

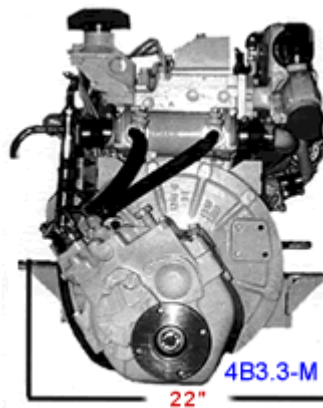
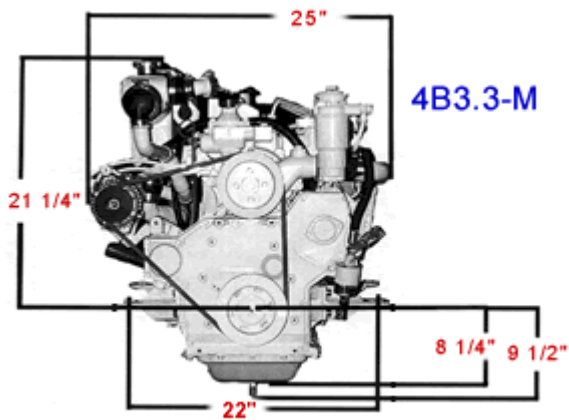
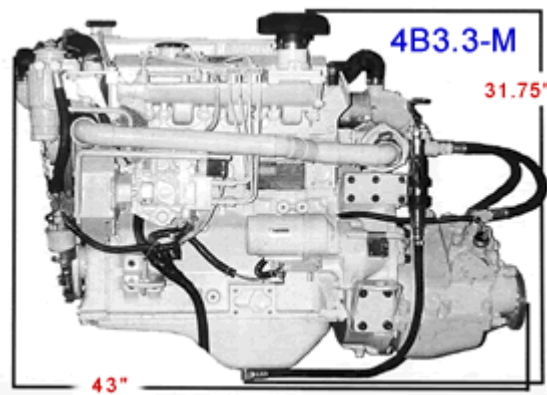
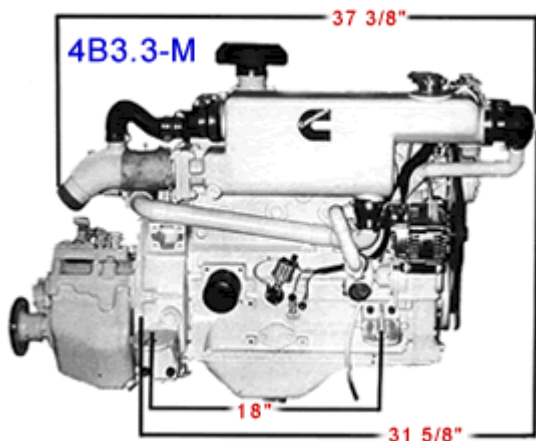


**TRANS ATLANTIC
DIESELS, INC.**

Trans Atlantic Diesels, Inc.
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CUMMINS 4B3.3M INSTALLATION GUIDE & SPECIFICATIONS

4B3.3M DIMENSIONS





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CUMMINS 4B3.3M SPECIFICATIONS - GENERAL ENGINE DATA

Engine Model: 4B3.3-M	Rating Type: Intermittent
Rated Engine Power: 65 bhp (48.5kw)	Rated Engine Speed: 2600 RPM
High Idle Speed Range (No Load): 2850 RPM	Idle Speed: 800 RPM
Engine Torque: 131.3 ft.lb (179 Nm)	Brake Mean Effective Pressure: 99.5 psi (687 kPa)
Piston Speed: 1963 ft/min (9.9 m/sec)	Average Noise Level: 94 dBA @ 1M
Firing Order: 1 - 3 - 4 - 2	Number of Cylinders: Four
Configuration: In-Line	Aspiration: Natural
Bore: 3.74 in. (95 mm)	Stroke: 4.53 in. (115 mm)
Displacement: 3.3 L (199 in. ³)	Cycle: 4 Stroke
Compression Ratio: 18.8:1	Direction of Rotation Viewed at Flywheel End: CCW
Total Weight - Dry - Less Gear: 554 lbs.	Total Weight - Dry - Including PRM Gear: 660 lbs.
Total Weight Dry Including Hurth HBW 250 Gear: 594 lbs.	Total Weight - Wet - Including PRM Gear: 700 lbs.



