



# Gearbox Service Kit

## Z Master® 320/350 Series 48" Mower

Part No. 105-6172

Part No. 105-6178

Form No. 3327-295

### Installation Instructions

## Loose Parts

**Note:** Use the chart below to identify parts for assembly.

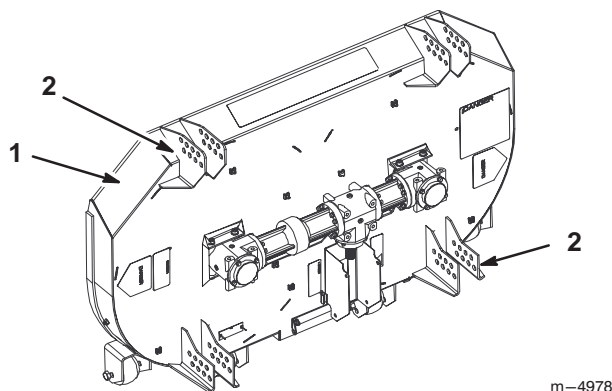
DESCRIPTION	QTY.	USE
Gearbox	1	Installing the Gearbox
Screw	8	
Washer	8	
Spring Pin	1	
Decal	1	Installing the Decal
Blade Bolt, Lefthand thread	1	Installing the Blade Bolt

## Identifying the Mowers

There are two types of mowers that this gearbox can be installed on. There is the Z320 Series and the Z350 Series. Identify the mower type you have in figures 1 and 2.

### Z320 Series Mower

If you have a mower, with height-of-cut brackets, as shown in figure 1 then proceed to page 2 for installation instructions.

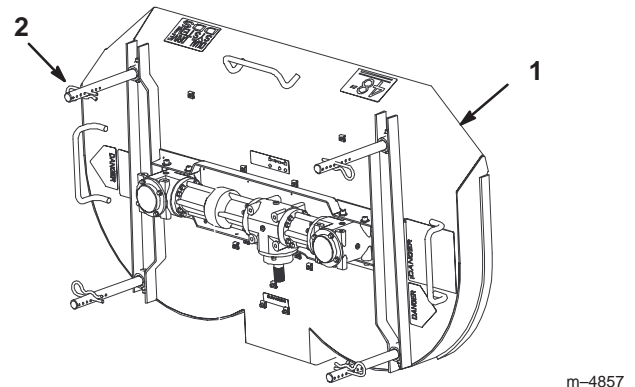


**Figure 1**

1. Z320 Series mower
2. Height-of-Cut Brackets

### Z350 Series Mower

If you have a mower, with height-of-cut posts, as shown in figure 2 then proceed to page 2 for installation instructions.



**Figure 2**

1. Z350 Series mower
2. Height-of-Cut Posts

# Installing the Z320 Series Gearbox

**Note:** Each gearbox assembly has three individual fluid boxes.

## Removing the Gearbox

1. Remove blades and blade retainers from beneath mower. Save the square key from each gearbox output shaft for use with the new gearbox.
2. Remove any guards connected to the existing gearbox, and disconnect drive shaft.
3. Remove and discard the existing gearbox mounting bolts (8).
4. Remove existing gearbox from top of mower.

## Installing the Gearbox

1. Place new gearbox on mower. The vertical output shafts should be centered in the two cone-shaped recesses in the top of the mower (Fig. 3).
2. Insert bolts, with washers, through mounting brackets and into gearbox mounting holes (Fig. 3). Torque mounting bolts to  $260 \pm 25$  in.-lbs.

**Important** Torque mounting bolts to  $260 \pm 25$  in.-lbs. Bolts have pre-applied thread locker.

3. Connect driveshaft to gearbox (use new spring pin included in kit). Attach any guards that were removed for assembly, and connect blade assemblies to new gearbox.

