

The Motor Road Test No. 15/58 — The Austin-Healey Sprite

Make: Austin-Healey **Type:** Sprite
Makers: Austin Motor Co. Ltd., Longbridge, Birmingham.

Test Data

World copyright reserved; no unauthorized reproduction in whole or in part.

CONDITIONS: Weather: Warm and dry with moderate breeze. (Temperature 70°-74°F., Barometer: 30.2-30.4 in Hg.). Surface: Dry tarred macadam. Fuel: Premium-grade pump petrol (Approx. 95 Research Method Octane Rating).

INSTRUMENTS
 Speedometer at 30 m.p.h. 3% fast
 Speedometer at 60 m.p.h. 5% fast
 Speedometer at 80 m.p.h. 8% fast
 Distance recorder 2% fast

WEIGHT
 Kerb weight (unladen, but with oil, coolant and fuel for approx. 50 miles) 12½ cwt.
 Front/rear distribution of kerb weight 55/45
 Weight laden as tested 16 cwt.

MAXIMUM SPEEDS
Flying Quarter Mile
 Mean of four opposite runs 82.9 m.p.h.
 Best one-way time equals 86.5 m.p.h.

"Maximile" Speed (Timed quarter mile after one mile accelerating from rest).
 Mean of four opposite runs 81.1 m.p.h.
 Best one-way time equals 83.3 m.p.h.

Speed in Gears (at 6,000 r.p.m.).
 Max. speed in 3rd gear 65 m.p.h.
 Max. speed in 2nd gear 39 m.p.h.
 Max. speed in 1st gear 25 m.p.h.

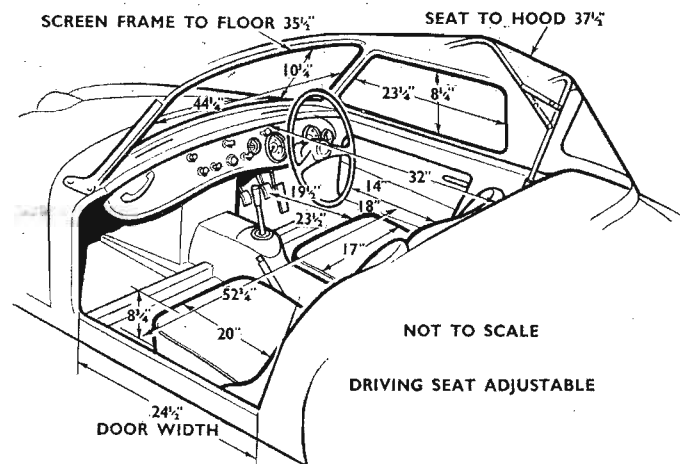
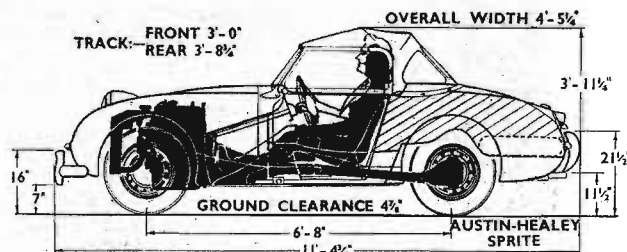
FUEL CONSUMPTION
 52.5 m.p.g. at constant 30 m.p.h. on level.
 54.5 m.p.g. at constant 40 m.p.h. on level.
 53.5 m.p.g. at constant 50 m.p.h. on level.
 38.0 m.p.g. at constant 60 m.p.h. on level.
 36.0 m.p.g. at constant 70 m.p.h. on level.

Overall Fuel Consumption for 1,696 miles, 50.5 gallons, equals 33.6 m.p.g. (8.4 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) 43.0 m.p.g. Fuel tank capacity (maker's figure) 6 gallons

STEERING
 Turning circle between kerbs:
 Left 28½ feet
 Right 29½ feet
 Turns of steering wheel from lock to lock 2½

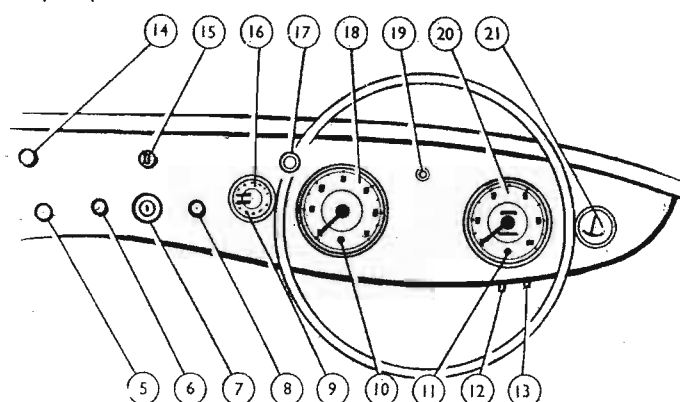
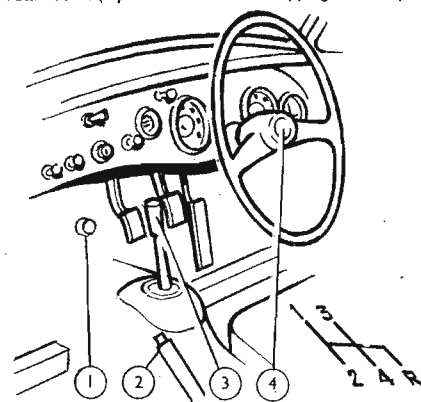
BRAKES from 30 m.p.h.
 0.97 g retardation (equivalent to 31 ft. stopping distance) with 90 lb. pedal pressure.
 0.75 g retardation (equivalent to 40 ft. stopping distance) with 75 lb. pedal pressure.
 0.49 g retardation (equivalent to 61½ ft. stopping distance) with 50 lb. pedal pressure.
 0.22 g retardation (equivalent to 137 ft. stopping distance) with 25 lb. pedal pressure.



ACCELERATION TIMES from standstill		ACCELERATION TIMES on Upper Ratios	
0-30 m.p.h.	5.1 sec.	10-30 m.p.h.	Top gear 3rd gear
0-40 m.p.h.	8.5 sec.	20-40 m.p.h.	13.7 sec. 8.6 sec.
0-50 m.p.h.	13.7 sec.	30-50 m.p.h.	12.6 sec. 7.7 sec.
0-60 m.p.h.	20.5 sec.	40-60 m.p.h.	14.4 sec. 11.4 sec.
0-70 m.p.h.	31.1 sec.	50-70 m.p.h.	18.5 sec.
Standing quarter mile	21.8 sec.		

