

### TARP SYSTEMS, PARTS & TARPS

P/N 1808922 Rev. C

# Quick-Flip III™ Electric Conversion #1808912

READ BEFORE INSTALLING

3353 SE GRAN PARK WAY STUART, FL 34997 PHONE 1-800-327-8287 FAX 772-287-0431 www.donovan-tarps.com

#### Shur-Co®, LLC Terms & Conditions

SHIPPING. Orders are shipped F.O.B. from the Shur-Co®, LLC sites listed below. No full freight is

allowed or prepaid shipment accepted unless quoted and approved in writing prior to acceptance of the order. All shipments are made by the most reasonable means in accordance with size and weight of order, unless specified routing instructions are furnished by the customer. Shipments are made daily via U.P.S. and common carrier. Claims for shortages must be made within 10 days. All claims for damages or loss in transit must be made with the carrier. No collect calls will be accepted. To ensure delivery of orders, we need your full street address and phone number. When you receive your shipment, examine it carefully. Be sure all cartons listed on the delivery sheet are accounted for. Large items may be packaged separately. If a carton is damaged, open it and inspect the contents before signing for delivery. If merchandise is damaged, describe damage on the delivery receipt. Failure on your part to document damaged or missing merchandise on the delivery receipt releases the carrier of all liability; repair or replacement will be the customer's responsibility.

**WARRANTY.** We warrant all new products are free of defects in materials and workmanship.\* This warranty is effective if products are properly installed and used for the purpose for which they were intended and applies to the original buyer only. Except as set forth above or in any product-specific warranty documentation, we make no other warranties, express or implied, including but not limited to warranties of merchantability of fitness for a particular use.

Returns of a product for warranty must be accompanied by a Return Merchandise Authorization number (RMA#), obtained by by calling Customer Service at 866-748-7435, and sent, with freight paid by us, to Shur-Co®, LLC, 2309 Shur-Lok St., PO Box 713, Yankton, SD 57078. All products returned without an RMA# will be refused. When we issue the RMA#, we will also issue a call tag to have UPS (or other freight company) pick up the product. C.O.D. returns not accepted. We will pay no storage fees for a warranty product return prior to pick by us or the freight company. If a warranty product return is scheduled to be picked up by us, we will pick up the product at our earliest convenience.

If a product returned is found, in our judgement, to be defective in material or workmanship, our obligation under this warranty is limited to the repair or replacement of the product, which will be made by us. Repair or replacement will be at our discretion, with replacements being made using current products performing in the equivalent function. Labor charges, other than those incurred at our factory, including, but not limited to, any labor to install a repaired or replacement product, are not covered under this warranty. All expenses associated with delivering defective products to our factory and delivering repaired or replacement products from our factory to the owner will be paid by us.

If the product returned is found, in our judgement, to be non-warrantable, the owner will be contacted to authorize repair work, purchase of a replacement product or return of the product, all of which will be at the owner's expense. Payment authorization must be received by us before any non-warrantable product is repaired, replaced or returned. All expenses associated with delivering the repaired non-warrantable product, a replacement product or the non-warrantable product from our factory to the owner will be paid by the owner.

In no event will we be liable for any damages of any kind to person, product or property, including but not limited to indirect, incidental, special, consequential or punitive damages, or damages for loss of profits or revenue, even if we have been advised of the possibility of such damages. There are no warranties for used products or products that have been repaired, altered, modified or subjected to misuse, negligence or accident. We will not repair or replace products that fail or malfunction due to ordinary wear and tear, except as expressly noted in a product-specific warranty. Use of non-Shur-Co®, LLC parts in conjuction with Shur-Co®, LLC products will void this product warranty.

\*Certain products have specific warranties that differ from this warranty, for example motors and electronics. Product-specific warranty documentation is available for these items. In the event of a conflict between this warranty and a product-specific warranty, the product-specific warranty will govern.

**RETURN POLICY.** All sales final. See WARRANTY above for return details.

**OTHER.** All prices, product listings, sizes, weights and manufacturing details are subject to change without notice. No person is authorized to modify the foregoing conditions of sale whatsoever.

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#### SHUR-CO® UK, Ltd.

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For more info, log on to our website:

www.shurco.com

#### **MESSAGE TO OWNERS**

Thank you for buying this tarping system from Shur-Co<sup>®</sup>. We appreciate your confidence in our products. Please read and thoroughly understand this manual before installing and/or operating this system.

Pay particular attention to important safety and operating instructions, as well as warnings and cautions. The hazard symbol is used to alert users to potentially hazardous conditions and is followed by caution, warning or danger messages.

Failure to READ AND FOLLOW INSTRUCTIONS could result in failure of your tarping system and/or personal injury. Your trailer requirements may, however, call for minor variations to these instructions.

Please inspect your tarping system periodically repairing or replacing worn or damaged parts.

QUESTIONS? CALL OUR HELP LINE:

1-800-327-8287

MON-FRI 8 AM-5 PM EASTERN TIME

### SAFETY

We at Shur-Co® are concerned with your safety and the safety of all those operating this system. Therefore, we have provided safety decals at various locations on your tarping system. Keep decals as clean as possible at all times. Replace any decal that has become worn or damaged, painted over or otherwise difficult to read. Replacement decals are available.

