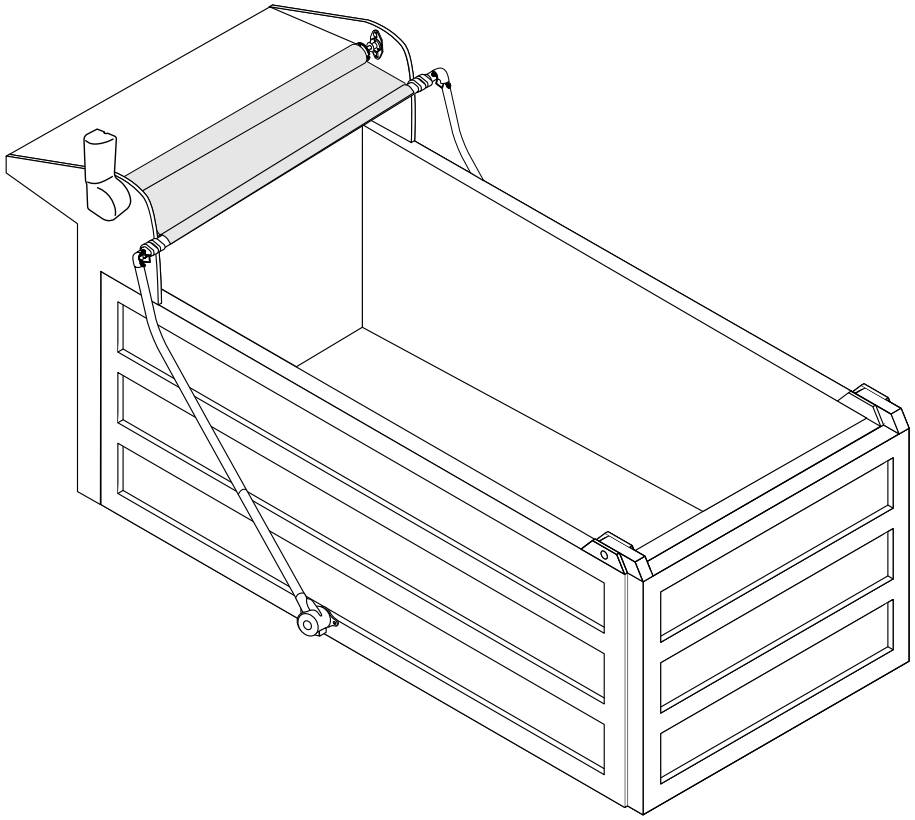
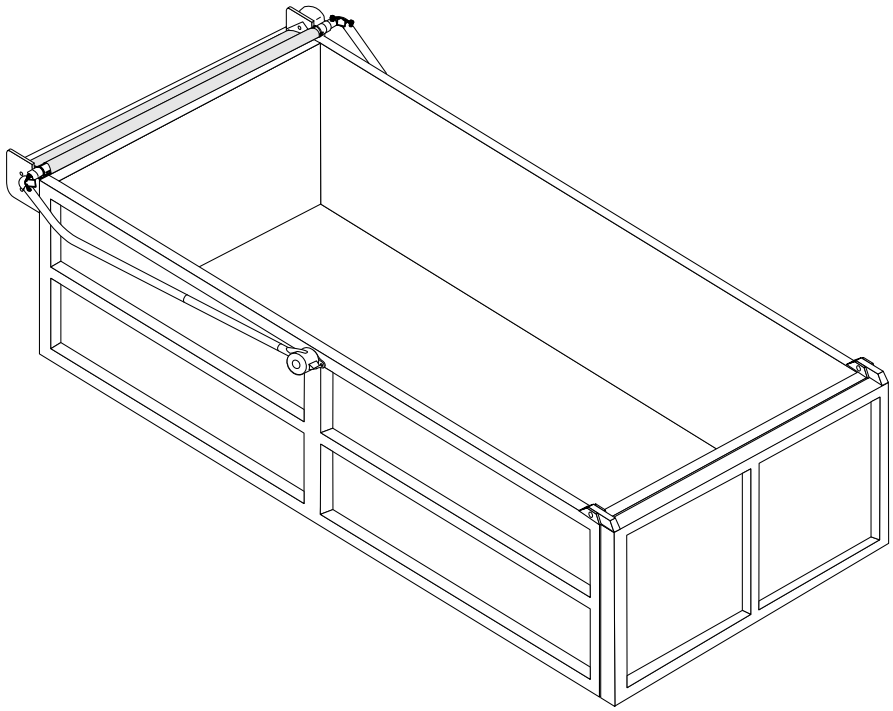
PULLTARPS®

INSTALLATION INSTRUCTIONS

Electric Core™ Systems

285-3017 & 531-2850





ATTENTION **DURING INSTALLATION, SOME FABRICATION MAY BE REQUIRED.**

Document #: 607-0152
Revised: 11/10/26 WLH

Table of Contents

Tools, Diagrams & Parts

Recommended Tools 2

Wiring Diagram #514-0139 3

Deluxe High Amp Switch Kit - 12 Volt #514-0139 4

Core (Automatic) #285-3017 & 531-2850 (EZ-Fit) 5

EZ-Mount 4 Spring Arm System #501-1768 (With Wire) #501-1769 (No Wire) 6

4 Spring Enclosed Housing Assembly Right #501-2204 (not shown) & Left #501-2203 (shown) 7

Roller Tube Assembly

Roller Tube EZ-Measure & Plastic End Cap Assembly 9

Roller Drive End Cap Assembly 10

Electric Arms & Pivot Assembly

Pivot Points and Mounting Locations (Low Mount) 12

Pivot Points and Mounting Locations (High Mount) 13

Arm Alignment, Tarp and Pullbar Installation 14

Standard Application

Attaching Tarp to Roller Tube 16

Installing Roller Tube & Electric Motor 17-19

Over The Top Application

Attaching Tarp to Roller Tube 21

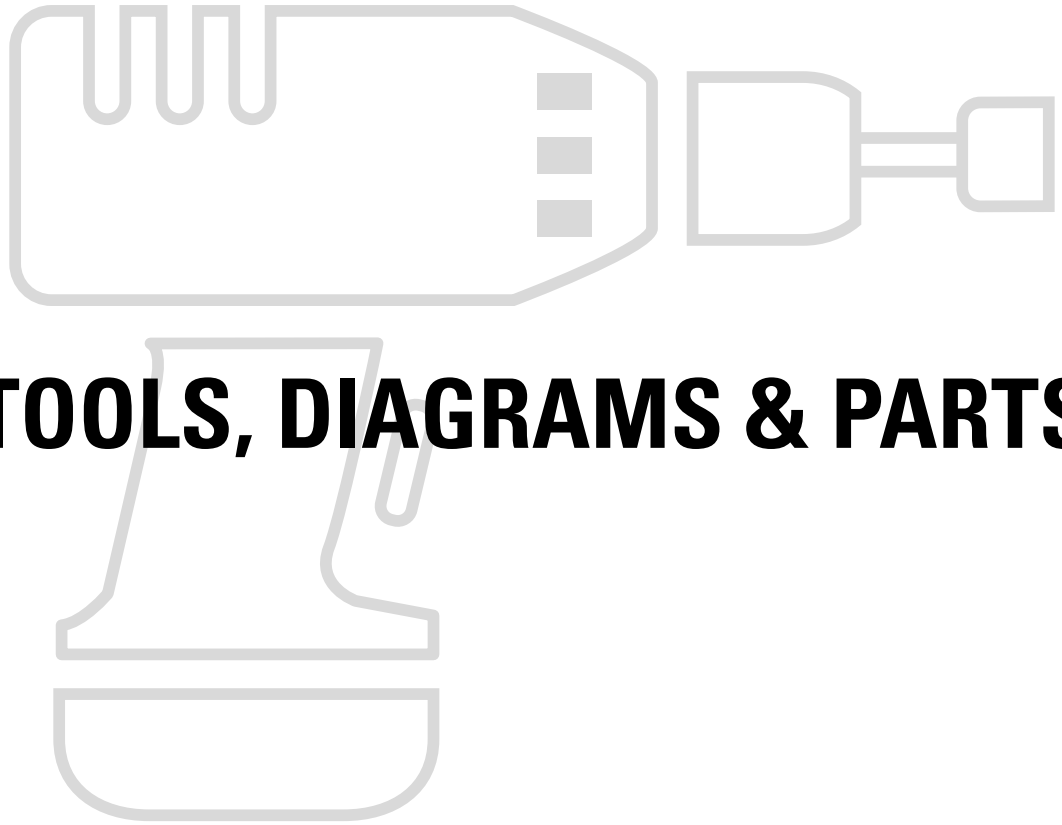
Installing Roller Tube & Electric Motor 22-24

Flat Tarp, Rope & Hook Installation

Optional Flap Tarp, Rope and Hook Installation 26

Bungee Cord Installation 27

Flap, Rope and Rope Hook Placement 28

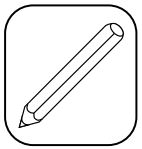


TOOLS, DIAGRAMS & PARTS

Recommended Tools

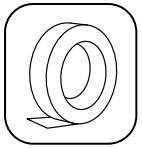

Safety Glasses and Gloves


Tape Measure


Pencil or Marker


Metal File

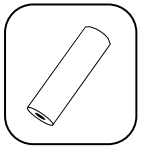

Hacksaw


Masking Tape

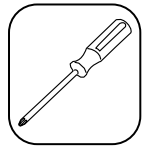

Mallet or Deadblow Hammer


Adjustable Wrench


Socket Wrench


1/2" Socket


Impact Drill


Philips Screwdriver

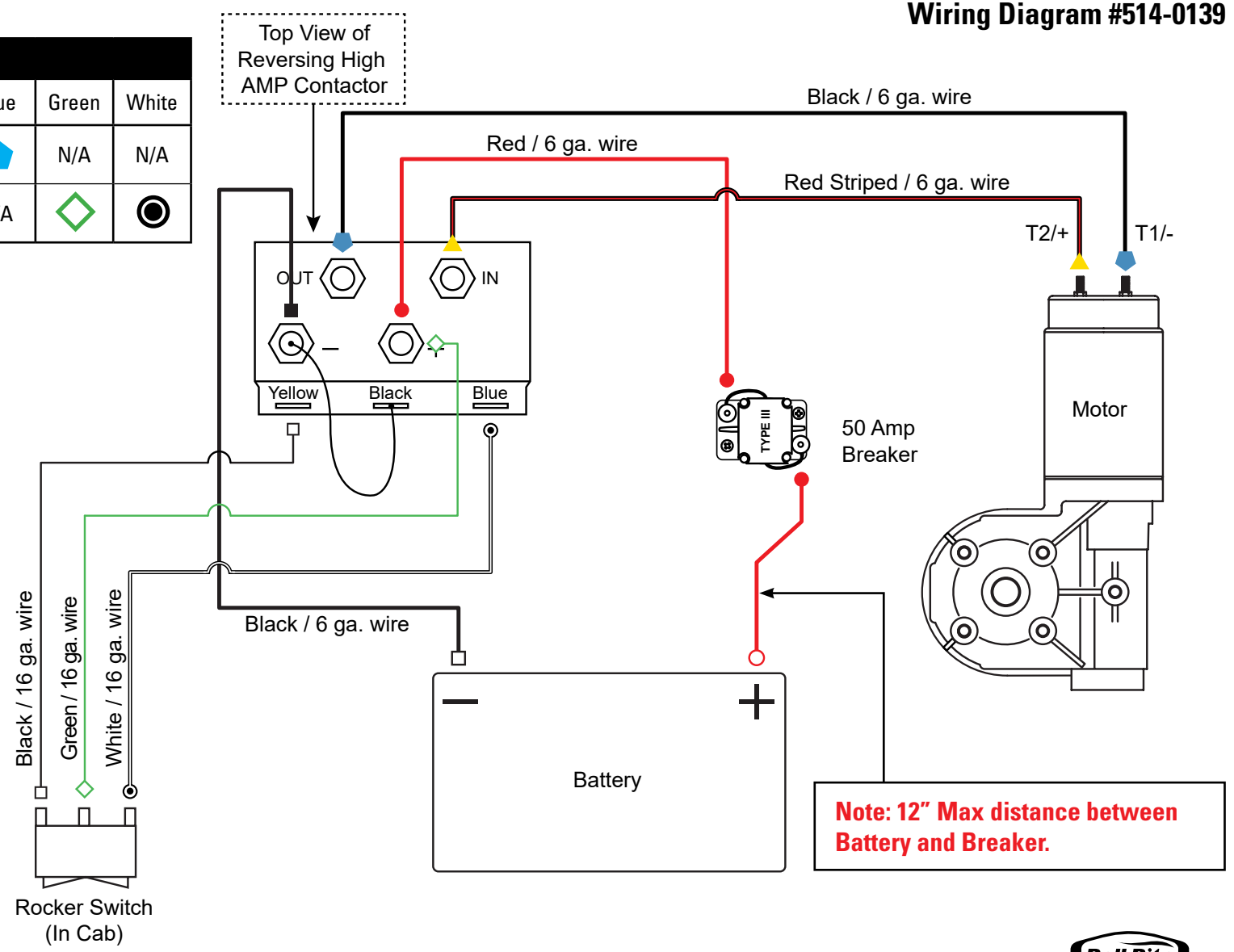

1/2" Open/Close Wrench


Hammer


Flathead Screwdriver

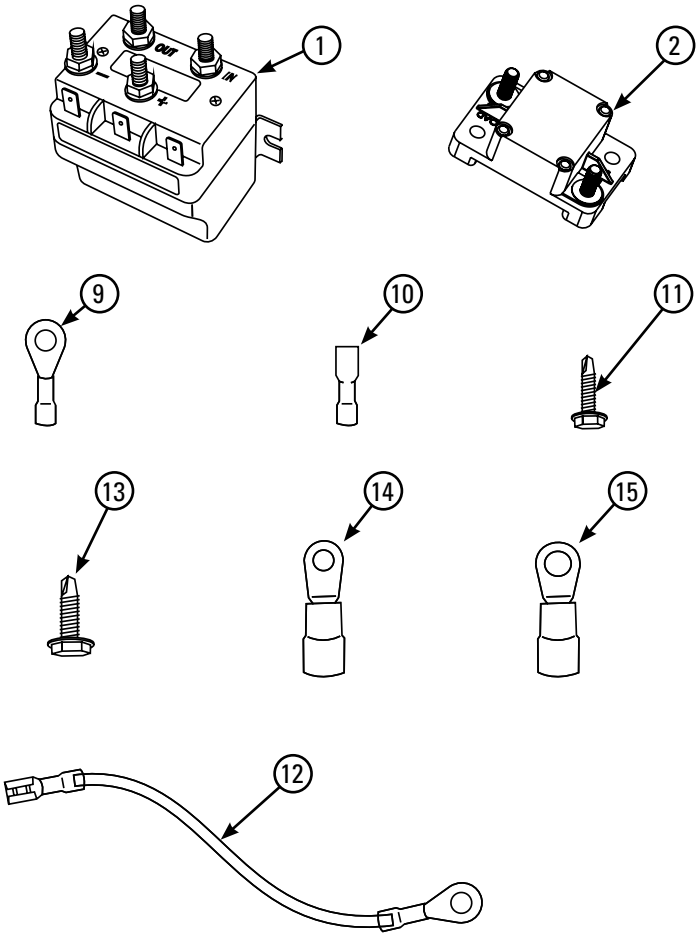
Wiring Diagram #514-0139

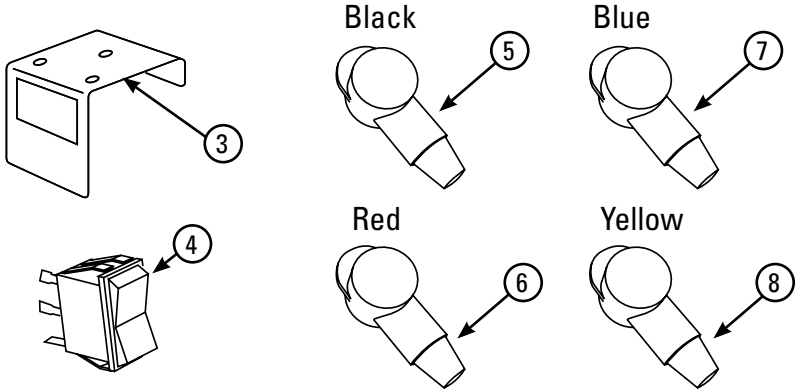
BOOT COLORS	Red	Black	Yellow	Blue	Green	White
With Boot	●	■	▲	⬟	N/A	N/A
No Boot	○	□	N/A	N/A	◇	◉



WIRING INSTRUCTIONS
See document 607-0139/Deluxe High Amp Switch Kit - 12 Volt in Technical Documents at Pulltarps.com

Deluxe High Amp Switch Kit - 12 Volt #514-0139





ITEM #	PART #	DESCRIPTION	QTY
1	514-9996	Reversing Polarity 12v Solenoid	1
2	514-0434	50 AMP Type III Breaker HIGH-AMP	1
3	514-9954	Rocker Switch Bracket	1
4	514-0117	Rocker Switch 3 Position Momentary	1
5	514-0337	Black Terminal Boot	1
6	514-0336	Red Terminal Boot	3
7	514-0342	Blue Terminal Boot	2
8	514-0343	Yellow Terminal Boot	2
9	514-0304	Connector 14 ga. Lug with 1/4" Eyelet	1
10	514-0321	Push On Female Terminal 16 ga.	5
11	506-9904	#10 x 3/4" Self Drilling Screw	4
12	514-9921	4" Black 10ga. Jumper Wire	1
13	506-9929	#12-14 Self Drilling TEK Screw	2
14	514-0308	Connector 6 ga. Lug with 1/4" Eyelet	8
15	514-0309	Connector 6 ga. Lug with 3/8" Eyelet	2
--	514-0211	#16-3 Wire PVC 27# Copper	25Ft.

