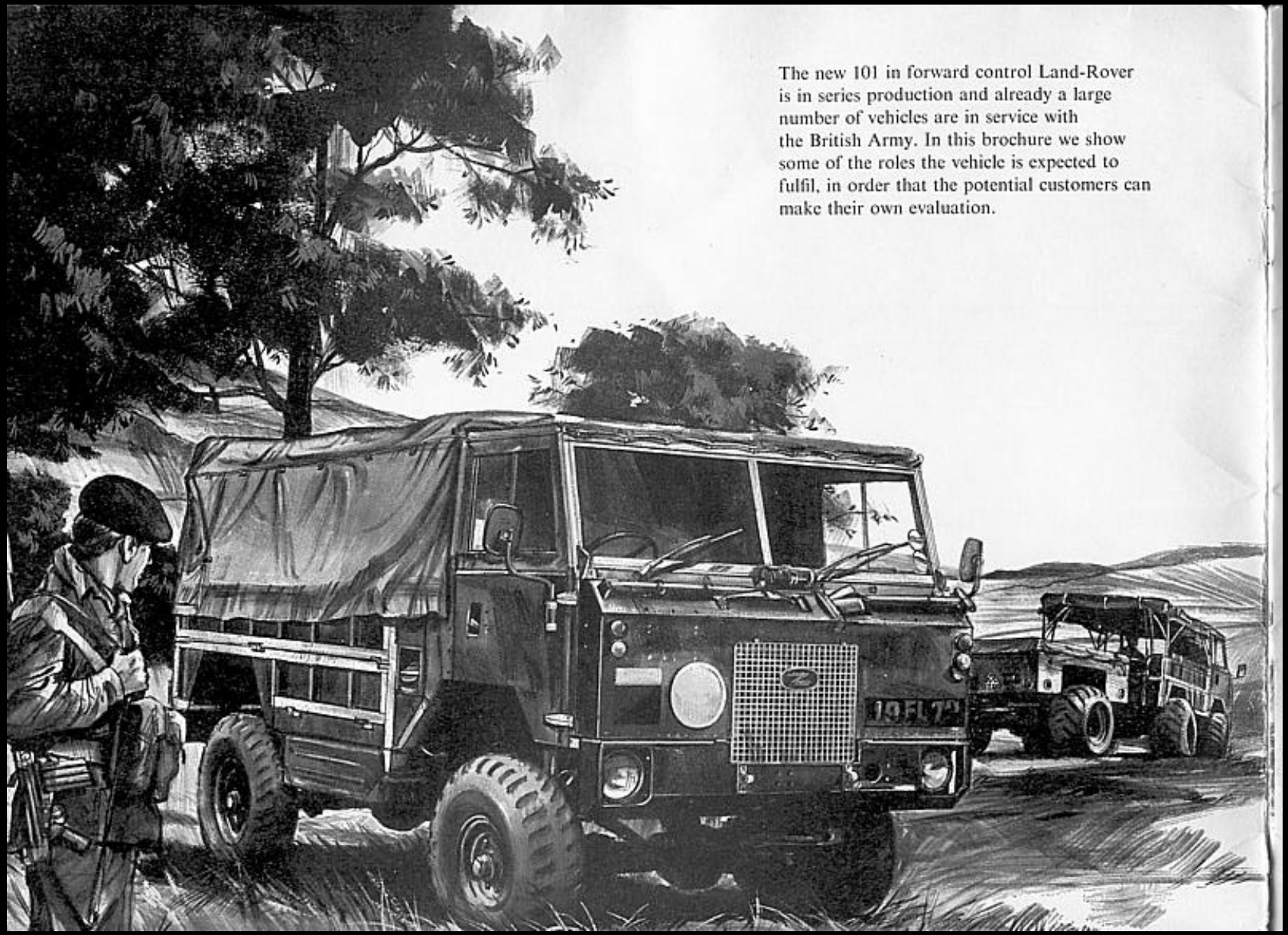
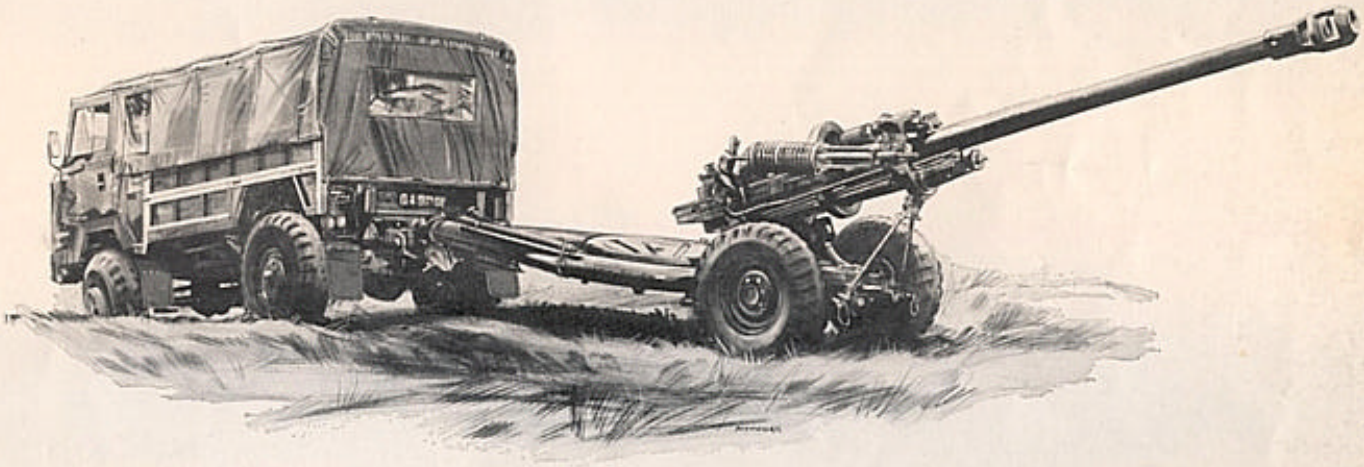

