Form No. 3368-115 Rev B

Tank Rinse Kit

Multi-Pro® 5800 Turf Sprayer

Model No. 41614—Serial No. 311000001 and Up

Installation Instructions

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

Model No.	
Serial No.	

The Rinse Kit is designed to remove residual chemicals from a sprayer tank and affected hoses. 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 and 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.

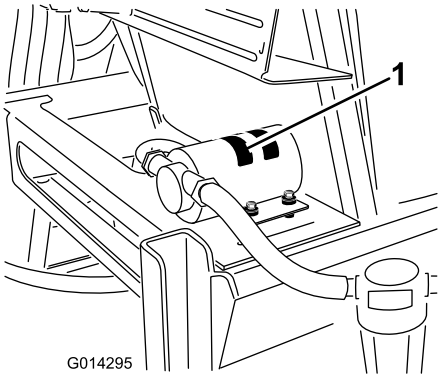

Figure 1

1. Model and serial number plate

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Safety

Also read the safety and operation instructions in the vehicle *Operator's Manual*.

Chemical Safety

⚠ 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 one chemical used and information on each should be assessed.**
- ***Refuse to operate or work on the sprayer if this information is not available!***
- **Before working on a spray system make sure the system has been triple rinsed and neutralized according to the recommendations of the chemical manufacturer(s).**
- **Verify there is an adequate supply of clean water and soap nearby, and immediately wash off any chemicals that contact you.**

- Obtain proper training before using or handling chemicals.
- Use the correct chemical for the job.
- Follow the chemical manufacturer's instructions for the safe application of the chemical.
- Handle chemicals in a well ventilated area.
- Wear goggles and other protective equipment as instructed by the chemical manufacturer. Ensure that as little skin as possible is exposed while using chemicals.
- Have clean water available especially when filling the spray tank.
- Do not eat, drink, or smoke while working with chemicals.
- Always wash your hands and other exposed areas as soon as possible after finishing the work.
- Properly dispose of unused chemicals and chemical containers as instructed by the chemical manufacturer and your local codes.
- Chemicals and fumes in the tanks are dangerous; never enter the tank or place your head over or in the opening.
- Follow all local/state/federal requirements for the spraying of chemicals.

Installation

Loose Parts

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

Procedure	Description	Qty.	Use
1	No parts required	–	Preparing the machine.
2	Rinse tank Filler cap Bulkhead fitting Clear gasket Plastic flange nut	1 1 1 1 1	Install the rinse tank bulkhead fitting.
3	Rinse tank strap Bolt Washer Lock nut Carriage bolt Lock nut	2 2 4 2 1 1	Install the rinse tank.
4	Rinse nozzle Bulkhead fitting Shoulder bolt Bushing Rinse vane Gasket Plastic flange nut	2 2 2 2 2 2 2	Install the rinse nozzle.
5	Pump Straight fittings	1 2	Install the pump.
6	Hose, rinse nozzle Hose clamp Tee fitting Hose, supply Filter assembly Hose, rinse tank Convoluted conduit Cable Tie	2 10 1 1 1 1 1 2	Install the hoses and filter.
7	Delay timer Fuse, 40 Amp Dash switch Relay Power relay Screw #10–24	1 1 1 1 1 2	Install the delay timer and dash switch.

1

Preparing the Machine

No Parts Required

Procedure

1. Move the sprayer onto a level surface, set the parking brake, stop the pump, stop the engine, and remove the ignition key.
2. Drain the contents of the tank to remove any solution in lines. Refer to the *Operator's Manual* for more information.

   Note: Take caution while disconnecting any hoses during the installation of this kit and have a catch bucket ready for any solutions remaining in the hose.

⚠ 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.**

2

Installing the Rinse Tank Bulkhead Fitting

Parts needed for this procedure:

1	Rinse tank
1	Filler cap
1	Bulkhead fitting
1	Clear gasket
1	Plastic flange nut

Procedure

1. Locate the bulkhead fitting and rinse tank with filler cap in loose parts.
2. Instal the bulkhead fitting to the rinse tank bottom hole.
   A. Install an clear gasket to the bulkhead fitting.
   B. Attach a wire, longer than the tank is tall, to one of the retaining fork holes in the bulkhead fitting (Figure 2).

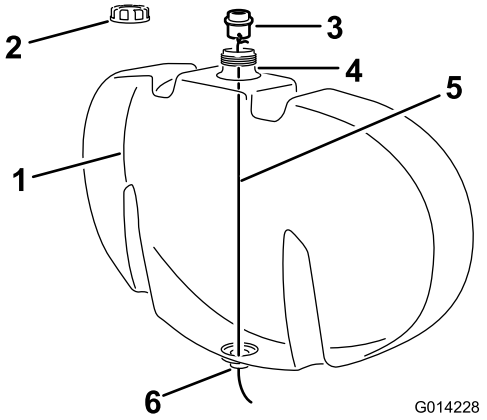

Figure 2

1. Rinse tank
2. Filler cap
3. Bulkhead fitting
4. Filler opening, rinse tank.
5. Wire
6. Bottom hole, rinse tank

   C. Remove the rinse tank filler cap (Figure 2).
   D. Lower the wire through the opening in the tank fill hole and route it through the open hole in the bottom of the tank (Figure 2).
   E. Use the wire to guide the bulkhead fitting to the open hole in the bottom of the tank (Figure 3).

