



Hose Reel Kit

Workman® 200 Spray System

Model No. 41097—Serial No. 310000001 and Up

Installation Instructions

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

Important: Teflon tape is required for the installation of this kit. The tape is used to wrap threads of fittings before assembly. Threads should be wrapped starting at the base and traveling to the tip of fitting to ensure a waterproof seal.

Important: A non-petroleum based lubricant, such as vegetable oil, will be required for the installation of this kit.

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.

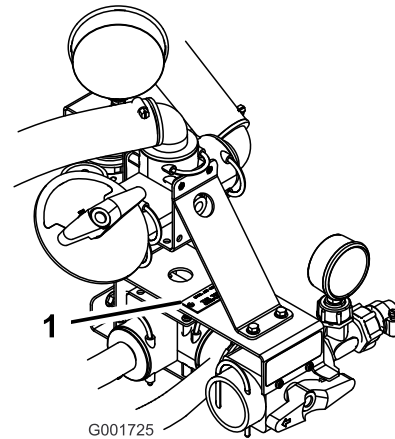


Figure 1

1. Model and serial number plate

Model No. _____

Serial No. _____

Safety

Improper use or maintenance by the operator or owner can result in injury. To reduce the potential for injury, comply with these safety instructions and always pay attention to the safety alert symbol, which means CAUTION, WARNING, or DANGER—"personal safety instruction." Failure to comply with the instruction may result in personal injury or death.

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

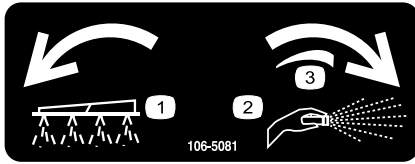
- Do not aim the hand sprayer at any person or animal. Fluids under high pressure can penetrate skin and cause severe injury, possibly resulting in amputation or death. Hot liquids and chemicals can also cause burns or injury. If any part of the body comes in contact with the spray stream, immediately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

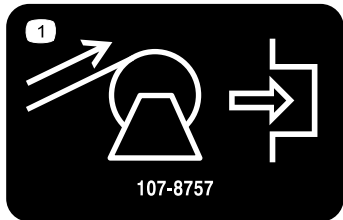


Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or lost.



106-5081

1. Boom spray
2. Hand spray
3. Continuous variable setting



107-8757

1. Hose reel rewind; push to engage.

Installation

Loose Parts

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

Procedure	Description	Qty.	Use
1	No parts required	–	Prepare the machine.
2	Electrical box Hose reel mount, left Hose reel mount, right Flange bolt (1/2 x 1-1/4 inches) Flange nut (1/2 inch) Hose reel mounting tubes Bolt (5/16 x 3-1/2 inch) Washer Flange nut, (5/16 inch) Bolt (5/16 x 1 inch) Hose reel assembly Bolt (5/16 x 1-1/2 inches) Plastic tie	1 1 1 4 4 2 4 8 9 1 1 4 8	Assemble the frame.
3	Control valve Retaining fork Control valve bracket Flange bolt (1/4 x 3/4 inch) Flange nut (1/4 inch) Screw Pressure gauge Plastic nut Reducer Tee Plastic O-ring Adapter Plastic nut, large Hose assembly	1 1 1 2 2 2 1 1 1 1 1 2 1 1 1	Install the control valve.
4	Long hose with fitting Spray gun Plastic hose clamp, small	1 1 1	Connect the spray hose.

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; refer to your vehicle *Operator's Manual* for instructions.
2. Disconnect the negative battery terminal from the battery.

2

Assembling the Frame

Parts needed for this procedure:

1	Electrical box
1	Hose reel mount, left
1	Hose reel mount, right
4	Flange bolt (1/2 x 1-1/4 inches)
4	Flange nut (1/2 inch)
2	Hose reel mounting tubes
4	Bolt (5/16 x 3-1/2 inch)
8	Washer
9	Flange nut, (5/16 inch)
1	Bolt (5/16 x 1 inch)
1	Hose reel assembly
4	Bolt (5/16 x 1-1/2 inches)
8	Plastic tie

Procedure

1. Remove and discard the bolt and nut from the lower inside roller support on the hose reel (if existing) and install the electrical box in that hole (Figure 2), using a flange-head bolt (5/16 x 1 inch) and a flange nut (5/16 inch).

