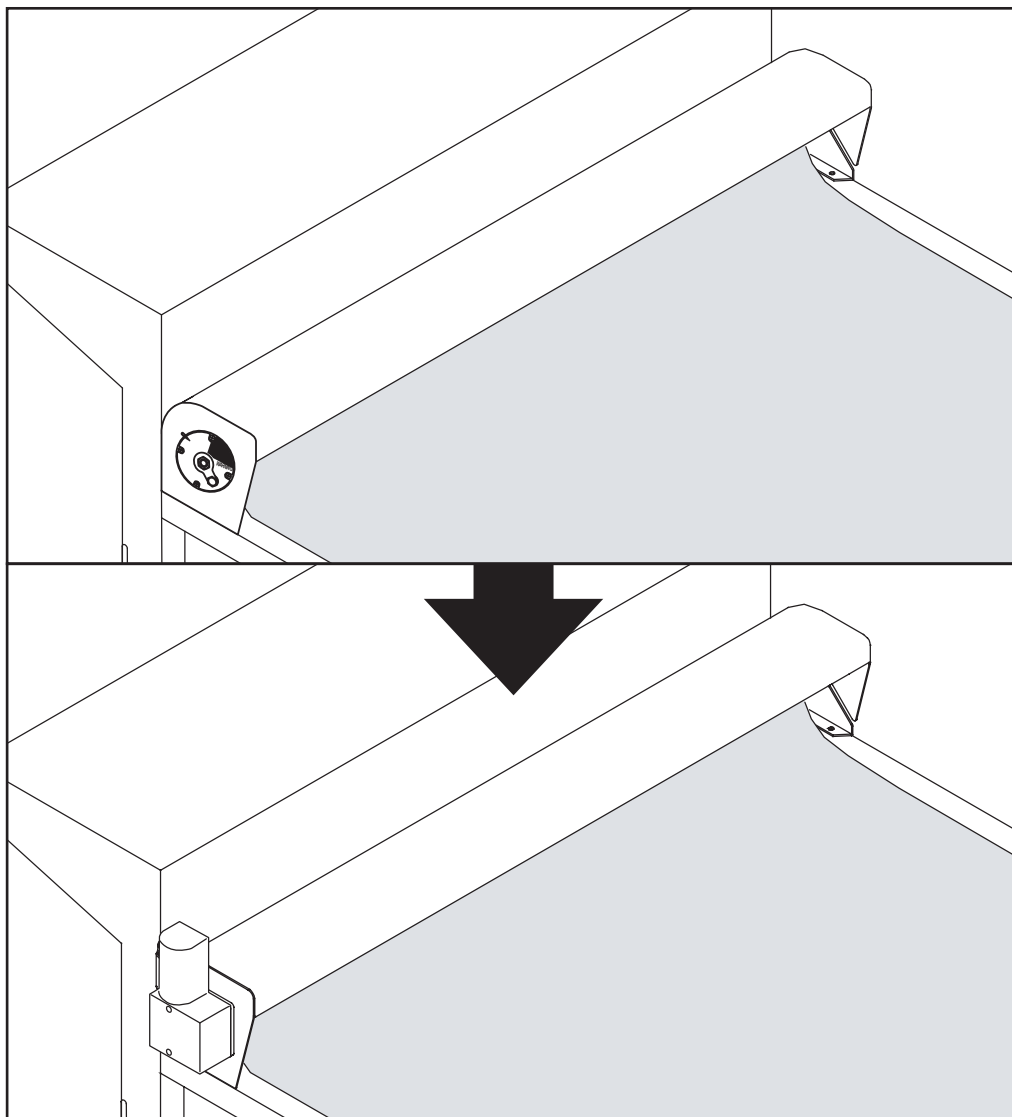




1404 N. Marshall Ave. El Cajon CA. 92020

Conversion Kit-Universal Super Shield Installation Instructions

WLH 04/12/16



607-0137

For technical support call us at (800) 368-3075 or visit our website at PullTarps.com.



1404 N. Marshall Ave. El Cajon CA. 92020

Conversion Kit-Universal Super Shield Installation Instructions

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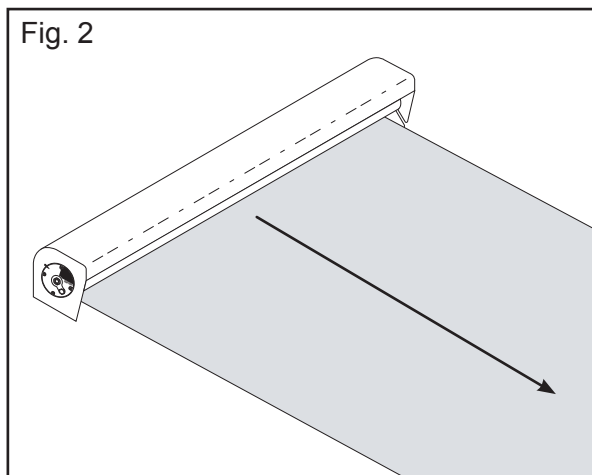
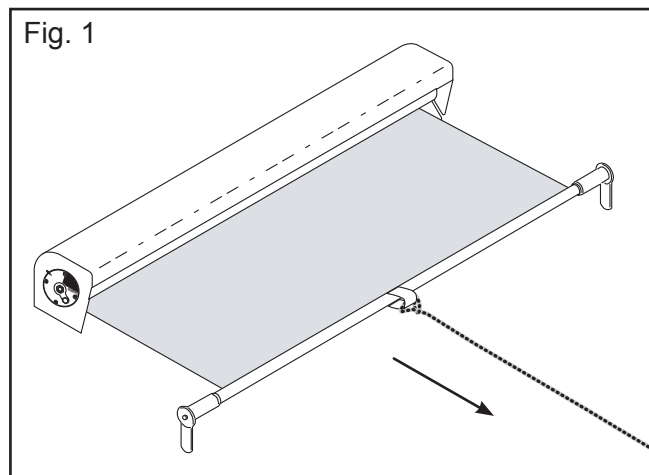
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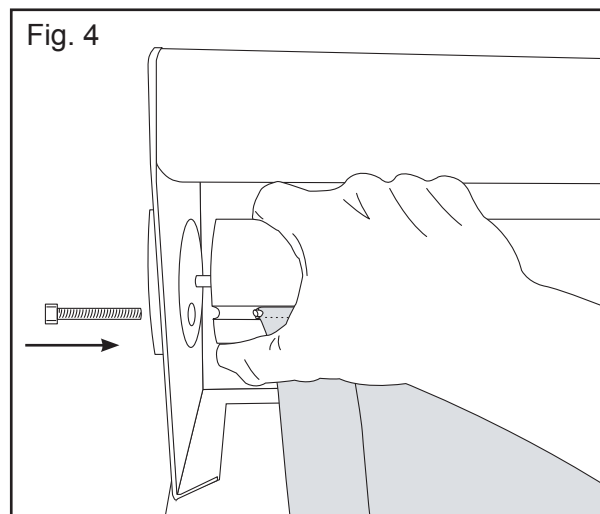
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Removing Tarp & Roller Tube

