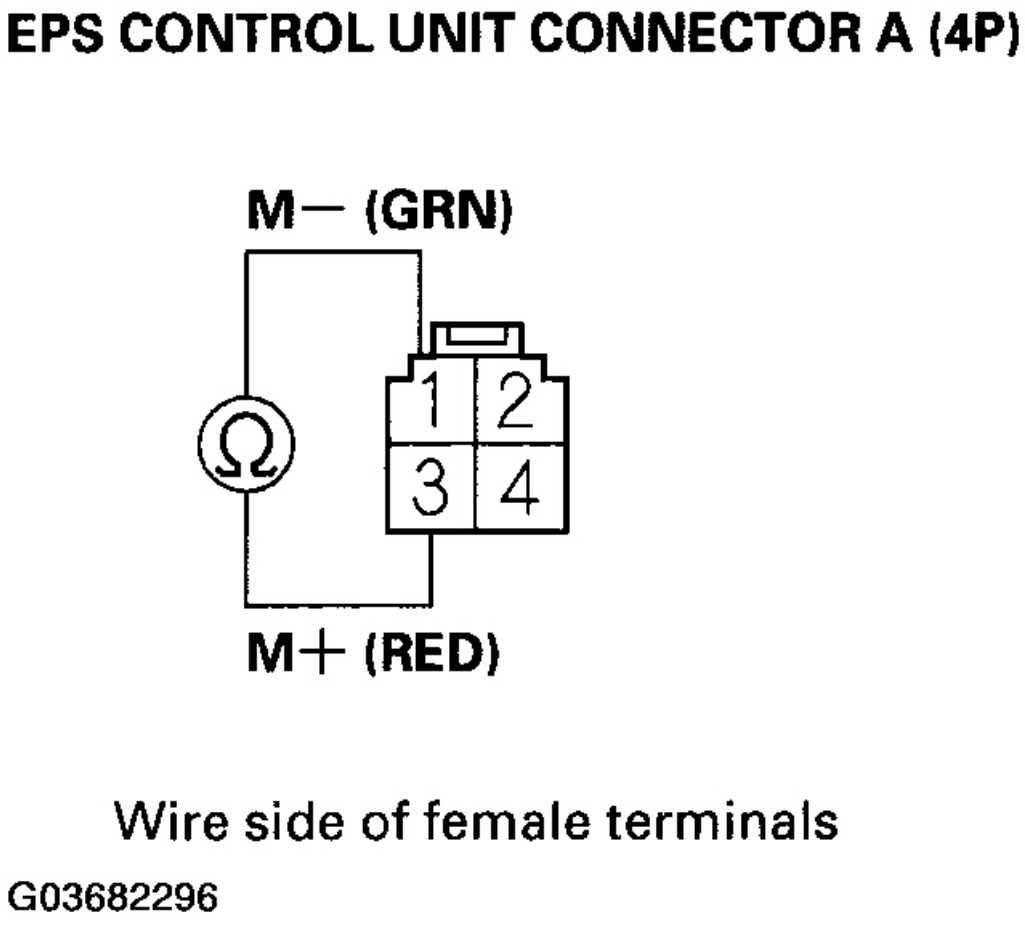


**Fig. 36: Checking Continuity Between EPS Control Unit Connector A (4P) Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short between the RED and GRN wires in the motor circuit

between the EPS control unit and motor.

**NO** -Go to step 10.

10. Check for continuity between the EPS control unit connector A (4P) terminal No. 3 and the power relay 4P connector terminal No. 1.

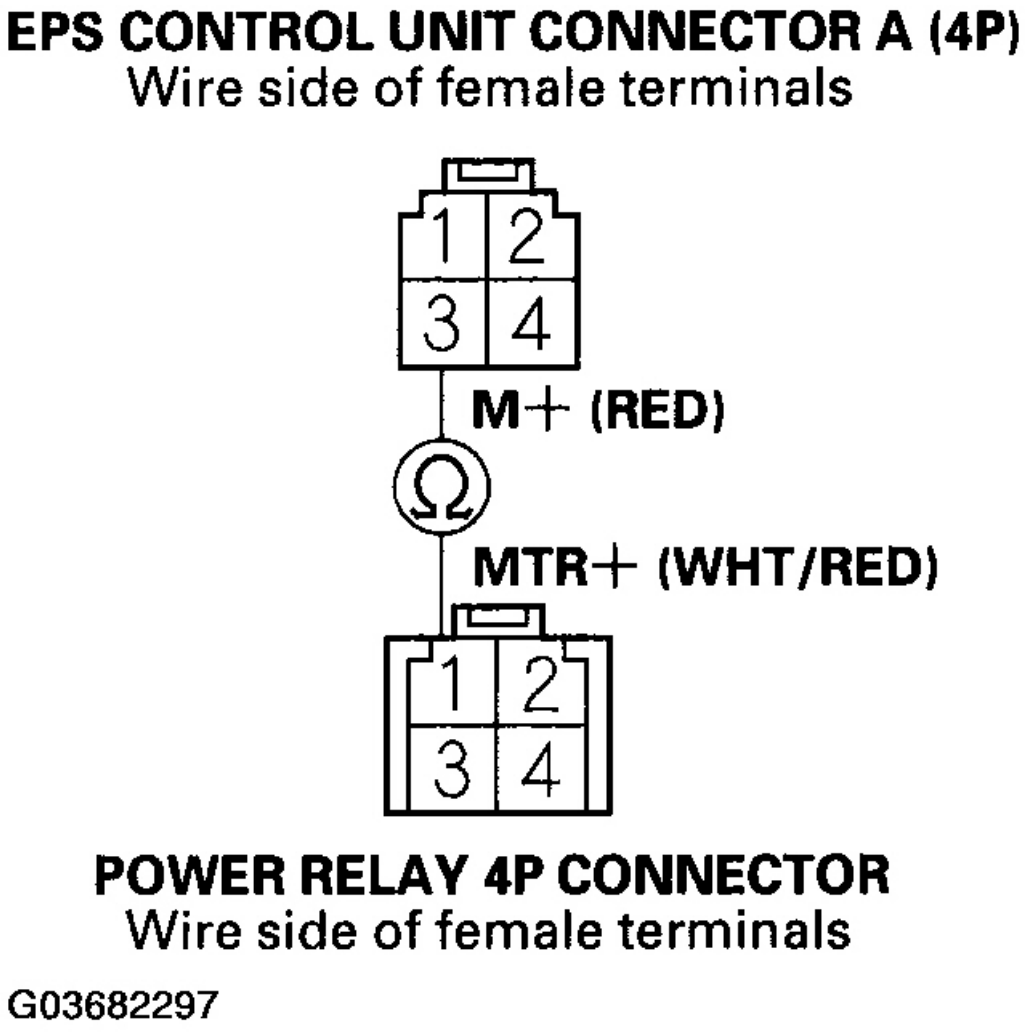


**Fig. 37: Checking Continuity Between EPS Control Unit Connector A (4P) Terminal**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short between the RED and WHT/RED wires in the motor circuit between the EPS control unit and motor.

**NO** -Go to step 11.

11. Check for continuity between the EPS control unit connector A (4P) terminal No. 1 and the power relay 4P connector terminal No. 1.

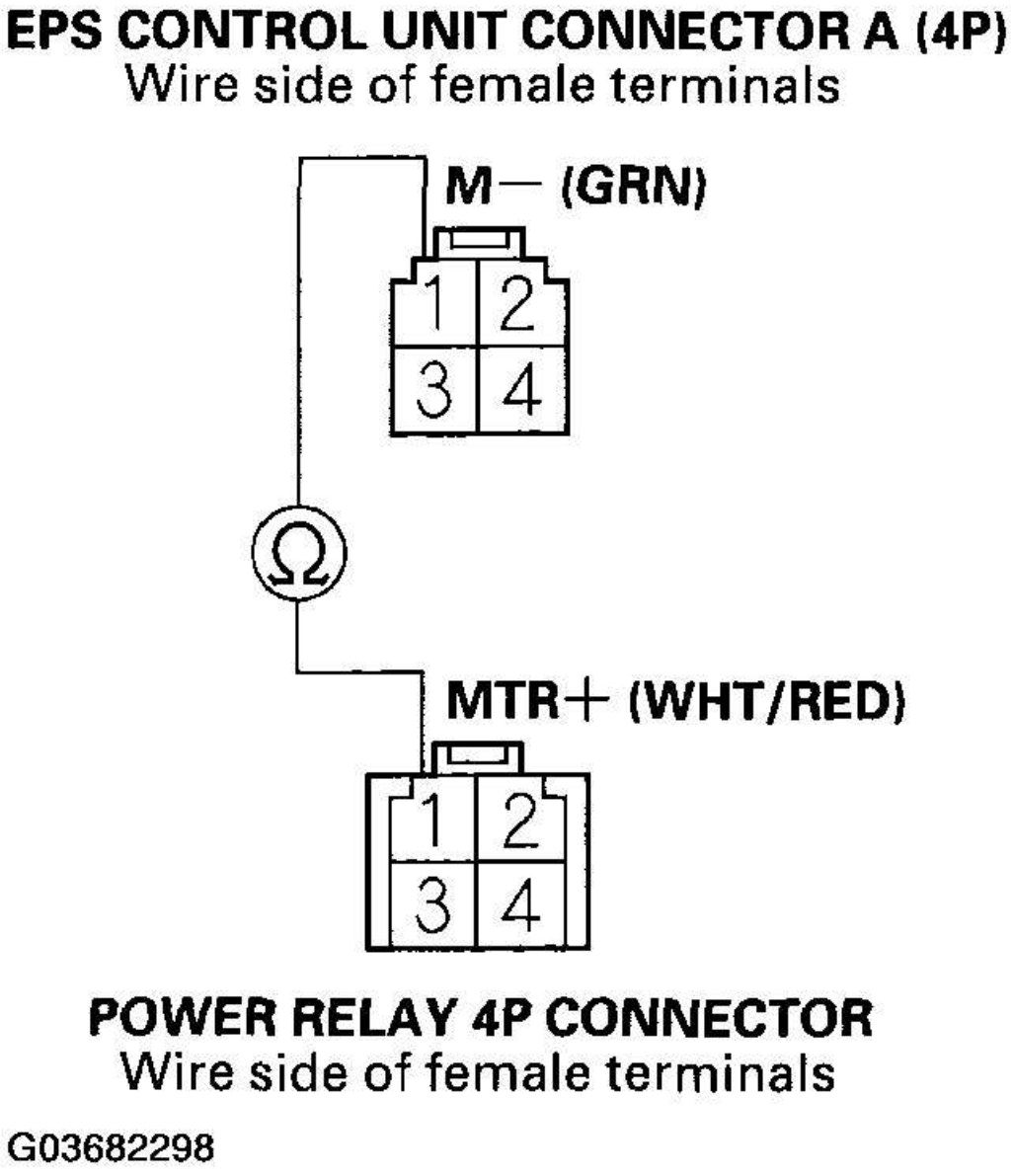


**Fig. 38: Checking Continuity Between EPS Control Unit Connector A (4P) Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Repair short between the GRN and WHT/RED wires in the motor circuit between the EPS control unit and motor.

**NO** -Go to step 12.

12. Turn the ignition switch ON (II), and measure the voltage between the EPS control unit connector A (4P) terminal No. 3 and body ground.

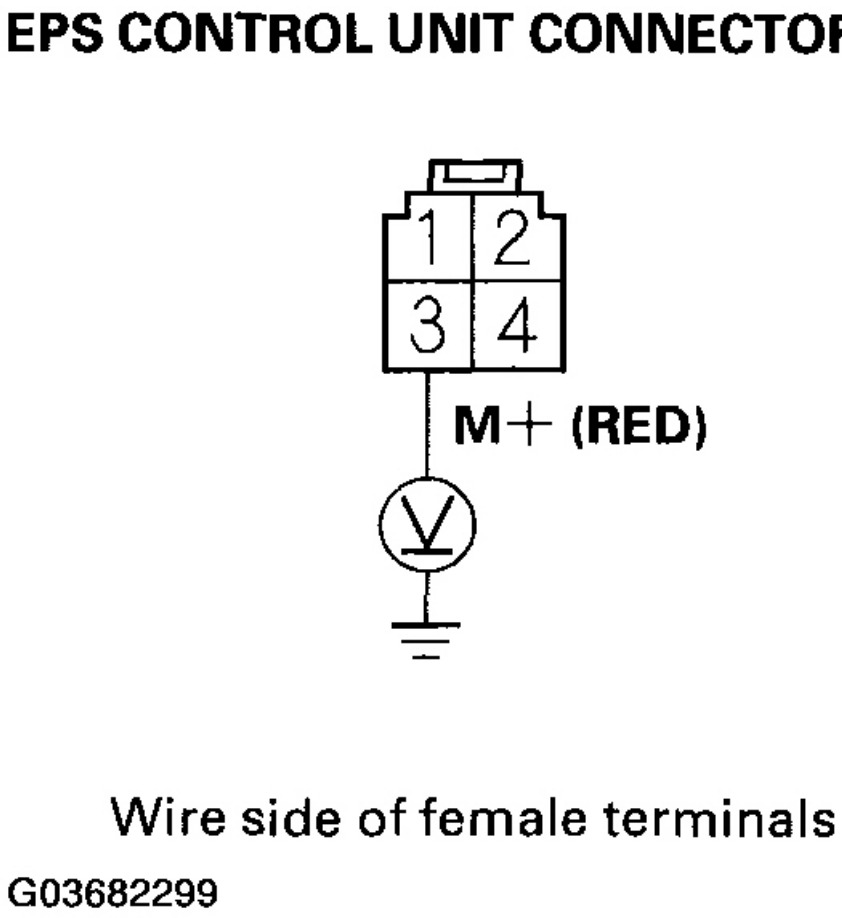


**Fig. 39: Identifying EPS Control Unit Connector**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage?*

**YES** -Repair short to power in the (+) circuit wire between the EPS control unit and power relay.

**NO** -Go to step 13.

13. Measure the voltage between the EPS control unit connector A (4P) terminal No. 1 and body ground.

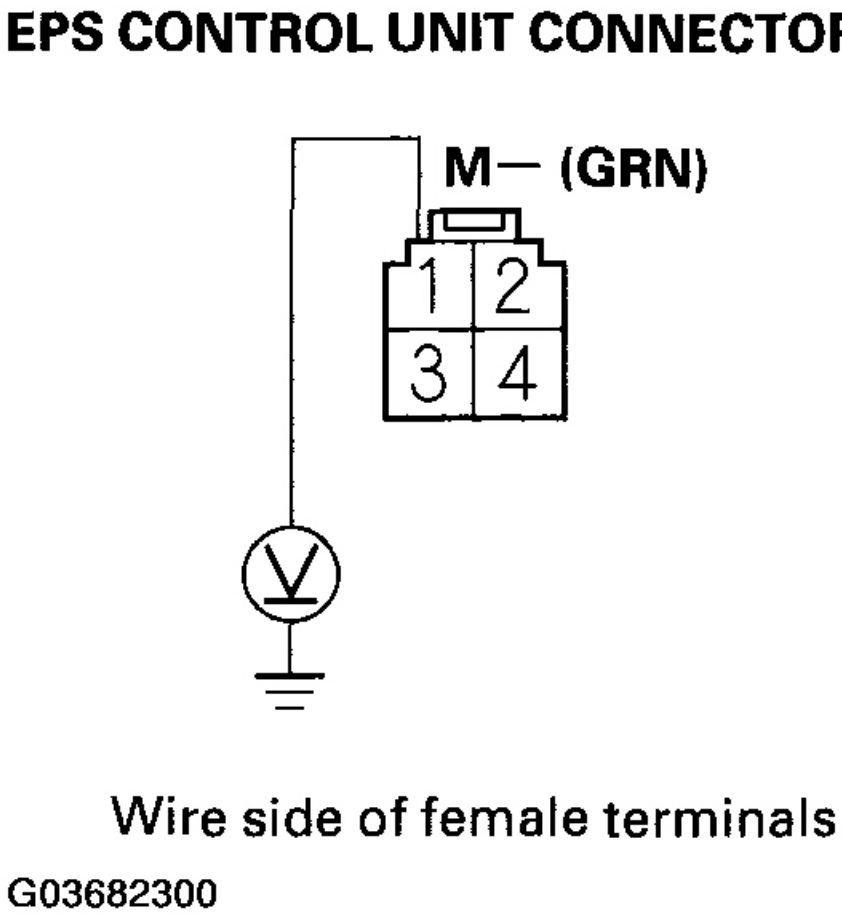


**Fig. 40: Measuring Voltage Between EPS Control Unit Connector A (4P) Terminal And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage?*

**YES** -Repair short to power in the (+) circuit wire between the EPS control unit and motor.

**NO** -Go to step 14.

14. Measure the voltage between the power relay 4P connector terminal No. 1 and body ground.

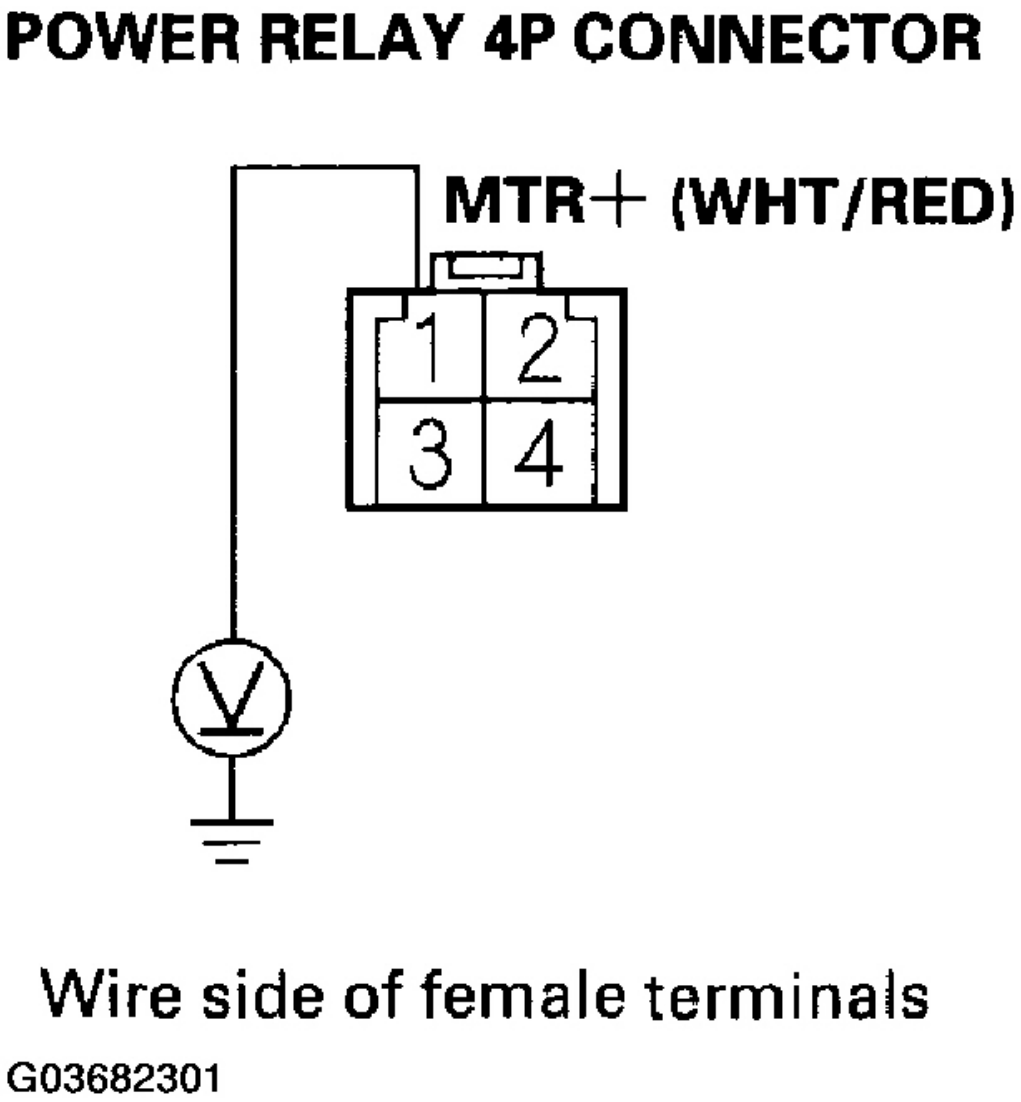


**Fig. 41: Measuring Voltage Between Power Relay 4P Connector Terminal**

**And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage?*

**YES** -Repair short to power in the (+) circuit wire between the power relay and motor.

**NO** -Go to step 15.

15. Turn the ignition switch OFF and check for continuity between the EPS control unit connector A (4P) terminal No. 3 and the power relay 4P connector terminal No. 3.

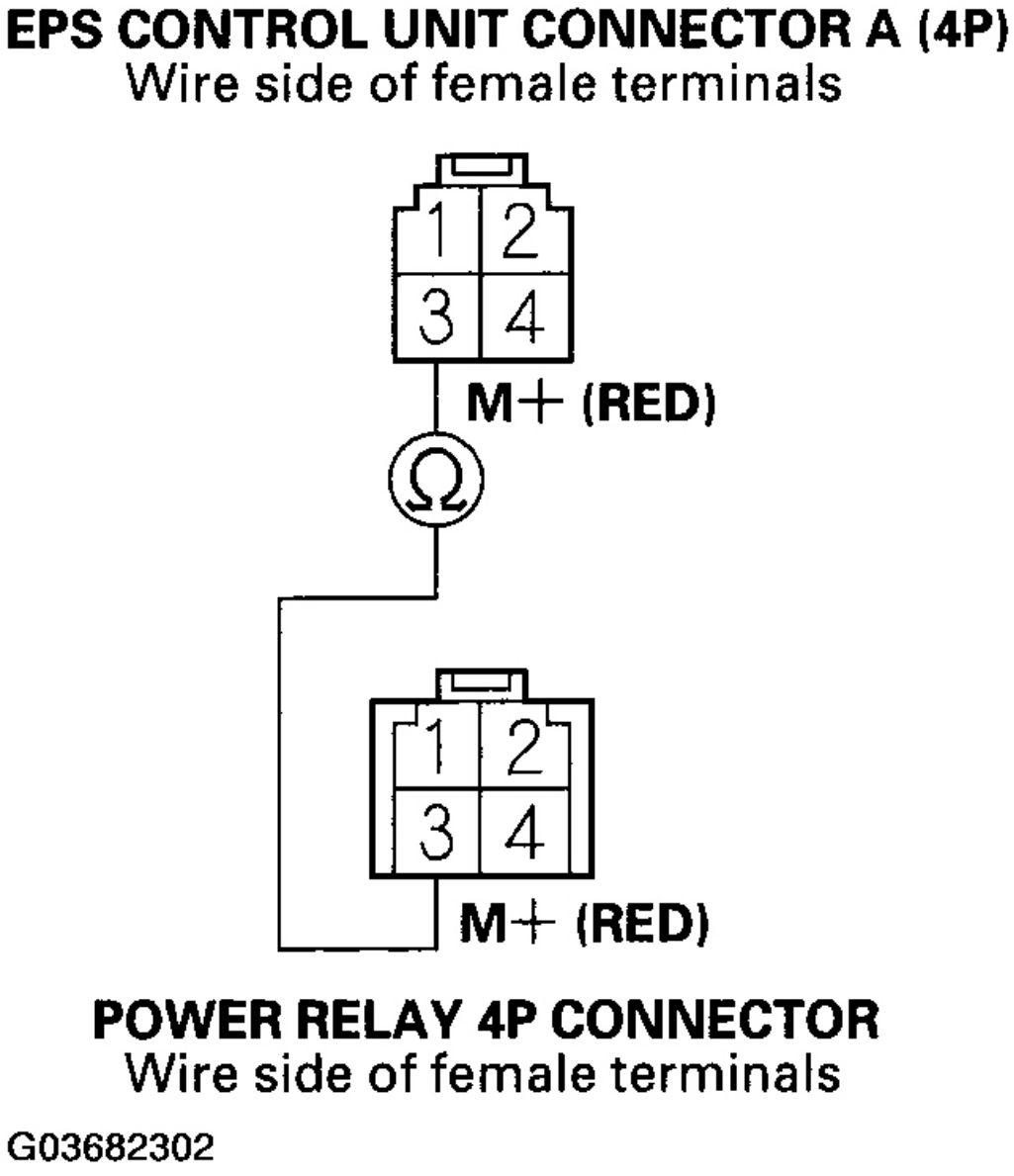


**Fig. 42: Checking Continuity Between EPS Control Unit Connector A (4P) Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Go to step 16.

**NO** -Repair open in the RED wire between the EPS control unit and motor.

16. Check for continuity between the power relay 4P connector terminal No. 1 and the motor connector (2P) terminal No. 1.

