

**SPECIFICATIONS**

Thermodynamic Cycle	Diesel 4 stroke
Air Handling	TAA
Arrangement	4L
Bore x Stroke (mm)	104 X 132
Total Displacement (L)	4.5
Valves per cylinder (n°)	4
Cooling System	liquid
Direction of Rotation (viewed facing flywheel)	CCW
Compression ratio	17:1
InjectionSystem	ECR

**PERFORMANCE**

Rated power (kW (HP) @ rpm)	110 ( 150 ) @ 2200
Peak power[*] (kW (HP) @ rpm)	120 ( 164 ) @ 1850
Peak torque (Nm (kgm) @ rpm)	676 ( 69 ) @ 1500
High idle speed (rpm)	2375
Low idle speed (rpm)	± 800
DEF[**]/AdBlue consumption at peak torque and rated power (% of fuel cons.)	4-5
Minimum starting temperature without auxiliaries (°C)	-15 °
Oil and oil filter maintenance interval for replacement [**] (hours)	600

**STANDARD CONFIGURATION**

Flywheel housing (type)	SAE 3 - cast iron
Flywheel size (inch)	11" ½
Intake manifold location	high / left side / vertical from top
Exhaust manifold location	high / right side / front
Turbocharger	fixed geometry with waste gate valve
Turbocharger location	high / back / right side
Fan transmission ratio	1.4:1
Distance between fan - crankshaft centers (mm)	X = 0 Y = 296
Fuel filter (n°)	single cartridge - left side
Oil filter (n°)	single cartridge - right side
Oil sump	suspended sheet steel / front sump, 35° angularity limits continuous in all directions
Oil vapours blow-by circuit	flywheel housing, Mann & Hummel valve
Oil heat exchanger	integrated into the block
Oil filler	on valve cover
Starter	24V - 4kW
Alternator	24V - 70A with W contact
Air Compressor (cm3)	-
Hydraulic steering pump (liters/min)	-
Maximum torque available from crankshaft pulley (Nm)	-
Engine stop device	incorporated in the pump
Wiring harness	-
Painting color	grey



**NOT INCLUDED IN STANDARD CONFIGURATION**

Power Take Off (PTO)	-
PTO - transmission ratio	1.03:1
PTO - maximum available torque	SAE A 100Nm (9 teeth) - 150Nm (11 teeth) SAE B 240Nm (13 teeth)
Battery - minimum capacity recommended [*] (Ah)	130Ah (24V)
Battery - minimum cold cranking capacity recommended [*] (A)	500A (24V)
A/C compressor	-

[\*] Power at flywheel according to 97/68 EC (without fan), after 50 hours running, 3% tolerance.

[\*\*] DEF: Diesel Exhaust Fluid.

[\*\*\*] Oil type: Approved engine oil specification: 15W-40 ACEA E7 / API CI-4 or 10W-30 ACEA E7 / API CI-4.

**Legend**

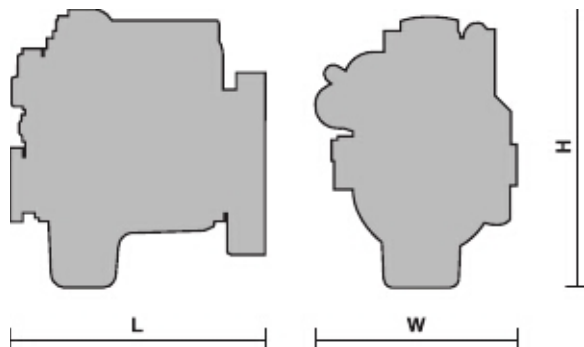
Arrangement L (in line)	Air Handling TAA (Turbocharged with aftercooler) TC (Turbocharged) NA (Naturally Aspirated)	Turbocharger WG (Wastegate) VGT (Variable Geometry Turbocharger) TST (Twin Stage Turbocharge)	InjectionSystem M (Mechanical): ECR (Electronic Common Rail) EUI (Electronic Unit Injector)	Emission Standard EEV (Enhanced Environmentally friendly Vehicle)	Exhaust System EGR (Exhaust Gas Recirculation) SCR (Selective Catalytic Reduction)
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FOR INFORMATION ON THE AVAILABLE RATINGS NOT LISTED IN THIS DOCUMENT PLEASE CONTACT THE FPT INDUSTRIAL SALES NETWORK OR VISIT OUR SITE [WWW.FPTINDUSTRIAL.COM](http://WWW.FPTINDUSTRIAL.COM)



