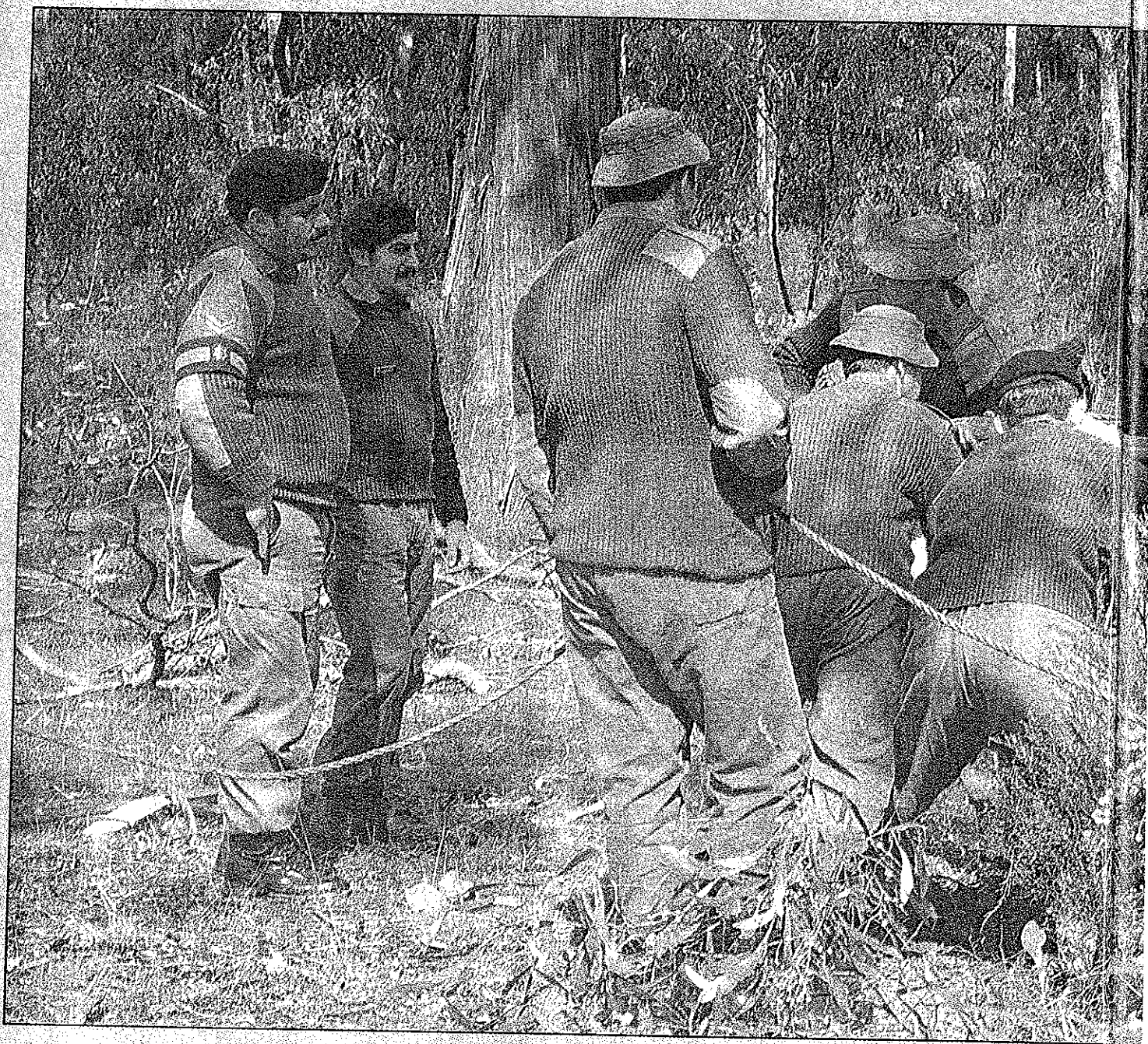


# Rovers



**T**HE Australian Army took delivery of its first quarter-tonne Series II SWB Land Rover way back in March 1959. It was the first vehicle in a program to replace the ageing World War II Jeeps and difficult-to-maintain Austin Champs.

