

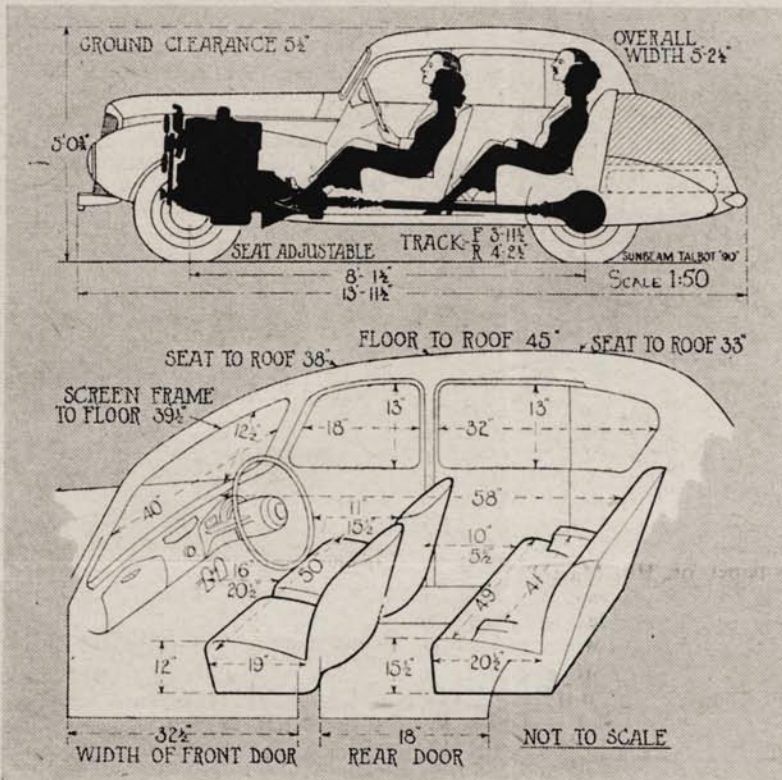
The Motor Road Test No. 6/48

Make: Sunbeam-Talbot

Type: "90" Saloon.

Makers: Sunbeam-Talbot Ltd., Ryton-on-Dunsmore, Coventry.

Dimensions and Seating



In Brief

Price: £775 plus purchase tax
 £216 0s. 7d. = £991 0s. 7d.
 Capacity 1,944 c.c.
 Road weight unladen .. 26 1/4 cwt.
 Front/rear weight distribution 50/50
 Laden weight as tested .. 30 1/4 cwt.
 Fuel consumption 23 m.p.g.
 Maximum Speed 76.6 m.p.h.
 Maximum speed on 1 in 20
 gradient 60 m.p.h.
 Maximum top gear gradient 1 in 11 1/2
 Acceleration 10-30 on top .. 11.5 secs.
 0-50 through gears 15.9 secs.
 Gearing* 17.5 m.p.h. in top at 1,000
 r.p.m. 60.4 m.p.h. at 2,500 ft.
 per minute piston speed.

* Note. 5.25 x 16 in. tyres fitted to car tested. Later models will have 5.50 x 16 in. tyres.

Specification

Engine	
Cylinders	4
Bore	75 mm.
Stroke	110 mm.
Cubic capacity	1,944 c.c.
Piston area	27.3 sq. ins.
Valves	Overhead (pushrods)
Compression ratio ..	6.59
Max. b.h.p.	64
at	4,100 r.p.m.
B.H.P. per sq. in. piston area	2.35
Piston speed at max. b.h.p. ..	2,960 ft./min.
Carburetter	Stromberg (down draught)
Ignition	Coil and Distributor
Sparking plugs	Champion N.A.B. (14 mm.)
Fuel pump	A.C. Mechanical
Oil filter	A.C. By-pass
Transmission	
Clutch	Borg & Beck, s.d.p.
Top gear	4.3 : 1
3rd gear	6.41 : 1
2nd gear	10.62 : 1
1st gear	15.32 : 1
Propeller shaft	Hardy Spicer
Final drive	Spiral bevel

Test Conditions

Mild, showery weather, light wind. Surface; concrete (dry during acceleration, braking and consumption tests—otherwise wet). Pool petrol and natural rubber tyres.

