



Electric Bed Lift Kit

2014 and After Workman® MDE Utility Vehicle

Model No. 07396—Serial No. 31500001 and Up

Installation Instructions

Safety

⚠ WARNING

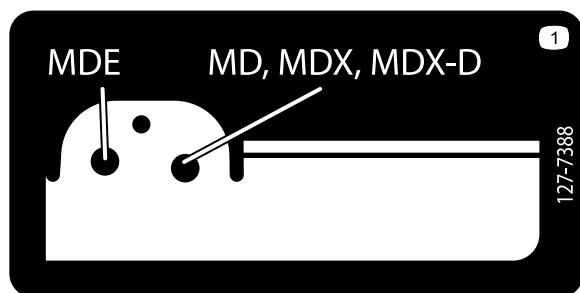
CALIFORNIA Proposition 65 Warning

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

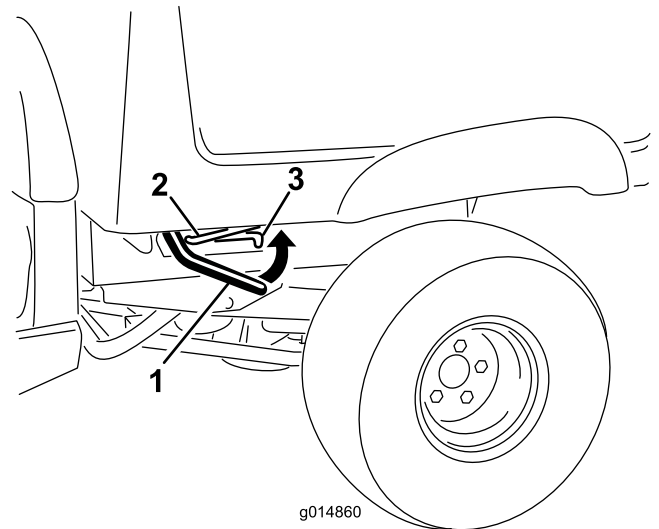
1. Move the machine to a level surface, set the parking brake, turn the ignition off, and remove the key.

⚠ 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).



g014860
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).

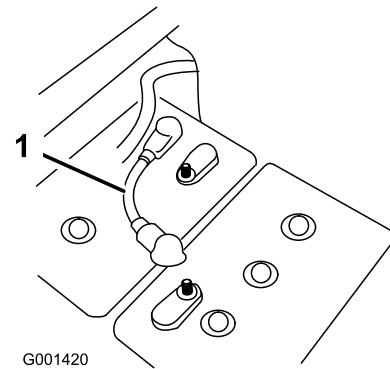


Figure 2

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).

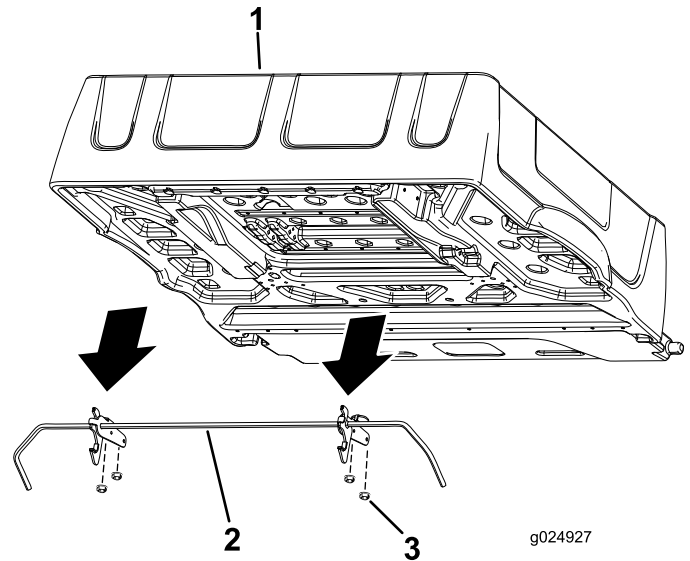


Figure 3

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:

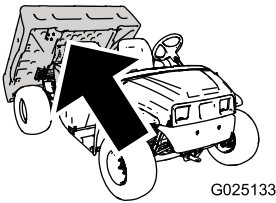
1	Outer bed bracket (short flanges)
1	Inner bed bracket (long flanges)
1	Hex-head bolt (5/16 x 5-1/2 inch)
1	Flange nut (5/16)

Procedure

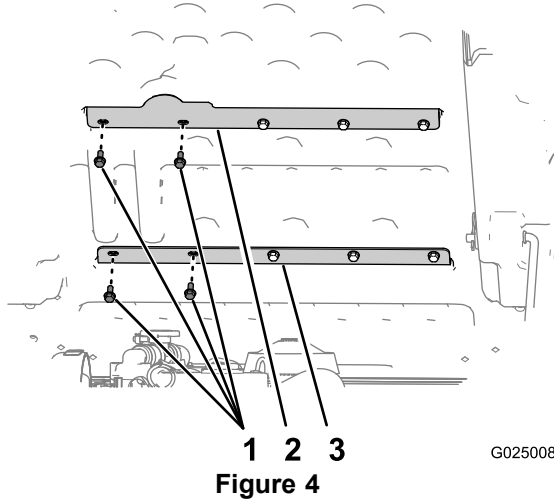
Perform the bed bracket installation on the bottom side of the bed.

1. 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.



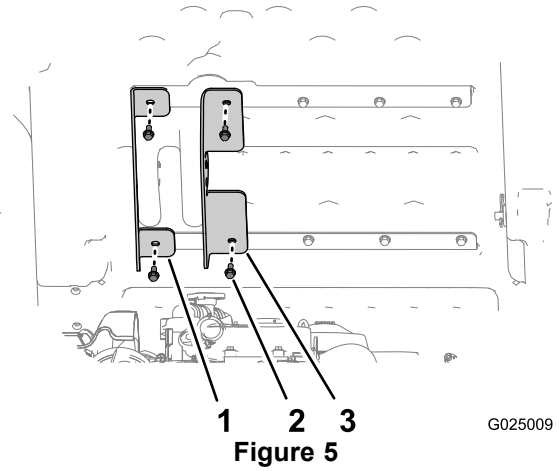
G025133



G025008

1. Bolts (5/16 x 3/4 inch)
2. Rear bed brace
3. Front bed brace

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

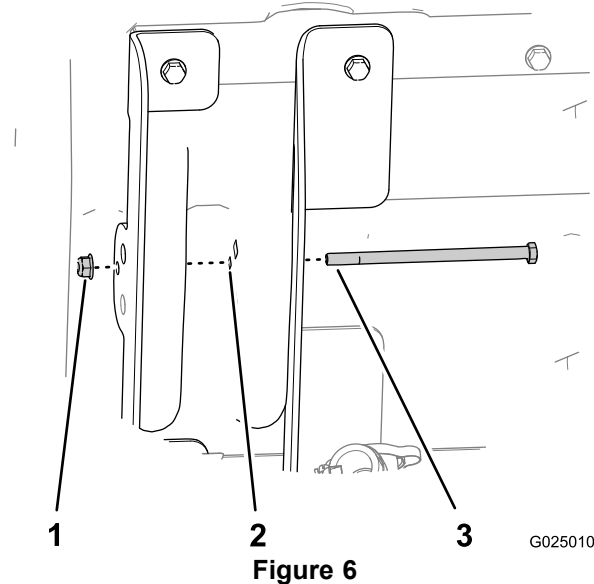


G025009

Figure 5

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

3. 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).
4. Align the inner bed bracket (the bracket with the long flanges) to the inner holes in the bed braces (Figure 5).
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).
6. 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

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

7. 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](#).

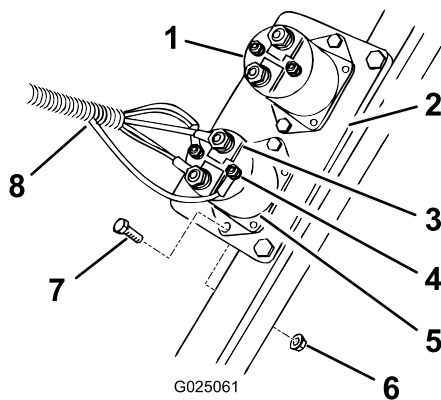


Figure 7

- | | |
|-----------------------|-------------------------|
| 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](#).

