



Electric Bed Lift Kit

2014 and After Workman® MDE Utility Vehicle

Model No. 07396—Serial No. 314000001 and Up

Installation Instructions

Safety

⚠ WARNING

CALIFORNIA Proposition 65 Warning

This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects, or reproductive harm.

Safety and Instructional Decals



Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or lost.



127-7388

1. Pin location



Installation

Loose Parts

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

Procedure	Description	Qty.	Use
1	No parts required	–	Prepare the machine.
2	Outer bed bracket (short flanges) Inner bed bracket (long flanges) Hex-head bolt (5/16 x 5-1/2 inch) Flange nut (5/16)	1 1 1 1	Install the bed brackets.
3	Switch Solenoid Bolt (#10 x 3/4 inch) Nut (#10) Accessory harness	1 1 2 2 1	Install the solenoid and the switch.
4	Lift-cylinder support Lift actuator Clevis pin (3-1/2 inch) Clevis pin (2-1/4 inch) Hairpin cotter Hex-head bolt (1/2 x 5-1/2 inch) Locknut (1/2 inch) U bolt Carriage bolt (3/8 x 1 inch) Flange nut (3/8 inch)	1 1 1 1 2 1 1 2 2 6	Install the lift actuator.
5	No parts required	–	Remove the prop rod.

1

Preparing the Machine

No Parts Required

Procedure

1. Move the machine to a level surface, set the parking brake, turn the ignition off, and remove the key.

⚠ WARNING

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

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

2. Lift the lever on either side of the box and lift the box up (Figure 1).

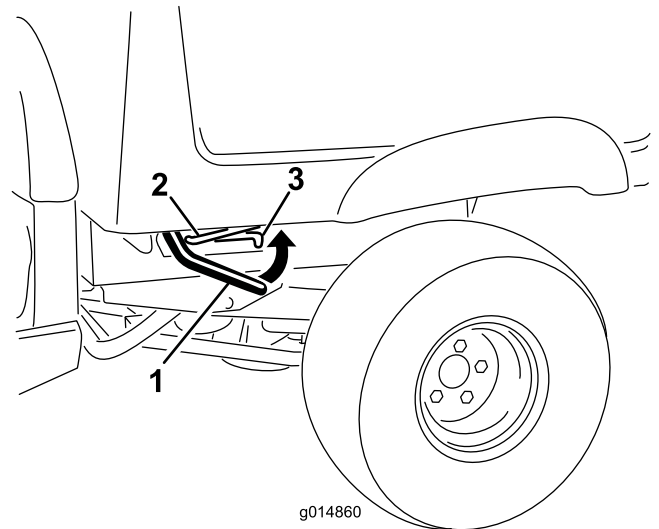


Figure 1

1. Lever
2. Prop rod

3. Detent slot

3. Pull the prop rod into the detent slot, securing the box (Figure 1).

⚠ WARNING

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.
4. Remove a short battery cable linking any 2 batteries in the battery bank to remove power from the system (Figure 2).

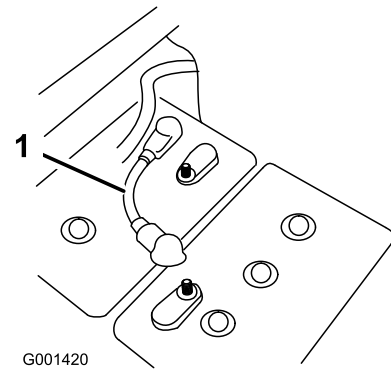


Figure 2

1. Short battery cable

⚠ WARNING

CALIFORNIA Proposition 65 Warning

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm.
Wash hands after handling.

⚠ WARNING

Battery terminals or metal tools could short against metal components causing sparks. Sparks can cause the battery gasses to explode, resulting in personal injury.

- When removing or installing a battery or a cable, do not allow the battery terminals to touch any metal parts of the machine.
- Do not allow metal tools to short between the battery terminals and metal parts of the machine.
- Always keep the battery retainers in place to protect and secure the batteries.

⚠ WARNING

Incorrect battery cable routing could damage the machine and cables causing sparks. Sparks can cause the battery gasses to explode, resulting in personal injury.

