

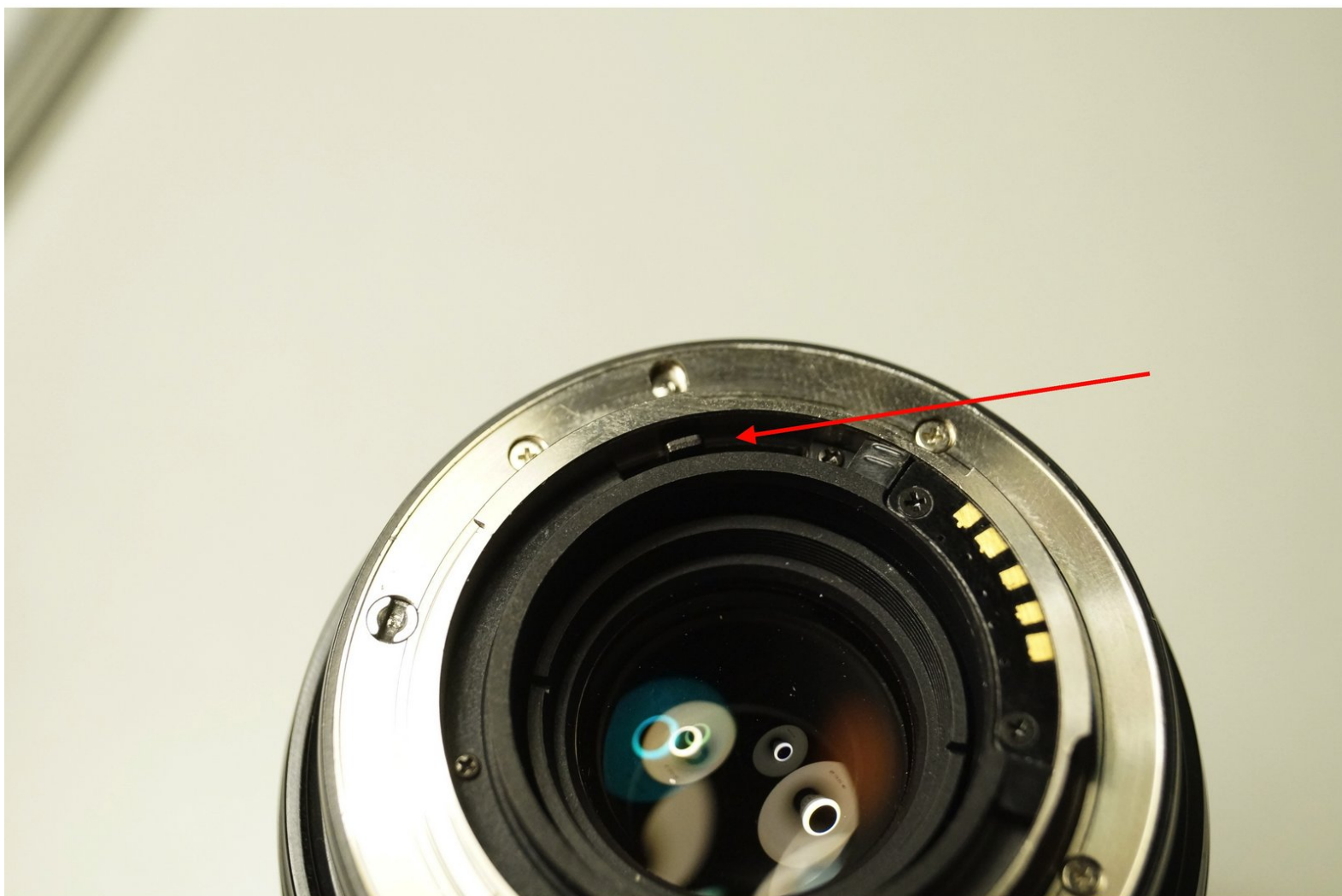


Repairing a stucked Aperture on Vivitar Series 1 28-300mm Camera Lens

Symptom: badly exposed pictures. Depending on the way the aperture is stucked, you'll see mostly all pictures over- or underexposed, regardless what manual aperture settings you use.

Autofocus also doesn't find correct settings.

