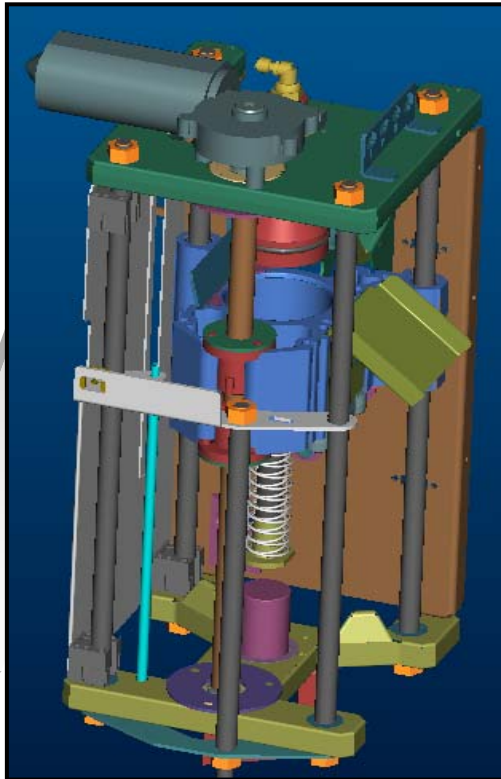


M1-M2 coffee group rebuild procedure



M1-M2 coffee group

- *Main components*
- *Procedure for a correct group handling during maintenance.*
- *Reconditioning procedure*
- *Control and set up*



When you see this symbol be sure to use the indicated wrench



When you see this symbol pay attention and be sure to follow the described instructions and checks

Mechanical Coffee Delivery Group



The group assures the thermal balance necessary to obtain an excellent cup quality.

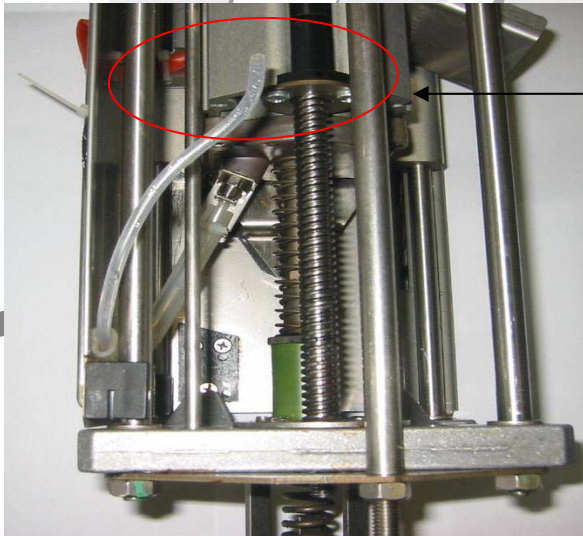
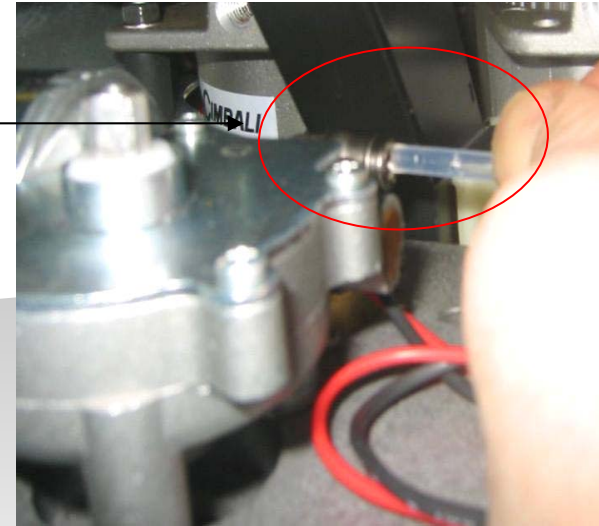
In case of necessity, the complete brewing group can be removed from the equipment within 2 minutes time of a technician.

Mechanical group moved by only one 24 V DC motor .

The correct lubrication of the group shafts and the main worm screw must be made periodically with the appropriated and specific oil lubricant.

How to remove the group from the machine: HYDRAULICAL

Disconnect the hot water pipe, coming from the G valve attached to the upper piston.



Disconnect the coffee line, coming from the group lower piston and connected to the coffee spout.

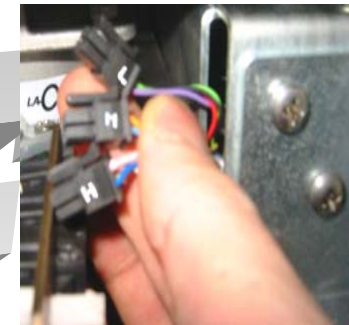
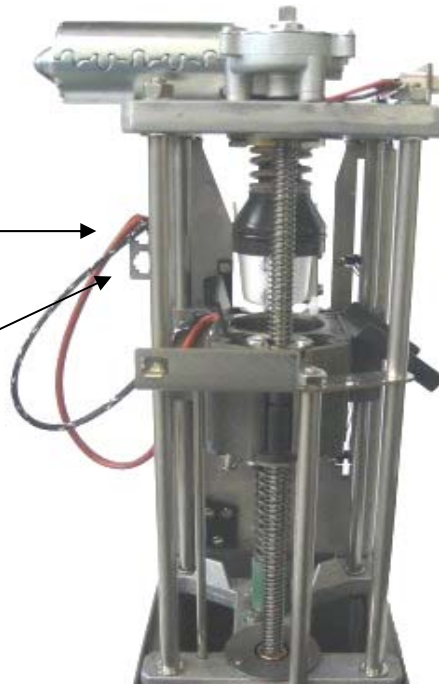
How to remove the group from the machine: ELECTRICAL

The first operation to do before removing the group is to disconnect it from the wiring as indicated below.

Left side



Disconnect the heater and temperature sensor connectors.

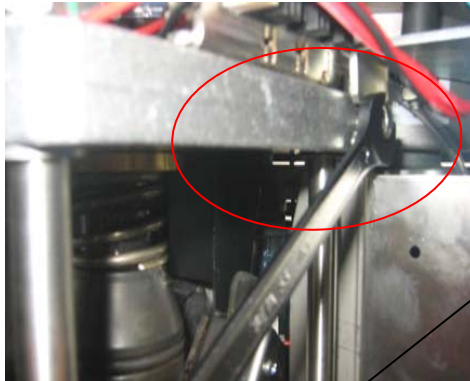


Right side

Disconnect the Motor and group position sensors connectors.

How to remove the group from the machine : MECHANICAL

Right side



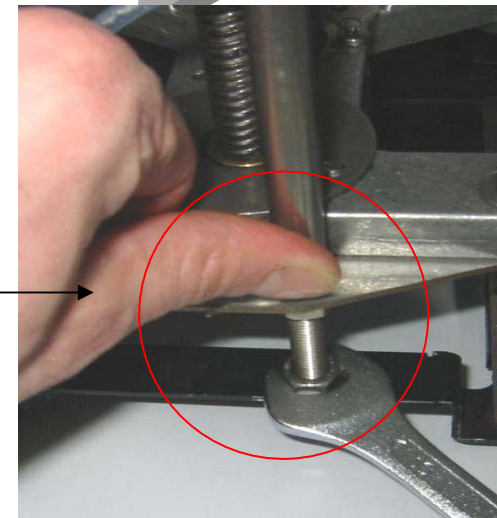
Open the front command panel.

Using a 8 mm wrench, loose the two bolts indicated in the pictures, one for each group side (left and right sides).

Left side



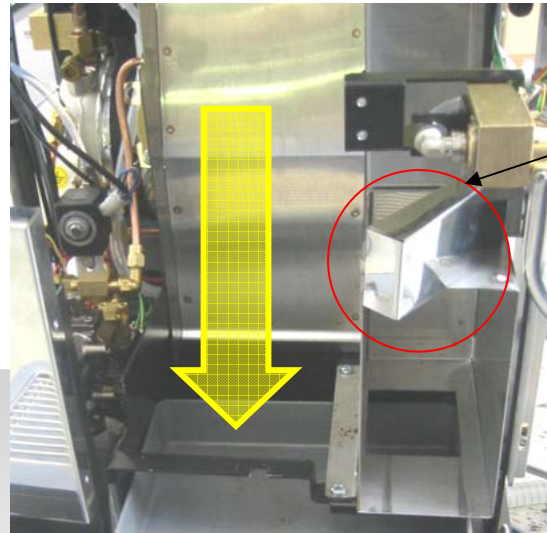
Bottom side



After release the upper bolts, loose using a 13 mm wrench, the nut at the bottom part of the group as indicated.



