

CLASSIC CAR WEEKLY

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Tuning & Improving

Why...?

A40s may be relatively rare now, and not supported by a massive band of specialists like their more popular BMC brethren, but getting all the bits to modify one is a whole lot easier than you might imagine. Because so much Austin parts-bin-raiding went on to build the MG Midget, all their suspension parts – and the many updated bits for them now on offer – will also fit the A40. Engines and gearboxes were shared with the ubiquitous Morris Minor, and thanks to the Mini's popularity, there's more information and parts about tuning the A-series engine than anyone can make sense of.

And a bit of modifying really suits the A40. After all, they have a strong history in rallying and historic motorsport. But they also make very good mildly tuned road cars, being easy and fun to drive whilst remaining immensely practical. If you are at all worried about messing with a car of which there are too few good survivors, fear not. Virtually all of the modifications I'm going to talk about are bolt-on changes that could easily be reversed at some time in the future, should the next owner, or yourself, want to return it to standard. I'm willing to bet, however, that once you've tried your A40 in improved form, you'll not be worrying about going back...



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Engine

DON'T do anything in here until you have attended to the brakes and suspension to some extent, but once you've sorted out those important safety issues, there is an awful lot of scope for playing under the bonnet.

You may wish to merely tune up the standard 948 or 1098cc engine, in which case I can do no better than to refer you to Dave Vizard's absolute bible on the matter: *Tuning the A-series Engine*. It's still in print and you can pick up a copy for under £15 from discount booksellers, and then enjoy untold hours of inspiration from it.

In fact that very same book could still come in handy if you take the next step up engine-wise and fit a 1275cc A-series engine. The easiest way to do this is to use the complete engine and box from a Midget as it is virtually a bolt-on swap – all the parts being closely related. However, finding a Midget engine and box isn't as easy as it used to be as so many have been snapped up by Austin and Morris modifiers and Midgets don't get scrapped so often now.



MG Metro carb is a cheap and effective upgrade.

So the next best option is to get the 1275 engine from a Marina/Ital, either to adapt to a Midget gearbox or to use one of the other options explained in the Transmission section. Tuning options for this engine are even greater. You can have it bored out to 1340cc without any expensive complications. For cost and simplicity I'd stick with a single-carb set-up, the best option being the 1.7in SU from an MG Metro which comes with a water-heated manifold. Add a 270 or 275 camshaft and have the head reworked to Stage 2 and you'll have a lively and un-

Transmission

THE standard gearbox is barely up to mild tuning of the original engine, so you'll need something better with any new engine. A 1275 Midget box is the easy option from a fitting point of view, although if you're fitting it to a Marina or Ital lump you'll also need the Midget's engine backplate, flywheel and clutch. The Marina box can be made to fit, but being larger will require work on the tunnel and fabrication of a mounting crossmember. Out of interest, perhaps, you can fit a Dolomite overdrive box to the Marina bellhousing, giving an easy-cruising six-speeder.

A better, though of course more expensive option, is the five-speed Type 9 box from a Ford Sierra. Several specialists like Frontline market a conversion for this as it is popular for Midgets, but also fits the A40. Expect the cost to be around £520 for a kit that provides everything including a new propshaft, bellhousing, clutch and speedo cable – you just have to source the gearbox itself. Feeling lazy? An all-in kit with reconditioned gearbox is £1112.48.

Any extra power is going to put terminal amounts of strain on the halfshafts. Apart from being a couple of inches narrower it's the same axle as used in Minors, and most know that they snap like twigs (in fact I'm using the broken stub of one as a paperweight).

Electrics

YOU don't get much standard kit on the dashboard of an A40, so to keep proper tabs on what's going on under the bonnet, I'd at least want to fit a water temperature and oil pressure gauge. Any number of specialists carry these with the correct senders for A-series engines.

Quite a few people also fit the two-speed wiper motor from an Allegro – your original is probably past its best by now anyway – and make life simpler by getting the column switch from the same source to operate it with.

temperamental motor which still gets good mpg. To finish off, you can use a three-into-one tubular manifold for a Midget, though you'll find the downpipe is too long. Shorten this and construct the rest of the system around an MGB rear silencer and you'll have good flow without it being too noisy.

Another idea worth considering is the K-series engine – a 1400 would do. It's a popular swap with Midget owners now, to the extent that there are several kits on the market for doing it, mating the engine to a Sierra five-speeder, parts of which will no doubt also work with the A40. So it'll fit and be fast and reliable, but you may have to do a bit of pioneering work on this one. If you have a go, or indeed have already done this conversion, do write and tell us how you got on.



