

DETROIT DIESEL



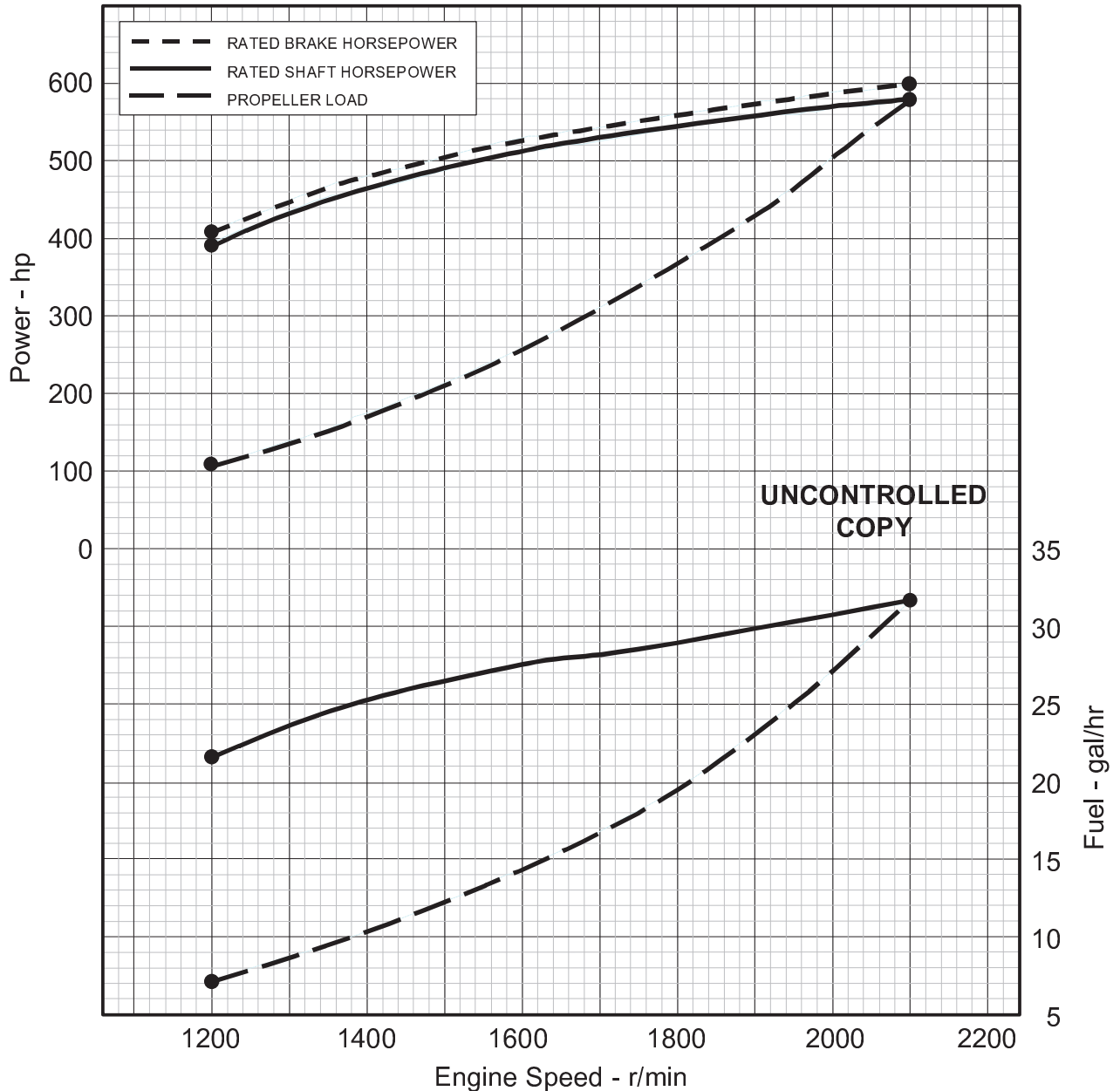
Marine Power

Model: 8V-92TA DDEC®

Rating: 600 bhp (448 kW) @ 2100 r/min

580 shp (433 kW) @ 2100 r/min

Intermittent-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: TV8405 (1.39 A/R) Injector: 5234915 Accessories: 5111V Gear Alternator: 24V, 65A Raw Water Pump: Included</p>
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Certified by:  T.J. MOORE

Curve No. E4-8082-32-23
Rev. / Date: 1 / 12-7-98
Sheet No. 1 of 2

Performance Curve

MARINE SPECIFICATION SHEET

General Data

Model	8082-7K24, -7K25
Number of Cylinders	8
Bore and Stroke – in. x in. (mm x mm)	4.84 x 5.00 (123 x 127)
Displacement – in. ³ (L)	736 (12.4)
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	EUI
Turbocharger	TW8403 (1.39 A/R)
Charge Air Cooling System	JWAC
Blower Type	100% Midi Relieved Clear
Blower Drive Ratio	2.05:1
Low Idle Speed – r/min	500
Maximum No Load Speed – r/min	2110
Engine Crankcase Vent System	CLOSED

