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The Motor Road Test No. 10/59 (Continental)

Make: Austin-Healey **Type:** 100-Six Two-seater

Makers: Austin Motor Co. Ltd., Longbridge, Birmingham

Test Data

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CONDITIONS: *Weather: Dry, fresh breeze. (Temperature 34°—40°F., Barometer 30.0—30.1 in. Hg.) Surface: Dry concrete (Ostend-Brussels motor road). Fuel: French and Belgian pump fuel, approximately 95 Research Method Octane Number.*

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	2% slow

WEIGHT

Kerb weight, (unladen, but with oil, coolant and fuel for approx. 50 miles)	22 cwt.
Front/rear distribution of kerb weight	51/49
Weight laden as tested	25¾ cwt.

MAXIMUM SPEEDS

Flying Half Mile

Mean of two opposite runs	108.1 m.p.h.
Best one-way time equals	109.8 m.p.h.

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

Mean of four opposite runs	103.9 m.p.h.
Best one-way time equals	105.9 m.p.h.

Speed in Gears

Max. speed in Direct Top	94 m.p.h. approx.
Max. speed in Overdrive 3rd gear	91 m.p.h.
Max. speed in 3rd gear	71 m.p.h.
Max. speed in 2nd gear	47 m.p.h.
Max. speed in 1st gear	31 m.p.h.

FUEL CONSUMPTION

(Overdrive top gear)

34 m.p.g. at constant 30 m.p.h. on level.
31½ m.p.g. at constant 40 m.p.h. on level.
27¼ m.p.g. at constant 50 m.p.h. on level.
25½ m.p.g. at constant 60 m.p.h. on level.
23½ m.p.g. at constant 70 m.p.h. on level.
21½ m.p.g. at constant 80 m.p.h. on level.
20 m.p.g. at constant 90 m.p.h. on level.
17½ m.p.g. at constant 100 m.p.h. on level.

Overall Fuel Consumption for 12,170 miles, 104.2 gallons, equals 20.8 m.p.g. (13.6 litres/100 km.).

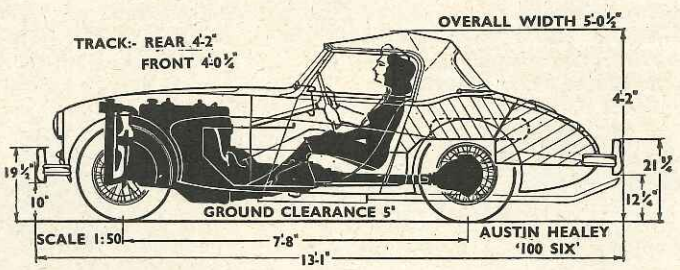
Touring Fuel Consumption (m.p.g. at steady speed midway between 30 m.p.h. and maximum, less 5% allowance for acceleration) 20.8 m.p.g. Fuel tank capacity (maker's figure) 12 gallons.

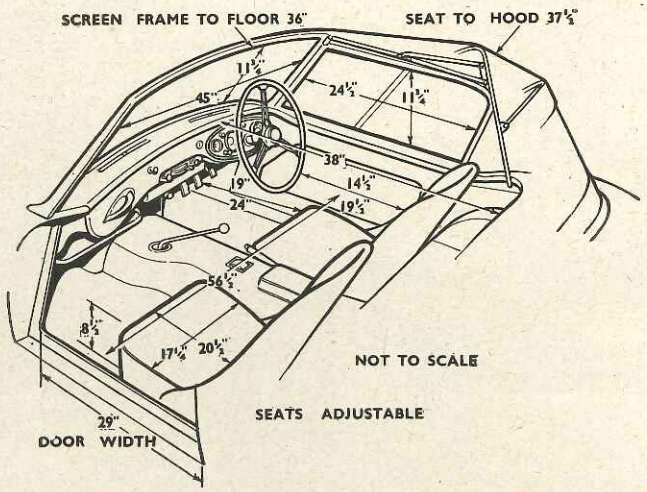
STEERING

Turning circle between kerbs:	
Left	33½ ft.
Right	31½ ft.
Turns of steering wheel from lock to lock	2¾

BRAKES from 30 m.p.h.

