



# BBA Compliance Kit

## Multi-Pro® 5800 Turf Sprayer

Model No. 41617

### Installation Instructions

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

The BBA Compliance Kit is designed to meet German safety requirements by enabling operators to clean out residual chemicals from the sprayer system and clean the external machine while bypassing the chemical tank. It is a dedicated kit 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.

## Safety

This manual identifies potential hazards and has safety messages identified by the safety alert symbol (Figure 1), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.



**Figure 1**

1. Safety alert symbol

This manual uses 2 other words to highlight information. **Important** calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

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, and federal requirements for the spraying of chemicals.

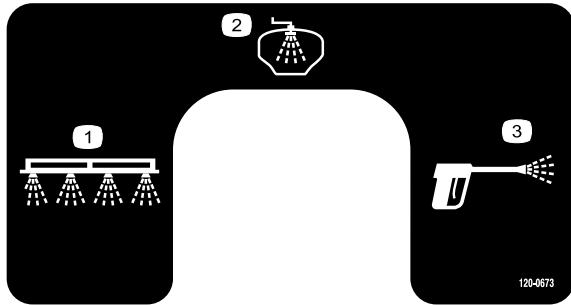
## Hand Sprayer Safety

- Do not aim the hand sprayer at any person or animal. Fluids under high pressure can penetrate skin and cause severe injury, possibly resulting in amputation or death. Hot liquids and chemicals can also cause burns or injury. If any part of the body comes in contact with the spray stream, immediately consult a physician familiar with injected fluid injuries.
- Do not place your hand or any other part of your body in front of the spray nozzle.
- Do not leave the equipment under pressure when you are not present.
- Do not use the hand sprayer if the hose, trigger lock, nozzle, or any other part is damaged or missing.
- Do not use the hand sprayer if there are any leaks in any hoses, fittings, or other components.
- Do not spray near power lines; the spray stream could contact the power lines and give you a potentially fatal electrical shock.
- Do not drive while spraying with a hand sprayer.
- Wear rubber gloves, safety goggles, and a full-body protective suit when spraying chemicals with the hand sprayer.
- Lightning can cause severe injury or death. If lightning is seen or thunder is heard in the area, do not operate the machine; seek shelter.

# Safety and Instructional Decals

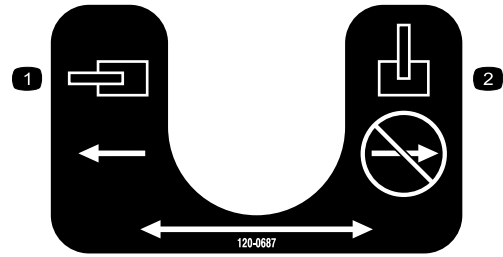


Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or lost.



120-0673

- 1. Boom spray
- 2. Rinse Tank
- 3. Hand spray



120-0687

- 1. Valve, open
- 2. Valve, closed

DÜSENTYP ENTSPRECHEND DER FARBE	bar	DURCH- FLUSS- MENENGE EINER DÜSE IN l/min	l/ha $\triangle$ 50 cm $\triangle$								DÜSENTYP ENTSPRECHEND DER FARBE	bar	DURCH- FLUSS- MENENGE EINER DÜSE IN l/min	l/ha $\triangle$ 50 cm $\triangle$							
			4	5	6	7	8	10	12	4				5	6	7	8	10	12		
XR8001	1.0	0.23	69.0	55.2	46.0	39.4	34.5	27.6	23.0	XR8005	1.0	1.14	342	274	228	195	171	137	114		
XR11001	1.5	0.28	84.0	67.2	56.0	48.0	42.0	33.6	28.0	XR11005	1.5	1.39	417	334	278	238	209	167	139		
(100)	2.0	0.32	96.0	76.8	64.0	54.9	48.0	38.4	32.0	(50)	2.0	1.61	483	386	322	276	242	193	161		
	2.5	0.36	108	86.4	72.0	61.7	54.0	43.2	36.0		2.5	1.80	540	432	360	309	270	216	180		
	3.0	0.39	117	93.6	78.0	66.9	58.5	46.8	39.0		3.0	1.97	591	473	394	338	296	236	197		
	4.0	0.45	135	108	90.0	77.1	67.5	54.0	45.0		4.0	2.27	681	545	454	389	341	272	227		
XR80015	1.0	0.34	102	81.6	68.0	58.3	51.0	40.8	34.0	XR8006	1.0	1.37	411	329	274	235	206	164	137		
XR110015	1.5	0.42	126	101	84.0	72.0	63.0	50.4	42.0	XR11006	1.5	1.68	504	403	336	288	252	202	168		
(100)	2.0	0.48	144	115	96.0	82.3	72.0	57.6	48.0	(50)	2.0	1.94	582	466	388	333	291	233	194		
	2.5	0.54	162	130	108	92.6	81.0	64.8	54.0		2.5	2.16	648	518	432	370	324	259	216		
	3.0	0.59	177	142	118	101	88.5	70.8	59.0		3.0	2.37	711	569	474	406	356	284	237		
	4.0	0.68	204	163	136	117	102	81.6	68.0		4.0	2.74	822	658	548	470	411	329	274		
XR8002	1.0	0.46	138	110	92.0	78.9	69.0	55.2	46.0	XR8008	1.0	1.82	546	437	364	312	273	218	182		
XR11002	1.5	0.56	168	134	112	96.0	84.0	67.2	56.0	XR11008	1.5	2.23	669	535	446	382	335	268	223		
(50)	2.0	0.65	195	156	130	111	97.5	78.0	65.0	(50)	2.0	2.58	774	619	516	442	387	310	258		
	2.5	0.72	216	173	144	123	108	86.4	72.0		2.5	2.88	864	691	576	494	432	346	288		
	3.0	0.79	237	190	158	135	119	94.8	79.0		3.0	3.16	948	758	632	542	474	379	316		
	4.0	0.91	273	218	182	156	137	109	91.0		4.0	3.65	1095	876	730	626	548	438	365		
XR110025	1.0	0.57	171	137	114	97.7	85.5	68.4	57.0	XR8010 †	1.0	2.28	684	547	456	391	342	274	228		
(50)	1.5	0.70	210	163	140	120	105	84.0	70.0	XR11010 †	1.5	2.79	837	670	558	478	419	335	279		
	2.0	0.81	243	194	162	139	122	97.2	81.0		2.0	3.23	969	775	646	554	485	388	323		
	2.5	0.90	270	216	180	154	135	108	90.0		2.5	3.61	1083	866	722	619	542	433	361		
	3.0	0.99	297	238	198	170	149	119	99.0		3.0	3.95	1185	948	790	677	593	474	395		
	4.0	1.14	342	274	228	195	171	137	114		4.0	4.56	1368	1094	912	782	684	547	456		
XR8003	1.0	0.68	204	163	136	117	102	81.6	68.0	XR8015 †	1.0	3.42	1026	821	684	586	513	410	342		
XR11003	1.5	0.83	243	199	166	142	125	99.6	83.0	XR11015 †	1.5	4.19	1257	1006	838	718	629	503	419		
(50)	2.0	0.96	288	230	192	165	144	115	96.0		2.0	4.83	1449	1159	966	828	725	580	483		
	2.5	1.08	324	259	216	185	162	130	108		2.5	5.40	1620	1296	1080	926	810	648	540		
	3.0	1.18	354	283	236	202	177	142	118		3.0	5.92	1776	1421	1184	1015	888	710	592		
	4.0	1.36	408	326	272	233	204	163	136		4.0	6.84	2052	1642	1368	1173	1026	821	684		
XR8004	1.0	0.91	273	218	182	156	137	109	91.0	Hinweis: Die Ausbringungsmengen immer einer Gegenprüfung unterziehen. Nützliche Gleichungen und Informationen sind auf Seite 153-157 zu finden.											
XR11004	1.5	1.12	336	269	224	192	168	134	112	† Nur in Volledelstahlausführung lieferbar.											
(50)	2.0	1.29	387	310	258	221	194	155	129	120-0723											
	2.5	1.44	432	346	288	247	216	173	144												
	3.0	1.58	474	379	316	271	237	190	158												
	4.0	1.82	546	437	364	312	273	218	182												

