



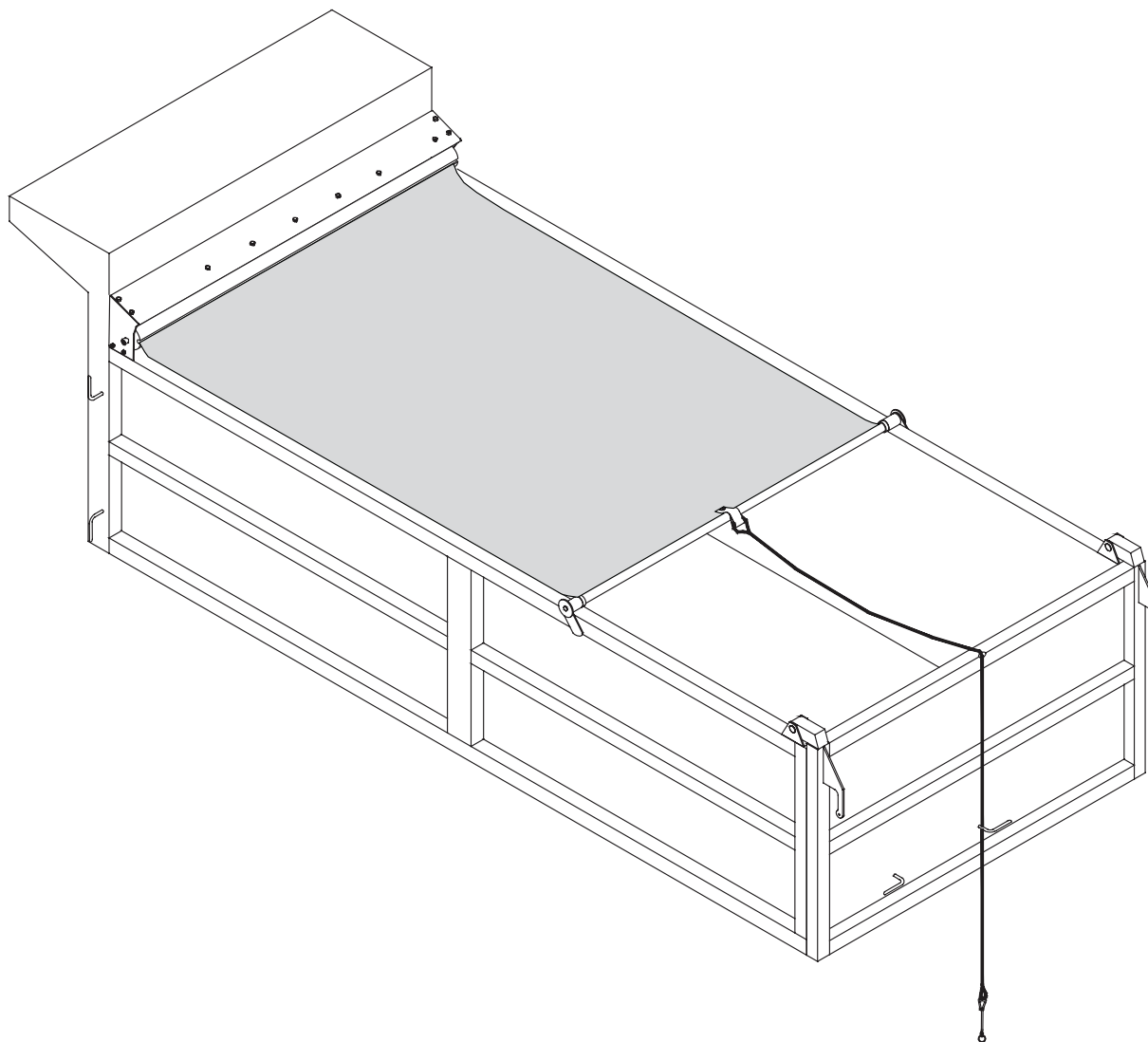
A Safe Fleet Brand



## Installation Instructions

## Steel Protector + (Semi-Automatic) & Steel Protector (Semi-Automatic)

116-0215 & 106-0215



607-0001

WLH 12/03/19



A Safe Fleet Brand



Installation Instructions

Steel Protector + (Semi-Automatic) & Steel Protector (Semi-Automatic)

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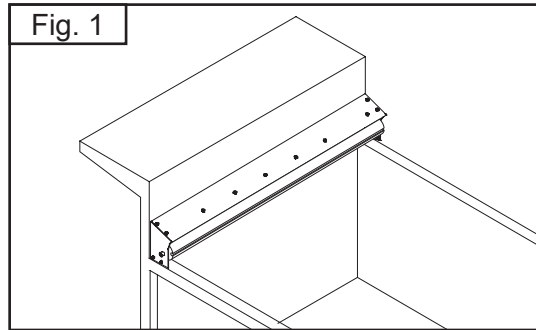


## Installation Instructions

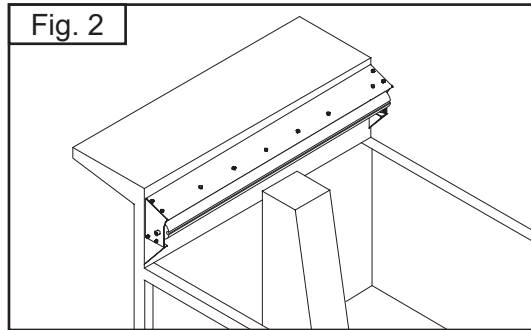
## Steel Protector + (Semi-Automatic) & Steel Protector (Semi-Automatic)

