

# Eldorado Mining, Queensland



**The Penske Australia On-highway Product Support team caught up with Eldorado Mining to find out why it holds the Detroit-Allison Transmission combo in such high regard.**

Several years ago tipper and dog operator Eldorado Mining, located in the hinterland behind Queensland's Sunshine Coast, took delivery of a new addition to its fleet, a dealer stock unit specified with a Detroit and optioned with an Allison automatic transmission.

The story goes that from the very first test drive the team at Eldorado was sold on the Detroit/Allison combo. As time went on however they became even more impressed with the product and made sure that all new additions to the fleet have since been ordered with an Allison.

#### **CUSTOMER**

Eldorado Mining

#### **LOCATION**

Sunshine Coast, Queensland

#### **DESCRIPTION**

Eldorado Mining, a tipper and dog operator on Queensland's Sunshine Coast, relies on its fleet of 12 Detroit-powered trucks for its contract work at Boral's Moy Pocket quarry. Five of these trucks are equipped with Allison automatic transmissions, showcasing Penske Australia's winning on-highway product combination.

**OPERATIONAL DATE** 2011 – ongoing

Penske Australia recently spent some time with Dean Harding, the man behind Eldorado Mining, to gain further insight into his operation and gauge how the Allison 4500 RDS transmissions are performing in his fleet.

“I’ve had plenty of dealings with Eldorado Mining previously, whether it be setting up new truck parameters prior to delivery or onsite reprogramming and evaluation of the latest Detroit fuel maps and Allison shift calibrations,” Darren Price, Product Support Specialist – Penske Australia, says.

Today was going to be a different day for Darren, as he planned to sit down with Dean and learn more about his operation and what makes it so unique.

## ABOUT ELDORADO MINING

As it goes, Eldorado Mining was engaged in contract mining, operating a large number of mobile and fixed plants in and around the Mount Isa region. However in the late 1990s Dean, and partner Susan, made the executive decision to slow down and ease into retirement, making the sea change to Queensland’s Sunshine Coast.

While most of us would be happy to sit back and enjoy the change of pace that comes with retirement, Dean thought he’d buy a couple of trucks “on the side” and have them operating out of a hinterland quarry about a half hour drive away.

Fast forward to 2015, and Eldorado Mining is now the prime contractor at Boral’s Moy Pocket quarry and Dean’s fleet stands at 12 trucks. As Dean explains his business strategy “a fleet of this size is relatively easy to manage and to go any larger

would require a greater investment in infrastructure and personnel, with minimal return.” Dean also acknowledges that Susan is responsible for the financial wellbeing of the company.

The Eldorado fleet is mostly Detroit powered, with some Freightliners and a couple of Sterlings and Western Stars in the mix. A Freightliner Columbia with the MBE 4000 engine is the elder statesman of the fleet, with the two Sterlings being later additions; one is MBE-powered and the other a 12.7 litre Detroit Series 60.

Back in 2011 Dean became aware that a Western Star 4800 was available in the same specification being delivered to Boral for its Sydney tipper and dog operations. As he required another addition to his fleet, Dean bought his first Detroit and Allison equipped truck at this time, and he has never looked back.

In fact, Dean and Ray Turner, his Operations Manager, needed only one test drive to be convinced that the Allison automatic transmission was going to be the perfect match for their Detroit favoured operation.

The Western Star is powered by the Detroit Series 60 in ADR 80-02 configuration and rated at 475 hp, with 1,650 lb-ft torque. Its transmission is in the way of the Allison 4500 RDS, or “rugged duty series”, which is a six-speed transmission, with the fourth range being direct and the two top gears being overdrives.

This particular truck has been in operation for four years, and as Dean advises the transmission has operated flawlessly the whole time. “What the Allison does is take the decision making on when

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“What the Allison does is take the decision making on when to shift out of the driving equation, which allows the driver to focus on the road.”



**Left:** The Allison Transmission touch pad style shift selector displays the requested gear and the current gear. The transmission oil level can also be checked by request via the MODE button.

to shift out of the driving equation, which allows the driver to focus on the road.” And this focus is especially important when operating on the roads in and around the Moy Pocket quarry that are undulating at best, and don’t start to flatten out until the trucks get closer to the coast.

Since Eldorado Mining’s first purchase, the number of Allison-equipped trucks in Eldorado’s fleet has grown to five, with the latest four purchases fronted by Detroit’s DD13 and rated at 450 hp delivering 1,650 lb-ft torque.

Eldorado’s first units to use the DD13 were the Western Star 4800 model and the Freightliner CST112, with Dean since putting another two DD13 powered Allison-equipped Century Class Freightliners into the fleet.

According to Dean, “you can’t beat North American brands” and their powertrain components for simplicity, reliability and low cost of ownership.

Dean adds that the DD13 has continued to provide the reliability that Eldorado has come to expect from the Detroit brand, based on their past experience with the Series 60 and MBE 4000 models in the older trucks.

He also emphasised that the aftersales support from his local Detroit dealer has been second to none. “This is all reinforced in the knowledge that we have 24/7 access to Detroit and Allison product support back-up from Penske Australia, who are authorised distributors for both brands,” Dean says.