Step 1: Extend tarp until it is completely unrolled from the roller tube (Fig. 1 & 2) and over the tail gate. Once tarp is fully extended, tie off at the end of the tail gate, so tarp will not roll back.

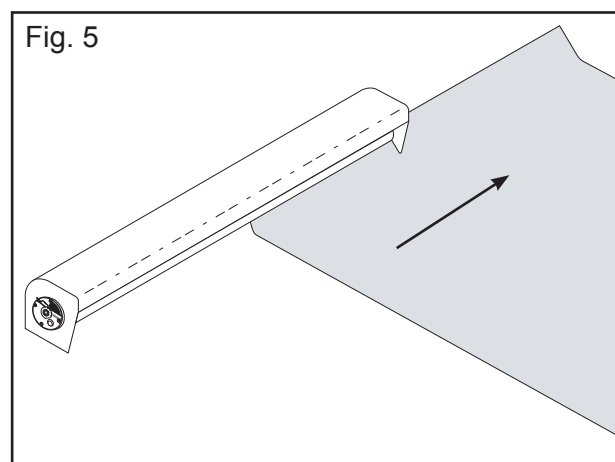


Note: The Universal Super Shield is to remain on box during entire conversion.



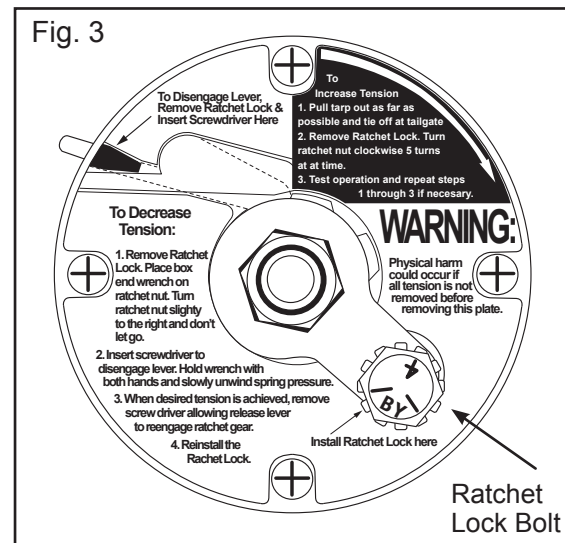
Step 3:

After removing Ratchet Lock bolt, roll the roller tube hem tube groove to align with the bolt hole. When the two are aligned, hold the tube in place and insert the provided 3/8" bolt into the hole and roller tube. This will assure that the roller tube will not rotate as the tarp is removed (Fig. 4).



Step 4:

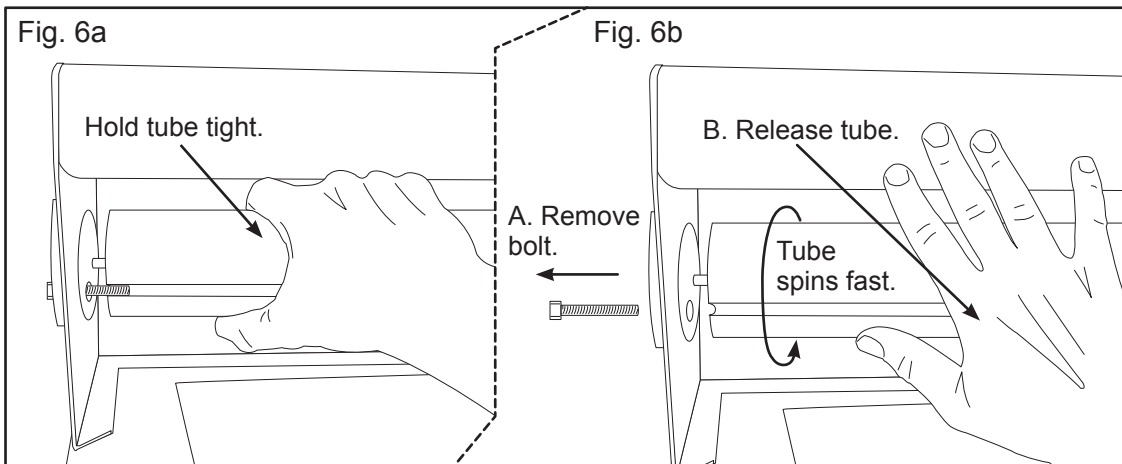
Once roller tube is secure, remove tarp from groove through slot on the right side of the Universal Super Shield (Fig. 5) and set aside.



Step 2: Remove Ratchet Lock bolt (Fig. 3), to allow insertion of a 3/8" bolt to hold Roller Tube in place prior to removing tarp.

