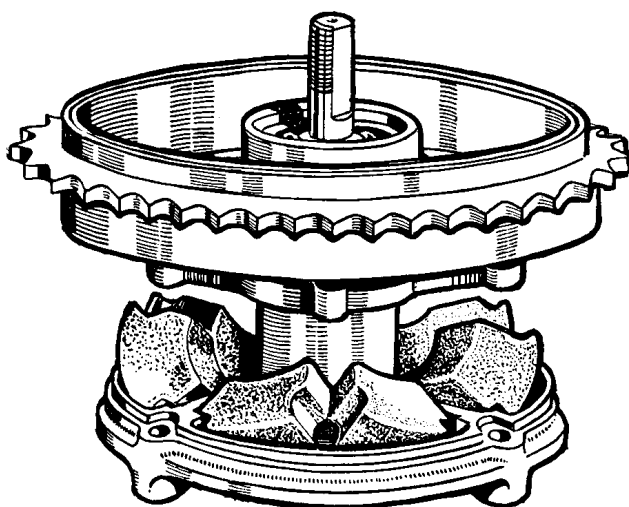


movement of the sprocket/brake drum relative to the hub barrel and transmitting both driving and braking torques and smoothing out harshness and irregularity in the former.

If the cush drive rubbers become worn so that the amount of free movement measured at the tyre exceeds  $\frac{1}{2}$  in. to 1 in., the rubbers should be replaced. To obtain access to them remove the complete wheel as described above; then unscrew the loose section of the spindle completely. The main portion of the wheel can then be lifted away from the assembly consisting of the fixed portion of the spindle, sprocket/brake drum complete with brake and the cush drive shell. Now remove the brake cover plate complete with brake shoes as described above, and unscrew the three nuts at the back of the cush drive shell after bending back the locking washers. The three studs are brazed to the lockring and should be driven out of the cush drive shell, each a little at a time to avoid distorting the lockring or bending the studs. The sprocket/brake drum can now be separated from the cush drive shell and the six such drive rubbers lifted out.

When reassembling the cush drive the entry of the vanes between the rubbers will be facilitated if the latter are fitted into the driving shell first and then tilted. The rubbers should be liberally smeared with soapsuds to facilitate entry of the vanes. Grease the inner face of the lockring before assembling and tighten the three nuts down solid as there is a shoulder on the stud which prevents tightening of the nuts from locking the operation of the cush drive. Do not forget to bend up the tabs of the three locking washers.

When reassembling the cush drive, coat the inside of the bore of the sprocket/brake drum liberally with grease where it fits over the hub barrel.



REASSEMBLY OF CUSH DRIVE

Fig. 46

#### 143. Removal of Ball Bearings

To remove the ball bearings take the complete wheel out of the machine and separate the main portion of the wheel from the sprocket/brake drum cush drive shell assembly as described above. To remove the bearing from the sprocket/brake drum, first remove the brake cover plate complete with brake shoe assembly; then remove the distance collar and unscrew the bearing retaining ring with a peg spanner. Now screw the loose section of the spindle into the fixed section and drive out the bearing by hitting the hexagon-headed end of the loose section of the spindle.

To remove the bearings from the loose half of the hub barrel, first lift away the distance collar, speedometer drive gearbox, the spacing collar and the felt washer. Remove the bearing retaining circlip from the driving sprocket end of the barrel. Between the two bearings is a spacer, slotted at one end to enable a drift to be used on the bearing at that end. Remove this bearing first, then enter the loose section of the spindle into the spacer and drive out the remaining bearing by means of a hammer and drift applied to the hexagon-headed end of the spindle.

#### 144. Hub Bearings

These are deep-groove single-row journal ball bearings. The sprocket/brake drum bearing is a Skefko RLS7,  $\frac{7}{8}$  in. i/d, by 2 in. o/d, by  $\frac{9}{16}$  in. wide. Equivalent bearings of other makes are Hoffmann LS9, Ransome & Marles LJ  $\frac{7}{8}$  in., and Fafnir LS9. The two bearings in the hub barrel are Skefko RLS5,  $\frac{5}{8}$  in. i/d, by  $1\frac{9}{16}$  in. o/d, by  $\frac{7}{16}$  in. wide. Equivalent bearings of other makes are Hoffman LS7, Ransome & Marles LJ  $\frac{5}{8}$  in. and Fafnir LS7. Bearings with slack fitting internal clearances marked "C3," "000" or "\*\*\*\*" should be specified.

#### 145. Fitting Limits for Bearings

The fit of the bearings in the hub barrel and sprocket/brake drum is important. The following are the manufacturing tolerances which control this and also the fits on the fixed and loose portions of the wheel spindle.

RLS5 Bearing o/d	....	1.5622/1.5617 in.
Hub Barrel bore	....	1.5620/1.5616 in.
RLS5 Bearing bore	....	.6252/.6248 in.
Loose Spindle dia.	....	.624/.622 in.
RLS7 Bearing o/d	....	1.9995/1.9990 in.
Sprocket bore	....	1.9994/1.9990 in.
RLS7 Bearing bore	....	.8752/.8748 in.
Fixed Spindle dia.	....	.8749/.8745 in.

All inner races are locked in position when the spindle nuts are tightened. The outer race of the RLS7 bearing is located by a screwed retaining ring and one of the RLS5 bearings is located by a circlip. Axial movement of the sprocket and/or barrel is therefore not possible. We recommend "Loctite" Sealant Grade C to secure any outer races which appear to have been rotating.