2025 ISSUE

Cummins®

MAGAZINE

PUTTING POWER TO THE TEST

Powertrain facility covers all the fuel options

POWER

CRITICAL ACCLAIM

Innovatively designed Centum™ Force is a game-changer for critical emergency and prime power demand

MINING

SINGLE MINDED

Cummins and mining equipment titan Komatsu are partners whose success is rooted in a 'one team' approach

RAIL

QST30 FOR VECTRON

Cummins' Stage V QST30 diesel engine plays a starring role in Siemens' Vectron Dual Mode Light locomotive

Welcome

Welcome to the latest edition of the *Cummins Magazine* for Europe. We hope you like our fresh new look.

In an uncertain world, you can always rely on Cummins to keep pushing forward with innovative technologies and services designed to deliver outstanding results.

Our cover story focuses on our new Powertrain Test Facility in the UK, a symbol of Cummins' commitment to smoothing the pathway to clean energy, giving customers the confidence to transition to new power solutions (page 12).

Our massive investment in technology is matched by our investment in talent, in training and in processes that will allow us to be even more effective in the way we engage with our customers.

It really is all about making it easier for customers to do business with us, as Thierry Pimi, our new vice president of international distribution operations, tells us on page 4.

In another high-level interview, we tap into the thoughts of Bill Lamb, our global engine platform strategist, about the upcoming Euro 7 emissions standard and the key technologies we expect will be to the fore (page 8).

Elsewhere in the magazine, you will read stories from across the front line of European industry that highlight the power of a partnership with Cummins and how we as a business are supporting the communities in which we live and work.

Enjoy the read!

Ann-Kristin de Verdier
Executive MD, Distribution Europe

HAVE A STORY TO TELL US?
If you have any news that you would like to see included in the Cummins Magazine, please email **marketing.europe@cummins.com**

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Cummins and Komatsu are partners working hard to advance sustainability in mining

Cummins gets fit for age of change

We bring together Ann-Kristin de Verdier, Executive Managing Director of Distribution Europe, and Thierry Pimi, Vice President of Cummins International Distribution Operations, to discuss the strength of the Cummins business structure, the company's approach to the energy transition, and plans to leverage diverse talent across the organisation

Cummins' new vice president of international distribution operations Thierry Pimi has begun implementing a bold three-pronged strategy for commercial success.

Thierry has identified three core areas of improvement: greater use of technology to improve efficiency and the customer experience; enhanced focus on delivering end-to-end value to the customer; and a drive to create what he calls "the right environment" by building diverse, inclusive and highly motivated teams.

Progress on these three action points is seen as vital to raise the already high bar of Cummins' service levels and satisfaction among its customers across some of the world's most important business segments, including data centres, mining, marine and power generation.

As Cummins' European distribution business, headed by Ann-Kristin de Verdier, is in the vanguard of the strategy, *Cummins Magazine* was keen to bring the two executives together and record their thoughts on the challenges and opportunities of what lies ahead.

"We want to continue to make it easier for customers to do business with us," said Thierry. "One of the ways to do that is to make sure we are constantly looking to improve our operational efficiencies. For instance, making sure the way we operate in our branches is as universal as possible for a seamless customer experience.

"We are investing very heavily, and Ann-Kristin's region will be spearheading a modern enterprise resource planning (ERP) system that is going to revolutionise the way we do business."

Ann-Kristin is in full agreement: "I'm tremendously excited about the transformation that's coming for our processes and the tools available to us across Europe. It will allow our employees to spend more time with customers and unlock real value."

Thierry, who was born in Douala, Cameroon and who has held a number of strategically important roles within Cummins, now presides over the company's International Distribution Unit (DBU), a company-owned network of more than 15,000 employees spread across 190 countries and territories operating from around 460 locations.

It is the nature and scale of the Cummins network that makes the brand so attractive, especially to larger, multi-national businesses. "Whether it's data centres, or power generation, or high-horsepower users, these customers see our network as the biggest plus because of the consistency in the quality and the capability which we have built around the world to support them."

Ann-Kristin points out that in Europe, many Cummins customers export equipment outside of the region, and there is comfort in knowing there is product available that can fit into their equipment and which meets local needs and regulatory requirements.

"They can also be confident there is service support for their product wherever in the world it is being used, and we also operate a number of global account management contracts, which means we can collaborate more seamlessly than some of our competitors who have mostly independent distributors.

"The fact we're one company makes doing business a lot more straightforward."

Turning his thoughts to the great energy transition, Thierry says Cummins' Destination Zero strategy offers a robust framework "but change will not be like flicking a switch. Different applications will adopt the transition at different phases".

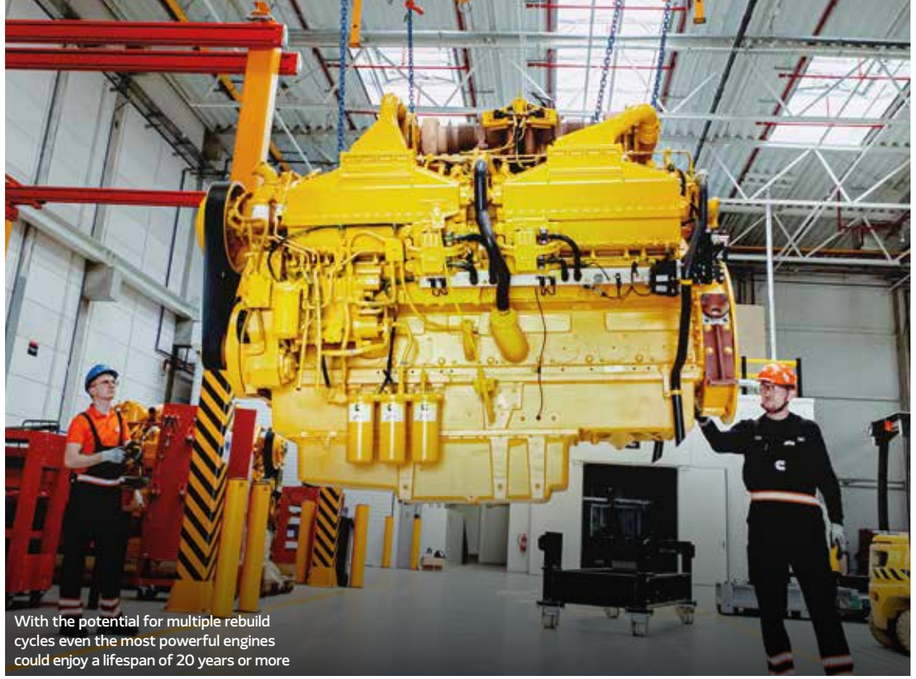
Ann-Kristin believes the distribution side of Cummins will have a key role to play. "Our customers know we have the expertise to help and guide them," she says. "When the technology and the product is less mature, support needs are more intense and we provide highly skilled technicians during the 'infant care' period.

Thierry is confident Cummins will rise to any challenge presented by the drive toward clean energy, saying the company has earned an enviable reputation for reliability over the past 105 years.

While the competitive landscape is going to keep changing and the needs of Cummins' customers are bound to evolve, Thierry is adamant one thing will remain constant and that's the company's focus on the customer experience.

"We don't just want to make it easy to do business with the customer, we want to drive the customer loyalty, and we do that by competing on service and the customer experience. The role of our distribution network is to ensure the customer gets the value expected from a premium global brand."

In Europe, Ann-Kristin's focus is on making sure Cummins has the right support in every country across the region, "whether we have a local Cummins-owned branch there, or whether we have channel partners, whether it's sales, application engineering, or aftermarket support".


With the potential for multiple rebuild cycles even the most powerful engines could enjoy a lifespan of 20 years or more

Ann-Kristin stresses the importance of stability in the network, knowing that some of the 'traditional' products Cummins sells today, particularly high-horsepower engines, could have long working lives.

"With regular servicing and the possibility of multiple rebuild cycles, these engines could be working for 20 years or more. Similarly, we can upgrade the electronics on our generator sets to prolong their life.

"Knowing the distribution network will be there for the full life of the product is really important, and we are fortunate to have some very long-standing and loyal service partners, including a lot of family businesses that go back generations, which also gives our customers added confidence."

Thierry agrees: "These partnerships are part of the DNA of Cummins. When you find partners that have similar values, it helps to create a culture that sticks."

DETAILS

There is an extended version of this article in our digital magazine. Scan the QR code to access the full interview

The right environment for personal growth

Wherever Thierry Pimi has worked within Cummins, he has developed a reputation as a superb leader of people: someone who can bring the very best out of the individual and collective talent at his disposal.

In Ann-Kristin, he has found a fellow business leader equally committed to creating the best conditions for colleagues to showcase their skills and leadership potential.

"We call it creating the right environment," says Thierry. "If we want to be the leading power solution provider in the next century and beyond, being able to design and deliver better solutions than our OEMS can do in-house, or than our customer can find from someone else, the key will be to have the most capable talent and skills.

"The world today is a global village, and we're working on processes that will allow us to move the best and most appropriate talent to wherever they are needed, as seamlessly as we can.

"I want us to be seen as one single distribution unit rather than a group of regional operations."

Thierry revealed that he and Ann-Kristin had been working together on a multi-faceted programme to develop the skills of leaders and supervisors. The programme covers themes such as how to deliver constructive feedback, how to foster open communication, and how to be authentic and vulnerable. These skills and others form the basis of Cummins leadership behaviours.

Taking inclusiveness to a new level

Cummins has taken heart from being voted among the top 100 companies in Europe for building an inclusive workforce through its focus on diversity.

The influential *Financial Times* Diversity Leaders list for 2024 placed Cummins at number 76, helped by the launch of the Cummins Powers Women initiative.

While encouraged by the top 100 position, Thierry believes Cummins can go a lot further, helped by being committed to valuing difference.

"This is really the frontier today of where we are going," says Thierry. "We are going beyond diversity and inclusion by admitting difference in the room. Valuing difference is about us getting to a point where we value, recognise and appreciate what's unique and different about the other person."

Ann-Kristin says valuing difference is a core component of Cummins' recruitment strategy. "Europe is inherently diverse, with so many different languages and cultures. We need to take full advantage of this in our teams."

Cummins defence sector appeal at all-time high

For decades, Cummins has been a critical supplier to the global defence industry, providing the reliable power that keeps military vehicles and equipment moving on land, sea and air.

From the rugged terrain of battlefields to the depths of the ocean, Cummins engines, generator sets, drivetrain and suspension components have proven their resilience and performance, playing a vital role in national security and global peacekeeping operations.

