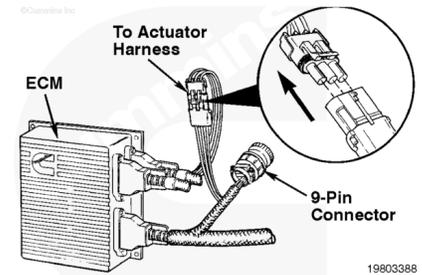


General Information

The CELECT™ system can control the fan clutch activation. The ECM energizes the fan clutch or air valve solenoid.

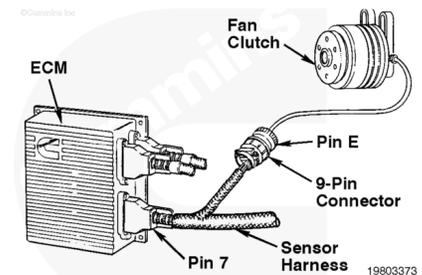
Refer to vehicle manufacturer's publications for more information on troubleshooting and repair of the fan clutch wiring.

Note : Engines with ECM Part Number 3619037 or 3618046 use 12-VDC for ON and 0-VDC for OFF. ECM Part Number 3084473 use 0-VDC for ON and 12-VDC for OFF (reference SPT94T19-7).



19803388

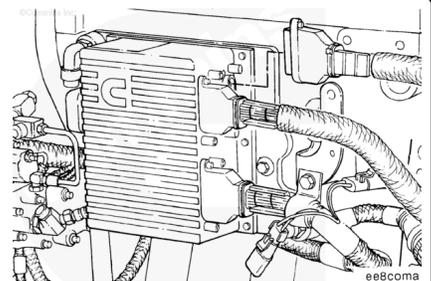
The fan clutch circuit resides in the actuator harness and the sensor harness. The circuit extends from pin 7 in the actuator harness to pin E in the 9-pin Deutsch connector of the sensor harness. From the 9-pin Deutsch connector, the circuit passes through the OEM wiring to the fan clutch.



19803373

Disconnect the actuator harness connector from the ECM.
Refer to Procedure 019-043
([/qs3/pubsys2/xml/en/procedures/83/83-019-043.html](http://qs3/pubsys2/xml/en/procedures/83/83-019-043.html)).

Disconnect the OEM wiring at the fan clutch solenoid.



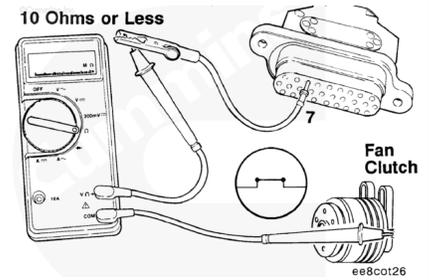
ee8coma

Resistance Check

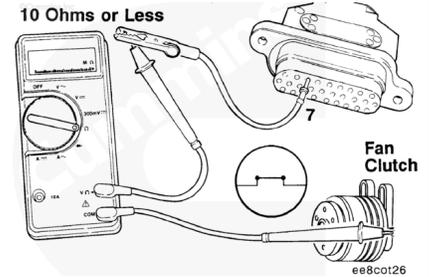
⚠ CAUTION ⚠

To reduce the possibility of connector damage, do not use probes or leads other than Part Number 3822758. The leads must fit tightly in the connector without expanding the pins in the connector.

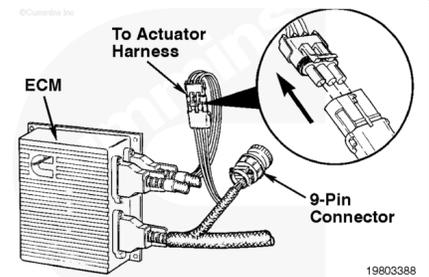
Insert a test lead into pin 7 of the actuator connector. Connect the alligator clip to the multimeter probe.



Touch the other multimeter probe to the connector terminal of the fan clutch solenoid. Make sure the fan clutch solenoid is disconnected. Measure the resistance. The multimeter **must** show a closed circuit (10 ohms or less). If the circuit is closed, it **must** still be checked for a short to ground and a short from pin to pin. If the circuit is **not** closed, there is a connection problem or an open circuit in the wiring harness.



Check the harness connections at the three-way connector and at the 9-pin Deutsch connector. If the connections are good, isolate the open circuit from the OEM wiring to the fan clutch solenoid, the sensor harness, or the actuator harness as follows:



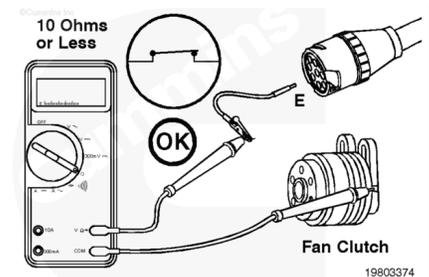
Check the OEM wiring to the fan clutch solenoid for an open circuit. Disconnect the 9-pin Deutsch connector.

Touch the multimeter probe to pin E of the 9-pin connector.