- Always disconnect the negative (black) battery cable before disconnecting the positive (red) cable.
- Always connect the positive (red) battery cable before connecting the negative (black) cable.

5. Remove the 4 flange nuts securing the latch-rod brackets to the underside of the box (Figure 3).

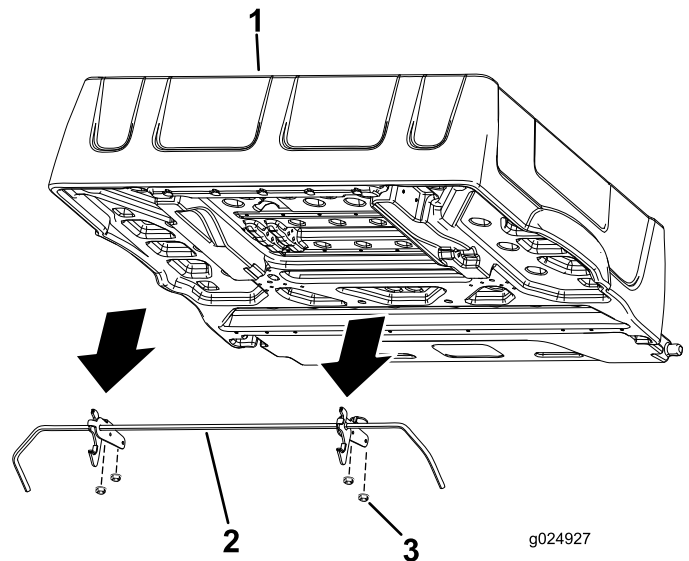


Figure 3

1. Box
2. Latch rod
3. Flange nut

6. Remove and save the latch rod and the latches.

2

Installing the Bed Brackets

Parts needed for this procedure:

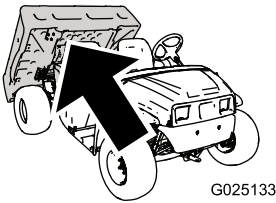
1	Outer bed bracket (short flanges)
1	Inner bed bracket (long flanges)
1	Hex-head bolt (5/16 x 5-1/2 inch)
1	Flange nut (5/16)

Procedure

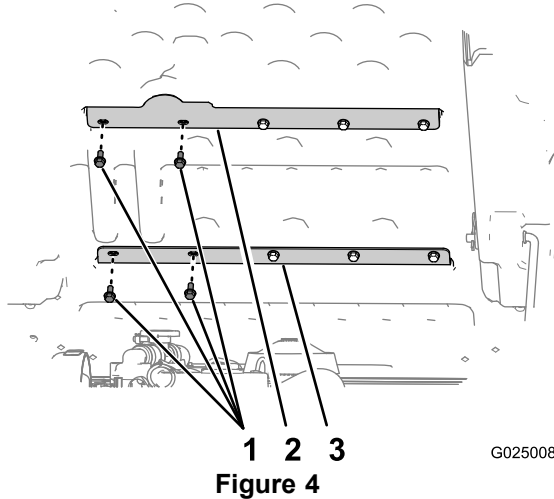
Perform the bed bracket installation on the bottom side of the bed.

- Looking toward the bottom of the raised bed, remove the 2 furthest left bolts (5/16 x 3/4 inch) that secure each of the 2 braces to the bed (Figure 4).

Note: Retain the 4 bolts for installation.



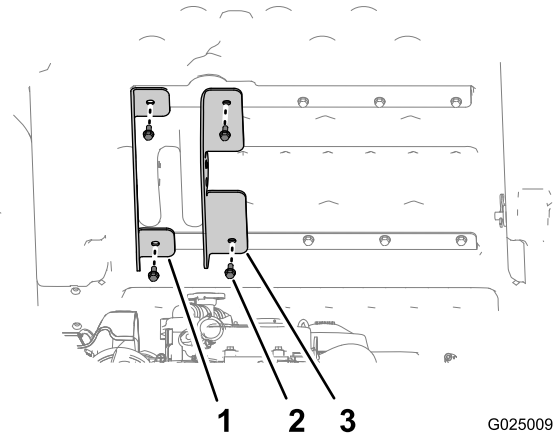
G025133



G025008

- Bolts (5/16 x 3/4 inch)
- Rear bed brace
- Front bed brace

- Align the outer bed bracket (the bracket with the short flanges) to the outer hole in each of the bed braces (Figure 5).

