

Dash Mount Installation
Template



**Professional Series Snow Plow System
FULL PLOW SYSTEM**

23001 Industrial Blvd Rogers, MN 55374



motoalliance

23001 Industrial Blvd, Rogers, MN 55374
www.motoalliance.com. 1-866-527-7637

Thank you for purchasing MotoAlliance's top-of-the-line Professional Series UTV Snow Plow System! We've paid attention to all the fine details and believe you now have a plow that will last for years to come. Please feel free to contact us with any questions.

Warning and User Caution

- Never allow passengers to ride on the blade while plowing
- Stay clear of bystanders while plowing
- Do not exceed 10 MPH with blade installed
- Always wear safety gear (helmet, glasses, etc) when plowing
- Always put your vehicle in Park before changing the angle of the plow blade
- Use extreme caution when plowing and riding on sloped surfaces
- Avoid all fixed objects and always wear a seatbelt
- Be cautious of the blade when lowering it from an upright position
- Always store your blade resting on the ground



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ITEM NO.	Part Description	Lift Arm Hardware	Blade Hardware	Plow Blade Box
1	Pivot Ring	1	-	-
2	5/8" x 2" Hex Bolt	1	-	-
3	5/8" Flat Washer	1	8	-
4	5/8" Nylock Nut	1	-	-
5	1/2" x 2" Hex Bolt	2	-	-
6	1/2" Flat Washer	4	-	-
7	1/2" Nylock Nut	2	-	-
8	3/8" x 1" Hex Bolt	11	4	-
9	3/8" x 1 1/2" Hex Bolt	2	-	-
10	3/8" Carriage Bolt	-	8	-
11	3/8" Flat Washer	15	12	-
12	3/8" Regular Nut	4	-	-
13	3/8" Nylock Nut	2	12	-
14	1/4" x 1 1/2" Hex Bolt	1	-	-
15	1/4" Flat Washer	2	-	-
16	1/4" Nylock Nut	1	-	-
17	Lock Lever Spring	1	-	-
18	Aluminum Spacer	1	-	-
19	Stop Block	2	-	-
20	SFUT - Skid Feet	-	2	-
21	Rubber Bushing	-	4	-
22	Blade Return Spring 1 1/2" x 10"	2	-	-
23	3/8" x 6" Eye Bolt	-	2	-
24	Lynch Pin	-	2	-
25	PFUT - Plow Flag	-	-	2
26	Skid Feet Bracket	-	2	-
27	Winch Attachment Bracket	1	-	-
28	Pivot Lock Lever	1	-	-
29	Pivot Lever Support Bracket	1	-	-
30	Pivot Lever Riser	2	-	-
31	1/2" x 2 1/2" Grade 8 Bolt	-	-	-
32	Quick Release Pin	2	-	-
33	Quick Release Pin Washers	4	-	-
34	Plow Blade	-	-	1
35	Wear Bar	-	-	1
36	Hold Down Bar	-	-	1
37	Rubber Flap	-	-	1
38	5/16" x 1" Carriage Bolts	-	8	-
39	5/16" Nylock Nut	-	8	-
42	1/4" x 1" Bolt (Plow Flag Kit)	-	-	4
43	1/4" Lock Washer (Plow Flag Kit)	-	-	4
44	1/4" Nut (Plow Flag Kit)	-	-	4

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Lift Arm Assembly

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- 1) Connect the Swivel Plate Assembly to the Lift Arm Assembly via the 5/8" Bolt (#2), Washer (#3), Nylock Nut (#4) and pivot ring (#1) shown in **(Figure 3)**. Tighten the 5/8" hardware securely but do not over tighten such that the swivel plate no longer moves side to side.

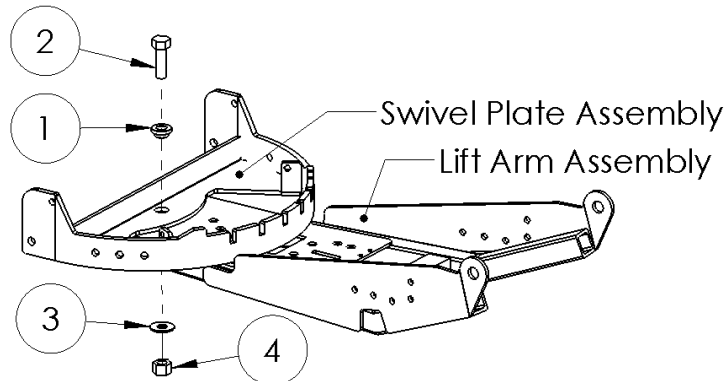


Figure 3

- 2) Attach the Pivot Lever Support Bracket (#29) to the Lift Arm Assembly via the 3/8" Bolts (#8) and washers (#11) included in your kit **(Figure 4)**.

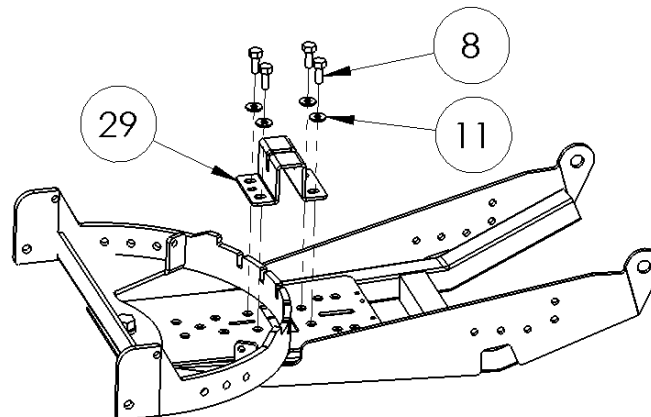


Figure 4

- 3) Attach the Pivot Lever Risers (#30) to the Lift Arm Assembly via the 3/8" Bolts (#8) and washers (#11) included in your kit **(Figure 5)** Do not tighten the 3/8" hardware at this time, it will be tightened after Step 4.

