

SPECIFICATIONS

| | | |
|--|------------------|-----------|
| Technical code | F3HFE611A*C | |
| Thermodynamic cycle | Diesel 4 stroke | |
| Air intake | TAA | |
| Arrangement | 6L | |
| Bore x Stroke | mm | 135 x 150 |
| Total displacement | L | 12.9 |
| N° valves per cylinder | 4 | |
| Cooling | liquid | |
| Direction of rotation | CCW | |
| Compression ratio | 16.5 : 1 | |
| Rotation mass moment of inertia (without flywheel) | kgm ² | 1.096 |
| Standard flywheel inertia | kgm ² | 1.44 |

FUEL SYSTEM

| | | |
|----------------------------------|------------------------|--------------------|
| Injection system | Electronic Common Rail | |
| Upstream injectors fuel pressure | kPa (bar) | 1700 |
| Gas oil max intake temperature | °C | 80° at fuel filter |

AIR INTAKE

| | | |
|--|-------------------------|-------------|
| Max suggested intake restriction | kPa(bar) | 6.0 (0.06) |
| Air flow at 100% load / rated speed | kg/h(m ³ /h) | 2000 (1860) |
| Turbocharging pressure at full load/rated speed | kPa(bar) | 180 (1.80) |
| Turbocharging air max temperature (engine inlet) | °C | 45 |
| Heat rejected to intercooler at maximum power | kJ/s(kcal/h) | 82 (70.6) |
| Intercooler system max pressure drop | kPa(bar) | 10 (0.1) |

EXHAUST SYSTEM

| | | |
|--|----------|----------|
| Max allowable backpressure | kPa(bar) | 30 (0.3) |
| Max exhaust temperature at full load/rated speed | °C | 570 |
| Exhaust flow at max output | kg/h | 2090 |

C13 ENT VI

412 kW @ 1900 rpm - 2500 Nm @ 1000 rpm

EURO VI

LUBRICATION SYSTEM

| | | |
|--|----------|-----------|
| Minimum oil pressure at idle | kPa(bar) | 150 (1.5) |
| Max oil pressure at max rating | kPa(bar) | 500 (5.0) |
| Max oil temperature at full load/rated speed | °C | 125 |
| Engine angularity limits continuous operation: | | |
| max front up and front down | 0/360° | 17 |
| max left hand and right hand | 0/360° | 17 |
| Total system capacity including pipes, filters, etc. | liters | 30 |

COOLING SYSTEM

| | | |
|---|-------------------|-----------|
| Coolant capacity (engine only) | liters | 10 |
| Water pump flow at rated speed | m ³ /h | 30 |
| Heat to reject by heat exchanger at max power | kW | 166 |
| Modulating range thermostat | °C | 84° ÷ 94° |
| Cooling liquid max temperature | °C | 106 |
| Min/max inner pressure in the cooling circuit | kPa(bar) | n.d. |
| External cooling system max pressure drop | kPa(bar) | 20 (0.20) |