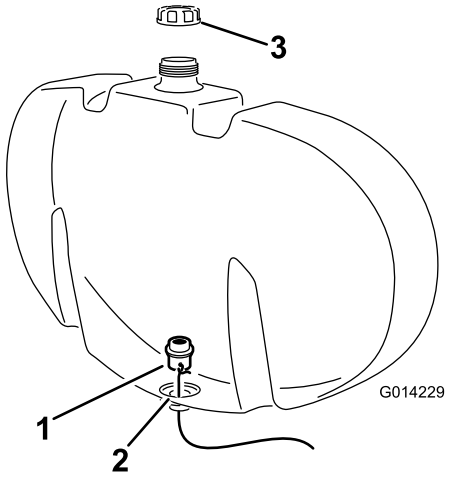

Figure 3

1. Bulkhead fitting, wire attached
2. Bottom hole, rinse tank
3. Filler cap

F. Move the bulkhead fitting into position making sure the clear gasket seats against the interior wall of the rinse tank (Figure 3).

3. Secure the bulkhead fitting to the rinse tank with a plastic flange-nut (Figure 4).

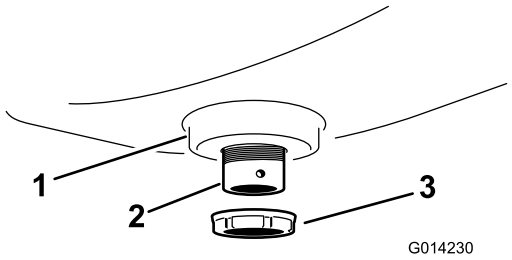

Figure 4

1. Rinse tank sump
2. Bulkhead fitting, installed
3. Plastic flange-nut

4. Install a 90 degree fitting to the bulkhead fitting and secure it with a retaining fork (Figure 5). Rotate the fitting so that it faces rearward.

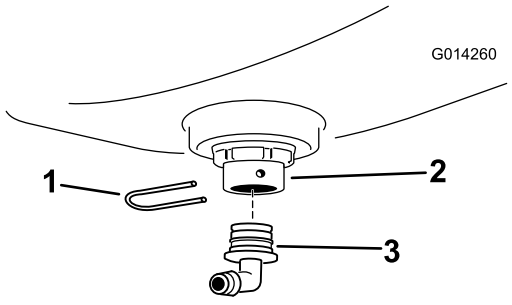

Figure 5

1. Retaining fork
2. Bulkhead fitting
3. 90 degree fitting

3

Installing the Rinse Tank

Parts needed for this procedure:

2	Rinse tank strap
2	Bolt
4	Washer
2	Lock nut
1	Carriage bolt
1	Lock nut

Prepare the Tank

1. Loosen the bolts securing the valve mounting rail to the frame (Figure 6).

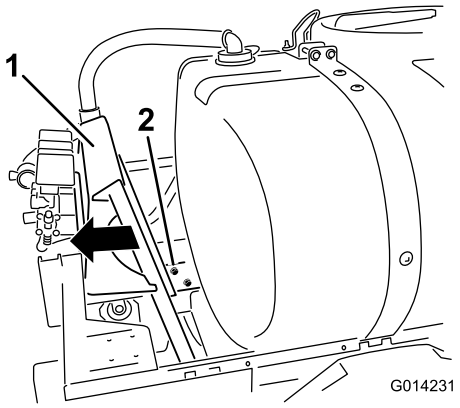

Figure 6

1. Mounting rail
2. Bolt

2. Move the mounting rail rearward. This is a small adjustment that will allow space for the installation of the rinse tank.
3. Tighten the bolts to secure the mounting rail in this position on the frame. Torque to 30 ft-lb (40 N-m).
4. Disconnect the supply hose at the rear and top of the main tank (Figure 7).

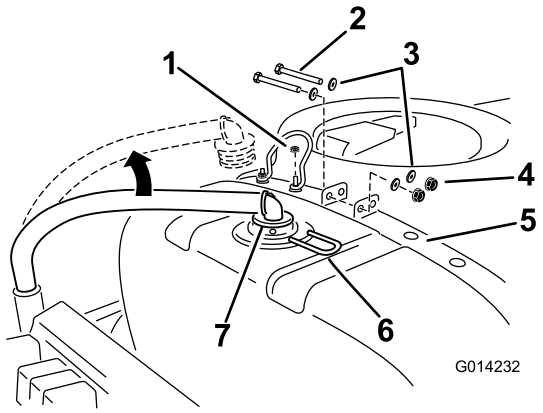

Figure 7

1. Lock nut
2. Bolt
3. Washer
4. Lock nut
5. Right rear tank strap
6. Retaining fork
7. Supply hose

5. Remove the retaining fork securing the fitting and remove the hose. Retain all parts.
6. Remove the fasteners securing the rear tank straps at the top of the tank. Retain all parts.
7. Remove the inboard lock nut securing the wire tank lid stop to the left, rear strap. Retain lock nut.

