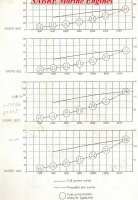


SABRE Marine Engines



NOTE: The power outputs shown above are of the nominal magnitude for an approved day of sea trial with service water temperatures not higher than 27°C, a relative humidity of 85% and recommended maintenance and supervision.

Figure 6

SABRE 120

MARINE DIESEL ENGINE



Exceeding the industry's standard 1000-hour service life, the Sabre 120 has been built to last. The engine's long life is guaranteed by its advanced design and construction. The engine's advanced design and construction have been proven in applications all over the world. The Sabre 120 is the most reliable.

COLD STARTING

The Sabre 120 has advanced injection system for its class, and a compression chamber in the cylinder. The engine's advanced design and construction have been proven in applications all over the world. The Sabre 120 is the most reliable.

RELIABILITY

The reliability of engines is a key factor in the choice of a marine diesel engine. The Sabre 120 is the most reliable.

The Sabre 120 is the most reliable engine in its class, and the Sabre 120 is the most reliable engine in its class.

— Fuel Consumption
— Horsepower



— Fuel Consumption
— Horsepower

DURABILITY

The Sabre 120 is the most reliable engine in its class, and the Sabre 120 is the most reliable engine in its class.

GOOD FUEL CONSUMPTION

The Sabre 120 is the most reliable engine in its class, and the Sabre 120 is the most reliable engine in its class.



LOW NOISE

The Sabre 120 is the most reliable engine in its class, and the Sabre 120 is the most reliable engine in its class.

QUALITY DESIGN

The Sabre 120 is the most reliable engine in its class, and the Sabre 120 is the most reliable engine in its class.

The Sabre 120 is the most reliable engine in its class, and the Sabre 120 is the most reliable engine in its class.



Checking the cooling system of the engine using tools.



SPECIFICATIONS SAABE 100

Type	Vertical four-stroke diesel engine
Rating	1000 W at 1500
Model	1000 W (SAABE 100)
Weight	110 kg (242 lb)
Capacity	12.5 litres (2.75 US gal)
Stroke	100 mm (3.94 in)
Stroke/Bore Ratio	1.75
Stroke/Speed	1.5 x 1000 = 150
Full Speed	1500 rpm (50 rev/sec) (range 1400-1600 rpm)
Method of Starting	Electric and manual (crank) starting
Starting System	Electric starting (SAABE 100) and manual (SAABE 100) starting (SAABE 100)
Transmission	SAABE 100 (SAABE 100) and SAABE 100 (SAABE 100)
Accessories	SAABE 100 (SAABE 100) and SAABE 100 (SAABE 100)
SAABE 100	SAABE 100 (SAABE 100) and SAABE 100 (SAABE 100)



SHIPPING DETAILS

Dimensions and weight
 Gross Weight: 110 kg (242 lb)
 Net Weight: 100 kg (220 lb)



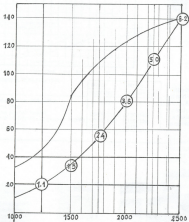
SAABE ENGINE LTD
 1000 W (SAABE 100)

SAABE ENGINE LTD
 1000 W (SAABE 100)

SAABE ENGINE LTD
 1000 W (SAABE 100)

SABRE 140 Commercial

SABRE 140 COMMERCIAL



SABRE 212

COMMERCIAL



HEAVY-DUTY WEIGHT SAVERS FOR COMMERCIAL USE

Powerful and fuel-efficient, rugged 60-hp engine, equipped with leading edge exhaust system, high-speed cooling and advanced lubrication. This commercial size engine is the COMMERCIAL size designed for this market, and the most economical size for Applications, mobile equipment, and both commercial and home use. Applications include: generators, power tools, commercial water pumps, power tools and many applications.

Many special features include: 1) COMMERCIAL, advanced cooling system, 2) variable speed cooling, 3) PTO drive pump, 4) AM, FM, 5) variable fan torque limit operation, and 6) full load starting capacity.

