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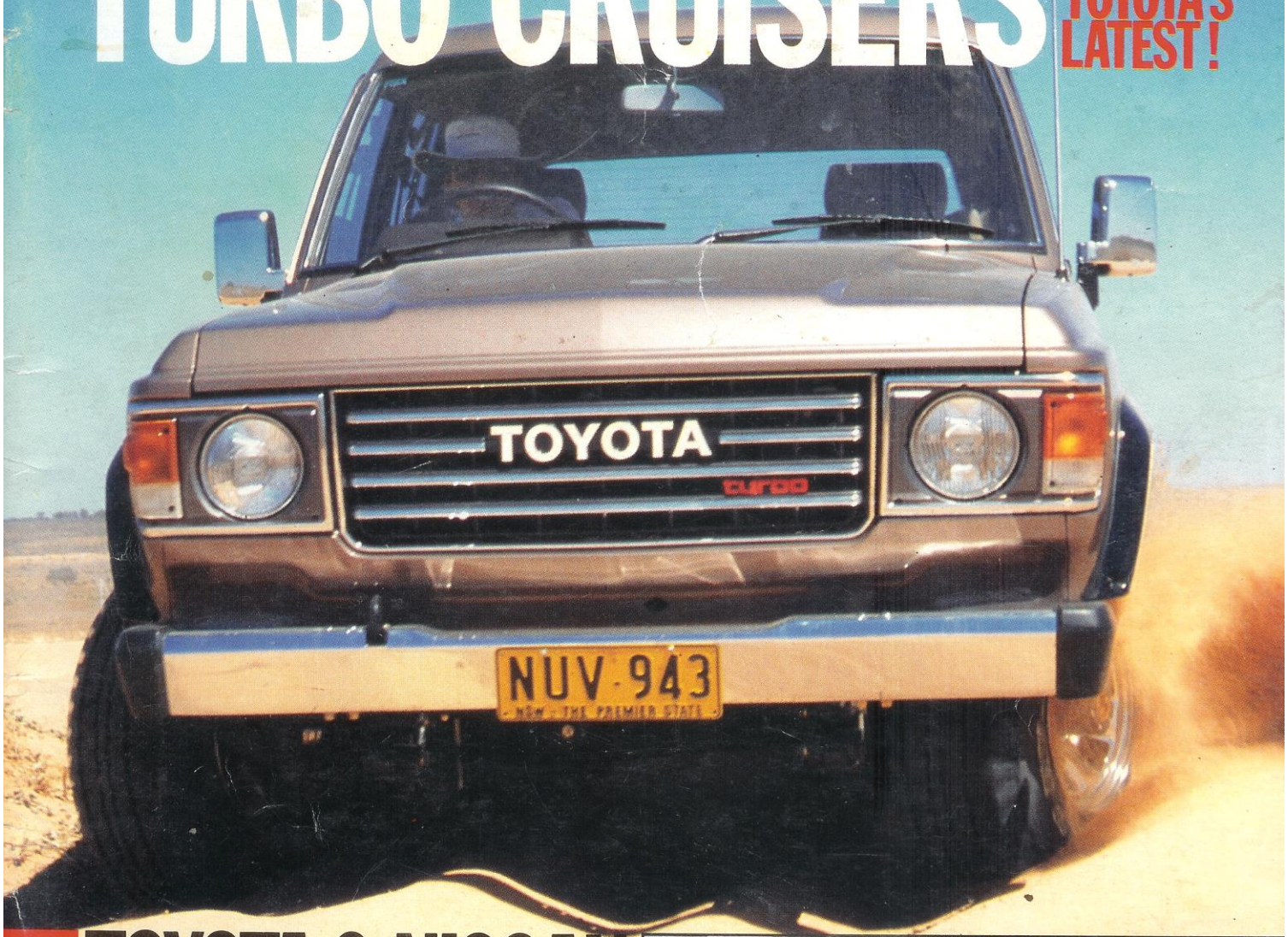
