



INSTALLATION INSTRUCTIONS

ATV Plow Blade

Part Number: 78950 (50”), 78954 (54”), or 78960 (60”)

Application: All Terrain Vehicles

Your safety, and the safety of others, is very important. To help you make informed decisions about safety, we have provided installation and operating instructions and other information on labels and in this guide. This information alerts you to potential hazards that could hurt you or others. It is not possible to warn you about all potential hazards associated with this product, you must use your own good judgment.

CARELESS INSTALLATION AND OPERATION CAN RESULT IN SERIOUS INJURY OR EQUIPMENT DAMAGE. READ AND UNDERSTAND ALL SAFETY PRECAUTIONS AND OPERATING INSTRUCTIONS BEFORE INSTALLING AND OPERATING THIS PRODUCT.

This guide identifies potential hazards and has important safety messages that help you and others avoid personal injury or death. **WARNING** and **CAUTION** are signal words that identify the level of hazard. These signal words mean:

WARNING signals a hazard that *could* cause serious injury or death, if you do not follow recommendations. **CAUTION** signals a hazard that *may* cause minor to moderate injury, if you do not follow recommendations.

This guide uses **NOTICE** to call attention to important mechanical information, and **Note**: to emphasize general information worthy of special attention.

Before You Begin

This kit also requires a plow tube base kit, a WARN specific vehicle plow mount, and lift mechanism such as a winch, electric actuator, or universal manual lift. See your local dealer for part numbers and available kits. Please note that the larger blades are very heavy and for some people may be too tiresome to lift with a manual lift. Older plow tube base kits come with a set of skids and plow springs that will not be used in the installation of this kit. Instead, use the skids and springs provided with the blade kit. Additionally, older plow base kits may come with English units fasteners rather than the metric fasteners as described in these instructions. The kits are compatible. Simply use the following guidelines; 8mm = 5/16”, 10mm = 3/8”, and 16mm = 5/8”. A list of replacement parts, such as skids and wear bars, can be found on the last page of this document.

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I. Tools Required

- Ratchet
- Sockets: 13mm, 14mm, 15mm, 17mm, 24mm
- Box Wrenches: 13mm, 14mm, 16mm, 17mm, 18mm
- Allen Wrenches: 6mm
- Torque Wrench

II. Torque Specifications

Please use the recommended torque specifications when assembling this product unless otherwise specified in the instructions.

8mm diameter bolt and nuts: 12 ft-lbs (17 N-m)

10mm diameter bolt and nuts: 31 ft-lbs (42 N-m)

16mm diameter nut: 100 ft-lbs (136 N-m)

