

Auto Spa Cover

The Automated Spa Cover System



Installation Guide

Installation Guide for
Model# ASC-2

Patent# 7,461,415

Legal Information

ASC-2 (Patent# 7,461,415)

AUTO SPA COVER INSTRUCTION MANUAL

Document Number RE:ASC-2-E4

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Please address any questions, comments and suggestions to:

AUTO SPA COVER INC
Paso Robles, CA 93446

Tel: (805) 226-5030

www.autospacover.com

The ASC-2 is designed for spas 7ft or larger in length with 2 1/2" thick covers.
We offer kits for smaller spas and/or newer 4" thick spa covers.

Disclaimer:

The information contained in this Manual is for general information purposes only. The information is provided by AutoSpaCover and while we endeavor to keep the information up to date and correct, we make no representations of any kind, express or implied, about the completeness, accuracy, reliability, suitability or availability with respect to the information, products, services, or related graphics contained in this Manual for any purpose. Any reliance you place on such information is therefore strictly at your own risk.

In no event will we be liable for any loss or damage including without limitation, indirect or consequential loss or damage whatsoever arising from the use of this Manual.

AutoSpaCover is not responsible for water logged or overweight covers , ASC assumes no responsibility for system failure due to water logged covers.

AutoSpaCover may not function properly with an over weight/water logged cover.

Spa/hot tub covers should not weigh more that 2 times the weight of a new dry cover.

DO NOT LET CHILDREN USE THE REMOTE CONTROL OR OPERATE THE ASC-2

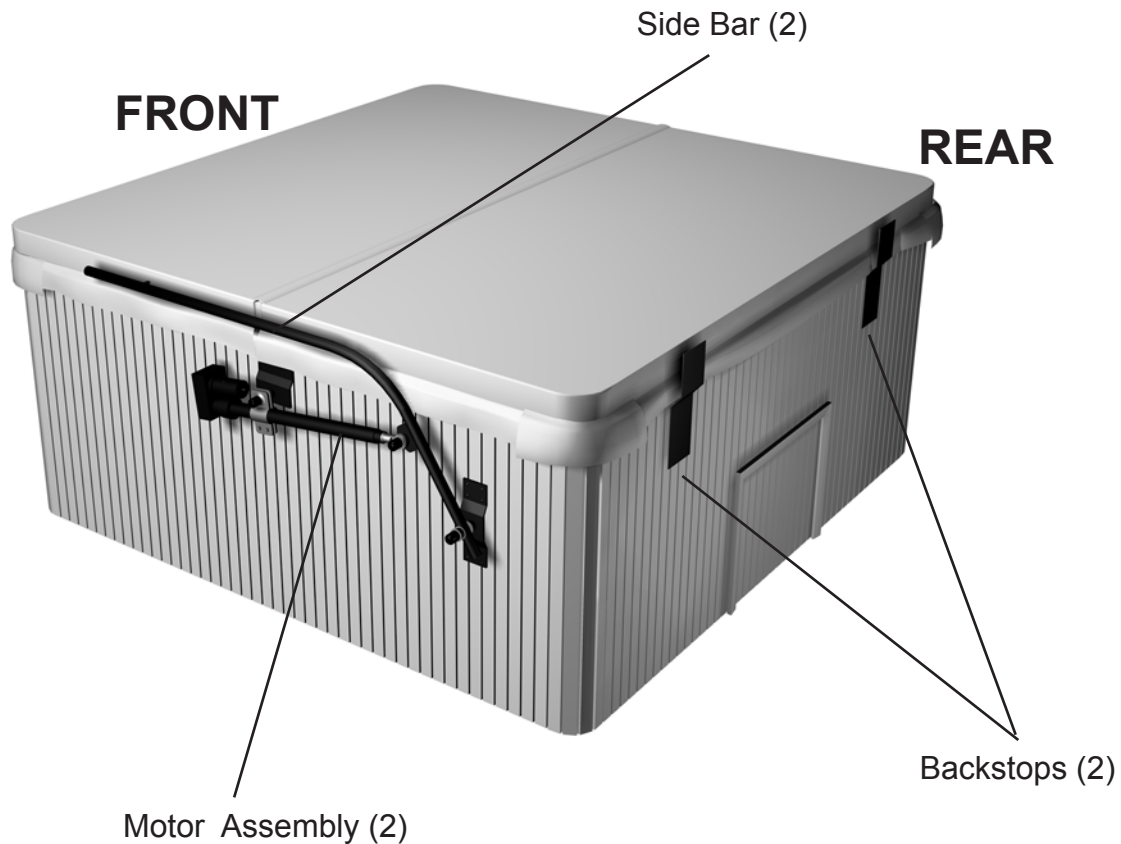
January 12th, 2016

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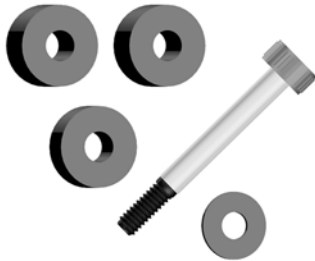
Diagram



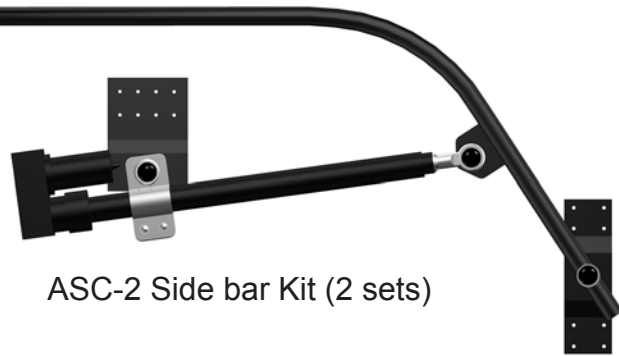
1. Parts included in the kit
 - a. Electronics control assembly
 - b. Remote control receiver
 - c. Motor assembly (2)
 - d. Backstops (2)
 - e. Side Bars (2)
 - f. Assorted hardware w/ wire nuts and 2 sided tape
2. Tools needed
 - a. Phillips Screwdriver
 - b. Wrench - 1/2", 7/16", 3/4", and 9/16" or 2 Crescent Wrenches
 - c. 3/4" Open End Wrench
 - d. Duct Tape
 - e. Power Drill
 - f. 1/4" drill bit

Time to install approximately 1-1/2 hour

Parts List



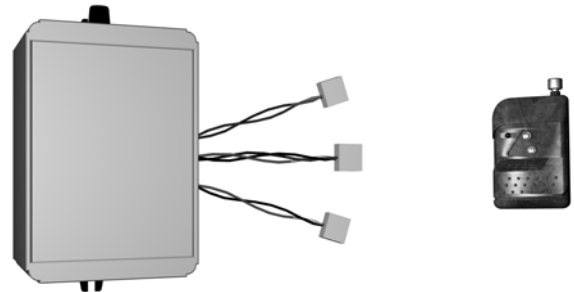
Shoulder Bolt
Assembly (2 sets)



ASC-2 Side bar Kit (2 sets)



Motor & Power Wiring Harnesses



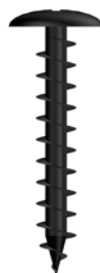
ASC-2 Control Box & Remote Control



Stop Bolt Assembly (2 sets)



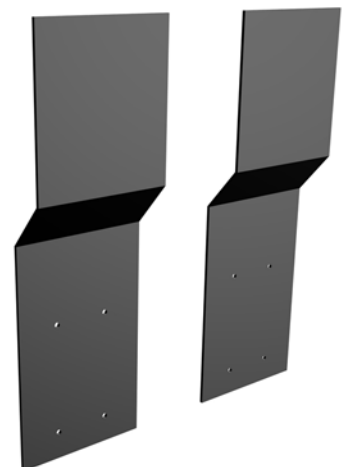
Control Box
Mounting Screw (2)



Wood Screws (40)



"C" Clamp kit (2 sets)



ASC-2 Backstops (2)

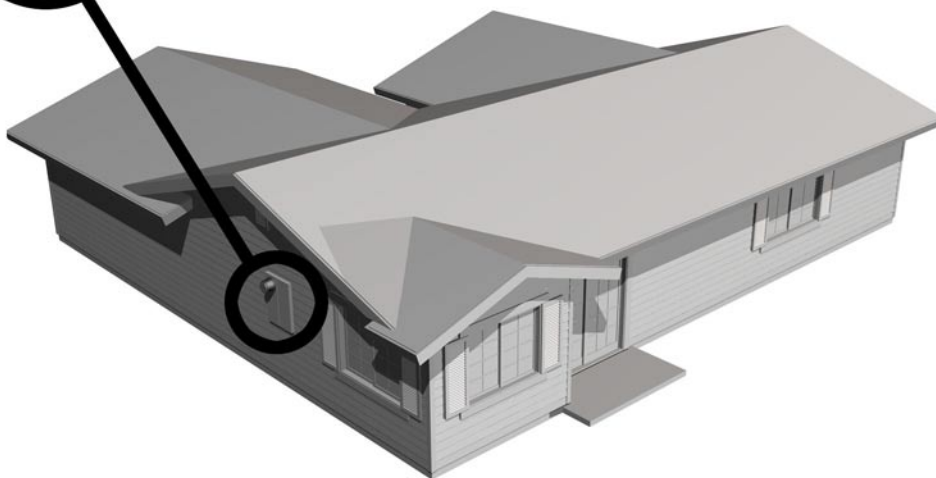
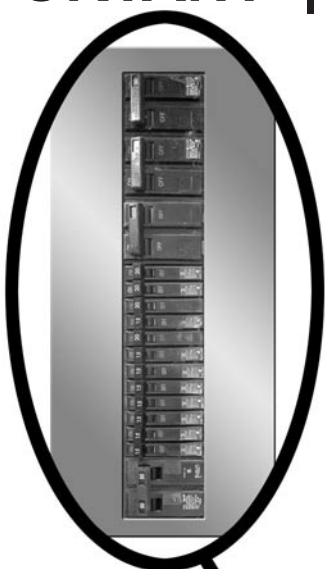
Installation

IMPORTANT | IMPORTANT | IMPORTANT

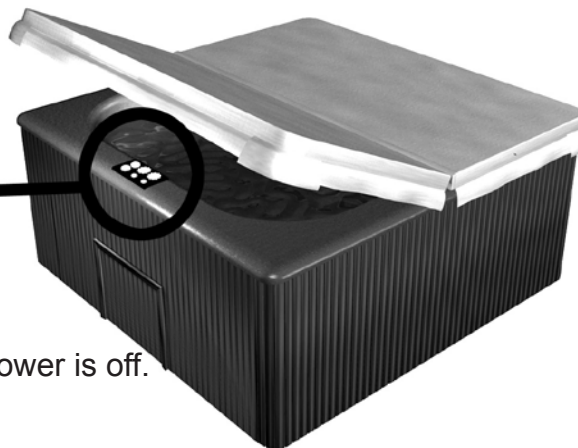
IMPORTANT | IMPORTANT | IMPORTANT | IMPORTANT | IMPORTANT | IMPORTANT | IMPORTANT

TURN OFF POWER TO SPA

1a. Find the house electrical breaker box and



1b. Go to spa and make sure the power is off.
(ie: test lights, jets, etc)

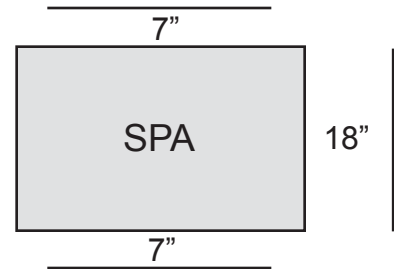


IMPORTANT | IMPORTANT | IMPORTANT

Installation

STEP 1

Make sure there is sufficient space around the spa for the ASC-2 to properly operate. The ASC-2 requires 7" of space on the spa sides for arm clearance. 18" of space on rear of spa is required for the cover.



STEP 2

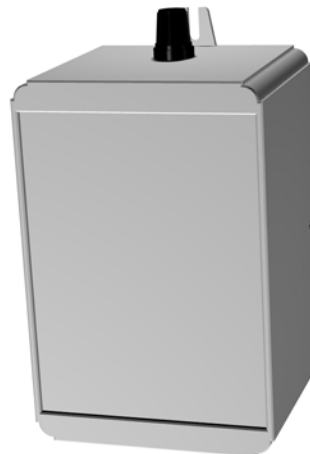
Installing Control Box:

Locate the Spa Power Supply on the spa. Find a good location for the **ASC-2 Control Box** as close as possible to the Spa Power Supply .

Use the 2 **Mounting Screws (91555A102)** and mount the **ASC-2 Control Box** to the spa.



