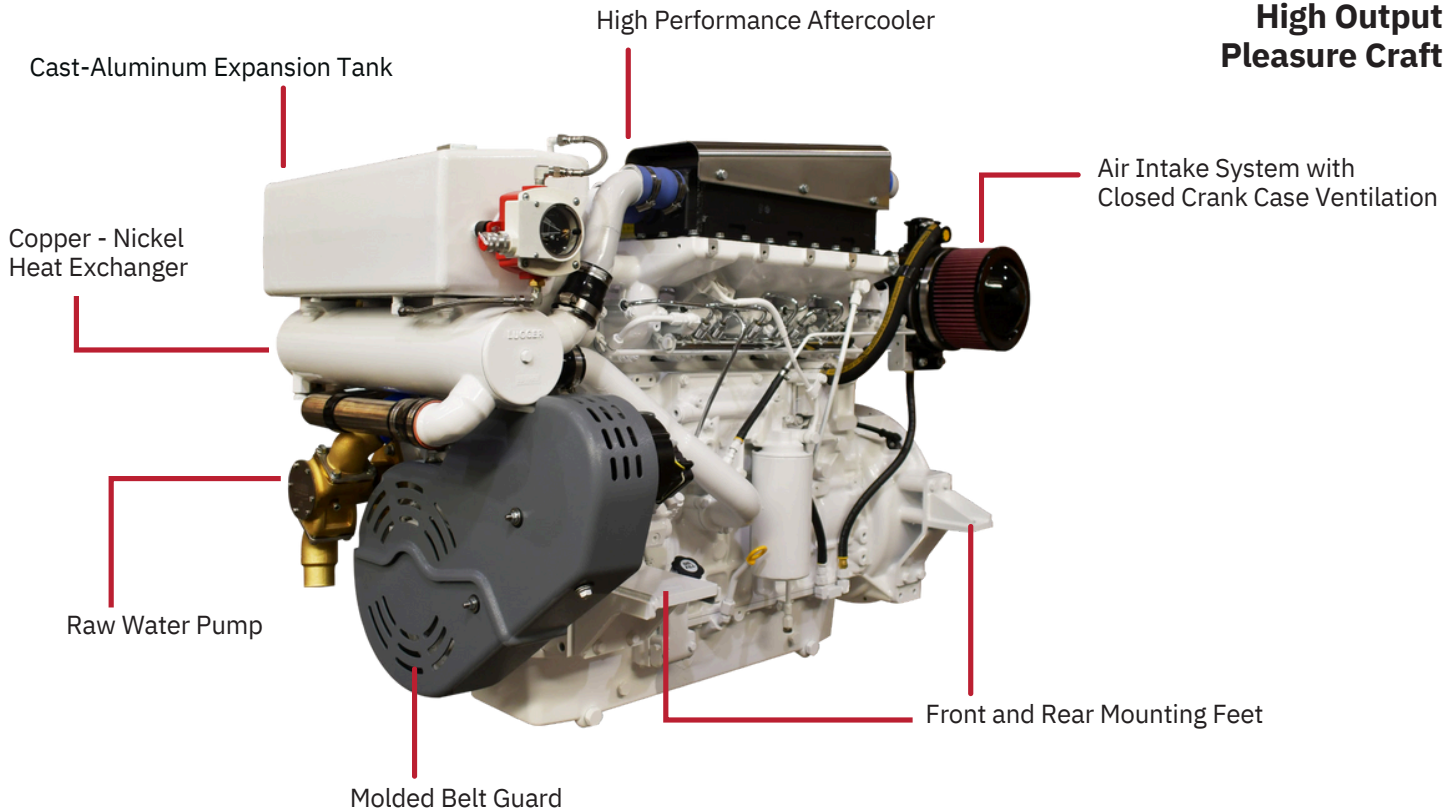




L4105A
Continuous Duty
Medium Duty

L4105H
High Output
Pleasure Craft



FEATURES & BENEFITS

Powered by LUGGER

- Designed for the smallest possible footprint without sacrificing serviceability
- Minimal belts and hoses for longer life
- Reliable cast-iron, gear-driven freshwater and silicon bronze raw water pump

ENGINE BLOCK

- Four cylinder, four cycle, inline, liquid cooled, overhead valve marine diesels with replaceable wet liners
- Forged crankshaft
- Individual cylinder heads for ease of service
- Heavy-duty, plate-type oil cooler
- Shaker pistons with oil gallery for improved cooling and performance

WORLD CLASS FEATURES

- Belt guard for operator safety
- Cast-iron thermostat housing for long life
- Closed loop crank case vent keeps oil vapor inside the engine
- Jacket-water cooled, cast iron exhaust manifold for operator safety and temperature control
- Jacket-water cooled turbocharger turbine housing for safety
- Copper-nickel heat exchanger with removable end covers for easy cleaning
- Sparkling white two-part polyurethane paint
- Operator and parts manual
- Optional stainless steel, wet exhaust elbow rotates for easy installation

Northern Lights, Inc.