Now removing the group from the machine

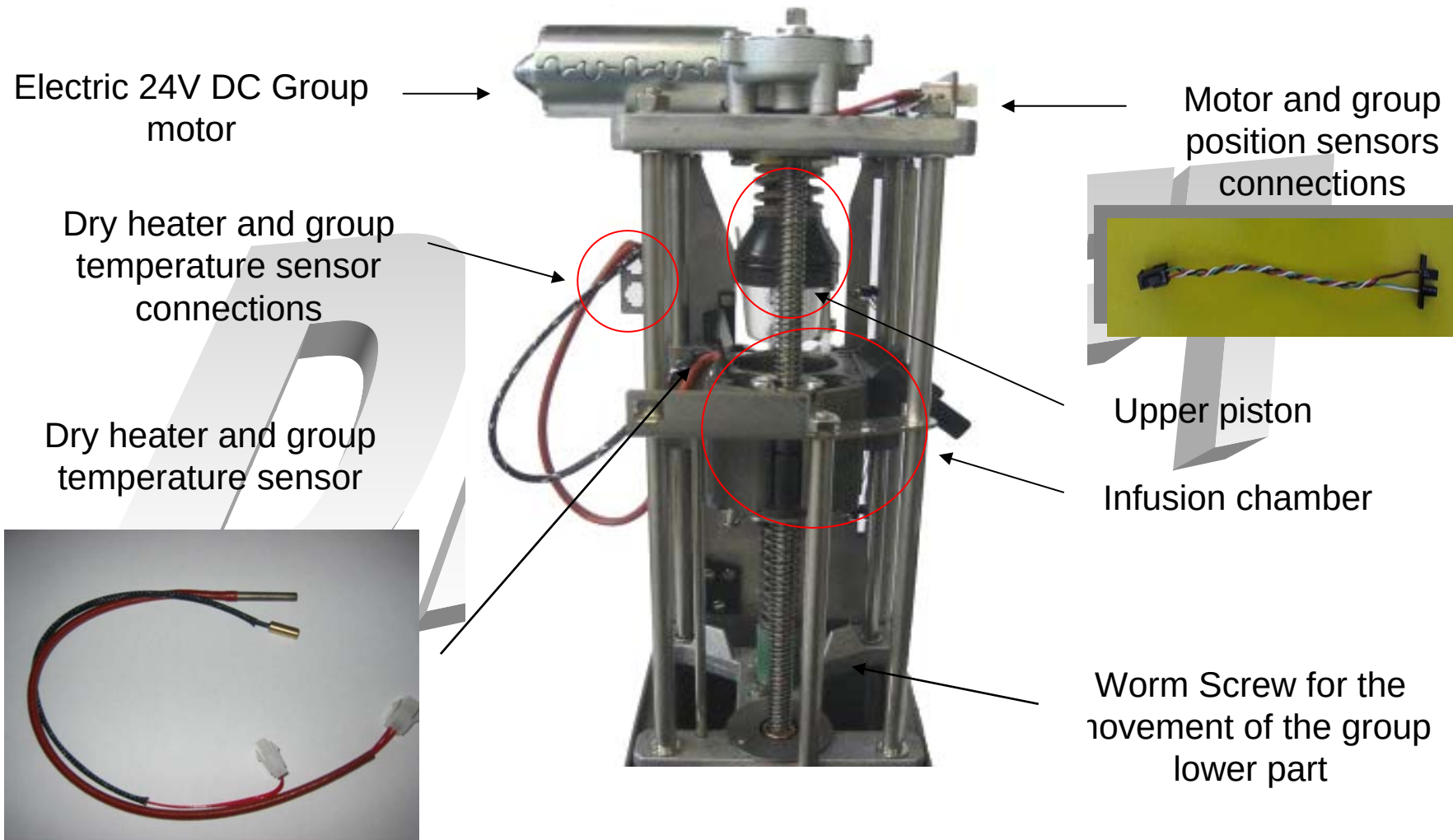


1) Rotate the wand support.

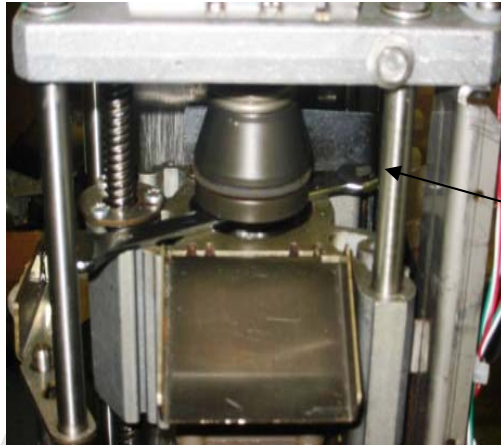


2) Pull the group towards you.

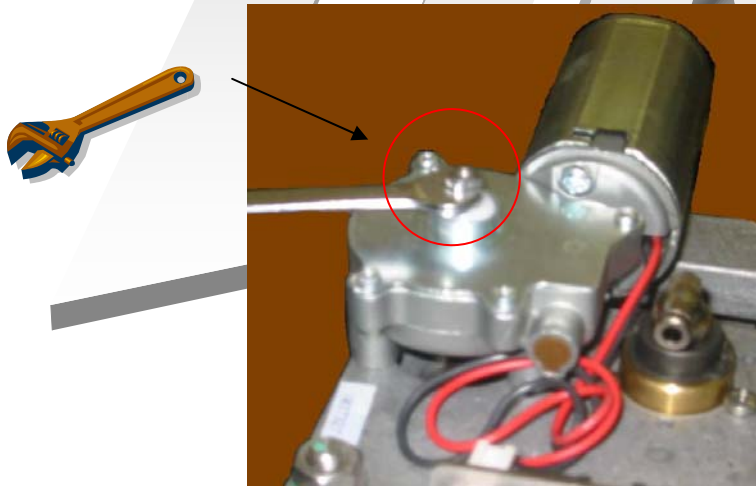
Main group components



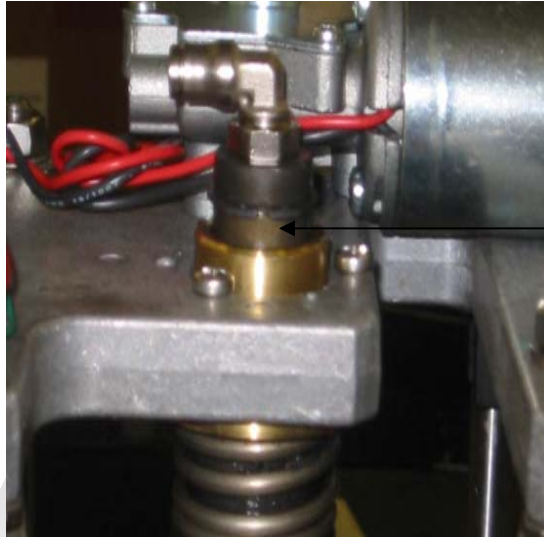
How to remove the: UPPER PISTON



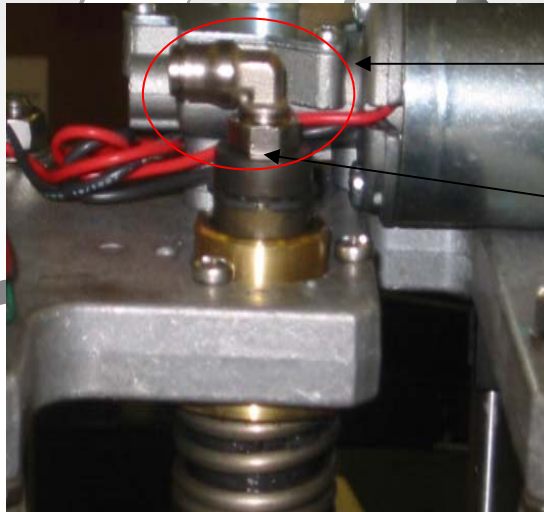
Insert the wrench between the infusion chamber and the upper piston like indicated on the picture and move it up using the 6 mm wrench



