



SUN
AWNING

INSTALLATION & MAINTENANCE MANUAL

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1. SYSTEM DESCRIPTION

The Multiplex Sun Awning System is a dedicated, custom-made sun protection system. The sun awning system is designed to be operated manually and can be assembled and disassembled without the assistance of lifting equipment. Load bearing elements of the sun awning such as the carbon awning poles are easy to install and remove via bayonet locking system and are integrated into the vessels structure for maximum structural capacity. The sun awning system is engineered for endurance and can withstand wind speeds up to 35 knots.



2. INSTALLATION

The following sub chapters describe the installation procedure of the awning, fine tune the awning tension and to disassemble the awning system. All pictures shown are representative only and do not depict the actual awning system.

2.1 INSTALLATION PREPARATION

- Remove all foundation covers labelled respectively with the foundation numbers, using the suction cup handle that is part of the system, as shown in Figure.1



Fig. 1 REMOVAL OF EMBEDDED COVERPLATE FROM FOUNDATION

The foundation covers are waterproof but not watertight. Waterproofing is achieved through a rubber gasket on the foundation cover. However, if water accumulation inside the foundation should occur, it is the operator's responsibility to remove the water.

2.2 POLE INSTALLATION

Before installing the poles make sure, the foundation is free of obstructions and abrasive matter such as sand or dust by wiping out the foundation with a clean and moist cloth. Leave the poles in their respective transport bags until needed but distribute the poles to their assigned positions by reading off the pole designation from the storage bag and matching them to the designation written on the inside of the foundations.



Fig. 2 POLE STORAGE BAG WITH DESIGNATION

Correct pole installation is carried out by aligning the pole with the bayonet locking pin of the foundation with the respective groove on the pole base and then turning the pole by 180°, as shown in Figure.3. The fitting tolerances of the poles versus the foundation is 1.2mm, which ensures easy installation. The foundations are labelled on Starboard side with odd numbers (i.e., 1, 3, 5...) and on Port side with even numbers (i.e., 2, 4, 6...)

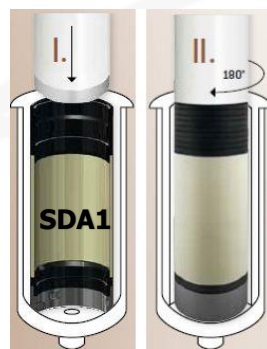


Fig. 3 POLE INSTALLATION

Just as with the storage bags, each pole has its designation (e.g. BDA2, BDA0, etc.) written on it, with a matching designation inside the respective pole foundation. Drop the pole into position and turn it by 180°, making sure the rope outlets at the top of the pole facing inboard. Repeat this process for all the awning poles.

2.3 AWNING INSTALLATION

The awning installation has the following steps. The Installation sequence starts at the structure/ceiling of the deckhouse, where multimouse/inbox are installed.

1. Unfold awning canvas on deck, after ensuring the deck is dry and clean.
2. Lock awning canvas into the multimouse/inbox installed in the structure.
3. Connect the attachment points of the canvas to the poles as per the designations on the awning, as shown in Figure.4.

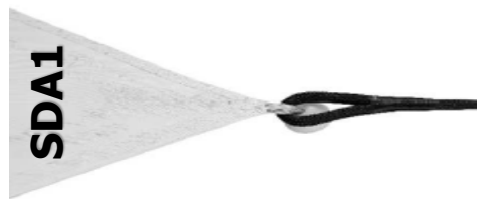


Fig. 4 ATTACHING AWNING TO THE POLE TENSIONING ROPES

4. Gently apply tension to the canvas using the power tool provided by Multiplex, to avoid excessive flapping during awning installation, but do not apply full tension just yet.
5. Repeat the step above until the sun awning system is installed.
6. After installing the awning, use the power tool, shown in Figure.5 to apply tension to the awning until you achieve a set-up free of creases.
7. The system has to be tensioned with highest power to avoid flapping during operation.