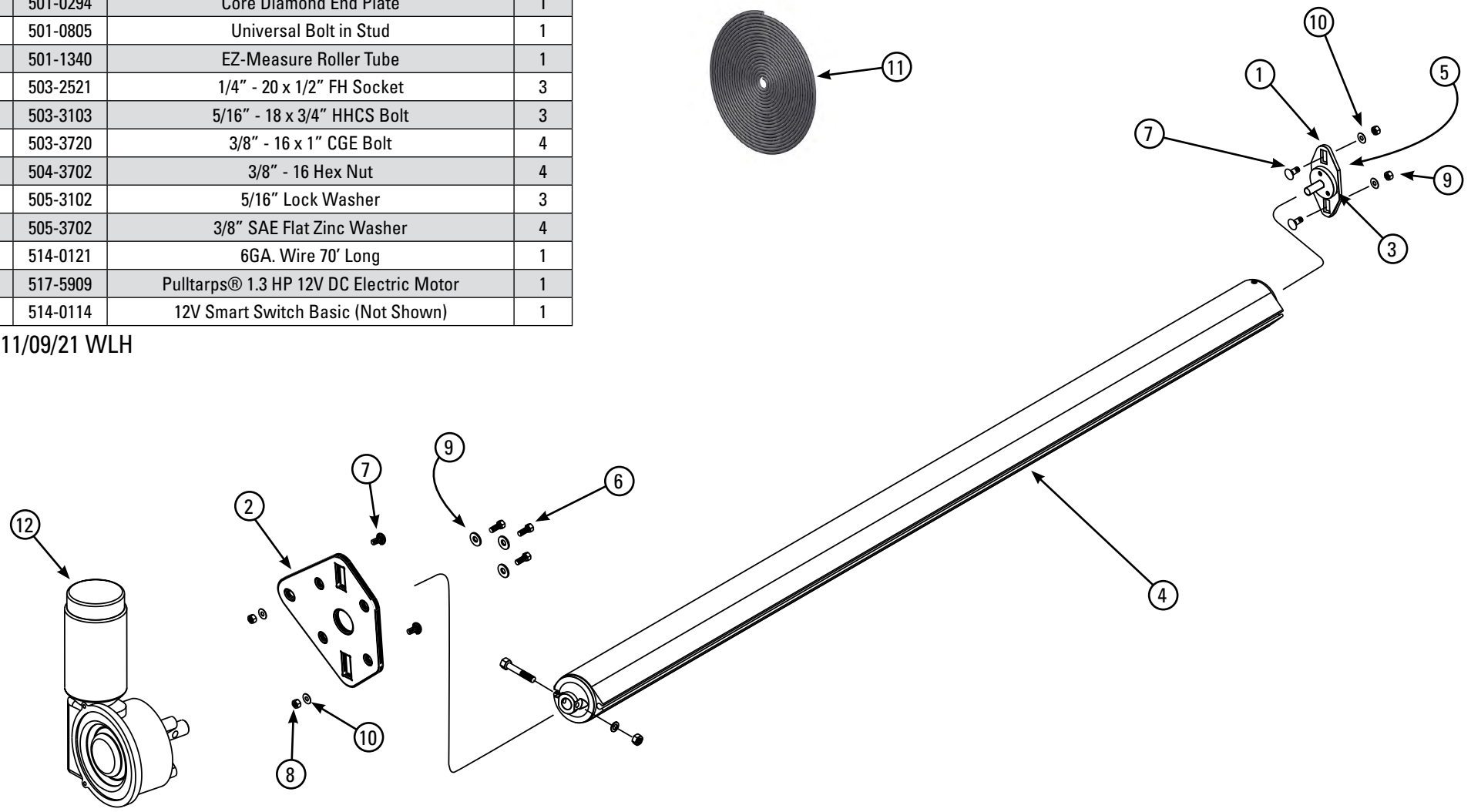
REV. 10/01/20 WLH

Core (Automatic) #285-3017 & 531-2850 (EZ-Fit)

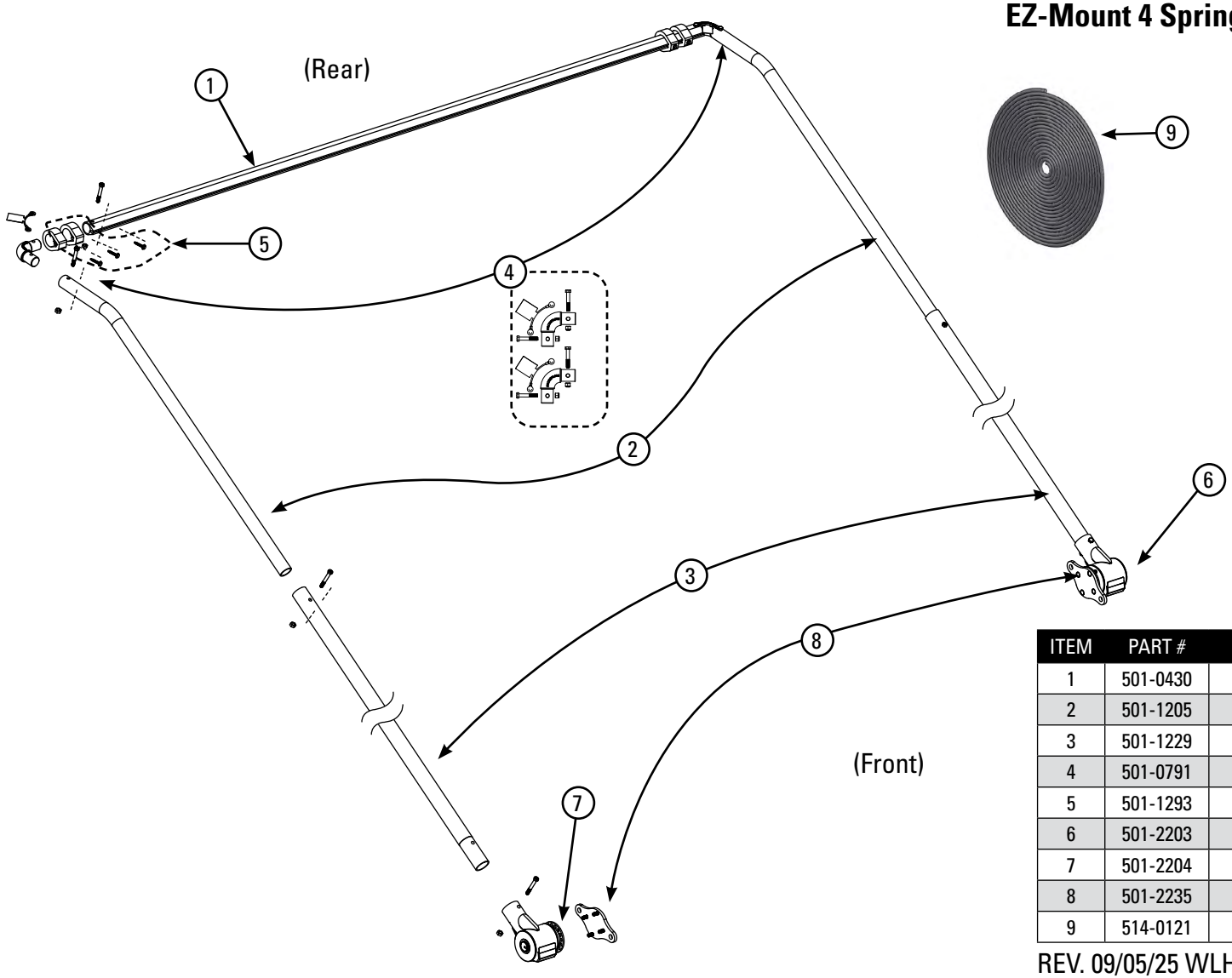
(Cut-to-Fit)

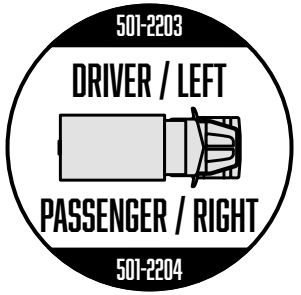
ITEM	PART #	DESCRIPTION	QTY
1	501-0293	Core End Plate	1
2	501-0294	Core Diamond End Plate	1
3	501-0805	Universal Bolt in Stud	1
4	501-1340	EZ-Measure Roller Tube	1
5	503-2521	1/4" - 20 x 1/2" FH Socket	3
6	503-3103	5/16" - 18 x 3/4" HHCS Bolt	3
7	503-3720	3/8" - 16 x 1" CGE Bolt	4
8	504-3702	3/8" - 16 Hex Nut	4
9	505-3102	5/16" Lock Washer	3
10	505-3702	3/8" SAE Flat Zinc Washer	4
11	514-0121	6GA. Wire 70' Long	1
12	517-5909	Pulltarps® 1.3 HP 12V DC Electric Motor	1
--	514-0114	12V Smart Switch Basic (Not Shown)	1

REV. 11/09/21 WLH



EZ-Mount 4 Spring Arm System #501-1768 (With Wire)
#501-1769 (No Wire)

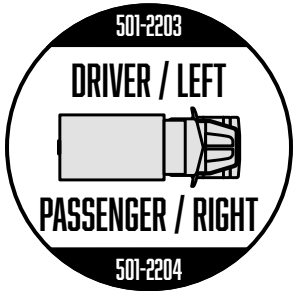




ITEM	PART #	DESCRIPTION	QTY
1	501-0430	103" Teardrop Pull Bar	1
2	501-1205	103" Steel Upper Arm Bent	2
3	501-1229	Lower Connection Arm Tube	2
4	501-0791	Steel/Aluminum Elbow & Upper Connection	2
5	501-1293	Teardrop Bumper Kit	1
6	501-2203	4 Spring Enclosed Housing Assembly (Left)	1
7	501-2204	4 Spring Enclosed Housing Assembly (Right)	1
8	501-2235	EZ-Mount Assembly	2
9	514-0121	6GA. Wire 70' Long (For 501-1768)	1

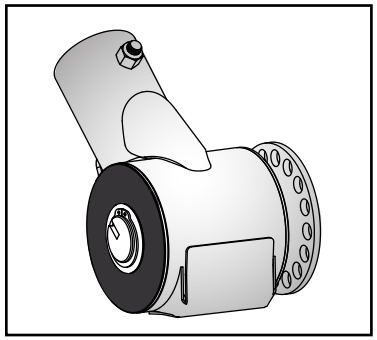
REV. 09/05/25 WLH

4 Spring Enclosed Housing Assembly Right #501-2204 (not shown) & Left #501-2203 (shown)

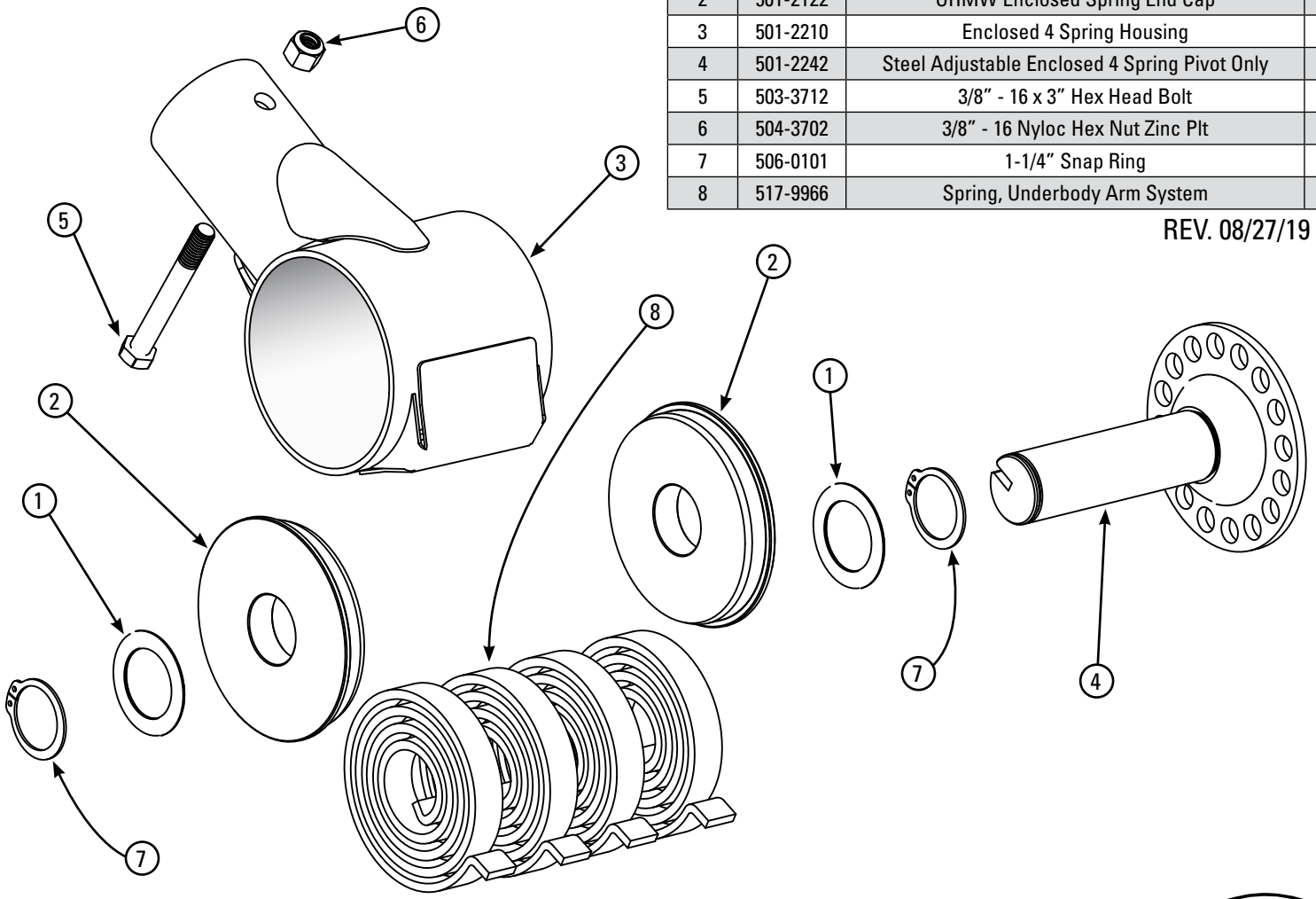


ITEM	PART #	DESCRIPTION	QTY
1	501-1162	Washer 1-7/8" x 1-1/4" Narrow Rim Bushing	2
2	501-2122	UHMW Enclosed Spring End Cap	2
3	501-2210	Enclosed 4 Spring Housing	1
4	501-2242	Steel Adjustable Enclosed 4 Spring Pivot Only	1
5	503-3712	3/8" - 16 x 3" Hex Head Bolt	1
6	504-3702	3/8" - 16 Nyloc Hex Nut Zinc Plt	1
7	506-0101	1-1/4" Snap Ring	2
8	517-9966	Spring, Underbody Arm System	4