120-0723

# Installation

## Loose Parts

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

Procedure	Description	Qty.	Use
<b>1</b>	No parts required	–	Prepare the machine.
<b>2</b>	Rinse tank Rinse tank lid Bulkhead O-ring Plastic ring nut	1 1 1 1 1	Install the rinse tank bulkhead fitting.
<b>3</b>	Tank strap Bolt Washer Locknut Carriage bolt	2 2 4 2 1	Install the rinse tank.
<b>4</b>	Rinse nozzle Bulkhead Shoulder bolt Bushing Rinse vane Gasket Plastic nut	2 2 2 2 2 2 2	Install the rinse nozzle.
<b>5</b>	Pump Straight fittings	1 2	Install the pump.
<b>6</b>	Four-way valve Hose-barb fitting (1 inch NPT x 3/4 inch HB) 90-degree hose-barb fitting Reducer fitting Faceplate bracket Valve mount assembly Bolt (6 mm) Flat washer (6 mm) Locknut (6 mm) Flat washer (3/8 inch) Flange nut (3/8 inch) Decal 120-0673	1 2 2 1 1 1 4 4 4 2 2 1	Assemble and mount the four-way valve.
<b>7</b>	Hose (24 inches) Hose clamp Rinse pump filter Tee fitting Hose (44 inches x 3/4 inch I.D.) Filter assembly Hose clamp Bolt (5/16 inch) Nut (5/16 inch) Hose (44 inches) Hose clamp	3 10 1 1 1 1 2 2 2 1 2	Install the hoses and filter.

Procedure	Description	Qty.	Use
<b>8</b>	Delay timer	1	Install the delay timer and dash switch.
	Fuse, 40-amp	1	
	Dash switch	1	
<b>9</b>	Ball valve	1	Install the ball valve and mounting assembly.
	Hose-barb fitting	2	
	Valve mount bracket	1	
	Hex head bolt (1/4 x 3/4 inch)	2	
	Hex head bolt (5/16 x 1 inch)	2	
	Flange nut (5/16 inch)	2	
<b>10</b>	S67 connector	1	Install the hose tee assembly.
	90-degree hose-barb fitting	1	
	Tee	1	
	Reducer	1	
	S53 Fork pin	1	
<b>11</b>	O-ring	1	Install the pressure filter assembly
	T5 adapter fitting	1	
	T5 straight hose barb fitting	1	
	Fly nut	1	
	Pressure filter	1	
<b>12</b>	Pressure hose (36 inches, 3/4 inch I.D.)	1	Install the hose between the ball valve and the four-way valve.
	Hose clamp	2	
<b>13</b>	Boom hose (44 inches, 3/4 inch I.D.)	1	Install the hose between the tee assembly and the ball valve.
	Hose clamp	2	
<b>14</b>	Hose hook	2	Install the hose hooks.
	Washer (3/8 inch)	2	
	Locknut (5/16 inch)	2	
	Carriage bolt	2	
<b>15</b>	Hose assembly (15 inches, 1 inch I.D.)	1	Install the hose between the tee assembly and the boom valves.
	Hose clamp	2	
<b>16</b>	Long hose (25 feet, 1/2 inch I.D.) with fitting	1	Connect the spray hose and gun.
	Spray gun	1	
	Hose clamp, small	1	
<b>17</b>	Rinse nozzle hose (28-1/2 inches. 3/4 inch I.D.)	1	Install the hose from the four-way valve to the sprinkler tee.
	Hose clamp	2	
<b>18</b>	Decal (120-0723)	1	Install the decal.

**Note:** Use Teflon tape to wrap the fitting threads before you assemble the fittings. Wrap the threads from left to right, starting at the base and travelling to the tip of the fitting (looking down the axis of the fitting, the tape should be wrapped clockwise from back to front).

**Note:** To install this kit more easily, apply a light coat of a non-petroleum-based lubricant, such as vegetable oil, on the barbed end of the hose-barb fittings.

# 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 chemicals in the 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 chemicals 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	Rinse tank lid
1	Bulkhead
1	O-ring
1	Plastic ring nut

### Procedure

1. Locate the bulkhead and rinse tank in loose parts.
2. Install the bulkhead to the lower opening in the tank through the tank fill hole.
  - A. Install the O-ring to the threaded side of the bulkhead.
  - B. Attach a wire, longer than the tank is tall, to one of the retaining fork holes in the bulkhead (Figure 2).

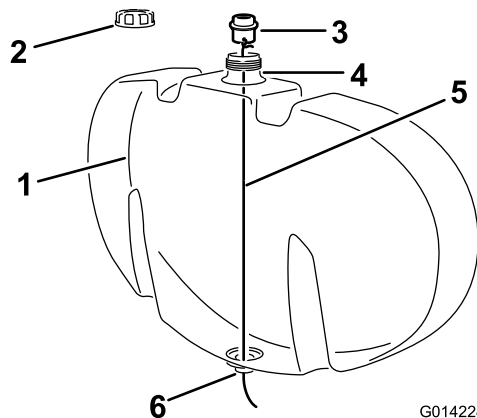
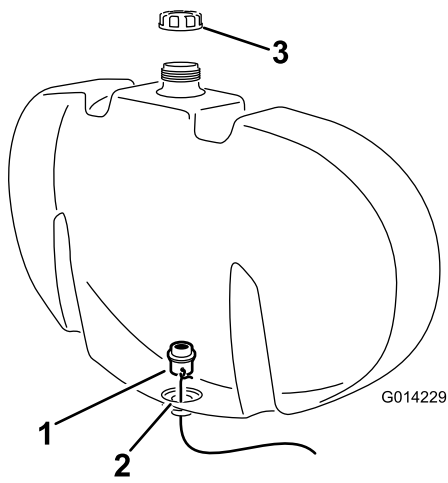


Figure 2

G014228

1. Rinse tank
2. Filler cap
3. Bulkhead
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 to the open hole in the bottom of the tank (Figure 3).



**Figure 3**

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

# 3

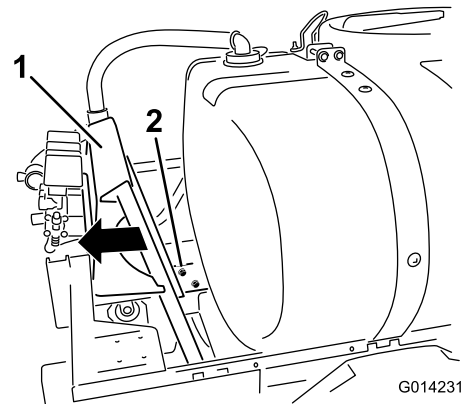
## Installing the Rinse Tank

### Parts needed for this procedure:

2	Tank strap
2	Bolt
4	Washer
2	Locknut
1	Carriage bolt

### Prepare the Tank

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

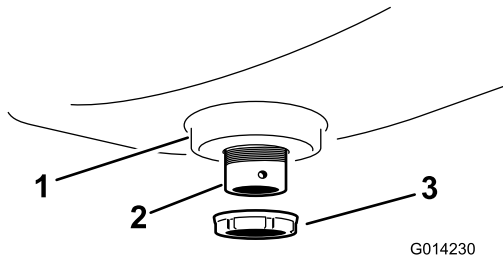


**Figure 6**

1. Valve mounting rail
2. Bolt

F. Move the bulkhead into position, ensuring that the O-ring seats against the interior wall of the rinse tank (Figure 3).

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

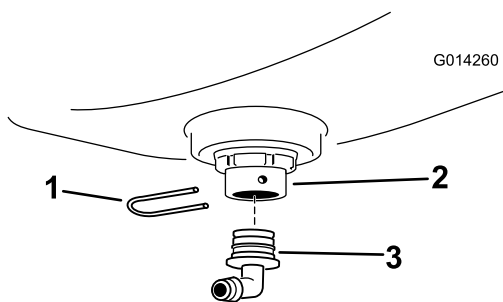


**Figure 4**

1. Rinse tank sump
2. Bulkhead, installed
3. Fly nut

4. Install a 90-degree fitting to the bulkhead, and secure it with a fork pin (Figure 5).

**Note:** Rotate the fitting so that it faces rearward.



**Figure 5**

1. Fork pin
2. Bulkhead
3. 90-degree fitting

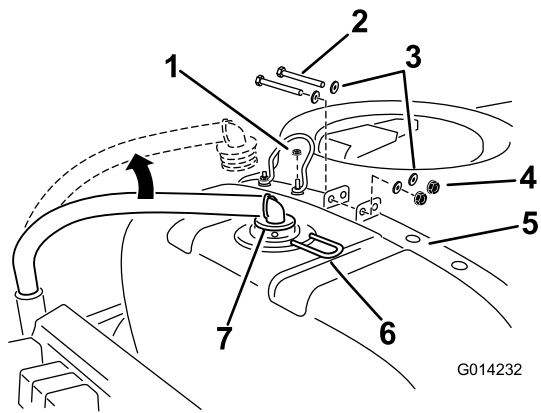
2. Move the valve mounting rail rearward.