Fig. 5 AWNING TENSIONING TOOL

2.4 UNINSTALLATION OF AWNING

Decommissioning of the awning is carried out by reversing the previously described steps.

3. GENERAL STORAGE DIMENSIONS

All items forming the sun awning system will be delivered in individual protective storage bags. Storage bags will be provided for the following items.



Fig. 6 SUN AWNING POLE BAGS



Fig. 7 AWNING FABRIC BAGS



Fig. 8 POWER TOOL, INCL. CHARGER

4. VESSEL FITTING PARTS

The following are the parts that bound to vessel. These may differ for individual projects.

4.1 FOUNDATIONS

The foundations are integrated into the vessels structure, as shown in Figure.9

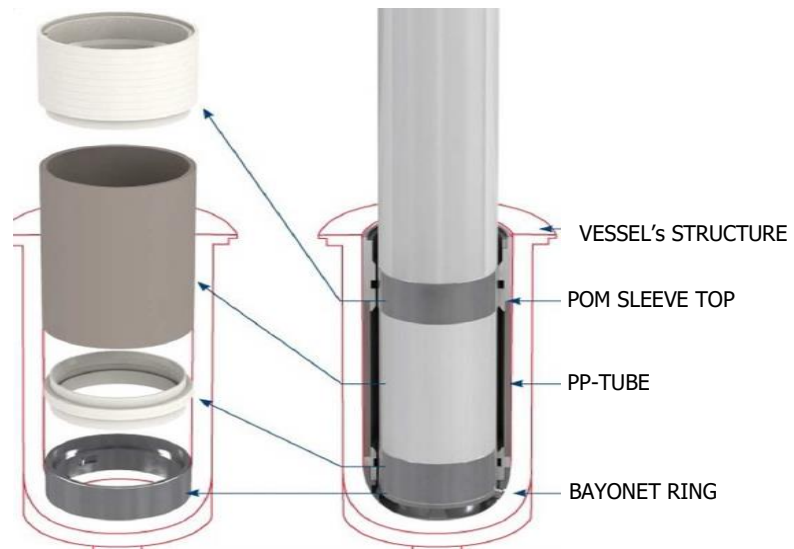


Fig. 9 FOUNDATION SCHEMATICS

4.2 MULTIMOUSE/INBOX

The deckhouse awning attachments are Multimouse as shown in Figure 10 and Inbox as shown in Figure.11



Fig. 10 MULTIMOUSE



Fig. 11 INBOX

5. MAINTENANCE GUIDELINES

In order to keep your sun awning system in good working order and for warranty reasons, the following steps should be carried out on a regular basis.

5.1 CANVAS CLEANING

The used canvas is SOLTIS 86, 96 or 96W with superior material characteristics. For longevity and untainted appearance, use "Serge Ferrari Cleaner 500", available with Multiplex as shown in Figure.12.



Fig. 112 SERGE FERRARI CLEANER 500

5.2 FOUNDATION MAINTENANCE

Foundations always need to be free of dust, sand and fully drained. The term "drained" is to be understood in the way that even though the foundation itself does not have dedicated drainage, it is the operator's responsibility to ensure that no water accumulation occurs at the bottom of the foundation.

5.3 POLE MAINTENANCE

Following the maintenance schedule, poles have to be maintained after 20 rigging operation cycles. A rigging operation is defined as follows.

- One full hoisting of the awning by loading up the tensioning ropes to the maximum tension of 2,5kN and the subsequent unloading of the tensioning ropes during decommissioning.

The graphic below shows a Straight pole, describing the elements accessible from the outside.