Installing the Hardware for the Rinse Tank Straps

1. Install a carriage bolt to the inboard hole on the right rear tank strap (Figure 8).

   The carriage bolt on the rear left tank strap should pass through the open loop of the wire tank lid stop.

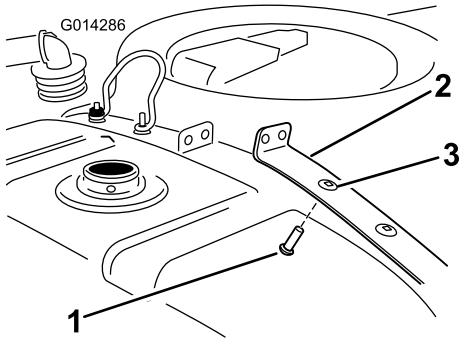

Figure 8

1. Carriage bolt
2. Right rear tank strap
3. Inboard hole

2. Install the tank strap fasteners removed previously to secure the straps to the tank.

   Make sure the strap is secure to the tank. **Do not overtighten.**

Install the Rinse Tank

1. Install the rinse tank as shown in (Figure 9).

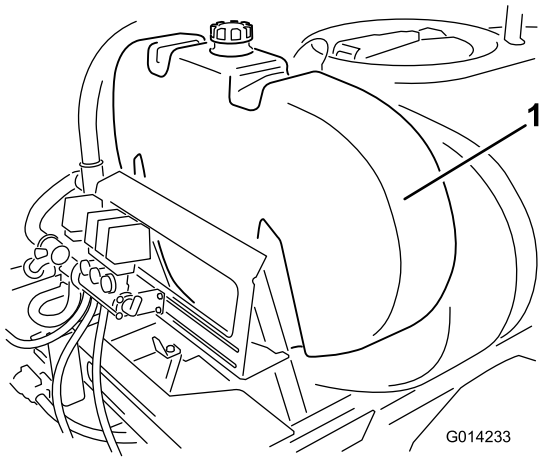

Figure 9

1. Rinse tank

2. Install the rinse tank straps to hardware installed previously on the rear strap tank straps.

   Note: The wire tank lid stop needs to be installed over the left rinse tank strap and main tank strap; then secured with the lock nut.

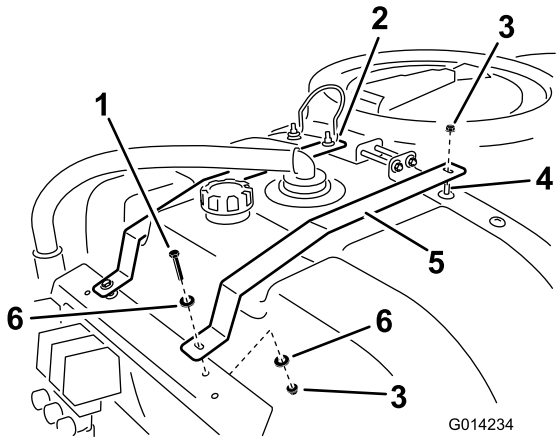

Figure 10

1. Bolt
2. Tank lid stop wire
3. Lock nut
4. Carriage bolt
5. Rinse tank strap
6. Washer

3. Secure the rinse tank straps to the rear tank strap with two lock nuts.
4. Secure the rinse tank straps to the mounting rail using two bolts, four washers and two lock nuts. Carefully tighten the fasteners. The rinse tank must be seated and secure but the straps should not deform or warp the tank.
5. Replace the supply hose at the rear of the tank and secure it with the retaining fork removed previously.

Note: Once the rinse tank has been initially filled the rinse tank strap fasteners should be checked and tightened if necessary as the weight of the liquid can further seat the tank against the frame.

4

Installing the Rinse Nozzles

Parts needed for this procedure:

2	Rinse nozzle
2	Bulkhead fitting
2	Shoulder bolt
2	Bushing
2	Rinse vane
2	Gasket
2	Plastic flange nut

Drilling the Main Tank

1. Open the tank lid and remove the strainer basket.
2. Locate the two drill marks in the main tank (Figure 11).

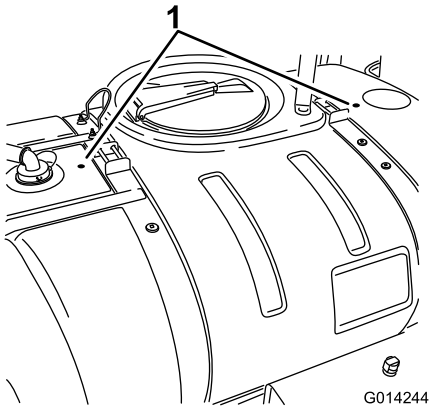

Figure 11

1. Drill marks

3. Move to the drill mark behind the tank lid.

   Note: Place a receptacle inside the tank and below the areas to be drilled to catch any debris created during the cutting.

