

# 24V Solar Charger Instructions

**PART #: F-043SCH**  
(Patriot Solar Charger Kit)

**MANDATORY – LEAVE THIS MANUAL WITH LIFT OWNER**



Read & follow all instructions  
Lift safety can only be ensured if the lift is installed  
and operated according to these instructions



**NEVER** permit children to play on or around the lift  
Do not allow children to use the lift without adult supervision



**NEVER** apply direct water pressure to the electronics



**NEVER** use the lift with a dry pool



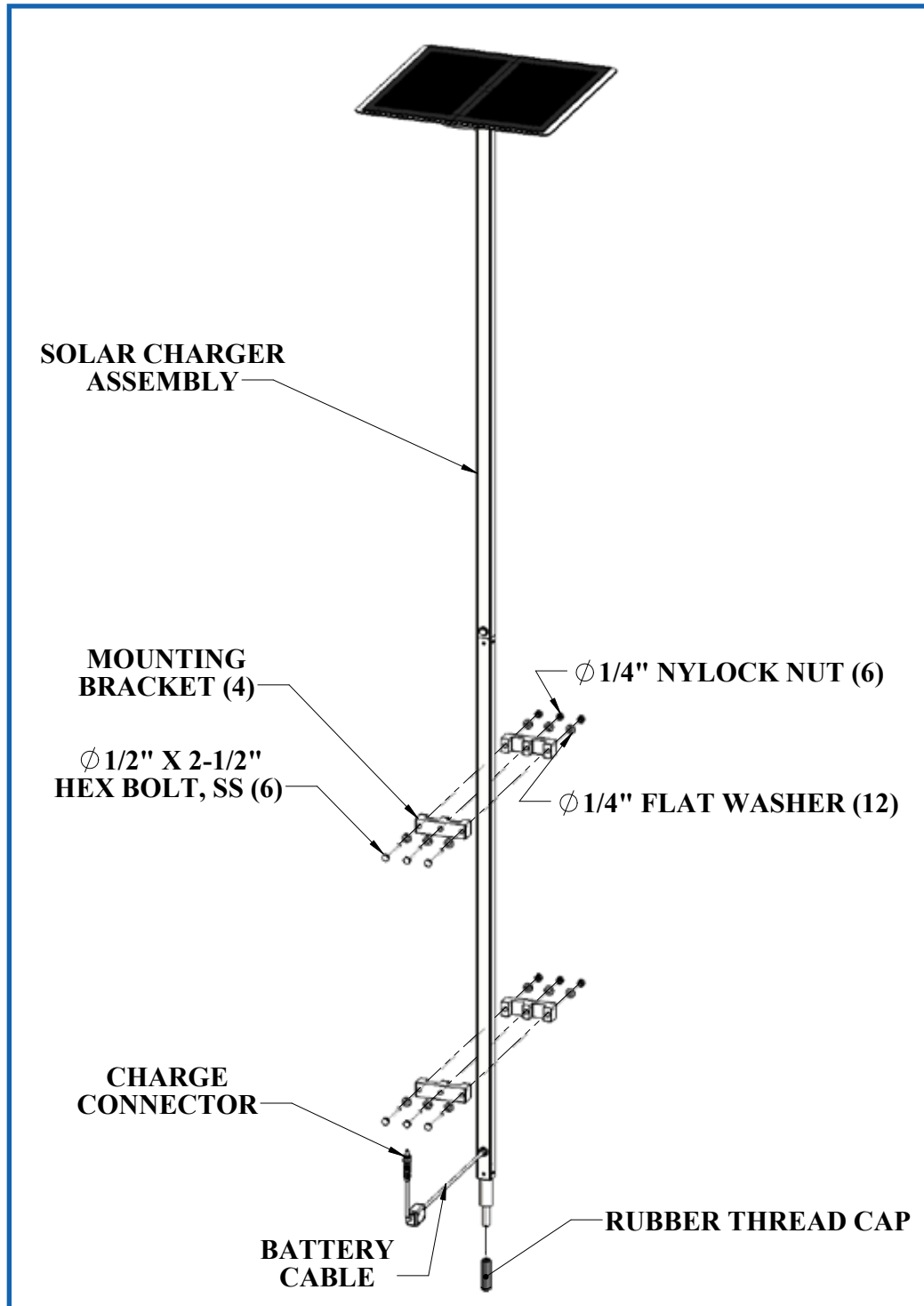
For safety reasons, **NEVER** swim alone