0.94 g retardation (equivalent to 32 ft. stopping distance) with 75 lb. pedal pressure.
0.66 g retardation (equivalent to 45½ ft. stopping distance) with 50 lb. pedal pressure.
0.31 g retardation (equivalent to 97 ft. stopping distance) with 25 lb. pedal pressure.





ACCELERATION TIMES from standstill.

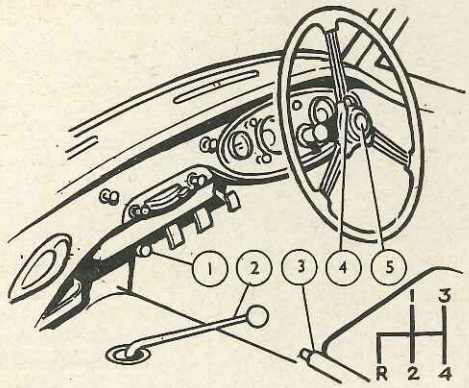
0-30 m.p.h.	3.6 sec.
0-40 m.p.h.	5.6 sec.
0-50 m.p.h.	7.5 sec.
0-60 m.p.h.	10.7 sec.
0-70 m.p.h.	14.1 sec.
0-80 m.p.h.	19.1 sec.
0-90 m.p.h.	24.8 sec.
0-100 m.p.h.	36.3 sec.
Standing quarter mile	18.2 sec.

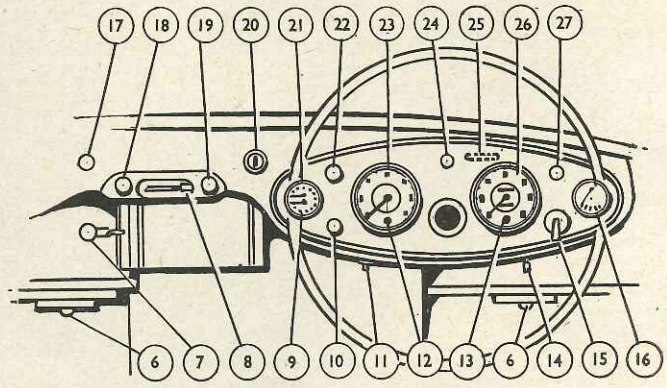
ACCELERATION TIMES on Upper Ratios

	O/D top gear	Direct top gear	3rd gear
0-20 m.p.h.	—	—	4.8 sec.
10-30 m.p.h.	—	6.7 sec.	4.7 sec.
20-40 m.p.h.	10.0 sec.	6.8 sec.	4.9 sec.
30-50 m.p.h.	9.6 sec.	6.6 sec.	5.3 sec.
40-60 m.p.h.	9.5 sec.	7.0 sec.	6.4 sec.
50-70 m.p.h.	10.7 sec.	7.5 sec.	—
60-80 m.p.h.	12.7 sec.	8.6 sec.	—
70-90 m.p.h.	14.4 sec.	10.7 sec.	—
80-100 m.p.h.	19.1 sec.	—	—

HILL CLIMBING at sustained steady speeds

Max. gradient on O/D top gear	1 in 8.9 (Tapley 245 lb./ton)
Max. gradient on direct top gear	1 in 6.4 (Tapley 345 lb./ton)
Max. gradient on O/D 3rd gear	1 in 6.4 (Tapley 345 lb./ton)
Max. gradient on direct 3rd gear	1 in 4.8 (Tapley 460 lb /ton)





1, Headlamp dip switch. 2, Gear lever. 3, Handbrake. 4, Direction indicator switch. 5, Horn button. 6, Heater shutter. 7, Choke control. 8, Heater fan switch and temperature control. 9, Water thermometer. 10, Windscreen wipers switch. 11, Panel light switch. 12, Dynamo charge warning light. 13, High beam indicator lamp. 14, Trip adjuster. 15, Overdrive switch. 16, Fuel contents gauge. 17, Windscreen washer control. 18, Cold air control. 19, Heater air intake control. 20, Ignition switch. 21, Oil pressure gauge. 22, Starter button. 23, Tachometer. 24, Direction indicator warning lamp. 25, Bonnet catch release (behind facia). 26, Speedometer and distance recorder. 27, Lights switch.