   Important: Debris left inside a tank could clog and damage the spray system during operation.

4. Use a 1-3/4 inch (4.5 cm) hole saw to drill a hole at the drill mark (Figure 12).

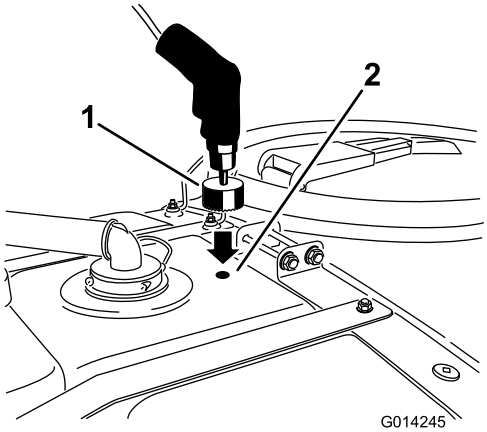

Figure 12

1. Hole saw
2. Drill mark, behind lid

5. After drilling the hole, remove any rough edges in the cut. Remove any debris that entered the main tank during the cutting process.
6. Move to the drill mark in front of the tank lid and repeat the procedure for the forward hole (Figure 13).

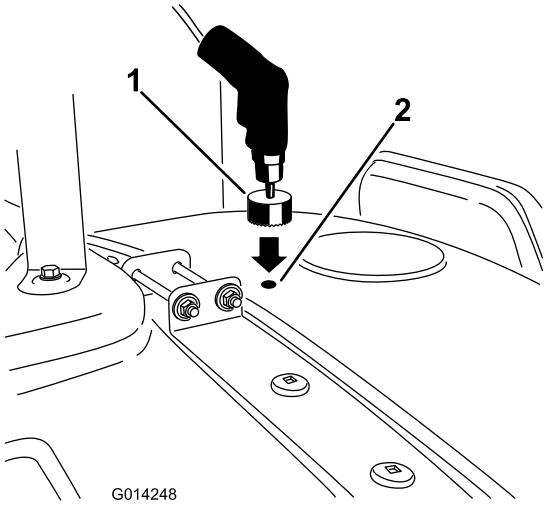

Figure 13

1. Hole saw
2. Drill mark, in front of lid

Installing the Rinse Nozzles

1. Assemble the nozzles as shown in (Figure 14).

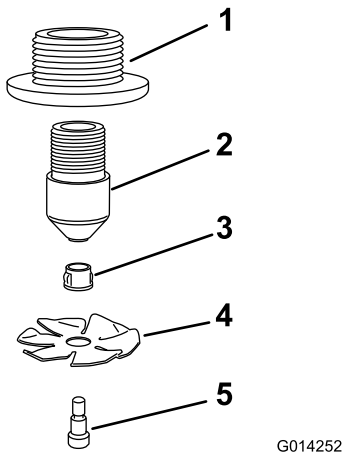

Figure 14

1. Bulkhead fitting
2. Rinse nozzle
3. Bushing
4. Rinse vane
5. Shoulder bolt

A. Install a rinse vane and bushing over the shoulder bolt.

B. Install all parts to the rinse nozzle .

C. Install the rinse nozzle assembly to the bulkhead.

2. Install a nozzle assembly up through the drilled hole (Figure 15).

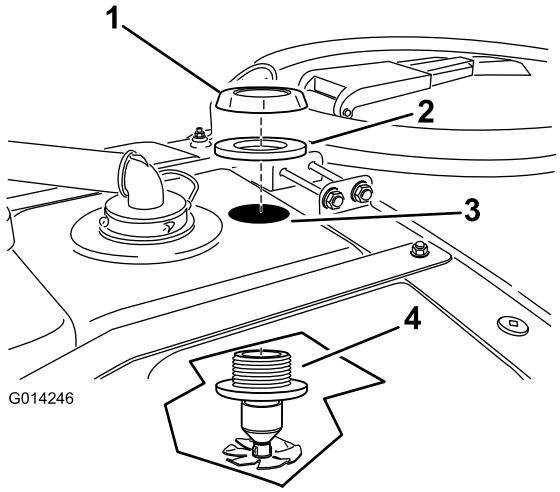

Figure 15

1. Plastic flange nut
2. Gasket
3. Hole, previously drilled
4. Rinse nozzle assembly

3. Install the gasket and plastic flange nut over the exposed threads of the bulkhead on top the tank (Figure 15). Ensure that the seal is seated correctly between the plastic nut and the tank surface.

