

N45 MSS

74 kW (2300 rpm) - 398 Nm (1400 rpm)

| | | |
|--|------------------|------------------------|
| Technical code | | F4GE0454A *D6 |
| Thermodynamic cycle | | Diesel 4 stroke - D.I. |
| Air intake | | TC |
| Arrangement | | 4L |
| Bore x Stroke | mm | 104 X 132 |
| Total displacement | L | 4.5 |
| Valves per cylinder | | 2 |
| Cooling | | liquid |
| Direction of rotation (viewed facing flywheel) | | CCW |
| Compression ratio | | 17.5:1 |
| Rotation mass moment of inertia (without flywheel) | kgm ² | 0.19 |
| Standard flywheel inertia | kgm ² | 0.69 |

AIR INDUCTION

| | | |
|---|-------------------------|--------------------|
| Max suggested intake restriction with clean air filter | kPa(bar) | 3.5 (0.035) |
| Max allowable restriction with dirty air filter | kPa(bar) | 6.5 (0.065) |
| Air requirement for combustion at 100% load/rated speed | kg/h(m ³ /h) | 500 (425) |
| Turbocharging pressure at full load/rated speed | kPa(bar) | 80 (0.8) |
| Turbocharging air max temperature (engine inlet) | °C | 100 (at 25°C amb.) |
| Heat rejected to intercooler at maximum power | kJ/s(kcal/h) | - |
| Intercooler system max pressure drop | kPa(bar) | - |

EXHAUST SYSTEM

| | | |
|--|----------|----------|
| Max allowable backpressure | kPa(bar) | 10 (0.1) |
| Max exhaust temperature at full load/rated speed | °C | 485 |
| Exhaust flow at max output | kg/h | 515 |

LUBRICATION SYSTEM

| | | |
|---|----------|----------|
| Minimum oil pressure at idle | kPa(bar) | 70 (0.7) |
| Max oil temperature at full load/rated speed | °C | 120 |
| Engine angularity limits continuous operation: | | |
| max front up and front down | 0/360 | 35 |
| max left hand and right hand | 0/360 | 35 |
| Total system capacity including pipes, filters etc. | liters | 12.8 |

COOLING SYSTEM

| | | |
|---|-------------------|----------------|
| Coolant capacity (engine only) | liters | 8.5 |
| Water pump flow at rated speed | m ³ /h | 9.5 |
| Heat to reject by heat exchanger at max power | kJ/s(kcal/h) | 42 (36 000) |
| Thermostat (modulating range) | °C | 83 ÷ 95 |
| Cooling liquid max temperature | °C | 103 |
| Min/max inner pressure in the cooling circuit | kPa(bar) | 30/100 (0.3/1) |
| External cooling system max pressure drop | kPa(bar) | 35 (0.35) |

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Engine N 45 MSS

FUEL SYSTEM

| | | |
|--------------------------------|----------|-------------------|
| Injection system | | Rotary pump |
| Gas oil max intake restriction | kPa(bar) | 15 (0,15) |
| Gas oil max intake temperature | °C | 60 (at 25°C amb.) |

ELECTRICAL SYSTEM

| | | |
|---|-------------------------|------------------------------|
| Voltage | V | 12 |
| Maximum rating | kW(CV) | 74 (100) |
| At speed | rpm | 2300 |
| Maximum torque | Nm(kgm) | 398 (40.5) |
| At speed | rpm | 1400 |
| Maximum no load governed speed at max rating | rpm | 2480 |
| Minimum idling speed | rpm | 650 |
| Mean piston speed at rated speed | m/s | 10.1 |
| BMEP at max torque | kg/cm ² | 11.3 |
| Available certifications | | EC 97/68 Phase 2 - EPA Tier2 |
| Specific fuel consumption at full load (best value) | g/kWh @ rpm | 217 @ 1400 |
| Oil consumption at max rating | (% of fuel consumption) | 0.1 |
| Noise at max rating (ISO 3744) | dBA | 92 |
| Minimum starting temperature without auxiliaries | °C | -15 |
| Oil and oil filter maintenance interval for replacement | hours | 500 |
| Dry weight (standard configuration) | kg | 390 |

FOR INFORMATION ON THE AVAILABLE RATINGS NOT LISTED IN THIS DOCUMENT PLEASE CONTACT THE FPT SALES NETWORK.

* **Power** at flywheel according to 97/68 EC (without fan), after 50 hours running, 3% tolerance, fuel Diese EN 590

Test conditions : ISO 3046/1, 25 °C air temperature, 100 kPa atmospheric pressure, 30 % relative humidity - Applicable also to DIN 6271, BS 5514, SAE J1349 Standards.

STANDARD CONFIGURATION

| | | |
|---|------|-------------------------------|
| Flywheel housing | type | 3 |
| Flywheel size | inch | 10 |
| Intake manifold location | | turbocharger inlet |
| Exhaust manifold location | | right side / frontward outlet |
| Turbocharger | | waste gate controlled |
| Turbocharger location | | high / right side |
| Fan transmission ratio | | 1.41 : 1 |
| Distance between fan - crankshaft centers | mm | 296 |
| Fuel filter | n° | 1 - left side |
| Fuel prefilter | | - |
| Fuel pump | | included |
| Oil filter | n° | 1 - right side |
| Oil sump | | sheet steel / front well |
| Oil vapours blow-by circuit | | on timing cover |
| Oil heat exchanger | | built in the crankcase |

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| | | |
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| Oil filler | | on timing cover 1st cylinder |
| Exhaust counter flange | | included |
| Starting motor | | 12V - 3kW |
| Alternator | | 12V - 90A with W contact |
| Engine stop device | | electrical excitation |
| Wiring harness | | - |
| Power take off | | optional |
| transmission ratio | | 1.03 :1 |
| PTO maximum available torque | SAE A | 100Nm (9 teeth) |
| Painting | colour | grey |

NOT INCLUDED IN THE STANDARD CONFIGURATION

| | | |
|--|--|--------------|
| Battery - minimum capacity recommended | | 180 Ah (12V) |
| Battery - minimum cold cranking capacity recommended | | 950 A (12V) |

FPT 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, CONTACT THE FPT SALES NETWORK.