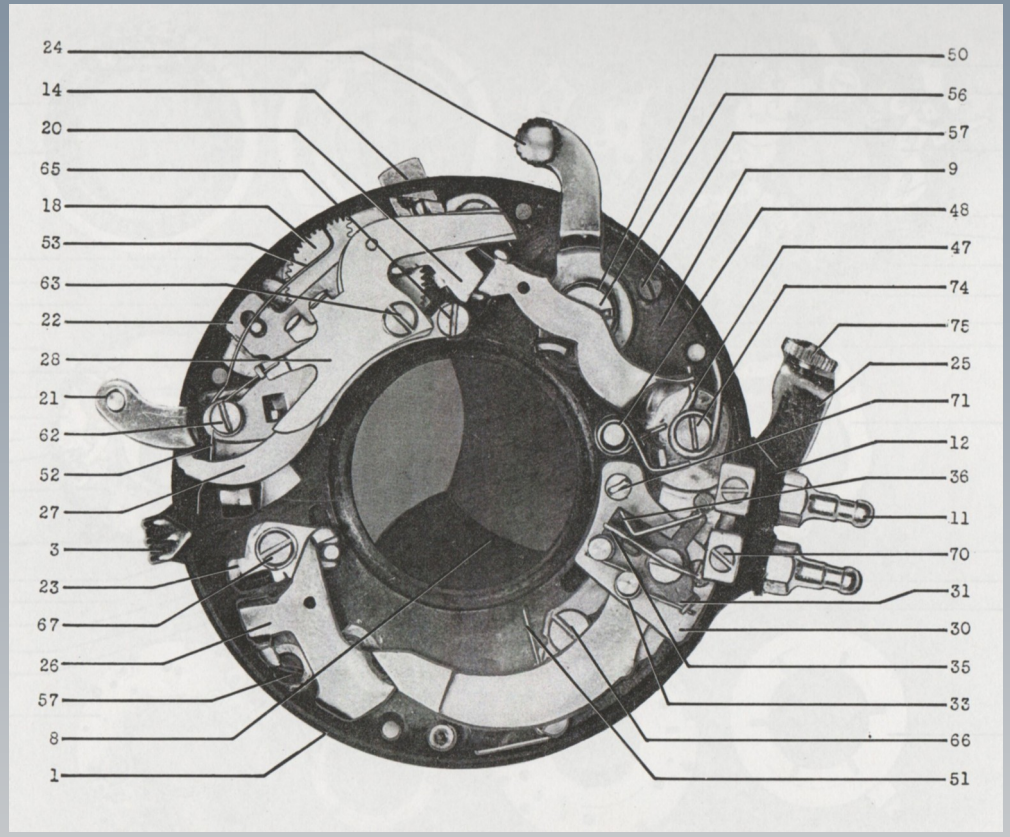
Minolta XG1 CLA Tutorial by Eugene Pate



https://learncamerarepair.com/

https://www.facebook.com/groups/360490091319202/

Post #1

https://www.facebook.com/groups/360490091319202/?post_id=592646841436858

I’m servicing a Minolta XG-1 for a complete CLA -

The first thing to do when servicing any camera mechanical or electronically operated is a visual inspection, look for any broken/damaged parts, install fresh batteries or set your power supply for the nominal battery voltage .

Learn Camera Repair Member and Professional Camera Repair Technician Don Perry was kind enough to post a Checkout Procedure from National Camera that can be found on the learncamerarepair.com website.

Visually the camera and lens are in fairly good condition, some sand and light dirt are present, upon removing the lens I found the owner had mounted the lens incorrectly and when that happens if force is used the mirror box light shield plate can become damaged, in this case the owner forcibly removed it leaving just a small loose portion (see the service manual on for the exploded views, part numbers and service information).

After installing batteries I found the shutter and electronics working, the wind lever over-travel has been adjusted too far resulting in a less than positive feel upon completion of the winding stroke, often someone will change the adjustment between the shutter charge gear and idler gear one tooth instead of using the fine adjustment located at the eccentric screw below the MD Coupling on the bottom.

The speeds are slow in auto and manual and the meter is slightly overexposing as well. The LED readout indications “jump” indicating the AV, SV and TV resistor bands and brush contacts are dirty (AV = aperture value, SV = speed value and TV = time value).

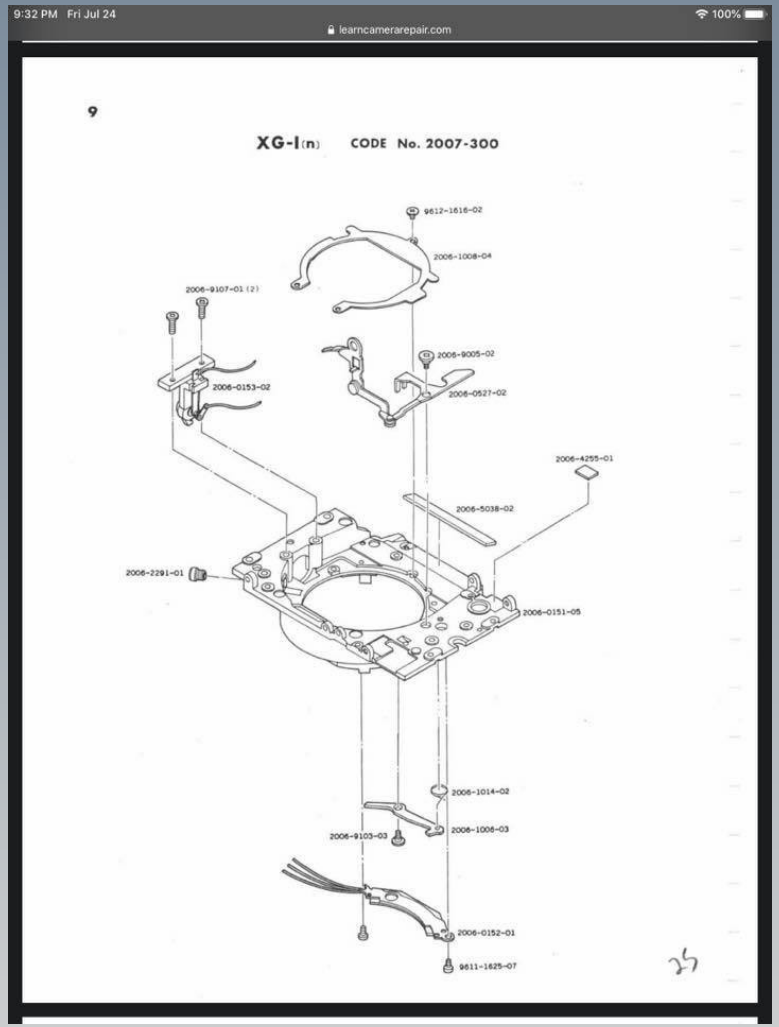
In this model intended for the amateur market the slow speeds below 1/30th second are just a series of dots representing 1/15, 1/8, 1/4, 1/2 - 1 second is indicated - in some early XG models such as the first series of the XG7 the exposure meter readout doesn't work in the manual mode, you have to meter in auto, switch to manual and shoot, fortunately in these later XG models the exposure meter readout works in the manual mode.

I usually check EV9, EV12 and EV15 at either f5.6 or f8 (I like f8 from habit as a photographer).

The Minolta 50mm f2 lens is in good condition with no signs of fungus and the aperture mechanism is very responsive, unfortunately the focus is a little gritty from most likely sand - I'm going to strip it down completely and clean the lens and helical, re-grease it and adjust it. The aperture assembly in these prime lenses usually have an accuracy adjustment, I recommend setting 5.6 at 1/60th second EV12 and adjusting th exposure error as close as possible to "zero" ... in actual practice tolerable error in my opinion should be within 1/4 stop (.25) - many manuals state 1/3rd stop error + or - however if the shutter is off 1/4 stop and the lens is off 1/4 stop at the worst that's 1/2 stop ... good enough for a slide film exposure latitude. 1/3rd stop could possibly exceed that 1/2 stop tolerance if say the camera and lens both were 1/3rd stop over or even worse under-exposing.

Serviced properly there's no reason why this amateur model couldn't give outstanding results on film.


