

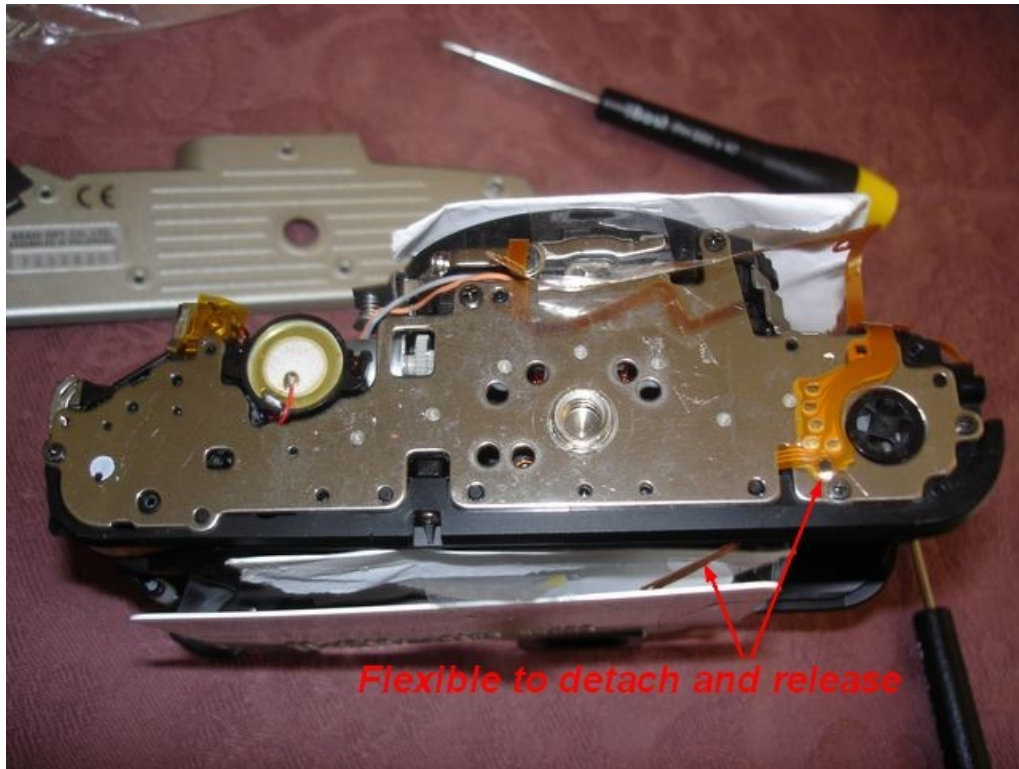
HOW TO CHANGE O-S250 mirror motor on PENTAX MZ50

You will need 4 basic but necessary tools :

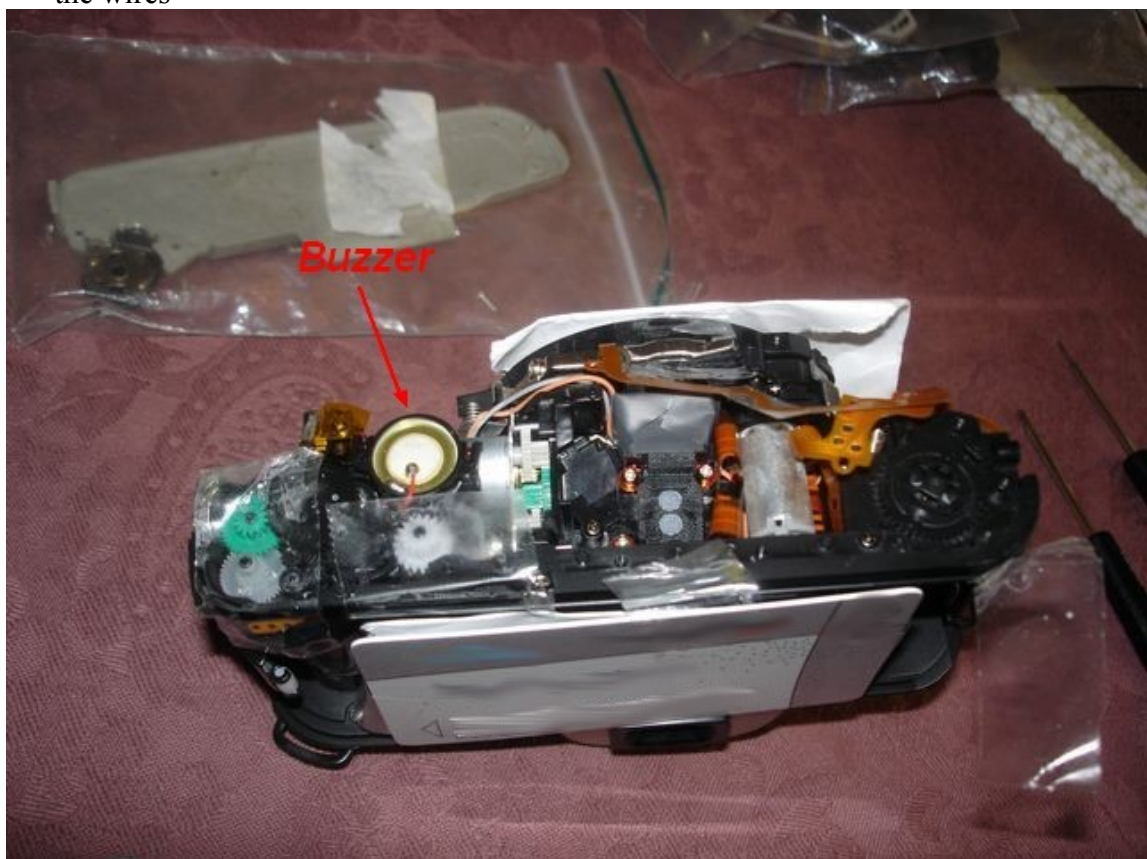
- little screwdriver Philips 000
 - a soldering iron (20W max) + unsolder pump : be cautious with flexible boards, they don't support heat very much.
 - a digital camera to take photographs step by step when dismantling your camera
 - small plastic bags to put the several elements you will progressively dismantle, attached with their screws, and make written notes for each, this will be very helpful when remounting the whole stuff. I used 20 of them for the whole.
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- Remove batteries, film and lens
 - now, be always careful with the curtain and the mirror box aperture : I stuck rigid paper or credit card on them to avoid to damage them or to introduce accidentally foreign parts inside.
 - Remove the back cover pushing down the screw head on the inner axis (A217 : do not unscrew it, it's not useful), like for a watch belt (there is a spring inside the axis)..
 - Remove all screws of cover parts, putting them in separate plastic bags : left, right, front ring (open flash to reach the hidden screw), top and bottom. Try to identify the specific ones (color, head, length...) making a drawing or writing down description, or taking pictures with the Digital camera for each step; for instance, for the top cover part, one long black screw is in film compartment, one silver one is on battery compartment side, very deep inside.



