

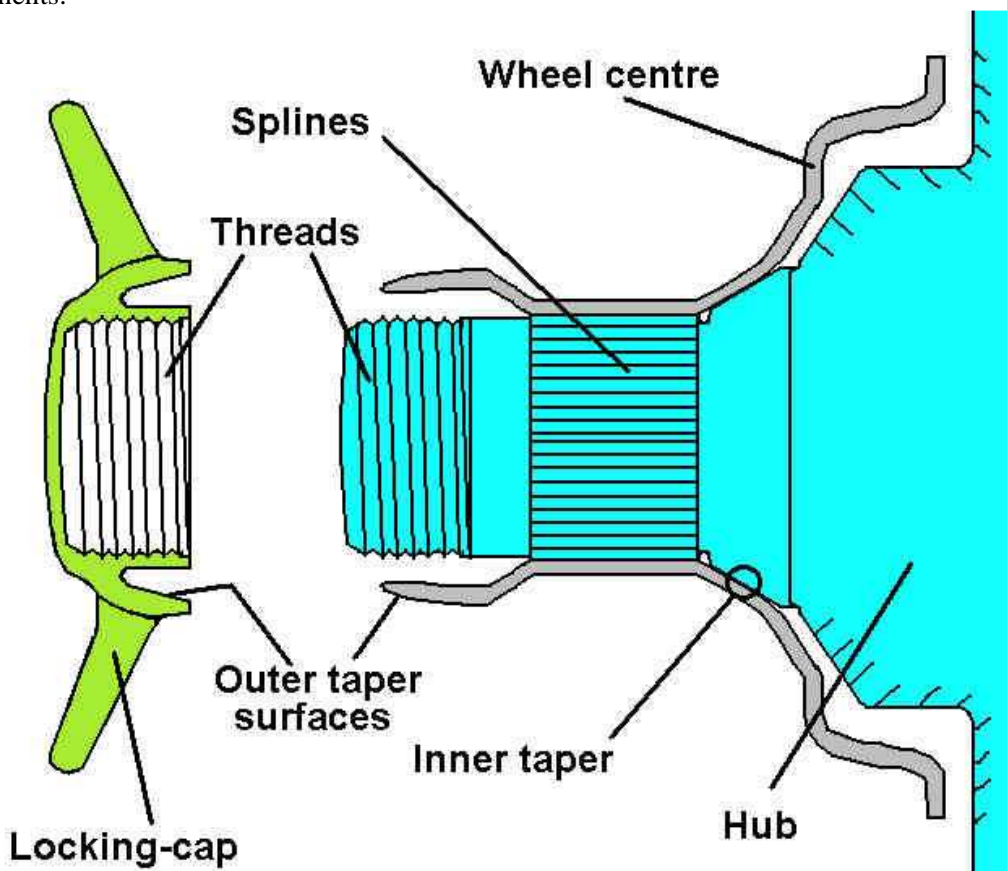
Centre-lock Wheel Balance Cones

Outer cone on the left, inner on the right



Centre-lock Wheels

Main components:



See also this Dayton Wire Wheel document on [taper angles](#).

Centre-lock Hammers



My preferred Thor hammer with a nylon insert one end. This has deformed slightly over the years but hasn't marked the spinners at all.



The MGOC hammer described as 'lead faced', whatever that means. It is very shiny and extremely hard, in fact it wouldn't surprise me if it wasn't lead at all but some harder alloy. Just one gentle knock far lighter than required to undo the spinner was enough to mark the chrome.

V8 Wheels Refurb

Deep in the recesses of the chrome rim there were areas of black that seemed to resist elbow-grease and Solvol Autosol, a so-called chrome cleaner that I would never normally use on chrome as I consider it too abrasive - I keep it for the alloy parts. It even resisted a wet Scotchbrite pad (although heavy use of a wet pad will eventually wear away the chrome, use of a dry pad results in visible scratches almost immediately). So I took a small screwdriver to a patch and scratched away at it fairly gently to see what happened. Amazingly it came away, and with a wet Scotchbrite used after the screwdriver left a tiny pimple in the chrome in place of what had been an area of black perhaps 1/2" by 1/4". So that became the first step in the process, to be followed by a session with Solvol Autosol and a great improvement in all the rims.



