

**FORD:** 1997 ECONOLINE, F SUPER DUTY, F-250 HD, F-350

### **ISSUE**

Significant changes have been made to the 7.3L DIT engine effective with the 1997 model year. The major areas addressed are the crankcase, valve train, front cover, lubrication, water pump, and glow plug controller.

### **ACTION**

Refer to the following Part Application Chart and the text for change description and correct part usage when servicing the subject engines.

### **HIGHLIGHTS**

#### **To Reduce Engine Noise Levels:**

- The crankcase has been redesigned with thicker valley walls to increase stiffness to the assembly which may reduce radiated engine combustion noise. The crankcase has also been modified on the tappet shelf area and has smaller pushrod holes.

#### **Assembly Issues:**

- The valve train has been redesigned with new style cam follower guide assemblies which directly bolt into the crankcase and hold the follower in place. The new roller follower guide assemblies are now held in place with a capscrew for each pair of tappets, thus eliminating the roller guide retainer.
- The change to the valve train and crankcase has upgraded the cylinder head gasket. The new head gasket has been redesigned to provide individual holes for each pushrod which will guide the push ball seat back into the hydraulic lifter.

#### **Lubrication:**

- In order to ensure that oil is retained in the bottom of the pump for initial oil priming, the position of the oil pump inlet port has been rotated 90 degrees. Because of the inlet port rotation, the pickup tube and mounting location at the front cover have been re-routed to the right side of the engine. The oil pickup tube and gasket, bracket, and the pickup clearance passage (and baffles) in the oil pan were also revised to accommodate the right side oil inlet design.
- All models are also equipped with new oil level gauges and tube assemblies. The front oil cooler header mounting gasket has been modified slightly in the coolant port sealing area as a result of the front cover changes.

#### **Front Cover:**

- The new front cover assembly has been redesigned to include the pickup tube location change, oil pump inlet port vane rotation repositioning and removal of the drilled hole for the de-aeration valve. The front cover is also fitted with a new mounting gasket.

#### **Coolant System:**

- The water pump has been redesigned to include a new backing plate and seal behind the impeller. The coolant system now includes a separate water pump inlet with O-ring to improve serviceability.

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### Starting System:

- The redesigned glow plug relay system is not affected by high operating temperatures. This redesign includes a new relay and mounting brackets. The Econoline and California models include a new housing post (GPC sensing) in the redesign. To increase reliability, transducers and sensors (with their related wiring harness connectors) have been improved by using gold terminal pins rather than tin alloy. All engines have revised wiring harnesses to incorporate these changes.
- The 1997 engines are now equipped with a new injection control pressure (transducer), Exhaust Back Pressure (EBP) and Engine Coolant Temperature (ECT) sensors.

### Fuel System:

- The fuel system has been improved by a new fuel supply pipe assembly and banjo fitting.

DIRECT INJECTION TURBO (DIT) MODEL YEAR PART INFORMATION		
Part Description	1997 Model Year	Earlier Model Year
Crankcase Assembly	F7TZ-6010-ARM	F4TZ-6010-ARM
Shoulder Bolt	F7TZ-6C329-AA	---
Guide Assembly	F7TZ-6C329-AAA	F4TZ-6C329-A
Spring Washer	1-824-002-C1	---
Retaining Ring	1-824-001-C1	---
Head Gasket	F7TZ-6051-AAA	F4TZ-6051-A
Oil Level Gauge (E-Series)	F7UZ-6750-AAA	F5UZ-6750-C
Oil Level Gauge (F-Series)	F7TZ-6750-AAA	F4TZ-6750-E
Oil Level Tube (E-Series)	F7UZ-6754-AAA	F5TZ-6754-B
Oil Level Tube (F-Series)	F7TZ-6754-AAA	F5TZ-6754-C
Oil Pan Assembly (E-Series)	F7TZ-6675-AAA	F5TZ-6675-A
Oil Pan Assembly (F-Series)	F7TZ-6675-AAA	F4TZ-6675-A
Oil Pickup Tube	F7TZ-6622-AAA	F4TZ-6622-A
Oil Pickup Tube Gasket	F7TZ-6626-AAA	F4TZ-6626-A
Oil Pickup Tube Bracket	F7TZ-6A661-AAA	F4TZ-6A661-A
Front Oil Cooler Header Mounting Gasket	F7TZ-6A636-AAA	F4TZ-6A636-B
Front Cover Assembly	F7TZ-6019-AAA	F6TZ-6019-BA
Front Cover Gasket Package	F7TZ-6020-AAA	F5TZ-6020-AAA
Water Pump	F7TZ-8501-ARM	F6TZ-8501-AA
Water Pump Inlet	F8TZ-8592-AA	---
Water Pump Inlet O-ring	F8TZ-8255-AB	---
Water Pump Inlet Bolts	1-817-957-C1	---

<b>DIRECT INJECTION TURBO (DIT) MODEL YEAR PART INFORMATION</b>		
<b>Part Description</b>	<b>1997 Model Year</b>	<b>Earlier Model Year</b>
Glow Plug Relay (F-Series Federal)	F5TZ-12B533-A	1-826-634-C92
Glow Plug Relay (E-Series and F-Series CA)	F7TZ-12B533-AB	1-826-634-C92
Injection Control Pressure (ICP) Sensor	F6TZ-9F838-A	F4TZ-9F838-A
Engine Coolant Temperature (ECT) Sensor	1-824-451-C1	1-814-320-C1
Exhaust Back Pressure (EBP) Sensor	F7TZ-9J460-AA	F4TZ-9J460-A
Exhaust Sensor Support (E-Series)	F7UZ-9J432-AA	F5UZ-9J432-A
Exhaust Sensor Support (F-Series)	F4TZ-9J432-B	F4TZ-9J432-B
Camshaft Position (CMP) Sensor	F7TZ-12K073-A	F5TZ-12K073-A
Engine Wiring Harness (E-Series)	F7UZ-9A451	F6TZ-9A451-E
Engine Wiring Harness (F-Series Federal)	F7TZ-9A451-CA	F6TZ-9A451-F
Engine Wiring Harness (F-Series CA)	F7TZ-9A451-BA	---
Water Temperature Indicator Sender (E-Series)	1-825-137-C1	1-816-432-C2
Fuel Supply Pipe (E-Series and F-Series CA)	F6TZ-9A564-BA	F6TZ-9A564-AA (All California)
Fuel Supply Pipe (F-Series Federal)	F6TZ-9A564-CA	F4TZ-9A564-A (All Federal )

**OTHER APPLICABLE ARTICLES:** NONE  
**WARRANTY STATUS:** INFORMATION ONLY  
**OASIS CODES:** 490000, 499000, 690000