**Note:** This is a small adjustment that will allow space for you to install the rinse tank.

3. Tighten the bolts on the valve mounting rail to secure the position on the frame.

**Note:** Torque the bolts 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. Locknut | 5. Right rear tank strap |
| 2. Bolt    | 6. Fork pin              |
| 3. Washer  | 7. Supply hose           |
| 4. Locknut |                          |

- Remove the fork pin that secures the fitting and remove the hose (Figure 7).

**Note:** Retain all parts.

- At the rear strap, remove the fasteners that secure the strap at the top of the tank.

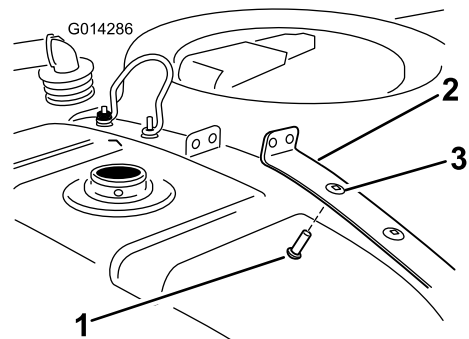
**Note:** Retain the fasteners.

- Remove the inboard locknut that secures the wire tank lid stop to the left rear strap (Figure 7).

**Note:** Discard the fasteners.

- Install the hardware for the rinse tank straps.
- To ensure that there are studs on the rear left and rear right tank straps. If there are no studs present, install a carriage bolt through each of the inboard holes (threaded section upward) on both the rear left and rear right tank straps (Figure 8).

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



**Figure 8**

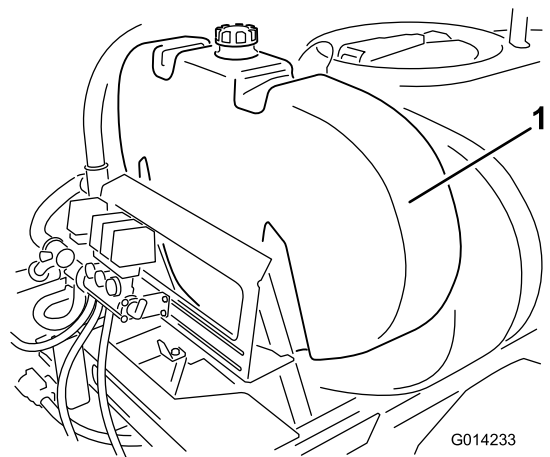
- |                     |                 |
|---------------------|-----------------|
| 1. Carriage bolt    | 3. Inboard hole |
| 2. Right rear strap |                 |

- Install the tank strap fasteners that you removed previously to secure the straps to the tank.

**Note:** Ensure that the straps are secured to the tank.  
**Do not overtighten the tank strap fasteners.**

## Installing the Rinse Tank

- Install the rinse tank as shown in Figure 9.



**Figure 9**

- Rinse tank

- Install the rinse tank straps onto the rear tank straps with the hardware that you removed previously (Figure 10).

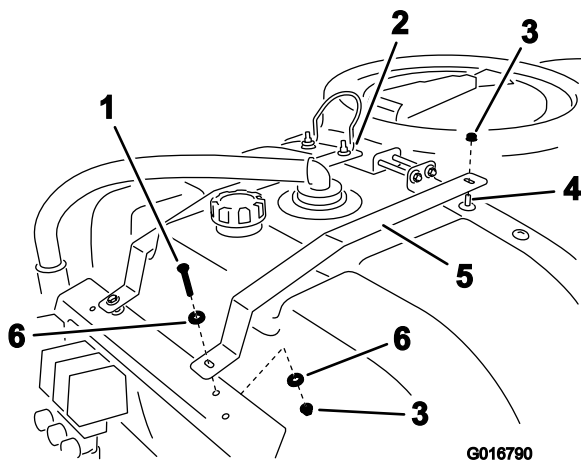


Figure 10

- |                          |                           |
|--------------------------|---------------------------|
| 1. Bolt (2)              | 4. Carriage bolt          |
| 2. Left rinse tank strap | 5. Right rinse tank strap |
| 3. Locknut               | 6. Washer                 |

# 4

## Installing the Rinse Nozzles

### Parts needed for this procedure:

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

- Secure the straps to the rear tank straps with 2 locknuts.
- Secure the rinse tank straps to the mounting rail using 2 bolts, 4 washers, and 2 locknuts.
- Carefully tighten the fasteners.

**Note:** The rinse tank must be seated and secure, but the straps should not deform or warp the tank.

**Note:** The rinse tank straps are not designed to contact the valve support frame. There should be a 2.5 to 5.1 cm (1 to 2 inch) clearance between the strap and the frame.

**Note:** Install the wire tank lid stop over the left rinse tank strap and the main tank strap; then secure the wire tank lid stop with the locknut.

- Replace the supply hose at the rear of the tank, and secure it with the fork pin that you removed previously.

**Note:** After you have initially filled the rinse tank, check the rinse tank strap fasteners and tighten them if necessary, as the weight of the liquid can further seat the tank against the frame.

## Drilling the Main Tank

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

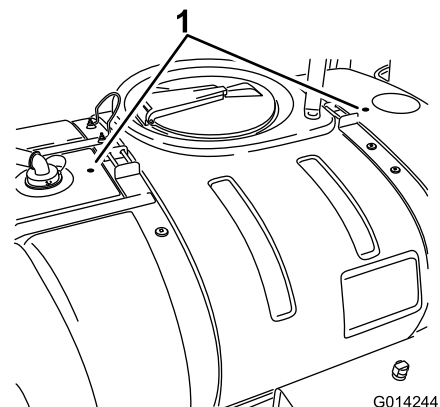
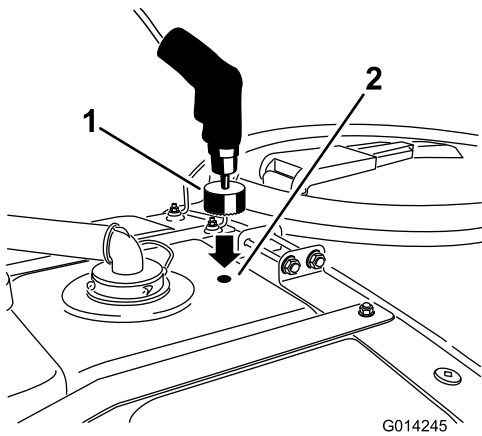


Figure 11

- Drill marks
- 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.

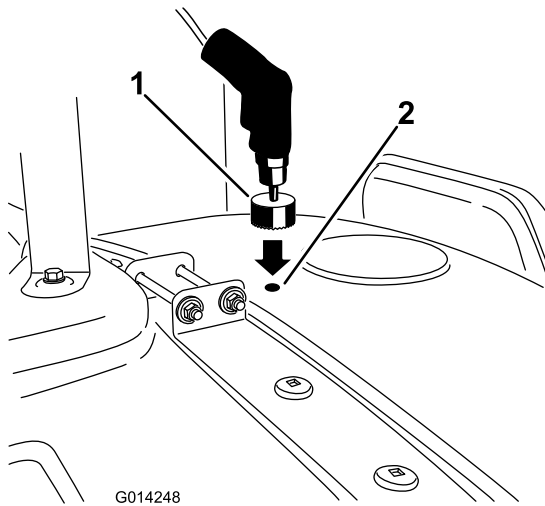
**Important:** Debris left inside the tank could clog and damage the spray system during operation.
  - Use a 4.5 cm (1-3/4 inch) hole saw to drill a hole at the drill mark (Figure 12).



