



# Owners Manual

## Submersible Light Kits

### Models LED3S19 & LED6S19



#### Contents

Important Safety. . . .	pg2
General Instructions. . . .	pg2
Parts Included. . . .	pg2
LED3S19 Assembly Instructions. . . .	pg3
Instructions For Mounting LED6S19. . . .	pg5
Maintenance Recommendations. . . .	pg6
Warranty Policy. . . .	pg6
Troubleshooting Tips. . . .	pg8
Replacement Parts. . . .	pg9
Customer Repair Form. . . .	pg10
Registration Information. . . .	pg12



**LISTED**

Submersible luminaire

E478088

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Rev. 01/31/17

## THANKS

We at Kasco Marine, Inc. would like to both thank and congratulate you on your purchase of the Submersible LED Light Kit. This kit will illuminate your fountain for a beautiful display. We thank you for choosing Kasco for your fountain and aeration needs and want you to be completely satisfied with your purchase.

## Important Safety

Please read and follow these extremely important safety and handling instructions for your Kasco equipment. Following these instructions will help ensure your safety and the quality performance of your equipment.

- Under NO circumstances should anyone enter the water with the electrical equipment plugged in and/or in operation. All Kasco equipment is designed and built for use in water, and control panels are available with GFCI protection. However, it is NEVER recommended to enter the water with the equipment in operation.
- Kasco's Submersible Light Kits are intended for use with a Listed control panel having a GFCI protected receptacle, or field wiring terminals and disconnect switch, or a timer with a disconnect for use with a GFCI receptacle. They are intended to be mounted on a floating fountain or aerator for use in a natural or man-made body of water to comply with NEC Article 682.
- Kasco's Submersible Light Kits have not been evaluated for use in swimming pools, spas or stationary fountains.
- The power connection for the light kit is 120Vac and MUST be plugged into a GFCI protected receptacle or GFCI protected field terminal connections.
- Caution should be used when dealing with any electrical and/or moving equipment.
- NEVER run the unit out of water. It could create a dangerous situation for the operator.
- Extreme caution should be used around water, especially cold water, as in Spring, Fall, and Winter, which poses a hazard itself.
- NEVER lift or drag the fountain or light kit by the power cords. If you need to pull the unit to the side of the pond, use the anchoring ropes.
- Do not use waders in ponds/lakes that are deep,

with drop-offs, drastic slopes, or soft bottom material.

- Do not use a canoe or boat that tips easily during installation
- To reduce the risk of electrical shock, be certain the light kit is connected to the GFCI protected lighting circuit of your control panel. For more information regarding your control panel instructions, refer to your fountain owner's manual or download control panel wiring diagrams from <http://kascomarine.com/instructions.html>. A control panel must be installed a minimum of 5 feet (3m in Canada) from the body of water unless separated from the body of water by a fence, wall, or other permanent barrier that will make the unit inaccessible to persons in the water.

## General Instructions

### INSPECT THE SHIPMENT

Immediately inspect this shipment for any visible damages. Also cross reference the "Parts Included" section to check for part shortages. Shortages should be reported immediately to your Kasco Marine distributor or representative and damages reported to your carrier and Kasco Marine.

## Parts Included

### LED3S19

- Submersible 3-Light LED Kit (1)
- Mounting Brackets (3)
- ¼" Stainless Steel Lock Washer (9)
- ¼" Stainless Steel Flat Washer (3)
- ¼" Stainless Steel Nut (3)
- ¼" x ½" Stainless Steel Bolt (6)
- ¼" x 1" Stainless Steel Bolt (3)
- ¼" x 1-3/8" Stainless Steel Bolt (3)
- Nylon Cable Ties (6)

### TOOLS & SUPPLIES NEEDED

- Two 7/16" wrenches (or one wrench & a 7/16" socket with driver)
- Wire Cutter (for trimming cable ties)

### LED6S19

- Submersible 6-Light LED Kit (1)
- Mounting Brackets (6)
- ¼" Stainless Steel Lock Washer (18)

