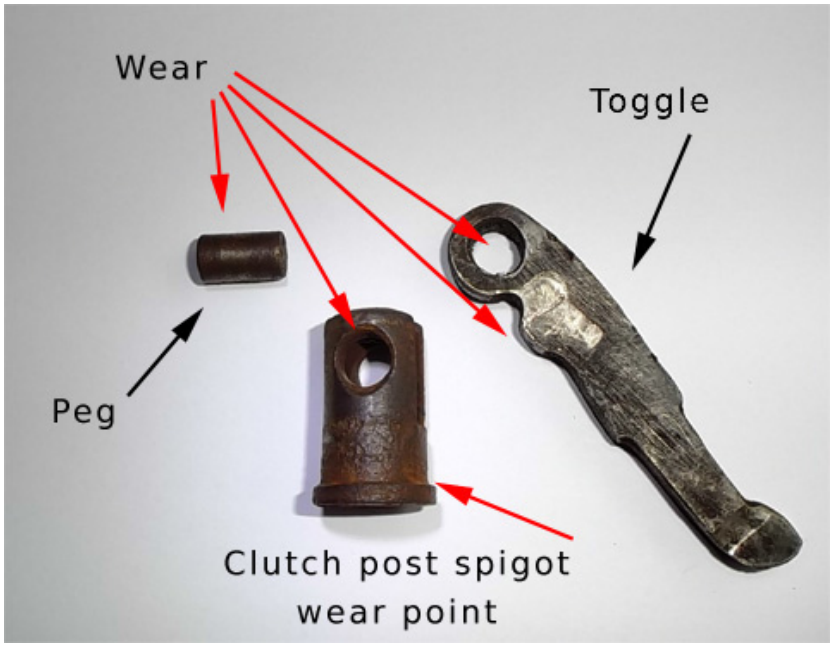
The majority of these tips have appeared in club newsletters over the years. Please note that you use them at your own risk as neither the Bristol Austin 7 Club nor the authors can be responsible for the results of trying to follow the instructions given.

Clutches - some thoughts - by Ron Hayhurst

Most of the information on repairs to clutches can be found in publications such as ***The Austin Seven Companion*** and ***The Austin Seven Manual***. The former is the much thumbed compendium of articles on all aspects of Sevens - particularly problem solving and special building - as described by members of the Seven Fifty Club. The latter publication, which has “definitive” articles by well experienced austineers, was pulled together by the late Doug Woodrow and is available from Mercury Vintage Services, T: 01945 430 058. It is full of instructions and detailed drawings, particularly of engines. There are three pages on clutches which include a couple of useful sketches. The A7 Companion is still available; try contacting those who advertise in this newsletter or the Association Mag. Both books are essential reading and make good Christmas presents!



Having briefed yourself on the overall picture with the above bed - time reading and learnt how to refurbish the fulcrum points on the clutch plate, where the toggle arms pivot, here are the “extra” thoughts!

Clutch levers (toggle arms), pegs and posts can still be bought new. Stocks vary from time to time, consequently you should be on the look - out for good second hand ones together with a good clutch withdrawal plate. If you are forced to use secondhand parts, apart from the obvious wear at the point of contact with the peg, there will also be wear on the post spigot where it mates with the withdrawal plate - the one that holds the clutch lining. Because of the turning moment which is applied to the post, there will be asymmetrical wear on its spigot. By turning it through 180º a different alignment of the toggle arm will obtain and then it may vary again depending on which of the three holes is chosen for any given post. Since the object is to get the clutch thrust bearing to contact all toggle arms at the same time, the ends must all be the same distance below the bell housing joint at the rear of the crankcase.

Work out the best permutation and mark up the location of items preparatory to any relining work, when only the posts need to be assembled.

If forced to go for a larger size of peg to eliminate wear, the next size up could conveniently be 7mm. Silver steel bar, drills and reamers are available from Chronos Engineering - www.chronos.ltd.uk - T:- 01582 471 900

With new toggle arms there may be some difficulty in threading the arm through the clutch cover plate. Deburr and ensure all parts move freely. Cold bending of arms is no longer recommended despite appearing as an option in Austin official publications. We can only assume that a more malleable steel was used at that time. On the front starter engines the rear face of the clutch cover plate sits 5 /16 “ below the bell housing face. The book says that the measurement from the bell housing face to the toggle arms should be 3 /16 “ (just under 5mm) for best clutch operation. If the clutch and flywheel are assembled prior to fitting to the crank, this equates to 1 /8 “ above the plate for the same effect when a straight edge is placed across the six set screws that secure the cover plate (assuming spring washers are being used). This info can be used to set up the clutch/flywheel assembly before fixing to the crankshaft and even before actually riveting in the linings, i.e. use the linings as “packers” at this stage. In practice the 5mm setting is hard to achieve and can be as much as 13mm whilst still obtaining satisfactory but fiercer clutch operation. The closer you are to 5mm, the better the clutch control.

When all is assembled, the toggle arms pass ever so close to the cotters holding the clutch withdrawal levers to the cross shaft. Make sure there is the minimum protrusion of the cotters or they will be hit by the toggle arms.

To help with setting the cross shaft in its foot-pedal pinch bolt, something better than a slot in the nearside end is needed. Take out the shaft if necessary and drill and tap the end 5/16” BSF and glue in a high tensile bolt with Loctite Studlock. You can then use a spanner to hold the shaft in a forward position when

doing up the pinch bolt. At the same time the opportunity should be taken to fit a Ruby type clutch pedal arm and detachable pedal. Having detached the short stub of pedal, the pedal arm can be more easily removed, allowing the engine to be taken out and refitted without the usual interference from the floor-plate.