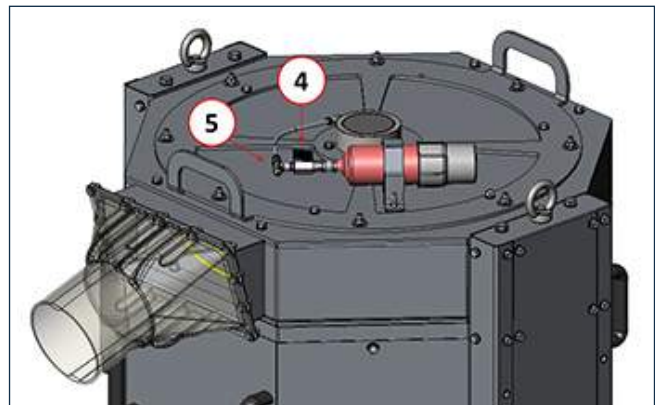
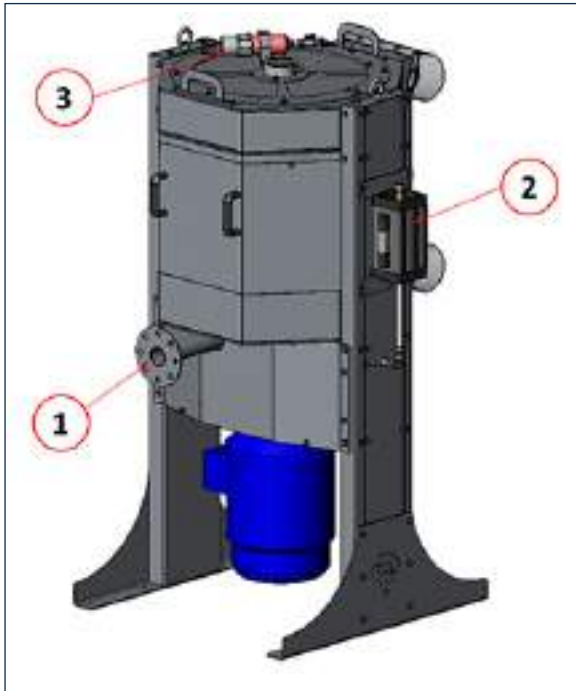


6.1 Start up and normal operation

When starting up the microfilter for the first time, and generally when operating the equipment after prolonged shut-downs, and after due maintenance operations, follow the procedure described below, after having checked the electric and hydraulic connections to the equipment.

First start of microfilter with mono pump (recommended configuration)

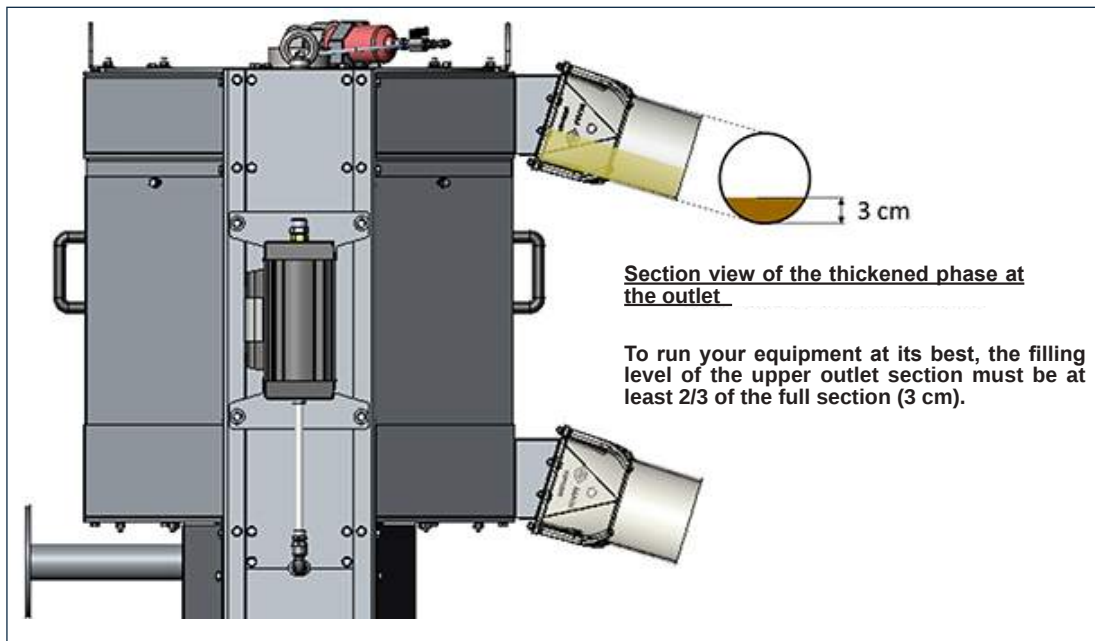
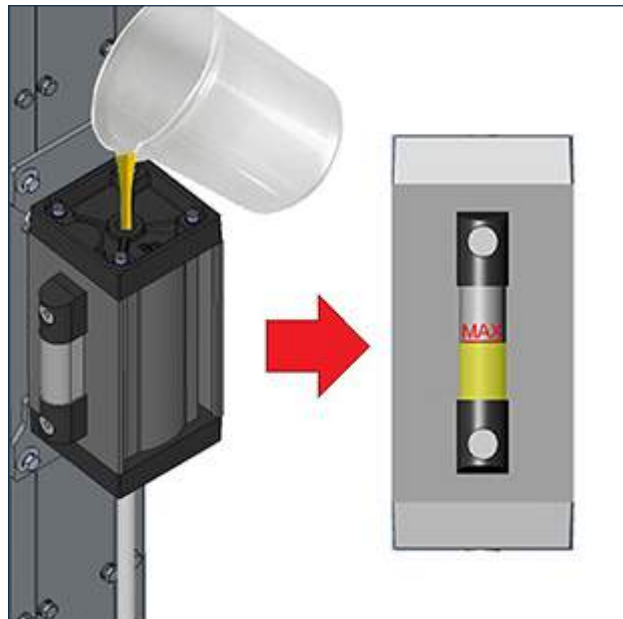


- 1) Connect the mono pump to the microfilter using a DN 65 hose suitable to support the pressure values implied (point 1 in the figure above).
- 2) Switch on the electro-mechanical lubricator (point 3 in the figure above) and set it on 3 months.
- 3) Check that the oil level in the tank has reached the middle line of the indicator (point 2 in the figure above).
- 4) Start the microfilter.
- 5) Check that the direction of rotation of the motor is correct.
- 6) Start the positive displacement feeding pump.
- 7) Ensure the absorption of the microfilter electric motor ranges between 10 and 14 A.
- 8) Check that the thickened sludge flow is constant from the upper hopper and that its height is about 3 cm. In case no thickened sludge comes out of the upper hopper, increase the revolutions of the mono-pump. In case of thickened sludge leaks out abundantly from the upper hopper, lower the mono pump revolutions.
- 9) During operation, grease manually the upper support according to the steps given below:
 - e) Close the tap (point 4 in the figure above);
 - f) Connect a grease gun to the lubricator (point 5 in the figure above);
 - g) Pump about 60 cm³ of grease;
 - h) Open the tap (point 4 in the figure above).



6.0 INFORMATION REGARDING USE

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6.2 Reuse after long shut-down



Important

If the equipment is to be used in different conditions and with materials other than the previous application, ensure the “Permitted use” indications are complied with.

For all fabricated parts:

- clean the screen and the impeller
- remove lubricants or antioxidant protection;
- clear the grease from the coupling bores threading;
- clean the coupling surfaces;
- repair the possible damages the structures might have suffered (corners bent, scratched surfaces, peeled paint etc.)

As regards the mechanisms:

- check the possible lubricant leakages and replace the worn seals;
- check the proper tightening of the bolted couplings;
- remove lubricants or antioxidant protection;
- remove rust traces from the sliding accessories of the controls;
- lubricate the unpainted mechanical components;
- remove water residues that may be present inside the concave parts of the structure or mechanisms.