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CUMMINS 4B3.3M - FUEL SYSTEM

Fuel Pump Type: Zexel VE	Injectors: Zexel
Max Fuel Consumption @ Rated RPM: 3.43 GPH (12.99 L/hr)	Approx. Fuel Flow to Pump @ Max RPM: 6.7 GPH (25.4 L/hr)
Lift Pump Type (USCG Approved): Electric	Lift Pump - Lift Capacity: 6 Ft. (2.1 M)
Lift Pump Flow Rate: 26 GPH (98.4 LPH) @ 3.5 psi* (24.1 kPa)	Fuel Supply Line Restriction (Max): 3.0 in Hg. (76.2 mm Hg.)
Fuel Return Line Restriction (Max): 15 in. Hg. (381 mm Hg.)	Fuel Supply Line Size (Min): 1/4 in. (6.4 mm) ID
Fuel Return Line Size (Min): 1/4 in. (6.4 mm) ID	Fuel Filter Change Interval: 500 Hours
Heat Rejection to Fuel: 28 BTU/Min. (0.5 kW)	Governor Droop: 9%

*** Normal operating pressure 3.5 psi, minimum 2.5, maximum shutoff 4 psi**

CUMMINS 4B3.3M - EXHAUST SYSTEM

Maximum Exhaust Back Pressure: 3.0 in. Hg. (75 mm Hg.)
Exhaust Gas Flow: 324 CFM (153 L/sec)
Maximum Allowable Static Bending Moment @ Exhaust MFD Flange : 14.8 lb.ft. (20 N-m)
Exhaust Gas Temperature: 1117° F (603° C)
Minimum Rise Sea Water Line to Exhaust Outlet: 12 in. (304.8 mm)
Recommended Minimum Exhaust Pipe Size: Outlet 2.5 in. (63.5 mm) OD



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CUMMINS 4B3.3M - INTAKE AIR SYSTEM

Intake Air Flow: 119 CFM (56 L/sec)

Intake Manifold Pressure: -0.3 in. Hg. (-8 mm Hg)

Maximum Engine Compartment Air Temperature: 140° F (60° C)

Maximum Air Temperature at Engine Inlet: 122° F (52° C)

Minimum Cross Section of Air Duct / Engine: 37 sq. in. (233 sq. mm)

Heat Rejection to Ambient: 950 BTU / min (16.7 kW)

CUMMINS 4B3.3M - LUBRICATION SYSTEM

Recommended Lube Oil: SAE 15W40, API CH4

Oil Pressure at Idle Speed - Minimum: 31.2 psi (215 kPa)

Oil Pressure at Normal Operating Range: 68 psi (469 kPa)

Maximum Allowable Oil Temperature: 248° F (120° C)

Oil Pan Capacity: 1.9 Gal US (7.0 L)

Total System Capacity: 1.914 Gal US (7.5 L)

Maximum Operation Angularity of Oil Pan: Front Up- 35° Front Down- 35° Side to Side- 35°

Low Oil Pressure Switch Setting: 15 psi (103 kPa)

Lube Oil Filter Change Interval: 250 Hours



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CUMMINS 4B3.3M - COOLING SYSTEM

Coolant Capacity - Engine Only: 1.2 Gal US (4.5L)

Coolant Capacity - Engine & Heat Exchanger: 2.9 Gal US (11L)

Maximum External Pressure Loss in Cooling System: 5.0 psi (35 kPa)

Standard Thermostat (modulating) Range: 180 - 203° F (82 - 95° C)

Maximum Coolant Temperature: 212° F (100° C)

Pressure Cap Setting at Sea Level: 7 psi (48 kPa)

Fresh Water Flow: 34.9 GPH (132.3 LPH)

Minimum Coolant Makeup Capacity: 2.4 Qts. US (2.2 Litre)

Minimum Raw Water Pump Inlet Plumbing Diameter: 1.25" (32 mm)

Minimum Raw Water Pump Inlet Restriction: 5 in. Hg. (127 mm Hg.)

Maximum Raw Water Pump Initial Suction Lift: 6 ft. (2.1 M)

Maximum Raw Water Pump Flow: 36.2 GPM (137 LPM)* * With 1.25" Inlet on Pump

Heat Rejection to Coolant: 1610 BTU / min. (28.3 kW)

High Water Temperature Switch Setting (VDO): 205° F (96° C)

CUMMINS 4B3.3M - ELECTRICAL SYSTEM

Minimum Recommended Battery Capacity - Cold Soak @ 0° F (-18° C): 550 CCA

Reserve Capacity Minutes: 135

Maximum Allowable Resistance of Starting Circuit: 0012 Ohms

Starter Motor: Nippondenso 12V

Alternator: Nippondenso 12V, 60 Amp

Fuel Solenoid Type: Energize to Run

Fuel Solenoid Current: 1.7 Amps