### Mounting Locations

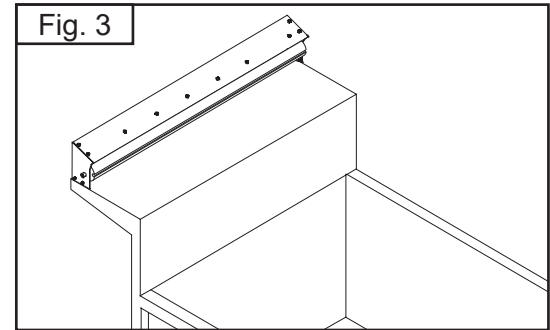
**Step 1:** Determine the mounting position for your truck (Fig. 1-7).



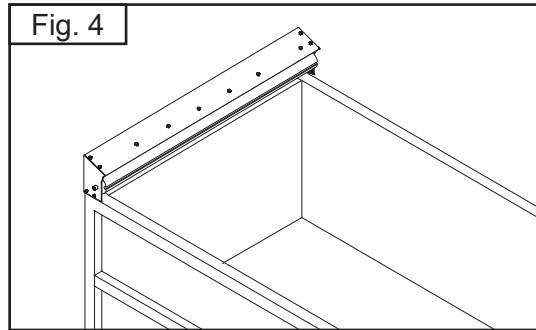
"A" Mount Bottom Roll



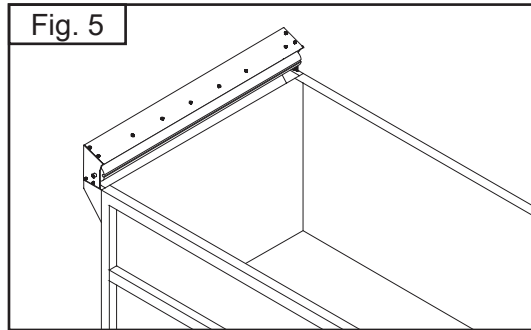
"B" Mount Bottom Roll



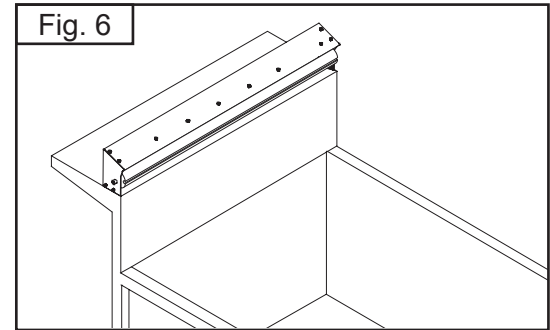
"C" Mount Bottom Roll



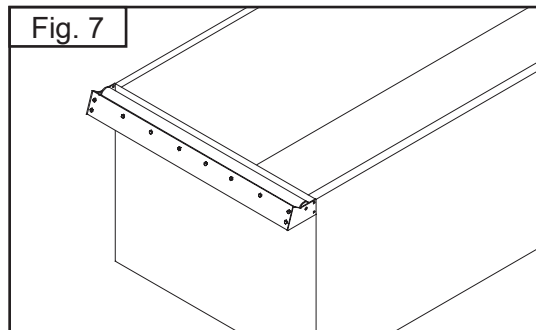
"D" Mount Bottom Roll



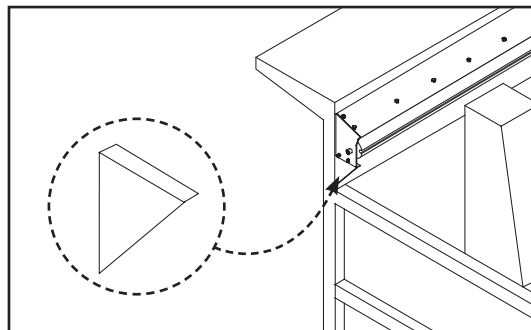
"E" Mount Bottom Roll



"F" Mount Bottom Roll



"G" Mount Top Roll (Special Order) - Specific off the top system.



#### "B" Brackets

NOTE: Use optional "B" Brackets when mounting in position "B" and "E".



