N67 TE2X

200 kW (1800 rpm)

1/ GENERAL		1800 rpm
Engine model		N67 TE2X
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)	18,7(271,2)
Stand-by Power	bar(psi)	20,6(299)
Dry weight (including cooling package)	kg(lb)	630(1389)
Energy to coolant	kcal/kWh	340
Energy to charge cooler	kcal/kWh	142
Energy to radiation	kcal/kWh	131
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)	151(202,5)
Prime Power	(gross)	kWm(hp)	189(253,5)
Stand-By Power	(gross)	kWm(hp)	208(279)
Fan consumption		kWm(hp)	7,5(10,05)
Continuous Power	(net)	kWm(hp)	145,5(195,2)
Prime Power	(net)	kWm(hp)	182(244)
Stand-By Power	(net)	kWm(hp)	200(268,2)
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

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3/ COOLING PACKAGE			1800 rpm
Type			liquid
Recommanded coolant			water + 50%paraflu 11
Coolant capacity			
	motor only	liter(US gal)	10,5(2,77)
	radiator and hose	liter(US gal)	33(9,45)
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(hp)	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		secco

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	630

7/ FUEL SYSTEM		**1800 rpm**
Fuel consumption at		
Stand-By	gr/kWh (l/h) [kg/h]	206 (51,0) [42,8]
full load	gr/kWh (l/h) [kg/h]	211 (47,0) [39,5]
80%	gr/kWh (l/h) [kg/h]	218 (38,9) [32,7]
50%	gr/kWh (l/h) [kg/h]	219 (24,2) [20,3]
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 PARTICLES			**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

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