Mounting Screws
(91555A102)

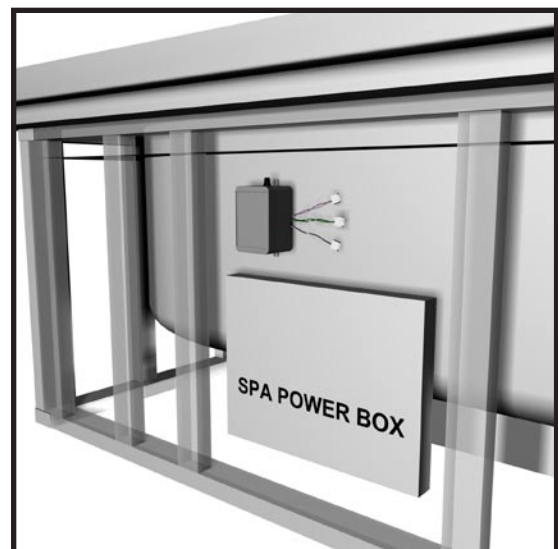
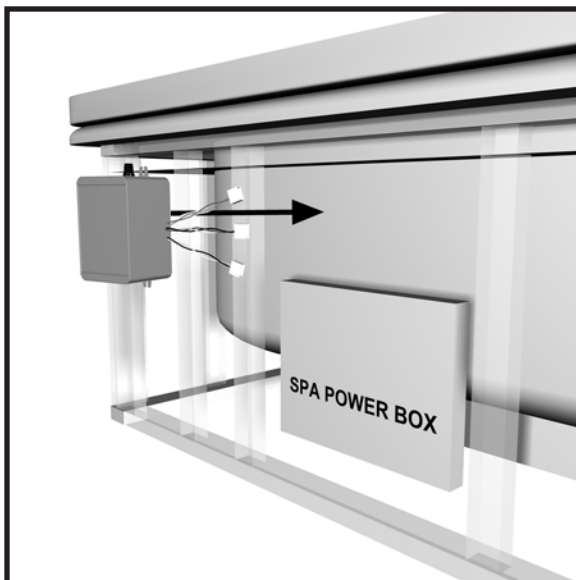


Motor Wire Clip
(Green & White)

220 Power Clip
(Green, Black, & White)

110 Power Clip
(Black, & White)

Final Position



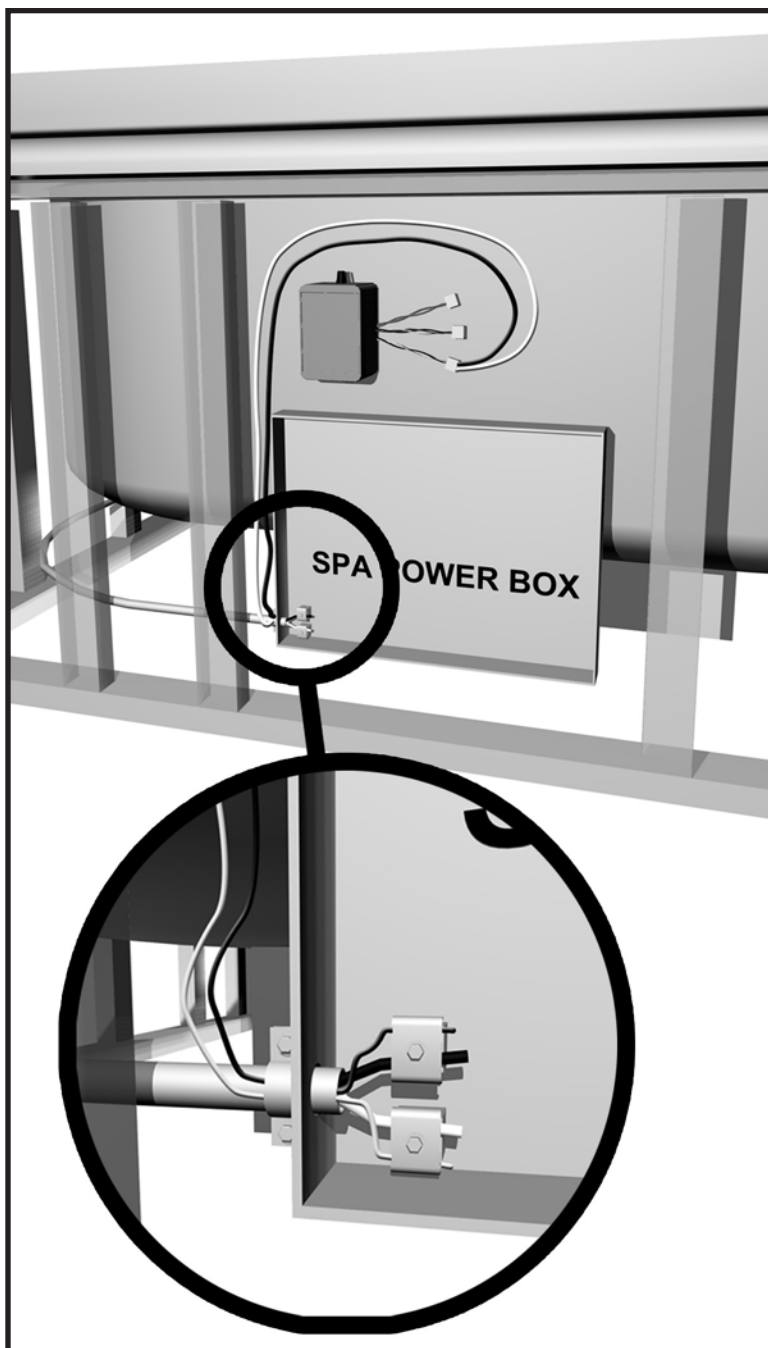
Installation

STEP 3

Connecting 110-VAC Power to Control Box:

Find out which power level the spa uses. (110VAC or 220VAC)

Remove the Spa Power Box cover. Locate where the main electrical line feeds into the box.



WARNING:

Use a certified electrician to wire the ASC-2 Control Box to your Spa Power Box.

Check your electrical panel box and make sure the power to the spa is shut off at your electrical panel.

Take the 2pin BLACK AND WHITE Wiring Harness and run it into the Spa Power Box using the same path as the main line.

(The 110VAC is used mainly for installation. Use the installer's AC power cord to set up the ASC power system. This can be ordered from Auto Spa Cover)

(The 110VAC connector has only "2" wires. 110VAC may be used for main power if 220VAC is not available.)

STEP 4

Connecting 220-VAC Power to Control Box:

Find out which power level the spa uses. (110VAC or 220VAC)

Remove the Spa Power Box cover. Locate where the main electrical line feeds into the box.

WARNING:

Use a certified electrician to wire the ASC-2 Control Box to your Spa Power Box.

Check your electrical panel box and make sure the power to the spa is shut off at your electrical panel.

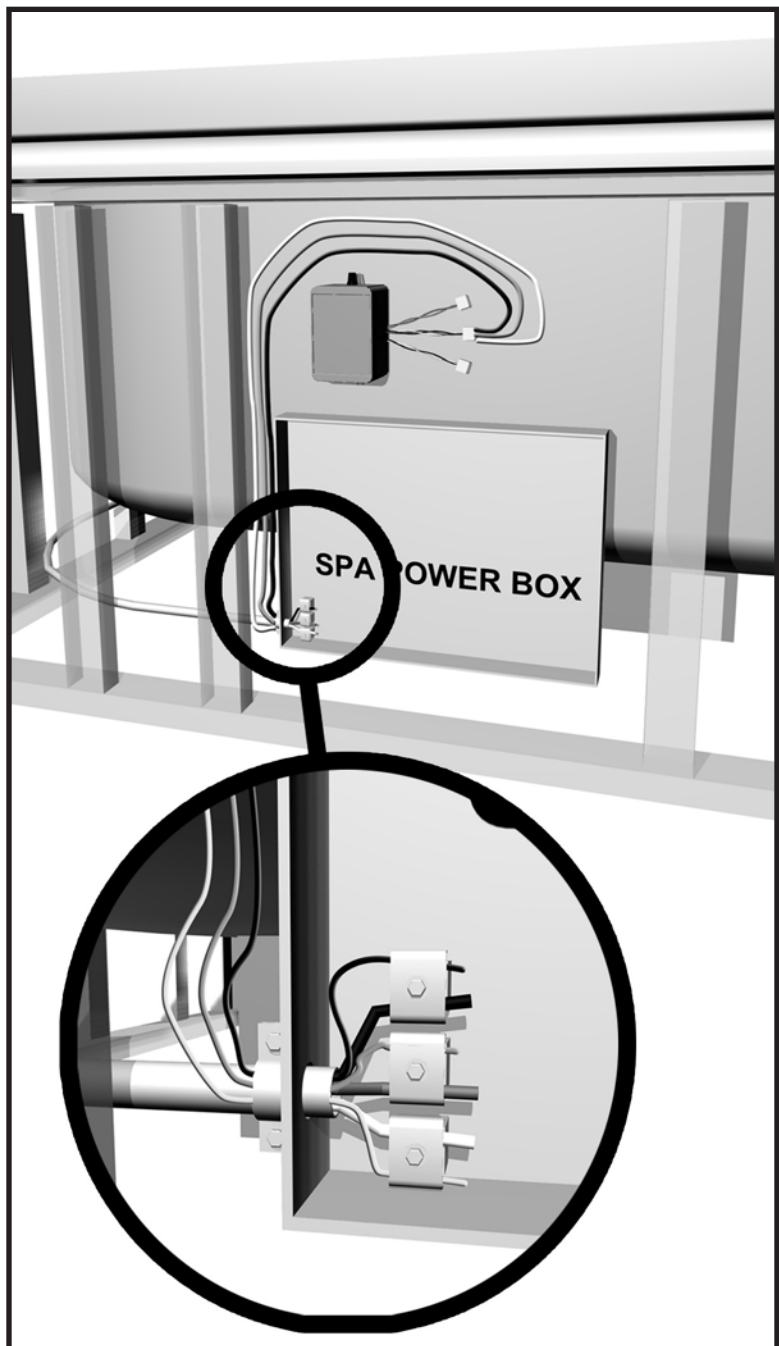
Take the 3pin BLACK, WHITE AND GREEN Wiring Harness and run it into the Spa Power Box using the same path as the main line.

*Black=220
White=220
Green=Ground*

Attach the **Wire Harness** to the same slots that the main line attaches to.

Replace the Spa Power Box Cover.

Plug **Wiring Harness** into the **ASC-2 Control Box**.



Installation

STEP 5

**CAUTION - USE THIS GUIDE TO MOUNT THE ASC-2
- FAILURE TO FOLLOW GUIDE WILL VOID WARRANTY -**

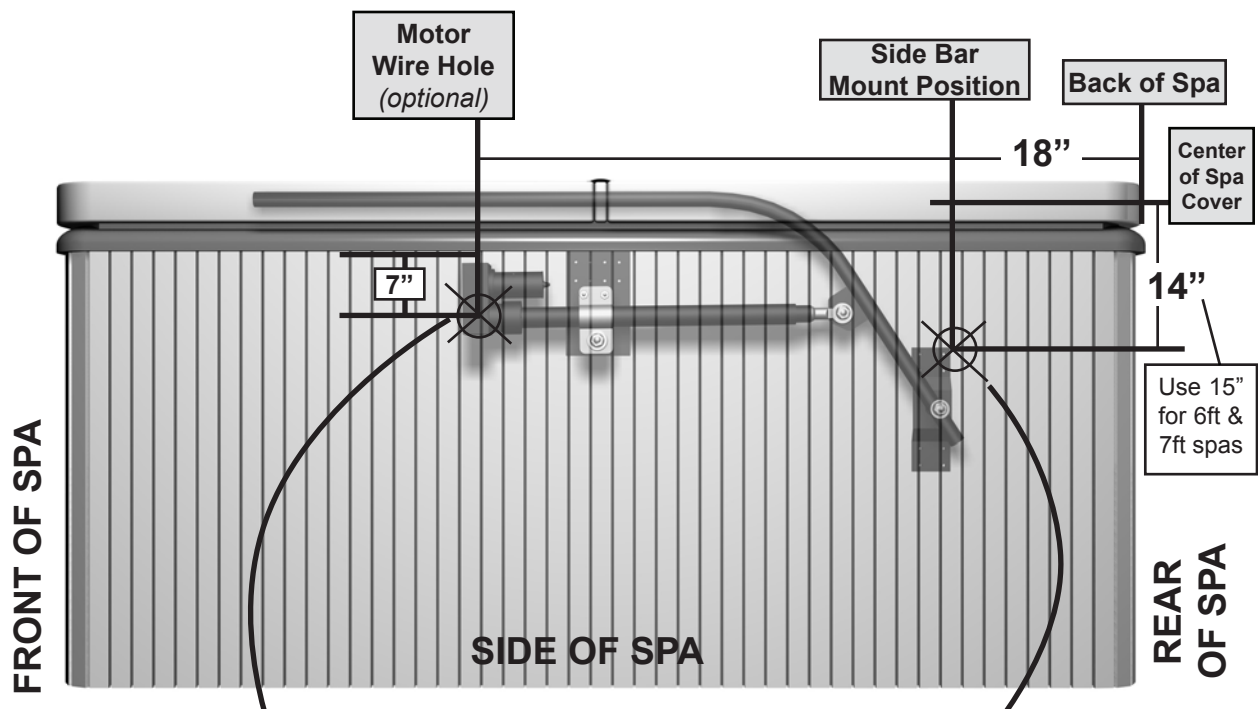
Locating the hardware mounting positions:

Measure 18" from the back of the spa along the side wall. Measure down 14" from the center of the spa cover. This will be the corner mark for the **Side Bar Mount**. (For 9ft spas use 21").