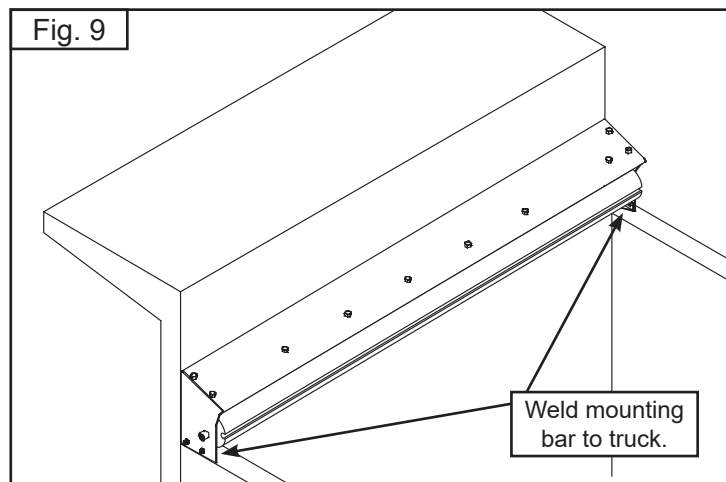
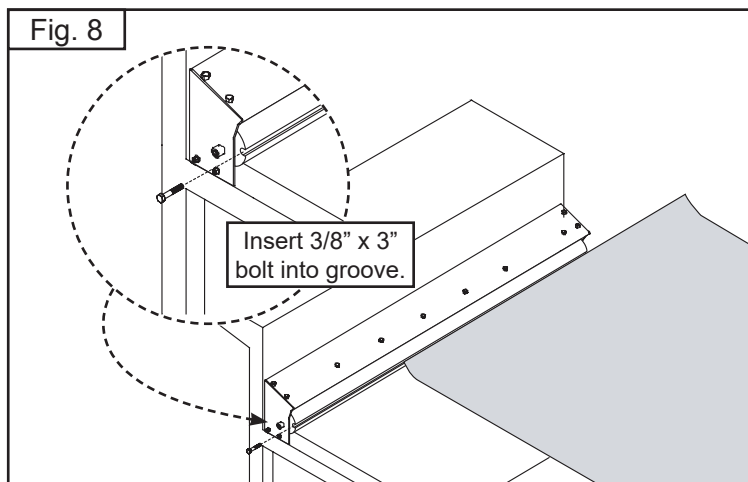
## Installation Instructions

## Steel Protector + (Semi-Automatic) & Steel Protector (Semi-Automatic)

### Mounting the System

#### Step 2: Remove Tarp before Welding.

To remove tarp, pull the tarp all the way out over the tailgate. Insert 3/8" x 3" bolt into groove on roller tube making sure the bolt head rests against front edge of end plate. This will lock spring tension in roller tube. Slide tarp out of roller tube and away from work area. NOTE: Before welding remove tarp to avoid damage (Fig. 8).

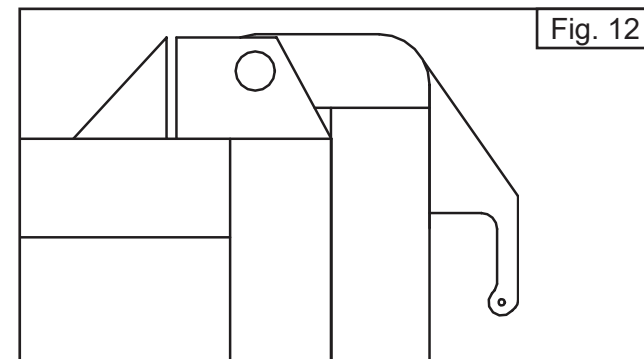
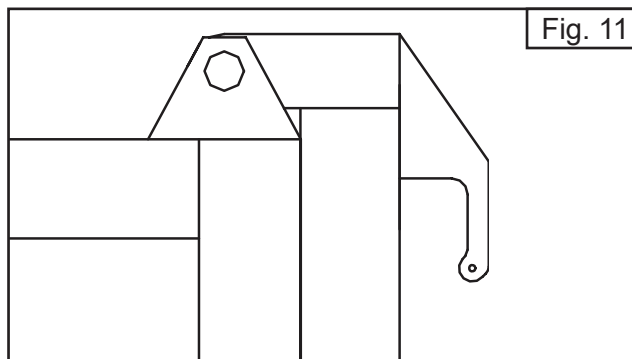
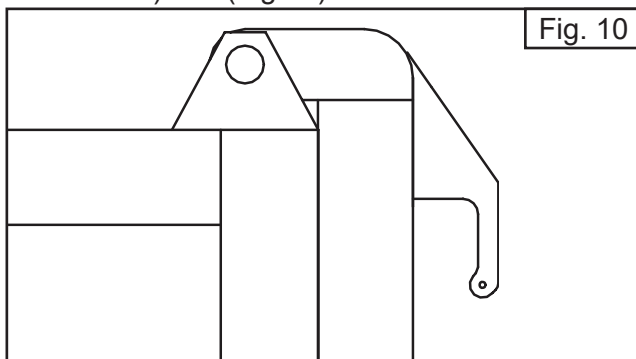


#### Step 3: Weld System to Truck

Weld system mounting bar to truck (Fig. 9).

#### Step 4: Weld on Tarp Return Ramps

The Tarp Return Ramps hold the pullrod in place once the tarp has been deployed. The ramps should be welded as high as possible. See (Fig.10 & Fig.11 for your application). Make sure all rough edges are ground smooth. If you have a raised hinge you will need to add a Hinged Ramp Gusset (NOT SUPPLIED) see (Fig.12).