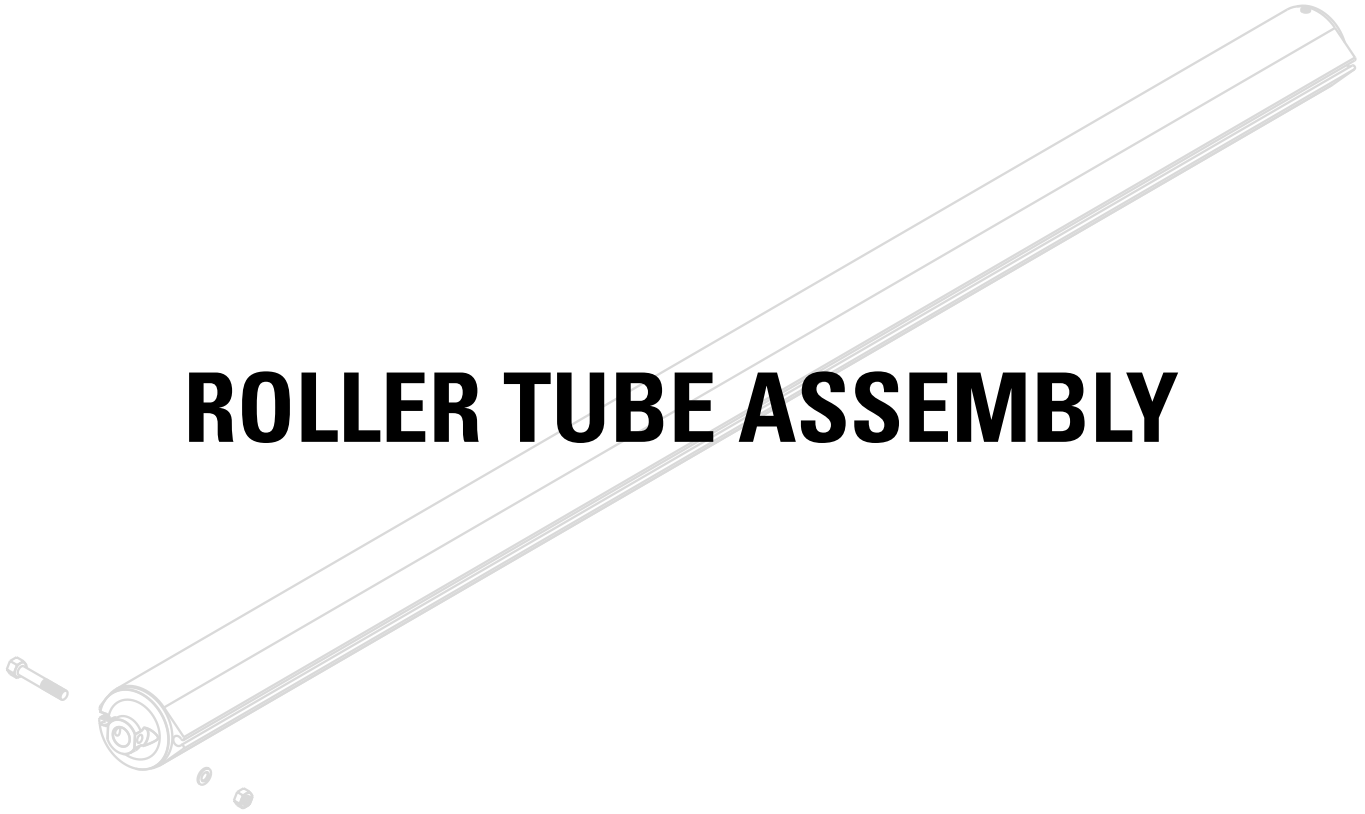
REV. 08/27/19 WLH



Assembled View of 501-2203



ROLLER TUBE ASSEMBLY



Roller Tube EZ-Measure & Plastic End Cap Assembly

Step 1: Measure the inside of your cab shield frame to get the width. This will give you the correct length to cut the roller tube (Fig. 1).

Fig. 1

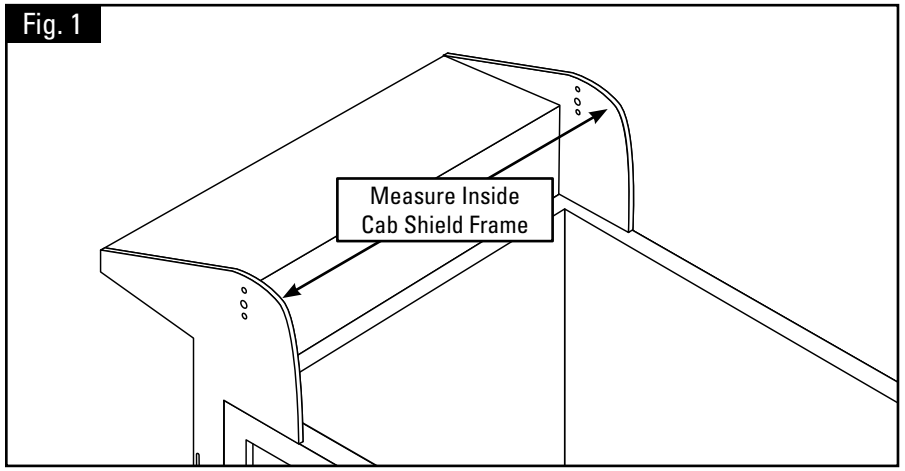


Fig. 2

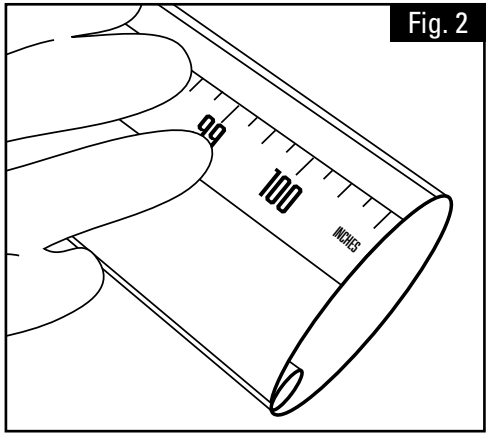
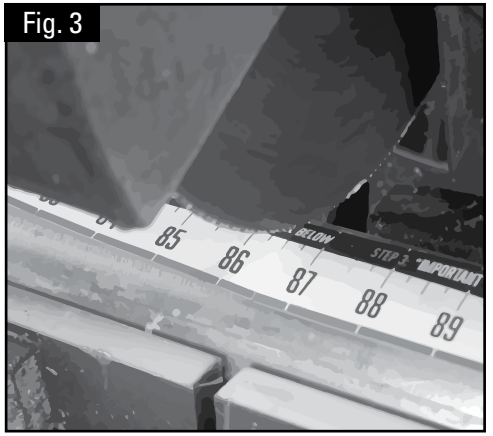


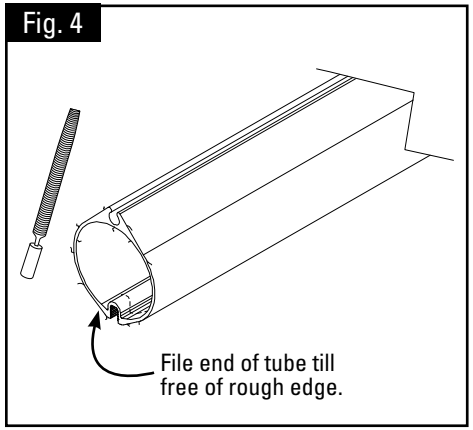
Fig. 3



Step 2: Locate the cab shield measurement tape on the Roller Tube (Fig. 2) and cut to the desired length (Fig. 3). **NOTE:** Please cut the end as straight as possible.

Step 3: After you've cut the Roller Tube, use a metal file to remove metal fragments (Fig. 4).

Fig. 4



Step 4: Insert the end cap into the Roller Tube. Use a rubber mallet to tap the edges of the end cap lightly to ensure that it has been seated properly (Fig 5A & B).

Fig. 5A

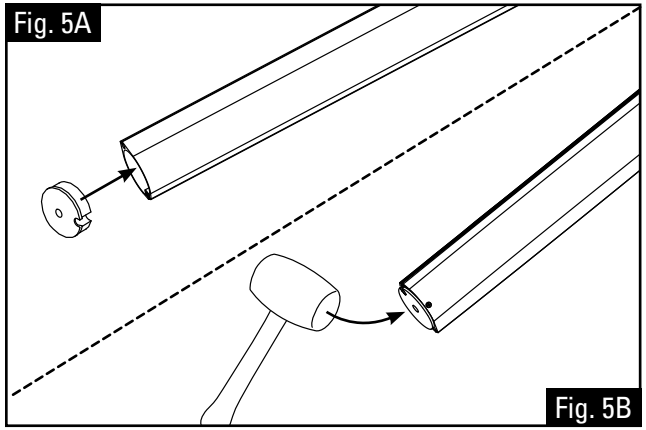


Fig. 5B

Step 5: Use a 3/4" Self-Drilling Screw and secure the Flanged End Cap in the Roller Tube. Insert the screw approximately 1/2" from the end of the End Cap and approximately 1" up from the Hemtube Groove on the Roller Tube (Fig. 6).

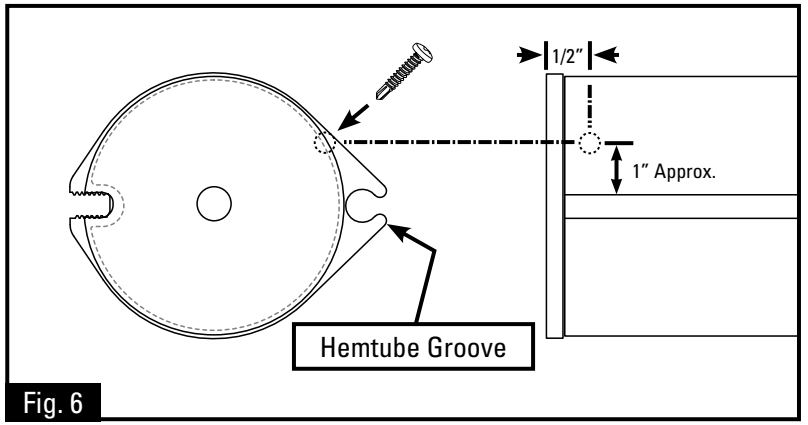
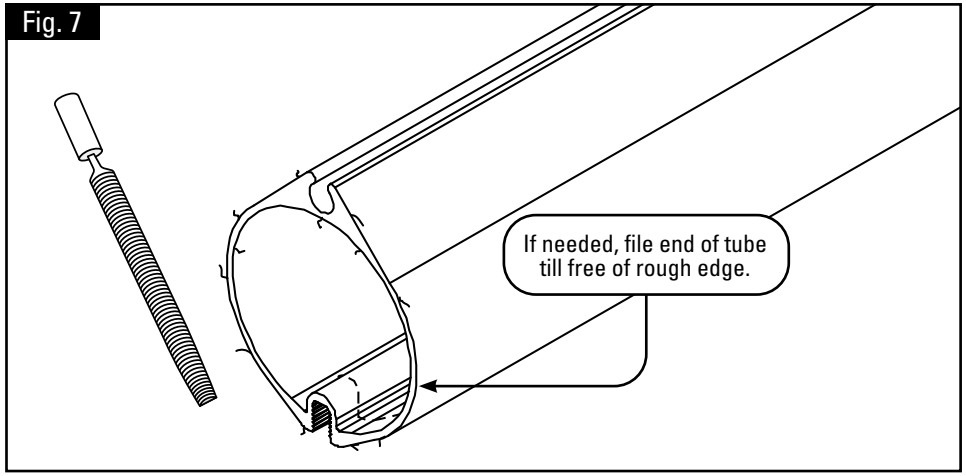


Fig. 6

Roller Drive End Cap Assembly

Fig. 7



Step 6: On the other side of the roller tube, if needed, file the edges to smooth out end of tube and provide a better fit for the end cap (Fig. 7).

Fig. 8A

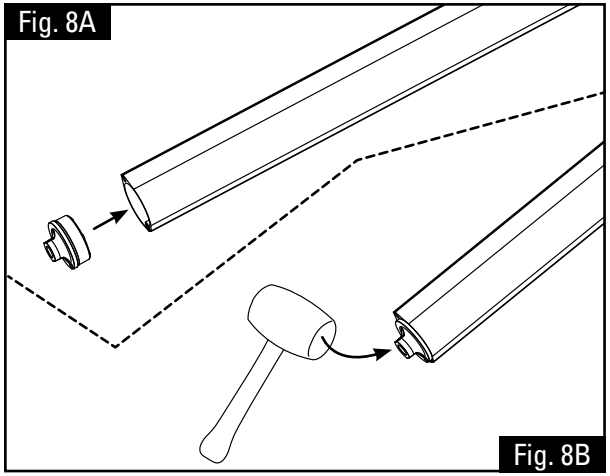
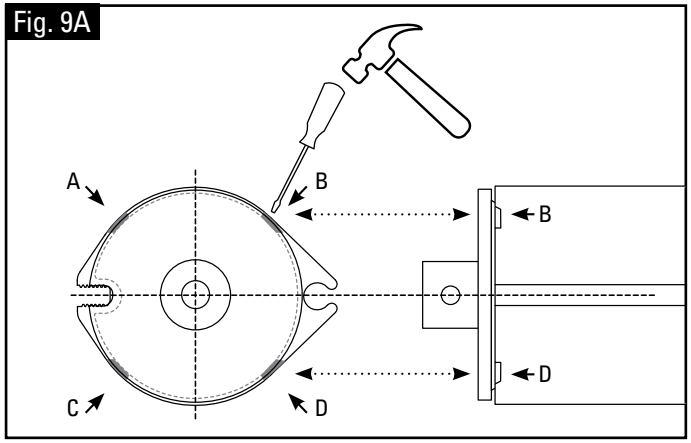


Fig. 8B

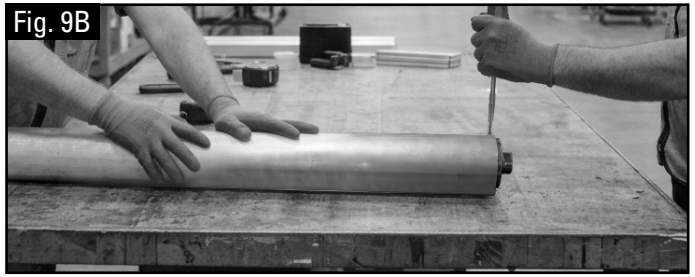
Step 7:
Insert end cap into roller tube. Use a rubber mallet to tap the edges of the end cap lightly to ensure that it has been seated properly (Fig. 8A & B).

Fig. 9A



Step 8: To secure the end cap in the roller tube, make four (4 - A, B, C & D) indentations or dimples to hold the end cap in place. Use a heavy metal hammer and screwdriver to make the dimples (Fig.9A).