Test Data

ACCELERATION TIMES on Two Upper Ratios

10-30 m.p.h.	11.5 secs.	7.2 secs.
20-40 m.p.h.	11.3 secs.	7.8 secs.
30-50 m.p.h.	12.7 secs.	9.8 secs.
40-60 m.p.h.	15.4 secs.	—
50-70 m.p.h.	22.9 secs.	—

ACCELERATION TIMES Through Gears

0-30 m.p.h.	6.2 secs.
0-40 m.p.h.	10.4 secs.
0-50 m.p.h.	15.9 secs.
0-60 m.p.h.	25.0 secs.
0-70 m.p.h.	38.7 secs.
Standing 1/4-mile	23.1 secs.

MAXIMUM SPEEDS

Flying Quarter-mile	
Mean of four opposite runs ..	75.6 m.p.h.
Best time equals	76.9 m.p.h.
Speed in Gears	
Max. speed in 3rd gear	57 m.p.h.
Max. speed in 2nd gear	35 m.p.h.

BRAKES AT 30 m.p.h.

0.85 g. (= 35.5 ft. stopping distance) with 85 lb. pedal pressure.
 0.82 g. (= 36.8 ft. stopping distance) with 75 lb. pedal pressure.
 0.44 g. (= 68.5 ft. stopping distance) with 45 lb. pedal pressure.
 0.24 g. (= 126 ft. stopping distance) with 25 lb. pedal pressure.

FUEL CONSUMPTION

Overall consumption for 278 miles, 12 gallons, equals 23.2 m.p.g. (normal fast driving). 221 miles on 10.4 gallons, equals 21.2 m.p.g. (fast driving and performance tests).
 31.0 m.p.g. at constant 30 m.p.h.
 29.0 m.p.g. at constant 40 m.p.h.
 26.5 m.p.g. at constant 50 m.p.h.
 24.0 m.p.g. at constant 60 m.p.h.
 21.5 m.p.g. at constant 70 m.p.h.

HILL CLIMBING

Max. top gear speed on 1 in 20, 60 m.p.h.
 Max. top gear speed on 1 in 15, 53 m.p.h.
 Max. gradient climbable on top gear, 1 in 11 1/2 (Tapley 200 lb. per ton)
 Max. gradient climbable on 3rd gear, 1 in 7 1/2 (Tapley 305 lb. per ton)
 Max. gradient climbable on 2nd gear, 1 in 5 1/2 (Tapley 425 lb. per ton)

STEERING

Left hand lock 36 ft.; Right hand lock 35 ft.
 3 turns of steering wheel, lock to lock.

Chassis

Brakes	Lockheed Hydraulic 2 LS
Brake drum diameter ..	10 ins.
Friction lining area ..	134.0 sq. in.
Tyres	Dunlop Fort 5.25 x 16
Steering gear	Burman Worm and Nut

Performance Factors (At laden weight as tested)

Piston area, sq. in. per ton	18.1 sq. in.
Brake lining area, sq. in. per ton	88.5 sq. in.
Litres per ton-mile ..	2,220

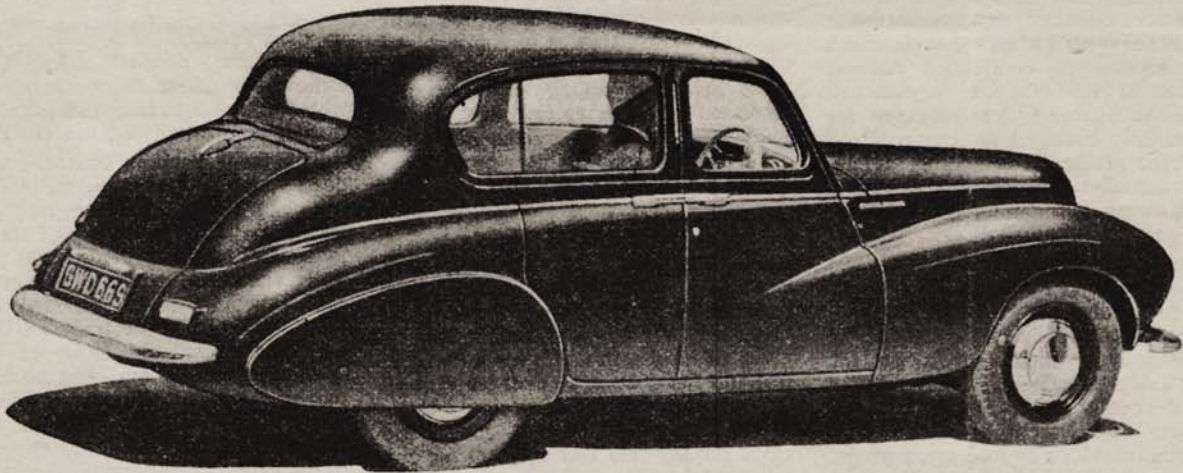
Fully described in this issue of "The Motor"

