

# PowerTrak™

## Full Installation Instructions

A step by step guide through the process of installing the Pool Cover Specialists Powertrak™ Automatic Pool Cover.



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# I. Pre-Installation Instructions

Before beginning installation of the Powertrak™, it is important to follow a few preparatory guidelines:

- A. Make sure that the pool has been built correctly and that the Powertrak™ mechanism and cover tracks have adequate room for proper installation.
- B. Follow the instructions in the PCS document “PCS Complete Measuring Form” (**Doc. ID# 60100**) to create a perfect square chalk rectangle around the pool. This chalk rectangle will give you a guide throughout the installation process.
- C. Make sure that the pool is “Cover Ready”:
  - Water level is at its normal height
  - Deck is free of debris and obstruction
  - Electrical preparation has taken place and meets required local and NEC codes
- D. Refer to the Suggested Tools and Powertrak™ Components lists below to determine that all necessary tools and materials are present and in working order.

## Suggested Tools\*:

- Cordless Drill w/ 1/4” Masonry Bit; 5/32” Hex Bit; # - #3 Screw Bits; 1/2” Socket Bit
- Hammer Drill w/ 1/4” Bit
- 100’ Measuring Tape
- Pencil
- Hammer/Rubber Mallet
- Extension Cord
- Chalk Line
- Lighter or Matchbook
- 11/64” Drill Bit
- Black Permanent Marker
- Utility Knife or Scissors
- 1/2” Wrench or 1/2” Socket & Ratchet
- Calculator
- Hole Punch
- Screwdriver
- File

## Powertrak™ Components:

- 22’ TopTrack (2 - 4, depending upon pool length: under 22’ = 2 track sections; over 22’ = 4 track sections) **#54817**
- Pulley Casting & Guide Kit (1) **#PT2005**
  - TopTrack Splice (2)
  - TopTrack Guide (1)
  - TopTrack Pulley Casting (2)
  - Pulley (2)
  - 8-32 x 1 Phillips Pan Head Machine Screw (2)
  - 8-32 Nylock Nut (2)
- Powertrak™ Drive System (1) **#PT2001**
- Powertrak™ Unit Mounting Kit (1) **#PT2006**
- TopTrack Wheel Assembly (1) **#TT1003**
- Snaplock Kit (1) **#SN1000**
- Powertrak™ Pinning Screw Kit (1) **#PT2004**
- Powertrak™ Pulley and Child Protector Mounting Kit **#PT2113**
- Powertrak™ Pulley Assembly **#PT2022**
- Pump w/ 10 x 10 Base Plate (1)
- Child Safety Protector
- Powertrak™ Owner’s Manual

\*NOTE: Not all Suggested Tools will be alluded to directly in this manual. However, technicians may find all useful.

## II. Snap-on Toptrack Installation

This document provides technicians with detailed instructions for the installation of the Pool Cover Specialists Snap-On Toptrack. This manual is written as a reference for technicians already familiar with the PCS cover systems. Installers should become familiar with the documentation specific to the system used before proceeding.

The Snap-On Toptrack provides many advantages for the installer and the pool owner: (1) Fewer screws make maintenance easier, and eliminate some safety issues; (2) Time and effort is saved on installation; (3) The finished track is more attractive.

**NOTE: Please read through this entire manual before beginning the installation.**

### Materials Needed:

- Snap-On Toptrack Kit (#SN1000) (1)
- Track Screws (#33252) (44)
- Snap-Lock Extrusions (#22098) (44)
- Red Holob Anchors (#33600) (44)
- 22' Snap-On Toptrack (#54817) (quantity needed depends upon pool length)
- Pulley Casting & Guide Kit
- Standard Toptrack Positive Stop Assembly (#TT1002)

### Tools Needed:

- Black Marker or Pencil
- 100' Measuring Tape
- Chalk Line
- Cordless Drill w/ 1/4" Masonry Bit; 5/32" Hex Bit; #2 - #3 Screw Bits
- Hammer Drill w/ 1/4" Bit
- Hole Punch
- Rubber Mallet/Hammer
- Screwdriver
- File
- Sawsall

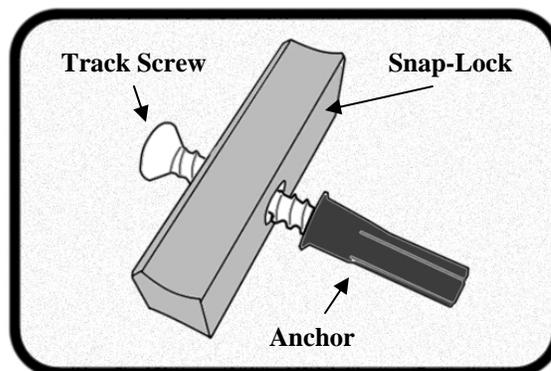
### Preparatory Steps

-Check the Materials Needed list above. Make sure all components are present and undamaged.

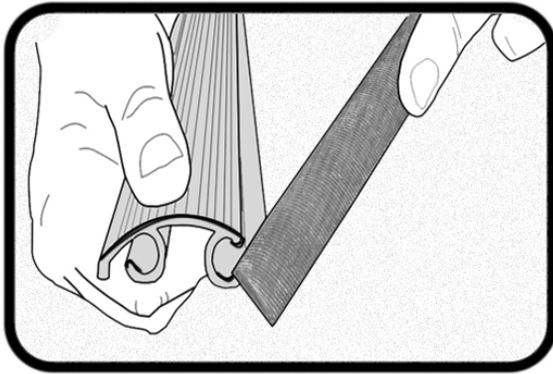
-Make sure all tools are accessible. Fully charge the batteries for the Cordless Electric Drill.

-Read through this instruction manual to become familiar with the parts and processes involved in this installation.

-Prepare the Snap Locks by combining each with a track screw and a red holob anchor, as in the picture at right.

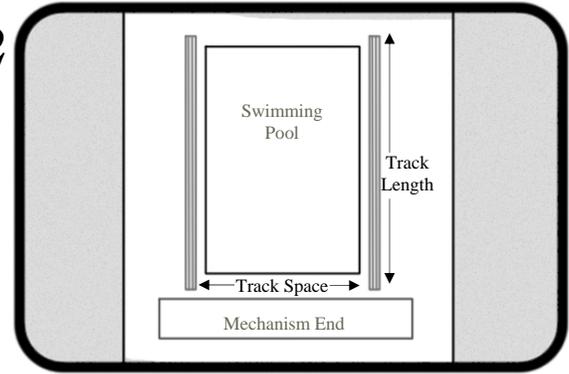


1



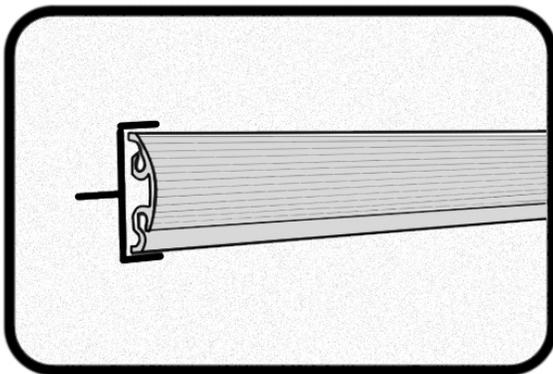
Use a half-round file to dull sharp edges on each end of each piece of Toptrack. Remove burrs from top edge of track ends. *(Points requiring filing in bold.)*

2



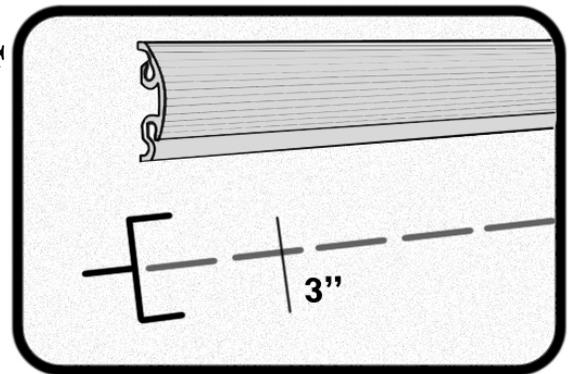
Place the Toptrack sections in their positions on the deck. Refer to reported Track Space and Track Length.

3



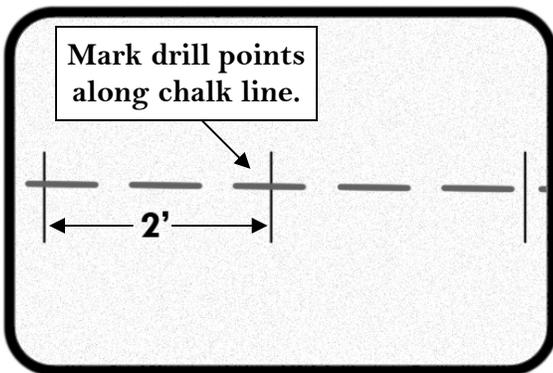
Mark the deck at each end of each track with a carpenter's pencil.

4



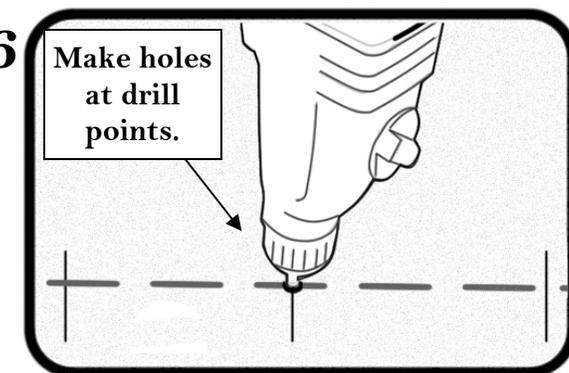
Set the track aside. Snap a straight chalk line. Make a mark 3 inches from each track end. This marks a drill point.

5

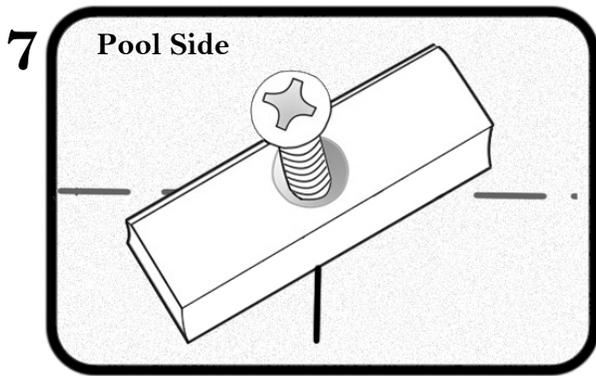


Mark the remaining drill points along the track, one approx. every 2 feet. **NOTE:** Make drill points at any low points in the deck.

