

# MODEL WN250 & WN250F

Installation Instructions for concrete and fibreglass pools & spas.



## User Instructions:

Congratulations on your purchase of a Spa Electrics underwater lighting system.

Spa Electrics, specialists in underwater lighting have been designing and manufacturing underwater lighting systems since 1976, with a focus on quality and reliability.

All Spa Electrics lights are manufactured in Australia from only the highest quality materials.

In order to maintain a long product life and hassle free operation, please take the time to become familiar with the following information.

## Installation:

- Cable length should not be shortened on the halogen light. If in doubt contact Spa Electrics.
- Ensure that the lighting system is installed by suitably qualified persons only ( e.g. registered pool builder and/or qualified electrician ), in accordance with AS/NZ 3000:2000 standards.
- For safe and proper installation, ensure that only those parts supplied with the system are used.
- Lights should only be installed to a maximum depth of 400mm.

## Cleaning:

- Should your underwater light require cleaning at any stage, be sure to use only a mild detergent. Products such as methylated spirits can weaken certain parts of the fitting, especially coloured lenses.

## Use:

- Your underwater light must be water cooled at all times. Do not switch the light on until installation is complete and the light is fully submerged in water.
- To ensure maximum life, your light should be used regularly throughout the year, i.e once per week.
- Do not operate your halogen underwater light for a continuous period extending beyond eight hours per day. This product has been designed for domestic use, not for commercial or security purposes.

## Installation Instructions:

For **concrete** pools and spas.

### Step 1. ( Before spraying concrete )

Attach the niche to either horizontal or vertical steel mounting bars using wire ties or similar. Ensure conduit entry is at the top of the niche. (Fig.1)

#### CAUTION:

Lights should only be submerged to a maximum depth of 400mm to the top of the light, any deeper and the warranty will be void.

These lights are not designed for horizontal mounting.

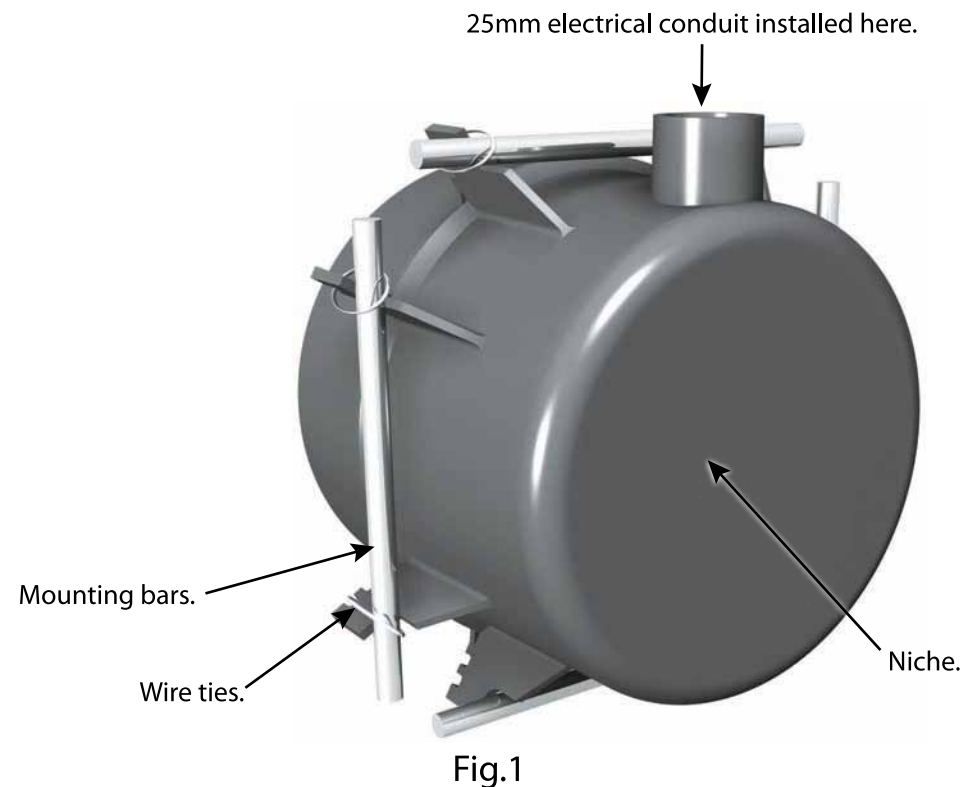


Fig.1

### Step 2.

Glue length of 25mm electrical conduit into top of niche using PVC solvent cement. Conduit should extend above the water level of the pool.

**CAUTION:** Ensure that sufficient area behind the niche is dug out to allow for 50mm of concrete coverage around the entire niche.

### Step 3.

Attach a second conduit to return below ground level and away to the location of the transformer. Conduits should contain a draw wire and be covered with a draw box ( part No. SE5 ) or similar to allow for later access. (Fig.2)

**CAUTION:** If a junction box is not used, ensure that conduits are 'broken' before returning below water level, to stop siphoning of water from pool or spa.