HILL CLIMBING at sustained steady speeds.

Max. gradient on top gear	1 in 11.7 (Tapley 190 lb./ton)
Max. gradient on 3rd gear	1 in 7.5 (Tapley 295 lb./ton)
Max. gradient on 2nd gear	1 in 4.5 (Tapley 485 lb./ton)



- 1, Headlamp dip switch. 2, Handbrake. 3, Gear lever. 4, Horn button. 5, Windscreen washers button. 6, Windscreen wipers control. 7, Ignition and lights switch. 8, Heater control. 9, Water thermometer. 10, Headlamp high-beam indicator lamp. 11, Dynamo charge warning lamp. 12, Panel light switch. 13, Trip resetting knob. 14, Choke control. 15, Direction indicator switch. 16, Oil pressure gauge. 17, Starter switch. 18, Tachometer. 19, Direction indicator warning lamp. 20, Speedometer and distance recorder. 21, Fuel contents gauge.



LOW built to corner with minimum roll, the Sprite combines protection for the driver with good all-round vision.

Motoring That is Fun at Very Modest Cost

WERE it possible to define quantitatively a pleasure-to-price ratio for cars, the new Austin-Healey Sprite would undoubtedly register an amazingly high figure for this desirable virtue. Costing about as much to buy as do many popular saloons of similar 1-litre engine size, and perhaps even cheaper than such saloons to run, this open two-seater offers much better acceleration up to a top speed which is higher by some 10 m.p.h., but responsiveness to the slightest touch on the controls is what really makes it such a joy to drive.

Small in size, the Sprite is certainly not a "miniature" car nor should it be regarded as merely a fragile toy. Modern full-width styling of the low-drag body enables it to provide generous room for two big men on excellent seats and there is substantial (if awkwardly arranged) accommodation for luggage also. Almost entirely in evenings and at week-ends,

and unable to attend motor races or other public functions in a still-secret car, members of our staff nevertheless ran the Sprite some 2,000 miles in a period of 20 days, at the end of which period a car which came to us with just over 2,000 miles on its speedometer merely seemed rather better for this extra running-in mileage.

Weighing 2-3-cwt. less than the saloons which use a basically similar power unit, and with wind resistance minimized by a 10-15-inch saving in overall height, the Sprite has required only mild engine tuning to gain performance fully comparable with lively modern saloons of double its size. There are two carburetters, and some valuable mechanical refinements inside the engine to ensure its stamina, but it retains a compression ratio which is moderate enough to tolerate the use of intermediate-grade fuels, a cast iron exhaust manifold with central hot-spot, and a camshaft giving touring valve timing. It is a docile engine, starting easily and quite happy to pull down to 15 m.p.h. in top gear if the car must be lent to some driver of non-sporting tastes. But it is an engine which only begins to sound alive in top gear at more than 30 m.p.h. and thereafter remains smooth and hard-working until the rev. counter needle reaches the far end of the scale, use of 5,000 r.p.m. in the gears when accelerating seeming entirely natural, and cautionary markings on the rev. counter dial between 5,500 and 6,000 r.p.m. being quickly reached. The exhaust note is sharp at wide throttle openings and high r.p.m., but with reasonably restrained handling the Sprite runs through towns without much noise.

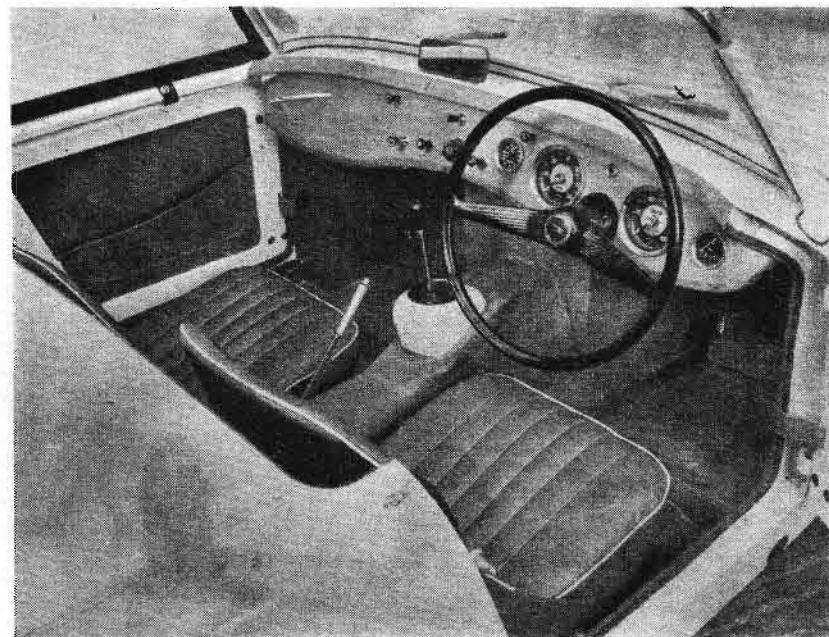
Oil consumption during our test was only about 1 pint per 1,000 miles, but in exceptionally warm spring weather the coolant temperature rose sharply enough in London traffic or around Devon trials hills to suggest the desirability of some air outlet louvres on top of the bonnet.

Contributing much to the merit of this car is a four-speed synchromesh gearbox, third gear being useful up to an over-60 m.p.h. speed which is in sensible relation to an over-80 m.p.h. maximum in top gear. The gap between 3rd and 2nd ratios is too wide to please really hard drivers, the useful limit of speed in 2nd gear being less than 40 m.p.h., but this ratio will, if required, start the car from rest and carries it up almost any hill which is used by normal traffic. Located with its knob rather high up and close to the facia, the remote-control gear lever is positive in action, but became stiff to use when the car was really well warmed up.

