

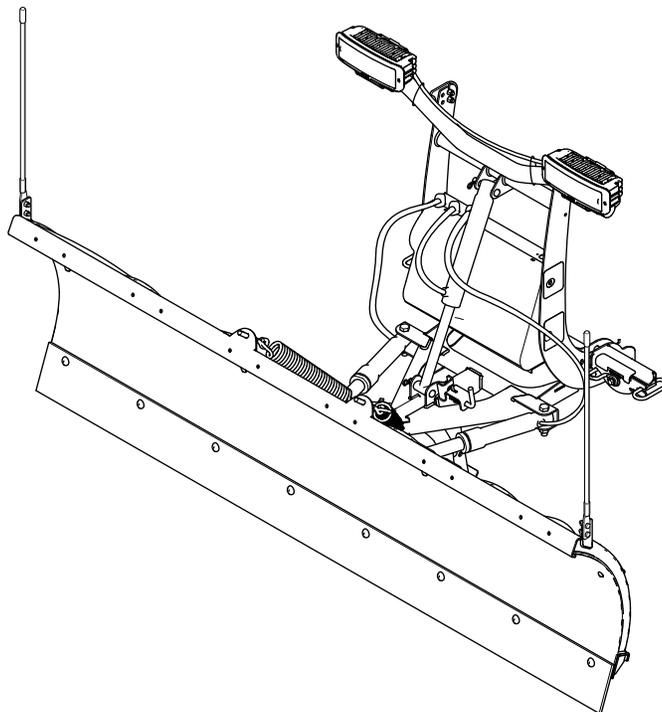


P.O. Box 787  
Iron Mountain, MI 49801  
United States

# Installation Instructions

## RT3 HTX Straight-Blade Plow

- Part No. STB08980B—Serial No. 40000000 and Up
- Part No. STB10321C—Serial No. 40000000 and Up
- Part No. STB15035—Serial No. 40000000 and Up
- Part No. STB18900—Serial No. 40000000 and Up
- Part No. STB19838B—Serial No. 40000000 and Up



**⚠ 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.**

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

This manual identifies potential hazards and has safety messages identified by the safety-alert symbol (Figure 2), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.

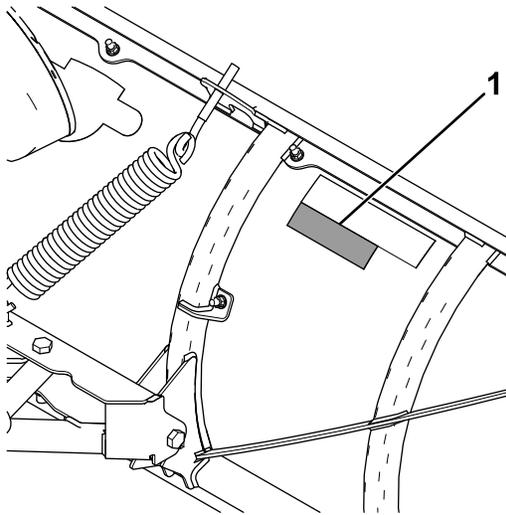
# Introduction

**Note:** This manual is used for the assembly of all BOSS HTX 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](http://www.BOSSPlow.com) for product safety and operation training materials, 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 Distributor and have the model and serial numbers of your product ready. Figure 1 identifies the location of the model and serial numbers on the product. Write the numbers in the space provided.



**Figure 1**

g210477

1. Model and serial number location



**Figure 2**

g000502

1. Safety-alert symbol

This manual uses 2 words to highlight information. **Important** calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

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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 *Operator'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 Snowplow Application Chart and Selection Guide*.
- Ensure that only trained personnel install and perform maintenance on the equipment and hydraulic components.
- Many newer trucks are equipped with air bags. **Never** disable, remove, or relocate any sensors or other components related to the operation of the air bags.
- 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 (GAWR) 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](http://www.BOSSPlow.com).

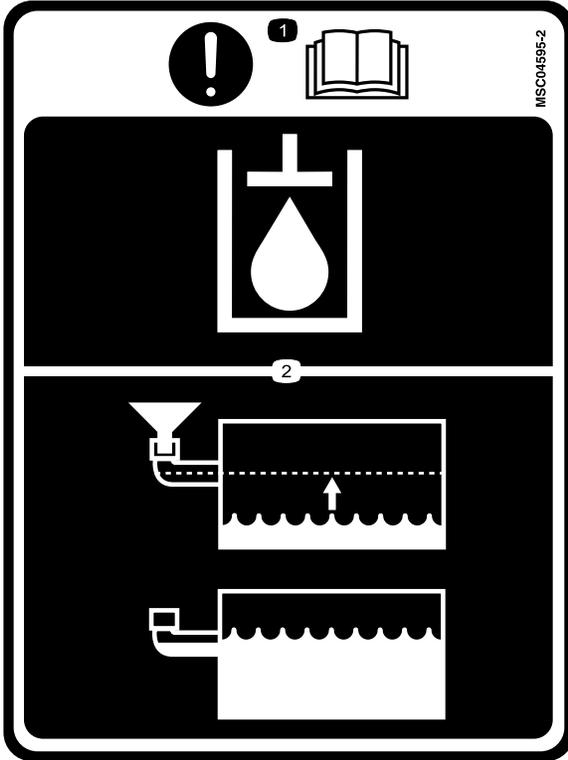
## Operation

- Vehicles equipped with air bags are designed so that the air bags activate in a frontal collision equivalent to hitting a solid barrier (such as a wall) at approximately 22 km/h (14 mph) or more, or a frontal perpendicular collision with a parked car or truck of similar size at approximately 45 km/h (28 mph) or more. Careless or high-speed driving while plowing snow can deploy the air bag.
- When transporting the vehicle, position the plow so as not to block your vision or the plow headlights.
- **Do not** change the blade position when traveling.
- **Do not** exceed 64 km/h (40 mph) when transporting the plow.
- **Do not** exceed 22 km/h (14 mph) when plowing.
- **Do not** exceed 8 km/h (5 mph) when D-Force is activated (if equipped).
- 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 operate the machine while ill, tired, or under the influence of alcohol or drugs.
- Always wear your seat belt 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 (GAWR) 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](http://www.BOSSPlow.com).

# Safety and Instructional Decals



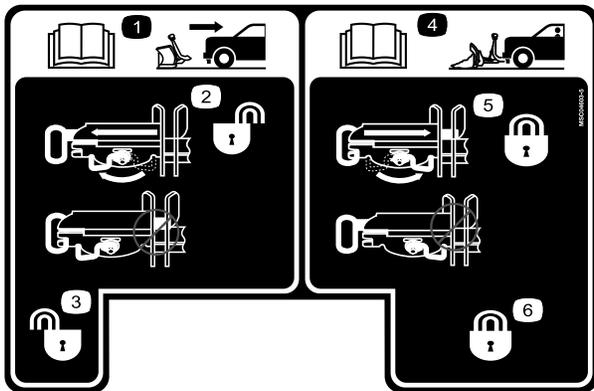
Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or missing.



**MSC04595**

decalmsc04595

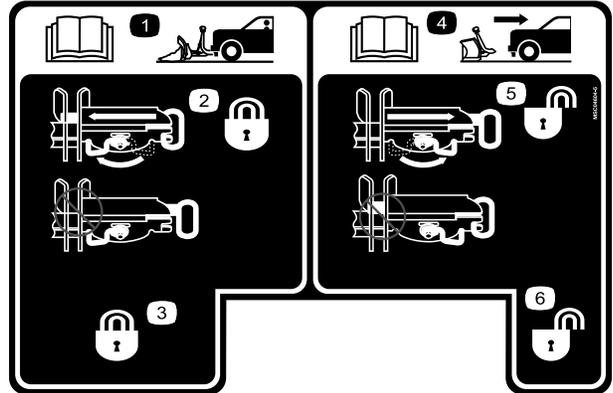
1. Important—read the *Owner's Manual*.
2. Fill the hydraulic fluid to the bottom of the fill elbow.



**MSC04603-5**

decalmsc04603-5

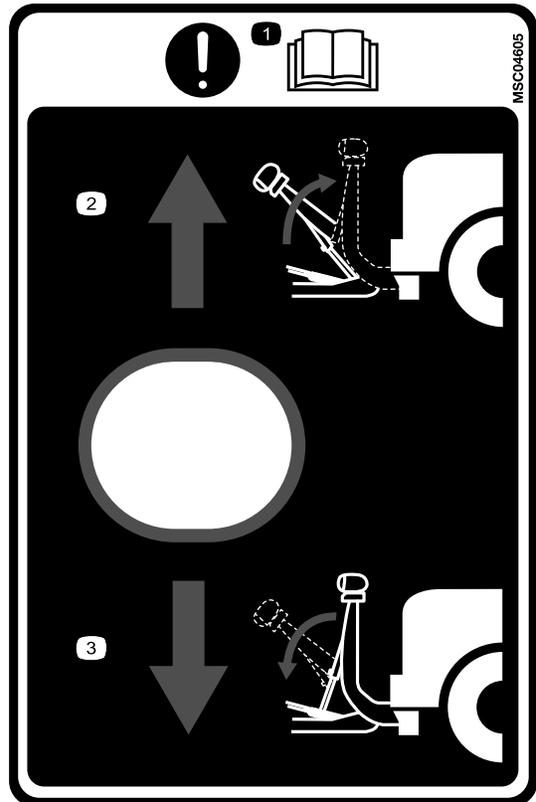
1. Read the *Owner's Manual* for information on removing the plow.
2. Coupler spring pin unlock
3. Coupler spring pin unlock
4. Read the *Owner's Manual* for information on attaching the plow.
5. Coupler spring pin lock
6. Coupler spring pin lock



decalmsc04604-5

**MSC04604-5**

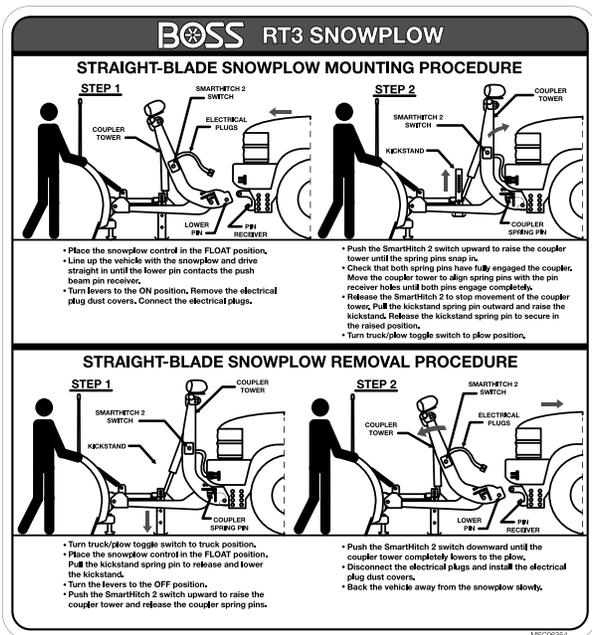
1. Read the *Owner's Manual* for information on attaching the plow.
2. Coupler spring pin lock
3. Coupler spring pin lock
4. Read the *Owner's Manual* for information on removing the plow.
5. Coupler spring pin unlock
6. Coupler spring pin unlock



