FIGHTING FI FOR WORLD WIDE SERVICE

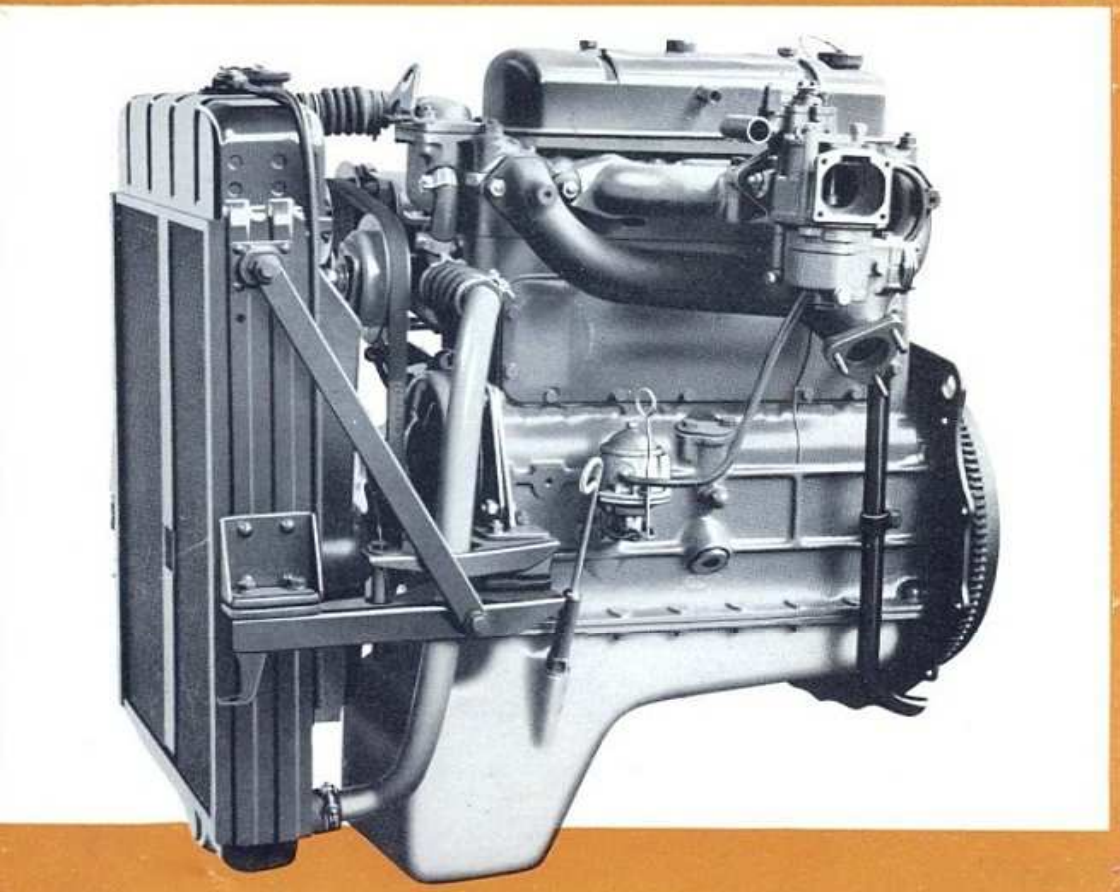
AUSTIN 4 x 4 Champ

Introduction

The Austin ½-ton four-wheel drive personnel carrier has been developed in collaboration with the British War Office and the Ministry of Supply. It has passed the most rigorous and exhaustive tests and proved itself thoroughly acceptable to the armed forces of the British Government. But although primarily produced for the British armed forces this extremely versatile and robust vehicle has a great many general applications and can be supplied to order. The army model, with Rolls-Royce B40 engine or special Austin A90 engine having electrical suppression, waterproofing equipment, two 12-volt batteries and a modified air cleaner for the carburetter, is also available at extra cost, if required. Outstanding among the many practical features in the design of the "Champ" are two- or four-wheel drive, five forward and reverse speeds with synchromesh engagement, independent torsion bar suspension at all wheels, hydraulic brakes and all-steel semi-integral body. A detachable P.V.C.-coated leather cloth hood gives good weather protection, while sidescreens to completely enclose the body may be supplied as extras. In fact the design, construction and equipment of this vehicle is such that it will undertake every transport job within its ½-ton load capacity, its outstanding performance being virtually unaffected by ground conditions, temperature or climate.