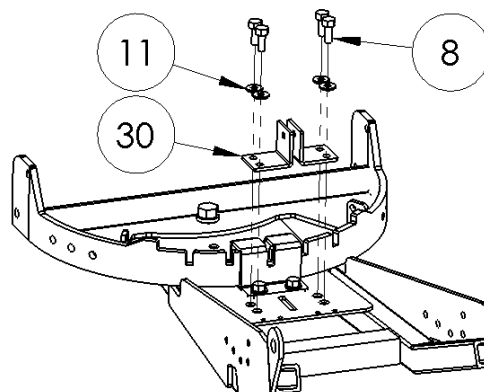


Figure 5

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- 4) Attach the Pivot Lock Lever (#28) to the Pivot Lever Risers (#30) (Attached in Step 3) via the 1/4" Bolt (#14), washer (#15), Nylock Nut (#16) and Aluminum Spacer (#18) included in your kit. **(Figure 6)**. Tighten the 1/4" hardware such that the Pivot Lock Lever can still move freely. You can now tighten the 3/8" bolts from the previous step to secure the Pivot Risers. Using needle nose pliers, attach the Lock Lever Spring (#17) to the nose of the Pivot Lock Lever (#28) and the slit in the Pivot Lever Support Bracket (#29). The Pivot Lock Lever should move freely when the handle is depressed and return promptly when released.

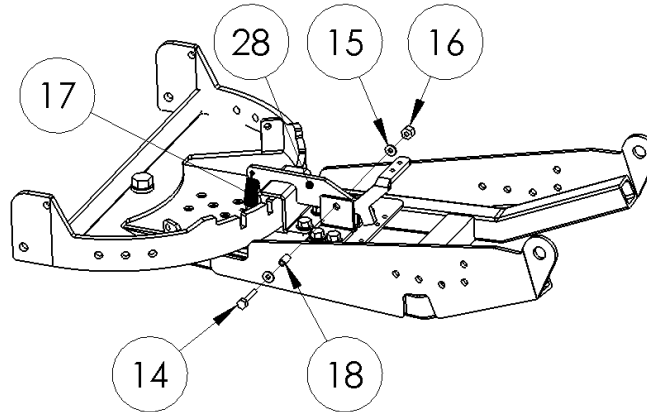


Figure 6

- 5) Install the Winch Attachment Bracket (#27) using the 3/8" Bolts (#8) and washers (#11). **(Figure 7)**

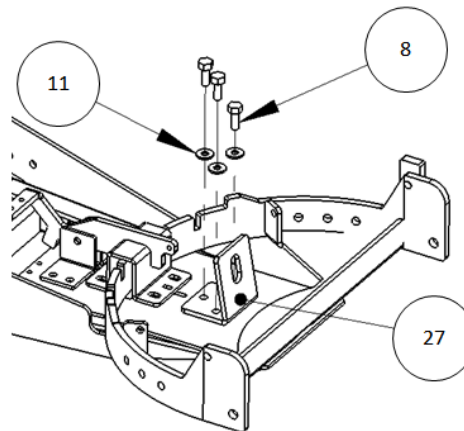


Figure 7

- 6) Install the blade Stop Blocks (#19) using the 3/8" Bolts (#9), Washers (#11), and Nylock Nuts (#13) included in your kit **(Figure 8)**. There are four different positions of the stop block that can be used depending on the angle you want your blade to rest at. Rotate the stop block to achieve the desired position. At this point your Plow Push Tubes are completely assembled. Continue to Step 7 for Blade Assembly.

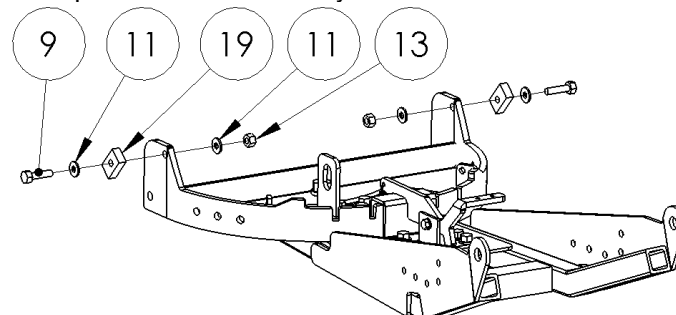


Figure 8

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Plow Blade Assembly

Remove your blade from the box and verify that the following contents are present:

- a. (1) Blade (#34)
- b. (1) Wear Bar (#35)
- c. (1) Rubber Flap (#37)
- d. (1) Flap Hold Down Bar (#36)
- e. (2) Flag Markers & Hardware Kits (#25)

- 7) Install the Wear Bar (#35) to the bottom of the Blade using the 3/8" Carriage Bolts (#10) and Nylock Nuts (#13) included in your kit. **(Figure 9).**

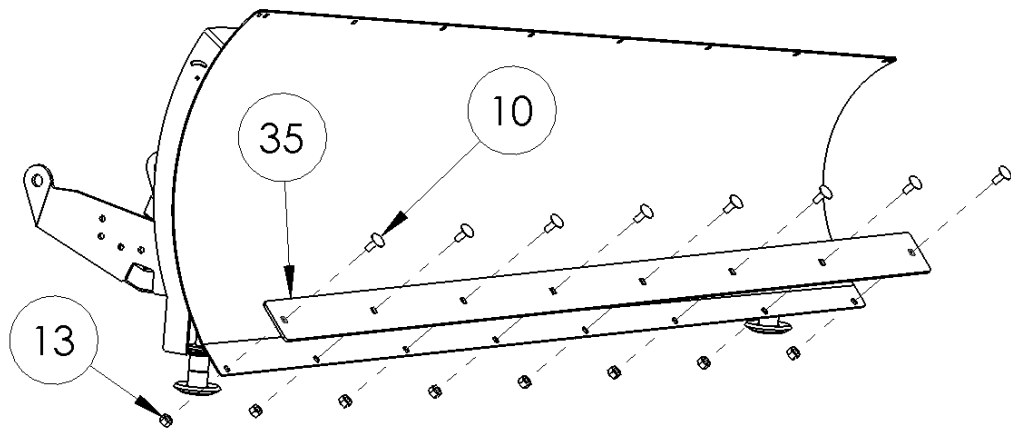


Figure 9

- 8) Install the Rubber Flap (#37) and Hold Down Bar (#36) using the 3/8" Carriage Bolts (#10) and Nylock Nuts (#13) included in your kit **(Figure 10)**

