



Illustration 17

g01387009

Cylinder and valve location

(A) Exhaust valve  
(B) Inlet valve

Table 1

| Engine Specifications     |                         |
|---------------------------|-------------------------|
| Engine                    | C13                     |
| Arrangement and Cylinders | In-Line 6 cylinder      |
| Bore                      | 130 mm (5.1 inch)       |
| Stroke                    | 157 mm (6.2 inch)       |
| Aspiration                | ATAAC <sup>(1)</sup>    |
| Displacement              | 12.5 L (763 cubic inch) |
| Firing Order              | 1-5-3-6-2-4             |
| Rotation (flywheel end)   | Counterclockwise        |

<sup>(1)</sup> Air-to-air aftercooled

## Electronic Engine Features

The Cat C13 Industrial Engine is designed for electronic controls. The integral on board computer controls the operation of the engine. Current operating conditions are monitored. The Electronic 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

- Aftertreatment regeneration control
- NOX reduction system control

## Additional Features

The following additional features provide increased engine fuel economy and serviceability:

- Cold starting capability
- Tampering detection
- Diagnostics

## Engine Service Life

Engine efficiency and maximum utilization of engine performance depend on the adherence to proper operation and maintenance recommendations. In addition, use recommended fuels, coolants, and lubricants. Use the Operation and Maintenance Manual as a guide for required engine maintenance.

Expected engine life is predicted by the average power that is demanded. The average power that is demanded is based on fuel consumption of the engine over a time. Reduced hours of operation at full throttle and/or operating at reduced throttle settings result in a lower average power demand. Reduced hours of operation will increase the length of operating time before an engine overhaul is required. For more information, refer to the Operation and Maintenance Manual, "Overhaul Considerations" topic.

## Aftermarket Products and Cat Engines

When auxiliary devices, accessories, or consumables (filters, additives, catalysts, etc.) which are made by other manufacturers are used on Cat products, the Caterpillar warranty is not affected simply because of such use.

**However, failures that result from the installation or use of devices, accessories, or consumables from other manufacturers are NOT Cat defects. Therefore, the defects are NOT covered under the Caterpillar warranty.**