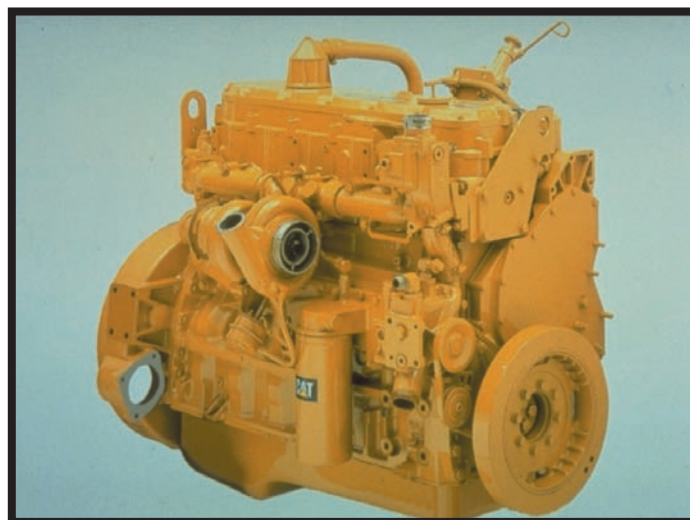




Caterpillar® Engine Service Training



3126B HEUI Engine

Electronic Components, Features and Troubleshooting ESTMG

serial number prefix: 7AS

LERV0370

3126B HEUI Medium-Duty Truck Engine ESTMG

Audience: Level II and III - Service personnel who are familiar with diesel engine operation, diagnostic equipment and procedures for testing and adjusting.

Background: This package contains information on 3126B HEUI Engine features and system operation.

Objectives: After learning the information in this presentation, the service technician will be able to:

1. Identify component locations for 3126B engines
2. Identify new features on 3126B engines
3. Understand the operation of the 3126B engines
4. Understand differences between 3126B engines and the 3116/3126 engines

References: 3126B HEUI Diesel Truck Service Manual RENR1360
Fuel System & Electronics System Operation and Troubleshooting CD Rom RENR1390

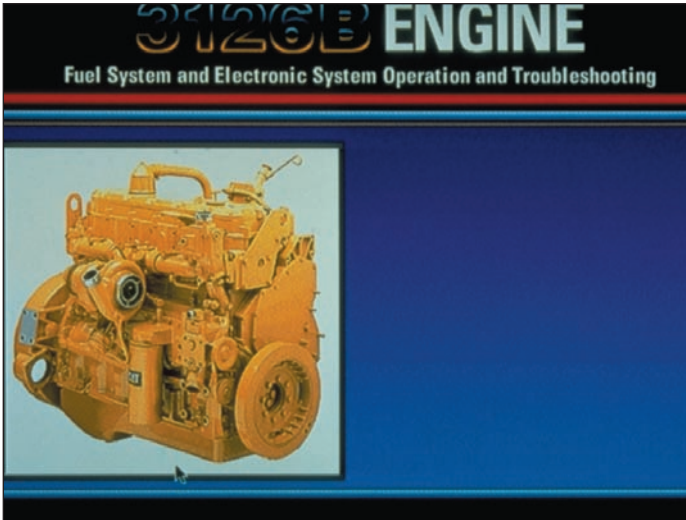
Approximate Time: 4-6 hours

Hardware Needed: 3126B HEUI engine for any live lab demos

149-6115	Installer-Valve Seat (for Intake & Exh.) (use 3500 valve guide 7N1819, to press on 149-6115)
6V4805	Valve Seat Removal Tool GP
1U7792 1U7793	Intake Valve Guide Collar (same as current 1.1/1.2) Intake Valve Guide Installer (same as current 1.1/1.2)
149-4008 9U6895	Exhaust Valve Guide Collar Exhaust Valve Guide Installer (same as 3406E)
150-3152 151-4832	Injector Sleeve Installer Sleeve Remover Assy (grooved sleeves)
149-2955 149-2956	Seal Protector (injector back up and O-rings, topmost groove) Seal Installer (injector back up and O-rings, topmost groove)
152-1057 152-1058	Injector Installer Assy Socket-Head Bolt (20mm 12 point, 3/4 inch drive, impact)



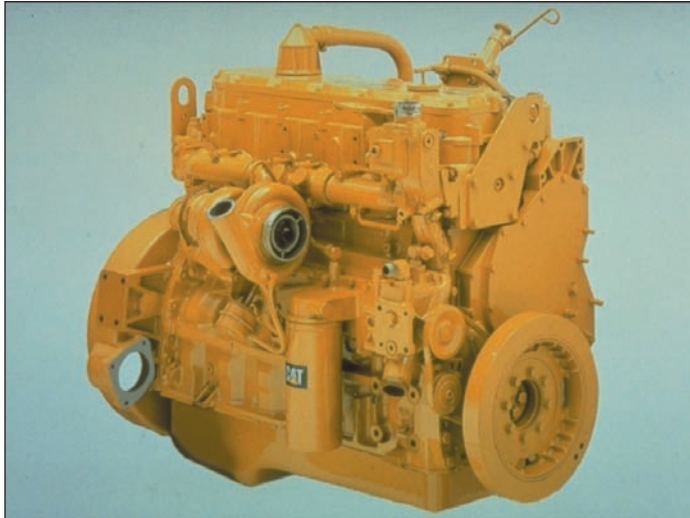
No. 1



No. 2

- 7.2 Liter
- HI300 Fuel System
- Upgraded Electronics
- 3 Valve Head

The 3126B is a 7.2 liter displacement, mid-range truck engine which incorporates the latest technology for improved performance, fuel economy, and exhaust emissions. The 3126B uses the revolutionary HEUI HI300 fuel system, upgraded electronics, and a totally new three-valve cylinder head to optimize engine performance.