WARNING: DO NOT ATTACH ANY OF THE OUTER HARDWARE TO SPA AT THIS POINT.

NOTE:

The Motor Wire hole can be adjusted/moved to a different position if the spot is over a spa stud support.



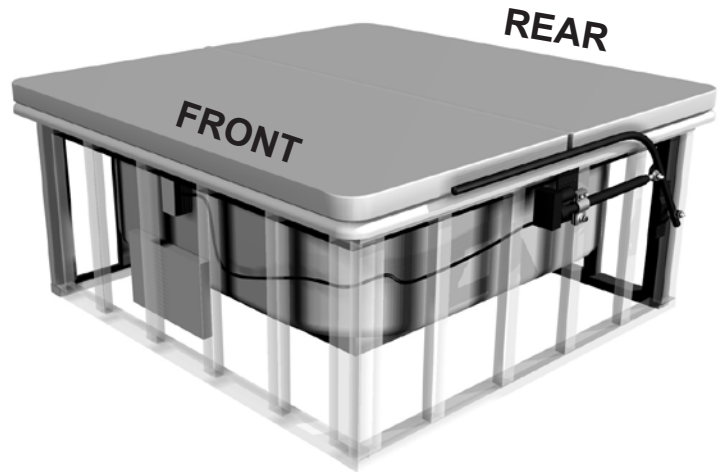
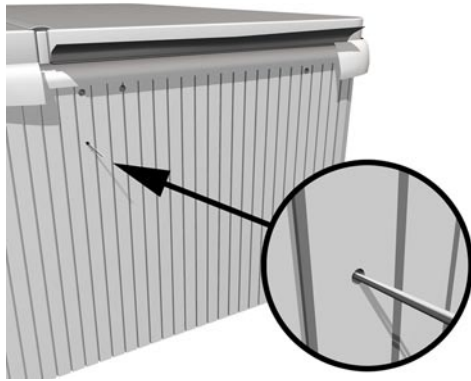
OPTIONAL:

Measure 7" down from the bottom edge of the **Spa Fiberglass Shell** and 9" to 12" over from the **Motor Mount Position**. This will be the mark for drilling a hole for the **Motor Wiring**.

Measure 18" from back of the Spa and 14" down from the center of the **Spa Cover** and make a mark. This will be the spot where the **Top Edge (closest to the back of the spa)** of the **Side Bar Mount** will be mounted.

For 9ft size spas use 21" instead of 18"

STEP 6



Routing the motor wires:

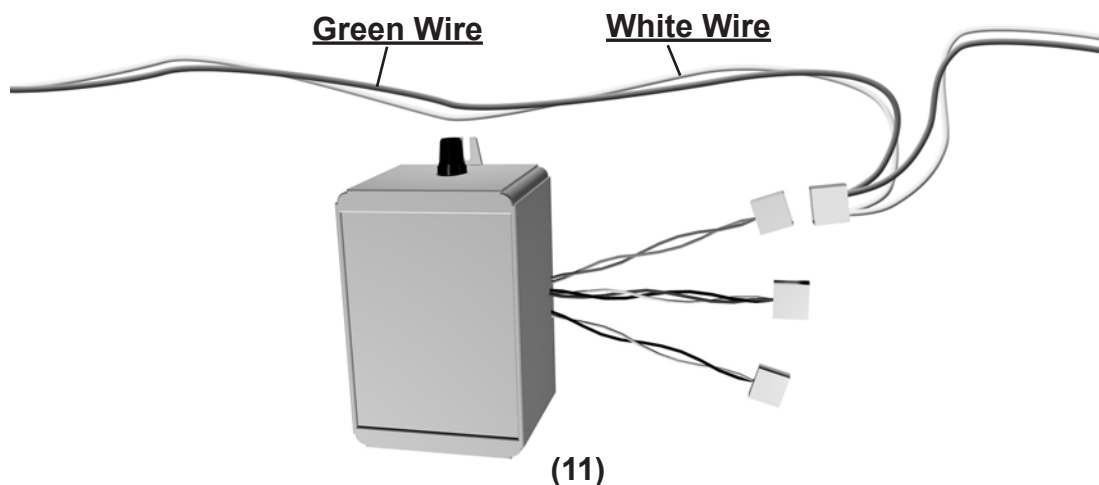
The **Motor Wires** need to be routed to the control box location, this can be done several ways:

1. Between the siding and the supports.
2. Through the side of the spa siding.
3. Down the side of the spa and along the bottom flange of the supports.

If the **Motor Wires “through spa wall option”** is used, drill a 1/4” hole at the **Motor Wire** mark that was previously determined in step 5.

Keep the wires from being crimped by the siding or other components , route the wires inside of the supports for the siding having them end up at the control box (leave extra wire length for future installations)

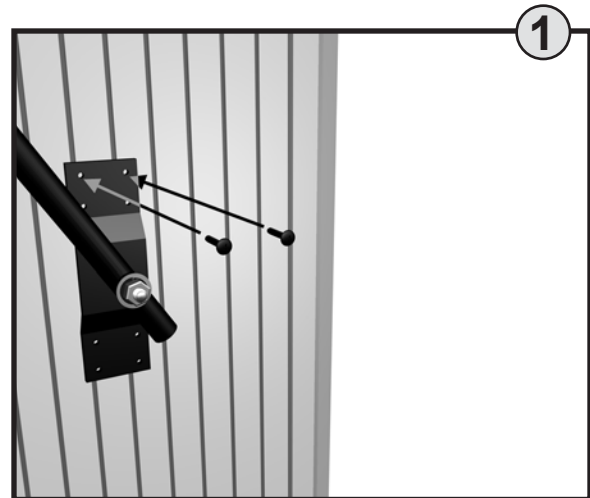
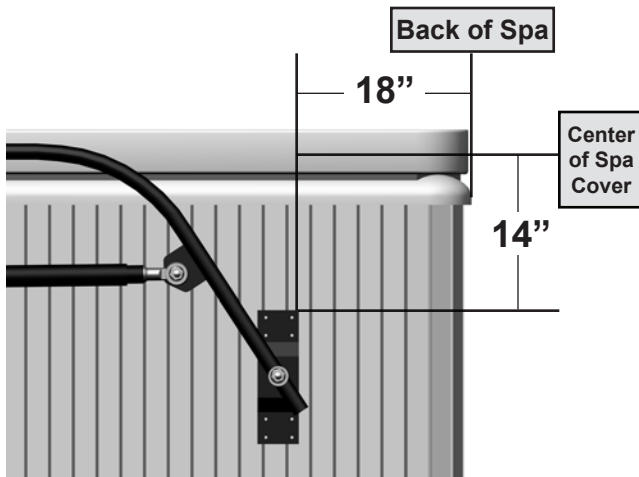
Attach the Motor Wiring Harness to the Control Box. (Green/White Wires)



Installation

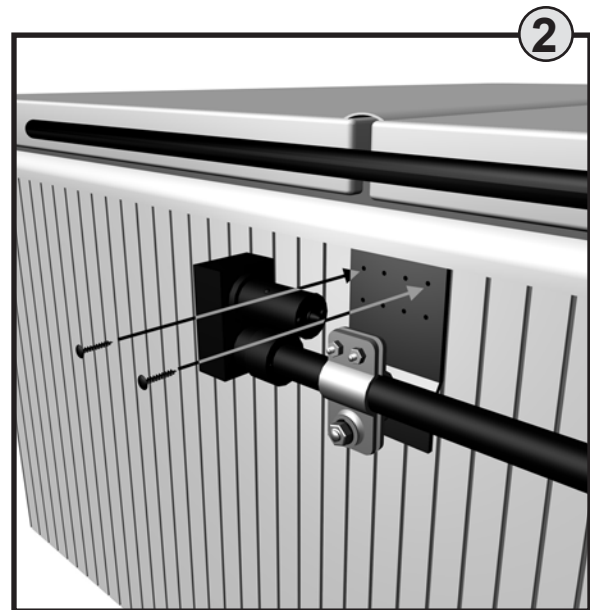
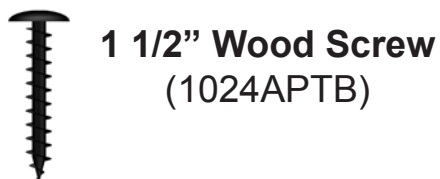
STEP 7

Attaching the Side Bar Assemblies to Spa:



Attach the **Motor Assemblies** to the spa. Line up the **ASC-2 Brackets** to the guides you marked earlier and attach using the supplied **Wood Screws** (part#1024APTb).

Center the **Side Bar Mount (1)** over the mark made in step 5 (pg 10) and attach to spa wall using **2 wood screws**. Next, place the **Motor Mount (2)** directly underneath the spa fiberglass shell lip and attach with **2 wood screws**.



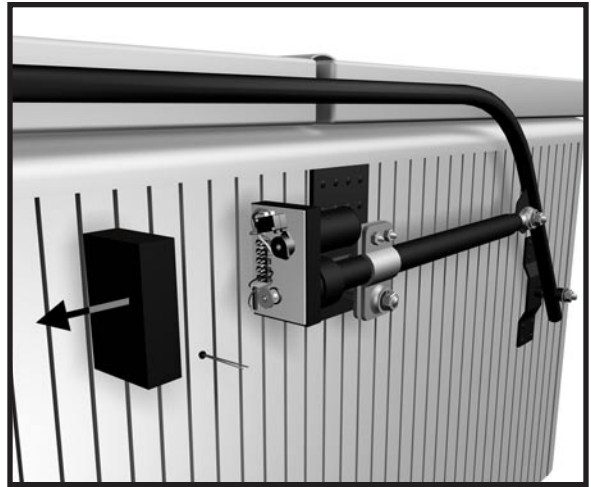
Check to see if everything placed in their proper locations and finish inserting the wood screws. If parts do not line up properly go back and repeat step 5.

The **Motor Assemblies** on the spa should look like the picture on the right.



Wiring up the Motors:

Remove the back covers from the motors.



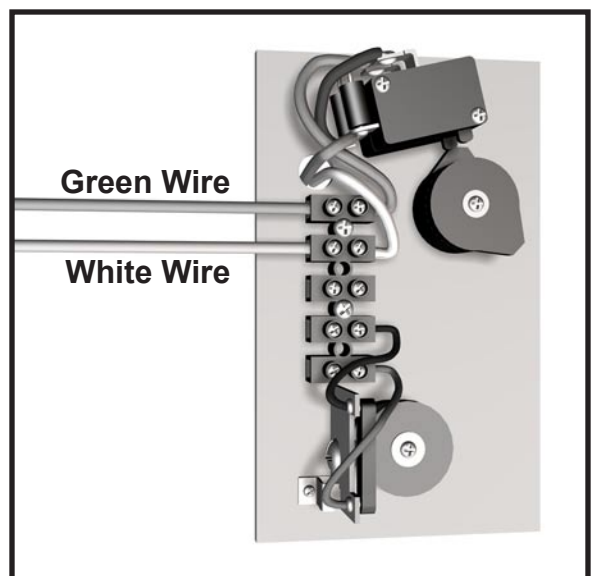
Place the motor wires protruding from the spa and run them through the hole on the bottom of the motor cover.



Attach the Motor Wire to the motors. Make sure the green/white wires match up to the green/white wires on the motor.

IMPORTANT: DO NOT CROSS WIRES. WIRES MUST CONNECT TO MATCHING COLORS.

When completed, re-attach motor covers.



Installation

STEP 8



Turn power back on to spa or use the installers 110VAC Power Adapter.

The **ASC-2 Assembly** will travel to the open position and stop. The **ASC-2 Side Bars** should stop at the same position.