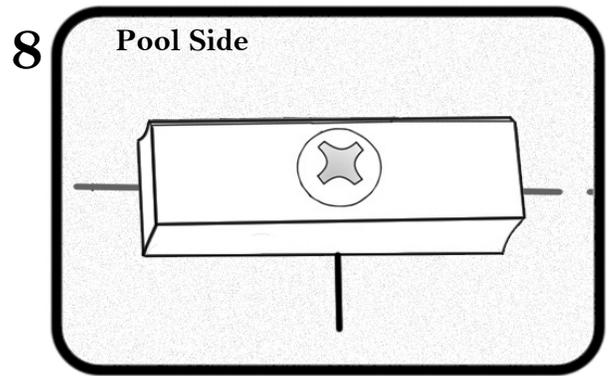
6



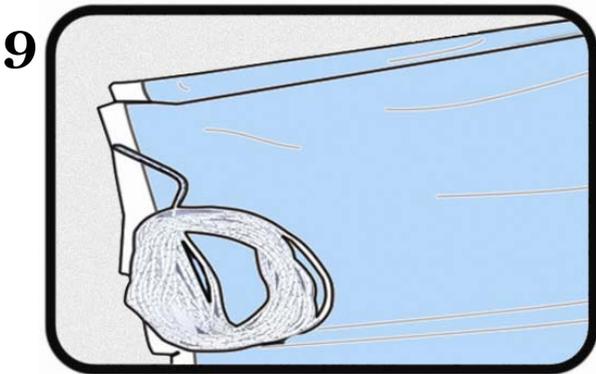
Using a 1/4" bit, create 2 inch deep holes at each drill point.



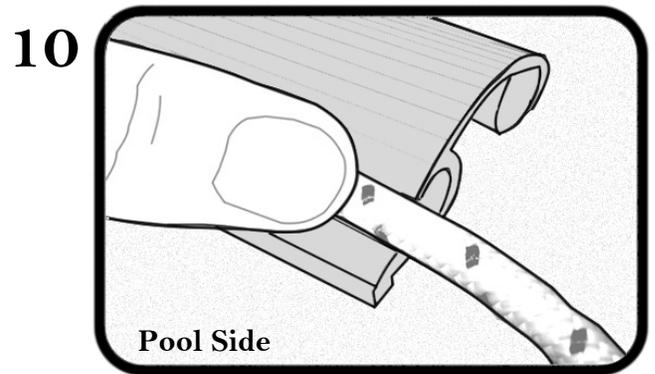
Hammer a snap lock assembly into each of the holes created in *Step 6*, excluding those 3" in from the track ends.



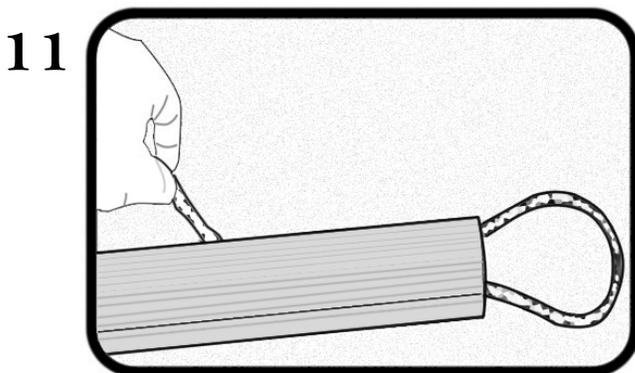
Twist the snap locks so that the beveled edge of each is facing the pool. Secure the snap locks to the deck.



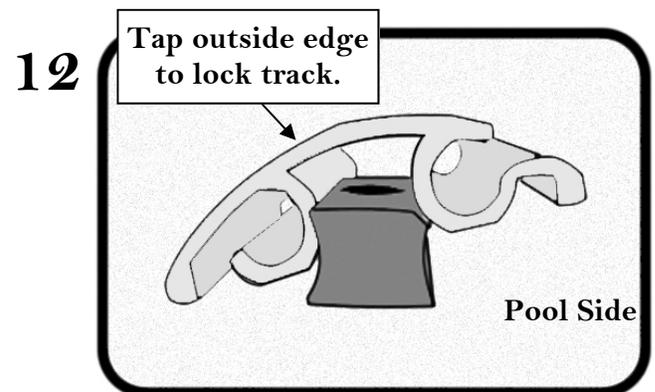
Place Cover Fabric in position at the mechanism end of the pool. Undo both ropes and loop in loose coils. Check for, and undo, knots in the ropes.



Feed the rope through the slotted (*pool-side*) channel of the Toptrack. Pull the full length of the rope to the opposite end.

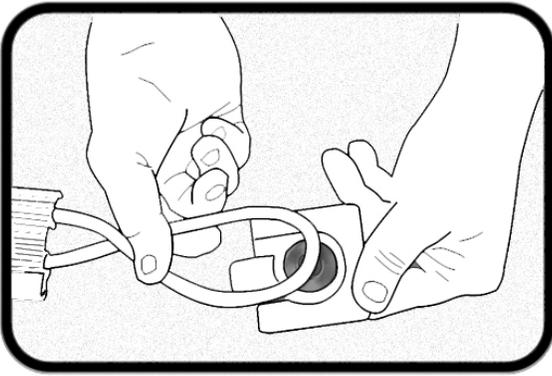


Feed the rope into the non-pool side channel of the track and pull it all the way back to the mechanism end. Leave a small loop extending from the non-mechanism end.



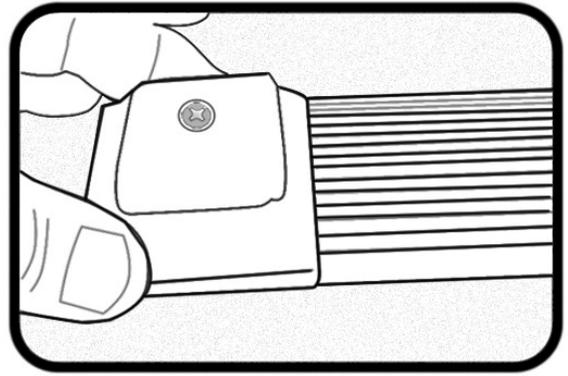
Lay all track sections over the snap locks. Press the track to the deck and tap the outside edge with a mallet to snap the track into place.

13



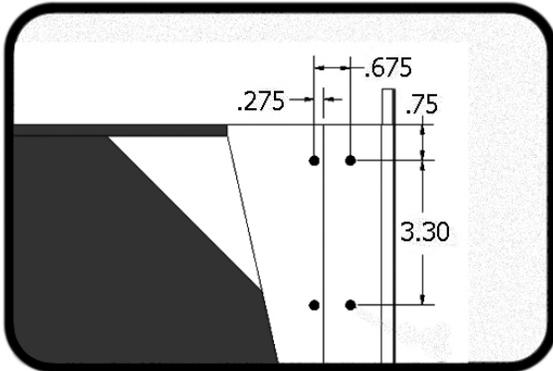
Twist the rope loop created in *Step 11* once and press the loop into the underside of the Pulley Casting.

14



Insert the Pulley Casting into the non-mechanism end of the track. Because the casting must sit flush on the deck, it will be necessary to drill a small hole beneath the screw.

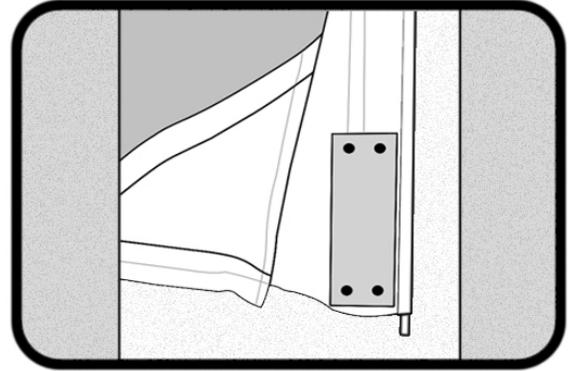
15



To install the Positive Stop, new holes must be created in the white trim of the Pool Cover, near the front edge. Use the image above as a reference through *Steps 16 - 18*. Create holes on both sides of the Cover.

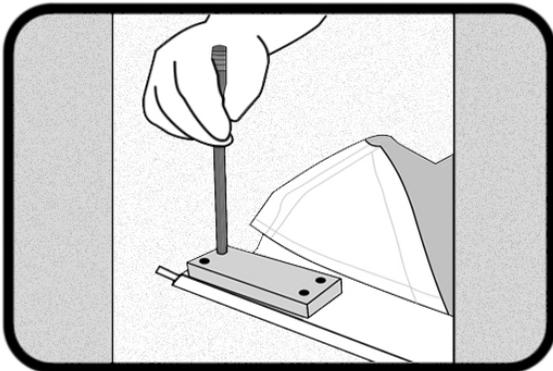
NOTE: Dimensions are in inches.

16



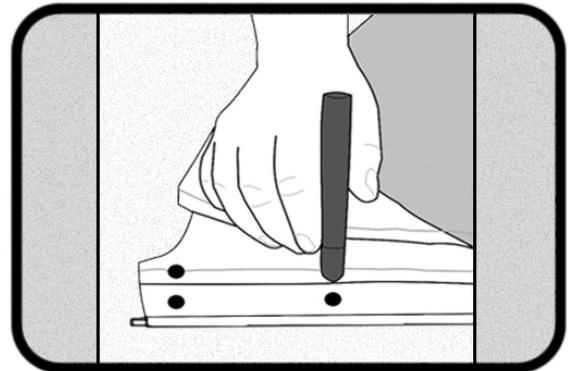
Locate the Top Half of the Positive Stop. Use it as a jig to mark the hole punch points in the fabric. Place it in position over white trim of the Pool Cover. (*Use Fig. 15 as a reference.*)

17



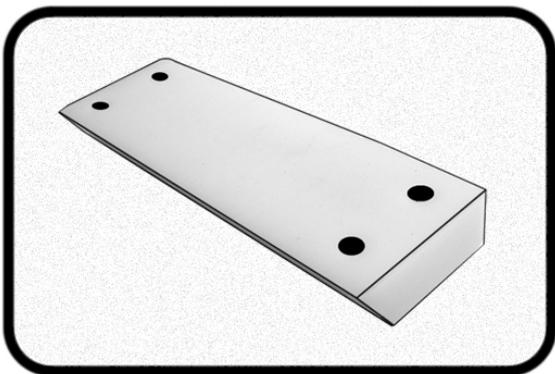
Use a pencil to mark the four punch points in the Cover Fabric. Set the Positive Stop aside.

18



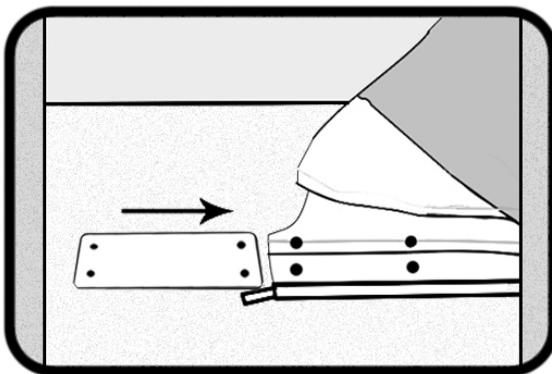
Use a hole punch with a hammer to create 1/4" holes at each of the punch points designated in *Step 17*.

