



# Multi Pro® WM Turf Sprayer Finishing Kit

## Automatic Workman® Utility Vehicle

Model No. 131-3301

### Installation Instructions

#### ⚠ 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.

Use of this product may cause exposure to chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

## 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	Hydraulic motor	1	Prepare the hydraulic motor.
	Shaft guard	1	
	Motor bracket	1	
	Flange-head bolt (1/2 x 1-1/2 inches)	2	
	Flange nut (1/2 inch)	2	
	Anti-rotation bracket	1	
	Flange-head bolt (5/16 x 3 inches)	1	
	Flat washer	1	
	Compression spring	2	
	Flange locknut (5/16 inch)	1	
3	Straight hydraulic fitting (7/8 inch)	2	Install the hydraulic motor to the hydraulic pump.
	Hydraulic hose (1/2 x 17 inches)	2	
	Male coupler	2	
	Shaft coupler	1	
	Woodruff key	1	
4	Square-head screw	4	Install the hydraulic hoses from the motor to the high-flow system.
	Flange-head bolt (3/8 x 1 inch)	2	
	Flange nut (3/8 inch)	2	
	No parts required	—	



Procedure	Description	Qty.	Use
<b>5</b>	Male quick-connect coupler Female quick-connect coupler Hydraulic hose (3/8 x 61 inches) Hydraulic hose (3/8 x 79 inches) Cable tie Tube-clamp half Flange-head bolt (5/16 x 1-1/2 inches)	1 1 1 1 2 2 1	Install the hydraulic hoses for the boom-lift cylinders.
<b>6</b>	Rocker switch Kit wire-harness adapter	1 1	Install the rocker switch.

**Note:** Remove the cargo box or flatbed from the vehicle before installing this kit; refer to the *Operator's Manual* for the vehicle.

**Note:** For Non-TC models, install the High-Flow Hydraulic Kit before installing this kit; contact your Authorized Toro Distributor about purchasing this kit.

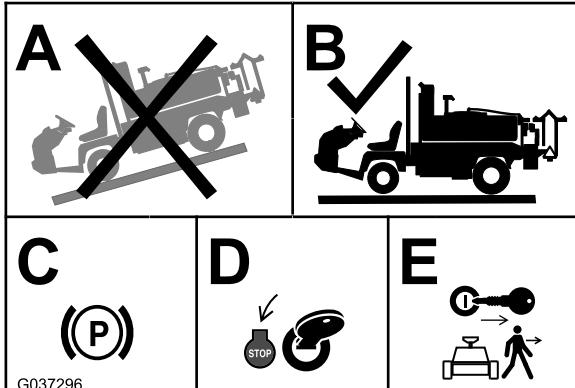
**1**

## Preparing the Machine

### No Parts Required

### Procedure

1. Move the machine to a level surface (A and B of [Figure 1](#)).



**Figure 1**

2. Set the parking brake (C of [Figure 1](#)).
3. Shut off the engine (D of [Figure 1](#)).
4. Remove the key from the key switch (E of [Figure 1](#)).

**2**

## Preparing the Hydraulic Motor

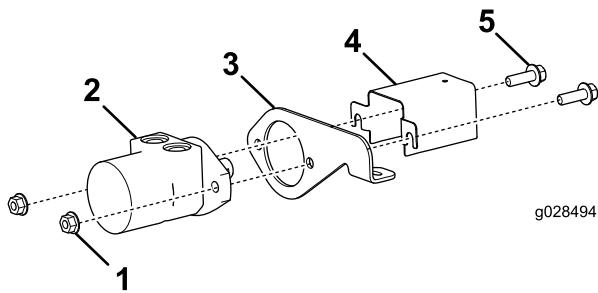
### Parts needed for this procedure:

1	Hydraulic motor
1	Shaft guard
1	Motor bracket
2	Flange-head bolt (1/2 x 1-1/2 inches)
2	Flange nut (1/2 inch)
1	Anti-rotation bracket
1	Flange-head bolt (5/16 x 3 inches)
1	Flat washer
2	Compression spring
1	Flange locknut (5/16 inch)
2	Straight hydraulic fitting (7/8 inch)
2	Hydraulic hose (1/2 x 17 inches)
2	Male coupler

### Assembling the Brackets to the Hydraulic Motor

1. Apply medium-duty thread-locking compound to the threads of 2 flange-head bolts (1/2 x 1-1/2 inches).
2. Install the shaft guard and the motor bracket onto the hydraulic motor with 2 flange-head bolts (1/2 x 1-1/2 inches) and 2 flange nuts (1/2 inch) as shown in [Figure 2](#).

