

## FITTING MGB FRONT SUSPENSION TO AN MGA

There seems to be a lot of fuss about converting MGAs to MGB front suspension. I do not normally advocate doing this as I believe that the MGA king pin is adequately strong and have been racing with them for years. Updating to MGB is technically illegal in most racing groups in any case, although enforcement seems to be lacking with some organisations. While there have been some reported king pin failures over the years, it is best to remember that we are talking about old components that may have reached the end of their usable life, and in the case of new parts, about a certain incidence of faulty design, prone to failure. With new properly designed king pins, I would not hesitate to run and race an MGA with original suspension.

Having said that, I found myself with a problem in my current project, transplanting a GM V6 into my rebodied MGA 1500. <http://www.rhodo.citymax.com/Jamaican.html>

The body of the shock on the MGA sticks into the engine compartment and occupies some valuable territory required for an alternator bracket, among other things. I therefore decided that as part of my scheduled upgrade from original drum to disc brakes, I would switch to MGB front end components. You can go the route of swapping shock arms from MGB to MGA shock, or of packing the extra spacing in the upper outer joint fork if you keep original MGA shocks, but as my goal was to end up with MGB bodies, which point outward rather than inward, the simplest thing to do was to just use the whole shock.

There are only two (major) problems with using the entire MGB front end assembly – the bolt pattern of the shocks are different, and the steering arm of the MGB is located a bit inboard of the MGA one.

Problem #1 – bolt spacing – easy solution – move two holes. You will find that two diagonally opposed bolt holes line up exactly with the MGA shocks. Take a high speed air grinder with a small cutting bit and move the back-side (toward engine) hole in the direction of the other existing hole on that side of the shock. The outer (away from engine bay) holes have to be treated differently – move the diagonally opposed hole to the one you just modified away from the other hole. So your pattern ends up with the inner holes being closer together and the outer ones further apart, and you have 2 untouched holes (diagonally opposite each other) and two slotted holes (diagonally opposite each other). The untouched holes are .375” in diameter, and the modified slotted holes measure .545” along their length – I did the first shock by hand fitting, used a micrometer on it and then did the second to suit that measurement and it just slid on perfectly. You can use the original studs but I prefer replacing them with grade 8 bolts (3/8” x 1.25” - coarse thread on MGAs, fine on MGBs) with lock and flat washers.

Bear in mind that one hole will have moved toward the shock body and you will need to make up a ‘D’ shaped flat washer to suit, by snipping the side off a regular one with shears. The modification does not take the bolt head so close to the shock body that you will have any clearance problem with a thinwall socket. I believe that there is no potential

for problems with slotting the holes this way, although I have seen discussion about such concerns. Note also that this approach will move the shocks very slightly in opposite directions, one back and one forward, resulting in a caster inequity. To wind up with caster identical, the ideal situation, would require that you also move the two holes I had left alone as reference holes.

Problem #2 – MGB steering arms are different than MGA. They windup with the tie rod end bolt hole closer to the center of the car than the MGA does. Shortening the steering rack in the middle to suit the relocated steering arm ends is expensive, but is the proper way to do this. Hacking a bit off each one is a pain and doesn't solve the potential for bump steer. One potentially easy way out that I tried was to fit the longer negative camber A arms that are readily available for the MGB, so that the tie rods ends need not be shortened. Unfortunately the MGB geometry is just different enough that this results in excessive (4 deg.) negative camber. Final solution – run a 5/8" die up each tie rod end to extend the threading as close to the two flats where you hold the tie rod for adjustment as you can, and saw off about 1/2" from the end. Best to do this while the die is still on it so you can clean the threads as it comes off again. Then take the tie rod end and cut another 1/2 - 3/4" off the inner threaded portion to ensure that you will be able to adjust enough to pull the tie rod ends in without them bottoming in the tie rod end.. Result is around 1.5 deg. negative camber, right where you want it.