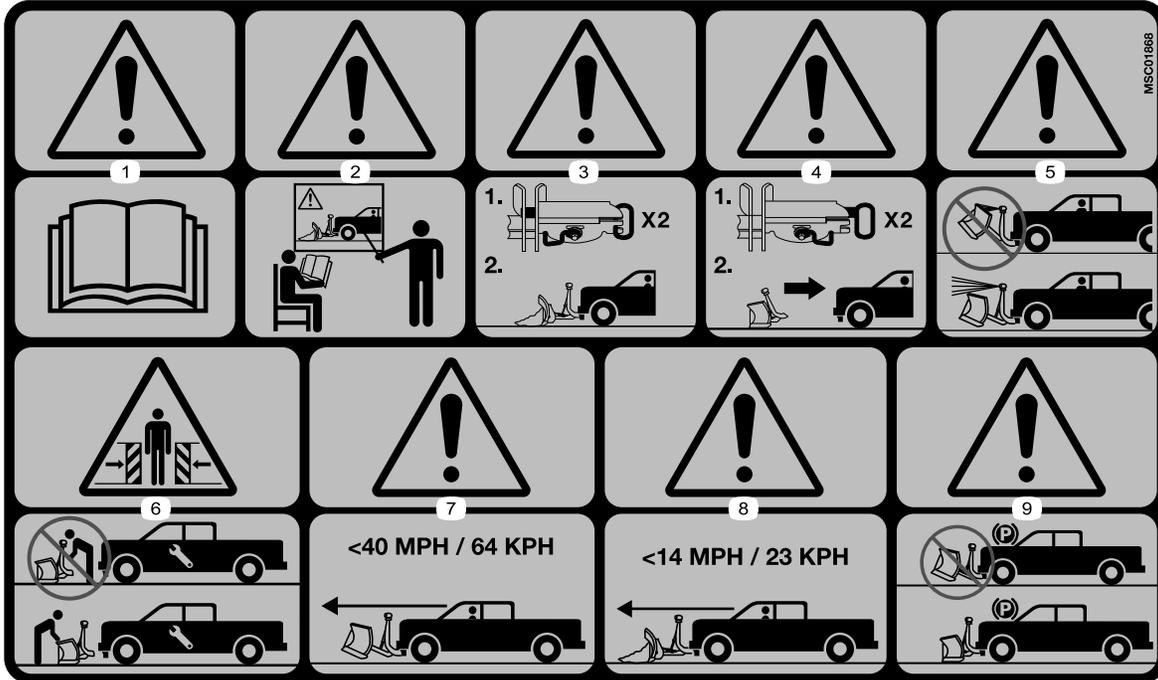
decalmsc04605

**MSC04605**

1. Important—read the *Owner's Manual*.
2. Raise the coupler tower.
3. Lower the coupler tower.



MSC06354



decalmsc01868

MSC01868

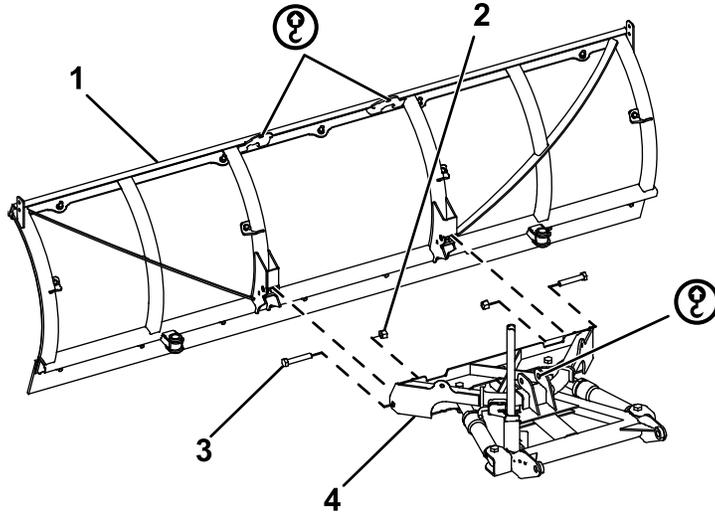
- Warning—read the *Owner's Manual*.
- Warning—all operators should be trained before operating the machine.
- Warning—coupler spring pins must be locked before plowing.
- Warning—coupler spring pins must be unlocked to remove the plow.
- Warning—do not block the vehicle headlights with the plow.
- Crushing hazard—do not stand between the plow and vehicle during maintenance.
- Warning—do not exceed 64 km/h (40 mph) when transporting the plow.
- Warning—do not exceed 22 km/h (14 mph) when plowing.
- Warning—lower the plow when the vehicle is not in use.

# Installation

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

## Installing the Push Frame and Coupler Tower

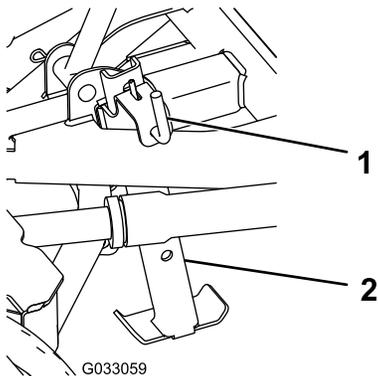
1. Attach the front of the push-frame assembly to the plow blade using 2 bolts (5/8 x 4 inch) and self-locking nuts (Figure 3). Torque the bolts to 153 N·m (113 ft-lb).



**Figure 3**

- |                     |                        |
|---------------------|------------------------|
| 1. Plow blade       | 3. Bolt (5/8 x 4 inch) |
| 2. Self-locking nut | 4. Push-frame assembly |

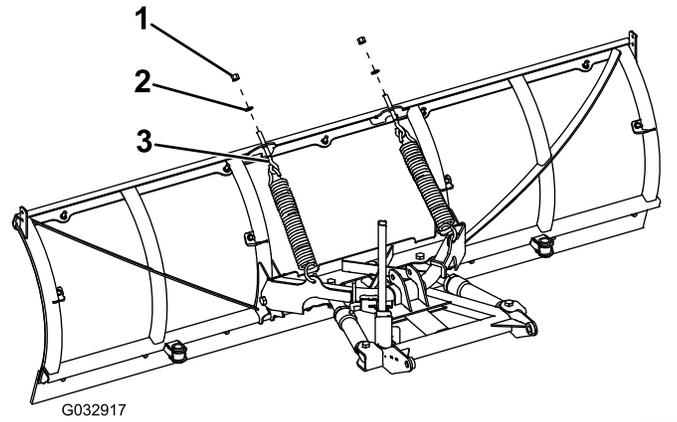
2. Pull the kickstand spring pin to release and lower the kickstand (Figure 4).



**Figure 4**

- |                         |              |
|-------------------------|--------------|
| 1. Kickstand spring pin | 2. Kickstand |
|-------------------------|--------------|

3. Hook the 2 trip springs through the holes on the push-frame assembly (Figure 5).

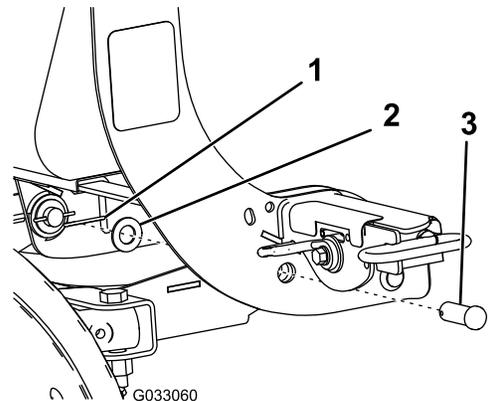


**Figure 5**

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

4. Hook the other ends of the trip springs to 2 eyebolts (Figure 5).
5. 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 5).
6. Tighten the self-locking nuts until there is a gap of 0.8 mm (1/32 inch) between the trip spring coils.
7. Align the pivot holes of the coupler tower with the pivot holes on the push-frame assembly, and secure them with 2 pivot pins, 2 flat washers (3/4 inch), and 2 cotter pins (Figure 6).

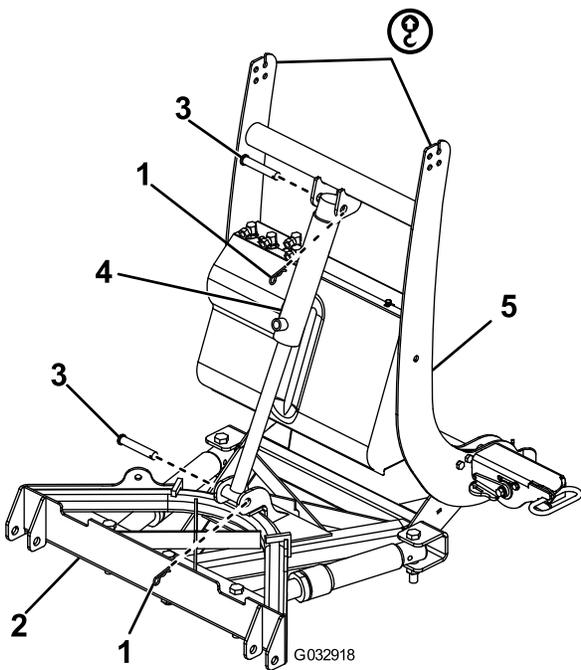
**Note:** Make sure to spread the ends of the cotter pins.



**Figure 6**

- |                |              |
|----------------|--------------|
| 1. Cotter pin  | 3. Pivot pin |
| 2. Flat washer |              |

8. Secure the rod end of the lift cylinder to the push-frame assembly using a clevis pin and hairpin cotter (Figure 7).



**Figure 7**

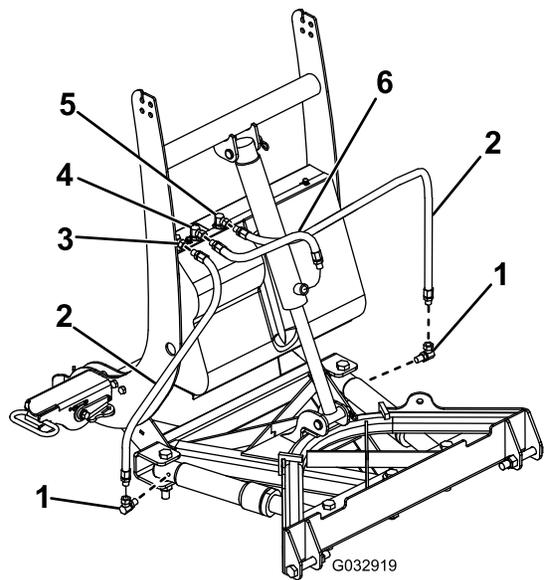
- |                        |                  |
|------------------------|------------------|
| 1. Clevis pin          | 4. Lift cylinder |
| 2. Push-frame assembly | 5. Coupler tower |
| 3. Hairpin cotter      |                  |

- Secure the free end of the lift cylinder to the coupler tower using a clevis pin and hairpin cotter (Figure 7).

## Installing the Hydraulic Hoses

- Install the 1/4 inch end of the 45 cm (18 inch) hose to the middle fitting on the hydraulic manifold (Figure 8). Turn the fitting until it is finger tight, then turn it 2 to 3 more times.

**Important: Do not overtighten.**



**Figure 8**

- |                         |                         |
|-------------------------|-------------------------|
| 1. 90° fitting          | 4. Middle fitting       |
| 2. 86 cm (34 inch) hose | 5. Right fitting        |
| 3. Left fitting         | 6. 45 cm (18 inch) hose |

- Install the 3/8 inch O-ring end of the 45 cm (18 inch) hose to the lower fitting on the lift cylinder (Figure 8). Turn the fitting until it is finger tight, then turn it 2 to 3 more times.

**Important: Do not overtighten.**

- Using thread compound, install a 90° fitting to the right angle cylinder located on the push-frame assembly (Figure 8).

**Note:** The fitting should be installed at a 45° angle pointing forward.

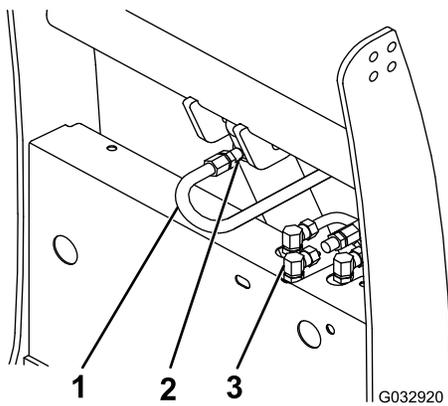
- Install the 1/4 inch end of the 86 cm (34 inch) hose to the right fitting on the hydraulic manifold (Figure 8). Turn the fitting until it is finger tight, then turn it 2 to 3 more times.

**Important: Do not overtighten.**

- Install the 3/8 inch end of the 86 cm (34 inch) hose to the previously installed 90° fitting (Figure 8). Turn the fitting until it is finger tight, then turn it 2 to 3 more times.

**Important: Do not overtighten.**

- Repeat steps 3 through 5 on the left side.
- Remove the plug on the upper fitting on the lift cylinder (Figure 9).



**Figure 9**

1. 39 cm (15-1/2 inch) hose
2. Upper lift-cylinder fitting
3. Rear fitting

8. Using thread compound, install one end of the 39 cm (15-1/2 inch) hose to the upper fitting on the lift cylinder (Figure 9). Turn the fitting until it is finger tight, then turn it 2 to 3 more times.

**Important:** Do not overtighten.

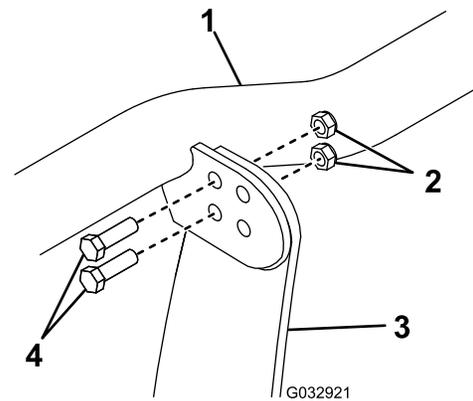
9. Creating an “S” shape with the hose, connect the free end of the hose to the rear fitting on the hydraulic manifold (Figure 9). Turn the fitting until it is finger tight, then turn it 2 to 3 more times.

**Important:** Do not overtighten.

## Installing the Light Bar

1. Secure the light bar to the top of the coupler tower through the rear holes using 4 bolts (3/8 x 1-1/4 inch) and self-locking nuts (3/8 inch) (Figure 10). Torque the bolts to 31 N·m (23 ft·lb).