101" FORWARD CONTROL
MILITARY LAND ROVER
LAND ROVER
03 SP 67



The new 101 in forward control Land-Rover is in series production and already a large number of vehicles are in service with the British Army. In this brochure we show some of the roles the vehicle is expected to fulfil, in order that the potential customers can make their own evaluation.

INTRODUCTION

The new 101 in wheelbase forward control Land-Rover was developed by Rover in co-operation with the Military Vehicles and Engineering Establishment (M.V.E.E.) to meet a British Army requirement for a 1 ton payload 4×4 vehicle with added capacity of towing a 1½ ton powered-axle trailer or, alternatively, a conventional dead-axle trailer. The new Land-Rover has successfully met all its design requirements and is expected to be employed in a wide variety of roles. The most important of these is to tow the new British 105 mm light gun. This gun is some 750 lb heavier than the 105 mm



pack howitzer towed by the ¾ ton Land-Rover. Furthermore, a much improved performance both cross-country and on roads and tracks was demanded. This improved performance enables the new vehicles to perform more effectively the other roles for which it is intended. As well as the British 105 mm, it will also tow the heavier American 105 gun. The new Land-Rover is powered by a military version of the highly successful light-weight aluminium Rover 3·5 litre V8 engine, basically the same as the car engine but with a reduced compression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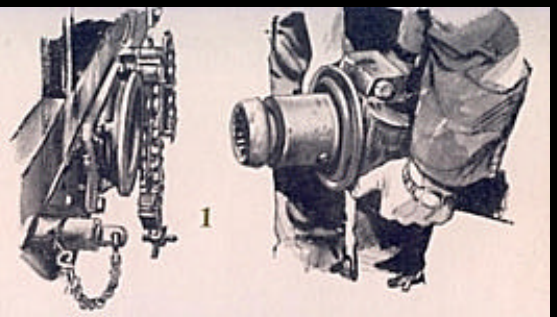
IMPROVED PERFORMANCE FROM A 6×6

The concept of a 4×4 vehicle plus powered-axle trailer has resulted in this highly mobile 6×6 unit offering exceptional cross-country performance. There is a very high degree of articulation—60 degrees in every plane—which means that the new Land-Rover can now traverse ground previously considered inaccessible. It is, therefore, especially useful in a re-supply role in forward areas. The complete unit is more flexible than a rigid 6×6 vehicle on which over rough ground a whole axle may be suspended in mid-air. With the new Land-Rover, the trailer axle is independent and all six wheels stay firmly in contact with the ground however uneven it may be. Over heavy going the powered axle enables the trailer to push the complete unit should some of the vehicle wheels begin to lose adhesion.