**Danger - Warning**

Before carrying out any maintenance operation, enable all safety devices to ensure the safety of the persons involved in the operations and those nearby. Set the equipment concerned in safety condition. Wear suitable personal protection equipment; in this regard, consult the person in charge of production activities safety.

7.1 Scheduled maintenance table

COMPONENT	OPERATION TO BE CARRIED OUT	FREQUENCY			
		DAILY	MONTH- LY	EACH 6 MONTHS	IF REQUIRED
Safety devices	Performance check	X			
Screen basket	Check cleaning		X		
Screen basket	Remove and clean using pressurized hot water				In case of leaks
Impeller	Check integrity			X	In case of leaks
Lower support unit	Check the oil level				Weekly
Lower support unit	Changing oil				Every 4000 hours of operation
Upper support unit	Replace the greaser cartridge				Depending on the time set
Safety and information signs	Check the condition and legibility			X	

7.2 Cleaning the equipment (the machine)

Clean the outside part of the equipment (the machine) using a vacuum cleaner to prevent dispersal of dust in the environment and in the surrounding area; or use a moist cloth.

Do not use compressed air.

Wash the equipment (the machine), after vacuuming the dust, with a low-pressure water jet.

**Danger - Warning**

All cleaning operations must be carried out with the machine switched off and set in safety.



7.3 Cleaning the screen

Remove the screen as indicated at page 71 (Cleaning or replacing the screen).

Wash the screen with a hot water jet to remove all solid particles and crusts on the mesh.

Then reposition the screen inside the microfilter by paying attention to insert it in the right direction.

8.1 Safety recommendations for replacement



Danger - Warning

The replacement operations must be carried out by a specialist authorized technician with specific skills in the sector concerned (mechanical, electrical, etc.).

Prior to performing any operation:

- 1) Provide appropriate safety measures and use suitable equipment to prevent risk of work accident to persons involved in the operations and to those nearby.
- 2) Enable all safety devices envisaged and prevent access to controls which, if activated, could cause work injuries to the persons involved in the operations.
- 3) Ensure there is enough space for manoeuvring (at least 1 meter around the machine).
- 4) Make sure that the passage of workers is not hindered.
- 5) Set up a hoist or lifting system above the machine for safe removal/installation of the components.

8.2 Replacing the electric motor (unscheduled maintenance)

Replace the electric motor with a new one having the same structural and functional features.

If the motor is supplied by the Manufacturer, ask for original spare parts to ensure the safety and functionality of the equipment.

Disassembly

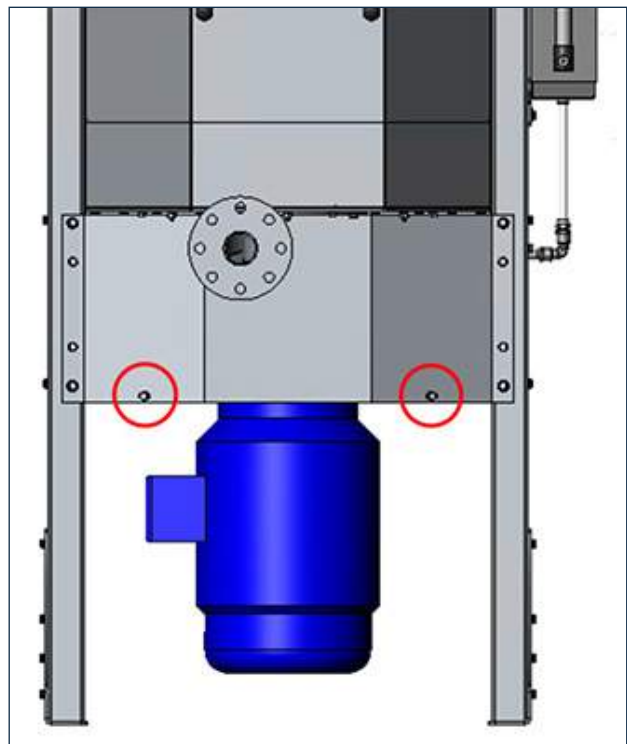


Danger - Warning

Set the microfilter in safety condition (see "Glossary and Terminology").

Follow the indications bellow:

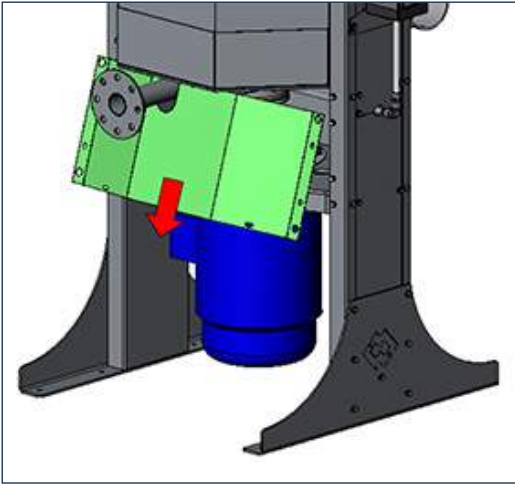
- 1) Open the junction box and disconnect the electric-ity connection cables from the motor terminals.
- 2) Unscrew the lower guard screws.



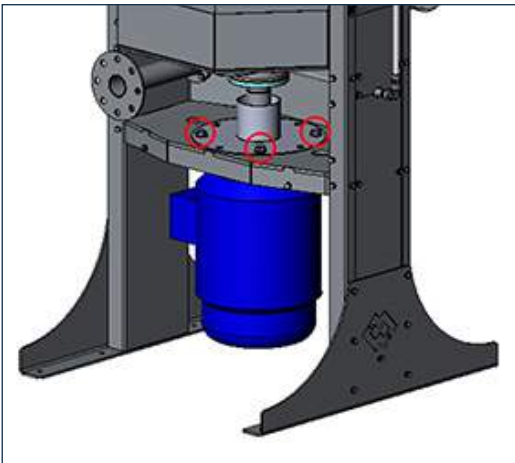
8.0 REPLACEMENT OF PARTS

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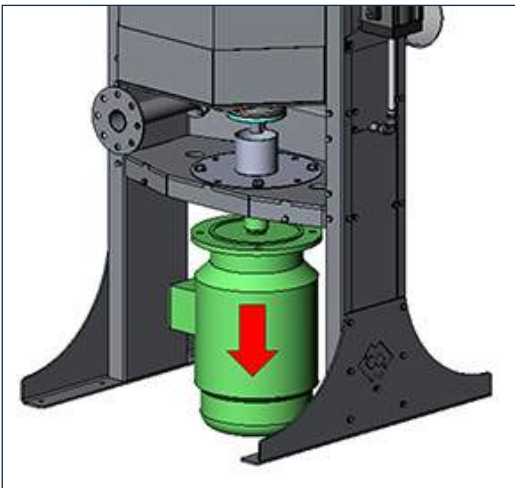
2



3) Remove the lower guard.



4) Unscrew the screws that secure the motor to the micro-filter.

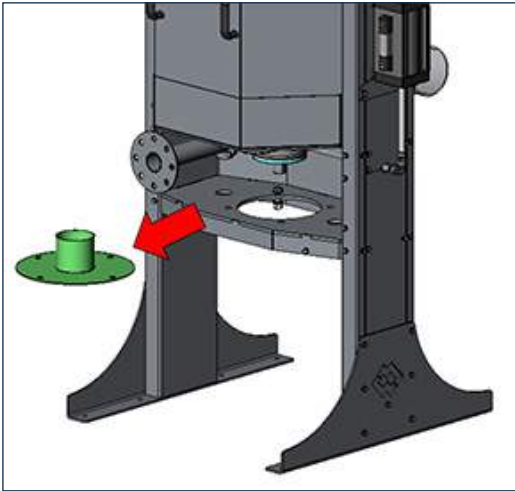


5) Remove the motor.