- ¼” Stainless Steel Flat Washer (6)
- ¼” Stainless Steel Nut (6)
- ¼” x ½” Stainless Steel Bolt (12)
- ¼” x 1” Stainless Steel Bolt (6)
- Nylon Cable Ties (12)
- Lower Float Brackets (6)
- 3/8” Stainless Steel Flat Washers (3)

**TOOLS & SUPPLIES NEEDED**

- Two 7/16” wrenches (or one wrench & a 7/16” socket with driver)
- Two 9/16” wrenches (or one wrench & a 9/16” socket with driver)
- Wire Cutter (for trimming cable ties)

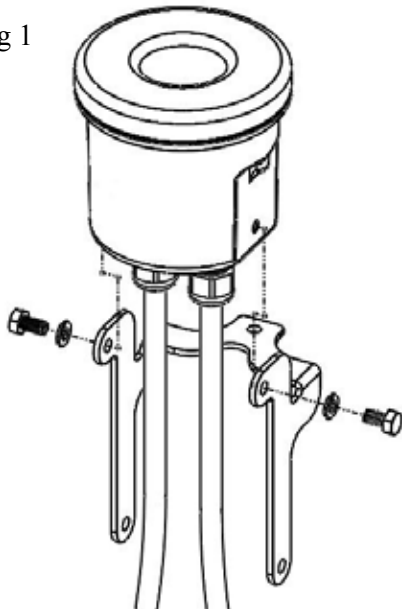
**LED3S19 Assembly Instructions**

For ease of assembly, make sure the Aerating Fountain is completely assembled. Place the assembly upright.

**Instructions for mounting LED3S19 on models: 2400VFX, 3400VFX, 3400HVFX, 3400JF, 3400HJF, 4400VFX, 4400HVFX, 4400JF, 4400HJF**

1. Install the mounting brackets to the light fixtures as shown using ¼” lock washers and ¼” x ½” bolts. Hand tighten only at this time.

Fig 1



Important Note: Installation of the LED light fixtures on the above listed aerating fountain units with the mounting brackets oriented as shown will ensure proper submersion of the light fixtures. Each fixture must be partially submerged in order for lights to operate properly. Other applications for these fixtures

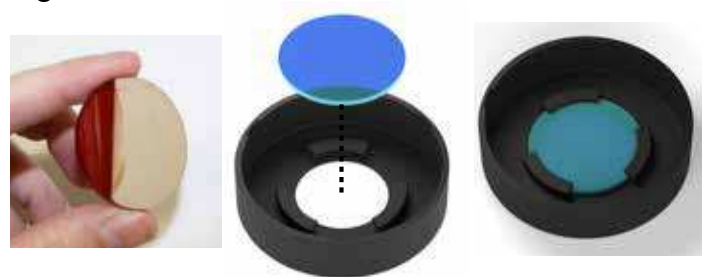
must provide at least the same submersion to properly cool the fixture. Operating the fixtures out of water will damage the LED and void warranty.

**Installing Color Lenses:**

If you desire to change to one of the color choices instead of the standard white light, follow these steps.

2. Unpeel the protective backing from both sides of the colored lens on the color of your choice. Place the lens inside the rubber cap making sure the 3 flaps are holding the lens in place. Do this for all 3 lenses.

Fig 2



3. Place rubber caps over the light fixtures as shown. Ensure the rubber cap is seated all the way down onto the fixture housing. If this is not on a new light kit, make sure the fixture and lens are clean before installing the rubber cap.

Fig 3



4. Insert the ¼” x 1-3/8” bolt into the light mounting bracket. Align the bracket to the float tab by placing the bolt through the light mounting hole (mounting bracket is on top of the float tab) as shown in Fig. 4



Fig 4:

5. Install the 1/4" Flat Washer, 1/4" Lock Washer and 1/4" Nut against the underside of the float tab as shown in Fig. 5. Tighten the nut until snug using the 7/16" wrench.

Fig 5



flat washer  
lock washer  
1/4" nut

6. Adjust the angle of the light as desired and tighten the 1/4" x 1/2" bolts on the sides of the mounting bracket until snug. For more uniform illumination, it is best to have all three fixtures at the same angle.

7. Repeat steps 1 through 4 for the remaining fixtures. Assembled light fixtures are pictured in Fig. 6. Note the orientation of the lights and mounting brackets.

