



Marine Power

Model: 12V-92TA

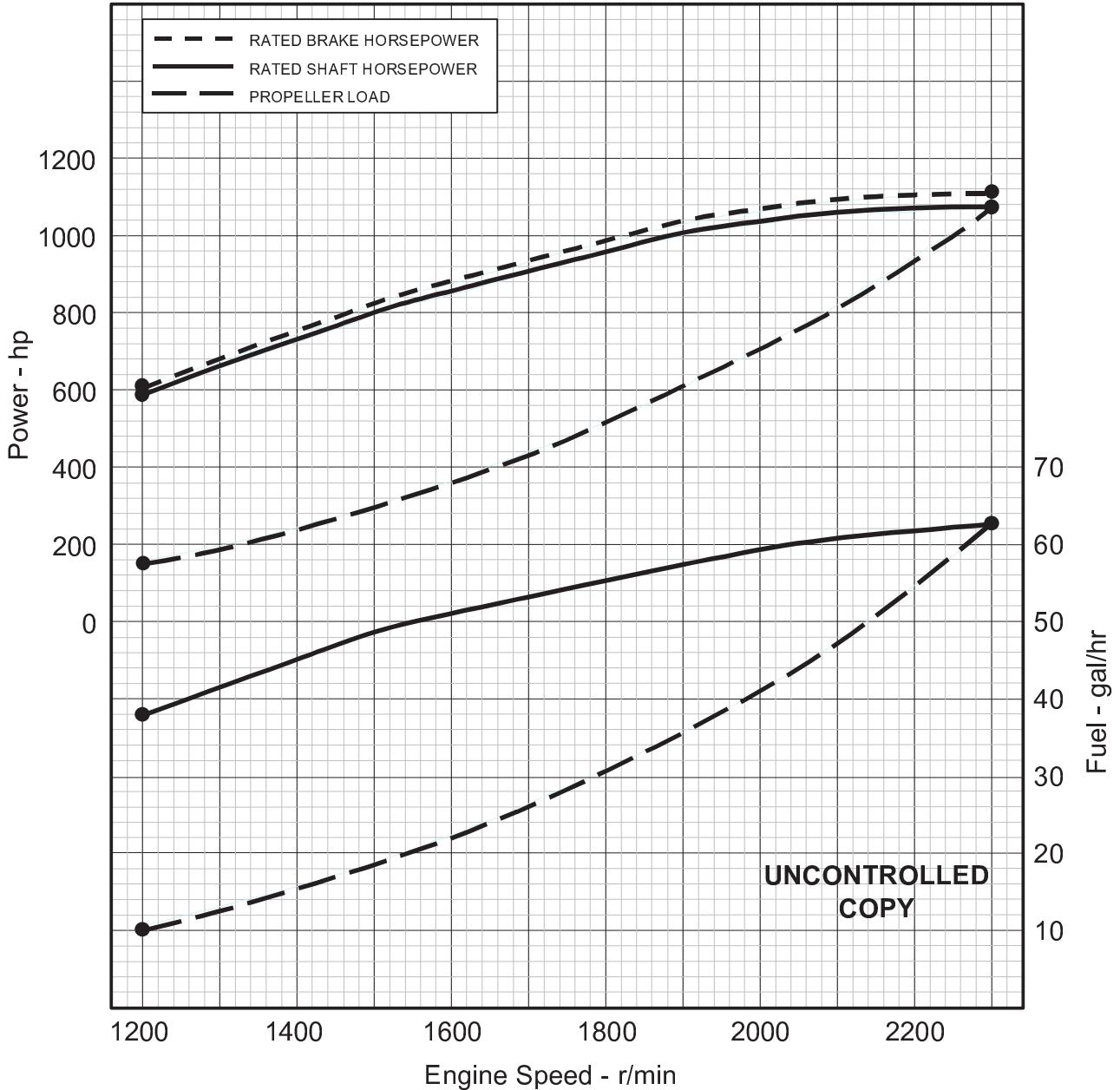
Rating: 1110 bhp (828 kW) @ 2300 r/min

1075 shp (802 kW) @ 2300 r/min

Marine

Maximum

Net Power



<p>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. H₂O (2.5 kPa) Exhaust Back Pressure: 15 in. H₂O (3.7 kPa)</p>	<p><i>Conversion Factors:</i> Power: kW = bhp x 0.746 Fuel: kg/kW · hr = lb/bhp · hr x 0.608 Torque: N · m = lb · ft x 1.356</p>	<p>Turbo: TW8403 (1.19 A/R) Injector: 5236035 Accessories: DD232EV Gear Alternator: 24V, 65A Raw Water Pump: Included</p>
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Certified by: JR Lehninger

