

ULTRAVAC® COLLECTION SYSTEM LZUV2B, LZUV3B

**For UltraVac Serial Nos.
411,294,212 & Higher
(To fit Lazer Z Gas Units Serial Nos
790,000 & Higher
2-Bagger-Fits units with 48 or 52 inch deck
3-Bagger-Fits units with 60 or 72 inch deck
To fit Lazer Z Propane Units
Serial Nos 313,000,000 & Higher
3-Bagger-Fits units with 60 inch deck)
Part No. 4505-853 Rev. A**

Operator's Manual

⚠ WARNING

**CALIFORNIA
Proposition 65 Warning**

Use of this product may cause exposure
to chemicals known to the State of
California to cause cancer, birth defects,
or other reproductive harm.

Exmark reserves the right to make changes or add improvements to its products at any time without incurring any obligation to make such changes to products manufactured previously. Exmark, or its distributors and dealers, accept no responsibility for variations which may be evident in the actual specifications of its products and the statements and descriptions contained in this publication.

Introduction

CONGRATULATIONS on the purchase of your Exmark UltraVac. This product has been carefully designed and manufactured to give you a maximum amount of dependability and years of trouble-free operation.

This manual contains operating, maintenance, adjustment, and safety instructions for your Exmark UltraVac.

BEFORE OPERATING YOUR MOWER, CAREFULLY READ THIS MANUAL IN ITS ENTIRETY.

By following the operating, maintenance, and safety instructions, you will prolong the life of your UltraVac, maintain its maximum efficiency, and promote safe operation.

To maximize safety, performance, and proper operation of this machine, it is essential that all operators carefully read and fully understand the contents of the Operator's manual provided with the product. Failure to comply with the operating instructions or receive proper training may result in injury. Go to <https://www.Exmark.com> for additional safe operation information, such as safety tips, training materials, and Operator's manuals.

If additional information is needed, or should you require trained mechanic service, contact your authorized Exmark equipment dealer or distributor.

All Exmark equipment dealers and distributors are kept informed of the latest methods of servicing and are equipped to provide prompt and efficient service in the field or at their service stations. They carry ample stock of service parts or can secure them promptly for you from the factory.

All Exmark parts are thoroughly tested and inspected before leaving the factory, however, attention is required on your part if you are to obtain the fullest measure of satisfaction and performance.

Whenever you need service, genuine Exmark parts, or additional information, contact an Authorized Service Dealer or Exmark Customer Service and have the model and serial numbers of your product ready.

Figure 1 identify the location of the model and serial numbers on the product. Write the numbers in the space provided.

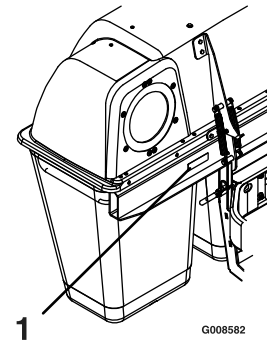


Figure 1

Model No. _____

Serial No. _____

For complete warranty details, see <https://www.Exmark.com>. You may also call us 402-223-6375 to request a written copy of the product's warranty.

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Safety

Safety Alert Symbol

This Safety Alert Symbol (Figure 2) is used both in this manual and on the machine to identify important safety messages which must be followed to avoid accidents.

This symbol means: **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



Figure 2
Safety Alert Symbol

g000502

The safety alert symbol appears above information which alerts you to unsafe actions or situations and will be followed by the word **DANGER**, **WARNING**, or **CAUTION**.

DANGER: Indicates an imminently hazardous situation which, if not avoided, **Will** result in death or serious injury.

WARNING: Indicates a potentially hazardous situation which, if not avoided, **Could** result in death or serious injury.

CAUTION: Indicates a potentially hazardous situation which, if not avoided, **May** result in minor or moderate injury.

This manual uses two other words to highlight information. **Important** calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

General Safety Information

This machine is capable of amputating hands and feet and of throwing objects. Always follow all safety instructions to avoid serious personal injury or death.

- Read, understand, and follow all instructions and warnings in the mower and UltraVac Operator's Manuals and on the machine, engine, and attachments. All operators and mechanics should be trained. If the operator(s) or mechanic(s) can not read this manual, it is the owner's

responsibility to explain this material to them; other languages may be available on our website.

- Only allow trained, responsible, and physically capable operators that are familiar with the safe operation, operator controls, and safety signs and instructions to operate the machine. Never let children or untrained people operate or service the equipment. Local regulations may restrict the age of the operator.
- Do Not operate the machine near drop-offs, ditches, embankments, water, or other hazards.
- Keep bystanders and children out of the operating area.
- Do Not put your hands or feet near moving parts.
- Do Not operate the machine without all safety shields, guards, switches, and other devices in place and in proper working condition.
- Park machine on level ground, disengage drives, set parking brake, stop engine, and remove key. Wait for all moving parts to stop before leaving the operator's position. Allow the machine to cool before servicing, adjusting, fueling, unclogging, cleaning, or storing.

Safety and Instructional Decals

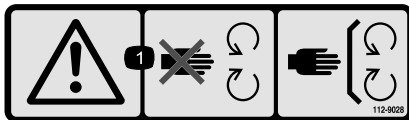
- Keep all safety signs legible. Remove all grease, dirt and debris from safety signs and instructional labels.
- Replace all worn, damaged, or missing safety signs.
- When replacement components are installed, be sure that current safety signs are affixed to the replaced components.
- If an attachment or accessory has been installed, make sure current safety signs are visible.
- New safety signs may be obtained from your authorized Exmark equipment dealer or distributor or from Exmark Mfg. Co. Inc.
- Safety signs may be affixed by peeling off the backing to expose the adhesive surface. Apply only to a clean, dry surface. Smooth to remove any air bubbles.
- Familiarize yourself with the following safety signs and instruction labels. They are critical to the safe operation of your Exmark commercial mower.



106-5517

decal106-5517

1. Warning—do not touch the hot surface.



112-9028

decal112-9028

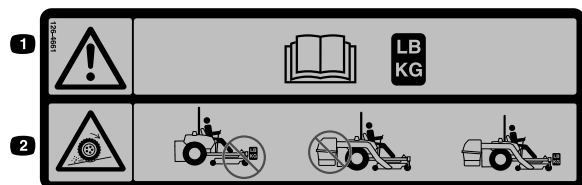
1. Warning—stay away from moving parts; keep all guards and shields in place.



126-4659

decal126-4659

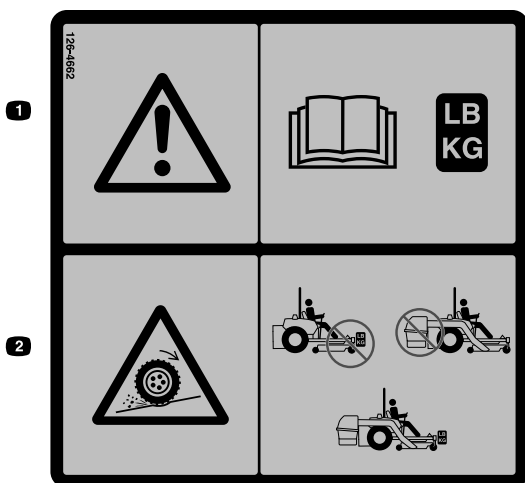
1. Warning—Hot pulley; allow to cool.