**Figure 12**

1. Hole saw
2. Drill mark, behind lid

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

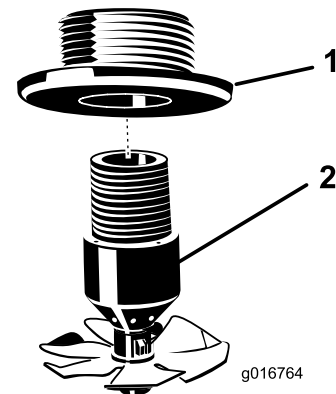


**Figure 13**

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

## Installing the Rinse Nozzles

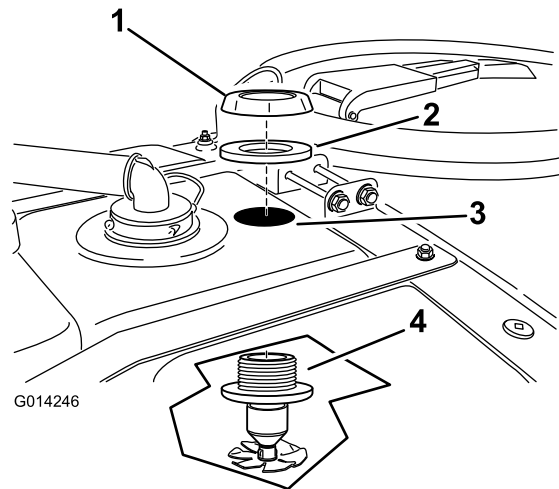
1. Install the rinse nozzle assembly to the bulkhead (Figure 14).



**Figure 14**

1. Bulkhead
2. Rinse nozzle assembly

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



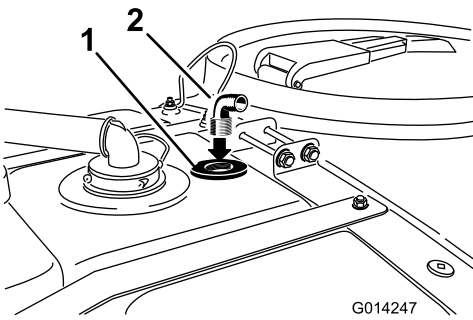
**Figure 15**

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

3. Install the plastic nut and gasket over the exposed threads of the bulkhead on top the tank (Figure 15).

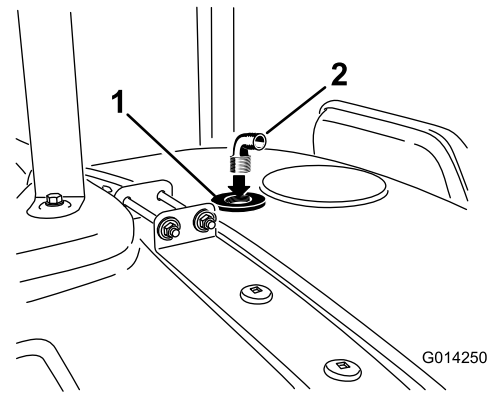
**Note:** Ensure that the seal is seated correctly between the plastic nut and the tank surface.

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



**Figure 16**

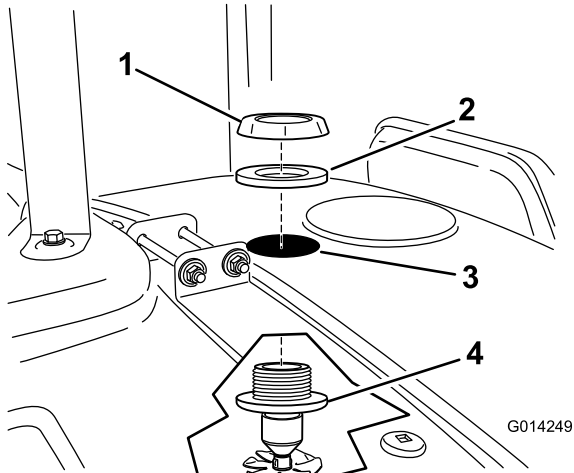
1. Assembly nozzle bulkhead 2. 90-degree fitting



**Figure 18**

1. Assembly nozzle bulkhead 2. 90-degree fitting

5. Direct the hose barb to the right-hand 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 nut 2. Gasket  
3. Hole, previously drilled  
4. Rinse nozzle assembly

8. Install the plastic nut and gasket over the exposed threads of the bulkhead on top the tank (Figure 17).

**Note:** 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).

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

# 5

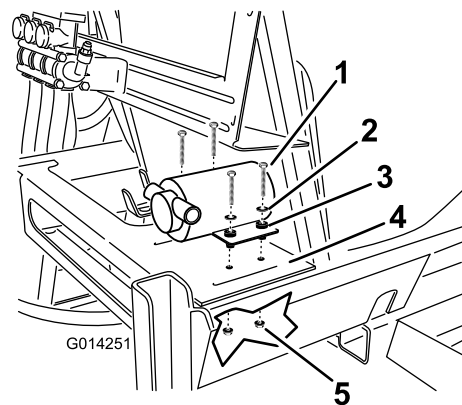
## Installing the Pump

### Parts needed for this procedure:

1	Pump
2	Straight fittings

### Procedure

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

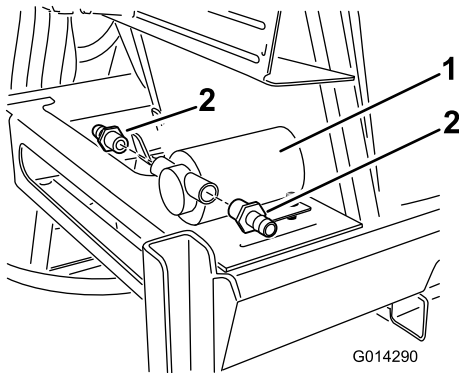


**Figure 19**

1. Bolt (4) 4. Tank frame  
2. Washer (4) 5. Locknut (4)  
3. Pump

2. Secure the tank to the frame using 4 bolts, 4 washers and 4 locknuts (Figure 19).

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



**Figure 20**

1. Pump
2. Straight connector

- 
5. Locate the harness coming from the pump.
  6. Locate the connector labeled “Rinse Pump” on the main wire harness at the rear of the tank.
  7. Connect the pump to the main wire harness.

# 6

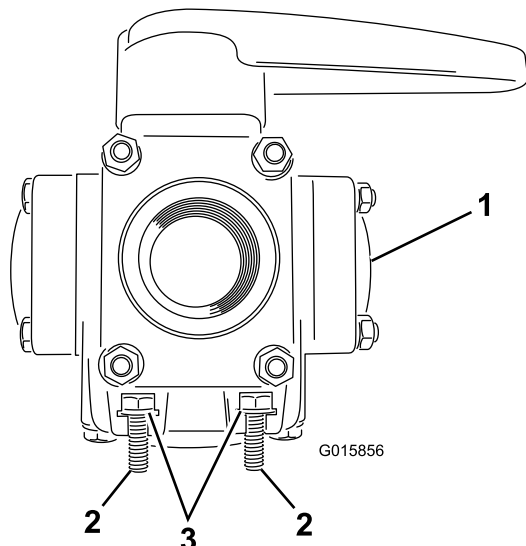
## Assembling and Mounting the Four-Way Valve

### Parts needed for this procedure:

1	Four-way valve
2	Hose-barb fitting (1 inch NPT x 3/4 inch HB)
2	90-degree hose-barb fitting
1	Reducer fitting
1	Faceplate bracket
1	Valve mount assembly
4	Bolt (6 mm)
4	Flat washer (6 mm)
4	Locknut (6 mm)
2	Flat washer (3/8 inch)
2	Flange nut (3/8 inch)
1	Decal 120-0673