minolta
XG 1
Mirror box light shield plate
Part number
2006-1008-04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100%
learncamerarepair.com
9
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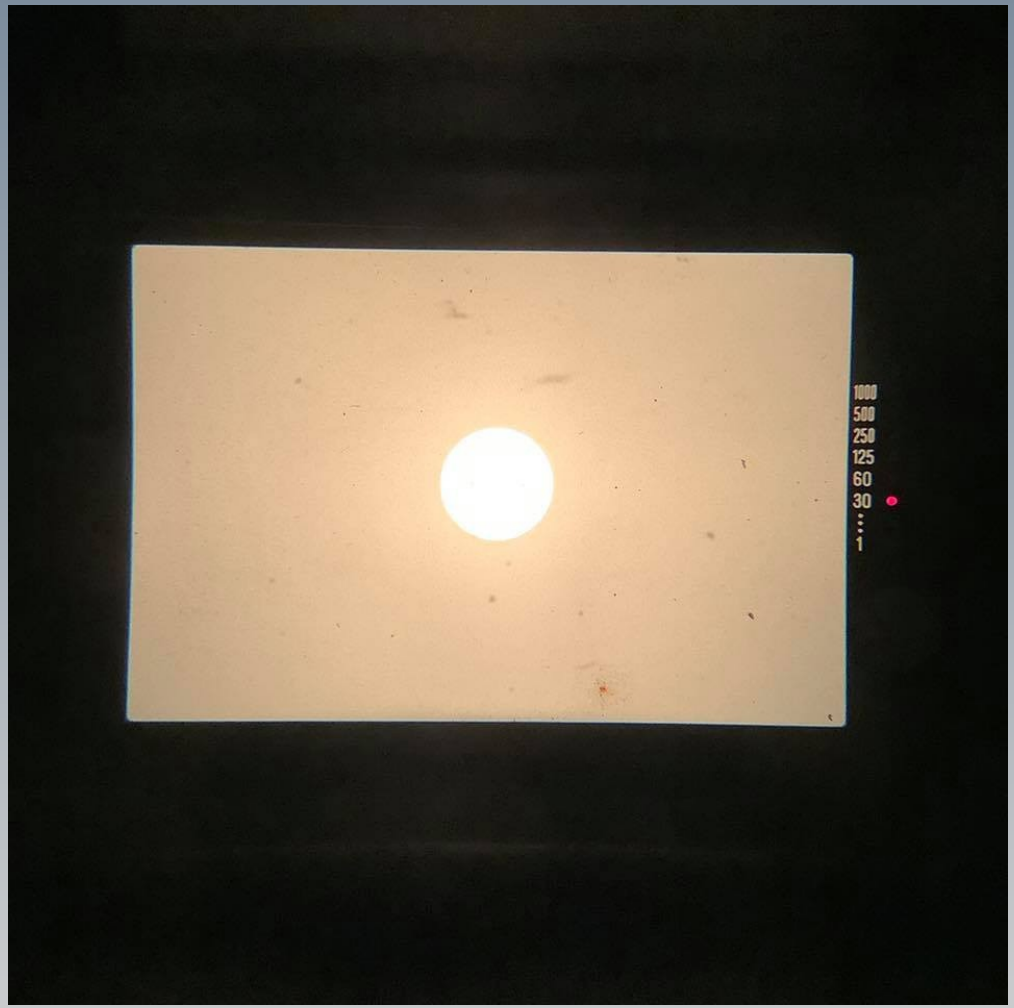
2006-9005-02
2006-0153-02
2006-0527-02
2006-4255-01
2006-5038-02
2006-2291-01
2006-0151-05
2006-1014-02
2006-9103-03
2006-1006-03
2006-0152-01
9611-1625-07
25


ZTS TESTER V
ERROR IN f-STOPS
-1.18
Ev - Av
TIME IN MILLISECONDS
SHUTTER SPEED
001.60
OPENING CURTAIN
12.35
CLOSING CURTAIN
11.97
ISO
100 200 400 800
ADJ Av
CURTAIN TRAVEL
REVERSE
ZTS LIGHT STANDARD
12.0
LIGHT VALUE
ZEISS
LENS CLEANER


ZTS TESTER V
ERROR IN f-STOPS
1.
Ev - Av
TIME IN MILLISECONDS
SHUTTER SPEED
015.41
OPENING CURTAIN
14.39
CLOSING CURTAIN
12.01
ISO
100 200 400 800
ADJ Av
CURTAIN TRAVEL
REVERSE
ZTS LIGHT STANDARD
12.0
LIGHT VALUE
ZEISS
LENS CLEANER


ZTS TESTER V
ERROR IN I-STOPS
1.
Ev - Av
TIME IN MILLISECONDS
SHUTTER SPEED
926.73
OPENING CURTAIN
14.61
CLOSING CURTAIN
12.13
ISO
100
200
400
800
ADJ
Av
CURTAIN TRAVEL
REVERSE
ZTS LIGHT STANDARD
12.0
LIGHT VALUE
ZEISS


1000
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30
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ZTS TESTER V
ERROR IN I-STOPS
.46
Ev - Av
TIME IN MILLISECONDS
SHUTTER SPEED
031.22
OPENING CURTAIN
CLOSING CURTAIN
ISO
100
200
400
800
ADJ
Av
CURTAIN TRAVEL
REVERSE
ZTS LIGHT STANDARD
12.0
LIGHT VALUE
ZEISS
LENS CLEANER
Safe for coated lens

Post #2

https://www.facebook.com/groups/360490091319202/?post_id=592662811435261

Disassembly -

Remove the batteries first... (the batteries are out and the battery cap is in place in the first photos).

Using your Handy-Dandy JIS Crosspoint Driver remove the two bottom cover screws and lift off the bottom cover for a quick visual inspection - light sand and dirt, a little corrosion on the battery chamber plate, actually pretty clean for this age...

If you don't have a JIS Crosspoint Driver, please don't not ruin the screws with a Phillips Driver!

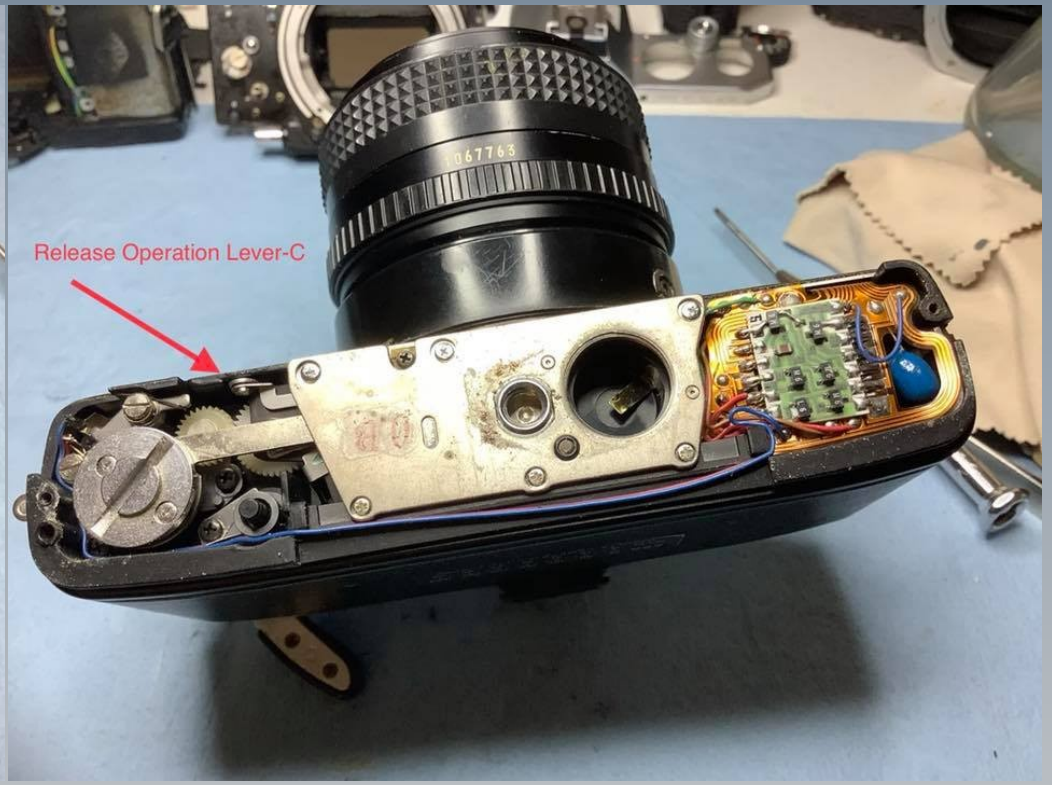
Often I see comments, "I purchased a Minolta XG Camera and it doesn't work when I press the release button"

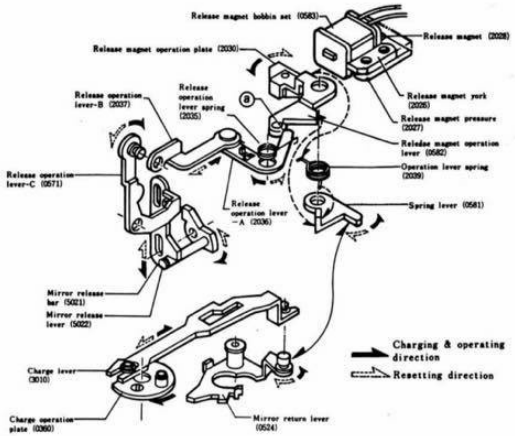
The first thing you should check is obviously for damage, especially the MD Coupling, look for tool marks, often an owner will have bad batteries or a bad connection between the battery cap and the battery contact in the body and mistake the Motor Drive Coupling Slot for a large screwdriver slot forcing the camera to wind when it's already been fully wound - the result depending upon how strong the owner is could be anything from a damaged winding shaft to damaging the shutter charge gear and idler gears as well as bending the mirror charge lever...

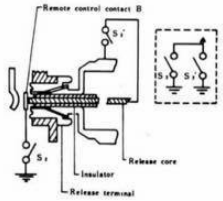
Provided there's been no damage and the camera isn't working electronically you can test the camera mechanically - in the video posted I show how to test the shutter/mirror action and winding action by simply actuating the Release Operation Lever- C (part number 2006-0571)...


1067763


1067763


Release Operation Lever-C





Post #3 - https://www.facebook.com/groups/360490091319202/?post_id=593266591374883

Time to disassemble the top cover...

Tools required:

JIS Crosspoint Driver

Smooth Jaw Needle Nose Pliers

Spanner Wrench

Tweezers

Soldering Iron

There are several variations of most Minolta XG models - make careful notes of parts and wiring, take lots of photos of your work to refer back to.

Hold both rewind forks with the needle nose pliers - do not wedge a tool in-between the forks or hold just one side, often one side will break off and you will remember curse words you promised your parents you wouldn't repeat...

Lift the rewind handle, hold the plastic knob carefully keeping the retaining screw in the cavity it sits in so you do not inadvertently damage the finish as the screw head lifts free of the plastic knob - unscrew the right-hand threaded knob counterclockwise to remove it...

Knowledge tid-bit - often you will see posts asking if anyone has a rewind knob for sale - that's because the last time they rewound the film they turned the rewind knob backwards (counter-clockwise and unwittingly unscrewed the knob)...

They will swear they didn't do that... if the film is rewound in the proper direction (arrow on the knob or handle) it tightens the knob.

Unscrew the on/off switch spanner nut, the stainless ball detent and coil spring below the black plastic on/off switch is loose - I keep my JIS Driver Bits magnetized so I can easily pick up magnetic parts like the ball and spring, as a added bonus screws stay with the driver bit when they're removed (fewer parts get lost).

