

Suggested Routing:

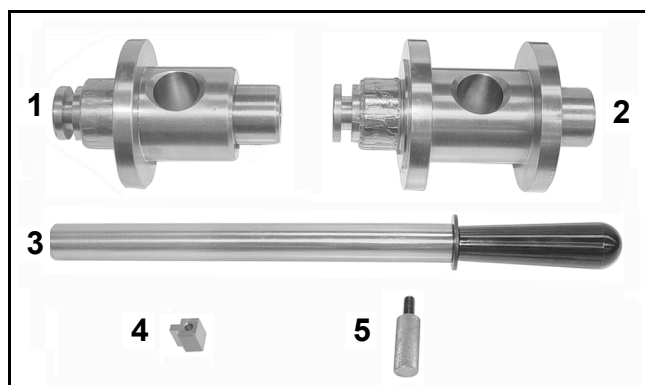
☐ Service ☐ Sales ☐ Parts**Date:** March 26, 2010**No.** 2010-03(S)**MODELS:** Evinrude® E-TEC® 75–300 HP outboards **SUBJECT:** Gearcase Alignment Gauge Kit, P/N 5006349

Replaces Service Bulletin 2004-09(S)

Dear Evinrude/Johnson® Dealers:

This communication is to inform Evinrude and Johnson dealers that additional components are available for use with the Gearcase Alignment Gauge Kit, P/N 5006349. The instructions for using the kit have also been revised.

The gearcase alignment gauge kit includes the following components.

**Gearcase Alignment Gauge Kit, P/N 5006349**

004315

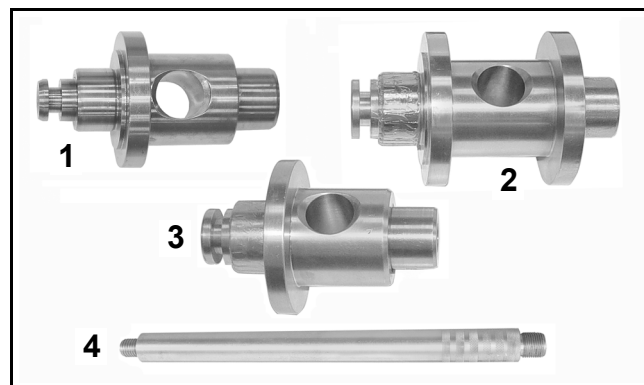
1. "L" type and "O" type gauging head
2. "M" type gauging head
3. Gauging shaft
4. Retainer
5. Thumb screw

For individual replacement components for this kit, contact Meyer Engineering, 1139 Lewis Avenue, Winthrop Harbor, IL 60096–1428, 847–746–1500.

Use the gearcase alignment gauge kit to check the condition of all late model V4 and V6 gearcase housings before reassembly.

Additional components have been developed since the gearcase alignment gauge kit was introduced. The following tools are available individually to support the Gearcase Alignment Gauge Kit, P/N 5006349, and should be ordered from

Evinrude/Johnson Genuine Parts and Accessories.



1. "S" type gauging head, P/N 352879
2. "M2" type gauging head, P/N 5007749
3. "L2" type gauging head, P/N 5007750
4. Gauge remover Shaft, P/N 354718

008261

INSTRUCTIONS

Check the alignment of the gearcase housing on gearcase assemblies that have experienced impact damage and/or internal bearing and gear failure.

NOTICE Distorted gearcase housings affect driveshaft to propeller shaft alignment and gear alignment. Failure to properly identify distorted gearcase housings can result in replacement gear failure. This type of failure is NOT covered by warranty.

The gearcase alignment gauge kit components assemble to the forward bearing housing of a standard rotation gearcase and Driver Handle, P/N 311880 (existing tool), or Gauge Remover Shaft, P/N 354718.

Assemble as indicated to check all V4 ("S" and "S2" types) and V6 gearcase housings (1979 and newer with 4 hole water inlets, "O," "L," "L2," "M," and "M2" types).