4420 14th Ave NW, Seattle, WA 98107

Tel: (206) 789-3880 | (800) 762-0165

www.northern-lights.com

info@northern-lights.com



L4105A / L4105H				
Dimensions and Weight Length - in (mm)				
Width - in (mm)		45 (1143)		
(kg)	Lugger Diesel Engine Data	37.6 (955)		
Cylinder / Aspiration / Operating Cycle		40 (1014)		
Displacement - in³ (ltr) Bore / Stroke - in (mm)		1390 (630)		
Flywheel Housing Size / Flywheel Size				
I-4/Turbo-Aftercooled/4-Stroke				
293 (4.8)				
4.13 (105) / 5.39 (137)				
SAE #3 / 11.5				
	L4105A1	L4105A2	L4105H1	L4105H2
Duty Factor	Continuous Duty	Medium Duty	High Output	Pleasure Craft
Power - FWHP (KW) @ RPM	174 (130) @ 2100	220 (164) @ 2250	270 (201) @2400	300 (224) @2500
Cooling System - Heat Exchanger Standard (Keel-Cooling Optional)				
Aftercooling Type	Jacket-Water	Jacket-Water	Raw Water	Raw Water
Freshwater Pump Capacity - gpm (lpm)	67 (255)	71 (270) 9.77	77 (290)	77 (290)
Heat Exchanger Approx. Cooling Capacity - gal (ltr)	9.77 (37)	(37) 8.3	9.11 (34.5)	9.11
Engine Only Approx. Cooling Capacity - gal (ltr)	8.3 (31.3)	(31.3) 61	7.6 (28.8)	(34.5) 7.6
Raw Water Pump Capacity - gpm (lpm)	56 (211)	(231) 39	62 (235)	(28.8) 63
Max. Raw Water Pump Suction Head Lift - in (mm)	39 (1000)	(1000) 2 (51)	39 (1000)	(238) 39
Raw Water Pump Inlet Hose ID - in (mm)	2 (51)	2 (51)	2 (51) 2	(1000) 2
Min. Raw Water Inlet/ Discharge Thru-Hull - in (mm) 2 (51)			(51)	(51) 2 (51)
DC Electrical				
DC Starting Voltage Standard (Optional)	12 (24)	12 (24)	12 (24)	12 (24)
Min. Battery Capacity - amp hr	90	90	90	90
Min. Battery Size - CCA	750	750	750	750
Starter Rolling Amps - 12V (24V)	420 (225)	420 (225)	420 (225)	420 (225)
12 Volt Battery Cable Size Up to 5ft (1.5m) - mm²	50	50	50	50
Air				
Air Consumption - m³/m (cfm)	11.3 (396)	16 (564)	15.5 (547)	17.2 (609)
Approx. Heat Radiated to Air - BTU/min	1131 787	1430 1076	1755 1053	1950
Exhaust Gas Volume - kg/hr (lbs/min)	(28.9) 418°	(39.5) 404°	(38.7) 492°	1185 (43.5)
Exhaust Gas Temp. - C°(F°)	(784°) 30	(759°) 30	(918°) 30	509° (948°)
Max. Exhaust Back Pressure - in H²O (mm H²O)	(765) 5	(765) 5	(765) 5	30 (765)
Wet Exhaust Elbow OD - in (mm)	(127) 4	(127) 4	(127) 4	5 (127)
Dry Exhaust Elbow - in (mm)	(102)	(102)	(102)	4 (102)
Fuel				
Approx. Fuel Rate at Full Load - gph (lph)	10.5 (39.7)	13.5 (51.1)	15.5 (56.7)	17.6 (66.6)
Fuel Injection Pump Type and Control		Electronic (HPCR)		
Min. Suction Line Size - in (mm)		0.375		
Min. Return Line Size - in (mm)		(9.525)		
Max. Fuel Transfer Pump Suction Lift - ft (m)		0.3728 (1)		
Max. Fuel Flow to Transfer Pump - gph		(9.525)		
Max. Fuel Return Line - psi		5		
Max Engine Operating Angle				
Continuous - Fore/Aft		10°		
Continuous - Side to Side		22.5°		