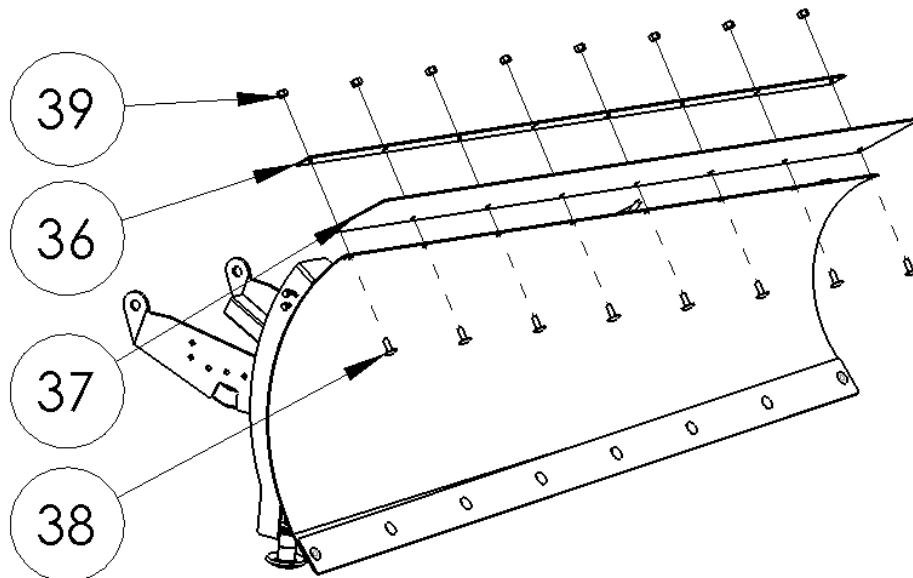


Figure 10

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- 9) Position your blade so that the ends of the Swivel Plate fit between the tabs on the Plow Blade. Attach the blade to the Swivel Plate using the 1/2" Bolts (#5), Washer (#6) and Nylock Nut (#7) included in your kit (**Figure 11**). Tighten the bolts securely.

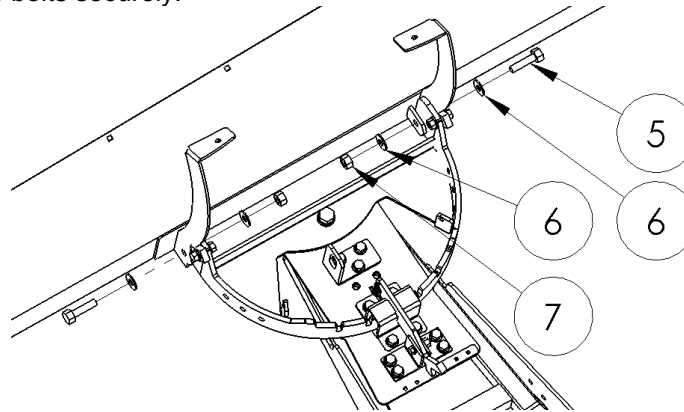


Figure 11

- 10) Install your Skid Feet Brackets (#26) using the 3/8" Bolts (#8) and 3/8" Washers (#11) included in your kit. (**Figure 12**) Your MotoAlliance Professional Series Plow System has been designed to allow the skid feet to angle if necessary. Additional 3/8" washers (Not Included) can be placed behind the Skid Feet Bracket to shim the bracket forward or backward.

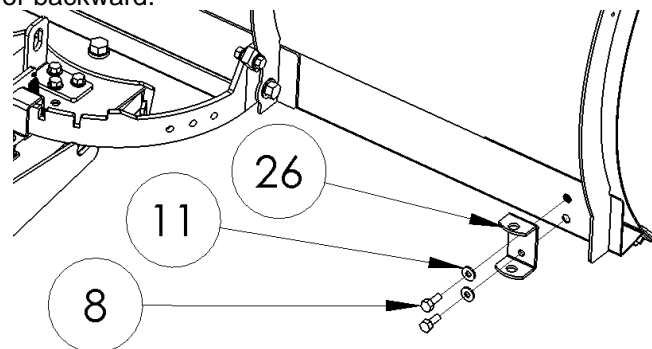


Figure 12

- 11) Install your Skid Feet (#20) using the 5/8" Flat Washers (#3) and the Rubber Bushings (#21) included in your kit (**Figure 13**). The height of the Skid Feet can be adjusted by adjusting the location of the skid feet and washers from the bottom of the bracket to the top. Secure the Skid Feet using the included snap ring (#24). (Not Shown). The cotter pin goes through the hole located on the blade support bar and should be bent to keep it from being removed.

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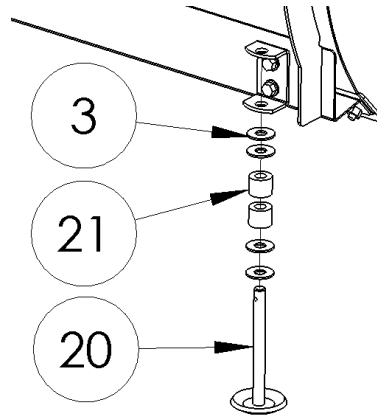


Figure 13

- 12) Install your Blade Return Springs (#22) using the Eye Bolts (#23) and 3/8" Regular Nuts (#12) included in your kit. The spring eyelet inserts into the Swivel Plate on one end and into the 6" Eye Bolt on the other end (**Figure 14**). Tighten the 3/8" (#12) Regular Nuts to add tension to the springs. If your blade tends to tip forward while plowing you can increase the tension to hold the blade upright.

