

500TH BUSHMASTER CELEBRATION

On October 17, the 500th Bushmaster, powered by Caterpillar, rolled off the assembly line at the Thales Group factory in Bendigo, Victoria. Here is a vehicle that has stringently been designed to best protect our active defence force personnel and for this we must all be grateful.

The first Bushmasters were deployed in East Timor and performed very well. Since then they have seen active duty in Afghanistan and Iraq. In fact, the Thales Group media office reports that over 700 units have been ordered by the Australian Army in six variants: patrol vehicle, command vehicle, assault pioneer vehicle, ambulance, direct fire support weapons vehicle and a mortar variant. The Dutch have further units in operation in the Middle East. Additional derivative vehicles have also been developed, namely an armoured combat support vehicle and the FireKing, a purpose-built fire-fighting vehicle.

The Bushmaster must perform and outperform. Australian lives depend on it. To put this into perspective our allies, the US military, saw its death toll from the Iraq war reach 4,000 on March 23, 2008. The next day, BBC News reported that 55 per cent of these fatalities were due to roadside bombs.

With statistics like this, Thales Group devised a most demanding 250,000km testing program for the Bushmaster. Because of the

risk of roadside bombs, the Bushmaster boasts significant mine blast protection under the vehicle. As EPSA's Peter Wootton recalled: "Ten kilos of TNT were placed under the prototype and set off to see how well the Bushmaster deflected the blast".

The Bushmaster is equipped with a range of ballistic protection against multiple hits. In addition to a bulletproof hull and windows, the Bushmaster also features a self-sealing plastic fuel tank. If the Bushmaster comes under fire and the fuel tank is damaged, it will self-seal the bullet holes long enough to transport our troops out of harm's way.

When it came to powering the Bushmaster, Thales Group chose the gutsy Caterpillar 3126E package boasting a high power to weight ratio, with sustained highway speed of over 100 kmph full-time four wheel drive. While Caterpillar is renowned for its reliability, when need be, engine changes for the Bushmaster can be facilitated rapidly, in two to three hours.

However, a major criterion was that the chosen engine could be serviced anywhere in the world. As Peter Wootton elaborated: "Caterpillar is supported by a truly global dealer network for parts/services which includes remote locations such as Afghanistan and Iraq".



The Bushmaster range of vehicles, powered by the Caterpillar 3126E package, was built to protect troops.

HASTINGS DEERING GEARS UP FOR GAS

In the past 12 to 18 months, the cleaner energy sector has experienced unprecedented expansion. To meet and exceed Caterpillar customer expectations, Hastings Deering is geared up and ready for even further growth.

Hastings Deering's Greg Arthy attributes the significant growth of this sector to two factors. "The Queensland Government legislated that 13 per cent of consumption come from non-coal electricity," Greg explained. "Further to this development, years of exploration in the region have come to fruition. Huge Coal Seam/Methane reserves have been uncovered and these present a phenomenal export opportunity to Asia". There are plans afoot to build no less than four LNG plants at Gladstone, with Coal Seam/Methane as the feedstock.

Of course, Hastings Deering has wasted no time in adjusting its focus to cater for this increased demand.

"We have been servicing the cleaner energy sector for about a decade, till now this has been very much on an as-needed basis. In recent times, it has become core business. To this end, we've applied more resources such as people, tooling and warehouse space," Greg said.

Caterpillar's reliability is renowned in this sector. Caterpillar Gas Compression and Power Generation engines are widely used by the big four, Santos Ltd, Origin Energy, Queensland Gas and Arrow Energy, as well as other smaller energy providers.

Greg points out that Hastings Deering customers have invested millions upon millions in this sector so they rightly expect the very best parts, service and technical support. "There has been a shift. It's more about availability, and maximising uptime these days. Hastings Deering is ready, willing and able to assist."

To this end, Hastings Deering has retrained staff to not only work on diesel engines but also gas. As manpower is an issue, the Caterpillar dealer is equally committed to its apprenticeship scheme. "In 2009, we are starting six new apprentices at Hastings Deering in Toowoomba alone," Greg elaborated. "With 75 staff in Toowoomba, we've boosted our workforce by almost a tenth with one year's intake".



CAT® RENTAL POWER TO THE RESCUE

When there was an infrastructure failure in the electricity grid of Darwin's Power & Water, an urgent call was placed to Cat Rental Power. Power & Water is a long-standing customer of Caterpillar, however, this time it was an emergency with 10MWs of back-up power required post haste.

Cat Rental Power's Darwin branch manager, Phil Brushett, took the call. Then throughout the night liaised with the customer and Cat Rental Power's Stuart Jay, Marcel Heijkoop and Shaun Cockman. Within 24 hours, 8MWs of power had been located in Townsville and a 2.5MVA Transformer in Perth. Less than two days after the initial call, 'Team Townsville' were preparing and loading four 1750kVA

modules, two 1250kVA sets and kilometres of cables together with a service ute. This convoy then hit the road with a special dispensation due to the state of emergency.