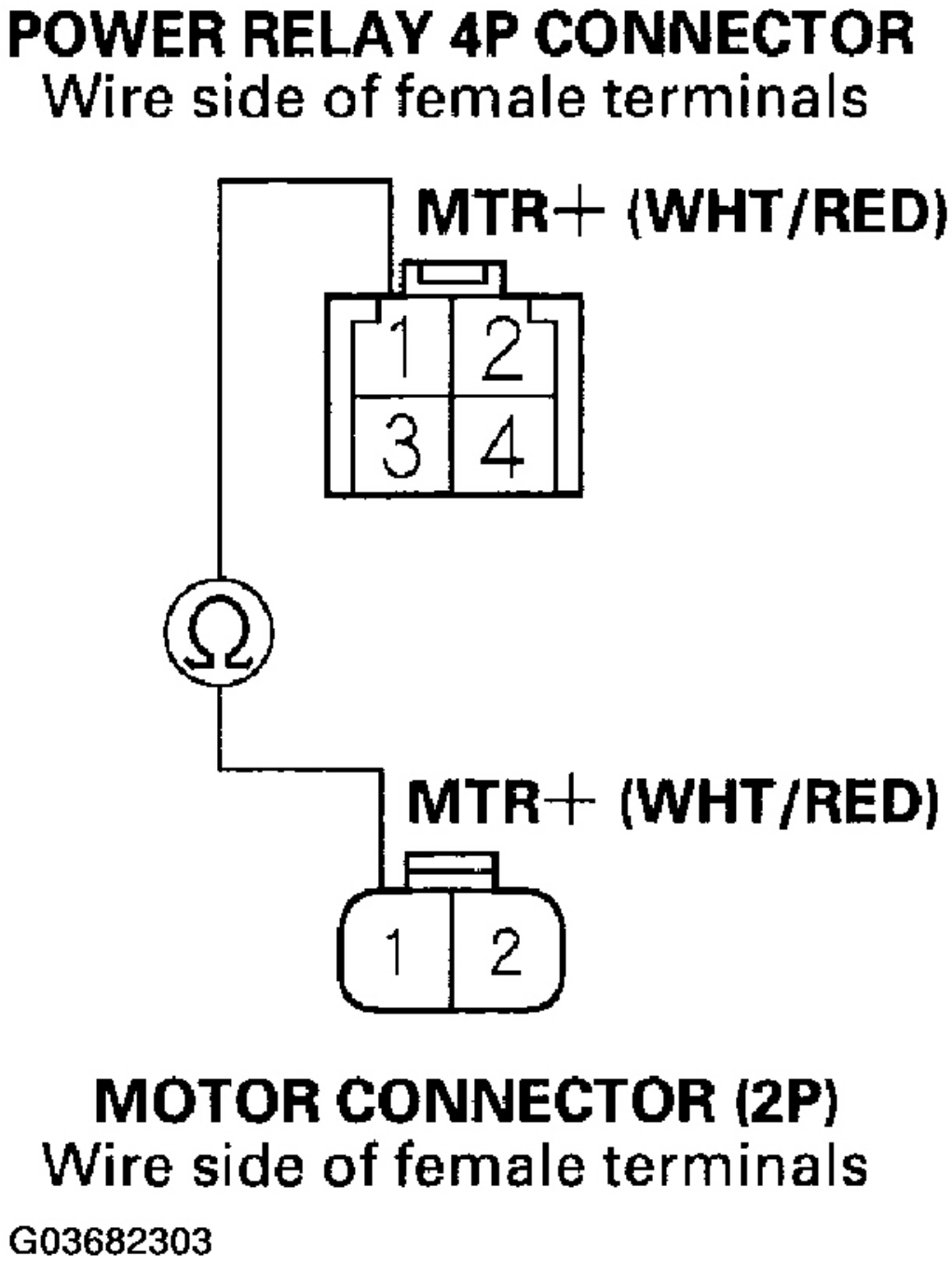


**Fig. 43: Checking Continuity Between Power Relay 4P Connector Terminal**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Go to step 17.

**NO** -Repair open in the WHT/RED wire between the motor and power relay.

17. Check for continuity between the EPS control unit connector A (4P) terminal No. 1 and the motor connector (2P) terminal No. 2.

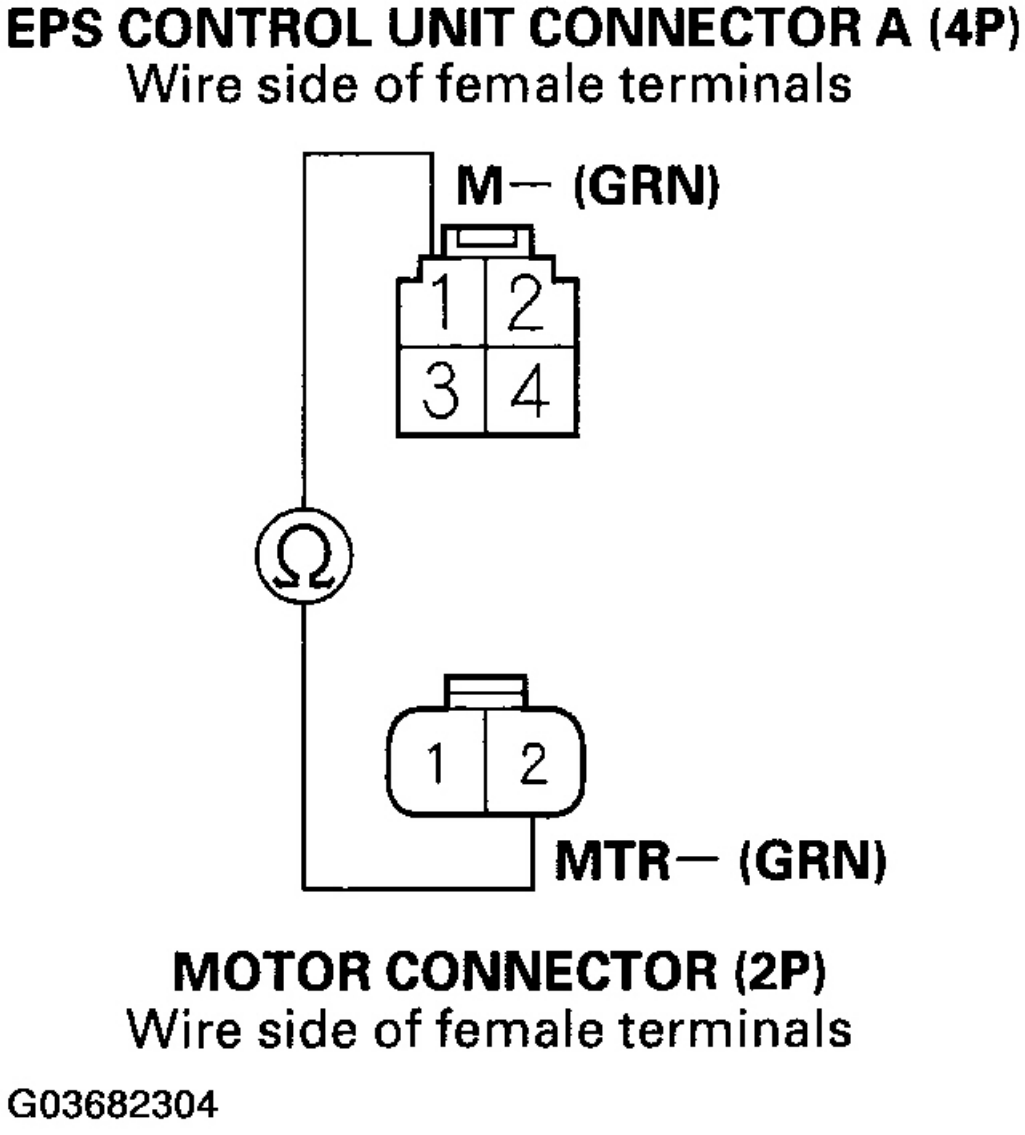


**Fig. 44: Checking Continuity Between EPS Control Unit Connector A (4P) Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity?*

**YES** -Go to step 18.

**NO** -Repair open in the GRN wire between the EPS control unit and motor.

18. Substitute a known-good EPS control unit, and connect the all disconnected connectors.
19. Start the engine.

*Does the EPS indicator come on?*

**YES** -Go to step 20.

**NO** -Check for poor connections or loose terminals at the EPS control unit. If necessary, replace the EPS control unit and retest.

20. Stop the engine, and verify the DTC.

*Is DTC 42 or 45 indicated?*

**YES** -Check for poor connections or loose terminals at the EPS control unit, motor, and the power relay. If necessary, substitute a known-good steering gearbox and recheck.

**NO** -Do the appropriate troubleshooting for the code indicated.

**DTC 43: MOTOR DRIVEN CURRENT IS EXCESSIVELY HIGH**

1. Clear the DTC.
2. Start the engine.
3. Turn the steering wheel from lock-to-lock several times, and wait 10 seconds or more.

*Does the EPS indicator come on?*

**YES** -Go to step 4.

**NO** -Check for loose terminals or poor connections. If the connections are good, the system is OK at this time.

4. Stop the engine, and verify the DTC.

*Is DTC 43 indicated?*

**YES** -Go to step 5.

**NO** -Do the appropriate troubleshooting for the code indicated.

5. Make sure the ignition switch is OFF, then disconnect the EPS control unit connector A (4P), the power relay 4P connector, and the motor connector (2P).
6. Turn the ignition switch ON (II).
7. Measure the voltage between the EPS control unit connector A (4P) terminal No. 3 and body ground.

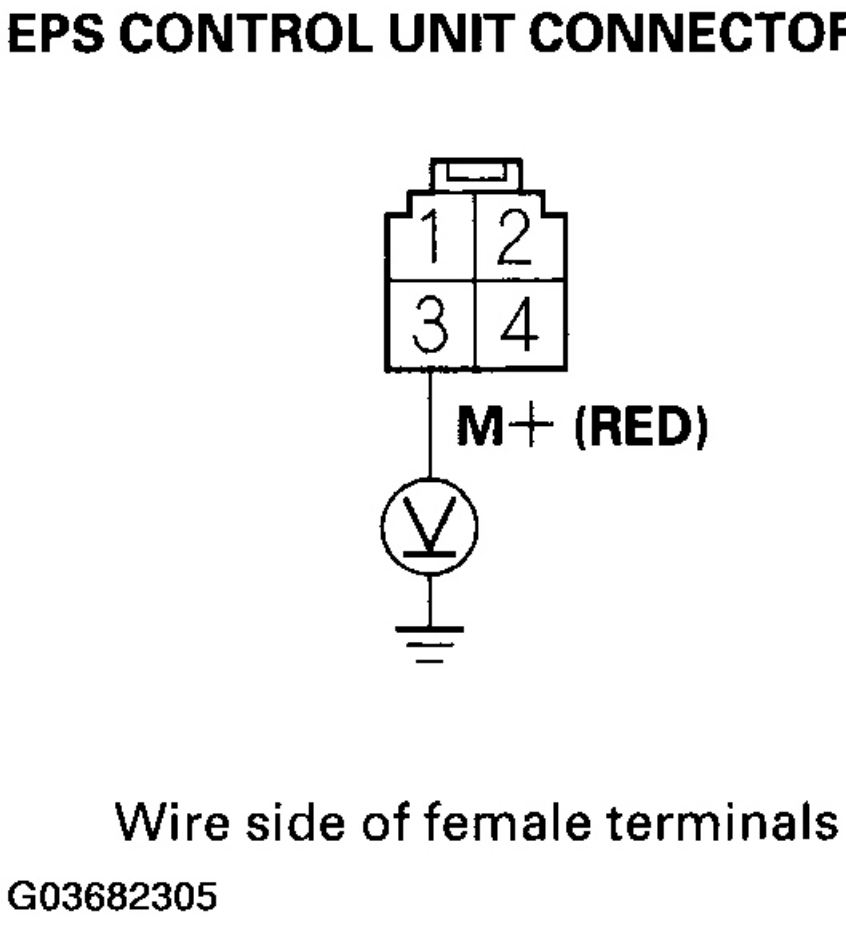


**Fig. 45: Measuring Voltage Between EPS Control Unit Connector A (4P) Terminal No. 3 And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage?*

**YES** -Repair short to power in the (+) circuit wire between the EPS control unit and power relay.

**NO** -Go to step 8.

8. Measure the voltage between the EPS control unit connector A (4P) terminal No. 1 and body ground.

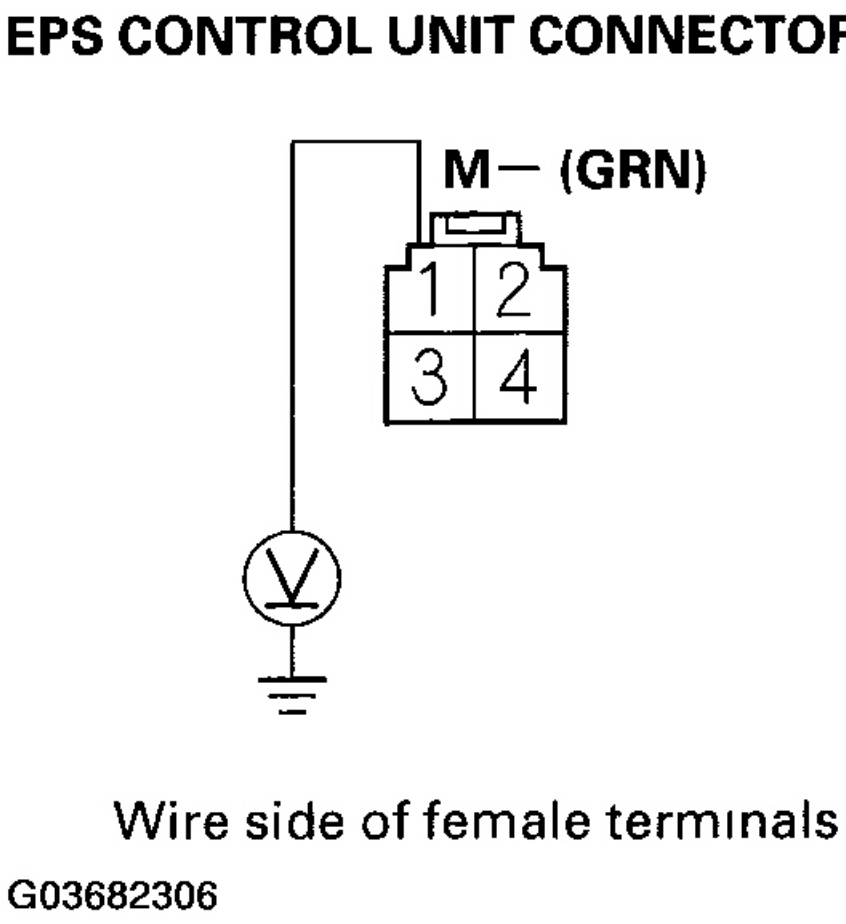


**Fig. 46: Measuring Voltage Between EPS Control Unit Connector A (4P) Terminal No And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage?*

**YES** -Repair short to power in the - circuit wire between the EPS control unit and motor.

**NO** -Go to step 9.

9. Measure the voltage between the power relay 4P connector terminal No. 1 and body ground.

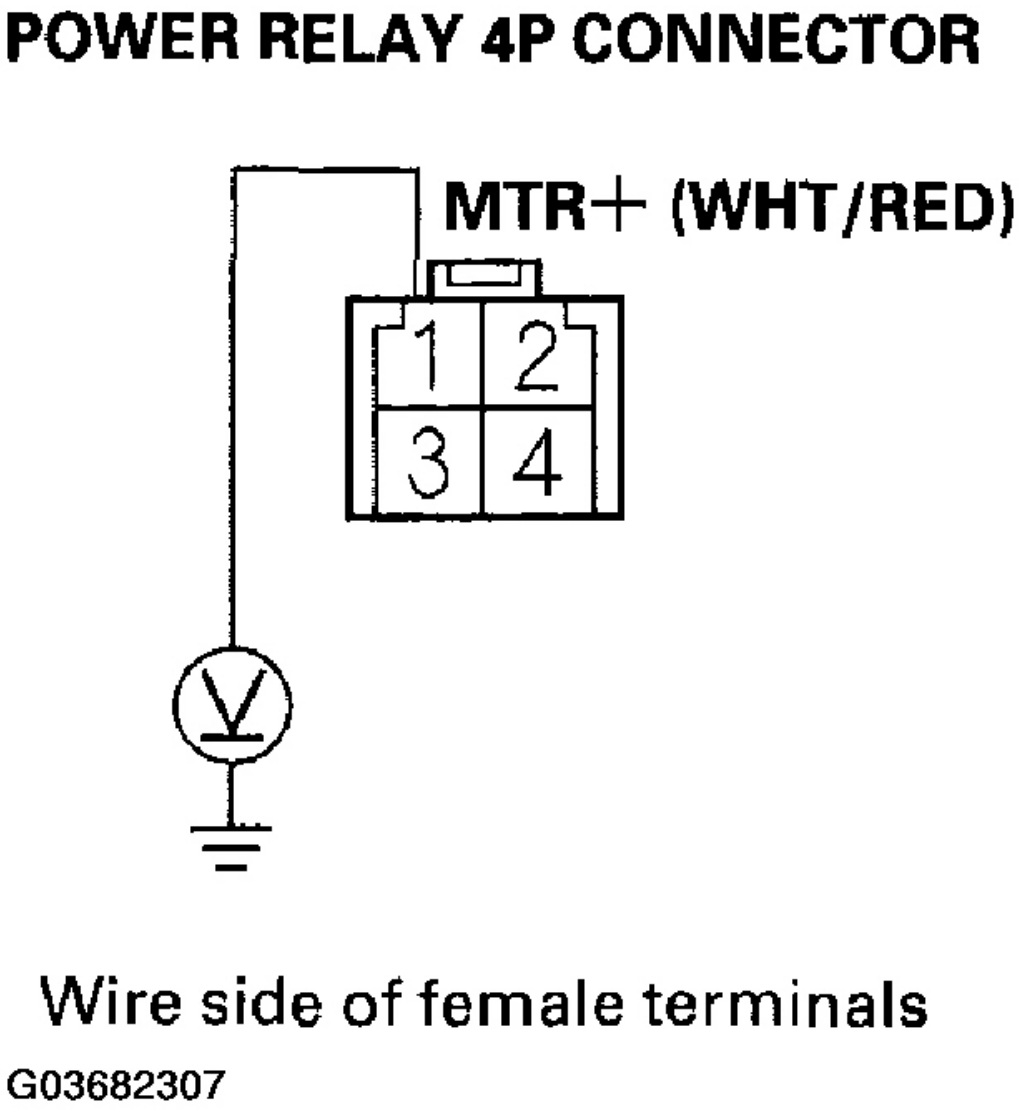


**Fig. 47: Measuring Voltage Between Power Relay 4P Connector Terminal No And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage ?*

**YES** -Repair short to power in the (+) circuit wire between the power relay and motor.

**NO** -Go to step 10.

10. Turn the ignition switch is OFF.
11. Check for continuity between the EPS control unit connector A (4P) terminal No. 1 and No. 3.

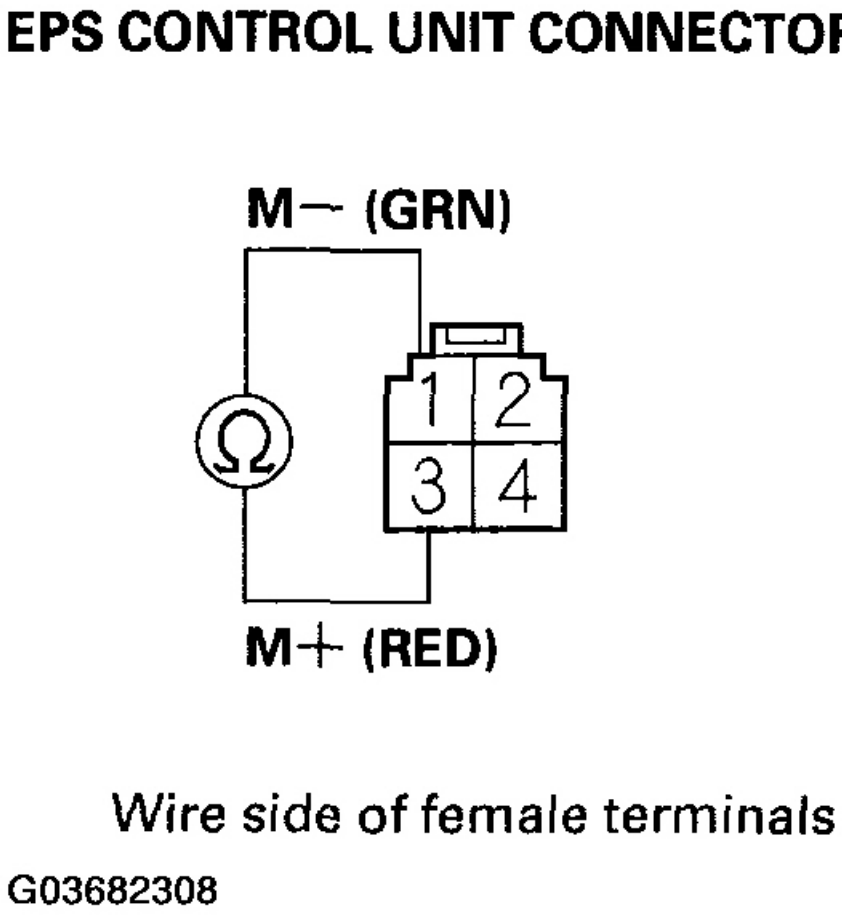


**Fig. 48: Checking Continuity Between EPS Control Unit Connector A (4P) Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity ?*

**YES** -Repair short between the GRN and RED wires in the motor circuit between the EPS control unit and motor.

**NO** -Go to step 12.

12. Check for continuity between the EPS control unit connector A (4P) terminal No. 3 and the power relay 4P connector terminal No. 1.

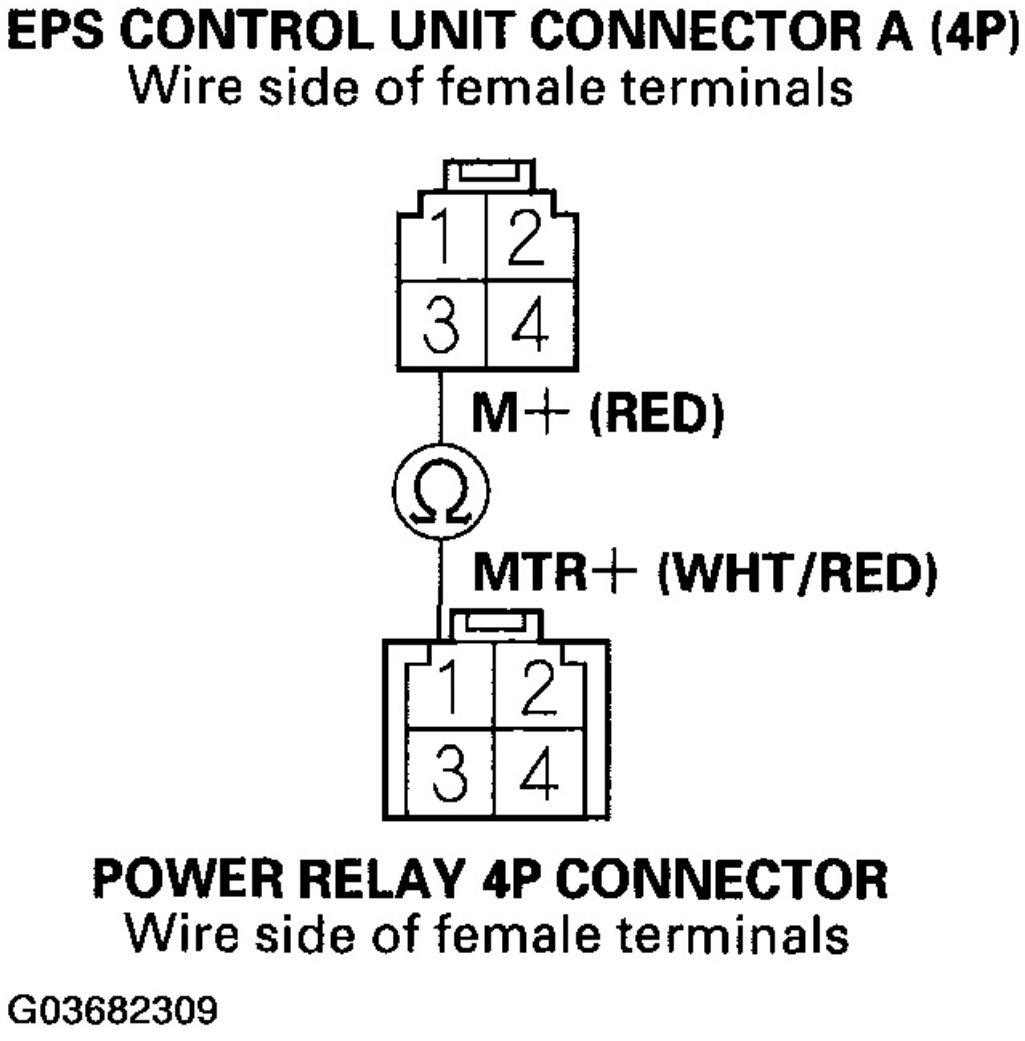


**Fig. 49: Checking Continuity Between EPS Control Unit Connector A (4P) Terminal**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity ?*

**YES** -Repair short between the RED and WHT/RED wires in the motor circuit between the EPS control unit and motor.

**NO** -Go to step 13.

13. Check for continuity between the EPS control unit connector A (4P) terminal No. 1 and the power relay 4P connector terminal No. 1.

