VOLVO PENTA D5A TA R2, rated speed 2300 rpm	Document No 21375070	Issue Index 03

General

In-line four stroke diesel engine with direct injection.

Number of cylinders		4
No of valves		2
Displacement, total	litres in³	4,76 290,7
Firing order		1-3-4-2
Rotational direction, viewed towards flywheel		Anti-clockwise
Bore	mm in	108 4,25
Stroke	mm in	130 5,12
Compression ratio		17,6
Idling speed	rpm	775 ± 25
Rated speed	rpm	2300
Propeller selection range	rpm	2275-2325

Performance	**Rating**	**r/min**	**1000**	**1200**	**1500**	**1800**	**1900**	**2100**	**2300**
Crankshaft power 1), 5)	2	kW	47	63	91	100	103	110	118
		hp	64	86	124	136	140	150	160
Propellershaft power 1)	2	kW	46	61	88	97	100	107	114
(At full load)		hp	62	83	120	132	136	145	156
Propellershaft power at prop.load x [2,5]	2	kW	14	22	39	62	71	91	114
		hp	19	30	53	84	96	123	155
Propellershaft power at prop.load x [3]	2	kW	9	16	32	55	64	87	114
		hp	12	22	44	75	87	118	155
Torque at crankshaft 2)	2	Nm	449	501	579	531	518	500	490
		lbf ft	331	370	427	391	382	369	361
Mean piston speed		m/s	4,3	5,2	6,5	7,8	8,2	9,1	10,0
		ft/s	14,2	17,1	21,3	25,6	27,0	29,9	32,7
Effective mean pressure 2)	2	MPa	1,18	1,32	1,53	1,40	1,37	1,32	1,29
		psi	171,7	191,8	221,7	203,0	198,1	191,4	187,4

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Fuel system	Rating	r/min	1000	1200	1500	1800	1900	2100	2300			
Specific fuel consumption 2)	2	g/kWh	225	215	205	202	202	206	210			
		lb/hph	0,36	0,35	0,33	0,33	0,33	0,33	0,34			
Fuel consumption at prop. load x [2,5]	2	l/h	4	6	10	15	17	22	29			
		US gal/h	1,0	1,5	2,5	3,9	4,5	5,9	7,5			
Fuel consumption at prop. load x [3]	2	l/h	2	4	8	13	15	21	29			
		US gal/h	0,6	1,1	2,1	3,5	4,1	5,6	7,5			
Fuel consumption at full load	2	l/h	13	16	22	24	25	27	30			
		US gal/h	3,3	4,3	5,9	6,4	6,5	7,1	7,8			

Intake and exhaust system	Rating	r/min	1000	1200	1500	1800	1900	2100	2300			
Specific exhaust heating effect in percent of crankshaft power	2											
	2											
Exhaust temperature (at the exhaust pipe connecting flange after the turbo charger?)	2	°C	430	440	450	390	380	360	350			
		°F	806	824	842	734	716	680	662			
Permitted back pressure in the exhaust line at rated speed. (Installed back pressure)		kPa							Max		5,7	
		psi									0,8	
		kPa							Min			
		psi										
Engine air consumption at 25°C / 77°F atmospheric pressure 100kPA and relative humidity 30%	2	m³/min			6	6,8	7,5	8,8	9,8			
		cu.ft./min			212	240	265	311	346			
Exhaust gas flow (behind turbine)	2	m³/min			15	19,3	20,3	21,7	23,2			
		cu.ft./min			530	683	718	765	818			

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Cooling system	Rating	r/min	1000	1200	1500	1800	1900	2100	2300			
Heat rejection to after cooler in percent of crankshaft power.	2	%			23	25	28	29	30			
Cooling water heating effect incl. oil cooler in percent of crankshaft power 3).	2	%			73	83	82	91	101			
Highest permissible pressure drop in outer circuit at keel cooling.		kPa In H_2O	50 201									
Sea water pump flow.		l/min cu.ft/min			110,0 3,9	130,0 4,6	135,0 4,8	145,0 5,1	160,0 5,7			
Cooling water circulation pump flow		l/min cu.ft/min			120,0 4,2	140,0 4,9	145,0 5,1	155,0 5,5	170,0 6,0			
Max permissible temperature on fresh water circulation outlet from the engine		°C °F	105 221									
Coolant volyme in engine with raw water.		litres U.S. gal.	21 5,55									
Thermostat, start open at		°C °F	87 189									
Thermostat, fully open at		°C °F	102 216									