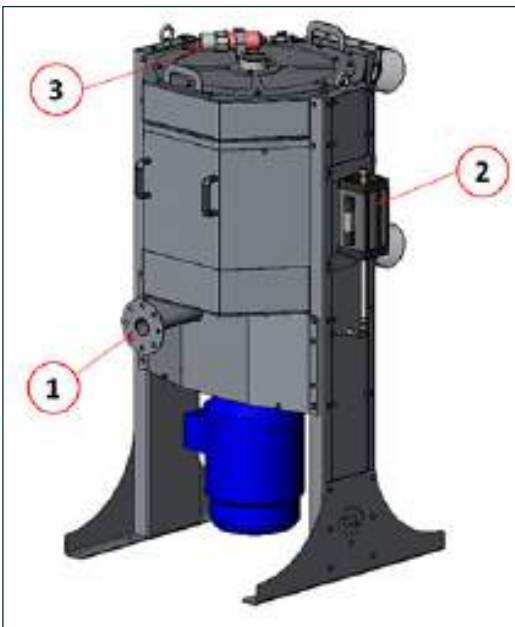
8.0 REPLACEMENT OF PARTS

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6) Remove the fastening plate of the motor.



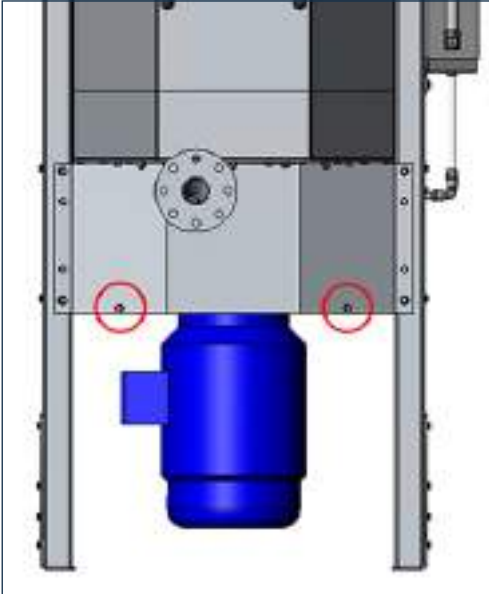
7) Remove the bushing of the fitting.

Assembly

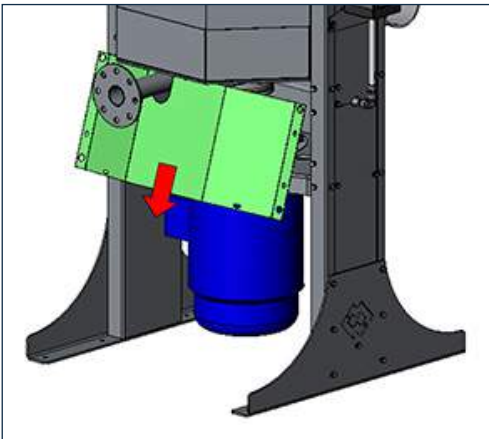
Follow the indications bellow:

- 1) Wipe the coupling surfaces of the new motor and transmission bushing thoroughly.
- 2) Lubricate the shaft of the electric motor and the corresponding seat of the transmission bushing with the prescribed lubricant (see "Table of lubricants and sealants").
- 3) Fit the motor under the microfilter following in reversed order the previous indications and then restore the operation of the machine.

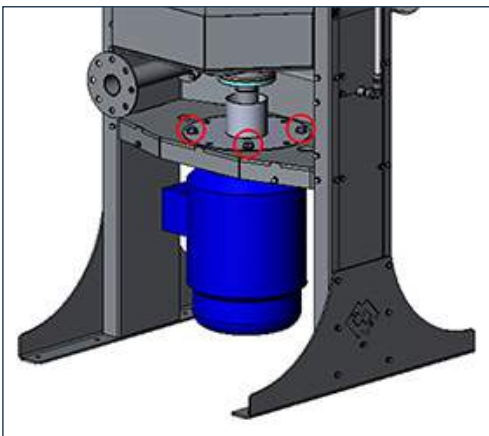
8.3 Removing the shaft, the seal and the bearing



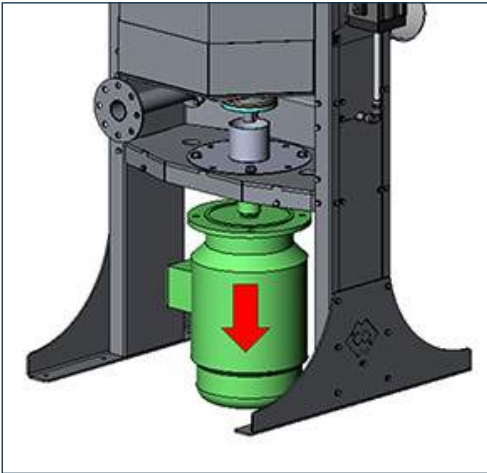
1) Unscrew the lower guard screws.



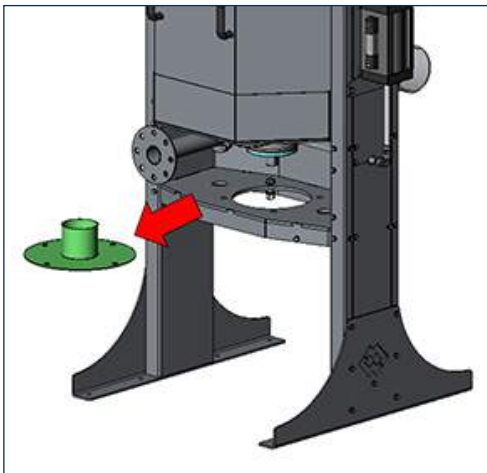
2) Remove the lower guard.



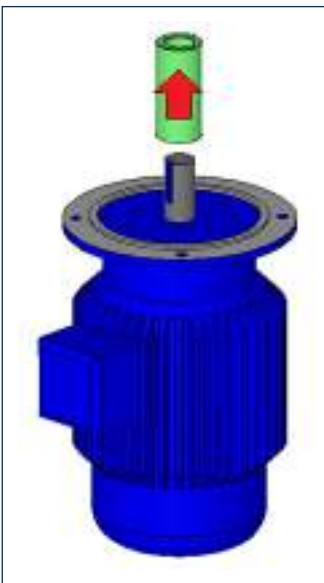
3) Unscrew the screws that secure the motor to the micro-filter.



4) Remove the motor.



5) Remove the fastening plate of the motor.

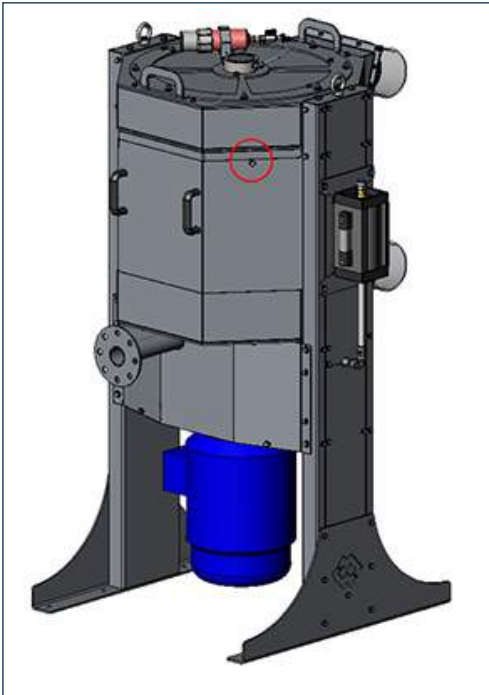


6) Remove the bushing of the fitting.