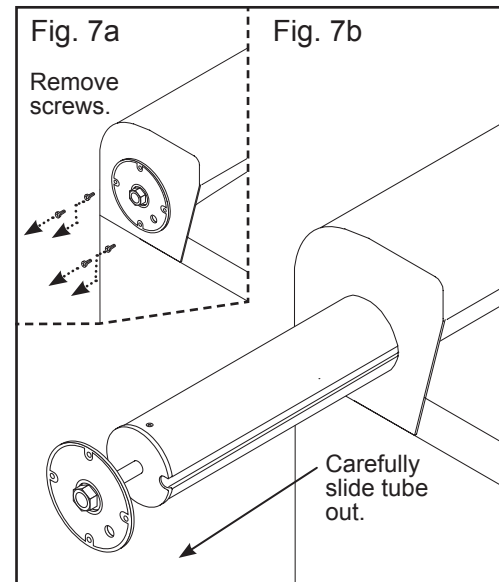
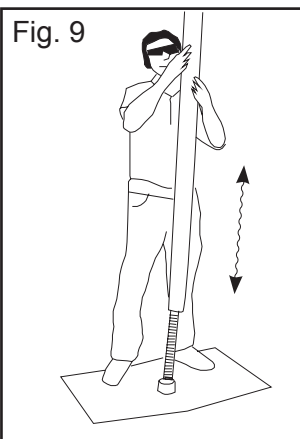
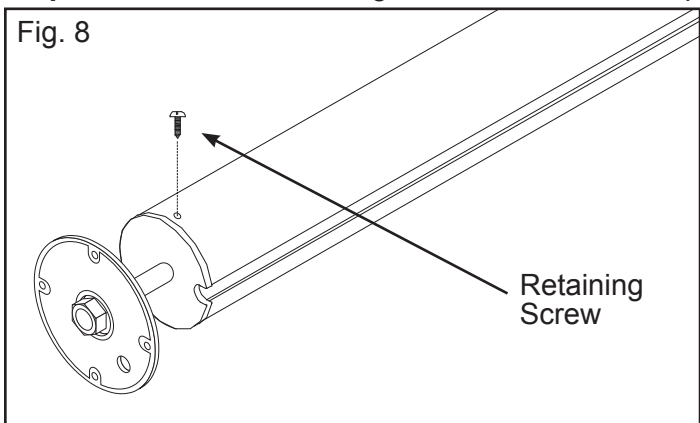
Removing Tarp, Roller Tube & Spring Assembly

Step 5: With bolt in roller groove, hold roller tight with hand then use other hand to remove bolt (Fig 6a). Once the bolt is removed, let go of the roller to release the spring tension (Fig. 6b-a & b). When released, the roller tube will spin rapidly until all tension is released.



Note: There may be a great deal of spring tension, so it may be necessary to hold the roller tube with two hands while someone else removes the bolt from the roller tube.

Step 7: Remove the retaining screw from the end cap (Fig. 8).

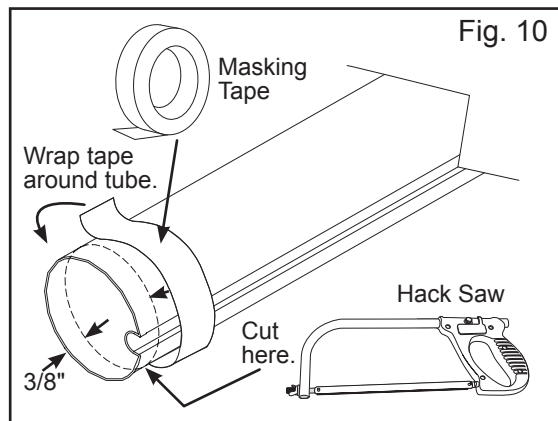


Step 6: Once all tension has been released from roller tube, remove four (4) Philips Head Pan screws (Fig. 7a). After screws are removed, pull the entire roller tube assembly out of the side of the housing (Fig. 7b).

Step 8: Place a piece of cardboard on the ground and hold the roller assembly vertically, with the ratchet assembly towards the ground. Shake the roller assembly up and down above the cardboard to pop the end cap and spring assembly free from the roller tube (Fig. 9).

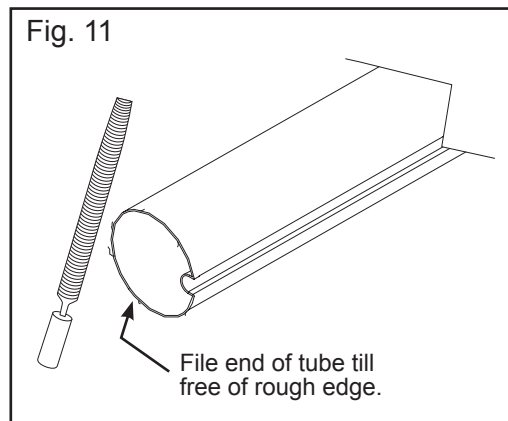
Note: The cardboard is to protect the end of the spring shaft when it breaks free.

Roller Tube End Cap Installation

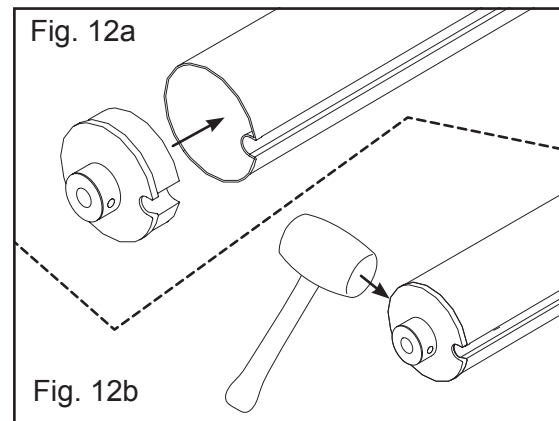


Step 9: Position the roller tube on a flat surface. Cut roller tube 3/8" from end using a hack saw (Fig. 10).

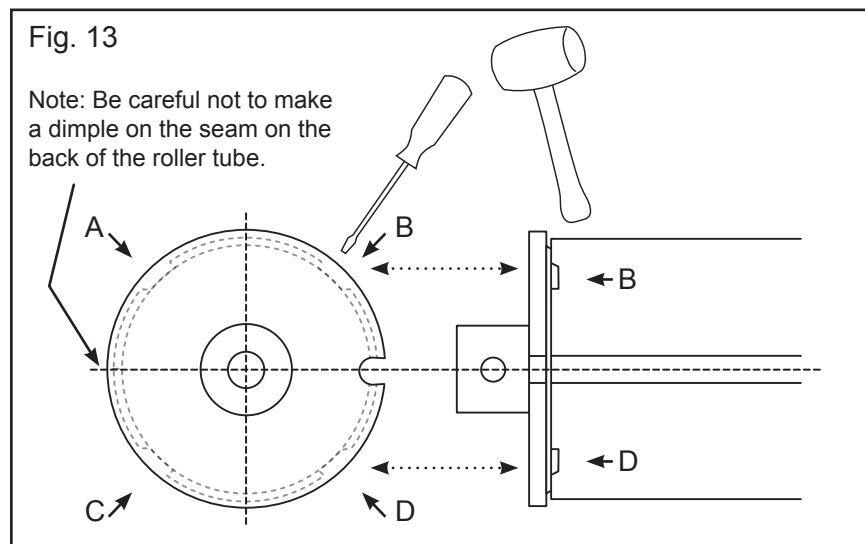
Note: Use masking tape wrapped around tube as a cutting guide.