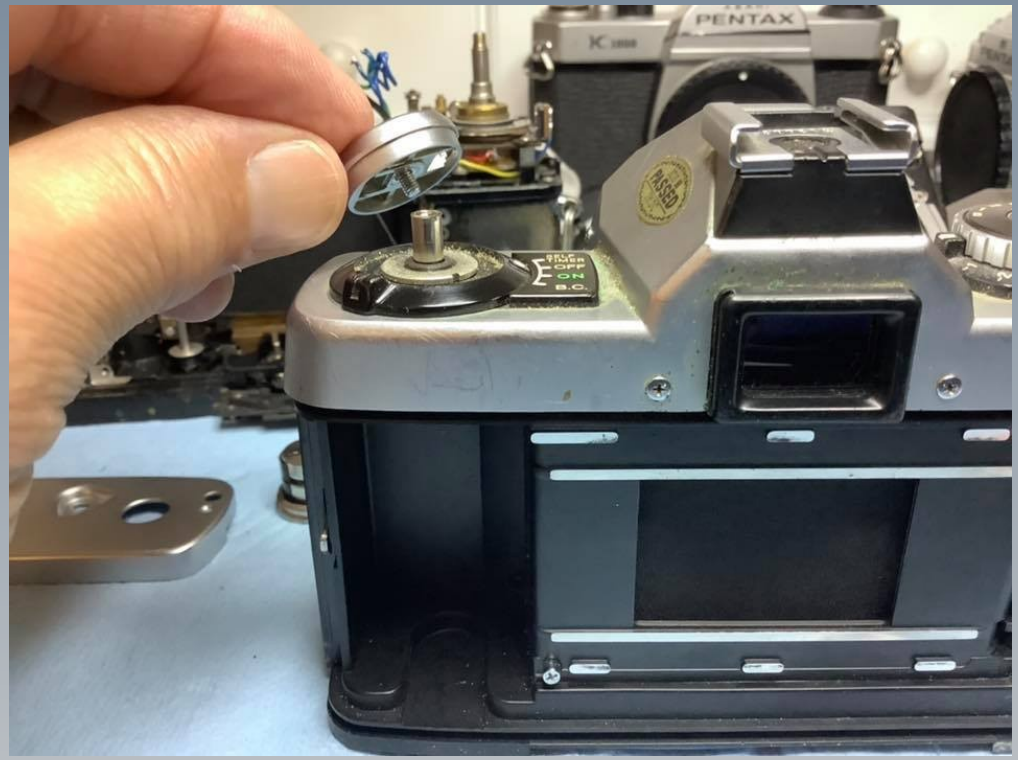
Moving on to the TV/SV/release button and dial assembly, use your spanner tips to unscrew the spanner nut around the release button, the button, TV Dial, SV Dial and a funny looking flat spring/washer hooks over the tab on the SV Dial, lift them off and set them aside.

Use your spanner to remove the winding lever capscrew (you can use flat tips if you have them, I have a selection of tips but it's quicker for me and I've learned not to mar the finish with the pointed tips), the lever is loose and a flat notched detent spring that acts to keep the lever stored or in the stand-off position (the shiny raised tabs work with two raised rounded tabs in the underside of the wind lever).

Next use the spanner wrench to remove the brass spanner nut...

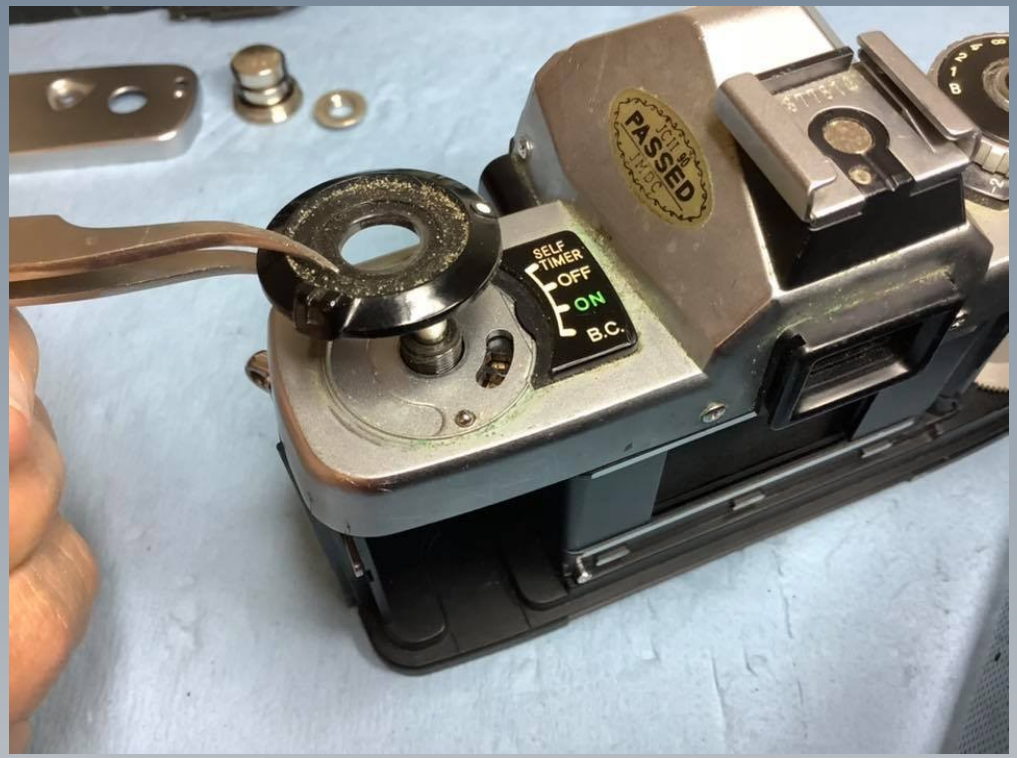
In the next post I'll remove the top cover screws and cover (FB only lets 24 photos accompany a posting).


PENTAX


PENTAX
OFF
ON


MINOLTA
AUTO
WINDER G
OFF
ON
B.C.


PASSED
SELF
TIMER
OFF
ON
B.C.


SELF TIMER
OFF
ON
B.C.
PASSED


SELF TIMER
OFF
ON
B.C.
PASSED


ASA
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1000
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-2


ASA
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ASA
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1600
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50
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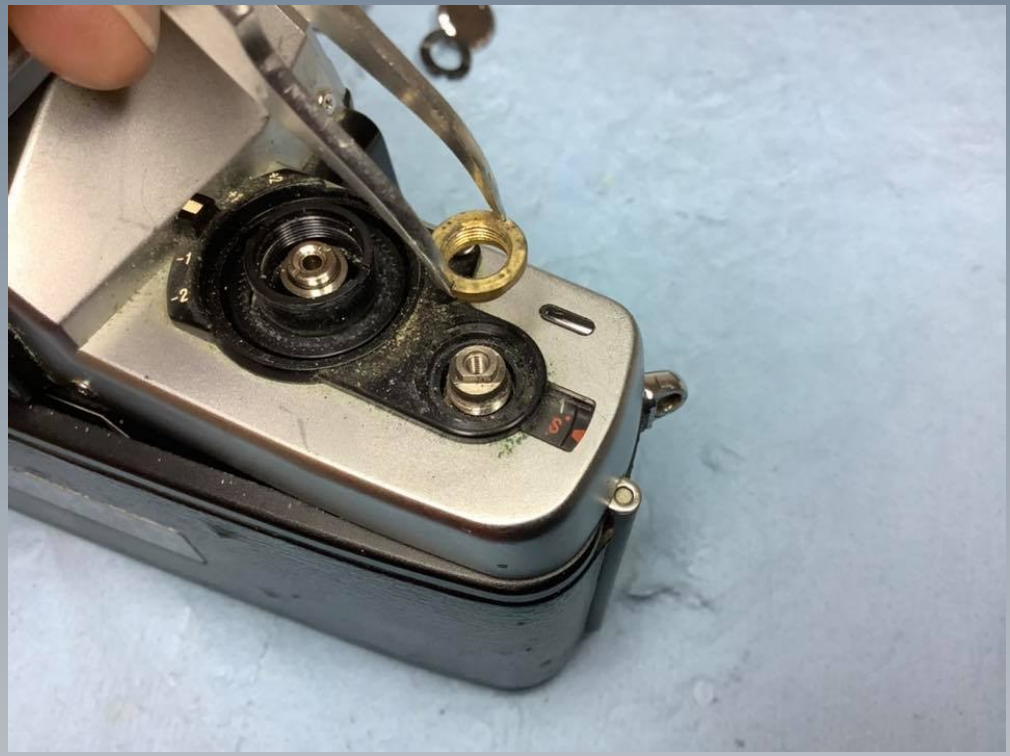
+2
+1
-1
-2


-1
-2



Post #4 - https://www.facebook.com/groups/360490091319202/?post_id=593271358041073

Remove the four screws holding the top cover using your JIS Driver - two long machine screws next to the eyepiece and two short machine screws at the wind and rewind sides of the prism area of the top cover.

Lift the cover carefully, there are two wires running from the main FPC (Flexible Printed Circuit) to the hot shoe dedicated contact and the center pin (note; the center pin has a switch that is closed when sliding the flash onto the shoe, so if you're testing the resistance of the flash contacts with an Ohmmeter you need to slide something on the side of the hot show ear that has the hard-to-see white nylon switch pin in order to close that switch).

