



## Electric Bed Lift Kit

2011 and After Workman® MDE Utility Vehicle

Model No. 07382—Serial No. 312000001 and Up

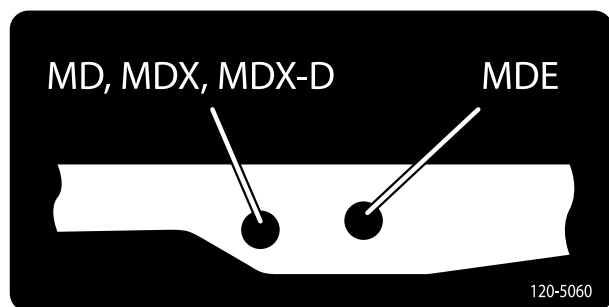
Installation Instructions

# Safety

## 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.



120-5060

# Installation

## Loose Parts

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

Procedure	Description	Qty.	Use
<b>1</b>	No parts required	–	Prepare the Machine
<b>2</b>	Lift bracket, upper Pan-head, Phillips screw (3/8 x 2-1/2 inches) Flange locknut (Whiz lock) (3/8 inch) Lift cylinder support Lift actuator U-bolts Flange locknut (Nylock) (3/8 inch) Carriage bolts (3/8 x 3/4 inch) Clevis pin Hair pin cotter	1 4 4 1 1 2 6 2 1 1	Install the bed lift
<b>3</b>	Solenoid Bolt (#10 x 3/4 inch) Nut (#10) Accessory harness Switch Clevis pin, large Hair pin cotter	1 2 2 1 1 1 1	Install the switch

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

# 1

## Preparing the Machine

### No Parts Required

### Procedure

1. Position the machine on 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).

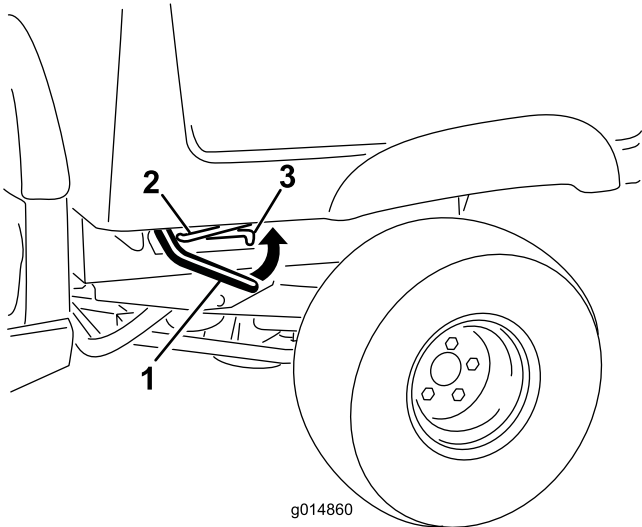


Figure 1

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 two batteries in the battery bank to remove power from the system (Figure 2).

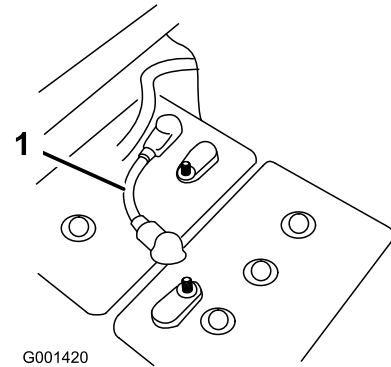


Figure 2

1. Short battery cable

5. Remove the 4 flange nuts securing the latch rod brackets to the underside of the box (Figure 3). Remove and save the rod and latches. Leave the carriage bolts in the holes and secure them to the bed with the flange nuts.

