

Road Research Report: AUSTIN-HEALEY SPRITE

► If you've passed the P-R-N-D-L stage of driving and are interested in sports cars, there's probably no better starting place than an Austin-Healey Sprite. It is far and away the cheapest sports car that is readily available with nationwide service and parts distribution to back it. It has the further advantage that it is a genuine sports car and not a four-wheel motorcycle. Whatever you learn about sports cars while apprenticed to a Sprite will serve you in good stead when you graduate to something larger and faster.

While no car will ever be a genuine successor to the MG TC, the Sprite comes the closest and that is how it should be. After all, Donald Healey designed it by exactly the same principles that had governed the MG Car Company, namely, to build a good sports car to a sensible price by clever, simple design and, wherever possible, components already proven by and tooled up for existing sedans within the parent company.

COCKPIT CAPERS

Because the Sprite has an integral body-frame, the cockpit is far more spacious than the car's size would

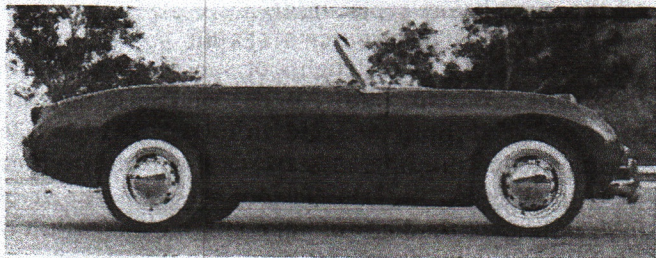
indicate. The doors are good-sized but access is made somewhat awkward because the door-latch's pin can catch on your coat pocket (and will if you don't watch out). The bucket seats, the real kind with simply curved wrap-around backs that are hardly upholstered at all, get a good grip on you and won't let you fall out. The seat cushions, while not overstuffed, were comfortable enough. They would have been better if they'd been tilted up at the front. We found we kept hitching ourselves back in the seat every few minutes.

All the controls are well placed, especially the stubby little shift lever which sprouts from the deeply curved metal transmission cover. One of those old-fashioned suction-cup-style ash trays would be a useful accessory for someone to revive; it would stick easily to that bulge and be handy to both driver and passenger. The starter pull seemed awkward, being nearly in front of the passenger, because the choke was also to the right of the steering column (and with too tight a spring to stay out by itself).

With an only 80-inch wheelbase and springs stiff enough for sporting driving through the bends, the Sprite has an understandably jiggly ride. On long undulating dips, the effect is that of a small sailboat in a following sea. Spring rates, for the technically minded, are 71 pounds per inch front and 98 rear.



Though short on ride comfort, the little Sprite's roadholding is as tenacious as its tires allow. The car is very low to the ground so it rolls but little and doesn't transfer too much weight to the usually overworked outside tires. Combine this with its quick-as-a-wink steering and the Sprite is sheer joy to tool through ess-bends on smooth, lightly-traveled roads.



Being a small car, it's natural that its living quarters should be a bit on the cramped side. Most of our staff always left the seat in the fully-rearward position and its range is only 3 inches.

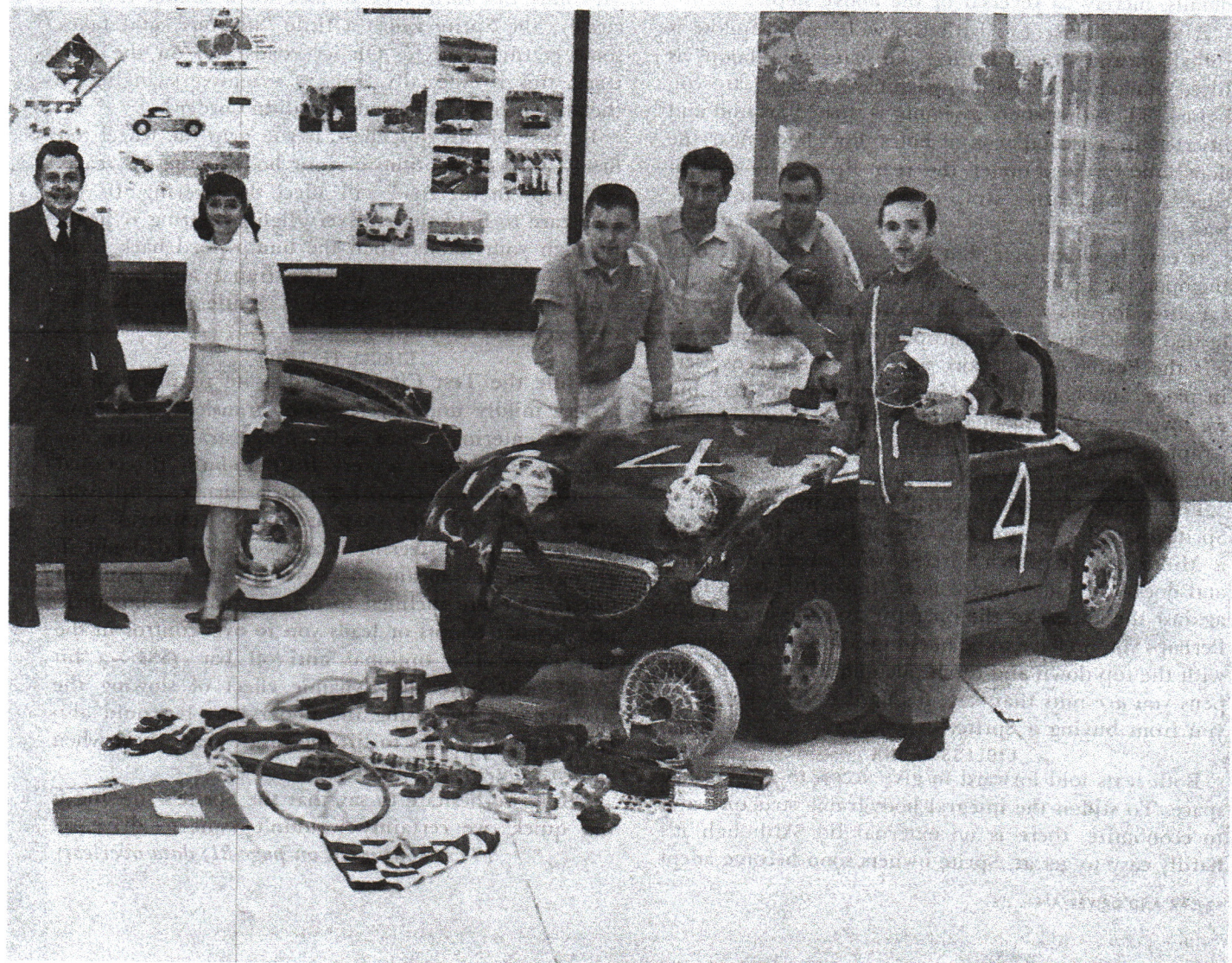
WEATHERPROOFING

In this respect the Sprite is a far cry indeed from the TC and TD. True, it has side-curtains rather than

roll-up windows, but they have sliding panes which permit hand signaling from the inside (and door opening from the out). Made of plastic, these panes scratch quickly and become difficult to see through unless cared for with loving tenderness and soft, clean rags. They slide reluctantly in felt-lined aluminum frames which clamp to the doors with knurled nuts. In a sleet storm, of course, you may be temporarily locked out since the door handles are only on the inside. (Unfasten the top's nearby buttons and reach way in.) A following wind will drive rain in through the gap but in practice this is no problem as the rain water runs down the front, fixed pane onto the body-contour surface of the door, then seeps under the fabric draft-excluder which surrounds the aluminum frame.