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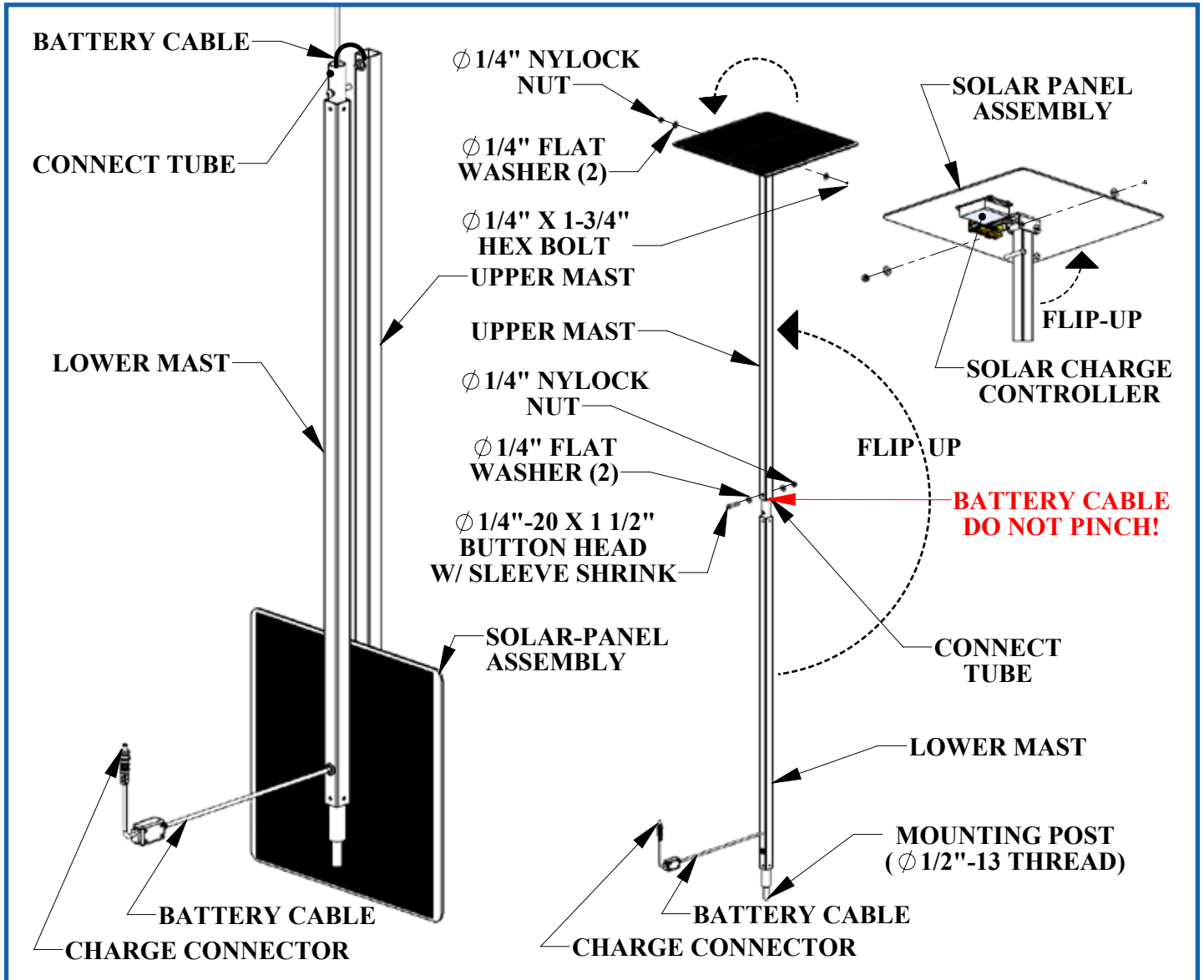
**SAVE** a copy of these instructions

