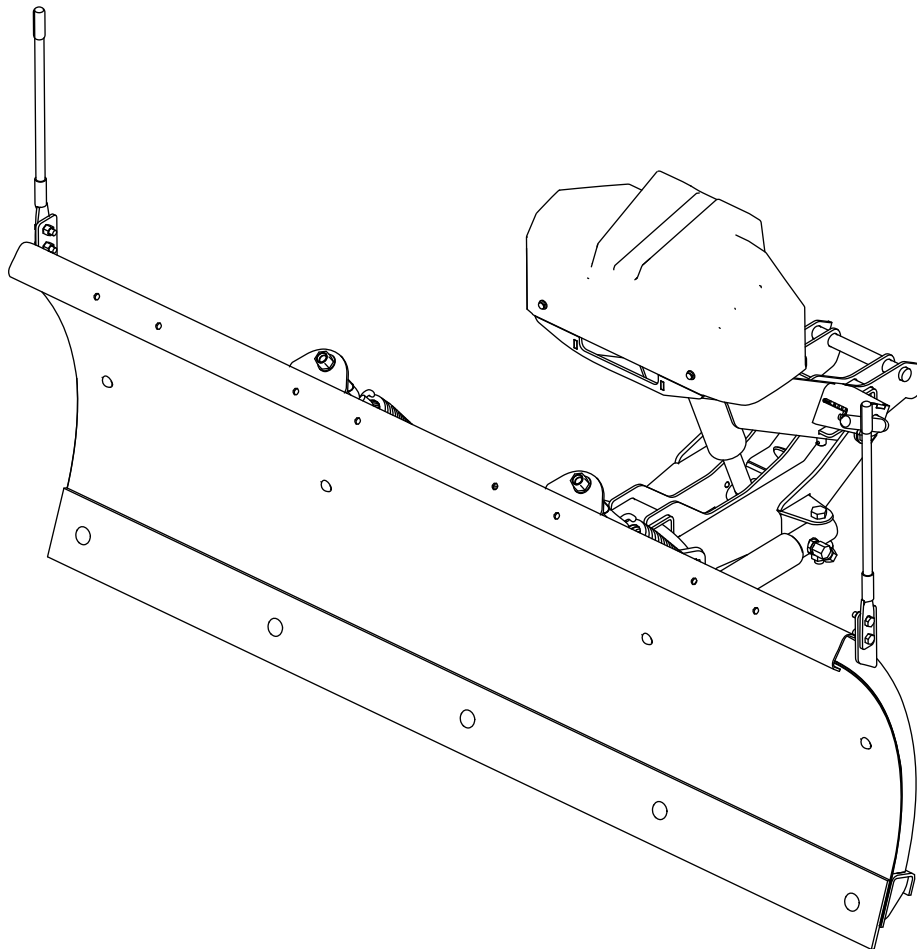




P.O. Box 787
Iron Mountain, MI 49801
United States

Owner's Manual

Straight-Blade Plow for ATV or UTV



This product complies with all relevant European directives; for details, please see the separate product specific Declaration of Conformity (DOC) sheet.

BOSS Products limited consumer warranty and BOSS Products commercial warranty policies are located at www.BOSSPlow.com.

Patents pending.

Introduction

Note: This manual is used for the assembly of all BOSS ATV and UTV straight-blade plows. Illustrations may vary.

Read this information carefully to learn how to operate and maintain your product properly and to avoid injury and product damage. You are responsible for operating the product properly and safely.

You may contact BOSS directly at www.BOSSPlow.com for product and accessory information, help finding a dealer, or to register your product.

Whenever you need service, genuine BOSS parts, or additional information, contact an Authorized BOSS Dealer or BOSS Technical Service (1-800-286-4155) and have the model and serial numbers of your product ready. [Figure 1](#) and [Figure 2](#) identifies the location of the model and serial numbers on the product. Write the numbers in the space provided.

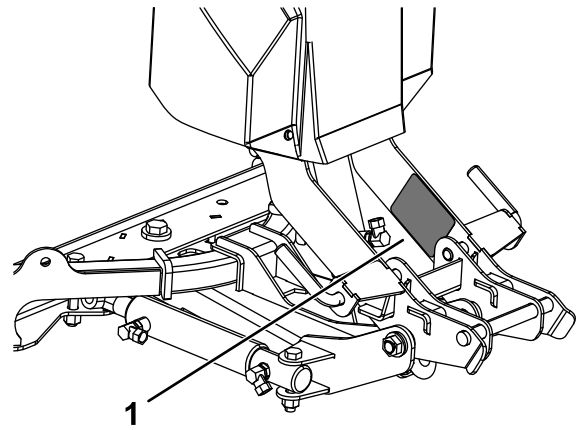


Figure 2

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1. Serial number decal

Date Purchased	_____
Model No.	_____
Serial No.	_____
Blade Crate Serial No.	_____

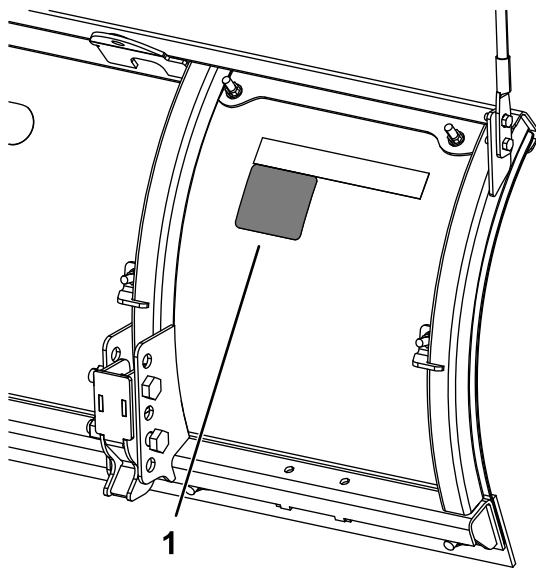


Figure 1

g261534

1. Serial number decal

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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.

Preparation

- Read the *Owner's Manual* before operating or servicing the plow.
- Always follow the vehicle manufacturer's recommendations relating to snowplow installation. For recommended vehicle models, refer to the BOSS product selector tool at www.BOSSPlow.com.
- Follow all operator safety instructions and age restrictions found in your ATV/UTV *Owner's Manual*.
- Ensure that only trained personnel install and perform maintenance on the equipment and hydraulic components.
- Keep your hands, feet, and clothing away from moving parts and mounting points.
- Ensure the plow is properly attached to the vehicle before moving it.
- To comply with federal regulations and to assure a safe vehicle, do not exceed the front gross-axle-weight rating (FGAWR), rear gross-axle-weight rating (RGAWR), and the gross-vehicle-weight rating (GVWR) at any time.
- Always wear appropriate personal protective equipment when operating and servicing the machine. Wear substantial, slip-resistant footwear, and cold-weather clothing.
- Use a 500 kg (1/2 ton) minimum lifting device to move heavy plow components.
- Material safety data sheets (MSDS) are available at www.BOSSPlow.com.

Operation

- When transporting the vehicle, position the plow so as not to block your vision.
- Do not change the blade position when traveling.
- When operating a UTV mounted plow:
 - Do not exceed 38 km/h (24 mph) when transporting the plow.
 - Do not exceed 22 km/h (14 mph) when plowing.
- When operating an ATV mounted plow:
 - Do not exceed 8 km/h (5 mph) when transporting the plow.
 - Do not exceed 8 km/h (5 mph) when plowing.
- Always lower the blade when the vehicle is not in use.
- Never put any part of your body between the plow and the vehicle.
- Do not climb or ride on the plow.
- Do not operate on steep inclines.
- Do not operate the machine while ill, tired, or under the influence of alcohol or drugs.
- Always wear your seat belt (if equipped) while operating a motor vehicle.
- Due to the variety of equipment that you can install on the vehicle, do not exceed the front gross-axle-weight rating (FGAWR), rear gross-axle-weight rating (RGAWR), and the gross-vehicle-weight rating (GVWR) at any time. This may require weighing the vehicle and adding ballast as necessary. It may also limit the payload capacity of the vehicle.
- This machine has an operating sound level below 70 dBA.
- When transporting the machine, ensure that it is properly secured. Instructions are available at www.BOSSPlow.com.
- The UTV straight-blade plow is for personal use only. Using the plow in a commercial setting voids the plow warranty.