When the Sprite was introduced the folding top attached across the top of the windshield with a row of "lift the dot" fasteners. Since the fabric itself was unstiffened, it tended to develop a severe case of gapisis between the "dots" and the interior was considered to be rather a shower. Now redesigned, the front edge of the top is reinforced and hooks over a narrow flange all across the front, having but two fasteners, one at each corner.

When the top and the side curtains are in place, Sprite riders, snug in their draft-free quarters, have



another advantage over the old-timers: that very standard option, the \$50 heater/defroster. It's a simple device: there's only one switch, either twist for blower-on or pull for ducts-open (through the heater, of course), plus the two small flaps above the transmission tunnel which, if closed, direct all the air on the windshield. Open, the warm air blows right on your ankles. When the temperature is in the twenties, you start getting warm air within a couple of blocks even though the engine is still demanding a rich mixture.

In summertime, Sprites are a rarity among front-engined sports cars in that the cockpit *can* be kept cool and well ventilated. The same fresh air duct which warms you in winter is used but the hot water from the engine is, of course, turned off by an under-hood tap.

FOLDING THE TOP

In fine old British sports car tradition, hiding the "rain-rag", an unfair euphemism these days, is a time-consuming chore. It's easiest to describe the process by telling how the top is erected first.

We've mentioned the flange across the upper edge of the windshield. There are also two hooks on the rear deck and a half-dozen fasteners. After all these items are hooked up, the spring-loaded tensioners (!) in the tubular steel, hoop-like framework are released, popping the center portion of the top up to its full height. Removing the top is, as the owner's manual details, merely "a reversal of the above steps."

After the fabric top with the wide rear window is rolled up and stowed behind the seats, the "hoop" is lifted out and the forward-reaching "zig-zags" are collapsed. Then the whole assembly is turned around and inserted in a second pair of holes, low down near the floor, and pressed under the rear lip of the cockpit edge. A small leather strap retains it there, out of the way.

It may be a struggle, but what joy it is to drive in the open air again. For us, the Sprite was the first open car after too many weeks of snow and cold and overheated buildings and claustrophobic cars. Of course we left the heater on full-bore and the side-screens were in place, and boy, did our noses and ears get red, but we loved every moment of it. There were a few well-wrapped people in stuffy sedans who may have stared but that just made us enjoy it more.

Logic-minded types may balk at paying more for a Sprite than an equivalently hopped-up sedan such as a Minor or 850 which carries twice as many people and does other such useful tasks, but what use is logic against the appeal of the open air and the open road? Perhaps you do have to be nuts to want to drive around with the top down and catch pneumonia, but if it happens you *are* nuts that way, it's hard to see what keeps you from buying a Sprite.

LIDLESS TRUNK

Both seats fold forward to give access to the luggage space. To stiffen the integral body-frame structure and to economize, there is no external lid. Although it's hardly easy to get at, Sprite owners soon become adept

at reaching in there. They learn several valuable lessons. There is a great deal of room there, probably twice as much as you'd have if there were a proper trunk with a floor over the spare tire. You should avoid hurling sturdy suitcases in with excessive vigor, otherwise you may make an inside-out dent! For that reason and because the trunk is so irregularly shaped, soft canvas tote bags are the preferred luggage pieces, no matter how big or small. It is also an excellent idea to wipe off the spare before replacing it.

LIGHT, QUICK STEERING

One of the favorite delights of sports car owners is their car's agility, its ability to change course instantly or to swerve abruptly to avoid an unexpected obstacle. The Sprite has this in spades. Its steering is the quickest we've ever tested on our 400-foot Test Circle. At 50 mph indicated, the limit of adhesion, the one-eighth of a turn of lock required (45°) is less than many cars require at only 10 mph. In fact, it is equal to the amount of free play allowed by some states in their vehicle inspection criteria!

Nearly all driving can be done without removing your hands from a fixed position on the rim. Because the Sprite's overall dimensions are so small, the car is thus exceedingly nimble in traffic. In highway maneuvers there is no delay; you turn the wheel and the Sprite turns right now. For those accustomed to slower steering (it's only 2½ turns lock to lock for a 30-foot turning circle), the Sprite seems a little "nervous" and takes some getting used to. On icy roads and on the race track, this is especially true, as extensive swinging of the arms is just what the doctor didn't order.

Because of this quickness, if you grip the wheel too firmly, the very motions of your body as the car reacts to bumps in the road will affect the steering. If you take care to hold the rim very lightly, letting it jiggle through your hands when the bumps feed back, your Sprite will maintain a steadier course and hold the road better on bumpy bends. A gentle grip also discourages over-controlling.

CIRCLE TESTING

While the Test Circle's steady-state results indicate a very mildly understeering car, transient conditions such as entering a turn or abruptly straightening out indicate that there is very little in-built directional stability. When you toss her into a turn violently, the Sprite's tail end may snap around to embarrass you. While the quick steering is an asset beyond doubt in giving you the means to recover from the resultant sideslip, we are inclined to believe that its too-quickness is what tempts or leads you to over-control in the first place. The optional anti-roll bar (\$34—a bit steep) will have the dynamic effect of slowing the steering and increasing the understeer. It would also reduce the tendency to lift the inside rear wheel when accelerating out of a tight turn.

