

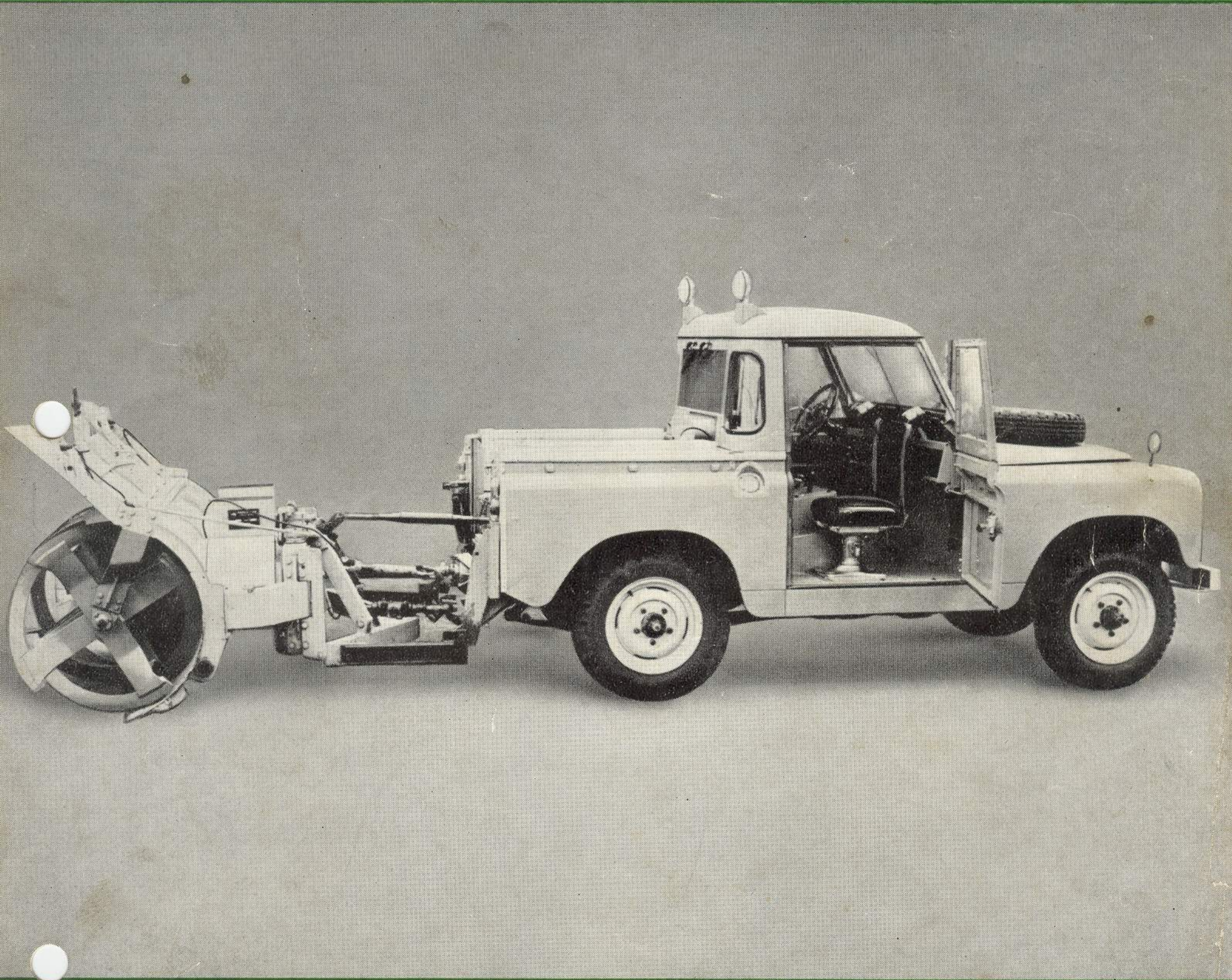
As approved by the Rover Co. Ltd.



ROTARY SNOWPLOUGH



WITH HYDROSTATIC TRANSMISSION



ROLBA LIMITED

88/92 ROCHESTER ROW, VICTORIA, LONDON, S.W.1
Tel: VICtoria 4980 Grams: Snowboy, London, S.W.1

The machine consists of:—

- the ROLBA Rotary Snowplough Attachment and
- the LAND-ROVER 4-wheel drive Vehicle suitably converted* for operating the Rotary Attachment, and including, in particular, a mechanical transmission from the main vehicle engine to the attachment via the vehicle power take-off, and an auxiliary, hydrostatic transmission for driving the road wheels during ploughing.