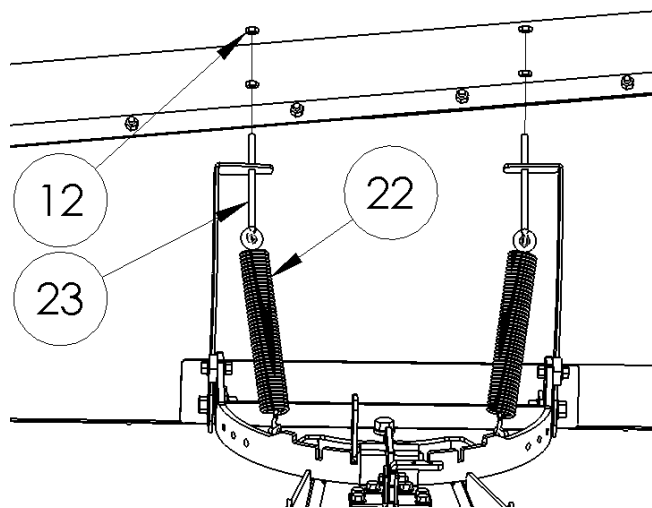


Figure 14

- 13) Install your Plow Flag Markers (#25) using the included 1/4" Bolts (#42), Lock Washers (#43) and Nuts (#44). Adjust the angle to the desired position for best viewing. (**Figure 15**)

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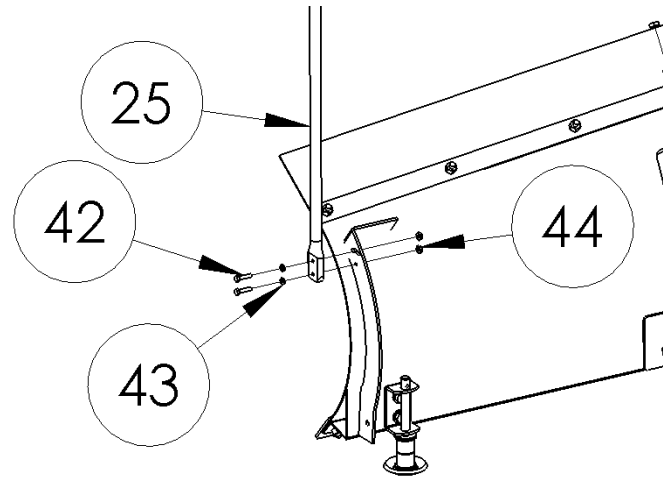


Figure 15

- 14) Your MotoAlliance Professional Series Plow System is now complete. Verify that all the bolts are secure. Install the plow mount per the instructions included in the plow mount kit. Use the Quick Release Pins (#32) included in your kit to attach the Plow System to your plow mount. Some plow mounts have slotted Quick Release Pin holes that help the blade to sit parallel to the ground. A set of Quick Release Pin Washers (#33) are included in your hardware kit and should be installed onto the Quick Release Pin AFTER it is inserted into the plow mount. The washers should be the last thing to be inserted over the Quick Release Pins.
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PLOW OPERATION TIPS

Blade position

Your plow is designed to shift into five (5) different angle positions. Simply step on the angled piece of the Pivot Lock Lever (#28) so that it rises above the Swivel Plate and position the blade to the desired location. Release your foot and verify that the locking mechanism is fully seated in one of the five (5) Swivel Plate slots.

Raising and Lowering your Plow

Your plow requires a winch to raise and lower your blade. Simply install a winch and attach the clevis hook to the eye bolt in the center of your lift arm assembly. We suggest using our MotoAlliance Plow Strap, which is designed to spread the weight of the plow blade over a 2" surface area. This will greatly extend the life of your cable. We also recommend plowing with one of our VIPER ELITE series with automatic braking system to lock the plow in place.

Long Distance Travel

If you plan on driving ¼" mile or more without plowing, we suggest attaching the plow to your UTV frame with a bungee cord to minimize the bouncing action on the plow and preserve your UTV shock and spring system.

Throwing Snow

Your county-style blade will throw snow up over snow banks. You will need to determine your best path of attack on the snow.

Warranty

Your plow has a **three-year warranty** against manufacturing defects.

Enjoy the plowing season.....you'll be the envy of your neighbors!



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Warning And User Caution

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- Stay clear of bystanders while plowing
- Do not exceed 10 MPH with blade installed
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- Always put your vehicle in Park before changing the angle of the plow blade
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- Always store your blade resting on the ground



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DENALI UTV Pushtube System

PTUT

Kit Content:

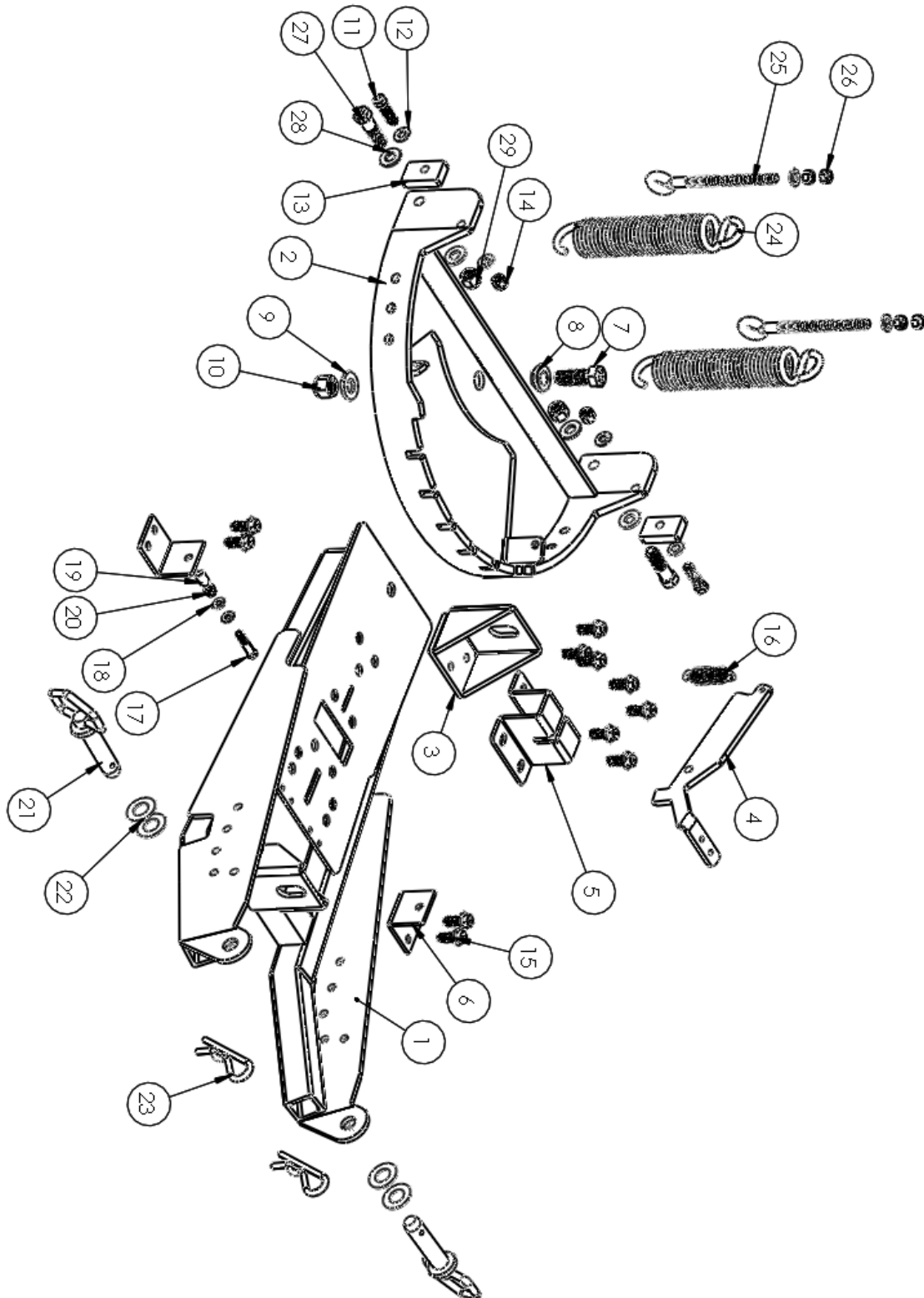
PART #	Part Description	Quantity
1	Lift Arm Weldment	1
2	Swivel Plate Weldment	1
3	Winch Attachment Bracket	1
4	Pivot Lock Lever	1
5	Pivot Lever Support Bracket	1
6	Pivot Lever Riser	2
7	5/8''-11 x 2'' G8 Hex Bolt	1
8	Pivot Ring	1
9	5/8'' Flat Washer	1
10	5/8''-11 G8 Nylock Nut	1
11	3/8''-16 x 1.5'' G5 Hex Bolt	2
12	3/8'' Flat Washer	6
13	Stop Block	2
14	3/8''-16 G5 Nylock Nut	1
15	3/8''-16 x 1'' G5 Serrated Flange Bolt	11
16	Lock Lever Spring	1
17	1/4''-20 x 1.5'' G5 Hex Head Bolt	1
18	1/4'' Flat Washer	2
19	Aluminum Spacer	1
20	1/4''-20 Nylock Nut	1
21	Quick Release Pin	2
22	Quick Release Pin Washer	2
23	Quick Release Pin Cotter Pin	2
24	Blade Return Spring 10'' x 1 1/2''	2
25	3/8'' Eye Bolt	2
26	3/8''-16 G5 Hex Nut	4
27	1/2''-13 x 2'' G8 Hex Bolt	2
28	1/2'' Flat Washer	4
29	1/2''-13 G8 Nylock Nut	2



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Assembly Instructions

- 1) Attach the Swivel Plate to the Lift Arm using the 5/8" Hex Bolt, 5/8" Flat Washer, 5/8" Nylock Nut and Pivot Ring as shown **Figure 1**.

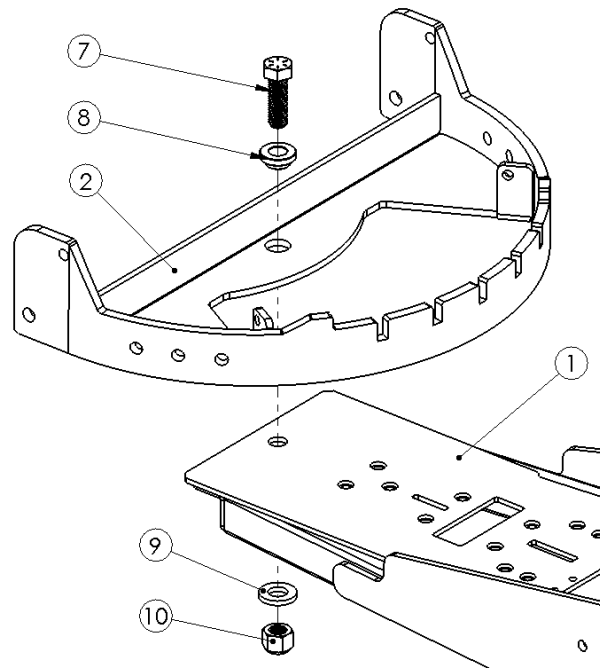


Figure 1

- 2) Attach the Pivot Lever Support Bracket to the Lift Arm using four 3/8" x 1.00" Flange Bolts as shown in **Figure 2**. Note the Spring Attachment Slot on the Pivot Lever Support Bracket should face forward.

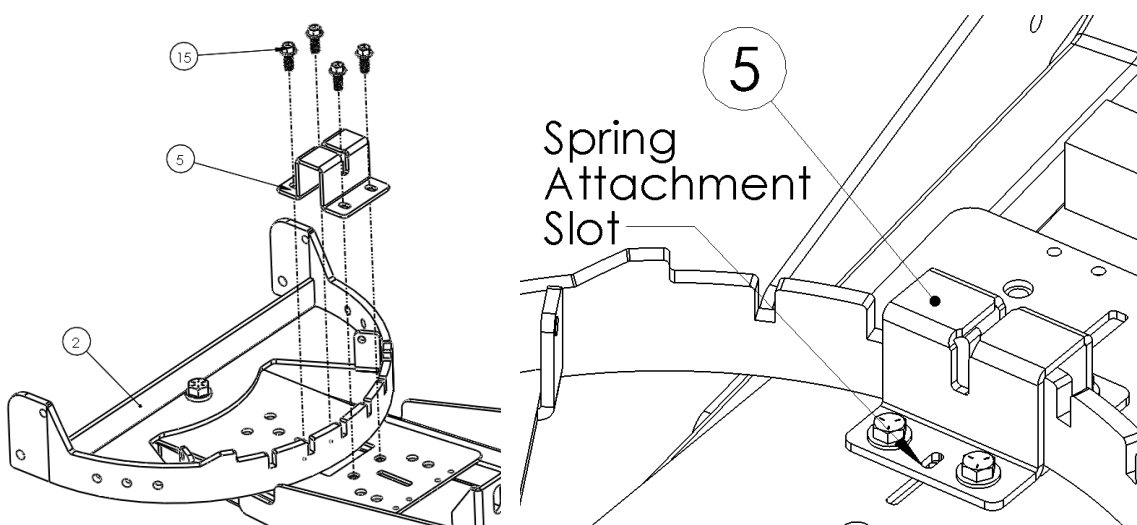


Figure 2



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- 3) Attach the Pivot Lever Risers to the Lift Arm using four $3/8"$ x $1.00"$ Flange Bolts as shown in **Figure 3**.