Rack and pinion steering is geared at only 2½ turns from extremity to extremity of a steering lock which lets the car swing round between low kerbs a mere 30 feet apart. With no evident lost motion whatever, seemingly negligible friction, and quite light self-centring effect, this steering lets the car be guided by use of fingers and wrists rather than by arm movements — the near-vertical two-spoke wheel is set too close to the seat to permit the straight-arm driving position which is fashionable with racing drivers of cars with lower-geared steering. Naturally enough, this is a car which corners fast with little or no roll, squealing its tyres only under very severe provocation, and in a corner it shows a modest degree of

In Brief

Price £455 plus purchase tax £223 17s. 0d. equals £678 17s. 0d.
 Capacity 948 c.c.
 Unladen kerb weight 12½ cwt.
 Acceleration:
 20-40 m.p.h. in top gear 12.6 sec.
 0-50 m.p.h. through gears 13.7 sec.
 Maximum direct top gear gradient 1 in 11.7
 Maximum speed 82.9 m.p.h.
 "Maximile" speed 81.1 m.p.h.
 Touring fuel consumption 43 m.p.g.
 Gearing: 15.4 m.p.h. in top gear at 1,000 r.p.m. 30.8 m.p.h. at 1,000 ft./min. piston speed.



The Austin-Healey Sprite

COCKPIT of this simple sports car shows the central gear lever and handbrake, individual bucket seats, two-spoke steering wheel, optional rev. counter and neatly fitted rubber floor covering.

pressures. Ordinary buyers of this car should never have any worry with brake fade, but the harder treatment imposed by competitions might disclose that whilst a single stop from 80 m.p.h. merely produces a warm smell, three or four stops from 60 m.p.h. in rapid succession cause a considerable temporary loss of front brake effectiveness. Set close against the passenger seat, the pull-up handbrake (of touring rather than fly-off pattern) works excellently. Low build and proximity of the radiator air intake to the ground limit this car's ability to negotiate fords or flood-water, but ground clearance beneath the chassis proves to be rather more adequate than it appears, as the underside of the body is a smooth metal surface almost devoid of vulnerable projections.

Habitability

In respect of touring car amenities a sensible compromise seems to have been struck, the Sprite having most of the essentials included in its moderate price but being very evidently capable of improvement by the subsequent addition of extra equipment. Two front-hinged doors (with interior handles only) give acceptable ease of entry to the low body, and capacious pockets in the lower halves of unlined doors leave generous elbow width available above them. Two sidescreens have simple and secure fixings, and the fully detachable hood has a three-piece rear window of wrap-around proportions. Two wiper blades operate on a curved glass windscreen of large area, which gives good protection although inducing appreciable back-draught in the cockpit. Flashing turn indicators do not cancel themselves but their control is conveniently placed at the centre of the fascia panel. An excellent driving light is given by the headlamps, though in misty weather the fact that their mountings are almost in the driver's short-range sight line over the low bonnet might prove a handicap. Unluckily, the pattern of air flow around the body at speeds above 60 m.p.h. tends to flutter the hood, and blows rainwater or insects into the body through gaps which open up between an easy-to-erect hood and the top of the windscreen, and between the windscreen and sidescreens. An optional extra, the fresh-air heater with air valve and booster fan controlled from the fascia panel worked well on our test car, and by turning off the under-bonnet water tap it could be used to blow cool air into the cockpit.

Accommodation for a considerable volume of luggage is available behind the seats, in a long and reasonably wide compartment of moderate height, but this space can be reached only from the front

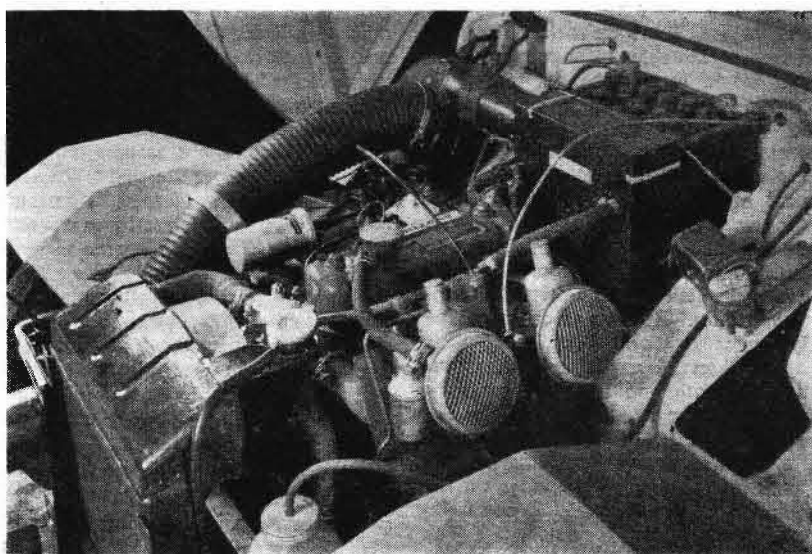
(Continued on page 603)

stable "understeer" until the limit of tyre adhesion is transgressed. Perhaps because the natural sensitivity of the steering is magnified by flexible rubber bushes in some of the front and rear suspension pivots, the car needs a decidedly delicate touch on the controls to put it into a corner fast and accurately on a chosen line without initial "oversteering" by the driver, and too heavy a hand on the controls will accentuate a slight tendency to weave on the straight at maximum speeds. Once a sensitive driver has the feel of this car however, he can revel in hustling it along winding roads, totally forgetting a tendency for the car to pull slightly to the right during acceleration or left on the over-run which

at first acquaintance was fairly evident. Wet and slippery roads do nothing to diminish the pleasure of driving this light and outstandingly responsive car, and rough roads do not jolt it unduly despite the suspension being much firmer than on most modern touring cars.