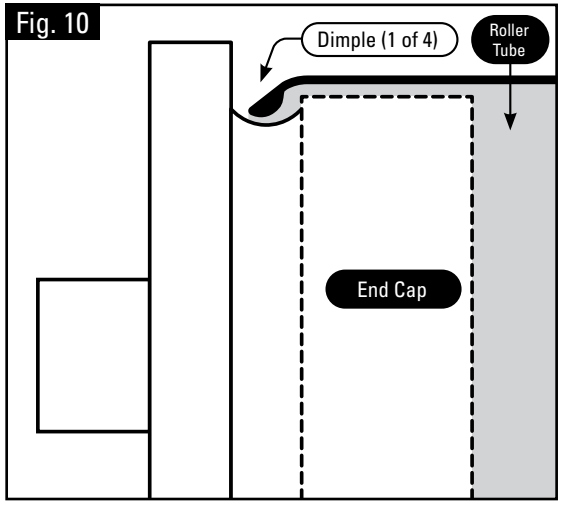
Fig. 9B

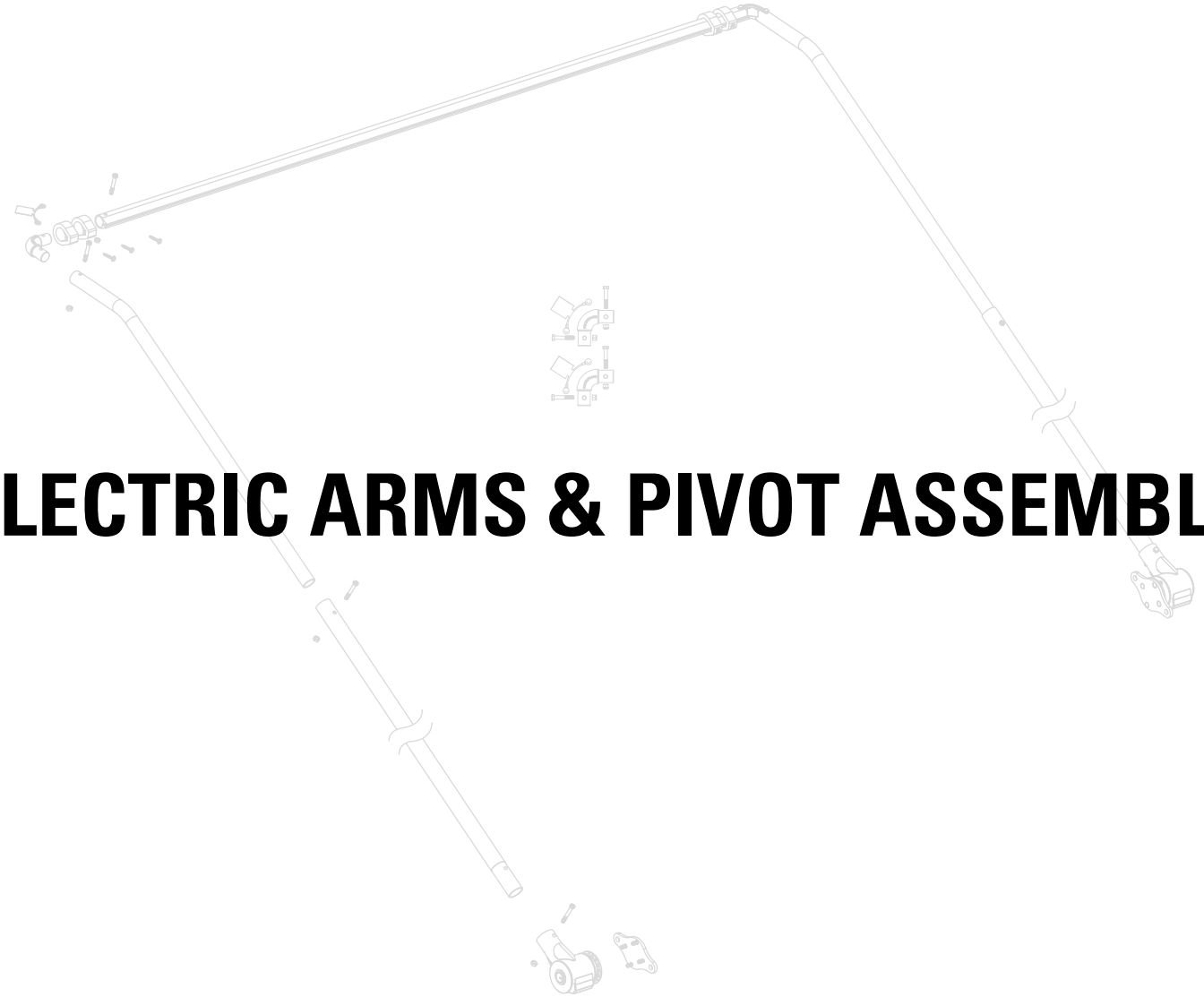


Note: Secure the roller tube before dimpling the end of the tube. Have someone hold the roller tube still on a flat surface during the procedure (Fig. 9B).

Dimple detail (Fig. 10).

Fig. 10



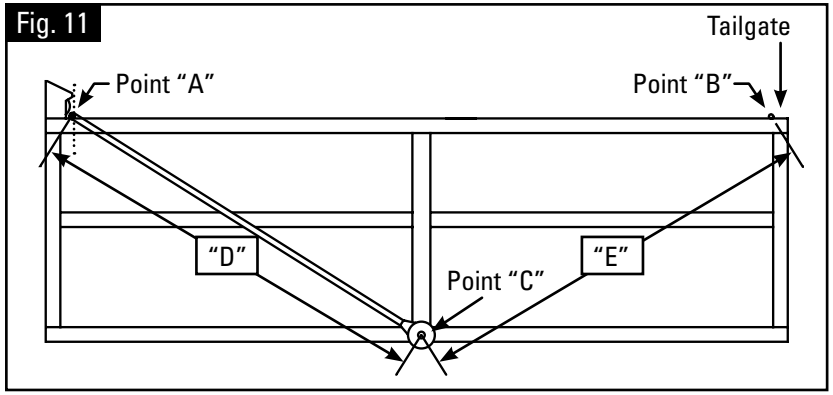


ELECTRIC ARMS & PIVOT ASSEMBLY

Pivot Points and Mounting Locations (Low Mount)

Step 1: Determining the Pivot Points and Mounting Locations on each side, careful measurement must be taken to insure that the arm and pivot assemblies are mounted square and parallel to the truck or trailer body. Locate the proper mounting positions by determining Point "A" and Point "B" and insuring measurement "D" and "E" are equal (Fig. 11). Point "C" must be located as low as possible and be the same on both sides.

Fig. 11



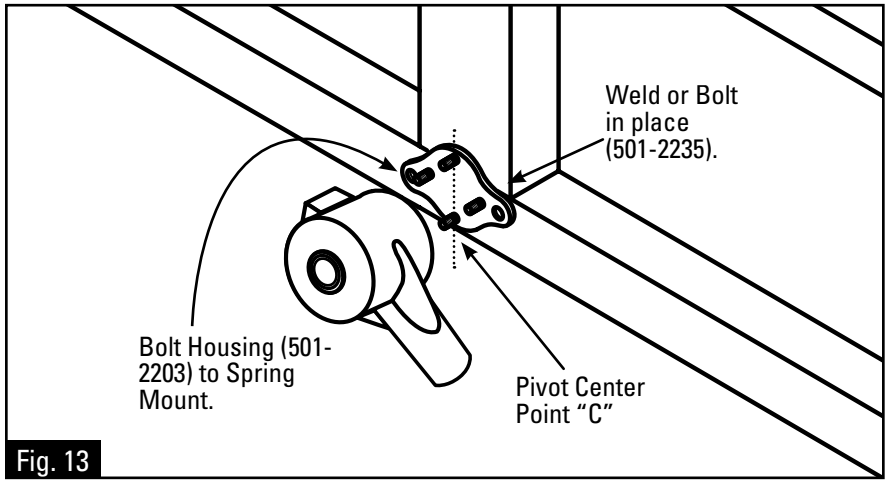


Fig. 13

Step 2 - Arm Preload: Install Arm and Pivot assemblies with Arm indexed (Fig. 12). Arms must be indexed with no spring load on pivots. Index Arm at 180 degrees of travel from the Roller Mechanism for proper preload of the spring. The dotted lines represent proper 180 degree preload position for applications with Bent Arms. Mark pivot pin location on box.

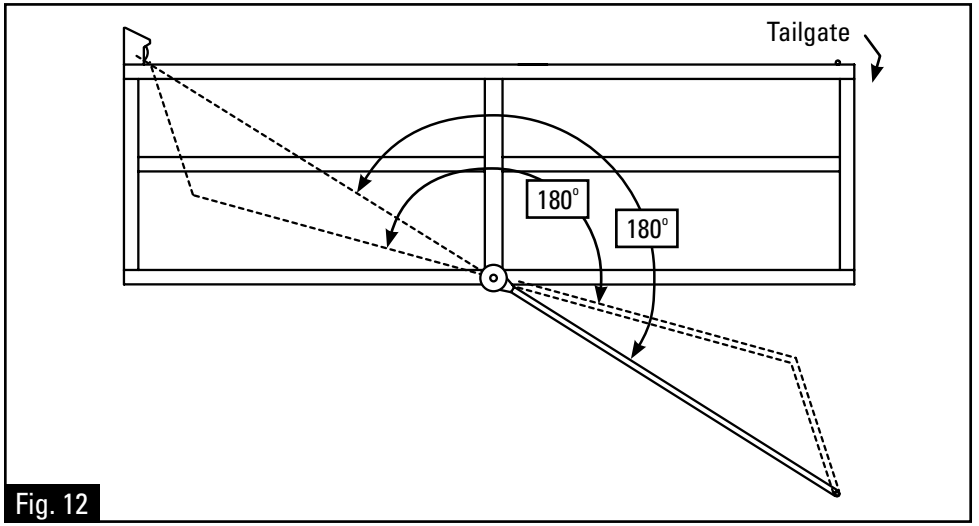


Fig. 12

Step 3 - Mounting the Pivot Mount:
Locate the 4 Spring Housing with marks made in Step 5. Weld the Spring Mounting in place and then bolt on the Spring Housing 180° from Housing Location (Fig. 13).
Note: Applies to Lower Mounting.

Pivot Points and Mounting Locations (High Mount)

Step 4: Careful measurements must be taken to insure that the arm and pivot assemblies are mounted square and parallel to the truck or trailer body. Locate the proper mounting positions by determining Point "A" and Point "B" and insuring measurement "D" and "E" are equal (Fig. 14). The pivot "C" should be 1/2 way between Point "A" and Point "B" and 7" below the top rail on both sides (Fig. 15).

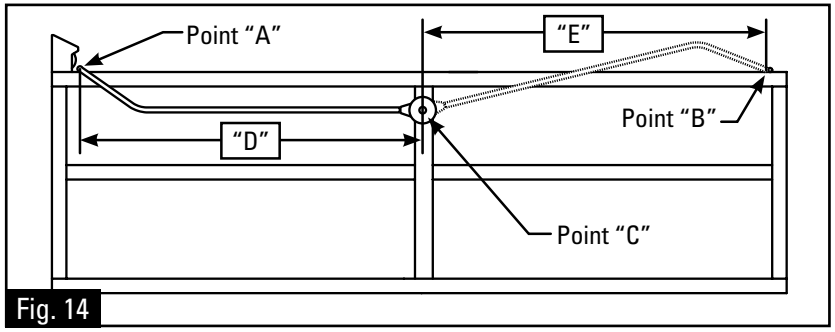


Fig. 14

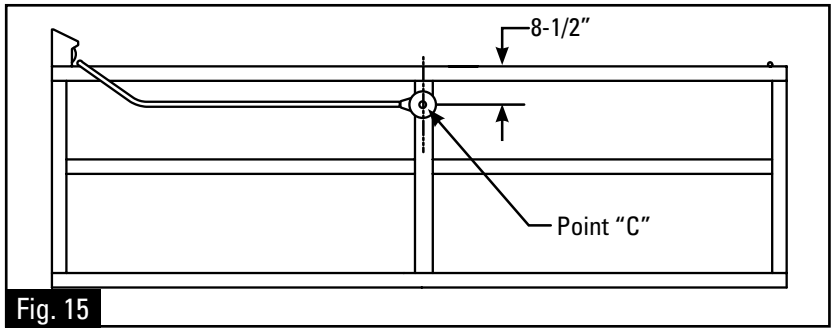


Fig. 15

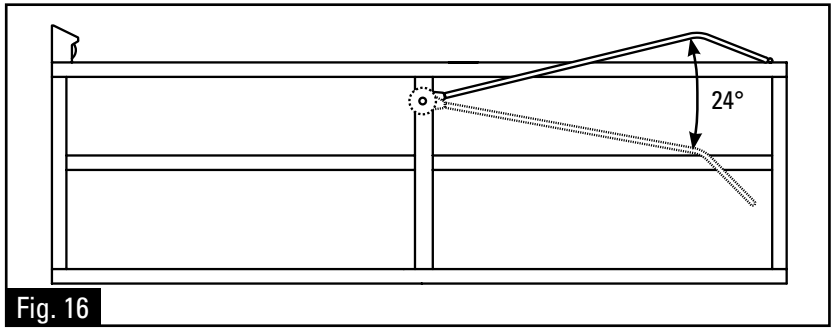
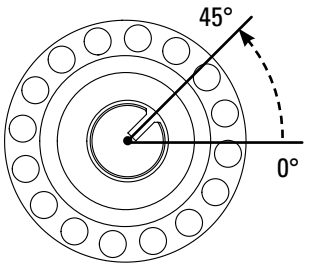


Fig. 16

Step 5 - Arm Preload:
Arm must be indexed with no load at 24 degrees to top rail for proper preload of springs (Fig. 16).

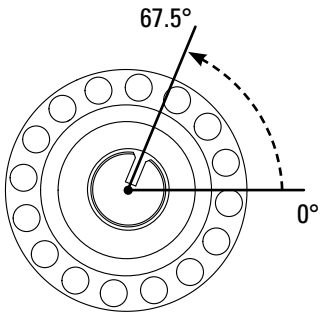
Step 6 - Setting the Index for EZ-Mount System (High Mount Only):
Indexing Illustrations are for DRIVER SIDE index (Fig. 17A, B, & C).

Fig. 17A



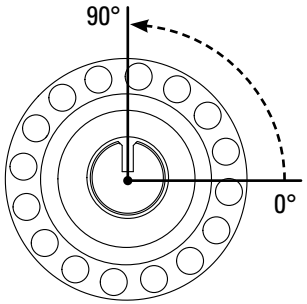
45° Rotation
(Highmount starting rotation to front of cab body)

Fig. 17B

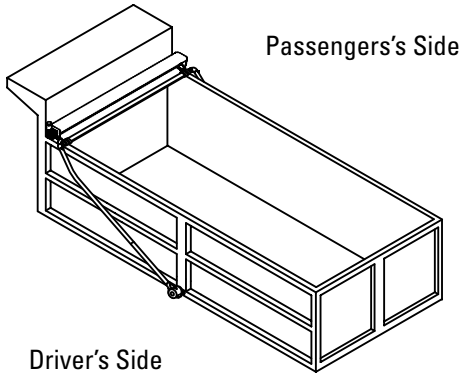


67.5° Rotation

Fig. 17C

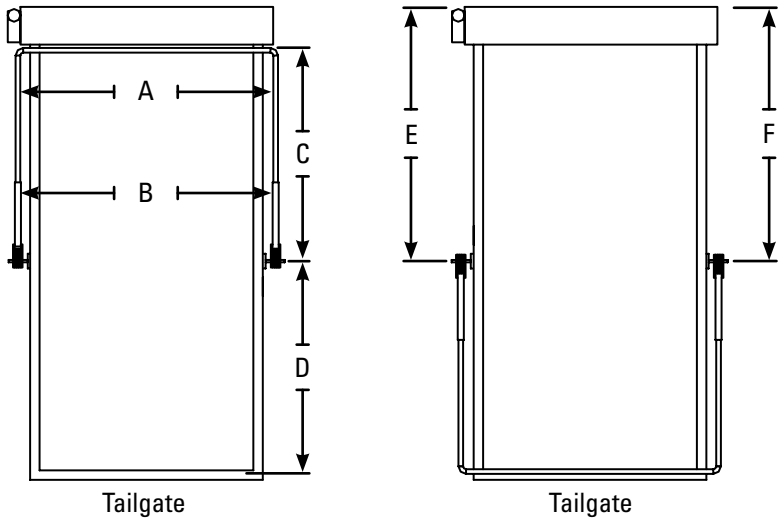


90° Rotation
(Maximum rotation point to front of cab body)



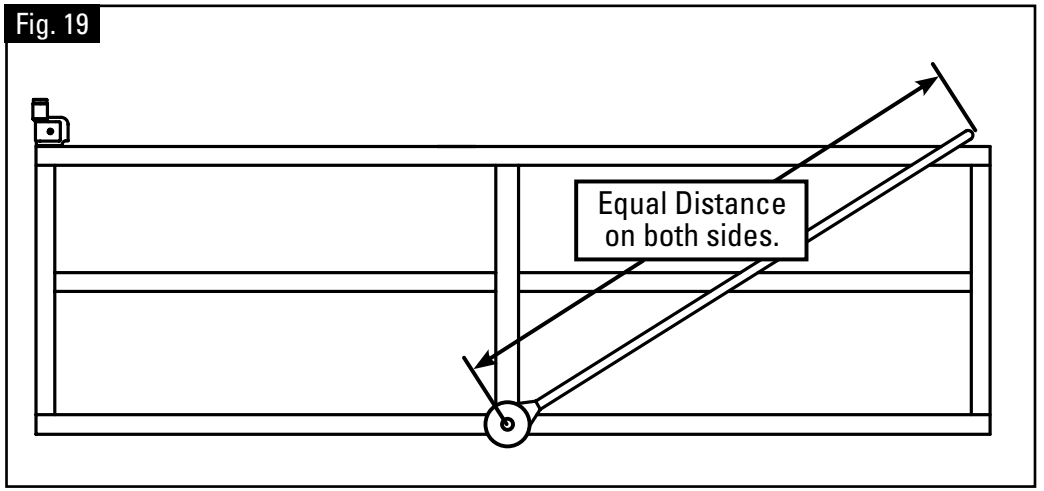
Arm Alignment, Tarp and Pullbar Installation

Fig. 18



Step 7 - Correct Alignment of arm to truck:
Arms and pivots must be square and parrallel to truck (Fig. 18).
(Dimension "A" must equal "B" - Dimension "C" must equal "D" - Dimension "E" must equal "F")

Fig. 19



Step 8: Adjust the Arms on both sides to be the same length (Fig. 19).

