## SPRING FREE LENGTH

Measure the damper spring free length.

**SERVICE LIMIT: 63.8 mm (2.512 in)** 

Replace it if it is shorter than the service limit.



Place the output gear case in a vise with soft jaws or a shop towel.

Set a horizontal type dial indicator on the final drive shaft as shown.

Hold the driven gear with the shaft holder and rotate the drive shaft until gear slack is taken up.

Turn the drive shaft back and forth to read back-lash.

STANDARD:

0.08-0.23 mm

(0.003-0.009 in)

SERVICE LIMIT: 0.40 mm (0.016 in)

Remove the dial indicator. Turn the output drive shaft  $120^{\circ}$  and measure backlash. Repeat this procedure once more.

Compare the difference of the three measurements.

## DIFFERENCE OF MEASUREMENTS SERVICE LIMIT: 0.10 mm (0.004 in)

If the difference in measurements exceeds the limit, it indicates that the bearing is not installed squarely. Inspect the bearings and reinstall if necessary.

If backlash is excessive, replace the drive shaft adjustment shim with a thinner one.

If the backlash is too small, replace the drive shaft adjustment shim with a thicker one.

Backlash is changed by about 0.06-0.07 mm (0.002-0.003 in) when thickness of the shim is changed by 0.10 mm (0.004 in).

## COUNTERSHAFT/OUTPUT DRIVE GEAR ADJUSTMENT SHIMS:

A: 0.40 mm (0.016 in)

B: 0.45 mm (0.018 in)

C: 0.50 mm (0.020 in) Standard

D: 0.55 mm (0.022 in)

E: 0.60 mm (0.024 in)