## Installation Instructions

## Steel Protector + (Semi-Automatic) & Steel Protector (Semi-Automatic)

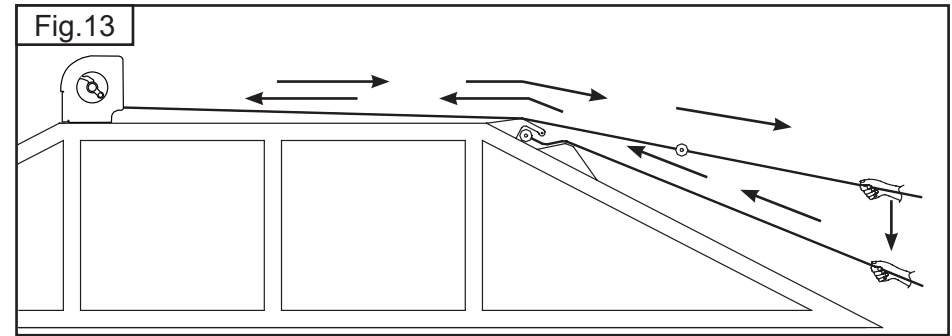
### Tarp Return Ramps for Belly Dumps

#### Step 5:

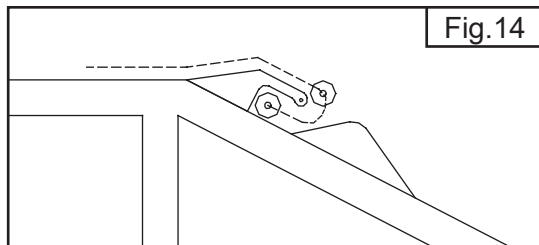
All belly dumps require special tarp return ramps. If you are not sure which type to use, call us at Pulltarps (800) 368-3075 for technical support.

#### Jump Ramp

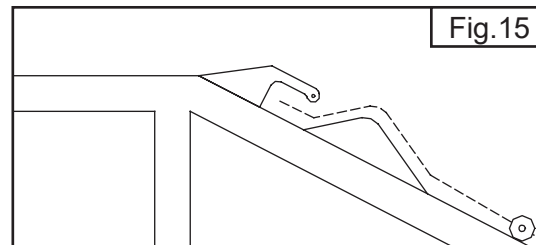
On longer single units, you are too far from the return ramp to unlatch the Pullrod by hand so we developed the easy to operate Jump Ramp (Fig. 13). Pull the tarp out all the way. Lower your arm. Release some rope slowly and allow the Pullrod to slide forward and drop down into the Tarp Return Ramp.



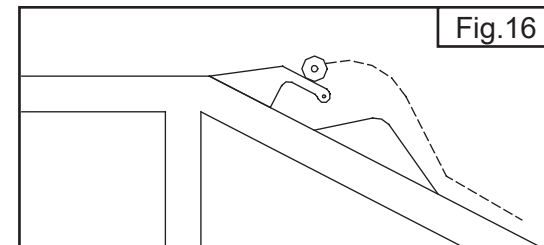
**A1.** Pull out and hook (Fig. 14).



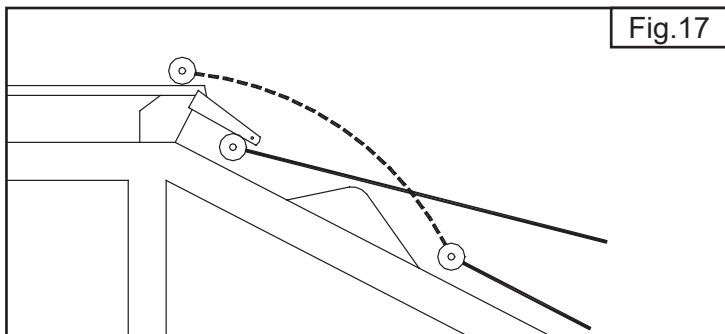
**A2.** To retract, pull the pullrod up over the jump-ramp gusset and down a few inches (Fig. 15).



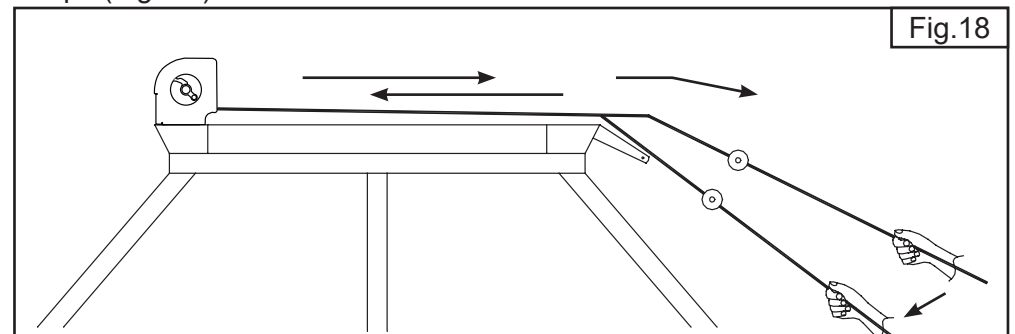
**A3.** Release a few feet of rope quickly and the spring in the roller will cause the Pullrod and tarp to jump over the return ramp and retract back to the system (Fig. 16).



**B.** On long belly dumps with short vertical sideboards, use the finger tarp return ramps. Weld the provided gussets to the box to create a Pullrod jump ramp (Fig. 17).



**C.** On short belly dumps, pull the tarp all the way out. Raise and lower to hook and unhook the Pullrod over the finger tarp return ramps (Fig. 18).





