

<b>General</b>						
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	17,6:1					
<b>Performance</b>		25% load	50% load	75% load	100% load	<b>Overload 110% load</b>
ISO Standard Power	122 kW [166 hp]	30,5	61	91,5	122	134,2
Torque	647 Nm [478 lbf. ft]	156	315,7	479,4	647,2	715,5
Mean piston speed	7,8 m/s [25,6 ft/sec]					
Effective mean pressure	1,14 MPa [165 psi]	0,3	0,6	0,9	1,1	1,3
Max combustion pressure	MPa [psi]	7,1	8,2	9,2	10,5	11,1
<b>Engine noise emission</b>						
Measured sound power Lw at no load	87,5 dB(A)					
Measured sound power Lw	dB(A)	93				
<b>Unsilenced exhaust noise emission</b>						
Data calculated as sound pressure Lp. Assumed microphone distance 1m.	dB(A)	112				
<b>Lubrication system</b>						
Lubricating oil consumption at ISO Standard Power	liter/h [US Gal/h]	0,07				
Lubricating oil system capacity including filters	liters [US Gal]	20				
<b>Fuel system</b>						
Specific fuel consumption	g/kWh [lb/hph]	275	226	216	215	217
Total fuel flow	liter/h [US Gal/h]	450				
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				
<b>Intake system</b>						
Air consumption, (at 27°C)	m <sup>3</sup> /min [cu.ft/min]	6,8	7,57	8,65	9,9	10,3
Max permissible air intake restriction	kPa [in H2 O]	2,5				

**VOLVO PENTA**

D7A-A T KC 1800 rpm

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Issue Index

**02****Exhaust system**

Heat rejection to exhaust	kW [BTU/min]	28,8	45	63,5	84,7	92
Exhaust gas temperature after turbine	oC [oF]	215	290	355	405	420
Max allowable back pressure in exhaust line	kPa [H2 O]				3	
Exhaust gas flow at Exhaust gas temperature after turbine	m3/min [cu.ft/min]	12,3	15,6	20,4	25,3	26,8

**Heat rejection the surrounding**

Heat rej. from engine to surrounding	kW [BTU/min]	3,6	4,9	5,9	7,9	8,7
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**Cooling water circuit**

Heat rejection to water	kW [BTU/min]	37,0	53,3	74,4	97,8	111,8
Maximum permissible water temp to engine	65 oC [141 oF]					
Maximum temperature increase across circuit of engine	oC [oF]	4	5	7	9	11
Thermostat, start to open	83 oC [154 oF]					
Thermostat, fully open	95 oC [176 oF]					
Maximum permissible test pressure	kPa [in H2 O]					
Cooling water flow at fully open thermostat	m3/h [cu.ft/h]				12,6	
Highest permissible pressure drop over external fresh water circuit	90 kPa [361 in H2 O]					
Cooling water capacity	14 liters [3,7 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.