



Transmission Kit

For Workman e2050 Utility Vehicle

Model No. 110-2540

Installation Instructions

Installation

Loose Parts

Use the chart below to verify that all parts have been shipped.

Step	Description	Qty.	Use
1	No parts required	–	Remove the bed.
2	No parts required	–	Remove the wheel assembly.
3	No parts required	–	Remove the axle shaft.
4	No parts required	–	Remove the differential assembly.
5	Final gear	1	Install the final gear.
6	Gasket Cover plate	1 1	Install the new differential case assembly.
7	No parts required	–	Install the axle shaft.
8	No parts required	–	Finish the installation.

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

Note: RTV silicone sealant is required for the installation of this kit.

Step
1

Removing the Bed

No Parts Required

Procedure

1. Position the machine on a level surface. Set the parking brake, turn the ignition off, and remove the key.



If you leave the key in the ignition switch, someone could accidentally start the engine and seriously injure you or other bystanders.

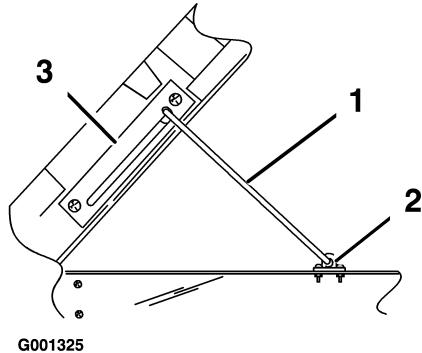
Remove the key from the ignition switch before you do any maintenance.

2. Rotate the latch rod upward and raise the box with the other hand.
3. Raise the box to its full height; then lower it slightly to engage the prop rod (Figure 1).



A raised box could fall and injure persons that are working beneath it.

- Always use the prop rod to hold the box up before working under the box.
- Remove any load material from the box before raising it.

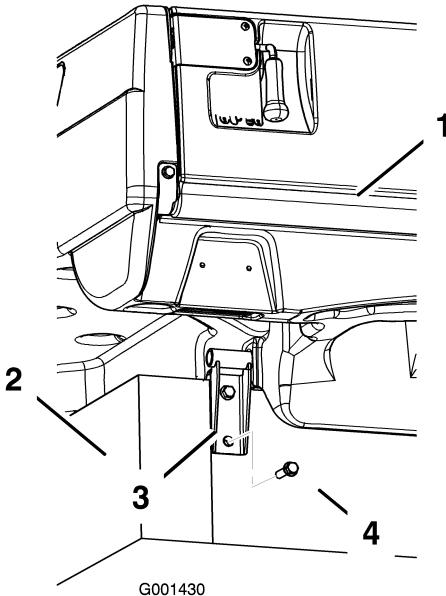


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Figure 1

1. Prop rod
2. Prop rod clip
3. Prop rod bracket

4. Use a block or another method to support the bed in the upright position.
5. Remove the screws and clip securing the prop rod to the frame rail (Figure 1). Retain the prop rod components for future use.
6. Lower the bed into the down position.
7. Remove the bolts securing the hinges to the box frame. Remove the hinges and retain all parts or fasteners (Figure 2).



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Figure 2

Left hinge shown

1. Bed
2. Bed box
3. Hinge
4. Bolt

8. Remove the bed assembly.

Note: Removing the bed assembly may require two people or the use of a automatic lift.

9. Locate the drain plug on the underside of the trans axle cover plate. Position a drain pan below the drain plug. Remove the plug and allow the transmission fluid to drain. Refer to the *Operator's Manual* for more information.

Step

2

Removing the Wheel Assembly

No Parts Required

Procedure

1. Raise the machine up on a lift or use jack stands if necessary. Refer to the *Operator's Manual* for more information.
2. Remove the lug nuts securing the tire and wheel to the axle (Figure 3). Remove the tire

assembly and brake drum. Retain all parts and fasteners.

