

FPT INDUSTRIAL'S NEW ICE AND ePOWERTRAIN PRODUCTS UNDER THE SPOTLIGHT AT IAA TRANSPORTATION 2024

Turin, Italy, September 16th, 2024

- **SUSTAINABILITY – ALWAYS ONE STEP AHEAD**
- **INTERNAL COMBUSTION ENGINE PRODUCT LINE-UP – INNOVATION AND TECHNOLOGY FIRST**
- **ePOWERTRAIN LINE-UP – SUSTAINABILITY AND CUTTING-EDGE TECHNOLOGY**
- **CUSTOMER SERVICE – TELEMATICS, CONNECTIVITY AND SUSTAINABILITY FOR ALL**

FPT Industrial, the third largest industrial powertrain company in the world in its range, is one of the leading exhibitors announced for **IAA TRANSPORTATION 2024**, the major global trade show for logistics, commercial vehicles, buses, and the transportation industry, taking place from **September 17 to 22, 2024, at Deutsche Messe AG in Hanover (Germany)**.

The Iveco Group brand dedicated to the design, production, and sale of low-environmental impact powertrains, and a world leader for on-road and industrial applications, will be **revealing new products in both the sustainable ICE and ePowertrain segments, perfectly in keeping with its multi-energy path**.

Visitors to FPT Industrial's new, larger stand in Hanover (Hall 21, Booth D09) will be able to appreciate its **advanced solutions in hydrogen propulsion systems, its leadership in natural gas, and its comprehensive multi-energy path**. The Brand's full line-up of **ePropulsion systems, Battery Packs, and Battery Management Systems** for commercial vehicles testifies to its commitment to deliver efficient and high-performance solutions for OEMs.

The focus of the Customer Service area is its **customer-centric approach**, showing off the division's **Connected Services, Remote Assistance, Reman remanufactured components and a brand-new range of high-performance oils**.

"FPT Industrial has a key role in decarbonization and achieving global targets, with a clear vision in mind," says **Sylvain Blaise**, President of Iveco Group's Powertrain Business Unit. *"We are*

working on the sustainability of the entire line-up, strengthening our position as a world-leading manufacturer of low environmental-impact powertrain solutions. In our vision, ICE technologies continue to have a relevant role, using multiple sustainable energy carriers to achieve major results in terms of decarbonization, while we also position ourselves as an electrification solutions supplier with our complete range of ePowertrain solutions.”



SUSTAINABILITY – ALWAYS ONE STEP AHEAD

FPT Industrial presents itself as the **right partner to support customers in their transition towards new, sustainable technologies for both passenger and goods transport, extending its commitment to sustainability to its stand as well.**

Like in other recent shows, **the Brand’s booth in Hanover will be carbon neutral**, in other words all the factors involved in its set-up, use and dismantling, including materials, passenger and goods transport, and the energy consumed during the event, to name just some, have been taken into consideration in order to pare emissions to the bone. In particular, all the components of the FPT Industrial booth were transported on board a fleet of IVECO S-Way Natural Gas trucks powered by FPT Industrial CURSOR 13 NG engines, fueled with bio-LNG supplied by Shell. This initiative has led up to a 99% reduction in lifecycle CO₂e emissions, compared to B7 diesel.

After the exhibition, FPT Industrial will verify the residual emissions in order to offset them through the purchase of certified carbon credits.

INTERNAL COMBUSTION ENGINE PRODUCT RANGE - INNOVATION AND TECHNOLOGY FIRST

Driven by its customers and their expectations, **FPT Industrial continues to invest in ever-more sustainable internal combustion engines.**

As the only player in the on-road segment with at least one alternative fuel product for its entire range, FPT Industrial is adopting a multi-energy path, covering light-, medium- and heavy-duty applications with innovative hydrogen, hythane, natural gas, diesel, and renewable fuel solutions. An approach driven by business and customer needs, and entirely driven by the final aim of providing its customers with the best ready-to-install products.

