



# Spray Gun Kit

## For Multi-Pro® 5600/5700 Turf Sprayers

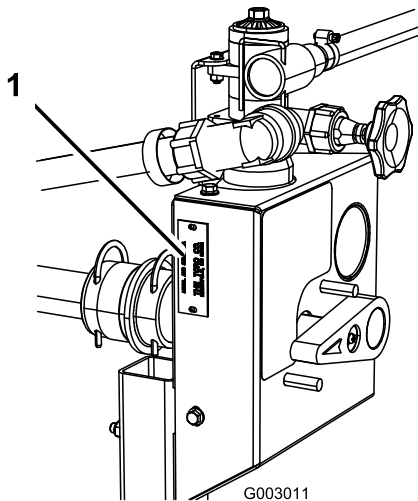
Model No. 41580—Serial No. 260000001 and Up

### Installation Instructions

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](http://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

<b>Model No.</b> _____ <b>Serial No.</b> _____
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## 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**

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.

Read also the safety and operation instructions in the vehicle *Operator's Manual*.

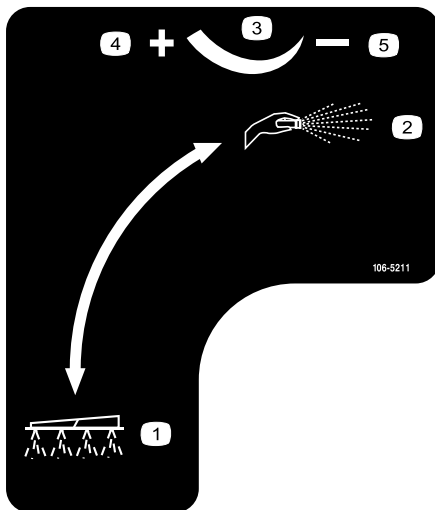
- Do not aim the hand sprayer at any person or animal. Fluids under high pressure can penetrate skin and cause severe injury, possibly resulting in amputation or death. Hot liquids and chemicals can also cause burns or injury. If any part of the body comes in contact with the spray stream, immediately 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.

## 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.



**106-5211**

- |                                |             |
|--------------------------------|-------------|
| 1. Boom spray                  | 4. Increase |
| 2. Hand spray                  | 5. Decrease |
| 3. Continuous variable setting |             |

# Installation

## Loose Parts

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

Step	Description	Qty.	Use
<b>1</b>	No parts required	–	Prepare the machine.
<b>2</b>	Hose hook Carriage bolt (5/16 x 3/4 inch) Washer (3/8 inch) Flange nut (5/16 inch)	2 2 2 2	Installing the hose hooks.
<b>3</b>	Barbed hose fitting, large S53 tee S53 tee fitting Hose clamp, large (1 inch) Retainer, small	1 1 2 2 2	Tap into the machine hoses.
<b>4</b>	S67 female/female fitting Large retainer Valve mounting tube Bolt (5/16 x 3 inches) Washer (3/8 inch) Flange nut (5/16 inch) Hose assembly, short O-ring Small retainer	1 2 1 2 1 2 1 2 1	Installing the control valve.
<b>5</b>	Pressure gauge Reducer fitting and nut Plastic fitting, small Control box cover Flange-head bolt (1/4 x 3/8 inch) Control handle Screw Red tubing	1 1 1 1 3 1 1 1 1	Install the pressure gauge and cover.
<b>6</b>	Long hose with fitting Spray gun Hose clamp, small	1 1 1	Connect the spray hose.

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

**Note:** Thread sealing tape is used in the installation of this kit.

# Step 1

## Preparing the Machine

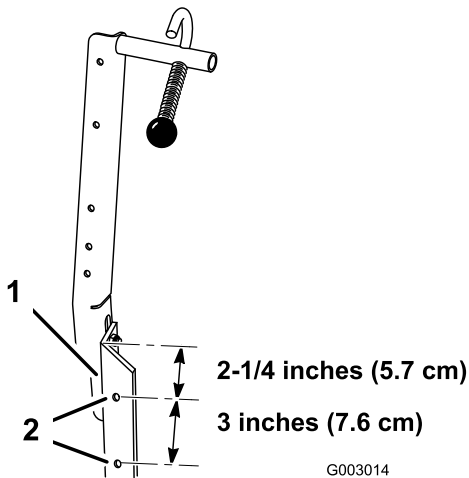
### No Parts Required

### Procedure

1. Ensure that the machine is empty of all fluids. If chemicals have been used in the machine, flush the system thoroughly with clean water then drain the water; refer to your vehicle *Operator's Manual* for instructions.
2. Disconnect the negative battery terminal from the battery.

