Form No. 3378-331 Rev B

Foam Marker Kit

Multi Pro 5800, 1750, and WM Turf Sprayer

Model No. 41232—Serial No. 314000001 and Up

Operator's Manual

⚠ WARNING

CALIFORNIA
Proposition 65 Warning

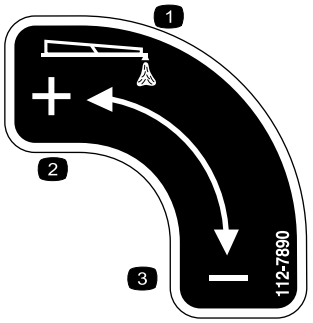
This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects, or reproductive harm.

Safety

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

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.



112-7890

1. Foam output
2. Increase
3. Decrease

Setup

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	Regulating valve, cap mount Regulating valve, dashboard mount Decal, 112-7890	1 1 1	Install the foam control valve.
3	Hose clamps (blue) Hose clamps (white) Brackets Spacers Set screws Mounting rod Foam-nozzle assemblies	2 2 4 4 4 2 2	Install the foam nozzles.
4	Foam marker finishing kit (sold separately)	1	Install the foam marker kit and the bracket.

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CE

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3378-331 B

Procedure	Description	Qty.	Use
5	Foam hose Plastic ties	1 8	Route the foam hoses.
6	No parts required	–	Connect the hoses.

Separate instructions for the installation of the foam marker kit are denoted in each step of the Setup where specific procedures deviate from 1 machine to another. Please look for the heading describing instructions specific to the machine you are working with before proceeding with each step of the Setup.

Note: This foam marker kit requires a mounting bracket specifically designed for your machine. Before installing this kit, contact an Authorized Toro Dealer to obtain the correct mounting bracket.

1

Preparing the Machine

No Parts Required

Procedure

1. Position the sprayer on a level surface, set the parking brake, and stop the pump.
2. Lower the booms to the spray position.
3. Stop the engine and remove the ignition key.

2

Installing the Foam Control Valve

Parts needed for this procedure:

1	Regulating valve, cap mount
1	Regulating valve, dashboard mount
1	Decal, 112-7890

Installing the Foam Control Valve on Multi-Pro 1750 Series and WM (Workman) Turf Sprayer Systems

1. Locate the black cap on the end of the foam-marker tank assembly.
2. Install the 92 cm (3 foot) loop-back hose, and the cap-mount regulating valve to the black cap (Figure 1).

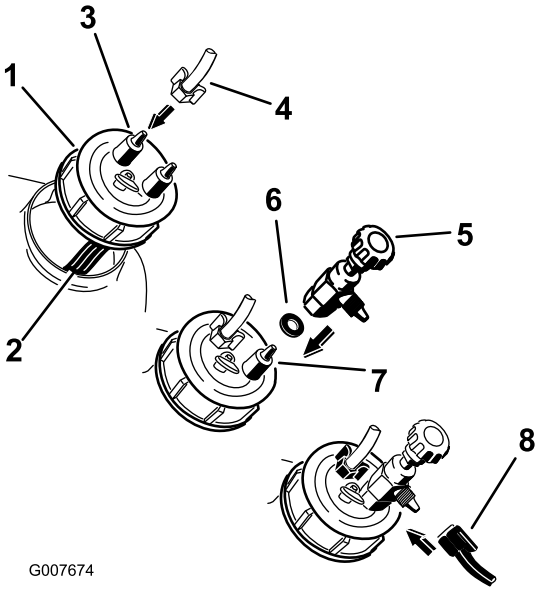


Figure 1

1. Black cap on the end of the tank assembly
2. Blue filter tube (inside the tank)
3. Barb (not connected to the filter tube)
4. Clear tube and white clamp
5. Cap mount regulating valve (black with 1 washer)
6. Washer
7. Barb, (connected to the filter tube)
8. Blue tube and blue clamp

A. Unscrew the black tank cap and lift it from the machine enough to see the blue filter tube.

B. Remove the white tube clamp from the hose barb on the tank cap **not connected** to the blue filter tube inside the tank.

C. Install the white clamp over the clear tube, install the clear tube onto the hose barb, and secure the clear tube with the white clamp.

D. Locate the cap mount regulating valve in loose parts.

Note: This valve is black with 1 washer.

E. Remove the blue tube clamp from the hose barb on the tank cap **connected** to the blue filter tube inside the tank.

F. Install the washer and then the cap-mount regulating valve to the hose barb.

G. Slip the blue clamp over the blue tube, install the blue tube to the top barb on the valve, and secure the blue tube with the blue clamp.

Installing the Foam Control Valve on Multi-Pro 5000 Series Turf Sprayers

1. Locate the foam hose previously routed forward to the cab.
2. Install a plastic tube clamp to the exposed foam tubes.

   Note: Use a blue clamp for the blue (fluid) tube and a white clamp for the clear (air) tube.
3. Depending on the model, drill or knock out a hole in the dashboard.

   For a Multi-Pro 5700 model:

   A. Make a mark inward from the right side of the dashboard 25 cm (10 inches) and then 4 cm (1-1/2 inches) from the bottom of the dashboard (Figure 2).

   Note: If there is a knock out plug in this location, knock out the plug and go to step 4.