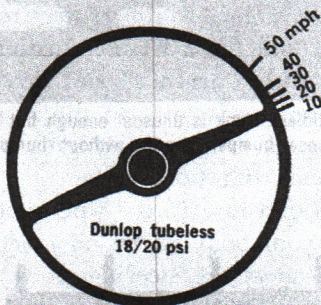
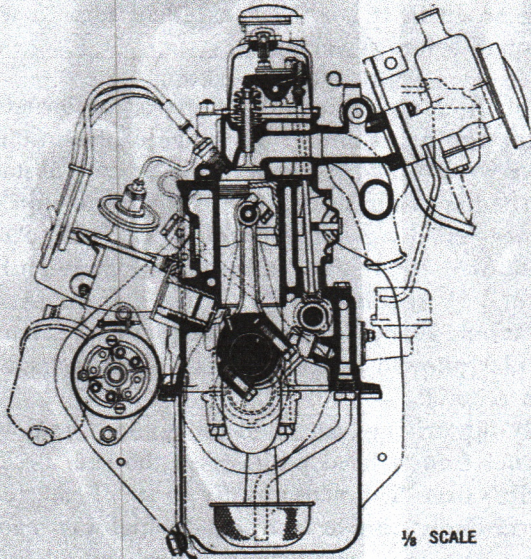
While we hesitate to say that the Sprite's steering is too quick, we certainly wouldn't want to drive on
(Text continued on page 81; data overleaf)

Road Research Report: AUSTIN-HEALEY SPRITE

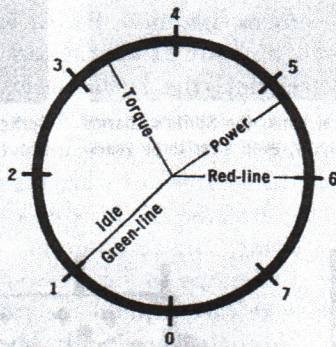
Importer:

Hambro Automotive Corp.
27 West 57th Street
New York 19, N. Y.
580
18,000
\$5,000,000

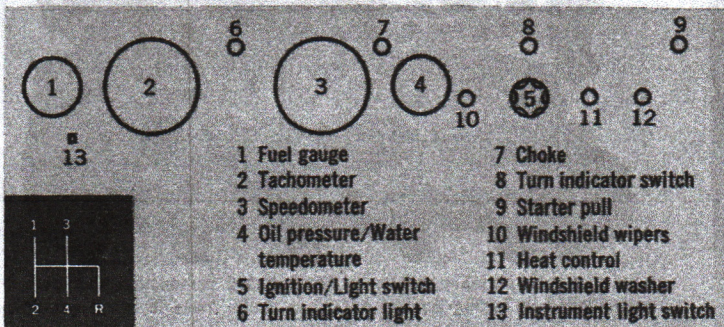
Number of U. S. dealers:
Planned annual production:
Dollar value of spare parts in U. S.:



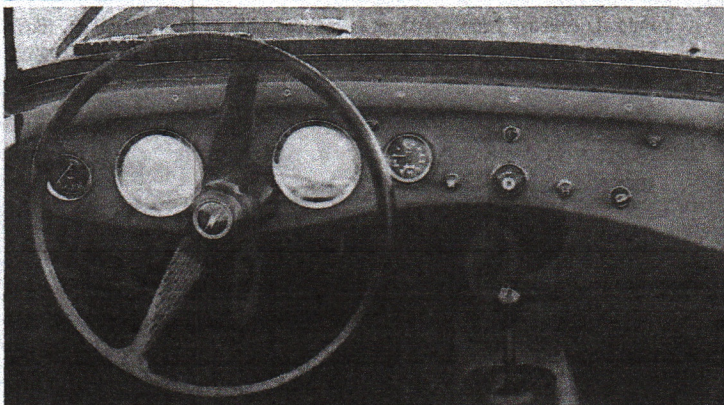
Steering Behavior
Wheel position to maintain 400-foot circle at speeds indicated.



Engine Flexibility
RPM in thousands



- 1 Fuel gauge
- 2 Tachometer
- 3 Speedometer
- 4 Oil pressure/Water temperature
- 5 Ignition/Light switch
- 6 Turn indicator light
- 7 Choke
- 8 Turn indicator switch
- 9 Starter pull
- 10 Windshield wipers
- 11 Heat control
- 12 Windshield washer
- 13 Instrument light switch



PRICES:

Basic Price	\$1795
Options fitted on all cars imported:	
Heater/defroster	50
Tachometer	30
Windshield washer	15
Total	1890
Other options fitted on test car:	
Tonneau cover	35
White sidewall tires	30
Dealer preparation	35
Total price of car, as tested	\$1955 at New York
Factory option:	
Stage V engine, prepared by Donald Healey, ordered as original equipment	380
Other options, available only through local dealers:	
Hardtop	\$ 225
Quick-action filler cap	15
Lockable filler cap	7
Wire wheel and disc brake conversion kit	603
8-in front brake drum kit	56
Anti-roll bar	34
Stiff shock valves (set)	17
Stiff front springs	17
Stiff rear springs	36
Light steel fl wheel	142
Close-ratio gearbox (see drive train specs below)	290
Parts to convert normal gearbox	66
5.38 ring and pinion set	27
5.38 complete assembly	75
4.55 ring and pinion set	20
4.55 complete assembly	75
3.73 ring and pinion set	23
3.73 complete assembly	80
9.3 piston set (std., .010, .030)	49
Set of piston rings for above	8
Camshaft (.315-in lift)	32
Set of inner valve springs & collars	11
Distributor	37
Front manifold	11
Exhaust pipe	7
Muffler	8
Clips for above	2
Dual exhaust system	21
Thermostat blanking sleeve	1
Large capacity oil pan	40
Oil cooler kit	110
Pair of 1 1/4-in S U carbs	77
Manifold for above	30
Polished cylinder head assembly	158

OPERATING SCHEDULE:

Fuel recommended	Regular
Mileage	32-35 mpg
Range on 7.2-gallon tank	230-250 miles
Oils recommended	SAE 30 or 20W/30; below freezing, 20W; below 10° F., 10W. (SAE 10W/30 is also approved.)
Crankcase capacity	3.6 quarts (4.2 with filter change)
Change at intervals of	3000 miles (filter at 6000 miles)
Number of grease fittings	12
Lubrication interval	1000 miles
Most frequent maintenance, interval recommended:	Refill transmission, rear axle; oil water pump; grease front hubs—6000 miles.

ENGINE: (BMC "A" series)

Displacement	57.9 cu in, 948 cc
Dimensions	Four cyl, 2.48 in bore, 3.00 in stroke
Valve gear	pushrod operated, vertical overhead valves, stamped rockers
Compression ratio	8.3 to one
Power (SAE)	48 bhp @ 5200 rpm
Torque	52 lb-ft @ 3300 rpm
Usable range of engine speeds	1000-6000 rpm
Corrected piston speed @ 5200 rpm	2360 fpm

