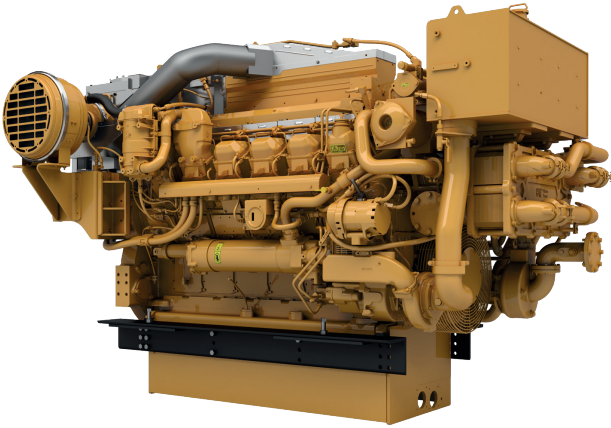


# 3512E

## MARINE PROPULSION ENGINE

1771 bkW (2375 bhp) @ 1800 rpm



3512E Marine Propulsion Engine  
U.S. EPA Tier 4 Final / IMO III

### ENGINE SPECIFICATIONS

**Configuration:**

Vee 12, 4-stroke-cycle diesel

**Emissions**

U.S. EPA Tier 4 Final certified  
IMO III emissions certified  
(SCR required)  
IMO II-III switchable

**Rated Engine Speed**

1800 rpm

**Bore x Stroke**

170 mm x 215 mm  
6.69 in x 8.46 in

**Displacement**

58.6 Liter /3574 cu in

**Aspiration**

Turbocharged-aftercooled  
aspiration

**Governor**

Electronic (A5 ECM)

**Refill Capacity**

Lube Oil System w/ oil filter change: 613  
L (162 gal)/1000 hrs pan

**Oil Change Interval**

1000 hrs

**Cooling**

Heat exchanger or keel cooled

**Flywheel Housing**

SAE No. 00 with SAE No. 00 flywheel  
(183 teeth)

**Rotation**

Counterclockwise from flywheel end

### FEATURES AND BENEFITS

- Utilizes SCR Technology to enable U.S. EPA Tier 4 Final emission regulations compliance while lowering operational costs
- Utilizes closed loop air assisted DEF dosing control strategy that delivers:
  - Highest efficiency mixing and control to lower operational costs
  - Extends emissions useful life
  - Ensures compliance
  - Flexible to urea quality
- Advanced engine combustion design process utilizing optimum configurations and cylinder geometry for maximum engine efficiency
- Enhanced control of fuel injection optimized through crank timing and the latest A5 ECM technology
- Optimal fuel injector nozzle geometry and electronic injection control for improved fuel delivery
- Strengthened cylinder heads and valves for increased durability and peak cylinder pressure capability resulting in higher engine duty cycle capability
- Industry-leading warranty coverage for factory packaged components
- Global dealer network for service in any location

### STANDARD ENGINE EQUIPMENT

- Corrosion-resistant aftercooler core
- Dual A5 engine control modules with electronic unit injection and low pressure fuel system
- Dual turbochargers with water-cooled bearings and heat shields
- Vibration damper and guard
- Meets SOLAS regulations
- Duplex Fuel and Oil Filtration
- Auxiliary fresh water pump
- Gear Driven, centrifugal jacket water pump with 40% more capacity

### OPTIONAL ATTACHMENTS

- Plate-type heat exchanger with integrated SCAC and JW Water expansion tanks
- Special appearance packages with chrome covers
- Marine society certifications
- Power take-off
- Certified marine alarm and protection safety system
- Standard instrument panel with color touchscreen display
- Mounting rails and trunnion mount options
- Engine mounted fuel cooler (SCAC Water Cooled)
- Sea water pump with 25% more capacity for cooling auxiliary vessel equipment
- Closed crank case ventilation

### B RATING (HEAVY DUTY) DEFINITION

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.