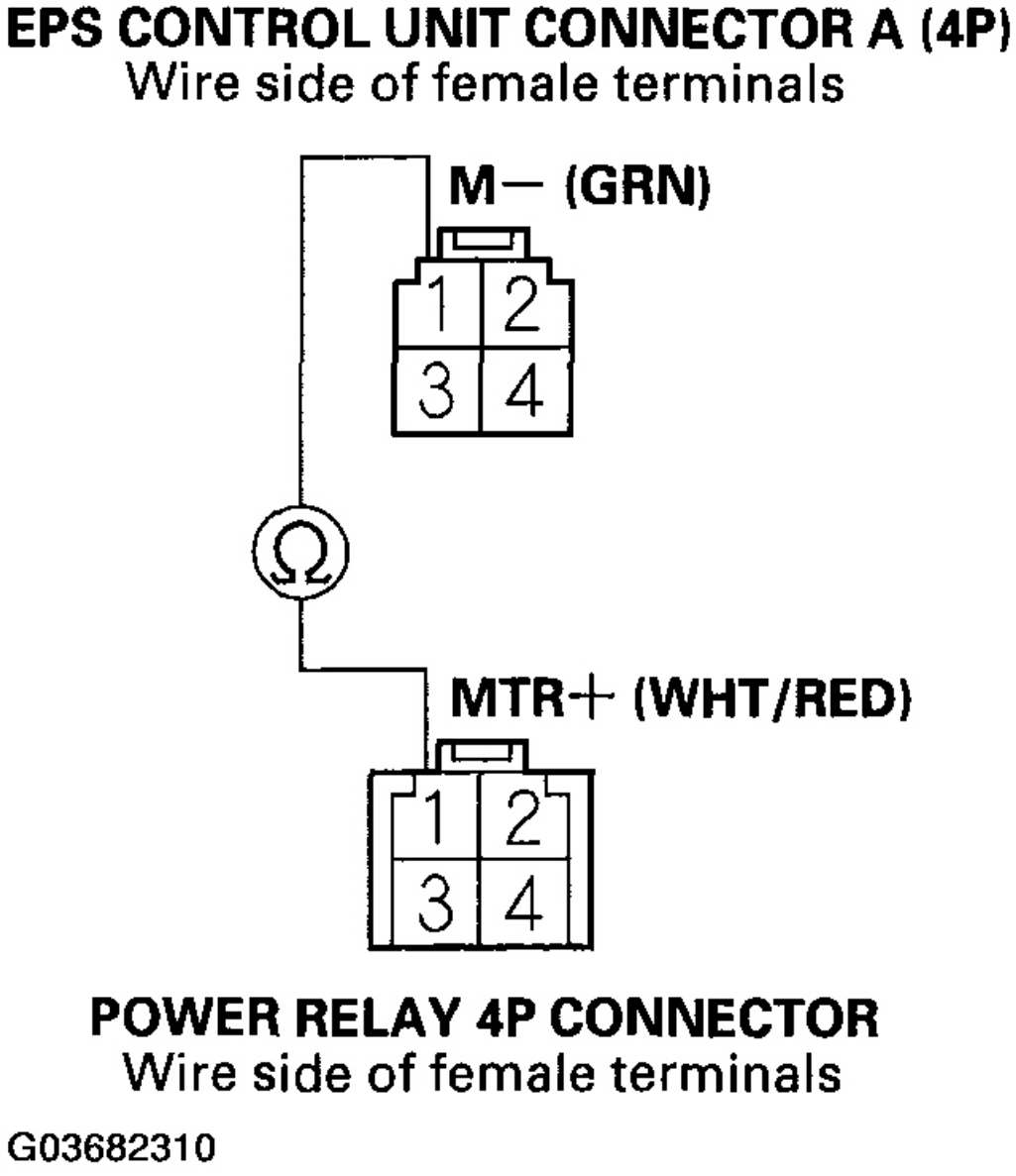


**Fig. 50: Checking Continuity Between EPS Control Unit Connector A (4P) Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity ?*

**YES** -Repair short between the GRN and WHT/RED wires in the motor circuit between the EPS control unit and motor.

**NO** -Go to step 14.

14. Substitute a known-good EPS control unit, and connect the all disconnected connectors.
15. Start the engine.

*Does the EPS indicator come on ?*

**YES** -Go to step 16.

**NO** -Check for poor connections or loose terminals at the EPS control unit. If necessary, replace the EPS control unit and retest.

16. Stop the engine, and verify the DTC.

*Is DTC 43 indicated ?*

**YES** -Check for poor connections or loose terminals at the EPS control unit, motor, and the power relay. If necessary, substitute a known-good steering gearbox and recheck.

**NO** -Do the appropriate troubleshooting for the code indicated.

**DTC 46,47: POWER RELAY STUCK ON OR STUCK OFF**

1. Clear the DTC.
2. Start the engine.

*Does the EPS indicator come on ?*

**YES** -Go to step 3.

**NO** -Check for loose terminals or poor connections. If the connections are good, the system is OK at this time.

3. Stop the engine, and verify the DTC.

*Is DTC 46 or 47 indicated ?*

**YES** -Go to step 4.

**NO** -Do the appropriate troubleshooting for the code indicated.

4. Make sure the ignition switch is OFF, then remove the power relay and test it (see **POWER RELAY TEST** ).

   *Is the relay OK ?*

   **YES** -With the power relay removed, go to step 5.

   **NO** -Replace the power relay.

5. Disconnect the EPS control unit connector A (4P).
6. Check for continuity between the EPS control unit connector A (4P) terminal No. 3 and the power relay 4P connector terminal No. 3.

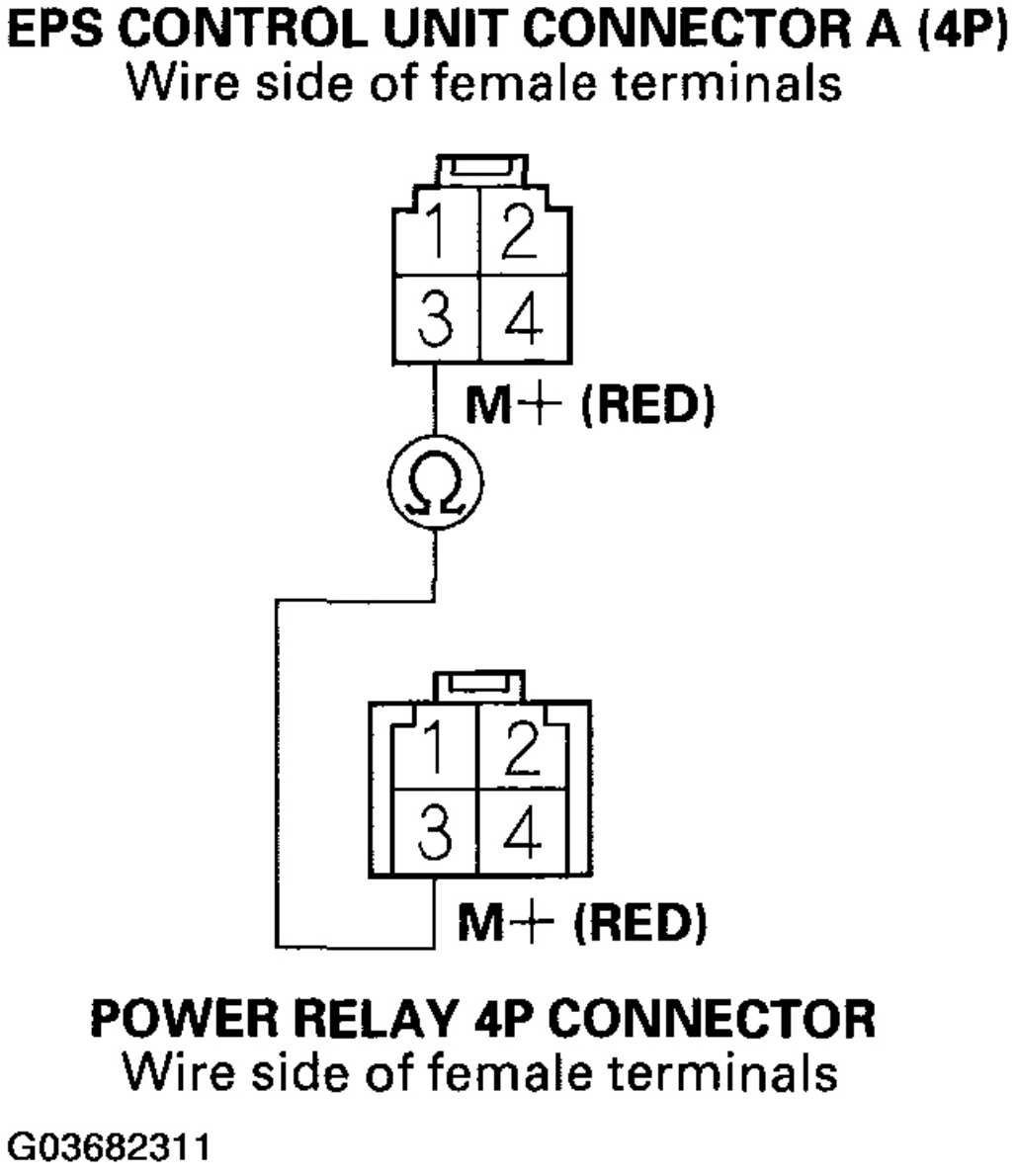


**Fig. 51: Checking Continuity Between EPS Control Unit Connector A (4P) Terminal No And Power Relay 4P Connector Terminal**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity ?*

**YES** -Go to step 7.

**NO** -Repair open in the RED wire between the EPS control unit and power relay.

7. Disconnect the motor connector (2P).
8. Check for continuity between the power relay 4P connector terminal No. 1 and motor connector (2P) terminal No. 1.

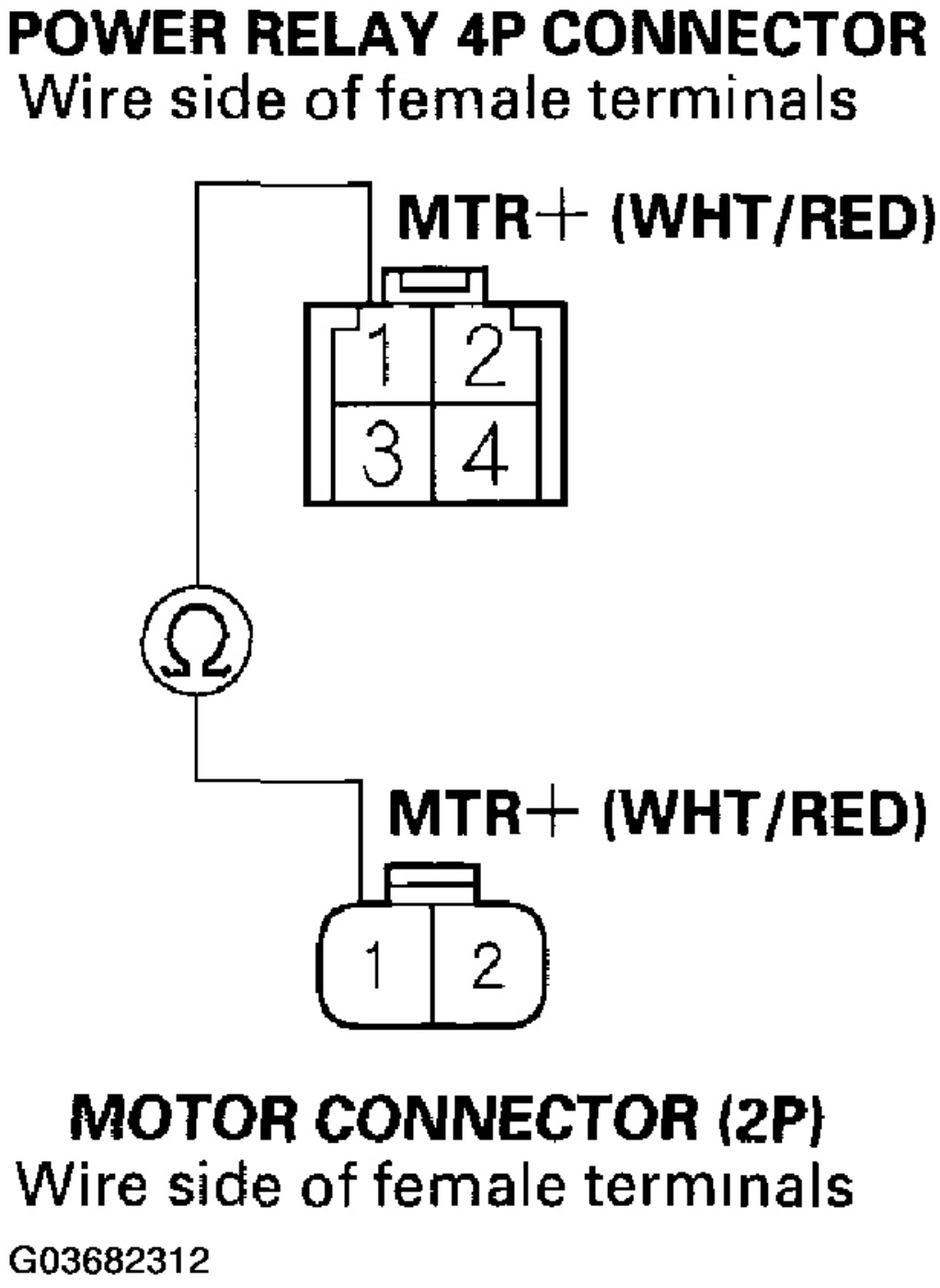


**Fig. 52: Disconnecting Motor Connector (2P)**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity ?*

**YES** -Go to step 9.

**NO** -Repair open in the WHT/RED wire between the motor and power relay.

9. Turn the ignition switch ON (II).
10. Measure the voltage between the power relay 4P connector terminal No. 1 and body ground.

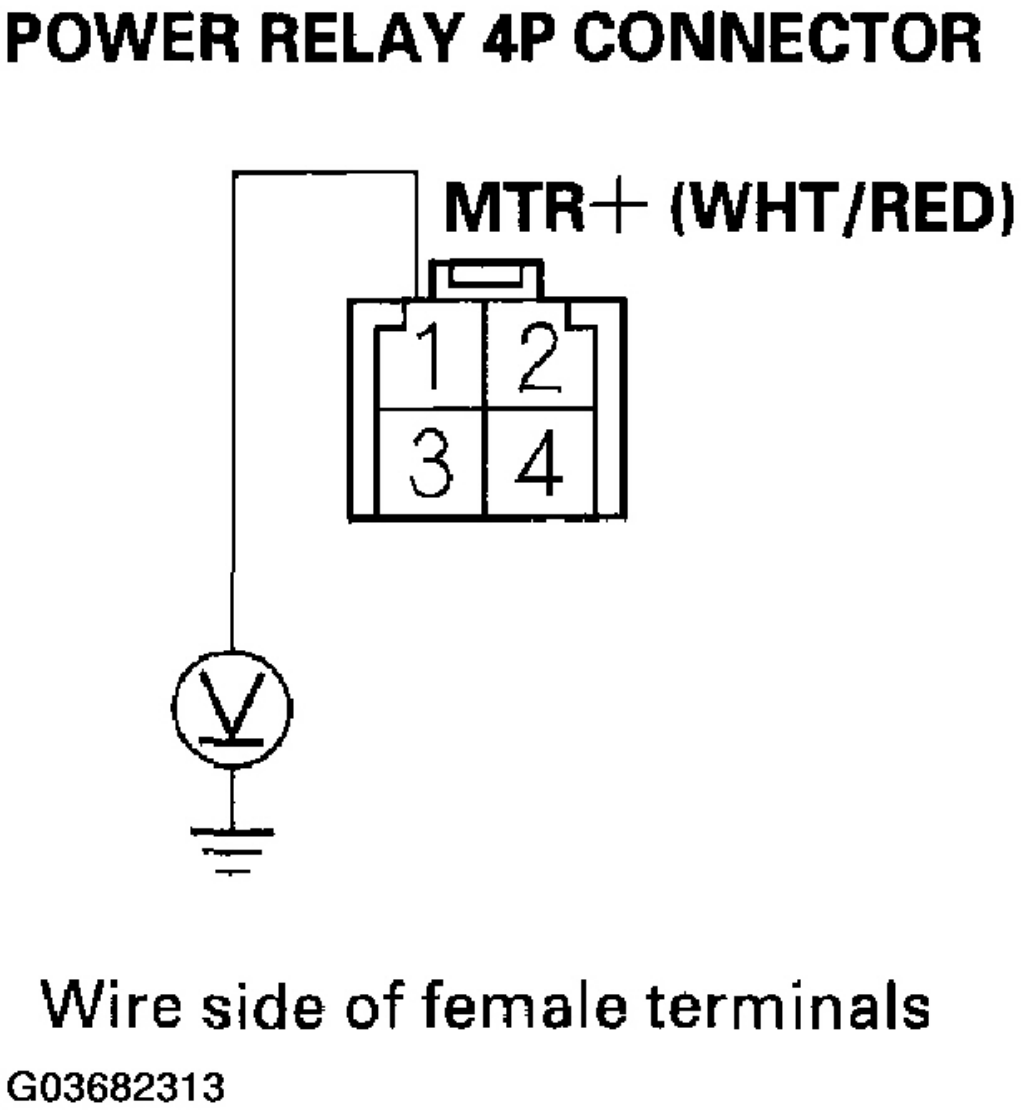


**Fig. 53: Measuring Voltage Between Power Relay 4P Connector Terminal No And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage ?*

**YES** -Repair short to power in the WHT/RED wire between the power

relay and motor.

**NO** -Go to step 11.

11. Measure the voltage between the power relay 4P connector terminal No. 3 and body ground.

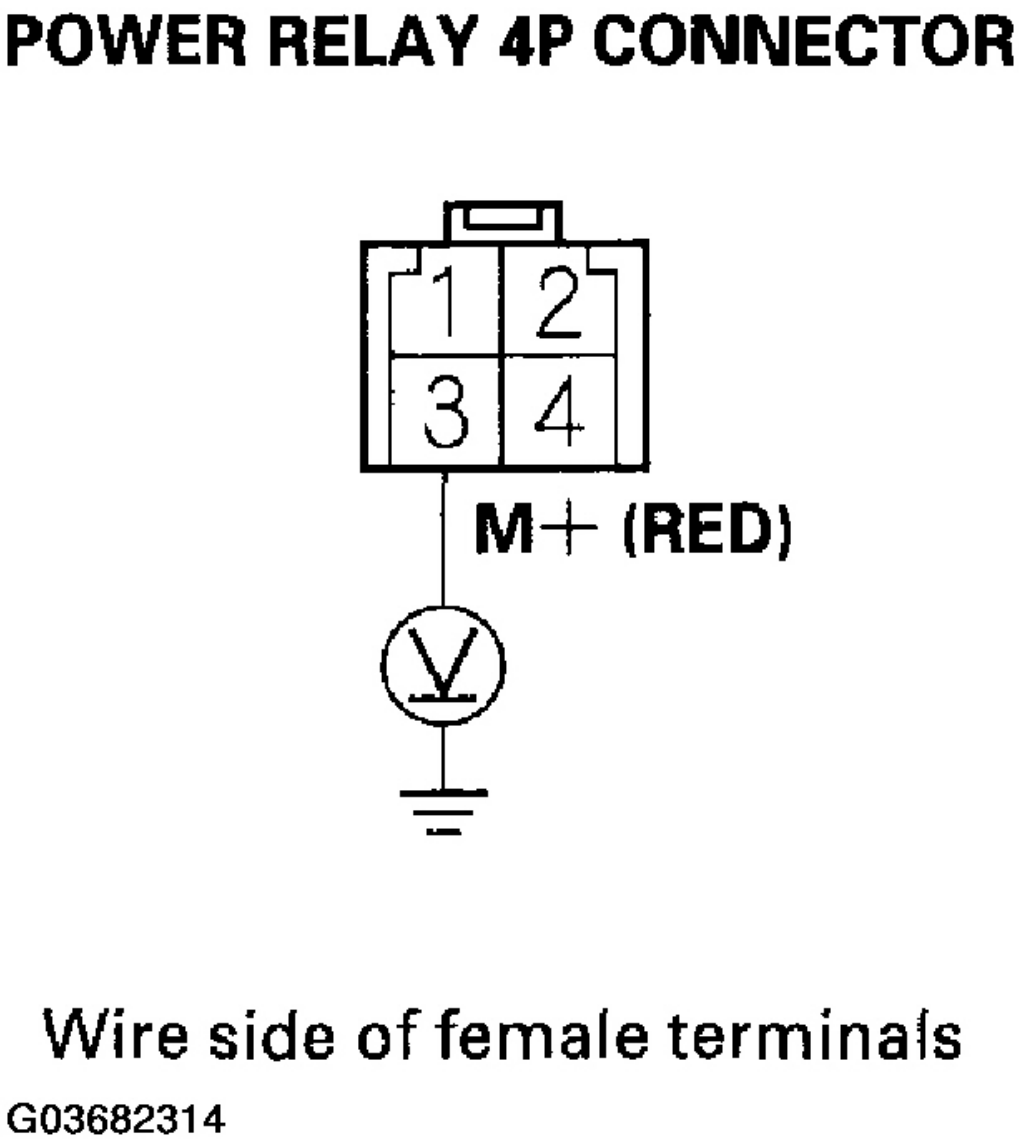


**Fig. 54: Measuring Voltage Between Power Relay 4P Connector Terminal**

**And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage ?*

**YES** -Repair short to power in the RED wire between the power relay and motor.

**NO** -Go to step 12.

12. Turn the ignition switch OFF.
13. Check for continuity between the power relay 4P connector terminal No. 3 and body ground.

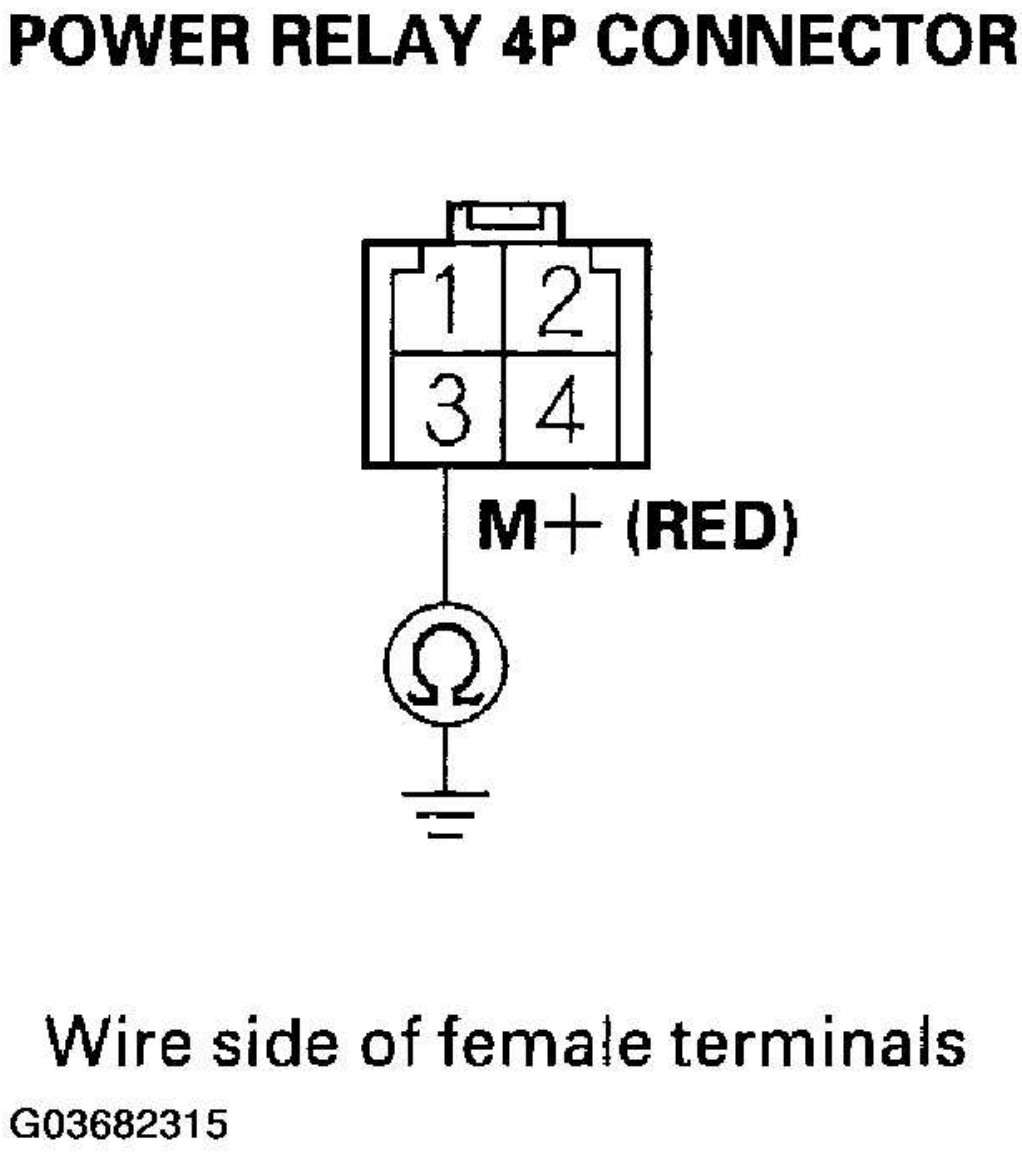


**Fig. 55: Checking Continuity Between Power Relay 4P Connector Terminal No And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity ?*

**YES** -Repair short to body ground in the RED wire between the EPS

control unit and power relay.