### **SAFETY INSTRUCTIONS**

- 1. Always wear safety glasses during installation and operation.
- 2. Stay clear of moving parts.
- 3. Do not operate under low-hung power lines. Always check for overhead obstructions before opening or closing.
- 4. Open and close tarp only at job site.
- 5. Place safety decals in visible locations. Replace worn or damaged decals.
- No other use of this system is authorized, except as designed.

#### **RUST PREVENTION**

To prevent rust, paint all exposed metal, such as weld seams and/or metal exposed by grinding or cutting, with corrosion-resistant paint.

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#### **TOOLS REQUIRED**

- 1. Wrenches 1/2", 5/16", 9/16", 5/8", 3/4", 7/8"
- 2. Ratcheting Socket Wrench
- 3. Sockets 1/2", 9/16", 3/4"
- 4. Allen Wrenches 1/8", 5/32", 3/16"
- 5. Drill Bits (metal cutting) 5/16", 3/8", 1/2", 3/16"
- 6. Center Punch
- 7. Hammer
- 8. Tape Measure
- Flat Head or Phillips Screwdriver
- 10. Grinder
- 11. Air or Electric Impact Driver w/9/16" Socket
- 12. Metal Saw
- 13. Steel Welder
- 14. Hex Driver Bit 5/16"
- 15. Phillips Driver Bit #2
- 16. Breaker Bar or Ratcheting Socket Wrench 3/4"

#### MAINTENANCE

- Spray all bearings and drive chain with penetrating oil as needed.
- Brush springs with steel brush weekly to remove dirt and spray with penetrating oil.
- Tighten any loose bolts.
- · Replace damaged/bent parts.
- · Replace worn or broken springs.
- Replace/repair worn or damaged tarps.



#### dinning.

1800802 Sheet Metal Screw - #10 x 1"





1800783 Cap Screw - 1/4" x 1 1/2"





1800998 Cap Screw - 5/16" x 1"





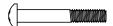
1800972 Cap Screw - 5/16" x 1 1/2"





1808682 Cap Screw - 5/16" x 1 5/8"





1800561 Pan Hd. Cap Screw - 5/16" x 2 1/4"





1800790 Cap Screw - 3/8" x 1 1/2"





1804139 Cap Screw - 3/8" x 3 1/4"





1801025 Cap Screw - 7/16" x 2 3/4"





1800356 Carriage Bolt - 1/2" x 1 1/2"





1801024 Cap Screw - 1/2" x 4"

#### TARP INSPECTION





1800699 Lock Nut - 1/4"





1800431 Hex Nut - 5/16"





1808681 Nylon Lock Nut - 5/16" - Thin





1800990 Lock Nut - 5/16"





1800993 Nylon Lock Nut - 3/8"





1800329 Lock Nut - 7/16"





1800995 Lock Nut - 1/2"





1800784 Flat Washer - 1/4"





1800787 Lock Washer - 5/16"





1800989 Flat Washer - 5/16"





1800991 Lock Washer - 3/8"





1800994 Flat Washer - 3/8"

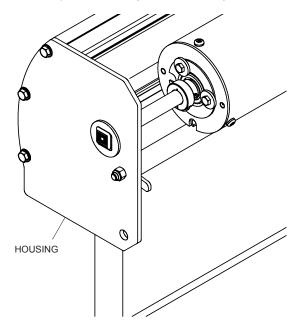




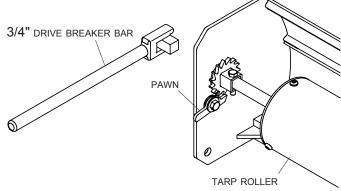
1800996 Flat Washer - 1/2"

**Tarp length:** Measure tarp length with slight tension applied. Compare actual tarp length with length stated on sheet attached to tarp. If tarp length does not match length on sheet, do not proceed. Call your local dealer or call Shur-Co<sup>®</sup> FL Customer Service at 1-800-327-8287.

**STEP 1:** Fully retract existing tarp into housing.



STEP 2: Insert 3/4" drive breaker bar or ratchet into square drive on driver side of housing. Slightly load tension onto roller bar. Carefully release pawl on ratchet plate on inside of housing. Firmly hold breaker bar and rotate pre-loaded shaft slowly counter-clockwise to remove all tension from tarp roller.



STEP 3: Support housing with hoist and lifting straps and remove fasteners from bottom of housing. Do not remove bolt holding cylinder to housing.

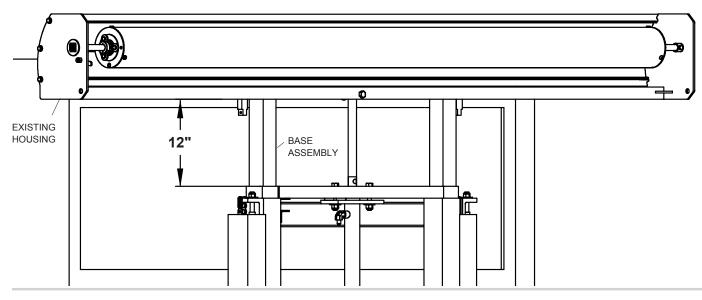
**NOTE:** Be careful straps are only supporting housing, not base assembly mounting plate under housing.