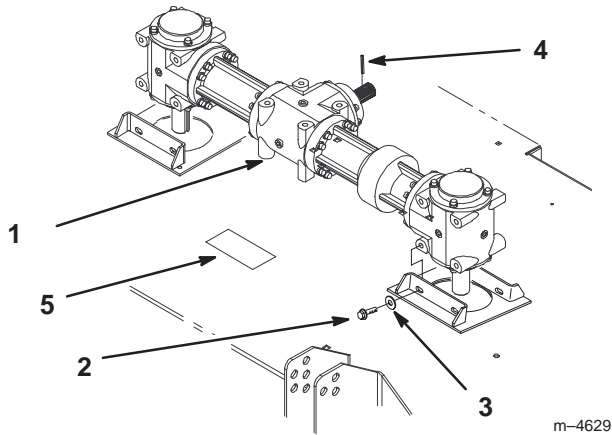


Figure 3

- |            |          |
|------------|----------|
| 1. Gearbox | 4. Pin   |
| 2. Bolt    | 5. Decal |
| 3. Washer  |          |

# Installing the Z350 Series Gearbox

**Note:** Each gearbox assembly has three individual fluid boxes.

## Removing the Gearbox

1. Remove blades and blade retainers from beneath mower. Save the square key from each gearbox output shaft for use with the new gearbox.
2. Remove any guards connected to the existing gearbox, and disconnect drive shaft.
3. Remove and discard the existing gearbox mounting bolts (8).
4. Remove existing gearbox from top of mower.

## Installing the Gearbox

1. Place new gearbox on mower. The vertical output shafts should be centered in the two cone-shaped recesses in the top of the mower (Fig. 4).
2. Insert bolts, with washers, through mounting brackets and into gearbox mounting holes (Fig. 4). Torque mounting bolts to  $260 \pm 25$  in.-lbs.

**Important** Torque mounting bolts to  $260 \pm 25$  in.-lbs. Bolts have pre-applied thread locker.

3. Connect driveshaft to gearbox (use new spring pin included in kit). Reattach any guards that were removed for assembly, and connect blade assemblies to new gearbox.

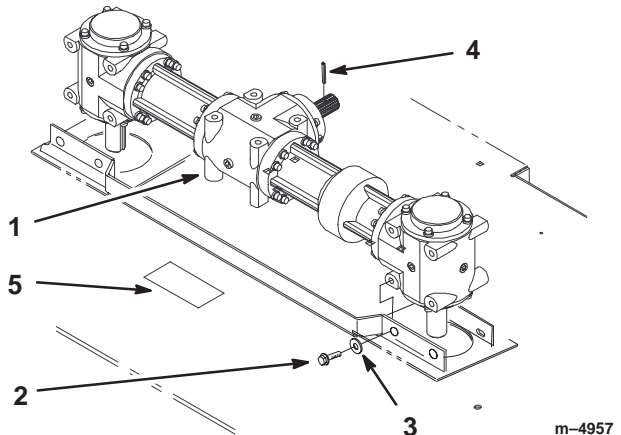


Figure 4

- |            |               |
|------------|---------------|
| 1. Gearbox | 4. Spring Pin |
| 2. Bolt    | 5. Decal      |
| 3. Washer  |               |

## Installing the Decal

A new decal has been provided to replace the existing gearbox lubricant decal on the mower. This is for both Z320 and Z350 series gearboxes.

1. Thoroughly clean mower in area of lubrication decal. Install new decal over the existing decal (Fig. 3 and 4).

## Installing the Blade Bolt

A new blade bolt (lefthand threaded) has been provided to replace the existing right hand blade bolt.

**Note:** Determine the left and right sides of the machine from the normal operating position.

Refer to the operator's manual for the correct procedure of installing the blades and blade bolt.

## Servicing the Gearbox Fluid

**Note:** Make sure to use the correct fluid for your machine. There are two different types of fluid.

### Gearbox Fluid for all Mowers *without* the letters **TE** in the model number.

The following is an example of a model number **without** the letters **TE**.

Model No. 74195—210000001 and Up

Change fluid:

- after initial 100 operating hours.

**Note:** Fluid will not have to be changed again after initial 100 hour fluid change.

Fluid Type: Automatic Transmission Fluid  
(Dexron® III or equivalent)

**Important** Do not mix fluids. Use only Automatic Transmission Fluid.

Gearbox Capacity: 5–1/2 oz. (129.6 ml) each box  
16–1/2 oz. (488 ml) for all three boxes

Check fluid: After every 100 operating hours.

### Gearbox Fluid for all Mowers *with* the letters **TE** in the model number.

The following is an example of a model number **with** the letters **TE**.

Model No. 74804TE—220000001 and Up

Change fluid:

- after initial 100 operating hours.
- each year before storage.

