The Motor Road Test No. 21/59

Make: M.G. **Type:** M.G. A 1600

Makers: M.G. Car Co., Ltd., Abingdon-on-Thames, Berkshire.

Test Data

CONDITIONS: *Weather: Warm and dry, gusty 10 m.p.h. cross wind. (Temperature 59°-63° F., Barometer 29.6-29.7 in. Hg.) Surface: Dry tar macadam and concrete. Fuel: Premium grade pump petrol (approx. 96 Research Method Octane rating).*

INSTRUMENTS

Speedometer at 30 m.p.h.	accurate
Speedometer at 60 m.p.h.	3% fast
Speedometer at 90 m.p.h.	4% fast
Distance recorder	accurate

WEIGHT

Kerb weight (unladen, but with oil, coolant and fuel for approx. 50 miles)	18¼ cwt.
Front/rear distribution of kerb weight	53/47
Weight laden as tested	22 cwt.

MAXIMUM SPEEDS

Flying Lap of Banked Circuit	96.1 m.p.h.
Best one-way ¼-mile on straight	100 m.p.h.

"Maximile" Speed (Timed quarter mile after one mile accelerating from rest).

Mean of four opposite runs	94.1 m.p.h.
Best ¼ mile time equals	96.3 m.p.h.

Speed in Gears (at 6,000 r.p.m. recommended limit).

Max. speed in 3rd gear	74 m.p.h.
Max. speed in 2nd gear	46 m.p.h.
Max. speed in 1st gear	28 m.p.h.

FUEL CONSUMPTION

39½ m.p.g. at constant 30 m.p.h. on level
37 m.p.g. at constant 40 m.p.h. on level
34½ m.p.g. at constant 50 m.p.h. on level
32 m.p.g. at constant 60 m.p.h. on level
29½ m.p.g. at constant 70 m.p.h. on level
27 m.p.g. at constant 80 m.p.h. on level
23 m.p.g. at constant 90 m.p.h. on level

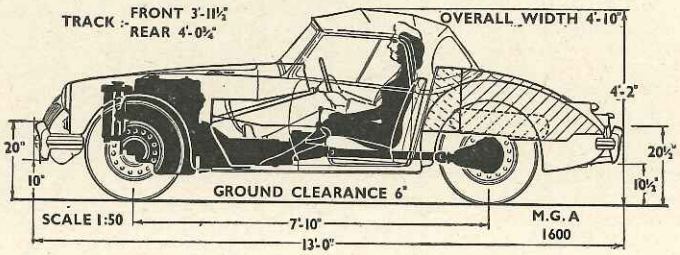
Overall Fuel Consumption for 1,028 miles, 42.2 gallons equals 24.4 m.p.g. (11.6 litres/100 km.).

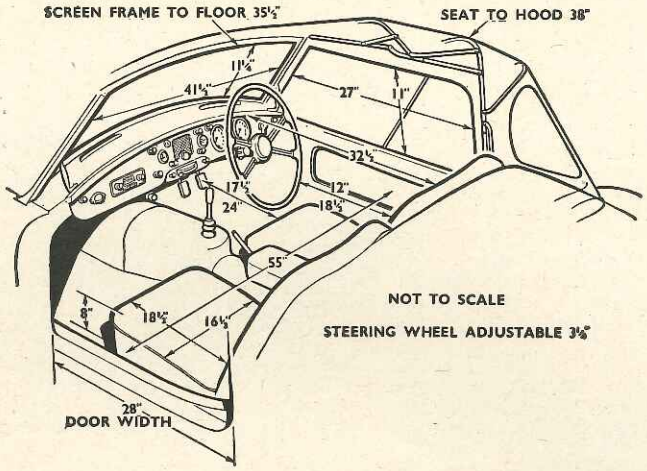
Touring Fuel Consumption (m.p.g. at steady speed midway between 30 m.p.h. and maximum, less 5% allowance for acceleration) 29.7 m.p.g.

Fuel tank capacity (maker's figure) 10 gallons.

STEERING

Turning circle between kerbs:	
Left	29½ ft.
Right	28½ ft.
Turns of steering wheel from lock to lock	2¾





ACCELERATION TIMES from standstill

0-30 m.p.h.	4.3 sec.
0-40 m.p.h.	6.4 sec.
0-50 m.p.h.	9.1 sec.
0-60 m.p.h.	13.3 sec.
0-70 m.p.h.	17.7 sec.
0-80 m.p.h.	25.1 sec.
Standing quarter mile	19.8 sec.

