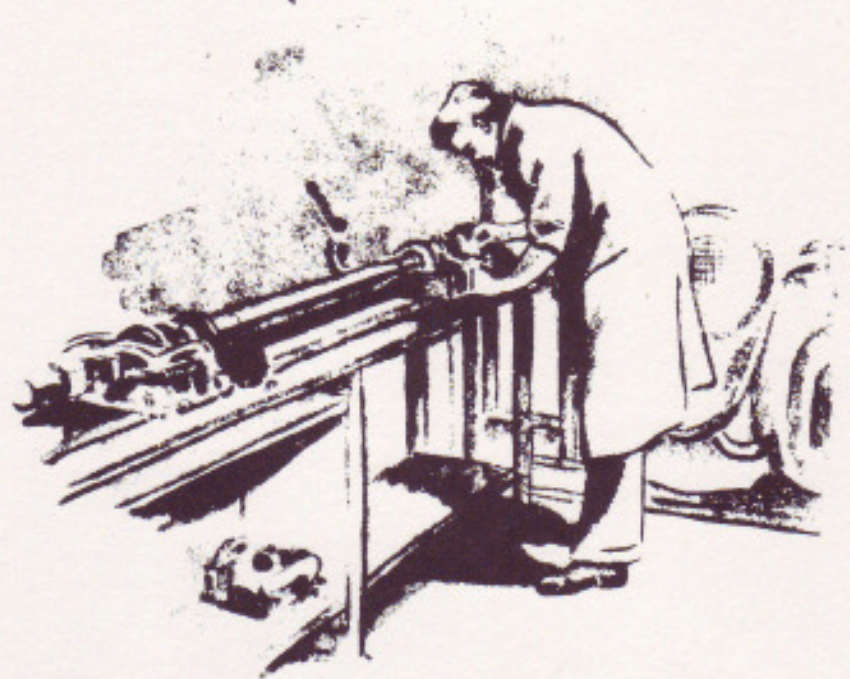




**PROPELLER SHAFT**

**UNIVERSAL JOINTS**





SECTION H

PROPELLOR SHAFT AND UNIVERSAL JOINTS.

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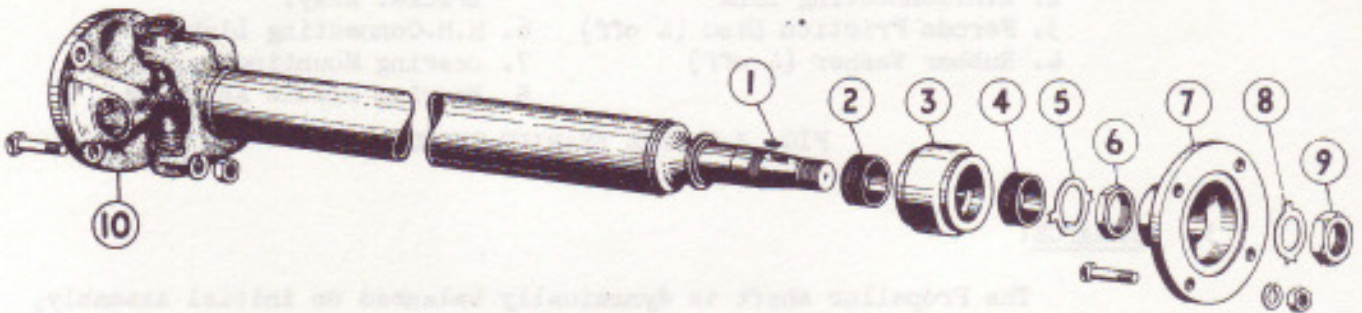
PROPELLOR SHAFT AND UNIVERSAL JOINTS.

1. GENERAL.

The propellor shaft is divided, having a spring mounted centre bearing and three needle-roller universal joints. Figures 1,2 and 3 show exploded views of each component.

2. MAINTENANCE.

Grease nipples are provided at each universal joint and at the sliding joint. A flow type grease should be injected every 5,000 miles.



- |                    |                           |
|--------------------|---------------------------|
| 1. Woodruff Key    | 6. Bearing Retaining Nut  |
| 2. Grease Retainer | 7. Centre Coupling Flange |
| 3. Centre Bearing  | 8. Lockwasher             |
| 4. Grease Retainer | 9. Flange Retaining Nut   |
| 5. Lockwasher      | 10. Front Coupling Flange |

FIG. 1 FRONT SHAFT WITH CENTRE BEARING 'EXPLODED'

