

# N67 TM1F

125 kW (1500 rpm)

Engine N67 TM1F

## 1/ GENERAL

1500 rpm

Engine model	NEF67 TM1F	
Basic engine type	F4GE9685C*J600 - 504388450	
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 aftercooled air/air	
Bore	mm	104
Stroke	mm	132
Total displacement	lit	6,7
Mean piston speed	m/s	6,6
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 <sup>2</sup>	0,31
flywheel only	kgm <sup>2</sup>	0,71
Degree of irregularity at PRP	0,038	
BMEP gross		
Prime Power	bar/kPa	14,1 / 1411,1
Stand-by Power	bar/kPa	15,5 / 1552,2
Dry weight (including cooling package)	kg	~ 640
Energy to coolant	kcal/kWh	373
Energy to charge cooler	kcal/kWh	105
Energy to radiation	kcal/kWh	310
Dimensions L x W x H	mm	1697 x 789 x 1318

## 2/ PERFORMANCES

1500 rpm

Continuous Power	(gross)	kWm	94
Prime Power	(gross)	kWm	117,5
Stand-By Power	(gross)	kWm	129
Fan consumption		kWm	4
Continuous Power	(net)	kWm	90
Prime Power	(net)	kWm	113,5
Stand-By Power	(net)	kWm	125
Performance condition			
temperature	°C		≤ 40
altitude a.s.l	m		≤ 1000
Derating			
temperature > T 40°C	%/5°C		1%
altitude >1000 <3000 m	%/500m		2%
altitude >3000 m	%/500m		4%

### 3/ COOLING SYSTEM

1500 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
Thermostat: start to open	°C	85
Thermostat: fully open	°C	80
Engine coolant outlet max temp.	°C	80
Engine coolant inlet temp.	°C	96
Pressure cap setting	kPa (bar)	100 (1,0)
Shutdown switch setting	°C	103
Maximum additional restriction	Pa	196
Air To Boil	Prime Power	°C
		61,5
Fan		
diameter	mm	600
number of blades		12
drive ratio		1,41 : 1
speed	rpm	2115
air flow	m <sup>3</sup> /s	3,2
power consumption	kWm	4

### 4/ LUBRICATION SYSTEM

1500 rpm

Oil sump capacity		
max	liter	12
min	liter	8
Oil system capacity including filter	liter	17,2
Oil pressure at rated speed	kPa	300-500
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

Air consumption at 100 % of load	m <sup>3</sup> /h (Kg/h)	470,5 (564,7)
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**

Gas flow at stand-by Power	kg/h	593
Max temperature at PRP (25°C)	°C	498
Max allowable back pressure	kPa (mbar)	5 (50)
Energy to exhaust	kcal/kWh	560

### 7/ FUEL SYSTEM

**1500 rpm**

Fuel consumption at		
Stand-By	gr/kWh (l/h) [kg/h]	217,3 (33,3) [28]
Full load	gr/kWh (l/h) [kg/h]	218 (30,5) [25,6]
80%	gr/kWh (l/h) [kg/h]	222,6 (25) [21]
50%	gr/kWh (l/h) [kg/h]	230 (17,7) [14,9]
Fuel specifications		EN 590
Feed pump max suction head	m	---
Injection pump	type STANADYNE	DB 4629

### 8/ ELECTRIC SYSTEM

**1500 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 <sup>+20°C</sup>	Amp	1580
cranking current <sup>+20°C</sup>	Amp	---
Number of teeth on starter motor		10
Number of teeth on flywheel		125
Starting batteries		
recommended capacity Ah	1x	180
discharge current	Amp	800
(EN 50342)		
Stop solenoid energized to run	Amp	---
Alternator		
voltage	V	14
charge	Amp	90

### 9/ COLD STARTING

**1500 rpm**

Without air preheating	°C	-10
With air preheating	°C	-25

### 10/ EMISSION GASEOUS AND PARTICLES

**1500 rpm**

No <sub>x</sub>	Oxides of nitrogen	gr/kWh	3,07
HC	Hydrocarbons	gr/kWh	0,16
No <sub>x</sub> +HC		gr/kWh	3,23
CO	Carbon monoxide	gr/kWh	0,76
PT	Particles	gr/kWh	0,12