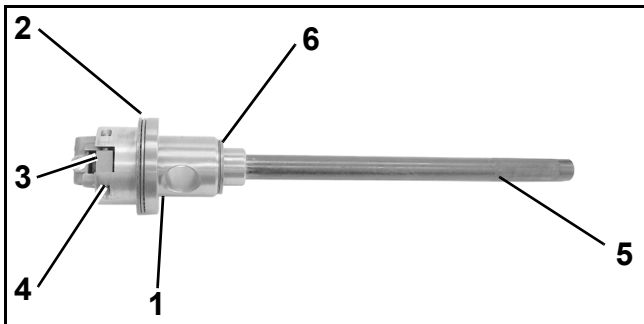
Refer to “GEARCASE IDENTIFICATION” on page 5 to properly identify gearcase type.

IMPORTANT: Disassemble and thoroughly clean gearcase housing and reinstall pinion bearing before installing the assembled gearcase alignment gauge into gearcase housing.

Select the correct gauging head. Refer to “GAUGING HEAD IDENTIFICATION” on page 6. Assemble gauging head with forward thrust bearing and washer onto forward bearing housing. Install the retainer in place of shift lever. Install shift pin.

“S,” “S2,” “O,” “L” and “M” Type Gearcases

Thread Driver Handle, P/N 311880, into back of gauging head and tighten. Gauge Remover Shaft, P/N 354718, can be used if driver handle is not available. Position reverse thrust bearing and washer on gauging head.

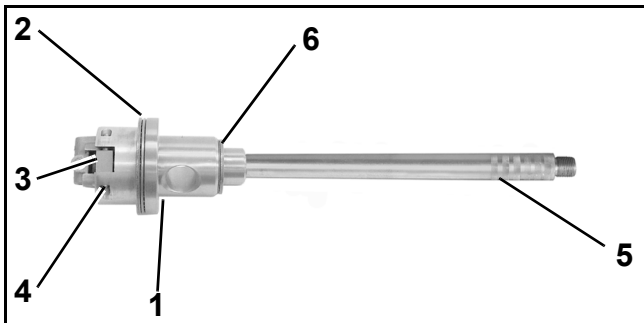


1. Gauging head
2. Forward thrust washer and bearing
3. Retainer
4. Shift pin
5. Driver handle, P/N 311880
6. Reverse thrust bearing and washer

004316

“L2” and “M2” Type Gearcases

Thread Gauge Remover Shaft, P/N 354718 into back of gauging head and tighten. Position reverse thrust bearing and washer on gauging head.



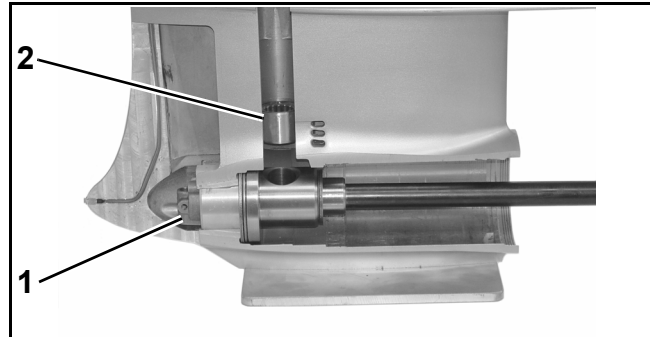
1. Gauging head
2. Forward thrust washer and bearing
3. Retainer
4. Shift pin
5. Gauge remover shaft, P/N 354718
6. Reverse thrust bearing and washer

004316A

NOTICE The gauge remover shaft **MUST** be used to remove gauging head, forward thrust bearing and forward bearing housing from “L2” and “M2” type gearcase housings.

All Gearcases

Insert assembly into cleaned gearcase housing. Make sure that forward bearing housing seats completely into front of gearcase housing.