Toe and Heel

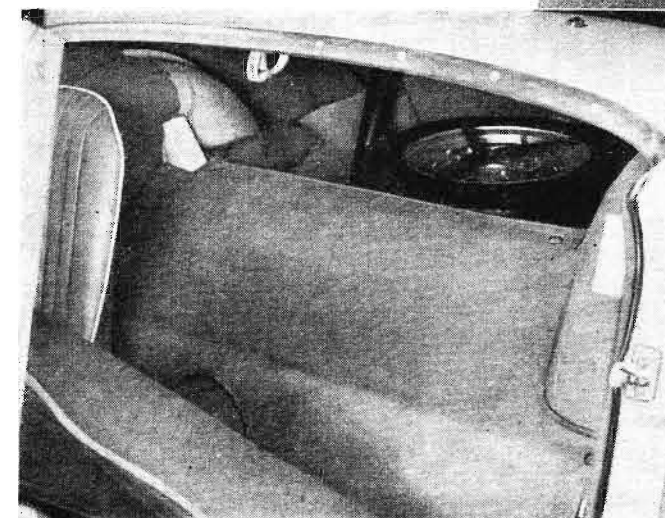
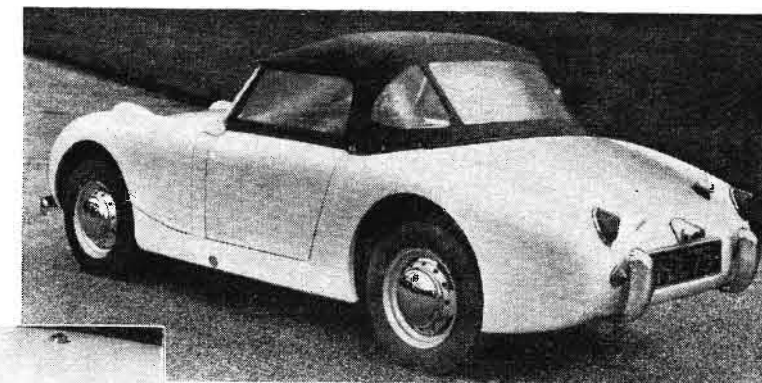
Three pedals which are spaced to accommodate reasonably wide shoes are set conveniently level with one another, and the headlamp dipper acts as a rest for the left foot beside the clutch pedal. It is possible to "blip" the accelerator for a downward gearchange whilst braking, and the brakes give instant and powerful response to modest pedal



BENEATH the lift-up body nose is this 948 c.c. engine, with twin carburetors and modified internally to withstand sustained operation, at high r.p.m.

The Austin-Healey Sprite

past tilted-forward seat backrests, and small items can become lost in its depths. The hood fabric and sidescreens must be stowed in the luggage space when they are not in use, the folded hood frame fitting neatly into sockets where it encircles the mouth of the luggage compartment, but contributing to the variety of minor rattles evident around



TAILPIECE of the small Austin-Healey is a luggage locker accessible only from inside the body. Weather protection includes a quickly erected hood with wrap-around rear window.

lift-up nose of the steel body to rise as far as is desirable for comfortable access to the engine, but two self-locking struts can be supplemented by a third prop to ensure the safety of anyone working on the mechanism. Even when driven quite hard this car gives over 30 m.p.g. fuel economy, and gentler treatment readily produces well over 40 m.p.g. on long runs when the petrol tank capacity of 6 gallons begins to seem less meagre.

It is safe to predict that this inexpensive new Austin-Healey will have a very wide appeal, both in Britain and in many other parts of the world. Good performance which asks to be used to the full, controls of a responsiveness which many touring car owners have never even imagined possible, and a complete lack of temperament will make it a desirable and possible purchase both as an "only" car and also as "second car" in households already using a four-seat saloon.

what is in essentials a sturdily rigid body. Simple in its mechanical design, and using a large proportion of well-tryed components this should not be in any way a difficult car to maintain. Proper

provision is made, for example, for access to the gearbox dipstick, a secure cover being disclosed when the moulded rubber floor covering is rolled back. Concealed hinges do not allow the awkwardly heavy

A full description of the Sprite appears on pages 622-625.

Specification

Engine:	
Cylinders	4
Bore	62.9 mm.
Stroke	76.2 mm.
Cubic capacity	948 c.c.
Piston area	19.29 sq. in.
Valves	Pushrod o.h.v.
Compression ratio	8.3:1
Carburettor	2 inclined S.U. type H1
Fuel pump	AC mechanical
Ignition timing control	Centrifugal and vacuum
Oil filter	Tecalemit or Purolator, full-flow
Max. power (net) 43 b.h.p. (gross, 50 b.h.p.) at	5,200 r.p.m.
Piston speed at max. b.h.p.	2,600 ft./min.
Transmission	
Clutch	Borg and Beck 6½-in. s.d.p.
Top gear (s/m)	4.22
3rd gear (s/m)	5.96
2nd gear (s/m)	10.02
1st gear	15.31
Reverse	19.69
Propeller shaft	Hardy Spicer open
Final drive	Hypoid bevel
Top gear m.p.h. at 1,000 r.p.m.	15.4
Top gear m.p.h. at 1,000 ft./min. piston speed	30.8
Chassis	
Brakes	Lockheed hydraulic (2 l.s. front)
Brake drum internal diameter	7 in.
Friction lining area	67.5 sq. in.
Suspension:	
Front	Independent by coil springs and wishbones
Rear	Quarter elliptic springs and rigid axle
Shock absorbers	Armstrong hydraulic, lever-arm type
Steering gear	Rack and pinion
Tyres	5.20-13 tubeless

