



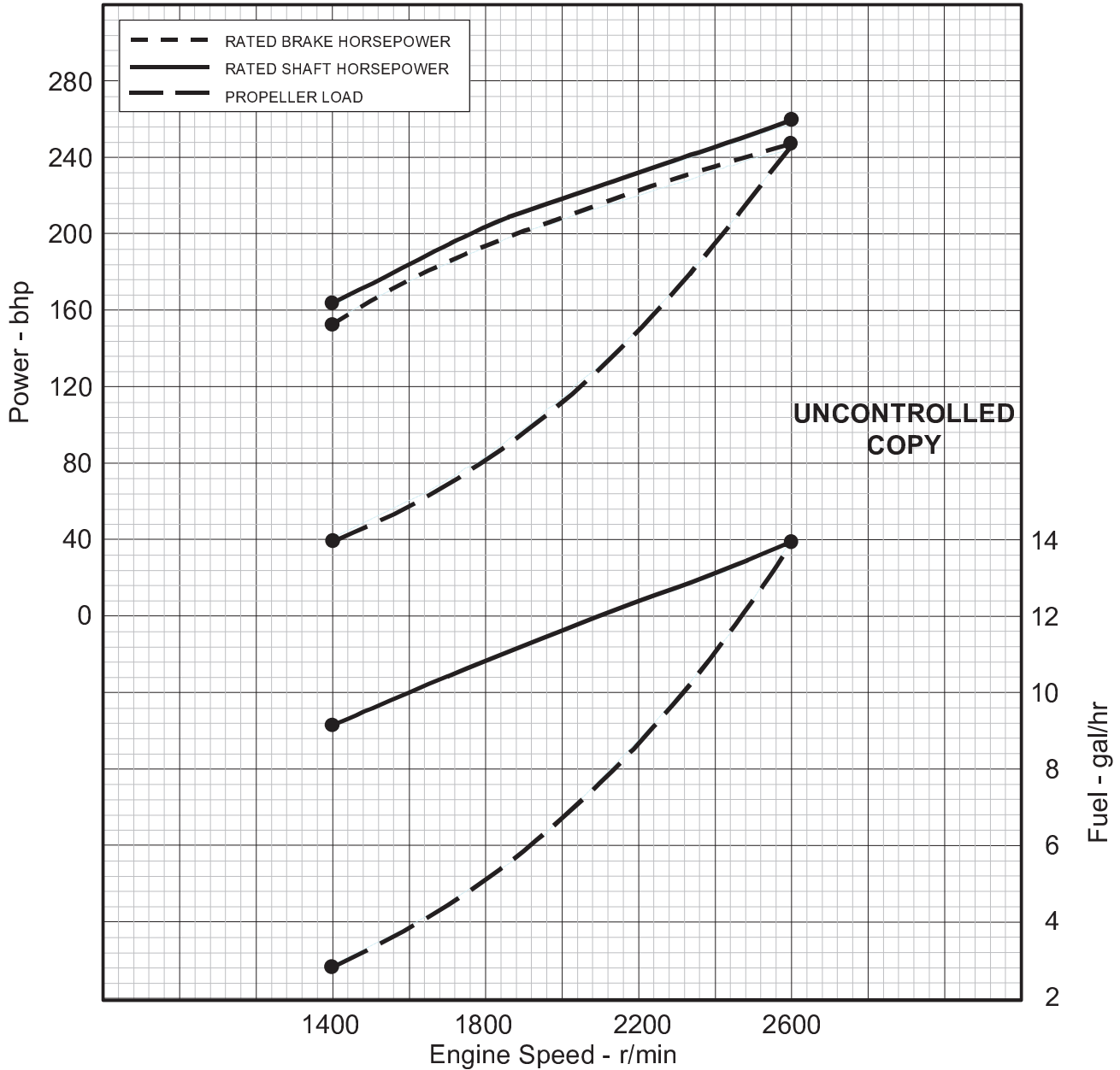
## Marine Power

**Model:** 6V-53T

**Rating:** 260 bhp (194 kW) @ 2600 r/min

247 shp (184 kW) @ 2600 r/min

Intermittent  
Net Power



Power output guaranteed within 5% SAE J1228 conditions: 77°F (25°C) air inlet temperature; 29.31 in. Hg (99kPa) dry barometer; 100°F (38°C) fuel inlet temperature; .853 specific gravity at 60°F. Power rated in accordance with NMMA Procedure Air intake restriction: 10 in. H <sub>2</sub> O (2.5 kPa) Exhaust Back Pressure: 15 in. H <sub>2</sub> O (3.7 kPa)	<b>Conversion Factors:</b> Power: kW = hp x 0.746 Fuel: L/hr = gal/hr x 3.785	<b>Turbo:</b> T04E02 (0.68 A/R) <b>Injector:</b> 5C55 <b>Accessories:</b> DD-506-1 Gear <b>Alternator:</b> 12V, 90A <b>Raw Water Pump:</b> Included
--	---	---

