

# DETROIT DIESEL

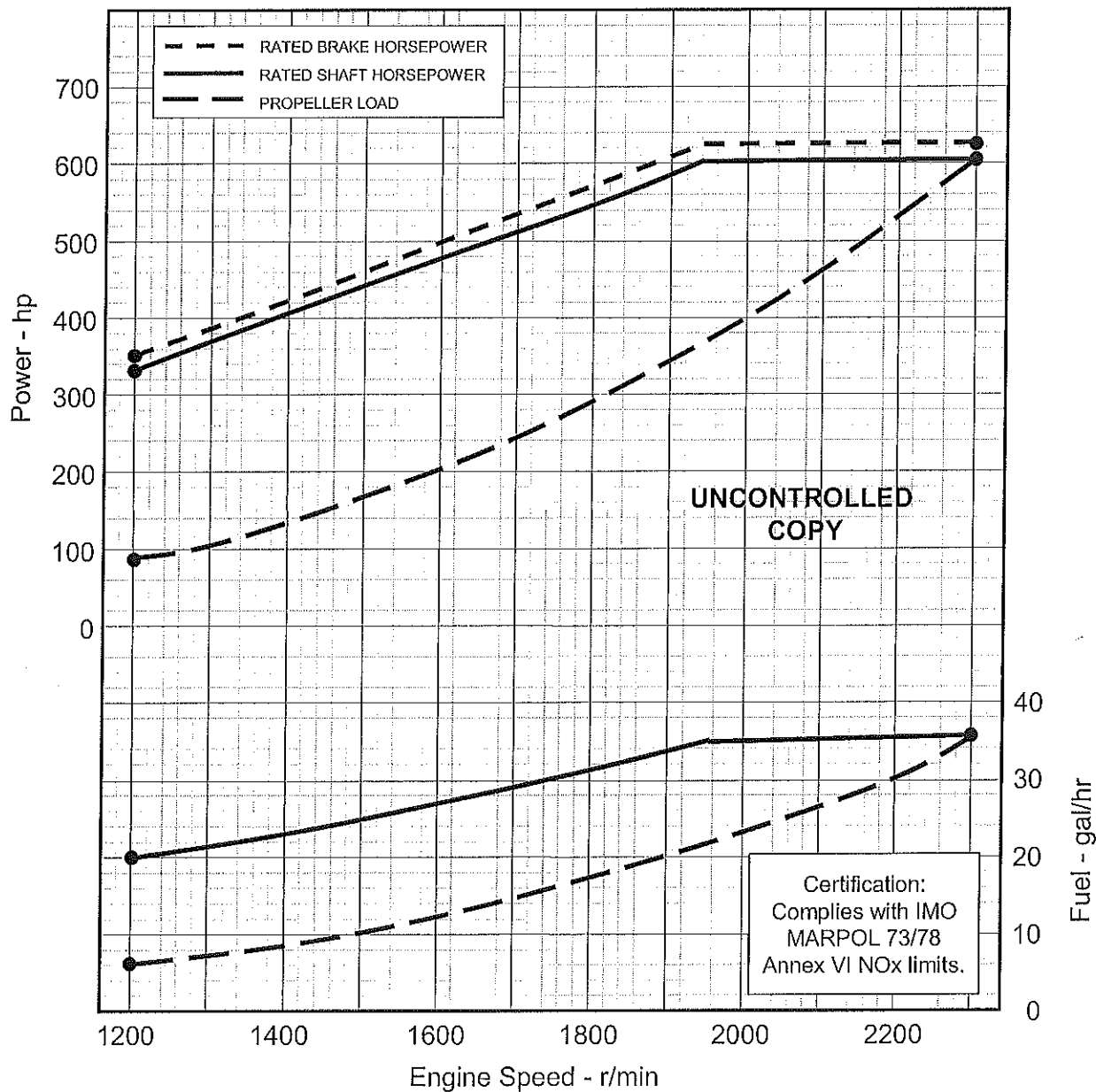


## Marine Power

Model: 6V-92TIA

Rating: 625 bhp (466 kW) @ 2300 r/min  
605 shp (451 kW) @ 2300 r/min

Maximum  
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)

**Conversion Factors:**  
Power: kW = bhp x 0.746  
Fuel: kg/kW • hr = lb/bhp • hr x 0.608  
Torque: N • m = lb • ft x 1.356

