

 Spa Electrics®



TITAN



**TITAN LIGHT
CONCRETE INSTALL**

T1

INSTALLATION & OWNER'S MANUAL

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NOTE



FRESH WATER USE ONLY
NOT INTENDED FOR OPERATION OUT OF WATER

READ THIS FIRST

Congratulations on your purchase of a Spa Electrics **Titan T1** Series Pool Light. This light has been designed in conjunction with leading pool professionals across the USA and manufactured solely in Australia.

For safe and proper installation, please read this manual in full before commencing installation and use only the parts (screws, plugs, sealant etc) as provided.

For operating instructions, please refer to the MULTI PLUS Installation & User Guide.

BEFORE YOU START:

- Cables can be shortened to suit individual installation requirements. Spa Electrics recommends all cabling is protected by conduit and that a junction box (or similar) is incorporated into pool cabling design to avoid siphoning.
- Ensure that the lighting system is installed by a qualified person (e.g. registered pool builder and/or licensed electrician), in accordance with local, state and national regulations.
- For safe and proper installation, ensure that only those parts supplied with the system are used.
- Maximum installation depth for the **Titan T1** light is 20" below water line (to top of light).
- The **Titan T1** light must be correctly installed in or on the wall of the pool with the top of the lens no less than **4"** below the nominal water level.
- All lights should be mounted in a location that is easily accessible without the need for entering or lowering the pool water.

CLEANING:

- Only use warm water and a soft brush or cloth to clean **Titan T1** lights. **DO NOT** use detergents or spirits as this can damage the light and void your warranty.

USE OF PRODUCT:

- **DO NOT** operate light unless completely submerged in water.
- Operating the light for at least 15 minutes every week is advised (unless removed and stored safely for winter months).
- **Titan T1** lights are suited for both domestic and commercial installations and can be operated continuously (24/7) if required.
- Temperature range for installation, operation and servicing: +32°F ~ +104°F (0°C ~ +40°C)

IMPORTANT



A 12V AC TRANSFORMER MUST BE INSTALLED.
DC POWER SUPPLIES ARE NOT COMPATIBLE.

TOOLS REQUIRED

✓ Draw wire

✓ PVC Cement - Medium Body

IMPORTANT NOTES



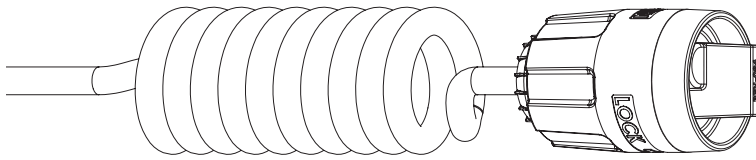
- The use of power tools during installation is **not** recommended as these devices can cause faults and damage to light components.
- All installation steps should be carried out with manual tools only.
- The enclosed images are for illustrative purposes only. Appearances of parts and assemblies may vary from the enclosed illustrations
- Please contact Spa Electrics or contact us below if you have any questions regarding the correct installation of this product.

PRODUCT SUPPORT AND INFORMATION

For the most up to date installation information and contact information for assistance in your region, please visit www.spaelectrics.com

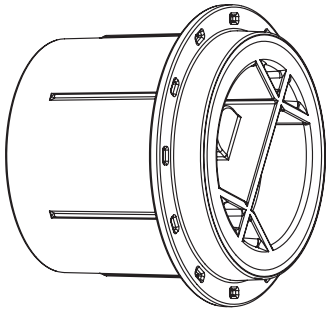
INCLUDED PARTS

CABLE ASSEMBLY (P/N: T1 18AWG 100/150)

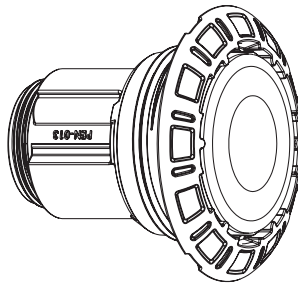


CABLE
with coiled section

PLUG ASSEMBLY
with PLUG COVER attached



BULKHEAD FITTING
with CAP inserted
(P/N: T1C 009)



LIGHT ASSEMBLY
with RIM (P/N: T1C 004) &
THREADED SLEEVE (P/N: T1 017)
attached



**LIGHT INSTALLATION
TOOL**
(P/N: T1 016)

REQUIRED PART (NOT INCLUDED)



UL LISTED ISOLATING LOW VOLTAGE POWER SUPPLY, EVALUATED FOR SWIMMING POOL USE.

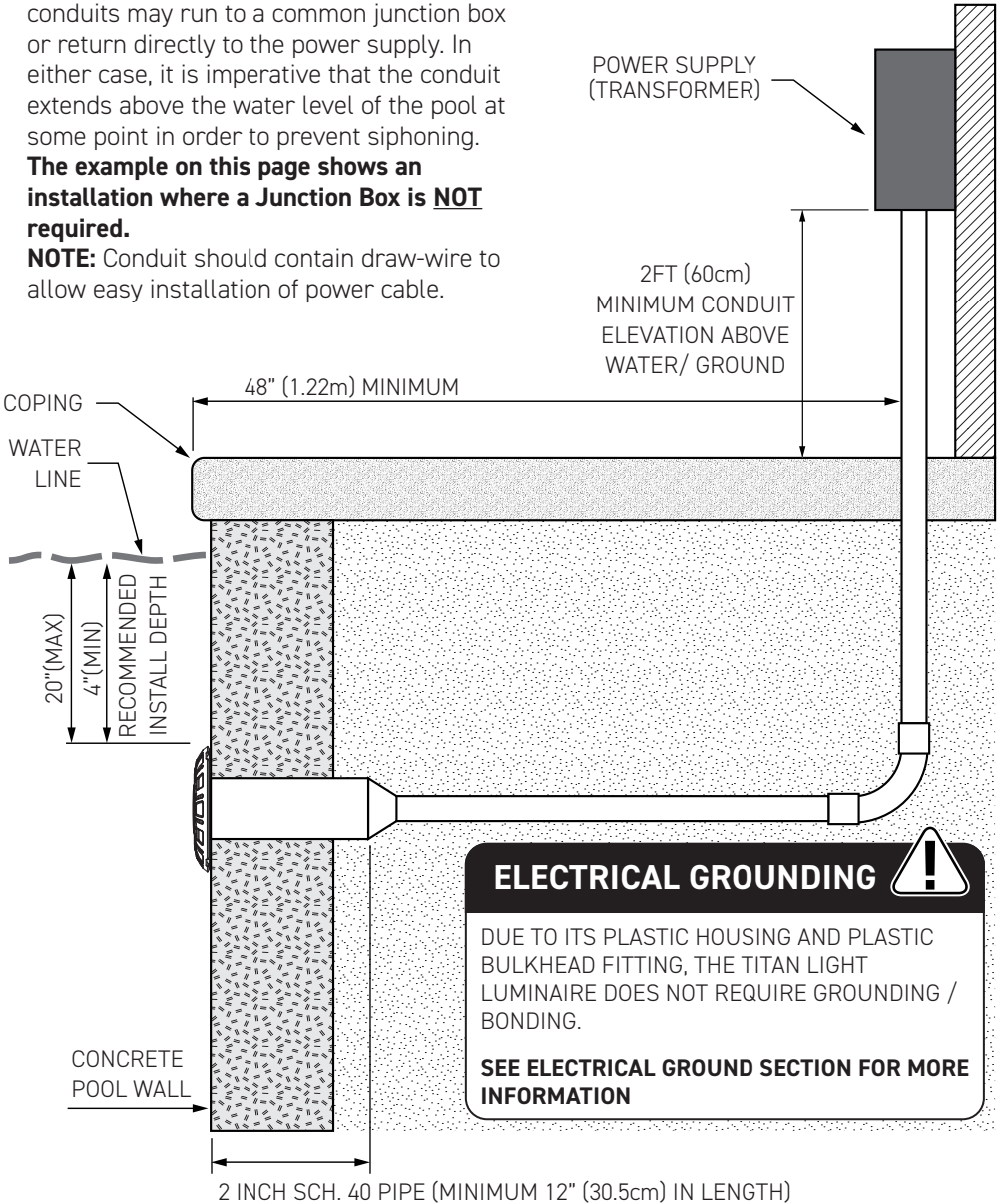
Installed as per current NEC wiring rules. 12~14v AC output. Minimum 8W per Retro Series Pool Light. Spa Electrics recommends "LVX" safety transformers for use with Retro Universal lights

FINISHED INSTALLATION - TYPE A

Depending on your installation requirements, conduits may run to a common junction box or return directly to the power supply. In either case, it is imperative that the conduit extends above the water level of the pool at some point in order to prevent siphoning.