**NO** -Go to step 14.

14. Check for continuity between the power relay 4P connector terminal No. 1 and body ground.

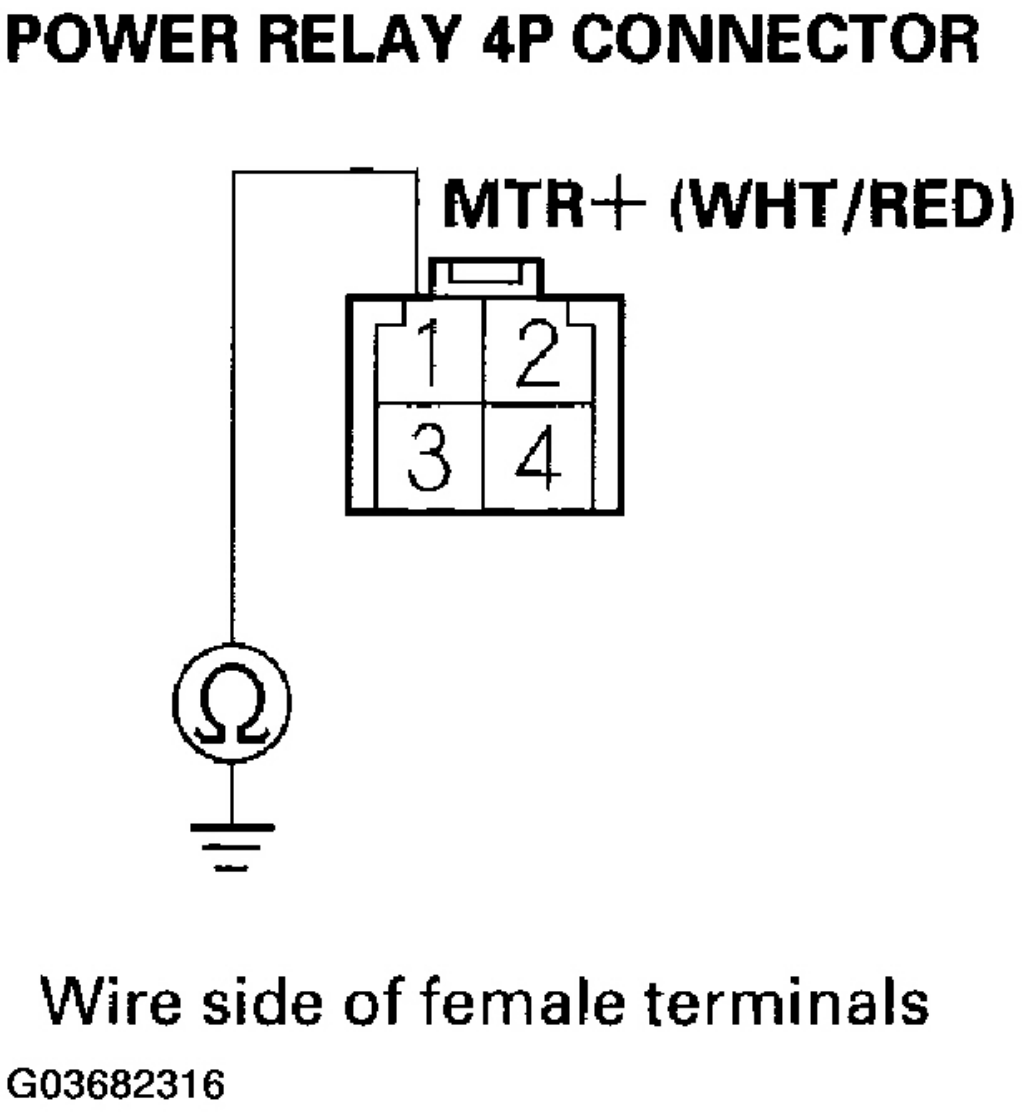


**Fig. 56: Checking Continuity Between Power Relay 4P Connector Terminal No And Body Ground**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity ?*

**YES** -Repair short to body ground in the WHT/RED wire between the motor and power relay.

**NO** -Go to step 15.

15. Start the engine.
16. Measure the voltage between the power relay 4P connector terminal No. 2 and body ground.

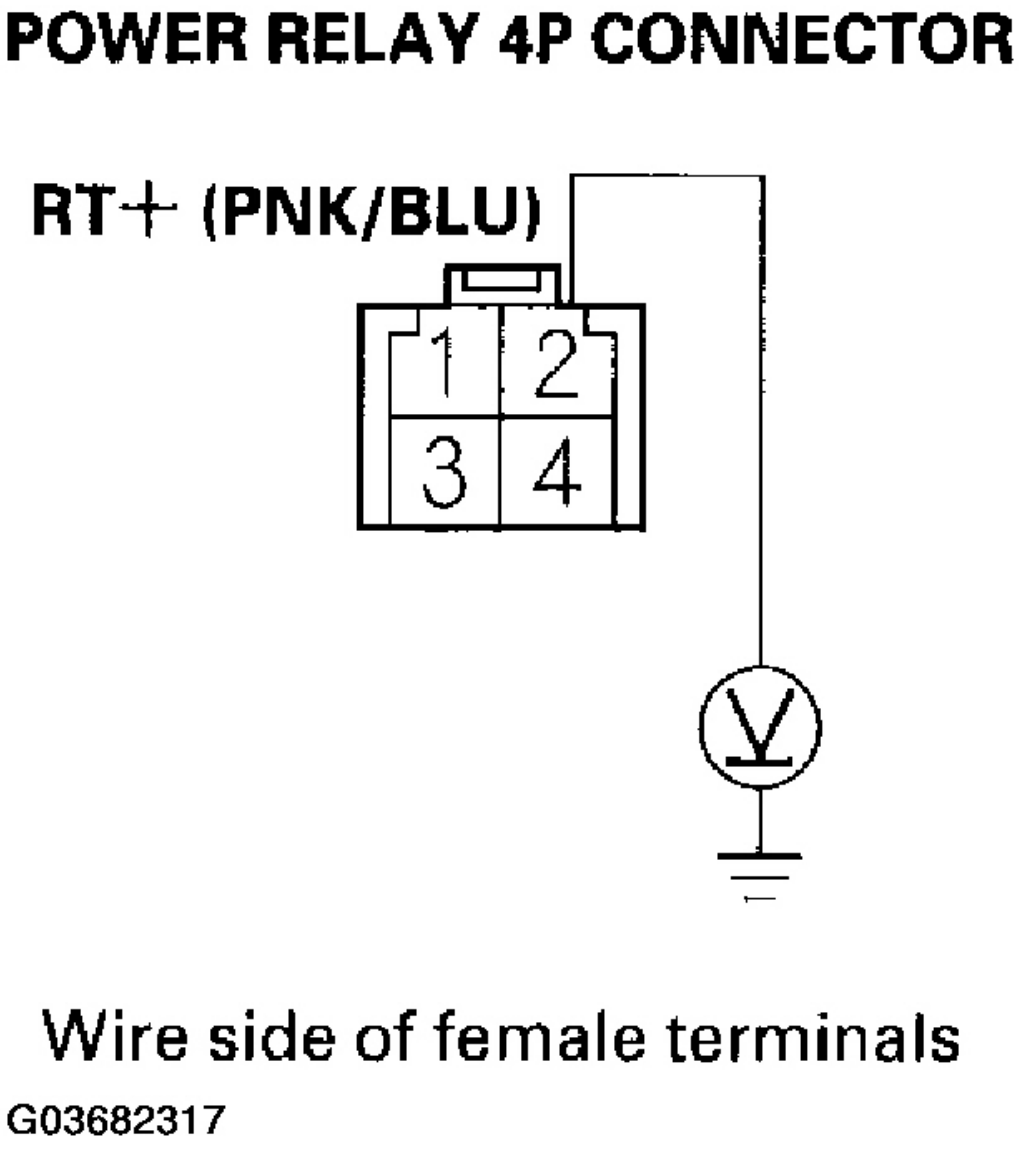


**Fig. 57: Measuring Voltage Between Power Relay 4P Connector Terminal And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage ?*

**YES** -Go to step 17.

**NO** -Repair short or open in the PNK/BLU wire between the EPS control unit and power relay.

17. Turn the ignition switch OFF.
18. Disconnect the EPS control unit connector B (14P).
19. Start the engine.
20. Measure the voltage between the power relay 4P connector terminal No. 2 and body ground.

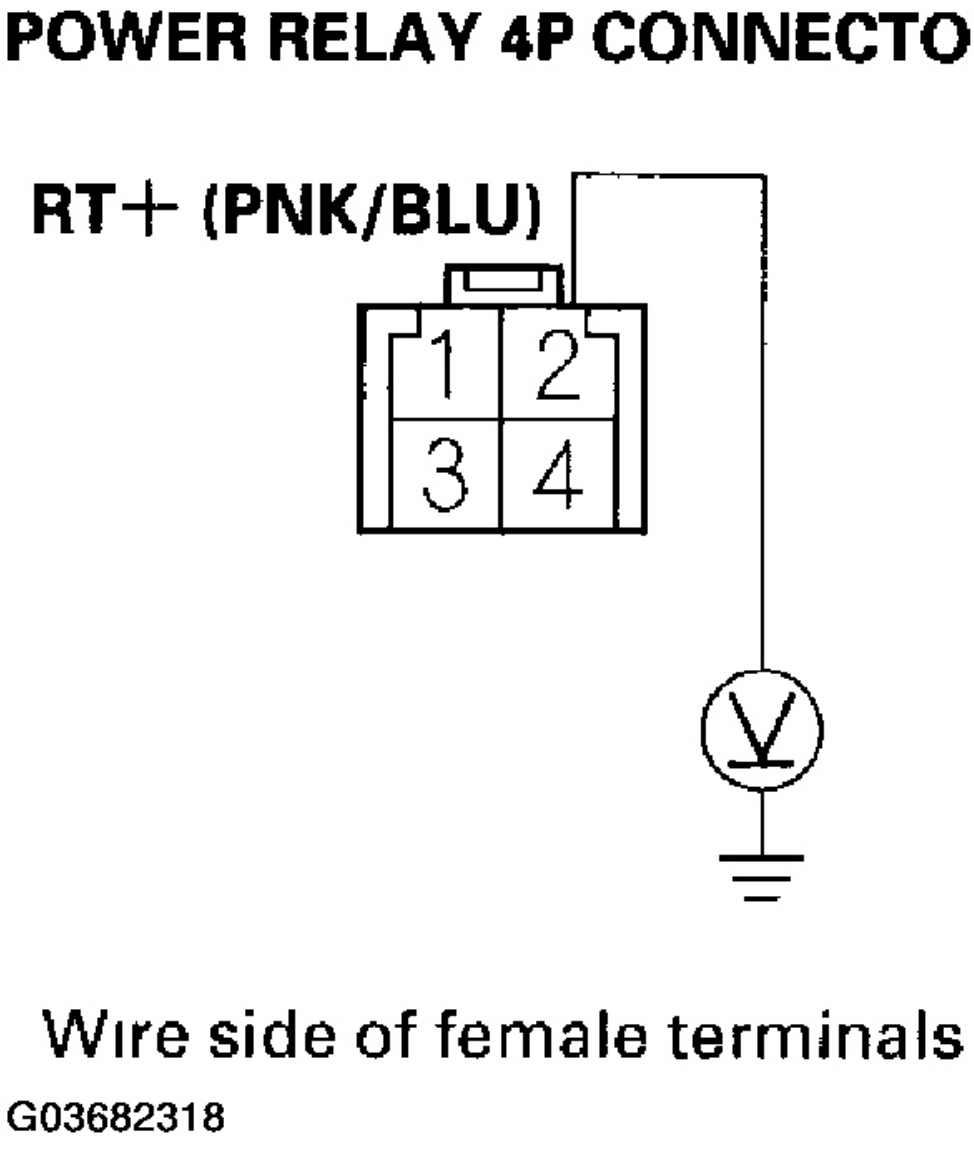


**Fig. 58: Measuring Voltage Between Power Relay 4P Connector Terminal And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage ?*

**YES** -Repair short to power in the PNK/BLU wire between the EPS

control unit and power relay.

**NO** -Go to step 21.

21. Turn the ignition switch OFF.
22. Check for continuity between the power relay 4P connector terminal No. 2 and body ground.

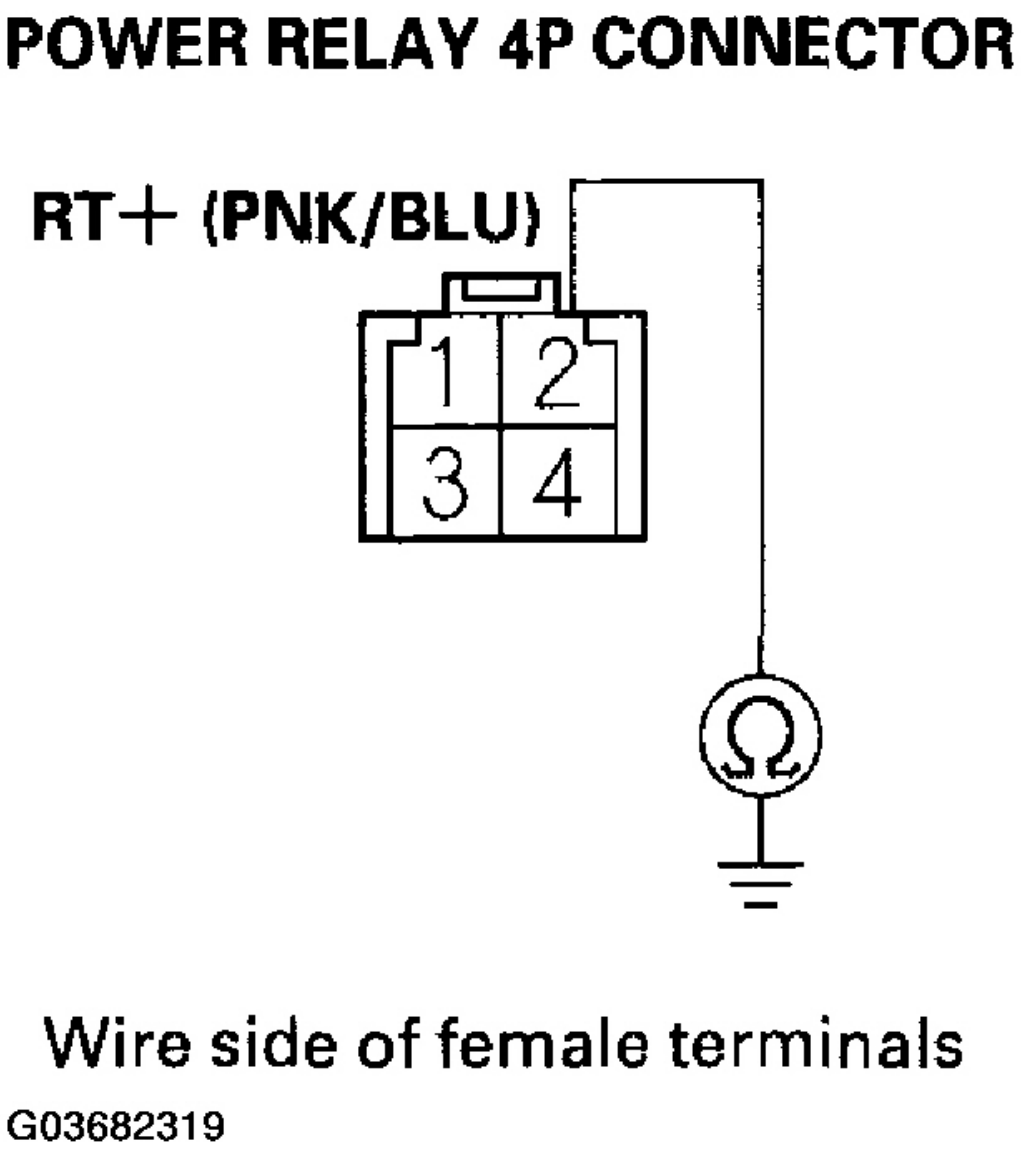

**Fig. 59: Checking Continuity Between Power Relay 4P Connector Terminal And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity ?*

**YES** -Repair short to body ground in the PNK/BLU wire between the EPS control unit and power relay.

**NO** -Go to step 23.

23. Check for continuity between the power relay 4P connector terminal No. 4 and body ground.

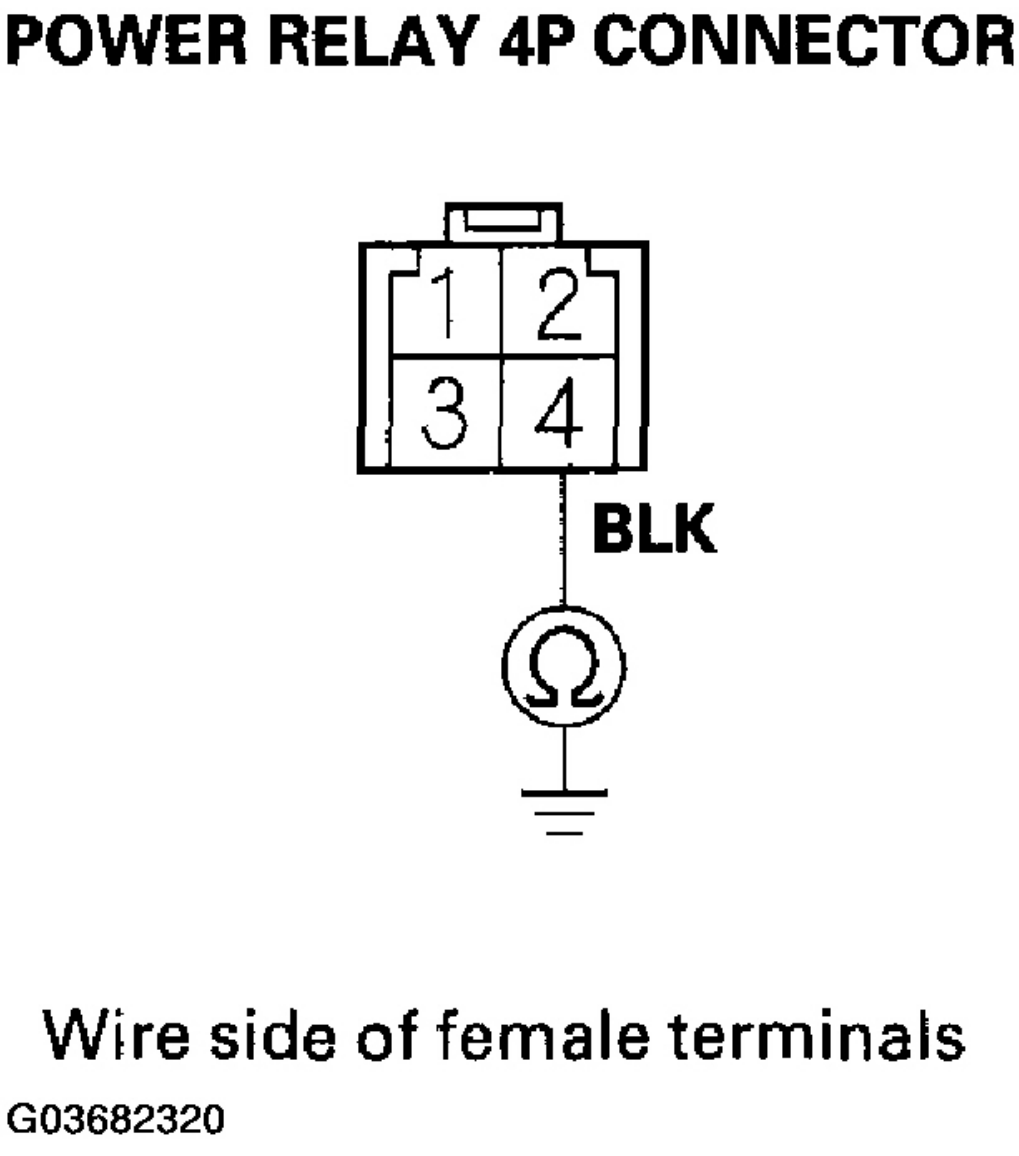


**Fig. 60: Checking Continuity Between Power Relay 4P Connector Terminal And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there continuity ?*

**YES** -Check for poor connections or loose terminals at the EPS control

unit, motor, and the power relay. If necessary, substitute a known-good EPS control unit and recheck.

**NO** -Repair open in the BLK wire between the power relay and body ground (G402).

**DTC 50: EPS CONTROL UNIT INTERNAL CIRCUIT (CPU OR MICROCOMPUTER)**

1. Clear the DTC.
2. Start the engine.

*Does the EPS indicator come on ?*

**YES** -Go to step 3.

**NO** -Check for loose terminals or poor connections. If the connections are good, the system is OK at this time.

3. Stop the engine, and verify the DTC.

*Is DTC 50 indicated ?*

**YES** -Check for poor connections or loose terminals at the EPS control unit. If necessary, substitute a known-good EPS control unit and recheck.

**NO** -Do the appropriate troubleshooting for the code indicated.

**DTC 62: EPS CONTROL UNIT INTERNAL CIRCUIT (FAIL-SAFE RELAY STUCK ON)**

1. Clear the DTC.
2. Start the engine.

*Does the EPS indicator come on ?*

**YES** -Go to step 3.

**NO** -Check for loose terminals or poor connections If the connections are good, the system is OK at this time.

3. Stop the engine, and verify the DTC.

*Is DTC 62 indicated ?*

**YES** -Check for loose or poor connections at the EPS control unit. If the connections are good, substitute a known-good EPS control unit. If the symptom/indication goes away, replace the original EPS control unit and recheck.

**NO** -Do the appropriate troubleshooting for the code indicated.

**DTC 64: BATTERY VOLTAGE IS EXCESSIVELY LOW (FAIL-SAFE RELAY CONTACT FAILURE AND MOTOR VOLTAGE FALL OFF)**

1. Clear the DTC.
2. Start the engine.

   *Does the EPS indicator come on ?*

   **YES** -Go to step 3.

   **NO** -Check for loose terminals or poor connections. If the connections are good, the system is OK at this time.
3. Stop the engine, and verify the DTC.

   *Is DTC 64 indicated ?*

   **YES** -Go to step 4.

   **NO** -Do the appropriate troubleshooting for the code indicated.
4. Check the No. 15 (40 A) fuse in the under-hood fuse/relay box, and reinstall the fuse if it is OK.

   *Is the fuse OK ?*

   **YES** -Go to step 5.

   **NO** -Replace the fuse and recheck.
5. Disconnect the EPS control unit connector A (4P).
6. Measure the voltage between the EPS control unit connector A (4P) terminal No. 2 and body ground.

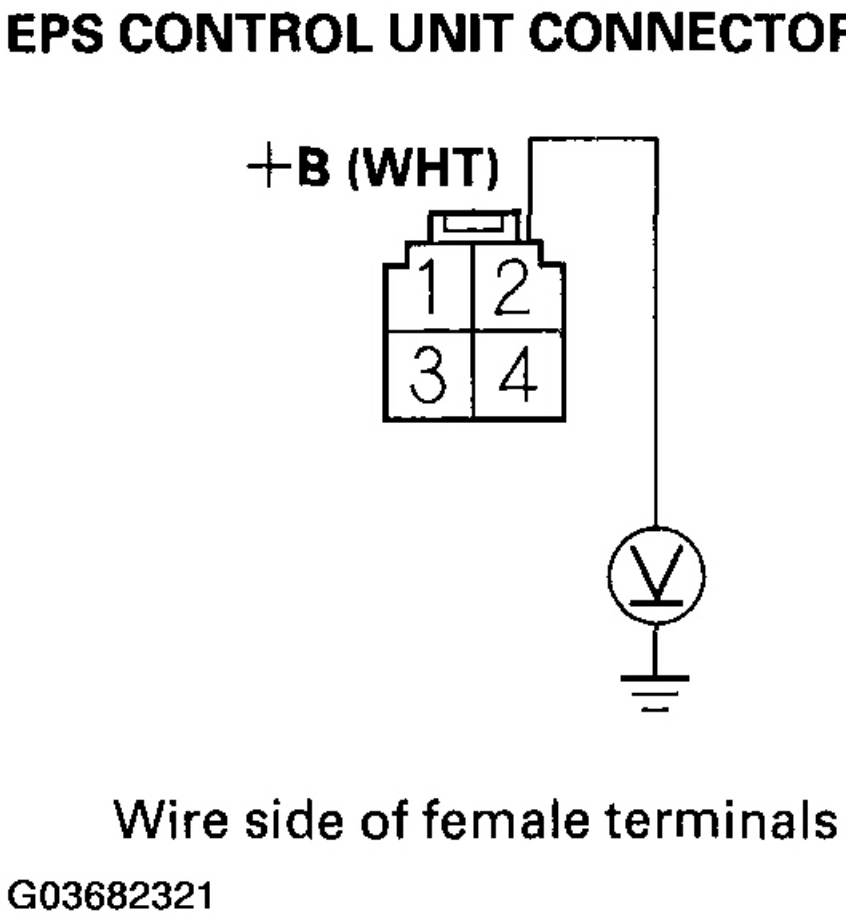


**Fig. 61: Measuring Voltage Between EPS Control Unit Connector A (4P) Terminal No And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage ?*

**YES** -Check for loose or poor connections at the EPS control unit. If the connections are good, substitute a known-good EPS control unit. If the symptom/indication goes away, replace the original EPS control unit and recheck.

**NO** -Repair open in the WHT wire between the No. 15 (40 A) fuse in the under-hood fuse/relay box and EPS control unit.

**DTC 66: MOTOR DRIVEN VOLTAGE; DTC 68: EPS CONTROL UNIT INTERNAL CIRCUIT**

1. Clear the DTC.
2. Start the engine.
3. Turn the steering terminals from lock-to-lock several times, and wait 10 seconds or more.

   *Does the EPS indicator come on ?*

   **YES** -Go to step 4.

   **NO** -Check for loose terminals or poor connections. If the connections are good, the system is OK at this time.
4. Stop the engine, and verify the DTC.

   *Is DTC 66 or 68 indicated ?*

   **YES** -Check for loose or poor connections at the EPS control unit. If the connections are good, substitute a known-good EPS control unit. If the symptom/indication goes away, replace the original EPS control unit and recheck.

   **NO** -Do the appropriate troubleshooting for the code indicated.

**DTC 67: TORQUE SENSOR I/F CIRCUIT**

1. Clear the DTC.
2. Start the engine.
3. Turn the steering wheel from lock-to-lock several time, and wait 10 seconds or more.

   *Does the EPS Indicator come on ?*

   **YES** -Go to step 4.

   **NO** -Check for loose terminals or poor connections. If the connections are good, the system is OK at this time.
4. Stop the engine, and verify the DTC.

*Is DTC 67 indicated ?*

**YES** -Check for loose or poor connections at the EPS control unit. If the connections are good, substitute a known-good EPS control unit. If the symptom/indication goes away, replace the original EPS control unit and recheck.

**NO** -Do the appropriate troubleshooting for the code indicated.

## EPS INDICATOR CIRCUIT TROUBLESHOOTING

1. Turn the ignition switch ON (II), start the engine, and watch the EPS indicator.

   *Does the EPS indicator come on ?*

   **YES** -If the EPS indicator comes on and goes off, it's OK. If the EPS indicator stays on or blinks, go to step 9 .

   **NO** -Go to step 2.
2. Turn the ignition switch OFF, then ON (II) again, and watch the brake system indicator.

   *Does the brake system indicator come on ?*

   **YES** -Go to step 3.

   **NO** -Repair open in the indicator power source circuit:
   - Blown No. 6 (7.5 A) fuse in the under-dash fuse/ relay box.
   - Open in the wire between the No. 6 (7.5 A) fuse and gauge assembly.
   - Open circuit inside the under-dash fuse/relay box.
3. Turn the ignition switch OFF.
4. Connect a jumper wire between the gauge assembly 22P connector terminal No. 2 and body ground, then turn the ignition switch ON (II).