### Procedure

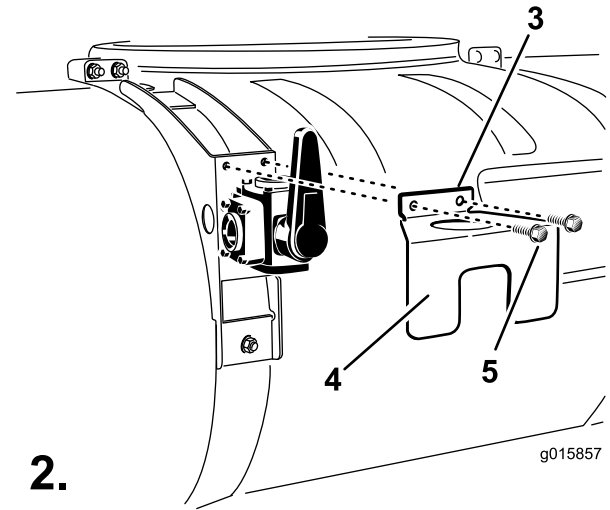
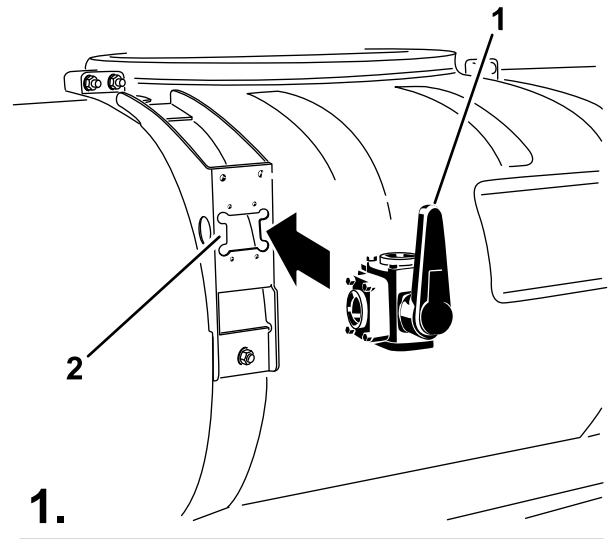
1. If there are no hose-barb fittings connected to the four-way valve, install them as follows:
  - A. Install a 90-degree hose-barb fitting on the top of the valve, and position the hose-barb fitting end toward the right-hand side of the valve.
  - B. Install a 90-degree hose-barb fitting on the rear of the valve, and position the hose-barb fitting end toward the left-hand side of the valve.
  - C. Install a reducer on the right-hand side of the valve.
  - D. Install a hose-barb fitting on the left-hand side of the valve.
  - E. Install a hose-barb fitting on the reducer.
2. Insert 4 bolts and 4 washers into the slots of the four-way valve (Figure 21).



**Figure 21**

- 1. Four-way valve
- 2. Bolt (4)
- 3. Washer (4)

3. Install the four-way valve to the valve mount assembly with 4 locknuts (6 mm) (Figure 22).



**Figure 22**

- 1. Four-way valve
- 2. Valve mount assembly
- 3. Faceplate bracket
- 4. Decal here
- 5. Flange bolt (2)

- 4. Install the selection decal (120-0673) on the faceplate bracket (Figure 22).
- 5. Install the faceplate bracket onto the valve mount assembly with 2 flange bolts and 2 flange nuts (Figure 22).
- 6. Install the valve mount assembly onto the rear right tank strap studs with 2 washers and 2 nuts (Figure 22).

# 7

## Installing the Hoses and Filter

### Parts needed for this procedure:

3	Hose (24 inches)
10	Hose clamp
1	Rinse pump filter
1	Tee fitting
1	Hose (44 inches x 3/4 inch I.D.)
1	Filter assembly
2	Hose clamp
2	Bolt (5/16 inch)
2	Nut (5/16 inch)
1	Hose (44 inches)
2	Hose clamp

### Installing the Rinse Nozzle Hoses

1. Locate 2 hoses (24 inches) in loose parts.
2. Slip a hose clamp on one end of each hose (Figure 23).

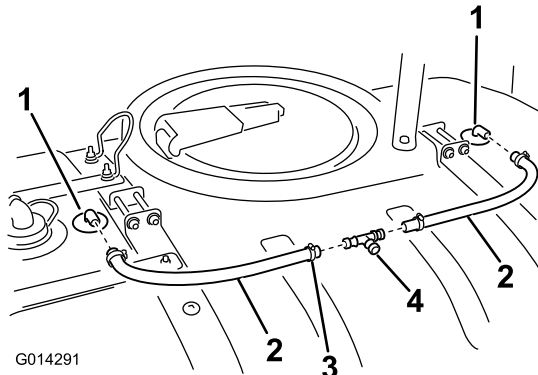


Figure 23

- |                      |               |
|----------------------|---------------|
| 1. Rinse nozzle barb | 3. Hose clamp |
| 2. Rinse nozzle hose | 4. Tee        |

3. Clamp one end of each of the hoses onto a rinse nozzle barb (Figure 23).

### Installing the Tee Fitting

1. Locate the tee fitting in loose parts.
2. Slip a hose clamp over the open end of each of the rinse nozzle hoses.

3. Install the 2 in-line ends of the tee fitting to the open ends of the rinse nozzle hoses installed previously as shown in Figure 23.
4. Clamp the hose ends onto the tee fittings.

### Installing the Supply Hose

1. Locate the hose (44 inches) in loose parts.
2. Measure 18 cm (7 inches) from the end of the hose.
3. Cut the hose at that mark.
4. Slip a hose clamp over one end of the longer hose.
5. Clamp the hose end onto the rear 90-degree hose barb fitting on the 4-way valve (Figure 24).

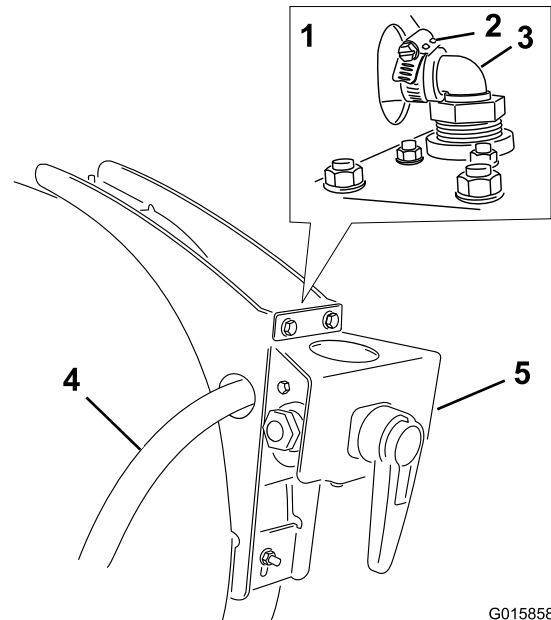


Figure 24

- |                                |   |
|--------------------------------|---|
| 1. Top view                    | 4. Supply hose                          |
| 2. Hose clamp                  | 5. Four-way valve and faceplate bracket |
| 3. 90-degree hose barb fitting |   |

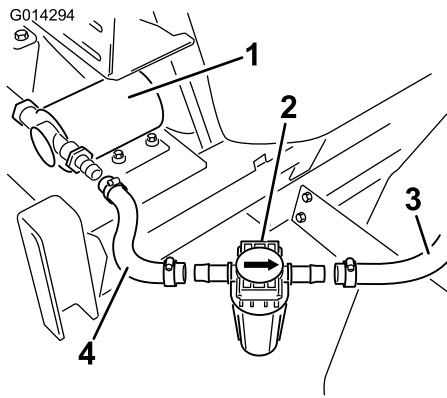
6. Slip a hose clamp over one end of the short hose.
7. Clamp the end of the short hose onto the straight barb fitting coming from the rinse pump.

### Install the Filter Assembly

1. Locate the filter assembly in loose parts.

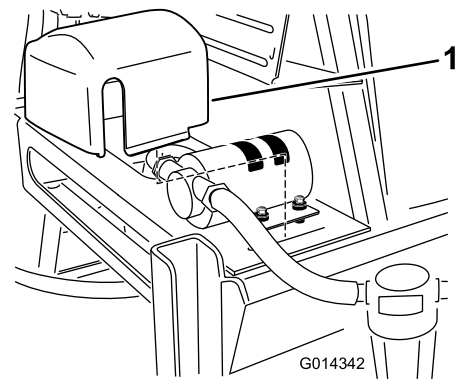
**Note:** Use care to note the directional arrow of the filter assembly.

2. Slip a hose clamp over the open ends of the supply and pressure hoses.
3. Install the filter in-line to the open ends of the hoses coming from the pump and to the rinse nozzles (Figure 25).



**Figure 25**

- 1. Pump
- 2. Filter assembly
- 3. Pressure hose
- 4. Rinse supply hose



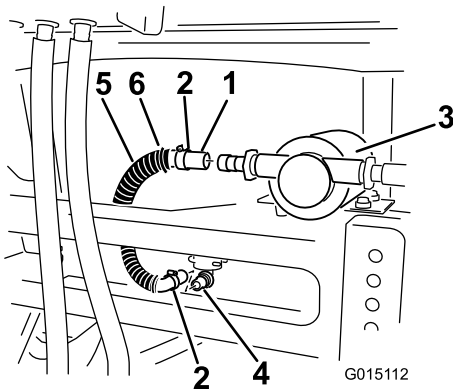
**Figure 27**

- 1. Pump cover

- 4. Clamp the supply and rinse hose ends onto the barb fittings of the filter assembly.