126-4661

decal126-4661

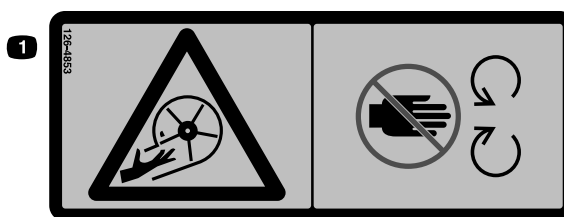
1. Warning—Read the Operator's manual for correct quantity of counterbalance weight(s).
2. Loss of traction and steering or reduced stability hazard—UltraVac counterbalance weight(s) installed without UltraVac may cause loss of traction and steering control. UltraVac installed without UltraVac counterbalance weight(s) will cause reduced stability. Install weight(s) only when UltraVac is installed.



126-4662

decal126-4662

1. Warning-Read the Operator's manual for correct quantity of counterbalance weight(s).
2. Loss of traction and steering or reduced stability hazard-UltraVac counterbalance weight(s) installed without UltraVac may cause loss of traction and steering control. UltraVac installed without UltraVac counterbalance weight(s) will cause reduced stability. Install weight(s) only when UltraVac is installed.



decal126-4853

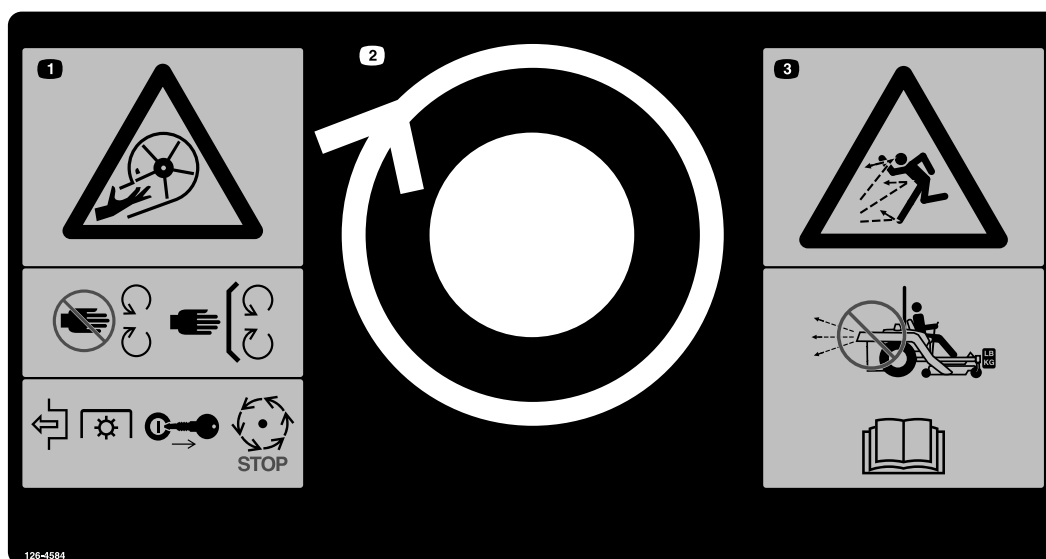
126-4853

1. Impeller/Rotating Blades hazard-Keep hands away from moving parts. Keep all safety devices in place and working. Do Not reach into blower unless rotation indicator has stopped.

⚠ WARNING: Cancer and Reproductive Harm • www.P65Warnings.ca.gov.
For more information, please visit www.tcoCAProp65.com

decal133-8061

133-8061



decal126-4584

126-4584

1. Impeller/Rotating Blades hazard-Keep hands away from moving parts. Keep all safety devices in place and working. Do Not reach into blower unless rotation indicator has stopped. Disengage PTO, stop engine, remove key, WAIT FOR MOVING PARTS TO STOP.
2. Rotation indicator
3. Thrown objects hazard-High speed discharge can cause injury or death. Do Not run blower without entire collection system installed and latched. Read the Operator's manual.

Specifications

Systems

Bagging System

- Collection bins:
 - Commercial grade, cloth mesh bags with reinforced bottoms.
 - 2-Bagger Capacity: 8.0 bushels
 - 3-Bagger Capacity: 13.4 Bushels
- Dump Mechanism: Manual lift off
- Blower Tube: Fixed, abrasion resistant molded polyethylene.
- Impeller: 5-bladed, 1/4 inch (6.4 mm) thick abrasion resistant steel, with vertical axis.
- Impeller bearings: 1 inch (2.5 cm) sealed non-greaseable bearings.

Dimensions

Overall Width:

2-Bagger

	w/UltraVac
Lazer Z w/48 inch Deck	62.50 inches (158.8 cm)
Lazer Z w/52 inch Deck	67.75 inches (172.1 cm)

3-Bagger

	w/UltraVac
Lazer Z w/60 inch Deck	75.00 inches (190.5 cm)
Lazer Z w/72 inch Deck	87.25 inches (221.6 cm)

Overall Length:

2-Bagger

	w/UltraVac
Lazer Z w/48 inch Deck	102.25 inches (259.7 cm)
Lazer Z w/52 inch Deck	102.25 inches (259.7 cm)

3-Bagger

	w/UltraVac
Lazer Z w/60 inch Deck	107.00 inches (271.8 cm)
Lazer Z w/72 inch Deck	110.00 inches (279.4 cm)

Curb Weight:

2-Bagger

	UltraVac Weight
For units w/48 inch Deck (3 toe board weights)	309 lb (140 kg)
For units w/52 inch Deck (2 toe board weights)	266 lb (120 kg)

3-Bagger

	UltraVac Weight
For units w/60 inch Deck (2 toe board weights)	449 lb (204 kg)
For units w/72 inch Deck (1 toe board weights)	406 lb (184 kg)

Torque Requirements

Bolt Location	Torque
Impeller Spindle Bottom Nut	55-60 ft-lb (75-81 N-m)
Impeller Spindle Top Nut	75-80 ft-lb (102-108 N-m)

Product Overview

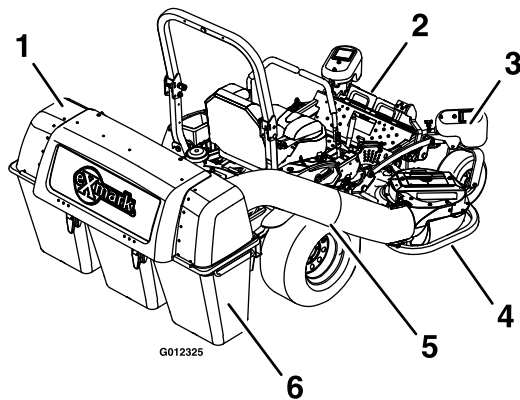


Figure 3

- | | |
|--|-----------|
| 1. Hood Assembly | 4. Blower |
| 2. Toeboard weight | 5. Tube |
| 3. Caster weight (3-Bagger Units Only) | 6. Bag |

Operation

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

Important: For Serial Numbers 790,000 and higher, multiple accessories added to a base unit can change the stability of the machine. Read the unit operator's manual to determine if counterbalance weights are necessary for the accessories installed on the unit.

