

SY 220 / SY 225 / SY 250 Series Underwater lights and Cameras

INSTALLATION OF THE GLASS LENS
INTO THE WELD-IN FLANGE

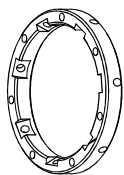
Please read ALL the following pages before attempting installation to ensure complete understanding of what is required

CARE POINTS

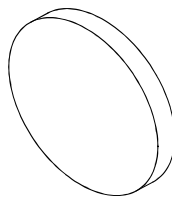
**CAUTION**

- DO NOT use any adhesives, sealants, gaskets, cleaning agents, or any other chemicals other than those specified in this manual. Using any materials in the installation of the lens, or light, that are not specified in this manual will invalidate the warranty.
- BEFORE installation, check the flange for any debris, weld splatter or any other damage that will prevent the proper fitting of the lens and locking ring. If in doubt contact Lumishore for advice.
- DO NOT test or switch the lights on if they are covered. This risks damaging the light and lens and will void the warranty.
- DO NOT pressure wash the light, flange or lens under any circumstances. Pressure washing can disturb the sealing arrangement.

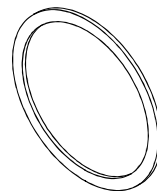
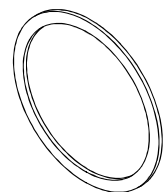
PARTS SUPPLIED



Locking Ring

Locking Ring
Grub Screw (x14)