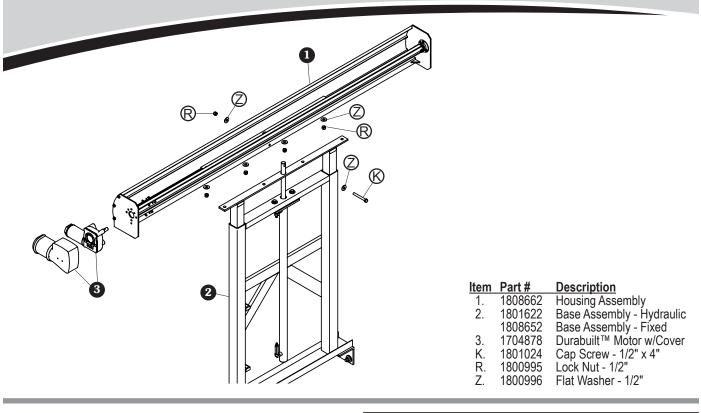
STEP 4: Carefully lower housing assembly so housing is back to fully rested position. With lifting straps still attached, remove bolt holding cylinder rod to housing.

**STEP 5:** Lift housing off base assembly and carefully lower housing to ground.

**STEP 6:** If existing tarp will be used with new tarp housing, remove tarp from spring roller bar before discarding old housing.

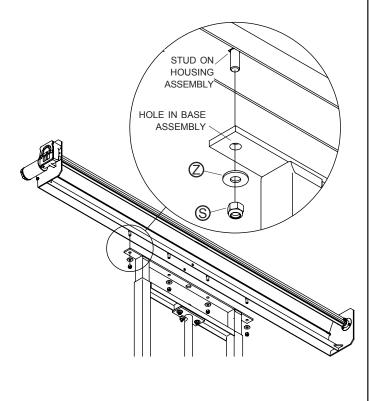
**STEP 3:** Lift housing assembly and existing housing 10" to 12" from fully rested position.



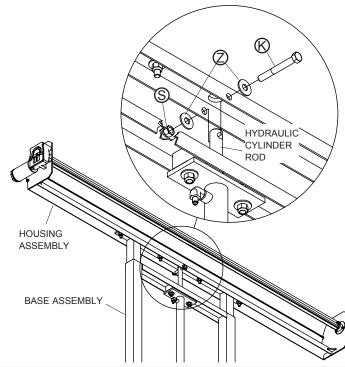


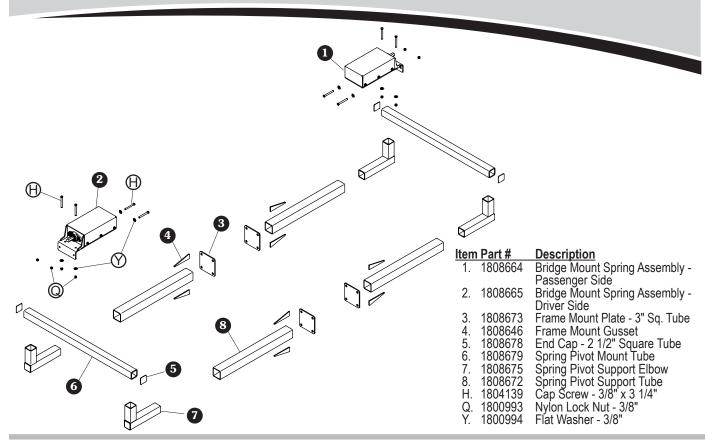
STEP 1: Insert studs on housing assembly into holes in base assembly and fasten with washers ② and nuts ⑤.

**NOTE:** To allow installation of tarp housing, you may need to weld section of steel flat bar to top of base assembly (depending on design and condition of housing assembly).



STEP 2: Hydraulic base assemblies only. Fasten hydraulic cylinder rod on base assembly to housing assembly with screws ③, washers ② and nuts ⑤.

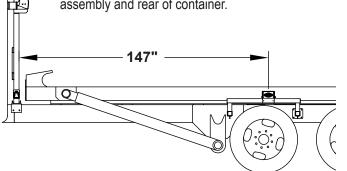




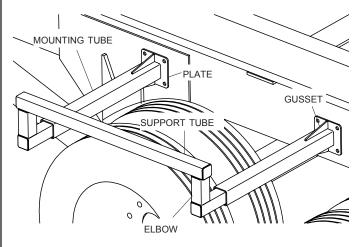
**NOTE:** Fenders on most trucks are not strong enough to support spring assemblies. Fabricate spring pivot supports to support weight and torsion of spring assemblies. Supports must be square and level for system to operate correctly.

**IMPORTANT:** Locate spring assemblies as low on truck frame as possible to allow clearance between roll-off container and spring assemblies. Top of spring assemblies must be less than 5" above rollers used to support container. If needed, pull container onto truck and check for clearance.

STEP 1: Determine location for spring assemblies. To locate center of spring assemblies to support arms to cover up to a 40-yard container, measure 147" from back of base assembly. To ensure tarp does not extend past rear of container, load truck's largest container onto truck and center spring assemblies between base assembly and rear of container.

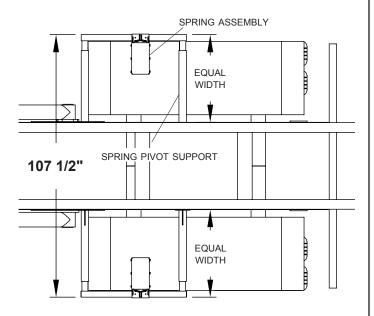


**STEP 2A**: Use mounting plates, elbows and tubes to fabricate spring pivot supports for spring assemblies, modifying components as needed (see next page for necessary dimensions).