4. Install the fitting into the threaded opening of the rinse nozzle bulkhead (Figure 16).

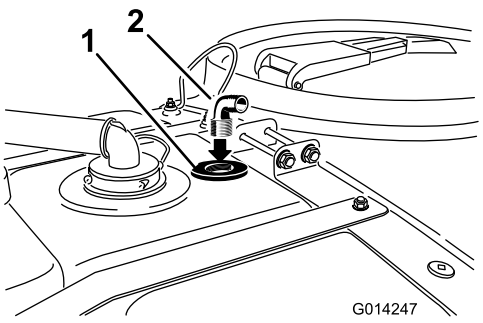

Figure 16

1. Assembly nozzle bulkhead
2. 90 degree fitting

5. Direct the hose barb to the right side of the machine.

6. Move to the forward hole in the tank.

7. Install a nozzle assembly up through the drilled hole (Figure 17).

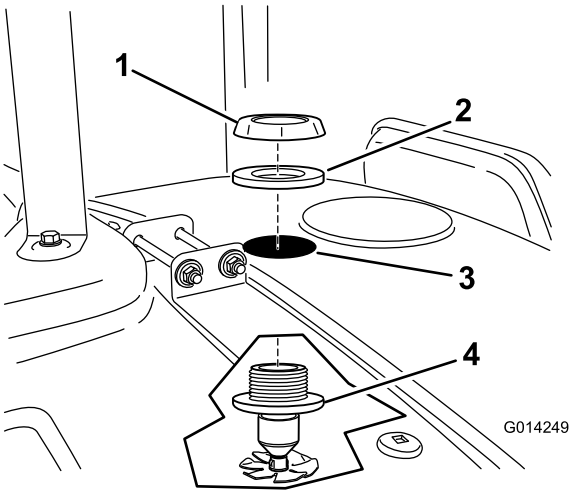

Figure 17

1. Plastic flange nut
2. Gasket
3. Hole, previously drilled
4. Rinse nozzle assembly

8. Install the gasket and plastic flange nut over the exposed threads of the bulkhead on top the tank (Figure 17). Ensure that the seal is seated correctly between the plastic nut and the tank surface.

9. Install the fitting into the threaded opening of the rinse nozzle bulkhead (Figure 18).

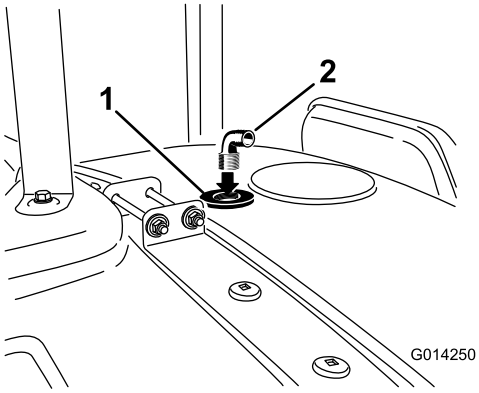

Figure 18

1. Assembly nozzle bulkhead 2. 90 degree fitting

10. Direct the hose barb to the right side of the machine.

5

Installing the Pump

Parts needed for this procedure:

1	Pump
2	Straight fittings

Procedure

1. Locate the pump in loose parts and it to the tank frame on the platform at the rear, right of the main tank (Figure 19).

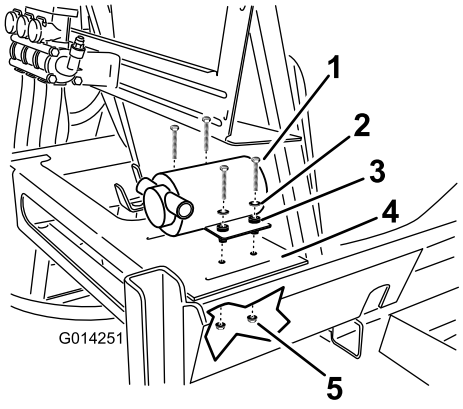

Figure 19

1. Bolt
2. Washer
3. Pump
4. Tank frame
5. Lock nut

2. Secure the pump to the frame using four bolts, four washers and four lock nuts (Figure 19).

3. Locate the straight barb hose connectors in loose parts. Install a connector to the pump inlet and outlet openings (Figure 20).

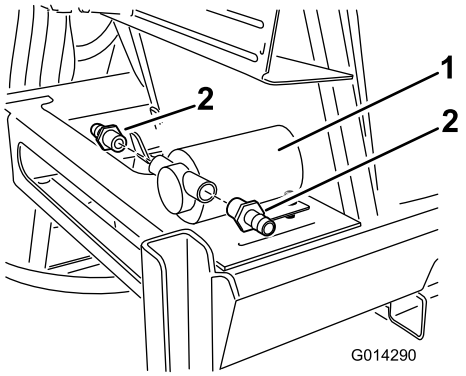

Figure 20

1. Pump 2. Straight connector

4. Locate the harness coming from the pump. Locate the connector labeled Rinse Pump on the main wiring harness at the rear of the tank.
5. Connect the pump to the main wiring harness.

