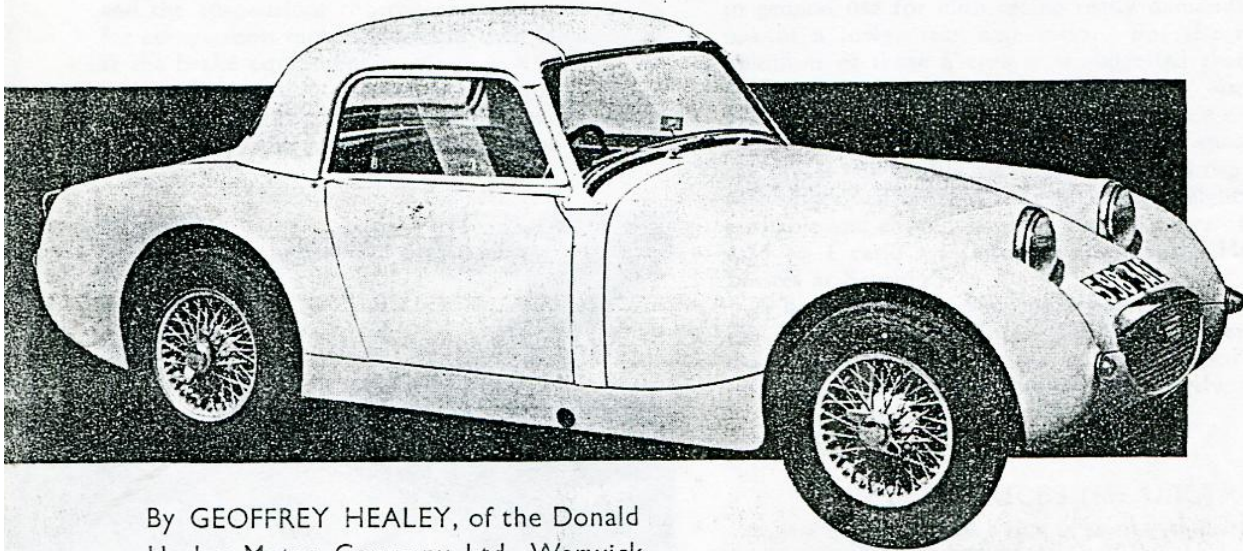


# Super Tuning Your Sprite



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**E**NGINE tuning for the Austin Healey Sprite has been well covered by the Austin Booklet No. AKD. 1021. This covers five different stages of tuning. In addition to these, however, further modifications for the exhaust system, brakes and suspension can be supplied or carried out by the Donald Healey Motor Company.

(Although the terms of the B.M.C. Warranty of a new Austin Healey Sprite expressly exclude any super tuning, this does not mean, of course, that tuning for extra performance will necessarily make the engine unreliable.)

Stages 1 and 2 tuning relate to the cylinder head, ports, compression ratio and ignition, and should raise the power output from 42.5 to 47 b.h.p. at 5,500 r.p.m.

Tuning as per stages 3 and 4, using the 2A.948 camshaft, 2A.946 pistons, and with the ports modified and polished, gives extremely good results with reliability. Using parts such as mentioned much depends on the manner in which the work is carried out. To obtain the very best results from

any engine, attention should be paid to the balance of the working parts. The balance of any normal production engine can be improved, as can the finish of such components as the connecting rods. Balancing reduces vibration and losses due to out-of-balance loads.

Of recent years more attention has been paid to tuning the exhaust system. Stage 5 tuning comprises a special front manifold, exhaust pipe and silencer. The Healey system, Q.2347, consists of a dual system, fore part fed by cylinders 1 and 4 and the other by cylinders 2 and 3. It is similar in principle to the well-known '100-S' system.

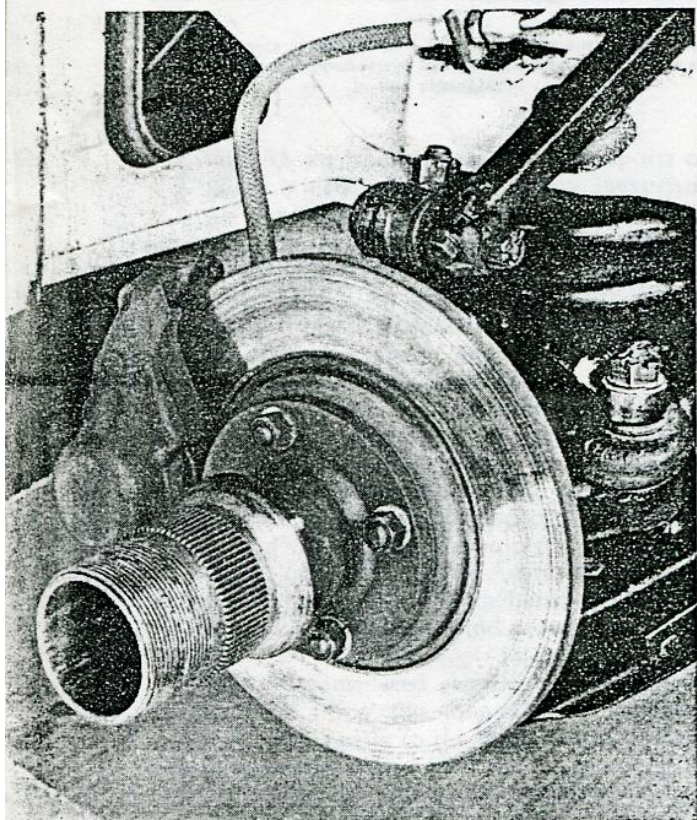
Having obtained extra power from the engine, the owner must then look in other directions for improvements. It is possible to stiffen up the suspension, giving a firmer ride, and to make the cornering power and road holding even better. To stiffen the suspension it is necessary to fit stiffer front springs, W.2334, and the stronger damper valves, Q.2325 to the front, and Q.2333 to the rear suspension. In addition, the front anti-roll