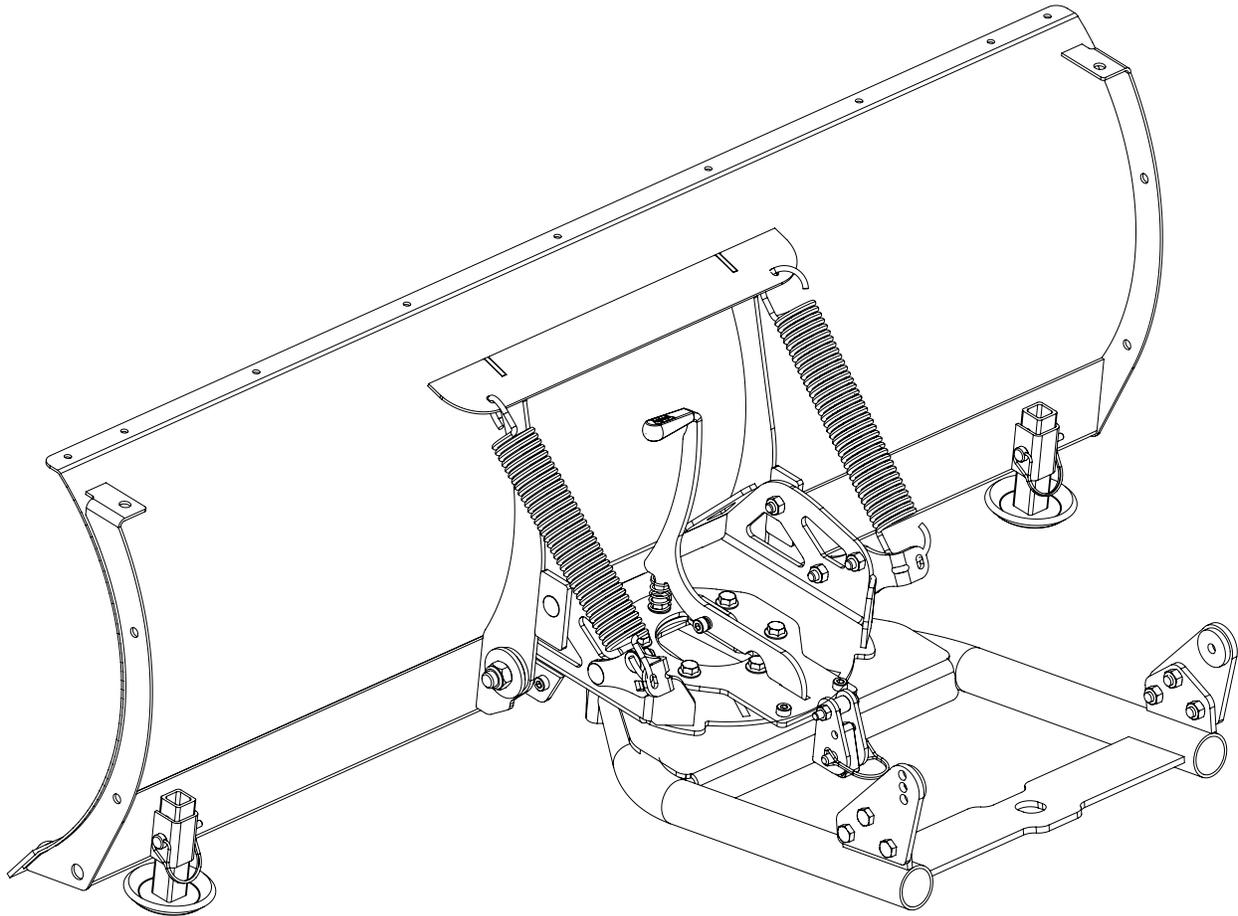
III. Parts List

<u>Part #</u>	<u>Qty</u>	<u>Description</u>
<i>50" Straight Blade Kit (PN 78950)</i>		
80059	1	50" Plow Blade
80225	1	50" Wear Bar
<i>54" Straight Blade Kit (PN 78954)</i>		
79537	1	54" Plow Blade
38734	1	54" Wear Bar
<i>60" Straight Blade Kit (PN 78960)</i>		
80230	1	60" Plow Blade
71189	1	60" Wear Bar

Hardware Kit for all plows

79882	9*	10mm dia Carriage Bolt
69807	9*	10mm dia Nylon Lock Nut
84671	2	Heavy Duty Plow Spring
68820	2	Heavy Duty Plow Skid
25397	2	Skid Pin, with snap

* The 50" and 54" blades will only use 7 of these fasteners.



IV. Installation

Latch Lever

1. Assemble the plow lever arm per Figure 1. Run a 10mm dia shoulder bolt through the lever arm side and out the center hole in the plow base. Use the small compression spring between the shoulder screw and the latch. Terminate with a 8mm dia lock nut. Tighten until the shoulder screw is firmly against the plow base. Latch lever should rotate freely.

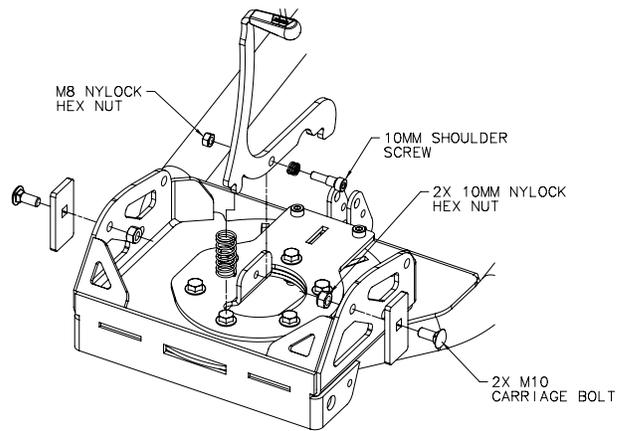


Figure 1 Assemble Plow Lever

Stop Blocks

2. Attach both stop blocks, as shown in Figure 1. Insert the M10 carriage bolt through each block and into the plow base as shown in Figure 1. Notice that hole in stop block is not in the center. This block produces three blade angle settings and must be set the same on both sides of base. Terminate with a 10mm dia lock nut.

