

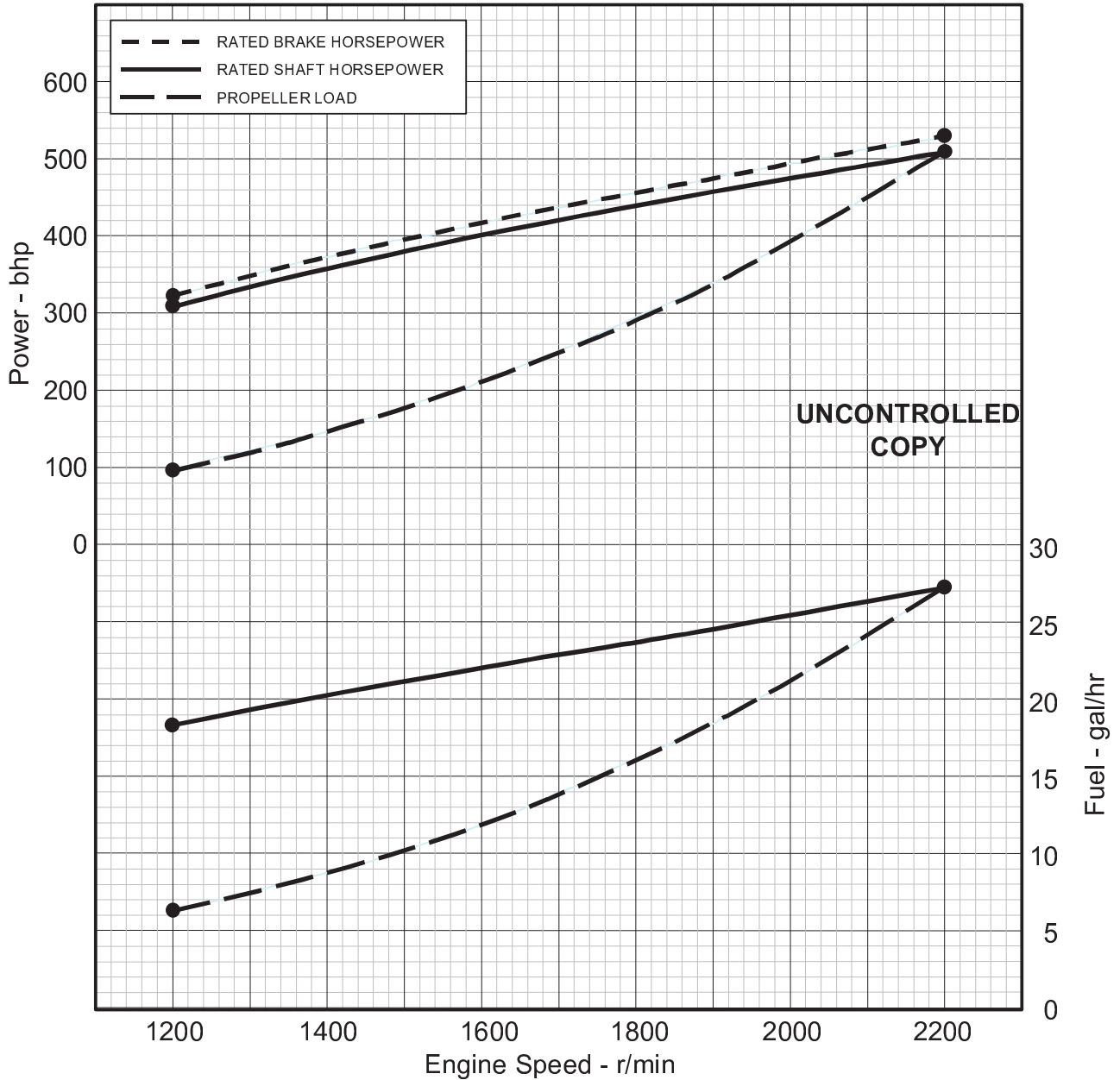


Marine Power

Model: 12-V71TA

Rating: 530 bhp (395 kW) @ 2100 r/min
510 shp (380 kW) @ 2100 r/min

Intermittent
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 = hp x 0.746 Fuel: L/hr = gal/hr x 3.785</p>	<p>Turbo: TW7502 (1.03 A/R) Injector: 7E65 Accessories: DD-514V Gear Alternator: 24V, 65A Raw Water Pump: Included</p>
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Certified by: TJ MOORE

Curve No. E4-7122-32-10
Rev. / Date: 1 / 10-26-98
Sheet No. 1 of 2

Performance Curve

MARINE SPECIFICATION SHEET

General Data

Model.....	7122-7601
Number of Cylinders.....	12
Bore and Stroke – in. x in. (mm x mm).....	4.25 x 5.00 (108 x 127)
Displacement – in. ³ (L).....	852 (13.97)
Compression Ratio.....	17.0:1
Piston Speed – ft/min (m/min).....	1750 (533)
Exhaust Valves.....	4
Combustion System.....	Direct Injection
Engine Type.....	63.5° VEE 2 Cycle
Aspiration.....	Turbocharged