Glass Lens

Sealing
GasketMetal Sealing
Washer

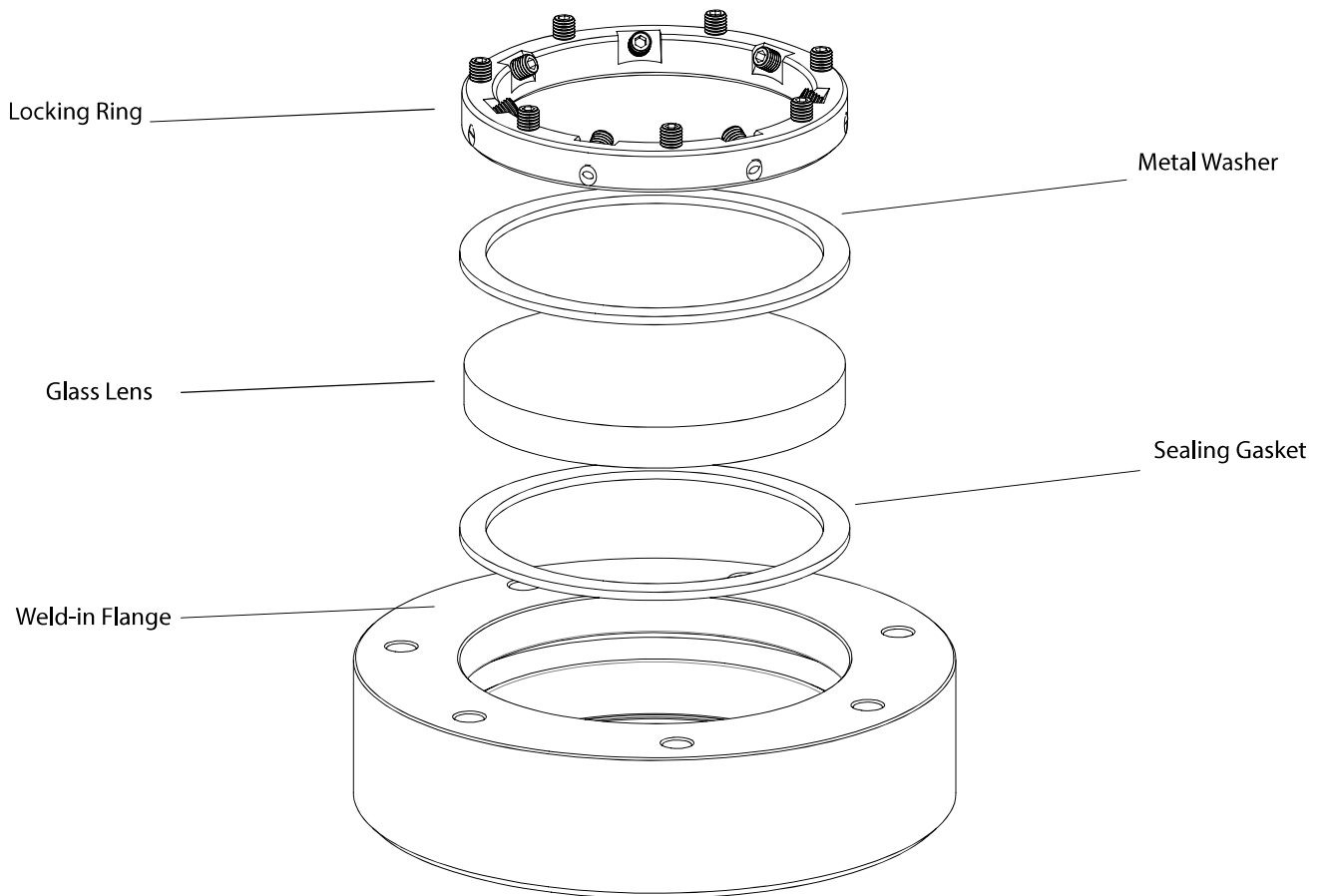
LENS INSTALLATION PROCEDURE

**NOTE: Remove the yellow cover plate and screws from the flange - keep these safe as they will be required later.
Remove any blanking plates, or locking rings that may have been previously fitted to the flange.**

- 1) Using IPA thoroughly clean the surfaces of the flange, metal washer and the locking ring, and allow to dry. Ensure that there is no damage, dust, grease or dirt particles on any of the mating surfaces.
- 2) Check the sealing face of the inside of the flange for any debris, damage or nicks. These will prevent the lens from sealing properly and must be resolved BEFORE proceeding. Fit the sealing gasket in first - check this is seated properly.
- 3) Using a clean, lint free cloth, clean all surfaces of the glass lens using IPA. Check the lens for any chips or damage before fitting. If the lens appears chipped or fractured DO NOT USE.

WARNING : ENSURE METAL WASHER IS FREE FROM ANY DAMAGE, DEBRIS OR BURRS.

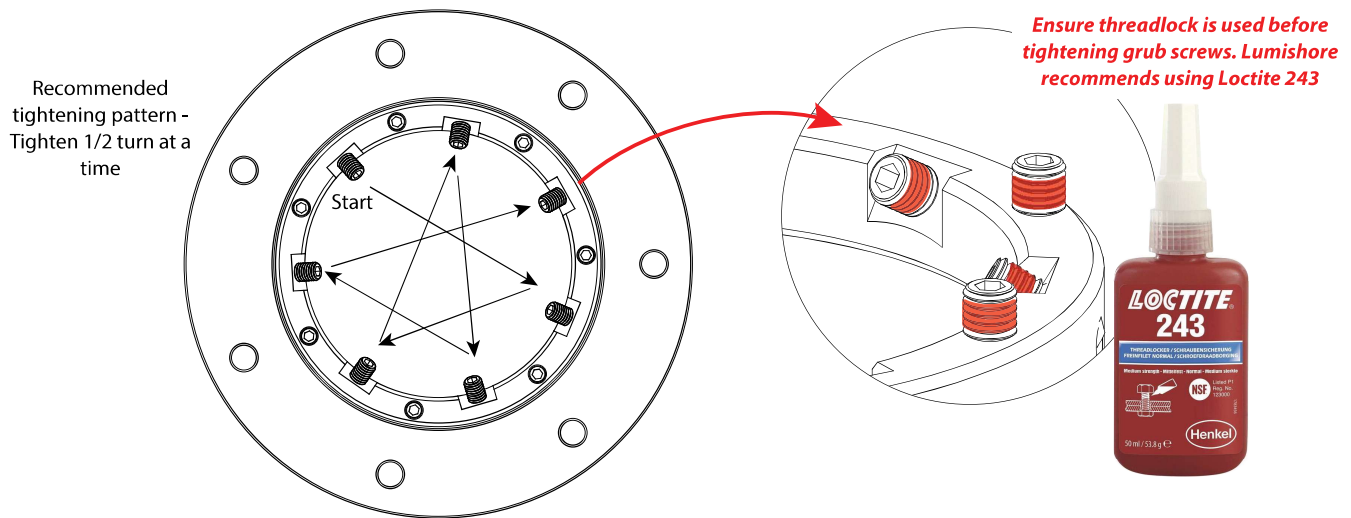
- 4) Ensure the surface of the glass is clean and flat, the metal washer can then be installed. Place the locking ring in last.