Important: Due to the added weight of the UltraVac, it is important to ensure the parking brake on your mower is adjusted properly. Before installing the UltraVac, make sure to re-adjust the parking brake on your mower as outlined in the "Adjusting the Parking Brake" procedure in the Maintenance section of the mower Operator's manual.

Before Operation

Before Operation Safety

- Evaluate the terrain to determine what accessories and attachments are needed to properly and safely perform the job. Only use accessories and attachments approved by Exmark.
- Inspect the area where the machine is to be used and remove all rocks, toys, sticks, wires, bones, and other foreign objects. These can be thrown or interfere with the operation of the machine and may cause personal injury to the operator or bystanders.
- The machine that the UltraVac attaches to was designed for one operator only. Do Not carry passengers.
- Wear appropriate personal protective equipment such as safety glasses, long pants, substantial slip-resistant footwear, and hearing protection. Tie back long hair and avoid loose clothing and loose jewelry which may get tangled in moving parts.
- This machine produces sound levels in excess of 85 dBA at the operator's ear and can cause hearing loss through extended periods of exposure. Wear hearing protection when operating this machine.
- Do Not operate the mower when people, especially children, or pets are in the area. Shut

Operation

off the machine and attachment(s) if anyone enters the area.

- Do Not operate the machine without the entire grass collection system, discharge deflector, or other safety devices in place and in proper working condition. Grass catcher components are subject to wear, damage and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check for worn or deteriorating components and replace them with the manufacturer's recommended parts when necessary.
- Ensure the blower, bags, tubes and hood assembly are in good condition, properly attached, and latched.

Important: Verify that the reinforced bumpers are installed on the machine prior to operation.

Operating Instructions

During Operation Safety

General Safety

The operator must use their full attention when operating the machine. **Do Not** engage in any activity that causes distractions; otherwise, injury or property damage may occur.

- Operate the machine only in good visibility and appropriate weather conditions. Do Not operate the machine when there is the risk of lightning.
- Keep away from holes, ruts, bumps, rocks, and other hidden hazards. Use care when approaching blind corners, shrubs, trees, tall grass or other objects that may hide obstacles or obscure vision. Uneven terrain could overturn the machine.
- Do Not operate the machine without all safety shields, guards, switches, and other devices in place and in proper working condition.
- Keep your hands and feet away from the moving parts. Keep clear of the discharge opening.

▲ DANGER

There are rotating blades in the blower and under the mower deck. Blade contact can cause serious operator or bystander injury or even death.

- **Do Not reach into blower unless rotation indicator has stopped. Disengage PTO, stop engine, remove key, wait for all moving parts to stop. Engage parking brake.**
- **Never operate mower unless discharge deflector, entire grass collection system, or mulch kit is installed.**
- Do Not mow with the discharge deflector raised, removed, or altered unless there is a grass-collection system or mulch kit in place and working properly.
- Be aware of the mower discharge path and direct discharge away from others. Avoid discharging material against a wall or obstruction as the material may ricochet back toward the operator. Stop the blades, slow down, and use caution when crossing surfaces other than grass and when transporting the mower to and from the area to be mowed.

▲ WARNING

Hands, feet, hair, clothing, or accessories can become entangled in rotating parts. Contact with the rotating parts can cause traumatic amputation or severe lacerations.

- **Do Not operate the machine without guards, shields, and safety devices in place and working properly.**
- **Keep hands, feet, hair, jewelry, or clothing away from rotating parts.**
- Be alert, slow down and use caution when making turns. Do Not mow in reverse unless it is absolutely necessary. Always look down and behind you before moving the machine in reverse.
- Park the machine on level ground. Stop engine, wait for all moving parts to stop, and remove key.
 - Before checking, cleaning or working on the mower.
 - After striking a foreign object or abnormal vibration occurs (inspect the mower for

- damage and make repairs before restarting and operating the mower).
 - Before clearing blockages.
 - Whenever you leave the mower. Do Not leave a running machine unattended.
 - Stop engine, wait for all moving parts to stop:
 - Before refueling.
 - Before dumping the bags.
 - Before making height adjustments.
 - Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. Never assume that children will remain where you last saw them.
 - Keep children out of the mowing area and under the watchful care of another responsible adult, not the operator.
 - Be alert and turn the machine off if children enter the area.
 - Before and while backing or changing direction, look behind, down, and side-to-side for small children.
 - Never allow children to operate the machine.
 - Do Not carry children, even with the blades shut off. Children could fall off and be seriously injured or interfere with the safe operation of the machine. Children that have been given rides in the past could suddenly appear in the working area for another ride and be run over or backed over by the machine.
 - 3. To remove the bags, first disengage the PTO, stop the engine and wait for all moving parts to stop. Open the hood assembly and remove the bags by lifting up on the rear of the bag, then unhooking the front clip. Empty the bags by inverting them.
 - 4. Reinstall bags, close and latch hood assembly before continuing mowing.
- Tips for mowing conditions:
- When mowing in areas with sandy soil, use low lift blades on the cutting deck and higher cutting heights to minimize wear on the blower components.
 - When mowing in wet conditions, such as just after a rain or in heavy dew, use low lift blades on the cutting deck to minimize plugging of the blower.
 - Maintaining a ground speed that does not pull down the engine RPM will allow for the highest productivity and best quality of cut. Bogging the engine RPM down by going too fast will cause plugging and quality of cut issues.
 - When the bags get full, the sound of the blower will change and there will be slight blowout from the front right corner of the deck. Emptying the bags at this point will minimize the potential for the tube to plug.

Collection System Removal for Side Discharge

1. Empty the bags.

⚠ CAUTION

The bags are heavy when full, which may make it difficult to remove the hood assembly from the machine. The entire hood assembly may fall, which may cause injury.

Prior to removing the hood assembly from the machine, first empty the contents.

Mowing

1. The UltraVac blower operates when the PTO is engaged. Be sure that all persons are clear of the mower deck before engaging the cutting blades. Set the throttle to “midway” position. Pull outward on the PTO switch to the “ROTATE” position. Accelerate to full throttle to begin mowing.
2. To disengage the PTO, set the throttle to “midway” position. Push in on the PTO switch to the “STOP” position to stop the cutting blades and blower. The cutting blades will require a slightly longer amount of time to come to a complete stop when the blower is installed on the deck. Verify that all rotation indicators have stopped before clearing blower assembly or mower deck.
2. Disengage the PTO, stop engine and wait for all moving parts to stop. Remove key and engage parking brake.
3. Remove the discharge tube by releasing the latches at the blower. Slide the tube off the blower outlet and remove the upper end from the hood assembly.

