



Low Flow Auxiliary Kit

TX 1000 Compact Utility Loader

Model No. 23134

Installation Instructions

Do not install this kit on the machine model numbers 22327G, 2327HD, and 22328HD.

Safety

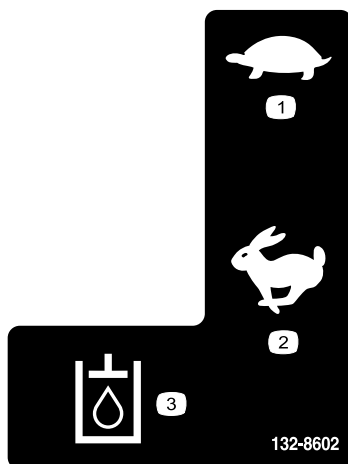
Hydraulic System Safety

- Seek immediate medical attention if fluid is injected into skin. Injected fluid must be surgically removed within a few hours by a doctor.
- Ensure that all hydraulic-fluid hoses and lines are in good condition and all hydraulic connections and fittings are tight before applying pressure to the hydraulic system.
- Keep your body and hands away from pinhole leaks or nozzles that eject high-pressure hydraulic fluid.
- Use cardboard or paper to find hydraulic leaks.
- Safely relieve all pressure in the hydraulic system before performing any work on the hydraulic system.

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 missing.



132-8602

decal132-8602

1. Slow
2. Fast
3. Hydraulic fluid



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 | No parts required | – | Disconnect the battery. |
| 3 | No parts required | – | Remove the cover plate and baffle. |
| 4 | No parts required | – | Separate the traction enable valve. |
| 5 | No parts required | – | Remove the existing hoses. |
| 6 | 45° fitting 90° fitting | 1 1 | Prepare the auxiliary valve. |
| 7 | Low-flow valve 90° fitting 45° fitting Bolt (1/4 x 2-1/2 inches) Locknut (1/4 inch) | 1 1 1 2 2 | Install the valve assembly. |
| 8 | 90° fitting Manifold tube S-shaped tube U-shaped tube L-shaped tube | 1 1 1 1 1 | Install the tubes. |
| 9 | Hose 41.9 cm (16-1/2 inches) Hose protector Cable tie | 1 1 3 | Install the hoses. |
| 10 | Switch Decal Wire harness | 1 1 1 | Install the switch and wire harness. |
| 11 | No parts required | – | Assemble the traction enable valve. |
| 12 | No parts required | – | Check for hydraulic leaks. |
| 13 | No parts required | – | Install the baffle and cover plate. |

1

Preparing the Machine

No Parts Required

Procedure

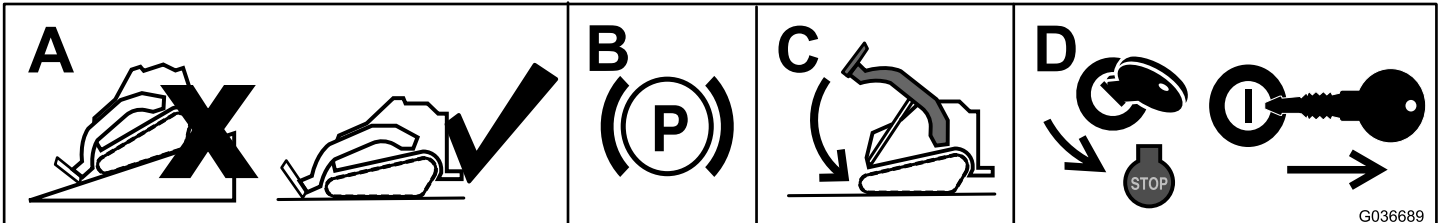


Figure 1

1. Move the machine to a level surface.
2. Engage the parking brake.
3. Lower the loader arms.
4. Shut off the engine and remove the key.
5. Wait for the engine to cool.
6. Unlatch the hood, open it, and support it with the prop rod; refer to *Accessing Internal Components* in the *Operator's Manual* for your machine.
7. Relieve hydraulic pressure; refer to *Hydraulic System Maintenance* in the *Operator's Manual* for your machine.

2

Disconnecting the Battery

No Parts Required

Opening the Battery Disconnect Switch

Machines with a Battery Disconnect Switch

Important: Ensure that the engine is cool before using the battery-disconnect switch.

Turn the battery disconnect switch to the OFF position (Figure 2).

Note: If the machine does not have a battery-disconnect switch, refer to [Removing the Negative Battery Cable](#) (page 4).

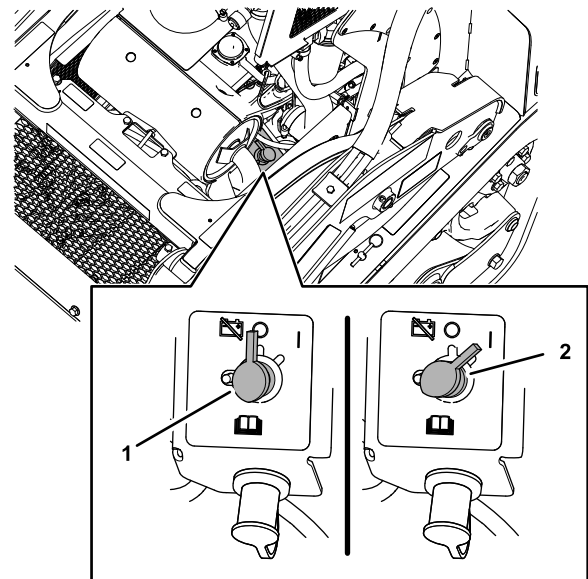


Figure 2

1. OFF position (battery-disconnect switch)
2. ON position (battery-disconnect switch)

Removing the Negative Battery Cable

Machines without a Battery Disconnect Switch

⚠ WARNING

Incorrect battery cable routing could damage the machine and cables causing sparks. Sparks can cause the battery gasses to explode, resulting in personal injury.

- Always disconnect the negative (black) battery cable before disconnecting the positive (red) cable.
 - Always connect the positive (red) battery cable before connecting the negative (black) cable.
1. Remove the front screen; refer to Accessing Internal Components in the *Operator's Manual* for your machine.
 2. Loosen the nut and tee bolt securing the negative battery cable to the battery post (Figure 3), and remove the cable from the battery.

Note: Position the battery cable away from the battery post.

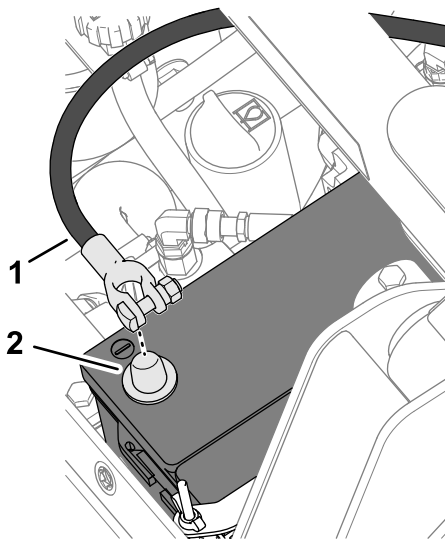


Figure 3

1. Negative battery cable
2. Battery post

3

Removing the Cover Plate and Baffle

No Parts Required

Procedure

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

1. Remove the 3 flange-head capscrews (1/4 x 3/4 inch) securing the cover plate front of the control panel frame, and remove the cover plate (Figure 4).