Safety and Instructional Decals



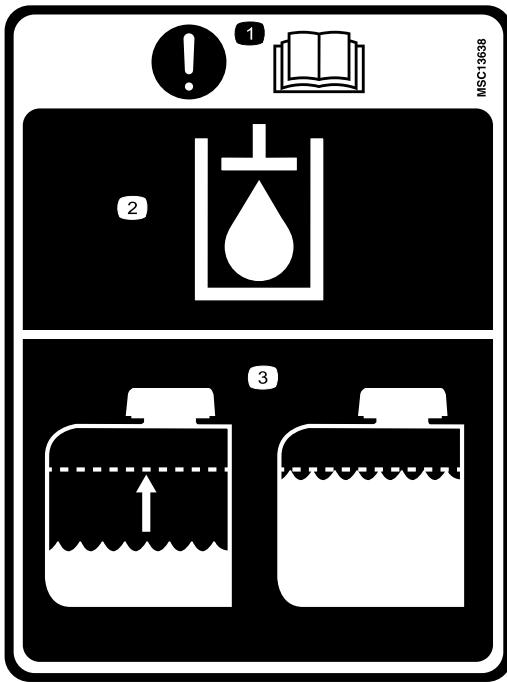
Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or missing.



decalmsc13637

MSC13637

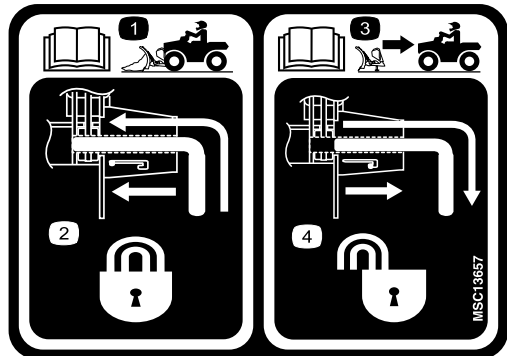
1. Warning—read the *Owner's Manual*.
2. Warning—all operators should be trained before operating the machine.
3. Warning—wear your helmet while operating the plow.
4. Warning—coupler spring pins must be locked before plowing.
5. Warning—coupler spring pins must be unlocked to remove the plow.
6. Warning—do not block driver visibility with the plow.
7. Crushing hazard—do not stand between the plow and vehicle during maintenance.
8. Warning—do not exceed 8 km/h (5 mph) when transporting the plow.
9. Warning—do not exceed 8 km/h (5 mph) when plowing; keep the vehicle in low when plowing.
10. Warning—lower the plow when the vehicle is not in use.



MSC13638

decalsc13638

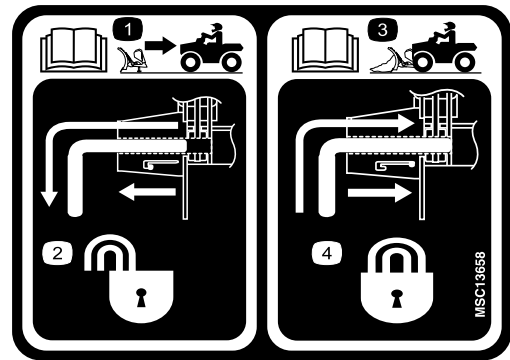
1. Important—read the *Owner's Manual*.
2. Hydraulic fluid
3. Fill the hydraulic fluid to the fill line.



MSC13657-1

decalsc13657-1

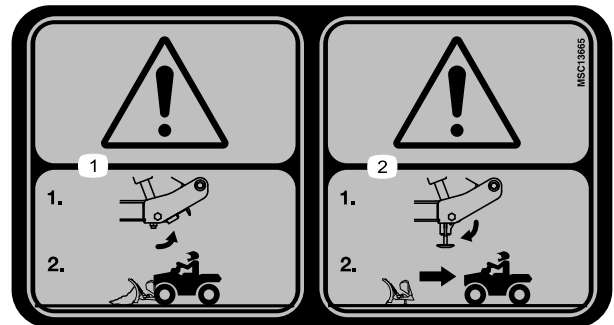
1. Read the *Owner's Manual* for information on attaching the plow.
2. Coupler spring pin—lock
3. Read the *Owner's Manual* for information on removing the plow.
4. Coupler spring pin—unlock



MSC13658-1

decalsc13658-1

1. Read the *Owner's Manual* for information on removing the plow.
2. Coupler spring pin—unlock
3. Read the *Owner's Manual* for information on attaching the plow.
4. Coupler spring pin—lock



MSC13665

decalsc13665

1. Warning—the kickstand must be raised before plowing.
2. Warning—the kickstand must be lowered before removing the plow.

Setup

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

Installing the Push Frame and Coupler Tower

1. Center the 2 blade mounting brackets on the plow blade and loosely secure them using 2 hex-head bolts and 2 self-locking nuts as shown in [Figure 3](#).

Note: Do not tighten the bolts at this time.

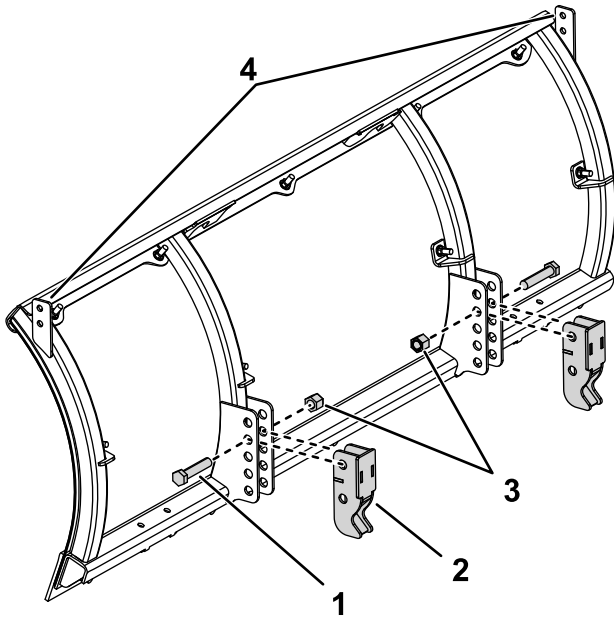


Figure 3

g261536

1. Hex-head bolt (5/8 x 3 inches)
2. Mounting bracket
3. Self-locking nuts
4. Lift points

2. Attach the push-frame assembly to the plow blade using 2 hex-head bolts and self-locking nuts as shown in [Figure 4](#).

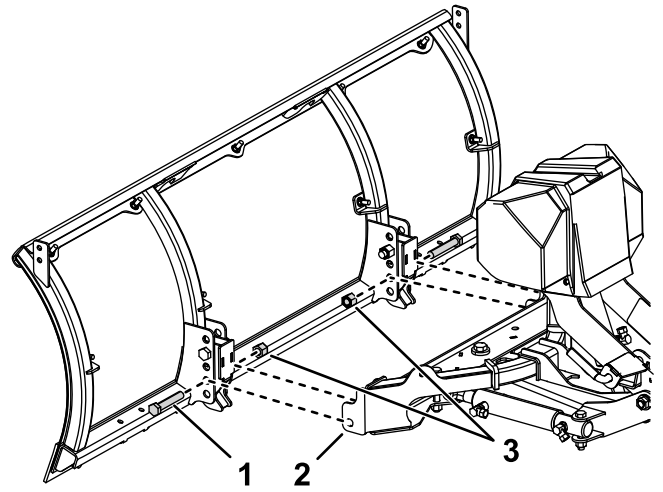


Figure 4

g261537

1. Bolt (5/8 x 3-1/2 inches)
2. Push-frame assembly
3. Self-locking nut

3. Torque all 4 bolts to 153 N·m (113 ft-lb).
4. Pull the kickstand handle outward and rotate it, to lower the kickstand ([Figure 5](#)).

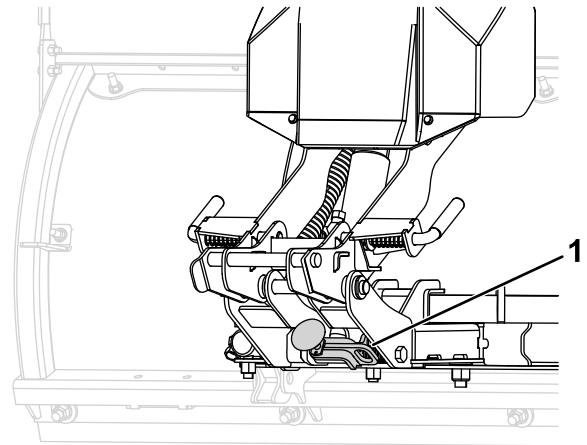


Figure 5

g261538

1. Kickstand handle

5. Hook the 2 trip springs through the holes on the push-frame assembly ([Figure 6](#)).

Installing the Blade Guides

Attach the blade guides to the plow blade using 4 bolts (5/16 inch) and 4 self-locking nuts (Figure 7).