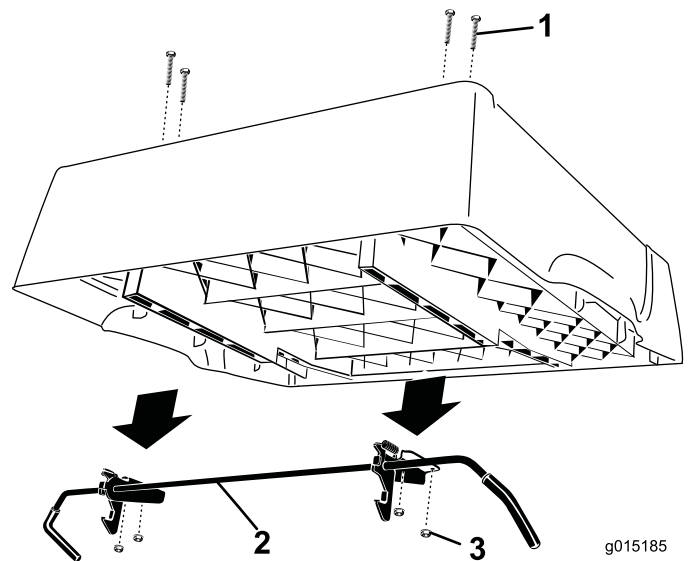


Figure 3

1. Carriage bolts—leave in the bed
2. Latch rod
3. Flange nut

# 2

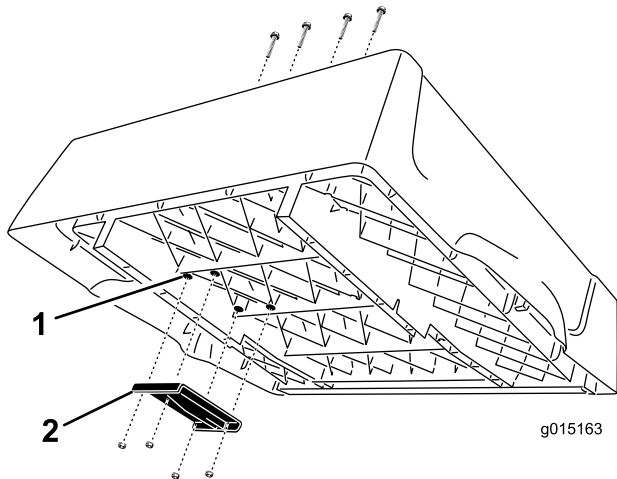
## Installing the Bed Lift

### Parts needed for this procedure:

1	Lift bracket, upper
4	Pan-head, Phillips screw (3/8 x 2-1/2 inches)
4	Flange locknut (Whiz lock) (3/8 inch)
1	Lift cylinder support
1	Lift actuator
2	U-bolts
6	Flange locknut (Nylock) (3/8 inch)
2	Carriage bolts (3/8 x 3/4 inch)
1	Clevis pin
1	Hair pin cotter

### Procedure

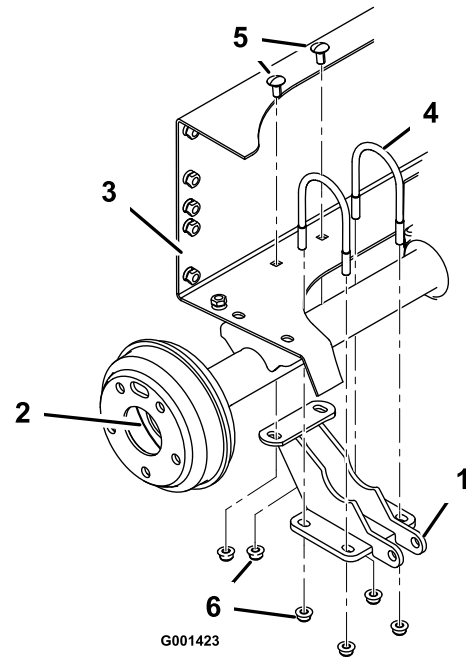
1. Locate the 4 bosses on the underside of the box on the right side (Figure 4). Using a drill with a 3/8 inch bit, carefully drill up through the bosses to make four holes through the floor of the bed.



**Figure 4**

1. Bosses
2. Upper lift bracket

(3/8 inch) while aligning the mounting holes with the holes in the battery tray (Figure 5).

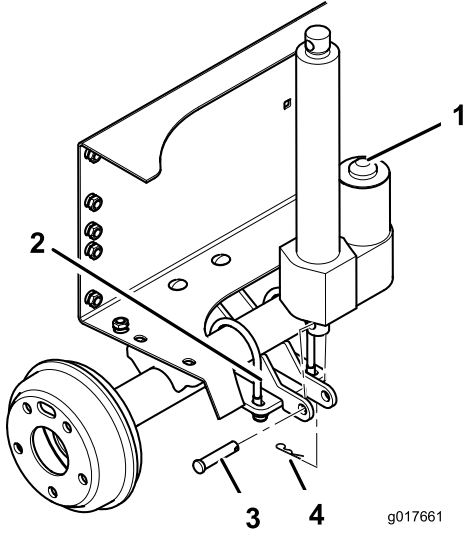


**Figure 5**

1. Lift cylinder support
  2. Right end of the axle
  3. Rear frame battery tray
  4. U-bolt
  5. Carriage bolt, 3/8 x 3/4 inch
  6. Flange nut, 3/8 inch
- 
5. Secure the lift cylinder support to the rear frame with 2 carriage bolts (3/8 x 3/4 inch) and 2 flange nuts (3/8 inch). Tighten the 4 flange nuts on the U-bolts equally to make sure the bracket is aligned to the axle. Tighten the two nuts securing the rear of the bracket to the rear frame (Figure 5).

