

KELLY TRACTOR CO.**Service Information System**

Shutdown SIS

Previous Screen

Product: TRUCK ENGINE
Model: C15 TRUCK ENGINE MXS
Configuration: C15 On-highway Truck MXS00001-UP

Systems Operation

C15 On-highway Engines

Media Number -SEN9692-06

Publication Date -01/06/2006

Date Updated -14/06/2006

i02732948

General Information

SMCS - 1000

The C15 is a in-line six cylinder engine. The engine has a bore of 137.2 mm (5.40 inch) and a stroke of 171.5 mm (6.75 inch). The displacement of the engine is 15.2 L (927.56 cu in). Each cylinder has two inlet valves and two exhaust valves. The firing sequence of the engine is 1-5-3-6-2-4.

The engines have two turbochargers. The engines arrange the two turbochargers in series. The two turbochargers allow the engine to have boost over the entire engine rpm range. The use of two turbochargers increases the maximum boost pressure to 410 kPa (60 psi). The engine also uses a air-to-air aftercooler (ATAAC).

The Electronic Unit Injector system (EUI) eliminates many of the mechanical components that are traditionally used in the fuel injector assembly. The EUI also provides increased control of the timing and increased control of the fuel air mixture. The timing advance is achieved by precise control of the fuel injection timing. Engine speed is controlled by adjusting the injection duration.

The ECM monitors the system. The ECM detects problems with the system. In the event of a system component failure, the operator is alerted to the condition by a red stop lamp. The check engine light is located on the dashboard. An electronic service tool can be used to read the numerical code of the faulty component or condition.

Starting The Engine

The engine's Engine Control Module (ECM) will automatically provide the correct amount of fuel in order to start the engine. Do not hold the throttle down while the engine is cranking. If the engine fails to start in 30 seconds, release the starting switch. Allow the starting motor to cool for two minutes before the starting motor is used again.

NOTICE

Excessive ether (starting fluid) can cause piston and ring damage. Use ether for cold weather starting purposes only.

Customer Specified Parameters

The ECM can be programmed for several customer specified parameters. For a brief explanation of each of the customer specified parameters, see the Troubleshooting Guide.

