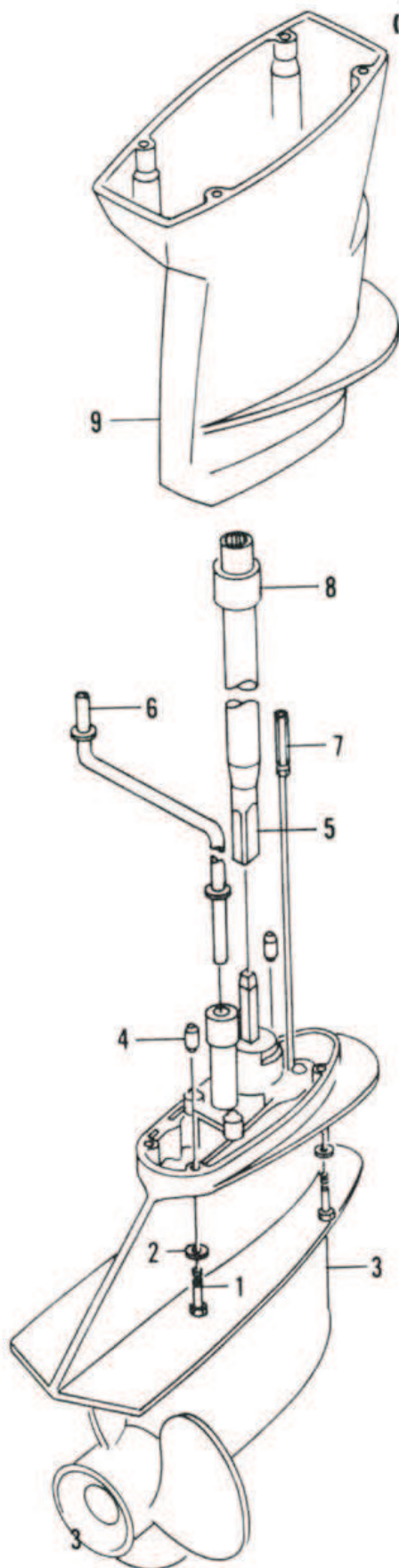


18

**GEARCASE MOUNTING  
(MODELS BF9.9A AND BF15A)**

1. Bolt
2. Washer
3. Gearcase
4. Alignment pin/dowel
5. Square end of upper drive shaft
6. Water tube
7. Shift shaft
8. Coupling seal end of upper drive shaft \*
9. Drive shaft housing

\* later models use a male splined connection.

10. Install the spark plugs and spark plug leads. Clean the battery terminals and connect the cables to the battery.

### Removal/Installation (Models BF20A, BF25A and BF30A)

1. Disconnect both battery cables from the battery, if so equipped. Remove the spark plugs and connect the plug leads to an engine ground. Shift the engine into reverse gear.

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 remove the upper connector from the lower shift shaft. Record the number of turns for reference during installation.

3. Support the gearcase as you remove the bolts (6, Figure 19) and washers that retain the gearcase (7, Figure 19) to the drive shaft housing.

4. 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 (3, Figure 19) upon removal.

5. If it becomes dislodged during removal, install the water tube into the sealing grommet at the upper end of the drive shaft housing.

6. Apply a light coat of water-resistant grease to the splined portion of the drive shaft (4, Figure 19), water tube grommet and alignment dowels (3, Figure 19). 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 connection. Lower the gearcase and slightly rotate the drive shaft clockwise. 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 may result.

