

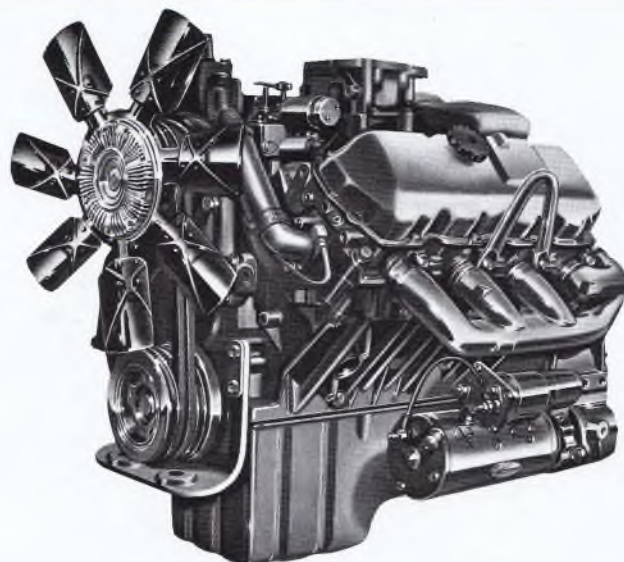
DETROIT DIESEL

Automotive Model

8.2 L 145-230 HP



BDC



General Specifications

| | 8.2N | 8.2T |
|----------------------|--|--|
| Basic Engine | 4 cycle-Vee | 4 cycle-Vee |
| Model | 4087-7100 | 4087-7300 |
| Number of Cylinders | 8 | 8 |
| Control | Mech. Unit Inj. | Mech. Unit Inj. |
| Bore and Stroke | 4.25 in × 4.41 in (108 mm × 112 mm) | 4.25 in × 4.41 in (108 mm × 112 mm) |
| Displacement | 500 cu in (8.2 liters) | 500 cu in (8.2 liters) |
| Compression Ratio | 18.3 to 1 | 16.9 to 1 |
| Dimensions (approx.) | | |
| Length | 35 in (890 mm) | 35 in (890 mm) |
| Width | 32.3 in (820 mm) | 32.3 in (820 mm) |
| Height | 32.7 in (830 mm) | 32.7 in (830 mm) |
| Weight (dry) | 1139 lbs (517 kg) | 1162 lbs (527 kg) |

Rated Power Output

(Turbocharged Models)

| | |
|--------------|----------------------------------|
| Gross Power | 230 BHP (172 kW) @ 2800 RPM |
| Peak Torque | 495 lb. ft. (671 N•m) @ 1700 RPM |
| Gross Power* | 225 BHP (168 kW) @ 2800 RPM |
| Peak Torque | 495 lb. ft. (671 N•m) @ 1700 RPM |
| Gross Power | 210 BHP (157 kW) @ 2800 RPM |
| Peak Torque | 468 lb. ft. (624 N•m) @ 1700 RPM |
| Gross Power | 180 BHP (134 kW) @ 2800 RPM |
| Peak Torque | 406 lb. ft. (551 N•m) @ 1500 RPM |

(Naturally Aspirated Models)

| | |
|-------------|----------------------------------|
| Gross Power | 170 BHP (127 kW) @ 2600 RPM |
| Peak Torque | 390 lb. ft. (529 N•m) @ 1200 RPM |
| Gross Power | 150 BHP (112 kW) @ 2800 RPM |
| Peak Torque | 316 lb. ft. (428 N•m) @ 1600 RPM |
| Gross Power | 145 BHP (108 kW) @ 2600 RPM |
| Peak Torque | 330 lb. ft. (447 N•m) @ 1200 RPM |

*California Rating

Rating conditions of SAE: 77°F (25°C) and 29.31 in Hg (99kPa) Barometer (Dry)

Equipment Specifications

Swirl-fire Combustion—As a rule, a diesel engine delivers substantially better mileage than a comparable gasoline engine doing the same job, due to its greater thermodynamic efficiency and to the higher energy content in diesel fuel. The 8.2L can even better this margin of improvement, because of its advanced combustion system that provides maximum mixing of air and fuel. This is the secret of the 8.2L — we call it swirl-fire combustion. It combines the latest in technology in air intake systems with the proven fuel atomizing ability of the Detroit Diesel unit fuel injector. Here's how it works:

Intake Air Swirl—The intake air passage in the cylinder head is specially shaped to act as both a forcing cone and air-twisting chamber. It accelerates the speed of the incoming air, then imparts a twisting turbulence, or "swirl." When the air enters the combustion chamber, this swirl is further enhanced by the toroidal shape of the piston bowl. As the piston compresses this turbulent air mass, it creates hundreds of miniature tornadoes circling in one violent vortex.