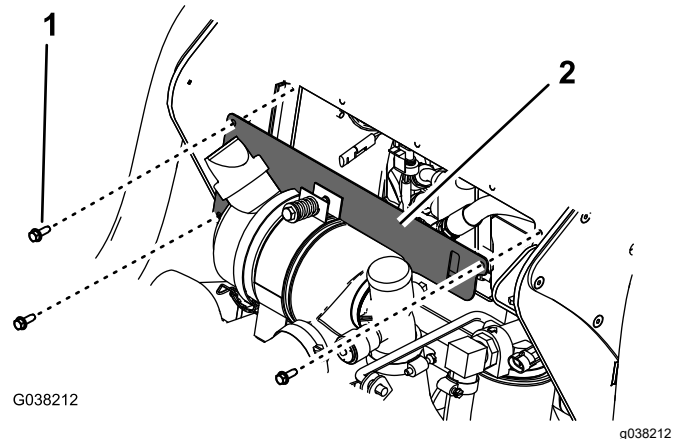


Figure 4

1. Flange-head capscrews (1/4 x 3/4 inch)
2. Cover plate

2. Remove the 3 flange-head capscrews (1/4 x 3/4 inch) and 3 washers (1/4 inch) securing the front of the rubber baffle to the bottom of the control panel frame (Figure 5).

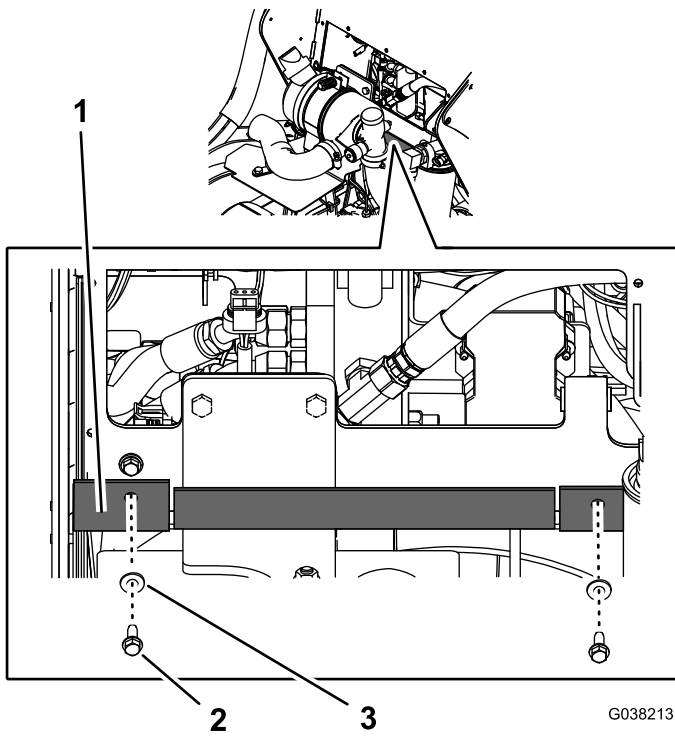


Figure 5

1. Rubber baffle
2. Flange-head capscrew (1/4 x 3/4 inch)
3. Washer (1/4 inch)

3. Push the rubber baffle down to provide access to the hydraulic hoses.

4

Separating the Traction Enable Valve

Serial No. 408833816 and Later

No Parts Required

Procedure

Remove the 2 flange-head capscrews (1/4 x 2 inches) that secure the traction enable valve to the low-flow valve to the bracket ([Figure 6](#)).

Note: Retain the flange-head capscrews. Move the valve as needed to provide access.

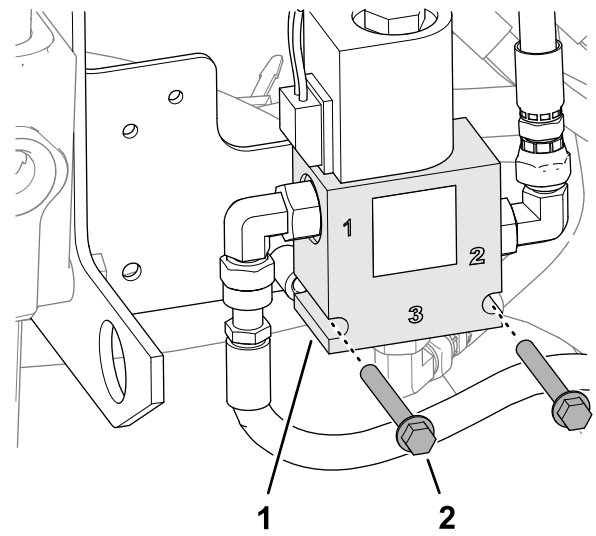


Figure 6

1. Low-flow valve
2. Flange-head capscrew (1/4 x 2 inches)

5

Removing the Hoses and Tubes

No Parts Required

Removing the Auxiliary Valve Hose and Pump Hose

Serial No. 408833815 and Before

1. Remove and discard the short hose shown in [Figure 7](#).

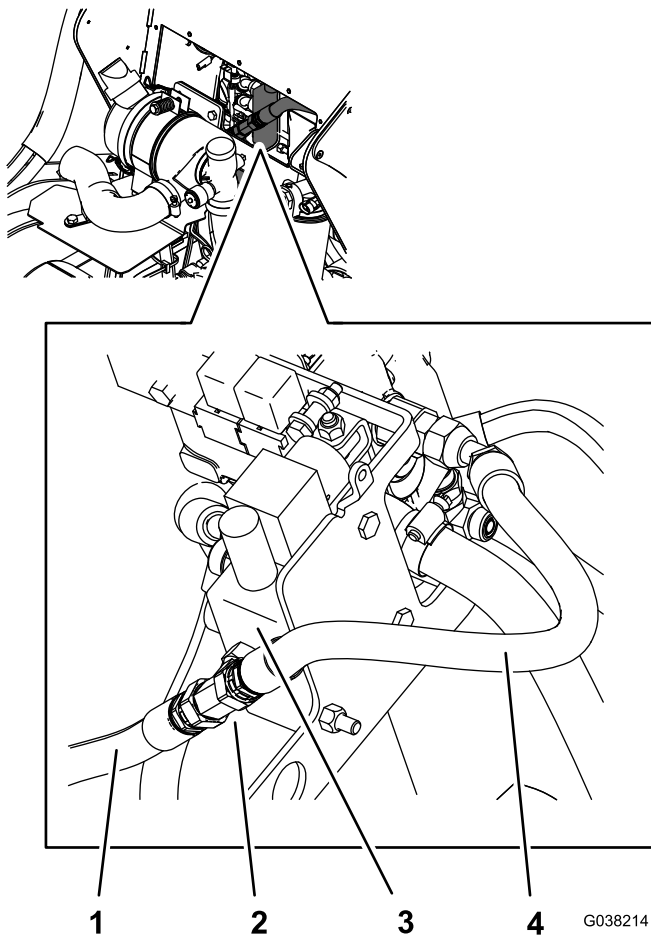


Figure 7

- | | |
|----------------|--------------------|
| 1. Pump hose | 3. Auxiliary valve |
| 2. Tee fitting | 4. Short hose |

2. Mark the pump hose "Pump".
3. Disconnect the pump hose from the tee fitting, and plug the hose (Figure 7).
4. Remove the tee fitting from the auxiliary valve.

