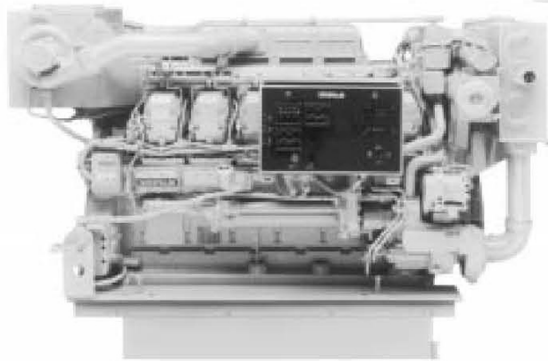


# CATERPILLAR®

## Marine Engine **3512** 955-1305 bkW/1280-1750 bhp with EUi option 1600-1800 rpm



### CATERPILLAR® ENGINE SPECIFICATIONS

V-12, 4-Stroke-Cycle Diesel

Bore — mm (in) .....	170 (6.7)
Stroke — mm (in) .....	190 (7.5)
Displacement — L (cu in) .....	51.8 (3158)
Rotation (from flywheel end) .....	ccw or cw
Compression Ratio .....	13.5:1
Capacity for Liquids — L (U.S. gal)	
Cooling System .....	291 (77)
Lube Oil System (refill) .....	613 (162)
Oil Change Interval — hrs. ....	1000
Minimum Lube Oil Grade (required) .....	CF-4
Engine Weight, Net Dry	
(approx) — kg (lb) .....	6667 (14 698)

### STANDARD EQUIPMENT

**Air Inlet System**  
Aftercooler core, corrosion resistant coating  
Air cleaners, regular duty, installed  
Dual turbochargers, water-cooled bearing housings, 152 mm (6 in) OD straight connection

**Control System**  
Dual Advanced Diesel Engine Management II modules with electronically controlled unit injectors

**Cooling System**  
Auxiliary fresh water pump  
Auxiliary sea water pump, non-self-priming (heat exchanger engines only)  
Expansion tank, installed  
Jacket water pump, gear driven, centrifugal  
Oil cooler  
Thermostats and housing, full open temperature 92° C (198° F), LH outlet

**Exhaust System**  
Dry gas-tight manifolds with thermo-laminated heat shields  
Dual turbochargers with thermo-laminated heat shields  
Exhaust outlet, vertical, 203 mm (8 in) ID round flanged outlet

**Flywheels and Flywheel Housings**  
Flywheel, SAE No. 00, 183 teeth  
Flywheel housing, SAE No. 00

**Fuel System**  
Electronically controlled unit injectors  
Fuel filter, RH  
Fuel transfer pump

**Instrumentation**  
Electronic instrument panel, RH with analog gauges for: oil and fuel pressure, oil and fuel filter differential, system DC voltage, exhaust and water temperature, fuel pressure, air inlet restriction  
digital display for: tachometer, hours, fuel consumption— total and instantaneous

**Lube System**  
Crankcase breather, top mounted  
Deep sump oil pan  
Oil filler and dipstick  
Oil filter, cartridge type, RH  
Oil pump, gear type

**Mounting System**  
Rails, engine length, ledge type, 203 x 203 mm (8 x 8 in)

**Power Take-Offs**  
Accessory drive, front housing  
standard rotation: lower RH, lower LH; opposite rotation: upper and lower RH and upper and lower LH  
Front housing, two-sided

**Protection System**  
ADEM II Electronic Monitoring System with customer programmable alarm, shutdown, and deration strategies  
Emergency stop pushbutton

**General**  
Lifting eyes, front and rear  
Paint, Caterpillar yellow  
Vibration damper and guard

### ACCESSORY EQUIPMENT

Air compressor  
Air inlet adapters  
Air inlet shut-offs  
Air pressure regulator  
Air separator  
Air starting motor  
Alarm contactors  
Auxiliary drive shafts and pulleys  
Batteries and battery chargers  
Charging alternator, 24 volt 60 amp  
Coolant level sensors and gauge  
Crankcase explosion relief valves  
Customer communication module  
Dual 24 volt electric starter motors  
Duplex fuel and oil filters  
Emergency water and oil connections  
Exhaust expander and flange, 203 to 305 mm (12 to 16 in)  
Flexible exhaust fitting, 292 mm dia x 305 mm long (11 in dia x 12 in long)  
Flexible fuel lines  
Front enclosed clutch  
Front hydraulic pump mounting  
Front stub shaft  
Fuel priming pump  
Horizontal exhaust outlet  
Jacket water heaters  
Keel cooling connections  
Mufflers  
Pilot house instrument panel  
Primary fuel filter  
Programmable relay control module  
Pyrometer and cylinder thermocouples  
Shell and tube-type heat exchanger  
Sump pump  
24 volt electric prelube pump

Power produced at the flywheel will be within standard tolerances up to 50° C (122° F) combustion air temperature measured at the air cleaner inlet, and fuel temperature up to 52° C (125° F) measured at the fuel filter base. Power rated in accordance with NMMA procedure as crankshaft power. Reduce crankshaft power by 3% for propeller shaft power.