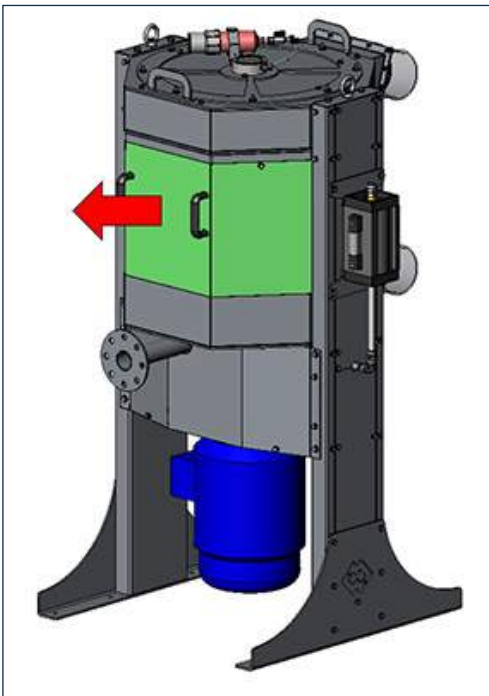
8.0 REPLACEMENT OF PARTS

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6) Unscrew the screws of the guard on the inlet side.

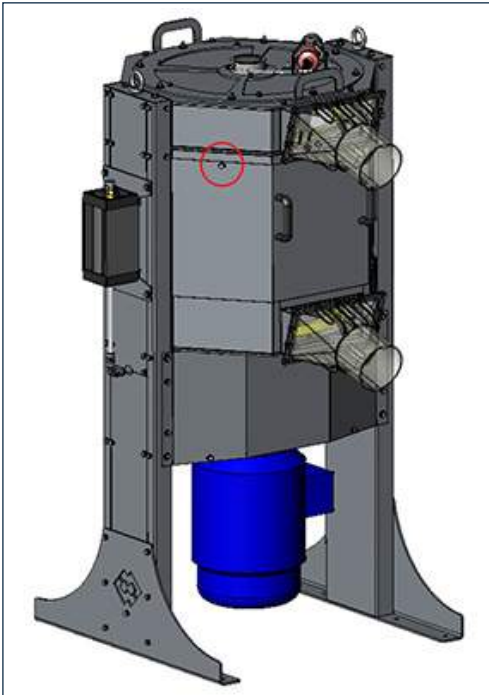


7) Remove the inlet side guard.

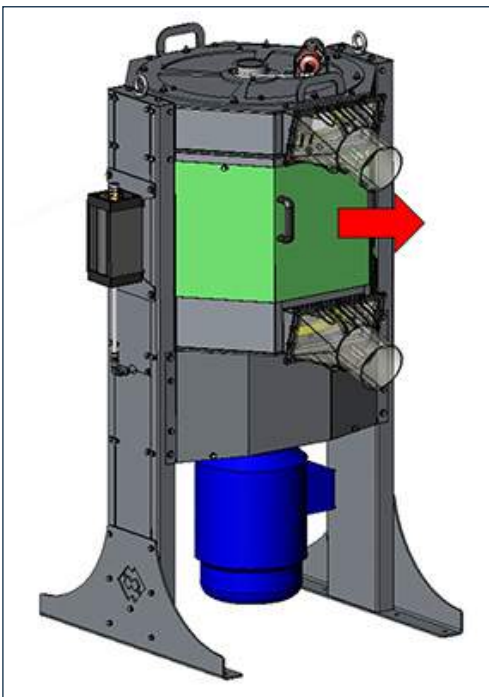
8.0 REPLACEMENT OF PARTS

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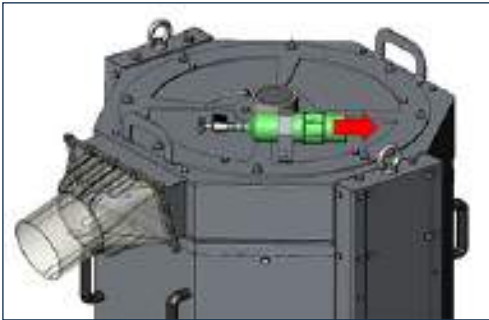
8) Unscrew the screws of the outlet side guard.



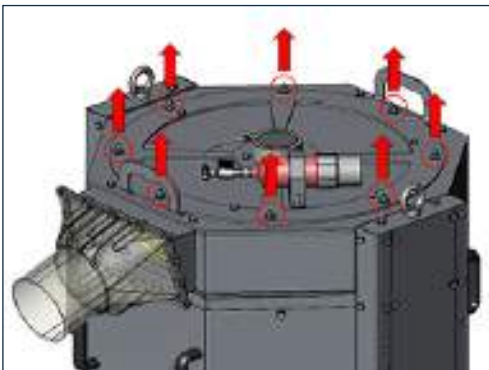
9) Remove the guard on the outlet side.



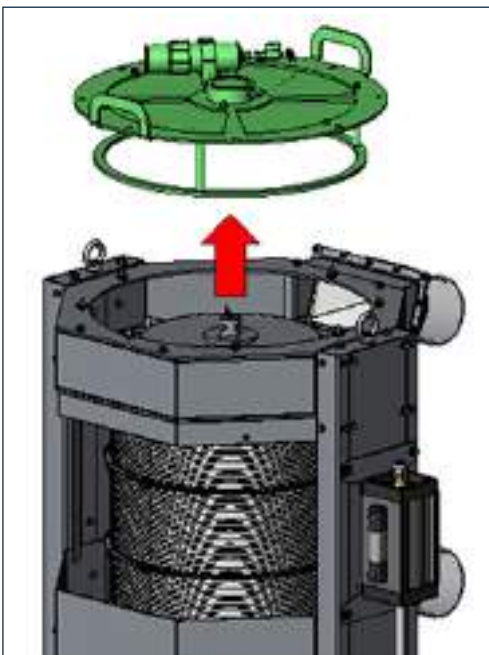
8.0 REPLACEMENT OF PARTS



10) Close the tap and unscrew the greasing device.



11) Unscrew the cover screws.

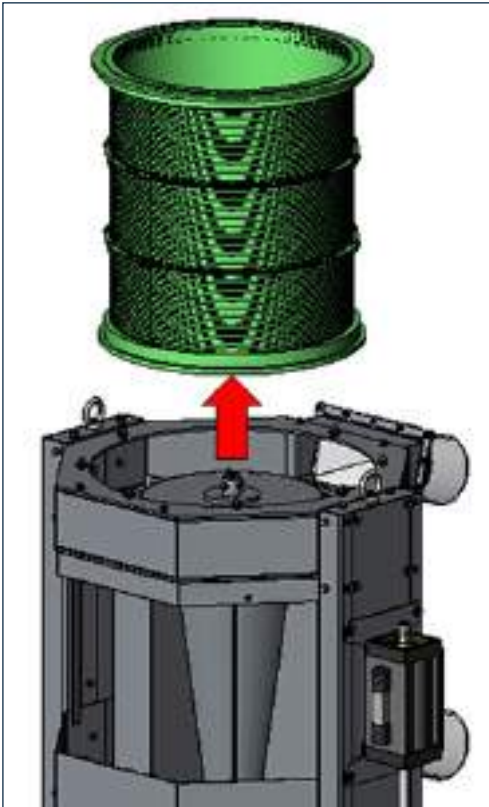


12) Remove the cover.

