FITTING A FRONT ANTI - ROLL BAR TO THE NG CHASSIS

Castle Coombe Kit Car Action Day 1994 - TA cornering at speed. Credit: Circuit photograph on day.

Okay you have got your NG built, it looks great and your wife or partner are still talking to you. Life is great!

Now that you have had a while to drive your new pride and joy, what do you think? Do you think you might be able to make it handle even better and reduce body roll in corners?

If your answer is yes to this question, you may need the help of the Famous Five. No, not Enid Blyton's gang, but Monsieur Renaults.

A limitation with the NG chassis is that it has no provision to mount an anti-roll bar to the front suspension and if it was to be fitted, the standard MGB anti-roll bar would look like a clothes rack stuck on the front of the car. Pretty ugly!

If you do decide to fit an anti-roll bar the only sensible solution is to have a bespoke part fabricated or apply a bit of lateral thinking to find and fit an anti-roll bar to the rear of the front suspension from a donor vehicle. This is where the Renault 5 comes in handy, pre 1984 models have a very suitably shaped anti-roll bar fitted to their front suspension. This component even has the advantage of coming in three thicknesses: 12mm, 16mm and 17mm. So, as you can see a degree of tuning is available to you if required. The shape of the bar also allows plenty of tyre clearance on full lock.

So armed with this information we can go off to the local car breakers in search of our Gaelic rust bucket. With reverence to this great motoring marque, remove the roll bar, fitting clamps, metalastic end mounts and all fittings associated with it. Make sure all the parts are in good order, particularly the metalastic mounts. I would suggest using the 16mm unit if available to you. On the way home, drop into the nut and bold store to pick up some new fixings. After all, who likes working with old nuts?

So how do you go about fitting your newly acquired anti - roll bar?

Firstly, it must be understood that some machining and welding is required for this job. Most importantly as these are structural parts, you must be sure that you are or will be employing a competent welder to weld some of the parts together.

If you are fortunate enough to have your own lathe, machine two mild steel pin as shown in the drawing which should have a minimum thickness of 15mm. Allow a 30mm shank and 20mm thread on the bar which has been turned down to a 10mm thickness at one end. Thread the ends to accept your newly acquired nyloc nuts. If you don't have your own lathe, a local engineering company should be able to do this for you at a modest cost. Cut the two 6mm plates and drill two 3/8th holes in each at 65mm centres as shown. These holes will align with the two holes already found in the front wishbone lower pan. A little filing may be required, but this provides a mounting point for the anti - bar pick up points being fabricated. Cut and profile the plate to follow the shape of the wishbone pan. Temporarily fit the plate to the wishbone pan and offer up the machined pin using the width of the roll bar, measured centre to centre as your guide to exact location on the plate. View from the top and allow clearance between the pin and road spring, also allow at least 10mm between the end of the shank and the rear of the wishbone. Mark the location between pin and plate, remove the plates and tack weld allowing clearance around the fixing bolts and washers. Make sure that you make a left and right hand side! Offer the roll bar up supported by a jack to allow clearance for the sump if necessary. This should be set up with the vehicle on level ground and with the suspension at rest and not straining the anti - roll bar metalastic bushes e g correctly aligned.

The mounting pedestals to the chassis is an area where your input is required as to exact design. They could be welded to the chassis or bolted through it. If bolted, crush sleeve inserts would be required in the chassis to allow full tightening without crushing the chassis section. Clamp all the parts in place and thoroughly check everything, including tyre clearance lock to lock before welding or drilling and bolting. Make sure that brake lines and flexible hoses are clear and will not rub in use.

Once everything has been test assembled, checked and rechecked, fully weld and bolt up as required.

Does it work?

You bet! I tried it for the first time at the Kit Car Action Day at Castle Combe last year and it felt as if it had made a real difference to body roll and this was noted by observers at the track. Straight line handling should also be improved at speed over undulating surfaces particularly if using soft front springs. My TA uses the early roadster front coil springs, V8 wishbone bushes and the 30% uprated lever arm front shock absorbers. At the rear early roadster leaf springs are used once again and assembled with nylon U bolt pads and bushes. The rear suspension is assisted with bespoke anti - tramp bars and a full width panhard rod with Lancia Delta rear suspension eye bushes at each end, this is superior to the NG panhard rod design and lies roughly parallel to the centre line of the rear axle when under load. Twelve-point adjustable Spax telescopic shock absorbers are employed at the rear set to two or three clicks up from softest setting for normal road use. (The adjustable shock absorber parts are now available from John Hoyle at NG Cars as a bolt on fitting for the TC, TD and TF models and some of the latest chassis may be fitted with anti - roll bar mounting brackets rear of the front axle that will accept an anti - roll bar fitting).

Is there a downside to using this Renault anti - roll bar? Yes, but only a slight one and that is due to the Renault parts policy, in that you do not appear to be able to obtain the metalastic mountings on the ends of the roll bar or rubber mounting to chassis rubbers as replacement parts, (Built in obsolescence) so buy a good used anti - roll bar to start with. However, all is not lost, particularly in regard to the chassis mounting U clamp rubbers. I used Lancia Y10 replacements as they were free at the time along with the Delta eye bushes. Sorry to be a bit obscure, but I am sure alternatives can be found in the MG or Triumph parts bins.

