Disconnect both the six and four pin connector from the control module. Checks will be performed on the vehicle end of the harness. Turn vehicle ignition and A/C controls in cab to the on position. Voltage checks should be between 11.0 and 16.0 volts.

**Six pin connector,** is there battery voltage between pin 4 (module ground) and pin 2 (module power)?

*Yes*

**Six pin connector,** is there voltage between pin 4 (module ground) and pin 3?

*Yes*

**Four pin connector,** is the resistance at pin 3 and pin 4 (high pressure switch circuit) between 0 and 5 ohms? If ok, check at switch**

*No*

Remove high pressure switch. Is the impedance between 0 and 5 ohms at the switch?

*Yes*

Remove pressure restriction from high side of the system.

*No*

Remove low pressure switch. Is the impedance between 2.24k and 2.74k ohms?

*Yes*

Replace pressure switch.

*No*

Check refrigerant charge level in the system.

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**CM-813 AIR CONDITIONING TROUBLESHOOTING FLOW CHART**

**Repair power or grounding problem.**

**Check ECM fan output.****

*Find open circuit between harness and A/C cab controls. Check at the t-stat, defroster microswitch, blower motor switch, A/C relay circuit or A/C On/Off switch.*

***Start delay, compressor lubrication cycle,***

- The A/C compressor is held off for the first 15 seconds after ignition switch engagement (module power up).
- After start delay the A/C compressor is turned on for 15 seconds if the high pressure state, low pressure switch state, clutch state and system voltage is correct.
- **Note:** The T-stat input is ignored during this period.

**High pressure switch note:**

If system is exhibiting abnormal high head pressure and/or the pressure relief valve on the A/C compressor is being blown open, first verify no restriction or blockage is present on the high side of the system, if no restriction is present replace high pressure switch. This is a indication of the high pressure switch not opening when pressure rises above 300PSI.

**Note:** Pressure differential can be up to 5-PSI lower per foot from compressure to high pressure switch. Red headed pressure switches set at 350PSI.

***Thermostatic (t-stat) switch note:**

If a t-stat fails in the closed position the compressor clutch will run continuously and the evaporator will freeze up.

****ECM fan output**

Pin 3 is the ECM fan output. Voltage should read between 5 and 12 volts. With the ignition in the off position, jumper pin 4 to pin 3. Turn the vehicle on, if the engine fan is engaged the problem is not in the control module. If the engine fan is not engaged, inspect proper operation of solenoid valve, relay, fan blades and/or related components. If all components check good, replace the control module.