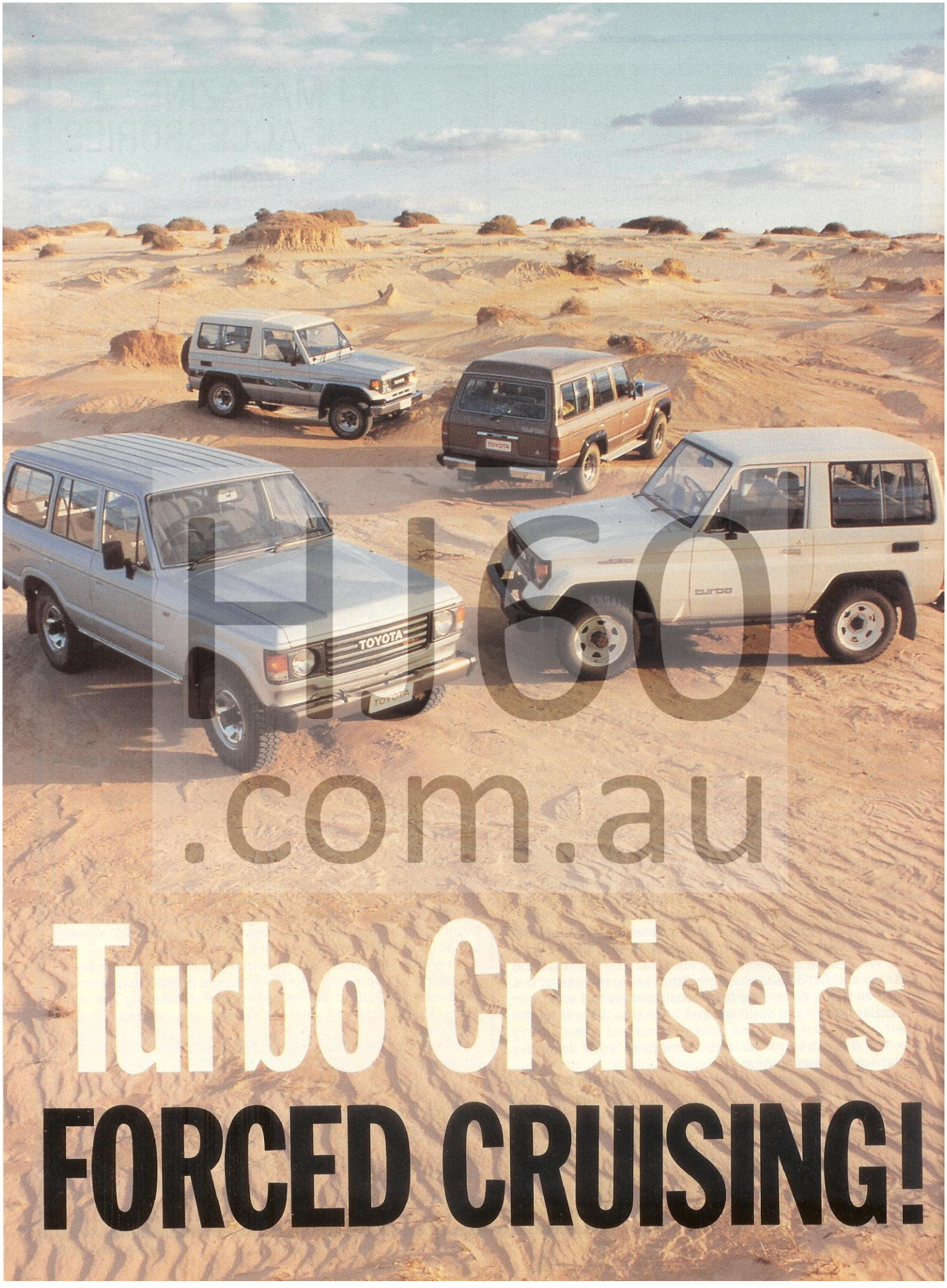
TURBO CRUISERS