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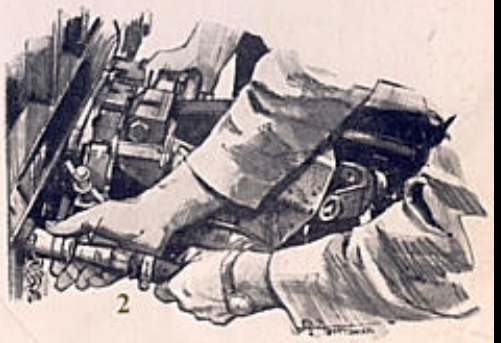

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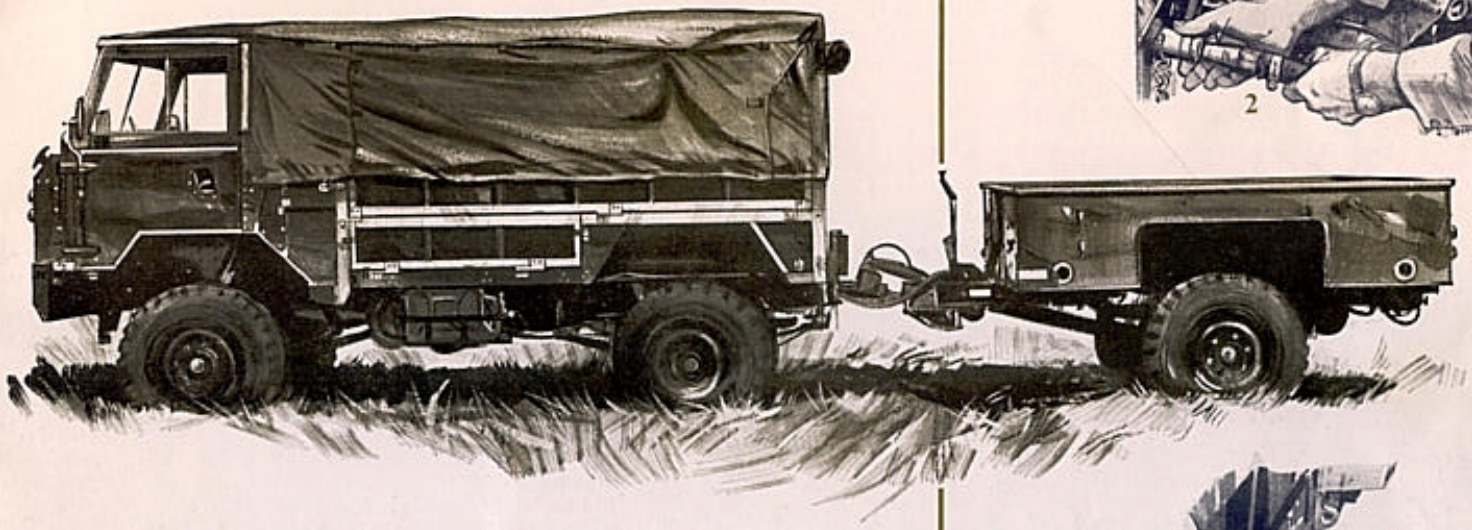

