

The Motor Road Test No. 8/60

Make: Austin

Type: A99 Westminster Saloon
(with automatic transmission)

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

Test Data

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CONDITIONS: Weather Cool. Fine with strong cross wind during max. speed and constant-speed fuel consumption tests; heavy rain and light wind during acceleration tests. (Temperature 43°-48°F, Barometer 29.57-29.67 in. Hg.). Surface: Tar macadam. Dry for max. speed, fuel and brake tests; very wet during remaining tests. Fuel: Premium grade pump petrol (approx. 96 Research Method Octane Rating).

INSTRUMENTS

Speedometer at 30 m.p.h.	.. ..	1% fast
Speedometer at 60 m.p.h.	.. ..	1% fast
Speedometer at 90 m.p.h.	.. ..	2% fast
Distance recorder	.. ..	2% fast

WEIGHT

Kerb weight, (unladen, but with oil, coolant and fuel for approx. 50 miles) .. 30½ cwt.
Front/rear distribution of kerb weight .. 57/43
Weight laden as tested .. 33½ cwt.

MAXIMUM SPEEDS

Flying Mile

Mean of six opposite runs	.. ..	98.1 m.p.h.
Best one-way time equals	.. ..	100.8 m.p.h.

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

Mean of four opposite runs	.. ..	90.5 m.p.h.
Best one-way time equals	.. ..	91.8 m.p.h.

Speed in gears

Max. speed in intermediate gear	.. ..	71 m.p.h.
Max. speed in low gear	.. ..	40 m.p.h.

FUEL CONSUMPTION

28½ m.p.g. at constant 30 m.p.h. on level.
28 m.p.g. at constant 40 m.p.h. on level.
27½ m.p.g. at constant 50 m.p.h. on level.
25 m.p.g. at constant 60 m.p.h. on level.
23 m.p.g. at constant 70 m.p.h. on level.
20 m.p.g. at constant 80 m.p.h. on level.
17 m.p.g. at constant 90 m.p.h. on level.

Overall Fuel Consumption for 1,648 miles, 88.2 gallons, equals 18.7 m.p.g. (15.1 litres/100km.).

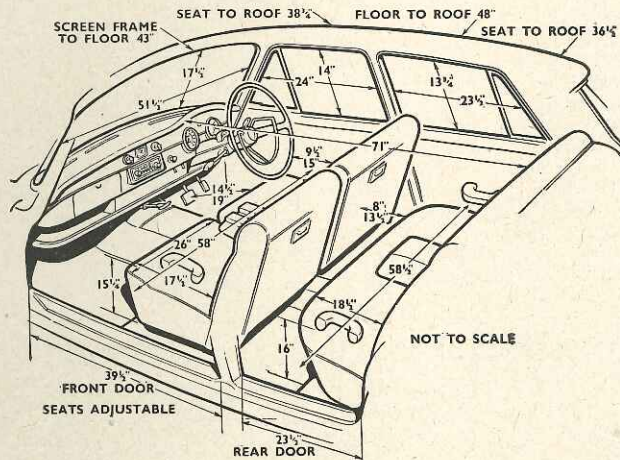
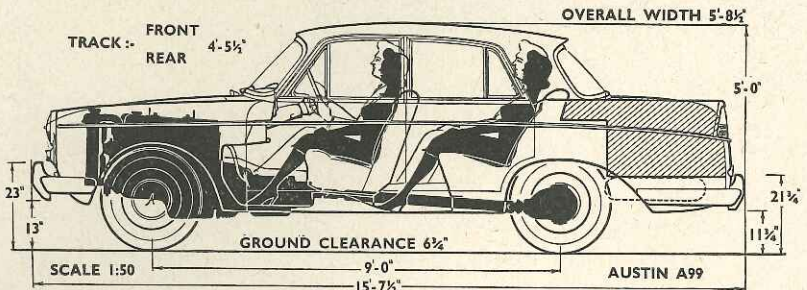
Touring Fuel Consumption (m.p.g. at steady speed midway between 30 m.p.h. and maximum, less 5% allowance for acceleration) .. 23.0 m.p.g.
Fuel tank capacity (maker's figure) .. 16 gallons

STEERING

Turning circle between kerbs;	
Left	36½ feet
Right	36½ feet
Turns of steering wheel from lock to lock	4

BRAKES from 30 m.p.h.