The Series II three-quarter tonne LWB models began arriving in October of that same year and four years later, in June 1963, they were joined by the Series IIA SWB and the IIA LWB the following year. These in turn were largely replaced by the Series III, which the army first

received in 1977.

Modified to a variety of guises the versatile vehicles performed in many theatres as light cargo, reconnaissance, ambulance, FFR (Fitted For Radio) and workshop vehicles, fire tankers, gun tractors, trailer tractors, convoy escorts, water carriers, light assault



# in arms



*Land Rovers have been around for 40 years, and the Australian Army has been bouncing them around the countryside for the past 30. How does the Army teach its soldiers to drive them and just what do they think of their new 110s? SCOTT KELLEHER joined the ranks of the Royal Australian Corps of Transport for a few days to find out.*

vehicles with SAS and Commando units, and personnel transports.

All in all, the army took delivery of 2,240 SWB and 4,386 LWB Series II and IIA models as well as 2,280 Series III; and before the year is out the Australian Army will have received its 10,000th Land Rover, when a 110

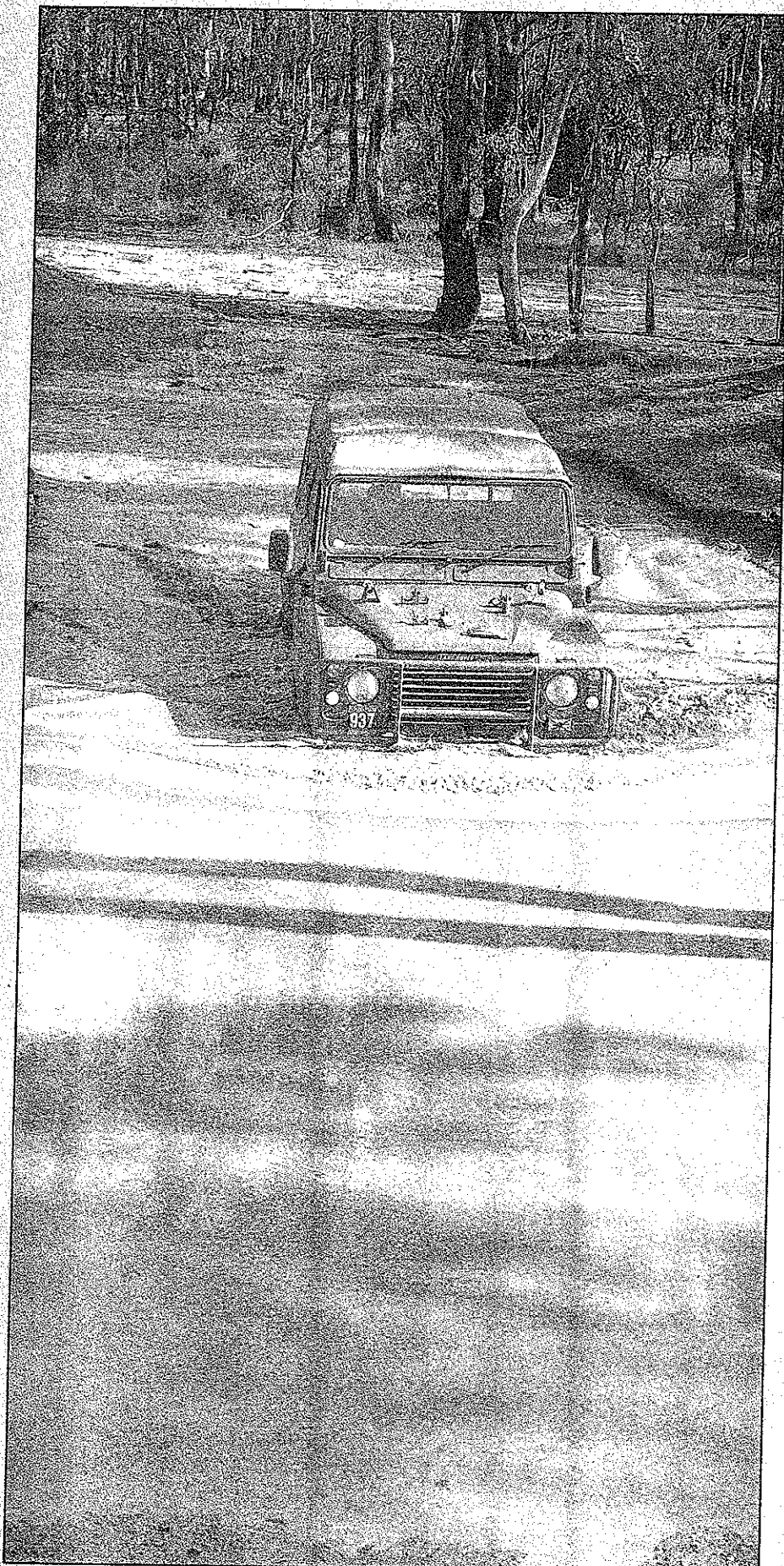
OVERLANDER, December, 1988

4WD or 6WD rolls off the assembly line at JRA Limited's Moorebank assembly line as part of the army's light truck replacement program, Project Perentie.

On completion of phase two of Project Perentie in 1990, the army will have taken delivery of 2,500 new 110

4WDs and 400 6WD vehicles (being produced exclusively for the Australian Army) to operate as the backbone of the army's GS (General Services) fleet for the years to come.

JRA are producing eight 4WD variants of the 110 for the army, ragtop cargo, cargo with winch, FFR



and FFR with winch models; a senior commander's vehicle and personnel carrier in station wagon form, a hardtop survey vehicle and special RFSU in northern Australia. There will also be six 6WD derivatives; cargo, cargo with winch, ambulance and maintenance vehicles, a Rapier (ground-to-air missile system) tractor and LRPV (Long Range Patrol Vehicle) specially modified with machine gun and motorcycle mounts, for use by the SAS.

But what does the army actually do with these British-bred off-landers that have been conquering Australia's worst terrain for the past 40 years? How does it teach its men and women to drive Land Rovers and what do those same drivers think of the vehicles?