With historic changes to defence and infrastructure spending policy in Germany, and calls for a greater commitment to defence spending throughout the NATO alliance, the scene is set for Cummins to leverage its credentials in the sector, boosted by its ability to offer a more complete package of products and services than ever before.

Following the successful integration of Meritor, acquired in 2022, Cummins is now positioned as one of the very few companies capable of offering fully integrated powertrain solutions.

The business now known as Cummins Drivetrain and Braking Systems (CDBS) marries famously robust engines with industry-leading drivetrain systems, including axles, brakes, suspensions, and drivelines, and offers dependable aftermarket parts support.

Cummins is a trusted partner to market-leading vehicle manufacturers across NATO and allied countries and is gaining momentum across central and eastern Europe under the co-ordinated leadership of Ali Baynes, Director of Off-Highway Sales, and Stephane Janiszewski, Executive Director – Europe and South America for CDBS.

OEMs in Ukraine and in Poland are close to signing off significant orders for all-wheel drive multi-purpose vehicles that serve in Multiple Rocket Launch Systems (MLRS) or as people movers in combat areas.

Meanwhile, in the UK, Cummins is fully engaged with procurement programmes for wheeled and tracked vehicles.

"The scale of the opportunity for Cummins is huge," said Garry Talbot, who leads Cummins' European defence sector sales and marketing effort. "Obviously, this is a massively sensitive environment, but we hope to be announcing more details about our recent wins in the near future."

David Phalippon, Director – Customer Management and Head of Defence in Europe, Middle East and Africa for CDBS, said: "The combination of expertise for engines and drivetrain puts Cummins at the top of the list for end users looking to purchase with complete confidence battlefield-proven and production-ready systems."

Cummins launches containerised BESS product line

Cummins Power Generation has announced the launch by its New Energy Solutions team of a fully containerised Battery Energy Storage Systems (BESS) product line, from 200kWh to 2MWh.

The line features plug-and-play solutions with AC output, tailored for diverse applications, including backup power, off-grid systems, peak shaving, EV charging and microgrids.

These systems meet or exceed all major international 50 Hz standards and are designed to deliver maximum performance and safety, assisted by liquid cooling for thermal management and a three-tier fire safety system.

The three main use cases of the new BESS line are off-grid (remote communities, mining sites and remote industrial uses), energy management (EV charging infrastructure, commercial properties and universities) and life-saving facilities (data centres, healthcare facilities and wastewater treatment plants).

"The global shift for renewable energy sources is becoming more profound," said Lucio Kroll, Senior Director New Energy Solutions of Cummins Power Generation.

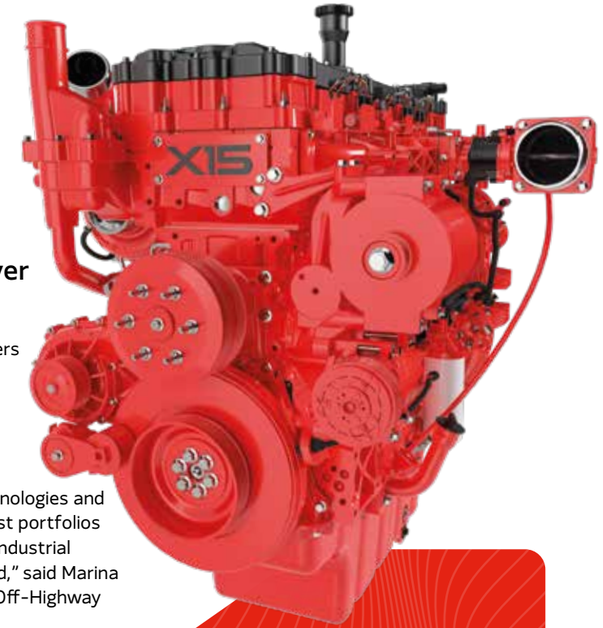
"We're proud to expand our offerings to include BESS, staying in line with that shift and serving our customers with safe and reliable solutions that can help them meet their energy transition goals."

DETAILS

For more information, scan the QR code

Next gen X15 to play key role in the great energy transition

Cummins' industrial appeal is broader than ever



Cummins' next generation X15 engine is set to play a pivotal role in the transition to clean energy for customers operating in the Off-Highway and Mining sectors.

The X15, which was centre stage at the 2025 Bauma trade fair in Munich, powers heavy duty applications such as large bulldozers, cranes and excavators.

It is part of the Cummins HELM™ fuel-agnostic engine platform, which means it can utilise renewable biofuels such as HVO and biomethane, or hydrogen.

The Next Gen X15 for Off-Highway offers ratings up to 522 kW (700 hp) and a peak torque of 3200 Nm (2360 ft lb) targeted for Stage V emissions and beyond.

The advanced diesel version can use either HVO or biodiesel with ratings up to 485 kW (650 hp) for the most demanding off-highway duty-cycles.

Thanks to its advanced XPI fuel system, which enables precise injection and optimised combustion, fuel consumption of the X15 is as low as 180 g/kWh, reducing total cost of ownership (TCO) and lifetime CO2 emissions.

"Our versatility, scale and longevity position us to help OEMs succeed, and we're thrilled to have met with so many of them at Bauma"

The Flex Module™ Aftertreatment System reduces emissions and simplifies maintenance. The X15 has extended maintenance intervals up to 1,000 hours, cutting service costs and downtime.

After a series of acquisitions, including Meritor, Cummins is positioning itself as so much more than a manufacturer of engines.

Bauma visitors learned Cummins is now a fully-fledged supplier of premium integrated powertrain solutions, covering engines, a wide range of axles, heavy-duty brakes, transfer cares, gearboxes, aftertreatment, telematics and more.

Cummins' power unit packages offer customers the ability to select the optimal combination of powertrain and components.

"We're making record investments in our technologies and have one of the broadest portfolios of power solutions for industrial applications in the world," said Marina Savelli, Vice President, Off-Highway at Cummins.

"Our versatility, scale and longevity position us to help OEMs succeed, and we're thrilled to have met with so many of them at Bauma."

Also on display at Bauma was the Tier 4 Final/Stage V compliant Cummins QSK60, which delivers a maximum of 2125kW (2850hp) and a maximum torque of 11,218Nm.

Equipped with Cummins' PrevenTech™ telematics-based diagnostics solution, the QSK60 provides more than 40,000 hours of operation before requiring an engine overhaul.

Bauma saw the debut of the Meritor MOX E8 telehandler axle, designed for durability and productivity. Engineered for the most demanding duty cycles and applications worldwide, Meritor axles are recognised as industry leaders.

In a further boost to its mining sector capability, Cummins recently acquired the assets of First Mode, a leader in retrofit hybrid solutions. The acquisition includes hydrogen and battery powertrain solutions.

First Mode's technology represents the first commercially available retrofit hybrid system for mining equipment, significantly reducing TCO while advancing decarbonisation in operations.

"With hybrid retrofit kits, modular component upgrades and scalable solutions, Cummins is bringing miners the flexibility and confidence they need to decarbonise operations while adapting to evolving technologies and infrastructure," said Jenny Bush, President of Power Systems at Cummins.

KEY IMPROVEMENTS ON THE NEXT GEN X15

10%
Better fuel efficiency

15%
Higher peak torque

1,000 hour
Longer service intervals

Application and duty-cycle dependent

DETAILS

Scan here to dive deeper into the design and features of the 2027 X15

Bill Lamb: Man in motion

Cummins' global engine platform strategist discusses the great energy transition

As the director responsible for the worldwide strategy and planning of every new or improved Cummins engine between 3 and 15 litres into markets at varying stages of maturity and environmental governance, the pressure is on Bill Lamb to navigate smoothly through uncertain waters.

Bearing in mind it takes Cummins about five years to develop a new engine from scratch – roughly an election cycle – Bill finds himself taking as much interest in politics as engineering, trying to keep abreast of shifts that could have major implications for the design and performance requirements of his products. *Cummins Magazine* caught up with Bill at his home in the north of England to tell us about his important work and specifically the approach to the upcoming Euro 7 emission regulations and the key technologies at play.

"We advocate for stringent, clear and stable regulation in all our markets as it plays to our strengths"
Bill Lamb

Bill, how do you explain what it is you do?

My job is to try to ensure Cummins has the right products to meet the legislative requirements and the market needs in all global markets. It's a challenge because certain places have very stringent regulations around emissions and others are not so strict. My team and I select the appropriate product architecture for each opportunity, taking into account political mood and the required timescales for change.

So how do you manage the risk of getting your planning wrong?

Our Product Compliance and Regulatory Affairs (PCRA) group is one way we get a sense-check: they are great at using their networks around the world to see what might be coming along, over what timeframe and how it might correspond to what's happening in other regions. We also work with regional product planning experts, and we closely tie in with our regional and global customers and joint venture partners to arrive at a product recommendation.

Does Cummins take an overarching view on emissions?

Cummins advocates for stringent, clear and stable regulation in all our markets. This plays to our strengths as a technology leader and provides growth opportunities as we are able to consistently deliver products which outperform our competitors. We have to consider what the market can sustain in terms of the upfront cost of the product, the operating costs and the reliability. Whatever products we propose in any given market must be appropriate and commercially feasible.

Here in Europe, we have Euro 7 emission regulations on the horizon. What are your thoughts?

We are seeing requirements to separately address both pollutant emissions and CO^2 around 2029-2030. Euro 7 covers pollutant emissions and is focused on reduction of NOx emissions, tightening the limits on the number and size of particulates, and introducing a limit on N_2O (nitrous oxide – a greenhouse gas) for the first time.

For CO^2, the first phase of the regulations, which calls for a 15% reduction on the 2019 baseline number, comes into force this year. The next stage is July 2030 when the reduction compared to 2019 is 43 per cent. That's a challenging ask and will only be achieved by OEMs arranging their product mix in such a way that their total CO^2 output averages out at the required number.

Isn't there also a requirement to consider emissions over a longer timeframe?

Yes. Euro 7 specifies emissions lives of up to 15 years or 875,000 kilometres, whichever comes first. With Euro VI, it was seven years and 700,000 km, so it's a big step up. The European Commission's objective is to ensure and verify lifetime compliance through ISC (In-Service Conformity) tests.

There are also changes proposed for on-board diagnostics and the addition of on-board monitoring that will allow emissions to be checked in real-time on every vehicle, every driver, every duty cycle.