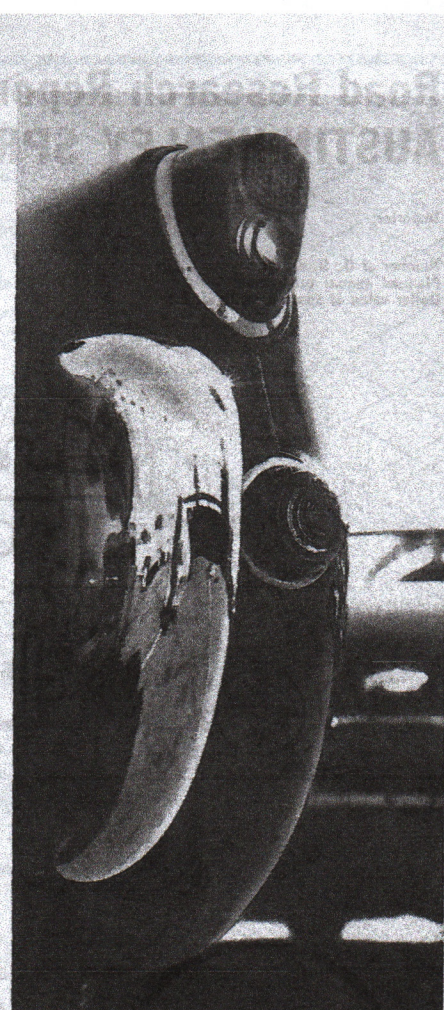
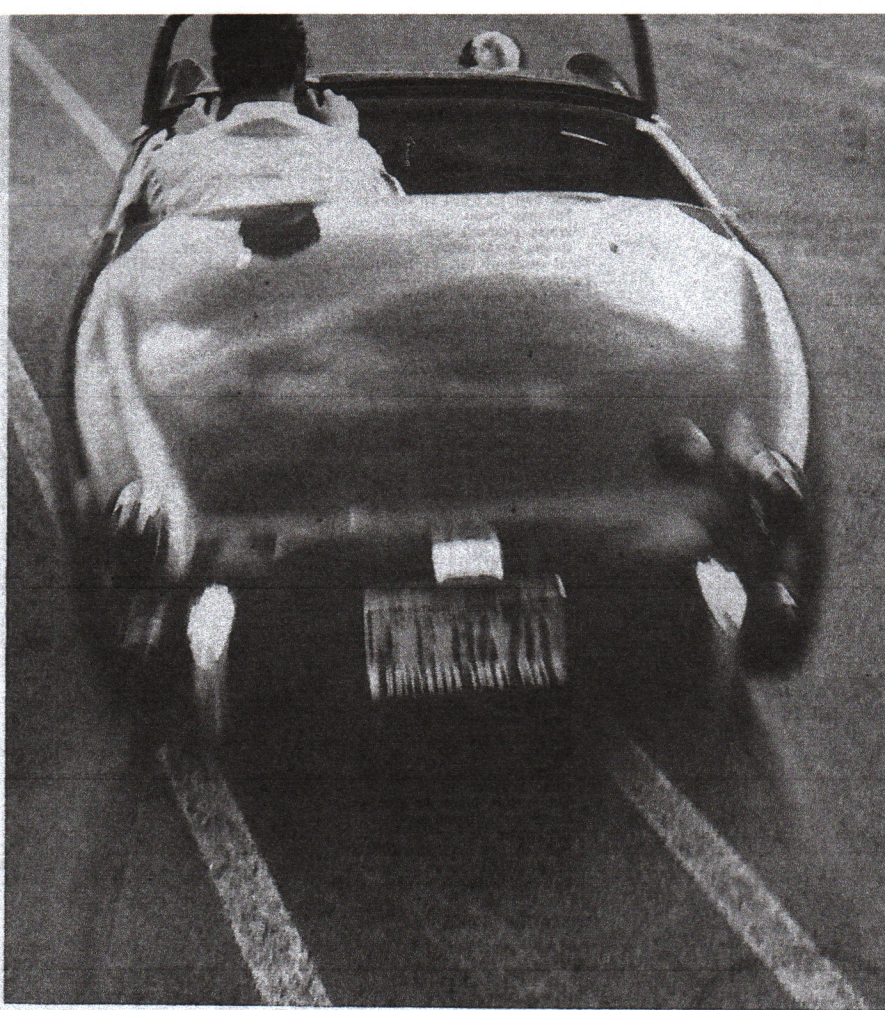
CHASSIS:

Wheelbase	80.0 in
Tread	F 45.8, R 44.8 in
Length	113.3 in
Ground clearance	5.0 in
Suspension: F, ind., coil spring, wishbone and control arm; R, rigid axle, trailing quarter-elliptic leaf springs and control arm.	
Turns, lock to lock	2 1/2
Turning circle diameter between curbs	30 ft
Tire and rim size	5.20 x 13, 15 x 4J
Pressures recommended	F 18, R 20 psi
Brakes: type, swept area	7 in drums, 110 sq in
Curb weight (full tank)	1480 lbs
Percentage on driving wheels	47%

DRIVE TRAIN: (BMC "A" series)

Gear	Synchro?	Ratio	Step	Overall	Mph per 1000 rpm
Rev	No	4.66	—	19.69	—3.3
1st	No	3.63	53%	15.32	4.3
2nd	Yes	2.37	68%	10.02	6.5
3rd	Yes	1.41	41%	5.96	10.9
4th	Yes	1.00	—	4.22	15.4
Optional close-ratio gearbox:					
Rev	No	4.11	—	17.39	—3.8
1st	No	3.20	67%	13.51	4.8
2nd	Yes	1.92	41%	8.09	8.1
3rd	Yes	1.36	36%	5.72	11.4
4th	Yes	1.00	—	4.22	15.4

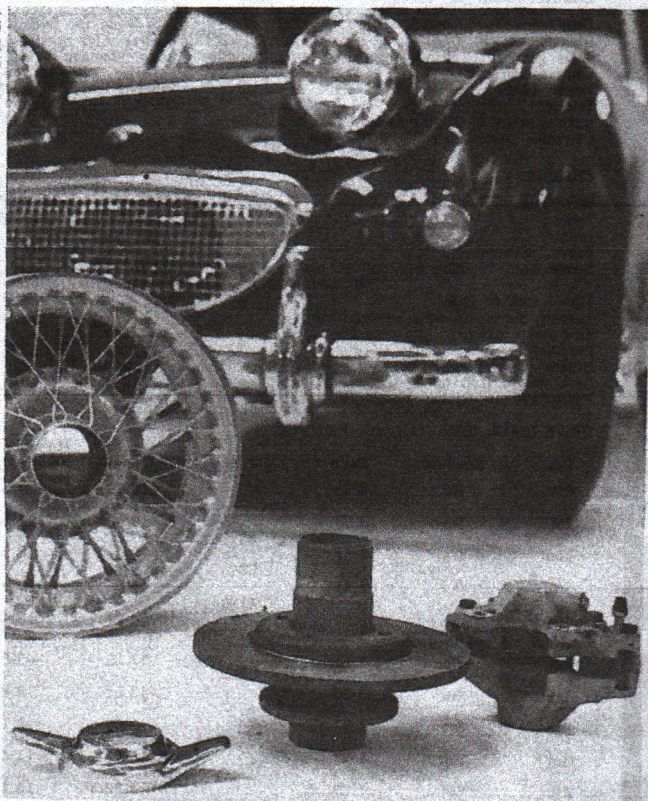
Final Drive Ratios: 4.22 to one standard; 3.73, 4.55 and 5.38 to one optional.



