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THE ROYAL AUSTRALIAN ARMY MEDICAL CORPS

WELCOME TO THE NEW PERENTIE AMBULANCE

11th Field Ambulance was privileged in January and February 1989 to trial the new PERENTIE ambulance. In production now, with delivery of the first vehicles due just in time for Exercise Kangaroo'89, the vehicle is a vastly superior ambulance to any in Australia, and perhaps the best field ambulance in the world.

The ambulance is revolutionary in its design and a giant leap ahead of the current ageing "blood boxes", which date back to the 1950s. The new ambulance is based on the six wheel Project PERENTIE two tonne vehicles, and is powered by a turbocharged ISUZU four cylinder diesel engine. State of the art technology, medical equipment, passengers, fuel, etc give the vehicle an all up weight of 5.6 tonnes.

The ambulance has several features, many of which are not found in civilian equivalent vehicles. These features, some of which are shown in the accompanying photographs, include the following:

a. The ambulance consists of a module and the chassis, either of which can be readily removed.
b. The ambulance has four and six wheel drive, ideal for cross country.
c. Patient comfort is excellent due to the stability of the six wheel design and the module construction.
d. The module is of a steel framed fibreglass construction, giving strength and flexibility.
e. Up four litters or eight sitting patients can be carried, or any combination thereof.
f. The vehicle is radio equipped, eventually with the new Project RAVEN VHF radios.
g. The module is air conditioned and has superb lighting.
h. The ambulance is air transportable in C130 aircraft.
i. There is a Life Pak 6 electro-cardiograph and defibrillator machine mounted in the module.
j. The module includes oxygen therapy and four types of suckers.
k. There is a waste trap in the floor as well as a waste cupboard.
l. The medical assistant has his own seat at the head of the litters.
m. There is enough room for the medical assistant to stand upright (unless you're like Corporal Dwyer who is 2.3m - 7ft 2in tall)
n. The medical Complete Equipment Schedules (CES) have been completely updated to reflect the increased capability of this ambulance.
o. The vehicle is a pleasure to drive, handling extremely well in all conditions encountered so far.

The trial by 11th Field Ambulance was designed to confirm that the initial production vehicle (IPV) conformed to the build standards and met the users requirements. We trialed the IPV as follows:

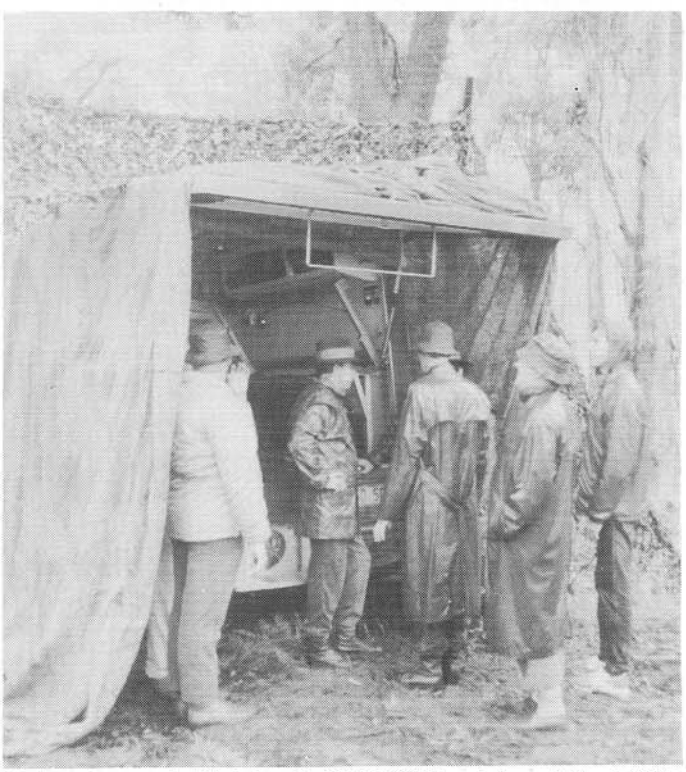
a. one week driver training;
b. one week medical evaluation;
c. two weeks field evaluation; and
d. five days servicing, receipt, preparation for movement, inspections, etc.

The new PERENTIE ambulance during trials. Note the rear door (no, its not supported by the litter.)

PTE Adam Kitching in the top litter of the new ambulance. The clip above his head has been relocated.

The driver training was a highlight, with Mr. Don Mohr and Mr. Jeff Stubbs from Jaguar Rover Australia, the manufacturers of the chassis, taking our drivers over tracks they would never have considered in any other vehicle. Drivers were queuing to be able to drive the ambulance.