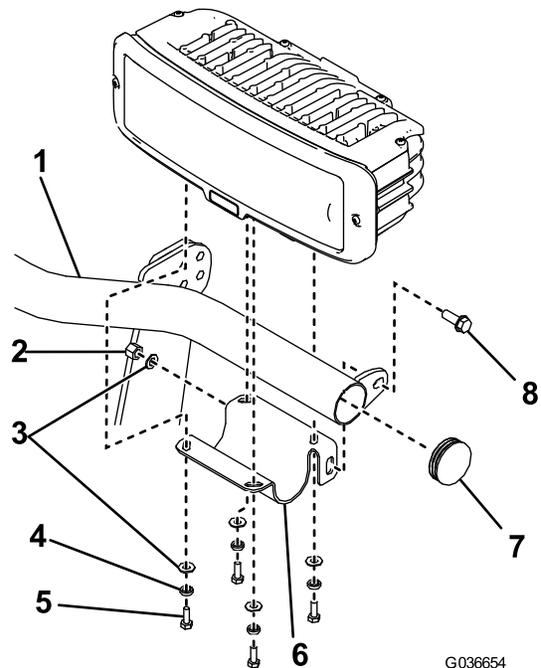
**Note:** If the light bar or plow headlights comes in contact with the hood of your vehicle, install the bar using the front holes.



**Figure 10**

1. Light bar
2. Self-locking nuts (3/8 inch)
3. Coupler tower
4. Bolts (3/8 x 1-1/4 inch)

2. Ensure that the end caps are installed on the ends of the light bar (Figure 11).



**Figure 11**

1. Light bar
2. Nylon locknut
3. Flat washer
4. Split lock washer
5. Bolt (1/4 x 3/4 inch)
6. Headlight bracket
7. End cap
8. Flange-head bolt (3/8 x 1 inch)

3. Secure the left headlight-bracket to the light bar using a flange-head bolt (3/8 x 1 inch), a flat washer, and a nylon locknut (Figure 11).

**Important:** Do not use thread locking compound on these bolts.

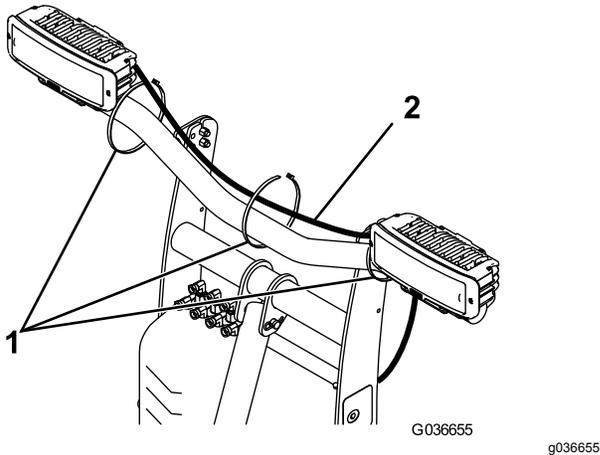
**Note:** Do not tighten the fasteners at this time.

- Secure the left headlight to the headlight bracket using 4 bolts (1/4 x 3/4 inch), split lock washers, and flat washers (Figure 11).

**Important:** Do not use thread locking compound on these bolts.

**Note:** Do not tighten the fasteners at this time.

- Repeat steps 3 and 4 for the right headlight bracket and headlight.
- Insert the headlight connectors on the wire harness to the back of the headlight housing (Figure 12). The short length connects to the left headlight and the long length connects to the right headlight.



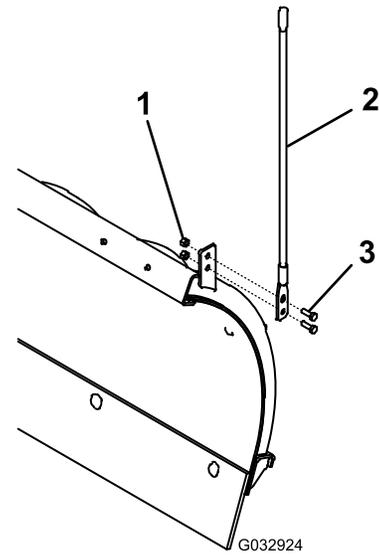
**Figure 12**

- Cable ties
- Short wire harness

- Secure the wire harness to the light bar using 3 cable ties as shown in Figure 12.

## Installing the Blade Guides and Filling the Hydraulic Reservoir

- Attach the blade guides to the plow blade using 4 bolts (5/16 x 1 inch) and 4 self-locking nuts (Figure 13).



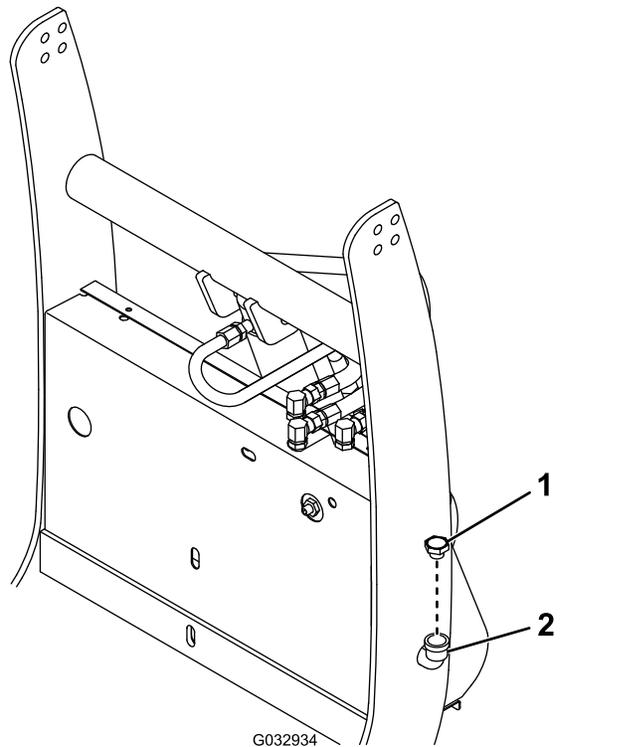
**Figure 13**

- Self-locking nut
- Blade guide
- Bolt (5/16 x 1 inch)

- Ensure that the lift cylinder is completely collapsed.

**Note:** The lights should tilt forward.

- Remove the fill cap from the hydraulic reservoir (Figure 14).



**Figure 14**

- Fill cap
- Hydraulic reservoir

- Slowly fill the reservoir with BOSS high-performance hydraulic fluid until it accepts no more.

**Note:** The reservoir holds approximately 1.9 L (2 US qt) of hydraulic fluid.

- Install the previously removed fill cap.

## 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.

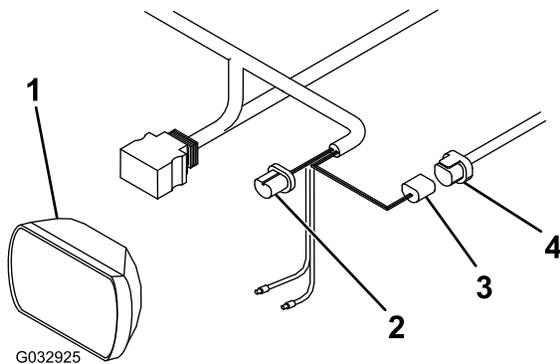
Disconnect your battery before installing this kit.

**Note:** Apply dielectric grease to all electrical connections.

**Note:** Some vehicles require a turn signal relay kit. Contact your Authorized BOSS Dealer for more information.

**Note:** If your vehicle requires a headlight adapter kit, refer to [Installing the Headlight Adapters](#) (page 13).

- Disconnect the wire harness plug from the back of the left vehicle headlight ([Figure 15](#)).

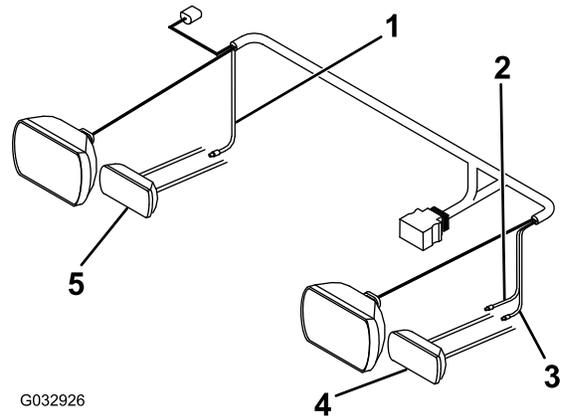


**Figure 15**

- Vehicle headlight
- Blue plug
- Black plug
- Vehicle wire-harness plug

- Connect the blue plug from the long wire harness to the back of the left vehicle headlight ([Figure 15](#)).
- Connect the black plug from the long wire harness to the previously disconnected plug on the vehicle wire harness ([Figure 15](#)).
- Repeat steps 1 through 3 on the right vehicle headlight.
- Connect the pink wire from the long wire harness to the right turn signal wire using a splice connector ([Figure 16](#)).

**Important:** Identify the circuit with a test lamp before splicing into any electrical circuit to prevent vehicle damage.



**Figure 16**

- Pink wire
- Violet wire
- Yellow wire
- Left turn signal
- Right turn signal

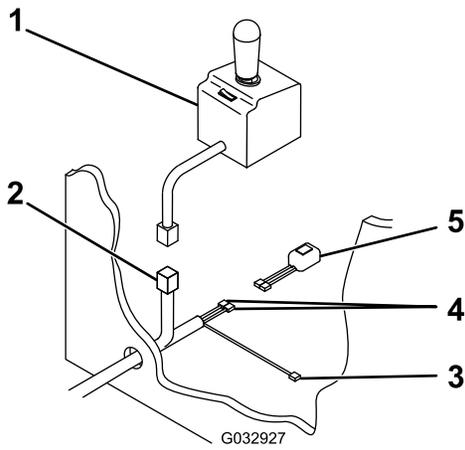
- Connect the violet wire from the long wire harness to the left turn signal wire using a splice connector ([Figure 16](#)).
- Connect the yellow wire from the long wire harness to the left park light wire using a splice connector ([Figure 16](#)).

- Ensure that the vehicle firewall is clear of obstructions.
- Drill a 3 cm (1-1/4 inch) diameter hole through the firewall on the driver side of the vehicle.

**Note:** The hole should be in an easily accessible area.

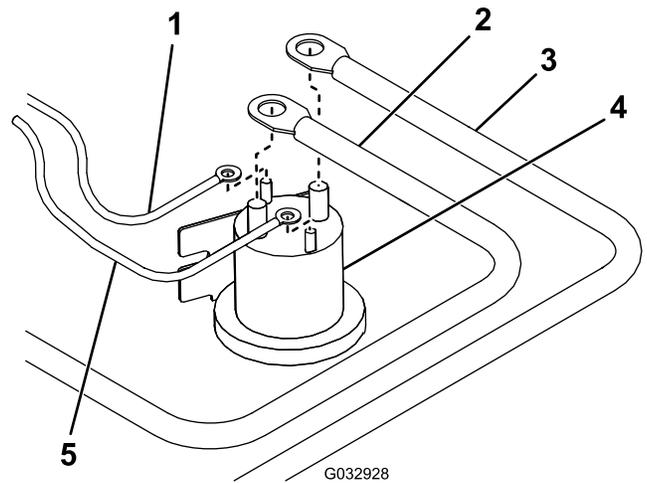
- Insert the split rubber grommet into the hole.
- Pull the plow controller connector, black/red wire, and 2 black wires into the vehicle cab through the hole in the firewall ([Figure 17](#)).

**Important:** Ensure that all wiring is secured in a position that avoids hot or moving parts to prevent damage to the vehicle or plow.



**Figure 17**

- |                         |                            |
|-------------------------|----------------------------|
| 1. Plow controller      | 4. Black wires             |
| 2. Controller connector | 5. Headlight toggle switch |
| 3. Black/red wire       |                            |



**Figure 18**

- |                           |                  |
|---------------------------|------------------|
| 1. White/black wire       | 4. Pump solenoid |
| 2. Battery cable          | 5. Brown wire    |
| 3. Red power/ground cable |                  |

12. Connect the 2 black wires to the headlight toggle switch ([Figure 17](#)).

13. Determine where you will mount the headlight toggle switch and clean the area thoroughly.

**Note:** Allow the area to dry completely after cleaning.

14. Remove the adhesive backing and press the toggle switch to the clean area of the dashboard for 30 seconds.

15. Plug the controller connector into the plow controller.

16. Mount the plow controller; refer to [Mounting the Plow Controller](#) (page 14).

17. Connect the black/red wire to a keyed 12 V + ignition source.

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

18. Connect the white/black wire from the wire harness to the small post on the pump solenoid ([Figure 18](#)).

19. Connect the brown wire from the wire harness to the other small post on the pump solenoid ([Figure 18](#)).

**Note:** The wires may go on either small post, but should not share a post.

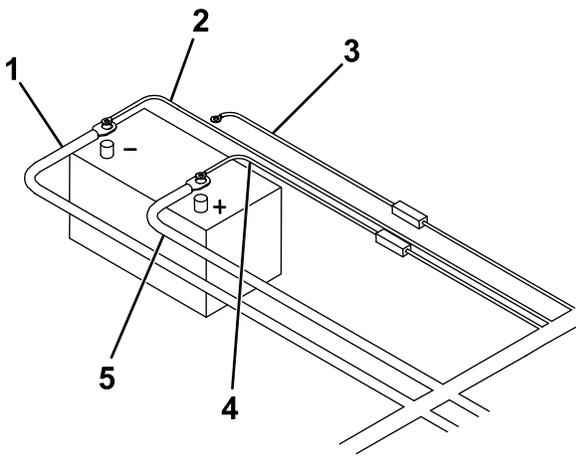
20. Mount the pump solenoid inside the engine compartment of the vehicle, ensuring that it stays in an upright position and does not contact the body, hood, or other conductive material on the vehicle.