**Note:** Torque the bolts and nuts to 67 to 83 N·m (91 to 113 ft-lb).



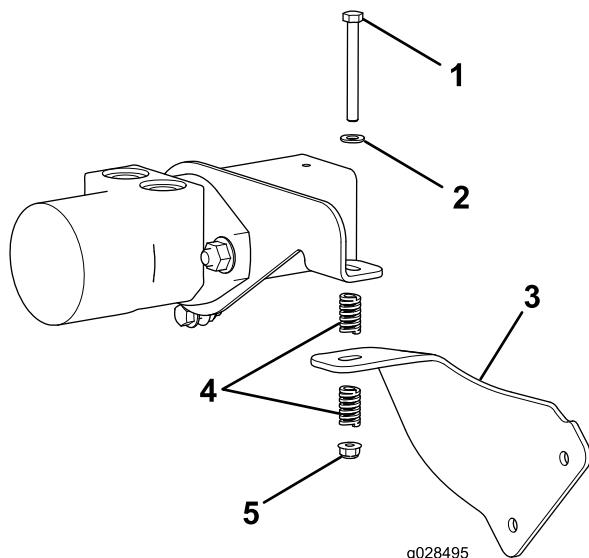
**Figure 2**

1. Flange nut—1/2 inch (2)	4. Shaft guard
2. Hydraulic motor	5. Flange-head bolt—1/2 x 1-1/2 inches (2)
3. Motor bracket	

3. Attach the anti-rotation bracket to the motor bracket with a flange head bolt (5/16 x 3 inches), a flat washer, 2 compression springs, and a flange locknut (5/16 inch) as shown in [Figure 3](#).

**Note:** Torque the nut until 2 threads of the bolt extend beyond the end of the nut.

**Note:** Ensure that the bottom of the locknut is flush with the end of the spring.



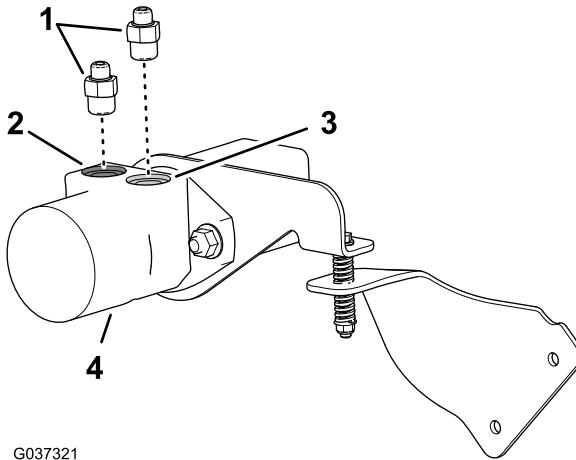
**Figure 3**

1. Flange-head bolt (5/16 x 3 inches)	4. Compression springs
2. Flat washer	5. Flange locknut (5/16 inch)
3. Anti-rotation bracket	

## Assembling the Fittings and Hoses to the Hydraulic Motor

1. Install a straight hydraulic fitting (5/8 inch) onto the port-A of the hydraulic motor and a straight hydraulic fitting (5/8 inch) onto the port-B of the hydraulic motor ([Figure 4](#)).