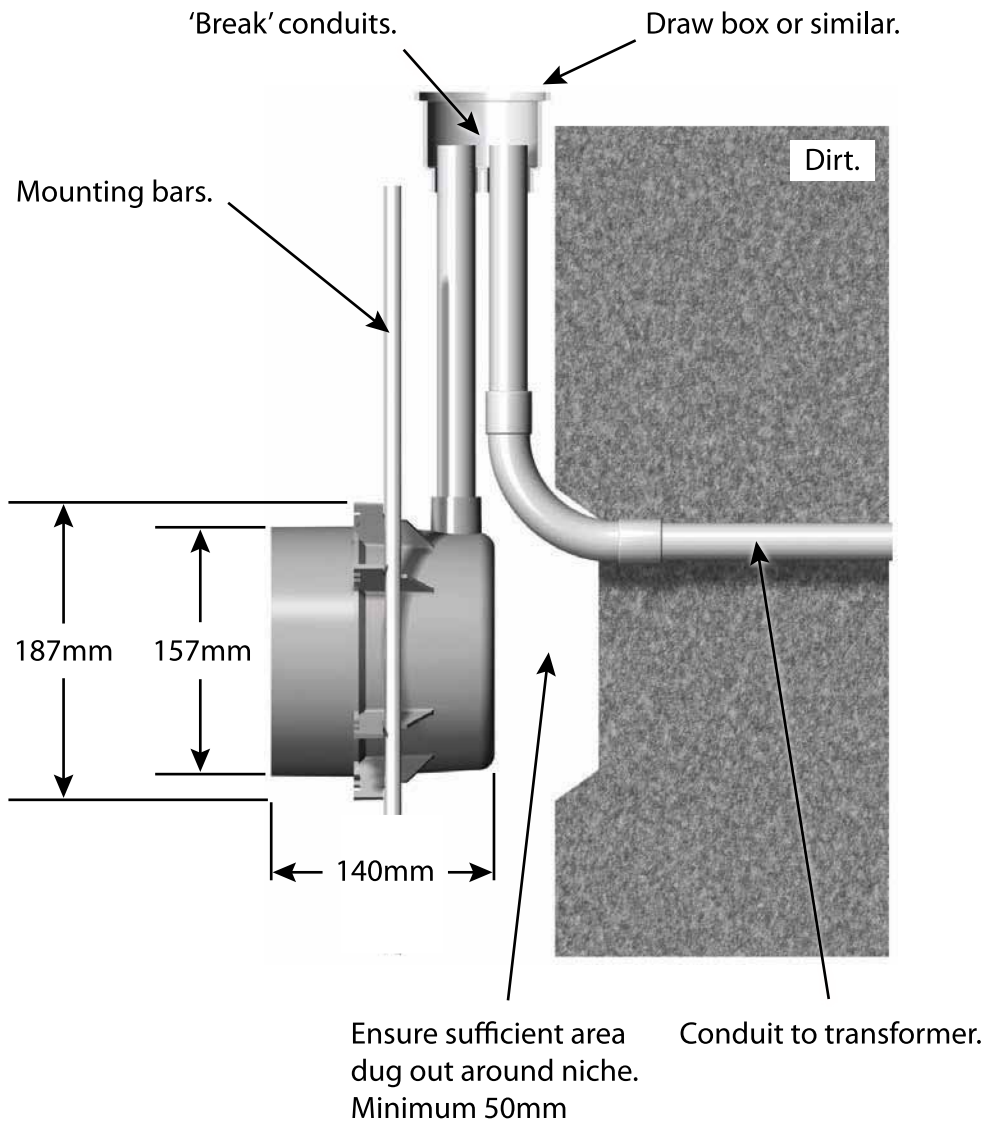


Fig.2

### Step 4.

Spray concrete, paying particular attention to covering the entire niche. Using fingers, scoop out the concrete around the front edge of the niche. (Fig.3)

Warning: Ensure that the concrete is well compacted around the rear and base of the niche, otherwise the pool may leak.