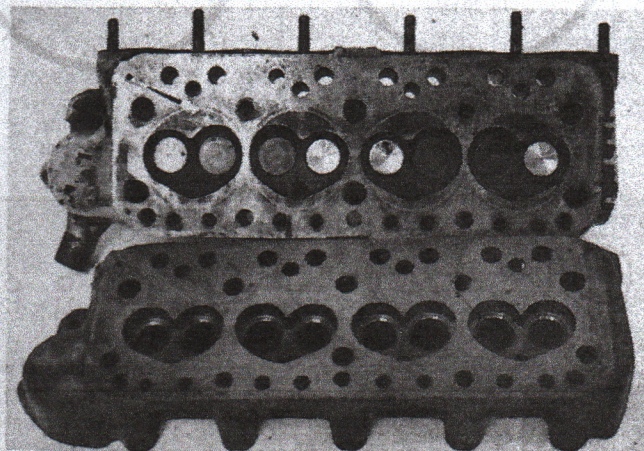
For a lot of sportiness with the minimum of fuss and bother at your local bank, the Sprite's charms are proving irresistible to more and more Americans. Demand exceeds supply, even after three years.

Sprite's lidless trunk is unusual enough but how about these bumper guards without bumpers?

PHOTOGRAPHY: CHITTENDEN

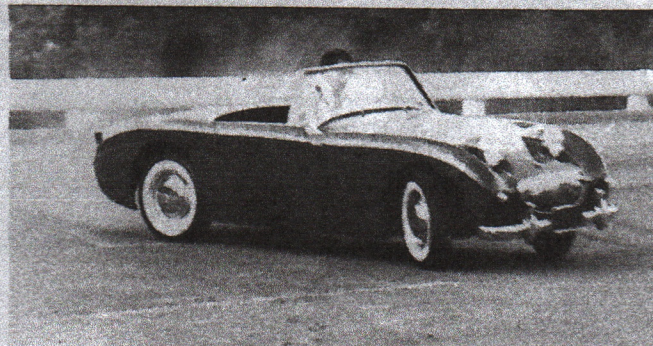


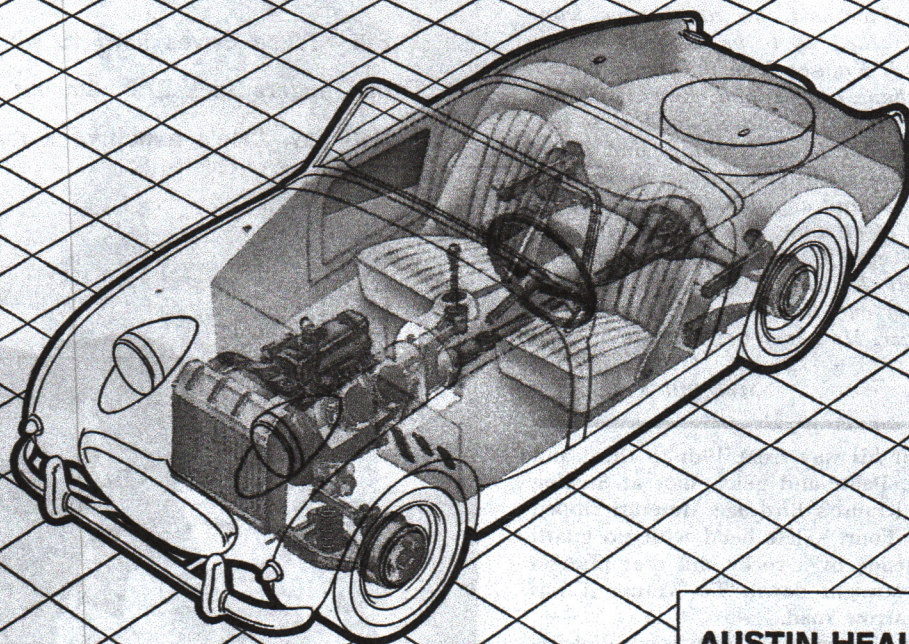
Out of a vast array of options, official and not, there's nothing quite like a \$603 wire wheel/disc brake kit to make Sprites sit up and grin.



Handwork with portable grinder to heart-shaped combustion chambers is unmentioned in Tuning Booklet but it's a useful move for good gas flow.

Hold it, cowboy! Final oversteer is induced only by overcontrolling. Basic Sprite handling is good enough to permit increases in horsepower.



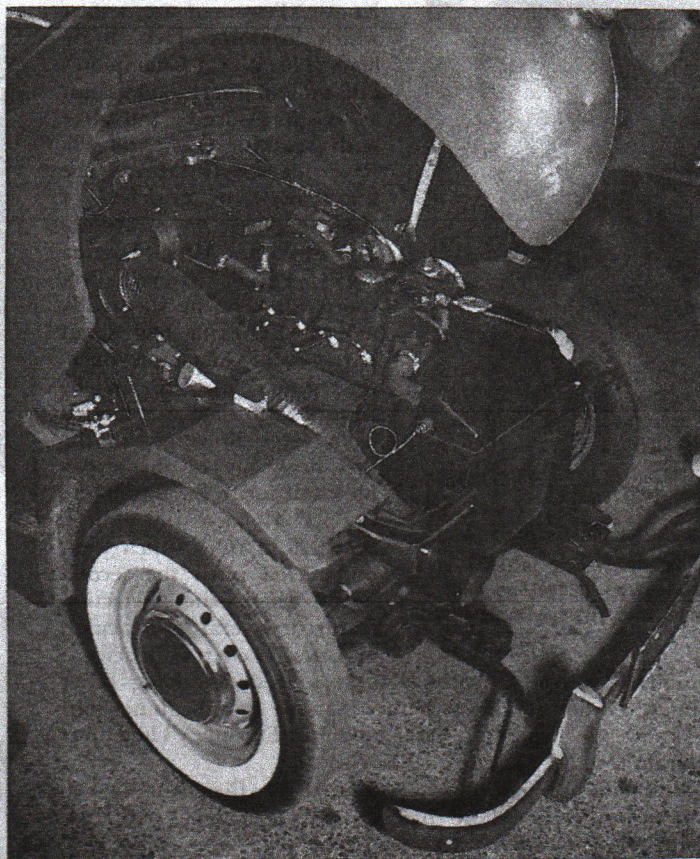
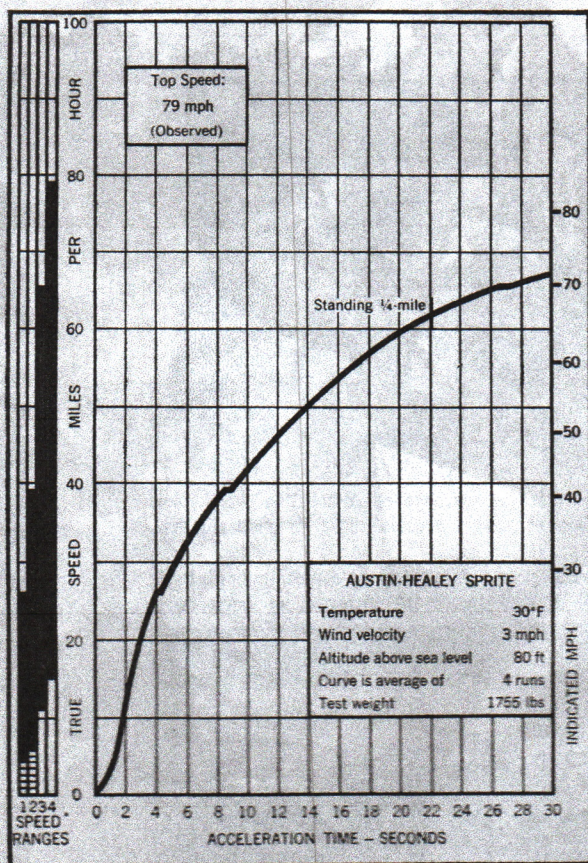