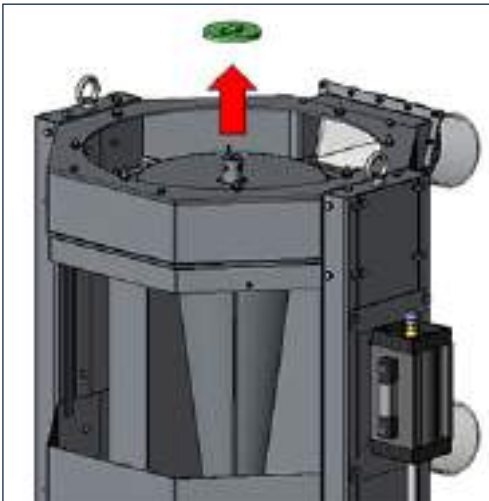


8.0 REPLACEMENT OF PARTS

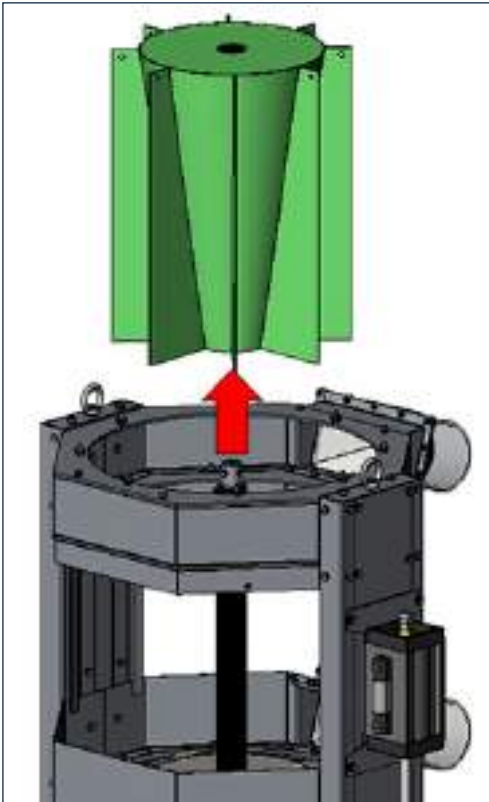
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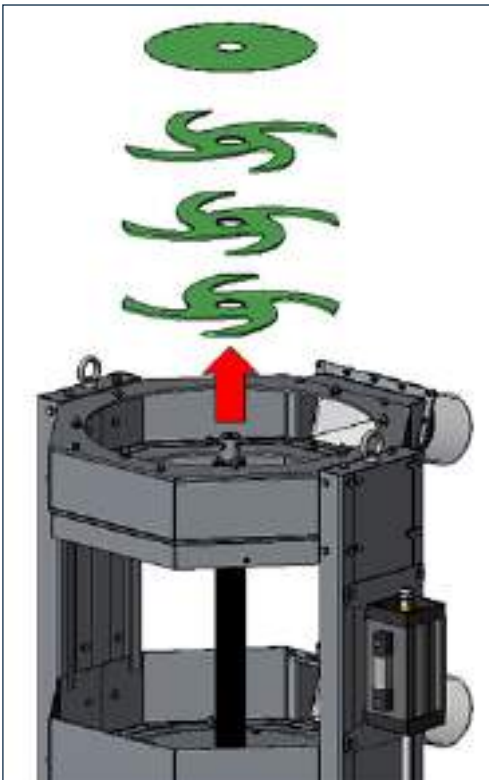
- 13) Remove the screen by pushing it toward the top. Use a pry bar if necessary.



- 14) Remove the spacer.



15) Take off the impeller.

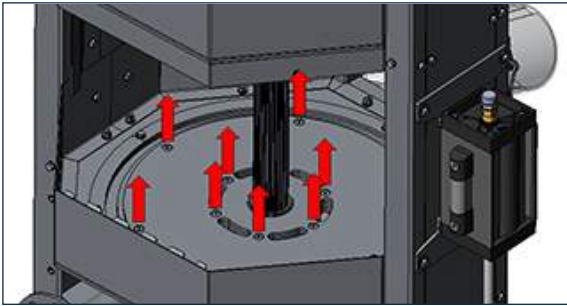


16) Remove blades one by one.

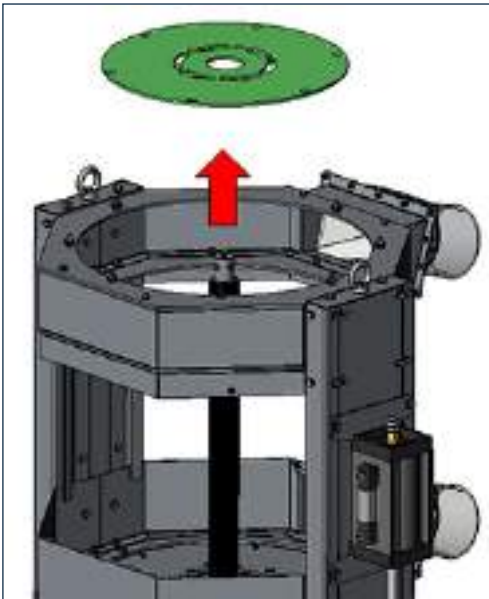
8.0 REPLACEMENT OF PARTS

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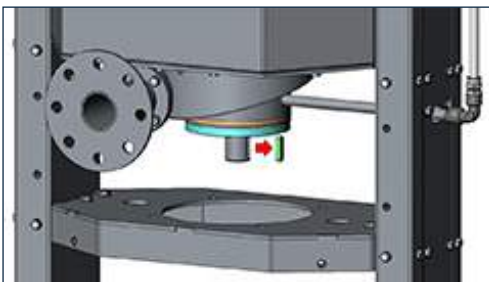
2



17) Unscrew the screws of the holding flange.



18) Remove the holding flange.



19) Remove the tab.

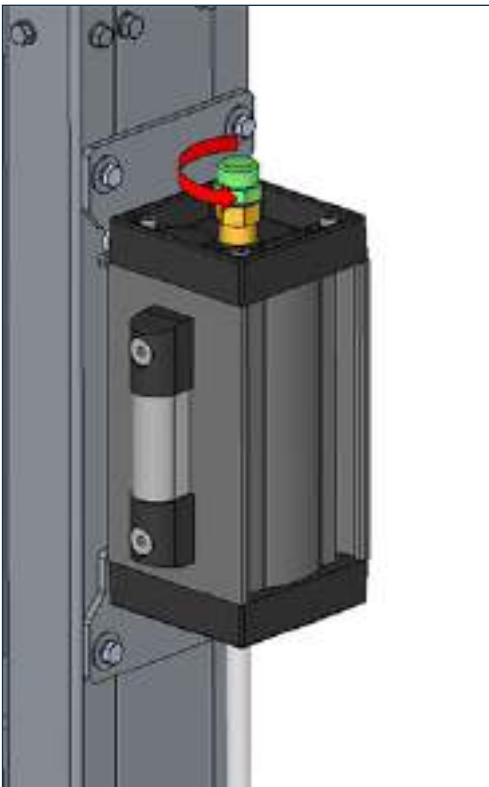


Important

Before performing the next step, position beneath the equipment a large tray for the collection of the oil contained by the lower bearing unit.



20) Unscrew and remove the plug of the holding unit (bottom side).



21) Slacken the plug of the oil tank.



22) Wait until the oil inside the support unit has completely drained out.



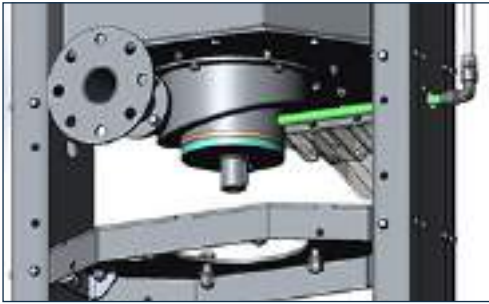
Important

Warning: prior to passing to the next steps, prepare a space suitable to disassembling the lower support unit + shaft (bench).