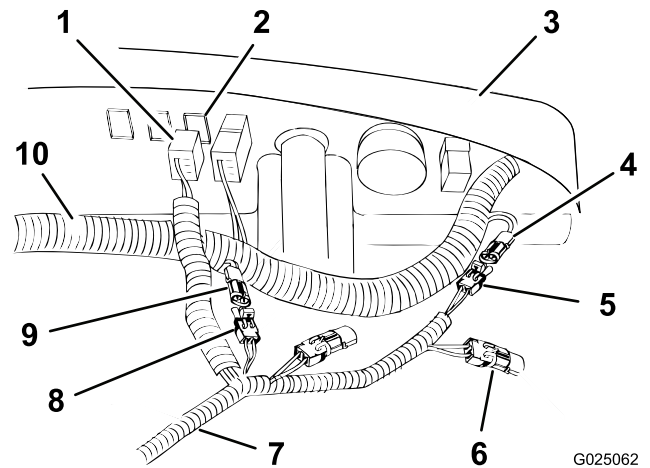
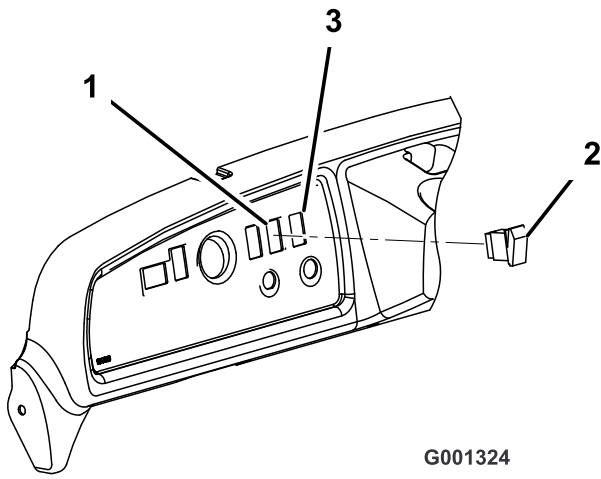


Figure 8

- | | |
|--|---|
| 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.



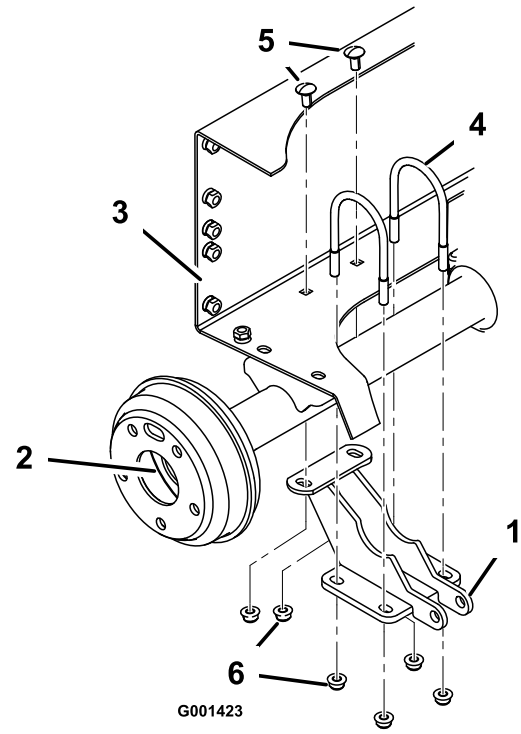
G001324

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).