**CAUTION:** The front of the niche should not be recessed into the concrete.

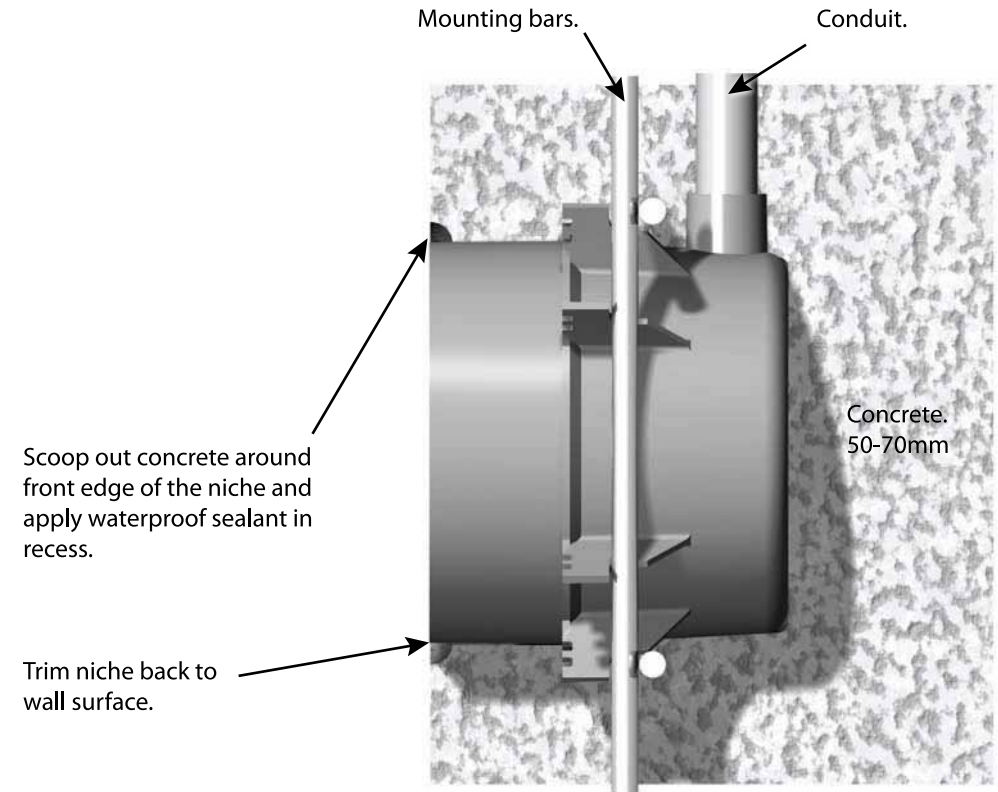


Fig.3

### Step 5. ( after concrete is sprayed and dry )

Remove foam from niche and if necessary, trim niche back to wall surface. Apply a waterproof sealant in the recess between the niche and the concrete wall. (Fig.3)

**CAUTION:** Do not trim more than 20mm from the front of the niche or there may not be sufficient depth remaining for inserting the light.

### Step 6.

Apply PVC solvent cement to bubble at rear of the mounting ring, and also to the inside of the niche where the mounting ring is likely to finish. ( approximately 40mm inside niche ) (Fig.4)

**WARNING:** Ensure solvent cement is suitable for ABS plastics.

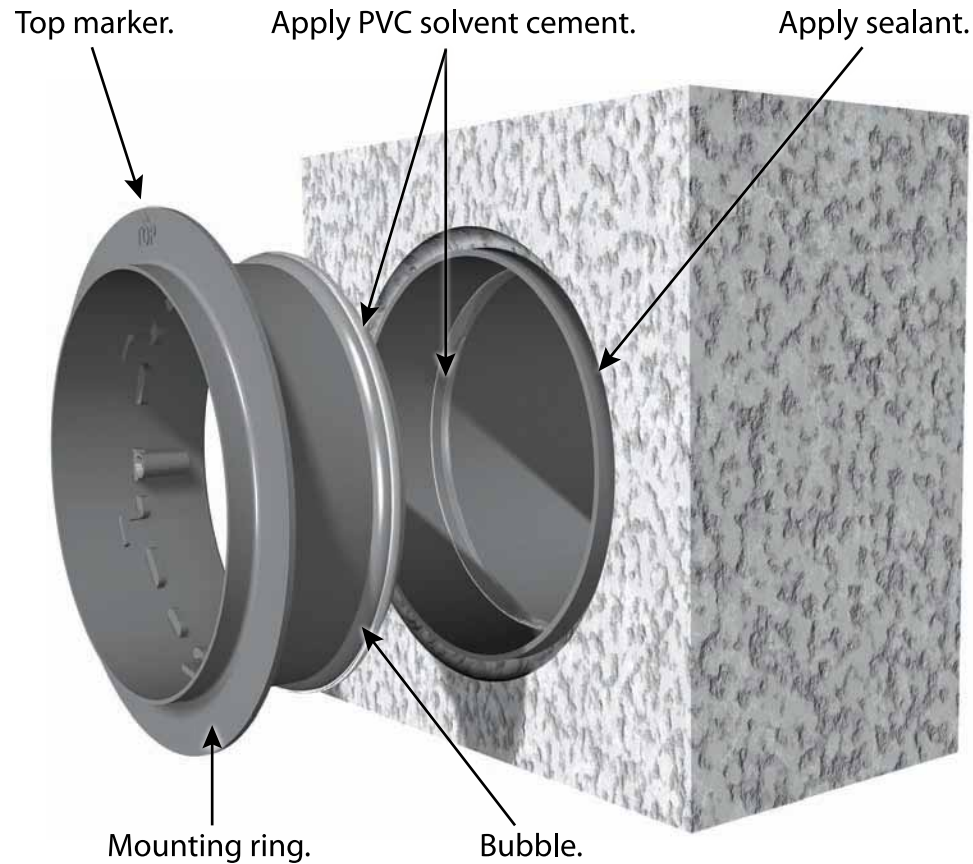


Fig.4

### Step 7.

Slide mounting ring into niche, with 'TOP' arrow uppermost until flush against pool wall. For fully tiled pools, and depending upon tile thickness, the mounting ring may need to be rendered partially into the wall.

**CAUTION:** Ensure that the mounting ring is vertical as the interior surface must be level with this ring.

### Step 8.

Pebble or tiled interior pool surface, level with raised edge of mounting ring.

**CAUTION:** Interior surface must not finish higher than raised edge of mounting ring, or the light will not be able to be mounted.

