

Engine pictured with Optional Equipment

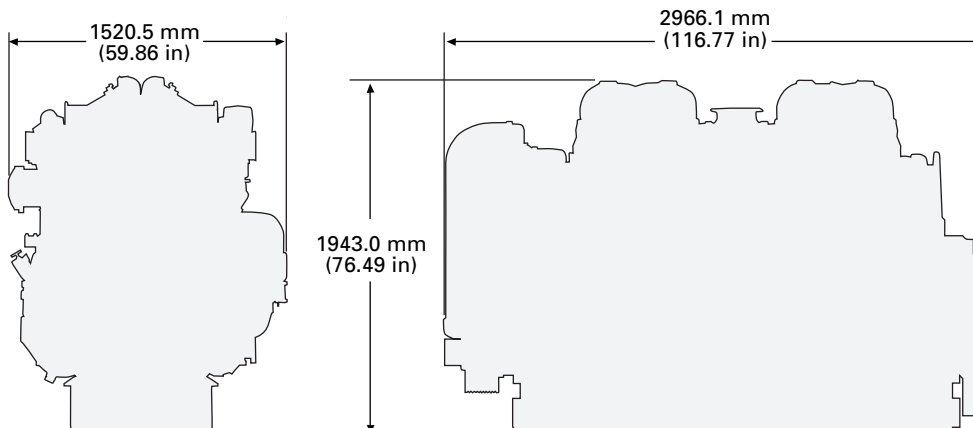


CATERPILLAR® ENGINE SPECIFICATIONS

16 Cylinder, Four-Stroke-Cycle Diesel
 Bore — mm (in)..... 170 (6.7)
 Stroke — mm (in)..... 215 (8.5)
 Displacement — L (cu in)..... 78 (4,760)
 Aspiration..... Turbocharged-Aftercooled
 Rotation (from flywheel end) .. Counterclockwise
 Capacity for Liquids — L (U.S. gal)
 Cooling System..... 205 (54)
 Lube Oil System (refill)..... 400 (106)

Weight, Net Dry (approximate) — kg (lb)
 including flywheel 7720 (17,000)
 Cold Start Capability 10° C (50° F)
 Compression Ratio 15.5:1
 Electronic fuel injection
 Meets current ERRI exhaust emissions levels
 For additional information on all your power requirements, visit www.cat.com.