21. Connect the red power/ground cable to the large post on the pump solenoid ([Figure 18](#)).

22. Connect the battery cable to the other large post on the pump solenoid ([Figure 18](#)).

**Note:** The wires may go on either large post, but should not share a post.

23. Connect the black power/ground cable to the negative (-) battery terminal ([Figure 19](#)).

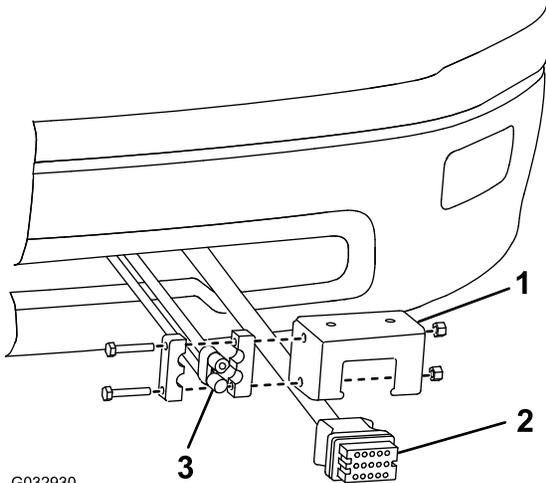


**Figure 19**

g212209

- 1. Black power/ground cable
- 2. Brown wire
- 3. Red/white fused wire
- 4. Red fused wire
- 5. Red power/ground cable

- 24. Connect the brown wire to the negative (-) battery terminal (Figure 19).
- 25. Connect the free end of the battery cable to the positive (+) battery terminal (Figure 19).
- 26. Connect the red, fused wire and the red/white fused wire to the positive (+) battery terminal (Figure 19).
- 27. Mount the truck-side, wire harness plow connector to the lower part of the bumper using the control harness mounting bracket (Figure 20).



**Figure 20**

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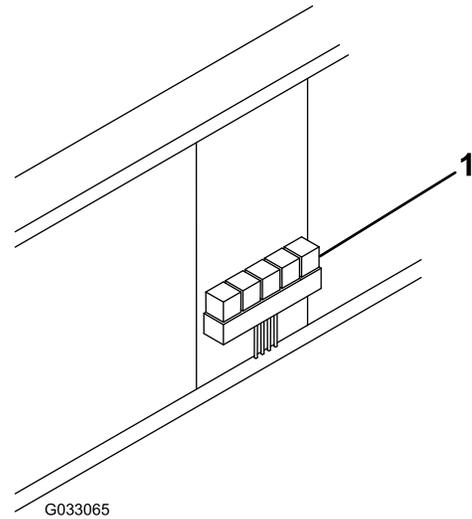
g032930

- 1. Control-harness mounting bracket
- 2. Plow connector
- 3. Power/ground connector bracket

- 28. Mount the black and red power/ground connector to the control harness mounting bracket (Figure 20).

- 29. Mount the relay pack to the inside of the engine compartment using 4 sheet-metal screws (Figure 21).

**Note:** Ensure that the relay pack is mounted in the upright position.



**Figure 21**

G033065

g033065

- 1. Relay pack

- 30. Locate the vehicle option connector and align it according to the table below:

**Note:** If your vehicle is not listed in the table, use the standard orientation.

**Note:** If the vehicle option connector is not properly oriented, the lights on the plow do not function correctly.

Models	Orientation
1992 and newer Ford models 1988 and newer GM models 2003 and newer Dodge models Dodge models with a 4-headlight system	<p>Standard Orientation</p> <p>1. Red/yellow wire 2. White/yellow wire 3. Red/yellow wire 4. White/yellow wire</p>
1987 and older GM models with a 4-headlight system 1987 to 1991 Ford models (9004 bulb) 1994 to 2002 Dodge models with a 2-headlight system (9004 bulb)	<p>Reverse Orientation</p> <p>1. White/yellow wire 2. Red/yellow wire 3. Red/yellow wire 4. White/yellow wire</p>

- 31. Connect the red/white wire to the battery according to the table below:

**Note:** If the red/white wire is installed incorrectly, the low beams do not illuminate when the plow high-beams are on.

Models	Wire Placement
1999 to 2002 Chevrolet and GMC models 1999 to 2002 Dodge models 2000 to 2006 Toyota models	Negative (-) battery terminal
All other vehicles	Positive (+) battery terminal

32. Secure the wire harness.
33. Attach the snowplow to the vehicle; refer to [Mounting the Snowplow \(page 16\)](#).
34. Test the wire harness installation as follows:

**Note:** Turn the ignition to the ON position before testing.

**Note:** If any of the lights fail to work, check the wiring and make any corrections.

- A. To test the vehicle low-beam lights, do the following:
  - Switch the vehicle headlights to the ON position.
  - Switch the plow headlight toggle switch to the TRUCK position.
  - Ensure that the low-beam light indicator on the vehicle is illuminated.

Only the vehicle low-beam lights should be illuminated.

- B. To test the vehicle high-beam lights, do the following:
  - Switch the vehicle headlights to the HIGH-BEAM position.
  - Switch the plow headlight toggle switch to the TRUCK position.
  - Ensure that the high-beam light indicator on the vehicle is illuminated.

Only the vehicle high-beam lights should be illuminated.

- C. To test the plow low-beam lights, do the following:
  - Switch the vehicle headlights to the ON position.
  - Switch the plow headlight toggle switch to the PLOW position.
  - Ensure that the low-beam light indicator on the vehicle is illuminated.

Only the plow low-beam lights should be illuminated.

- D. To test the plow high-beam lights, do the following:

- Switch the vehicle headlights to the HIGH-BEAM position.
- Switch the plow headlight toggle switch to the PLOW position.
- Ensure that the high-beam light indicator on the vehicle is illuminated.

Only the plow high-beam and low-beam lights should be illuminated.

- E. To test the plow and vehicle turn signals, do the following:

- Activate the left or right vehicle turn signal.
- Ensure that the appropriate vehicle turn-signal indicator is illuminated.

Both the vehicle and plow turn signals should flash.

- F. To test the plow and vehicle park lights, activate the vehicle park lights.

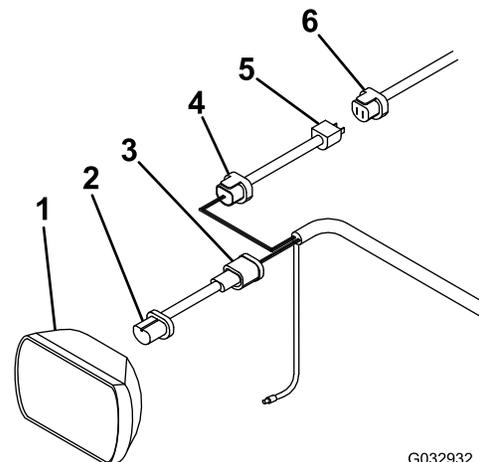
All the plow and vehicle park lights should be on.

## Installing the Headlight Adapters

### Optional

### For Two-Headlight Vehicles

1. Disconnect the wire harness plug from the back of the left vehicle headlight ([Figure 22](#)).



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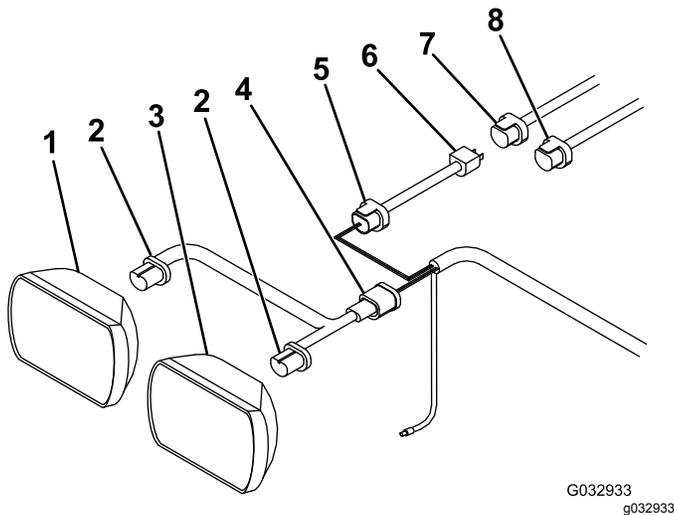
**Figure 22**

- |                      |                              |
|----------------------|------------------------------|
| 1. Vehicle headlight | 4. Blue plug                 |
| 2. Headlight adapter | 5. Headlight adapter         |
| 3. Black plug        | 6. Vehicle wire-harness plug |

2. Connect the headlight adapter to the back of the left vehicle headlight (Figure 22).
3. Connect the black plug from the headlight adapter to the long wire harness (Figure 22).
4. Connect the blue plug from the headlight adapter to the blue plug on the long wire harness (Figure 22).
5. Connect the free end of the headlight adapter to the previously disconnected plug on the vehicle wire harness (Figure 22).
6. Repeat steps 1 through 5 on the right vehicle headlight.
7. Continue the wire harness installation from step 5 of [Installing the Wire Harness \(page 10\)](#).
6. Grease, tuck, and secure the previously disconnected high-beam plug on the vehicle wire harness (Figure 23).
- Note:** You will not use this connector.
7. Repeat steps 1 through 6 on the right vehicle headlights.
8. Continue the wire harness installation from step 5 of [Installing the Wire Harness \(page 10\)](#).

## For Four-Headlight Vehicles

1. Disconnect the wire harness plugs from the back of the left vehicle headlights (Figure 23).



**Figure 23**

- |                            |                           |
|----------------------------|---------------------------|
| 1. Outer vehicle headlight | 5. Blue plug              |
| 2. Headlight adapter       | 6. Headlight adapter      |
| 3. Inner vehicle headlight | 7. Vehicle low-beam plug  |
| 4. Black plug              | 8. Vehicle high-beam plug |

2. Connect the 2 ends of the headlight adapter to the back of the left vehicle headlights (Figure 23).
3. Connect the black plug from the headlight adapter to the long wire harness (Figure 23).
4. Connect the blue plug from the headlight adapter to the blue plug on the long wire harness (Figure 23).
5. Connect the free end of the headlight adapter to the previously disconnected low-beam plug on the vehicle wire harness (Figure 23).

## Mounting the Plow Controller

### Mounting the Joystick Controller

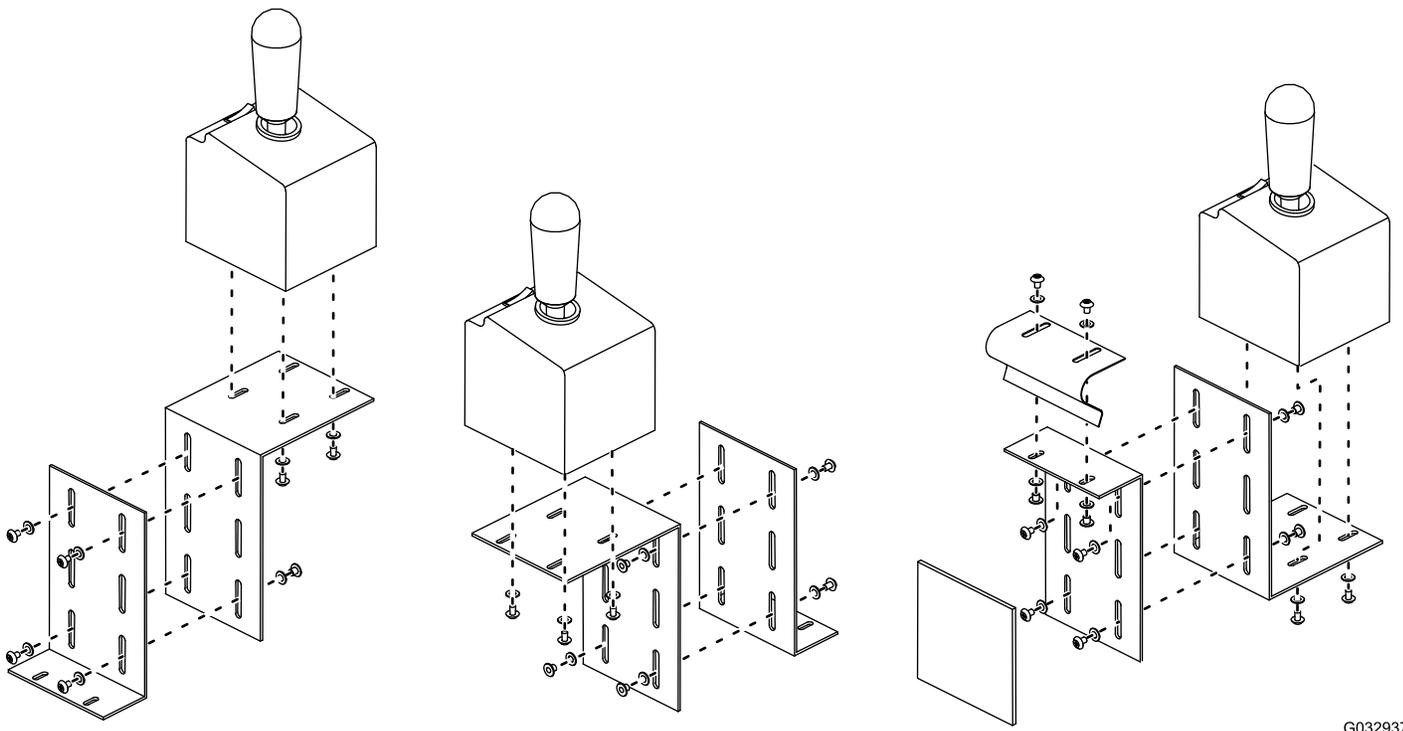
**Note:** Mount the controller in the cab in a dry area where it does not interfere with vehicle operation or visibility.