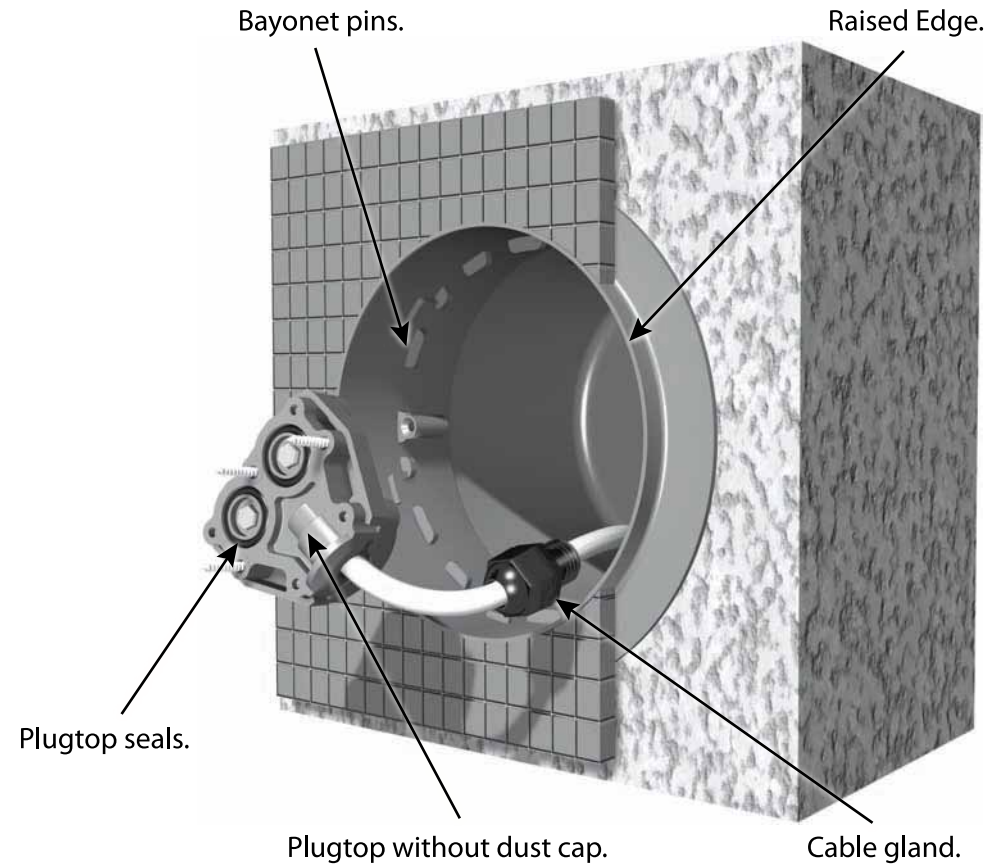


Fig.5

### Step 9.

Using the draw wire, feed the cable from the pool interior, through the niche and conduit, to transformer. Ensure that approximately 800mm of cable extends from the niche to the light, in order to allow the light to be lifted from the water to the pool surround for servicing. Insert and tighten the cable gland.

**CAUTION:** Do not install the light until after the pool has been acid washed. (Fig.5)

### Step 10.

Remove the dust covers from both the light housing and the plugtop. Ensure both plugtop seals are present and located within their grooves. Attach plugtop to light housing using the three fixing screws provided and tighten firmly. (Fig.6)

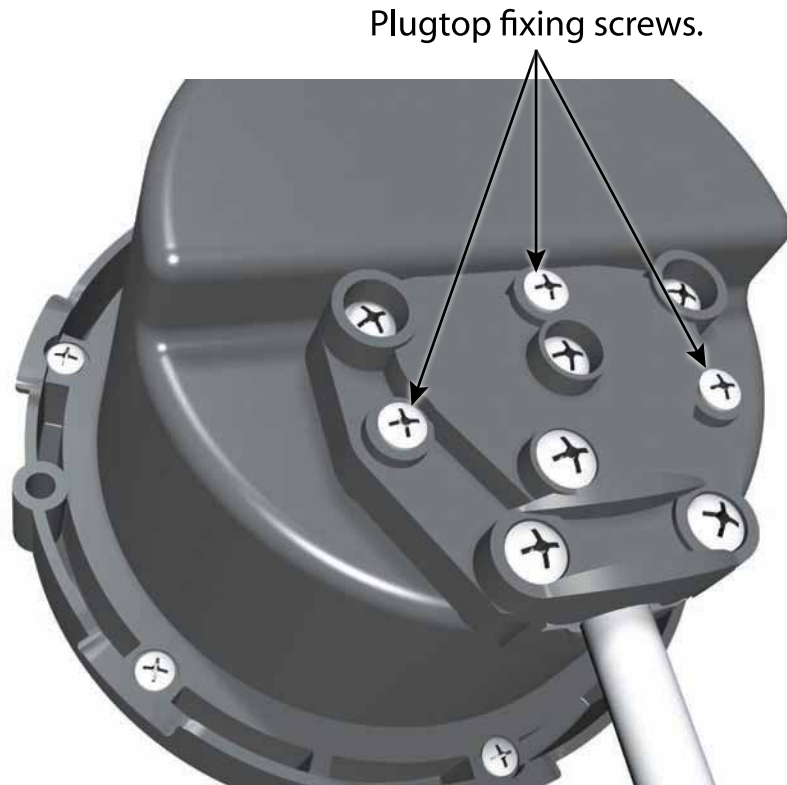


Fig.6

### Step 11.

Coil the remaining cable into the niche ( not around the light body ) in a clockwise rotation. Continue turning in a clockwise direction until all cable is inside the niche and the 'TOP' arrow on the light is at the 12 o'clock position. Rotate the light in an anti-clockwise direction until it clips behind the bayonet tabs, before rotating clockwise to lock it into position. Insert fixing screws provided and lightly tighten.

**WARNING:** Ensure that the light can not be turned on until it is fully submerged in water.

## Installation Instructions:

For **fibreglass** pools and spas.