We intend to have our Euro 7 products connected so customers can benefit from remote downloads and software updates, and we can capture data to see if the vehicle is operating without any faults, or if we can tweak the calibration settings to improve fuel economy. It will also help us ensure vehicles are getting properly maintained.

What might be the winning technologies?

I think the way forward will be a combination of different powertrain layouts and different fuels. Within that, the 'headline makers' will be battery electric and fuel cells but we also have HVO (hydrotreated vegetable oil), renewable diesel, natural gas and renewable natural gas, and hydrogen. Also, hybrids are gathering interest. I'm a particular fan of HVO – I use it in my car – because it drops into existing machines without modification and gives an instant 90 per cent reduction in CO^2 emissions well-to-wheel.

So what's the future for diesel?

Our strategy is based on the premise that there is no one-size-fits-all solution when it comes to fuel types and we have to keep all options open. Some applications, for example, are relatively easy to move to battery electric but some are more difficult to switch and that's where diesel remains the most viable solution, for now at least. We actually believe there's still lots of life in diesel. It's incredibly energy-dense, easy to work with and serves lots of different applications. Those demands aren't going away any time soon and the market demand will remain.

And what about after treatment systems?

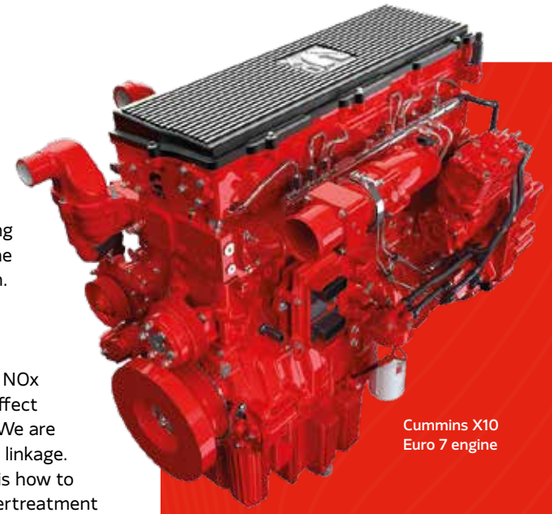
The requirement to reduce NOx generally has an adverse effect on fuel economy and CO^2. We are working hard to break that linkage. One of the key challenges is how to get more heat into the aftertreatment quicker. We're looking at how double overhead camshafts and variable valve timing can help us achieve our goal. That's one of the key technologies we're exploring.

Is this fragmentation of technologies the rationale for your HELM® fuel-agnostic engine platform strategy?

Absolutely. HELM®, which is shorthand for Higher Efficiency, Lower Emissions, Multiple fuels, is about being very adaptable between different fuel types. We have developed a lot of fantastic IP (intellectual property) in the area of spark ignition so we can keep the engine block and all the connections into the vehicle common and modify the cylinder heads, pistons and fuel system to suit the desired fuel.

You mentioned powertrain solutions earlier. Has the acquisition of Meritor (now Cummins Drivetrain and Braking Systems) been a big factor in your strategic approach?

Yes it has. We increasingly view ourselves as a powertrain organisation rather than 'engine plus'. We already take that approach in the US and will be looking at opportunities around the world to partner with other Cummins units such as Accelera by Cummins on batteries and fuel cells, the former Meritor business on axles, brakes and suspension and Eaton-Cummins Joint Venture for transmissions.



Cummins X10 Euro 7 engine

EURO 7
WHAT'S AT STAKE

The Euro 7 emission regulations come into force for newly-approved heavy-duty applications on May 29, 2028. It's exactly one year later for all newly-registered vehicles.

Euro 7 introduces stricter limits on existing pollutants like nitrogen oxides (NOx), particulate matter (PM), and hydrocarbons (HC), and adds new limits for pollutants like N2O (nitrous oxide) and nonmethane organic gas (NMOG).

Vehicles will be tested under real-world driving conditions to ensure compliance in actual use, and the regulations also address non-exhaust emissions, such as brake wear and tyre wear particles.

To comply, manufacturers will need to further develop both engines and aftertreatment systems by adopting advanced technologies, with particular focus on the efficiency of Selective Catalytic Reduction (SCR) systems (for NOx reduction) and Diesel Particulate Filters (DPFs) for particulate matter reduction.

WATCH
Scan the QR code to learn more about Euro 7 emission regulations

Cummins shows an array of empowering new technology at Hannover

Cummins brought a feast of technology to the IAA Transportation event in Hannover, Germany.

Alongside the Euro-7 ready X10 and X15H hydrogen internal combustion engines (H2ICE) Cummins showed an integrated drivetrain concept featuring advanced diesel, diesel-hybrid and hydrogen engines from the fuel-agnostic Cummins HELM™ platforms.

There was also a modular 300 kW hydrogen fuel cell engine, compact high-power eAxles, next-generation batteries and efficient traction systems from Accelera by Cummins.

With more stringent European emissions standards on the near horizon, the integrated drivetrain proved particularly popular with visitors to the flagship show.

Cummins Chair and CEO Jennifer Rumsey emphasised Cummins' commitment to delivering a diverse portfolio of power solutions as part of the company's Destination Zero strategy to drive forward industry decarbonisation.

"Our customers are running real businesses, and our products are helping them do the difficult work needed to power economies, move goods around the world and provide good jobs for people in our communities," she told IAA delegates.

"And as we move closer to these new, stricter vehicle-level standards, power technology decisions are becoming tougher and more complex."

Cummins HELM™ platforms feature a series of engine versions derived from a common base.

Below the head gasket of each engine are largely similar components and above the head gasket will have different components for different fuel types – either advanced diesel, natural gas or zero-carbon hydrogen. Each engine version will operate using a different, single fuel.

The X10 engine, with ratings from 240-335 kW (320 – 450 hp), extends Cummins' heavy-duty performance down to a 10-litre displacement, while meeting Euro 7's stringent ultra-low emissions standards.

With peak torque of 2300 Nm, the X10 delivers exceptional engine response and vehicle driveability, setting a new benchmark for heavy-duty performance in 26-44 tonne truck applications.

Cummins' drivetrain display also featured H2-ICE technology from its X15H – part of the company's 15-litre platform.

With power ratings from 298-395 kW (400-530 hp) and peak torque of 2600 Nm, the X15H offers an operating range comparable to current diesel engines, ideal for heavier-duty or longer-range applications.

The X15H, which is slated for production by the end of the decade, was displayed at Hannover alongside Cummins' production-ready 700-bar hydrogen fuel delivery system, with Type IV on-vehicle storage vessels from its NPROXX joint venture with ETC.

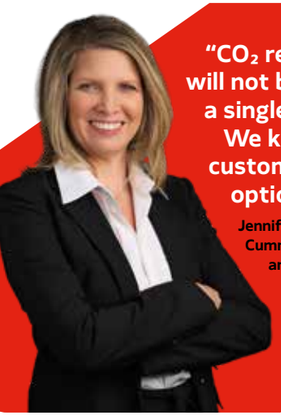
Rumsey said Cummins had allocated a company record $1.4 billion to research and development in 2023, with $250 million of this spent in Europe alone.

The investment has enabled greenhouse gas reductions through improvements in fuel economy performance of diesel and natural gas powertrains, as well as development of H2-ICE solutions and battery electric, fuel cell electric and hydrogen production technologies.

She said: "CO_2 regulations will not be met with a single solution. We know our customers need optionality, and Cummins and Accelera have all the components in our portfolio to provide a solution, either in part or as a full powertrain, based on our customers' needs."

Cummins also displayed its e-turbocharger, e-compressor, hydrogen recirculation pump, fuel cell injector and fuel cell ejector. These components aim to improve fuel cell efficiency, reduce noise and enhance reliability.

Along with the physical products, Cummins presented a virtual interactive display featuring valvetrain technologies, turbochargers, aftertreatments, dosers and axles.



"CO_2 regulations will not be met with a single solution. We know our customers need optionality"

Jennifer Rumsey, Cummins Chair and CEO

DETAILS

Scan the QR code for a comprehensive guide to upcoming emissions regulations in Europe

The future starts here

Guy Woodford, editor of Aggregates Business Europe/International, reports from Cummins' ground-breaking Powertrain Test Facility

Cummins' fuel-agnostic Powertrain Test Facility, the first of its type globally for the power solutions giant and believed to be the only one in Europe, is up and running at Darlington in northern England.

The two-storey site puts Cummins at the forefront of ultra-low and zero-emissions power technologies and the drive to improve air quality.

The facility will play a crucial role in the development of the fuel-agonistic Cummins HELM™ platform, as well as Accelera by Cummins products, in addition to supporting the continued development work on the hydrogen-fuelled internal combustion engine (H2-ICE).

More than $16.65m has been invested in the 738sqm site that will significantly increase Cummins' testing capacity, focusing on a wider range of vehicles and machinery powered by hydrogen, renewable natural gas, advanced diesel, or battery electric.

It is also the latest standout element of Cummins' Destination Zero™ strategy, supporting the company and its customers' energy transition goals.

Tom Partridge, Cummins director of laboratory operations within European Technical Operations, said Cummins engineers were expanding their capabilities using highly advanced dynamometers to test chassis-installed powertrains.

Previously focused predominantly on engine testing, they can now develop full drivelines for on-road use, from compact SUV (sport utility vehicle) size to 44-tonne trucks and double-decker buses, plus off-road use in construction and agricultural machines. These can be two- or four-wheel drive.

The facility will play a crucial role in the development of the Cummins HELM™ platform plus Accelera by Cummins products

The powertrains are driven in the test chamber by a robotic driver which is known as 'VERA' (Virtual Engineer Robotic Assistant).

The new powertrain test facility and wider Cummins engineering focus also support compliance with regulatory standards, including those linked to CO_2 heavy-duty vehicle emissions and the upcoming Euro 7, which lays down emission limits for road vehicles and battery durability. Euro 7 comes into force on May 29, 2028 for HDV.

"We expect to pull in work from all over the world," says Tom Partridge. "For example, I expect we'll have 15-25 on-highway trucks in a year, each being here for an average of two to three weeks.

"OEMs (original equipment manufacturers) will likely come and use it for some of their internal powertrain testing, including some testing of non-Cummins powertrains, which will be fine."

The new Darlington powertrain test facility has undergone a full CFD (computational fluid dynamics) assessment. CFD uses computers to predict liquid and gas flows based on the governing equations of conservation of mass, momentum, and energy.

"One of the most important things in making a fuel-agnostic powertrain test facility is the need to be safe in hydrogen mode," says Tom Partridge.

