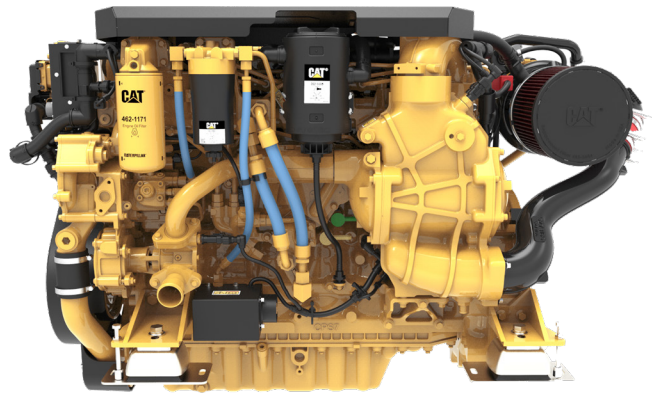
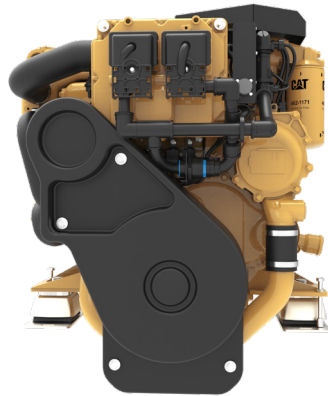


C7.1 Marine Propulsion Engine

Commercial Applications



ENGINE SPECIFICATIONS

CONFIGURATION	In-line 6, 4-stroke cycle diesel
EMISSIONS	U.S. EPA Tier 3, IMO II, RCD II, China II
RATED ENGINE SPEED	2300 rpm - 2700 rpm
DISPLACEMENT	7.01 L (428 cu in)
ASPIRATION	Turbocharged - aftercooled
GOVERNOR	Electronic (A5E2 V2 ECM)
FLYWHEEL HOUSING	SAE No. 03

BORE x STROKE	105 mm x 135 mm / 4.13 in x 5.31 in
REFILL CAPACITY LUBE OIL SYSTEM W/ OIL FILTER CHANGE	20 L (5.3 gal)
OIL CHANGE INTERVAL	500 hrs
ROTATION (from flywheel end)	Counterclockwise from the flywheel end
COOLING	Heat exchange or keel cooled

KEY FEATURES & BENEFITS

- Common rail fuel system enables optimum combustion and low emissions
- Reduced combustion noise through advanced electronic control
- 12V or 24V electrical system
- Compatible with Cat® displays and electronics
- Closed crankcase ventilation system improves engine room cleanliness
- Gear-driven jacket water pump and sea water pump for superior reliability
- Maintenance free valve train with hydraulic valve lash adjusters
- Self-priming fuel system ensures a smooth start every time

STANDARD EQUIPMENT

- Water-cooled turbocharger and exhaust manifold
- Common rail fuel system
- Corrosion-resistant sea water aftercooler
- Closed crankcase ventilation system
- Starter motors – 12V or 24V
- Fuel cooler
- Integral engine oil cooler
- Vibration damper and guard
- Electric fuel priming pump
- Self-tensioning multi-vee alternator drive belt
- Gear-driven seawater pump (rubber impeller)
- Fin and tube-type jacket water heat exchanger
- Front and rear engine mounting brackets

OPTIONAL ATTACHMENTS

- Marine Classification Society (MCS) Approval
ABS, BV, CCS, CRS, *DNV-GL, IRS, LR, Class NK, PRS, RINA
(*DNV-GL approval available for keel-cooled engines only)
- SOLAS double wall high-pressure fuel lines
- Engine mounted bilge pumps and auxiliary water pumps with electromagnetic clutch
- Engine-mounted secondary alternator – 24V 55 amp or 12V 100 amp
- Analogue gauge displays
- Transmission gear oil cooler (engine mounted)
- Glow plugs
- Jacket water heater
- Various 5" and 6" water cooled exhaust elbow configurations
- Cabin heater (calorifier) connections
- Right-hand and high-level left-hand oil dipsticks
- Mechanical throttle converter for repower

RATINGS & FUEL CONSUMPTION

IMO II

Rating	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	IMO	U.S. EPA	EU	China
B	284	280	209	2300	14.9	215.1	II	T3C	RCD	C-II
C	355	350	261	2500	18.3	211.5	II	T3C	RCD	C-II
D	406	400	298	2600	20.3	206.1	II	T3C	RCD	C-II
D	431	425	317	2700	22.9	215.6	II	T3C	RCD	C-II

ISO 3046/1 BSFC tolerance of -0/+5%

Rating Definitions:

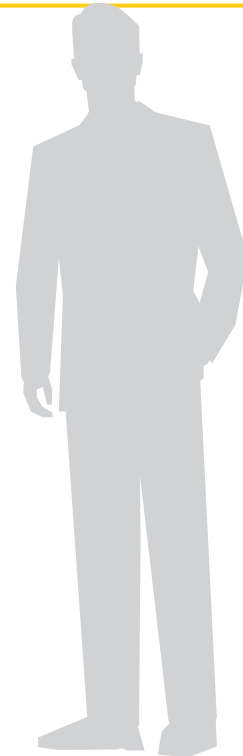
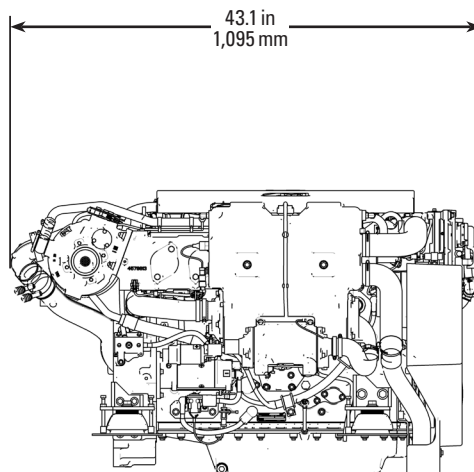
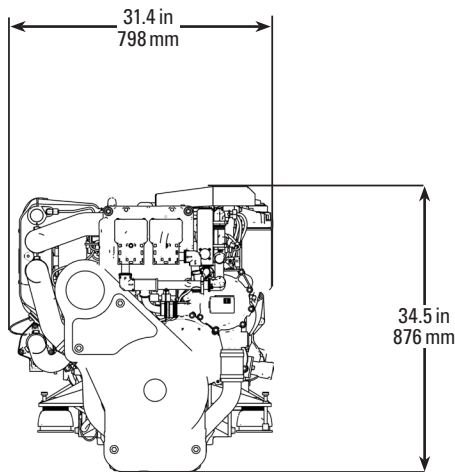
B Rating (Heavy Duty): Typical applications: For vessels operating at rated load and rated speed up to 80% of the time with some load cycling (40% to 80% load factor). Typical operation ranges from 3000 to 5000 hours per year.

C Rating (Maximum Continuous): Typical applications: For vessels operating at rated load and rated speed up to 50% of the time with cyclical load and speed (20% to 80% load factor). Typical operation ranges from 2000 to 4000 hours per year.

D Rating (Intermittent Duty): For vessels operating at rated load and rated speed up to 16% of the time (up to 50% load factor). Typical operation ranges from 1000 to 3000 hours per year.

ENGINE DIMENSIONS & WEIGHT

LENGTH	43.1 in / 1,095 mm
HEIGHT	34.5 in / 876 mm
WIDTH	31.4 in / 798 mm
DRY WEIGHT	1,676 lb / 760 kg



Contact your local Cat® Dealer for more information!

LEHM21398-01

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