NOTE: It is recommended to first place the stop block in the position shown in Figure 1. See the "ATV Plow Operator's Guide" for instruction on blade attach angle settings.

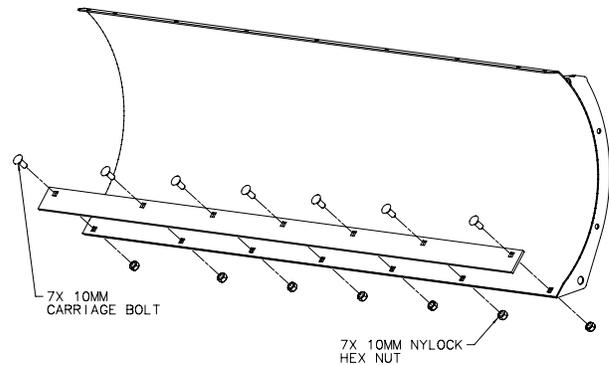


Figure 2 Assemble Wear Bar to Blade

3. Attach the wear bar to the plow blade as shown in Figure 2. Place 10mm dia carriage bolts through each of the square holes in the wear bar, and through their respective holes on the blade. Terminate with a 10mm dia lock nut. Secure nut with 17mm socket and torque wrench.

4. Attach the plow blade to the plow base as shown in Figure 3. Run a 16mm dia bolt through the plow blade and base and then through the large retainer washer and rib bushing. The rib bushing should rest inside the large hole in the side of the plow blade rib. Terminate with a 16mm dia lock nut. Torque the M16 bolt and then check to make sure the blade rotates freely. It is recommended to use a light lubricating oil on all plow bushings.

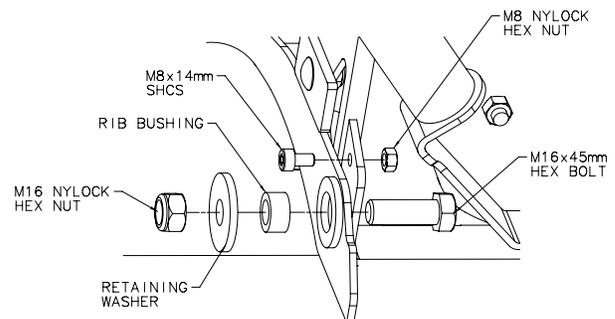


Figure 3 Attach Blade to Tube Base

5. Attach the spring to the horizontal rib on the blade

and to the hook location on the spring bracket. Fasten the bracket to the plow base with a M10 carriage bolt through the lower square on the bracket. Terminate with a 10mm diameter lock nut, so that spring bracket is tight against plow base but can still rotate. To set pre load on plow springs use a 3/8" drive ratchet or breaker bar to push the spring bracket down. Fasten in place with an M10 carriage bolt and 10mm diameter lock nut. See Figure 4.

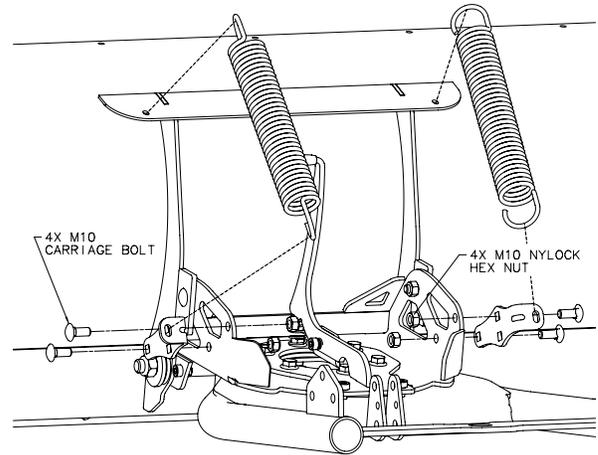


Figure 4 Assemble Plow Springs

6. Insert rope guide between flange located towards the back of the plow base. Use a 10mm x 30mm shoulder bolt through the top hole of flange to hold the rope guide in place. Terminate with an 8mm diameter lock nut. See Figure 5.