Fig 6



8. Using the cable ties, tie each fixture cord to bottom leg of mounting brackets using the holes provided. This will act as a strain relief and will keep the cord from being damaged by the fountain and balance the unit properly. Next, cable tie the main power cord to the float as shown in Fig. 7.

Fig 7



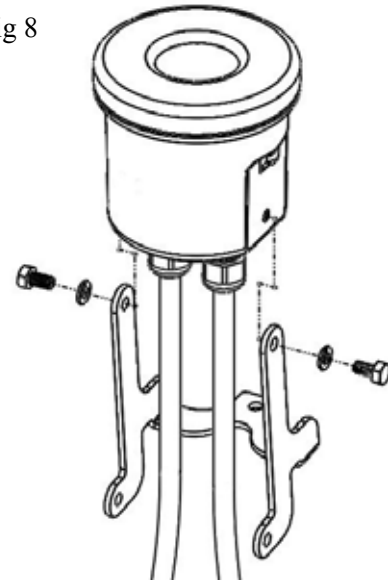
9. Upon installation of the assembled unit, connect your LED light kit to your field installed GFCI

protected outlet and timer.

**Instructions for mounting LED3S19 on models: 8400VFX, 800JF, 2.3VFX, 2.3JF, 3.1JF, 3.3JF, 5.1JF, 5.3JF, 5.1VFX, 5.3VFX, 7.3JF**

1. Install the mounting brackets to the light fixtures as shown using 1/4" lock washers and 1/4" x 1/2" bolts. Hand tighten only at this time.

Fig 8



**Important Note:** Installation of the LED light fixtures on the above listed aerating fountain units with the mounting brackets oriented as shown will ensure proper submersion of the light fixtures. Each fixture must be partially submerged in order for lights to operate properly. Other applications for these fixtures must provide at least the same submersion to properly cool the fixture. Operating the fixtures out of water will damage the LED and void warranty.

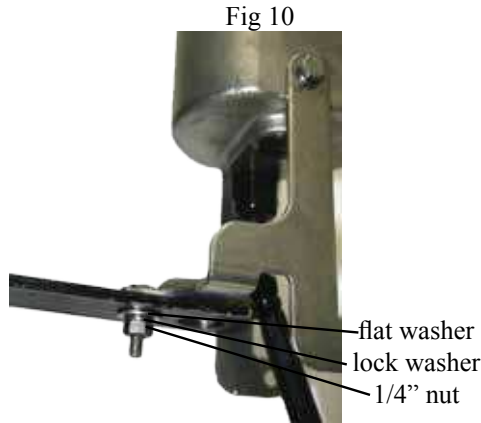
2. Insert the 1/4" x 1" bolt into the light mounting bracket. Align the bracket to the float bracket by placing the bolt through the light mounting hole (mounting bracket is on top of the float bracket) as shown in Fig.9

Fig 9



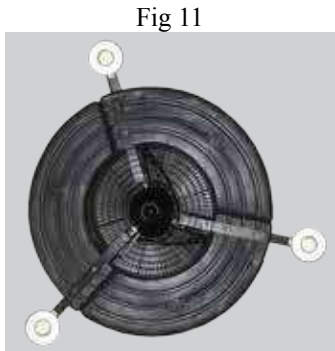
3. Install the 1/4" Flat Washer, 1/4" Lock Washer and

1/4" Nut against the underside of the float tab as shown in Fig. 10. Tighten the nut until snug using the 7/16" wrench.



4. Adjust the angle of the light as desired and tighten the 1/4" x 1/2" bolts on the sides of the mounting bracket until snug. For more uniform illumination, it is best to have all three fixtures at the same angle.

5. Repeat steps 1 through 4 for the remaining fixtures. Assembled light fixtures are pictured in Fig. 11. Note the orientation of the lights and mounting brackets.



6. Using the cable ties, tie each fixture cord to bottom leg of mounting brackets using the holes provided. This will act as a strain relief and will keep the cord from being damaged by the fountain and balance the unit properly. Next, cable tie the main power cord to the float as shown in Fig. 12.