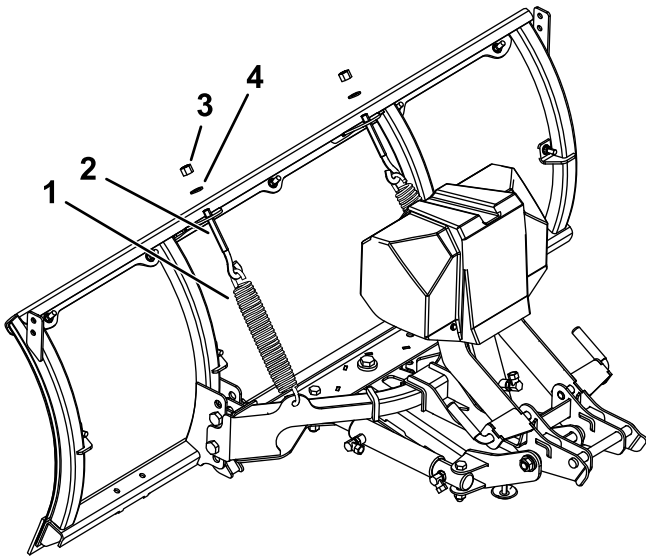


Figure 6

- | | |
|----------------|---------------------|
| 1. Trip spring | 3. Self-locking nut |
| 2. Eye bolt | 4. Washer |

-
6. Hook the other ends of the trip springs to 2 eyebolts (Figure 6).
 7. Insert the threaded end of the eyebolts through the holes on the plow blade and secure them using 2 washers (1/2 inch) and 2 self-locking nuts (Figure 6).
 8. Tighten the self-locking nuts until there is a gap of 0.8 mm (1/32 inch) between the trip spring coils.

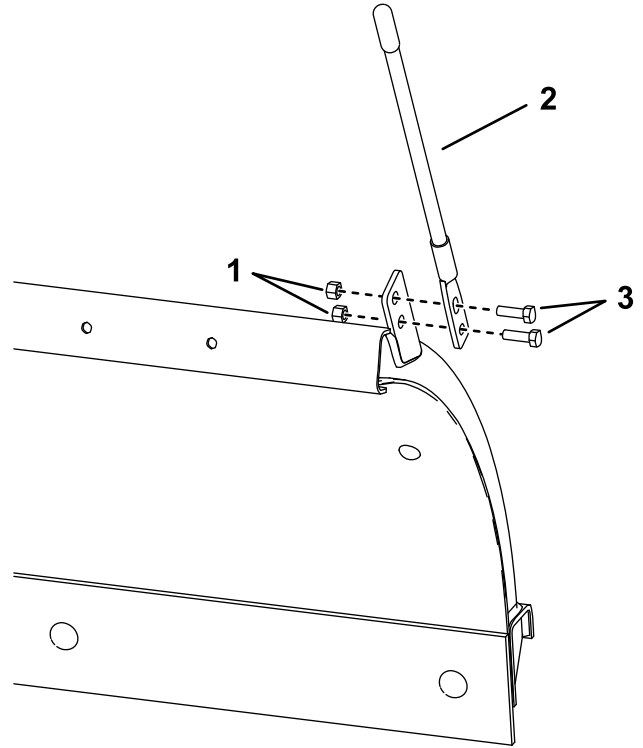


Figure 7

- | | |
|---------------------|---------------------|
| 1. Self-locking nut | 3. Bolt (5/16 inch) |
| 2. Blade guide | |

Mounting the Plow Controller

⚠ DANGER

The controller could cause serious injury if contacted during a crash.

Mount the controller in a location that vehicle occupants will not contact during a crash.

Mounting the ATV Controller

1. Park the machine on a level surface, engage the parking brake, shut off the engine, wait for all moving parts to stop, and remove the key.
2. Secure 1 of the mounting brackets along the left side of the vehicle control cluster using the long U-bolt and 2 self-locking nuts (1/4 inch) as shown in [Figure 8](#).

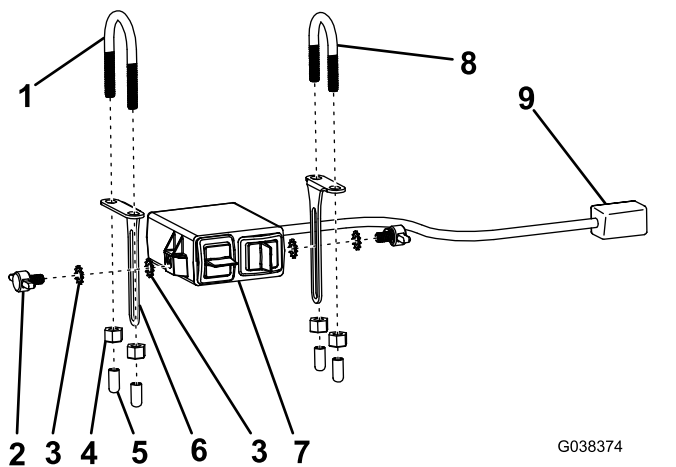


Figure 8

- | | |
|---------------------|-------------------------|
| 1. Long U-bolt | 6. Mounting bracket |
| 2. Thumbscrew | 7. Switch box |
| 3. Star washer | 8. Short U-bolt |
| 4. Self-locking nut | 9. Controller connector |
| 5. Rubber end cap | |

3. Secure the other mounting bracket along the right side of the vehicle control cluster using the short U-bolt and 2 self-locking nuts (1/4 inch) as shown in [Figure 8](#).
4. Secure the switch box to the mounting brackets using 4 star washers and 2 thumb screws and adjust it to the desired position ([Figure 8](#)).
5. Slide the 4 rubber end caps over the ends of the U-bolts ([Figure 8](#)).
6. Route the switch box wire along the existing vehicle wiring down the handlebar and steering stem, and secure it under the central part of the fender using cable ties.

Mounting the UTV Controller

Note: Mount the controller in the cab in a dry area where it does not interfere with vehicle operation or visibility.

Important: Do not install the swivel mount when temperatures are below 16°C (60°F).

1. Park the machine on a level surface, shut off the engine, wait for all moving parts to stop, engage the parking brake, and remove the key from the ignition switch.
2. Determine the mounting location for the controller.
3. Clean the location with the provided alcohol wipe and dry it with a cloth or paper towel.
4. Clean the back of the swivel mount ([Figure 9](#)) with the alcohol wipe and then dry it.

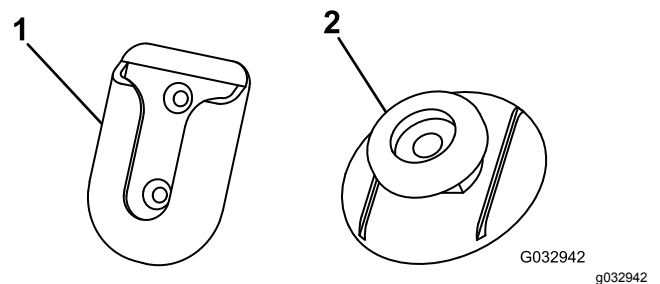


Figure 9

1. Swivel mount
2. Mounting tab

5. Remove the backing from 1 side of the adhesive and apply it to the back of the swivel mount.
6. Remove the remaining backing from the swivel-mount adhesive and press the swivel mount to the clean area of the dashboard for 30 seconds.

Important: Once the mount is placed, you cannot remove it without destroying the adhesive.

7. Clean the back of the controller with the alcohol wipe and then dry it.
8. Remove the backing from 1 side of the adhesive and apply it to the back of the mounting tab ([Figure 9](#)).
9. Remove the remaining backing from the controller adhesive and press the mounting tab to the controller for 30 seconds.
10. Let the swivel mount rest unused for 72 hours before sliding the controller into the mounting bracket.

Important: Mounting the controller immediately may cause the adhesive to fail.

Installing the Wire Harness

⚠ DANGER

Vehicle engines contain moving parts and can become extremely hot, capable of causing severe burns and serious bodily harm.

Shut off the engine and allow it sufficient time to cool down before installing this kit.

⚠ DANGER

Vehicle batteries can cause dangerous electrical shocks that could lead to severe burns or death.

Disconnect your battery before installing this kit.

Note: Apply dielectric grease to all electrical connections.

1. Park the machine on a level surface, shut off the engine, wait for all moving parts to stop, engage the parking brake, and remove the key from the ignition switch.
2. Mount the vehicle-side, wire-harness plow connector to the left side of the front bumper using the control-harness mounting-bracket and 2 cap screws and self-locking nuts (Figure 10).

Note: You will have to drill 2 holes in the front bumper to mount the bracket.