How to remove the: UPPER PISTON

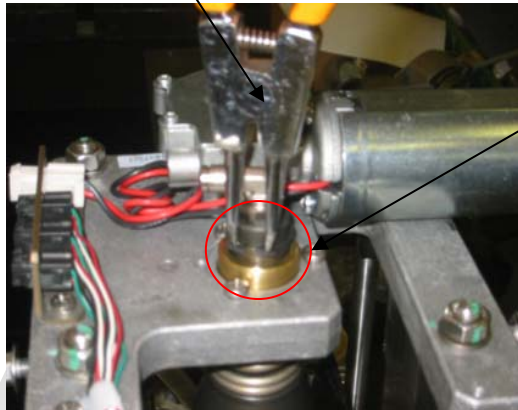


The upper piston rod
need to be out of the
bushing

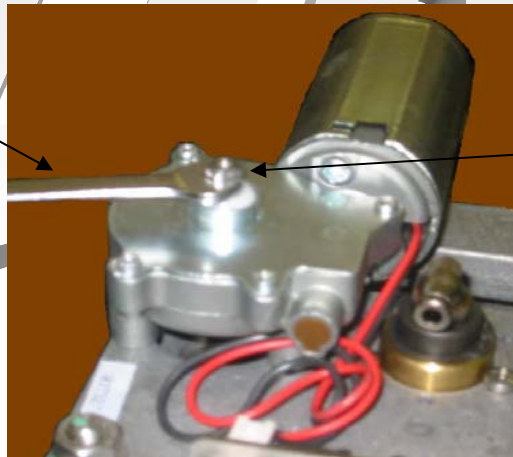


Disassemble the
L blow

How to remove the: UPPER PISTON



Use the proper tool (tweezers) to remove the elastic ring



Move down the infusion chamber and remove the wrench previously positioned



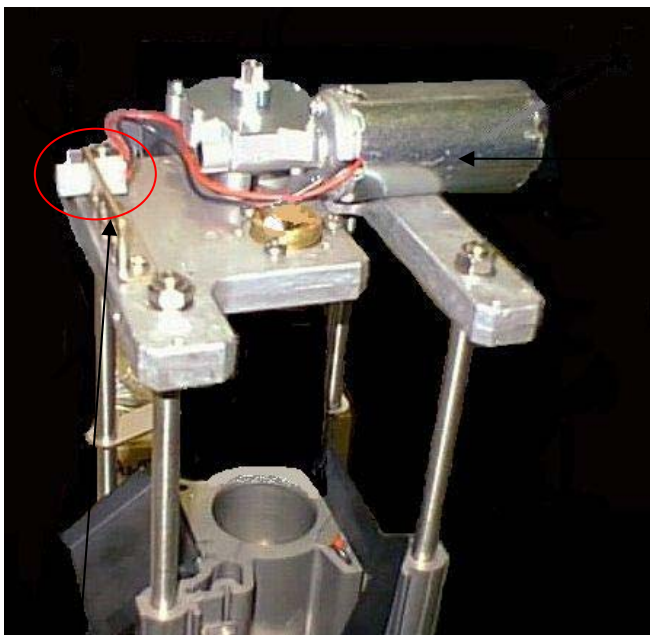
How to remove the: UPPER PISTON



Remove the upper piston assembly
from the coffee group



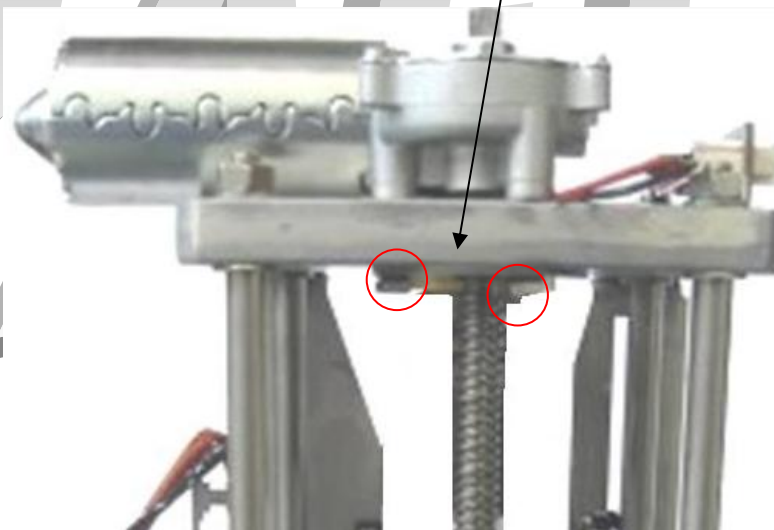
How to remove the: GROUP MOTOR



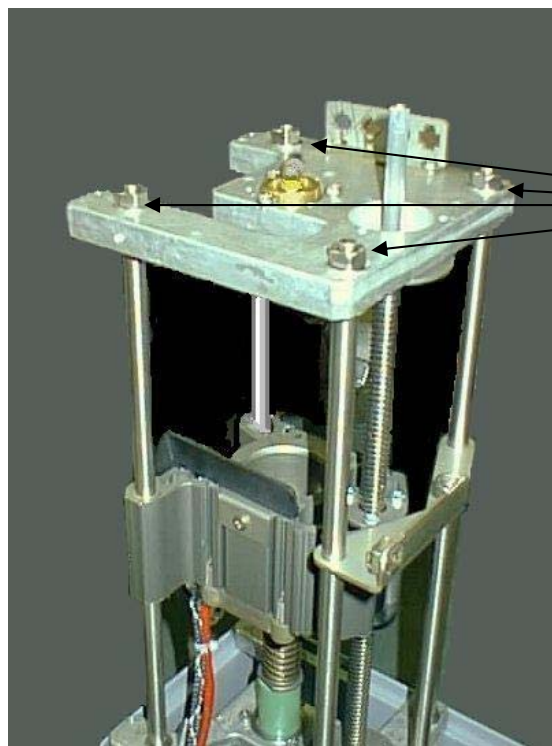
Remove the connector
from the metal support



Disassemble the group motor
remove the three screws M5X25,
use 8 mm wrench

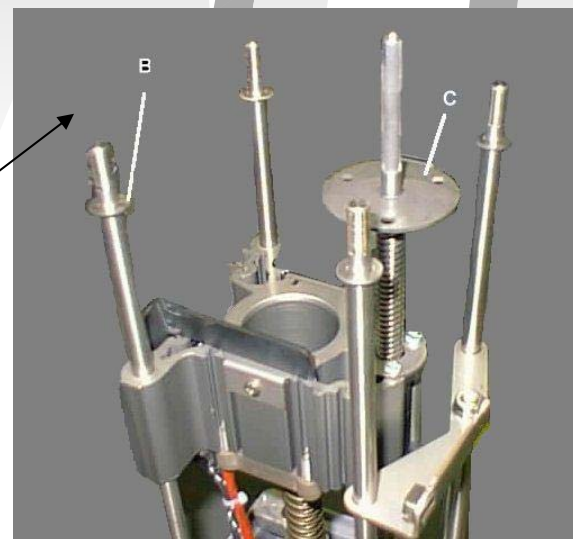


How to remove the: UPPER ALUMINUM PLATE

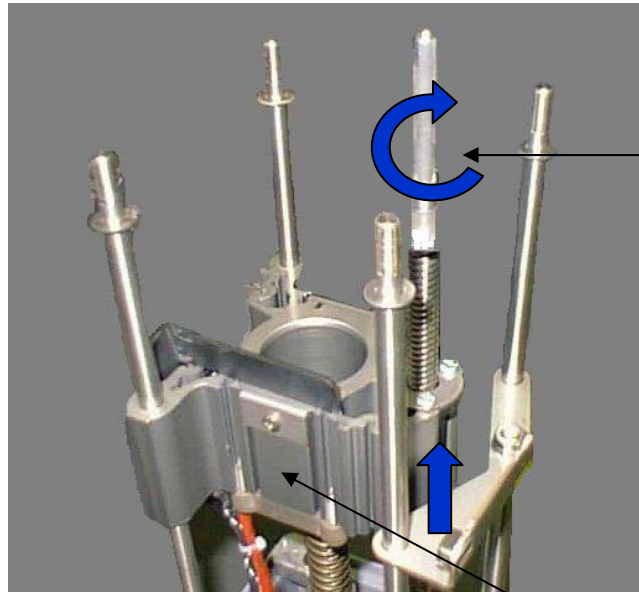


Disassemble the four nuts,
use 13 mm wrench and
remove the upper PLATE

Remove washers ref. **B** and
group motor ring ref. **C**



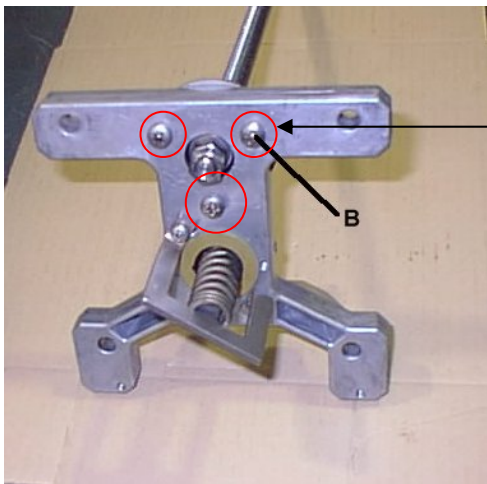
How to remove the: INFUSION CHAMBER ASSEMBLY



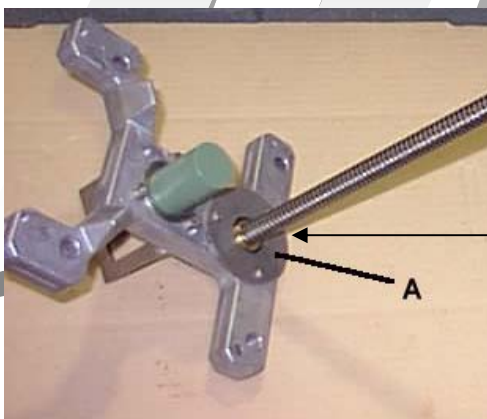
Remove the infusion chamber assembly, use 6 mm wrench to turn the Worm Screw



How to remove the: BEARING

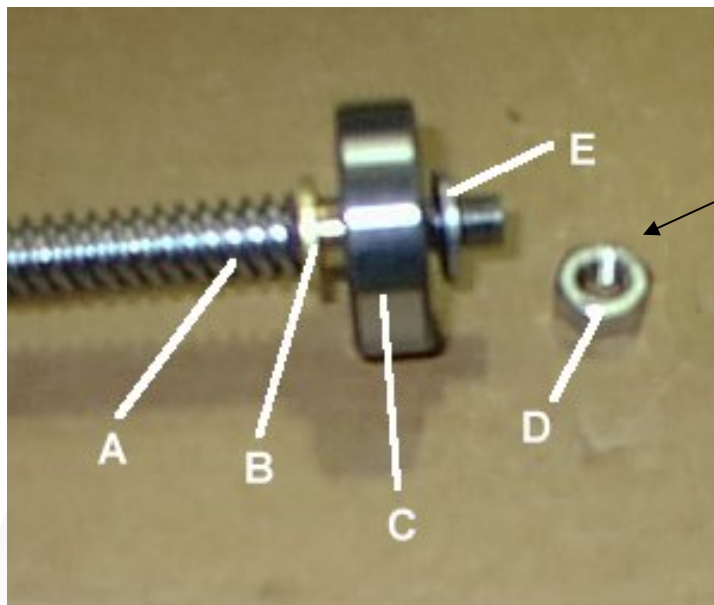


Disassemble the 3
screws ref. **B**



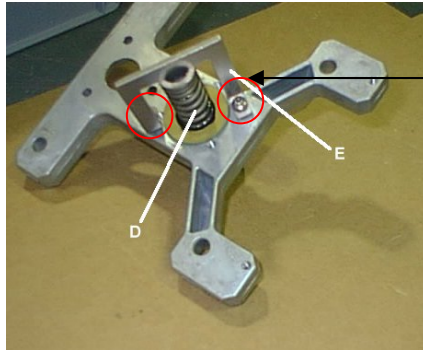
Disassemble the
bearing plate ref. **A**