- Dismount the metallic bottom cover with gears O-D1 : be careful not to loose gears and one spring on camera body side ! put tape on them to maintain them in place.
- To completely free this O-D1 metallic piece, it will be necessary to loosen the 2 screws tightening the A265 part and the flexible contact (3 circular pads) in the film compartment, close to the shutter; when dismantled pull the flexible enough to free O-D1, be careful not the damage the flexible.

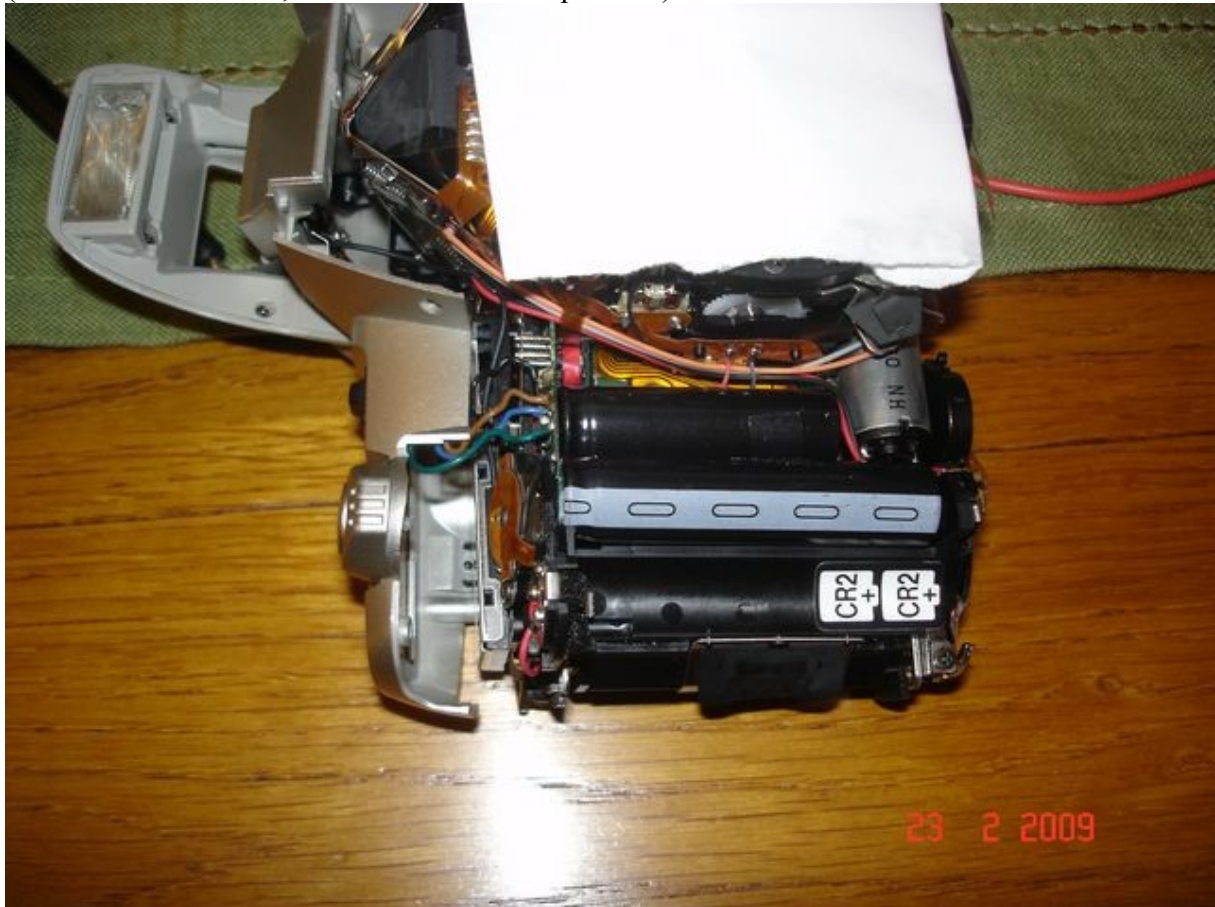


- detach the buzzer (the white disc with 2 wires), it is lightly glued but leave it soldered to the wires



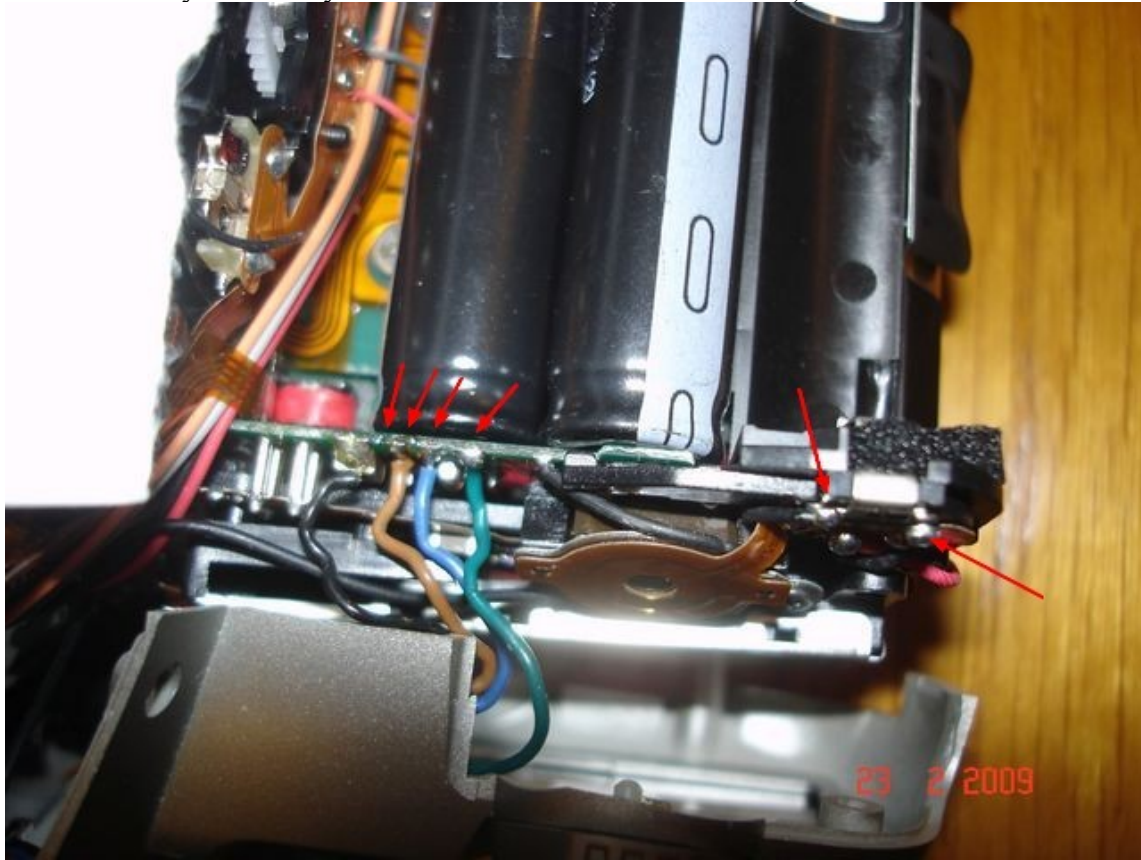
- This is the easiest step, I hope you are not desperate at this step, the hardest job is coming right now...
- The 2 main problems to reach the guilty motor of the mirror box is to dismount the flash board (2 big capacitors like black tubes) first, and the mirror box assembly after. This requires to unsolder a lot of wires; that's why pictures are very useful, even if the repair notice (electrical wiring diagram) may help.

