



Chemical Pre-Mix Kit

2015 and After Multi-Pro 5800 Turf Sprayer

Model No. 41622—Serial No. 400000000 and Up

Installation Instructions

This kit is designed to aid in the mixing of chemicals in preparation for turf spray applications on well-maintained lawns in parks, golf courses, sports fields, and on commercial grounds. It is a dedicated attachment for a turf spray application vehicle and is intended to be used by professional, hired operators in commercial applications.

This product complies with all relevant European directives; for details, please see the separate product specific Declaration of Conformity (DOC) sheet.

Read this manual carefully to learn how to operate and maintain your product properly. The information in this manual can help you and others avoid injury and product damage. Although Toro designs and produces safe products, you are responsible for operating the product properly and safely.

You may contact Toro directly at www.Toro.com for product safety and operation training materials, accessory information, help finding a dealer, or to register your product.

Whenever you need service, genuine Toro parts, or additional information, contact an Authorized Service Dealer or Toro Customer Service and have the model and serial numbers of your product ready. [Figure 1](#) illustrates the location of the model and serial numbers on the product.

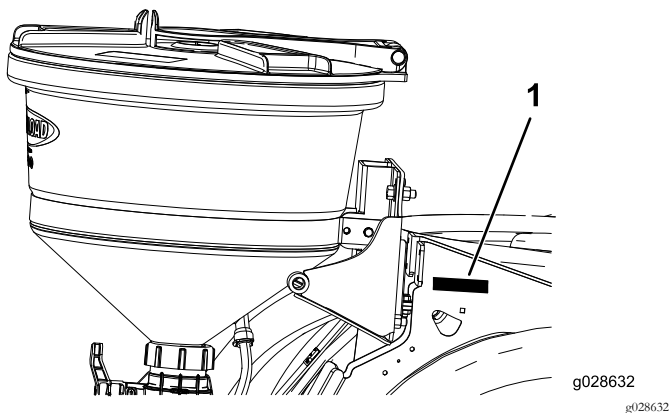


Figure 1

1. Model and serial number plate

Model No. _____

Serial No. _____

⚠ 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.

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



Safety

This manual identifies potential hazards and has safety messages identified by the safety-alert symbol (Figure 2), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.



Figure 2

g000502

1. Safety-alert symbol

This manual uses 2 words to highlight information.

Important calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

⚠ WARNING

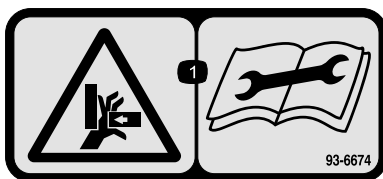
Chemical substances used in the spray system may be hazardous and toxic to you, bystanders, animals, plants, soils, or other property.

- Carefully read and follow the chemical warning labels and material safety data sheets (MSDS) for all chemicals used, and protect yourself according to the chemical manufacturer's recommendations. For example, use appropriate personal protective equipment (PPE), including face and eye protection, gloves, or other equipment to guard against personal contact with the chemical.
- Keep in mind that there may be more than 1 chemical used, and you should assess information on each chemical.
- Refuse to operate or work on the sprayer if this information is not available!
- Before working on a spray system, make sure that the system has been triple rinsed and neutralized according to the recommendations of the chemical manufacturer(s).
- Verify that there is an adequate supply of clean water and soap nearby, and immediately wash off any chemicals that contact you.

Safety and Instructional Decals



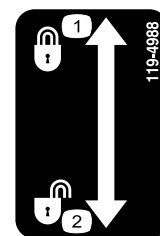
Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or missing.



93-6674

decal93-6674

1. Crushing hazard, hand—read the instructions before servicing or performing maintenance.



119-4988

decal119-4988

1. Lock
2. Unlock

Installation

Loose Parts

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

Procedure	Description	Qty.	Use
1	No parts required	–	Prepare to install the kit.
2	Eductor valve bracket (The bracket may already be installed from a previous kit installation) Flange-head bolt (5/16 x 3/4 inch) Flange locknut (5/16 inch) Washer (5/16 inch) Eductor valve assembly Flange nut (1/4 inch) Agitation bypass-hose assembly 25 x 305 mm (1 x 12 inches) Pressure relief-hose Supply-hose assembly	1 2 2 2 1 2 1 1 1	Install the eductor valve and hoses.
3	Eductor mount Flange locknut (5/16 inch) Back plate assembly Right cradle arm Left cradle arm Bushing Pivot pin Jam nut (3/8 inch) Handle Bolt (3/8 x 1-1/4 inches) Set screw Hairpin Flat washer	1 1 1 1 1 2 2 2 2 2 2 2 2 2	Assemble the frame.
4	Spring	2	Install the latching components.
5	Handle Socket-head screw (#10-24 x 1/2 inch) Latch post Spring clip Bolt (#10-24 x 1/2 inch) Locknut (#10-24) Eductor Flange-head bolt (5/16 x 3/4 inch) Flanged-locknut (5/16 inch) Latch handle Bolt (3/8 x 1 inch) Flanged-serrated nut (3/8 inch) T-fitting and drain valve Gasket Flange clamp	1 2 1 1 2 2 1 2 2 1 4 4 1 1 1	Install the eductor.

Procedure	Description	Qty.	Use
6	Bulkhead fitting	1	Install the forward hose.
	Seal	1	
	Locking ring	1	
	Carriage bolt (5/16 x 1 inch)	1	
	Eductor hose assembly	1	
	Flange locknut (5/16 inch)	1	
	Retainer	1	
	R-clamp (5/16 inch)	1	
	Gasket	1	
	Flange clamp	1	
7	Eductor supply hose	1	Install the supply hose.
	Flange clamp	1	
	Gasket	1	
	Retainer	1	

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

1

Preparing to Install the Kit

No Parts Required

Procedure

1. Clean the sprayer; refer to *Cleaning the Sprayer* in the *Operator's Manual* for the machine.
2. Park the machine on a level surface, engage the parking brake, shut off the engine, and remove the key; refer to the *Operator's Manual*.

2

Installing the Eductor Valve and Hoses

Parts needed for this procedure:

1	Eductor valve bracket (The bracket may already be installed from a previous kit installation)
2	Flange-head bolt (5/16 x 3/4 inch)
2	Flange locknut (5/16 inch)
2	Washer (5/16 inch)
1	Eductor valve assembly
2	Flange nut (1/4 inch)
1	Agitation bypass-hose assembly 25 x 305 mm (1 x 12 inches)
1	Pressure relief-hose
1	Supply-hose assembly

Removing the Hoses

1. Move to the rear of the machine and locate the valve-mount bracket.
2. Remove the 3 hoses shown in [Figure 3](#).

Note: Retain the hose clamps, gaskets, and retainers for installation in [Installing the Bracket and Eductor Valve Assembly](#) (page 6), [Installing the Agitation Bypass Hose](#) (page 7) and [Installing the Pressure Relief-Hose Assembly](#) (page 7); discard the 3 hoses.

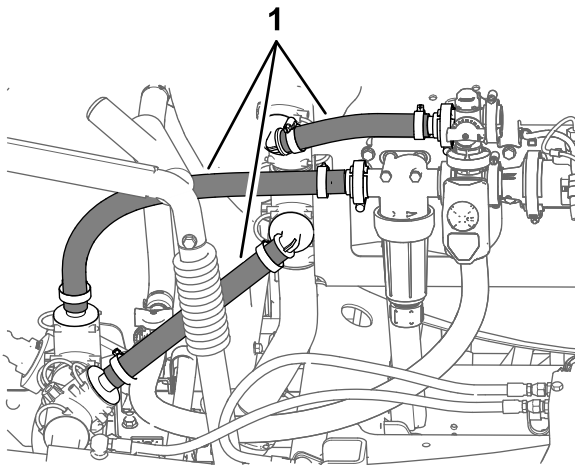


Figure 3

1. Hoses

Repositioning the Pressure Relief Valve and Upper T-Fitting

1. Remove the retainer that secures the pressure-relief valve to the T-fitting at the sprayer pump, and remove the relief valve (Figure 4).

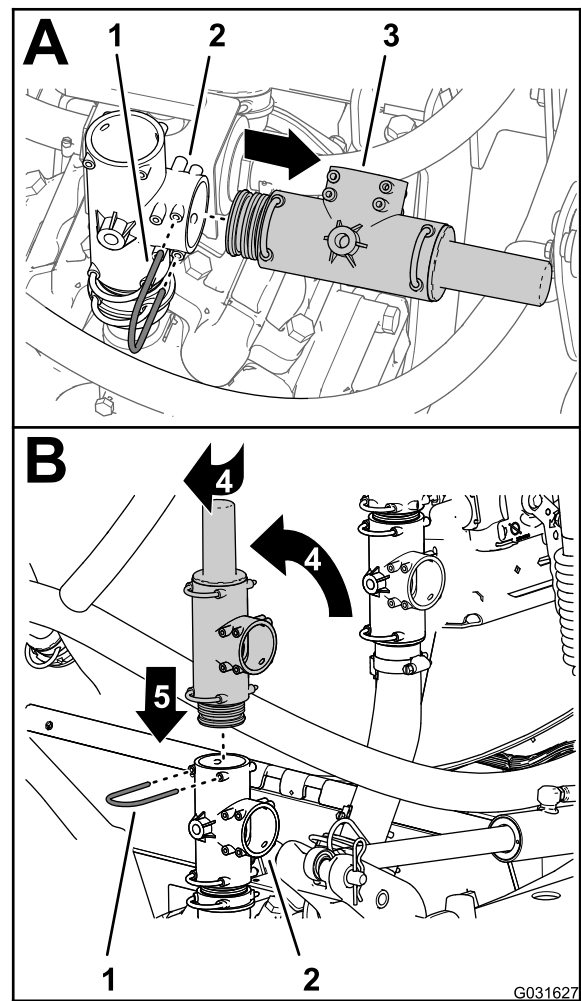


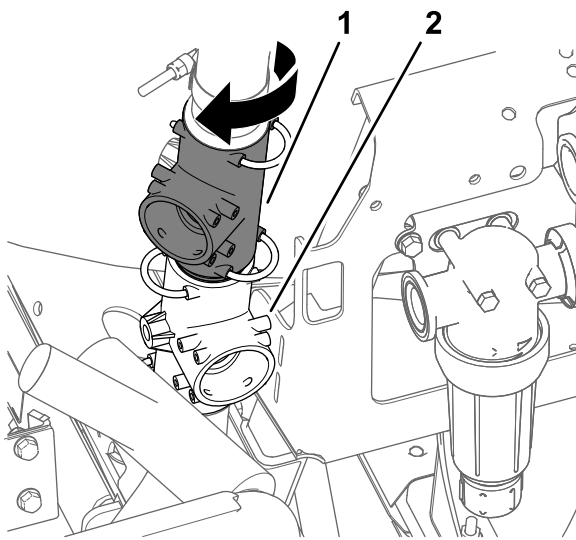
Figure 4

- | | |
|--------------------------|-------------------------------------|
| 1. Retainer | 4. Rotate the pressure-relief valve |
| 2. T-fitting | 5. Down |
| 3. Pressure-relief valve | |

2. Rotate the pressure relief valve up as shown in Figure 4.

Note: Align outlet of the pressure-relief valve rearward.