FEATURES	BENEFITS
<b>INJECTION SYSTEM</b> State-of-the-art system for accurate fuel delivery, based on a very compact direct injection 2nd generation Common Rail (1.600 bar) to achieve top performance in terms of load response, max torque and top power with the minimum fuel consumption.	<b>FLAT TORQUE AND HIGH ENGINE THERMODYNAMIC PERFORMANCE WITH LOW FUEL CONSUMPTION</b>
<b>ENGINE DESIGN</b> Multiple injections, balancer counterweights incorporated in crankshaft webs, rear geartrain layout, camshaft in crankcase, suspended oil pan, ladder frame cylinder block and, for 4 cylinder engines, countershafts arrangements available as options.	<b>VIBRATION &amp; NOISE REDUCTION</b>
<b>COMPONENT INTEGRATION</b> Integrated CCV (Closed Crankcase Ventilation) system and engine design oriented to high component integration. Water-oil cooler, oil and water pumps are completely integrated in the engine block.	<b>LEAKAGE PREVENTION</b>
<b>SPECIFIC FEATURES</b> Engine specifically designed for agricultural applications; lean layout; starting temperature without auxiliaries down to -15°C (with grid heater down to -25°, with water and oil heater down to -30°C); engine slope up to 35° continuous in all allowed directions. Tier 3 exhaust emissions compliance achieved without external EGR, VGT. Tier 4B emission limits reached thanks to in-cylinder PM reduction, due to an optimized combustion process and the adoption of Hi-eSCR, without losing engine performance and improving running costs.	<b>HIGH PERFORMANCE GUARANTEED IN ALL CONDITIONS</b>
<b>AIR HANDLING</b> All NEF electronic series engines are turbocharged with Air to Air intercooler and equipped with Internal EGR in Tier 3 and SCR in Tier 4. The above described features allow OEM's customers to optimize engine installation, machine performance, load response and fuel consumption.	<b>HIGH ENGINE POWER DENSITY AND FAST LOAD RESPONSE TIME WITH THE LOWEST FUEL CONSUMPTION</b>
<b>UP TO 600H OIL INTERVAL CHANGE</b> NEF Series adopts combustion chambers and high pressure injection system optimized to reduce oil dilution. Optimum engine design in terms of mechanical clearances, piston rings and oil system calculation.	<b>REDUCED MAINTENANCE NEEDS AND OPERATING COST</b>
<b>SERVICEABILITY &amp; MAINTAINABILITY</b> Worldwide service network. Engine ECU (Electronic Control Unit) with CAN-BUS control and monitoring interfaces for advanced real time diagnosis.	<b>QUICK SERVICE SUPPORT AND FAST MAINTENANCE ACTIVITIES</b>
<b>OPTION LIST</b> NEF engines feature both non-structural and structural architecture for agricultural application. Additional options are available for alternators, radiators, air filters, mufflers, oil pans, SAE standard transmission interfaces, PTO arrangement SAE A-B, air conditioning compressor arrangement. Specific options may be developed on demand. Double configuration for SCR catalyst (vertical and horizontal) for both 4 and 6 cylinder; specific DEF/AdBlue tank for each engine.	<b>CUSTOMER ORIENTATION AND SPECIFIC ENGINE ARCHITECTURE BASED ON APPLICATION TYPE</b>
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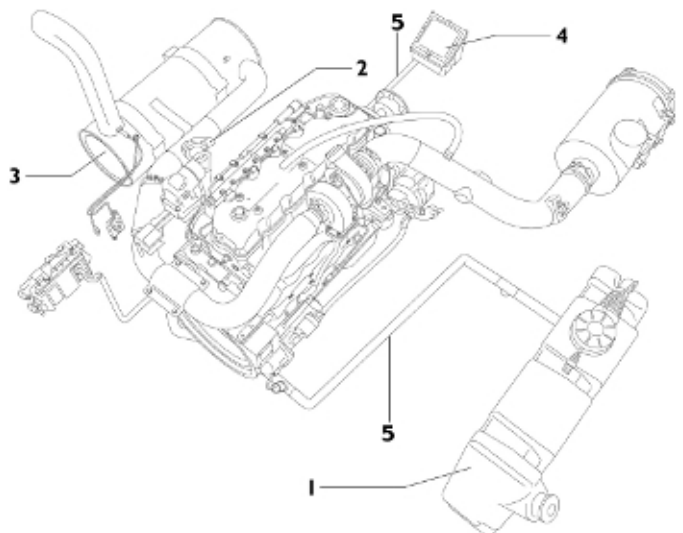
## WEIGHT AND DIMENSIONS



L = 833 W= 685 H = 955

**Dry Weight** (standard configuration without: oil, cooling, starter, clutch, Compressor A/C, alternator) = Kg 425

## AFTER TREATMENT SYSTEM



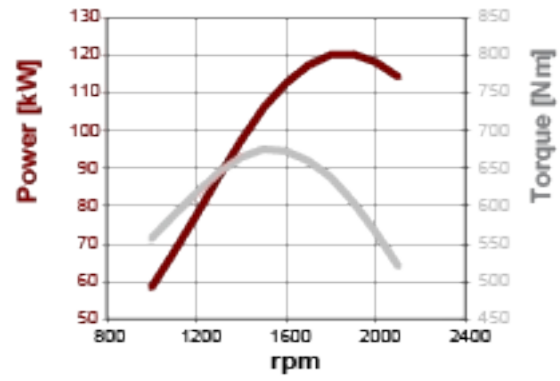
### SCR (Selective Catalytic Reduction) system Main components

- 1) AdBlue/DEF\* Tank: available options 43 and 61 liters
- 2) Dosing Module
- 3) SCR muffler: available options Vertical and Horizontal configuration
- 4) Supply Module
- 5) AdBlue/DEF\* pipes

\*DEF: Diesel Exhaust Fluid

FPT INDUSTRIAL OFFERS THE WIDEST AVAILABILITY OF ENGINE BUILD OPTIONS TO CUSTOMER SPECIFIC REQUIREMENTS WITHIN THE ENGINE SUPPLY. TO FIND OUT MORE ABOUT THE CONFIGURATIONS AND ACCESSORIES WHICH ARE AVAILABLE





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