**Turbo:** TD13MT45QRC22V19CM2  
**Injector:** 5236672  
**Accessories:** DD5091V Gear  
**Alternator:** 24V, 75A  
**Raw Water Pump:** Included

Certified by:

**Performance Curve**

Curve No. E4-8062-32-25  
Rev. / Date: New / 12-10-01  
Sheet No. 1 of 2

# MARINE SPECIFICATION SHEET

## General Data

Model	8062-7K10, -7K11
Number of Cylinders	6
Bore and Stroke - in. x in. (mm x mm)	4.84 x 5.00 (123 x 127)
Displacement - in. <sup>3</sup> (L)	552 (9.05)
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	TD13MT45QRC22V-19CM2
Charge Air Cooling System	JWAC w/ Boost & Intclr
Blower Type	100% Maxi Bypass
Blower Drive Ratio	2.60:1
Low Idle Speed - r/min	425
Maximum No Load Speed - r/min	2400
Engine Crankcase Vent System	OPEN

## Physical Data

Size:	WITH GEAR	WITHOUT GEAR
Length - in. (mm)	63.2 (1605)	61.42 (1560)
Width - in. (mm)	45.3 (1150)	45.3 (1150)
Height - in. (mm)	46.0 (1169)	46.0 (1169)
Weight, Dry - lb (kg)	3343 (1516)	2858 (1296)
Weight, Wet - lb (kg)	3562 (1616)	3059 (1388)

## Center of Gravity Distance:

From R.F.O. Flg/Blk. (x axis) - in. (mm)	29.5 (749)	9.46 (240)
Above Output Shaft (y axis) - in. (mm)	17.4 (442)	13.28 (337)
Right of Output Shaft (z axis) - in. (mm)	-1.65 (41.9)	-1.74 (-44)

## Installation Drawing

Installation Drawing	23519277
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## Mechanical Data

Mechanical Data	E4-8000-32-1
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## Marine Gear

Type	DD5091V
Reduction Ratio	1.71:1
Lube Oil Capacity - qt (L)	9.6 (9.1)
(marine gear must use straight viscosity oil)	
Gear Weight, Dry - lb (kg)	485 (220)
Center of Gravity Distance:	
From R.F.O. Flange (x axis) - in. (mm)	8.26 (210)
Above Output Shaft (y axis) - in. (mm)	11.5 (292)
Right of Output Shaft (z axis) - in. (mm)	-1.19 (-30.2)

## Fuel System

Fuel Injector Part Number	5236672
Injection Timing Height - in.	1.460
Fuel Consumption - lb/hr (kg/hr)	249.3 (113.1)
Fuel Spill Rate gal/hr (L/hr)	77.0 (291.5)
Total Fuel Flow gal/hr (L/hr)	112.7 (426.5)
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	8
Recommended Supply Line I.D. - in. (mm)	0.5 (12.7)

## Lubrication System

Oil Pressure at Rated Speed - lb/in. <sup>2</sup> (kPa)	49-70 (338-483)
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)	39 (148)
Oil Pan Capacity at Installation Angle	0° 15°
High Limit - qt (L)	19.2 (18.2) 18.2 (17.2)
Low Limit - qt (L)	14.2 (13.4) 16.3 (15.4)
Total Engine Oil Capacity with Filters - qt (L)	21.2 (20.1) 20.2 (19.1)
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)	22110 (388.8)
Boost Cooler Heat Rejection - Btu/min (kW)	3120 (54.9)
Engine Radiated Heat - Btu/min (kW)	1060 (18.6)
Coolant Flow:	
Fresh Water Flow - gal/min (L/min)	185 (700)
Raw Water Flow - gal/min (L/min)	92 (348)
Maximum Water Pump:	
Inlet Restriction - in. Hg (kPa)	3.0 (10.2)
Fresh Water Capacity - qt (L)	76 (71.9)
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)	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 <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)	1700 (48.1)
Air Box Pressure - in. Hg (kPa)	82.5 (278.6)
Recommended Intake Pipe Dia. - in. (mm)	6.0 (152)
Minimum Net Engine Room Vent Area, - in. <sup>2</sup> (cm <sup>2</sup> )	163 (1053)
Maximum Crankcase Pressure - in. H <sub>2</sub> O (kPa)	3.5 (0.87)

