ISSUE 3, 2024

Cummins®

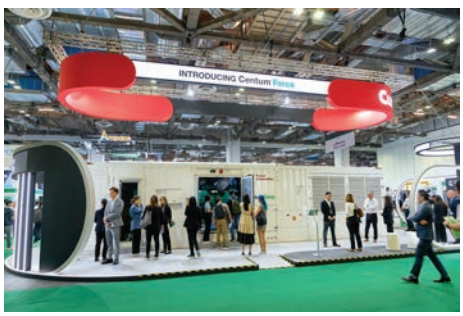
ASIA PACIFIC MAGAZINE

CARROT KINGS CALL THE SHOTS

Powering haulage efficiencies to new levels

ACE STARS AT LAND FORCES:
Advanced 1000 hp, four-cylinder engine

COOL WITH CUMMINS:
Batchfire's life-of-engine protection



CENTUM FORCE ON DISPLAY:
The new force in data centre power

How one of Australia's largest carrot producers powered efficiencies to new levels.

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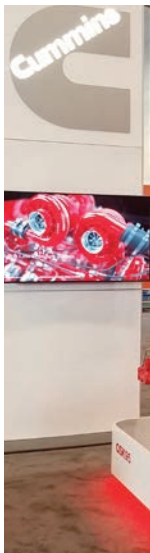

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CUMMINS ASIA PACIFIC MAGAZINE
ISSUE 3 2024

A new era at Cummins

Hello, I am Annie Chu. As the new Executive Managing Director of Cummins Asia Pacific, I am honored to share our latest magazine with you.

At Cummins, our vision is to innovate for our customers to power their success. This vision is not just a statement; it is a commitment that our customers are at the heart of everything we do. By listening to their needs and understanding their challenges, we can deliver solutions that exceed expectations. Our goal is to build lasting partnerships based on trust and reliability – a goal that is highlighted in this issue in articles on end-user customers like Rocky Lamattina & Sons and TR Group, as well as manufacturing partners like Goldacres and Birdon.

Innovation is the lifeblood of Cummins. We are dedicated to pushing the boundaries of what is possible, delivering solutions that drive efficiency, performance and reliability. At the recent Land Forces Expo in Melbourne we showcased our 1000 hp, opposed-piston Advanced Combat Engine (ACE) which you can read about in this issue. And who would have thought that one day our iconic diesel engine company would be touting hydrogen internal combustion engines and hydrogen fuel cell engines? By fostering a culture of creativity and embracing new technologies, we aim to provide our customers with the most advanced and dependable products and services.

Our people are our greatest asset. At Cummins, we believe that a motivated and engaged workforce is key to driving innovation and taking good care of our customers. You can read about the incredible work our people do in the field in this issue – at mission critical hospital projects in Melbourne and Brisbane where we are installing emergency power, at minesites in the Bowen Basin, and for our trucking customers who want one million trouble-free kilometres.

Our Destination Zero strategy is an ambitious initiative aimed at reducing our environmental impact and leading the industry in sustainable practices. We are committed to leveraging cutting-edge technology and innovative solutions in the transition to zero emissions as you'll read in the article 'No cooling off with ICE' which highlights Cummins' industry-first fuel agnostic approach. By pioneering advancements in clean energy through our Accelera by Cummins business unit, we will ensure that Cummins remains at the forefront of the transition to a greener future.

As I settle into my role and get to know the region better, I am truly encouraged by the strong relationship we have built with our customers and partners over the years. We have a remarkable team of passionate and talented individuals committed to our shared success. I am excited about the opportunities that lie ahead, and I look forward to achieving great things together in the future!

Annie Chu
Executive Managing Director
Cummins Asia Pacific

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Every new model introduced since 1999 has boasted Cummins power.

Leading Australian spray equipment manufacturer, Goldacres, has installed its 1000th Cummins engine.

GOLDEN ERA

Twenty-eight years ago, in 1996, Cummins began working with all-Australian spray equipment manufacturer, Goldacres, during development of its first self-propelled crop sprayer.

The first Crop Cruiser sprayer went into production in 1999, sporting a 5.9-litre Cummins 6BTA engine producing 177 hp.

One thousand Cummins engines later, in 2024, another chapter has been added to the amazing Goldacres story – a Victorian family company beating the imports and helping farmers do their job more efficiently with reliable and innovative products.

Goldacres' enduring relationship with Cummins has been built on trust, engineering and technical support, and bullet-proof product.

"Cummins showed a willingness to work with us from day one and the relationship has gone from strength to strength," says Goldacres general manager Roger Richards. "We haven't had a bad experience with Cummins or the Cummins product.

"The support we get from Cummins is second to none, and the Cummins engine brand is very well accepted in the farming community."

Pick of the crop

Goldacres was set up in central Victoria in the country town of St Arnaud by machinery trader John Richards in the late 1970s and although he is now retired, his two sons Roger and Stephen continue to drive the company as one of Australia's leading agricultural spray equipment suppliers.

Now Ballarat-based with close to 200 employees, Goldacres markets an incredible range of spray equipment from 2.0-litre 'pump up' hand-held sprayers for the home and garden through to broadacre agricultural sprayers such as its 8000-litre self-propelled Super Cruiser – all via an Australia-wide dealer network.

Goldacres has introduced various new models since the first incarnation in 1999, and every one of them has boasted a Cummins powerplant. The Crop Cruisers have found favour in regions as diverse as the Western Australian wheat belt to Queensland's cotton croppers.

Goldacres general manager Roger Richards (right) with plaque marking 1000th engine delivery. He's pictured with Michael Hickling, manager of Cummins Asia Pacific's agricultural and construction business.

> "The support we get from Cummins is second to none…"

Last year was a record for Goldacres which had its manufacturing line at full throttle, building 12 to 13 self-propelled sprayers a month.

At the heart

Cummins' B-series engines – displacing 4.5 and 6.7-litres – are installed in the company's Crop Cruiser and Super Cruiser line-up.

The G4 Crop Cruiser (4000-litres capacity) is equipped with the B4.5 rated at 200 hp while the G6 Crop Cruiser (6000-litres capacity) and G8 Super Cruiser (8000-litres capacity) are propelled by the QSB6.7 rated at 225 and 260 hp respectively. All are emissions certified to Tier 3.

Roger Richards points out the company has already engineered a prototype Cummins installation that meets Stage V emissions regulations – the most stringent off-road emissions regulations in the world – in preparedness for possible introduction in Australia as well as for export potential.

Exhaust emissions for off-road equipment are still unregulated in Australia although the Federal Government is currently considering regulation.

Goldacres' self-propelled sprayers are mechanical drive – as opposed to most competitors' hydrostatic drivetrains – which presents a compelling case to buyers in terms of fuel efficiency. The company points out that with mechanical drive, which is more efficient in putting power to the ground, its machines can operate at relatively low revs even in full spray mode. Along with the inherent efficiency of the Cummins B-series engines, this contributes to fuel consumption that is up to two-thirds less than a comparable hydrostatic machine.

▲ Scan here or click here for more info.

How one of Australia's largest carrot producers has powered haulage efficiencies to new levels with creative combinations.

CARROT KINGS

Rocky Lamattina & Sons is big business, and its headquarters in Wemen in northern Victoria, needs to be seen to be believed.

It's a world-class family-owned operation, processing around 1000 tonnes of carrots every week for delivery to supermarkets as well as wholesale and export markets.

All the transport is carried out by the Lamattinas' own fleet of 16 Cummins X15-powered Kenworths pulling trailers splashed with the motto 'Australia's Favourite Carrots'.

The fleet is kept busy 52 weeks of the year, running like clockwork, as harvesting is carried out at the Lamattinas' three properties, Wemen and Kaniva in Victoria and St George in southern Queensland.

The carrots are then trucked back to Wemen HQ where they are washed, graded and packed using the latest process technologies from around the world.

Establishing year-round growing capacity at different geographical locations has been key to the family's success – success that has been forged over 33 years by Rocky Lamattina, wife Kathy, and sons Angelo, Phil, John and the team.

While the core focus of the business is still carrots, the Lamattinas are in the process of diversifying by establishing a pistachio farm, spurred on by rising demand for the nut from Australian consumers.

Buying the best

Discussing the company's vast array of farming and transport equipment, John Lamattina is clear about the family's priorities.

"Our philosophy has always been to buy the best, utilise it to its full capacity, maintain it properly and then replace it when it's done," he states.

"Having our own truck fleet gives us the flexibility to deliver carrots from harvest to supermarket shelves in less than 24 hours," he adds. "We've looked a number of times at sub-contracting out our transport but we've always come to the conclusion that we can do it more efficiently ourselves.

"Carrots are the cheapest vegetable on the shelves and that hasn't changed in 30 years. Our only option has been to become more efficient."

He insists that trucks should be able to do 900,000 to one million kilometres trouble-free and that this expectation is not an over-reach but a realistic assessment when purchasing, at high cost, premium equipment.

High productivity

John credits brother Angelo with the design concepts that now see the company running innovative high productivity vehicles that have attracted international interest.

These include five B-quads, a Stag B-triple and (at the time of writing) four 30-pallet single-trailer units pulled by twin-steer Kenworths – two K200s and two K220s – all powered by Cummins X15 Euro 5 engines rated at 600 hp with peak torque of 2050 lb ft, the standard rating for the entire fleet.

By early next year, the Lamattinas will have seven of the 30-pallet units running at a gross weight of 62 tonnes over a length of 22.5 metres, replacing 32-pallet B-doubles.

The quad-axle arrangement under the 18.3-metre Southern Cross fridge vans is actually two separate bogies with a total weight allowance of 34 tonnes (17 tonnes-per-bogie).

"We've got the same payload as our 32-pallet B-doubles but have one less fridge motor, one less axle, reduced tyre costs, improved fuel consumption and life is easier for the drivers because they don't have to disconnect and connect and don't have to back up two trailers," says John.

Cummins regional branch manager Jackson Meredith (left) with Angelo Lamattina, Cummins Mildura service advisor Maddy Price, John Lamattina and Cummins Swan Hill operations manager Adam Boys.

CALL THE SHOTS

John Lamattina... has high expectations for equipment reliability.

A noticeable aspect of all the new combinations is the absence of converter dollies, Angelo Lamattina noting they are redundant due to the company's specific operational requirements as well as a focus on greater stability.

The five B-quads, which haul the harvested carrots from the St George and Kaniva farms to Wemen for processing, are essentially three A-trailers coupled to a B-trailer which operate at 107 tonnes gross with a payload of 74 tonnes.

The Stag B-triple tipper combination comprises a short last trailer that connects to a B-double via a fifth wheel. The unit, which carries a 59-tonne payload at a GVM of 95.5 tonnes, delivers gypsum and cow manure (collected from feedlots) to the farms and delivers grain to Lamattina customers.

Continued overleaf...

> "Carrots are the cheapest vegetable on the shelves and that hasn't changed in 30 years. Our only option has been to become more efficient."

Twin-steer Kenworth with 30-pallet trailer is replacing 32-pallet B-doubles.

Continued from previous page...

Stag B-triple is a side-tipper combination with payload of 62 tonnes.

Cummins support

Cummins' branches in Victoria's Riverland region, at Mildura and Swan Hill, have forged a strong relationship with the Lamattinas.

As head of the transport operation, John Lamattina came up with a good idea to further underpin Cummins' position as a key supplier to Lamattina & Sons.

"I was invited to the Swan Hill branch to talk to everyone about our operation but I thought it would be better if all Cummins staff from Mildura and Swan Hill visited our facility and we could show them exactly how we go about our business and the pressures we encounter on a daily basis," he says.

That happened over two days and so as not to cause disruption to branch operations, half the staff from Mildura and Swan Hill visited the Lamattina facility one day, and the other half the next day.

"The feedback from the branch teams was fantastic," says John, a sentiment confirmed by Cummins regional branch manager Jackson Meredith. "Our goal as a region is making sure everyone at our branches, not just a select few, are fully aware of our customers' operations, what they do, how they do it and how we play a crucial role in the success of their business.

"We are recognised for delivering top-tier support in our industry, and to maintain that standard we need to ensure our operational and communication systems are well established."

Rocky's story

The Lamattina story is indeed a remarkable one: Rocky came to Australia from Italy in the early 1950s as a three-year-old and his family bought their first Australian farm – a mere three-hectare lot – in Clayton, a suburb of Melbourne, in the early 1960s.

Rocky, Kathy and their sons started their own business in Wemen in 1991 with 500 acres of land which had sheep grazing on it at the time of purchase. After initially growing broccoli, potatoes and carrots, the decision was made to focus on just one crop and become very good at it. That crop was carrots.

The rest, as they say, is history.

> "Our philosophy has always been to buy the best, utilise it to its full capacity, maintain it properly."

Five B-quads haul carrots from farms to Wemen HQ for processing.

FORCING THE ISSUE WITH

COUNTERFEIT PARTS

Cummins' engagement with the Australian Border Force (ABF) to identify and stop shipments of counterfeit parts entering the country is now in full swing, with training workshops recently held for ABF personnel in Perth, Darwin, Sydney and Brisbane.

Cummins is now a Notice of Objection holder registered with the Australian Border Force, a legal document that allows ABF to seize imported goods that infringe copyright and trademarks.

The Intellectual Property (IP) training workshops saw over 300 ABF officers familiarising themselves with the Cummins brands – engines, generators, Holset turbochargers, Stamford alternators and PGXL coolants.

"The magnitude of the problem in Australia has required Cummins to take a tougher stance against counterfeiters, and that means working closely with ABF," says Kyle Miller, Cummins' aftermarket business development manager for mining in the Asia Pacific region.

Sophisticated reproductions of original parts have made it incredibly hard for even the trained eye to distinguish real from fake. These illegal imitations of engine components, oils and lubricants manufactured from inferior materials can lead to serious safety and product issues.

Even counterfeit labelling, packaging, barcodes and QR codes look like the original, with many consumers misled into thinking they are buying the genuine article.

To put the cost into perspective, counterfeit goods are estimated to be a US$500 billion-per-year industry.

The training workshops for ABF officers highlighted the difference between genuine and counterfeit parts, the safety and operational risks involved with counterfeit parts, and Cummins' latest global initiative – the use of holograms – to support anti-counterfeiting efforts.

Holograms

Cummins has introduced a new leading-edge parts label system, featuring hologram technology, to help customers confirm they are buying the genuine product.

The development of holograms, whose effects cannot be completely replicated or simulated by normal reprographics methods, has introduced a new level of brand protection.

To differentiate from counterfeit products, Cummins' new labels feature a Cummins-specific hologram as well as a verification website. Customers can scan a QR code on the label to reach the site (see link to site below).

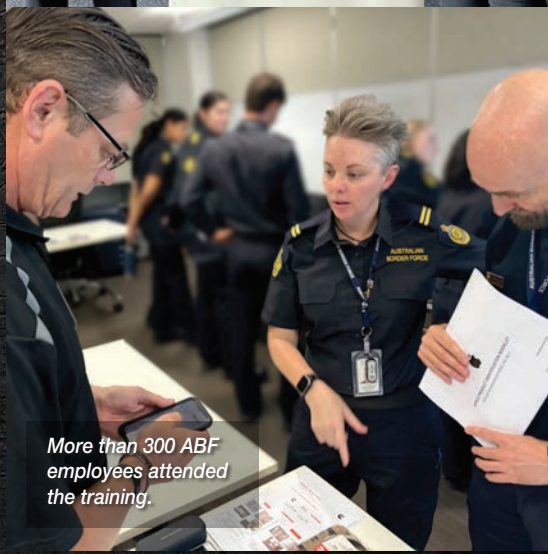
To verify the authenticity of Cummins products using the new label, visit www.cummins.com/genuinepartsauthentication. Customers can also visit a Cummins branch or authorised Cummins dealer for confirmation.

> "The magnitude of the problem in Australia has required Cummins to take a tougher stance against counterfeiters, and that means working closely with Australian Border Force."

▲ Scan here or click here for more info.

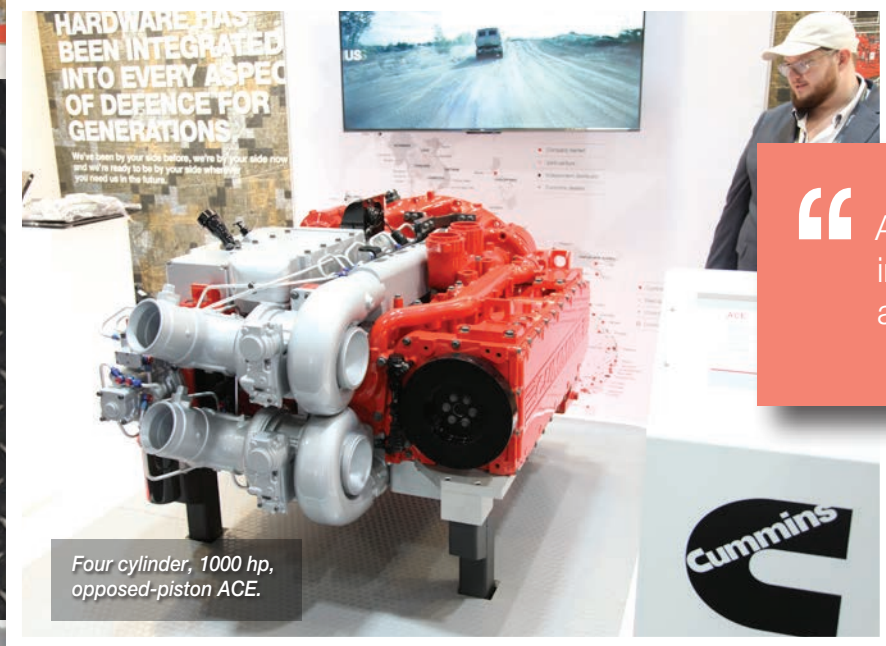
Hologram technology is now being used for Cummins parts labels.