3. Mount the power/ground connector to the control harness mounting bracket (Figure 10).

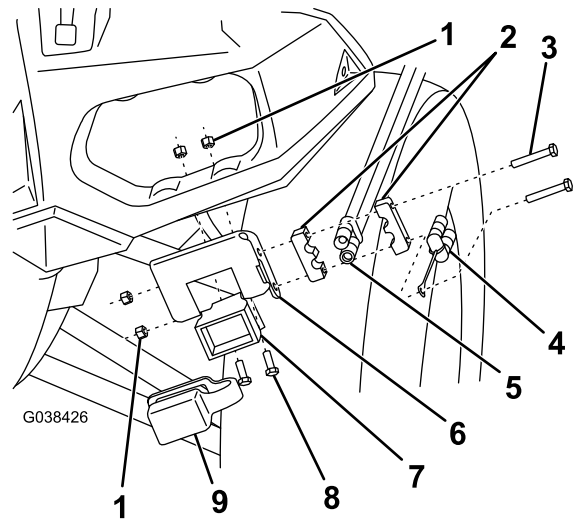


Figure 10

- | | |
|---------------------------|-------------------------------------|
| 1. Self-locking nut | 6. Control harness mounting bracket |
| 2. Power/Ground connector | 7. Plow connector |
| 3. Long bolt | 8. Short bolt |
| 4. Power/Ground dust cap | 9. Control harness dust cap |
| 5. Power/Ground connector | |

4. Secure the dust caps to the wire harness plugs and mounting bracket.
5. Route the cables along the vehicle frame toward the battery and controller connector and secure them with cable ties.
6. If you are installing the plow on an ATV, proceed to step 9. If you are installing the plow on a UTV, proceed to the next step.
7. Pull the plow controller connector into the vehicle cab (Figure 11).

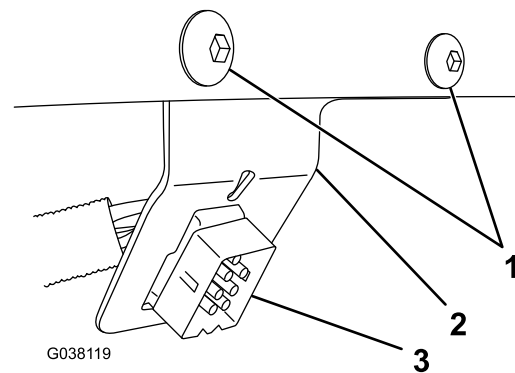


Figure 11

- | | |
|-----------------------|------------------------------|
| 1. Self-tapping bolts | 3. Plow controller connector |
| 2. Dash bracket | |

8. Mount the plow controller connector to the dash bracket, and secure the bracket to the left of the steering wheel using 2 self-tapping bolts (Figure 11).

9. Plug the plow controller into the plow controller connector.
10. Locate a keyed 12 V+ ignition source on the vehicle wire harness and identify the corresponding connector in your loose parts.
11. Slide the appropriate connector onto the end of the black/red wire and crimp the connector to secure it.
12. Connect the black/red wire to a keyed 12 V+ ignition source (Figure 12).

Note: Connecting the wire to a source that is not keyed can cause the battery to drain.

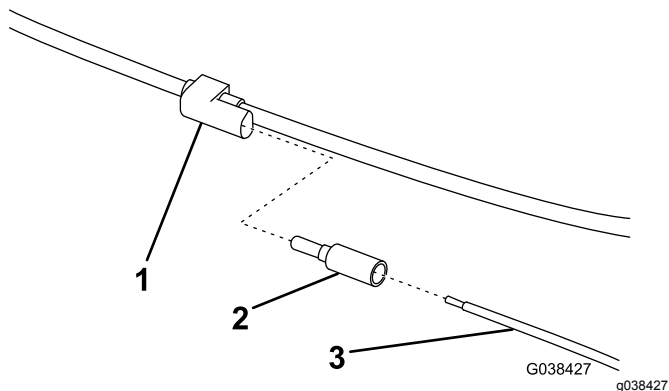


Figure 12

1. Keyed 12 V+ ignition source
2. Connector
3. Black/Red wire

13. Connect the black power/ground cable to the negative (-) battery terminal (Figure 13).

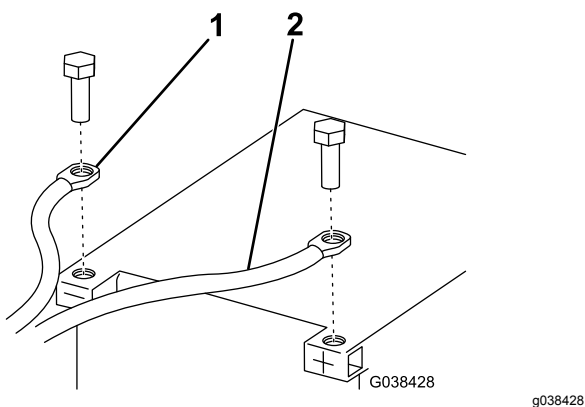


Figure 13

1. Black power/ground cable
2. Red power/ground cable

14. Connect the red power/ground cable to the positive (+) battery terminal (Figure 13).
15. Secure all wiring in a position that avoids hot or moving parts using cable ties.

Adjusting the Kickstand

Note: The vehicle undercarriage must be installed before beginning this procedure.

1. Lower the kickstand; refer to [Kickstand \(page 13\)](#).
2. Align the vehicle to the plow as if mounting the plow; refer to [Mounting the Snowplow \(page 14\)](#).
3. Loosen the jam nut on the kickstand (Figure 14).

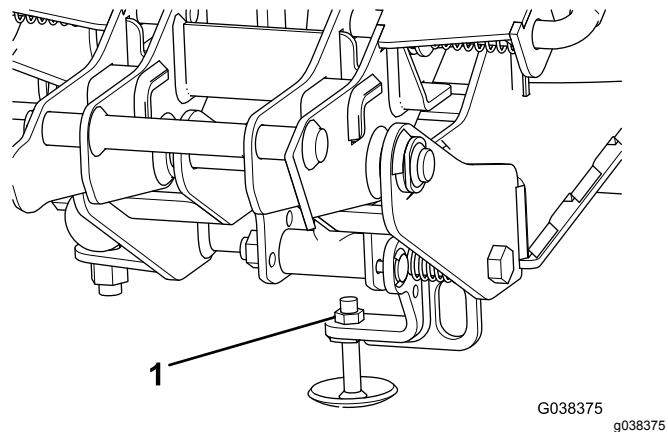


Figure 14

1. Jam nut

4. Rotate the kickstand leg until the coupler rear pin contacts the pin receiver as shown in Figure 15.

Note: If the rear pin can't reach the pin receiver, use the longer kickstand leg.

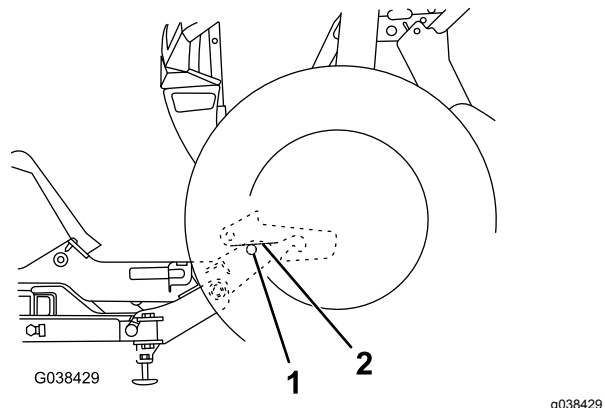


Figure 15

1. Rear pin
2. Pin receiver

5. Tighten the jam nut (Figure 14).

Mounting the Snowplow

Refer to [Mounting the Snowplow \(page 11\)](#) to mount the plow.

Product Overview

Controls

Become familiar with all the controls before you operate the plow.

Couplers

The couplers secure the plow to the vehicle push beam. Turn the levers toward the coupler tower to turn on the spring pins. Turn the levers away from the coupler tower to turn off the spring pins.

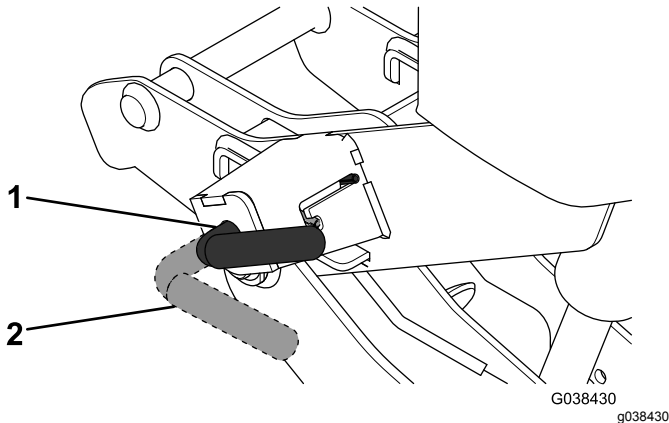


Figure 16

1. LOCK position 2. UNLOCK position

Switch Box Controller (for the ATV)

The switch box controller operates the movements of the snowplow.

- Raise/Lower switch—pressing upward raises the plow blade; pressing downward lowers the plow blade. Lowering the blade will also activate the FLOAT feature, allowing the plow blade to follow the contour of the ground.
- Left/Right switch—pressing left angles the plow blade to the left; pressing right angles the plow blade right.