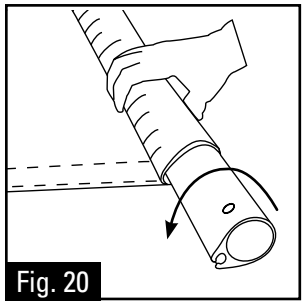


Fig. 20

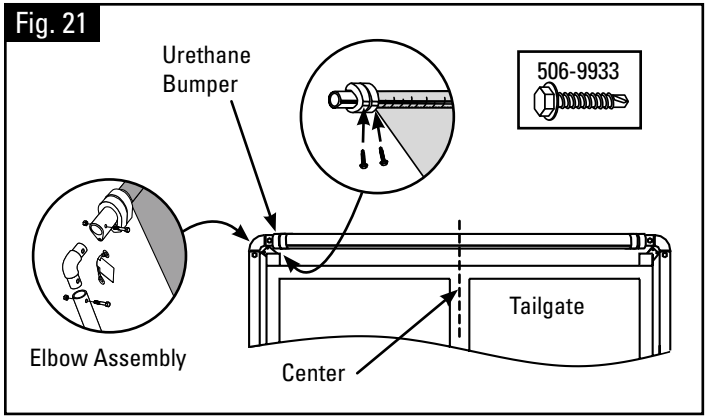
Step 9 - Installing The Pullbar:
Cut the pullbar to length making sure the arms remain parallel and square to the body.

Slide the tarp into groove in the pullbar and center the tarp.

Roll the tarp up on the pullbar two revolutions (Fig. 20).

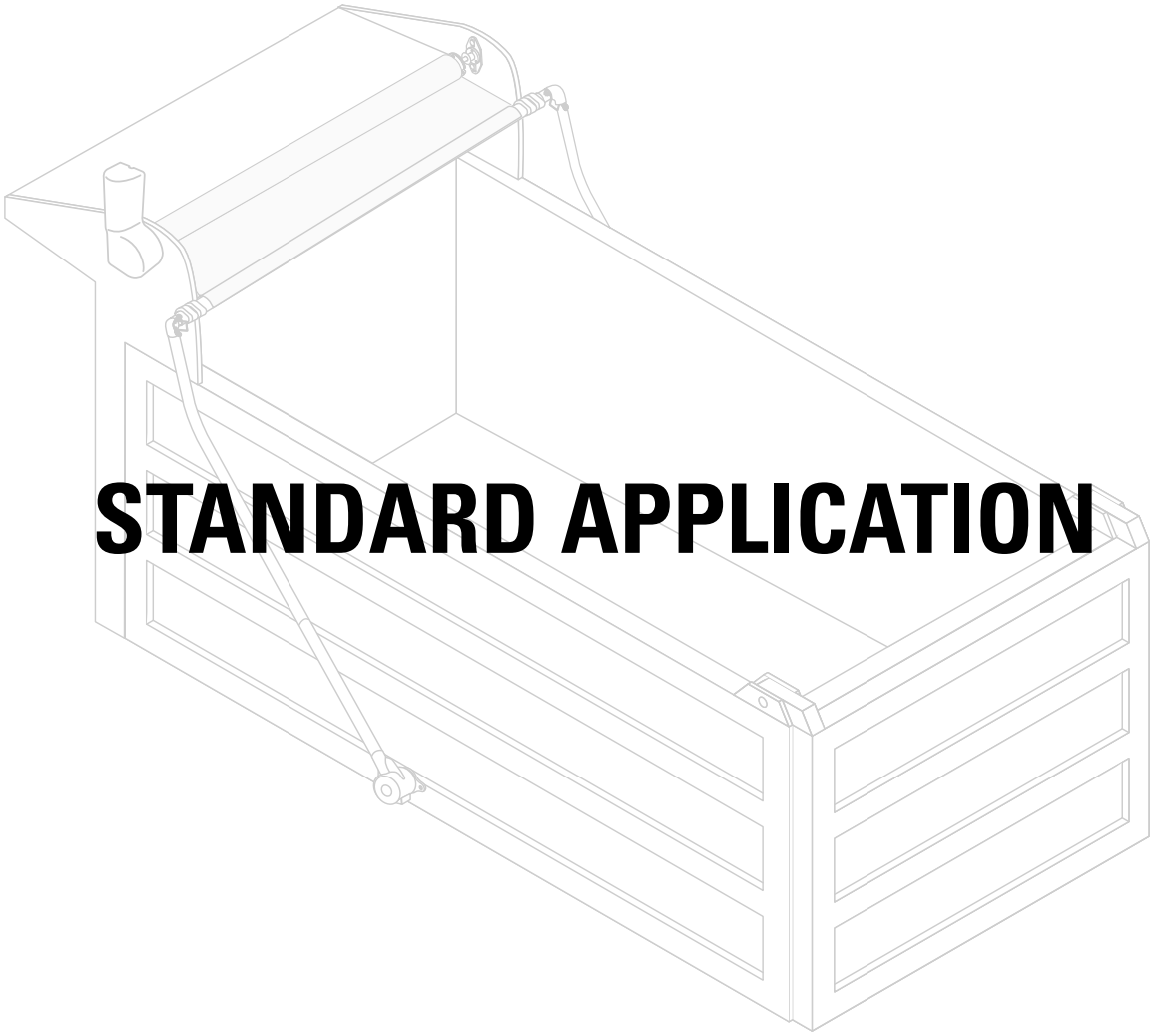
Note: Tarp must be retracted when dumping.

Fig. 21



Step 10: Fasten the tarp in place by sliding the two urethane bumpers on to the pullbar far enough to touch the edges of the tarp. Lock in place by installing a 1-1/2" long (506-9933) self drilling screw through the bumper and into the hem tube groove of the pullbar (Fig. 21).

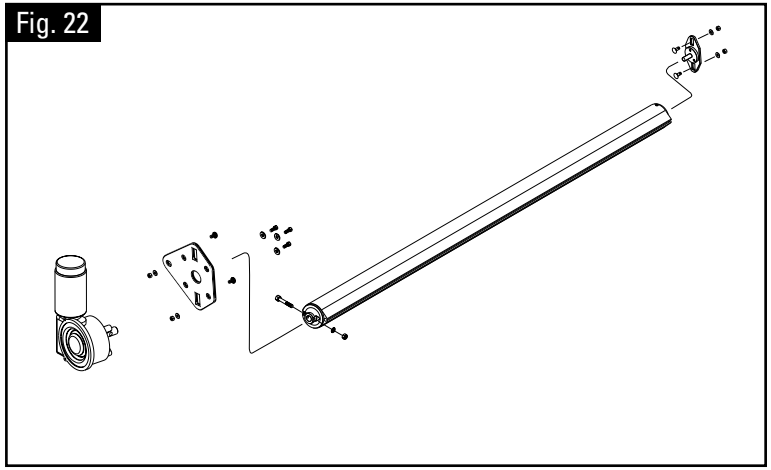
For elbows, use the long bolts provided in the kit, when deployed to catch the rope on flap tarps. Install tether onto elbows as shown.



STANDARD APPLICATION

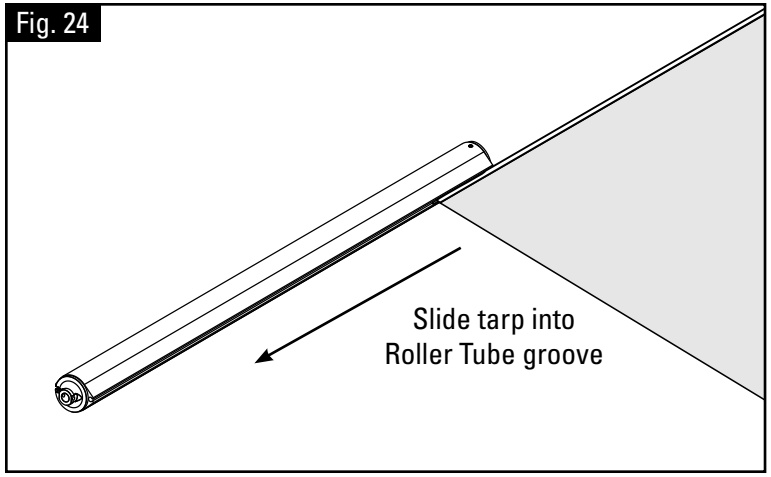
Attaching Tarp to Roller Tube

Fig. 22



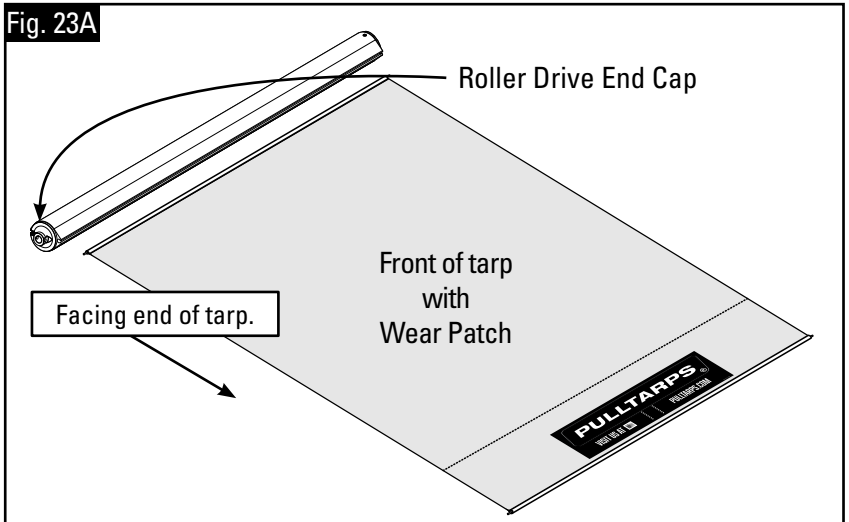
Electric Core System & Roller Tube Assembly (Fig. 22).

Fig. 24



Step 2: Grab either end of the tarp and slide Hemtube into the Roller Groove, until centered (Fig. 24).

Fig. 23A



Shown: Standard Installation

Front of tarp with Wear Patch

Fig. 23B

Back of tarp

Fig. 23C

Step 1: Place the tarp on the ground or large table and unroll flat. The front of the tarp should be facing up, showing the wearpatch logo (Fig. 23A - C). At the opposite end of the wearpatch, place the Roller Tube on the ground with the Roller Drive End Cap on the right side, facing the end with the wear patch. **NOTE:** Do not attach the Pullbar at this time.

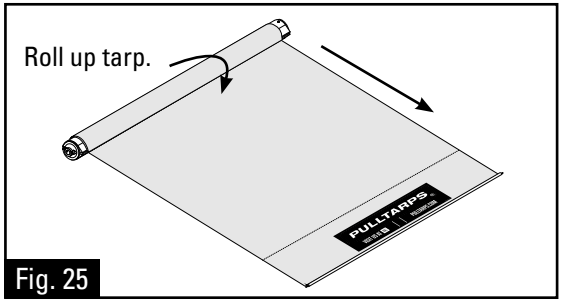
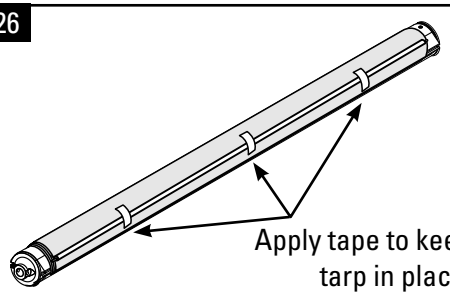


Fig. 25

Step 3: Roll the tarp on Roller Tube, keeping tarp centered (Fig. 25).

Fig. 26



Step 4: Once the tarp is rolled up, use duct tape to hold tarp in place (Fig. 26).

Installing Roller Tube & Electric Motor

Fig. 27A

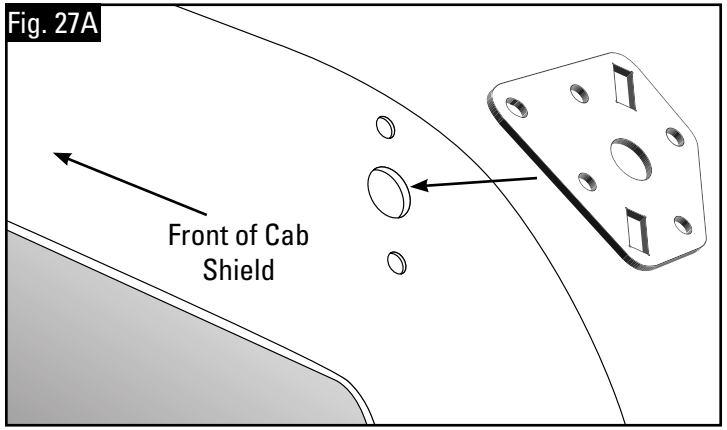
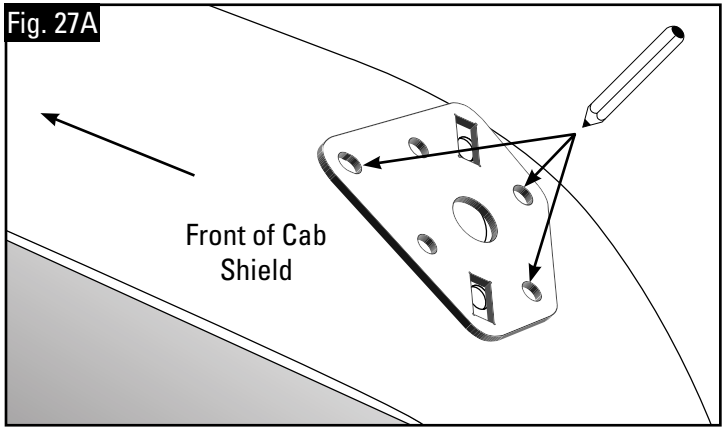


Fig. 27A



Step 5: To get the proper mounting position to drill the necessary holes for the Electric Motor, take the Core Diamond End Plate and place against the Driver Side of the Cab Shield, over the existing mounting holes (Fig. 27A). Once the Core Diamond Plate is in position, mark hole positions on the Cab Shield for drilling (Fig. 27B).