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The Austin-Healey 100-Six Two-seater

(Type BN6, with overdrive)

High-performance Motoring in Armchair Comfort

Closed or open, the low-built Austin-Healey (with an occasionally vulnerable silencer) has a purposeful appearance. The hood presents something of a struggle for one man, but is easily managed by two.

IN very generous measure, the six-cylinder Austin-Healey 2-seater looks, sounds and performs like a full-blooded 2.6-litre sports car. The really distinctive features which distinguish it from its competitors, however, are the silky smoothness of its 6-cylinder engine, the comfortable and weatherproof nature of its body, and the remarkably level riding which the suspension provides, so that apart from its sheer performance this is an exceptionally enjoyable and untiring car fully deserving of the title "Grand Touring."

Since this model was introduced as the successor to a four-cylinder car, it has benefited from lessons learned in a great many international rallies, the most conspicuous change which has been made being the adoption of a new cylinder head and six-port inlet manifold. Quoted as providing an extra 15 b.h.p., the latest engine allowed our test model to record a timed two-way mean speed of 108.1 m.p.h. at the end of a continental tour, yet it was equally willing to pull smoothly right down to below 15 m.p.h. in the same overdrive top gear ratio of 3.18 : 1.

As with almost any low-built sports car, entering the Austin-Healey when the hood is up can seem a slightly awkward process for a stranger, but is later found to be reasonably easy. Hinged to swing upwards, and so not to "ground" on roadside kerbs, the doors have friction devices on their hinges which hold them open, devices which are necessary but at times are also a slight nuisance. Hollowed out to provide really generous elbow room within their thickness, the front-hinged doors incorporate "map pockets" which are vast enough to swallow up a business man's zipp-fastened brief-case with ease. On the whole, tall drivers found this car more comfortable than did short drivers, as sliding the driving seat forward brought the driver's chest rather too close to the steering wheel.

Simple and ordinary in appearance, the two adjustable bucket seats proved able to make very varied sizes and shapes of driver or passenger comfortable, and day runs of more than 400 miles did not disclose shortcomings. Our only criticism is that a driver who crouches forward over the wheel when cornering fast may find that the hinged seat backrest is flexible laterally when there is no appreciable pressure upon it, although its actual shape is such as to give good lateral support. Comfort of the driving position, and proximity of all the controls to the steering wheel rim, are valuable contributions to the tirelessness of long-distance travel in this car.

Reinforcing the comfort provided by the seats is a suspension system which secures exceptionally good results from a perfectly orthodox coil-spring i.f.s. layout (controlled by an anti-roll torsion bar) and semi-elliptic rear springs braced laterally by a Panhard rod. With the 20-23 lb./sq. in. tyre pressures recommended for normal touring use, this car gives a considerably more comfortable ride over bad surfaces than do most family saloons, and although at 80 m.p.h. on a rough French main road it never "bottoms" the suspension as do many more softly sprung models it nevertheless rides smoothly along cobblestoned village streets. Only a visible weaving of the long bonnet really indicates that the chassis is having to absorb large bumps.

Pressures for Speed

For sustained speeds of more than 85/90 m.p.h. a 6 lb./sq. in. increase in the inflation pressures of Dunlop "Road Speed" tyres is advised, and this extra tyre pressure makes the Austin-Healey more aware of sharp bumps although it remains a very comfortably sprung car. Many owners are likely to use these higher pressures consistently, as they give quicker steering response and greater resistance to tyre squeal during fast cornering, and the loss of riding comfort is inconspicuous on British road surfaces.