0.90 g retardation (equivalent to 33½ ft. stopping distance) with 75 lb. pedal pressure.
0.83 g retardation (equivalent to 36½ ft. stopping distance) with 50 lb. pedal pressure.
0.47 g retardation (equivalent to 64 ft. stopping distance) with 25 lb. pedal pressure.



ACCELERATION TIMES from standstill

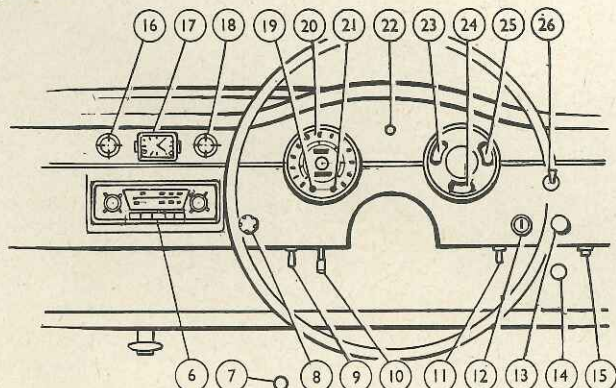
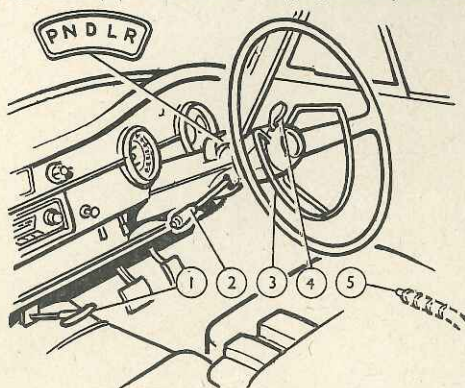
0-30 m.p.h.	.. ..	6.1 sec.
0-40 m.p.h.	.. ..	9.1 sec.
0-50 m.p.h.	.. ..	13.1 sec.
0-60 m.p.h.	.. ..	17.9 sec.
0-70 m.p.h.	.. ..	24.7 sec.
0-80 m.p.h.	.. ..	36.0 sec.
Standing quarter mile	.. ..	21.9 sec.

ACCELERATION TIMES in "Drive" range

0-20 m.p.h.	.. ..	3.8 sec.
10-30 m.p.h.	.. ..	4.4 sec.
20-40 m.p.h.	.. ..	5.3 sec.
30-50 m.p.h.	.. ..	7.0 sec.
40-60 m.p.h.	.. ..	8.8 sec.
50-70 m.p.h.	.. ..	11.6 sec.
60-80 m.p.h.	.. ..	18.1 sec.

HILL CLIMBING at sustained steady speeds

Approx. max. gradient on top gear .. 1 in 10.8 (Tapley 205 lb./ton)
Approx. max. gradient on intermediate gear 1 in 6.1 (Tapley 365 lb./ton)



1, Intermediate gear hold. 2, Transmission selector. 3, Horn ring. 4, Direction indicator switch and warning light. 5, Handbrake. 6, Radio. 7, Headlamp dipswitch. 8, Choke control. 9, Heater fan switch. 10, Trip re-setting knob. 11,

Panel light switch. 12, Ignition and Starter switch. 13, Windscreen wipers switch. 14, Bonnet catch release. 15, Windscreen washer button. 16, Heater control. 17, Clock. 18, Demister control. 19, High beam indicator light. 20, Speed-

ometer and distance recorder. 21, Dynamo charge warning light. 22, Brake servo vacuum warning light. 23, Oil pressure gauge. 24, Fuel contents gauge. 25, Water thermometer. 26, Lights switch.

The AUSTIN A99

(with automatic transmission)

Latest Six-cylinder
Austin has Long
Stride and More
Room and Comfort

BIG in roominess and easy-going performance, the Austin A99 remains reasonable enough in overall size to be at ease on minor roads.



A MERE increase in size is by no means an invariable pointer to an all-round improvement in other qualities, but the Austin A99 Westminster saloon is undoubtedly a better as well as a bigger car than the A95 and earlier A90 Westminster models which preceded it. The A99 has, in fact, moved into a rather different class. Earlier models of the line belonged to the medium-powered, medium-sized category and were capable of being housed in a typical built-in suburban garage of 15 ft. by 7 ft. 6 in. or thereabouts. The new A99, with its overall dimensions of 15 ft. 8 in. by 5 ft. 8½ in. and higher-powered engine belongs more to the large-car class, although its price remains strictly competitive.