Written By: binderrobert



INTRODUCTION

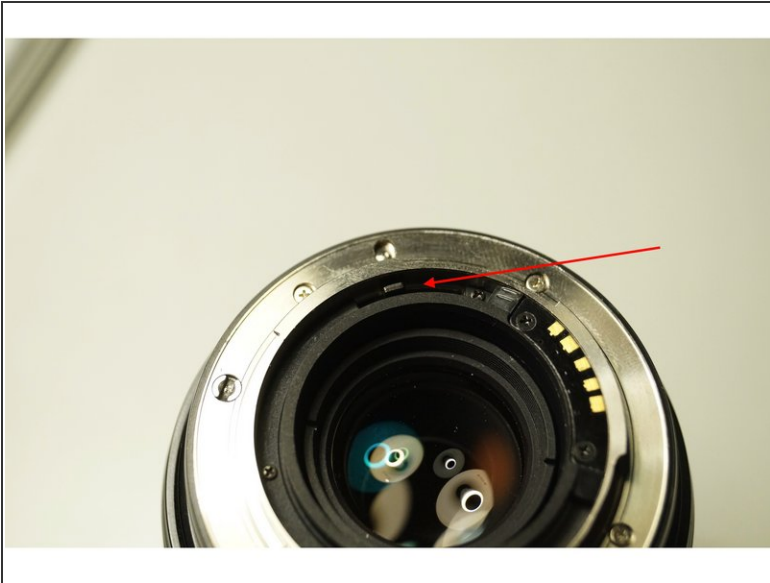
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TOOLS:

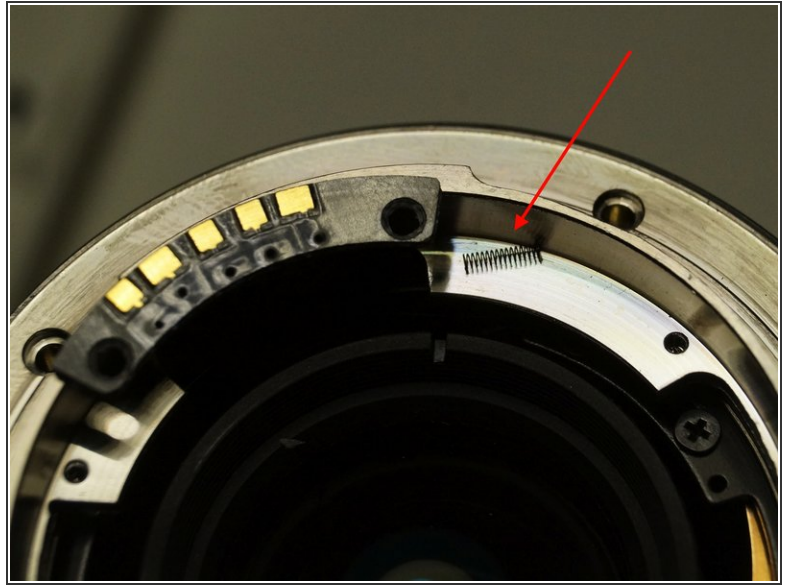
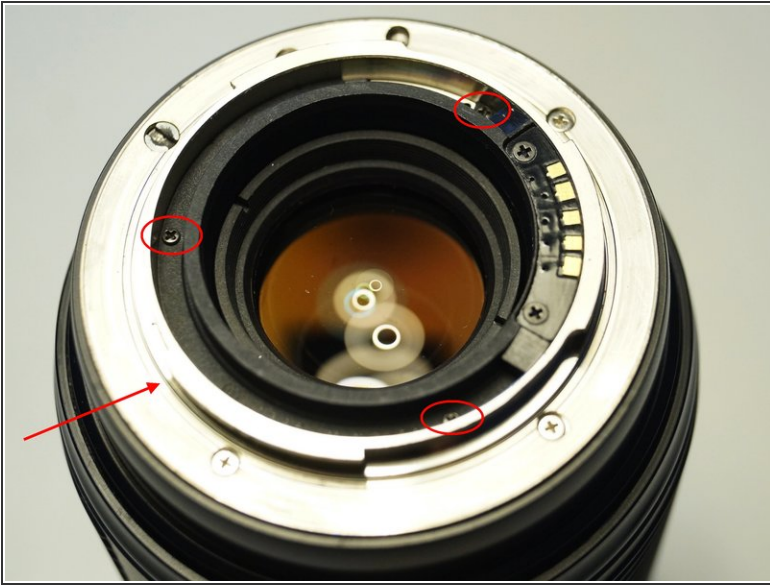
- [Phillips #00 Screwdriver](#) (1)
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Step 1 — first check of aperture moving



