N67 TE2A

193 kW (1500 rpm) - 215 kW (1800 rpm)

1/ GENERAL		1500 rpm	1800 rpm
Engine Model		N67 TE2A	
Basic engine type		F4HE0685A*F - 504247726	
Number of cylinders		6	
Firing order (N° 1 nearest to fan)		1-5-3-6-2-4	
Cylinder arrangement		in line	
Valves per cylinder		4	
Cycle		diesel 4 stroke	
Injection system		direct common rail	
Electronic engine control unit		BOSCH EDC7 C1	
Induction System		turbocharged aftercooled air/air	
Bore	mm	104	
Stroke	mm	132	
Total displacement	lit	6,7	
Mean piston speed	m/s	6,6	7,9
Compression ratio		17,5 : 1	
Flywheel rotation		anti clockwise viewed on flywheel	
Housing flywheel		SAE 3	
Flywheel		11"1/2	
Moment of inertia			
without flywheel	kgm^2	0,31	
flywheel only	kgm^2	0,71	
BMEP gross			
Prime Power	bar/kPa	21,4 / 2140	20,3 /2030
Stand-by Power	bar/kPa	23,6 / 2360	22,3 / 2230
Dry weight (including cooling package)	kg	630	
Energy to coolant	kcal/kWh	438	-
Energy to charge cooler	kcal/kWh	125	-
Energy to radiation	kcal/kWh	50	-
Dimensions L x W x H	mm	1713 x 796 x 1230	

2/ PERFORMANCES			1500 rpm	1800 rpm
Continuous Power	(gross)	kWm	145	162,2
Prime Power	(gross)	kWm	180	202,7
Stand-By Power	(gross)	kWm	198	223
Fan consumption		kWm	5	7,5
Continuous Power	(net)	kWm	140	154,6
Prime Power	(net)	kWm	175	195,2
Stand-By Power	(net)	kWm	193	215,5
Performance condition				
temperature		°C	≤ 40	
altitude a.s.l		m	≤ 1000	
Derating				
temperature > T 40°C		%/5°C	2%	
altitude >1000 <3000 m		%/500m	3%	
altitude >3000 m		%/500m	6%	

FPT POWERTRAIN TECHNOLOGIES

3/ COOLING SYSTEM		1500 rpm	1800 rpm
Type		liquid	
Recommanded coolant		water + 50 % paraflu 11	
Coolant capacity			
engine only	liter	10,5	
radiator and hoses	liter	15	
Coolant pump flow	l/min	141	-
Pressure cap setting	kPa (bar)	100 (1,0)	
Shutdown switch setting	°C	103	
Maximum additional restriction	Pa	196	
Air To Boil Prime Power	°C	55	-
Fan			
diameter	mm	685	
number of blades		12	
drive ratio		1,41:1	
speed	rpm	2115	2538
air flow	m^3/s	3,8	4,8
power consumption	kWm	5	7,5

4/ LUBRICATION SYSTEM		1500 rpm	1800 rpm
Oil sump capacity			
max	liter	15	
min	liter	8	
Oil system capacity including filter	liter	17	
Oil pressure at rated speed	kPa	300-500	
Oil temperature			
normal	°C	---	
max	°C	120	
Engine angularity			
longitudinal	degrees	35°	
transverse	degrees	35°	
Servicing interval	hours	600	
Oil specification		ACEA E3/E5	
Oil consumption	%fuel	< 0,1	

5/ INTAKE SYSTEM		1500 rpm	1800 rpm
Air consumption at 100 % of load	m^3/h (Kg/h)	754 (905)	-
Air intake restriction, clean filter	kPa (mbar)	2 (20)	
Air intake restriction, dirty filter	kPa (mbar)	5 (50)	
Air filter type		dry	

6/ EXHAUST SYSTEM		1500 rpm	1800 rpm
Gas flow at stand-by Power	kg/h	946	-
Max temperature at PRP (25°C)	°C	550	-
Max allowable back pressure	kPa (mbar)	6 (60)	
Energy to exhaust	kcal/kWh	614	-

FPT POWERTRAIN TECHNOLOGIES

7/ FUEL SYSTEM			1500 rpm	1800 rpm
Fuel consumption at				
Stand-By	gr/kWh (l/h) [kg/h]		204,7 (48) [40,3]	-
Full load	gr/kWh (l/h) [kg/h]		205,5 (44) [37]	-
80%	gr/kWh (l/h) [kg/h]		207 (35,7) [30]	-
50%	gr/kWh (l/h) [kg/h]		217,5 (25,6) [21,5]	-
Fuel specifications			EN 590	
Feed pump max suction head	m		---	

8/ ELECTRIC SYSTEM			1500 rpm	1800 rpm
Voltage (negative to ground)	V		12	
Starter motor				
make			Bosch	
power	kW		3	
pull current	Amp		60	
hold current	Amp		12	
break away current +20°C	Amp		1900	
cranking current +20°C	Amp		0	
Number of teeth on starter motor			10	
Number of teeth on flywheel			125	
Starting batteries				
recommended capacity Ah		1x	185	
discharge current	Amp		1200	
(EN 50342)				
Alternator				
voltage	V		14	
charge	Amp		90	

9/ COLD STARTING		1500 rpm	1800 rpm
Without air preheating	°C		-10
With air preheating	°C		-25

10/ EMISSION GASEOUS AND PARTICLES			1500 rpm	1800 rpm
No_x	Oxides of nitrogen	gr/kWh	5,8	-
HC	Hydrocarbons	gr/kWh	0,09	-
No_x+HC		gr/kWh	5,89	-
CO	Carbon monoxide	gr/kWh	0,6	-
PT	Particles	gr/kWh	0,08	-

FPT POWERTRAIN TECHNOLOGIES