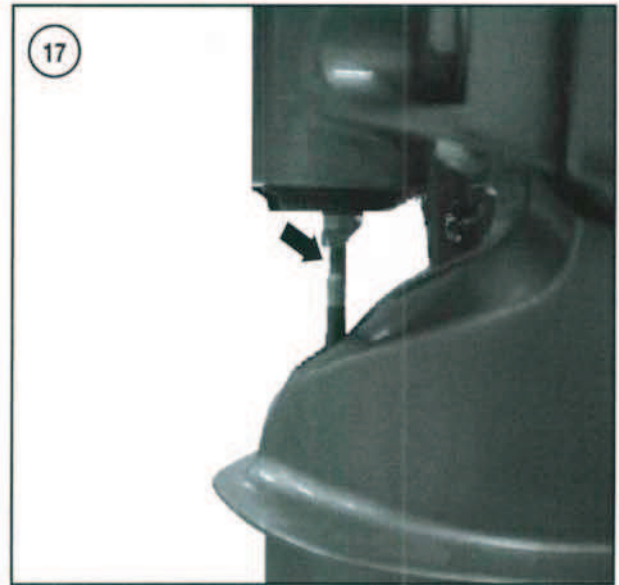


1. Disconnect both battery cables from the battery, if so equipped. Remove the spark plugs and connect the plug leads an engine ground. Shift the engine into neutral.
2. Locate the shift shaft linkage connector in the engine cover on the lower front portion. Remove the locking pin to disconnect the shift shaft from the shift linkage.
3. Count the turns as you remove the shift linkage connector from the upper end of the shift shaft (4, **Figure 16**).
4. Support the gearcase as you loosen the five bolts (1, **Figure 16**) from the gearcase. Remove the gearcase from the drive shaft housing. Pry at the points located near the front and rear of the gearcase. Install the water tube into position in the drive shaft housing if dislodged during removal of the gearcase.
5. Apply water-resistant grease to the splined area of the drive shaft and to the water tube grommet in the water pump housing. Make sure that the dowel pin (8, **Figure 16**) is properly positioned in the gearcase.
6. Place the shift selector into reverse. Make sure that the shift shaft enters the proper opening. Guide the water tube into the water pump grommet (3, **Figure 16**) and insert the drive shaft into the splined crankshaft. Lower the gearcase and slightly rotate the drive shaft clockwise if the gearcase and drive shaft housing do not mate. Repeat this step until the splined connections align and the housings mate. Ensure that the water tube enters the water pump grommet.
7. Secure the gearcase in position and install the fasteners. Tighten the fasteners to the specification provided in **Table 1**.
8. Align the upper and lower shift shafts. Thread the upper shift shaft linkage connector (4, **Figure 16**) onto the lower shift shaft with the number of turns recorded during removal. Make sure the nut makes several turns of engagement onto the lower shift shaft.
9. Refer to Chapter Five and adjust the shift linkage and or cables. Install the spark plugs and spark plug leads. Clean the battery terminals and connect the cables to the battery. Run the engine to check for proper shift and cooling system operation before putting the engine into service.

Removal/Installation (Models BF9.9A and BF15A)

1. Disconnect both battery cables from the battery, if so equipped. Remove the spark plugs and connect the battery cables to an engine ground. Shift the engine into reverse.
2. Locate the shift shaft connector at the lower forward side of the drive shaft housing (**Figure 17**). Loosen the lower jam nut. Count the number of turns as you thread the upper connector from the lower shift shaft. Record the number of turns for reference during installation.



3. Support the gearcase and remove the bolts (1, **Figure 18**) and washers from the gearcase (3) and drive shaft housing (9).
4. Carefully remove the gearcase from the drive shaft housing. Pry at the points located near the front and rear of the gearcase. Carefully lower the gearcase from the drive shaft housing when it becomes free. Retain the aligning dowels (4, **Figure 18**) from the gearcase or drive shaft housing upon removal.
5. If it becomes dislodged during removal, install the water tube and sealing grommet (6, **Figure 18**) into position in the drive shaft housing. Remove the upper drive shaft (8, **Figure 18**) from the lower drive shaft or crankshaft.
6. Apply a light coat of water-resistant grease to the splined and square portion of the drive shaft, water tube grommet and alignment dowels. Position the shift selector into reverse gear.
7. Guide the water tube into the water pump discharge hole while inserting the drive shaft into the crankshaft. Lower the gearcase and slightly rotate the drive shaft clockwise if the drive shaft does not engage the crankshaft. Repeat this step until the shafts align and the gearcase and drive shaft housing mate. Never force the gearcase into position. Damage to the shift shafts and drive shaft seal could result.
8. Support the gearcase as you install the mounting bolts and washers. Tighten them to the specification listed in **Table 1**.
9. Thread the shift shaft upper nut or connector onto the lower shift shaft the same number of turns noted during removal. Refer to Chapter Five and adjust the shift linkage.