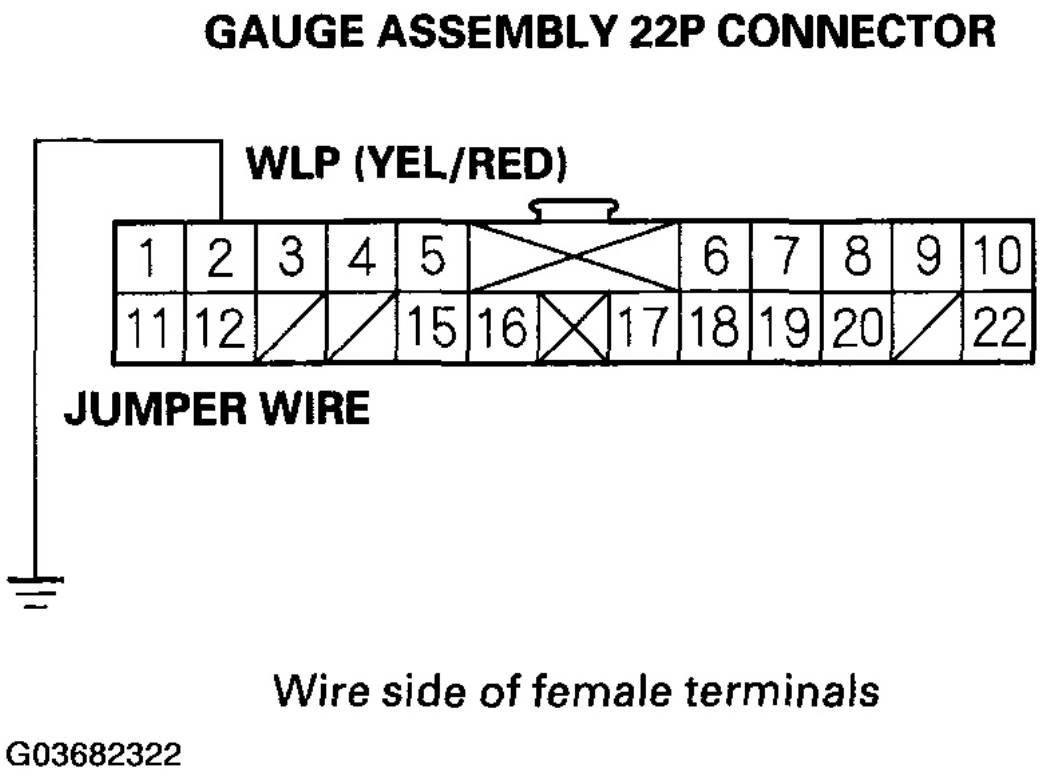


**Fig. 62: Connecting Jumper Wire Between Gauge Assembly 22P Connector Terminal No. 2 And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Does EPS indicator come on ?*

**YES** -Go to step 5.

**NO** -Inspect the EPS indicator bulb, if the bulb is OK, replace the gauge assembly (see **VSS REPLACEMENT** ).

5. Turn the ignition switch OFF.
6. Disconnect the EPS control unit connector B (14P).
7. Turn the ignition switch ON (II).
8. Connect the EPS control unit connector B (14P) terminal No. 13 to body ground with a jumper wire.

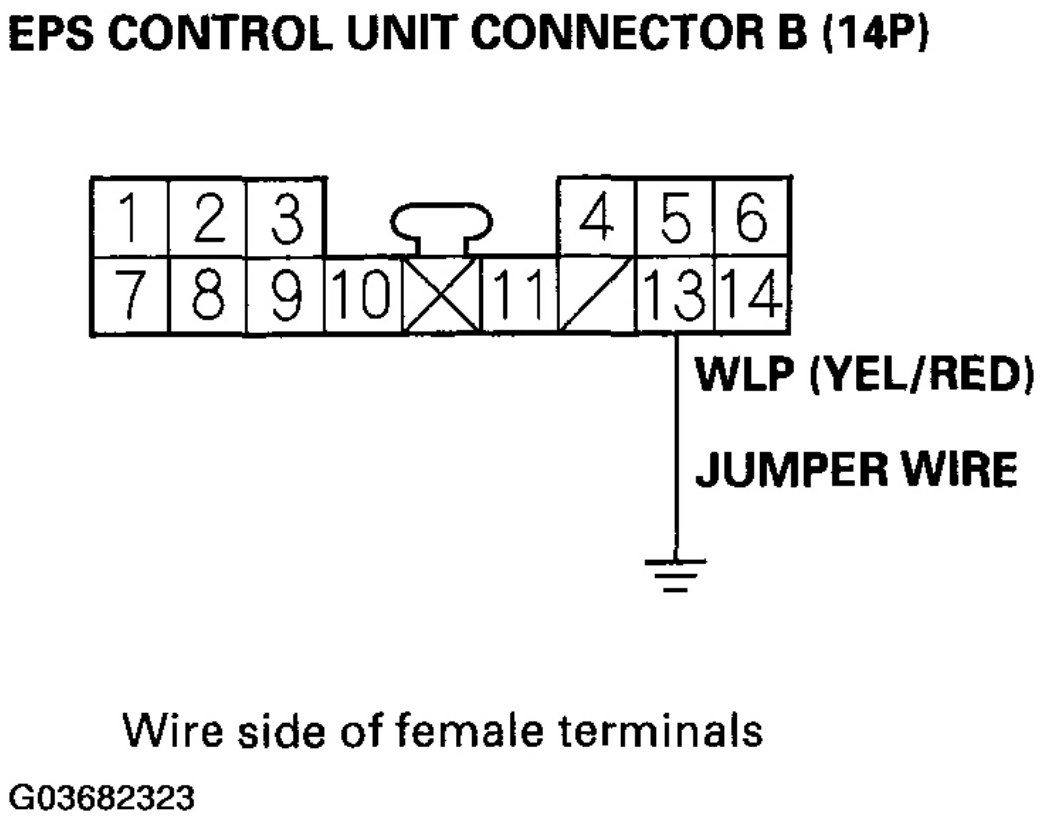


**Fig. 63: Connecting EPS Control Unit Connector B (14P) Terminal No. 13 To Body Ground With A Jumper Wire**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Does EPS indicator come on ?*

**YES** -Check for loose or poor connections at the EPS control unit. If the connections are good, substitute a known-good EPS control unit. If the symptom/indication goes away, replace the original EPS control unit and recheck.

**NO** -Repair open in the wire between the gauge assembly and EPS control unit.

9. Turn the ignition switch OFF.
10. Disconnect the EPS control unit connector B (14P).

11. Turn the ignition switch ON (II).

    *Does EPS indicator come on ?*

    **YES** -Repair short to ground in the YEL/RED wire between the gauge assembly and the EPS control unit, or replace the gauge assembly (see **GAUGE ASSEMBLY REPLACEMENT** ).

    **NO** -Go to step 12.

12. Measure the voltage between the EPS control unit connector B (14P) terminal No. 6 and body ground.

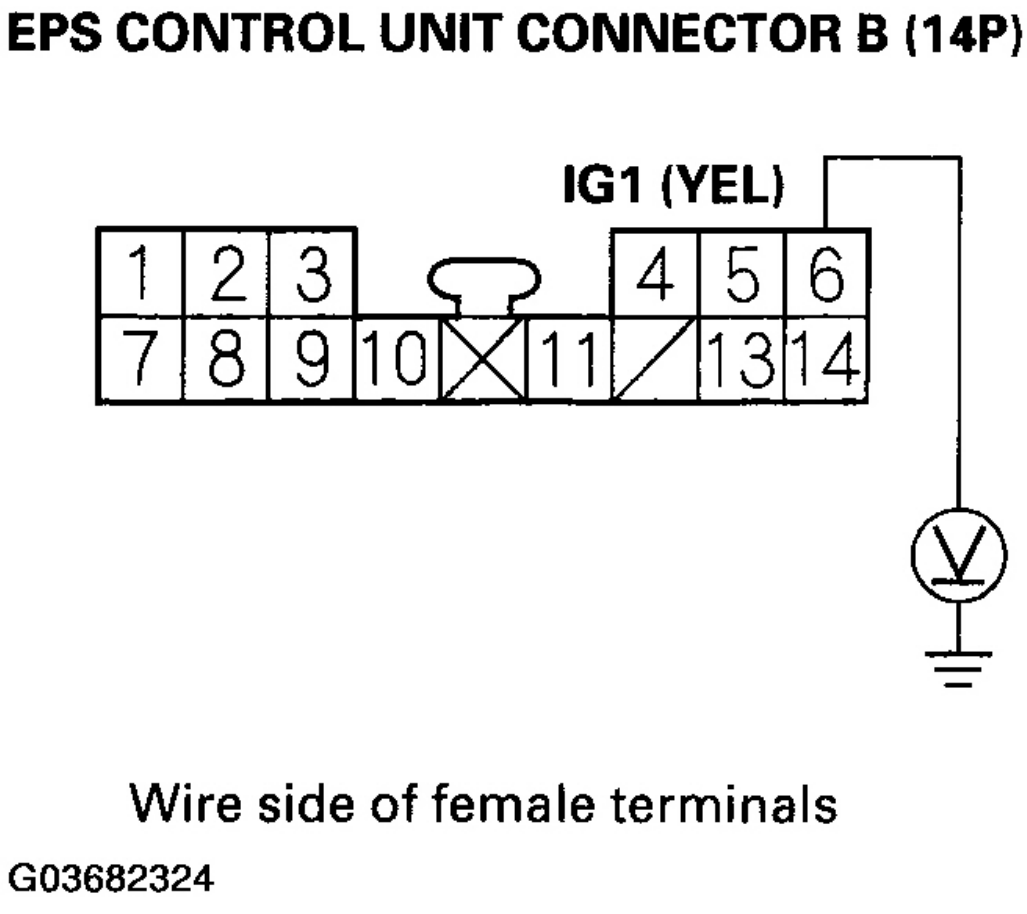


**Fig. 64: Measuring Voltage Between EPS Control Unit Connector B (14P)**

**Terminal No. 6 And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage ?*

**YES** -Go to step 13.

**NO** -Repair open in the wire between the EPS control unit connector B (14P) and No. 6 (7.5 A) fuse.

13. Measure the voltage between the EPS control unit connector B (14P) terminal No. 2 and body ground.

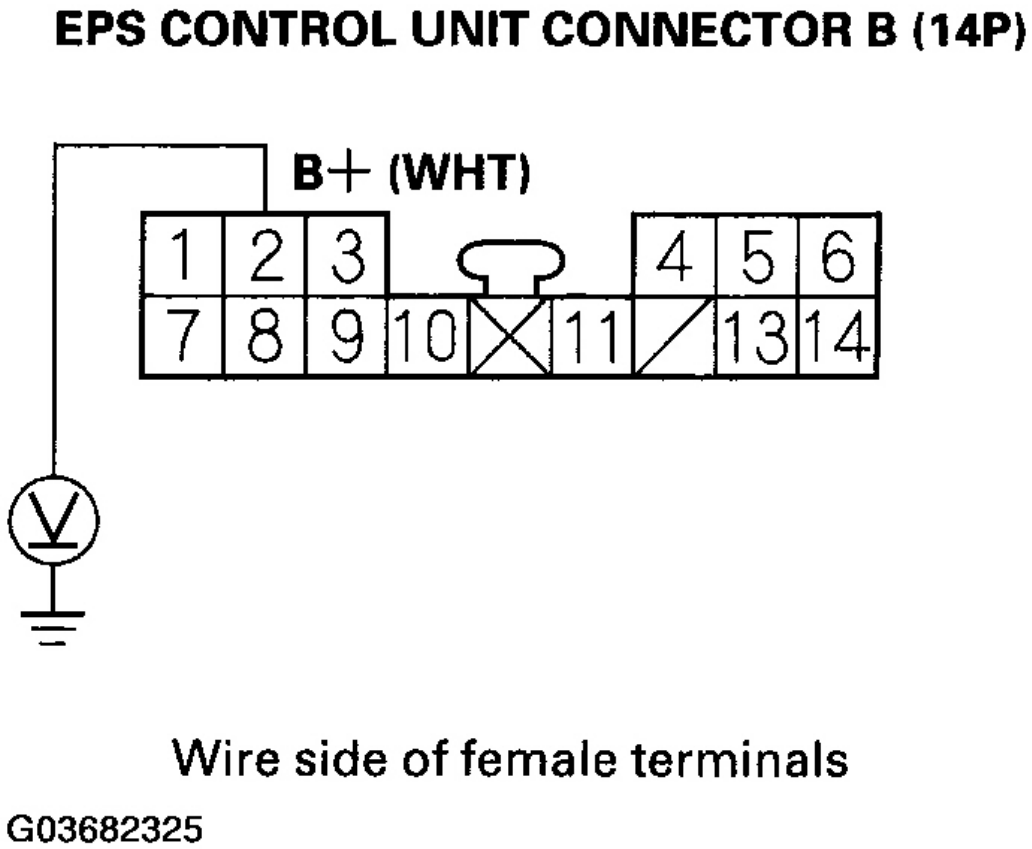


**Fig. 65: Measuring Voltage Between EPS Control Unit Connector B (14P) Terminal No. 2 And Body Ground**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage ?*

**YES** -Go to step 14.

**NO** -Check for a blown No. 15 (40 A) fuse in the under-hood fuse/relay box or open/short in the WHT wire between the under-hood fuse/relay box and the EPS control unit.

14. Turn the ignition switch OFF.
15. Reconnect the EPS control unit connector B (14P).
16. Turn the ignition switch ON (II).
17. Measure the voltage between the EPS control unit connector B (14P) terminal No. 3 and body ground.

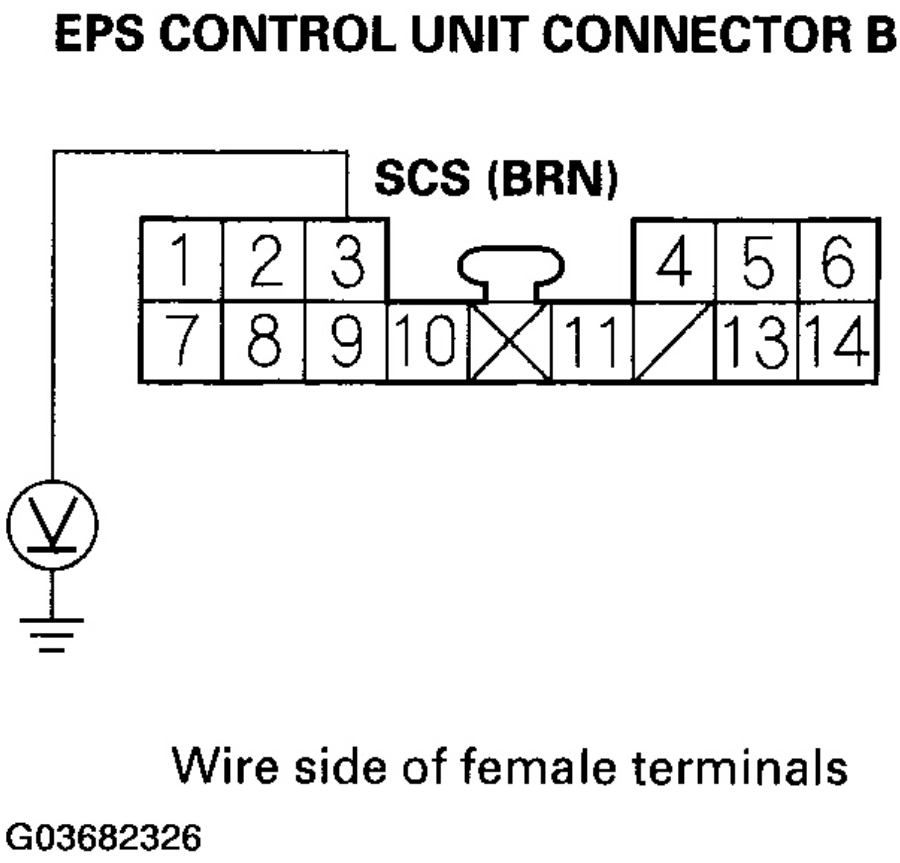


**Fig. 66: Measuring Voltage Between EPS Control Unit Connector B (14P) Terminal No. 3 And Body Ground**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

*Is there battery voltage ?*

**YES** -Check for loose or poor connections at the EPS control unit. If the connections are good, substitute a known-good EPS control unit. If the symptom/indication goes away, replace the original EPS control unit and recheck.

**NO** -Repair short to ground in the BRN wire between the data link connector and the EPS control unit.

## STEERING GEARBOX REPLACEMENT

**NOTE: Bolts and nuts with the * it mark are special corrosion-resistant Dacro fasteners. Use the same type if replacement is necessary.**

**NOTE: Note these items during removal:**

- **Using solvent and a brush, wash any oil and dirt off the gearbox. Blow dry with compressed air.**
- **Be sure to remove the steering wheel before disconnecting the steering joint. Damage to the cable reel can occur.**

1. Write down the frequencies for the radio preset buttons. Disconnect the negative cable from the battery.
2. Raise the vehicle, and support it with safety stands in the proper locations (see **SAFETY STANDS** ).
3. Remove the front wheels.
4. Remove the driver's airbag (see **DRIVER'S AIRBAG REPLACEMENT** ).
5. Remove the steering wheel (see **STEERING WHEEL REMOVAL** ).
6. Remove the steering joint bolts (A), and disconnect the steering joint by moving the steering joint (B) toward the column.

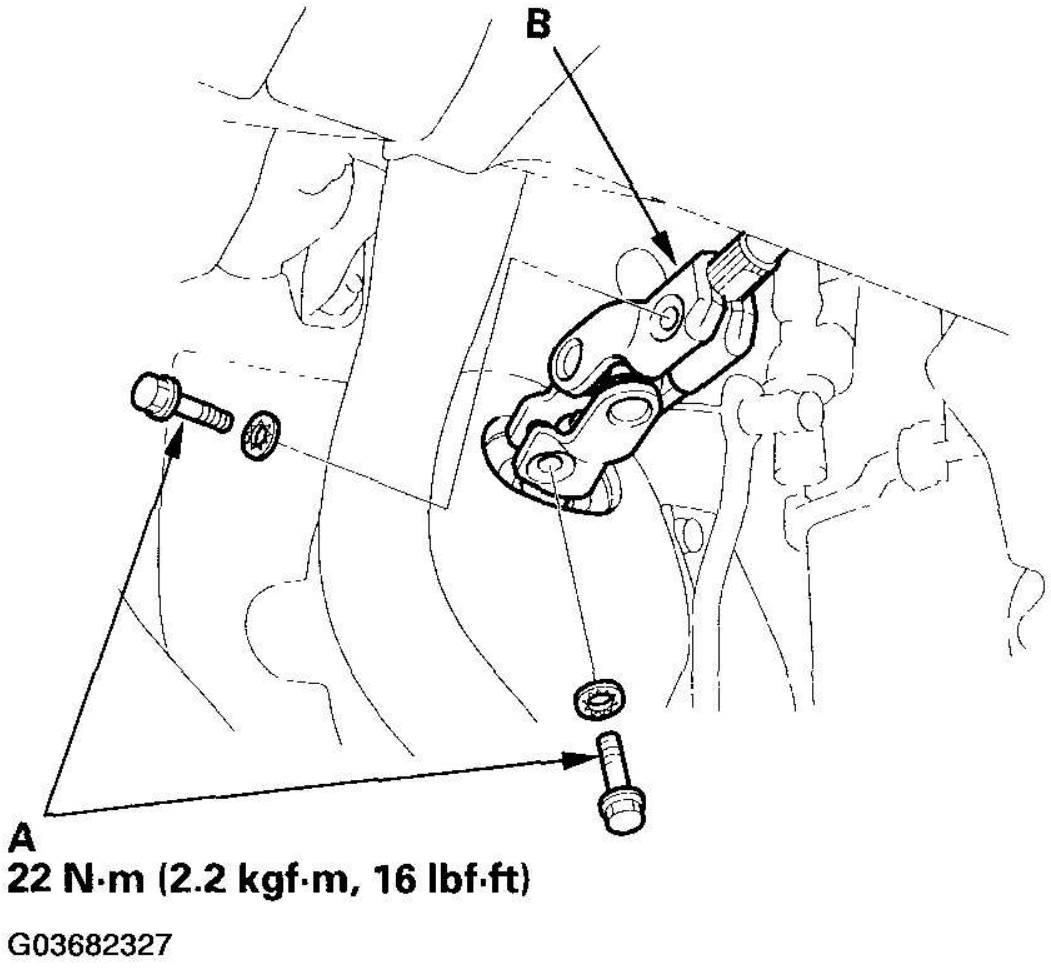


**Fig. 67: Removing Steering Joint Bolts And Torque Specifications**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

7. Remove the battery box (A) and front damper base beam (B) (see **FRONT DAMPER BASE BEAM AND BATTERY BOX REPLACEMENT** ).

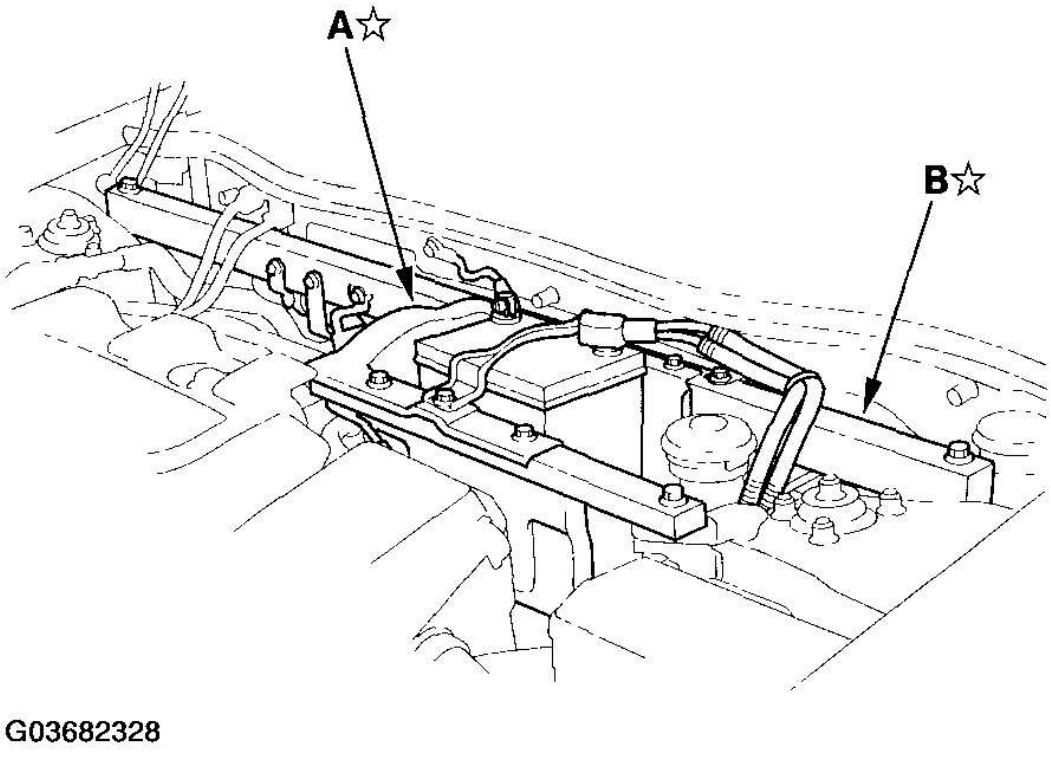


**Fig. 68: Removing Battery Box And Front Damper Base Beam**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

8. Unbend the locking tabs (A) on the stop plate (B), and loosen the 12 mm bolts (C).

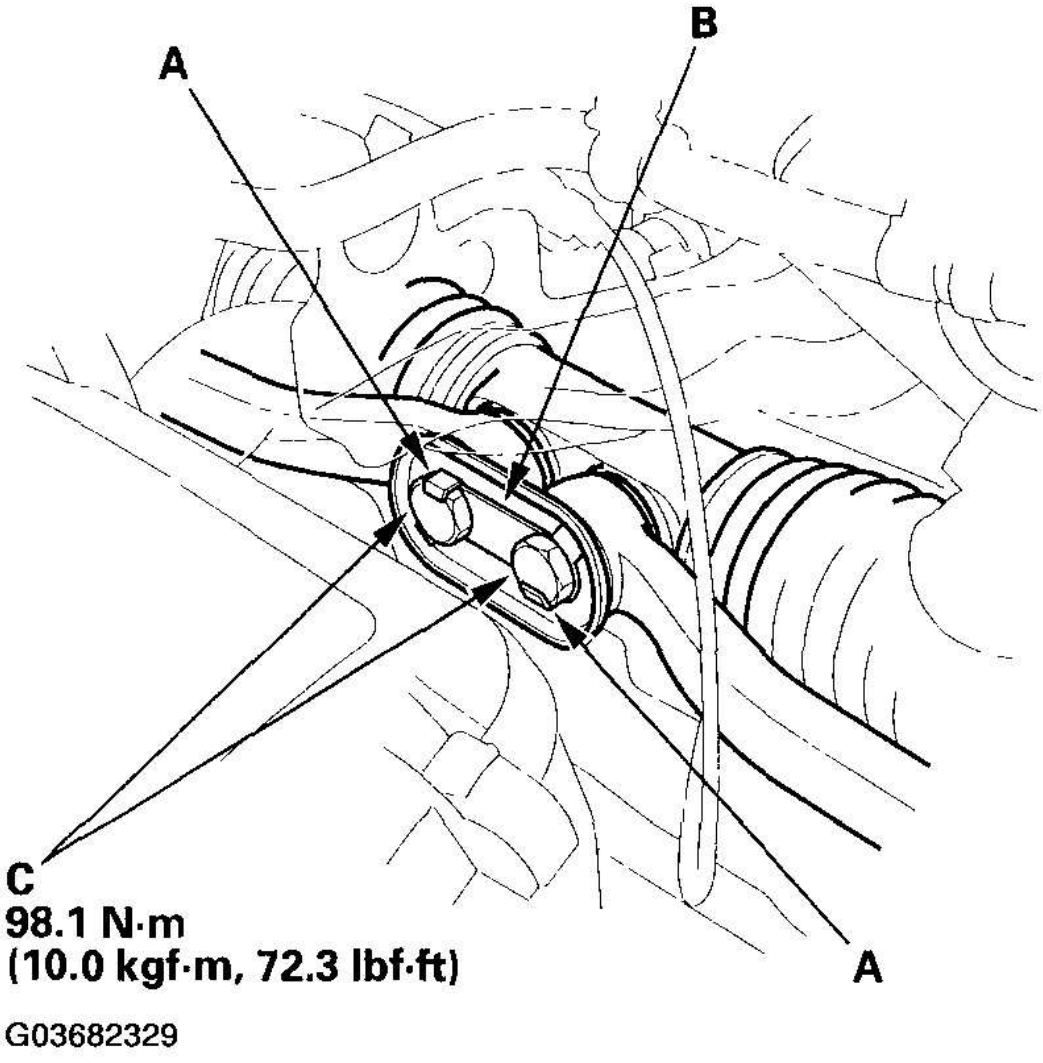


**Fig. 69: Unbending Locking Tabs On Stop Plate And Torque Specifications**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

9. Separate the tie-rods (A) by removing the 12 mm bolts (B), the stop plate (C), the tie-rod plate (D), and seal washers (E).