How to remove the: BEARING

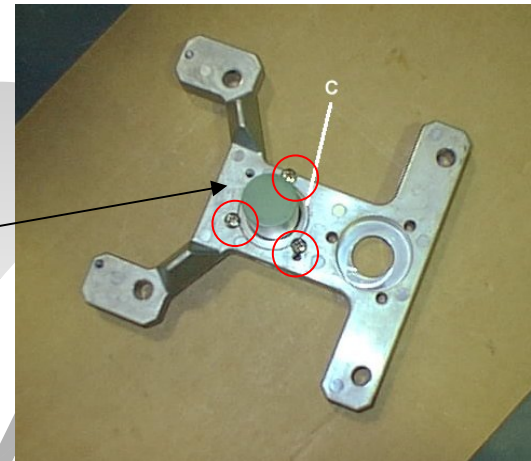


Disassemble the nut ref. **D** use 12 mm wrench, remove washer ref. **E** - bearing ref. **C** and the bushing ref. **B** from the warm screw ref. **A**

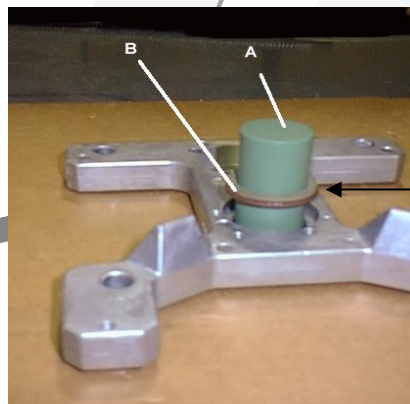
How to remove the: RETURN SPRING



Disassemble the two screws and remove the spring holder ref. **E** and the spring ref. **D**

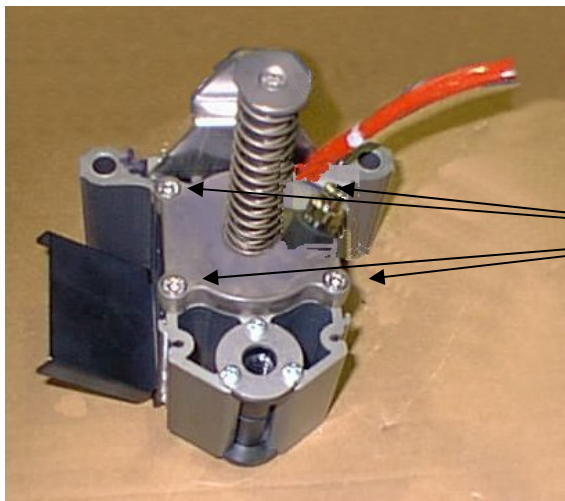


Disassemble the three screws used to fit the scraper ref. **C**



Remove the scraper ref. **B** and the spring sleeve ref. **A**

How to remove the: LOWER PISTON



Remove the lower piston from the infusion chamber use 4 mm allen wrench to disassemble the four screws



Upper, Lower Pistons & o-rings



Upper piston



Lower piston

Upper Piston o-rings

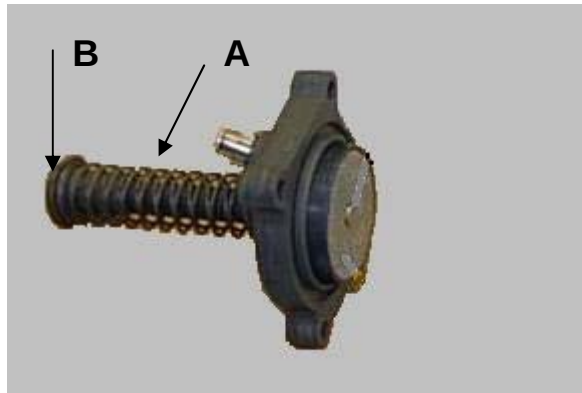


Remove the three screws in order to disassembly the shower

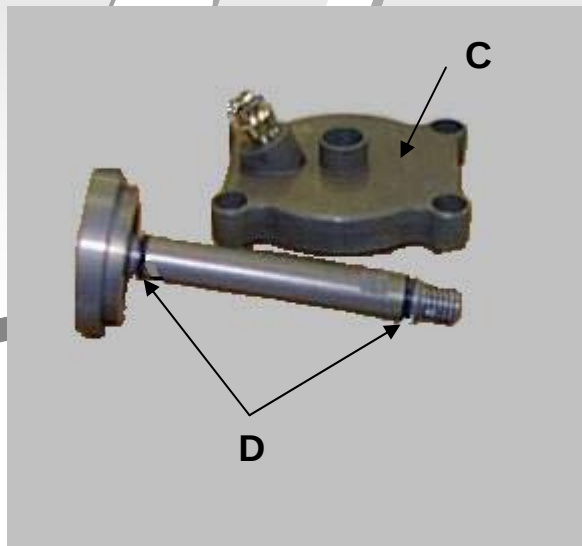


Clean well all the components and **replace** all the o-rings the L blow the coffee pipe and the shower

How to disassemble the: LOWER PISTON

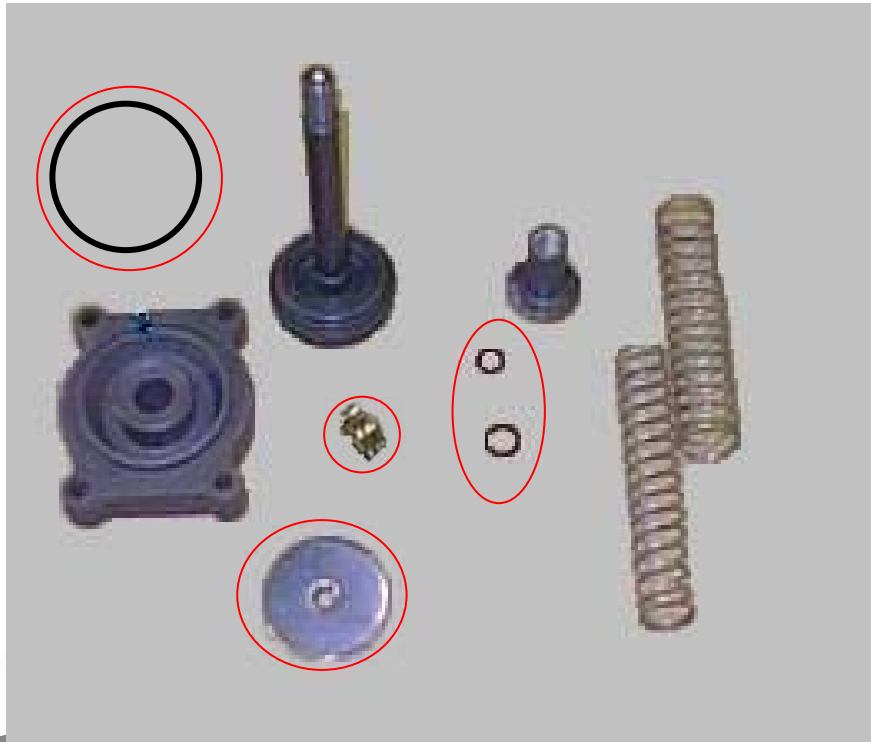


Remove the screw inserted inside the component ref. **B**, unscrew it from the piston and disassemble the two spring ref. **A**



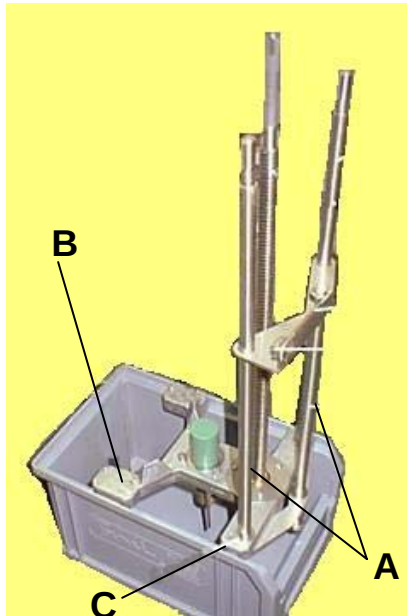
Dismount the flange ref. **C**, and remove the two o-rings ref. **D** from the lower piston.