bar, Q.2315, should be fitted. The damper valves increase the bump rebound and the leak settings of dampers. The anti-roll bar increases the roll stiffness of the front suspension.

Having improved the performance of the engine and the suspension, the owner wishing to go in for competition motoring would then take a look at the brake equipment.

A special set-up consisting of Girling disc brakes at the front and drum brakes at the rear has been developed by the Donald Healey Motor Co. Ltd.



The Girling disc brake fitted to the front of an Austin Healey Sprite.

in conjunction with Messrs. Girling. The brakes consist of 8½ in. diameter front discs with 8 in. diameter rear drum brakes. This arrangement gives a very good balance with very high fade resistance—in fact excellent results at all speeds whilst obtaining a most effective handbrake. These brakes will stand up to the most arduous conditions. Allied with the brake equipment is the wire wheel. The wire wheel and brake kit, Q.2337, consists of all the braking parts, together with the centre lock wire wheels. These have 13 in. rims and are specially spoked for extra strength. They were

first seen publicly when used on the Austin-Healey Sprites at Sebring during the 12-Hour International Sports Car Race in which the cars finished 1st, 2nd and 3rd in Class 4 G.T.

Competition motoring and the type of circuit in general use for club racing really demands the use of a lower rear axle ratio. For the more common of these events it is suggested that the 4.55 to 1 differential assembly, part number ATA.7093, should be used. Whilst the use of this ratio may slightly reduce the maximum speed of the car, it will enable maximum speed on top gear to be obtained more readily on what straights are available and should improve the lap times. (The 4.55 to 1 ratio was used in the Austin Healey Sprites at Sebring.)

A booklet is at the moment being prepared by the Donald Healey Motor Co. which covers all the above mentioned extras and it is hoped that this will be available upon request shortly.

#### RETAIL PRICES (for U.K.)

Tuning Condition Stage 1 to 4 as per the Austin-Healey Sprite Special Tuning Booklet AKD. 1021:

		£	s.	d.
2A.946	Pistons 9.3:1 compression ratio ..	9	10	0
2A.948	Camshaft .. .. .	6	0	0
2A.951	Distributor .. .. .	5	10	0
2A.950	Valve springs .. .. .	15	4	
		21	15	4
	Fitting charge	24	5	0
	Modify and polish cylinder head, only .. .. .	10	0	0
Q.2347	Dual exhaust system .. .. .	11	0	0
	Fitting charge	2	0	0
Q.2431	Wire wheel and disc brake set ..	89	10	0
	Fitting charge	15	0	0
	Alternative wire wheel conversion kit using existing brakes .. ..	58	3	0
	Fitting charge	5	5	0
ATA.7093	Differential assembly 4.555:1 ..	23	0	0
	Fitting charge	3	15	0
Q.2325	Stronger front damper valves (pair)	1	10	0
Q.2333	Stronger rear damper valves ..	1	10	0
	Fitting charge	1	10	0
	Quick action filler cap .. .. .	2	4	0
	Chromium plated tail pipe .. ..	15	0	
	Ammeter .. .. .	16	0	
	Fitting charge	1	0	0

Other special B.M.C. parts as listed in Booklet AKD. 1021 include the following:\*

	£	s.	d.
Thermostat outlet blanking sleeve (Part No. 119176) .. .. .	4	0	0
Differential assemblies: 4.555:1 (ATA.7093); 5.375:1 (ATA.7073) .. .. .	23	0	0
3.727:1 (ATA.7239); 3.90:1 (ATA.7353) .. .. .	25	0	0
Speedometer heads to suit above ratios .. .. .	5	15	0
Special front manifold (AHA.5448) .. .. .	1	15	0
Exhaust pipe (AHA.5449) .. .. .	1	10	0
Silencer assembly (ARA.98) .. .. .	1	7	6

\*Provisional prices at time of going to press, given for guidance only.