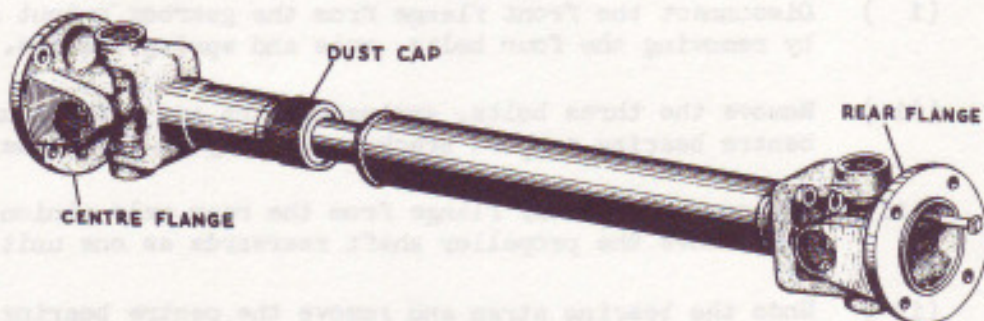
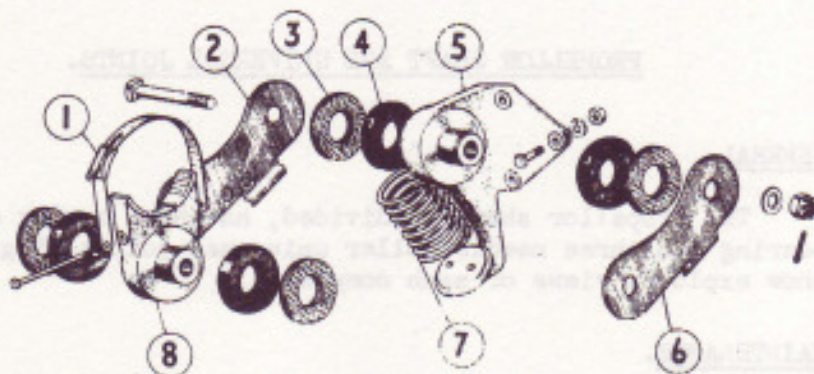


FIG. 2 REAR SHAFT





- |                                 |                                  |
|---------------------------------|----------------------------------|
| 1. Bearing Strap                | 5. Bearing Support Bracket Assy. |
| 2. L.H. Connecting Link         | 6. R.H. Connecting Link          |
| 3. Ferodo Friction Disc (4 off) | 7. Bearing Mounting Spring       |
| 4. Rubber Washer (4 off)        | 8. Bearing Cradle Assembly       |

FIG. 3 CENTRE BEARING SUPPORT

3. BALANCE:

The Propellor shaft is dynamically balanced on initial assembly, drillings being made as necessary in the flanges. It is recommended that whenever the universal joints are overhauled or undue vibration is experienced, the shaft should again be checked for dynamic balance. Retailers in the British Isles are advised that the London Service Station has the necessary equipment and will carry out this work for them if required.

4. TO REMOVE THE PROPELLOR SHAFT.

- (i ) Disconnect the front flange from the gearbox output shaft flange by removing the four bolts, nuts and spring washers.
- (ii ) Remove the three bolts, spring washers and nuts securing the centre bearing support bracket assembly to the frame.
- (iii) Disconnect the rear flange from the rear axle pinion flange and remove the propellor shaft rearwards as one unit.
- (iv ) Undo the bearing strap and remove the centre bearing support.





## 5. TO DISMANTLE.

In order to preserve balance, parts should be marked on dismantling so that they may be reassembled in the same relative positions. Do not strip the universal joints unless replacement is necessary as the joints cannot be stripped without damaging the oil seals.

- (i ) Mark the centre flanges and disconnect the front shaft from the rear shaft.
- (ii ) Undo the retaining nut on the front shaft, mark the flange and shaft and withdraw the flange. Collect the two woodruff keys.
- (iii ) Remove the retaining nut and the grease retainer and press off the bearing assembly (3 Fig.1).
- (iv ) Remove the circlips and force out the bearing races by tapping on the yoke with a hide mallet.
- (v ) Unscrew the dust cap on the rear shaft and slide off the front universal joint, marking the splines to ensure correct angular replacement.

## 6. TO REASSEMBLE.

Reassembly is the approximate reverse of dismantling but the following points should be noted.

- (i ) The bearing assembly should be a light press fit on the rear end of the front shaft. A new shaft should be fitted if it is loose. Similarly a new shaft assembly should be fitted if the bearing races are loose in the yokes.
- (ii ) When renewing the universal joints the spiders should be positioned so that all the grease nipples are in line, for ease in subsequent maintenance. The bearing races should be lightly packed with grease.
- (iii ) Reassemble in accordance with the markings made on dismantling to ensure that the balance is preserved.

## 7. TO REFIT THE PROPELLOR SHAFT.

Refitting is the approximate reversal of removing.