### Installing the Rinse Tank Hose

- 1. Locate the hose (24 inches) in loose parts.
- 2. Slip a hose clamp over each end of the hose.
- 3. Install one end of the hose to the 90-degree fitting at the bottom of the rinse tank (Figure 26).



**Figure 26**

- 4. Clamp the hose end onto the barb fitting.
- 5. Install the other end of the hose over the straight barb going to the pump.
- 6. Clamp the hose end onto the barb fitting.
- 7. Locate the rinse pump cover in loose parts, and install it over the pump (Figure 26).

## 8

### Installing the Delay Timer and Dash Switch

#### Parts needed for this procedure:

1	Delay timer
1	Fuse, 40-amp
1	Dash switch

#### Installing the Delay Timer

- 1. Raise the operator's seat to access the electronic components under the seat.
- 2. Locate the delay timer in loose parts, and install it at the location shown in Figure 28.

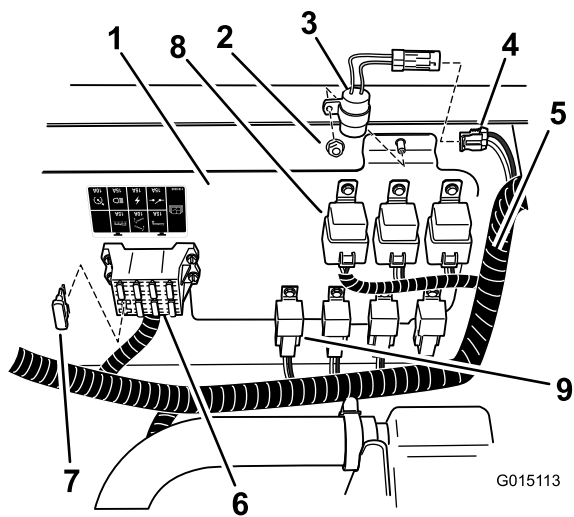


Figure 28

1. Electrical panel
2. Locknut
3. Delay timer
4. Delay timer connector, main wiring harness
5. Main wiring harness
6. Fuse block
7. 40-amp fuse

3. Locate the connector on the main harness labeled “Delay timer.”
4. Connect the timer to the main harness at this location (Figure 28).
5. Install a 40-amp fuse to the open slot in the fuse block as shown in Figure 28.

**Note:** If a lower amperage fuse already exists in the slot, remove it and replace it with the 40-amp fuse.

## Installing the Dashboard Switch

1. Locate the plug for the rinse tank switch on the dashboard (Figure 29).

**Note:** It is the first plug to the right of the ignition key.

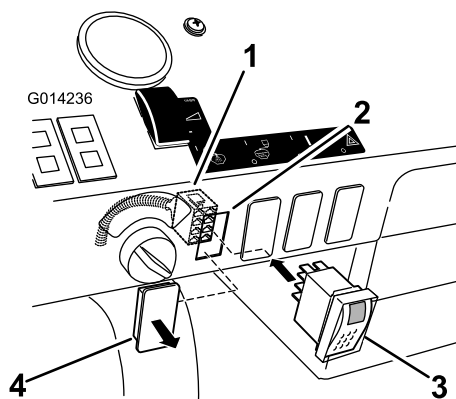


Figure 29

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

2. Remove the plug from the dashboard (Figure 29).
3. From below the dash, locate the box connector labeled “Rinse Tank” in the main harness.
4. Remove the plastic tie that secures the box connector and route it toward the open hole in the dashboard.
5. Install the switch to the box connector through the dashboard (Figure 29).
6. Push the switch into the dashboard to mount the switch.

# 9

## Installing the Ball Valve and Mounting Assembly

### Parts needed for this procedure:

1	Ball valve
2	Hose-barb fitting
1	Valve mount bracket
2	Hex head bolt (1/4 x 3/4 inch)
2	Hex head bolt (5/16 x 1 inch)
2	Flange nut (5/16 inch)

### Procedure

**Note:** If the ball valve comes with 2 barb fittings and the valve mount bracket installed, you may skip steps 1 and 2 below.

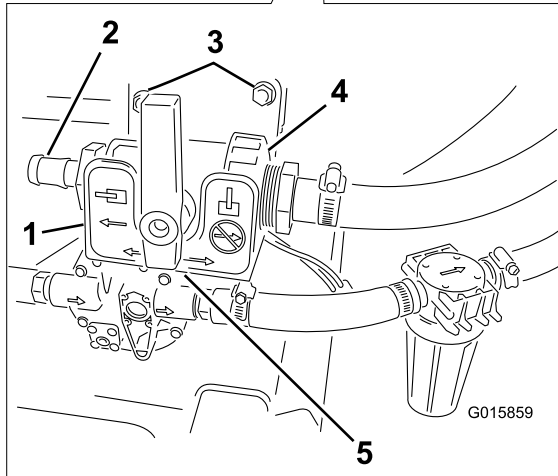
1. Install the 2 hose-barb fittings (1–1/4 inch NPT x 3/4 inch HB) onto the ball valve.
2. Secure the ball valve to the valve mount bracket with 2 hex-head bolts (1/4 x 3/4 inch) (Figure 30).

# 10

## Installing the Tee Assembly

### Parts needed for this procedure:

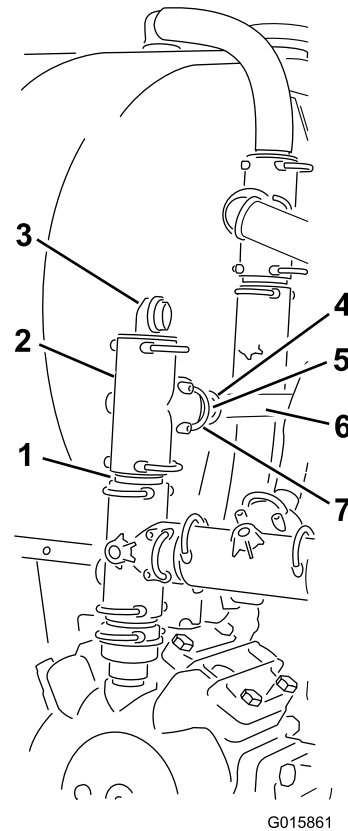
1	S67 connector
1	90-degree hose-barb fitting
1	Tee
1	Reducer
1	S53 Fork pin



**Figure 30**

1. Valve mount bracket
2. Hose barb fitting (2)
3. Bolts (5/16 x 1 inch) and flange nuts (5/16 inch)
4. Ball valve
5. Bolts (1/4 x 3/4 inch) not shown; under the bracket

3. Install the ball valve and valve mount bracket to the machine with 2 hex-head bolts (5/16 x 1 inch) and 2 flange nuts (5/16 inch) (Figure 30).



**Figure 31**

1. S67 Connector
2. Tee (from loose parts)
3. 90-degree hose-barb fitting
4. S67 fork pin
5. S53 fork pin
6. Straight barb hose fitting
7. Reducer

2. Install the S67 connector into the top of the open tee and secure it with a fork pin.

3. Install the tee onto the S67 connector and secure it with a fork pin.
4. Install a 90-degree hose-barb fitting on the top leg of the tee (Figure 31), and secure it with a fork pin.

**Note:** Orient the nozzle rearward (Figure 31).

5. Install a S67 to S53 reducer into the side of the tee, and secure the reducer with a fork pin.
6. Install a S53 straight barbed hose fitting into the reducer with an S53 fork pin.

