

Troubleshooting

DTC 1: Pump Motor Over-run

NOTE: The ABS indicator light comes on twice; once for 2 seconds during the bulb check, then again, indicating DTC 1.

The ABS control unit monitors the pump motor relay drive signal during the initial diagnosis and individual diagnosis when the ABS is not functioning. When the ABS control unit detects the drive signal for 40 seconds, it turns the pump motor relay off and turns the ABS indicator light on.

Possible causes:

- Pressure switch stuck OFF
- Open circuit between the pressure switch and ABS control unit
- Open circuit in the P-SW circuit between the pressure switch and body ground, or a poor ground
- Drop in pump discharge volume
- Leaking outlet valve
- Leaking relief valve
- Brake fluid leakage in the ABS operation system
- Faulty ABS control unit
- Air trapped in the modulator

- With engine running, ABS indicator light is ON.
- With the SCS service connector connected (see page 19-40), DTC 1 is indicated.

Problem verification:

Start the engine and let it run for 1 minute.

Does the pump motor run for 40 seconds and does the ABS indicator light come on?

NO

The vehicle is OK at this time.

YES

Check the reservoir fluid level.

Is the level OK?

NO

Inspect the modulator reservoir and the accumulator for brake fluid leakage, and repair as necessary. If the reservoir and the accumulator are OK, replace the modulator unit.

YES

(To page 19-49)

(From page 19-48)

Check for aerated high-pressure brake fluid:

Bleed the high-pressure brake fluid (see page 19-98).

Does the ABS indicator light go off after bleeding the brake fluid?

YES

The ABS is OK now.

NO

Check the modulator unit:

1. Turn the ignition switch OFF.
2. Disconnect the modulator unit 14P connector.
3. Check for continuity between terminals No. 4 and No. 11.

Is there continuity?

NO

Replace the modulator unit.

- Pressure switch stuck OFF
- Drop in pump discharge volume
- Leaking outlet valve
- Leaking relief valve

YES

Check for an open in the P-SW GND circuit:

1. Turn the ignition switch ON (II).
2. Measure the voltage between the modulator unit 14P connector terminal No. 4 and body ground.

Is there battery voltage?

YES

Repair open in the wire between the pressure switch and body ground.

NO

Check for an open in the P-SW circuit:

Measure the voltage between the ABS control unit 26P connector terminal No. 19 and body ground.

Is there battery voltage?

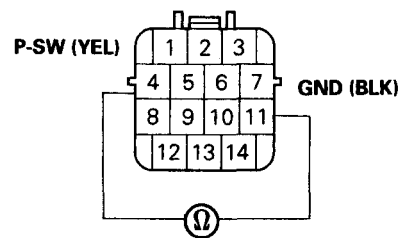
YES

Repair open in the wire between the pressure switch and ABS control unit.

NO

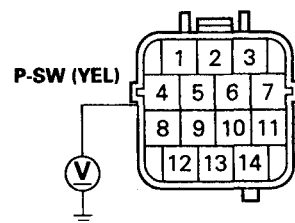
Check for loose ABS control unit connectors. If necessary, substitute a known-good ABS control unit and recheck.

MODULATOR UNIT 14P CONNECTOR



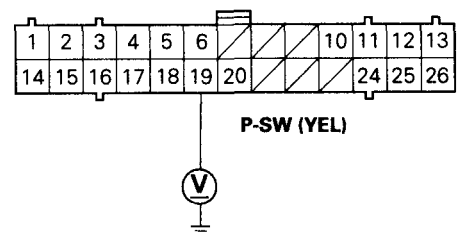
Wire side of female terminals

MODULATOR UNIT 14P CONNECTOR



Terminal side of male terminals

ABS CONTROL UNIT 26P CONNECTOR



Wire side of female terminals