Next came removing the existing black paint. A 'pencil' wire brush in a drill proved very effective. Even though quite a lot of the paint remained most of it had very poor adhesion around the cut-outs in the outer part, although it was a bit harder work in the central section. I completely stripped the front but just the areas round the cut-outs on the back. A short-cut I know, but since the end-result was hardly going to be pristine it didn't warrant the extra effort to completely strip the rear as well.



What paint to use? Although the spare (which I have only ever used once for a puncture as about 1/3rd of the chrome in one large area has peeled off and been painted silver) looks like it has been repainted in gloss, that on the wheels on the car looks like satin, and I think the satin is preferable. I had previously used Hammerite Special Metals primer (brushing) and silver (aerosol spray) on the Toyota Celica wheels with good results so opted for the same again but in satin black. The problem is all those cut-outs in the alloy with polished facets,

and the polished ring round the nuts. I tried masking off the central ring but it proved impossible, let alone the cut-outs. Laying masking tape past the edge then shaving it off with a sharp blade may work but I didn't think of that at the time. I had seen liquid masking tape in Halfords so thought that worth a try, but wouldn't you know they had sold out and didn't know when they were getting more in. As I was on a tight timescale there was nothing else for it but to go for brushing top-coat as well as undercoat and no masking - what was I thinking of!

The primer is very easy to apply, being thin but with good coverage, and able to be top-coated within a couple of hours. I used a 1/4" flat brush (last used for painting Airfix kits with my son) and it didn't take too long. I made sure I painted right up to the edges which meant that there were some streaks onto the polished facets, but I immediately wiped along each facet with a thumb or finger which left a nice sharp edge.



The top coat was a different matter - it is quite thick anyway, has to be applied thickly or the coverage is poor and the red primer shows through badly, it needs two coats anyway, and they must be applied at least two hours apart but within seven hours of each other. This was very time consuming with the 1/4" brush and a 1/2" proved better for the larger areas with the 1/4" being reserved for the groove between the cut-outs and the ring and the inner faces of the cut-outs. One thing I was concerned about was brush-marks in the paint, but even though it has a thick consistency it flows very well and all the brush marks vanished. The can warns against too-thick application causing sagging and runs, but I didn't get any. For the back of the wheel round the cut-outs a spray version of the same paint was OK as there was no masking required, and this saved some time. While waiting for each coat to dry I cleaned up the (previously removed) hub centres with Solvol Autosol and the wheel nuts with a wet Scotchbrite pad to remove the rust staining on the chrome and Solvol Autosol to polish. The MG logo came out of one of the centres while removing it from the wheel with a mallet, Araldite has proved very good for sticking them back on.