## ON THE ROAD

But now to the test drive, and climbing into the DD13-powered Western Star 4800 with experienced driver Brenton Fromm, affectionately known as “Shorty”, behind the wheel, we turn left and head north out of the quarry, which takes the truck up what is the toughest route and the ultimate test for the Allison.

In quad dog configuration the trucks leave the quarry grossing 50 tonnes and on this section the Allison is quickly doing what it does best, picking the best gear for its grade. Within a short time the six-speed unit is up into top gear and we have reached the legal limit, however rounding the bend

the grade suddenly changes and the engine is now protesting at the job at hand.

Brenton stays relaxed behind the wheel, and just holds the throttle pedal flat as the Allison takes care of the shifting, working its way back down through each gear and into third, which the truck maintains until we crest the peak. These are full throttle downshifts done seamlessly with no interruption of power to the wheels during the shift, as there is no need to take control of the engine to break torque and achieve gear speed synchronous to complete a shift.

It's clear to see the advantage of the Allison-equipped trucks in Eldorado's fleet, and how these

**Below:** Heading north out of the Moy Pocket quarry, the Detroit-Allison combination handles these grades with ease.



*The DD13 has continued to provide the reliability that Eldorado has come to expect from the Detroit brand.*





**Left:** Eldorado's trucks are more than capable of outperforming other higher horsepower manual transmission units in the hilly terrain of the Moy Pocket location.

trucks are more than capable of outperforming other higher horsepower manual transmission units through undulating terrains.

Another Allison strong point is the reliability of the electronics. Externally there are only three speed sensors, with all other pressure/temperature sensors and shift control solenoids being internal and linked via a single connection on the transmission case. The transmission control module is also smartly mounted inside the engine bay and away from the elements.

Still riding with driver Brenton, the ups and downs on this route seem never ending and we encounter more third-gear climbs and then ride down the other side in fourth and fifth gear under engine brake. The Allison is keeping its cool on this demanding road as the torque converter lock-up clutch remains engaged providing a mechanical link of engine power to the transmission, and preventing any heat build-up by not using the transmission oil to transfer engine power through the torque converter elements.

The torque converter is really working only during lift-off in first and second gear, with the lock-up clutch engagement occurring before the transmission shifts to third. Engine braking performance is enhanced via a programmable range pre-select feature in the transmission control module that raises the downshift points under closed throttle conditions, when the engine brake is requested.

This feature means that once on a downhill run, Brenton doesn't have to reach for the shifter to manually request an early downshift in an effort to lift engine speed to maximise the engine brake retardation effect. This is all done automatically leaving him free to keep both hands on the wheel and his eyes on the winding road ahead.

When we hit the traffic in the populated areas close to the coast, the engine brake is still working well in the stop/start traffic. Even as the transmission downshifts, there is no interruption to engine brake activation as a downshift takes place. Under closed throttle conditions the lock-up clutch

remains engaged keeping the engine brake active right up until the vehicle comes to a stop.

In these conditions, drivers typically need to apply the service brakes at the last minute to bring the truck to a final stop at the lights. Testimony to this is the minimal brake pad wear that is experienced. All of Eldorado's trucks and dog trailers are fitted with disc brakes, and out of the Allison-equipped trucks, it's only that first Western Star 4800 thus far having required a brake pad change on the drive axles at 250,000 km.

The nimble acceleration of the Allison-equipped trucks is also a big benefit when operating in the traffic close to the coast, minimising the time

required to clear an intersection. Brenton starts a story with a smile on his face about how Eldorado's mining trucks keep up with fellow motorists when taking off at the traffic lights. "Drivers in the adjacent lanes are pretty shocked that we are still bonnet-to-bonnet when we roll up to the next set of lights."

With our drive over, we make our way back to the quarry where we catch up with Dean to wrap up our visit. Referring back to the time when the second and third Allison-equipped trucks went into service, he laughs when recalling that some drivers had threatened to quit if he put them into "one of those automatic trucks", as the mentality was that truck driving is all about changing gears.



**Right:** Eldorado driver Brenton Fromm pictured in front of the DD13-powered Western Star 4800.



**Above:** The Eldorado Mining fleet's Western Stars are also Allison equipped.



*Once you've tried the Allison, there is no going back.*

"Once they've been assigned an Allison-equipped truck, they complain if they have to go back into a manual truck when theirs is off the road for scheduled maintenance," Dean adds. He goes on to say that other owner/drivers operating out of the Moy Pocket quarry have also been paying attention to the Eldorado operation, with some now seriously considering the move to an Allison Transmission with their next truck purchase.

To round off the day, Dean leaves a parting comment that represents his experience with the Allison brand: "Once you've tried the Allison,

there is no going back." Then he turns on his heels, heading to the shed, and says that he has another truck on order: "This one is a Freightliner CST112 with a DD13 and Allison."

With a new truck on order, retirement of one of the older units is inevitable if Dean is to keep the fleet at 12. On the subject of retirement, this appears to be a far off concept for the man in charge. Now in his 70s, Dean's passion for running Eldorado Mining is still as alive as it was 15 years ago when he and Susan made their sea change to the Sunshine Coast to "wind down".

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