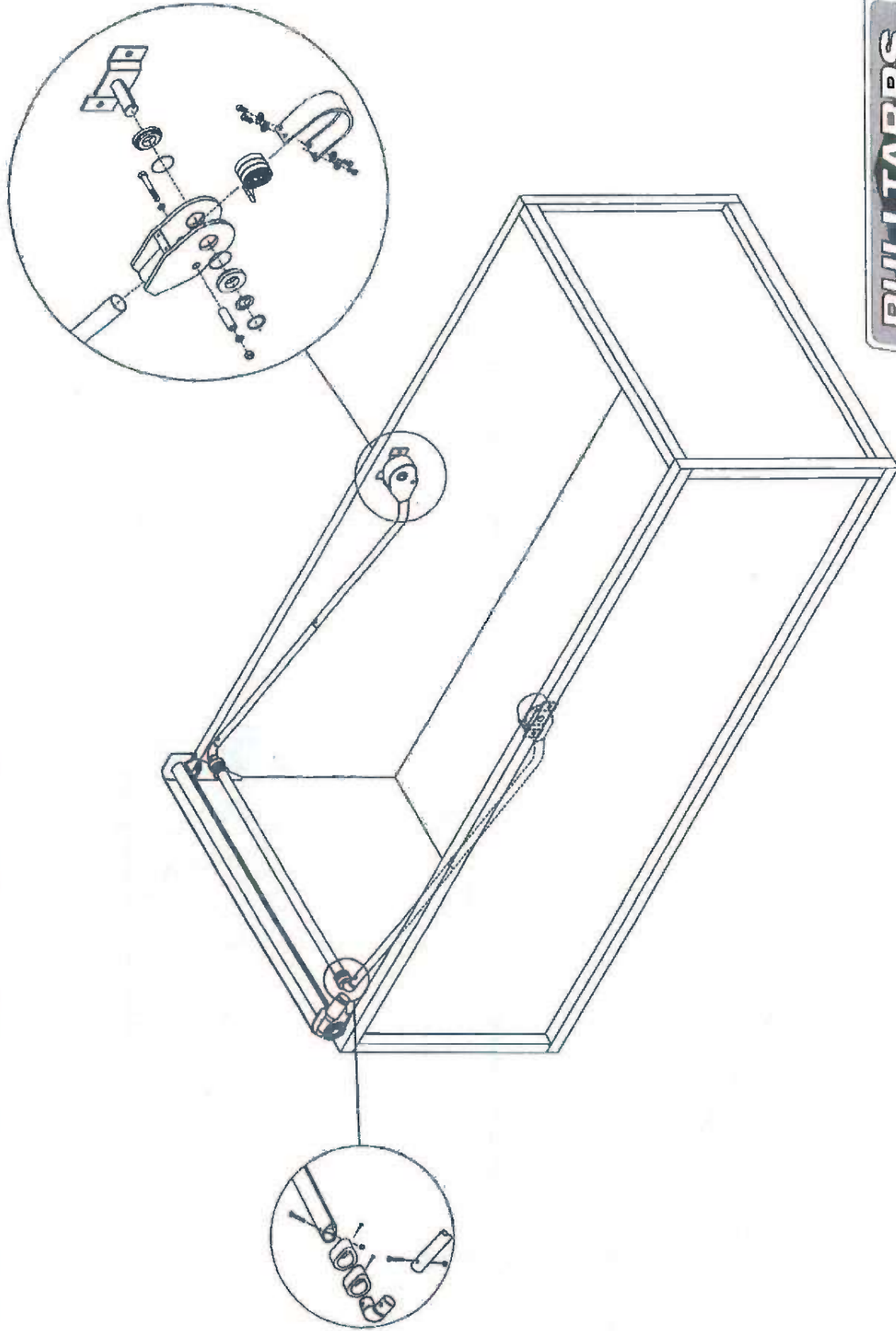


TARP SYSTEM

SECTION 5

Installation Instructions - Inside the Box and High Mount Arm Kits

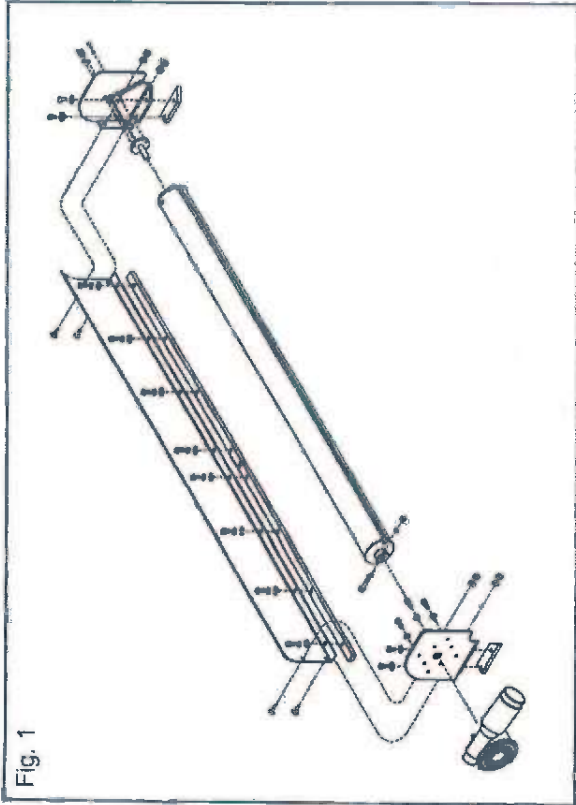
Electric Arm Kits - 501-0780, 501-0781, 501-1780, 501-1781



1404 N. Marshall Ave. El Cajon CA. 92020
For technical support call us at (800) 368-3075

607-0109 / 607-0019

GR 6/26/12



Step 1. Remove Tarp Before Welding

Before welding remove tarp to avoid damage (Fig. 2)
To remove tarp slide the tarp out of the slotted end of the housing and remove from work area.

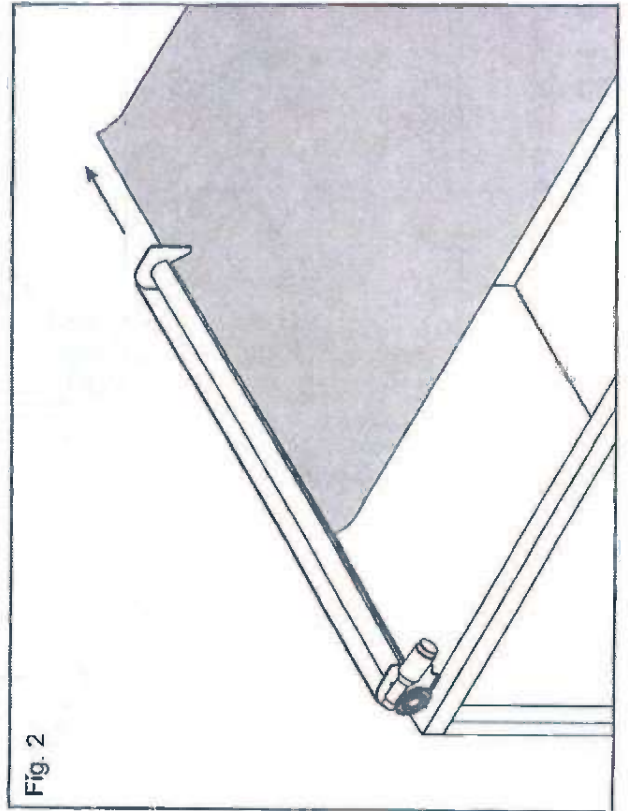
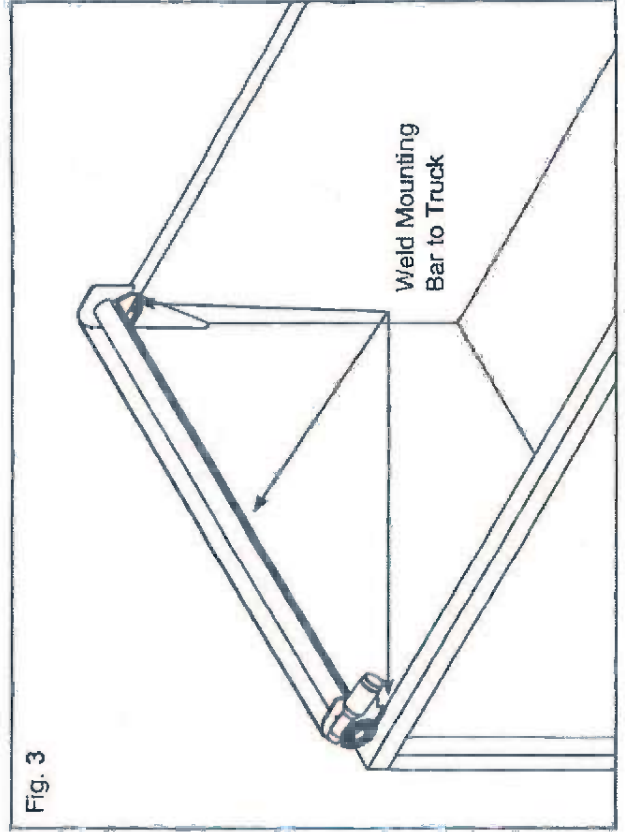


