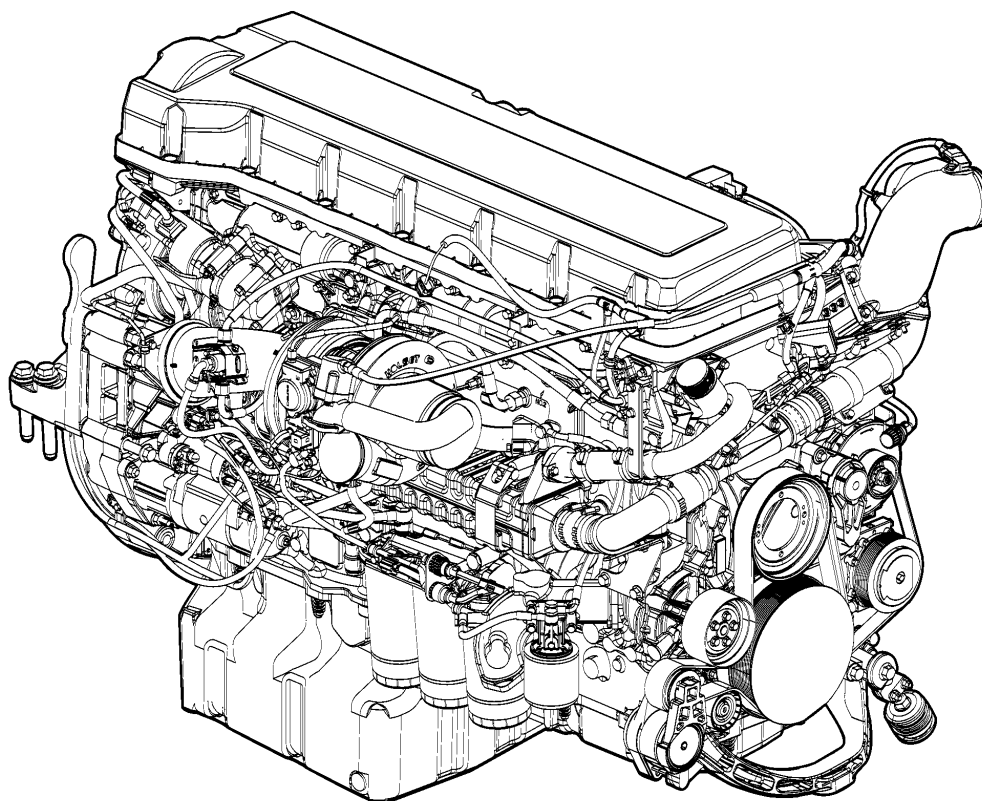


Viscous Fan
Design and Function
D16F

Viscous Fan, Design and Function



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This bulletin provides information regarding the viscous fan for a vehicle with a Volvo D16F 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.

Design and Function

Viscous Fan

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.

Viscous Fan Overview

The electronically-controlled viscous fan (E-Visco) is a maintenance-free system that reduces noise (due to low engagement rates) and lowers fuel consumption. It features:

- Low idle speed
- Quick engagement
- Fan speed according to requirements
- Low oscillations of coolant temperature
- Increased performance life (slip-heat protection)
- Increased torque capacity (comparable to ON/OFF clutches)
- Soft engagements (no torque-peaks at engagement)

Slip-Heat Protection and Limits of Slip-Heat Protection

The viscous fan includes slip-heat protection which prevents intermediate fan speeds at high input speed. Without this protection the clutch tends to overheat at high input speed.

- No limitation below drive input speed of 2400 rpm (approximately 1800 rpm engine speed).
- Function is similar to ON/OFF fan at drive input speed of 2400–3060 rpm (approximately 2300 rpm engine speed).