(this is the flashboard, with the 2 tubular capacitors).

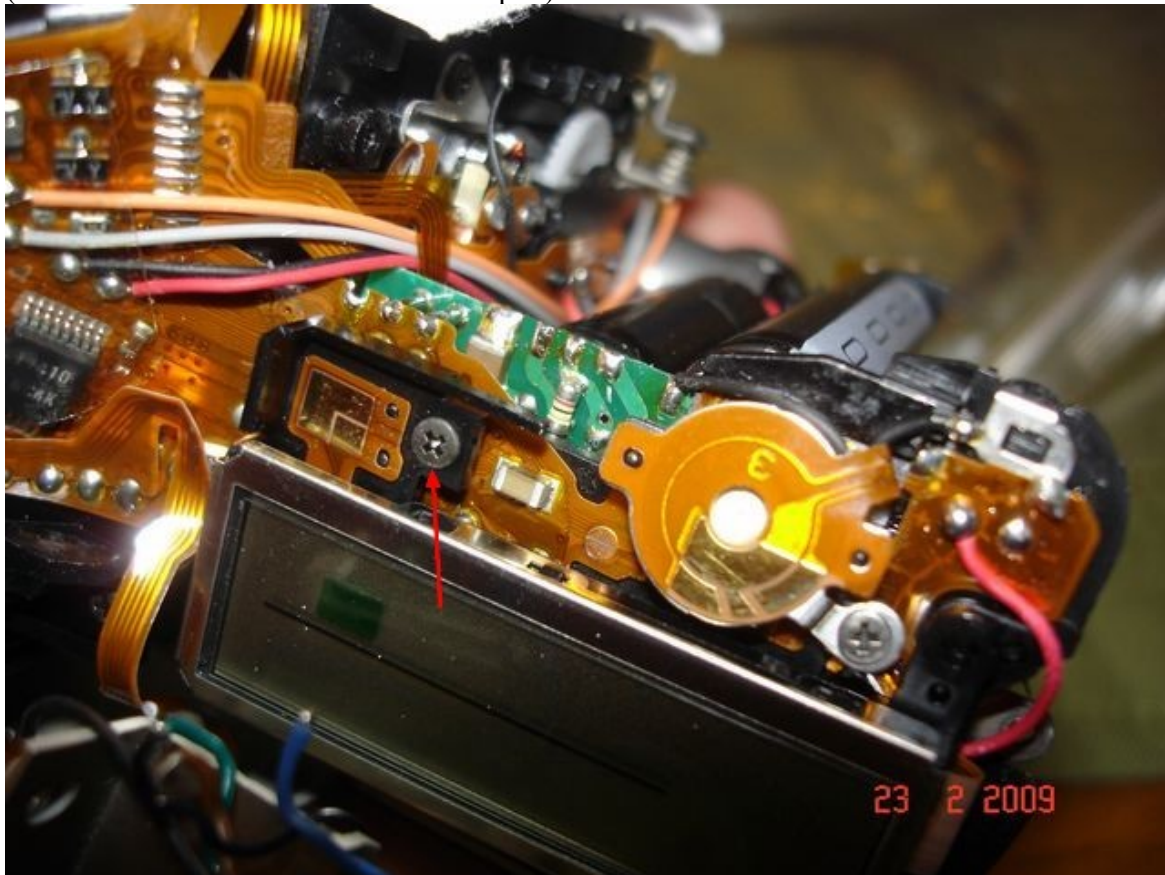


- You have to unsolder :
 - 4 wires on the flash board linked to the top cover (flash) + 1 long black wire coming from the flashlamp to the – battery contact; after this step, you will dismount 2 screws of the LCD : one up, close to the ON/OFF switch pad, and one below the LCD.
 - 2 + 4 wires of the top flexible board
 - red wire on the + contact of battery case
 - black wire of the – contact battery case
 - 2 contacts (+ and -) on the battery case directly soldered with the board carrying the shutter button.
 - 4 pillar contacts (use a solder pump, this is mandatory to avoid overheat on the flexible board).
 - Red wire on the flash board

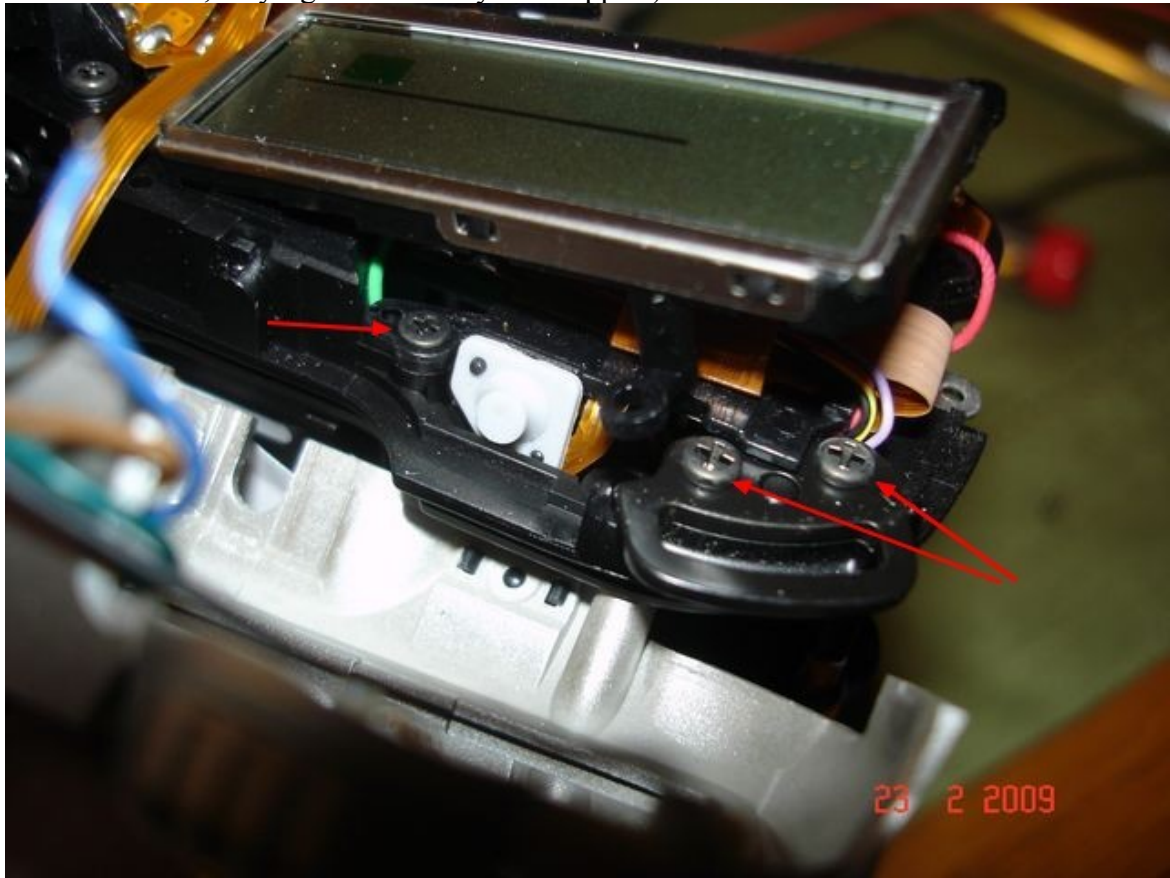
(The 4 wires to unsolder between the flashboard and the flash : black left, brown, blue and green,; unsolder the little black on the right, but on the right extremity at - battery contact ; additionally, there's a long black wire coming along the flashboard, running from the flashlamp to the - battery contact : you will unsolder it on the - contact)



