

HINO 4X4

WITH ALL-WHEEL-DRIVE ALTERNATIVES, HINO IS HEADING INTO NEW TERRITORY. WORDS BY BRENTON O'CONNOR



Up until now, operators requiring a light-duty, 4x4 truck in cabover configuration, were limited to either an Isuzu N Series or a Fuso Canter. Whilst Hino has been a very successful contender in the light-duty Japanese truck market for many years, its variants only included 4x2 axle configurations.

Hino Australia's product manager, Daniel Petrovski, has been the driving force behind the company's newly released 4x4 300-Series truck. This is a truck that was designed, tested and introduced primarily for the Australian market, and, consequently, it's a credit to Daniel and the team that pushed to make it happen.

Given the small size of the Australian market, and also the high concentration of manufacturers from Japan, Europe and USA, Australian buyers are traditionally limited to the available model ranges from a parent company's global product line-up. Except in the rare cases of locally produced PACCAR, Volvo Group and Iveco products manufactured in Australia, manufacturers have found it economically unviable to produce models in response to demand from just Australia.

The Hino 300 4x4 project started back in 2012, with Petrovski as the driving force, working with Hino's engineering department in Japan and in consultation with operators in Australia already operating this class of

vehicle, even though they were traditionally from other Japanese manufacturers. Initial prototypes were built and placed into operations with a drilling company in Western Australia and Cook Shire Council in Far North Queensland. Petrovski and his team spent considerable time with the operators in these locations constantly evaluating, testing and gauging feedback from the test companies. The conditions in which both test operators were located were harsh, and high temperatures, rough roads and dusty conditions were the norm.

These test conditions gave Hino valuable feedback and provided the impetus behind product enhancements including the raising of the engine air intake system to assist in gaining cleaner air for the engine and reducing the need for constant air cleaner blowouts in dusty conditions.

The new Hino 817 300 4x4 is available in both a standard cabin with three seats and as a crew cabin with seven seats, a configuration that is particularly appealing to fire and emergency services. The GVM of the vehicle is 7500 kg, however, it can be downgraded to 4495 kg to allow for car licence drivability. The GCM of the vehicle is 11,000 kg (optionally downgradable to 7995 kg for car licence holders), which implies the 817 has a towing capacity of 3500 kg.

Standard wheels are a six-stud 8.5R17.5-121 all-terrain pattern tyre, including a spare tyre and rim mounted to the chassis. Hino has included dual fuel tanks to extend the range of this vehicle, with a total capacity of 170 litres.

There are four key standout features of the new Hino 300 4x4, and these include the standard-fit safety features, the six-speed transmission with deep reduction provided by the transfer case, the engine and the power it delivers, and, finally, the occupant comfort – all of which will be discussed later in the review.

When it comes to safety, the 300 4x4 pushes the boundaries of what is expected of a truck in this class. Unlike many 4x4s, Hino has elected to use disc brakes rather than the industry standard drum brake.

“The choice of disc rather than drum is two-fold. Firstly, disc brakes are far superior in off-road conditions, particularly when traversing river crossings and mud, as the disc brake is self-cleaning and doesn’t block up with water and mud. Secondly, disc brakes are much easier and quicker to change pads. As a worst-case scenario, the driver could change the disc brake pads on the side of the road, however, you would not attempt to change brake shoes in any place other than a workshop,” said Daniel.

The disc brake system is fitted with ABS as standard; however, the ABS is disengaged when low range is selected, as ABS brakes can be somewhat dangerous off-road. Furthermore, the truck is incredibly highly spec’d, including vehicle stability control (VSC), driver and passenger airbags, electronic brake force distribution (EBD) and anti-slip regulation (ASR) systems. Plus, as an industry first on a 4x4 truck, a standard-fit reverse camera has been included. Cabin access is excellent, including both entry into the front cabin and also into the rear doors on the optional crew cabin, with three points of contact maintained at all times when entering and exiting the vehicle.

As mentioned earlier, the 300 4x4 is fitted with a six-speed synchromesh manual transmission, with a somewhat unusual layout – sixth gear is positioned in its own gate, against a spring detent, closest to the driver. The selection of gears from the cabin to the transmission is done by cables rather than linkages, which lack some feel. In particular, selecting second gear is somewhat difficult, as the detent position is slightly offset from where you would expect it to be. However, the ratio spacings are well thought out and top gear (sixth) is an overdrive.