SmartTouch2 Controller (for the UTV)

The SmartTouch2 controller operates the movement of the snowplow.

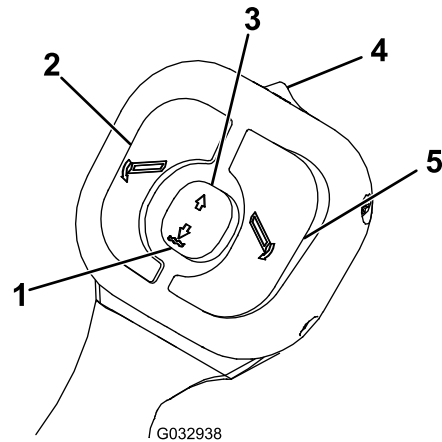


Figure 17

1. Lower/Float button 4. On/Off switch
2. Left button 5. Right button
3. Raise button

- On/Off switch—turns the plow controller on and off. A green light illuminates when the controller is on.

Note: Turn off the controller when not in use to prevent accidental activation of the plow.

- Raise button—raises the plow blade. Pressing the button quickly twice automatically raises the blade.
- Lower/Float button—lowers the plow blade and activates the Float feature. Pressing the button quickly twice automatically lowers the blade and activates the Float feature, allowing the plow blade to follow the contour of the ground. A red light illuminates when the Float feature is active.
- Left button—angles the plow blade to the left
- Right button—angles the plow blade to the right
- Sleep mode—If you do not use the controller for 20 minutes, it enters sleep mode and the controller lights flash green and red. Turn the controller off to deactivate the sleep mode.

Kickstand

Pull the kickstand handle and rotate to raise or lower the kickstand.

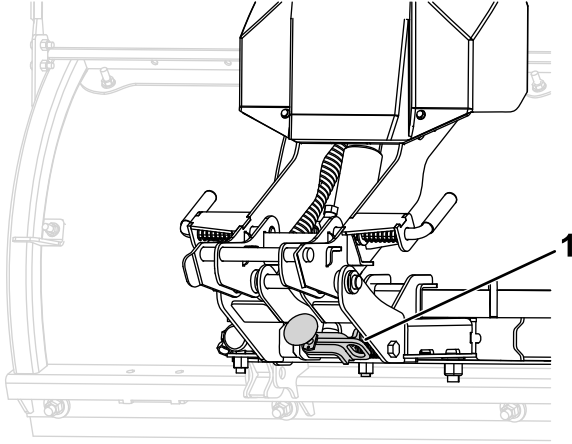


Figure 18

g261538

1. Kickstand handle

Specifications

Note: Specifications and design are subject to change without notice.

Blade width	122 cm (4 ft Poly Straight)	152 cm (5 ft Poly Straight)
Blade height	56 cm (22 inches)	56 cm (22 inches)
Weight	77 kg (170 lbs)	86 kg (190 lbs)

Attachments/Accessories

A selection of BOSS approved attachments and accessories is available for use with the machine to enhance and expand its capabilities. Contact your Authorized Service Dealer or authorized BOSS distributor or go to www.BOSSPlow.com for a list of all approved attachments and accessories.

To ensure optimum performance and continued safety certification of the machine, use only genuine BOSS replacement parts and accessories. Replacement parts and accessories made by other manufacturers could be dangerous, and such use could void the product warranty.

Operation

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

Mounting the Snowplow

Note: The vehicle must be running before starting this procedure.

1. Activate the FLOAT feature on your plow controller.
2. Line up the vehicle with the snowplow and drive forward until the lower pin contacts the pin receiver (Figure 19).

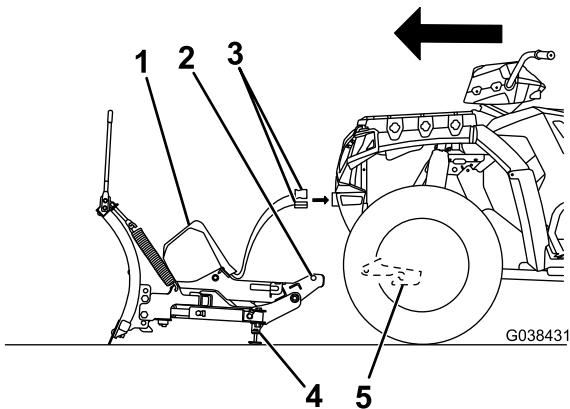


Figure 19

g038431

- | | |
|------------------|-----------------|
| 1. Coupler tower | 4. Kickstand |
| 2. Lower pin | 5. Pin receiver |
| 3. Wire harness | |

3. Set the parking brake.

Note: If your vehicle does not have a parking brake, chock the wheels.

4. Turn the levers on the couplers to the ATTACH position (Figure 20).

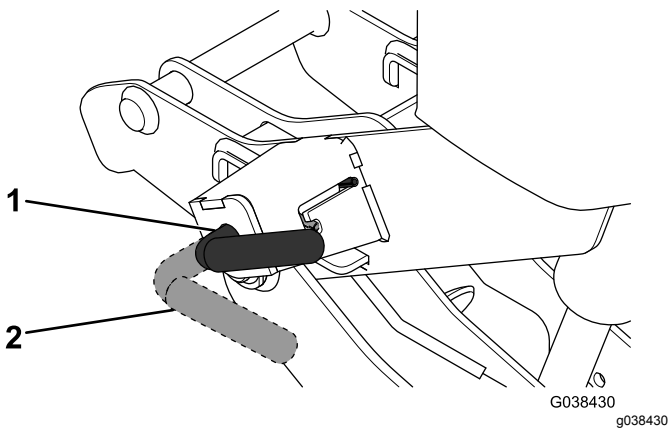


Figure 20

g038430

- | | |
|------------------|--------------------|
| 1. LOCK position | 2. UNLOCK position |
|------------------|--------------------|

5. Remove the electrical-plug dust-covers and connect the plow wire harness to the vehicle wire harness (Figure 19).
6. Activate the FLOAT feature on your plow controller.
7. Using the coupler handle, push the coupler tower upward until the coupler spring pins snap in (Figure 21).

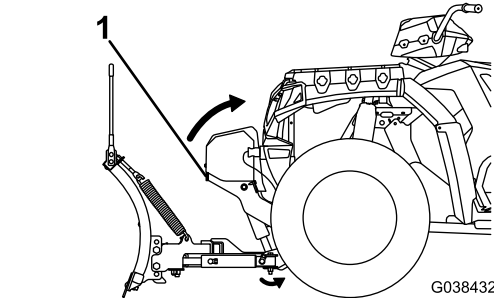


Figure 21

g038432

1. Coupler handle

8. Ensure that both coupler spring pins have fully engaged the coupler (Figure 20).

Note: Move the coupler tower until the spring pins engage completely.

9. Pull the kickstand handle outward and raise the kickstand (Figure 21).

Removing the Snowplow

Note: The vehicle must be running before starting this procedure. Set the parking brake. If your vehicle does not have a parking brake, chock the wheels.

1. Activate the FLOAT feature on the plow controller.
2. Pull the kickstand handle outward and lower the kickstand (Figure 22).

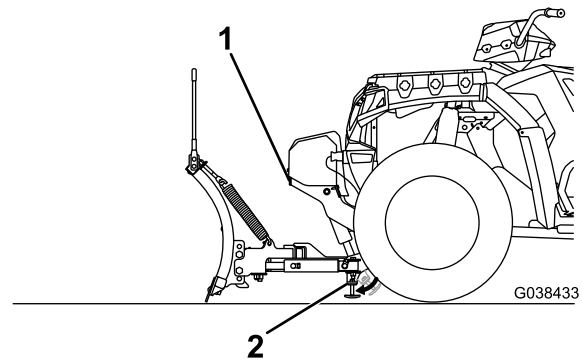


Figure 22

g038433

- | | |
|-------------------|--------------|
| 1. Coupler handle | 2. Kickstand |
|-------------------|--------------|

- While putting upward pressure on the coupler handle, turn the levers on the couplers to the OFF position (Figure 23).

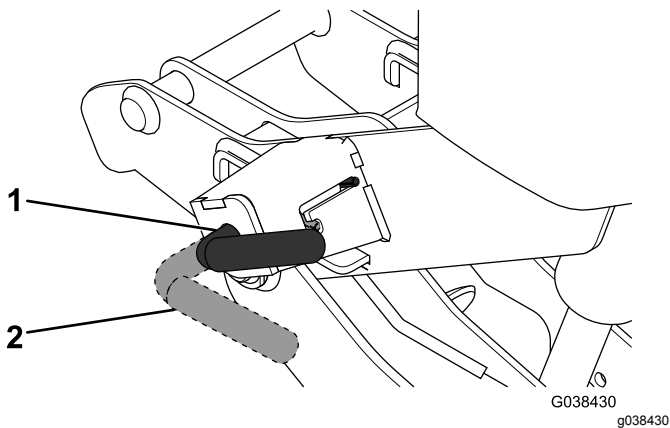


Figure 23

- LOCK position
- UNLOCK position

- Using the coupler handle, lower the coupler tower completely (Figure 24).