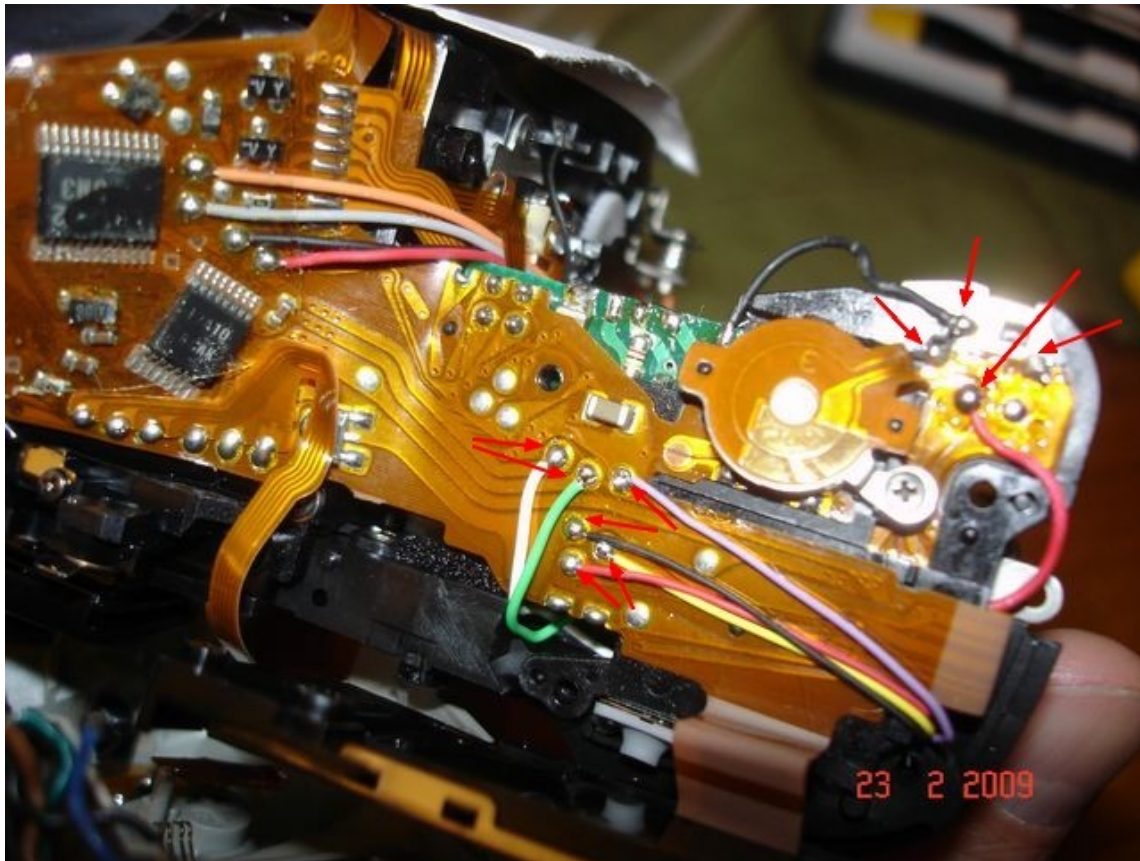
(the screw to loosen close to ON/OFF pad)



(the screw to loosen below the LCD screen; additionally the 2 screws on the right shall be dismantled too, they tighten the carry belt support)