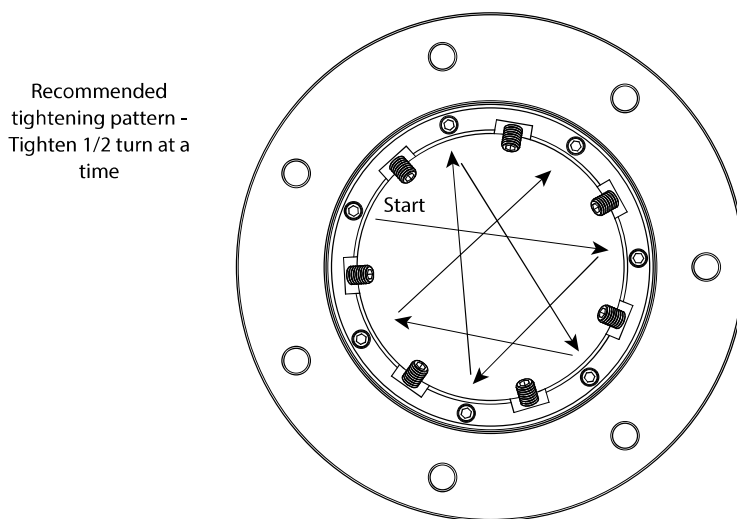


The grub screws require a 2.5 mm HEX bit. To prevent issues with the screw or bit rounding use a good quality bit, and make sure that the bit is properly seated in the grub screw before tightening

- 5) USING A SUITABLE TORQUE DRIVER SET TO **3 Nm**, tighten the ANGLED grub screws one turn at a time, working in a cross tightening pattern (i.e. move to a screw opposite the one you have just tightened - DO NOT move to the next screw in the circle - see diagram below). Tighten until each screw achieves the desired torque.



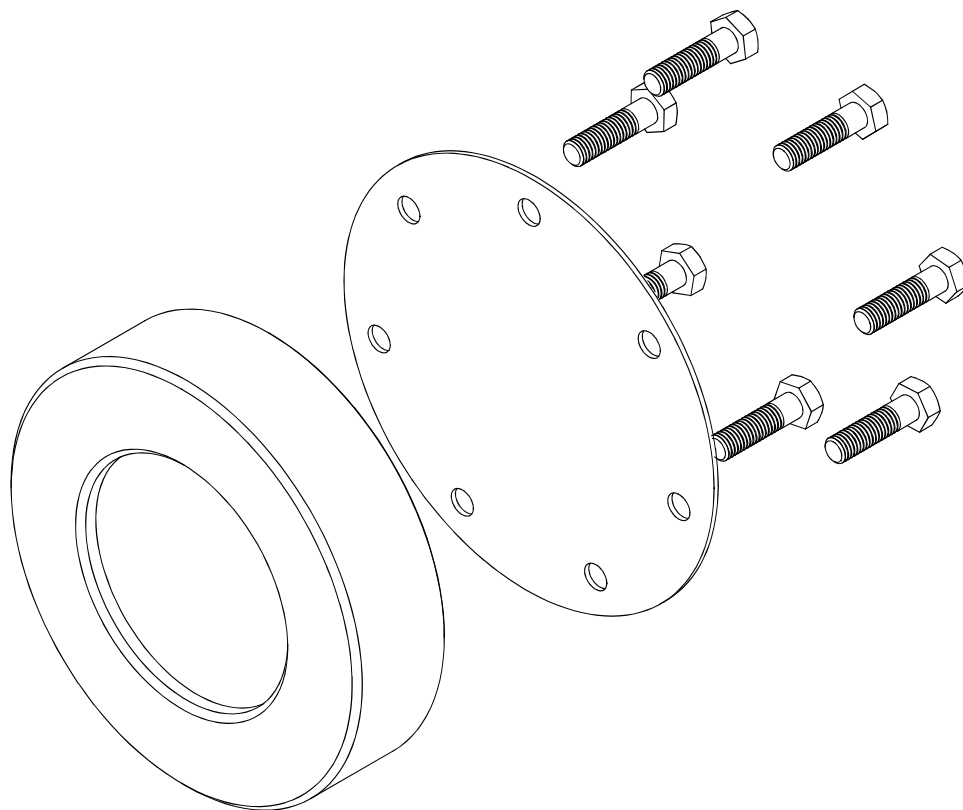
- 6) USING A SUITABLE TORQUE DRIVER SET TO **3 Nm**, tighten the VERTICAL grub screws one turn at a time, working in a cross tightening pattern (i.e. move to a screw opposite the one you have just tightened - DO NOT move to the next screw in the circle - see diagram below). Tighten until each screw achieves the desired torque.



NOTE: Keep tightening until ALL the bolts are at the required torque setting. Bolts that have reached the required torque can loosen when other bolts are tightened.
MAKE SURE ALL BOLTS ARE AT THE REQUIRED TORQUE SETTING

- 7) The water tightness of the glass fitting should be tested from outside the vessel. The test should be carried out using the yards normal method for testing watertightness of seals - e.g. Ultrasonic testing. The water tightness of the whole fitting is checked when the light is fitted.

- 8) Re-fit the rear cover plate to the back of the flange and secure using the flange bolts



NOTE: Keep the rear cover plate fitted until it is time to install the lens and light module.