# 11

## Installing the Pressure Filter Assembly

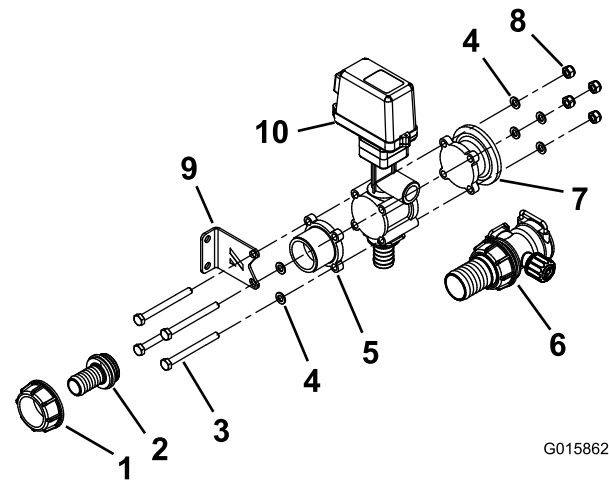
### Parts needed for this procedure:

1	O-ring
1	T5 adapter fitting
1	T5 straight hose barb fitting
1	Fly nut
1	Pressure filter

### Procedure

1. Remove and discard the fly nut and the straight hose-barb fitting (Figure 32).

**Note:** You may remove the valve nozzle for easier installation.



**Figure 32**

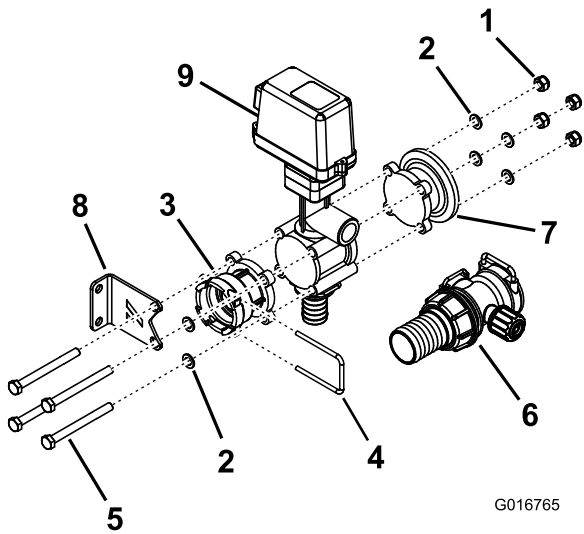
- |                                      |                                     |
|--------------------------------------|-------------------------------------|
| 1. Fly nut (discard)                 | 6. Valve nozzle (save)              |
| 2. Hose-barb fitting (discard)       | 7. Right-hand flange fitting (save) |
| 3. Bolt (4) (save)                   | 8. Locknut (4) (save)               |
| 4. Flat washer (6) (save)            | 9. Left-hand mount bracket (save)   |
| 5. Threaded flange fitting (discard) | 10. Agitation valve                 |

2. Remove the 4 bolts, 6 washers, the left-hand mount bracket, side flange fittings, and 4 locknuts (Figure 32).

**Note:** Save the left-hand bracket, the right-hand flange, 6 washers, 4 locknuts so that you can install them later.

**Note:** Save the o-ring from the threaded flange fitting before you discard the fitting.

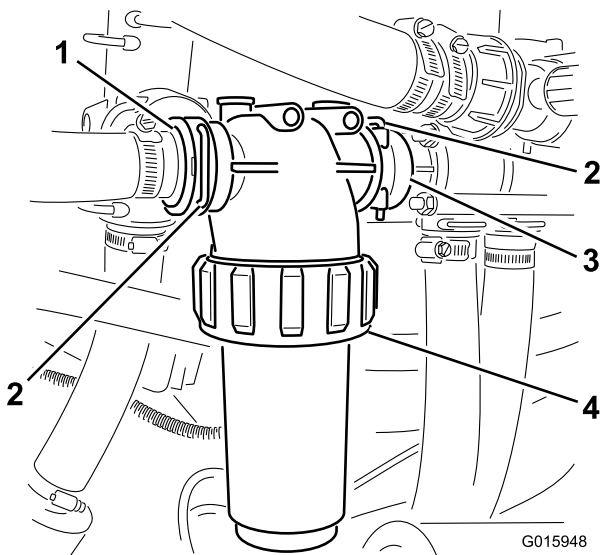
3. Install the T5 adapter fitting onto the agitation valve with the following previously removed parts: the left-hand mount bracket, 4 threaded rods, 6 washers, and 8 locknuts as shown in Figure 33.



**Figure 33**

- |   |  |
|---|--|
| 1. Locknut (4), existing                | 6. Valve nozzle, existing              |
| 2. Flat washer (6), existing            | 7. Right-hand flange fitting, existing |
| 3. T5 adapter fitting, from loose parts | 8. Left-hand mount bracket, existing   |
| 4. Fork pin                             | 9. Agitation valve                     |
| 5. Bolt (4), existing                   |  |

- Install the o-ring that you previously removed from the threaded fitting in step 2 and insert it into the T5 adapter fitting from loose parts.
- Secure the T5 adapter fitting to the agitation valve (Figure 33).
- Install the pressure filter assembly to the T5 adapter fitting and secure it with a fork pin (Figure 34).



**Figure 34**

- |                                  |                             |
|----------------------------------|-----------------------------|
| 1. T5 straight hose-barb fitting | 3. T5 adapter fitting       |
| 2. Fork pin                      | 4. Pressure filter assembly |

- Insert an o-ring (from loose parts) in the left-hand fitting on the pressure filter.
- Insert the T5 straight hose-barb fitting (from loose parts) onto the pressure filter and secure it with a fork pin (Figure 34).

# 12

## Installing the Hose between the Ball Valve and the Four-Way Valve

### Parts needed for this procedure:

1	Pressure hose (36 inches, 3/4 inch I.D.)
2	Hose clamp

### Procedure

- Locate the hose (36 inches, 3/4 inch I.D.) from loose parts.
- Slip a hose clamp over one end of the hose.
- Install the hose end over the open right-hand hose-barb fitting on the ball valve.
- Clamp the hose end onto the barb fitting.
- Slip a hose clamp over the other end of the hose.
- Install the hose end over the left hand hose-barb fitting on the four-way valve.
- Clamp the hose end onto the barb fitting.

# 13

## Installing the Hose between the Filter Assembly and the Ball Valve

### Parts needed for this procedure:

1	Boom hose (44 inches, 3/4 inch I.D.)
2	Hose clamp

### Procedure

- Locate the hose (44 inches, 3/4 inch I.D.) from loose parts.
- Slip a hose clamp over one end of the hose.

3. Install the hose end over the open hose-barb fitting on the side leg of the hose barb fitting on the tee assembly.
4. Clamp the hose end onto the barb fitting.
5. Slip a hose clamp over the other end of the hose.
6. Install the hose end over the left hand (open) hose-barb fitting on the ball valve.
7. Clamp the hose end onto the barb fitting.

# 14

## Installing the Hose Hooks

### Parts needed for this procedure:

2	Hose hook
2	Washer (3/8 inch)
2	Locknut (5/16 inch)
2	Carriage bolt

### Procedure

**Note:** If the bolts are not installed on the front tank strap, perform the following procedure:

1. Loosen the front tank strap on the right hand side.
2. Install the upper hose hook using a carriage bolt (5/16 x 3/4 inch), a washer (3/8 inch), and a locknut (5/16 inch).
3. Install the lower hose hook using a carriage bolt (5/16 x 3/4 inch), a washer (3/8 inch), and a locknut (5/16 inch).
4. Install the 2 R-clamps onto the lower hose hook.

**Note:** Refer to Figure 36 for the correct position of the R-clamps.

# 15

## Installing the Main Supply Hose Assembly

### Parts needed for this procedure:

1	Hose assembly (15 inches, 1 inch I.D.)
2	Hose clamp

### Procedure

1. Locate the hose (15 inches, 1 inch I.D.) from loose parts.
2. Slide the hose end onto an open 90-degree hose-barb fitting on top of the tee assembly, and secure it with a hose clamp.
3. Slide a hose clamp over the other hose end, route it around the pressure filter, and install it onto the open hose barb fitting on the pressure filter.
4. Clamp the hose end to the fitting on the pressure filter with a hose clamp.