By Monday, Cat Rental Power had secured a further six MWs to be sent out of Perth, Melbourne and Brisbane. With Cat Rental Power's Adrian Van't Wout and Craig Balnaves flying to Darwin to start the placement and commissioning.

The equipment was greeted in Darwin by much fanfare. The media covered the arrival and it was officially welcomed by the Chief Minister and the Utilities Minister.

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(from previous page) The arrival of Cat Rental Power's back-up equipment made the news and saved the day in Darwin.

CAT GETS MINING COMPANY OUT OF HOLE

When an error was detected in the generator set specifications for its new concept service vehicle, Thiess Group turned to Cat. That was over a year ago.

Thiess Group is among the largest coal miners in the Australasian region, with a plant fleet valued in excess of \$1.2 billion. To maximise productivity, Thiess's Mount Owen open-cut coal mine commissioned Starline Motor Bodies to build a new concept service vehicle that would facilitate on-site maintenance and repair work on their fleet of mining equipment. However, during the vehicle's assembly, they noticed a problem with the generator set's specifications.

Thiess had plenty of experience with Cat products and the extensive support network provided by EPSA and WesTrac. So to get the project back on track, they wasted no time with the original generator set provider and instead called on Caterpillar to help.

EPSA's Electric Power division has an established reputation for solving the toughest of challenges. Still Thiess's predicament called for some re-engineering miracles. Put simply, the original specs for the onboard generator set (a 22 kVA unit) were underestimated for the load of welding gear, lighting gear and a compressor.

After running the Caterpillar Generator SpecSizer software programme, a 44 kVA Olympian GEP 44-5 generator set was recommended. This decided, the standard configured unit needed to undergo extensive modifications to fit the available space, along with re-wiring to meet stringent mining regulations.

According to Bruce Robinson, a Thiess Electrical Engineer, the technical support received from EPSA's Ken Fackler and his team to sort out the problems was excellent. Support that has continued to this day with the equally dedicated crew at WesTrac.



The 44 kVA Olympian GEP 44-5 generator set installed on the Thiess concept service vehicle.

LINKE REPOWERS WITH C15

“The original Caterpillar C15 had done 1.7 million kilometres,” according to Linke Contracting’s workshop manager, Andy Mickan. So when it came time for a repower a new C15 seemed the obvious choice.

Linke Contracting, based in the Barossa Valley with depots in Adelaide and Geelong, has been around since 1967. The company has a fleet of 50 trucks which it works long and hard to carry out quality work in mining, civil works, earthmoving and bulk haulage. In this business, performance is everything, the company’s good reputation relies on it.

When it comes to the engines that Linke uses to power its fleet, Andy said that “the ‘specking’ of the truck, the power configuration and the driveline” are key criteria.

To repower its T604 Kenworth Prime Mover B-Double Combination, Linke purchased the new Caterpillar C15 from Cavpower, who handled the installation and set up.

As Cavpower’s Terry Hondow recalled: “The C15 supplied through EPSA Adelaide was configured to 550 Horse Power at 2100 RPM and the torque set to 1850 Lb-ft. Other operating parameters were transferred from the old engine’s Electronic Control Module”.

“At Linke Contracting we’ve been very happy with Caterpillar’s performance, the C15s especially,” added Andy. “But we’ve also purchased a Caterpillar C13 ACERT engine for our Western Star Tandem Tipper pulling a quad dog set up.”



The T604 Kenworth Prime Mover B-Double Combination that was repowered with a C15

CAT TORQUE APPEALS TO RACE ACE

Multi championship-winning Russell Ingall, anchor of the Supercheap Auto V8 Supercar team, has a passion for racing which applies to his leisure time as well. Now the proud owner of a new Maritimo 500 Offshore Convertible, Russell consulted the boat race experts and chose to power his new baby with a Caterpillar 12 litre C12 diesel engine, complete with ACERT technology.

It’s not the first time Russell has owned a Maritimo boat. After a chance meeting with Maritimo’s Bill Barry-Cotter, Russell bought a Maritimo 48, powered by a standard 670hp Cummins. However, this time around Russell did his homework.

“I ended up spending a fair bit of time with the guys at Maritimo who work on Bill’s race team as they do a lot of sea miles and are

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fairly unbiased on the engine front,” Russell explained. “The one that ticked all the boxes for me was the C12 Caterpillar, as the common thing that came through in talking with the Maritimo guys was that the C12 Cat has the best torque rating in the market.”

After a test run on a Maritimo 550 that was fitted with Cat C18’s, Russell knew he’d made the right decision, adding that along with power another big bonus was the engine’s fuel efficiency.



Russell Ingall said that in talking to people who know engines and all about performance, CAT came up more often than not to be the best.

POWERING UP TO COMBAT COMPETITION



Six-Sigma Black Belt Ian Allison will drive this exciting initiative in Australia.

An exciting Multi-Generational Project Plan (MGPP) is underway that aims to deliver a world-class product and service to the power generation sector, with the ability of promoting better fuel efficiencies, emission controls and installation capabilities.