ACCELERATION TIMES on Upper Ratios

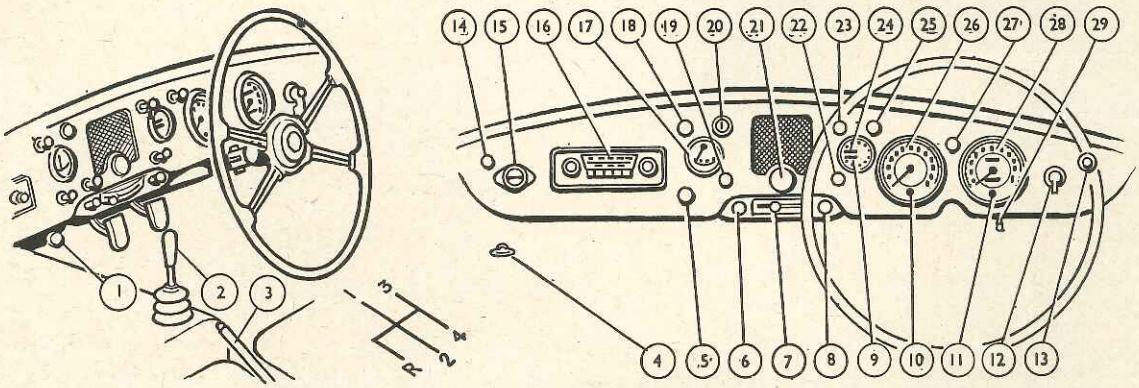
	Top gear	3rd gear
10-30 m.p.h.	12.1 sec.	8.0 sec.
20-40 m.p.h.	11.0 sec.	6.9 sec.
30-50 m.p.h.	10.6 sec.	6.8 sec.
40-60 m.p.h.	11.2 sec.	7.4 sec.
50-70 m.p.h.	13.3 sec.	9.0 sec.
60-80 m.p.h.	15.0 sec.	—

BRAKES from 30 m.p.h.

1.00 g retardation (equivalent to 30 ft. stopping distance) with 100 lb. pedal pressure.
0.82 g retardation (equivalent to 36¾ ft. stopping distance) with 75 lb. pedal pressure.
0.53 g retardation (equivalent to 56¾ ft. stopping distance) with 50 lb. pedal pressure.
0.29 g retardation (equivalent to 104 ft. stopping distance) with 25 lb. pedal prersure.

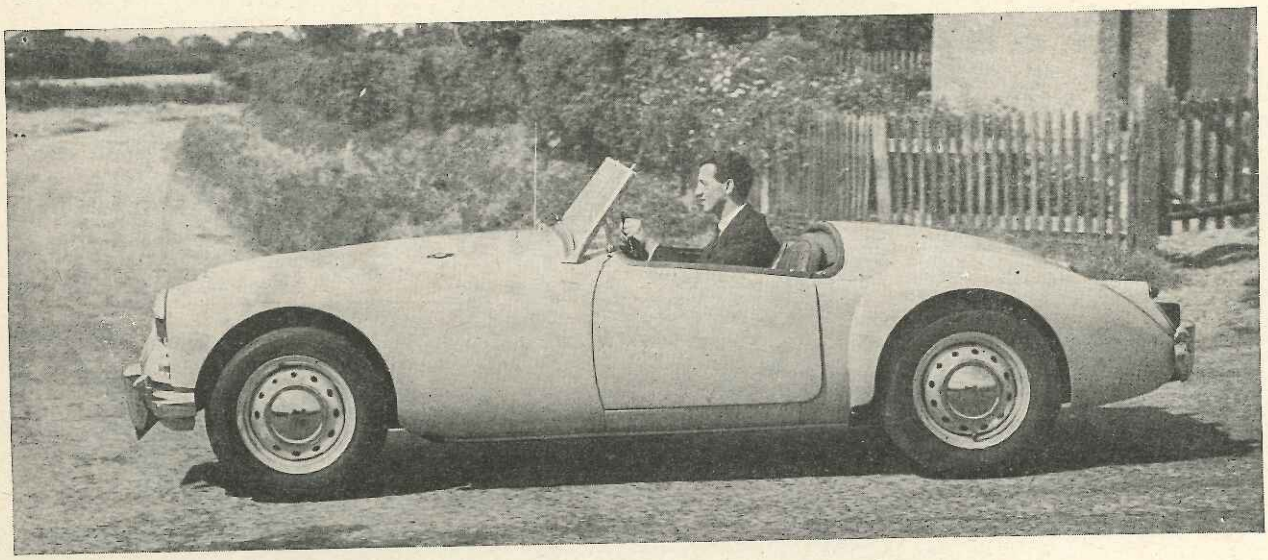
HILL CLIMBING at sustained steady speeds