New CURSOR 9 H2 - Unleashing the power of hydrogen for a wider range of heavy-duty applications

The new CURSOR 9 H2 **which will debut in Hanover lives up to its family reputation, and represents the latest zero-CO₂ emissions solution from FPT Industrial for decarbonization and driving the future of clean transportation.** It is designed to **power urban and regional heavy trucks, heavy construction vehicles, and urban and intercity buses.** Its advanced hydrogen engine technology is paired with a traditional mechanical driveline and serviceability like a standard ICE, in order to make it easy to use from day one. Compared to fuel cell solutions, the new CURSOR 9 H2 delivers lower complexity, comparable Total Cost of Ownership, and higher payloads, making it the ideal solution for both environmental and financial sustainability.



CURSOR 9 H2 – Technical Specifications

Engine displacement (l): 8.7

Cylinder arrangement: 6 in-line

Injection system: Port Fuel Injection (PFI)

Max Power (hp): 310

Max Torque (Nm @ rpm): 1,400 @ 1,100

Aftertreatment: SCR

New N67 Hythane - The innovative dual-fuel solution to empower sustainable transportation for medium-duty trucks and buses

Starting out from a natural gas base engine, and leveraging all its **25 years of experience with 100,000 natural gas engines sold all around the world**, FPT Industrial has developed the **new prototype N67 Hythane engine**. Scheduled to go on show for the first time ever in Hanover, it is **fuelled by a blend of H₂ and NG in order to both accelerate and improve the combustion process, and also making it much cleaner, with an estimated CO₂ emissions reduction of up to 50% compared to natural gas**. Suitable for both CNG and LNG, as well as retrofit solutions to extend the lifetime of NG vehicles, the **N67 Hythane features a dual fuel injection system for hydrogen and natural gas**, delivering optimized fuel mixing with integrated Engine Control Unit according to operating conditions, for the maximum CO₂ reduction benefits. A smart and ready-to-install bridge solution on the road towards full hydrogen ICE, the new N67 Hythane allows a proven natural gas engine to be used without affecting the engine and aftertreatment system layout.

Designed to deliver best-in-class performance, durability, and maintenance intervals, this unique engine features low fuel consumption and reduced engine noise compared to diesel, thanks to proven multipoint stoichiometric combustion. High reliability, thanks to its nickel-resist cast-iron exhaust manifold, and water-cooled wastegate turbocharger, and emission compliance with a simple after-treatment system (three-way catalyst with CPF and without EGR), complete the package.



N67 Hythane – Technical Specifications

Engine displacement (l): 6.7

Cylinder arrangement: 6 in-line

Injection system: Port Fuel Injection (PFI)

Max power (hp): 280

Max torque (Nm): 1,000

Aftertreatment: Three-way-catalyst + CPF

XCURSOR 13 Multi-fuel – Extending sustainability and capability for internal combustion engines

XCURSOR 13 is FPT Industrial's **first single-base multi-fuel engine. From diesel and natural gas (including biomethane) to hydrogen and renewable fuels**, this base engine has been designed and engineered with multiple versions to allow maximum standardization of components, and minimum impact for easy on-vehicle installation. **The three versions which will be on show in Hanover are dedicated to long-haul heavy trucks, heavy construction vehicles, and coaches.** A major step in the ICE decarbonization path, the XCURSOR 13 offers reduced TCO together with best-in-class performance and braking power (diesel up to 530 kW, natural gas up to 260 kW), thanks to the new valvetrain system, and significant weight reductions thanks to the new lighter cylinder block and cylinder head (-10% for both applications). The diesel version delivers up to 600 hp and 2850 Nm, resulting in +14% torque and +5% power compared to the previous CURSOR 13. The natural gas version delivers up to 520 hp and 2500 Nm, with an increase of 25% torque and 13% power respectively compared

to the previous CURSOR 13 NG. CO₂ emissions reductions stand at 7% for the diesel unit and 8% for the natural gas one, but net emissions can be fully eliminated when fueled by biomethane. A CO₂-free hydrogen-powered version of the LEITWOLF snow groomer, boasting 460 hp and 2,000 Nm, has been undergoing field testing, in partnership with PRINOTH, since 2022. The off-road XCURSOR 13 hydrogen engine debuted at Agritechnica 2023, offering 520 hp, and will be crucial for accelerating industrial decarbonization efforts.