WE DRIVE TOYOTA'S LATEST!



TOYOTA & NISSAN LOCK HORNS

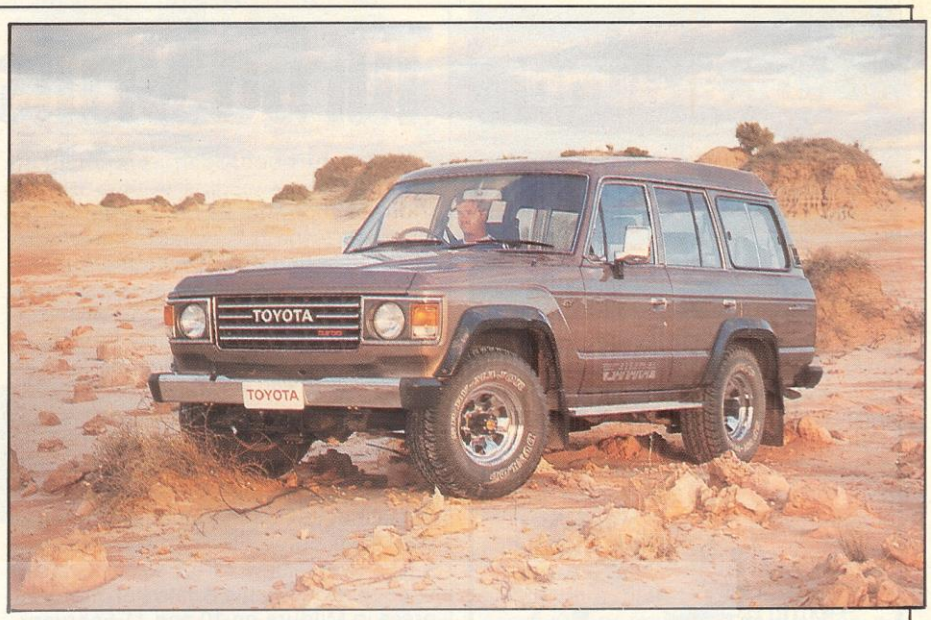
We Crown the Ute King

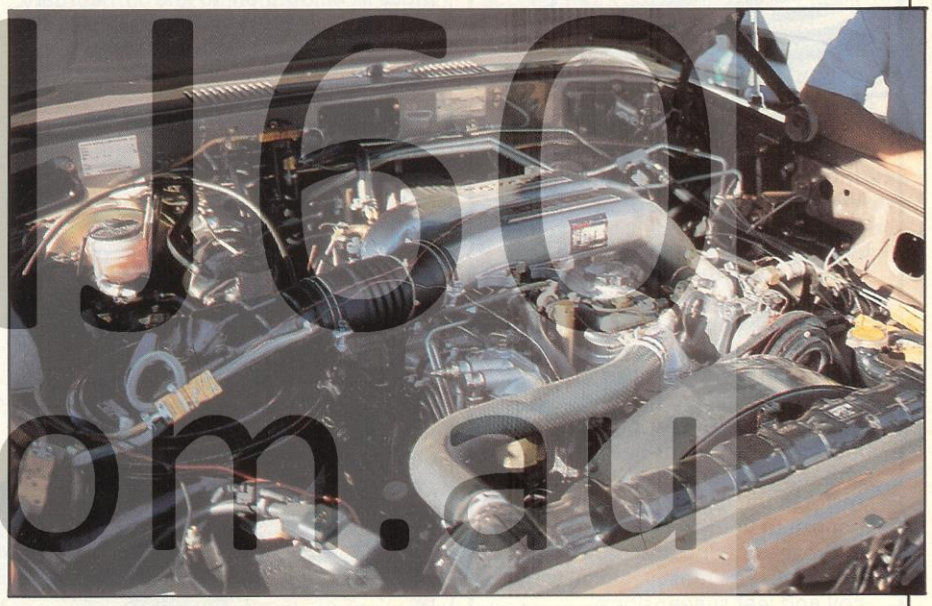


Turbo Cruisers

FORCED CRUISING!

Toyota has finally joined in the recreational off-road turbo boom with its new range of Land Cruisers. The engines are undoubtedly state of the art and put Toyota at the forefront — but the suspension and steering remain as great Cruiser legacies.





Toyota has once again leapt to the forefront of the Australian 4WD market with its all-new range of forced induction engines for the mighty Land Cruiser marque.