Cummins aftermarket sales executives Attilio Labbozzetta and Laura Saville at the Sydney training.



More than 300 ABF employees attended the training.

Cummins team at unveiling of ACE, from left Andra Budiaji, Sam Jones, Ross Kunkler and Xavier Taylor.



Four cylinder, 1000 hp, opposed-piston ACE.

> "ACE is designed for both infantry fighting vehicles and main battle tanks."

▲ Scan here or click here for more info.

Cummins Asia Pacific defence manager Sam Jones (centre) with Birdon Australia MD Terri Benson (right). From left are Birdon executives Stephen Bugler and Ben Keogh.

Birdon's Landing Craft Medium design for Australian Army featuring four 1600 hp Cummins QSK38 engines and four Cummins gensets.

ACE stars at LAND FORCES 2024

The Advanced Combat Engine (ACE), developed by Cummins in collaboration with the U.S. Army, was a star drawcard at 2024 Land Forces in Melbourne, the largest defence exposition ever held in Australia.

With Ross Kunkler, Cummins Inc. commercial leader for ACE in attendance, the advanced technologies embedded in the 1000 hp, four-cylinder, opposed-piston diesel engine were a lure for technical and engineering personnel at Land Forces.

The compactness of the 14.3-litre two-stroke engine, which features dual superchargers and dual turbochargers, peak torque of 2424 lb ft at 1600-2000 rpm, high fuel efficiency and low heat rejection, provides compelling reasons for its use in the next generation of combat vehicles.

Cummins collaborated with Achates Power on the opposed-piston technology which eliminates the need for a valve train and cylinder head.

“Cummins is in discussions with nearly all combat vehicle OEMs (original equipment manufacturers) and there is strong interest in the ACE technology,” said Kunkler.

ACE is designed for both infantry fighting vehicles and main battle tanks. “When used in a hybrid configuration, ACE offers the required horsepower for main battle tank mobility,” he confirmed.

He pointed out ACE is designed with a 20,000-hour life-to-overhaul – “far in excess of current combat engine requirements”.

The fuel savings it offers are significant too – 13% compared with the current best-in-class combat engine in infantry fighting vehicles and even greater savings versus powerplants in main battle tanks.

Engineered for operation in full desert conditions using all specified military fuels, ACE has already accumulated 4000 hours of testing, some of that at the U.S. Army’s Yuma Proving Ground in Arizona, powering the Advanced Mobility Experimental Prototype.

Further endurance testing, including the NATO 400-hour test, is scheduled as part of the product introduction process.

Kunkler sees a great future for ACE. “It is a privilege working with the Cummins ACE team,” he says. “They’re a very capable and dedicated group with the sole focus of bringing to market the most advanced combat engine ever developed.”

ACE production at the Cummins Seymour Plant in Indiana is expected in late 2027.

Landing the big one

The buzz at Australian marine engineering company Birdon was its success in designing a new landing craft for the Australian Army.

The company’s Landing Craft Medium design is the basis of an 18-vessel order recently placed by the army. On board are four 1600 hp Cummins QSK38 propulsion engines and four Cummins QSB7 generator sets.

The new fleet, to be built by Austal in Henderson, Western Australia, will be capable of carrying joint forces’ current and planned armoured and protected vehicles as a combat-laden mission system in high seas states.

It was also revealed at Land Forces that Birdon is close to installing the 1000th Cummins QSB6.7 engine in bridge erection boats (BEBs) it designed – and is building – for the U.S. Army at the company’s Denver facility.

The 1000th engine, rated at 250 hp, will be installed in the 500th twin-engined BEB, a waterjet vessel used to help the army erect temporary bridges in warzones and also for disaster response.

Uncrewed ATLAS

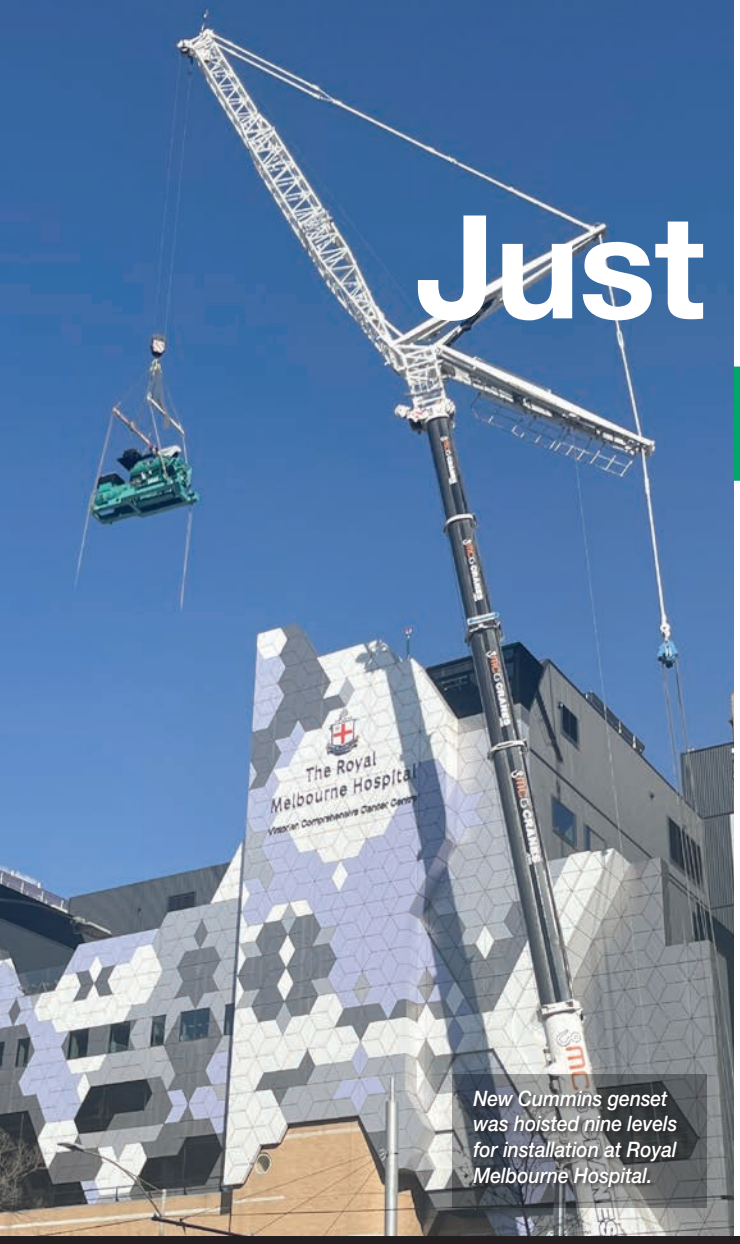
Big news at Land Forces was the unveiling of ATLAS, an uncrewed 8x8 ground combat vehicle developed by BAE Systems Australia and powered by Cummins’ ISB 6.7-litre engine rated at 185 hp.

Standing for Autonomous Tactical Light Armour System, ATLAS is designed to increase combat power while removing soldiers from harm’s way through proven autonomous technologies.

According to BAE Systems, ATLAS will operate autonomously in various combat environments, both on and off-road, complementing crewed counterparts such as infantry fighting vehicles and main battle tanks, at a lower cost.

BAE Systems’ ATLAS uncrewed 8x8 combat vehicle powered by Cummins 6.7-litre ISB.

Cummins team beside ATLAS, from left, aftermarket sales leader Sam Rickard, Asia Pacific defence business manager Sam Jones and Cummins Inc. commercial leader for ACE Ross Kunkler.



New Cummins genset was hoisted nine levels for installation at Royal Melbourne Hospital.

Just what the DOCTORS

Hospitals all over the world rely on Cummins emergency generator sets for critical power. In Australia, Cummins is currently involved in a number of major hospital and medical facility projects.

Power system reliability is non-negotiable, especially for mission critical infrastructure like hospitals.

Cummins is immersed in five hospital developments and two medical-related facilities in Melbourne, highlighting the reliability of emergency power systems and aftersales support provided by Cummins.

The projects are headed up by a Cummins power generation team comprising Davin Pryor, Russell Slocomb, Nick Rousch, Mohsen Elnashar, Dallas Gledhill, Nikhil Kathe, Kevin Baxter, Andrew Taylor and Madonna Tawfik, all with extensive experience in mission critical installations.

The new Footscray Hospital is a $1.5 billion project and is expected to reach completion in late 2025. It is the largest ever health infrastructure investment in Victoria. Four 2500 kVA Cummins generator sets and six Cummins digital master control systems are at the heart of the emergency power system.

Prepared for any emergency

Cummins emergency generator sets are at the heart of a $1 billion-plus expansion of Logan Hospital, the first stage of which has been completed and includes new intensive care, coronary care, cardiac and palliative care wards.

Logan, a suburb in the corridor between Brisbane and the Gold Coast, is one of Queensland's fastest growing regions with population set to exceed 500,000 by the mid-2030s.

Stage one of the project, costing $460 million, includes vertical expansion of 'Building 3' with four new floors, additional emergency department capacity and a further 206 beds and treatment spaces.

The emergency department is one of the busiest in the state, seeing more than 88,000 patients each year.

Cummins was contracted by Stowe Australia to upgrade the emergency power system on a design, supply, install and commission basis while also providing technical training for the hospital maintenance team.

Fully integrated system

The upgrade includes installation of a new Cummins C1675D5A generator set and DMC8000 digital master control system as well as component upgrades for the original Cummins 1500 kVA genset installed in 2012.

The 1500 kVA prime power capable units are powered by Cummins' long established KTA50 engine, a 50-litre V16 which has won plaudits for its reliability and durability in the toughest applications.

"Cummins has provided a fully integrated emergency power system incorporating

Cummins senior project manager Jose Indopia (left) runs through control system with Ean Dixon, Logan Hospital's HV electrical trade supervisor.

New Footscray Hospital has four Cummins gensets as well as six Cummins digital master control systems at the heart of its emergency power system.

ORDERED

▲ Scan here or click here for more info.

Proven experience

The hospital is being delivered as a Public Private Partnership with Cummins having proven experience in hospital-related PPP projects.

With more than 500 beds – an increase of 200 beds over the old hospital – the new hospital will treat around 15,000 additional patients each year and enable around 20,000 additional people to be seen by the emergency department.

Cummins has installed a new emergency power genset at Royal Melbourne Hospital as part of the decommissioning and removal of a co-generation plant. The 2250 kVA genset with remote radiator will be paralleled to an existing Cummins 2250 kVA set. The additional diesel generator will provide extra capacity to the site for further redundancy.

Another major hospital project is the upgrade of emergency power at the 600-bed Sunshine Hospital in St Albans. The first Cummins genset was installed at the hospital in 2018 along with a digital master control system paralleled to two existing non-Cummins gensets. A second 2250 kVA Cummins genset and digital master controller are being added this year along with a main switchboard upgrade.

American pharmaceutical and biotechnology company, Moderna, noted for producing an mRNA vaccine for COVID-19, is launching the first large-scale mRNA manufacturing facility in Australia. Located at Monash Technology Precinct in Clayton, the facility features a 2250 kVA Cummins genset for emergency power. The set is installed in an acoustic enclosure with a 21,000 litre base fuel tank and is noise level rated at 70 dBA at one-metre.

At Warringal Private Hospital, which is being transformed into a multi-tower, 290-bed facility – almost twice the size of the existing hospital – Cummins is installing an 825 kVA genset and fuel system while also being responsible for plant room acoustics and ventilation. When the development is completed the hospital will feature 14 operating theatres, a new, larger intensive care unit and emergency department.

Point Cook Community Hospital is being built as a small public hospital and is expected to open in 2026. Its emergency power system will feature a Cummins 1400 kVA Cummins genset and Cummins DMC8000 digital master control system. Cummins is responsible for plant room acoustics as well, with noise level restricted to 76 dBA at one-metre.

Cummins PowerCommand digital paralleling equipment and a Cummins digital master control system," says Jose Indopia, senior project manager for Cummins South Pacific's power generation business.

"A performance stipulation for the generators is that they are on-line within 15 seconds in the event of a power outage, with all loads connected in less than one minute."

A new 1000-litre day tank was also integrated with the existing 20,000-litre bulk diesel fuel system to supply the new generator set.

Ean Dixon, Logan Hospital's HV electrical trade supervisor, points out the generators are exercised for four hours each month at minimum 40% load.

The second stage of the Logan Hospital expansion, which will deliver 10 operating theatres and a further 112 beds, is scheduled for completion by the end of 2026.

> "A performance stipulation for the generators is that they are on-line within 15 seconds…"

New Cummins genset and digital master control system are at the heart of the upgraded emergency power system.

There's a lot about legacy in Jason Cocks' repower of his 22-year-old

A CHANGE OF

Before deciding to repower his K104 Kenworth with a Cummins X15 Euro 3 engine, Jason Cocks weighed up all the economics in what eventually became a clear-cut verdict.

"I looked at every cost aspect, including rebuilding the C15 which was the original engine in the truck," he says. "But in the end there were several factors strongly in favour of Cummins.

"The projected improvement in fuel economy was important, as was the fact I could repower with a brand new Euro 3 engine," he says. "I've calculated it will pay for itself within two years."

Operating as Jason Cocks Transport, he also knew he could count on the well-credentialed service support provided by the Cummins Wodonga (Vic) branch which carried out the repower.

Popular for repower

The X15 Euro 3 engine is becoming a popular repower option.

It shares the same base engine hardware as the X15 Euro 6 powerhouse but without SCR aftertreatment; it can only be installed in pre-2008 registered on-highway trucks.

Cocks, 37, was impressed with Cummins Wodonga's project management and the installation of the X15 rated at 600 hp/2050 lb ft. His K104 does tarped single trailer work as well as tipper B-double and roadtrain double haulage.

"The communication from the branch was great. They kept me up to date on a daily basis," he states.

The odometer in his 22-year-old Kenworth K104 Aerodyne has now spun up to 2.6 million kilometres. The KW had two previous owners, Wayne Sebire and Neil Lemin, both of whom were known to maintain their equipment well.

Jason admits to being a perfectionist, and his neatly presented K104 is evidence of that. "She's a neat old banger," he quips.

Legacy engine

While Cummins' reputation for industry-leading service support was among the key factors that swung him over to the X15, his experience with legacy Cummins engines also influenced his thinking.

"The Gen II Signature 600 was an impressive engine," he says, recalling driving stints in Western Australia in several Kenworths, hauling fuel and ammonium nitrate in a quad roadtrain combination.

Trucking has long been in the blood of the Cocks family. Jason's father, Ivan, was a career driver and so it wasn't surprising that Jason himself would end up piloting trucks – which he has done for 15 years, working for several well-known companies on the east and west coasts, before the lure of starting his own business as an owner-driver took hold.

He has a sound mechanical knowledge, a lot of which he learned from his Dad over the years and which serves him well in maintaining his own truck at his base in Barooga, a border town in the Murray region of NSW.

Fuel economy

The fuel economy improvement with the X15-powered Kenworth is every bit as good as he calculated and he expects it to improve as the engine fully beds in.

"The difference in fuel consumption between the two engines is like chalk and cheese," he says.

"With my B-double tipper combination running at 68.5 tonnes, I'm looking at 1.8 to 1.9 km/litre with the X15 compared with 1.5 km/litre with the C15."

He points out the X15 is returning 1.3 to 1.4 km/litre pulling a set of tippers as a roadtrain double at 91 tonnes, while with a tarped single trailer fuel economy is usually around the 2.4 km/litre mark.