Medical evaluation, controlled by Captain Phil Scott, our senior nursing officer, involved stripping the module and packing it with CES items. A thorough review of the CES was conducted to ensure items were practical and functional. For example, there is no requirement for several sizes (including childrens) of laryngoscope. Loading and unloading trials were



Rain and more rain fell during the PERENTIE ambulance trials at Wide Bay Training area. Directorate staff as well as JAKAB and Jaguar Rover Australia personnel were involved in the trial's field phase. They gained a greater appreciation for the ambulance's employment.

conducted and extensive environmental tests were made by Lieutenant Matt Waixel.

Medical, driver and environmental aspects were thoroughly tested across two weeks of field training. The first week involved rain and more rain at Wide Bay Training Area. Lance Corporal Paul Collis was in charge of the driver aspects and enjoyed testing the vehicle, as can be seen in some of the photographs. Private Garry Smith, who "volunteered" to be a patient (along with Privates Adam Kitching, Damien Trevor, Peter Daley, Geoff Day and Corporal Julien Wong, our cook, and Captain Brian Speakman) were blissfully unaware of the vehicle's journey, and would not believe wheels had left the ground.

Other aspects of the trial involved camouflage. This part of the trial was excellent, as it showed that an extra camouflage net is required to the old blood boxes. The hessian also needs to be replaced with a parachute silk as the inner sock. This is due to the all up weight, when wet, exceeding design specifications and becoming potentially dangerous. Call our Quartermaster if you have any queries.

We were sad to leave Wide Bay, just as the rain was clearing too! However, it gave us the opportunity to use the vehicle in its real role at Greenbank with its first ever casualty, who was safely evacuated to 1st Military Hospital and successfully treated.

The unit used the IPV in a series of gruelling casualty evacuation exercises at Greenbank. Once again, drivers were queuing to man the vehicle. Load/unload sequences were well practised during the exercise and identified a potential problem with the litter runners. A brilliant innovation by JAKAB at Tamworth, makers of the module, seems to have solved the whole problem of loading and unloading. They have designed a loading assist tray, which slides out and down from the top litter rails, so that the litter starts its load journey at shoulder height. A friction reduced, reversible insert on the little rail allows extremely easy movement of the litter. This innovation means that most casualties can be loaded by two people.

Once the IPV left 11th Field Ambulance (despite our howls of protest), rapid and extensive reviews were conducted to enable recommendations resulting from the trial to be actioned. A revised production plan, with marvellous co-operation from Lieutenant Colonel Curren, the Directorates Project Officer since inception, Major Doug Webb, the Co-ordinator of the overall project and JAKAB has meant that we will have some of the new ambulances for Exercise Kangaroo'89. Patients will be thankful for their efforts.

This ambulance is probably the best field ambulance in the world. Other countries have already expressed interest. The vehicle's design and equipment will give us the capability to evacuate casualties through the 1990s and beyond. It is a technologically superior vehicle to any similar vehicle in Australia. Well done all involved. Patients will undoubtedly be happier.

Volunteer patients didn't realize the wheel was off the ground, as the ride is so smooth.

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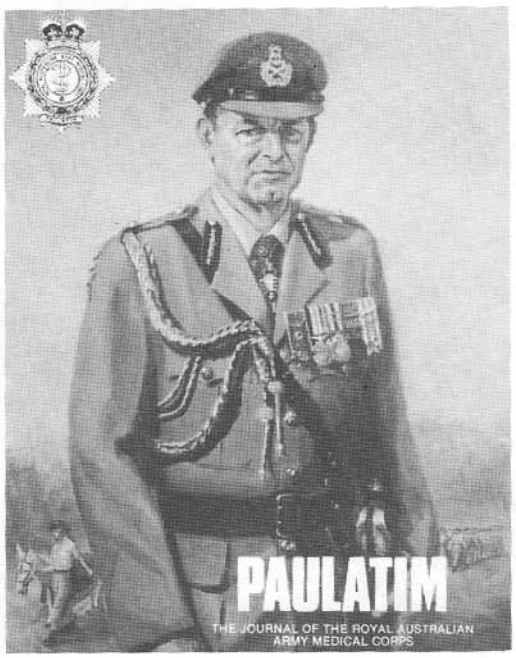
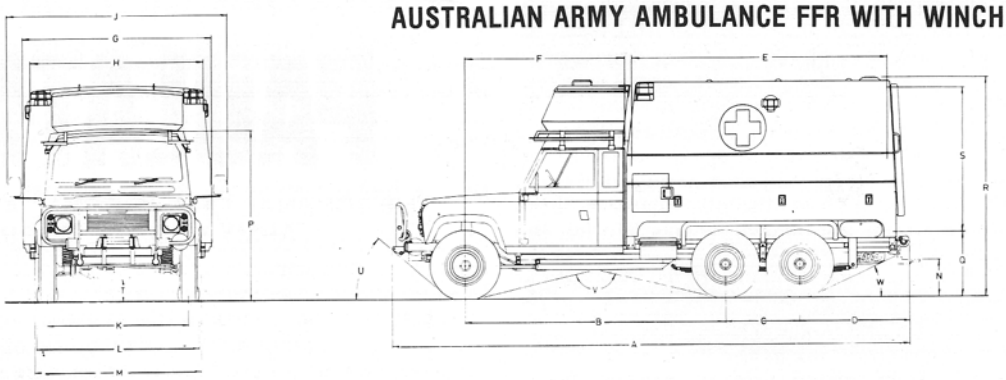