Operation

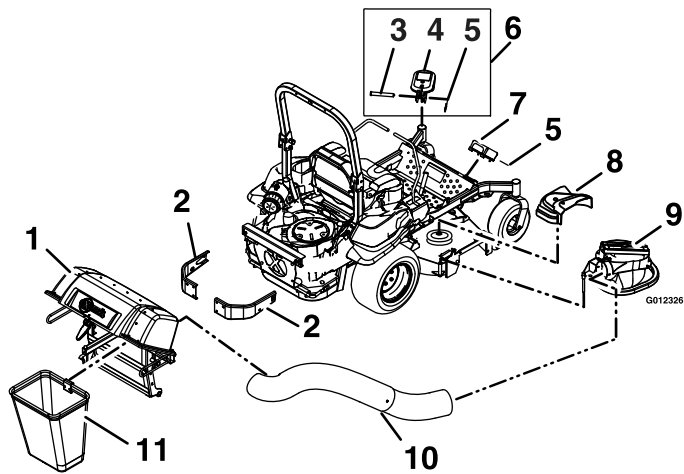


Figure 4

- | | |
|----------------------------|---------------------|
| 1. Hood Assembly | 7. Toe board weight |
| 2. Reinforced bumpers | 8. Belt cover |
| 3. Clevis pin | 9. Blower |
| 4. Caster arm weight | 10. Tubes |
| 5. Hairpin | 11. Bag |
| 6. For 3-Bagger Units Only | |

- Remove the knob from the belt cover bracket and take off the belt cover.

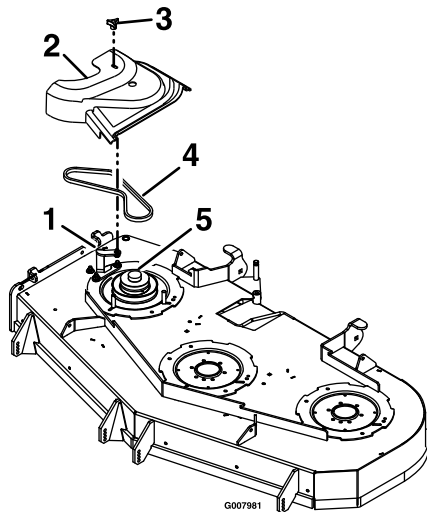


Figure 5

- | | |
|-----------------------|----------------|
| 1. Belt cover bracket | 4. Belt |
| 2. Belt cover | 5. Deck sheave |
| 3. Knob | |

⚠ CAUTION

The deck sheave will become very hot. Touching a hot deck sheave can cause severe burns.

Allow the deck sheave to cool completely before removing the belt.

- Pull the idler release handle and remove the belt from the upper groove of the deck sheave.
- Unlatch the front end of the blower. Pivot the blower back and lift it off the deck.

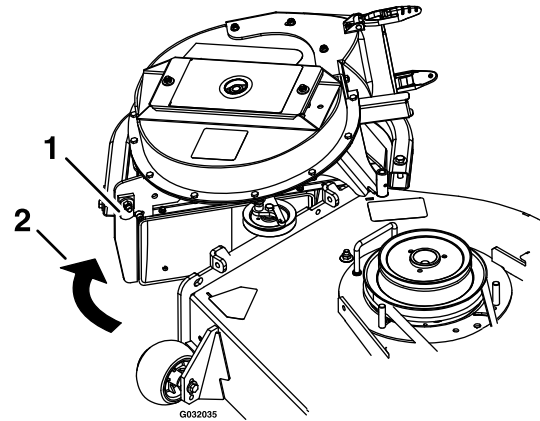


Figure 6

- Blower latch
- Pivot blower away from deck

- Install the discharge deflector using the chute pivot pin and hairpin (see Figure 7).

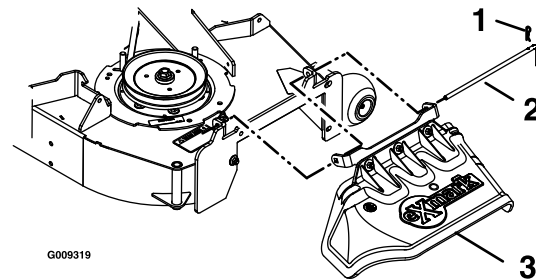


Figure 7

- | | |
|--------------------|------------------------|
| 1. Hairpin | 3. Discharge deflector |
| 2. Chute pivot pin | |

⚠ WARNING

An uncovered discharge opening will allow objects to be thrown in operator's or bystander's direction. Also, contact with blade could occur. Thrown objects or blade contact can cause serious injury or death.

Never operate mower unless discharge deflector, or entire grass collection system, or mulch kit is installed.

8. Re-install the plastic belt cover and tighten the knobs.
9. Remove the bags from the hood assembly by opening the hood and lifting up on the rear of the bag and then unhooking the front clip.
10. Remove the hood assembly. Do Not use the exhaust diverter as a handle when removing the hood assembly.

⚠ CAUTION

The exhaust diverter is hot. Touching a hot exhaust diverter can cause severe burns.

Allow the exhaust diverter to cool completely before removing the hood assembly.

- A. Push and hold the hood assembly towards the unit and pull the hairpins and mount pins from frame mount barrel located on each side of the frame legs.

⚠ WARNING

When the mount pins have been removed, the hood assembly may fall. A falling hood assembly may cause injury.

Use care when the mount pins are removed and if necessary, use assistance when lowering the hood assembly to the ground.

- B. If necessary, use assistance and carefully lower the hood assembly to the ground.
 - C. Re-insert the mount pins into the frame mount barrel and secure with the hairpin.
11. **Gasoline Units:** The removable weights must be removed from the unit.

To remove the weight on the front of the toe board, remove the two hairpins that retain it and

then lift it from the mount bracket. The bracket bolted to the toe board remains on the unit.

⚠ WARNING

Caster or toe board weights installed without the collection system may cause loss of traction and steering control. Loss of control can result in an accident which may cause death, injury, or property damage.

Install caster or toe board weights **ONLY** when the collection system is installed.

Propane Units: Do Not remove the two factory installed toe board weights without decals. **ONLY** remove the one toe board weight with a decal on it.

⚠ WARNING

Removing the toe board weights from the propane unit may cause loss of traction and steering control. Loss of control can result in an accident which may cause death, injury, or property damage.

- Do Not remove the two factory installed toe board weights from the propane unit. Only remove the third (center) weight.
- Install the third (center) caster weight **ONLY** when the collection system is installed.

13. **For the 3-Bagger Units:** Remove the caster weights by loosening the clamping knobs until the weight can be moved relative to the caster arm. Remove the hairpins and clevis pins that hold the weights to the caster arms. Carefully lift the weights off of the caster arms.

Note: The removable weights are heavy. Use care when lifting them. Make sure that you can hold them securely before lifting them. Use caution when positioning your hands so that you Do Not set them down on your hands or fingers.

Note: The portions of the UltraVac collection system that are not bolted to the mower are designed to be installed or removed in their entirety. Do Not operate the mower with only a portion of the UltraVac installed.

The machine can now be used for side discharge mowing.

Operation

Collection System Installation

Important: Verify that the reinforced bumpers are installed on your unit prior to operation.

Important: Due to the added weight of the UltraVac, it is important to ensure the parking brake on your mower is adjusted properly. Before installing the UltraVac, make sure to re-adjust the parking brake on your mower as outlined in the “Adjusting the Parking Brake” procedure in the Maintenance section of the mower Operator's manual.

1. Stop engine, remove key, and wait for all moving parts to stop. Engage parking brake.
2. Remove hairpin and chute pivot pin. Remove discharge deflector. Pivot pin and hair pin may be stored in the pivot holes of the discharge deflector during bagging operation.
3. Lay the hood assembly down as shown in Figure 8.