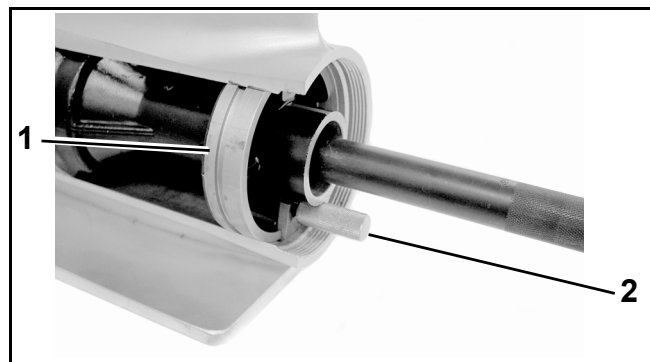


1. Forward bearing housing
2. Pinion bearing, assembled

004348

“S,” “S2,” “O,” “L” and “M” Type Gearcases

Temporarily install the propeller shaft bearing housing **without** large O-rings (or locking wedge, if equipped). Bearing housing must be fully seated in gearcase housing. Install lower tab retainer in housing and secure with thumb screw (if equipped).



1. Bearing housing
2. Thumb screw

004318

“L2” and “M2” Type Gearcases

Grease the machined side surfaces of propeller shaft bearing housing. Do NOT install the propeller shaft bearing housing large O-rings.

Align propeller shaft bearing housing into gearcase

“L2” Gearcase: Align screw holes with retainer slots in gearcase.

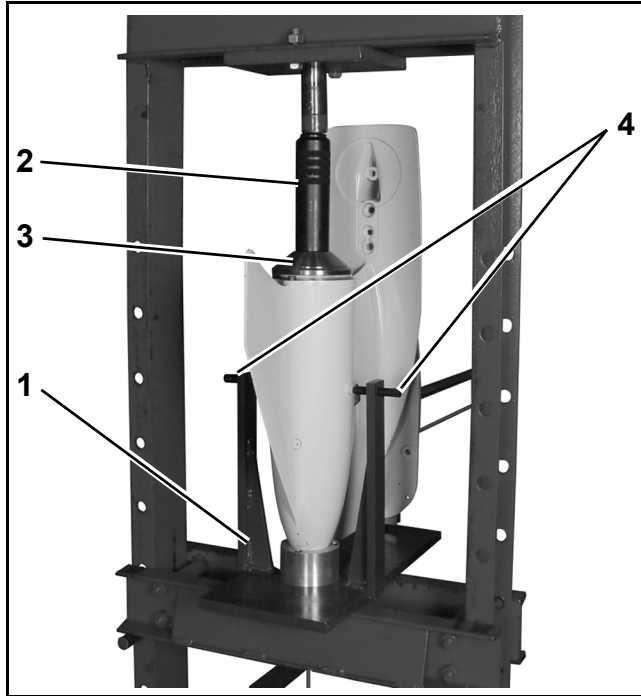
“M2” Gearcase: Align retaining holes in propeller shaft bearing housing with screw holes in gear-

case. Thread Alignment Pins, P/N 354140, into gearcase.

Seat the propeller shaft bearing housing with:

- Gearcase Fixture, P/N 354059
- Installer Handle, P/N 345822
- Propeller Shaft Bearing Housing Installer, P/N 354058, "L2" type, or P/N 354057, "M2" type

Align and level gearcase assembly in fixture as shown. Secure fixture to floor press. Use an appropriate floor press (10 ton or greater) to seat housing into gearcase.

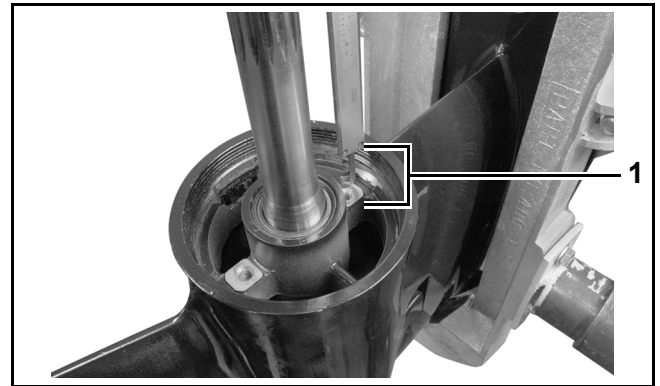


1. Gearcase fixture, P/N 354059
2. Handle P/N 345822
3. Propeller shaft bearing housing installer
4. Vertical alignment screws

006927

The propeller shaft bearing housing must be completely seated in gearcase.