#### **⚠ 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.

1. Determine the best location and configuration for your controller mounting-bracket; refer to [Figure 24](#) for possible configurations.
2. Secure the mounting brackets to the vehicle and joystick controller using 8 to 10 bolts (#8), washers (#10), and nuts (#8) as shown in [Figure 24](#).
3. Continue the wire harness installation from step 17 of [Installing the Wire Harness \(page 10\)](#).



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Figure 24

## Mounting the SmartTouch2™ Controller

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

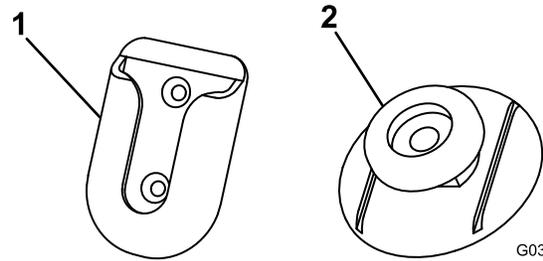
**Important:** Do not install the swivel mount when temperatures are below 16 °C (60 °F).

### **⚠ 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.

1. Determine the mounting location for the controller.
2. Clean the location with the provided alcohol wipe and dry it with a cloth or paper towel.
3. Clean the back of the swivel mount (Figure 25) with the alcohol wipe and then dry it.



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g032942

Figure 25

1. Swivel mount
2. Mounting tab

4. Remove the backing from 1 side of the adhesive and apply it to the back of the swivel mount.
5. 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.

6. Clean the back of the controller with the alcohol wipe and then dry it.
7. Remove the backing from 1 side of the adhesive and apply it to the back of the mounting tab (Figure 25).
8. Remove the remaining backing from the controller adhesive and press the mounting tab to the controller for 30 seconds.

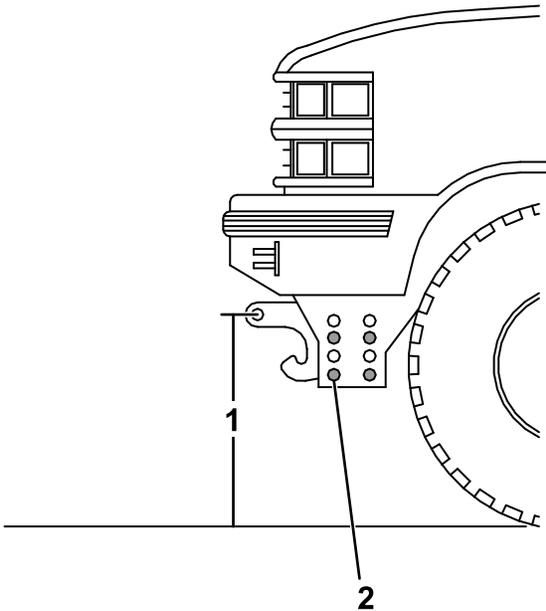
- Let the swivel mount rest unused for 72 hours before sliding the controller into the mounting bracket.

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

- Continue the wire harness installation from step 17 of [Installing the Wire Harness \(page 10\)](#).

## Adjusting the Pushbeam Height

- Measure the distance from the ground to the coupler spring-pin holes on the undercarriage pushbeam ([Figure 26](#)). The distance should be 36.8 cm (14-1/2 inches).



**Figure 26**

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- 36.8 cm (14-1/2 inches)
- Fastener

- If the pushbeam is not at 36.8 cm (14-1/2 inches), remove the fasteners securing the pushbeam to the undercarriage ([Figure 26](#)).
- Move the pushbeam up or down and secure it with the previously removed hardware.
- Torque the fasteners to 76 N·m (56 ft-lb).

## Mounting the Snowplow

Refer to [Mounting the Snowplow \(page 19\)](#) to mount the plow.

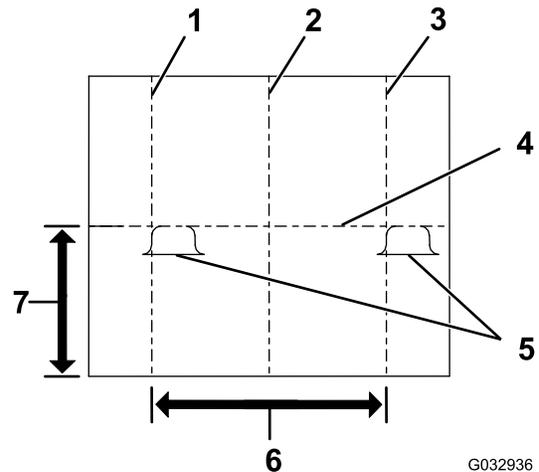
## Aiming the Headlights

**Important:** Certify that the installation of the snowplow lights conforms to applicable federal motor vehicle safety standards.

- Park the vehicle on a level surface 7.5 m (25 ft) away from a matte white screen or garage door.

**Note:** The screen should be perpendicular to both the ground and the front of the vehicle.

- Ensure that the vehicle is equipped for normal operation with the snowplow attached and in the raised position.
- Perform the following actions to ensure optimal headlight alignment:
  - Remove any ice or mud from under the fenders.
  - Ensure that all tires are fully and evenly inflated.
  - Check vehicle springs for sag or broken leaves.
  - Check the function of any level ride controls.
  - Stabilize the suspension by rocking the vehicle sideways.
  - Ensure that there is no load in the vehicle other than the driver.
  - Clean the headlights and matte white screen.
- Mark the vertical vehicle centerline on the screen ([Figure 27](#)).



**Figure 27**

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- Vertical left headlight centerline
- Vehicle centerline
- Vertical right headlight centerline
- Horizontal headlight centerline
- Brightest points
- Distance between headlight centers
- Distance from ground to headlight centers

5. Mark the vertical headlight centerline on the screen (Figure 27).

6. Mark the horizontal headlight centerline on the screen (Figure 27).

**Note:** The horizontal headlight centerline should be the distance from the ground to the center of the headlight.

7. Adjust the plow headlights until the brightest part of the plow low-beam lights are aligned as shown in Figure 27.

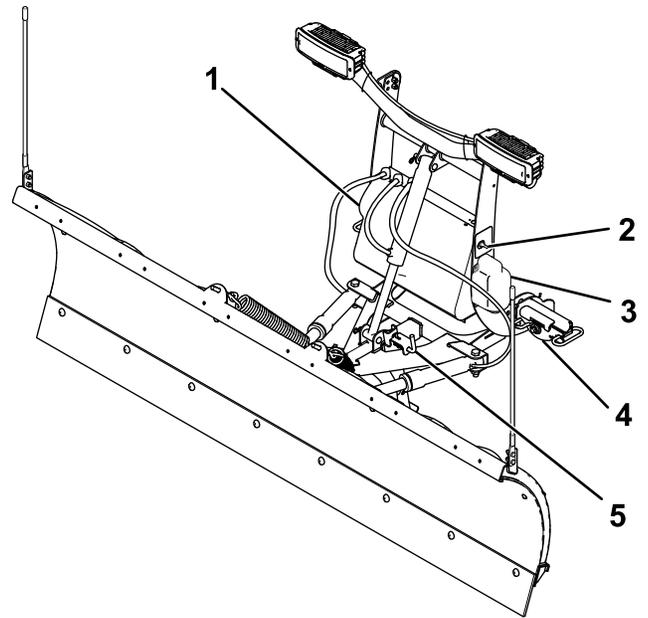
8. Tighten the 4 bolts (1/4 x 3/4 inch) securing each headlight to the headlight brackets and torque them to 8 N·m (6 ft-lb).

**Important:** Do not use thread locking compound on these bolts.

9. Tighten the bolt (3/8 x 1 inch) securing each headlight-bracket to the light bar and torque them to 31 N·m (23 ft-lb).

**Important:** Do not use thread locking compound on these bolts.

# Product Overview



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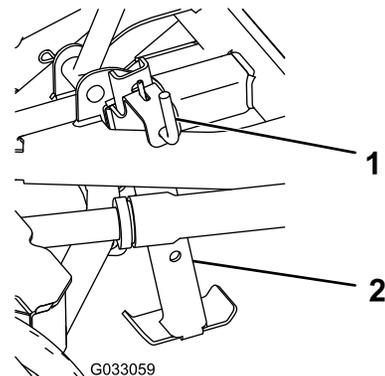
Figure 28

- |                                   |              |
|-----------------------------------|--------------|
| 1. Hydraulic reservoir fill elbow | 4. Coupler   |
| 2. SmartHitch2 switch             | 5. Kickstand |
| 3. D-Force accumulator (optional) |              |

## Controls

### Kickstand

Pull the kickstand spring pin to raise and lower the kickstand.



g033059

Figure 29

- |                         |              |
|-------------------------|--------------|
| 1. Kickstand spring pin | 2. Kickstand |
|-------------------------|--------------|

## SmartHitch2 Switch

The SmartHitch2 switch controls the movement of the coupler tower to facilitate plow attachment and removal. Press the switch up to raise the tower and down to lower the tower.

## 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.

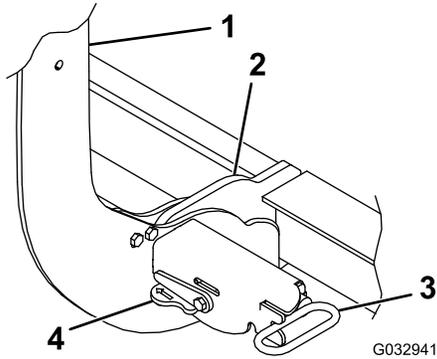


Figure 30

- |                  |                       |
|------------------|-----------------------|
| 1. Coupler tower | 3. Coupler spring-pin |
| 2. Pin receiver  | 4. Coupler lever      |

## Headlight Toggle Switch

The headlight toggle switch controls which set of headlights is being used. Move the switch to the TRUCK position to use the headlights on the vehicle. Move the switch to the PLOW position to use the headlights on the plow.

## Joystick Controller

The joystick controller operates the movement of the snowplow.

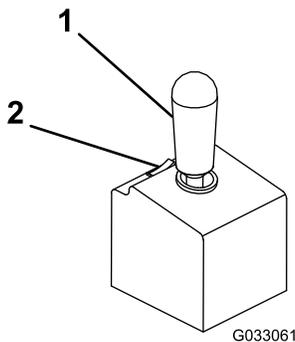


Figure 31

- |             |                  |
|-------------|------------------|
| 1. Joystick | 2. ON/OFF switch |
|-------------|------------------|

- ON/OFF switch—turns the plow controller on and off. A red light will illuminate when the controller is on.

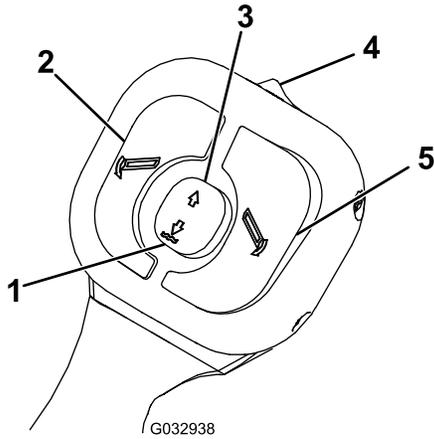
**Note:** Turn off the controller when not in use to prevent accidental activation of the plow.

- Directional joystick—controls the direction that the plow moves
  - To raise the plow blade, pull the joystick back.
  - To lower the plow blade, push the joystick forward.
  - To angle the plow blade right, push the joystick right.
  - To angle the plow blade left, push the joystick left.
  - To activate the FLOAT feature, push the joystick forward until it clicks into the detent position, allowing the plow blade to follow the contour of the ground. The joystick stays in the FLOAT position until the joystick is centered again.

# SmartTouch2 Controller

The SmartTouch2 controller operates the movement of the snowplow.

**Note:** Plows equipped with D-Force must have a SmartTouch2 controller with a red center button.



**Figure 32**

- |                 |                  |
|-----------------|------------------|
| 1. LOWER 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 button—lowers the plow blade and activates the FLOAT and D-FORCE features.
  - FLOAT—double tapping the button 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.
  - D-FORCE (optional)—if your plow is equipped with the D-FORCE feature, double tapping the button a second time activates it, applying a downward force on the blade to improve back blading. An orange light illuminates when the D-FORCE feature is active.

**Note:** The D-FORCE feature can only be activated twice before the plow must be raised.

- 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.