PRESS RELEASE

XCURSOR 13 Multi-Fuel Diesel Version – Technical Specifications

Engine displacement: 12.9 l
Cylinder arrangement: 6 in-line
Max power: 600 hp (442 kW)
Max torque: 2,850 Nm
Service life: up to 1.6 million km
Braking power: up to 720 hp (530 kW)
Weight: 1,018 kg
Emissions: Euro VI Step E

Hydrogen / Natural Gas Version – Technical Specifications

Max power: 520 hp (382 kW)
Max torque: 2500 Nm
Injection system: Direct Injection (DI)

F1C Diesel - Making the world turn

The culmination of over **40 years of experience**, the F1C engine, **specifically designed for light commercial vehicles**, is a category leader in terms of performance, delivering up to 152 kW (207 hp) and 470 Nm, and boasts best-in-class transient response, thanks to electronically controlled variable geometry turbochargers (eVGT), delivering 470 Nm at 1400 rpm/min.

Thanks to its **maintenance-free** duplex timing chain, **quieter and cheaper than gear-driven timing**, the F1C is a **class leader for reliability**. Designed to have a long service life of up to 400,000 km Be10 on GVWs up to 7.2 tonnes, this robust and versatile engine also leads its category in terms of maintenance, with **oil change intervals of up to 50,000 km**. The engine features a dual-SCR ATS system, optimized for urban missions with reduced load and low exhaust temperatures, as well as for suburban use.

Available for both transverse and longitudinal installation, F1C models can be customized on request, with options including radiator, air filter, oil pan and dipstick, alternator, and other components. It is the only 3-liter engine for light commercial applications, and the only light commercial vehicle engine also available in natural gas configuration, and it is HVO-ready across the entire range. Around **two million units have been sold worldwide since 2003**, meeting global emission standards such as EuVI, GBVI, JP24, and PROCONVE P8.



F1C – Technical Specifications

Engine displacement (l): 3.0

Cylinder arrangement: 4 in-line

Max power (hp): 207

Max torque (Nm): 470

ePOWERTRAIN LINE UP - SUSTAINABILITY AND CUTTING-EDGE TECHNOLOGY

FPT Industrial is one of the major global players in electric powertrains, designing, developing, and manufacturing an extensive and differentiated line-up of zero-emission products, positioning itself as a provider of efficient, reliable and high-performance commercial vehicle electrification solutions for OEMs. This position is firmly based on the Brand's industrial and research footprint.

Inaugurated in October 2022, the Brand's ePowertrain plant is fully dedicated to the production of electric drivelines for all commercial vehicles, and to the assembly of battery packs for light commercial vehicles and buses, as well as battery management systems. Integrated and compact solutions for high-performance sport cars such as the 100% electric Maserati GranTurismo Folgore, ranging from 300 kW to over 600 kW, are also part of the ePowertrain plant's innovative products.

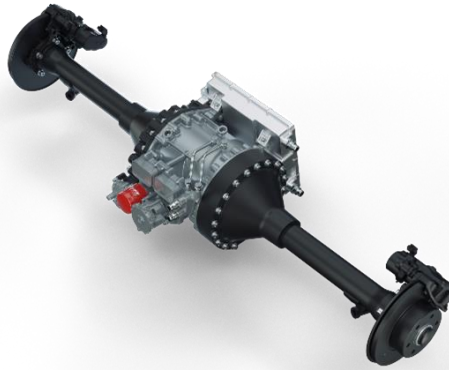
New eAX 200-R – The 3-in-1 solution with cutting-edge internal design by FPT Industrial for commercial vehicles up to 11 tonnes

FPT Industrial's latest generation of electrified axles is engineered with four core pillars: **Efficiency, Robustness, Flexibility, and Cost-effectiveness**. This innovative 3-in-1 design incorporates the electric motor, inverter, and transmission, for **commercial vehicles ranging from 3.5 to 11 tonnes, as well as minibuses**. Specifically designed to provide maximum flexibility, this system offers unparalleled integration and performance, with the same ground clearance as a standard axle.