"It took five to six weeks for 20+ computers to do the full CFD. It included analysing what would happen if we had a credible hydrogen leak on a vehicle and an ignition source.

"The CFD told us we needed to protect the people in the control room and our assets at the back of the facility. As a result, the facility's concrete walls have the highest level of blast protection, including tethered blast-relief panels.

"In the worst-case hydrogen leak scenario, the walls would move but not crack and carry on supporting everything. This was a big part of the blood, sweat and tears Emma Laidler, (Cummins ETO Powertrain operations manager) and I experienced during the four-year build."

Cummins' Darlington campus also contains a pilot centre for customer equipment repowering. The pilot centre and Powertrain Test Facility operate as the company's European Technical Operations division.

The Darlington engine plant assembles Cummins' 3.8, 4.5, 6.7, 9-litre, and natural gas-powered engines. Darlington is also home to Cummins' Emission Solutions division, where automotive and industrial aftertreatment production, development and testing occur, and to Cummins Business Services and support staff.

Tom Partridge highlights that further earmarked investment in the Darlington site includes a new $30 million Long Block engine assembly line, upgrades to the Short Block engine assembly line, and transferring the company's Euro 6 Module line to Darlington.

Seeing the big picture on emissions

The Darlington Powertrain Test Facility story begins back in 2018 when Tom Partridge was invited to be part of a group charged with looking at what it would take to get Cummins beyond Euro 6 On-Highway engine emission regulations to meet Euro 7.

What became clear was the need to move to vehicle-level rather than just engine-level understanding and development.

Tom says going forward, it will be important to assess the pollutant emissions Euro 7 brings in conjunction with the vehicle-level CO_2 emissions and VECTO (Vehicle Energy Consumption calculation Tools).

"When you look at what Cummins can do, we can do engines, transmissions and axles. We are not yet doing tyres, and we are not doing aerodynamics. Those two parts are down to OEMs.

"My research and others supporting me found that we needed vehicle-level fuel consumption testing capability to have high confidence in our actions.

"We also needed fuel-agnostic engine testing capability, an understanding of a much wider range of duty cycles, and, with Euro 7, a deep understanding of how to analyse a lot lower pollutants."

DETAILS

Scan the QR code for information on our ground-breaking Powertrain Test Facility

The Powertrain Test Facility is expected to play a pivotal role in supporting the energy transition goals of Cummins' customers

GAME CHANGER

Cummins' Powertrain Test Facility can test a range of power technologies without being limited to a specific fuel type. Using state-of-the-art technology and systems, the facility has a wealth of capabilities, including:

Testing powertrains
The facility can test powertrains, chassis-installed powertrains, and vehicles

Fuel types
Powertrains running on advanced diesel, natural gas, zero-carbon hydrogen fuel and battery electric technologies can all be tested

Dynamometers
Advanced dynamometers with energy recovery systems generate electricity that can be used across the Cummins site and reduce the impact on the local grid

Sustainable power
The facility generates its own sustainable power

Water conservation
Rainwater is harvested, reducing water consumption

Robotic driving
Allocated test facilities in place for fully robotic driving

Engine duty cycle
Capability to recreate engine duty cycles

Road, load and wheel-slip
The facility has road-grade, load and wheel-slip simulation capabilities

THE FORCE IS STRONG

Introducing Centum™ Force, an ingenious containerised generator set with all the right answers for power critical commercial operations

Good things come in small packages, they say. And in the world of power generation, an all-in-one, containerised, stackable, premium quality generator set that comes in at just 40 ft (12.192 metres) is more than simply 'good', it's astounding.

Thanks to its innovative design and packaging, Centum™ Force, which is now available to serve markets across Europe, promises to rewrite the rules of turn-key critical emergency and prime power demand.

Its arrival has sparked a huge wave of interest in a critical power segments across the 50Hz range, including data centres, hospitals, manufacturing plants, temporary power, rental applications and more.

The fully integrated containerised generator sets are powered by the Cummins QSK60 engine, renowned for its reliable power, low emissions and fast response to load charges.

The QSK60 is capable of running on hydrotreated vegetable oil (HVO), just one of a number of environmentally-aware features to delight customers who are increasingly concerned about sustainability.

The Centum™ Force gensets have been engineered for easy transportation, simple installation and are stackable, offering up to 34% space utilisation savings over traditional build designs.

Each generator is equipped with an advanced paralleling control module, allowing it to support a fast start of multiple units paralleled for power demands in emergency situations.

"As data centres and mission-critical industries expand rapidly, we're committed to offering solutions that combine exceptional engineering with effortless deployment," said Ignacio Gonzalez, Executive Director of Cummins Power Generation Europe Middle East India and Africa.

"We're committed to offering solutions that combine exceptional engineering with effortless deployment"

Ignacio Gonzalez

"Cummins has over a century of experience delivering innovative power solutions. We focus on what matters most: responding to customers' needs, meeting regulations, achieving engineering excellence, and leveraging our global reach to provide a consistent experience worldwide.

"We believe Centum™ Force is the containerised solution our customers are seeking. It delivers faster commissioning times, lower upfront costs, a compact footprint, simpler transportation and reduced lead times."

Centum™ Force is equipped with a multi-function intelligent control system, which monitors and manages the entire system's performance.

For convenient maintenance and operation, Centum™ Force is available with full colour touch control screens, container wall installed panels and friendly interfaces.

Multiple service doors, removable container roof and radiator core, make service operations much easier for technicians. Aftersales service for all parts are available, offering reduced downtime and maintenance waiting time.

Introducing the Centum™ Force to Cummins customers at the European launch event in Spain, Daniel Glenn, Managing Director, Powergen Europe for Cummins, said every component within Centum™ Force had been completely designed and built by Cummins and tested to ensure the highest reliability in the industry.

"What continues to set us apart in the world of power systems is our focus on sustainability and fuel efficiency and our application expertise," he said.

"Our power generators are more reliable and robust, with a lower total cost of ownership, and we support customers in the most demanding of applications and locations."

Daniel said Centum™ Force was a direct response to customers' concerns surrounding investment costs, enclosure sizes and spacing distance between units, overlong deployment times and high transport costs.

"Our mission-critical partners can expect fast lead times of between 16 and 20 weeks ex-factory, faster installation thanks to quick connection sockets and plug-and-play, weatherproof design, and shorter field commissioning time, with built-in fuel tanks, built-in silencer, and built in neutral grounding resistor (NGR) for high voltage or circuit breaker for low voltage.

"All this plus unmatched flexibility, with multiple layout choices and the options of two-level stacked deployment. Simply put, Centum™ Force is the ultimate solution."

Centum™ Force is engineered with a vertical exhaust design, allowing for a variety of site layout combinations of multiple Centum™ Force units, including head-to-head, back-to-back, head to back and two-layer stacking.

Centum™ Force is backed by a comprehensive two-year Cummins Power Generation warranty and is supported by Cummins' extensive global network of service and dealer locations.

FOUR MODELS BASED ON THE LEGENDARY QSK60

The expanded Centum™ Force offering will encompass four models at different power nodes based on the Cummins QSK60 engine: C2000D5-PB (2000kVA), C2250D5-PB (2250kVA), C2500D5A-PB (2500kVA) and C2750D5B-PB (2750kVA).

All models are compliant with both CE and ISO 8528 standards and produced in ISO-9001 certified facilities.

Design features include:

- Advanced paralleling control module
- Integrated cooling system
- Connection sockets for easy installation and servicing
- Fire detection and suppression system
- Cummins PowerCommand® Control 3.3
- Cummins PowerCommand Cloud™ remote monitoring system

DETAILS

To learn more about the ground-breaking Centum™ Force generator set, scan the QR code

Standout solution for data centres

Europe's data centre industry is going through a period of lightning growth and transformation, driven by increasing data consumption, cloud computing adoption, and the rise of artificial intelligence.

This surge in demand is prompting significant investments in new data centre facilities across the continent.

As the industry expands, it faces challenges related to energy consumption and sustainability, prompting a focus on energy-efficient technologies and renewable energy sources.

Cummins Power Generation has witnessed this growth up close, having installed more than 1,400 generator sets to the European data centre sector over the past decade, providing more than 3.5 gigawatts of standby power.

Ignacio Gonzalez said to keep pace, data centre operators wanted solutions that were fast and easy to deploy.

"They want solutions that have the right engineering but which can be plug-and-play, and that's where Centum™ Force can work for them.

"We can lower the footprint, lower the capital expenditure and bring the solution directly to the site with a short commissioning period and a lead time that will get even shorter as the product becomes standard."

UK modular data centre specialist Durata quick to place first order

Centum™ Force is the perfect fit

Cummins has completed the first Centum™ Force sale in Europe with an initial delivery by September of 24 of its new containerised sets to Durata, a UK provider of modular data centres and critical power infrastructure.

The Centum™ Force solution will provide back-up power to data centre modules Durata is supplying across two locations where there is the potential for a further 150 or so modules.

As part of the deal, Cummins will put a three-year service plan in place, allowing for a 75-point service check and an oil and filtration check each year, and a complete service with oil change in the third year.

The standard Centum™ Force generators are designed for rapid deployment and can be shipped globally with ease and cost-effectively as they fit inside an ISO steel shipping container.

The data centre modules custom-made for Durata come pre-packed with servers, cooling systems, switchgear and uninterruptible power systems (UPS) and fit neatly inside Durata's 14m x 3m enclosures.

Once in situ, the modules can be stacked, which yields useful gains in power density.

Durata, which is based in Teesside, northern England, is currently looking at export opportunities across the globe.

"It's all about speed," said Gary Meadows, Head of Cummins Power Projects UK, who has known Durata's managing director John McGee for 20 years and is proud to count him as a loyal and committed customer.

"In some cases, Durata will send out modular units while the data centre is under construction. Once it's built, the data is transferred across and the module can be moved elsewhere, although on this occasion with our Centum™ Forces the modules are static.

The standard Centum™ Force generators are designed for rapid deployment and can be shipped globally with ease and cost-effectively as they fit inside an ISO steel shipping container

"Basically, in this highly responsive and mobile way, Durata is capable of getting a Tier 3 data centre up and running anywhere in the world."

Gary said he had John McGee in mind from the moment he learned of Centum™ Force availability. "I delivered a presentation and they were impressed and wanted to move quickly. Our concept is a perfect match for their business model."

John McGee said: "Durata prides itself on supplying quality solutions to our clients, which is why we have supplied Cummins products on our installations for many years.