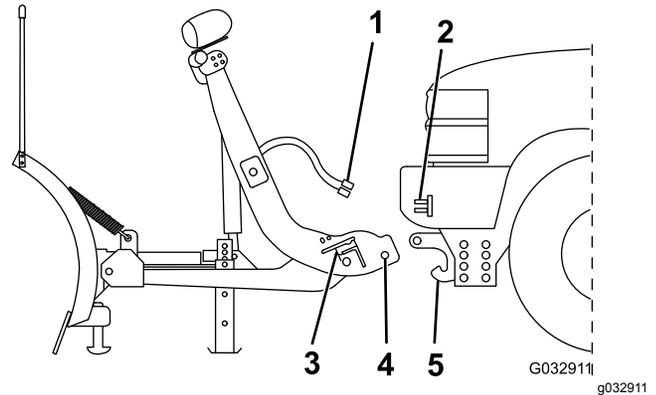
# Operation

**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.

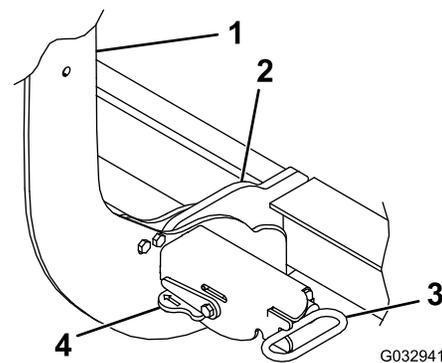
1. Activate the FLOAT feature on your plow controller.
2. Line up the vehicle with the snowplow and slowly drive forward until the lower pin contacts the push-beam pin receiver (Figure 33).



**Figure 33**

- |                         |                 |
|-------------------------|-----------------|
| 1. Plow wire harness    | 4. Lower pin    |
| 2. Vehicle wire harness | 5. Pin receiver |
| 3. Coupler              |                 |

3. Turn the levers on the couplers to the ON position (Figure 34).

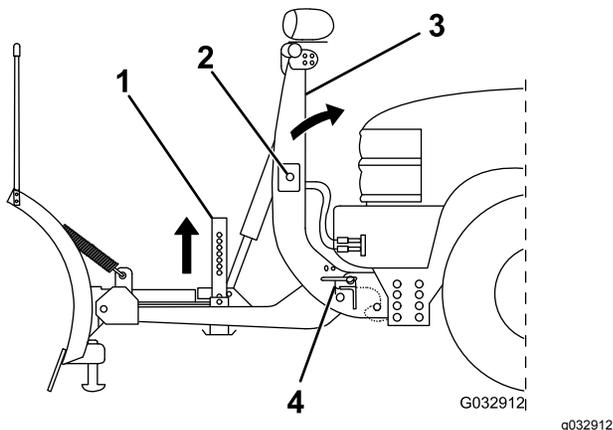


**Figure 34**

- |                  |                       |
|------------------|-----------------------|
| 1. Coupler tower | 3. Coupler spring-pin |
| 2. Pin receiver  | 4. Coupler lever      |

4. Remove the electrical-plug dust-covers and connect the plow wire harness to the vehicle wire harness (Figure 33).

5. Push the SmartHitch2 switch on the side of the coupler tower upward and raise the tower until the coupler spring pins snap in (Figure 35).



**Figure 35**

- |                       |                       |
|-----------------------|-----------------------|
| 1. Kickstand          | 3. Coupler tower      |
| 2. SmartHitch2 switch | 4. Coupler spring pin |

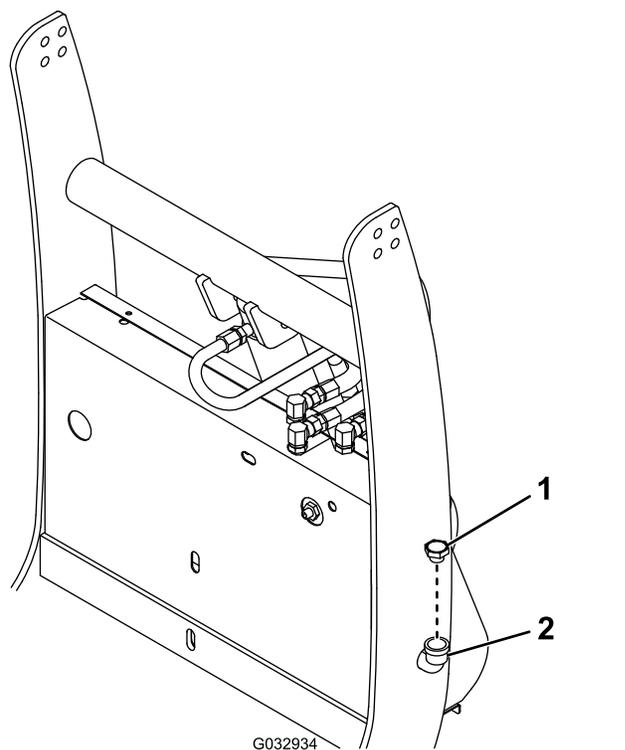
6. Ensure that both coupler spring pins have fully engaged the coupler (Figure 34).

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

7. Pull the kickstand spring pin outward and raise the kickstand, then release the spring pin to secure it (Figure 35).
8. Switch the headlight toggle switch to the PLOW position.

## Checking the Hydraulic Fluid Level

1. With the plow mounted to the vehicle, lower the plow to the ground and ensure that it is in the straight position.
2. Clean the area around the fill cap (Figure 36).



**Figure 36**

- |             |               |
|-------------|---------------|
| 1. Fill cap | 2. Fill elbow |
|-------------|---------------|
3. Remove the fill cap from the hydraulic reservoir (Figure 36).
  4. Ensure that the fluid comes up to the bottom of the fill elbow. If it does not, add more hydraulic fluid; refer to [Adding Hydraulic Fluid \(page 20\)](#).
  5. Install the previously removed fill cap.

## Adding Hydraulic Fluid

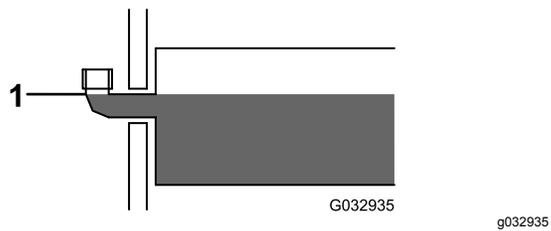
1. Ensure that the lift cylinder is completely collapsed.

**Note:** The lights should tilt forward.

**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 36).
3. Remove the fill cap from the hydraulic reservoir (Figure 37).
4. Slowly fill the reservoir with BOSS high-performance hydraulic fluid to the bottom of the fill elbow (Figure 37).

**Note:** The reservoir holds approximately 1.9 L (2.0 US qt) of hydraulic fluid.



**Figure 37**

1. Fill elbow

---

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 \(page 20\)](#).

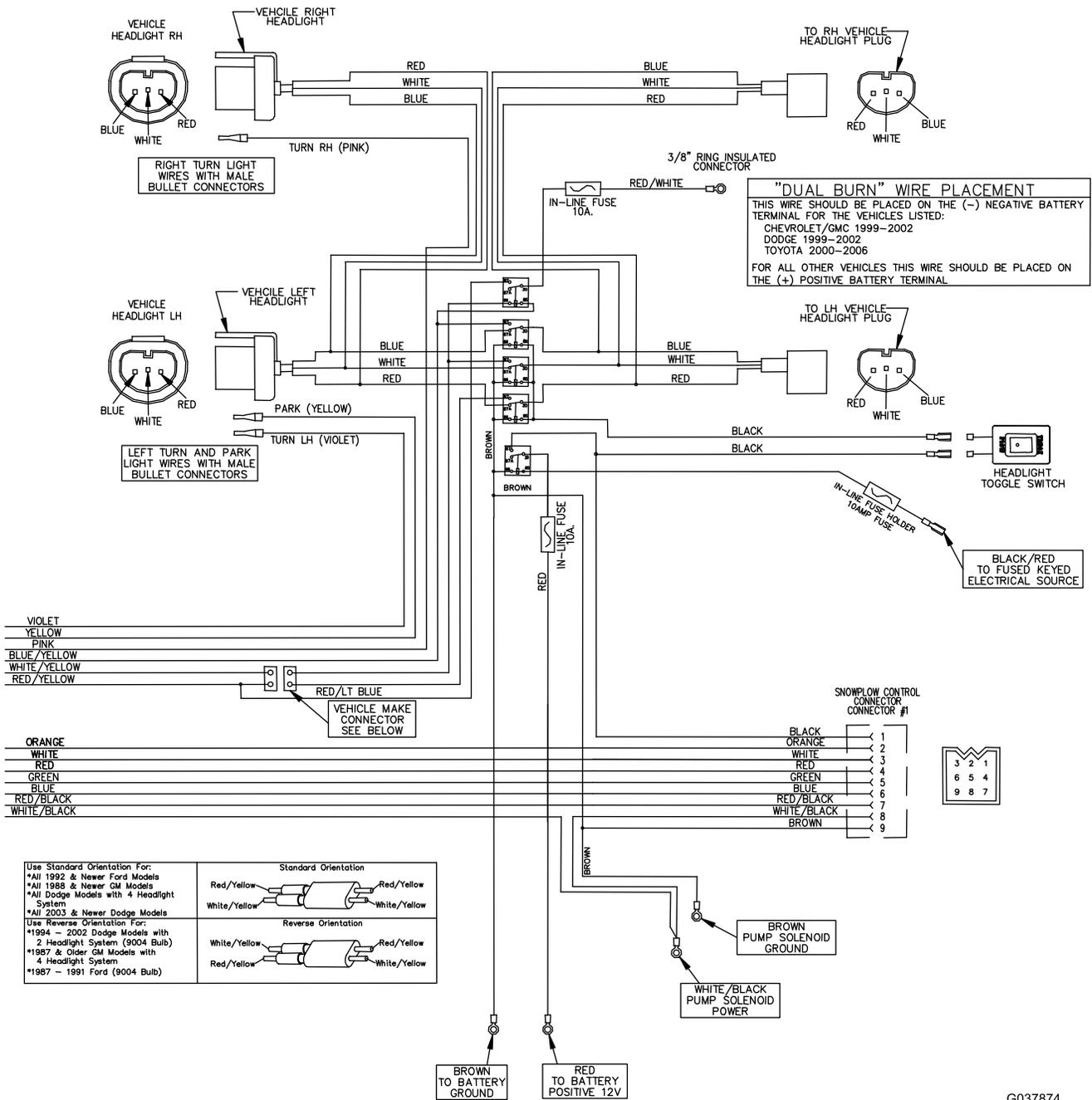
# Troubleshooting

Problem	Possible Cause	Corrective Action
The pump motor does not run.	<ol style="list-style-type: none"> <li>1. Check that the power/ground cables and control cables are connected properly.</li> <li>2. Check for voltage at the pump motor while the ignition switch is on and the RAISE button is pressed on the controller.</li> <li>3. Check for power to the solenoid by testing for voltage between both large terminals and ground.</li> <li>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.</li> <li>5. Test the power to the controller by checking the voltage between the black wire and ground at the white 9-pin connector.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect the cables if they are not connected.</li> <li>2. If voltage is present, the pump motor has failed or the pump has seized. Motor brushes may be replaced, otherwise replace the pump/motor assembly.</li> <li>3. If voltage is not present between one large terminal and ground, the cable between the battery and the solenoid is disconnected or broken.</li> <li>4. If no voltage is present, the solenoid has failed and must be replaced. If voltage is present, the wire from the small terminal of the solenoid to ground may be disconnected or broken.</li> <li>5. If no voltage is present, power from the relay has become disconnected. If voltage is present, check the wiring and controller switches.</li> </ol>
The pump continues to run while the switch is in neutral.	<ol style="list-style-type: none"> <li>1. Disconnect the controller and turn the ignition on.</li> <li>2. Disconnect the controller and turn the ignition on.</li> </ol>	<ol style="list-style-type: none"> <li>1. If the pump continues to run, the solenoid has failed in the closed position. Quickly remove power to the pump by disconnecting the power/ground cables to the plow. Replace the solenoid.</li> <li>2. If the pump stops running, check the wiring of the controller for a short between the black and white/black wire in the controller, or a failed switch.</li> </ol>
The plow does not lower.	<ol style="list-style-type: none"> <li>1. Check that the power/ground cables and control cables are connected properly.</li> <li>2. Check the flow-control valve.</li> <li>3. Check the wiring on the valve block for proper connections.</li> <li>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.</li> <li>5. Test the power to the control box by checking the voltage between the black wire and ground at the white 9-pin connector.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect the cables if they are not connected.</li> <li>2. If the flow-control valve is completely closed, place the controller in neutral, then open the flow-control valve.</li> <li>3. Refer to the wiring diagram included with your <i>Owner's Manual</i>.</li> <li>4. If voltage is present, the solenoid valve or valve coil has failed. Replace the valve or valve coil.</li> <li>5. If no voltage is present, power from the relays has become disconnected. If voltage is present, check the wiring and switch off the controller.</li> </ol>
The plow lowers too fast.	<ol style="list-style-type: none"> <li>1. Check the flow-control valve.</li> </ol>	<ol style="list-style-type: none"> <li>1. Close the flow-control valve to the desired drop speed.</li> </ol>