Note: Discard the tee fitting.

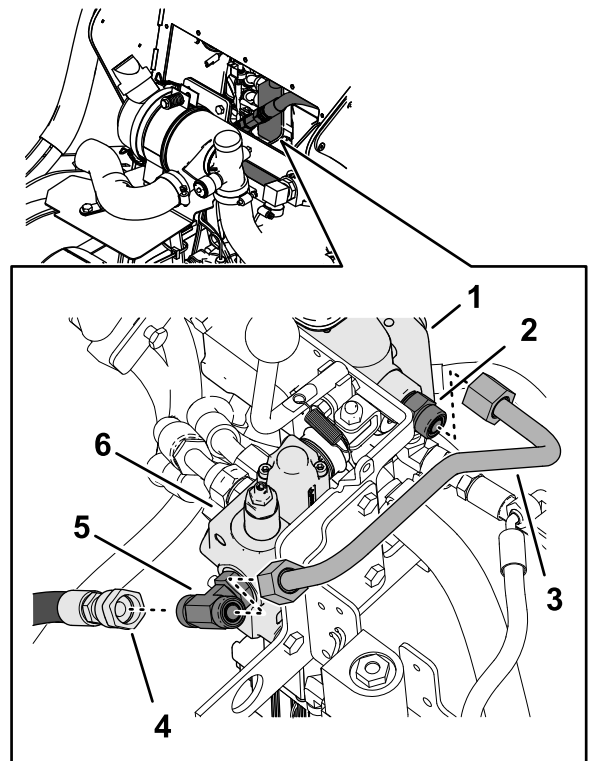


Figure 8

- | | |
|--------------------------------|--------------------|
| 1. Loader-arm valve | 4. Pump hose |
| 2. Straight fitting (port T-1) | 5. Tee fitting |
| 3. Tube | 6. Auxiliary valve |

2. Mark the pump hose "Pump".
3. Disconnect the pump hose from the tee fitting, and plug the hose (Figure 8).
4. Remove the tee fitting from the auxiliary valve.

Note: Discard the tee fitting.

Removing the Auxiliary Valve Tube and Pump Hose

Serial No. 408833816 and Later

1. Remove and discard the short tube shown in Figure 8.

Removing the Right Loader Hoses

1. Mark the upper loader hose "Port B", and remove the hose from the auxiliary valve fitting (Figure 9).

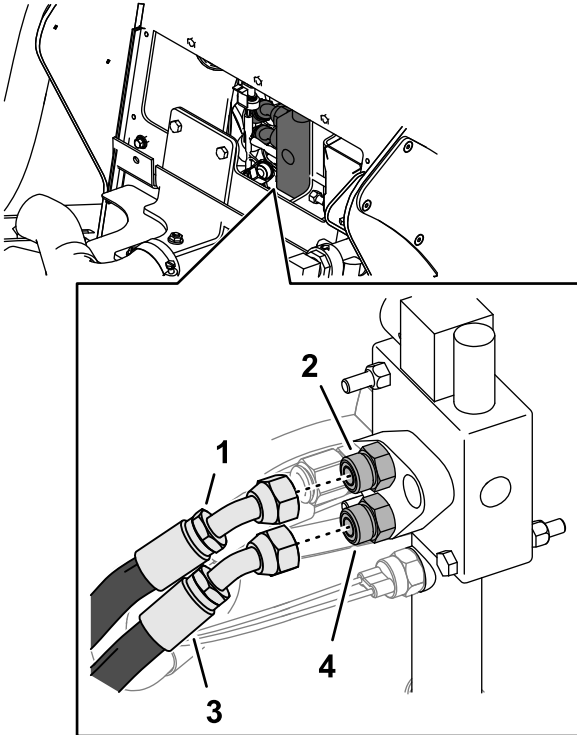


Figure 9

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1. Upper loader hose (port-B)
2. Auxiliary valve port-B fitting
3. Lower loader hose (port-A)
4. Auxiliary valve port-A fitting

2. Mark the lower loader hose "Port A", and remove the hose from the auxiliary valve fitting.

Removing the Port T Hose

1. Remove the remaining hose from the port-T fitting in the auxiliary valve and the port-T fitting in the loader-arm valve. (Figure 10).

Note: Discard the hose.

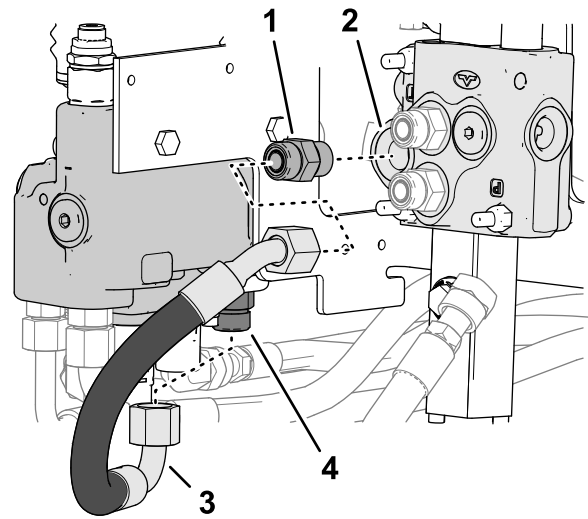


Figure 10

g359444

1. Fitting (auxiliary valve)
2. Remaining hose
3. Auxiliary valve port-T
4. Fitting (loader-arm valve port-T)

2. Remove the fitting from port-T of the auxiliary valve.

Note: Discard the fitting.

6

Preparing the Auxiliary Valve

Parts needed for this procedure:

| | |
|---|-------------|
| 1 | 45° fitting |
| 1 | 90° fitting |

Procedure

1. Assemble a 45° fitting into port-T of the auxiliary valve (Figure 11).

Note: Do not tighten the fitting.

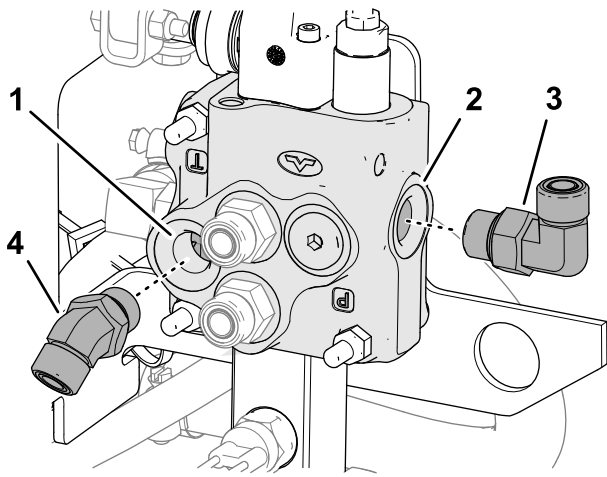


Figure 11

g359478

- 1. Port-T (auxiliary valve)
- 2. Port-P (auxiliary valve)
- 3. 45° fitting
- 4. 90° fitting

2. Assemble a 90° fitting into port-P of the auxiliary valve.

Note: Do not tighten the fitting.

