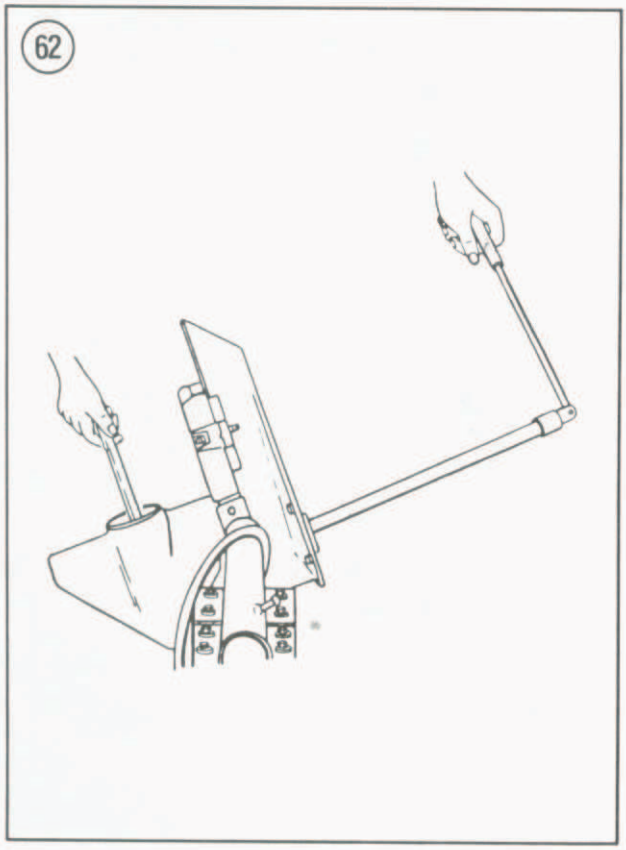
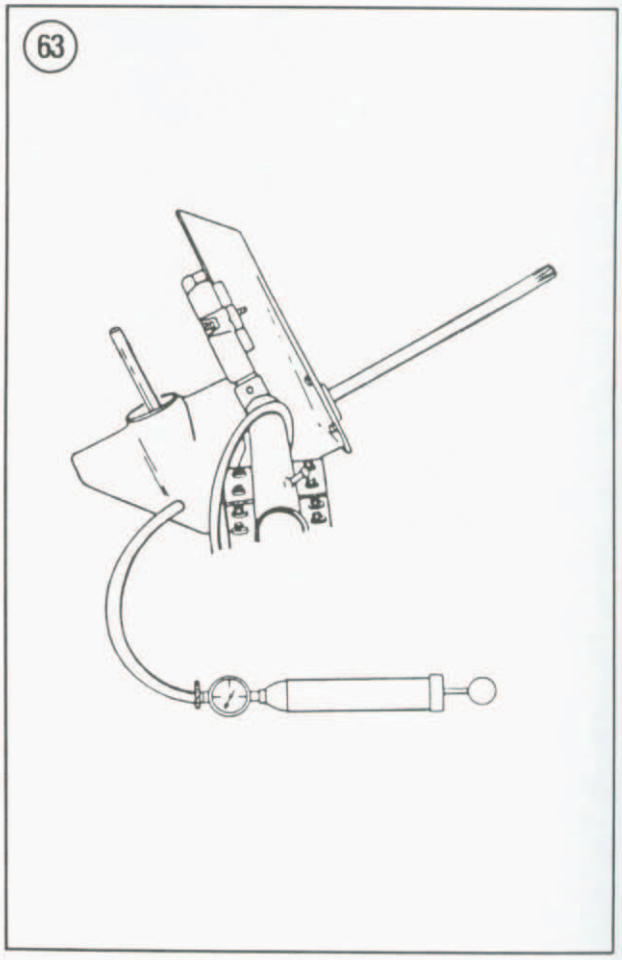
31. Hold the pinion nut from moving and turn the drive shaft to tighten the pinion locknut to specifications (**Table 1**). See **Figure 62**. Remove the pinion locknut and drive shaft holding tools.
32. Install the thrust bearing and thrust washer on reverse gear. Install reverse gear assembly with retainer plate on propeller shaft.
33. Slip one snap ring (flat side facing out) over the propeller shaft and install with snap ring pliers part No. 311879 on 1973-1984 models and with snap ring pliers part No. 331045 on 1985-on models.
34. If the bearing was removed from the propeller shaft bearing housing, install a new one with a suitable mandrel.
35. Wipe the outer diameter of 2 new propeller bearing housing seals with OMC Gasket Sealing Compound. Install the seals back to back (one lip facing in, the other facing out) with a suitable seal installer. Pack the cavity between the seals with OMC Triple-Guard grease.



36. Install a new O-ring on the bearing housing and lubricate with OMC Triple-Guard grease. Install new O-rings on the housing screws and wipe the screw threads with OMC Gasket Sealing Compound.
37. Install the guide pins used for bearing housing removal. Position the housing on the guide pins with drain slot facing downward or "UP" mark facing upward and slide the housing into the gearcase. Tighten screws to specifications (**Table 1**).
38. Install the water pump as described in this chapter.
39. Pressure and vacuum test the gearcase as described in this chapter.
40. Install the gearcase as described in this chapter. Fill with the recommended type and quantity of lubricant. See Chapter Four.



41. Check the gearcase lubricant level after the engine has been run. Change the lubricant after 10 hours of operation (break-in period). See Chapter Four.

PRESSURE AND VACUUM TEST

Whenever a gearcase is overhauled, it should be pressure and vacuum tested before refilling it with lubricant. If the gearcase fails either the pressure or vacuum test, it must be disassembled and the source of the problem located and corrected. Failure to perform a pressure and vacuum test or ignoring the results and running a gearcase which failed one or both portions of the test will result in major gearcase damage.

1. Install a new seal on the oil level plug.
2. Thread a pressure test gauge into the fill/drain plug hole. See **Figure 63** (typical).
3. Pump the pressure to 3-6 psi. If pressure holds, increase it to 16-18 psi. If it does not hold, submerge the gearcase in water and check for the presence of air bubbles to indicate the source of the leak.
4. If pressure holds at 16-18 psi, release the pressure and remove the pressure tester. If pressure does not hold at this level, submerge the gearcase in water and check for the presence of air bubbles to indicate the source of the leak.
5. Thread a vacuum test gauge into the fill/drain plug hole. See **Figure 63** (typical).
6. Draw a 3-5 in. Hg vacuum. If vacuum holds, increase it to 15 in. Hg. If vacuum does not hold at this level, coat the suspected seal with lubricant to see if the leak stops or the lubricant is sucked in.
7. If vacuum holds at 15 in. Hg, release the vacuum and remove the tester. If vacuum does not hold, coat the suspected seal with lubricant to see if the leak stops or the lubricant is sucked in.
8. If the source of a pressure or vacuum leak cannot be determined visually, disassemble the gearcase and locate it.
9. If the gearcase passes the pressure and vacuum test, fill it with the required type and quantity of lubricant. See Chapter Four.

Tables are on the following pages.