The new eAX 200-R stands out for its enhanced system peak efficiency (92%) – the Coaxial Architecture increases power density while making the design more compact, allowing more room for battery storage, and extending the vehicle's range. In addition, the aluminum housing contributes to weight reductions compared to traditional layouts, improving vehicle dynamics and efficiency, thus increasing the overall durability.

Designed with a flexible wheel end, brake, and suspension interface, the axle can be customized to meet a range of customer needs.

With this totally new product, FPT Industrial is reiterating its commitment to cutting-edge solutions in vehicle electrification, and setting a new industry benchmark, combining **superior efficiency, advanced technology, and user-centric design to cater to the evolving needs of light and medium commercial vehicle manufacturers and their customers**



eAX 200-R – Technical Specifications

Layout: Single Motor eAxle, 3-in-1 coaxial design

No. of eMotors: 1

Gross Vehicle Weight [tonnes]: up to 11

Peak Power [kW]: up to 200

Peak Wheel Torque [Nm]: up to 10,000

Voltage [V]: 800

No. speeds: 1

eAX 375-R - A high-performance and efficient solution for medium- and heavy-duty applications

Making its debut in Europe and marking the birth of the **second generation of FPT Industrial eAxes**, the **eAX 375-R integrated electric axle is suitable for medium-duty 4x2 and 6x2 vehicles up to 29 tonnes GVW**, and **heavy-duty 6x4 vehicles up to 49 tonnes GCW**, as well as **for intercity and coach applications**. Thanks to its **multi-speed** design, the eAX 375-R delivers high performance and outstanding efficiency.

The **design developed by FPT Industrial's team**, including features such as the bolted wheel end, allows the electric axle to be **scalable and extremely adaptable in order to meet a range of powertrain requirements**. This is how the Brand's know-how supports everyday customer needs.

Up to 30,000 Nm torque at the wheels, and service life of up to 1.6 million km (mission-dependent) **ensures sustainability and delivers excellent uptime performance**.



eAX 375-R – Technical Specifications

Layout: Single Motor eAxle, compact and lightweight design

No. of eMotors: 1

System efficiency: > 92%

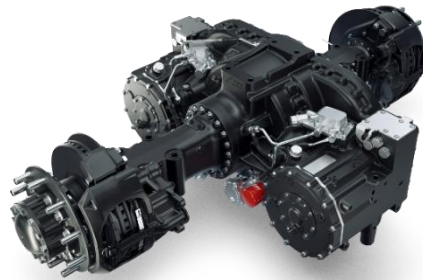
No. speeds: 2

Gross Vehicle Weight | Gross Combined Weight [tonnes]: Up to 29 medium-duty | 49 heavy-duty

Gross Axle Weight [tonnes]: up to 13
Peak Power [kW]: 375
Peak Wheel Torque [Nm]: 30,000
Weight [kg]: 600 (without brakes and wheel ends)
Service life: 1,600,000 km

eAX 840-R – Single-speed dual-motor electric axle

FPT Industrial introduced this axle, originally developed for the United States market, and then adapted it to meet the specific needs of European markets, for use in applications such as the Iveco S-eWay FECV and BEV. As the **first HDT eAxle on the market**, it is designed for **heavy vehicles, with multiple transmission ratios available**. The eAX 840-R is a **groundbreaking solution in the electric truck market**, offering a **unique combination of efficiency, performance, and ease of integration**. Its **single-speed design eliminates the need for a transmission control unit (TCU)**, simplifying the overall system and reducing development time. This enabled FPT Industrial to bring the eAX 840-R to market in just two years from the concept stage.



eAX 840-R – Technical Specifications

Layout: twin-motor eAxle
No. of eMotors: 2
System efficiency: > 92%
No. speeds: 1
Gross Vehicle Weight: 44 tonnes

Gross Axle Weight: 13 tonnes
Peak Power [kW]: 840
Peak Wheel Torque [Nm]: 45,000
Weight [kg]: 1,360
Gear ratio: from 15 to 25
Service life: up to 1.2 million km

eBS 37 EVO – The Battery Pack for zero-emissions urban mobility

The 37 kWh FPT Industrial **Battery Pack for Light Commercial Vehicles and Minibuses** is a **modular battery pack that incorporates cells and modules with unique Lithium-ion NMC (Nickel Manganese Cobalt) technology for impressive energy density and depth-of-discharge (95%), with advantages in terms of reduced battery weight.**

The eBS 37 EVO battery pack presents some significant innovations: the **eBM 5 Battery Management System** – developed and produced entirely by FPT Industrial – and a new internal design which allows the battery to meet the highest safety standard, ECE R100.3. Thanks to FPT Industrial's in-house Battery Management System eBM 5, the eBS 37 EVO ensures increased battery life according to mission requirements.