# Patriot Solar Charger Kit



The Patriot Solar Charger Kit comes complete with a 24V solar charger assembly, the brackets and hardware required for mounting the solar charger to the Patriot pool lift as shown on page 4. The solar charger comes partially assembled. Before mounting the solar charger to the Patriot lift, you will need to assemble the solar charger as shown on the next page.

# Unpacking And Assembly

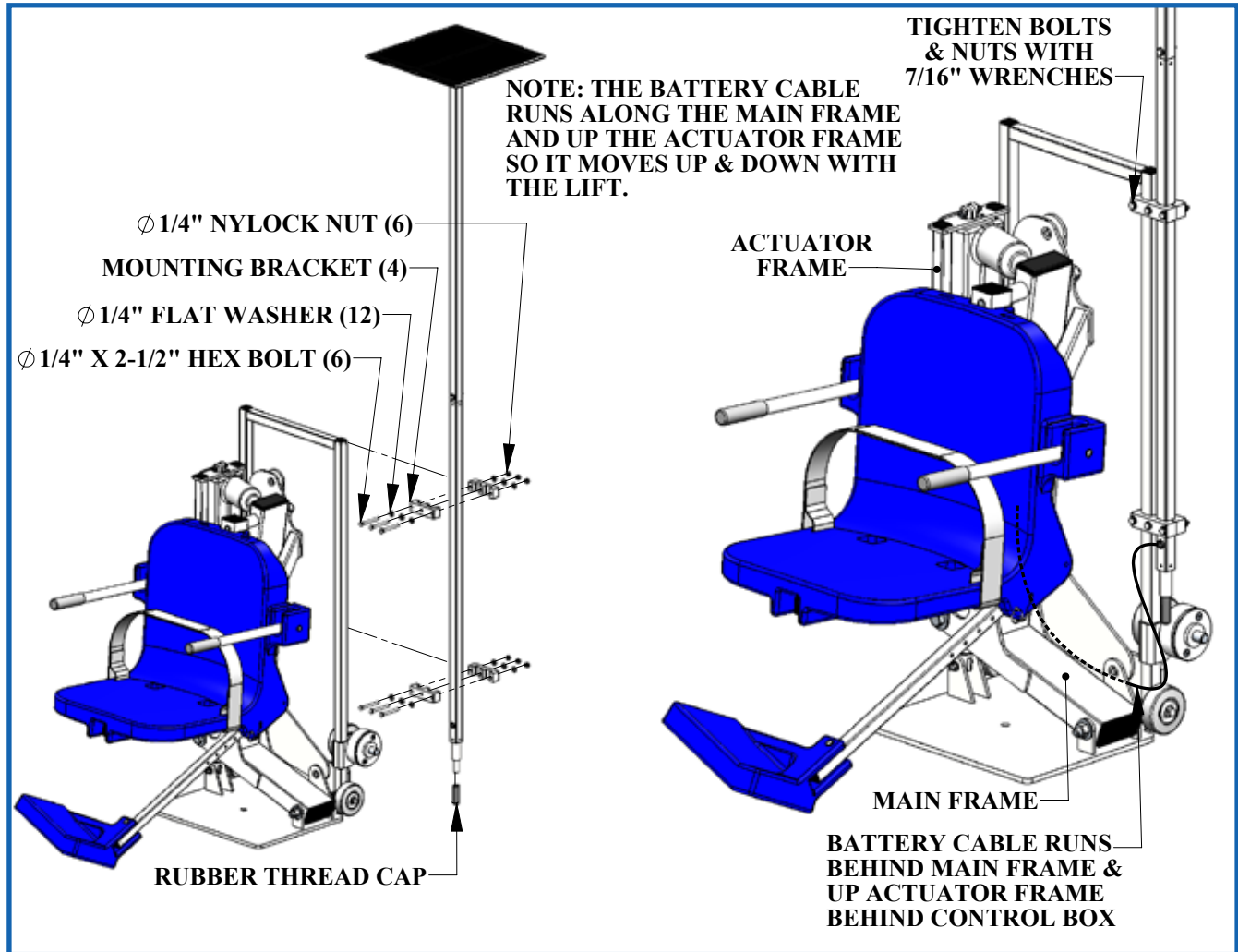


To assemble the Solar Charger you will need two (2) 7/16" wrenches or sockets.