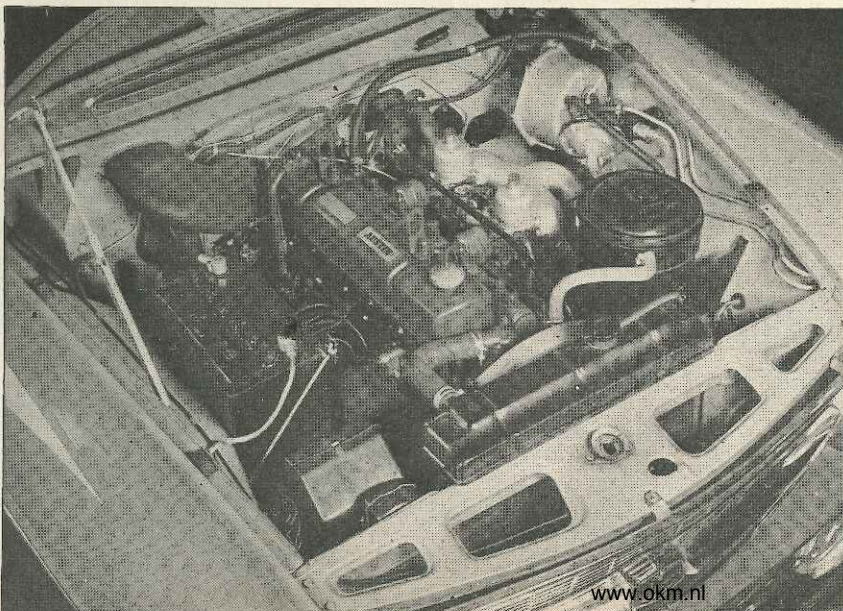
As those who follow model changes will recall, this latest six-cylinder Austin

appeared last July as one of a pair—the other being the basically similar but more luxuriously equipped and higher-priced Wolseley Six-Ninety Nine. Innovations included a completely new and larger unitary-construction body shell styled by Farina, increases of 2¼-in. and 2⅝-in. in wheelbase and track respectively, an engine closely following the former basic design, but enlarged from 2,639 c.c. to 2,912 c.c. and fitted as standard with two carburetters, and the adoption of a Lockheed disc-front-drum-rear braking system with vacuum servo assistance. In addition, an entirely new three-speed gearbox with overdrive on top and second (giving, in effect, five speeds) was adopted, although the subject of this report is a car fitted with the alternative Borg-Warner fully automatic transmission.

One of the most attractive features of the A90 and A95 models has always been a long stride, an untiring way of dealing with time and space that makes long-distance motoring effortless and satisfying. That characteristic has been retained in full measure in the A99. Where some cars reach the stage of being still game but a little breathless, the A99 lopes along in easy fashion as though that sort of motoring is what it was designed to do—as indeed it was, because it is high-g geared, with ample power to deal with the sort of top-gear ratio that one usually associates with overdrive.

In cars supplied with the Borg-Warner automatic transmission a 3.55/1 final-drive ratio in conjunction with 7.00-in. tyres on 14-in. rims gives nearly 21 m.p.h. for every 1,000 r.p.m. of the big six

ENLARGED and improved but following on well-tried lines, the six-cylinder engine has twin carburetters, close to which is the servo for a discs-and-drums braking system.



In Brief

Price (including Borg-Warner automatic transmission as tested) £860 plus purchase tax £359 9s. 2d. equals £1,219 9s. 2d.

Price with synchromesh gearbox and overdrive (including purchase tax) £1,148 12s. 6d.

Capacity 2,912 c.c.

Unladen kerb weight 30¼ cwt.

Acceleration:

20-40 m.p.h. in Drive

range 5.3 sec.

0-50 m.p.h. through gears 13.1 sec.