**No. 3**

- **175 to 300 HP Truck**
- **Special 330 HP**
- **Compare Full Feature to Basic**

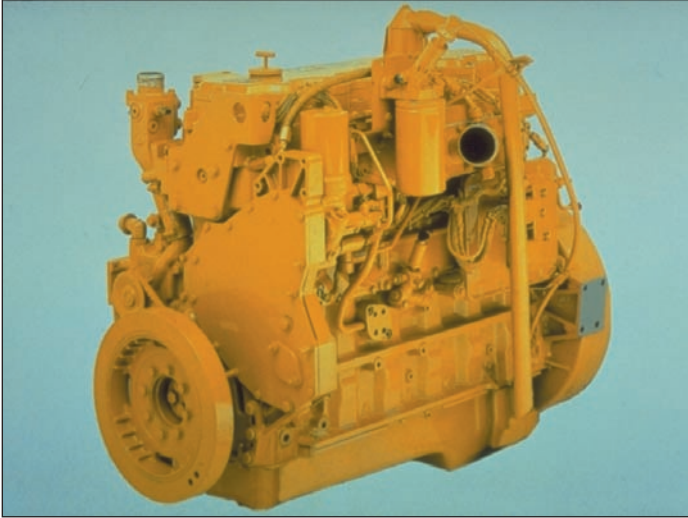
Horsepower ratings for 1998 range from 175 hp to 300 hp for truck applications. A special 330 horsepower rating is available for emergency vehicles and motorhomes.

Available in two different systems - Full Feature and Basic

Full Feature for Freightliner, Peterbilt, Kenworth, Dina, etc.

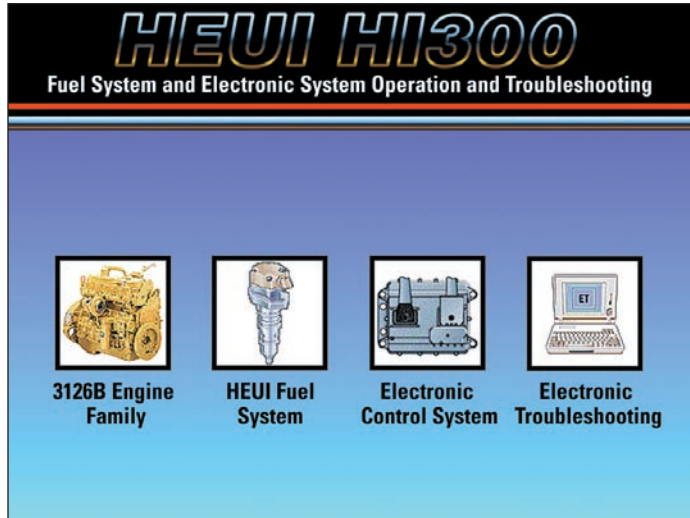
Basic = GM Chassis

Full Feature ECM has a cooling fan output, coolant level sensor, J1939 data link, engine monitoring shutdown.

**No. 4**

- **Upgrade Fee**

Horsepower ratings can be increased, but require a one time uprate fee in addition to software and mechanical changes.



No. 5

- **New Features of the 3126B Engine**

This presentation will cover four topics:

- **Operation of the HEUI HI300 Fuel System**

New Features of the 3126B Engine

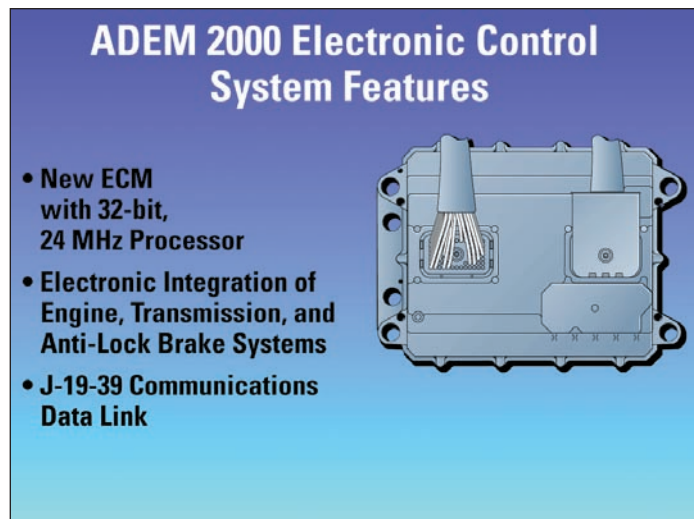
- **Operation of the New Upgraded Electronic Controls**

Operation of the HEUI HI300 Fuel System

- **Basic Diagnostics and Troubleshooting**

Operation of the New Upgraded Electronic Controls

Basic Diagnostics and Troubleshooting



No. 6

- New ECM
- 32 Bit, 16 Megahertz
- J1939 Data Link

The 3126B has a completely new ECM with a 32-bit, 16 megahertz processor. This new ECM is much faster and has more memory to allow electronic integration of engine, transmission, and anti-lock brake systems, as well as additional customer features.

The new ECM also incorporates an upgraded J1939 communications data link. This new data link is faster and has more capacity to allow electronic integration between the engine and other vehicle systems.