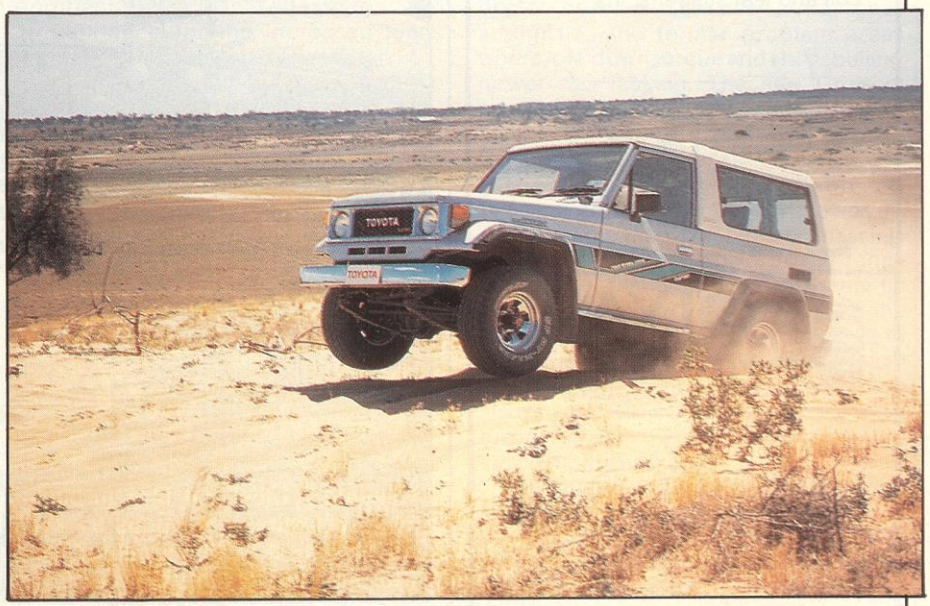
Featuring the most advanced engine technology yet seen in the Australian 4x4 market, Toyota's three new turbo powerplants mixed between seven new variants are just what the doctor ordered for the previously struggling diesel engines in the Cruisers.

4X4 magazine specially criticised the MWB Cruiser as "Toyota's Weak Link" when we first tested the diesel version last year. In the engine department, this is no longer the case at all.

Toyota has aimed the major improvements to the bottom end, pulling-power of the Cruiser, rather than its highway cruising ability. As we said, there are three all-new turbo diesel engines spread throughout seven new models.

They are: deluxe 60-series wagon manual and auto; High-roof Sahara Wagon in both manual and auto; deluxe mid wheelbase both manual and auto; and the all-new turbo diesel Bundera hardtop.

The wagons feature direct injection turbocharged versions of the 2H diesel engine previously featured in that model, while the mid wheelbase also gets an



Turbo Cruisers

injected turbocharged version of its previous diesel engine — the 3B. The indirect injected turbo engine in the Bundera — the 2LT — was not previously featured in that model, with the Bundera only previously available in petrol form.

4X4 magazine brought you the "Australian exclusive" on the new turbo Land Cruisers way back in November and we are happy to say we were *totally right*.

We leaked production schedules from within Thiess showing the exact model mix and which engines would be featured. We managed to pick, back then, down to the last detail, all the models Thiess has now unveiled.

The seven new turbo diesel Cruisers were released to the Australian motoring press in Mildura on 10 and 11 February.

At that release Thiess Toyota's Managing Director Robert Johnston optimistically viewed the 4WD industry amid the overall decrease in commercial sales for 1986. He predicted a five per cent decrease in 4x4 sales over the record year of 1985 . . . when Thiess recorded retail sales of 70,000 units in the commercial sector. He warned however, that '86 would be the toughest year on record for the commercial giant and while in 14 years, Thiess has never decreased in sales from year to year, Johnston warned 1986 may be the first.

But while gloom was the general order of the day, Thiess made no bones about the importance of the move to turbocharging for them. Thiess claims the new turbos will account for 37 per cent of Land Cruiser sales from now on.

However, while the news is good in regard to engines for the mighty Cruiser range, steering and suspension have once again been ignored.

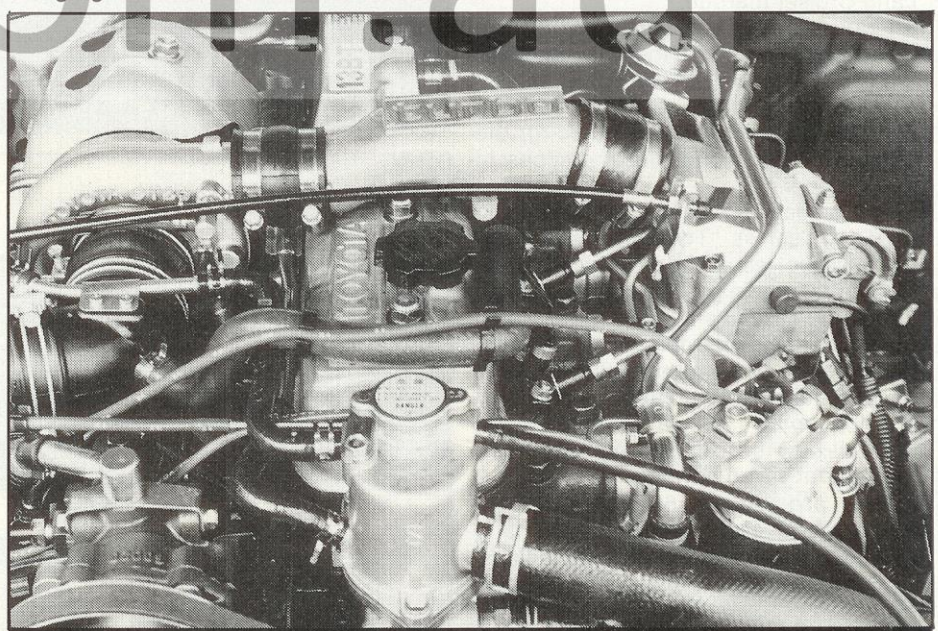
Why Thiess doesn't update the complete vehicle in one go defies all logic. During the Mildura release, Thiess execs admitted the steering and suspension on all cruiser models — particularly the mid wheelbase and 60-series — were in need of revamping and would be the next two features to be changed. "Toyota goes for slow and gradual evolution — not drastic and quick changes," according to a spokesman.