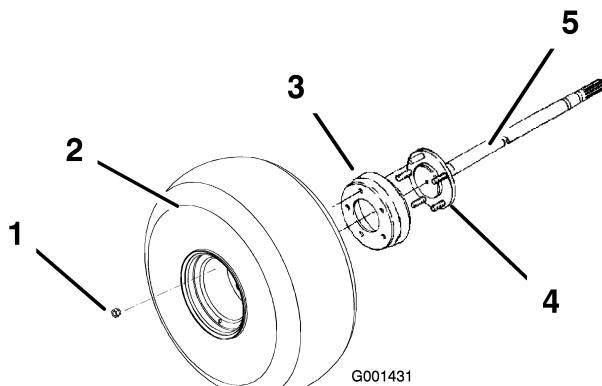


Figure 3

- 1. Lug nut
- 2. Tire and wheel assembly
- 3. Brake drum
- 4. Axle
- 5. Axle shaft

- 3. Repeat this procedure for the opposing wheel assembly.

Step
3

Removing the Axle Shaft

No Parts Required

Procedure

- 1. Remove the snap ring from the end of the tube (Figure 4).

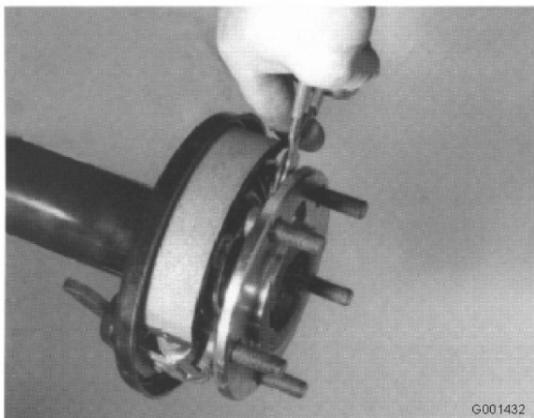


Figure 4

- 2. Remove the axle shaft from the tube (Figure 5).

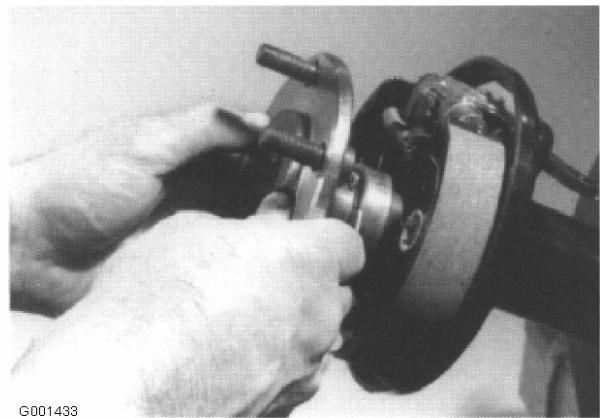


Figure 5

- 3. Repeat the procedure for the opposing axle shaft. Retain all parts and fasteners.

Step
4

Removing the Differential Assembly

No Parts Required

Procedure

- 1. Position a drain pan under the axle housing and cover plate.
- 2. Remove the ten cover plate screws (Figure 6). Retain the fasteners

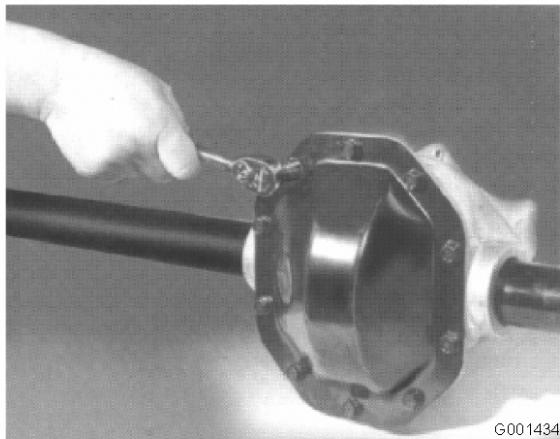


Figure 6

- 3. Use a putty knife to separate the cover plate from the housing (Figure 7). Discard the cover plate and old gasket.

