

AUSTIN mini-cooper
998 cc and 'S' type 1275 cc
now with hydrolastic suspension



MORE CONTROLLED CORNERING FIRMER for the brilliant

Winners of the formidable Monte Carlo Rally for two years in succession, now the brilliant Mini-Coopers go one better! Give the real enthusiasts—the competition and rally drivers—something to rave about: Hydrolastic suspension.

Hydrolastic suspension, the most advanced system of fluid suspension in the world, gives even greater stability, control, and comfort to the

Although basically similar in appearance, the power units of the standard Mini-Cooper and the 'S'-type saloon differ considerably in construction. The 998 c.c. unit of the Mini-Cooper is a twin-carburettor development of the BMC 'A'-series engine which was so successfully utilized as a transverse "power pack" for the normal Mini range. For the 'S'-type saloon, however, a completely new power unit has been developed with the help of experience gained in racing BMC-powered cars in Formula Junior competition events. Because of the bigger bore diameter, the cylinder centres have been re-spaced in the crankcase, while the top face of the cylinder block has been slightly raised in order to accommodate a piston of adequate length. To withstand the greater stresses resulting from the increased power output the engine is fitted with a massive crankshaft having 2-in. diameter main bearings, together with special

connecting rods and enlarged gudgeon pins to improve gas-flow characteristics and unit life. Valve guides are also different, but the design of the valve gear generally is until approximately 7,000 r.p.m.

The power curve of the 'S'-type is characteristically different to the standard Mini-Cooper, without vacuum control, is fitted to a standard high-speed running.

In the gear train of the 1275 c.c. Mini, gears of immense strength are used to



SPECIFICATION

ENGINE: In-line 4-cylinder, water-cooled, overhead valve with three-main-bearing counterbalanced crankshaft. In unit with clutch, gearbox, and final drive. Installed transversely at front of car.

998 c.c. Cooper Standard: Bore 2.642 in. (66.98 mm.); stroke 3.00 in. (76.20 mm.); cubic capacity 90.98 cu. in. (598 c.c.); compression ratio 9 : 1; maximum b.h.p. 55 at 5,800 r.p.m. Torque 57 lb. ft. at 3,000 r.p.m.

1275 c.c. Cooper 'S': Bore 2.781 in. (70.83 mm.); stroke 3.2 in. (81.33 mm.); cubic capacity 77.9 cu. in. (1,275 c.c.); compression ratio 9.75 : 1; standard b.h.p. 70 at 6,000 r.p.m. (78 gross). Maximum torque 75 lb. ft. at 3,000 r.p.m.

GEARBOX: 4-speed with lock ring synchromesh on second, third, and top; in unit with engine and final drive, remote-control, central floor gear change lever. Final drive to front wheels via helical spur gears, universal joints, and open shafts; drive casing in unit with engine and gearbox.

Final Drive: Cooper Standard; 3.765 : 1 (17/64)
Cooper 'S'; 3.44 : 1 (18/52)

Gear Ratio:	3.765 : 1 (17/64) Final drive		3.44 : 1 (18/52) Final drive		
	Overall	Road speeds at 1,000 r.p.m.	Overall	Road speeds at 1,000 r.p.m.	
Reverse	3.20 : 1	—	11.022 : 1	—	
1st	3.20 : 1	12.05 : 1	4.58 m.p.h.	11.022 : 1	5.02 m.p.h.
2nd	1.92 : 1	7.21 : 1	7.67 m.p.h.	6.598 : 1	6.39 m.p.h.
3rd	1.36 : 1	5.11 : 1	10.83 m.p.h.	4.674 : 1	11.94 m.p.h.
4th	1.00 : 1	3.765 : 1	14.70 m.p.h.	3.444 : 1	16.07 m.p.h.

FUEL SYSTEM: Two S.U. carburetors, type H52, with controlled air cleaner and silencer with two paper elements and hot-air intake tube. S.U. electric fuel pump, mounted under tank at rear. Petrol tank capacity 5½ gallons (25 litres). Fuel filters in pump and fuel tank.

LUBRICATION SYSTEM: Full pressure to engine bearings; sump forms oil bath for gearbox and final drive; accessory lobe-type pump driven by camshaft; full-flow oil filter with replaceable element, gauze strainer in sump; magnetic sump drain plug. Oil capacity including transmission, 8 pints (4.5 litres) approximately, plus 1 pint (0.57 litre) for filter.

IGNITION SYSTEM: 12-volt; coil and distributor with automatic control (and vacuum control on standard Mini-Cooper).

COOLING SYSTEM: Pressurized radiator with pump, fan, and thermostat; capacity approximately 5½ pints (3 litres), plus 1 pint (0.57 litre) for heater when fitted.

TRANSMISSION: 7½ in. (192 mm.) diameter diaphragm-spring clutch designed to withstand high-speed running; hydraulic operation by pendant pedal.

STEERING: Cooper 'S': Rack and pinion; 2½ turn lock-to-lock; 2-spoke 15½ in. (394 mm.) diameter steering-wheel, turning circle 31 ft. 7 in. (9.63 m.). Track (with 2½ in. rim wheels): front 3 ft. 11½ in. (1.21 m.); rear 3 ft. 10½ in. (1.10 m.). Track (with 4½ in. rim wheels): front 4 ft. 0½ in. (1.24 m.); rear 3 ft. 11½ in. (1.21 m.). Cooper Standard as above, track: front 2 ft. 11½ in. (1.21 m.); rear 3 ft. 9½ in. (1.10 m.).

