Rufus - Tinkers Patches:

In a previous article '**Bonnet Modifications**' I mentioned the name of 'Tinkers Patches' to disguise the holes left by the original bonnet catches. It will be a while before I get round to making Tinkers Patches for Rufus so I will describe some I made for 'Kermit' my Aero Merlin, the successor to the JZR 3-Wheeler.

Tinkers patches get their name from the patches applied to metal items by the 'Tinkers' who used to travel around the country repairing metal household items during the nineteenth century. A tinkers patch is a metal patch soldered or riveted to the item (often kitchenware) being repaired.

Kermit has an aluminium body with no supports where I wanted to secure the silencer. The answer was to strengthen the area with a Tinkers Patch. Proceed as follows.

1. Position the silencers and work out the location of the M8 securing bolts.
2. Drill M8 holes through the aluminium body panel on both sides of the car.
3. Take a piece of aluminium and mark out two circles of 32mm or so radius which, when cut out and fettled, will be the exterior strengthening discs.
4. Draw an inner circle on one of the discs so the radius is 22mm.
5. Step round this inner circle with the compass still set at 22mm and mark out six evenly spaced lines.
6. Centre pop where these marks cross the inner circle and then drill out to 5mm.
7. Drill an 8mm centre hole in these two small discs and bolt them together.

Note.
At this stage I bolted the two discs to a piece of plywood then put the bolt in the 3-jaw chuck on the lathe and made the discs perfectly circular.

If you haven't got a lathe you could put them in a drill church and rotate them against an abrasive belt etc.

Another method is to cut the discs out with a hole saw.

As a last resort cut the patch out carefully by hand with a pair of tin snips.

8. Drill through the 5mm holes in the first disc so both small discs now have six holes around the periphery.
9. Now make two more discs with a radius of 55mm. These will be the inside discs. Making them slightly larger in diameter than the exterior discs spreads the pressure on the body panel.
10. Drill an M8 centre hole in these two discs.
11. Fettle all discs.
12. Back at the car bolt the discs to the car with an M8 bolt. The small disc on the outside of the panel and the larger disc on the inside.
13. Using the holes in the small outer disc as a template drill through both the body panel and the inner disc with a 5.5mm drill bit.
14. Unbolt and fettle all disc and body panel holes.
15. Smear all contact surfaces with Duralac Anti Corrosive Jointing Compound.
16. Assemble the discs on the car, loosely insert an 8mm bolt and nut and then insert six 5mm button head screws and join all panels together.
17. Attach the silencer.

Summary:
Tinkers patches can be used anywhere you need to add some reinforcements on an aluminium panel; e.g. mirrors or aero-screen mountings etc. (or to effectively disguise unwanted holes or damage) which is what I shall use them for on the original lower bonnet side panels fitted to Rufus