MOBILITY

The snowblower attachment forms a trailer, with two detachable pneumatic-tyred wheels on its sides. Thanks to this the snowblower can be towed to the working site at high speed, and a separate trailer for transporting the equipment is not required.

On arrival at the working site, the snowblower attachment is locked to the back of the vehicle by means of stabilizer bars, and the plough wheels are removed.

The steering wheel is then coupled via a shaft to a duplicate steering wheel at the back of the passenger's seat. This seat is reversed so that from it, the operator can control the unit while ploughing in the direction of the snow blower attachment at the rear of the Land-Rover. The plough therefore does not have to be shunted from its position at the back of the vehicle to the front.

ECONOMY

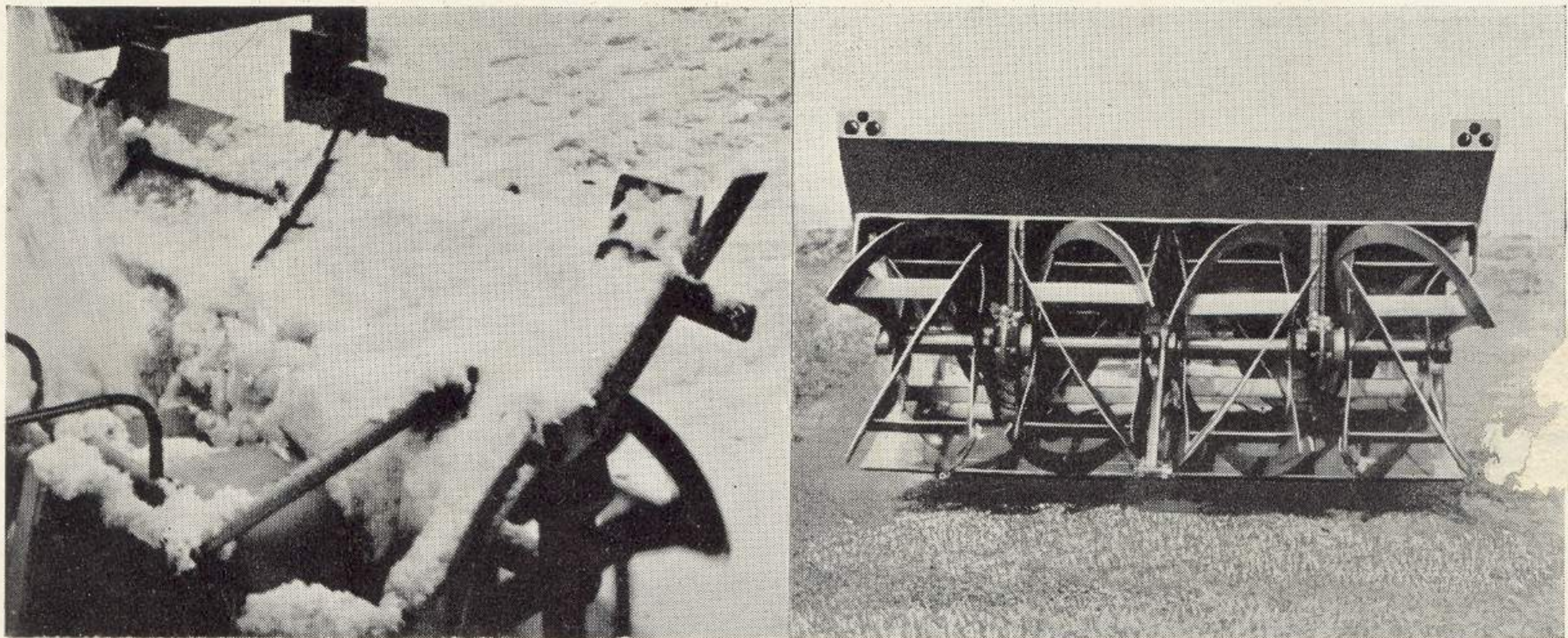
The new concept assures that the power requirements of the plough and the movement of the complete unit are provided for in the most economical manner.

The vehicle engine is the **ONLY ONE** used; a separate auxiliary snowplough engine is not required.

Despite this, the drive to the vehicle during ploughing and the revolving speed of the rotary snow cutting and ejecting device are independent of each other. While the revolving speed of the rotary plough is set (governed) at the correct r.p.m., the forward drive of the road wheels is infinitely variable and can be exactly adjusted by the operator to the prevailing snow condition (snow density and depth). This feat is due to the incorporation of a hydrostatic transmission.