AUSTIN 4×4 Champ

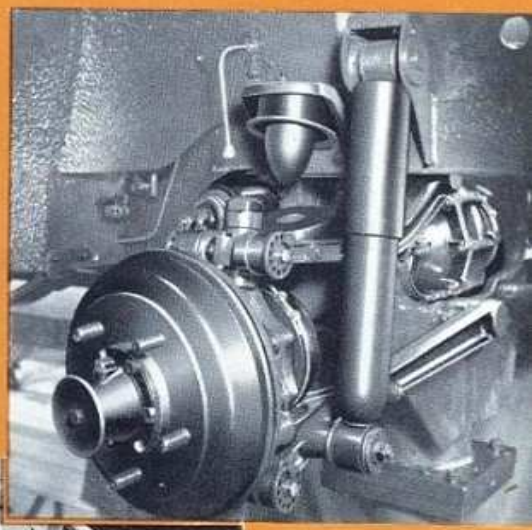
Features



POWER UNIT

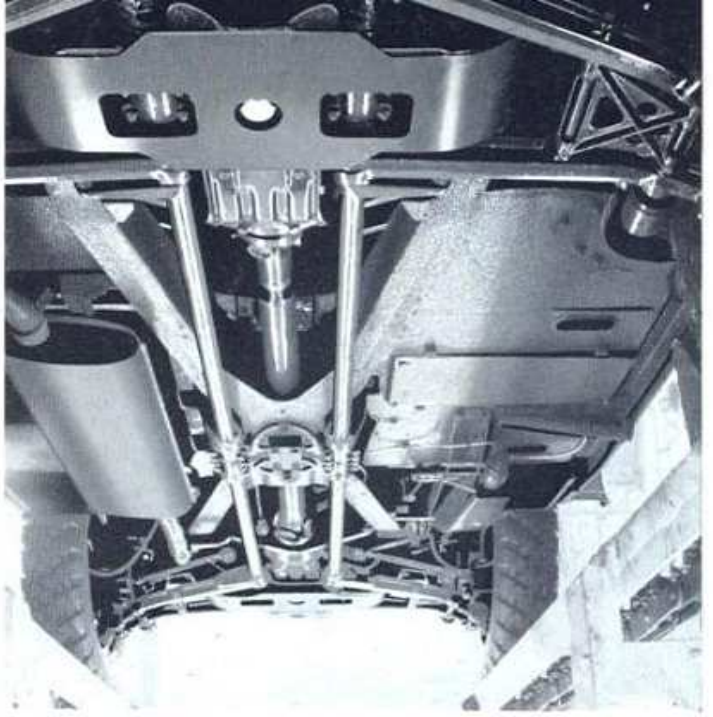
The heart of the "Champ" is the Austin A90 overhead-valve engine which develops 75 b.h.p. at 3,750 r.p.m. and has a torque of 135 lb. ft. at 2,000 r.p.m. It is a powerful unit of 2½ litres capacity, that incorporates many patented features of design to prolong its working life and ensure dependable operation under all conditions. Here is an engine that has been proved by years of world-wide service and whose capacity for hard work is phenomenal.

Independent, torsion bar suspension is fitted to all four wheels. The illustration below shows a front suspension and axle unit with telescopic shock absorber and progressive rubber buffer which provides a gradually increasing resistance and is designed to function as part of the normal system.



The layout of the driving compartment is simple and workmanlike. To the left of the central main gear control is the selector lever for rear or four-wheel drive, while between the seats a short three-way lever engages 'forward,' 'reverse' and 'winch.'

