



# Saeco Royal Pressure Relief Valve rebuild

The pressure relief valve of this machine can...

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## INTRODUCTION

The pressure relief valve of this machine can get stuck and no longer be properly working. It is also possible for the valve seal to be damaged. Here's how you can revise or replace the valve.

**Note:** You can also remove the pump with the pressure relief valve without removing the heater. However, it is much easier to access without the heater. You can skip the corresponding steps according to what you want to do,

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### TOOLS:

TR10 Torx Security Screwdriver (1)

T15 Torx Screwdriver (1)

Phillips #2 Screwdriver (1)

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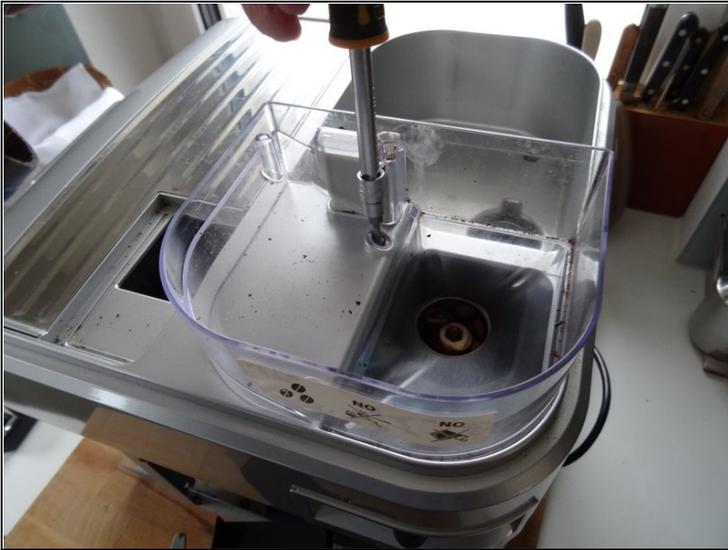
## Step 1 — Preparing



### Unplug!

- Remove all attachments like water tank, brewing unit etc.
- ⓘ The pictures show a Royal Cappuccino One Touch HD8930, but the opening procedure is similar to all models.

## Step 2 — Top



- The coffeebean supply is fixed with two screws. Unscrew them and lift it off.
- There is a black rubber lid under the bean hopper that you can easily lift off, leaving a large opening.
- The adjuster of the grinder has to be solved. Mark the position or just take a picture. This type is fixed with a screw, others are only stucked together.

## Step 3 — Rear side



- There are two screws to be turned out.

## Step 4 — Front



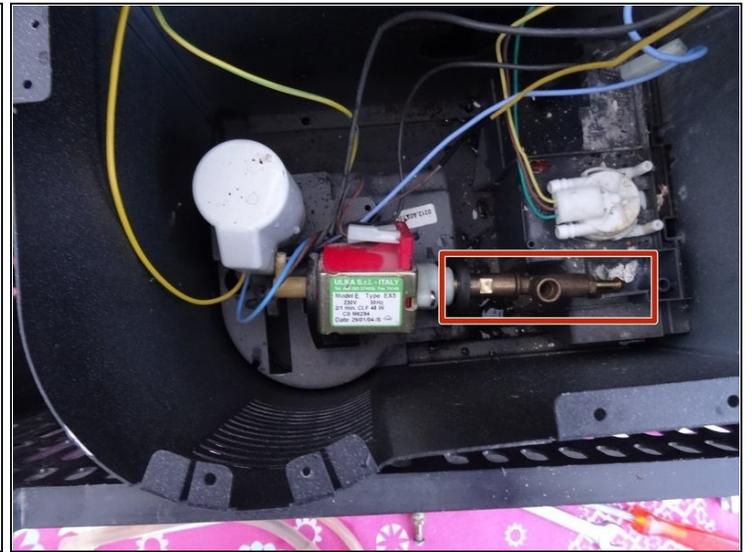
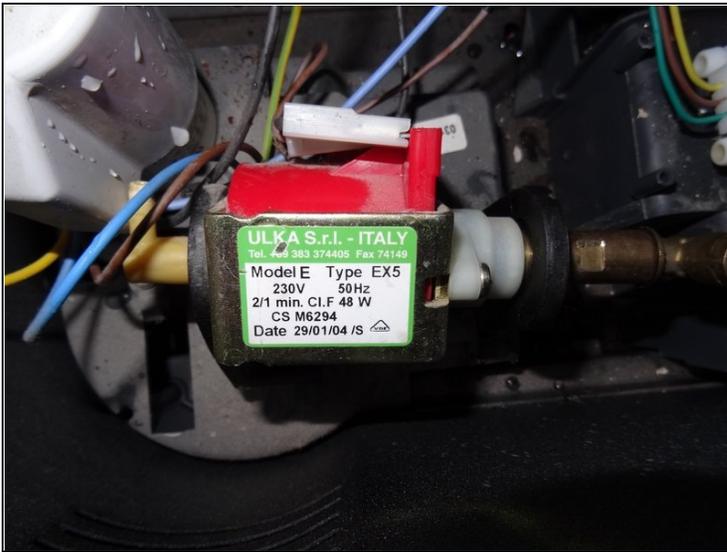
- The screws are situated on the underneath of the cover. This type is held by four screws.