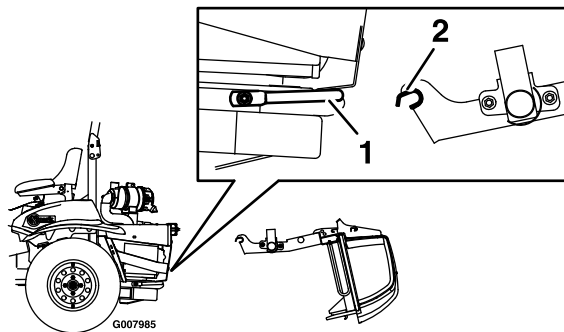


Figure 8

1. Lower bagger mount bar 2. Frame notch

4. Remove the hairpin from the mount pin and pull the mount pin out of the frame mount barrel.
5. Pick up the frame legs and hook the notch onto the lower mount bar (see Figure 8).
6. Lift the hood assembly and pivot it upward towards the back of the machine (see Figure 9).

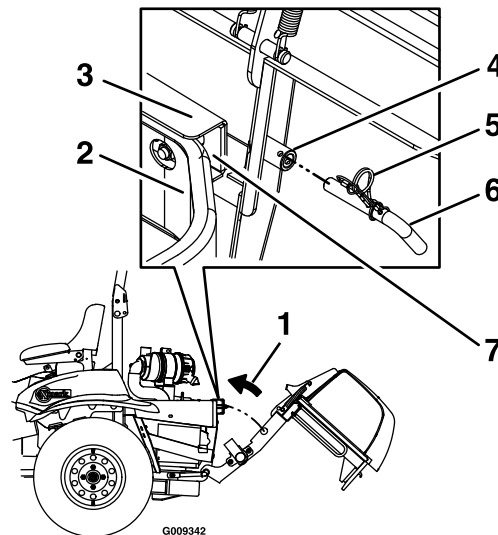


Figure 9

1. Rotate hood assembly
 2. Rear bumper
 3. Mount bracket
 4. Frame mount barrel
 5. Hairpin
 6. Mount pin
 7. Opening
7. Continue to push the hood assembly forward until it contacts the mount bracket.
 8. Adjust the exhaust diverter up or down in the slots so it fits over the muffler.
 9. If needed, install washers between the exhaust diverter and the frame to space the guard outward.
 10. Install the mount pin into the frame mount barrel. Make sure that it extends into the opening (see Figure 9).
 11. Align the holes in the mount pin and frame mount barrel and insert the hairpin to lock the hood assembly into place.
 12. Tighten the hardware on the exhaust diverter.
 13. Raise the hood and install the bag assemblies by inserting the hook portion into the slots in the bagger support rods.
 14. Remove the belt cover on the right side of the deck.
 15. Mount the blower on the deck by inserting the mounting pin into the tube welded to the rear corner of the deck (see Figure 10). Pivot the blower until the front pin engages the slot in the deck. Adjust the position of the front pin if necessary to engage the slot. Use the latches to lock the blower in this position. Adjust the

tension on the latch to hold the blower up to the deck, yet allow for release by hand.

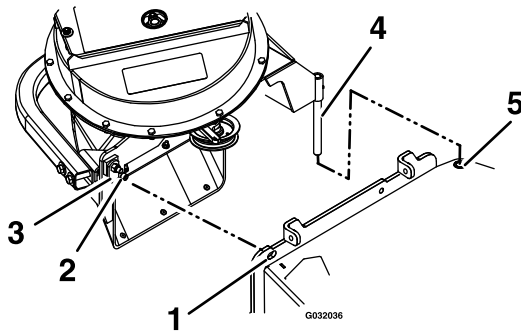


Figure 10

- | | |
|-----------------|-----------------|
| 1. Slot | 4. Mounting pin |
| 2. Front pin | 5. Deck tube |
| 3. Blower latch | |

16. Belt Installation:

For Small Decks:

- A. Slip the belt over the impeller sheave on the blower.

Note: It may be easier to install the belt if the belt guide is temporarily shifted to one side or temporarily removed. Either loosen or remove both nuts on the top and bottom of the belt guide. Once the belt is installed on the impeller sheave, reinstall the belt guide and tighten all hardware.

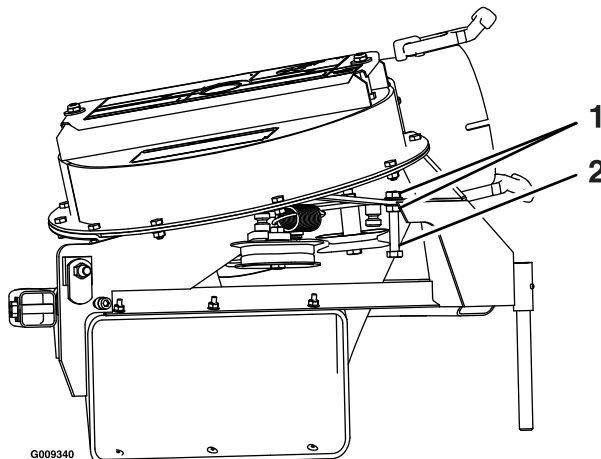


Figure 11

- | | |
|--------|---------------|
| 1. Nut | 2. Belt guide |
|--------|---------------|

- B. Pull the spring loaded idler release handle back and install the belt in the upper groove

of the deck sheave. The belt should be routed as shown in Figure 12.

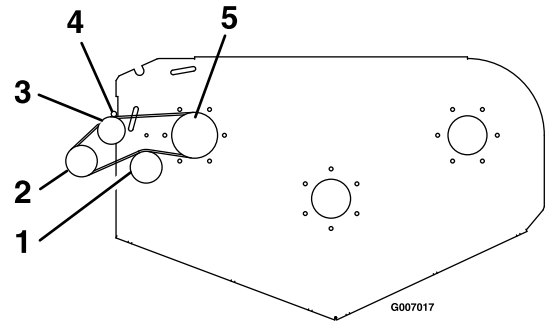


Figure 12

Small Decks — View from Top of Blower

- | | |
|------------------------|----------------|
| 1. Spring loaded idler | 4. Belt guide |
| 2. Impeller sheave | 5. Deck sheave |
| 3. Fixed idler | |

For Large Decks:

Pull the spring loaded idler back and slip the belt over the deck sheave.

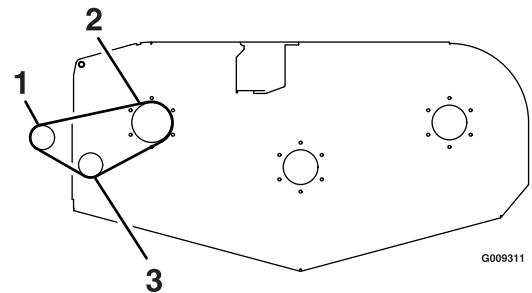


Figure 13

Large Decks — View from Top of Blower

- | | |
|--------------------|------------------------|
| 1. Impeller sheave | 3. Spring loaded idler |
| 2. Deck sheave | |

17. Position the belt cover at an angle and slide it under the mower frame (see Figure 14).

Operation

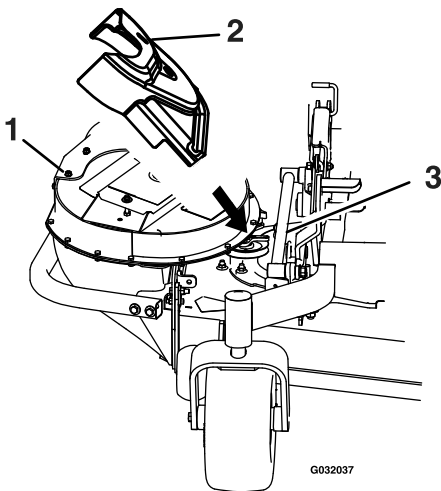


Figure 14

- | | |
|---------------|----------------|
| 1. Blower | 3. Mower frame |
| 2. Belt cover | |

18. Push down on the back of the cover and slide it backwards under the blower.
19. Slide the belt cover forward until it is seated under both lips on the deck.