Maximum direct top gear

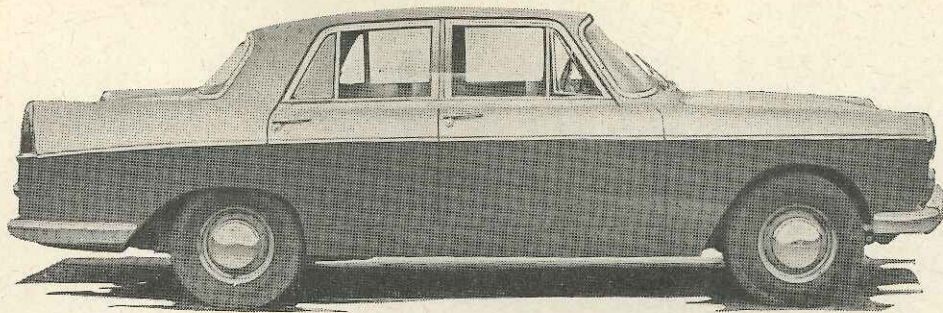
gradient Approx. 1 in 10.8

Maximum speed 98.1 m.p.h.

"Maximile" speed 90.5 m.p.h.

Touring fuel consumption 23.0 m.p.g.

Gearing: 20.8 m.p.h. in top gear at 1,000 r.p.m; 35.7 m.p.h. at 1,000 ft./min. piston speed.



The AUSTIN A99

SIMPLE in outline and moderate in overall height, the Farina-styled body makes only very restrained use of non-functional decoration.

cylinder engine. The latter is smooth and quiet with the result that a driver who sets himself a main-road cruising speed of 75 m.p.h. is more likely to find that the speedometer has crept up to 80 or 85 m.p.h. when he wasn't looking than fallen back to the "70" mark. With a maximum speed little short of 100 m.p.h. (which comes up with very little help from wind or gradient), 80 m.p.h. is a practical cruising speed for roads of the M1 order, leaving a useful margin for gradients or overtaking.

Acceleration is in keeping with maximum, and loss of speed created by road or traffic checks is soon recovered. In this connection, the tabulated data does the A99 rather less than justice because the weather turned suddenly and persistently unfavourable after the speed and fuel consumption tests had been completed and the acceleration figures had to be taken in continuous heavy rain. Although (thanks to the torque converter) this did not provoke wheelspin from rest, the swimming surface undoubtedly produced appreciable extra drag in the upper speed ranges.

To the effortless qualities of the engine already mentioned must be added a good-tempered ability to start at the first operation of the switch after standing in the open during nights of frost, snow and rain. With an automatic transmission which calls for a relatively slow tick-over to avoid excessive creep when a gear is engaged, this is a quality by no means easy to achieve, but Austin and S.U. engineers between them have obviously succeeded.

There is, incidentally, a very minor degree of creep at all times when a gear is engaged at rest, but it is too slight to cause any embarrassment and is, in fact, less irritating than the somewhat lumpy tick-over which becomes evident if the car is kept at rest for some minutes in a traffic jam with "Drive" engaged.

The 3-litre engine, with its two carburettors and large oil-bath air cleaner, plus such auxiliaries as the brake vacuum servo, battery and so on, leaves little spare room under the wide bonnet, but most of the items requiring routine attention are easy to reach. Other good engine features are a very modest appetite for oil and complete freedom from pinking on normal premium fuels.

Whether or not flexibility can be added to these virtues is a point which does not



QUIET comfort for five people is provided by leather-upholstered seats with folding central armrests. A narrow parcel shelf is provided below the fascia, a small glove box faces the front passenger, and there is a map pocket inside each of the four doors.

transpire in this particular model—and is, in fact, of no particular moment—because the automatic transmission never gives the unit an opportunity to labour at low speeds. Even at minimum throttle opening for acceleration in the "Drive" range, top gear is not engaged until approximately 24 m.p.h. is reached and any heavier accelerator-pedal pressure delays the change to anything up to 70 m.p.h. according to how heavy-footed the driver chooses to be. Similarly, intermediate gear does not take over from bottom until the car is well under way, and on full throttle the first change up comes at 40 m.p.h.

The upward changes are made almost imperceptibly with light-to-medium throttle openings and smoothly, but with a slight bound forward caused by engine inertia,

if the accelerator is hard down—satisfying if maximum acceleration is desired, but slightly disconcerting if a hopeful burst of acceleration has to be terminated abruptly on account of changed traffic conditions.

Downward changes are imperceptible on a closed throttle, but the kick-down arrangements (designed to enable a lower gear to be engaged at will for extra acceleration by depressing the accelerator fully) are not entirely ideal as the accelerator has a somewhat heavy and springy action which gives the driver no indication of the actual kick-down point. The settings for engine and throttle which govern changes prior to the kick-down point, on the other hand, tend to be a little oversensitive. The result is to make this particular application of the Borg-Warner system less amenable than some to driver control through throttle manipulation.