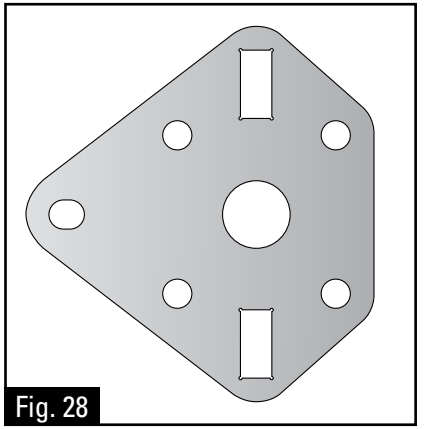
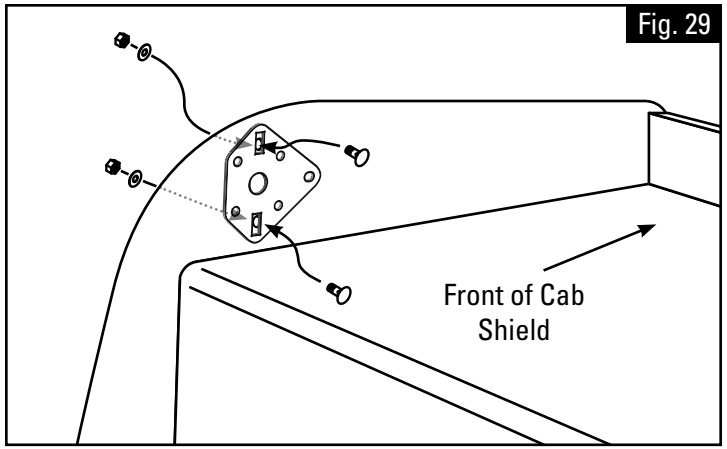


Fig. 28

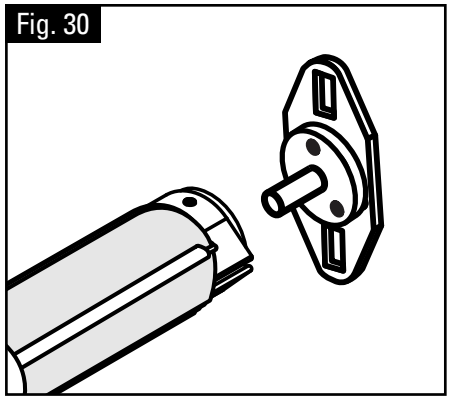
NOTE: The Core Diamond End Plate comes with multiple hole positions for different Cab Shield Layouts & Motors (Fig. 28).

Fig. 29



Step 6: With the holes drilled, secure the Diamond End Plate on the inside portion of the Driver Side Cab Shield using carriage bolts and fasten with washers and nylock nuts (Fig. 29).

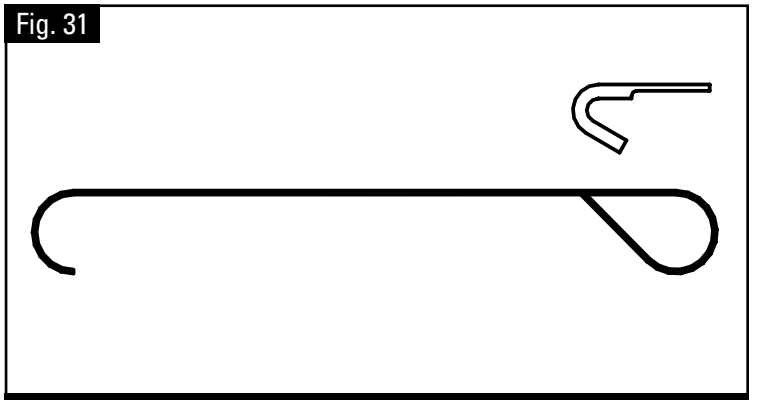
Fig. 30



Step 7: Next, insert the Universal Bolt Stud on the Flanged End Cap of the Roller Tube (Fig. 30).

Step 8: With a team member, lift the Roller Tube up and prepare to install in housing brackets (Fig. 31).

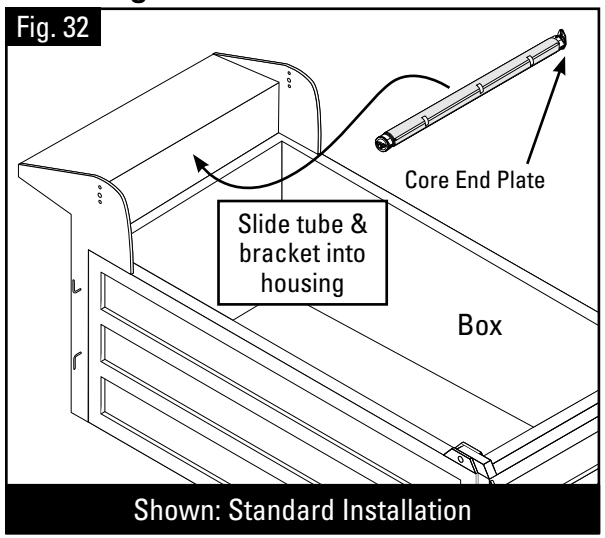
Fig. 31



NOTE: Utilize two (2) people for ease of installation.

Installing Roller Tube & Electric Motor

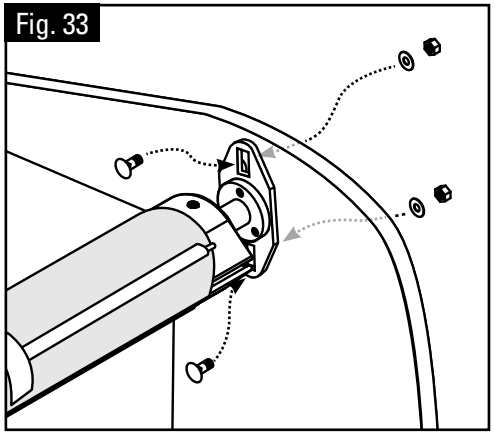
Fig. 32



Shown: Standard Installation

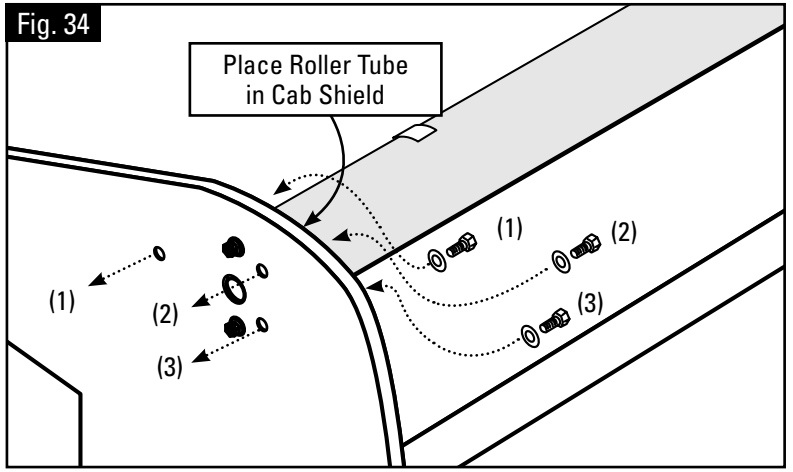
Step 9: With both team members holding the roller tube, slide the Roller Tube with Core End Plate into the Cab Shield (Fig. 32).

Fig. 33



Step 10: Place the Core End Plate on the Passenger Side of the Cab Shield, then insert carriage bolt and fasten with washer and nylock nut (Fig. 33).

Fig. 34



Step 11: On the Driver Side, insert three (3) HHCS Bolts to allow for the Electric Motor to be mounted in the Cab Shield (Fig. 34).

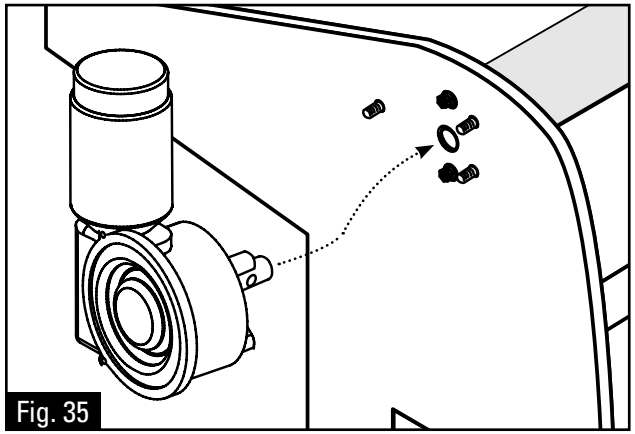


Fig. 35

Step 12: With the HHCS Bolts in place, attach the Electric Motor (Fig. 35) to the Cab Shield and Core Diamond End Plate (inside Cab Shield).

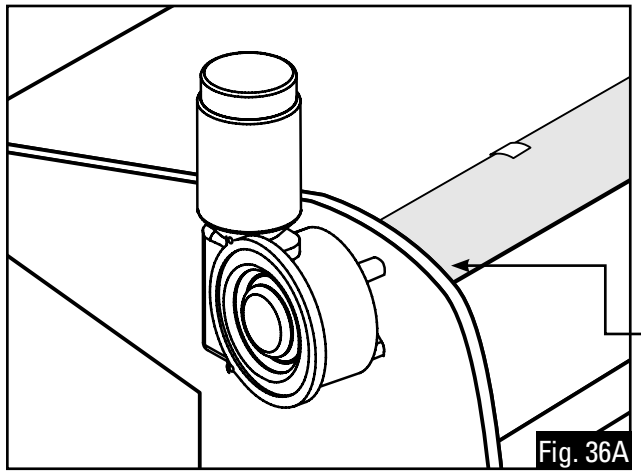


Fig. 36A

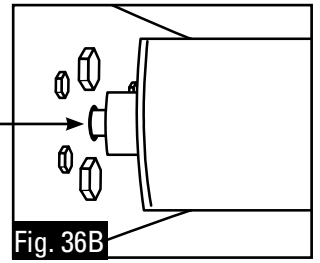


Fig. 36B

Step 13: With the Electric Motor in place, secure with three (3) HHCS Bolts using a 5/16" wrench (Fig. 36A & B).

Installing Roller Tube & Electric Motor

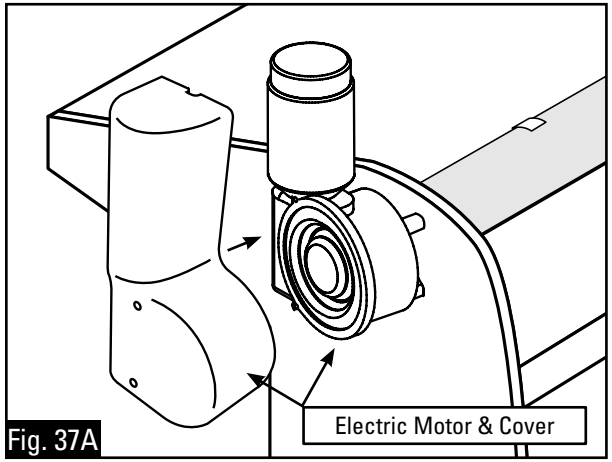
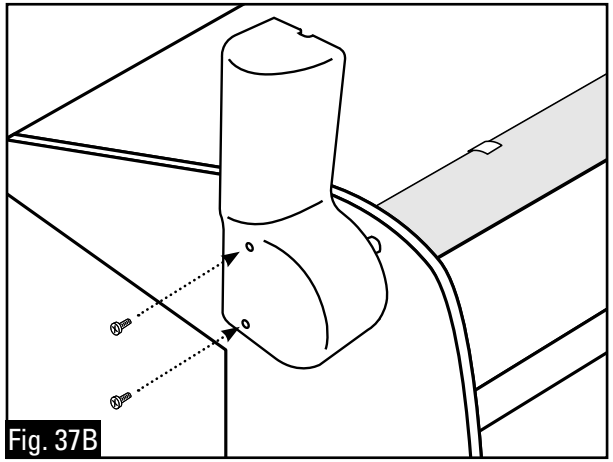
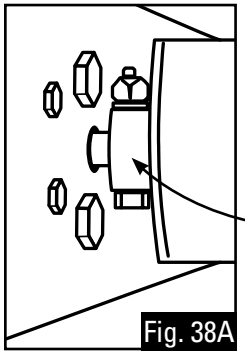
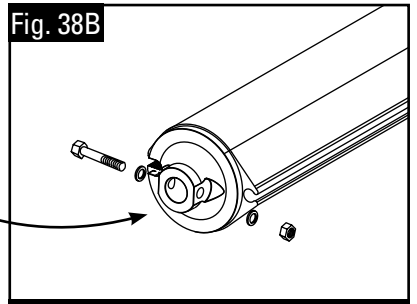


Fig. 37A


Fig. 37B

Step 14: Place Electric Motor Cover on the mounted motor (Fig. 37A) and then secure with two (2) mounting screws (Fig. 37B).


Fig. 38A

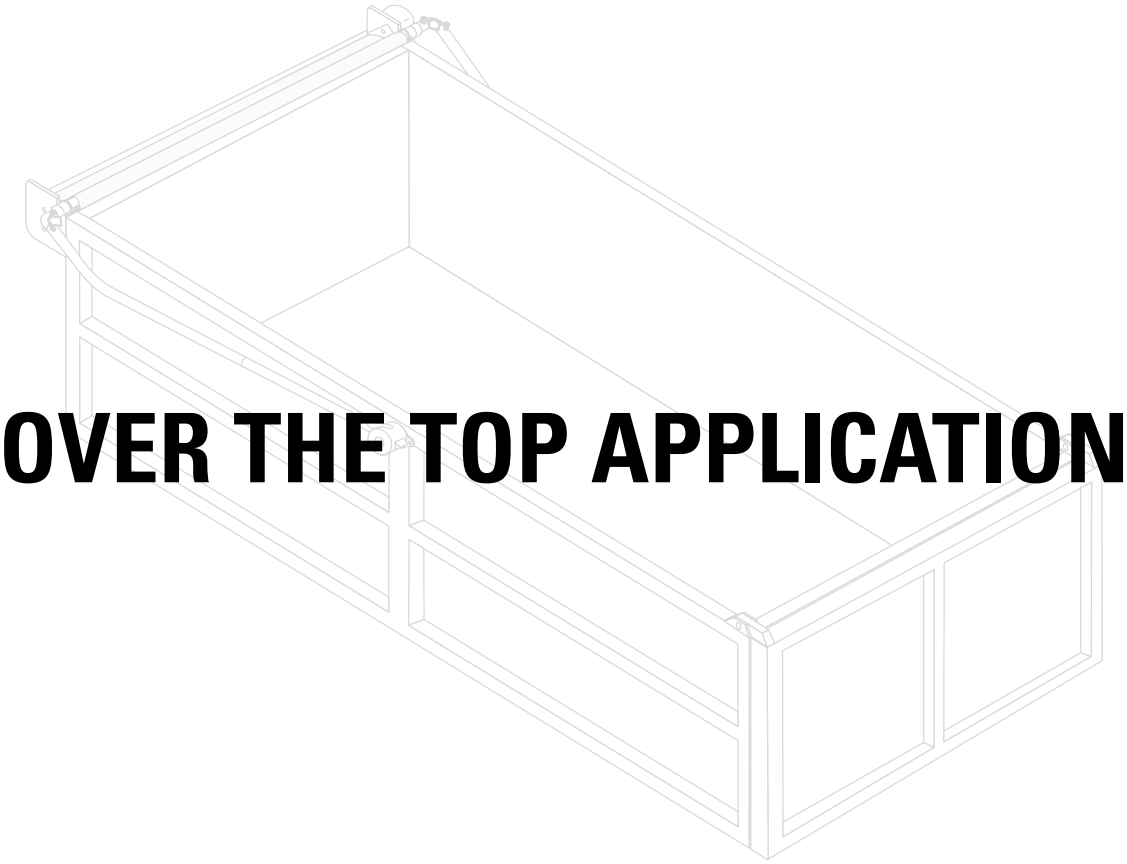

Fig. 38B

View of roller tube without housing.

Step 15: With the Electric Motor drive shaft inserted into the Roller Drive End Cap, install the HHCS bolt, flat washers and nyloc nut (Fig. 38A & 38B) and tighten.

Note: Make sure the Roller Tube is firmly secured to the Electric Motor shaft.