The 24V Solar-Charger comes fully wired, in two halves for shipping. To assemble the charger remove it from the shipping box and connect the UPPER MAST to the LOWER MAST by flipping the UPPER MAST up and sliding the CONNECT TUBE inside the UPPER MAST and aligning the holes as shown above. Pull the BATTERY CABLE and the CHARGE CONNECTOR through the tube as you slide the TOP ASSEMBLY down. **DO NOT PINCH THE BATTERY CABLE!** Install the supplied 1/4" x 1 1/2" hex bolt, the flat washers and Nylock-nut as shown. Tighten until snug.

Next, flip-up the SOLAR PANEL ASSEMBLY until it is flat-horizontal, and install the 1/4" x 1 3/4" hex bolt and flat washer underneath as shown. Install the 2nd flat washer and the Nylock nut on the opposite side, and tighten until snug. The Solar Charger is now ready to install on your pool lift.

# Patriot Solar Charger Installation



To install the Solar Charger on a Patriot lift;

**STEP 1:** Put the lift in operation mode on the pool deck.

**STEP 2:** Find the RUBBER THREAD CAP and install over the mounting stud.

**STEP 3:** Using the MOUNTING BRACKETS (4) and supplied hardware, attach the Solar Charger to the handle as shown above. Tighten hardware with 7/16" wrenches or sockets until snug. The Solar Charger should be solid and stable when the brackets are fully installed.

**STEP 4:** Run the BATTERY CABLE behind the main frame and up the ACTUATOR FRAME. The CONNECTOR is on the CONTROL BOX (see INSTALLING THE CHARGE CONNECTOR).

# Control Box Modification Instructions

Check to make sure the far right plug in does not have a plastic disk at the top of the hole. If it has a plastic disk, follow the instructions on how to remove it. If the hole is clear, skip to "Installing The Charge Connector".



**TO OPEN THE CONTROL BOX  
USE A TORX T20 DRIVER**



**"TORX" T20 DRIVER FOR  
OPENING CONTROL-BOX**



**REMOVE THE FOUR (4) SCREWS FROM THE TOP OF THE CONTROL BOX: LEAVE SCREWS IN HOLES**



# Control Box Modification Instructions



REMOVE THE COVER AND PLACE ON TABLE RIGHT-SIDE UP: NOTE POSITION OF EMERGENCY-SWITCH CAP



USE A "TORX" T10 DRIVER TO REMOVE THE THREE (3) SCREWS FROM THE CONTROL BOARD

# Control Box Modification Instructions



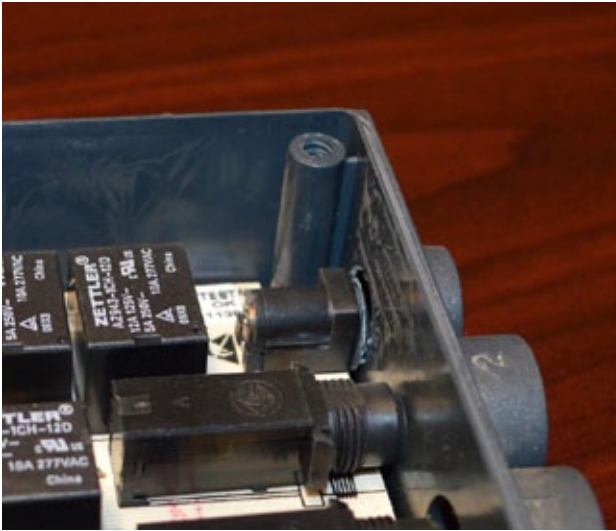
**REMOVE THE CONTROL BOARD FROM THE CONTROL BOX**