## Exhaust System

Exhaust Flow - ft <sup>3</sup> /min (m <sup>3</sup> /min)	3210 (90.9)
Exhaust Temperature - °F (°C)	530 (277)
Maximum Back Pressure - in. Hg (kPa)	2.2 (7.5)
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)	195.5 (1344)
Friction Power - fhp (kW)	94 (70)

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	625 (466)	605 (451)	35.7 (135.1)	0.399 (243)
2100	625 (466)	603 (450)	35.1 (132.9)	0.393 (239)
1950	623 (465)	601 (448)	34.8 (131.7)	0.390 (237)
1800	568 (423)	546 (408)	31.1 (117.7)	0.383 (233)
1500	459 (342)	441 (329)	24.9 (94.3)	0.379 (231)
1200	350 (261)	335 (250)	19.9 (75.2)	0.397 (241)

Engine Speed	Prop Load	Prop Fuel Usage	Prop BSFC
r/min	shp (kW)	gal/hr (L/hr)	lb/bhp-hr (g/kW-hr)
2300	605 (451)	35.7 (135.1)	0.399 (243)
2100	461 (344)	26.3 (99.7)	0.386 (235)
1950	369 (275)	21.9 (82.9)	0.400 (243)
1800	290 (216)	17.4 (65.8)	0.402 (244)
1500	168 (125)	10.6 (40.3)	0.420 (255)
1200	86 (64)	6.3 (23.9)	0.473 (288)

## Emissions Data

NO <sub>x</sub> - g/kW-hr	8.89
CO - g/kW-hr	5.65
THC - g/kW-hr	0.24

Curve No. E4-8062-32-25  
Rev. / Date: New/12-10-01  
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.  
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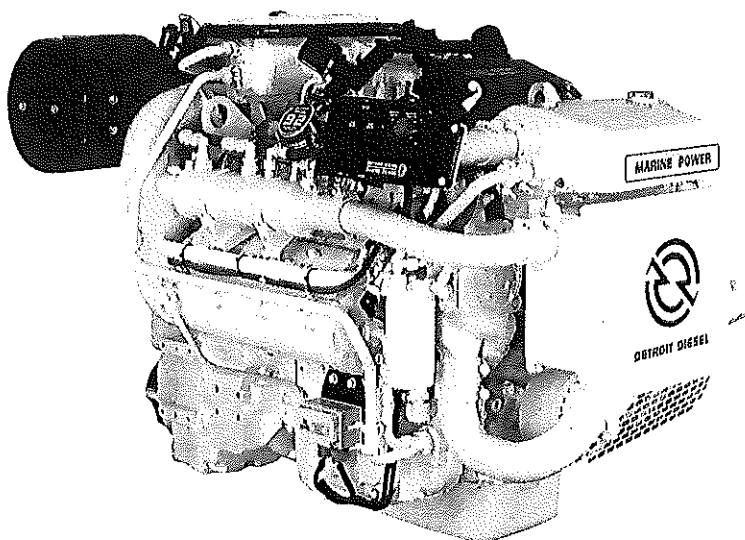
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# DETROIT DIESEL



**6V-92TIA DDEC  
625 BHP**

**Marine Pleasure Craft**



## General Specifications

Basic Engine	6V-92TIA
Model—Port	8062-7K11
Starboard	8062-7K10
Description	Turbocharged-Aftercooled-Intercooled with 100% Bypass Blower
Control	DDEC III
Number of Cylinders	6
Bore and Stroke	4.84 in x 5.00 in (123 mm x 127 mm)
Displacement	552 cu in (9.05 liters)
Compression Ratio	15.0 to 1
Weight (dry)	2800 lbs (1239 kg) Est.