Even though the initiative has been launched to counter Caterpillar’s engine competitors and their dealer networks, this project also signifies the lengths that the Caterpillar family is willing to go to best serve its power generation customers.

The MGPP is supported by four key players. They are Caterpillar Asia Pacific Power Systems based in Singapore, EAME (Europe Africa Middle East) operating from Geneva in Switzerland, Caterpillar Global Engine Marketing Group which is looking after the product side and Energy Power Systems Australia. Caterpillar’s Australian Regional Sales Manager is coordinating all parties involved.

Before the project was started, EPSA’s Phil Canning deemed that Ian Allison should be the designated Six Sigma Black Belt, with the responsibility of driving the initiative in Australia. As Ian explained: “I had to juggle the launch of the project with the extensive and intensive Black Belt training to ensure that the way I managed the project was in keeping with Six Sigma’s proven approach”.

Caterpillar deployed the Six Sigma project management methodology in December 2000, becoming the first company to launch Six Sigma at all business units simultaneously – worldwide. It is led by a specially trained infrastructure of Champions, Black Belts and Master Black Belts.

In line with the Six Sigma approach, the MGPP’s participants are currently conducting a gap analysis, comparing the Caterpillar product and dealer services with the competitors’ offering to determine strengths and weaknesses. As Ian explained: “All aspects of its power generation product range are being scrutinised by Caterpillar. At the same time, the dealer contingent is comparing our turn key and support capabilities. This way, opportunities for improvement can be identified”.

As Ian surmised: “The next stage of the project will involve implementing necessary changes to ensure Caterpillar meets and exceeds the expectations of its power generation customers”.

Most Six Sigma projects are usually completed within six months. However, because of the extensive gap analysis across product and service, the challenges of making real and meaningful business improvements, as well as the logistics of coordinating input from across the globe, this project will take anywhere from six months to a year.

ENGINE ROOM

Issue Six
December 2008

GOING THE DISTANCE

On the back of the WA boom, WesTrac has been busier than ever, servicing the trucks of Caterpillar's on-highway customers.

WesTrac exclusively provides parts and service for Caterpillar engines across Western Australia and New South Wales. As WesTrac's WA-based Terry Harwood explained: "The support infrastructure WesTrac provide, particularly in Western Australia where it is quite remote, is a key selling feature for Caterpillar".

With this in mind, in WA alone, WesTrac boasts 1,653 staff, of which 1,359 are employed in parts and service. In NSW there are another 953 employees, with 772 of these dedicated to this side of the business. To meet increasing demand, this Caterpillar dealer currently has 453 apprentices, 286 in WA and a further 167 in NSW.

Terry said that from the customer's perspective the Caterpillar buying and ownership experience should be seamless. "WesTrac work very closely with Caterpillar and EPSA to provide end-to-end support."

Despite the economic downturn, Terry reports that WesTrac has not seen any slowdown. With an extensive branch network including dedicated on-highway facilities as well as ongoing training, WesTrac is well equipped to best serve its Caterpillar truck engine customers.



WesTrac's dedicated truck servicing facility at Kewdale.



WesTrac's dedicated truck servicing facility at Kewdale.

CAT COMMANDS NEW PATROL VESSEL

'Nemesis', an \$11 million offshore patrol boat and the new flagship of the NSW Police Force Marine Area Command, is the latest in a long line of Cat powered vessels.

Leigh Newbery, the BAE Systems Australia Project Manager who oversaw the build by Tenix Defence was quoted as "being extremely happy with how the project has come together, especially the performance aspects of the vessel".

As Leigh elaborated: "At 32 metres and 104 tonnes it's a lot of boat, so when it came to recommending the propulsion engines we looked at quite a few options, but in the end the 1,825hp Cat 12V C32 ACERT diesels stood out from the rest".

In addition to power, the C32 diesels with ACERT technology also offer surprising fuel efficiency. "We pretty well knew what the fuel consumption would be at 20 knots, but when the cruise speed was dropped back to 18 knots due to heavy conditions, their fuel consumption was simply unbelievable," a Water Police spokesman said. "[This] meant we used thousands of litres

less fuel than we estimated – which for a boat of this size is just phenomenal."

The NSW Police Force Marine Area Command has had a long association with Caterpillar. It currently has six 16 metre vessels powered by Cat and credits the Caterpillar performance and support from WesTrac and EPSA as being of "an extremely high standard".

WesTrac was involved in the commissioning of the C32 and provides servicing. According to WesTrac's Chris Chappell: "After completing over 500 hours the Nemesis is performing above everyone's expectations. WesTrac provide preventative maintenance to the Area Command and every facet of the engine's performance is exactly what we were hoping to see".

The engines have been trouble-free since launching the vessel. The ACERT engine technology produces amazing horsepower for the lowest emissions which is a "win win" for everyone.



The C32's exceptional torque output gets the 'Nemesis' out of the water fast and produces sprint speeds of 27 knots.

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