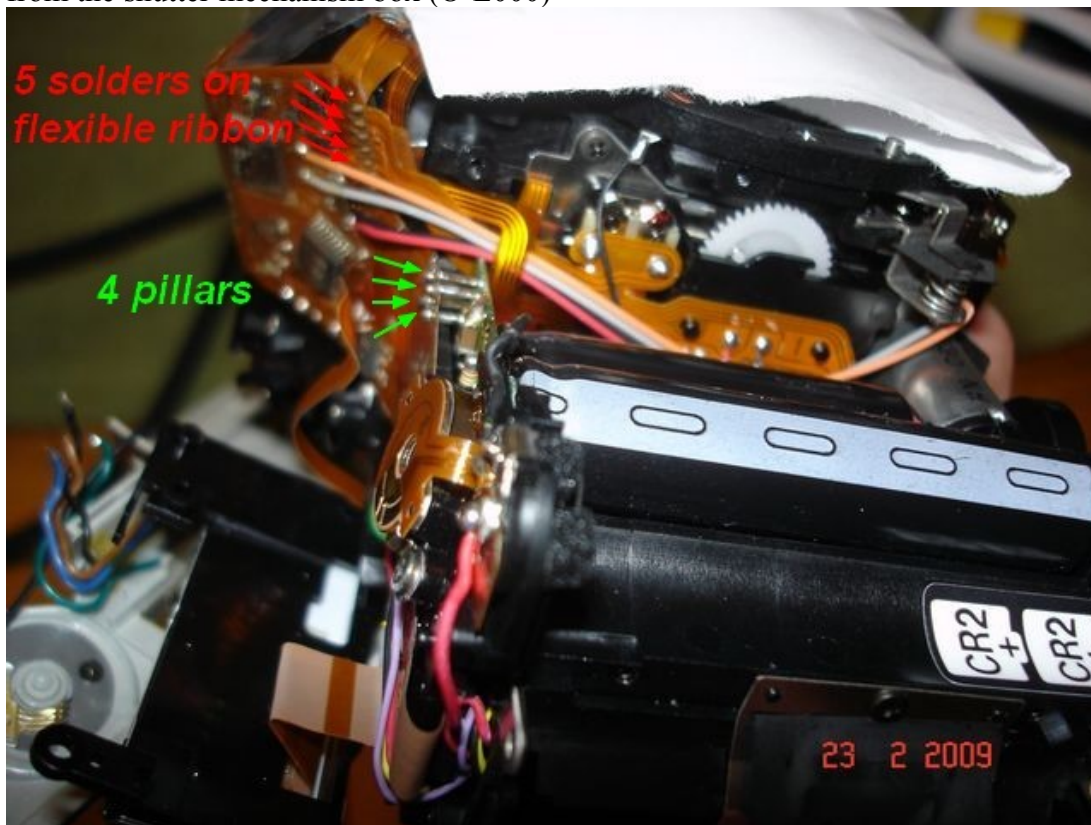


(The 2+4 wires to unsolder, and the red and the black wires on the right on the battery case contact, and on the board close to the shutter button; don't make error when resoldering it, don't be confused with the pads + and - !!! They are very close each other)

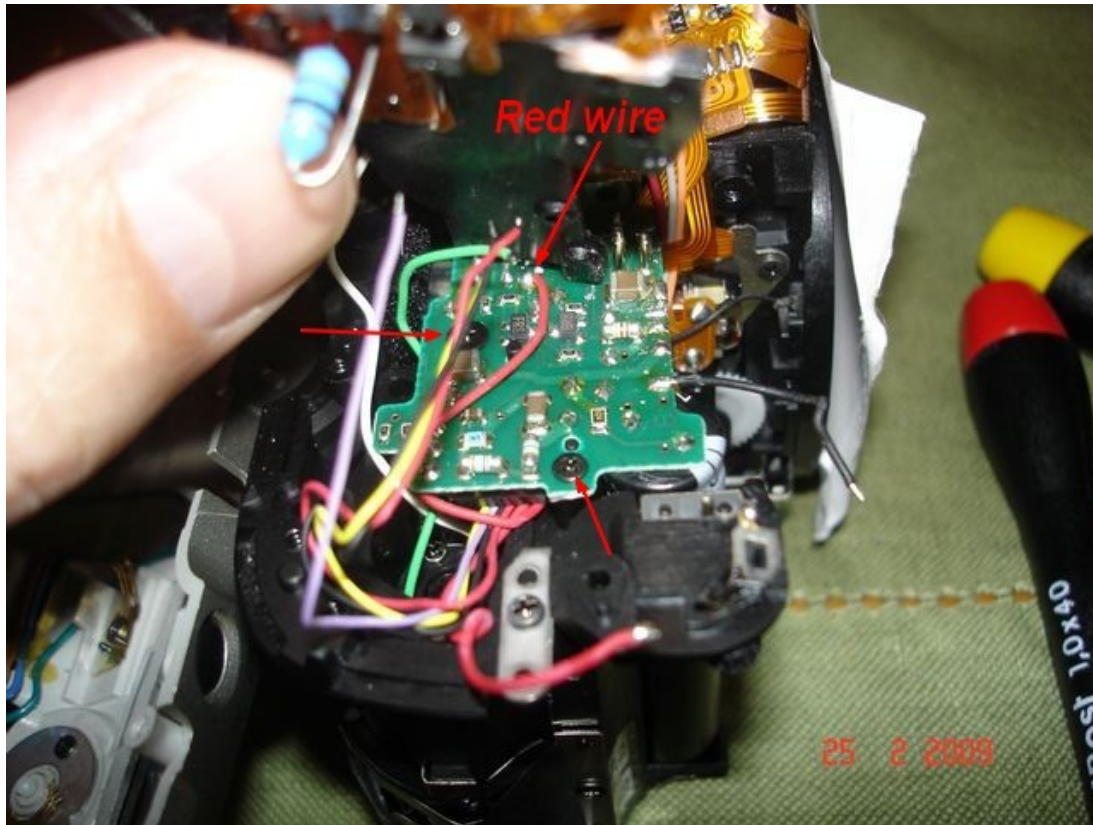


Here you see the 4 contact pillars soldered between the flashboard and the main flexible board : unsolder them at main board size (on the left here); don't overheat, because you may unsolder the other extremity of the pillars !

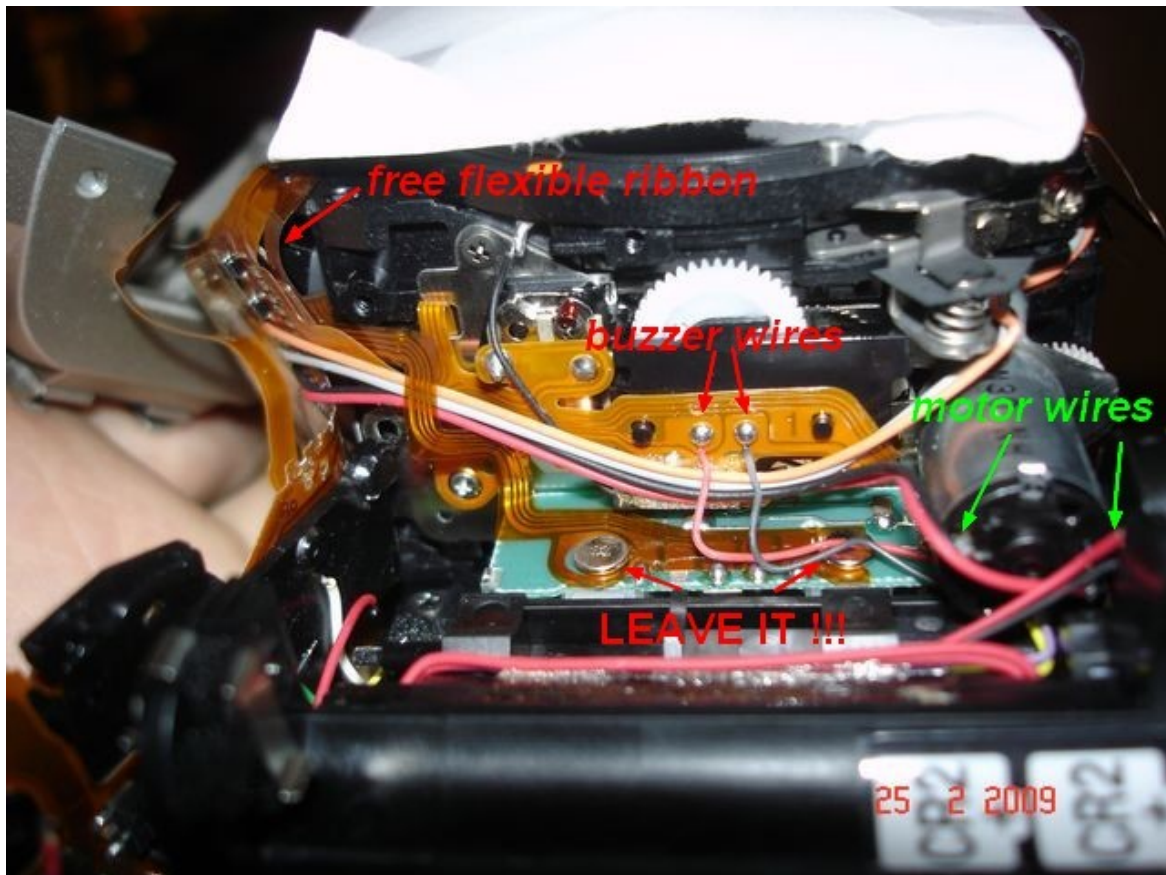
Unsolder the flexible ribbon soldered on flexible main board (close to the reflex prism) coming from the shutter mechanism box (O-E000)



Here to lift up this board, it was necessary to unsolder the 2 contacts (+ and -) on the battery case soldered with the board carrying the shutter button (they are shown 2 picture above). Unsolder the red remaining wire are release the screws.