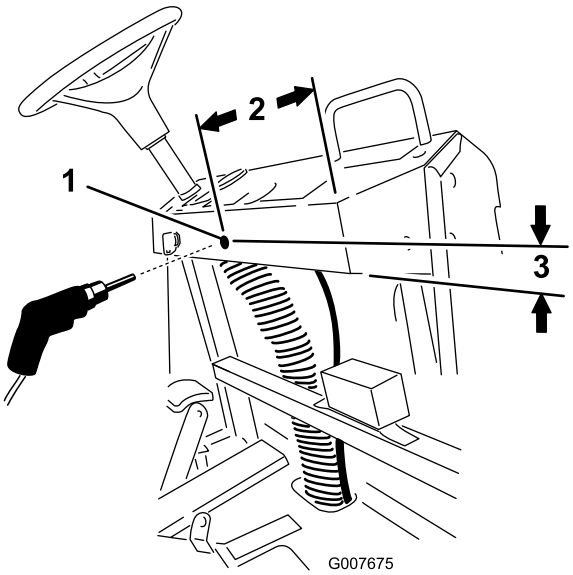


Figure 2
Multi-Pro 5700

1. Drill hole, 11 mm (7/16 inch) diameter
2. 10 inches
3. 1-1/2 inches

   B. Drill a 11 mm (7/16 inch) diameter hole at the location marked, and clean any debris and file off any rough edges around the hole.

   For a Multi-Pro 5800 model:

   Knock out the plug at the location shown in (Figure 3).

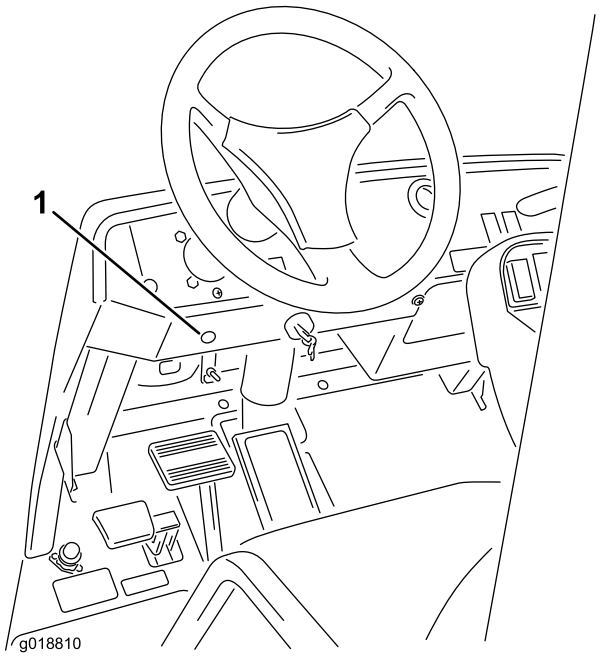


Figure 3
Multi-Pro 5800 model

1. Knock out plug location

4. Locate the regulating valve in loose parts.
5. Loosen the nut that secures the knob to the tee fitting as shown in Figure 4.

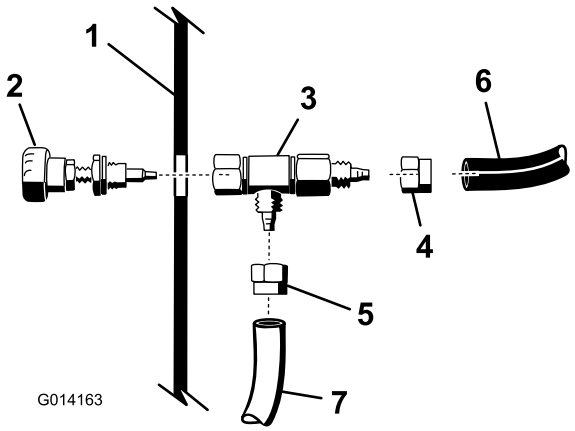


Figure 4

1. Dashboard
2. Knob on the regulating valve
3. Body of the regulating valve
4. Blue tube ferule
5. Clear tube ferule
6. Blue tube
7. Clear tube

6. Install the blue and white tubes from the foam hose under the dashboard to the regulating valve body as shown in Figure 4.

   Note: Use the tube clamps to secure the tubes to the fitting.

7. Wrap PTFE thread tape around the threads of the knob assembly.
8. Install the threaded end of the knob assembly through the dashboard knock out hole.
9. On the underside of the dashboard, secure the regulating valve body to the knob by tightening the nut on the knob.
10. Install the decal as shown in Figure 5.

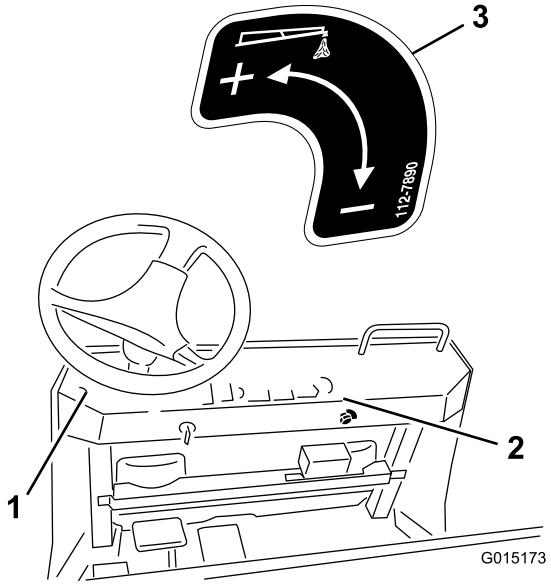


Figure 5

1. For the Multi-Pro 5800, place the decal here.
2. For the Multi-Pro 5700, place the decal here.
3. Decal 112-7890

3

Installing the Foam Nozzles

Parts needed for this procedure:

2	Hose clamps (blue)
2	Hose clamps (white)
4	Brackets
4	Spacers
4	Set screws
2	Mounting rod
2	Foam-nozzle assemblies

Procedure

1. Install a plastic tube clamp to the exposed foam tubes (Figure 6).

   Note: Use a blue clamp for the blue (fluid) tube and a white clamp for the clear (air) tube.

