

# 3406 C

# **Industrial Engine**

**Non-Certified** 328 bkW/440 bhp @ 2000 rpm

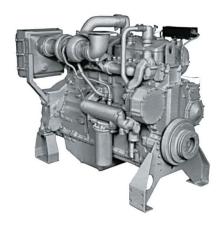


Image shown may not reflect actual engine

#### CAT® ENGINE SPECIFICATIONS

#### I-6, 4-Stroke-Cycle Diesel

| Bore                       | 137.2 mm (5.4 in)                 |
|----------------------------|-----------------------------------|
|                            | 165.1 mm (6.5 in)                 |
| Displacement               | 14.64 L (893.39 in <sup>3</sup> ) |
|                            | Turbocharged / Aftercooled        |
|                            | 14.6:1                            |
|                            | d) Counterclockwise               |
| Capacity for Liquids       |                                   |
|                            | 20.8 L (5.5 gal)                  |
|                            | 38.0 L (10.0 gal)                 |
| Engine Weight, Net Dry (ap | proximate) 1,518 kg (3,347        |
| lb)                        |                                   |

#### **FEATURES**

#### **Emissions**

Non-certified rating. Meets emission levels for Tier 1 Wide range of bolt-on system expansion / Stage I standards.

#### **Single Source Supplier**

Caterpillar

- Casts engine blocks, heads, cylinder liners, and flywheel housings
- Machines critical components
- Assembles complete engine

Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable product.

Factory-designed systems built at Caterpillar ISO certified facilities.

#### **Testing**

Prototype testing on every model:

- proves computer design
- verifies system torsional stability
- functionality tests every model

Every Caterpillar engine is dynamometer tested under full load to ensure proper engine performance.

#### **Full Range of Attachments**

attachments, factory designed and tested

#### **Unmatched Product Support Offered Through Worldwide Caterpillar Dealer Network**

More than 1,500 dealer outlets.

Caterpillar factory-trained dealer technicians service every aspect of your industrial engine. 99.7% of parts orders filled within 24 hours worldwide.

Caterpillar parts and labor warranty. Preventive maintenance agreements available for repair before failure options.

Scheduled Oil Sampling program matches your oil sample against Caterpillar set standards to determine:

- internal engine component condition
- presence of unwanted fluids
- presence of combustion by-products

#### Web Site

For all your industrial power requirements, visit www.cat-industrial.com.



#### STANDARD ENGINE EQUIPMENT

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#### Air Inlet System

Air cleaner, Regular duty, dry, panel type with service indicators, turbocharger, jacket water aftercooled

#### **Control System**

Governor, Hydra-mechanical

#### **Cooling System**

Thermostats and housing, Jacket water pump, gear driven, centrifugal, RH

#### **Exhaust System**

Exhaust manifold, dry, front exhaust Exhaust elbow, dry, 152 mm (6 in), 4 bolt flange 127 mm (5 in) on 406DO12

#### Flywheels and Flywheel Housings

Flywheel, SAE No. 1 Flywheel housing, SAE No. 1, SAE standard rotation

#### **Fuel Systems**

Fuel Filter, LH Fuel transfer pump Fuel priming pump

#### Instrumentation

Instrument Panel, LH Engine oil pressure gauge Fuel pressure gauge Water temperature gauge Service meter

#### **Lube System**

Crankcase breather
Oil cooler, RH
Oil filter, RH
Oil filler in valve cover and dipstick, both RH
Rear sump oil pan