At all times the steering of this model is pleasingly light, but it is only in car-park manœuvres or on hairpin bends that one becomes aware of fairly low gearing having contributed to this. On straight road, the car holds naturally to a chosen course and is "aimed" through narrow

In Brief

Price (including overdrive as tested)	£870 17s. 6d., plus purchase tax £436 15s. 9d. equals £1,307 13s. 3d.
Price without overdrive (including purchase tax)	£1,226 17s. 0d.
Capacity	2,639 c.c.
Unladen kerb weight	22 cwt.
Acceleration:	
20-40 m.p.h. in top gear ..	6.8 sec.
0-50 m.p.h. through gears	7.5 sec.
Maximum direct top gear gradient	1 in 6.4
Maximum speed ..	108.1 m.p.h.
"Maximile" speed ..	103.9 m.p.h.
Touring fuel consumption	20.8 m.p.g.
Gearing: 18.1 m.p.h. in top gear at 1,000 r.p.m. (overdrive, 23.2 m.p.h.), 31 m.p.h. at 1,000 ft./min. piston speed (overdrive, 39.7 m.p.h.).	

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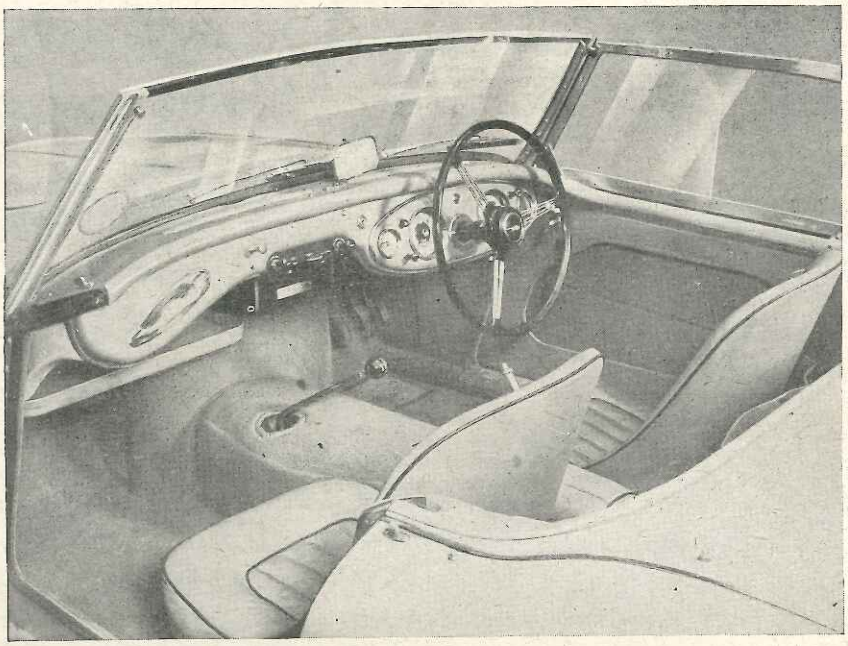


Comfortable seats and carpeted floor belong to the "grand tourer" class. The gear lever is more convenient than its offset position suggests, but the handbrake lever is liable to catch in raincoat pockets.

The Austin-Healey 100-Six Two-seater

gaps without conscious effort. Handling qualities with "touring" tyre pressures do not come up to "thoroughbred" standards if a sudden change of course is made, but with a touch of throttle the car can be cornered easily and accurately. Extra tyre inflation improves the roll-free cornering to a point at which this high-performance model can enjoyably be taken along a winding road very fast indeed, in the confidence that slight misjudgment of the speed for a corner will not cause it to "fly off the handle."

Whether it be driven in touring or sporting fashion, this car gains much merit from a thoroughly appropriate clutch, gearbox and (optional extra) overdrive. The clutch is impeccably smooth around town yet does not slip in standing-start acceleration tests, and whilst the gear lever is at first noticed as extending across the cockpit at an unexpected angle it proves to be rigid and to operate smoothly in a conveniently natural fore-and-aft direction. The gear ratios combine well with the engine's ability to develop ample torque over an exceptionally wide range of speeds, the red mark at 5,250 r.p.m. on the tachometer corresponding to 31, 49, 71 and 94 m.p.h. in the four direct gears, and being equivalent to a speed of 122 m.p.h. in overdrive top gear, although this is more than could be attained in any but highly favourable conditions. A driver has very wide freedom of choice, either to idle almost inaudibly through town traffic in a very high gear (with quite brisk acceleration available at a touch of the accelerator pedal) or to make very fast progress in the lower gears.