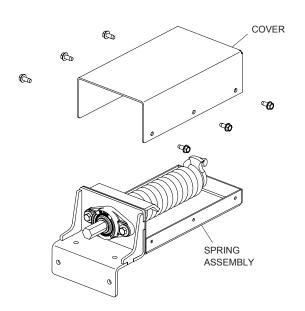
**NOTE:** Do not weld directly to truck frame as this can weaken frame and potentially void warranty. Use mounting plates and drill 5/8" holes and fasten with grade 5 or better 5/8" bolts, washers and nuts (not included), or weld components to structure existing on truck frame.

**STEP 2B**: Fabricate supports to be equal in width, with an overall width of 107 1/2". Secure supports to truck frame.

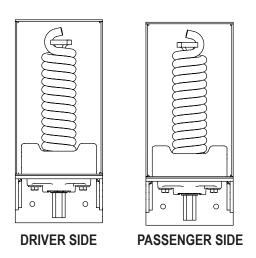


**NOTE:** Spring pivot supports must be equal in length so system will be centered on truck

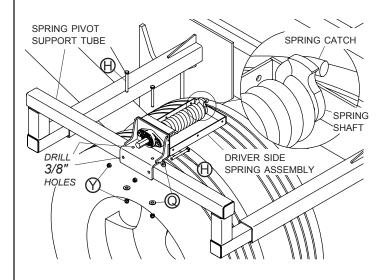
**STEP 3:** Remove covers from spring assemblies.

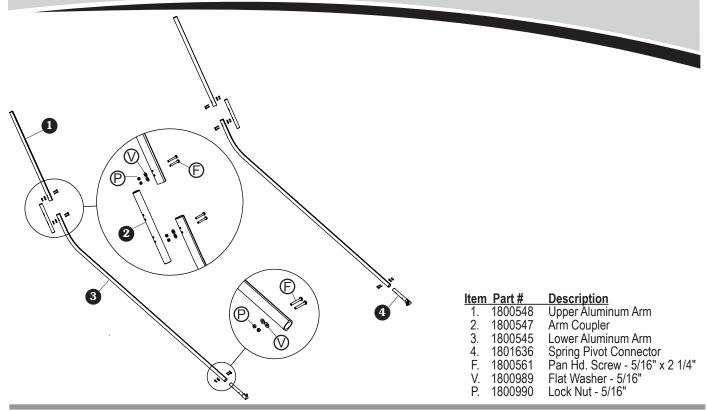


**STEP 4:** Compare springs to springs illustrated below to find driver side assembly.

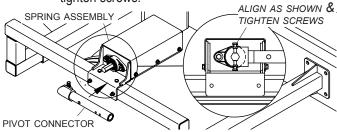


STEP 5: Clamp driver side spring assembly to spring pivot support tube at location determined previously. Weld directly to tube or drill 3/8" holes and fasten to tube with screws ①, washers ② and nuts ③. Repeat for passenger side. Rotate spring shafts so spring catch engages spring hook as shown, then reinstall covers.

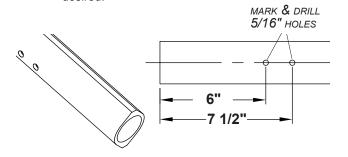




STEP 1: Turn spring shaft (counter-clockwise on driver side and clockwise on passenger side) until you feel shaft contact hook on spring. Slide spring pivot connector onto shaft so connector is close to horizontal and tighten screws.

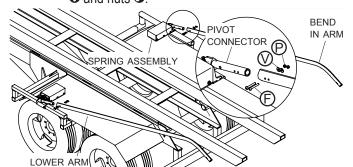


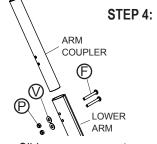
STEP 2: Mark and drill 5/16" holes in lower end of arm. Cut arm to length before drilling holes if shorter arm length is desired.



**NOTES**: If holes will not align well enough to insert bolts, run 5/16" drill bit through holes. Place bolt heads on inside of arms to prevent bolts from catching on container.

STEP 3: Slide lower arm onto pivot connector on spring assembly, positioning bend in arm as shown. Fasten lower arm to pivot connector with screws ③, washers ④ and nuts ②.

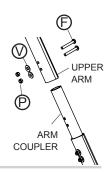


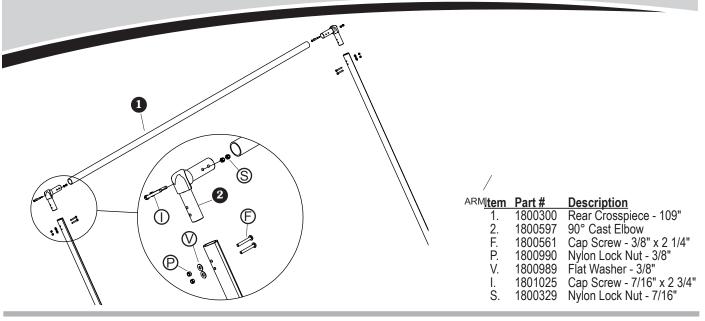


Slide arm coupler into lower arm and fasten with screws ③, washers ④ and nuts ②.

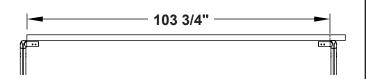
STEP 5: Slide upper arm onto arm coupler and fasten with screws **9**, washers **9** and nuts **9**.