Editor Carey thought it would be a good idea to find out, so while he was touring the hallowed halls of the Land Rover's birthplace in Solihull in England, I was despatched to Puchapunyal, north of Melbourne, the largest army base in Australia, to visit the AST — Army School of Transport.

### LEARNER DRIVERS

THE Army School of Transport, a part of the RACT, or Royal Australian Corps of Transport, is the place where the army teaches its soldiers to drive — the army's way!

Every person who enlists in the army is first put through a twelve-week basic training course as a soldier, but is then offered a range of career options within the army itself. They can become infantrymen, cooks, signallers, mechanics, clerks or embark on a number of other different careers, but the one we are interested in here, is drivers.

Drivers can be found in almost every army corps, and are the men and women who's job it is to drive the army's fleets of staff cars, buses, Land Rovers, Unimogs, F-1's, Internationals, Mack 6WDs and Reo trucks, while keeping them in one piece and maintaining them in good order.

Those men and women selected to become drivers embark on a six-week course as IETs (Initial Employment Trainees) at the school of transport.

Each driver training course at the AST normally begins with 24 trainees, who for the duration of the course operate as a transport troop, divided into two sections. An officer, normally a lieutenant, and some several NCOs are in charge of each troop and act as

***Land Rover 110 negotiates deep water on the AST's cross country obstacle training course.***



driving, loading and recovery instructors for the course.

In the first two weeks of the course the trainees are taught to drive — from scratch! As most of them will eventually become truck drivers in their respective units, they are taught to drive in Land Rovers and Unimogs, normally 8 Unimogs and 4 Rovers per course, and after being thoroughly familiarised with the vehicles by the instructors are taken out onto the SDA (Safe Driving Area) to begin driving.

The SDA is a large circuit, almost a cross between a racing circuit and a street plan of a small town, and encompasses everything a driver could possibly encounter on the road, like traffic lights, pedestrian crossings, parked cars, sharp corners, cross roads, railway crossings, stop signs, etcetera. A typical first day on the course begins something like this for the trainees:

The instructor completes an initial hour-or-so period of familiarisation with the vehicle with a 'commentary drive' around the SDA. Four or five trainees are with him or her in the Land Rover.

