

Gearcase Failures – 90/120 HP

Models Affected

1995, 1996 and 1997 Force 90/120 HP Models, serial number

0E093700 thru 0E287999

Some 1995, 1996 and 1997 model year outboard gearhousings have experienced low hour clutch failures. Others, after considerable use, will not stay in reverse gear despite proper shift cable adjustment. If either of these conditions occur, replace the complete gear housing assembly with the new, improved, 6-jaw clutch style gearhousing assembly.

CORRECTION

1. Inspect gearhousing and components for impact damage, abuse or modifications to gearhousing. Failures caused by these conditions are not covered by warranty.
2. Check shift cable adjustment and condition of the clutch dogs in gearhousings that will not stay in gear. If the shift cable is not properly adjusted and if the clutch dogs are not rounded, replacement is not required. Reassemble the gearhousing and properly adjust the shift cable using the method shown in this bulletin. Adjustments are not covered by warranty.
3. If the clutch has failed, or if the clutch dogs are rounded and the shift cable was properly adjusted, replace the gearhousing assembly with the new 6-jaw clutch style gearhousing assembly.

IMPORTANT: Models will require the installation of a new upper shift shaft. The installation instructions included with replacement gearhousing assemblies will show which parts will be required for each model.

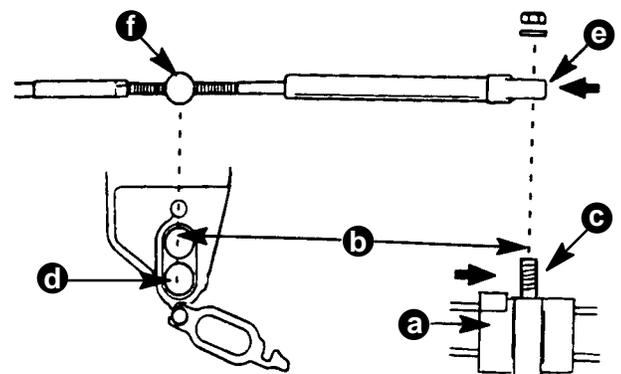
4. Readjust the throttle and shift cables utilizing the following updated procedure and readjust the engine idle rpm to the specification listed in the Service Manual.

⚠ CAUTION

Shift cable installation is critical to ensure gearcase durability.

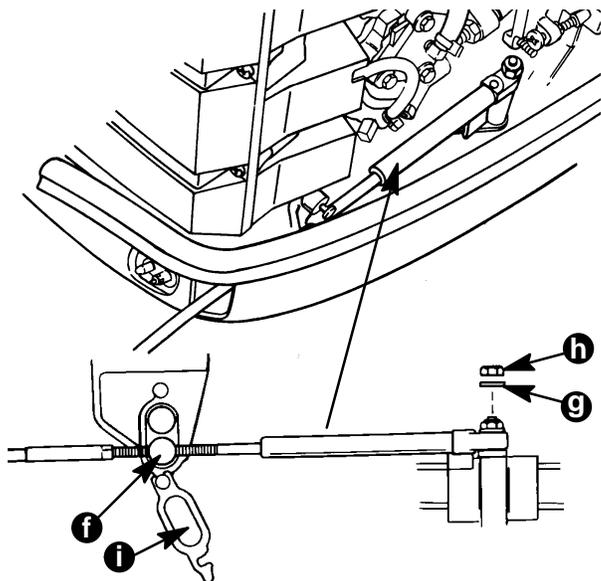
Shift Cable Installation

1. Position the remote control and outboard into neutral.
2. Slide shift actuator (a) toward the rear of engine (reverse gear) until resistance is felt. Measure distance (b) between mounting stud (c) and barrel retainer (d).
3. Push the cable end (e) in (towards cable barrel) until resistance is felt. Adjust the cable barrel (f) to attain distance (b).



Typical

- Place cable barrel (f) into retainer and close latch (i). Fasten the cable end to mounting stud with nylon washer (g) and locknut (h). Tighten locknut against the nylon washer, then back-off the locknut 1/4 turn.

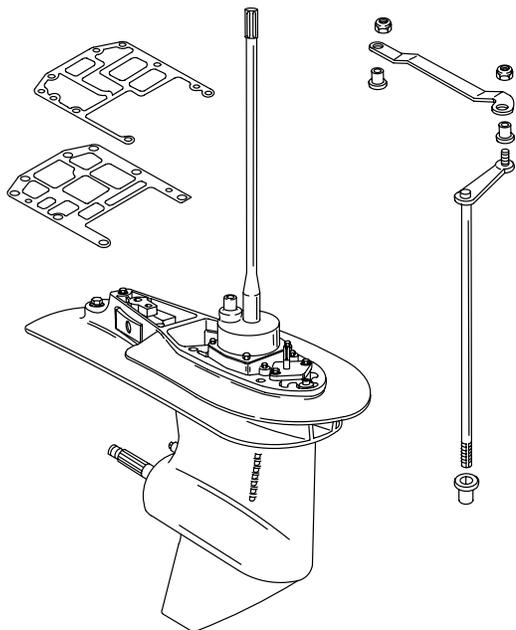


Mercury/Mariner/Tracker

- Instruct the customer on proper usage of warm-up lever / throttle only button on remote controls. Caution the customer not to shift above the maximum idle RPM specified in the Owner's Manual.