Maintenance

Fuel tank: 10 gallons. Sump: 10 1/2 pints, S.A.E. 30. Gearbox: 2 pints, S.A.E. 30. Rear axle: 1 pint, S.A.E. 140. Radiator: 20 pints. Chassis lubrication: 15 oil-gun points (Spirax E.P. 140), 4 grease-gun points (hub—Retinax R.B.).
 Ignition timing: 1 degree B.T.D.C. Spark plug gap: .028-.032 in. Contact breaker gap: .010-.012 in. Tappets: inlet .007 in. exhaust .009 in. Front wheel toe-in: 1/4 in. Camber angle: 1 1/2 degrees. Caster angle: 3 1/2 degrees. Tyre pressures: Front 26 lb. Rear 28 lb. Brake Fluid: Lockheed Orange. Shock absorber fluid: Lockheed "P" type. Battery: Lucas 12-volt. Lamp bulbs: 12-volt single pole. Head and road lamps, 36 watts; reversing and stop lamps, 24 watts; side, tail and rear number plate, 6 watts.
 Ref. B. 20/48.

THE SUNBEAM-TALBOT "90"

Increased Speed and Spaciousness in a Stylish New Model



A 600-MILE test of one of the new "90" model Sunbeam-Talbot saloons, compressed by circumstances into a brief 48-hour period, left no doubt that the extensive differences which distinguish this model from the previous Two-litre type, all exist for very sound reasons which go far beyond the mere dictates of fashion. The re-styled coachwork possesses many points of real practical merit, the new o.h.v. engine gives a very notable improvement in performance (especially in the upper speed ranges) and the redesigned chassis offers many advantages.

Before the behaviour of the new model is discussed in detail, it is only fair to make it clear that the car handed over to us for test was one which had been hastily seized from the production line and as hastily run-in to enable this test report to appear simultaneously with the announcement of the new model. A bare 1,400 miles showed on the speedometer, so that, although the engine and transmission were run-in in the usually accepted sense of the term, it is very doubtful whether the car had reached the point of giving its ultimate best. In spite of this, the figures obtained were, as the accompanying data panel shows, thoroughly creditable.

Brisk Economy

In particular, the petrol consumption results obtained at high speeds were notable, the m.p.g. figures (starting with 31 to the gallon at 30 m.p.h.) still remaining well on the better side of 20 m.p.g. at a constant 70 m.p.h. This is of more than usual importance in these times when drivers of fast cars find themselves torn between a need to eke out their meagre rations to the maximum extent by gentle motoring and an equally strong inclination not to spare the horses.

How much this very welcome behaviour is due to the efficiency of the new engine and how much to the new body, is a moot point, but the latter is

obviously not without its effect. Two facts point to this. One is a very pleasing absence of noticeable wind noise and the other is the significant straight-line direction of the mud streaks on the body sides after a fast run in the rain. Both suggest functional as well as æsthetic value in the new body contours.