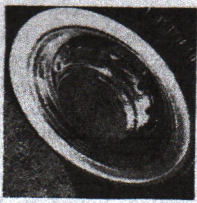
AUSTIN-HEALEY SPRITE

SCALE: EACH SQUARE ON DRAWING
REPRESENTS ONE SQUARE FOOT

CAR and DRIVER

T. E. FORNANDER





ROAD RESEARCH REPORT: AUSTIN-HEALEY SPRITE

Continued
from page 60

public roads with steering any quicker. The least movement of your hands changes the Sprite's course, which becomes noticeable if you throw a quick shift in the middle of a fast bend. Yet the steering forces are always very moderate indeed, a factor perhaps in the Sprite's extensive popularity with women.

NIGHT DRIVING

The Sprite's headlights are at full legal height, as any stylist will quickly remind you. American sealed-beam units are used on cars shipped over here and they are easily adequate to the Sprite's performance. The high beam indicator is at the bottom of the speedo dial, and doesn't annoy you at night, but the turn indicator light is much too bright and gets you right in the eyes. Why a smaller bulb isn't used here is beyond our comprehension. We found that a small piece of masking tape placed over it at dusk when we first turned on the lights was an eye-saving trick that paid dividends in destroying dazzle later on.

ENGINE PERFORMANCE

Our test was performed in winterlike weather so we had excellent opportunity to check the Sprite's cold-start characteristics. Even with the temperature down to 20° F, it would start promptly and run steadily provided you pulled the choke knob all the way out. However, even with a piece of cardboard covering three-fourths of the radiator, continued use of the choke was required for at least the first mile and the water temperature needle wouldn't move for one or two more.

The importers recommend premium gas so we used that for our acceleration runs but for normal driving we found that regular gave no trouble at all. No adjustments were made to the carburetors or ignition during the test.

Though the idle and "green-line" speeds are a bit on the high side at 1000 rpm for both, the Sprite engine doesn't act up or behave fussily in any way. A pint of oil was used, but only after the always tiresome (for the engine) acceleration runs. In fact, other than for photography, the only reason the hood was lifted was to show someone how it was done. Our only concern was with the oil pressure gauge which consistently read about 45 psi instead of the specified "60 or higher."

Like the brakes, the clutch is operated hydraulically. The clutch itself is tiny, only 6¼ inches in diameter, so the forces are quite low. Perhaps there was some stickiness in our clutch cylinder; we could certainly feel that some force was needed, yet the mechanism seemed devoid of "feel."

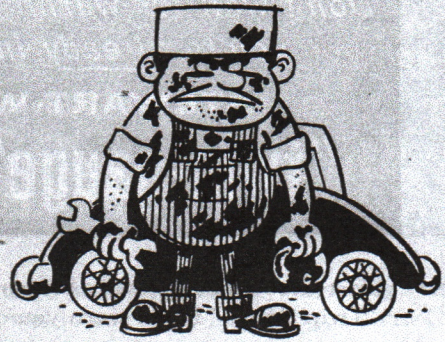
ACCESS TO THE ENGINE

What the Sprite misses in the way of a trunk lid it more than makes up for with engine access. The entire front body structure opens up, exposing both engine and front suspension. To keep everything else reasonably clean there are two very spartan-looking sub-fenders. The hood is unlatched by reaching behind the license plate on the front bumper below the grille and twisting the tee-handle with the left hand while releasing a safety catch with the right. Then you take a firm grip (and a deep breath) and lift the heavy structure up until the telescoping struts engage their ratchets.

Everything under the hood is then exposed for checking or adjusting, but there are two drawbacks. If it's been raining, then there is a good chance that, as you bend awkwardly under the nose (it's such a small car, even when the nose is up, it's low), you'll get water dripped on you by the upraised body. The other is that tall people will find it awkward to bend that low. Since the fender sides come up too, your access is limited mainly to the front where the under edge of the nose hangs low enough to make it awkward to avoid touching it with your back.

The dipstick is back between plugs #2 and #3 and lies quite close to the warmth of the cylinder head, but not, fortunately, anywhere near the exhaust manifold. It's

(Continued on page 82)



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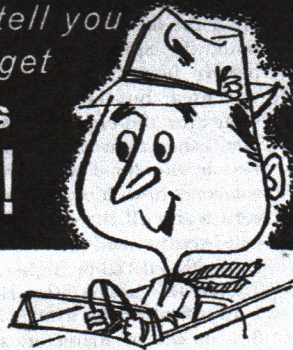
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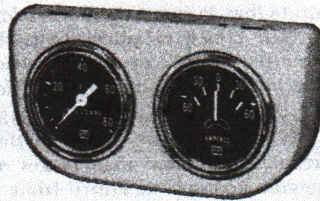
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Dept. AJ-41, 1840 Diversey Parkway, Chicago 14, Ill.

(Continued from page 81)
hard to see the hole in the block to replace it because you stand so far away.

The "electrics" and the suspension's grease fittings are unusually easy to reach. In the case of the latter, the most important nine of the 12 total fittings on the car can be lubricated by the owner at home without aid of a hoist. It's better though to lube suspension bushes with the car's weight off its wheels so the grease can flow where the load is greatest, so use of the car's jack is recommended if money-saving greasing-at-home appeals to you.

TRANSMISSION

The ubiquitous BMC A-series gearbox (cars using it range from Lotus to Austin A40) has four forward speeds, the upper three being synchronized. The gears are indifferently spaced as second gear could usefully be moved much closer to third without getting too far from first. The shift is very stiff when it's new, but by the time you're ready to trade the car in for a new one it's as smooth as silk and a real delight to use. The synchromeshes are easily beaten, especially when the near-new shifting mechanism is so tight that smooth, delicate shifts are nearly impossible.

While it is true that eventually the mechanism does wear in, it would be fine if the manufacturing process could be sharpened up so that gear-shifting could be a pleasure right from the very day you drive away. If we were trading in an old Sprite for a new one, we'd have the service department swap transmissions for us so we wouldn't have to break in another.