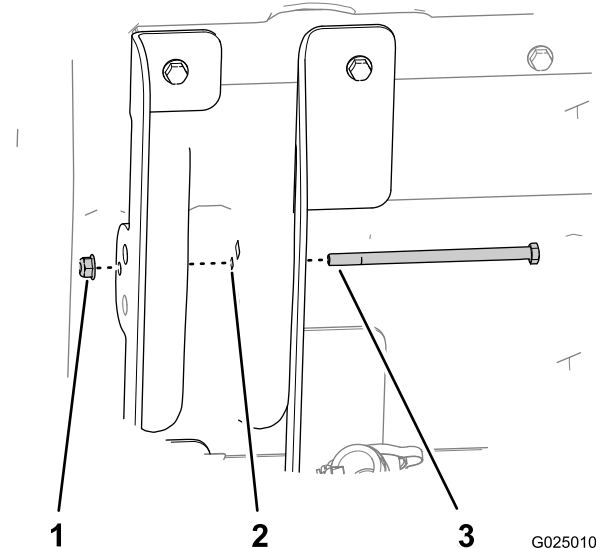


G025009

Figure 5

- Outer bed bracket (short flanges)
- Bolts (5/16 x 3/4 inch)
- Inner bed bracket (long flanges)

- Secure the outer bed bracket (the bracket with the short flanges) to the bed with 2 of the bolts that you removed in step 1, and tighten the bolts hand tight (Figure 5).
- Align the inner bed bracket (the bracket with the long flanges) to the inner holes in the bed braces (Figure 5).
- Secure the inner bed bracket to the bed with the 2 other bolts that you removed in step 1, and tighten the bolts hand tight (Figure 5).
- Insert the hex-head bolt (5/16 x 5-1/2 inch) through the small hole in the inner bed bracket (long flanges), the bed structure, and the outer bed bracket (short flanges) as shown in Figure 6.



G025010

Figure 6

- Locknut (5/16 inch)
- Small hole
- Hex-head bolt (5/16 x 5-1/2 inch)

- Secure the bolt with the flange nut (5/16 inch) until it is hand tight (Figure 6).

3

Installing the Solenoid and the Switch

Parts needed for this procedure:

1	Switch
1	Solenoid
2	Bolt (#10 x 3/4 inch)
2	Nut (#10)
1	Accessory harness

Procedure

1. Remove the hood to access the main harness and the solenoid plate.
2. Install the solenoid on the existing plate using 2 bolts (#10 x 3/4 inch) and 2 nuts (#10) as shown in Figure 7.

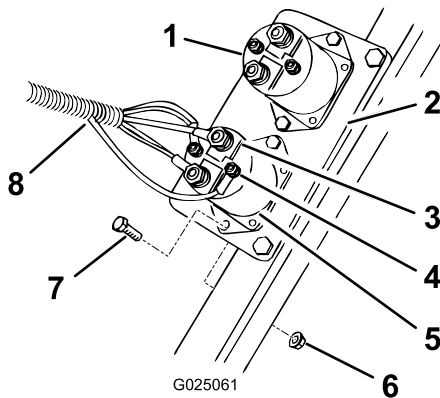


Figure 7

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|-----------------------|-------------------------|
| 1. Solenoid, existing | 5. Solenoid, new |
| 2. Solenoid plate | 6. Nut, #10 |
| 3. Large posts | 7. Bolt, #10 x 3/4 inch |
| 4. Small posts | 8. Accessory harness |

3. Attach the accessory harness to the solenoid. Connect a large ring to each large post. Connect a small ring wire to each small post. Secure the wires with the existing fasteners.
4. Locate the optional 48-volt output connector as labeled on the main harness and remove the cap. Connect the accessory harness to the 48-volt output connector as shown in Figure 8.