ELECTRICAL SYSTEM

| | | |
|---------|---|----|
| Voltage | V | 24 |
|---------|---|----|

Dimensions



C13 ENT VI

412 kW @ 1900 rpm - 2500 Nm @ 1000 rpm
EURO VI

PERFORMANCE

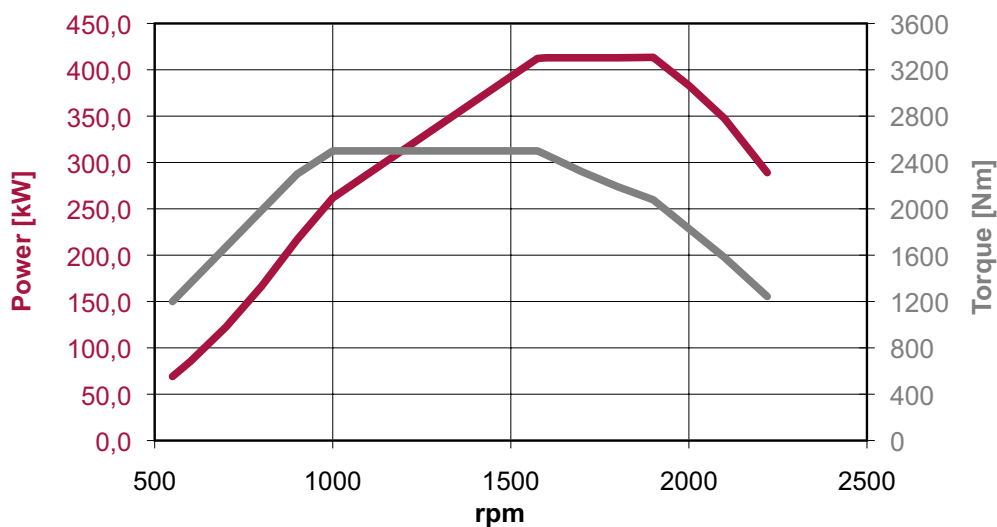
| | | |
|---|--|------------|
| Maximum rating [*] | kW(HP) | 412 (560) |
| At speed | rpm | 1900 |
| Maximum torque | Nm(kgm) | 2500 (255) |
| At speed | rpm | 1000 |
| Engine brake power | kW | 463 |
| At speed | rpm | 2400 |
| Maximum no load governed speed at max rating | rpm | 2320 ± 50 |
| Minimum idling speed | rpm | 550 ± 50 |
| Mean piston speed at rated speed | m/s | 9.5 |
| BMEP at max torque | bar | 24.9 |
| Available certifications | EC 595/2009 - EC 582/2011 - EC 64/2012 | |
| Specific fuel consumption at max power | g/kWh | 204 |
| Specific fuel consumption at max torque | g/kWh | 192 |
| Oil consumption at max rating | % fuel consumption | 0.09 |
| Noise at max rating (ISO 3744) | dBA | n.a. |
| Minimum starting temperature without auxiliaries | °C | -15 |
| Oil and oil filter maintenance interval for replacement [**] | Km (up to) | 150000 |
| Dry weight (standard configuration for truck version without cooling) | kg | 1320 |

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 Diesel EN 590.

[**] Oil type: ACEA E6, SAE 5W30 low saps

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.



C13 ENT VI

412 kW @ 1900 rpm - 2500 Nm @ 1000 rpm
EURO VI

STANDARD CONFIGURATION

| | | |
|---|-----------------|---|
| Flywheel housing | type | SAE 1 - aluminium |
| Flywheel size | inch | 17" |
| Intake manifold location | | middle high / right side |
| Exhaust manifold location middle high | | middle high / left side / back |
| Turbocharger | | Electronic Variable Geometry Turbocharger with exhaust flap |
| Turbocharger location | | center / left side |
| Fan transmission ratio | | 1.3 : 1 |
| Distance between fan - crankshaft centers | mm | x = -20 ; y = 225 |
| Fuel filter | | single cartridge - left side |
| Oil filter | | single cartridge - right side |
| Oil sump | | suspended sheet steel/front sump |
| Oil vapours blow-by circuit | | close case ventilation |
| Oil heat exchanger | | integrated into the block |
| Oil filler | | on valve cover |
| Starter | | 24V - 5.5 kW |
| Alternator | | 24V - 90A |
| Air Compressor | cm ³ | 352 - 630 |
| Hydraulic steering pump - available versions | liters/min | 16 - 20 - 25 |
| Maximum torque available from crankshaft pulley | | 800 Nm |
| Engine stop device | | by electronic control unit |
| Wiring harness | | interface wiring loom with accessories |
| Painting | colour | grey |

NOT INCLUDED IN THE STANDARD CONFIGURATION

| | | |
|--|--|---------------|
| Power take off - transmission | | 1 : 1.14 |
| PTO - maximum available torque from rear gear | | 800 Nm |
| Battery - minimum capacity recommended [*] | | 24 V - 473 Ah |
| Battery - minimum cold cranking capacity recommended [*] | | 24 V - 662 Ah |

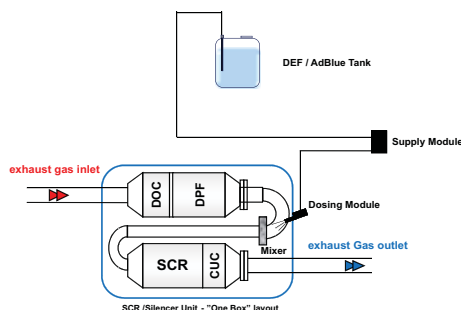
[*] at -25°C with SAE 5W30 oil

LEGEND:

n.a. = not applicable

n.av. = not available

AFTERTREATMENT SYSTEM



HI-eSCR (High Efficiency SCR)

Main components - Functional Scheme

- Supply Module
- Dosing Module
- SCR Catalyst with integrated CUC*
- DOC**
- DEF***/AdBlue Tank
- DPF****

*CUC: Clean Up Catalyst

**DOC: Diesel Oxidation Catalyst

***DEF: Diesel Exhaust Fluid

****DPF: Diesel Particulate Filter

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.