With standard 4.22 to one gears in the rear axle, the Sprite is almost perfectly geared for top speed. We achieved 79 mph with the soft top and side curtains in place; with the hardtop's smoothness, 80 itself should be possible. If so, it would be at exactly 5200 rpm, the speed of peak power.

If tip-top speed isn't your main concern, there are alternative ratios available. The 3.73 to one gearset would cut the acceleration, increase the amount of gear-shifting necessary and reduce the engine revs and noise while cruising. If a *vast* increase in power were made, then and only then would this big change in gearing actually result in the theoretically higher top speed one expects with a "longer" gear.

For better acceleration, there are two "shorter" gearsets available, 4.55 and 5.38. The former would be fun around town, yet still usable on the open road, being only 8% shorter than the stock 4.22 set. The latter is strictly for racing on short, twisty circuits or scaring the opposition in gymkhanas. Its red line (6000 rpm) would come up at only 72½ mph, and discretion would be in order to avoid blowing up your engine by literally over-revving in top gear.

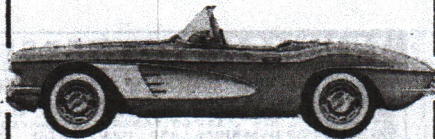
On the other hand, over-revving will not be a problem with the 4.55s, as 80 mph, if you could achieve it, would equal 5600 rpm, past the power peak but short of the red-line. Of course, a long down-hill grade might tempt you . . .

CONSTRUCTION

The outstanding technical feature of the Sprite is the use of integral body-frame design with an open two-seater body. Generally this technique is used on coupes and sedans where the roof and windshield posts play an important stress-carrying part in

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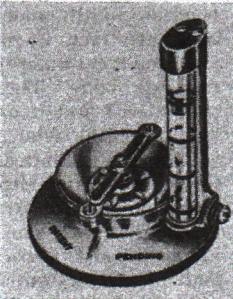
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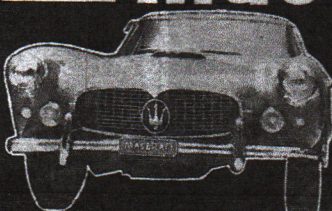
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making up a stiff, box-like structure with which to replace the separate frame. As usual with such designs, the welded assembly of sheet metal stampings looks in many places just like a series of box-section members.

The Sprite's suspension mounts are joined to one another by two U-shaped arrays; that is, the front cross-member caps a small U which passes each side of the engine and gearbox (also carrying them) and runs into a median cross member below the driver's knees. This cross-member extends the full width of the car, serving as a suitable jacking point, complete with sockets. Near its extremities, under the door sill, a pair of box-sections run aft, sprouting upward just as they end to make tall mounts for the trailing quarter-elliptic springs and, above, locating arms for the rear axle.

A part of each box-section is, of course, the floor pan which extends fully across the car, enclosing the propeller shaft. (The front U-joint is greased from inside the cockpit through an awkwardly small hole in the tunnel.) The rest of the sub-frame, consisting of some 50 stampings, is welded together to make a single unit; this is then shipped to another factory where all body panels are welded or hinged in place.

So much for the sheet-metal side of things. The machinery of the Sprite makes extensive use of components that were already in production when the Sprite was first built (March, 1958). The engine is used in single-carb style in the Morris Minor and Austin A40 and, in very modified form, in the 850 mini-twins. The

transmission and rear axle gears are the same as in the first two cars. The front suspension was taken straight off the Austin A35, since succeeded by the A40, and the rack and pinion steering is from the Morris Minor. The only mechanical "exclusive" seems to be the use of trailing arms and quarter-elliptic springs, which are ideal for integral construction since the box-section suspension reinforcements to the floor can be so much shorter. Only body panels are required aft of the axle and they are self-supporting. A drawback evidently is the difficulty in obtaining ample wheel travel for we found the Sprite would bottom out readily at the rear.

An impressive fact about this design is that after three years of production the only serious modification has been in the method of attaching the top to the windshield frame, and that was made shortly after introduction.

OWNER'S TIPS

In checking with friends and relations who own and drive Sprites we came up with a surprisingly short list of tips, which again testifies to the basic soundness of the original layout.

One is to apply glycerin, graphite or, if they aren't available, Vaseline to the felt slides of the sliding pane sidescreens. They will then work smoothly and more easily.

As to getting under the hood, one earnest recommendation is always to set the auxiliary hood stay (the one which folds across the front of the radiator) rather than trusting wholeheartedly to the telescopic
(Continued on page 84)

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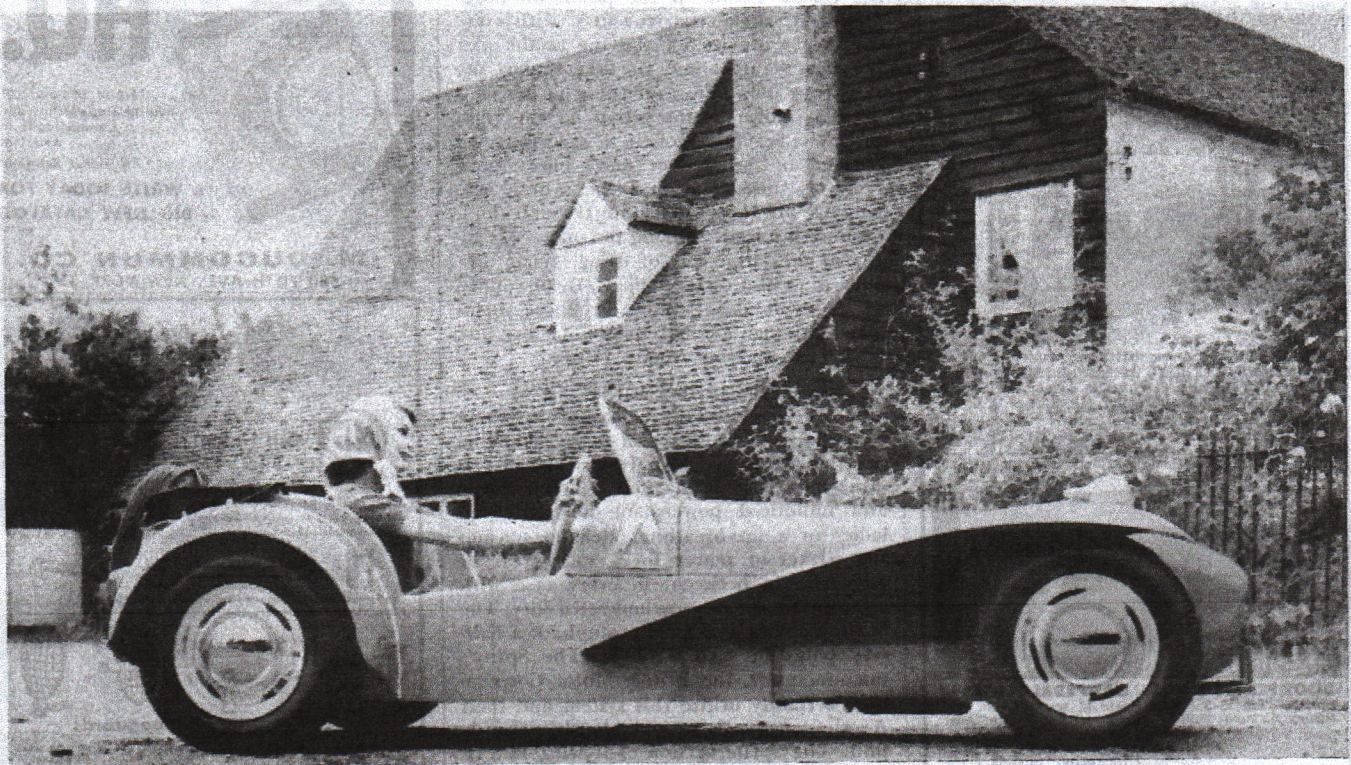
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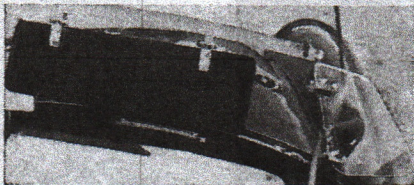
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(Continued from page 83)