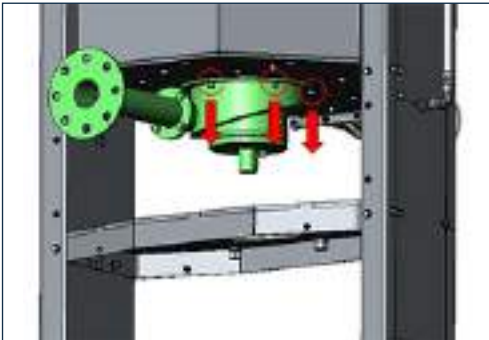
8.0 REPLACEMENT OF PARTS

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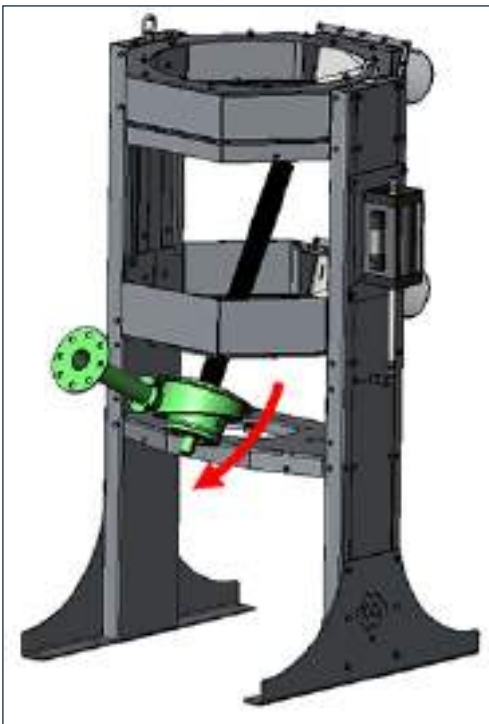
2



- 23) Disconnect and remove the connecting pipe between the oil tank and the lower support unit.



- 24) Unscrew the screws that secure the inlet module.

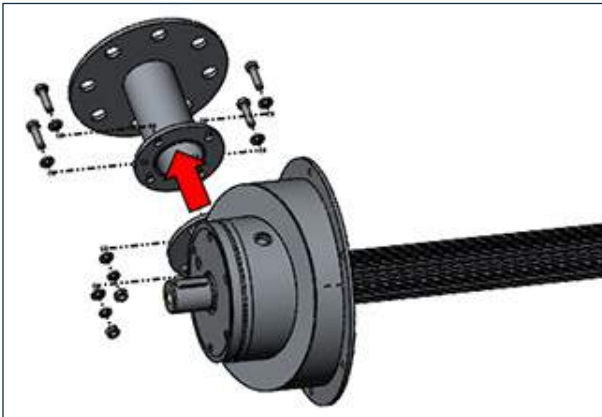


- 25) Remove the lower support unit along with the shaft, by extracting it from the bottom.

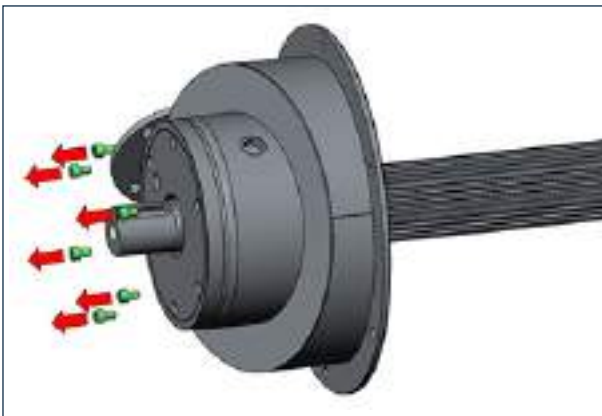


Important

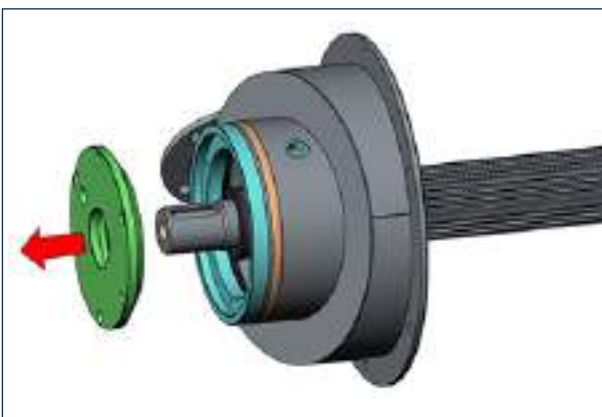
Warning: start now disassembling the lower support unit properly placed on the bench.



26) Unscrew and remove the spigot from the inlet module.



27) Unscrew the lower cover screws.

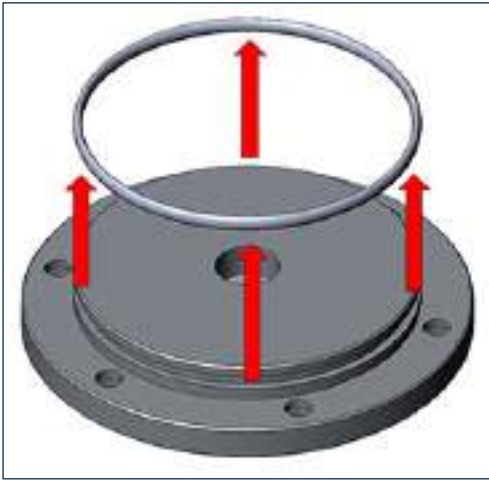


28) Remove the lower cover.

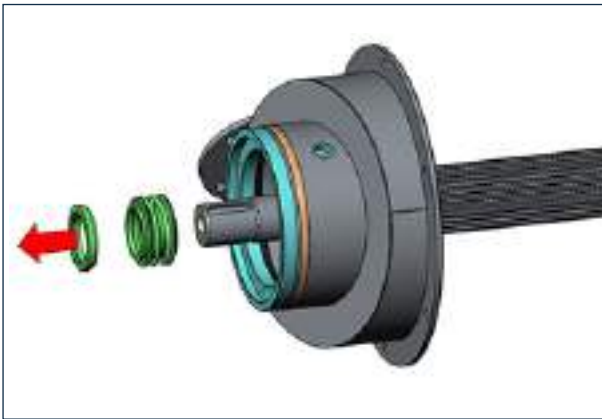
8.0 REPLACEMENT OF PARTS

SEP.SEPCOM_Micro-filter---M.A2.0722.EN Issue: A2

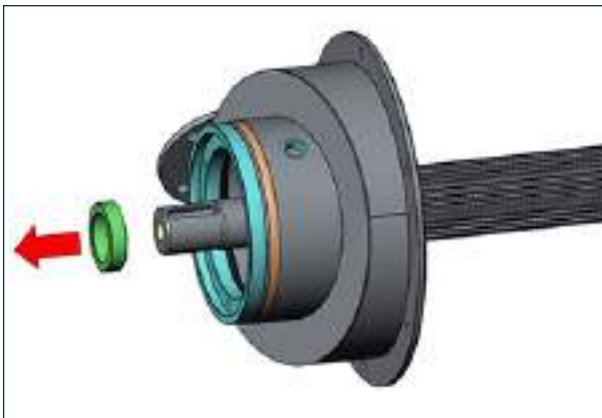
2



29) Slip out the sealing ring fixed to the cover.



30) Remove the mechanical seal.

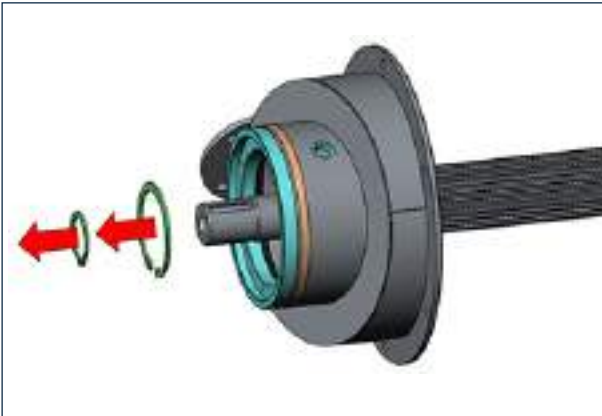


31) Remove the spacer.