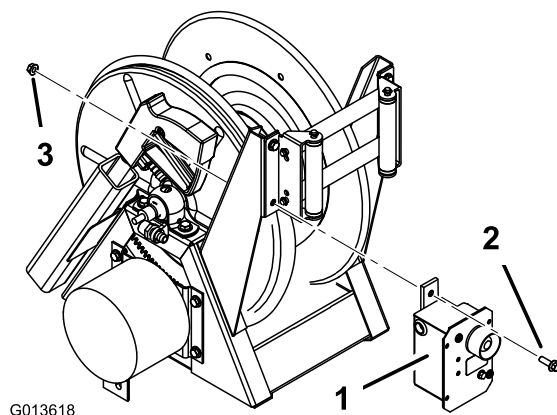


Figure 2

1. Electrical box
2. Flange-head bolt (5/16 x 1 inch)
3. Flange nut (5/16 inch)

2. At the rear of the machine, install the left and right hose reel mounts to the boom frame as shown in Figure 3. Secure the mounts to the boom frame with four flange bolts (1/2 x 1-1/4 inches) and four flange nuts (1/2 inch).

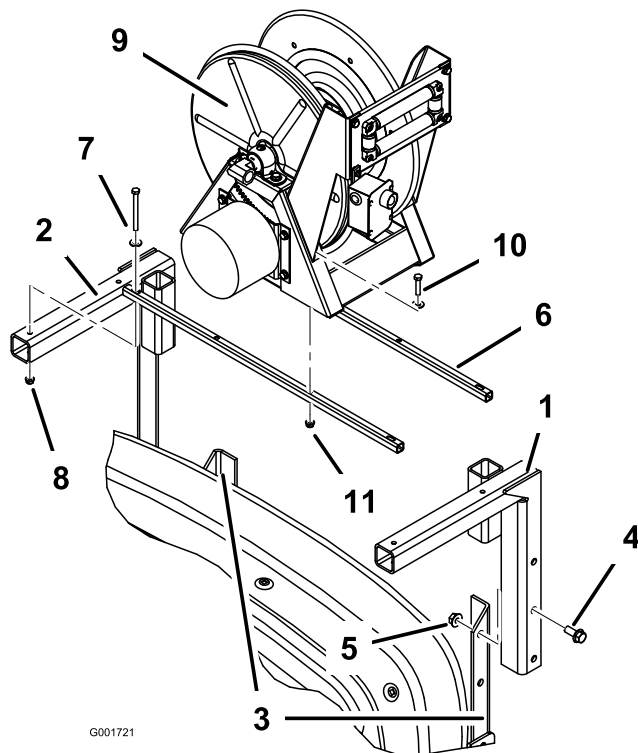


Figure 3

1. Hose reel mount, left
2. Hose reel mount, right
3. Boom frame
4. Flange bolt (1/2 x 1-1/4 inches)
5. Flange nut (1/2 inch)
6. Hose reel mounting tube
7. Bolt (5/16 x 3-1/2 inch) and washer
8. Flange nut (5/16 inch)
9. Hose reel assembly
10. Bolt (5/16 x 1-1/2 inches) and washer
11. Flange nut (5/16 inch)

3. Install two hose reel mounting tubes to the top of the hose reel mounts (Figure 3) using four bolts (5/16 x 3-1/2 inch), four flat washers (11/16 inch outside diameter), and four flange nuts (5/16 inch).

Note: Do not fully tighten the fasteners to allow for later adjustment.

4. Install the hose reel assembly onto the hose reel mounting tubes (Figure 3) using four bolts (5/16 x 1-1/2 inches), four flat washers (7/8 inch outside diameter), and four flange nuts (5/16 inch). Do not fully tighten the fasteners to allow for later adjustment.

Note: Do not fully tighten the fasteners to allow for later adjustment.

5. Level the hose reel assembly and then tighten all fasteners in the reverse order they were installed.
6. Route the electrical box wiring harness under the tank from the rear of the machine into the engine compartment.
7. Remove the hold down bolts and raise the sprayer. Refer to the *Operator's Manual* for more information.
8. Locate the starter solenoid on the left side of the engine. Connect the red power wire on the wiring harness to the front of the solenoid (Figure 4).