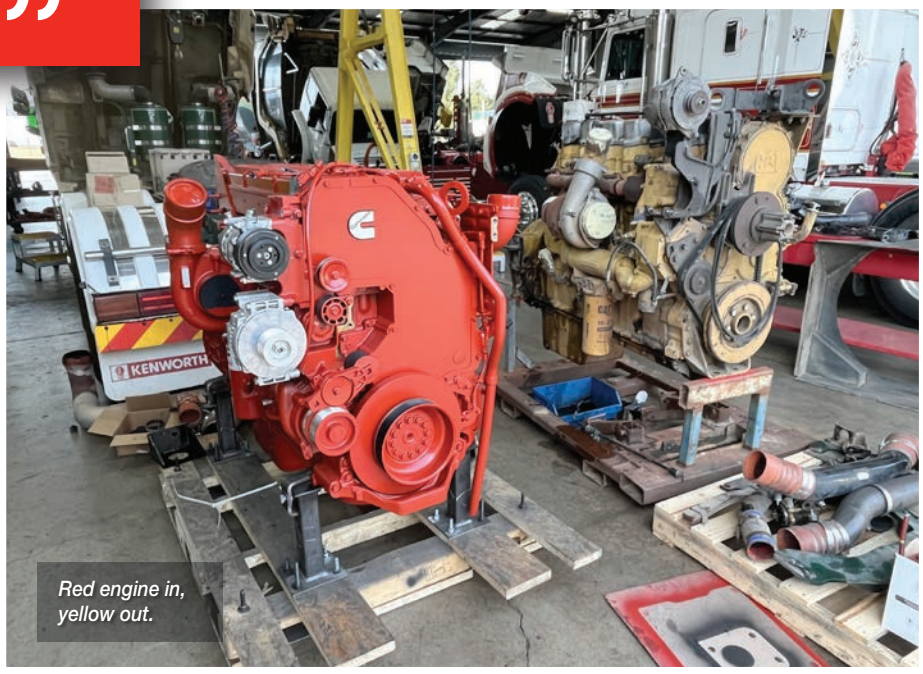
Repowered K104 does single trailer work as well as tipper B-double and roadtrain double haulage.

Kenworth.

HEART

Jason Cocks with wife Georgia and children Bill and Alice.

> “The communication from the branch was great. They kept me up to date on a daily basis.”



Red engine in, yellow out.

Pumped up for a

Twenty-two 1000 hp Cummins CustomPaks, built in Australia and equipped with Weir Multiflo high-capacity dewatering pumps, have been delivered to one of the world's largest coal mining contractors for dewatering operations in Indonesia.

The mining contractor is one of Weir's key customers for dewatering in the Asia Pacific region. Weir's dewatering equipment is manufactured and assembled for global markets at its facility at Coolum on Queensland's Sunshine Coast.

There's no glory in mine dewatering, with bulletproof diesel workhorses and pumps required for relentless 24/7 operation in deep pits, lifting thousands of litres of water a minute to the surface. It's a critical business.

Trusted workhorse

The CustomPaks are designed around Cummins' QST30 engine, a 30-litre V12 continuous duty-rated at 1000 hp, a tried and trusted workhorse in dewatering with its combination of power density, flexible rpm range and proven robustness.

While Cummins CustomPaks have earned a reputation for ruggedness, their ability to operate in intense heat is another feature. All CustomPak cooling systems provide for continuous operation in ambient temperatures of plus 50 deg. Celsius.

The CustomPaks for the Indonesian customer incorporate Weir's Multiflo MF-420(EX) HV pump which is designed for high capacity, high head and heavy-duty mine dewatering due to its robust structure and materials of construction.

The pump delivers a maximum flow rate of 340 litres/second or 1,200m3/h (at 200 metres head).

Selling value

In a price-sensitive market, the ability of an OEM to sell the proven benefits of its dewatering systems becomes a critical factor.

"We sell value," says Dean Little, Weir's Asia Pacific sales manager for dewatering. "Up front price isn't everything. Total cost of ownership is the most important thing for end users and that's where product quality is the key.

"Weir has the most robust wet-end product for dewatering and that's decisive for a market like Indonesia where you want 100 percent reliability, not on-going maintenance issues."

He points out that Weir's focus on materials development through its laboratory and foundry in Sydney is one of the keys to the high efficiency and wear life of its dewatering equipment.

Dewatering pumps are just one part of a wide range of premium equipment Weir engineers, manufactures, sells and services as a global player in the mining and aggregate industries.

Weir claims to have the most robust wet-end product for dewatering.

dewatering mission

One of the 22 Cummins-powered dewatering pumps built for the Indonesian mining contractor.

> “We’re discussing with our OEM partners like Cummins the technology options that are available to us for the energy transition.”

Ready for delivery to the Indonesian customer.

Headquartered in Glasgow, Scotland, the company was founded in 1871 by two brothers who produced numerous groundbreaking innovations in pumping equipment, primarily for the Clyde shipyards and the steamships built there.

Decarbonisation

Today, as decarbonisation gathers momentum in the mining industry, Weir is actively implementing measures to reduce the environmental footprint of its equipment and operations.

“We’re discussing with our OEM partners like Cummins the technology options that are available to us for the energy transition,” says Dean Little.

“Whether the power source evolves from advanced internal combustion and alternative fuels to hydrogen fuel cells or another technology is a step-change we’ll need to be prepared for.”

▲ Scan here or click here for more info.

Weir’s Asia Pacific sales manager for dewatering, Dean Little (right) with Cummins sales executive Justin Kelty.

Culture, care...

Craig and Sharee Scholz with, from left, Cummins regional branch manager Jackson Meredith and Cummins Wodonga service manager Kaine Norman.

Cummins 'Iron Cross' logo (1953-1975) features on the bonnet of Kenworth SAR Legend.

> "We're close to the Cummins branch in Wodonga and the service they provide is unmatched."

Among the immaculate Scholz fleet of 23 Kenworths are a T908, SAR Legend and T600.

and Cummins

Pride in everything is everything at Scholz Bulk Haulage (SBH), a family business based in Wodonga, NSW, which is celebrating its 25th anniversary in 2024.

SBH was established by brothers Wayne and Craig Scholz at Pleasant Hills, a small town in the Riverina district of NSW, in 1999. They actually purchased their first truck several years earlier, a 1979 Kenworth K125 and a 1984 McGrath flat-top trailer to cart hay. An Alcan tipper was also bought to haul lime, gypsum and grain to Melbourne.

Today, the company is owned and managed by Craig and wife Sharee and has since relocated to a base in Wodonga which is now home to 23 Kenworths and 52 trailers.

SBH specialises in bulk commodity work with A-double, B-double and truck-and-dog combinations hauling the likes of fertiliser, potatoes, grains for stock feed companies, and canola and monola seeds.

A 5000-tonne capacity bulk grain storage shed is located on the Scholz family farm at Pleasant Hills, allowing quick and efficient turnaround for farmers in the region. This grain is then sold to direct buyers in the Melbourne and Gippsland regions.

Immaculate fleet

Craig and Sharee's passion for trucking is obvious in the premium equipment they operate – variants of the Kenworth-Cummins recipe – and the exceptional condition of their fleet.

A T908 adorned with distinctive graphics looks in showroom condition despite the fact it is 15 years old with more than three million kilometres on the clock.

The new flagship in the fleet is a Legend SAR, equipped – like all recently purchased SBH Kenworths – with Icepak sleeper cab air conditioning, fridge, microwave oven, diesel heater and TV.

"We're passionate about what we do here," says Craig, when I visit Scholz HQ. "Culture is a big thing in our business. Everyone on our team is valued not only for what they do but for who they are.

"As the saying goes, we treat people the way we want to be treated.

"The boys look after the gear really well," he adds with a definite tone of pride. "We'll park a truck until we get the right driver and we do everything in our power to minimise risk."

Cummins support

While the subject of decarbonisation is lined with questions, Craig says he is looking to the future positively as Cummins makes clear its plans for further advancements in internal combustion technology to meet increasingly stringent emissions standards.

The next-gen 15-litre Cummins, the X15D, also has Craig's attention with its projected peak outputs of 660 hp and 2360 lb ft. "Our standard X15 rating is 600 hp and 2050 lb ft torque but we'd like more horsepower in some of our applications," he states.

Cummins' support is a key reason for the rock-solid relationship between the two companies.

"We bought our first Cummins, an N14-400, in the early 2000s to repower our 1979 Kenworth," Craig recalls. "We decided to stick with Cummins because we thought the company would be around for a long time which looks certain to be the case.

"We're also close to the Cummins branch in Wodonga and the service they provide is unmatched. Kaine Norman and his crew in the workshop do an incredible job."

With the SBH business continuing to expand, Craig and Sharee thought it would be worthwhile to get a business coach involved to ensure their strategic planning is on the right pathway.

"As we are picking up more work with corporate clients, we want to make sure we are delivering the highest levels of certainty and satisfaction," says Craig.

"We've built our business on communicating with our customers honestly and providing good old fashion quality service and loyalty."

There's obviously a lot of pride in what has been achieved at SBH, a business built on sensible goals and driven by a team of loyal employees who are acknowledged as being the key to success of this quietly achieving company.

Photo: Kaine Norman

The new FORCE in DATA CENTRE

Cummins' Centum Force display was a highlight at Data Centre World Asia, held in Singapore, the region's largest data centre event.

Part of the Tech Week Singapore show, the event attracted over 26,000 attendees, including more than 3,000 C-suite executives and decision-makers.

The show featured 300 global data centre technology and solution providers, along with nearly 200 international speakers and thought leaders.

Cutting-edge solutions

At the event, Cummins' large booth was a focal point, highlighting the latest power solutions for data centres. A standout was Centum Force, Cummins' containerized, fully integrated power solution.

This innovative product sets new standards in footprint optimization, layout flexibility, ease of transportation, and overall robustness and reliability.

Featuring Cummins' latest in-cylinder combustion technology, the Centum units also deliver a step-change improvement in power density, reliability, sustainability and low emissions.

Centum Force is designed to meet the demanding needs of modern data centres. It offers:

- **Footprint Optimization:** Maximizes space efficiency, allowing for stackable, more flexible data centre layouts.
- **Ease of Transportation:** The containerised design simplifies logistics, making it easier to transport and deploy.
- **Rapid Installation and Commissioning:** Quick connection sockets and compact design enable fast commissioning and easy service access.
- **Robustness and Reliability:** Built to withstand harsh conditions, ensuring continuous operation and minimal downtime.

Additionally, Cummins took the stage at the Efficiency & Sustainability Theatre, showcasing innovative solutions and the company's Destination Zero strategy, which aims to reduce carbon emissions and promote sustainability in data centre operations.

Legacy of excellence

Globally, Cummins is immersed in the data centre industry, having long-standing and strategic partnerships with the key players in what is one of the fastest-growing industries in the history of business.

In fact, Cummins boasts over 30+ GW of power installed in data centres across 52 countries, serving over 500 data centre customers, supported by 10 global manufacturing facilities.

Technological innovation, brand reputation and credibility are core to Cummins' history, and they ensure that the 105-year-old company is a trusted partner in the data centre industry.

For more detailed information on the Centum Force solution, scan the QR code.

▲ Scan here or click here for more info.

“Featuring Cummins’ latest in-cylinder combustion technology, the Centum units deliver a step-change improvement in power density, reliability, sustainability and low emissions.”

Cummins team at the event.

POWER

Cummins’ Lim Keow Teck (holding microphone) and Bhargava Srikantha were speakers at the Efficiency & Sustainability Theatre with their presentation titled ‘Evolving Onsite Power Technologies for Sustainable Data Centres’.


Cummins Asia Pacific executive managing director Annie Chu was with colleagues from China, Sam Yan (on her left), Jason Feng (her right), and Aaron Wang (with back to camera).

CLEAN TECH for top tier

Tranzliquid Logistics is one of New Zealand's top tier fleets, a company that has forged a reputation for its immaculate equipment, exemplary safety record and great team culture.

Tranzliquid has been operating the sole Euro 6 Cummins X15 engine in New Zealand since 2021 which, at the time of writing in September, had just exceeded 600,000 km.

Importantly, it has Greg Pert's stamp of approval as more stringent emission regulations loom on the horizon.

In Australia, around 350 Euro 6 Cummins X15 engines are running in the lead up to the introduction of Euro 6 – or ADR80/4 – from November 1, 2025.

Greg Pert founded Tranzliquid in Mt Maunganui in 2000 with partner Jackie Carroll following a career as a driver and independent operator in the tanker industry, transporting non-hazardous and dangerous goods products throughout New Zealand.

His formative years in the trucking industry were with Freightways Bulk Services where he started as a driver in 1977 at the age of 18 and went on to become an independent operator with the company, hauling a vast array of liquid products from chocolate to fruit juice, to molasses, to petroleum.

> "We get very good support from Jade Whiteman and the team at Cummins."

Today, Tranzliquid has 50 Cummins X15-powered Kenworths – mainly T610s and K200s – which operate throughout the North Island and South Island, hauling fuel and liquid bitumen for blue chip customers, while a small number of trucks also do container deliveries.

Performance rating

The Euro 6 Cummins is available in two distinct series – Efficiency and Performance – and both are EGR-free and have a standard wastegate turbocharger. Single module aftertreatment technology integrates both the diesel particulate filter (DPF) and AdBlue SCR system.

Tranzliquid's Euro 6 engine – the flagship Performance version rated at 625 hp with peak torque of 2050 lb ft – is installed in a T610 Kenworth and stirred by Eaton's 18-speed RTLO20918 box.

With the Meritor rear axle ratio of 4.10, the 15-litre Cummins is downsped to optimise fuel economy, turning over at 1410 rpm at the 90 km/h speed limit in New Zealand. At this point in the rpm range, peak torque of 2050 lb ft is on tap, all the way back to 1000 rpm, providing the grunt to meet both driver and trip time expectations.

"Southpac Trucks (New Zealand's Kenworth dealer) asked us if we wanted to be part of a Euro 6 trial and we thought it would be a good idea to be involved due to the benefits that would play out over the longer term," says Greg Pert.

"After 600,000 kilometres we now have a good working knowledge of the Euro 6 Cummins which will be beneficial as the technology becomes more widely adopted and emission requirements are tightened."

Fuel efficiency

Performance and fuel efficiency of the Euro 6 X15 are in line with expectations at Tranzliquid which is regularly double-shifting the two-trailer combination seven days a week.

A recent ECM download showed overall fuel consumption at 2.01 km/litre while time spent in top gear was 45%. "We're operating in some tough terrain in the North Island which eats into the fuel economy," Pert points out. "Our fully loaded running is generally around the 70 to 80 percent mark."

The download also showed AdBlue being injected into the exhaust flow at a rate of 8% of fuel burn.

Apart from a couple of minor sensor issues, the Euro 6 engine has basically been trouble-free. The DPF was changed out at 600,000 km in line with Cummins' recommended maintenance schedule.

Cummins' support is a key factor in keeping the Tranzliquid fleet running at the required utilisation levels.

Cummins Euro 6-powered T610 Kenworth is downsped to optimise fuel economy.

Photos courtesy of NZ Truck & Driver magazine.

▲ Scan here or click here for more info.

NZ FLEET

Euro 6 Cummins is 'Performance' version rated at 625 hp.

"We get very good support from Jade Whiteman and the team at Cummins," Pert says. "We don't have to ask for support, we're offered support. Cummins understands our needs."

Fuel agnostic

Pert is showing keen interest in Cummins' industry-first fuel agnostic platform of advanced diesel, hydrogen and natural gas internal combustion engines.

"The diesel internal combustion engine will be around for a long time yet for heavy haulage, as confirmed by Cummins, but the hydrogen combustion engine could definitely be of interest to us for specific applications in the future," he says.

"One of our customers, Waitomo Group, is establishing a green hydrogen refuelling network for heavy vehicles and has already opened three sites in the North Island."

One thing that irks Pert is governments' lack of recognition for the road transport industry's contribution to reduced environmental impact. "We are moving much bigger tonnages today while using less fuel and significantly reducing atmospheric pollutants," he states.

Not surprisingly, risk management is a critical factor in the safety record of the Tranzliquid fleet. "We give our drivers all the tools to help them do their job efficiently and safely," comments Pert.

Both trailers behind the Euro 6 prime mover are disc-braked while all Tranzliquid Kenworths have the full suite of electronic/active safety features such as electronic stability control, adaptive cruise control with engine braking, collision mitigation system with autonomous emergency braking and lane departure warning.