For machines with a serial number of 259999999 and below with a standard boom only:

For machines with a serial number of 259999999 and below with a standard boom, drill 2 holes (11/32 inch dia) in the right, rear boom frame, 2-1/4 inches (5.7 cm) from the top of the frame and 3 inches (7.6 cm) apart as shown in (Figure 3).



**Figure 3**

1. Right, rear boom frame
2. Drill these holes, 11/32 inch dia

# Step 2

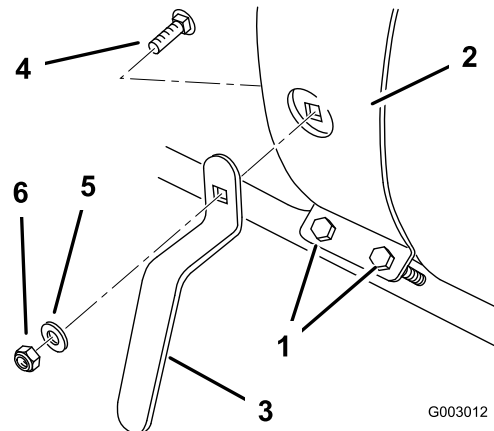
## Installing the Hose Hooks

### Parts needed for this step:

2	Hose hook
2	Carriage bolt (5/16 x 3/4 inch)
2	Washer (3/8 inch)
2	Flange nut (5/16 inch)

### Procedure

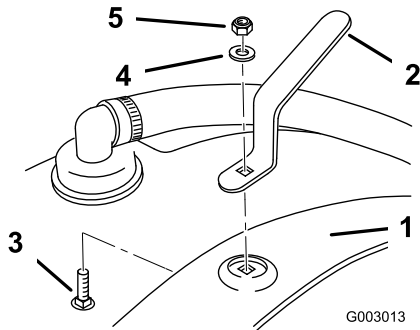
1. Remove the fasteners securing the right side of the rear tank strap (Figure 4).



**Figure 4**

1. Tank strap fasteners
2. Rear tank strap
3. Hose hook
4. Carriage bolt (5/16 x 3/4 inch)
5. Washer (3/8 inch)
6. Flange nut (5/16 inch)

2. Install the lower hose hook as shown in Figure 4 using a carriage bolt (5/16 x 3/4 inch), a washer (3/8 inch), and a flange nut (5/16 inch).
3. Install the upper hose hook as shown in Figure 5 using a carriage bolt (5/16 x 3/4 inch), a washer (3/8 inch), and a flange nut (5/16 inch).



**Figure 5**

- |                                    |                           |
|------------------------------------|---------------------------|
| 1. Rear tank strap                 | 4. Washer (3/8 inch)      |
| 2. Hose hook                       | 5. Flange nut (5/16 inch) |
| 3. Carriage bolt (5/16 x 3/4 inch) |                           |

- Secure the tank strap using the fasteners you removed previously.

**Step**

**3**

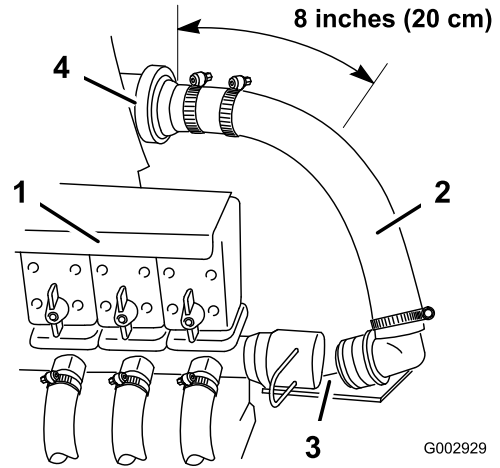
## Tapping into the Machine Hoses

### Parts needed for this step:

1	Barbed hose fitting, large
1	S53 tee
2	S53 tee fitting
2	Hose clamp, large (1 inch)
2	Retainer, small

### Procedure

- Remove the retainer securing the end of the boom supply hose connected to the tee located to the right of the boom supply valves and disconnect it (Figure 6).