Fig. 3

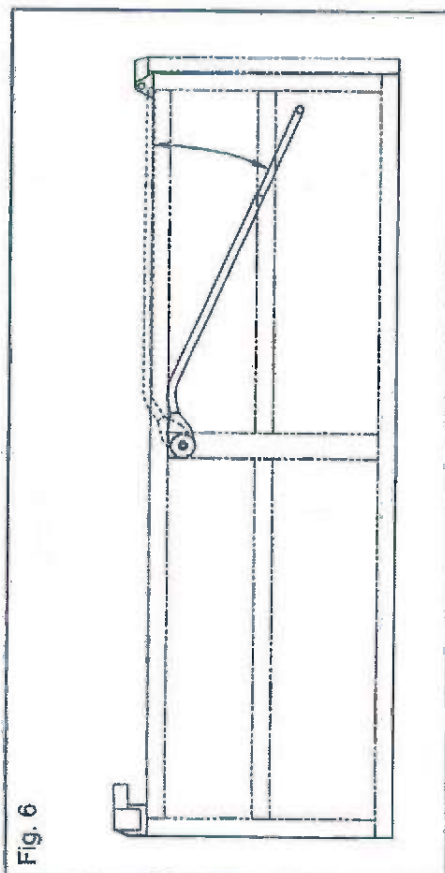
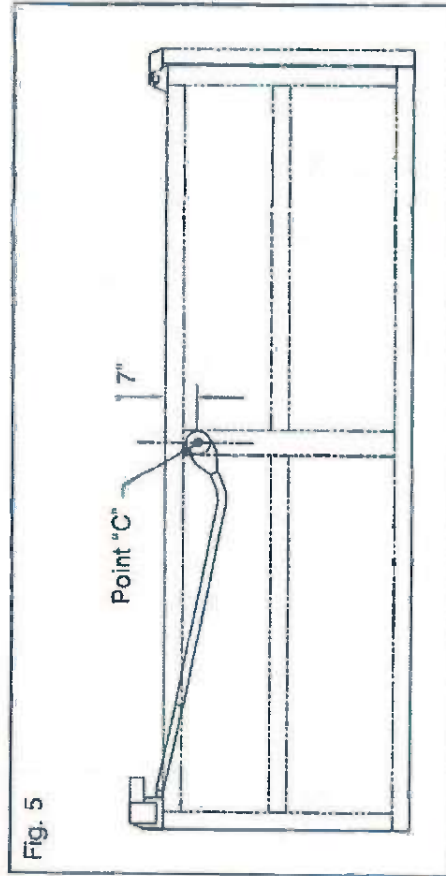
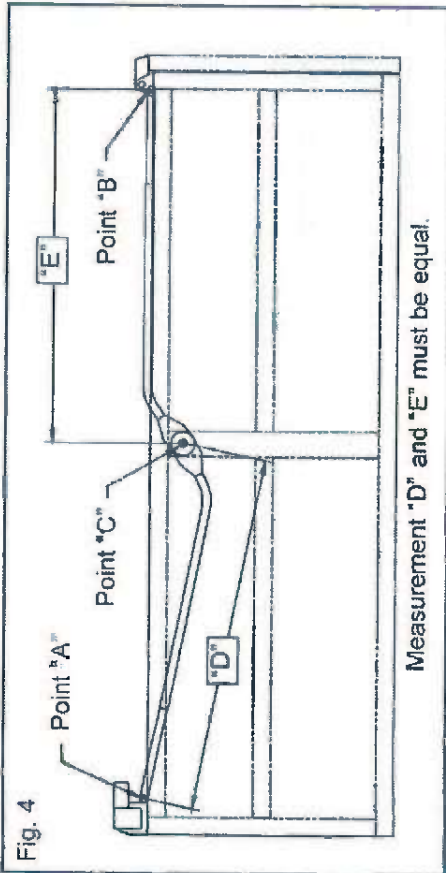


Step 2. Weld System To Truck

Weld system mounting bar to truck as shown in Fig. 3.

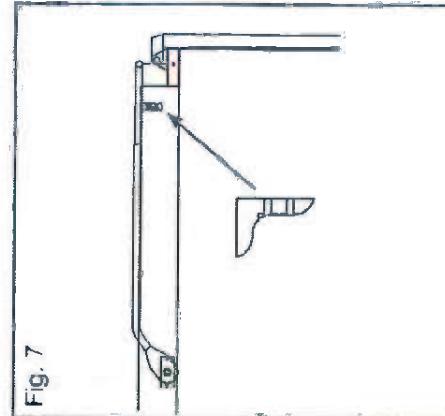
Step 3. Determining the Pivot Points and Mounting Locations on each side

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. 4). The pivot "C" should be 1/2 way between Point "A" and Point "B" and 7" below the top rail on both sides (Fig. 5).

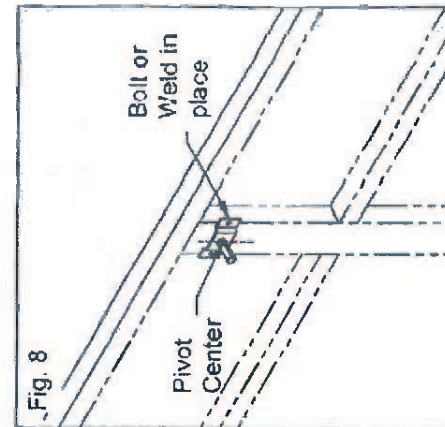


Step 4. Arm Preload

Arm must be indexed with no load at 24 degrees to top rail for proper preload of springs (Fig. 6). Mark pivot pin location on box.



Step 5. Arm Stop
Install Arm Stop (Part # 501-9940) as shown in Fig. 7.



Step 6. Mounting the Pivot
Locate the Pivot pin with the notch facing to the rear. Bolt or weld in place.

Step 7. Correct Alignment of arm to truck.
 Arms and pivots must be square and parallel to truck or trailer body (Fig. 9 & 10).

Dimension "A" must equal "B"
 Dimension "C" must equal "D"
 Dimension "E" must equal "F"

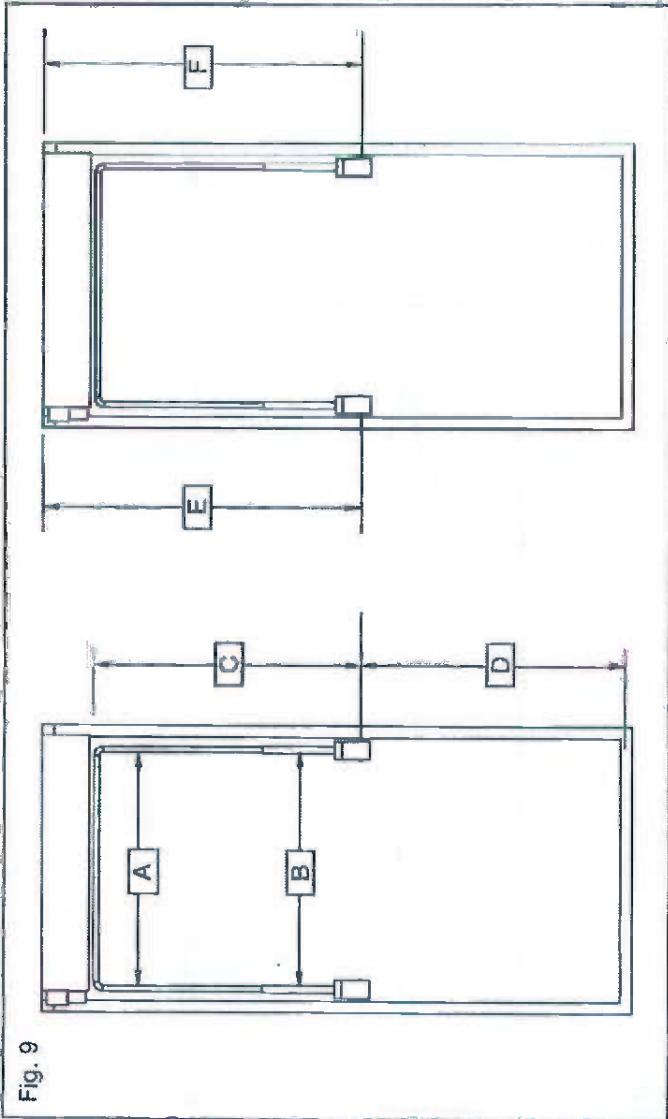


Fig. 9

Step 8. Pivot and Spring Assembly
 Assemble the springs and pivot assembly as shown in Fig. 11. Make sure arms move freely after assembly.