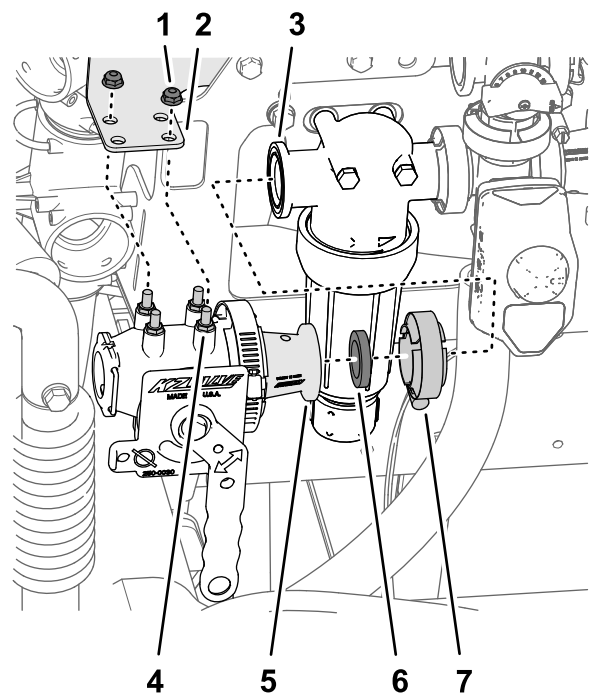
3. Insert the pressure-relief valve into the top of the T-fitting until the valve is fully seated (Figure 4).
4. Secure the pressure-relief valve to the T-fitting with the retainer that you removed in step 1.
5. Rotate the upper T-fitting approximately 45° clockwise (Figure 5).



g204682

Figure 5

1. Upper T-fitting
2. Lower T-fitting



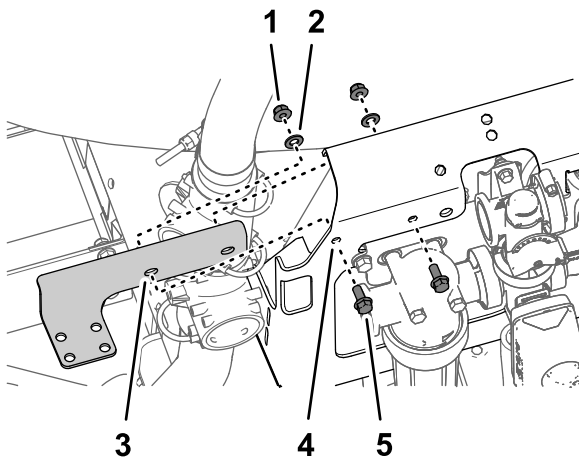
g204708

Figure 7

1. Flange locknut (1/4 inch)
2. Valve mount bracket
3. Flange (pressure filter head)
4. Stud (eductor valve)
5. Reducer adapter
6. Gasket
7. Flange clamp

Installing the Bracket and Eductor Valve Assembly

1. Assemble the valve mount bracket to the front of the valve support (Figure 6) with the 4 flange-head bolts (5/16 x 3/4 inch), 4 flange locknuts (5/16 inch), and 4 washers (5/16 inch).



g204705

Figure 6

1. Flange locknut (5/16 inch)
2. Washer (5/16 inch)
3. Valve mount bracket
4. Valve support
5. Flange-head bolt (5/16 x 3/4 inch)

2. Align the flange of the reducer adapter (eductor valve) to the flange of the pressure-filter head (Figure 7) with the gasket that you removed in step 2 of [Removing the Hoses](#) (page 4).

3. Align the studs of the pressure-filter head through the holes in the valve mount bracket (Figure 7).
4. Assemble the flange of the reducer adapter to the flange of the pressure-filter head (Figure 7) with the flange clamp that you removed in step 2 of [Removing the Hoses](#) (page 4).
5. Secure the eductor valve top the valve mount bracket with the 2 flange locknuts (1/4 inch), and torque the nuts to 1017 to 1243 N·cm (90 to 110 in·lb).
6. Tighten the flange clamp by hand.

Installing the Agitation Bypass Hose

1. Align the 90° barbed fitting of the new agitation bypass-hose assembly with the open port in the upper T-fitting and insert the 90° fitting until it is seated in the T-fitting ([Figure 8](#)).

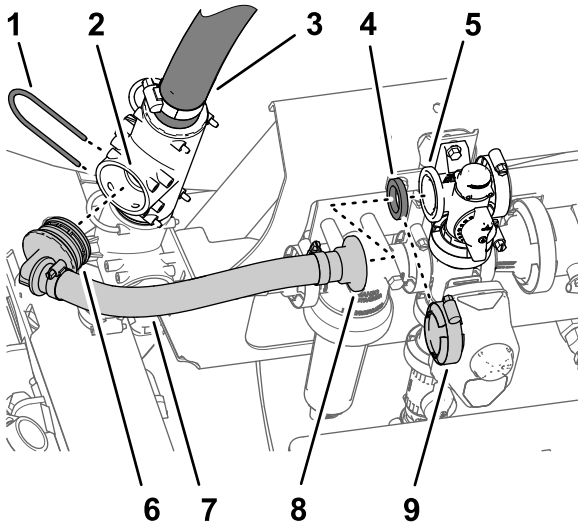


Figure 8

- | | |
|--------------------------------------|--|
| 1. Retainer | 6. 90° barbed fitting |
| 2. Port (upper T-fitting) | 7. Hose 25 x 305 mm (1 x 12 inches—agitation bypass-hose assembly) |
| 3. Upper suction hose (sprayer tank) | 8. Straight flange fitting |
| 4. Gasket | 9. Flange clamp |
| 5. Flange (agitation valve) | |

2. Secure the 90° barbed fitting to the T-fitting with the retainer ([Figure 8](#)) that you removed in step 2 of [Removing the Hoses \(page 4\)](#).
3. Align the straight flange fitting of the new agitation bypass-hose assembly and the gasket with the flange of the bypass valve ([Figure 8](#)).
4. Secure the straight flange fitting and gasket to the bypass valve with the flange clamp ([Figure 8](#)) that you removed in step 2 of [Removing the Hoses \(page 4\)](#).

Installing the Pressure Relief-Hose Assembly

1. Align the 90° fitting of the pressure relief-hose assembly with the open port in the upper T-fitting (located below the pressure-relief valve), and insert the 90° fitting until it is fully seated ([Figure 9](#)).

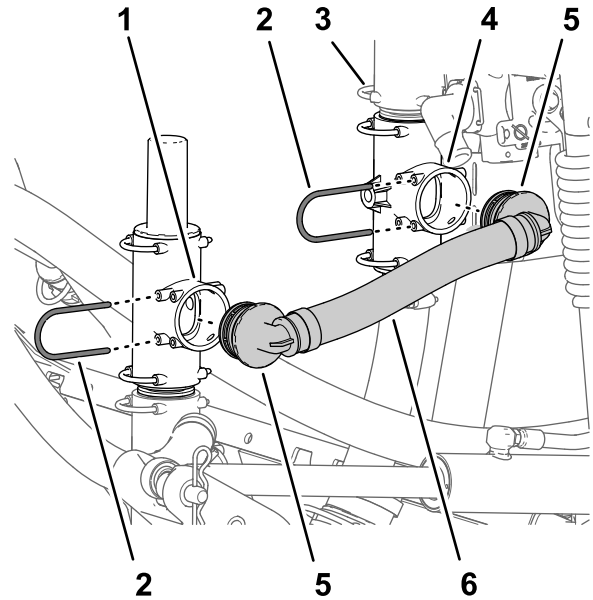


Figure 9

- | | |
|--|-------------------------|
| 1. Upper T-fitting (below the pressure-relief valve) | 4. Lower T-fitting |
| 2. Retainer | 5. 90° barbed fitting (|
| 3. Upper T-fitting | 6. Pressure relief-hose |

2. Secure the 90° T-fitting with the retainer ([Figure 9](#)) that you removed in step 2 of [Removing the Hoses \(page 4\)](#).
3. Align the other 90° fitting of the pressure relief-hose assembly with the open port of the lower T-fitting (secure to the valve mount) and insert the 90° fitting until it is fully seated ([Figure 9](#)).
4. Secure the 90° fitting to the upper T-fitting with the retainer ([Figure 9](#)) that you removed in step 2 of [Removing the Hoses \(page 4\)](#).

Installing the Supply-Hose Assembly

1. Align the other 90° fitting of the supply-hose assembly with the open port of the lower T-fitting at the sprayer pump and insert the 90° fitting until it is seated ([Figure 10](#)).