The example on this page shows an installation where a Junction Box is NOT required.

NOTE: Conduit should contain draw-wire to allow easy installation of power cable.



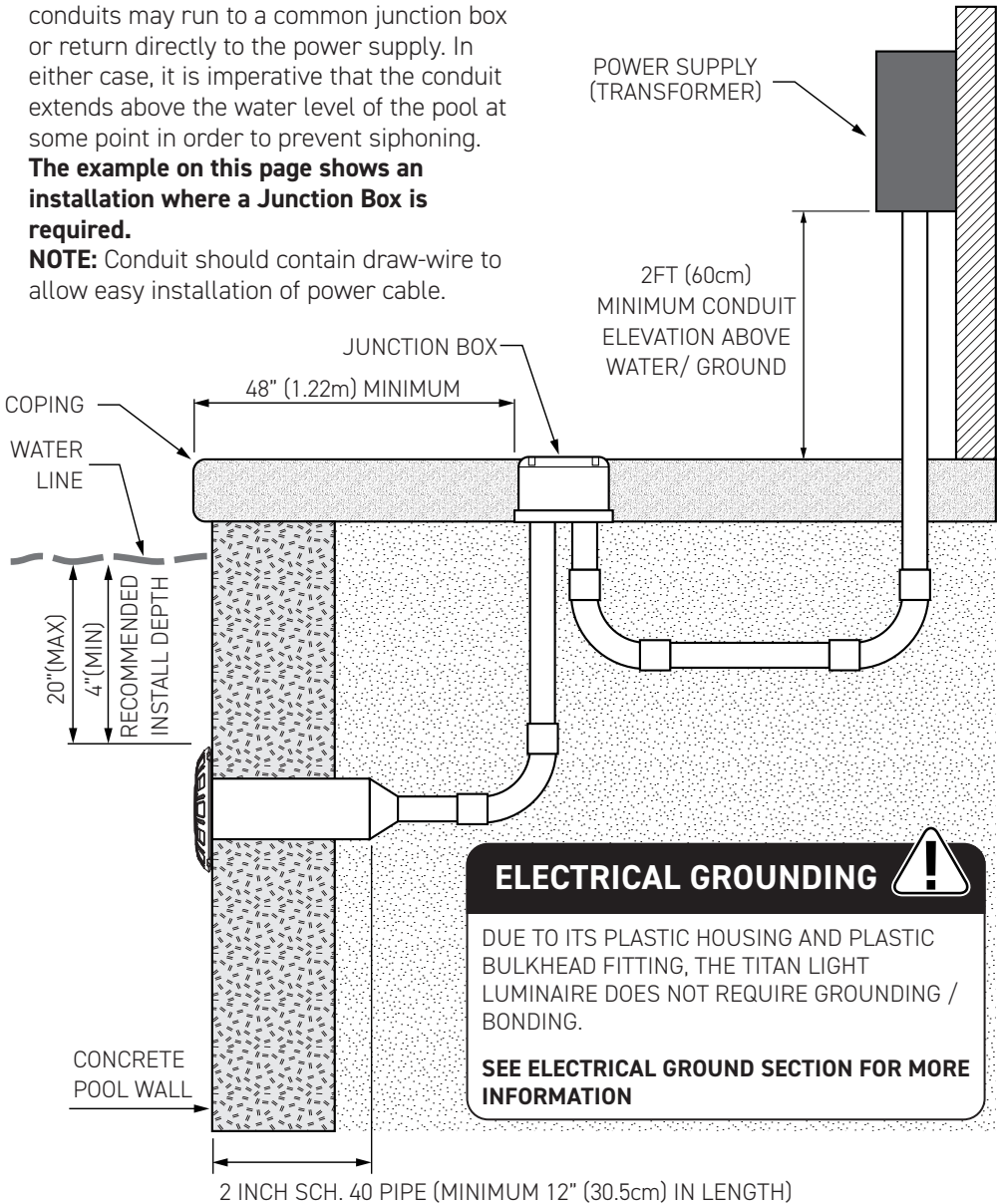
POOL CROSS SECTION SHOWN FOR REFERENCE ONLY

FINISHED INSTALLATION - TYPE B

Depending on your installation requirements, conduits may run to a common junction box or return directly to the power supply. In either case, it is imperative that the conduit extends above the water level of the pool at some point in order to prevent siphoning.

The example on this page shows an installation where a Junction Box is required.

NOTE: Conduit should contain draw-wire to allow easy installation of power cable.



ELECTRICAL GROUNDING

DUE TO ITS PLASTIC HOUSING AND PLASTIC BULKHEAD FITTING, THE TITAN LIGHT LUMINAIRE DOES NOT REQUIRE GROUNDING / BONDING.


SEE ELECTRICAL GROUND SECTION FOR MORE INFORMATION


POOL CROSS SECTION SHOWN FOR REFERENCE ONLY

A: PREPARE PIPE & BULKHEAD

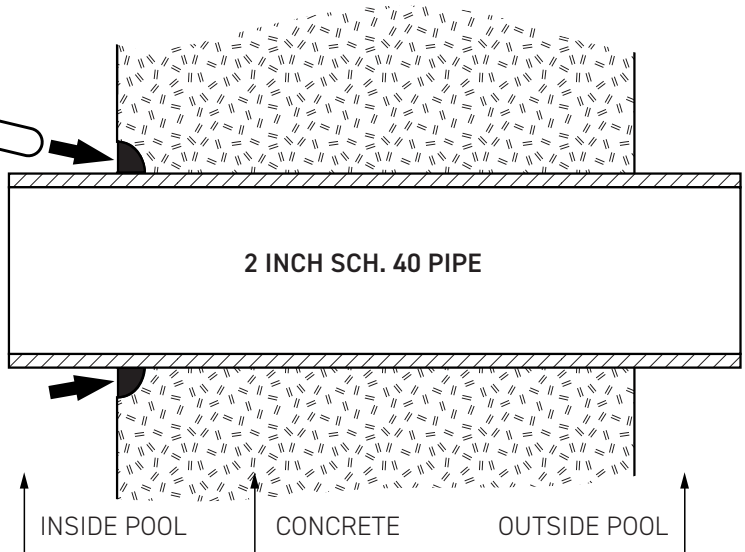
1 INSTALL 2 INCH SCH. 40 PIPE


APPLY **MEDIUM BODY PVC CEMENT** TO THE SECTION SHOWN ON THE BULKHEAD FITTING.

NOTE 



SCALLOP CONCRETE AROUND PIPE PERIMETER AND FILL WITH SEALING COMPOUND*



***SEALING NOTES** 

SEALING COMPOUND OR HYDRAULIC CEMENT REQUIRED TO PREVENT WATER EGRESS THROUGH POOL WALL.

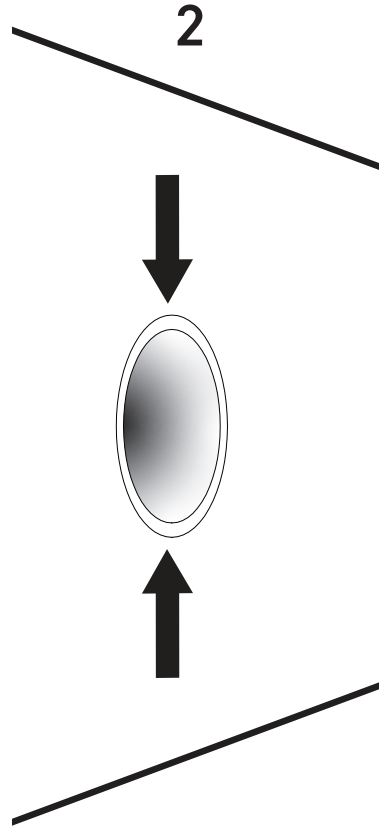
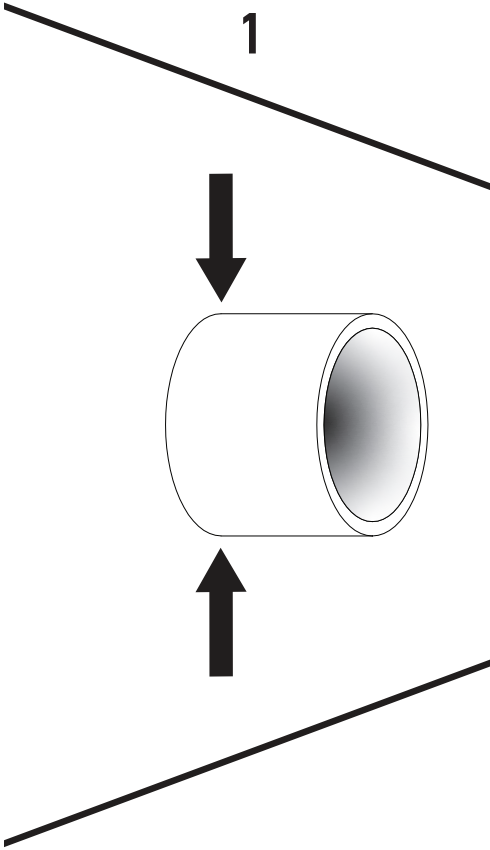
ENSURE PIPE IS CLEAN, DRY AND FREE OF DEBRIS PRIOR TO APPLICATION OF SEALING COMPOUND.