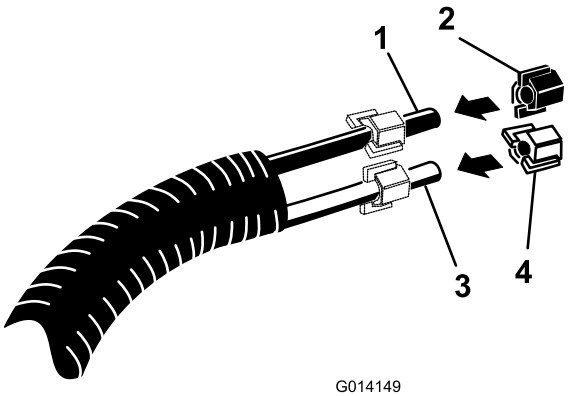


Figure 6

1. Blue tube
2. Blue tube clamp
3. Clear tube
4. White tube clamp

2. Locate the foam nozzle mounting brackets and the spacer.
3. Install the first bracket 3 to 4 inches from the end of the upper boom support pole.
4. Assemble the bracket and spacer as shown (Figure 7).

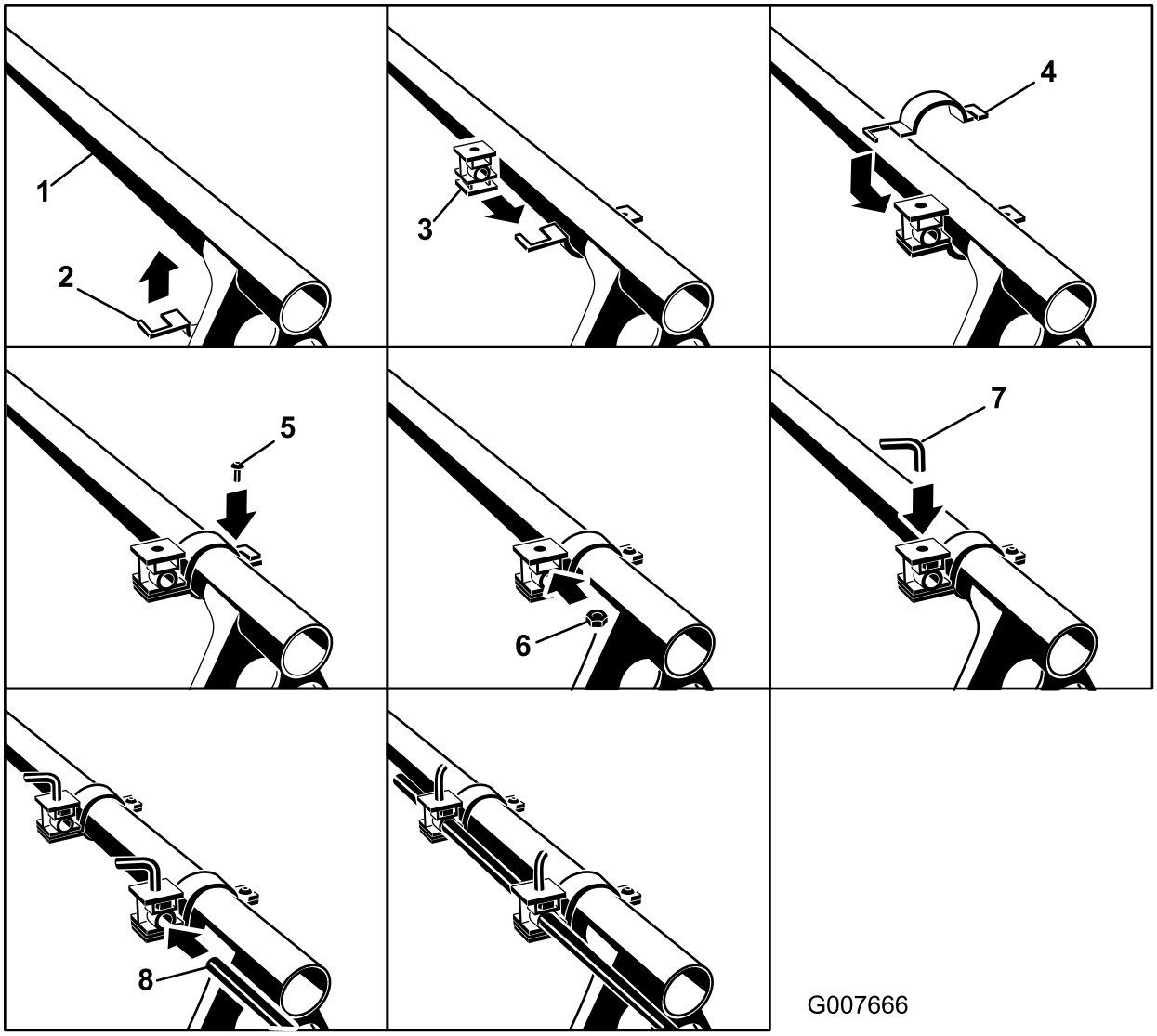


Figure 7

1. Upper-boom support pole
2. Lower half of the bracket clamp
3. Spacer (note orientation)
4. Lower half of the bracket clamp
5. Clamp screw
6. Spacer nut
7. Set screw
8. Mounting rod

5. Install the second bracket assembly 7 to 10 cm (3 to 4 inches) inboard from the first bracket.
6. Install a set screw in the top hole of each spacer.
7. Install the mounting rod, with the splined end outward, into the holes in the spacers.

