

General

Number of cylinders	6
Displacement, total	7,15 liters [437 cu. in]
Firing order	1-5-3-6-2-4
Bore	108 mm [4,25 in]
Stroke mm	130 [5,12 in]
Compression ratio	19

Performance

	25% load	50% load	75% load	100% load	Overload 110% load
ISO Standard Power	35	70	104	139	153
Torque	213	432	656	885	978
Mean piston speed	6,5 m/s [21,3 ft/sec]				
Effective mean pressure	0,4	0,8	1,2	1,6	1,7
Max combustion pressure	MPa [psi]		11	13	14

Engine noise emission

Measured sound power Lw at no load	86,5 dB(A)
Measured sound power Lw	90

Unsilenced exhaust noise emission

Data calculated as sound pressure Lp. Assumed microphone distance 1m.	111,5
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Lubrication system

Lubricating oil consumption	liter/h [US Gal/h]	0,07
Lubricating oil system capacity including filters	liters [US Gal]	20

Fuel system

Specific fuel consumption	g/kWh [lb/hph]	242	213	208,5	208,5	210
Total fuel flow	liter/h [US Gal/h]				375	
Maximum return flow	liter/h [US Gal/h]					
Feed pump pressure	kPa [in H2 O]				500	
Feed pump max suction head	m				1	
Max allowable back pressure in fuel return line	kPa [H2 O]				50	

Intake system

Air consumption, (at 27oC)	m3/min [cu.ft/min]	5,6	6,5	8,0	9,8	10,5
Max permissible air intake restriction incl. air filter	kPa [in H2 O]				2,5	

VOLVO PENTA

D7 version B Marine Genset

D7A TA HE 1500

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Issue Index

01**Exhaust system**

Heat rejection to exhaust	kW [BTU/min]	24	43	65	89	98
Exhaust gas temperature after turbine	oC [oF]	225	315	375	405	420
Max allowable back pressure in exhaust line	kPa [H2 O]				3	
Exhaust gas flow	m3/min [cu.ft/min]	9,4	13,4	18,2	19,1	25,8

Heat rejection the surrounding

Heat rejection from engine to surrounding	kW [BTU/min]	2	4	5	7	8
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Engine water circuit

Engine water circuit capacity	14 liters [US gal]
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Raw water circuit

Heat rejection to raw water	kW [BTU/min]	43	65	92	120	132
Maximum permissible raw water temp to charge air cooler	38oC [oF]					
Maximum temperature increase across external raw water circuit	oC [oF]	8	11	15	20	22
Maximum permissible test pressure	100 kPa [in H2 O]					
LT water pump flow	6,6 m3/h [233 cu.ft/h]					
Maximum pressure head of LT water pump	100 kPa [402 in H2 O]					
Maximum permissible suction head of LT water pump	20 kPa [80,4 in H2 O]					
Maximum permissible pressure drop over external raw water circuit	50 kPa [201 in H2 O]					
Raw water system capacity	12 liters [US gal]					

Power take off

Look in technical data for propulsion

Power Standards

The engine performance corresponds to ISO 3046, BS 5514, DIN 6271 and in general SAE J 1349. The technical data applies to an engine operation on a fuel with calorific value of 42,7 MJ/ kg (18360 BTU/ lb) and a density of 0,84 kg/ liters (7,01 lb/ US gal, 8,42 lb/Imp gal), also where this involves a deviation from the standards.

Engine speed governor in accordance with ISO 3046/IV, class A1 and ISO 8528-5 G2 (G3 with electronic speed governor).

Rating Guidelines

ISO Standard Power for continuous operation with 10% overload capability for 1 hour of 12.