ENSURE SEALING COMPOUND IS SUITABLE FOR USE WITH PVC PIPES.

2

MAKE 2 INCH SCH. 40 PIPE FLUSH

CUT THE EXCESS PIPE TO BE FLUSH WITH THE CONCRETE WALL.



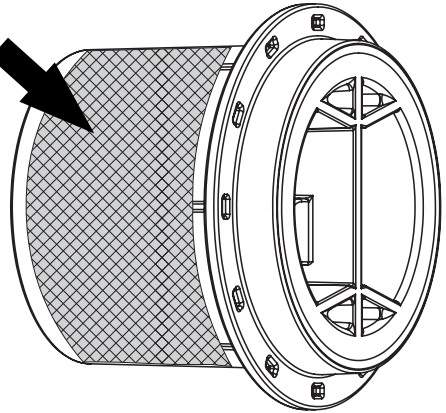
3 APPLY ADHESIVE

APPLY **MEDIUM BODY PVC CEMENT** TO THE SECTION SHOWN ON THE BULKHEAD FITTING.

 APPLY ADHESIVE

IMPORTANT NOTES

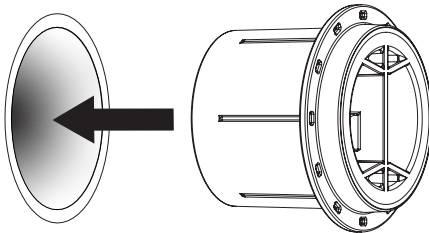
AVOID GETTING ADHESIVE ON OTHER PARTS.



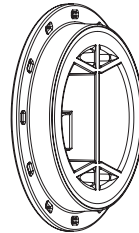
4 INSERT BULKHEAD FITTING INTO PIPE

FULLY PUSH THE BULKHEAD FITTING INTO THE PIPE UNTIL THE BULKHEAD FITTING IS TOUCHING THE CONCRETE POOL WALL.

1



2



5

APPLY POOL FINISH

APPLY POOL FINISH (PLASTERING / TILING) AROUND THE BULKHEAD FITTING. ENSURE THE FINISH IS FLUSH WITH THE FRONT EDGE OF THE BULKHEAD FITTING..

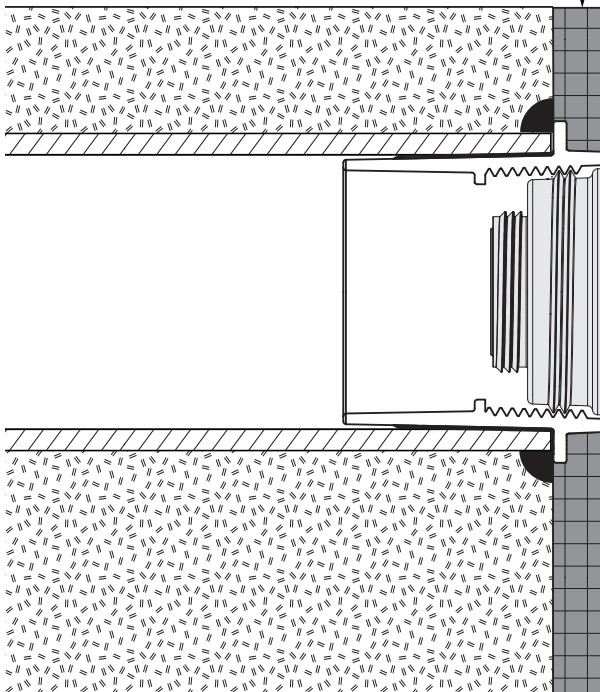
NOTE



PROTECTIVE CAP MUST REMAIN IN BULKHEAD FITTING DURING PLASTERING / TILING.

USE FRONT EDGE OF BULKHEAD FITTING AS
GUIDE FOR MINIMUM POOL-FINISH THICKNESS

PLASTER / TILING FINISH



NOTE

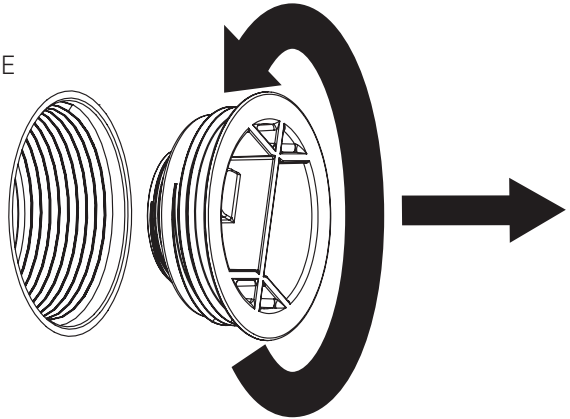


DO NOT TRIM FRONT EDGE
OF BULKHEAD FITTING.

B: LIGHT ASSEMBLY

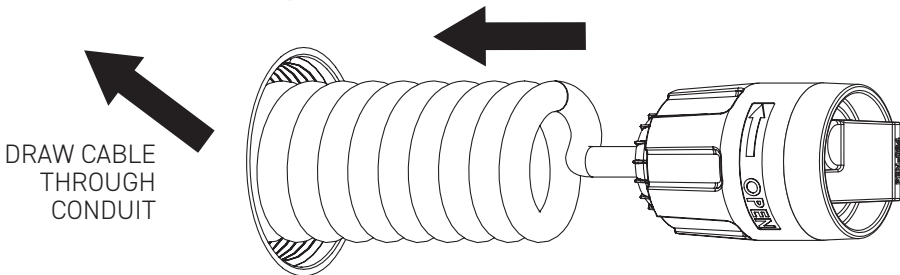
1 REMOVE CAP FROM BULKHEAD

TURN THE BULKHEAD FITTING CAP ANTI-CLOCKWISE TO REMOVE IT.



2 FEED CABLE

FEED CABLE WITH PLUG ASSEMBLY AND PLUG COVER THROUGH THE BULKHEAD AND PIPE. DRAW THE CABLE THROUGH THE CONDUIT UP TO THE TRANSFORMER/ CONTROLLER.



DRAW CABLE THROUGH CONDUIT

NOTE



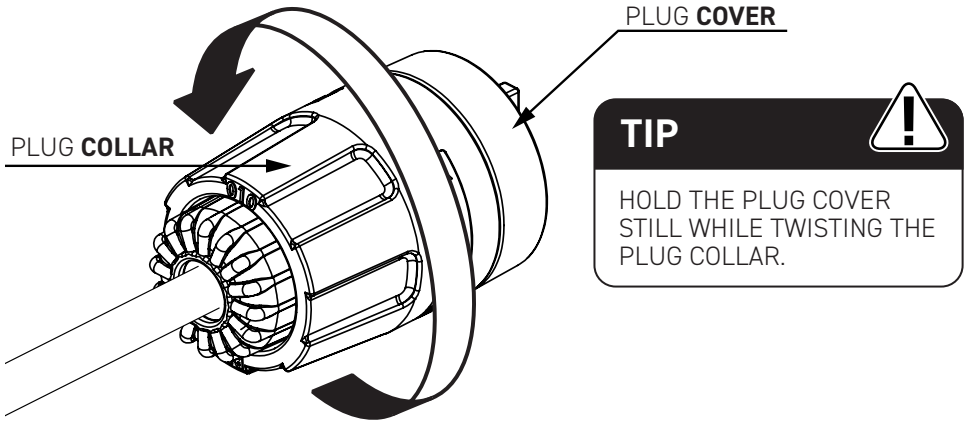
IF FITMENT INTO THE PIPE IS TIGHT, ROTATING THE COILED CABLE SECTION CLOCKWISE WILL HELP PROVIDE CLEARANCE TO THE PIPE.

OPTION 1: IF READY TO INSTALL LIGHT ASSEMBLY, PROCEED TO **STEP 3**.