**USE SCREWDRIVER, AND MALLET IF NECESSARY, TO PUNCH-OUT  
AND REMOVE PLASTIC-DISC ON 24V INPUT/OUTPUT PORT**



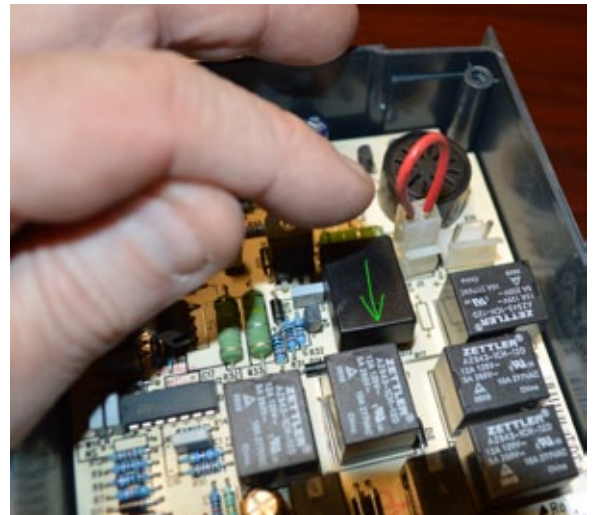
# Control Box Modification Instructions



**PLACE THE CONTROL BOARD BACK IN PLACE INSIDE THE CONTROL BOX**



**RETURN THE THREE (3) SCREWS TO SECURE THE CONTROL BOARD BACK IN PLACE**



**REPLACE THE EMERGENCY-SWITCH CAP WITH "ARROW" POINTING DOWN AS SHOWN**



# Control Box Modification Instructions



**PUT COVER ON AND REINSTALL SCREWS**



**TEST EMERGENCY-SWITCH WITH DRIVER, LISTEN FOR "CLICK"**

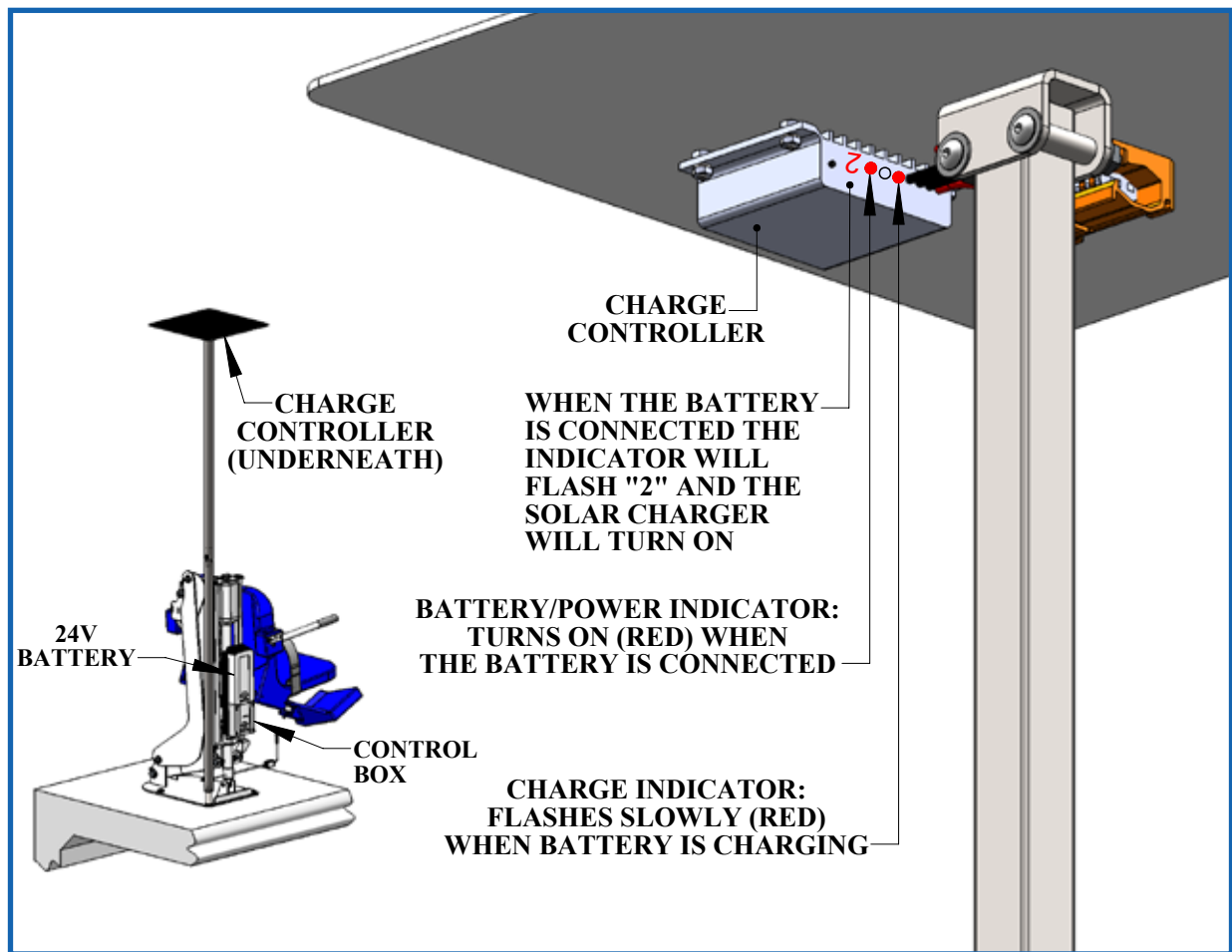
# Installing The Charge Connector



**STEP 5:** Run the BATTERY CABLE behind the control box as shown, and plug the BATTERY CONNECTOR into the control box.

**NOTE:** The BATTERY CABLE must be run along the main frame as shown so it follows the lift as it goes down into the water. Run the lift up and down to make sure the cable has been installed properly.

# Solar Charger Operation



Once the BATTERY CONNECTOR has been installed, and a battery is installed onto the lift the 24V Solar Charger will turn on and start trickle-charging the battery. Without the battery installed the 24V Solar Charger will be off, and will remain off until a battery is installed.

When a 24V battery is installed onto the lift the LED INDICATOR will flash "2" to show that a 24V battery has been detected and the charger is operational.

The Solar-Panel power indicator will light up (red) when the Solar Charger has been properly attached to the battery. The charger will work even on cloudy days, but not as efficiently.

When the battery is installed and there is sufficient sunlight, the CHARGE INDICATOR will flash (red) slowly, indicating the battery is being charged. When the controller detects the battery is fully charged the flashing will stop. Under most conditions the CHARGE INDICATOR light will be flashing whenever a battery has been installed.

The 24V Solar Charger will continue to charge the battery, even as the lift is being used. So once the 24V Solar Charger has been installed it will function without any need for adjustment. The user should check the indicators periodically to make sure it is working.