self-latching props on each side. If that heavy hood drops on you accidentally, you'll be stuck for the day.

While you're under there checking the oil, it might be a good idea to check the tightness of the two bolts mounting the oil filter to the block.

If you have trouble with overheating on hot summer days, you'll find that moving your front license plate down or to one side will allow lots more air to the radiator.

In the wintertime when you need to use the choke for so long, you can out-fox its overly strong return spring by putting a nickel (5¢) edgewise between the knob and the dash. If you're the type that has a "church-key" on your keychain, it has just the right width too. (But you need a long keychain.)

About the stiff gear change, the universal advice is this: the more you use it, the faster it'll break in. But be careful with your brute strength, as too violent an effort will overload and "beat" the synchromesh cones.

Finally, there is the matter of clutch adjustment. There should always be 5/32-inch free play at the pedal itself. The normal adjustment is at the pedal end of the pushrod to the master cylinder. If you have used up all the adjustment there, lengthen the fixed-length pushrod to the slave cylinder by welding on a piece of screw stock, using trial and error to get the right length by cutting or grinding off some of the extension.

OPTIONS GALORE

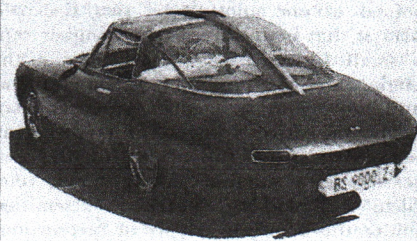
Most any sort of person is likely to buy a Sprite; what makes the Sprite so charming is that it can be "arranged" to suit the individual, personal desires of any of them. You may keep it virtually stock as the center couple in the photo on pages 58-59 have done; you may fit it with every conceivable device for rallying as the pair on the left are about to, or you may use it as your foundation for going racing on a limited budget as the group on the right intend. The factory offers a wide range of options and what they don't offer, somebody else does. Marion Weber's firm, who lent us all those items in the left foreground, is a leader among the many specialists in the latter sort of thing. What they offer is well advertised (in C/D, of course) so we will dwell only on those items which, though offered by the factory, are harder to find out about.

STURDY ENGINE

If auto factories have learned anything from hot-rodders, it's that a given engine may be rearranged to have any one of several characters. It may be a sweet, docile and unnoticed powerplant for little old ladies or a fire-breathing, defiance-screaming packet of power for a racing car or anywhere in between; in every case with appropriate smoothness and reliability. The Sprite's engine is a good example of a halfway point in such a range. The Sprite's manufacturers, the British Motor Corporation, certainly utilize this system and their A-series engine is a marvelously versatile unit. The Sprite version of it with 48 SAE bhp or 43 net is only a moderate boost from the basic Morris version's 37 (net).

At the other end of the scale is the Formula Junior version, such as powered

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See Details on Page 26 Feb. Issue—Sports Cars III.

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Charlie Kolb's championship Elva last year. It is rated at over 70 bhp SAE.

Few Sprite owners may want that specialized an engine under their hood, but if they're interested in more than stock output, the best dollar's worth of option they can get is part number AKD1021A. That's the Sprite Special Tuning booklet which lists all the options available and describes how to group the engine ones for varying increases of power. They list five stages; in terms of net horsepower (i.e., with accessories) they increase the peak output by 2, 4, 7, 9 and 11 or 12 bhp respectively, with the speed going up to about 5800 rpm.

A .315-inch lift competition camshaft jumps the overlap from a mild 15° to a still hardly hair-raising 37°. If you want every last revolution before valve bounce (and who doesn't?), a set of inner valve springs raises the red-line to 7000 rpm.

While the engine parts may seem rather limited, the booklet describes in great detail how to achieve the five stages of performance. Of course it's not merely a matter of installing parts; considerable careful hand reworking must be done to the cylinder head.

PERFORMANCE OPTIONS

Don't get carried away by the Tuning Booklet's list of 86 items because you cannot get each and every one of them here in the States. At this writing, Hambro does carry 25 of the 86, seven of them under different part numbers. Better yet, they also list 15 items that *aren't* in the booklet. Everything they have is shown on page 62, though we have condensed the array somewhat.

As we go to press, we have been informed that a simpler disc brake conversion is being introduced by the Donald Healey Motor Co., Ltd. of Warwick, England. For \$126 plus shipping and duty, you get two Lockheed discs and calipers for the front wheels. Order direct, not through channels.

The close-ratio gearbox may be bought over the counter or you can rebuild your own by buying only the parts you need. Either way, it's an option we recommend. To give a comparison, the Drive Train specs include the figures for the close-ratio box below the standard one. If you're serious about road-racing, nothing will improve your "skill" as suddenly and impressively, unless it's the stiffening group of suspension parts (anti-roll bar, stiff springs and stiff valves for your shocks). It was used on the now-famous Sebring Sprites (along with a few other well-chosen items — namely everything on Hambro's list) and it turns a complete fun car into a serious piece of racing iron. Flat cornering, we mean *flat*, an engagingly snarling engine up front with a sharp, crackling exhaust just behind you, and if you top it off with a handsome wood-rimmed steering wheel, well, you might as well be Fangio. Such a car is a long way indeed from the docile car you buy off the showroom floor, but that's a distance the Sprite can easily reach. As our lead photo indicates, it's only one of the directions you can choose, for the Sprite is a truly sound foundation for economically building your very own, thoroughly personalized sports car. If you prefer a bread-and-butter Sprite to one with jam, you'll still find it tasty. —C/D

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