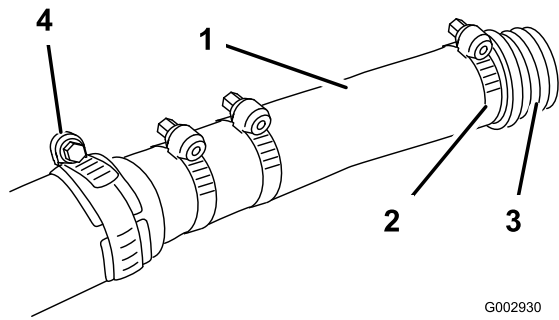


**Figure 6**

- |                       |                    |
|-----------------------|--------------------|
| 1. Boom supply valves | 3. Disconnect here |
| 2. Boom supply hose   | 4. Flow meter      |

- Cut the boom supply hose 8-3/4 inches (22 cm) to the right of the flow meter (if equipped) or 32 inches (81 cm) from the supply tee (located directly behind the boom valves) using a hacksaw (Figure 6). Remove the hose clamp from the loose end and discard the hose and fitting.
- Remove the barbed fitting and retainer from the control valve assembly (Figure 9).
- Apply a liberal amount of liquid soap to the barb of the fitting and to the inside of the hose coming from the flow meter or supply tee as applicable.
- Slide a large hose clamp (removed from the hose in step 2) over the hose and install the fitting all the way into the hose, securing it with the hose clamp (Figure 7).

**Important:** The fitting may be very difficult to push into the hose. It is very important, however, that you get it all the way into the hose, ensuring that it will not leak. You may need to remove the hose from the machine at the flow meter.

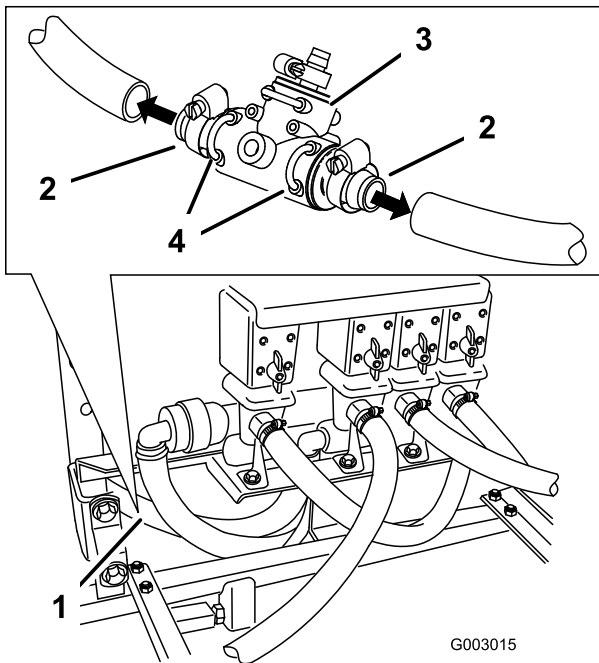


**Figure 7**

- |                          |                 |
|--------------------------|-----------------|
| 1. Hose                  | 3. Fitting      |
| 2. Ratcheting hose clamp | 4. Flow divider |

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- Cut the by-pass hose half way between the boom valves and the tank (Figure 8).



**Figure 8**

- |                   |                    |
|-------------------|--------------------|
| 1. By-pass hose   | 3. S53 tee fitting |
| 2. Agitation hose | 4. Small retainer  |

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- Using liquid soap on the barbs, insert an S53 tee fitting assembly into each hose and secure them using 2 large, hose clamps (Figure 8).
- Assemble the S53 tee to the fittings, using 2 small retainers (Figure 8).

