

How to Check the Clutch Rubbers

Many clutches on Burman gearboxes have rubber pads in which the sprocket is mounted floating. They act as a buffer between the sprocket and the clutch. So the clutch basket, which holds all clutch plates, is actually separate from the drive sprocket and has six holes, each with a rubber washer under a metal cap. The basket and the sprocket are held together by pins that go through the middle of the rubber discs, but they are not locked. As the engine torque is applied, the sprocket first moves relative to the basket, compressing the rubber discs which then transmit the movement to the clutch basket and drive train.



All clutch plates must first be removed for inspection. The basket/sprocket assembly is then disconnected. To do this, a lock washer must be removed and a large 26mm nut loosened with a socket wrench. **Caution:** If the clutch assembly is then pulled out, 24 bearing rollers will fall out. In order not to lose the rollers, one should catch them with a tray underneath (I took a baking tray).



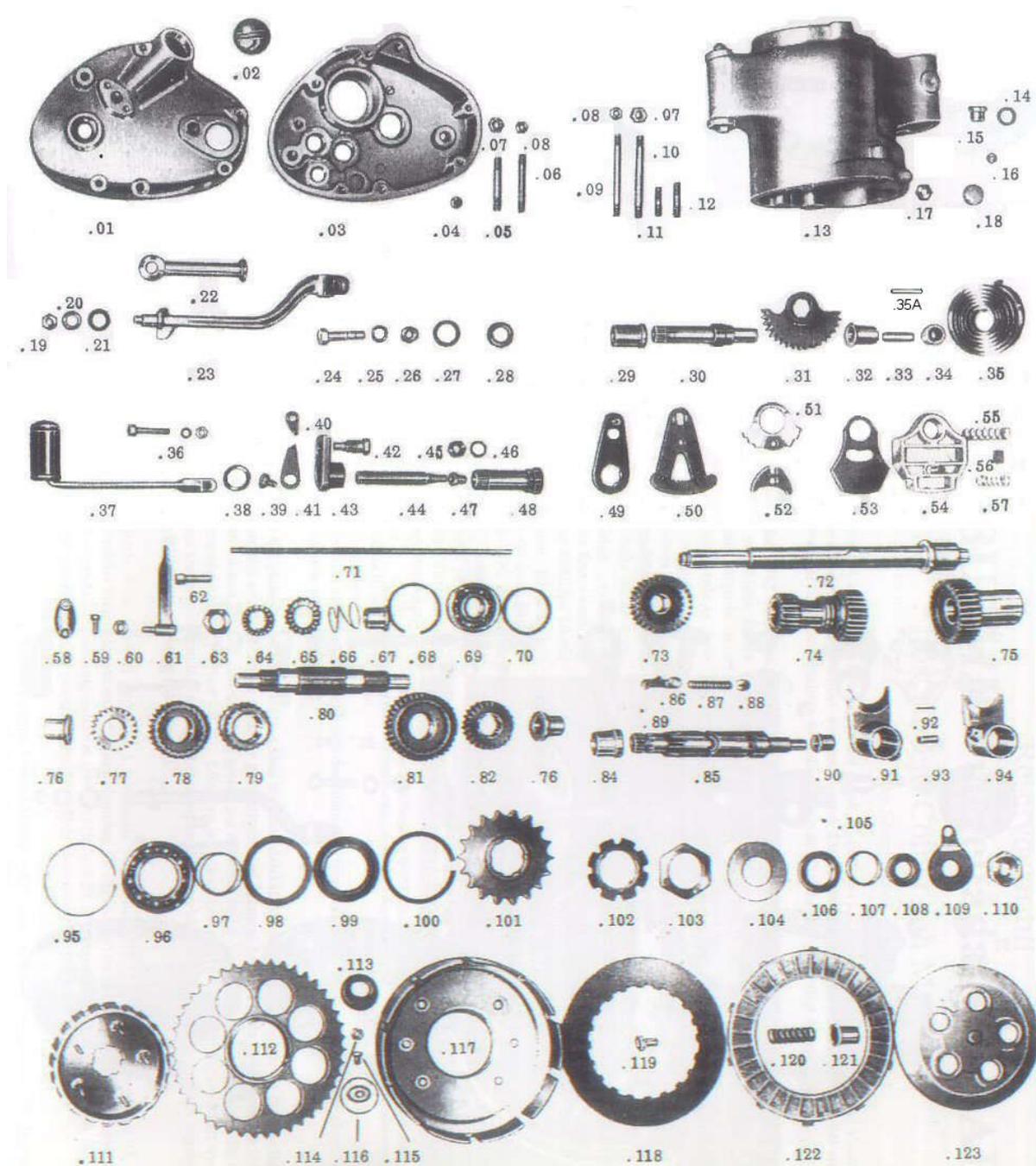
The rollers can be reassembled later with grease to hold them. If one turns the basket/sprocket unit upside down, the rubbers can be found in corresponding holders under metal plates with elliptical recesses for the nuts. The nuts are normally held by grit holes that widen the bolt head. This is important to prevent the nuts from coming off during driving, which would have fatal consequences. When reassembling the bolt, either one puts a new punch with a center punch or one uses Loctide.

The rubbers should not be squeezed out anywhere or be soft, and one should check if the basket/sprocket is prevented from rotating when moved firmly by hand - everything should feel solid. To put the rollers back in place one can "glue" them with grease. Then everything can be reassembled.



The individual parts can be found here under part numbers 113 – 116.

The entire parts list is at http://thevincent.com/Comet_G97_Burman.html



SHOCK ABSORBER.

In some Burman Gear Boxes no Shock Absorber is fitted, but the majority are so fitted in such a way that the drive is transmitted from the Chainwheel to the Clutch through rubber buffers. These, while being perfectly rigid laterally, allow a radial movement of approximately $\frac{3}{8}$ " , which absorbs any ordinary harshness. They are made of special oil resisting rubber and the diagrams giving section arrangements of the Clutch show the method of attachment and also the dished recesses into which the compressed rubber can expand, thus preventing any crushing and destruction of the buffers. It should be mentioned that although, for the sake of uniformity, a number of holes are drilled round the Chain Wheel to allow for the fitting of these buffers, they are not necessarily all used; thus, it is quite in order to find three, four, six or eight shock absorber buffers in varying types of Clutch, the smaller Clutches having the smaller number of buffers, and the larger Clutches the larger number so as to absorb more effectively the larger power transmitted. It is, therefore, quite in order that in some cases all the holes should not be filled with buffers and empty spaces should not necessarily be taken as indicating that they have been omitted or lost.