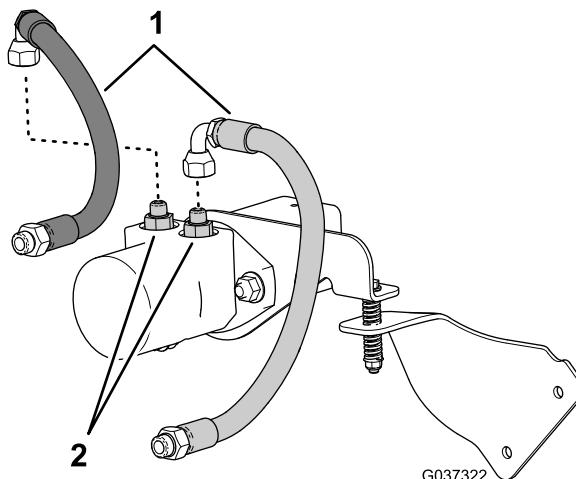
**Note:** Torque the fittings to 79 to 98 N·m (58 to 72 ft-lb).



**Figure 4**

1. Straight-hydraulic fittings—7/8 inch (2)	3. Port-B (hydraulic-motor case)
2. Port-A (hydraulic-motor case)	4. Hydraulic motor

2. Mark the straight end of 1 hydraulic hose (1/2 x 17 inch) with a piece of tape ([Figure 5](#)).



**Figure 5**

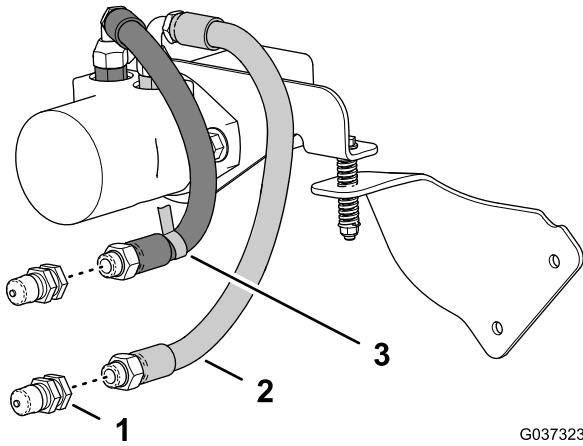
1. Hydraulic hose (1/2 x 17 inch)	3. Straight-hydraulic fitting (port-A)
2. Tape marker (hydraulic hose—port-A)	4. Straight-hydraulic fitting (port-B)

3. Assemble the 90-degree fitting of the marked hydraulic hose onto the straight fitting in port-A of the hydraulic motor ([Figure 5](#)).

- Assemble the 90-degree fitting of the other hydraulic hoses onto the straight fitting in port-B of the hydraulic motor (Figure 5) until it is finger tight.

**Note:** You will torque these fittings later; refer to step 3 in 4 [Installing the Hydraulic Hoses from the Hydraulic Motor to the High-Flow Hydraulic Ports \(page 5\)](#).

- Install a male quick coupler on the other end of each of the 2 hydraulic hoses (Figure 6).



**Figure 6**

1. Male coupler (2)	3. Port-B hydraulic hose
2. Port-A hydraulic hose	

**Note:** Torque the fittings to 79 to 98 N·m (58 to 72 ft-lb).

# 3

## Installing the Hydraulic Motor to the Sprayer Pump

### Parts needed for this procedure:

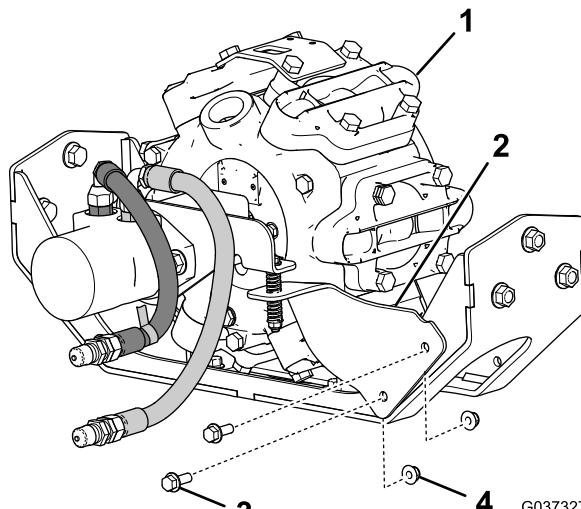
1	Shaft coupler
1	Woodruff key
4	Square-head screw
2	Flange-head bolt (3/8 x 1 inch)
2	Flange nut (3/8 inch)

### Procedure

**Note:** Ensure that the tank skid is raised so that you can install the hydraulic motor from beneath the sprayer; refer to the *Operator's Manual* for the vehicle.

