

N67 TE1X

165 kW (1800 rpm)

Engine N67 TE1X

1/ GENERAL

1800 rpm

Engine model			N67 TE1X
Basic engine			F4HE9685A*J100 - 504156212XY
Number cylinders			6
Firing order (N°1 nearest to fan)			1-5-3-6-2-4
Cylinder arrangement			in line
Valves per cylinder			4
Type			diesel 4 stroke
Injection system			direct common rail
Centralina elettronica			Bosch EDC7 C1
Induction System			Turbocharged aftercooled air/air
Bore	mm(in)		104(4,1)
Stroke	mm(in)		132(5,2)
Total displacement	lit(in ³)		6,7(408,9)
Mean piston speed	m/s(ft/s)		7,92(25,9)
Compression ratio			16,5 : 1
Flywheel rotation			anti clockwise viewed on flywheel
Housing flywheel			SAE 3
Flywheel			11"1/2
Moment of inertia			
without flywheel	Kgm ² (lbft ²)		0,31(7,33)
flywheel only	Kgm ² (lbft ²)		0,71(16,78)
BMEP			
Prime Power	bar(psi)		15,5(224,8)
Stand-by Power	bar(psi)		17,06(247,4)
Dry weight (including cooling package)	kg(lb)		630(1389)
Energy to coolant	kcal/kWh		302
Energy to charge cooler	kcal/kWh		164
Energy to radiation	kcal/kWh		53,5
Dimensions L x W x H	mm(in)		1713 x 796 x 1230(67,44x31,34x48,42)

2/ PERFORMANCES

1800 rpm

Continuous Power	(gross)	kWm(hp)	125(167,6)
Prime Power	(gross)	kWm(hp)	156(209,2)
Stand-By Power	(gross)	kWm(hp)	172(230,6)
Fan consumption		kWm(hp)	7,5(10,05)
Continuous Power	(net)	kWm(hp)	119,7(160,5)
Prime Power	(net)	kWm(hp)	149,6(200,7)
Stand-By Power	(net)	kWm(hp)	164,5(220,6)
Performance conditions			
temperature	°C(°F)		≤ 40(104)
altitude s.l.m	m(ft)		≤ 1000(3281)
Derating			
temperature > T 40°C	%/5°C		2
altitude >1000 <3000 m	%/500m		3
altitude >3000 m	%/500m		6

3/ COOLING PACKAGE

1800 rpm

Type		liquid
Recommended coolant		water + 50%paraflu 11
Coolant capacity		
motor only	liter(US gal)	10,5(2,77)
radiator and hose	liter(US gal)	15(3,96)
Coolant pump flow	l/min(US gal/min)	170(44,7)
Pression cap setting	kPa (bar)	100 (1,0)
Shutdown switch setting	°C(°F)	103(217,4)
maximal additional restriction	Pa(psi)	196(0,03)
Air To Boil	Prime Power	°C(°F)
		52(125,6)
Fan		
diameter	mm(in)	685(27)
number of pale		12
drive ratio		1,41 : 1
speed	rpm	2538
air flow	m ³ /s	3,75
power consumption	kWm	7,5(10,05)

4/ LUBRICATION SYSTEM

1800 rpm

Oil sump capacity		
max	liter(US gal)	15(4,3)
min	liter(US gal)	8(2,1)
Oil system capacity including filters	liter(US gal)	17(4,9)
Oil pressure at rated speed	kPa(psi)	300-500(43,5-72,6)
Oil temperature		
normal	°C(°F)	---
max	°C(°F)	120(248)
Engine angularity		
longitudinal	degrees	35°
trasverse	degrees	35°
Servicing intervall	hours	600
Oil specification		ACEA E3/E5
Oil consumption	%fuel	< 0,1

5/ INTAKE SYSTEM

1800 rpm

Air consumption at 100% of load	m ³ /h (Kg/h)	795 (950)
Air intake restriction clean filter	kPa (mbar)	2 (20)
Air intake restriction dirty filter	kPa (mbar)	5 (50)
Air filter type		dry

6/ EXHAUST SYTEM

1800 rpm

Gas flow at stand by power	kg/h	990
Max temperature at PRP (25°C)	°C	560
Max allowable back pressure	kPa (mbar)	5 (50)
Energy to exhaust	kcal/kWh	715

7/ FUEL SYSTEM

1800 rpm

Fuel consumption at			
Stand-By	gr/kWh (l/h) [kg/h]		205 (42) [35,3]
full load	gr/kWh (l/h) [kg/h]		221 (41) [34,5]
80%	gr/kWh (l/h) [kg/h]		217 (32,3) [27,1]
50%	gr/kWh (l/h) [kg/h]		219 (22,4) [18,8]
Fuel specifications			EN 590
Fuel pump max suction head		m	-

8/ ELECTRIC SYSTEM

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	Amp		1900
cranking current	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

1800 rpm

Without air preheating	°C (°F)	-10(14)
With air preheating	°C (°F)	-25(-13)

10/ EMISSION GASEOUS AND PARTICULATE

1800 rpm

No _x	Oxides of nitrogen	gr/kWh	-
HC	Hydrocarbons	gr/kWh	-
NMHC + NO _x		gr/kWh	3,2
CO	Carbon monoxide	gr/kWh	1,2
PT	Particulate	gr/kWh	0,08