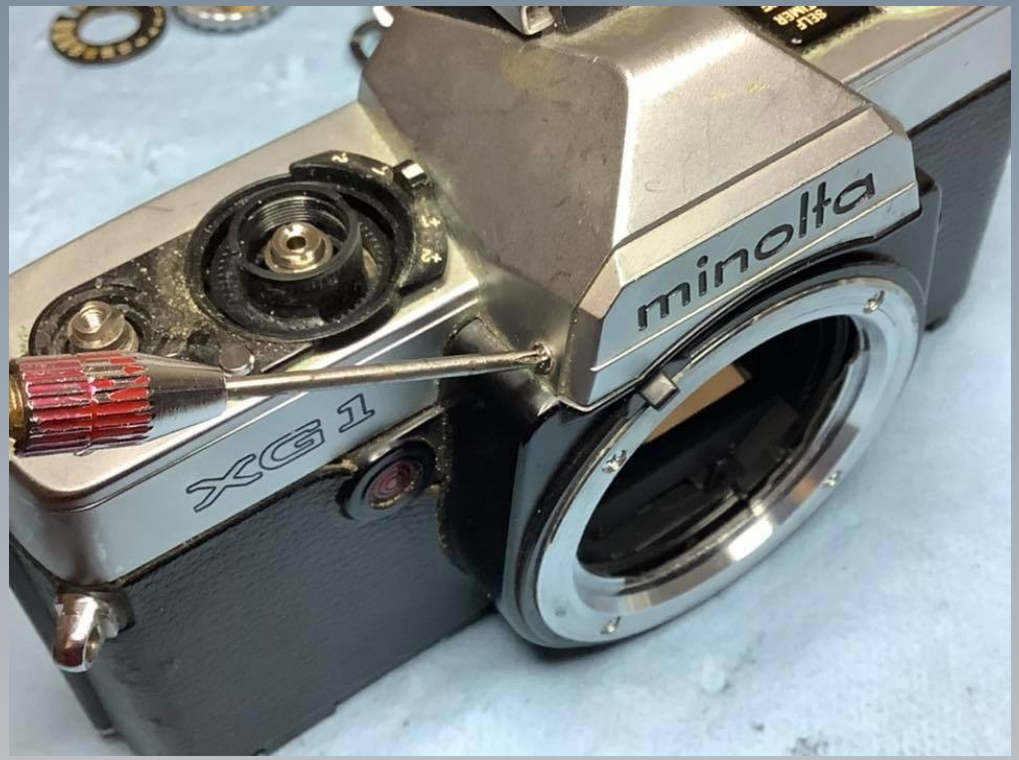
The eyepiece and main switch contacts are loose, lift them off and set them aside.

Unsolder the green and white Hot Shoe wires at the FPC... (you didn't forget to take photos of their location on the FPC and routing did you)?

Study the top carefully and take lots of photos of the wiring and switches, we'll remove those during the next series of disassembly posts.