## Installation Instructions

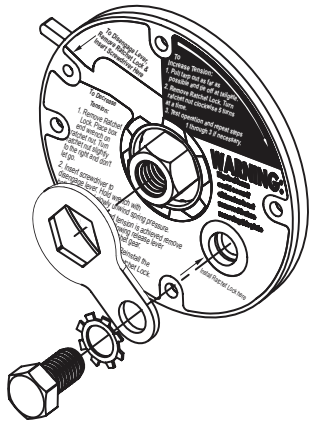
## Steel Protector + (Semi-Automatic) & Steel Protector (Semi-Automatic)

### Reinstalling Tarp, Rope Hook Installation & Adjusting Spring Tension

#### Step 6: Reinstall Tarp

Before you reinstall your tarp on the roller, make sure the roller has not lost its spring tension (Fig. 19 & 20). If the roller is still locked with the locking bolt, the tension should have been maintained. Slide the front end of tarp (with beaded rod) into the slot of the roller from the opposite side of the locking bolt. If needed, lubricate the edge of the tarp with soapy water so it will slide into the roller slot easy. After the tarp is in place, make sure that it is centered on the roller with an equal amount of space on each end, and that the bead tubing is also equally spaced. Secure tarp and pullrod to tailgate with the pullrope. Hold the roller with one hand and remove the locking bolt with the other. Release pullrope from tailgate and cycle the tarp 2 or 3 times. This will ensure the tarp rolling up straight. If the tarp rolls up consistently off to one side or the other, you can offset the tarp to the opposite side on the roller to start with, this way the tarp will roll up as centered as possible. If you have side flaps or tie downs proceed to page 6 or 7.

Fig. 19



#### IF ROLLER HAS LOST SPRING TENSION

The roller comes pre-loaded from the factory. Should the roller lose tension for any reason during installation, you must pre-load the spring mechanism again before installing the tarp.

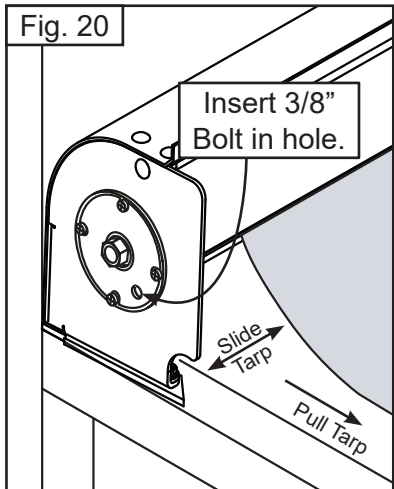
##### To Increase Tension

1. Pull Tarp out as far as possible and tie off at tailgate.
2. Remove Ratchet Lock. Turn ratchet nut clockwise 5 turns at a time.
3. Test operation and repeat steps 1 through 3 if necessary.
4. Reinstall the Ratchet Lock

##### To Decrease Tension

1. Remove Ratchet Lock. Place box and wrench on ratchet nut. Turn ratchet nut slightly to the right and don't let go
2. Insert screwdriver to disengage lever. Hold wrench with both hands slowly unwind spring pressure.
3. When desired tension is achieved remove screw driver allowing release lever to reengage ratchet gear.

Fig. 20



#### Step 7: Rope Storage Hook Installation

Mount the rope as low as possible. The rope should come straight down and wrap around the center hook and then coil off to the side (Fig. 21). When tarp is not in use, space the hooks far enough apart to store the full length of rope (Fig. 22).

**Note: Tarp must be retracted when dumping.**

Fig. 21

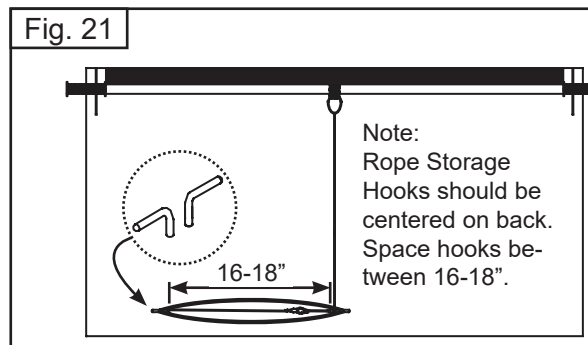
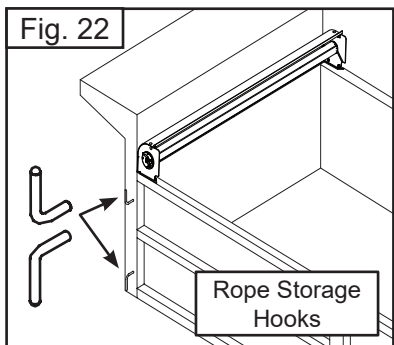