19



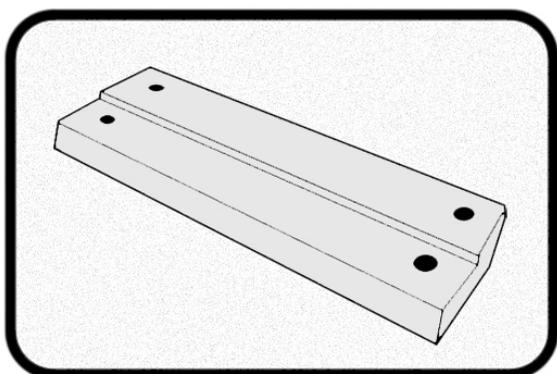
Locate the Bottom Half of the Positive Stop. (PCS Part #14066)

20



Press the beveled side of the Positive Stop against the inside of the Toptrack. Slide it underneath the Cover until its holes line up with those created in Step 18.

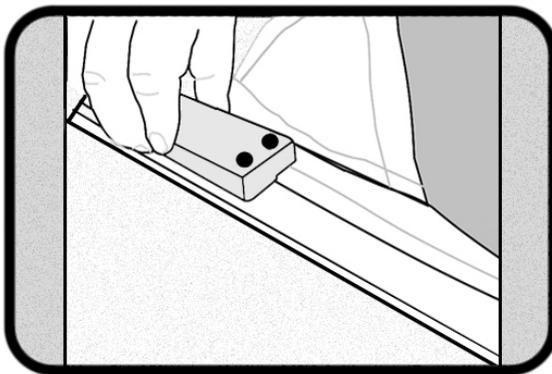
21



Locate the Top Half of the Positive Stop. (PCS Part #14065)

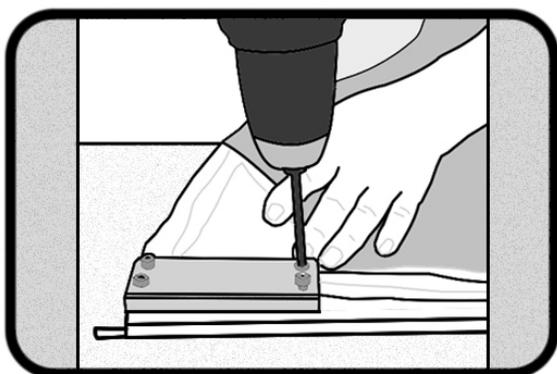
NOTE: The above image shows the underside of the piece.

22



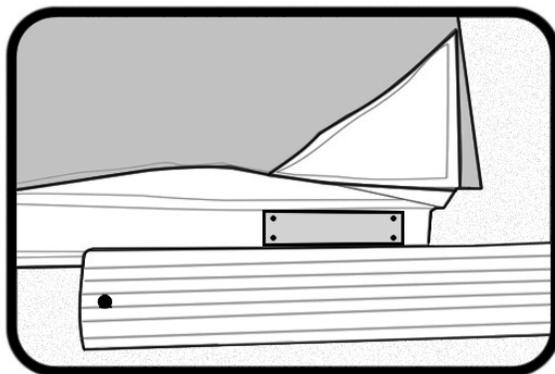
Place the Top Half in position over the holes punched in the trim. Line up the holes with those in the Bottom Half of the Positive Stop.

23



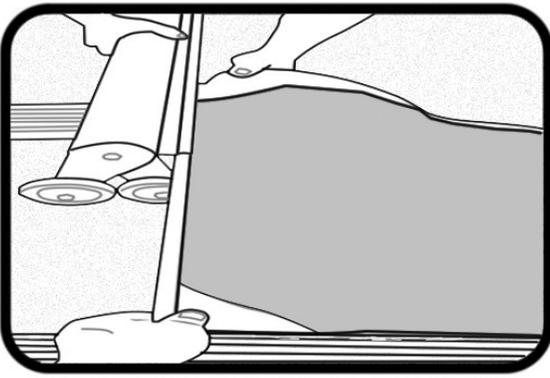
Locate 4 Hex Head Screws. Use a drill with a 5/32" hex bit to insert them through both halves of the Positive Stop.

24



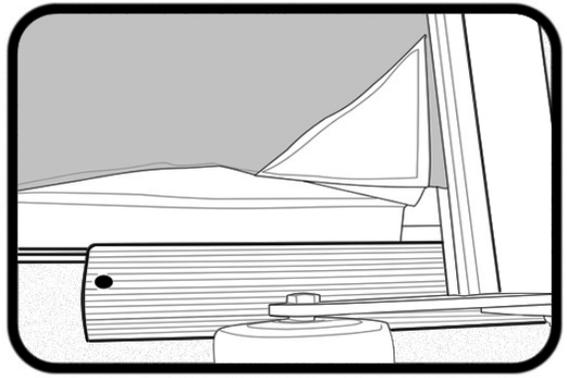
Pull 1 foot of the Pool Cover into the Track on one side of the pool. NOTE: Do not pull the cover into the opposite Track at this time.

25



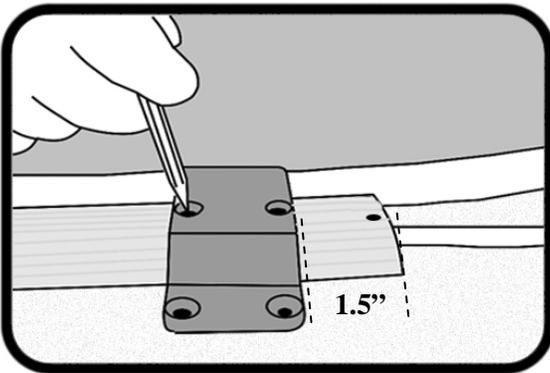
Insert the front edge of the un-inserted end of the Cover into the slotted channel of the Leading Edge Bar. Push the bar across the pool.

26



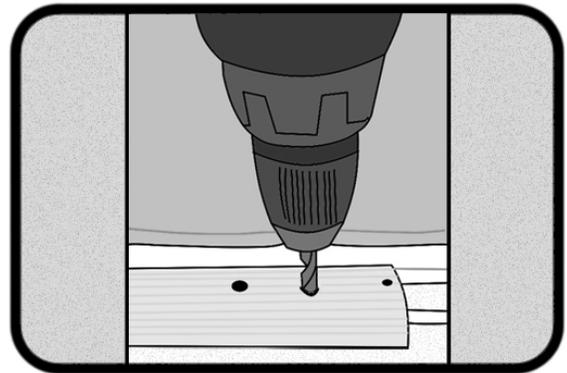
Feed the un-inserted end of the fabric into the Track. Pull the Cover forward until both sides extend about 1 foot into the track.

27



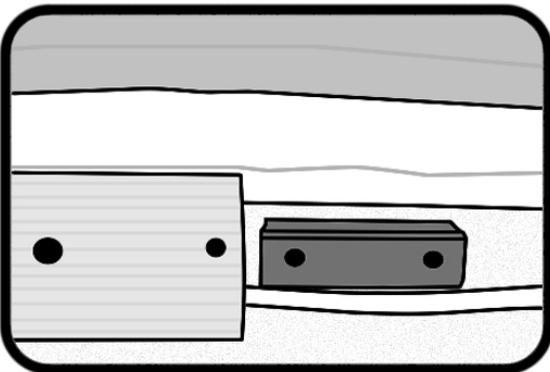
Locate the Positive Stop Plate. Position it on top of the Toptrack, as shown. Leave about 1.5 inches of clearance from the Track end. Use a pencil to create drill-point marks on the track. **NOTE:** If necessary, slide the leading edge away from the track.

28



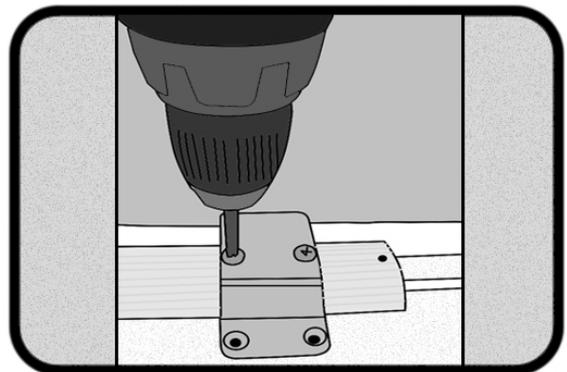
Use a drill with a 1/4" drill bit to create holes through the Track at the drill-points marked in *Step 27*.

29



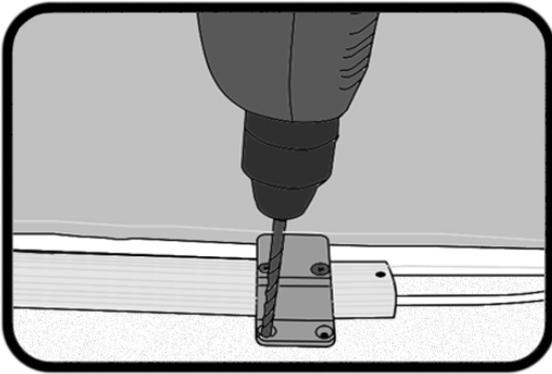
Slide the Stop Plate Support Splice into the Track. Line up the holes in the Support Splice with the holes created in *Step 28*.

30



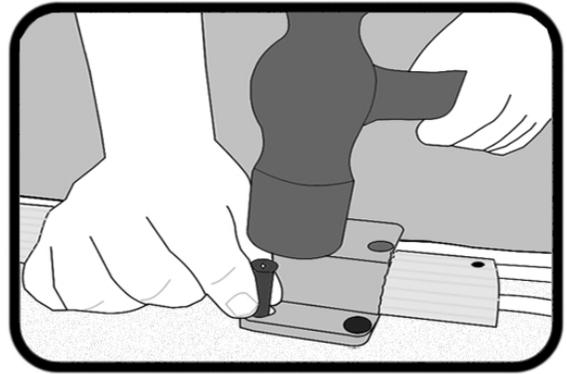
Locate the Positive Stop Plate. (*PCS Part #22097*) Place it over the Track as shown above. Line up the holes and use a drill with a #3 screw bit to insert Flat Head Screws.

**31**



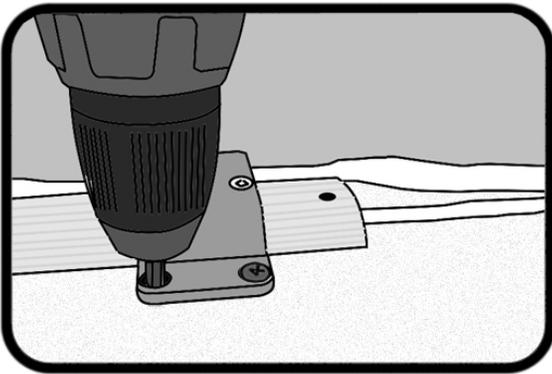
Use a hammer drill with a 1/4" bit to create 1.5" deep anchor points in the deck. Drill straight through the two unused holes in the Positive Stop Plate.