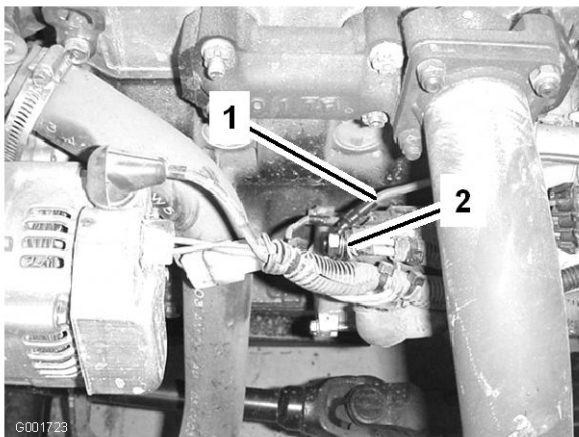


Figure 4

1. Red power wire from the electrical box
2. Solenoid

9. Ground the black wire on the wiring harness to the engine using a coil bolt or other suitable ground (Figure 5).

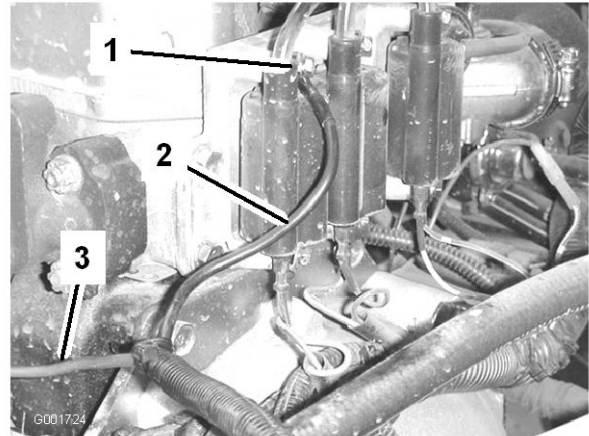


Figure 5

1. Coil bolt
2. Black wire
3. Red wire to solenoid

10. Remove any slack and secure the wiring harness to existing wires using the plastic ties included in the kit as the harness is routed forward to the engine compartment.

Important: Secure the harness a safe distance from any hot or moving parts that may damage the wiring harness.

3

Installing the Control Valve

Parts needed for this procedure:

1	Control valve
1	Retaining fork
1	Control valve bracket
2	Flange bolt (1/4 x 3/4 inch)
2	Flange nut (1/4 inch)
2	Screw
1	Pressure gauge
1	Plastic nut
1	Reducer
1	Tee
2	Plastic O-ring
1	Adapter
1	Plastic nut, large
1	Hose assembly

Procedure

1. Locate the valve assembly on the right side of the tank, remove the retaining fork to disconnect the boom supply hose from the supply tee (Figure 6).

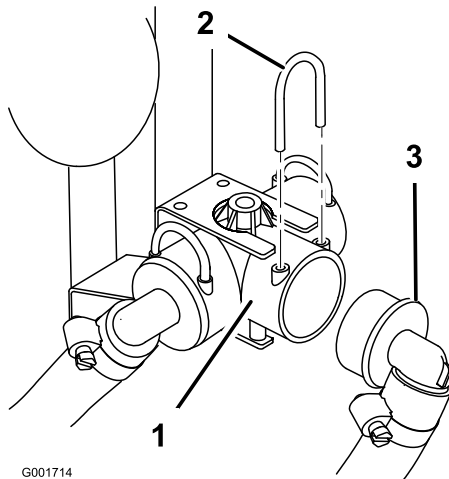


Figure 6

1. Supply tee
2. Retaining fork
3. Boom supply hose

2. Remove the two bolts and two nuts securing the supply tee and supply tee mounting bracket to the vehicle (Figure 7). Retain the fasteners for later use.

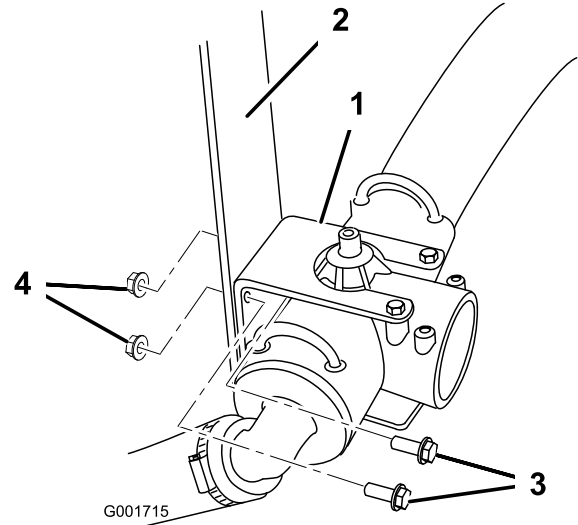


Figure 7

1. Supply tee mounting bracket
2. Tank strap
3. Bolt
4. Nut

3. Install the new control valve into the open port on the supply tee and secure it with a new retaining fork (Figure 8).