## Step 5 — Lift cover off



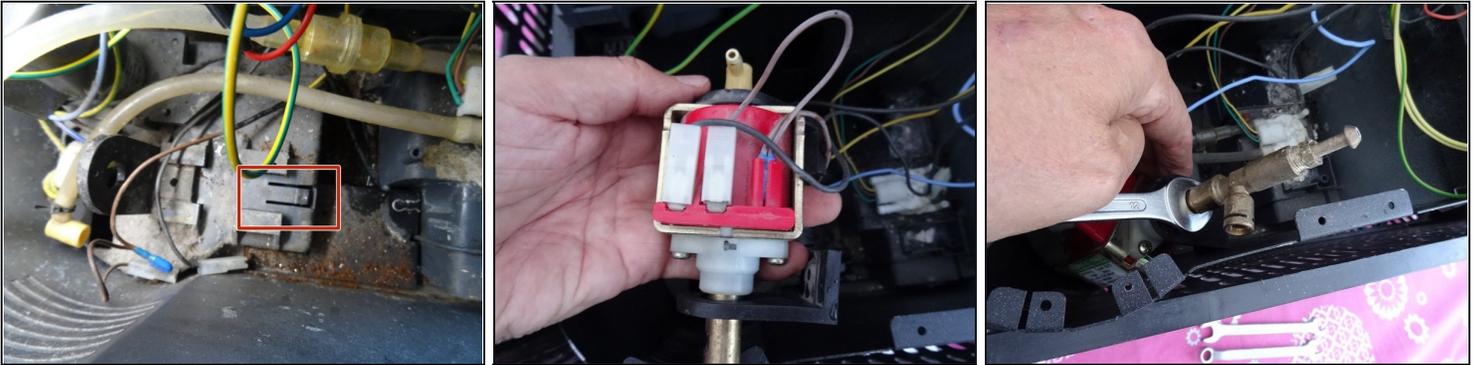
- Now the cover can be raised: first grip on left and right rear side and lift about 10 cm (4 in). Sometimes the cover jams a little bit.
- Solve the hoses which lead to the water tank. Perhaps you have to pull out some contacts, (e.g. the yellow-green protection lead), don't forget to put them on again later.
- The cover can be drawn aslant towards the front, sliding it over the hot water pipe.
- Most repairs can be done with the cover being laid up partially , it must not be completely removed.

## Step 6 — Pump



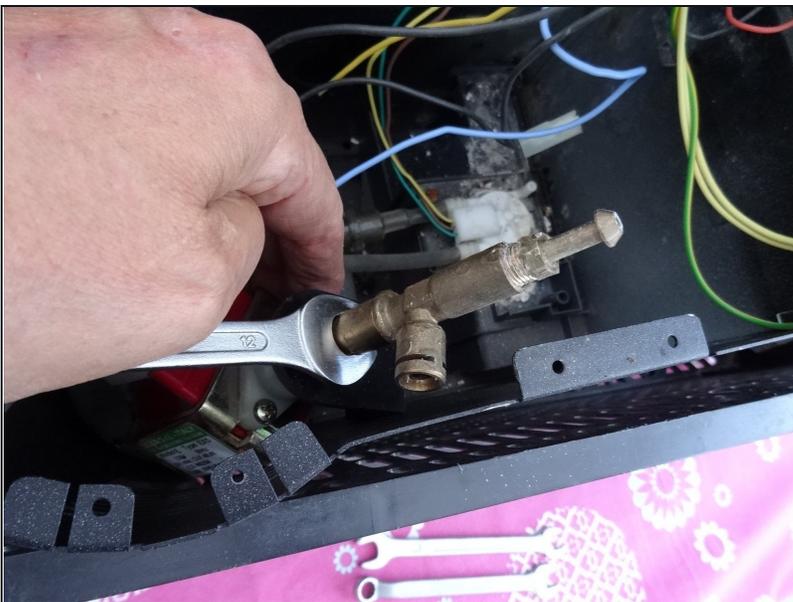
- Here the pump viewed from above, a Ulka EX5 with 230V. The pump is stored in rubber pieces.
- Pull the silicone hose off the rear elbow.
- If not already done, remove the clamp on the pressure hose on the pressure relief valve. Then remove the pressure hose.
- ⓘ The pressure hose is sealed with two O-rings at the end. These will usually hang at the end. Replace them before re-assembling.

## Step 7



- In the first picture, the pump has already been removed. The red marking shows the catch that holds the rubber molded part. You can easily pull it out when the catch is pressed down.
  - Pull the angled molded rubber parts out of their spots on the floor.
  - Lift the pump with the rubber moldings out of the machine.
- When reassembling, make sure that the molded rubber part is correctly attached.

## Step 8 — Replacing the pump



- Unscrew the pressure relief valve with two wrenches SW 10 and 13.
- Only the pump itself as well as the relief valve will remain.
- If you want to replace the pump, you'll have to transfer the pressure relief valve to the new pump. You should also [service](#) your valve while you're at it.

## Step 9 — Pressure Relief valve rebuild



- The pressure relief valve can be opened with a 10mm open-end wrench. The screws can be very tight.
- ⓘ The complete pressure relief valve consists of the valve body, the valve spring, the valve piston with seal, and the outlet. Note: the valve stem must face towards the pressure, not as shown in the picture.

## Step 10



- Check if the piston is stuck. If it is it will be necessary to free it.
- Look at the seal: is there a deep circular groove pressed into it? If so, then it is possible that it does not close properly anymore.
- The whole valve can be replaced with a new one.
- It is also possible to gently pry out the seal with a needle and then turn it over. The back of the seal will seal properly if it is flat and smooth. Picture two and three show the front and back.

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To reassemble your device, follow these instructions in reverse order.