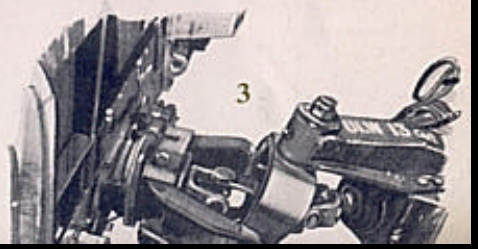

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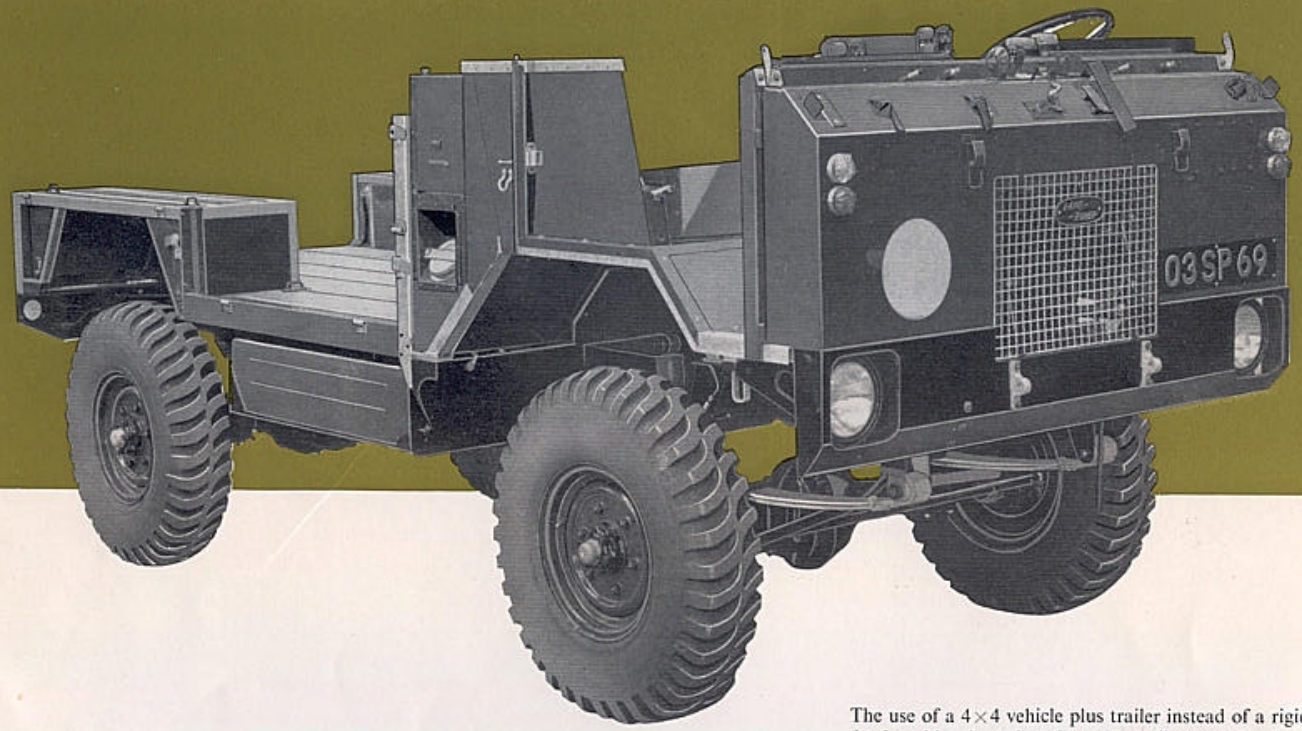
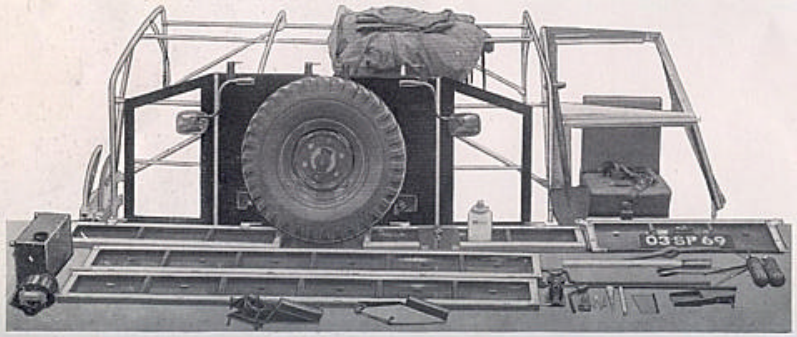
1 Lining up drive. Chain free.