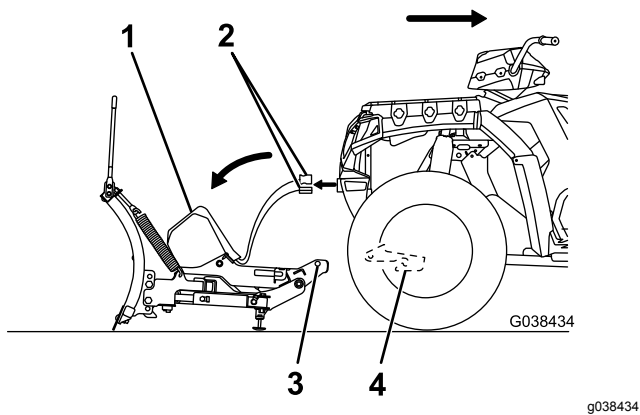


Figure 24

- Coupler tower
- Wire harness
- Lower pin
- Pin receiver

- Disconnect the plow wire harness from the vehicle wire harness and secure the electrical-plug dust-covers (Figure 24).
- Release the parking brake and slowly back the vehicle away from the snowplow.

Checking the Hydraulic Fluid Level

- With the plow mounted to the vehicle, lower the plow to the ground and ensure that it is in the straight position.
- Remove the 4 plastic rivets securing the coupler cover to the coupler, and remove the cover (Figure 25).

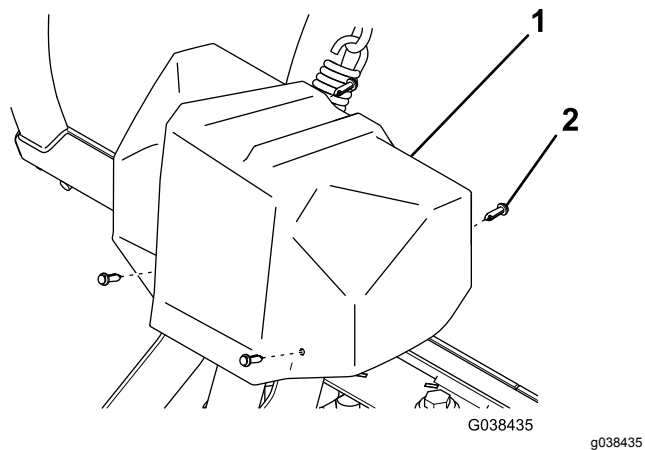


Figure 25

- Coupler cover
- Plastic rivet

- Ensure that the fluid comes up to the fill line on the side of the tank (Figure 26). If it does not, add more hydraulic fluid; refer to [Adding Hydraulic Fluid](#) (page 16).

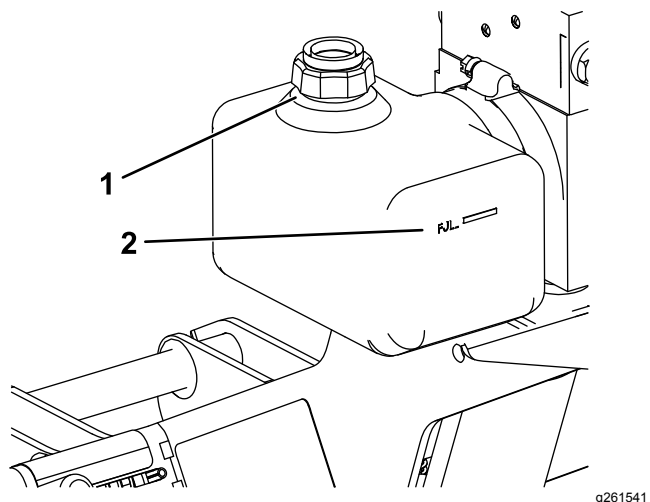


Figure 26

- Fill cap
- Fill line

Adding Hydraulic Fluid

1. Ensure that the lift cylinder is completely collapsed.

Important: Do not manually pull the tower down. This can cause an air pocket to form in the hydraulic system and fluid to spill out of the internal filler cap.

2. Clean the area around the fill cap (Figure 27).

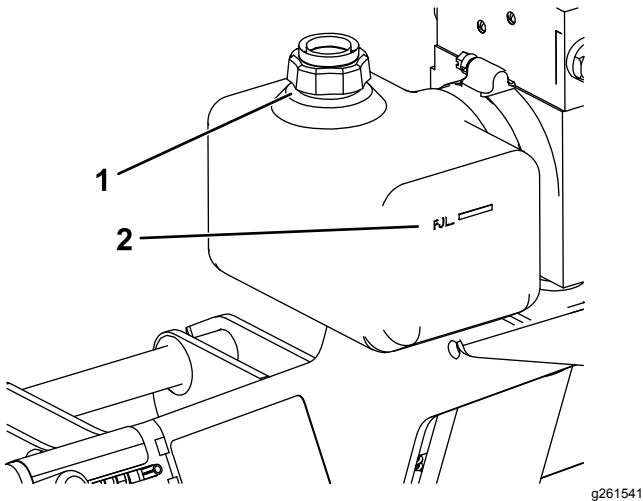


Figure 27

1. Fill cap
2. Fill line

3. Remove the fill cap from the hydraulic reservoir (Figure 27).
4. Slowly fill the reservoir with BOSS high-performance hydraulic fluid to the fill line on the outside of the tank (Figure 27).

Note: The reservoir holds approximately 0.48 L (1/2 US qt) of hydraulic fluid.

5. Install the previously removed fill cap.
6. Start the vehicle and operate the plow in its full range of movement.
7. Stop the vehicle, check the hydraulic-fluid level, and replenish the fluid if necessary; refer to [Checking the Hydraulic Fluid Level \(page 15\)](#).
8. Install the previously removed coupler cover.

Operating Tips

- Become familiar with the area you are plowing; hidden obstructions such as curbs and pipes can damage your plow or machine.
- Do not let snow accumulate; always plow with the storm.
- Lower the plow when not in use to prevent possible injury.
- Always plow at a safe speed in case you hit hidden obstructions.
- When transporting the machine, do not block your vision with the plow.
- Do not change the plow position while plowing.
- Ensure that the kickstand is raised before plowing to prevent damage to the plow or machine.
- For more plowing tips, visit www.BOSSPlow.com.

Maintenance

⚠ WARNING

Failing to properly maintain the machine could result in premature failure of machine systems, causing possible harm to you or bystanders.

Keep the machine well maintained and in good working order as indicated in these instructions.

⚠ CAUTION

If you leave the key in the switch, someone could accidentally start the engine and seriously injure you or other bystanders.

Remove the key from the switch before you perform any maintenance.

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

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
Before each use or daily	<ul style="list-style-type: none">• Check the hydraulic lines and hoses.• Check the torque of all fasteners, pins, retainers, nuts, and bolts.• Check the cutting edge.• Check the wire-harness connector.• Grease the coupler spring pins.
Before storage	<ul style="list-style-type: none">• Grease the lift-cylinder rod.• Apply dielectric grease to the wire-harness connectors.• Grease the coupler spring pins.
Monthly	<ul style="list-style-type: none">• Apply dielectric grease to the wire-harness connectors.

Checking the Hydraulic Lines and Hoses

Service Interval: Before each use or daily

⚠ WARNING

Hydraulic fluid escaping under pressure can penetrate the skin and cause injury.

- **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 pin-hole 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.**
- **Get immediate medical help if fluid is injected into skin.**

Check the hydraulic lines and hoses daily for leaks, kinked lines, loose mounting supports, wear, loose fittings, weather deterioration, and chemical deterioration. Make all necessary repairs before operating.

Storage

Storing the Plow

1. Grease any exposed chrome or nitro bar on the lift cylinders.
2. Drive the snowplow to your storage location and remove the plow; refer to [Removing the Snowplow \(page 14\)](#).
3. Pull the coupler tower forward until the lift cylinder is completely compressed.
4. Apply dielectric grease to all of the wire harness connectors and install the dust caps.
5. Lightly sand and use touch-up paint on painted areas that are scratched, chipped, or rusted.
6. Loosen the trip-return springs.
7. Grease the coupler spring pins.

Removing the Plow from Storage

1. Check the plow for cracked welds.
2. Check the torque of all fasteners, pins, retainers, nuts, and bolts; tighten as necessary.
3. Check the hydraulic lines and hoses for cracks or leaks.
4. Check the cutting edge for wear.
5. Tighten the trip-return springs.
6. Lightly sand and use touch-up paint on painted areas that are scratched, chipped, or rusted.
7. Grease the coupler spring pins.
8. Apply dielectric grease to all of the wire harness connectors.
9. Attach the plow to the vehicle; refer to [Mounting the Snowplow \(page 11\)](#).
10. Move the plow through its range of motion to check the hydraulic cylinder rods.