"We know there are other faults, but we'd like to tackle one thing at a time."

Despite the well-known conservatism of Toyota, the opinion of this magazine is that the Australian — and world — public deserves an entirely efficient vehicle in one hit . . . not just an ongoing "striptease". It is both unfair and in some ways outright dangerous to tackle a piece of the range at a time. While Toyota continues on its conservative way, the Australian public is forced to accept inferior products with dangerous steering and suspension.

However, for the time being let's look positively at what Toyota *has* done to its diesel engines, and other improvements to the massive 29-model range.

The Bundera petrol engine has been improved for ULP operation and an automatic transmission has been added



Toyota's 13B-T 3.4 litre turbocharged diesel motor in the Land Cruiser mid-wheelbase develops 91 kW at 3400 rpm and 285 Nm of torque at 2000 rpm. It is 38 per cent more powerful and develops 32 per cent more torque than the naturally aspirated diesel also available.

to the mid wheelbase variant. Four naturally-aspirated diesel models have in fact been discontinued to make way for the turbos. Toyota has also moved in advance of safety legislation requirements by fitting child restraint anchorage points to all MWB and 60-series wagons.

There has also been a general re-specifying of the MWB standard, the Bundera soft-top and hard top so as to off-set the devaluation price rises. Simply, this means a little less icing to keep prices reasonable.

Four tie-down D-hooks are fitted to the cargo area of all Land Cruiser passenger models to provide secure restraint of luggage. The comfort, adjustment and uitility of rear seats in the 60-series, MWB and Bundera have been improved, now featuring head restraints, with fold away seats in the Bundera and MWB for extra cargo space if needed. Front seat belt inertia reels have been modified to avoid over tightening across the chest on corrugated roads. There is also a driver's footrest on all new auto Cruisers and the audio systems, sound-proofing and air conditioning specs have been improved in the flagship 60-series.

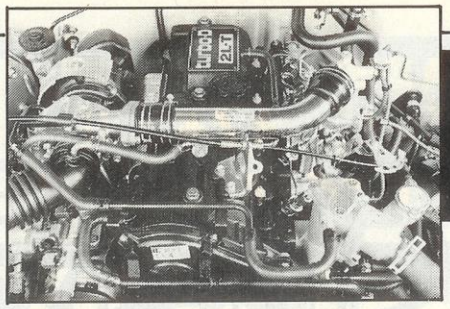
Significantly, now available as options, are front and rear manual diff locks on the workhorse 60-series wagon. A price has not yet been given on this rather important option, but Thiess says the locks will be cheaper that the leading alternatives from the aftermarket. Logically, the locks should add around $2000 to the price of the machine.

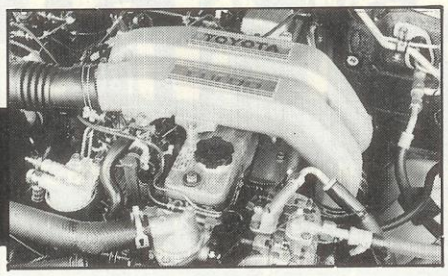
This entire new release by Toyota represents a huge blow to the Australian 4x4 aftermarket. Leading AM companies have thrived on the business of turbo-charging Toyota products or supplying AM diff locks to the market. With this new Cruiser range hitting the streets, the only work really needed in the aftermarket would be to the suspension of the new Cruisers.