Step 10: After cutting off the 3/8" section and removing the masking tape (Fig. 11), file the edges to smooth out end of tube and provide a better fit for the end cap.



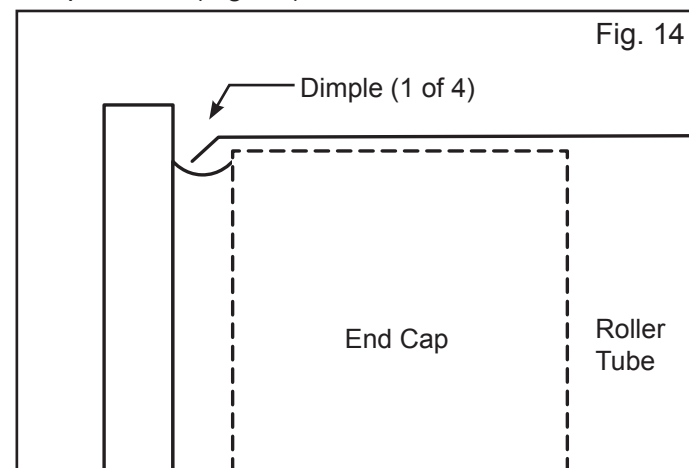
Step 11: Insert end cap into roller tube. Use a rubber mallet to tap the edges of the end cap lightly to ensure that it has been seated properly (Fig. 12a & 12b).



Step 12: To secure the end cap in the roller tube, make four (4) indentations or dimples to hold the end cap in place. Use a mallet and flathead screwdriver to make the dimples (Fig. 13 - A, B, C & D).

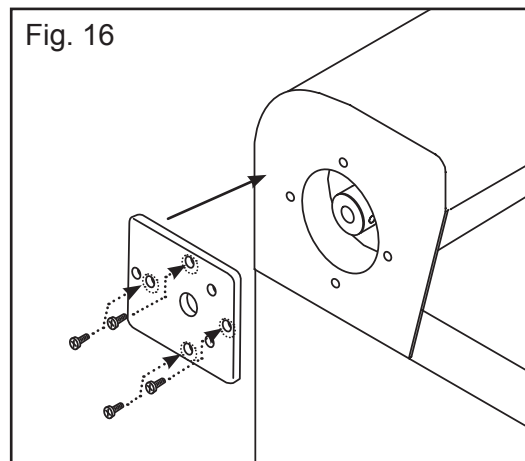
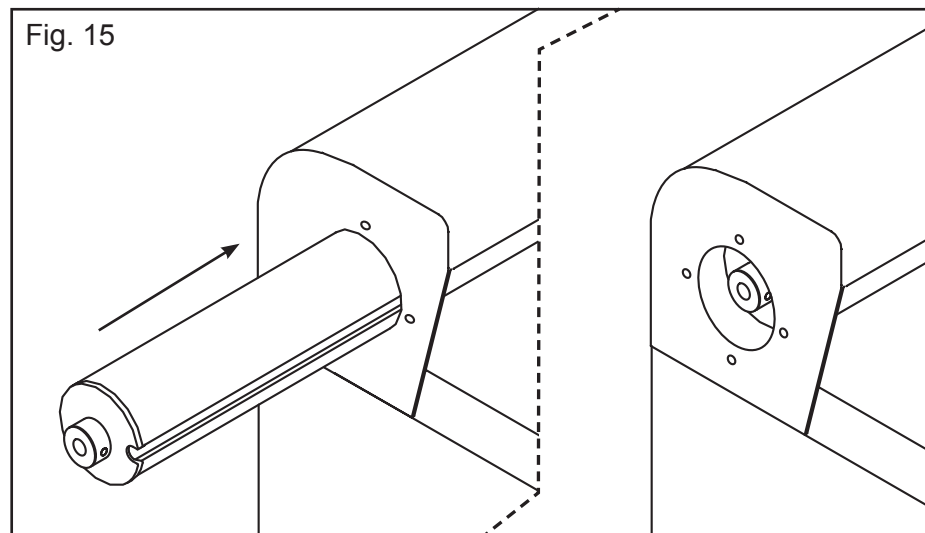
WARNING: Do not make indentation on welded seam.

Dimple detail (Fig. 14).