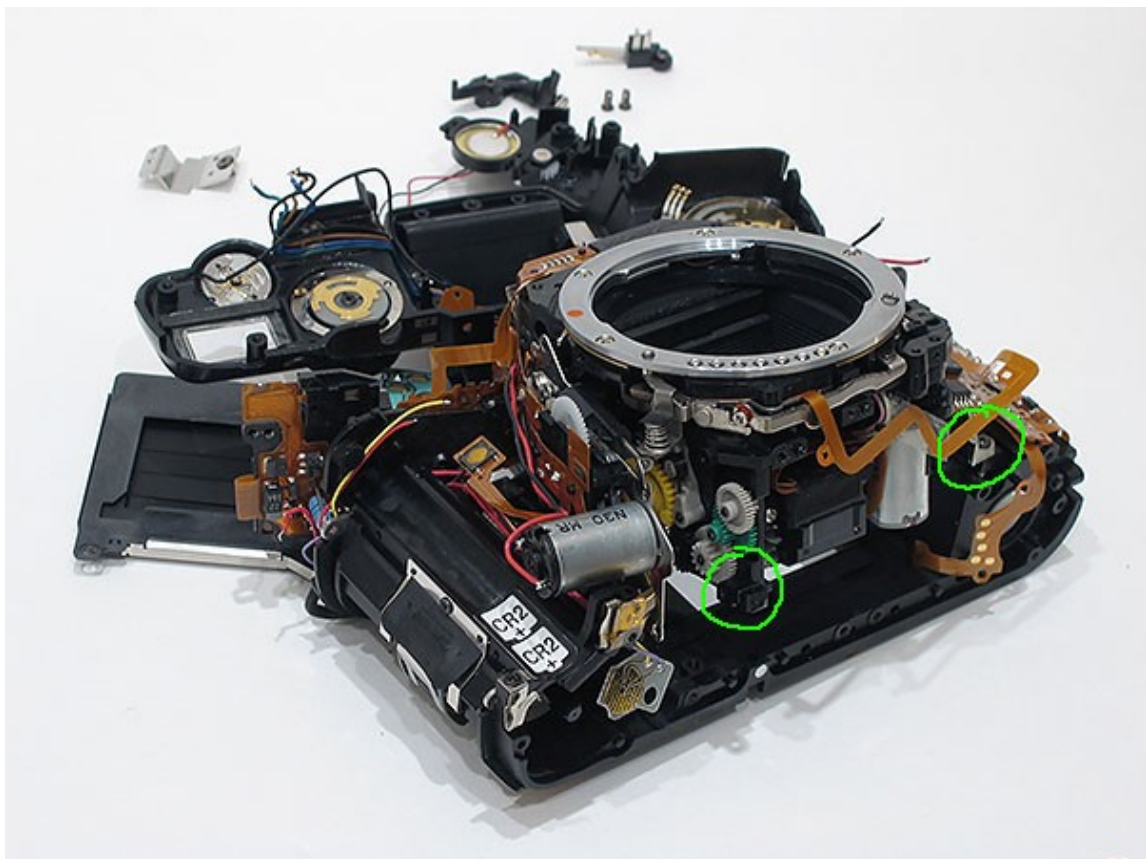


The flashboard is OUT !



Notice ! The flashboard capacitors shall be discharged to avoid any electrical stress : try to discharge the flash before putting out batteries, if the camera permits you (before starting the dismantle); if not, measure the voltage on capacitors contacts at board level : if voltage is higher than 10V, discharge each of them with a resistor 100kOhms.

- Unsolder the black and red wires on O-S250 motor
- Move away the flexible ribbon (previously unsoldered) coming from shutter mechanism
- Move the buzzer away (do not unsolder it)
- (Those 3 steps are necessary to have free space to dismount the mirror box assembly).
- NOTICE : do not dismount the 2 big screws on the top of O-E000 (I did it by mistake, it was a mess after, because it's the inner mechanism of the shutter, lot of work to rebuild it and set it again...)
- Dismount the viewfinder (2 screws)
- Dismount the mirror box assembly (4 screws + 1 reinforced plate A162 : 2 at the bottom front , and 2 at the top rear, below the viewfinder free space).



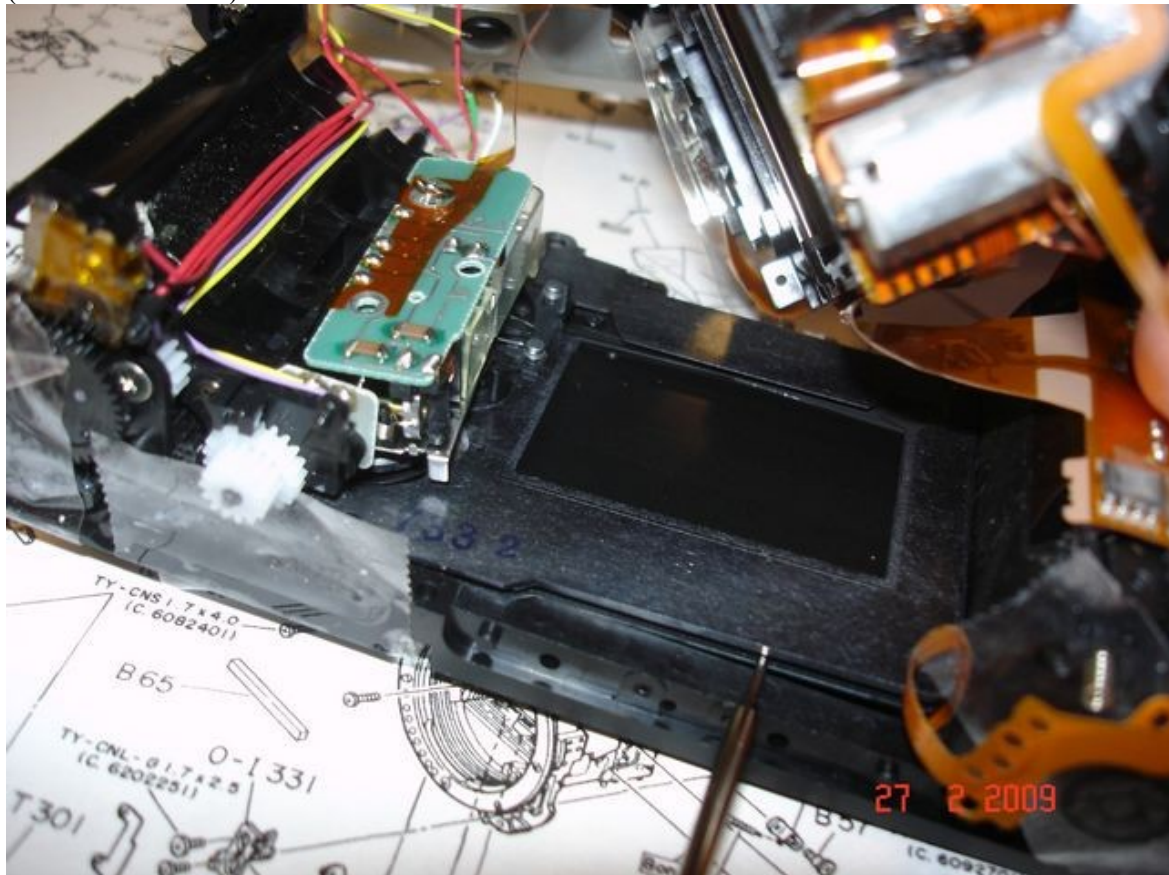
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(Within the green circles, here are the 2 bottom screws and the reinforced plate).