Midget or Marina 1275 engine can be fitted but disguised to look original.



An

early purchase should be a pair of competition halfshafts – Peter May sells them for £147 each. If that's a bit rich for you, there's a period option that requires more skill but a lot less money.

If you can find a Mk1 Cortina axle, they're the right width, but you need to grind off the old and weld on new spring mounts, change the rear prop flange, adapt the handbrake mechanism and live with different wheel stud patterns front and rear. You won't break it, though!

If you do add any more electrical gear, it's worth changing to an alternator. This is pretty simple if you use the alternator and bracketry from a later A-series engine car – such as a Mini, Metro etc.



For an alternator, raid the scrapyards for later A-series engine cars such as the Metro.

Brakes

A40s came with drum brakes all round, but you can handily swap the front ones for Midget discs by using the MG's complete upright and hub unit. This will be fine for most road use, especially in conjunction with a set of uprated pads (Greenstuff or Mintex). However, if used in anger, the rather small 8.25in diameter discs can be prone to fade, exacerbated by the A40's weighing over 200lb more than a Midget. If you encounter this problem, plenty of MG specialists like Peter May and Frontline Spridget sell uprated brake kits using thicker 9in discs and larger calipers which will more than cure the problem. Expect to pay £375-£400 for a complete kit. Early Mk1 A40s used smaller diameter kingpins, but it is easy to swap these for the later version that is compatible with the Midget uprights.

Similarly, Mk1 A40s had rod-operated rear brakes (from the A35) while the later ones were all-hydraulic. If you have an early car, swap to the more efficient later system. Standard rear brakes will be fine with the Midget discs at front, as long as you

fit uprated brake linings. However, if you uprate the front brakes, the rear ones need a bit of help to restore balance. You can achieve this by seeking out a set of rear brakes from a Riley 1.5 that are bigger and bolt on to the A40 axle, though you may have to play around with the handbrake linkage.

If you feel the car needs it, fitting an inline brake servo is a simple task that will reduce pedal pressures. Moss sells a suitable unit for under £150. Another popular trick with these cars is to fit the dual-circuit brake master cylinder from a post-1979 Mini, connecting the lower outlet to the front brakes, the upper one to the rears.



Midget disc brakes fitted, along with homemade telescopic damper conversion.

Wheels and tyres

AS long as the offset is right, you can squeeze up to 5.5x13in rims under the arches without fouling. 175/70 or 185/60 is about right for tyres. For a cheap option, Midget Rostys are popular and can usually be picked up cheaply as long as you don't mind repainting them. They're 4.5x13 and work well with 165s.



Revolution four-spoke is a nice period design wheel available in 5.5x13.

Cooling system

FOR any A-series engine the standard radiator will be able to cope as long as it is in reasonable condition, but I'd definitely chuck away the old engine-driven fan blades and fit a thermostatically controlled electric fan instead.

With anything other than a mildly tuned A-series (and this applies to any car you fit one to) you should also consider fitting an oil-cooler. It doesn't need to be big – a simple 10-row one (which costs around £40) will do the job, but your engine will thank you for it.

Suspension

THANKS once again to the Midget connection, there's quite a lot you can do to improve the A40's standard suspension set-up. The choice of front springs on offer is quite bewildering, but I'd go for 1.1in shorter ones with a 400 or 500lb rate, to greatly improve handling without destroying the ride quality. About £50 will buy you a pair. You can match this at the rear with a £35 lowering block kit, and I'd also go for polyurethane spring bushes. You can get poly bushes for the front, too; ones for the top trunnions being most worthwhile at under £15 a set from Frontline. Peter May also offers a negative camber top trunion kit for £23, which is well worth the cost if you want to take things a bit more seriously.

The A40 suspension's limiting factor is the lever arm dampers all round. Frontline does a kit which replaces these at the front with new and much more rigid upper links, and includes telescopic dampers, priced at £394. If that's too steep, it's easy enough to make some brackets to weld to the wishbone and bolt through the inner wings (with some added stiffening plates) to take telescopic shocks. Those intended for converting a Midget or Minor should be ideal and easily sourced. You'll need to use the same trick at the rear, as it helps overcome the car's tendency for axle tramp. To further aid this, you can buy an anti-tramp bar kit for Midgets for £120, though you may have to lengthen the bar itself to use it on the A40. A simple welding job.

Austin's little family saloon has quite a rallying and racing past, and can benefit enormously