Seating accommodation may be provided for four people with additional space behind the rear seats for carrying goods, luggage or equipment. On the Home market, however, vehicles supplied with rear seats are subject to purchase tax.

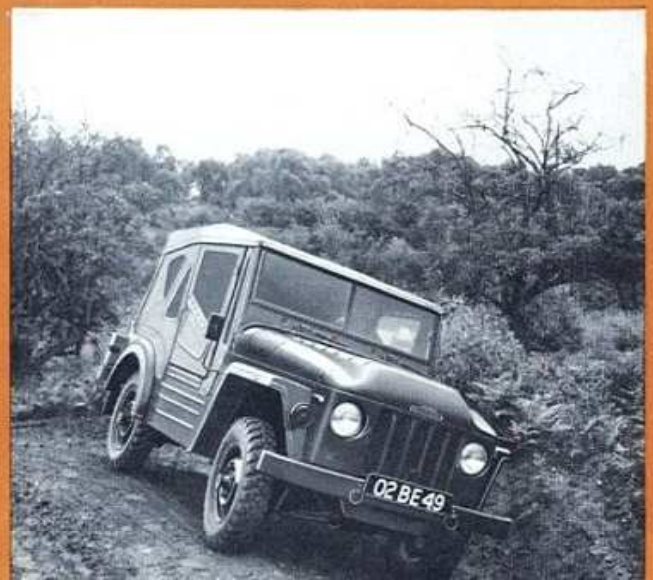


A general underneath view showing the sturdy semi-integral construction of the body.

With the two rear [illegible]ts folded and hinged [illegible]odily forward the "Cham[illegible]" can be speedily converted [illegible]to a ½-ton load carrier with a f[illegible], unobstructed steel floor behind [illegible]the front seats.

THE MOST SCIENTIFIC DESIGN EVER EVOLVED

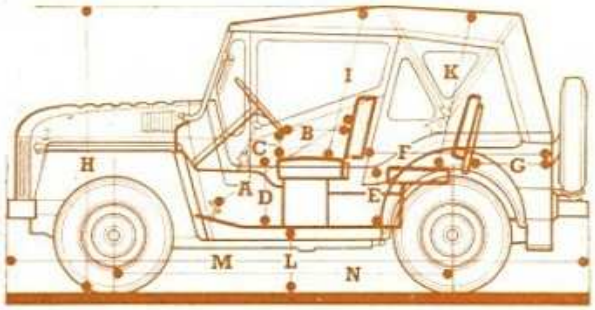
Fm the pictures on these
pes some idea may
beained of the adverse
ciumstances under
wth the Austin
"(amp" is able to
opate, although 'still'
phographs do scant
jusce to the rough
coitions actually
exrienced.



FOR LAND TRANSPORTATION

Awkward angles, soft sar steep inclines and declines, deep ruts and cling undergrowth—all these and many other hards are successfully overcome by this versatile vcle with its powerful engine, four-wheel drivetough construction and good ground clearanc It is, as its name implies, a real champion.

The "Champ" is fitted with a towing attachment as standard equipment and provision is made for fitting a power take-off unit or winch. Thus, in addition to its numerous other applications it may also be employed in recovery work, driving machinery and hauling.



LEADING DIMENSIONS		English	Metric
Pedal to seat squab	A	3' 3"	0·99 m.
Steering wheel to seat squab ...	B	1' 4"	0·41 m.
Steering wheel to seat	C	7"	0·18 m.
Front seat to floor	D	1' 4"	0·41 m.
Rear seat to floor	E	1' 3"	0·38 m.
Back of front seat to rear of vehicle	F	3' 11½"	1·21 m.
Back of rear seat to rear of vehicle	G	1' 10½"	0·57 m.
Overall height	H	5' 11"	1·80 m.
Height over front seat	J	3' 3"	0·99 m.
Height over rear seat	K	3' 3"	0·99 m.
Body floor to ground	L	1' 4½"	0·42 m.
Overall length	M	12' 0½"	3·67 m.
Wheelbase	N	7' 0"	2·13 m.
Track, front and rear		4' 0"	1·22 m.
Overall width		5' 1½"	1·56 m.
Turning circle		35' 0"	10·67 m.
Ground clearance...		10"	0·25 m.
Weight, approximately, unladen ...		3,470 lb.	1,574 kg.