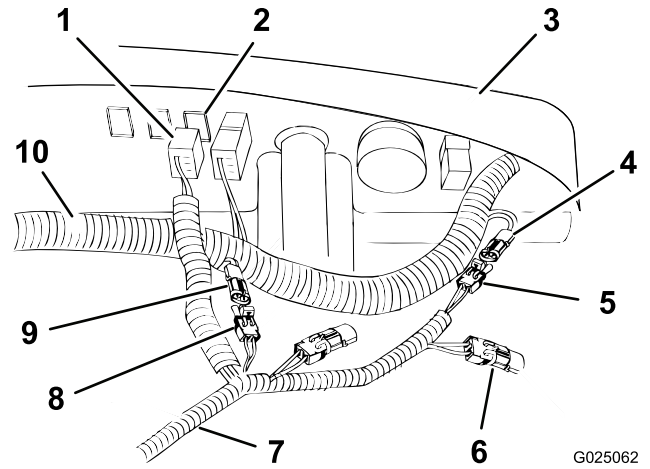
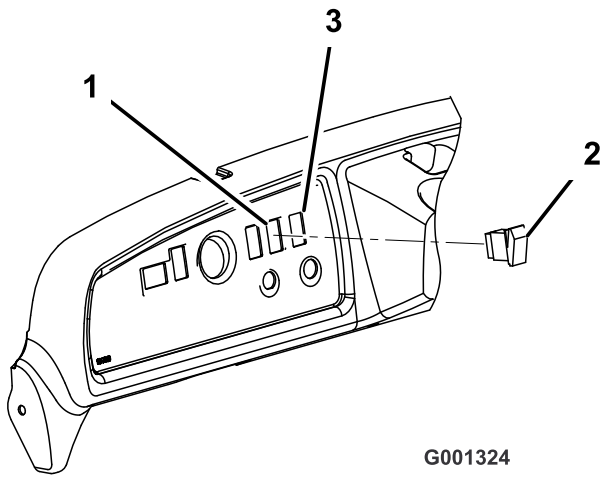


Figure 8

- | | |
|--|---|
| 1. Switch connector | 6. Capped 48-volt connector extension (accessory harness) |
| 2. Plug (in dash) | 7. Accessory harness |
| 3. Dash (underside) | 8. Box lift kit connector, from accessory harness |
| 4. 48-volt connector, from main harness | 9. Box lift kit connector, from main harness |
| 5. 48-volt connector, from accessory harness | 10. Main harness |

5. Locate the box lift kit connector on the main harness and remove the cap. Attach the accessory harness to the box lift kit connector wire from the main harness.
6. Cap the 48-volt output connector on the accessory harness.
7. Place the switch connector into position behind the plug in the dash as shown in Figure 8.
8. Remove the plug from the dash panel, to the right of the steering column and above the key switch (Figure 9).

Note: If the hole in the dash is in use, measure over 13 mm (1/2 inch) and cut another 22 x 38 mm (7/8 x 1-1/2 inch) rectangular opening in the dash. Make sure not to damage any existing components behind the dash when cutting the hole.



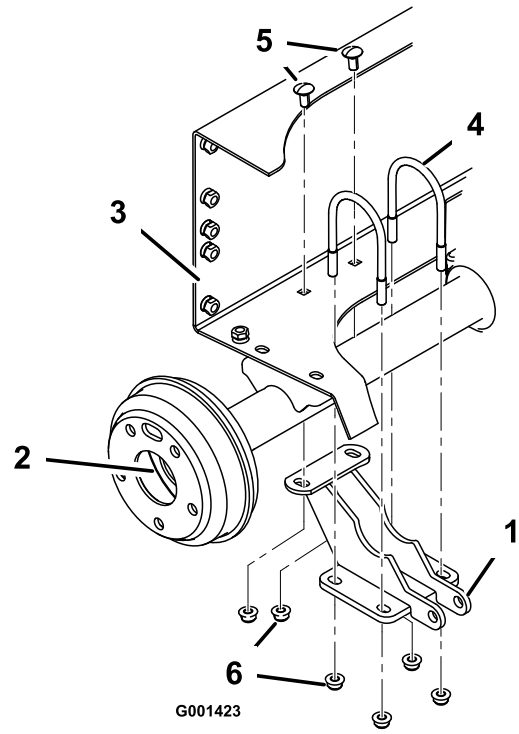
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Figure 9

- 1. Plugged hole
- 2. Bed-lift switch
- 3. Cut the new hole (if required).

