

3516C



MARINE PROPULSION ENGINE

3046 mhp	(3004 bhp)	2240 kW
3196 mhp	(3151 bhp)	2350 kW



Image shown may not reflect actual engine

SPECIFICATIONS

V-16, 4-Stroke-Cycle-Diesel

- EPA Marine Tier 4 certified (SCR required)
- IMO Tier II emissions certified (SCR required)
- IMO Tier III emissions compliant (SCR required)
- 78.08 L (4765 in³) displacement
- 1800 rpm
- 170 mm (6.69 in) bore x 215 mm (8.46 in) stroke
- Turbocharged-aftercooled aspiration
- Electronically governed A4 ECU
- Heat exchanger or keel cooled
- Refill capacity
Lube oil system: 779.8 L (206 gal)
- 1000-hour oil change interval
- Counterclockwise rotation
- SAE No. 00 flywheel housing with SAE No. 00 flywheel (183 teeth)
- Engine diagnostic system data link messaging

All new 3500C marine EPA Tier 4 capable engines, including both propulsion and auxiliary units, will be required to use a maximum concentration of 20% glycol mixture in the aftercooler circuit. This restriction applies equally to both heat exchanger cooled and keel cooled configurations (box coolers). In the event that specific project needs require higher levels of freeze protection, (lower freeze temperature), please contact ASC to review the specific engine rating and glycol concentration desired.

The jacket water circuit will continue to be capable of operation up to 50% glycol.

COMPLETE SOLUTIONS FOR YOUR MARINE APPLICATION

- Single-source for support and service
- Industry-leading warranty coverage for factory packaged components
- Global dealer network for service in any location

EFFICIENT OPERATION

- Instrument panel with cold mode start strategy and programmable low idle
- Electronic governing control unit minimizes fuel consumption and monitors engine operating parameters
- Optional alarm and protection system

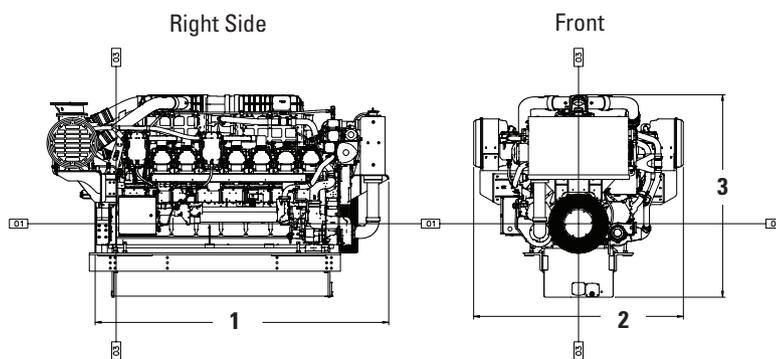
IMPROVED PERFORMANCE AND FUNCTION

- Advanced combustion design uses the optimum configurations and cylinder geometry
- Enhanced control of fuel injection optimized through crank timing

ENVIRONMENTALLY CONSCIOUS

- Closed crankcase ventilation system and redesigned piston for improved efficiency and lower emissions
- Optimal nozzle geometry and electronic injection control for improved fuel delivery
- EPA Marine Tier 4/IMO Tier II Emissions Certified

DIMENSIONS



ENGINE DIMENSIONS & WEIGHT

(1) Length to Flywheel Housing	3192 mm	125.6 in
(2) Width	2284 mm	89.9 in
(3) Height	2251 mm	88.6 in
Weight, Net Dry (approx)	9600 kg	21,164 lb

Note: Do not use these dimensions for installation design. See general dimension drawings for detail (Drawing #421-1026).