# Battery Maintenance

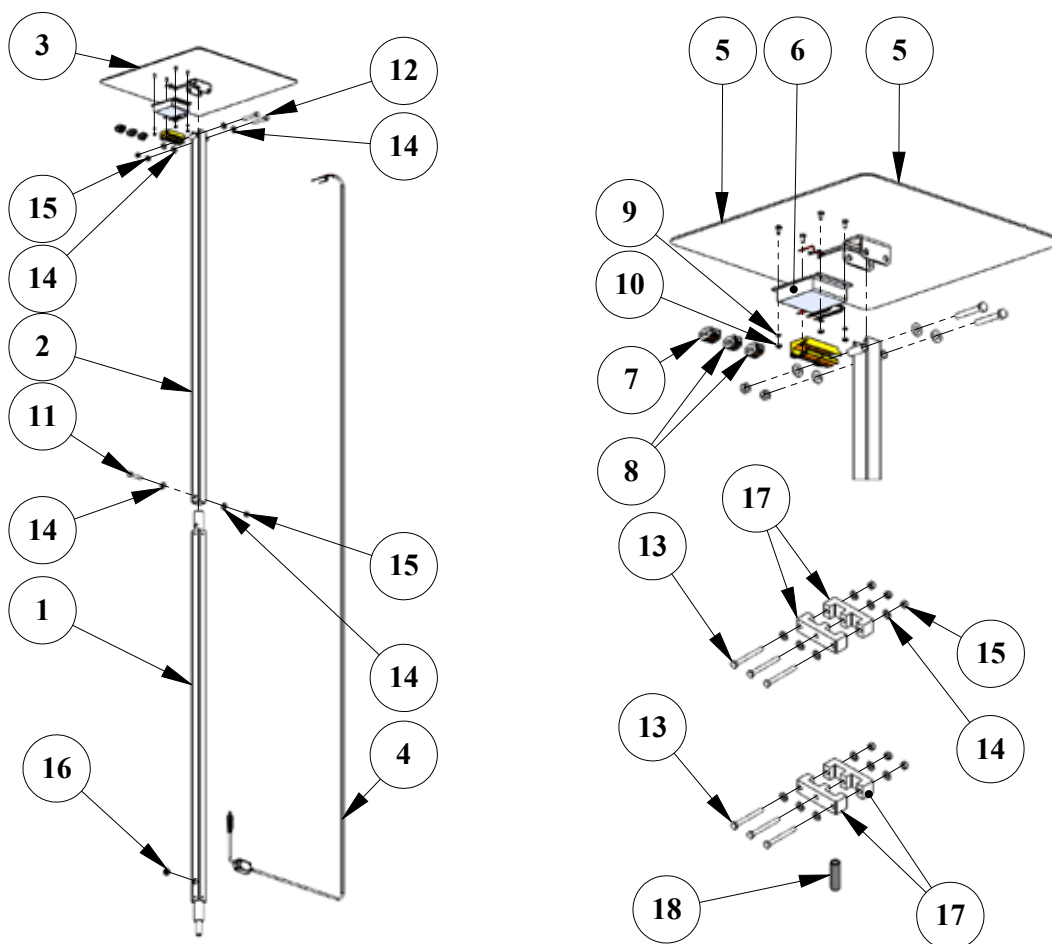
1. Do NOT expose the battery to freezing temperatures.
2. Do NOT expose the battery to prolonged periods of extreme heat or severe cold temperatures.
3. Do NOT expose the battery to temperatures below 32 degrees Fahrenheit (0 degrees Celsius).
4. Do NOT expose the battery to long periods of direct sunlight. Heat will shorten your battery life. Optimum operating temperature is below 20 degrees Celsius (68 degrees F.)  
Aqua Creek recommends a battery cover be used with solar chargers since the battery is left on the lift at all times.
5. Never drop or bump the battery pack. This may result in loose or damaged internal connections, and may damage the battery terminals.
6. Keep battery terminals clean and free from dirt and corrosion to ensure good contact. The terminals may be cleaned using alcohol and a cotton swab. Clean off any corrosion or discoloration of the battery contacts with a Scotch-Brite™ pad and then apply dielectric grease (supplied with lift) as shown in the figure below.