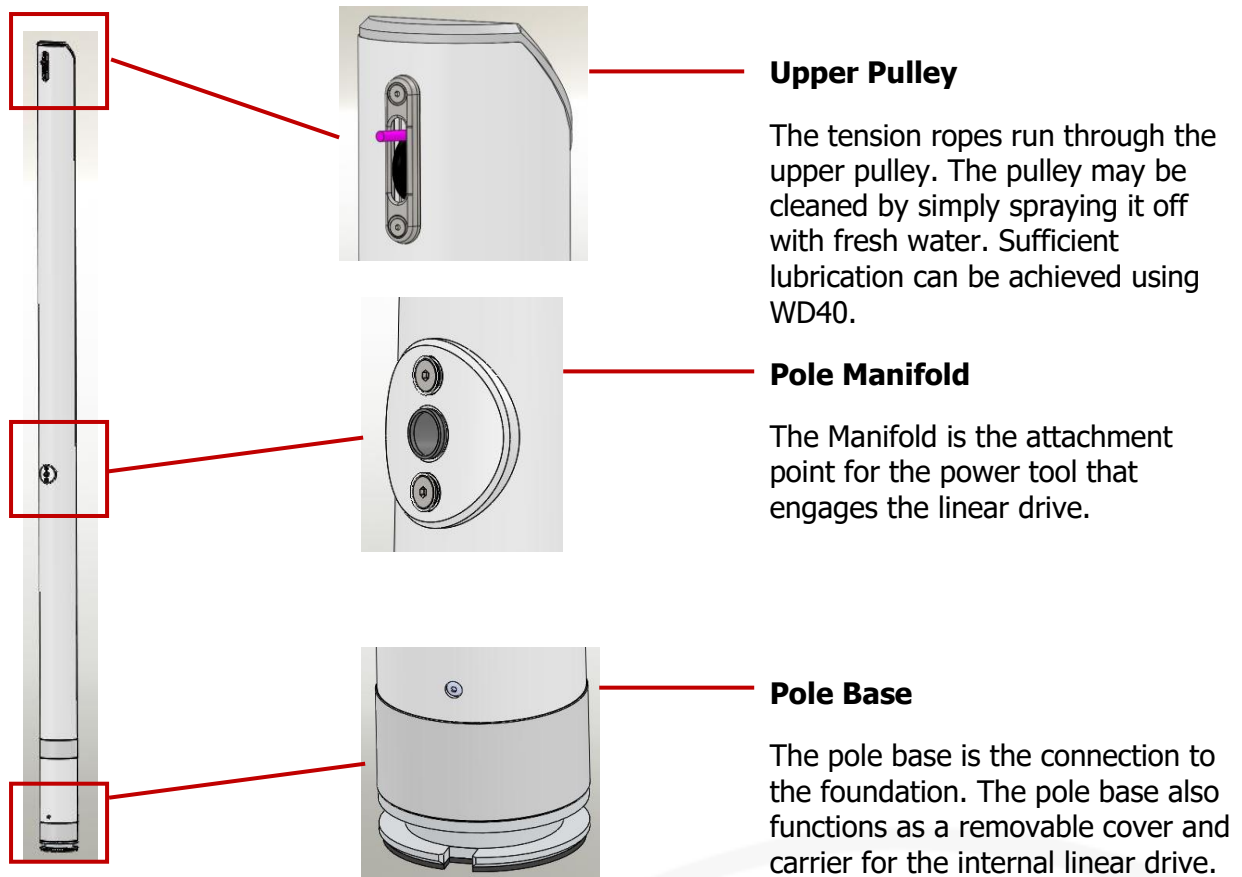
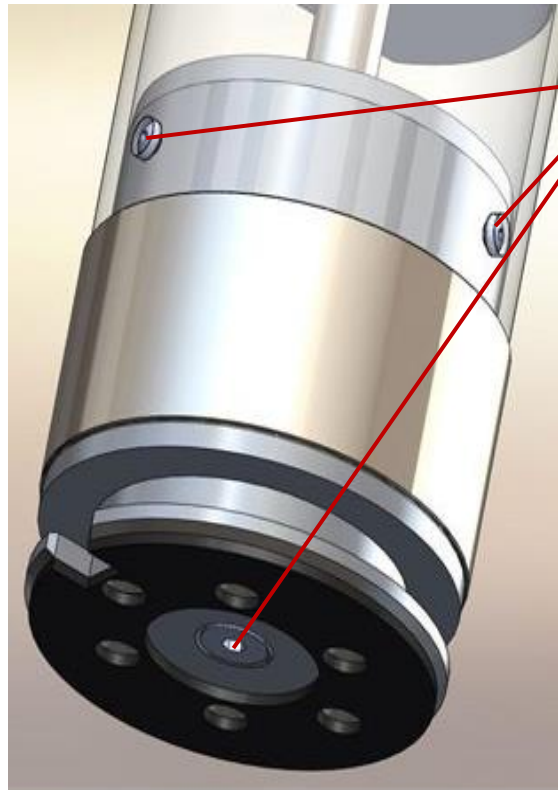