Important: Use caution not to damage the surface of the aluminum axle housing when using the putty knife to separate cover plate from the housing. Nicks or gouges in the surface can prevent the gasket from creating a seal and result in transmission fluid leaks.

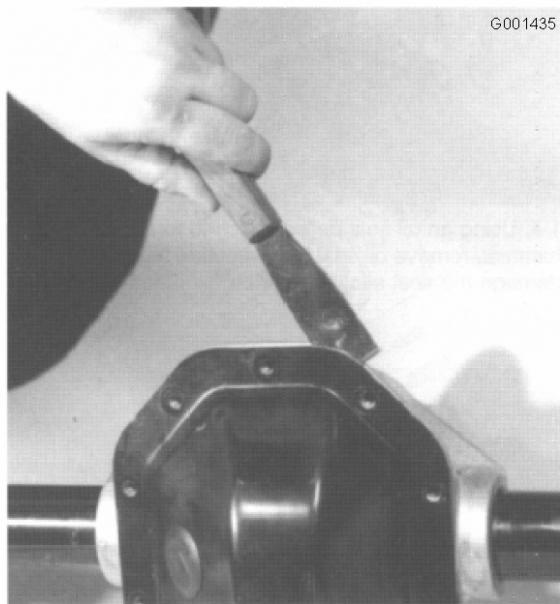


Figure 7

- 4. Remove the four bearing cap screws and remove the bearing caps (Figure 8).

Note: Note the position and orientation of each bearing cap. When installing the bearing caps, return them to their original position and location.

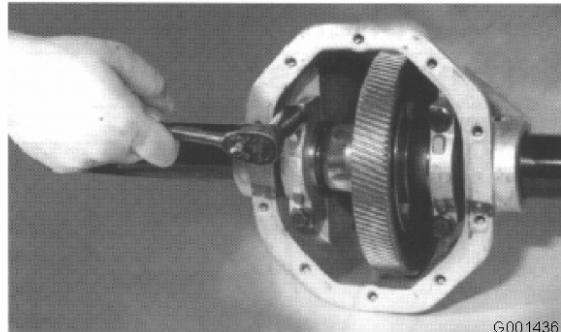


Figure 8

- 5. Remove the differential assembly (Figure 9).

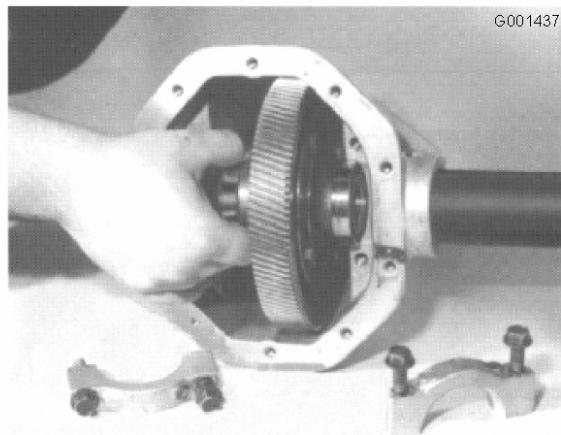


Figure 9

- 6. Retain all parts and fasteners.

Step**5****Installing the Final Gear****Parts needed for this step:**

1	Final gear
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Procedure

1. Position the differential assembly with the flanged side trunion facing down on the work surface.
2. Remove the four bolts and nuts securing the existing final gear drive from the assembly. Remove the gear from the assembly. Use caution not to damage any parts (Figure 10).



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Figure 10

3. Install the new final gear, located in loose parts, to the assembly.
 - A. Align the final gear mounting holes with the differential case holes. Secure the gear with the four bolts and nuts removed previously (Figure 11).