ASA 25 50 100 200 400 800 1600
DIN 15 18 21 24 27 30 33
MINOLTA CAMERA CO.,LTD. JAPAN

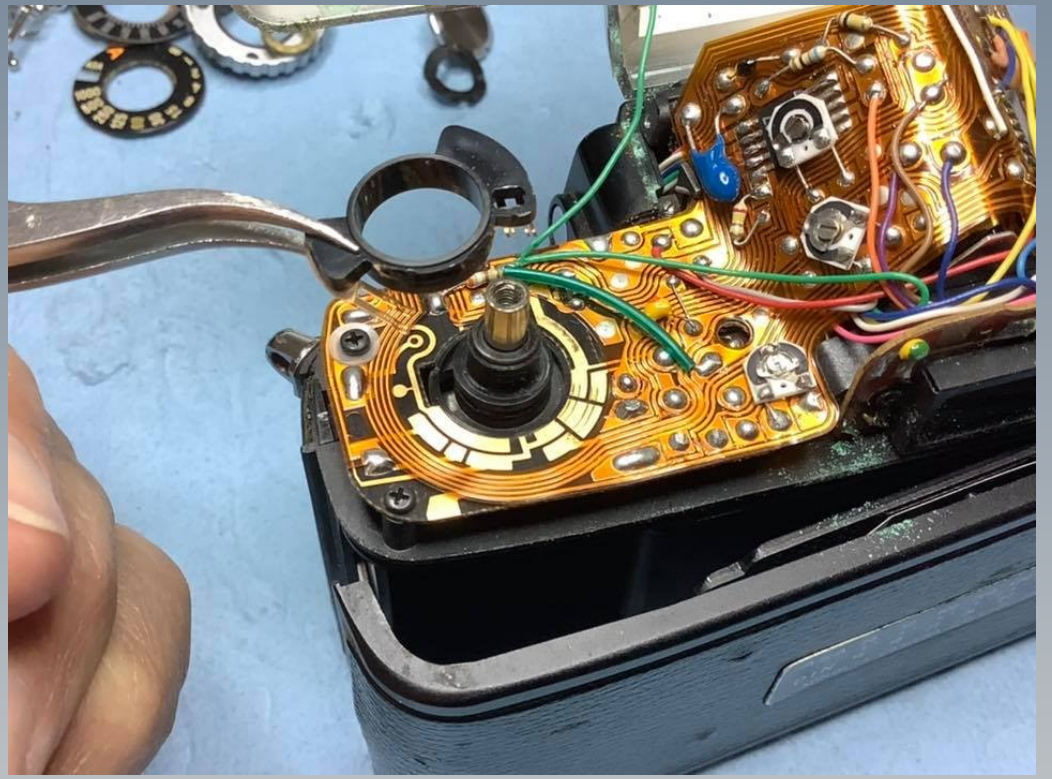

SA 25 50 100 200 400 800 1600
15 18 21 24 27 30 33
LTA CAMERA CO.,LTD. JAPAN

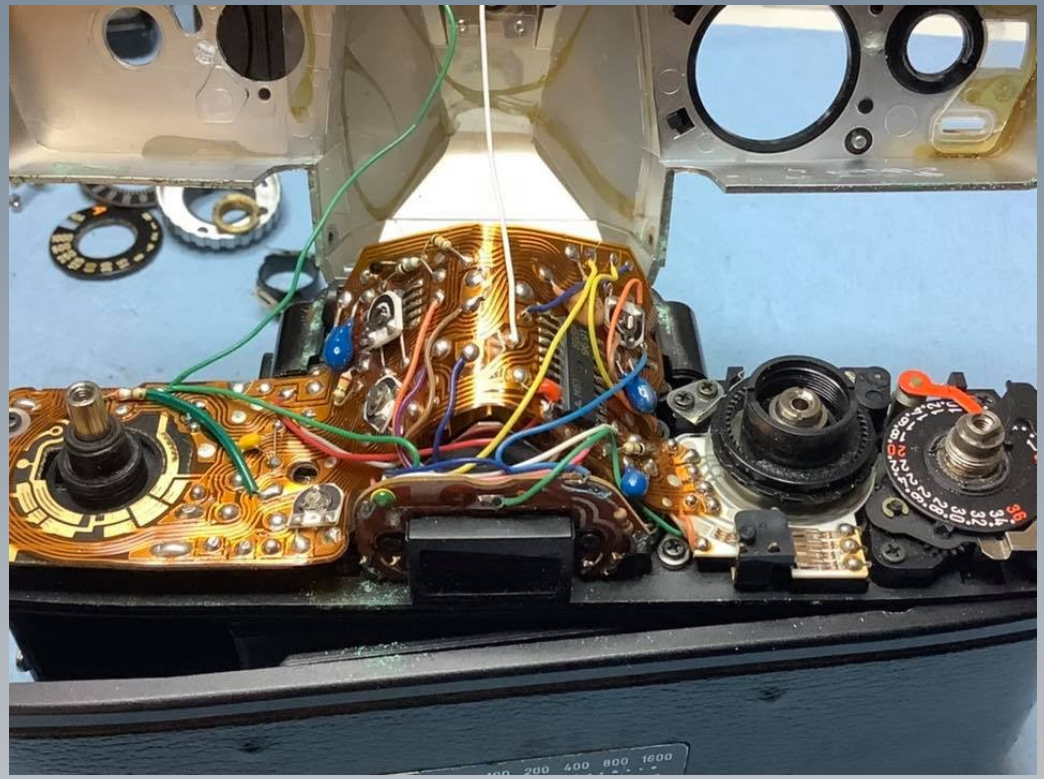

minolta
XG 1

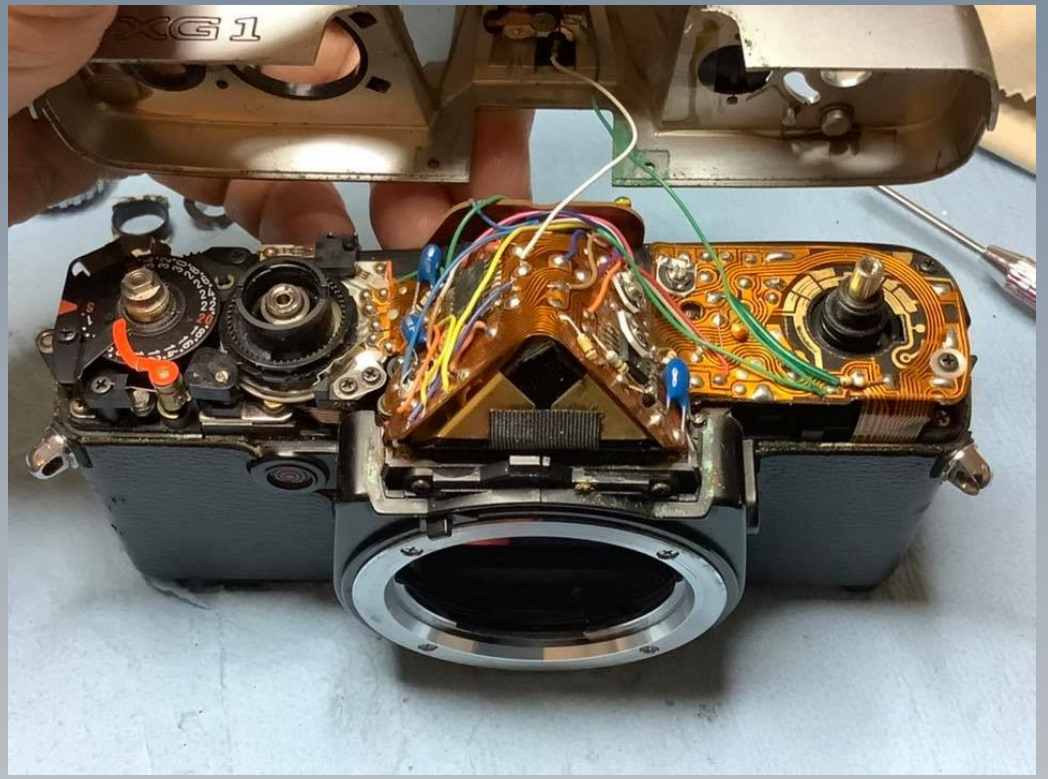

-1
-2

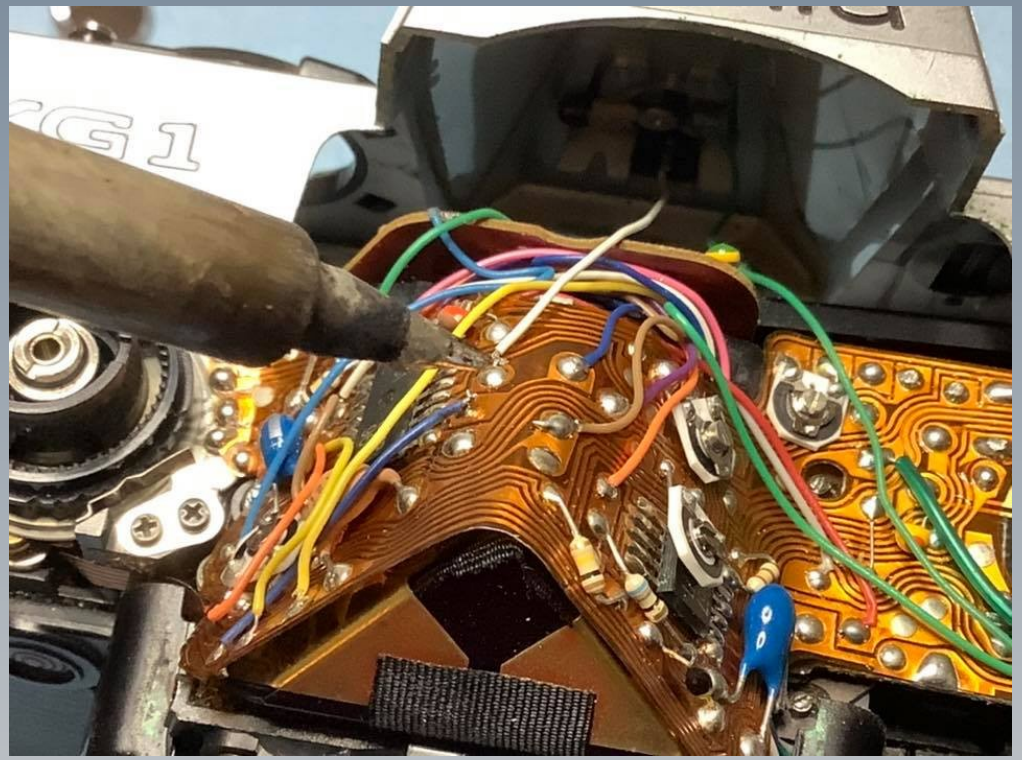

ASA 25 50 100 200 400 800 1600
DIN 15 18 21 24 27 30 33
MINOLTA CAMERA CO.LTD. JAPAN

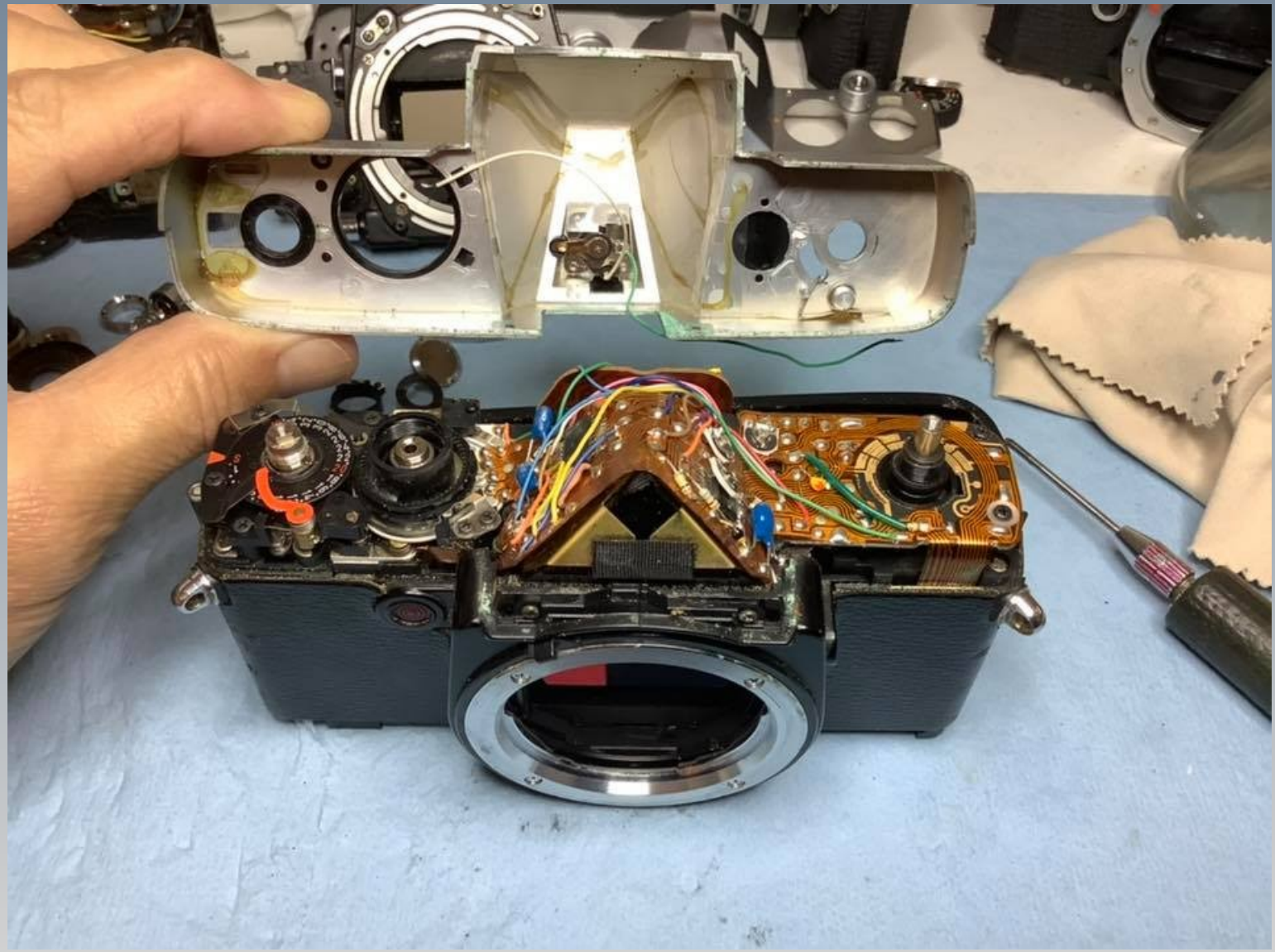

ASA 25 50 100 200 400 800 1600
