

SPRING RING SYNCHRO-MESH

Description

To ensure a positive, quiet and smooth gear change, the synchro-mesh action operates on all forward gears and the spring ring detent operation on 2nd, 3rd and top gears only.

The synchro-mesh operating sequence is the same as for the other type.

The spring ring synchro-mesh consists of a split ring fitted into an annular groove in the sliding sleeve which, with gear engagement, is carried across to engage in an annular detent in the outer diameter of the hub at the "in gear" position.

Parts used in both types of synchro-mesh are not fully interchangeable so care will be needed to ensure that the two types are not mixed.

Certain cars with the original type synchro-mesh have been fitted with a spring ring type sliding sleeve. These assemblies can be dismantled or reassembled using the following method.

To dismantle spring ring synchro hubs

The synchro hub assembly can be dismantled by smartly pushing the hub through the sliding sleeve, taking care to retain the three shifting plates, two circlips and the spring ring.

Ensure that each synchro hub and sliding sleeve is kept together in matched pairs and that they are reassembled in the same position as they were dismantled.

This procedure applies to both hubs.

To examine

Ensure that the short leg on the end of the shifting plate circlip is not butting on the base of the shifting plate. Where necessary, carefully grind off part of the short leg sufficient to ensure a small gap at position X in Fig. 64.

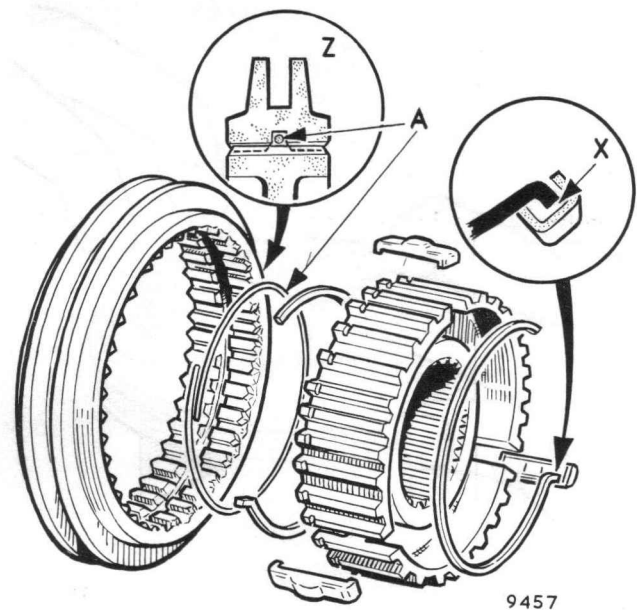


Fig. 64. Synchro hub assembly

Check the fit of each sliding sleeve on the hub. The sleeve should slide freely, but must not tilt on the splines.

Check the condition of the chamfers on the sliding sleeve internal teeth, each face should be flat and free from burrs.

See that the hub teeth do not foul the roots of the sliding sleeve teeth. If contact is made, the tops of the teeth on the hub should be carefully stoned until a clearance is obtained.

See that in each set of three shifting plates, all are the same length and have an identical top profile.

Replace any shifting plate circlips that are weak or show signs of wear at the contact faces with the shifting plates.