Max. gradient on top gear	1 in 10.9 (Tapley 205 lb./ton)
Max. gradient on 3rd gear	1 in 7.3 (Tapley 305 lb./ton)
Max. gradient on 2nd gear	1 in 4.5 (Tapley 485 lb./ton)



1, Headlamp dipswitch. 2, Gear lever. 3, Handbrake. 4, Bonnet catch release. 5, Windscreen washer button. 6, Heater air-intake control. 7, Heater temperature control. 8, Demister control. 9, Water thermometer. 10, Dynamo charge warning light. 11, Headlamp main beam indicator lamp. 12, Direction indicator switch. 13, Direction indicator warning light. 14, Map-reading light switch. 15, Map-reading light. 16, Radio controls. 17, Fuel contents gauge. 18, Windscreen wipers switch. 19, Choke control. 20, Ignition switch. 21, Horn button. 22, Starter button. 23, Lights switch. 24, Oil pressure gauge. 25, Switch for optional fog-lamp. 26, Tachometer. 27, Panel light rheostat. 28, Speedometer and distance recorder. 29, Trip adjuster.

The M.G. A 1600 Two-Seater



Extra Acceleration and Retardation for a Popular Sporting Car

FAMILIAR since the autumn of 1955 as a sporting two-seater of notable strength and roadworthiness, the M.G. A has now been endowed with extra acceleration by an increase in cylinder bore, and with improved retardation by disc-pattern Lockheed front brakes. Involving no price increase whatever, and accompanied by other minor refinements, these two important changes increase the attractiveness of what is already a very popular model.

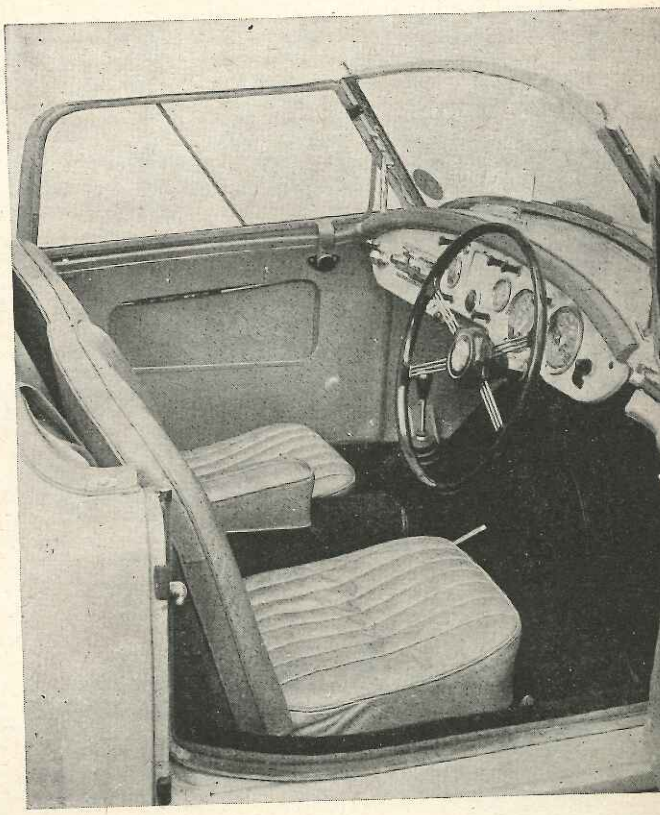
Enlargement of the engine by 6½% without any alteration in the 4.3/1 axle ratio has produced a welcome improvement in the acceleration of the M.G. A which extends throughout its speed range. From 30 m.p.h. to 50 m.p.h. in top gear, the latest car took 10.6 sec., whereas the original M.G. A of September 1955 took 11.4 sec., and the M.G. A Coupé which we tested in August 1957 took 13.8 sec.; from 50 to 70 m.p.h. the latest car takes 13.3 sec. as against 14.9 sec. for the 2-seater in 1955 and 13.7 sec. for the hardtop in 1955. Acceleration from a standstill through the gears benefits very markedly from the extra engine torque, rest to 50 m.p.h. and 70 m.p.h. times of 9.1 sec. and 17.7 sec. comparing with 10.8 sec. and 21.9 sec. for the earlier 2-seater, 10.8 sec. and 21.4 sec. for the former coupé.