In its quest to deliver top-quality products to its customers, FPT Industrial is introducing the blockchain-guaranteed “battery passport” on all its battery packs. To increase transparency and data security, and to ensure instant traceability of its battery packs, the brand has decided to explore a new technological path using the blockchain to transparently track all the data collected during the production of the battery and during its service life. This ambitious technology transfer project was carried out with an open innovation approach through collaboration with an innovative startup, a spin-off of Polytechnic University of Milan.



eBS 37 EVO - Technical Specifications

Layout: multipack solution with up to four battery packs in parallel

Cell technology: Li-NMC

Cooling system: water-cooled

Nominal energy (kWh): 37

Nominal voltage (V): 355

Energy density [Wh/kg]: > 140

C-rate (continuous): 1C (charge) / 2C (discharge)

Degree of protection: IP67 - IP6K9K

Dimensions [L x W x H, mm]: 925 x 854 x 310

Weight [kg]: 260

Life cycles: > 2,500

BMS: FPT eBM 5

Regulatory Compliance: ECE R100.3, ECE R10.6

CUSTOMER SERVICE – TELEMATICS, CONNECTIVITY AND SUSTAINABILITY FOR ALL

For FPT Industrial, sustainability is a value to be shared with its customers each and every day, also as regards Customer Service. The array of services FPT Industrial offers to customers who rely on its powertrains is not only intended to deliver maximum uptime and to minimize potential problems and issues, but also to limit the environmental impact of any maintenance activity.

Through the MyFPT App and the Control Room, connected engines can be remotely and proactively monitored, forestalling costly failures and limiting the trips to workshop to the bare minimum, saving time, money, fuel, and naturally emissions.

At the same time, the company's Original Reman remanufactured parts are the best, sustainability-conscious alternative to new ones, with environmental and financial benefits for all involved. Used cores don't end up in landfills. The remanufacturing process uses about 80% less energy than manufacturing, with 28 Mt less CO₂ emissions per year.

All these values and benefits can be seen in the Customer Service area at FPT Industrial's stand in Hanover, together with a new range of engine oils featuring high quality, specific formulations, and consistent performance under all operating conditions.

Created in close partnership with PLI (Petronas Lubricants International), the new oils in the range are perfectly attuned to FPT Industrial's latest developments in engine technology, and deliver exceptional engine performance as well as sustained fuel efficiency at all engine speeds, and under all working conditions.

Repeated tests performed by FPT Industrial's specialists have confirmed the new oils' performance in terms of enhanced engine protection under extreme conditions, extended service life, and extended oil change intervals, with consequent cost reductions, and improved environmental protection.

FPT Industrial is a brand of Iveco Group N.V. (EXM: IVG), dedicated to the design, production, and sale of powertrains and solutions for on- and off-road vehicles, as well as marine and power generation applications. Over 8,000 people across ten production sites and ten R&D centers work for FPT Industrial all around the world. Active in nearly 100 different countries, its global sales and its Customer Service department supports all Brand customers. The extensive product offering includes six engine ranges with power outputs from 42 hp to over 1,000 hp, transmissions with torque up to 500 Nm, and front and rear axles from 2.45 to 32 tonne GAW (Gross Axle Weight). FPT Industrial offers the most complete line-up of natural gas engines for industrial applications on the market, with power outputs ranging from 50 to 520 hp. A dedicated ePowertrain division is accelerating the path towards net zero-emissions mobility, with electric drivelines, battery packs, and battery management systems. This extensive offering, and its strong focus on R&D, makes FPT Industrial a world leader in industrial powertrains and solutions. For more information, visit www.fptindustrial.com.

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