CATERPILLAR®

Locomotive Engine

3512

1000-1480 hp

SPECIFICATIONS

12 cylinder, 4-stroke-cycle diesel
Bore — in (mm) 6.7 (170)
Stroke — in (mm) 7.5 (190)
Displacement — cu in (L) 3,158 (51.8)
Aspiration . . . . . .Turbocharged-Aftercooled
Rotation (from flywheel end) . . . . . .Counterclockwise
Capacity for Liquids — U.S. gal (L)
  Cooling System 41.4 (156.8)
  Lube Oil System (refill) 162 (613)
Weight, Net Dry (approx) — lb (kg)
  Including Flywheel 13,752 (6238)

CATERPILLAR ENGINE FACILITIES ISO 9001 CERTIFIED

Engine Arrangement May Be Shown with Optional Equipment

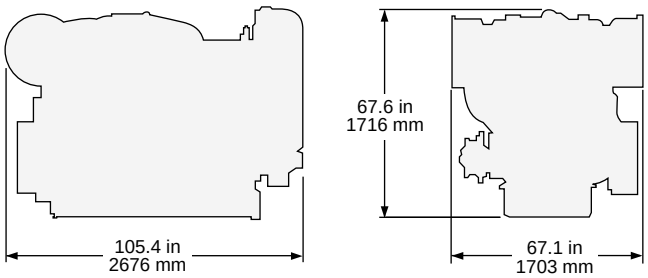
STANDARD EQUIPMENT

Aftercooler core, corrosion resistant coated (air side)
Air cleaner with service indicators
Breather, crankcase, top mounted
Cooler, lubricating oil
Damper guard
Filters – fuel, left hand with service indicators;
  lubricating oil, left hand
Flywheel
Flywheel Housing, SAE No. 00
Front housing, two sided
Governor, 3161, right hand, air-fuel ratio control
Instrument panel, left hand
  engine oil pressure gauge
  fuel pressure gauge
  oil filter differential gauge
  jacket water temperature gauge
  service meter, electric
Lifting eyes
Manifold, exhaust dry
Oil filler and dipstick, left hand
Oil pan, shallow
Pumps, fuel and lubricating
  fuel priming
  fuel transfer
  lubricating oil
Pumps, water – jacket water
Shutoff system, electrical (64 V DC)
  oil pressure, water temperature, and overspeed
  3161 governor includes solenoid, energized to run
  with air inlet shutoff
Shutoff, manual left hand
Thermostats and housing
Vibration damper

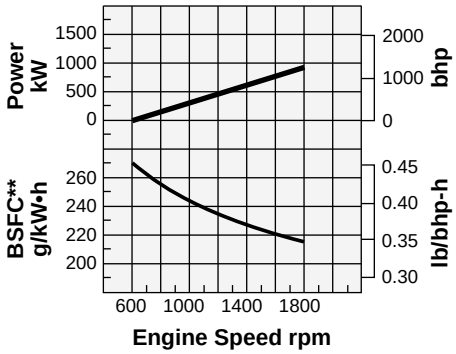
OPTIONAL EQUIPMENT

Air cleaners
  heavy duty/dual element
Exhaust fittings and manifolds
Exhaust pyrometer and thermocouples
Flywheel
Gauge
  water level switch
Governor
  programmable electronic engine control (PEEC)
Oil pan
  deep sump
Starting systems and accessories
Switches
  alarm

DIMENSIONS

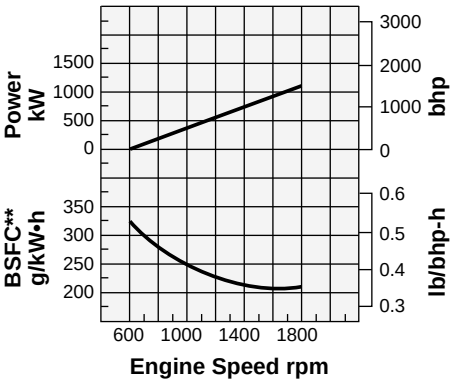


PERFORMANCE CURVES AND DATA*



Mainline Operation

Rated hp (kW)	1,200 (895)
Full Load rpm	1,800
Low Idle rpm	600
Operating Range (rpm)	1,200
Altitude Capability — ft (m)	10,500 (3200)



Shunting/Branch Line

Rated hp (kW)	1,480 (1104)
Full Load rpm	1,800
Low Idle rpm	600
Operating Range (rpm)	1,200
Altitude Capability — ft (m)	7,500 (2300)

* 1300 and 1500 rpm ratings also available.
** Brake Specific Fuel Consumption

RATING CONDITIONS AND DEFINITIONS

Ratings are based on SAE J1349 standard conditions of 100 kPa (29.61 in Hg) and 25° C (77° F). Ratings also apply at DIN6271 standard conditions of 100 kPa (29.61 in Hg), 27° C (81° F) and 60% relative humidity.

Fuel consumption is based on fuel oil having an LHV of 42 780 kJ/kg (18,390 Btu/lb) and weighing 838.9 g/liter (7.043 lb/U.S. gal).

Engine equipped with fuel, lube oil, and jacket water pumps but without fan.

Intermittent is the horsepower and speed capability of the engine which can be used for about one hour, followed by an hour of operation at or below the continuous rating.

Continuous is the horsepower and speed capability of the engine which can be used without interruption or load cycling.

Additional ratings including high torque rise are available for specific customer requirements. Consult your Caterpillar dealer.

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

Materials and specifications are subject to change without notice.

LEHH5392 (6-95)
Supersedes LEHH8610

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