Engineered for maximum fuel economy, low emissions, and long life. Features include: advanced cooling system, high-speed cooling, and advanced lubrication. This engine is designed for maximum fuel economy, low emissions, and long life. Features include: advanced cooling system, high-speed cooling, and advanced lubrication.

Advanced cooling system, high-speed cooling, and advanced lubrication. This engine is designed for maximum fuel economy, low emissions, and long life. Features include: advanced cooling system, high-speed cooling, and advanced lubrication.

Special attention has been paid to the accessibility of service points, including: oil, water, and fuel. This engine is designed for maximum fuel economy, low emissions, and long life. Features include: advanced cooling system, high-speed cooling, and advanced lubrication.

For more information, contact your Sabre distributor or call 1-800-555-5555.



POWERFUL AND FUEL-EFFICIENT, rugged 60-hp engine, equipped with leading edge exhaust system, high-speed cooling and advanced lubrication. This engine is the COMMERCIAL size designed for this market, and the most economical size for Applications, mobile equipment, and both commercial and home use.



SABRE

SPECIFICATIONS FOR COMMERCIAL

Type	Vertical industrial diesel engine
Model	4200 Series
Size	2 1/2" Bore, 3 1/2" Stroke at 2200 RPM
Power	30 HP (22 kW)
Stroke	3 1/2" (90 mm)
Capacity	1000 cc (61 cu in) (displacement)
Compression Ratio	16.5 : 1
Stroke Index	1.33 : 1
Performance	1000 RPM (industrial engine type)
Manual Starting	Hand Cranking Electrical with Remote Start for Automotives
Cooling System	Direct water cooling (open water, closed recirculating, or glycol) Submergence. Two tank cooling loop water tank (optional), glycol reservoir and air separator.
Transmission	Dry Mount (4-Stroke Standard), Two-Speed
Electric	17 Volt/1000 Watt Motor and Electric Starters in optional kit with 24 Volt/1000 Watt generator (100 Amp)
Body Weight	100 lbs (45 kg)

DETAILS

1. Vertical industrial engine

Case Size: 2 1/2" Bore x 3 1/2" Stroke at 1000 RPM

Weight: 100 lbs (45 kg)



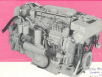
1000 RPM (industrial engine type)



OLSON ENGINEERS LTD
MILWAUKEE, WISCONSIN, U.S.A.
TEL: 414-762-1000

SABRE 250

HIGH PERFORMANCE MARINE DIESEL ENGINE



Only when you install
Sabre on your Sabre
Caterpillar Diesel
Marine Engine, No. 1
or 250A, 270, 311, 312

REPRESENTATIVE OF HIGH QUALITY ENGINE DESIGN

When the Sabre 250 was introduced, it made you feel like you had bought a high performance, top quality diesel engine. Since then, the engine has proved itself in many water applications. As a result, it has become the standard engine choice for military, commercial and pleasure applications, not only for its ruggedness and maintenance economy, but for its performance of 2,000 hours per year.

The specification of the Sabre 250 has been the measure of the size and the reliability and long life of all high speed diesel engines. It has been distinguished by its quality, ruggedness and performance which incorporate many design improvements.

The power of the engine is reflected in the combination of a naturally designed scavenging system, variable injection timing, an air to fuel ratio fuel injection system, mechanical governor, clean cooling by design. The engine's rugged construction, high torque output, low fuel consumption, and low operating temperatures are the primary characteristics of this engine.

High speed engines are used throughout the world in the marine use of the Sabre 250. It is used in the construction of the world's most advanced motor yachts, in the construction of the world's most advanced motor yachts, and in the construction of the world's most advanced motor yachts.

Engine design has been put to the test in all forms of racing, including the world's most advanced motor yachts, and in the construction of the world's most advanced motor yachts.

Improving engine performance and engine output are possible.



