

Injector Removal and Installation

Injector Removal

When removing an injector for replacement, examine it for the common failures listed below. This can help avoid a repeat of the problem causing injector replacement.

Injector Blow By

A build-up of black carbon in the area shown is an indicator or poor sealing between the injector and the injector sleeve. Often proper cleaning of the injector and injector sleeve along with installation of a new external injector seal kit will take care of the problem with this injector. After cleaning, examine the injector sleeve for any cracks, which can lead to engine coolant contamination if a cracked sleeve is not replaced.



Improper Oil Rail Installation

Improper installation of the oil inlet fitting can damage the sealing rings. Be sure to examine the oil inlet fitting for damage and use care in alignment when installing a replacement injector. Also, examine this area in the injector being replaced for signs of metal debris which is an indicator of problems along the fuel supply system and can cause injector failure.



Fuel Contamination

Discoloration, pitting, or other markings in the area shown is an indicator of contaminated fuel. Fuel system flushing is recommended prior to installing a new injector.



Injector Installation

- Remove and install the injector using hand tools only.
- Make sure the old copper compression gasket was removed.
- Clean the injector sleeve compression gasket and o-ring sealing areas.
- Remove any fluid from the injector hold down bolt hole.
- Lubricate the injector o-rings with clean engine oil.
- Install the injector and tighten the hold down bolt to the correct torque.
 - Early build with a T40 Torx bolt 24 lb. ft.
 - Late build with a T45 Torx bolt 26 lb. ft.
- Lubricate the oil rail tubes with clean engine oil, align the tubes to the injectors and seat the rail by hand.
- Change the engine oil, oil filter, HFCM fuel filter and the engine mounted secondary fuel filter.
- Check that the PCM and FICM have the latest calibration update applied.
- Check for a minimum 45 PSI fuel supply pressure.

Warranty Information and Processing

DTech 6.0L injectors are covered by a 12 month, unlimited mileage, limited warranty. In the unlikely event of the operational failure of a DTech 6.0L injector please review the following.

Vehicle With No Start, Hard Start, Runs Rough, White Smoke, or Lacks Power Complaint

Refer to the Ford Technical Service Bulletins (TSB) Below. The complete TSBs with Actions and Procedures can be found at dtechproducts.com or dipaco.com in the Service Information area.

TSB 07-05-4 Date: February 27, 2007

Issue Some vehicles equipped with a 6.0L diesel engine may experience white smoke, lack of power, exhaust odor, surges, running rough, or no start when cold. These conditions are caused by the injector spool valve sticking internally during cold engine operation (engine oil temperature (EOT) less than 70°F (21°C)). The concern is typically evident following a cold start after an overnight soak at ambient temperatures below 70°F (21°C) and may last 3-5 minutes or longer as the vehicle warms up. The concern completely disappears after driving and the EOT is greater than 1500F (66°C). This concern typically occurs on vehicles with greater than 15,000 miles.

TSB 09-24-3 Date: December 14, 2009

Issue Some 2003-2007 F-Super Duty vehicles, 2003-2005 Excursions and 2004-2010 E-Series vehicles, equipped with a 6.0L diesel engine may exhibit hard start, no start, white smoke, lack of power, running rough condition after cold engine start up, or diagnostic trouble codes (DTCs) P0404, P0470, P0611, P1260 and/or P1378 issues. Refer to the Calibration Content for information detailing specific vehicle content by vehicle application and model year that being addressed by this calibration update. This article includes previously released calibration content that improves injector performance in cold engine operation and additional diagnostic capabilities and product protection strategy enhancements. These enhancements provide additional diagnostic capabilities, adds additional new DTCs and engine protection strategies. Refer to the Calibration Content for additional details. See the appropriate Powertrain Control/Emissions Diagnostic (PC/ED) manual for technical descriptions and diagnostic routines associated with new DTCs.

TSB 10-12-6 Date: July 5, 2010

Issue Some 2003-2007 F-Super Duty, 2003-2005 Excursion and 2004-2010 E-Series vehicles with a 6.0L engine may exhibit a runs rough, lacks power, hard start, no start concern with or without diagnostic trouble code (DTC) P0611 code or various injector circuit codes. This concern may be caused by a DC-DC converter located in one half of the Fuel Injector Control Module (FICM) or by the main circuit board in the other half of the FICM.

Injectors With Conditions Identified On The Other Side Of This Card

Injectors submitted for warranty with any of the conditions shown on the reverse of this card are generally not covered under the DTech warranty as they are the result of installation error or contamination.

If you have checked the above items and the DTech injector does not operate then please submit a product warranty. Complete warranty information can be found at dtechproducts.com or dipaco.com in the Service Information area.