## Step

# 4

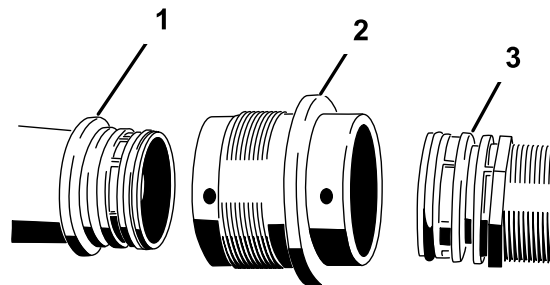
## Installing the Control Valve

### Parts needed for this step:

1	S67 female/female fitting
2	Large retainer
1	Valve mounting tube
2	Bolt (5/16 x 3 inches)
1	Washer (3/8 inch)
2	Flange nut (5/16 inch)
1	Hose assembly, short
2	O-ring
1	Small retainer

### Procedure

- Look in the opening under the control valve and ensure that the opening in the white ball valve is open toward the bottom (Figure 13).  
If it is not, turn the cross shaped control on the face of the control valve counter-clockwise until the opening in the ball valve is fully visible from below.
- Connect the hose from the flow meter or supply tee as applicable to the control valve using an S67 female/female fitting and 2 large retainers (Figure 9).



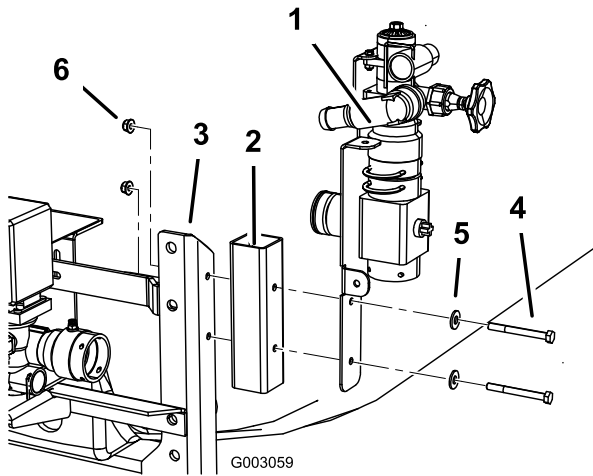
**Figure 9**

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- |   |   |
|---|---|
| 1. Hose from the flow meter or supply tee | 3. Fitting on the back of the control valve |
| 2. S67 female/female fitting              |   |

- Install the control valve and valve mounting tube to the right rear boom frame (Figure 10) using two bolts (5/16 x 3 inches), two washers (3/8 inch) and two flange nuts(5/16 inch).

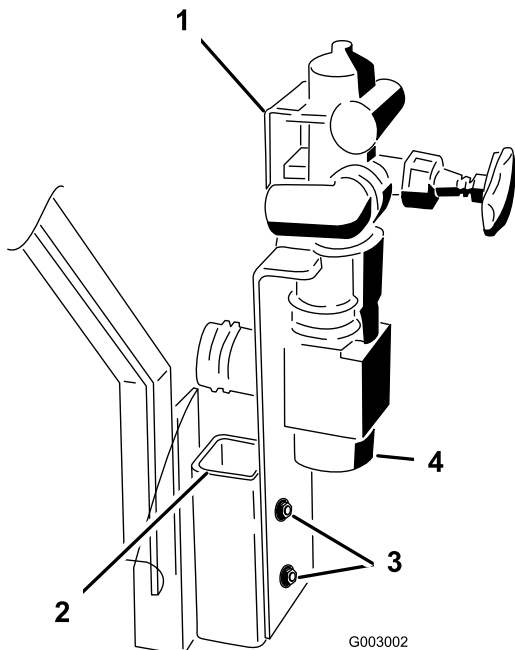
- A. For machines with a serial number of 260000001 and up; or for any machine with covered booms or without any booms:



**Figure 10**

- |                           |                           |
|---------------------------|---------------------------|
| 1. Control valve assembly | 4. Bolt (5/16 x 3 inches) |
| 2. Valve mounting tube    | 5. Washer (3/8 inch)      |
| 3. Right, rear boom frame | 6. Flange nut (5/16 inch) |