7. Upon installation of the assembled unit, connect

your LED light kit to your field installed GFCI protected outlet and timer.

### Instructions For Mounting LED6S19

Instructions for attaching brackets on the float prior to mounting the light fixtures on 2 HP or larger Kasco units.

Parts needed:

- Lower float brackets (6)
- 3/8" washers (3)



Part 1



Part 2

1. Turn the unit upside down. Loosen and remove the 3/8" nuts on the three 9" bolts that are closest to the motor unit. Place 2 Lower Float Brackets (Part #1) and one 3/8" washer (Part #2) on each of the 9" bolts over the bottom screen clips and replace the 3/8" nut.



2. Arrange the brackets into the position shown and tighten down the nuts. Once the brackets are secure, turn the unit back into its upright position.



3. Follow the instruction on the previous page (LED3S19 Assembly instructions) to mount the light kit to the brackets.

## Maintenance Recommendations

- DO NOT attempt to open light fixtures!
- Under No Circumstances should anyone enter the water while a fountain is operating.
- Please keep the original box for maintenance shipping.

The following maintenance procedures can be utilized to ensure many years of quality performance from your Kasco Fountain and Light Kit and reduce the need for more costly repair work.

**PROPER INSTALLATION:** Proper installation of Kasco equipment will include a power source with ground fault protection. For Fountain models, Kasco provided control panels included with the unit have built-in ground fault protection. Ground fault interrupters are a safety feature that can also alert you to electrical leaks in the equipment. If you have repeat, consistent trips of the ground fault device, the equipment should be disconnected and removed from the water. The power cord should be inspected for damage and you should contact your distributor, or call Kasco Marine at 715-262-4488 for further instructions or email Kasco at sales@kascomarine.com.

**OBSERVATION:** Operating equipment should be observed on a regular basis (daily, if possible) for any reduction or variation in performance. If a change in performance is observed, the equipment should be disconnected from power and inspected.

**WINTER STORAGE:** In regions where there is significant freezing in the wintertime, the fountain and light kit should be removed from the water to protect them from the expansion pressure of the ice. In many areas, fountains will keep some amount of ice open through the winter. However, when the water is thrust into the air, it is exposed to the colder air temperatures longer and can actually make ice thicker on the pond/lake. Storage over winter is best in a location that is out of the sun and cool, but above 32° F.

**CLEANING:** Fountains and light kits should be removed from the water at least once per year (at the end of the season in cold climates) to clean the exterior of the system, especially the stainless steel motor housing (can) and light fixtures. The motor housing and light fixture surfaces dissipate heat into the water and any algae, calcium, etc. build-up will become an insulator that blocks heat transfer. In warmer regions it is recommended that the motor is removed and cleaned at least two to three times per year

depending on conditions. In most cases a power washer will be sufficient if the unit and algae are still wet. Also make sure the lens of the light fixtures is clean to ensure the brightest light possible.

**FIXTURE SERVICE:** The LED light fixtures are sealed and do not require any maintenance other than cleaning.

Do not attempt to open light fixtures.

Any required repairs need to be performed by Kasco Marine. Any alterations or changes made to Kasco units by an unauthorized source will void the warranty. This includes tampering with the unit, power cord, and/or control box. Please contact Kasco Marine, Inc. at 715-262-4488 or sales@kascomarine.com.

## Warranty Policy

**2 Year Limited Warranty:** Kasco® Marine, Inc. warrants this Light Kit to be free from defects in material or workmanship under normal use and service. The Kasco Marine, Inc. obligation under this warranty is limited to replacing or repairing free of charge any defective part within two (2) years from the date of shipment. Customer shall pay shipping charges for returning the unit to Kasco.

**THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND ANY OTHER OBLIGATION OR LIABILITY WHATSOEVER ON THE PART OF KASCO MARINE, INC. AND IN NO EVENT SHALL KASCO MARINE, INC. BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES.**

Warranty is void if:

The Light Kit is not maintained properly according to the Maintenance Recommendations supplied in this Owner's Manual.

The lights, control box, or power cord are altered in any way from original shipment. Cuts in the power cord are not covered under warranty.