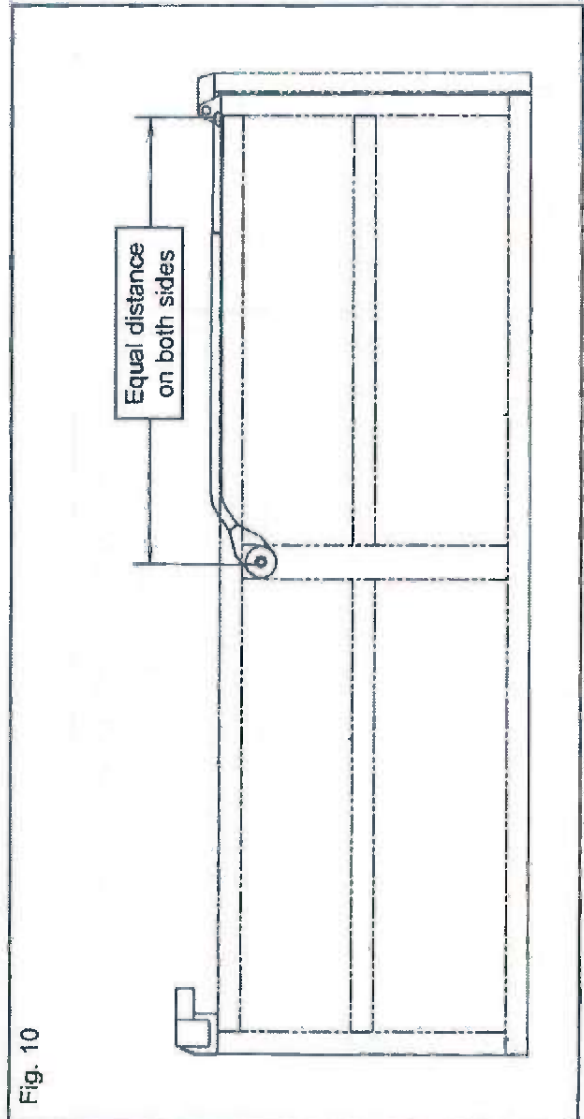


Fig. 10

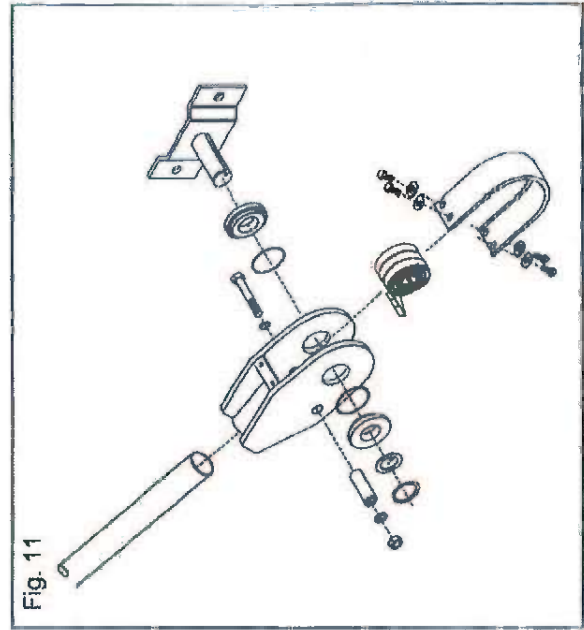
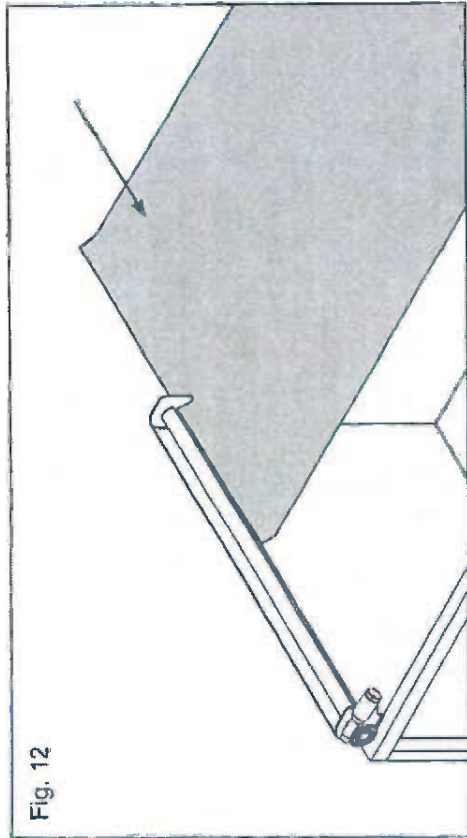


Fig. 11

Step 9. Tarp Installation

Slide Tarp into Groove on roller tube and center as shown in Fig. 12.

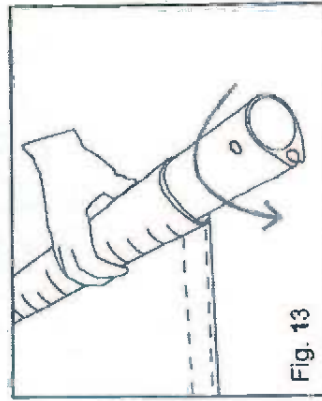


Step 9. Installing the Pullbar

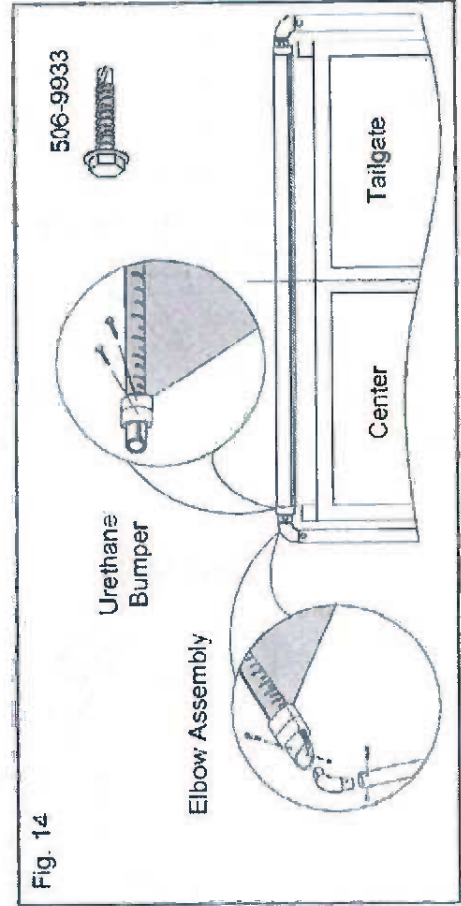
Cut the pull bar to length making sure the arms remain parallel and square to the body.

Slide the tarp into groove in the pull bar and center the tarp.

Roll the tarp up on the pull bar two revolutions. (Fig. 13)