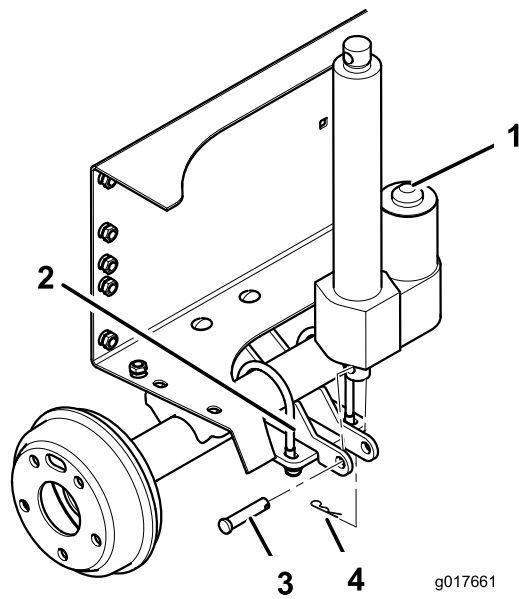


Figure 11

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

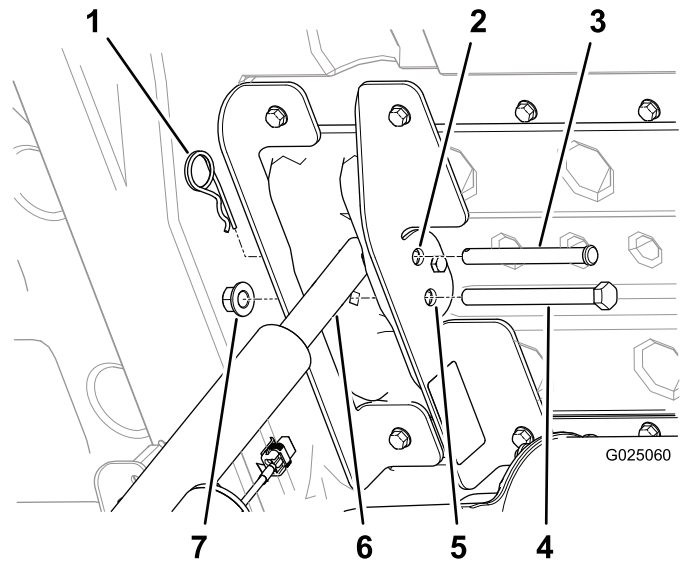


Figure 12

- | | |
|-------------------------------------|-------------------------------|
| 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) | |

- 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.

- 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).

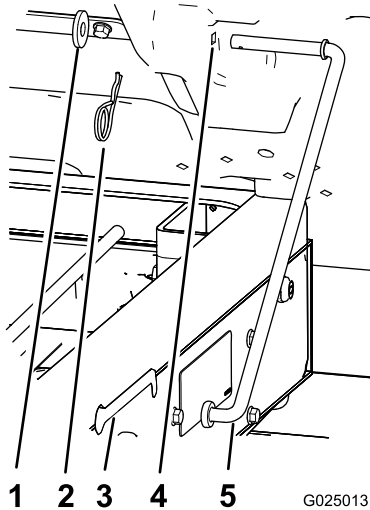


Figure 13

- | | |
|-----------------|-------------|
| 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:

Declaration of Incorporation

Model No.	Serial No.	Product Description	Invoice Description	General Description	Directive
07396	315000001 and Up	Electric Bed Lift Kit, 2014 and After Workman MDE Utility Vehicle	48V ELECTRIC CARGO BED LIFT (2014+)	Utility Vehicle	2006/42/EC, 2004/108/EC

Relevant technical documentation has been compiled as required per Part B of Annex VII of 2006/42/EC.

We will undertake to transmit, in response to requests by national authorities, relevant information on this partly completed machinery. The method of transmission shall be electronic transmittal.

This machinery shall not be put into service until incorporated into approved Toro models as indicated on the associated Declaration of Conformity and in accordance with all instructions, whereby it can be declared in conformity with all relevant Directives.

Certified:



David Klis
Sr. Engineering Manager
8111 Lyndale Ave. South
Bloomington, MN 55420, USA
October 15, 2014

EU Technical Contact:

Peter Tetteroo
Toro Europe NV
B-2260 Oevel-Westerloo
Belgium

Tel. 0032 14 562960
Fax 0032 14 581911

International Distributor List

Distributor:	Country:	Phone Number:	Distributor:	Country:	Phone Number:
Agrolanc Kft	Hungary	36 27 539 640	Maquiver S.A.	Colombia	57 1 236 4079
Balama Prima Engineering Equip.	Hong Kong	852 2155 2163	Maruyama Mfg. Co. Inc.	Japan	81 3 3252 2285
B-Ray Corporation	Korea	82 32 551 2076	Mountfield a.s.	Czech Republic	420 255 704 220
Casco Sales Company	Puerto Rico	787 788 8383	Mountfield a.s.	Slovakia	420 255 704 220
Ceres S.A.	Costa Rica	506 239 1138	Munditol S.A.	Argentina	54 11 4 821 9999
CSSC Turf Equipment (pvt) Ltd.	Sri Lanka	94 11 2746100	Norma Garden	Russia	7 495 411 61 20
Cyril Johnston & Co.	Northern Ireland	44 2890 813 121	Oslinger Turf Equipment SA	Ecuador	593 4 239 6970
Cyril Johnston & Co.	Republic of Ireland	44 2890 813 121	Oy Hako Ground and Garden Ab	Finland	358 987 00733
Equivar	Mexico	52 55 539 95444	Parkland Products Ltd.	New Zealand	64 3 34 93760
Femco S.A.	Guatemala	502 442 3277	Perfetto	Poland	48 61 8 208 416
ForGarder OU	Estonia	372 384 6060	Pratoverde SRL.	Italy	39 049 9128 128
G.Y.K. Company Ltd.	Japan	81 726 325 861	Prochaska & Cie	Austria	43 1 278 5100
Geomechaniki of Athens	Greece	30 10 935 0054	RT Cohen 2004 Ltd.	Israel	972 986 17979
Golf international Turizm	Turkey	90 216 336 5993	Riversa	Spain	34 9 52 83 7500
Guandong Golden Star	China	86 20 876 51338	Lely Turfcare	Denmark	45 66 109 200
Hako Ground and Garden	Sweden	46 35 10 0000	Solvret S.A.S.	France	33 1 30 81 77 00
Hako Ground and Garden	Norway	47 22 90 7760	Spypros Stavrinides Limited	Cyprus	357 22 434131
Hayter Limited (U.K.)	United Kingdom	44 1279 723 444	Surge Systems India Limited	India	91 1 292299901
Hydroturf Int. Co Dubai	United Arab Emirates	97 14 347 9479	T-Markt Logistics Ltd.	Hungary	36 26 525 500
Hydroturf Egypt LLC	Egypt	202 519 4308	Toro Australia	Australia	61 3 9580 7355
Irrimac	Portugal	351 21 238 8260	Toro Europe NV	Belgium	32 14 562 960
Irrigation Products Int'l Pvt Ltd.	India	0091 44 2449 4387	Valtech	Morocco	212 5 3766 3636
Jean Heybroek b.v.	Netherlands	31 30 639 4611	Victus Emak	Poland	48 61 823 8369

European Privacy Notice

The Information Toro Collects

Toro Warranty Company (Toro) respects your privacy. In order to process your warranty claim and contact you in the event of a product recall, we ask you to share certain personal information with us, either directly or through your local Toro company or dealer.

The Toro warranty system is hosted on servers located within the United States where privacy law may not provide the same protection as applies in your country.

BY SHARING YOUR PERSONAL INFORMATION WITH US, YOU ARE CONSENTING TO THE PROCESSING OF YOUR PERSONAL INFORMATION AS DESCRIBED IN THIS PRIVACY NOTICE.

The Way Toro Uses Information

Toro may use your personal information to process warranty claims, to contact you in the event of a product recall and for any other purpose which we tell you about. Toro may share your information with Toro's affiliates, dealers or other business partners in connection with any of these activities. We will not sell your personal information to any other company. We reserve the right to disclose personal information in order to comply with applicable laws and with requests by the appropriate authorities, to operate our systems properly or for our own protection or that of other users.

Retention of your Personal Information

We will keep your personal information as long as we need it for the purposes for which it was originally collected or for other legitimate purposes (such as regulatory compliance), or as required by applicable law.

Toro's Commitment to Security of Your Personal Information

We take reasonable precautions in order to protect the security of your personal information. We also take steps to maintain the accuracy and current status of personal information.

Access and Correction of your Personal Information

If you would like to review or correct your personal information, please contact us by email at legal@toro.com.

Australian Consumer Law

Australian customers will find details relating to the Australian Consumer Law either inside the box or at your local Toro Dealer.



Toro General Commercial Product Warranty

A Two-Year 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