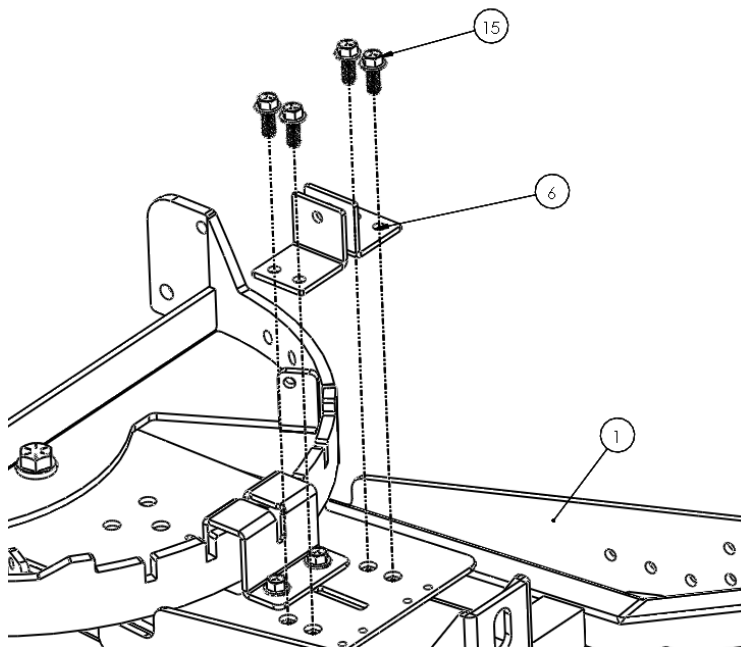


Figure 3

- 4) Attach the Pivot Lock Lever to the Pivot Lever Risers using the $1/4"$ x $1.5"$ Hex bolt, $1/4"$ Washers, $1/4"$ Aluminum Spacer and $1/4"$ Nylock Nut as shown in **Figure 4**.

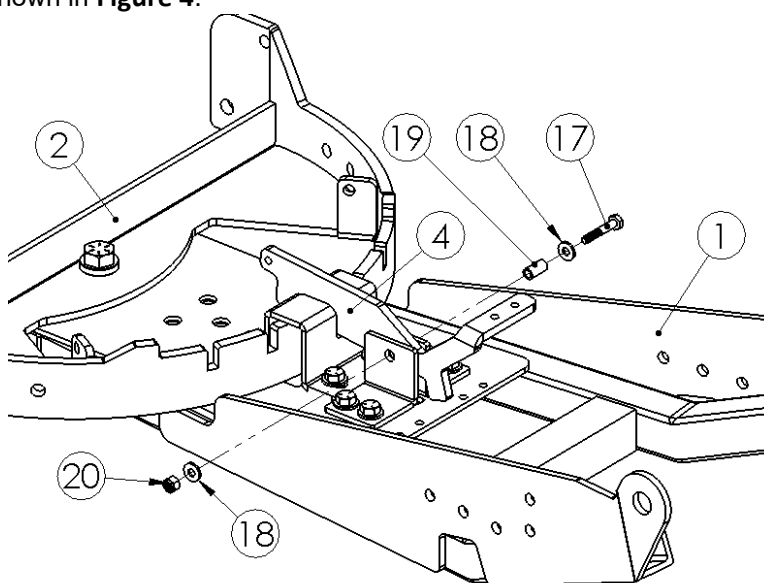


Figure 4



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- 5) Install the Lock Lever Spring between the Pivot Lock Lever and Pivot Lever Support Bracket using a needle nose pliers as shown **Figure 5**.

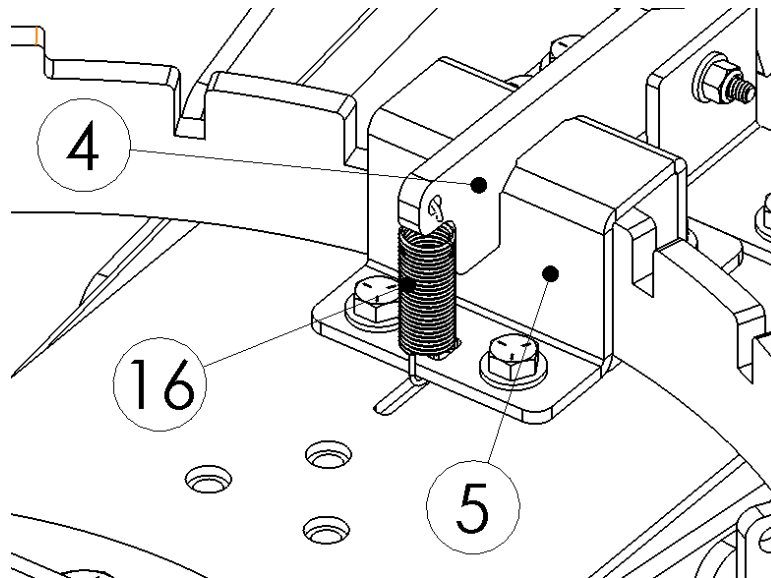


Figure 5

- 6) Install the Stop Blocks using the 3/8" x 1.5" Hex Bolts, 3/8" Flat Washers, and 3/8" Nylock Nuts. Note that the hole in the Stop Block is a different distance from each of the four edges of the Stop Block. By adjusting which of the four faces is pointed forward the plow blades resting position can be changed. Begin with the shortest distance facing forward and adjust if necessary. See **Figure 6**.