Fuel Atomization with Unit Injectors—At the moment when this swirling air mass has been compressed to approximately 1/17 its original size and heated to a temperature of 1100°F, fuel is forced into the combustion chamber through tiny .008 inch holes under 15,000 psi pressure by the fuel injector. The patented Detroit Diesel unit fuel injector combines the functions of measuring, timing, pressurizing and atomizing into one mechanism that is located immediately above the combustion chamber. Fuel injection is precise and atomization is thorough.

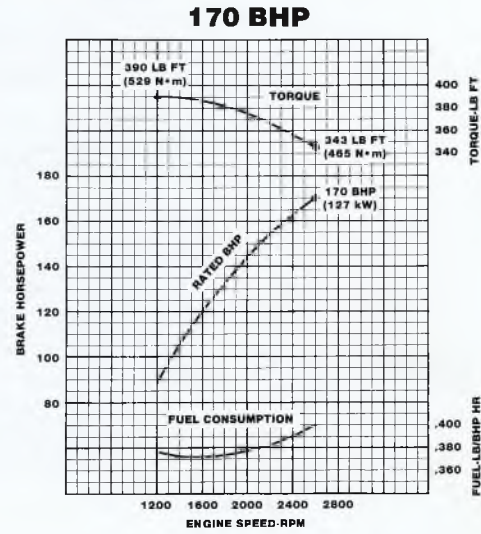
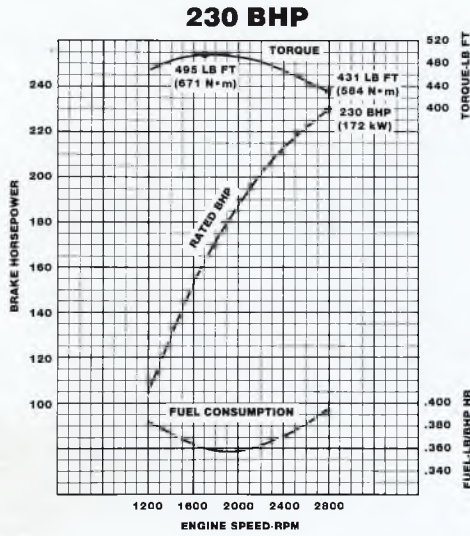
Complete Combustion—The finely-atomized fuel is immediately engulfed by the super-hot, violently-swirling air. It ignites and burns at a controlled rate, with the tornadic air continuing to mix and re-mix with every atom of fuel. The results is complete burning of the fuel for the highest possible extraction of its energy potential.

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

Photograph represents a typical automotive engine

<http://www.barringtondieselclub.co.za/>

Performance Curves



Rating Explanation

RATED BHP is the power rating for variable speed and load applications where full power is required intermittently.
 FUEL CONSUMPTION CURVE shows fuel used in pounds per brake horsepower hour.

POWER OUTPUT guaranteed within 5% at rated ambient conditions.
 THIS RATING does not include power requirements for accessory and standard equipment.