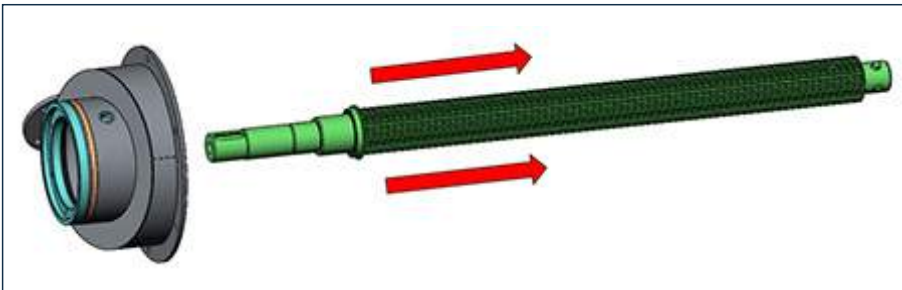
8.0 REPLACEMENT OF PARTS

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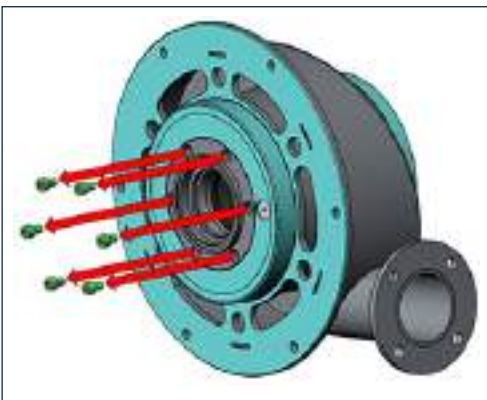
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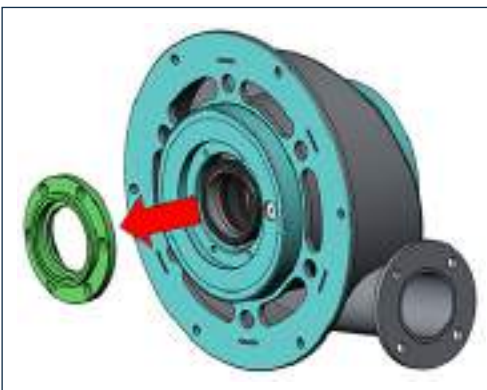
32) Use pincers to remove the snap ring that blocks the shaft.



33) Remove the shaft.



34) Unscrew the top cover screws.



35) Remove the top cover.

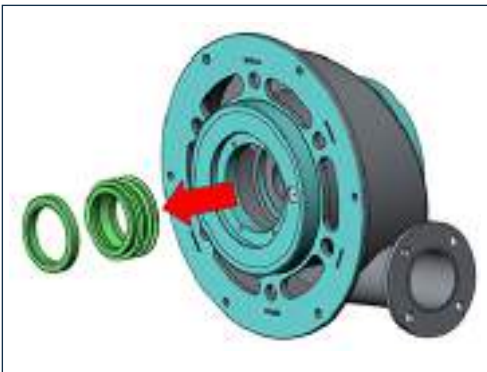
8.0 REPLACEMENT OF PARTS

SEP.SEPCOM_Micro-filter---M.A2.0722.EN Issue: A2

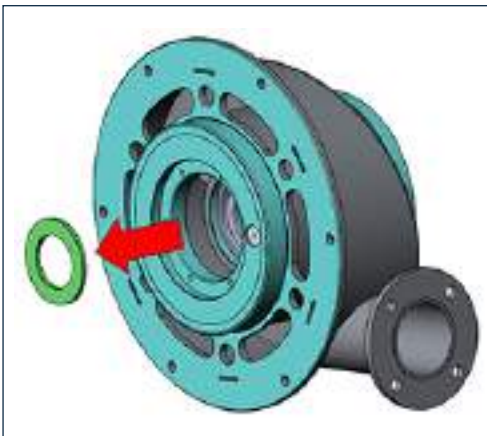
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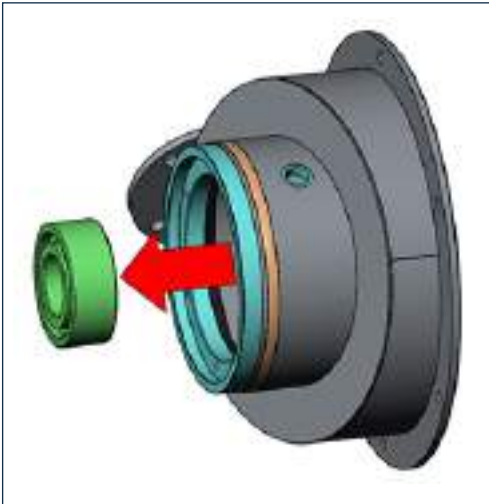
36) Remove the sealing ring from the cover.



37) Remove the mechanical seal.



38) Remove the upper spacer.



39) Remove the snap ring that blocks the bearing.

**Important**

Replace the following components:

- the snap ring that blocks the shaft,;
- no. 2 sealing rings;
- the seals;
- the snap ring that blocks the bearing;
- the bearing.

**Important**

Fit back the bearing and the seal by following the previous indications.

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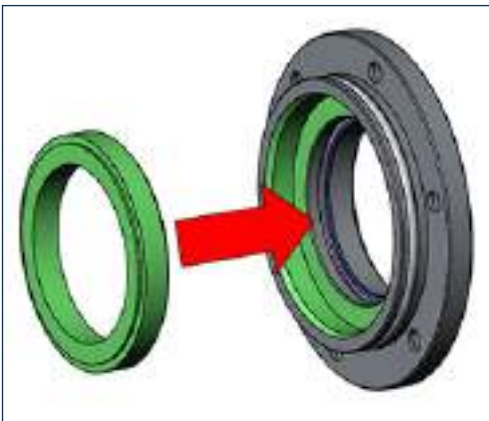
2



1) Fit the sealing ring in its seat on the top cover.



2) Apply 2% soap and water mixture on the outer surface of the mechanical seal rubber ring.



3) Insert the ring of the mechanical seal in the housing provided on the top cover toward the outside of the sliding surface.



4) Grease the opposite side of the top cover on the seat machined for the shaft.

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- 5) Fit the top cover on the shaft by positioning the ring of the mechanical seal toward the outside.



- 6) Lubricate with oil the sliding surfaces of the mechanical seal.



- 7) Apply 2% soap and water mixture on the outer surface of the mechanical seal rubber ring.



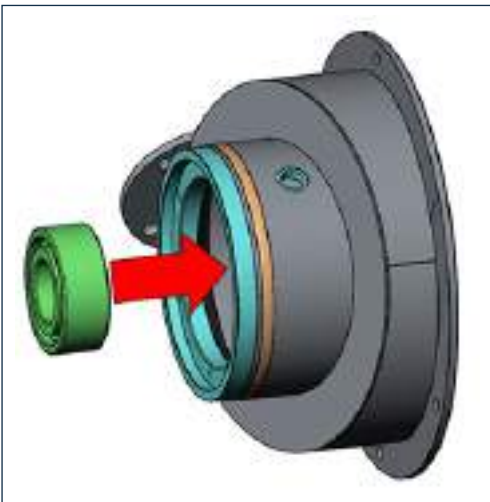
- 8) Fit the mechanical seal until it gets abutted to the ring.



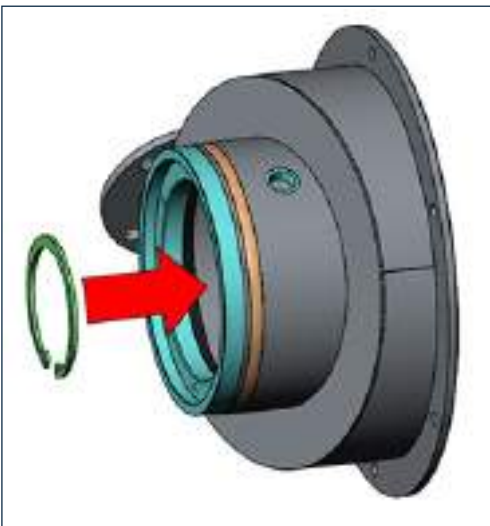
- 9) Fit the spacer.



10) Grease the bearing seat in the body of the inlet module.



11) Fit the bearing.

