a new concept in marine diesels

- Four cycle, four cylinder 52 H.P. marine engine
- Low profile and lightweight
- New self priming fuel system with electric shut off
- Hi-capacity heat exchanger with removable end caps and zinc electrode
- Fresh water cooled manifold with front or rear exhaust openings and a remote recovery tank for visible coolant monitoring.
- Heavy flywheel, precision balanced, for that steam engine effect
- Tuned air intake silencer for lower noise level

ENGINES: 10.2, 13, 21, 27, 33, 46, 52, 58, 70, 80, 100, 120
A NEW COMPACT DIESEL, 52 HP FOR YACHTS UP TO 55 FT.

CONSTRUCTION

1. Cylinder Head: The special cast-iron cylinder head is precision-cast by the shell moulding process and then soft-gas-nitrided for increased durability. The intake and exhaust ports are arranged for crossflow to raise the intake and exhaust efficiency. The swirl type precombustion chamber is used.

2. Cylinder Block: Weight reduction achieved by technologies of thin wall ductile cast iron and half skirt. The water rail is designed to provide uniform distribution of coolant to the cylinder head. The cylinder liner is of the dry type of precision-cast by the shell moulding process and then soft-gas-nitrided for increased durability. The intake and exhaust ports are arranged for crossflow to raise the intake and exhaust efficiency. The swirl type precombustion chamber is used.

3. Crank Mechanism: The forged crankshaft is supported by 5 bearings. The autothermatic piston of Lo-Ex alloy has a sheet metal cast in its skirt so as to hold the thermal expansion of the piston, thereby making it possible to lessen the piston clearance. The piston pin is offset by 0.5mm. All these improvements ensure quiet operation from low to high speeds.

4. Valve Mechanism: O.H.V. Both intake and exhaust valves are of rotation type for higher durability of the valve seat. Coupled with a friction gear with one extra tooth, the timing gear train is intended to eliminate the backlash at the time of gear engagement to reduce gear noise.

5. Intake and Exhaust System: The intake manifold is of independent branch type for higher intake efficiency.

6. Fuel System: The fuel injection pump is a Bosch VE type distributor pump, small in size and light in weight, contributing toward noise reduction. Since fuel can be cut with the solenoid valve built in the pump, the engine operation can be stopped by turning off the ignition switch.

SPECIFICATIONS

Number of Cylinders & Arrangement .......... 4 in-line
Cylinder Bore & Stroke .................. 3.50 in. x 3.51 in.
Displacement ..................................... 134.8 C.I.D.
Compression Ratio ............................. 21:1
Combustion Chamber ......................... Swirl Type
Firing Order ...................................... 1-3-4-2
Injection Pump ................................. Bosch Distributor Type
Governor ......................................... Mechanical (Built in Pump)
Lubrication Method ............................. Pressure Feed Type
Cooling Method ................................. Fresh Water Cooled
Cold Starting Aid ............................... Glow Plug
Electrical System Voltage .................... 12 Volts
Dry Weight of Engine (w/2:1 Trans.) .......... 627 lbs.
Power Take-off ..................................... Various Crankshaft Pulleys

PERFORMANCE DATA

Maximum Torque ......................... 93.3 ft. lb./2500 r.p.m.
One hour Rating
35 HP/2000 r.p.m., 53 HP/3000 r.p.m., 66 HP/4000 r.p.m.
Continuous Rating
30 HP/2000 r.p.m., 45 HP/3000 r.p.m., 56 HP/4000 r.p.m.
Typical Fuel Consumption Rate ............. .063 US gal/HP/hr
Typical Fuel Consumption Rate at 2500 RPM
when wheeled to turn 3000 RPM .......... 1.7 US gal/hr
Capacity of Lubricant ..................... 5.3 qts.
Capacity of Coolant ....................... 10.5 qts.

STANDARD EQUIPMENT

Clutch and 2:1 Reduction Gear (R.H. Propeller)
Adjustable flexible mounts on 18° centers
Fresh water cooling system
12 volt 55 amperes alternator
Clutch and throttle control brackets
Glow plug cold starting aid
Engine pre-wired with single 8 pin connector
Electric shut off
Operators manual
Alarm, low oil pressure, high water temperature
Water Injected Exhaust Elbow
Lube Oil Drain Hose
Flowcontroller-for easy connection of domestic hot water heater

OPTIONAL EQUIPMENT

Various accessory front pulleys
Hydro-Hush Muffler
Sea Water Strainer
Alternator Output Splitter
Additional 55 amp. alternator
Primary 90 amp. alternator
18/20/22½” mounting centers
Remote mounting lube oil filter
Five function Electric Instrument Panel including Hour Meter and Tachometer
A wide variety of manual and hydraulic transmissions are available in various reduction gears and vee drives.
Front exhaust outlet for Vee Drive applications

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Cable: Westcorp, Avon, Telex: 92-4444
Westerbeke

W-52

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Fresh Water Cooled Diesels from Westerbeke.
A NEW COMPACT DIESEL, 52 HP FOR YACHTS UP TO 55 FT.

CONSTRUCTION

1. Cylinder Head: The special cast-iron cylinder head is precision-cast by the shell moulding process and then soft-gas-nitrided for increased durability. The intake and exhaust ports are arranged for crossflow to raise the intake and exhaust efficiency. The swirl type precombustion chamber is used. Quick seating and good oil retention, thus increasing wear, are arranged for cross flow to raise the intake and exhaust efficiency. The cylinder liner is of the dry type of high-precision-cast by the shell moulding process and then soft-gas-nitrided for increased durability. The intake and exhaust ports are phosphorus cast iron, which is given special honing to provide resistance.