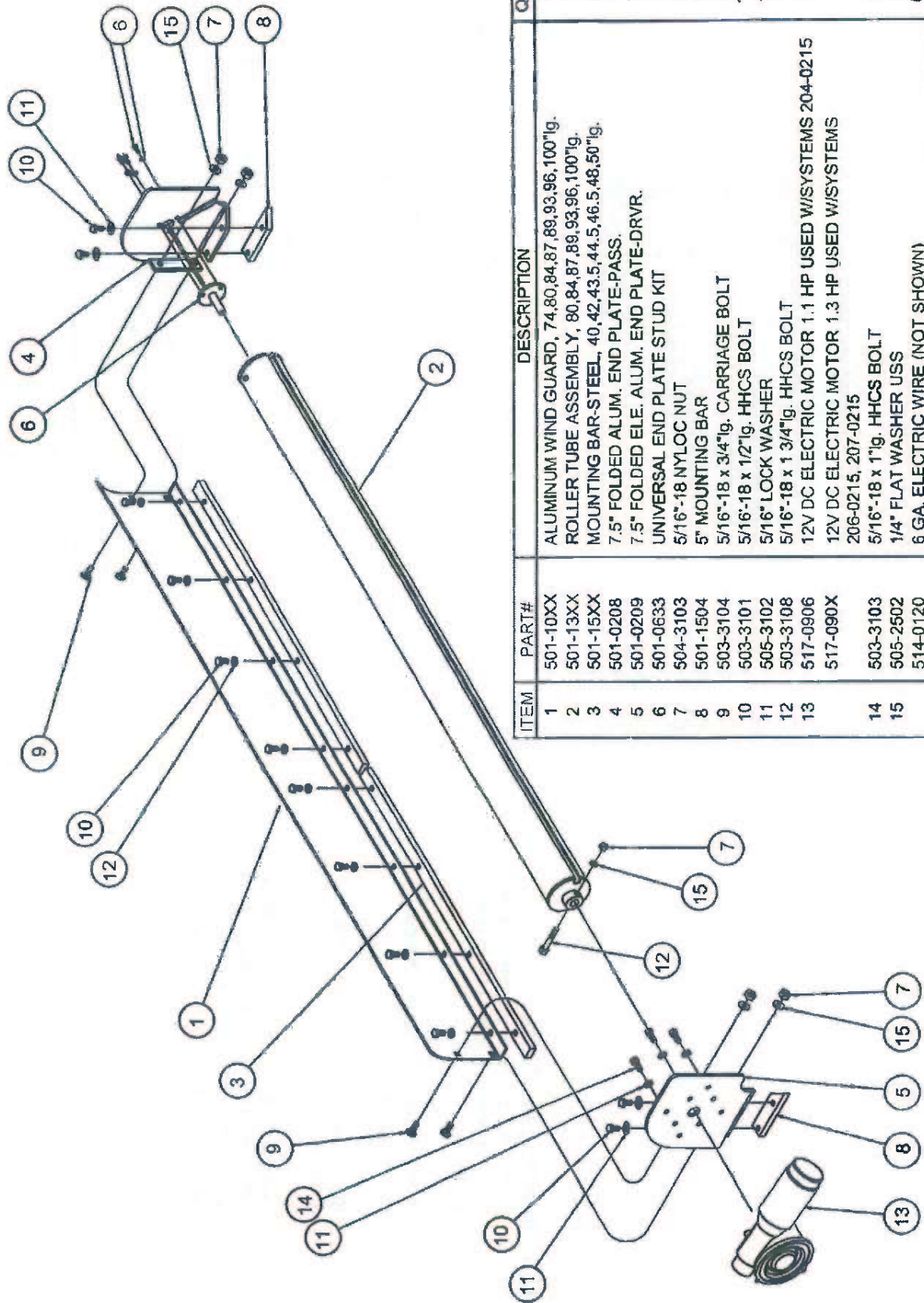
Fasten the tarp in place by sliding the two urethane bumpers on each side of the pull bar far enough to touch the edges of the tarp. Lock in place by installing a 1 1/2" long (506-9933) self drilling screw through the bumper and into the hem tube groove of the pull bar.(Fig. 14)



Note: Tarp must be retracted when dumping.

7" ALUMINUM ELECTRIC ARM SYSTEM

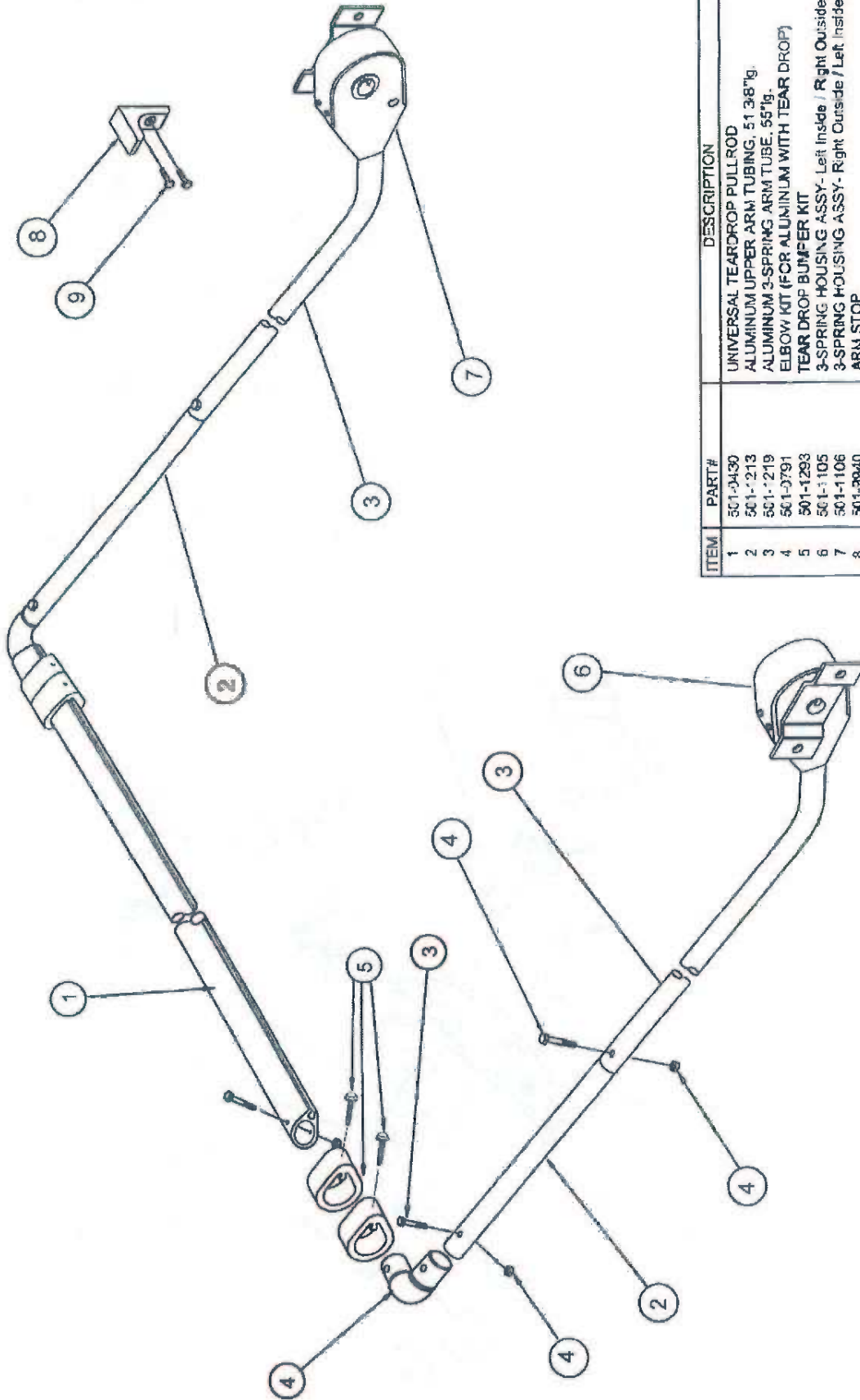
(#204-0215, 206-0215, 207-0215)



ITEM	PART#	DESCRIPTION	QTY
1	501-10XX	ALUMINUM WIND GUARD, 74,80,84,87,89,93,96,100"lg.	1
2	501-13XX	ROLLER TUBE ASSEMBLY, 80,84,87,89,93,96,100"lg.	1
3	501-15XX	MOUNTING BAR-STEEL, 40,42,43,5,44,5,46,5,48,50"lg.	2
4	501-0208	7.5" FOLDED ALUM. END PLATE-PASS.	1
5	501-0209	7.5" FOLDED ELE. ALUM. END PLATE-DRVR.	1
6	501-0633	UNIVERSAL END PLATE STUD KIT	1
7	504-3103	5/16"-18 NYLOC NUT	5
8	501-1504	5" MOUNTING BAR	2
9	503-3104	5/16"-18 x 3/4"lg. CARRIAGE BOLT	4
10	503-3101	5/16"-18 x 1/2"lg. HHCS BOLT	13
11	505-3102	5/16" LOCK WASHER	15
12	503-3108	5/16"-18 x 1 3/4"lg. HHCS BOLT	1
13	517-0906	12V DC ELECTRIC MOTOR 1.1 HP USED W/SYSTEMS 204-0215	1
	517-090X	12V DC ELECTRIC MOTOR 1.3 HP USED W/SYSTEMS 206-0215, 207-0215	1
14	503-3103	5/16"-18 x 1"lg. HHCS BOLT	3
15	505-2502	1/4" FLAT WASHER USS	4
	514-0120	6 GA. ELECTRIC WIRE (NOT SHOWN)	60'

REV: 11/13/07 BAB

REAR TRANSFER INSIDE ARM SYSTEM (#501-0780)