Lower Pistons o-rings

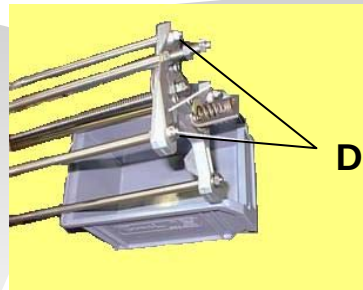


Clean well everything,
replace all the o-rings and
the filter plus the pipe fast
connector

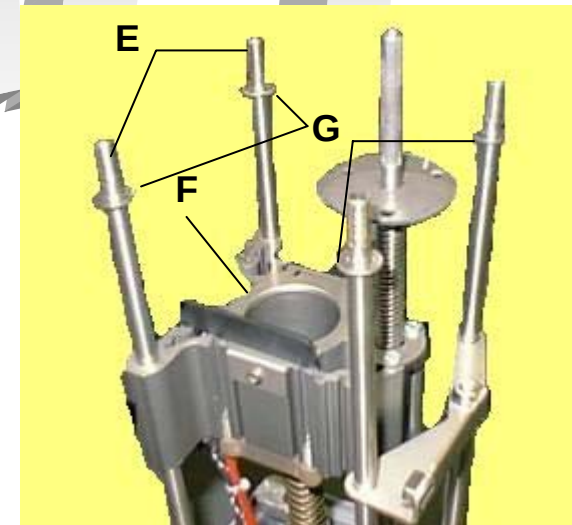
How to assembly the: COFFEE GROUP



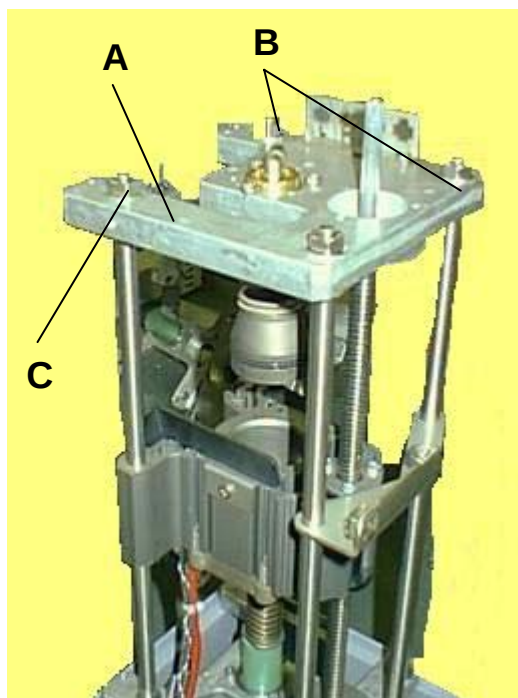
Insert the two guide shaft ref. **A** into the front side of the lower aluminum plate ref. **B**, insert the proper washer ref. **C** and fix them using two nuts ref. **D**.



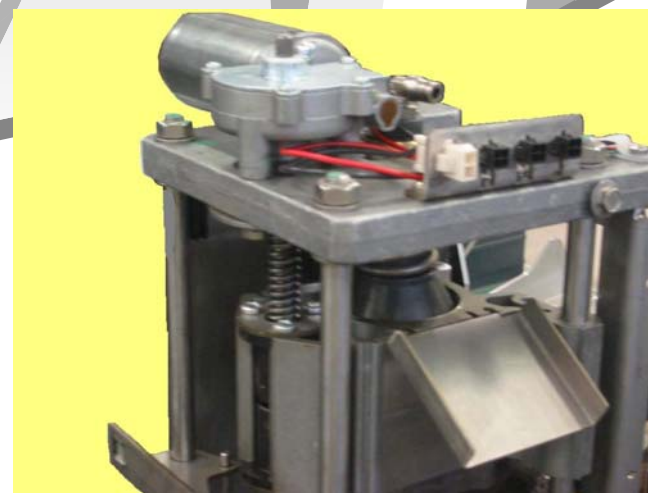
Insert the two group movement shaft ref. **E** into the lower chamber assembly ref. **F**, (check the free movement inside the lower chamber guide bushing), positioning the washers ref. **G** on the top of the shafts



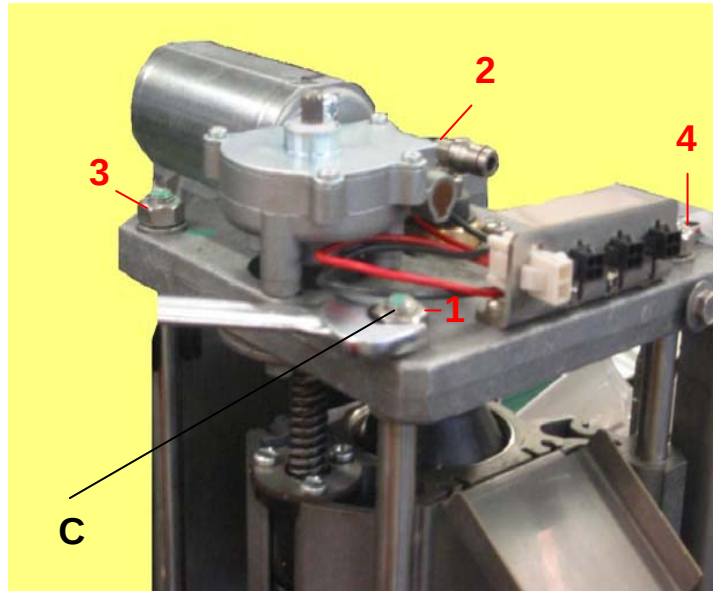
How to assembly the: COFFEE GROUP



Put in position the upper aluminum plate ref. **A**, insert the washers ref. **B** and the four nuts ref. **C**, move up the lower chamber and insert the upper piston inside it (this operation is needed in order to align the upper aluminum plate comparing to the lower one), is extremely important guarantee the parallel positioning to avoid noise during the up and down movement and most important to prevent early deterioration of the main components.



How to assembly the: COFFEE GROUP

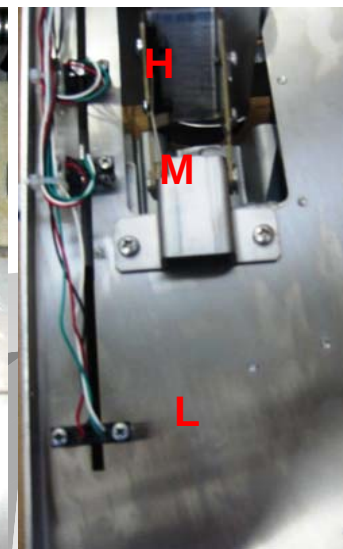
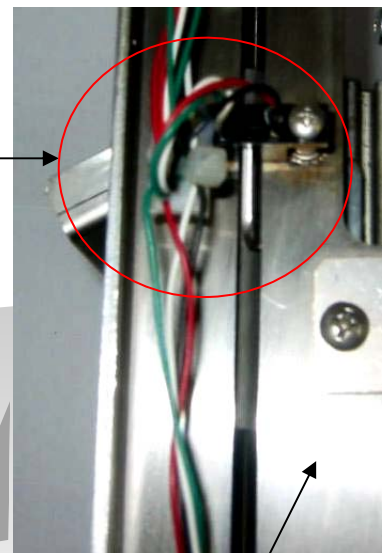
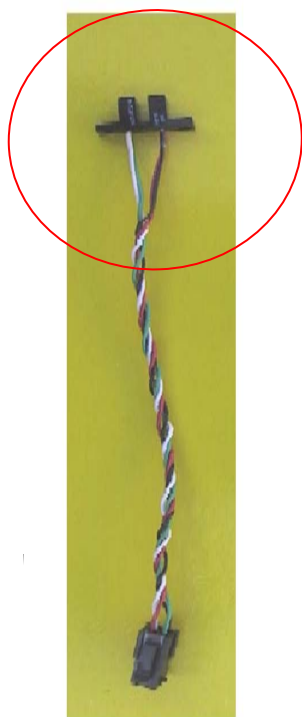


Pay Attention

Tight the for nuts ref. **C** in a cross way (like indicated), this can help to guarantee the perfect alignment of the upper piston comparing the lower chamber

Checks to be effected

In case the group sensor need to be replaced. Be sure when the group is moving, its position plate does not get directly in contact with the sensor and break it.



In case you remove the plate where are located all the sensors, be sure when you will place it in its original position to repeat the same check explained above.

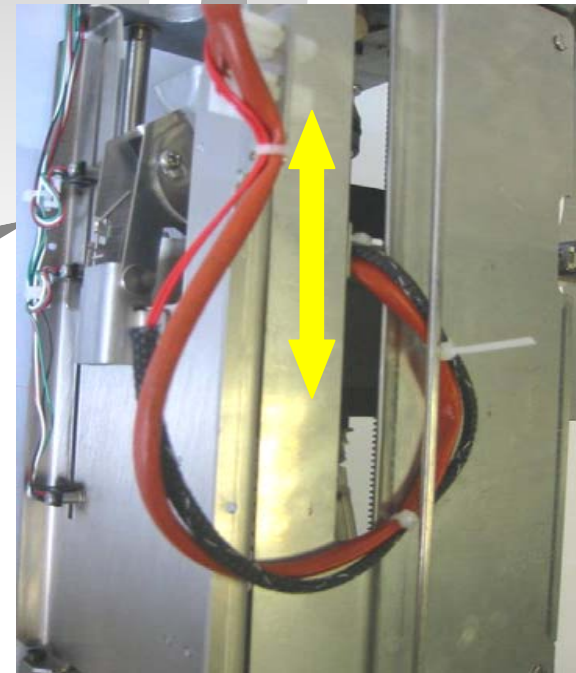
Checks to be effected



Before installing the group back in the machine. Be sure the plastic clamp it is located and long exactly like shown in the below picture.



The corrected positioning of the plastic clamp allows a free movements of the wiring and avoid its break after several cycles.