OPTION 2: IF LIGHT ASSEMBLY IS NOT READY TO BE INSTALLED FOR A PERIOD OF TIME, FOLLOW SECTION "**INSTALL BULKHEAD COVER**". LEAVE THE BULKHEAD COVER IN PLACE UNTIL READY TO INSTALL LIGHT ASSEMBLY.

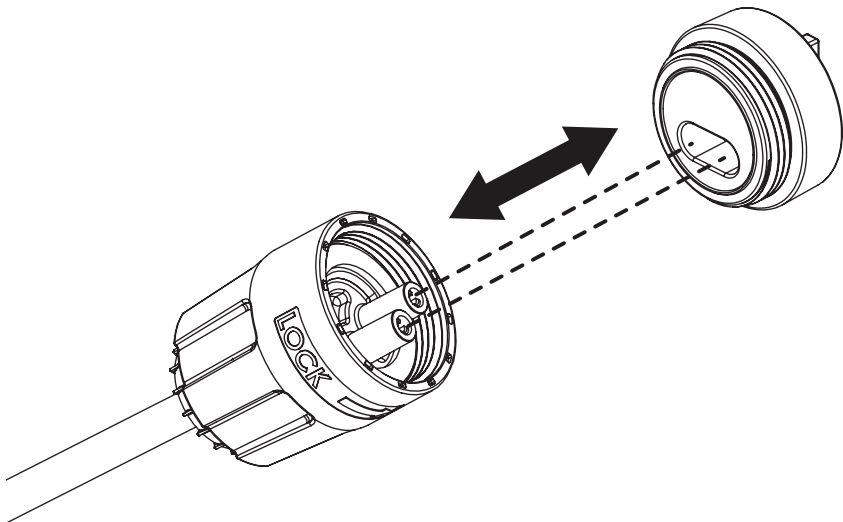
3 REMOVE PLUG COVER

WHEN READY TO ATTACH THE LIGHT ASSEMBLY, REMOVE THE PLUG **COVER** BY TWISTING THE **COLLAR** ANTI-CLOCKWISE A FEW TIMES UNTIL IT IS FREE SPINNING.



4 REMOVE PLUG COVER

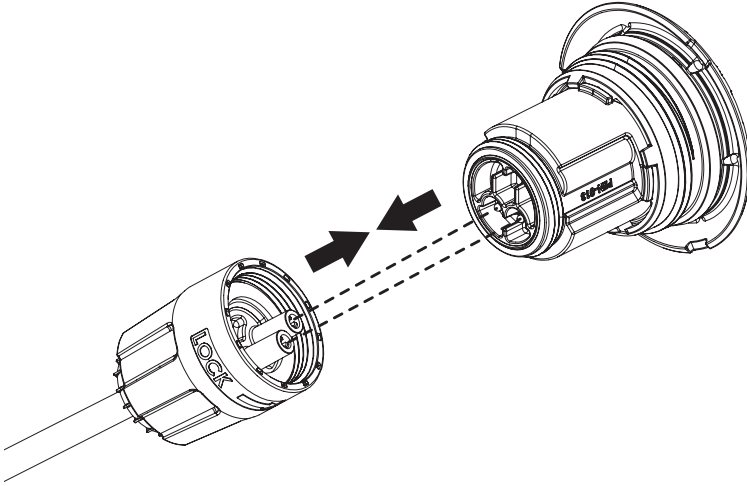
DISCONNECT PLUG COVER FROM PLUG BY PULLING APART.



5

CONNECT THE TERMINALS

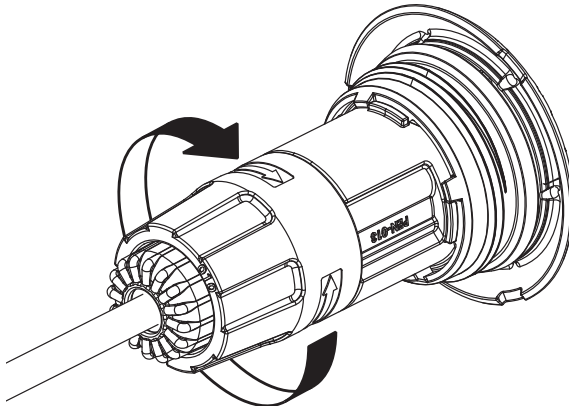
ALIGN THE TERMINAL PINS ON THE PLUG AND BACK OF THE LIGHT ASSEMBLY AND FIRMLY CONNECT TOGETHER.



6

FASTEN PLUG TO LIGHT

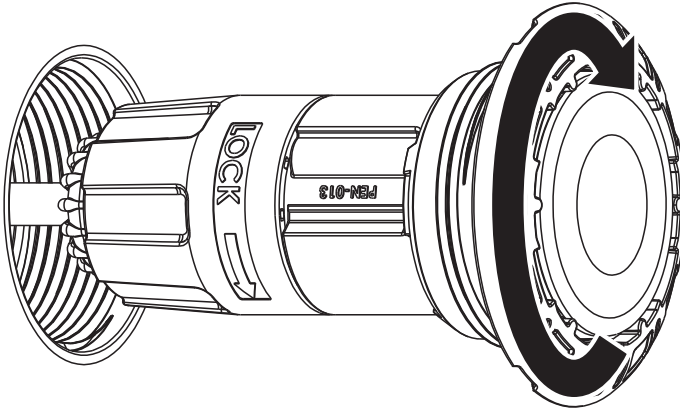
TO LOCK INTO PLACE:
TWIST COLLAR CLOCKWISE A FEW TIMES UNTIL IT'S HAND TIGHT.



7

ROTATE LIGHT CLOCKWISE

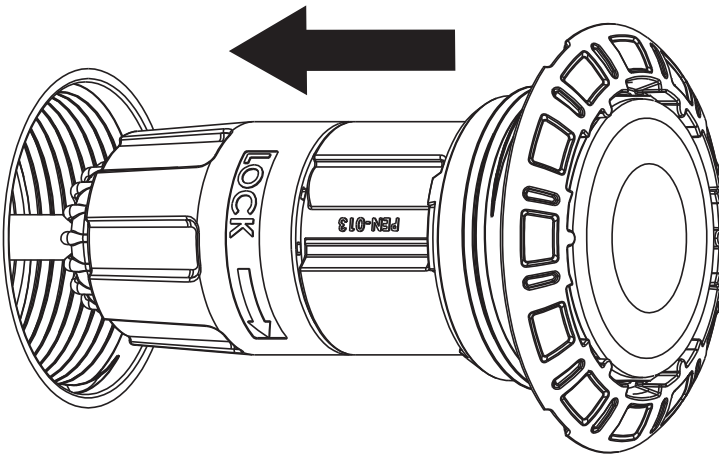
JUST BEFORE INSERTING THE LIGHT INTO THE BULKHEAD, ROTATE THE LIGHT CLOCKWISE A COUPLE TURNS.



8

INSERT LIGHT INTO BULKHEAD FITTING

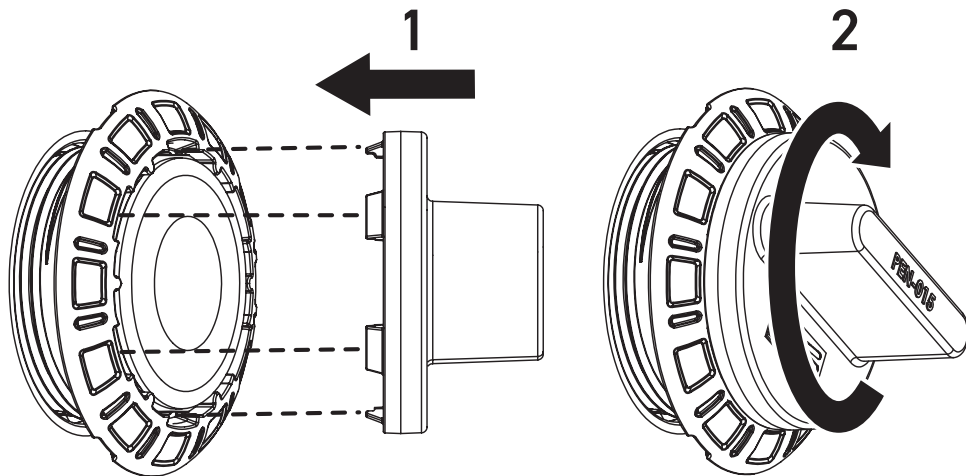
INSERT THE LIGHT ASSEMBLY INTO THE BULKHEAD FITTING.