Only when you install Sabre on your Sabre Caterpillar Diesel Marine Engine, No. 1 or 250A, 270, 311, 312



Photo courtesy of Sabre

SABRE
MARINE ENGINES

SPECIFICATION BARBER D38

Type	Vertical shaft industrial diesel engine
Rating	200 hp (149 kW) @ 1500 rpm
Model	Model D 38
Stroke	7 (219 mm)
Cylinder	4 (vertical)
Compression Ratio	14.7:1
Firing Order	1-3-4-2
Fuel Injection	Direct injection with long fuel injection lines
Method of Starting	Electric with 24 volt or 120 volt AC, depending on configuration
Cooling System	Water cooled with 2 pumps, 2 fans, expansion tank, radiator, fan drive, water pump, and thermostat
Transmission	Optional integral shaft mounted gear drive, 50:1 gearbox
Electric	Optional generator and alternator, starter
Net Weight	1100 lbs (500 kg) (without generator)



SHIPPING DETAILS

Close tolerance construction

Available in 1500, 1800, 2100, 2400, 2700, 3000 rpm

Overweight 1100 lbs (500 kg)



BARBER ENGINEERS LTD

Waltham, Massachusetts 01955, U.S.A.
Tel: 617 892 2000

SABRE 275

HIGH PERFORMANCE MARINE DIESEL ENGINE



For more information, contact your local distributor or write to Cummins Engine Company, P.O. Box 300, Columbus, Indiana 47324.

HIGH OUTPUT FOR FAST PAYLOADS

The new Sabre 275's strength, quietness, high-speed operation, its built-in turbo-charger efficiency, speed, torque, and easy maintenance combine to make it the most powerful, most maneuverable, most fuel-efficient, and most economical marine diesel engine available. It's the only engine that does it all.

The high-torque efficiency Sabre 275 has been developed from several years experience of operating engines at similar high-speeds with engine manufacturers' standard ratings for speed and torque.

Because of the high power output, the Sabre 275's torque capacity allows for a wide speed range, allowing you to choose the most efficient speed for your load. The Sabre 275's torque capacity allows you to operate at a lower speed than other engines, which means you can save fuel and wear on your engine. The Sabre 275's torque capacity also allows you to operate at a higher speed than other engines, which means you can save time and wear on your engine.

For easy maintenance, the Sabre 275's engine is designed to be easily accessible from the side of the boat. The engine is also designed to be easily accessible from the top of the boat. The Sabre 275's engine is also designed to be easily accessible from the bottom of the boat. The Sabre 275's engine is also designed to be easily accessible from the front of the boat.



QUALITY CONTROL is a major concern for Cummins. Each engine is run on a dynamometer test bed. This procedure allows us to control the engine's performance.



Production engineering

SABRE

DESCRIPTION TABLE 275

Model	275
Rating	14.000 hp (10.297 kW) at 3600 rpm
Model	275
Weight	100 lb (45.36 kg)
Length	18 1/2 in (468.5 mm)
Height	18 1/2 in (468.5 mm)
Width	18 1/2 in (468.5 mm)
Minimum Fueling	1.0 gpm (37.85 l/hr) at 1500 rpm
Operating Fueling	1.0 gpm (37.85 l/hr) at 1500 rpm
Maximum Fueling	1.0 gpm (37.85 l/hr) at 1500 rpm
Operating Fueling	1.0 gpm (37.85 l/hr) at 1500 rpm
Minimum Fueling	1.0 gpm (37.85 l/hr) at 1500 rpm
Operating Fueling	1.0 gpm (37.85 l/hr) at 1500 rpm
Maximum Fueling	1.0 gpm (37.85 l/hr) at 1500 rpm
Operating Fueling	1.0 gpm (37.85 l/hr) at 1500 rpm
Minimum Fueling	1.0 gpm (37.85 l/hr) at 1500 rpm
Operating Fueling	1.0 gpm (37.85 l/hr) at 1500 rpm
Maximum Fueling	1.0 gpm (37.85 l/hr) at 1500 rpm
Operating Fueling	1.0 gpm (37.85 l/hr) at 1500 rpm



SHIPPING DETAILS

Shipping Weight	100 lb (45.36 kg)
Shipping Dimensions	20 1/2 in (518 mm) x 18 1/2 in (468.5 mm) x 18 1/2 in (468.5 mm)
Net Weight	75 lb (34.0 kg)



7467

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 N1L 7C8, Canada