GREEN POWER IVECO DIESEL ENGINE

1500 RPM	Type GP85F

The Engine with integrated water cooling

Engine: NEF N45TM1A

Technical description

- Optimized cast iron cylinder block with optimum distribution of forces
- Piston cooling for low piston temperature and reduced ring temperature
- Powerful but 4.5 litre naturally aspirated 4 cylinder compact Engine
- Crankshaft hardened bearing surfaces and fillets for moderate on main and big end bearings
- Keystone top compression rings for long service life
- Replaceable valve guides and valve seats
- Thermostatically controlled system with gear driven circulation pump
- Lift eyelets
- Flywheel housing SAE 3
- Flywheel for flexible coupling and friction clutch
- Front engine mounting brackets

Benefits

- Low noise emission, cost savings as no noise attenation measures are required
- Long service intervals: 1000 hour oil change intervals and low fuel consumption bring savings in Operating costs
- Low installation costs
- Excellent load takeover characteristics ensure prompt power supply
- Combined oil cooling and lubrication prevents corrosion and cavitation
- High reliability and durability together with reduced maintenance requirement and wear parts

Fuel System

- Fuel filter with water-separator
- Direct fuel injection system

Oil System

- Spin-on full flow lub oil filter
- Wet steel sump with filler and dipstick

Control Panel

Manual or Automatic start control panel

- 12 volt Electric system
- Expansion module for CAN communication
- Control version for synchronizing a single genset with mains
- Control version for synchronizing with mains without blackout

Rating Table : The Genset NEF N45TM1A Engine.

Engine type		NEF N45TM1A
Speed	min^{-1} | rpm	1500
Frequency	Hz	50
Engine Power		
Prime power (PRP)	kVA | KW	85 | 68
Limited time running power (LTP)	kVA | KW	94 | 75.2
Fuel consumption		
100 % Load	l/hr	19.3
75 % Load	l/hr	13.5
50 % Load	l/hr	9.8

PRP* kVA/KW :

The prime power is the maximum power available with varying loads for an unlimited number of hours. The average power output during a 24 hour period of operation must not exceed 80% of the declared prime power between the prescribed maintenance intervals and at standard environmental conditions. A 10% overload is permissible for 1 hour every 12 hours of operation.

LTP** kVA/KW :

The stand-by power is the maximum power available for a period of 500 hours/year with a mean load factor of 90% of the declared stand-by power. No kind of overloads is permissible for this use.

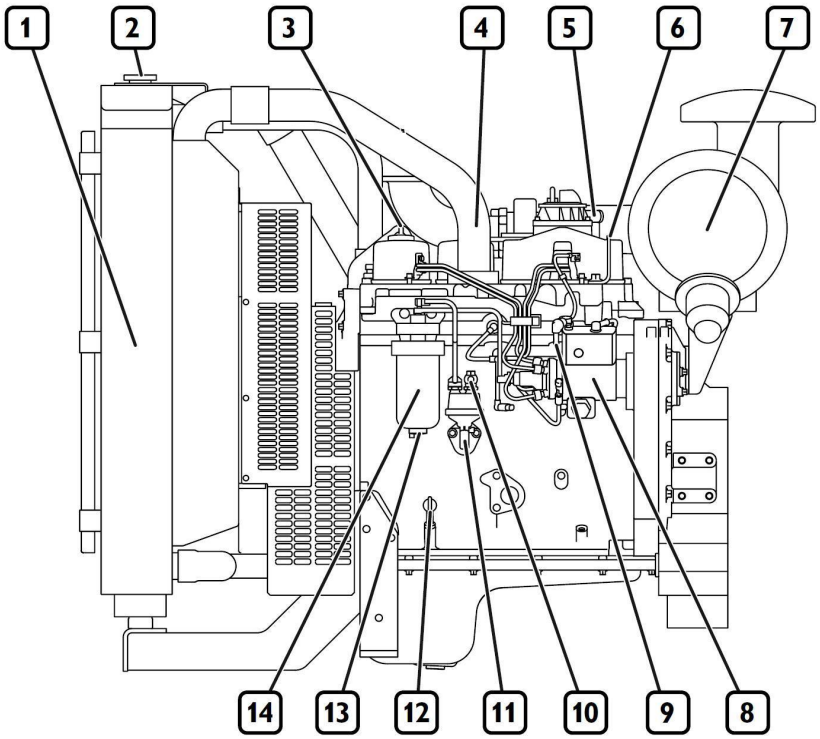
Scope of supply :

The engine and alternator are mounted together forming a rigid monoblock, the shoulders are connected by inflexible disc connection. The mono-block is mounted on a steel base frame through silent blocks. The base frame is including a fuel tank. Starting is electric and it contains a battery. The generator monitoring system consists of a control module.

