

**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	<b>Overload 110% load</b>	
ISO Standard Power	139 kW [189 hp]	34,8	69,5	104,3	139	152,9
Torque	885 Nm [654 lbf. ft]	213	431,7	656	885	978
Mean piston speed	6,5 m/s [21,3 ft/sec]					
Effective mean pressure	1,55 MPa [189 psi]	0,4	0,8	1,2	1,6	1,7
Max combustion pressure	MPa [psi]					

**Engine noise emission**

Measured sound power Lw at no load	91 dB(A)	
Measured sound power Lw	dB(A)	94

**Unsilenced exhaust noise emission**

Data calculated as sound pressure Lp. Assumed microphone distance 1m.	dB(A)	112,5
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**Lubrication system**

Lubricating oil consumption at ISO Standard Power	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	9,83	10,5
Max permissible air intake restriction	kPa [in H2 O]				2,5	

**VOLVO PENTA**

**D7 version B Marine Genset**  
**D7A-TA KC-2 1500**

Document No

**21378468**

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 at Exhaust gas temperature after turbine	m3/min [cu.ft/min]	9,4	13,4	18,2	19,1	25,8

**Heat rejection the surrounding**

Heat rej. from engine to surrounding	kW [BTU/min]	2	4	5	7	8
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**Engine cooling water circuit**

Heat rejection to water	kW	41	61	83	104	113
Maximum permissible water temp to engine	65 oC [141 oF]					
Maximum temperature increase across circuit of engine	oC [oF]	5	7	9	12	13
Thermostat, start to open	83 oC [154 oF]					
Thermostat, fully open	95 oC [176 oF]					
Maximum permissible test pressure	100 kPa [in H2 O]					
Cooling water flow at fully open thermostat	m3/h [cu.ft/h]				10,5	
Highest permissible pressure drop over external fresh water circuit	90 kPa [361 in H2 O]					
Cooling water capacity	14 liters [3,7 US gal]					

**Charge air cooler circuit**

Heat rejection to water	kW	1	4	9	16	19
Maximum permissible water temp to pump	38 oC [ oF]					
Cooling water capacity	10 liters [US gal]					
Cooling water flow	6,6 m3/h [233 cu.ft/h]					
Maximum pressure head	100 kPa [402 in H2 O]					
Highest permissible suction head	20 kPa [80,4 in H2 O]					
Highest permissible pressure drop over external cooling water circuit	90 kPa [361 in H2 O]					
Highest permissible pressure drop over external coolant circuit	?					

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Issue Index

**01**

## **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.