



MGB

after the hot-up

There's more to making a goer of the MGB than just getting extra horses from the engine. You've got to take a close look at the drive train, and then get your power on to the road . . . and keep it there.

GETTING bags of additional power from the MG-B engine is not a specially difficult trick. And if it's well done there is absolutely no reason why the power unit should not run for years without any kind of trouble.

However, getting the extra horses beyond the clutch can bring its share of difficulties. For instance, the gearbox can cause trouble because it cannot cope with the extra torque and the demands of the driver.

Rectification can be undertaken without too much of a pain in the wallet, though. In fact, if the engine and drive train are out of the chassis the sensible thing is to fix the box before it's refitted.

There are two ways of climbing over this particular Achilles heel. First, BLMC itself makes a close-ratio gear set for the B box. This incorporates a larger diameter layshaft — the point of failure in the standard box.

The close ratio box gives these ratios (the

standard ratios are in brackets): First 2.45 to 1 (3.64 to 1); second 1.62 to 1 (2.21 to 1); third 1.27 to 1 (1.37 to 1); top, one to one in both cases.

Nice and all as a close ratio gear set can be in an MG-B, especially one with a modified engine, the fact remains that the cost is \$102. Owners wanting to use the standard box and ratios can have a \$19.50 mod to the box.

This is carried out by Lynx Engineering in Sydney, which very accurately line-bores the casing, fits new bushes and modifies the oil system before installing a $\frac{3}{4}$ in. layshaft.

Latest model MG-Bs have a different back axle arrangement from the earlier types. It has a split case differential, called the Sebring type, and it limits the alternative final drive ratios. Nevertheless, the earlier varieties allow a wide selection of ratios to be used.

Standard, the final drive is 3.9. But a 4.1 can be used, or a 4.2 from the old Magnette MG, or for really low gearing the Austin A/60's 4.8 can be fitted.

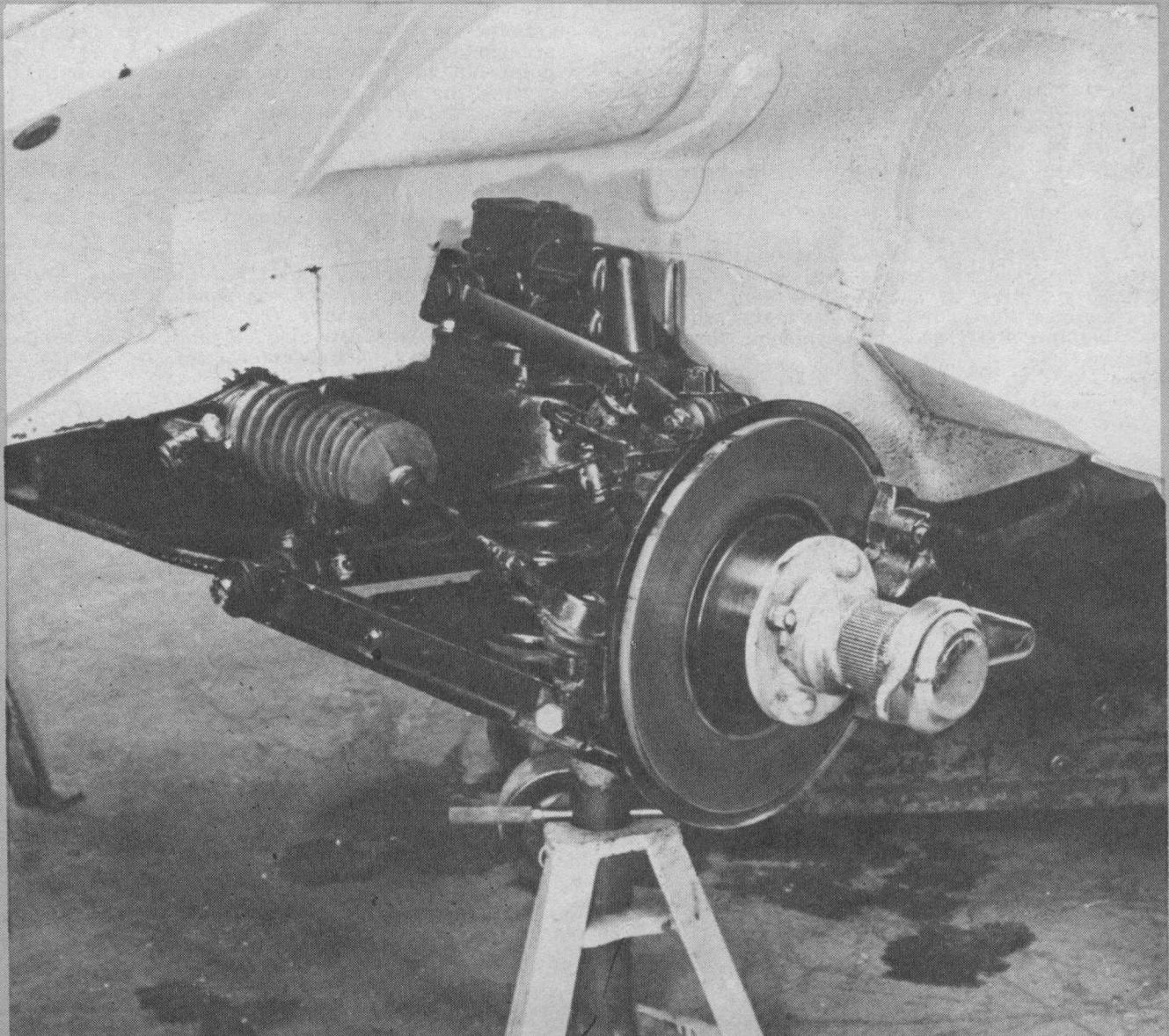
Significantly, the standard 3.9 ratio provides the highest gearing in the book. All the others reduce the number of miles per hour per 1000 revs.