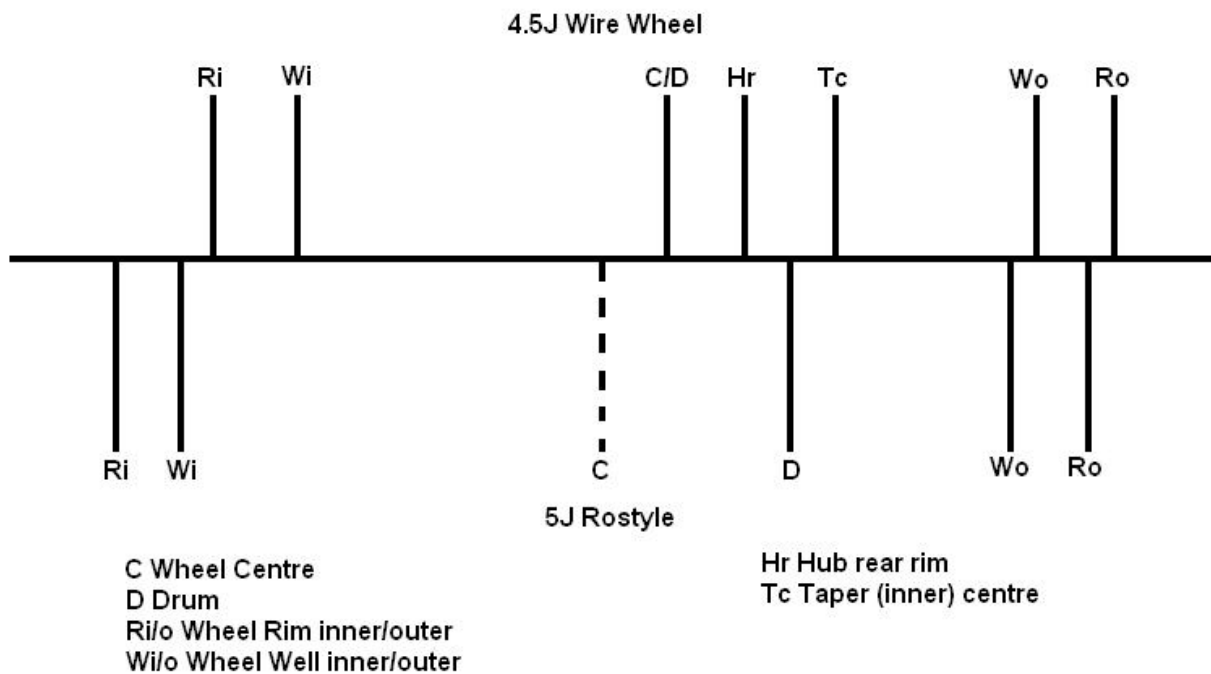
The results are really quite good (this was a refurb not a restoration) and well worth the eight hours or so of effort per wheel it took. They still don't bear close examination of the chrome or nuts but they are a lot better than before. Some of the nuts are hardly marked whereas others have lost quite a bit of chrome and the substrate has rusted. I did consider replacing the nuts with stainless now but at £74 for sixteen that can wait for the new wheels.



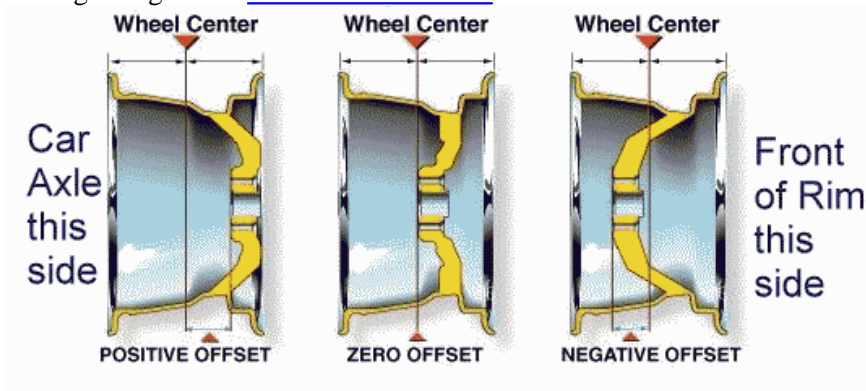
In 2010 I replaced the wheel nuts with stainless after national tyre and auto wreck tightened them to 120ft.lb after a tyre change by putting them on with an air-gun until it chattered, and then simply checking with a torque wrench that they weren't **under**-tightened! After I had freed them the front ones seemed loose on the studs compared with a couple of rear nuts on the front studs, so I opted to replace them all. Had to smile as they simply reflect the muck and rubbish on the wheels so they look just the same :o). However if and when I do get the wheels done properly they will look good then. *April 2011*: After a winter largely garaged I note that a couple of the washers on the new 'stainless' wheel nuts are showing traces of rust ... hmmm.

