

FUEL INJECTION

Ford 6.0L Diesel Fuel Injection Control Module FICM Repair / Upgrades

Produced 2003 to 2007 F250 F350 F450 F550 F650 F750 Excursion and E Series to 2009

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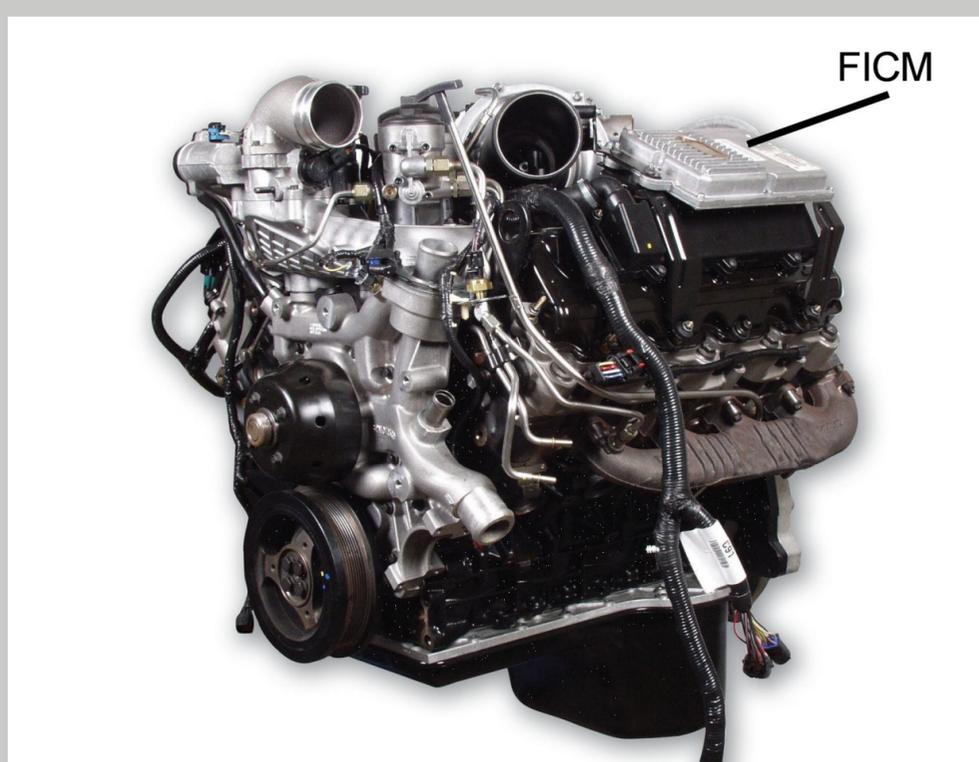
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FICM - TESTING PROCEDURE

Many injector problems are not injector problems at all. Could be likely your FICM is on the way out. Our repair procedure will fix the P0611 code and/or multiple injector codes (causing slow cold starts or no starts with the loss of fuel economy and power.

To test the FICM you first have to know where it is on the vehicle—[print out the pdf file for handy reference](#)



Perform this test when the engine is completely cold. First make sure there are two good batteries and a health alternator and charging system. Dead or going bad batteries are a know FICM killer.

The FICM is located on top of the drivers side valve cover. Remove the air filter restriction gauge, remove the two small hoses from the de-gas reservoir bottle (over-flow jug) and cap it off to avoid coolant loss; Remove the two bolts holding the de-gas bottle to the firewall. Pull the de-gas bottle forward and towards the drivers side fender this should allow adequate room to work. Use a bungee cord or rope to hold the de-gas bottle out of the way.

On the top of the FICM there is a oval plate held in place by two T20 torx screws. Remove the plate and there will be either four screws or seven screws. On most 2003's you will see 7 screw heads under the cover. Except on the very early 04's and later trucks you will see 4 screws.

PROCEDURE for 4 SCREW FICM

CAUTION NOTE: The FICM is capably of producing 48 DC volts. This voltage is very capable of causing a lethal electric shock. Do not touch the bare red (positive) lead of the test meter , while attached, or any of the FICM screws with bare hands.

Take a multi-meter set on DC volts and connect the ground lead (black) to battery negative, connect the red lead (positive) to the screw closest to the drivers side fender (farthest away from the engine center-line). Do not let the probe short against the FICM case or any other two screws! Have a helper to work the ignition key.

With the key ON (do not engage the starter) measure the voltage. It is important to notice and make note of any variations from the time the key is engaged. The voltage should almost immediately be right at 48 volts. Anything over 46 volts is OK 48 is better. You can cycle the key more than once to be sure of you readings if necessary

Next measure the voltage while cranking the engine. This will be as far as you can go if it is a no start. If voltage stays at or above 46 volts, the FICM is OK, (unless there is a shorted injector spool coil or harness, one of the injector drive circuits in the FICM could be blown, you will have a miss). Abnormally low battery voltage can give a false low FICM voltage reading, so make sure your batteries are good.

Start the engine if possible, voltage should hold steady 48 volts, no less than 45 volts. This is factory minimum but not really great.

If voltage is between 36 and 45 volts it's going to run, but not great. If it is between 25 and 35 volts, you have serious FICM problems. Below 25 there are not very many that are still going to run.

PROCEDURE for 7 SCREW FICM

The procedure is the same for FICM's with 7 screws, except that you will be checking voltage at a different screw.

CAUTION NOTE: The FICM is capably of producing 48 DC volts. This voltage is very capable of causing a lethal electric shock. Do not touch the bare red (positive) lead of the test meter or any of the FICM screws with bare hands.

Take a multi-meter set on DC volts and connect the ground lead (black) to battery negative, connect the red lead (positive) to the screw (there will be a line of 4 screws and a line of 3 screws) in the line of 4, furthest from the drivers side fender or closest to the engine centerline. Do not let the probe short against the FICM case or any two screws! Use a helper to work the key. With the key ON (do not engage the starter) measure the voltage. It is important to notice and make note of any variations from the time the key is engaged. The voltage should almost immediately be right at 48 volts. Anything above 46 should be OK.

Next measure the voltage while cranking the engine. If voltage stays at or above 46 volts, the FICM is OK, (unless there is a shorted injector spool coil or harness, one of the injector drive circuits in the FICM could be blown, you will have a miss). Abnormally low battery voltage can give a false low FICM voltage reading, so make sure your batteries are good.

Start the engine, voltage should hold steady 48 volts, no less than 45 volts which as explained above is OK but not really great.

If voltage is between 36 and 45 volts it's going to run, but not great. If it is between 25 and 35 volts, you have serious FICM problems. Below 25 there are not very many that are still going to run.

FICM REMOVAL

If the FICM tests bad remove both battery grounds, the four bolts holding the FICM in place some 8mm some 10mm. On some years the two in back have a bracket underneath the bolts. Lift up FICM and remove the three harness plugs from bottom of the FICM (they have release tabs in the middle of the connectors and can be a little stubborn. Do not pry on them with a screwdriver or any other tool. Now would be a good time to inspect the wire harness for chaffing where it rests against the valve cover. Inspect the connector pins on the FICM to make sure none are missing or bent and you are done!.

ERS

Please Call

We want to talk to you before you ship

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