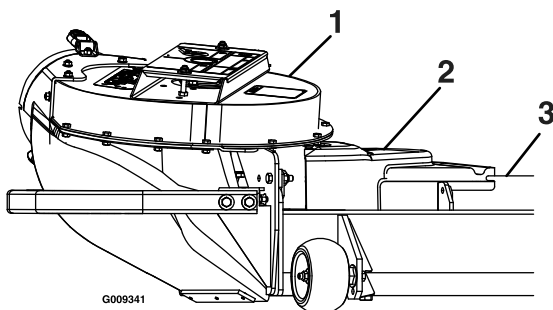


Figure 15

- | | |
|---------------|-------------|
| 1. Blower | 3. Deck lip |
| 2. Belt cover | |

20. Install the knob and its hardware.
21. Slip the upper and the lower tubes together.
22. Insert the upper tube into the hood seal – push in then pull out so that the seal is extended outward.
23. Align the dimple on the upper tube with the end of hood seal and center between the two screws as shown in Figure 16.

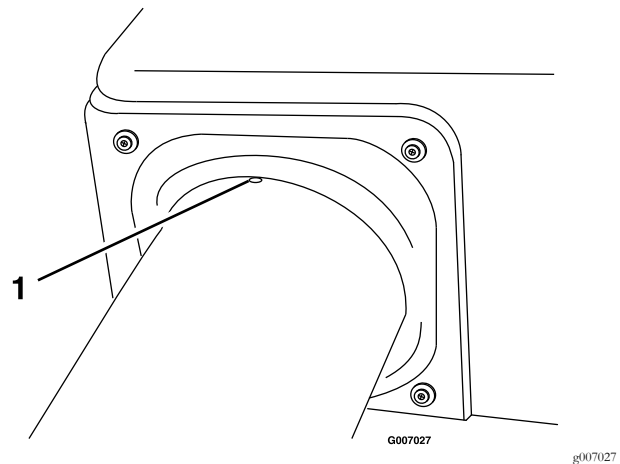


Figure 16

1. Dimple

24. Set the deck in lowest cutting position.

25. Slide the lower tube onto the blower and attach the latches. (Make sure that the upper tube does not move out of alignment).

If the lower tube is replaced, drill three 7/32 inch holes in the lower tube using the upper tube holes as reference. See Figure 17.

27. Remove the tubes from unit and assemble the upper and the lower tubes using three #10-24 x 3/4 inch hex washer head screws, three #10 washers, and three #10-24 nyloc nuts. The screw head should be installed to the inside of the tube to provide minimum obstruction to flow. Make sure that the upper and the lower ends are oriented properly as the tubes are assembled. (Parting lines should roughly be lined up.)

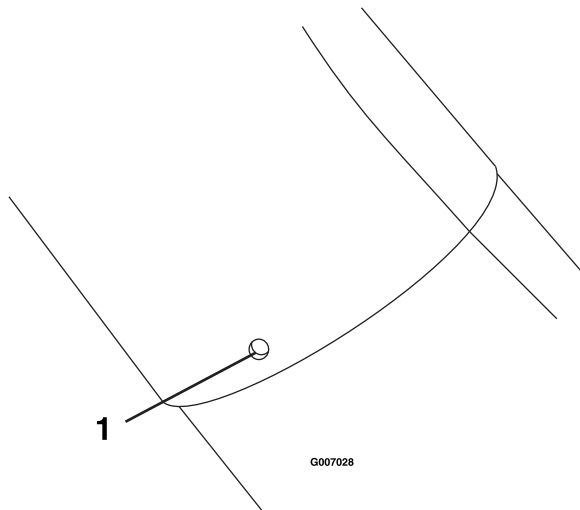


Figure 17

1. Drill the holes here

28. Slide the lower end of the tube assembly over the blower outlet and align the notch with the tube latch. Latch the tube to the blower.
29. Install the removable weights. Hook the front toe board weight assembly over the top of the weight mounting plate and secure with two hairpins (Figure 18).

Important: For correct traction and stability, install the required quantity of counterbalance weight(s) as specified in the UltraVac Operator's manual, setup instructions, and/or completing kit.

Weight Quantities-Gasoline Units

Deck Size	48 inch	52 inch	60 inch	72 inch
Toe Board Weight	3	2	2	1
Caster Weight	—	—	2	2

Weight Quantities-Propane Units

Deck Size	60 inch
Toe Board Weight	3*
Caster Weight	2

*Three total toe board weights = two factory installed weights without decals, plus one weight with decal from the UltraVac kit. Refer to the

propane completing kit for weight installation instructions.

Note: The removable weights are heavy. Use care when lifting them. make sure that you can hold them securely before lifting them. Use caution when positioning your hands to that you Do Not set them down on your hands or fingers.

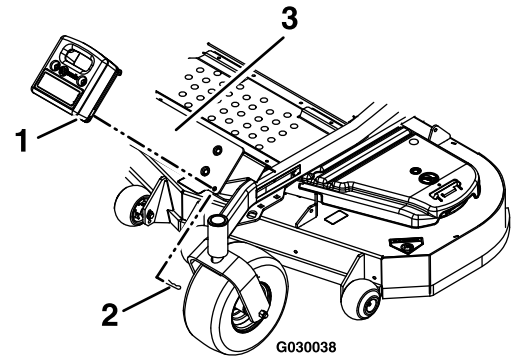


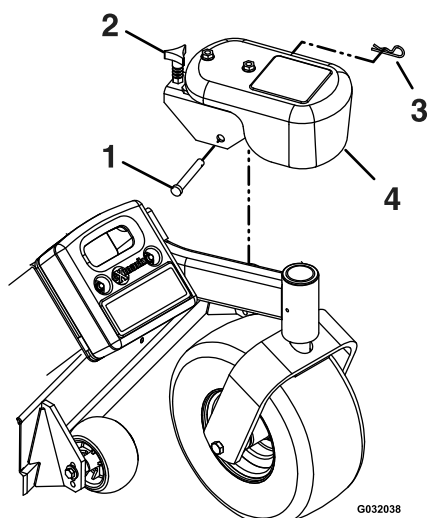
Figure 18
Gasoline Unit Shown

1. Toe board weight
2. Hairpin
3. Weight mounting plate

30. For 3-Bagger Units Only:

- A. Install the removable caster weights on the caster arms (see Figure 19).
- B. Insert the clevis pin through the bracket hole and fasten with a hairpin.
- C. Tighten knob on weight assembly until the weight is clamped securely to the caster arm.

