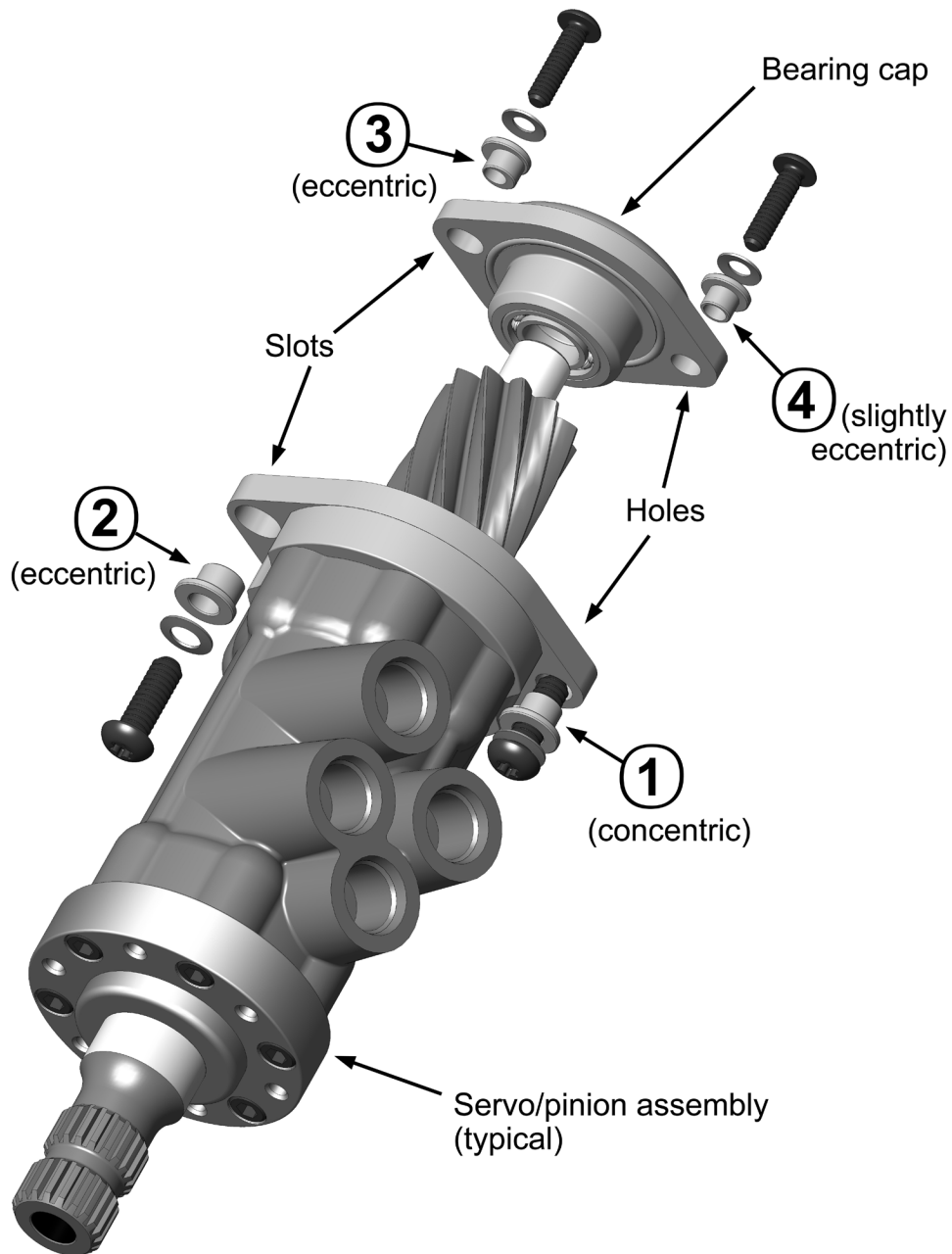
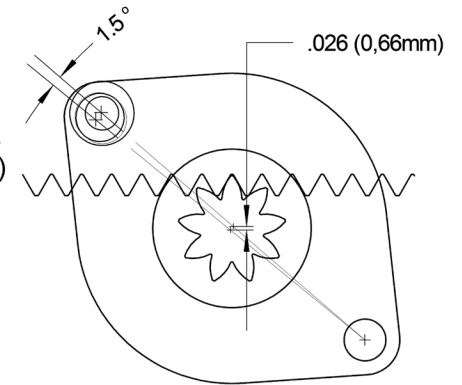


Adjusting gear backlash in type CF steering racks



Range of eccentrics
=.026 inch (0,66mm)
measured at
center of pinion



Procedure:

(Servo/pinion and bearing cap removed)

1. Loosen the snubber so the rack will slide freely (the snubber is a backstop for the rackshaft and is not used to adjust backlash).
2. Install concentric bushing 1 with its screw and spring washer. Leave it loose enough to allow the servo and pinion to pivot around it.
3. Pivot the pinion into mesh with the rack teeth. While holding these parts together, twist the rackshaft both ways to align the rack teeth with the pinion teeth. Test for backlash by turning the pinion with a suitable tool.
4. When you have found a position where the backlash is removed, tighten the screw more firmly in bushing 1 and install eccentric bushing 2. Rotate bushing 2 in the slot until its hole is in alignment and the screw will start without interference.
5. Tighten the screws in both 1 and 2 and test the backlash by turning the pinion. If the pinion will not turn smoothly your adjusted position is too tight. Remember, the purpose of backlash in gears is to allow them to operate with minimum friction. Preload must be avoided. If the gears are preloaded the sensitivity of the steering will be reduced.
6. Apply some grease or anti-seize compound to the nose of the pinion and install the bearing cap. Make absolutely sure the slot for bushing 3 is on the same side as the slot with bushing 2. Rotate bushings 3 and 4 until their screws will start without interference.
7. Installing the bearing cap should not affect your adjustment. If it makes the pinion too tight, you used too much force when holding the pinion against the rack. Simply loosen the screws, take out the eccentric bushings and repeat the exercise.