Touch the other multimeter probe to the fan clutch solenoid connector terminal.

Measure the resistance.

The multimeter **must** show a closed circuit (10 ohms or less). If the circuit is **not** closed, there is an open circuit in the OEM wiring to the fan clutch solenoid. Repair or replace the OEM harness according to the OEM procedures.



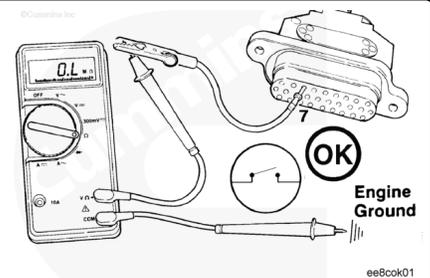
Repair or replace the OEM harness according to the OEM procedures.

Connect all components after the repair is complete.

Check for Short Circuit to Ground

⚠ CAUTION ⚠

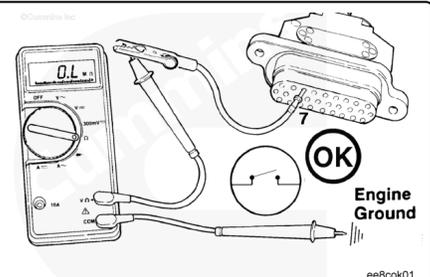
To reduce the possibility of connector damage, do not use probes or leads other than Part Number 3822758. The leads must fit tightly in the connector without expanding the pins in the connector.



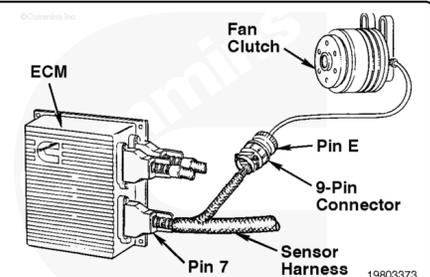
Check for a short circuit to chassis ground in the fan clutch solenoid wire connected to pin 7. Make sure the fan clutch or air valve solenoid is disconnected.

Insert a test lead into pin 7 of the actuator harness connector. Connect the alligator clip to the multimeter probe.

Touch the other multimeter probe to the engine block ground. Measure the resistance. The multimeter **must** show an open circuit (more than 100k ohms). If the circuit is **not** open, there is a short to ground in the wire connected to pin 7.



Isolate the short circuit from the OEM wiring, fan clutch solenoid, sensor wiring harness, actuator wiring harness, or ground.

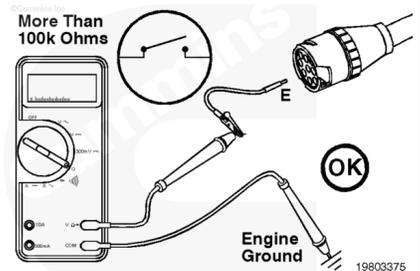


Check the OEM wiring to the fan clutch solenoid for a short circuit to ground. Disconnect the 9-pin Deutsch connector. Disconnect the fan clutch or air valve solenoid. Touch the multimeter probe to pin E at the connector, OEM wiring side. Touch the other multimeter probe to the engine block ground.

Measure the resistance.

The multimeter **must** show an open circuit (more than 100k ohms). If the circuit is **not** open, there is a short to ground in the OEM wiring to the fan clutch solenoid. Repair the circuit according to the OEM procedures.

Connect all components after the repair is complete.



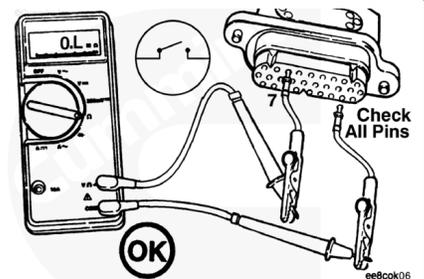
Check for Short Circuit from Pin to Pin

Check for a short circuit between pin 7 and all other pins in the actuator harness connector. Make sure the fan clutch solenoid is disconnected. Make sure the battery voltage supply is disconnected.

Insert the test lead into pin 7 of the actuator harness connector. Connect the alligator clip of the test lead to the multimeter probe. Insert the other test lead into all of the other pins of the actuator harness connector.

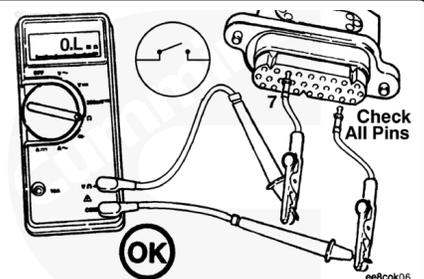
Measure the resistance.

The multimeter **must** show an open circuit (more than 100k ohms).



If the circuit is **not** open, there is a short circuit between pin 7 and **any** pins that measured a closed circuit. Repair or replace the actuator wiring harness. Refer to Procedure 019-043 ([/qs3/pubsys2/xml/en/procedures/83/83-019-043.html](https://qs3/pubsys2/xml/en/procedures/83/83-019-043.html)).

Connect all components.



Last Modified: 10-Feb-2003