9. Plug the switch into the accessory connector in the dash.

Note: Do not install the switch.



G001423

Figure 10

- 1. Lift-cylinder support
- 2. Right end of the axle
- 3. Rear frame battery tray
- 4. U-bolt
- 5. Carriage bolt, 3/8 x 1 inch
- 6. Flange nut, 3/8 inch

- 2. Secure the lift-cylinder support to the rear frame with 2 carriage bolts (3/8 x 1 inch) and 2 flange nuts (3/8 inch). Tighten the 4 flange nuts on the U-bolts equally to make sure that the bracket is aligned to the axle. Tighten the 2 nuts securing the rear of the bracket to the rear frame (Figure 10).
- 3. Mount the bottom end of the lift actuator to the lift-cylinder support with a clevis pin and a hairpin cotter. Position the components as shown in Figure 11.

4

Installing the Lift Actuator

Parts needed for this procedure:

1	Lift-cylinder support
1	Lift actuator
1	Clevis pin (3-1/2 inch)
1	Clevis pin (2-1/4 inch)
2	Hairpin cotter
1	Hex-head bolt (1/2 x 5-1/2 inch)
1	Locknut (1/2 inch)
2	U bolt
2	Carriage bolt (3/8 x 1 inch)
6	Flange nut (3/8 inch)

Procedure

- 1. Loosely mount the lift-cylinder support to the right end of the rear axle with 2 U-bolts and 4 flange nuts (3/8 inch) while aligning the mounting holes with the holes in the battery tray (Figure 10).

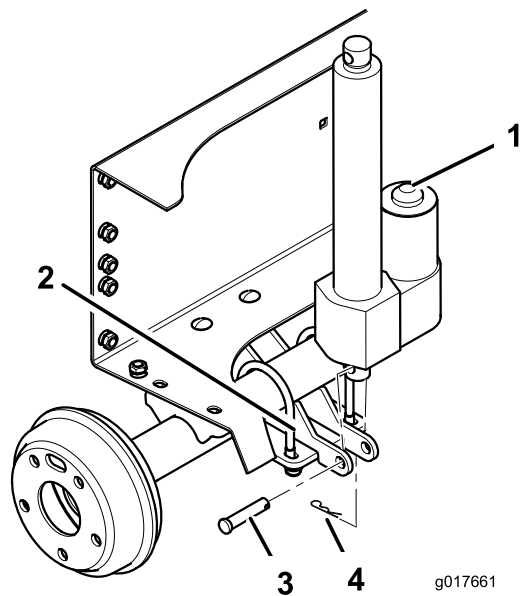


Figure 11

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|--------------------------|-------------------|
| 1. Actuator | 3. Clevis pin |
| 2. Lift-cylinder support | 4. Hairpin cotter |