**32**



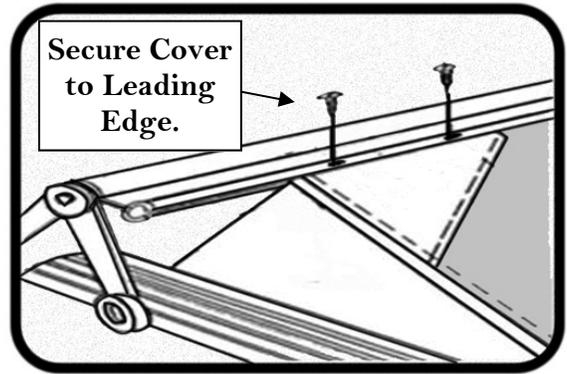
Hammer 1 Red Holob Anchor into each of the anchor points created in *Step 31*.

**33**



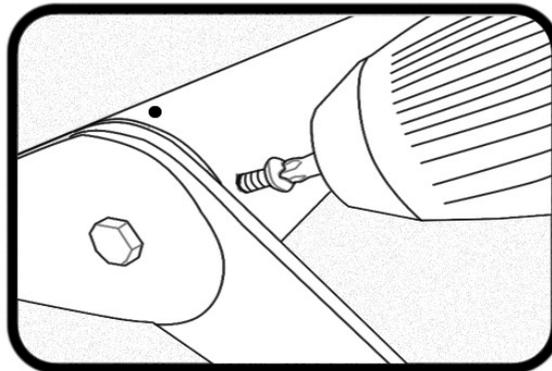
Use a drill with a #3 screw bit to insert Track Screws through the holes and into the anchors. Repeat on opposite side of pool.

**34**



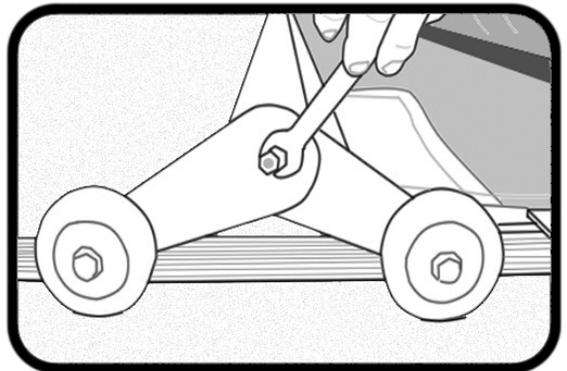
Drill two holes through the beaded fabric edge on each end of the slotted channel. Use four 1/2" screws to pin the fabric to the leading edge.

**35**



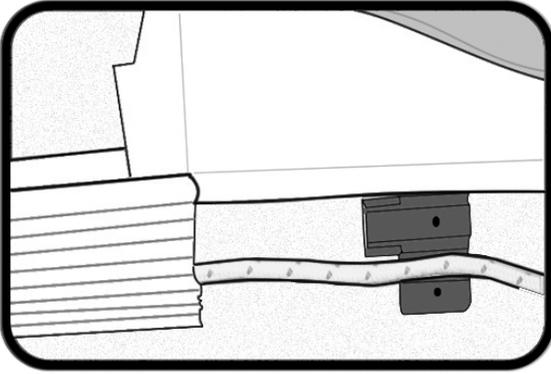
Slide 1 Wheel Assembly into each end of the Leading Edge Bar. Secure both assemblies by inserting four 1/4" screws through the Bar and into the Wheel Dowel.

**36**



Center the Bar over the pool. Adjust the Wheel Arms so that the Bar is elevated above the deck for the entire length of the pool.

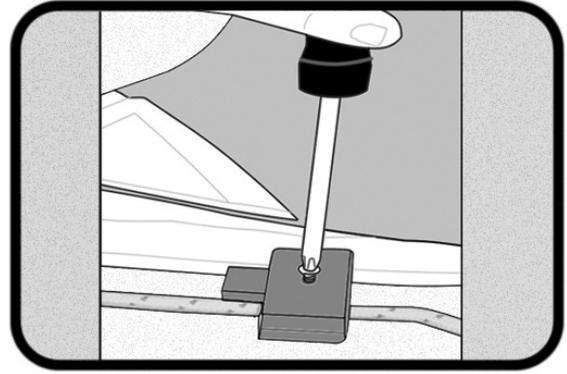
**37**



Place the bottom half of the Split Guide beneath the white Dacron edge of the cover and the rope.

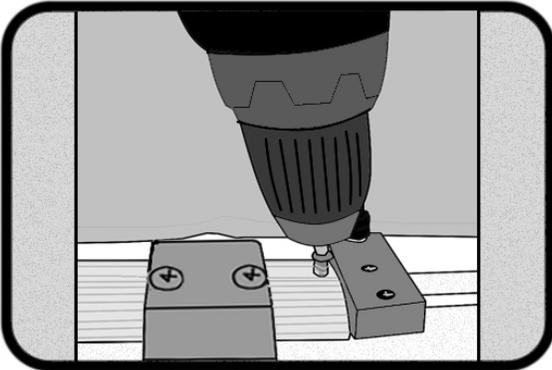
**NOTE: Split Guides are side specific; make sure the sensor hole is on the side closest to the pool.**

**38**



Use a Phillips screwdriver to secure the top half of the Split Guide over the ropes.

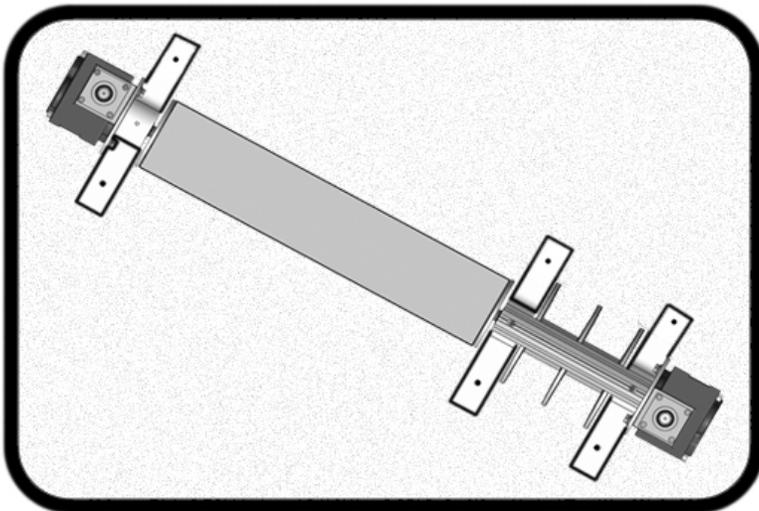
**39**



Use a mallet to tap the tongue of the Guide into the Track end. Secure the Guide by inserting a track screw through the Track and into the tongue of the Guide.

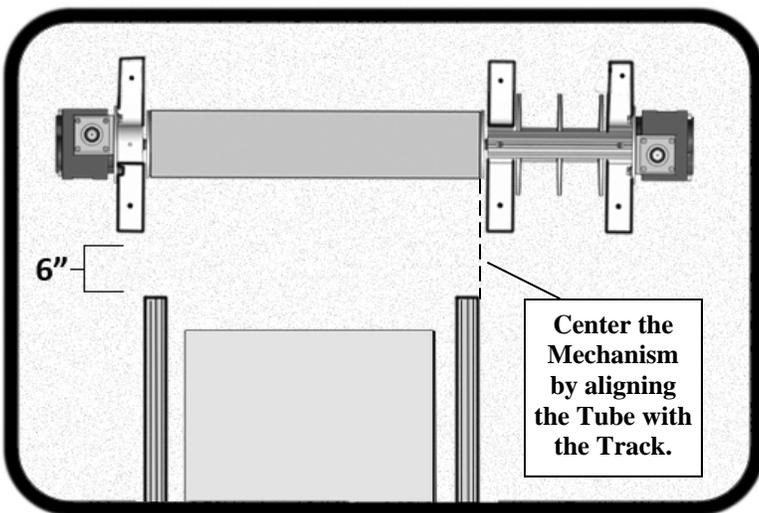
### III. Mechanism Installation

1



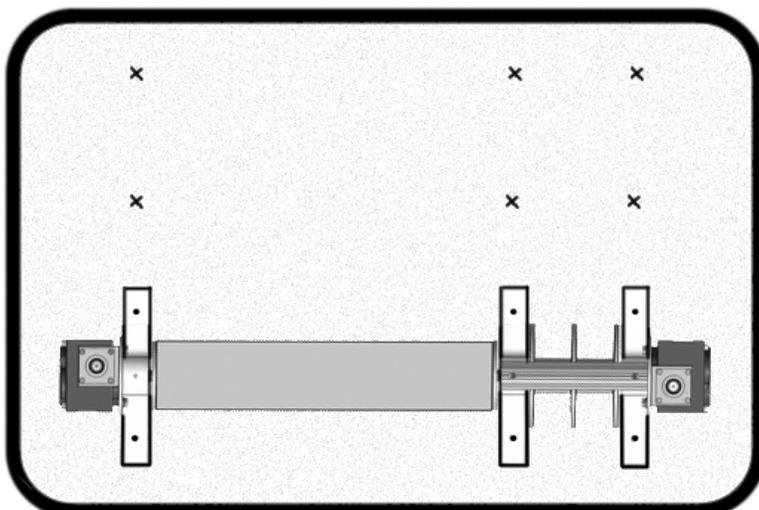
Assemble the Mechanism by snapping each end (*Motor End and Opposite End*) onto the hubs at either side of the 4" diameter Roll-up Tube.

2



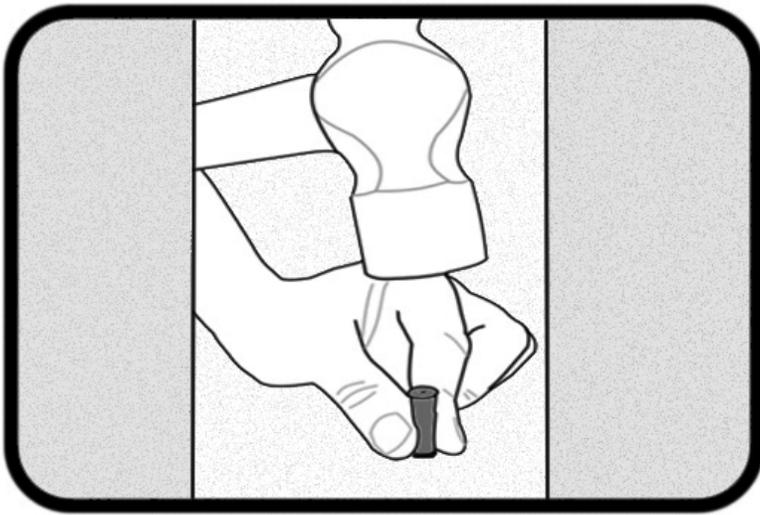
Set the assembled Mechanism in position. Center the Roll-up Tube by aligning the ends of the Tube with the outside edges of the Toptrack. Set the Mechanism back about 6" from the track ends.

