

DISMANTLING SHOCK ABSORBERS

Shock absorbers require very little attention. They support the machine and iron out the bumps without need for regular servicing. However, even though damper units are not serviceable, there are occasions when it is necessary to dismantle the units. You may decide to fit covers different from standard, chrome and black covers are available. You may remove the covers altogether, leaving the springs exposed.



Another option is to fit dual rate springs, available for certain models. These springs give a softer ride and improved road holding. New springs ought to be fitted when the springs have 'set' by more than $\frac{1}{4}$ inch. Any of these jobs will require dismantling the shock absorber units.



A spring compressor fitted to a shock absorber, showing cloth wrapped round the unit to prevent damage to paintwork. A useful but expensive tool — in most cases a good strong arm will be able to compress the springs sufficiently without this device!

There are three basic methods for dismantling shock absorbers fitted to Royal Enfields. The first is to dismantle the unit by removing a single collar or pair of collets from the top of the upper shrouds. The second method involves slackening off a locknut, out of sight under the top shroud. The third method apply to very first Enfield units. Remember, Royal Enfield were the pioneers of the swinging arm rear suspension set up and developed the spring box shock absorber as part of that project. We'll return to these early types of units later in this article.

It must be kept in mind that the spring force is considerable in shock absorber units and care should be taken to avoid damage or injury when dismantling.

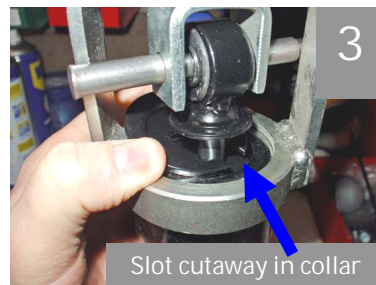
Place the lower end of the unit in a vice, be careful not to damage the paintwork. Compress the shock absorber and withdraw the collets. Photo 1 shows this being done using a shock absorber compressor tool.



If fitted, the spring covers may be removed, along with the main spring (photo 2).

Reassembly of the units is the reverse of this procedure.

Some units (including those used on Electra X and new Efi models) have a single collar, with a radial slot cutaway (see photo 3), rather than two split collets. These are dismantled in a similar way to those just described. The only difference being that a single collar is withdrawn, rather than two collets (see photo 3).



One type of Armstrong style unit uses two springs. These units are a little more complicated than the standard items but the method for dismantling them is the same — once the split collets have been removed the entire unit is easily dismantled.



Some Indian style shock absorbers, offer an attractive and less expensive option to the Hagon units. These are 300 mm long and suitable for many classic bikes, not only Royal Enfields. The components of these units are illustrated in the picture below.



To dismantle these units, a concealed locknut, on the central stud, must first be loosened. The locknut is located under the upper shock absorber shroud, which must be lowered to give access to the locknut.

Grip the lower end of the bottom casting in a vice (using soft jaws and cloth to protect the paintwork). Compress the spring to gain access to the locknut, and with a suitable bar through the eye of the shock absorber and the correct spanner slacken the locknut. The shock absorber may now be dismantled by unscrewing the upper cap. This will allow the components to be easily removed, by lifting the upper shroud, the spring and the lower shroud.

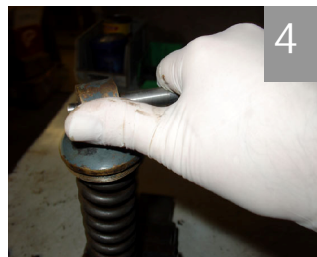
Reassemble by placing the lower shroud on the damper unit, make sure the washer (if fitted) is located in the base of the shroud. Position the spring, tight coils downward, and the upper shroud.

To fit the upper cap onto the central stud, place the unit carefully in a vice, grasp the upper shroud and compress the main spring. Screw the upper cap onto the central stud. This job is easier with an assistant: one person to compress the unit, the other to start the cap on the stud thread. Compress the unit, and tighten the locknut. Before refitting the shock absorbers to the machine, check the condition of the upper and lower bushes and replace if necessary [part number GR/9054/316H, £3.50 each plus postage and VAT].

Finally, we will look at the very early Royal Enfield shock absorbers fitted in the late 40's and early 50's. These differ in many respects from the later designs and are dismantled differently.



Hold the unit in a vice by the lower end of the bottom casting. Insert a bar through the eye in the top casting and unscrew the top casting, normally requiring no more than half a turn clockwise (see photo 4). The spring will remain attached to either the top or bottom of the casting. If the spring is attached to the bottom casting, unscrew the bottom cover tube and unscrew the spring from its scroll, again a half turn in a clockwise direction. The main components can now be laid out for cleaning.



To reassemble the unit, grip the bottom casting in a vice and screw the main spring tightly into the bottom scroll (counter clockwise). Slide the lower cover over the spring, slide the upper cover over the lower cover. Insert the inner main tube in the spring. With a suitable bar through the top bush eye, screw the spring tightly into the upper scroll (counter clockwise). Screw the upper and lower covers in position.

Unlike the previously mentioned shock absorbers, the damper units in these can be dismantled (unfortunately parts are no longer available off the shelf). The thorough servicing of these units is an involved job, beyond the scope of this article, please see the comprehensive guide in the Workshop Maintenance Manual for 1949-55, Bullets (section H1 pages 2—5).

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