- Install the anti-rotation bracket to the front left bracket on the sprayer pump with 2 flange-head bolts (3/8 x 1 inch) and 2 flange nuts (3/8 inch) as shown in Figure 7.

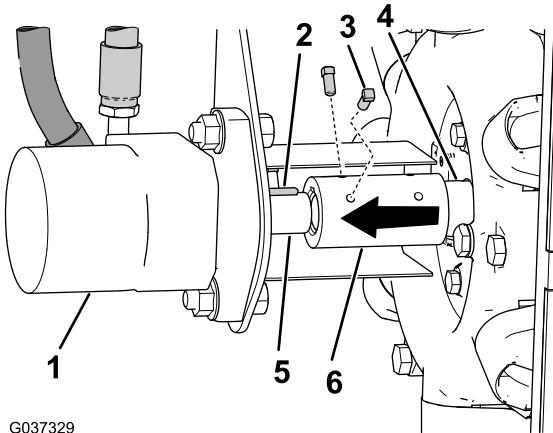
**Note:** Torque the bolts and nuts to 37 to 45 N·m (27 to 33 ft-lb).



**Figure 7**

1. Sprayer pump	3. Flange-head bolt—3/8 x 1 inch (2)
2. Anti-rotation bracket	4. Flange nut—3/8 inch (2)

- Insert the Woodruff key into the key slot in the shaft of the hydraulic motor (Figure 8).



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**Figure 8**  
Bottom view

1. Motor	4. Pump shaft
2. Woodruff key	5. Shaft of the hydraulic motor
3. Square-head screw (4)	6. Shaft coupler

3. Align the slot in the shaft coupler with the Woodruff key, and slip the shaft coupler onto the shaft of the hydraulic motor (Figure 8).
4. Align the slot in the open end of the shaft coupler with the Woodruff key in the sprayer pump shaft (Figure 8).

**Note:** Ensure that there is a Woodruff key in the key slot of the sprayer pump shaft (Figure 8).

5. Position the coupler evenly over the motor and pump shafts (Figure 8).
6. Apply medium-duty, thread-locking compound on the 4 square-head screws, and secure the shaft coupler to both shafts with the screws (Figure 8).

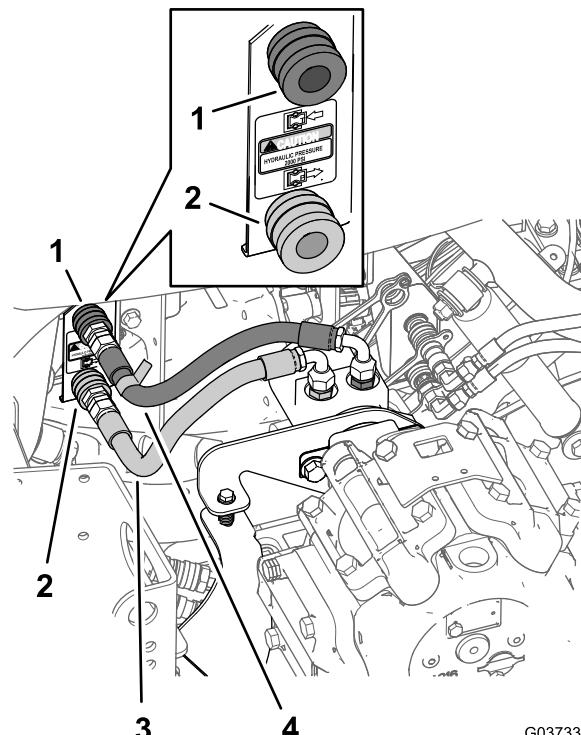
# 4

## Installing the Hydraulic Hoses from the Hydraulic Motor to the High-Flow Hydraulic Ports

### No Parts Required

### Procedure

1. Connect the free end of the hydraulic hose (hydraulic-motor port-B) that you marked with tape in step 2 of [Assembling the Fittings and Hoses to the Hydraulic Motor \(page 3\)](#) to the port-T of the quick-connect coupler panel (Figure 9).



