FACTORY AIR™ by 4 SEASONS

TECH TIP

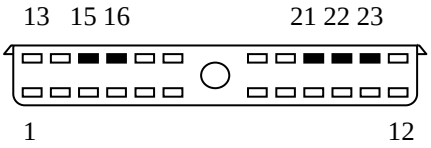
97 and Newer Escort, ZX2
'99 and Newer Mustang
Constant Control Relay Module

The constant control relay module (CCRM) used on Escort and Mustang operates differently from other Ford CCRMs. The Escort/Mustang module has a wide-open throttle (WOT) relay instead of the solid state relay. (See Tech Tip #354) The WOT relay is a "normally closed" relay. This allows voltage from a pressure switch or fuse to be applied to the compressor clutch. When compressor operation is not required, the engine computer grounds the WOT relay and "opens" the relay contacts, turning the compressor off.

Testing for a customer complaint of "no compressor operation" can be quickly performed with a digital voltmeter. Do not use a testlight as it will ground the WOT relay. Testing involves back probing terminals of the CCRM.

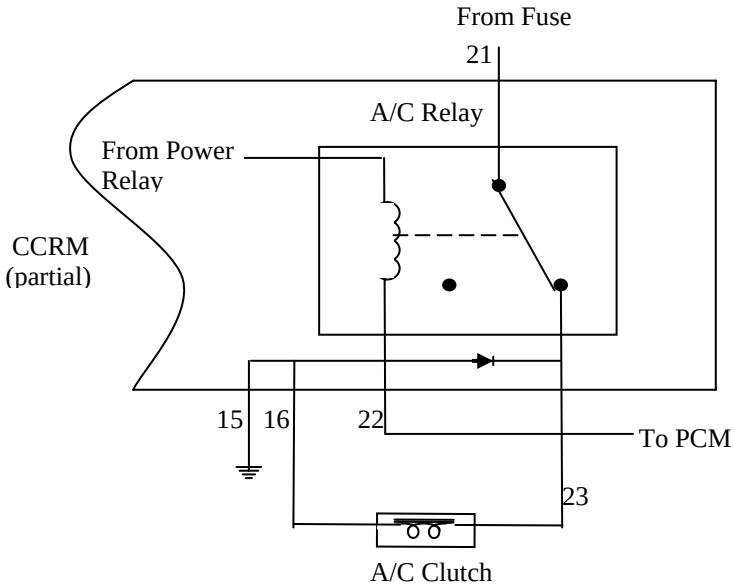
Test Procedure:

With the digital voltmeter connected to ground, test for battery voltage at terminals 21, 22 and 23.



Diagnosis:

If terminal 21 does not have battery voltage, check, repair or replace the fuse, pressure switches and wiring.

If terminals 21 and 22 have battery voltage, and terminal 23 does not, replace the CCRM.

If terminal 21 has battery voltage, and terminal 22 does not, then the computer has grounded the relay to prevent compressor operation. This occurs when computer sensors indicate an engine performance problem. The performance problem will have to be diagnosed and repaired for compressor operation to return.