### Step 1.

Cut a circular hole of 151mm diameter in a flat surface approximately 300mm below the water line. Check that the niche will fit through the previously cut hole without any interference. (Fig.1)  
Remove the niche from the hole before continuing to step 2.

**CAUTION:** Niche should be installed no deeper than 400mm below the finished pool surround, to allow for servicing.

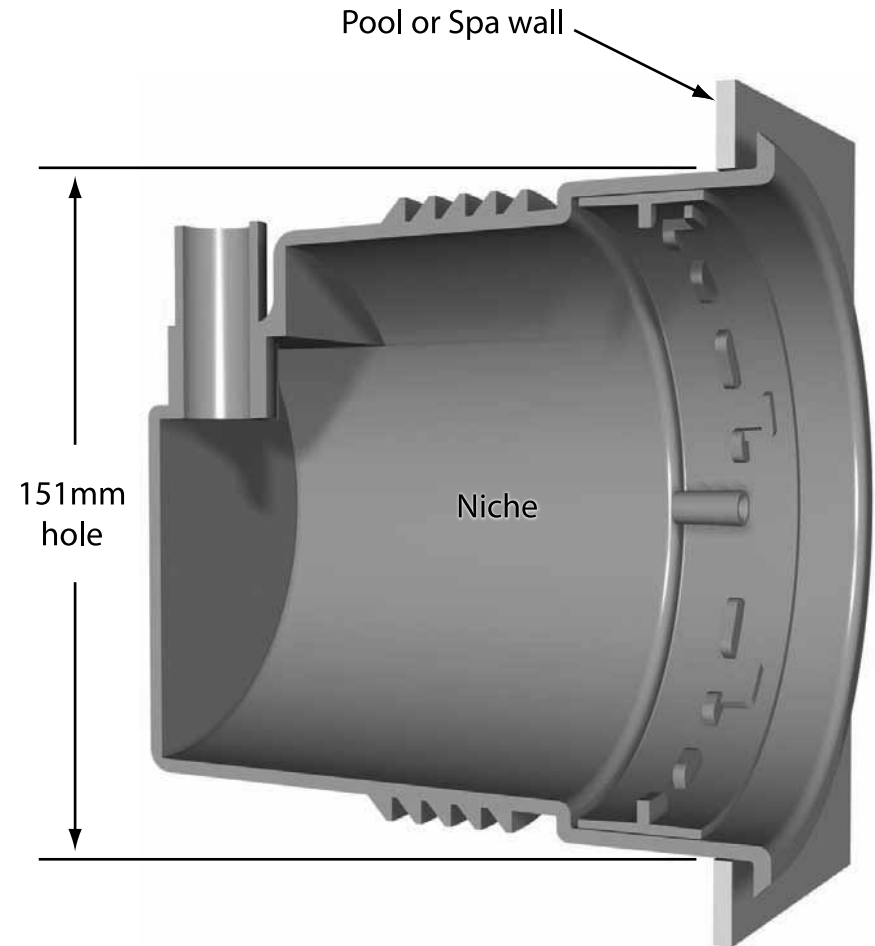


Fig.1

### Step 2.

Run a small bead of silicone around the inner edge of the niche front lip before fitting the niche through the hole, ensuring that the conduit entry is at the top position of the niche. Apply a second heavy full circle bead of silicone around the niche on the outside of the pool or spa wall. (Fig.2)