   Note: Use the set screws to secure the rod in the desired position.
8. Locate the foam nozzles in loose parts and install a nozzle to the mounting rod as shown (Figure 8).

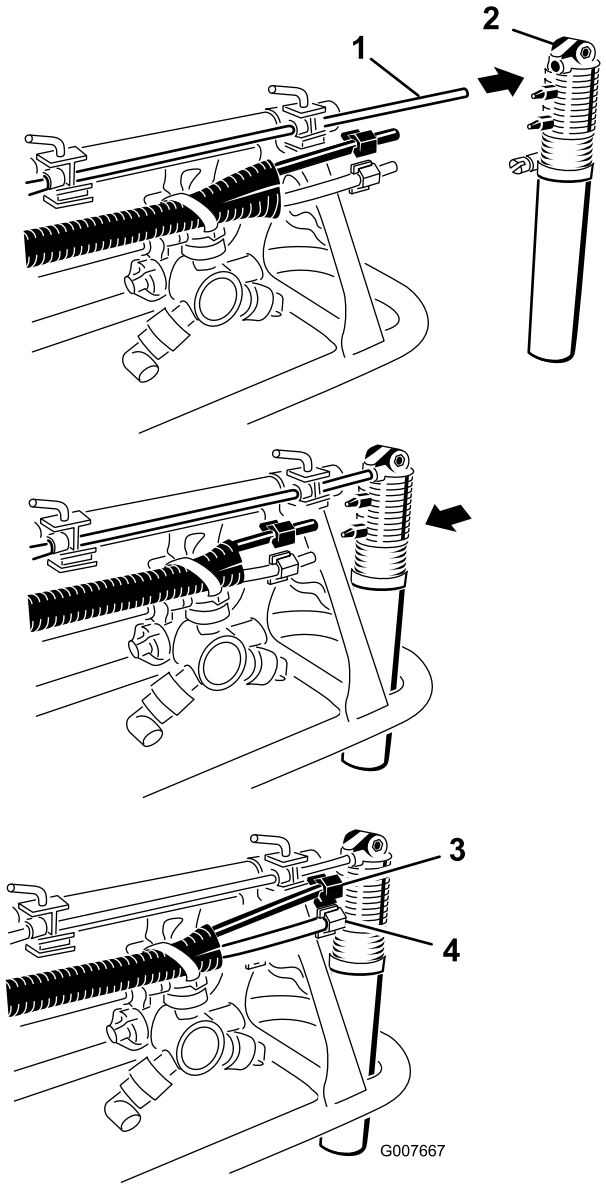


Figure 8

1. Splined-end mandrel
2. Foam nozzle
3. Blue tube and clamp
4. Clear tube and white clamp

9. Connect the blue tube to the upper barb and the clear tube to the lower barb.
10. Secure the hoses with the tube clamps installed previously.
11. Repeat this procedure for the opposing boom.

    Note: Install both mounts onto the rearward side of the upper support pole.

4

Installing the Foam Marker Kit and the Bracket

Parts needed for this procedure:

1	Foam marker finishing kit (sold separately)

See the installation instructions that came with the foam marker finishing kit.

5

Routing the Foam Hoses

Parts needed for this procedure:

1	Foam hose
8	Plastic ties

Cutting Lengths for Foam Hose

	1750 Series	5000 Series	WM (Workman) 200
Right boom foam hose	5.5 m (18 ft)	4.3 m (14 ft)	5.5 m (18 ft)
Left boom foam hose	4.9 m (16 ft)	4.9 m (16 ft)	4.9 m (16 ft)
Foam density control hose	N/A	4.9 m (16 ft)	N/A
Compressor to tank loop	92 cm (3 ft)	92 cm (3 ft) (Clear tube used only)	92 cm (3 ft)

1. Measure the length of hose from the larger loop and cut accordingly.

   Note: Place the remainder aside.
2. At each end of the cut hoses, cut back the black sheath to expose 7 to 10 cm (3 to 4 inches) of the blue and clear tubing.

Routing the Foam Hoses to the Booms

1. Install the foam hoses to the booms.

   Note: Install the shorter length of hose to the boom on the same side as the bracket; install the longer hose to the boom on the side opposite of the bracket.

   A. On the right boom, install the foam hose along the rear side of the upper support pole (Figure 9).

Important: The foam hoses will be pinched when the booms are in the "X" transport position if they are installed on the wrong side.

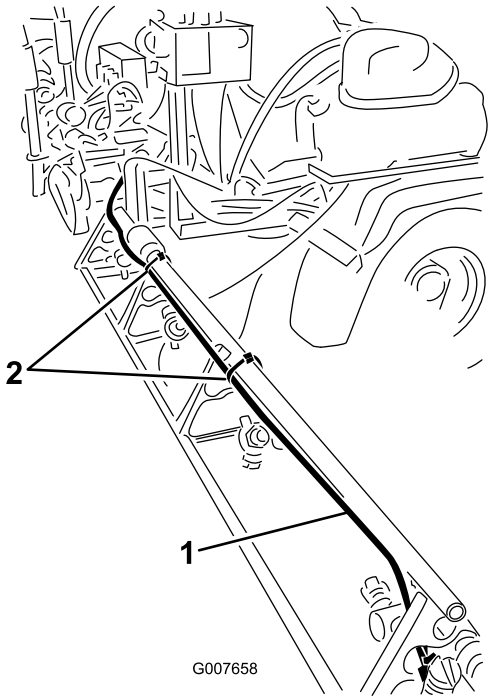


Figure 9

Multi-Pro 5000 Series shown

1. Foam hose on the right boom
2. Plastic ties

B. Align the end of the hose with the end of the upper support pole.

Note: Use a plastic tie to secure the foam hose to the brace using the holes in the brace (Figure 10).