Coachwork and Equipment

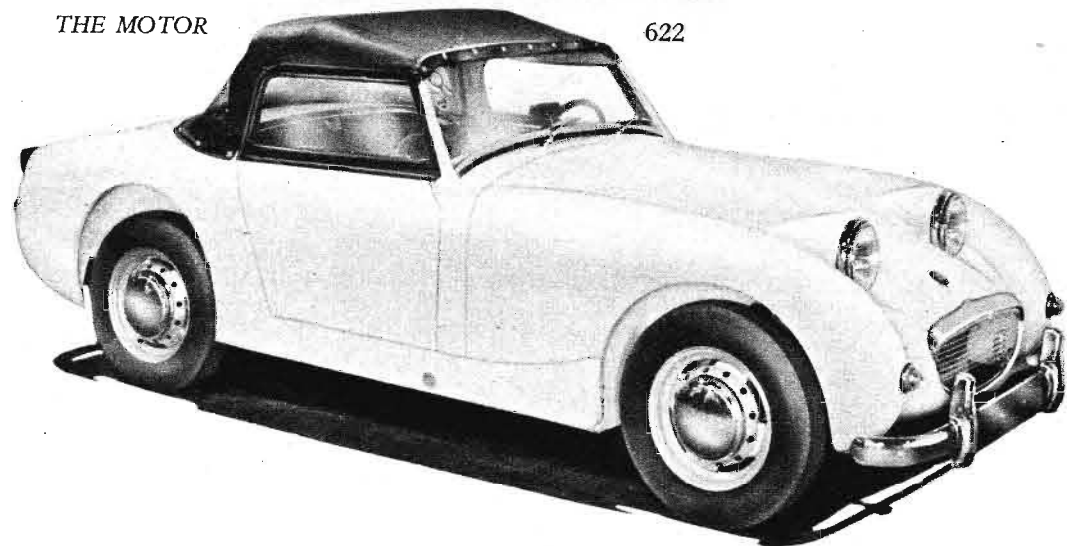
Starting handle	Yes	Behind engine on scuttle
Battery mounting	None	Behind engine on scuttle
Jack	Bipod screw type with ratchet handle	None
Jacking points	External sockets on body sides	None
Standard tool kit: Jack and ratchet handle, tyre pump, grease gun, wheel nut spanner, ignition screwdriver/feeler, tyre valve key, sparking plug spanner, plug and tappet feeler gauge, screwdriver, toolbag.		
Exterior lights	2 headlamps, 2 sidelamps/flashers, 2 stop/tail lamps, number plate lamp.	None
Number of electrical fuses	2	None
Direction indicators	Flashers (white front, amber rear), non self-cancelling.	None
Windscreen wipers	2-blade electrical, self-parking.	None
Windscreen washers	Optional extra.	None
Sun visors	None	None
Instruments	Speedometer with decimal trip distance recorder, oil pressure gauge, coolant thermometer, fuel contents gauge (tachometer optional extra).	None
Warning lights: Headlamp main beam, direction indicators, dynamo charge.		
Locks: With ignition key: Ignition switch, glove lockers: None		
Map pockets: Two in doors		
Parcel shelves: None		
Ashtrays: None		
Cigar lighters: None		
Interior lights: Instrument lighting only		
Interior heater: Optional extra, fresh-air type with screen de-misters.		
Car radio: Optional extra		
Extras available: Rev. Counter, Heater, Radio, Screen washers, laminated glass screen, front bumper, tonneau cover, locking petrol cap.		
Upholstery material: Leathercloth		
Floor covering: Moulded rubber mats		
Exterior colours standardized: Five		
Alternative body styles: None		

Maintenance

Sump	6 pints, plus 7/8 pint in filter, S.A.E. 30 (below freezing, S.A.E. 20W)
Gearbox	2½ pints, S.A.E. 30
Rear axle	1½ pints, S.A.E. 90 hypoid gear oil
Steering gear lubricant	S.A.E. 90 hypoid gear oil
Cooling system capacity	5½ pints (2 drain taps)
Chassis lubrication: By oil gun every 1,000 miles to 10 points	
Ignition timing	5° before t.d.c. static
Contact breaker-gap	0.014-0.016 in.
Spark plug type	Champion N5 (14 mm. long reach)
Spark plug gap	0.025 in.
Valve timing	Inlet opens 5° before t.d.c. and closes 45° after b.d.c.; Exhaust opens 40° before b.d.c. and closes 10° after t.d.c.
Tappet clearances (Hot)	Inlet and exhaust 0.012 in.
Front wheel toe-in	0-1/8 in.
Camber angle	1°
Castor angle	3°
Steering swivel pin inclination	6½°
Tyre pressures:	
Front	18 lb.
Rear	20 lb.
Brake fluid	Lockheed
Battery type and capacity: 12 volt, 43 amp. hr. Lucas B.T.W.7A.	

