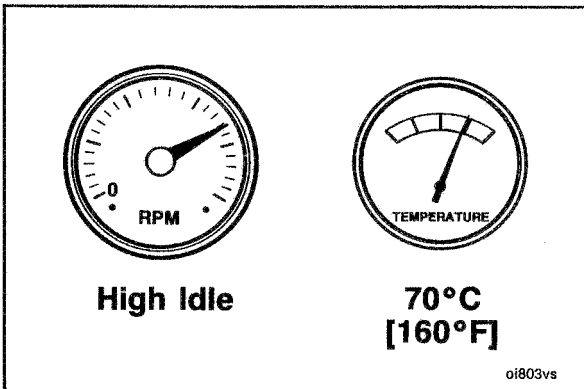


## Engine Storage - Long Term (14-10)

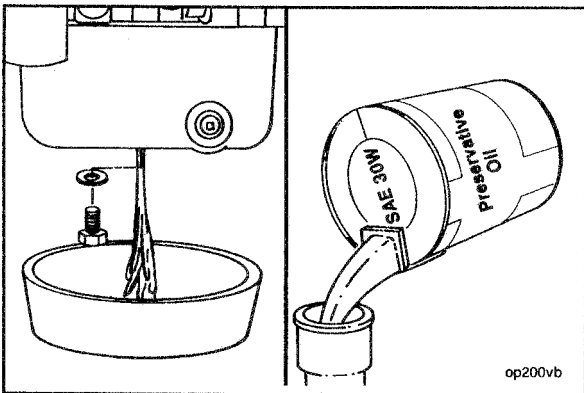
This procedure describes the correct method of preparing an engine for long-term (6 to 24 months) storage.

**NOTE:** If the engine has been stored for 24 months, the cooling system **must** be flushed with a solvent. Repeat the flushing procedure a second time.



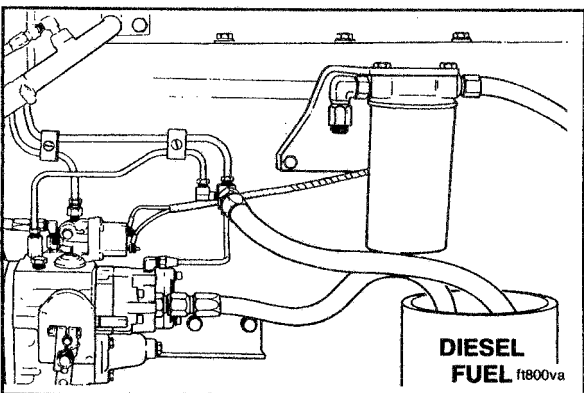
Operate the engine at the high idle throttle position until the coolant temperature is 70°C [160°F].

Shut off the engine.



Drain the lubricating oil pan. Install the drain plug, and fill the oil pan to the high level mark on the dipstick with preservative oil.

**NOTE:** Lubricating system preservative oil **must** meet Military Specification MIL-L-21260 Type PE30-1 SAE 30. (Example: Shell 66202.)



Disconnect the fuel supply tube at the fuel filter and the injector return tube at a convenient place.

**NOTE:** Fuel system preservative oil **must** meet Federal Specification VV-L-800C. (Example: Daubert Chemical NoxRust No. 518.)



Fill two containers, one with diesel fuel and the other with preservative oil. Put both fuel tubes into the container of diesel fuel.

**Engine Testing - Group 14  
NT/NTE**

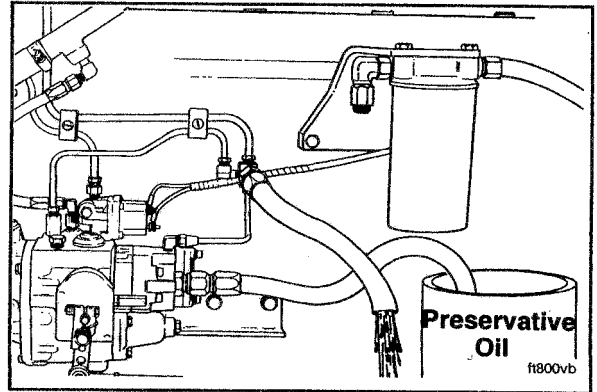
Start the engine and, when operating smoothly, put the fuel supply tube into the container of preservative oil.

Remove the injector return tube from the diesel fuel container. When the preservative oil flows from the tube, shut off the engine.

Connect the fuel supply tube to the fuel filter, and put a cap on the ends of all the other fuel tubes.

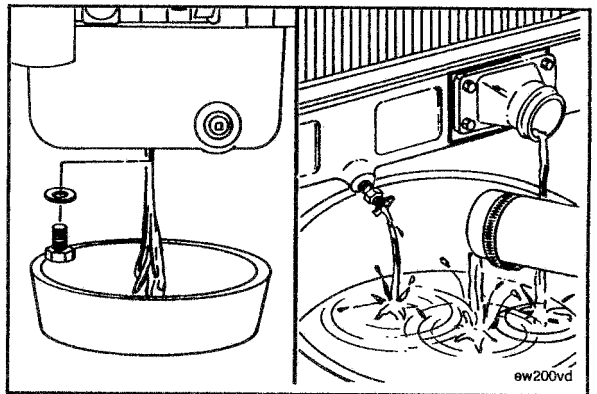


**Engine Storage - Long Term (14-10)  
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Drain the preservative oil from the lubricating oil pan and the oil filters. Install the drain plug.

