



GOING ALLA AUTO

THE OPTION OF AN ALLISON AUTOMATIC TRANSMISSION FOR THE 500 FE MODEL IS MEANT TO INCREASE HINO'S COMPETITIVENESS IN THE 14-TONNE GVM CATEGORY. PRIME MOVER TOOK IT TO THE TEST.

Story by Peter Shields

It's safe to say that Hino is a leading force in the manual 14-tonne market, but that doesn't mean there is no room for improvement. Up to 60 per cent of all units purchased in this segment are sold with a fully automatic or automated manual transmission, so the recent addition of an auto version could hold a lot of potential for the Japanese brand. But can it fill the gap from the outset?

For our road test, we're taking the Hino 500 FE out in and around Sydney. There

are just 1,000 km on the clock when we set out with our seven tonnes of payload, so everything – including the engine – is almost brand-new. The unit is rated at 14 tonnes, which would require the use of a driver's work diary if venturing more than 100 kilometres out of town. If you don't mind sacrificing a couple of tonnes of payload, Hino is also offering a 12-tonne spec to avoid the need for a logbook.

But that's not what we're here for today anyway.

Today, it's all about the gearbox. With a

manual, stop-start and low-speed heavy traffic situations can often discourage shifting gears, which throws fuel efficiency out the window. Yet the auto will always make the right decision whether to shift or remain in a particular gear – so Hino did well adding it to spec sheet.

The standard unit for the FE is a six-speed all synchromesh, but it's soon becoming obvious that the new option of a 2500 series Allison full automatic – equipped with a lock up clutch torque convertor – will appeal to a wider range of applications

from construction to street sweeping. The transmission has power and economy modes and we give both a good workout during our drive. In 'Eco' mode, the transmission will always keep the engine revs in the green band and upshift within that range even if the accelerator is held flat to the floor. Interestingly, the 'Pwr/Eco' switch is located to the left of the shifter – perhaps a deliberate play to place it out of the way and discourage drivers from using it too often.

Fourth gear is direct and fifth provides a

similar overdrive to the manual's sixth gear. Around town and on the occasional 100 km/h inter-suburban motorway, it works well in conjunction with the 4.555 ratio differential. Those operators envisaging extensive highway work can have their Hino dealer activate the unused sixth gear within the transmission to provide an extra overdrive in order to keep the engine revs even lower in the green zone, for better economy and less wear down the line. As expected, the transmission protects the engine from over-revving and the shift lever can be pulled all the way back to first gear at any speed with no repercussions on the driveline – it simply won't allow the transmission to downshift if there is any chance of over-revving the engine. Pre-selecting the exhaust brake ensures its maximum effectiveness and the transmission will downshift on its own accord to assist in controlling descent speeds.

It's not often that we have to use the brakes at all on downhill sections, but they do get a good workout in the stop-start sections of our test route. It's in situations like this that the wisdom of a fully automatic transmission is appreciated, as sensitive freight can be knocked around by the exuberant use of a clutch pedal.

Making a driver's life easier by using an auto isn't the only area where Hino has put in some extra thought: The driver's ISRI seat would be quite at home in a line haul interstater and is equipped with an integral seat belt and multiple adjustments and damping.

It's a real touch of practical luxury for metropolitan drivers who are just as likely to spend very long hours behind the wheel as those working on inter-state routes. The

seat automatically senses the weight of the driver, unlike other styles of seat that require each driver to manually "dial in" their own weight. This is an advantage for operations that don't have one dedicated driver per vehicle.

The combination of the front stabiliser bar, 19-inch diameter wheels and low profile 70 series tyres that have very little sidewall flex results in a truck that handles very well with little body roll and feels stable when cornering even if pushed a little.

Hino has also done its OH&S homework, as evidenced by vertical grab handles on the A-pillars and a long horizontal grab rail beside the seat. At the front of the cab, there is a centre-mounted hand rail to ensure driver stability when using a squeegee to clean the windscreen. According to WorkCover NSW, falls from trucks account for a significant proportion of injuries in the transport sector, so items such as these strategically placed handles are not just for convenience.

The parking brake is air actuated and operated by a conventional ratchet lever, which takes some getting used to and is pulled up a bit too hard the first few times we try it.

Behind the seats is what could be called a day bed, but in reality, it will be most often used as a large storage area – even though there is a curtain track in place if block out curtains need to be fitted.

But, back to the new transmission. When driving under normal circumstances, the gear shifts are almost imperceptible and with the windows up to eliminate most of the exhaust noise, the only indicators that there has been a gear shift are the tacho needle and the digital readout on the dash showing the current gear. But there is a



FAST FACT

The 6.5-litre JO7E-TN engine has five cylinders and produces a maximum 260 hp or 191 kW at 2400 rpm, as well as what is said to be a 'class leading' torque of 794 Nm at 1500 rpm. This engine uses exhaust gas recirculation and a diesel particulate filter to break down pollutants.



downside, too. The auto option misses out on cruise control, which is standard on the manual version.

From a business perspective, the new Allison option will help improve driveability and is perfect for manoeuvring at the slow speeds that are required in a city environment – a real safety advantage. Plus, there's no clutch to get hot or wear prematurely when doing this sort of task; and the fuel economy is comparable to, or even better than, a traditional manual transmission in the hands of a good driver. The common belief that employing an auto would result in more fuel burn can be relegated to the folder of 'old wives' tales', because the fifth generation Allison software synchronises perfectly with the Hino engine.

Even under hard acceleration in Power mode, the upshifts are smooth and the constant delivery of torque maintains even momentum – which is easier on the driver and on the freight.

What's more, the Allison 2500 has facilities for PTO installation on each side, which is

important for complex installations such as street sweeping bodies.

Wheelbases range from 3750mm to a stretchy 5500mm, so the Hino should be able to accommodate bodies with a nominal length of up to 7820mm. The short wheelbase is suitable for applications such as sweeper, small garbage compactor or tipping bodies, while the medium 4250mm wheelbase is suitable for high payload eight pallet 5-5.5m pan bodies and will also find work in refrigerated pan, tipper and tanker applications, for example.

The long 4850mm wheelbase is suitable for 5.5-6.5m general freight pantech, tautliner, flat tray and tilt tray tow truck work. The extra-long 5500mm wheelbase can be combined with a Hendrickson Air bag rear suspension and will be at home in the metropolitan distribution domain, fitted with seven-metre curtain-sider or pantech bodies. This configuration could also be a good fit for longer tilt and flat tray applications, according to Hino.

Other cab features include a 6.1-inch high-

definition touch-screen, conventional AM/FM radio receivers, CD and DVD player, USB input for connecting portable audio players and an SD card reader for accessing digital photographs, video and audio files. The system also features Bluetooth hands-free phone connectivity with voice dialing. In addition, there is the option of up to three reversing cameras, with the image displayed on the integrated two-DIN LCD screen.

The headlamps are protected by the bumper, which incorporates a Front Under-run Protection system that meets ADR 84 standards and not only reduces the severity of front end crashes, but also protects the truck's steering componentry. So has Hino hit the mark? Yes, because it had to. The medium-duty truck market has been demanding more two-pedal options for a while now and the big Japanese brand had to react.

The result is a practical auto package that will enable fleets to access to a larger pool of drivers and in many cases be capable of doing the work of a larger vehicle. (M)



FAST FACT

At the conclusion of our day driving around Sydney, the computer on the dash shows a frugal average fuel consumption 4.7 km per litre over the distance of just under 200 km of city, motorway and suburban driving. Even better figures can be expected once the engine frees up.