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i02566206

Electronic Control System Components

SMCS - 1900

MXS and ; NXS Model Views

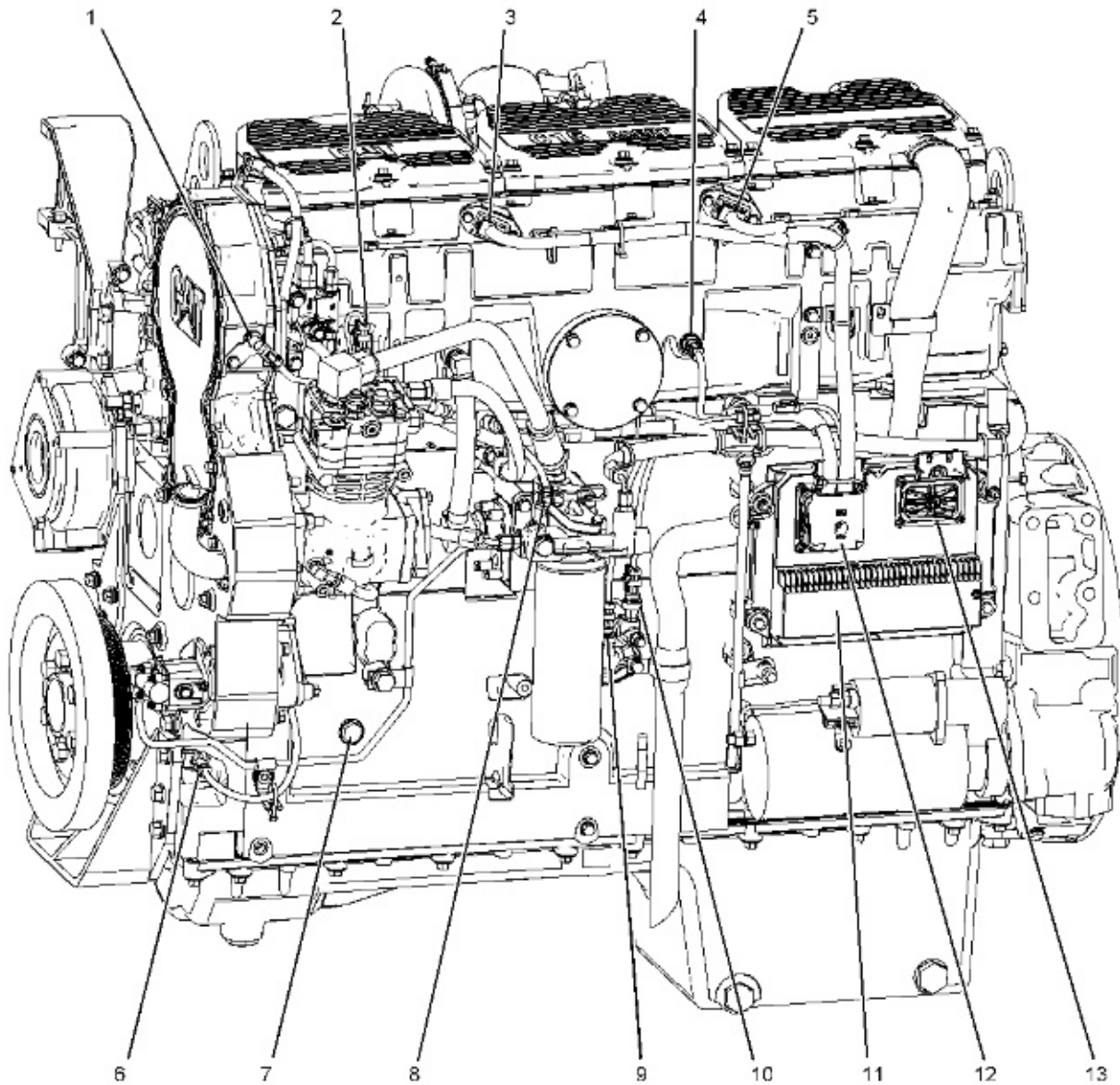


Illustration 1

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Typical example

Left side view of engine

- (1) Secondary engine speed/timing sensor
- (2) Intake manifold pressure sensor (Boost)
- (3) Front valve cover connector
- (4) Intake manifold air temperature sensor
- (5) Rear valve cover connector

(6) Primary engine speed/timing sensor

(7) Timing calibration port

(8) Fuel temperature sensor

(9) Atmospheric pressure sensor

(10) Engine oil pressure sensor

(11) Engine Control Module (ECM)

(12) J2/P2 ECM connector

(13) J1 ECM connector

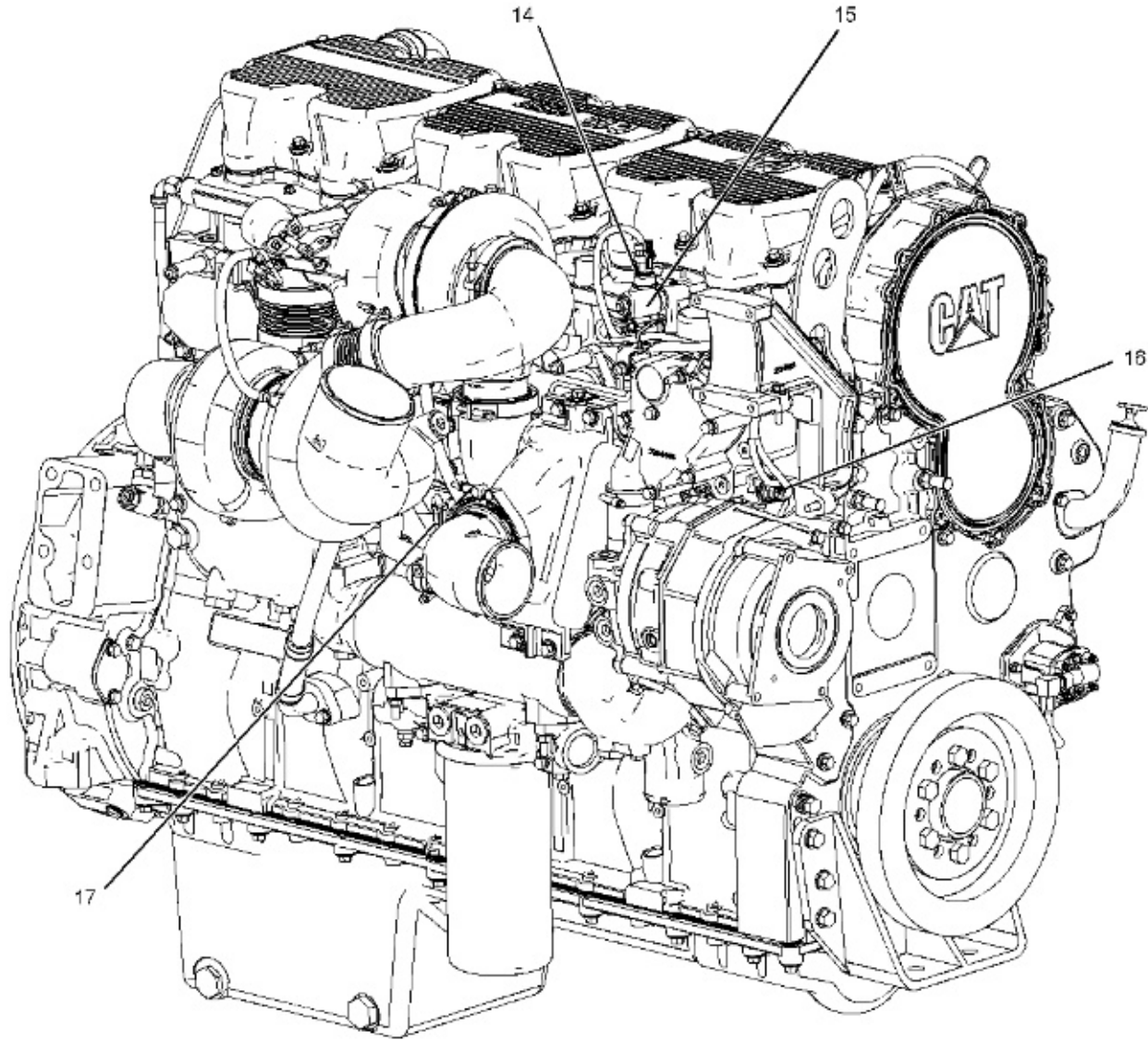


Illustration 2
Right side of engine

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- (14) Sensor for the intake valve actuation pressure
- (15) Solenoid for the intake valve actuation pressure
- (16) Coolant temperature sensor
- (17) Diverter valve for the engine coolant

BXS Model Views