Physical Data

Size:	WITH GEAR	WITHOUT GEAR
Length – in. (mm)	69.0 (1753)	62.1 (1577)
Width – in. (mm)	41.8 (1062)	41.8 (1062)
Height – in. (mm)	46.6 (1184)	46.6 (1184)
Weight, Dry – lb (kg)	3580 (1624)	3025 (1372)
Weight, Wet – lb (kg)	3878 (1759)	3303 (1498)
Center of Gravity Distance:		
From R.F.O.Fig/Blk. (x axis) – in. (mm)	34.3 (870)	12.9 (328)
Above Output Shaft (y axis) – in. (mm)	12.1 (306)	6.0 (152.4)
Right of Output Shaft (z axis) – in. (mm)	-0.3 (-0.99)	-0.4 (-10.2)
Installation Drawing	SK-10544, SK10545	

Mechanical Data

E4-8000-32-1

Marine Gear

Type	DD5111V
Reduction Ratio	2.54:1
Lube Oil Capacity – qt (L)	11.2 (10.6)
(marine gear must use straight viscosity oil)	
Gear Weight, Dry – lb (kg)	555 (252)
Center of Gravity Distance:	
From Mounting Face (x axis) – in. (mm)	9.97 (253)
Above Output Shaft (y axis) – in. (mm)	4.18 (106)
Right of Output Shaft (z axis) – in. (mm)	1.97 (50.0)

Fuel System

Fuel Injector- Part Number	5234915
Injector Timing Height – in.	1.520
Fuel Consumption – lb/hr (kg/hr)	220.1 (99.8)
Fuel Spill Rate gal/hr (L/hr)	108.0 (408.8)
Total Fuel Flow gal/hr (L/hr)	139.5 (528.0)
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)	37 (140)
Oil Pan Capacity at Installation Angle	0°
High Limit – qt (L)	23 (22)
Low Limit – qt (L)	17 (16)
Total Engine Oil Capacity with Filters – qt (L)	26 (25)
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)	19200 (337.6)
Engine Radiated Heat – Btu/min (kW)	3030 (53.3)
Coolant Flow:	
Fresh Water Flow – gal/min (L/min)	187 (708)
Raw Water flow – gal/min (L/min)	100 (379)
Maximum Water Pump:	
Inlet Restriction – in. Hg (kPa)	3.0 (10.2)
Fresh Water Capacity – qt (L)	108 (102)
Maximum Coolant Pressure	
(Exclusive of Pressure Cap) – lb/in. ² (kPa)	18 (124)
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)	1620 (45.9)
Air Box Pressure – in. Hg (kPa)	68.0 (229.6)
Recommended Intake Pipe Dia. – in. (mm)	6.0 (152)
Minimum Net Engine Room Vent Area. – in. ² (cm ²)	156 (410)
Maximum Crankcase Pressure – in. H ₂ O (kPa)	2.5 (0.62)

Exhaust System

Exhaust Flow – ft ³ /min (m ³ /min)	4330 (122.6)
Exhaust Temperature – °F (°C)	770 (410)
Maximum Back Pressure – in. Hg (kPa)	2.5 (8.4)
Recommended Exhaust Pipe Diameter:	
Single – in. (mm)	5.0 (127)
Dual – in. (mm)	Not Applicable

Performance Data

BMEP – lb/in. ² (kPa)	153.7 (1060)
Friction Power – fhp (kW)	106 (79)

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)
2100	600 (448)	580 (433)	31.5 (119.3)	0.367 (223)
1950	582 (434)	562 (420)	30.2 (114.5)	0.363 (221)
1800	562 (419)	543 (405)	28.9 (109.4)	0.359 (219)
1600	529 (395)	511 (381)	27.4 (103.9)	0.362 (220)
1400	482 (360)	465 (347)	25.2 (95.3)	0.365 (222)
1200	408 (304)	393 (293)	21.5 (81.5)	0.369 (224)

Engine Speed	Prop Load	Prop Fuel Usage	Prop BSFC
r/min	shp (kW)	gal/hr (L/hr)	lb/bhp·hr (g/kW·hr)
2100	580 (433)	31.5 (119.3)	0.366 (222)
1950	464 (346)	24.9 (94.4)	0.361 (219)
1800	365 (272)	19.5 (73.7)	0.357 (217)
1600	257 (191)	14.3 (54.3)	0.373 (227)
1400	172 (128)	10.3 (39.1)	0.397 (241)
1200	108 (81)	7.1 (27.0)	0.429 (261)

Emissions Data

Smoke, Rated Speed – Bosch Number	0.1
Noise – dB(A) @ 1	102.2
Additional Noise Data	Not Available
NO _x – g/hr	6180
CO – g/hr	183
HC – g/hr	90
SO ₂ – g/hr	100

UNCONTROLLED
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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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