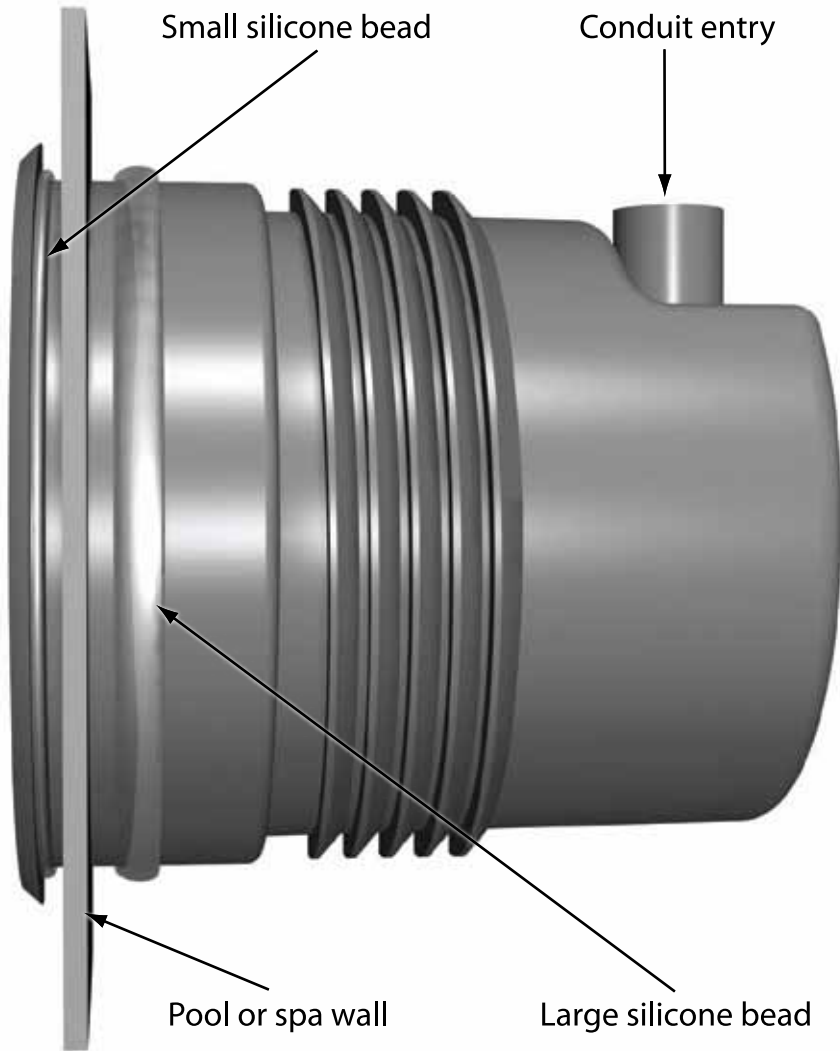


Fig.2

### Step 3.

Lightly smear silicone in compression ring recess in the nut. Fit compression ring then the nut over the niche, allowing compression ring to push the silicone bead against the pool or spa wall. Tighten the nut firmly by hand only. (Fig.3 & Fig.4)

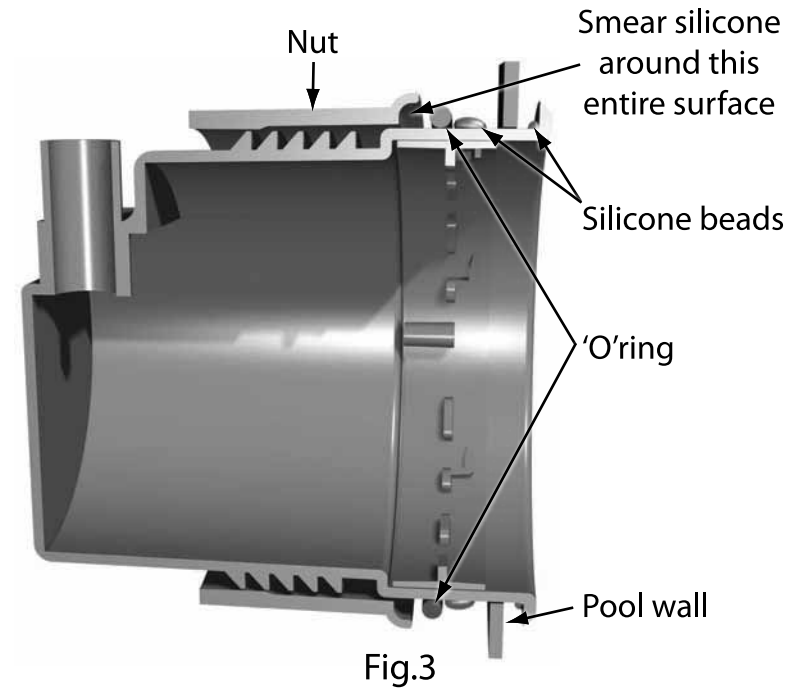


Fig.3

### Step 4.

Clean excess silicone from front and rear of outer niche and allow it to cure ( approx 12 hours ) before fitting the electrical conduit. (Fig.4)

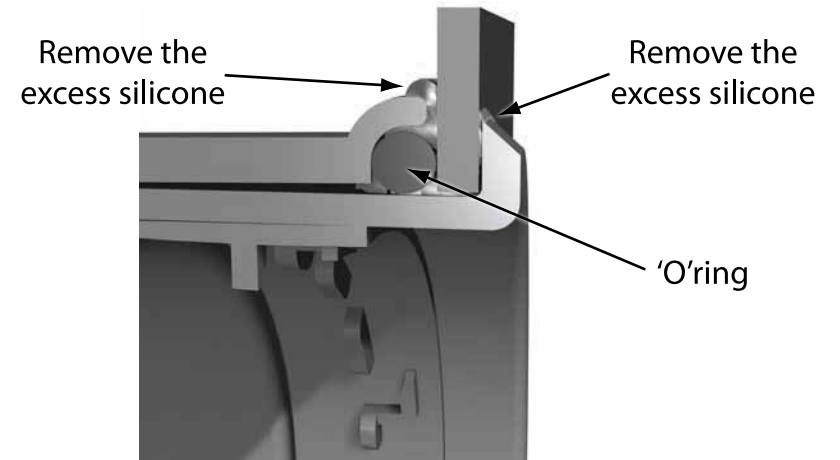
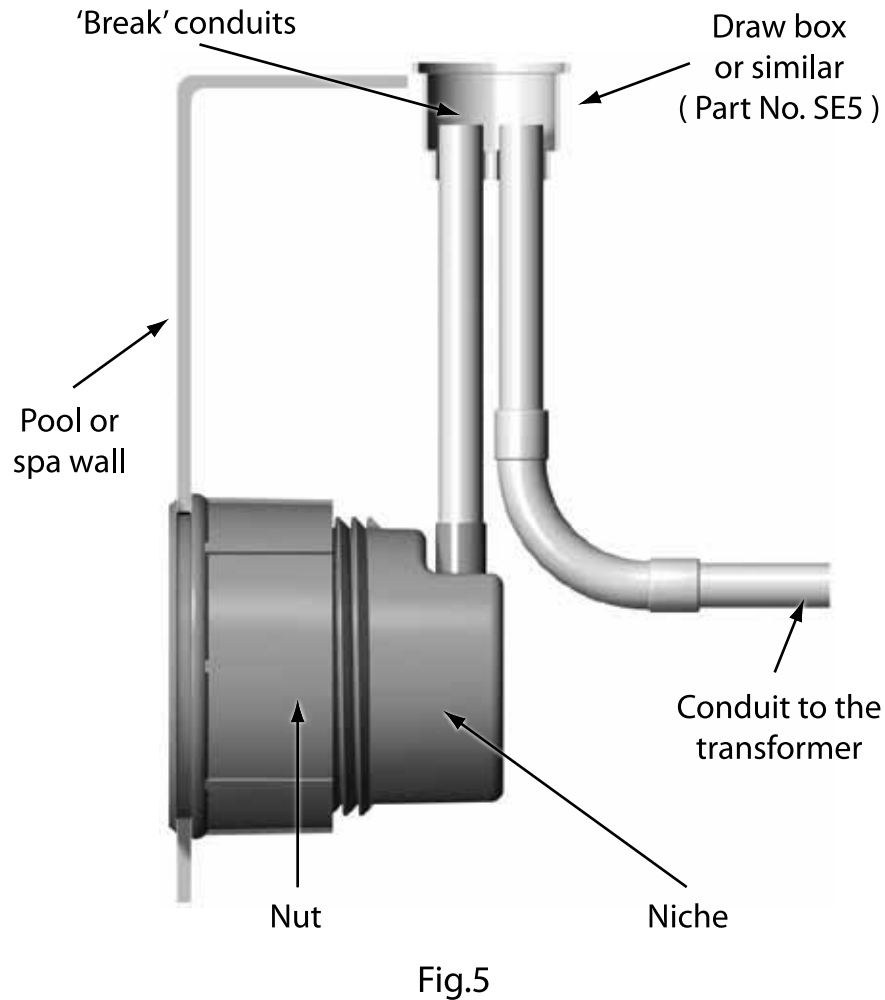


