

# **SERVICE SHEET No. 706**

## **TELESCOPIC FORKS**

### **'A', 'B' AND 'M' GROUP, C10, C11G AND C12 MODELS**

Of robust design B.S.A. telescopic forks require the minimum of maintenance it being necessary only to replenish the oil occasionally between major overhauls.

For normal use each fork leg should contain a quarter pint of oil (142 c.c.) or three-eighths of a pint (213 c.c.) according to model as detailed below.

#### **Quarter-pint Capacity**

Models C10, C10L (1956 onwards), C11, C11G, C12, B31-33 (up to 1956), B32-34 and Gold Stars (up to 1952), M20, M21, M33, 'A' Group (up to 1952).

#### **Three-eighth Pint Capacity**

Models B31-33 (1956 onwards), B32-34 and Gold Stars (1952 onwards), 'A' Group (1952 onwards).

#### **Oil Changes**

To replenish the oil remove the drain plugs at the base of the fork tubes and remove the fork top nuts. Allow the oil to drain off. Replace the plugs and pour either a quarter or three-eighths pint of oil into the hollow tubes revealed when the top plugs are removed.

#### **Dismantling**

Before beginning to overhaul the forks have the following tools and replacement parts available in case they are required:—

|             |  |
|-------------|--|
| 61-3001     | Fork top nut spanner.                      |
| 61-3003     | Fork plug spanner.                         |
| 61-3005     | Oil Seal holder assembly tool.             |
| 61-3006     | Oil seal extractor.                        |
| 61-3007     | Oil seal assembly tool.                    |
| 61-3350     | Fork leg assembly and removal tool.        |
| 29-5334     | Packing shim (.005 in.).                   |
| 29-5335     | Packing shim (.010 in.).                   |
| 29-5336     | Packing shim (.020 in.).                   |
| 29-5337     | Packing shim (.030 in.).                   |
| 65-5424 (2) | Fork top bush ('A' and 'B' Group).         |
| 29-5347 (2) | Fork bottom bush ('A', 'B', C11G and C12). |
| 29-5346 (2) | Fork top bush (C10L, C11G and C12).        |
| 29-5313 (2) | Fork oil seal (all models).                |
|             | Number 5 twine (approx 18 in.).            |

**B.S.A. Service Sheet No. 706 (contd.)**

Remove the front wheel and front mudguard. Take out the fork top cap (A) Fig. X1, screw service tool part number 61-3350 into the thread at the top of the fork shaft using the larger of the fine threads.

Slacken off the pinch bolt (B) Fig. X1.

Take a firm grasp of the lower fork sliding tube and strike the top of the tool smartly with a hammer. This will release the shaft from its taper and the complete fork leg can be drawn down and removed from the machine.

Repeat the operation on the other leg.

To dismantle the lower section of the fork hold the fork sliding tube by gripping the wheel spindle lug in a soft-jawed vice and lift off the spring (see Fig. X2).

Enter service tool part number 61-3005 until the dogs on the tool engage in the slots at the bottom of the oil seal holder (D) Fig. X2. Pressing the tool down and turning at the same time unscrew the oil seal holder. Slide the holder up the shaft until it becomes tight on the tapered section of the shaft. Do not use excessive force or the oil seal may be damaged.

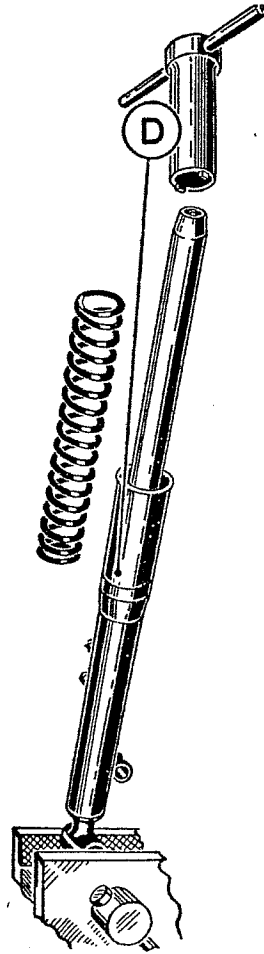


Fig. X2.

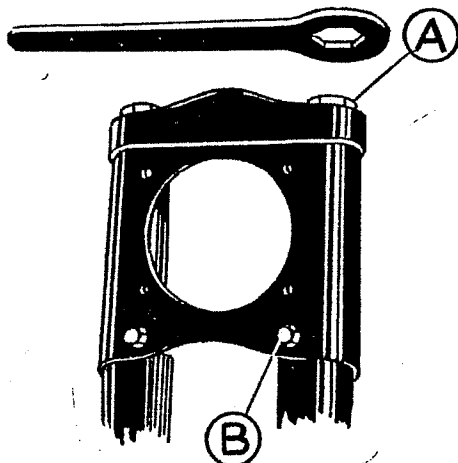


Fig. X1.

The top fork bearing is retained in the fork leg by a circlip (E) Fig. X3, which can be prised out with a sharp tool such as the tang end of a file. There may be a number of shims fitted between the circlip and the top bearing. These must be replaced if the bushes are not renewed when assembling.