Note: Leave a small excess of hose at the end of the boom to allow the boom to extend.

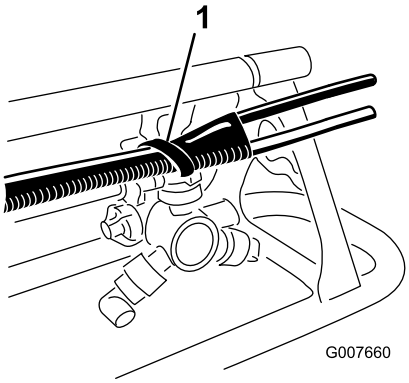


Figure 10

1. Plastic tie

C. Continue to route the hose along the existing boom supply hose.

Note: Use plastic ties to secure the hose to the brace at the positions shown in Figure 11.

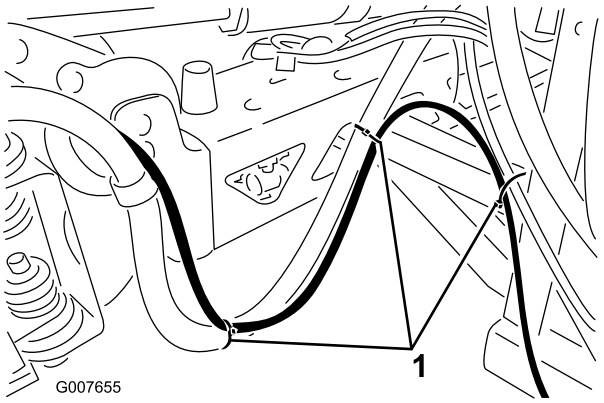


Figure 11

1. Plastic ties

D. Repeat the process for the left boom, but route the hose along the front side of the upper support pole.

Important: The foam hoses will be pinched when the booms are in the "X" transport position if they are installed on the wrong side.

2. Route the 2 foam hoses from the booms forward to the side of the machine with the mounting bracket (Figure 12).

Important: Do not route hoses where they will be pinched or pulled out of place.

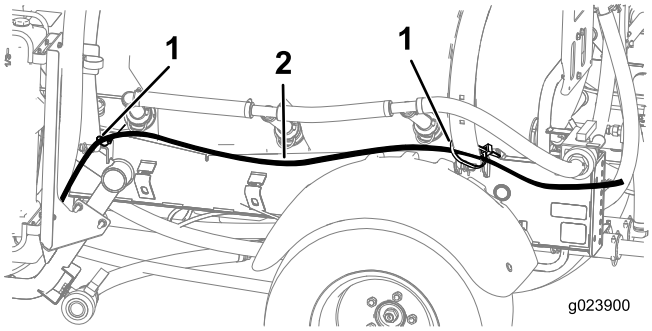


Figure 12

Multi-Pro 1750 shown as an example

1. Plastic ties
2. Hose

3. Use the wire ties provided to secure the foam hoses to the existing wiring harness or the boom supply hoses.

Routing the Foam-density-control Hose (for the Multi-Pro 5000 Series Sprayers only)

The foam-control knob is installed on the cab of the Multi-Pro 5000 Series sprayers only.

Route a separate foam hose forward toward the cab to prepare for installation of the control valve.

1. Locate the 16-foot foam hose for the dashboard-mounted control valve.
2. Route the hose from the foam marker bracket forward, below the chemical tank and behind the fuel tank, along with existing wiring to the area under the seat box (Figure 13).

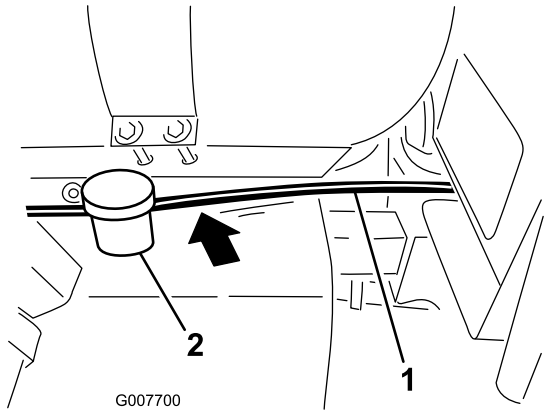


Figure 13

1. Foam hose
2. Fuel tank

3. Lift the seat, and continue to route the hose under the floor board and forward to the opening in the front end.
4. Route the hose upward to behind the right side of the dashboard (Figure 14).