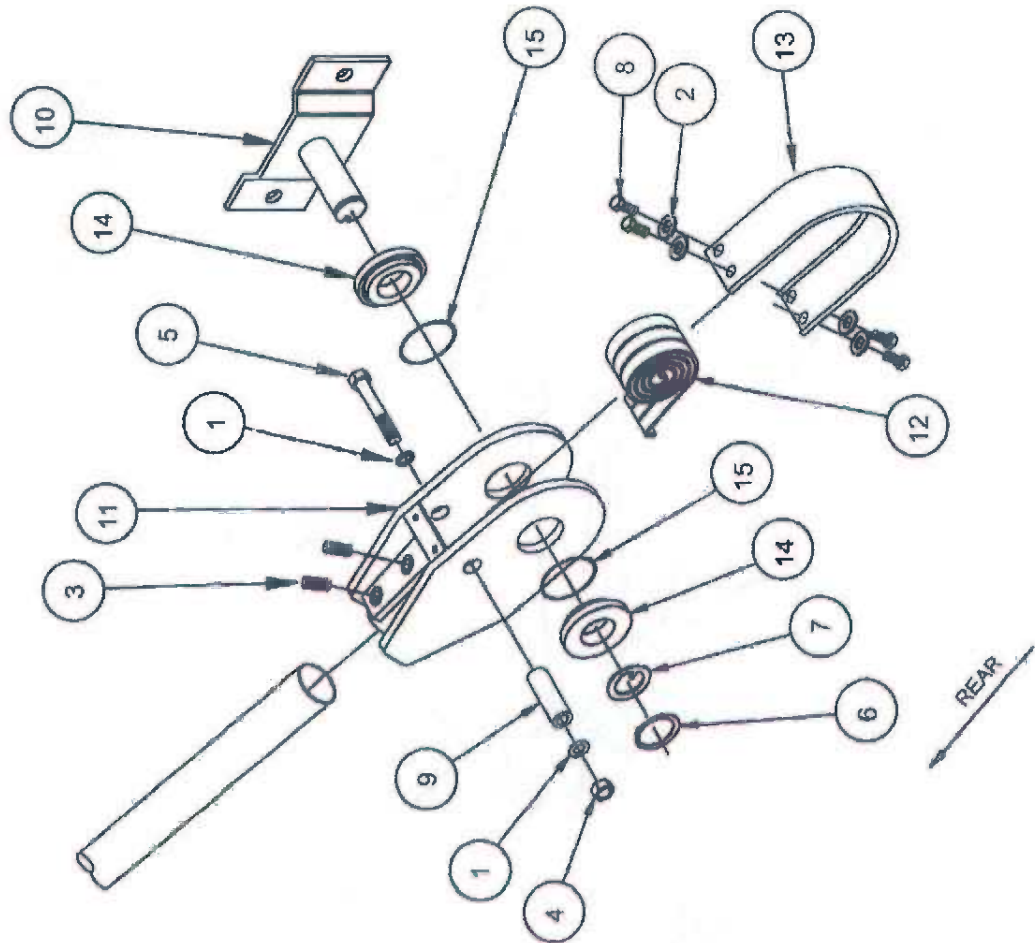


ITEM	PART#	DESCRIPTION	QTY
1	501-0430	UNIVERSAL TEARDROP PULL ROD	1
2	501-213	ALUMINUM UPPER ARM TUBING, 51.38"lg.	2
3	501-219	ALUMINUM 3-SPRING ARM TUBE, 55"lg.	2
4	501-0791	ELBOW KIT (FOR ALUMINUM WITH TEAR DROP)	2
5	501-1293	TEAR DROP BUMPER KIT	1
6	501-1105	3-SPRING HOUSING ASSY- Left Inside / Right Outside	1
7	501-1106	3-SPRING HOUSING ASSY- Right Outside / Left Inside	1
8	501-3940	ARM STOP	2
9	506-3705	3/8"-16 x 2" SELF TAPPING SCREW	4

GR REV: 06/27/12

**INSIDE TRANSFER/ HIGH MOUNT
3-SPRING HOUSING ASSEMBLY**

(#501-1105 DRVR.) SHOWN
(#501-1106 PASS.) OPPOSITE



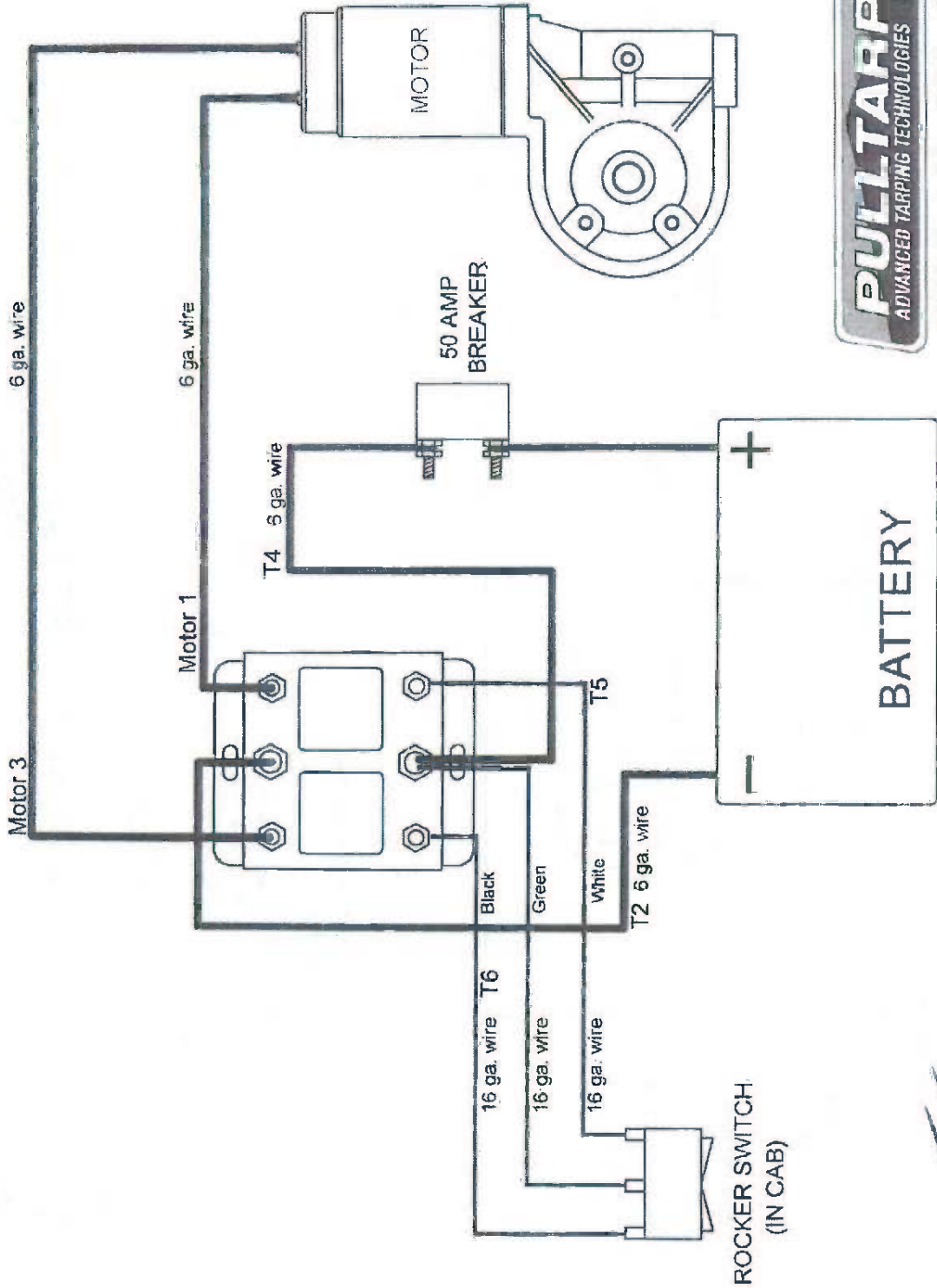
ITEM	PART#	DESCRIPTION	QTY
1	505-5001	1/2" AN FLAT WASHER	2
2	505-2502	1/4" FLAT WASHER USS	4
3	506-5008	1/2"-13 X 3/4" SET SCREW	4
4	504-5004	1/2"-13 NYLOC NUT	2
5	503-5011	1/2"-13 x 3-1/4"lg. HHCS BOLT	1
6	506-0101	1 1/4" SNAP RING	1
7	505-9904	WASHER, W/TANG 1 7/8"	1
8	503-2503	1/4"-20 x 1/2"lg. HHCS BOLT	4
9	501-1158	SPRING CONNECTION-ARM SYSTEM	1
10	501-1123	SPRING ASSEMBLY INSIDE TRAN.	1
11	501-1109	SPRING SIDE PLATE ASSEMBLY	1
12	517-9921	SMALL SPRING FOR ARM SYSTEM	3
13	501-1151	ARM DUST COVER	1
14	501-1155	UHMW PIVOT RETAINER 2 1/2" DIA.	2
15	506-9902	O-RING 2" I.D. x 3/32" thk.	2

NB REV. 05/19/10

Smart Switch Basic Kit - 12 volt (514-0114)

