Disconnect the ten 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.

Is there battery voltage between pin C (module ground) and pin F (module power)?

No

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.

Is there voltage between pin C (module ground) and pin H (t-stat circuit)? ***

No

Is there voltage between pin C (module ground) and pin G (Fan put down output)?

Yes

No

Is there resistance at pin A and pin K (high pressure switch circuit) between 0 and 5 ohms? If ok, check at switch**

Yes

No

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

No

Replace pressure switch.

Remove pressure restriction from high side of the system.

Is the resistance at pin B and pin J (low pressure switch circuit) between 2.24k and 2.74k ohms? If ok, check at switch

Yes

No

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

No

Check refrigerant charge level in the system.

Yes

Replace pressure switch.

Continue to other side of page.

* 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 compressor to high pressure switch.

*** 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 G is the ECM fan output. Voltage should read between 5 and 12 volts. With the ignition in the off position, jumper pin C to pin G. 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.
If red LED is blinking, does the blink code reset by cycling the ignition switch four times?

Is impedance below 2.4 ohms?

Is impedance above 5.0 ohms?

Reconnect to module. Is the control module making a good connection to the truck harness?

Does Module pass its start delay compressor lubrication cycle? *

Does the control module have any LED's?

If red LED is blinking, does the blink code reset by cycling the ignition switch four times?

Install A/C service gauges and perform typical troubleshooting practices.

Is blink code reoccurring after fault has been cleared?

Does A/C operate?

Does A/C have intermittent problems?

Replace the control module.

Check for a open in the wiring or in the A/C clutch.

Replace A/C clutch

No

Yes

No

Yes

No

Yes

No

Yes

Does A/C have intermittent problems?

Yes

No

Done

Vehicle Harness Connector Pin Out

A

K

High Pressure Switch

B

J

Low Pressure Switch

C

H

Thermostat and A/C On/Off Input

D

G

Engine Fan Output

E

F

VIGN 12 Volts

If vehicle is experiencing intermittent problems and/or module is flashing a three blink code after determining vehicle checks are in specification, refer to CM-814 Product Description & Troubleshooting Manual for more detailed troubleshooting information. Access to this document is available by logging on to the Index web site at www.indexsensors.com under technical manuals or by calling Index customer service at (360) 629-5200.