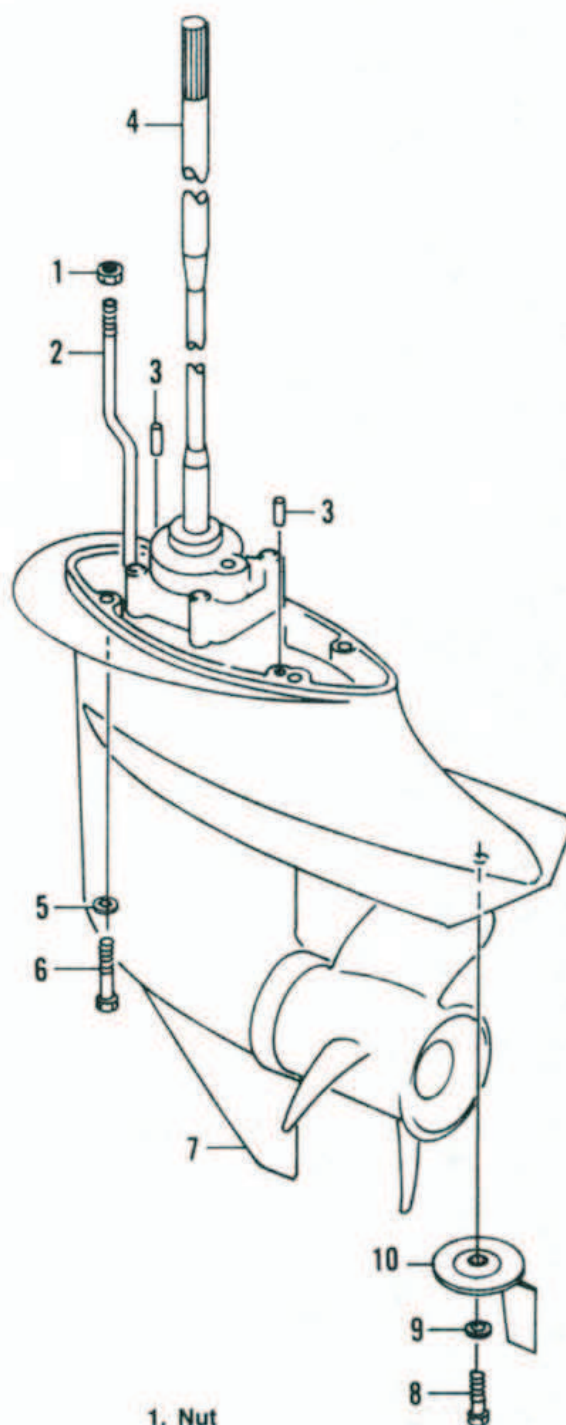
8. Provide support for the gearcase as you install the mounting bolts and washers. Tighten them to the specification listed in Table 1.

9. Thread the shift shaft upper nut or connector onto the lower shift shaft the number of turns noted during removal. Refer to Chapter Five and adjust the shift linkage.