The Light Kit is damaged by unauthorized tampering.

**Warranty Claim Procedure:**

The warranty coverage can be established by the date of purchase receipt or by calling Kasco Marine, Inc. Please call Kasco Marine at 715-262-4488 prior to shipping to receive a Return Authorization Number and/or Repair Form, then ship to:

Kasco Marine, Inc.  
800 Deere Rd.  
Prescott, WI 54021  
Attn: Repairs

You can also email Kasco at [sales@kascomarine.com](mailto:sales@kascomarine.com) .

Note: Please contact Kasco to determine if the main power cord needs to be returned to be considered for warranty. The power cord may be needed to diagnose the failure.

Please include the Repair Form received from Kasco Marine or your local distributor with the shipment. If no Repair Form is available, include your name and physical address for return delivery of the repaired Light Kit and a daytime phone number and/or e-mail address for correspondence regarding the warranty claim.

Any expedited shipping method for the return of the unit is at the customer's expense. Kasco Marine will return units repaired under warranty at our expense via ground freight

#### Non-Warranty Repairs:

Most failed equipment can be repaired at substantially lower costs than replacement with new. If your light kit requires repair and is no longer covered under warranty, please contact Kasco Marine for current repair pricing. Please ship according to the instructions in the previous section. Again, it is best to call ahead for a Return Authorization Number and/or Repair Form so we know the repair is coming.

All light kits that are rejected for repair will be destroyed unless otherwise directed by the customer. If the customer would like the Light Kit returned, it will be restored as closely as possible to the condition in which it was received and shipped at the customer's expense for shipping and handling charges.

#### Billing:

All non-warranty repairs will be returned to the customer and billed C.O.D. unless otherwise directed. Kasco Marine also accepts Visa and MasterCard credit card payments. Kasco Marine will call for credit card information upon completion of the estimate at the customer's request.

All other warranty and repair inquiries should be directed to Kasco Marine, Inc. at 715-262-4488 or [sales@kascomarine.com](mailto:sales@kascomarine.com) .

## Troubleshooting tips - light kit

The following is provided to help diagnose a probable source of trouble. It is a guideline only and may not show all causes for all problems. For additional troubleshooting help contact your local distributor or visit [www.kascomarine.com](http://www.kascomarine.com) for additional help.

**NOTE: you may need to refer to your owners manual that was provided with your fountain for additional control panel settings and adjustments.**