DIN 15 18 21 24 27 30 33
MINOLTA CAMERA CO.LTD JAPAN






XG1





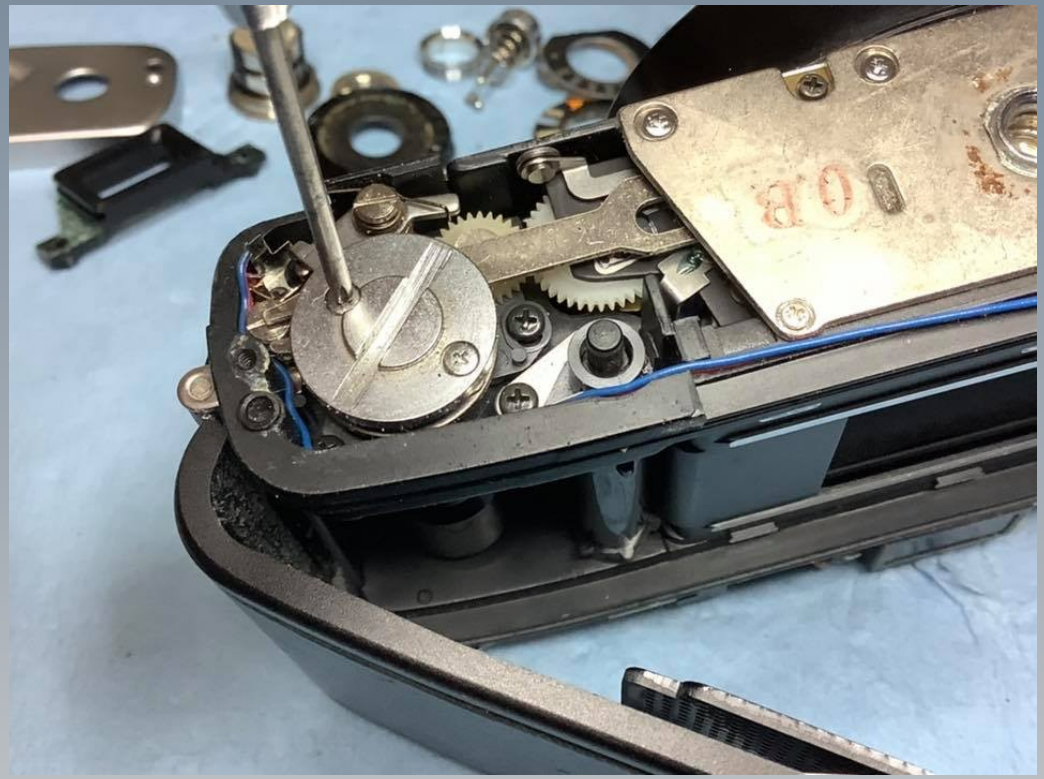
Post #5

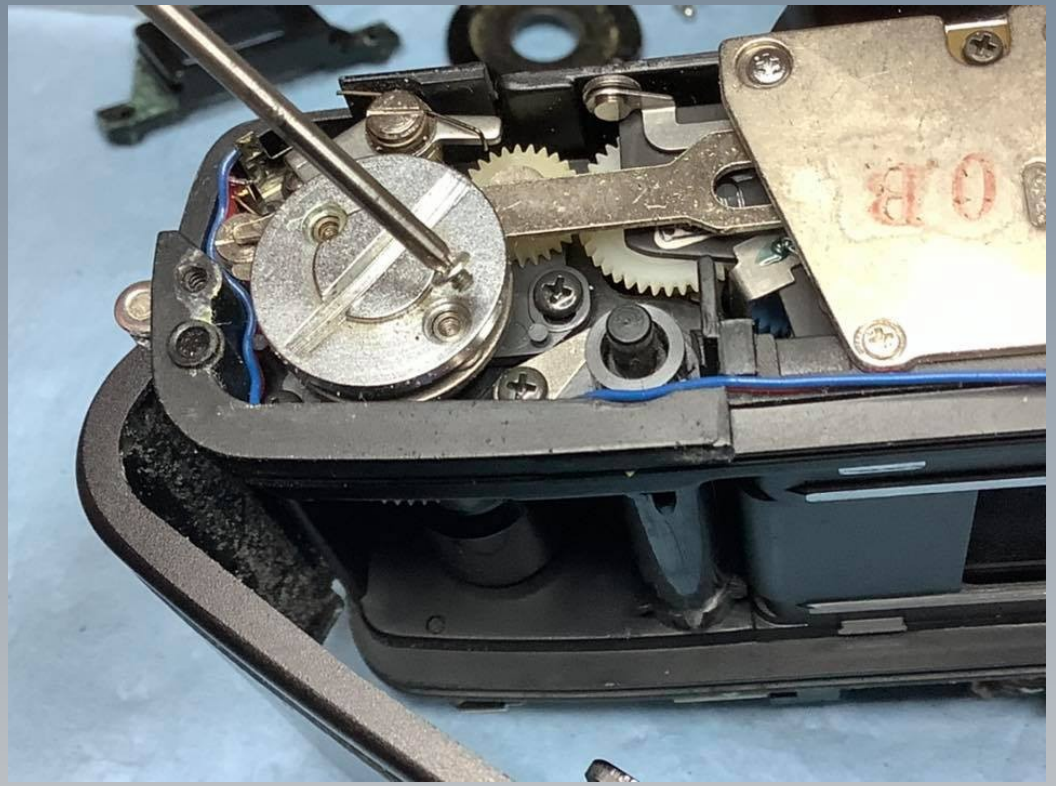
https://www.facebook.com/groups/360490091319202/?post_id=594224967945712

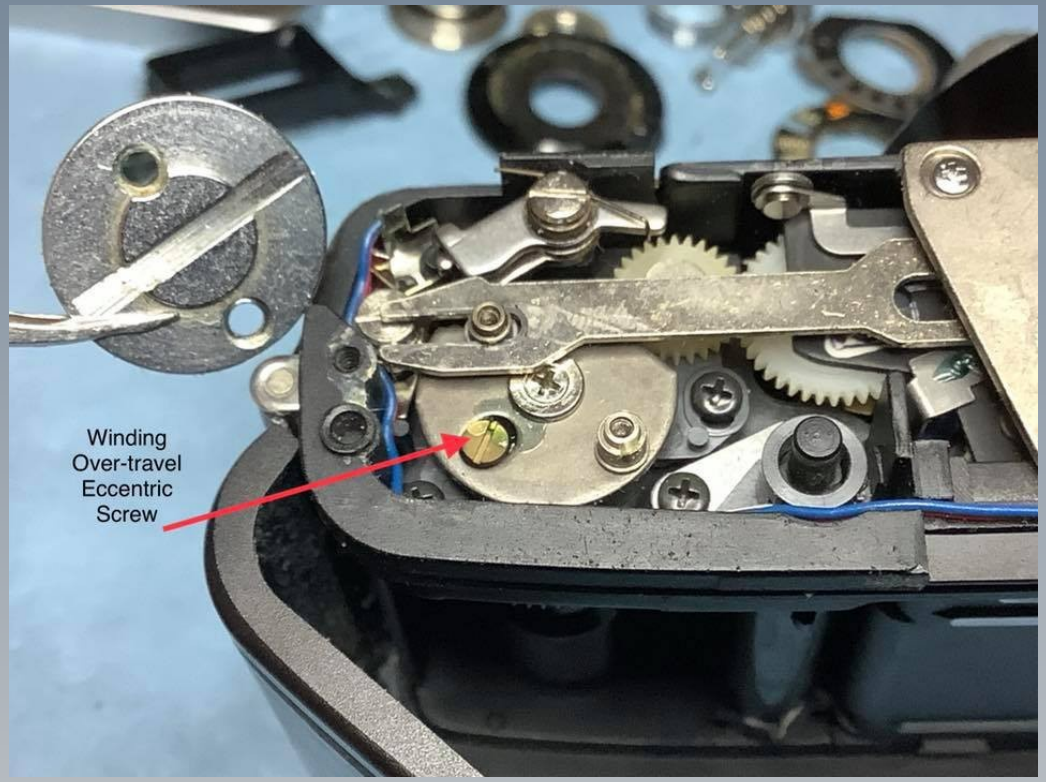
At the bottom remove the two screws holding the MD Coupler, lift off the coupler and set it aside.

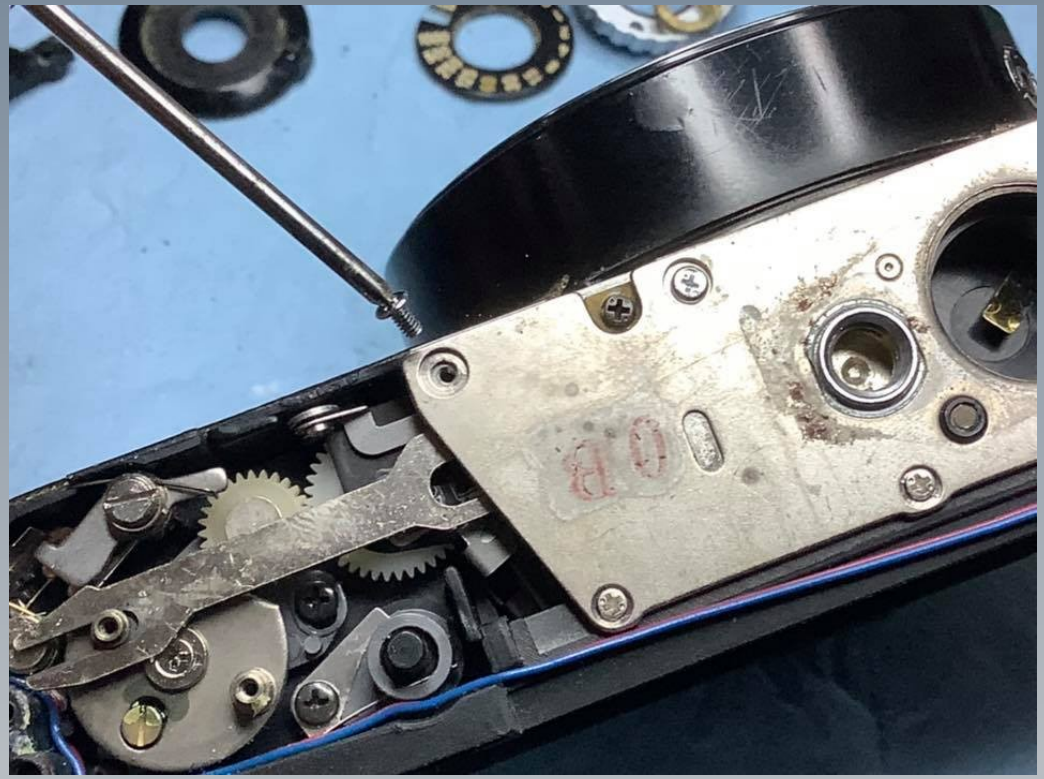
Remove the 6 screws holding the battery cover plate - note the machine screws go to the front plate side.