Good luck and Happy NG'ing.

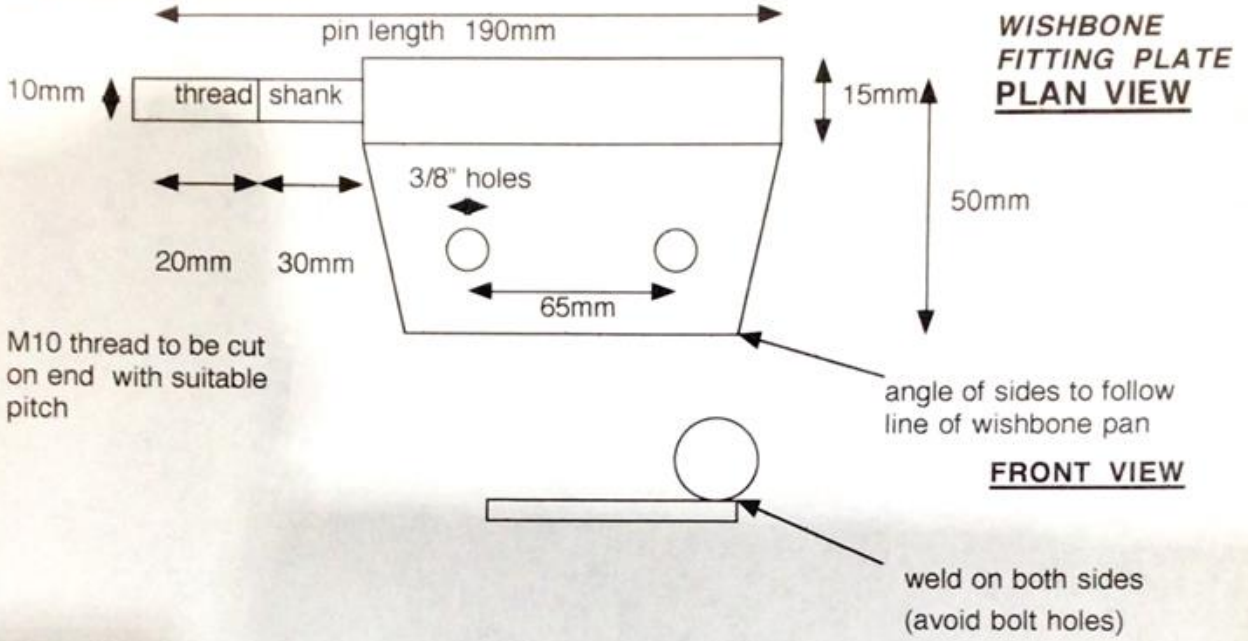
Dave Woolgar - February 1995.

2025 Update: Since writing this piece you will notice from the accompanying photographs, that I have fabricated and fitted two aluminium clamps to the anti - roll bar that are positioned inside of the U clamp mountings to the chassis. In use I found that the anti - roll bar settled off centre, the clamps have prevented this movement and everything has remained serviceable and unchanged for the last 53,000 miles.

RENAULT 5 ANTI ROLL BAR MOUNTING ARRANGEMENT

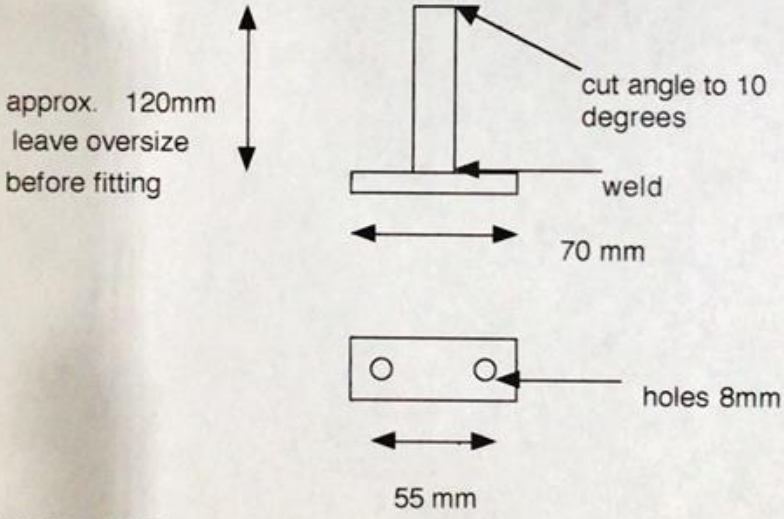
DRAWINGS NOT TO SCALE

O/S ITEM SHOWN ONLY



WISHBONE FITTING PLATE
PLAN VIEW

FRONT VIEW



MOUNTING PEDALSTAL FOR CHASISIS
SIDE VIEW

PLAN VIEW

MATERIALS USED
PLATES. 6MM MILD STEEL
PINS. 15MM MILD STEEL BAR
PEDASTALS 6MM PLATE & 1inch 3MM WALL SQUARE TUBE
NUTS & BOLTS.
4 3/8 X 1" UNF BOLTS
4 3/8 UNF NYLOC NUTS
8 FLAT WASHERS.
4 1/4 X 1" UNF BOLTS
4 1/4 UNF NUTS
8 1/4 FLAT WASHERS
2 M10 NYLOC NUTS
4 M10 FLAT WASHERS