"Our rapid deployment modular data centres are designed to a standard format which is replicable and expandable, and the modular design of the Centum™ Force units fits perfectly with our brief."

Gary said the inexorable rise of artificial intelligence would place increasing demands on data centres, and Cummins, with its reputation for high-calibre power generation products, was well placed to capitalise on growth in the sector.

END USER BENEFITS

- Deploy anywhere in the world
- Save valuable space by accommodating more gensets in smaller area
- Save time and money on installation and commissioning
- Gain peace of mind – Cummins dependable quality and service
- Reduce complexity – everything you need is built-in
- Get back up power deployed up and running faster

WATCH
Scan the QR code to see our video on Centum Force™

Cummins France in the fast lane

Customers benefit from access to 'One Cummins'

Customers, suppliers and partners have enjoyed a seamless level of support following the move by Cummins to take direct control of its business in France.

The acquisition of Cummins France, one of the last major independent Cummins distributors in Europe, was completed in November 2023. It included Cummins' interests in Algeria.

Ann-Kristin de Verdier, Executive Managing Director of Distribution Europe, described the acquisition as a significant milestone for the company, adding: "It underlines our commitment to providing superior services and innovation in the European market through one Cummins organisation."

Cummins' business in France started out small but over the past two decades it has evolved, supporting customers across the country through a strong dealer network and regional offices in Lyon and Nantes.

The French market has fared particularly well in the marine and powergen sectors, and in recent times Cummins France has established a strong presence in the strategically important area of data centres.

Less than a year-and-a-half into the new structure, Cummins is proud to report the continuity of service to customers has been maintained and the relationship with dealers in the Cummins France network remains strong and getting stronger.

"We are able to leverage all the knowledge systems and skills of a powerful global brand"
Catherine Sannier, Country Leader, Cummins France

"Everyone is working so hard to achieve a smooth transition," said Catherine Sannier, Cummins France Country Leader.

"We have a wonderful platform to drive excellence, innovation and lead our customers through the energy transition and toward a sustainable future."

Now, customers have access to a much broader level of support across the country while Cummins France engineers are enjoying being integrated into global Cummins teams and absorbing best practice.

Cummins France has been making full use of the modern, Qualiopi-certified training centre at its Lyon facility.

Equipped with the latest technology, the centre offers top-level expertise for the training of official network technicians. As a result, they are perfectly prepared to intervene directly on site, ensuring high-quality service.

Lyon was also the scene of the first Cummins France Community Involvement Team (CIT) initiative, a 'Clean Walk' around the local industrial estate, organised by Rachel Martin York, Aftermarket Sales Manager, whose team collected and sorted 250kg of litter and waste in a single day.

AN EXCITING NEW CHAPTER UNFOLDS

Catherine Sannier is proud of the way the team has been helping to shape this new chapter in the history of Cummins in France.

"We've come a long way in a short time," said Catherine, "and we can now present ourselves as a single, focussed entity, able to leverage all the knowledge, systems and skills of a powerful global brand. The future looks massively exciting."

One of Catherine's highest priorities has been to roll out health and safety initiatives across the business to ensure all employees are conversant and compliant with the very latest standards.

Cummins France has seen strong demand for its Upfit Hub at Lyon, where highly trained technicians can install, build and test Cummins engines and generator sets to meet exact customer requirements. The work covers monitoring, cooling and emission controls.

Cummins France continues to steadily integrate with the European marketing and communications team to deliver more effective tools and resources to end customers through the dealer network.

REMOTE CONTROL

The skills of Prior Power technicians keep North Sea oil rigs running safely and efficiently

Cummins is proud to work in partnership with a dealer network that features some of the finest specialist technicians in the world.

One such dealer is Prior Power Solutions of Great Yarmouth in the east of England which for many years has been maintaining Cummins engines and Cummins-powered generators and equipment on oil rigs in the North Sea.

These are some of the toughest work environments an engineer will ever encounter: intensive round-the-clock assignments working on engines which are often hard to access and always at the mercy of the elements.

On top of this are the commercial pressures to get the job done with as little downtime as possible.

To gain more of an understanding of their work, *Cummins Magazine* spoke to Paul Mirgaux, who co-ordinates the offshore operations performed by the six-strong engineering team backed up by five technical support engineers and 20 onshore service engineers when required.

"Delivery of parts is fast and reliable and the quality is outstanding"

Paul Mirgaux

Paul, what type of work do you do and what are the pressures?

We carry out scheduled maintenance and in-situ overhauls. We're working on rigs which go back to the 1970s and 80s and the engines are often in places that are incredibly difficult to access, sometimes tight to the rig structure itself.

Often, we encounter situations where the customer has bought the engine package but adapted it to suit their required specification, with things like modified air intakes or additional pipework – items that are not supported by Cummins. Identifying them for replacement can be a challenge.

Obviously, the remoteness of the rigs presents challenges in terms of getting our engineers and equipment on site, and then there's the weather, which if it's too harsh means we have to sit it out.

A typical engine overhaul could involve a team of up to four engineers – two on days, two on nights – working 12-hour days, seven days a week and lasting between one and six weeks depending on model, accessibility and site permit availability.

What are the typical Cummins engines you work on?

We've come across a number of different Cummins engines in our time and our engineers are always impressed with the build quality.

One North Sea rig we've been working on recently has five Cummins engines: two KTA38s on fire pumps; two KTA50s on emergency back-up generators; and a QSM11 on an emergency air compressor.

A while back, we carried out what we believe was the first overhaul on a K38 which had been in service since 1981. That says a lot about Cummins durability.

How do you find the support from Cummins?

It's excellent. Cummins QuickServe is a great tool and very easy to use. I can quickly get prices and availability information, which helps us when we're preparing quotes. Delivery of parts is fast and reliable and, although they are not the cheapest, the quality is outstanding and represents best-value for our customers in the long run.

I can count on one hand the number of products we've had to return to Cummins under warranty in the past 18 years, which is exceptional. We would always stress the importance of using genuine Cummins parts.

What would you say are the strengths of Cummins based on your front-line experience?

I've already mentioned the robustness of the engines and the quality of the genuine parts, which are both fundamental. We also have great communication with Cummins through the UK and Ireland Dealers and Aftermarkets Projects section, which gives us an insight on best practice in the network and what's coming down the line.

DETAILS

Scan the QR code to find your nearest Cummins dealer or location

At your service

Eddy Bosker and his top-level service team keep the show on the road

Cummins is renowned the world over for the quality and durability of its engines, with some examples still in working order decades into their life.

As with all mechanical equipment, the trick to longevity and maintaining operational performance is continual care and attention, faithfully observing the recommended servicing intervals and using genuine replacement parts and approved lubricants.

What happens when a Cummins engine develops a technical fault and comes offline is what keeps the Central and Northern Europe Regional Team on their toes, ready to respond with speed and skill to diagnose and then fix the issue, keeping downtime as short as possible.

The team of 60+ specialist Cummins-employed technicians is led by Dutchman Eddy Bosker, who is based in Dordrecht in the Netherlands. The technicians are typically out in the field, on site with customers, or active in dedicated workshops in the region.

For some high-intensity customers operating around the clock, for example in the mining sector and rail passenger service, Cummins has technicians embedded on-site.

In his more than three decades with Cummins, Eddy has supported customers across every business sector in a multitude of situations, either as a specialist field service engineer himself or as leader of a team whose goal is to keep Cummins customers happy and productive.

Each and every day, Eddy's unit of senior technicians is supporting Cummins customers by dealing with maintenance, repairs and sometimes complex technical issues affecting Cummins engines and generators in markets like automotive, power generation, marine, industrial, rail, and mining.

The Cummins product range stretches from 2.8- to 95-litre engines and power generator sets up to 3500 kW, so a breadth of knowledge and experience is vital to make the grade as specialist Cummins technician.

For the past three years, a dedicated service team in Germany has supported a major train manufacturer in maintenance and repair of fuel cell-powered rail cars.

"We had to hire new technicians with different knowledge and skillsets to handle these products as this is frontier technology and nobody has the experience," said Eddy. "We embraced the product and invested in two different work centres in tooling, training, processes and procedures. It was a steep learning curve.

"Cummins has also been expanding in the electrolyser business, where we build, maintain and repair equipment that converts green electric power into hydrogen. We are at the early stage of this programme and exciting times are ahead."

> **"Our technicians are on the front line and are ambassadors of our brand"**
> **Eddy Bosker**

Field service technicians are the cream of the Cummins crop within the regions they serve, selected for their knowledge, technical ability and people skills.

Our technicians are on the front line and are ambassadors of our brand, says Eddy. "They have the right soft skills and know how to start and finish a job properly."

To make the service organisation a smooth-running machine, Cummins has experienced office teams, based mainly in its distributor branches in the different countries.

Customer service advisors and representatives take the customer calls, convert them into service orders, schedule the intervention, provide quotations, collect the parts needed and support the technicians until the job is finished.

Together with a dedicated administration team, the office employees, whom Eddy describes as the "lubricant" of the organisation, process invoices and warranty claims and undertake other key behind-the-scenes tasks.

Eddy says the team occasionally deals with issues that are hard to diagnose and where the technician needs extra support. Such situations are reported back to colleagues at Cummins Care so trending and repeating issues can be spotted.

Cummins Care is a 'hotline' service available to all customers and service providers of Cummins products, including original equipment manufacturers, distributors, dealers and end user customers. The aim is to deliver a response within 24 hours.

There are three levels of attention available through Cummins Care: the first is where the answer is readily available, perhaps already in published form, and that can take a matter of minutes.

If the answer doesn't fall to hand, Cummins will involve its high-capability team but will still strive to get a response within 24 hours.

When a query has to be escalated to Level 3, an expert Cummins Field Service Engineer (CFSE) gets involved, and a site visit can be arranged within days,

CUMMINS CENTRAL AND NORTHERN EUROPE SERVICE NETWORK

60
Field technicians

10
Specialist fuel cell technicians at centres in Frankfurt and Bremervoerde, east of Hamburg

6
Specialist mining technicians embedded with operations in Finland and Sweden

accompanied by a field service technician.

The field experts use sophisticated tooling including dataloggers and remote connect equipment to collect data to analyse and understand how customers are using their Cummins-powered equipment so any recurring problems can be identified and remedies applied.

Rising to the toughest of tasks

Eddy won't discuss individual customers but he's happy to share a couple of examples of recent challenges tackled by his team.

"We were called out to look at a thermal incident involving a practically new machine. We established the problem was oil leaking onto the exhaust, and on detailed inspection we could see the root cause was a hose routed on the wrong side of the heat shield.