For engine braking on steep hills there is the usual "L" position which locks the transmission in the low-gear condition. A separate intermediate hold is also fitted, but as this provides no more over-run drag than top gear, its usefulness is confined to such conditions as preventing unwanted upward changes in suburban traffic or when ascending an Alpine pass.

In the design of the braking system, the manufacturers have worked on the basis of providing very adequate margins. Not only are discs used at the front, but the rear drums are large and wide, giving very ample lining areas; in addition, a servo

FLAT floored and with the spare wheel hung separately beneath it, the luggage locker is large, easy to load, and illuminated at night by the number plate lamp. Fuel is carried in a 16-gallon tank located directly behind the rear seat.



system, with reservoir, is incorporated and a hydraulic pressure-limiting valve greatly reduces the risk of rear-wheel locking on slippery surfaces.

Unfortunately a defect developed in the servo system of the test car, but after the servo unit and reservoir had been changed, the results proved outstandingly good. Light pedal pressures produced powerful and stable braking.

Suspension and handling qualities of the A99 combine to give mental, as well as physical, comfort—that is to say, the springing is firm enough to give quite good insulation from road shocks, especially at low speeds, without harshness, whilst the combination of good steering geometry and weight distribution, plus anti-roll bars fore and aft, gives the car a very reassuring firmness on both slow and fast corners with no excessive over or under-steer to disconcert driver or passenger. Roll is almost entirely absent and if the rear end is made to break away by over exuberance, a twitch of the large steering wheel soon brings it back into place.

Road reactions through the wheel are not entirely absent but never excessive and the steering effort is moderate, whilst the car handles well in cross winds.

The main controls are all substantial and well placed, whilst the instruments and switches have obviously been schemed to be easily reached without confusion rather than to please by symmetrical arrangement. Crisp-acting toggle switches are used for lamps, heater fan and instrument lighting, the last-named non-adjustable but not too bright; the same cannot, however, be said for the indicator segment of the automatic transmission, which makes an unpleasantly bright spot in front of the driver at night. In the daytime, reflections of the instrument rims in the windscreen can be an annoyance in sunny weather.

All-round vision is good and the front wing tips and rear fins are both clearly visible to a driver of average height. Other good points include windows which wind



FINS of restrained size help a driver to park a large car accurately in confined spaces, without being a nuisance in other respects: stability in windy weather is good.

down completely into the doors and hinged ventilating panels at both front and rear. In spite of drip channels, however, the front panels still lead water into the interior if opened in heavy rain. Ventilation is aided by a fresh-air heating and demisting system which would be even better if the stream of hot air were directed on to the occupants' feet instead of to the top of the rather large transmission tunnel.

The whole interior is furnished straightforwardly but in good taste and there is a pleasant roominess, with large well-upholstered seats that give good all-round support; at the front, the seats are of the split-bench type, each with its own folding central arm rest, and there is also a folding central arm rest in the rear. In addition, side arm rests are provided on the doors for all passengers, but the driver's door is wisely left clear to give him elbow room.

At the rear, the ride is good and there is excellent knee and foot room. Entry, too, is easy, and the step-down floor introduces no complications. Far from praiseworthy, however, is the arrangement of the door

handles. Not only do the keys have to be turned in the illogical direction, but the interior handles now have to be pushed forward to open the doors. This can be a source of danger on the passenger's side because the front passenger has nothing else to clutch in the event of violent braking and is all too liable to put a hand forward on to the door handle, thus unlatching the front-hinged door in the very conditions in which it could fly open.

Luggage accommodation in the boot is particularly good, with a clear floor and a low loading level, whilst the interior of the car is also reasonably well equipped with numerous, although rather small, stowage spaces for odds and ends, a welcome feature being a map pocket in each of the four doors.

In all, this A99 is a large and comfortable car in which an excellent and effortless performance is combined with good handling and a reassuring suggestion of solidity about the whole build.

