i02719893

Engine Description

SMCS Code: 1000

The front end of the engine is opposite the flywheel end of the engine. The left and the right sides of the engine are determined from the flywheel end. The number 1 cylinder is the front cylinder.

The C13 and the C15 Engines have the following characteristics: air-to-air aftercooled, direct fuel injection, four stroke cycle, in-line 6 cylinder, and turbocharged.

C13 Engine Specifications

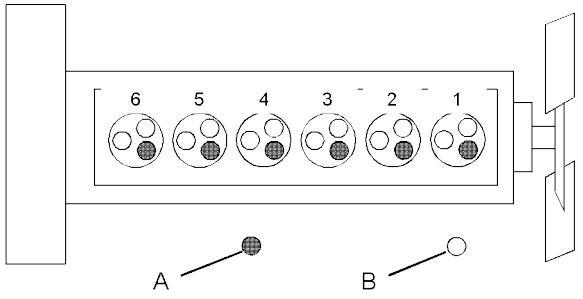

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Illustration 18

Cylinder and valve location

(A) Exhaust valve
(B) Inlet valve

Table 1

C13 Engine Specifications	
Arrangement and Cylinders	In-Line 6 cylinder
Bore	130 mm (5.2 inch)
Stroke	157 mm (6.2 inch)
Aspiration	ATAAC(1)
Displacement	12.5 L (763 in^3)
Firing Order	1-5-3-6-2-4
Rotation (flywheel end)	Counterclockwise

(1) Air-to-air aftercooled

C15 Engine Specifications

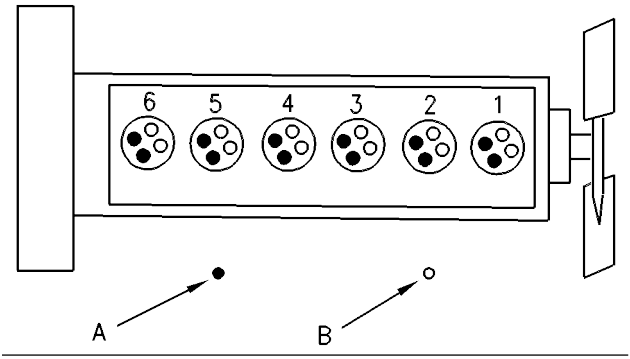

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Illustration 19

Cylinder and valve location

(A) Exhaust valve
(B) Inlet valve

Table 2

C15 Engine Specifications	
Arrangement and Cylinders	In-Line 6 cylinder
Bore	137.2 mm (5.4 inch)
Stroke	171.5 mm (6.8 inch)
Aspiration	ATAAC(1)
Displacement	15.2 L (928 in^3)
Firing Order	1-5-3-6-2-4
Rotation (flywheel end)	Counterclockwise

(1) Air-to-air aftercooled

Electronic Engine Features

The Caterpillar C13 and C15 Engines are designed for electronic controls. The integral on board computer controls the operation of the engine. Current operating conditions are monitored. The Engine Control Module (ECM) controls the response of the engine to these conditions and to the demands of the operator. These conditions and operator demands determine the precise control of fuel injection by the ECM. The electronic engine control system provides the following features:

- Engine speed governor
- Automatic air/fuel ratio control
- Torque rise shaping
- Injection timing control
- System diagnostics

The following programmable features are included in the electronic control:

- Cruise control
- Governing of the PTO
- Vehicle speed limiter