

New Model



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THE VERY HAPPY MEDIUM



HINO LAUNCHES ITS NEW 500 SERIES MEDIUM DUTY

SINCE THE SOMEWHAT UNDERDONE 2008 IMPROVEMENTS TO ITS 500 RANGE HINO HAS LAGGED BEHIND THE MARKET LEADER'S OFFERINGS. THAT GAP HAS BEEN NARROWED WITH THE 2017 HINO 500 WIDE CAB INTRODUCTION, ALLAN WHITING RECKONS.

Wide Cab' is something of a misnomer, because the cab metal is the same width as before. However, a new wide-track front axle has dictated wider cab fenders, so the overall width is up by 200mm.

'Optimised Powertrain' might have made a better model description than 'Wide Cab' for the 2017 Hino 500 models, because revised engine and transmission specifications have transformed the 500s.

FIRST UP, A LITTLE HISTORY.

Like all truck importers and makers in the Australian market Hino had to upgrade its engines for compliance with ADR80/02 (Euro 4) that took effect from January 2008. Also like most, Hino adopted common-rail injection, variable geometry turbocharging and cooled exhaust gas recirculation (EGR), plus an oxidising catalyst (OC) in the exhaust system.

In conjunction with these changes Hino came up with a longer-stroke version of the proved J08 engine, called the AO9C.





5000

In the 2007 Hino 500 models the JO8 7.7-litre six had figures of 190kW (255hp) at 2500rpm, with 794Nm at 1500rpm.

That performance proved more than adequate in the case of two-axle models, but we were critical of the FL 6x2 that struggled in hilly country at its 24-tonnes GVM rating. That's where the 2008 AO9C engine stepped in.

The upsized Hino engine had the same 112mm bore dimension as the JO8E, but a 20mm longer, 150mm stroke, for a 1.1-litre increase in capacity.

The Hino AO9C came in two states of tune: the TK engine powering the Hino FM 2632 variants delivered 235kW (320hp) at 2100rpm and 1275Nm of torque at 1100rpm; and the TJ engine powering the FM 2630 variants had figures of 221kW (300hp) and 1079Nm.

For Euro 5 compliance in 2011 Hino retained EGR, but dropped the OC in favour of a diesel particulate filter (DPF). Experience with this combination showed that there was a better way and for 2017 the JO8E and AO9C engines no longer have EGR and DPF, but rely solely on SCR, fed from a 56-litre AdBlue tank.

The 2017 changes to both these engines increase outputs: the JO8E-WA now has 206kW (280hp) at 2500rpm with

883Nm at 1500rpm, and the AO9C-UR has 235kW (320hp) at 1800rpm with 1275Nm at 1100rpm in front of automatic transmissions and 257kW (350hp) at 1800rpm with 1422Nm at 1100rpm in front of manual transmissions.

The AO9C also scores a 'Jake style' engine brake.

As before, the 7.7-litre JO8E engine couples to either a Hino six-speed synchro box or an Eaton ES1109 nine-speed synchro box.

The standard box behind the AO9C engine used to be Eaton's RTO 11909 LL constant mesh transmission. This box had eight highway ratios, a low gear, two crawl ratios and two reverse gears, making it versatile, but the dearth of young drivers familiar with constant-mesh boxes has seen a switch to synchromesh.

A newly developed nine-speed, all-synchromesh gearbox is now the standard offering behind the AO9C. This MOO9 OD box is branded Hino and made by Toyota's transmission corporation, Aisin.

Like the Eaton synchro box used behind the JO8E engine the new Hino box has a repeat-H, four-gate shift pattern.

Allison double-overdrive six-speeds remain the optional autos behind both engines and, being filled with synthetic oil, have a drain period of 480,000km.

RUNNING CHANGES

Hino claims that the new Wide Cab trucks are the safest Japanese trucks in the medium truck market, thanks to standard vehicle stability control (VSC), traction control (TC), ABS braking, driver's side airbag, front underrun protection (FUPS), ECE R29-rated cab strength, reversing camera and fog lamps.

Manual-transmission Wide Cabs come with Easy Start, delayed brake release, allowing for hill starts without roll-back.

We were highly critical of the 2008MY Hino 500 seats and it's pleasing to report that the Wide Cabs have class leading ISRI 6860 chairs.

Ergonomics were very good in the previous cab and remain so. Even better is a 'staircase' entry step layout, rather than the in-line steps previously used.

The frame is all-new. Higher-tensile rails are pre-drilled in 50mm increments, allowing simple wheelbase changes and easy fitment of ancillary equipment and bodywork, without the need to drill the frame. The top flange is finally rivet-free.

Hendrickson HAS230 and HAS400 suspensions are available and are fitted with electronically controlled height adjustment (ECAS), to suit different loading dock heights.





ON THE ROAD

The press drive program began at Sydney's Eastern Creek racetrack, where a go-kart-style skid pan had been hosed, to make it slippery. Drivers were able to feel the lack of stability of an unladen Wide Cab with its VSC disconnected and contrast that with the absolute stability of the same truck with VSC engaged.

With VSC disengaged the test truck would plough-understeer off the track in tight corners or hang out its tail when provoked with too much right foot and too much steering wheel input. With VSC engaged the truck could be driven with a flat accelerator and still kept quite tidy, thanks to power cutting and wheel brake action by the VSC system.

Hino's product strategy manager, Daniel Petrovski, pointed out to the assembled journos that trucks are over-represented in single vehicle accidents involving roll-overs. He also quoted US National Highway Traffic Safety Administration figures, showing that two-thirds of fatal truck accidents are roll-overs.

Then it was time to get behind the wheel of bodied and loaded Wide Cab models for a combined city, freeway and secondary road drive from Sydney to the Hunter Valley.

Pre-trip checking wasn't difficult and getting in and out of the Hino 500 cab was OH&S safe, with two-hand grab positions and non-slip, staircase steps. The 280hp models had two-step access and the 300+hp models, three steps.

All switches and levers were easy to reach and the new instrument panel was clear. Driver vision was first class, thanks to a large screen and side windows, plus flat and spotter mirrors on both sides.

Ride quality and steering precision was exceptional in the air-suspended test vehicles, but the leaf-sprung rear ends gave a firmer ride.

The ABS braking system worked fine, with a progressive pedal action that made it easy to avoid over-braking. The AO9C engine's braking power was adequate for three-axle rigid applications.

Cruise control is welcome in any truck and the Hino system behaved ideally. Selection and cancellation were intuitive.

The previous 1109 LL box was well installed and the shift quality was very good, but Hino has responded to the move away from constant-mesh boxes in medium-size trucks, by fitting its own nine-speed. This box was a delight to shift, with a positive gate

and light lever and clutch actions.

The repeat-H pattern is the same as that in the lighter-duty Eaton synchro box that fits behind the JO8E engine, so fleet commonality won't be an issue. Also, it's good driver preparation for the time when this medium-truck generation of drivers moves into heavies that have Roadranger 18-speeds that have the same repeat-H gate.

The AO9C engine had noticeably more grunt than its shorter-stroke sibling and made a much better three-axle truck powerplant. The previous-generation AO9C, was well off the pace, but the 2017 variants have much more useable torque and are flexible enough to be operated in the green economy band that tops out at 1500rpm.

During a press preview of the FM at Hino in Japan in late 2007 we were told the AO9C engine had considerable development ahead of it and that has proved to be the case.

The Wide Cab 320 and 350 models were the first Japanese trucks I've driven that felt like European machines, with very little engine noise, slick synchro or full auto transmission, great comfort and ergonomics, state of the art chassis dynamics. Very impressive. 