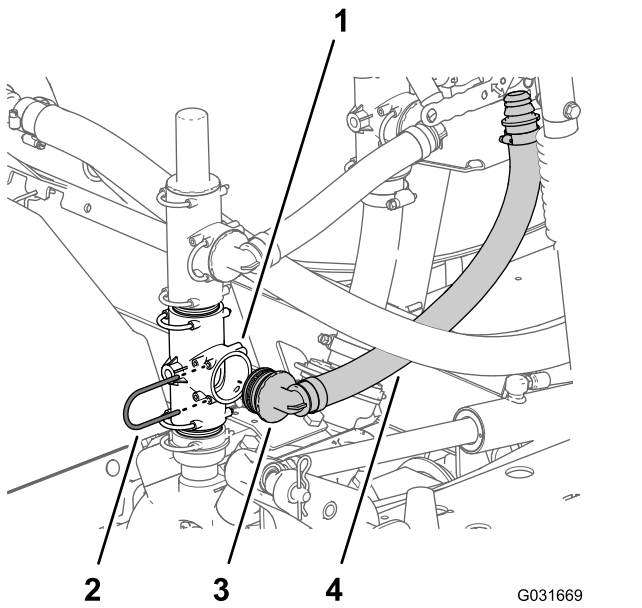


Figure 10

- | | |
|-----------------------------------|-------------------------|
| 1. Lower T-fitting (sprayer pump) | 3. 90° barbed fitting |
| 2. Retainer | 4. Supply-hose assembly |

2. Secure the 90° fitting to the T-fitting at the sprayer pump with the retainer ([Figure 10](#)) that you removed in step 1 of [Repositioning the Pressure Relief Valve and Upper T-Fitting](#) (page 5).
3. Align the straight-barbed fitting of the pressure-hose assembly with the bottom port of the eductor valve and insert the straight fitting until it is seated ([Figure 11](#)).

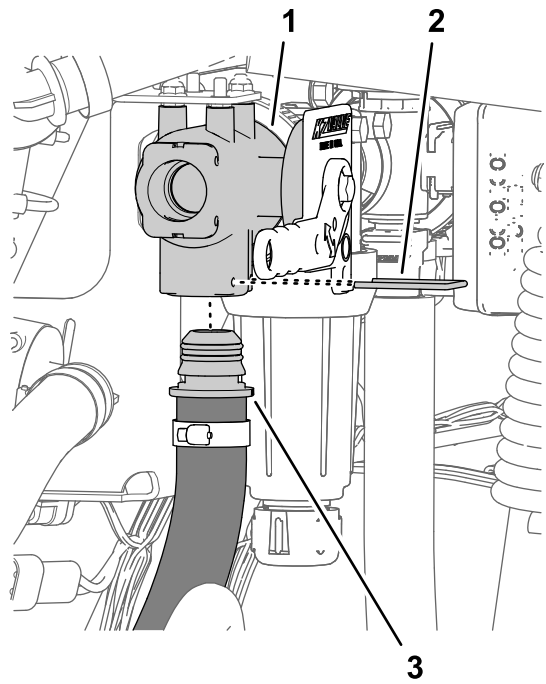


Figure 11

- | | |
|------------------|-------------------------|
| 1. Eductor valve | 3. Supply-hose assembly |
| 2. Retainer | |

4. Secure the straight-barbed fitting to the eductor valve ([Figure 9](#)) with a retainer.

3

Assembling the Frame

Parts needed for this procedure:

1	Eductor mount
1	Flange locknut (5/16 inch)
1	Back plate assembly
1	Right cradle arm
1	Left cradle arm
2	Bushing
2	Pivot pin
2	Jam nut (3/8 inch)
2	Handle
2	Bolt (3/8 x 1-1/4 inches)
2	Set screw
2	Hairpin
2	Flat washer

Installing the Support Frame to the Tank

1. Remove the 2 flange locknuts securing the tank-lid stop to the 2 carriage bolts at the rear strap of the sprayer tank, and remove the tank-lid stop ([Figure 12](#)).

Note: Retain the tank-lid stop and flange locknut.

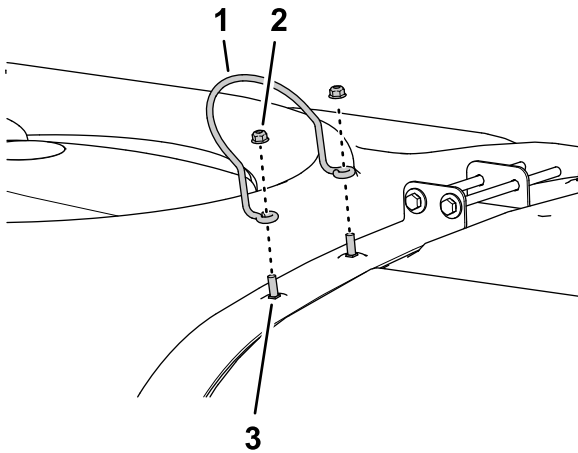


Figure 12

1. Tank-lid stop
2. Flange locknut
3. Carriage bolt

2. Align the slots in the eductor mount to the 2 lower carriage bolts of the rear tank strap as shown in [Figure 13](#).

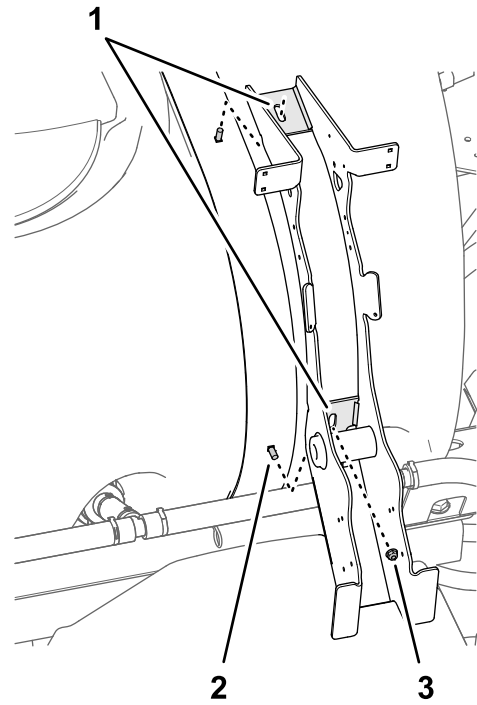


Figure 13

1. Slots (eductor mount)
2. Flange locknut (5/16 inch)
3. Carriage bolt

3. Loosely assemble the flange locknut (5/16 inch) onto the lower carriage bolt ([Figure 13](#)).
4. Assemble the tank-lid stop and 2 flange locknut that you removed in step 1 onto the 2 upper carriage bolts ([Figure 14](#)).

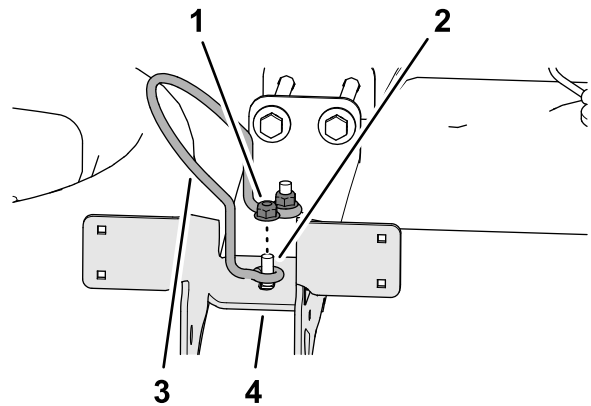


Figure 14

1. Flange locknut (5/16 inch)
2. Carriage bolt
3. Tank-lid stop
4. Eductor mount

5. Torque the 3 flange locknuts to 1978 to 2542 N·cm (175 to 225 in-lb).

Preparing the Cradle Arms

1. Assemble the pivot pin through the upper hole in the cradle arm (Figure 15).

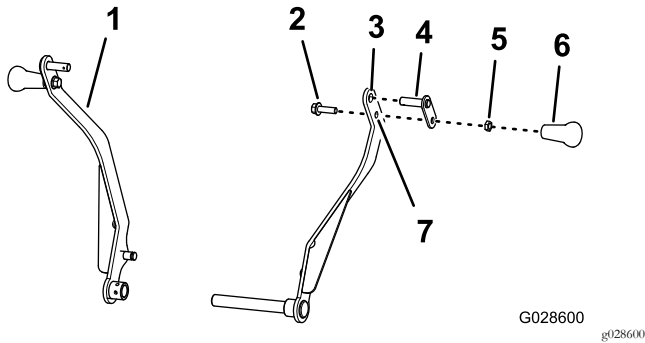


Figure 15

- | | |
|---------------------------------|---------------------------------|
| 1. Cradle arm (left) | 5. Jam nut (3/8 inch) |
| 2. Bolt (3/8 x 1-1/4 inches) | 6. Handle |
| 3. Upper hole (Cradle arm—left) | 7. Lower hole (Cradle arm—left) |
| 4. Pivot pin | |

2. Apply medium-grade, thread-locking compound to the threads of the bolt (3/8 x 1-1/4 inch).
3. Assemble the bolt (3/8 x 1-1/4 inch) through the lower hole in the cradle arm and the retainer of the pivot pin (Figure 15) with the jam nut (3/8 inch), and tighten the jam nut to 15 to 17 N·m (11 to 13 ft-lb).
4. Thread the handle onto the bolt (3/8 x 1-1/4 inch) and tighten the handle against the jam nut and tighten the handle by hand (Figure 15).
5. Repeat steps 1 through 4 to the other cradle arm (Figure 15).

Assembling the Cradle Arms to the Support Frame

1. Insert a flanged bushing (3/4 inch inside diameter) into each end of the pivot tube in the main-support frame (Figure 16).