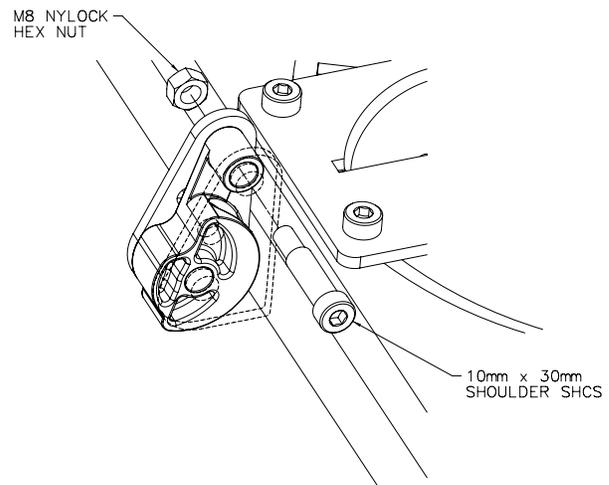


Figure 5

Mounting Tabs (92100 Only)

7. Attach the plow mounting tabs to the plow tube assembly.

NOTE: Mounting tabs are vehicle specific and are not included in this kit. These parts are included in vehicle mounting kit.

Use the M10 fasteners included with tube assembly to secure the tabs to the tube assembly. See Figure 6. Secure tabs to the tube assembly loosely until plow is secured to mount on vehicle that is on a flat level surface. This will provide the best alignment of the plow and mount. Torque M10 bolts to specification.

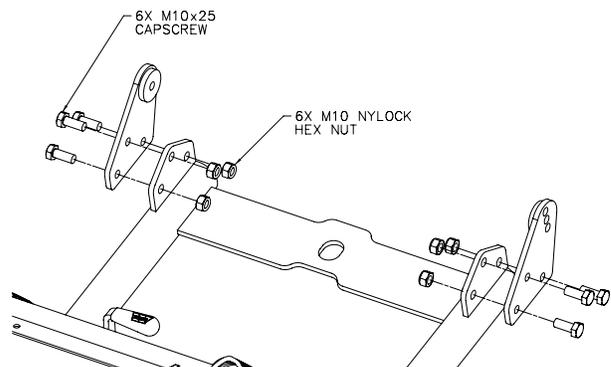


Figure 6

Skids

8. Attach the heavy-duty plow skids to the plow blade. See Figure 7. Slide the skid into the skid

sleeve toward the edges of the plow blade. Terminate with a skid pin by running the pin through the skid sleeve hole and through the desired skid hole. Be sure to lock the skid pin when completed to prevent losing the pin and skid during plowing.

NOTE: Set the skids higher than the edge of the plow blade for gravel and decorative surfaces. Set the skids at plow edge level for pavement and concrete surfaces. Failure to use the skids can result in scratches to the roadway surface and reduced wear bar life.

9. In order to use your winch to raise and lower the plow blade, you must first attach the plow assembly to the vehicle mount. (Please refer to vehicle mount installation instructions for proper mounting and use of the vehicle snow plow mount).

Swing the rope guide up and run the winch rope through the guide. Close the rope guide and secure it with safety retainer pin. The winch rope should now be fully captured by the rope guide. See Figure 8. Attach the winch rope hook to the rear cross member between the tubes. Figure 8 shows installation of 92100. For use on 78100, route winch rope through the rope guide as shown in Figure 8. Hook should be secured to cross member at the rear of tube assembly.

Installation is now complete, please proceed to the next section.