BRAKES: Front-four-wheel hydraulic, operated by pendant pedal. Pressure-relieving valve installed in system. Cooper Standard: 7-in. diameter discs at front and 7-in. x 1½-in. drums at rear. Cooper 'S': 7½-in. diameter discs at front and 7-in. x 1½-in. drums at rear, supplemented by 6½-in. diaphragm servo. Hand brake—central pull-up lever which operates on rear wheels.

COACHWORK: Four-seater, 4-light, 2-door saloon of all-steel unitary construction. Boreest top hinged at rear edge and supported in open position by pretied rod. Boreest lock and safety catch incorporated behind radiator grille. Curved, toughened-glass windscreen with twin-jet windscreen washers. The doors are hinged at their forward edges by outside hinges. Each door has a large inside pocket and is fitted with two independently adjustable sliding windows. Exterior handle on driver's door has private lock, passenger's door locked from inside by trip catch. The doors are opened from inside by chromium-plated, lever-type handles. Hinged rear side windows. Wide, curved rear window. Floor luggage compartment contains spare wheel and tyre and has drop-down, luggage-carrying lid with hinged number-plate and locking handle; capacity with lid closed 6½ cu. ft. (0.184 m.³). Bright plastic external finishes fitted to windscreen and rear window. Door window frames and lower panel sills have bright metal finishes. Wheel trims, rear number-plate lamp, fuel filler cap, also front/rear bumpers with over-riders and tubular extensions. Entire interior trim in washable vinyl-coated fabric; windscreen between rail and side copings, trimmed black to eliminate windscreen reflections. Ashtray incorporated in fascia. Large, oval instrument panel, trimmed black, contains speedometer with oil pressure and water temperature gauges. Full-width parcel shelf beneath fascia containing central switch panel. Interior anti-glare mirror and dual sun-visor. Adjustable front seats. Front and rear seat cushions upholstered with polyether; squabs upholstered with reinforced foam. Companion box on each side of rear seat includes ashtray, interior lights fitted in roof. Parcel shelf behind rear seat and supplementary luggage space beneath. Kicking protectors fitted to doors and door sills. Entire floor, including plywood spare wheel cover in luggage compartment covered in Velours floor covering, with underfelts. Fresh-air heater/demister fitted.

ELECTRICAL: 12-volt, 43 amp.-hr. capacity battery at 20-hr. rate located under floor of boot. Double-dipping headlamps with foot-operated dip switch; sidelamps in headlamps with separate bulbs; rear lamps, stop lamps, reflectors, and flashers are all combined in single units; rear number-plate lamp; roof lamp with integral switch; separate front amber flashers, self-cancelling switch under steering-wheel with warning light in the end of the lever. Twin-blade electrical windscreen wipers, single Windtone horn with push in centre of wheel. Concealed instrument illumination.

INSTRUMENTS: Speedometer, with fuel gauge and warning lights to show dynamo not charging and headlamp high-beam position. Separate gauges for oil pressure and water temperature. The various switches, including combined ignition/starter switch, are mounted on a panel in the centre of the parcel shelf.

ROAD WHEELS: Pressed-steel, 4-stud fixing, 145—10 Dunlop SP41 tyres. *Cooper Standard*—3½-in. rims with tubeless tyres, wheel trims fitted; *Cooper 'S'*—Ventilated wheels with 3½-in. or 4½-in. rims and tubed tyres.

SUSPENSION: Front: independent suspension with Hydrolastic displacers (interconnecting front to rear). Rear: independent; trailing arms. Hydrolastic displacers incorporating auxiliary springs.

OPTIONAL EQUIPMENT: Reclining front seats. *Cooper 'S' only*—Additional 5½ gal. (25 litre) fuel tank, oil cooler, sump guard.

EXPORT AVAILABILITY: For the specific Export requirements encountered throughout the world numerous production variations are available. The following items can therefore be alternatively supplied at no extra cost: m.p.h. or km.p.h. speedometer; right- or left-hand steering; headlamp and flasher equipment to suit any overseas territory. Optional equipment at extra cost includes: fresh-air heater (heater is not considered standard equipment for Export markets); radio; laminated windscreen; locking fuel filler cap.

COLOURS:

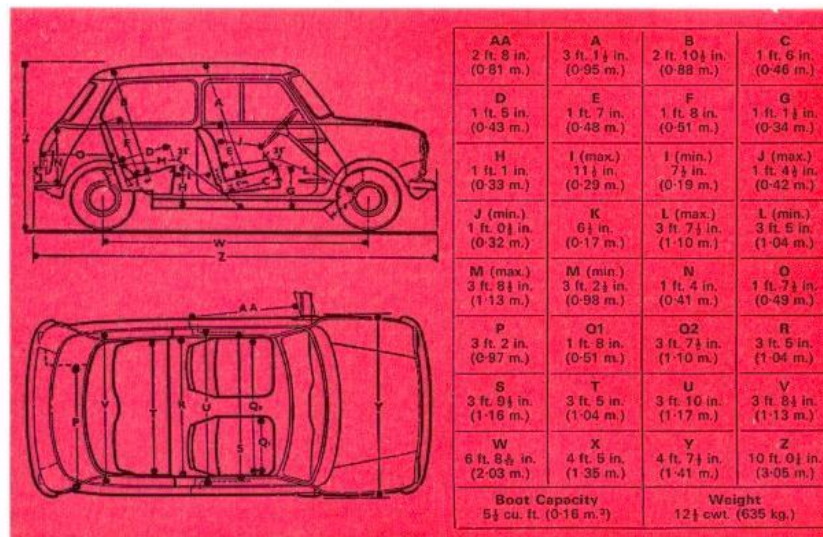
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Dimensions



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