



The other five pieces of the thrust washers

Surprise on opening up an MGBGTV8 back axle!

Peter Nixon is restoring a V8 Roadster with a V8 conversion. It has had the restored shell resprayed in one colour throughout. He has been two pack primed throughout with new panels, the underside stone chipped and then a final paint in Pageant Blue. In July 2019 he found a secondhand MGBGTV8 back axle and on checking it before installation was surprised by what he found. Fellow members will note his reminder – “Does your MGB differential have a “clunk” sound when you start moving?”

Broken piece of a thrust washer

I was about to fit the secondhand MGBGTV8 ratio rear axle to the MGB Roadster shell that I bought for my SD1 V8 conversion and opened up the back axle to inspect the gearing and to confirm it was a V8 3.07 differential. It was then I noticed a broken piece of a bronze thrust washer from the planet gears lying in the oil - not what one wants to see. Using a screwdriver I could move the planet gears by about a millimetre on the pinion shaft, so obviously this called for new thrust washers to be fitted. As the remains of the planet gear thrust washers had signs of wear, there would also be wear in the sun gearing thrust washers, this wear would produce a noticeable clunk from the rear on moving away.

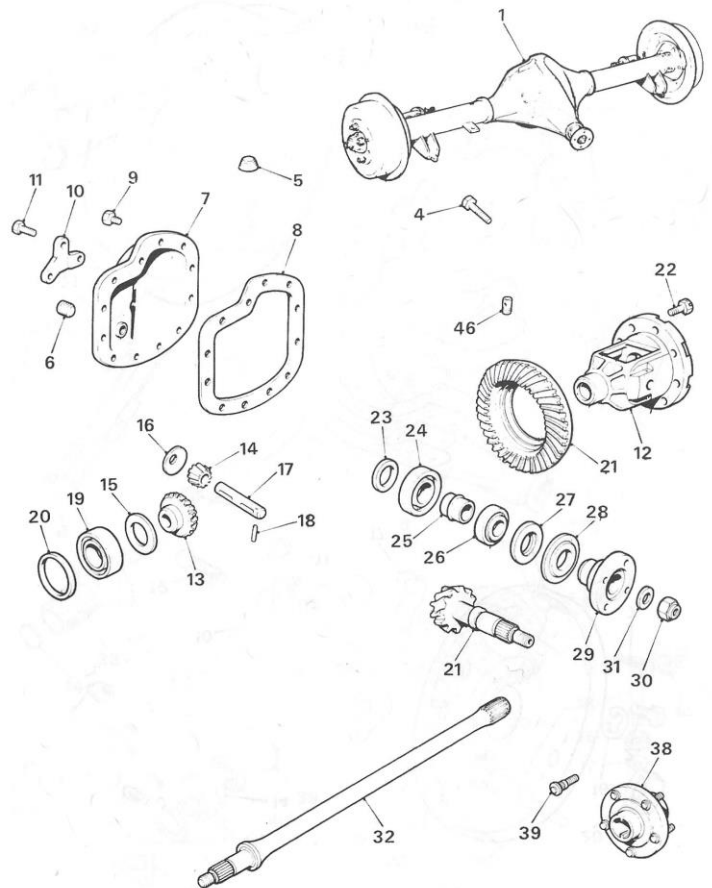


The first piece of a planet gear thrust washer found.

Looking at the MGB parts catalogue, I could see the thrust washers for the planet gears, the fibre washers for the sun gears, and the oil seals in the wheel hubs. Talking to Moss Europe they said there are three thicknesses of bronze washers available to take up wear in the sun gears, so I ordered all three pairs, plus the thrust washers for the planet gears, the oil seals, the roll pin and a 7/64" split pin as noted in the V8 Workshop Notes. See [V8NOTE98](#)

The parts numbers are:-

Planet gear thrust washer, supplied in pairs	1G7445
Sun gear fibre washer, supplied in pairs	ATB7072
Axle oil seal, supplied in pairs.	GHS179
Roll pin.	BTB7159
Wear take-up washers, 35 thou standard, supplied in pairs	ATB7072
Wear take-up washers, 40 thou (+0.005"), supplied in pairs	ATB7072
Wear take-up washers, 48 thou (+0.013"), supplied in pairs	ATB7072
Split pin, 7/64" dia	GHF505



16	1G7445	Washer, thrust pinion
15	ATB7072	Washer, thrust pinion
36	GHS179	Axle oil seal
18	BTB7159	Roll pin
15	ATB7072	Wear take up washers
	GHF505	Split pin



Differential opened up

More thrust washer pieces emerge

Draining the hypoid oil, four further pieces of the two planet thrust washers were found. On stripping down the brake hubs to be able to get at the drive shaft to free off the sun gears, a further piece of a planet thrust washer - the middle small piece in the lower line of the photo at the head of the article - was found embedded in the left side outer oil seal, having worked its way through the differential half shaft bearing, along the axle tube, through the wheel bearing

into left side oil seal, effectively destroying the oil seal. We checked the bearings, they seemed fine.