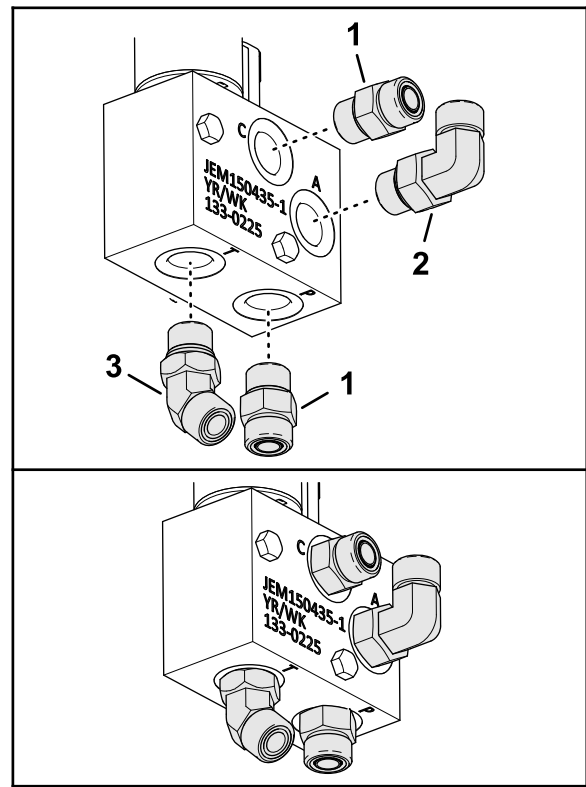


Figure 12

g359466

- 1. Straight fitting (low-flow valve port-C and port-P)
- 2. 90° fitting (port-A)
- 3. 45° fitting (port-T)

2. Assemble a 45° fitting into port-T of the low-flow valve.
3. Assemble straight fittings port-C and port-P of the low-flow valve (Figure 12).
4. Align the fitting is 45° and 90° fittings as shown in Figure 12.
5. Torque the fittings to 79 to 98 N·m (58 to 72 ft-lb).

7

Installing the Low Flow Valve

Parts needed for this procedure:

| | |
|---|---------------------------|
| 1 | Low-flow valve |
| 1 | 90° fitting |
| 1 | 45° fitting |
| 2 | Bolt (1/4 x 2-1/2 inches) |
| 2 | Locknut (1/4 inch) |

Assembling the Low-Flow Valve Fittings

1. Assemble a 90° fitting into port-A of the low-flow valve (Figure 12).

Assembling the Low-Flow Valve to the Bracket

Serial No. 408833815 and Before

1. Remove the 2 rear bolts (5/16 x 2-3/4 inches) and 2 locknuts (5/16 inch) securing auxiliary valve to the valve bracket as shown in [Figure 17](#).

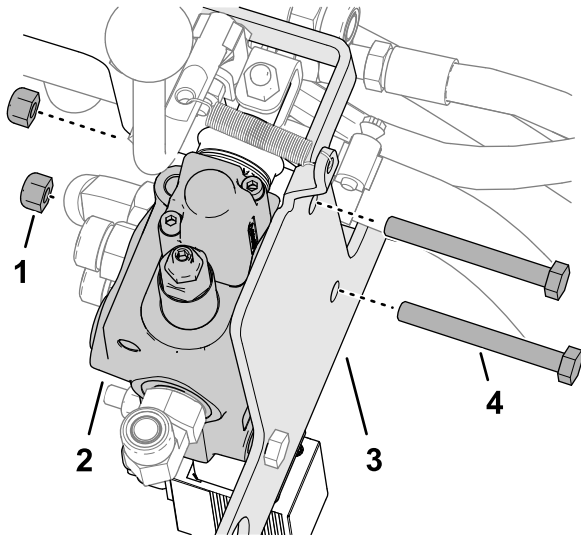


Figure 13

g359546

- | | |
|------------------------|-------------------------------|
| 1. Locknut (5/16 inch) | 4. Bolt (5/16 x 2-3/4 inches) |
| 2. Auxiliary valve | 5. |
| 3. Valve bracket | |

2. Assemble the bolts (5/16 x 2-3/4 inches) that you removed in step 1 through the holes in the low-flow valve bracket ([Figure 14](#)).

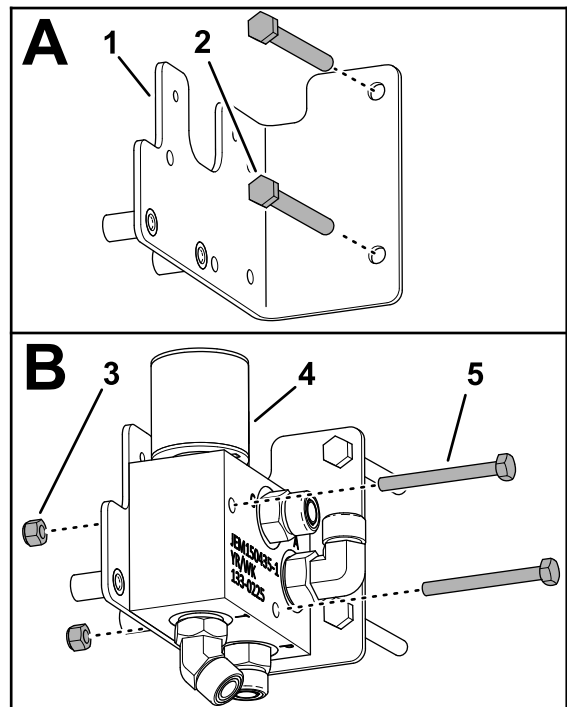


Figure 14

g359467

- | | |
|-------------------------------|------------------------------|
| 1. Bracket | 4. Low-flow valve |
| 2. Bolt (5/16 x 2-3/4 inches) | 5. Bolt (1/4 x 2-1/2 inches) |
| 3. Locknut (1/4 inch) | |

3. Install the low-flow valve to the bracket using 2 bolts (1/4 x 2-1/2 inches) and 2 locknuts (1/4 inch).

Assembling the Low-Flow Valve to the Bracket

Serial No. 408833816 and Later

1. Assemble the 2 bolts (1/4 x 2-1/2 inches) through the body of the low-flow valve as shown in [Figure 15](#).

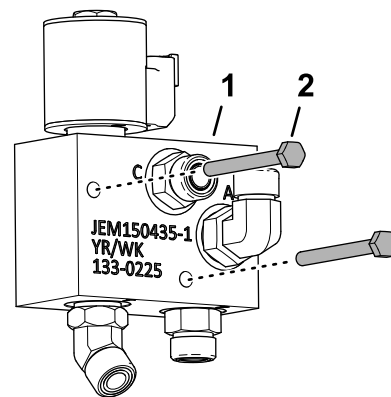


Figure 15

g359771

- | | |
|-------------------|------------------------------|
| 1. Low-flow valve | 2. Bolt (1/4 x 2-1/2 inches) |
|-------------------|------------------------------|

- Assemble the low-flow valve to the bracket (Figure 16) with the 2 bolts (1/4 x 2-1/2 inches) and 2 locknuts (1/4 inch).