Wiring Instructions

NB E/12/11



Smart Switch™

607-0089



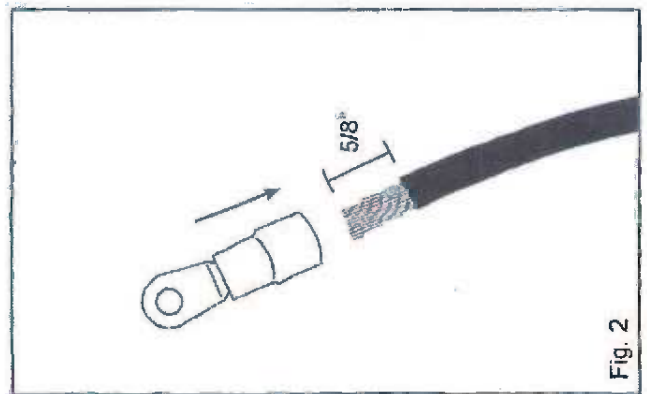
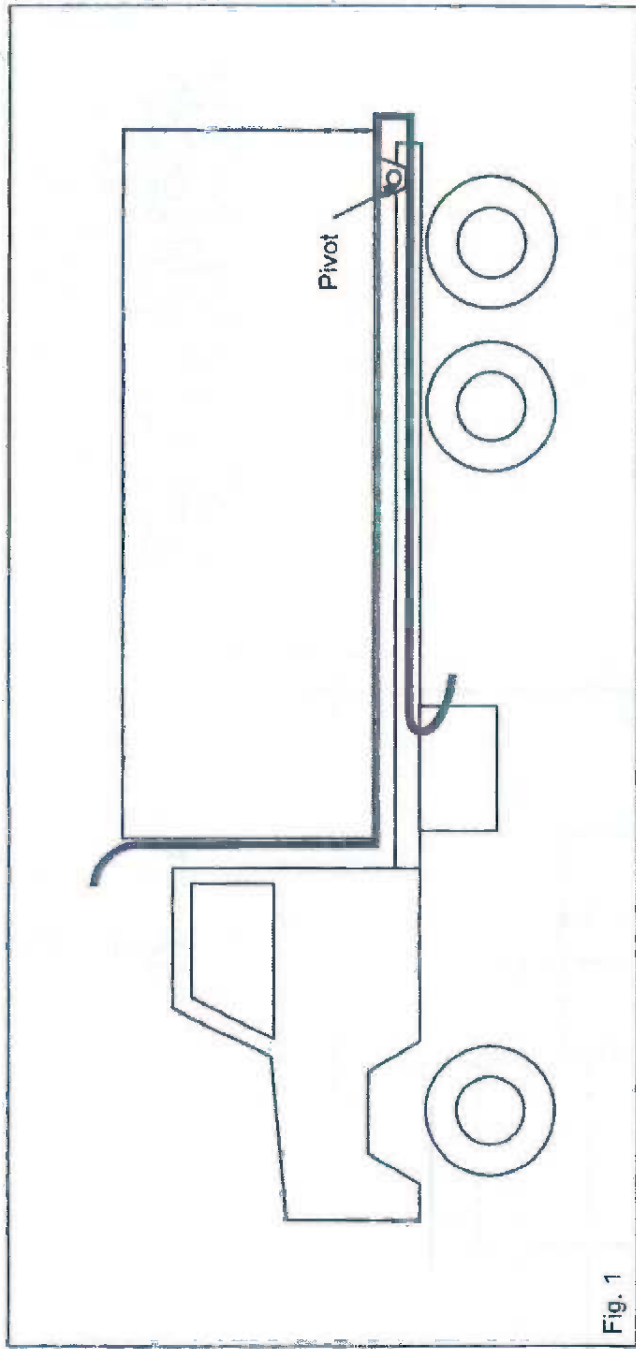
1404 N. Marshall Ave, El Cajon, CA 92020
 For Technical Assistance
 Call Toll Free: (800) 368-3075

Step. 1

Run the 6 ga. wire to both locations (motor & battery box) and attach to truck body as shown in Fig. 1.

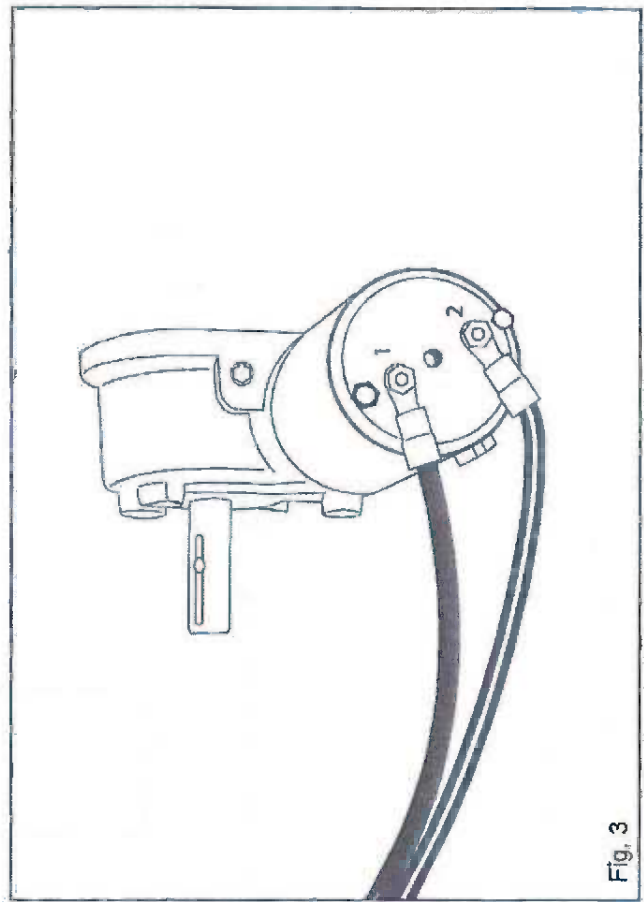
Note: The wire must go beyond the pivot point.

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



Step 2. Attaching The Connectors (Motor)

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



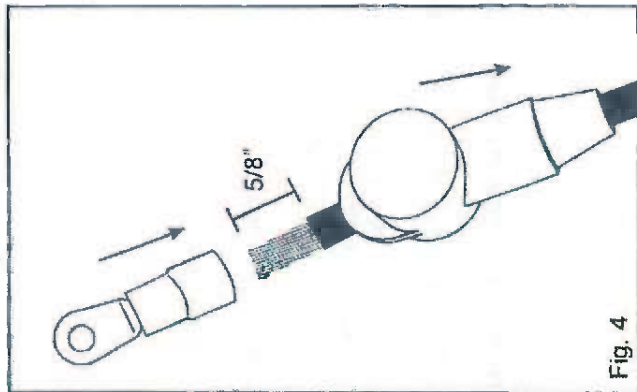


Fig. 4

Step 3.

- A. Locate the Solenoid in a ventilated area near the battery. Mount using the self drilling screws (part # 506-9904).
- B. Split the 6 ga. wire at the solenoid about 4" back and slip on rubber boots - Red Boot (part # 514-0336) on red striped wire and Black Boot (part # 514-0337) on black wire (Fig. 4 & 5).
- C. Strip wire about 5/8" and attach connectors (part # 514-0328) (Fig. 4). Crimp Connectors.
- D. Attach Red to IN and Black to OUT on Solenoid (Fig. 5).

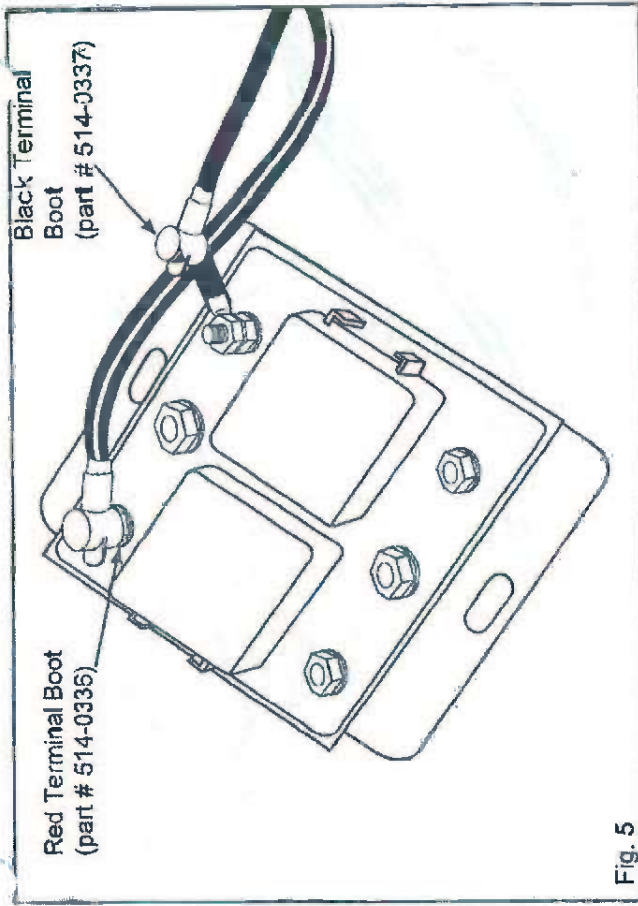


Fig. 5

Do not over tighten nuts on Solenoid!