*Please note that the ROLBA snowblower attachment **CANNOT** be connected to an UNconverted Land-Rover, but only to Land-Rovers which have undergone extensive alterations in our works.

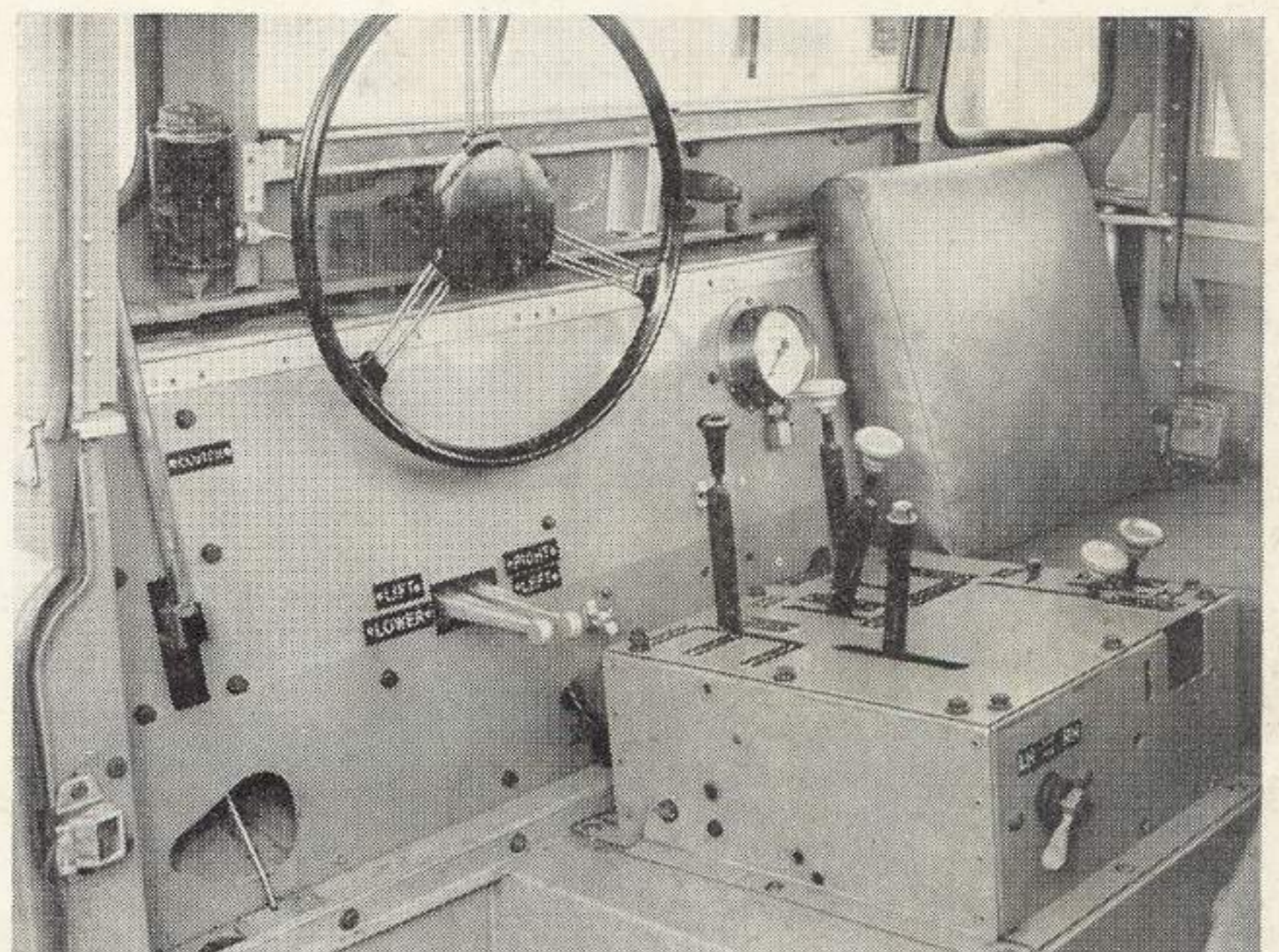




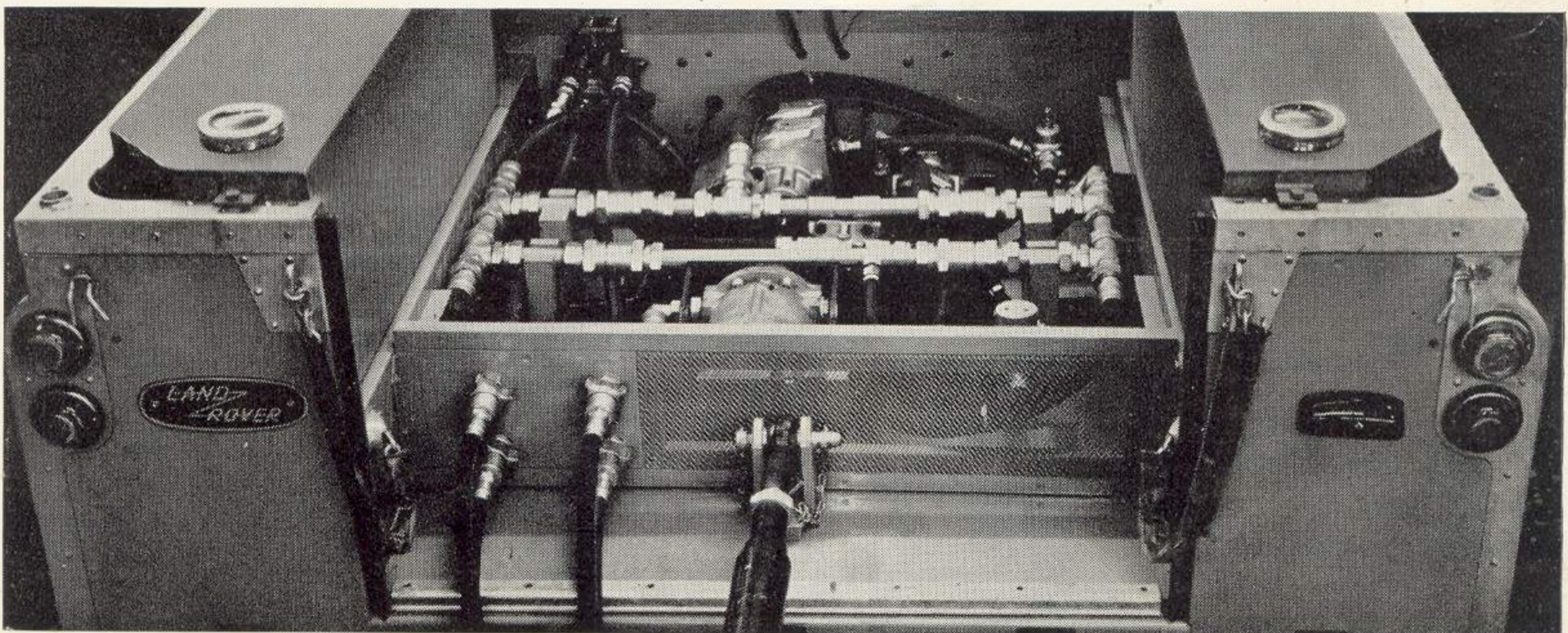
*ROLBA Rotary Snowplough Milling—Centrifuge system Dr. Bucher
(Snow miller and snow centrifuge combined in ONE machine)*



Swivelling seat for passenger/operator



Duplicate steering wheel and auxiliary controls



The auxiliary transmission system and the hydraulic equipment are hidden in the rear body section, covered by a metal canopy. The useful load-carrying space in the rear body of the Land-Rover is therefore still available.

SPECIFICATION AND SHIPPING DETAILS

The ROLBA Rotary Snowplough

Performance		
Clearing Width ...	6' 7"	(2.00 m.)
Clearing Depth:		
Normal ...	2'	(1.00 m.)
Maximum ...	3'	(1.50 m.)
Snow Clearing Capacity	300 tons per hour.	
Snow Ejecting Distance	27'—30' (9.00—10.00 m.)	
Technical Data		
Cutting Rotors:		
Number ...	2 × 2	
Diameter ...	2' 9" (0.85 m.)	
Revolving speed	abt. 100 r.p.m.	
Cutting Knives ...	"Snow-Boy" Mod. 2005 type	
Ejecting Turbines:		