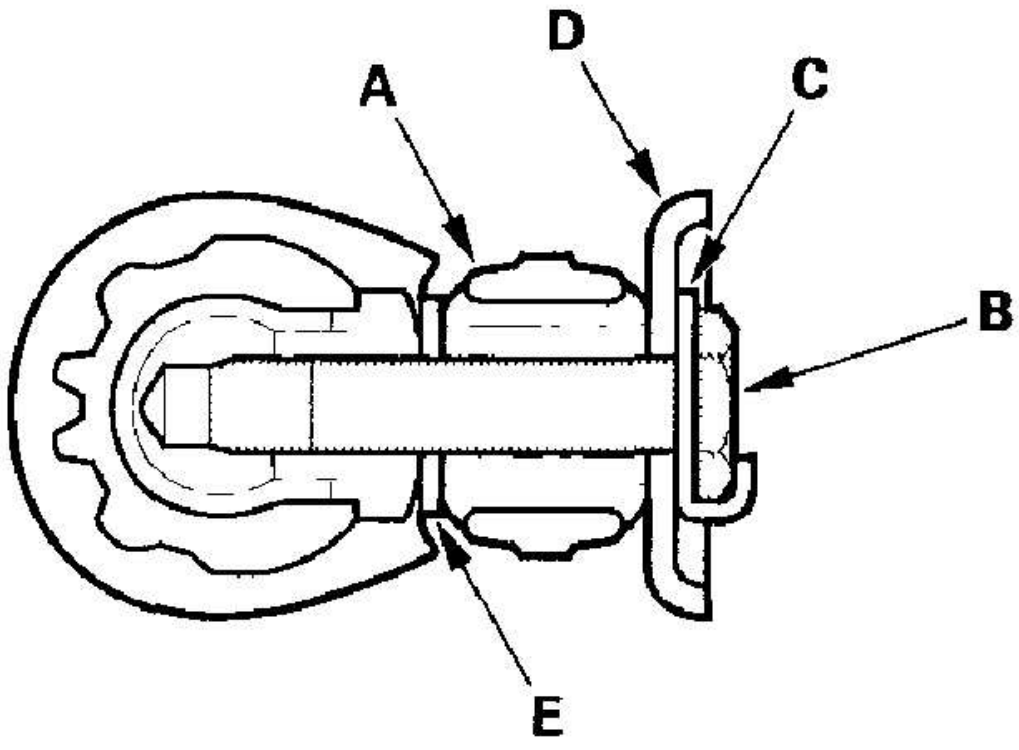


**Fig. 70: Removing Tie-Rod Plate, And Seal Washers**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

10. Disconnect the motor connector (2P) (A) and torque sensor 7P connector (B). After disconnecting the connectors, tape the connectors to keep out dust, dirt, and foreign materials.

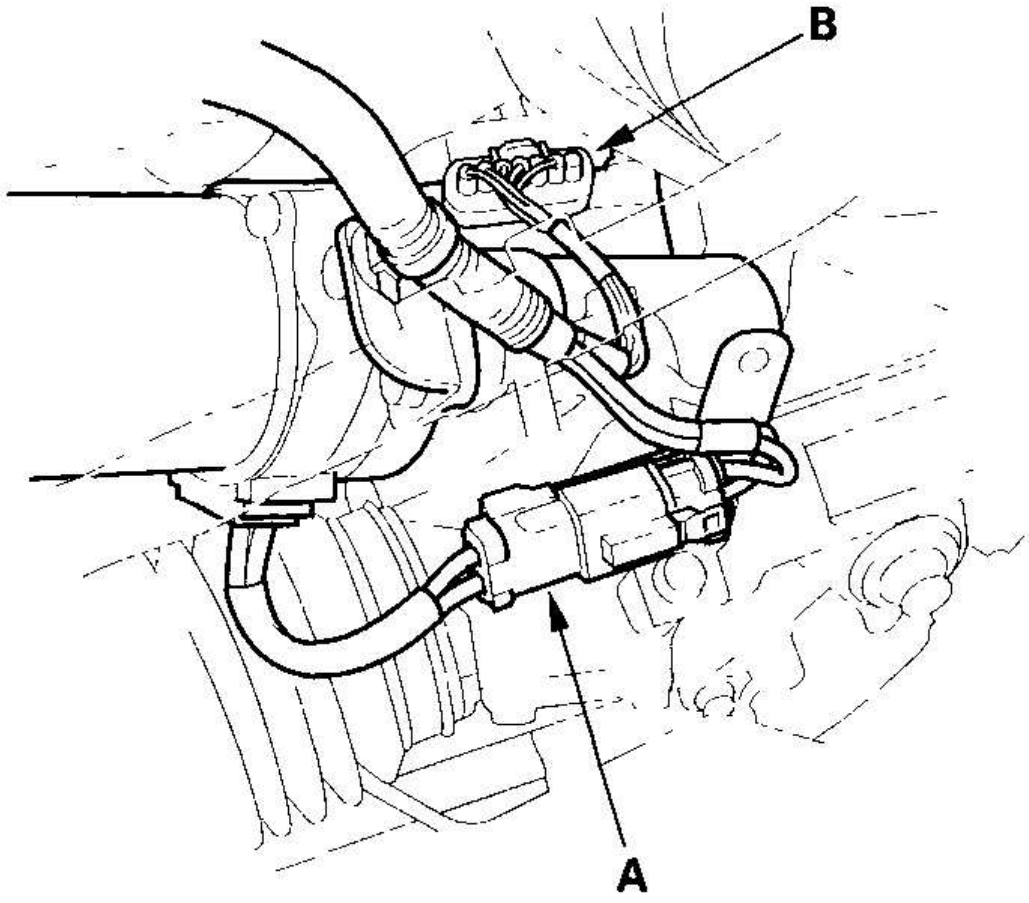


**Fig. 71: Disconnecting Motor Connector And Torque Sensor 7P Connector**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

11. Remove the ground cable terminal (A) from the gearbox housing.

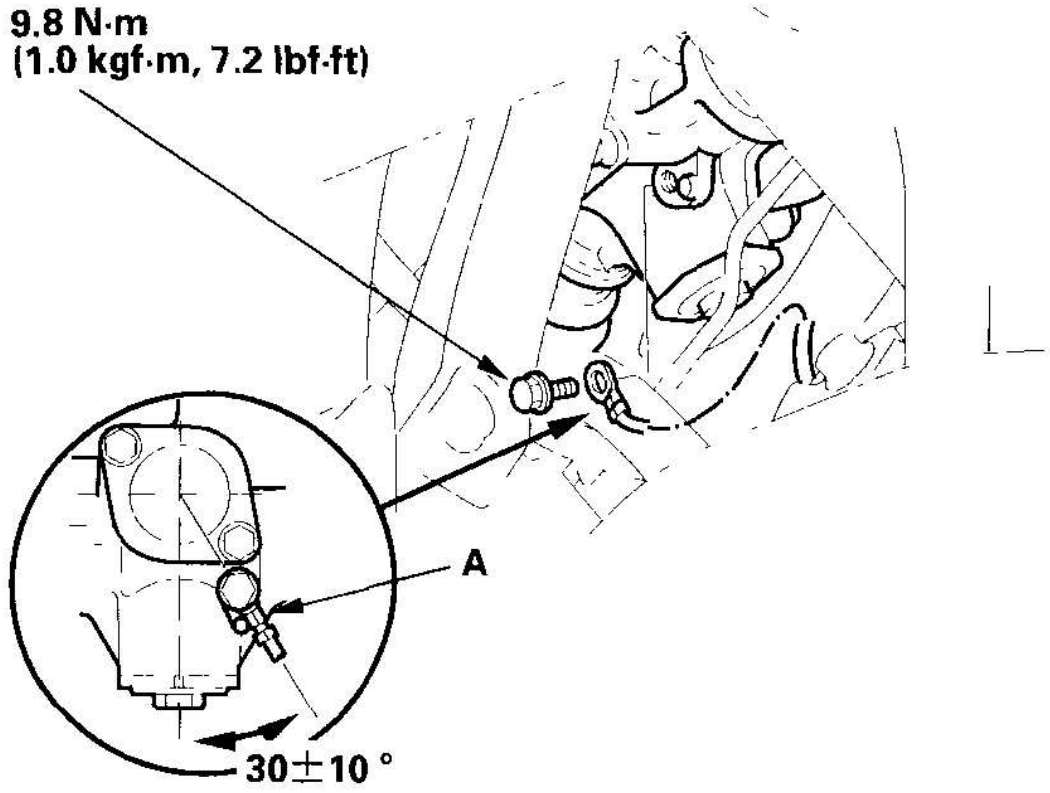


**Fig. 72: Removing Ground Cable Terminal From Gearbox Housing And Torque Specifications**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

12. Remove the four gearbox mounting bolts.

**Right side**

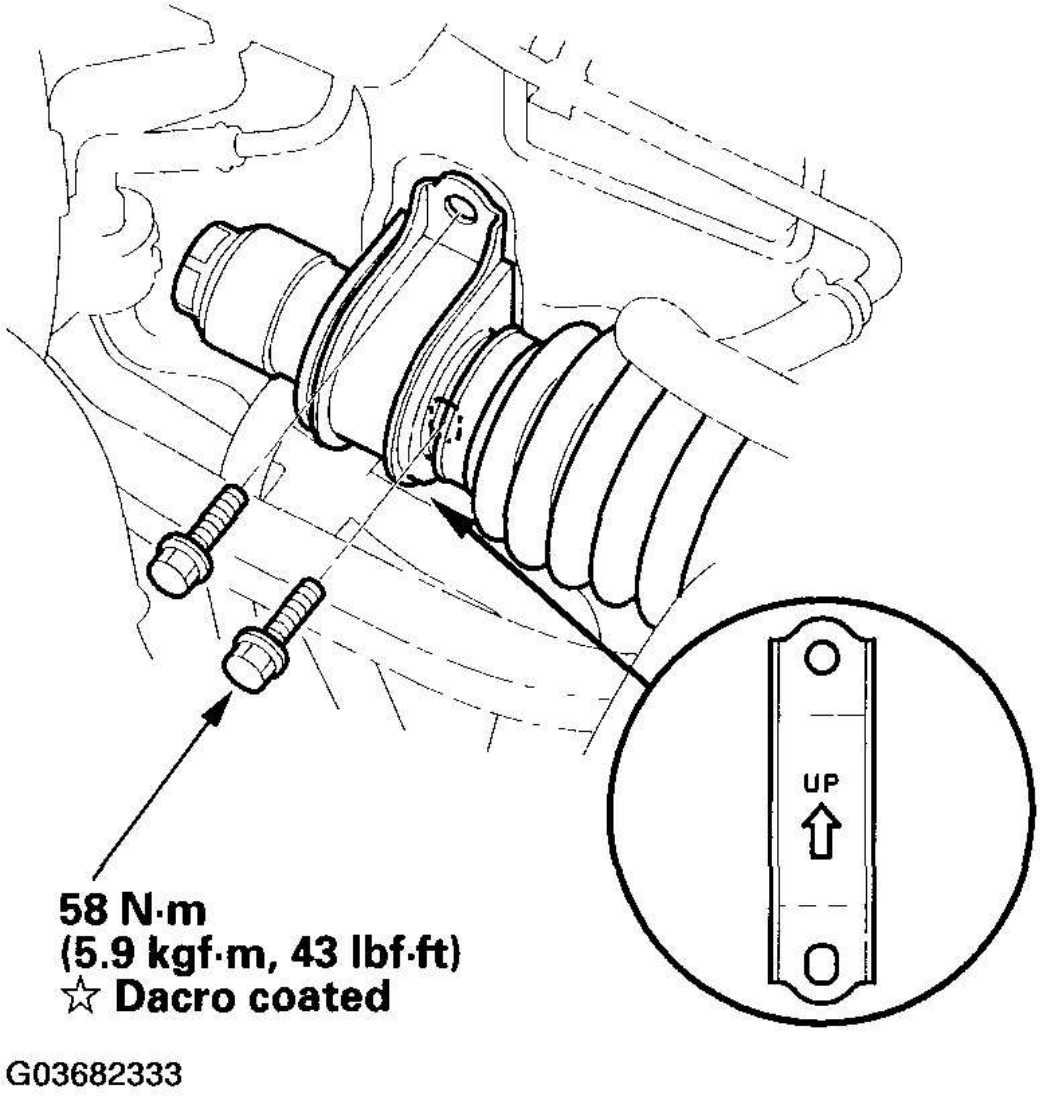


**Fig. 73: Removing Four Gearbox Mounting Bolts And Torque Specifications (Right Side)**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

**Left side**

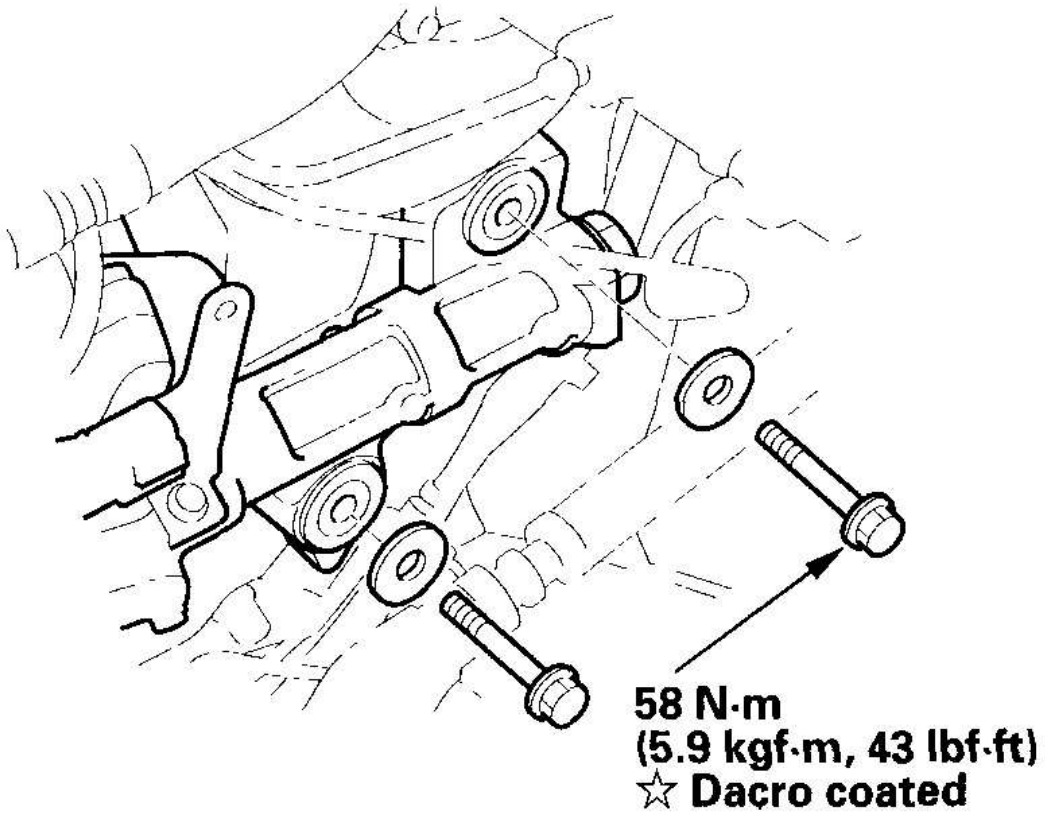


**Fig. 74: Removing Four Gearbox Mounting Bolts And Torque Specifications (Left Side)**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

13. Move the steering gearbox to the passenger's side, and remove the driver's side first.

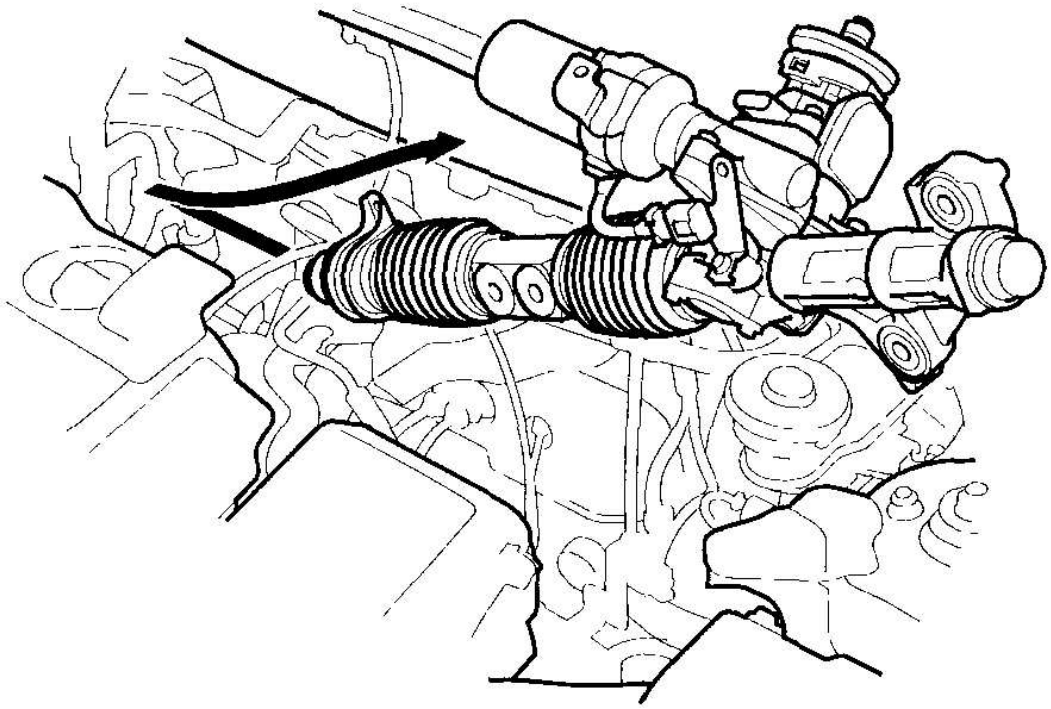

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**Fig. 75: Removing Steering Gearbox On Passenger's Side And Remove Driver's Side First**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

14. Install the steering gearbox in the reverse order of removal, and note these items:
    - Steering joint installation (see **INSTALLATION** ).
    - Make sure the steering gearbox wires are not caught or pinched by any parts.
    - Make sure the steering gearbox connectors are properly connected.
    - Reconnect the battery negative cable.
    - Set the clock.
    - Enter the anti-theft codes for the radio, then reset the customer's radio presets.
    - Do the ECM idle learn procedure (see **ECM IDLE LEARN**

**PROCEDURE** ).

- Start the engine, and check that the EPS indicator goes off.
- Test-drive the vehicle:
  - Check that the EPS indicator does not come on.
  - Check the steering wheel spoke angle. Recheck and adjust the front wheel alignment, if necessary.
- Use a new seal washers and new stop plate.
- Stop Plate Installation: Tighten the 12 mm bolts to the specified torque, and bend the stop plate (A). If after tightening the bolts, the flats of the bolt heads (B) do not align with the lock tabs, continue tightening the bolt until it aligns with one of the lock tabs. Do not exceed the torque value of 108 N.m (11.0 kgf.m, 79.6 lbf.ft).

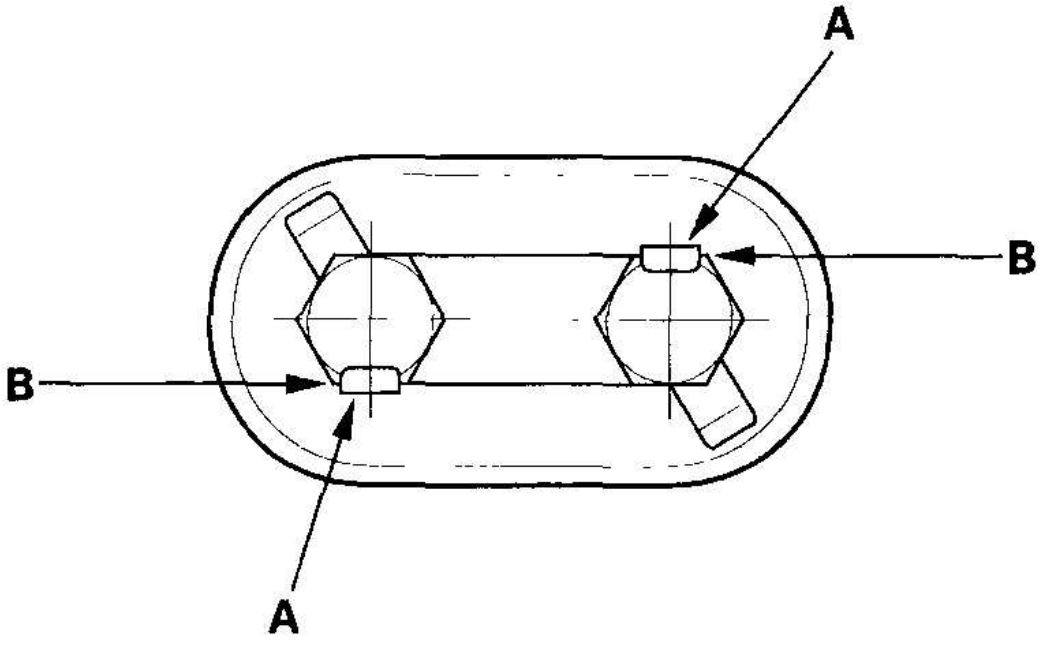


**Fig. 76: Checking Bolt-To-Lock Tab Alignment**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

15. Remove the No. 15 EPS (40 A) fuse from the under-hood fuse/relay box.
16. If the IMA battery level gauge (BAT) displays no segments, start the engine, and hold it between 3,500 RPM and 4,000 RPM without load (in Park or neutral) until the BAT displays at least three segments.
17. Reinstall the No. 15 EPS (40 A) fuse.

## RACK GUIDE REMOVAL/INSTALLATION

**NOTE: During removal/installation, do not allow dust, dirt, or other foreign materials to enter the gearbox.**

1. Loosen the locknut (A), then remove the rack guide screw (B), disc washer (C), spring (D), and rack guide (E).

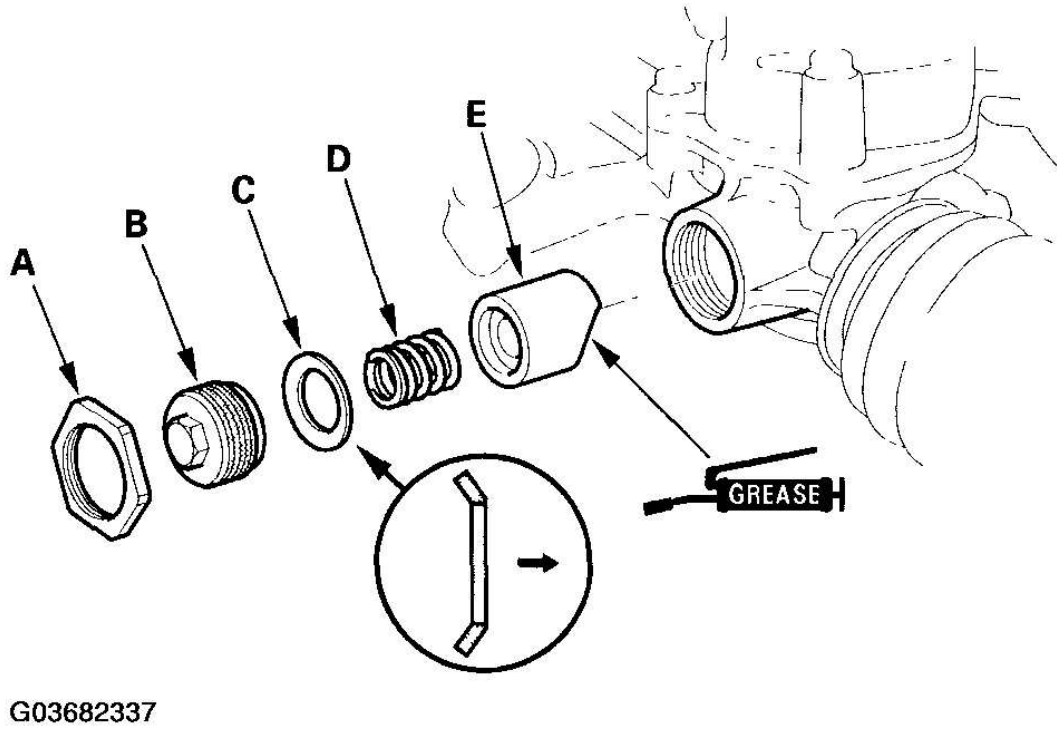


**Fig. 77: Removing Rack Guide Screw**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

2. Grease the sliding surface of the rack guide, and install it onto the gearbox housing.
3. Install the spring.
4. Install the disc washer with its convex side facing in.
5. Remove the old sealant from rack guide screw, and loosely install the rack guide screw on the steering gearbox.
6. Loosely install the locknut.
7. Adjust the rack guide screw (see **STEERING LOCK REPLACEMENT** ). After adjusting, check that the rack moves smoothly by sliding the rack right and left.