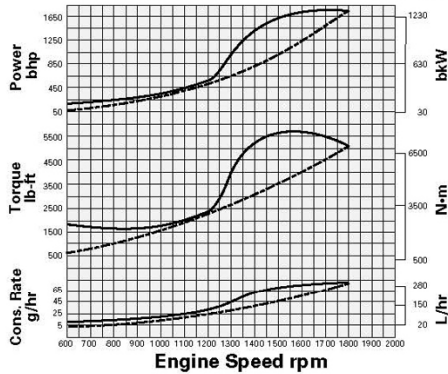
Fig. 8-3-1 Catálogo oficial del motor CATERPILLAR 3512 EUi



## 3512 MARINE ENGINE WITH EUI OPTION

### PERFORMANCE CURVES

**D Rating – 1800 rpm**  
1305 bkW (1750 bhp) 1775 mhp



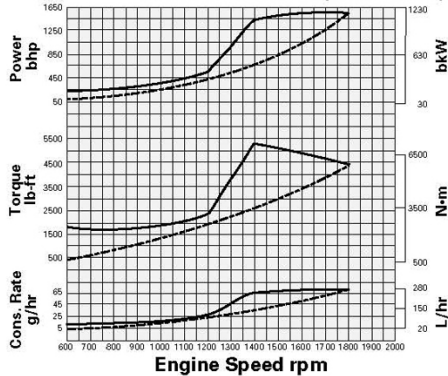
Prop Demand Curve Data					Max Power Curve Data			
Speed rpm	Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr	Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1800	1305	6923	203	315.9	1305	6923	203	315.9
1600	917	5470	203	222.2	1305	7789	193	299.5
1400	614	4188	214	156.9	1070	7298	197	251.7
1200	387	3077	225	103.5	407	3239	222	107.9
1000	224	2137	230	61.4	254	2426	230	69.6
800	115	1368	245	33.4	192	2292	234	53.6
600	48	769	300	17.3	155	2467	246	45.5

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1800	1750	5106	.334	83.5	1750	5106	.334	83.5
1600	1229	4034	.334	58.7	1750	5745	.316	79.1
1400	823	3089	.352	41.4	1435	5383	.325	66.5
1200	519	2269	.369	27.3	546	2389	.366	28.5
1000	300	1576	.378	16.2	341	1789	.378	18.4
800	154	1009	.402	8.8	257	1690	.385	14.2
600	65	567	.493	4.6	208	1820	.405	12.0

D RATING – Planing hull vessels such as offshore patrol boats, customs, police, and some fire and fishing boats. Also used for bow and stern thrusters.

**C Rating – 1800 rpm**  
1119 bkW (1500 bhp) 1521 mhp



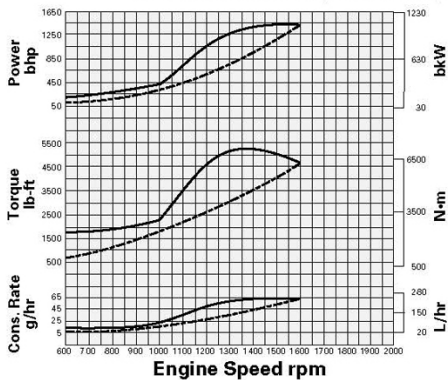
Prop Demand Curve Data					Max Power Curve Data			
Speed rpm	Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr	Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1800	1119	5934	203	270.1	1119	5934	203	270.1
1600	786	4688	207	193.4	1119	6676	201	267.5
1400	526	3590	216	135.6	1046	7135	205	254.9
1200	331	2637	224	88.8	407	3239	223	108.1
1000	192	1831	232	53.0	254	2426	230	69.6
800	98	1172	259	30.3	192	2292	234	53.6
600	41	659	319	15.8	155	2467	246	45.5

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1800	1500	4377	.333	71.4	1500	4377	.333	71.4
1600	1054	3458	.339	51.1	1500	4924	.330	70.7
1400	706	2648	.355	35.8	1403	5262	.336	67.3
1200	444	1945	.369	23.4	546	2389	.366	28.6
1000	257	1350	.381	14.0	341	1789	.378	18.4
800	132	864	.426	8.0	257	1690	.385	14.2
600	56	486	.525	4.2	208	1820	.405	12.0

C RATING – Vessels such as ferries, harbor tugs, fishing boats moving at higher speeds out and back (e.g. lobster, crayfish, and tuna), offshore service boats, and also displacement hull yachts and short trip coastal freighters where engine load and speed are cyclical.

**C Rating – 1600 rpm**  
1052 bkW (1410 bhp) 1430 mhp



Prop Demand Curve Data					Max Power Curve Data			
Speed rpm	Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr	Power bkW	Torque N-m	Fuel Cons g/bkW-hr	Fuel Rate L/hr
1600	1052	6276	194	243.1	1052	6276	194	243.1
1400	704	4805	204	171.4	800	6366	210	199.8
1200	444	3530	216	114.2	325	3104	224	86.9
1000	257	2451	219	67.0	220	2626	228	59.7
800	131	1569	222	34.8	154	2451	231	42.5
600	56	883	265	17.5				

Speed rpm	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr	Power bhp	Torque lb-ft	Fuel Cons lb/bhp-hr	Fuel Rate g/hr
1600	1410	4629	.319	64.2	1410	4629	.319	64.2
1400	945	3544	.336	45.3	1410	5290	.326	65.6
1200	595	2604	.355	30.1	1073	4695	.344	52.8
1000	344	1808	.360	17.7	436	2289	.369	23.0
800	176	1157	.365	9.2	295	1937	.374	15.8
600	74	651	.436	4.6	207	1808	.380	11.2

C RATING – Vessels such as ferries, harbor tugs, fishing boats moving at higher speeds out and back (e.g. lobster, crayfish, and tuna), offshore service boats, and also displacement hull yachts and short trip coastal freighters where engine load and speed are cyclical.

- Prop Demand ----- 3.0 Exponent
- Engine Performance Parameters: Power +/- 3%; Specific Fuel Consumption +/- 3%; Fuel Rate +/- 5%.

Fig. 8-3-2 Catálogo oficial del motor CATERPILLAR 3512 EUI