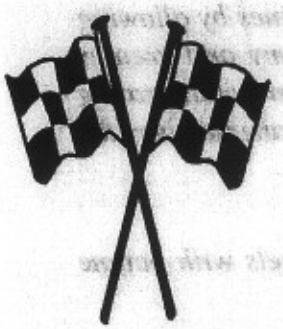
Call Gillspeed For All Your Competition Requirements.

How To Avoid Melting Your Engine.



If you are just starting out in motor sport, the following information will help you make the right decisions and get the best performance from your car.

Motor sport is great fun if your car is reliable. . .

Most sportscars will run around town all day without too many problems. However, once you start driving flat out around a racetrack any faults will become very obvious very quickly. Engine overheating is a common problem. Overheating at racing speeds is usually caused by a combination of incorrect fuel mixtures and inappropriate ignition timing. It can also be caused by an inadequate cooling system. If your car overheats you can have your radiator and thermostat tested. If the radiator is sub-standard you could consider installing a Gillspeed 'super-core' radiator. These have an extra row of water tubes and extra cooling fins. If overheating persists, then the next two things to check are the carburettors and the distributor.

DISTRIBUTORS: Old worn out distributor advance mechanisms tend to allow the distributor to 'over-advance' the ignition at low RPM and cause pre-ignition. You could 'retard' the static ignition timing to overcome the pre-ignition on acceleration, however this would also retard the engine at high PRM and so lead to overheating at racing speeds. The simple and correct 'fix' is to have the distributor advance curve checked and revised to suit your driving requirements.

SU CARBURETTORS: SU carburettor needles and jets tend to rub together. This causes wear which allows excessive fuel into the engine.. The engine tends to run roughly and blow black smoke out the exhaust at idle. You can adjust the SU mixture nut to achieve a smooth idle, however because of the design of the SU carburettor, this will make the carburettors run lean (too little fuel) throughout the entire RPM range. Since the last thing you need is a lean mixture at racing speeds, you need to consider fitting new fuel metering needles and jets or perhaps even completely reconditioning the carburettors.....

Luckily, most ignition and fuel problems are easily solved. Gillspeed can provide all the parts and information you need. . . . . **However, since 1994 there has arisen another problem which you need to consider if you plan to drive your sportscar hard and fast !**

All MG Midgets, Sprites and MGB's were designed to run on **97 octane** Super (or higher) for normal road use, let alone flat out competition.

On the 1st January 1994, the Australian Government enacted legislation that required oil companies to reduce the lead content of Super petrol. As a result, **all Super petrol is now 96 octane.**

If you refer to the first page of the original BMC Sprite / Midget workshop manual headed **"Getting The Best From Your Car"** you will find it is devoted to the topic of minimum acceptable octane ratings and ignition settings for Sprite and Midget engines. (This information also applies to MGA and MGB engines.) The manufacturer's message written **25 years ago** is quite blunt. It is reprinted below . . . . . .

Compression ratios 8.9:1 and 9:1

". . . . .High octane fuels have been produced to improve the efficiency of engines by allowing them to operate on high compression ratios, resulting in better fuel economy and greater power. Owing to the high compression ratios of these engines, fuels with an octane rating below 98 are **not** *suitable. Should it be necessary to use a fuel with a lower octane number, the car must be used very carefully until the correct fuel can be obtained. . . . ."*

Compression ratios 8.8:1

"Fuels with an octane rating below 94 are not suitable. Premium grade fuels with octane ratings of 97 to 99 must be used when optimum performance is required."

Since all high compression Sprite, Midget and MGB engines were sold with compression ratios between 8.8:1 and 9:1, they should be all be running on 97 to 100 octane fuel. However, most owners are running current 96 octane Super petrol and as a result are experiencing increasing pre-ignition problems.

If you plan to raise your compression ratio to say 10:1 or 12:1 for competition, then you must consider running on Avgas or racing fuel at all times. If you race your Sprite, Midget or MGB on current 96 octane Super petrol you risk a catastrophic engine failure!

Some owners report that fuel additives seem to reduce their pre-ignition problems. Some use additives in competition. **Gillspeed makes no recommendation other than to suggest racing fuel be used for all competition events no matter what state of tune your car is in.** Using racing fuel costs a little extra, but it is far cheaper than rebuilding a siezed engine.

If you have any questions call Gillspeed now on (03) 9568 0688.

Is Your Car A Little Jumpy Going Around Corners? If So, The Following Gillspeed Competition Parts Will Fix It.

Uprated Front Dampers.

Sprites and Midgets handle terribly when fitted with worn out dampers (Shock absorbers). You will find fitting a new set makes a world of difference. Some owners ask for really stiff dampers. They are not the way to go. They usually tear the mounting bolts out of the front cross member or tear themselves to pieces internally! It is the job of the springs, not the dampers, to absorb the bumps and keep the car on an even keel. The dampers are required to release the springs gently after they have been compressed. Without dampers, the springs would continue to bounce out of control and throw the car all over the road. If dampers were made ridiculously stiff, say stiffer than the springs for example, the springs would be unable to absorb bumps at all and the car would behave as though it had solid suspension. It would leap all over the road like an unsprung trailer. What is needed, is a fine balance between springs and dampers. Gillspeed standard 'Black' and 'Red' uprated dampers are set just right.

