C13 Defence Engine

447-530 kW (600-711 hp)

2386-2700 Nm (1760-1991 lb-ft)

Shown with optional equipment

CAT® ENGINE SPECIFICATIONS

In-line 6-Cylinder, 4-Stroke-Cycle Diesel
Bore ………………………………………… 130 mm (5.12 in)
Stroke ……………………………...…… 157 mm (6.18 in)
Displacement ……………………...……….... 12.5 L (763 in³)
Aspiration ……………................ Turbocharged and After-cooled
Compression Ratio ………………...………………… 15.8 to 18:1
Combustion System …………….……………….. Direct Injection
Rotation (from flywheel end) ………….……..……… Anti-clockwise
Cooling System[1] …………………………… 14.2 L (3.8 gal US)
Lubrication Oil System[2] (refill) ………………… 30 L (9.0 gal US)
Engine Weight, Net Dry (approximate) with:
  Single turbo ……….………………………… 1075 kg (2371 lbs)
  Standard equipment ………………………… 1143 kg (2520 lbs)
Maximum engine tilt angle[2] of operation:
Longitudinal ………………………….…..……………… 31° (60%)
Transverse ……………….…………………..…… 17° (30%)

[1] Engine only. Capacity will vary with radiator size and coolant ancillaries
[3] Dependent upon type of oil sump

STANDARD EQUIPMENT

Cooling: gear-driven water pump, oil cooler
Crankcase breather
Electronic Control Module (ECM)
Electronic Data Link, SAE/ATA, SAE/J1939
Electronically Controlled Mechanically Actuated Unit Injector (MEUI™) system
Fuel - spin-on secondary filter , transfer pump
Governor - full range electronically controlled
Lifting eyes
Lubrication: gear-driven pump, front or rear sump pan, full flow spin-on filter, oil filter, dipstick (oil level gauge)
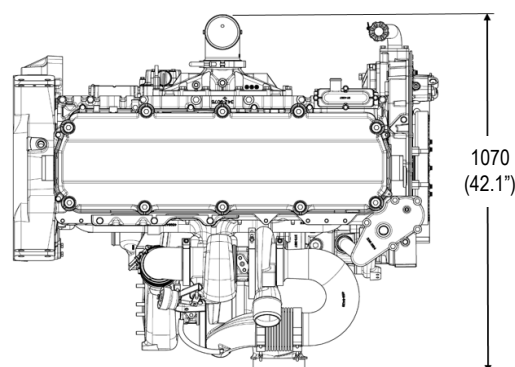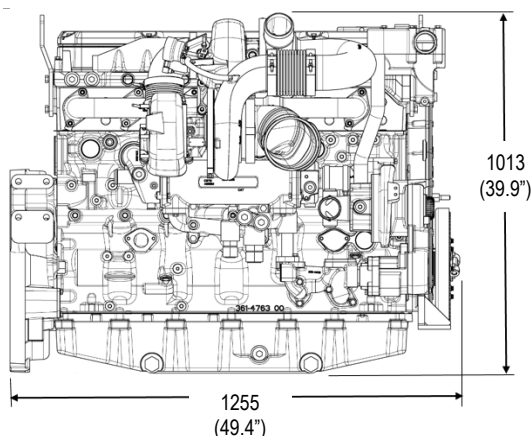SAE No.1 flywheel housing
Series or single turbochargers

ACCESSORY EQUIPMENT

Air compressor - gear driven; 445-878 L/min (15.7-31.0 cfm),
Air conditioner compressor mounting
Air inlet elbow
Air, oil or water cooled electrical generator with belt or direct drive options
Cat Compression Brake
Dual rear PTO SAE No. 1 flywheel housing
Front engine support
Front PTO adapter
Fuel priming pump
Jacket water heater
Single or dual starter motor (24V)
Transmission coupling
Turbocharger interface connections
Wide range of hydraulic pumps; fixed and variable displacement, with belt or direct drive options
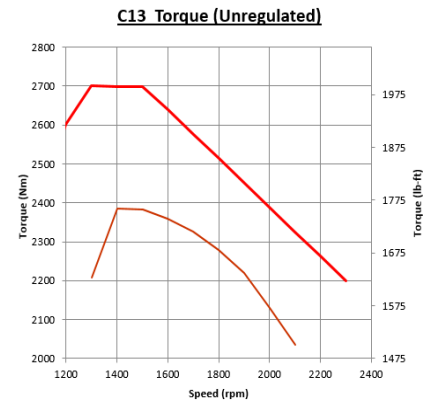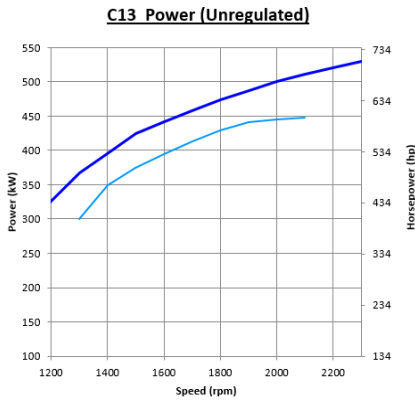
RATING DEFINITIONS AND CONDITIONS

Performance is based upon SAE J1995 standard conditions of 100 kPa (29.61 in Hg) and 25°C (77°F)

DIMENSIONS

1013 (39.9")

1255 (49.4")

1070 (42.1")

PERFORMANCE

Power @ Rated Speed (kW)	Power @ Rated Speed (hp)	Torque @ Rated Speed (Nm)	Torque @ Rated Speed (lb.ft)	Rated Speed (rpm)	Peak Torque (Nm)	Peak Torque (lb.ft)	Peak Torque Speed (rpm)	Emissions
447	600	2035	1501	2100	2386	1760	1400	Unregulated
530	711	2200	1623	2300	2700	1991	1300	Unregulated

C13 Power (Unregulated)

- 447 kW
- 530 kW
- 2386 Nm @ 1400 rpm
- 2700 Nm @ 1500 rpm

C13 Torque (Unregulated)

ELECTRONIC FEATURES

SAE J1939 compatible
ECM storage of operational, maintenance, diagnostics codes and data
Electronic self-diagnostics
Customer selectable, re-programmable operational parameters:
- 2-speed fast idle capabilities
- Adjustable low idle rpm
- Cruise control
- Engine protection system; selectable warning, derate, or shutdown
- Fleet information software capability
- Idle shutdown timer and override

- Maintenance monitor [kilometres (miles) or hours]
- Vehicle speed [km/h (mph)] limiting and protection
Programmable Power Take-Off (PTO) functions:
- Adjustable minimum and maximum engine rpm speed
- Adjustable ramp rate up or down between PTO and speed(s)
- Adjustable rpm "bump" intervals
- Adjustable speed control [km/h (mph)] of that vehicle while in PTO mode
- Limit engine torque to driven equipment
Cold weather start-up strategy and electronic idle control functions
Compatible with Caterpillar Electronic Technician (ET)

FEATURES

Unmatched Product Support Offered Through Worldwide Caterpillar Dealer Network
Design and development consultancy service available for bespoke fully integrated powerpack solutions
Global presence; in excess of 1,800 approved Dealer outlets

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

For more information contact: **cat_defence_products@cat.com** Or visit: **www.catdfp.com**

CAT®