**Figure 9**

1. Quick-connect coupler (port-T—coupler panel)	3. Hydraulic hose (hydraulic-motor port-A)
2. Quick-connect coupler (port-P—coupler panel)	4. Hydraulic hose (hydraulic-motor port-B—marked with tape)

2. Connect the free end of the other hose (hydraulic-motor port A) to the port-P of the quick-connect coupler panel (Figure 9).
3. At the 2 straight fittings in the hydraulic motor, torque the swivel nuts of the 90-degree fittings on the 2 hydraulic hoses (Figure 5) to 50 to 64 N·m (37 to 47 ft-lb).

# 5

## Installing the Hydraulic Hoses for the Boom-Lift Cylinders

### Parts needed for this procedure:

1	Male quick-connect coupler
1	Female quick-connect coupler
1	Hydraulic hose (3/8 x 61 inches)
1	Hydraulic hose (3/8 x 79 inches)
2	Cable tie
2	Tube-clamp half
1	Flange-head bolt (5/16 x 1-1/2 inches)

### Assembling the Quick-Disconnect Fittings to the Hoses

**Note:** Ensure that the tank skid is raised and that the cylinder lock is in place.

**Note:** Ensure that the center boom section is installed; refer to the *Installation Instructions* for the sprayer.

1. Assemble the male quick-connect coupler onto the male hose fitting (Figure 10) of the hydraulic hose (3/8 x 79 inches).

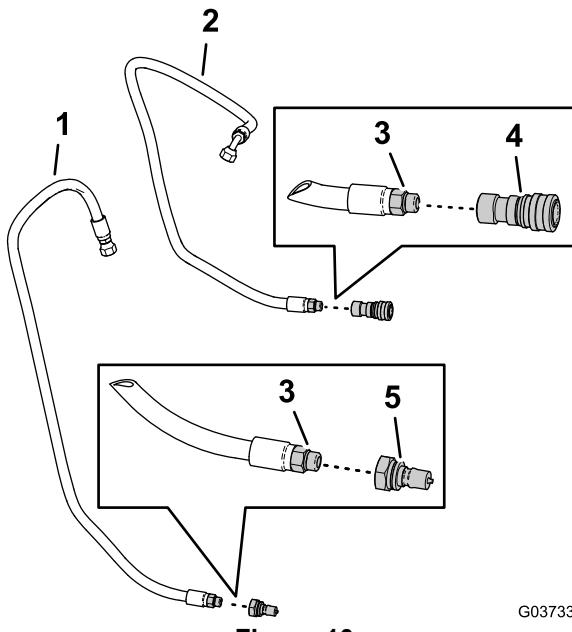


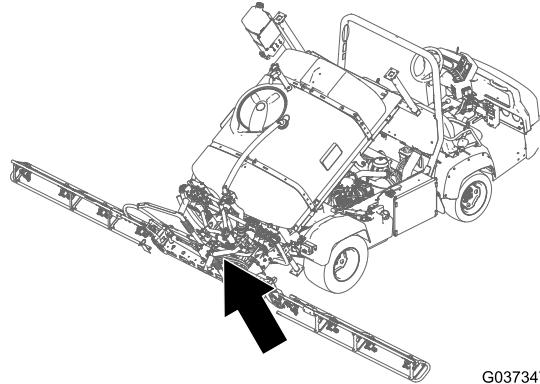
Figure 10

1. Hydraulic hose (3/8 x 79 inches)
2. Hydraulic hose (3/8 x 61 inches)
3. Male hose fitting
4. Female quick-connect coupler
5. Male quick-connect coupler

2. Assemble the female quick-connect coupler onto the male hose fitting (Figure 10) of the hydraulic hose (3/8 x 61 inches).
3. Torque the quick disconnect fitting and the hose to 24 to 30 N·m (18 to 22 ft-lb)

### Routing the Hydraulic Hoses

1. At the boom-lift manifold, note the tank hydraulic hose at port-T and the pressure hydraulic hose at port-P of the manifold (Figure 11).