3



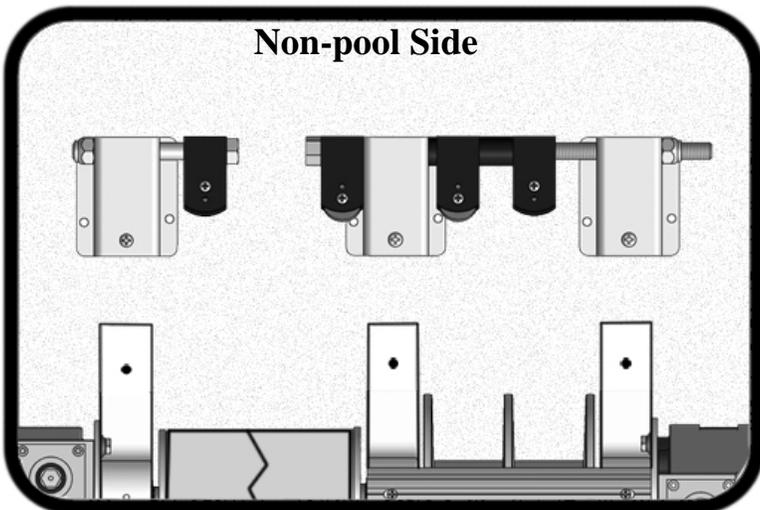
When positioned correctly, use a pencil to mark all 6 anchoring drill points. Set the Mechanism aside. Use a hammer drill with a 1/4" bit to create 2" deep holes at all drill points.

4



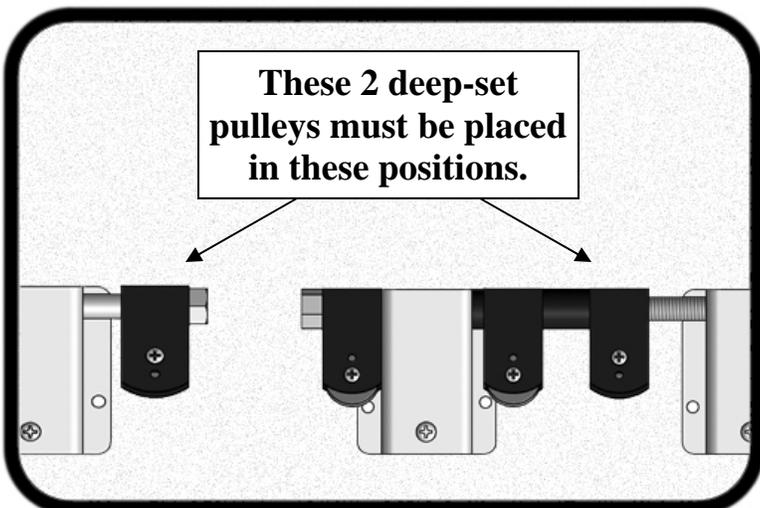
Use a hammer to fully insert one red anchor into each of the holes drilled in *Step 3*.

5



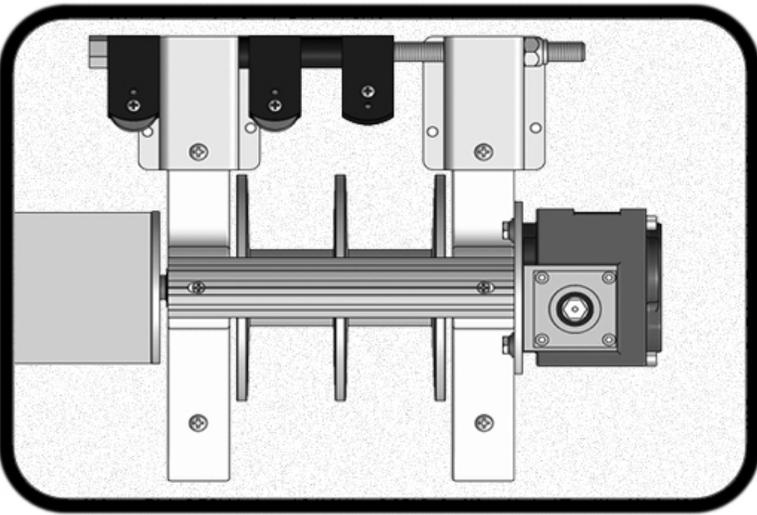
Reposition the Mechanism, but do not anchor it at this time. It is first necessary to prepare the Pulley Assemblies. Refer to images 5 and 6 to correctly piece together the Pulley Assemblies.

6



There are 2 different pulley blocks: deep-set pulley and shallow pulley. In order for the cover to run smoothly and efficiently the deep-set pulleys must be placed correctly. Refer to the image at left.

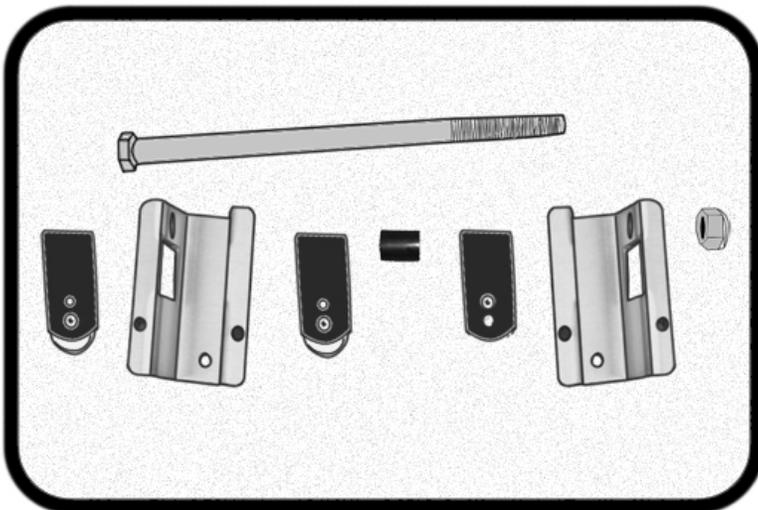
7



Position the Pulley Assemblies over the Powertrak™ Legs that face away from the pool. Anchor both ends of the Mechanism to the deck using the 3” screws provided in the Installation Kit.

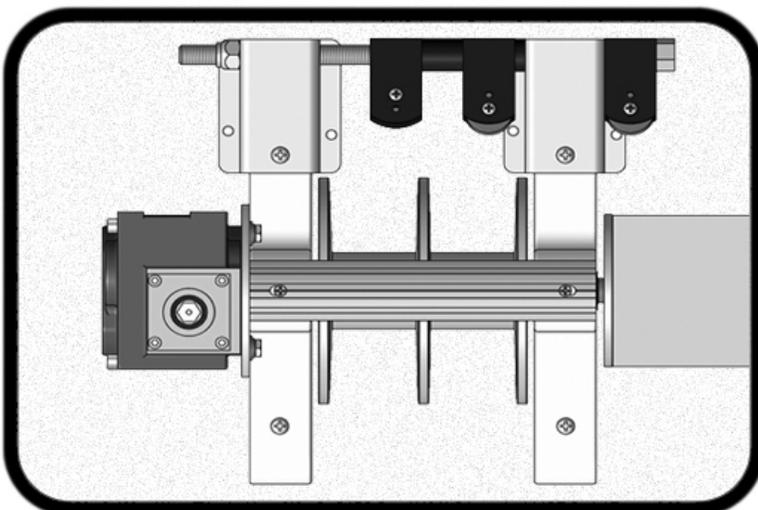
*(NOTE: The following steps illustrate the process for switching the side of the pool to which the Powertrak™ Mechanism is anchored. This should rarely be necessary, but if repositioning is desired, follow Steps 8—9.)*

8



If it is necessary to reposition the Powertrak™, the Pulley Assemblies will require reassembly. Use a 3/4” wrench to fully disassemble the motor side Pulley Assembly.

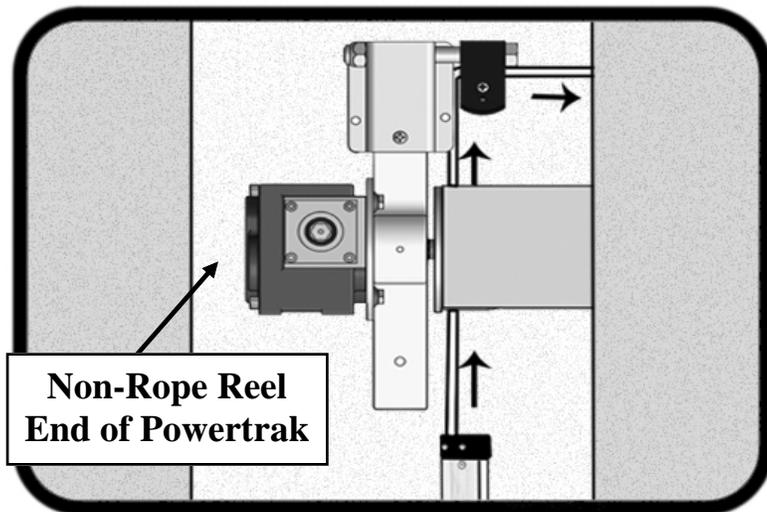
9



Rearrange the pieces of the Pulley Assembly to create the “mirror image” of the layout depicted in *Step 7*. Reattach the Pulley Assembly to the Mechanism.

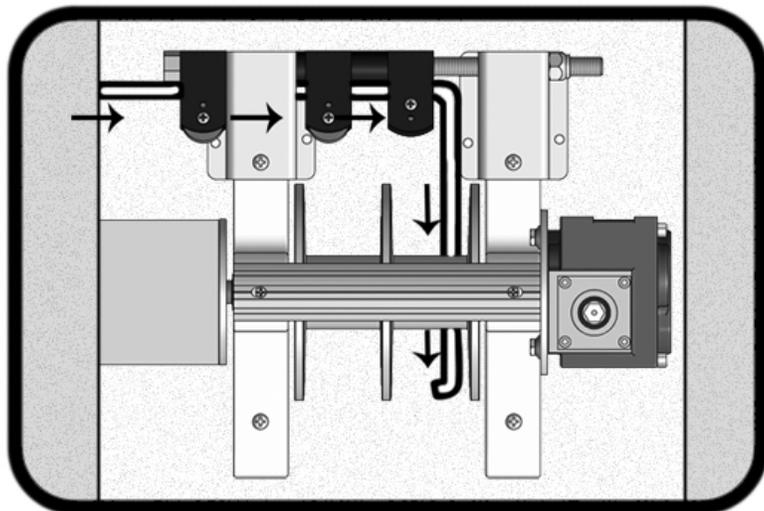
## IV. Pinning the Ropes to the Two Take Up Reels

1



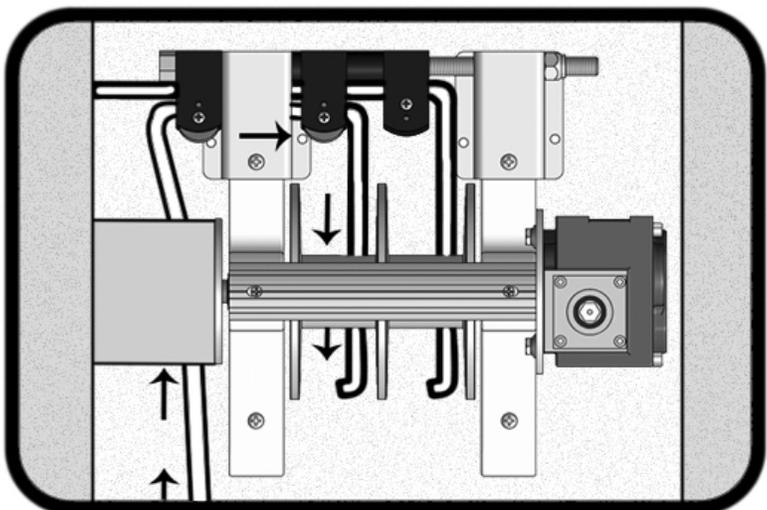
Feed the Rope that extends from the non-Rope Reel Track beneath the roll-up Tube and through the Pulley Assembly. Pull the Rope all the way across the Mechanism.