Fig.4

### Step 5.

Glue a length of 25mm electrical conduit into the top of the niche using PVC solvent cement. The conduit should extend to above the water level of the pool.



### Step 6.

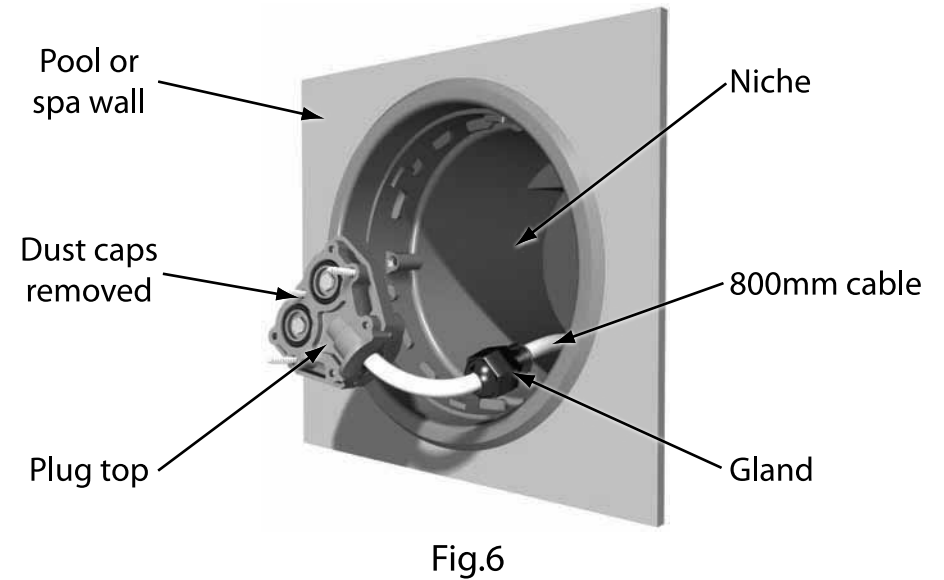
Attach a second conduit to return below ground level and to the location of the transformer. Conduit should contain a draw wire and be covered with a draw box. ( Part No. SE5 ) or similar, to allow access. ( Fig.5 )

**Ensure** that conduits are 'broken' before returning below water level to stop siphoning of water from the pool or spa.

**NOTE: If your light is pre-assembled please skip steps 7, 8 & 9.**

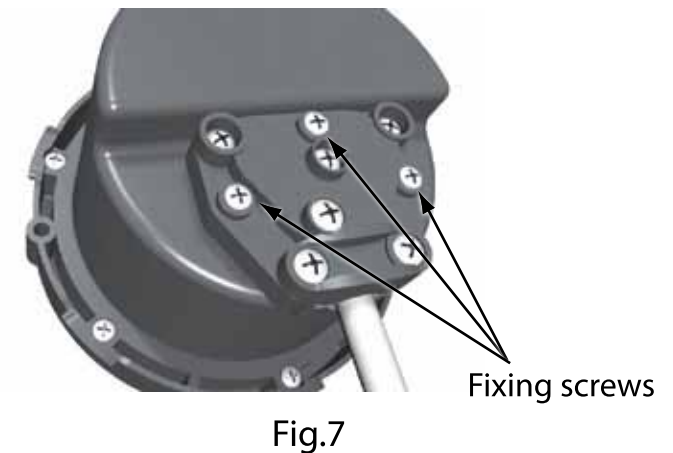
### Step 7.