LAND ROVER 110 Heavy Duty 6 x 6

AUSTRALIAN ARMY AMBULANCE FFR WITH WINCH



NOMINAL DIMENSIONS – AMBULANCE VEHICLE

A	Overall Length		6116 mm
B	Intermediate Wheelbase		3040 mm
C	Rear Axle Spacing		900 mm
D	Rear Overhang		1298 mm
E	Rear Body Internal Length		3250 mm
F	Front Axle to Cab Back		1925 mm
G	Overall Width		2250 mm
H	Rear Body Internal Width		2145 mm
J	Width Over Mirrors		2430 mm
K	Track – Front Rear		1698 mm
L	Width Over Tyres – Front and Rear		1910 mm
M	Width Over Front Wings		1980 mm
N	Rear Step Height	– Unladen	280 mm
		– Laden	240 mm
P	Cab Height	– Unladen	2080 mm
		– Laden	2050 mm
Q	Rear Floor Height	– Unladen	800 mm
		– Laden	760 mm
R	Overall Height	– Unladen	2600 mm
		– Laden	2560 mm
S	Rear Body Internal Height		1750 mm
T	Axle Ground Clearance	– Front	235 mm
		– Rear	215 mm
U	Approach Angle	– Unladen	45°
		– Laden	41°
V	Ramp Angle	– Unladen	148°
		– Laden	152°
W	Departure Angle	– Unladen	33°
		– Laden	30°
	Turning Circle	– Wall to Wall	17.2 m
		– Kerb to Kerb	16.8 m

PERFORMANCE

Maximum Speed	100 km/h
Range (on tanks)	600 km
Gradeability – Stop and Restart at G.V.M.	60%
Overturn Angle – Unladen Cargo Vehicle	40°

MASS DATA

Unladen Mass	– Basic Chassis Cab*	2600 kg
	– Military Chassis Cab**	3100 kg
	– Ambulance FFR with Winch***	4600 kg
Gross Vehicle Mass / Gross Combination Mass	Highway and Cross Country	5600 kg / 7100 kg

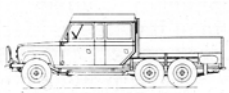
* Diesel engined chasis cab vehicle without military equipment but with full capacity of water, oil and fuel plus spare wheel and tyre.

** Australian Army specification chassis cab vehicle without rear body, seats and canopy, but with full military equipment including 24 volt supplementary electrical system, winch, driver and full capacity of water, oil and fuel (including jerry cans) plus spare wheel and tyre.

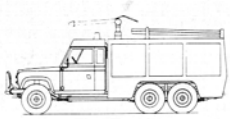
*** Australian Army Ambulance FFR with Winch with full equipment and driver as above, plus fully equipped modular rear body.

DERIVATIVES


Cargo/Personnel

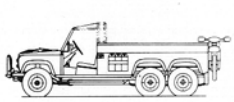

Crew Cab

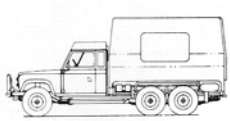

Ambulance

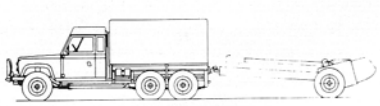

Fire Truck


Shelter Transport


Maintenance Vehicle


Patrol Vehicle


Command Post


Gun Tractor


Air Defence Vehicle

A wide variety of specialised body configurations can be made to order.

LAND ROVER

Land Rover Australia
(A division of JRA Limited)