

Ford 7.3L Injector Drive Module Installation Pre-Tests



There are many common 7.3L Power Stroke electrical issues with the injector wiring harness / connectors, valve cover gasket electrical connections, and the under valve cover harness / connectors that affect the operation of the injector drive module (IDM) and injectors.

To prevent unnecessary replacement of an IDM and to prevent damage to a remanufactured IDM on installation the tests on this bulletin should be performed.

INJECTOR DRIVE MODULE BATTERY POWER TEST

Check for battery power to the IDM at the IDM harness connector pin 14 and ground on pin 26. Then verify the circuits will carry a load using a sealed beam headlamp.

INJECTOR RESISTANCE + WIRING TEST

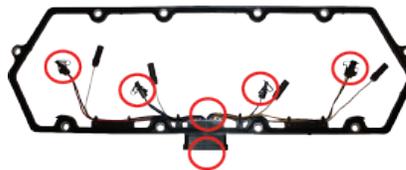
Faulty electrical wiring between the injectors and IDM can be an issue with the Ford 7.3L Power Stroke engine. To determine whether the wiring between the injectors and IDM is within specification and that there are no open or short circuits, measure the resistance (ohms) of the complete power output and ground circuit. Measuring the resistance will also determine whether you have defective injector solenoid(s). You can see where the wiring is connected into both styles of wiring harnesses (model years 1994 - 1998 and model years 1999 - 2003) below.

VISUAL INSPECTION OF WIRING HARNESS + CONNECTORS

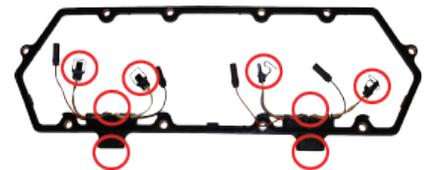
A connector to the Ford 7.3L Power Stroke wiring harness can crack, break, or come loose; this can cause the wiring to be faulty and open or short circuits. By hand, gently attempt to move the connector to determine whether it is broken. If the connector is loose or appears damaged it needs to be replaced. The valve cover gasket should also be visually inspected and potentially replaced. See below to view D Tech valve cover gasket and connection areas.

NOTE: Referencing vehicle specific service procedures is recommended.

DT730018 (VALVE COVER
GASKET KIT 1998 - 2003)



DT730017 (VALVE COVER
GASKET KIT 1994 - 1997)



CONNECTORS ARE CIRCLED IN RED

An Employee Owned Company

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DIPACO PRODUCT INFORMATION

(Continued from front side.)

THREE TESTS FOR INJECTOR DRIVE MODULES

The following tests should be performed with the key off, the IDM wiring harness disconnected from the module and all other wiring harness connectors plugged in. Measurements are taken by probing the female terminals from the connector face (where it would normally plug into the IDM).

TEST 1

Measures entire circuit resistance including wire and valve cover gasket connector resistance. Use an multi-meter to measure the resistance between each power feed and each injector's ground circuit at the IDM connector. All readings for the vehicle should be consistent between each circuit in a range of 2.8 - 3.6 Ohms. Nominal solenoid resistance for a Ford 7.3L Power Stroke injector is 2.9 Ohms.

NOTE: Each cylinder bank only has one power feed. Additionally, the wires to the injectors are shielded, if you pierce them the harness will be permanently damaged.

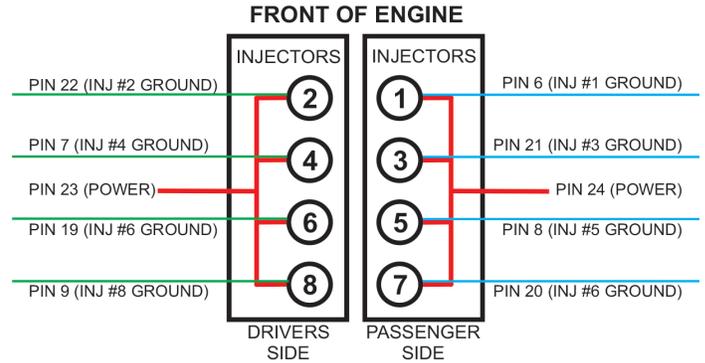
TEST 2

Checks for injector circuits that are shorted to ground, which will cause immediate and permanent damage to the IDM. The resistance between the pins should be open (infinity), indicating no path to ground. Measure the resistance between each power feed and ground. This should indicate an open circuit. If resistance is present check for damaged valve cover gasket connectors and the wiring beneath the valve cover. See the first page to view DTech valve cover gaskets and connection areas.

TEST 3

Checks for damaged injector wiring harness; measure the resistance between the each injector power feed and the ground shield for the injector wires. This should indicate an open circuit. If resistance is present inspect the wiring harness for damage.

NOTE: Referencing vehicle specific service procedures / diagnostic information is recommended.



	PINS	CIRCUIT TEST	VALUE
TEST 1	23 & 22	Left Bank Power Feed to Inj. #2 Ground Circuit	All Circuits 2.8-3.6 Ohms
	23 & 7	Left Bank Power Feed to Inj. #4 Ground Circuit	
	23 & 19	Left Bank Power Feed to Inj. #6 Ground Circuit	
	23 & 9	Left Bank Power Feed to Inj. #8 Ground Circuit	
	24 & 6	Right Bank Power Feed to Inj. #1 Ground Circuit	
TEST 2	24 & 21	Right Bank Power Feed to Inj. #3 Ground Circuit	Open "OL"
	24 & 8	Right Bank Power Feed to Inj. #5 Ground Circuit	
TEST 3	24 & 20	Right Bank Power Feed to Inj. #7 Ground Circuit	Open "OL"
	23 & 18	Left Bank Power Feed to IDM Ground Circuit (26)	
	24 & 18	Right Bank Power Feed to IDM Ground Circuit (26)	
	23 & 18	Left Bank Power Feed to Injector Ground Shield (18)	Open "OL"
	24 & 18	Right Bank Power Feed to Injector Ground Shield (18)	