# 16

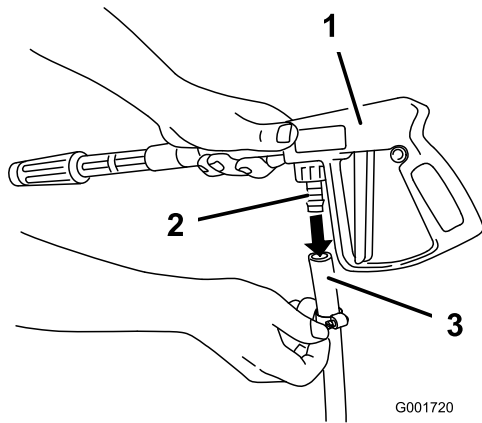
## Connecting the Spray Hose and Gun

### Parts needed for this procedure:

1	Long hose (25 feet, 1/2 inch I.D.) with fitting
1	Spray gun
1	Hose clamp, small

### Procedure

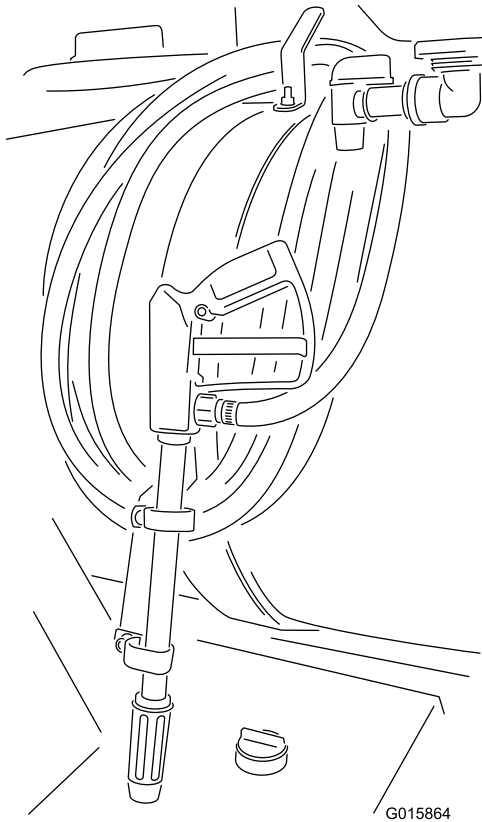
1. Locate the long hose from loose parts.
2. Slip a hose clamp over one end of the hose.
3. Install the hose end over the right-hand hose-barb fitting on the four-way valve, and clamp the hose end onto the fitting.
4. Slip the small hose clamp over the other end of the hose.
5. Connect the end of the hose to the fitting on the spray gun (Figure 35), and secure the hose end with the small clamp.



**Figure 35**

- 1. Spray gun
- 2. Fitting
- 3. Spray hose

Wrap the hose around the hooks of the tank and secure the gun in the R-clamps as shown in Figure 36.



**Figure 36**

# 17

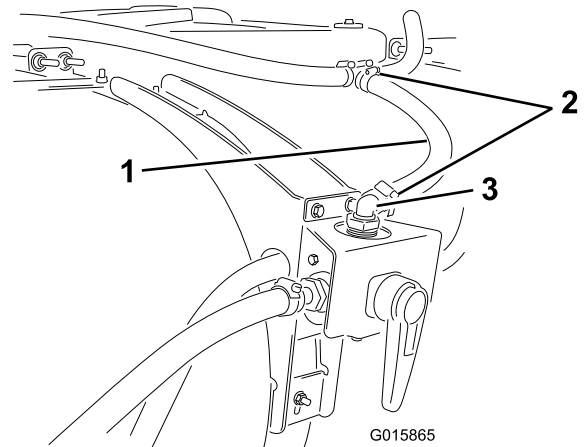
## Installing the Hose from the Four-Way Valve to the Sprinkler Tee

### Parts needed for this procedure:

1	Rinse nozzle hose (28-1/2 inches, 3/4 inch I.D.)
2	Hose clamp

### Procedure

1. Locate the supply hose in loose parts.
2. Install a hose clamp over each end of the hose.
3. Install the hose to the open end of the tee fitting installed previously (Figure 37).



**Figure 37**

- 1. Supply hose
- 2. Hose clamps
- 3. 90-degree hose barb fitting

4. Slide the hose clamp over the barb and tighten the clamp to secure the hose end.
5. Install the other end of the hose over the 90-degree hose-barb fitting at the top of the four-way valve.
6. Slide the hose clamp over the barb, and tighten the clamp to secure the hose end.

# 18

## 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 wettable powder or “water-soluble” chemicals that occur when chemicals are not properly introduced into the main tank.

#### Parts needed for this procedure:

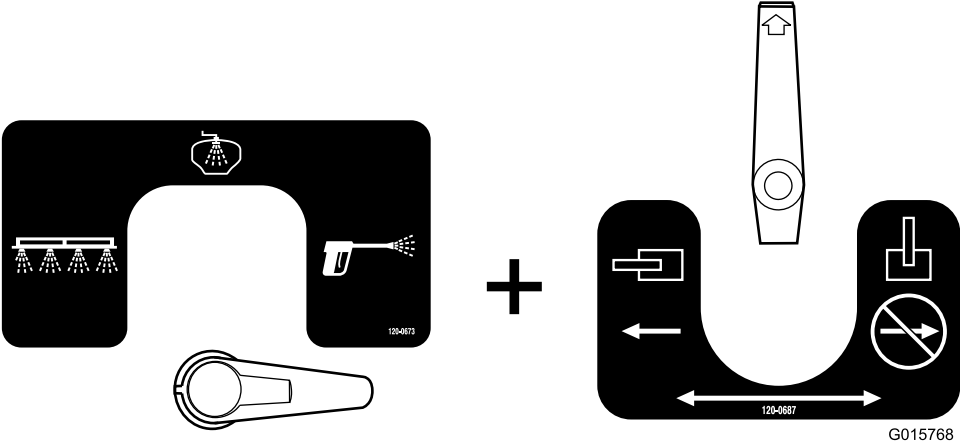
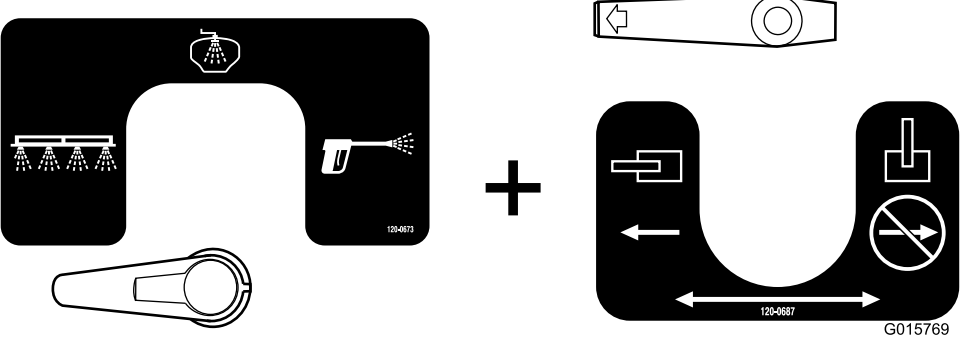
1	Decal (120-0723)
---	------------------

#### Procedure

1. Locate the decal in loose parts.
2. Thoroughly clean the area on the plastic fender above the passenger side wheel.
3. Dampen the area with water or mildly soapy water.
4. Peel the decal from the backing and install the decal.
5. Squeegee across the surface of the decal, starting at the center of the decal and working toward the edges, using overlapping strokes.

#### Valve Configurations for the Rinse System

Four-way Valve + Ball Valve	Description of Outcome
	<p><b>Tank Rinsing Configuration</b> Use this configuration to spray rinse water out of the rinse nozzles in the tank.</p> <p><b>Note:</b> The ball valve must be in this position when using the spray system.</p>

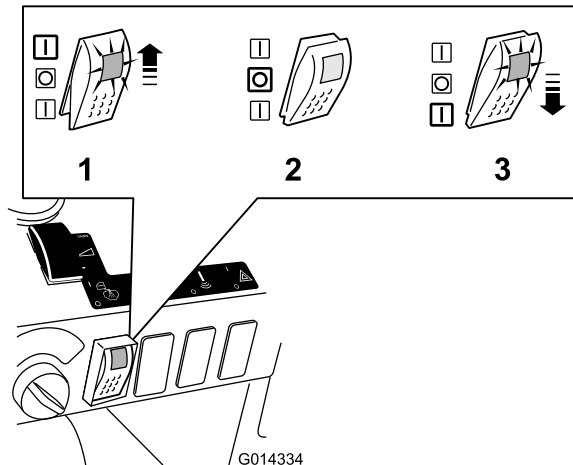
 <p>The diagram shows a hand spray gun (120-0673) and a boom (120-0687) with a ball valve in the up position. A plus sign indicates the combination of these two components.</p>	<p><b>Spray Gun Configuration</b> Use this configuration to spray rinse water out of the hand spray gun.</p> <p><b>Note:</b> The ball valve must be in this position when using the spray system.</p>
 <p>The diagram shows a boom (120-0687) with a ball valve in the up position. A plus sign indicates the combination of these two components.</p>	<p><b>Boom Configuration</b> Use this configuration to spray rinse water out of the booms.</p> <p><b>Important:</b> Do not set the ball valve in this position when you operate the main chemical pump.</p>

**Note:** Do not set the valves in any other configuration except those shown in the table above.

## 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 is not activated and the switch illuminates.



**Figure 41**

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 signalling 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.

## Filling 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.**

## Operating 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

## Inspecting the Rinse System for 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 fork pins. 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.**