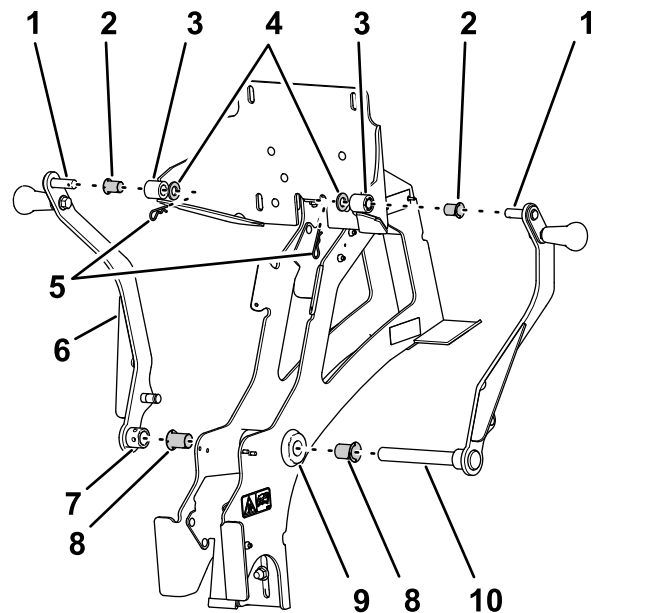


Figure 16

- | | |
|--|---|
| 1. Upper pivot pins (1/2 inch) | 6. Cradle arm (left) |
| 2. Flanged bushings (1/2 inch inside diameter) | 7. Hub (left cradle arm) |
| 3. Hubs (back plate—left and right) | 8. Flanged bushings (3/4 inch inside diameter) |
| 4. Washers (1/2 inch) | 9. Pivot tube (main-support frame) |
| 5. Hairpins | 10. Lower pivot pin (3/4 inch—right cradle arm) |

2. Insert a flanged bushing (1/2 inch inside diameter) into the left and right hubs of the back plate (Figure 16).

Note: Ensure that the flange of the bushings are aligned to the outward side of the hubs.

3. Assemble the lower pivot pin of the right cradle arm through the flanged bushing at the right side of the pivot tube and the pivot (Figure 16).

Note: Align the upper pivot pin of the arm with the right hub of the back plate.

4. Assemble the upper pivot pin of the right cradle arm through the right hub of the back plate (Figure 16).
5. Secure the upper pivot pin to the back plate with a washers (1/2 inch) and hairpin (Figure 16).
6. Assemble the hub of the left cradle arm over the end of the lower pivot pin of the right cradle arm that is protruding to the left of the left flanged bushing in pivot tube (Figure 16).

Note: Align the upper pivot pin of the arm with the left hub of the back plate.

7. Assemble the upper pivot pin of the left cradle arm through the left hub of the back plate (Figure 16).
8. Secure the upper pivot pin of the left cradle arm to the back plate with a washer (1/2 inch) and hairpin (Figure 16).

9. Install 2 set screws to the left arm at the lower hinge point (Figure 17).

Note: Do not tighten the set screw at this time to allow for later adjustment of the cradle system.

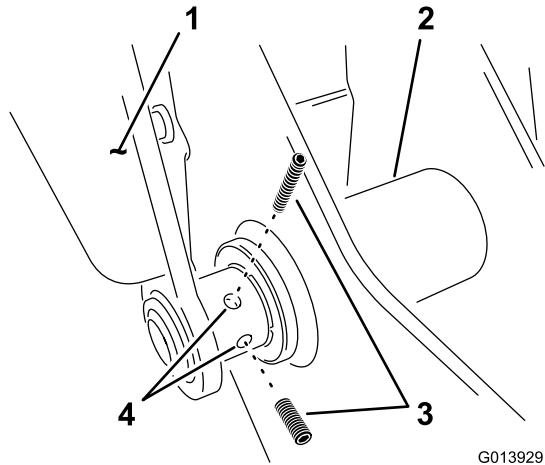


Figure 17

- | | |
|----------------------|------------------------|
| 1. Cradle arm (left) | 3. Set screw |
| 2. Pivot tube | 4. Holes in cradle arm |

4

Installing the Latching Components

Parts needed for this procedure:

2	Spring
---	--------

Installing the Springs

1. Install the spring in the hole in the lower end of the angled tab on the side of the frame assembly (Figure 18).

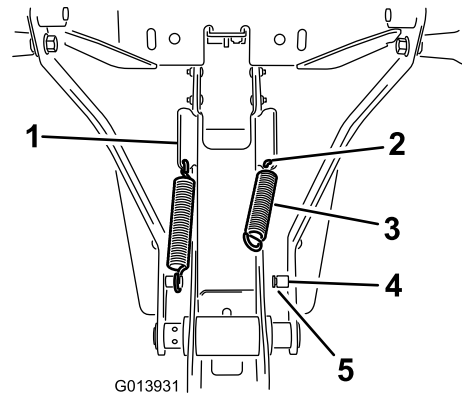


Figure 18

- | | |
|----------------|-----------|
| 1. Angled tab | 4. Post |
| 2. Hole in tab | 5. Groove |
| 3. Spring | |

2. Hook 1 end of the spring into the hole and the other end onto the spring post (Figure 18).
3. Make sure that the spring end is seated properly in the groove in the post (Figure 18).
4. Repeat steps 1 through 3 for the other side.
5. Tighten the 2 set screws in the left arm.

Adjusting the Tongue Position

Move the cradle assembly into the upper transport position to adjust the tongue.

1. Lift up on the handles to raise the assembly while slightly tipping it toward the tank.
2. Guide the tongue under the crossbar with the welded tab in the upper portion of the frame assembly.
3. Let the assembly pivot down, toward the tank.
4. Making sure that the plastic stops are in contact with the spring tabs, apply enough pressure against the back plate assembly of the cradle to compress the spring tabs midway (Figure 19).

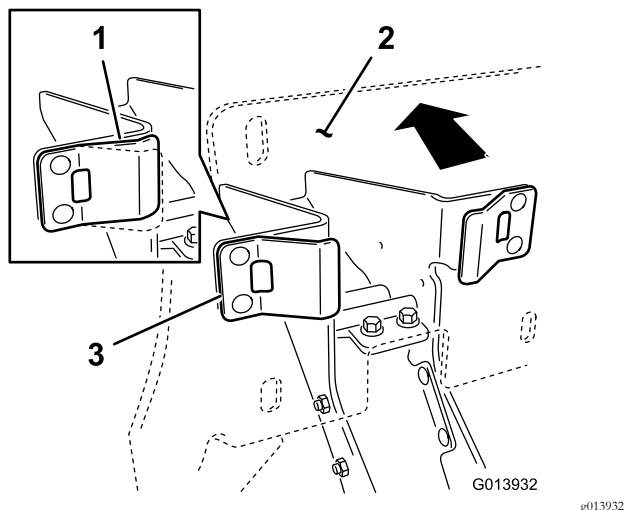


Figure 19

1. Spring tab under pressure
2. Back plate
3. Spring tab

5. While maintaining the pressure on the back plate, slide the tongue toward you until the lip of the tongue plate contacts the crossbar (Figure 20).

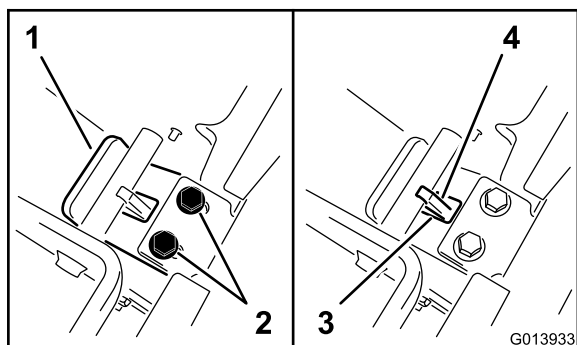


Figure 20

1. Tongue-plate lip
2. Fasteners
3. Slot in plate
4. Welded tab

6. Tighten the fasteners in the tongue to secure its position, then release pressure on the back plate.

Note: Check to see if there is any play in the cradle. It should be held snug to the frame assembly. You can repeat this procedure once the eductor is installed to adjust the locked position.

5

Installing the Eductor

Parts needed for this procedure:

1	Handle
2	Socket-head screw (#10-24 x 1/2 inch)
1	Latch post
1	Spring clip
2	Bolt (#10-24 x 1/2 inch)
2	Locknut (#10-24)
1	Eductor
2	Flange-head bolt (5/16 x 3/4 inch)
2	Flanged-locknut (5/16 inch)
1	Latch handle
4	Bolt (3/8 x 1 inch)
4	Flanged-serrated nut (3/8 inch)
1	T-fitting and drain valve
1	Gasket
1	Flange clamp

Assembling the Eductor Handle

Note: You can install the latch handle and latch post at either the left or right side of the eductor handle.

1. Assemble the latch post to the handle of the eductor (Figure 21) using the 2 socket-head screws (#10-24 x 1/2 inch).

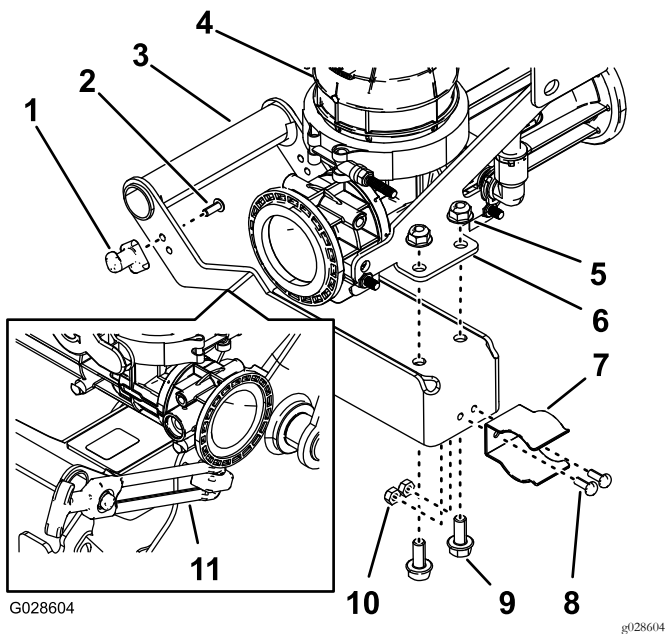


Figure 21

- | | |
|--|---------------------------------------|
| 1. Latch post | 7. Spring clip |
| 2. Socket-head screw (#10-24 x 1/2 inch) | 8. Bolt (#10-24 x 1/2 inch) |
| 3. Eductor handle | 9. Flange-head bolt (5/16 x 3/4 inch) |
| 4. Eductor assembly | 10. Locknut (#10-24) |
| 5. Flange locknut | 11. Latch handle |
| 6. Mount plate (eductor) | |

- Assemble the spring clip to the latch handle (Figure 21) with the 2 bolts (#10-24 x 1/2 inch) and 2 locknuts (#10-24).
- Assemble the handle to the mount plate for the eductor (Figure 21) with 2 flange-head bolts (5/16 x 3/4 inch) and flange locknuts (5/16 inch).
- Lower the cradle into the down position.