6

Installing the Hoses and Filter

Parts needed for this procedure:

2	Hose, rinse nozzle
10	Hose clamp
1	Tee fitting
1	Hose, supply
1	Filter assembly
1	Hose, rinse tank
1	Convoluted conduit
2	Cable Tie

Install the Rinse Nozzle Hoses

Note: Lightly lubricating the barbed end of a hose fitting with a non-petroleum based lubricant such as vegetable oil can ease the process of installation.

1. Locate a rinse nozzle hose in loose parts.

   Note: There are three hoses of the same length, one is for the rinse tank pump supply hose and two are the rinse nozzle hoses.

2. Install a hose clamp on the end each hose (Figure 21).

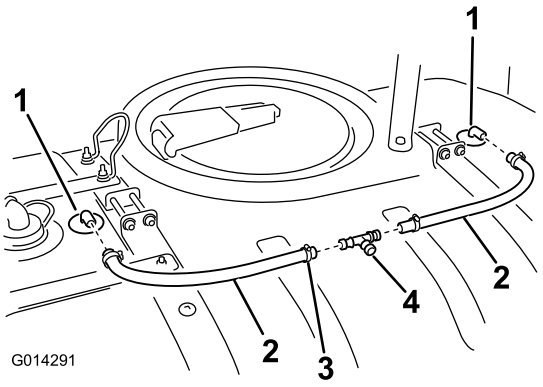

Figure 21

1. Barb, rinse nozzle
2. Rinse nozzle hose
3. Hose clamp
4. Tee fitting

3. Install a hose over the barb of the rinse nozzle (Figure 21).

   Repeat the procedure for the other rinse nozzle barb.

4. Slide a hose clamp over the barb and tighten to secure.

Repeat this procedure for the other rinse nozzle.

Install the Tee Fitting

1. Locate the tee fitting in loose parts.
2. Install the tee fitting to the open ends of the rinse nozzle hoses installed previously as shown in (Figure 21).
3. Slide the hose clamps over the barb and tighten to secure.

Install the Supply Hose

1. Locate the long supply hose in loose parts.
2. Measure 7 inches from the end of the hose.
3. Cut the hose at that mark.
4. Install a hose clamp over each end of the longer hose.
5. Install the hose to the open end of the tee fitting installed previously (Figure 22).

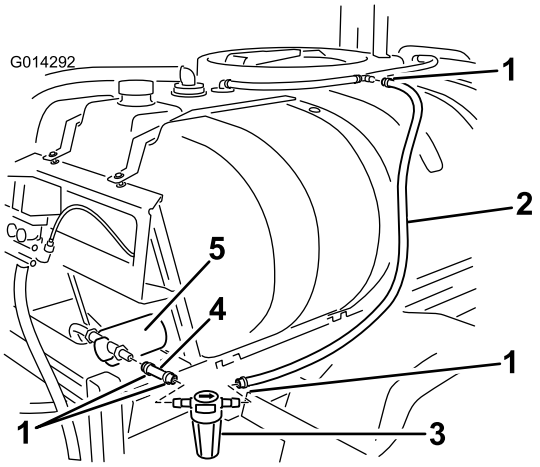

Figure 22

1. Hose clamp
2. Long supply hose
3. Filter
4. Cut hose
5. Pump

6. Slide the hose clamp over the barb and tighten to secure.
7. Install a hose clamp over each end of the short hose.
8. Install an open end of short hose over the straight barb coming from the pump.
9. Slide the hose clamps over the barb and tighten to secure.

Install the Filter

1. Locate the filter assembly in loose parts. Use care to note the directional arrow of the filter assembly.
2. Install the filter in-line to the open ends of the hoses coming from the pump and to the rinse nozzles (Figure 23).

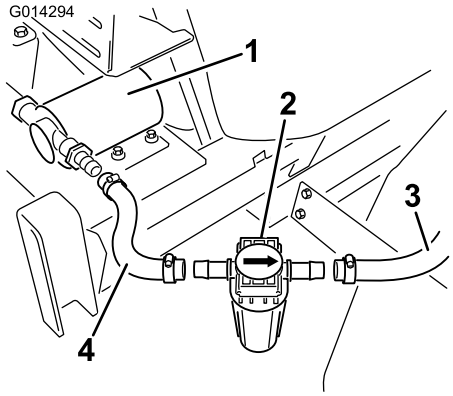

Figure 23

1. Pump
2. Filter
3. Long supply hose
4. Cut hose

3. Slide the hose clamps of the supply hose over the barbs of the filter assembly and tighten to secure.

Install the Rinse Tank Hose

1. Locate the rinse tank hose in loose parts.
2. Install a hose clamp over one end of the hose.
3. Install one end of the hose to the 90 degree fitting at the bottom of the rinse tank (Figure 24).