Operation



g032038

Figure 19
For 3-Bagger Units Only
Gasoline Unit Shown

- | | |
|---------------|------------------|
| 1. Clevis pin | 3. Hairpin |
| 2. Knob | 4. Caster weight |

After Operation

General Safety

- Park machine on level ground, disengage drives, set parking brake, stop engine, and remove key. Wait for all moving parts to stop before leaving the operator's position. Allow the machine to cool before servicing, adjusting, fueling, unclogging, cleaning, or storing.
- Clean grass, leaves, excessive grease or oil, and other debris from the mower deck, muffler, drives, grass catcher, and engine area to help prevent fires.

Maintenance

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

Maintenance Safety

- Park machine on level ground, disengage drives, set parking brake, stop engine, and remove key. Wait for all moving parts to stop before leaving the operator's position. Allow the machine to cool before servicing, adjusting, fueling, unclogging, cleaning, or storing.

⚠ WARNING

The engine can become very hot. Touching a hot engine can cause severe burns.

Allow the engine to cool completely before service or making repairs around the engine area.

- If you leave the key in the switch, someone could accidentally start the engine and seriously injure you or other bystanders. Remove the key from the switch before you perform any maintenance.
- Never allow untrained personnel to service machine.
- Keep all guards, shields, switches, and all safety devices in place and in proper working condition. Frequently check for worn or deteriorating components and replace them with genuine Exmark parts when necessary.

⚠ WARNING

Removal or modification of original equipment, parts and/or accessories may alter the warranty, controllability, and safety of the machine. Unauthorized modifications to the original equipment or failure to use original Exmark parts could lead to serious injury or death. Unauthorized changes to the machine, engine, fuel or venting system, may violate applicable safety standards such as: ANSI, OSHA and NFPA and/or government regulations such as EPA and CARB.

- Keep your hands and feet away from moving parts or hot surfaces. If possible, Do Not make adjustments with the engine running.

⚠ WARNING

Contact with moving parts or hot surfaces may cause personal injury.

Keep your fingers, hands, and clothing clear of rotating components and hot surfaces.

- Keep all parts in good working condition and all hardware tightened.

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
Before each use or daily	<ul style="list-style-type: none"> • Check the blower housing/impeller. • Check bags. • Check exhaust diverter. • Clean muffler and rear frame area. • Clean rear screen in the hood assembly.
Every 25 hours	<ul style="list-style-type: none"> • Lubricate grease fittings.
Every 50 hours	<ul style="list-style-type: none"> • Check condition of belt.
Yearly or before storage	<ul style="list-style-type: none"> • Clean blower.

Periodic Maintenance

Check Blower Housing/Impeller

Service Interval: Before each use or daily

1. Stop engine, wait for all moving parts to stop, and remove key. Engage parking brake.
2. Inspect for wear or damage daily. Replace or repair worn parts as needed.

Note: When mowing in areas with sandy soil, use low lift blades on the cutting deck and higher cutting heights to minimize wear on the blower components.

Check Bags

Service Interval: Before each use or daily

1. Stop engine, wait for all moving parts to stop, and remove key. Engage parking brake.
2. Inspect the bags for wear, tears, or damage.

⚠ WARNING

Under normal use the bag will deteriorate and wear. Objects could exit through worn bag at high speeds. Thrown objects can cause serious injury or kill you or bystanders.

Check bags frequently for tears and holes. Replace worn bags only with Exmark replacement bags.

Check Exhaust Diverter

Service Interval: Before each use or daily

⚠ CAUTION

The exhaust diverter is hot. Touching a hot exhaust diverter can cause severe burns.

Allow the exhaust diverter to cool completely before performing maintenance.

1. Stop engine, wait for all moving parts to stop, and remove key. Engage parking brake.
2. Inspect and remove debris from the exhaust diverter daily.

Lubricate Grease Fittings

Note: See chart for service intervals.

1. Stop engine, wait for all moving parts to stop, and remove key. Engage parking brake.
2. Lubricate fittings with NLGI grade #2 multi-purpose gun grease.

Refer to the following chart for fitting locations and lubrication schedule.

Lubrication Chart			
Fitting Locations	Initial Pumps	Number of Places	Service Interval
1. Idler Bushings	1–2	1	25 Hours

Check Condition of Belt

Service Interval: Every 50 hours

All Units

1. Stop engine, wait for all moving parts to stop, and remove key. Engage parking brake.
2. Inspect the belt for damage or wear. Replace belt with one of the following:

Deck	Part No.
48 inch	1-653333
52 inch	1-653438
60 inch	103-0866
72 inch	103-0867

Adjustments

Adjusting the Blower Drive Belt Position

1. Read the operator's manual for the UltraVac and mower before performing this adjustment. Make sure that you understand the controls, their locations their functions and safety requirements.
2. Ensure the blower, belt cover, bags, tube and hood assembly are in good condition, properly attached and latched.
3. Run the unit with the PTO and the blower engaged for two minutes.
4. Disengage the PTO, stop the engine and remove the key.
5. Remove the belt cover and check to make sure that the belt is riding near the center of the flat idler on the idler arm. If the belt is not riding near the center of the idler, remove the blower, and bend the idler arm slightly.
6. Reinstall the blower and belt cover and perform steps 3-5 again to verify belt position.

Cleaning

Cleaning and Storing Safety

- Park machine on level ground, disengage drives, set parking brake, stop engine, and remove key. Wait for all moving parts to stop before leaving the operator's position. Allow the machine to cool before servicing, adjusting, fueling, unclogging, cleaning, or storing.
- Clean grass and debris from the cutting unit, muffler, drives, grass catcher, and engine compartment to prevent fires.
- Allow the machine to cool before storing the machine in any enclosure. Do Not store the machine or fuel container, or refuel, where there is an open flame, spark, or pilot light such as on a water heater or other appliance.

Clean Muffler and Rear Frame Area

Service Interval: Before each use or daily

Stop engine, wait for all moving parts to stop, and remove key. Engage parking brake.

⚠ WARNING

Operating engine parts, especially the muffler, become extremely hot. Severe burns can occur on contact and debris, such as leaves, grass, brush, etc. can catch fire.

- Allow engine parts, especially the muffler, to cool before touching.
- Remove accumulated debris from muffler and engine area.

Clean Rear Screen In Hood Assembly

Service Interval: Before each use or daily

1. Stop engine, wait for all moving parts to stop, and remove key. Engage parking brake.
2. Open hood and remove clippings that are stuck to the screen.

Clean Blower

Service Interval: Yearly or before storage

Maintenance

Grass build up may cause problems with the impeller when the unit is put back into operation.

1. Stop engine, wait for all moving parts to stop, and remove key. Engage parking brake.
2. Remove grass buildup from around the impeller before placing it in storage.

Troubleshooting

Important: It is essential that all operator safety mechanisms be connected and in proper operating condition prior to mower use.

When a problem occurs, Do Not overlook the simple causes. For example: starting problems could be caused by an empty fuel tank.

The following table lists some of the common causes of trouble. Do Not attempt to service or replace major items or any items that call for special timing or adjustment procedures (such as valves, governor, etc.). Have this work done by your **Engine Service Dealer**.

Note: When disconnecting electrical connectors Do Not pull on the wires to separate the connectors.