Fig. 13 STRAIGHT POLE

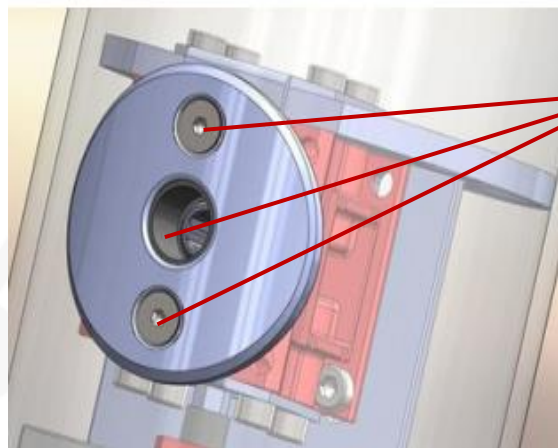
Pole maintenance is defined as follows:

- Pole surface cleaning
- Upper Pulley cleaning
- Linear drive cleaning

To access the linear drive inside the pole, the screws at the manifold and the pole base have to be removed, as shown in figure 14.



Remove the three screws from the pole base and the countersunk screw at the bottom of the pole base to access the linear drive inside the pole.



Remove the two screws & Plastic bush at the manifold to access the linear drive inside the pole.

Fig. 124 POLE DISASSEMBLY

Before pulling out the linear drive from the pole, make sure to tie a pilot line to the awning attachment at the tensioning rope at the upper pulley.