Curve No. E4-8122-32-7
 Rev. / Date: 5 / 12-23-97
 Sheet No. 1 of 2

Performance Curve

MARINE SPECIFICATION SHEET

General Data

Model.....	8122-7K00
Number of Cylinders.....	12
Bore and Stroke – in. x in. (mm x mm).....	4.84 x 5.00 (123 x 127)
Displacement – in. ³ (L).....	1104 (18.09)
Compression Ratio.....	15.0:1
Piston Speed – ft/min (m/min).....	1917 (584)
Exhaust Valves.....	4
Combustion System.....	DIRECT INJECTION
Engine Type.....	63.5° VEE 2 Cycle
Aspiration.....	TURBOCHARGED

Configuration

Injection Device.....	EUI
Turbocharger.....	TW8403 (1.19 A/R)
Charge Air Cooling System.....	JWAC with Boost Cooler
Blower Type.....	100% Bypass
Blower Drive Ratio.....	2.60:1
Low Idle Speed – r/min.....	500
Maximum No Load Speed – r/min.....	2400
Engine Crankcase Vent System.....	CLOSED

Physical Data

Size:	WITH GEAR	WITHOUT GEAR
Length – in. (mm).....	93.9 (2385)	73.35 (1863)
Width – in. (mm).....	50.1 (1273)	50.1 (1273)
Height – in. (mm).....	50.9 (1293)	50.9 (1293)
Weight, dry – lb (kg).....	5391 (2445)	4730 (2146)
Weight, wet – lb (kg).....	5822 (2641)	5137 (2330)
Center of Gravity Distance:		
From R.F.O.Flg/Blk. (x axis) – in. (mm).....	43.1 (1095)	19.93 (506)
Above Output Shaft (y axis) – in. (mm).....	15.0 (1273)	7.95 (201.9)
Right of Output Shaft (z axis) – in. (mm).....	0.59 (15.0)	0.37 (9.0)
Installation Drawing.....	23504646	

Mechanical Data

.....	E4-8000-32-1
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Marine Gear

Type.....	DD232-EV
Reduction Ratio.....	1.76:1
Lube Oil Capacity– qt (L).....	12.7 (12.0)
(marine gear must use straight viscosity oil)	
Gear Weight, Dry – lb (kg).....	661 (300)
Center of Gravity Distance:	
From Mounting Face (x axis) – in. (mm).....	10.55 (268)
Above Output Shaft (y axis) – in. (mm).....	5.51 (140)
Right of Output Shaft (z axis) – in. (mm).....	2.36 (59.9)

Fuel System

Fuel Injector – Part Number.....	5236035
Injection Timing Height – in.	1.460
Fuel Consumption – lb/hr (kg/hr).....	439.0 (199.1)
Fuel Spill Rate gal/hr (L/hr).....	210.0 (795)
Total Fuel Flow gal/hr (L/hr).....	272.8 (1032.7)
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).....	0.75 (19.05)

Lubrication System

Oil Pressure at Rated Speed – lb/in. ² (kPa).....	49-70 (338-483)
Oil Pressure at Low Idle – lb/in. ² (kPa).....	5.0 (34)
In Pan Oil Temperature – °F (°C).....	200 – 250 (93 – 121)
Oil Flow – gal/min (L/min).....	64 (242)
Oil Pan Capacity at Installation Angle	0° 15°
High Limit – qt (L).....	42.0 (39.7) 42.0 (39.7)
Low Limit – qt (L).....	34.0 (32.2) 34.0 (32.2)
Total Engine Oil Capacity with Filters – qt (L).....	53.0 (50.2) 53.0 (50.2)
Maximum Installation Angle – Degrees.....	15.0