Checks to be effected

In case you rebuilt the lower piston indicated in the picture.

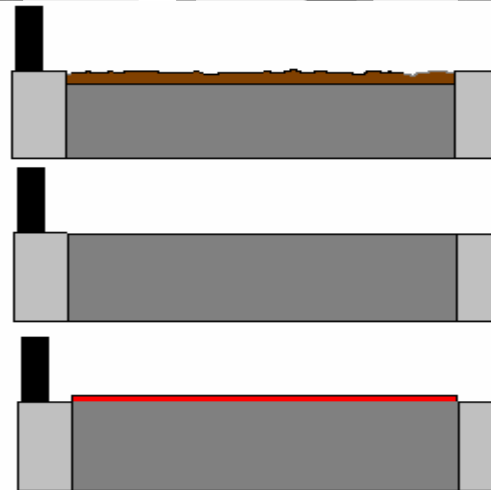
After the complete re-assembly of a lower piston, check the following:

When the piston is in the group, compress completely the spring by placing the piston in its upper position. At that moment be sure the piston filter remains at the same high of the upper part of the piston chamber. In case the piston is too high is possible damage the discharge coffee dreg lever. In case the piston is placed too low the same will get dirty easily.

Not correct position,
residual of coffee

Correct position

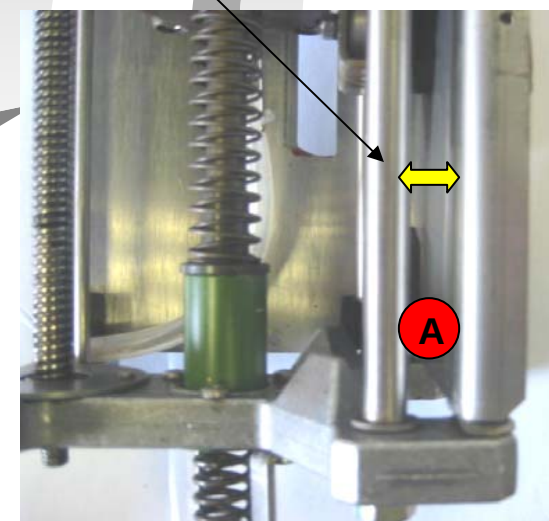
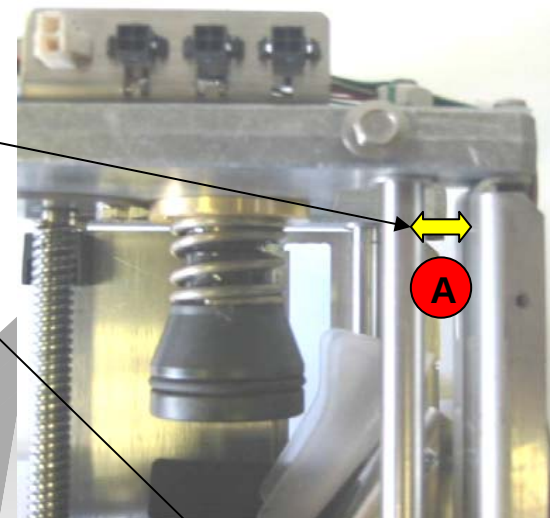
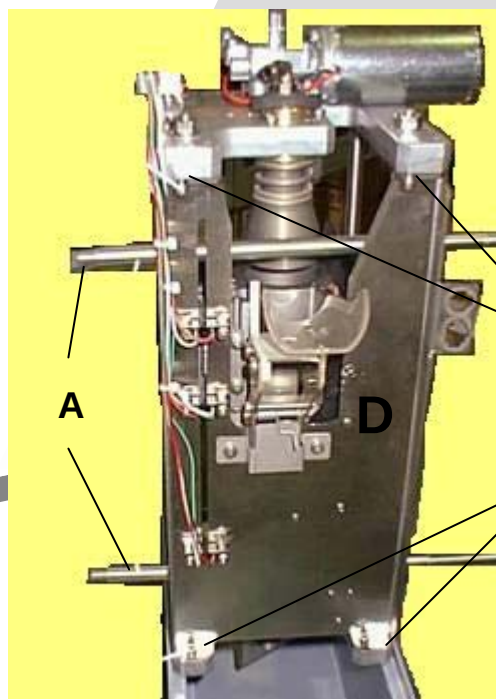
Not correct position,
damage the
discharge coffee
dreg lever



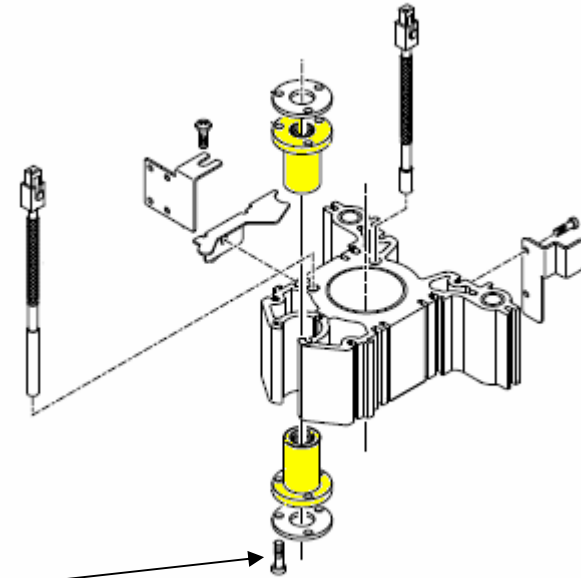
Checks to be effected

After the group has been totally reassembled: be sure to have between the two shafts indicated in the pictures and the back plate (ref. **D**), **10 mm** distance.

Use two service shaft Ref. **A** ($\varnothing$ 10 mm), for easy positioning the mentioned plate and fix it with the allen screws ref. **B** and **C**.



Lower chamber plastic slide replacement



When you replaced the two black plastic slides be sure, while locking the screws of the two stainless steel rings, that the worm screw remains free. Rotate the worm screw while tighten the screws and check it is rotating free from resistance up to the screws are completely tight.



Lower chamber plastic slide replacement

When the black plastic sliding is replaced with the new ones. Be sure, when the new piece is in place, to check that the rotation of the of the worm screw is free from any resistance during its rotation in all directions.

Apply on the screw the specific worm screw lubricant oil. Use only the oil suggested by the manufacturer.

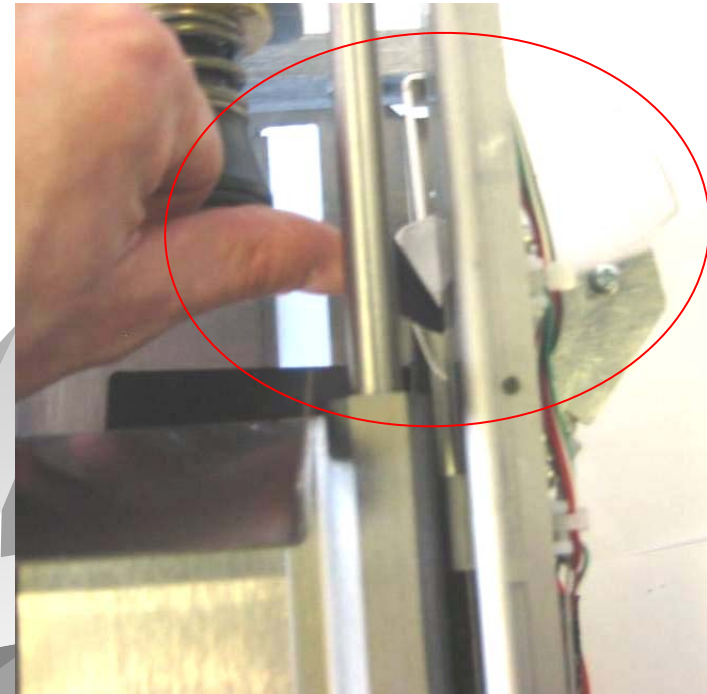
Code number: 931-209-000



How to relocate the group in the machine. Part 1



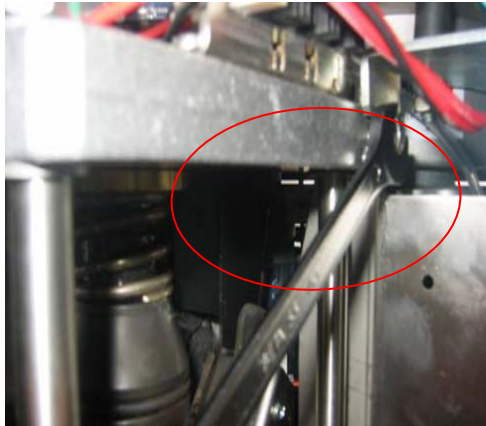
Follow the procedure
listed below to place the
group into the machine



Pay Attention

Push with your hand the coffee
conveyor ahead like in the
picture before you locate the
group, if you do not follow this
procedure you will break the
plastic conveyor .