DETROIT DIESEL
 CORPORATION



13400 Outer Drive, West / Detroit, Michigan 48239-4001
 Telephone: 313-592-5000
 Telex: 4320091 / TWX: 810-221-1649

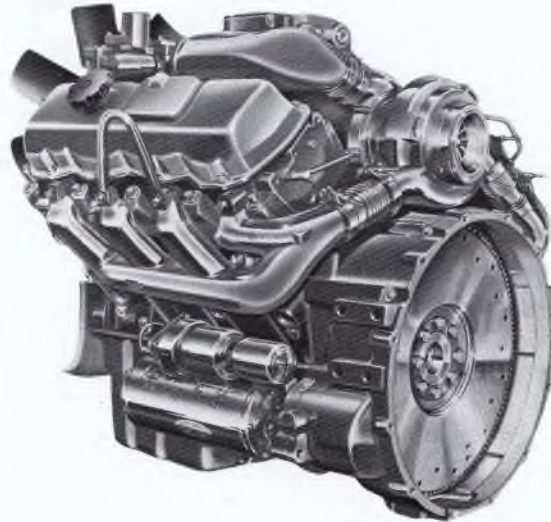
DETROIT DIESEL

Industrial Model

8.2 N/T 130-230 HP



BDC



General Specifications

| | | |
|---------------------------|--|--|
| Basic Engine | 8.2 N | 8.2T |
| Model | 4083-7100 | 4083-7336 |
| Number of Cylinders | 8 | 8 |
| Bore and Stroke | 4.25 in × 4.41 in (108 mm × 112 mm) | 4.25 in × 4.41 in (108 mm × 112 mm) |
| Displacement | 500 cu in (8.2 liters) | 500 cu in (8.2 liters) |
| Engine Type | 4 cycle-Vee | 4 cycle-Vee |
| Compression Ratio | 18.3 to 1 | 16.0 to 1 |
| Engine Heat Rej. | 3640 BTU/min (64 kW) | 6450 BTU/min (113 kW) |
| Engine Coolant Capacity | 12.5 qt (11.8 liters) | 12.5 qt (11.8 liters) |
| Exhaust Temperature | 810°F (432°C) | 1030°F (554 C) |
| Total Engine Oil Capacity | 12 qt (11.4 liters) | 12 qt (11.4 liters) |
| Dimensions (approx.) | | |
| Length | 38.2 in (970 mm) | 38.2 in (970 mm) |
| Width | 36 in (914 mm) | 36 in (914 mm) |
| Height | 32.4 in (823 mm) | 32.4 in (823 mm) |
| Weight (dry) | 1139 lbs (517 kg) | 1162 lbs (527 kg) |

Rated Power Output

Maximum (4083-7336)

Gross Power 230 BHP (172 kW) @ 2800 RPM
Peak Torque 510 lb ft (664 N·m) @ 1700 RPM

Minimum (4083-7100)

Gross Power 130 BHP (97 kW) @ 2800 RPM
Peak Torque 318 lb ft (431 N·m) @ 1000 RPM

Continuous

Gross Power 145 BHP (108 kW) @ 2800 RPM
Peak Torque 330 lb ft (447 N·m) @ 1200 RPM

Equipment Specifications

Alternator—12 volt, 10SI
Engine Oil Cooler
Fan—22 in, 5 blade suction
Flywheel—SAE #2
Flywheel Housing—SAE #2
Governor—Mechanical, limiting speed
Lifter Eyes
Oil Pan—Front sump
Oil and Fuel Filters
Starting Motor—12 volt
Water and Oil Pump

Continuous rating is turbocharged rating.
Rating conditions of SAE: 77°F (25°C) and 29.31 in Hg (99kPa) Barometer (Dry)

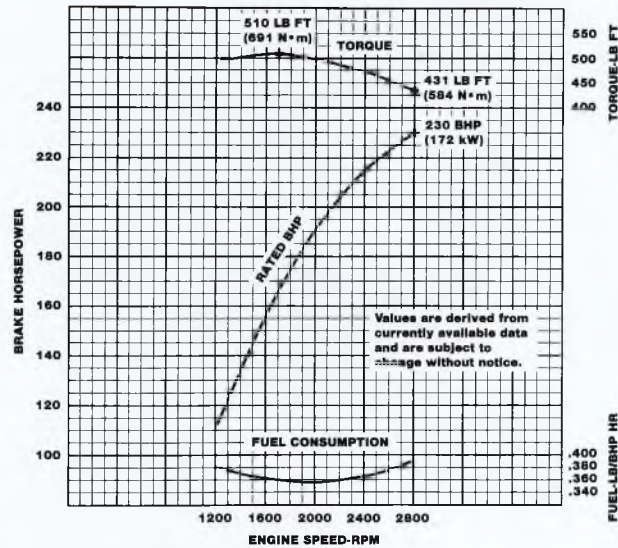
For a complete listing of standard and optional equipment, consult your distributor or authorized Detroit Diesel Corporation representative.

Photograph represents a typical industrial engine



Performance Curve

230 BHP



Rating Explanation

RATED BHP is the power rating for variable speed and load applications where full power is required intermittently.

FUEL CONSUMPTION CURVE shows fuel used in pounds per brake horsepower hour.

POWER OUTPUT guaranteed within 5% at rated ambient conditions. THIS RATING does not include power requirements for accessory and standard equipment.