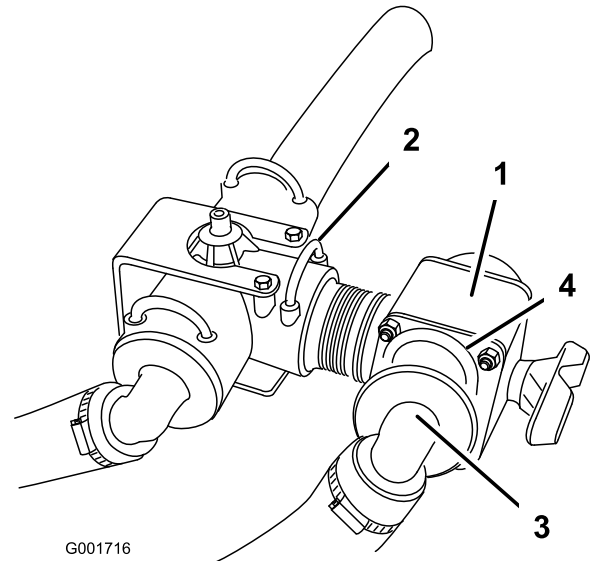


Figure 8

1. Control Valve
2. Retaining fork, new
3. Boom supply hose
4. Retaining fork, existing

4. Connect the boom supply hose to the open port on the control valve and secure it with the retainer removed previously (Figure 8).

5. Install the control valve bracket between the supply tee bracket and the mounting frame (Figure 9) using the fasteners removed previously.

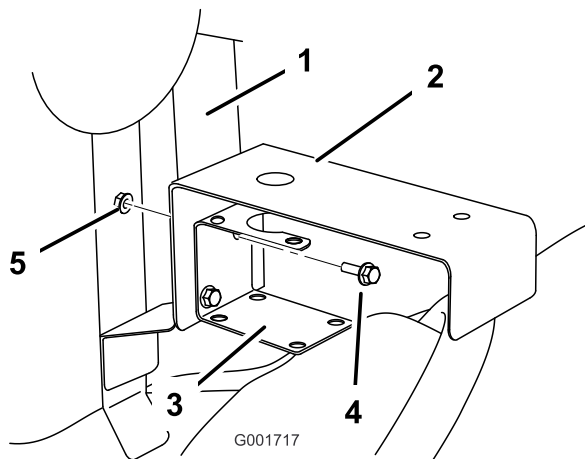


Figure 9

Valve assemblies not depicted for clarity.

- | | |
|--------------------------|---------|
| 1. Tank strap | 4. Bolt |
| 2. Control valve bracket | 5. Nut |
| 3. Supply tee bracket | |

6. Turn the control valve handle so that the arrow is pointing rearward.
7. Install the support bracket over the control valve bracket. Use the two existing screws securing the upper tee assembly to secure upper portion of the support bracket (Figure 10). Secure the lower portion of the support bracket using two flange-head bolts (1/4 x 3/4 inch) and two flange nuts (1/4 inch).

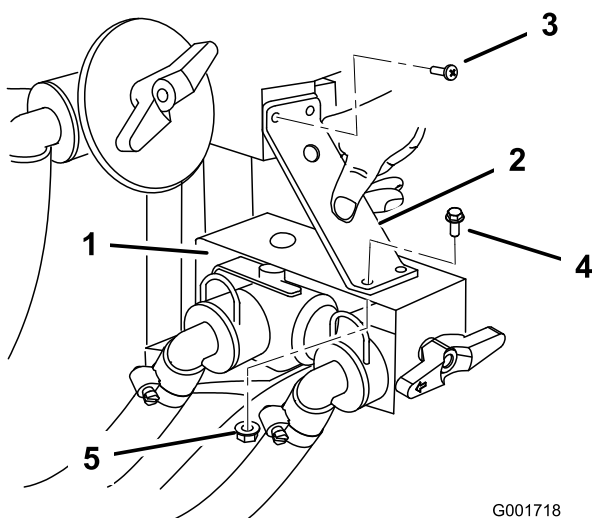


Figure 10

- | | |
|--------------------------|--------------------------------------|
| 1. Control valve bracket | 4. Flange-head bolt (1/4 x 3/4 inch) |
| 2. Support bracket | 5. Flange nut (1/4 inch) |
| 3. Screw, existing | |