- Close to the end.... now extract the mirror box assembly with a delicate and combined movement : towards and to the right simultaneously, because there is a flexible connection in "Z" on the right of mirror box connected to the ASA contacts film detector, this needs some tricky ability to free the mirror box. Don't force at all, I shall be free without forcing it

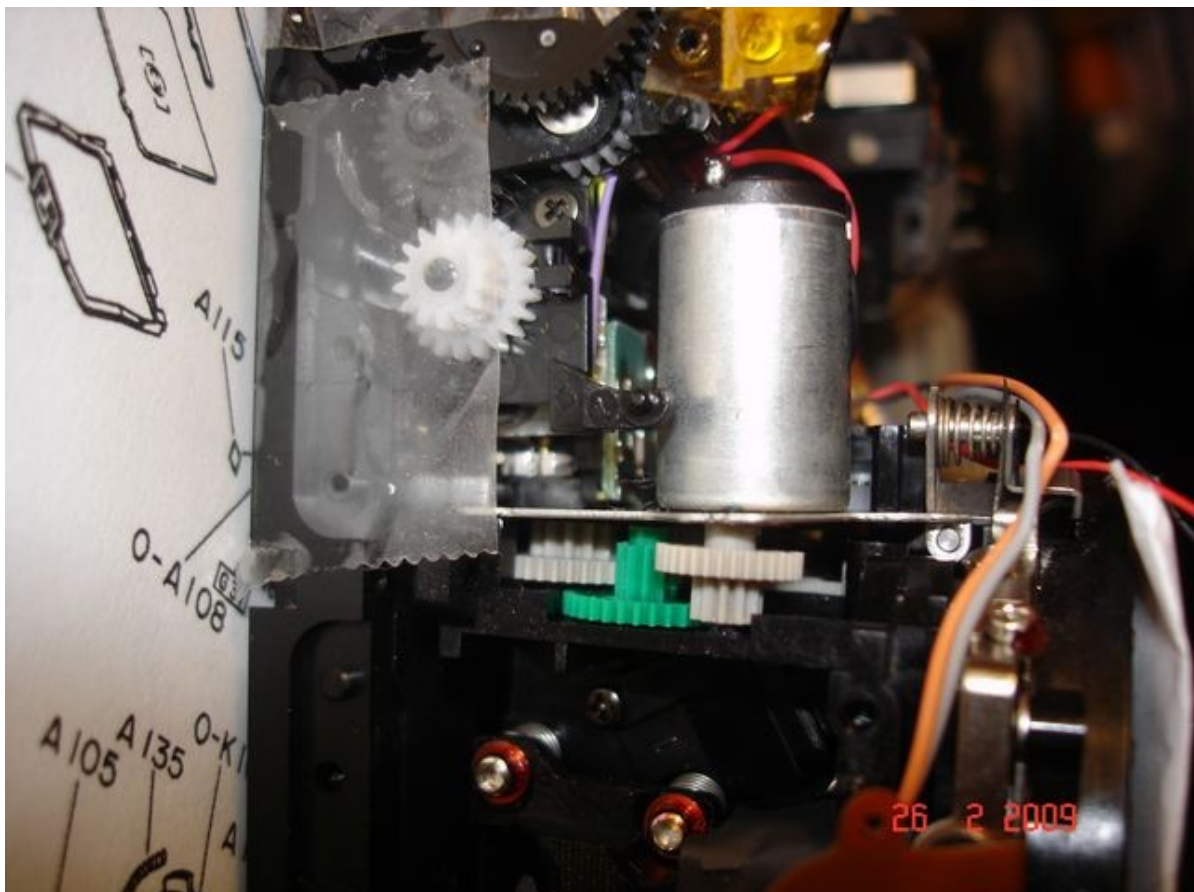
(mirror box OUT)