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Telephone: 313-592-5000

Telex: 4320091 / TWX: 810-221-1649

Preliminary

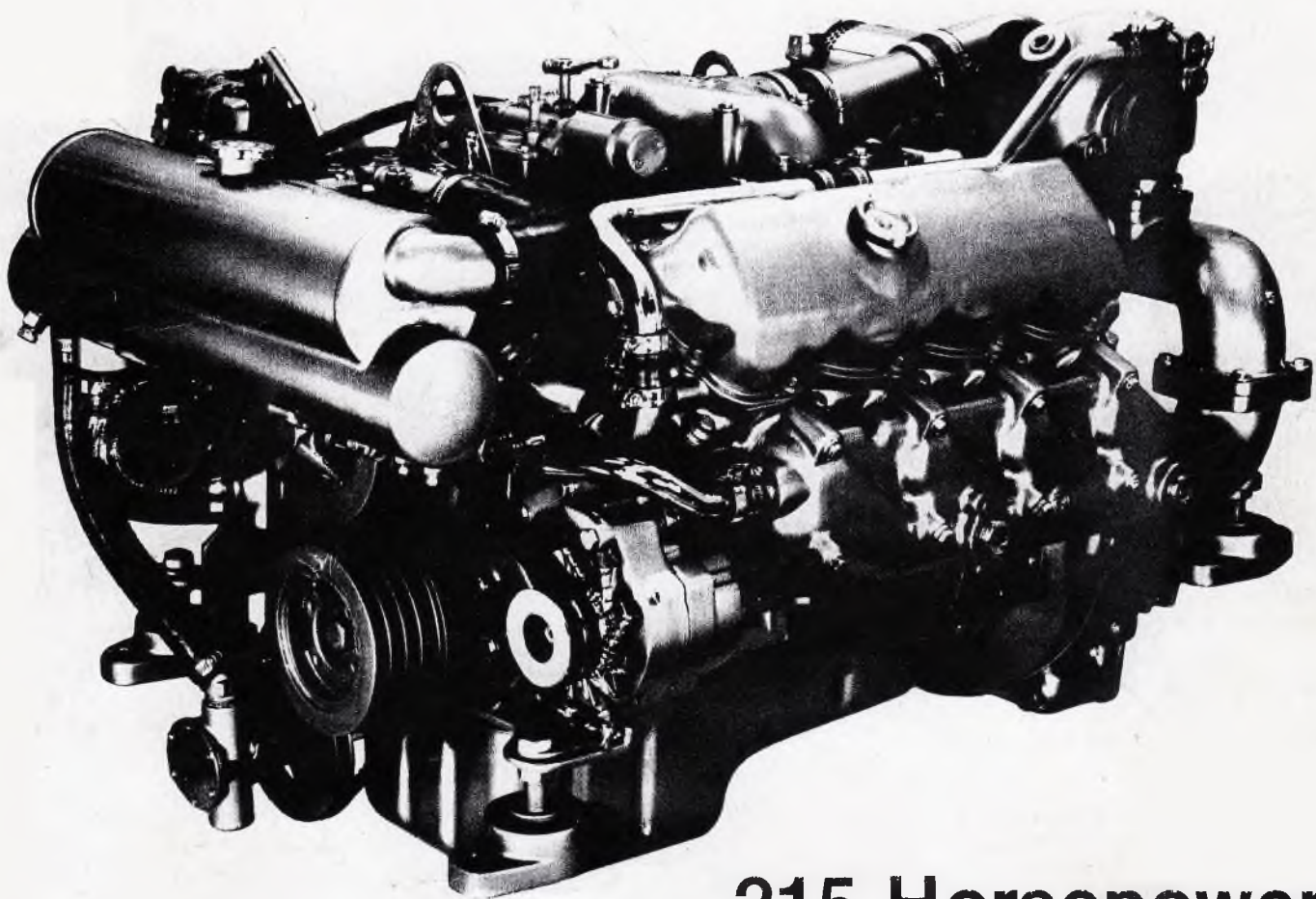


BDC

Detroit Diesel

8.2 Liter

Turbocharged Marine Engine

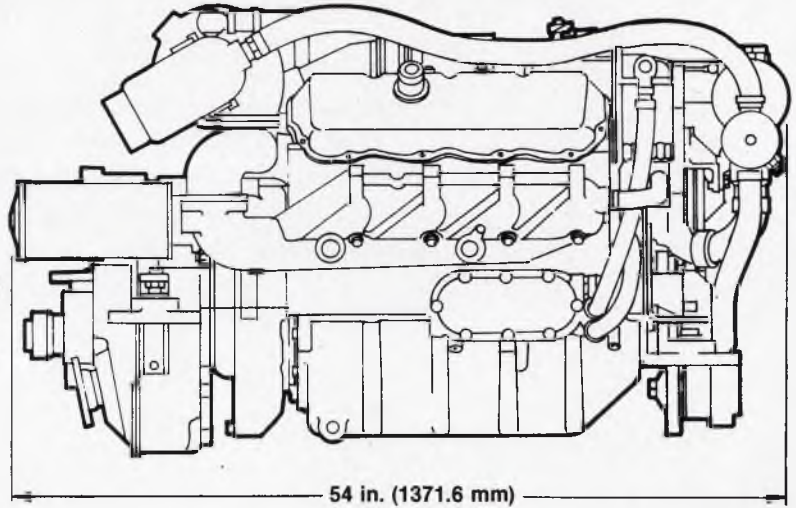
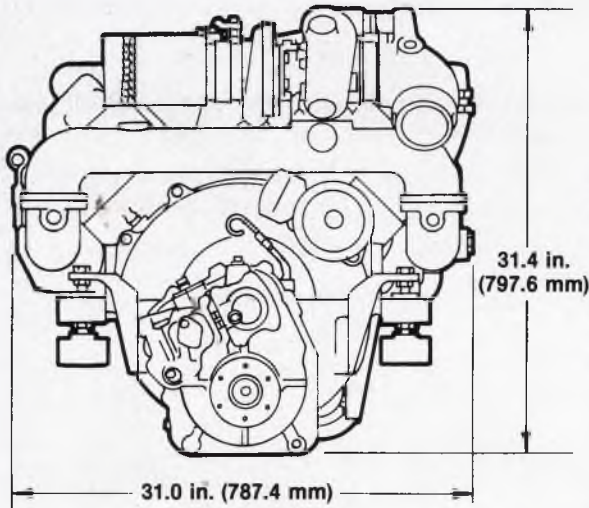


215 Horsepower

The New . . .

DETROIT DIESEL FUEL PINCHER

8.2T MARINE



STANDARD EQUIPMENT

- Air intake silencer
- Battery charging alternator — 12 Volt
42 Amp Delco Remy
- Crankshaft pulley — 4 groove
- Engine mounts — Adjustable
- Exhaust manifold and crossover pipe —
Watercooled
- Flywheel housing SAE#3
- Fuel filters — spin on — Primary and
secondary
- Governor — Limiting speed 600-3200 RPM
- Heat exchanger — Low profile
tube and shell
- Injectors — 4A70 GM (direct injection).
- Lube oil cooler and high efficiency spin-on
filter
- Marine gear — Twin Disc 502, 1.5:1 ratio*
10° down angle drive
- Oil pan — 12 quart — steel (corrosion
resistant)*
- Raw water pump — Jabsco
- Shut down — 12 Volt electrical*
- Starting motor — 12 Volt Delco Remy
- Turbocharger — High efficiency*

OPTIONAL UPON REQUEST

- *Twin disc marine gear 502, 2:1 ratio
- *Aluminum oil pan
- *Manual shutdown
- *Exhaust outlet elbow

SPECIFICATIONS

| | |
|----------------------------------|---|
| Model | 4082-8300 with marine gear for starboard installations 4082-8301 with marine gear for port installations (engine is right hand rotation only) |
| Rating | 215 BHP (160.4 kW) @ 3200 RPM |
| Length (LOA) | 54 in. (1371.6 mm) |
| Width | 31 in. (787.4 mm) |
| Height | 31.4 in. (797.6 mm) |
| Weight (Dry) | 1526 lbs. (693.6 kg) |
| Number of cylinders | 8 |
| Bore & stroke | 4.25 in. x 4.41 in. (108 mm x 112 mm) |
| Displacement | 500 cu. in. (8.2 l) |
| Compression ratio | 16.9 to 1 |
| Propeller shaft angle | 15° maximum |

Additional information is available through your
authorized Detroit Diesel Allison representative.

BDC

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Detroit Diesel Allison

Division of General Motors

13400 West Outer Drive, Detroit, Michigan 48239
(313/592-5000)