2



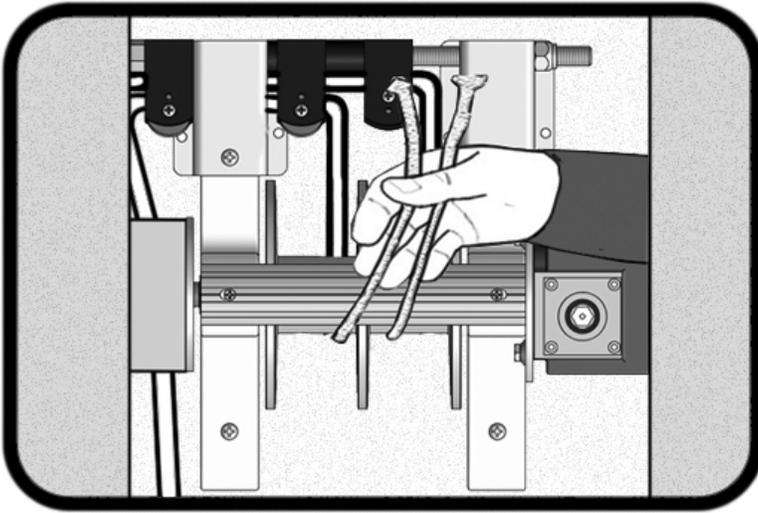
Slide the Rope through all 3 Pulleys on the Rope Reel End of the Mechanism. Pull the end beneath the outside Rope Reel.

3



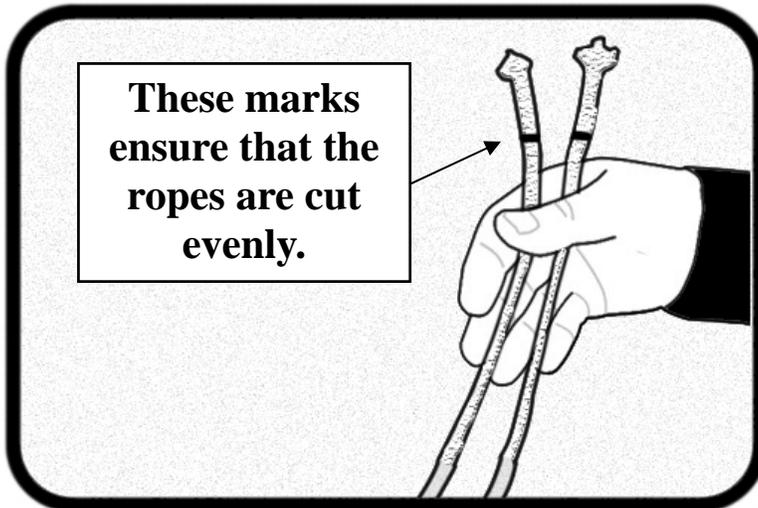
Feed the rope that extends from the Rope Reel End Track beneath the Roll-up Tube, through the first 2 Pulley Assemblies, and beneath the inside Rope Reel.

4



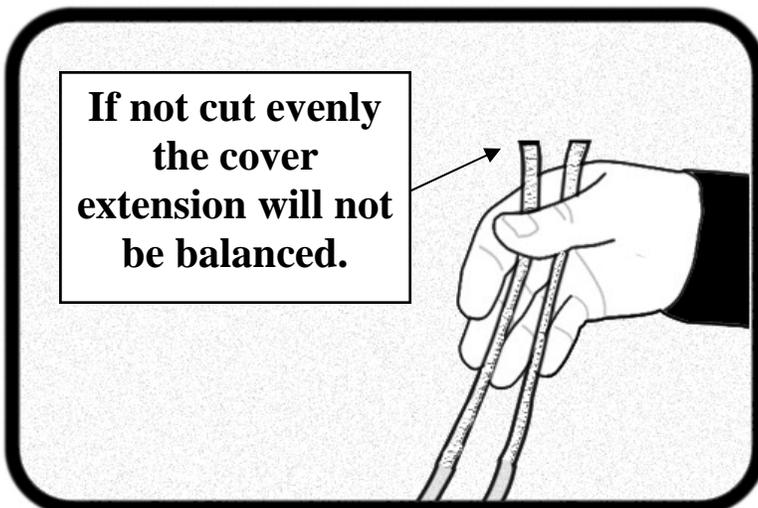
Grip both Rope ends and pull sky-ward until the Pool Cover begins to tighten. (*NOTE: Make sure the leading edge bar is even and centered.*)

5



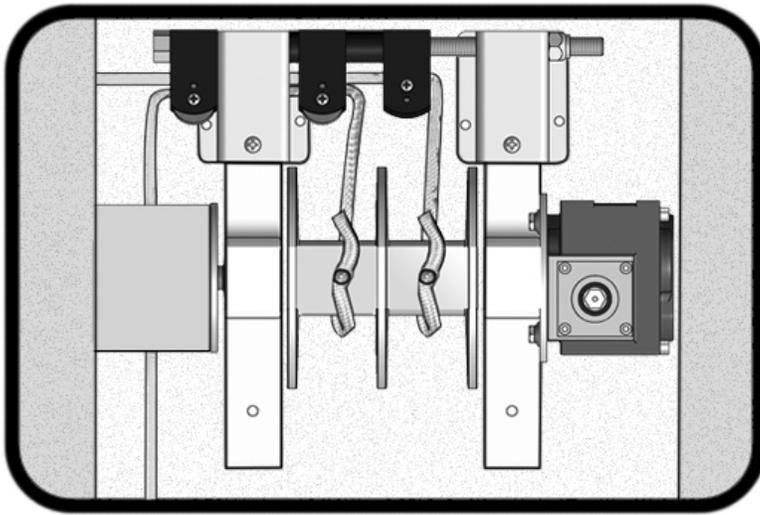
Hold both Ropes even and mark them approximately 4-5 feet from where they leave the Rope Reel.

6



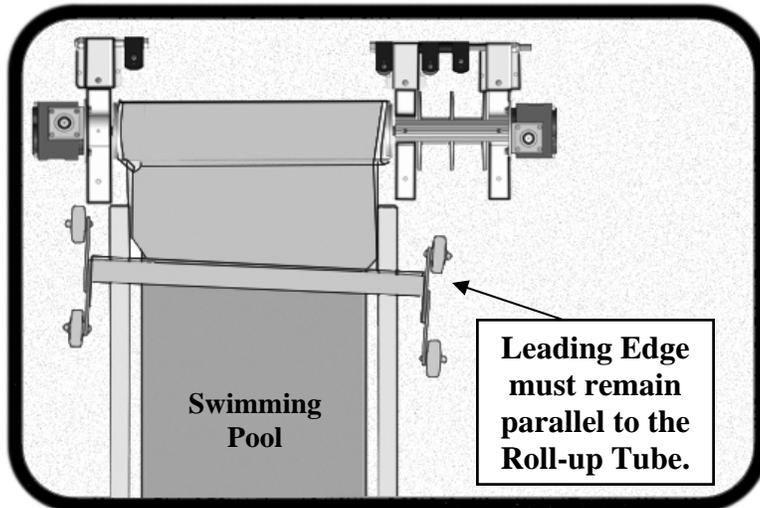
Use a utility knife to cut the Ropes at the markings made in *Step 5*. NOTE: It is very important that the Ropes be cut evenly. Use a lighter to burn the Rope ends. This will ensure that the Ropes do not fray.

7



Pin the two Rope ends to the appropriate Reels by inserting a 1/2" screw through the Ropes, 3" from the Rope end, and into the pre-drilled holes in the Reel. *(NOTE: It is very important that the Ropes are pinned evenly.)*

8



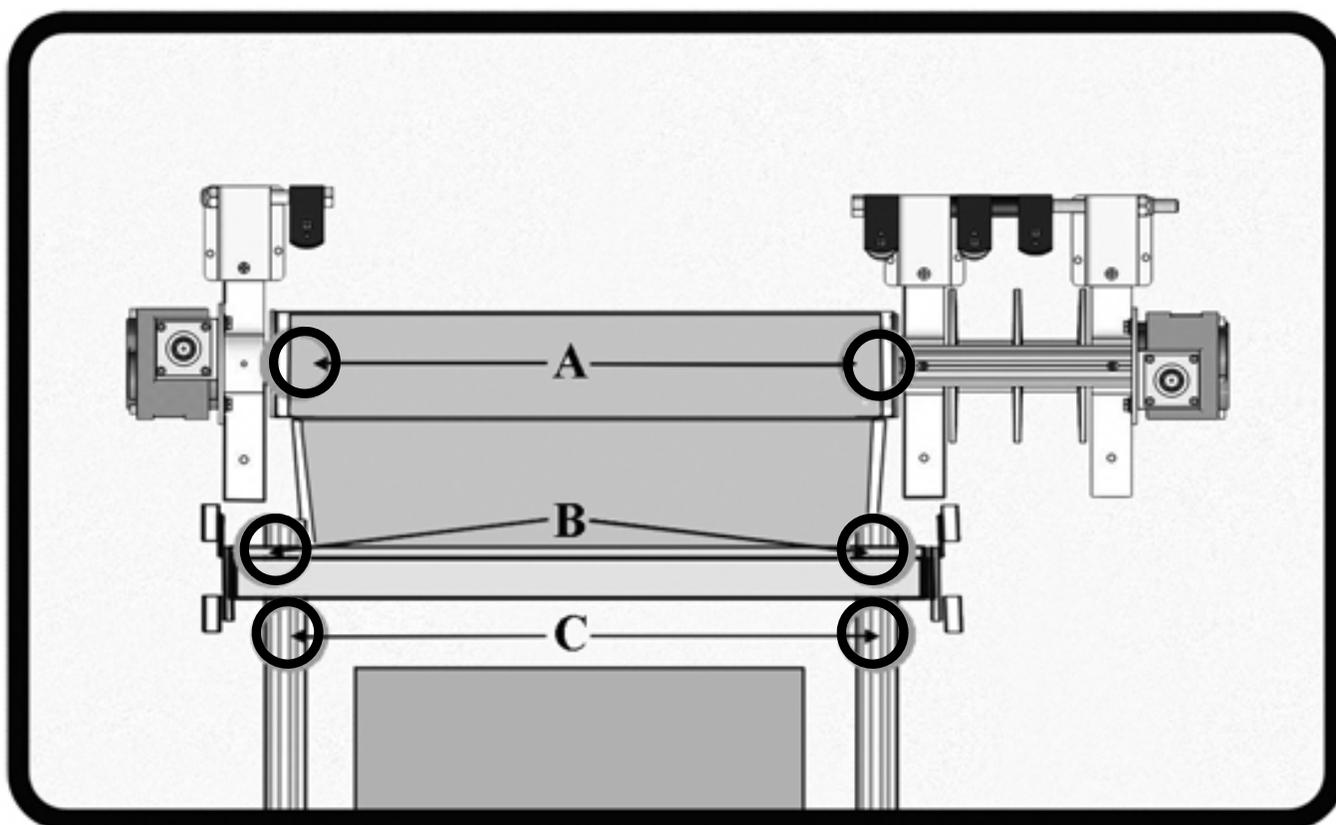
If the Pool Cover rolls up unevenly, it will be necessary to re-pin the Ropes to the Rope Reel. If adjustments are made, be sure to cut any slack Rope.