9

THREAD LIGHT INTO BULKHEAD FITTING

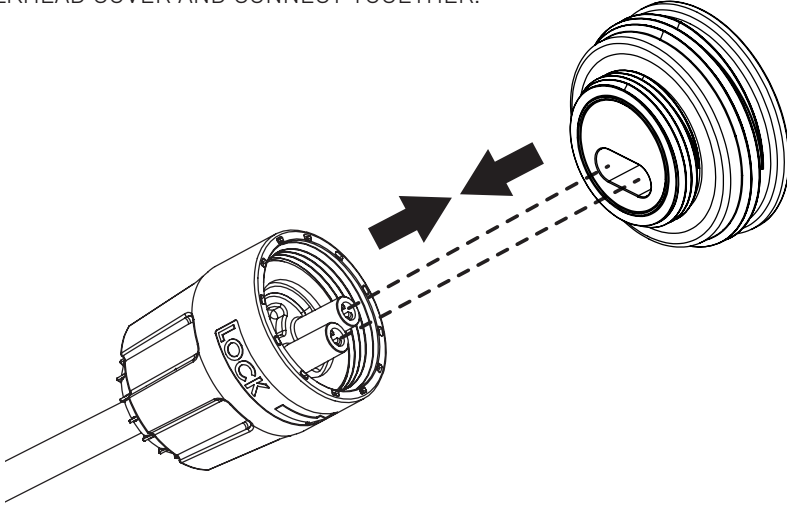
1. INSERT THE LIGHT INSTALLATION TOOL INTO THE FRONT OF THE LIGHT ASSEMBLY, ALIGNING THE TEETH ON THE TOOL WITH THE SLOTS ON THE RIM.
2. TWIST THE LIGHT ASSEMBLY WITH THE TOOL CLOCKWISE INTO THE BULKHEAD FITTING UNTIL FIRMLY HAND TIGHT.



INSTALL BULKHEAD COVER

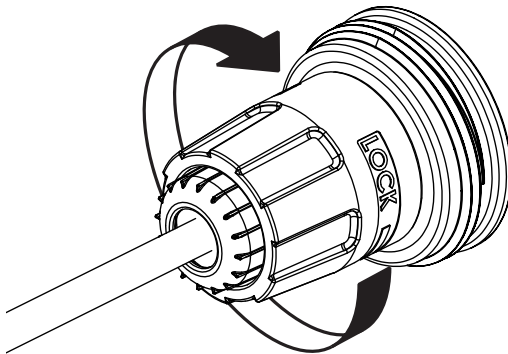
1 ATTACH BULKHEAD COVER TO PLUG

ALIGN THE TERMINAL PINS ON THE PLUG WITH THE SLOT ON THE BULKHEAD COVER AND CONNECT TOGETHER.



2 ATTACH BULKHEAD COVER TO PLUG

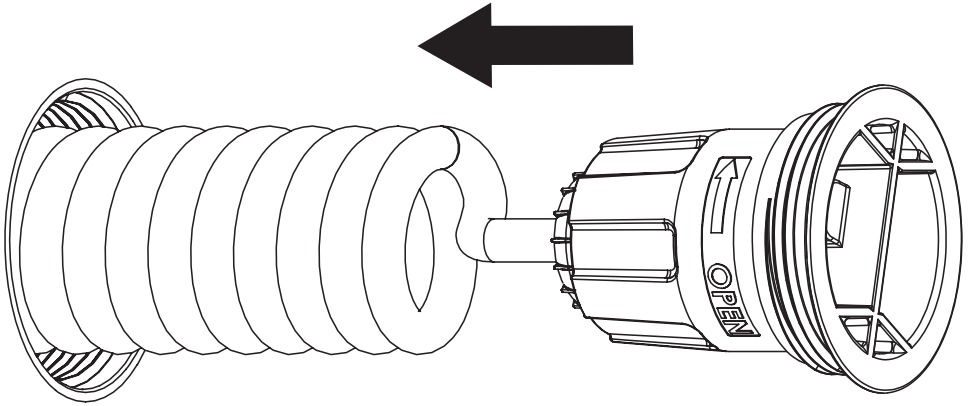
TO LOCK INTO PLACE:
TWIST COLLAR CLOCKWISE A FEW TIMES UNTIL IT'S HAND TIGHT.



3

ATTACH BULKHEAD COVER TO PLUG

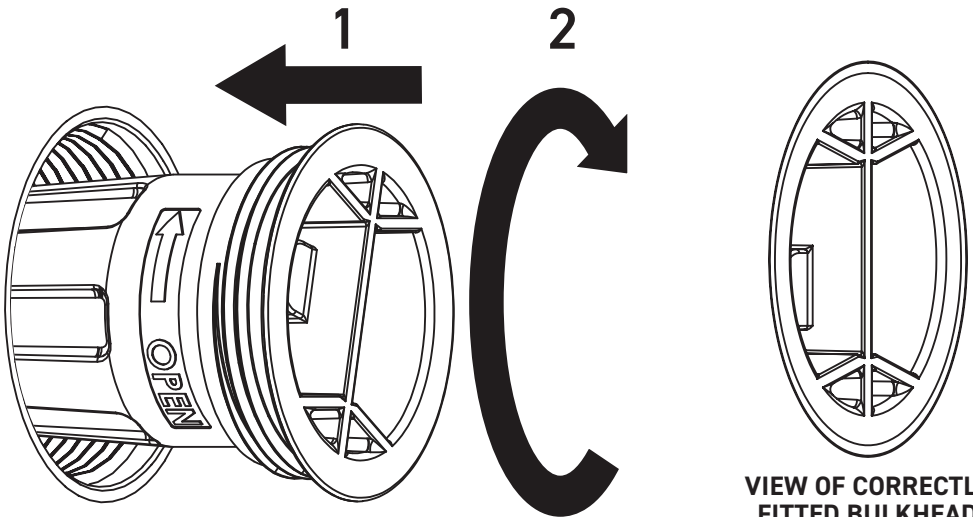
PUSH THE CABLE AND PLUG WITH THE BULKHEAD COVER ATTACHED INTO THE BULKHEAD FITTING.



4

THREAD BULKHEAD COVER INTO PLACE

1. PUSH BULKHEAD COVER FULLY INTO THE BULKHEAD
2. TWIST THE COVER CLOCKWISE UNTIL FIRMLY HAND TIGHT



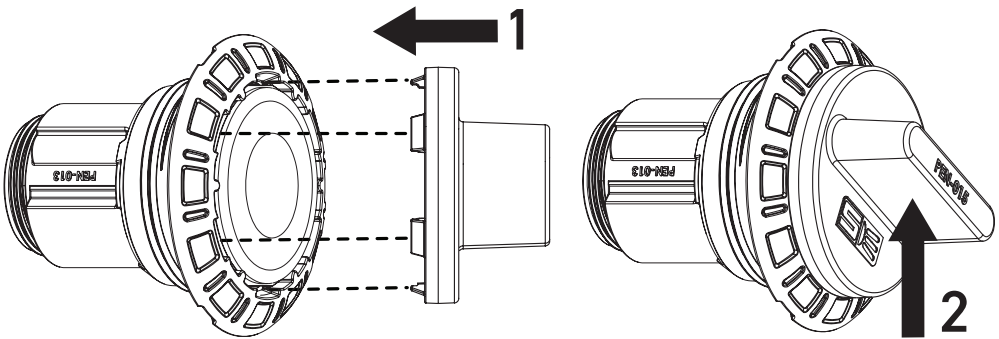
VIEW OF CORRECTLY
FITTED BULKHEAD
COVER

RIM & THREADED SLEEVE REMOVAL

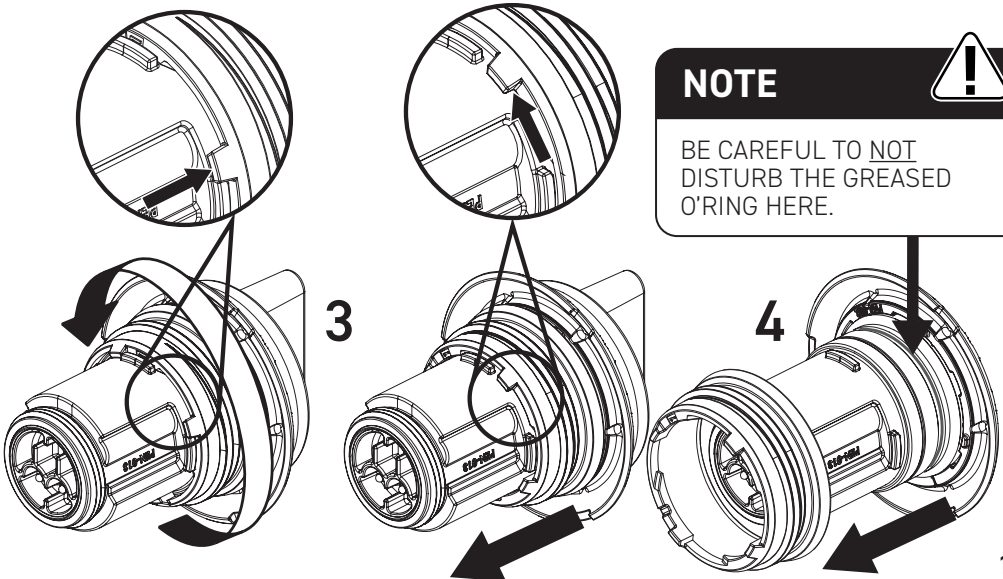
THE FOLLOWING STEPS DEMONSTRATE HOW TO REMOVE THE THREADED SLEEVE AND RIM IF REPLACEMENT OR MAINTENANCE IS REQUIRED.

