

## GREEN POWER IVECO DIESEL ENGINE

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<b>1500 RPM</b>	<b>Type GP100F</b>
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The Engine with integrated water cooling

**Engine:** NEF N45TM2A

### 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 attenuation 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 N45TM2A Engine.

Engine type		NEF N45TM2A
Speed	min <sup>-1</sup>   rpm	1500
Frequency	Hz	50
<b>Engine Power</b>		
Prime power (PRP)	kVA   kW	100   80
Limited time running power (LTP)	kVA   kW	110   88
<b>Fuel consumption</b>		
100 % Load	l/hr	22
75 % Load	l/hr	16.2
50 % Load	l/hr	11

### 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.

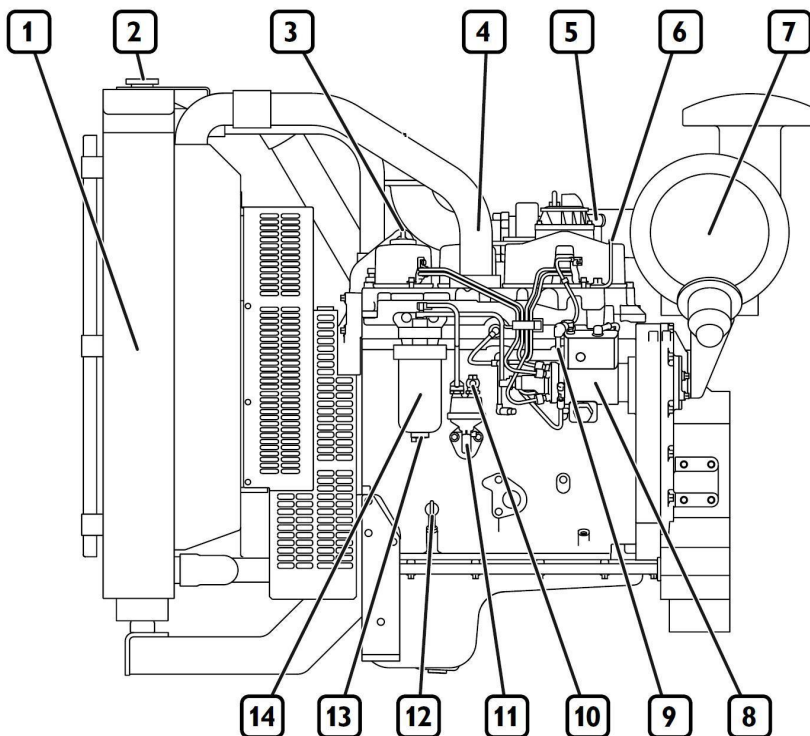
### Scope of supply :

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	<b>NEF N45TM2A</b>	
Numer of cylinder	4	
Bore x Stroke	mm	104 x 132
Displacement	l	4.5
Speed	rpm	1500
Engine Power PRP	KW	80
Engine Power LTP	KW	88
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	87/117
Coolant capacity	Litres	8.5
Ampere rating	Ah	160
Oil Tank capacity	Litres	12.8
Electrical systems	V	12
Exhaust gas Temperature	°C	535

## Engine Illustration

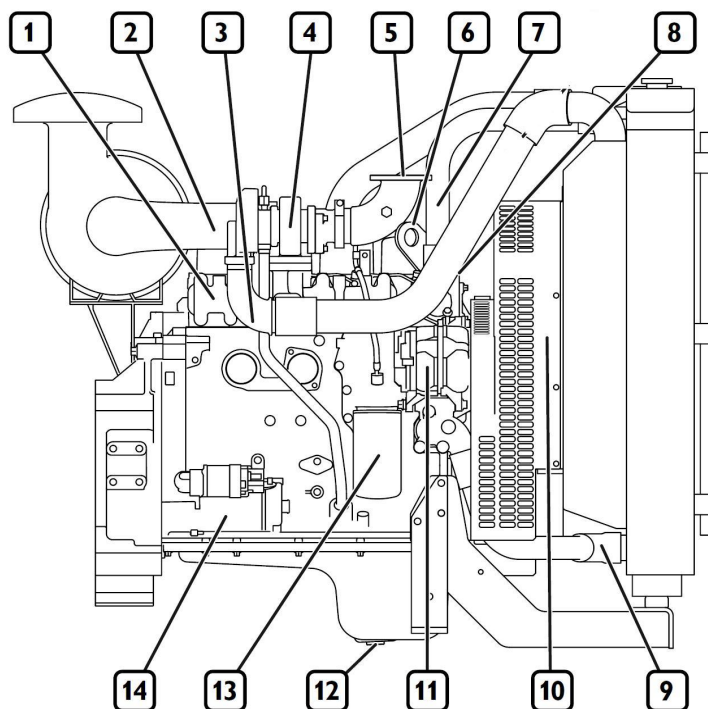


### Engine Description NEF N45TM2A

- 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 N45TM2A

- 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
<b>NEF N45TM2A</b>	mm	1367	753	1086