## V. Electrically Grounding the Powertrak™

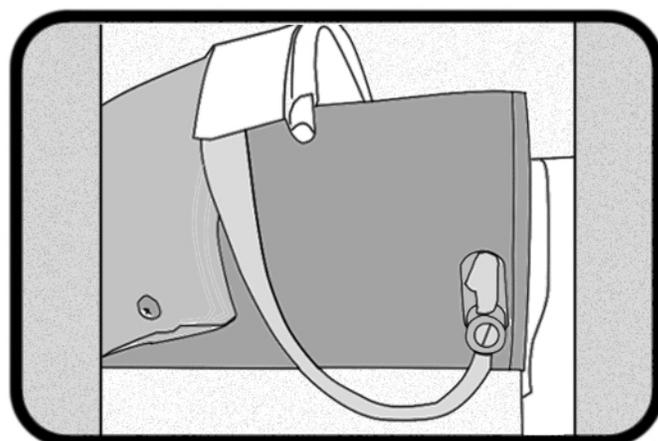
New safety codes (*as of 2007*) require full electrical grounding of all pool cover systems. PCS Bonding Lugs have been included with each system. These must be secured to the system at the points marked in the diagram below. This section also includes more detailed instructions for installing the Bonding Lugs.



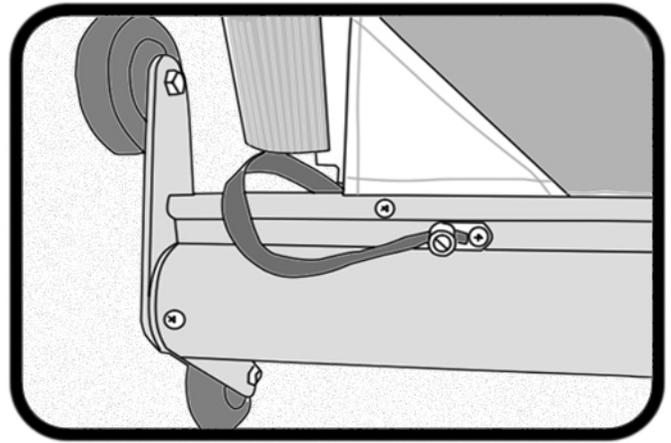
Positions marked ○ require installment of a bonding lug.



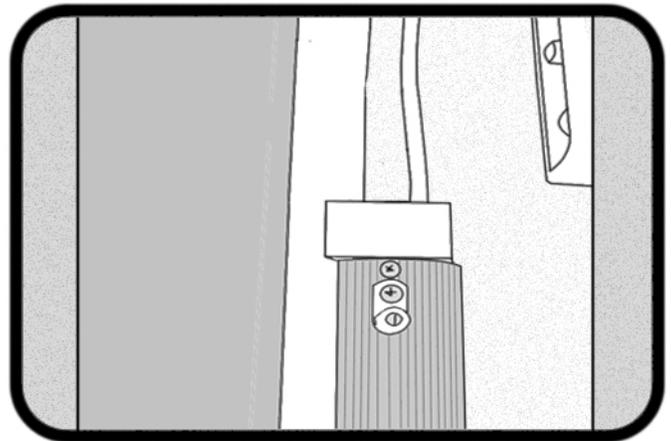
**Position A:** Install one Bonding Lug on each end of the Roll-up Tube, as shown at right. Locate the Grounding Ribbon, which extends from the webbing at each end of the Pool Cover. Pull the Ribbon through the Bonding Lug. Repeat on the opposite side of the Tube. The Roll-up Tube is now grounded.



**Position B:** Each end of the Leading Edge requires a Bonding Lug. Secure the Lugs to the flat point extending from the Leading Edge toward the mechanism. Locate the Grounding Ribbon, extending from either end of the Pool Cover, and secure the end to the Bonding Lug. The Leading Edge is now grounded.



**Position C:** A Bonding Lug must now be installed at the mechanism end of each track. Place the Lug as close to the end of the track as possible without interfering with the cover guide. No Grounding Ribbon connects to this Lug. Tracks are now grounded.



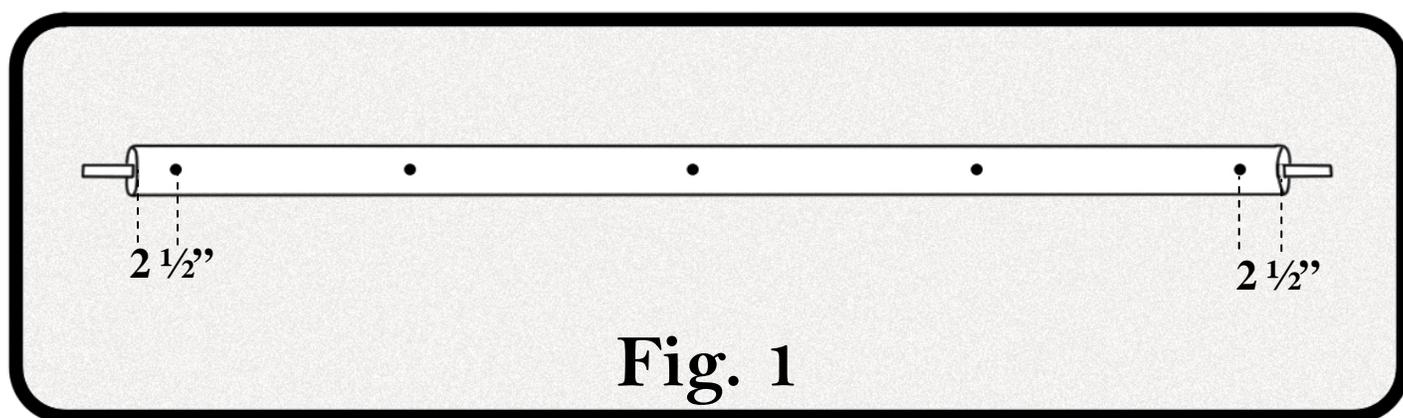
When these 6 Bonding Lugs have been placed appropriately, the system is electrically grounded and up to current code.

## VI. Pinning Pool Cover Fabric to the Roll-up Tube

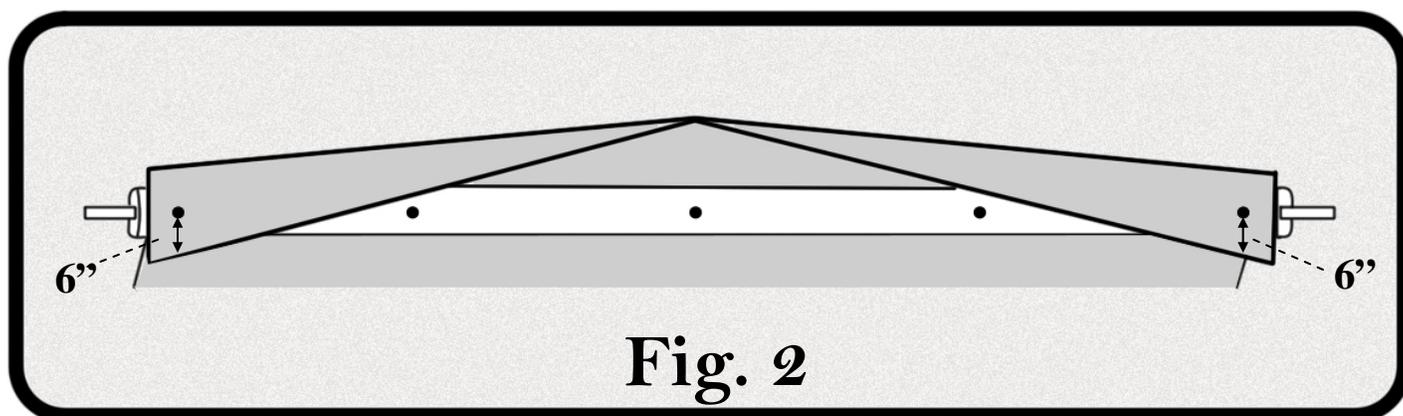
**Step 1:** It is now necessary to fully extend the cover over the pool. Activate the Touchpad in the “Close” direction, watching the cover carefully as it advances. Be prepared to stop the cover immediately if it is not feeding evenly into the track, or if one side begins to pull ahead. If possible, this task is best performed by two people; one observing the cover, the other activating the control.

**Step 2:** Pull the tail of the fabric underneath the Roll-up Tube.

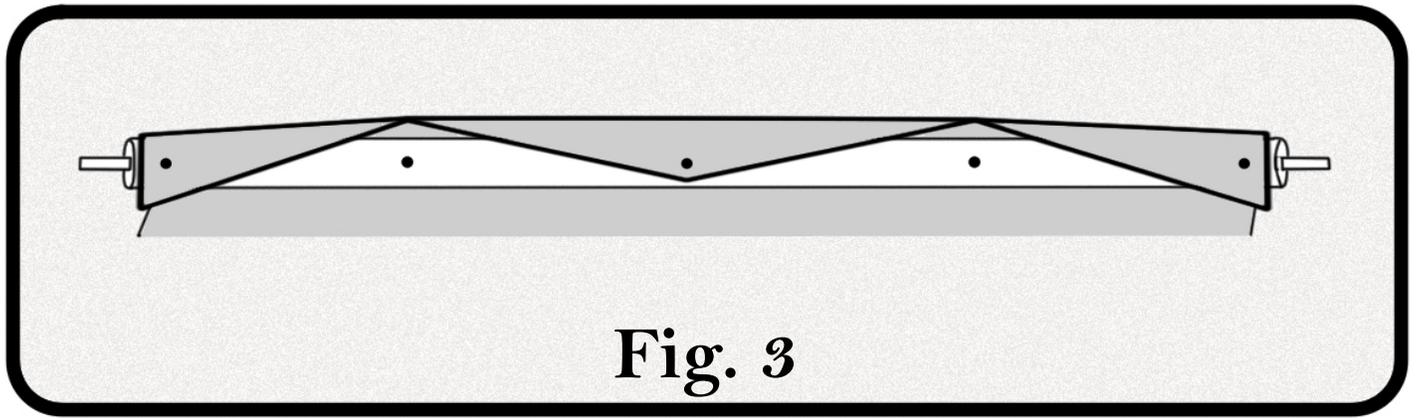
**Step 3:** It is now necessary to create pinning holes along the length of the mechanism tube. Using the cordless drill with a 11/64” drill bit, create 5 evenly spaced holes in a straight line across the tube. Start by drilling holes approximately 2 1/2 inches from each end. (Refer to Fig. 1, below)