Load capacity—Driver and 3 passengers or Driver and 560 lb. (245 kg.)

ENGINE.—Bore 3·4375 in. (87·3 mm.); stroke 4·375 in. (111·1 mm.); capacity 162·2 cu. in. (2,660 c.c.); b.h.p. 75 at 3,750 r.p.m.; max. torque 135 lb. ft. at 2,000 r.p.m. ; compression ratio 6·8 to 1.

Cylinders: Four cylinders cast integral with crankcase. Full length water jackets. Cast iron cylinder head carrying all valve gear.

Crankshaft: Forged steel, counterbalanced crankshaft supported in three detachable steel-backed white metal bearings.

Connecting Rods: Forged steel with detachable steel-backed white metal big-end bearings.

Pistons : Split skirt type in low expansion aluminium alloy with alumilite finish. Three compression rings and one oil control ring fitted.

Camshaft: Forged steel, sup in three detachable steel-backed white metal bearings. Camsnted design for quiet operation. Driven by Duplex roller chai crankshaft with oil catchers and a tensioner ring of synthetic to maintain chain lubrication and tightness respectively.

Valves : Overhead valves op by push-rods. Large inlet valves of silicon chrome steel; exhaus in 'XB' steel designed to resist corrosion from leaded fuels.

Lubrication : Pressure gea forces oil to all main, big-end, camshaft and overhead valvr shaft bearings. Holes in the big-end bearings provide for ication of the cylinder walls, and the front camshaft bearing p a controlled feed of oil to the timing chain. Both main and bearing oil feeds are of patented design which ensures longerhaft life. A full-flow filter with renewable element is fitted. capacity approximately 15 pints (8·52 litres).

Cooling : Circulation by cal type of pump with thermostat control. Fan cooled patentator to prevent loss of coolant through expansion. Water :ted to sparking plug bosses and exhaust port walls. Coolinn capacity 22 pints (12·5 litres).

Ignition : Coil and batteron with automatic advance and retard and additional vacuuml.

Dynamo : 12-volt fan ven unit with compensated voltage control.

Starter : Controlled from ent panel by separate pull switch.

Fuel System : Fuel from tank of 17 gallons (77·28 litres) capacity is fed by an AC cal pump to a horizontal Solex carburetter fitted with an oil- cleaner. An alternative type of carburetter may be fitted. duction manifold incorporates a stainless steel hotspot.

CLUTCH.—A flexible single ate Borg and Beck clutch is fitted. The pedal is mounted on the s frame and isolated from engine movement by special adjus nkage. Clutch diameter 10 in. (0·25 m.).

GEARBOX.—Mounted in ith the engine. There are five forward speeds with synchr engagement for all speeds. The control lever is centrally mou top of the gearbox. The reverse gear is carried in the transfi casing and is selected by a lever having 3 positions, i.e., forwarse or winch. This in effect gives 5 reverse speeds. Oil capproximately 8 pints (4·55 litres).

TRANSMISSION.—The dr be transmitted to the rear wheels only or to all four wheels at A selector lever for rear or four-wheel drive is located below ward of the main gear lever. One Hardy Spicer open propeller ith needle roller bearings conveys the drive from the gearbox rear axle. A second shaft drives the front axle from the rear nsfer case and runs idly when the front wheel drive is not in u

FRONT AXLE.—Hypoid ive in cast aluminium case. The crown wheel carries a straigh bevel type differential, and the axle half-shafts transmit the d he wheels through Tracta constant velocity universal joints. Oty 4 pints (2·27 litres).