1958 CARS

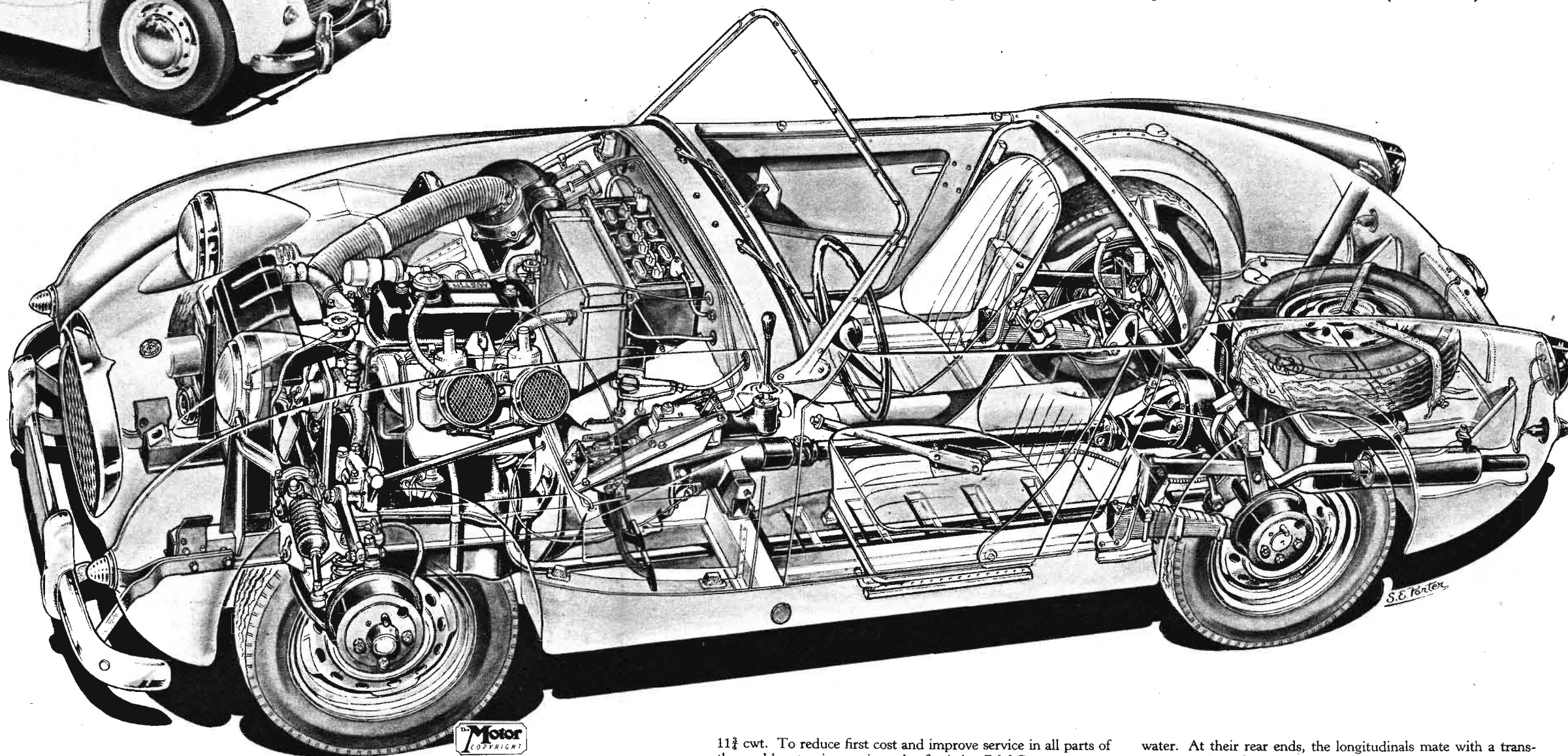
A ONE-LITRE AUSTIN-HEALEY



Entirely New Sprite Model Powered by 948 c.c.
Two-carburetter, A-type Engine Brings Sports-car
Motoring Back to Economy Class at £678 17s. (inc. tax)

AUSTIN-HEALEY SPRITE

Engine Dimensions	
Cylinders	4
Bore	62.9 mm.
Stroke	76.2 mm.
Cubic capacity	948 c.c.
Piston area	19.29 sq. in.
Valves	Overhead (push rod)
Compression ratio	8.3:1
Engine Performance	
Max. power	43 b.h.p.
at	5,200 r.p.m.
Max. b.m.e.p.	136 lb./sq. in.
at	3,300 r.p.m.
B.h.p. per sq. in. piston area	2.23
Piston speed at max. power	2,600 ft./min.
Engine Details	
Carburetter	Two S.U. (H1)
Ignition timing control	Centrifugal and vacuum
Plugs	Champion N5
Fuel pump	AC mechanical
Fuel capacity	6 gallons
Oil filter	Tecalemit or Purolator, full flow
Oil capacity	6½ pints (incl. filter)
Cooling system	Pump, fan and thermostat
Water capacity	10 pints (10½ with heater)
Electrical system	12-volt
Battery capacity	43 amp.hr.
Transmission	
Clutch	Borg and Beck,
	6½ in. s.d.p.
Gear ratios: Top (s/m)	4.22
3rd (s/m)	5.96
2nd (s/m)	10.02
1st (s/m)	15.31
Rev.	19.69
Prop. shaft	Open Hardy Spicer
Final drive	Hypoid bevel
Chassis Details	
Brakes	Lockheed hydraulic (2 l.s. on front)
Brake drum diameter	7 in.
Friction lining area	67.5 sq. in.
Suspension: Front	Independent (coil)
Rear	Quarter-elliptic with trailing links
Shock absorbers	Armstrong lever-type hydraulic
Wheel type	Pressed steel
Tyre size	5.20-13 tubeless
Steering gear	Rack and pinion
Dimensions	
Wheelbase	6 ft. 6 in.
Track: Front	3 ft. 9½ in.
Rear	3 ft. 8½ in.
Overall length	11 ft. 5½ in.
Overall width	4 ft. 5 in.
Overall height	Hood down, 3 ft. 8½ in.
	Hood up, 4 ft. 1½ in.
Ground clearance	5 in.
Turning circle	Right, 31 ft. 1½ in.
	Left, 32 ft. 1½ in.
Dry weight	11½ cwt.
Performance Factors (at dry weight)	
Piston area, sq. in. per ton	32.9
Brake lining area, sq. in. per ton	115
Top gear m.p.h. per 1,000 r.p.m.	15.4
Top gear m.p.h. per 1,000 ft./min. piston speed	30.8
Litres per ton-mile	3,160



SINCE the war, the sort of small sports-car which provided so much fun for so many now middle-aged drivers in their early motoring days has been conspicuously missing from the catalogues of the larger manufacturers. Engine sizes have gone up and so has the price level vis-a-vis contemporary small saloons. There have been various sound commercial reasons for this. Amongst them one may mention the post-war change to a flat-rate taxation system (which, in the days of low-grade Pool petrol, made an increase in engine capacity the most economic way of improving performance) and a natural emphasis on larger engines for export.

Since these policies were formulated, times have changed and for some time now, there has been a growing belief that this tendency has gone far enough and that, with improved fuels, better bearing materials and a wider appreciation of the potentialities of small engines in many overseas countries, a profitable market exists both at home and abroad for a small low-priced sports car.

It is to fill this gap that the new Austin-Healey Sprite two-seater is being introduced. Powered by a two-carburetter edition of the B.M.C. one-litre A-type engine, it combines a 43 b.h.p. output with a small frontal area and a dry weight of

11½ cwt. To reduce first cost and improve service in all parts of the world, extensive use is made of existing B.M.C. components, but the rust-proofed steel unitary-construction body shell is entirely new and so is the quarter-elliptic rear suspension, which, by concentrating the stresses in the centre portion of the body shell, makes a lighter tail structure possible. The price is £455, and a purchase tax increment of £223 17s. brings the total cost to the very competitive figure of £678 17s.

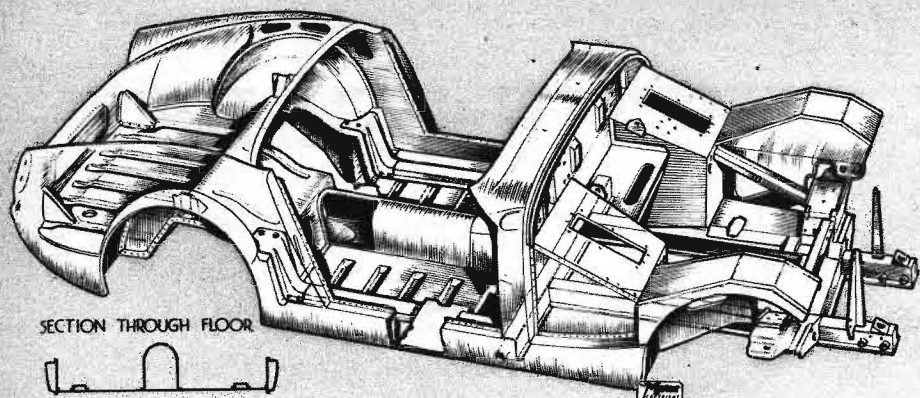
Basis of the new car is a pressed-steel structure which serves the dual purpose of body and chassis. At the front, the entire bonnet, wings, radiator grille and headlamps form a separate unit hinged to the scuttle and arranged to swing up to give access to the engine. Accordingly, the main shell terminates at the front in a very rigid boxed scuttle structure, recessed to take the power unit. Extending forward from this are two top-hat section girders, fully boxed on their undersides, which carry the front suspension member and the front engine mountings.