Thiess acknowledged the blow to the Australian aftermarket, disagreeing with the possibility that Toyota's move to turbos would encourage more second hand Toyota owners to move for forced induction. It said that when people realised how much research and development had gone into the factory turbos, they would not be rushing out so quickly for an aftermarket bolt on job.

Thiess' reference to its research and development is certainly not unwarranted, with the new turbo engines not simply being straight forced induction.

The new 12H-T and 13B-T turbo-charged engines have direct injection, for improved fuel economy and performance.





4-litre 12H six-cylinder diesel motor with a watercooled turbocharger. It develops 103 kW at 3500 rpm and 322 Nm of torque at 1800 rpm.

The 4.0 litre 12H-T engine produces 32 per cent more power and 30 per cent more torque than the naturally aspirated 4.0 litre 2H diesel, from which it was developed. The 12H-T engine produces 13 per cent more torque than the 4.0 litre six-cylinder 3F petrol engine offered in the 60 Series Land Cruiser while the new 3.4 litre 13B-T engine produces 38 per cent more power and 32 per cent more torque than the naturally aspirated 3.4 litre 3B diesel, from which it was developed.

The new 13B-T diesel now produces as much torque as the 3F petrol engine offered in the MWB Land Cruiser and the 2.4 litre 2L-T engine produces 15 per cent more power and 21 per cent more torque than the naturally aspirated 2L diesel fitted to Toyota Hilux 4x2 and 4x4, 4Runner, HiAce and Dyna models.

The new 2L-T turbocharged diesel produces as much torque as the new, more powerful, 2366 cc ULP-suitable 22R-C engine offered in Bundera.

Toyota's new turbocharged diesel engines have been redesigned and strengthened for the increased loads imposed by turbocharger operation.

The changes engineered by Toyota to valve gear, cylinder heads, cylinder blocks, pistons, connecting rods, crankshafts, camshafts, lubrication, fuel and cooling systems seem well beyond the scope of bolt-on, after-market turbocharger installations.

Toyota's naturally aspirated diesel engines have benefited from the development of the turbocharged evolution.

The new 2H and 3B naturally aspirated engines have revised cylinder blocks and high-volume trochoidal oil pumps developed for the turbocharged, direct-injection 12H-T and 13B-T engines.

Toyota has strengthened the H55F five-speed manual transmission of the 60 series and MWB models. Clutch clamping pressure and clutch diameter have been increased on turbocharged 60 Series and MWB models.

Bundera's 2.4 litre 21-T engine, developed from the diesel fitted to the Hilux range, produces 63 kW at 4000 rpm, and 188 Nm of torque at 2400 rpm.

Toyota has designed a new R151F five-speed manual transmission and increased the clutch clamping pressure to suit the new turbocharged diesel engine in Bundera.

Toyota has also modified the A440F four-speed overdrive automatic transmission to suit the increased power and torque of the 12H-T and 13B-T engines by changing the lock-up clutch damper, change points and converter stall point.

Low-speed transfer ratio has been revised on all models to improve durability and reduce noise.

Toyota has revised the final drive ratio of Bundera petrol models to improve acceleration, and fitted four-pinion differentials to improve durability.

Rear spring rates of Mid-Wheelbase models have been revised and gross vehicle mass increased to 2730 kg — unfortunately not having that much real effect on the end result.

The company has fitted a front-end stabiliser bar to Bundera to try to improve handling and stability and a new non-slip safety edging is fitted to the sideboards on MWB and Bundera models.

Multi-adjustable Sports seats are available in automatic Sahara turbo diesel and petrol, and Bundera Deluxe Hardtop.

All turbocharged models have Turbo embroidery on the front seat backrests, and Turbo identification on the grille and tailgate.

On paper and on the drawing boards, this all sounds little short of impressive. In the field and after driving the new turbo Cruisers, the impression is even greater.

Toyota has hit with exactly what the doctor ordered. The new power goes straight to the former problem areas where low-down torque and sheer pulling power was lacking. The new Cruisers now have the best power bands, suited to combination on-off-road work, seen in the market.

They can cruise comfortably on 140 kmh and there is enough power up the top of the range for highway passing ability. But it's low down in the range where the real improvements can be enjoyed. The new engines all have the same characteristics — versatile and highly usable bottom end torque to make off-road work a breeze. In the coming issues, we will be testing all the new turbocharged variants to analyse the specific pros and cons.

For now, it's suffice to say we were impressed with the new highly developed and engineered powerplants. Time will tell just how each model fares, so watch this space . . .

4X4