Certified by: *TJ MOORE*

**Curve No.** E4-5062-32-3  
**Rev. / Date:** 3 / 11-14-98  
**Sheet No.** 1 of 2

### Performance Curve

# MARINE SPECIFICATION SHEET

## General Data

Model.....	5062-7301
Number of Cylinders.....	6
Bore and Stroke – in. x in. (mm x mm).....	3.875 x 4.5 (98 x 114)
Displacement – in. <sup>3</sup> (L).....	318 (5.22)
Compression Ratio.....	18.0:1
Piston Speed – ft/min (m/min).....	1950 (594)
Exhaust Valves.....	4
Combustion System.....	Direct Injection
Engine Type.....	66.7° VEE 2 Cycle
Aspiration.....	Turbocharged

## Configuration

Injection Device.....	MUI
Turbocharger.....	T04E02 (0.68 A/R)
Charge Air Cooling System.....	None
Blower Type.....	Bypass
Blower Drive Ratio.....	2.49:1
Low Idle Speed – r/min.....	550
Maximum No Load Speed – r/min.....	2850
Engine Crankcase Vent System.....	Closed

## Physical Data

Size:	WITH GEAR	WITHOUT GEAR
Length – in. (mm).....	53.46 (1358)	48.0 (1219)
Width – in. (mm).....	35.62 (905)	35.62 (905)
Height – in. (mm).....	40.6 (1098)	40.6 (1098)
Weight, dry – lb (kg).....	2200 (998)	1980 (898)
Weight, wet – lb (kg).....	2382 (1081)	2032 (922)
Center of Gravity Distance:		
From R.F.O.B. (x axis) – in. (mm).....	22.9 (581)	6.92 (176)
Above Crankshaft (y axis) – in. (mm).....	6.4 (162)	7.26 (184)
Right of Crankshaft (z axis) – in. (mm).....	0.9 (23)	1.25 (31.8)
Installation Drawing.....	5108072	

## Mechanical Data

E4-5000-32-1

## Marine Gear

Type.....	DD506-1
Reduction Ratio.....	1.50:1
Lube Oil Capacity – qt (L).....	4.8 (4.5)
(marine gear must use straight viscosity oil)	
Gear Weight, Dry – lb (kg).....	220 (99.8)
Center of Gravity Distance:	
From Mounting Face (x axis) in. (mm).....	6.68 (170)
Above Output Shaft (y axis) in. (mm).....	1.50 (38.1)
Right of Output Shaft (z axis) in. (mm).....	-1.08 (-27.4)

## Fuel System

Fuel Injector.....	5C55
Injector Timing.....	1.475
Fuel Consumption – lb/hr (kg/hr).....	97.5 (44.2)
Fuel Spill Rate gal/hr (L/hr).....	56.9 (215.5)
Total Fuel Flow gal/hr (L/hr).....	70.9 (268)
Maximum Fuel Inlet Temperature – °F (°C).....	140 (60)
Maximum Fuel Pump Suction:	
Clean System – in. Hg (kPa).....	6 (20.3)
Dirty System – in. Hg (kPa).....	12 (41)
Fuel Filter Size, Primary – microns.....	30
Fuel Filter Size, Secondary – microns.....	12
Recommended Supply Line I.D. – in.(mm).....	0.5 (12.7)

## Lubrication System

Oil Pressure at Rated Speed – lb/in. <sup>2</sup> (kPa).....	40-60 (275-414)
Oil Pressure at Low Idle – lb/in. <sup>2</sup> (kPa).....	5.0 (34)
In Pan Oil Temperature – °F (°C).....	200 – 250 (93 – 121)
Oil Flow – gal/min (L/min).....	34 (129)
Oil Pan Capacity at Installation Angle	0° 17°
High Limit – qt (L).....	14 (13.2) 10.0 (9.5)
Low Limit – qt (L).....	10 (9.5) 6.0 (5.7)
Total Engine Oil Capacity with Filters – qt (L).....	16 (15.1) 12.0 (11.4)
Maximum Installation Angle – Degrees.....	17.0

## Electrical System

Recommended Battery Capacity (CCA @ 0°F):	
12 Volt System, Above 32°.....	900
12 Volt System, Below 32°.....	1250
24 Volt System, Above 32°.....	475
24 Volt System, Below 32°.....	625
Maximum Resistance of Starting Circuit:	
12 Volt System – ohms.....	0.0012
24 Volt System – ohms.....	0.002