"...Okay, that's how to drive the Land Rover 110. Who's never driven before?"

A pause, and then, "Me Sergeant!"

"Then you'd like to have first go at it then, wouldn't you lad?"

"Er, yes Sergeant."

"Good lad! In you get."

I had to hand it to the young guy. He was nervous and stalled the vehicle as soon as he took his foot off the clutch, but after 15 minutes he was driving around the course as well as anyone — if slowly. Learning to drive mum or dad's automatic sedan is bad enough, but having your first drive in a bloody great Land Rover with a gruff looking army sergeant is something else!

Interestingly, about 10 per cent of the army's driver intake have never driven before and don't hold a civilian licence. While they may not have had much experience, it does mean that they haven't had time to develop any bad habits and can be taught to drive the 'right way' by the army, which prides itself on its very low accident record and emphasis a very 'defensive' style of driving among its recruits. Safety is the army's paramount concern.

During this first two-week period the trainees also learn the mechanical principles of petrol and diesel engines, drivetrains and running gear, the theory and principles of loading vehicles, and army transport documentation.

The second two weeks of the course sees them out on the highway, learning highway driving and convoy discipline, being tested on theory and getting an introduction to city driving, learning navigation, fault finding skills and 'blackout' night driving.

The final two weeks of the course involve cross country driving and recovery techniques, camouflage and concealment and their practical use in the field and final tests on everything they have learnt so far. The course then finishes with 'Exercise Long Trek', a full four-day exercise in which the troop leaves Pucakapunya in convoy for a long distance drive. It then returns to deploy on the base's range area and operate as if in an environment of threat as a transport unit, deploying and concealing each of the vehicles and honing navigation and recovery skills.

At the end of the course the successful drivers receive their army trade licence 109, classes B7 and B8 (Land Rover and Unimog). Driver training on other vehicles, like motorcycles or 6WD Mack trucks, is conducted by their own units or on future courses at the AST.

AST instructors are all very experienced drivers who hold their instructors' certificates, and they are very strict on driving technique. For instance, every gear change must be double-shuffled, speed limits must be strictly adhered to, and any trainee driver who even thinks about pulling the handbrake on without releasing the ratchet will probably fail the course.

Of the 24 drivers on each course there are usually a number of failures, who the army instructors consider to be unsuitable as drivers. They are either given a second chance at the course or provided with another career option. The ironic thing is that many of the 'failures' still have their civilian licences!

## THE ARMY OPINION

ASK the men and women of the Royal Australian Corps of Transport what they think of Land Rovers, and the 110 models in particular, and you get interesting reactions.

Most of the instructors have been driving Series III Land Rovers for many years and the AST at present has 12 110 and 22 Series III Land Rovers in which it teaches trainees to drive. This is because most units still operate with Series III models and it will be some time before they are all replaced. Therefore, comparisons between the new and old vehicles are inevitable.

Most drivers much prefer the 110, which offers a 'luxurious' standard of comfort in comparison with the Series III — the coil-spring suspension and comfortable and adjustable seats make the big difference here. The 110's engine is quieter and a much better performer than the ancient petrol design in the Series III, constant 4WD makes for much better handling, the brakes are better and forward vision is unimpaired by the spare wheel which is mounted atop the bonnet in the Series III.

For all this however, the Series III has been an honest and reliable worker for many years and many drivers have developed a fond respect for the noisy and uncomfortable old trucks, rating them tougher than the 'softer' 110s. Mind you, a lot of other drivers hate them, and see the 110 as a Godsend. A funny thing is human nature!

Drivers did have one recurring gripe with the 110, however, finding the body roll occasioned by the all-coil suspension somewhat disconcerting. But perhaps that's not surprising when you consider the leaf-spring vehicles they're comparing them with, and I know which vehicle I'd rather have to drive.

The men of the Technical Services Section, the mechanics who are more familiar with the inner workings of the vehicle than anybody, have a grudging respect for the 110. The AST has had its 110s for over a year now and in that time all problems with the vehicles have only been minor technical or design faults, such as brake lines wearing by rubbing against the air filter intake, leaky seals in the transfer case and collapsing fuel tanks because of blocked breathers. As far as the mechanics are concerned, the 110s are strong, sound, have good big diesel engines and are easy to work on. They like them.

