

# **L6125H** 350-470 Hp

### **Features and Benefits**

#### **Engine Block**

- Komatsu six cylinder, four cycle, four overhead valve, heavy duty industrial engine block.
- Replaceable wet cylinder liners for heat dissipation, enhanced life expectancy and lower rebuild costs.
- Single piece forged steel crankshaft with induction hardened journals. Rigid seven bearing crankshaft support.
- Robust forged steel connecting rods.
- Roller cam followers reduce friction and extend life of valve train.
- Four valves per cylinder for superior "breathing." Double valve springs. Replaceable valve seats and guides. Intake valve rotators provide even wear.
- Nodular cast iron pistons

#### **Cooling System**

- Jacket water heat exchanger has flexible impeller-type seawater pump. Heat exchanger housing has removable end caps. Cupro-nickel tube bundle can be removed for cleaning without disturbing other cooling system components.
- Centrifugal jacket-water pump is gear driven, eliminating issues caused by drive belt failures.
- One piece, cast iron exhaust manifold is jacket-water cooled. No welds to fail. No gasketed connections between water and exhaust passages reduce chances of water entering the cylinders.
- Coolant connections are pipe with o-ring seals to eliminate hoses.
- Two thermostats for safety, quick warm-ups and even temperature control.
- Zinc anodes help prevent electrolysis in heat exchanger cooling system.

#### **Lubrication System**

- Gear type high capacity oil pump.
- Internal oil passages to prevent leaks.
- Plate type, jacket water oil cooler with thermostat. Cooler controls oil temperature. Cooler is integrated into block to eliminate hoses.
- Full flow, spin on oil filter.

### **Options and Accessories**

Use these components to make your Lugger into an integrated power system that fits your vessel's special requirements.

- Flybridge and auxiliary instrument panels with wire harness plug-ins are easy to install.
- · Engine mount stop-start panel.
- 10, 20 and 40 foot wiring harness extensions.
- High output primary alternators: 24V-75A and 24V-100A.
- Add a second alternator:
- 12V-65A, 12V-140A, 24V-35A, 24V-75A.
- DC electrical systems. 24V isolated ground.
- Wet Exhaust: 6" and 8" stainless steel wet exhaust elbow. Rotate 0-15° and 15/75° from vertical.
- Dry exhaust: 5" and 6" dry exhaust elbows. 5" and 6" stainless exhaust flex. Turbo outlet weld flange.

#### Air System

Large capacity aftercooler uses seawater to cool the intake air compressed

by the turbocharger. This dense, cool air provides more efficient combustion, increases horsepower, and meets emissions regulations.

- Turbocharger is liquid cooled for safety. No need to carry heat blankets that can become oil soaked and combustible.
- Large capacity air filter and closed crankcase breather (Airsep® system).

#### Fuel System

- HPCR for better fuel atomization. Centrally mounted electronic injectors for improved fuel economy and faster starts.
- Fuel system design is self-venting
- · Large spin-on fuel filter elements.
- Gear driven, positive displacement mechanical fuel transfer pump.
- Engine mounted primary fuel filter.

#### **Electrical System**

- 24 volt, negative ground, marine grade electrical system includes starter and 24V/40A battery charging alternator. See Accessories column for more alternator options.
- The Engine Control Unit (ECU) is housed in a water resistant module, and controls the electronic fuel injection system. The ECU supplies a SAE J1939 engine information data stream that is accessible through a CANbus plug for the Electronic System Profiler (ESP) monitor screen. Service diagnostics and error codes are automatically stored.

#### **Special Features**

- White polyurethane paint for long life finish and service visibility.
- Operator's and parts manuals standard.

- Oil change pump for engine and gear.
- Duplex Racor primary fuel filters.
- Spare parts kit.
- Twin Disc or ZF gears.

Trolling valves. Shaft couplings.

- Coolant level sensor.
- Chrome valve covers.
- Vibration isolating flexible engine mounts. Sets of 4 or 6.
- · Crankshaft pulleys: 8" 4-A/B or A grooves.
- Front PTO with 12 or 24V electric clutch and SAE C splined,
- 2 or 4 bolt pump mount pad. Provides up to 1,000 ft-lbs of torque for hydraulics.

#### Dealer

4420 14th Ave. NW., Seattle WA 98107 Tel: (206) 789-3880 • 1-800-762-0165 • Fax: (206) 782-5455 Information and dimensions subject to change without notice. Northern Lights and Lugger are registered trademarks of Northern Lights, Inc. © 2013 All rights reserved. Litho USA. S132a 1/13



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### **General Specifications and Dimensions**

Output rating	High Output	Medium Duty	Continous Duty	
FWHP (kW)	470 (350)	440 (328)	350 (261)	
Maximum RPM	2300	2200	1800	
Cylinders/Configuration/Cycle		All: 6 / Inline / 4		
Displacement CID (ltr)		All: 674 (11)		
Aspiration	All: Turbocharged - Aftercooled			
Bore x Stroke in (mm)		All: 4.92 x 5.91 (125 x 150)		
Cooling (Heat Exchanger)				
Seawater pump flow - US gpm (lpm)	74 (280)	71 (269)	58 (219)	
Heat rejection to sea water - BTU-min	13390	11350	8040	
Freshwater system capacity - US gal (ltr)		All: 9 (34)		
Raw water intake dia in (mm)		All: 2 (51)		
Raw water discharge dia in (mm)		All: 2 (51)		
Max. raw water temp. at inlet -°F (°C)		All: 86° (30°)		
Electrical				
Voltage		All: 24V standard ground		
Min. battery capacity		All: 200 amp hours - 800 CCA		
Battery cable size up to 10 ft run		All: 00		
Standard panel harness length - ft (m)		All: 20 ft (6m)		
Air and Exhaust				
Engine air consumption - cfm (m <sup>3</sup> /min)	1024 (29)	936 (26.5)	590 (16.7)	
Exhaust gas flow at - cfm (m <sup>3</sup> /min)	2508 (71)	2323 (66)	1715 (49)	
Exhaust gas temperature -°F (°C)	759 (404)	777 (414)	961 (516)	
Max. exhaust back pressure - in (mm) $H_2^0$		All: 30 (762)		
Suggested dry exhaust I.D in (mm)		All: 6		
Suggested wet exhaust I.D in (mm)		All: 8		
Fuel and Oil				
Minimum fuel suction line - in (mm)		All: 0.5 (12)		
Minimum fuel return line - in (mm)		All: 0.38 (10)		
Maximum fuel pump head - in (m)		All: 39 (1)		
Crankcase oil capacity - US qts (ltr)		All: 34 (32)		
Other Data				
Engine rotation (facing flywheel)		All: Counter-Clockwise		
Flywheel housing size		All: #1 SAE		
Optional front PTO size SAE # - inch		All: 4 -8", 4 -10" or 3 -11.5"		
Maximum operating angle any direction		All: 35° for less than 2 minutes		
Maximum installed operating angle		All: 10° rear down - 0° front down		
Heat Exchanger Weight - without gear		2867 lbs (1300 kg)		

## **Dimensions** NOT intended for installation. Contact factory for installation drawings.



Dimensions	inch (mm)	
Alength	69 (1758)	
B width	33.0 (840)	
C height	45.0 (1143)	
D mounts	44 (1115)	
E mounts	26.5 (673)	

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