2. Cylinder Block: Weight reduction achieved by technologies of thin wall ductile cast iron and half skirt. The water rail is designed to provide uniform distribution of coolant to the cylinder head. The cylinder liner is of the dry type of high-phosphorus cast iron, which is given special honing to provide quick seating, and good oil retention, thus increasing wear resistance.

3. Crank Mechanism: The forged crankshaft is supported by 5 bearings. The autothermal piston of Lo-Ex alloy has a sheet metal cast in its skirt so as to hold the thermal expansion of the piston, thereby making it possible to lessen the piston clearance. The piston pin is offset by 0.5mm. All these improvements ensure quiet operation from low to high speeds.

4. Valve Mechanism: O.H.V. Both intake and exhaust valves are of rotation type for higher durability of the valve seat. Coupled with a friction gear with one extra tooth, the timing gear train is intended to eliminate the backlash at the time of gear engagement to reduce gear noise.

5. Intake and Exhaust System: The intake manifold is of independent branch type for higher intake efficiency.

6. Fuel System: The fuel injection pump is a Bosch VE type distributor pump, small in size and light in weight, contributing toward noise reduction. Since fuel can be cut with the solenoid valve built in the pump, the engine operation can be stopped by turning off the ignition switch.

SPECIFICATIONS

- Number of Cylinders & Arrangement: 4 in-line
- Cylinder Bore & Stroke: 3.50 in. × 3.51 in.
- Displacement: 134.8 C.I.D.
- Compression Ratio: 21:1
- Combustion Chamber: Swirl Type
- Firing Order: 1-3-4-2
- Injection Pump: Bosch Distributor Type
- Governor: Mechanical (Built in Pump)
- Lubrication Method: Pressure Feed Type
- Cooling Method: Fresh Water Cooled
- Cold Starting Aid: Glow Plug
- Electrical System Voltage: 12 Volts
- Dry Weight of Engine (w/2:1 Trans): 627 lbs.
- Power Take-off: Various Crankshaft Pulleys

PERFORMANCE DATA

- Maximum Torque: 93.3 lb./2500 r.p.m.
- One hour Rating: 35 HP/2000 r.p.m., 53 HP/3000 r.p.m., 66 HP/4000 r.p.m.
- Continuous Rating: 30 HP/2000 r.p.m., 45 HP/3000 r.p.m., 56 HP/4000 r.p.m.
- Typical Fuel Consumption Rate: .063 US gal/HP/hr
- Typical Fuel Consumption Rate at 2500 RPM: 1.7 US gal/hr
- Capacity of Lubricant: 5.3 qts.
- Capacity of Coolant: 10.5 qts.

STANDARD EQUIPMENT

- Clutch and 2:1 Reduction Gear (R.H. Propeller)
- Adjustable flexible mounts on 18" centers
- Fresh water cooling system
- 12 volt 55 amper alternator
- Engine pre-wired with single 8 pin connector
- Electric shut off
- Operators manual
- Alarm, low oil pressure, high water temperature
- Water Injected Exhaust Elbow
- Lube Oil Drain Hose
- Flowcontroller-for easy connection of domestic hot water heater

OPTIONAL EQUIPMENT

- Various accessory front pulleys
- Hydro-Hush Muffler
- Sea Water Strainer
- Alternator Output Splitter
- Additional 55 amp. alternator
- Primary 90 amp. alternator
- 18/20/22½" mounting centers
- Remote mounting lube oil filter
- Five function Electric Instrument Panel including Hour Meter and Tachometer

A wide variety of manual and hydraulic transmissions are available in various reduction gears and vee drives.

Front exhaust outlet for Vee Drive applications

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- Cylinder Bore & Stroke: 3.50 in x 3.51 in
- Displacement: 134.8 in³
- Compression Ratio: 21.0
- Combustion Chamber: Swirl Type
- Firing Order: 1-3-4-2
- Injection Pump: Bosch Distributor Type
- Governor: Mechanical (Built in Pump)
- Lubrication Method: Pressure Feed Type
- Cooling Method: Fresh Water Cooled
- Cold Starting Aid: Glow Plug
- Electrical System Voltage: 12 Volts
- Dry Weight of Engine (w/ 2:1 Trans.): 627 lbs
- Power Take-off: Various Crankshaft Pulleys

PERFORMANCE DATA
- Maximum Torque: 53PS/2000 r.p.m., 56.5PS/4000 r.p.m.
- One hour Rated Power Output: 35PS/2000 r.p.m., 65.5PS/4000 r.p.m.
- Continuous Rated Power Output: 30PS/2000 r.p.m., 56.5PS/4000 r.p.m.
- Specific Fuel Consumption: 0.413 lb./HP-hr
- Capacity of Lubricant: 10.5 qt.
- Capacity of Coolant: 760mm Hg, temp 20°C, humidity 65%
- *Performance is based on JIS standard atmospheric condition without cooling fan. Conversion to BHP is to be made at 1 HP = 0.9859 PS.

STANDARD EQUIPMENT
- Direct drive hydraulic transmission
- Adjustable flex isolator engine mounts (18" on centre)
- Fresh water cooling system
- 12 volt 55 ampere alternator
- Throttle, stop, and shift control brackets
- Glow plug cold weather starting aid
- Engine pre-wired at the factory with a single 8 pin connector
- Operators manual

OPTIONAL EQUIPMENT
- Various accessory front pulleys
- Water Injected Exhaust Elbow
- Hydro-Hush Muffler
- Sea Water Strainer
- Alternator Output Splitter
- Five function Electric Instrument Panel including Hour Meter and Tachometer
- Short Profile Reduction Gears, Paragon or Warner Transmissions
- Front exhaust outlet for Vee Drive applications

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