Problem	Possible Cause	Corrective Action
The plow does not raise or raises slowly.	<ol style="list-style-type: none"> <li>1. Check the hydraulic-fluid level.</li> <li>2. Check that the power/ground cables and the control cable are connected properly.</li> <li>3. Check the wiring on the valve block for proper connections.</li> <li>4. Load a test battery.</li> <li>5. Check the pressure at the pressure port of the pump.</li> <li>6. Check the RAISE control solenoid valve.</li> <li>7. Check the LOWER control solenoid valve.</li> </ol>	<ol style="list-style-type: none"> <li>1. The hydraulic-fluid level should be within 2 cm (3/4 inch) of the top of the reservoir when lowered.</li> <li>2. Connect the cables if they are not connected.</li> <li>3. Refer to the manifold wiring diagram included with your <i>Owner's Manual</i>.</li> <li>4. Replace the battery if it is weak or defective.</li> <li>5. If the pressure is less than 2,500 psi (at the end of the lift), the motor brushes may be defective, the pump pressure relief valve may be contaminated, damaged, or set to less than 2,500 psi, or the pump may be worn.</li> <li>6. If the RAISE solenoid valve is not opening completely, replace it.</li> <li>7. The LOWER solenoid valve may be stuck open. Replace it.</li> </ol>
The plow angles while plowing.	<ol style="list-style-type: none"> <li>1. Check the ANGLE control solenoid valve.</li> <li>2. Check that the pressure relief valve is not contaminated.</li> <li>3. Check that the pressure relief valve is set correctly.</li> </ol>	<ol style="list-style-type: none"> <li>1. If the ANGLE control solenoid valve is contaminated, clean or replace it.</li> <li>2. If the pressure relief valve is contaminated, clean or replace it.</li> <li>3. If the pressure is set too low, contact your authorized BOSS dealer.</li> </ol>
The plow does not angle or angles slowly.	<ol style="list-style-type: none"> <li>1. Check the hydraulic-fluid level.</li> <li>2. Check that the power/ground cables and the control cable are connected properly.</li> <li>3. Check the wiring on the valve block for proper connections.</li> <li>4. Load a test battery.</li> <li>5. Check the ANGLE control solenoid valve.</li> </ol>	<ol style="list-style-type: none"> <li>1. The hydraulic-fluid level should be within 2 cm (3/4 inch) of the top of the reservoir when lowered.</li> <li>2. Connect the cables if they are not connected.</li> <li>3. Refer to the manifold wiring diagram included with your <i>Owner's Manual</i>.</li> <li>4. Replace the battery if it is weak or defective.</li> <li>5. If the ANGLE solenoid valve is not opening completely, replace it.</li> </ol>
Oil leaks from the lift cylinders.	<ol style="list-style-type: none"> <li>1. Inspect the fittings and O-rings.</li> <li>2. Check the rod condition.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten loose fittings. See your authorized BOSS dealer for a seal kit.</li> <li>2. If the rods are pitted or rough, polish them with a copus cloth or extra fine steel wool.</li> </ol>
The vehicle battery dies when the vehicle is turned off.	<ol style="list-style-type: none"> <li>1. Verify that the plow was installed to a keyed fuse source.</li> </ol>	<ol style="list-style-type: none"> <li>1. Refer to the wiring diagram included with your <i>Owner's Manual</i>.</li> </ol>
The vehicle battery dies when all of the switches are in the NEUTRAL position.	<ol style="list-style-type: none"> <li>1. Inspect the controller wiring for a short.</li> <li>2. Inspect the wire harness for a short.</li> <li>3. Inspect the valve coils for a short.</li> </ol>	<ol style="list-style-type: none"> <li>1. If there is a short, repair or replace the controller.</li> <li>2. If there is a short, repair or replace the wire harness.</li> <li>3. If there is a short, replace the valve coils.</li> </ol>

<b>Problem</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
The plow lights are dim, do not come on, or flicker.	<ol style="list-style-type: none"> <li>1. Check the electrical connections.</li> <li>2. Check the headlight adapter wires.</li> <li>3. Check the relays for corrosion and function.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean and repair any corroded or damaged terminals.</li> <li>2. Verify that the proper headlight adapters are being used and are correctly installed.</li> <li>3. The relays should click when energized.</li> </ol>
The turn signals flash at a rapid rate.	<ol style="list-style-type: none"> <li>1. Check the headlight adapters.</li> <li>2. Check the flasher.</li> </ol>	<ol style="list-style-type: none"> <li>1. Verify that the proper headlight adapters are being used and are correctly installed.</li> <li>2. Replace the vehicle flasher with the heavy-duty 6 A flasher.</li> </ol>
There is no high-beam indicator light, or it does not function properly.	<ol style="list-style-type: none"> <li>1. Check the headlight adapters.</li> </ol>	<ol style="list-style-type: none"> <li>1. Verify that the proper headlight adapters are being used and are correctly installed.</li> </ol>
The blade trips too easily.	<ol style="list-style-type: none"> <li>1. Check the trip-spring adjustment.</li> <li>2. Check the push-beam height.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten the springs and replace them if they are damaged.</li> <li>2. Adjust the push beam to the proper height.</li> </ol>
The plow does not clean up snow from low areas.	<ol style="list-style-type: none"> <li>1. The controller is not in the FLOAT position.</li> </ol>	<ol style="list-style-type: none"> <li>1. Activate the FLOAT feature on the controller.</li> </ol>
Fluid is running out of the fill cap of the hydraulic pump.	<ol style="list-style-type: none"> <li>1. Power the light tower down. Do not pull the tower down.</li> <li>2. The terrain is too steep.</li> <li>3. The pump reservoir is overfilled.</li> <li>4. The plow is hitting snowbanks too hard.</li> </ol>	<ol style="list-style-type: none"> <li>1. Disconnect the plow and adjust the hydraulic-fluid level.</li> <li>2. Avoid steeply sloped areas.</li> <li>3. The hydraulic fluid level should be within 2 cm (3/4 inch) of the top of the reservoir.</li> <li>4. Do not plow recklessly.</li> </ol>
The pump chatters when raising or angling the plow.	<ol style="list-style-type: none"> <li>1. Check that the hydraulic-fluid level is not low.</li> </ol>	<ol style="list-style-type: none"> <li>1. The hydraulic-fluid level should be within 2 cm (3/4 inch) of the top of the reservoir when lowered.</li> </ol>
The SmartHitch2 does not attach to the plow.	<ol style="list-style-type: none"> <li>1. Make sure that the vehicle is on and the controller is in the FLOAT position.</li> <li>2. Make sure that the controller is staying in the FLOAT position.</li> <li>3. Check valve block and the SmartHitch2 switch for proper connections.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn the vehicle on and put the controller in the FLOAT position.</li> <li>2. If the controller comes out of the FLOAT position when using the SmartHitch2 controller, replace the controller.</li> <li>3. Refer to the manifold wiring diagram included with your <i>Owner's Manual</i>.</li> </ol>
The plow lights and truck lights are on at the same time.	<ol style="list-style-type: none"> <li>1. Check the vehicle harness wiring connected to the truck headlights.</li> </ol>	<ol style="list-style-type: none"> <li>1. Refer to the wiring diagram included with your <i>Owner's Manual</i> and ensure that the vehicle wire harness is not plugged into the vehicle headlight.</li> </ol>
All of the plow and vehicle lights are on at the same time.	<ol style="list-style-type: none"> <li>1. Check the headlight adapters.</li> </ol>	<ol style="list-style-type: none"> <li>1. If the headlight adapters are installed incorrectly, unplug them and connect them as shown in Installing the Wire Harness.</li> </ol>

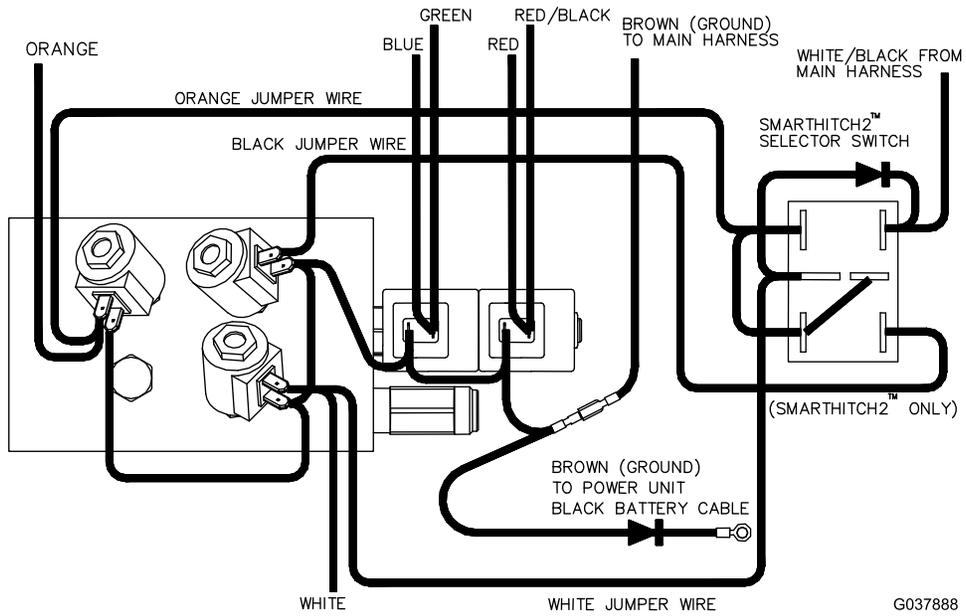




Truck Side Electrical Schematic (Rev. 0)

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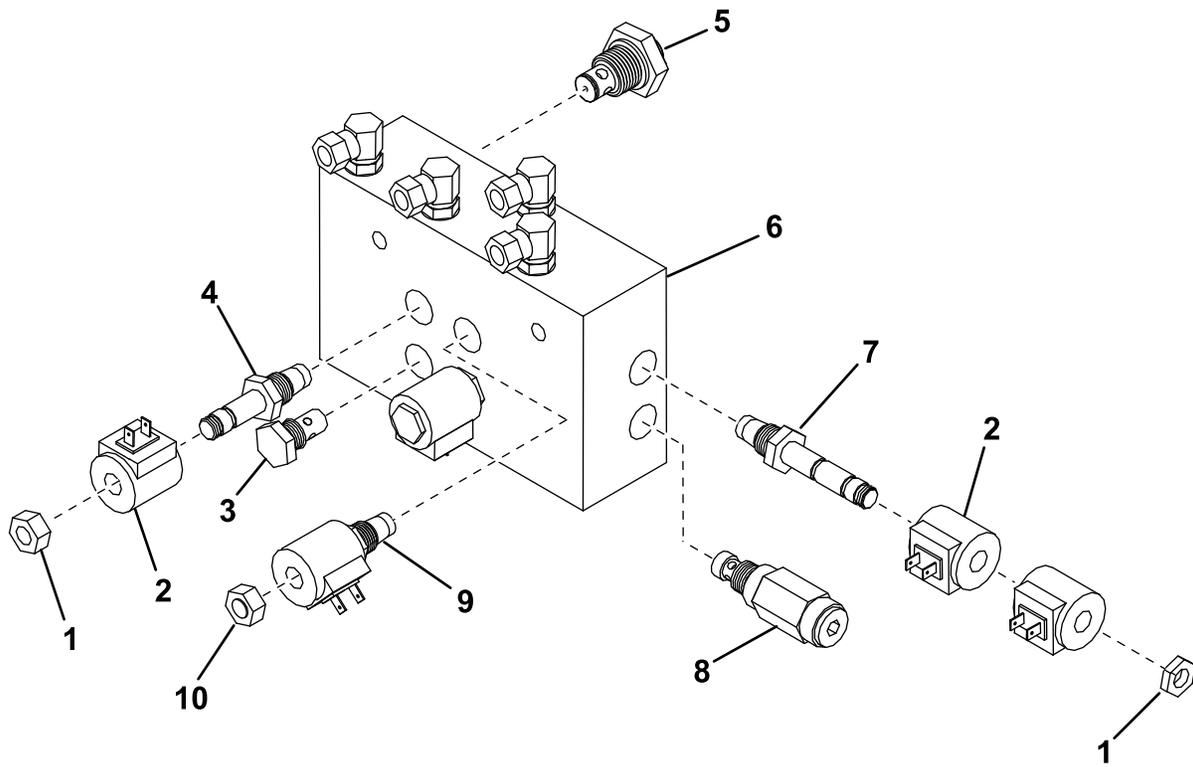


G037888

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Wire Color	Function
Green	Blade left
Red	Blade right
White	Lift
Orange	Lower
Red/Black	Blade right
Blue	Blade left
Black	SmartHitch2
Brown	Ground