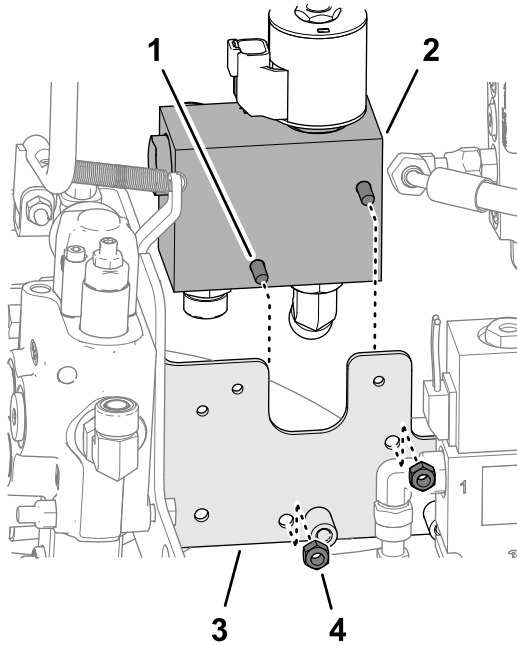


Figure 16

g359772

- | | |
|------------------------------|-----------------------|
| 1. Bolt (1/4 x 2-1/2 inches) | 3. Bracket |
| 2. Low-flow valve | 4. Locknut (1/4 inch) |

Installing the Low-Flow Valve to the Auxiliary Valve

Loosely assemble the low-flow valve bracket to the valve bracket and auxiliary valve with the 2 rear bolts (5/16 x 2-3/4 inches) and locknut (5/16 inch).

Note: Do not tighten the locknuts and bolts.

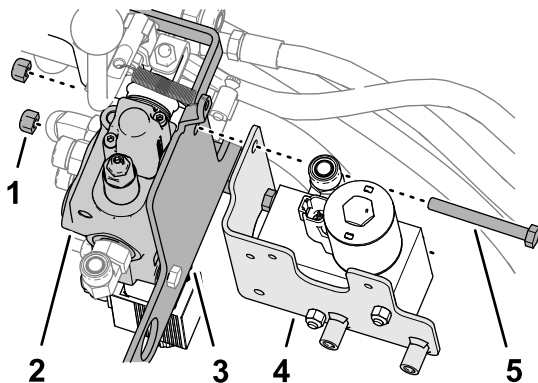


Figure 17

g359532

- | | |
|------------------------|-------------------------------|
| 1. Locknut (5/16 inch) | 4. Low-flow valve bracket |
| 2. Auxiliary valve | 5. Bolt (5/16 x 2-3/4 inches) |
| 3. Valve bracket | |

8

Installing the Tubes

Parts needed for this procedure:

| | |
|---|---------------|
| 1 | 90° fitting |
| 1 | Manifold tube |
| 1 | S-shaped tube |
| 1 | U-shaped tube |
| 1 | L-shaped tube |

Installing the Manifold Tube and S-Shaped Tube

Note: Do not torque the tube nuts until all tubes are assembled.

- Loosely assemble the 90° fitting onto the straight fitting in the loader-arm valve port-T (Figure 18).

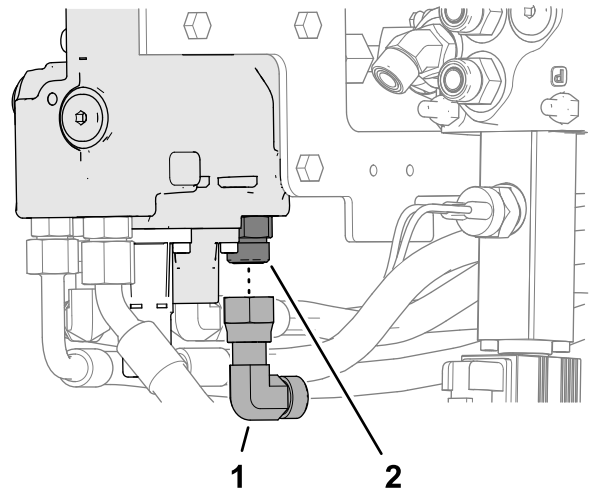


Figure 18

g359572

- | | |
|---------------------------------|----------------|
| 1. Straight fitting (loader-arm | 2. 90° fitting |
| valve port-T) | |

- Loosely assemble the manifold tube to the 90° fitting of the loader-arm valve and the 45° fitting (bottom) in port-T of the low-flow valve (Figure 19).

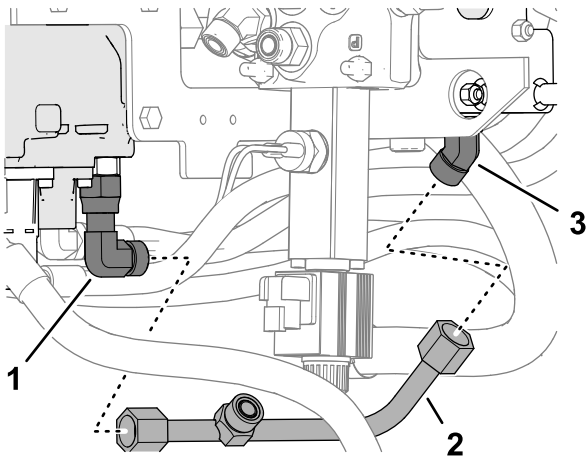


Figure 19

g359575

1. 90° fitting (loader-arm valve port-T)
3. 45° fitting (low-flow valve port-T)

2. Manifold tube

3. Loosely assemble the S-shaped tube to the fitting in the manifold tube and the 45° fitting in port-T of the auxiliary valve (Figure 20).

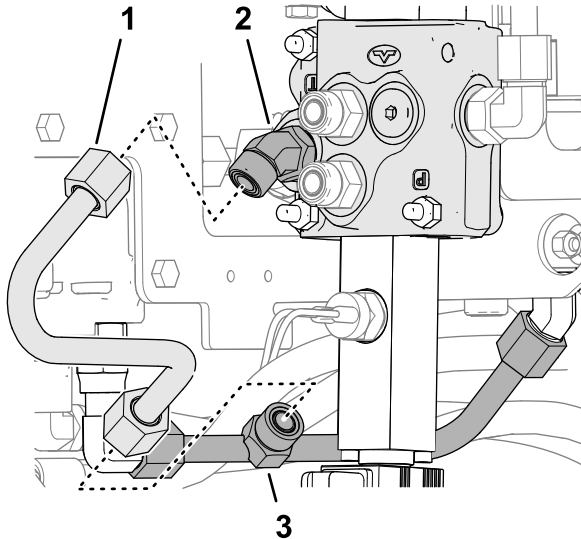


Figure 20

g359573

1. S-shaped tube
3. Fitting (manifold tube)
2. 45° fitting (auxiliary valve port-T)

4. Torque the 90° fitting of loader-arm valve port-T (Figure 19) and the 45° fitting in auxiliary valve port-T (Figure 20) to 79 to 98 N·m (58 to 72 ft-lb).
5. Torque the tube nuts of the manifold tube and S-shaped tube to 50 to 64 N·m (37 to 47 ft-lb).

Installing the U-Shaped Tube

1. Assemble the U-shaped tube to the 90° fitting in port-P of the auxiliary valve and the 90° in port fitting in Port A in the low-flow valve (Figure 21).