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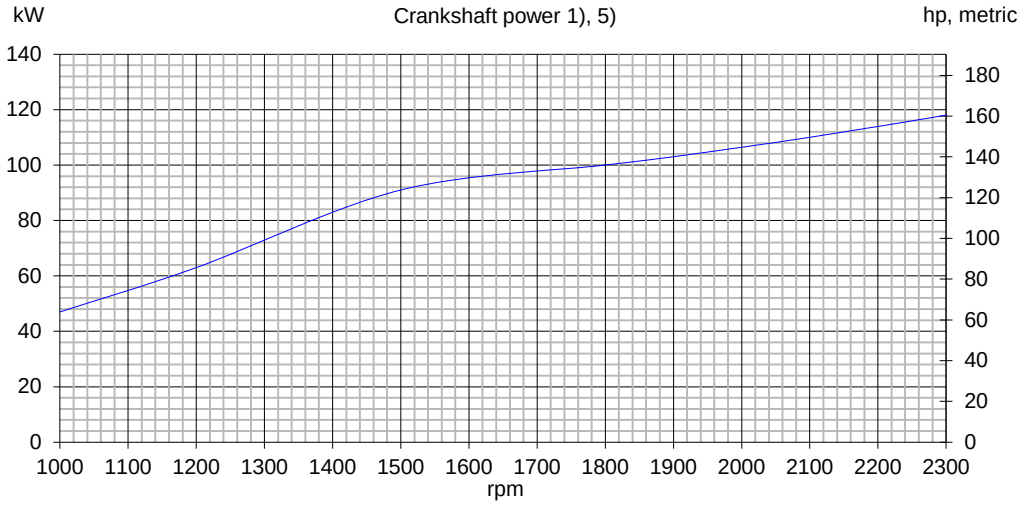