2 Chain clamped around drive. Vacuum pipe and lighting sockets being connected.

AIR PORTABILITY

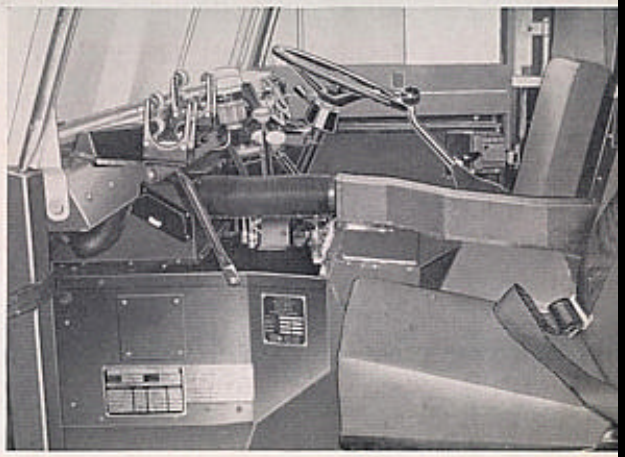




The use of a 4×4 vehicle plus trailer instead of a rigid 6×6 enables the unit to be more easily transported or air-dropped from transport aircraft in that it can be broken down into two comparatively short vehicles instead of one long one.

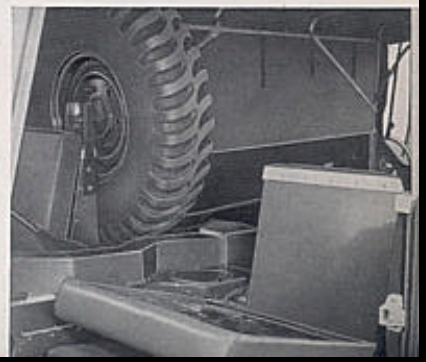
Heliportability

The 1 ton Land-Rover can be lifted by helicopters of medium lift capability, such as the Wessex and the Puma, and in order that a useful operational range may be achieved by the helicopter, the complete hood, body sides, windscreen, bumpers, and spare wheel can be removed from the vehicle. In this stripped-down form the Land-Rover only weighs about 3,500 lb and although austere in appearance is perfectly serviceable for an indefinite period. Lashing points on the vehicle enable suitable loads to be carried and of course the powered trailer with its load can be lifted in subsequently.



The profiled wheel arch gives easy access to cab. Also in the picture: fresh air heater and demister; tandem brake master cylinder under instrument panel.

The spare wheel is mounted behind the driver, leaving space behind the passenger seat for radio installation, etc. The split bulkhead gives limited access to rear of vehicle.



Body: All body panels in aluminium alloy. Two-man cab with removable engine cover and access to water and oil through inspection hatches. Roll-over bar* to be fitted to production vehicles. Main body with drop sides provides 120 ft³ (11·15 m³) of storage space. Tool lockers in rear body behind wheel arches. Mud flaps* front and rear; removable front wheel arch spats*. Folding rear entry step*.

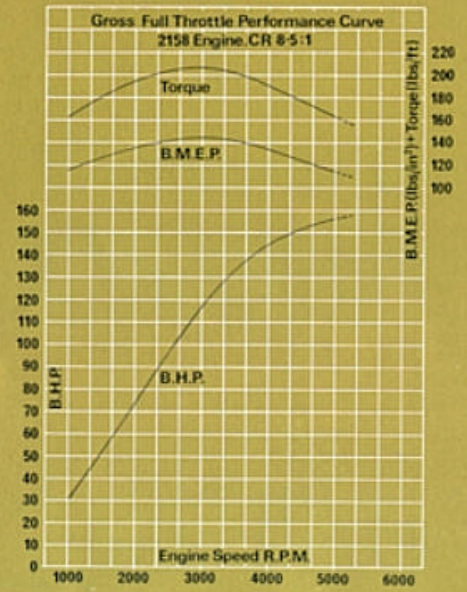
Chassis: Steel frame construction with two 'U' sections overlapped and welded on the vertical faces. Full length flat topped side-members; intermediate support bearing for rear power take-off shaft on 'bolt-on' cross-member between numbers 3 and 4 cross-members.