## Rated Power Output—Maximum

Gross Power	625 BHP (466 kW) @ 2300 RPM
Net Power	605 SHP (451 kW) @ 2300 RPM

## Equipment Specifications

100% Bypass Blower Intercooler—Two-Pass
Aftercooler—Two-pass with precooled coolant supply
Turbocharger—High Efficiency (uses compressor diffuser vanes & turbine nozzles)
Alternator—24 volt, 75 amp
Cooling System—Low profile aluminum expansion tank with raw water pump
Space Saver—Crankcase vapor collectors with silencers
Crankshaft Pulley—3 grooves, .50 inch wide
DDEC III—Detroit Diesel Electronic Controls
Exhaust System—Fresh water-cooled manifolds and turbine housing; port or starboard exhaust connection
Flywheel Housing—SAE #2
Fuel System—Cam operated electronic unit injectors with low pressure USCG type A external hoses, fuel filters and cooler
Lube Oil Filter—Full flow
Marine Gear—Available with Detroit Diesel 5081, 5091, & 5112 (Range of reduction ratios from 1.45 to 2.95)
Oil Pan—Cast iron, designed for 0°-15° inclination angle, rear sump
Starting Motor—24 volt

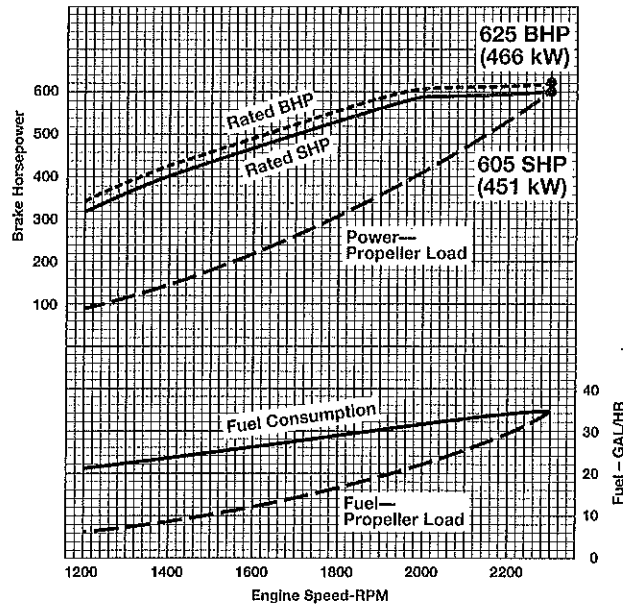
Rating conditions: ISO 3046, SAE J1349, SAE J1228  
77°F (25°C) and 29.31 in. Hg. (99 kPa) Barometer (Dry)

For a complete listing of standard and optional equipment,  
consult your authorized Detroit Diesel Corporation representative.

Photograph illustrates a typical marine engine

## Performance Curve

### Model 6V-92TIA—Maximum



## Rating Explanation

**RATED BHP** Basic engine gross horsepower.

**RATED SHP** Net power available at the marine gear output flange.

**PROPELLER LOAD** indicates power absorbed by a typical fixed pitch propeller.

**POWER OUTPUT** Guaranteed within 5% at rated ambient conditions.

**MARINE MAXIMUM** The marine maximum rating applies to high performance boats where speed is of primary importance and overall load factors are low. Normal or continuous cruising RPM should be limited to 90% of rated engine RPM, and the use of full rated power should be limited to 10% (average) of operating time. This rating is normally reserved for privately-owned yachts in non-revenue applications with an average annual hour accumulation of 500 hrs.

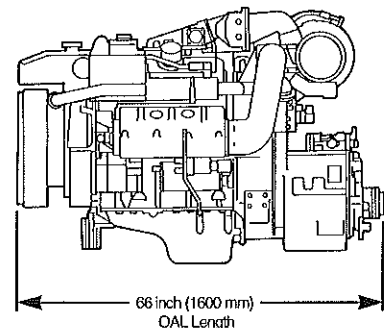
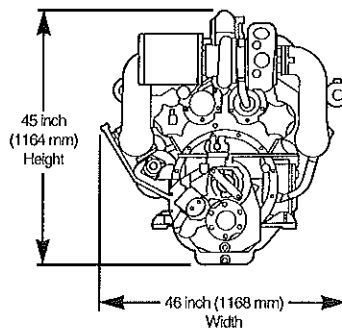
NOTE: Other boats; e.g., fire, police, with an overall duty cycle similar to maximum or intermittent-maximum may be applied at the appropriate rating.

Consult your authorized Detroit Diesel Corporation representative for the rating that will apply to your vessel.

## Dimensional Drawing

Model 8062-7K10 / 7K11  
6V-92TIA

Approximate dimensions shown.  
For complete dimensional information,  
refer to installation drawing.



**DETROIT DIESEL**  
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