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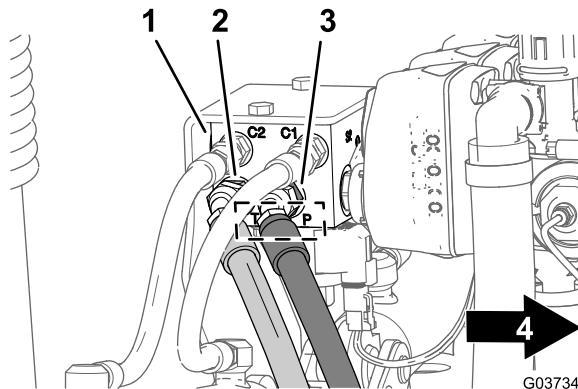


Figure 11

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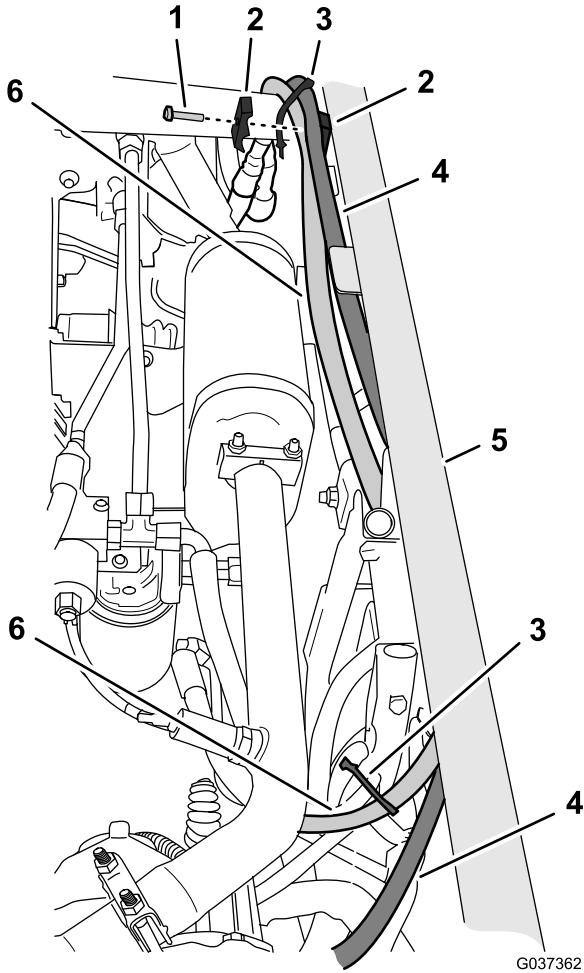
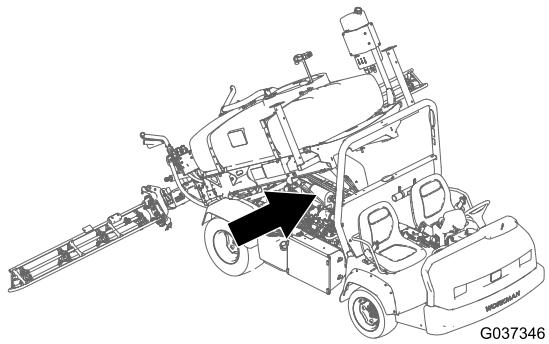
1. Boom-lift manifold
2. Hydraulic hose—tank (port-T fitting)
3. Hydraulic hose—pressure (port-P fitting)
4. Front of the machine

2. Route the hydraulic hose (3/8 x 79 inches) and the hydraulic hose (3/8 x 61 inches) along the left frame channel of the machine as shown in Figure 12