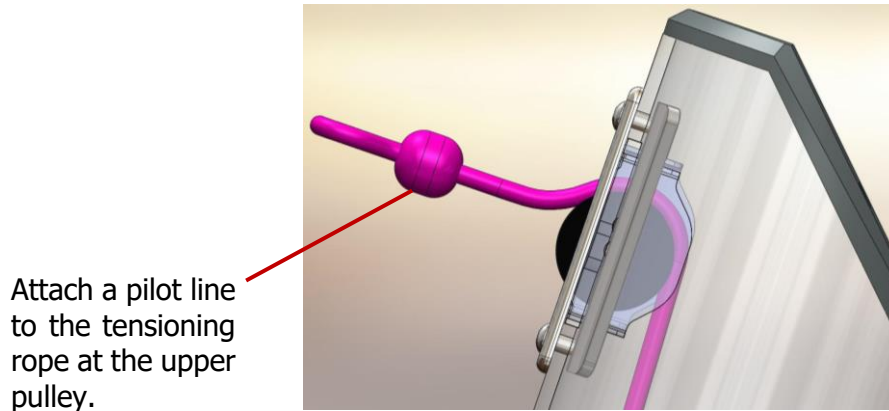


Fig. 135 PILOT ROPE ATTACHMENT AT UPPER PULLEY

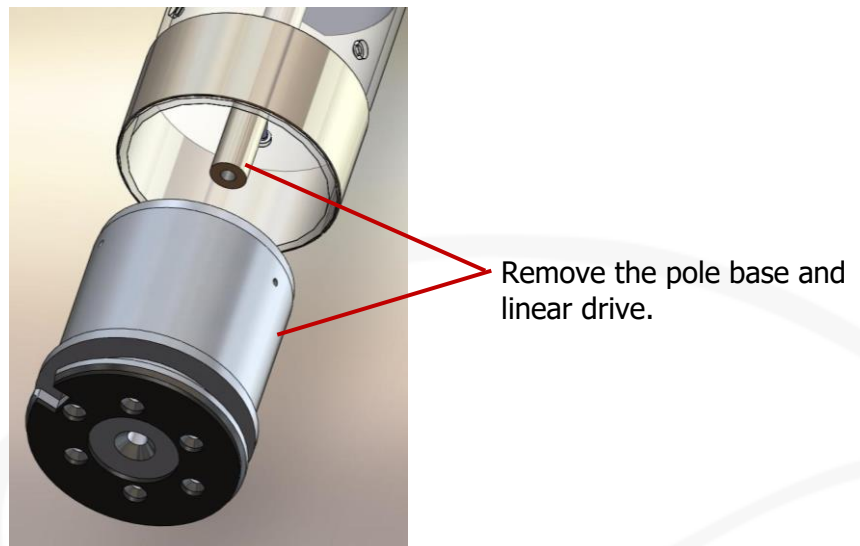


Fig. 146 PILOT ROPE ATTACHMENT AT UPPER PULLEY

Pull out the pole base to access the linear drive inside the pole.

Once the linear drive has been removed, cleaning can commence. Cleaning can be achieved by simply spraying off the linear drive with fresh water and apply a dusting of WD40 after the linear drive has been dried with a cloth.