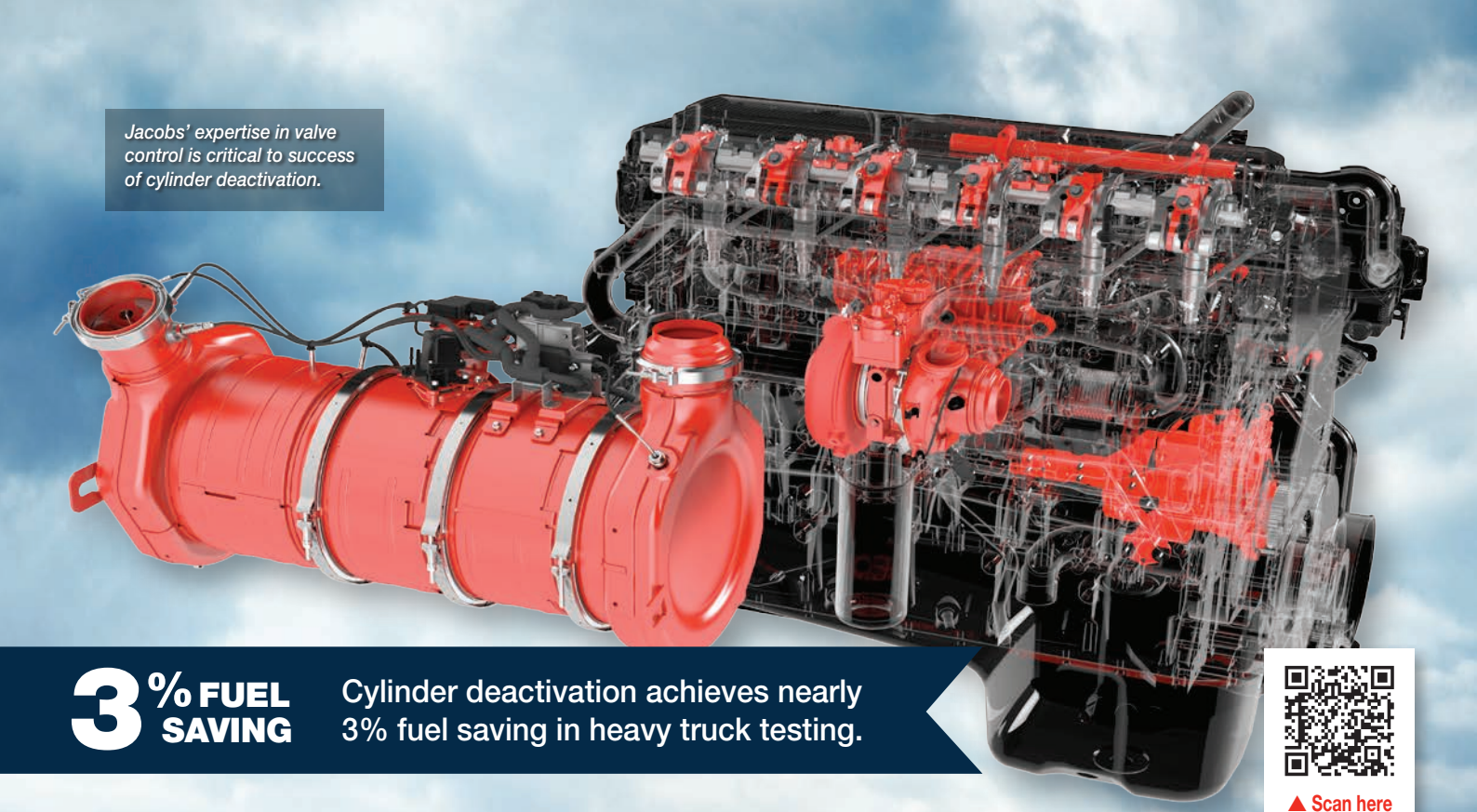
There's great emphasis at Tranzliquid on team culture which revolves around core values such as accountability, delivering on promise, having the right attitude and treating people with dignity and respect.

Greg Pert says they're constantly looking at ways to improve the way they do business.

"Tranzliquid prefers to be a leader in the industry, not a follower," he says.

> "After 600,000 kilometres we now have a good working knowledge of the Euro 6 Cummins."

Greg Pert (left) with partner Jackie Carroll and MD Gareth Pert.



Jacobs' expertise in valve control is critical to success of cylinder deactivation.

3% FUEL SAVING Cylinder deactivation achieves nearly 3% fuel saving in heavy truck testing.

▲ Scan here or click here for more info.

Jake technology but without the 'bark'

Nothing screams raw diesel power like the bark of a Jake Brake.

The iconic compression engine brake was introduced by Jacobs in 1961 after being invented by Clessie Cummins, founder of Cummins Inc.

Clessie's plan was reportedly for the valve-opening device to be produced by the company he started in 1919 but in the end it was taken up by Jacobs Vehicle Systems.

Fast forward to 2022 and Cummins announced it had acquired Jacobs as an investment in key technologies such as engine braking and cylinder deactivation (CDA) aimed at optimising fuel economy and reducing emissions.

Fuel savings

Now under the Cummins Valvetrain Technologies banner, Jacobs CDA technology has achieved fuel savings of 2.76% in the first SAE J1321 standardised fuel consumption testing of CDA, using fully loaded comparison trucks on a highway route in North America.

Similar tests on a distribution route returned fuel savings of 2%.

CDA converts a six-cylinder diesel engine into one that uses just four or fewer cylinders under the right operating conditions to not only reduce fuel consumption but also to better maintain the optimal operating temperatures required to operate the exhaust aftertreatment in low-load and start-up conditions.

Impending ultra-stringent emissions legislation in North America (EPA 27) and Europe (Euro 7), which covers both NOx and CO2 emissions, is pushing engine designers harder than ever before in the search for greater efficiencies.

Working from a 2019 baseline, the EU (European Union) will require a vehicle-by-vehicle 45% reduction in CO2 by 2030, a 56% reduction by 2035 and a 90% reduction by 2040.

Valve control

The CDA system uses Jacobs' expertise in valve control to automatically shut down selected cylinders in low engine load conditions by leaving their inlet and exhaust valves closed throughout the four-stroke cycle, while their fuel injectors are deactivated. This reduces fuel consumption.

When additional engine braking is required, the same components that deactivate the cylinders are repurposed to provide vehicle retardation using the latest 1.5-stroke High Power Density version of the Jake Brake compression release engine brake.

Toxic emissions are also reduced because CDA optimises the efficiency of exhaust aftertreatment systems through thermal management. That's because CDA increases exhaust temperatures at partial loads.

The tests were conducted using a 2018 International LT 6x4 prime mover with a 13-litre Navistar 450 hp diesel engine and Eaton Endurant 12-speed overdrive AMT gearbox.

Cummins Valvetrain Technologies has deployed CDA systems into over 20 development programs, with engines ranging from 2.0 litres to 16 litres. A number of programs have moved into the vehicle testing stage.

As an 'in-engine' technology, CDA can add a small cost to engine production, but that cost can be mitigated by reducing the size and complexity of the aftertreatment system or eliminating the need for other technologies that reduce emissions.

Cummins PNG general manager David Leach (centre) with Cummins technicians alongside a KTA50 engine rebuild.

The power of certainty:

Cummins' 50 years in PNG

While there are challenges doing business in Papua New Guinea, Cummins has maintained a strong presence in the country for more than 50 years.

The company was represented in PNG by Blackwood Hodge from the mid-1960s until 1984, when the Cummins Diesel Sales & Service franchise was sold to Cummins Engine Co (Cummins Inc.).

Today, Cummins employs 45 nationals in PNG who work out of two locations, Port Moresby and Lae, and most are involved in workshop and field service technical roles.

"It's probably the most challenging assignment I've ever taken on but it's also the most rewarding in terms of employee development and getting these employees to take ownership of the business," says David Leach, general manager of Cummins PNG.

"Currently, I'm the only expat in Cummins PNG. For a long time, all key roles within the PNG business were in the hands of expats. I can see one day that our work in building skills, loyalty and dedication within our workforce will see a PNG national as general manager.

"We already have two nationals managing our Port Moresby and Lae branches."

Dave Leach has worked for Cummins for over 27 years, starting in the UK at the international training school in Daventry where he led training on Cummins' high horsepower engines – QSK45, QSK60 and QSK78.

He was also involved in establishing an engine and power generation distributorship in Ghana, Africa, before taking on the role of senior application engineering manager for Cummins' power generation business in Europe. He moved to Australia in 2018 to become branch manager of Cummins Emerald in Queensland which has a strong mining focus.

Leach points out that Cummins is the only global company involved in the mining industry in PNG that owns and runs its branches. "One of the key reasons our customers prefer using our product is because they're dealing directly with Cummins, not through a dealership," he says.

Developing apprentices is another key to building a sustainable business, and Cummins PNG currently has six apprentices. "We have a lot of applications for our apprenticeships because Cummins is recognised in the community as being a good employer and good trainer," says Leach.

It's not just technical training that is important at Cummins PNG but also training in corporate values. "We want Cummins' values of integrity, teamwork, diversity and inclusion, caring and excellence to be ever-present in the minds of our team," he adds.

"Safety training is also crucial to the success of our business. Our 'safety first' culture is reflected in our record of zero incidents over the last two years.

"It's all about creating the right work environment and I think we're on a good journey to achieving that."

Cummins PNG's business procedures have seen a dramatic transformation in recent years with support from Cummins Asia Pacific's functional excellence leaders maintaining the company's competitive edge in a volatile, diverse market.

PNG is a resource-rich country which sees a large number of high horsepower Cummins engines involved in mining operations.

Cummins has had a presence at the iconic Ok Tedi copper and gold mine for over 30 years due to product reliability and service support. Today six Cat excavators, each with dual Cummins KTTA38 engines, are the backbone of the operation and supported with parts and service from Cummins Lae.

The first of 21 new haul trucks from Chinese manufacturer XCMG, powered by Tier 2 Cummins QSK60 MCRS engines, will go into service at OK Tedi in September.

K92 Mining, a Canada-based gold producer, has 21 Cummins Powerboxes at its Kainantu Gold Mine in Eastern Highlands Province. These Powerboxes provide a fully integrated power system with the generator installed in a standard 20ft ISO container. The 1250 kVA gensets are powered by Cummins' long established KTA50 engine. Two Cummins technicians are dedicated to onsite support at the K92 mine.

Cummins also supports Lihir Gold Mine with its fleet of QSK23 and KTA38 engines, while Porgera Joint Venture and Wafi-Golpu Joint Venture are other projects that use Cummins power in their gold exploration and mining operations.

A new focus for Cummins PNG is 20 Cummins X15 Euro 5 engines, powering T659 Kenworths, which have recently gone into service with Mapai Transport, Traisa Transport, Zenag Island Products and IPI Transport, all involved in logistics haulage for the mining sector.

Twenty-one XCMG haul trucks with Cummins QSK60 power will enter service at OK Tedi.

Cummins service support is rated highly by Batchfire.

Batchfire: Cool and collected with Cummins

Cummins' Australian-made PGXL coolants are widely accepted in the mining industry, providing superior protection across all diesel engine brands.

In supporting remote mine operations, Cummins provides a well-established bulk coolant delivery service, eliminating the need for miners to manage their coolant inventory.

Cummins takes care of all the logistics, delivering the coolant directly to the minesite. The PGXL production facility in Melbourne has the capacity to deliver 30 million litres of coolant per annum, so supply is readily available.

Within the PGXL product line-up, Cummins offers two coolant technologies, PGXL HD and PGXL Vital. Both are propylene glycol-based coolants which provide excellent heat transfer while being a safer option (than ethylene glycol) for product handling and the environment in that they are low toxicity and biodegradable.

Both products are life-of-engine coolants and each offers its own set of benefits in engine and radiator protection to suit the wide-ranging operational requirements of customers.

Batchfire experience

Queensland miner Batchfire Resources has been using PGXL HD coolant since 2018, with bulk deliveries being made to the Callide site by one of the country's most reputable fleets – Emerald Carrying Company.

The PGXL HD coolant is used across all mobile equipment at the mine which encompasses more than 130 pieces of equipment, including Cummins and Caterpillar-powered machinery.

The open-cut Callide Mine, which has been operating since 1944, has grown from 7 Mtpa to around 10 to 11 Mtpa since Batchfire Resources acquired it in late 2016.

The energy coal produced at Callide Mine – one of the cleanest burning low-sulphur coals in the Asia Pacific region – plays a key role in generating around 15 to 18 per cent of Queensland's baseload electricity needs each year.

Classed as an extended life coolant, PGXL HD has proven this classification valid at Callide Mine.

"It's an easy coolant to deal with," says Daniel Boal, Batchfire's Superintendent - Maintenance and Engineering for mobile equipment.

"If everything goes well and we don't have an issue such as a blown coolant hose, we're looking at coolant life of up to 30,000 hours depending on duty cycle and when engine changeout occurs."

With its latest haul trucks – Komatsu 930-5 units with Cummins Tier 4 QSK60 MCRS engines rated at 2700 hp – coolant/engine changeout is at 30,000 hours, while the Komatsu PC7000 excavators with dual 1675 hp Cummins QSK50 MCRS engines have a coolant/engine changeout target of 20,000 hours.

No issues

"We haven't had any coolant-related issues across the different engine brands we're operating," states Daniel Boal, pointing out that engine teardowns at Callide have shown PGXL HD to provide the required protection against cavitation (liner pitting), corrosion and scale formation.

▲ Scan here or click here for more info.

Batchfire's Superintendent - Maintenance & Engineering for mobile equipment, Daniel Boal (left) with Cummins product support representative Sam van Leeuwen (centre) and Cummins Emerald branch manager Greg Evans.

One of Australia's most respected fleets, Emerald Carrying Company, delivers the bulk coolant to Callide Mine.

"We've found it important to use the one coolant brand across all machinery and to stay with that brand to achieve consistency of water pump seal life and coolant performance in general," he adds.

Coolant samples are taken at each service at Callide Mine, which is every 500 hours for the 320-tonne payload Komatsu 930E trucks, to ensure that glycol concentration and supplemental coolant additives (SCAs) are at the required levels.

Cummins service support at Callide Mine – headed up by product support representative Sam van Leeuwen, who works out of the Cummins Emerald branch – also underpins the use of the Cummins coolant.

Daniel Boal rates Cummins' support highly. "Nothing is going to be perfect, but Cummins' support is as good as you can get, it makes a big difference," he states.

Batchfire's Superintendent - Supply and Contracts, Janelle McNamara, confirms there have been no issues with delivery of the Cummins coolant directly to the mine site.

Crucial role

Cooling systems play a crucial role in maintaining the productivity of mining equipment and as diesel engine technology has evolved and improved over the years, so too has diesel engine coolant.

Cummins PGXL extended life coolants are carefully formulated mixtures containing an advanced system of additives for enhanced performance. These additives include corrosion inhibitors, anti-foaming agents and lubricants.

PGXL coolant is popular in the mining industry because it is also silicone safe. This means it doesn't contain 2-ethylhexanoic acid (2-EH), which can cause silicone hoses, seals and gaskets to lose their flexibility and elasticity, ultimately leading to coolant leaks.

In fact, PGXL coolants are compatible with the various elastomeric seals, gaskets, plastics and metal alloys used by heavy-duty engine manufacturers.

The PGXL range is fully supported by an industry-leading non pro-rata warranty and can be used across a range of original equipment brands, such as Cummins, Caterpillar, Detroit Diesel, mtu, John Deere, Mercedes, Volvo and Waukesha.

> "We haven't had any coolant-related issues across the different engine brands we're operating."

"PGXL products have had decades of performance in both on-highway and off-highway heavy-duty applications and exceed the requirements of internationally recognised ASTM standards for heavy-duty coolant," says Kyle Miller, aftermarket business development manager for Cummins Asia Pacific.

"At the end of the day, we want customers operational for longer with reduced downtime, but without compromising safety."

Cummins zeroes in on integrated powe

When Clessie Cummins was applying all his genius to commercialise the diesel engine in the early 1900s, did he ever envisage what his beloved company would become – a company that would dramatically reinvent itself in just a short time as an advocate for climate action?

Cummins is now a genuine powertrain company.

Who would have thought that the iconic diesel engine company would one day be touting hydrogen internal combustion engines and hydrogen fuel cell engines?

Well, it has happened with Cummins now investing billions of dollars in alternative fuel and powertrain technologies as part of its strategy called Destination Zero to go further, faster to reduce the greenhouse gas and air quality impacts of its products.

Significantly, Cummins has transformed itself in recent years to become a genuine powertrain company, a move enhanced by a number of strategic partnerships and acquisitions, including that of leading axle and brake supplier Meritor.

In fact, that acquisition has positioned Cummins as one of the few companies able to provide integrated powertrain solutions across both internal combustion and electric drivetrains.

The Meritor-developed portfolio of eAxles which have been incorporated alongside other zero emission technologies under a new business unit and brand – Accelera by Cummins – are a critical integration point within hybrid and electric drivetrains and are essential to delivering market-leading solutions to customers.

Automated transmissions

In addition to the Meritor acquisition, Cummins has an established joint venture with Eaton under the banner Eaton Cummins Automated Transmission Technologies.

The Endurant XD Pro 18-speed transmission is a product of the joint venture, a game-changer in terms of the sophisticated communications system between the engine and transmission software.

"The key benefit of the integrated powertrain is improved fuel economy," says Scott Alexander, manager of Cummins' on-highway sales and support in the South Pacific region.

"There's only so much you can do with the engine by itself but when the engine, transmission and diff ratio are precisely matched the real benefits emerge."

He points out that the 18-speed Eaton Cummins Endurant automated transmission is a critical part of the integrated powertrain's ability to deliver fuel economy gains.

"Driver feedback on the Endurant has been overwhelmingly positive," he states.

"One of our customers put their best driver in a new truck with an Endurant transmission and the driver commented that he would have made 95 per cent of the shifts that the transmission made."