1 REMOVE THREADED SLEEVE

1. INSERT THE LIGHT INSTALLATION TOOL INTO THE FRONT OF THE LIGHT ASSEMBLY. ALIGNING THE TEETH ON THE TOOL WITH THE SLOTS ON THE RIM.
2. HOLD THE LOCKING TOOL SO THE LIGHT ASSEMBLY DOES NOT ROTATE WHEN REMOVING THE THREADED SLEEVE IN STEP 3 BELOW.

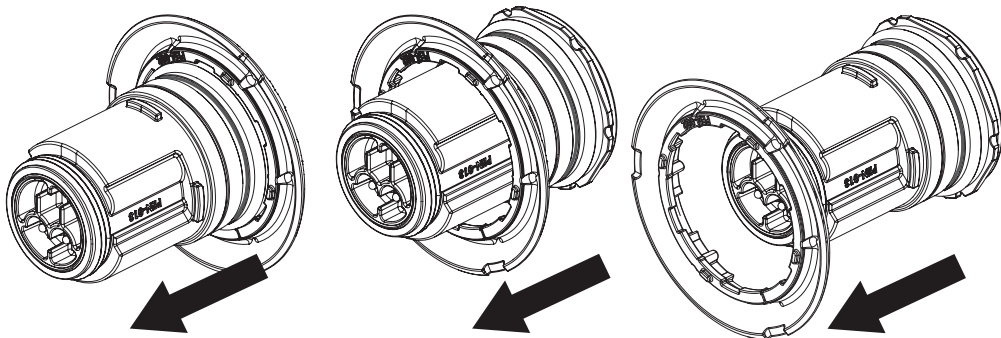


3. TWIST THE THREADED SLEEVE ANTI-CLOCKWISE TO UNLOCK IT.
4. THEN SLIDE THE SLEEVE OFF THE LIGHT ASSEMBLY.



2 REMOVE RIM

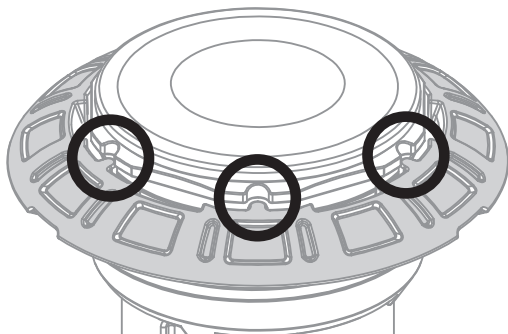
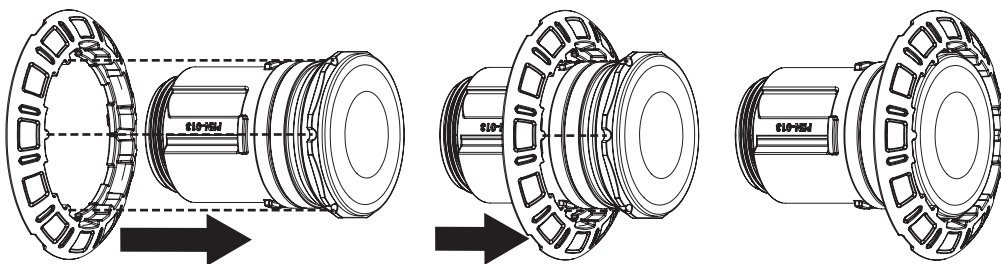
WITH THE SLEEVE REMOVED, THE RIM CAN BE CLIPPED OFF THE LIGHT ASSEMBLY. REMOVE THE RIM BY HAND ONLY.



RIM & THREADED SLEEVE INSTALL

1 ATTACH RIM

ALIGN THE RIM AND SLIDE IT OVER THE LIGHT ASSEMBLY UNTIL IT SNAPS INTO PLACE AND IS FULLY SEATED AS INDICATED. DO THIS BY HAND ONLY.

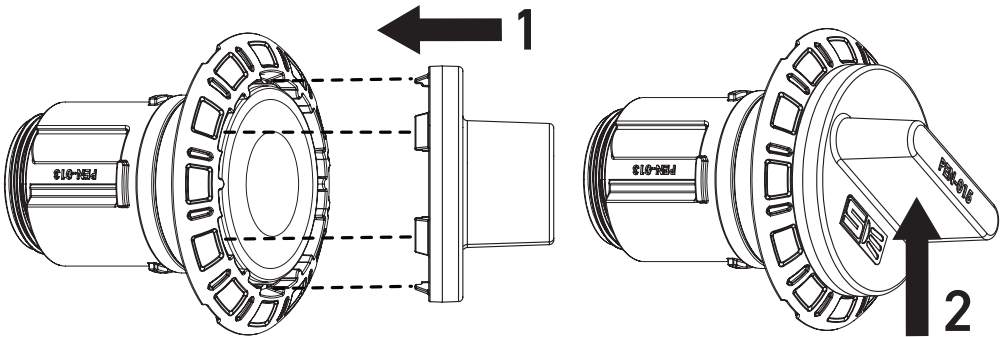


NOTE THE INDICATED ALIGNMENT POINTS ON THE RIM AND LIGHT ASSEMBLY.

2

ATTACH THREADED SLEEVE

1. INSERT THE LIGHT INSTALLATION TOOL INTO THE FRONT OF THE LIGHT ASSEMBLY. ALIGNING THE TEETH ON THE TOOL WITH THE SLOTS ON THE RIM.
2. HOLD THE LOCKING TOOL SO THE LIGHT ASSEMBLY DOES NOT ROTATE WHEN ATTACHING THE THREADED SLEEVE IN STEP 4 BELOW.

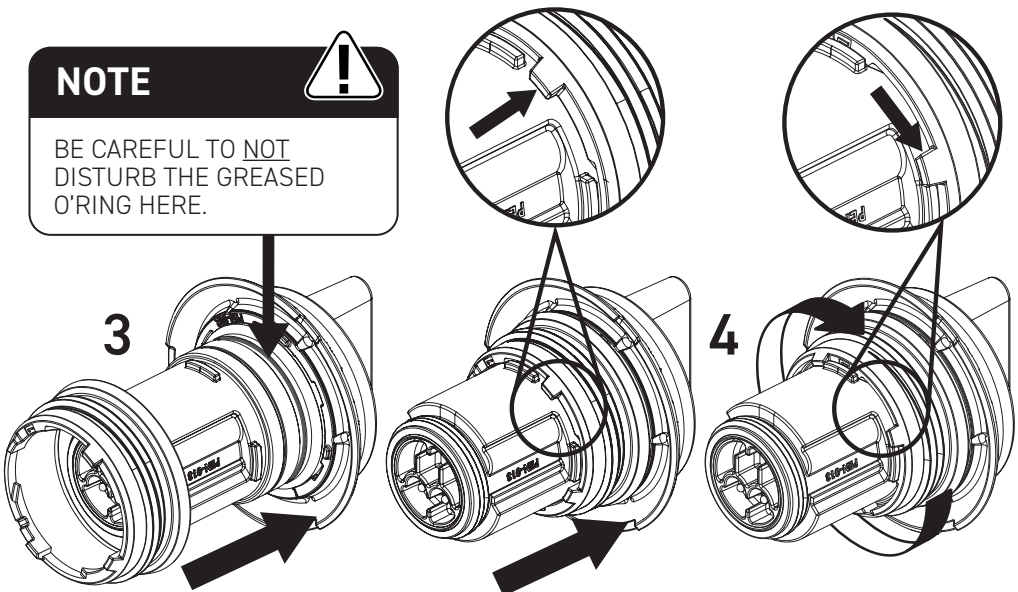


4. SLIDE THE THREADED SLEEVE ONTO THE LIGHT ASSEMBLY.
3. TWIST THE THREADED SLEEVE CLOCKWISE TO LOCK IT. NOTE THE POSITION OF THE INDICATED TAB.