For Bs using the earlier back axle, the Pimec limited slip differential at \$186 is a sensible proposition. LSDs for the Sebring axles are virtually



While the front is stiffened the rear should be lowered. This can be done with lowering blocks but this method requires tramp rods to eliminate distortion under braking. MG-B GT leaf springs will also do a good job at the rear, or springs can be made to order from a manufacturer.

MGs don't have brake problems in standard form but when the power is increased it's a good idea to increase the braking efficiency. DS11 front brake pads are recommended. It's important to fit the same compound linings to the back brakes to prevent rear-wheel locking.



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unheard of in Australia but when they do become available the price will be frightening.

MG-Bs do not have brake problems in standard form, even when coping with substantially increased power outputs.

However, DS11 pads and compatible rear linings will virtually guarantee fade-free operation at the cost of increased pedal pressure and a tendency towards increased noise from the discs and pads. It's most important if hard pads are fitted that hard linings also be used on the rear shoes. Failure to do this will lead to premature back-wheel lock-up under braking.

Because the MG-B has to please a wide variety of buyers, the suspension has been compromised on the side of softness. For the vast majority of owners, of course, this is just fine. But for the performance buff hell-bent on overall improvement, modifications can be made at the price of money, increased suspension stiffness and loss of riding comfort.

Basically, what needs to be done to improve the handling is to stiffen up the front end and lower the back. A simple method is to use the springs from the MG-B GT. Its coils give 480 psi (BLMC part number AHH 5789) with the rears providing 99 psi (AHC 31). Extra heavy rear springs are also available, giving 124 psi (AHH-7346).

Shockers can also be modified by replacing the valves with heavier ones (C/AHH7217 for the front and C/AHH7218 for the rear).

If these do not suit, then a reputable spring maker, such as National Springs, will make coils and leaves to order. Resist the temptation to cut down the standard coils — your life could depend on it.

The right spring combination for the individual's specific needs is not easy to find. It's largely a matter of trial and error if he wants to be super-fussy about the whole thing.

BLMC offers owners a bigger diameter roll bar for the front. It is $\frac{1}{2}$ in. diameter instead of $\frac{9}{16}$ th in. A worthwhile improvement, many owners find that this and the shocker valves give the changes they need for little cost.

However, the good work can be continued further by dismantling the back springs and lubricating between the leaves with a good quality grease or a moly grease. A finer point of tuning, this enables the springs to work faster when they are being compressed as cornering forces are applied.

Lowering blocks can be used under the back springs but while this drops the height, it also makes the springs more subject to distortion under braking and acceleration. One thing leads to another, so it then becomes almost mandatory to fit a good tramp-rod set-up to eliminate this vice.

But always bear in mind that if the back end is too securely pinned down it will make one wheel highly dependent on the other and will create a wheel lifting tendency that is as pointless as it is time consuming and costly on tyres.

However, when a limited slip diff is used the back end can be tied down as tight as you like. The LSD actively prevents wheel spin and should considerably reduce the B's time around any given corner.

The B's wheels can be widened an inch and, of course, radial ply tyres of virtually any good brand can be fitted.

As with developing the engine, the suspension and brakes should not be too wild. MG-B's are not suitable for serious racing, so they are going to spend most of their active life on the road. They should be modified with this in mind.

Use only the best materials available and get the work done by recognised experts — and apply commonsense to your thinking. For instance, no matter how well the car should be handling and how much has been spent on mods, it will never be any good unless the wheels are properly aligned. Elementary, yes. But very close to real life.

Likewise, change the brake fluid every 12 months to ensure that it is maintaining its boiling point; never mix brake fluid brands or grades; get brake jobs done by experts only.

Some of the wise oldies of the car business occasionally let out a sigh of despair. As they point out in their infinite wisdom, the path to getting the most out of a car is to first make it stock standard — and that includes properly adjusted brakes, correctly aligned front end and engine settings to factory specifications.

If the owner is still unhappy, then is the time to start looking for ways of improving the designer's handywork. And that is often pretty difficult. #

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