DTC C1850-14: FAIL SAFE RELAY STUCK OFF

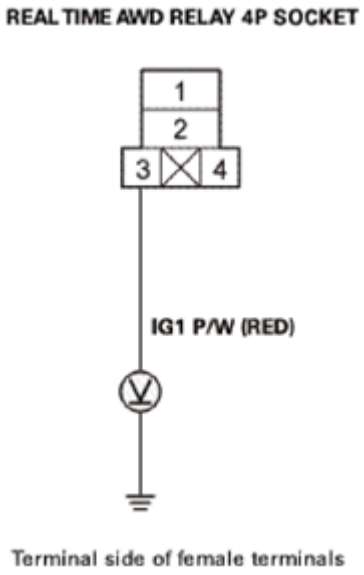
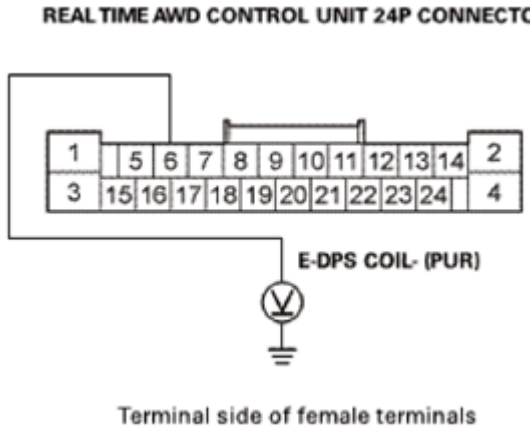
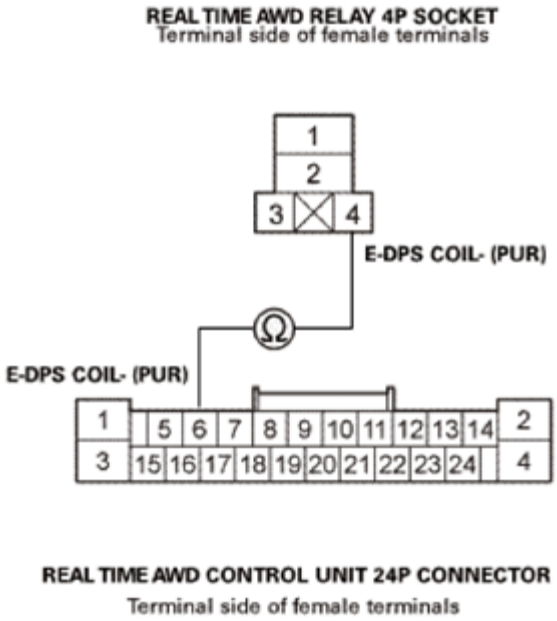


Fig. 25: DTC Troubleshooting Flow Chart (



C1850



-14)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

NOTE: **Before you troubleshoot, REVIEW THE HOW TO TROUBLESHOOT THE REAL TIME AWD SYSTEM .**

DTC Description	DTC	Freeze Frame
C1850-14 Fail Safe Relay Stuck OFF		

1. Problem verification:
   - 1. Start the engine.
   - 2. Check the parameter(s) below with the HDS.

Signal	Threshold		Current conditions	
	Values	Unit	Values	Unit
Voltage of Battery	Less than 3.0	V		

Do the current condition(s) match the threshold?

YES : The failure is duplicated. Go to step 2.

NO : Intermittent failure, the system is OK at this time.

2. Fuse check:
   - 1. Turn the ignition switch to LOCK (0).
   - 2. Check the following fuse.

Fuse No. A1-5 (30 A)

Location Under-hood fuse/relay box

Is the fuse OK?

YES : The fuse is OK. Reinstall the fuses, then go to step 3.

NO : Replace the fuse, and recheck. If the fuse blows again, repair a short in the No. A1-5 (30 A) fuse circuit.

3. Real time AWD relay check:
   - 1. **REMOVE THE REAL TIME AWD RELAY** , then **TEST IT** .

Is the real time AWD relay OK?

YES : The real time AWD relay is OK. Go to step 4.

NO : **REPLACE THE REAL TIME AWD RELAY** .