We re-assembled the differential gearing with the planet gear thrust washers, to eliminate the wear in the sun gears required a 40 thou and a 48 thou bronze thrust washer to be fitted. After fitting the new roll pin we tried to insert the 7/64" split pin into the roll pin, but it was proved too big as the roll pin had closed up, it fitted into the roll pin before the roll pin was fitted - I am not sure it is really necessary as the roll pin had to be driven in with a hammer and punch.

New oil seals to the hubs

We then fitted the new oil seals in the wheel hubs, re-assembling the drum brakes, fitting new rear MGB Roadster brake cylinders as the axle originated in a chrome bumper GT it had bigger brake cylinders, these would cause the roadster rear brakes to lock-up as my rubber bumper to roadster chrome bumper conversion rear has less weight to carry than a chrome bumper GT. Hopefully this fix will last 150,000 miles.



V8 Roadster shell

The photo above is of my bead blasted two pack primed fully repaired and painted 1980 MGB Roadster shell still on the rotisserie frame and about to have the suspension, brakes, V8 dashboard, windscreen, the new V8 front wiring harness, new GT rear harness and a set of old Rostyles wheels installed.

The photo below is the rear end of the MGB assembled.

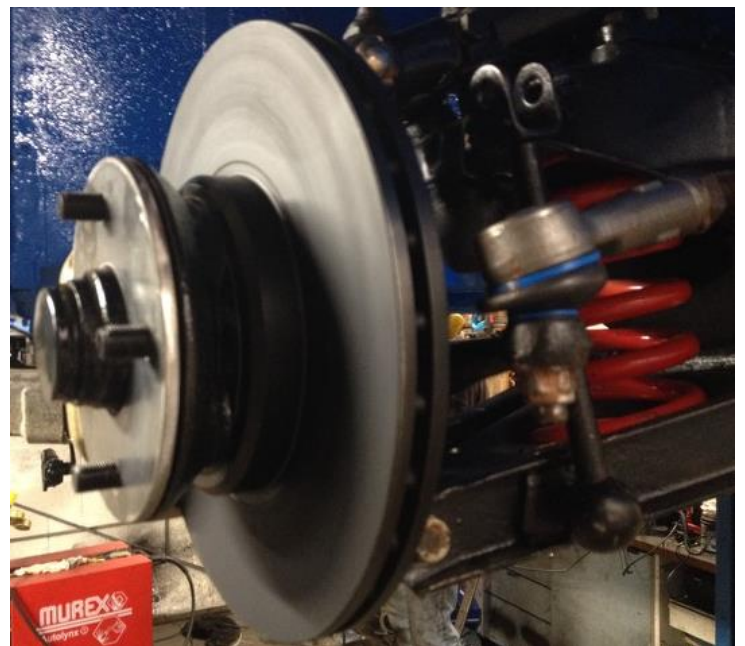


Windscreen

Assembling the windscreen was 'fun' - we first assembled the bottom rail and sides, loosely, fitted the rubber to the glass, then the glass and rubber into the frame, then fitted the two small connector bars in the top, fitted the top rail, and attached a ratchet strap to draw in the side rails and then finally screwed it all up. Liberal applications of a liquid soap to the rubber helped to ease the fitting together process.

Room for Princess calipers

I spoke with Roger Parker and he confirmed that the old original Rostyles with the 4 mm greater offset would fit over the larger Austin Princess four pot calipers if I used a 6 mm spacer on the front hubs, the four pot calipers have a spacer fitted so they fit over the Peugeot 505 Turbo vented discs I have fitted. The four pots are fitted with a link pipe from the second incoming brake pipe to a bleed vent so they operate with a single brake feed. A local engineering company produced the spacers using laser cutting, the fit is very good, just fitting onto the wheel studs with no play, this company also re-drilled the vented discs to suit the MGB stub bolt hole PCD.



See article by Dugald MacNeill: "Changing the differential thrust washers on an MGBGTV8". [More](#)