# TECHNICAL DATA

## 3512E Marine Propulsion Engine

### PROP DEMAND FUEL & DEF CONSUMPTION (B RATING)

rpm	Brake Specific Fuel Consumption				DEF Consumption 32.5 % Concentration		DEF Consumption 40 % Concentration	
	bhp	lb/bhp-hr	bkW	g/bkW-hr	Gal/hr	Liters/hr	Gal/hr	Liters/hr
1800	2375	0.331	1771	197.3	6.4	24.2	4.8	18.3
1600	1668	0.322	1244	192.2	4.7	17.9	3.6	13.5
1400	1117	0.330	833	197.0	2.7	10.1	2.0	7.6
1200	704	0.347	525	207.0	1.3	4.8	1.0	3.6
1000	408	0.356	304	212.4	0.6	2.1	0.4	1.6
800	208	0.367	155	219.1	0.0	0.0	0.0	0.0

For Cat® dealers:  
Please reference TMI  
Web for most current  
information.

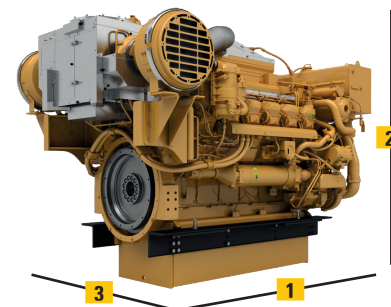
- ISO 3046/1 fluid consumption tolerance of -0/+5%
- Reference 32.5% DEF density of 1.0895 kg/L
- Reference 40% DEF density of 1.1120 kg/L

Consult your local Cat® dealer to create a customized engine  
TCO (Total Cost of Ownership) analysis specific to your vessel as  
well as for IMO II optimized performance data.

### DIMENSIONS & WEIGHT

	Length (1)	Height (2)	Width (3)	Engine dry weight
min.	104.2 in/2646 mm	91.9 in/2335 mm	71.2 in/1808 mm	18,025 lb/8,176 kg
max.			81.9 in/2081 mm	

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

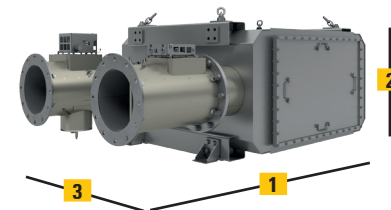


### CLEAN EMISSIONS MODULE (CEM)

Dimensions & Weight				
Model	Length (1)	Height (2)	Width (3)	Weight
12 Brick Z-Flow	3453.6 mm 135.97 in	1012.4 mm 39.86 in	1627.2 mm 64.06 in	1253.6 kg 2763.7 lb
12 Brick U-Flow	2712.0 mm 106.77 in	1012.4 mm 39.86 in	1627.2 mm 64.06 in	1261.5 kg 2783.3 lb
Dosing Cabinet	948.6 mm 37.35 in	534.5 mm 21.05 in	477.3 mm 18.79 in	---

#### Clean Emissions Module (CEM)

Available in U-flow configurations (shown)  
and Z-flow configurations.



The 3512E engine requires Selective Catalyst Reduction (SCR) technology.  
The easy-to-install Cat® SCR System is an exhaust gas aftertreatment solution  
compliant with U.S. EPA Tier 4 Final / IMO III emission standards.

- Proven technology to meet U.S. EPA Tier 4 Final / IMO III emission standards
- IMO II-III switchable calibrations available.
- Maintains engine efficiency, durability and reliability
- Easy to install with minimum impact to vessel design
- Compact package from one single source
- Available for new builds and retrofits
- For detailed dimensions and installation requirements, please refer to latest revision of A&I guide LEBM0023.

#### Dosing Cabinet



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. U.S. Sourced

LEHM0262-02

To find your nearest dealer, please visit: [www.cat.com/marine](http://www.cat.com/marine)

©2018 Caterpillar  
All rights reserved.

Materials and specifications are subject to change without notice.  
The International System of Units (SI) is used in this publication.