**Note:** You will secure the hoses in later a later step.

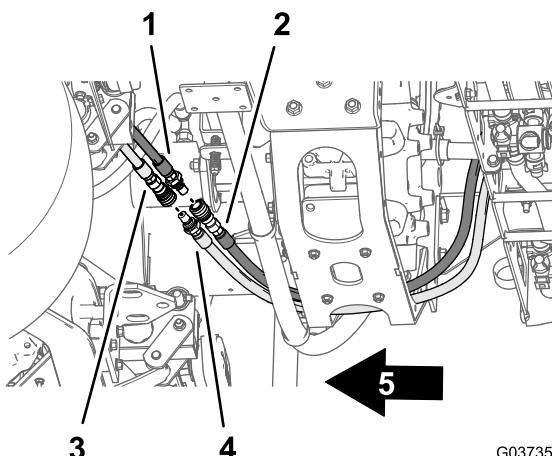
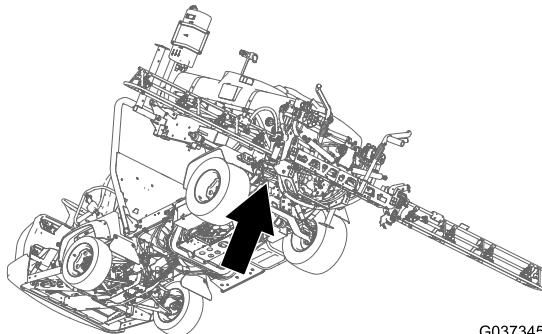
## Installing the Hydraulic Hoses

1. Connect the male quick-connect coupler of the hydraulic hose (3/8 x 79 inches) into the female quick-connect coupler of the pressure hose for the boom-lift manifold that you identified in step 1 as shown in [Figure 13](#).



**Figure 12**

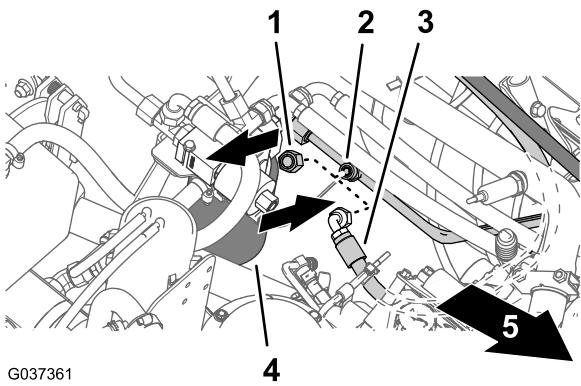
1. Flange-head bolt (5/16 x 1-1/2 inches)	4. Hydraulic hose (3/8 x 79 inches)
2. Tube-clamp halves	5. Left frame channel (machine)
3. Cable tie	6. Hydraulic hose (3/8 x 61 inches)



**Figure 13**

1. Hydraulic hose (3/8 x 79 inches—male quick-connect coupler)	4. Boom-lift manifold hose—tank (male quick-connect coupler)
2. Boom-lift manifold hose—pressure (female quick-connect coupler)	5. Front of the machine
3. Hydraulic hose (3/8 x 61 inches—female quick-connect coupler)	

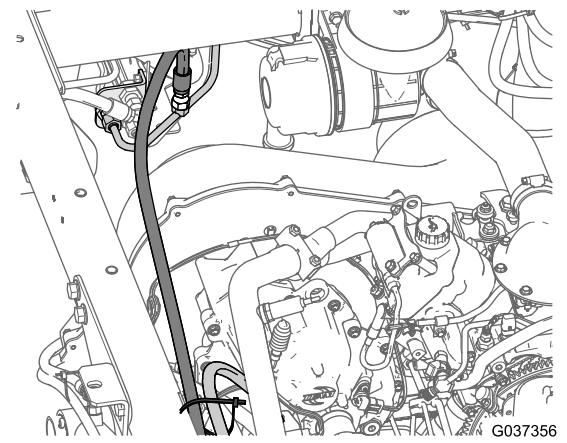
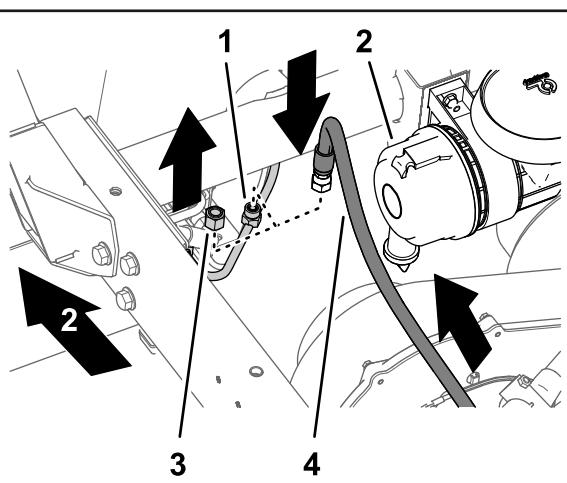
2. Connect the female quick-connect coupler of the hydraulic hose (3/8 x 61 inches) onto the male quick-connect coupler of the tank hose for the boom-lift manifold that you identified in step 1 as shown in [Figure 13](#).
3. Remove the cap from the T-fitting in the hydraulic tube next to the hydraulic-oil filter as shown in [Figure 14](#).