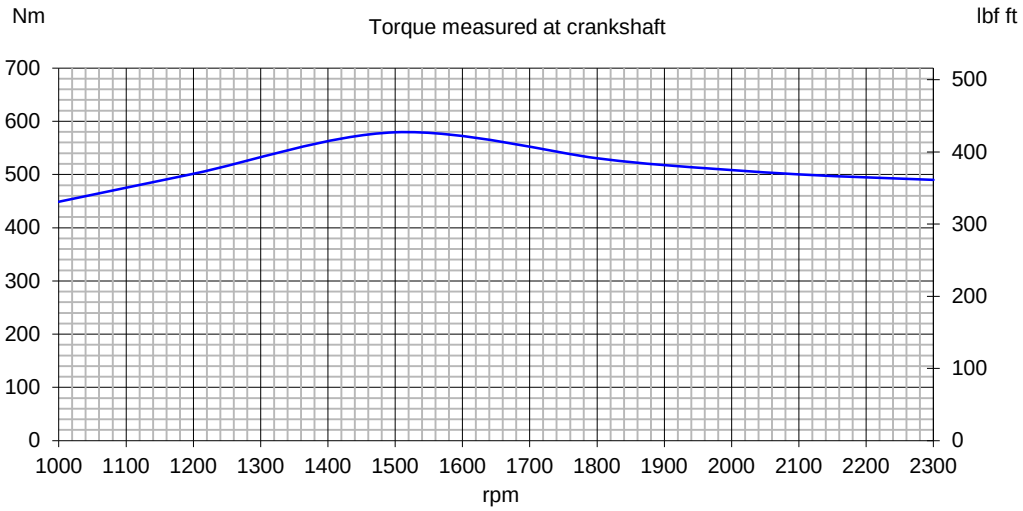

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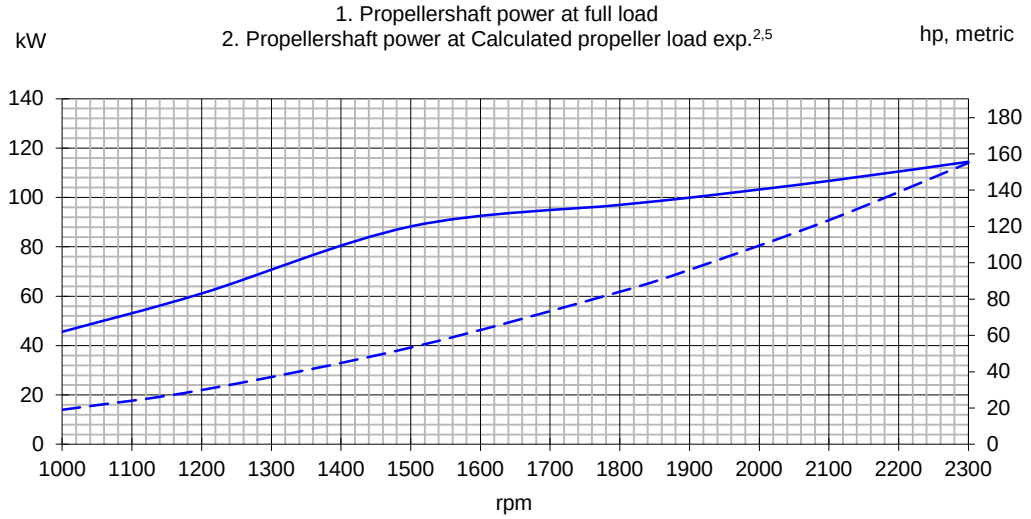

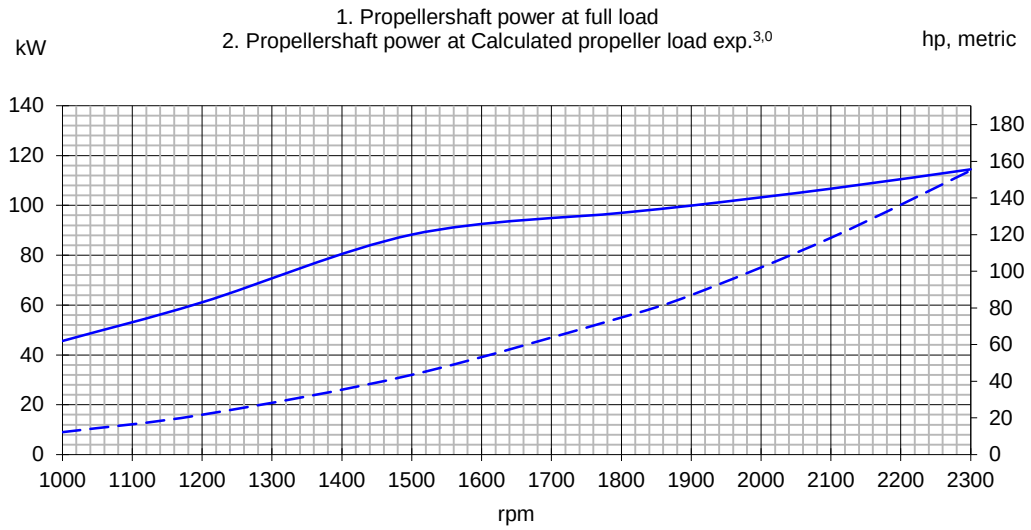

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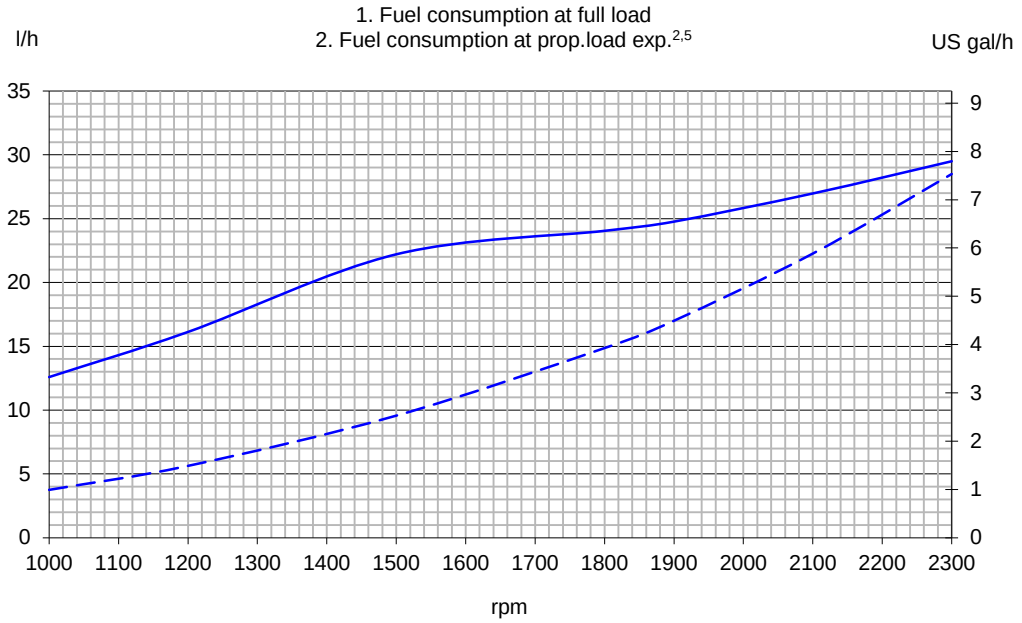