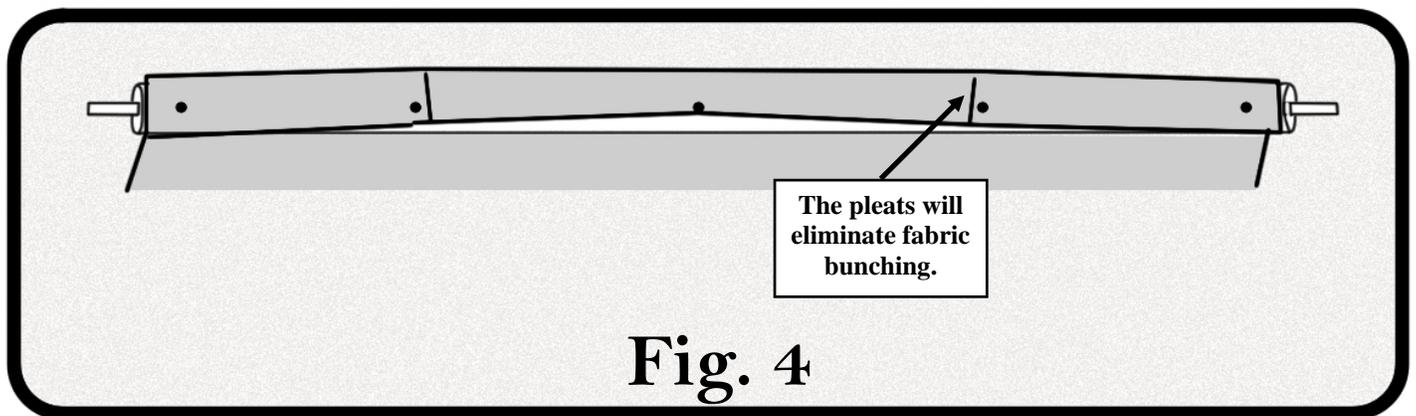
**Step 4:** Pull the tail of the fabric up around the tube until the edge of the fabric is approximately six inches beyond the holes drilled in Step 2. Use two 1/2” screws to pin the fabric ends to the roller through the two holes drilled at either end of the mechanism in Step 2. Pin only the ends at this point. Make sure the tail edge of the fabric is about six inches beyond the pinning point. (Fig. 2, below)



**Step 5:** Lift the fabric up in the middle of the roller, forming an upside down “V”, as in Fig. 2, above. This will allow you to locate the center point of the fabric. Pull the center of the fabric about one inch beyond the pinning hole and use a 1/2 inch screw to pin the center point of the fabric to the center screw hole in the tube. (Fig. 3, following page)



**Step 6:** Move to one side to locate the screw hole that is spaced between the center hole and the end hole. Lift the fabric again into an upside-down “V”. (**Fig. 3, above**) Identify the center point and fold any excess fabric to create a pleat. Pin the pleat to the appropriate screw hole. Repeat this step at the last remaining screw hole, located at the other side of the tube. **NOTE: Failure to follow these instructions may result in an uneven cover pinning. This can cause the cover to retract crookedly, a condition that can cause problems with the operation of the cover.**



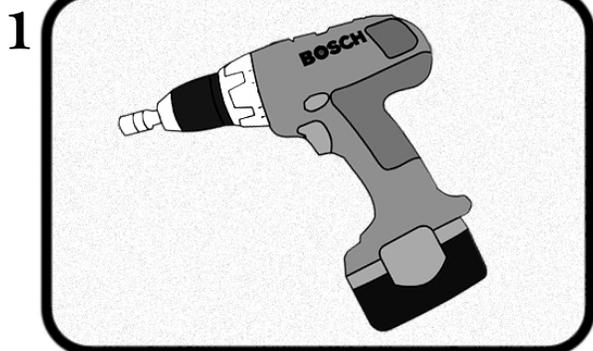
**Step 7:** When the cover is evenly pinned to the roller tube, wrap the “tail” of the cover around the roller tube by manually rotating the tube until all of the loose fabric surrounds the roller tube.

**Step 8:** Now, operate the Touchpad in the “Open” direction. Stop when the cover is positioned halfway across the bond beam.

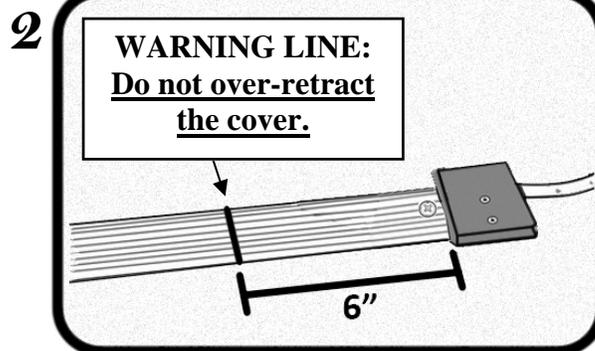
**Step 9:** Determine whether or not the cover retracted evenly by noticing whether or not the Leading Edge of the cover is parallel with the Powertrak™ Mechanism. If it is not even, the cover will require adjusting.

**Step 10:** To make adjustments to the cover, determine which side of the cover is closest to the Mechanism. Disengage the double-dog clutch gear from the rope reel assembly, grab hold of both ropes and unwind them from the reels. Use a screwdriver or drill to release the rope controlling the closer side of the cover. Pull on this rope manually until the Leading Edge bar becomes parallel with the Mechanism. Re-secure the rope to the appropriate reel. This may require repositioning of the rope pinning. Re-wind the ropes onto the reels and move cover into the closed position. Retract the cover once again and determine whether the Leading Edge is even. Repeat this process until the Cover is extending and retracting evenly.

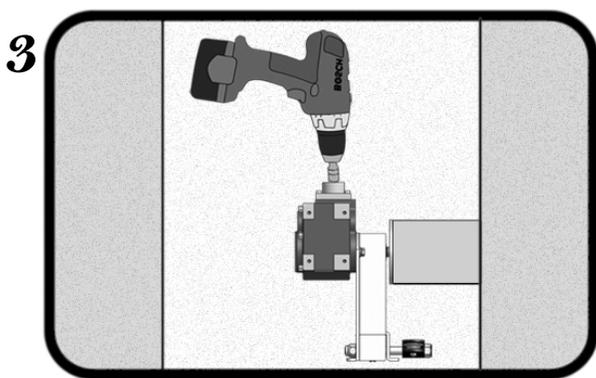
## VII. Opening and Closing the Pool Cover



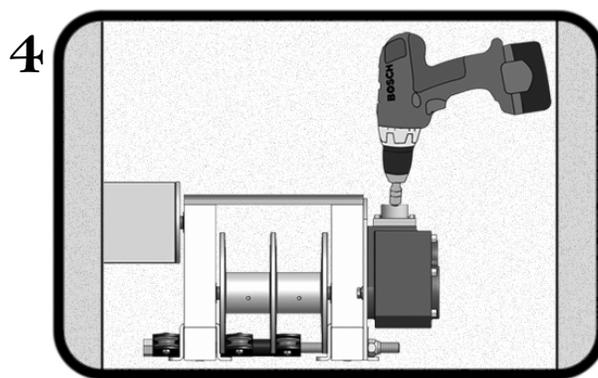
Locate the Electric Drill, included with your Powertrak™.\* Attach the 1/2" Socket. Set the drill to the slow-speed position. Rotate the Torque Sleeve to #15.



Measure 6" - 8" in from the track ends on the mechanism side. Draw a distinct line across the track. This line is a signal for the operator to stop the cover during opening. This "Warning Line" may need to be re-established over time.†



To Open the Cover: Place the drill over the drive shaft of the Reducer on the non-Rope Reel side of the Mechanism. Being careful to stop the Cover at the appropriate position, operate the drill.

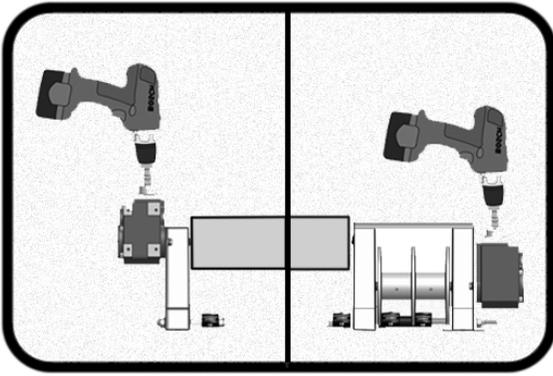


To Close the Cover: Place the drill over the drive shaft of the Reducer on the Rope Reel side of the Mechanism. Being careful to stop the Cover at the appropriate position, operate the drill.

**\*WARNING:** Never use a 110 VOLT drill to operate the pool cover system. The gears in the two Gear-Reduction Boxes are not designed to withstand the amount of torque generated by a 110 VOLT drill. **PLEASE BE ADVISED:** Damage to the drill or the two Gear-Reduction Boxes resulting (a) from failure of the Cover operator to release the drill trigger prior to the Cover running into the end of the track or (b) from continued use of the drill when the drill is over-heated or stalled, is deemed to be an operator error and, therefore, not subject to Limited Warranty protection. Similarly, use of a 110 VOLT drill to power the Cover will void the manufacturer's Limited Warranties.

†All individuals authorized to operate the cover system must understand the significance of the "Warning Line" and the importance of never retracting the Pool Cover beyond the line.

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Open and close the Cover several times until you become comfortable with the operation of the mechanism — especially the requirement to observe the Cover at all times during operation.

***NOTE:*** If your cover retracts or extends unevenly, make sure that an even amount of rope envelops each reel. If the imbalance persists, make sure that Cover has been pinned evenly all the way across the tube. If you require technical assistance, contact the manufacturer's Customer Service department to speak with a Specialist: **1-800-369-5152**.

## VIII. Final Notes

Your installation is now complete. If you have any questions regarding this installation, or the operation of your system, please call the Pool Cover Specialists Customer Service department at 1-800-369-5152. Remember to read the Owner's Manual before beginning routine operation of the Powertrak™. Here are some important reminders:

- Never permit individuals unfamiliar with the Operating Procedures to use the cover!! Failure to follow the Operating Procedures (operator error) could result in extensive damage to your cover system.
- Never operate the cover with standing water, snow, or any other object atop the cover. The drill motor does not have the capacity to pull standing water or other, heavy objects back and forth. Attempting to do so could severely damage the drill.
- Do not use the high-speed position of the drill to extend or retract your cover. Doing so will run the battery down prematurely and may damage the reduction gears.
- If using the drill in the "drill" mode, thus bypassing the slip-clutch function of the #15 torque mode, remember to release the trigger immediately in the event that the drill stalls out or over-heats.
- Always stop the cover before the cover runs into the end of the track.

# THE INFINITY 4000™



## Deckmount Mechanism Installation Instructions



**Pool Cover Specialists National, Inc.**

**8553 South 2940 West  
West Jordan, Utah 84088**

**1-800-369-5152 Fax: 1-801-568-6955**

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