Grip the shaft in a vice using soft-jaw clamps on the unground portion of the shaft and unscrew the gland nut (F) Fig. X4. Service tool part number 61-3003 is designed for this purpose. Remove the gland nut which secures the lower bearing and both bearings, shims, circlip and oil seal holder will then slide off the shaft.

B.S.A. Service Sheet No. 706 (contd.)

If it is necessary to remove the oil seal place the lower edge of the holder on a soft wooden block and enter service tool part number 61-3006 into the top of the holder. Give this tool a sharp tap with a hammer and the oil seal will be driven out.

**Reassembly**

Reassembly is carried out in the reverse order. Cleanliness is essential and before attempting to reassemble clean all parts thoroughly and clean down the bench on which the forks have been dismantled.

If the oil seal is to be replaced care must be taken that the feather edge of the seal is not damaged. Enter the oil seal (*I*) Fig. X6 into the holder, metal part first, and drive home using B.S.A. service tool part number 61-3007 (*H*) Fig. X6. Place the oil seal holder over the shaft and pass it up the shaft until it is firmly held on the tapered section. Do not use excessive force or the oil seal may be damaged. Place the circlip over the shaft followed by the shims and top bearing and then the bottom bearing. Place the steel washer over the thread of the gland nut, screw up the gland nut and holding the shaft firmly in a soft-jawed vice as described in dismantling procedure firmly tighten the gland nut.

Place the lower sliding tube in a vice and enter the fork shaft with parts assembled into the lower sliding tube. Fit the circlip and check for up and down movement on the

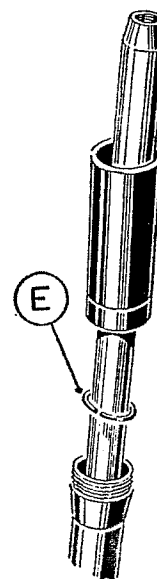


Fig. X3.

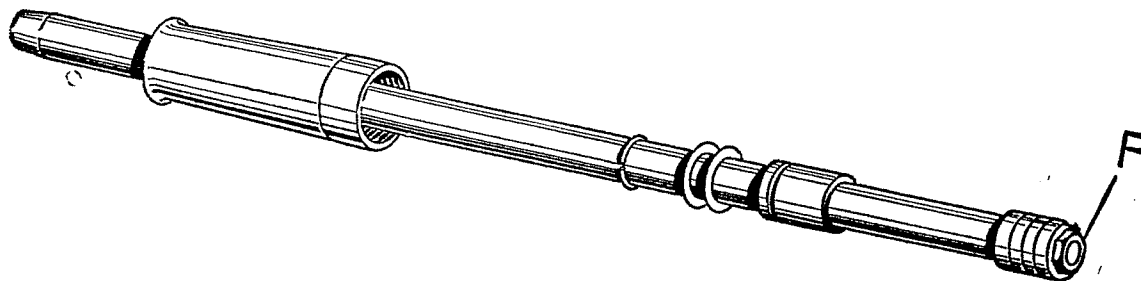


Fig. X4.

top bush. If a new bush has been fitted it may be necessary to add to, or take from, some of the existing shims. Packing shims are available in the following sizes:—

|          |                     |
|----------|---------------------|
| .005 in. | Part Number 29-5334 |
| .010 in. | Part Number 29-5335 |
| .020 in. | Part Number 29-5336 |
| .030 in. | Part Number 29-5337 |

If the bush is not properly shimmed a tapping noise may be heard when the machine is ridden.

Having shimmed up the bush correctly and fitted the circlip firmly in position, screw down the oil seal holder and take one turn of number five twine around the base of the thread to provide an additional seal. Screw down the oil seal firmly using B.S.A. service tool part number 61-3005.

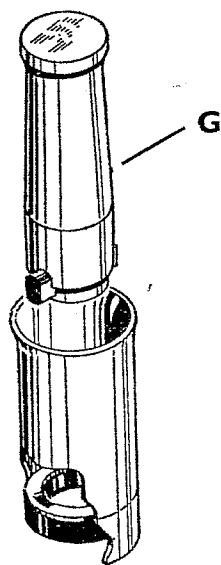


Fig. X5.

To fit the main tubes to the fork yokes screw B.S.A. service tool part number 61-3350 into the top of the tube and pass it up through the two yokes, then fit the collar and nut and draw the tube firmly home into the yokes. When the tube is fully home the pinch bolts on the lower yoke should be tightened. The tool may then be removed and after filling the legs with the correct amount of oil the top plugs can be replaced and fully tightened. Finally slacken the pinch bolt, position the top outer shroud centrally over the lower leg. Check that the top nuts are completely tight and retighten the pinch bolts.

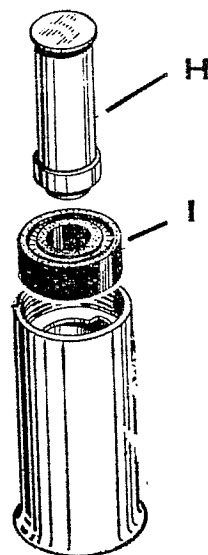


Fig. X6.