

## DIAGNOSIS AND TESTING (Continued)

Operation of the A/C compressor clutch is dependent on the ambient temperature and signals from the engine computer. Strategies are programmed into the engine computer to interrupt A/C compressor operation when certain conditions exist. The A/C compressor clutch can be shut off (or kept off) for several seconds at engine start-up, at high engine speeds, during acceleration, when the engine coolant temperature exceeds a predetermined temperature and during low engine idle conditions (approximately 200 rpm below low idle specifications. Refer to the following diagnostic procedures and, if necessary, the Powertrain Control/Emissions Diagnosis Manual<sup>1</sup> to correct an inoperative compressor clutch condition.

**NOTE:** The ambient temperature must also be above approximately 50°F for A/C compressor operation.

**PINPOINT TEST B:  
A/C CLUTCH CIRCUIT DIAGNOSIS**

TEST STEP		RESULT	ACTION TO TAKE
<b>B1</b>	<b>CHECK SYSTEM OPERATION</b> <ul style="list-style-type: none"> <li>Start engine.</li> <li>Set the A/C control MAX A/C. Check battery voltage (if not 12.5 volts or more, refer to Charging System Diagnosis).</li> <li>Does clutch engage?</li> </ul>	Yes	▶ Circuit functioning properly
		No	▶ GO to B2.
<b>B2</b>	<b>BY-PASS PRESSURE SWITCH</b> <ul style="list-style-type: none"> <li>Disconnect electrical connector from pressure switch on accumulator. Jumper the harness connector pins. Engine must be running and system set at MAX A/C.</li> <li>Does clutch engage?</li> </ul>	Yes	▶ GO to B3.
		No	▶ GO to B4.
<b>B3</b>	<b>CHECK REFRIGERANT SYSTEM PRESSURES</b> <ul style="list-style-type: none"> <li>Connect gauge set to service ports and observe pressure.</li> <li>Does pressure measure above 50 psi?</li> </ul>	Yes	▶ REPLACE clutch cycling pressure switch. GO to B1.
		No	▶ CHECK refrigerant system for leaks. SERVICE leak test and charge as necessary. GO to B1.
<b>B4</b>	<b>CHECK VOLTAGE AT PRESSURE SWITCH</b> <ul style="list-style-type: none"> <li>Check for battery voltage at pressure switch electrical connector 348 circuit (LG/P wire) to ground.</li> <li>Is there battery voltage?</li> </ul>	Yes	▶ GO to B8.
		No	▶ GO to B5.
<b>B5</b>	<b>CHECK A/C CONTROL SWITCH</b> <ul style="list-style-type: none"> <li>Check for battery voltage at the A/C control switch 348 circuit (LG/P wire).</li> <li>Is there voltage?</li> </ul>	Yes	▶ SERVICE wiring as necessary. GO to B1.
		No	▶ GO to B6.
<b>B6</b>	<b>CHECK EATC OR CONTROL ASSEMBLY OUTPUT VOLTAGE</b> <ul style="list-style-type: none"> <li>Check for battery voltage at: EATC Control Assembly Pin 25 (clutch output signal). A/C Control Assembly output.</li> <li>Is there voltage?</li> </ul>	Yes	▶ CHECK circuit between control assembly and pressure switch for open. SERVICE as necessary. GO to B1.
		No	▶ GO to B6.

<sup>1</sup> Can be purchased as a separate item.