Competition Stabiliser Bars.

The idea of a front stabiliser bar is to transfer some extra 'weight' to the rear suspension. This reduces the tendency of the rear suspension to lose grip when cornering fast. Front stabiliser bars work as follows; during hard cornering the 'outside' front suspension compresses and applies a torque to the stabiliser bar which in turn causes the other end of the bar to lift the 'inside' suspension. In extreme cases, the inside front wheel may lift off the road leaving the total weight of the car to be distributed between the three wheels remaining in contact with the road. Since the total weight of the car remains constant, some of the 'weight' previously being carried by the inside front wheel is now being transferred to the back wheels. This extra weight gives the rear wheels more grip. Gillspeed competition front stabiliser bars come in two diameters for road and race use. They are easy to fit.

Competition Coil Springs.

Gillspeed uprated front coil springs replace your original springs and maintain the standard ride height. This avoids some of the odd handling effects caused by lowered front suspensions. You will notice your car stays flatter when cornering and yet is not noticeably stiffer over bumps. It's the best of both worlds! Coil springs are easy to fit at home by hand. No spring compressors are required.

New Rear Leaf Springs.

Rear springs on most Sprites and Midgets are now very old and tired. On ¼ elliptic models such as Mk1 Midgets and Bugeye Sprites, each upper spring leaf usually wears through the leaf below causing the spring to weaken and sag. This leaves only an inch or so of suspension travel. When the car corners, the rear suspension quickly moves this one inch and settles on the bump stops leaving no suspension travel at all. Then, when you hit a bump in the middle of a corner with no available springing, the car is literally bounced off line. Later Sprites and Midgets are fitted with full length (semi elliptic) rear springs which also sag with age and give the same handling problems. The best solution is to fit brand new springs. Rebuilding the car's fatigued old springs is seldom satisfactory as they soon go soft and sag again.

Negative Camber Trunnions.

Gillspeed negative camber trunnions replace the standard trunnion on the outside end of the front damper arm. They allow the front wheels to lean inward at the top. This counteracts the tendency of the outside front wheel and tyre to 'tuck under' during hard cornering and allows the full width of the tyre tread to sit squarely on the road. This increases tyre adhesion and cornering ability. They Negative camber trunnions are great for cars that spend a lot of time racing around corners. Because negatively cambered wheels tend to roll toward each other, you will need to reset the front wheels to have 1/16" to 1/8" 'toe-out' rather than 'toe-in'.

If you would like to discuss fitting these parts to your car at home, you are welcome to phone Bob, Derek or Sergio at Gillspeed on (03) 9568 0688.

OVERNIGHT DELIVERY ALL OVER AUSTRALIA

ALL PRICES INCLUDE SALES TAX.

GILLSPEED SPRITE & MIDGET FUN & PERFORMANCE PARTS

Summer's Almost here!

With summer fast approaching, now is the perfect time to get your Sprite or Midget ready for some roof off motoring. Luckily for you, Gillspeed now has in stock a lot of performance parts that were hard to find even when your car was new. Check them out and give Gillspeed a call.

How To Improve Ride And Handling

Sprites and Midgets have always handled well, but now with a few modern bolt on suspension components from Gillspeed you can make quite amazing improvements. We have reprinted part of Gillspeed Bulletin No10 on the back of this page. It explains how each suspension modification gets the best from your car. We suggest you replace faulty **dampers** (shock absorbers) and **rear springs** first, then fit a pair of **heavy duty front coil springs**, a standard 'factory' or competition **front stabiliser bar** and finally, if you are looking for the winning edge, a pair of **negative camber trunnions.** If you want to have some summer fun, enter club competitions or go in any Grand Prix type rallies call Gillspeed today for your parts and free technical advise.

Standard Height Competition Front Coil Springs. $155 Pair	**Original Factory Design 15mm Dia. Front Sway Bar Kits. $195**	Competition Front Sway Bar Kits. (17mm Dia) $245 (Limited Stock)	**Replacement 17mm Dia.Front Sway Bar & Rubbers. $165**	Negative Camber Trunnions. $70 Pair
Eurethane Wishbone And Shocker Bushes	Trailing Arm Bushes (Sliding Window Models) $26.50ea.	**Reco. c/o Front & Rear Dampers. 12 Mth Guarantee. Race Units Avail.**	Gillspeed "SUPER CORE" Super Cool Radiators 948, 1100, 1275	**Special Tuning Thermostat Blanking Sleeves $21.60**
Brand New Tachometer Drive Gearboxes $115	**Original Side Screen Rubbers $95 Car Set.**	Winged Bonnet Badges $32 Ea.	**Oil Cooler Kits (Includes All Hoses And Fittings) $295**	Superb Quality AMCO (USA) Soft Tops $395

Once you know which parts you need for your car, give Bob, Derek or Sergio a call on ***Ph: (03) 568 0688 or FAX: (03) 568 0688***