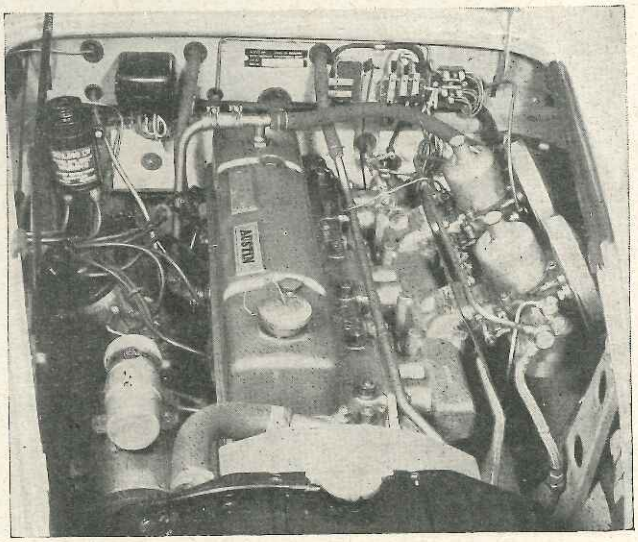
Engaging and disengaging very smoothly and positively, although with a slight time lag, the switch-controlled overdrive works with either top or third gear. The fact that overdrive third and direct top are identical ratios to within 3% means that this is, in effect, a five-speed car with switch-controlled clutchless changes either between ratios of 3.18 and 4.10 on an open main road or between ratios of 4.24 and 5.46 in slower conditions, according to whether third or top gear is left engaged.

Rather unfortunately, a neat and symmetrical facia panel layout has been given priority over utmost accessibility of the overdrive, headlamp and screen wiper switches, all three of which are fairly easy to reach but would become even handier if moved an inch or two sideways towards the steering wheel rim. Another minor control which is tantalizingly short of the ideal in its positioning is the pull-up handbrake which can become lost beneath a driver's coat-tails.

With the ability to accelerate from a standstill to 90 m.p.h. through the gears in less than 25 seconds, or from 30 m.p.h. to 90 m.p.h. in fourth gear in the same brief space of time, the 22-cwt. Austin-Healey 100-Six is capable of giving its brakes a very great deal of work to do. The measured ability to provide 0.94g retardation with only 75 lb. pedal pressure indicates the light and responsive nature of the brakes in normal driving, and the heat-dissipating capacity of 11-in. drums is ample for an emergency stop from high speeds or, to instance a test which we repeated several times, for quite brisk descent of an Alpine pass using only overdrive top gear, without appreciable fade being evident in either case. But, within two minutes on level road, it is possible to heat up the brake drums enough for their expansion to cause a conspicuous increase in pedal travel, and for smoke to accompany a considerable loss in front brake effectiveness, if the two minutes are devoted to four 0-85-0 m.p.h. acceleration and stopping cycles. Whilst the most notable successes of this model in International competitions have been scored with the disc brakes which are obtainable to special order, the ordinary Girling drum brakes will no doubt fully meet the requirements of a vast majority of purchasers of this model.

Good Hood

As has already been indicated, the all-weather equipment provided for this model is almost 100% effective in keeping out rain, either when the car is parked or during fast driving, and the sidescreens (with sliding window panels) are most commendably rigid when erected. The hood can be raised or lowered by one person although the presence of a helper cuts the time needed to less than a half, convenient details being a tonneau cover to conceal and weather-proof the cockpit when the car is parked with the hood down, and a really large rear window of



Access to most ancillaries of the six-cylinder, six-port engine is good for this type of car.