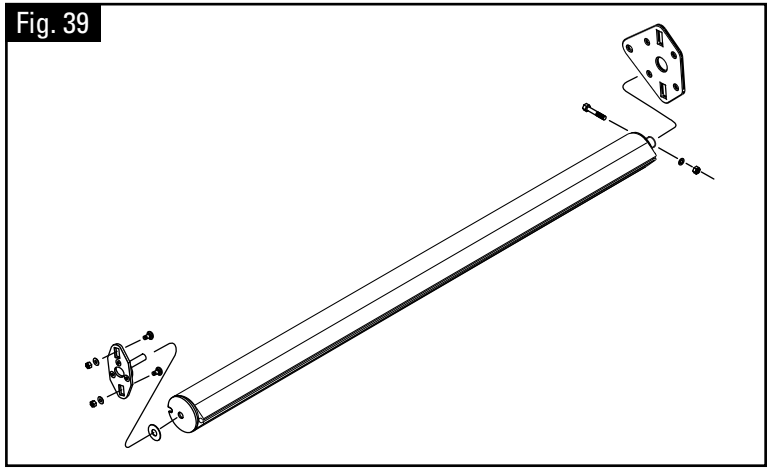
(For Arm installation, see instructions on pages 12-14)



OVER THE TOP APPLICATION

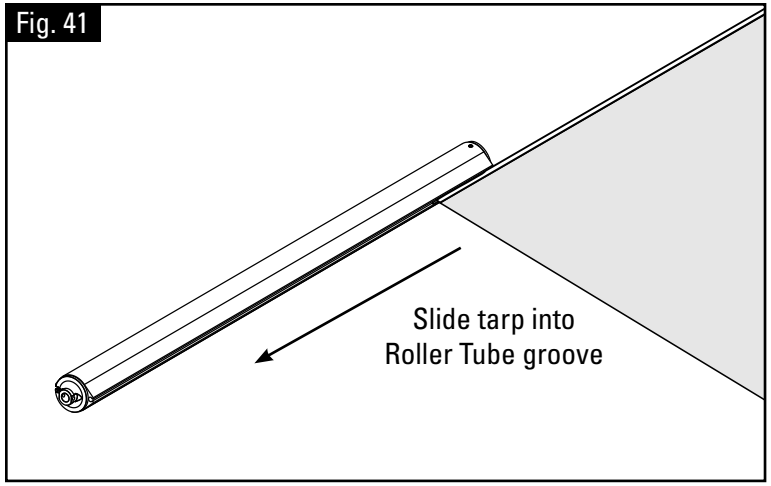
Attaching Tarp to Roller Tube

Fig. 39



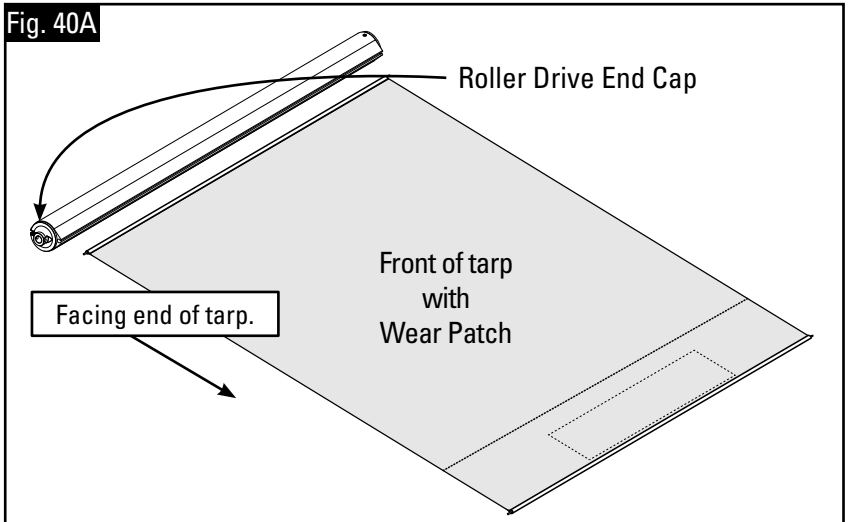
Electric Core System & Roller Tube Assembly (Fig. 39).

Fig. 41



Step 2: Grab either end of the tarp and slide Hemtube into the Roller Groove, until centered (Fig. 41).

Fig. 40A



Shown: Standard Installation

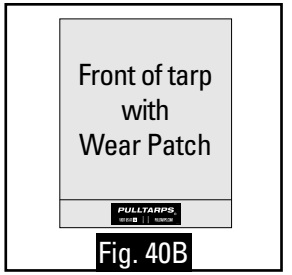


Fig. 40B

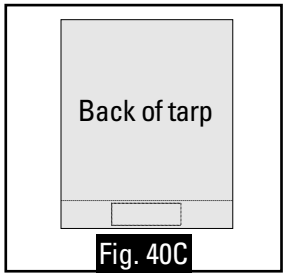


Fig. 40C

Step 1: Place the tarp on the ground or large table and unroll flat. The front of the tarp should be facing up, showing the wearpatch logo (Fig. 40A - C). At the opposite end of the wearpatch, place the Roller Tube on the ground with the Roller Drive End Cap on the right side, facing the end with the wear patch. **NOTE:** Do not attach the Pullbar at this time.

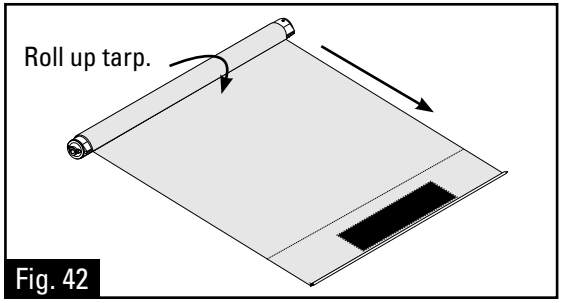
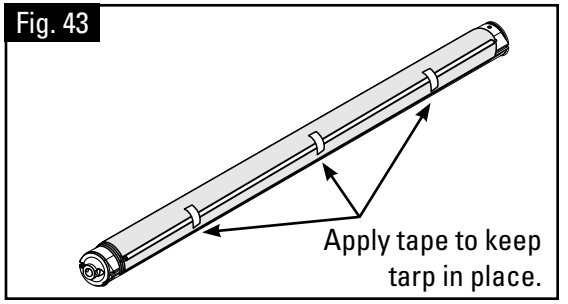


Fig. 42

Step 3: Roll the tarp on Roller Tube, keeping tarp centered (Fig. 42).

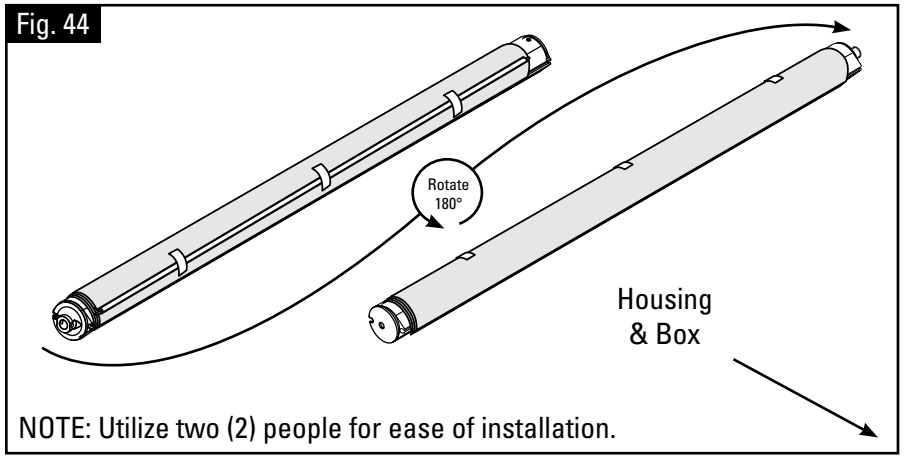
Fig. 43



Step 4: Once the tarp is rolled up, use duct tape to hold tarp in place (Fig. 43).

Installing Roller Tube & Electric Motor

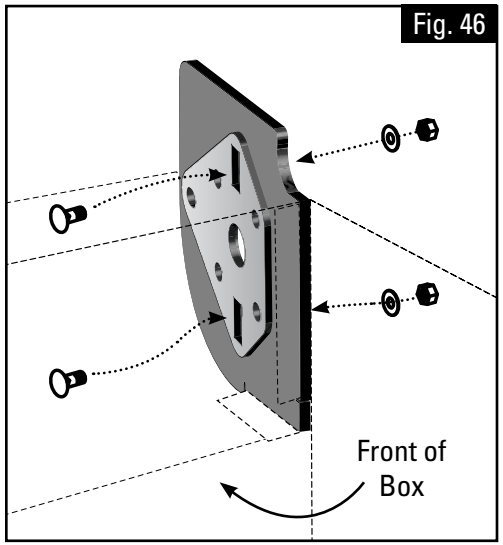
Fig. 44



NOTE: Utilize two (2) people for ease of installation.

Step 5: Once the tarp is securly taped, lift and rotate the Roller Tube 180°, facing the system housing (Fig. 44) and set aside.

Fig. 46



Step 7: With the holes drilled, secure the Diamond End Plate on the inside portion of the Passenger Side End Plate using carriage bolts and fasten with washers and nylock nuts (Fig. 46).

Fig. 45A

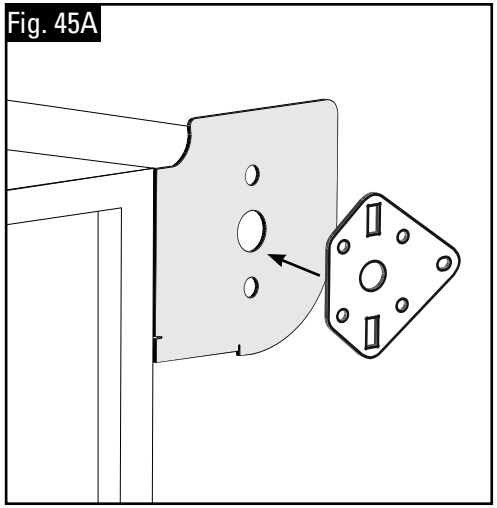
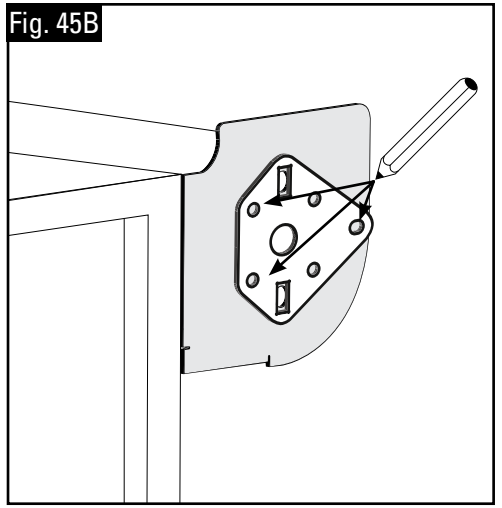
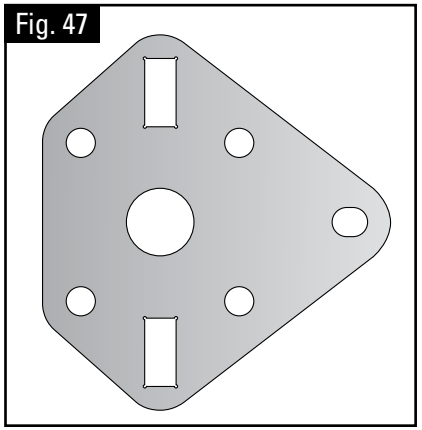


Fig. 45B



Step 6: To get the proper mounting position, you must drill the necessary holes for the Electric Motor. Take the Core Diamond End Plate and place against the Passenger Side Housing Side Plate, over the existing mounting holes (Fig. 45A). Once the Core Diamond Plate is in position, mark hole positions on the Cab Shield for drilling (Fig. 45B).

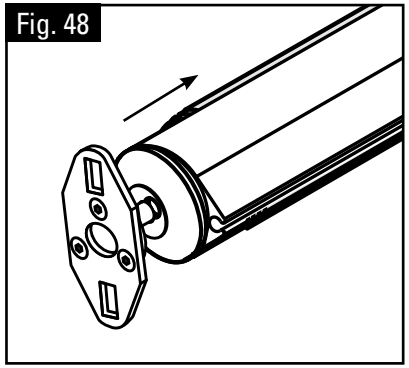
Fig. 47



NOTE: The Core Diamond End Plate comes with multiple hole positions for different Cab Shield Layouts & Motors (Fig. 47).

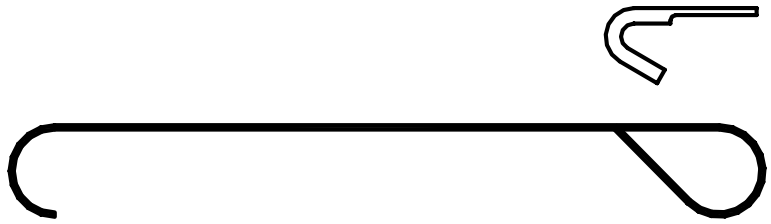
Installing Roller Tube & Electric Motor

Fig. 48



Step 8: Next, insert the Universal Bolt Stud on the female side of the Roller Tube (Fig. 48).

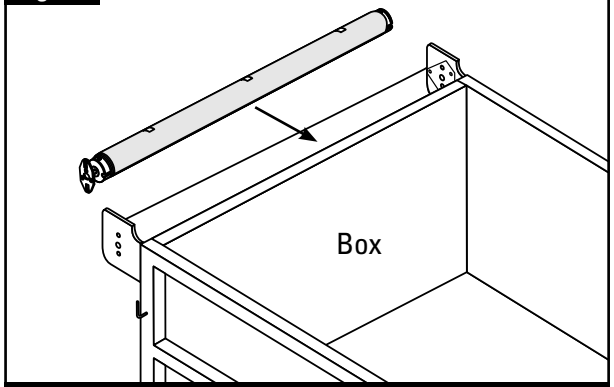
Fig. 49



NOTE: Utilize two (2) people for ease of installation.

Step 9: With a team member, lift the roller tube up and prepare to install in housing brackets (Fig. 49).

Fig. 50



Shown: Over the Top Installation

Step 10: With both team members holding the roller tube, position in front of housing (Fig. 50).

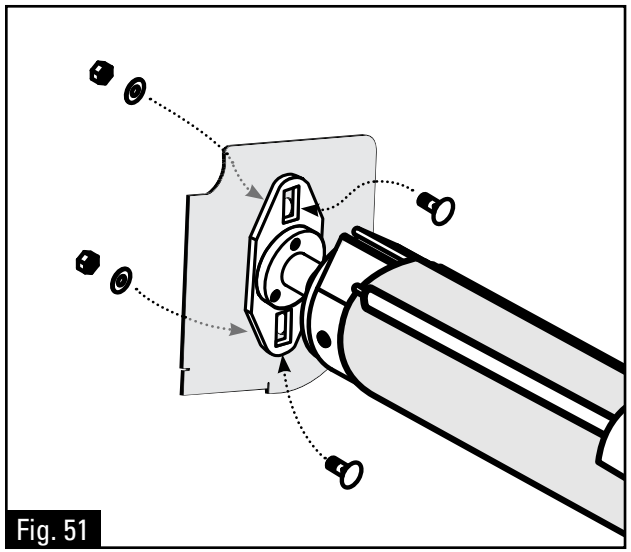


Fig. 51

Step 11: Place the Core End Plate on the Passenger Side of the Cab Shield, then insert carriage bolt and fasten with washer and nylock nut (Fig. 51).