Note: The bolts should be installed from the flanged side.



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Figure 11

- B. Torque the nuts to 55-63 ft-lbs (74-85 N·m).

Step**6****Installing the New Differential Assembly****Parts needed for this step:**

1	Gasket
1	Cover plate

Procedure

1. Insert the differential assembly into the housing (Figure 12).

Note: Return the bearing caps to their original position and orientation when installing the differential assembly.

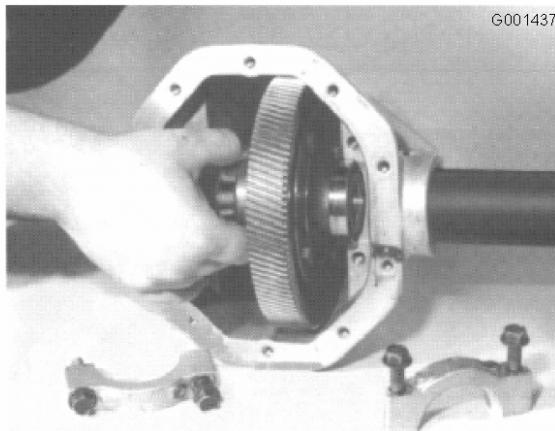


Figure 12

2. Secure the assembly and bearing caps with the fasteners removed previously. Install the four bolts into the bearing caps and torque the fasteners to 35-45 ft-lbs (47-61 N·m).
3. Place a small bead of RTV silicone sealant to the flanged edge of the new cover plate (Figure 13). The sealant should be applied inside of the cover plate mounting holes.



Figure 13

4. Install the gasket, located in loose parts, over the holes in the cover plate.
5. Secure the cover plate and gasket with the ten cover plate screws removed previously. Torque the screws to 16-24 ft-lbs (21-32 N·m)

Step

7

Installing the Axle Shaft

No Parts Required

Procedure

1. Install the axle shaft in the axle tube, being careful not to damage the seal (Figure 14).

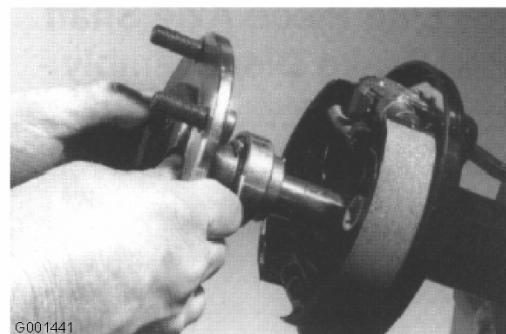


Figure 14

2. Install the snap ring, removed previously (Figure 15).

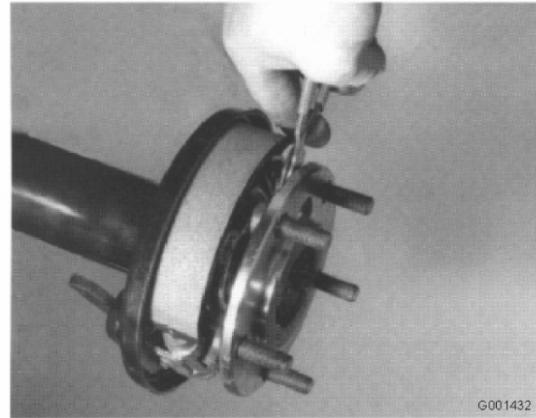


Figure 15

3. Repeat the procedure for the opposing axle shaft.

Step 8

Finishing the Installation

No Parts Required

Procedure

1. Install the brake drum.
2. Install the tire and wheel assembly. Use the lug nuts removed previously to secure the assembly to the axle (Figure 16).