Using single hypoid reduction axles, the final drive ratios Hino has selected (4.625:1) are particularly impressive. This relatively high gearing for a 4x4 allows the Hino to sit on 100 km/h at just 2440 rpm. This provides added benefits of improved fuel economy and reduced engine noise while enabling the engine to operate in its 'sweet' spot of near maximum horsepower and within the flat torque curve.

The transfer case used on the 300 4x4 is borrowed from the larger GD 4x4, and has a huge reduction of 2.224:1 when low range is selected. This is another reason why Hino was able to use the above-mentioned axle ratios, as it allows for high gearing on road, without sacrificing reduction when off-road in low range. For instance, when low first gear is selected, a massive reduction of 14.165:1 is achieved, which is superb for traversing river crossings, climbing steep hills and crawling over rocks.

The test day provided the opportunity for plenty of time to evaluate off-road performance, and the results were incredible, with the truck wading through a river crossing and then climbing a steep bank exiting the river with aplomb.

Selection of both 4x4 and low range is done via electro switches in the cabin; however, the driver will need to engage the hubs manually. The truck isn't available with differential locks ex-factory, however, a local fitment is something a customer could consider. The exhaust brake provided sufficient retardation so that steep declines could be negotiated without the need to use the service brakes.

Powering the 400 4x4 is Hino's own NO4C UT, which is a diesel four-cylinder turbocharged and intercooled engine. Displacement is 4.009 litres, and maximum power outputs are 121 kW (165 hp) and 464 Nm of torque. The engine is also used and proven in Hino's existing range of 300 4x2 trucks, and, as such, has proven to be a reliable workhorse. Emission reduction requirements are met using EGR and a DPF filter. Somewhat concerning is the DPF filter and the potential of frequent blockages requiring manual burn offs due to high idle times and also low travel speeds typically encountered by 4x4 vehicles, however, Petrovski confirmed it hasn't been an issue with any of the test vehicles.

Driver comfort is a standout for the 817, and, in addition to the numerous driver aids mentioned earlier, the Hino is a nice place to spend the day. Standard fit is an adjustable, magnetically damped driver's seat. Other mod cons include cruise control, and a navigation system that includes truck mapping, Bluetooth telephony, AM/FM/DAB+ radio and Bluetooth audio system, together with a waterproof reversing camera, all of which are fitted as standard. In the crew cab variant, an auxiliary independent heater and air conditioning system are included in the rear of the cab to either heat or cool the occupants. This was also extremely welcome as it allowed for a comfortable interior during the evaluation while ambient temperatures were recorded at 34 degrees C.



The test route included a variety of road surfaces, in addition to the river crossings, steep climbs and rock paths mentioned earlier. In all of these situations the Hino was well up to the task, dealing with everything from freeway driving, sealed C roads, as well as rough gravel forest roads in the Daylesford (Victoria) area.

The ride is firm, but not uncomfortable, and was much better than expected from a Japanese 4x4 that rides on 17.5" wheels. The test vehicles were all loaded to just under their 7500 kg legal GVM, which prevented the opportunity for evaluating the difference in ride comfort of an unladen vehicle. With near full payload, the engine was somewhat busy providing adequate horsepower, and it would certainly be interesting to trial the vehicle at maximum GCM (11,000 kg) to ascertain the performance with a high overall weight.

The warranty is fairly industry standard, with three years/100,000 km included with all purchases, however, an extended driveline warranty is available for purchase through the selling dealer at the time of sale. When it comes to service intervals, the standard is at 20,000 km. Minor services are required at 20, 60, 100, 140 etc., with major services at 40, 80, 120 and 160 etc. There are some additional service items required from time to time that are based on higher/different kilometres or time – brake and clutch fluid, air filter, coolant or DPR hoses.

The Hino 817 4x4 is testimony to Hino's interest and commitment to the Australian market, having invested much time and money to bring the 300 Series 4x4 to fruition. The test programme proved Hino has achieved an extremely accomplished overall package, which will no doubt appeal to a myriad of operators requiring a 4x4 vehicle in this weight class. **D**



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