Suspension: 76 mm (3 in) wide semi-elliptic taper leaf springs with 44·5 mm (1¾ in) bore telescopic hydraulic dampers. Springs over axles. 28·4 mm (1⅛ in) anti-roll bar at front*.

Engine: Rover V8 3528 cm³ (215 in³), 8·25 to 1 compression ratio, developing 128 b.h.p. (94 kW) DIN at 5000 rev/min. Max. torque 185 lbf ft (25·6 mkg) DIN at 2500 rev/min.

Gearbox and Transmissions: Four-speed all-synchromesh Range Rover type with high and low transfer box providing a choice of eight forward and two reverse speeds. Permanent four-wheel-drive eliminates the necessity for the 4 × 2 control lever. A third differential between the front and rear axles obviates transmission wind-up associated with four-wheel-drive transmissions. This differential can be locked by a vacuum actuated control to provide maximum traction through both axles for severe cross-country conditions. The front axle drive provides a 35 degree steering lock through constant velocity joints.

Power take-offs for winch and powered trailer.



Main Gearbox Ratios:	Top	1 : 1
	3rd	1·505 : 1
	2nd	2·448 : 1
	1st	4·069 : 1
	Reverse	3·665 : 1
Transfer:	High	1·174 : 1
	Low	3·321 : 1
Axle ratio, front and rear		5·571 : 1

Wheels and Tyres: 9·00—16 tyres on 6½L × 16 rims; six-stud fixing. 18·6 in Terra-Tires† on special wheels are available as an extra. Wheel steps* on front wheels.

Brakes: Drum type hydraulically operated through split circuit (front and rear) and Girling type 50 tandem direct-acting servo. Rear brake line pressure controlled by a Girling apportioning valve sensitive to the dynamic rear axle loading to obviate premature locking of the rear wheels. Friction lining area 1410 cm² (219·6 in²). Hand brake acting on rear propeller shaft 184 mm × 76 mm (7¼ in × 3 in).

Steering: Optional right- or left-hand drive, recirculating ball type, 23 to 1 ratio. Steering damper, Woodhead S11A.

Cooling System: Four-row, 11 fins per inch radiator with overflow bottle, 406·4 mm (16 in) diameter fan with viscous drive coupling.

Fuel System: 109 litre (24 gallon) fuel tank, right-hand mounted. Electric fuel pump, replaceable element filter, glass sediment bowl and spill return to obviate vaporization.

Electrical System: 12-volt, 16ACR, 34-amp alternator or optional 24-volt 90 amp (AC90) alternator for FFR.

PERFORMANCE:
Approach angle—fully equipped and laden: 50°.
Departure angle—fully equipped and laden: 46° to towing hook.
Payload (road and cross-country): 1 tonne (2205 lb) (1000 kg).
Maximum speed: 75 m.p.h. (120 km/h).
Power/weight ratio (laden): 40·7 b.h.p. (29·9 kW) per tonne.

SPECIAL W.D. EQUIPMENT:
Power trailer drive from rear of gearbox.
Rear bumperettes.
Helicopter lifting rings front and rear.
Rotating towing-hooks front and rear. Rear hook is mounted on special adaptor to fit trailer coupling where applicable.
Trailer brakes operated from the towing vehicle using an inverted vacuum single-line system by Clayton-Dewandre. They are operated with both the foot brake and the hand brake systems.

Stowages for:
Fire extinguishers—1 inside, 1 outside vehicle.
1 pick and handle.
1 shovel.
1 jerrican.
1 rifle.

Side-mounted Nokken winch driven off bottom P.T.O. on transfer box.
Rear seating for eight.