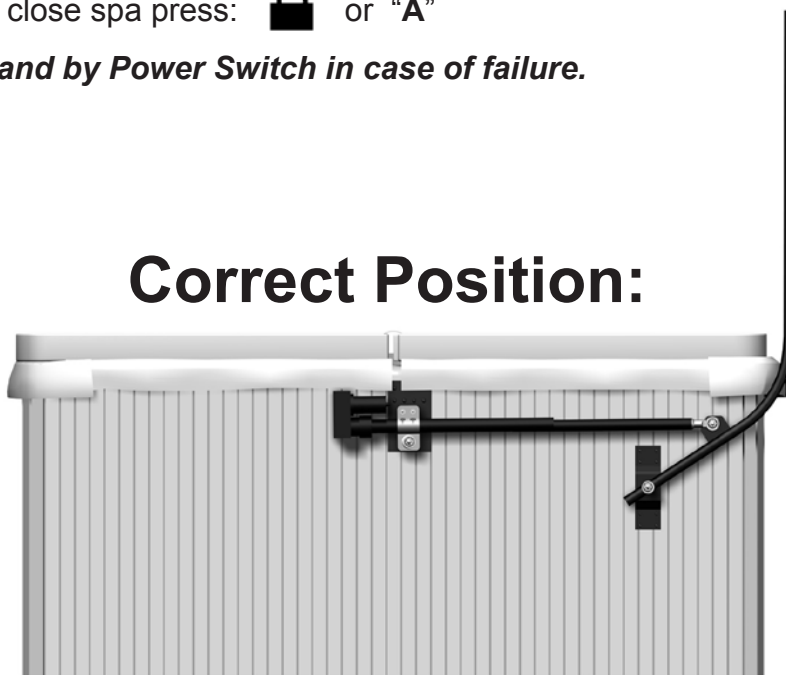
Use the Remote Control to raise and lower the Side Bars.

To open spa press:  or "B"

To close spa press:  or "A"

Stand by Power Switch in case of failure.

Correct Position:



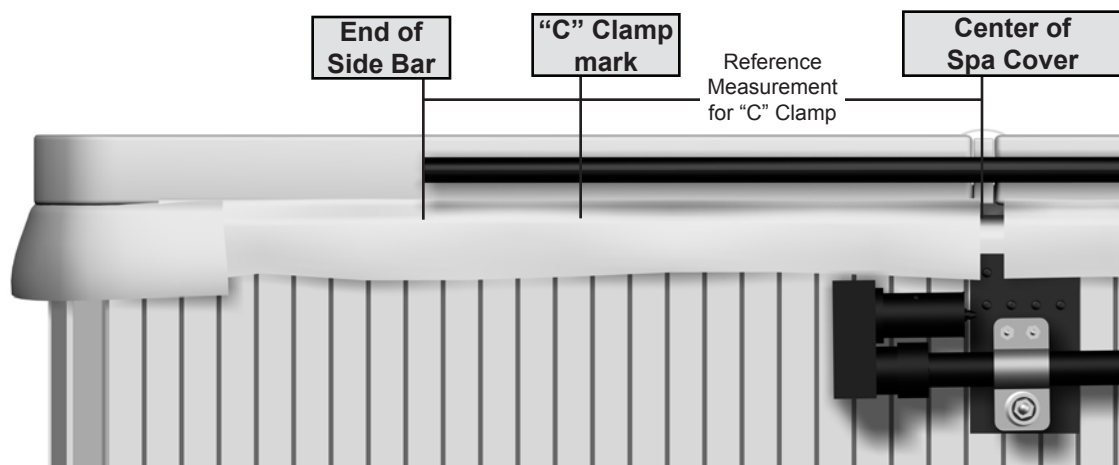
The **Side Bars** should travel towards the back of the spa and stop as shown.

STEP 9

Installing the “C” clamps:

The unit comes with 2 “C” clamps that are attached to the front half of the cover. These need to be installed under the vinyl cover.

Use the “C” Clamp Position Installation Chart below to find where the “C” Clamp needs to be installed. Use the size of your spa as a starting guide.



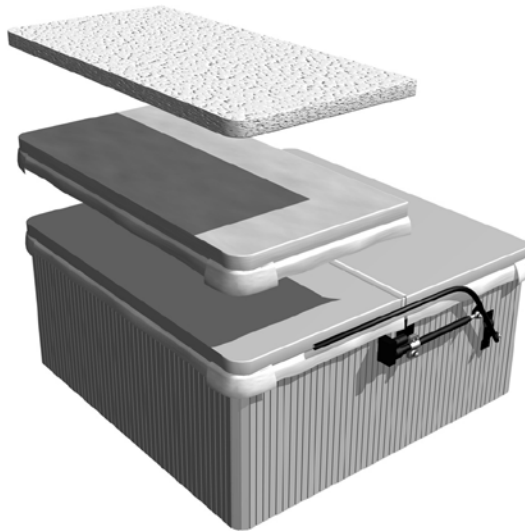
“C” Clamp Position Installation Chart

Spa Size	“C” Clamp	Stop Bolt Position from “C” Clamp
6ft	21”	7”
7ft	22”	8”
7½ft	20”	5”
8ft	18”	5”
8½ft	18”	6”
Over 9ft	18”	7½” or 21” from back of spa Side Bar Mounting Point

Installation

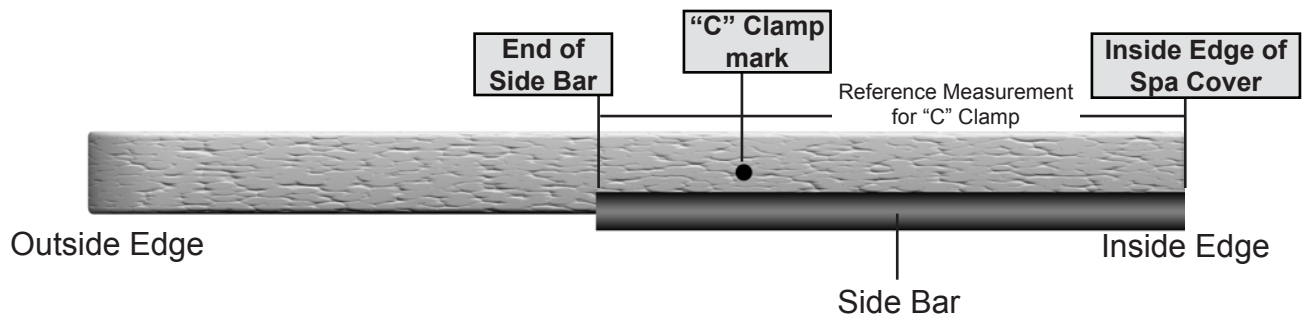
Installing the “C” clamps CONTINUED:

Remove the front half of the cover.



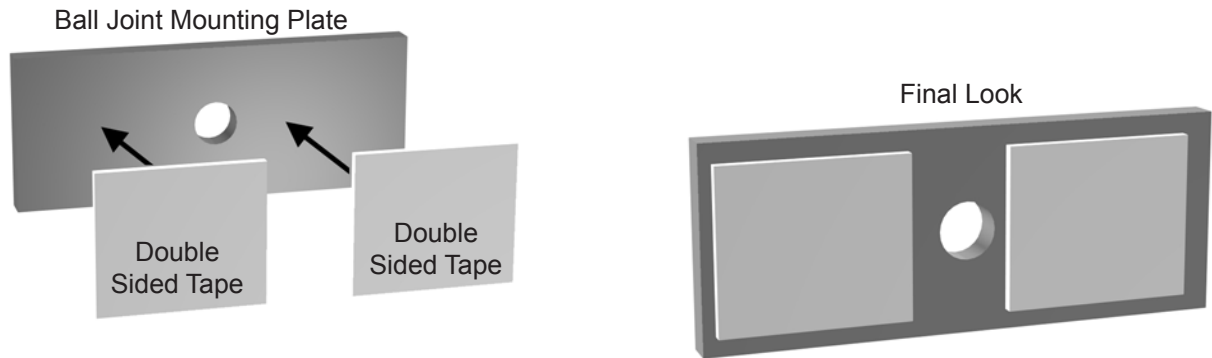
Using the **“C” Clamp Position Installation Guide**, use the length from the “C” Clamp Column and measure from the inside edge of the spa cover foam insert towards the back edge of the spa cover foam insert and make a mark.

This will be the position where the “C” Clamp will be centered and attached to the spa cover foam insert.

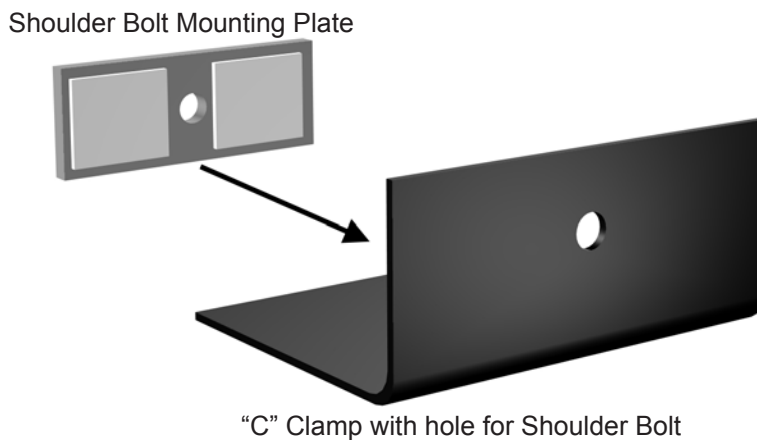


Installation

Installing the “C” clamps CONTINUED:



Apply 2 small strips of double sided tape to the **Shoulder Bolt Mounting Plate** as shown.

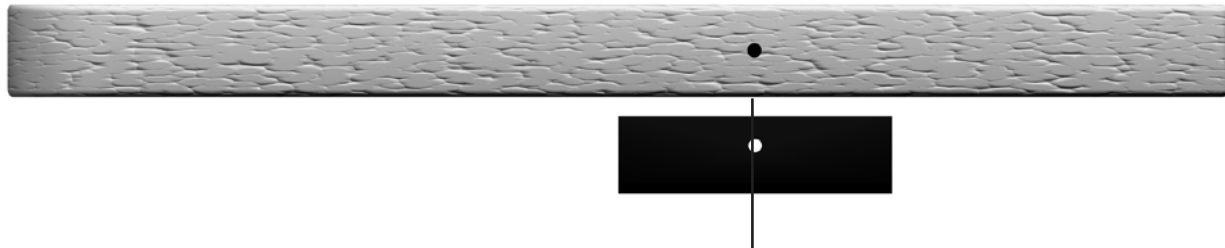


Press the **Shoulder Bolt Mounting Plate** onto the **C Clamp**. Make sure the holes line up before pressing the 2 parts together. The 2 parts together should look like the illustrations below.

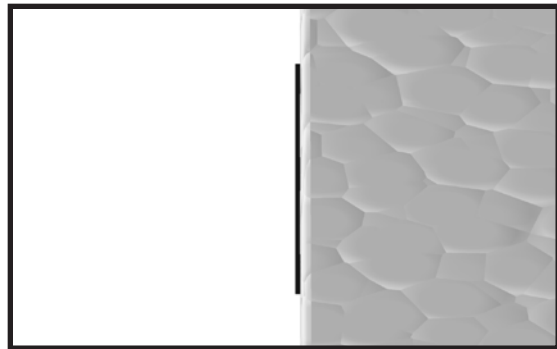
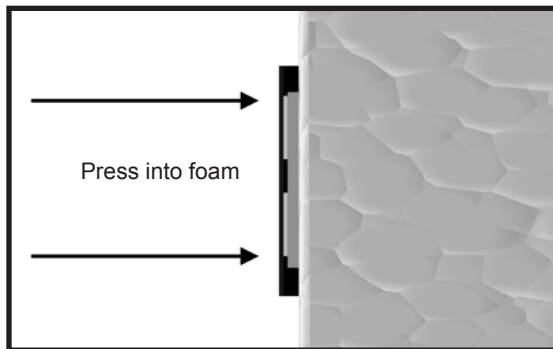


Installation

Installing the “C” clamps CONTINUED:



Line up the C Clamp (with the attached Shoulder Bolt Mounting Plate) to the alignment mark on the cover.

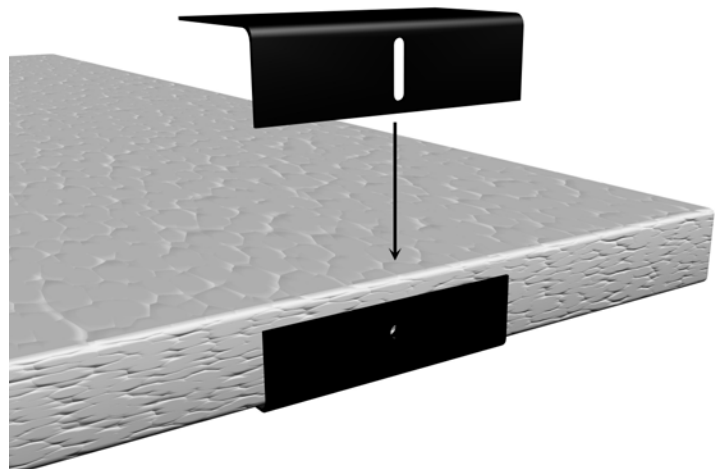


Press the **C Clamp** assembly into the foam surface of the cover until the **Shoulder Bolt Mounting Plate** is flush with the edge as shown.

Doing this will make the **C Clamp** assembly fit better into the spa cover and avoid possible tearing of the vinyl fabric.

Take the second **C clamp** and place it over the bottom piece with the slot lining up with screw hole.

Perform these instructions to both sides of the cover.