DIMENSIONS

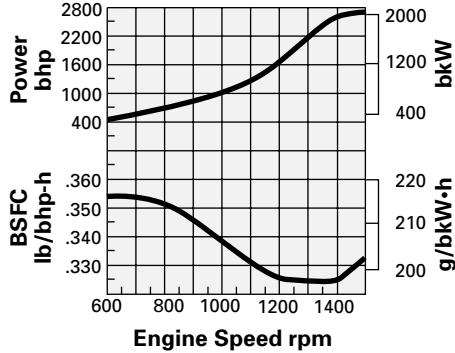


FACTORY INSTALLED STANDARD AND OPTIONAL EQUIPMENT

SYSTEM	STANDARD EQUIPMENT	OPTIONAL EQUIPMENT
Air Inlet	Aftercooler core, material: copper nickel Four top-mounted turbochargers	Air cleaners — single or dual element Air inlet adapters for air cleaners
Control System	ADEM control, electronic engine control, requires isolated 10 amps at 24 volts DC for operation	Customer Control Module (CCM) (shipped loose) provides interface between engine control and customer control Throttle position signal conversion module (shipped loose) — provides PWM signal to engine control Instrument panel for remote mounting
Cooling System	Thermostats and housing. Full open temperature 92° C (198° F) for engine jacket water Jacket water and separate circuit pumps, gear driven, centrifugal Separate Circuit Aftercooler (SCAC) cooling circuit contains a thermostat to maintain the aftercooler water temperature. Requires customer supplied cooling system to supply 50° C (122° F) water to achieve maximum performance Connections: jacket water — single inlet, dual outlet, hose type; separate circuit — flange type with companion flange	Jacket water conversion — converts standard separate circuit aftercooled engine to jacket water aftercooling Jacket water connections — flange connections for cooling water inlet and outlet Connections (shipped loose) — flexible hose and mechanical connections for cooling water
Exhaust System	Exhaust manifold, dry, gas tight	Exhaust fittings — flexible connections, flanges, and elbows (shipped loose) Exhaust port thermocouples Heat shields
Flywheels and Flywheel Housings	Flywheel, SAE No. 00, 183 teeth Flywheel housing, SAE No. 00 SAE standard rotation	Flywheel and housing SAE No. 0 Flywheel SAE No. 0
Front Housing	Two-sided front housing	
Fuel System	Fuel filters, cartridge type, RH service Fuel transfer pump Electronically controlled unit injectors	Fuel priming pumps (manual) Flexible fuel lines (shipped loose) Hard fuel return line includes flexible hose connections Primary fuel filter (shipped loose) Water/fuel separator (shipped loose) Fuel filter with left side service Fuel cooler (shipped loose)
Lube System	Crankcase breathers, top mounted, 51 mm (2 in) OD outlet Oil cooler Oil filler, RH, with chained stopper LH and RH dipstick Oil filter, RH Oil pump, gear type Shallow oil pan	Oil pan accessories: oil pan capacities, oil pan drain cover, filler, sampling and drain valve Oil filter with left side service Fumes disposal (shipped loose) — provides hard fumes disposal tube and flexible hose to route fumes out of the engine compartment Lubricating oil
Power Take-Offs	Accessory driven, lower LH, used to drive SCAC pump	Front accessory drives Auxiliary drive shafts and pulleys Front stub shafts and pulleys
Protection System	Safety shut off protection, electrical, energized to shut off Protection override	Remote air shut off control Programmable relay control — provides control of 7 relays and 6 alarm fault LEDs for customer use Explosion relief valves
Mounting System		Rails (ledge type)
Starting System		Electric starting motors (dual) Electric starting motor magnetic switch enclosure Air starter
General	Paint — Caterpillar yellow Vibration damper and guard Lifting eyes	
Special Locomotive Equipment	Electrical interface Remote junction box provides normal and emergency shut off Customer connection to ADEM control including: throttle, speed signal, General Alarm Relay (NC or NO contacts) (GAR), Shut Down Notify Relay (NC or NO contacts) (SDNR), Start Enable Relay (NC or NO contacts) (SER), Cat Data Link, load feedback, torque limiting, remote emergency and normal shutdown switch connections, engine electrical power connections	

PERFORMANCE CURVES AND DATA

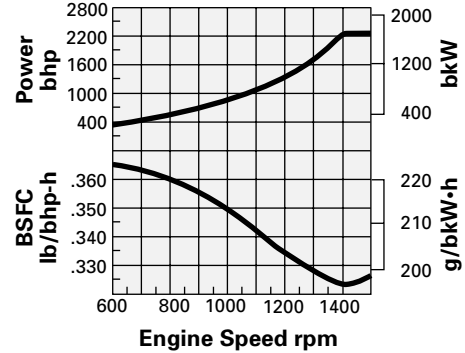
Separate Circuit Aftercooled (SCAC)* DM6781



Rated kW (bhp) flywheel	2060 (2760)
Full Load — rpm	1500
Low Idle — rpm	600
Operating Range — rpm	900
Altitude Capability — m (ft)	
max operating altitude	1000 (3,280)
Fuel Consumption — L/hr (gal/hr)	
Idle (600 rpm)	13.6 (3.6)
Full Load (1500 rpm)	494 (130.5)
BSFC — g/bkW-hr (lb/bhp-hr)	
minimum value (@1300 rpm)	195.1 (.321)

* SCAC performance data is based on 45° C (113° F) cooling water. Automatic power derate for higher cooling water temperatures.

Separate Circuit Aftercooled (SCAC)* DM6782



Rated kW (bhp) flywheel	1655 (2220)
Full Load — rpm	1500
Low Idle — rpm	600
Operating Range — rpm	900
Altitude Capability — m (ft)	
max operating altitude	1000 (3,280)
Fuel Consumption — L/hr (gal/hr)	
Idle (600 rpm)	13.6 (3.6)
Full Load (1500 rpm)	392 (103.5)
BSFC — g/bkW-hr (lb/bhp-hr)	
minimum value (@1400 rpm)	196.4 (.323)

* SCAC performance data is based on 70° C (158° F) cooling water. Automatic power derate for higher cooling water temperatures.

RATING DEFINITIONS AND CONDITIONS

Performance obtained and corrected in accordance with ISO3046/2 standard atmospheric conditions of 99 kPa (29.31 in Hg) and 25° C (77° F). These values correspond to the standard atmospheric pressure and temperature as shown on SAE J1995.

Performance and fuel consumption are based on 35 API 15° C (60° F) gravity fuel having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) where the density is 839.9 g/liter (7.001 lb/U.S. gal).

Engine equipped with fuel, lube oil, and water pumps.