- B. For machines with a serial number of 259999999 and below with a standard booms use the previously drilled holes:



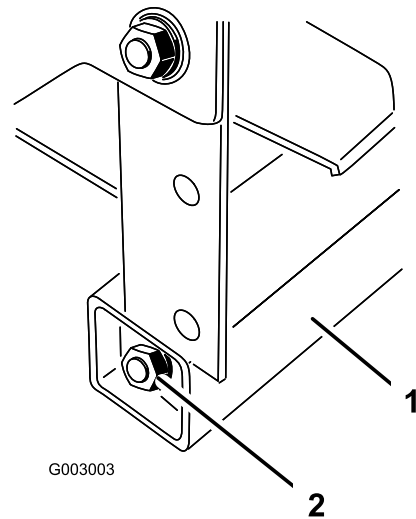
**Figure 11**

- |                  |   |
|------------------|---|
| 1. Control valve | 3. Flange head bolts (5/16 x 3 inches), washers (3/8 inch), and flange nuts (5/16 inch) |
| 2. Spacer        | 4. Bottom opening of the control valve.   |

**Note:** If there is not enough clearance between the control valve and the tank, loosen the 2 bolts securing the boom frame to the vehicle and back the boom frame out until there is at least 3 inches of clearance between the control valve and the tank (Figure 12).

**Important:** Do Not remove the bolts. Loosen the bolt by 2 revolutions and then tap the frame with a mallet to back the boom frame out. Repeat until desired clearance has been achieved.

4. Tighten the bolts to secure the boom frame (it will slide in about 1-1/2 inches (4 cm) as you tighten the bolts).

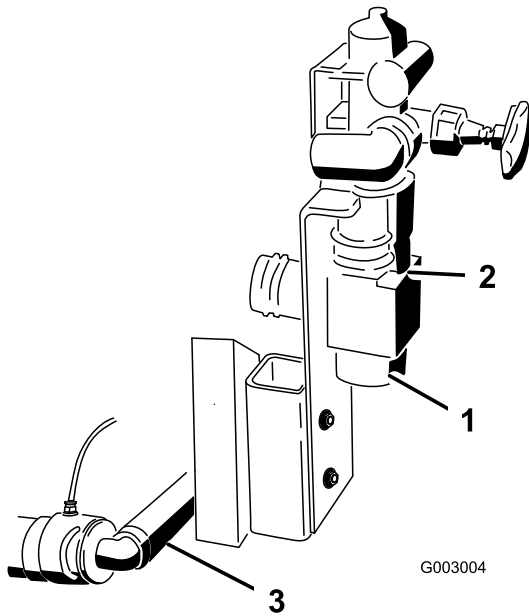


**Figure 12**

Boom frame

- 1.

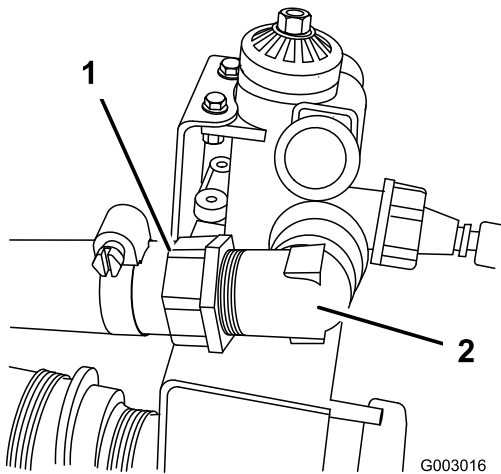
5. Install the short hose assembly to the bottom of the control valve and to the boom supply valves, securing it with one previously used retainer and one new retainer (Figure 13).



**Figure 13**

- 1. 1-1/2 inch dia hose assembly
- 2. Control valve
- 3. Boom supply valve fitting

- 6. Lightly coat a white O-ring from the kit with a non-petroleum based lubricant such as vegetable oil.
- 7. Insert the O-ring into the female threaded end of the long hose assembly and install it onto the fitting on the side of the control valve (Figure 14).