REAR AXLE.—Similar to but having a transfer gear casing attached to the forward en main axle casing. The transfer gear casing also carries the nd power take-off drives which are selected by a lever locate en the front seats. The winch drive is an optional extra. le drive shafts, Tracta joints and differential are interchang etween front and rear axles. Oil capacity 5½ pints (2·98 l

OVERALL GEAR RATIOS.—4·99; 7·62; 11·84; 17·71; 27·25. Reverse (1st speed) 26·53.

ROAD SPEEDS AT 1,000 R.P.M.—Top 16·34 m.p.h.; fourth 10·7 m.p.h.; third 6·88 m.p.h.; second 4·6 m.p.h.; first 2·99 m.p.h. with 6·50×16 tyres.

STEERING.—High efficiency helical rack and pinion type. The half track rods are tubular and provide an oil reservoir for the ball joints, thus permitting long periods of running without attention. Spring spoked 17 in. (43 cm.) diameter steering wheel. Turning circle 35 feet (10·67 m.).

BRAKES.—Girling hydraulic brakes on all wheels, operated by pedal. The handbrake operates mechanical brakes on the rear wheels only. Front brakes are of two-leading shoe design. All lever bearings are of the bronze oil impregnated type and are sealed against the entry of dust and water.

SUSPENSION.—Independent suspension at all four wheels by torsion bar springs and wishbone arms. The torsion bars are interchangeable between all four positions, and any one can be removed without disturbing the others. A progressive rubber buffer provides a gradually increasing resistance and is designed to function as a part of the normal suspension system. Telescopic dampers of 1 in. diameter are fitted front and rear.

WHEELS AND TYRES.—One-piece wheels, size 4·50—16. Dunlop 6·50×16 RK.3 dual purpose tyres are fitted as standard equipment. Alternative types available at extra cost are: 6·50×16 Fort or Trakgrip; 7·50×16 Fort or Trakgrip; 7·00×16 sand; 7·50×16 Tractor. Spare wheel carried on the back panel of the body.

ELECTRICAL EQUIPMENT.—12 volt, 63 amp. hr. capacity battery. Built-in headlamps; sidelamps; twin tail-stop-lamps; rear number plate illumination lamp; dip-switch; horn; instrument panel illumination lamps.

INSTRUMENTS.—Speedometer; water thermometer; fuel gauge; oil pressure gauge; ammeter; ignition warning light.

BODYWORK

GENERAL.—All-steel semi-integral construction with cutaway sides. There is a box section cruciform chassis frame the rear cross member of which takes the form of the rear body panel and incorporates suitable reinforcements for the fitting of winch gear. Dash, floor, front wheelarches, seat supports, rear floors, etc., are all welded to the main chassis frame and constitute the frame and floor assembly. Built-in cool boxes are provided behind the rear wheelarches, and grab handles are fitted on the dash and centre transmission cover. There are bumpers front and rear, the rear one being reinforced for towing. The windscreen is of toughened glass and can be opened when required.

SEATS.—The driver's seat may be fixed in one of several positions. Both front seats have folding back rests and are hinged at the front edge, to give access to the rear seats and storage lockers respectively. The rear seats may be hinged forward to engage with the front seat cross member to form a flat load floor. All seats are filled with sponge rubber and covered with P.V.C. coated leather cloth.

WEATHER EQUIPMENT.—The hood is of P.V.C. coated leather cloth. It is detachable, being fixed to the windscreen by means of clips and to the back panel by straps. Provision is also made for the fitting of side curtains as an optional extra. A hard top may be fitted to special order.

NOTE: On the Home Market, the Champ is subject to pu tax if rear seats and side curtains are fitted before delivery.

THE AUSTIN MOTOR COMPANY LIMITED
LONGBRIDGE BIRMINGHAM
AUSTIN MOTOR EXPORT CORPORATION LIMITED
LONGBRIDGE, BIRMINGHAM, 8 479-483 OXFORD ST., LONDON, ENGLAND