Wheel Offset

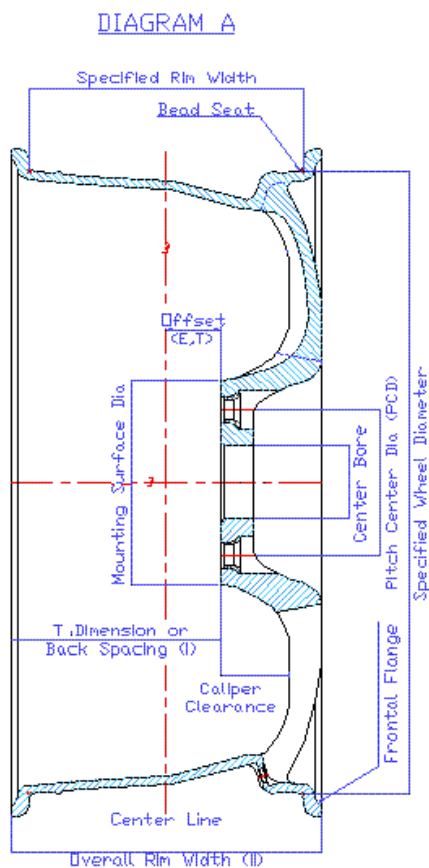
Comparison of my wire and Rostyle wheels. The outer face is the closest comparison between the two, giving a (near) standard clearance to the outer arch, which has the effect of reducing the track with the wider Rostyles. If choosing wider wheels you would have to go for more offset to maintain that clearance, while still giving adequate clearance to the inner part of the wheel well.



Positive, zero and negative offsets, where the mounting face is outside the centre-line of the wheel. Positive offset is the usual arrangement - for steel and alloy wheels at least, to bring the angle of the kin-pin and the centre-line of the tyre together at the road surface. Negative offset is often used on show cars to bring the wheels out, but it causes them to move back and fore as the wheel is turned instead of pivoting and can adversely affect handling. Image from [Crankshaft Coalition](#).



Offset and other wheel dimensions, from [The MG Experience](#)



Replacing Spokes

Jacking down the V8 wheel (or any other car for that matter) on the sidewall of the wire wheel to break the bead. Lay the wire wheel on some thick padding to prevent damage to the edge of the inner rim.



Removing the broken spoke complete with nipple through the rim, the tyre sidewall is easily pushed out of the way with hand pressure.



The protective tape over the nipples of the short spokes at the rim, this is superfluous as the tyre bead covers them and prevents the tube from coming into contact with them. Damage to the tape when removing and replacing the nipple can be ignored.



A broken chrome spoke (top) and sample polished stainless from Central Wheel Components - virtually indistinguishable (in finish, the stainless is a sample hence no bend at the butt).



The spoke spanner from Central Wheel Components - six different sizes in two jaws, but the biggest (No.1) has to be opened out very slightly for the nipples on my Dunlop wheels.



The outer edges ground back slightly to allow the spanner to be swung 90 degrees when adjusting the nipples as they only have four flats.