Electrical System

Recommended Battery Capacity (CCA @ 0°F):	
12 Volt System, Above 32°.....	1900
12 Volt System, Below 32°.....	2500
24 Volt System, Above 32°.....	950
24 Volt System, Below 32°.....	1250
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).....	43655 (767.6)
Boost Cooler Heat Rejection – Btu/min (kW).....	11630 (204.5)
Engine Radiated Heat – Btu/min (kW).....	2020 (35.5)
Coolant Flow:	
Fresh Water Flow – gal/min (L/min).....	440 (1666)
Raw Water Flow – gal/min (L/min).....	143 (541)
Maximum Water Pump:	Fresh Water Raw Water
Inlet Restriction – in. Hg (kPa).....	3.0 (10.2) 5.0 (17.0)
Fresh Water Capacity – qt (L).....	148 (140.1)
Maximum Coolant Pressure	
(Exclusive of Pressure Cap) – lb/in. ² (kPa).....	17 (117.2)
Maximum Raw Water Pump Pressure – lb/in. ² (kPa).....	14 (97)
Maximum Top Tank Temperature – °F (°C).....	210 (99)
Recommended Raw Water Pipe I.D.:	
Inlet – in. (mm).....	4.0 (152)
Outlet – in. (mm).....	3.0 (76)
Recommended Sea Strainer Size:	
(Max. Screen Opening – 2.0 mm).....	
Simplex – in. (mm).....	3.0 (76)
Duplex – in. (mm).....	4.0 (102)

Air System

Maximum Temperature Rise	
(Ambient Air to Engine Inlet) – °F (°C).....	30 (16.7)
Maximum Air Intake Restriction:	
Clean Air Cleaner – in. H ₂ O (kPa).....	12 (3.0)
Dirty Air Cleaner – in. H ₂ O (kPa).....	20 (5.0)
Engine Air Flow – ft ³ /min (m ³ /min).....	2800 (79.3)
Air Box Pressure – in. Hg (kPa).....	62.0 (209.4)
Recommended Intake Pipe Outer Diameter:	
Single – in. (mm).....	8.0 (203)
Dual – in. (mm).....	6.0 (152)
Minimum Net Engine Room Vent Area, – in. ² (cm ²).....	269 (1734)
Maximum Crankcase Pressure – in. H ₂ O (kPa).....	3.5 (0.87)

Exhaust System

Exhaust Flow – ft ³ /min (m ³ /min).....	6150 (174.2)
Exhaust Temperature – °F (°C).....	690 (366)
Maximum Back Pressure – in. Hg (kPa).....	2.5 (8.4)
Recommended Exhaust Pipe Diameter:	Dry Wet
Single – in. (mm).....	10.0 (254) 12.0 (305)
Dual – in. (mm).....	8.0 (203) 10.0 (254)

Performance Data

BMEP – lb/in. ² (kPa).....	173.1 (1194)
Friction Power – fhp (kW).....	188 (140)

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)
2300	1110 (828)	1075 (802)	62.8 (237.9)	0.396 (241)
2100	1092 (815)	1058 (789)	61.0 (231.1)	0.390 (238)
1950	1054 (786)	1021 (762)	58.5 (221.6)	0.388 (236)
1800	989 (738)	958 (715)	55.7 (210.8)	0.393 (239)
1500	826 (616)	800 (596)	49.0 (185.4)	0.414 (252)
1200	610 (455)	589 (439)	38.4 (145.3)	0.440 (268)

Engine Speed	Prop Load	Prop Fuel Usage	Prop BSFC
r/min	shp (kW)	gal/hr (L/hr)	lb/bhp-hr (g/kW-hr)
2300	1075 (802)	62.8 (237.9)	0.396 (241)
2100	818 (610)	47.2 (178.8)	0.390 (237)
1950	655 (489)	38.2 (144.7)	0.394 (239)
1800	515 (384)	30.7 (116.2)	0.401 (244)
1500	298 (222)	18.6 (70.4)	0.417 (254)
1200	153 (114)	10.3 (38.9)	0.443 (270)

Emissions Data

Smoke, Rated Speed – Bosch Number.....	2.0
Noise – dB(A) @ 1.....	105.7
Additional Noise Data.....	Not Available
NO _x – g/hr.....	10440
CO – g/hr.....	5880
HC – gh/r.....	215
SO ₂ – g/hr.....	1990

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

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