**Figure 14**

- 1. Female-threaded end of the short hose assembly
- 2. Fitting on the side of the control valve

- 8. Connect the other end of the long hose assembly to the open fitting on the S53 tee that you installed into the by-pass hose (Figure 14) and secure it with a small retainer.

## Step **5**

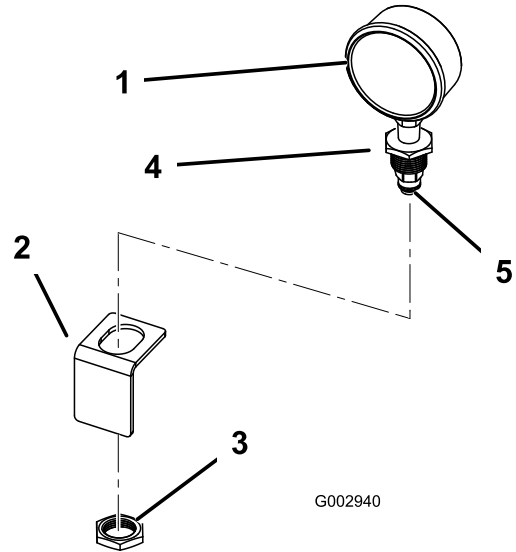
### Installing the Pressure Gauge and Cover

#### Parts needed for this step:

1	Pressure gauge
1	Reducer fitting and nut
1	Plastic fitting, small
1	Control box cover
3	Flange-head bolt (1/4 x 3/8 inch)
1	Control handle
1	Screw
1	Red tubing

#### Procedure

- 1. Wrap Teflon tape counterclockwise around the threads of the gauge and install the reducer fitting onto the gauge (Figure 13).



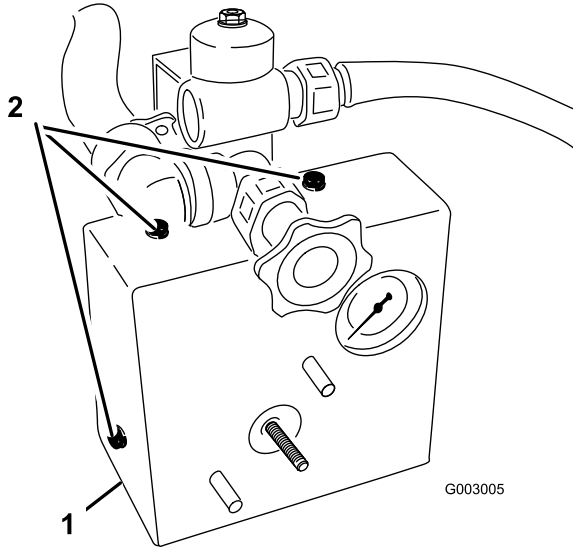
**Figure 15**

- 1. Pressure gauge
- 2. Bracket (inside of the control box cover)
- 3. Nut
- 4. Reducer fitting
- 5. Black plastic fitting

- 2. Install the black plastic fitting into the reducer fitting on the gauge (Figure 15).
- 3. Install the pressure gauge into the bracket under the circular opening inside the control valve cover, securing it with the nut packaged with it (Figure 15).

**Note:** The face of the gauge must face the circular opening of the cover.

4. Install the cover on the control valve assembly (Figure 16), securing it with 3 bolts.

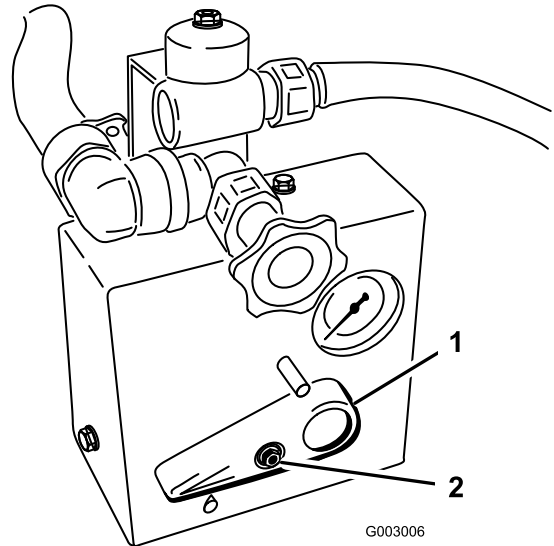


**Figure 16**

1. Control valve cover
2. Bolt

5. Push the end of the small red tube into the fitting on the bottom of the pressure gauge.
6. Push the other end of the red tube into the fitting on the back of the control valve.
7. Install the red handle on the face of the control valve assembly and secure it with the screw as shown in Figure 17.