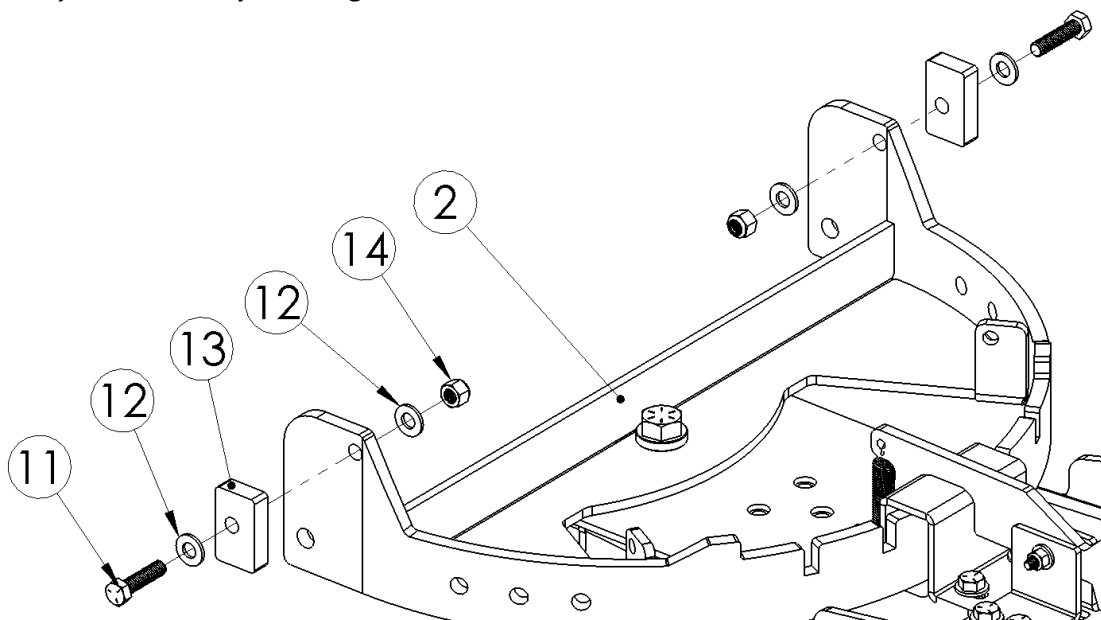


Figure 6



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- 7) Install the Winch Attachment Bracket to the Lift Arm using the 3/8" x 1.00" Flange Bolts as shown Figure 7.

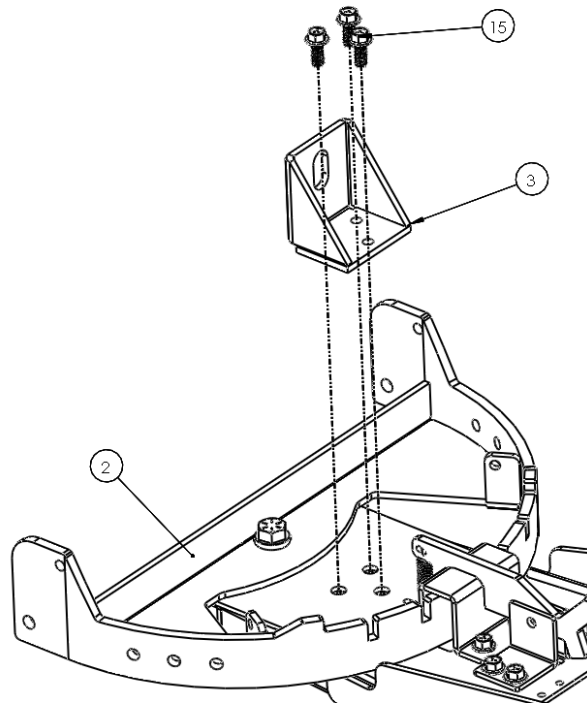


Figure 7

- 8) Attach the completed Pushtube assembly to the Snow Plow using the 1/2" x 2.00" Hex Bolts, 1/2" Flat Washers, and 1/2" Nylock Nuts as shown in **Figure 8**.

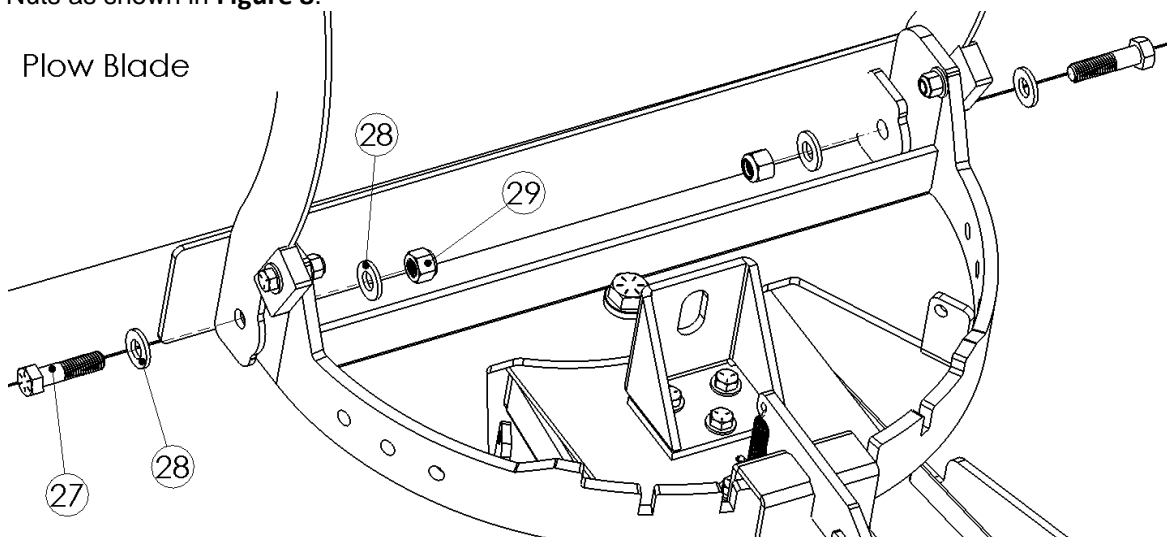


Figure 8



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9) Attach the 10" Springs to the Swivel Plate with the hook pointed toward the blade as shown in Figure 9.

