

Features and Benefits

Engine Block

- Four cylinder, four cycle, in-line, liquid cooled, overhead valve, marine diesels with heavy-duty industrial engine blocks.
- Replaceable, wet cylinder liners for long life, lower rebuild costs.
- Bimetallic valves have chrome plated stems and rotators. Replaceable valve seats and guides.
- Balanced crankshaft with induction hardened journals and rolled fillets.
- Two gear-driven, counter-rotating, balancing shafts for smooth operation.
- Three ring aluminum alloy pistons with Ni-Resist insert for the top ring. Keystone piston ring reduces carbon buildup under light loads.
- Self adjusting, poly-vee drive belt powers the alternator and jacket water coolant pump.

Direct Fuel Injection System

- **L1064T1**: Mechanical rotary fuel injection pump. Automatic timing advance for cleaner exhaust during start up and under light loads.
- **L1064A**: Engine control unit (1) electronically controls rotary fuel injection pump (2) for higher injection pressures, variable injection timing and precise fuel metering for higher power output with lower emissions.
- Ring clamp fuel filter with air bleed and drain.
- Diaphragm-type, mechanically driven fuel transfer pump with manual priming lever.

Air System

- Dry air filter silences air intake noise.
- **L1064T1** is turbocharged.
- **L1064A** is turbocharged and aftercooled to increase output. Turbocharger (1) turbine housing is jacket water cooled for safety. Aftercooler has aircraft quality, 70/30 cupronickel, two pass element (2). Oval water tubes are easy to clean and promote better heat transfer than round tubes. Corrugated air cooling fin design supports tubes better than plate fin type. Seawater piping (3) is cast bronze and stainless steel; water never touches the cast aluminum air ducts (4). No gaskets; all components are machined and have o-ring seals. Seawater direct from the gear driven pump, for maximum cooling.

Cooling System

- Jacket-water cooling has two thermostats for safety and quicker engine warm-ups.
- Cast iron expansion tank has no welds to break. Large brass filler neck for easy filling.
- Cast-iron exhaust manifold has double pass jacket water flow for even temperature control, fast warm-up and no hot spots.
- Heat exchanger cooling has: Gear driven, flexible impeller seawater pump. Easy to clean, tube-type, cupro-nickel heat exchanger. Zinc anode electrolysis protection.
- **L1064T1** available in keel cooled version.

Lubrication System

- 250 hour oil change.
- Positive displacement gear-type oil pump.
- Oil spray cooling reduces piston crown temperature for longer life.
- Plate-type, full jacket-water flow oil cooler reduces heat and thermal breakdown of oil.
- Full flow, spin-on oil filter.
- Cast aluminum, rocker cover traps valve noise. It's also a closed loop crankcase vent to keep oil mist inside the engine.

ESP and DC Electrical System

- Standard 12 volt, negative ground, DC system has circuit breaker, starter motor and battery charging alternator with regulator.
- **L1064A**: The Electronic System Profiler (ESP) supplies an SAE J1939 engine information data stream through a CANbus plug for optional monitor.
- Instrument panel has tachometer, DC volt meter, hour meter, coolant temperature gauge, oil pressure gauge, stop button, key switch and gauge light rheostat. Warning lights and audible alarm for low oil pressure and high water temperature. Installation of main and optional panels is plug-in simple.
- Engine and panel are prewired. 20-foot wire harness with plug-ins is standard.

Special Equipment

- Cast iron, centerline mounting brackets.
- Belt guard protects operator.
- Sparkling, white IMRON® polyurethane paint.
- Operator's and parts manuals on CD-ROM.

Options and Accessories

- **L1064A**: Electronic System Profile (ESP) monitor keeps you in touch with your engine's operating condition.
- DC systems: 12 volt isolated ground. 24 volt standard and isolated ground.
- Flybridge and auxilliary panels. Plug-in installation.
- Coolant level sensor/alarm.
- Alternators:
12 volt/90 amps, 12 volt/140amps, 24 volt/75amps as a second alternator or in place of the original.
- Wet and dry exhaust elbows. Dry exhaust flex. Fiberglass water lift exhaust muffler.
- Crankshaft pulleys: 3-A/B or 4-A grooves.
- Twin Disc® or ZF® marine gears. Trolling valves. Shaft couplings.
- Vibration isolating engine mounts.
- Spare parts kits.
- Racor® fuel filters.
- High capacity front PTO (power take off) with a 12 volt or 24 volt electric clutch and an SAE B or C splined hydraulic pump mount pad. At the touch of a button you have power to power your vessel's hydraulic auxiliary systems. Maximum torque: L1064T1 = 168 ft lbs, L1064A = 306 ft lbs.