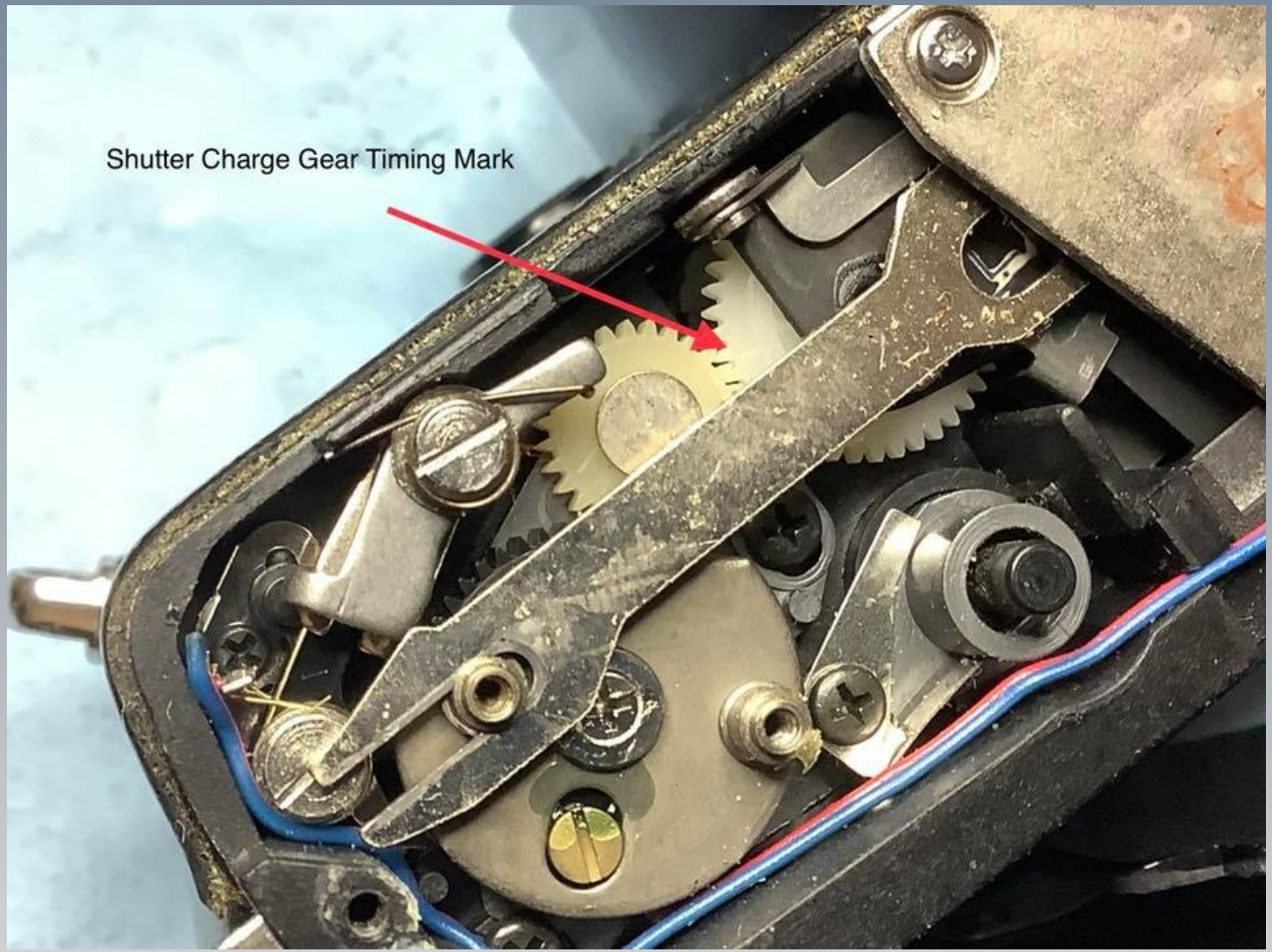
In the last photo you can see the dash timing mark for the shutter charge gear and the winding idler gear that provides the winding over-travel adjustment - the dash should pointing directly towards the center of the idler gear post. The brass eccentric screw provides the fine adjustment and has a locking agent to hold its adjusted position - if you make this adjustment sure to apply a glue or paint to keep it from moving easily.






Winding
Over-travel
Eccentric
Screw

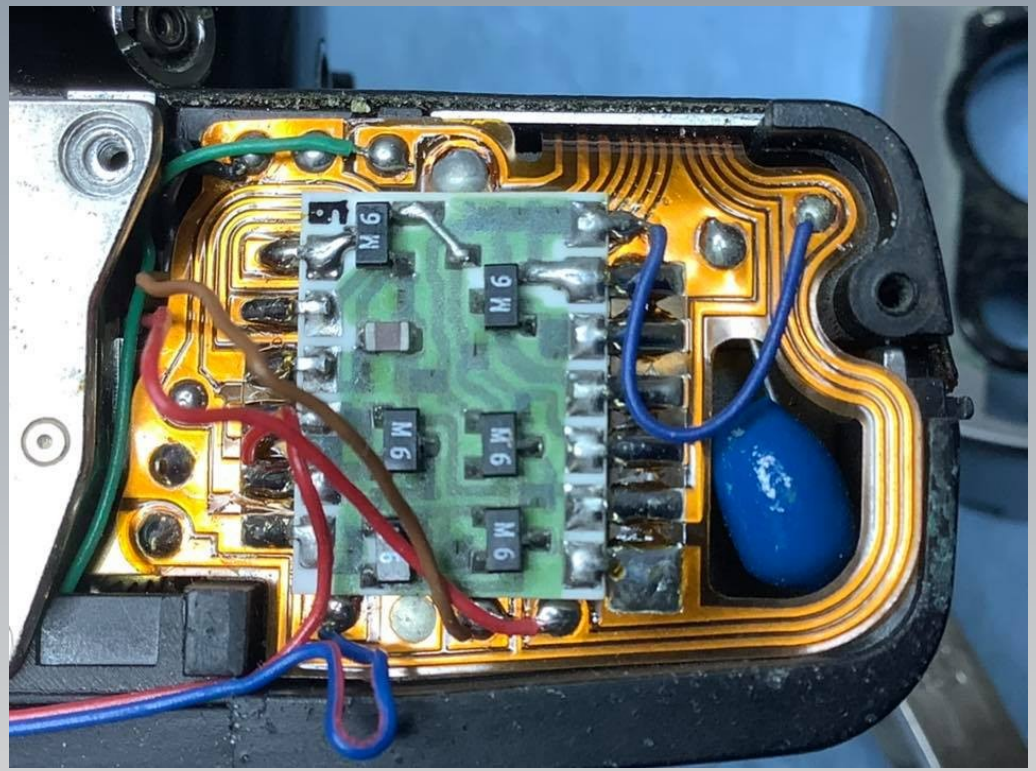


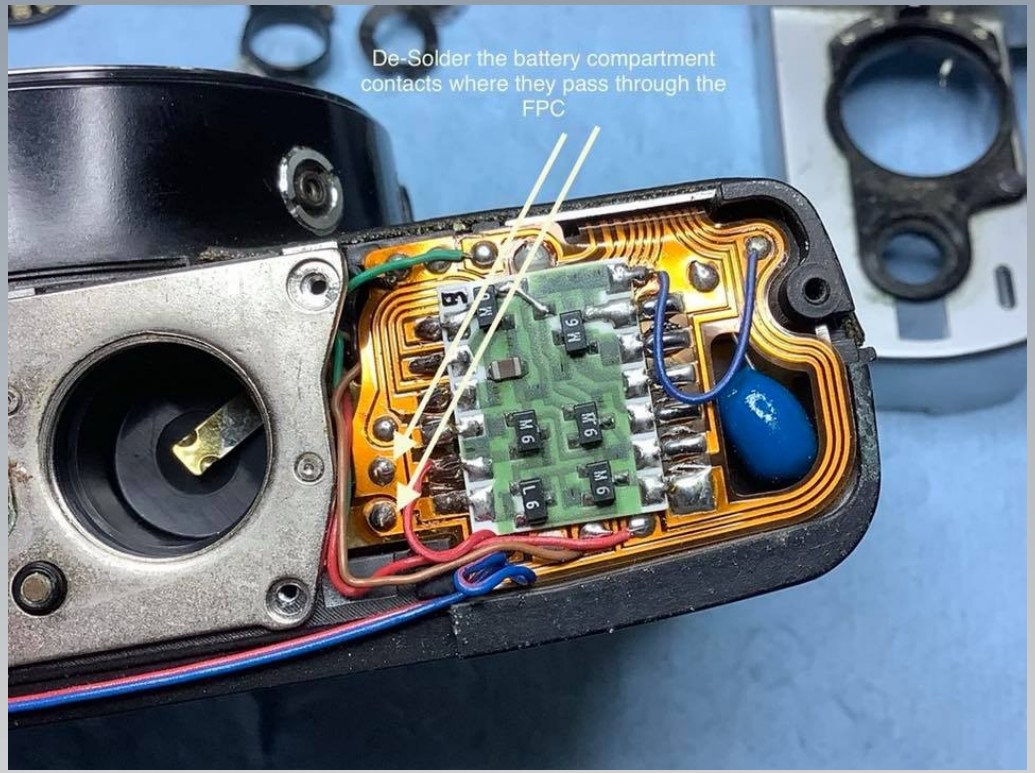

Shutter Charge Gear Timing Mark

Post #6 - https://www.facebook.com/groups/360490091319202/?post_id=594237131277829

Note the wiring at the lower PFC where the battery plate contacts attach, the red & blue wires are coming from the winding side bottom re-set switch and another red wire connects the battery positive to the FPC (battery negative is ground).

De-solder the battery plate contacts, free the lower FPC, lift the battery plate and de-solder the red wire coming from the battery compartment.






shack
64-2090


Battery compartment red wire

Post #7

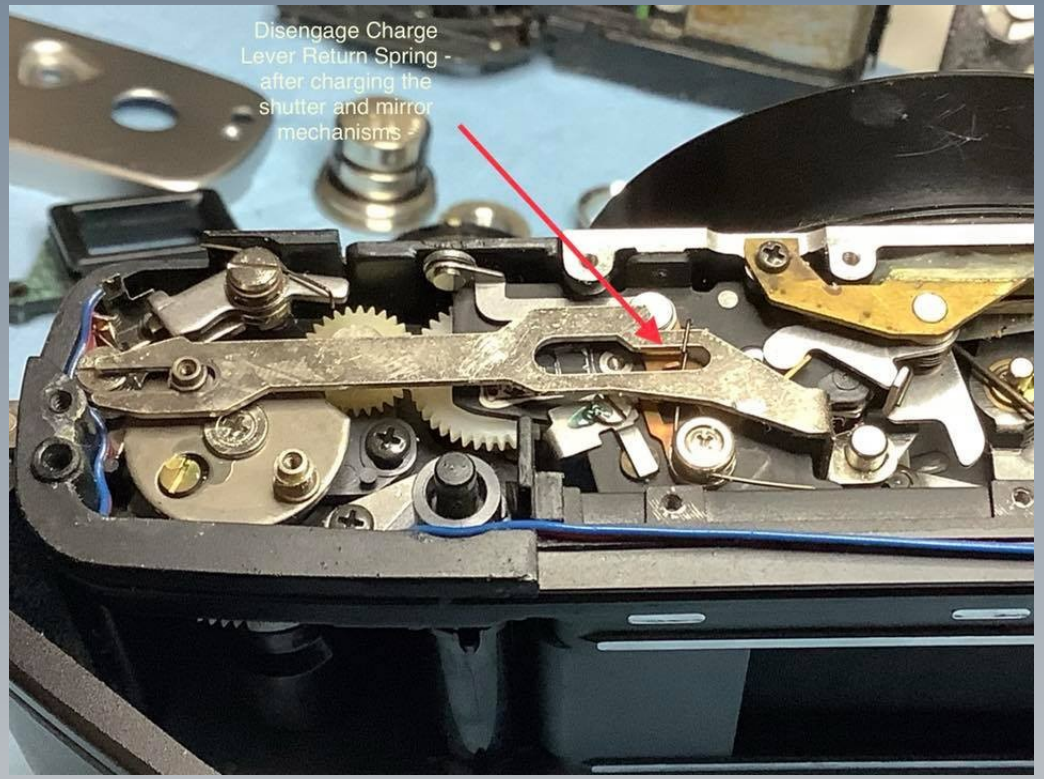
https://www.facebook.com/groups/360490091319202/?post_id=594251647943044