Fluid Type: 85W–140 Mobilube® or equivalent

**Important** Do not mix fluids.

Gearbox Capacity: 5–1/2 oz. (129.6 ml) each box  
16–1/2 oz. (488 ml) for all three boxes

Check fluid: After every 100 operating hours.

## Changing the Gearbox Fluid

The gearbox fluid must be changed after first 100 operating hours. Change all three gearboxes.

**Important** Do not mix fluids.

1. Warm the fluid in gearbox by running the mower for a few minutes.
2. For the 320 Series remove footrest and two shields that cover gearbox and PTO shaft (Fig. 5).
3. For the 350 Series remove the mower footrest and guards as necessary. This is not valid for all 350 Series models.

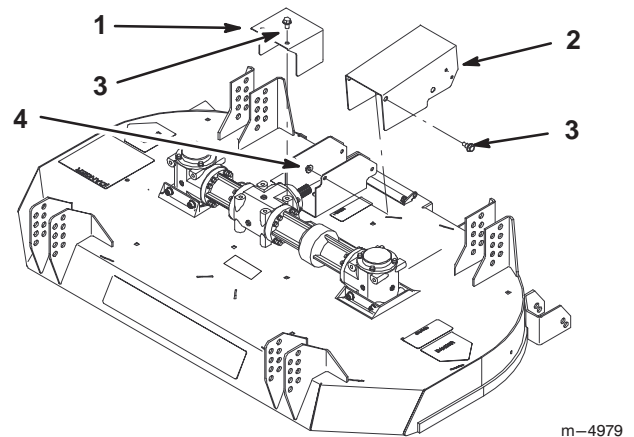
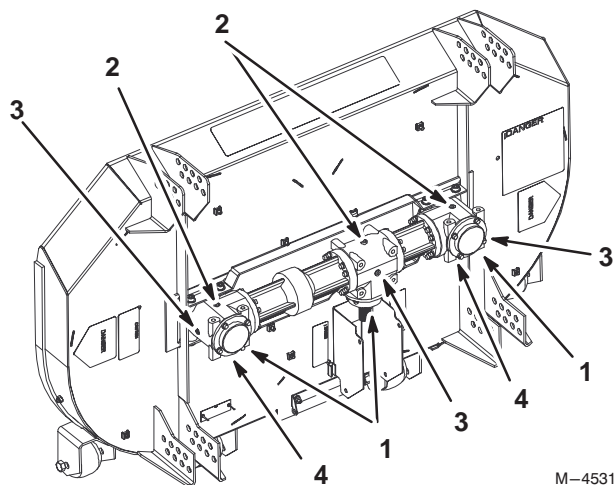


Figure 5

- |                   |          |
|-------------------|----------|
| 1. Gearbox Shield | 3. Screw |
| 2. PTO Shield     | 4. Nut   |

4. Raise mower to upright position.
5. With mower raised, remove plug on the bottom side of the gearbox. Let fluid fully drain into a pan. (Fig. 6).
6. Reinstall the bottom plug into the gearbox using pipe sealant on threads (Fig. 6).
7. Remove the top plug to fill gearbox (Fig. 6).

8. Fill gearbox with 5-1/2 ounces (129.6 ml) of gearbox fluid. For correct fluid; refer to Gearbox Fluid, on page 3.
9. Reinstall the top plug into the gearbox using pipe sealant (Fig. 6).
10. Repeat for remaining gearboxes.



**Figure 6**

- |             |                |
|-------------|----------------|
| 1. Gearbox  | 3. Side plug   |
| 2. Top plug | 4. Bottom plug |

## Checking the Gearbox Fluid

The gearbox fluid must be checked after every 100 operating hours. Check all three gearboxes.

1. Warm the fluid in gearbox, by running the mower mower for a few minutes.
2. Raise mower to upright position.
3. Remove plug on the side of the gearbox. The fluid level must be up to side hole in gearbox (Fig. 6).
4. If needed, fill fluid into top hole until it runs out the side hole in gearbox. Gearbox is full when fluid runs out the side hole (Fig. 6). For correct fluid; refer to Gearbox Fluid, on page 3.

**Important** Do not mix fluids.

5. Reinstall the top and side plugs into gearbox using pipe sealant on threads (Fig. 6).
6. Repeat for remaining gearboxes.