FPT INDUSTRIAL PRESENTS LATEST CONSTRUCTION POWER SOLUTIONS AT INTERMAT 2015

Turin, January 2015

Innovative powertrain manufacturer FPT Industrial will display its latest solutions for construction applications at Intermat, to be held at Paris-Nord Villepinte – France, next April 20 – 25.

FPT's range for the construction sector is very broad, spanning from 33 to 570 kW, lately revamped with a state-of-the-art engine, the Cursor 16 for heavy duty applications, winner of prestigious title of DIESEL OF THE YEAR ® 2014, recognized by the Italian magazine "Diesel".

FPT Industrial will be present at Intermat in Hall 5B, Stand L041, with experts on hand to discuss the company's solutions for the construction market and future perspectives in the powertrain sector.

PRESS RELEASE

R22 and Cursor 16 engines: FPT's smallest and biggest solutions for the world of construction

At the bottom of FPT's range, the customisable R22 engine, developed in partnership with Italian VM Motori, features Common Rail fuel injection and a fixed geometry turbocharger with after-cooler and waste gate valve. Assuring service intervals up to 600 hours, the engine is able to comply with Tier 4B/Stage IIIB emission regulations thanks to an FPT Industrial's maintenance-free after-treatment solution, specifically developed to achieve emission levels required for power outputs below 56 kW. This solution adopts a combination of Diesel Oxidation Catalyst (DOC) and Partial Flow Filter (PFF), canned in an integrated converter.

The Partial Flow Filter (PFF) oxidises particulate matter (PM) that is regenerated passively by nitrogen dioxide (NO2) when the engine is operating at normal temperatures of over 240°C. However, if running at lower temperatures, unlike diesel particulate filter (DPF) widely used in engines under 56 kW, a PFF will not clog with PM avoiding any backpressure increase. To ensure a perfect PM conversion in all conditions the filter has been combined with a unique engine management system designed by FPT Industrial's Research & Development Centre in Arbon, Switzerland.

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The R22 is suitable mainly for construction machineries such as skid steer loaders and mini excavators.

As FPT's flagship engine, the Cursor 16 delivers 18-litre performance in a 13-litre package and offers best in class power and torque density, rated and max power as well as service intervals. Compliant to Tier 4B/Stage IV emissions standards thanks to the patented HI-eSCR system, the engine delivers power outputs of up to 570 kW with maximum torque of 3,320 Nm at 1,500 rpm in its single stage version and up to 630 kW with maximum torque of 3,500 Nm at 1,400 rpm when available in its double stage version.

The Cursor 16 is the first FPT Industrial engine to adopt a Compact Graphite Iron (CGI) cylinder head; this high performance material provides high thermal and mechanical resistance. Combustion is optimized by the use of steel pistons, creating high peak cylinder pressure and, as a result, high power density and low Particular Matter (PM) output. Combustion optimisation is furthered with a FPT-developed double re-entrant combustion bowl, two different turbulent vortexes within the bowl allow for the accurate control of fuel and air mix to maximise performance and minimise emissions, while ensuring no residual fuel is left on the cylinder lining.

The engine features a third generation Common Rail system, of up to 2,200 bar under cover, allowing a precise control of the injection process. Meanwhile, the Cursor 16's ball bearing turbo charger with waste gate further increases engine efficiency.

The Cursor 16 is specifically suitable for large construction and material handling equipment, such as wheel loaders, excavators, cranes and dumpers.

Both R22 and Cursor 16 will be present on FPT's stand at Intermat.

Other FPT's engines on show

At Intermat 2015, FPT Industrial will also display its N67 engine for medium duty applications.

With a maximum output of 210 kW (286 hp) and a performance curve providing full torque of 1,143 Nm @ 1,500 rpm, constant output and required power delivery is guaranteed for a wide rpm range. This makes it easy to save fuel while working at a low engine speed and maximum torque, or to work at rated speed with a full reserve.

The NEF engine meets the stringent requirements for Stage IV/Tier 4 Final emission regulations through urea-based High Efficiency Selective Catalytic Reduction (HI-eSCR), avoiding the use of either Exhaust Gas Recirculation (EGR) or Diesel Particulate Filter (DPF).

