

MARINE ENGINE

CATERPILLAR

D399

1000 hp 1225 rpm, 1380 hp (at 1300 rpm)

MARINE PROPULSION

Turbocharged-Aftercooled



MARINE TRANSMISSION	CAT 7251	CAT 7251	CAT 7271
REDUCTION RATIOS	1 00:1	2.89:1 3.18:1 3.49:1 3.84:1 4.22:1	4.50:1 5.09:1 5.55:1 7.00:1

V16, 4-STROKE-CYCLE DIESEL

BORE—In (mm)	6.25 (159)
STROKE—In (mm)	8.00 (203)
DISPLACEMENT—cu in (liter)	3,927 (64.4)
ROTATION (from flywheel end) Clockwise or Counterclockwise
ENGINE WEIGHT, Net Dry (approximate)—lb (kg)	
Separate Circuit Aftercooled (SCAC) (for keel cooling)	17,240 (7818)
Separate Circuit Aftercooled (SCAC) (for heat exchanger cooling)	17,250 (7823)
Jacket Water Aftercooled (JWAC)	17,150 (7778)
TRANSMISSION WEIGHT, Net Dry (approximate)—tb (kg)	
7251	5,290 (2399)
7261 (weight varies with gear ratio)	6,340-6,635 (2675-3009)
7271	8,000 (3628)

Note: Caterpillar Marine Engine and Transmissions are approved for certification by the following marine classification societies: ABS, By, CBSI, DnV, GL, LR, NK, R.I.Na.

STANDARD EQUIPMENT

Air Intake System:

Air Cleaner Adapters
Air Cleaner Service Indicators
Single-Stage Dry Air Cleaners

Control Systems:

Hydra-Mechanical Governor

Cooling System:

Coolant Expansion Tank
Coolant Pump
Coolant Thermostats
Lube Oil Cooler
Non-Self-Priming Fresh Water Pump (SCAC—KC)
Self-Priming Sea Water Pump (SCAC—H/E)

Exhaust System:

Watercooled Exhaust Manifolds (continuous rating only)
Watercooled Turbocharger Shield

Fuel System:

Fuel Filter
Fuel Priming Pump
Fuel Transfer Pump

Instruments and Gauges:

Instrument Panel with Ten Gauges
SAE Standard Dual Tachometer Drive
Service Meter

Lubricating System:

Emergency Connections
Lube Oil Filter
Lube Oil Pump

Manual Sump Pump

Prelube Pump

Mounting System:

Lifting Eyes
Mounting Rails
Power Takeoffs:
Flywheel Housing, SAE No. OD
Front Accessory Drive

Protection Devices:

Manual Shutoff Control
Shutoffs—Oil Pressure and Coolant Temperature Contactors, Intake Manifold Temperature Contactor (SCAC), Overspeed and Engine Reversal Protection (1200-1300 rpm)

ACCESSORY EQUIPMENT*

Control Systems:

Engine Mounted
Pilot House
Woodward UG8 Governor

Cooling System:

Emergency Coolant Connections
Heat Exchangers

Exhaust System:

Muffler
Fuel System:
Double Wall Fuel Lines
Duplex Fuel Filter
Flexible Fuel Lines

Instruments and Gauges:

Exhaust Pyrometer and Thermocouples
Pilot House Panels
Tachometer

Lubricating System:

Duplex Lube Oil Filters

Marine Transmissions:

Cat 7271, 7261, 7251
Emergency Lube Oil Connections (7261)
Trolling Valve (7271, 7261)

Mounting System:

Sound Isolation Mounting (engine and 7261)

Power Takeoffs:

Auxiliary Drive Pulleys
Front Enclosed Clutch

Protection Devices:

Overspeed Shutoff
Rack Solenoid Shutoffs (24, 30-32V)

Spare Parts:

ABS, By, DnV, GL, LA, NK, R.I.Na
Approved Parts Kits (engine and 7271, 7261)

Starting Systems:

Air Starting
Battery Chargers
Battery Sets
Charging Alternators (24, 30-32V)
Electric Starting (24, 30-32V)
Glow Plugs

*Consult your Caterpillar Dealer for additional accessory equipment.

CATERPILLAR

0399 MARINE PROPULSION ENGINE

RATINGS

	SEPARATE CIRCUIT AFTERCOOLED-85°F			SEPARATE CIRCUIT AFTERCOOLED-110°F			JACKET WATER AFTERCOOLED		
Shaft Power	1225	1091	814	1225	1057 788		1225	970	723
	rpm U.S. sph lkerlh			rpm U.S. gph lter/h			rpm U.S. gen lter/h		
Fuel Rate	1225	60.7	229.9	1225	59.3	224.5	1225	55.1	208.6
	1100	43.7	165.5	1100	42.7	161.7	1100	39.9	151.0
	1000	33.6	127.0	1000	32.2	121.8	1000	30.2	114.4
	900	23.9	90.6	900	23.7	69.9	900	22.2	83.9

	rpm hp kW			rpm hp kW		
MEDIUM-DUTY COMMERCIAL	1225	1240	925	1225	1150	821
Shaft Power	1225	1204	896	1225	1068	796
	rpm U.S. sph [kWh]			rpm U.S. gph liter/h		
Fuel Rate	1225	67.5	255.4	1225	61.9	234.2
	1100	48.4	183.0	1100	44.3	157.5
	1000	36.2	137.2	1000	32.9	124.4
	900	26.2	99.8	900	24.2	91.6

Consult your Caterpillar Dealer or the factory for appropriate rating.

	rpm hp kW			rpm hp kW		
LIGHT-DUTY COMMERCIAL	1300	1350	1029	1300	1270	947
Shaft Power	1300	1340	999	1300	1233	919
	rpm U.S. gph lter/h			rpm U.S. gph lter/h		
Fuel Rate	1300	78.4	296.8	1300	72.2	273.0
	1200	58.3	220.8	1200	54.9	207.9
	1100	44.7	169.1	1100	42.1	159.4
	1000	33.6	127.3	1000	31.8	120.3

Consult your Caterpillar Dealer or the factory for appropriate rating.

*85°F (30°C) water to aftercooler
 **110°F (44°C) water to aftercooler.

RATING DEFINITIONS

Continuous: For heavy-duty service where the engine is operated at rated load and speed without interruption or load cycling.

Medium-Duty Commercial For service where engine load and speed are constant with some cycling. Full power operation is limited to four hour periods followed by one hour at continuous power levels and below. Synonymous with "maximum continuous" ratings used by marine classification societies.

Light-Duty Commercial: For service where engine load and speed are cyclical. Full power operation is limited to one hour periods followed by one hour at continuous power levels and below.

RATING CONDITIONS

Ratings are based on SAE J816 standard conditions of 29.38 in Hg (99.2 kPa) and 85°F (30°C). These ratings also apply at DIN 6270 standard conditions of 97.8 kPa (28.97 in Hg) and 20°C (68°F).

Shaft power represents power requirements of a typical fixed pitch propeller and 97 percent of gross engine horsepower.

Fuel rates are based on power requirements of a typical fixed pitch propeller and fuel oil having an HHV of 19,590 Btu/lb (45,570 kJ/l) and weighing 7.076 lb/U.S. gal (848 g/liter).



	L	H	W
D399 w/7251, 7281	194.4 (4937)	89.8 (2292)	63.1 (1602)
0399 w/7271	209.9 (5332)	89.7 (2278)	63.1 (1602)

Materials and specifications are subject to change without notice

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