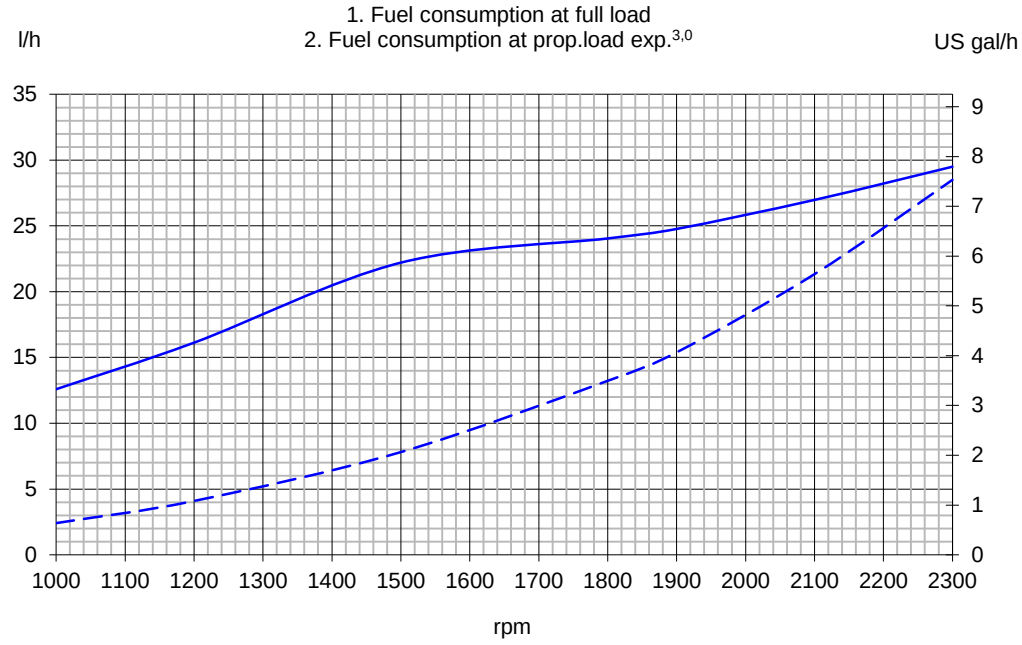

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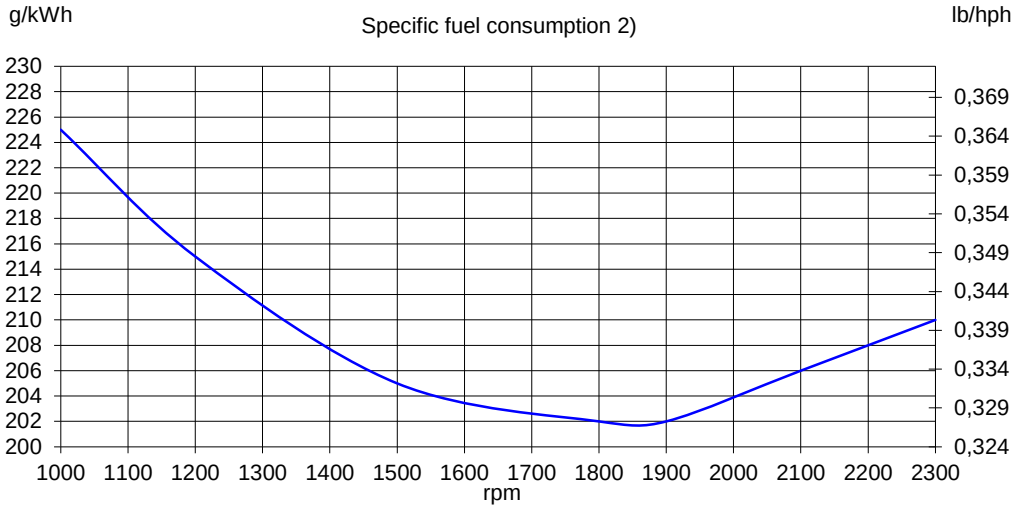

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