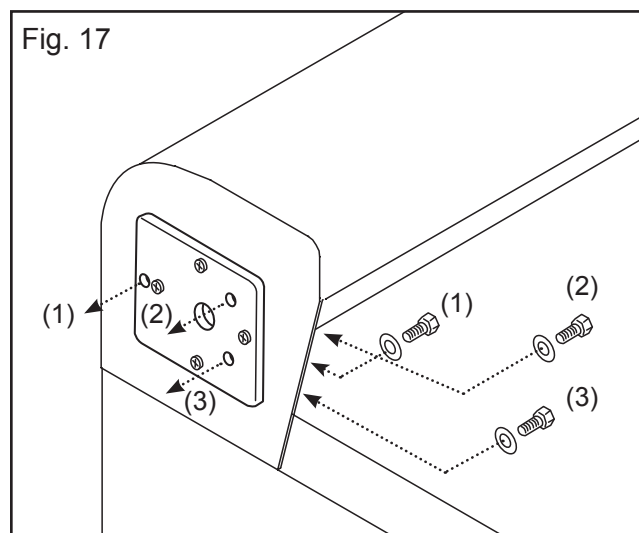


Roller Tube And Electric Motor Installation

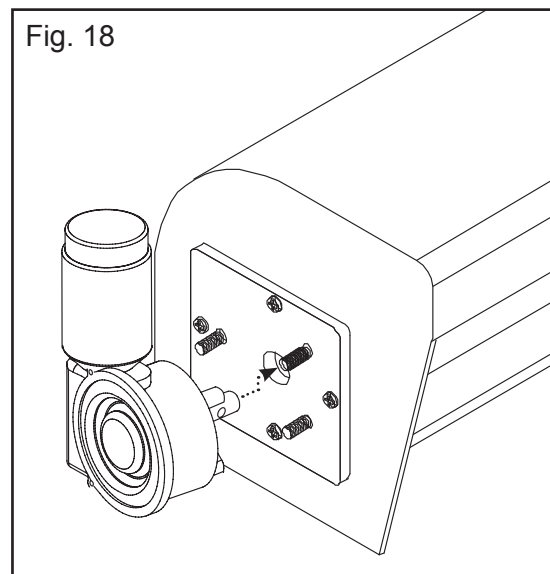
Step 13: Insert roller tube into housing (Fig. 15).



Step 14: With the roller tube fully inserted, attach the Adaptor Plate to the Universal Super Shield housing. Secure using four (4) Philips Head Pan screws (Fig. 16).

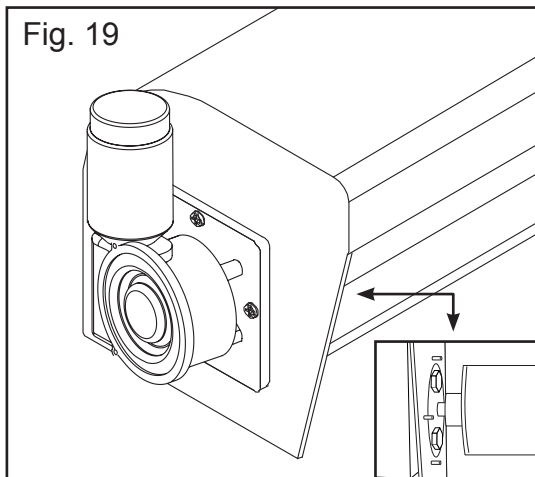


Step 15: Insert three (3) HHCS bolts (Fig. 17) to allow for the Electric Motor to be mounted on the side of the Universal Super Shield.



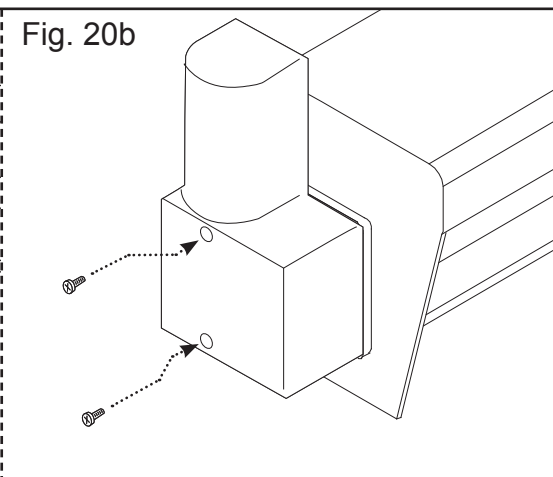
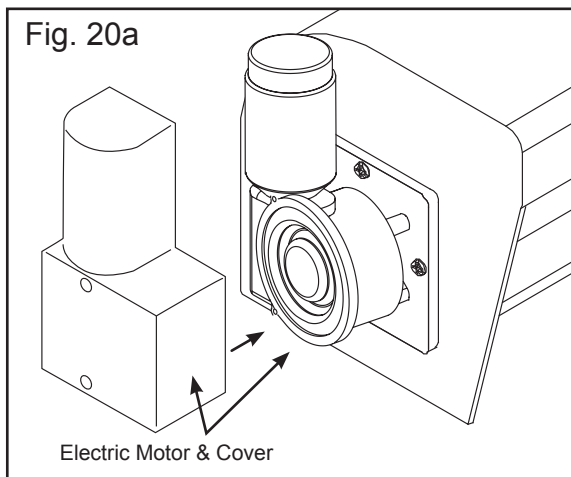
Step 16: With the HHCS bolts in place, attach and secure the Electric Motor (Fig. 18) to the Adaptor Plate using a 5/16" crescent wrench.

Electric Motor Installation

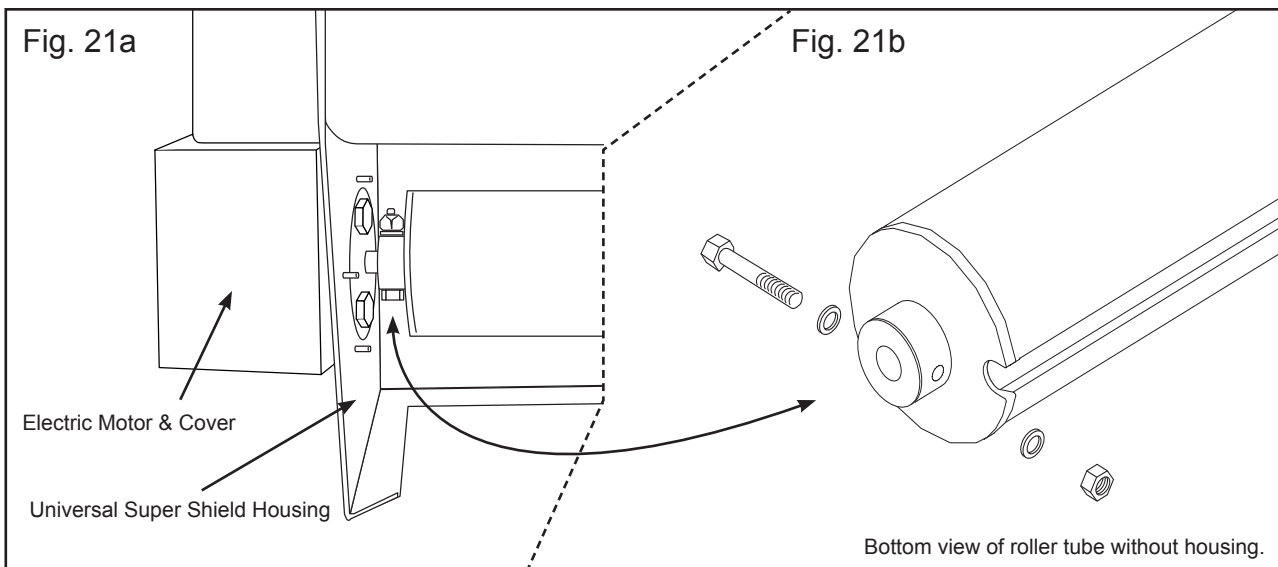


Step 17: With the Electric Motor in place, secure with three (3) HHCS Bolts (Fig. 19).