Number ...	2	
Diameter ...	20" (0.50 m.)	
Depth ...	10" (0.25 m.)	
Number of vanes	2 × 3	
Revolving speed	400 r.p.m. at 3,600 r.p.m. engine speed.	
Snow Ejecting Nozzles...	2 (swivelling).	
Plough Gears ...	main plough (reduction) chain case incorporated in plough frame. 2 bevel reduction gearboxes on cutter axle.	
Shear Bolts ...	provided on the 2 shearing pin couplings.	
Snow Plough Hydraulics	2 dual-acting hydraulic rams, one for turning the 2 ejector nozzles, and one for lifting and lowering of the plough.	
Scraper Bar ...	1, metal.	
Skid ...	1, centrally mounted, adjustable, with built-in rollers.	
Detachable Plough trailer wheels ...	standard Land-Rover wheels fitted with 6.00 × 16 tyres.	
Light ...	rear lights, side lights, flashing direction indicators, number plate illumination light and reflectors; wiring and cable with plug to connect to socket on vehicle.	
Dimensions and Weight:		
Plough width without trailer wheels ...	6' 7"	(2.00 m.)
Plough width with trailer wheels ...	7' 6"	(2.30 m.)
Plough length ...	approx. 5'	(1.50 m.) (from front of cutting rotors to tow hook).
Plough height ...	approx. 4'	(1.20 m.)
Plough weight ...	approx. 1 ton.	