Fig. 22





## Installation Instructions

## Steel Protector + (Semi-Automatic) & Steel Protector (Semi-Automatic)

### Optional Flap Tarp, Rope and Hook Installation

#### Parts:

Tie Down Hooks (Steel or Alum.) →

Pull Down Hook →

**Note: The Location Of The Tie Down Hooks Is Critical!**

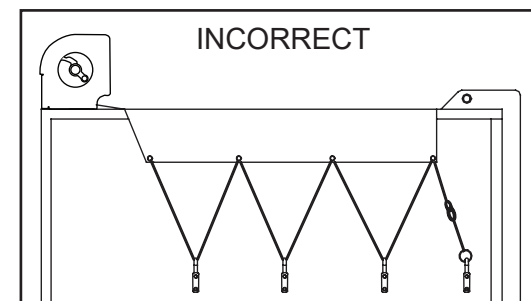
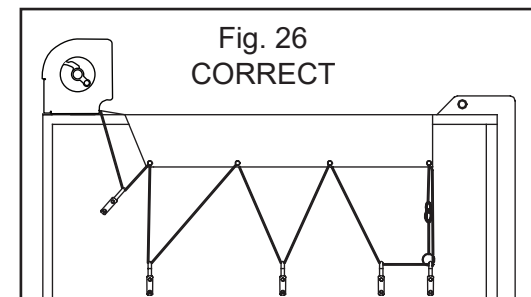
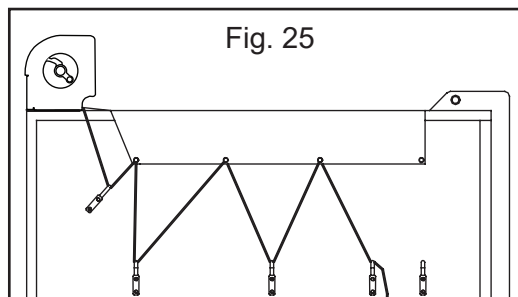
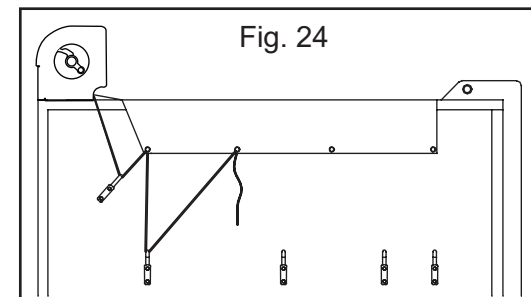
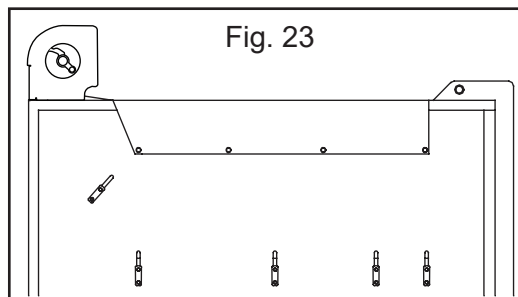
**Step 8:** Flip the braided rope over the corner so that the flaps and tie down ropes hang over each side of the box. The number of tie down hooks vary depending on the length of your tarp. One pull down hook is included with your Pulltarps system. If needed. Use the hook to pull the braided rope and flaps over the side of the box.

**The tie down hooks must be positioned so that:**

1. The tie down rope can be reached from the ground.
2. The bungee cord has to be stretched to reach the last hook (see **Step 9**).
3. The rope has no slack.
4. The tie down hooks are level with one another.

**To ensure proper hook placement, first duct tape the rope to the box in place of the tie down hooks. Start with hook closest to the cab.**

1. Position the first hook 6" (15.24cm) down and 12" (30.48cm) forward (toward the cab) from the first grommet (Fig. 23).
2. Position 2nd hook straight down from 1st grommet. This hook should be reached from ground (Fig. 24).
3. Place middle hooks equal distances from grommet (Fig. 25). These hooks should be placed at the same height as the second hook.
4. Position last hook (closest to the tailgate) below the last grommet at the same height as the others (Fig. 26).
5. Weld hooks in place.



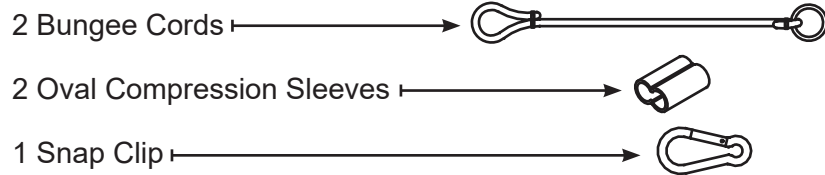


## Installation Instructions

## Steel Protector + (Semi-Automatic) & Steel Protector (Semi-Automatic)

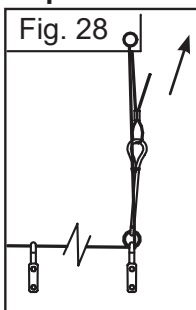
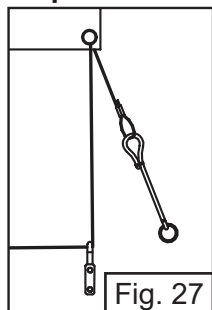
### Bungee Cord Installation

#### Parts:



**Step 9:** After side hooks are installed, the tie down rope must be installed and cut to proper length. It is important to get all of the slack out of the rope to prevent blowing and rubbing of flaps in windy conditions.

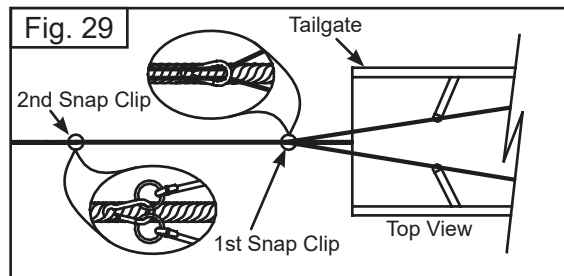
#### Tarps with Side Flaps



To tighten, pull loose end of rope through the Oval Compression Sleeve (Fig. 27). Stretch the bungee cord making sure all slack is taken out of the rope, crimp compression sleeve (Fig. 28). Be sure to keep flaps even on sides so Tie Down Ropes remain equal in length.