NOTE



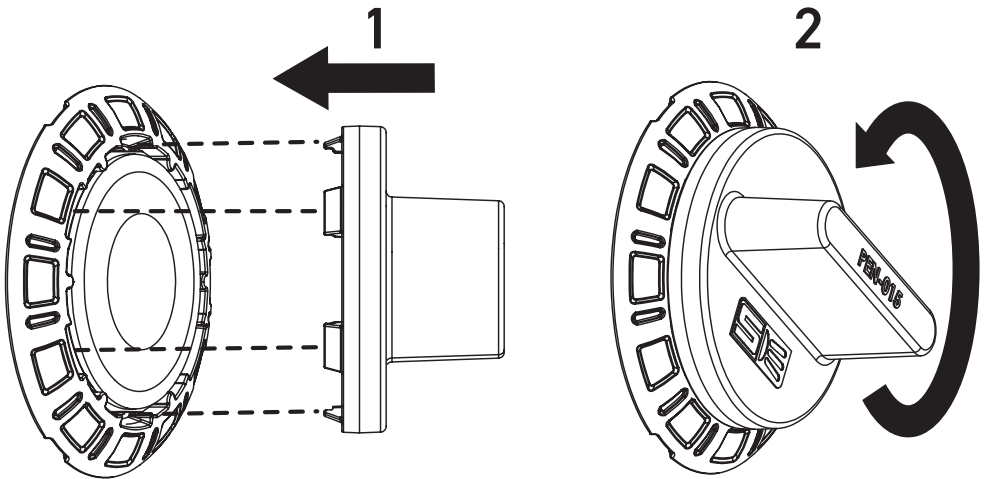
BE CAREFUL TO NOT DISTURB THE GREASED O'RING HERE.



WINTERIZATION

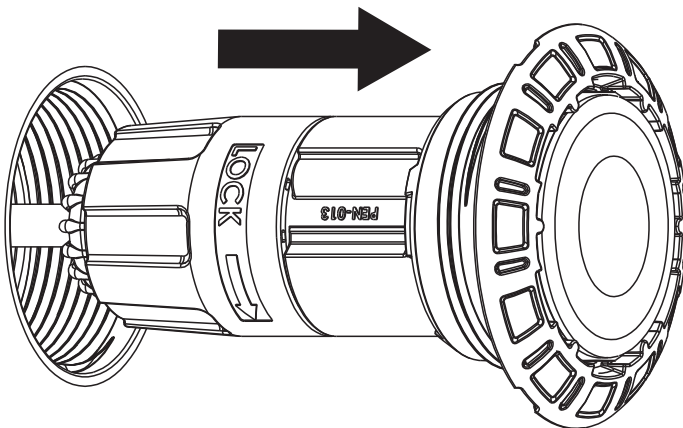
1 UN-THREAD LIGHT FROM BULKHEAD

1. INSERT THE LIGHT INSTALLATION TOOL INTO THE FRONT OF THE LIGHT ASSEMBLY, ALIGNING THE TEETH ON THE TOOL WITH THE SLOTS ON THE RIM.
2. TWIST THE LIGHT ASSEMBLY WITH THE TOOL ANTI-CLOCKWISE TO UN-THREAD FROM THE BULKHEAD FITTING.



2 PULL LIGHT OUT OF BULKHEAD FITTING

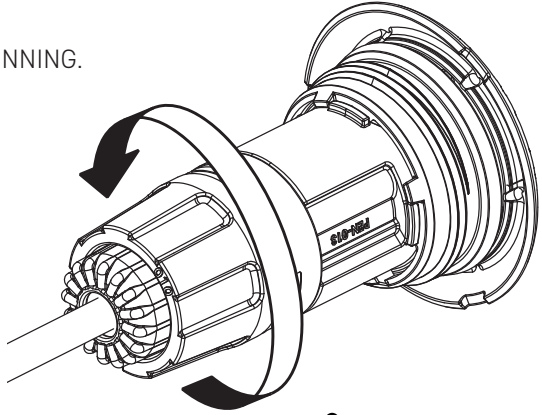
PULL LIGHT ASSEMBLY WITH PLUG ATTACHED OUT OF THE BULKHEAD FITTING.



3

REMOVE PLUG FROM LIGHT

UNSCREW PLUG COLLAR ANTI-CLOCKWISE UNTIL IT IS FREE SPINNING.



IMPORTANT NOTES

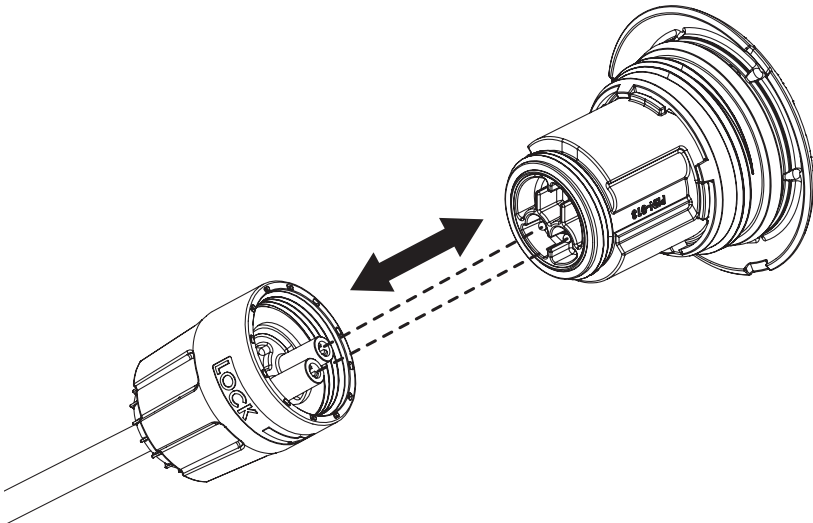


CABLE SHOULD BE SECURED ABOVE WATER AND WEATHER PROTECTED WHILE LIGHT IS DETACHED.

4

REMOVE PLUG FROM LIGHT

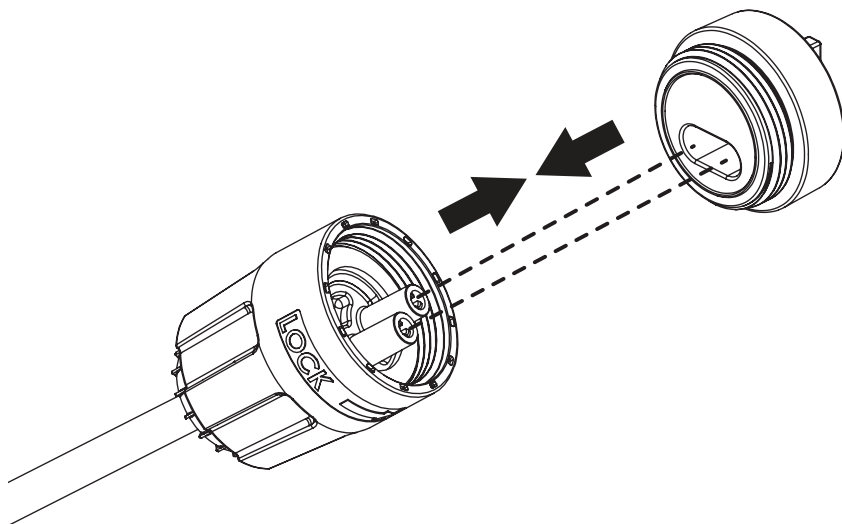
DISCONNECT LIGHT ASSEMBLY FROM PLUG BY PULLING APART.



5

ATTACH PLUG COVER TO PLUG

ALIGN THE TERMINAL PINS ON THE PLUG WITH THE SLOT ON THE PLUG COVER AND CONNECT TOGETHER.

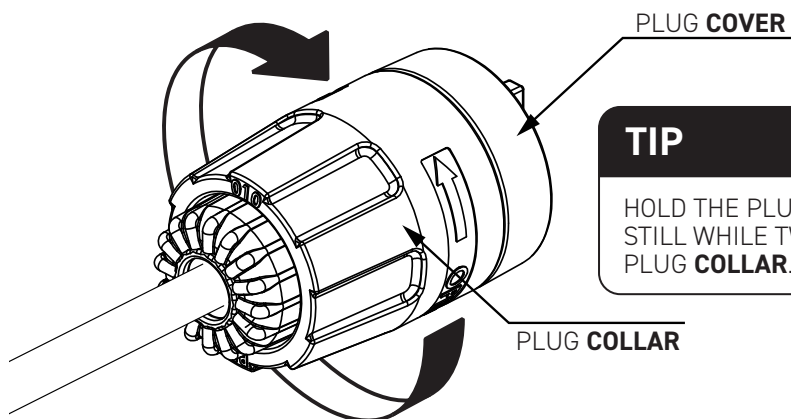


6

FASTEN PLUG COVER

TO LOCK INTO PLACE:

TWIST THE PLUG **COLLAR** CLOCKWISE A FEW TIMES UNTIL IT'S HAND TIGHT.