"We reported back to the original equipment manufacturer, and they jumped on the design fault which was putting at risk their machines across the world.

"Another time, we established that we needed to exchange a large engine on a power generation project installation in Germany. The only trouble was the genset was installed on the roof of a tall building, and the building was on the flight path close to the local international airport.

"We needed to get a bunch of work permits arranged with the customer and airport facilities, special frames installed, a road closed and a telescopic crane in place.

"We were told the job would take several weeks to complete, but after proper preparation with a selected team of service guys we had that engine changed in a single day."

Data centres are one of the biggest growth areas for Cummins and among the most critical in terms of technical back-up. Cummins has maintenance contracts in place where it says it will respond to emergencies within four hours.

Eddy Bosker (in the blue shirt) with a group of his expert technicians

Another area where Eddy expects Cummins technical know-how to come into play is with bus operators. "The market is changing toward electric buses, but the existing fleets will stay in operation for the foreseeable future. Replacement engines and proper support are needed to keep them going."

Mining equipment giant Komatsu is a global partner of Cummins, and since winning a big contract for dump trucks in the Nordics region, Cummins' service team has been heavily involved in maintenance and repair activities in an operation that runs 24/7, all year round.

Eddy says the art of his team's work is to adapt continuously to changing market expectations, understanding that diesel engines and diesel-powered generators will be around for many more years, potentially decades, but focusing more and more on the new technologies using batteries, fuel cells and electrolysers.

"Making our technicians successful is my main driver and the office teams have to support that goal. There's a slogan I like to use: Service is not a department, it's an attitude."

DETAILS

Scan the QR code for more information on Cummins Care

Image courtesy of @410Films

Cummins and Beneteau unveil a new star

SWIFT Trawler 54 combines smooth power with refined luxury

Leading boatbuilder Beneteau unveiled its Cummins-powered SWIFT Trawler 54 at the 2024 Cannes Boat Show.

The latest sleek and sophisticated addition to the Swift Trawler range, which now includes five models ranging from 35 to 62 feet, is designed for leisurely long-range cruising in a serene environment laden with new technology and home comforts.

It is a statement of seafaring luxury from Beneteau, the world's leading marine brand, which has been working in partnership with Cummins for almost 20 years.

The Swift Trawler 54 (17.13m) is powered by two Cummins QSB 6.7 engines each delivering 550hp. The QSB 6.7 is a proven winner for Beneteau, featuring on the Swift Trawler 48 (2 x 425hp versions) and Swift Trawler 35 (single 425hp).

With the refined power of the twin Cummins engines, the Swift Trawler 54 has a cruising speed of 8-12 knots and a maximum speed of 20 knots.

It offers a range of 700 nautical miles at nine knots, maintaining a 10% fuel reserve. Handling is enhanced by the 'Fusion' hull shape from the drawing board of Dixon Yacht Design.

"The QSB 6.7 550hp has excellent power density and gives Beneteau the right balance of power, fuel efficiency and smoothness, with low levels of noise and vibration," said Patrick Leroux, Recreational Marine Sales Manager at Cummins France, based in Nantes, not far from Beneteau's manufacturing base.

"It is also equipped with Cummins' world-beating DockCommand® controlled docking system that integrates engines, transmission and the bow and stern thrusters through a highly responsive joystick, which is easy to use."

Aside from the obvious benefit of greater manoeuvrability for the boat around marinas, the Cummins DockCommand® inboard joystick is easier and less expensive to maintain than the alternative pod system. It is suitable for any 35-60ft fibreglass recreational single or twin-engine boat.

The Swift Trawler 54 can accommodate up to six people, with an option for an additional crew berth.

The QSB 6.7 550hp has excellent power density and gives Beneteau the right balance of power, fuel efficiency and smoothness, with low levels of noise and vibration

At the stern there is a 400kg tender lift, ample storage for kayaks and paddleboards and a hydraulic swim platform with integrated tender supports. The foredeck can be used as a sun lounger or open space with table, also incorporating storage for mooring lines and fenders.

Beneteau's 'Silent Boat' option allows for up to 10 hours of on-anchor autonomy without the need to run the generator, with a bank of solar panels topping up the lithium battery bank.

"The Swift 54 is the most sophisticated boat that I've had the pleasure to be involved with in my time working with Beneteau, which goes back to 2006 when I was working for Cummins MerCruiser Diesel Europe," said Patrick Leroux.

"After 140 years as a business, Beneteau is still a family-owned group, and it has been wonderful to watch them become such a powerful and respected name in the recreational marine world. They have an exceptional portfolio of motorboats, sailing boats and catamarans, ranging from six to 24 metres."

Patrick said a key aspect of the Cummins-Beneteau relationship was the presence of a global aftersales network, especially as the appeal of the boats and the customer base becomes more international.

"For a prestigious brand like Beneteau, service is incredibly important. When we started out, I would say about 90% of Beneteau's sales were to customers in Europe. Today, specialist support in all the major world markets – Europe, the United States, China – is fundamental, and that's what Cummins can offer through our network of authorised dealers."

DETAILS

Scan the QR code for more information on Cummins engine solutions for recreational marine

Monks of Saint Honorat sing the praises of Cummins

Ferry service provides lifeline for historic island

Ann-Kristin de Verdier, Executive Managing Director of Cummins Distribution Business in Europe, was the honoured guest on a special visit to a holy island off the coast of Cannes in the south of France.

Cruising to Saint Honorat aboard a new Cummins-powered ferry, Ann-Kristin enjoyed lunch and a guided tour of the island's world-famous abbey, home to a community of Cistercian monks.

"I was delighted to visit Saint Honorat and celebrate the launch of a vessel which plays such a vital role in sustaining the local community," said Ann-Kristin, who had earlier visited the Cannes international boat show.

"It was a very windy day, and the ferry ride was quite an adventure. I am extremely proud of the way our experienced Cummins France Marine and Aftermarket teams worked with our trusted local dealer CUMAS to deliver this important project."

For the past 18 years, the combination of reliable Cummins power solutions and responsive local service and maintenance support has underpinned the ferry operation that connects Saint Honorat with Cannes and the French Riviera.

Two ferries – The Saint-Siffrein and Saint-Honorat III – each powered by twin Cummins QSM11-450hp engines, have enabled the inhabitants, workers and visitors to commute to the tiny island, which is only 1500m long and 400m wide. The similarly powered Saint-Maxime serves as a supply vessel.

Saint-Honorat III was repurposed to Atlantic coast operations and a completely new ferry was commissioned in June 2024: The Saint Honorat IV.

The new vessel is powered by two Cummins X15-M engines. The X15, rated 630hp at 2100rpm, has proven its performance, endurance and reliability over many years in other power segments and can meet the most demanding marine applications.

Cummins' patented XPI fuel system installed on the X15 ensures a quick transient response and an unparalleled fuel economy at cruise speeds while meeting the most stringent emissions regulations and achieving low maintenance costs.

The crossing from Cannes Bay to Saint Honorat takes about 20 minutes, and the service, which runs between 8am and 6.30pm seven days a week, carries more than 95,000 passengers a year. Tourists flock to see the Lérins Abbey and the famous fortified monastery tower, built during the 11th Century.

The Priest described the Saint Honorat IV as a symbol of the intelligence and ingenuity of man

The Priest of the Abbey conducted a 'baptism' service for the Saint-Honorat IV and described the boat as a symbol of the intelligence and ingenuity of man.

Recognising ferry operator Planaria's wish for its boats to be as environmentally-friendly as possible, the six Cummins engines and three on-board Cummins Onan generator-sets are running on hydrotreated vegetable oil (HVO).

The entire fleet will run on HVO once the Saint-Maxime's QSM11s and genset are replaced by local authorised Cummins dealer CUMAS.

"The cost of the HVO is slightly more than diesel but the engines themselves do not require any additional maintenance," said Jean-Francois Ropart, Managing Director of CUMAS.

"We check the oil every 200 hours instead of the normal 250 hours to see if it needs replacing but that's about it. Planaria believes the benefits to the environment are worth the switchover."

The maximum speed of the Saint-Honorat IV is 19 knots but to comply with local regulations it is limited to no more than 12 knots when operating in the busy Bay of Cannes area.

DETAILS

Scan the QR code for more information on Cummins engine solutions for passenger vessels

The Saint-Honorat IV is powered by twin Cummins X15-M engines, each rated at 630hp

Cummins pays it forward

Bold initiatives in education, STEM and water management

Cummins has launched a global STEM (Science, Technology, Engineering and Mathematics)-focused education strategy designed to power the pathway to education and career success.

Cummins READY aims to support at least one million learners and workers in communities where its employees live and work by the year 2030.


Cummins volunteers on the Natuurpunt Wetlands project


Students on the European MRC STEM tour, Krakow


STEM fair in Craiova, Romania


Smiling faces at the STEM Club – Engineering for Girls project in Izmir

In addition to partnering with local schools, new partnerships have been developed that promote educational excellence from pre-kindergarten through post-secondary and workforce training.

In Europe, Cummins is partnering with STEM Learning UK and the Scientix STEM Alliance. Over the next two years, these organisations will provide high-quality STEM learning experiences to reach more than 70,000 students.

Additionally, more than 6,700 schoolchildren across Europe recently took part in STEM festivals and events supported by Cummins alongside local businesses and community partners.

The activities, which included introducing basic design and engineering concepts, were aimed at children aged nine to 13 and were supported by more than 250 Cummins employees volunteering around 3,000 hours between them.

The largest of the European STEMFest events, organised by RTC North, was held in Sunderland, northern England where around 3,000 children took part over three days. Other STEM events took place in nearby Darlington, in the Turkish city of Izmir and in Craiova, Romania. STEM sessions have also been held in and around Krakow, Poland, home of Cummins' new Master Rebuild Centre.

Jonathan Wood, Vice President and Chief Technical Officer at Cummins, said the most exciting aspect of Cummins READY was the scale of its ambition.

"We're going to show learners what they can achieve in STEM and the great opportunities available in STEM careers while bringing a diversity of talent into the industry," he said.

Meanwhile, in Belgium, as part of Cummins Water Works, Cummins' global environmental programme to strengthen communities through sustainable water, Cummins has partnered with Natuurpunt to restore 345 hectares of wetland around the city of Mechelen.

The project, which celebrated its first anniversary on World Water Day (March 22), will support biodiversity and carbon capture and help Cummins as it strives to meet its 2030 goal of being net water positive in each region it operates.