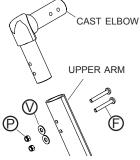




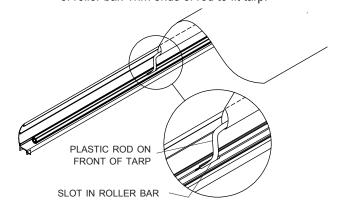
**STEP 1:** Mark and cut rear cross piece to 103 3/4".



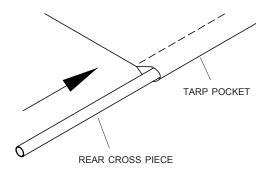
STEP 2: Insert cast elbow into upper arm and fasten with screws **9**, washers **0** and nuts **9**.



STEP 3: Thread front of tarp with plastic rod into slot in center of roller bar. Trim ends of rod to fit tarp.

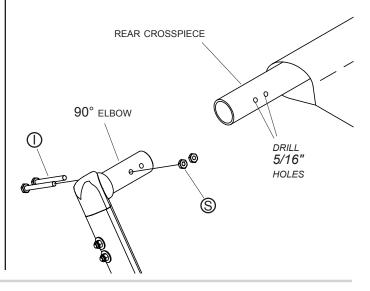


**STEP 4:** Slide rear cross piece into tarp pocket at rear of tarp.

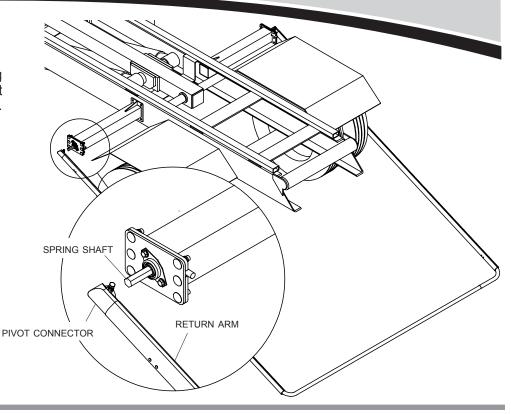


**STEP 5:** Center tarp on roller bar and rear cross piece.

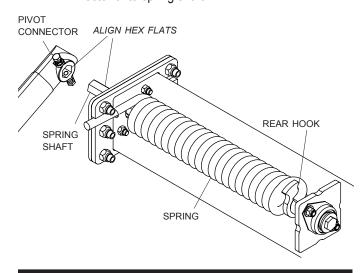
Insert rear cross piece into 90° elbows. Using holes in 90° elbow as guide, mark and drill 5/16" holes. Fasten with screws • and nuts •.



STEP 1: With return arms resting on ground, slide pivot connector off spring shaft.



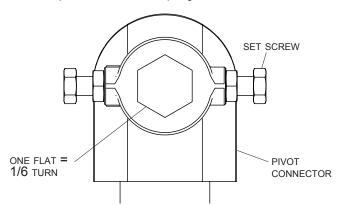
STEP 2: To pre-load spring, turn spring shaft (counter-clock-wise for driver side and clockwise for passenger side) until you feel shaft engage rear hook on spring. Use 7/8" wrench or pipe wrench to continue turning shaft in same direction until next flat on hex shaft lines up with hex flats in pivot connector, then slide pivot connector onto spring shaft.



### **A** WARNING

Use caution when pre-loading springs. Do not let go of pipe wrench until spring pressure is relieved.

STEP 3: Pre-load spring one flat (1/6 turn) at a time on hex shaft until desired pre-load is reached. Remove pivot connector after each 1/6 turn, rotate connector to next flat and replace. When desired pre-load is reached, secure pivot connectors to spring shafts with set screws.

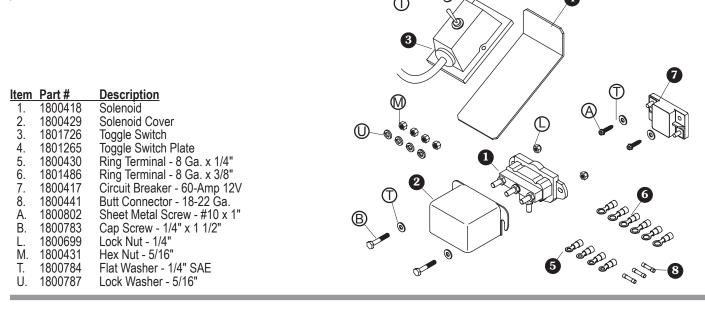


Recommended pre-loads:

**Single axle kits** - Start by turning two flats (1/3 turn) of pre-load, adding more if needed. For containers up to 22', start by turning three flats (1/2 turn) of pre-load.

**Tandem/multi-axle kits** - One flat (1/6 turn) of pre-load can be added, but do not exceed that amount or spring may be damaged. Tandem/multi-axle kits require less pre-load because spring loads up more quickly.

**Trailers** - Start by turning three flats (1/2 turn) of pre-load and increase as needed.



**NOTE:** New electric motor kits include dual-conductor wire. If not using new electric kit, use existing wire on truck.

### **A** CAUTION

Do not spray electric components with pressure washer or hose.

