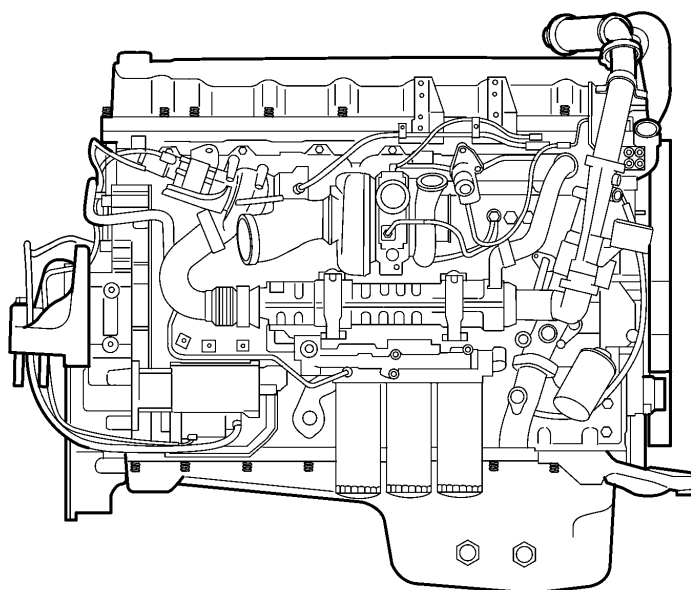


Viscous Fan Checking D13F

Viscous Fan, Checking



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This bulletin provides information regarding viscous fan checking on a Volvo D13F engine.

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Note: Information is subject to change without notice. Illustrations are used for reference only and can differ slightly from the actual vehicle being serviced. However, key components addressed in this information are represented as accurately as possible.

Troubleshooting

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Viscous Fan, Checking

You must read and understand the precautions and guidelines in Service Information, group 20, "General Safety Practices, Engine" before performing these procedures. If you are not properly trained and certified in these procedures, ask your supervisor for training before you perform the procedures.

If any of the following characteristics are observed, it is possible that the fan could be faulty. However, be sure to go through the following checklist:

Fan Does Not Engage

Possible reasons:

- Bearing is damaged
- Electro-mechanical malfunction (solenoid/valve-lever)
- Interruption of connections (cable/connector)
- Fault in fan-speed sensor
- Malfunction of cooling system (loss of cooling performance)
- Loss of torque capacity (oil leakage, internal damage)

Possible actions:

- 1 Check whether bearing is seized. If not, see next step.
- 2 Cool down engine. Start engine again; fan should disengage after a short time. If not, see next step.
- 3 Disconnect E-Visco fan. Supply the solenoid with 12V using external power supply at 7-pin connector (pin 3 and 4); fan should disengage. If not, see next step.
- 4 Possible electro-mechanical malfunction; replace the fan.

Excessive Noise During Operation

Possible reasons:

- Bearing is damaged
- Fan interference with fan shroud

Possible actions:

- 1 Pull the fan back and forth; bearing clearance indicates damage. Replace the fan.
- 2 Inspect the fan blades for evidence of interference.

Note: Fan blade interference can cause unseen damage to the bearing. This can also lead to damage of the clutch. Therefore, the clutch should be removed and replaced, even if no damage is visible.