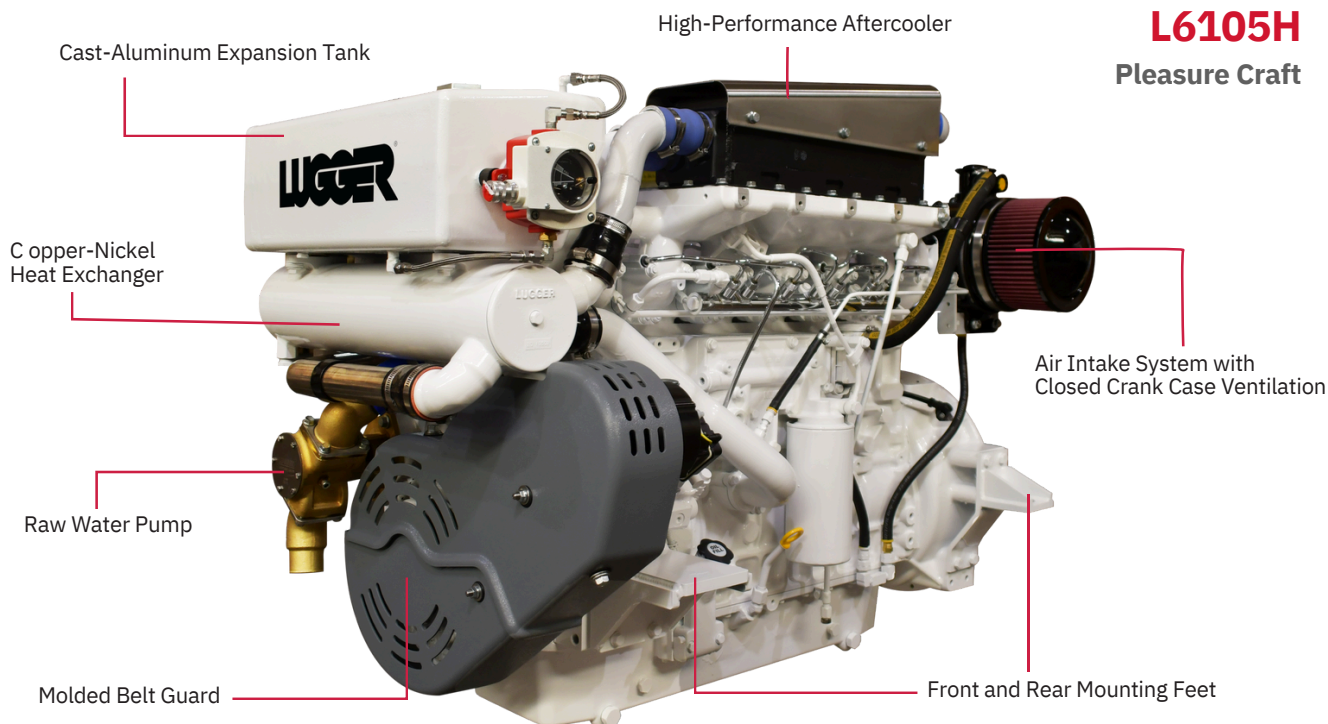


L6105A

Continuous Duty
Medium Duty
High Output

L6105H

Pleasure Craft



FEATURES AND BENEFITS POWERED BY LUGGER

- Designed for smallest possible footprint without sacrificing serviceability
- Minimal belts and hoses for longer life
- Reliable cast-iron, gear driven freshwater and silicon bronze raw water pump, keel-cooling optional for A models

ENGINE BLOCK

- Six cylinder, four cycle, in-line, liquid cooled, overhead valve marine diesels with replaceable wet liners
- Forged crankshaft
- Individual cylinder heads for ease of service
- Naturally smooth operation from the inline six cylinder arrangement
- Heavy duty, plate-type oil cooler
- Ladder frame on lower block easily handles higher power levels
- Shaker pistons with oil gallery for improved cooling and performance
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WORLD CLASS FEATURES

- Belt guard for operator safety
- Cast-iron thermostat housing for long life
- Closed loop crankcase vent keeps oil vapor inside the engine
- Jacket-water cooled, cast iron exhaust manifold for operator safety and temperature control
- Jacket-water cooled turbocharger turbine housing for safety
- Electronically controlled, high pressure common rail, fuel injection system
- Copper-nickel heat exchanger with removable end covers for easy cleaning
- Sparking white two-part polyurethane paint
- Operator and parts manuals
- Optional stainless steel, wet exhaust elbow rotates for easy installation