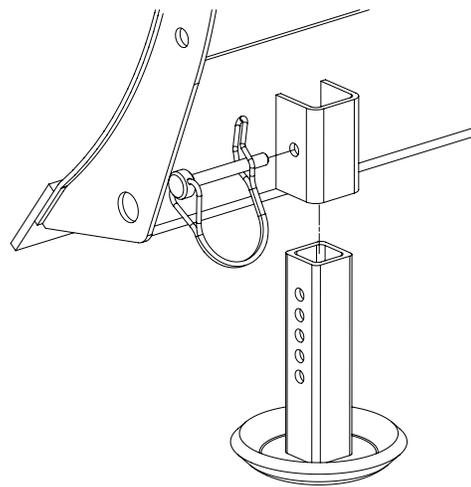
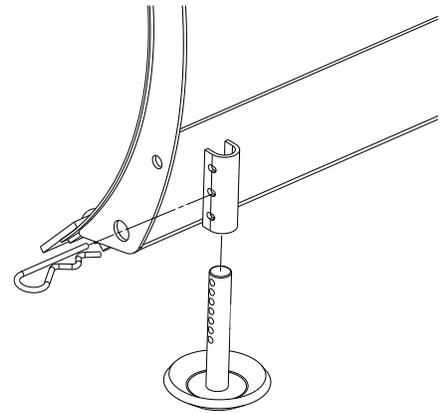


Figure 7

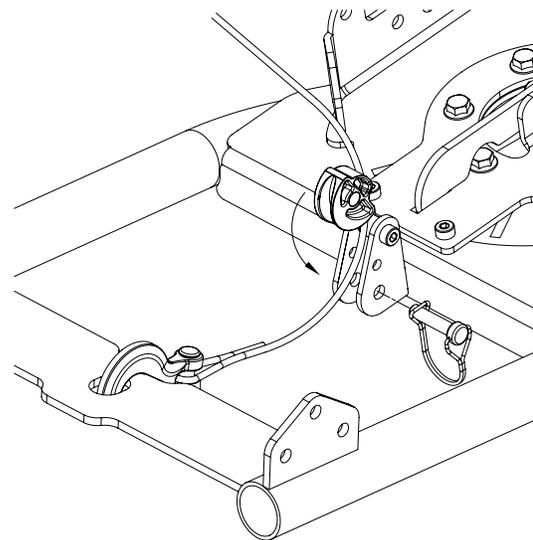


Figure 8

V. Maintenance/Care

- Inspect all metal parts on the plow, plow mount, and related hardware prior to each use. Replace all parts that appears rusted or deformed.
- Inspect all nuts and bolts on the plow, plow mount, and related hardware prior to each use. Tighten all nuts and bolts that appear to be loose. Stripped, fractured, or bent bolts or nuts must be replaced.
- Check all cables prior to use. Replace cables that are worn or frayed.
- Check all moving and rotating parts. Remove debris that may inhibit the part from moving freely.

WARNING

Failure to perform regular inspections and maintenance on the plow, plow mount, and related hardware may result in vehicle damage and operator injury or death.

The following replacement parts are available for purchase:

<u>Part #</u>	<u>Description</u>	<u>Notes</u>
80608	50" Wear Bar	1x 80225
39415	54" Wear Bar	1x 38734
62601	60" Wear Bar	1x 37098
69212	Heavy Duty Skid and Pin	2x 68820, 2x 25397
80475	ProVantage Plow Skid SVC	2x 77907, 2x 79938
83404	ProVantage Blade Springs	2x 84671, 2x 80491, 4x 79882, 4x 69807

Contact your nearest WARN dealer for ordering. To find a dealer nearest you, contact the WARN dealer locator line at 1-800-910-1122.

If you are having problems with your plow, please follow the steps below:

1. Reference the installation instructions for tips or notes.
2. Contact the dealer where you purchased the kit.
3. Call an authorized WARN Service Center from the warranty sheet included in the kit. Please have the following information available before calling; part number (listed on front of instructions), date of purchase, and make, model, and model year of ATV.
4. Contact WARN customer service at 1-800-543-9276 or www.warn.com. Again, please have the following information available before calling; part number (listed on front of instructions), date of purchase, and make, model, and model year of ATV.