



Automatic Alternative

TOYOTA'S NEW 60 SERIES LANDCRUISER IS A POWERHOUSE IN TURBO DIESEL FORM. WHAT BETTER EXCUSE CAN THERE BE FOR FITTING AN AUTOMATIC TRANSMISSION?



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Not everyone thinks an automatic transmission is the way to go on a heavy duty four wheel drive. There are those who insist that a manual gearbox just can't be beat and that autos are for wimps. Well, let 'em — I've driven a number of automatic 4WDs and have been forced to come to the conclusion that, despite what some may say, autos have their place and, in some cases, can actually be better suited to conditions than a manual.

An example of what I'm talking about is the steep climb where rocky steps and sand-covered washaways makes the tentative balance between traction, stability and momentum a difficult one to maintain. Under such conditions the fluid nature of an auto's drive allows the engine and tyres to hunt for that extra grip where a

manual often either stalls or begins to wheelspin. An auto can use low revs all the time *without* stalling.

There are drawbacks. Autos sap some power. They usually offer less engine braking than might be required on a steep descent and, where accurate control of power application is desirable, an auto's tendency to shift gears without reference to what the driver wants can be frustrating.

Toyota's 60-Series wagons, now with the incredibly powerful turbo diesel, seemed to us a prime candidate for such a gearbox for a whole range of reasons. The auto option had to be available if only to cater for those who want a more relaxed style of driving. With all that power (105kW), any power loss would be negligible and still leave as many horses

at the rear wheels as direct competitors.

But there was another reason, one which made the auto version likely to be even better than the manual. The manual turbo diesel has so much power low down, and such a responsive engine, coupled to a light pedal and a fair amount of 'give' in the driveline that rough terrain tended to cause progress to become very jerky. In some instances the jerkiness could become so severe that the engine would stall, and even when it didn't, the whole experience could become quite annoying.

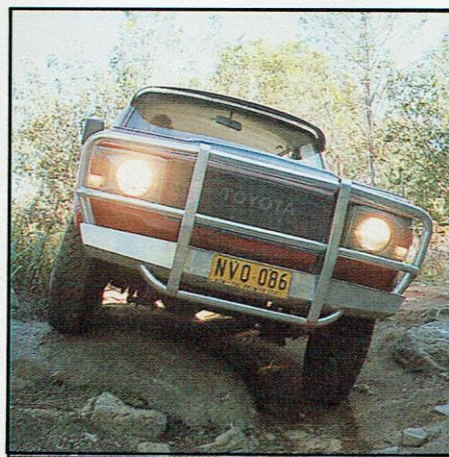
When we tested the manual in a comparison with Patrol, Pajero and Jackaroo turbos in June (Vol. No. 29) we were more than happy with the engine itself, but commented adversely on its combination with the transmission. Some of that criticism may have been misplaced, and the blame may well have been deserved by some other component in the system. Whatever, the fact remains that the end result was not the best.

It was then decided that we had to look at the auto, figuring that the nature of an automatic transmission would soak up some of that jerkiness and provide a smooth, controllable throttle response under *all* conditions. We hoped, in effect that the auto would remove our only serious complaint with the turbo wagon.

So, did it?

The simple answer is yes. Even under extreme provocation, the vehicle could not be made to lurch in the way the manual did. I particularly sought out some of the bumpiest uphill tracks I could find, including one ascent which is little more than a path composed of large diameter boulders, yet power could easily be fed in in such a way as to keep uphill progress smooth and unfussed.

The pedal is still light, and there are still the occasional surges in engine speed due to your foot bouncing on the throttle,



but where this caused difficulties in manual form, they made little practical difference in the auto. Overall, I was forced to conclude that the auto is actually better in rough off-road conditions than the manual because it allows that engine to do its work properly, without masking the brilliance of the broad range of massive power.

On the road, of course, there is something of a trade off. As with any automatic you're going to have a minor drop in outright performance. But in this case it barely matters. There's so much urge there to start with a small drop like that is hardly worth mentioning. And it is small. The auto 'Cruiser can still keep pace with

most ordinary cars and will readily accelerate with the best 4WDs, lagging only slightly behind its manual counterpart.

At highway speeds, overtaking remains authoritative compared to most and the engine doesn't even begin to run out of steam until well over 130kmh. Top speeds in excess of 160kmh are achievable, though overtaking power is reduced above 130.

Around town, the transmission shifts smoothly and unobtrusively. The lower three ratios are well suited to this work and the only criticism could be levelled at the way fourth gear drops in and out so readily. That, however, can readily be overcome by moving the lever back to '3' until higher speeds are called for. Once on the highway, that fourth gear gives low engine speeds (and hence better fuel economy) at respectable touring speeds.

That aside, and the small fuel penalty associated with all autos, the only area worthy of comment is the low range ratios. Although the use of an automatic transmission alleviates ratio problems in many cases, it can't automatically cater for engine braking. Unfortunately the ratios in this case are a little too high for steep descents and retardation has to be found elsewhere — either by applying some foot brake or (under some conditions only) by pulling a notch or two of hand brake.

We were left, at the end of our testing of the manual, with the distinct feeling that Toyota could well improve the vehicle. In some ways we felt that vehicle represented an unintentional retrograde step only offset by the beautiful power and towing ability of the new turbo engine. For many buyers, the trade off was worth it, and still is, but for our money we should have been able to have our cake and eat it too.

With the Automatic transmission, we can.

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