**Figure 14**

- 1. Cap
- 2. T-fitting (hydraulic tube)
- 3. 90° fitting—hydraulic hose (3/8 x 61 inches)
- 4. Hydraulic-oil filter

- 4. Assemble the 90° fitting of the hydraulic hose (3/8 x 61 inches) to the T-fitting (Figure 14) and torque the swivel nut of the hose to 37 to 45 N·m (27 to 33 ft-lb).
- 5. Remove the cap from the T-fitting of the hydraulic tube fitting next to the engine-air filter as shown in Figure 15.



**Figure 15**

- 1. T-fitting (hydraulic tube)
- 2. Engine-air filter
- 3. Cap
- 4. Hydraulic hose (3/8 x 79 inches)

- 6. Assemble the straight fitting of the hydraulic hose (3/8 x 79 inches) onto the hydraulic tube fitting and torque the swivel nut of the hose to 37 to 45 N·m (27 to 33 ft-lb).
- 7. Secure the hoses with flange-head bolt (5/16 x 1-1/2 inches), 2 tube-clamp halves, and 2 cable ties at the locations shown in Figure 12 of [Routing the Hydraulic Hoses \(page 6\)](#).

# 6

## Installing the Rocker Switch

### Parts needed for this procedure:

1	Rocker switch
1	Kit wire-harness adapter

### Procedure

**Note:** Ensure that the control console and the electrical harness are installed; refer to the *Installation Instructions* for the sprayer.

1. Connect the 3-pin connector of the wire-harness adapter to the 3-socket connector labeled CLOSED LOOP CONTROL KIT for the console-wire harness (Figure 16).

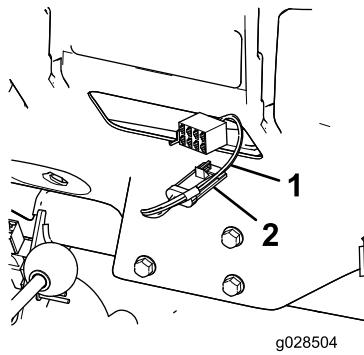


Figure 16

1. Wire-harness adapter      2. 3-socket connector (labeled CLOSED LOOP CONTROL KIT—console-wire harness)
2. Connect the rocker switch into the 8-socket connector of the wire-harness adapter.
3. Install the rocker switch into the opening in the control console (Figure 17) until the switch snaps into place.

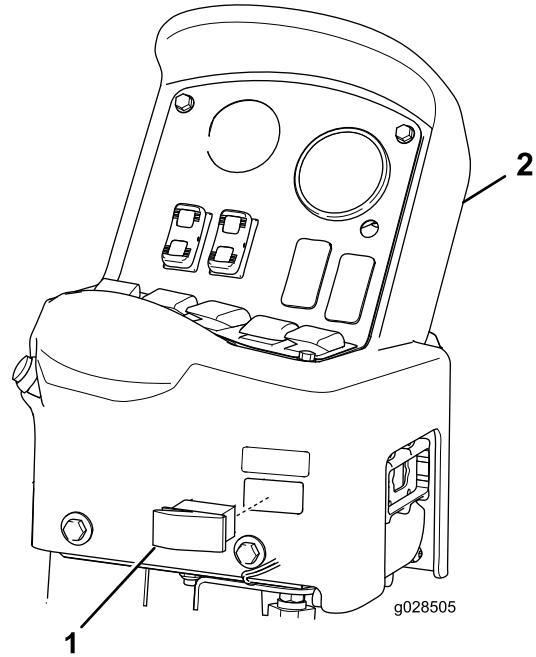


Figure 17

1. Rocker switch
2. Control console

## Notes:

## Notes:



**Count on it.**