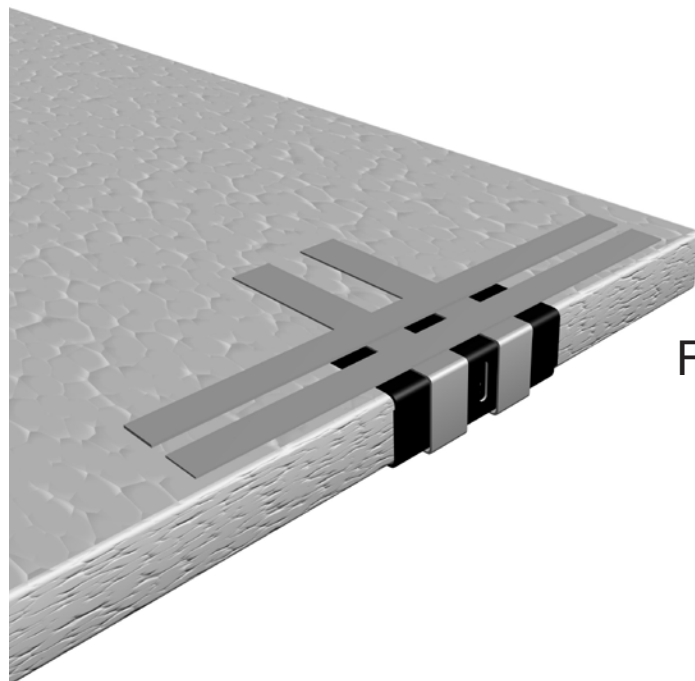
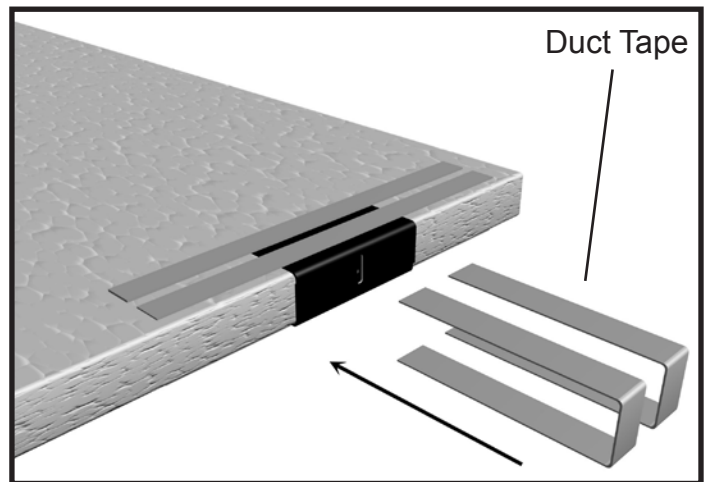
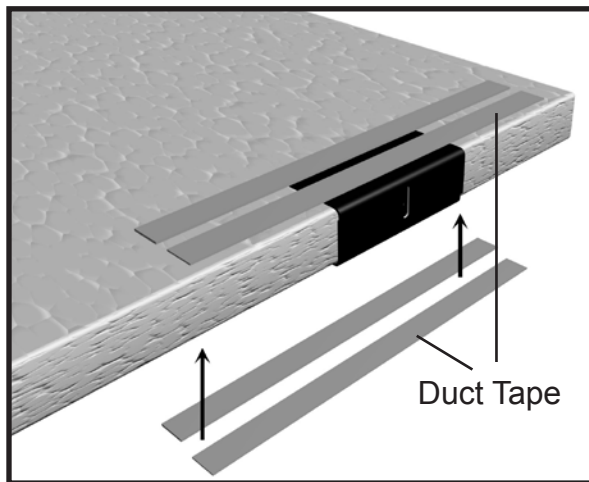


Installing the “C” clamps CONTINUED:

Take the **Duct Tape** and run 2 pieces lengthwise along the top of cover to hold **C Clamp** assembly in place. Repeat along the bottom half of the cover.

Next, place 1 strip of Duct Tape on each side of the **C Clamp** running perpendicular to the previously placed Duct Tape.

MAKE SURE THAT THE SHOULDER BOLT MOUNTING HOLE IS NOT COVERED BY DUCT TAPE. Repeat this for both sides of the **C clamp**.



Final Look

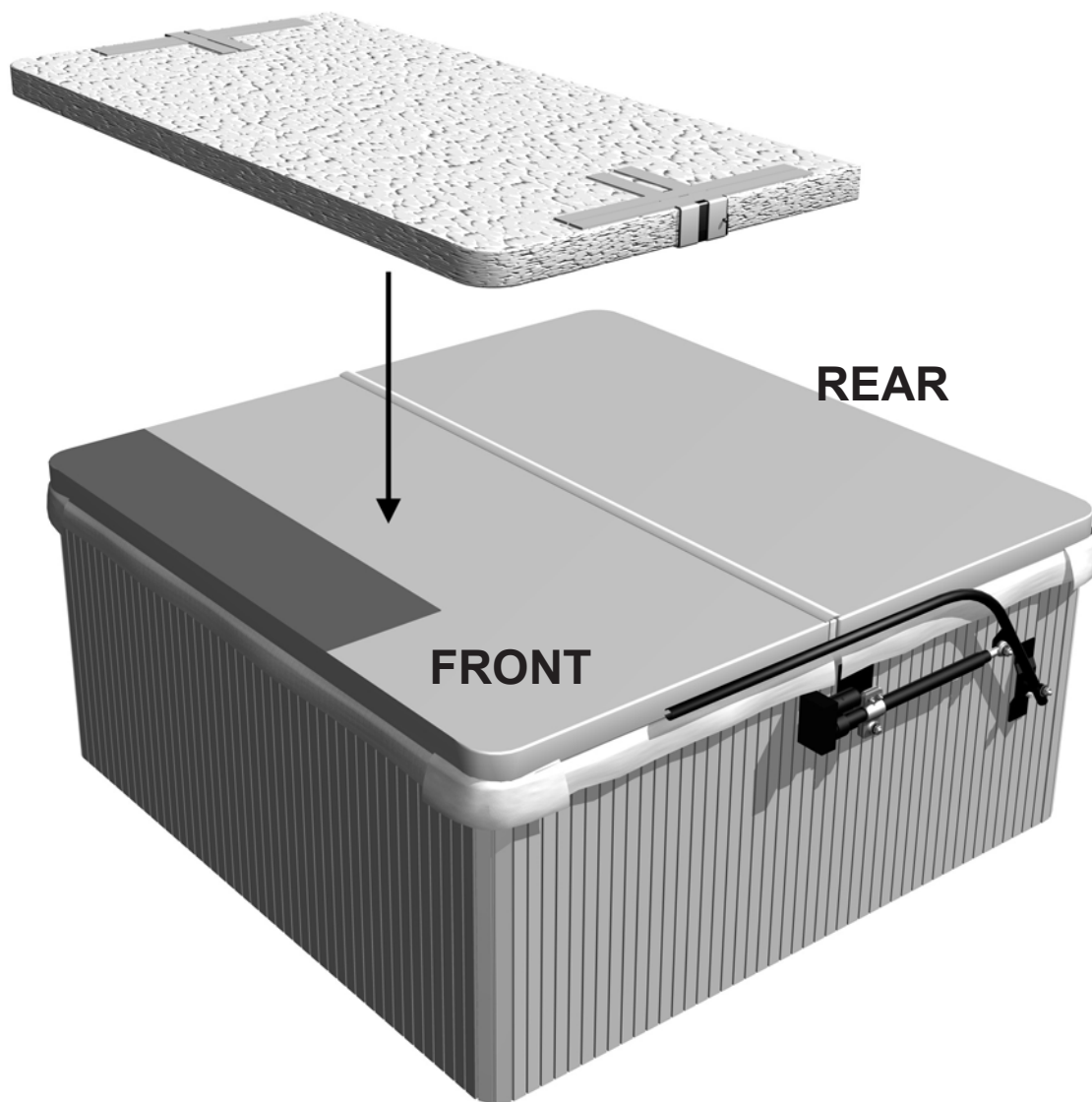
Installation

Installing the “C” clamps CONTINUED:

Re-insert the foam into the cover sleeve. Close the zipper on the cover.

NOTE:

DO NOT RIP COVER WHEN RE-INSERTING FOAM INTO SPA COVER.



STEP 10

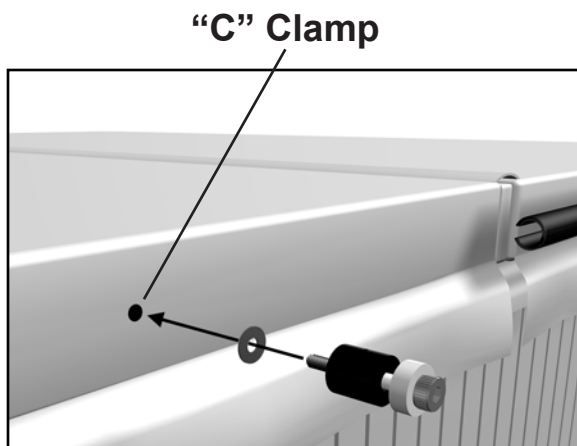
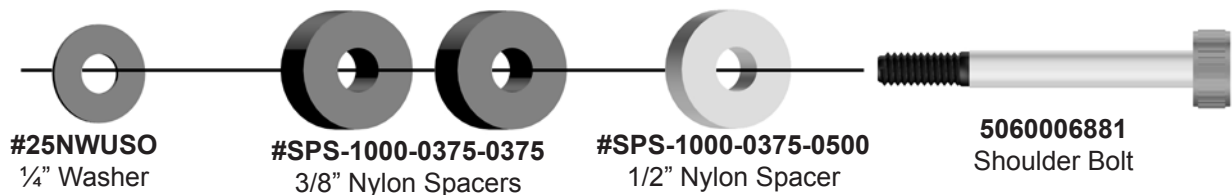
Installing the “C” clamp Shoulder Bolt Assembly:

Slide the cover towards the front of the spa to access the **C Clamp**.



Locate the screw hole in the **C clamp** on the side of the cover. Use a screwdriver to punch through the vinyl cover. Repeat this to both sides.

Shoulder Bolt Assembly

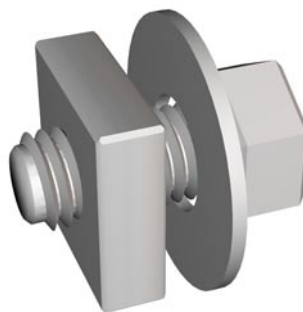


Assemble the parts as shown. Screw the **C Clamp Shoulder Bolt Assembly** with **Washer** into the **C Clamp**.

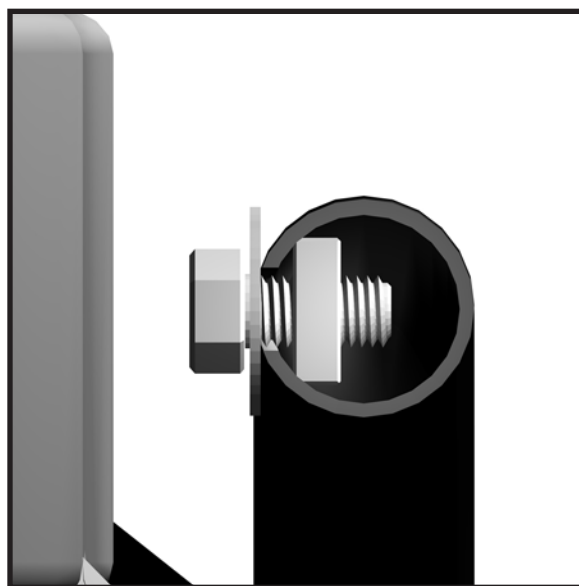
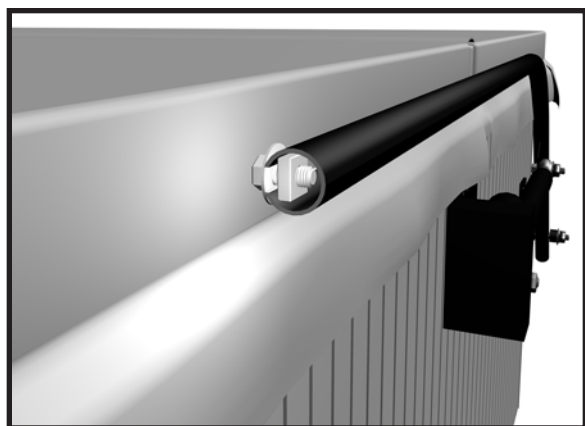
Installation

Installing the Stop Bolt Assembly:

the **Stop Bolt Assembly** is for limiting the distance the spa cover will slide on the **Side Bar**. This helps insure the cover will open properly.



Stop Bolt Assembly



Place the **Stop Bolt Assembly** into the open slot of the **Side Bar**. Make sure the **Side Bar** slot is in between the 2 curved washers. Also make sure the **Lock Washer** end of the **Stop Bolt Assembly** is on the inside of the **Side Bar**. Use the above images as guides.