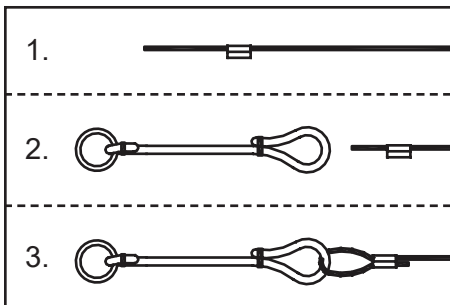
**Note:** Check for proper placement of rope through the last two hooks.

#### Snap Clip Installation



Flip the rope back on top of the tarp, making sure to hold the bungee at all times. The first snap clip is factory installed 5'-6" from the pullrod. Open the clip and enclose the rope. Weave the second clip through the main pullrope where the ends of the bungee cords meet the main pullrope. Make sure the rope is taught when clipped (Fig. 29).

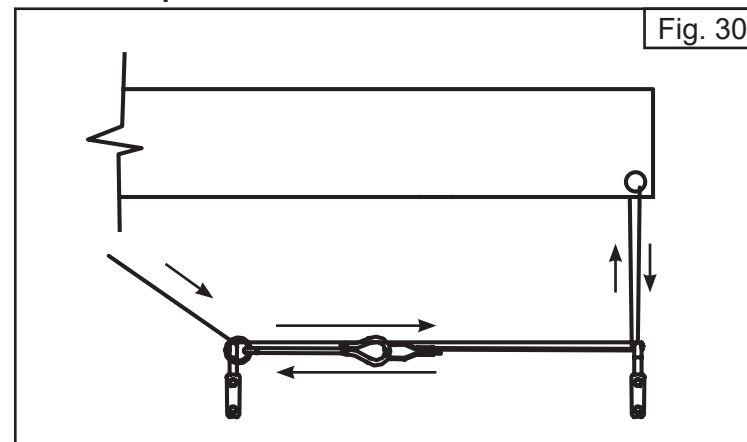
**Note:** First snap clip should not be used on long wheel base belly dumps.



#### Connect Bungee Cord to Rope

1. Thread braided rope through Oval Compression Sleeve.
2. Feed rope through the eye of the bungee cord.
3. Thread the rope back through the oval compression sleeve. Adjust for proper length. Crimp compression sleeve.

#### Excess Rope



You may need extra rope to keep the side flap system ground operated. If your application requires extra rope, the slack needs to be taken up by attaching the end of the bungee cord to an alternate hook (Fig. 30).