That goal is part of the Cummins Water Works agenda of working with experts to create projects around the world to improve water quality, water quantity and access to WASH (water, sanitation and hygiene).

The Mechelen project is part of the European LIFE project Wetlands4Cities, in which multiple partners are committed to making nature around cities climate-proof.

SEE FOR YOURSELF
Scan the QR code to see these projects in action

Deeply committed to the future

Cummins and Komatsu share vision of a cleaner mining industry

The strategic global partnership between Cummins and Komatsu, the seeds of which were first sown as far back as 1961, goes from strength to strength.

With super-reliable high horsepower Cummins diesel engines at their heart, Komatsu's famously robust haul trucks are working relentlessly in mining and construction operations in every corner of the world.

They are supported by a Cummins-owned distribution network and Cummins technical specialists based close to the action, sometimes embedded in the actual operation.

As both companies increasingly recognise the need to reduce their environmental impact and develop innovative solutions for a low-carbon future – a mission outlined in Cummins' bold Destination Zero strategy – they are working harder than ever to advance sustainability in the mining industry.

Critical to the success of the Cummins-Komatsu relationship has been their shared 'one team' philosophy where the two business are aligned in their production strategies and maintenance schedules.

"We are plugged into each other's model strategies, so we always know what's coming," says Goran Galic, DBU Europe Mining Leader at Cummins and a pivotal figure in the relationship with Komatsu in Europe.

"We also share data on equipment health and performance data over common infrastructure which allows us to develop joint analytics and insights."

Komatsu uses several Cummins engines in its mining trucks, particularly its larger haul trucks. All are compliant with the Tier 4 emission standard but there is a clear ambition to transition to cleaner and greener energy.

"We are plugged into each other's model strategies, so we always know what's coming"

Goran Galic, DBU Europe Mining Leader at Cummins

The predominant engine in the Komatsu line-up is the legendary 60-litre Cummins QSK60 which powers the Komatsu 830E and 930E with a payload capacity of around 220 tonnes, and the mammoth Komatsu WE2350, the world's biggest wheel loader, with a capacity of up to 360 tonnes.

The 78-litre V18 Cummins QSK78, delivering a colossal 3,500 horsepower, powers Komatsu's 930E-4SE (290 tonnes).

With the opening of Cummins' Master Rebuild Centre in Europe – the latest in a global network of 15 such centres and the first of its kind in the region – Komatsu customers can now look forward to the greater cost benefits that will flow from being able to extend the life of their hard-working high-horsepower Cummins engines.

By allowing customers to keep their equipment working for longer, Cummins is, in effect, giving them greater control over how they navigate their energy transition pathway.

The engine remanufacturing is planned exactly to dovetail with any work Komatsu needs to carry out on the chassis and the rest of the truck, so the customer never has to worry about double downtime.

Goran Galic says the needs of the mining sector and of Komatsu in particular were uppermost in Cummins' thoughts when the idea of a European Master Rebuild Centre was conceived back in 2016.

"These were the early days of Komatsu and its mining ambitions. They had just signed their first big deal with Boliden to operate in its mines in northern Sweden and across the border in Finland.

"We gave them our commitment that Cummins would support Komatsu's trucks for the lifetime of the engine and assured them we would be extending the lifecycle of those engines through high-quality engine remanufacturing of Cummins engines."

In 2018, Cummins took the strategic decision to offer dedicated on-site support to Komatsu mining operations in Finland.

"It was a major investment and a bold move because the ideal scenario for us is to work with independent dealers," said Goran.

"But in this instance, and given the strategic nature of our relationship with Komatsu, we felt it was the right way to go; to offer an undiluted focus on them and mining equipment."

Fast-forward to the present time and those mighty yellow-painted Komatsu haul truck engines are being lined up to undergo the six-stage remanufacturing process at the ISO 9001-certified European Master Rebuild Centre (MRC).

DETAILS
For more information scan the QR code

Time is money – and that's where remanufacturing scores

Cummins' Master Rebuild Centres boast the very latest equipment for remanufacturing and employ the same quality control processes as the factories producing new Cummins engines. There are no fewer than 150 checks in the reassembly part of the operation.

A full one-year/unlimited hours warranty is offered on the work carried out by Cummins-certified technicians.

"When you buy mining equipment, you are buying it for the long term," says Goran Galic. "A haul truck might need to keep working for 80 – 90,000 hours, and you don't want to be buying new engines when there is the possibility of extending the life of the original unit.

"Now in Europe, we can say every mining engine can have a minimum three lives: factory original plus at least two 'zero hour' rebuilds.

"For Komatsu and our other high horsepower customers – those operating engines of 19 litres and above – we are committed to rebuilding engines to the highest possible standard in the shortest possible time.

"In mining, everything is cost per tonne. If a truck is standing still, it's losing money. The overall turnround target for a Cummins Komatsu engine to be remanufactured and installed is 60 days for scheduled rebuilds and preordered parts. For our part at the MRC, the entire rebuild process will take seven working weeks, or 35 days."

Goran says remanufacturing works out at around 80% of the cost of ordering a new replacement engine, and by setting up a service exchange agreement, machinery can be back in business in days rather than months, translating into a significant cost saving.

What's more, every remanufactured engine is upgraded to the latest specification. "That includes any supersession of part numbers and any improvement in fuel technology," says Goran.

"The engine will move with the latest technology, it will stay evergreen." As part of the agreement, Cummins will also update the aftertreatment system.

The ability to remanufacture engines bolsters Cummins' commitment to progressing its environmental sustainability goals and to advancing the circular economy. Remanufacturing promotes the reuse and recycling of materials and addresses environmental challenges like climate change.

PARTNERS IN THE TRUEST SENSE

The foundation for the Cummins-Komatsu partnership was laid in 1961 with a technology licence agreement.

This evolved into joint ventures like Industrial Power Alliance (focusing on engine research and development in Japan) and Komatsu Cummins Engine Co. (manufacturing engines).

The partners have been customer and supplier to each other for decades, with Cummins engines powering many of Komatsu's most popular mining and construction machines.

2016

In 2016, the partners formalised a global corporate responsibility partnership to focus on education and social development initiatives.

2022

In June 2022, Cummins and Komatsu announced a formal agreement specifically for zero-emission mining trucks.

2025

In 2025, Cummins will unveil PrevenTech© Mining version 2.0, a significantly improved real-time digital monitoring and reporting system that provides an early warning of potential equipment operating issues. It is invaluable in helping to plan maintenance and service, ensuring machinery is offline as little as possible.

Vectron combines the best of both worlds

Locomotive can switch between pure electric and Cummins diesel power with HVO capability

Siemens Mobility's pioneering Vectron Dual Mode locomotive is expected to play a huge role in reducing carbon emissions generated by the European rail sector in the coming years.

The Vectron Dual Mode Light can be operated with both electric power and – courtesy of the Cummins Stage V QST30 – diesel power. The QST30 can also run on hydrotreated vegetable oil (HVO), a key requirement from freight operator giant Deutsche Bahn (DB) Cargo, which has ordered 146 of the locomotives. The dual-mode locomotive seamlessly transitions between electric and diesel power, eliminating the need to switch locomotives for electrified and non-electrified routes.

DB Cargo estimates the Vectron will save around 12 million litres of fuel and reduce CO^2 emissions by something like 25,000 tonnes per year.

The DB Cargo locomotive comes with a power of 2,210 kW in catenary mode and 750 kW in autonomous mode, the locomotive has a maximum speed of 120 kmh and a starting tractive effort of 300 kN.

The Vectron Dual Mode light is a member of the Vectron family. The pure electric Vectron locomotives can be delivered for operating with alternating current (AC) or direct current (DC) power systems as well as multisystem (MS) variants in the power classes 5.2 MW, 5.6 MW and 6.4 MW.

To date, Siemens Mobility says it has sold more than 2,600 locomotives of the Vectron family to 103 customers in 16 countries, and the fleet has already accumulated over 1,000 million kilometres in service.

Locomotives using the Vectron platform are currently approved for operation in 20 European countries. They will be deployed for both freight and passenger service.

Along with the desired national train control system, the locomotives, which are built in the Siemens Mobility plant in Munich-Allach, can also be equipped with the latest European Train Control System (ETCS).

The Vectron is able to run on several corridors throughout Europe. Latest corridor approval has been for operating along the Scandinavian Corridor which extends from Austria to Norway via Germany, Denmark and Sweden. This enables both freight and passenger trains to run along the entire corridor without changing locomotives.

The Vectron is the first ETCS-equipped locomotive allowed to operate across the 16 km long Öresund connection (bridge and tunnel) between Sweden and Denmark.

Andreas Dammann, Rail Business Manager EMEA for Cummins and in charge of the Vectron project, said InnoTrans 2024 had been a fantastic showcase for Vectron Dual Mode Light and was made possible by the shared effort of Cummins, Siemens Mobility and DB Cargo.

"The locomotive actually hauled all rolling vehicles to the exhibition before going on display, which sent a strong message about its capability, and the train driver said he thought Vectron was, in his words, a paradigm shift for the rail freight business."

Andreas said Vectron was a classic example of how original equipment manufacturers in the rail sector were tackling the journey toward a sustainable future.

"The rail industry has shown itself to be an early adopter of energy transition technologies, second only to the automotive sector. But getting to zero emissions is not a toggle switch; it's a journey where new technology slowly but steadily replaces conventional technology.

"Vectron Dual Mode Light is a fantastic step in the right direction and a great example of Cummins and Siemens working together to create carbon-reducing solutions."

HOW DUAL-MODE WORKS

Dual-mode diesel electric locomotives are a cutting-edge technology that combines the efficiency of electric power and the flexibility of diesel.

When operating on electrified tracks, the locomotive draws power from the overhead catenary wires. This mode of operation is highly efficient, with zero in-use emissions and low operating costs.

On non-electrified tracks, the locomotive switches to diesel power. The diesel engine drives a generator, which in turn powers the electric motor. This allows the locomotive to operate on any track, regardless of electrification.

The locomotive's control system seamlessly switches between electric and diesel modes depending on the operating conditions.

This flexibility is particularly valuable for routes which are not fully electrified, allowing for efficient and uninterrupted service.

Stadler's Class 99 breaks new ground

High hauling capability and a top speed of 120kmh

Below is the first glimpse in its GB Railfreight livery of the diesel-electric Class 99 locomotive built by Stadler.