Slide the **Stop Bolt Assembly** to the end of the slot of the Side Bar. **FINGER TIGHTEN.**

STEP 11

Attaching Cover to Side Bars:

Remove the **End Caps** from both **Side Bars**.

Insert the **Shoulder Bolt Spring** into the **Side Bar**.

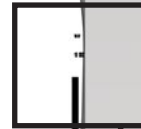
Start by sliding the spa cover back into place until the Shoulder Bolt Assembly meets the Side Bars.

Separate the nylon spacers with the **3/8" Nylon Spacer** touching the head of the **Shoulder Bolt** and the other **1/2" Nylon Spacers** touching the spa cover. (as shown)

Insert only the **3/8" Nylon Spacer** into the Side Bar. (as shown)

Finish sliding the spa cover back into it's regular position. Replace the **Side Bar End Caps** back

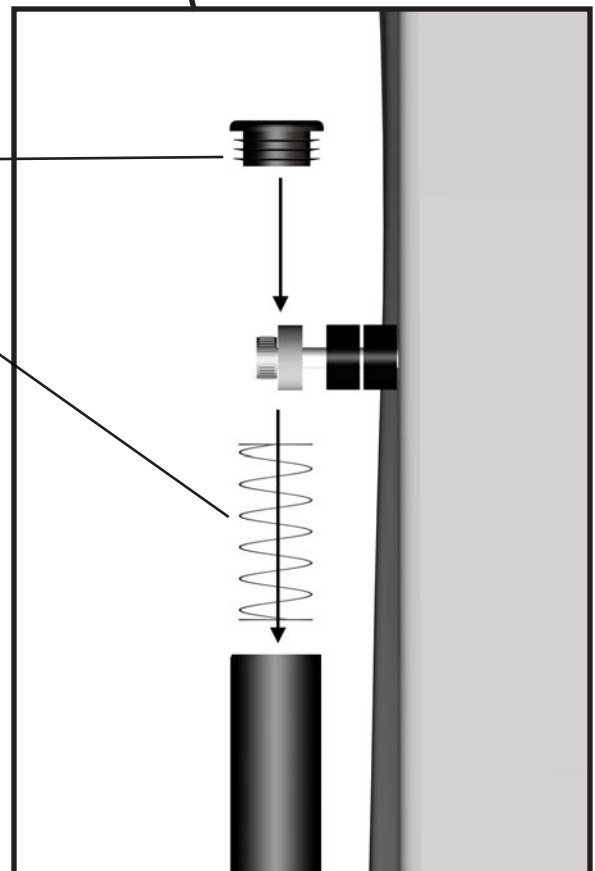
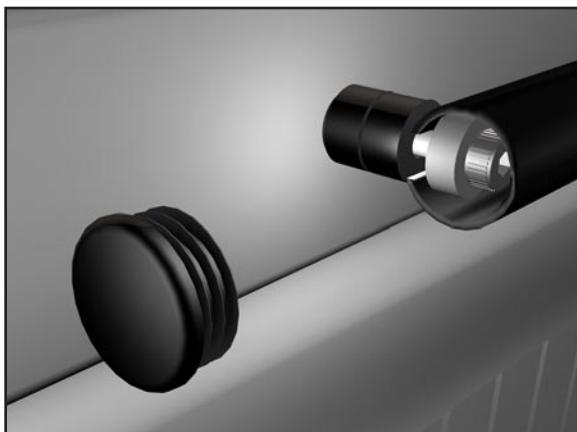
FRONT



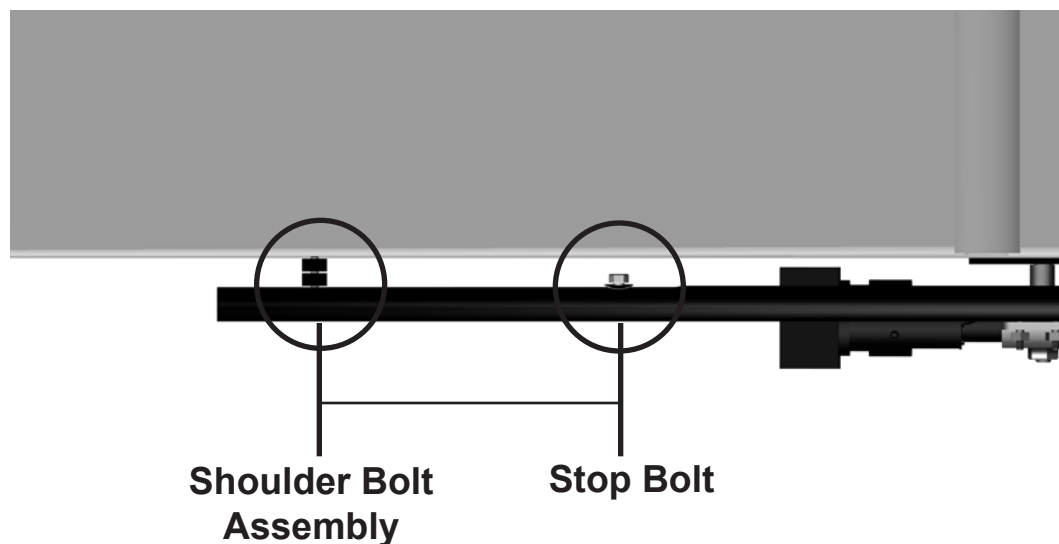
REAR

Side Bar End Cap

Shoulder Bolt Spring



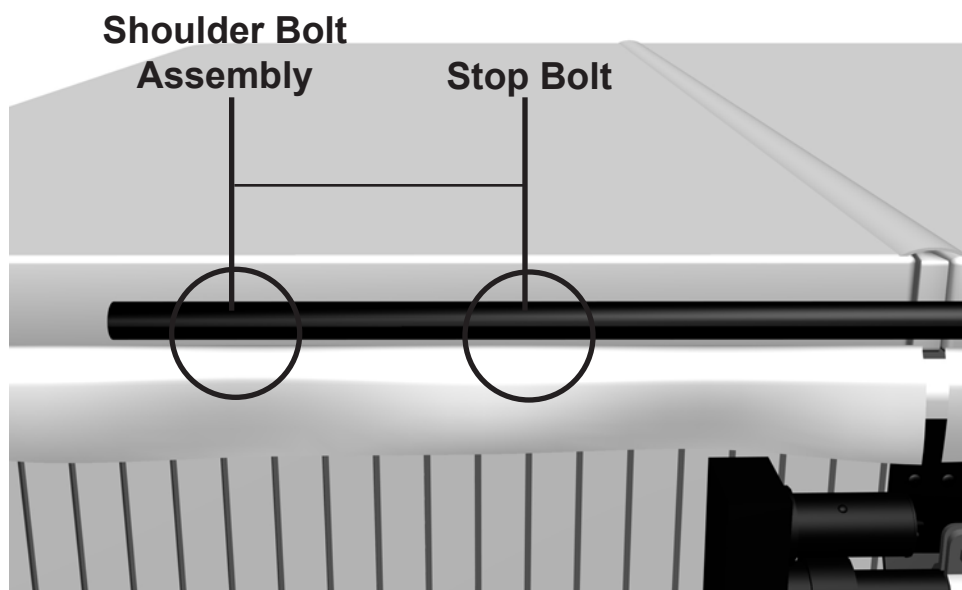
Installation



Finalizing the Stop Bolt position:

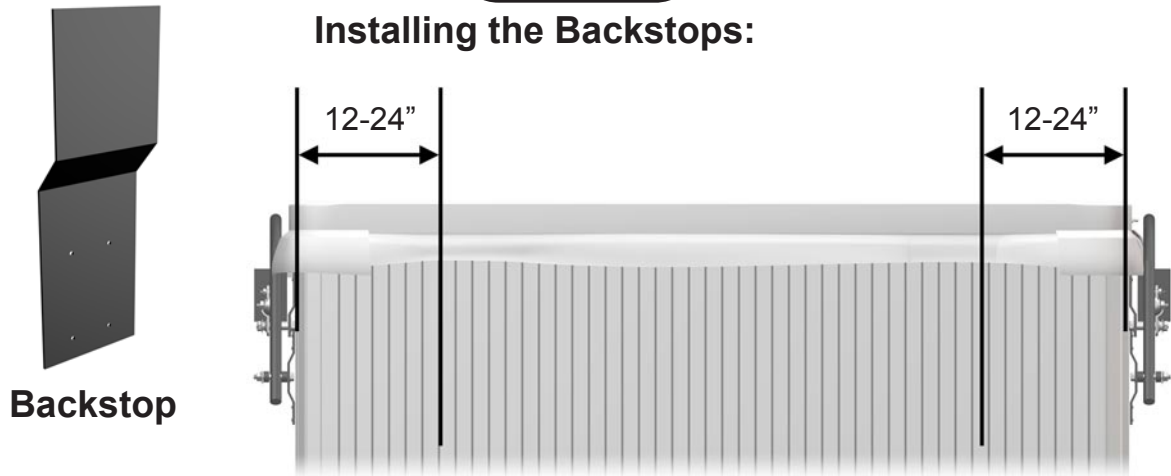
Measure the specified distance (*according to measurement chart on page 16*) from the **Shoulder Bolt Assembly** to find the spot to tighten down the **Stop Bolt**.

Use 1/2" wrench to tighten the **Stop Bolt**. You may need to place your finger on the nut located inside the Side Bar to help tighten the **Stop Bolt** assembly.

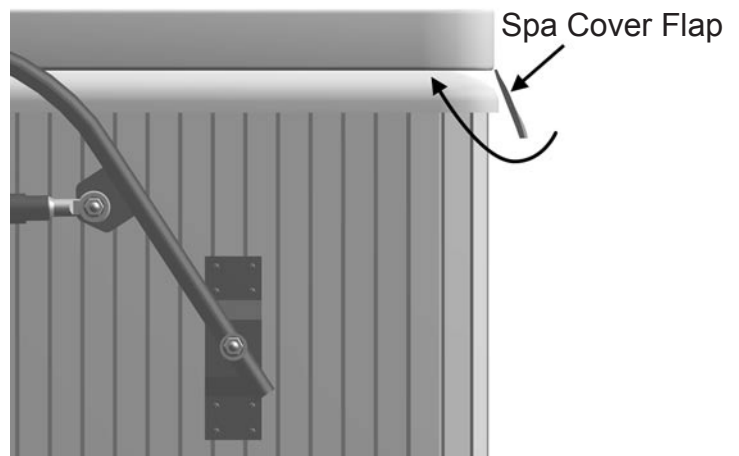
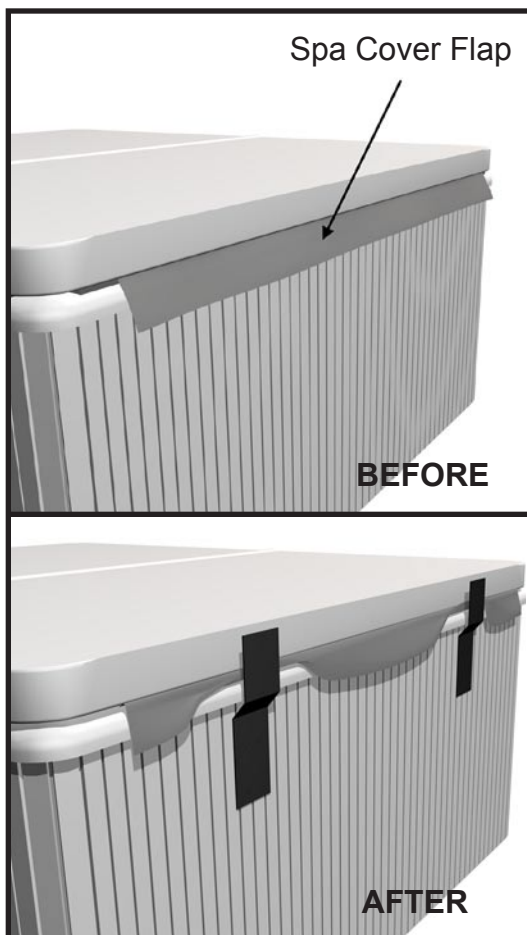


STEP 12

Installing the Backstops:



Go to the rear side of the spa. Measure 12"-24" from the outside corner of the spa along the Rear spa wall. Make a mark. Repeat on the other side of Rear spa wall. For spas that have large rounded corners, the **Backstops** need to be placed at the end of the curve. This will let the spa cover sit flush against the inside back wall of the **Backstop**.