Additional strength is given by triangulated supports from the scuttle, these supports also serving for attachment of the front wheel arches which protect the underbonnet area from mud and

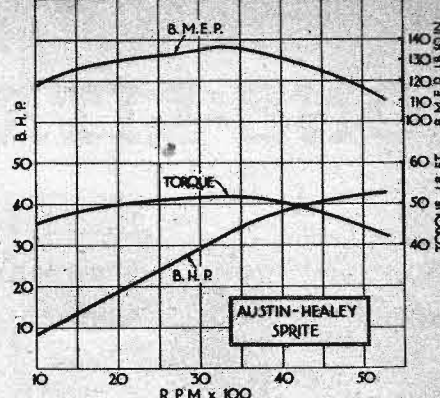
water. At their rear ends, the longitudinals mate with a transverse member of similar section which extends outwards to the body sills and also provides a location for the rear mountings of the engine-gearbox unit.

In an open car, with no roof to combine with the floor in providing a parallelogram, a problem always arises with unitary construction in obtaining adequate stiffness as between the fore and rear parts of the structure owing to the need for providing door apertures. In the case of the Sprite, the necessary stiffness is provided in a number of ways. In the first place, the body sills are fully boxed and are some five inches deep, whilst the propeller shaft tunnel (which joins with scuttle members at the front and with a sloping transverse pressing just forward of the wheel arches at the rear) is enclosed on its underside to provide a stiff backbone. In addition, top-hat section pressings are welded to the upper side of the pressed steel floor on each side.

At the rear, the entire tail and rear wings form a rigid shell stiffened by the inner wheel arches and by inner pressings welded between the wheel arches and both the door pillars and the top panel. The latter, moreover, is unbroken by any aperture for a boot lid. In addition, stout reinforcing members are provided



THE BASIC STRUCTURE of the Austin-Healey Sprite takes the form of this light but strong pressed-steel shell, in which boxed top-hat sections are used both to carry the engine and the front suspension and to provide beam strength for the centre portion; for the latter purpose, the body sills and fully-enclosed propeller shaft tunnel also play a major part.



POWER OUTPUT of the B.M.C. 948 c.c. A-type engine in the two-carburettor form in which it is used in the Sprite. In addition to the two carburettors, the engine differs from touring versions in having stronger valve springs, stellite, hard-faced exhaust valves and copper-lead bearings for the mains as well as the big ends.

A ONE-LITRE AUSTIN-HEALEY—contd.

for the spring mounting points and there are also triangulated supports which serve the dual role of providing shock-absorber mountings and of bracing the spring abutments to the transverse member and to the floor of the boot.

Front suspension is of the kind used on the Austin A35 and is carried on a stout cross-member welded to the front longitudinals. Of the coil type, the suspension comprises pressed-steel lower wishbones and single forged upper links which also form the arms of the Armstrong hydraulic lever shock absorbers. The upper and lower links are of unequal length to minimize track variations.

As already indicated, the Sprite rear suspension is unusual in that it represents a reversion to quarter-elliptic springs. The adoption of this system has obvious benefits in conjunction with unitary construction, because a single mounting point relatively close to the centre of the body structure is required for each spring and the tail plays no part in supporting the weight of the car.

Each spring consists of 15 thin blades and the master leaf, which is carried round to form a spring eye at the rear, is reinforced by a part-length leaf secured by spring clips. The rear attachment is to a bracket welded to the axle casing, this bracket being continued upwards both to provide the rear pivot point of a parallel radius arm and also to accommodate a bump stop at its upper end. Rubber bushes are employed both for the

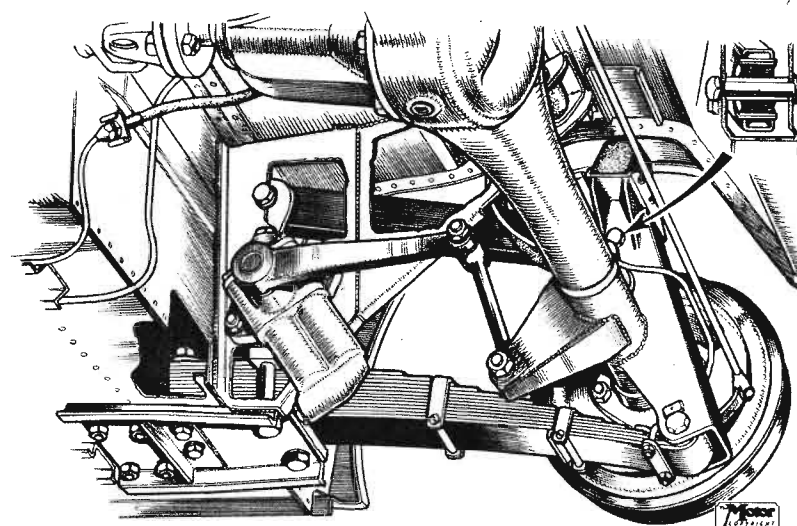
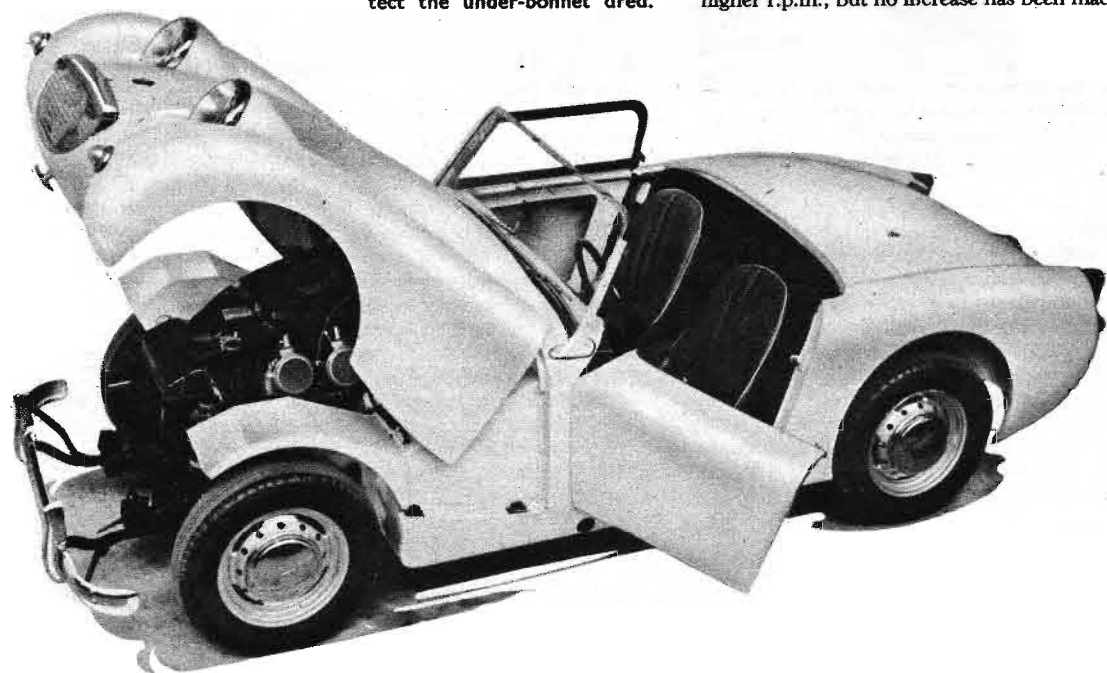
spring eyes and for the pivot points of the radius arms so that, apart from the need for spraying the spring leaves with oil occasionally to prevent rust and squeaks, the rear suspension requires no routine maintenance. As at the front, Armstrong double-acting hydraulic lever shock absorbers are used.