Step 4. Run 16 ga. Wire to Cab from solenoid

- A. Mount Switch Bracket (part # 514-9954) in a convenient place in cab using the two self drilling screws (part # 506-9904).
- B. Strip wire in cab about 1/4" and attach push on connectors (part # 514-0321) and crimp (Fig. 6).
- C. Pull wire through Switch Bracket (part # 514-9954) (Fig. 6).
- D. Attach wire to Rocker Switch (part # 514-0117) (Fig. 6).
Green to Center
Black to Top
White to Bottom
- E. Snap Rocker Switch firmly in Switch Bracket.

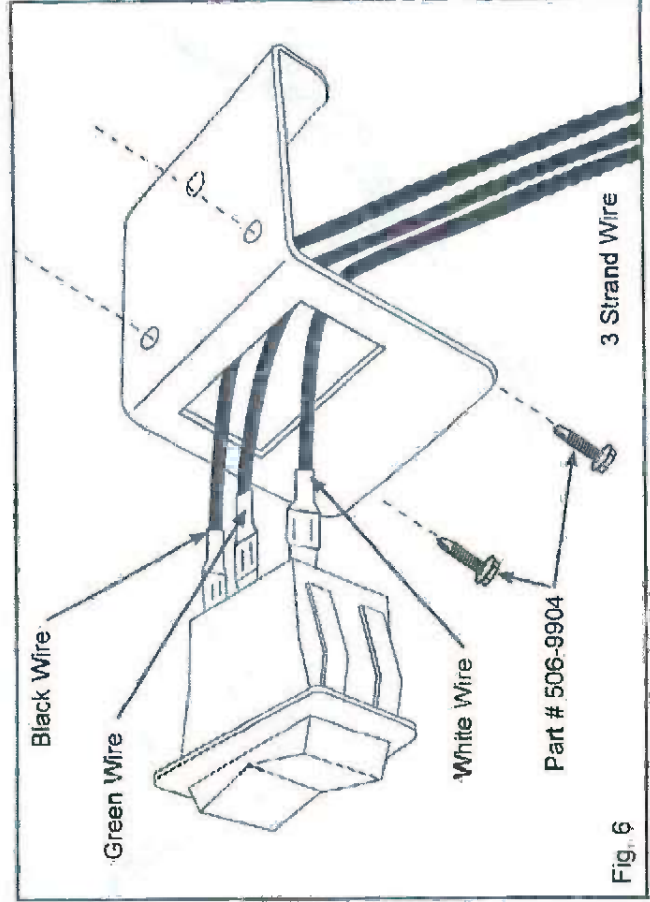


Fig. 6

Step 5. Attaching Switch Wires to Solenoid

- A. On the black and white wires only, strip ends about 1/4" and attach #10 loop connectors (part # 514-0303).
- B. On the green wire, strip end about 1/4" and attach connector with 1/4" eyelet (part # 514-0304).
- C. Attach Black to LEFT Terminal on Solenoid (Fig. 7).
Attach White to RIGHT Terminal on Solenoid (Fig. 7).
Attach Green to BATT+ on Solenoid (Fig. 7).

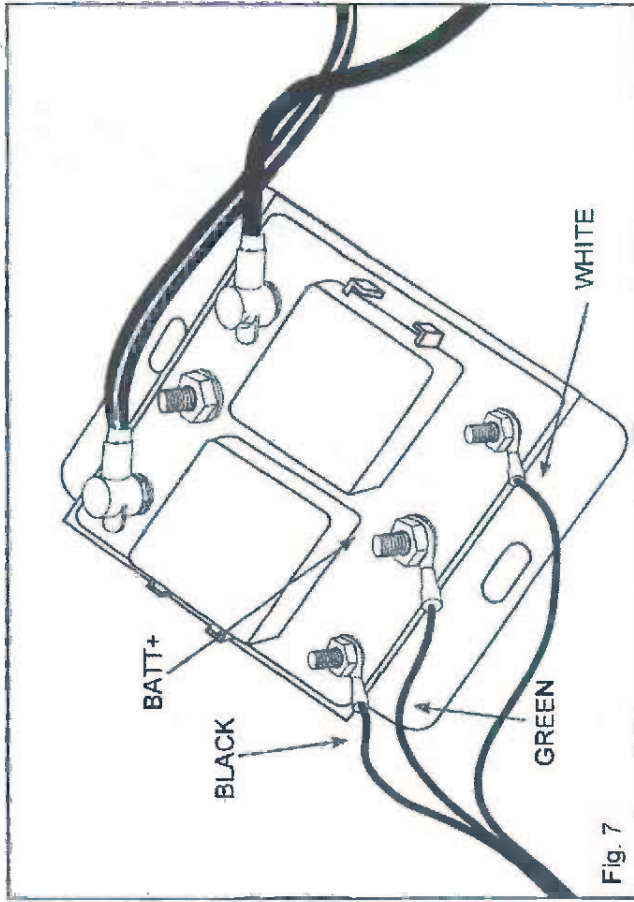


Fig. 7

Step 6. Connecting the Solenoid to the Battery

- A. Cut a length of wire to run between the battery and the solenoid.
- B. Split wire about 4" down and strip ends about 5/8". Slip on Red Boot (part # 514-0336) on Red Striped Wire and Black Boot (part # 514-0337) on Black Wire as done in Step 3.
- C. Attach Connectors (part # 514-0328) and crimp to wires.
- D. Attach Red Striped wire to BATT+ on Solenoid, and tighten nut (Fig. 8).
- E. DO NOT attach Black wire to BATT- on Solenoid at this time.