4. Open wire check (+B E-DPS line):
   - 1. Measure the voltage between test points 1 and 2.

     Test condition IG LOCK (0)

     Real time AWD relay: disconnected

     Test circuit +B E-DPS

     Test point 1 Real time AWD relay 4P socket No. 1 (BLU)

     Test point 2 Body ground

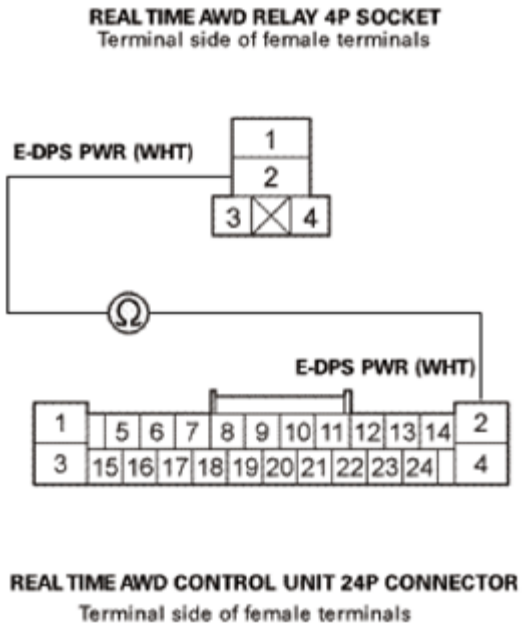


Fig. 26: Measuring Voltage Between Real Time AWD Relay 4P Socket No. 1 (BLU) And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES : The +B E-DPS wire is OK. Go to step 5.

NO : Repair an open in the +B E-DPS wire between the real time AWD relay and the No. A1-5 (30 A) fuse in the under-hood fuse/relay box.

5. Open wire check (IG1 P/W line):
   - 1. Turn the ignition switch to ON (II).
   - 2. Measure the voltage between test points 1 and 2.

     Test condition IG ON (II)

     Real time AWD relay: disconnected

     Test circuit IG1 P/W

     Test point 1 Real time AWD relay 4P socket No. 3 (RED)