It may at first glance seem surprising that the engine changes which have resulted in such markedly improved acceleration through the gears have not raised the top speed of the car. With full silencing as installed in the car, however, the new engine develops peak power at 5,300 r.p.m. corresponding to approximately 89-90 m.p.h. in top gear, the timed mean speed of just over 96 m.p.h. being well within the 6,000 r.p.m. limit suggested by a red sector on the tachometer dial but 7% beyond the peak of the power curve. Raised tyre pressures, and/or the use of Road Speed tyres which are an optional extra, in place of the tubeless touring-quality tyres fitted to our test model, would no doubt have reduced drag and lifted the top speed—so, judging by our experience of other M.G. cars, would some additional running-in of an engine which was quiet mechanically and used very little oil indeed. What matters about the M.G. A 1600 is not, however, its ultimate speed, but the ease and rapidity with which 80 m.p.h. can be reached and exceeded whenever there is a slight break in the traffic on ordinary main roads.

Complete docility characterizes the enlarged engine, as witness our recording of top gear acceleration times from a mere 10 m.p.h., and it runs happily on ordinary Premium grades of petrol without demanding 100-octane, but it does not feel to pull its full weight below 2,500 r.p.m. In the warm summer weather which prevailed during our test, the choke was never needed for starting from cold, even after the car had stood in the open throughout rainy nights. The engine can seem rather harsh when accelerated hard in the gears, an effect which is difficult to define exactly as neither exhaust nor mechanical noise levels are high for a sports car. Fuel economy proved rather inferior to smaller-engined preceding models, our checks showing between 23½ m.p.g. and 25½ m.p.g. in varied (but always fast) road driving.

In Brief

Price £663 plus purchase tax £277 7s. 6d., equals £940 7s. 6d.	
Capacity	1,588 c.c.
Unladen kerb weight ...	18¼ cwt.
Acceleration:	
20-40 m.p.h. in top gear ...	11.0 sec.
0-50 m.p.h. through gears	9.1 sec.
Maximum top gear gradient	1 in 10.9
Maximum speed	96.1 m.p.h.
"Maximile" speed	94.1 m.p.h.
Touring fuel consumption ...	29.7 m.p.g.
Gearing: 17.0 m.p.h. in top gear at 1,000 r.p.m.; 29.1 m.p.h. at 1,000 ft./min. piston speed.	



COMFORT and convenience have been well studied in the layout and equipment of the cockpit; the two bucket seats have a central arm-rest between them on the propeller-shaft tunnel, just to the rear of the short gear lever. Rev. counter and speedometer are two large circular dials immediately in front of the driver, with smaller dials for fuel gauge, oil pressure and water thermometer on the left.

The M.G. A 1600 Two-

Provision of Lockheed 11-inch disc brakes behind the bolt-on front wheels has given this car an immense reserve of stopping power. There is outstandingly good balance between front and rear brakes, so that the car can be checked from 95 m.p.h. down to a standstill at virtually the limit of tyre adhesion without any fuss or excitement whatever. An extended series of stops from 60 m.p.h., at the closest intervals permitted by very good acceleration, produced no perceptible fade but merely a slight and entirely temporary loss of the usual perfect balance between the four brakes. As we have noted on some other disc-braked cars, a form of brake squeal could be induced by extremely gentle brake application at town speeds, a trivial price to pay for smoothly progressive stopping power which inspired utter confidence at all times. The fly-off handbrake works very effectively upon the rear drums, location of the pull-up lever on the right of the transmission tunnel being reasonably convenient for tall drivers but awkward when the driving seat was adjusted further forwards.

Apart from the new braking system, no chassis changes in this model have been announced, nor was there any reason to expect them. Exceptional strength characterizes a box-section frame of which the scuttle structure is an integral part, and although 18¼ cwt. is thought rather heavy for a 1.6-litre sports 2-seater, stamina is known to go with the appreciable weight, and if the gearbox is used properly, acceleration can be very brisk indeed. Factory recommendations on the subject of tyre pressures cover rather a wide range, but we found the highest recommended pressures to be best suited to everyday use of this sporting car, which otherwise took town corners to an accompaniment of loud tyre squeal.