Equipped with a compact low-emissions Cummins Stage V QSK50 diesel engine that can run on HVO, the Class 99 heralds a new generation of locomotives, providing a range of economic and environmental benefits.

The Class 99 is built at Stadler's Valencia works in Spain and adapted for use on the UK railway network. It is based on the proven EURODUAL locomotive concept and features a dual drive system, which means it can operate in purely electric as well as in diesel-electric mode.

"Because it can run on both electrified and non-electrified lines, the Class 99 has the potential to replace diesel-powered locomotives such as the widely used Class 66, where a dual locomotive is required, especially in the UK but also throughout Europe," said Jorge Santoyo Pastor, Cummins' Rail and Off Highway Sales Leader for Spain.

The Class 99, which was officially revealed at InnoTrans in Berlin last September, is able to operate on a 25 kV AC electrified line and has a power of 6,000 kW.

With an impressive tractive effort of 500 kN, it can reach speeds of up to 120 km/h, boasting high hauling capability and performance.

Beacon Rail and GB Railfreight have commissioned 30 of these vehicles in an order that is the first of its type in the UK and builds on the success of the EURODUAL six-axle locomotives sold in mainland Europe.

The cab is designed with the driver in mind, and is a safe, modern and comfortable working environment. A centrally positioned seat in combination with the huge front window ensures excellent visibility.

State-of-the-art cameras provide direct views of pantographs, shunting zones and the area in front of the locomotive. The two protection systems required on British rail networks, AWS and TPWS, have been fitted.

Iñigo Parra, Chief Executive Officer of Stadler Valencia, said: "This environmentally-friendly, efficient and powerful vehicle will encourage modal shift from road to rail, helping the UK decarbonise the railway and supporting net zero targets."

"This efficient and powerful vehicle will encourage modal shift from road to rail, helping the UK decarbonise the railway"

Inigo Parra, Stadler Valencia CEO

John Smith, CEO of GB Railfreight, agreed, adding: "The Class 99s represent a game-changing moment for the UK rail freight industry, improving the resilience of our fleet and reducing journey times. These locomotives will be the first to offer rail freight customers the chance to run wholly sustainable, heavy-haul services the length and breadth of the country."

Adam Cunliffe, CEO of Beacon Rail, said: " The Class 99 order underlines our drive to support the UK's journey towards a greener and more efficient rail network."

Stadler has a 16-year full service contract with GB Railfreight, comprising tailored maintenance solutions, modernisation and overhaul and the provision of spare parts and material supplies. It covers vehicle repairs and service support, as well as the management of rail data and maintenance software.

After dynamic testing at Stadler's facility in Velim, Czech Republic, the locomotives will be tested in the UK this summer.

DETAILS

For more information on the Cummins engines powering the rail industry scan the QR code

One premium HD diesel oil to rule them all!

Valvoline launches all-new Premium Blue™ 8600

Valvoline has introduced Premium Blue™ 8600 15W-40, a Heavy Duty diesel engine oil recommended and endorsed globally by Cummins and covering all Cummins' On- and Off-Highway diesel platforms.

The 2025 Premium Blue™ 8600 is based on the latest API CK-4 chemistry and has been optimised to offer a wide range of the benefits of the Premium Blue 8600ES including low emission-compatible and improved durability.

It meets Euro 6 and backward to Euro 1 on-highway legislation and Stage V and Tier IV off-highway legislation.

OEM APPROVALS
Cummins CES 20086
PERFORMANCE LEVELS
ACEA E11
API CK-4, CI-4, CL-4+ CH-4, CJ-4
ALLISON TES 439
Caterpillar ECF-3
Cummins CES 20081
DTFR 15C100 (MB-228.31)
Detroit Diesel DFS 93K222, 93K218
Deutz DQC III-18 LA, DQC III-10 LA
Ford WSS-M2C171-F1
JASO DH-1, DH-2
Mack EOS-4.5, EO-N Premium Plus
MAN M3775, M3575
MTU Type 2.1
Renault RLD-4.5, RLD-4
Volvo VDS 4.5, VDS-4, VDS-3

It is backward-compatible for previous categories to include the popular Stage III, IV and Tier III .

Premium Blue™ 8600 offers strong performance in diesel-fuelled engines. It provides enhanced protection against catalyst poisoning, particulate filter blocking, oil oxidation, engine wear, piston deposits, viscosity loss due to shear, degradation of low-and high-temperature properties, and soot-related viscosity increase.

Alastair Weston, Technical Applications Manager Europe for Valvoline, said: "Working closely with Cummins, we carried out extensive research into the power source of choice in Europe for the many applications in operation.

"For the ultra-low emission zone needs (ULEZ) of the big towns and cities of the continent, we have seen a dramatic change in the market from operating or choosing multi-fuel agnostic engines over to 100% battery electric vehicles.

"Consequently, there is a reduced need for a multi-fuel engine oil like the Premium Blue One Solution Gen 2, although it will remain on sale for the customers who prefer this strategy."

The Premium Blue One Solution Gen 2 was launched to great fanfare as the world's first engine oil that could lubricate CNG (compressed natural gas) engines like the Cummins L9G as well as being suitable and formulated for use in the latest low emission diesel engines such as the Euro 6 and Stage V tier IV engines.

KEY BENEFITS OF PREMIUM BLUE™ 8600

- Compatible with low emission aftertreatment systems
- SCR/ Adblue system-compatible
- EGR-compatible
- DPF-compatible
- Offers improved TBN retention

Premium Blue™ 8600 has been designed to provide advanced lubricant performance in modern, emission-equipped Cummins and other diesel engines.

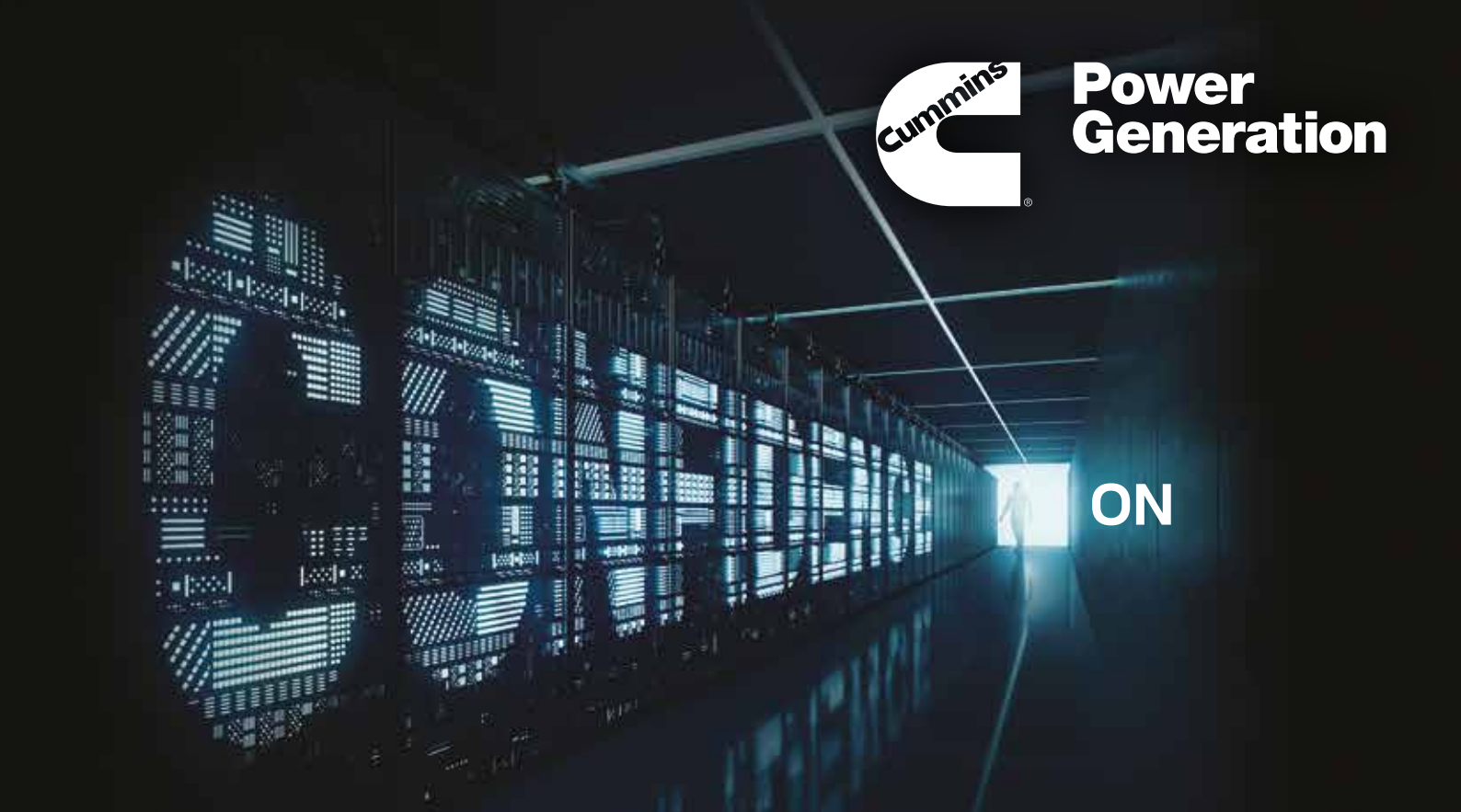
This formulation is based on the latest API CK-4 engine oil classification and meets and exceeds the Cummins CES 20086 engine oil standard too. It also carries the latest ACEA E119 European classifications.

Premium Blue™ 8600 has been formulated in a way that can be mixed with any of the previous Premium Blue™ diesel products, including Premium Blue™ 7800 or Premium Blue™ 8100. This new product has been designed to be an upgrade over and above Premium Blue™ 7800 and Premium Blue™ 8100.

DETAILS

Scan the QR code for more information about Valvoline products

Cummins Power Generation



Introducing Centum™ Force Containerised Solutions

Fully Integrated Power Systems
Includes cooling, fire suppression, fuel tanks, smart monitoring, and quick connections in a 40-foot ISO container.

Flexible Layout Options
Designed for performance, easy installation, service, and stackable, versatile layouts.

Rapid Installation and Commissioning
Quick connection sockets and compact design enables fast commissioning and easy service access.

Fast Lead Time + Easy Transportation
Standard 40-foot container fits on truck trailers, lowering freight costs and simplifying shipping.

Quiet Operational Performance
Optimised sound attenuation meets stringent global site requirements.

Reduced Footprint
~34% smaller footprint than traditional containers installations.

Learn about our latest innovation.

Power Onward™