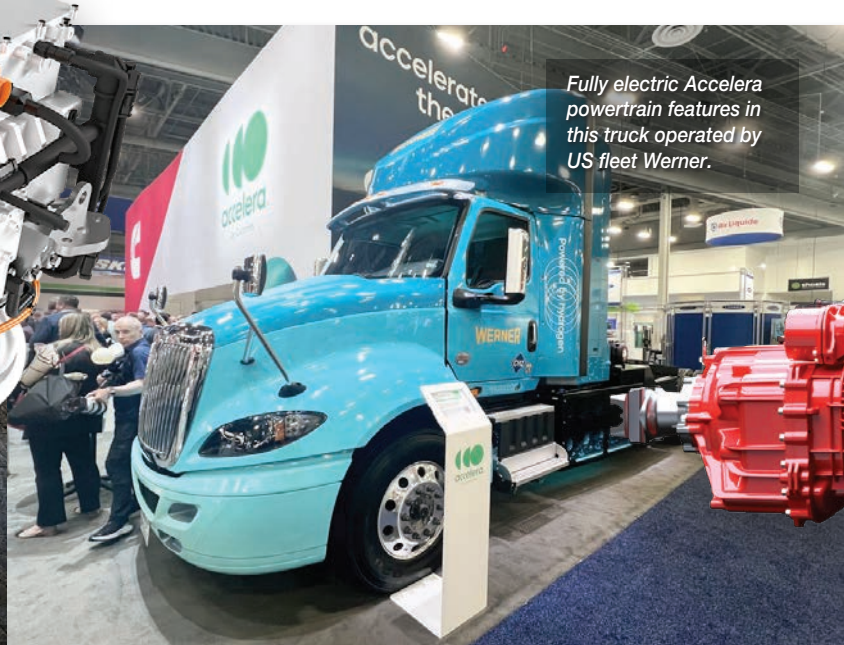
Not to be forgotten in the efficiency equation – and an important part of the integrated drivetrain – is the Meritor MT21-165 tandem drive axle which was recently updated with two different specs for Australian linehaul and vocational applications.

In the linehaul version, the oil pump has been engineered out of the tandem axle which provides linehaul customers with a fuel economy improvement of up to 1.5%.

The vocational version retains an integrated pump enabling greater longevity where a broader and more demanding application is required.

While the existing portfolio of traditional axle, brake and drivelines from Meritor are highly complementary, enabling Cummins to offer a complete conventional drivetrain, the eAxle is no doubt where the future lies in terms of full electric integration.

Werner truck features dual Accelera 150 kW hydrogen fuel cell engines.



Fully electric Accelera powertrain features in this truck operated by US fleet Werner.

rtrains

> “Driver feedback on the Endurant 18-speed transmission is overwhelmingly positive.”

Fully electric powertrain

At the recent Advanced Clean Transportation (ACT) Expo in Las Vegas, Accelera by Cummins displayed a full line-up of differing technologies, including the eAxle. A fully electric Accelera powertrain in an International RH Class 8 truck was a highlight of the expo.

▲ Scan here or click here for more info.

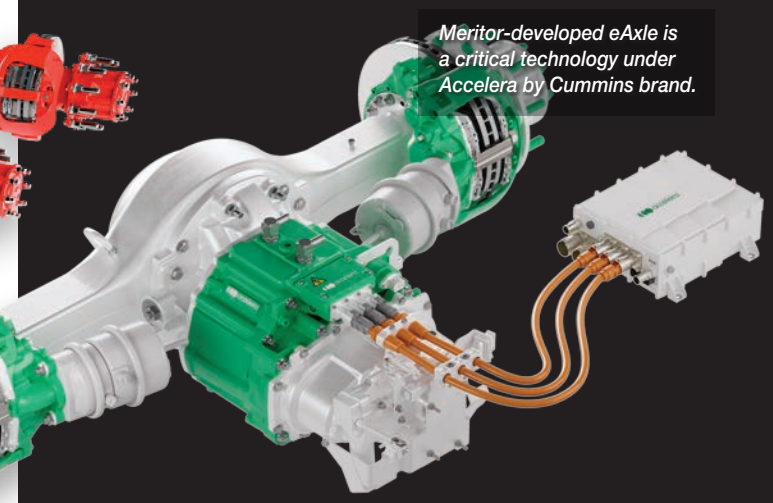
The truck, for the Werner Enterprises fleet, features two Accelera FCE150 hydrogen fuel cell engines and an Accelera electric powertrain in the form of the 14Xe eAxle, basically a 250 kW electric motor with a 3-speed twin-countershaft or a 2-speed planetary transmission engineered and integrated into the axle assembly.

Werner, a premium US transportation and logistics provider, said the initiative aligned perfectly with its commitment to reducing its carbon footprint by 55% by 2035.

Two years after Cummins’ acquisition of Meritor, the traditional Meritor products have also now been integrated under a new business unit called Cummins Drivetrain and Braking Systems.

However, in recognition of the reputation Meritor had in the traditional powertrain market, the Meritor name will continue to live on in the axle naming as well as in the casting, stamping and packaging of the axle and brake products sold by this business today.

Euro 6 X15 coupled to Eaton Endurant XD Pro 18-speed transmission.



Meritor-developed eAxle is a critical technology under Accelera by Cummins brand.

Recent advances in electric vehicle technology have spawned terms that are unfamiliar to the uninitiated. When Cummins acquired Meritor it may have been the first time many people heard the term eAxle.

What’s an eAxle?

It may seem that the most logical way to convert a conventional diesel powertrain to electric is to replace the internal combustion engine with an electric motor connected to a battery.

While this can be done it’s not the most efficient way to make use of the new power source.

The battery must be accommodated on the vehicle along with the transmission, driveshaft and conventional axles, all of which restrict where the battery can be mounted. In addition, there is a considerable weight penalty as the battery and electric motor combined weigh more than the engine they replace.

This is where the ingenuity of the eAxle comes into its own.

By taking the electric motor and transmission and integrating them on the eAxle, the driveshaft is eliminated and all the space normally taken up by the internal combustion engine, transmission and driveshaft on a conventional vehicle is free to be used for cargo or battery space.

In addition, the controllability of an electric motor – which can be reversed, stopped and started at will – combined with the high torque available from the motor at very low speeds – means that a much less complex transmission is needed.

An eAxle transmission will typically only have two or three gears versus the 12 or 18 gears required in a conventional heavy-duty transmission. In fact, in some eAxle applications the transmission can be eliminated entirely.

On top of this, the use of the electric motor to provide regenerative braking (using the motor as a generator to slow the vehicle down) means the size and therefore the weight of the brakes on an eAxle can also be reduced.

While the changes required to engineer an eAxle into a conventional chassis are more involved than simply replacing the internal combustion engine with an electric motor, it’s clear that in the long run the space and weight savings of an eAxle will allow for a more efficient vehicle in converting the battery energy into kilometres travelled.

Cummins is a proven supplier to New Zealand's TR Group, a world-rated heavy truck lease and rental company which is expanding in Australia.

TAKING ON THE WORLD

TR is excited about Cummins' 15-litre fuel agnostic platform.

> "The cornerstone of our business is ensuring that our customers have best experience."

TR's national maintenance manager Lyndon Maffey (left) with national sales manager Shane O'Grady.

> One of our key differentiators is the strength of our relationships with suppliers like Cummins.

A special TR Kenworth commemorating the ANZACs.

New Zealand company TR Group is acknowledged as a world-class heavy transport lease and rental company with a strong vision and culture throughout the organisation.

Andrew Carpenter formed the company in 1992 as a 21-year-old, when he and his father, New Zealand transport industry icon Ron Carpenter, bought a small trailer hire business from CHEP.

The fleet comprised 65 used trailers, none being under eight years old.

Thirty-two years later, TR Group has some 9000 commercial trucks and trailers across New Zealand and Australia, a fleet that will no doubt grow as the Australian arm of the business builds on the company's reputation as a quality provider of customer focused lease and rental solutions.

"We don't get distracted by cars, utes, vans or machinery. We're a specialist heavy vehicle rental and lease company," says TR's national sales manager Shane O'Grady.

Targeting Australia

TR made its move to Australia in 2019, acquiring Semi Skel Hire in Melbourne, a business with 1200 trailers, mainly skeletal units. Perth Axle Truck & Trailer Rental was acquired in 2022, while Southern Cross Rentals in Adelaide was brought into the group in 2023.

Today, TR has a fleet of around 600 trucks and 1800 trailers in Australia, managed by branches in Brisbane, Newcastle, Sydney, Melbourne, Adelaide and Perth which offer fully maintained operating lease options. High profile customers include Qube, Australia Post, Toll, K&S Freighters, Coles and Woolworths.

In New Zealand, TR has created enduring relationships with key customers and suppliers since its modest beginnings in 1992, and today boasts the country's largest commercial vehicle fleet with 4500 trucks and 2000 trailers supported by 10 branches.

TR's comprehensive service offering has one clear focus – ensuring that its vehicles are always ready for work and backed by 24/7 support.

Leasing sees a specialist TR team involved. "We develop the spec, buy the truck on behalf of the customer, have it painted in the customer's fleet livery, and take care of the maintenance all the way through," says O'Grady.

Specialist driver training is provided with each new leased vehicle, as is downtime cover as a contingency. TR's rental fleet can also provide backup support as well as extra capacity to cope with seasonal spikes.

"The cornerstone of our business is ensuring that our customers have best experience, that we are helping them be at their best," says O'Grady. "Maximising uptime and minimising disruption is the most important thing we're selling."

TR's relationship with suppliers is critical to achieving this goal. "One of our key differentiators is the strength of our relationships with suppliers like Cummins," says O'Grady. "Without this we'd just be another finance provider, we wouldn't bring anything additional to the table."

Cummins support

The premium end of TR's fleet is where Cummins' industry-leading branch and dealer network across New Zealand and Australia is critical to supporting the TR business and its customers, keeping a fleet of several hundred Kenworths at high utilisation levels.

All routine servicing and maintenance is carried out to Cummins' recommended schedules.

"It's all about driving customer value," says Lyndon Maffey, TR's national maintenance manager. "We have an excellent relationship with the people at Cummins. It's not just transactional, we catch up regularly on a face-to-face basis to maximise how we do things at TR.

"If we are working well together and understanding each other, our customers' trucks flow in to a Cummins branch or dealer, the work gets done without any drama or red tape, and they're back to work quickly.

"All our team are from the transport industry. We have more than 20 maintenance managers across New Zealand and Australia with an average of over 20 years' experience, creating relationships, guiding repairs, handling any problems that arise.

"Success for us is at the end of a customer's lease and the customer acknowledges the value of what has been achieved and takes another lease with TR."

Fuel agnostic

Decarbonisation is high on the TR agenda.

"We are very active is this space," says Maffey. "In fact, it would be fair to say we're leading the industry in trying to decarbonise and we're taking a few risks that others probably can't.

"There's going to be a blend of technologies and to decarbonise 100 years of what we know is no small task. Technology is moving so quickly and the cost involved is huge.

"We're excited about Cummins' fuel agnostic natural gas and hydrogen internal combustion engines and have customers who are keen to get their hands on them. The technology is awesome and we need to be getting as much experience with it as possible.

"We know we need a loud voice to get traction, and work through right pathways with global companies. We want to be learning and trialing the different technologies and be at the forefront of decarbonisation."

He points out that TR has a hydrogen fuel cell truck operating successfully with New Zealand Post and also has an NZ-built fuel cell truck in the final stages of commissioning. The company is also working closely with global fuel cell truck manufacturers to bring 20 fuel cell 6x4 prime movers to NZ, all of which have strong interest from customers.

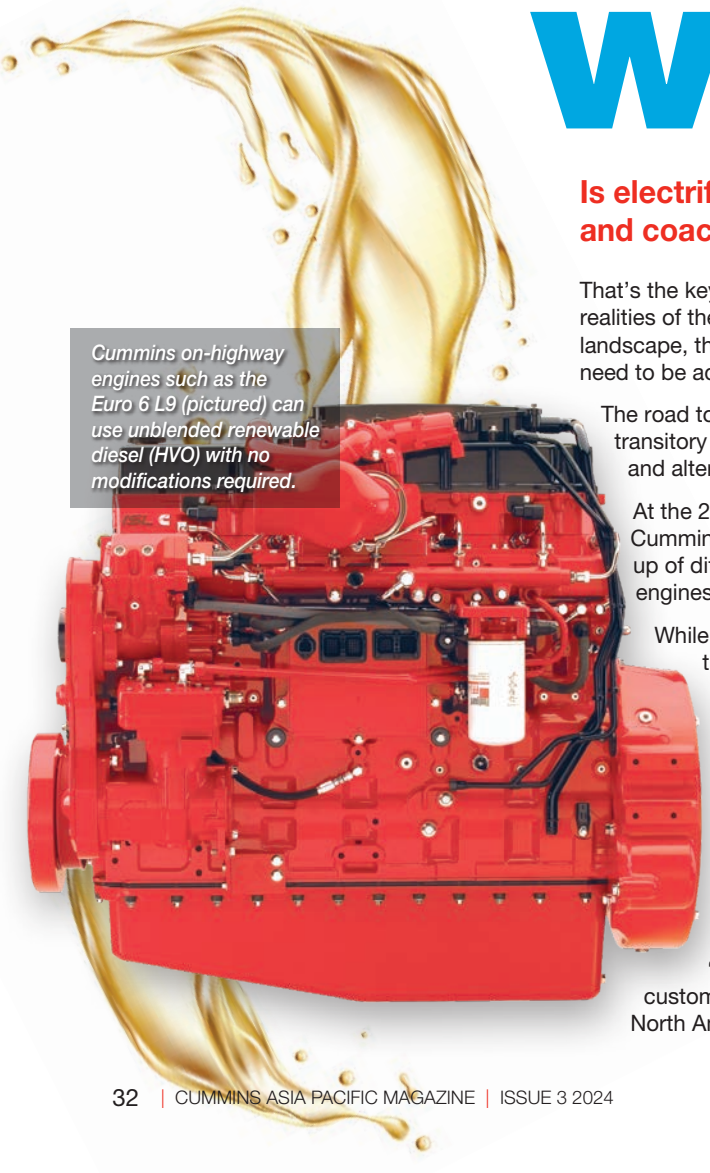
"Importantly, we have Hiringa Energy building green hydrogen production and refuelling infrastructure across New Zealand," he says.

No cooling off with ICE

Is electrification the only decarbonisation option for the bus and coach industry right now?

That's the key question as the optimism and uncertainties of the future collide with the realities of the moment. While battery electric vehicles may eventually dominate the landscape, the current limitations of vehicle cost, range and supporting infrastructure still need to be addressed.

The road to zero-emissions is long and lined with questions that will no doubt see transitory solutions like advanced internal combustion engines (ICE), hybrid technologies and alternative fuels playing a role.



Cummins on-highway engines such as the Euro 6 L9 (pictured) can use unblended renewable diesel (HVO) with no modifications required.

At the 2024 Advanced Clean Transportation (ACT) Expo in Las Vegas, Accelera by Cummins – the zero-emissions business unit of Cummins Inc. – displayed a full line-up of differing technologies, including more powerful versions of its hydrogen fuel cell engines, a high-efficiency eAxle and its next-generation batteries.

While there were plenty of headlines from the displays at ACT Expo, the reality is that Cummins is still investing heavily in internal combustion technologies for increasingly stringent emissions standards.

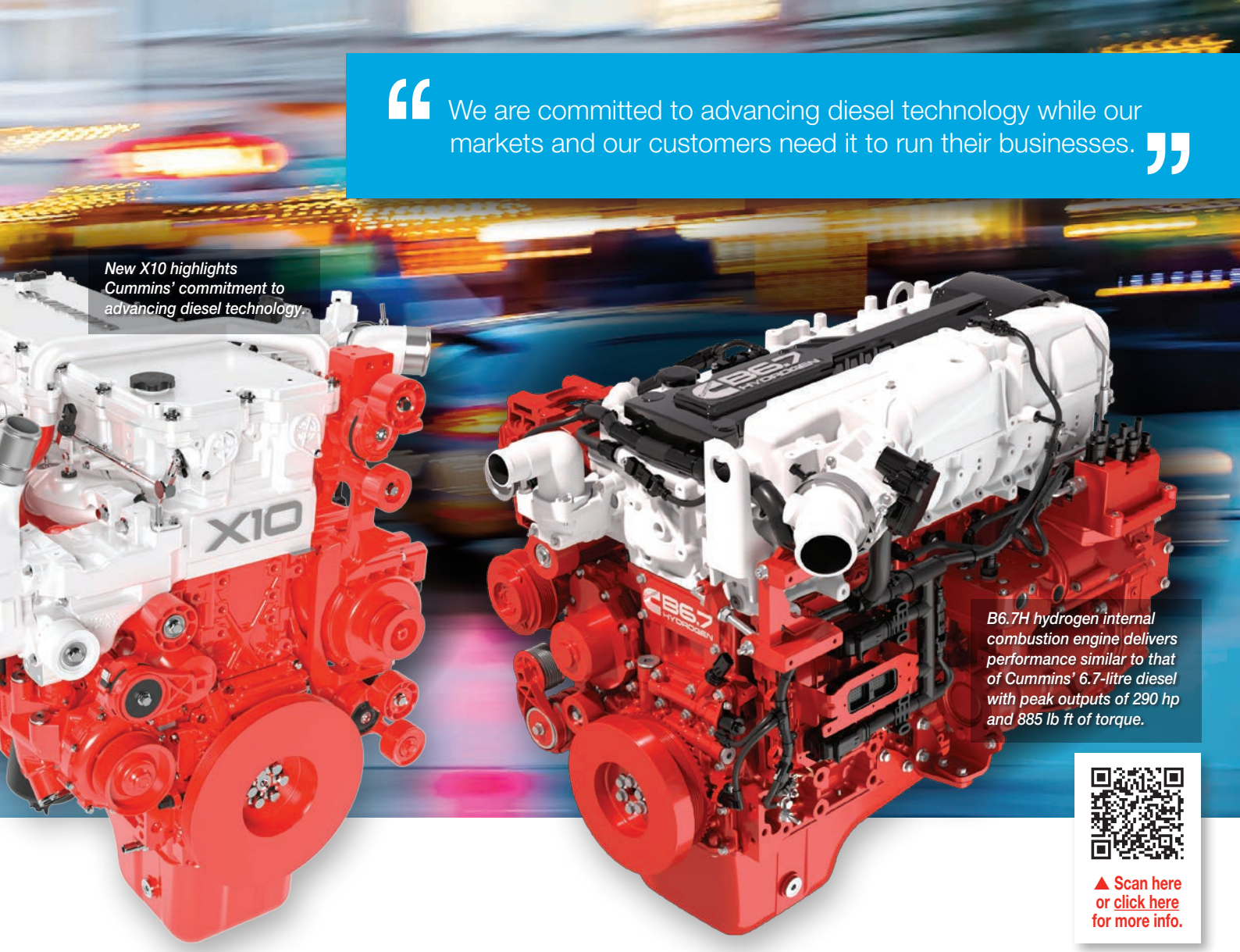
Fuel agnostic engines

While the X15 may dominate the headlines for heavy road transport, two products that will be of special interest to the bus and coach industry are the B6.7H and X10, both part of Cummins' industry-first fuel agnostic platform.

