

N67 TM4

165 kW (1500 rpm)

Engine N67 TM4

1/ GENERAL

1500 rpm

| | | |
|--|------------------|-----------------------------------|
| Engine model | | NEF67 TM4 |
| Basic engine | | F4GE0685A*B601 - 5801669214 |
| Number cylinders | | 6 |
| Firing order (N°1 nearest to fan) | | 1-5-3-6-2-4 |
| Cylinder arrangement | | in line |
| Valves per cylinder | | 2 |
| Type | | diesel 4 stroke |
| Injection system | | direct |
| Induction System | | Turbocharged aftercooled air/air |
| Bore | mm | 104 |
| Stroke | mm | 132 |
| Total displacement | liter | 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 ² | 0,14 |
| flywheel only | kgm ² | 0,71 |
| BMEP | | |
| Prime Power | bar/kPa | 18,5 / 1850 |
| Stand-by Power | bar/kPa | 20,3 / 2030 |
| Dry weight (including cooling package) | kg | ~ 640 |
| Energy to coolant | kcal/kWh | 443 |
| Energy to charge cooler | kcal/kWh | 98 |
| Energy to radiation | kcal/kWh | 107 |
| Dimensions L x W x H | mm | 1697 X 789 X 1318 |

2/ PERFORMANCES

1500 rpm

| | | | |
|------------------------|---------|--------|--------|
| Continuous Power | (gross) | kWm | 123,7 |
| Prime Power | (gross) | kWm | 154,7 |
| Stand-By Power | (gross) | kWm | 170 |
| Fan consumption | | kWm | 5 |
| Continuous Power | (net) | kWm | 118,7 |
| Prime Power | (net) | kWm | 149,7 |
| Stand-By Power | (net) | kWm | 165 |
| Performance conditions | | | |
| 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% |

3/ COOLING SYSTEM

1500 rpm

| | | |
|--------------------------------|-------------------|------------------------|
| Type | | liquid |
| Recommended coolant | | water + 50%parafllu 11 |
| Coolant capacity | | |
| motor only | litri | 10,5 |
| radiator and hose | litri | 15 |
| Coolant pump flow | l/min | 141 |
| Pression cap setting | kPa (bar) | 70 (0,7) |
| Shutdown switch setting | °C | 103 |
| Maximal additional restriction | Pa | 196 |
| Air To Boil | Prime Power | °C |
| | | 60 |
| Fan | | |
| diameter | mm | 685 |
| number of blades | | 12 |
| drive ratio | | 1,41 : 1 |
| speed | giri/1' | 2115,0 |
| air flow | m ³ /s | 3,8 |
| power consumption | kWm | 5 |

4/ LUBRICATION SYSTEM

1500 rpm

| | | |
|---------------------------------------|---------|------------|
| Oil sump capacity | | |
| max | liter | 12 |
| min | liter | 8 |
| Oil system capacity including filters | liter | 17,2 |
| Oil pressure at PRP | kPa | 300-500 |
| Oil temperature | | |
| normal | °C | --- |
| max | °C | 120 |
| Engine angularity | | |
| longitudinal | degrees | 35° |
| trasverse | degrees | 35° |
| Servicing intervall | hours | 800 |
| Oil specification | | ACEA E3/E5 |
| Oil consumption | %fuel | < 0,1 |

5/ INTAKE SYSTEM

1500 rpm

| | | |
|-------------------------------------|--------------------------|-----------|
| Air consumption at 100% of load | m ³ /h (Kg/h) | 586 (706) |
| 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

1500 rpm

| | | |
|-------------------------------|------------|--------|
| Gas flow at stand by power | kg/h | 741,2 |
| Max temperature at PRP (25°C) | °C | 497 |
| Max allowable back pressure | kPa (mbar) | 5 (50) |
| Energy to exhaust | kcal/kWh | 598 |

7/ FUEL SYSTEM

1500 rpm

| | | | |
|----------------------------|---------------------|--|---------------------|
| Fuel consumption at | | | |
| Stand-By | gr/kWh (l/h) [kg/h] | | 207,2 (42,2) [35,2] |
| full load PRP | gr/kWh (l/h) [kg/h] | | 197 (36,6) [30,5] |
| 80% | gr/kWh (l/h) [kg/h] | | 198 (29,4) [24,5] |
| 50% | gr/kWh (l/h) [kg/h] | | 194 (18) [15] |
| Fuel specifications | | | EN 590 |
| Fuel 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(+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 | | 1 x 100 |
| discharge current | Amp | | 650 |
| | (EN 50342) | | |
| Stop solenoid energized to run | | | --- |
| 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 _x | Oxides of nitrogen | gr/kWh | - |
| HC | Hydrocarbons | gr/kWh | - |
| No _x +HC | | gr/kWh | - |
| CO | Carbon monoxide | gr/kWh | - |
| PT | Particles | gr/kWh | - |