8. Secure the new control valve to the bracket using two screws (Figure 11).

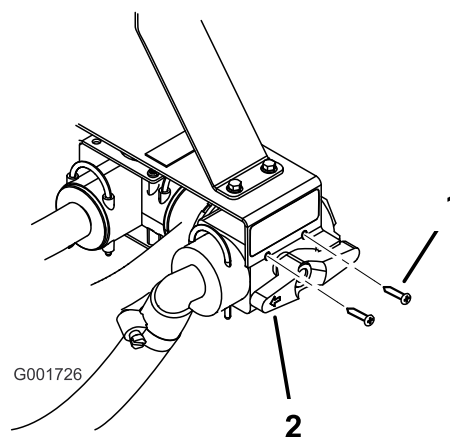


Figure 11

- | | |
|----------|--------------------------------------------|
| 1. Screw | 2. Control valve handle, pointing rearward |
|----------|--------------------------------------------|

9. Lightly lubricate all the O-rings in the kit with a non-petroleum based lubricant, such as vegetable oil.
10. Wrap the pressure gauge threads with Teflon tape. Install the small plastic nut and reducer assembly to the pressure gauge. Use a hex wrench to screw the reducer assembly to the pressure gauge (Figure 12).

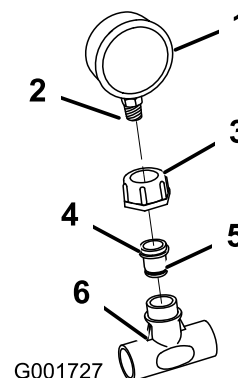


Figure 12

- | | |
|--------------------|---------------------|
| 1. Pressure gauge | 4. Reducer |
| 2. Wrapped threads | 5. Lubricate O-ring |
| 3. Plastic nut | 6. Tee |

11. Install the pressure gauge assembly to the plastic tee (Figure 12).

12. Install the large plastic nut over the pressure gauge and tee assembly. Install a plastic O-ring and adapter to the assembly as shown in Figure 13.

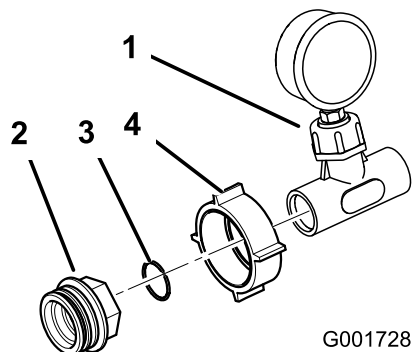


Figure 13

- | | |
|-----------------------|----------------------|
| 1. Gauge tee assembly | 3. O-ring, plastic |
| 2. Adapter | 4. Large plastic nut |

Tighten the plastic nut on the hose to secure it to the pressure gauge assembly.

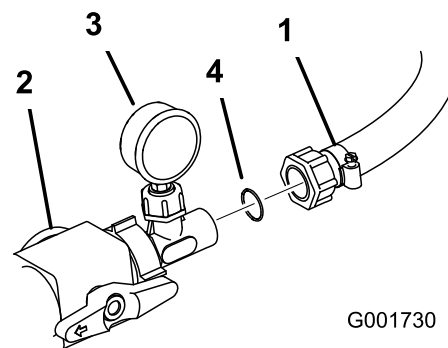


Figure 15

- | | |
|--------------------|--------------------|
| 1. Hose, from reel | 3. Gauge assembly |
| 2. Control valve | 4. O-ring, plastic |

13. Lubricate the O-ring in the adapter with a non-petroleum based lubricant, such as vegetable oil (Figure 14).
14. Install the pressure gauge assembly to the opening in the control valve installed previously (Figure 14). Tight the plastic nut to secure the assembly to the valve.

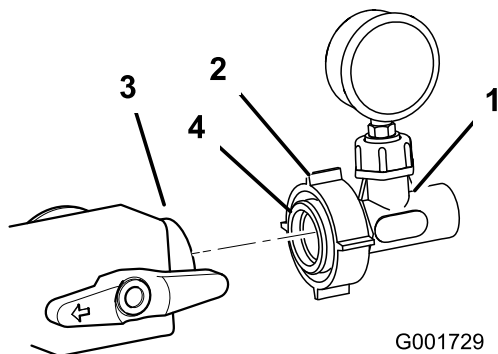


Figure 14

- | | |
|----------------------------|------------------------|
| 1. Pressure gauge assembly | 3. Control valve, open |
| 2. Large plastic nut | 4. Lubricate O-ring |

15. Install a plastic O-ring between the pressure gauge assembly and hose leading to the reel assembly. Connect the hose to the assembly (Figure 15).