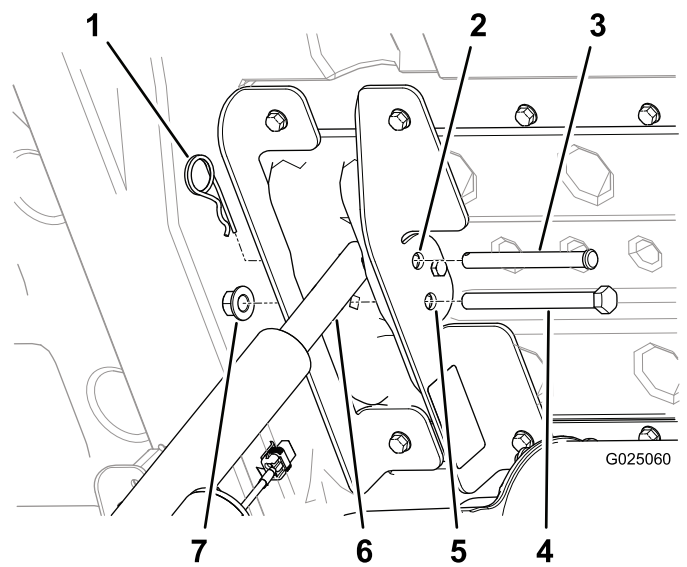


Figure 12

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|-------------------------------------|-------------------------------|
| 1. Hair pin | 5. Hole for the hex-head bolt |
| 2. Hole for the clevis pin | 6. Lift-actuator rod |
| 3. Clevis pin (3-1/2 inch) | 7. Locknut (1/2 inch) |
| 4. Hex-head bolt (1/2 x 5-1/2 inch) | |

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- Press the upper paddle of the bed-lift switch to extend the rod of the lift actuator rod until the hole in the rod aligns with the holes in the inner and outer bed brackets (Figure 12).

Note: If the lift actuator does not extend, press the other paddle of the switch

- Align the upper paddle to the 12 o'clock position and insert the bed-lift switch into the opening in the dash (Figure 9).

Note: The switch should snap and lock into position.

- Secure the lift-actuator rod between the bed brackets with the clevis pin (3-1/2 inch) and the hairpin (Figure 12).

Note: In each bracket, select the hole for the electric machine (MDE); refer to Safety and Instructional Decals (page 1) for the appropriate hole for this machine.

Note: Tighten the locknut until it is snug.

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- Tighten the 4 bolts (5/16 x 3/4 inch) that secure the inner and outer bed brackets to the bed (Figure 5) to 15 to 16.6 N-m (133 to 147 inch-lb).
 - Align the hex-head bolt (1/2 x 5-1/2 inch) through the remaining 12.7 mm (1/2 inch) holes in the inner and outer bed brackets (Figure 12) and secure it with a nut (1/2 inch) until the flange nut is snug.
 - Tighten the flange nut that secures the bolt (5/16 inch) until it is snug (Figure 6).

5

Removing the Prop Rod

No Parts Required

Procedure

1. Remove the hairpin and washer that secure the prop rod to the bottom of the bed (Figure 13).

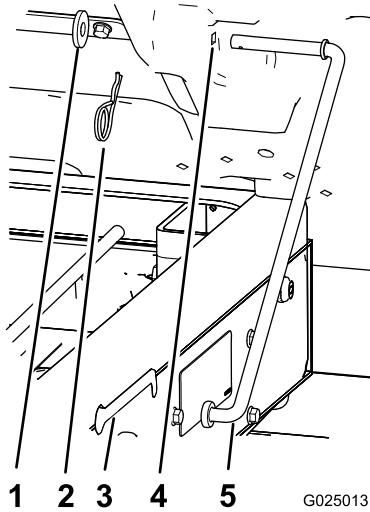


Figure 13

- | | |
|-----------------|-------------|
| 1. Washer | 4. Bed hole |
| 2. Hairpin | 5. Prop rod |
| 3. Slot (frame) | |

2. Slide the prop rod forward to remove it from the bracket on the frame (Figure 13).

Note: Retain the prop rod components for future use.

Note: If the electric box lift is ever removed, install the prop rod and latch rod again, using the existing fasteners and the prop-rod bracket.

Operation

⚠ WARNING

Driving the machine with the cargo box raised may cause the machine to tip or roll more easily. The box structure may become damaged if the box is raised for an extended period of time while operating the machine.

- Only operate the machine when the cargo box is down.
- After a load has been dumped, lower the cargo box.

⚠ CAUTION

The weight of the box may be heavy. Hands or other body parts could be crushed.

Keep hands and other body parts clear when lowering the box.

Raising the Bed

1. Turn the ignition key to the On position.
2. Push the top of the switch to raise the box.

Important: When you hear a ratcheting noise, the box lift is completely extended or retracted. Do not continue pressing the switch.

Lowering the Bed

Push the bottom of the switch to lower the box.

Important: When you hear a ratcheting noise, the box lift is completely extended or retracted. Do not continue pressing the switch.

Note: The actuator may cause slight deformation to the bed after it is fully lowered and before the actuator clutch engages. Release the switch when a ratcheting noise is heard.