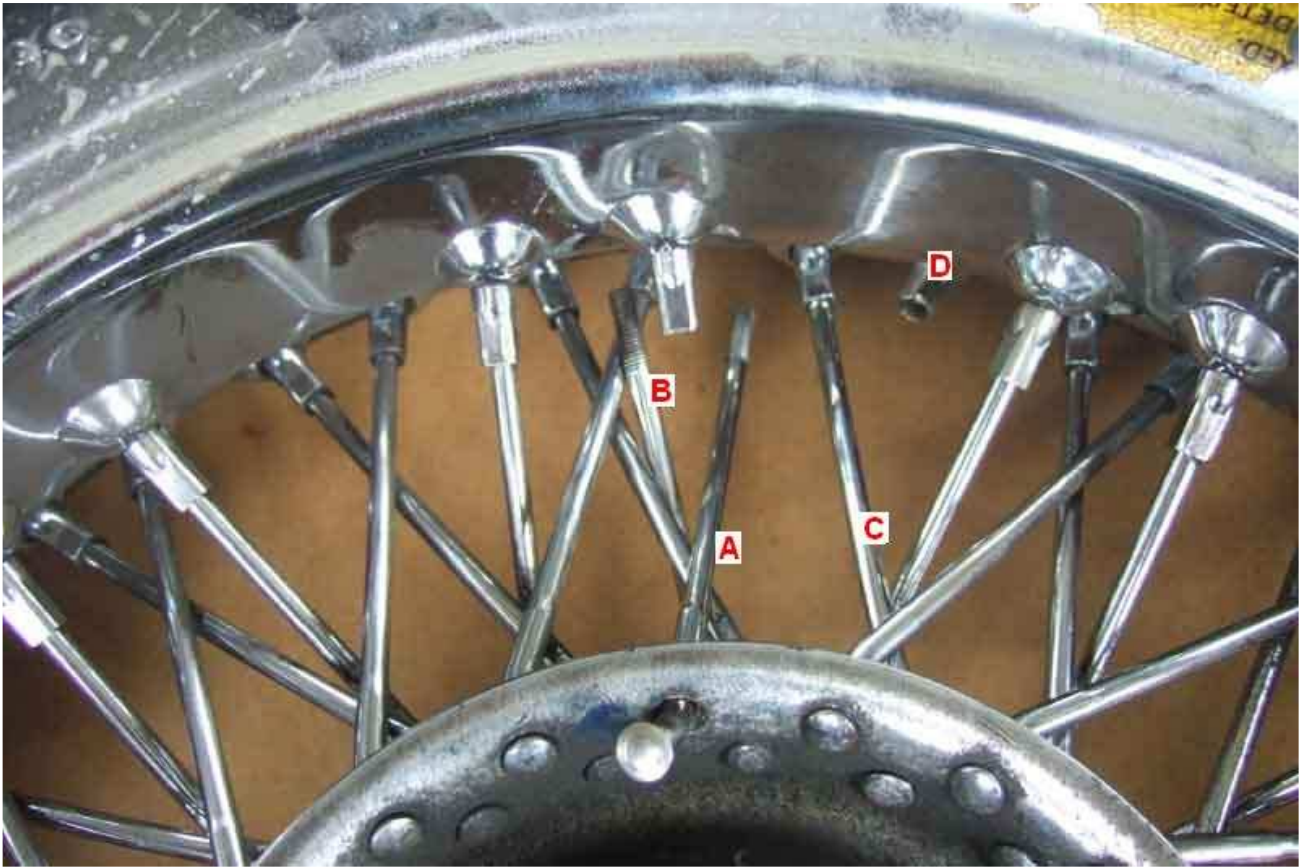
New spoke (centre) compared to the original sample (top) and broken chrome. When received they were slightly duller than the original sample, but a few moments with some Solvol Autosol brought them up. No problem with individual replacements as I'm doing, but not something you would want to have to do if respoking four wheels!



Inserting the new spoke (A). When the thicker butt reaches the hole in the hub the upper end fouls the long spoke (B) to the left of it (circled) and can't be inserted any further.