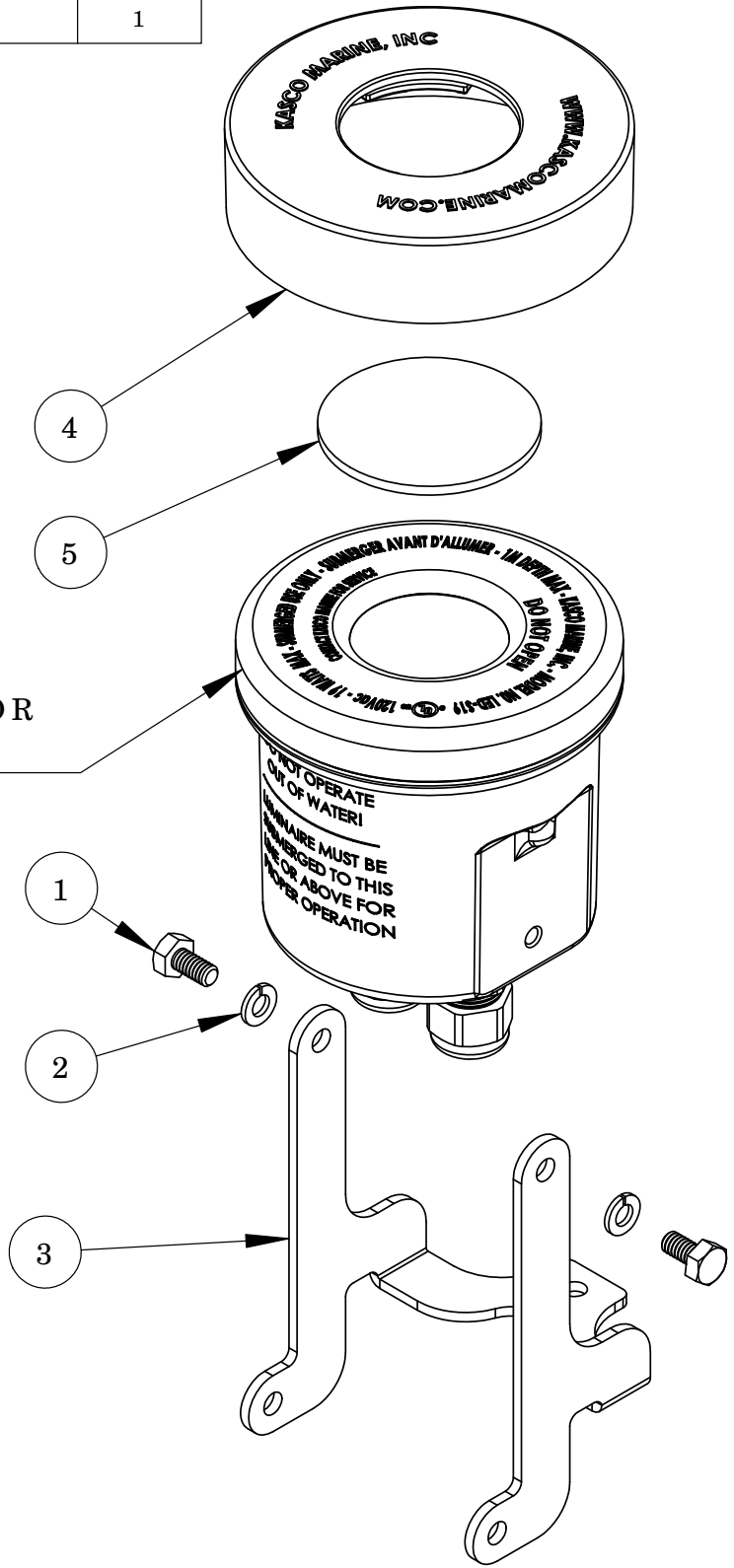
Problem	Possible Cause	Likely Remedy
Light kit is installed and wired, but will not turn on.	Power is off or disconnected	Ensure control panel is connected to the electrical circuit. Verify circuit breakers, timers, and/or interlock switches are turned on and functional. Refer to your owners manual that was provided with the fountain.
	Not dark enough for photo eye to activate	<p><b>C-25 control panel:</b> The control panel has a photo eye on the left side of the enclosure exterior. This photo eye measures ambient light. To activate, the photo eye must not measure any ambient light for at least several minutes. Also, the C-25 timer must be turned on (fountain operating) to allow the light circuit to energize. Covering the photo eye with black electrical tape will activate the photo eye for testing.</p> <p><b>C-85, or C-95 control panel with GFCI outlet and photo eye control:</b> The control panel has a photo eye on the left side of the enclosure exterior. This photo eye measures ambient light. To activate, the photo eye must not measure any ambient light for at least several minutes. Also, the fountain timer must be turned on (fountain operating) to allow the light circuit to energize. Covering the photo eye with black electrical tape will activate the photo eye for testing. While the photo eye is covered, the GFCI outlet can be reset if tripped.</p>
	Timer not set properly	<p><b>C-85, or C-95 control panel (and all 3phase fountain control panels) with terminal connections and timer control for light kit:</b> The control panel has a second timer for controlling the lights (No photo eye). Ensure the light timer is set to operate the lights. The timer has a built in Hand-Off-Auto switch. Ensure the switch is set properly. Ensure the fountain is turned on. The light timer will not energize the light kit unless the fountain circuit is energized.</p>
	GFCI is tripped	<p><b>C-25 control panel:</b> Reset the GFCI. If the GFCI does not reset it could be a ground fault in the fountain wiring, or the light kit wiring. Unplug both the fountain and light kit and reset the GFCI. If it resets, plug fountain then light kit back in and see which one trips the GFCI. If the GFCI does not reset with both unplugged, then the GFCI may be defective.</p> <p><b>C-85, or C-95 control panel with GFCI outlet and photo eye control:</b> To reset the GFCI outlet the fountain timer must be turned on, and the photo eye must be activated. (black electrical tape can be wrapped around the photo eye to activate it). Once these are on, the GFCI reset button can be pressed. (unplug the light kit prior). Plug the light kit in and see if it operates. If the GFCI trips again then the light kit may be damaged. If the GFCI does not reset (with light kit unplugged) then it may be defective or the photo eye is not activated to send power to the outlet.</p> <p><b>C-85, or C-95 control panel with terminal connections and timer control for light kit:</b> For panels with a GFCB (ground fault circuit breaker) and timer controlled lights, simply reset the two pole breaker. This will turn the fountain and light kit back on if the timers are set to on! If it trips again, disconnect the light kit from the terminals and reset. <b>WARNING!</b> you must turn off power to the panel before disconnecting any wiring from the terminals! If the breaker trips with the light kit disconnected, then disconnect the fountain as well and reset. If the breaker continues to trip it may be a defective GFCB. If the breaker resets, then reconnect the fountain then the light kit to see which one trips the GFCB.</p> <p><b>3phase fountain control panels:</b> 3phase fountain panels have a ground fault sensing module that will trip if either the light kit or fountain has a ground fault. To reset the module, simply press the reset button in the panel. This will turn the fountain and light kit back on if the timers are set to on! If it trips again, disconnect the light kit from the terminals and reset. <b>WARNING!</b> you must turn off power to the panel before disconnecting any wiring from the terminals! If the GFI module trips with the light kit disconnected, then disconnect the fountain as well and reset. If the GFI module continues to trip it may be a defective module or an internal wiring issue with the panel. If the module resets, then reconnect the fountain then the light kit to see which one trips the module.</p>
Light work. However, they are not as bright as when first installed.	Dirty lenses	Turn of power to the control panel and disconnect power cords to the fountain and the light kit. Bring the fountain to the shore and inspect the light lenses. Over time, algae growth and hard water deposits on the lenses can block light output. Clean the lenses with a soft brush and the light should be bright again.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	451126	SCREW, 1/4-20x1/2"	2
2	840537	LOCK WASHER, 1/4"	2
3	346065	BRACKET, S.S. LED MOUNTING	1
4	346090	CAP, LENS, S-19 LED LIGHT	1
5	345559	LENS KIT, 4 COLORS	1

