

**FORD:** 1994-2000 SUPER DUTY F SERIES  
1995-2000 ECONOLINE

Article **00-6-10** is being republished in its entirety as part of a consolidated 7.3L diagnostic aid booklet.

### **ISSUE**

For 7.3L DIT engines, Rotunda Tool has issued an Injector Performance Analyzer (164-R25535) that may now be purchased as an effective aid in helping to resolve rough idle concerns.

### **ACTION**

Refer to the following Service Procedure for use of the Injector Performance Analyzer.

### **SERVICE PROCEDURE**

#### **NOTE**

**ENGINE PERFORMANCE DIAGNOSTICS SHOULD BE PERFORMED PRIOR TO USING THE INJECTOR PERFORMANCE ANALYZER. OTHER CAUSAL FACTORS THAT MAY CONTRIBUTE TO ROUGH IDLE INCLUDE AERATED OIL, LOW FUEL PRESSURE, A DEFECTIVE DUAL MASS FLYWHEEL, AND INJECTOR ELECTRICAL PROBLEMS.**

After performing diagnostics and receiving pass codes, individual injectors may be tested using the Injector Performance Analyzer.

1. Install New Generation Star (NGS) Tester.
2. Install Injector Performance Analyzer. Installing the analyzer and switching off the cylinders will lead to fault codes being generated as a result of testing. Disregard these codes while the box is installed and clear all codes after diagnosis is complete.
3. Warm engine to operating temperature.

Prior to canceling any cylinders, record baseline MFDES (mass fuel desired) for the engine idling on all eight cylinders. The numbers on the screen will fluctuate. The numbers should be recorded from the NGS tester and then averaged for comparison (example: high 9.0, low 8.2, value average 8.6).

The Powertrain Control Module's (PCM's) strategy will try to maintain the fixed RPM at idle. The PCM compensates for weak or non-contributing cylinders by increasing fuel to all the other cylinders.

When a cylinder is disabled, the PCM will command higher fuel delivery to the other cylinders relative to the strength of the disabled cylinder.

When a weak cylinder is disabled through the switches, little or no change may occur. However, a strong cylinder will show a large change when disabled. Be prepared to write down the readings at each switch movement. Compare the individual cylinder contribution to the baseline number.

The cylinder(s) with the least change in MFDES observed when switched off should be considered weak or defective.

Check the compression in the weak cylinder(s) and compare to a strong cylinder. If the compression tests within 75% of the strong cylinders, follow normal service procedures for that suspect injector. Be sure to clear any codes related to switching off the cylinders after diagnosis/repair is complete.

**OTHER APPLICABLE ARTICLES: NONE**

**SUPERSEDES: 00-6-10**

**WARRANTY STATUS: INFORMATION ONLY**

**NOTE:** The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford, Lincoln, or Mercury dealership to determine whether the Bulletin applies to your vehicle.