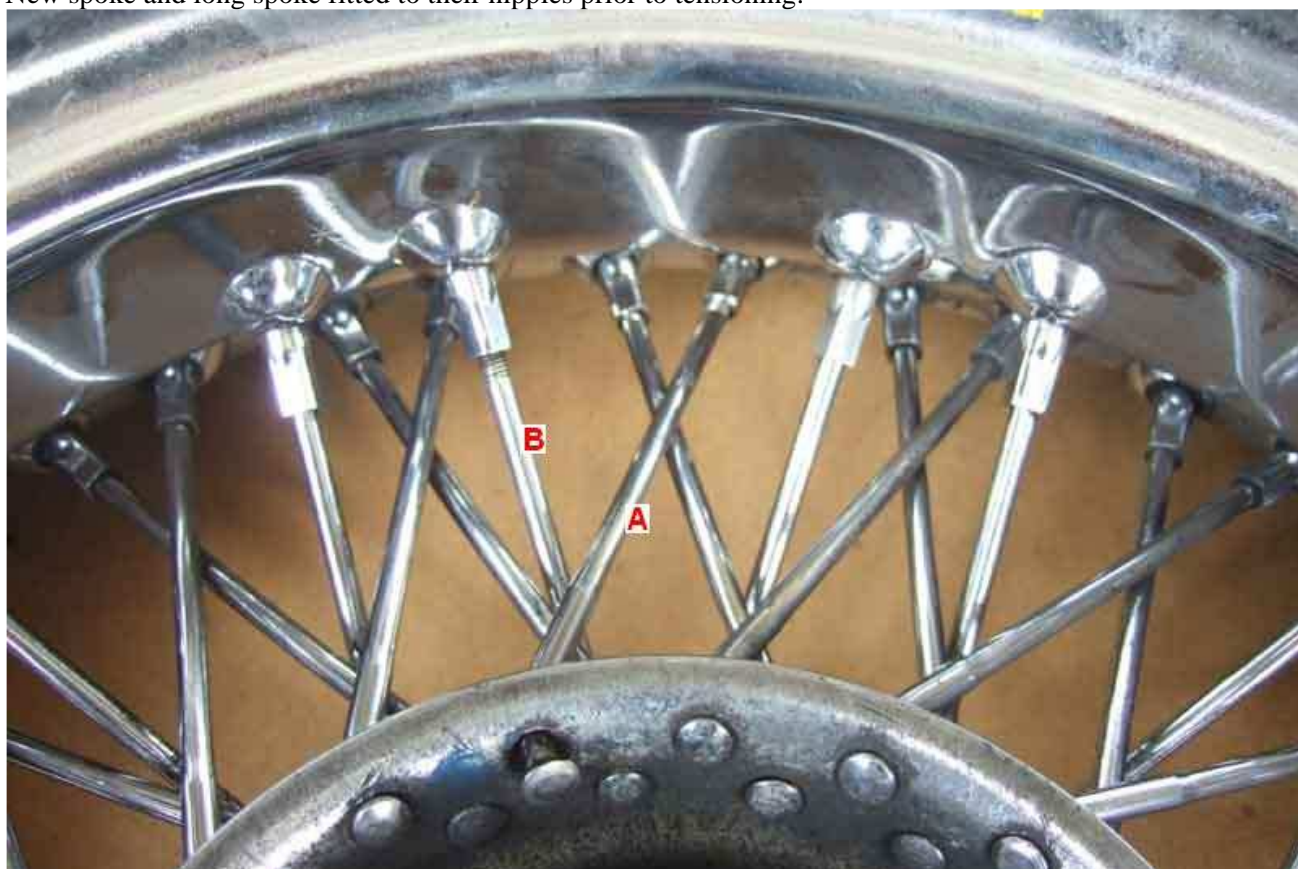
The long spoke (B) unscrewed and swung out of the way. This allows you to push the new spoke (A) all the way in, however this has to be on the **wrong** side of the short spoke to the right of it (C) as shown here, as again the butt prevents you pushing the new spoke directly towards its nipple (D).



Once the new spoke (A) has been pushed in most of the way it can be swung past the short spoke to its right (C). Take care when doing this to prevent the rough end of the new spoke from marking the chrome of the rim. *Update May 2009* First broken spoke since May last year. This time even after I had removed the long spoke I still couldn't swing the new spoke (A) past the short spoke on the other side (C), so had to undo that as well, not sure yet why this time should have been different. *Update June 2009* Had to replace another after our New Forest and Dorset trip but this time I could swing the new spoke into position without having to remove spoke C first. They do only just go in, the end just clearing the rim, so maybe it is a matter of length - slightly longer ones not going in. I'll check before polishing next time and cut down the threaded end slightly if needs be, rather than having three spokes loose all at the same time.



New spoke and long spoke fitted to their nipples prior to tensioning.



Old but good chrome nipple on the left, and new distorted stainless on the right.



Chrome Wire Cleaning

Pretty good, after 20 years



<http://www.mgb-stuff.org.uk/>

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