Check the depth from gearcase housing to retainer tab surface on propeller shaft bearing housing. Depth for an "L2" gearcase is approximately 1 in. (25.4 mm).



"L2" Type Gearcase
1. 1 in. (25.4 mm)

006845

Check the depth from gearcase housing to propeller shaft bearing housing. Depth for an "M2" gearcase is approximately level with gearcase.

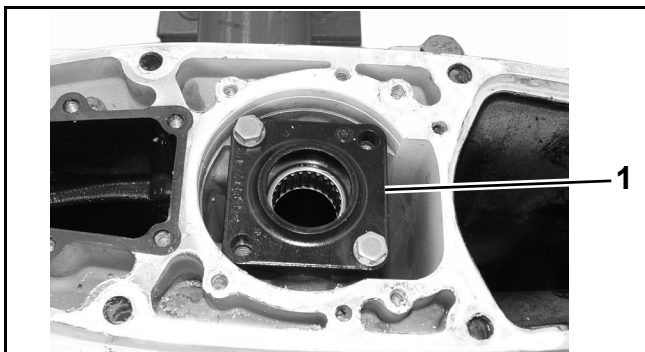


"M2" Type Gearcase
1. Level with gearcase

006928

All Gearcases

Temporarily install driveshaft bearing housing **without** seals and O-ring into gearcase housing and secure with two (2) screws. Bearing housing must be fully seated in gearcase housing.



1. Driveshaft bearing housing

004346

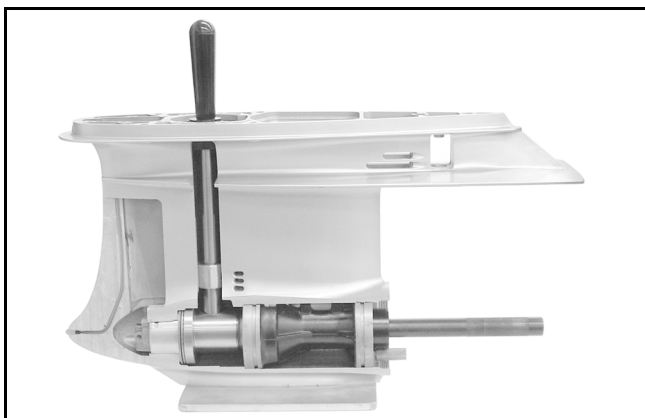
Use driver handle to turn gauging head as needed. Position gauging head to allow gauging shaft to slide easily into alignment hole in gauging head.

IMPORTANT: DO NOT force shaft into alignment hole. Shaft **MUST** slide easily into hole of gauging head. If shaft does not slide into hole, gearcase housing is damaged and **must** be replaced.



1. Gauging shaft

004347



Assembled Cutaway View

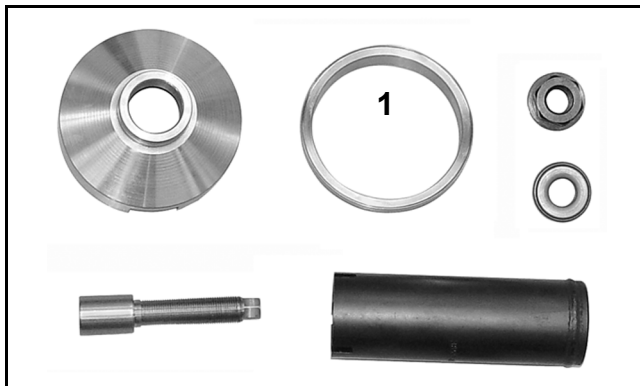
004317

Remove gauging shaft from gearcase assembly **BEFORE** removing the propeller shaft bearing housing from the gearcase.

“L2” and “M2” Type Gearcases

Remove the propeller shaft bearing housing from the gearcase using Propeller Shaft Bearing Housing Puller Kit, P/N 354060.

IMPORTANT: Use the adaptor ring included with the propeller shaft bearing housing puller kit to remove the propeller shaft bearing housing from “L2” type gearcases.