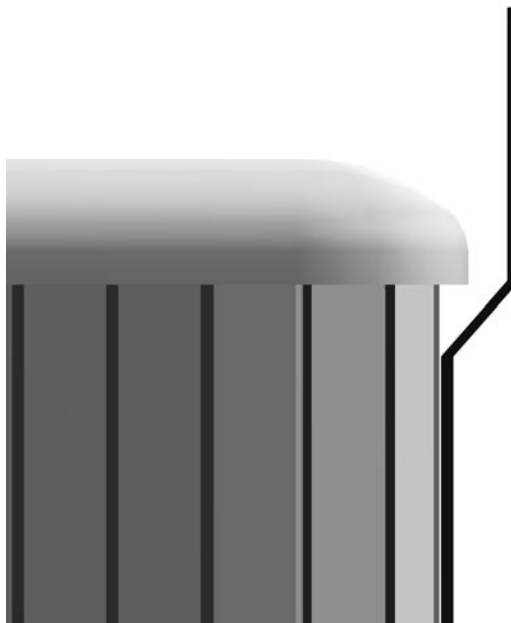


Fold the spa cover flap on the rear side of the spa underneath so it rests between the cover and spa surface. This will make it easier to properly install the Backstops.

Installation

Installing the Backstops:

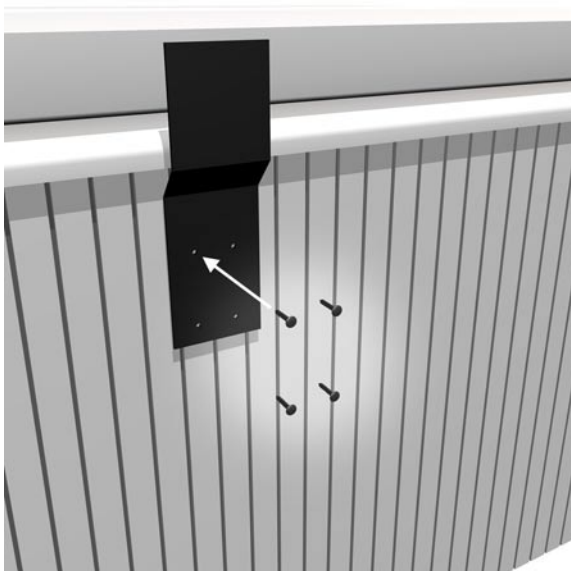
Place and align the **Backstop** against the markings made on the spa wall. Make sure to leave a small space between the spa shell lip and the **Backstop** as shown.



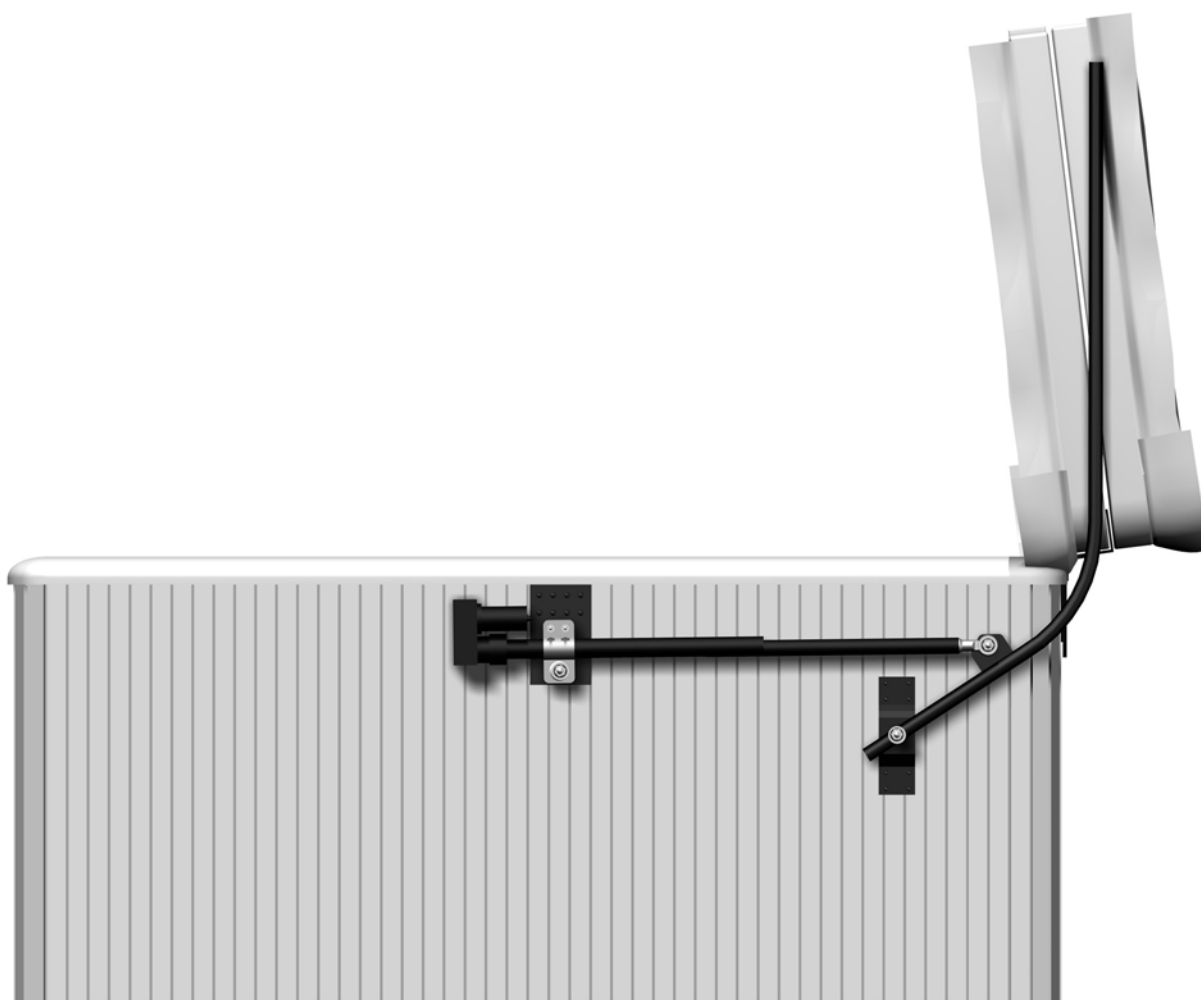
Attach the **Backstops** to the spa wall using the supplied wood screws. Make sure the **Backstops** are lined up with the the guide marks. This will help ensure the **Backstops** are parallel to the spa walls.



1 1/2" Wood Screw
(1024APT B)

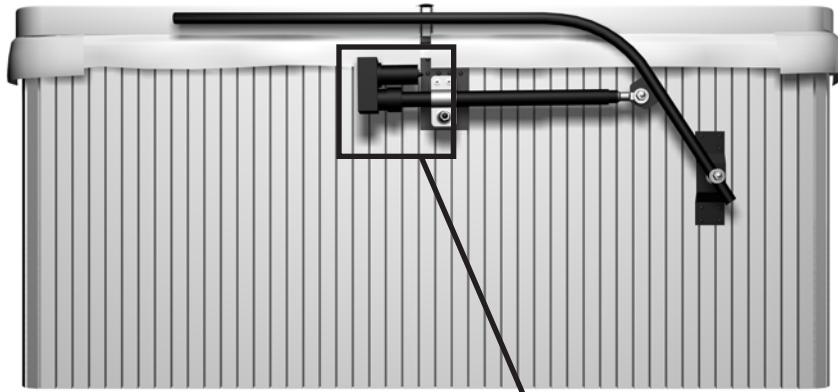


Final Position:



Maintenance

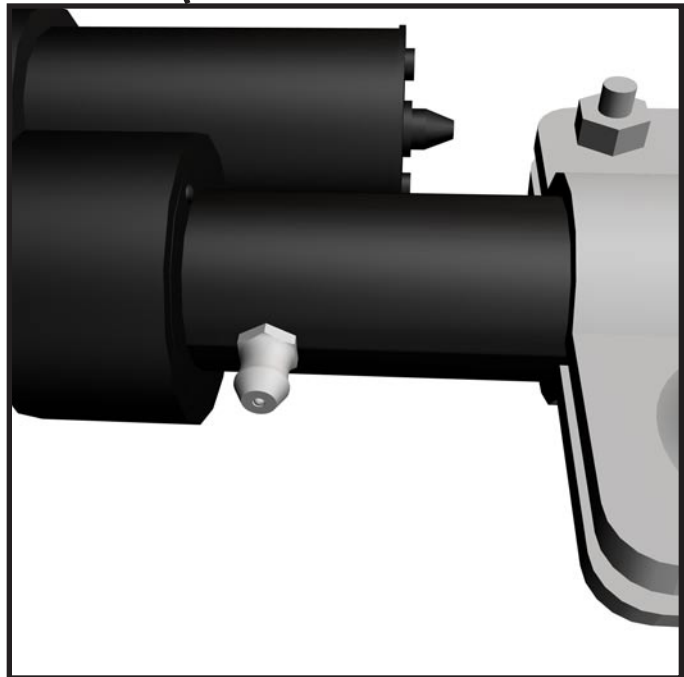
Maintenance:



The **ASC-2 Motors** should be maintained with **High Temperature Waterproof Grease** once a year.

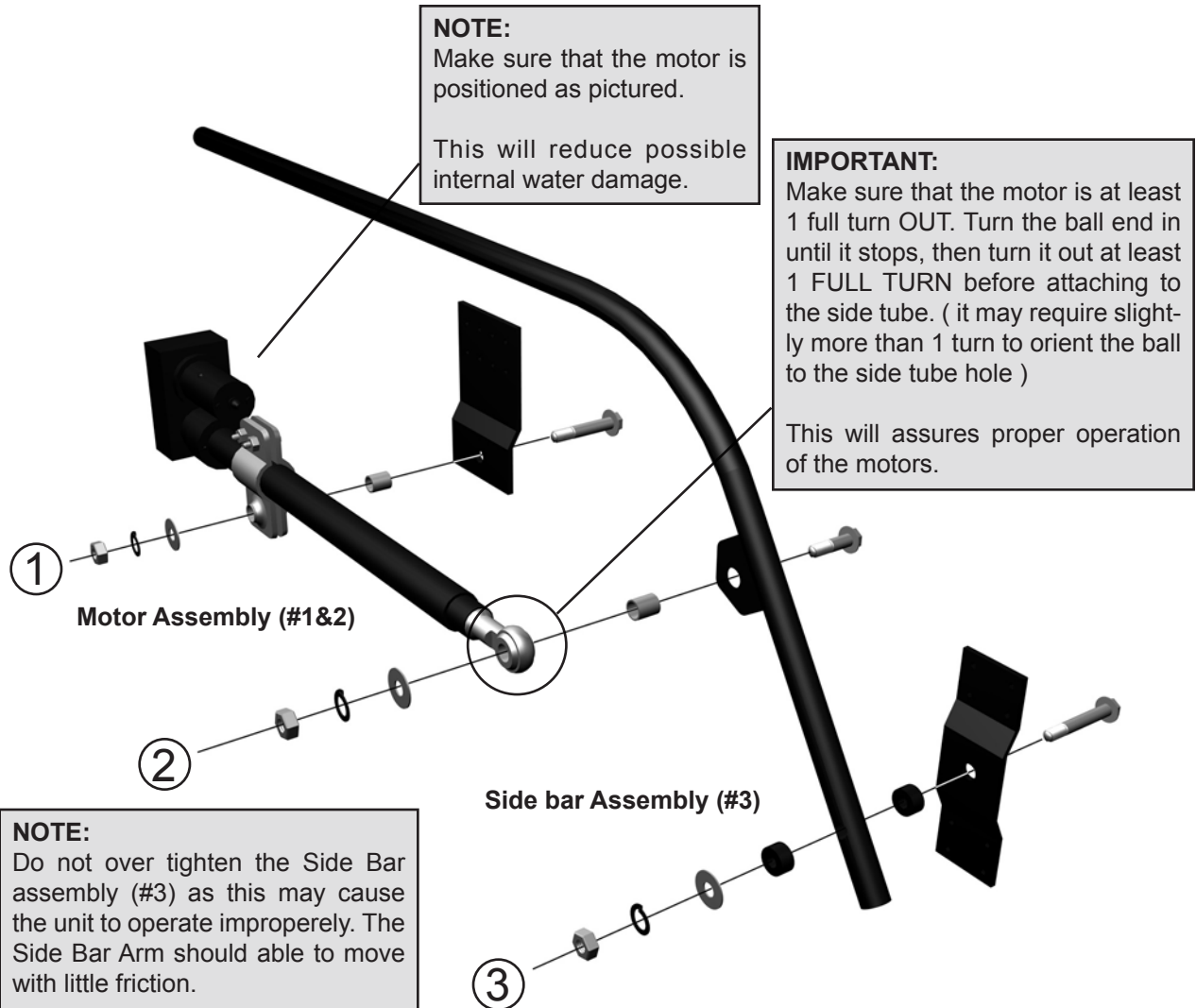
Use a grease gun to insert a small amount of grease through the Zirc fitting on the motor.

In some cases the motor may not have a Zirc fitting. Use a grease gun with a small tip to squirt a small amount of grease into the hole where a Zirc fitting would normally be.