The N67 also features second-generation Common Rail fuel injection technology, charge air cooling and fixed geometry turbocharger with waste gate valve.

Thanks to these features, the engine delivers top performance in load response, torque and power with minimal fuel consumption, while assuring leading efficiency, robustness and reliability.

FPT Industrial's Power Generation offering

At Intermat 2015, FPT Industrial will also show its Power Generation offer, represented by a 100 kVA soundproof genset powered by an N45 unit.

FPT soundproof generators offer an extremely compact layout, characterised by easily accessible maintenance points and dust and water-proof doors; they guarantee lower running costs in continuous operating power, best in class oil intervals (up to 600 hours) and are specially designed to operate in extreme climate conditions.

FPT Industrial's power generation offering includes G-drives, standard and rental gensets, covering the main applications, such as emergency services and self-generation, and special groups, plants and after sales services.

Engines powering the line-up include F32, NEF and Cursor series powerplants, ranging from 30 to 500 kVA. A variety of customization options are available, including open or closed power sets equipped with sub-frames, electrical machinery and control panels.

With environmental initiatives a priority for FPT Industrial, the genset offering complies with emission regulations without compromising its outstanding performance.

FPT Industrial's global offering for off road applications

<u>R22 Series</u>
The new R22 is the most compact engine of its segment and features Common Rail fuel injection and a turbocharger with after-cooler and waste gate.

Main R22 Series features and benefits:

- Single-side service
- Service intervals of up to 600 hours
- Meets Tier 4B/Stage IIIB emission regulations
- The use of hydraulic tappets and an 'Antiphone' insulated sheet metal front cover minimises engine noise, improving the end user's working environment
- A wide scope of customization possibilities including fan, alternator and transmission interface options, different starter motor and power take-off positions

F5 Series

Featuring a customer-oriented design, the F5 Series is available in both a 3.2 and 3.4 litre version.

Main F5 Series features and benefits:

- The F5 engines feature turbocharger and both Internal and External Cooled EGR, thus allowing customers to optimize engine installation, machine performance, load response and fuel consumption
- The F5 stands out for low operating costs and easy maintenance thanks to single-side service

NEF Series engines

Setting the standard in its class, NEF engines offer high-performance, reliable, cost-effective and compact solutions.

Main NEF Series features and benefits:

- The 4.5-litre NEF 45 offers performance from 53 to 129 kW
- The 6.7-litre NEF 67 produces between 84 and 228 kW
- Meets emissions standards from Tier 3/Stage IIIA to Tier 4B/Stage IV
- Options for both include Common Rail (Tier 3,Tier 4A and B compliant) or rotary pump injection (Tier 3 compliant) and fixed geometry turbocharging
- Suitable for powering a wide variety of construction equipment machines

Cursor Series engines

Engines in the Cursor Series have been developed to deliver high specific power outputs, rapid throttle response, low fuel consumption and low running costs in heavy duty applications.

Main Cursor Series features and benefits:

- The 8.7-litre Cursor 9 ranges from 175 to 305 kW; the Cursor 11, 11.1-litre displacement, from 300 to 380 kW; the 12.9-litre Cursor 13 from 286 to 515 kW; the Cursor 16 from 480 to 570 kW (single stage) and from 540 to 630 kW (double stage)
- Meets emissions standards from Tier 3/Stage IIIA to Tier 4B/Stage IV
- Incorporating overhead camshafts with rockers, engines use state-of-the-art electronic unit Injectors or heavy duty Common Rail fuel injection systems, while a range of forced induction options are available
- Suitable for powering a wide variety of construction machineries

FPT Industrial *is a brand of CNH Industrial, dedicated to the design, production and sale of powertrains for on and off-road vehicles, marine and power generation applications. The company employs approximately 8,400 people worldwide, in ten manufacturing plants and six R&D Centers. The FPT Industrial sales network consists of 93 dealers and over 900 service centers in almost 100 countries. A wide product offering, including six engine ranges from 31 kW up to 740 kW and transmissions with maximum torque of 200 Nm up to 500 Nm, and a close focus on R&D activities make FPT Industrial a world leader in industrial powertrains. For further information, visit www.fptindustrial.com.*