## ARMY ROVERS

THE accompanying spec sheet provides a basic mechanical rundown on the Army's 110 Land Rovers, which mechanically are very similar to civilian 110 models, although equipped with the earlier four-speed gearbox instead of the five-speed of current models. Engines, brakes, the lockable centre differential, suspension and drivetrain are all the same or very similar, but there are a number of differences in other areas.

The cabin is furnished from standard welded aluminium alloy and fitted with minimum trim. The windscreen is of one-piece laminated glass and can be folded down in

ragtop models and side windows are of two-piece sliding safety glass.

The body is a standard integrated box body of aluminium alloy panels with a fixed partition at the front and drop tailgate. Storage lockers are incorporated in the wheel wells and two four-man vinyl covered seats attached to a folding frame are fixed longitudinally to the wheel wells in the rear. Jerry can holders for fuel and water are attached to the rear of the vehicle. A four-bow canopy frame provides roll over protection.

Other equipment includes a 12-pin NATO trailer connection, front and rear blackout military lights, a flexible map reading light and personal weapon mounts in the cabin, de-ditching tools affixed to the bonnet, a front bullbar-style tinfoil alloy brush guard and optional Thomas T8000 PTO winch, a BCF fire extinguisher and army unit/formation sign holders.

And soldiers get paid for driving around in these! I wonder how long it'll be before you're able to pick one up army surplus.

# Rovers in arms



An army 110 Land Rover, available in any colour as long as it's olive drab.

## SPECIFICATIONS

	Land Rover Series III	Land Rover 110 4WD	Land Rover 110 6WD	
<b>ENGINE</b>				
Type:	Rover six-cylinder petrol	Isuzu 4BD1 four-cylinder ohv	Isuzu 4BD1T four-cylinder ohv turbo	
Capacity:	2625 cm <sup>3</sup>	3856 cm <sup>3</sup>	3856 cm <sup>3</sup>	
Power/revs:	57 kW at 4200 rpm	66 kW at 3200 rpm	90 kW at 3000 rpm	
Torque/revs:	167 Nm at 2000 rpm	245 Nm at 1900 rpm	314 Nm at 2200 rpm	
Power/litre:	21.7 kW/litre	17.1 kW/litre	22.3 kW/litre	
Fuel Type:	Petrol	Diesel	Diesel	
<b>GEARING</b>				
Ratios	High	Low	High	Low
1st	n/a	n/a	4.07:1	13.51:1
2nd	n/a	n/a	2.45:1	8.13:1
3rd	n/a	n/a	1.51:1	5.01:1
4th	n/a	n/a	1.00:1	3.32:1
Reverse	n/a	n/a	3.66:1	11.15:1
Transfer case:	1.15:1	2.36:1	0.996:1	3.32:1
Axle ratio:	4.70:1		3.54:1	4.70:1
<b>SUSPENSION</b>				
Front:	Constant rate, semi-elliptic leaf springs	Constant rate coil springs with radius arm location	Constant rate coil springs with radius arm location	
Rear:	Constant rate semi-elliptic leaf springs	Constant rate coil springs with radius arm location	Dual rate semi-elliptic leaf springs with load compensating rocker	
Tyres:	7.50x16 6ply crossplys	7.50R16 10 ply Olympic Steeltreks	7.50R16 10 ply Olympic Steeltreks	
<b>BRAKES</b>				
Front/rear:	Drum/drum	Vacuum assisted disc/drum	Vacuum assisted disc/drum	
<b>STEERING</b>				
Type:	Manual recirculating ball	Manual worm and roller	Power assisted variable rate recirculating ball	
Turning circle:	14.5 m	12.8 m	15.9 m	
<b>DIMENSIONS</b>				
Wheelbase:	2768 mm	2795 mm	3940 mm	
Track — front/rear:	1330/1330 mm	1498/1498 mm	1698/1698 mm	
Ground clearance:	n/a	n/a	n/a	
GVM:	2760 kg	3200 kg	5600 kg	
Mass/power at GVM:	48.42 kg/kW	48.48 kg/kW	65.12 kg/kW	