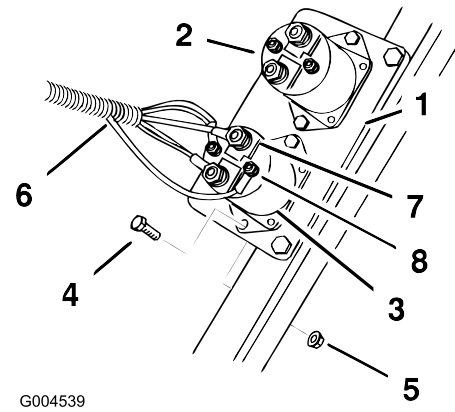
2. Mount the upper lift bracket to the underside of the box with 4 pan-head, Phillips screws (3/8 x 2-1/2 inches) and flange locknuts (Whiz lock) (3/8 inch). Position the bracket as shown in Figure 4.
3. Torque the nuts to 200 in-lb (22.6 N-m).
4. Loosely mount the lift cylinder support to the right end of the rear axle with 2 U-bolts and 4 flange nuts

- Mount the bottom end of the lift actuator to the lift cylinder support with a clevis pin and hair pin cotter. Position the components as shown in Figure 6.



**Figure 6**

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



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**Figure 7**

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

- 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.
- Locate the optional 48v output connector as labeled on the main harness and remove the cap. Connect the accessory harness to the 48v output connector as shown in Figure 8.

# 3

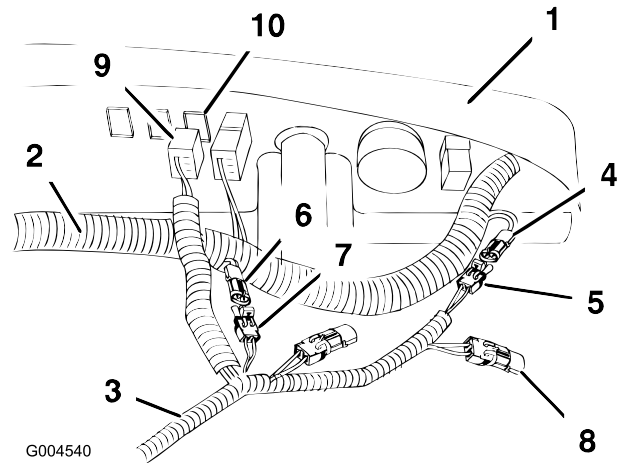
## Installing the Switch

### Parts needed for this procedure:

1	Solenoid
2	Bolt (#10 x 3/4 inch)
2	Nut (#10)
1	Accessory harness
1	Switch
1	Clevis pin, large
1	Hair pin cotter

### Procedure

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

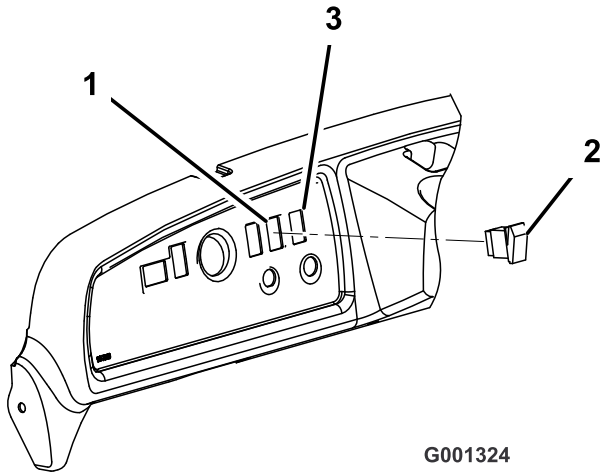


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**Figure 8**

- |  |  |
|--|--|
| 1. Dash, under side                      | 6. Box lift kit connector, from main harness           |
| 2. Main harness                          | 7. Box lift kit connector, from accessory harness      |
| 3. Accessory harness                     | 8. Cap 48v connector extension, from accessory harness |
| 4. 48v connector, from main harness      | 9. Switch connector                                    |
| 5. 48v connector, from accessory harness | 10. Plug in dash                                       |

5. Locate the box lift kit connector on the main harness and remove the cap. Attach accessory harness to box lift kit connector wire from main harness.
6. Cap 48v output connector on 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 hole in the right side of the dash (Figure 9).
9. Plug the switch into the accessory connector in the dash. Insert the switch into the hole in the dash (Figure 9).