Note: Make sure the motor shaft is inserted in the roller tube end cap.



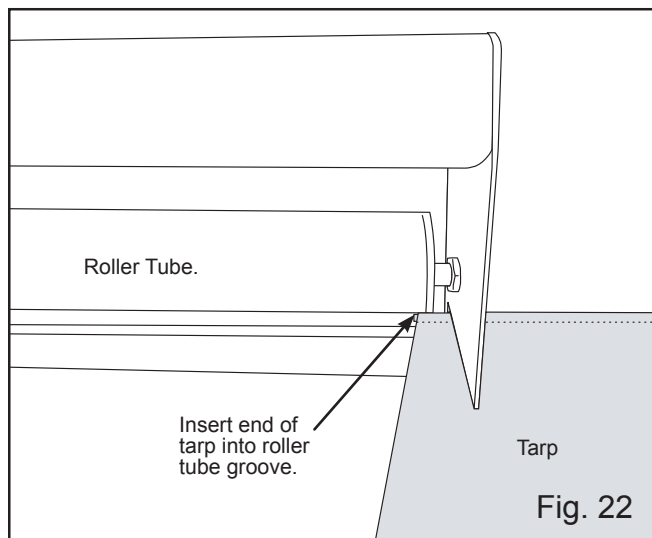
Step 18: Place Electric Motor Cover on the mounted motor (Fig. 20a) and then secure with two (2) mounting screws (Fig. 20b).



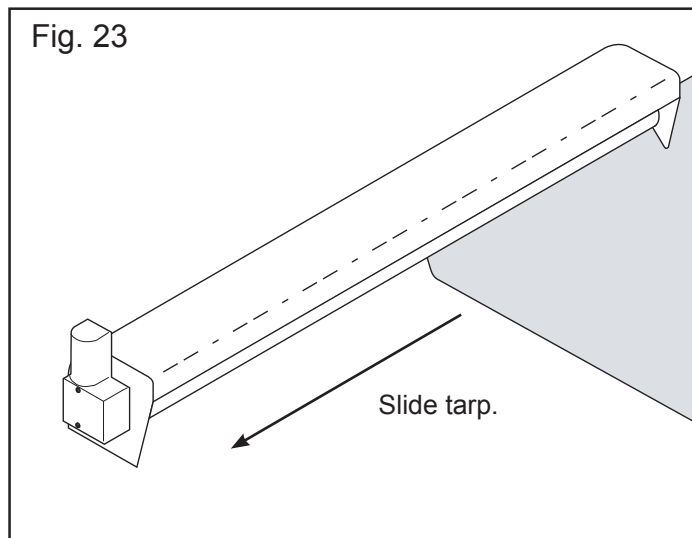
Step 19: With the Electric Motor drive shaft inserted into the roller tube end cap, install the HHCS bolt, flat washers and nyloc nut (Fig. 21a & b) and tighten.

Note: Make sure the roller tube is firmly secured to the Electric Motor shaft.

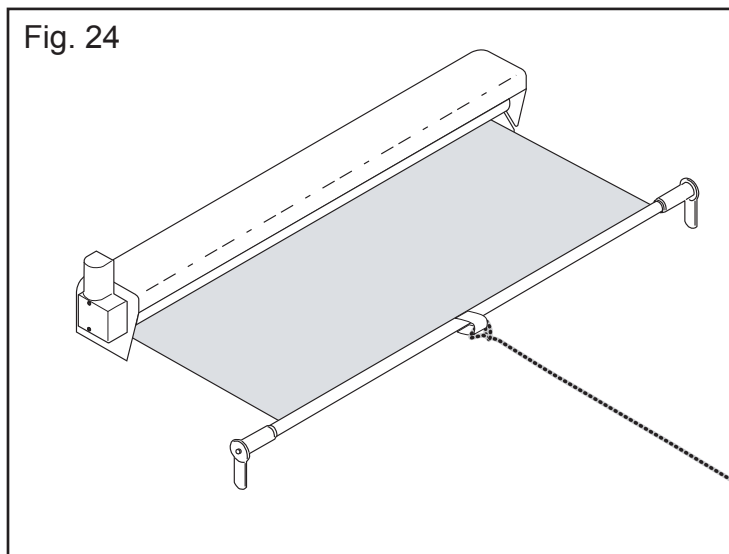
Tarp Reinstallation



Step 20: Slide the edge of the tarp into the housing and roller tube groove (Fig. 22).



Step 21: Slide tarp in roller tube groove until it is flush with the other side (Fig. 23).

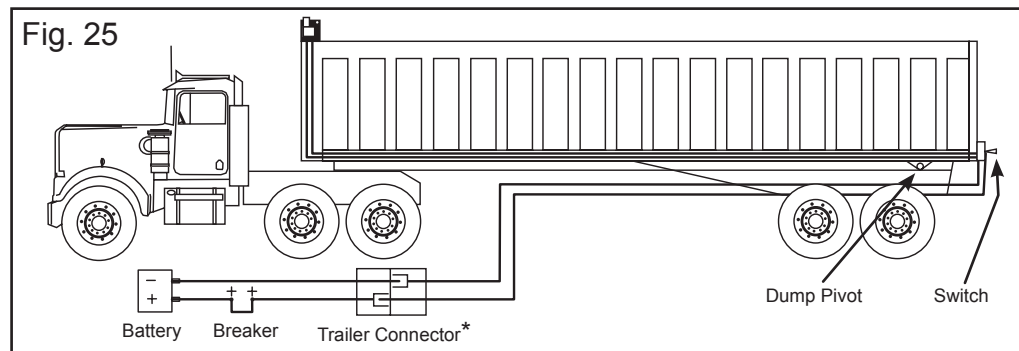


Step 22: Once the tarp is installed and square on the box, use the electric motor to retract tarp (Fig. 24).