Assembling the Eductor to the Sprayer

- Align the holes in the eductor mount plate with the slots in the cradle support frame (Figure 22).

Note: The fasteners need to be loose enough so that they can travel in the slot when the eductor is initially raised up into the transport position. This allows you to adjust the travel and alignment of the eductor.

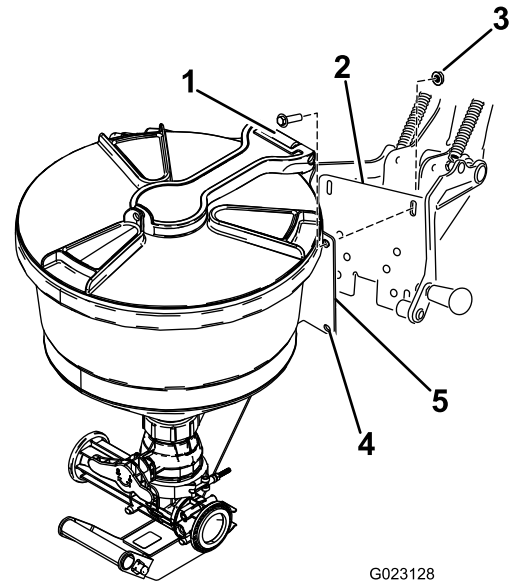


Figure 22

- | | |
|------------------------------------|--------------------------------|
| 1. Bolt (3/8 x 1 inch) | 4. Eductor assembly mount hole |
| 2. Back plate | 5. Eductor assembly mount |
| 3. Flanged-serrated nut (3/8 inch) | |

- Install 4 bolts (3/8 x 1 inch) and locknuts (3/8 inch) to mount the eductor.

Note: Do not tighten the bolts at this time.

- To carefully raise the eductor in the cradle assembly up to the transport position, do the following:
 - Lift the lower handle to raise the eductor while slightly tipping it toward the tank.
 - Guide the tongue under the crossbar with the welded tab in the upper portion of the frame assembly.
 - Then pivot the assembly toward the tank, taking care to line up the spring clip with the large pivot tube in the lower portion of the frame.
 - Push until the spring clip snaps over the pivot tube as shown in Figure 23.

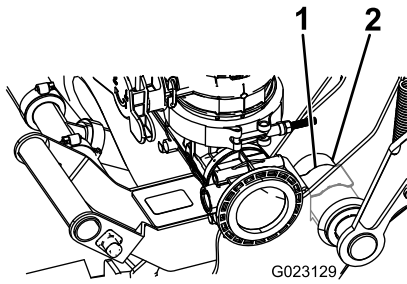


Figure 23

1. Spring clip
2. Pivot tube

4. Check the eductor height on the cradle back plate and adjust as necessary.
5. Tighten the fasteners securing the eductor to the cradle.

Note: Torque the fasteners to 36 to 45 N·m (27 to 33 ft-lb).

6. Tighten the 2 set screws on the left hand pivot arm, refer to [Figure 17](#) in [Assembling the Cradle Arms to the Support Frame](#) (page 10).
7. Check the overall position of the eductor assembly on the tank strap.

Note: The eductor should be upright, in the transport position. Loosen the lower locknut on the frame assembly securing it to the tank. Do not remove the locknut. Adjust the position as necessary and tighten the locknut. Make sure that the strap is secure to the tank.

Assembling the T-fitting and Drain Valve

1. Align the flange of the T-fitting for the drain valve with the forward flange of the eductor ([Figure 24](#)).

Note: Ensure that the handle for the drain valve is located outward.

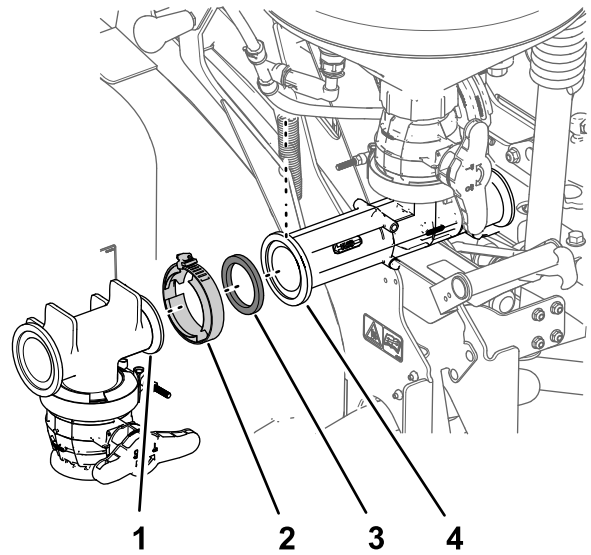


Figure 24

1. Flange (T-fitting—drain valve)
2. Flange clamp
3. Gasket
4. Forward flange (eductor)

2. Assemble the T-fitting to the eductor with a gasket and flange clamp, and tighten the clamp by hand ([Figure 24](#)).

6

Installing the Forward Hose

Parts needed for this procedure:

1	Bulkhead fitting
1	Seal
1	Locking ring
1	Carriage bolt (5/16 x 1 inch)
1	Eductor hose assembly
1	Flange locknut (5/16 inch)
1	Retainer
1	R-clamp (5/16 inch)
1	Gasket
1	Flange clamp

Drilling the Tank

1. Open the lid of the spray tank and remove the filter basket ([Figure 25](#)).

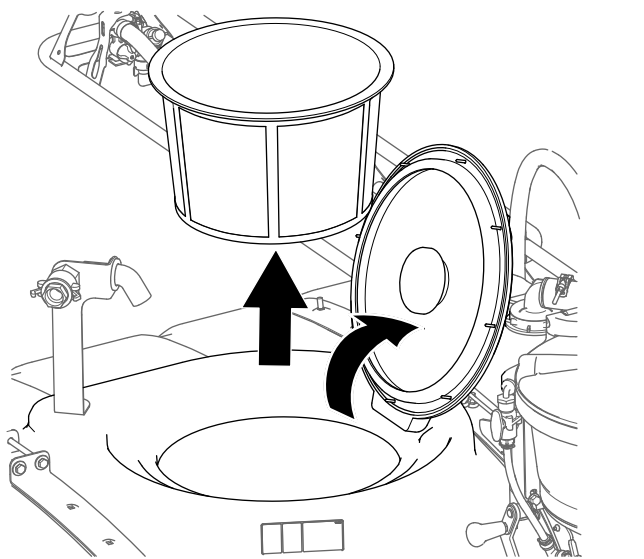


Figure 25

2. Locate the forward location on the top of the tank as shown in [Figure 26](#).

Note: Locate the drill mark in the center of the molded circle.

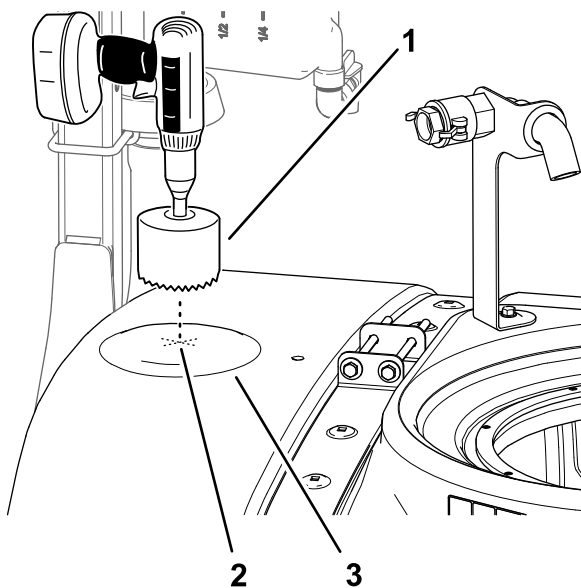


Figure 26

1. Drill with hole saw 9 cm (3-5/8 inch)
2. Drill at the center of the molded circle
3. Molded circle

3. Use a 9 cm (3-5/8 inch) hole saw to drill a hole at the drill mark ([Figure 26](#)).

Note: You will need to increase the diameter slightly to accommodate the bulkhead.

4. After drilling the hole, remove any rough edges in the cut, and remove any debris that entered the spray tank during the cutting process.

Installing the Bulkhead

1. Install the seal over the bulkhead fitting ([Figure 27](#)).

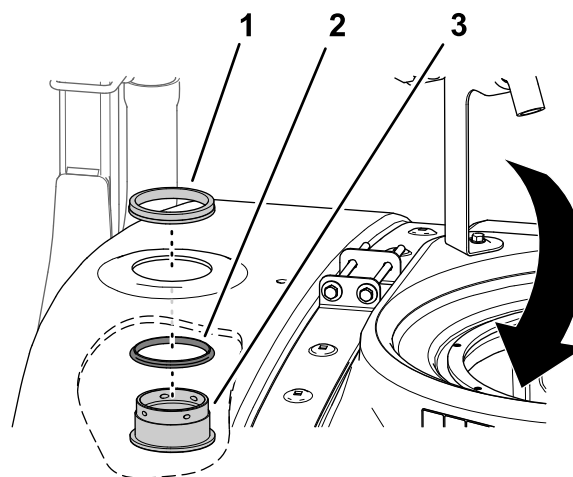


Figure 27

1. Locking ring
2. Seal
3. Bulkhead fitting

2. Install the bulkhead fitting and the seal through the hole that you created in [Drilling the Tank \(page 14\)](#), from inside the tank ([Figure 27](#)).
3. Secure the bulkhead to the tank with the locking ring ([Figure 27](#)).
4. Install the filter basket and close the lid of the spray tank.