10. Install the spark plugs and spark plug leads. Clean the battery terminals and connect the cables to the battery.

19

### GEARCASE MOUNTING (MODELS BF20A, BF25A AND BF30A)



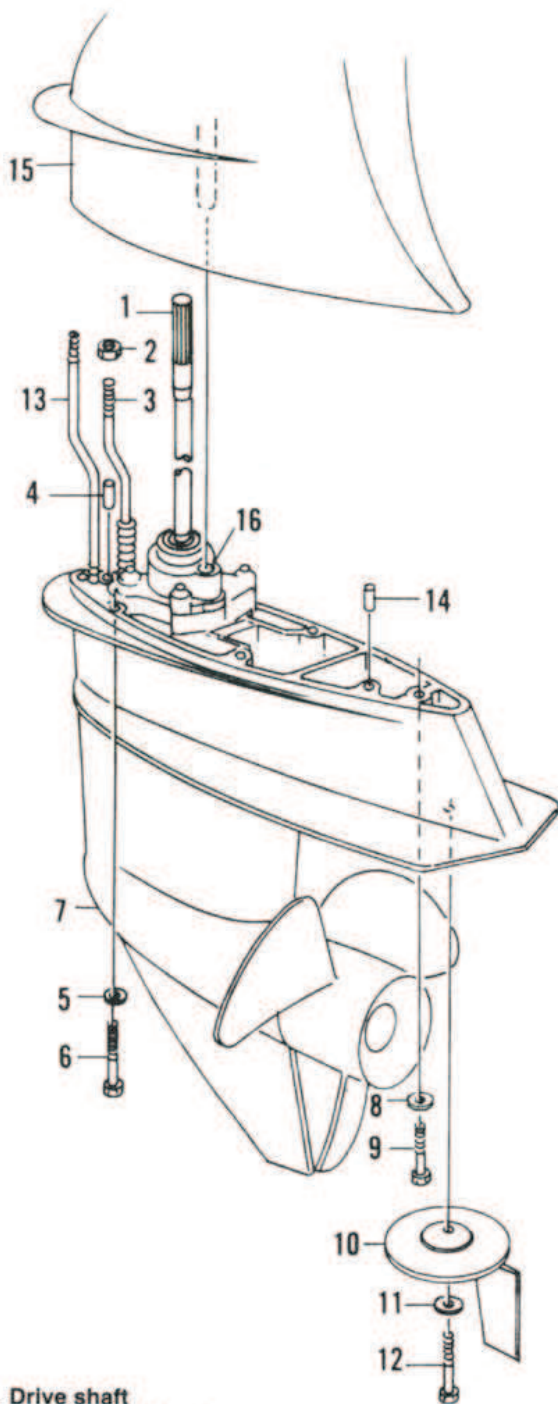
1. Nut
2. Washer
3. Alignment pin
4. Drive shaft
5. Washer
6. Bolt
7. Gearcase
8. Bolt
9. Washer
10. Trim tab



20

# GEARCASE MOUNTING

## MODELS BF35A, BF40A, BF45A AND BF50A



- |                          |                                       |
|--------------------------|---------------------------------------|
| 1. Drive shaft           | 11. Washer                            |
| 2. Shift shaft locknut   | 12. Bolt                              |
| 3. Shift shaft           | 13. Speedometer hose coupling/fitting |
| 4. Locating pin or dowel | 14. Locating pin or dowel             |
| 5. Washer                | 15. Drive shaft housing               |
| 6. Bolt                  | 16. Water tube grommet                |
| 7. Gearcase              |                                       |
| 8. Washer                |                                       |
| 9. Long bolt             |                                       |
| 10. Trim tab             |                                       |

# Removal/Installation (Models BF35A, BF40A, BF45A and BF50A)

1. Disconnect both battery cables from the battery. Remove the spark plugs and connect the plug leads to an engine ground. Shift the engine into reverse gear.
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 remove the upper connector from the lower shift shaft. Record the number of turns for reference during installation.
3. Note the location and position of the mounting bolts (6, **Figure 20**) and washers (5).
4. Use a black marker to mark the trim tab position relative to the gearcase (**Figure 21**). Remove the bolt (12, **Figure 20**) and washer then lightly tap the trim tab (10, **Figure 20**) with a plastic mallet to remove it from the gearcase.
5. Cut the speedometer tube as close as possible to the fitting.
6. Remove the bolt (9, **Figure 20**) and washer (8) that are located above the trim tab. The trim tab must be removed to access the bolt.
7. Support the gearcase as you remove the bolts and washers from the gearcase and drive shaft housing.
8. 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.
9. Retain the aligning dowels (14, **Figure 20**) upon removal.
10. If it becomes dislodged during removal, install the water tube into position in the drive shaft housing (16, **Figure 20**).
11. Apply a light coat of water-resistant grease to the splined portion (1, **Figure 20**) of the drive shaft, the water tube grommet (16, **Figure 20**) and alignment dowels. Position the shift selector in reverse gear.
12. Guide the water tube into the water pump discharge hole while inserting the drive shaft into the crankshaft connection. Lower the gearcase and slightly rotate the drive shaft clockwise. 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.
13. Support the gearcase as you install the mounting bolts and washers. Tighten them to the specification listed in **Table 1**.
14. Thread the shift shaft upper nut or connector onto the lower shift shaft the number of turns noted during removal.