- Move the lever back and forth and look through the lens: the aperture on a good lens should open and close and spring back into position

Step 2



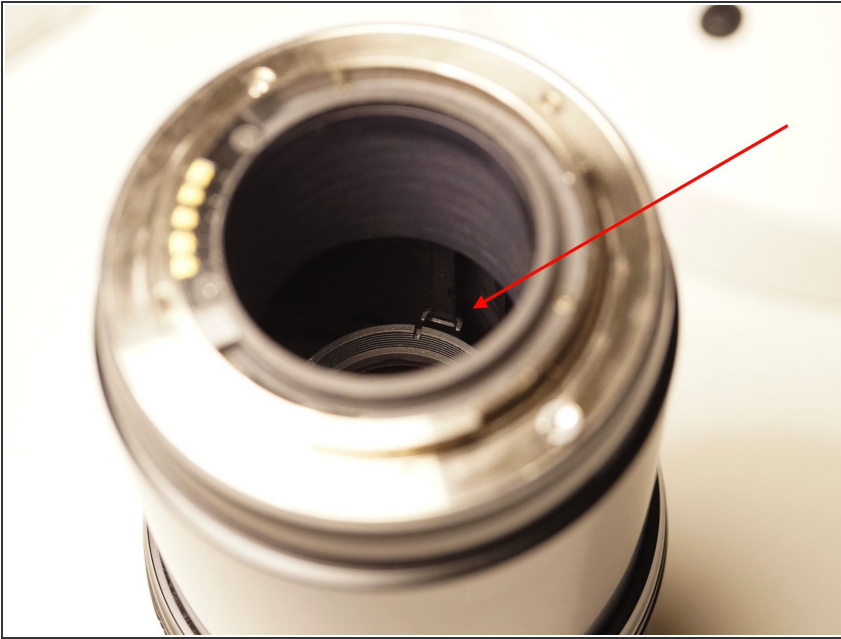
- remove the 3 little black screws (circled) and the one on the side (arrow)
- Remove the two black screws holding the contact plate in place. Be careful: lift up the contact plate slowly. Underneath the contact plate sits a tiny spring. The spring sits in a hole pressing against the contact plate from below.

Step 3 — remove the inner tube



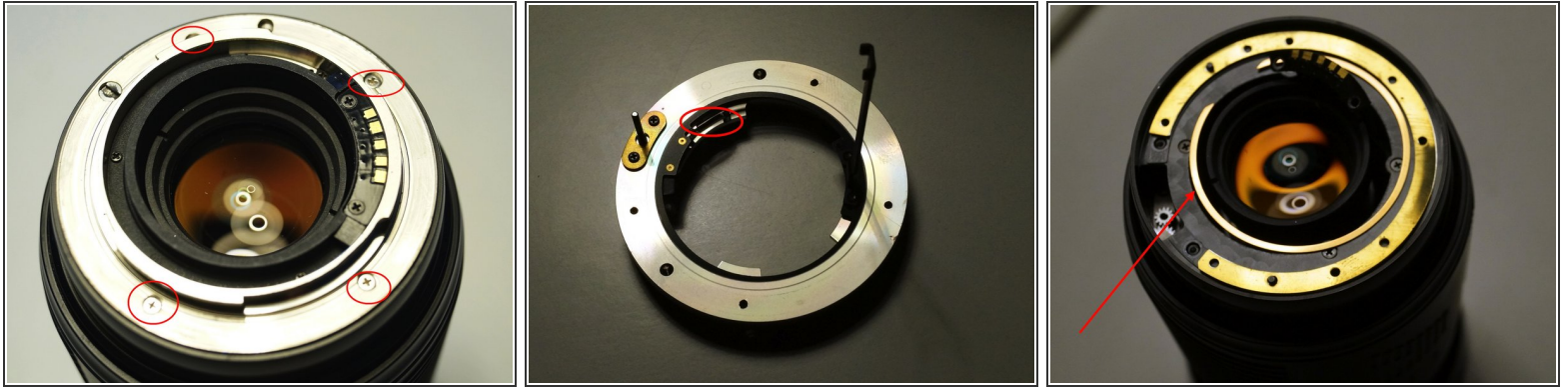
- gently take out the inner tube. Take care about the contact plate: it is connected with some fine wires to the optical parts and cannot be removed