Steering is by means of a Morris Minor-type, rack-and-pinion unit which is mounted on the front suspension cross member, the rack and its links to the steering arms serving also the purpose of a three-piece track rod. The steering is high geared, 2½ turns of the steering wheel being required from lock to lock. The steering column is well raked and terminates in a two-spoke wheel.

Braking follows conventional Lockheed hydraulic practice with 7 in. drums all round and two leading shoes at the front. The friction lining area is 67.5 sq. in. giving a braking area of 115 square inches per ton of dry weight. The hand-brake lever, which has the normal type of ratchet, is mounted between the seats on the side of the propeller-shaft tunnel and operates the rear shoes via an enclosed cable and transverse rods in tension mounted on the rear axle with the usual compensating device.

As mentioned at the outset, the power unit of the new Austin-Healey Sprite is the well-proven B.M.C. A-type engine of 948 c.c. but with a substantially increased power output of 43 b.h.p. brought about by the use of a neat two-carburettor induction system employing a pair of S.U. H1 instruments, each with its own separate Cooper air cleaner. As a matter of interest, the output of 43 b.h.p. at 5,200 r.p.m. compares with the 34 b.h.p. at 4,750 r.p.m. in the Austin A35 edition and the 37 b.h.p. at 4,750 r.p.m. in the Morris Minor "1000" version. Stronger valve springs, stellite hard-faced exhaust valves and copper-lead main as well as big-end bearings are used to provide for the higher r.p.m., but no increase has been made in the compression

THE BONNET and front wings are a separate structure hinged to the scuttle; hence the inner front wings to protect the under-bonnet area.



QUARTER-ELLIPTIC SPRINGS are an unusual feature of the rear suspension but have distinct advantages for a car of this type in relieving the tail of main loads. They work in conjunction with parallel radius arms, and rubber bushes are used throughout. This drawing also shows the shock-absorber mounting, bump stops and check strap.

in the tail itself for two moderate-sized suitcases above the spare wheel, which is strapped horizontally to the floor. There are two very useful pockets in the front-hinged doors.

The plastic covered fascia board is of pleasing appearance with the two main instruments, a 100 m.p.h. speedometer and a matching rev. counter—the latter an extra—prominently visible through the steering wheel. Flanking these are a fuel gauge and a combined oil-pressure gauge and water thermometer. Warning lights are provided for the ignition, headlamp high beam and flashing indicator lights which are of the non-self-cancelling type. The switch for the latter is centrally placed directly above the lighting and ignition switch. On the passenger's side is a sensibly placed grab handle.

As one would expect on a car of this type, vision is excellent, both the front wings and the headlamp contours being visible from the driving seat. Even with the hood erected, the view all round is extremely good, thanks in no small measure to the provision of quarter lights as well as a large rear window, the whole effect, in fact, being much the same as with a typical wrap-round saloon window. To facilitate folding, the rear window and quarter lights are of flexible plastic. The side screens are rigid-framed and can be used whether or not the hood is in use. The latter is of P.V.C.-coated fabric and is completely detachable.

Equipment provided as standard includes the items already mentioned, together with twin electric wipers. A fresh-air heating system which takes its supply from the front grille to a fan

and heater unit mounted on the engine side of the dash just forward of the 12-volt battery is available as an optional feature and other extras include windscreen washers, a tonneau cover, a laminated windscreen, the front bumper (which is, however, standard on export models) and radio.

The headlamps and side lights/direction indicators are built into the bonnet structure which, as already mentioned, is hinged at the scuttle and, when raised, gives exceptional accessibility to both the power unit and the front suspension and steering. At the front, the optional full-width bumper with over-riders is mounted on the longitudinal extensions of the body structure whilst, at the rear, protection is given by a pair of over-riders. Lighting arrangements at the rear include separate wipers, and combined stop/tail lamp clusters with built-in reflectors, whilst the number plate has a separate central lamp.

In all, this new Austin-Healey Sprite very ably fills a gap that has existed since the war and in the next few years is likely to bring sports-car motoring within the reach of many both at home and abroad who have so far been neglected by the larger car manufacturers.

A full Road Test Report appears on pages 600-603.



SET alongside the deep propeller-shaft tunnel, the seats have comfortably deep cushions and well-curved squabs to provide lateral support.

The large heater air-intake trunk runs well clear of dynamo, coil and plugs. The battery is mounted high on the centre of the scuttle.