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L6105A / L6105H

Lugger Diesel Engine Data

Inline Cylinders / Aspiration / Operating Cycle	I-6 / Turbo-Aftercooled / 4 - Stroke
Displacement - in³ (ltr) Bore / Stroke - in (mm)	439 (7.2)
Flywheel Housing Size / Flywheel Size	4.13 (105) / 5.39 (137)
	SAE #3 / 11.5

	L6105A1	L6105A2	L6105A3	L6105H1
Duty Factor	Continuous Duty	Medium Duty	High Output	Pleasure Craft
Power - FWHP (KW) @ RPM	255 (190) @ 2100	315 (235) @ 2250	380 (283) @ 2500	425 (317) @ 2500
Cooling System (Heat Exchanger Standard, Keel-Cooling Optional)				
Aftercooling Type	Jacket-Water	Jacket-Water	Jacket-Water	Raw-Water
Freshwater Pump Capacity - gpm (lpm)	67 (255)	71 (270)	77 (290)	77 (290)
HE Approx. Cooling Capacity - gal (ltr)	11.3 (43)	11.3 (43)	11.3 (43)	10.3 (238)
KC Approx. Cooling Capacity - gal (ltr)	9.9 (32.5)	9.9 (37.5)	9.9 (37.5)	8.8 (33.3)
Raw Water Pump Capacity - gpm (lp m)	56 (211)	61 (231)	63 (238)	63 (238)
Max. Raw Water Pump Suction Head Lift - in (m m)	39 (1000)	39 (1000)	39 (1000)	39 (1000)
Raw Water Pump Inlet Hose ID - in (mm)	2 (51)	2 (51)	2 (51)	2 (51)
Min. Raw Water Inlet / Discharge Thru-Hull - in (mm)	2 (51)	2 (51)	2 (51)	2 (51)
DC Electrical (12V Standard, 24V Optional)				
DC Starting Voltage - Standard (Optional)	12 (24)	12 (24)	12 (24)	12 (24)
Min. Battery Capacity - amp hr / 12V CCA (24V CCA)	150 (C/F)	150 (C/F)	150 (C/F)	150 (C/F)
Battery Size - CCA 12VDC (24 V DC)	900 (C/F)	900 (C/F)	900 (C/F)	900 (C/F)
Starter Rolling Amps @ 0°C - 12VDC (24VDC)	C/F	C/F	C/F	C/F
12 Volt Battery Cable Size Up to 10 ft (3m) - mm² (gage)	50 (1/ 0)	50 (1/0)	50 (1/0)	50 (1/0)
Air				
Air Consumption - m3/ m (cfm)				
Approx. Heat Radiated to Air - BTU / m in	17.9 (631)	20.9 (738)	22.1 (780)	24.8 (876)
Exhaust Gas Volume - kg / hr (lb / m in)	1657.5 0	2047.50	24 70.00	2762.50
Exhaust Gas Temp - C° (F°)	1242 (45.6)	1454 (53.4)	1535 (56.4)	17 0 9 (63)
Max. Exhaust Back Pressure - in H2O (mm H2O)	342° (647°)	388° (730°)	483 ° (901°)	470° (878°)
Wet Exhaust Elbow OD - in (mm)	30 (762)	30 (762)	30 (762)	30 (762)
Dry Exhaust Elbow - in (mm)	5 (127)	5 (127)	5 (127)	5 (127)
Fuel				
Approx. Fuel Rate at Full Load - gph (lp h)				
Fuel Injection Pump Type and Control	13.1 (49.6)	16.9 (64)	21 (79.7)	23 (87.1)
Min. Suction Line Size - in (mm)		Electronic (HPCR)		
Min. Return Line Size - in (mm)		0.375 (9.525)		
Max. Fuel Transfer Pump Suction Lift - ft (m)		0.375 (9.525)		
		3.28 (1)		

Dimensions and Weight Do not use for installation. Contact factory for installation drawings and info.

Length - in (mm)	55 (1394)
Width - in (mm)	36 (912)
Height - in (mm)	42 (1062)
Weight - lbs (kg)	1769 (802)

Max Engine Operating Down Angle

Continuous (Fore/Aft)	10°
Continuous (Side to Side)	22.5°

C/F: Consult factory