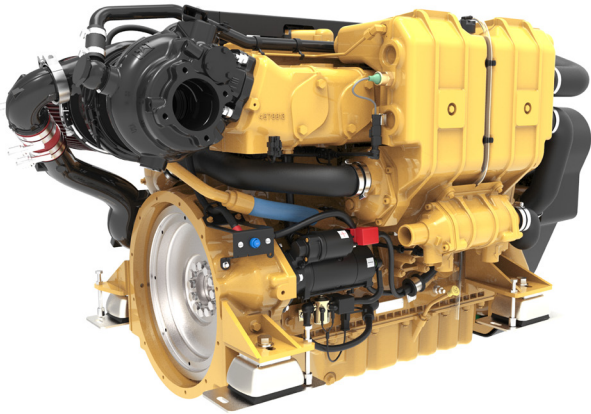


C7.1

MARINE PROPULSION ENGINE (U.S. EPA Tier 3 / IMO II)

317 bkW (425 bhp) @ 2700 rpm

298 bkW (400 bhp) @ 2600 rpm



C7.1 Marine Propulsion Engine (Commercial)
U.S. EPA Tier 3 / IMO II
Image may not reflect actual product.

ENGINE SPECIFICATIONS

Configuration

In-line 6, 4-stroke-cycle diesel

Emissions

U.S. EPA Tier 3 / IMO II emissions certified (commercial), RCD 2016 compliant, EU Stage IIIA compliant, CCNR Stage II through reciprocity with EU Stage IIIA

Rated Engine Speed

2600 rpm - 2700 rpm

Bore x Stroke

105 mm x 135 mm / 4.13 in x 5.31 in

Displacement

7.01 Liter
428 cu in

Aspiration

Turbocharged-aftercooled aspiration

Governor

Electronic (A5E2 V2 ECM)

Refill Capacity

Lube Oil System w/Oil filter change:
20 L (5.3 gal)

Oil Change Interval

500 hrs

Cooling

Heat exchanger or keel cooled

Flywheel Housing

SAE No. 03 with SAE
11.5 in flywheel

Rotation

Counterclockwise from flywheel end

FEATURES AND BENEFITS

- Superior response time and acceleration
- Common rail fuel system enables optimum combustion and low emissions
- Reduced combustion noise through advanced electronic control
- No visible smoke
- 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 ENGINE EQUIPMENT

- Watercooled 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 belt drive
- Gear driven jacket water pump
- Front and rear engine mounting brackets

OPTIONAL ATTACHMENTS

- SOLAS double wall high pressure fuel lines kit
- Engine mounted bilge pumps and auxiliary water pumps with electromagnetic clutch
- Engine mounted secondary alternator – 24V 100 amp or 12V 175 amp
- Tube and bundle jacket water heat exchanger and gear-driven sea water pump (rubber impeller)
- Transmission gear oil cooler (engine mounted)
- Additional engine and transmission sensor packages for on or off vessel monitoring
- Glow plugs
- Jacket water heater
- Various 6" water cooled exhaust elbow configurations
- Cabin heater (calorifier) connections
- Left-hand and right-hand oil dipsticks

D RATING (INTERMITTENT DUTY) DEFINITION

Typical applications: 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.

BUILT FOR IT.™

CAT®

TECHNICAL DATA

C7.1 Marine Propulsion Engine (U.S. EPA Tier 3 / IMO II)

PROP DEMAND FUEL CONSUMPTION

Brake Specific Fuel Consumption 317 bkW (425 bhp) @ 2700 rpm				
rpm	bkW	L/hr	bhp	Gal/hr
2700	317	86.5	425	22.9
2600	283	77.3	380	20.4
2400	223	60.1	299	15.9
2200	171	45.5	230	12
2000	129	34.5	173	9.1
1800	94	26.2	126	6.9
1600	66	18.6	88	4.9
1400	44	12.1	59	3.2
1200	28	7.9	37	2.1
1000	16	4.9	22	1.3
800	8	2.9	11	0.8
600	3	1.6	5	0.4

- ISO 3046/1 fluid consumption tolerance of -0/+5%

Brake Specific Fuel Consumption 298 bkW (400 bhp) @ 2600 rpm				
rpm	bkW	L/hr	bhp	Gal/hr
2600	298	76.9	400	20.3
2400	234	61.5	314	16.2
2200	181	47.8	242	12.6
2000	136	36.7	182	9.7
1800	98.9	26.9	133	7.1
1600	69.4	19.1	93.1	5
1400	46.5	12.6	62.4	3.3
1200	29.3	8.1	39.3	2.1
1000	17	5.1	22.7	1.3
800	8.7	3	11.6	0.8
600	3.7	1.7	4.9	0.4

- ISO 3046/1 fluid consumption tolerance of -0/+5%

Note:

Consult your local Cat dealer to create a customized engine TCO (Total Cost of Ownership) analysis specific to your vessel.

Dealers (only): Please reference TMI Web for most current information.

DIMENSIONS & WEIGHT

	Length (1)	Height (2)	Width (3)	Engine dry weight
min.	1095 mm/43.1 in ¹	891 mm/35.1 in	798 mm/31.4 in ²	730 kg/1609 lb ³
max.			850 mm/33.5 in ³	760 kg/1676 lb ²

Note:

Do not use these dimensions for installation design. See general dimension drawings for detail.

¹ From rear face of flywheel housing to front of engine

² Heat Exchanger

³ Keel Cooled

