VOLVO PENTA D5 version B Marine Genset D5A TA HE 1800	Document No 21376548	Issue Index 01

General						
Number of cylinders	4					
Displacement, total	4,76 liters [290,7 cu. in]					
Firing order	1-3-4-2					
Bore	108 mm [4,25 in]					
Stroke mm	130 mm [5,12 in]					
Compression ratio	19					
Performance		25% load	50% load	75% load	100% load	**Overload 110% load**
ISO Standard Power	100 kW [136 hp]	25	50	75	100	110
Torque	531 Nm [392 lbf ft]	128	259	393	531	587
Mean piston speed	7,8 m/s [25,6 ft/sec]					
Effective mean pressure	1,4 Mpa [204 psi]	0,34	0,68	1,04	1,4	1,55
Max combustion pressure	Mpa [psi]			11	13	14
Engine noise emission						
Measured sound power Lw at no load	87 dB(A)					
Measured sound power Lw	dB(A)				90,5	
Unsilenced exhaust noise emission						
Data calculated as sound pressure Lp. Assumed microphone distance 1m.	dB(A)				108,5	
Lubrication system						
Lubricating oil consumption	liter/h [US Gal/h]				0,06	
Lubricating oil system capacity including filters	liters [US Gal]				13	
Fuel system						
Specific fuel consumption	g/kWh [lb/hph]	278	230	221	220	222
Total fuel flow	liter/h [US Gal/h]				450	
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]	4,3	5,3	6,3	7,6	7,8

Max permissible air intake restriction incl. air filter	kPa [in H2 O]				2,5	
Exhaust system						
Heat rejection to exhaust	kW [BTU/min]	21	36	52	70	79
Exhaust gas temperature after turbine	oC [oF]	225	290	345	385	405
Max allowable back pressure in exhaust line	kPa [H2 O]				3	
Exhaust gas flow	m3/min [cu.ft/min]	8,1	10,7	14,4	18,3	19,5
Heat rejection the surrounding						
Heat rejection from engine to surrounding	kW [BTU/min]	2	3	4	5	6
Engine water circuit						
Engine water circuit capacity	11 liters [2,9 US gal]					
Raw water circuit						
Heat rejection to raw water	kW [BTU/min]	36	53	72	93	103
Maximum permissible raw water temp to charge air cooler	38oC [oF]					
Maximum temperature increase across external raw water circuit	oC [oF]	6	8	11	14	14
Maximum permissible test pressure	100 kPa [in H2 O]					
LT water pump flow	7,8 m3/h [275 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	10 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 Guidlines
ISO Standard Power for continuous operation with 10% overload capability for 1 hour of 12.