Using draw wire, feed electrical cable from the pool interior, through the niche and conduit, to the transformer. Ensure that approximately 800mm of cable extends from the niche to the light before tightening the gland, in order to allow the light to be lifted to the pool surround for servicing.



### Step 8.

Remove the dust covers from the plug top and the light housing. Attach the plug top to the light using the three fixing screws provided. Tighten firmly. (Fig.7)



### Step 9.

Coil the remaining cable into the niche ( not around the light body ) in a clockwise rotation. Continue turning in a clockwise direction until all cable is inside the niche and the 'TOP' arrow on the light is at the 12 o'clock position. Rotate the light in an anti-clockwise direction until it clips behind the bayonet tabs, before rotating clockwise to lock it into position. Insert fixing screws provided and lightly tighten.

**WARNING:** Ensure that the light can not be turned on until it is fully submerged in water.

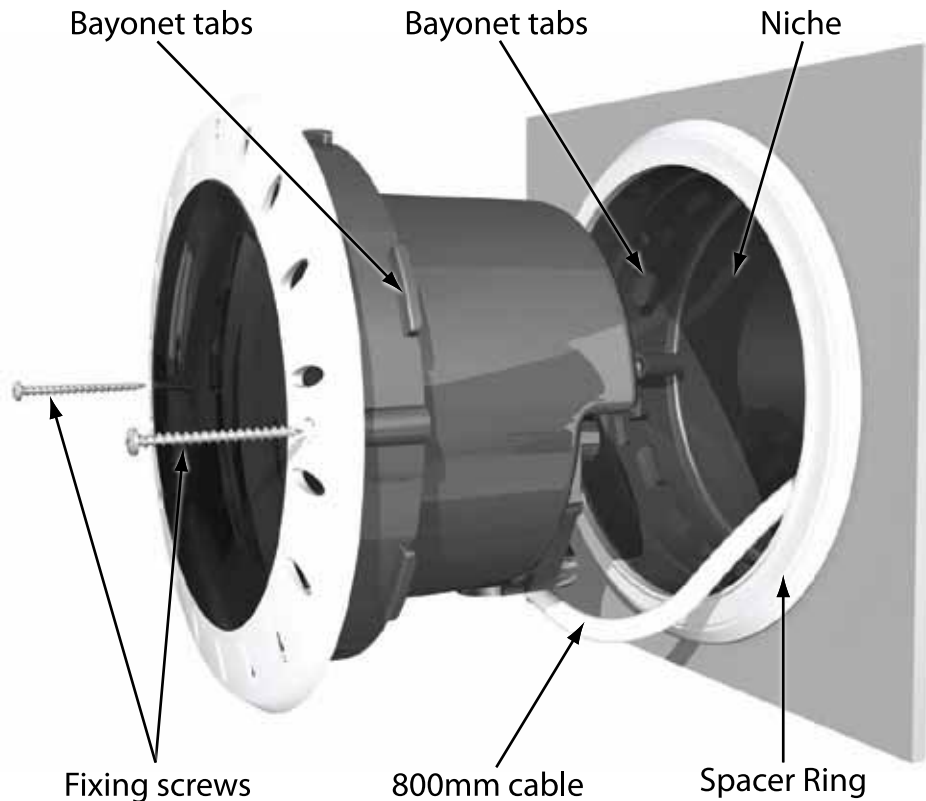
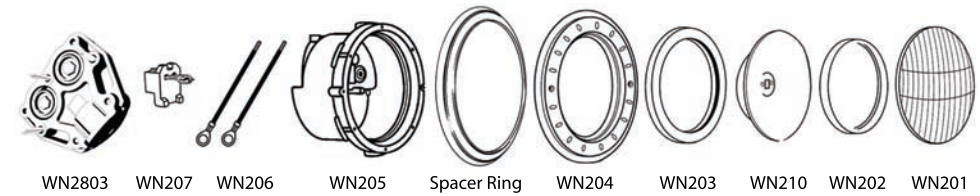


Fig.8

## WN250 & WN250F Halogen Light - Replacement parts.

For instructions on how to change the halogen globe please refer to [www.spaelectrics.com.au](http://www.spaelectrics.com.au)

- WN201 - Coloured, Removeable lens.
- WN202 - Glass lens.
- WN203 - Gasket.
- WN204 - Facia.
- WN205 - Light housing.
- WN206 - Connector tails.
- WN207 - Globe and Connector.
- WN210 - Reflector.
- WN2803 - Plugtop & seal kit.



### Transformer ( sold seperately ).

#### Halogen

Part No.

- LV100-12 - for one halogen light.
- LV200-12 - for two halogen lights.

### Trouble Shooting.

FAULT	POSSIBLE CAUSE	SOLUTION
Light not working	No power to transformer Blown fuse in transformer Blown globe Fault in electrical wiring	Check fuses at switchboard Replace fuses Replace halogen globe Contact qualified electrician to test
Light is very dim	Mismatch of transformer and globe	Check voltage at transformer and globe Check cable size and length Fit correct globe
Globe blows immediately when switched on	As above	As above
Main house / transformer fuse blows when light is switched on	Faulty Transformer Damaged Cable Incorrect electrical installation	Contact qualified electrician to test Installation

#### Warning

Before touching any electrical installation or checking globes or fuses, switch off mains power. Any modification to an electrical circuit must be carried out by a qualified electrician. Never turn on the light unless it is fully submerged in water, otherwise damage to your light will occur.