Installing the Eductor Hose Assembly

1. Remove the 2 bolts (3/8 x 7 inches), 4 washers (3/8 inch), and 2 locknuts (3/8 inch) that secure the front strap halves of the spray tank ([Figure 28](#)).

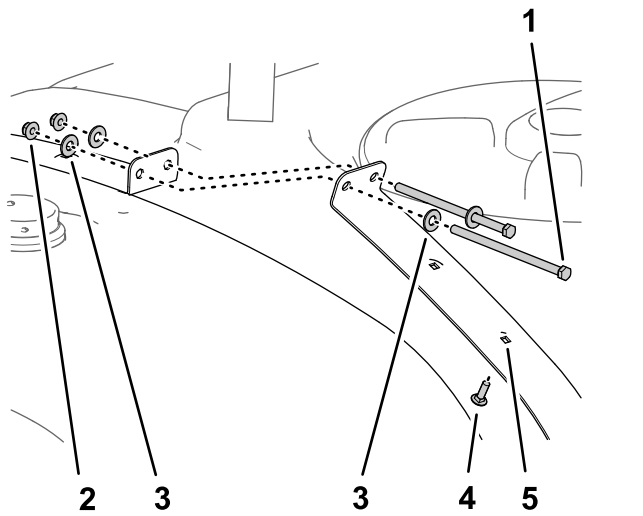


Figure 28

- | | |
|------------------------------|--|
| 1. Bolt (3/8 x 7 inches) | 4. Carriage bolt (5/16 x 1 inch) |
| 2. Flange locknut (3/8 inch) | 5. Second hole—strap half (spray tank) |
| 3. Washer (3/8 inch) | |
-
2. Insert the carriage bolt (5/16 x 1 inch) into the second hole in the strap half as shown in [Figure 28](#).
 3. Assemble the 2 front strap halves with the 2 bolts 4 washers, and 2 locknuts that you removed in step 1, and tighten the bolts and nuts by hand ([Figure 28](#)).
 4. Install an R-clamp over eductor hose assembly ([Figure 29](#)).

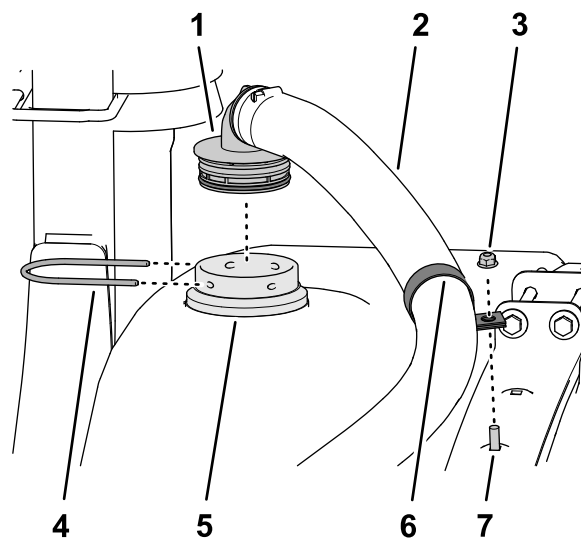


Figure 29

- | | |
|-------------------------------|----------------------------------|
| 1. 90° barbed fitting | 5. Bulkhead fitting |
| 2. Eductor hose assembly | 6. R-clamp (5/16 inch) |
| 3. Flange locknut (5/16 inch) | 7. Carriage bolt (5/16 x 1 inch) |

4. Retainer

5. Assemble the 90° barbed fitting of the eductor hose assembly into the bulkhead fitting and secure the barbed fitting to the bulkhead fitting a retainer ([Figure 29](#)).
 6. Loosely assemble the R-clamp onto the carriage bolt and secure the clamp ([Figure 29](#)) with a flange locknut (5/16 inch).
- Note:** You will tighten the flange nut after the other end of the eductor hose assembly is installed.
7. Attach the straight-barb fitting of the eductor hose assembly to the flange of the T-fitting for the eductor using a gasket and flange clamp, and tighten the clamp by hand ([Figure 30](#)).

7

Installing the Supply Hose

Parts needed for this procedure:

1	Eductor supply hose
1	Flange clamp
1	Gasket
1	Retainer

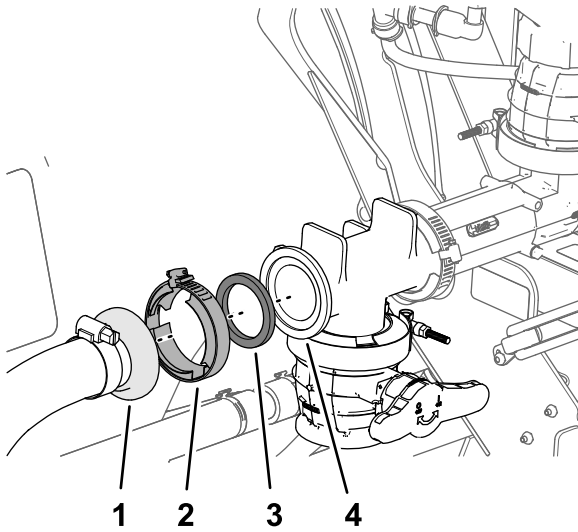


Figure 30

g205926

1. Straight-barb fitting (eductor hose assembly)
2. Flange clamp
3. Gasket
4. Flange (T-fitting—eductor assembly)

8. Raise and lower the handle of the eductor to ensure that the eductor moves freely.

Note: If needed, adjust the position of the R-clamp to align the eductor hose (Figure 29).

9. Tighten the flange locknut (5/16 inch) that secures the R-clamp to the carriage bolt to 1978 to 2542 N·cm (175 to 225 in-lb).

Procedure

1. Loosely assemble the straight-barb fitting of the eductor supply hose onto the flange of the eductor with a gasket and flange clamp (Figure 31).

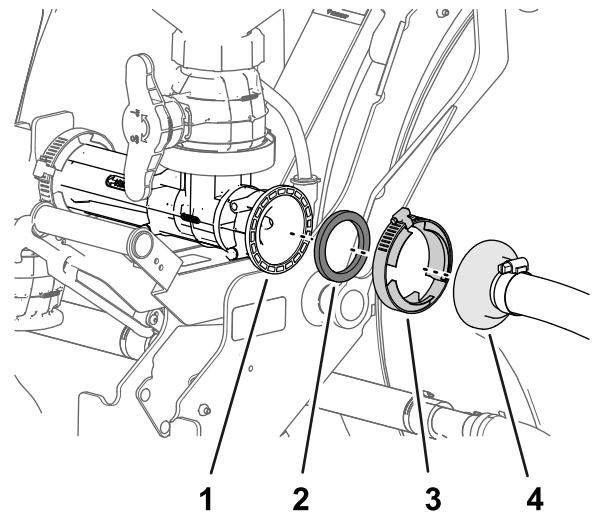


Figure 31

g205927

1. Flange (eductor)
2. Gasket
3. Flange clamp
4. Straight-barb fitting (eductor supply hose)

2. Route the other end of the eductor supply hose past the spray pump and turn toward the eductor shutoff valve.
3. Assemble the 90° barbed fitting of eductor supply hose into the open port of the eductor shutoff valve (Figure 32).

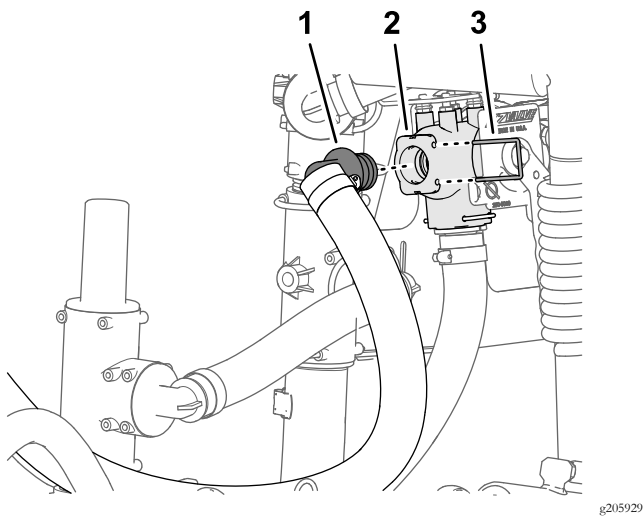


Figure 32

1. 90° barbed fitting (eductor supply hose)
 2. Eductor shutoff valve
 3. Retainer
-
4. Secure the barbed fitting to the shutoff valve with a retainer (Figure 32).
 5. Tighten the flange clamp that secures eductor supply hose to the eductor by hand.

8

Finishing the Installation

Parts needed for this procedure:

1	Suction lance and hose (optional)
---	-----------------------------------

Procedure

Note: The suction lance and hose are optional accessories. Contact your Authorized Toro Distributor for more information.

Retain the suction lance and hose for later use. Read and retain the remaining documentation on using the Chemical Pre-Mix Kit.

Operation

⚠ CAUTION

Chemicals are hazardous and can cause personal injury.

- Read the directions on the chemical labels before handling the chemicals and follow all manufacturer recommendations and precautions.
- Keep chemicals away from your skin. Should contact occur, wash the affected area thoroughly with soap and clean water.
- Wear goggles and any other protective equipment recommended by the chemical manufacturer.