MARINE ENGINE PERFORMANCE

Max Power

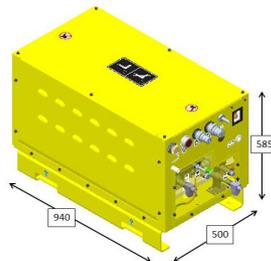
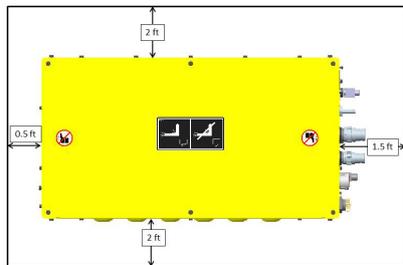
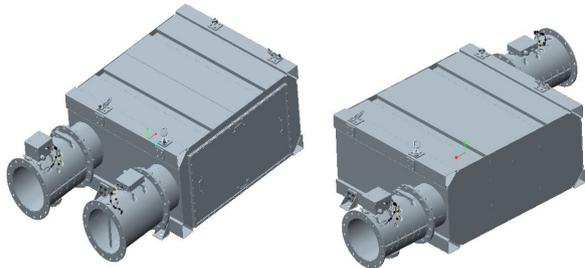
B Rating EM0550 Fuel Consumption DEF Consumption*							C Rating EM0551 Fuel Consumption				DEF Consumption*	
rpm	bhp	g/hr	bkW	g/bkW-hr	g/hr	g/bkW-hr	bhp	g/hr	bkW	g/bkW-hr	g/hr	g/bkW-hr
1800	3004	148.3	2240	210.3	5.0	9.2	3151.4	156.0	2350	210.9	5.2	9.1
1500	2698	128.1	2012	202.1	4.4	8.9	1823.8	85.8	1360	200.4	4.5	13.5
1300	1690	79.7	1260	201.0	4.0	13.1	1186.8	57.6	885	206.5	3.0	13.9
1100	1008	49.7	752	209.8	2.5	13.8	718.8	35.6	536	210.9	2.0	15.6
900	675	33.8	503	213.1	1.6	13.3	394.3	20.1	294	217.2	0.9	13.3
700	512	26.7	382	222.1	1.0	11.0	185.21	10.1	138	233.2	0.5	13.5

*Assumes 40% DEF fluid concentration

Prop Demand

B Rating EM0550 Fuel Consumption DEF Consumption*							C Rating EM0551 Fuel Consumption				DEF Consumption*	
rpm	bhp	g/hr	bkW	g/bkW-hr	g/hr	g/bkW-hr	bhp	g/hr	bkW	g/bkW-hr	g/hr	g/bkW-hr
1800	3004	148.3	2240	210.3	5.0	9.2	3151.4	156.0	2350	210.9	5.2	9.1
1500	1738	82.1	1296	201.0	4.3	13.8	2830.9	135.8	2111	204.2	4.3	8.3
1300	1132	55.2	844	207.6	2.8	13.9	1842.6	86.8	1374	200.7	4.2	12.5
1100	685	34.0	511	211.4	2.0	15.7	1040.6	51.2	776	209.8	2.5	13.5
900	375	19.3	280	218.5	0.9	13.2	700.0	35.2	522	214.0	1.7	13.1
700	177	9.8	132	289.0	0.4	13.0	512.3	26.7	382	222.1	1.0	10.9

CEM can be installed in a "U" configuration or a "Z" configuration.



Clean Emissions Module (CEM)

This engine requires Selective Catalyst Reduction (SCR) technology to comply with EPA Tier 4 emissions levels. The major components are shown below with dimensions, weights, and some of the installation requirements. Please refer to A&I guide LEBM0023-00.

CEM DIMENSIONS & WEIGHTS

Length	2776 mm	109.3in
Width	1660 mm	65.4 in
Height	925 mm	36.4 in
Weight	1390 kg	3064 lb

Dosing Cabinet

Length	940 mm	37.0 in
Width	500 mm	19.7 in

Height	585mm	23.0 in
Access	610 mm	24.0 in sides
	457 mm	8.0 in front
	52 mm	6.0 in rear

RATING DEFINITIONS AND CONDITIONS

B Rating (Heavy Duty)

Typical applications: For vessels operating at rated load and rated speed up to 80% of the time, or 10 hours out of 12, with some load cycling (40% to 80% load factor). Typical applications could include but are not limited to vessels such as mid-water trawlers, purse seiner, crew and supply boats, ferries, or towboats. Typical operation ranges from 3000 to 5000 hours per year.

CAT, CATERPILLAR, their respective logos, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

C Rating (Maximum Continuous)

Typical applications: For vessels operating at rated load and rated speed up to 50% of the time, or 6 hours out of 12, with cyclical load and speed (20% to 80% load factor). Typical applications could include but are not limited to vessels such as ferries, harbor tugs, fishing boats, offshore service boats, displacement hull yachts, or short trip coastal freighters. Typical operation