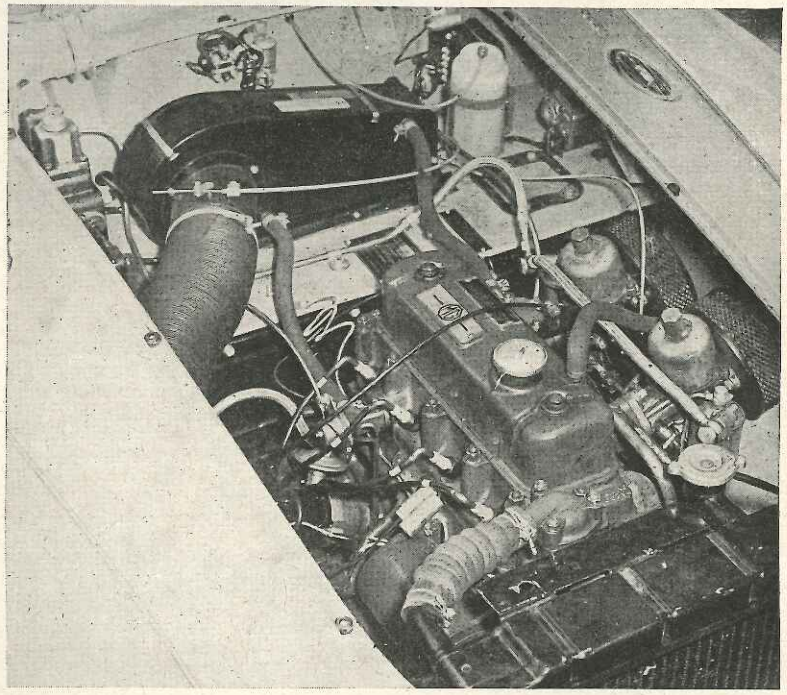
Even with quite high tyre pressures, the coil-spring I.F.S. and semi-elliptic rear springs are very far from harsh, and in fact a certain amount of body roll is evident during fast cornering, despite the low build of the M.G. A. Around town, there is not quite the same cushioned ride as many present-day touring cars provide, but the suspension is extremely well suited to comfortably "flat" riding at the brisk pace which is natural to this car on country roads of all kinds. There is certainly no cause to be shy of taking the M.G. A onto really rough surfaces.

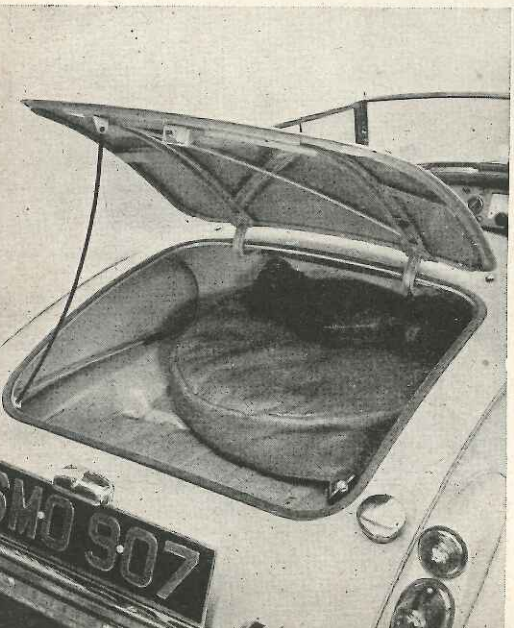
Like other M.G. two-seaters for a considerable number of years past, this model has a rack-and-pinion steering gear which is extremely positive in action, without any of the backlash or flexibility which spoil the precision of all too many steering installations based upon worm or screw gearing. In conjunction with a chassis which seems never to "put a foot wrong," steering gear precision makes this a very brisk car from point to point, especially on the secondary roads which in Britain often serve as traffic avoiders.

At the extremes of the speed range, it must be noted that the fully reversible rack-and-pinion steering, slightly damped by a friction device which makes it self-adjusting for wear, does reveal shortcomings. Below 25 m.p.h. the friction is evident enough to cause a slight amount of "wander," and above 60 m.p.h. road reaction begins to reach the driver's hands, of small amplitude but persistent enough to leave his fingers tingling after a fast non-stop hundred miles. Whilst it has strong self-centering action, the steering never becomes very heavy, and a turning circle of below 30 feet diameter is extremely convenient on many occasions.