# DIAGRAMS & PARTS



## Installation Instructions

## Steel Protector + (Semi-Automatic) & Steel Protector (Semi-Automatic)

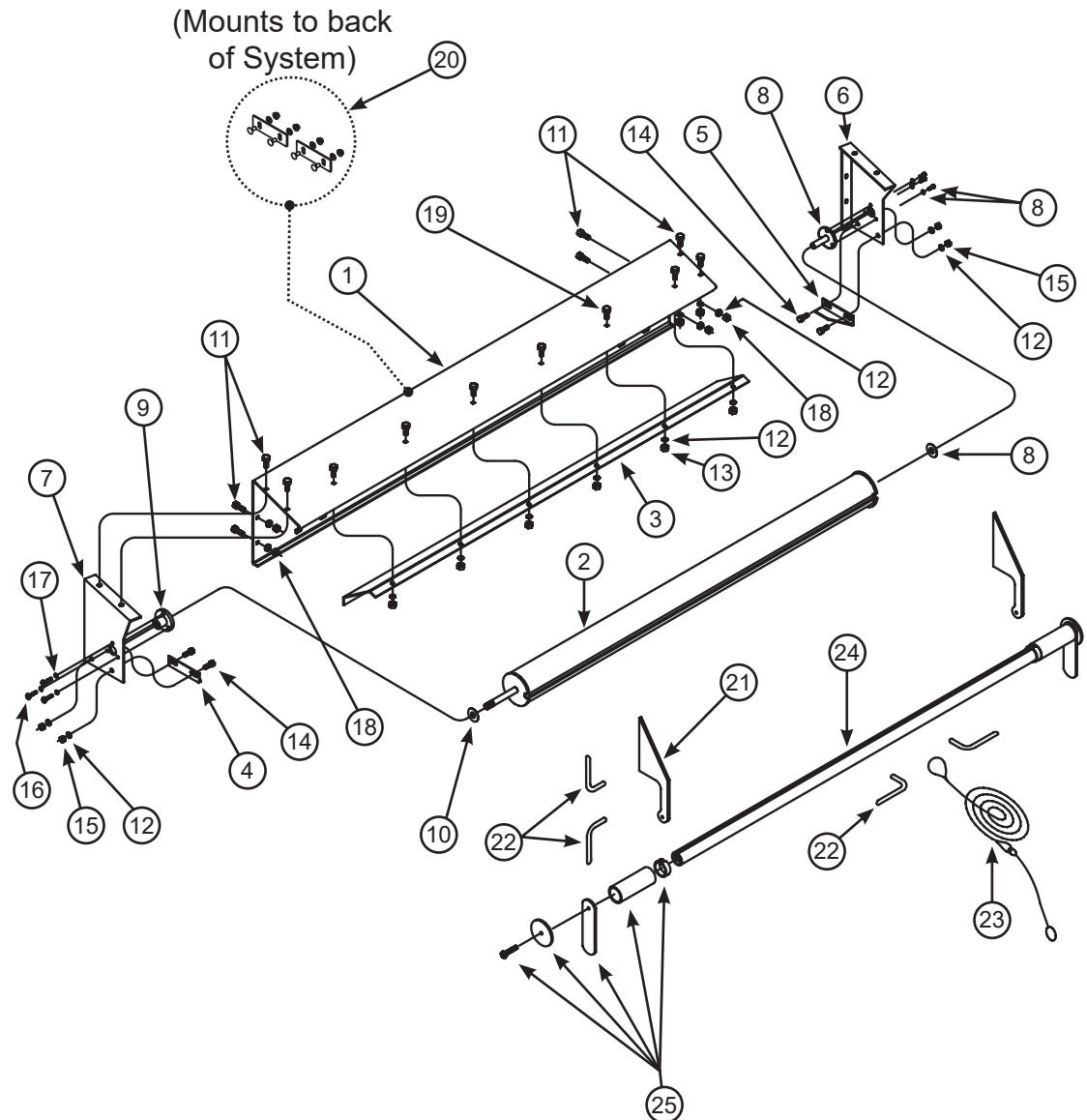
### Steel Protector™ #106-0215

ITEM	PART #	DESCRIPTION	QTY
1	501-010X	Galv. Steel Protector Housing 80, 84, 87, 89, 93, 96, 100"	1
2	501-130X	Roller Assembly 80, 84, 87, 89, 93, 96, 100"	1
3	501-0138	48" x 5-1/2" Galv. Insert	1
4	501-152X	System Mount Bracket (Specify Steel or Alum. - Left)	1
5	501-152X	System Mount Bracket (Specify Steel or Alum. - Right)	1
6	501-0254	Passenger Side Plate for "N" System	1
7	501-0253	Driver Side Plate for "N" System	1
8	501-0633	Universal Bolt in Stud Kit	1
9	501-0804	Steel Spring Shaft Anchor	1
10	505-5002	Nylon Washer	1
11	503-2505	1/4" - 20 x 3/4"lg. Carriage Bolt	8
12	505-2502	1/4" Flat Washer USS	24
13	504-2506	1/4" - 20 Nyloc Nut (Thin)	12
14	503-3104	5/16" - 18 x 3/4"lg. Carriage Bolt	4
15	504-3103	5/16" - 18 Nyloc Nut	4
16	503-2503	1/4" - 20 x 1/2"lg. HHCS Bolt	3
17	505-2503	1/4" Lock Washer	3
18	504-2503	1/4" - 20 Nyloc Nut	8
19	503-2501	1/4" - 20 x 1/2"lg. Carriage Bolt	12
20	501-06XX	Steel Protector System Hardware (Specify Steel or Alum)	1

### Pullrod Hardware

REV. 11/15/16 WLH

ITEM	PART #	DESCRIPTION	QTY
21	501-0301	Tarp Return Ramps (Steel)	2
--	501-0302	Tarp Return Ramps (Alum.)	2
22	501-0621	Rope Storage Kits (4 Steel Hooks)	1
--	501-0608	Rope Storage Kits (4 Alum. Hooks)	1
23	517-10XX	Pull Rope (20, 25, 30, 35, 40, 50')	1
24	Determined by Length	Pullrod (85, 91, 93, 96, 100, 105" Lengths)	1
25	501-0612	Pullrod Hardware Kit	1





## Installation Instructions

**Steel Protector + (Semi-Automatic) & Steel Protector (Semi-Automatic)**

# Steel Protector +™ #116-0215

ITEM	PART #	DESCRIPTION	QTY
1	501-0138	Galvanized Insert	1
2	501-018X to 019X	Galv. Steel Protector + Housing	1
3		Protector + Ratchet End Plate	1
4	501-0281	Protector + End Plate Passenger	1
5	501-0801	System End Plate Stud 2.4"	1
6	501-0647	System End Plate Ratchet	1
7	501-1505	6" Large Steel Mounting Bar	2
---	501-1506	6" Large Aluminum Mounting Bar	---
8	501-1520	50" Mounting Bar Aluminum	2
---	501-1513	50" Mounting Bar Steel	---
9	501-130X	Spring Roller Tube	1
10	503-2501	1/4" - 20 x 1/2" USS Carriage Bolt	12
11	503-2505	1/4" - 20 x 3/4" USS Carriage Bolt	10
12	503-3101	5/16" - 18 x 1/2" Hex Bolt	12
13	504-2503	1/4" - 20 USS Nylock Nut	10
14	504-2506	1/4" Hex Lock Nut "Thin" L/N Steel Zinc	12
15	504-5001	1/2" Crimp Nut	1
16	505-2502	1/4" USS Washer 5/16" Hole	35
17	505-3102	5/16" Lock Washer	15
18	505-5001	1/2" AN Washer 1/16" Thick	1
19	505-5002	Washer Nylon 0.5ID X	2
20	506-9937	10-31 x 5/8" Philips Pan	4

## Pullrod Hardware

REV. 04/18/19 WLH

ITEM	PART #	DESCRIPTION	QTY
20	501-0301	Tarp Return Ramps (Steel)	2
--	501-0302	Tarp Return Ramps (Alum.)	2
21	501-0623	Rope Storage Kits (4 Steel Hooks)	1
22	517-10XX	Pull Rope (20, 25, 30, 35, 40, 50')	1
23	Determined by Length	Pullrod (85, 91, 93, 96, 100, 105")	1
24	501-0612	Pullrod Hardware Kit	1