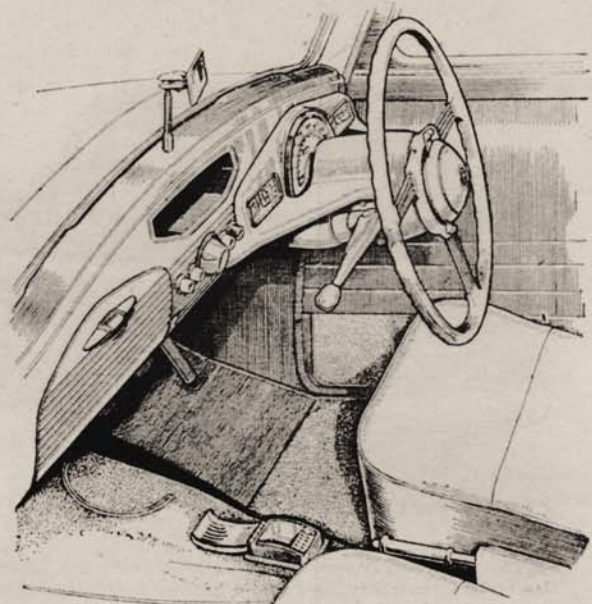
It is obvious, too, from a study of acceleration figures, that good high-speed consumption has not been obtained by sacrifice of performance at either the top or bottom ends of the range. Compared with the previous Two-litre model, the top-gear acceleration times are better throughout the range, the 40-60 m.p.h. figure, for example, representing a 2.7-second improvement, whilst the 0-60 m.p.h. time through the gears showed an improvement of over four seconds.

The standing-start tests emphasized another very excellent feature of the new model—the Synchronomatic steering-

column gearchange. Not only is this as easy and convenient to operate as the most lazy or unskilled driver could wish, but it also has points of very distinct interest to more enthusiastic types who buy such a car as the Sunbeam-Talbot "90" with an eye to competitions. The rally driver who requires a transmission which will stand a real snatch change without hesitation or protest will find in this system the answer to his prayer; the lever is convenient, the linkage positive and the synchromesh amenable.

The whole transmission also reaches very acceptable standards of silence and that remark can equally be applied to the engine, which is free from fuss at all speeds and, on full throttle, produces a very minor amount of power roar which would probably escape notice entirely in a car less well-behaved in the matter of wind noise. The engine is commendable, too, in the matter of smooth running and in its tolerance of

PLANNED.—Thoughtful details of the interior layout are the centrally mounted ashtray and handbrake, left-hand steering-column gearchange, large quadrant speedometer, and capacious cubby hole symmetrically matching the fascia panel.



Sunbeam-Talbot "90" - - - - - Contd.

Pool petrol, there being very little pinking and practically no tendency to "running-on."

For a high-efficiency design, the unit offers a considerable degree of flexibility and, at the other end of the scale, raises no objection to continuous running between 60 and 70 m.p.h. A pace just above the former figure represents the theoretically desirable maximum piston speed for prolonged operation, but on many occasions the car was driven at the latter speed for miles on end without signs of distress.

The new Lockheed brakes (with two leading shoes on the front) behaved as one has come to expect them to function—powerfully and progressively but with very modest calls on the driver's leg muscles—and the steering proved equally modest in its demands on arm muscles. The three turns required from lock to lock are, perhaps, rather more than one would expect on a car of this type, but it is only fair to add that this figure surprised us when we came to test it, as we had not been conscious of any suggestion of low gearing.

Extra Comfort

In its cornering qualities, the Sunbeam-Talbot more than satisfies all normal standards. Only when the car is flung into an acute turn with vastly more enthusiasm than discretion, can any cause for criticism be found; in these circumstances, some trace of roll is apparent and one feels a slight suggestion of independence between axles and chassis frame, but the car remains entirely controllable and the sort of driver who is prepared to indulge in tactics of this kind is well able to look after the quite minor effects of his exuberance.

The suspension gives a ride that is firm but not unpleasantly harsh at low speeds and general road holding is good, with a commendable absence of pitch.

In its coachwork and equipment the new Sunbeam-Talbot "90" reveals

both good planning and imagination. The sports body (of all-steel construction) is, like its forerunner, essentially and intentionally compact, but it offers adequate space for four to travel long distances in comfort and the new full-width design of the body gives welcome added elbow room, increased still further (in effect, if not in fact) in the front by the new gear change which calls for no elbow movements in the passenger's direction.

The other controls are equally well arranged, notable improvements including a sloping-rest for the driver's left foot and considerably more space between the pedals than hitherto. The increased rake of the steering column gives an ideal arm angle for good control and the new instrument panel, with its large-diameter semi-circular speedometer, flanked by a fuel gauge and clock on one side and an ammeter and oil gauge on the other, could not be better placed for easy reference. On the near side is a large locker with (all manufacturers please copy!) an interior light, shielded from the driver but readily available for map reading; when open, the lid is adequately supported to act as a convenient platform.