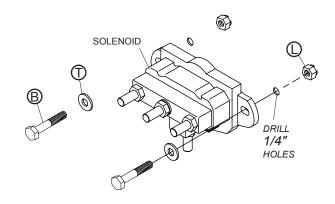
### **A** CAUTION

Do not pull dual-strand wires apart. To separate, cut through insulation between wires carefully with knife. Pulling wires apart could damage wire insulation and expose wire. This could result in equipment damage and/or personal injury.

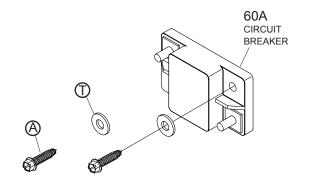
**NOTE:** Cut wires to length and strip only enough wire insulation to install ring terminals. Insert bare wire into ring terminals and crimp securely.



STEP 1: Locate solenoid in sheltered location, such as battery box, cab or under cab. Using solenoid as guide, mark and drill 1/4" holes. Loosely fasten solenoid with screws ①. washers ① and nuts ①.



**STEP 2:** Locate circuit breaker near battery. Fasten with screws **①** and washers **①**.



## WIRING DIAGRAM TOGGLE **SWITCH** $\bigcirc$ 0 DIRECT-DRIVE MOTOR SOLENOID CIRCUIT BREAKER Q **NOTE:** Refer to wiring diagram for steps 3, 4, 5, 6 and 9. See note and caution on previous page. **BATTERY**

STEP 3: Cut section of dual-conductor wire to run from solenoid to electric motor.

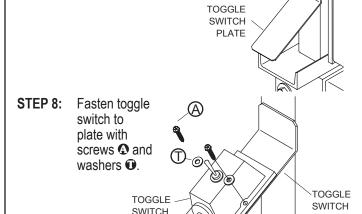
**NOTE:** Be sure to raise housing assembly to fully extended height before cutting wire to length.

STEP 4: Crimp two 3/8" ring terminals **⊙** on one end of wire and two 1/4" ring terminals **⊙** on other end. Connect 1/4" ring terminals to motor and 3/8" ring terminals to solenoid.

STEP 5: Cut section of dual-conductor wire to run from solenoid to battery. Crimp two 3/8" ring terminals **3** on one end of wire and connect terminals to posts on solenoid marked Batt+ and Batt-. Crimp one 1/4" ring terminal **3** and one 3/8" ring terminal **3** on other end of wire. Connect 1/4" ring terminal to circuit breaker post marked AUX and connect 3/8" ring terminal to negative battery post.

STEP 6: Divide portion of dual-conductor wire into 2 single-strand wires (see caution). Cut section of single-strand wire to run from positive terminal on battery to circuit breaker. Crimp 3/8" ring terminal ③ onto one end of wire and 1/4" ring terminal ⑤ onto other. Connect 3/8" ring terminal to positive battery post and connect 1/4" ring terminal to post on circuit breaker marked BAT.

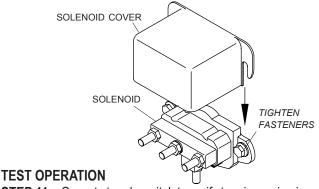
STEP 7: Locate toggle switch where switch can easily be accessed by system operator. Weld toggle switch plate in place.



STEP 9: Run 3-strand jacketed toggle switch wire to solenoid and cut to length. Connect wire ends to solenoid, placing ring terminal **9** on post marked BATT+ and 2 quick disconnects to tabs marked T1 and T2.

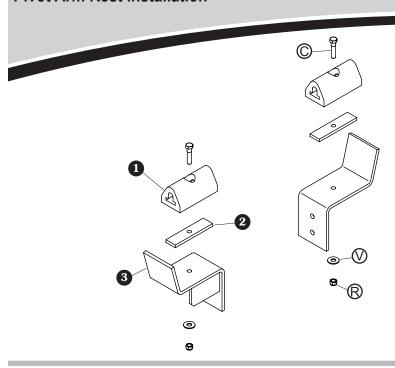
**NOTE:** Kit includes 3 extra butt connectors. If excess switch wire cannot be coiled, connectors are provided to shorten switch wires to desired length.

**STEP 10:** Slide solenoid cover under bolt heads and washers holding solenoid in place. Tighten fasteners to hold cover and solenoid in place.



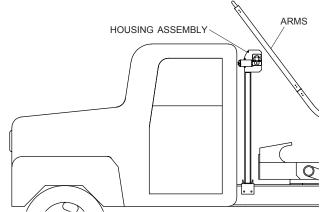
STEP 11: Operate toggle switch to verify tarp is moving in same direction as shown on toggle. If tarp is not moving in same direction as toggle, either swap 2 wires connected to tabs T1 and T2 on solenoid or 2 wires connected to motor.

PLATE

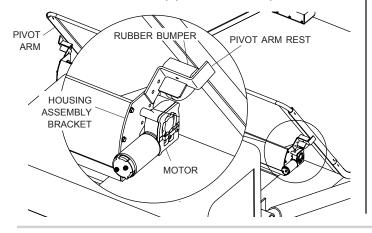


<u>ltem</u>	Part #	<u>Description</u>
1.	1801012	Rubber Bumper
2.	1800140	Bumper Hold-Down Bar
3.	1801324	Pivot Arm Rest
C.	1800998	Cap Screw - 5/16" x 1"
R.	1800995	Lock Nut - 5/16"
V.	1800989	Flat Washer - 5/16"

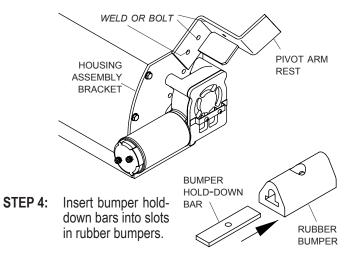
**STEP 1:** Wind tarp open until arms are completely forward, stopping just before arms reach housing assembly.