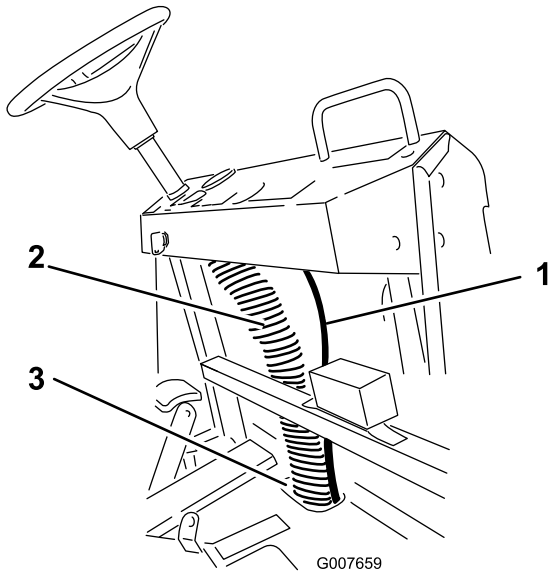


Figure 14

1. Foam hose
2. Column of existing wiring
3. Opening in front end floor board

5. Secure the hose to the column of the existing wiring (Figure 14).

6

Connecting the Hoses

No Parts Required

Connecting the Hoses on Multi-Pro 1750 Series Turf Sprayers and WM (Workman) Turf Spray Systems

1. Install a corresponding colored clamp over each colored tube from the 3-foot loop-back hose previously installed to the black tank cap.
2. Install the blue and clear tubes to the corresponding upper barbs on the compressor (Figure 15).

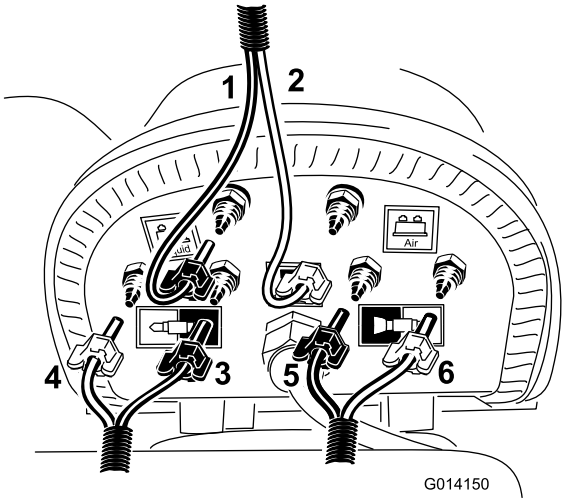


Figure 15

1. Blue (fluid) tube and blue clamp for the 1m (3 ft) loop-back hose
2. Clear (air) tube and white clamp for the 1 m (3 ft) loop-back hose
3. Blue tube and blue clamp for the right boom
4. Clear tube and white clamp for the right boom
5. Blue tube and blue clamp for the left boom
6. Clear tube and white clamp for the left boom

3. Install a corresponding colored clamp over each colored tube from the foam hose previously routed to the spray booms.
4. Locate the foam hose routed to the left boom, and install the blue and white tubes to the locations as shown in Figure 15.
5. Locate the foam hose routed to the right boom, and install the blue and white tubes to the locations as shown in Figure 15.
6. Secure all of the tubes to the barbs with the remaining clamps.
7. Ensure that the final routing is as shown in Figure 16.

