i06217687

General Information

SMCS - 1000

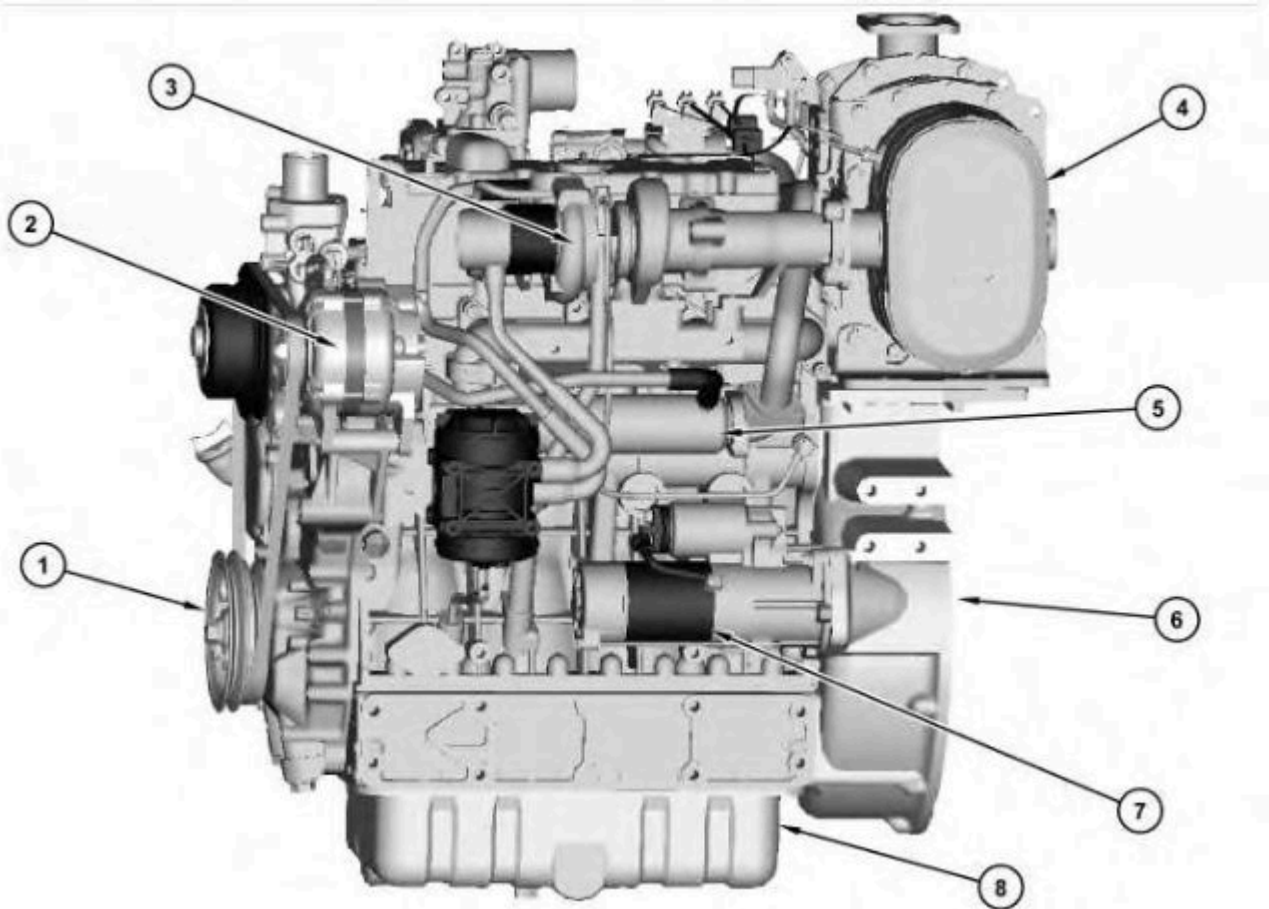Illustration 1   g02730726
(1) Crankshaft Pulley
(2) Alternator
(3) Turbocharger
(4) Diesel Particulate Filter (DPF)
(5) NRS Cooler
(6) Flywheel Housing
(7) Electric Starting Motor
(8) Oil Pan

Overview

These engines are equipped with a common rail fuel system. The fuel injection pump and the fuel lines deliver fuel to an electronic unit injector in each cylinder. A solenoid on each injector meters the amount of fuel that is delivered by the injector. An Electronic Control Module (ECM) sends signals to two pressurizing assemblies on the pump and to the injector solenoids in order to control the injection of fuel.

Electronic Control System

The electronic system consists of the ECM, the wiring harness, switches, sensors, and fuel injectors. The ECM consists of two main components, the control computer (hardware) and the flash file (software). The control computer consists of a microprocessor and electronic circuitry. The flash file contains the operational characteristics. The operating maps define the following characteristics of the engine:

- Horsepower

- Torque curves

- Engine speed (rpm)

Refer to Troubleshooting, "System Overview" for additional information on the electronic control system.

Interface

The ECM interfaces with the machine via software and an electrical connector on the ECM. The ECM also communicates with machine systems via data links.

The machine provides inputs to the electrical connector on the ECM in order to indicate the status of switches. The ECM must be correctly configured in order to interpret the inputs. Refer to Troubleshooting, "Configuration Parameters" for additional information on configuring the inputs.

The ECM provides outputs for the machine via the electrical connector in order to control lamps, solenoids, and other devices. The ECM must be correctly configured in order for the outputs to match the machine's configuration. Refer to Troubleshooting, "Configuration Parameters" for additional information on configuring the outputs.

Power Curves

Rated 2600 RPM