The Land-Rover Conversion

Performance		
Speeds:		
In standard (mechanical) transmission ...	...	up to 70 m.p.h. (112 km/h)
In additional hydrostatic drive for snow clearing ...	...	3 Ranges: <i>infinitely variable</i> from 0—1 m.p.h. (0—0.6 km/h) 0—3 m.p.h. (0—2 km/h) for heavy duty work, 0—7.5 m.p.h. (0—5 km/h) for light duty work.
Tractive Effort ...	...	3,330 lbs. low range main transfer box. 1,260 lbs. high range main transfer box.
Technical Data		
Land-Rover:		
88" wheelbase regular left- or right-hand drive, petrol model, fitted with 6.00 × 16 tyres and the following standard extras: Heavy duty suspensions, Engine oil cooler, Engine speed governor Truck Cab, Spare wheel on bonnet, Heater/Demister, Extra external driving mirror, Trailer lighting socket and plug, Flashing indicators.		
Engine ...	...	Rating: 77 b.h.p. at 4,250 r.p.m., 66.5 b.h.p. max. net power at governed speed for ploughing 3,600 r.p.m.
Engine Governor ...	...	Engine driven type controlling engine at 3,600 r.p.m. constant (during ploughing).
Conversion:		
Hydrostatic Pump ...	...	Lucas I.P. 500 variable delivery type driven at two speeds.
Booster Pump ...	...	Dowty G.P. 1/10 fixed delivery type.
Hydrostatic Motor ...	...	Hydrostatic Transmissions Ltd. M.1875/C 5-cylinder radial, high torque, low speed unit.
Pipes ...	...	High pressure wire-braided flexible hose.
Swivelling Seat for Passenger/Operator ...	...	Seat box cut away down to the floor. Seat fitted which can swivel to face forwards or rearwards.

Additional Fuel Tank ...	Standard fuel tank removed and replaced by two separate 20 gallon tanks, one on each wheelbox. Fuel supply through change-over tap.
Duplicate Steering Wheel	A second steering wheel positioned on back of cab, with chain and sprocket drive fixed permanently to outside of cab base and concealed under metal cover. Out-put spindle of secondary steering unit coupled to main steering wheel by quickly detachable shaft and universal couplings. Thus, for normal driving the steering system remains as standard.
Modified Rear window...	Standard truck cab sliding rear window replaced by a single plate of Triplex Safety Glass. Twin windscreen wipers fitted on the cab rear.
Auxiliary Controls ...	Hand-operated clutch lever for plough. On the other side, speed control. This single control for the flow of variable delivery pump gives full speed range in either forward or rearward direction. Levers for operation of the dog clutches in the transmission and for the selection of high or low ratios in the transfer boxes emerging from the centre seat box. Plough ram control levers directly in front of operator.
Additional Lights ...	Auxiliary driving lights on cab roof for night-work. Standard Land-Rover 5-pin plug and socket provided at rear of vehicle for lighting services on plough.
Towing Arrangement ...	2" ball-type coupling fitted for towing the plough. Stabilizer bars between brackets on rear of Land-Rover and plough preventing articulation of plough unit during snow clearing.

OPTIONAL EXTRAS:

- Escape Hatch.
- Rotating windscreen for rear window (instead of twin windscreen wipers).
- Fog Lamp.
- Fire Extinguisher.
- Special RUD snow chains.

SHIPPING DETAILS

Overall length ...	approx. 19'	(5.70 m.)
Overall width ...	approx 7' 6"	(2.30 m.)
Overall height ...	approx. 6' 6"	(2.00 m.)
Total weight ...	approx. 2½ tons.	

All Enquiries to

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