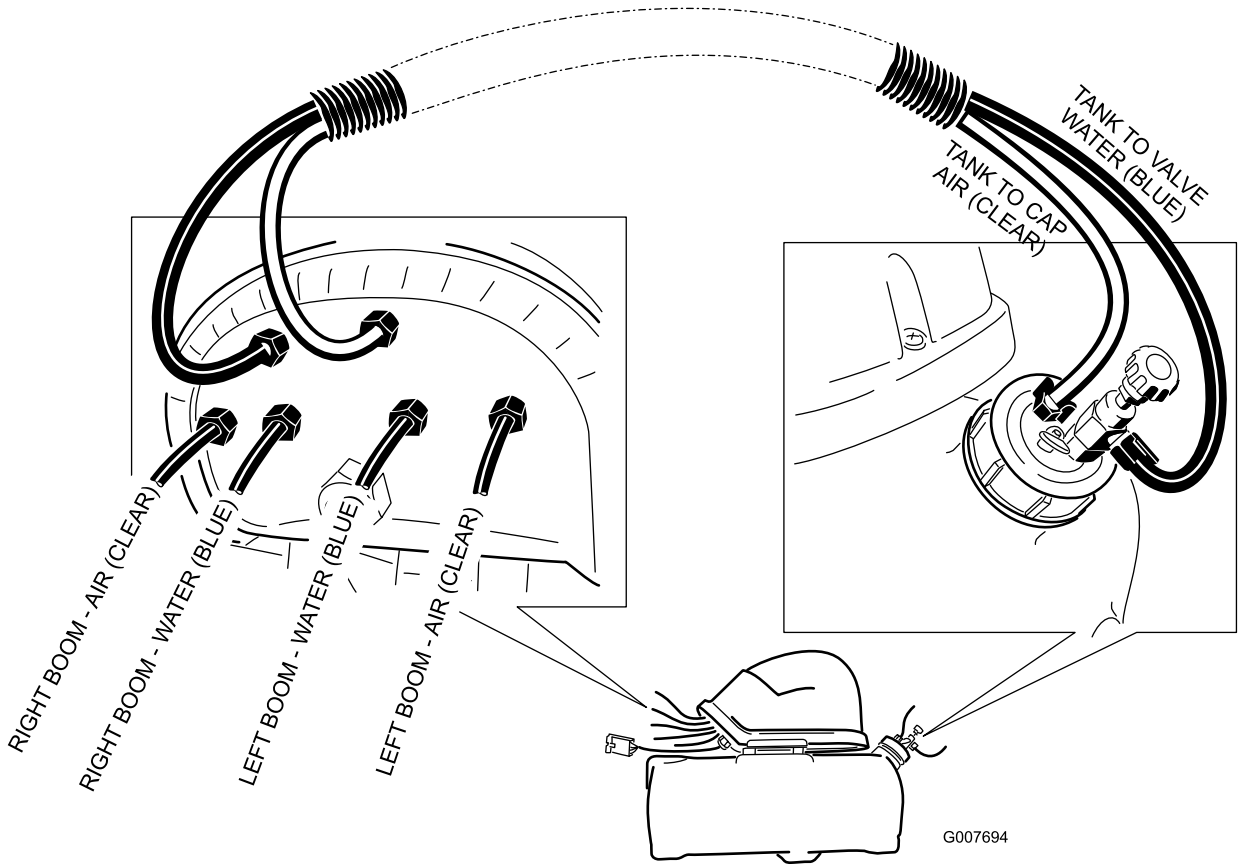


Figure 16

Connecting the Hoses on Multi-Pro 5000 Series Turf Sprayers

1. Connect the electrical plug from the foam marker tank assembly to the open plug in the wiring harness at the bracket.
2. Locate the open tube ends from the long hose routed to the dashboard previously installed, and install the blue tube to the an open barb on the black, tank cap.

   Note: Install the clear tube to the **blue** or water barb on the compressor shown in Figure 17. Use a blue tube clamp to secure both tubes. The sheath of the tubing will require further splitting to accommodate the length of the tank assembly.

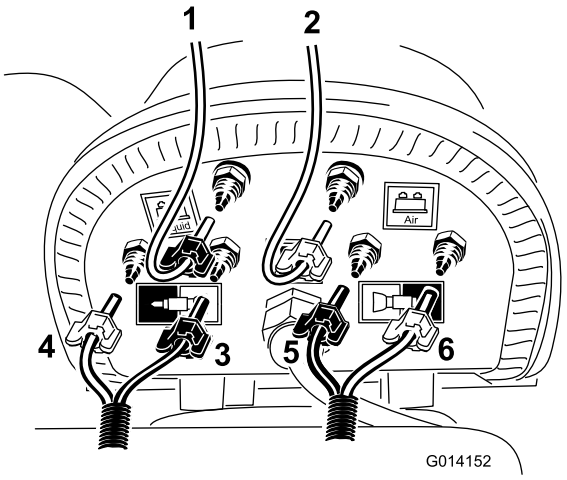


Figure 17

1. Clear tube and blue clamp for the return tube from the control valve
2. Clear tube and white clamp (a single-use clear tube of 1m (3 ft) loop-back hose)
3. Clear tube and white clamp for the right boom
4. Blue tube and blue clamp for the right boom
5. Blue tube and blue clamp for the left boom
6. Clear tube and white clamp for the left boom

3. Locate the short, loop-back hose previously cut, and install the clear tube to the remaining barb on the tank cap shown in Figure 17.

   Note: Route the open end to the air or white barb on the compressor. Use white tube clamps to secure the tube.

4. Locate 2 blue clamps and 2 white clamps in loose parts, and install a corresponding colored clamp over each colored tube in the foam hose previously routed to the spray booms.

5. Locate the foam hose routed to the left boom, and install the blue and white tube to the locations as shown in Figure 17.

6. Locate the foam hose routed to the right boom, and install the blue and white tube to the locations as shown in Figure 17.