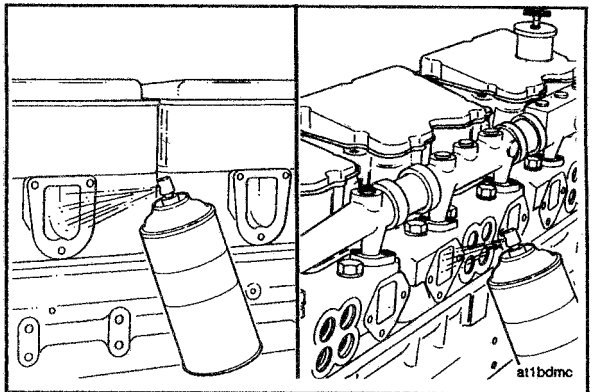
Drain and flush the cooling system, using a water-soluble rust inhibitor.



Remove the aftercooler assembly and the exhaust manifold. Refer to Engine Disassembly (00-01).

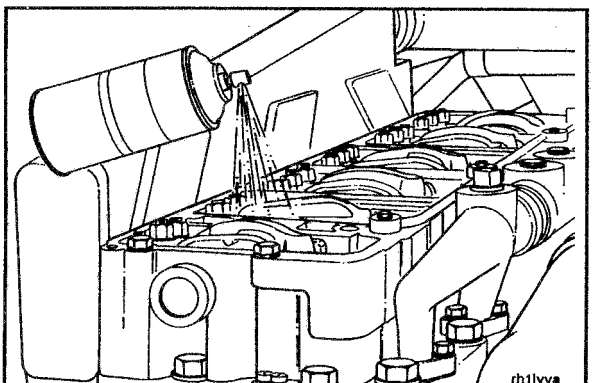
Spray preservative oil into the intake and the exhaust ports of the cylinder head and into the aftercooler housing and the exhaust manifold.

Install the aftercooler assembly and the exhaust manifold. Refer to Engine Assembly (00-02).

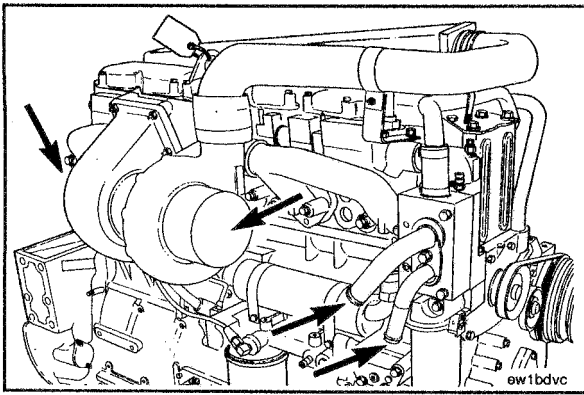


Remove the rocker housing covers, and spray the rocker levers, crossheads, valve springs, valve stems, valve guides, and the push rods with preservative oil. Install the rocker housing cover.

Spray preservative oil into the intake port of the air compressor and on all exposed metal surfaces that are **not** painted.



**NOTE:** Use a preservative compound that meets Military Specification MIL-C-16137C Type P-2 Grade 1 or 2.



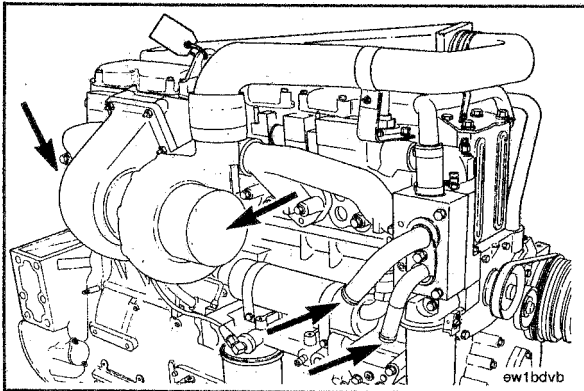
Cover all openings with heavy paper and tape to prevent entrance of dirt and moisture.



Put a warning tag on the engine which contains the following information:

- Date the engine was prepared for storage.
- Crankshaft **must not** be rotated.
- Coolant has been drained.
- Engine **must not** be operated.

Store the engine in a dry area of even temperature.

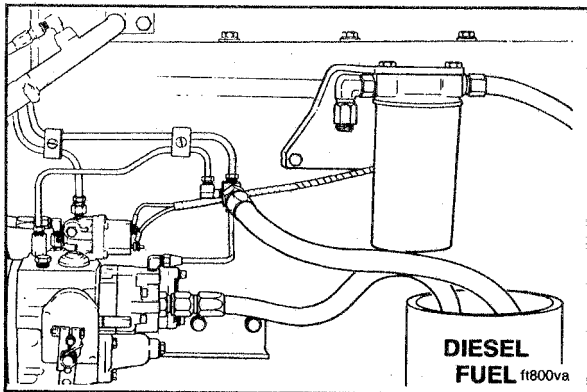


### Removing the Engine from Long-Term Storage

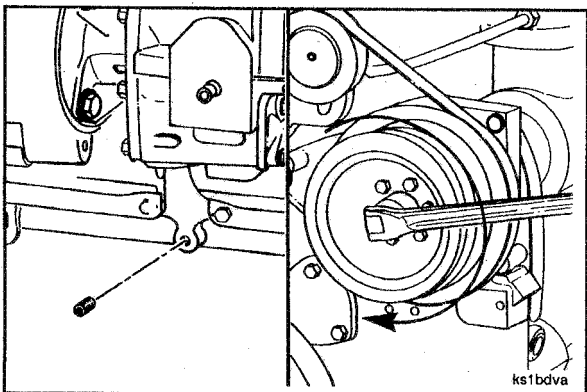


Remove the paper and the tape from all openings.

Remove the warning tag.



Flush the fuel system with clean diesel fuel to remove preservative oil.



Remove a plug from the main oil rifle drilling. Use a pump to flush the preservative oil from the engine with light mineral oil.

**NOTE:** Rotate the crankshaft three or four revolutions as the engine is flushed.

Drain and flush the cooling system.