* Features introduced since pre-production build run 1972. † Goodyear Trade Name.

		mm	Inches
AA	Wheelbase	2565	101·00
BB	Track—front	1524	60·00
	Track—rear	1549	61·00
CC	Length (over chassis)	4127	162·50
DD	Overall width	1842	72·50
EE	Overall height to top of windscreen	2138	84·10
FF	Overall height with hood	2283	89·90
A	Front cushion to accelerator pedal:		
	(Fully back)	508	20·00
	(Fully forward)	421	16·56
B	Front squab to steering-wheel:		
	(Fully back)	389	15·31
	(Fully forward)	297	11·69
C	Head-room, front seat (uncompressed)	952	33·50
D	Front to rear of front cushion	415	16·34
E	Width of front cushion	459	18·00
F	Width of front centre	640	25·20
G	Width between front seats	708	27·88
H	Top of front cushion to floor—mid position	339	13·25
I	Front squab height	445	17·50
J	Height of body sides	587	23·10
K	Width of body interior	1720	67·75
L	Length of body interior	2491	98·00
M	Interior body width between wheel boxes	984	38·75
N	Width of wheel boxes	368	14·50
O	Height of wheel boxes	282	11·10
P	Platform height (unladen)	924	36·40
	Trailer		
QQ	Overall width	1854	73·00
RR	Body length	2296	90·38
SS	Overall height	1385	54·50
	Vehicle and Trailer combination		
TT	Overall length	7925	312·00

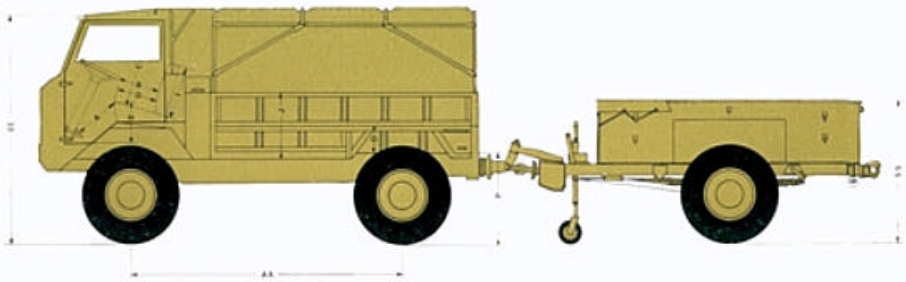
Ground clearance: 254 mm (10 in) under axles

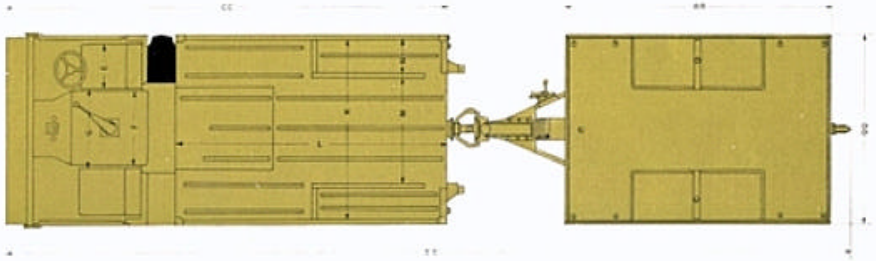
Turning circle: 11·27 m (37 ft)

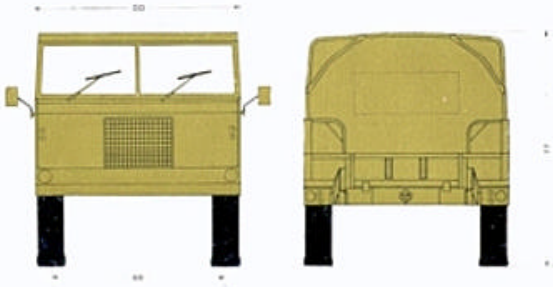
Unladen weight (12 volt, full tank): 1924 kg (4242 lb)