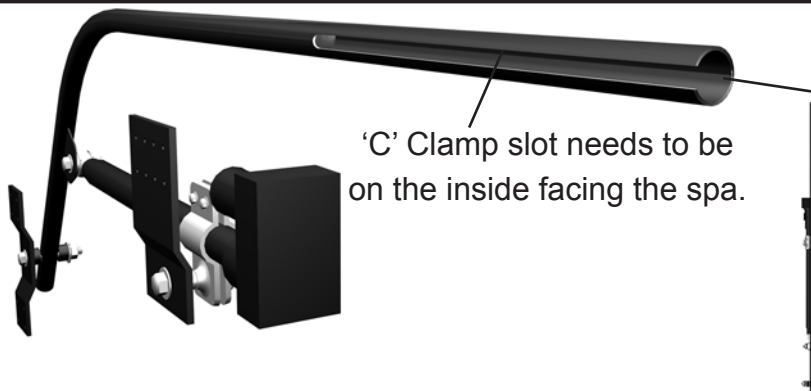


Assembly Diagram for Side Bars and Motor:

MAKE SURE THE "C" CLAMP SLOT ON THE SIDE BAR IS FACING INWARD.



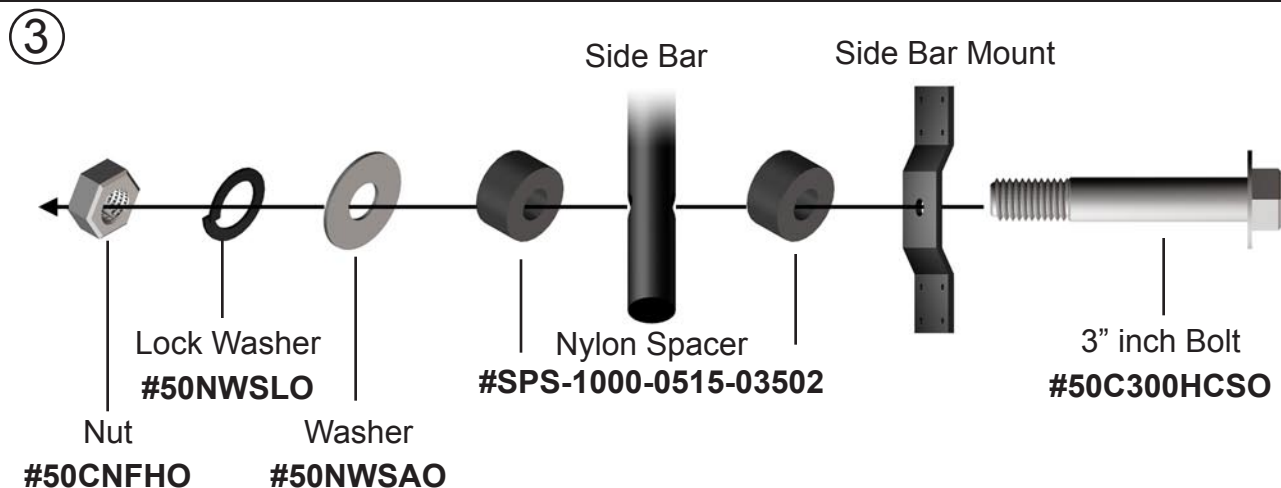
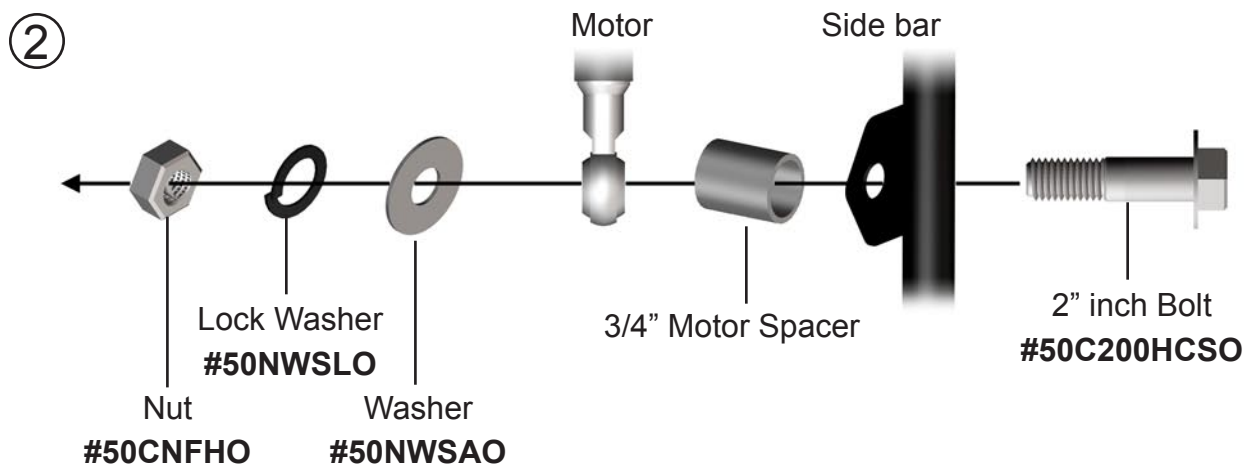
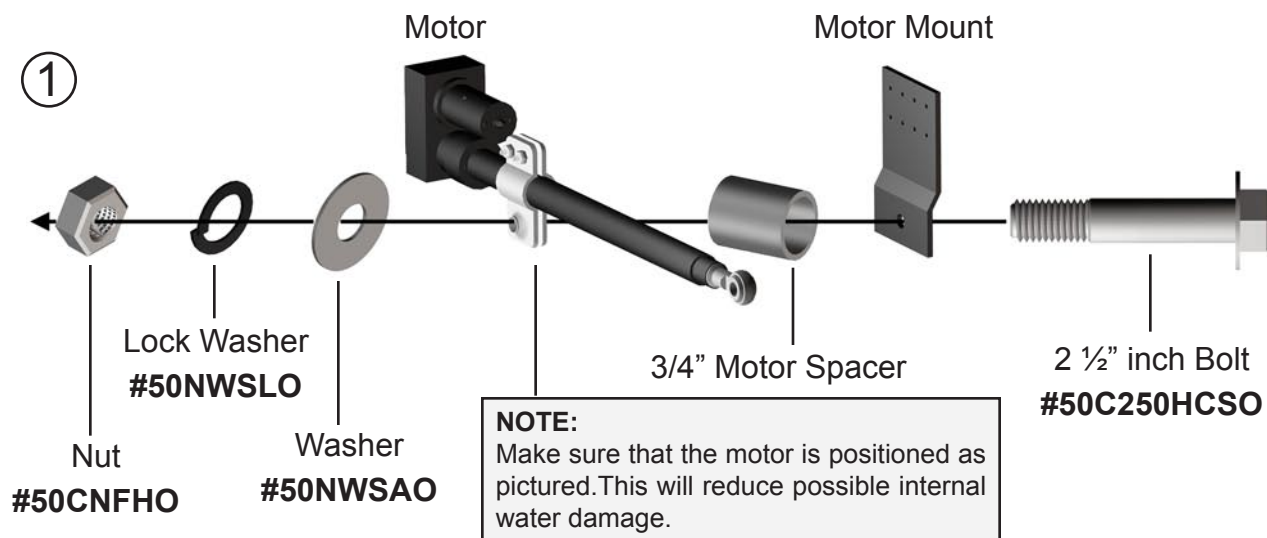
IMPORTANT



TOP VIEW

Assembly

Assembly Diagram for Side Bars and Motor:



Troubleshooting:

Cover will not open	Power connections faulty , motor wires hooked up wrong , blown fuse
Only 1 motor operates	Faulty wiring (reversed) , bad motor
Motors stop at different times	Limit switches not set correctly (more than 2 seconds)
Cover is tilted when open	Side Bars not set correctly , none symmetrical spa cover , or Back Hinges at different heights.
Cover comes down offset	Side Bars not set properly
Remote does not work	Check battery. If battery is good then there may be an issue with electronic board.
Cover opens but will not close	Faulty electronics board. Contact tech support.
Motors keep running after the cover is closed	Motors not set to fully closed position when the unit was set up , loosen the motor clamps in the closed position until they slide to a free position then tighten (you will need to reset the limit switches

Resetting Remote Control:

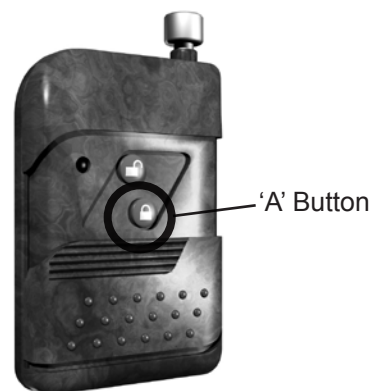
In the event that the Remote Control loses the ability to connect to the Receiver, the system needs to be reset. **UNPLUG MOTOR FROM POWER SUPPLY BEFORE RESETTNG.**

Remote Control Receiver



Green LED Light

Remote Control











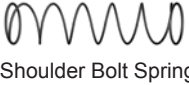
















'A' Button

Learning Button

Begin by opening up the **ASC-2 Control Box** and locate the **Remote Control Receiver**. Press and hold the **Learning Button** for 3 seconds until the **Green LED Light** activates. Next, press the **'A' button** on the **Remote Control**. The Green LED Light will shut off to indicate that the Remote Control has been reset.

Parts List

QTY	Part Description	QTY	Part Description	QTY	Part Description
6	 #50CNFHO 1/2"-20 Nut	4	 Double Sided Tape Squares	2 (sets)	 Stop Bolt Assembly (2-3/8" bolts, 2-3/8" washers, 2-square nuts)
6	 #50NWSLO 1/2" Lock washer	2	 #SHK-40R-BK Cap Screw	2	 #4026-B Spa Backstops
6	 #50NWASO 1/2" washer	1 (set)	 Motor & Power Wire Harnesses	2	 # 4018 Motor Mount
4	 #25NWUSO 1/4" Washer	2	 Shoulder Bolt Spring	2	 #4016 Side Bar Mount
40	 #1024APTb Wood Screw	2	 #50C200HCSO 2" Inch Bolt	1	 Control Box & Remote Control
2	 #91555A102 Mounting Screw	2	 #50C250HCSO 2 1/2" Inch Bolt	2 (sets)	 C Clamp Set
4	 # SPS-1000-0515-03502	2	 #50C300HCSO 3" Inch Bolt	2	 # 4015 Side bar
4	 # SPS-1000-0375-0375 Nylon Spacer	2	 # SPS-1000-0375-0500 Nylon Spacer	2	 #HARL 3618 Motor
				2	 #5060006881 Shoulder Bolt

Limited Warranty

ASC 1-Year Limited Warranty

U.S. Warranty – Warranty service is only available in the country of original purchase. This is an important document. Attach your bill of sale to this card and keep it in a safe place. Your bill of sale is your warranty.

The ASC warranty remains in effect for one year from the date of the first consumer purchase.

WHO IS PROTECTED BY THIS WARRANTY

The ASC warranty protects the original owner and all subsequent owners. A copy of the original dated bill of sale must be presented whenever warranty service is required.

WHAT IS COVERED BY THIS WARRANTY

Except as specified below, the ASC warranty covers all defects in material and workmanship. The following are not covered: damage caused by accident, misuse, abuse, product modification or neglect; damage occurring during shipment; damage from failure to follow instructions contained in the instruction manual; damage resulting from the performance of repairs by someone not authorized by ASC; damage caused by installation of parts that do not conform to ASC specifications; units used for other than home and office use; units not used for their intended purpose; any claims based on misrepresentations by the seller; products sold on an "as-is" or final sale basis; or the cost of installing, removing, or reinstalling the unit.

ASC's liability is limited to the repair or replacement, at our option, of any defective product and shall not include incidental or consequential damages. ASC reserves the right to replace a discontinued model with a comparable model. Any replacement units or parts may be new or rebuilt.

TO OBTAIN WARRANTY SERVICE

If you require warranty service, please return the product to your dealer. If this is not possible and you live in the United States, please call 1-805-226-5030 for information on how to obtain service or replacement.

If purchased outside the United States, contact your local dealer for repair or replacement.

DO NOT RETURN PRODUCTS TO THE ASC FACTORY WITHOUT AUTHORIZATION; THEY WILL BE RETURNED UNOPENED

You are responsible for transporting your product for repair or replacement. ASC will pay reasonable return charges for delivery to any location in the United States if the repair or replacement is covered under the warranty. Correspondence with ASC should be addressed to: ASC Customer Service, 2501 Golden Hill Rd Paso Robles Ca 93446. Outside the United States, please contact your local distributor. This warranty gives you specific legal rights. You may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above may not apply to you.

Auto Spa Cover assumes no liability for the ASC-2 product.

Failure to follow installation instructions will void warranty.

Auto Spa Cover recommends replacing spa covers that are 2½ years old before installation.

Auto Spa Cover Inc
Paso Robles, CA 93446

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www.autospacover.com

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