Dealer

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L1064 Series

General Specifications and Dimensions

| Model Number | L1064T1 | L1064A |
|------------------------------------------|----------------------|-----------------------|
| High Output Rating - fwhp (kW) @ rpm | n/a | 140 hp (104) 2400 |
| Medium Duty Rating - fwhp (kW) @ rpm | n/a | 125 hp (93) 2200 |
| Continuous Duty Rating - fwhp (kW) @ rpm | 100 (75) @ 2500 | 115 hp (85) 2000 |
| Cylinders | 4 Inline | 4 Inline |
| Displacement - CID (ltr) | 276 (4.5) | 276 (4.5) |
| Operating Cycle / Aspiration | 4 / Turbocharged | 4 / Turbo-Aftercooled |
| Bore x Stroke - in (mm) | 4.19 x 5 (106 x 127) | 4.19 x 5 (106 x 127) |

Cooling (General)

| | | |
|-----------------------------------------------|-----------------|-----------------|
| Jacket-water circ pump flow - gpm (lpm) / rpm | 53 (200) / 2500 | 51 (192) / 2400 |
| Heat rejection to jacket water - BTU/min | 3465 | 6147 |

Cooling (Heat Exchanger) available on all models, all ratings.

| | | |
|-------------------------------------------------|---------------|----------------|
| Raw water intake and discharge dia. - inch (mm) | 1.25 (32) | 2 (51) |
| Raw water pump flow - gpm (lpm) / rpm | 31 (117) 2500 | 53(200) / 2400 |
| Raw water pump max. suction head - in (m) | 39 (1) | 39 (1) |
| Maximum raw water temp. at inlet - °F (°C) | 86° (30°) | 86° (30°) |
| Freshwater system capacity - US gal (ltr) | 5.5 (21) | 5.5 (21) |

Cooling (Keel Cooled) available on L1064D only.

*Based on 70° F seawater and minimum full boat speed of 8 kts. Return water from keel cooler 70-130° F.

| | | |
|--------------------------------------------------------|-----------------------|-----------------|
| Water hose inside diameter - in (mm) | 2-3/8 (60) | HE cooling only |
| Head diameter - in NPT | 1-1/2 | HE cooling only |
| Turbo tube length - ft (m) | 18 (6) | HE cooling only |
| One inch plain round tube length - ft (m) | 42 (12.75) | HE cooling only |
| Skin cooler aluminum / steel - sq ft (m ²) | 18 (1.65) / 60 (5.55) | HE cooling only |

Electrical

| | | |
|-----------------------------------------|-----------|-----------|
| Min. 12V battery capacity - amp hrs/CCA | 180 / 640 | 180 / 640 |
| Battery cable size up to 10 ft run | "00" | "00" |
| Standard panel harness length - ft (m) | 20 (6) | 20 (6) |

Air and Exhaust

| | | |
|----------------------------------------------------------|------------------|-------------------|
| Engine air consumption - cfm (m ³ /min)/rpm | 254 (7.2) / 2500 | 360 (10.2) / 2400 |
| Minimum engine room vent area - sq in (m ²) | 73 (.047) | 105 (0.06) |
| Exhaust gas flow at - cfm (m ³ /min)/rpm | 544 (15.3) | 858 (24.3) / 2400 |
| Exhaust gas temperature - °F (°C)/rpm | 1184 (640) 2500 | 887 (475) / 2400 |
| Maximum exhaust back pressure - in (mm) H ₂ O | 30 (762) | 30 (762) |
| Suggested dry/wet exhaust I.D. - in (mm) | 3 (75) / 5 (127) | 3 (75) / 5 (127) |

Fuel and Oil

| | | |
|------------------------------------------------|-------------|-------------|
| Minimum fuel suction and return line - in (mm) | 3/8 (10) | 3/8 (10) |
| Maximum fuel pump head - in (m) | 39 (1) | 39 (1) |
| Crankcase oil capacity - US qts (ltr) | 21.7 (20.5) | 21.7 (20.5) |

Other Data

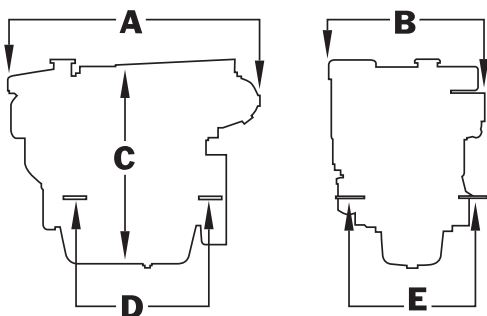
| | | |
|---------------------------------------------|--------------------|--------------------|
| Engine rotation (facing flywheel) | Counter-Clockwise | Counter-Clockwise |
| Flywheel housing size - SAE # | SAE 4 | SAE 4 |
| Optional front PTO size - SAE #/ Max Torque | SAE 5 / 168 ft lbs | SAE 5 / 306 ft lbs |
| Max. operating down angle front/rear | 0° / 12° | 0° / 12° |

Dimensions and Weight

NOT intended for installation. Contact factory for installation drawings.

Approximate Weight

| | | |
|------------------------------------------------------|------------|------------|
| Heat exchanger cooled dry weight w/o gear - lbs (kg) | 1190 (540) | 1250 (567) |
| Keel Cooled dry weight w/o gear - lbs (kg) | 1160 (526) | n/a |



| Dimensions: | L1064T1 | L1064A |
|-------------------------|--------------|----------------|
| A length in(mm) | 40.48 (1028) | 45.05 (1144.3) |
| B width in(mm) | 32.66 (830) | 29.42 (747.3) |
| C height in(mm) | 35.93 (911) | 35.93 (912.6) |
| D mounts in(mm) | 24.2(614.6) | 24.2 (614.7) |
| E mounts in(mm) | 24.0 (609.6) | 24.0 (609.6) |
| Dry Weight: | L1064T1 | L1064A |
| Heat Exchanged lbs (kg) | 1190 (540) | 1250 (567) |
| Keel cooled lbs(kg) | 1160 (526) | n/a |

Weights do not include gear or options. Dimensions subject to change without notice.