**Note:** Ensure that you install the handle in the orientation shown in Figure 17.



**Figure 17**

1. Control valve cover
2. Screw

## Step **6**

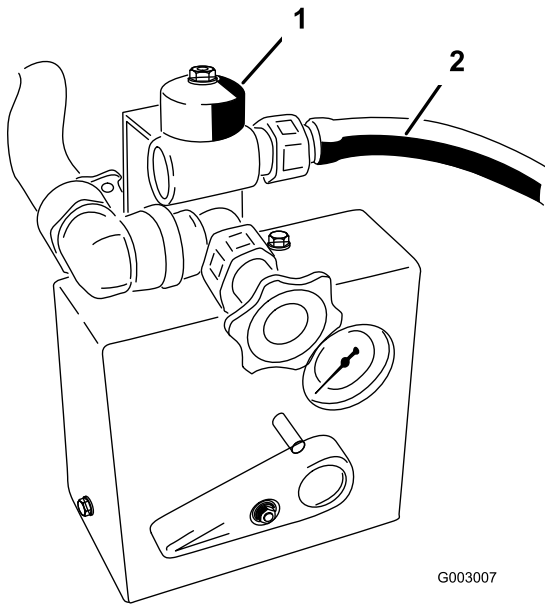
### Connecting the Spray Hose

#### Parts needed for this step:

1	Long hose with fitting
1	Spray gun
1	Hose clamp, small

#### Procedure

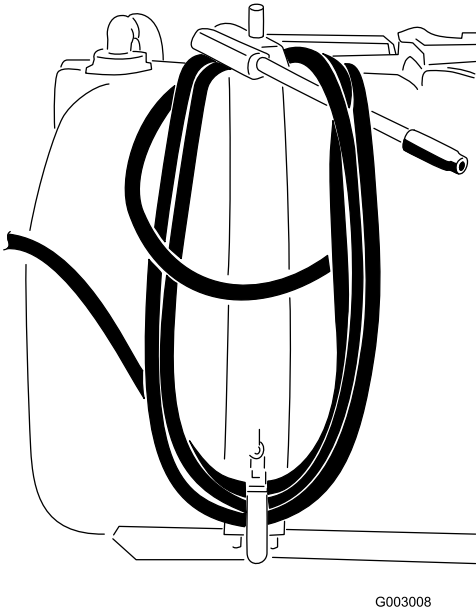
1. Thread and tighten the nut on the end of the hose and spray gun assembly to the threaded male fitting on the control valve assembly (Figure 18).



**Figure 18**

1. Control valve                      2. Hose
- 

2. Wrap the hose around the hooks on the tank and secure the gun as shown in Figure 19.



**Figure 19**

3. Ensure that the control valve assembly and the tank are about 1 inch apart. If they are not, adjust the boom frame.
-

# Operation



Fluid under pressure can penetrate skin and cause injury.

- Keep your body and hands away from nozzles that eject high pressure fluid.
- Do not aim the sprayer at any person or animal.
- Make sure all fluid hoses and lines are in good condition and all connections and fittings are tight before applying pressure to the system.
- Use cardboard or paper to find leaks.
- Safely relieve all pressure in the system before performing any work on it.
- Get immediate medical help if fluid is injected into skin.
- Hot liquids and chemicals can cause burns or other harm.

## Turf Care Precautions While Operating in Stationary Modes

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

Use 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 on the turf while stationary spraying. Park on a cart path whenever possible.
- **Minimize** the amount of time 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

will minimize 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 if additional heat protection is desired. Contact your Authorized Toro Dealer to obtain a Toro Heat Shield Blanket kit, for turf sprayers.

