Inspection

1. Inspect pinion (especially teeth) for wear and damage. Make sure that both parts have the same set number.
2. Inspect roller bearing and double-row ball bearing. Replace if necessary.
3. Inspect gears for wear and damage. If necessary replace (2nd, 3rd and 4th gear in pairs only).
4. Inspect all synchronizing parts for wear.

Determining Shims

4 RA

Provisional determination of shims between roller bearing and thrust washer for 1st gear on pinion shaft.

For differential ring and pinion ratio 7:31 the **setting dimension** is etched either into the face of the pinion or the outside of the ring gear. This dimension gives the correct distance R between the centerline of the differential drive and the face of the pinion when assembled (Fig. 52).

The basic size for the dimension R, before fitting shims, is given as 59.80 mm (2.354 in.) for the gear ratio 7:31.

The difference between this basic size and the setting dimension marked on the gears has to be made up with shims. The shims are available in thicknesses of 0.10 mm, 0.15 mm, 0.30 mm. These shims are placed between the roller bearing inner race and the thrust washer for the 1st gear.

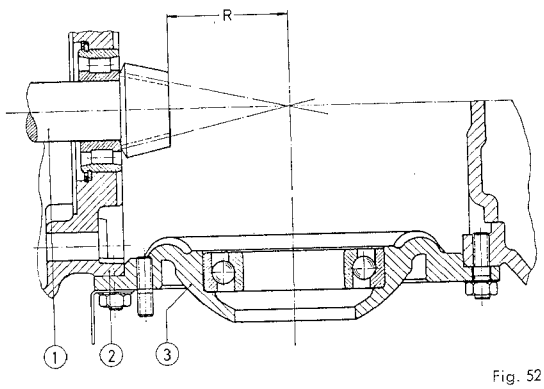

Fig. 52

Example (gear ratio 7:31)

Basic dimension	59.80 mm
Setting dimension	59.25 mm
Difference	0.55 mm
Shims required:	1 shim 0.30 mm
	1 shim 0.10 mm
	1 shim 0.15 mm

Use the next larger size for shim values above 0.05 mm.
Use the next lower size for shim values below 0.05 mm.

The shim combination is best chosen in such a manner that it is possible, in case additional adjustment is required, to add or substract the smallest possible value of 0.05 mm by a change of one shim.

Note

For the foregoing determination of the required shims, it is advisable to assume the basic dimension too high rather than too low, i. e. to fit too thick a shim pack rather than too thin, since an error on the plus side can be corrected by installing gaskets at the intermediate plate. Removal from the intermediate plate and dismantling of the pinion subassembly can thus be avoided.

R = Distance between centerline of differential and face of pinion

① Pinion and shaft
② Transmission housing
③ Differential cover plate, left side