     Test point 2 Body ground

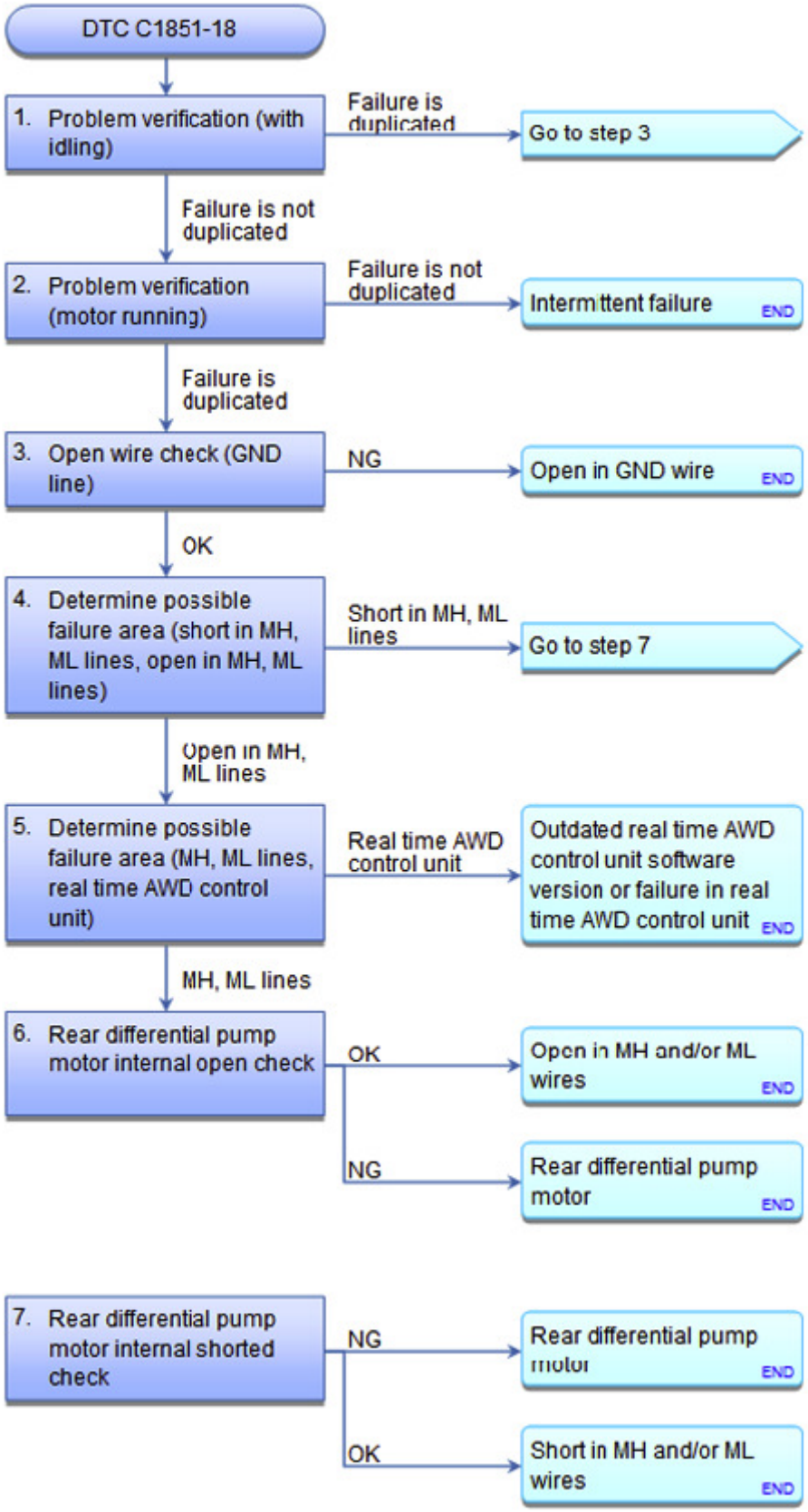


Fig. 27: Measuring Voltage Between Real Time AWD Relay 4P Socket No. 3 (RED) And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES : The IG1 P/W wire is OK. Go to step 6.

NO : Repair an open in the IG1 P/W wire between the real time AWD relay and the ignition switch.

6. Shorted wire check (E-DPS COIL- line to power):
   - 1. Turn the ignition switch to LOCK (0).
   - 2. Disconnect the following connector.

     Real time AWD control unit 24P connector

   - 3. Turn the ignition switch to ON (II).
   - 4. Measure the voltage between test points 1 and 2.

     Test condition IG ON (II)

     Real time AWD relay: disconnected

     Real time AWD control unit 24P connector: disconnected

     Test circuit E-DPS COIL-

     Test point 1 Real time AWD control unit 24P connector No. 6 (PUR)

     Test point 2 Body ground

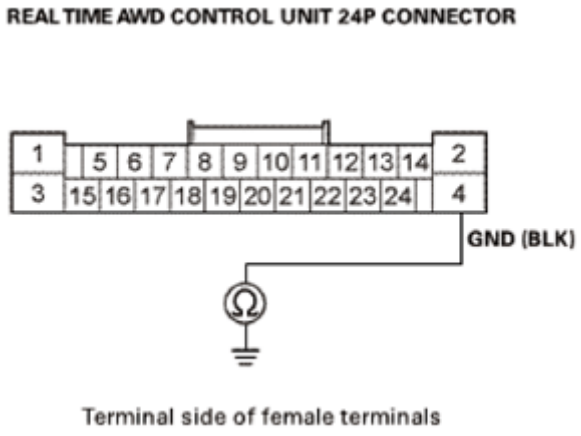


Fig. 28: Measuring Voltage Between Real Time AWD Control Unit 24P Connector No. 6 (PUR) And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 0.1 V or less?

YES : The E-DPS COIL- wire is not shorted to power. Go to step 7.

NO : Repair a short to power in the E-DPS COIL- wire between the real time AWD relay and the real time AWD control unit, then **replace the real time AWD control unit** See **REAL TIME AWD CONTROL UNIT REMOVAL AND INSTALLATION** or **REAL TIME AWD CONTROL UNIT UPDATE** .