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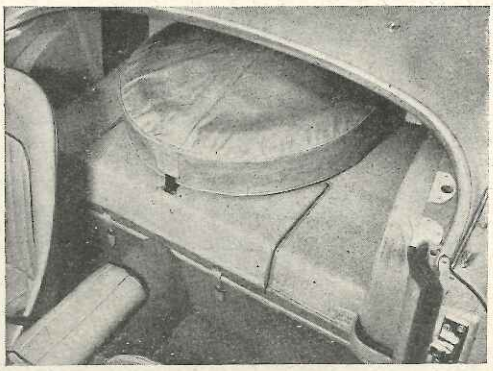
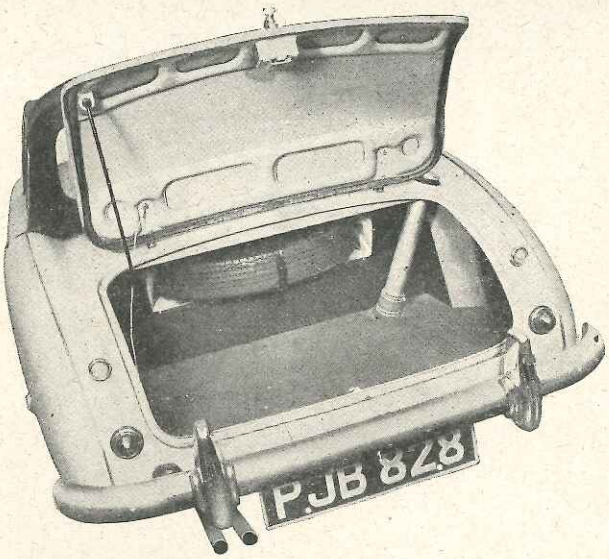


The spare wheel lies partly in the boot and partly in the space behind the seats which is also available for small items of luggage. An opening panel under the wheel (left) gives access to the two batteries.



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flexible plastic in the hood. A cold air intake and an optional fresh-air heater (which also demists the windscreen very effectively) are aids to around-the-calendar comfort, but open windows do make the body interior become rather draughty. Quite fair luggage accommodation is available, for cases in the lockable boot and for a considerable amount of shopping behind the seats.

It seems slightly out of character with this model's exceptional refinement of running that it should be noisier than mature drivers are likely to appreciate, in respect of loud exhaust noise during hard acceleration at speeds below 80 m.p.h., and in respect of wind noise at the 90 m.p.h. cruising speed which is quickly reached whenever traffic conditions allow. Also, whilst the suspension irons out rough surfaces in a manner which astonishes those whose ideas about sports car chassis design are not altogether up to date, limited ground clearance beneath the exhaust system discourages carefree use of this car away from well-trafficked roads. No mechanical noise from engine or gearbox is noticed, but at tick-over or in very gentle driving there is a fairly marked hiss from the twin diaphragm-type S.U. carburetters and quite loud ticking of the electrical petrol pump is also then audible.

With a generous amount of power available and a chassis which encourages fast travel, the fuel consumption of a car such as this may be very much what a driver makes it by his use of the lower gears. Our overall figure of 20.8 m.p.g. for 2,000-odd miles reflects a high proportion of Continental driving, on roads which permitted us to cruise fast but which did not involve as high a proportion of traffic motoring as do tests centred largely upon London. Certainly figures in the range from 25 m.p.g. down to 15 m.p.g. are within what can be obtained in less or more severe conditions. Easy to start from cold, the engine warms up quite quickly and smoothly in cool spring weather.

Without question, the great attraction of this car is its versatility. With never a trace of temperament, it will potter gently around a big city on business or social errands day after day, yet when the opportunity occurs to wind the tachometer needle around its scale the Austin-Healey will hurl itself forwards in most impressive fashion, reaching nearly 80 m.p.h. within a quarter-mile of starting from rest and 100 m.p.h. in less than a mile. To find a comparable combination of performance and of smooth-running comfort in any but a much larger and more expensive car would seem extremely difficult.