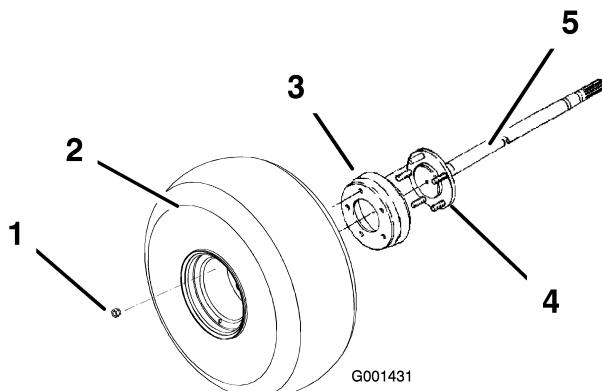


Figure 16

1. Lug nut
2. Tire and wheel assembly
3. Brake drum
4. Axle
5. Axle shaft

3. Repeat this procedure for the opposing wheel assembly.
4. Lower the machine to the ground. Torque the lug nuts to 45-65 ft-lb (61-88 N·m). Refer to the *Operator's Manual* for more information.
5. Locate and remove the check bolt in the transaxle housing (Figure 17).

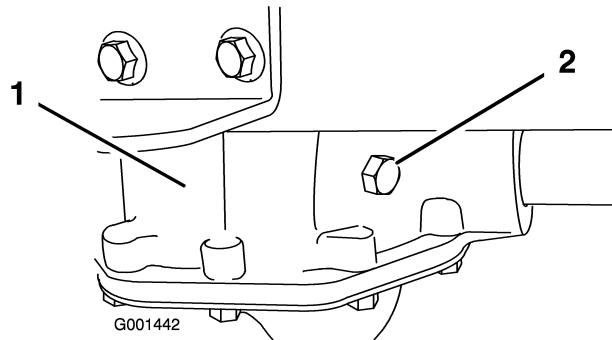


Figure 17

1. Transaxle housing
2. Check bolt

6. Fill the transaxle reservoir with 10W-30 motor oil. Add oil until the fluid level reaches the bottom of the check bolt indicator hole, approximately 1 qt (0.8 L).
7. Replace the check bolt and torque it to 15-20 ft-lb (20-27 N·m).
8. Place the bed on top of the frame. Install the hinges to the bed (Figure 18). Use the bolts removed previously to secure the hinges to the frame.

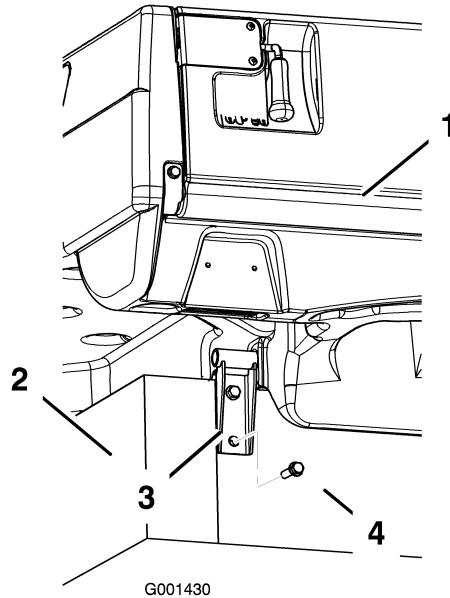
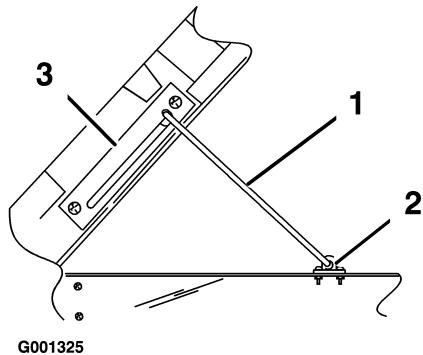


Figure 18

Left hinge shown

9. Raise the bed to the upright position and support it using a block or another method.
10. Install the screws and clip to secure the prop rod to the frame rail (Figure 19).



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Figure 19

1. Prop rod	3. Prop rod bracket
2. Prop rod clip	