Problem	Possible Cause	Corrective Action
Abnormal vibration.	<ol style="list-style-type: none"> 1. Cutting blade(s) is/are bent or unbalanced. 2. Blade mounting bolt is loose. 3. Loose blower pulley or pulley assembly. 4. Blower impeller blades are bent. 	<ol style="list-style-type: none"> 1. Install new cutting blade(s). 2. Tighten the blade mounting bolt. 3. Tighten the appropriate pulley. 4. Contact an Authorized Service Dealer.
Blower drive belt snaps or breaks frequently.	<ol style="list-style-type: none"> 1. Idler arm is out of alignment. 	<ol style="list-style-type: none"> 1. Correct the alignment of the idler arm.
Excessive grass blowout from the deck.	<ol style="list-style-type: none"> 1. Bags are full. 2. Plugged screen in hood assembly. 3. Ground speed is too fast. 4. Blower belt is worn, loose, or broken. 5. Plugged tube or blower. 6. Conditions are dry. 	<ol style="list-style-type: none"> 1. Empty bags more frequently. 2. Remove debris, leaves or grass clippings from the screen. 3. Drive slower at full throttle. 4. Install new blower belt. 5. Locate and remove plugged debris. 6. Use lower lift blade.
Blower and tubes plug too frequently.	<ol style="list-style-type: none"> 1. Bags are too full. 2. Ground speed is too fast. 3. Grass is too wet. 4. Grass is too long. 5. Plugged screen in hood assembly. 6. Blower drive belt is worn, loose, or broken. 7. Blower is plugged. 	<ol style="list-style-type: none"> 1. Empty bags more frequently 2. Drive slower at full throttle. 3. Cut grass when it is dry. 4. Cut grass more frequently or at higher cut height. 5. Remove debris, leaves, or grass clippings from the screen. 6. Install new belt. 7. Use low lift blades in wet conditions.
Blower impeller does not spin freely.	<ol style="list-style-type: none"> 1. Plugged blower. 2. Impeller not aligned. 	<ol style="list-style-type: none"> 1. Remove debris, leaves, or grass clippings from the blower impeller. 2. Contact an Authorized Service Dealer.
Plowing leaves.	<ol style="list-style-type: none"> 1. Deck is too low. 	<ol style="list-style-type: none"> 1. Raise the deck slightly.
Chasing leaves.	<ol style="list-style-type: none"> 1. Blowout from deck. 2. Bags are full. 	<ol style="list-style-type: none"> 1. Check for clogged tubes. 2. Empty bags more frequently.
Blower components show signs of wear and/or air cleaners and cooling fins are dirty.	<ol style="list-style-type: none"> 1. Sand or dry conditions. 	<ol style="list-style-type: none"> 1. Use low lift blades on the cutting deck and higher cutting heights. <p>Clean air cleaners and cooling fins frequently.</p>

California Proposition 65 Warning Information

What is this warning?

You may see a product for sale that has a warning label like the following:



WARNING: Cancer and Reproductive Harm—www.p65Warnings.ca.gov.

What is Prop 65?

Prop 65 applies to any company operating in California, selling products in California, or manufacturing products that may be sold in or brought into California. It mandates that the Governor of California maintain and publish a list of chemicals known to cause cancer, birth defects, and/or other reproductive harm. The list, which is updated annually, includes hundreds of chemicals found in many everyday items. The purpose of Prop 65 is to inform the public about exposure to these chemicals.

Prop 65 does not ban the sale of products containing these chemicals but instead requires warnings on any product, product packaging, or literature with the product. Moreover, a Prop 65 warning does not mean that a product is in violation of any product safety standards or requirements. In fact, the California government has clarified that a Prop 65 warning “is not the same as a regulatory decision that a product is ‘safe’ or ‘unsafe.’” Many of these chemicals have been used in everyday products for years without documented harm. For more information, go to <https://oag.ca.gov/prop65/faqs-view-all>.

A Prop 65 warning means that a company has either (1) evaluated the exposure and has concluded that it exceeds the “no significant risk level”; or (2) has chosen to provide a warning based on its understanding about the presence of a listed chemical without attempting to evaluate the exposure.

Does this law apply everywhere?

Prop 65 warnings are required under California law only. These warnings are seen throughout California in a wide range of settings, including but not limited to restaurants, grocery stores, hotels, schools, and hospitals, and on a wide variety of products. Additionally, some online and mail order retailers provide Prop 65 warnings on their websites or in catalogs.

How do the California warnings compare to federal limits?

Prop 65 standards are often more stringent than federal and international standards. There are various substances that require a Prop 65 warning at levels that are far lower than federal action limits. For example, the Prop 65 standard for warnings for lead is 0.5 µg/day, which is well below the federal and international standards.

Why don't all similar products carry the warning?

- Products sold in California require Prop 65 labelling while similar products sold elsewhere do not.
- A company involved in a Prop 65 lawsuit reaching a settlement may be required to use Prop 65 warnings for its products, but other companies making similar products may have no such requirement.
- The enforcement of Prop 65 is inconsistent.
- Companies may elect not to provide warnings because they conclude that they are not required to do so under Prop 65; a lack of warnings for a product does not mean that the product is free of listed chemicals at similar levels.

Why does Exmark include this warning?

Exmark has chosen to provide consumers with as much information as possible so that they can make informed decisions about the products they buy and use. Exmark provides warnings in certain cases based on its knowledge of the presence of one or more listed chemicals without evaluating the level of exposure, as not all the listed chemicals provide exposure limit requirements. While the exposure from Exmark products may be negligible or well within the “no significant risk” range, out of an abundance of caution, Exmark has elected to provide the Prop 65 warnings. Moreover, if Exmark does not provide these warnings, it could be sued by the State of California or by private parties seeking to enforce Prop 65 and subject to substantial penalties.

Notes:

Notes:

Service Record

[illegible]

EXMARK ACCESSORIES AND OPTIONS*

MID-MOUNT RIDING ACCESSORIES AND OPTIONS

CUSTOM RIDE SEAT SUSPENSION SYSTEM	OPERATOR CONTROLLED DISCHARGE
FULL SUSPENSION SEAT	SUN SHADE
DECK LIFT ASSIST KIT	TRASH CONTAINER
HITCH KIT	TURF STRIPER
LIGHT KIT	ULTRA VAC COLLECTION SYSTEM
12V POWER PORT	ULTRA VAC QUICK DISPOSAL SYSTEM
MICRO-MULCH SYSTEM	

OUT-FRONT RIDING ACCESSORIES AND OPTIONS

CUSTOM RIDE SEAT SUSPENSION SYSTEM	SNOW BLADE
DUAL-TAIL WHEEL	SNOWBLOWER
FLOOR PAN EXTENDER	SUN SHADE
HITCH KIT	TRASH CONTAINER
LIGHT KIT	ULTRA VAC COLLECTION SYSTEM
MICRO-MULCH SYSTEM	ULTRA VAC QUICK DISPOSAL SYSTEM
ROLL OVER PROTECTION SYSTEM (ROPS)	WEATHER CAB

WALK-BEHIND ACCESSORIES AND OPTIONS

GRASS CATCHER	TURF STRIPER
MICRO-MULCH SYSTEM	STANDON

*Some accessories and options not available for some models.

Place Model No. and Serial No.
Label Here (Included in the Literature
Pack) or Fill in Below

Model No. _____

Serial No. _____

Date Purchased _____

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