7. Open wire check (E-DPS COIL- line):
   - 1. Turn the ignition switch to LOCK (0).
   - 2. Check for continuity between test points 1 and 2.

   Test condition IG LOCK (0)

   Real time AWD relay: disconnected

   Real time AWD control unit 24P connector: disconnected

   Test circuit E-DPS COIL-

   Test point 1 Real time AWD relay 4P socket No. 4 (PUR)

   Test point 2 Real time AWD control unit 24P connector No. 6 (PUR)

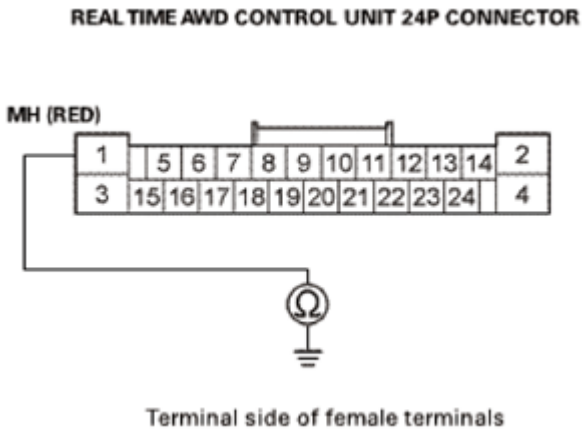


Fig. 29: Checking Continuity Between Real Time AWD Relay 4P Socket No. 4 (PUR) And Real Time AWD Control Unit 24P Connector No. 6 (PUR)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES : The E-DPS COIL- wire is OK. Go to step 8.

NO : Repair an open in the E-DPS COIL- wire between the real time AWD relay and the real time AWD

control unit.

8. Open wire check (E-DPS PWR line):
   - 1. Check for continuity between test points 1 and 2.

     Test condition IG LOCK (0)

     Real time AWD relay: disconnected

     Real time AWD control unit 24P connector: disconnected

     Test circuit E-DPS PWR

     Test point 1 Real time AWD relay 4P socket No. 2 (WHT)

     Test point 2 Real time AWD control unit 24P connector No. 2 (WHT)

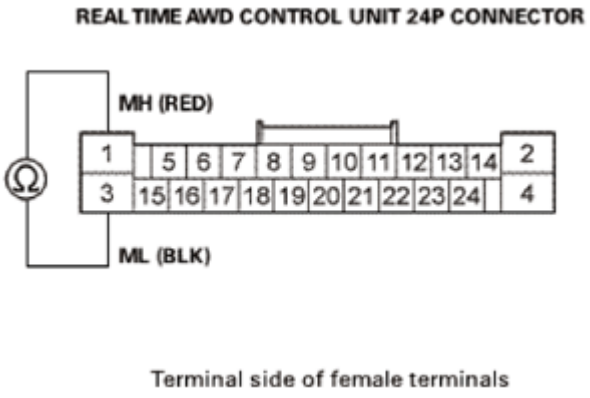


Fig. 30: Checking Continuity Between Real Time AWD Relay 4P Socket No. 2 (WHT) And Real Time AWD Control Unit 24P Connector No. 2 (WHT)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES : **Update the real time AWD control unit if it does not have the latest software** See **REAL TIME AWD CONTROL UNIT REMOVAL AND INSTALLATION** or **REAL TIME AWD CONTROL UNIT UPDATE** , or **substitute a known-good real time AWD control unit** See **REAL TIME AWD CONTROL UNIT REMOVAL AND INSTALLATION** or **REAL TIME AWD CONTROL UNIT UPDATE** , and recheck. If the symptom/indication goes away with the updated real time AWD control unit, troubleshooting is complete. If the symptom/indication goes away with a known-good real time AWD control unit, **replace the original real time AWD control unit** See **REAL TIME AWD CONTROL UNIT REMOVAL AND INSTALLATION** or **REAL TIME AWD CONTROL UNIT UPDATE** .

NO : Repair an open in the E-DPS PWR wire between the real time AWD relay and the real time AWD control unit.