## Cooling System

Engine Heat Rejection – Btu/min (kW).....	9540 (168.0)
Engine Radiated Heat – Btu/min (kW).....	1195 (21.0)
Coolant Flow:	
Fresh Water Flow – gal/min (L/min).....	84 (320)
Raw Water Flow – gal/min (L/min).....	77 (291)
Maximum Water Pump:	
Inlet Restriction – in. Hg (kPa).....	3.0 (10.2)
Fresh Water Capacity – qt (L).....	30 (28.4)
Maximum Coolant Pressure	
(Exclusive of Pressure Cap) – lb/in. <sup>2</sup> (kPa).....	18 (124)
Maximum Raw Water Pump Pressure – lb/in. <sup>2</sup> (kPa).....	10 (6.9)
Maximum Top Tank Temperature – °F (°C).....	210 (99)
Recommended Raw Water Pipe I.D.:	
Inlet – in. (mm).....	2.5 (63.5)
Outlet – in. (mm).....	2.0 (50.8)
Recommended Sea Strainer Size:	
(Max. Screen Opening – 2.0 mm)	
Simplex – in. (mm).....	2.5 (63.5)
Duplex – in. (mm).....	3.0 (76.2)

## Air System

Maximum Temperature Rise	
(Outside Air to Engine Inlet) – °F (°C).....	30 (16.7)
Maximum Air Intake Restriction:	
Clean Air Cleaner – in. H <sub>2</sub> O (kPa).....	12 (3.0)
Dirty Air Cleaner – in. H <sub>2</sub> O (kPa).....	20 (5.0)
Engine Air Flow – ft <sup>3</sup> /min (m <sup>3</sup> /min).....	840 (23.8)
Air Box Pressure – in. Hg (kPa).....	38.3 (129.3)
Recommended Intake Pipe Dia. – in. (mm).....	4.0 (102)
Minimum Net Engine Room Vent Area, – in. <sup>2</sup> (cm <sup>2</sup> ).....	80.6 (520)
Maximum Crankcase Pressure – in. H <sub>2</sub> O (kPa).....	4.0 (1.00)

## Exhaust System

Exhaust Flow – ft <sup>3</sup> /min (m <sup>3</sup> /min).....	2080 (58.9)
Exhaust Temperature – °F (°C).....	870 (466)
Maximum Back Pressure – in. Hg (kPa).....	2.5 (8.4)
Recommended Exhaust Pipe Diameter:	
Single – in. (mm).....	5.0 (127) 6 (152)
Dual – in. (mm).....	Not Applicable

## Performance Data

BMEP – lb/in. <sup>2</sup> (kPa).....	124.4 (858)
Friction Power – fhp (kW).....	60.5 (45.1)

Engine Speed	Brake Power	Shaft Power	Rated Fuel Usage	Rated BSFC
r/min	bhp (kW)	shp (kW)	gal/hr (L/hr)	lb/bhp-hr (g/kW-hr)
2600	260 (194)	247 (184)	14.0 (52.8)	0.375 (228)
2400	247 (184)	235 (175)	13.1 (49.6)	0.371 (226)
2200	234 (175)	222 (166)	12.4 (46.9)	0.370 (225)
1900	212 (158)	201 (150)	11.2 (42.5)	0.370 (225)
1600	185 (138)	176 (131)	10.0 (37.9)	0.378 (230)
1400	163 (122)	154 (115)	9.1 (34.5)	0.390 (237)

Engine Speed	Prop Load	Prop Fuel Usage	Prop BSFC
r/min	shp (kW)	gal/hr (L/hr)	lb/bhp-hr (g/kW-hr)
2600	247 (194)	14.0 (52.8)	0.375 (228)
2400	194 (145)	11.0 (41.6)	0.373 (227)
2200	150 (112)	8.7 (32.8)	0.377 (229)
1900	96 (72)	5.7 (21.7)	0.385 (234)
1600	58 (43)	3.8 (14.3)	0.412 (250)
1400	39 (29)	2.8 (10.5)	0.436 (265)

## Emissions Data

Smoke, Rated Speed – Bosch Number.....	1.8
Noise – dB(A) @ 1.....	102
Additional Noise Data.....	Not Available
NO <sub>x</sub> – g/hr.....	2240
CO – g/hr.....	700
HC – gh/r.....	210
SO <sub>2</sub> – g/hr.....	440

**UNCONTROLLED  
COPY**

Curve No. E4-5062-32-3  
Rev. / Date: 3 / 11-14-98  
Sheet No. 2 of 2

All values are at rated speed and power at SAE J1228 with standard engine hardware, unless otherwise noted.

All information subject to change without notice.  
Detroit Diesel and Spinning Arrows Design © are registered trademarks of Detroit Diesel Corporation.  
© 1998 DETROIT DIESEL CORPORATION