## MOTOR REPLACEMENT

**NOTE: Do not allow dust, dirt, or other foreign materials to enter the gearbox.**

1. Remove the steering gearbox (see **STEERING GEARBOX REPLACEMENT** ).
2. Remove the motor (A) and O-ring (B) from the gearbox.

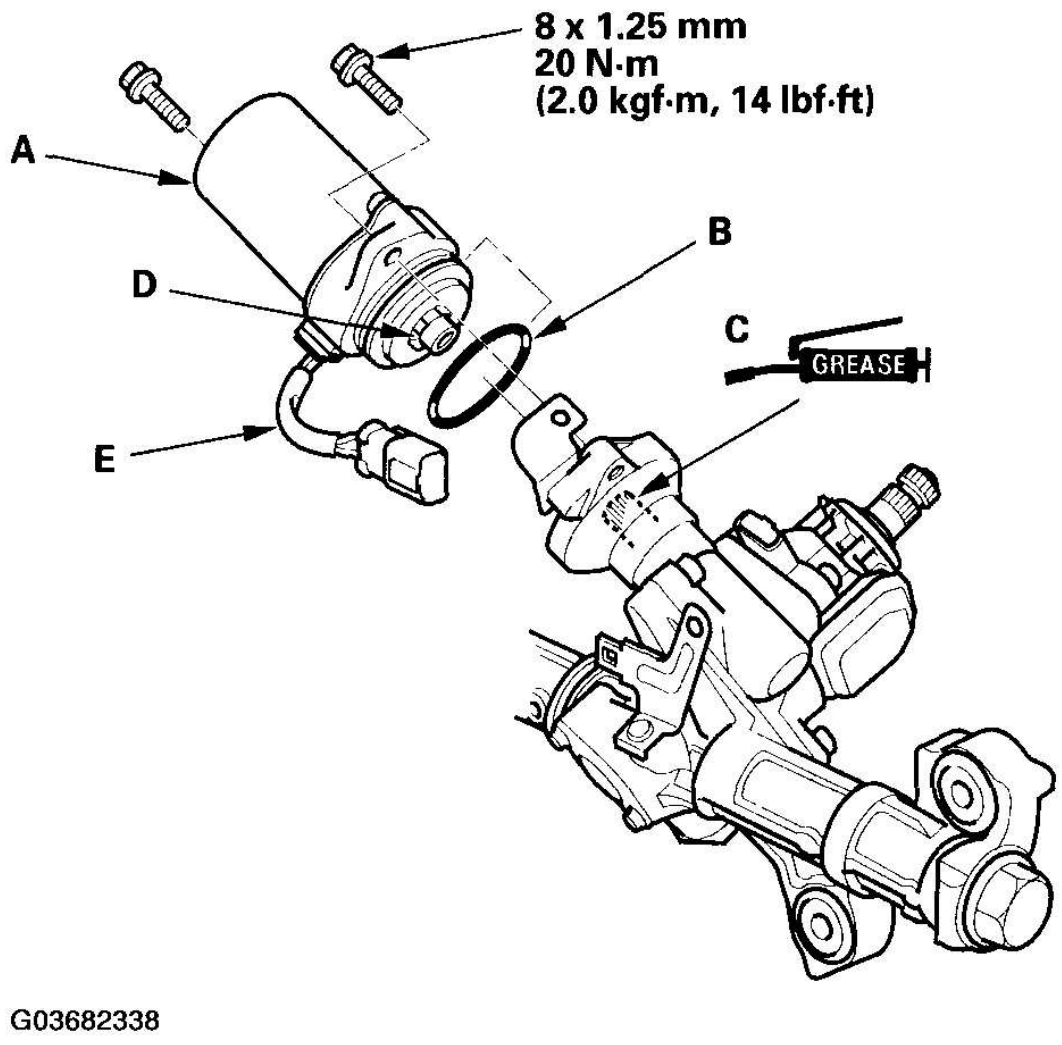


**Fig. 78: Removing Motor And O-Ring From Gearbox With Specified Torques**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

3. Apply a thin coat of silicone grease to the new O-ring, and carefully fit it on the motor.
4. Apply steering gear grease around the pinion shaft (C).
5. Install the new motor on the gearbox by engaging the motor shaft (D) and pinion shaft. Note the motor installation position (direction of motor wires (E)).
6. Install the gearbox (see step 14 ).

7. After installation, start the engine, and let it idle. Turn the steering wheel from lock-to-lock several times. Check that the EPS indicator does not come on.

## STEERING GEARBOX OVERHAUL

**EXPLODED VIEW**

**NOTE: Bolts and nuts with the * mark are special corrosion-resistant Dacro fasteners. Use the same type if replacement is necessary.**

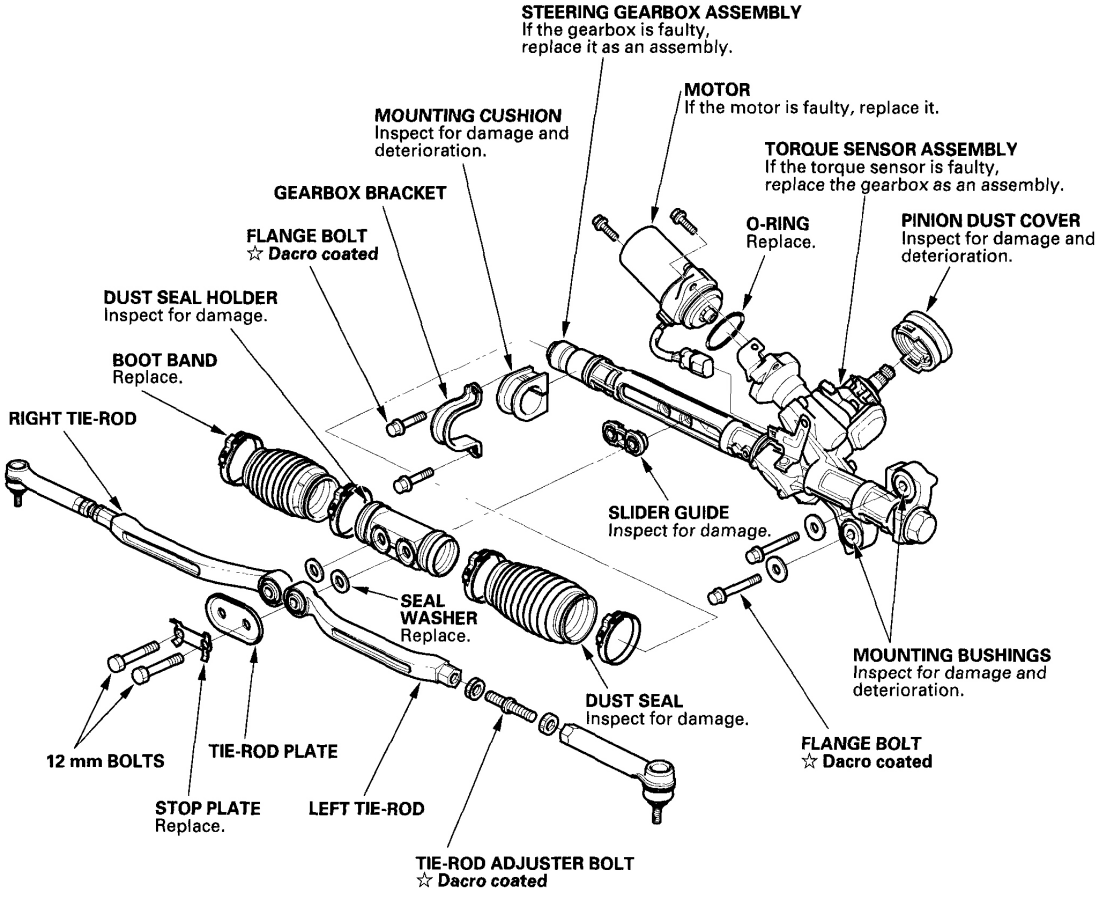


**Fig. 79: Exploded View Of Steering Gearbox Overhaul**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

## TIE-ROD REMOVAL/INSTALLATION

## Special Tools Required

Ball joint remover, 28 mm 07MAC-SL0A202

**NOTE: Bolts and nuts with the * mark are special corrosion-resistant Dacro fasteners. Use the same type if replacement is necessary.**

**REMOVAL**

1. Write down the frequencies for the radio preset buttons. Remove the battery.
2. Raise the vehicle, and support it with safety stands in the proper locations (see **SAFETY STANDS** ).
3. Remove the battery box (A) and front damper base beam (B) (see **FRONT DAMPER BASE BEAM AND BATTERY BOX REPLACEMENT** ).

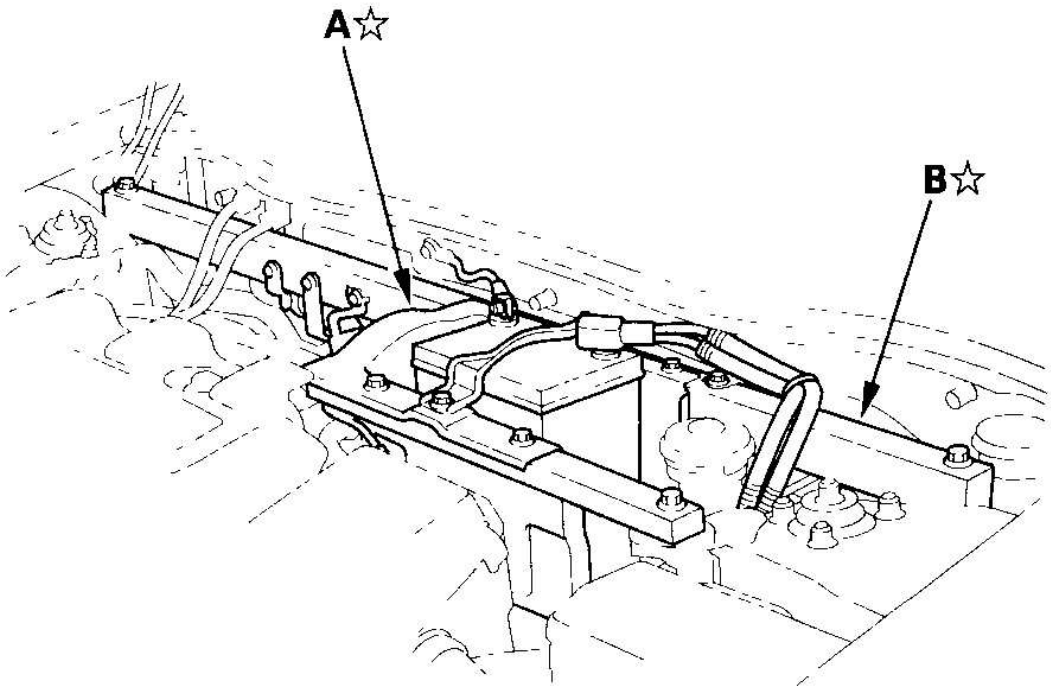


**Fig. 80: Removing Battery Box And Front Damper Base Beam**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

4. Unbend the locking tabs (A) on the stop plate (B).

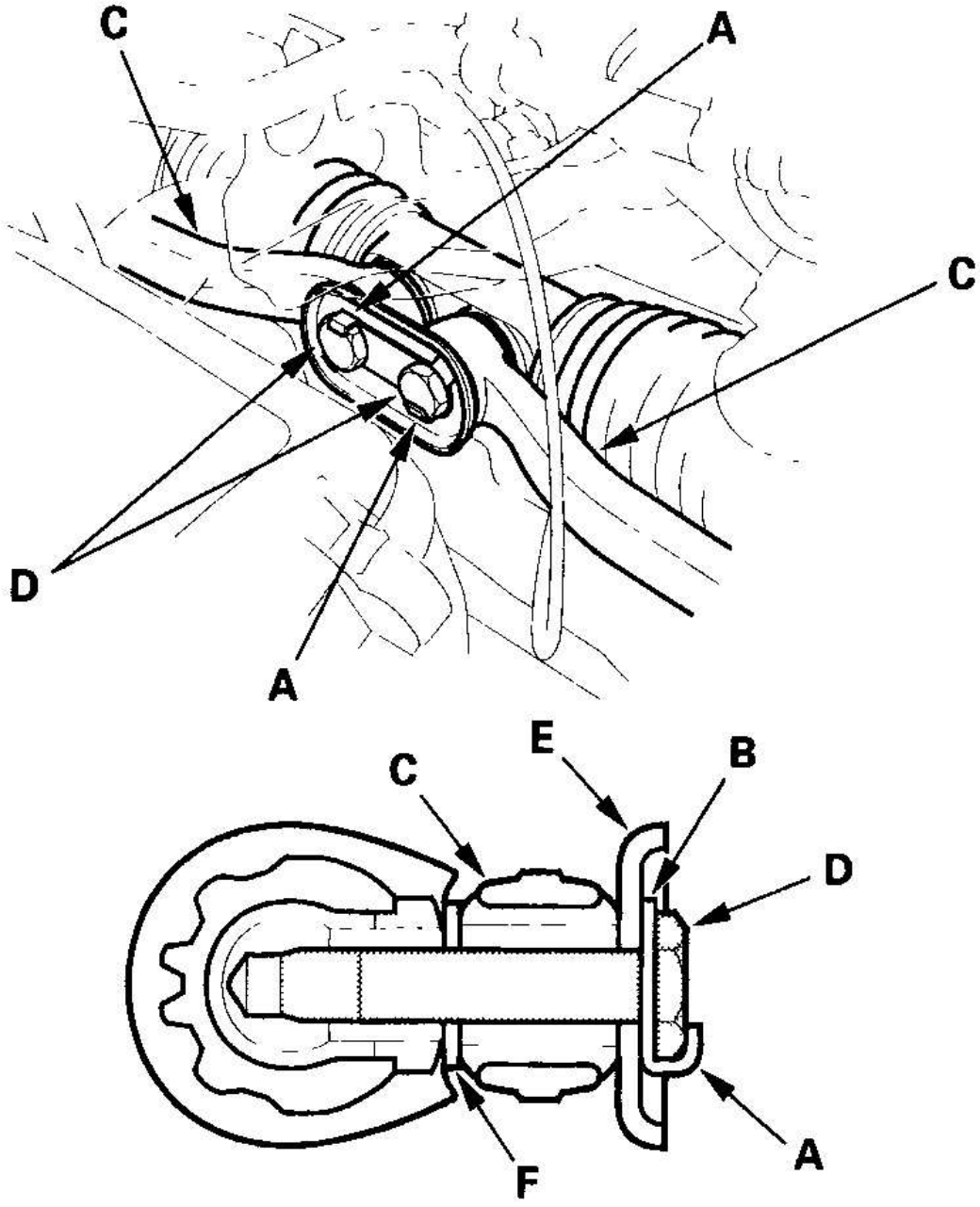


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**Fig. 81: Unbending Locking Tabs On Stop Plate**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

5. Separate the tie-rods (C) from gearbox by removing the 12 mm bolts (D), the stop plate, the tie-rod plate (E), and the seal washers (F).
6. Remove the cotter pin (A) from the 10 mm nut (B), and loosen the nut.

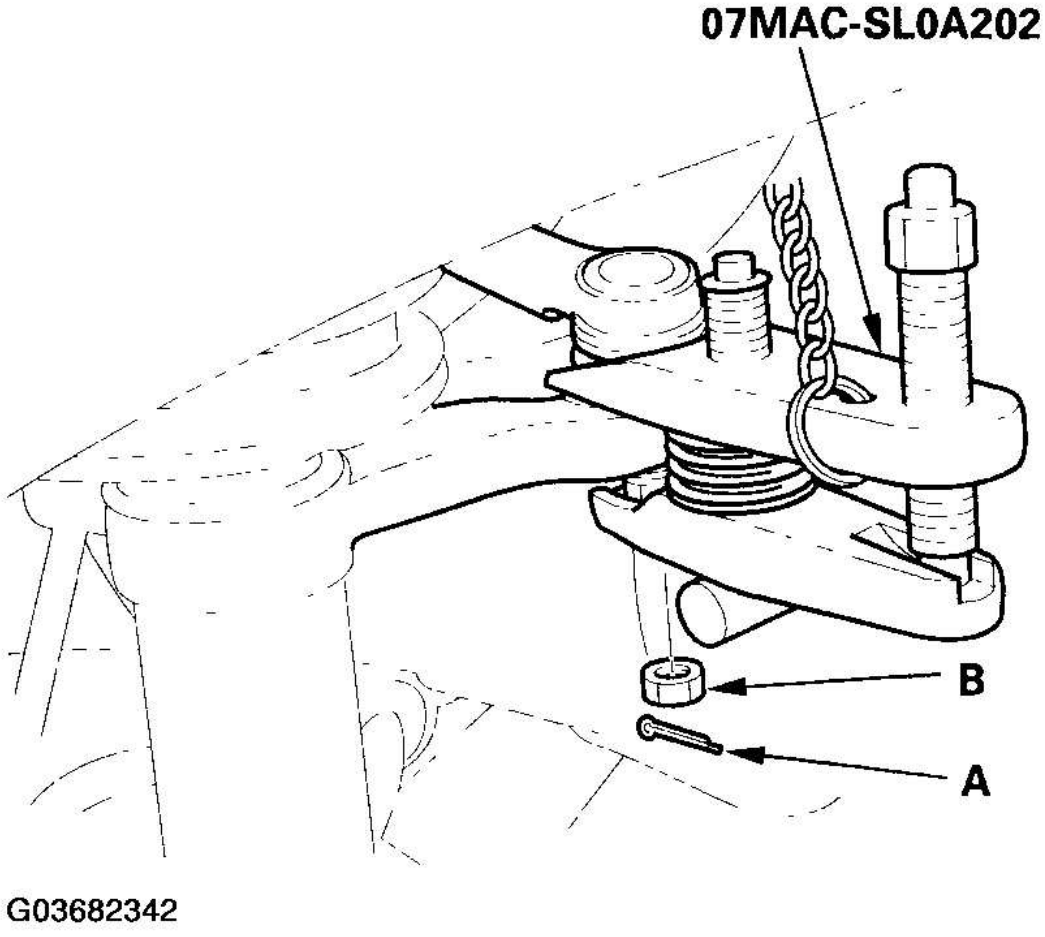


**Fig. 82: Removing Cotter Pin**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

7. Separate the tie-rod ball joint and damper using the special tool (see **BALL JOINT REMOVAL** ).

8. Remove the tie-rods.

**INSTALLATION**

**NOTE: There are two types of the tie-rod arm; one for left side and the other for the right side. Do not interchange them. The left tie-rod arm is marked with "L" and the right one is marked with "R" for identification.**

1. Wipe off any grease contamination from the ball joint tapered section and threads. Then reconnect tie-rod (A) to the dampers. Install the 10 mm nut (B) and tighten it.

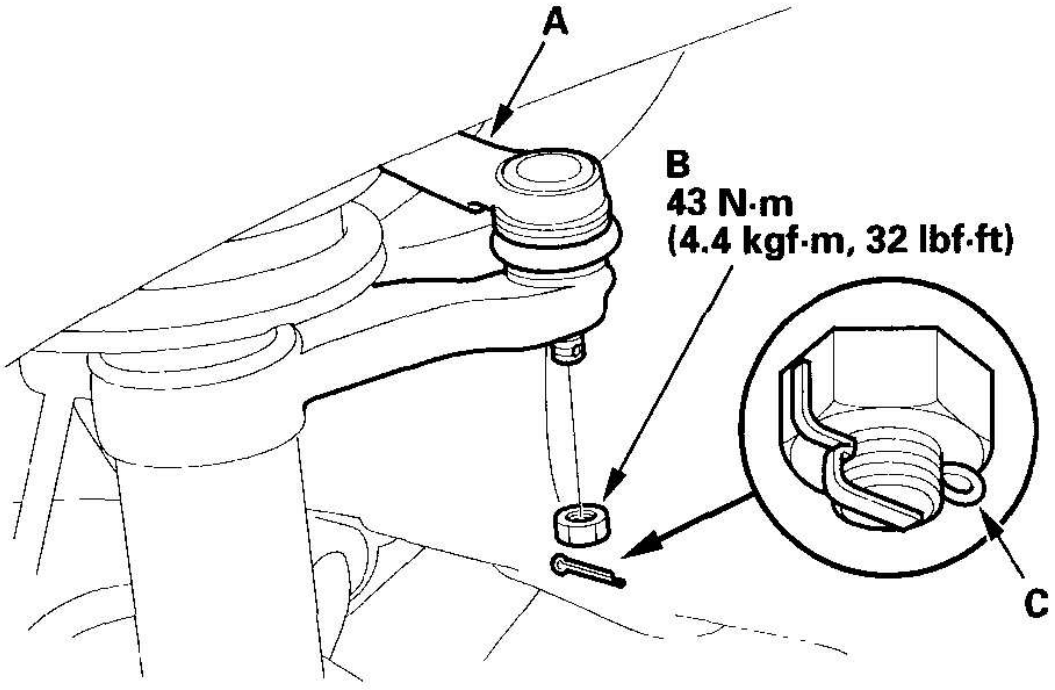


**Fig. 83: Wiping Off Any Grease Contamination From Ball Joint And Torque Specifications**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

2. Install the new cotter pin (C), and bend it as shown.
3. Install the 12 mm bolts (A), a new stop plate (B), the tie-rod plate (C) and new seal washers (D) by aligning the steering rack bolt hole and tie-rod bolt hole.

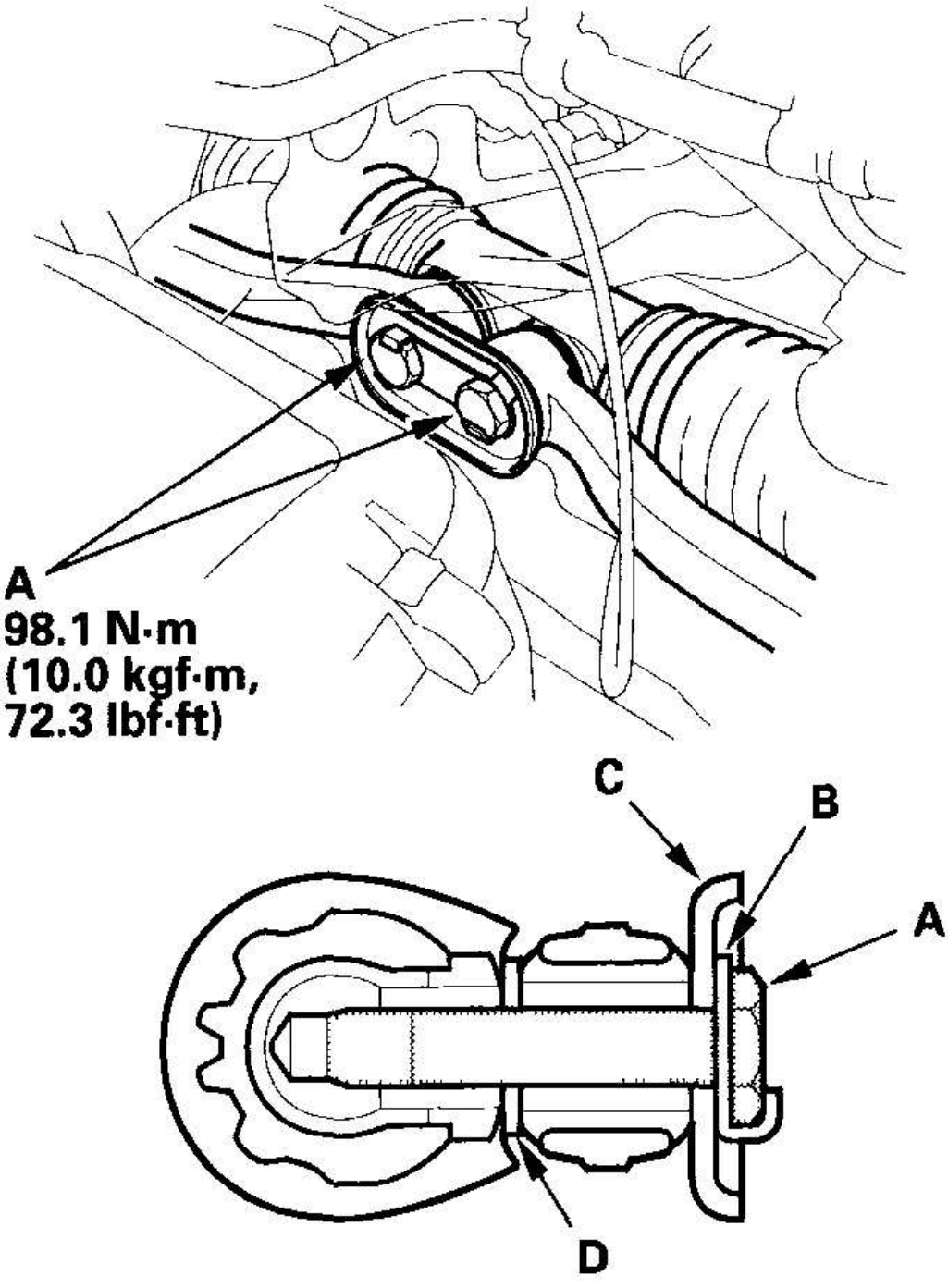


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**Fig. 84: Installing New Cotter Pin, And Bend With Specified Torques**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

4. Tighten the 12 mm bolts, and bend the stop plate lock tabs (A).

**NOTE: If, after tightening the 12 mm bolts, the flats of the bolt heads (B) do not align with the lock tabs, continue tightening the bolt unit the bolt head aligns with one of the lock tabs. Do not exceed the torque value of 108 N.m (11.0 kgf.m, 79.6 lbf.ft).**

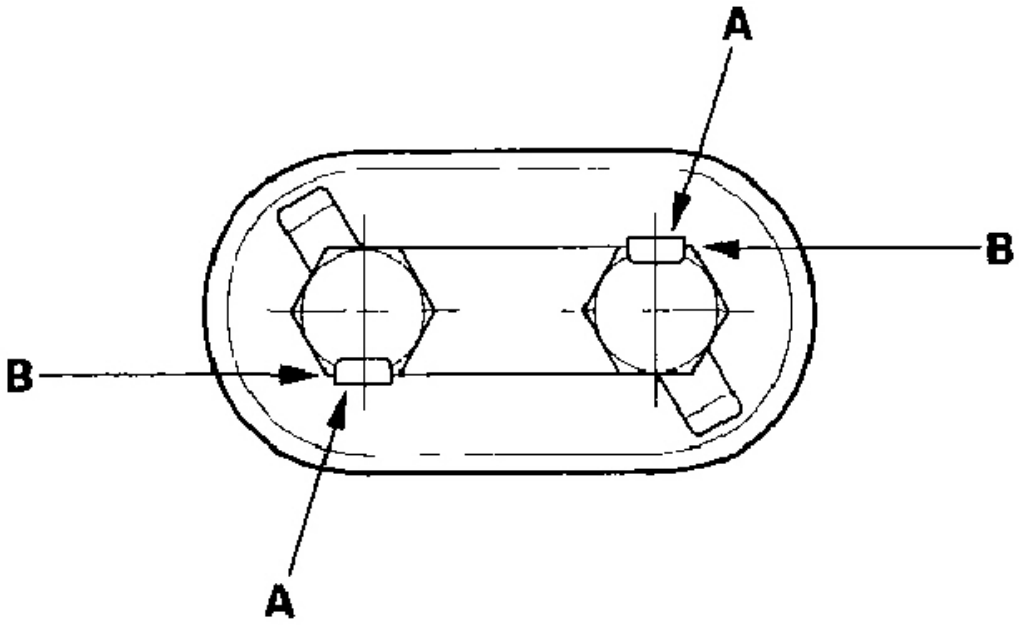


**Fig. 85: Tightening And Bend Stop Plate Lock Tabs**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

5. Perform the following after installation.
   - Check whether the arrow (A) on the tie-rod arm (B) aligns with the center

of the alignment mark (C) located at the tie-rod end (D) by viewing the tie-rod in the axial direction from the wheelhouse.