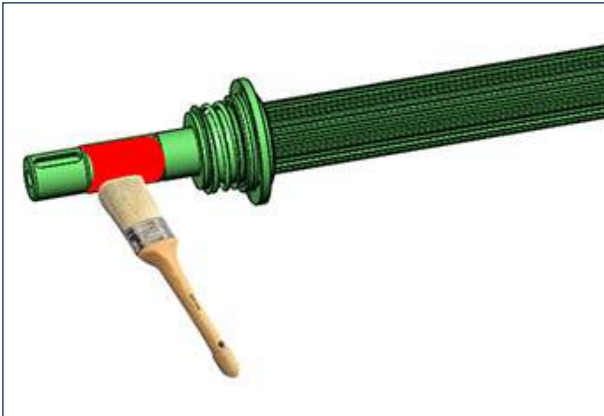


12) Insert the snap ring in its seat on the inlet module body.

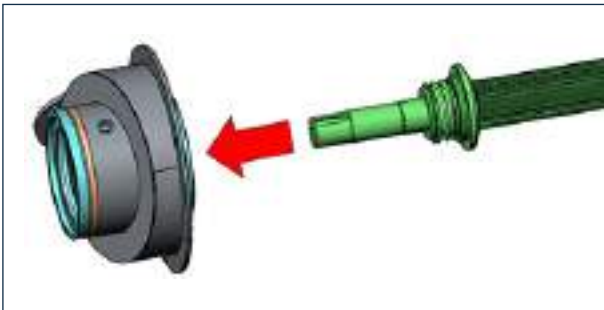
8.0 REPLACEMENT OF PARTS

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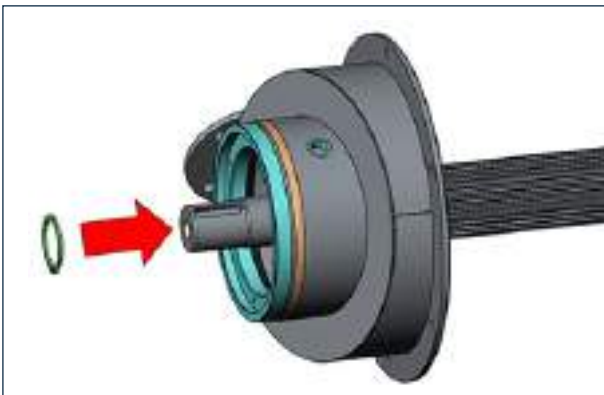
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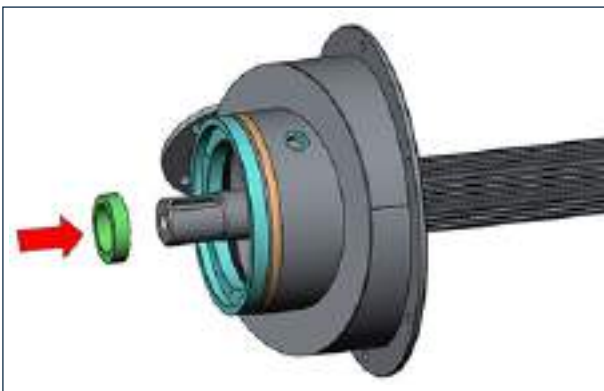
13) Grease the shaft in the area indicated in the figure.



14) Fit the shaft on the inlet module body.



15) Insert the snap ring in the slot on the shaft.



16) Fit the spacer.

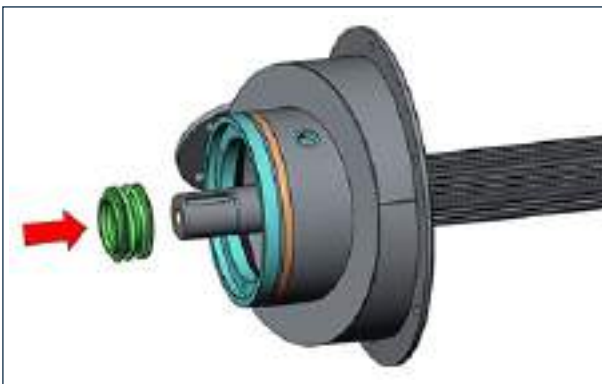
8.0 REPLACEMENT OF PARTS

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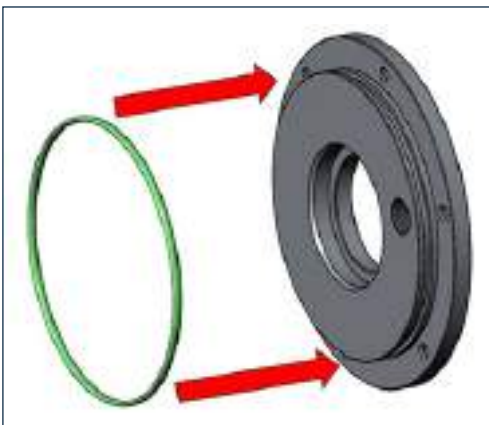
2



17) Apply 2% soap and water mixture on the outer surface of the mechanical seal rubber ring.



18) Fit the mechanical seal on the shaft by positioning toward the outside the sliding surface.



19) Fit the sealing ring in the special seat of the lower cover.

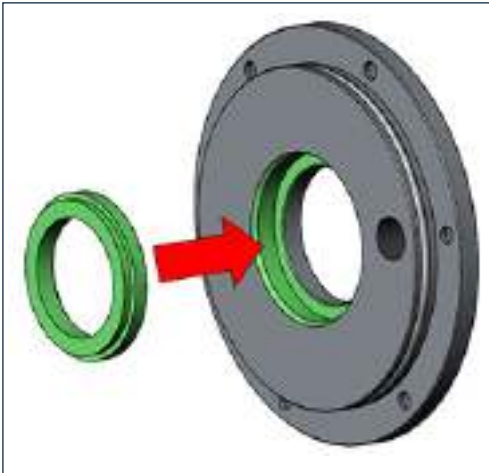


20) Apply 2% soap and water mixture on the outer surface of the mechanical seal rubber ring.

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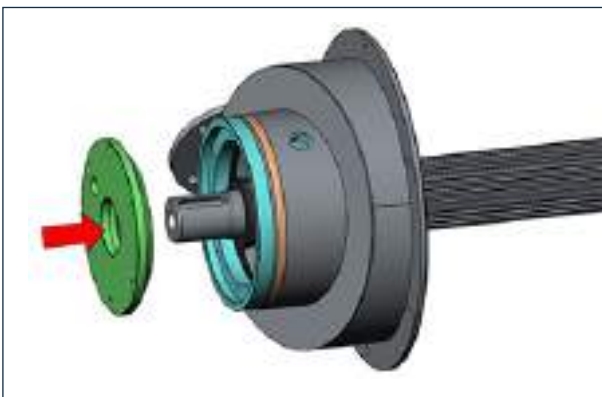
2



21) Insert the ring of the mechanical seal in the housing provided on the lower cover by positioning it toward the outer side of the sliding surface.



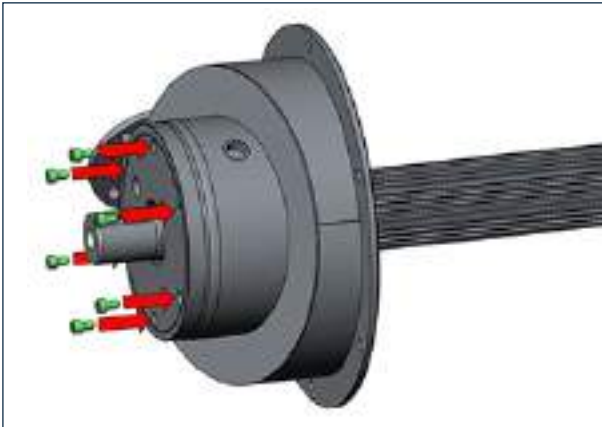
22) Lubricate with oil the sliding surfaces of the mechanical seal.



23) Fit the lower cover.



8.0 REPLACEMENT OF PARTS



24) Screw in the lower cover.



25) Screw the oil plug to the lower cover.



26) Apply sealant on the contact surface and around the holes.