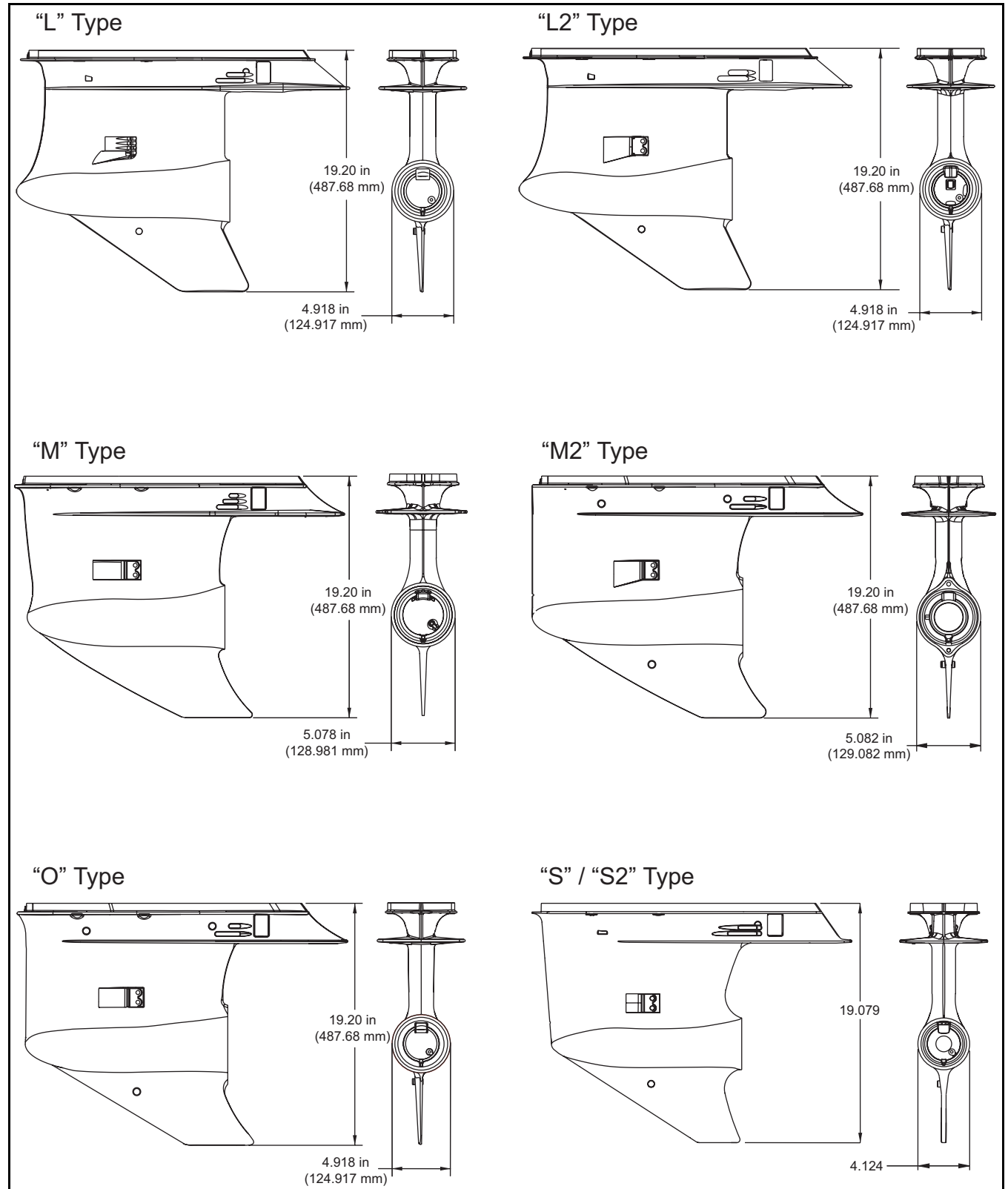


Propeller Shaft Bearing Housing Puller Kit, P/N 354060 006784

1. Adaptor ring, “L2” gearcases

DO NOT use tools designed to push on the propeller shaft. Pushing force against the propeller shaft could damage the forward gear thrust bearing or thrust washer.

GEARCASE IDENTIFICATION



008262

GAUGING HEAD IDENTIFICATION