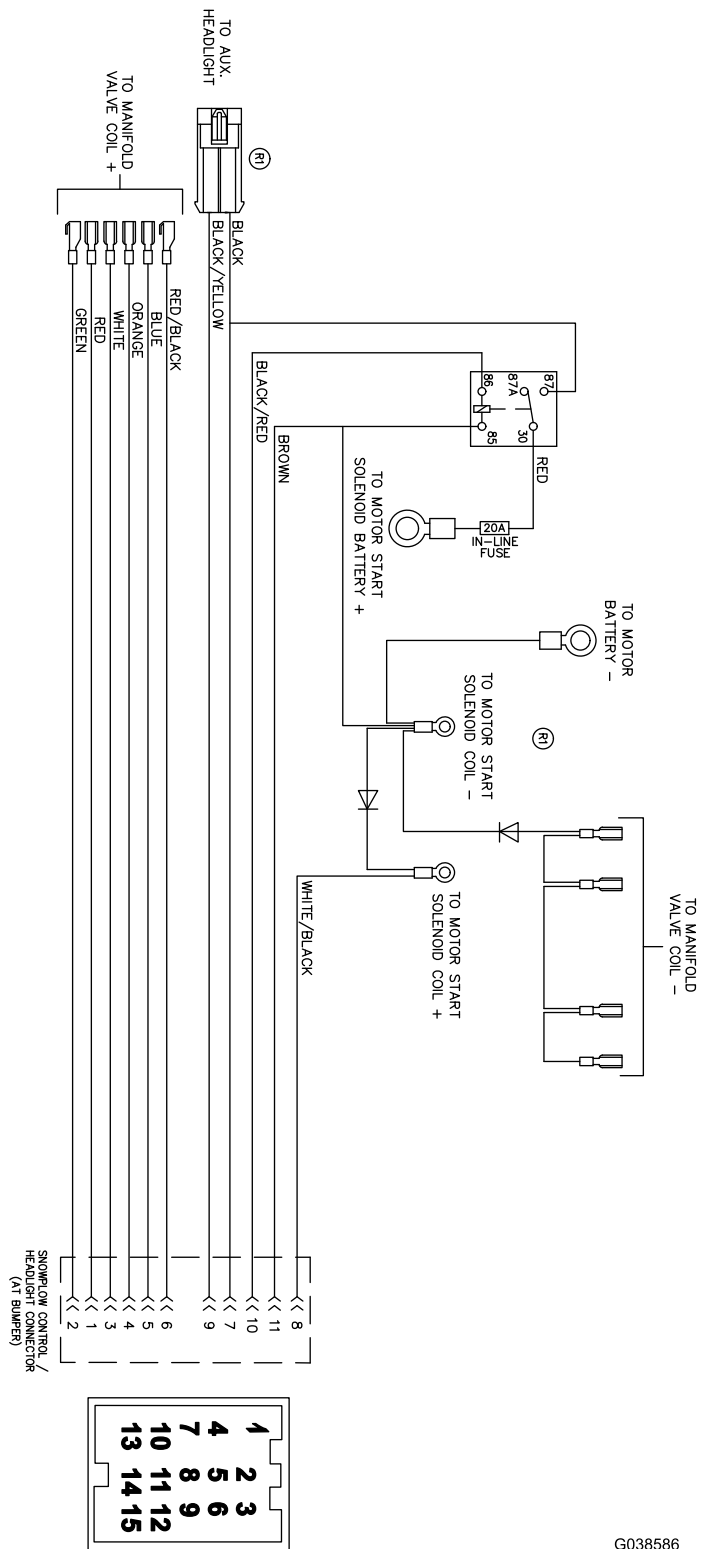
Troubleshooting

Problem	Possible Cause	Corrective Action
The pump motor does not run.	<ol style="list-style-type: none"> 1. The power/ground cables or control cables are not connected. 2. The pump motor has failed or the pump has seized 3. The cable between the battery and the solenoid is disconnected or broken. 4. The solenoid has failed. 5. Power from the relay is disconnected. 	<ol style="list-style-type: none"> 1. Connect the cables. 2. Check for voltage at the pump motor while the ignition switch is on and the Raise button is pressed on the controller. If voltage is present, the motor brushes or pump/motor assembly may be replaced. 3. Check for power to the solenoid by testing for voltage between both large terminals and ground. If voltage is not present between one large terminal and ground, connect or replace the cable. 4. Check for voltage between the other large terminal of the solenoid and ground while jumping power to the small terminal with the white/black wire. If no voltage is present, replace the solenoid. If voltage is present, connect or replace the wire from the small terminal of the solenoid to ground. 5. Test the voltage between the black wire and ground at the white 9-pin connector. If no voltage is present, connect the relay. If voltage is present, check the wiring and controller switches.
The pump continues to run while the switch is in neutral.	<ol style="list-style-type: none"> 1. The solenoid has failed in the closed position. 2. There is a short between the black and white/black wire in the controller. 3. The switch has failed. 	<ol style="list-style-type: none"> 1. Disconnect the controller and turn the ignition on. If the pump continues to run, quickly remove power to the pump by disconnecting the power/ground cables to the plow and replace the solenoid. 2. Disconnect the controller and turn the ignition on. If the pump stops running, replace the wire. 3. Replace the switch.
The plow does not lower.	<ol style="list-style-type: none"> 1. The power/ground cables or control cables are not connected. 2. The flow-control valve is closed. 3. The wiring on the valve block is not connected. 4. The solenoid valve or valve coil has failed. 5. Power from the relays is disconnected. 	<ol style="list-style-type: none"> 1. Connect the cables if they are not connected. 2. Place the controller in neutral, then open the flow-control valve. 3. Refer to the wiring schematic. 4. Check for voltage between the solenoid valve terminal and ground while the ignition switch is on and the controller is in the Float position. If voltage is present, replace the valve or valve coil. 5. Check the voltage between the black wire and ground at the white 9-pin connector. If no voltage is present, connect the relays. If voltage is present, check the wiring and switch off the controller.
The plow lowers too fast.	<ol style="list-style-type: none"> 1. The flow-control valve is open too much. 	<ol style="list-style-type: none"> 1. Close the flow-control valve to the desired drop speed.

Problem	Possible Cause	Corrective Action
The plow does not raise or raises slowly.	<ol style="list-style-type: none"> 1. The hydraulic-fluid level is low. 2. The power/ground cables or the control cable are not connected. 3. The wiring on the valve block is not connected. 4. The battery is weak or needs replacing. 5. The motor brushes are bad. 6. The pump pressure relief valve is set to less than 172 bar (2,500 psi), contaminated, or damaged. 7. The pump is worn 8. The Raise control solenoid valve is not opening completely. 9. The Lower control solenoid valve is stuck open. 	<ol style="list-style-type: none"> 1. Check the hydraulic-fluid level; refer to the Checking the Hydraulic Fluid section. 2. Connect the cables. 3. Refer to the wiring schematic. 4. Load a test battery and replace it if necessary. 5. Check the motor brushes and replace them if necessary. 6. Ensure that the pressure is set to 172 bar (2,500 psi). Check the pressure again. If it is less than 172 bar (2,500 psi) at the end of the lift, clean or replace the pressure relief valve. 7. Replace the pump. 8. Replace the valve. 9. Replace the valve.
The plow angles while plowing.	<ol style="list-style-type: none"> 1. The ANGLE control solenoid valve is contaminated or damaged. 2. The pressure relief valve is contaminated or damaged. 3. The pressure relief valve is set incorrectly. 	<ol style="list-style-type: none"> 1. Clean or replace the ANGLE control solenoid valve. 2. Clean or replace the pressure relief valve. 3. Contact your authorized BOSS dealer.
The plow does not angle or angles slowly.	<ol style="list-style-type: none"> 1. The hydraulic-fluid level is incorrect. 2. The power/ground cables and/or the control cables are not connected properly. 3. The wiring connections on the valve block are not connected properly. 4. The battery is damaged or depleted. 5. The ANGLE control solenoid valve does not open completely. 	<ol style="list-style-type: none"> 1. Ensure that the hydraulic-fluid level should be within 2 cm (3/4 inch) of the top of the reservoir when the plow is lowered. 2. Connect the cables if they are not connected. 3. Refer to the manifold wiring schematic included with your <i>Owner's Manual</i>. 4. Load a test battery and replace it if necessary. 5. Replace the ANGLE control solenoid valve.
Oil leaks from the lift cylinders.	<ol style="list-style-type: none"> 1. The fittings are loose or the O-rings are damaged. 2. The rods are pitted or rough. 	<ol style="list-style-type: none"> 1. Tighten loose fittings. See your authorized BOSS dealer for a seal kit. 2. Polish them with a copus cloth or extra fine steel wool.
The vehicle battery dies when the vehicle is turned off.	<ol style="list-style-type: none"> 1. The wire harness isn't connected to a keyed fuse source. 	<ol style="list-style-type: none"> 1. Connect the wire harness to a keyed fuse source; refer to the wire schematic.
The vehicle battery dies when all of the switches are in the Neutral position.	<ol style="list-style-type: none"> 1. There is a short in the controller wiring. 2. There is a short in the wire harness. 3. There is a short in the valve coils. 	<ol style="list-style-type: none"> 1. Repair or replace the controller. 2. Repair or replace the wire harness. 3. Replace the valve coils.
The blade trips too easily.	<ol style="list-style-type: none"> 1. Check the trip-spring adjustment. 2. Check the push-beam height. 	<ol style="list-style-type: none"> 1. Tighten the springs and replace them if they are damaged. 2. Adjust the push beam to the proper height.
The plow does not clean up snow from low areas.	<ol style="list-style-type: none"> 1. The controller is not in the FLOAT position. 	<ol style="list-style-type: none"> 1. Activate the FLOAT feature on the controller.