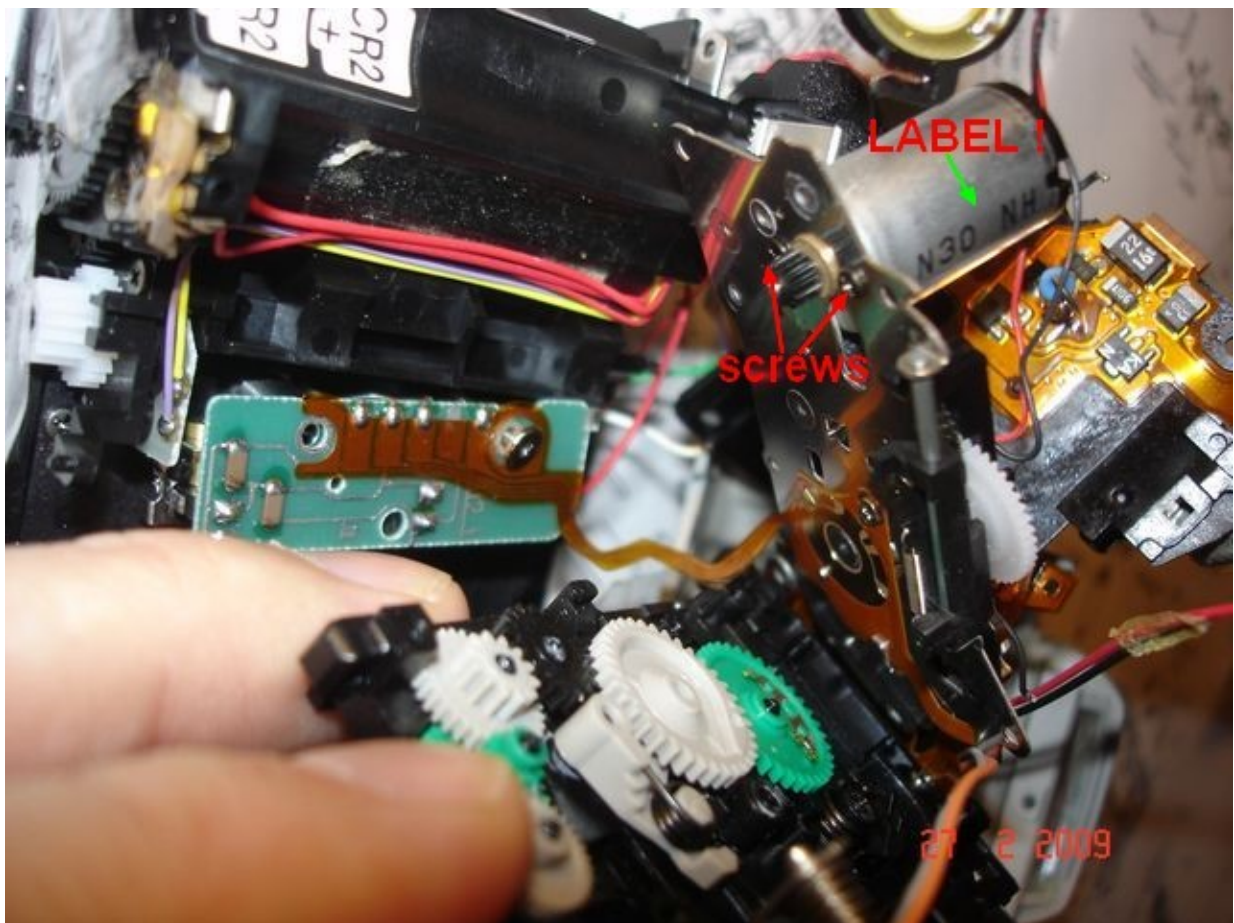
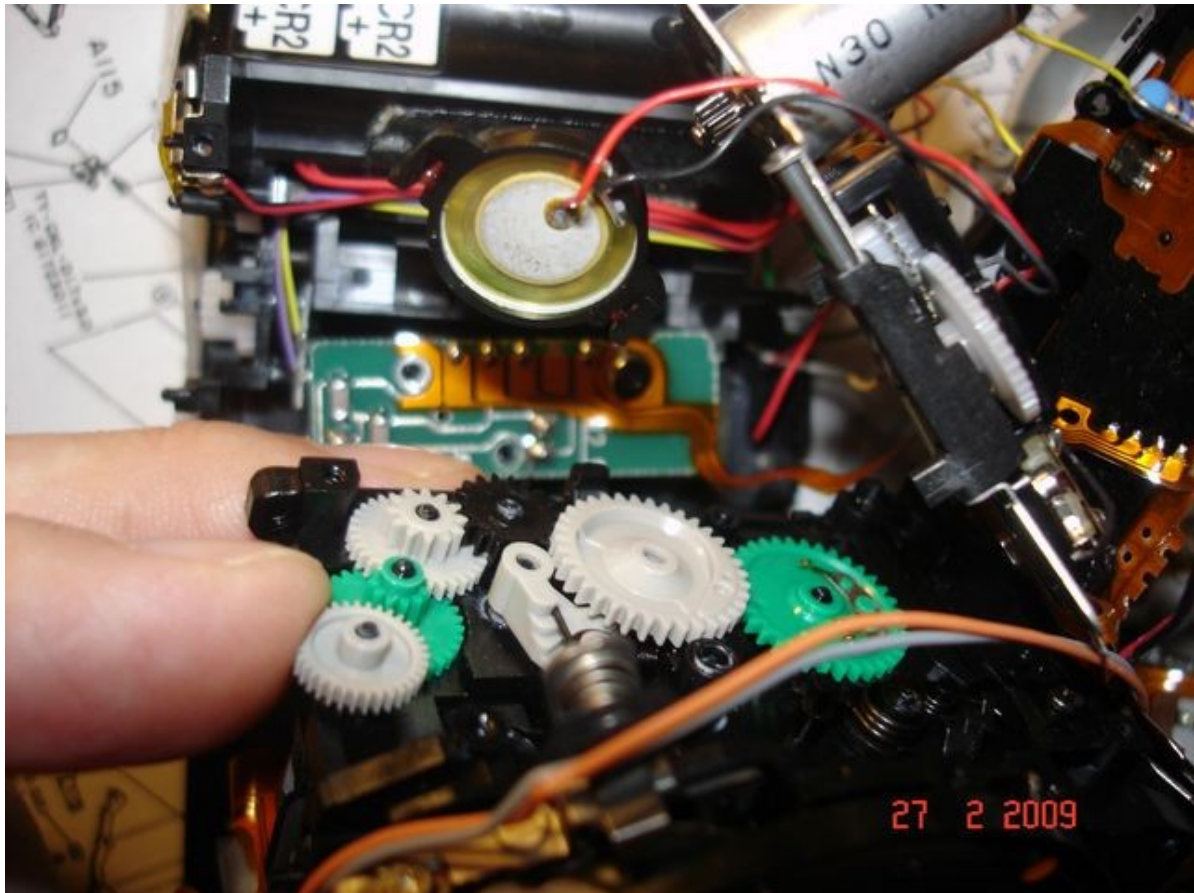
(the gearbox)



- Now you have the G-100 gearbox : loosen the 4 screws, and delicately open the gearbox, avoiding to loosen the gears. Use tape if necessary.



(O-100 is now open, motor ready to be free !)



- Final step : remove the 2 inner screws that tighten the bloody O-S250 motor to G-100.
Done !!

- Put the new motor : be CAREFUL on orientation of the motor !!! The label is UP, visible when remounting it on G-100, and in the camera (as on my picture); this is fundamental to avoid to have the motor running in the wrong way when you will resolder wires on it (that's why pictures help!)
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- ... and do again all what you did before in reverse order...
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- if remounting the mirror box assembly is hard (be sure that the 4 feet are in contact with the body before tightening the 4 screws), this may because you have to resynchronise a bit the gearbox with the shutter mechanism; I don't think you may suffer this inconvenience, if shutter has not be accidentally opened as I did. Tell me if you have a problem at this step.
- BE CAREFUL and TAKE YOUR TIME on each reconstruction step :
 - o check twice that you resolder on the CORRECT pad the CORRECT wire, making comparison with the pictures.
 - o Check that parts match perfectly each other, without forcing when tightening screws
 - o Checks screws type
 - o Check that no wire is stressed or compressed; they must be put as on pictures, a few position tolerance is allowed.

GOOD LUCK !

Bob