

N67 SM1

121 kW (1500 rpm) - 138 kW (1800 rpm)

Engine N67 SM1

1/ GENERAL			1500 rpm	1800 rpm
Engine model			N67 SM1	
Basic engine type			F4GE0685B*B600 - 504112187 XY	
Number cylinders			6	
Firing order (N° 1 nearest to fan)			1-5-3-6-2-4	
Cylinder arrangement			in line	
Valves per cylinder			2	
Cycle			diesel 4 stroke	
Injection system			direct	
Induction System			Turbocharged	
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	13,6 / 1356,9	13,1 / 1311,6
	Stand-by Power	bar/kPa	14,9 / 1492,5	14,4 / 1442,8
Dry weight (including cooling package)			kg ~ 610	
Energy to coolant	kcal/kWh		588,8	602,1
Energy to radiation	kcal/kWh		126,5	105,6
Dimensions L x W x H	mm		1697 x 789 x 1318	
2/ PERFORMANCES			1500 rpm	1800 rpm
Continuous Power	(gross)	kWm	92	107,3
Prime Power	(gross)	kWm	114	132,4
Stand-By Power	(gross)	kWm	125	145
Fan consumption		kWm	4	6,9
Continuous Power	(net)	kWm	88	100,4
Prime Power	(net)	kWm	110	125,5
Stand-By Power	(net)	kWm	121	138,1
Performance condition				
	temperature	°C	≤ 40	
	altitude a.s.l	m	≤ 1000	
Derating				
	temperature > T 40°C	%/5°C	3%	
	altitude >1000 <3000 m	%/500m	3%	
	altitude >3000 m	%/500m	6%	

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3/ COOLING SYSTEM		1500 rpm	1800 rpm	
Type		liquid		
Recommended coolant		water + 50 % paraflu 11		
Coolant capacity				
engine only	liter		10,5	
radiator and hoses	liter		15	
Coolant pump flow	l/min	141	169,2	
Pressure cap setting	kPa (bar)		70 (0,7)	
Shutdown switch setting	°C		103	
Maximum additional restriction	Pa		196	
Air To Boil	Prime Power	°C	0	0
Fan				
diameter	mm		600	
number of blades			12	
drive ratio			1,41 : 1	
speed	rpm	2115	2538	
air flow	m ³ /s	3,2	3,9	
power consumption	kWm	4	6,9	

4/ LUBRICATION SYSTEM		1500 rpm	1800 rpm
Oil sump capacity			
max	liter		12
min	liter		8
Oil system capacity including filter	liter		17,2
Oil pressure at rated speed	kPa		350-550
Oil temperature			
normal	°C		---
max	°C		120
Engine angularity			
longitudinal	degrees		25°
transverse	degrees		25°
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)	475 (571,6)	602 (725,3)
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	599	757
Max temperature at PRP (25°C)	°C	528	488
Max allowable back pressure	kPa (mbar)		5 (50)
Energy to exhaust	kcal/kWh	641,1	643,4



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7/ FUEL SYSTEM			1500 rpm	1800 rpm
Fuel consumption at				
Stand-By	gr/kWh (l/h) [kg/h]		206,9 (32,0) [26,9]	216,1 (38,1) [32,0]
Full load	gr/kWh (l/h) [kg/h]		208,1 (29,3) [24,6]	217,1 (34,8) [29,2]
80%	gr/kWh (l/h) [kg/h]		228,0 (24,1) [20,2]	237,6 (28,5) [24,0]
50%	gr/kWh (l/h) [kg/h]		225,0 (15,8) [13,3]	239,4 (19,2) [16,1]
Fuel specifications			EN 590	
Feed pump max suction head		m	---	
Injection pump		type STANADYNE	DB4629-5944	

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	1580	
cranking current ^{+20°C}		Amp	---	
Number of teeth on starter motor			10	
Number of teeth on flywheel			125	
Starting batteries				
recommended capacity Ah		1x	100	
discharge current		Amp	650	
(EN 50342)				
Stop solenoid energized to run		Amp	0	
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	9,03	8,67
HC	Hydrocarbons	gr/kWh	0,41	0,44
No _x +HC		gr/kWh	9,44	9,11
CO	Carbon monoxide	gr/kWh	0,98	0,53
PT	Particles	gr/kWh	---	---