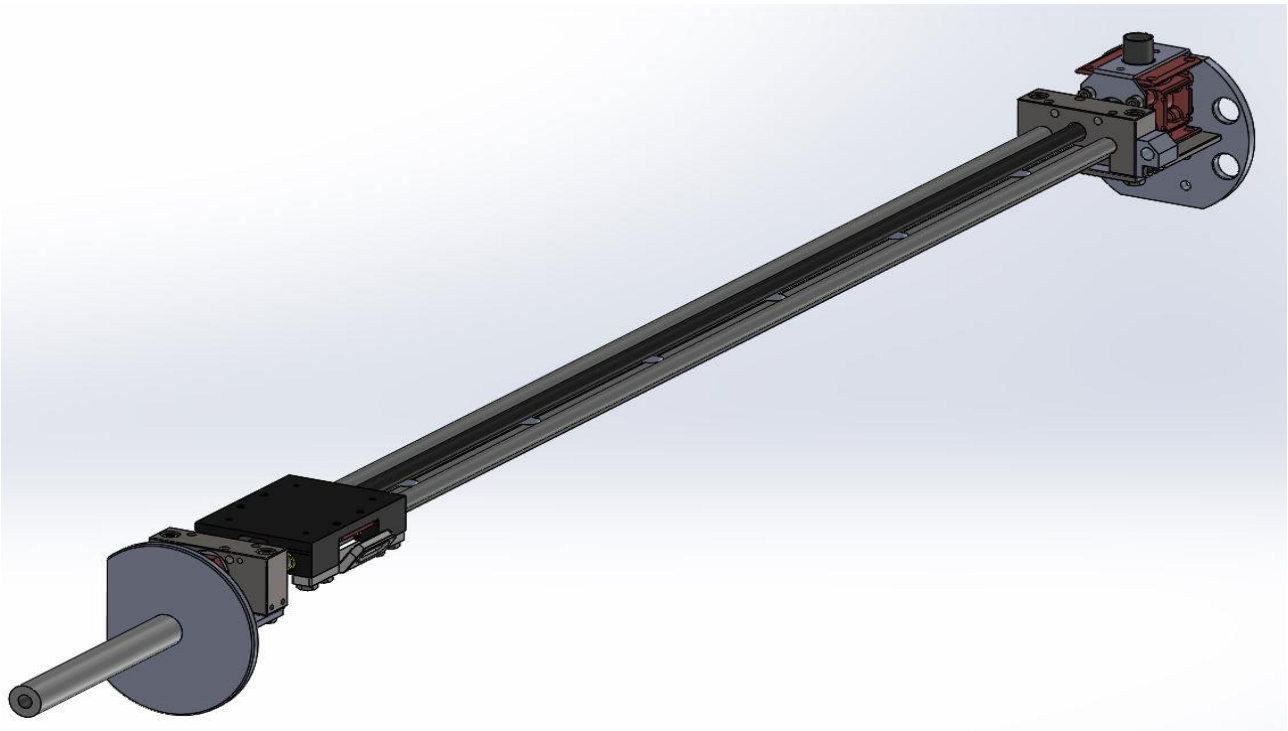
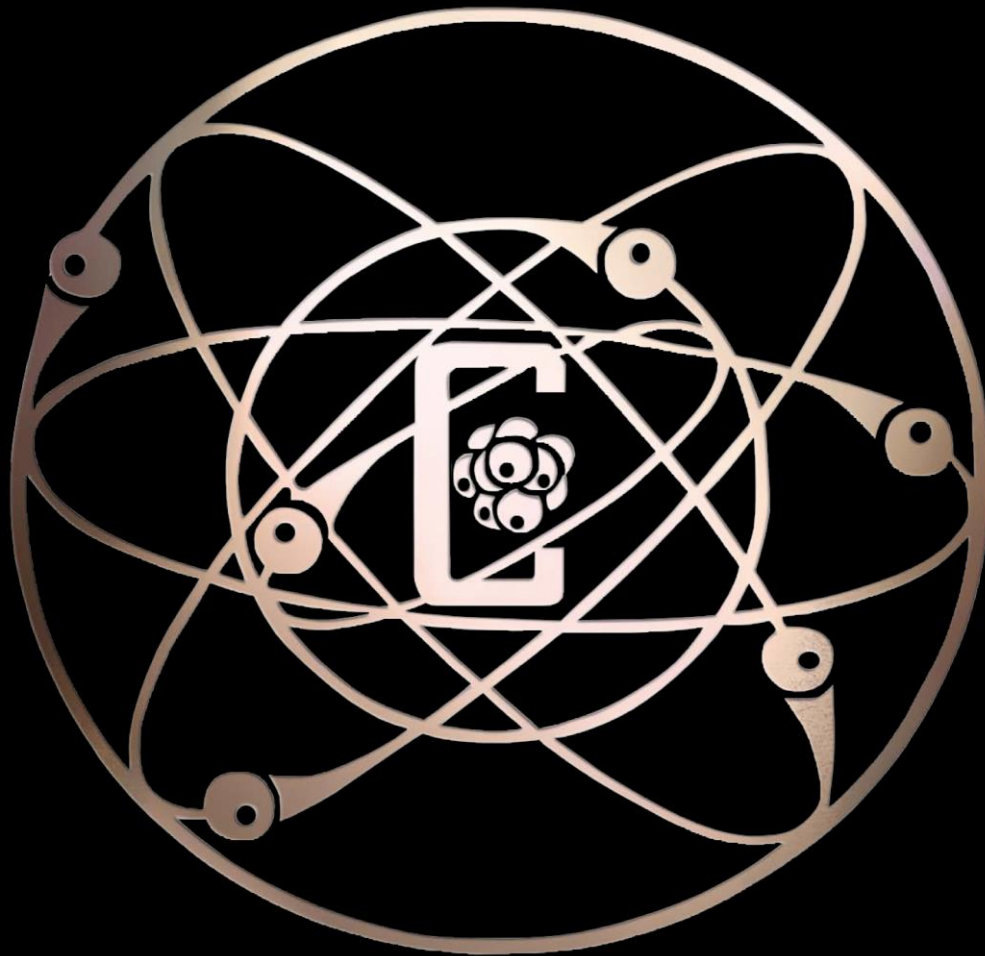


Fig. 157 LINEAR DRIVE

5.4 POWER TOOL MAINTENANCE

Power tools have to be charged on a regular basis to ensure longevity of the rechargeable batteries. The power tool is a cordless handheld drill powered by 18V Lithium Ion rechargeable batteries. Charging stations can be placed at the crew's discretion at any power outlet with 240V / 60Hz.

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