

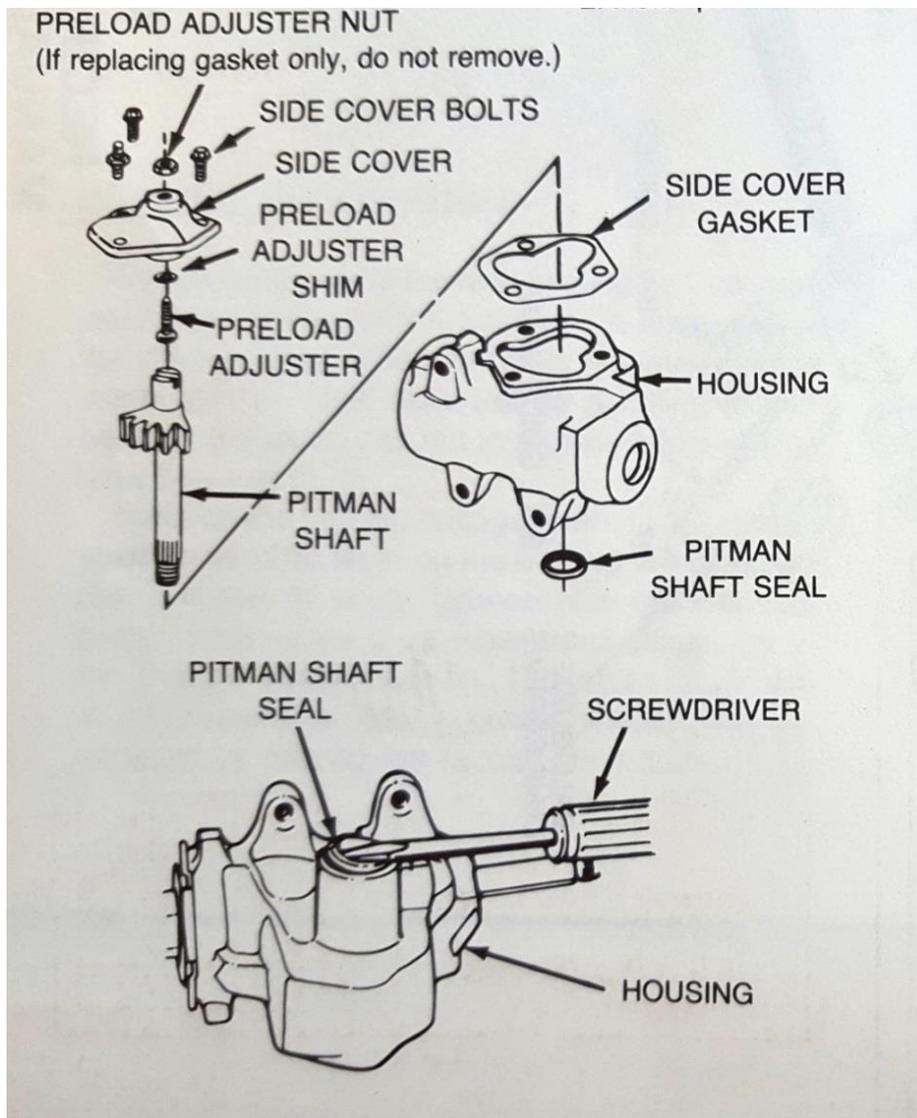
BORGESON

Steering You Forward

Chevy Manual Steering Gear Rebuild Instructions

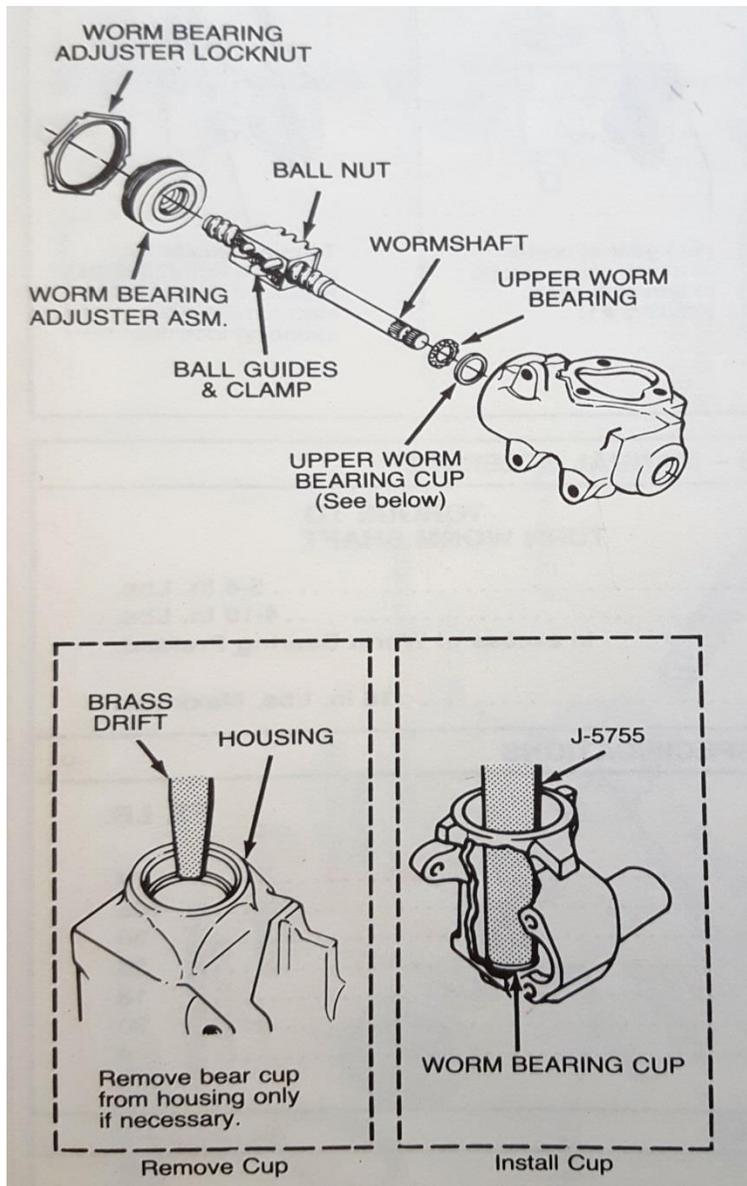
Disassembly of pitman shaft from housing:

- 1) Center steering gear. Pitman shaft will not be able to be removed without the steering gear in its center position.
- 2) Remove the pre-load adjuster lock nut and remove three bolts from side cover. Gently tap on splined end of pitman shaft and remove pitman shaft and side cover as one form the steering gear. Remove side cover gasket from housing.
- 3) Remove lock nut from preload adjuster on the side cover. Thread the preload adjuster through the side cover to remove from the pitman shaft.
- 4) With a screw driver remove the old pitman shaft seal from the housing.



Disassembly of worm shaft and ball nut from housing:

- 1) With a punch against the edge of existing slots loosen lock nut and remove from the worm bearing adjuster assembly.
- 2) With the proper socket for your application remove the worm bearing adjuster assembly.
- 3) Gently tap on the input shaft of the gearbox to remove the complete worm assembly and upper worm bearing from the housing.
- 4) Use a screw driver to pry input shaft seal from housing then use a brass drift working evenly around the edge of the upper bearing cup to remove it from the housing.
- 5) With a screwdriver pry up and remove lower worm bearing retainer from worm bearing adjuster and remove lower worm bearing. Remove lower worm bearing cup with a bearing puller and slide hammer.
- 6) Corvette and 55-57 steering gears have two bushings in the housing. The rebuild kits for these gears will include new bushings. Use a bushing removal tool to remove the old bushings from the housing.
- 7) Completely clean housing of all old grease and debris to prepare for assembly.



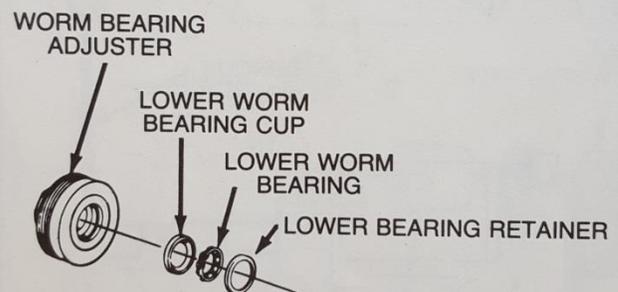
4. DISASSEMBLE AND ASSEMBLE WORM BEARING ADJUSTER

DISASSEMBLE

1. Pry lower bearing retainer out with screwdriver
2. Remove cup using J- 5822 puller and slide hammer.

ASSEMBLE

1. Press cup into adjuster using J-5755.
2. Install parts as shown.



Assembly of worm shaft and ball nut in housing:

- 1) If you are rebuilding a Corvette or 55-57 Chevy steering gear install new bushings into housing with proper bushing installation tools.
- 2) With a 1" socket tap the input shaft seal into the housing until it is fully seated.
- 3) Prepare worm bearing adjuster by pressing in new bearing cup. Pre-grease bearing and place in cup. Press in lower bearing retainer to securely hold the lower bearing in the worm adjuster assembly.
- 4) Prepare housing by installing the upper worm bearing cup.
- 5) Pre grease the upper worm bearing and slide over the input of the worm assembly. Install worm shaft and ball nut assembly into steering gear. Be sure the gear teeth are pointed toward the pitman shaft opening in the housing. Use a liquid pipe sealant and install and tighten the worm bearing adjuster until it bottoms out and then loosen one quarter turn.
- 6) **Setting the worm assembly pre-load.** Carefully turn the input shaft of the worm assembly all the way to the end of travel and then turn back one half turn. With an 11/16" socket and torque wrench on the input shaft tighten the worm adjuster assembly until the torque wrench reads 5-8 in.-lbs.
- 7) Once proper worm assembly pre-load is established install lock nut on to worm adjuster assembly and tighten the lock nut using a punch against the edge of the slots.

Installing Pitman shaft Into housing:

- 1) With an 1-1/8" socket tap the pitman shaft seal into position in the housing until fully seated.
- 2) Install pre-load adjuster shim over pre-load adjuster and insert into t-slot on the top of the pitman shaft.
- 3) Center worm assembly in the steering gear housing. Pre-grease the pitman shaft and insert into the housing making sure to line the center tooth of the pitman shaft with the center of the worm assembly.
- 4) At this time, fill the steering gear with 11oz. of lithium complex EP-2 grease. **Do not overfill** the steering gear as the worm assembly moving back and forth generates pressure and an over greased gear will blow out the seals.
- 5) Thread side cover assembly on to pre-load adjuster of pitman shaft until the side cover sits flush to the top of the steering gear and bolt the side cover to the top of the steering gear.
- 6) **Setting over center pre-load.** Back off pre-load adjuster until it stops and then turn it in one full turn. With the steering gear in its center position use an 11/16" socket and torque wrench on the input shaft to check the torque required to turn the input shaft. **(Torque reading #1)** Tighten the pre-load adjuster until the torque required to turn the input shaft through center is **4-10 in.-lbs. higher than your initial torque reading.**
- 7) Install and tighten the pre-load adjuster lock nut to 25 ft.-lbs. be sure to hold the lash adjuster so you do not change your setting while tightening the lock nut.