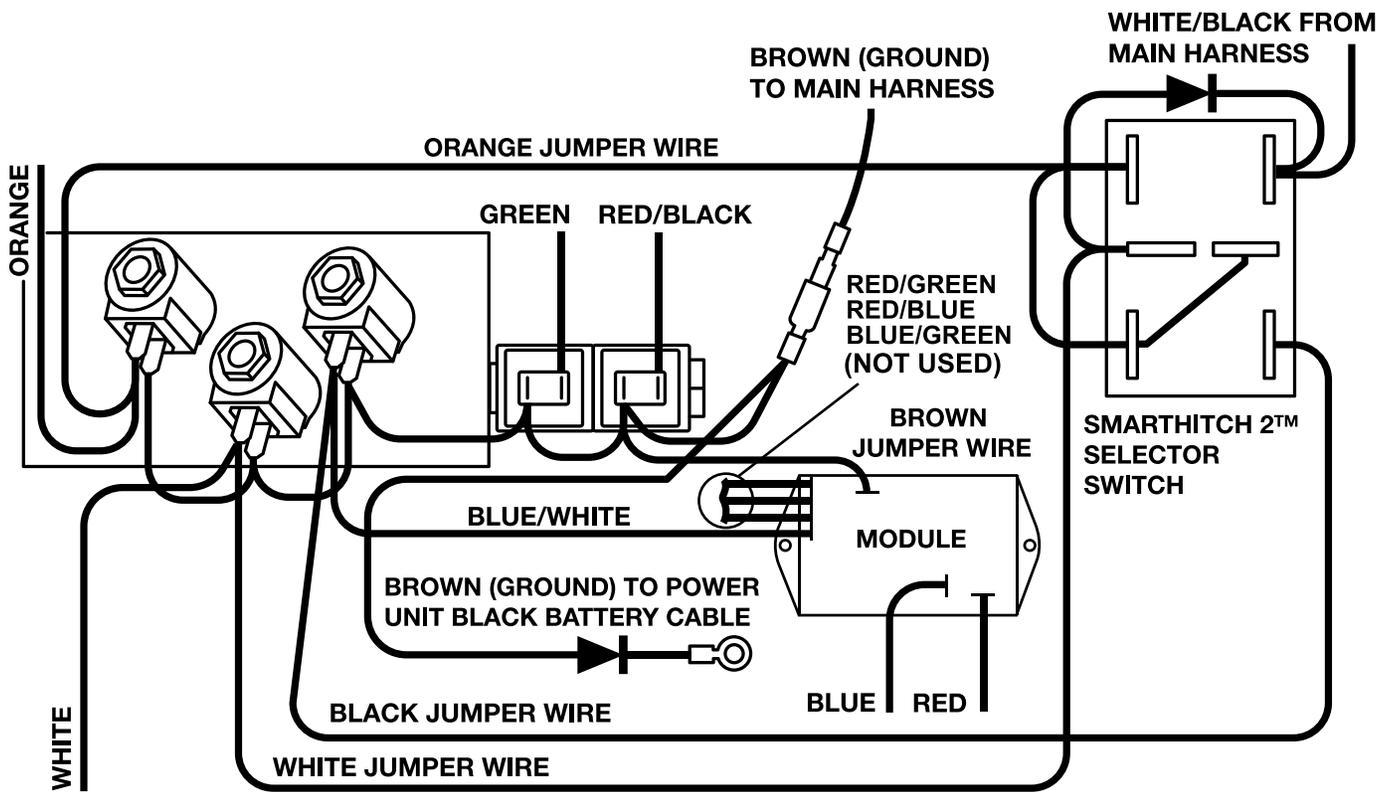
**Non-D-Force Plow Hydraulic Manifold Wiring (Rev. 0)**



g212234

Ref.	Part Number	Qty.	Description
1	HYD07059	2	Nut, Coil — used with valve HYD01637 & HYD07100
2	HYD01638	5	Coil, Hydraulic Valve
3	HYD01640	1	Check Valve
4	HYD01637	2	Hydraulic Valve, Lift/Lower Cartridge
5	HYD07048	1	Hydraulic Valve, Flow Control Cartridge
6	HYD07122	1	Hydraulic Valve Assembly with SmartHitch2 (Red)
7	HYD07100	1	Hydraulic Valve, Angle Cartridge (3 Position - 4 Way Spool)
8	HYD07027	1	Relief Valve, Hydraulic Crossover (3,800 PSI)
9	HYD07047	1	Hydraulic Valve, SmartHitch2 Attach
10	HYD07060	1	Nut, Coil - used with valve HYD07047

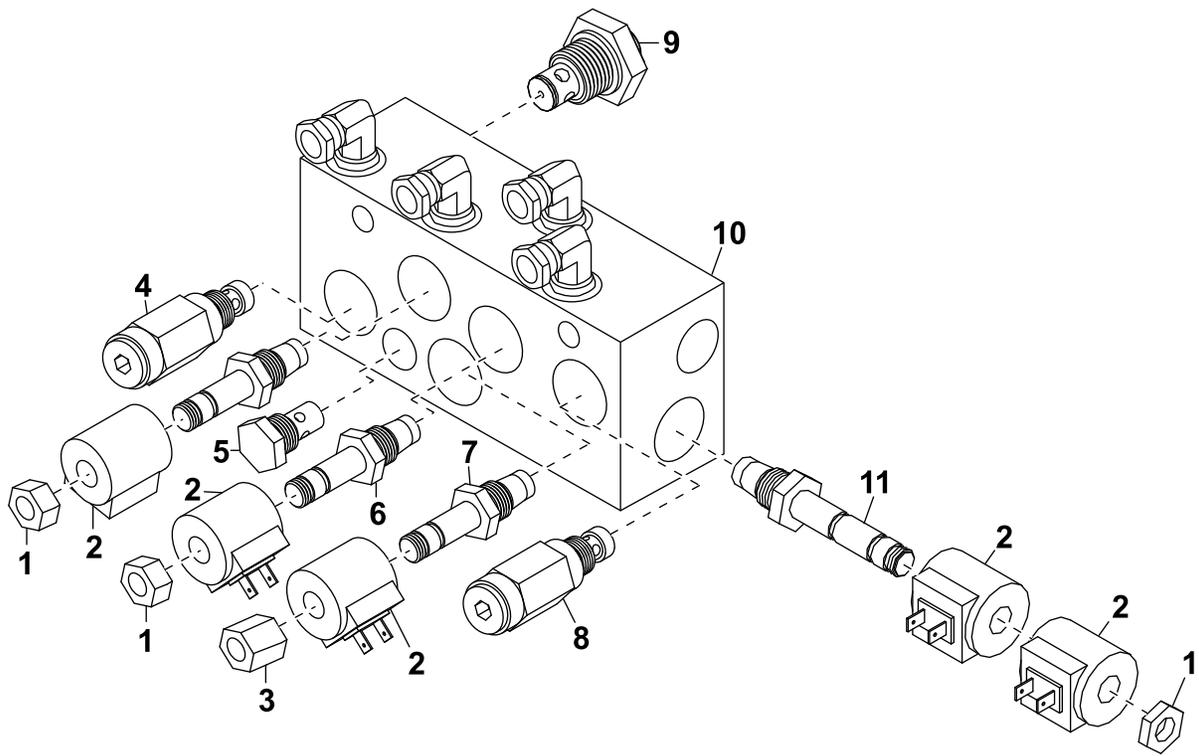
**Non-D-Force Plow Hydraulic Manifold Parts List (Rev. 0)**



g212706

Wire Color	Function
Green	Blade left
Red/Black	Blade right
White	Lift
Orange	Lower
Red	Communication
Blue	Module power
Black	SmartHitch2
Brown	Ground
Blue/White	D-Force
Red/Green	Unused
Red/Blue	Unused
Blue/Green	Unused

**D-Force Plow Hydraulic Manifold Wiring (Rev. 0)**



g212249

Ref.	Part Number	Qty.	Description
1	HYD07059	3	Nut, Coil - used with valve HYD01637 & HYD07100
2	HYD01638	5	Coil, Hydraulic Valve
3	HYD07060	1	Nut, Coil - used with valve HYD07047
4	HYD10174	1	Relief Valve, Hydraulic D-Force
5	HYD01640	1	Check Valve
6	HYD07048	1	Hydraulic Valve, Flow Control Cartridge
7	HYD07047	1	Hydraulic Valve, SmartHitch2 Attach
8	HYD07027	1	Relief Valve, Hydraulic Crossover (3,800 PSI)
9	HYD07048	1	Hydraulic Valve, Flow Control Cartridge
10	HYD10171	1	Hydraulic Valve Assembly with SmartHitch2 (Red)
11	HYD07100	1	Hydraulic Valve, Angle Cartridge (3 Position - 4 Way Spool)

**D-Force Plow Hydraulic Manifold Parts List (Rev. 0)**

**Notes:**

**Notes:**

# Notes:

## **European Privacy Notice**

### **The Information Toro Collects**

Toro Warranty Company (Toro) respects your privacy. In order to process your warranty claim and contact you in the event of a product recall, we ask you to share certain personal information with us, either directly or through your local Toro company or dealer.

The Toro warranty system is hosted on servers located within the United States where privacy law may not provide the same protection as applies in your country.

**BY SHARING YOUR PERSONAL INFORMATION WITH US, YOU ARE CONSENTING TO THE PROCESSING OF YOUR PERSONAL INFORMATION AS DESCRIBED IN THIS PRIVACY NOTICE.**

### **The Way Toro Uses Information**

Toro may use your personal information to process warranty claims, to contact you in the event of a product recall and for any other purpose which we tell you about. Toro may share your information with Toro's affiliates, dealers or other business partners in connection with any of these activities. We will not sell your personal information to any other company. We reserve the right to disclose personal information in order to comply with applicable laws and with requests by the appropriate authorities, to operate our systems properly or for our own protection or that of other users.

### **Retention of your Personal Information**

We will keep your personal information as long as we need it for the purposes for which it was originally collected or for other legitimate purposes (such as regulatory compliance), or as required by applicable law.

### **Toro's Commitment to Security of Your Personal Information**

We take reasonable precautions in order to protect the security of your personal information. We also take steps to maintain the accuracy and current status of personal information.

### **Access and Correction of your Personal Information**

If you would like to review or correct your personal information, please contact us by email at [legal@toro.com](mailto:legal@toro.com).

## **Australian Consumer Law**

Australian customers will find details relating to the Australian Consumer Law either inside the box or at your local Toro Dealer.

# BOSS Products Commercial Warranty

**What this warranty covers:**

This warranty covers defects in material and workmanship except as set forth below.

**Who is covered:**

The original purchaser from an authorized dealer.

**For how long:**

**Complete Product:** 2 years from the date of purchase.

**Labor:** 2 years from the date of purchase for complete product.

**Parts:** 1 year from the date of purchase. (no Labor)

**What BOSS Products will do:**

BOSS Products will, at its sole option, repair or replace defective parts at no charge.

**What you must do for warranty service:**

To obtain warranty service, purchaser must return the defective product to any authorized BOSS Products dealer (preferably the one from whom the product was purchased) within the warranty period. Purchaser must be able to verify the original purchase date. All transportation costs to and from the dealer will be the responsibility of the purchaser. To locate the authorized BOSS dealer nearest to you, call toll free: (800) 286-4155.

**What is not covered:**

1. Expendable parts such as hoses, plow shoes, cutting edges, pins, nuts, bolts, blade guides, etc.
2. Products repaired or altered by anyone other than an authorized BOSS Products dealer.
3. Products which have been subject to misuse, negligence, accident, improper installation, maintenance, care, or storage.
4. Products mounted on vehicles other than those listed in the *BOSS Snowplow Application Chart and Selection Guide*.
5. BOSS Products does not assume liability for damage to your motor vehicle resulting from the attachment or use of any BOSS products. Vehicle risk is the sole responsibility of the purchaser.

**Limits of BOSS Products Liability are:**

**BOSS Products' liability is expressly limited to repair or replacement of defective parts. BOSS Products shall not be liable for consequential, incidental, or contingent damages whatsoever, even if damages are caused by the negligence or fault of BOSS Products. The foregoing warranties are exclusive and in lieu of all other express and implied warranties including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.**

This warranty does not apply if you purchased your product for personal, family, or household use. In this case, refer to the BOSS Products Limited Consumer Warranty.

BOSS Products is a division of  
The Toro® Company  
P.O.Box 787 2010 The BOSS Way  
Iron Mountain, MI 49801

(2016-2017)

# BOSS Products Consumer Warranty

**What this warranty covers:**

This warranty covers defects in material and workmanship except as set forth below.

**Who is covered:**

The original retail purchaser of a BOSS product who purchases it for personal, family, or household use.

**For how long:**

**Complete Product:** 2 years from the date of purchase.

**Labor:** 2 years from the date of purchase for complete product.

**Parts:** 1 year from the date of purchase. (no Labor)

**What BOSS Products will do:**

BOSS Products will, at its sole option, repair or replace defective parts at no charge.

**What you must do for warranty service:**

To obtain warranty service, purchaser must return the defective product to any authorized BOSS Products dealer (preferably the one from whom the product was purchased) within the warranty period. Purchaser must be able to verify the original purchase date. All transportation costs to and from the dealer will be the responsibility of the purchaser. To locate the authorized BOSS dealer nearest to you, call toll free: (800) 286-4155.

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**State laws:**

Some states do not allow exclusion of incidental or consequential damages or the limitations on how long an implied warranty lasts, so these limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have the other rights which vary from state to state.

This warranty does not apply if you purchased your product for personal, family, or household use. In this case, refer to the BOSS Products Limited Consumer Warranty.

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