Technical Data

Engine type		NEF N45TM1A
Numer of cylinder		4
Bore x Stroke	mm	104 x 132
Displacement	l	4.5
Speed	rpm	1500
Engine Power PRP	KW	68
Engine Power LTP	KW	75.2
Cooling Type		water
Injection Type		Direct
Air intake restriction, clean filter	kPa	2
Air intake restriction, dirty filter	kPa	5
Max standby power at rated RPM	KW/HP	77/105
Coolant capacity	Litres	8.5
Ampere rating	Ah	125
Oil Tank capacity	Litres	12.8
Electrical systems	V	12
Exhaust gas Temperature	^{o}C	429

Engine Illustration

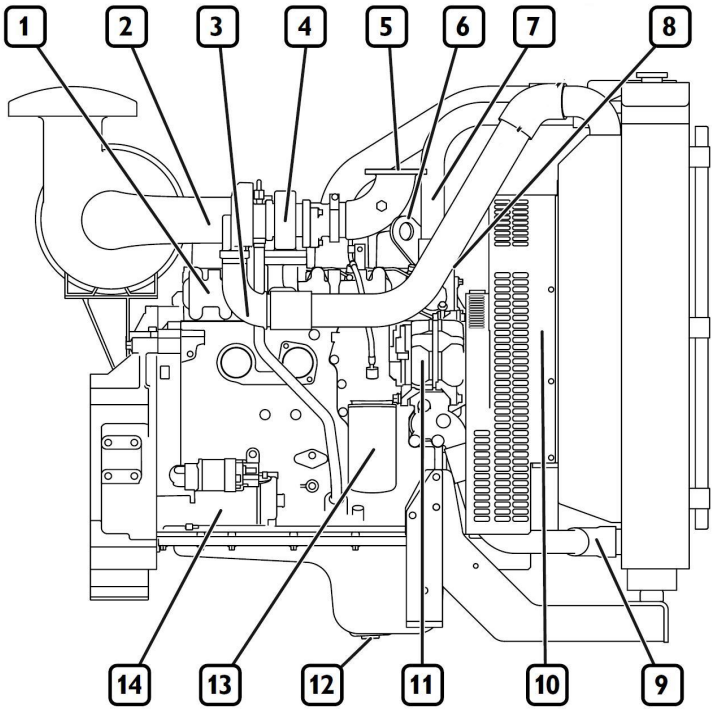


Engine Description
NEF N45TM1A

1 Heat exchangers
2 Coolant filler cap
3 Oil filler cap
4 Engine air inlet manifold
5 Oil vapor bleeder
6 Lifting U-bolt
7 Air filter
8 Injection Pump
9 Fuel outlet connector to tank
10 Fuel inlet manifold from tank
11 Hand pump
12 Oil dipstick
13 Fuel Filter condensation drain plug
14 Fuel Filter

Engine Description
NEF N45TM1A

1 Exhaust manifold
2 Turbocharger air intake
3 Turbo charging air outlet
4 Turbocharger
5 Exhaust outlet
6 Lifting U-bolt
7 Coolant outlet manifold from engine
8 Location of thermostatic valve
9 Engine coolant inlet connector sleeve
10 Fan
11 Alternator
12 Lubricant oil discharge plug
13 Oil filter
14 Electrical starter



Dimensions

Engine type		Length	Width	Height
NEF N45TM1A	mm	1367	753	1085

Greenpower AB
Helsingborgsvägen Varalöv
262 96 Ängelholm, Sweden
Tel: +46 431-222 40
E-mail: info@greenpower.se
web:www.greenpower.se