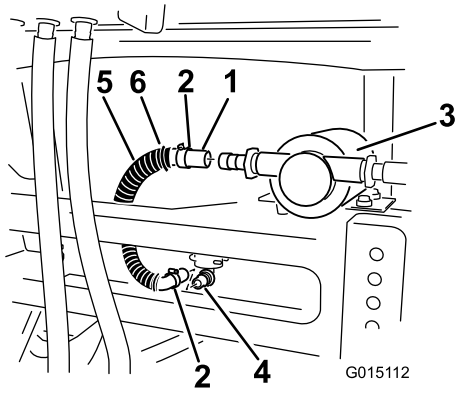

Figure 24

1. Rinse hose
2. Hose clamp
3. Pump
4. Rinse tank fitting
5. Convoluted conduit
6. Cable tie

4. Slide the hose clamp over the barb and tighten to secure.
5. Slide the convoluted conduit over the hose to protect it from rubbing on the frame member.
6. Install the other end of the hose over the straight barb going to the pump.
7. Slide the hose clamps over the barb and tighten to secure.
8. Secure the convoluted conduit to the hose at both ends with two cable ties.
9. Locate the rinse pump cover in loose parts.
10. Install the cover over the pump and insert cover tabs into slots in frame member (Figure 24).

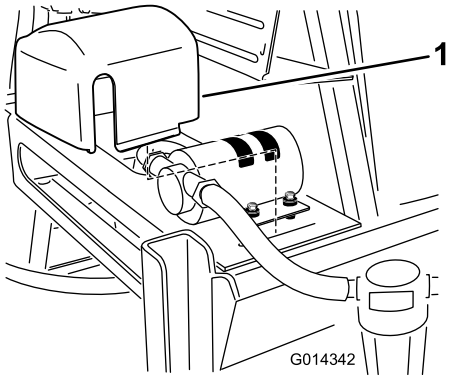

Figure 25

1. Pump cover

7

Installing the Delay Timer and Dash Switch

Parts needed for this procedure:

1	Delay timer
1	Fuse, 40 Amp
1	Dash switch
1	Relay
1	Power relay
2	Screw #10–24

Install the Delay Timer and Relays

1. Raise the operator seat to access the electronic components under the seat.
2. Locate the delay timer in loose parts and install it to the location shown in (Figure 26) with lock nut.

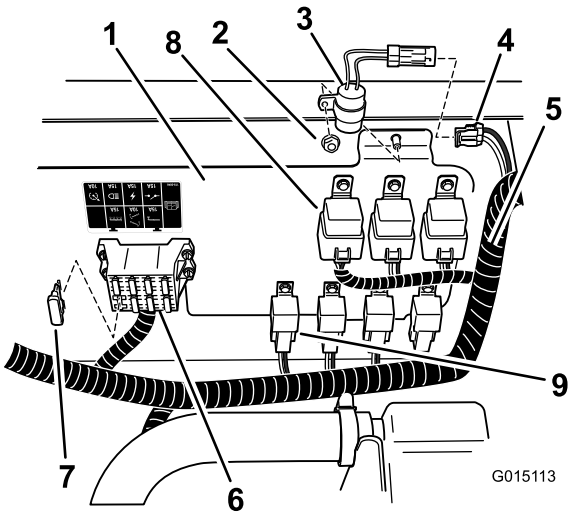

Figure 26

1. Electrical panel
2. Lock nut
3. Delay timer
4. Delay timer connector, main wiring harness
5. Main wiring harness
6. Fuse block
7. 40 Amp fuse
8. Relay
9. Power relay

3. Locate the connector on the main harness labeled delay timer. Connect the timer to the main harness at this location (Figure 26).
4. Install a 40 Amp fuse to the open slot in the fuse block as shown in (Figure 26). If a lower amperage fuse already exists in the slot remove it and replace it with the 40 Amp fuse.

5. Locate relay and power relay in line with the other relays of the same style, and mount to the panel with #10–24 screws.
6. Locate the proper connectors on the main harness and connect them to the relay and power relay.

Install the Dash Switch

1. Locate the plug for the rinse tank switch on the dash (Figure 27). It is the first plug over from the ignition key.

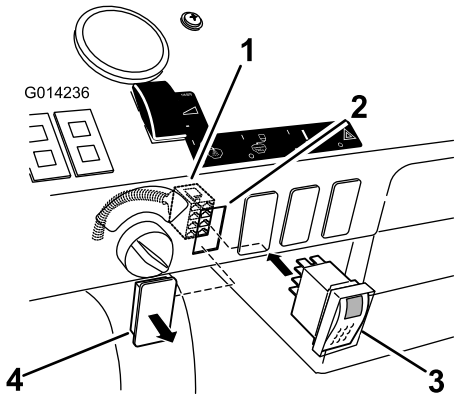

Figure 27

1. Connector for rinse tank, from main harness
2. Hole in dash
3. Dash switch
4. Plug

2. Remove the plug from the dash (Figure 27).
3. From below the dash, locate the box connector labeled rinse tank in the main harness. Remove the plastic tie securing it and route it toward the open hole in the dash.
4. Install the switch to the box connector, through the dash (Figure 27).
5. Push the switch into the dash to mount.

Operation

Rinse Kit Operation

The use of the Rinse Kit will result in a **rinsate**; a diluted solution of residual chemicals. In many cases it is appropriate to apply the rinsate onto the treated areas. However, before doing so, check with the manufacturers of the chemical to ensure the application of a diluted solution to the treated areas will not adversely affect the performance of the product.