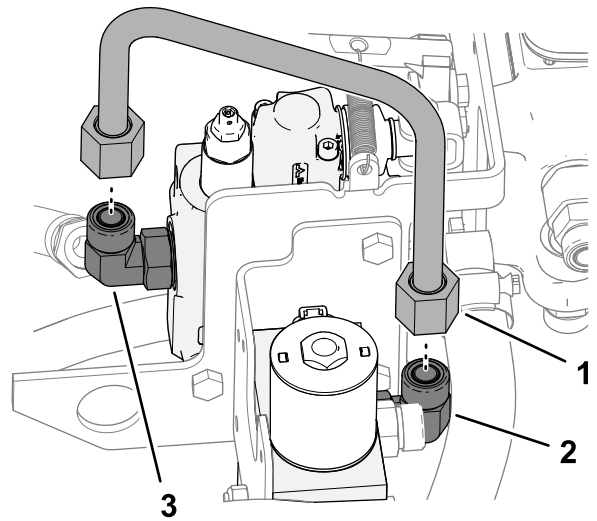


Figure 21

g359574

1. U-shaped tube
3. 90° fitting (auxiliary valve port-P)
2. 90° fitting (low-flow valve port-A)

2. Torque the 90° fitting in auxiliary valve port-P to 79 to 98 N·m (58 to 72 ft-lb).
3. Torque the tube nuts to 50 to 64 N·m (37 to 47 ft-lb).

Installing the L-Shaped Tube

1. Assemble the L-shaped tube to the straight fitting in port-C of the low-flow valve and the straight fitting in port-T-1 of the loader-arm valve (Figure 22).

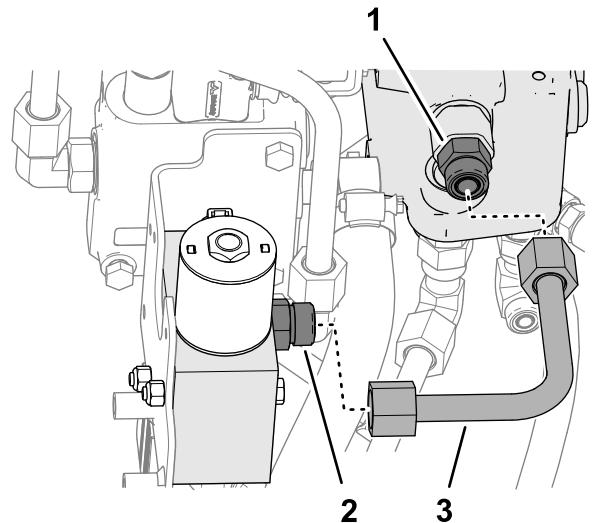


Figure 22

g359599

1. Straight fitting (loader-arm valve port T-1)
3. L-shaped tube
2. Straight fitting (low-flow valve port-C)

- Torque the tube nuts to 50 to 64 N·m (37 to 47 ft-lb).

Tightening the Valve Mounting Hardware

Tighten the 2 bolts and 2 locknuts that secure the low-flow valve bracket to the loader valve and bracket (Figure 23).

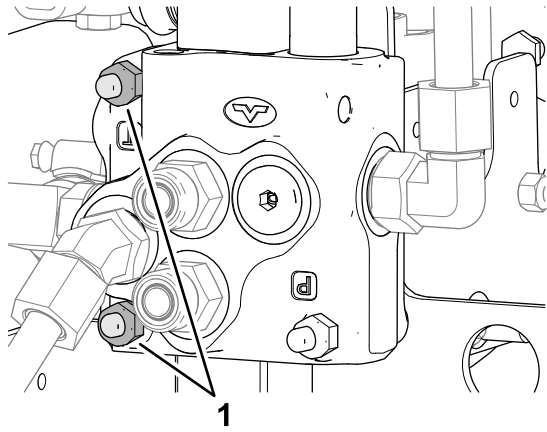


Figure 23

g359723

- Bolts and locknuts

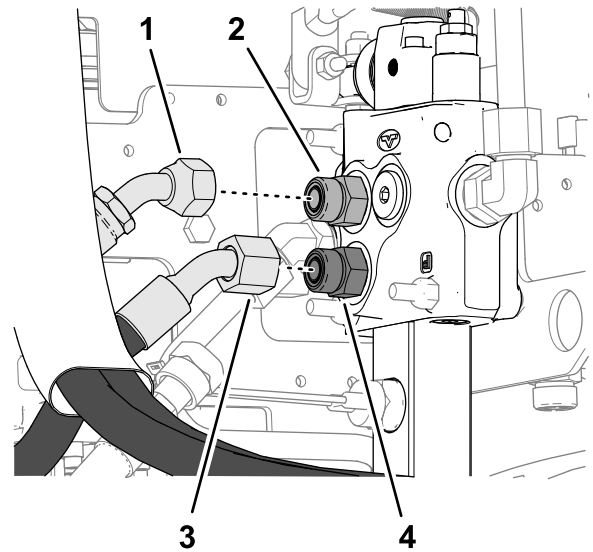


Figure 24

g359722

- Upper loader hose (marked "Port B")
- Upper straight fitting (auxiliary valve)
- Lower loader hose (marked "Port A")
- Lower straight fitting (auxiliary valve)

- Torque the swivel nut of the hose to 50 to 64 N·m (37 to 47 ft-lb).
- Assemble the lower loader hose marked "Port A" to the lower auxiliary valve fitting.
- Torque the swivel nut of the hose to 50 to 64 N·m (37 to 47 ft-lb).

9

Installing the Hoses

Parts needed for this procedure:

| | |
|---|------------------------------|
| 1 | Hose 41.9 cm (16-1/2 inches) |
| 1 | Hose protector |
| 3 | Cable tie |

Installing the Right Loader Hosed

- Assemble the upper loader hose marked "Port B" to the upper auxiliary valve fitting (Figure 24).

Installing the Low-Flow Valve and Pump Hoses

Machine serial numbers 408833816 and later are shown; machine serial numbers 408833815 and before are similar.

- Assemble the 90° fitting of the 41.9 cm (16-1/2 inches) hose to the straight fitting in port-P of the low-flow valve (Figure 25).

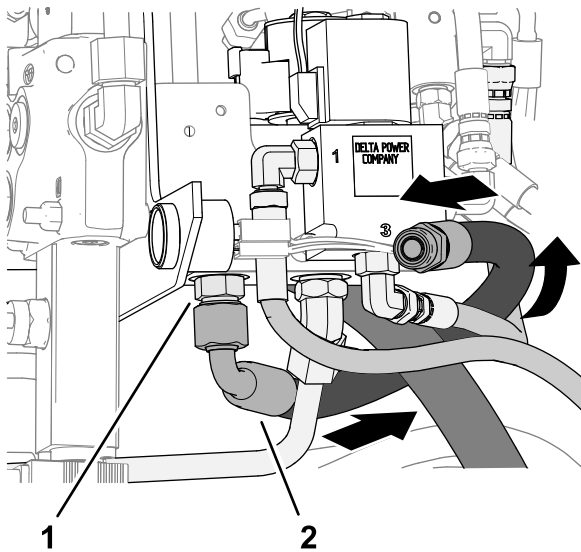


Figure 25

g359893

1. Straight fitting (low-flow valve port-P)
2. 90° fitting hose 41.9 cm (16-1/2 inches)

2. Assemble the straight fitting of the 41.9 cm (16-1/2 inches) hose to the fitting of the hose that you marked "Pump" (Figure 26).