Set just about as conveniently close to the steering wheel rim as it could possibly be without getting in the way is the knob of a central remote-control gear lever, controlling an excellent four-speed gearbox. Faults can be found with the transmission, some people finding the small across-the-gate movement needed for a 3rd-to-2nd change awkward at first, and others tending to make audible changes into top gear when in a hurry, due to not depressing the clutch pedal through the whole of its travel. With familiarity these points cease

ALTHOUGH the smooth bonnet falls away to a very low front, the engine compartment is not cramped and access for routine maintenance is good.





HOLDING the spare wheel, the boot has room only for soft luggage; those contemplating serious touring can obtain a grid to fit the boot lid.

Seater

DISTINGUISHED from earlier models by rigid sliding side-screens and deeper plinths to accommodate flasher units separate from the rear lamps, the M.G. A 1600 retains such useful features as a large rear window and quarter lights in the hood, stout bumpers and smooth, easy-to-clean bodywork.

to obtrude, but a rather wide gap between 3rd and 2nd gears (which, at the 6,000 r.p.m. where a red sector of the tachometer begins, respectively, give speeds of about 74 m.p.h. and 45 m.p.h.) remains evident, the designers presumably not wishing changes down into an unsynchronized 1st gear to be needed very often. But, regardless of these imperfections, the smoothly firm clutch and quiet, easy-to-use gearbox are thoroughly appropriate to the car.

Purely and simply a two-seater, the sleek body of this car is no more difficult to enter than most comparable low-built models. The floor is flat and the doors open down to floor level, but the sturdy structure of the car does not let the doors extend far enough forward for utmost ease of entry. Once entered, this car offers an exceptionally high standard of comfort and convenience, the individual seats with their "wrap around" backrests having an adjustment range which even the very tall find satisfactory. Between the seats, a cushioned armrest covers the propeller shaft tunnel, and hollowed-out doors provide quite generous elbow width in the cockpit as well as two very capacious pockets. The facia is a metal panel onto which instruments and controls have been crowded with little pretence at "styling" but with a great deal of practical common sense—the speedometer and matching tachometer face the driver directly, a combined oil pressure gauge and coolant thermometer is close beside them and the fuel gauge not far away. Unusual but convenient once a driver is accustomed to them, are facia-panel locations of the horn button (on the driver's left) and turn-indicator time switch (on the driver's right), the horn button being touch-sensitive so that either a gentle cautionary note or a strident warning can be given at will. Rheostat-controlled lighting is provided for the instruments, a map reading light is in front of the passenger, and a spare switch is provided for a foglamp if this extra is specified.

All-weather equipment takes the form of two sidescreens and a hood, all of which can in fine weather be stowed safely and invisibly behind the seats. These removable items really do keep out wet weather, and stay firmly in place at the car's maximum speed—the curved-glass windscreen has bracing struts which serve also as grab handles, the hood fastens to the windscreen at three points, and when the doors are closed, rubber-cushioned fittings on the sidescreens hold them in rattle-free contact with the windscreen. Each sidescreen has a sliding half panel to provide ventilation, and in striking contrast with the one-time austerity of sporting cars is the inclusion of a fresh air cockpit heater and windscreen de-mister in this competitively-priced model's extensive range of optional built-in extras.

The two criticisms which must be made of the hood are, that the car becomes very much noisier to drive when it is in use owing to wind-induced flutter of the roof fabric, and that the multiple joints which let a really rigid hood frame fold away so neatly make reasonably rapid erection or folding of the hood a skilled task. By some people's standards of judgement, the luggage locker also is criticized as being of rather modest size.

With its share of the imperfections from which no car ever altogether escapes, this remains a very attractive and versatile sporting two-seater. Sturdy, well furnished and probably built with more thorough care than most of its contemporaries, it travels fast and is enjoyable to drive or ride in, yet can also serve as a reliable and weatherproof form of everyday transportation.

Specification

Engine

Cylinders	4
Bore	75.39 mm.
Stroke	88.9 mm.
Cubic capacity	1,588 c.c.
Piston area	27.68 sq. in.
Valves	Push-rod o.h.v.
Compression ratio	8.3/1
Carburetters	Twin S.U. type H4
Fuel pump	S.U. electrical
Ignition timing control	Vacuum and centrifugal
Oil filter	Full flow Tecalemit or Purolator
Max. power (net) at	75.5 b.h.p. at 5,300 r.p.m.
Piston speed at max. b.h.p.	3,090 ft./min.