Step 4



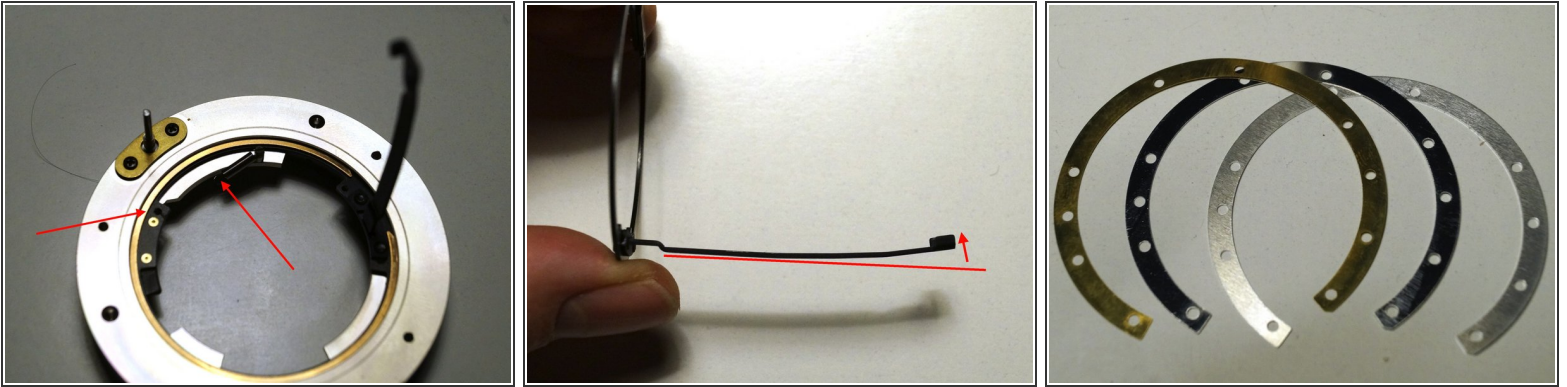
- extract the lens to its full length (zoom in to 300mm) and look at the inside for the aperture lever. In the picture it correctly grips the lower aperture lever. if there is a problem, the 2 parts do not line up and connect to each other
- You can try to put it back in place right from this point. Use some tweezers or a plastic spudge: the upper part can gently be bent to snap back in place.
- In my case I noticed another problem: the lever would not move with ease and seem to stuck and stop sometimes. Time to remove the metal ring.

Step 5 — Remove the metal ring



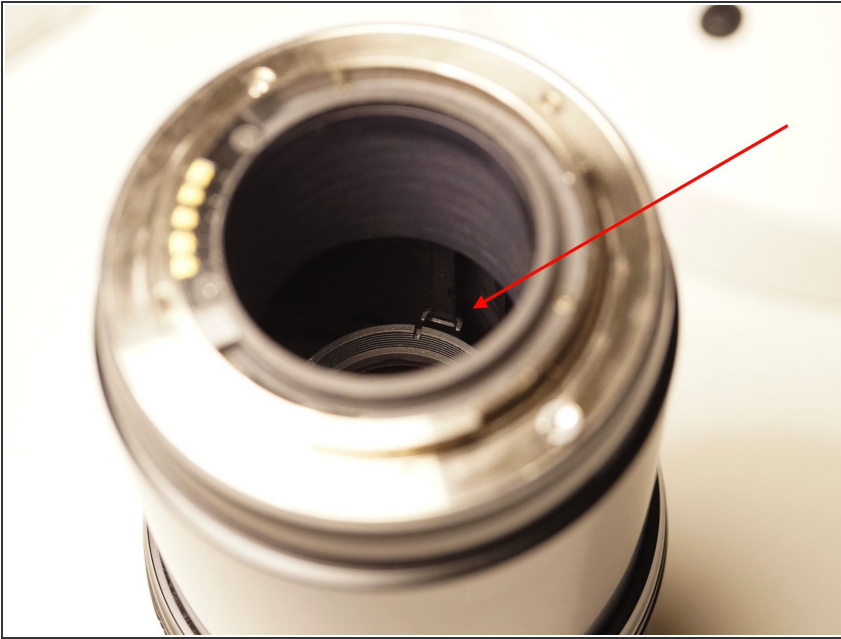
- unscrew the 4 screws and take off the metal ring. Attached to the metal ring is the aperture-moving lever, so you need to slide it off a long way.
- The lever has a small spring attached to the metal ring: keep both parts together, to save the spring.
- That retaining ring (arrow) took me a while to sort out: it doesn't belong there, but rather fell out of the just removed metal ring.