Configuration

Injection Device.....	MUI
Turbocharger.....	TW73 (1.03 A/R)
Charge Air Cooling System.....	JWAC
Blower Type.....	100% Bypass
Blower Drive Ratio.....	1.95:1
Low Idle Speed – r/min.....	550
Maximum No Load Speed – r/min.....	2250
Engine Crankcase Vent System.....	Open

Physical Data

Size:		
Length – in. (mm).....	84.8 (2154)	78.3 (1786)
Width – in. (mm).....	49.7 (1262)	49.7 (1262)
Height – in. (mm).....	52.4 (1526)	52.4 (1338)
Weight, dry – lb (kg).....	Not Available	4340 (1969)
Weight, wet – lb (kg).....	Not Available	4723 (2142)
Center of Gravity Distance:		
From R.F.O. Flange/Blk. (x axis) – in. (mm).....	Not Available	
Above Output Shaft (y axis) – in. (mm).....	Not Available	
Right of Output Shaft (z axis) – in. (mm).....	Not Available	
Installation Drawing.....	23504091	

Mechanical Data

E4-7000-32-1

Marine Gear

Type.....	DD-514V
Reduction Ratio.....	1.50:1
Lube Oil Capacity – qt (L).....	24.0 (23)
(marine gear must use straight viscosity oil)	
Gear Weight, dry – lb (kg).....	1155 (524)
Center of Gravity Distance:	
From R.F.O. Flange (x axis) – in. (mm).....	10.4 (265)
Above Output Shaft (y axis) – in. (mm).....	5.06 (129)
Right of Output Shaft (z axis) – in. (mm).....	1.98 (50.0)

Fuel System

Fuel Injector.....	9E65
Injector Timing Height.....	1.460
Fuel Consumption – lb/hr (kg/hr).....	191.1 (86.7)
Fuel Spill Rate gal/hr (L/hr).....	108.0 (408.8)
Total Fuel Flow gal/hr (L/hr).....	135.4 (512.4)
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. 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).....	58 (220)
Oil Pan Capacity – at Installation Angle	
High Limit – qt (L).....	Not Available
Low Limit – qt (L).....	Not Available
Total Engine Oil Capacity with Filters – qt (L).....	Not Available
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):.....	19860 (349.2)
Engine Radiated Heat – Btu/min (kW).....	880 (15.4)
Coolant Flow:	
Fresh Water Flow – gal/min (L/min).....	200 (757)
Raw Water Flow – gal/min (L/min).....	100 (379)
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).....	140 (132)
Maximum Coolant Pressure	
(Exclusive of Pressure Cap) – lb/in. ² (kPa).....	17 (117)
Maximum Raw Water Pump Pressure – lb/in. ² (kPa).....	10 (69)
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).....	1800 (51.0)
Air Box Pressure – in. Hg (kPa).....	43.0 (145.2)
Recommended Intake Pipe Dia.	
Single – in. (mm).....	8.0 (203)
Dual – in. (mm).....	6.0 (152)
Minimum Net Engine Room Vent Area, – in. ² (cm ²).....	173 (1115)
Maximum Crankcase Pressure – in. H ₂ O (kPa).....	3.0 (0.57)

Exhaust System

Exhaust Flow – ft ³ /min (m ³ /min).....	3670 (103.9)
Exhaust Temperature – °F (°C).....	620 (327)
Maximum Back Pressure – in. Hg (kPa).....	2.5 (8.4)
Recommended Exhaust Pipe Diameter:	Dry Wet
Single – in. (mm).....	8.0 (203) 10 (254)
Dual – in. (mm).....	5.0 (127) 8.0 (203)

Performance Data

BMEP – lb/in. ² (kPa).....	117.4 (810)
Friction Power– fhp (kW).....	116 (87)

Engine Speed r/min	Brake Power bhp (kW)	Shaft Power shp (kW)	Rated Fuel Usage gal/hr (L/hr)	Rated BSFC lb/bhp-hr (g/kW-hr)
2100	530 (395)	510 (380)	27.3 (103.5)	0.360 (219)
1950	502 (374)	483 (360)	25.8 (97.7)	0.359 (218)
1800	471 (351)	453 (338)	24.3 (92.1)	0.361 (220)
1600	427 (319)	410 (306)	22.4 (84.9)	0.367 (223)
1400	380 (283)	365 (272)	20.5 (77.7)	0.377 (230)
1200	323 (241)	309 (231)	18.4 (69.5)	0.397 (242)

Engine Speed r/min	Prop Load shp (kW)	Prop Fuel Usage gal/hr (L/hr)	Prop BSFC lb/bhp-hr (g/kW-hr)
2100	510 (380)	27.3 (103.5)	0.360 (219)
1950	408 (305)	22.1 (83.6)	0.363 (221)
1800	321 (240)	17.6 (66.6)	0.367 (223)
1600	226 (168)	12.7 (47.9)	0.373 (227)
1400	151 (113)	9.0 (34.0)	0.391 (238)
1200	95 (71)	6.1 (23.2)	0.417 (253)

Emissions Data

Smoke, Rated Speed – Bosch Number.....	0.3
Noise – dB(A) @ 1.....	100.0
Additional Noise Data.....	Not Available
NO _x – g/hr.....	5580
CO – g/hr.....	80
HC – g/hr.....	170
SO ₂ – g/hr.....	870

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

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All information subject to change without notice.

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