Controls

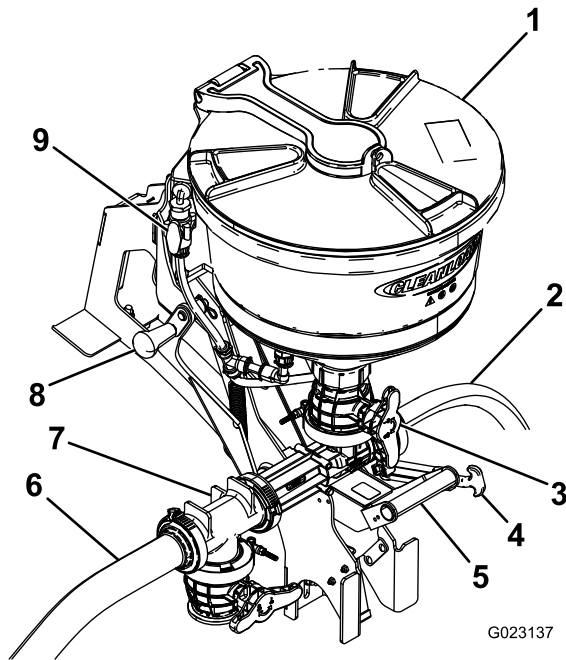


Figure 33

- | | |
|--------------------|-----------------|
| 1. Lid | 6. Tank hose |
| 2. Supply hose | 7. T-valve |
| 3. Hopper valve | 8. Upper handle |
| 4. Transport strap | 9. Flush valve |
| 5. Lower handle | |

Lid

Rotate the lid counter clockwise to open it. Close the lid completely before turning it clockwise to lock it. You must close the lid and lock it before it is raised to the transport position.

Handles and Transport Strap

Use the upper and lower handles (Figure 33) to raise and lower the eductor and to lock it into the transport position.

Hopper Valve

Use the hopper valve to introduce chemicals from the eductor into the hose leading to the spray tank.

Bottle Rinse

The bottle rinse (Figure 34) is located inside the eductor tank. Use the bottle rinse to remove chemical residue from the inside of the container (bottle) in which the chemical is packaged. The bottle rinse is pressurized with solution from the spray system. The chemical container (bottle) is rinsed with spray-system solution discharged at the spout of the bottle rinse.

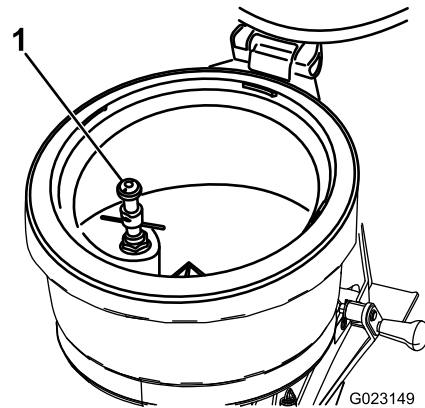


Figure 34

1. Bottle rinse

Flush Valve

The flush valve (Figure 33) is used to rinse residual chemical from the inside of the hopper of the eductor. The flush valve pressurizes with solution from the spray system. Rotating the flush-valve handle 90° counterclockwise to rinse the hopper; rotating the flush-valve handle 90° clockwise to closes the valve.

Lowering and Raising the Educator

Lowering the Educator

1. Grasp the educator handle and pull the latch handle off the latch post (Figure 35 and Figure 36).

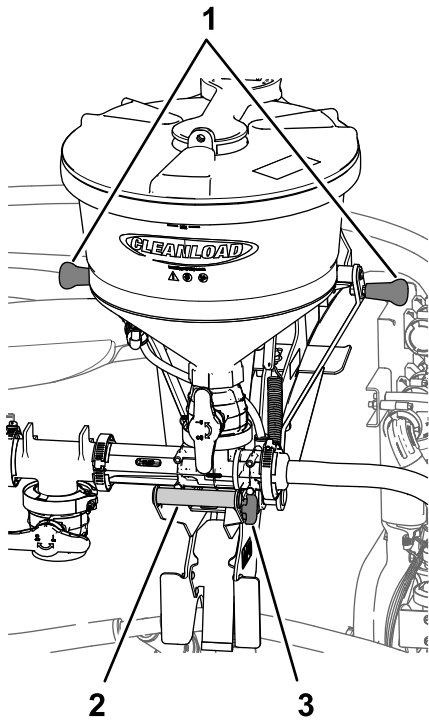


Figure 35

1. Handles (top of the cradle)
2. Educator handle
3. Latch handle

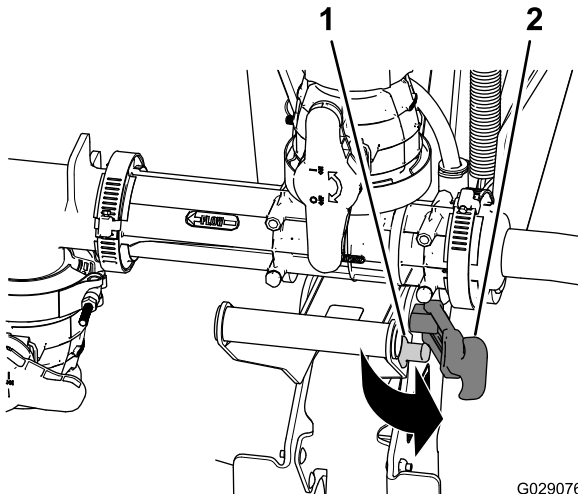


Figure 36

1. Latch post
2. Latch handle

2. Grasp the educator handle at the top of the cradle in addition to the educator handle and pull the educator

handle out until the spring clip releases from the pivot tube (Figure 35 and Figure 37).

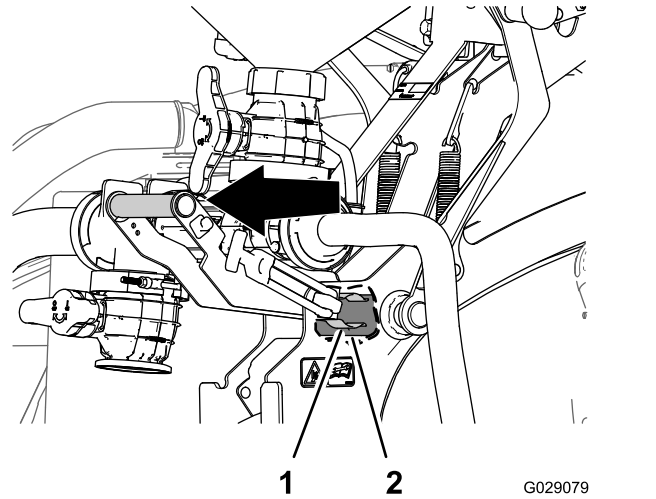


Figure 37

1. Spring clip
2. Pivot tube

3. Pull the educator handle outward and down until the hook of the latch at the inboard side of the back plate is clear of the latch rod of the main support-frame assembly (Figure 38).

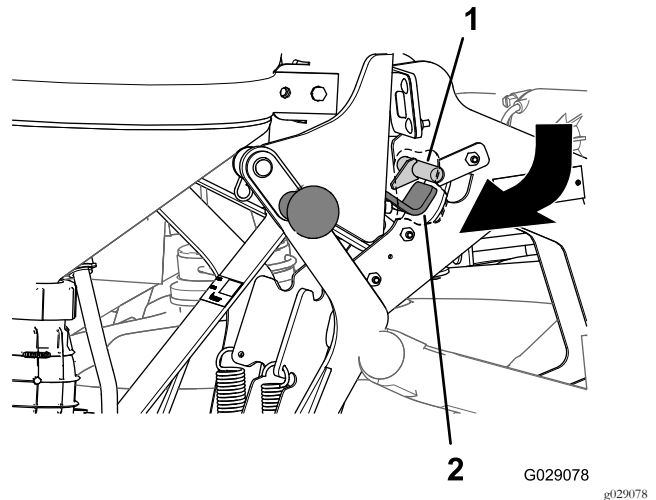


Figure 38

1. Latch rod (main-support frame)
2. Latch (back plate)

4. Fully lower the educator while holding the educator handle outward slightly (Figure 39).

Note: You will need to tip the bottom of the educator outward so that you can align the hook of the latch under the spring plate at the bottom of the main-support frame.

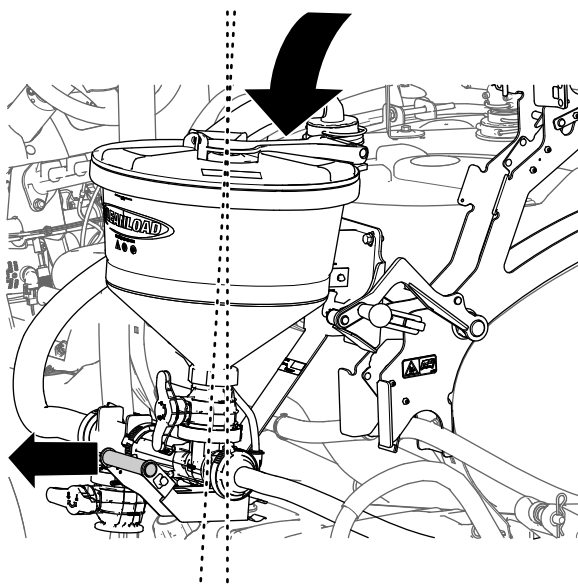


Figure 39

g205963

5. When the latch of the back plate is under the spring plate (A of Figure 40), rotate the educor handle inward so that the hook portion of the latch is aligned behind the spring plate (B of Figure 40).

