

SPECIAL NOTE FOR INSTALLING #0427 OR #0547 TAIL ROTOR GEARS IN ALL X-CELL OR XL-PRO HELICOPTERS.

Four .005" (.12mm) shims are provided for adjusting the gear mesh. In most cases none will be required, however in some cases 1 or 2 per gear may be necessary to achieve optimal gear mesh.

The set-up procedure is as follows:

1.) Trial fit all components (without shims) and assemble gear box with a couple of the #0025 screws. To be accurate, it is necessary to insert the transmission into the tailboom each time you wish to check gear mesh. This is because the boom will slightly compress the transmission case.

Each shaft assembly should be individually test fitted with each transmission case in place to check for end-play and excessive bearing loads. The former is caused by the gear being set too far from the bearing or spacer and the later is from too much spacing causing the assembly to "snap" into place in the transmission.

2.) If it is determined that shims are required, trial fit one-at-a-time (never exceeding two in any one location) to optimize gear backlash. The above procedures must be adhered to each time a shim is tested (to avoid end play or bearing pre-load).

By examining the drawing you will see that only two positions are acceptable for shimming. Position (A) is behind the bearing nearest the gear on the input shaft and next to the stepped area of the transmission. Position (B) is outside the bearing on the output shaft but inside the flange of the transmission case.

The most desired gear mesh will be that of minimum backlash, even the point of having slight interference during rotation. This condition will "Break-in" during the first few flights. As with any similar system, we always recommend a through check over after the first 20 - 30 flights to ensure good mesh and change to new grease (to remove any break-in debris).