Specification

Engine

Cylinders	6
Bore	79.4 mm.
Stroke	89.0 mm.
Cubic capacity	2,639 c.c.
Piston area	45.9 sq. in.
Valves	pushrod o.h.v.
Compression ratio	8.7 /1.
Carburetters	two S.U. H.D.6
Fuel pump	S.U. electric
Ignition timing control	Vacuum and centrifugal
Oil filter	Tecalemit full-flow
Max. power (gross)	117 b.h.p.
at	5,000 r.p.m.
Piston speed at max. b.h.p.	2,920 ft./min.

Transmission

Clutch	Borg and Beck s.d.p. 9 in.
Top gear (s/m)	4.1 (Overdrive, 3.18)
3rd gear (s/m)	5.47 (Overdrive, 4.24)
2nd gear (s/m)	7.84
1st gear	12.6
Reverse	17.1
Overdrive	Laycock-de Normanville
Propeller shaft	Hardy Spicer open
Final drive	hypoid bevel
Top gear m.p.h. at 1,000 r.p.m	18.1 (Overdrive, 23.2)
Top gear m.p.h. at 1,000 ft./min. piston speed	31.0 (Overdrive, 39.7)

Chassis

Brakes	Girling hydraulic
Brake drum internal diameter	11 in.
Friction lining area	188 sq. in.
Suspension	
Front	Independent, coil springs and wishbones
Rear	Semi-elliptic leaf springs and Panhard rod
Shock absorbers:	
Front and rear	Armstrong lever type, hydraulic
Steering gear	Cam Gears cam and peg
Tyres	5.90-15 tubeless, Dunlop 5.90-15 Road Speed optional

Coachwork and Equipment

Starting handle	None
Battery mounting	Two 6-volt in series behind seat
Jack	Screw type
Jacking points	Under front spring plates and rear springs
Standard tool kit	Jack, two jack levers, tommy bar, grease gun, hub extractor, copper hammer or wheelbrace, plug spanner, screw driver, feeler gauge, valve extractor, contact-breaker gauge
Exterior lights	Two head, two side/indicator, two tail/stop/indicator, rear number plate
Number of electrical fuses	2
Direction indicators	Flashing, self-cancelling
Windscreen wipers	Lucas electric self-parking
Windscreen washers	Optional
Sun visors	None
Instruments	Speedometer with decimal trip distance recorder, revolution counter, fuel gauge, water thermometer, oil pressure gauge
Warning lights	Dynamo, headlamp main beam indicators
Locks: with ignition key	Ignition, boot
with other keys	none
Glove lockers	none
Map pockets	One in each door
Parcel shelves	One below facia
Ashtrays	One on transmission tunnel
Cigar lighters	None
Interior lights	None
Interior heater	Optional, fresh-air with demister
Car radio	Optional, Smiths Radiomobile
Extras available	Wire wheels, overdrive, Road Speed tyres, heater, radio, windscreen washers
Upholstery material	Leather
Floor covering	Carpet
Exterior colours standardized	7 single, 8 two tone
Alternative body styles	Hard-top coupe

Maintenance

Sump	12½ pints, S.A.E. 30
Gearbox	5½ pints, S.A.E. 30
Rear Axle	3 pints, S.A.E. 90
Steering gear lubricant	S.A.E. 90
Cooling system capacity	20 pints (2 drain taps)
Chassis lubrication	By grease gun every 1,000 miles to 19 points
Ignition timing	4° B.T.D.C.
Contact-breaker gap	0.014-0.016 in.
Sparking plug type	Champion NA8, 14 mm long reach
Sparking plug gap	0.024-0.026 in.
Valve timing	I.O., 5° B.T.D.C.; I.C., 45° A.B.D.C.; E.O., 40° B.B.D.C.; E.C., 10° A.T.D.C.
Tappet Clearances (Hot)	Inlet 0.012 in. Exhaust 0.012 in.
Front wheel toe-in	1/16-1/8 in.
Camber angle	1°
Castor angle	1¼°
Steering swivel pin inclination	6½°
Tyre pressures	Front 20 lb. Rear 23 lb. (See text)
Brake fluid	Girling
Battery type and capacity	Lucas GTW9A 51 amp. hr.

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