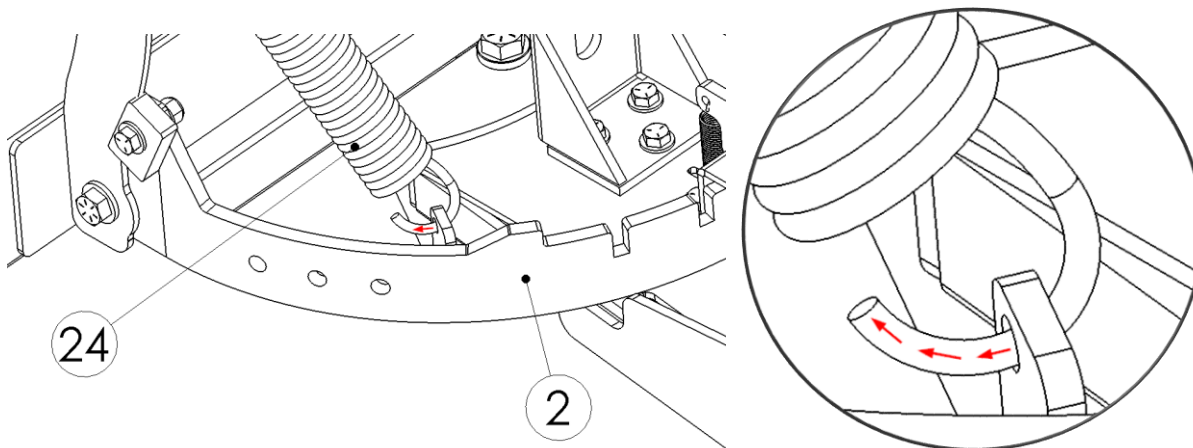


Figure 9

10) Attach the top end of the 10" Spring to the 3/8" Eye Bolt and then insert the threads of the 3/8" Eye Bolt through the mount plate welded to the Plow Blade. Secure the Eye Bolts using a 3/8" Flat Washer and two 3/8" Hex Nuts on each Eye Bolt. Alternate tightening the first 3/8" Hex Nut until the 10" Springs are taugth. Tighten the second 3/8" Hex Nut to the First to keep them from spinning backward. See Figure 10.

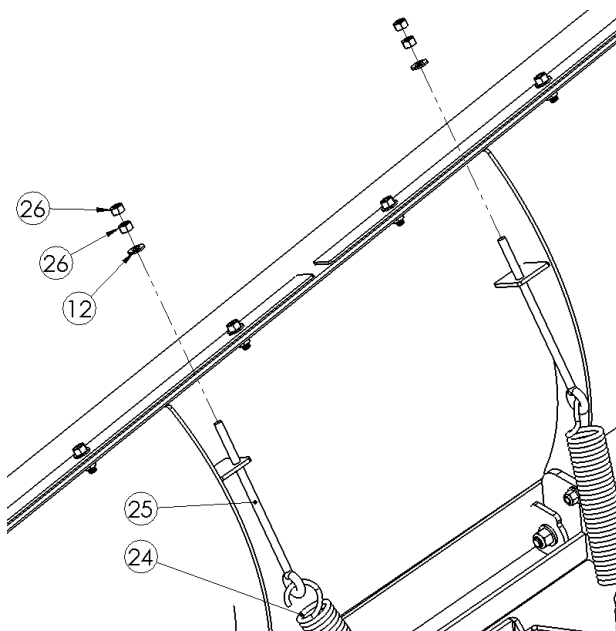


Figure 10



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- 11) Attach the Plow System to the Plow Mount (Sold and installed separately) using the 5/8" Quick Release Pins, 5/8" Flat Washers and R-Clips as shown in **Figure 11**.

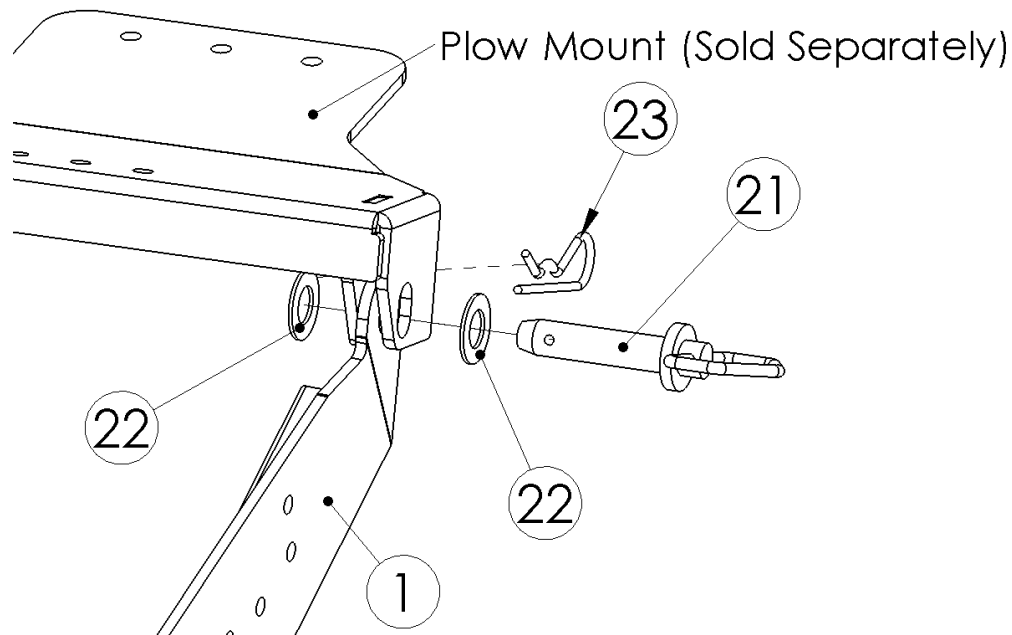


Figure 11

PLOW OPERATION TIPS

Raising and Lowering your Plow

Your plow requires a winch to raise and lower your blade. Simply install a winch and attach the clevis hook to the eye bolt in the center of your lift arm assembly. We suggest using our MotoAlliance Plow Pulley Fairlead, which is designed to spread the weight of the plow blade over a 2" surface area. This will greatly extend the life of your cable. We also recommend plowing with one of our VIPER V2 winches to lock the plow in place.

Long Distance Travel

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Warranty

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