While each engine will be able to run on hydrogen and natural gas, Cummins states that diesel will remain a critical technology for the on-highway market for years to come, and the company will continue to support it.

"We are committed to advancing diesel technology while our markets and our customers need it to run their businesses," said José Samperio, Executive Director – North America On-Highway at Cummins Inc.

> We are committed to advancing diesel technology while our markets and our customers need it to run their businesses.



New X10 highlights Cummins' commitment to advancing diesel technology.

B6.7H hydrogen internal combustion engine delivers performance similar to that of Cummins' 6.7-litre diesel with peak outputs of 290 hp and 885 lb ft of torque.

▲ Scan here or click here for more info.

The brand new X10, available as a diesel initially with ratings from 320-450 hp, will be compliant with the US EPA's 2027 regulations while providing a step-change in fuel economy improvement.

The B6.7H hydrogen internal combustion engine, scheduled for release in the 2026-2027 timeframe, delivers performance similar to that of Cummins's 6.7-litre diesel engine with peak outputs of 290 hp and 885 lb ft of torque.

"While Cummins is investing in a range of power options to support decarbonisation, hydrogen internal combustion engines are emerging as a key technology to eliminate carbon emissions from the transport sectors, while retaining the power density typical of diesel engines," said Jim Nebergall, general manager of hydrogen engines at Cummins Inc.

Hydrogen has some way to go to reach its full potential as a zero-carbon fuel, the obvious requirement being for adequate infrastructure to produce green hydrogen in quantities that make it accessible and affordable.

Alternative fuels

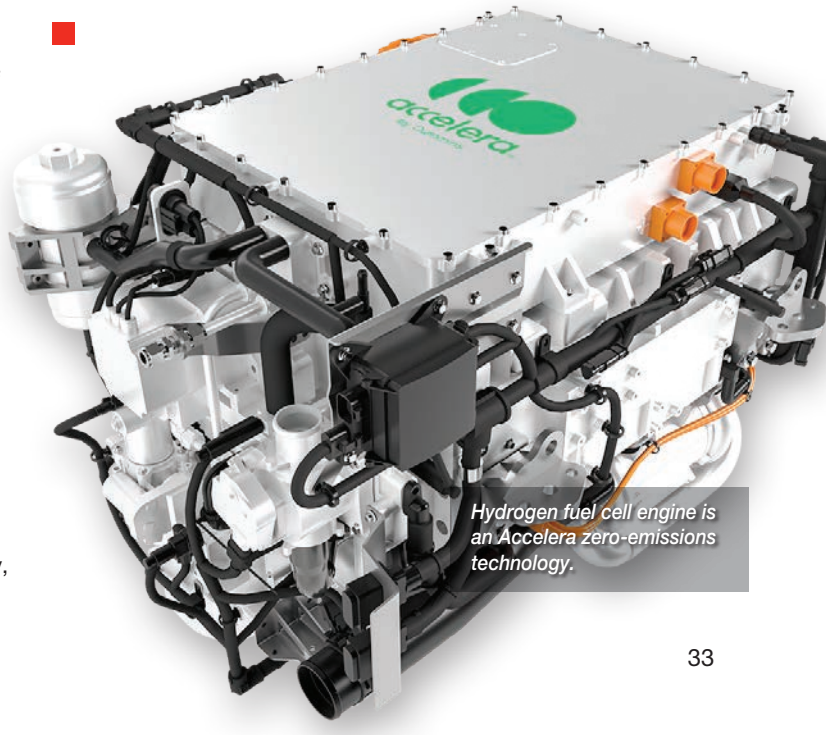
The near-term opportunities from the use of lower-carbon alternative fuels are also significant.

Cummins has approved the use of unblended renewable diesel, including hydrotreated vegetable oil (HVO), for its on-highway diesel engines (B6.7, L9, X12 and X15) with no engine modifications required for a 100% blend.

Utilising renewable diesels like HVO reduces net greenhouse gas (GHG) emissions by up to 90% compared to conventional diesel. Particulate matter emissions are also reduced dramatically, potentially by up to half.

Biodiesel is another lower-carbon fuel that can easily be integrated into a fleet's engines. Manufactured from vegetable oils, animal fats or recycled restaurant grease (used cooking oil), biodiesel is a renewable, biodegradable fuel with properties similar to those of diesel.

Cummins on-highway engines built after 2007 are compatible with B20 biodiesel (20% biodiesel, 80% petroleum diesel), a blend that is capable of reducing greenhouse gas emissions, namely CO2, by around 15%.



Hydrogen fuel cell engine is an Accelera zero-emissions technology.

Cummins is committed to advancing internal combustion technology, which serves as the base for bridge pathways.

Bridging the gap to ZERO

MINExpo is over for another four years but the impact of announcements at the Las Vegas show will be felt for some time.

Cummins expanded on how bridge technologies will be used to support the mining industry's energy transition.

Speaking at MINExpo, Molly Puga, Cummins Executive Director of Strategy, Digital and Product Planning, highlighted that the global need to reduce emissions in mining will be achieved most effectively with the support of power solutions that can be implemented today, with a low Total Cost of Ownership (TCO) and a high level of performance for miners.

“Cummins anticipates that the mining industry will need multiple power technology solutions for the foreseeable future,” she said.

“The energy transition in mining will be driven by the availability of solutions that help achieve TCO parity or improvement, combined with the ability to meet varied Environment Sustainability Goals in operation.

“While longer term zero-emission technologies – such as full battery-electric solutions and hydrogen – have exciting potential, a lack of infrastructure availability, high upfront costs and performance of current equipment limits how effective this technology can be over the coming years.

“Based on conversations with our customers, there has been a noticeable shift in expectations from focusing solely on zero emissions to also considering bridge technologies, which can reduce carbon emissions and assist miners in making sustainability progress this decade.”

Bridge technologies

Puga elaborated that Cummins will continue to invest in its internal combustion engine range while advancing its Destination Zero strategy for mining, which includes further development of two bridge pathways – hybrid and clean fuel capabilities.

Both of these technologies provide fuel savings and emissions reductions from well-to-wheel.

As of 2023, all Cummins high-horsepower engines are approved for unblended use of 100% HVO (Hydrated Vegetable Oil), allowing miners to utilise renewable diesel, generating emissions savings while maintaining power output.

Cummins is also developing dual-fuel technology to allow use of ethanol or methanol alongside diesel in mining applications.

Cummins, global miner Vale, and Komatsu recently signed an agreement to develop and test dual fuel haul trucks, powered by a mixture of ethanol and diesel. They will be the world’s first dual-fuel powered trucks of their size, with payloads of 250 – 320 t.

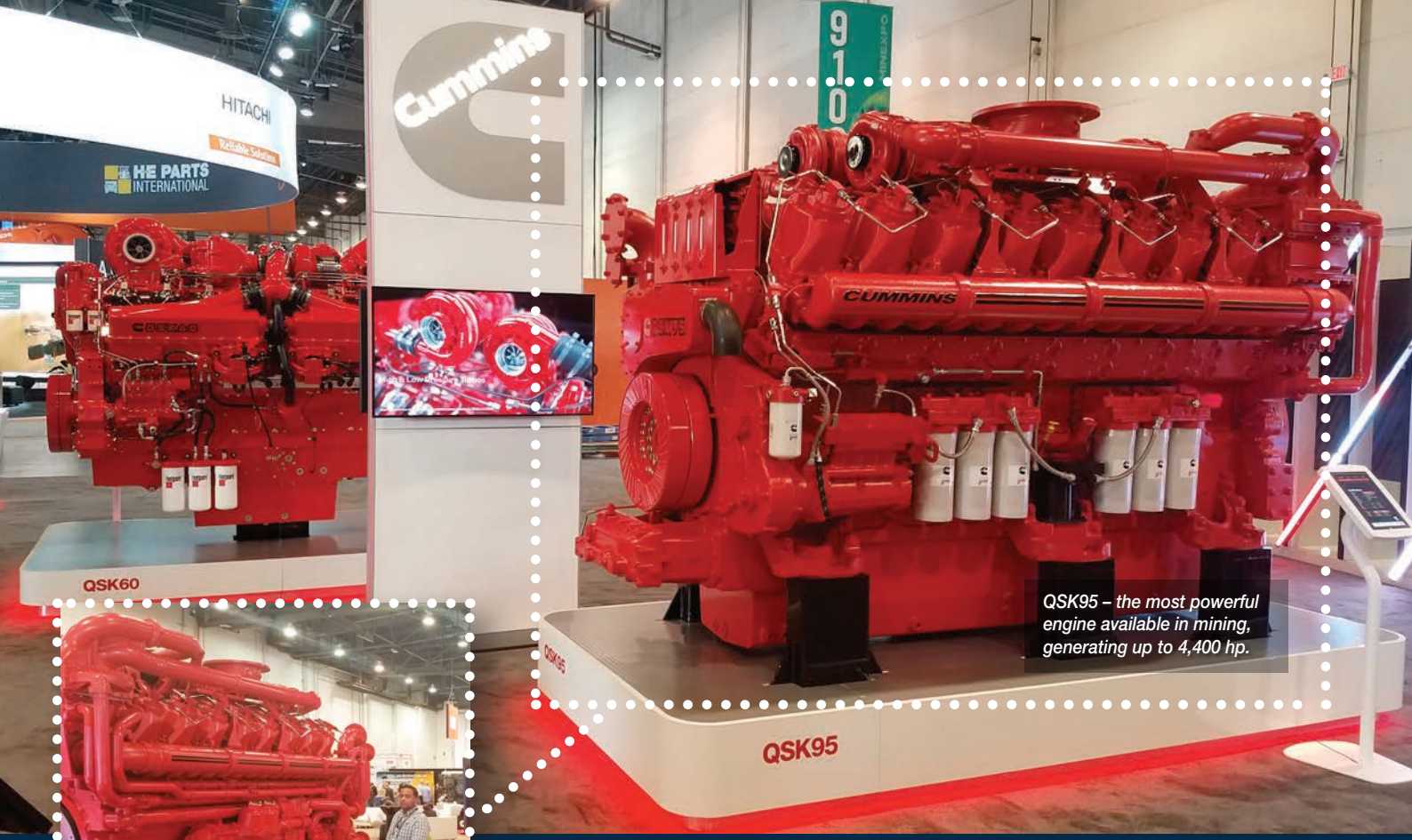
For hybrid power units, Cummins is taking a modular approach, with plans for first-fit and retrofit application capabilities.

Cummins’ hybrid solutions can be used in-tandem with HVO-ready internal combustion engines to generate additional emissions benefits, creating an affordable way to reduce emissions and fuel consumption costs compared to alternatives like trolley assist.

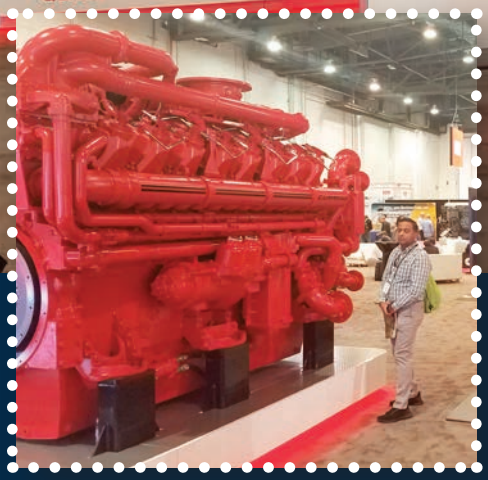
Hybrid fuel savings

Cummins is performing field testing of a mining diesel-battery hybrid truck solution in China with North Hauler Joint Stock Co., Ltd. (NHL).

In the hybrid NTH260, a 220 t payload mining truck, the hybrid system has allowed the truck engine to be downsized from the previous 2500 hp QSK60 to the current 2000 hp two-stage QSK50.



QSK95 – the most powerful engine available in mining, generating up to 4,400 hp.



> "We have seen from recent collaborations that 15-20% improvements in fuel efficiency with hybrid power are currently achievable."

Early field test results show 15 – 20% average fuel savings compared to a non-hybrid system.

"Hybrid bridge technology offers a tangible solution to reduce environmental impacts and reduce TCO," said Molly Puga. "They can also be futureproof, as modular designs enable miners' flexibility to add more hybrid capabilities over time.

"The technology makes economic and environmental sense, which is why it has so much potential to achieve change. We have seen from recent collaborations that 15-20% improvements in fuel efficiency with hybrid are currently achievable.

"Projected potential increases significantly when you consider further system optimisation, opportunity charging and use of low-carbon fuels.

"We are confident that over the coming decade, the prevalence of bridge technologies in mining, such as hybrid and lower carbon fuel capabilities, will lead to significant carbon reductions while mining operations are maintained.

"This approach and these values are core to our approach to mining and more generally our Cummins Destination Zero strategy."

Hybrid diesel-battery mining truck in China is achieving 15-20% improvements in fuel efficiency.

Throughout MINExpo, Cummins also showcased the company's commitment to advancing internal combustion technology, which serves as the base for both bridge pathways in development.

Leading the showcase of internal combustion engine technology was the Tier 4 Final/Stage V emissions compliant Cummins QSK60, which delivers a maximum 2850 hp. In addition, Cummins displayed the QSK95. This EPA Tier 2 emissions equivalent is the most powerful mining engine available producing up to 4400hp and peak torque of 17,802 lb ft.

▲ Scan here or click here for more info.

T900 now achieving much faster trip times.

REPOWER a ‘no brainer’ for family fleet

Repowering a 1998 Kenworth T900 with a Cummins X15 Euro 3 engine was a “no brainer” for Aaron Millikin after he weighed up the options.

The T900 Classic, one of 11 Kenworths operated by the Millikin family business, Greenlands Garden Centre, was originally equipped with a Cummins N14 Red Head and had started life in a logging operation in Coffs Harbour, NSW.

The Millikin business is based in Moruya on the NSW south coast and incorporates the Blue Ridge Quarry which produces up to 150,000 tonnes of material a year.

Around half of the Millikins’ haulage work is for their quarry and garden supply and landscaping business while the other half is carried out on a sub-contract basis, transporting bulk products like aggregate, sand, fertiliser and grain.

Jeff Millikin started the Greenlands business in 2007 after a career as a professional driver and today has sons Aaron and Andrew and daughter Sarah in the business in key roles. Aaron manages the truck fleet, Andrew is responsible for fleet maintenance and Sarah is office manager.

“We’ve owned the T900 for around four years and started to have a few dramas with the N14,” says Aaron.

“We looked at the options – rebuild or repower – and decided that repowering with the X15 Euro 3 engine was a no brainer with the benefits it offered.”

Repower perfection

So impressed is Aaron with the T900 repower – a project carried out by Cummins Newcastle – that it may not be the last truck the company subjects to a heart transplant.

“We’re actually talking now about buying older trucks and repowering them with the X15 Euro 3 engine,” he confides. “The economics make sense in our operation and it also gives us parts commonality with the 10 other X15 engines in the fleet.

“I’m over the moon with the repower installation,” he adds. “I can’t speak highly enough of Dan Stoneman and the team at Cummins Newcastle. The passion they put into the project was unbelievable.”

The Euro 3 engine has become a popular repower option. It has the same base engine hardware as the X15 Euro 6 powerhouse but without the SCR aftertreatment; it can only be installed in pre-2008 registered on-highway trucks.

The Millikin T900, now with 2.6 million kilometres on its odometer, is coupled to a three-axle dog and operates at a gross weight of 50.5 tonnes, doing five to six loads a day carrying 32-tonne payloads.