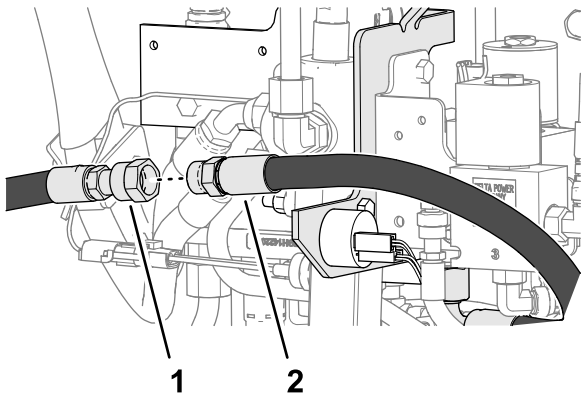


Figure 26

g359895

1. Hose (marked "Pump")
2. Hose 41.9 cm (16-1/2 inches)

3. Torque the 90° fitting of the 41.9 cm (16-1/2 inches) hose to 50 to 64 N·m (37 to 47 ft-lb).
4. Torque the straight fittings of the 41.9 cm (16-1/2 inches) hose and the pump hose to 50 to 64 N·m (37 to 47 ft-lb).
5. Wrap the straight fittings of the 2 hoses with the hose protector, and secure the protector to the fittings with 2 cable ties (Figure 27).

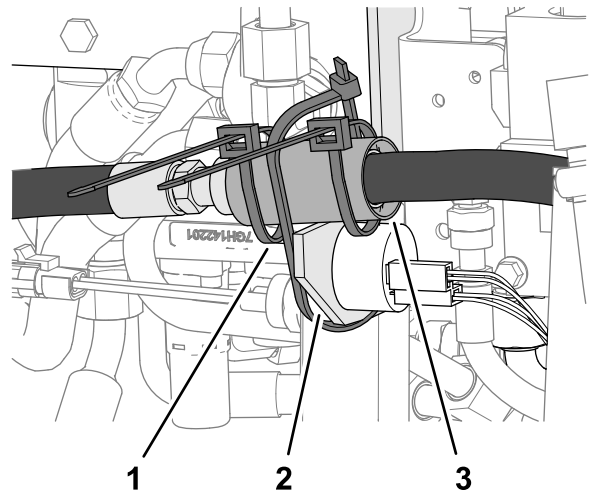


Figure 27

g359896

1. Cable tie
2. Valve bracket
3. Hose protector

6. Secure the protector and hoses to the valve bracket as shown in Figure 27.

10

Installing the Switch and Wire Harness

Parts needed for this procedure:

| | |
|---|--------------|
| 1 | Switch |
| 1 | Decal |
| 1 | Wire harness |

Procedure

1. Remove the plug from the console and install the switch (Figure 28).

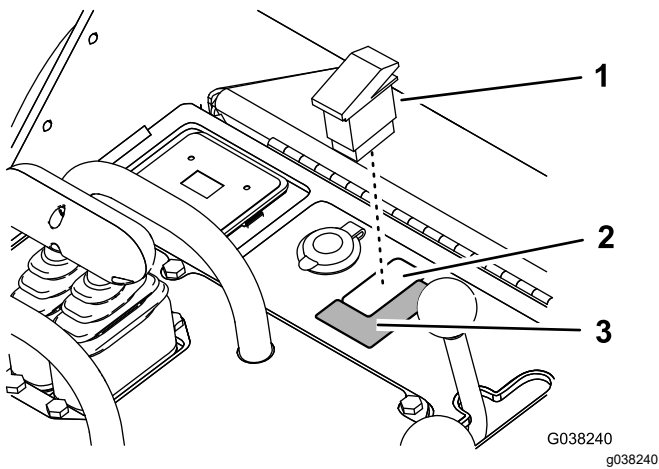


Figure 28

- 1. Switch
- 2. Plug
- 3. Decal

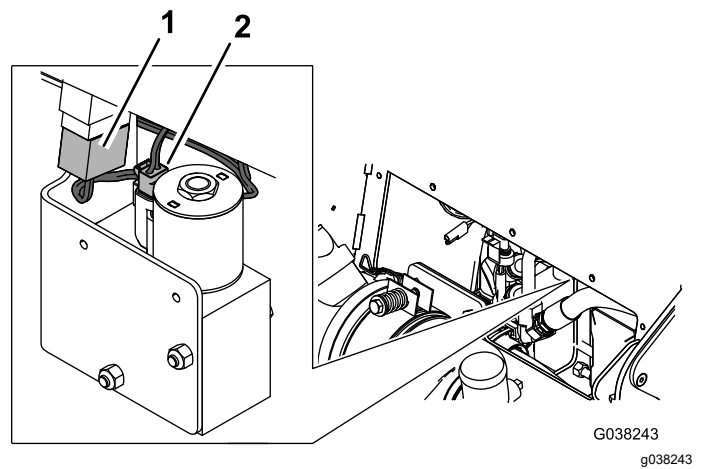


Figure 30

- 1. Connect to the switch
- 2. Connect to the low-flow valve

- 2. If the decal on the console does not show the rabbit and turtle symbols near the switch, affix the kit decal (Figure 28).
- 3. Unplug the cap from the auxiliary connector on the machine wire harness and connect the kit wire harness to the connector (Figure 29).

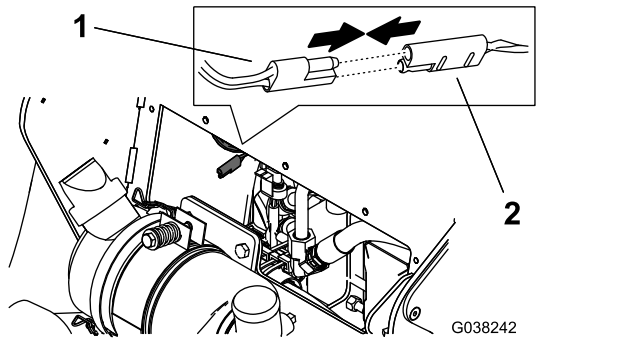


Figure 29

- 1. Kit wire harness connector
- 2. Auxiliary connector on machine wire harness

- 4. Connect the kit wire harness to the switch and the low-flow valve (Figure 30).

11

Assembling the Traction Enable Valve

Serial No. 408833816 and Later

No Parts Required

Procedure

- 1. Align the notches in the body of the traction enable valve with the threaded support tubes if the low-flow valve bracket (Figure 31).

