

# Cummins Engine Company, Inc.

## Marine Engine General Data Sheet

Marine

Pg. No.

**6B**

**21**

Engine Model: 6B/6BT/6BTA-M

Data Sheet: DS-4960

Date: 18Feb02

### General Engine Data

### Metric [U.S. Customary]

Type .....		4 cycle, Inline, 6 cylinder
Bore & Stroke .....	mm [in.]	102 [4.02] x 119 [4.72]
Displacement .....	litre [in. <sup>3</sup> ]	5.9 [359]
C.G. Distance from Front Face of Block (Engine Only) .....	mm [in.]	338 [13.3]
C.G. Distance above Crankshaft Centerline (Engine Only) .....	mm [in.]	168 [6.6]

### Engine Mounting

Maximum Allowable Bending Moment at Rear Face of Block .....	N•m [lb-ft]	1356 [1000]
Minimum/Maximum Static Installation Angle for In-line Drives (Front Up) .....	Degrees	0 / 12
Minimum/Maximum Static Installation Angle for V drives (Front Up) .....	Degrees	3 / 12

Note: Front up refers to front of engines. In V-Drives it faces the back of the boat.

### Fuel System

Maximum Allowable Restriction to Fuel Pump - With Clean Filter .....	mm Hg [in. Hg]	63.5 [2.5]
Maximum Allowable Restriction to Fuel Pump - With Dirty Filter .....	mm Hg [in. Hg]	100 [4]
Maximum Allowable Return Line Pressure - 6B/6BT .....	mm Hg [in. Hg]	259 [10.2]
Maximum Allowable Return Line Pressure - 6BTA .....	mm Hg [in. Hg]	518 [20.4]

### Exhaust System

Maximum Allowable Back Pressure .....	mm Hg [in. Hg]	75 [3]
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### Air Induction System

Maximum Allowable Intake Restriction		
6B Clean/Dirty Element .....	mm H <sub>2</sub> O [in. H <sub>2</sub> O]	254 / 508 [10 / 20]
6BT/6BTA Clean/Dirty Element .....	mm H <sub>2</sub> O [in. H <sub>2</sub> O]	380 / 635 [15 / 25]
Maximum Allowable Engine Intake $\Delta T$		
Engine Intake Air-Ambient Air At Rated Condition .....	°C [°F]	17 [30]

### Lubrication System

Oil Pressure		
At Idle Speed-Minimum .....	kPa [PSI]	69 [10]
Normal Operating Range .....	kPa [PSI]	207 - 448 [30 - 65]
Maximum Allowable Sump Oil Temperature ( <b>Sump</b> ) .....	°C [°F]	120 [250]
Oil Pan Capacity High/Low .....	litre [U.S. qts]	14.1 / 12.3 [15 / 13]
Total System Capacity .....	litre [U.S. qts]	15 [16]
Maximum Operational Angularity of Oil Pan (See Engine Mounting)		
Front Down .....	Degrees	15
Front Up .....	Degrees	45
Side-to-Side .....	Degrees	35

### Cooling System

Coolant Capacity - Engine Only .....	litre [U.S. qts]	12.9 [13.6]
Coolant Capacity - Engine with Heat Exchanger .....	litre [U.S. qts]	20.6 [21.6]
Maximum External Pressure Loss in Cooling System .....	kPa [PSI]	35 [5]
Maximum Static Pressure of Coolant (exclusive of Pressure Cap) .....	kPa [PSI]	103 [15]
Standard Thermostat (modulating) Range .....	°C [°F]	83 - 95 [181 - 203]
Maximum Coolant Temperature .....	°C [°F]	96 [205]
Minimum Allowable Coolant Expansion Space .....	% of System Capacity	5
Minimum Coolant Makeup Capacity .....	litre [U.S. qts]	2.4 [2.7]
Maximum Sea Water Pressure .....	kPa [PSI]	103 [15]

**Sea Water Pump Specifications..... Refer to MAB 0.08.17-07/16/2001**

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COLUMBUS, INDIANA**

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### Electrical System

	<u>12V</u>	<u>24V</u>
Minimum Recommended Battery Capacity		
6B/6BT/6BTA-M Cold Soak at -18°C (0°F)..... Cold Cranking Amperes (CCA)	950	475
Cold Soak at 0°C (32°F) ..... Marine Cranking Amperes (MCA)	1188	595
6BTA (SW) Cold Soak at -18°C (0°F)..... Cold Cranking Amperes (CCA)	1100	550
Cold Soak at 0°C (32°F) ..... Marine Cranking Amperes (MCA)	1375	690
Reserve Capacity ..... minutes	160	160
Voltage Drop.....Volts	0.2	0.4
Maximum Allowable Resistance of Starting Circuit ..... Ohms	0.0012	0.002
Wiring Diagram Number.....	3920281	

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