“Totally different truck”

Aaron says the T900 is now a “totally different truck” and that the performance improvement was expected with the X15 which is rated at 550 hp with peak torque of 1850 lb compared with the N14’s 525hp and 1650 lb ft.

“We’re now doing much faster trip times,” he says. “We’ve gained a gear uphill and a gear-and-a-half downhill due to the X15 engine brake.”

This kind of performance is important in the Millikin operation which often sees the T900 on the steep Clyde Mountain climb in the Great Dividing Range, hauling sand to the Snowy Hydro Scheme and returning with maximum weight bulk product.

“The N14 was good on fuel but the X15 is edging it in this area too, while delivering far better performance,” says Aaron.

Callie Sandilands, who shares the driving with Aaron, didn’t really want to pilot the T900 at first because she was “wrapped up in the N14”.

“However, I’m stoked with the X15,” she says. “It’s heaps better in every way - faster uphill and faster downhill with the engine brake. Trip times are so much quicker.”

X15 Euro 3 engine has become a popular repower option.

Aaron Millikin (far right) with, from left, Cummins Newcastle's Michael Andrews, Daniel Stoneman and Sheldon Beehag.

> "I'm over the moon with the repower installation…"

T900 is a "totally different truck" since the X15 repower.

Isuzu engine plant employees celebrate the announcement of the new engine.

A new 6.7-litre engine jointly developed by Cummins and Isuzu will be available in Asia Pacific markets.

Cummins and Isuzu in

Cummins and Isuzu have announced a new 6.7-litre engine jointly developed by the two companies, designed for use in Isuzu's new medium-duty truck lineup.

The 'Isuzu DB6A' will power on-highway trucks built for the Japanese market and will also be available for Asia Pacific and other global markets.

Significantly, the engine will be assembled at Isuzu's engine plant in Tochigi Prefecture, Japan.

The two companies formally unveiled the new engine with a ceremony at the Tochigi plant earlier this year. It has maximum outputs of 220 kW (295 hp) and 1081 Nm (797 lb ft) and is significantly lighter than conventional six-cylinder engines.

220 kW DB6A is significantly lighter than conventional 6-cylinder engines.

First for Cummins

"Today marks an important milestone for both Cummins and Isuzu, as Cummins enters the Japanese on-highway market for the first time in our 105-year history," said Jennifer Rumsey, Chair and CEO of Cummins.

"I'm proud of the strong partnership our two companies have built, and I'm excited to leverage our collective strength and scale to expand our impact and continue meeting the evolving needs of our customers."

Isuzu and Cummins signed the Isuzu Cummins Powertrain Partnership in May 2019 to realise the efficient development of next-generation powertrains.

The two companies agreed to collaborate globally in the medium-duty diesel

Cummins Inc. CEO Jennifer Rumsey formally launches the new engine at Isuzu's Tochigi plant.

> "Today marks an important milestone for both Cummins and Isuzu, as Cummins enters the Japanese on-highway market for the first time in our 105-year history."

historic engine venture

powertrain segment, and the newly developed DB6A is the first engine to be incorporated in the FORWARD medium-duty truck as a result.

In 2022, Isuzu North America Corporation Commercial integrated the Cummins B6.7 into its FTR and FVR trucks for customers in the United States and Canada.

Electric powertrain

More recently, Accelera by Cummins, the zero-emissions business segment of Cummins Inc., announced plans to launch a battery electric powertrain for Isuzu's F-series in North America.

Availability of the medium-duty truck is expected in 2026 and will include Accelera's next generation lithium iron phosphate (LFP) battery technology.

"We need to invest in both internal combustion engine and electrification to achieve carbon neutrality," said Masanori Katayama, Chairman and Representative Director, Isuzu Motors Limited.

"I am convinced that Cummins is the best partner in such a challenging time. Isuzu and Cummins leadership has established strong mutual trust and respect of each other since the first day of our partnership. I am confident that our strategic partnership will continue and expand over future generations of respective leadership."

New 20-ton Isuzu with DB6A.

A powerful advant

Miner wins with engine upgrade

In 2017, mining contractor HSE began what has turned out to be a highly successful upgrade of its 2500 hp Cummins QSK60 engines to reduce its carbon footprint at the South Walker Creek coal mine in Queensland's Bowen Basin.

Not only that, longer engine life and improved fuel efficiency were benefits that shone through when HSE carried out a cost benefit analysis of several engine manufacturers' upgrade packages before deciding on the Cummins solution as the best value proposal.

The proposal was to upgrade the miner's Tier 1 QSK60 engines to the then newly-engineered 'Advantage' solution in its Komatsu 830E haul trucks. Six units were upgraded initially, followed by a further five – all supplied by the Cummins Master Rebuild Centre in Brisbane.

So, what exactly is the 'Advantage' solution?

Cummins engineers in Australia and the US were proactive in developing a solution for the early generation QSK60 where it could be upgraded to the latest diesel technology at overhaul time with no major change to the base 60-litre V16 design.

The key technology upgrade is to the fuel injection, with the early high-pressure unit injection system (HPI) replaced with the high-pressure modular common rail system (MCRS) that now features on all of Cummins' latest generation high horsepower engines.

Other Cummins innovations in combustion technology that were engineered for Tier 4 Final and Stage V emissions compliance – the most stringent off-highways emissions standards in the world – are also incorporated in the 'Advantage' package.

Longer life, slashed emissions

Longer engine life and reduced fuel consumption are key benefits with the upgrade to MCRS – benefits that have been underlined in the South Walker Creek operation. Additionally, diesel particulate emissions are slashed by more than 60% through in-cylinder combustion technology with no aftertreatment. This is also a plus for maintenance with less soot loading in the oil.

"By upgrading to the more technically efficient 'Advantage' engine we've significantly reduced our carbon footprint and diesel particulate emissions as well as achieving major cost efficiency gains by burning less fuel and gaining longer engine life," says maintenance superintendent Aaron Poli.

Early on, it was established that fuel consumption was reduced by 3 per cent across the first six Komatsu 830E trucks using the 'Advantage' engines.

This translated to a major greenhouse gas (GHG) emissions reduction, with carbon dioxide (CO_2) reduced by more than 510,000 kg for six trucks, each operating 6000 hours/year.

Life-to-overhaul has seen a significant increase. The Tier 1 QSK60 engines were originally changed out at 22,000 hours

▲ Scan here or click here for more info.

age:

Fuel system upgrade from HPI to MCRS has resulted in longer engine life, improved fuel consumption and emissions reductions.

Maintenance superintendent at South Walker Creek mine Aaron Poli (right) with Cummins site technician Anthony Civello (centre) and Cummins product support manager Wade Ford.

> "If we do have a drama, it's all hands-on deck from the Cummins team in Mackay…"

which was then extended to 26,000 hours based on fuel burn. The 'Advantage' engines have increased life to 32,000 hours, with a recent unit taken out to 36,000 hours without any issues.

The longer life has eliminated one engine change-out in the 80,000-hour life of the truck chassis.

The 'Advantage' engines also have minimal mid-life component change-out, with the longevity of the MCRS injectors of particular note in achieving full engine life.

Importantly from a cost angle, the 'Advantage' solution utilises the original factory 830E cooling system package.

Top-level maintenance

Aaron Poli, who has been maintenance superintendent at South Walker Creek mine for six years, rates Cummins' support highly.

"If we do have a drama, it's all hands-on deck from the Cummins team in Mackay, from the fitter on the floor, up through to Wade Ford (product support representative) to Glen Jones (branch manager)," he says.

"It's not often I've seen a branch manager get involved as much as I've seen Glen Jones involved which is a positive."

Cummins has two site-based technicians at South Walker, Anthony Civello and Jeff Martin, and they are acknowledged as being pivotal to the success of the Cummins product at the mine.

So far, all MCRS engines returned to the Master Rebuild Centre have had no core damage or additional core charges, underlining the top-level maintenance practices at the mine.

Reliable diggers

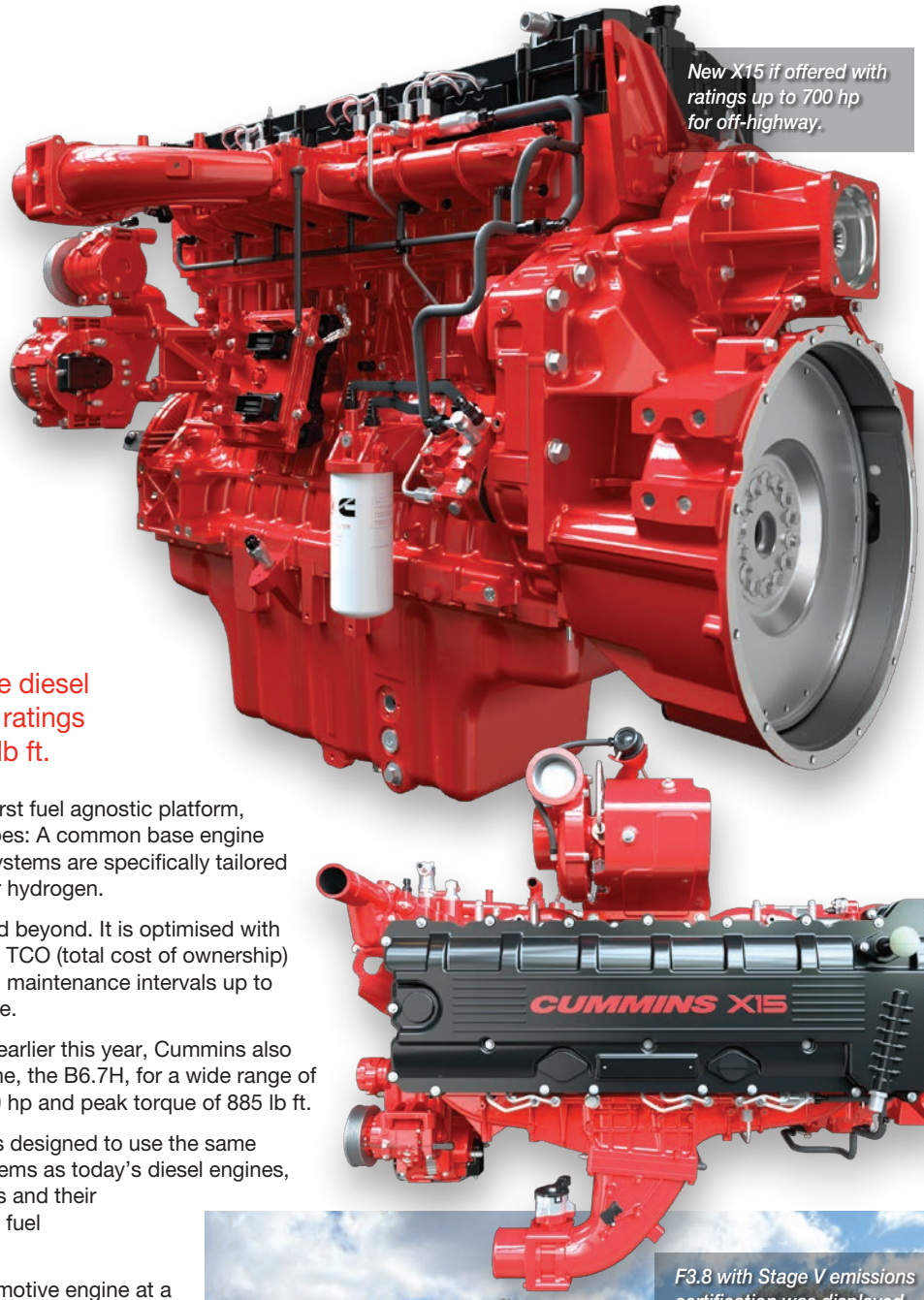
Apart from the 11 'Advantage' engines, a further nine Tier 2 QSK60 MCRS engines are providing reliable service at the mine in Komatsu 830E trucks.

The South Walker Creek mine is producing around 6.5 Mtpa of ROM coal from its open cut operations, with six Cummins-powered Hitachi excavators the backbone of the operation.

The four EX5600s with dual 1500 hp Cummins QSK50 MCRS engines and two EX3600s with single 1944 hp Cummins QSK60 MCRS engines are providing the reliability that is critical to meeting production targets.

"Our Hitachi excavators have very good availability of 92%," says Aaron Poli. He points out that due to the high load factors, engine change-out is at 20,000 hours which is "comfortably" being achieved after a 10,000-hour mid-life inspection and replacement of front and rear engine seals.

700 hp RATING for new off-highway X15



New X15 if offered with ratings up to 700 hp for off-highway.

Cummins has announced a new 15-litre diesel engine for the off-highway market with ratings up to 700 hp and peak torque of 2360 lb ft.

The next-gen X15 is part of Cummins' industry-first fuel agnostic platform, offering customers the option of different fuel types: A common base engine design is offered while cylinder heads and fuel systems are specifically tailored for a single fuel – advanced diesel, natural gas or hydrogen.

The X15 diesel is aimed at Stage V emissions and beyond. It is optimised with fuel consumption as low as 180 g/kWh, reducing TCO (total cost of ownership) and lifetime CO2 emissions. It also has extended maintenance intervals up to 1000 hours, reducing service costs and downtime.

At the Intermat construction trade show in Paris earlier this year, Cummins also displayed its hydrogen internal combustion engine, the B6.7H, for a wide range of off-highway applications, with a top rating of 290 hp and peak torque of 885 lb ft.

Aimed at Stage VI/Tier 5 emissions, the B6.76H is designed to use the same transmission, cooling systems and hydraulic systems as today's diesel engines, reducing complexity for equipment manufacturers and their customers wanting to switch to using a hydrogen fuel power solution.

While the B6.7H had been previewed as an automotive engine at a series of industry events, at Intermat it was displayed with specific changes for off-highway applications with a series of newly-developed components for heavy-duty work cycles.

Stage V engine

While exhaust emissions from off-highway equipment are still unregulated in Australia, Cummins' display at FarmFest in Toowoomba, Qld, showed the technology that is likely to be required in the future with the introduction of emissions standards.

Cummins displayed its 170 hp F3.8 ValuePak – a self-contained powerpack – with Stage V certification, the toughest emissions standard in the world for off-highway diesel engines. Since Stage V was introduced in Europe in 2019, there have been more than 14,000 installations.

The Stage V engine at FarmFest – a 3.8-litre inline four-cylinder unit – had Cummins' Single Module aftertreatment system, combining DPF, SCR and urea dosing in one unit. Its EGR-free architecture reduces complexity and improves reliability.

The aftertreatment technology is virtually 'fit and forget' as it operates almost entirely through passive regeneration.

The F3.8 is offered with ratings from 75 to 173 hp and service intervals up to 1,000 hours. All Stage V engines are approved to use renewable diesel such as HVO (hydrotreated vegetable oil).

F3.8 with Stage V emissions certification was displayed at this year's FarmFest in Toowoomba (Qld).

▲ Scan here or click here for more info.

Thousands of mission critical applications rely on the reliability of Cummins gensets.

Preventive maintenance ensures that standby generators are ready for action when called upon in mission critical applications.

MISSION ACCOMPLISHED:

Cummins gensets critical to frontline reliability

Generators failing to start are not an option for mission critical facilities.

Whether for public health, national security or business continuity reasons, the reliability of the generators and standby power systems is crucial to the continued operation of these facilities.

More than 3,500 Cummins generator sets are installed in mission critical applications across the South Pacific, South East Asia and North East Asia regions – testimony to the reliability of the standby power systems and aftersales support provided by Cummins.

Cummins' routine servicing and preventive maintenance guidelines underline the fact that generators are among the most important pieces of equipment at a mission critical facility, whether it be a hospital, data centre, airport or telecommunications centre.

That importance is highlighted when the lights go out and the seconds are counted anxiously until they come back on again.

Maintenance neglect is the single most common reason for genset and power system failures, says Stuart Quinn, Aftermarket Business Development Manager for Cummins Asia Pacific's power generation business.

Peace of mind

"Cummins' aim is to provide peace of mind with tailored service solutions that underpin power system reliability and ensure that any minor issues are identified prior to becoming major problems," he says.

"Diesel and gas generator sets and their control systems are complex pieces of equipment so routine servicing and preventive maintenance are critical to overall system reliability.

"In Australia, we're coming into the storm season which makes preventive maintenance even more critical if the generators need to come on line in the event of grid outages.

"It's the simple maintenance items that are often missed, such as a coolant or fuel hose leaks, that can let you down. The aim with our service plans is to ensure that minor issues are identified before they become major problems."

Cummins offers facility managers a range of capped price service solutions, from routine servicing on a quarterly, six-monthly or annual basis to mains failure testing – the ultimate test to know for certain that the generator will start in an emergency.

"We fully simulate a mains power failure and 'black start' the generators to ensure they are 100 percent operational. This can be carried out whenever the customer requires," says Stuart Quinn.

24/7 support

All Cummins service solutions include 24/7 support with fast response and diagnosis, a 90-day workmanship guarantee and 12-month parts warranty, and a detailed service report.

Capped pricing can be locked in for up to five years.

Importantly, all major components of a Cummins genset are designed and manufactured by Cummins. The Cummins brand also covers digital controls, transfer switches, paralleling systems and remote monitoring.