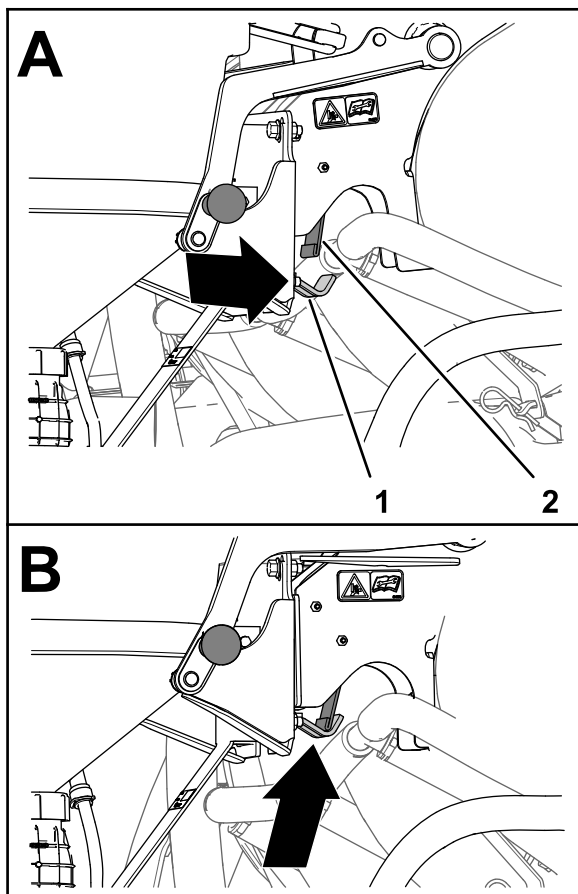


Figure 40

g205964

1. Latch hook
2. Spring plate

Raising the Educator

1. Grasp a handle at the top of the cradle in addition to the educor handle and pull the educor handle outward until the hook portion of the latch is aligned outward of the spring plate (Figure 37 and Figure 40).
2. Raise the educor while holding the educor handle outward slightly (Figure 39).

Note: Tip the top of the educor inward as needed so that you can align the latch at the inboard side of the back plate under the latch rod of the main-support-frame assembly.

3. Push in the handles at the top of the cradle until the hook portion of the latch is aligned behind the latch rod of the main-support frame (Figure 38).
4. Push in the educor handle so that the hook raises to the latch rod and the spring clip fully seats around the pivot tube (Figure 37).
5. Pull the latch handle onto the latch post (Figure 36).

Protecting the Turf when Operating a Stationary Machine

Important: Under some conditions, heat from the engine, radiator, and muffler can potentially damage the grass when operating the sprayer in a stationary mode. Stationary modes include tank agitation, hand spraying, or using a walking boom.

Take the following precautions:

- **Avoid** stationary spraying when conditions are very hot and/or dry, as turf can be more stressed during these periods.
- **Avoid** parking the machine on the turf while stationary spraying. Park the machine on a cart path whenever possible.
- **Minimize** the amount of time that the machine is left running over any particular area of turf. Both time and temperature affect how much the grass may be damaged.
- **Set the engine speed as low as possible** to achieve the desired pressure and flow. This minimizes the heat generated and the air velocity from the cooling fan.
- **Allow heat to escape** upward from the engine compartment by raising the engine guard/seat assemblies during stationary operation rather than being forced out under the vehicle. Refer to your *Operator's Manual* for more information on raising the seat assemblies.

Note: Use a heat-shield blanket underneath the vehicle during stationary operation for additional heat protection. Contact your Authorized Toro Distributor to obtain a Toro heat-shield blanket kit for turf sprayers.

Using the Eductor

The following procedures assume the following operational states exist for the standard tank agitation: The sprayer is started and running, the pump is engaged and set to the desired pressure, and the throttle is in the mid-range position.

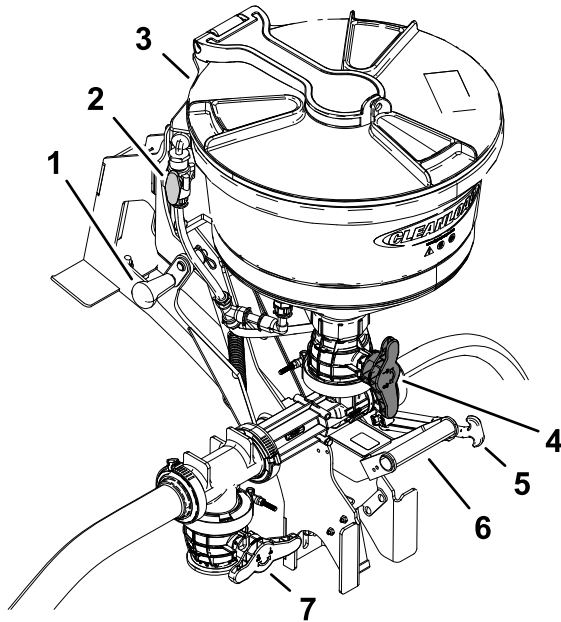


Figure 41

- | | |
|----------------------------|--------------------|
| 1. Upper handle | 5. Transport strap |
| 2. Flush-valve knob | 6. Lower handle |
| 3. Hopper-valve knob (red) | 7. T-valve |
| 4. Lid | |

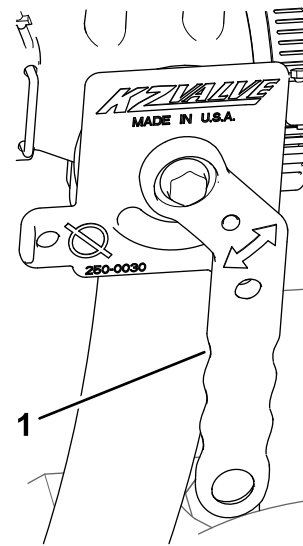


Figure 42

1. Handle (eductor-shutoff valve)
5. Open the hopper valve (red knob) located on the bottom of the hopper (Figure 41).
6. Unlock and open the lid slowly by turning the cover counterclockwise.

Starting the Eductor

Note: Close the hopper valve and flush valve before starting the eductor.

1. Use the lower handle to lower the eductor (Figure 41).
2. Open the lid to check for foreign objects which may hinder performance or contaminate the system (Figure 41).
3. Close and lock the lid by turning the cover clockwise.
4. Rotate the handle of the eductor shutoff valve to open position (Figure 42).

The spray system pressurizes the eductor circuit.

Loading Liquid or Powdered Chemical into the Hopper

1. Open the eductor shutoff valve.
2. Open the hopper valve (Figure 41).
3. Pour the required amount of chemical into the hopper.

Note: Avoid splashing liquids or powdered chemicals outside of the hopper.

4. If applicable, rinse the empty chemical containers as follows:
 - A. Place the rim of the container over the bottle rinse and press down to open the valve; refer to Figure 34 in Bottle Rinse (page 19).

Solution will stream from the nozzle of the bottle rinse into the inverted container (bottle).
 - B. Lift up the chemical container to close the shut-off valve of the bottle rinse.
5. Rinse the hopper of the eductor as follows:
 - A. Close lid of the hopper and lock it by turning the cover clockwise.
 - B. Open the flush valve and rinse the hopper of the eductor for 20 seconds (Figure 41).
 - C. Close the flush valve (Figure 41).
 - D. Open the lid of the hopper and inspect for chemical residue.

Repeat step A and B as necessary to clean the hopper.

6. Raise the eductor and secure it with the transport strap (Figure 41).
7. Close the eductor shutoff valve and the hopper valve (Figure 41).

Loading Chemicals with the Optional Suction Lance

Note: Lance suction depends upon eductor pressure and flow. For best results, use pressure up to 10 bar (150 psi) maximum.

1. Insert the suction lance body into the eductor until the O-ring seals on the hopper drain.

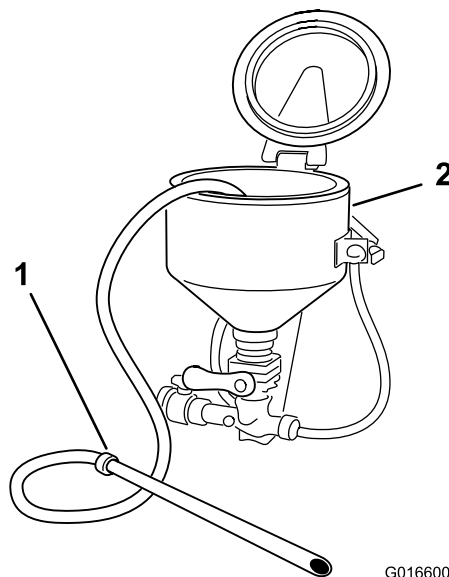


Figure 43

1. Suction lance

2. Eductor

2. Use the free end of the lance to pierce the bag or container to vacuum powdered or liquid chemical.
3. Place the lance end into a clean container of water to rinse the lance assembly.
4. Remove the lance body from eductor and drain any remaining fluid into the hopper.
5. Close the hopper valve (red handle).

Shutting off the Eductor

1. Close all the valves.

Note: Close the hopper valve first.

2. Remove all chemical residue.
3. Close and lock the hopper lid by turning the cover clockwise (Figure 41).
4. Return the agitation valve to the fully open position.
5. Close the eductor shutoff valve; refer to Figure 42 of Starting the Eductor (page 22).
6. Return the eductor to the transport position, and secure it with the transport strap (Figure 41).

Troubleshooting

Problem	Possible Cause	Corrective Action
The eduction rate is low.	<ol style="list-style-type: none"> 1. There is a lack of flow and pressure to the eductor system. 2. The outlet/Inlet hose is obstructed. 3. Fittings with elbows or other flow-restrictions are in the eductor outlet. 	<ol style="list-style-type: none"> 1. Increase the pump speed. Turn the agitation throttling toward the closed position. 2. Disassemble and remove any obstructions. 3. Use only sweeping turns with flexible hoses.
There is no rinsing or flushing action.	<ol style="list-style-type: none"> 1. The bottle rinse nozzle is plugged or clogged. 2. The flush tee is plugged or clogged. 	<ol style="list-style-type: none"> 1. Disassemble the rotary portion of the nozzle from the lower valve assembly and back flush until the nozzle ports are clear of debris. 2. Disassemble the flush tee and clean until the nozzle ports are clear of debris.
There are leaks at the fittings.	<ol style="list-style-type: none"> 1. The fittings are damaged. 2. The thread sealant is worn. 	<ol style="list-style-type: none"> 1. Check for cracks in the fitting. Replace the fitting if necessary. 2. Disassemble and seal the joint with joint seal compound if a leak occurs on the threads.

Notes:

Notes:

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.



The Toro 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.

- 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.

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.