**Figure 9**

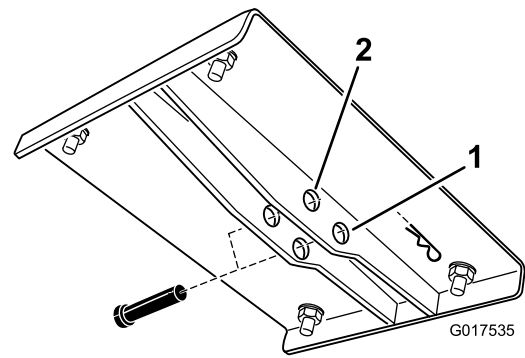
1. Plugged hole
2. Switch
3. Cut new hole (if required).

### **⚠ WARNING**

**Loose or improperly secured battery connections could damage the vehicle and cables causing sparks. Sparks can cause the battery gasses to explode, resulting in personal injury.**

**Always ensure the battery polarity when making connections.**

10. Plug the switch into the harness connector in the dash. Insert the switch into the hole in the dash (Figure 9).
11. Press the switch upward to extend the actuator rod until it is aligned with the mounting holes in the upper lift bracket.
12. Locate the two sets of holes in the upper lift bracket (Figure 10). Select the set of holes in the bracket for the electric vehicles.



**Figure 10**

1. Hole for gasoline and diesel powered vehicles
2. Hole for electric vehicles

13. Secure the rod to the bracket with the clevis pin (3-1/2 inch) and hair pin cotter.
14. Replace the short battery cable removed previously. Torque the nuts securing all battery cables to 120 to 180 in-lb (13.5 to 21 N-m).
15. Coat the battery terminals with Toro battery terminal protector.
16. Press the switch upward to extend the actuator rod until it is aligned with the mounting holes in the upper lift bracket. Secure the rod to the bracket with the large clevis pin and cotter pin.
17. Remove the nuts and bracket securing the prop rod to the underside of the bed. Install the nuts back on the carriage bolts to secure them in the bed and cover the holes.
18. Slide the prop rod forward to remove it from the bracket on the frame. Retain the prop rod components for future use.

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

# Operation

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

## Raising the Bed

### **⚠ WARNING**

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

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

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

## Lowering the Bed

### **⚠ 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.**

Push the bottom of the switch to lower the box.

**Important:** When a ratcheting noise is heard, 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.



# The Toro Total Coverage Guarantee

## A Limited Warranty

### 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. This warranty is applicable to all products with the exception of Aerators (refer to separate warranty statements for these products). 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:

Toro Commercial Products Service Department  
Toro Warranty Company  
8111 Lyndale Avenue South  
Bloomington, MN 55420-1196  
952-888-8801 or 800-952-2740  
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.
- 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, brake pads and linings, clutch linings, blades, reels, rollers and bearings (sealed or greasable), bed knives, spark plugs, castor wheels and bearings, tires, filters, belts, and certain sprayer components such as diaphragms, nozzles, and check valves, etc.
- Failures caused by outside influence. Conditions considered to be outside influence include, but are not limited to, weather, storage practices, contamination, use of unapproved fuels, coolants, lubricants, additives, fertilizers, water, or chemicals, etc.
- Failure or performance issues due to the use of fuels (e.g. gasoline, diesel, or biodiesel) that do not conform to their respective industry standards.

### 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.

- Normal noise, vibration, wear and tear, and deterioration.
- 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.

### Deep Cycle and Lithium-Ion Battery Warranty:

Deep cycle and Lithium-Ion 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. Note: (Lithium-Ion battery only): A Lithium-Ion battery has a part only prorated warranty beginning year 3 through year 5 based on the time in service and kilowatt hours used. Refer to the *Operator's Manual* for additional information.

### Maintenance is at Owner's Expense

Engine tune-up, lubrication, cleaning and polishing, replacement of filters, coolant, and completing recommended maintenance are some of the normal services Toro products require that are at the 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. Except for the Emissions warranty referenced below, if applicable, there is no other express 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.

### Note regarding engine warranty:

The Emissions Control System on your Product may be covered by a separate warranty meeting requirements established by the U.S. Environmental Protection Agency (EPA) and/or the California Air Resources Board (CARB). The hour limitations set forth above do not apply to the Emissions Control System Warranty. Refer to the Engine Emission Control Warranty Statement supplied with your product or contained in the engine manufacturer's documentation for details