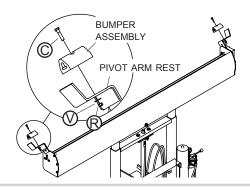
STEP 2: Position rubber bumpers on pivot arm rests. Align components on housing assembly brackets, adjusting so pivot arms rest evenly on rests and do not interfere with motor. Clamp pivot arm rests in place.

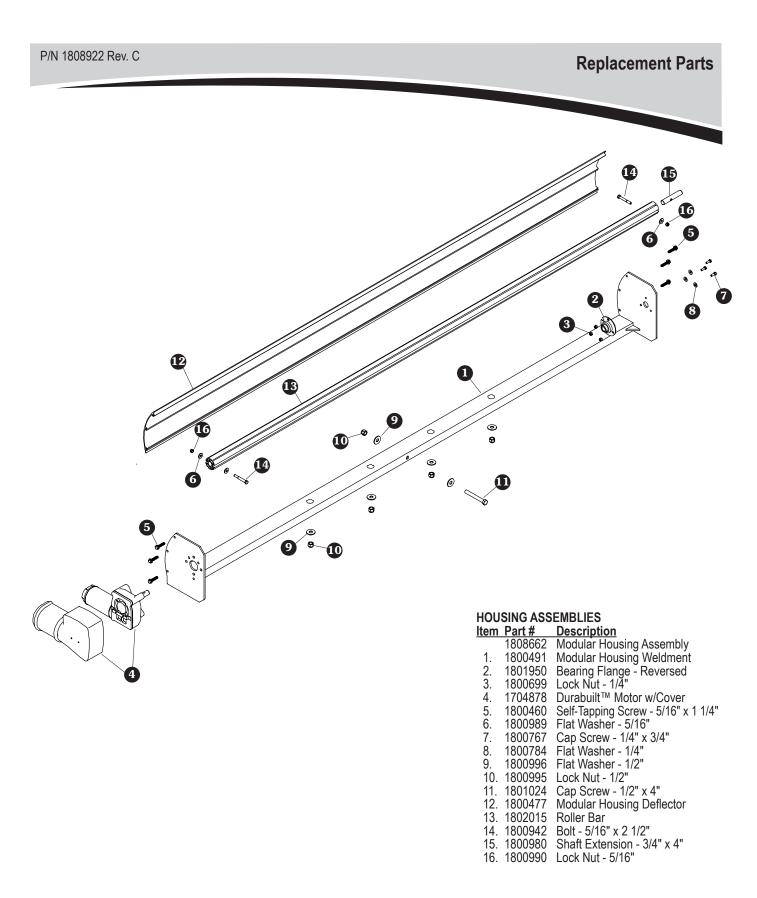


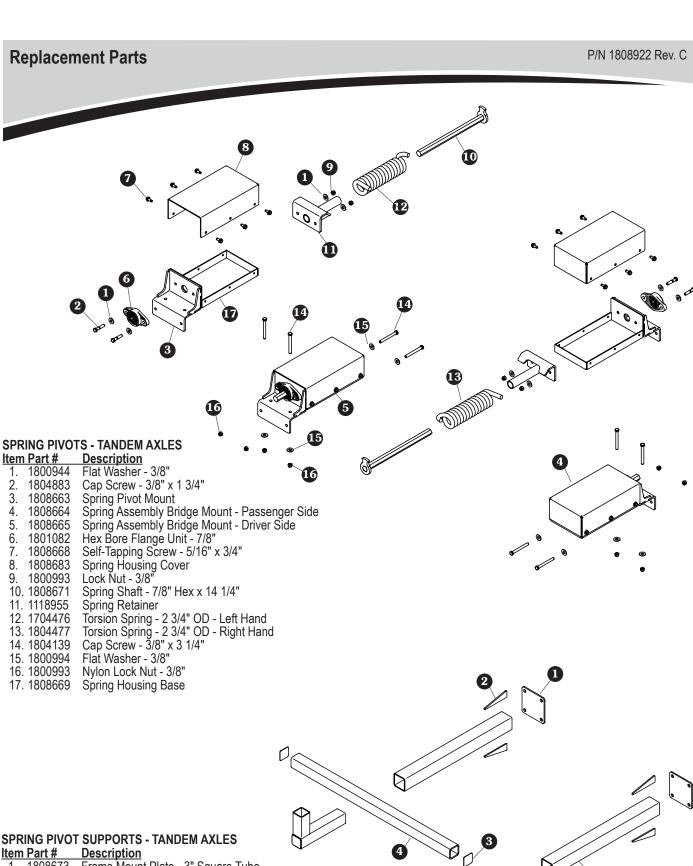
**STEP 3:** Remove rubber bumpers and weld or bolt pivot arm rests onto housing brackets (hardware not provided).



STEP 5: Fasten bumper assemblies to pivot arm rests with screws **⊙**, washers **⊙** and nuts **⊙**.