The support capabilities Cummins has built in the Asia Pacific region are unmatched. In the South Pacific region, for example, 38 company-owned branches are dedicated to customer support in strategic locations around Australia, New Zealand and Papua New Guinea.

Factory-trained Cummins technicians carry out all generator system servicing and maintenance while Cummins' extensive service network is equipped with comprehensive power generation knowledge to enable all makes and models of generators to be serviced.

Cummins also operates a Customer Support Centre, based in Melbourne, which is staffed 24/7 by qualified technicians and parts interpreters. The centre is available to customers in Australian and New Zealand and provides one-on-one diagnostic and technical support as a well as handling parts orders.

▲ Scan here or click here for more info.

On the RIGHT TRACK

Cummins Sales & Service Korea has won a major order for 15 engines from SSRST which is supplying Tanzanian Railways Corporation with a range of new rolling stock.

QSK60 firefighting pump will be installed at LNG terminal at the port of Dangjin.

SSRST – Sung Shin Rolling Stock Technology – was established in 1990 as a bogie assembly manufacturer for passenger trains and other railway applications.

The company has now evolved into a manufacturer and supplier of passenger train sets, diesel locomotives and other special purpose equipment for operators in several countries.

Since 2020, SSRST has built a large number of rail vehicles – including 59 passenger coaches – for Tanzanian Railways Corporation in Africa.

The Cummins engines for the latest project include nine QSM11s rated at 340 hp, two X15s rated at 500 hp and four QSK19 rated at 700 hp.

These engines are powering rail maintenance equipment such as ultrasound track inspection vehicles and heavy-duty motor trolleys for towing and transporting railroad construction equipment and materials.

Robert Yoo and Crystal Lee headed up the project for Cummins Sales & Service Korea.

Another engine brand competing for the SSRST business was up to 20% cheaper than Cummins, but the Cummins team's strong relationship with the rolling stock manufacturer, along with Cummins' proven support and engine reliability, won the day.

Firefighting engines

Another major project for Cummins Sales & Service Korea is the supply of 2500 hp Cummins QSK60 fire pump engines for LNG power plants and terminals.

There are plans in South Korea to dismantle coal-fired power stations and convert them to LNG power plants by 2040 which will require a number of firefighting pumps.

Cummins has proven experience in this market in Korea, supplying fire pump engines for chemical plants and power plants over the past 20 years.

Early this year, a Cummins QSK60 – CFP60E-F30 – was delivered for the LNG power plant in Tongyoung .

Cummins will also deliver a CFP60E-F30 pump package to Hansung Heavy Industrial early next year for the LNG terminal at the port of Dangjin.

Cummins QSM11, X15 and QSK19 engines power the new rolling stock being built by SSRST.

Since the mid-90s Cummins has supplied around 13,000 engines for Aggreko generator sets.

Cummins reliability crucial in remote power project

> “Maintaining trust in Cummins’ reliability is the key to longstanding relationships with our customers.”

Aggreko claims to be the largest supplier of temporary power in the world – a claim that’s hard to dispute when you look at the company’s projects past and present.

The sheer magnitude of Aggreko’s operations is emphasised in massive multi-megawatt projects around the globe, utilising generators from the world’s most extensive fleet of containerised gensets – estimated to be around 11,000 units.

Cummins is the largest single supplier of engines to Scotland-based Aggreko.

In fact, since 1994 Cummins has supplied around 13,000 engines for Aggreko generator sets, more than 4,000 of these being the time-honoured KTA50 – a 50-litre V16 with a remarkable record for reliability and durability.

While the company is shifting to solar, battery and wind power as part of the energy transition occurring in a number of its key markets, Aggreko still has a world-leading role in the supply of diesel and gas generators to developing countries and also remote operations such as mining.

Solely Cummins

Aggreko’s 25 MW power station at remote Nhulubuy on the Northern Territory’s Gove Peninsula, operating solely with Cummins-powered generators, is an example of an application that highlights the company’s capabilities.

The plant generates prime power for Rio Tinto’s Gove bauxite mine and also the nearby township of Nhulunbuy.

Gove bauxite is shipped internationally as well as being used to supply the Queensland Alumina Ltd and Yarwun refineries in Gladstone, Queensland.

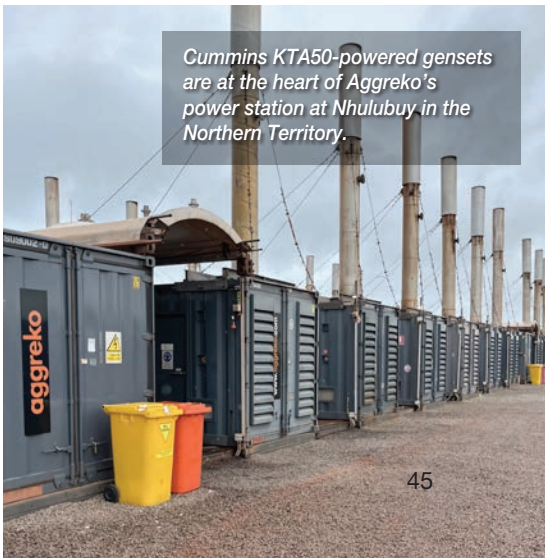
Cummins personnel recently visited Nhulunbuy to further understand any workshop issues surrounding delivery of services to remote locations in the Northern Territory, especially during the wet season.

Trust in Cummins

“Maintaining trust in Cummins’ reliability is the key to longstanding relationships with our customers,” says Chris Appleyard, Aggreko account manager for Cummins South Pacific. He visited Nhulunbuy with Mai Hamed, Cummins’ international technical support manager, and Cummins Darwin service manager Macauley Taunton.

Aggreko has a significant footprint in mining regions across Western Australia and the Northern Territory, with power station mobilisations providing power to mines and mining towns.

Cummins’ KTA50 engine powers all the generators at the Gove power station, and new engines will be installed later this year to replace some of the older fleet.



Cummins KTA50-powered gensets are at the heart of Aggreko’s power station at Nhulubuy in the Northern Territory.

Rollout of Euro 6

The rollout of Euro 6 was a major talking point at the recent National Bus & Coach Show in Brisbane with the new emissions standard to be phased in over 12 months from November 1, 2024.

Andrew Steele, bus and coach business manager for Cummins Asia Pacific, says the mood was positive among operators about future technologies.

“Most of our discussions with operators and industry partners at the show were around our advanced combustion engines, including Euro 6 diesel, and the significant role these will provide in reducing overall emissions as the industry and world transition to a zero emission future,” he says.

Cummins displayed an L9 Euro 6 engine which attracted plenty of attention.

“Most operators are confident that Cummins Euro 6 engines will have limited impact on their operations,” Steele says.

EGR-free

He points out that Cummins Euro 6 engines are free of EGR (exhaust gas recirculation) and that a standard wastegate turbocharger is used, not a variable geometry turbocharger (VGT).

Exhaust aftertreatment combines a diesel particulate filter (DPF) with AdBlue selective catalytic reduction (SCR) technology.

Challenger, Yutong and King Long coaches were all displayed at the show with the Euro 6 Cummins D6.7 engine rated up to 320 hp.

Cummins’ Euro 6 line-up includes the F3.8, F4.5, D6.7, L9, X11 and X12 with ratings from 154 to 490 hp.

“We had good conversations with operators around the fact that diesel internal combustion engines are going to exist well into the future,” says Steele.

“There will be no dramatic change in engine technology tomorrow.

“Diesel will remain a critical technology for the on-highway market for years to come, and Cummins will continue to support it.”

Accelera powers up

There was also significant interest at the show in products from Accelera by Cummins – the zero emissions business segment of Cummins Inc.

On display was a BP107E battery pack with107 kWh energy capacity and lithium iron phosphate chemistry which enables longer battery life and faster charging .

Accelera products include battery packs, hydrogen fuel cells engines and eAxles. Cummins Inc. was recently awarded US$75 million from the U.S. Department of Energy to expand production of zero-emissions components and electric powertrain systems from Accelera.

Accelera, Daimler Truck and PACCAR have also formed a joint venture, known as Amplify Cell Technologies, to establish battery cell production and the battery supply chain in the U.S. This strategic collaboration will advance zero-emissions technology for electric commercial vehicles and industrial applications. Total investment is expected to be in the range of US$2-3 billion.

In late 2023, U.S. manufacturer Blue Bird delivered its 1500th electric, zero emissions school bus powered by Accelera’s electric PowerDrive 7000 system.

▲ Scan here or click here for more info.

> “Diesel will remain a critical technology for the on-highway market for years to come, and Cummins will continue to support it.”

Challenger V10 bus powered by Euro 6 Cummins D6.7.

King Long midi-bus with Euro 6 Cummins D6.7 rated at 320 hp.

engines begins

Yutong C10 43-seat bus with Cummins D6.7 Euro 6 engine.

Cummins' impact

TEC Program launched in the Philippines!

Cummins Philippines' Technical Education for Communities (TEC) program in partnership with MFI Polytechnic Institute successfully welcomed students for the new school year in July.

Through the guidance of Kristina Lambkin, APAC Corporate Responsibility Leader, the local program came to fruition after years of research and planning. Cummins' TEC programs are designed to address the critical shortages of skilled technical workers, and close significant gaps in soft skills such as problem-solving, analytical ability and the proper attitudes and belief systems necessary for job success. This landmark project is the first of its kind in South East Asia.

Noel Dumaguit, COO of MFI Polytechnic Institute, stated the program was a valued opportunity to drive change with a global leader in innovation such as Cummins.

"One must be prepared to grab the opportunity when presented, and be courageous enough to be resilient," said Dumaguit.

Implementation of the program began on 15 November 2023 as both parties signed the Memorandum of Understanding at Cummins Philippines' office in Binan, Laguna. This was succeeded by the program's launch event and training initiatives the following year:

- **TEC Program Launch: 8 April**

  Taken place at MFI's campus in Pasig City, Cummins Philippines and MFI officially launched the local program with potential industry partners in attendance.

  Guests included: Sherwin Laig, Gerald Rebullar, and Roberto Adeviso of Maxima-Komatsu; Rem Agustin and Stan Gamboa of Value Plus; Bienvenido Angeles Sr. and Rodrigo Alonsagun of JAC Liner; Kristine Airoso and Marge Cuadera of International Container Terminal Services (ICTSI).

- **Teachers' Training: 4 - 7 June**

  Teachers from MFI participated in a four-day training workshop with Bennie Suyom, Technical Trainer, and Ray Von Vitaliz, Sales Engineer from Cummins Philippines. The sessions covered topics such as Engine Fundamentals, Cooling and Air System, Fuel System, Control System, Mechanicals and Filtration.

  To complement the hands-on training, brand new QSF3.8 engines were also provided to ensure the participants can learn from new technology, as well as specialised tools needed for the engines.

- **Passport to Success Training: 23 - 26 July**

  Prior to schools reopening on 29 July, TEC instructors from MFI and selected Cummins employees underwent Passport to Success Training of Trainers. The training was facilitated by International Youth Foundation's Master Trainers, Grace Karanja from Kenya and Sarah Shebele from Tanzania.

  The Passport to Success Program aims to hone the soft skills of the young people for them to be ready for the workforce, as technical skills may not be sufficient for them to succeed in the competitive and challenging technical-vocational industry.

- **Scholar's Day: 30 August**

  To honour and welcome the new students who are being supported by MFI's industry partners, an event was held on campus to celebrate Scholar's Day.

In an inspiring speech, Eric Alfonso, General Manager of Cummins Philippines, encouraged the students to strive for their dreams. Drawing from his own experiences, he emphasised the importance of staying focused and wished them all the best in their studies.

Jowell de Asis, Project Manager for Corporate Responsibility and TEC in the Philippines, looks forward to the positive impact the program will bring to the talent pool.

"The TEC Program excites me as this is the epitome model of learning, realistic, concise, skill-based, with the curriculum based on the industry leader Cummins," said Jowell.

Currently there are more than 25 TEC programs operating worldwide. Overall, the program has achieved an 83 percent graduation rate with more than 3,600 graduates globally. 72 percent of graduates gained employment within six months.

on communities

Cummins Newcastle bring smiles to Ronald McDonald House

In a heartwarming display of community commitment, the Cummins Newcastle branch dedicated their time to volunteer at their local Ronald McDonald House. One of the many programs and services by the Ronald McDonald House Charity (RMHC), these houses operate as sanctuaries for families with hospitalised children. This commitment has strengthened the bond of the teams involved and provided invaluable support to families in need.

Over the past several months, the Cummins teams have gathered at Ronald McDonald House, ready to roll up their sleeves and make a difference. Their tasks have included preparing meals for families staying at the house, cleaning the play areas for children and helping with general duties to ensure the facility remains a warm and welcoming environment.

Amongst the volunteers, employees from interstate have also contributed: Julia Utan and her Customer Support and Business Transformation team.

All these teams have worked diligently throughout their nominated days to create a warm and cozy atmosphere for everyone. Some have even taken time to engage with the children, playing games and providing companionship. This has bought smiles to a lot faces.

The staff at Ronald McDonald House have expressed their gratitude for the teams and their contributions.

“Having groups like this makes a huge difference, not only with daily tasks but they come with a sense of warmth and support for these families,” says Kerryn Scully, the Community Engagement Coordinator.

Newcastle employees have also run a fundraising campaign asking for single packaged foods, so families can grab and go when they need to. This was met with an overwhelming response from the rest of the branch.

As they reflect on their day of volunteering, the team looks forward to future opportunities to give back. A small act of kindness can lead to significant change in the lives of others.

Troy O'Hare discusses Euro VI aftertreatment system.

Renzo Barone presented on inter-axle differential operation.

Cummins X15 Euro VI engine a drawcard at TMC

Cummins displayed an X15 Euro VI engine and its aftertreatment system to highlight emissions requirements at this year's Australian Trucking Association's (ATA) Technical and Maintenance Conference (TMC) at Kangan Institute in Melbourne.

This was the first year that Cummins Driveline and Braking Systems (previously known as Meritor) had a presence on the Cummins stand. It was clearly evident to everyone present that Cummins and Meritor are now one, offering the complete powertrain solution.

The team presented at a session run by Troy O'Hare, product design engineer, and Renzo Barone, field operations manager. Troy presented on Euro VI aftertreatment maintenance, breaking down each part of the aftertreatment system and explaining their functions.

Renzo presented on inter-axle differential operation and had parts to show how it all works together.

Cummins scholarship winners

Each year Cummins Asia Pacific partners with the Australian Trucking Association (ATA) to offer three apprentices the opportunity to win a scholarship that allows them to attend a paid trip to Melbourne to attend the TMC.

As part of this opportunity, each winner gets a full conference pass including all social events throughout the conference, a visit to Cummins Scoresby to do a site tour, and be recognised on the stage at TMC during the opening session of the event.

To be considered for this scholarship the nominees must be an apprentice or full-service technician and employed in Australia; they also must be minimum 18 and less than 25 years old.

Those who nominate the applicant must provide details on the person's character, personality and interests in the heavy vehicle industry. They must also describe how they are going to benefit from this opportunity.

This year, all applications received were incredibly close and due to the high standard it was decided to give the opportunity to four well deserving apprentices:

- **Joshua Troeth** – 3rd year, Tatiara Truck & Trailers;
- **Lachlan Evans** – 3rd year, Divall's Earthmoving Bulk Haulage;
- **Samuel Della** – 3rd year, Frasers Livestock Transport;
- **Zethaniah Copland** – 4th year, McColl's Transport.

Cummins team with four scholarship winners.

Annie Chu leads Cummins Asia Pacific

Annie Chu is the new Executive Managing Director for Cummins Asia Pacific following the retirement of Peter Jensen-Muir.

Chu is based in Singapore and is overseeing Cummins' operations in Australia, New Zealand, Papua New Guinea, Southeast Asia, Japan, Korea and the Pacific Islands.

Her new role follows 14 years of experience at Cummins, having most recently served as executive managing director for Cummins' Africa and Middle East distribution business. Her strategic thinking, customer-centric mindset, and teamwork have been evident throughout her career.

Chu's leadership in Africa and the Middle East has been marked by significant achievements, including record financial performance and transformative initiatives to enhance both customer support and employee engagement.

PJM retires after 36 years with Cummins

Peter Jensen-Muir has retired, leaving behind a legacy of 36 years of dedicated service to Cummins, including 10 years leading the diverse Asia Pacific region.

From 2013, he served as the Executive Managing Director for Cummins Asia Pacific, overseeing operations in South East Asia, Japan, Korea, Australia, New Zealand, Papua New Guinea and the Pacific Islands.

Under his leadership, the distribution business surpassed $1b in revenue, while consistently enhancing customer support and profitability.

Peter Jensen-Muir holds a profound personal commitment to diversity and ensuring equality of opportunity for all.

Throughout his tenure at Cummins, he collaborated with industry and community partners, advocating for gender and indigenous equality through his membership in the Champions of Change Coalition and various community partnerships across the Asia Pacific region.

On retirement, he plans to spend time with his wife Daniela, sons Mark and Andrew, daughter-in-law Jordie, and granddaughter Amelia.

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