INSTALLATION).

NO - Replace A/C diode B.

A/C COMPRESSOR CLUTCH CIRCUIT TROUBLESHOOTING

NOTE:

- **It is normal for the A/C compressor to turn off under certain conditions, such as low idle, high engine coolant temperature, or hard acceleration.**
- **Do not use this troubleshooting procedure if the fans are also inoperative with the A/C on. Refer to the SYMPTOM TROUBLESHOOTING INDEX.**
- **Before doing any symptom troubleshooting, check for powertrain DTCs, R18A1 engine (see GENERAL TROUBLESHOOTING INFORMATION), K20Z3 engine (see GENERAL TROUBLESHOOTING INFORMATION).**

1. Check the No. 20 (7.5 A) fuse in the under-hood fuse/relay box, and the No. 36 (10 A) fuse in the under-dash fuse/relay box.

   Are the fuses OK?

   YES - Go to step 2.

   NO - Replace the fuses and recheck. If the fuses blow again, check for a short in the No. 20 (7.5 A) and No. 36 (10 A) fuses circuit.

2. Connect the HDS to the DLC.
3. Start the engine.
4. Turn on the A/C on the HVAC control unit.
5. Check the A/C CLUTCH in the PGM-FI Data List with the HDS at idle.

HDS A/C VALUES

ECT sensor 2	176-212 °F (80-100 °C)
TP sensor	About 0.5 V at idle

RPM	More than 670
A/C Switch	ON
A/C Clutch	ON

Are all the values within specifications?

YES - Go to step 6.

NO - Troubleshoot the value that is not within the specfications.

6. Turn the ignition switch to LOCK (0).
7. Remove the A/C compressor clutch relay from the under-hood fuse/relay box, and test it (see **POWER RELAY TEST**).

   Is the relay OK?

   YES - Go to step 8.

   NO - Replace the A/C compressor clutch relay.

8. Measure the voltage between the A/C compressor clutch relay 4P socket terminal No. 1 and body ground.

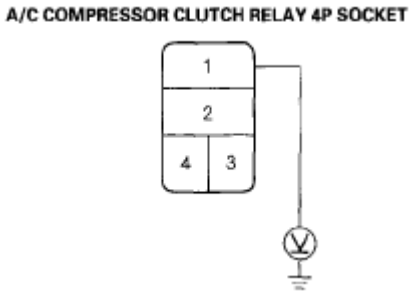

Fig. 61: Measuring Voltage Between A/C Compressor Clutch Relay 4P Socket Terminal No. 1 And Body Ground

Is there battery voltage?

YES - Go to step 9.

NO - Replace the under-hood fuse/relay box (see **REMOVAL AND INSTALLATION**).

9. Connect the A/C compressor clutch relay 4P socket terminals No. 1 and No. 2 with a jumper wire.

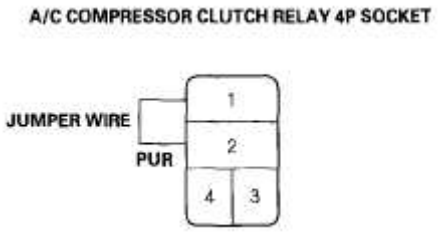

Fig. 62: Connecting A/C Compressor Clutch Relay 4P Socket Terminals No. 1 And No. 2 With Jumper Wire

Does the A/C compressor clutch click?

YES - Go to step 10.

NO - Go to step 19.

10. Disconnect the jumper wire.
11. Turn the ignition switch ON (II).
12. Measure the voltage between the A/C compressor clutch relay 4P socket terminal No. 3 and body ground.

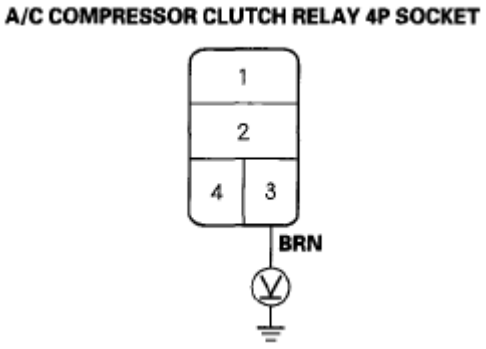

Fig. 63: Measuring Voltage Between A/C Compressor Clutch Relay 4P Socket Terminal No. 3 And Body Ground

Is there battery voltage?

YES - Go to step 13.

NO - Repair open in the wire between the No. 36 (10 A) fuse in the under-dash fuse/relay box and the A/C compressor clutch relay.

13. Turn the ignition switch to LOCK (0).
14. Reinstall the A/C compressor clutch relay.
15. Jump the SCS line with the HDS.

NOTE: This step must be done to protect the engine control module (ECM)/powertrain control module (PCM) from damage.

16. Disconnect ECM/PCM connector A (44P).
17. Connect the ECM/PCM connector A (44P) terminal No. 14 to body ground with a jumper wire.

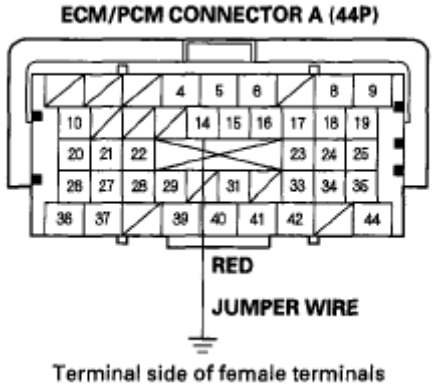

Fig. 64: Connecting ECM/PCM Connector A (44P) Terminal No. 14 To Body Ground With Jumper Wire

18. Turn the ignition switch ON (II).

Does the A/C compressor click?

YES - Check for loose wires or poor connections at ECM/PCM connector A (44P). If the connections are good, check the ECM/PCM grounds. If the

grounds are good, substitute a known-good ECM/PCM, and recheck. If the symptom/indication goes away, replace the original ECM/PCM, R18A1 engine (see **ECM/PCM REPLACEMENT**), K20Z3 engine (see **ECM REPLACEMENT**).

NO - Repair open in the wire between the A/C compressor clutch relay and the ECM/PCM.

19. Disconnect the jumper wire.
20. Disconnect the A/C compressor clutch 3P connector.
21. Check for continuity between the A/C compressor clutch relay 4P socket terminal No. 2 and the A/C compressor clutch 3P connector terminal No. 2.

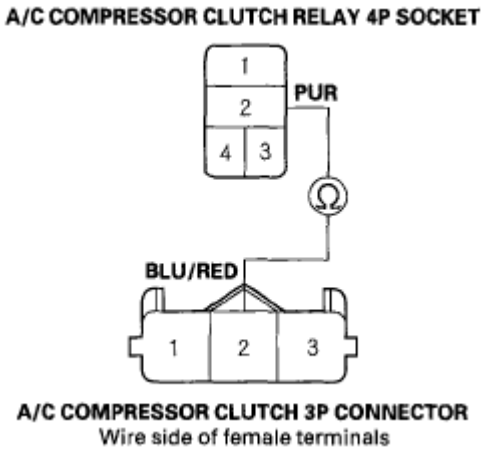

Fig. 65: Checking Continuity Between A/C Compressor Clutch Relay 4P Socket Terminal No. 2 And A/C Compressor Clutch 3P Terminal

Is there continuity?

YES - Check the A/C compressor clutch clearance, and the compressor clutch field coil (see **A/C COMPRESSOR CLUTCH CHECK**). Repair as needed.

NO - Repair open in the wire between the A/C compressor clutch relay and the A/C compressor clutch.

A/C SIGNAL CIRCUIT TROUBLESHOOTING