## Switching from Boom Spray Mode to Hand Spray Mode

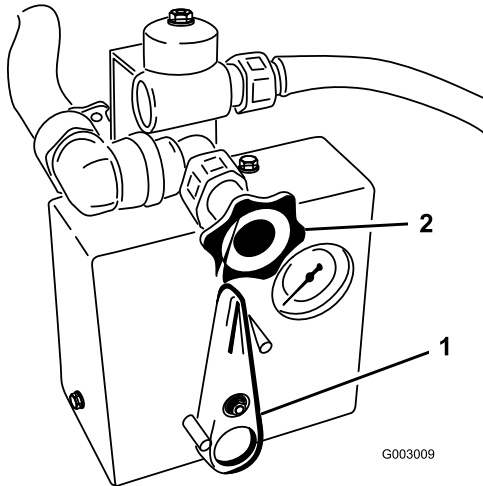
1. Stop the machine and set the parking brake.



Driving while using the hand sprayer can cause loss of control, resulting in injury or death. Do not operate the hand sprayer while driving.

2. Ensure that the pump switch is on and the Pro Control™ (if applicable) is set in the manual position.
3. Set the throttle 3/4 of the way toward the Fast position.
4. Ensure that the trigger lock on the spray gun is locked.

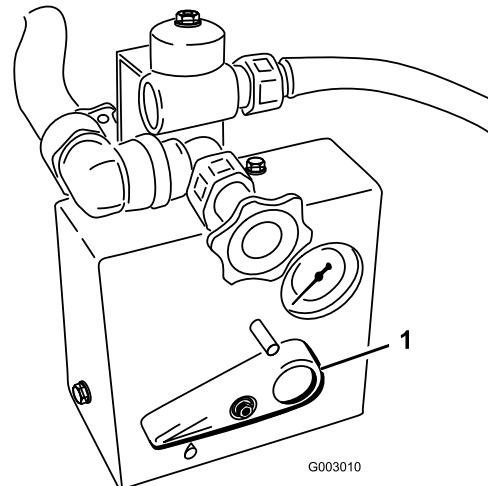
- Turn the pressure control knob counter-clockwise (Figure 20).



**Figure 20**

- Control handle
- Pressure control knob

- Move the control handle counter-clockwise, pointing rearward (Figure 21).



**Figure 21**

- Control handle

- Move the control handle clockwise, pointing up (Figure 20).
- Turn on the pump and agitation switches.
- Adjust the rate control switch to the maximum pressure setting and reduce the throttle setting to achieve the desired pressure.
- While spraying, use the pressure control knob to adjust the hand spray pressure (Figure 20).

**Note:** The maximum recommended operating pressure of the hose reel kit is 150 psi.

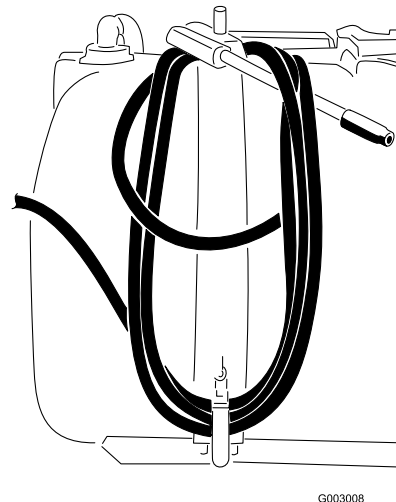
## Spraying with the Hand Sprayer

- Unwind the hose from the hooks.
- Release the trigger lock.
- Direct the spray gun nozzle at the area to be sprayed and pull the trigger.
- Release the trigger and set the trigger lock when finished.

## Switching from Hand Spray Mode to Boom Spray Mode

- Press the rate control switch to reduce the pressure and stop the pump.
- Turn the pump and agitation switch to the Off position if desired.

- Direct the spray gun nozzle at an area where it is safe to spray, release the trigger lock, and pull the trigger until all remaining fluid is out of the hose, then set the trigger lock.
- Wrap the hose around the hooks on the tank and secure the gun as shown in Figure 22.



**Figure 22**