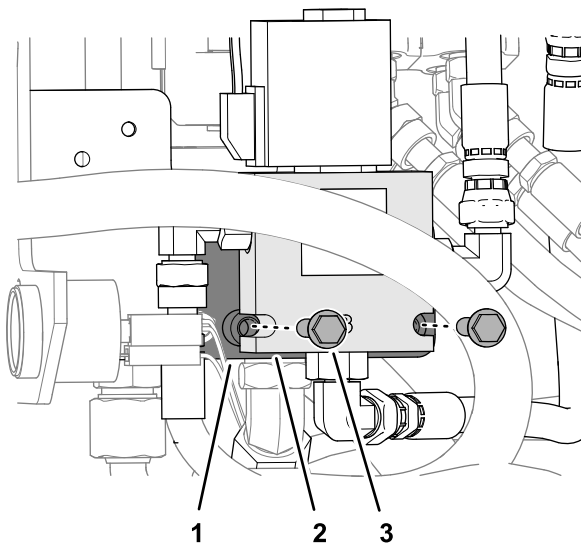


Figure 31

g359894

1. Low-flow valve bracket
2. Traction enable valve
3. Flange-head capscrews (1/4 x 2 inches)

2. Secure the traction enable valve to the bracket with the 2 flange-head capscrews (1/4 x 2 inches).

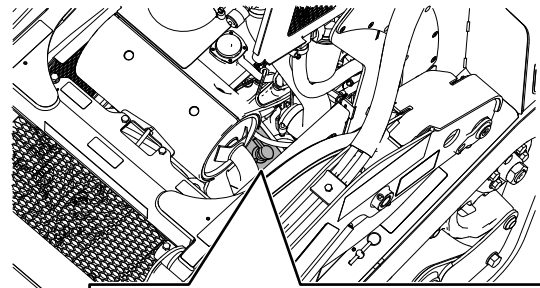


Figure 32

g359374

1. OFF position (battery-disconnect switch)
2. ON position (battery-disconnect switch)

12

Checking for Hydraulic Leaks

No Parts Required

Positioning the Baffle

Move the baffle up over the hoses and components, toward the installation position.

Closing the Battery Disconnect Switch

Machines with a Battery Disconnect Switch

Turn the battery disconnect switch to the OFF position (Figure 32).

Note: If the machine does not have a battery-disconnect switch, refer to [Installing the Negative Battery Cable](#) (page 15).

Installing the Negative Battery Cable

Machines without a Battery Disconnect Switch

1. Install the negative battery cable onto the battery post (Figure 33), and tighten the tee bolt and nut.

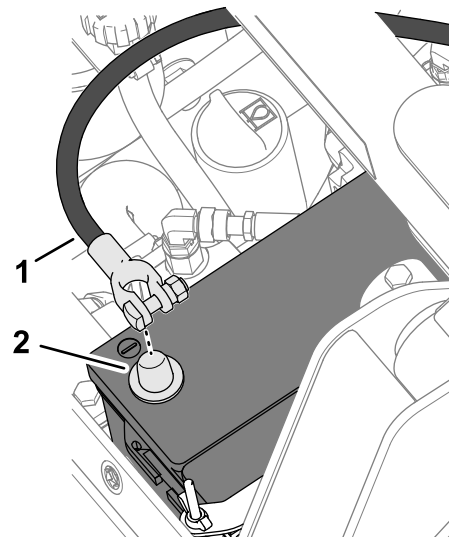


Figure 33

g359935

1. Negative battery cable
2. Battery post

2. Install the front screen; refer to [Accessing Internal Components](#) in the *Operator's Manual* for your machine.

Checking for Leaks

Hydraulic Safety

- Seek immediate medical attention if fluid is injected into skin. Injected fluid must be surgically removed within a few hours by a doctor.
- Ensure that all hydraulic-fluid hoses and lines are in good condition and all hydraulic connections and fittings are tight before applying pressure to the hydraulic system.
- Keep your body and hands away from pinhole leaks or nozzles that eject high-pressure hydraulic fluid.
- Use cardboard or paper to find hydraulic leaks.
- Safely relieve all pressure in the hydraulic system before performing any work on the hydraulic system.

1. Start the engine.
2. Check tubes, hoses, and fitting at the loader valve, low-flow valve, and auxiliary valve for hydraulic leaks.

Machine serial numbers 408833816 and late—check the traction enable valve fittings and hose.

Note: Repair any hydraulic leaks.

3. Shut off the engine.
4. Check the hydraulic fluid level; refer to Hydraulic System Maintenance in the OPERATOR'S MANUAL for your machine.

Note: If needed, add hydraulic fluid.

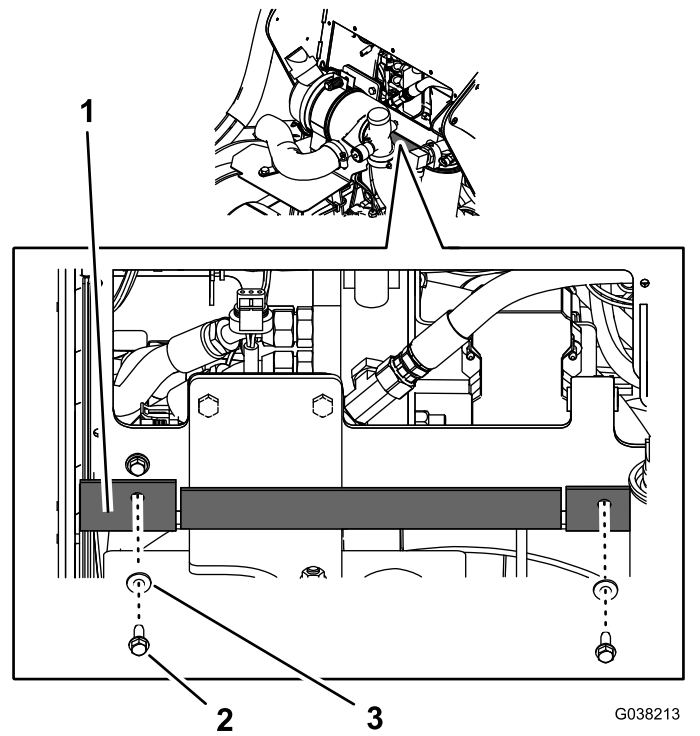


Figure 34

1. Rubber baffle
2. Flange-head capscrew (1/4 x 3/4 inch)
3. Washer (1/4 inch)

2. Secure the baffle to the panel with the 3 flange-head capscrews (1/4 x 3/4 inch) and 3 washers (1/4 inch) that you removed in [3 Removing the Cover Plate and Baffle \(page 4\)](#).
3. Align the holes in the cover plate ([Figure 35](#)) with the holes in the front of the control panel frame.

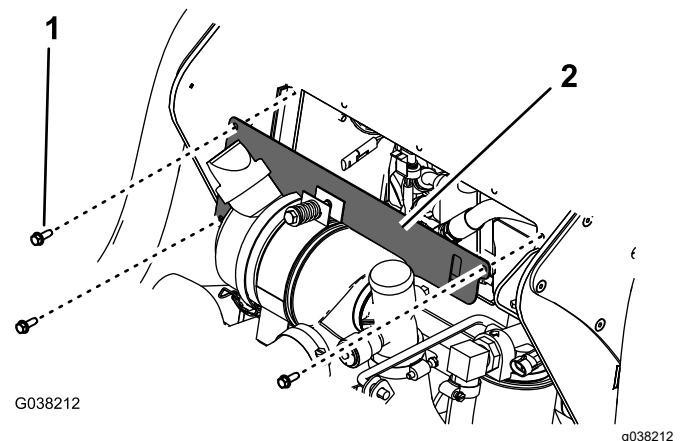


Figure 35

1. Flange-head capscrews (1/4 x 3/4 inch)
2. Cover plate

4. Secure the cover plate to the panel with the flange-head capscrews (1/4 x 3/4 inch) that you removed in [3 Removing the Cover Plate and Baffle \(page 4\)](#).

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Installing Baffle and Cover Plate

No Parts Required

Procedure

1. Align the holes in the rubber baffle ([Figure 34](#)) with the holes in the bottom of the control panel frame.

5. Close and latch the hood.

Notes:

Notes:



Count on it.