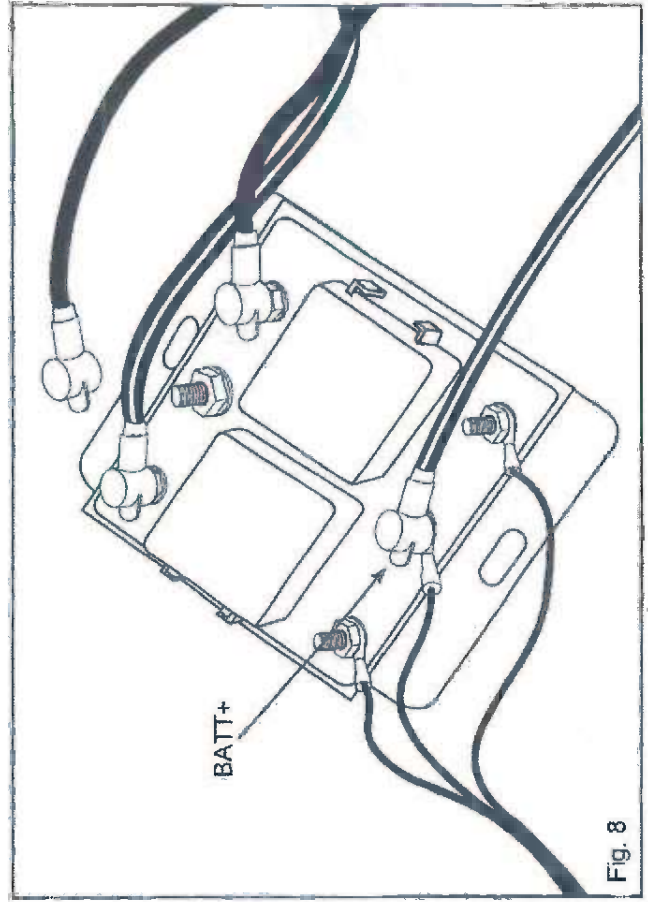


Fig. 8

Step 7. Hooking up the Breaker

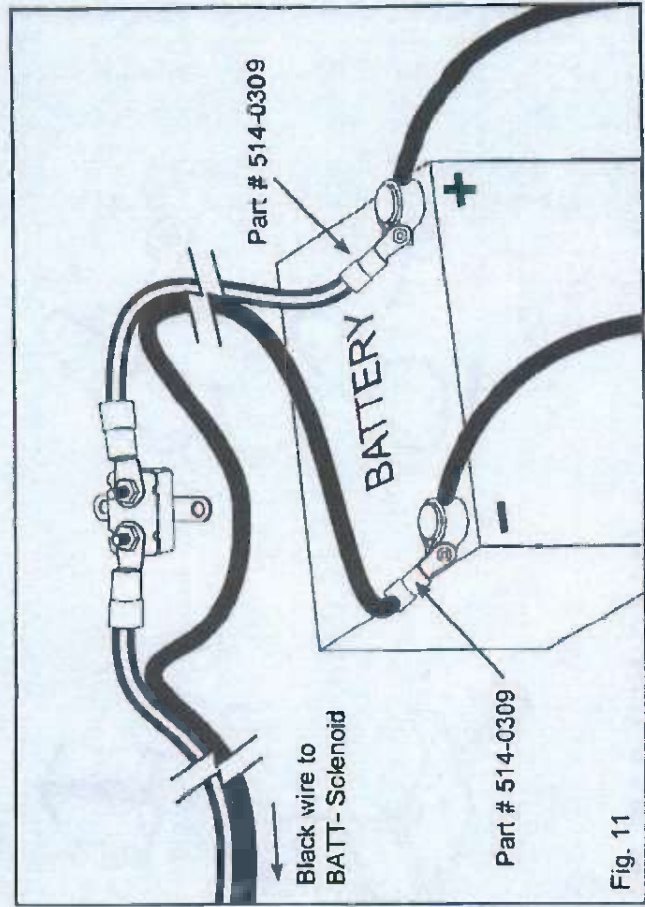
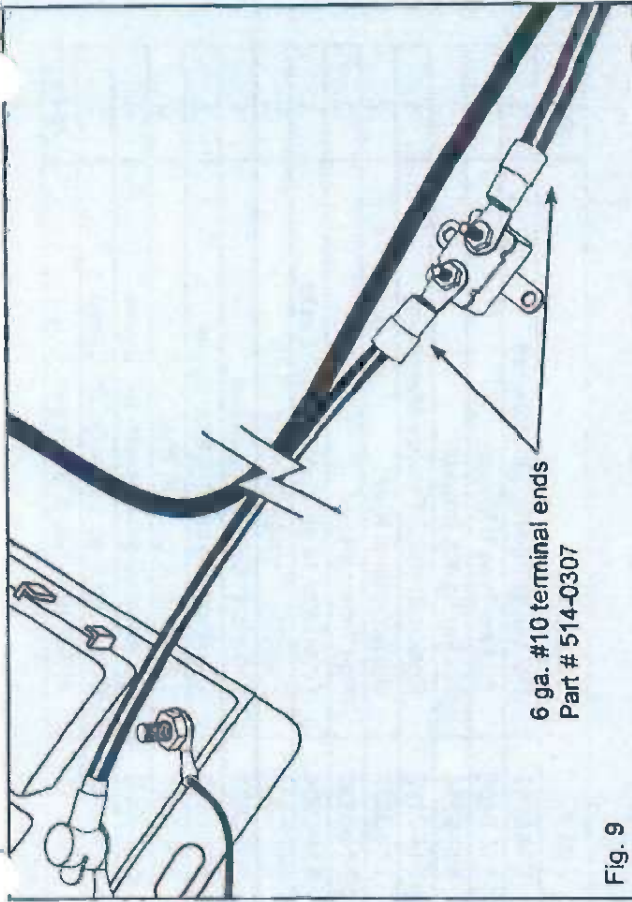
- A. Mount the Breaker in the Battery Box away from moisture and so that it won't short out on the battery lid or terminals.
- B. Split a section of the 6 ga. wire that runs from BATT+ on the Solenoid to the Breaker as needed.
- C. Cut and then strip ends of the Red Striped Wire about 5/8" and attach the #10 terminal ends (Part # 514-0307) only to the Red Striped Wire.
- D. Attach to Breaker. The breaker is marked "Load" at the Solenoid end and "Line" at the Battery end.

Warning: Failure to install properly will void warranty on motor and other parts.

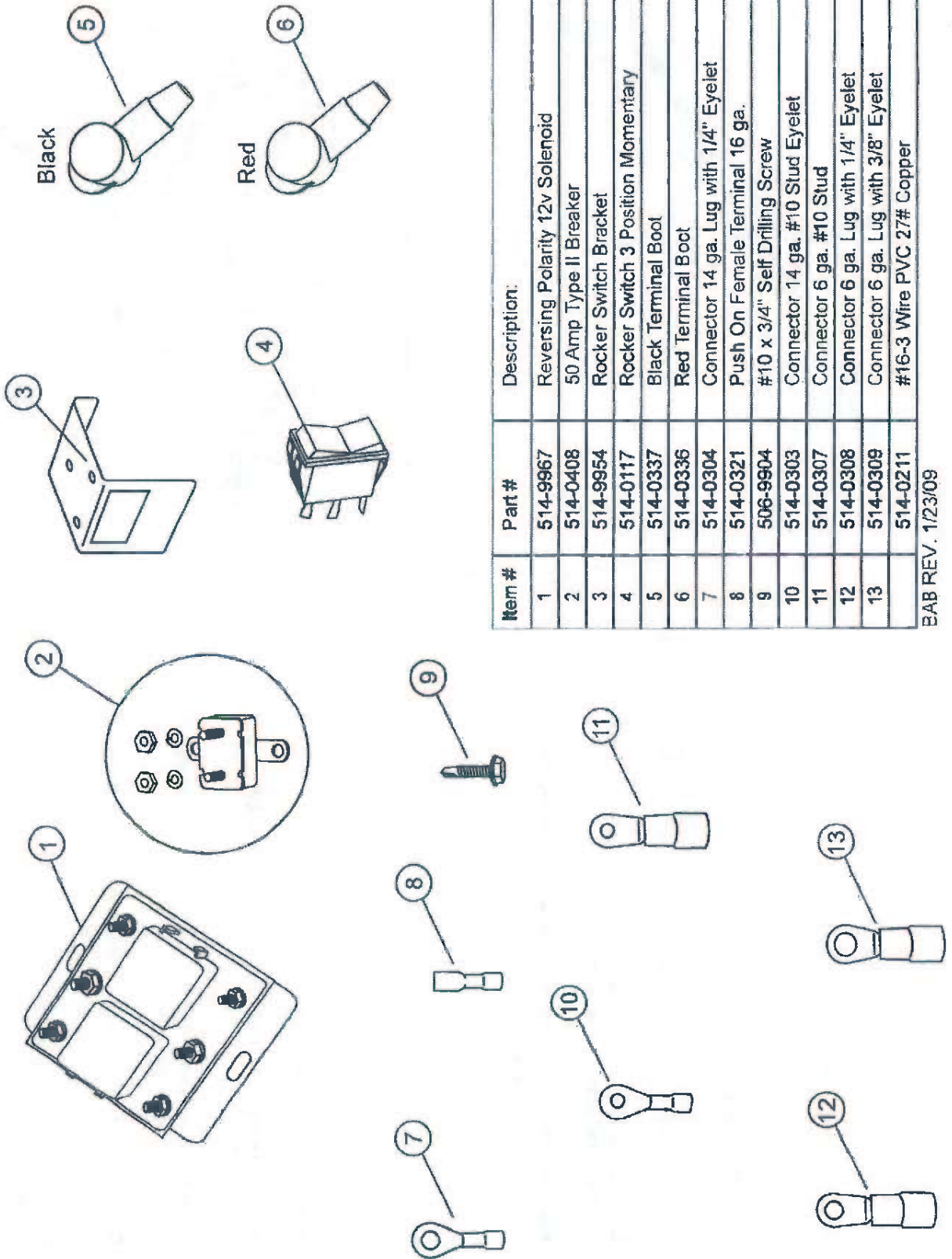
Step 9. Hooking up the Battery

- A. Split the 6 ga. wire that runs from BATT+ and BATT- on the Solenoid about 4".
- B. Strip the ends about 5/8" and attach the 3/8" connectors (part # 514-0309), crimp to wires.
- C. Attach Red Striped wire to Positive Terminal on Battery (Fig. 11). Attach Black wire to Negative Terminal on Battery (Fig. 11).

Note: If the system operates backwards, reverse the connections on the motor.



Smart Switch Basic Kit (Part # 514-0114)



Item #	Part #	Description:	QTY:
1	514-9967	Reversing Polarity 12v Solenoid	1
2	514-0408	50 Amp Type II Breaker	1
3	514-9954	Rocker Switch Bracket	1
4	514-0117	Rocker Switch 3 Position Momentary	1
5	514-0337	Black Terminal Boot	2
6	514-0336	Red Terminal Boot	2
7	514-0304	Connector 14 ga. Lug with 1/4" Eyelet	1
8	514-0321	Push On Female Terminal 16 ga.	3
9	506-9904	#10 x 3/4" Self Drilling Screw	6
10	514-0303	Connector 14 ga. #10 Stud Eyelet	2
11	514-0307	Connector 6 ga. #10 Stud	2
12	514-0308	Connector 6 ga. Lug with 1/4" Eyelet	6
13	514-0309	Connector 6 ga. Lug with 3/8" Eyelet	2
BAB REV. 1/23/09			25 Ft.

MOTOR CHECK OUT PROCEDURE:

1. Remove leads from motor & attach volt meter to the leads.
2. With the switch in to 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 30 amps. Constant amperage reading of over 50 amps indicated binding in the system and/or low voltage.
8. Disconnect 6 ga #10 terminal end from the solenoid side of the breaker.
9. Connect the 6 ga #10 terminal end to the battery side of the breaker. This will bypass the breaker.
10. Test the tarp system. If the motor operates properly then replace the breaker.