Problem	Possible Cause	Corrective Action
Fluid is running out of the fill cap of the hydraulic pump.	<ol style="list-style-type: none"> 1. The terrain is too steep. 2. The pump reservoir is overfilled. 3. The plow is hitting snowbanks too hard. 	<ol style="list-style-type: none"> 1. Avoid steeply sloped areas. 2. The hydraulic fluid level should be within 2 cm (3/4 inch) of the top of the reservoir. 3. Do not plow recklessly.
The pump chatters when raising or angling the plow.	<ol style="list-style-type: none"> 1. The hydraulic-fluid level is low. 	<ol style="list-style-type: none"> 1. Check the hydraulic-fluid level; refer to the Checking the Hydraulic Fluid section.

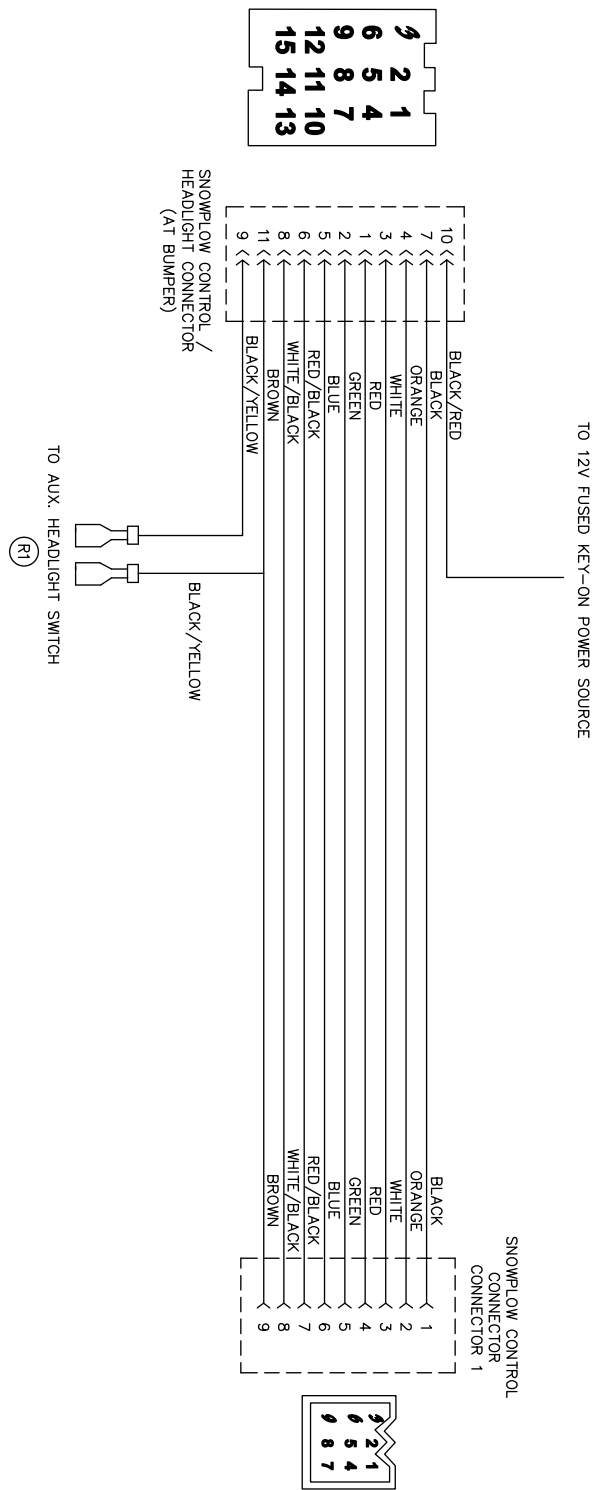
Schematics



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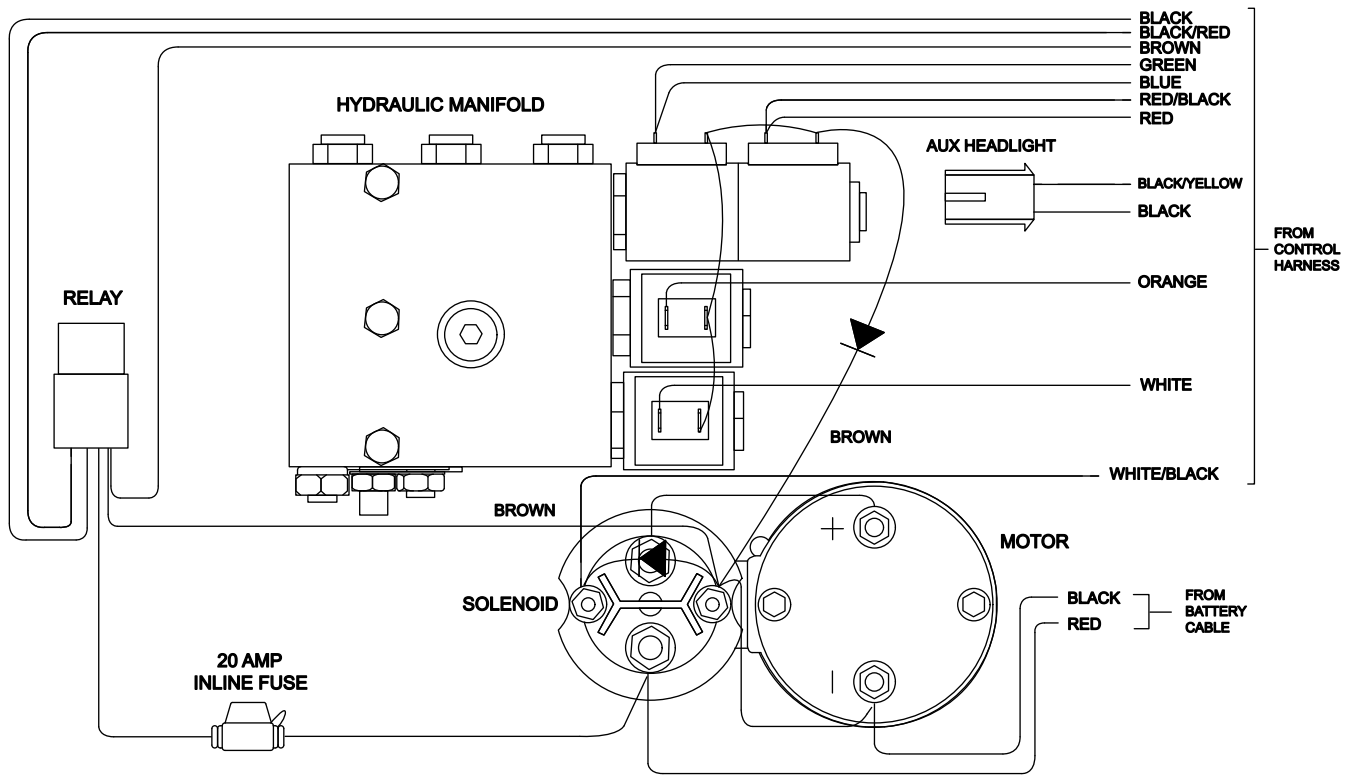
Plow Side Electrical Schematic (Rev. 0)



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Vehicle Side Electrical Schematic (Rev. 0)



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Wire Color	Function
Black	12V+ to Control
Black/Red	12V+ from key-on power source
Brown	Ground
Green	Blade Left
Blue	Blade Left
Red/Black	Blade Right
Red	Blade Right
Orange	Lower
White	Raise
White/Black	Motor Start Solenoid
Black/Yellow	Auxiliary Headlight Ground

Hydraulic Manifold (Rev. 0)