#### **Mounting System**

Supports

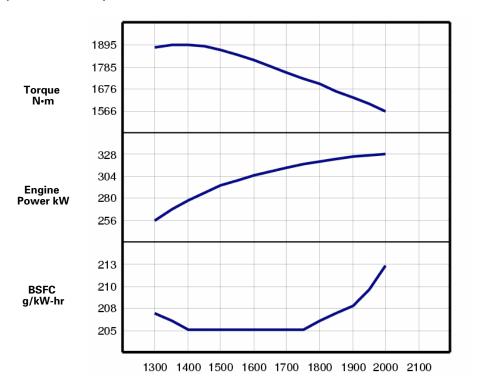
#### General

Paint, Caterpillar Yellow Vibration damper and guard Lifting eyes



### **PERFORMANCE CURVES**

#### IND - C (Intermittent) - DM2256-01



Metric

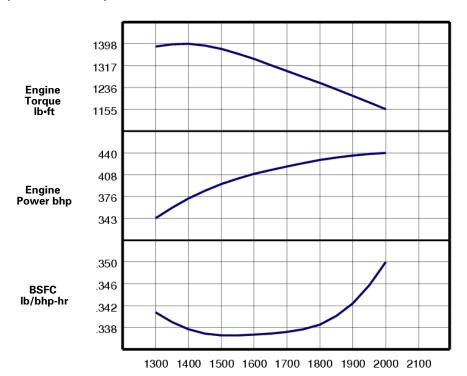
Engine Speed - rpm

| Engine Speed rpm | Engine Power<br>kW | Torque N·m | BSFC g/kW-hr | Fuel Rate L/hr |
|------------------|--------------------|------------|--------------|----------------|
| 2000             | 328                | 1566       | 212.9        | 83.2           |
| 1950             | 327                | 1600       | 210.3        | 81.9           |
| 1900             | 325                | 1634       | 208.3        | 80.7           |
| 1850             | 323                | 1667       | 206.9        | 79.6           |
| 1800             | 320                | 1699       | 205.9        | 78.5           |
| 1750             | 317                | 1729       | 205.4        | 77.5           |
| 1700             | 313                | 1759       | 205.1        | 76.4           |
| 1650             | 309                | 1789       | 204.9        | 75.3           |
| 1600             | 305                | 1819       | 204.8        | 74.2           |
| 1550             | 300                | 1846       | 204.7        | 72.9           |
| 1500             | 294                | 1869       | 204.7        | 71.4           |
| 1450             | 286                | 1886       | 204.9        | 69.7           |
| 1400             | 278                | 1895       | 205.4        | 67.8           |
| 1350             | 268                | 1893       | 206.2        | 65.6           |
| 1300             | 256                | 1881       | 207.3        | 63.3           |



## **PERFORMANCE CURVES**

#### IND - C (Intermittent) - DM2256-01



English

**Engine Speed rpm** 

| Engine Speed rpm | Engine Power bhp | Engine Torque<br>lb•ft | BSFC lb/bhp-hr | Fuel Rate<br>gal/hr |
|------------------|------------------|------------------------|----------------|---------------------|
| 2000             | 440              | 1155                   | .350           | 22.0                |
| 1950             | 438              | 1180                   | .346           | 21.6                |
| 1900             | 436              | 1205                   | .342           | 21.3                |
| 1850             | 433              | 1230                   | .340           | 21.0                |
| 1800             | 430              | 1253                   | .338           | 20.7                |
| 1750             | 425              | 1275                   | .338           | 20.5                |
| 1700             | 420              | 1297                   | .337           | 20.2                |
| 1650             | 415              | 1319                   | .337           | 19.9                |
| 1600             | 409              | 1342                   | .337           | 19.6                |
| 1550             | 402              | 1362                   | .337           | 19.3                |
| 1500             | 394              | 1378                   | .337           | 18.9                |
| 1450             | 384              | 1391                   | .337           | 18.4                |
| 1400             | 373              | 1398                   | .338           | 17.9                |
| 1350             | 359              | 1396                   | .339           | 17.3                |
| 1300             | 343              | 1387                   | .341           | 16.7                |



#### RATINGS AND CONDITIONS

3406 C **Industrial Engine Non-Certified** 

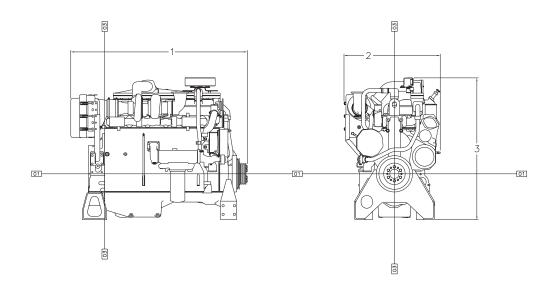
328 bkW/440 bhp @ 2000 rpm

IND - C (Intermittent) Intermittent service where maximum power and/or speed are cyclic. The power and speed capability of the engine can be utilized for one uninterrupted hour followed by one hour of operation at or below IND - A. Time at full load is not to exceed 50% of the duty cycle. Typical service examples are: agricultural tractors, harvesters and combines, off highway trucks, fire pump application power, blast hole drills, rock crushers and wood chippers with high torque rise, and oil field hosting.

Engine Performance Engine performance is corrected to inlet air standard conditions of 99 KPA (29.31 IN HG) dry barometer and 25 deg C (77 deg F) temperature. These values correspond to the standard atmospheric pressure and temperature as shown in SAE J1995.

Performance measured using a standard fuel with fuel gravity of 35 degrees API having a lower heating value of 42,780 KJ/KG (18,390 BTU/LB) when used at 29 DEG (84.2 DEG F) where the density is 838.9 G/L (7.001 LB/US GAL).

The corrected performance values shown for Caterpillar engines will approximate the values obtained when the observed performance data is corrected to SAE J1995, ISO 3046-2 and 8665 and 2288 and 9249 and 1585, EEC 80/1269 and DIN 70020 standard reference conditions.



| Engine Dimensions |                      |  |  |  |
|-------------------|----------------------|--|--|--|
| (1) Length        | 1660.1 mm (65.36 in) |  |  |  |
| (2) Width         | 905.7 mm (35.66 in)  |  |  |  |
| (3) Height        | 1335.0 mm (52.56 in) |  |  |  |

Note: Do not use for installation design. See general dimension drawings for detail (Drawing # 1324895).

Performance Number: DM2256-01

Feature Code: 406DI02 Arr. Number: 1304571

The International System of Units (SI) is used in this publication.

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