In the centre of the fascia, a small recess provides accommodation for the control panel of His Master's Voice Automobile Radio (available as an extra) or offers an ideal home for cigarettes, matches, or what-have-you.

A worth-while improvement in driving vision results from the use of a curved fixed screen, which enables the pillars to be placed farther from the driver's forward range of sight. A wide curved rear window assists in similar manner for reversing, whilst a third aid to good vision is the pillarless construction of the rear portion of the body.

Front-seat adjustment is easy and effective, and, in addition to the normal arrangement, a very practical novelty is fitted to the driving seat in the shape of a hand wheel which permits both

height and rake to be varied. The seats themselves are well shaped, but would have been more comfortable on the model tried had it not been for a horizontal ridge in the seaming of the leather upholstery (a point which we understand is receiving attention) and the awkward placing of the front door handles; although of no moment to the driver, the position adopted was criticised by more than one passenger, who found the handle a distinct bar to leaning comfortably against the door.

The front window controls, on the other hand, earned universal praise; of the quick-acting lever type, they permit instant raising or lowering of the glass to its full extent. Ventilation, too, is well arranged, with knob-controlled scuttle ventilators as standard and a Clayton-Dewandre heating and demisting system available as an extra. In addition, there is a sliding roof. On the model tested, this was not entirely innocent of leaks in very heavy rain and some water also found its way on to the driver's right leg; doubtless, these faults were due to the hasty preparation of the particular model concerned and will not occur in later production models, but we can, of course, write of cars only as we find them.

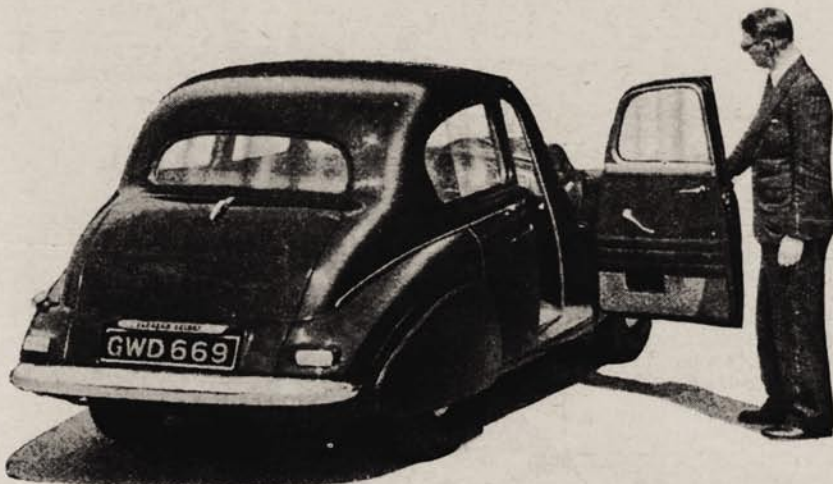
Nothing Forgotten

Tool accommodation deserves particular praise. Not only are the large items housed, each in its own recess, in a hinged tray formed in the lid of the large luggage locker, but small tools, such as spanners, are carried in a wallet which lives in an inconspicuous but handy locker in the near side of the scuttle. Another example of original thinking is the placing of the ashtray for the front compartment in a central position on the floor where it is equally handy for driver or passenger; at the rear, the usual position in the side arm rests has been retained.

These are good examples of the comprehensive and well-planned equipment of the new model, which also includes all the usual items such as sun visors, door pockets, roof light (with push-button control on the off-side door pillar), twin reversing and stop lights (partially recessed into the body), easy jacking system and separate spare-wheel compartment below the luggage locker.

The recessed head lamps (which incorporate pilot bulbs to replace separate side lamps) combine adequate range with a reasonable spread of light and operation of the steering-wheel dipper switch cuts out both and switches on a built-in road light on the near side; this gives a wide beam with horizontal cut-off and, for fog driving, a matching lamp on the off side can be brought into operation by a separate switch.

In all, this new Sunbeam-Talbot "90" reveals a very refreshing degree of imagination, coupled with a practical but modern outlook; with greatly improved performance and attractive styling to add to these qualities, the marque is likely to retain all its old adherents and to gain many new ones.



SWEET AND LOW.—Smart in external lines, the Sunbeam-Talbot's low, flat floor facilitates entry, and ample ground clearance under the tail contributes to suitability for world-wide service.