General

4-stroke direct injected, turbocharged and aftercooled diesel engine

Number of cylinders		6
No of valves		24
Displacement, total	litres in³	5,50 335,6
Firing order		1-5-3-6-2-4
Rotational direction, viewed from the front		Clockwise
Bore	mm in	103 4,06
Stroke	mm in	110 4,33
Compression ratio		17.5:1
Compression pressure at 240 rpm	MPa psi	
Max. static forward inclination:	°	0
Max. static backward inclination:	°	10
Max. intermittent forward inclination while running:	°	10
Max. intermittent backward inclination while running:	°	20
Max. intermittent side inclination while running:	°	30 for max 30 sec
Idling speed	rpm	600 - 650
Rated speed R5	rpm	3500
Propeller selection range R5	rpm	3400-3600
Dry weight engine BT	kg lb	580 1279
Dry weight with drive reverse gear: DPH	kg lb	766 1689
Dry weight with drive reverse gear: DPH and Power steering	kg lb	770 1698
Dry weight with drive IPS	kg lb	887 1956

Performance	Rating	rpm	1000	1500	2000	2500	3000	3500
Crankshaft power 1), 5)	5	kW	74	130	185	230	265	272
		hp	101	177	252	312	360	370
Propeller shaft power 1) (At full load)	5	kW	71	125	177	219	253	260
With drive reverse gear: DPH		hp	96	169	240	298	344	353
With drive reverse gear: DPH	5	kW	71	125	177	220	253	260
		hp	96	169	240	299	344	353
Propellershaft power at prop. load $x^{2,5}$	5	kW	11	31	64	112	177	260
With drive reverse gear: DPH		hp	15	42	87	152	240	353
With drive reverse gear: DPH	5	kW	11	31	64	112	177	260
		hp	15	42	87	152	240	353
Propellershaft power at prop. load x^{3}	5	kW	6	20	48	95	164	260
With drive reverse gear: DPH		hp	8	28	66	129	222	353
With drive reverse gear: DPH	5	kW	6	20	48	95	164	260
		hp	8	28	66	129	222	353
Torque at crankshaft 2)	5	Nm	706,6	830,2	883,3	876,6	843,5	742,1
		lbf ft	521	612	651	647	622	547
Mean piston speed		m/s	3,7	5,5	7,3	9,2	11,0	12,8
		ft/s	12,0	18,0	24,1	30,1	36,1	42,1
Effective mean pressure 2)	5	MPa	1,61	1,90	2,02	2,00	1,93	1,70
		psi	234,2	275,1	292,7	290,5	279,6	246,0
Max combustion pressure 2)	5	MPa	16	18	18	18	17	17
		psi	2321	2611	2611	2611	2466	2466

Lubricating system

Specific lubricating oil consumption.	g/kWh	< 0,2
Max. oil volume including filters for all allowed installation inclinations:	litres	20
	US gal	5,28
Min. oil volume excluding filters for all allowed installation inclinations:	litres	15
	US gal	3,96

Fuel system	Rating	rpm	1000	1500	2000	2500	3000	3500
Specific fuel consumption 2)	5	g/kWh	226	217	217	203	216	236
		lb/hph	0,366	0,352	0,352	0,329	0,35	0,382
Fuel consumption, Test cycle E5	5	g/kWh	231					
		lb/hph	0,37					
Fuel consumption at prop. load $x^{2,5}$	5	l/h	3,6	8,8	17,5	30,3	49,6	76,8
		US gal/h	1,0	2,3	4,6	8,0	13,1	20,3
Fuel consumption at prop. load x^{3}	5	l/h	2,7	6,3	13,7	26,3	46,1	76,8
		US gal/h	0,7	1,7	3,6	7,0	12,2	20,3
Fuel consumption at full load	5	l/h	20,0	33,9	48,0	55,7	68,5	76,8
		US gal/h	5,3	8,9	12,7	14,7	18,1	20,3

Intake and exhaust system	Rating	rpm	1000	1500	2000	2500	3000	3500		
Specific exhaust heating effect in percent of crankshaft power	5	%						64		
Exhaust temperature at the exhaust pipe connecting flange after the turbo charger.	5	°C	165	240	305	320	325	390		
		°F	329	464	581	608	617	734		
Permitted back pressure in the exhaust line at rated speed. (Installed back pressure)		kPa							Max	30
		psi								4,4
		kPa							Min	10
		psi								1,5

Intake and exhaust system	Rating	rpm	1000	1500	2000	2500	3000	3500				
Engine air consumption at 25°C / 77°F atmospheric pressure 100kPA and relative humidity 30%.	5	m³/min cu.ft./min						22,9 808,7				
Charge air pressure Inlet manifold	5	kPa psi						206 29,9				
Exhaust gas flow	5	m³/min cu.ft./min						42,7 1508				

Cooling system	Rating	rpm	1000	1500	2000	2500	3000	3500				
Radiated heat in percent of crankshaft power.	5	%						2				
Heat rejection to charge air cooler in percent of crankshaft power.	5	%						28				
Coolant heat rejection to HE, incl. engine oil cooler and excl. charge air cooler, in percent of crankshaft power.	5	%						84				
Coolant flow with fully open thermostat and std cooling system		l/min cu.ft./min						360 12,7				
Extra water pump flow through charge air cooler		l/min cu.ft./min						215 7,6				
Max. permissible temperature on coolant in engine outlet		°C °F	55 131									
Coolant volume engine, including heat exchanger and charge air cooler		litres US gal.	16 4,23									
Max. additional coolant for cabin heater etc. with std. Expansion tank		litres US gal.	5 1,32									
Maximum coolant flow to cabin heater etc.		l/min cu.ft./min	30 1,06									
Thermostat, start open at		°C °F	82 180									
Thermostat, fully open at		°C °F	92 198									

Raw water circuit	rpm	1000	1500	2000	2500	3000	3500				
Nominal raw water design flow	l/min cu.ft/min						215 7,6				
Maximum raw water temperature entering heat exchanger	°C °F	30 86									

Emissions	Rating	rpm	1000	1500	2000	2500	3000	3500				
Smoke at prop. load $x^{2,5}$	5	*BSU	0,5	0,3	0,2	0,1	0,4	0,7				
Smoke at prop. load x^3	5	*BSU	0,4	0,3	0,3	0,2	0,4	0,7				

***NB.!** BSU are calculated values. Measured values are acc. to ISO 10054 in FSN units