TIP

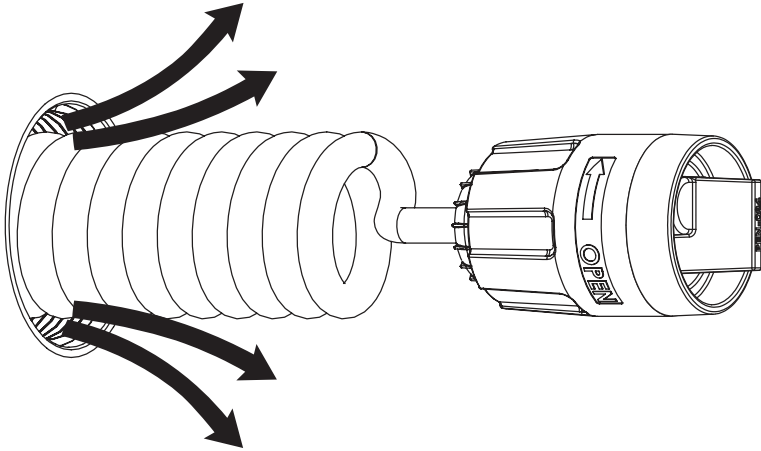


HOLD THE PLUG **COVER** STILL WHILE TWISTING THE PLUG **COLLAR**.

7

REMOVE WATER FROM PIPE

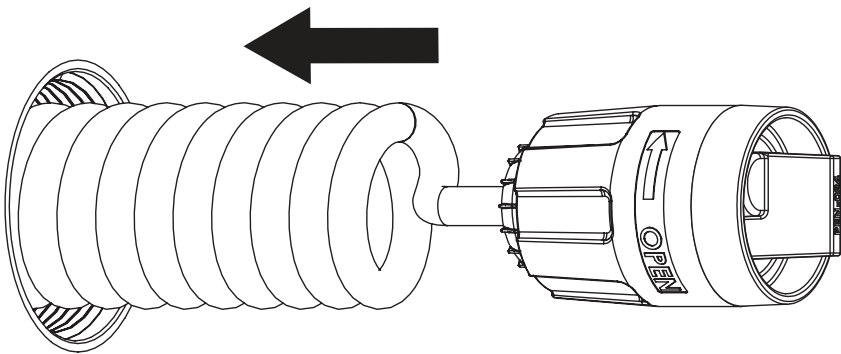
REMOVE THE REMAINING WATER FROM THE PIPING, THIS MAY INVOLVE BLOWING OUT WITH COMPRESSED AIR.



8

STORE CABLE

STORE CABLE BACK INTO THE PIPING.



NOTE

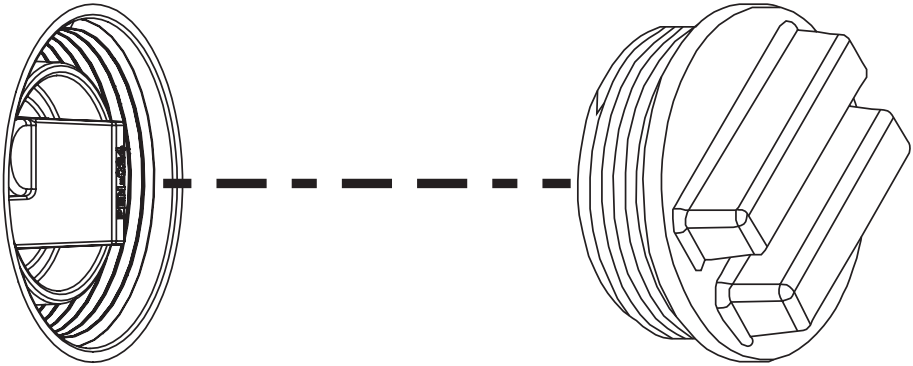


IF FITMENT INTO THE PIPE IS TIGHT, ROTATING THE COILED CABLE SECTION CLOCKWISE WILL HELP PROVIDE CLEARANCE TO THE PIPE.

9

SEAL PIPE OPENING

SELECT FROM COMMONLY AVAILABLE WINTERIZATION FITTINGS TO SEAL OFF THE BULKHEAD FITTING, IT IS IMPORTANT TO ENSURE THEY ARE APPROPRIATELY SELECTED AND INSTALLED TO ACHIEVE A WATER TIGHT SEAL.

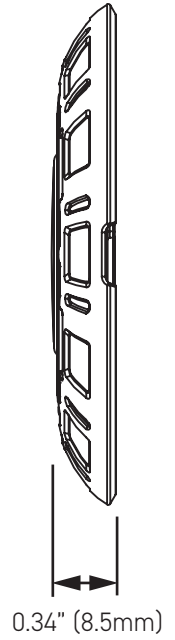
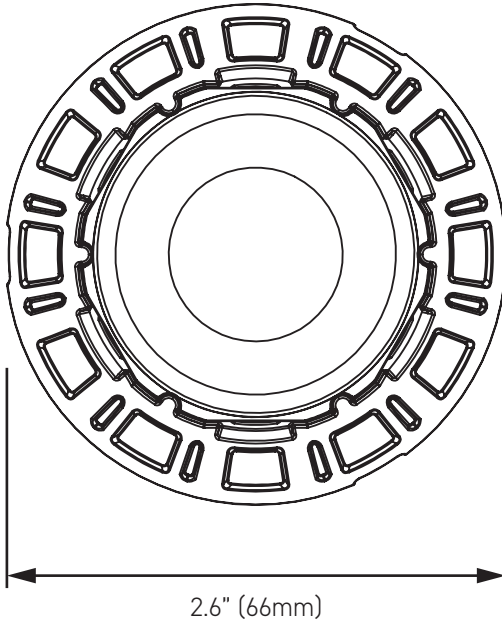


IMPORTANT NOTE



IMAGE OF SEALED FITTING SHOWN FOR REFERENCE ONLY. ENSURE THE CORRECT TYPE IS SELECTED TO SEAL OFF BULKHEAD FITTING.

KEY DIMENSIONS



TROUBLESHOOTING

ISSUE	REASON	ACTION
Light returns to WHITE color during manual color change	Light synchronization process has been triggered	Refer to MULTI PLUS Installation & User Guide
Light flashes 2 times (RED)	Light over heating.	Check light is fully submerged. Check vents are not obstructed
Light not operating (1)	Faulty connection to transformer	Ensure cable correctly connected to transformer terminals
Light not operating (2)	Mains power not connected	Check transformer is plugged in to GPO and switched on
Light not operating (3)	Damaged cable	Disconnect plug top and test voltage under load using multi-meter (ie. 20w 12v)
Light not operating (4)	Transformer not working	Check fuses & test transformer using multimeter under load (ie.15W 12V)
Light colors not synchronized	Incorrect operating mode selected.	Refer to MULTI PLUS setup procedure

If these issues cannot be resolved with the above recommended actions, please contact your local Spa Electrics reseller or Spa Electrics directly.

www.spaelectrics.com

ELECTRICAL GROUNDING

Underwriters Laboratories (UL) Statement

Per the NEC, NFPA 70, Article 680.23 (B)(5), states that bonding shall not be required for luminaires that are listed for the application and have no non-current carrying metal parts. In addition, per Article 680.26 (B)(4), exception states that Listed low-voltage lighting systems with non-metallic forming shells shall not require bonding.

Therefore, luminaires with polymeric/non-current carrying metal parts are not required to be grounded / bonded.

Manufacturers Statement

Spa Electrics **Retro Universal** luminaires with their plastic housing designs do not require grounding / bonding.

Spa Electrics **Retro Universal** lights have also been determined to comply with the applicable requirements for wet-niche, LED type Swimming Pool and Spa Luminaires.

FCC COMPLIANCE STATEMENT

This device complies with part 15 of the FCC rules. Operation is subject to the following two (2) conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- **Reorient or relocate the receiving antenna.**
- **Increase the separation between the equipment and receiver.**
- **Connect the equipment into an outlet on a circuit different to that to which the receiver is connected.**
- **Consult the dealer or an experienced radio / TV technician for help.**

Do not make any changes or modifications to the equipment unless otherwise specified in the manual.

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IMPORTANT NOTE

PLEASE STORE THIS MANUAL IN A SAFE PLACE
FOR FUTURE REFERENCE



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