Important: The Rinse Kit is *NOT* intended to dislodge clumped masses of wetable powder or "water-soluble" chemicals that occur when chemicals are not properly introduced into the main tank.

Controls

The Rinse Kit is controlled by a three position switch.

- **Up:** the rinse pump is On, the switch will lock in the up position, the delay timer is activated and switch illuminates.
- **Neutral:** the rinse pump is Off, switch is in a middle position.
- **Down:** the rinse pump is On, the switch must be held in the down position, the delay timer in not activated and the switch illuminates.

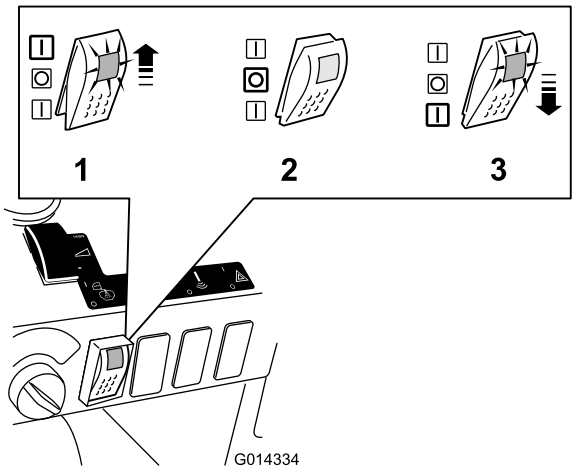

Figure 28

1. Up, On or timed rinse position
2. Neutral, Off position
3. Down, On or momentary rinse position

Pressing the switch **Up** engages a timed rinse. The pump engages for 90 seconds and pumps approximately 1/3 of the rinse tank contents into the main tank. During this time the switch will stay in the up position and the light on the switch will be illuminated to signal that the pump is running. After 90 seconds the light

will extinguish signaling that power to the pump has been shut off and the pump will stop running. The switch will remain in the up position until moved to the center or neutral position.

When the switch is in the **Neutral** position the power is not supplied to the pump and the rinse kit is Off. The light on the switch is not illuminated.

Pressing the switch **Down** engages a momentary switch. Power is supplied to the pump for only the duration in which the switch is held down. Release pressure and the switch will move to the neutral position and power will not be supplied to the pump. While the switch is held in the down position the pump will run and the switch will be illuminated.

Fillling the Tank

Position the sprayer on a level surface, set the parking brake, stop the pump, stop the engine, and remove the ignition key.

Remove the rinse tank cap and fill the tank with approximately 30 gallons (113 l) with clean water. Replace the cap

Important: The 30 gallon (113 l) rinse tank is only intended to be filled with clean water. The introduction of any other substance to the rinse tank can cause a safety hazard and/or damage the machine.

The Rinse Cycle

Now optionally, once the pump has placed 10 gallons of water in the tank, the user can use agitation switch at his disposal to put the clean water into the agitation loop. Once finished the rinsate can be sprayed out the boom nozzles or manually drained from tank. This allows the vehicle to be moving during rinse processes.

1. Turn the Rinse Pump On:
   - Use the Up position for a timed rinse
   - Or press and hold the switch Down for a desired duration.
2. Now once the pump has placed 10 gallons of water in the tank, optionally, the user can use agitation switch to put the clean water into the agitation loop.
3. Pump the rinsate out as required by Federal, State and Local regulations. Either:
   - Spray the rinsate through the booms until the main tank is empty.
   - Or drain the main tank contents into a suitable container and dispose of the diluted solution as required by federal, state or local regulations.

The rinse cycle can be repeated again as necessary or two more timed rinse cycles.

Maintenance

Inspect the Filter

Service Interval: After the first 5 hours

Every 50 hours

Check the filter for any signs of damage. Replace if any damage is found.

Inspect Rinse System of Leaks and Damage

Service Interval: Before each use or daily—Inspect the hoses for leaks.

After the first 5 hours—Inspect hoses for damage.

Every 100 hours—Inspect hoses and O-rings for damage

After the first 5 hours of operation, inspect all hoses and connections for any leaks or signs of damage. Inspect the hose clamps and retaining forks. Verify that all connections are secure. Replace any damaged parts. Repeat this inspection before each use of the Rinse system.

After 100 operating hours, inspect all hose and O–rings. Replace any damaged parts.

Contact your Authorized Toro Dealer to obtain replacement parts.

Inspecting the Rinse Tank Straps

Service Interval: After the first hour—Check the rinse tank straps.

Once the main tank has been filled with water, check to see if there is any play in the tank straps. If the straps are loose, tighten the fasteners at the top straps until they are flush with tank. **Do not over tighten.**

Important: Over tightening the tank strap fasteners can result in deforming and damaging the straps.

Storage

Drain the pump inlet line, outlet line, and filter line prior to storage for 30 days or more.

Notes:

Count on it.