Fixing the group in its original position. 1st operation

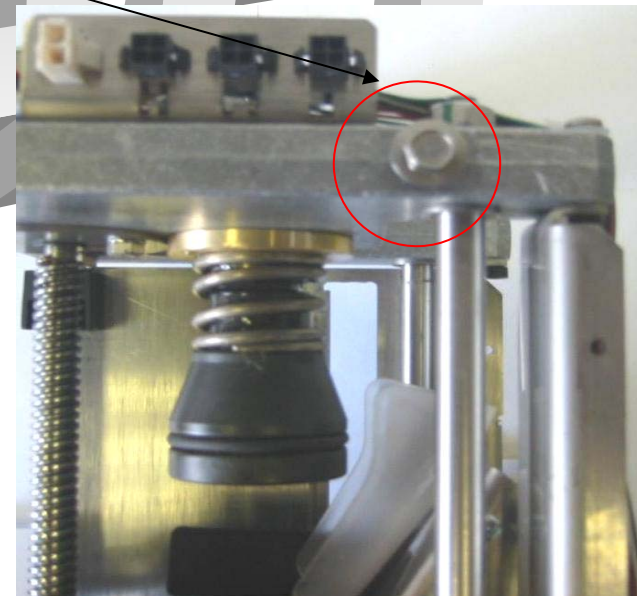
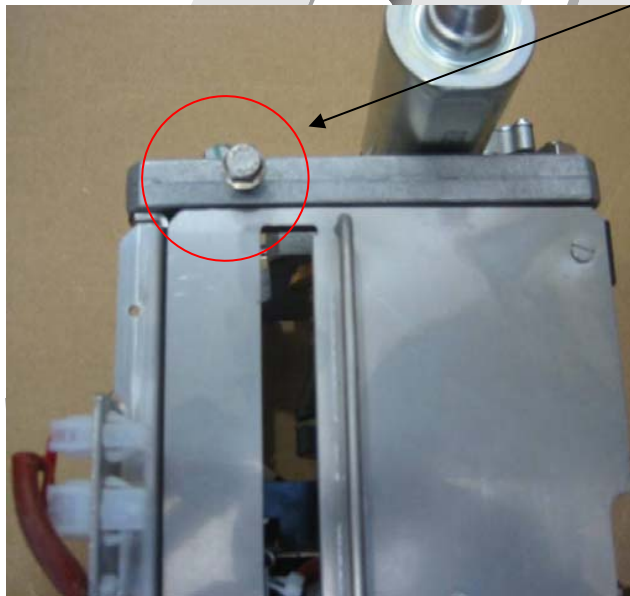


Left side



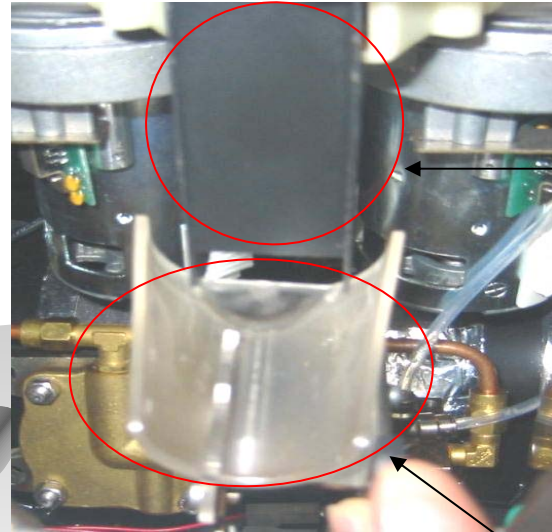
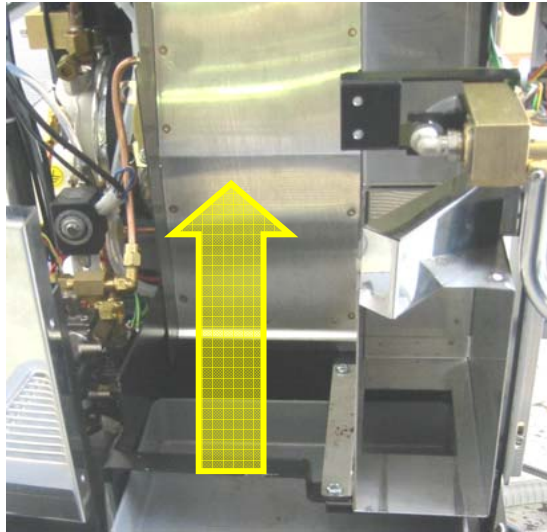
Using a 8 mm wrench, screw the two bolts indicated in the two picture, one for each group sides.

Bolts



Right side

How to relocate the group in the machine: Part 2



Grinders coffee chute

Group coffee conveyor



With your finger drive the group conveyor under the chute than place the group in its position.

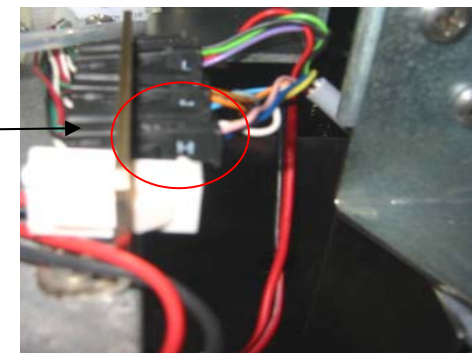
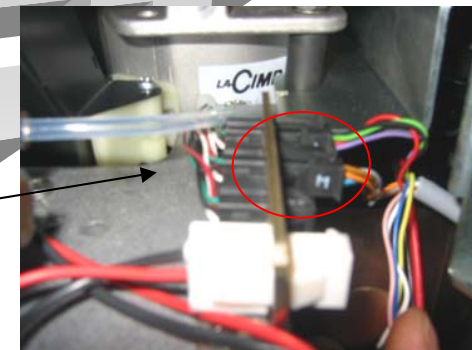
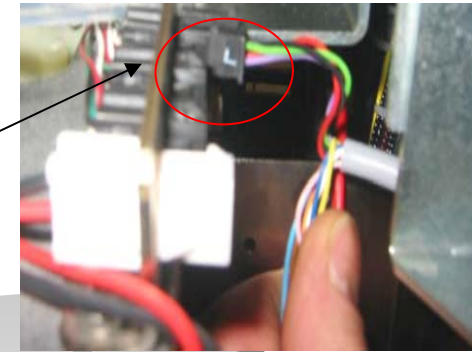
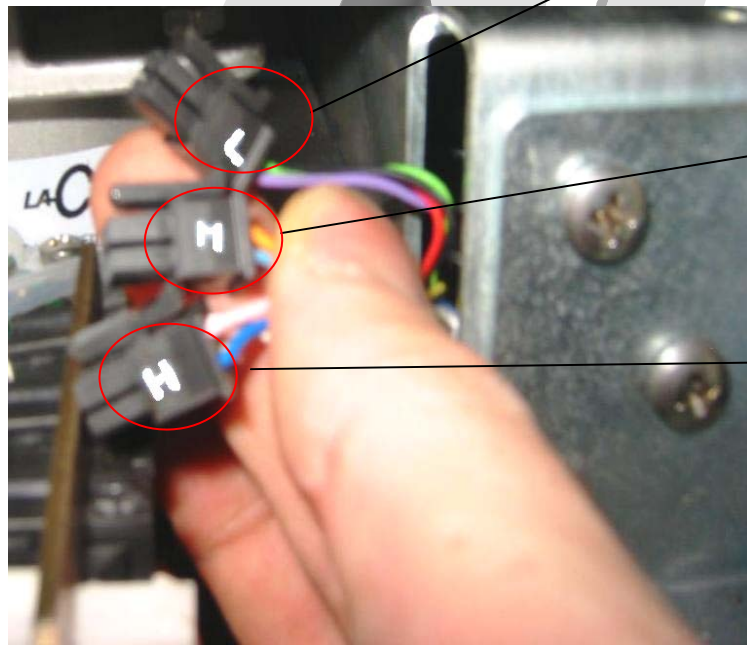
Fixing the group in its original position. 2nd operation

After that the group is in the correct position.
Plug in all sensors connections by
respecting their locations.

L= Low sensor position

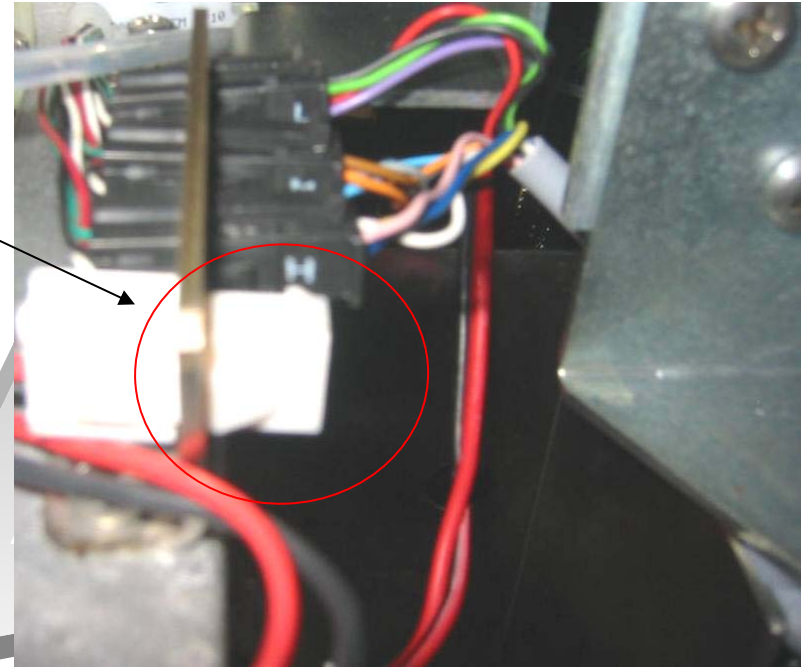
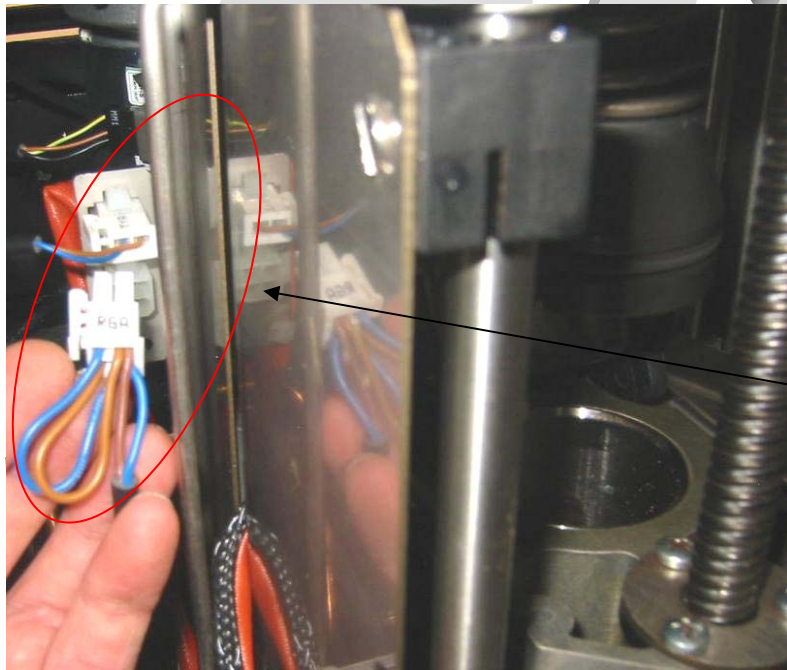
M= Medium sensor position