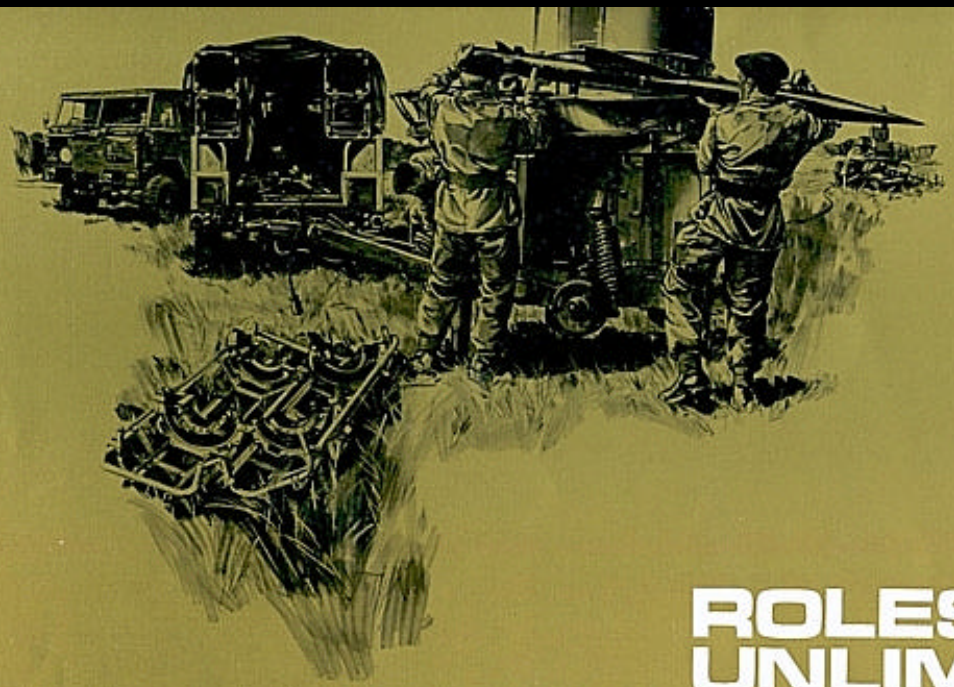
Stripped weight: 1580 kg (3500 lb)

Gross vehicle weight: 3143 kg (6930 lb)









Because of its high mobility and increased stowage area the 101 in forward control Land-Rover is a particularly suitable vehicle for the Rapier low-level surface to air missile system.

ROLES UNLIMITED:

With its excellent cross-country performance and a high power-to-weight ratio, the new 101 in Land-Rover is particularly suitable for a large number of military roles including: personnel and load carrier; powered- and dead-axle trailer towing; 105 mm light gun towing; carrier for recoil-less anti-tank gun; anti-aircraft and anti-tank missile systems; mortar and machine-gun carrier; command, control and reconnaissance; signals centre; computer systems; field ambulance; mobile workshop and stores (including with specialist trailers); airfield crash rescue tender; aircraft and airfield servicing and maintenance; Civil Defence reconnaissance, communications and fire services. Although developed primarily for military use, it will also be of great interest to Police and Civil Authorities, as has occurred with earlier Land-Rover models.

The Wombat recoil-less anti-tank gun and crew make a typical load for the new vehicle, and the excellent cross-country performance enables the crew to reach the most effective point for deployment.

1

2

1 **Infantry Swingfire.** A new version of the proved long range anti-tank missile system for infantry units which, because of their air-portable role, cannot afford to be hampered by armoured vehicles.

2 F.A.C.E. Field Artillery Computer Equipment and similar systems are easily accommodated for operations in forward areas.

3 **81 mm Mortar.** Mortars and crews can be carried to any point in the battle area, the powered axle trailer combination enabling them to negotiate any terrain.

3

24 volt FFR version

The 1-ton Land-Rover in its 24 volt FFR form may be employed as an artillery or other command post vehicle and, when fitted with a container or hard top body, as a Signals mobile radio communications centre.

The new Land-Rover as an ambulance

Like the ¾ ton Land-Rover, the 1 ton can form the basis of an ambulance conversion which, because of the greater body length and width available, can provide more space and hence comfort for the patients. Permutations of accommodation could be provided between four stretcher and no sitting cases to eight sitting cases, in addition to the driver and attendant.

BRITISH LEYLAND

Land Rover

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