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Specification

Engine	
Cylinders	6
Bore	83.34 mm.
Stroke	88.9 mm.
Cubic capacity	2,912 c.c.
Piston area	50.7 sq. in.
Valves	Overhead (push rods)
Compression ratio	8.23/1
Carburettors	Two S.U. type H4
Fuel pumps	Two S.U. electric
Ignition timing control	Centrifugal and vacuum
Oil filter	Tecalemit or Puralator, full-flow
Max. power (gross)	112 b.h.p. (108 b.h.p. net)
at	4,750 r.p.m.
Piston speed at max. b.h.p.	2,770 ft./min.

Transmission	
Borg-Warner fully automatic transmission including fluid torque converter.	
Top gear	3.55
2nd gear	5.09
(with maximum torque conversion, 10.95)	
1st gear	8.19
(with maximum torque conversion, 17.62)	
Reverse	7.13
(with maximum torque conversion, 15.33)	
Propeller shaft	Hardy Spicer, open
Final drive	Hypoid bevel
Top gear m.p.h. at 1,000 r.p.m.	20.8
Top gear m.p.h. at 1,000 ft./min. piston speed	35.7

Chassis	
Brakes: Lockheed hydraulic with vacuum servo and reservoir; disc front, drum rear with rear pressure-limiting valve.	
Brake dimensions:	
Front discs	10½ in. diameter
Rear drums	10 in. diameter by 3 in. wide
Brake areas: 153 sq. in. of lining working on 188 sq. in. rubbed area of drums and 212 sq. in. swept area of discs. (Total rubbed area 450 sq. in.)	
Suspension:	
Front Independent, coil, with anti-roll bar	
Rear	Semi-elliptic with anti-roll bar
Shock absorbers	Armstrong lever type
Steering gear	Bishop cam and peg
Tyres	7.00—14 Dunlop tubeless

Coachwork and Equipment

Starting handle	Not provided with automatic transmission
Battery mounting	Under bonnet, o/s
Jack	Smiths Steadylift
Jacking points	Two, one below each front door
Standard tool kit: Jack, wheelbrace, grease gun, sparking-plug spanner, tommy bar, hub-cap removing lever, holdall.	
Exterior lights: 2 headlamps, 2 side lamps, 2 front amber flashers, 2 stop/tail lamps, 2 rear amber flashers, number plate lamp.	
Number of electrical fuses	2
Direction indicators	Amber flasher type, self-cancelling
Windscreen wipers	Twin-blade, two speed, self-parking electric
Windscreen washers	Twin-jet suction type
Sun visors	Two
Instruments: Speedometer with total and trip distance recorders, oil-pressure gauge, coolant thermometer, fuel gauge, clock.	
Warning lights: Ignition, headlamp main beam, brake servo, direction indicators (dimmed at night).	

Locks:	
With ignition key	Two front doors and petrol filler
With other keys Boot	
Glove lockers	One in facia board
Map pockets	One in each door
Parcel shelves	Below facia and behind rear squab
Ashtrays	Two front, two rear
Cigar lighters	None
Interior lights: One on each centre pillar with manual and courtesy switches.	
Interior heater	Smiths fresh-air type heater and demister
Car radio	Optional extra
Extras available	Radio
Upholstery material: Leather on wearing surfaces, vinyl treated fabric elsewhere.	
Floor covering	Carpet with felt underlay
Exterior colours standardized: Seven single colours and five duotone schemes.	
Alternative body styles	None

Maintenance

Sump	11 pints (+1¼ pints for filter) S.A.E. 30 (summer) 20 (winter)
Gearbox (automatic)	15 pints Castrol TQ or equivalent
Rear axle	¾ pints S.A.E. 90 E.P. (or 80 E.P. for arctic conditions)
Steering gear lubricant	As rear axle
Cooling system capacity	21 pints (2 drain taps)
Chassis lubrication	By grease gun every 1,000 miles to 16 points
Ignition timing (static)	t.d.c.
Contact-breaker gap	0.014—0.016 in.
Sparking plug type	Champion N5
Sparking plug gap	0.025 in.
Valve timing: Inlet opens 5° b.t.d.c. and closes 45° a.b.d.c.; exhaust opens 40° b.b.d.c. and closes 10° a.t.d.c.	
Tappet clearances (hot)	0.012 in.
Front wheel toe-in	½ in.
Camber angle	1°
Castor angle	1¼°
Steering swivel pin inclination	7½°
Tyre pressures: 26 lb. front and rear (increase to 30 lb. for sustained high speeds).	
Brake fluid	Lockheed disc brake fluid
Battery type and capacity	51 amp. hr.