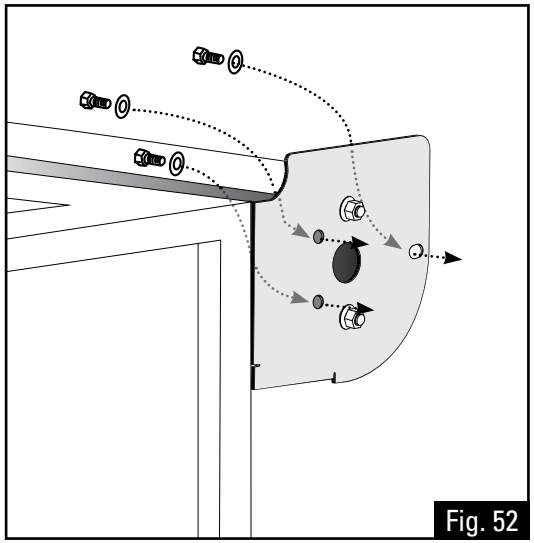
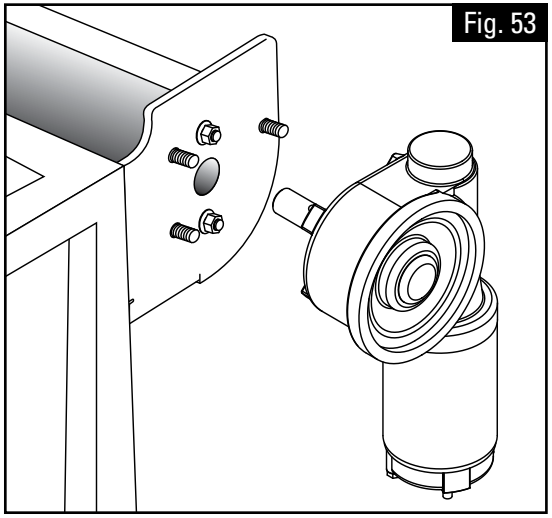


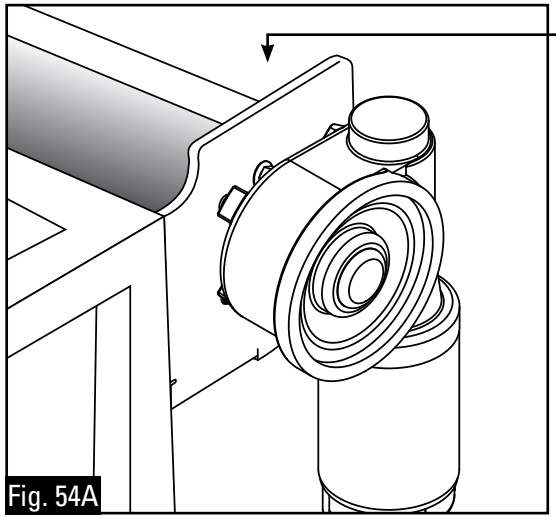
Fig. 52

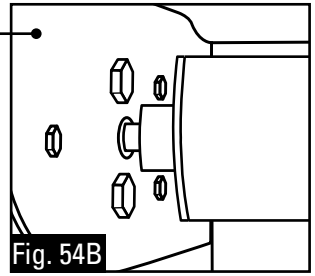
Step 12: Insert three (3) HHCS Bolts to allow for the Electric Motor to be mounted on the Drivers Side of the Cab Shield (Fig. 52).

Installing Roller Tube & Electric Motor

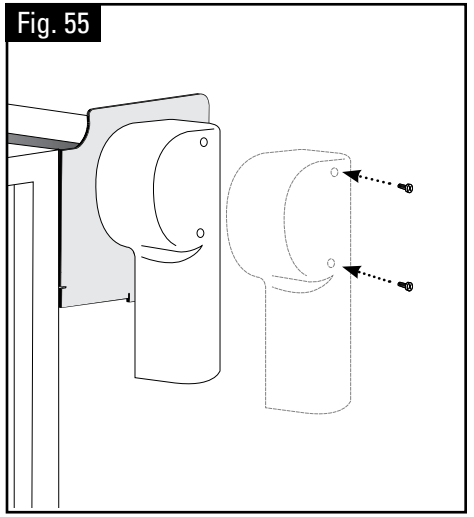

Fig. 53

Step 13: With the HHCS bolts in place, attach and secure the Electric Motor (Fig. 53) to the Passenger side End Plate and Core Diamond End Plate (inside Cab Shield) using a 5/16" wrench.

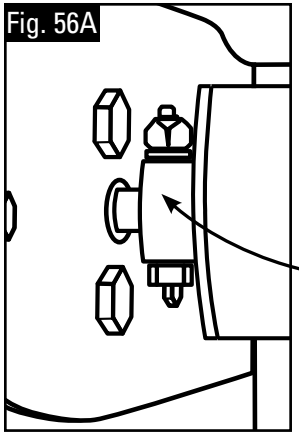

Fig. 54A

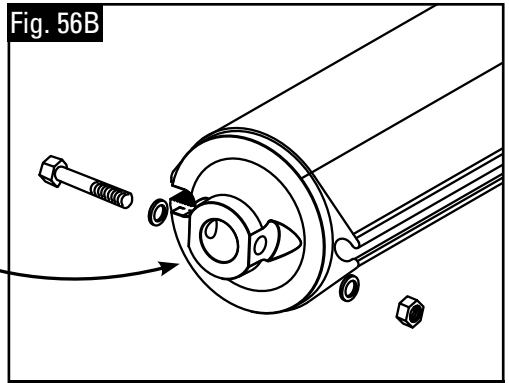

Fig. 54B

Step 14: With the Electric Motor in place, secure with three (3) HHCS Bolts (Fig. 54A & B).


Fig. 55

Step 15: Place Electric Motor Cover on the mounted motor and then secure with two (2) mounting screws (Fig. 55).


Fig. 56A


Fig. 56B

View of roller tube without housing.

Step 16: With the Electric Motor drive shaft inserted into the roller tube end cap, install the HHCS bolt, flat washers and nyloc nut (Fig. 56A & 56B) and tighten.

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

(For Arm installation, see instructions on page 5-7)



FLAP TARP, ROPE & HOOK INSTALLATION

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 1: 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 Pulltarp 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 2 in **Bungee Cord Installation** section.
3. The rope has no slack.
4. The tie down hooks are level with one another.

Fig. 57

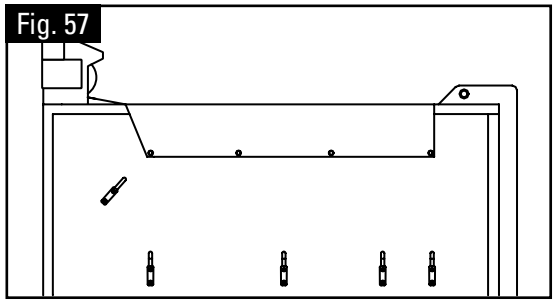


Fig. 58

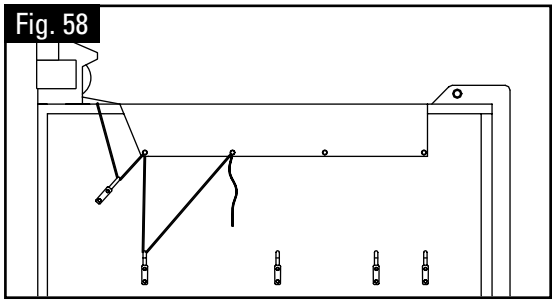


Fig. 59

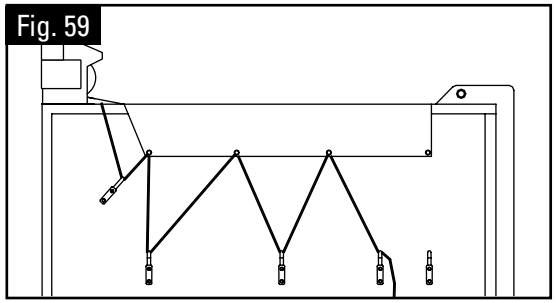


Fig. 60A

CORRECT

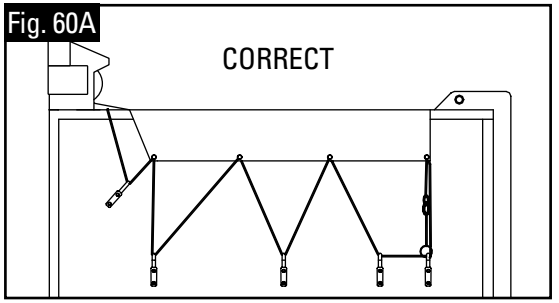
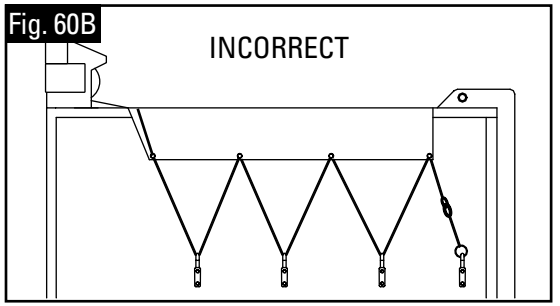


Fig. 60B

INCORRECT



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.57).
2. Position 2nd hook straight down from 1st grommet. This hook should be reached from ground (Fig. 58).
3. Place middle hooks equal distances from grommet (Fig. 59). 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. 60A & B).
5. Weld hooks in place.

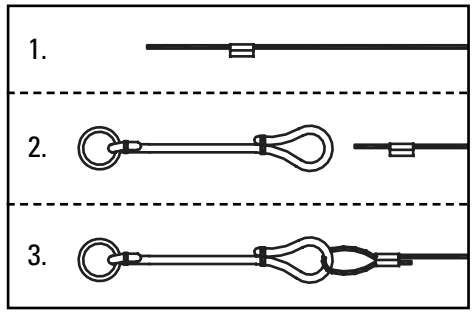
Bungee Cord Installation

Parts:

2 Bungee Cords

2 Oval Compression Sleeves

1 Snap Clip

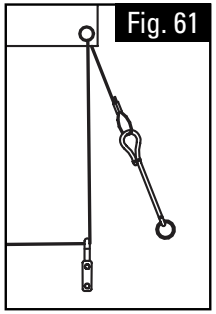


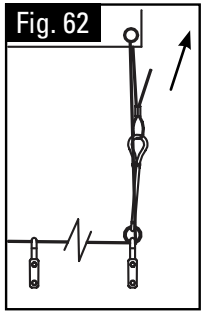
Connect Bungee Cord to Rope

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.

Step 2: 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

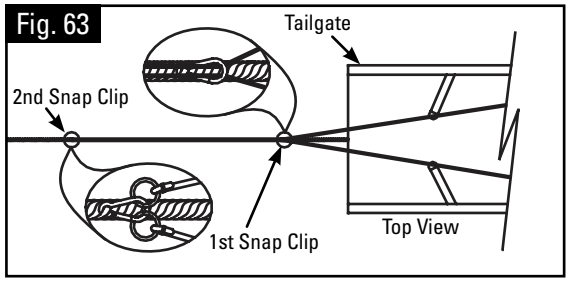




To tighten, pull loose end of rope through the Oval Compression Sleeve (Fig. 61). Stretch the bungee cord making sure all slack is taken out of the rope, crimp compression sleeve (Fig. 62). Be sure to keep flaps even on sides so Tie Down Ropes remain equal in length.

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

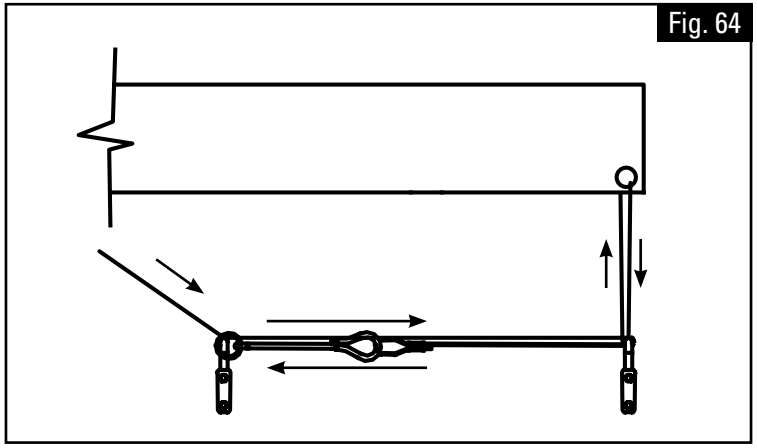
Snap Clip Installation



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. 63).

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

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 a taching the end of the bungee cord to an alternate hook (Fig. 64).

Flap, Rope and Rope Hook Placement

Step 3 - Flap / Tie Down Rope Placement and Installation (Fig. 65).

Fig. 65

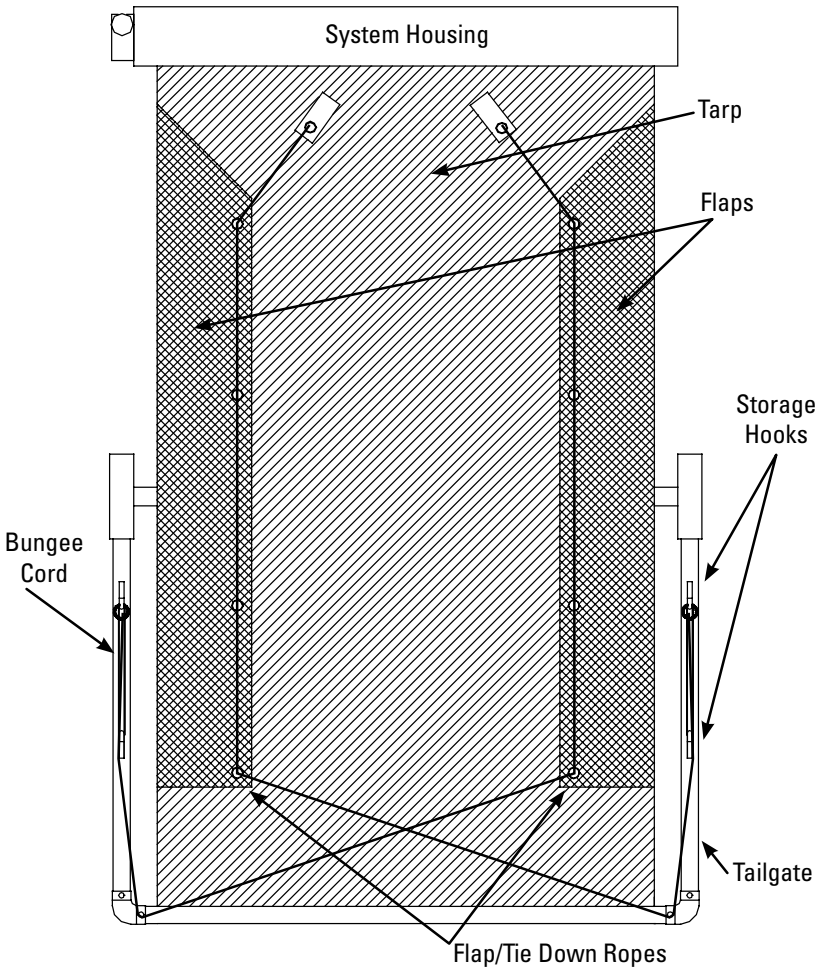
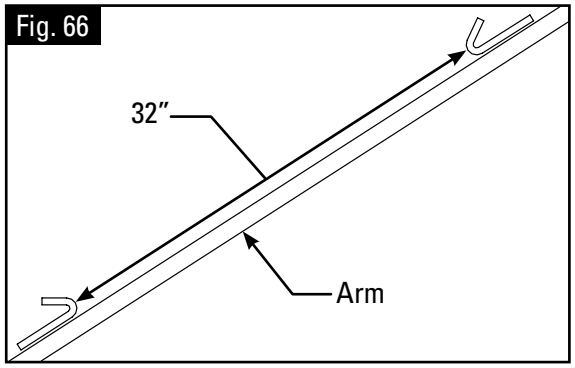
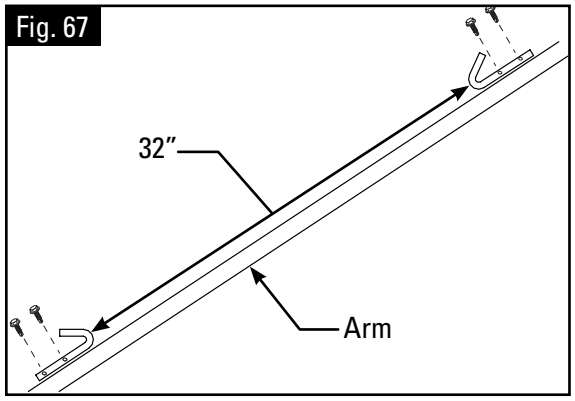


Fig. 66



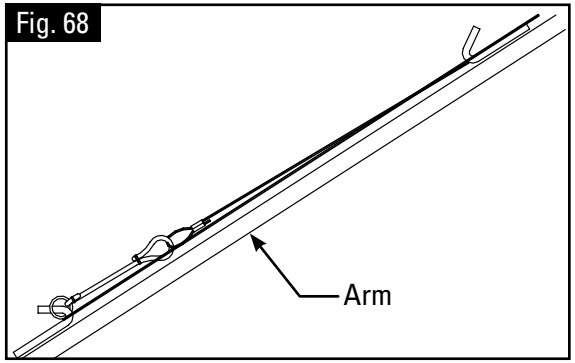
Step 4 - Rope Hook Placement: Weld rope storage hook on the top of the arms approx. 32″ apart (Fig. 66).

Fig. 67



Step 5 - Rope Hook Placement For Aluminum Arms:
Use Self Drilling screws (part #506-9933) to install hooks (Fig. 67).

Fig. 68



Step 6 - Rope storage on Arms (Fig. 68).