4

Connecting the Spray Hose

Parts needed for this procedure:

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

Procedure

1. Wrap Teflon tape around the threads of the hose fitting on the long hose and install the fitting into the connecting tube on the reel (Figure 16).

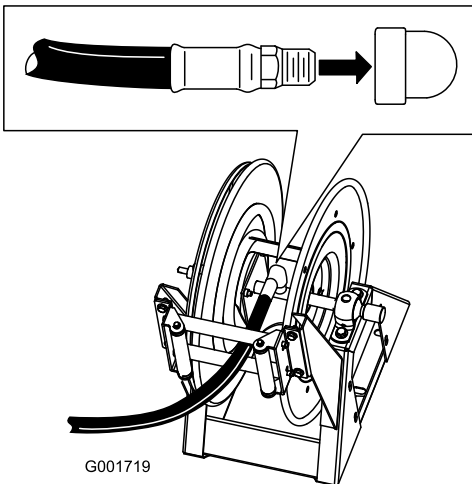


Figure 16

2. Connect the free end of the long hose to the fitting on the spray gun (Figure 17).

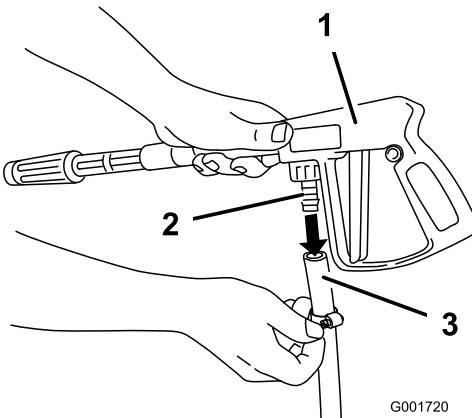


Figure 17

3. Secure the end of the hose with a small hose clamp.

4. Connect the negative battery wire to the battery.
5. Press the hose wind button and carefully guide the hose onto the reel.

CAUTION

Hands, loose clothing, long hair, and jewelry could get caught in the hose and reel while rewinding and cause injury.

- Keep your hands clear of the reel and hose while it is rewinding.
- Do not wear loose clothing or jewelry and tie up long hair.

Operation

⚠ WARNING

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.

Switching from Boom Spray Mode to Hand Spray Mode

1. Stop the machine and set the parking brake.

⚠ WARNING

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 trigger lock on the spray gun is locked.
3. Turn the red knob on the face of the control valve to the Hand Spray position.
4. Turn the booms off.
5. Use the application rate switch to adjust the application rate to the highest setting.
6. Turn the pump on.
7. Increase the engine speed until the pressure gauge reads 150 psi and set it at that speed.

Important: Do not use a pressure setting higher than 150 psi with the hand sprayer.

Note: Use the pressure gauge to the right of the control valve while turning the red knob to achieve the desired amount of pressure at hand sprayer.

Spraying with the Hand Sprayer

1. Pull out the desired amount of hose from the reel.

Important: Do not pull the hose with the spray gun. Always hold the hose and pull on it directly. Pulling on the hose with the gun may break the fitting on the gun.

2. Release the trigger lock.
3. Direct the spray gun nozzle at the area to be sprayed and pull the trigger.
4. Release the trigger and set the trigger lock when finished.

Switching from Hand Spray Mode to Boom Spray Mode

1. Press the rewind button on the hose reel until only a few feet of hose is out of the reel.

⚠ CAUTION

Hands, loose clothing, long hair, and jewelry could get caught in the hose and reel while rewinding and cause injury.

- Keep your hands clear of the reel and hose while it is rewinding.
 - Do not wear loose clothing or jewelry and tie up long hair.
2. Turn the red nob on the face of the control valve to the Boom Spray position.
 3. 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.
 4. Return the spray gun to the holder on the back of the reel.
 5. Return the engine to idle speed and stop the pump.

Important: Ensure that you flush the spray gun with fresh clean water during your daily cleaning routine (refer to your sprayer *Operator's Manual*).

Notes:



Count on it.