Step 6 — put retaining ring back onto metal ring



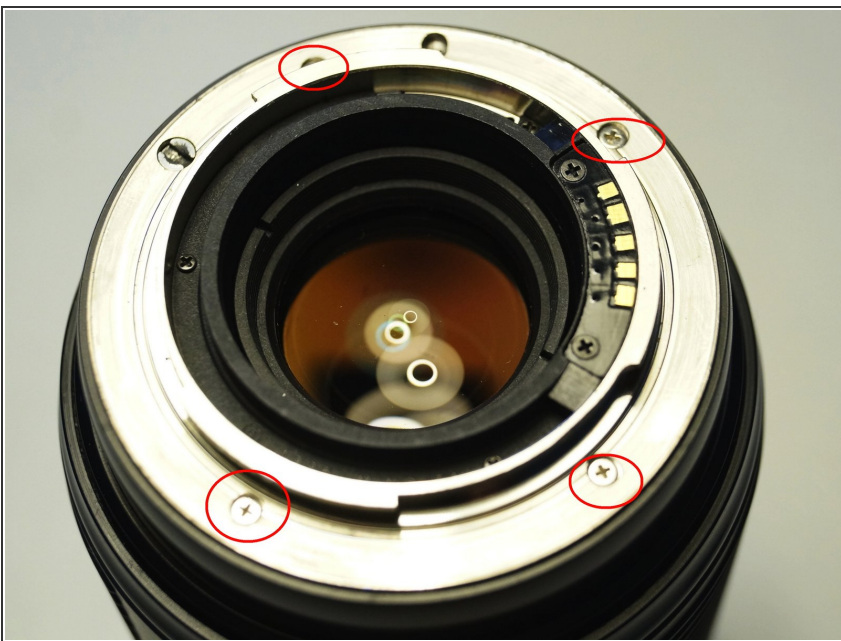
- That turned out to be the problem: the retaining ring had snapped of the metal ring, giving the aperture lever to much room to move around and disconnect from the lower aperture lever.
- Put the aperture lever (see left arrow) and the retaining ring back into the metal ring as shown in the picture. Connect the spring (see center arrow) in case it was disconnected.
- I bent the lever slightly to better grip onto its opponent part
- In the upper left part of the first picture you'll see the auto focus pin: this one needs to be aligned in the lens body during re-assembly.
- three metal rings are on the lens body: do not mix them up. Picture shows the correct order.

Step 7 — Re-assembly



- This can become a little tricky. Best is to extract the lens to its full length.
- Put the metal ring back and align the auto focus pin with the gear wheel in the lens body. Slightly turn it with a screw driver until it fits into the hole of the gear wheel.
- At the same time try to align the two aperture levers that they are connected

Step 8



- put the remaining parts back. Always tighten the screws very loosely at first and continue tighten them in a starway fashion (opposite sides).

Step 9 — Bonus pictures



- In case you want to disassemble further: here are some detail shots of what to expect. Not necessary for the aperture fix!
- removing the 4 black screws lets you remove the big optical tube. Just slide it out carefully.
- You can see some decoder contacts: clean them and look for eventual problems here
- I was not able to remove the optical part from the housing. Hopefully some iFixit members can jump in here.

Arbeite die Schritte in umgekehrter Reihenfolge ab, um dein Gerät wieder zusammenzubauen.