Note: See electric motor wiring instructions on page 7 & 8.

Special note: If installing an Arm Kit, use Spring Kit instructions from here on.

Electric Motor Wiring & Plug Assembly

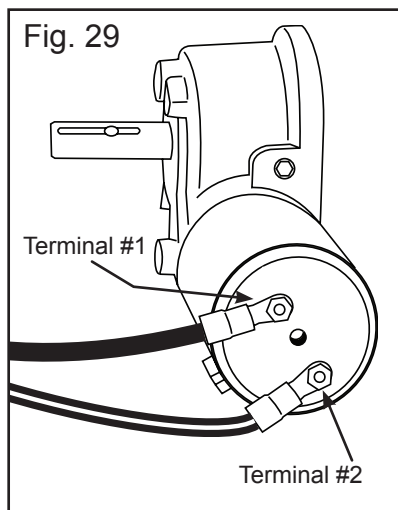
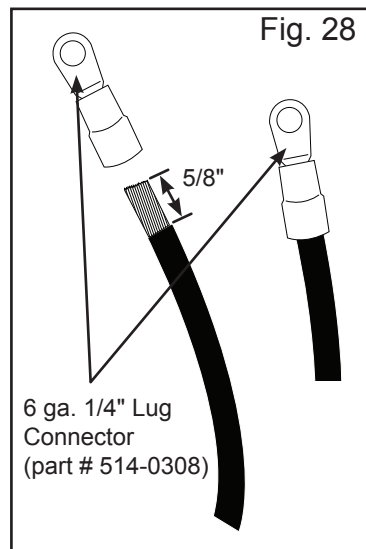


Step A - Wiring:

First, remove motor housing, then run the 6 ga. wire to both locations (motor & battery box) and attach to truck body (Fig. 25).

Note: The wire must go beyond the pivot point.

Caution: Make sure wire does not get pinched at the pivot.

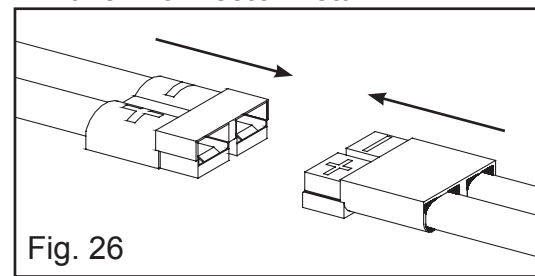


Step D - Attaching The Connectors (Motor):

1. Split the molded 6 ga. wire approximately 4" and strip the ends about 5/8" down.
2. Attach connectors (part # 514-0308) and crimp (Fig. 28).
3. Attach black wire to Terminal #1 on motor (Fig. 29).
4. Attach red striped wire to Terminal #2 on motor (Fig. 29).

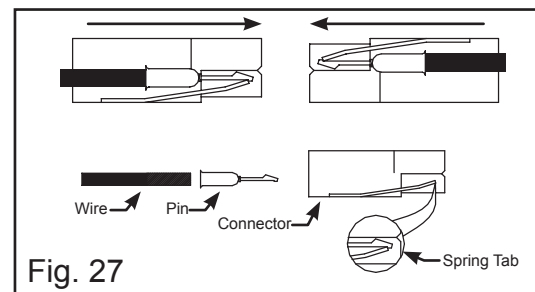
Note: Wire Cutters required.

* Trailer Connector Detail



Step B - Wiring:

Assemble the Quick Disconnect as shown (Fig. 26).

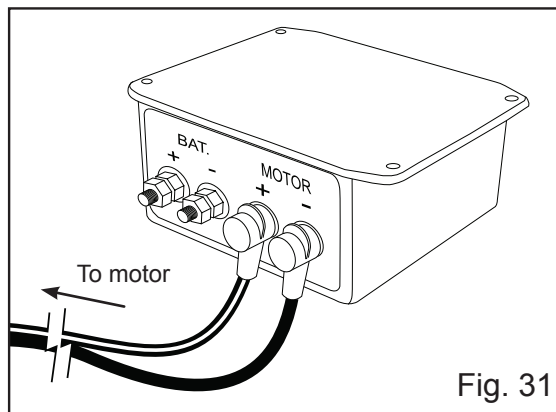
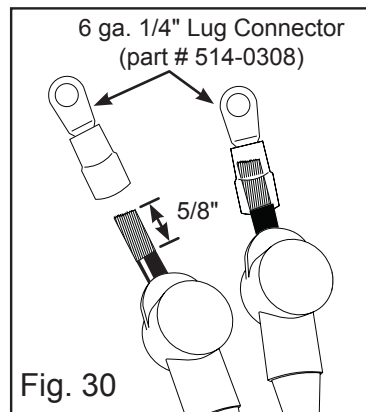


Step C:

Crimp or solder pin to wire (Fig. 27).

Note: Make sure the pin snaps over the end of the spring tab.

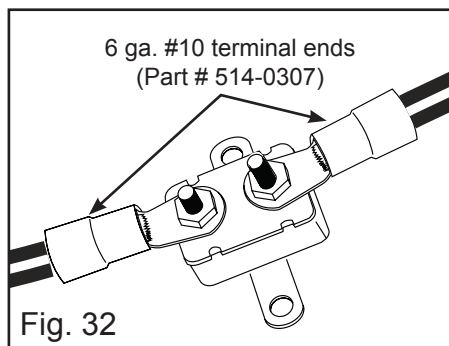
Electric Motor & Breaker Wiring



Step E:

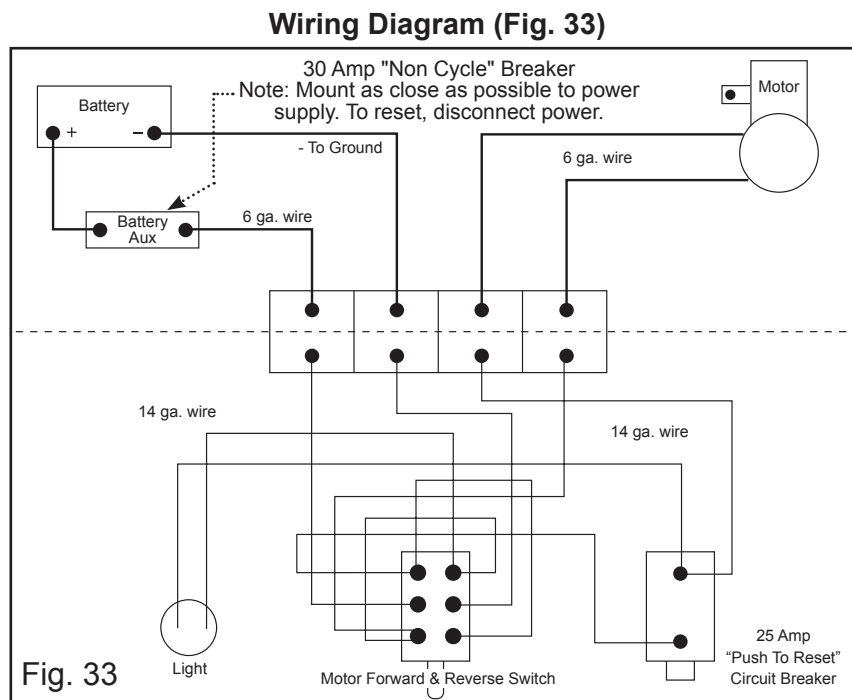
1. Mount the Control Box at tailgate.
2. Spilt the 6 ga. wire at the Control Box about 4" back and slip on rubber boots Red Boot (part # 514-0319) on red striped wire and Black Boot (part # 514-0317) on black wire (Fig. 30 & 31).
3. Strip wire about 5/8" and attach connectors (part # 514-0308) (Fig. 30).
4. Attach Red Striped wire to Motor (+) and Black wire to Motor (-) on Control Box (Fig. 31).

Note: Do not over tighten nuts on connections!



Step F:

1. Mount breaker in the battery box away from moisture.
2. Cut a section in the red 6 ga. wire that will run to the positive terminal on the battery.
3. Strip wire the ends about 5/8" and attach 6 ga. #10 terminal ends (part # 514-0307) (Fig. 32).
4. Attach to breaker.



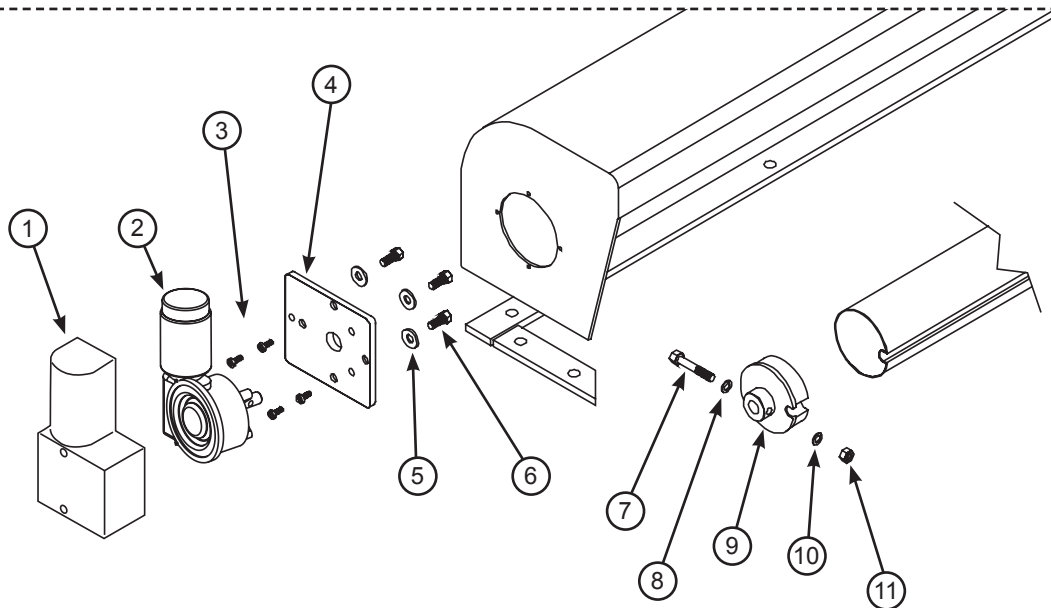
Motor check out procedure:

1. Remove leads from motor & attach volt meter to the leads.
2. With the switch in the on position, the volt meter should read 12 volts minimum. If voltage is low recheck with engine running. Recheck wiring and connections (minimum 6 gauge wire must be used).
3. Return switch to the neutral position & reattach leads to motor.
4. Attach volt meter to leads at the motor.
5. With the switch in the on position and the leads attached, the volt meter should read 8.5 volts minimum. If voltage is low recheck with engine running. Recheck wiring and connections (minimum 6 gauge wire must be used).
6. Return switch to the neutral position and attach amp meter to leads at the motor.
7. With the switch in the on position, amp meter should read approximately 20 – 30 amps. Constant amperage reading of over 40 amps indicated binding in the system and/or low voltage.

EDU Conversion Kit Components & Tools Required

EDU Conversion Kit Components

ITEM	PART #	DESCRIPTION	QTY
1	517-xxxx	Electric Motor Cover	1
2	517-xxxx	Electric Motor	1
3	P610-32	18-32 x 1/2" Philips	4
4	P4AD1	Aluminum Adaptor Plate	1
5	P65/16LW	5/16" Lock Washer	3
6	EHW35	5/16-18 x1 HHCS Bolt	3
7	EHW34	5/16-1 x 1 3/4" HHCS Bolt	1
8	P65/16LW	5/16" Lock Washer	1
9	P4RD1	Roller Drive Aluminum End	1
10	29	1/4" USS Washer	1
11	31	5/16-18 Nyloc Nut	1



Tools Required

ITEM	DESCRIPTION	QTY
1	Hack Saw	1
2	Adjustable Wrench	1
3	Rubber Mallet	1
4	Metal File	1
5	Flathead Screwdriver	1
6	Masking Tape	1
7	Wire Cutters	1
8	5/16" Wrench	1