H= High sensor position



Fixing the group in its original position. 3rd operation

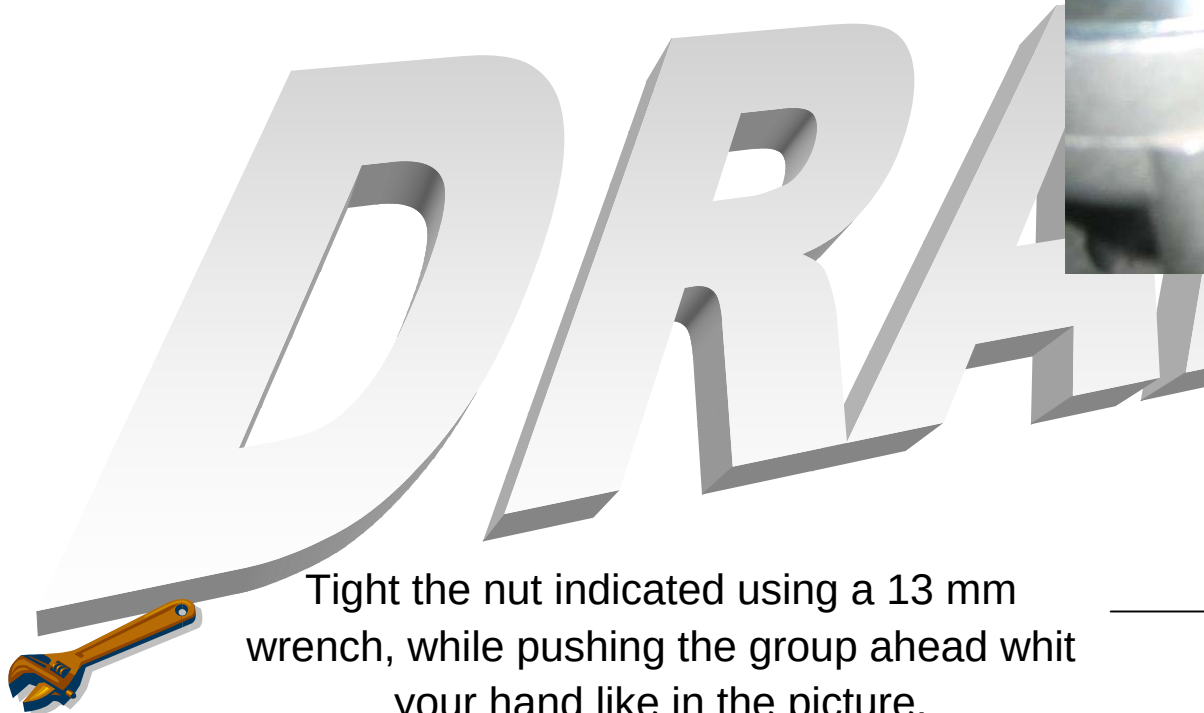
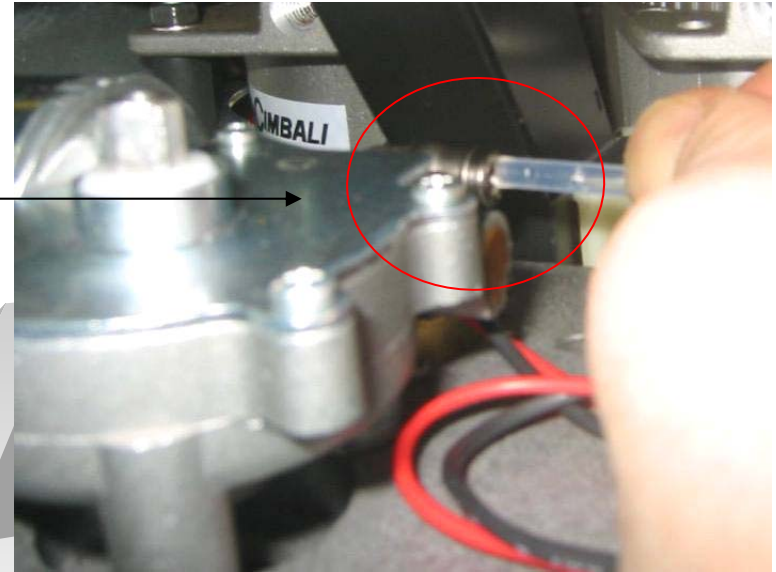
Connect the group motor power supply



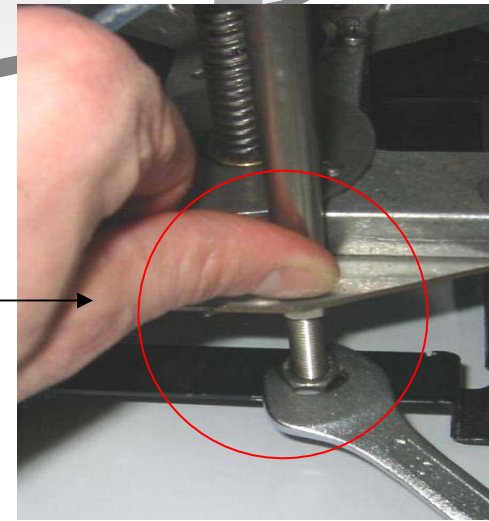
Connect the heating element and temperature sensor

Fixing the group in its original position: 4th operation

Connect the hot water pipe, coming from the G solenoid valve to the upper piston

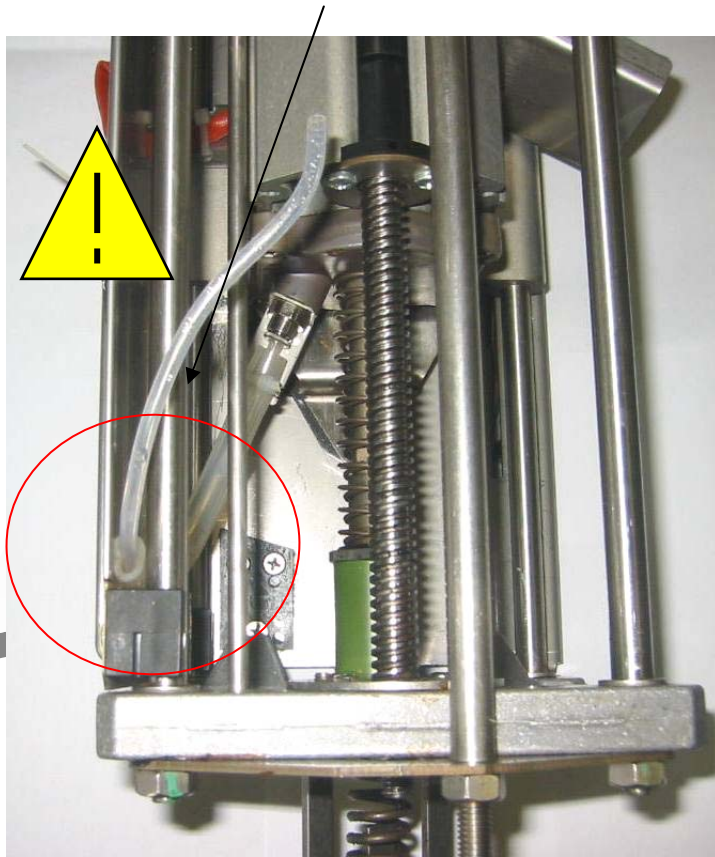


Tight the nut indicated using a 13 mm wrench, while pushing the group ahead with your hand like in the picture.



Fixing the group in its original position. 5th operation

Pay attention: Be sure the coffee line, coming from the lower piston of the group is **is not place** as indicated. It is wrong!!!



This is the correct position of the coffee line which allows free movement of the pipe while the group is moving up and down.