7. Secure all tubes to with the remaining tube clamps.

8. The final routing should be as shown in Figure 18.

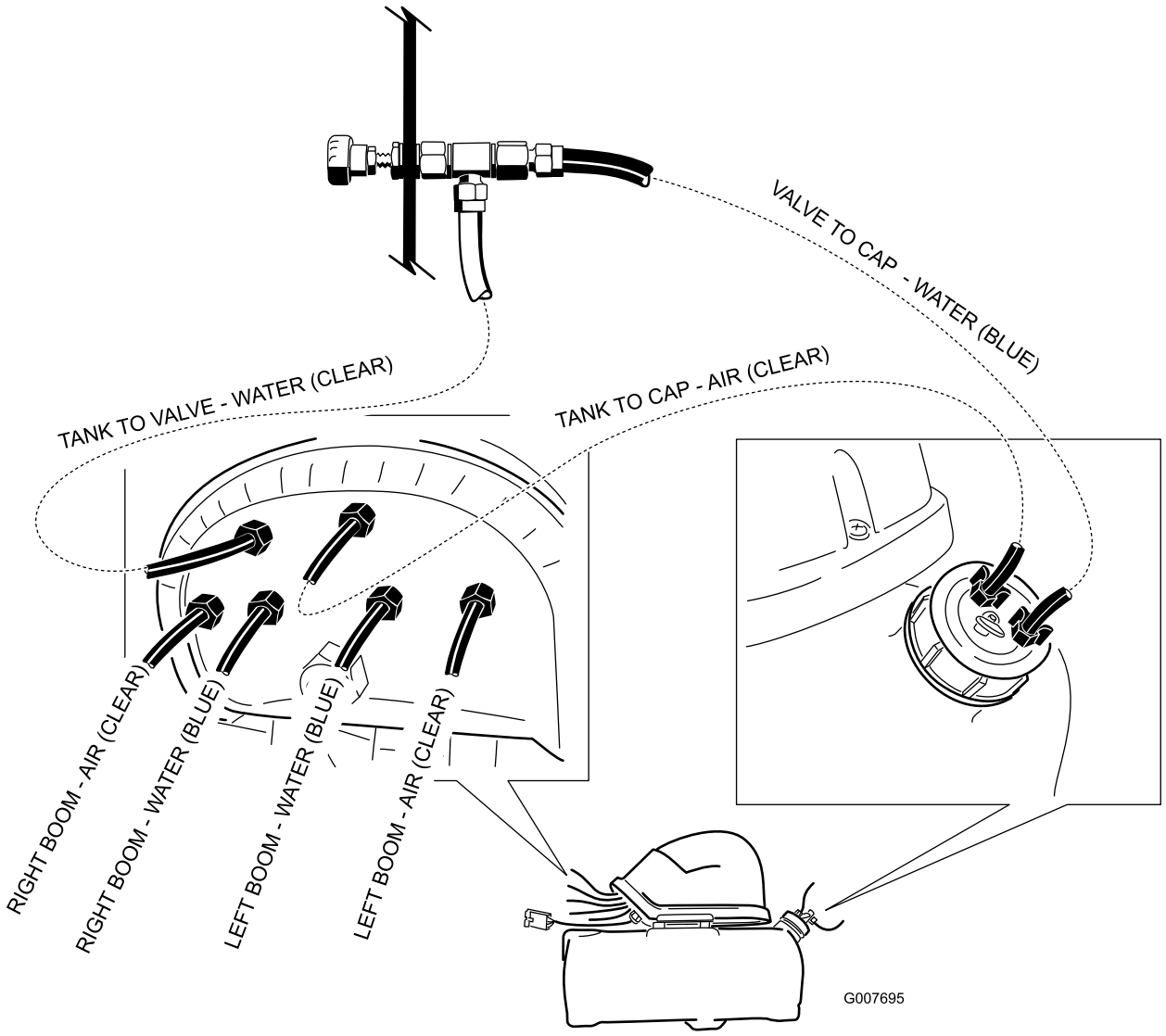


Figure 18

Operation

Using the Controls

Right boom switch—activates the compressor, generating a flow of water and air to the right boom section.

Left boom switch—activates the compressor, generating a flow of water and air to the left boom section.

Note: You can drop the foam simultaneously from both boom sections.

Indicator markings—located on the side of the tank, they indicate the solution level in the tank.

Foam regulator adjustment valve—controls the consistency of the foam solution. Adjusting the valve, opening or closing, controls the amount of soap solution delivered to the foam nozzles. Increasing the flow results in larger, more frequent foam drops; decreasing the flow results in smaller, less frequent foam drops.

Note: A watery marker consistency may be helpful on windy days.

Pressure relief valve—pull the red tab on the tank cap outward to relieve pressure in the tank.

Filling the Tank and Adjusting the Foam Density

Important: Flush the system with clean water after each use, especially after using hard water. Do not apply lubricating oils, grease, or other petroleum products to the compressor motor assembly.

1. Ensure that both the left and right boom switches located on the console are in the Off position.
2. Pull out on the red pressure-relief tab, and remove the black cap from the tank.
3. Pour the proper amount water into the tank, and then add foam concentrate through the opening in the top of the tank according to the manufacturer's instructions.

   Important: Extreme pH levels (hardness or softness) of the water will affect the amount of foam concentrate needed.
4. Install the cap on the tank and tighten it by hand.
5. For the initial operation, open the foam density adjustment valve 1/8 to 1/4 turn counterclockwise (Figure 19).

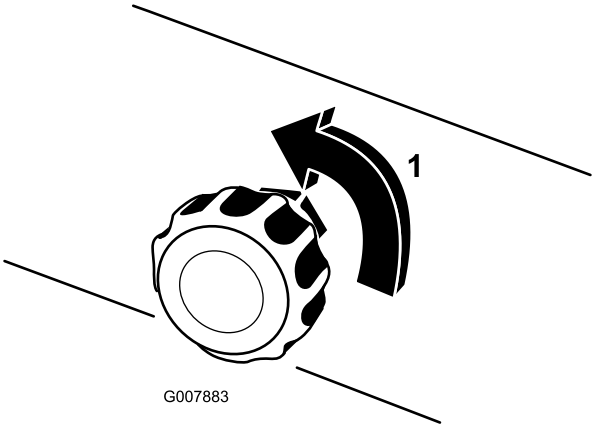


Figure 19

1. 1/4 turn open

6. Start operating the marking system and make a test pattern on the ground.

   Note: When you first start the marking system, allow 1 to 2 minutes for the foam to flow through the line.
7. Adjust the foam density adjustment valve to obtain the desired consistency and spray as normal.

   Note: If you leave the foam in the line for more than 2 hours, it may become watery. Before operating after a break of 2 or more hours, run the machine for 1 to 2 minutes to remove the excess water.

   If the foam in the machine is very watery, do the following:

   A. Close the foam density adjustment valve completely.

   B. Operate for 2 minutes.

   C. Wait 1 minute and then check the consistency of the foam.

   D. Adjust the foam to achieve the desired consistency.

Maintenance

Winterizing

1. Relieve the pressure within the tank by pulling the release valve on the tank.
2. Disconnect the air and liquid tubing from the tank cap.
3. Connect the air and water tubing together with the supplied tubing coupler.
4. Turn on the foam marker for 5 minutes on each side.

   Note: This will remove the solution from the solenoids and avoid damage from freezing.
5. Disassemble the foam nozzles and replace the foam sponges.
6. Empty the tank of all soap and liquids to avoid damaging the tank from freezing.

Storage

1. Move the vehicle onto a level surface, set the parking brake, stop the pump, stop the engine, and remove the ignition key.
2. Relieve pressure within tank by opening the tank fill cap, install the tank fill cap, and hand tighten it.
3. Disconnect the air and liquid tubing from the tank.

   Note: Replace air and liquid tubing together with the supplied tubing coupler.
4. Disassemble the foam nozzles and replace the foam sponges.
5. Empty the tank of all soap and liquids to avoid damaging the tank from freezing.