Clean with alcohol  
and a cotton swab and  
apply dielectric grease  
to terminals



# Solar Charger Parts List



ITEM #	QTY	PART #	DESCRIPTION
1	1	PSC-100-00	SOLAR CHARGER LOWER MAST ASSEMBLY
2	1	PSC-200-00	SOLAR CHARGER UPPER MAST ASSEMBLY
3	1	PSC-300-00	SOLAR CHARGER TOP PLATE ASSEMBLY
4	1	VSCC2	CABLE, SOLAR CHARGER CABLE, VITO
5	2	P-WSME-0040	SOLAR PANEL, 4 WATT MOBILE
6	1	P-LCSC-A1	CONTROLLER, 12/24V SOLAR, 10A
7	2	222-412	CONNECTOR, WAGO, 2 LEVER
8	1	222-413	CONNECTOR, WAGO, 3 LEVER
9	4	FLAT WASHER, #4 SS 316	WASHER, FLAT, #4, 316 SS
10	4	NYLOCK, #4-40 316 SS	NUT, 316 SS, NYLOCK, #4-40
11	1	BOLT, 1/4-20 X 1 1/2 HCS	BOLT, 316 SS, 1/4-20 X 1 1/2 HCS
12	2	BOLT, 1/4-20 X 1 3/4 HCS	BOLT, 316 SS, 1/4-20 X 1 3/4 HCS
13	3	BOLT, 1/4-20 X 2 1/2 HCS	BOLT, 316 SS, 1/4-20 X 2 1/2 HCS
14	18	FLAT WASHER, 1/4 SS	WASHER, FLAT, 1/4, 316 SS
15	6	NYLOCK, 1/4-20 SS	NUT, 316 SS, NYLOCK, 1/4"-20
16	1	GROMMET, 5/16 X 1/2	GROMMET, CHARGER, 5/16 ID X 1/2
17	4	PAT-PMB-00	SOLAR CHARGER MOUNTING BRACKET
18	1	P-TPTR12	THREAD PROTECTOR, 1/2" OD X 2"
19	1	450 DEGR	SILICON, BLISTER PACKET, 450 DEGREE
20	1	ANTI SIEZE, PACKET, .75	ANTI SIEZE, PACKET, 5 GRAMS

**AQUA CREEK PRODUCTS, LLC LIMITED ONE (1) YEAR WARRANTY:  
SOLAR CHARGING SYSTEMS  
(ITEM #'s F-043SCH, F-044SCH, F-045SCH)**

Aqua Creek Products, LLC (a.k.a. Aqua Creek) warrants to the original end user purchaser that products manufactured by Aqua Creek, when properly installed in accordance with assembly and installation instructions and properly used and maintained, shall be free from defects in material and workmanship for a period of one (1) year from the date of original purchase, provided that Aqua Creek receives prompt notice in writing of any defect or failure and satisfactory proof thereof, with the following exceptions:

**Exceptions:**

- All electrical components shall be warranted for a period of ninety (90) days from the date of original purchase.
- This warranty specifically excludes reimbursement for labor to remove, repair, or install the product and any freight charges.
- This warranty does not cover any damages due to accident, misuse, abuse, negligence or failure to properly maintain any products, or normal wear and tear from day to day operations.
- In the event that any products are altered, repaired, or improperly installed by anyone without the prior written approval by Aqua Creek, all warranties are void.

To initiate a warranty claim, the owner of an Aqua Creek product must provide the place of purchase, in writing, with a full description of the product, its serial number, the dates of purchase and installation, and the exact nature of the defect. Within thirty (30) days after receipt of a written warranty claim by Aqua Creek, and barring any unforeseen delays, the place of purchase will be notified of Aqua Creek's decision regarding the claim. All warranty calculations are from date of original purchase at manufacturer's suggested retail price. Non-payment for product to Aqua Creek may void warranty.

If requested by Aqua Creek, any defective product must be returned, freight prepaid, to Aqua Creek's designated factory location or duly appointed distributor for inspection and/or repair. Aqua Creek will, at its option, repair or replace the failed or defective item, and deliver the repaired product or replacement to the seller of the product, freight prepaid to the destination provided for in the original order. Products returned to Aqua Creek for which Aqua Creek provides replacement under this limited warranty shall become the property of Aqua Creek.

A new warranty period shall NOT be established for the repaired or replaced products. Such products shall remain under warranty only for the remainder of the original warranty period on the original products purchased.

This written limited warranty constitutes the final, complete and exclusive statement of warranty terms. No person or organization is authorized to make any other specific or implied warranties or representations on behalf of Aqua Creek.

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