- Check the front toe (see **FRONT TOE INSPECTION/ADJUSTMENT** ).
- Check the steering wheel spoke angle. Adjust by turning the right and left tie-rod adjuster bolts equally, if necessary.
- Enter the anti-theft codes for the radio, then reset the customer's radio presets.
- Set the clock.
- Do the ECM idle learn procedure (see **ECM IDLE LEARN PROCEDURE** ).

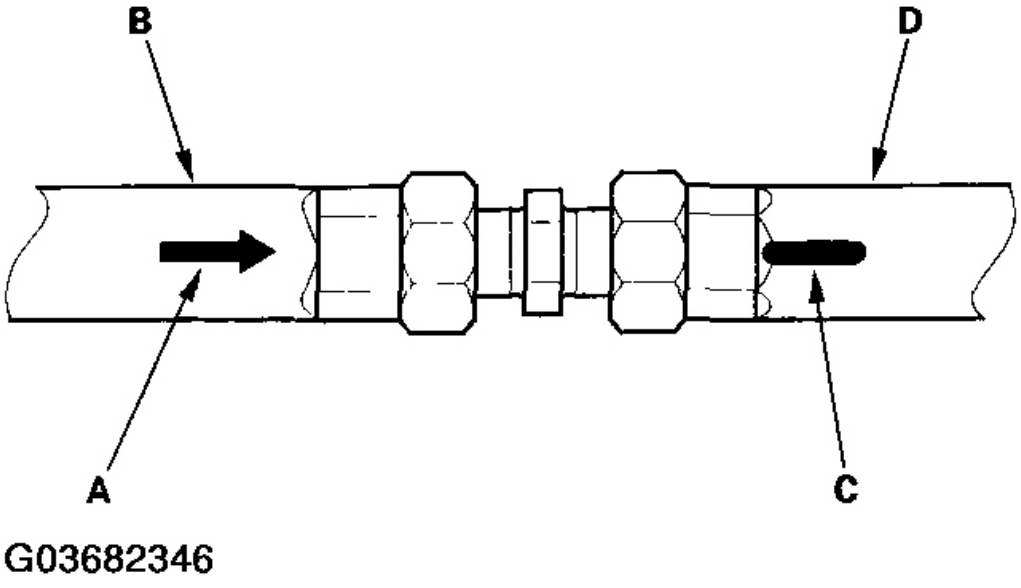


**Fig. 86: Turning The Right And Left Tie-Rod Adjuster Bolts Equally**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

6. Remove the No. 15 EPS (40 A) fuse from the under-hood fuse/relay box.
7. If the IMA battery level gauge (BAT) displays no segments, start the engine, and hold it between 3,500 RPM and 4,000 RPM without load (in Park or

neutral) until the BAT displays at least three segments.

8. Reinstall the No. 15 EPS (40 A) fuse.

## BALL JOINT BOOT REPLACEMENT

1. Remove the boot set ring and boot from the tie-rod end.
2. Wipe the old grease of the ball pin.
3. Pack the lower area of the ball pin (A) with fresh multipurpose grease.

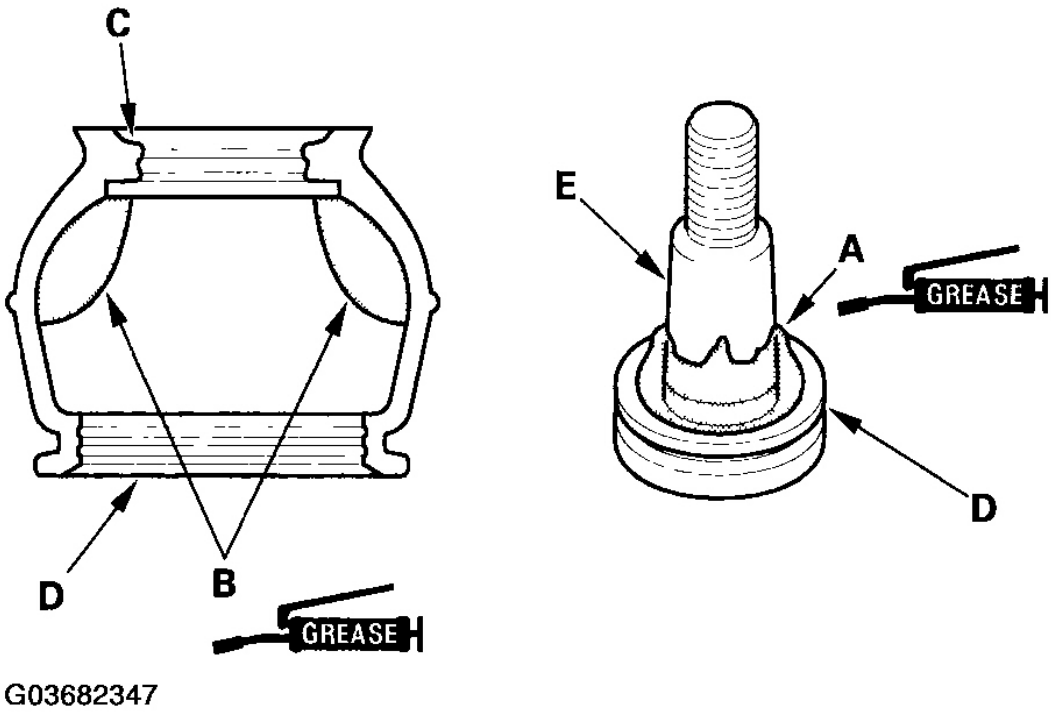


**Fig. 87: Removing Boot Set Ring And Boot From Tie-Rod End**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

4. Pack the inside of the new boot (B) and lip (C) with fresh multipurpose grease.

**NOTE: Note these items when installing new grease:**

- Keep grease off the boot installation section (D) and the tapered section

(E) of the ball pin.

- Do not allow dust, dirt, or other foreign materials to enter the boot.

5. Using flat-blade screwdrivers (A), expand the boot set ring (B) as shown, and set it in the groove of the boot. Take care not to damage the boot with the tips of the flat-blade screwdrivers.

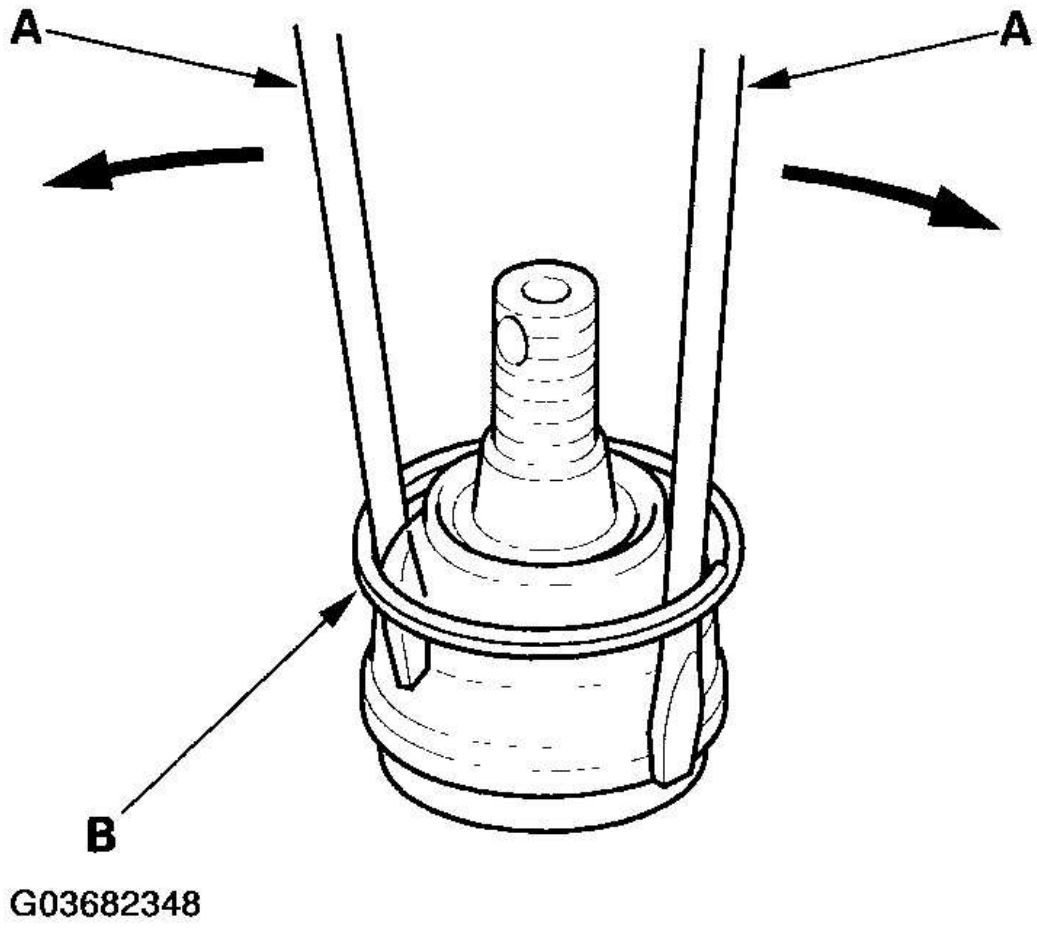


**Fig. 88: Expanding The Boot Set Ring**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

## DUST SEAL HOLDER AND BOOTS REPLACEMENT

**NOTE: Note during replacement, do not allow dust, dirt or other**

**foreign materials to enter the gearbox.**

1. Remove the steering gearbox (see **STEERING GEARBOX REPLACEMENT** ).
2. Remove the boot bands (A) and discard them.

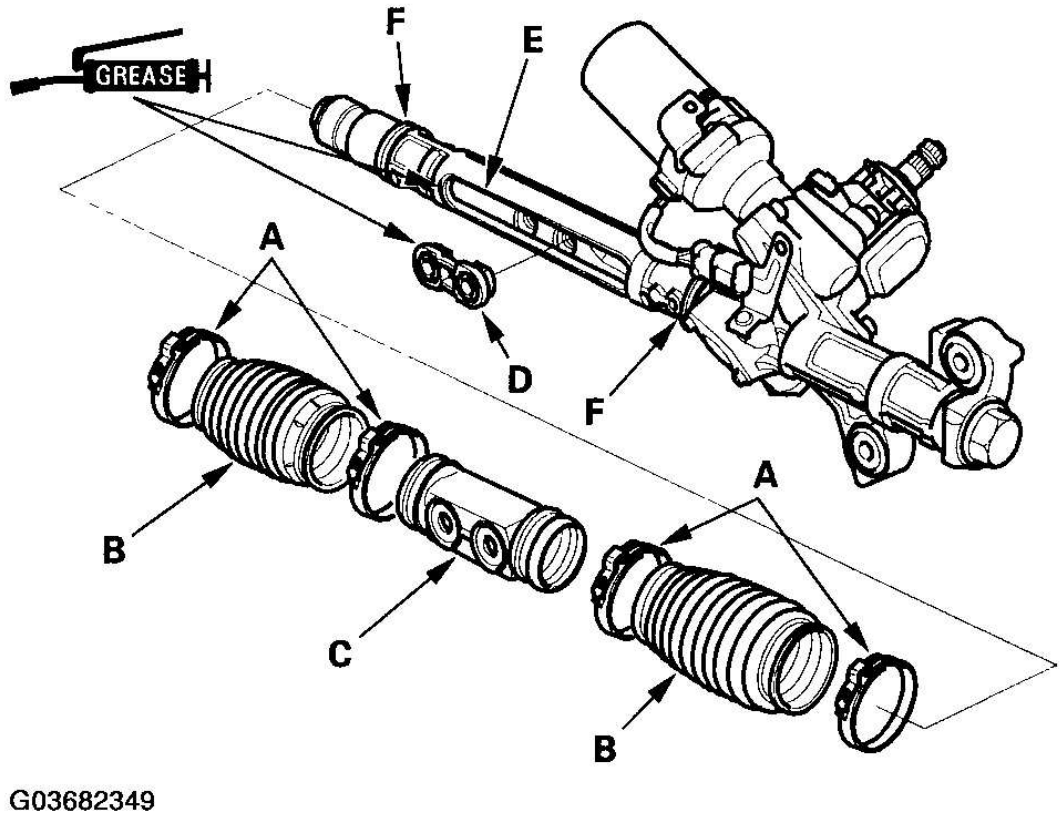


**Fig. 89: Removing Steering Gearbox**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

3. Pull the boots (B) and dust seal holder (C) away from the ends of the gearbox.
4. Apply multipurpose grease to the sliding surface of the slider guide (D).
5. Apply multipurpose grease to the entire sliding surface (where the slider guide moves) on the housing (E).
6. Install the slider guide on the steering rack by aligning the bolt holes.

7. Clean off any grease or contamination from the grooves (F) around on the housing.
8. Pass the left boot, dust seal holder and the right boot over the steering gearbox in this order. Then, set the boots in the corresponding installation grooves in the gearbox housing and the dust seal holder.
9. Install the boot band by aligning the tabs (A) with holes (B) of the band. Make sure the ear portion (C) is within the range shown.

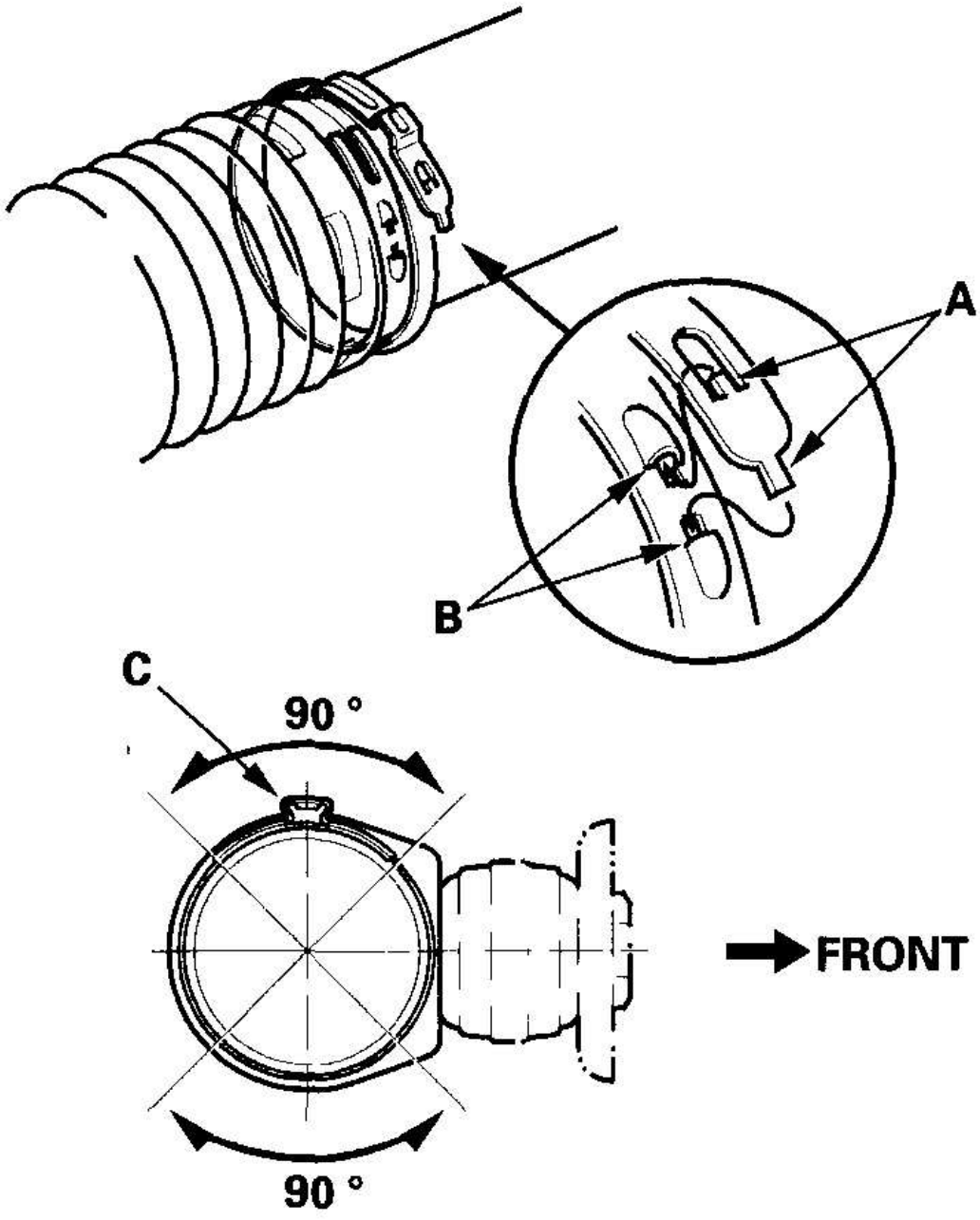


**Fig. 90: Installing Boot Band**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

10. Close the ear portion (A) of the band with commercially available pincers, Oetiker 1098 or equivalent (B).

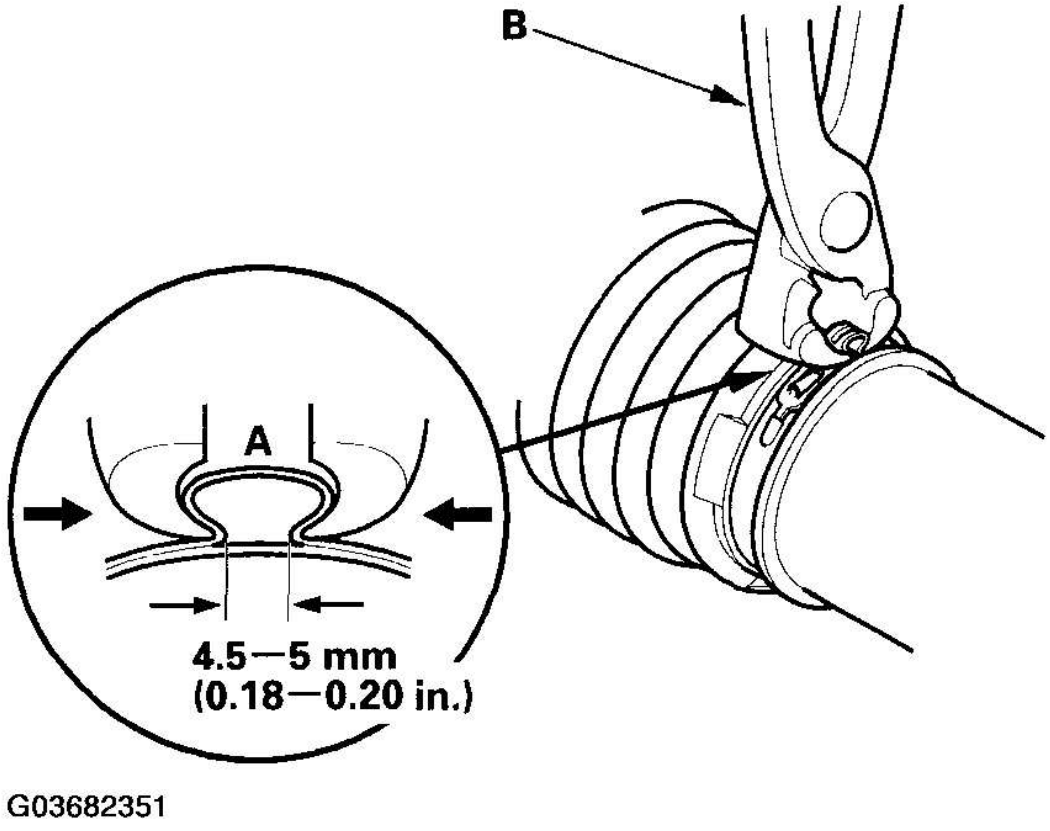


**Fig. 91: Closing Ear Portion Of Band With Commercially Pincers**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

11. Slide the rack right and left to be certain that the boots are not deformed or twisted.

## EPS CONTROL UNIT REMOVAL/ INSTALLATION

1. Write down the frequencies for the radio preset buttons. Disconnect the negative cable from the battery.
2. Remove the right kick panel.
3. Remove the EPS control unit (A) and the power relay (B).

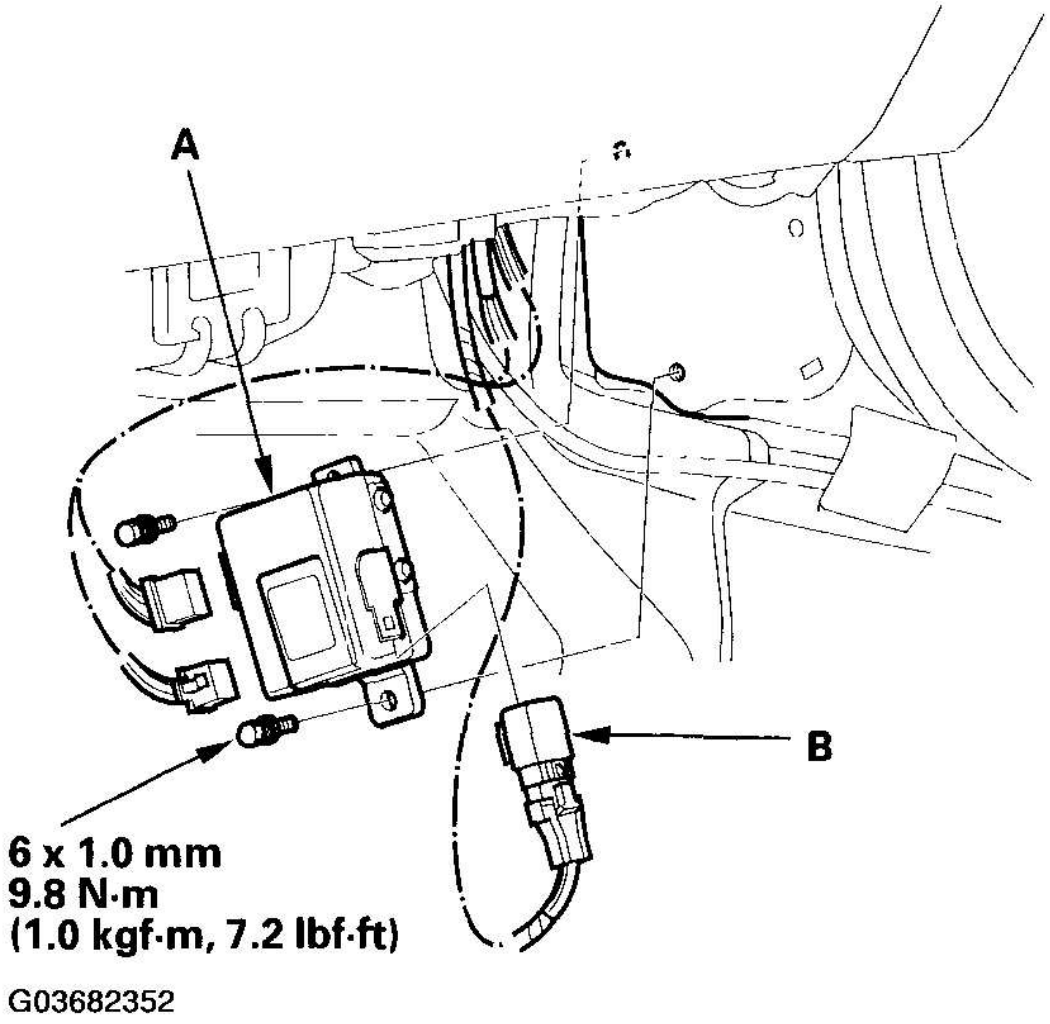


**Fig. 92: Removing EPS Control Unit (A) And The Power Relay**
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

4. Disconnect the EPS control unit connectors and power relay connector.
5. Install the EPS control unit in the reverse order of removal.
6. Reconnect the battery cable, and do the following:
   - Reset the radio station presets.
   - Set the clock.
   - Do the ECM idle learn procedure (see **ECM IDLE LEARN**

**PROCEDURE** ).

7. Remove the No. 15 EPS (40 A) fuse from the under-hood fuse/relay box.
8. If the IMA battery level gauge (BAT) displays no segments, start the engine, and hold it between 3,500 RPM and 4,000 RPM without load (in Park or neutral) until the BAT displays at least three segments.
9. Reinstall the No. 15 EPS (40 A) fuse.