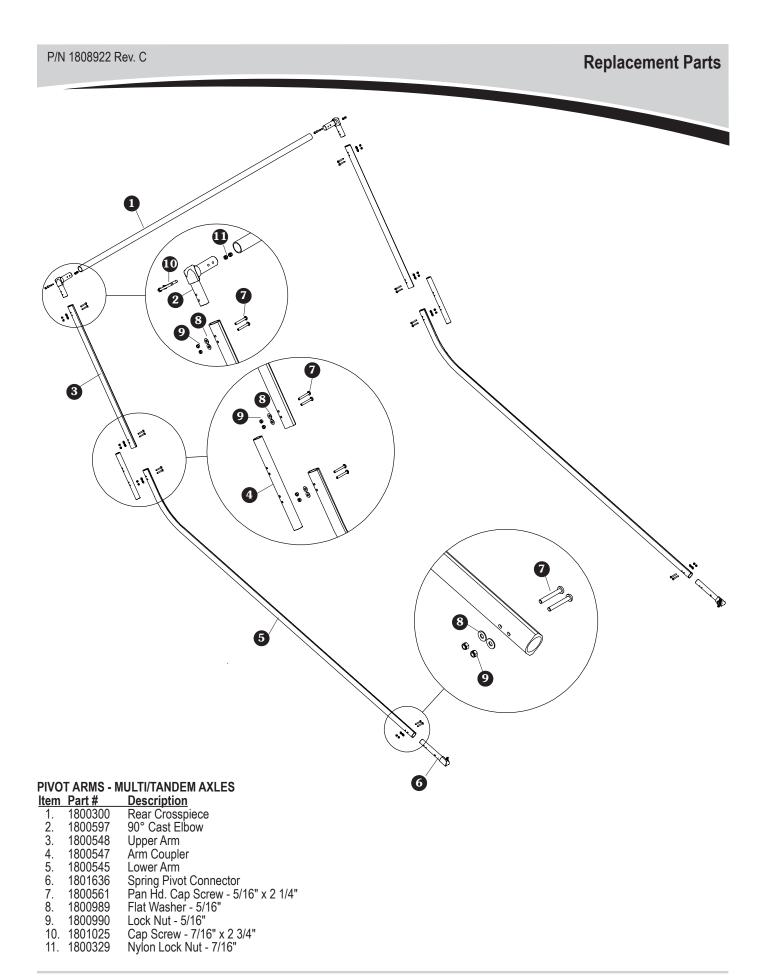






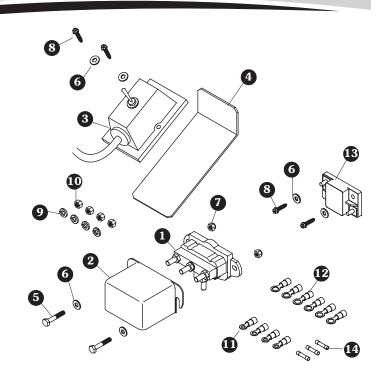
Frame Mount Plate - 3" Square Tube 1808673 1808646 Frame Mount Gusset End Cap - 2 1/2" Square Tube Spring Pivot Mount Tube 1808678 1808679 1808675 Spring Pivot Support Elbow 1808672 Spring Pivot Support Tube

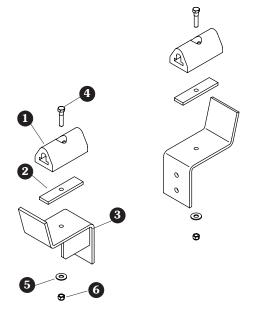




### **ELECTRIC COMPONENTS**

Part #	Description
1800418	Solenoid
1800429	Solenoid Cover
1801726	Toggle Switch
1801265	Toggle Switch Plate
1800783	Cap Screw - 1/4" x 1 1/2"
1800784	Flat Washer - 1/4" USS
1800699	Lock Nut - 1/4"
1800802	Sheet Metal Screw - #10 x 1"
1800787	Lock Washer - 5/16"
1800431	Hex Nut - 5/16"
1800430	Ring Terminal - 8 Ga. x 1/4"
1801486	Ring Terminal - 8 Ga. x 3/8"
1800417	Circuit Breaker - 60-Amp 12V
1800441	Butt Connector - 18 to 22 Ga.
	1800418 1800429 1801726 1801265 1800783 1800784 1800699 1800802 1800787 1800431 1800430 1801486 1800417





### PIVOT ARM RESTS

IteIII	rail#	Description
1.	1801012	Rubber Bumper - 4" - Drilled
2.	1800140	Bumper Hold-Down Bar
3.	1801324	Pivot Arm Rest
4.	1800972	Cap Screw - 5/16" x 1 1/2"
5.	1800989	Flat Washer - 5/16"
6.	1800990	Lock Nut - 5/16"

P/N 1808922 Rev. C **Notes** 

# MORE QUALITY PRODUCTS FROM DONOVAN™

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  - Arm-Matic<sup>™</sup>
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  - Econo-Pull™
  - Turbo Tarp2™
  - 2000 Series
  - 5000 Series
  - Hammer™
  - Bullet™
  - Flash™
  - Long Arm<sup>TM</sup>

- **■** Waste Products
  - SWAT TM
  - The  $Ox^{TM}$
  - Quick-Flip III™
  - Sidewinder™
  - Sidewinder™ 350
  - HyTower™ SL
  - HyTower™ DL
  - Double-Flip™
  - Donovan Belt & Ratchet (DBR)