Notes:

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The Toro General Commercial products Guarantee

A Limited Warranty

Electric
Workman

Conditions and Products Covered

The Toro Company and its affiliate, Toro Warranty Company, pursuant to an agreement between them, jointly warrant your Toro Commercial product ("Product") to be free from defects in materials or workmanship for two years or 1500 operational hours*, whichever occurs first. Where a warrantable condition exists, we will repair the Product at no cost to you including diagnostics, labor, parts, and transportation. This warranty begins on the date the Product is delivered to the original retail purchaser. * Product equipped with an hour meter.

Instructions for Obtaining Warranty Service

You are responsible for notifying the Commercial Products Distributor or Authorized Commercial Products Dealer from whom you purchased the Product as soon as you believe a warrantable condition exists. If you need help locating a Commercial Products Distributor or Authorized Dealer, or if you have questions regarding your warranty rights or responsibilities, you may contact us at:

Commercial Products Service Department
Toro Warranty Company
8111 Lyndale Avenue South
Bloomington, MN 55420-1196
E-mail: commercial.warranty@toro.com

Owner Responsibilities

As the Product owner, you are responsible for required maintenance and adjustments stated in your *Operator's Manual*. Failure to perform required maintenance and adjustments can be grounds for disallowing a warranty claim.

Items and Conditions Not Covered

Not all product failures or malfunctions that occur during the warranty period are defects in materials or workmanship. This warranty does not cover the following:

- Product failures which result from the use of non-Toro replacement parts, or from installation and use of add-on, or modified non-Toro branded accessories and products. A separate warranty may be provided by the manufacturer of these items.
- Product failures which result from failure to perform recommended maintenance and/or adjustments. Failure to properly maintain your Toro product per the Recommended Maintenance listed in the *Operator's Manual* can result in claims for warranty being denied.
- Product failures which result from operating the Product in an abusive, negligent or reckless manner.

Countries Other than the United States or Canada

Customers who have purchased Toro products exported from the United States or Canada should contact their Toro Distributor (Dealer) to obtain guarantee policies for your country, province, or state. If for any reason you are dissatisfied with your Distributor's service or have difficulty obtaining guarantee information, contact the Toro importer. If all other remedies fail, you may contact us at Toro Warranty Company.

- Parts subject to consumption through use unless found to be defective. Examples of parts which are consumed, or used up, during normal Product operation include, but are not limited to, batteries, carbon brushes, brake components, tires, filters, belts, etc.
- Failures caused by outside influence. Items considered to be outside influence include, but are not limited to, weather, storage practices, contamination, use of unapproved lubricants, additives, chemicals, etc.
- Normal "wear and tear" items. Normal "wear and tear" includes, but is not limited to, damage to seats due to wear or abrasion, worn painted surfaces, scratched decals or windows, etc.

Parts

Parts scheduled for replacement as required maintenance are warranted for the period of time up to the scheduled replacement time for that part. Parts replaced under this warranty are covered for the duration of the original product warranty and become the property of Toro. Toro will make the final decision whether to repair any existing part or assembly or replace it. Toro may use remanufactured parts for warranty repairs.

Note Regarding Deep Cycle Battery Warranty:

Deep cycle batteries have a specified total number of kilowatt-hours they can deliver during their lifetime. Operating, recharging, and maintenance techniques can extend or reduce total battery life. As the batteries in this product are consumed, the amount of useful work between charging intervals will slowly decrease until the battery is completely worn out. Replacement of worn out batteries, due to normal consumption, is the responsibility of the product owner. Battery replacement may be required during the normal product warranty period at owner's expense.

General Conditions

Repair by an Authorized Toro Distributor or Dealer is your sole remedy under this warranty.

Neither The Toro Company nor Toro Warranty Company is liable for indirect, incidental or consequential damages in connection with the use of the Toro Products covered by this warranty, including any cost or expense of providing substitute equipment or service during reasonable periods of malfunction or non-use pending completion of repairs under this warranty.

All implied warranties of merchantability and fitness for use are limited to the duration of this express warranty. Some states do not allow exclusions of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions and limitations may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.