Recommendation

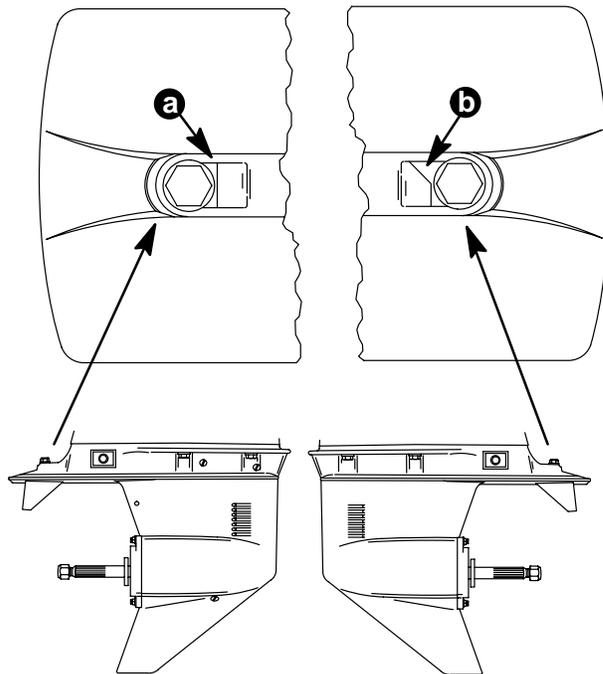
Commercial applications should use a propeller with a rubber hub to minimize stress and reduce the possibility of gearcase failures. Order Vengeance, High Five, or Laser II propellers with Flo-Torq I rubber hubs by replacing the "A45" part number suffix with an "A40" suffix.



Gearhousing Assembly Identification

⚠ CAUTION

Identify gear case design to ensure correct components are being installed. Design I - "3 Jaw Reverse Clutch" (a) gear case identified with straight machined edge for trim tab screw mounting surface. Design II - "6 Jaw Reverse Clutch" (b) gear case identified with angled machined edge for trim tab screw mounting surface.

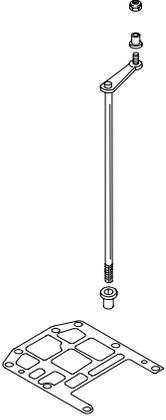
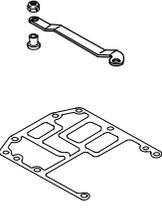


1987 – 1997 "3 Jaw Reverse Clutch" 1998 and Newer "6 Jaw Reverse Clutch"

- a - Design I - "3 Jaw Reverse Clutch" Gear Case Identifier
- b - Design II - "6 Jaw Reverse Clutch" Gear Case Identifier

After the "6-Jaw Reverse Clutch" gearcase and updated Shift Shaft have been installed replacement parts **MUST** be ordered from the 1998 model year parts list. "3-Jaw" and "6-Jaw" reverse clutch parts are **NOT** interchangeable.

Component Application for Design II "6-Jaw Reverse Clutch" Gear Housing Replacement

Models	Installation Required	Not Required
Force/Force Tracker 90 ELPT 90 EXLPT 120 ELPT 120 EXLPT		

Parts Required

90 GEAR HOUSING ASSEMBLY

P/N	Description
1667-9011G25	Long-Graphite Gray
1667-9011G26	X-Long-Graphite Gray

120 GEAR HOUSING ASSY.

P/N	Description
1667-9011G27	Long-Graphite Gray
1667-9011G28	X-Long-Graphite Gray

Warranty

Gearhousing failures on 1995, 1996, and 1997 outboards will be covered for a period of two (2) years from date of sale to the original owner to assure customer satisfaction. U.S. and Canadian dealers are to call Outboard Technical Service for warranty pre-authorization or complete and send a QuickFax form (p/n 90-821655) to have a complete gearhousing assembly and a pre-printed warranty claim sent to them.

Complete a warranty claim listing:

- Outboard Serial Number
- Qty 1 p/n 1667-XXXXXXX Gearhousing
- Flat Rate Codes

Gearhousing replacement	
• 0G12 R&R Gearhousing	0.7 hours
• 0G20 Diagnose and test	0.3 hours
Shift Shaft replacement	
• 0D32 Shift Rod Upper	1.5 hours
- Failure code: 204 00

U.S. and Canada dealers: Return gearhousing assembly with warranty claim.

International: Hold gearhousing assembly for inspection/disposition by Marine Power International Technical Representative.