Transmission

Clutch	Borg and Beck 8 in. s.d.p.
Top gear (s/m)	4.3
3rd gear (s/m)	5.908
2nd gear (s/m)	9.520
1st gear	15.652
Reverse	20.468
Propeller shaft	Hardy Spicer, open
Final drive	Hypoid bevel
Top gear m.p.h. at 1,000 r.p.m.	17.0
Top gear m.p.h. at 1,000 ft./min. piston speed	29.1

Chassis

Brakes	Lockheed hydraulic—disc front, drum rear
Brake diameter	Disc 11 in., drum 10 in.
Friction lining area	87 sq. in.
Suspension:	
Front	Independent coil springs and wishbones
Rear	Rigid axle with half-elliptic leaf springs
Shock absorbers	Armstrong, hydraulic lever arm
Steering gear	Rack and pinion
Tyres	Dunlop 5.60—15 tubeless

Coachwork and Equipment

Starting handle	Yes
Battery mounting	One each side behind seats
Jack	Screw-type
Jacking points	Front wishbones and rear springs

Standard tool kit: Jack, wheelbrace and hub cap lever (combined), starting handle, 1 box and 3 open-ended or box spanners, sparking plug spanner, tommy bar, cylinder head spanner, ring-type tappet spanner, adjustable spanner, tappet feeler gauge, screwdriver grease gun, tyre pump, No. 2 screwdriver, pliers, brake bleeder tube, distributor screwdriver and gauge, tyre lever, tyre valve spanner, rear axle drain plug key, tool roll.

Exterior lights	2 head, 2 side, 2 stop and tail
Number of electrical fuses	2
Direction indicators	Flashing type, self-cancelling
Windscreen wipers	Electrical two-blade, self-parking
Windscreen washers	Optional
Sun vizors	None

Instruments: Speedometer with decimal trip recorder, tachometer, oil pressure gauge, water temperature gauge, fuel gauge.

Warning lights	Dynamo charge, turn indicators, headlamp main beam

Locks:	
With ignition key	Ignition switch
With other keys	None
Glove lockers	None
Map pockets	In each door
Parcel shelves	None
Ashtrays	None
Cigar lighters	None
Interior lights	Instrument panel

Interior heater: Optional extra: Smith's 3½ kW. fresh-air-type with de-misters.

Car radio	Optional, H.M.V.

Extras available: Heater, radio, wire wheels, whitewall tyres, 5.90—15 Road Speed tyres, alternative 4.55:1 axle ratio, adjustable steering column, tonneau cover, radiator blind, twin horns, anti-roll bar, fog lamp battery cover, badge bar, screen washers, detachable hardtop, competition windscreen, luggage carrier, wing mirror, cold air ventilation, ashtray, competition de luxe seats.

Upholstery material: Leather on wearing parts, leathercloth borders.

Floor covering	Carpet
Exterior colours standardized	6
Alternative body styles:	Fixed-head coupe or detachable hardtop

Maintenance

Sump	8 pints, S.A.E. 30 (winter 20W)
Gearbox	4½ pints, S.A.E. 30
Rear axle	2 pints, S.A.E. 90 Hypoid
Steering gear lubricant	90 Hypoid
Cooling system capacity	10 pints (2 drain taps)
Chassis lubrication	By grease gun every 1,000 miles to 10 points
Ignition timing	6° b.t.d.c.
Contact-breaker gap	0.015 in.
Sparking plug type	Champion N5
Sparking plug gap	0.025 in.

Valve timing: Inlet opens 16° b.t.d.c. and closes 56° a.t.d.c.; exhaust opens 51° b.b.d.c. and closes 21° a.t.d.c.

Tappet clearances (hot)	Inlet and exhaust 0.015 in.
Front wheel toe-in	Parallel
Camber angle	½°-1°
Castor angle	4°
Steering swivel pin inclination	9°-10½°
Tyre pressures:	
Front	17-23 lb.
Rear	20-26 lb. according to speed
Brake fluid	Lockheed grade 103 (S.A.E. 70-R-1)
Battery type and capacity:	Two 6-volt Lucas SG9E, 51 amp. hr.