**DO NOT ATTEMPT TO OPEN!**

CONTACT KASCO MARINE FOR  
INSTRUCTIONS REGARDING  
SERVICE OR REPAIR.



**MODEL LEDxS19-xxx  
19 WATT LED LIGHT FIXTURE  
REPLACEMENT PARTS**



800 Deere Rd.  
 Prescott, WI 54021  
 Phone: 715-262-4488 - Fax: 715-262-4487  
 www.KascoMarine.com Sales@KascoMarine.com

### Customer Repair Form

**\* Important Reminders \***

- All repairs sent in **MUST** be accompanied by a copy of this completed sheet!
- Address your Repair to Kasco Marine, Attn: Repairs (or to your Authorized Repair Center.
- Shipping to Kasco or an Authorized Repair Center is paid for by the customer.
- You must include the power cord with each unit sent in for repair to be considered for warranty repair!
- Do not ship the control box with the unit for repair, unless otherwise instructed.

Today's Date: \_\_\_\_\_

**Customer Information**

Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Address: \_\_\_\_\_

Alternate Number: \_\_\_\_\_

City: \_\_\_\_\_

Email Address: \_\_\_\_\_

State: \_\_\_\_\_

Zip Code: \_\_\_\_\_

**Unit Information:**

Model # (Ex. LED3S19): \_\_\_\_\_

Serial # (Ex. 2101LEDS3025) \_\_\_\_\_

Date Purchased: \_\_\_\_\_

Purchased From: \_\_\_\_\_

Earliest Date of Problem: \_\_\_\_\_

Description of Problem:

Comments:



## Registration Information

Fill in the information below and keep for your records.

Model # (Ex. LED3S19) \_\_\_\_\_

Serial # (Ex. 2101LEDS3001) \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Purchased From: \_\_\_\_\_

Registration Date: \_\_\_\_\_



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