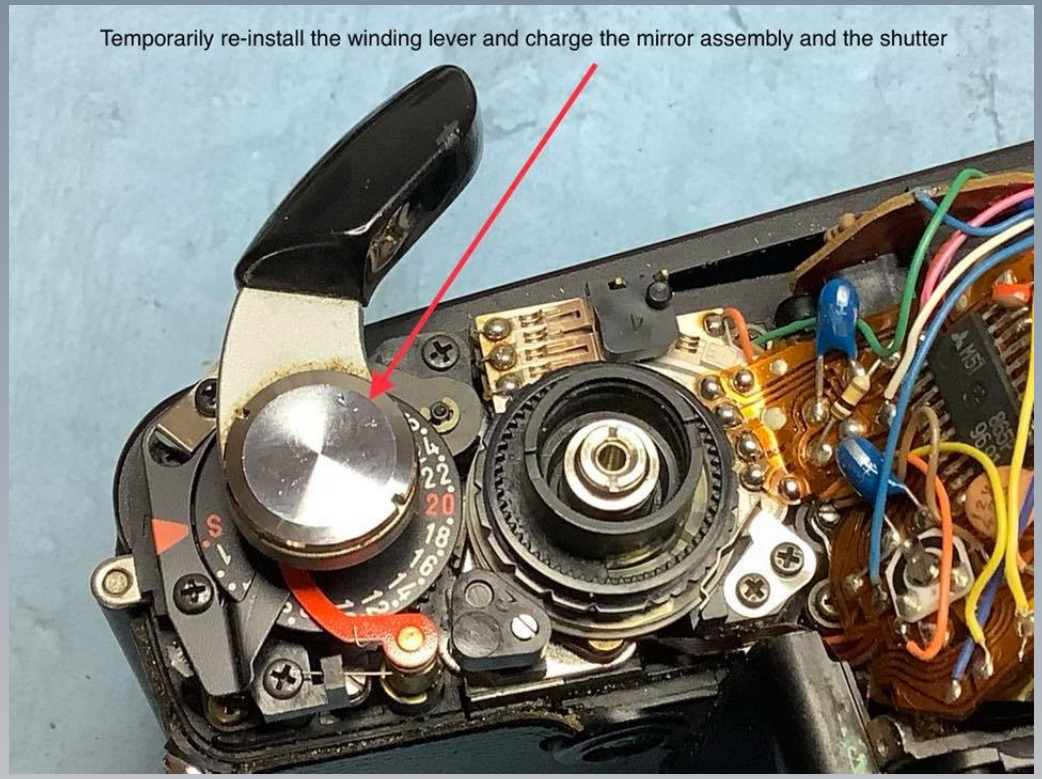
Note the position of the mirror charge lever, temporarily attach the winding lever and charge the shutter/mirror mechanisms, the charge lever has to be removed, it’s easier to remove the meter when the camera is wound, be careful not the damage the return-assist spring. Alternately you could lever the charge lever and lift it off as you remove the front plate/mirror/shutter assembly but I find removing it now works for me.

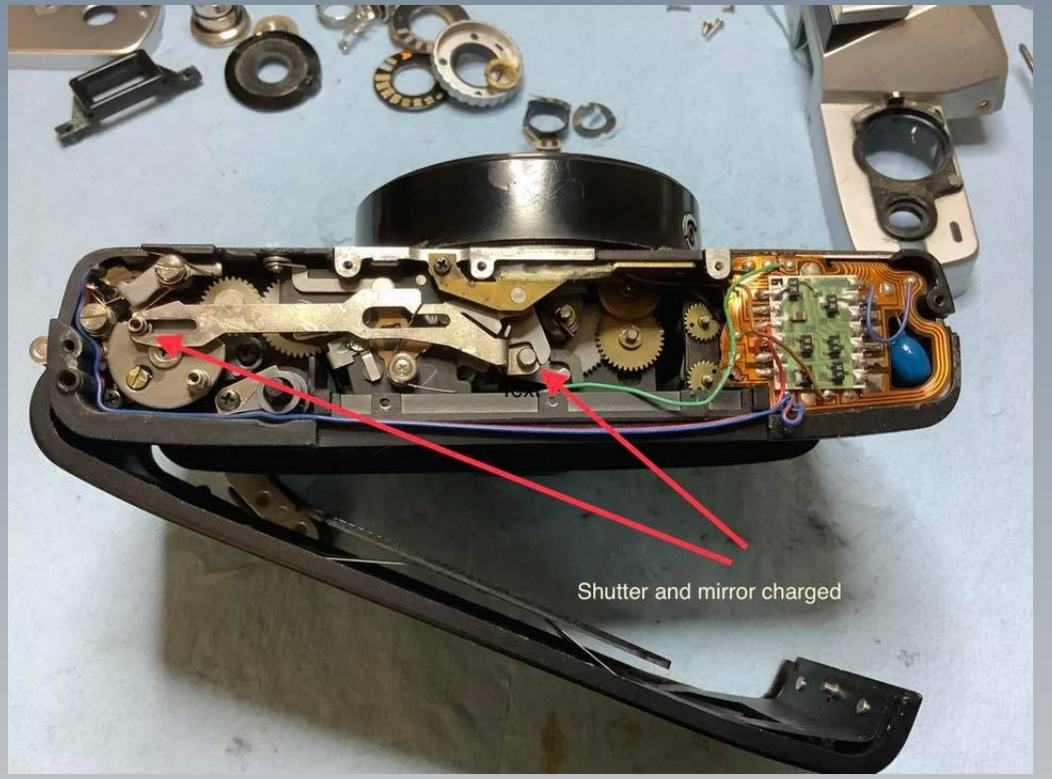
In the video, I pull back on the charge lever so the forks clear the guide tab on the winding cam, the shutter released and the mirror stayed up but that’s not a concern for disassembly purposes.

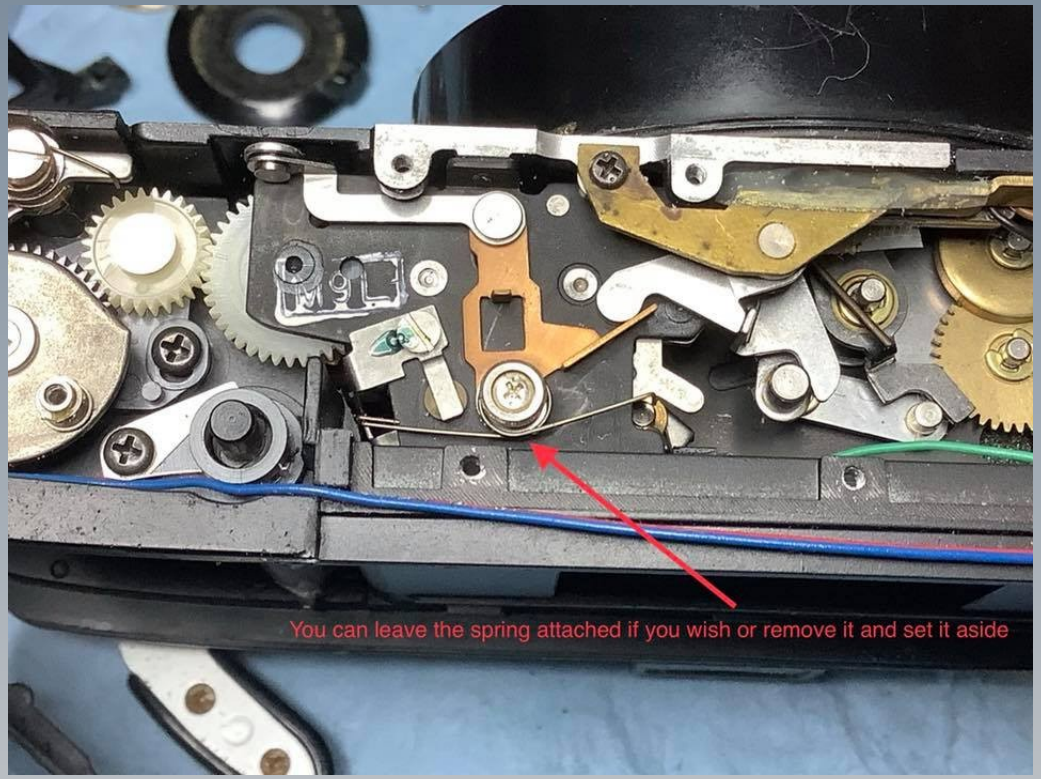
Lift off the charge lever and set it aside...


Mirror charge lever in the released position


Disengage Charge
Lever Return Spring -
after charging the
shutter and mirror
mechanisms


Temporarily re-install the winding lever and charge the mirror assembly and the shutter


Shutter and mirror charged


You can leave the spring attached if you wish or remove it and set it aside

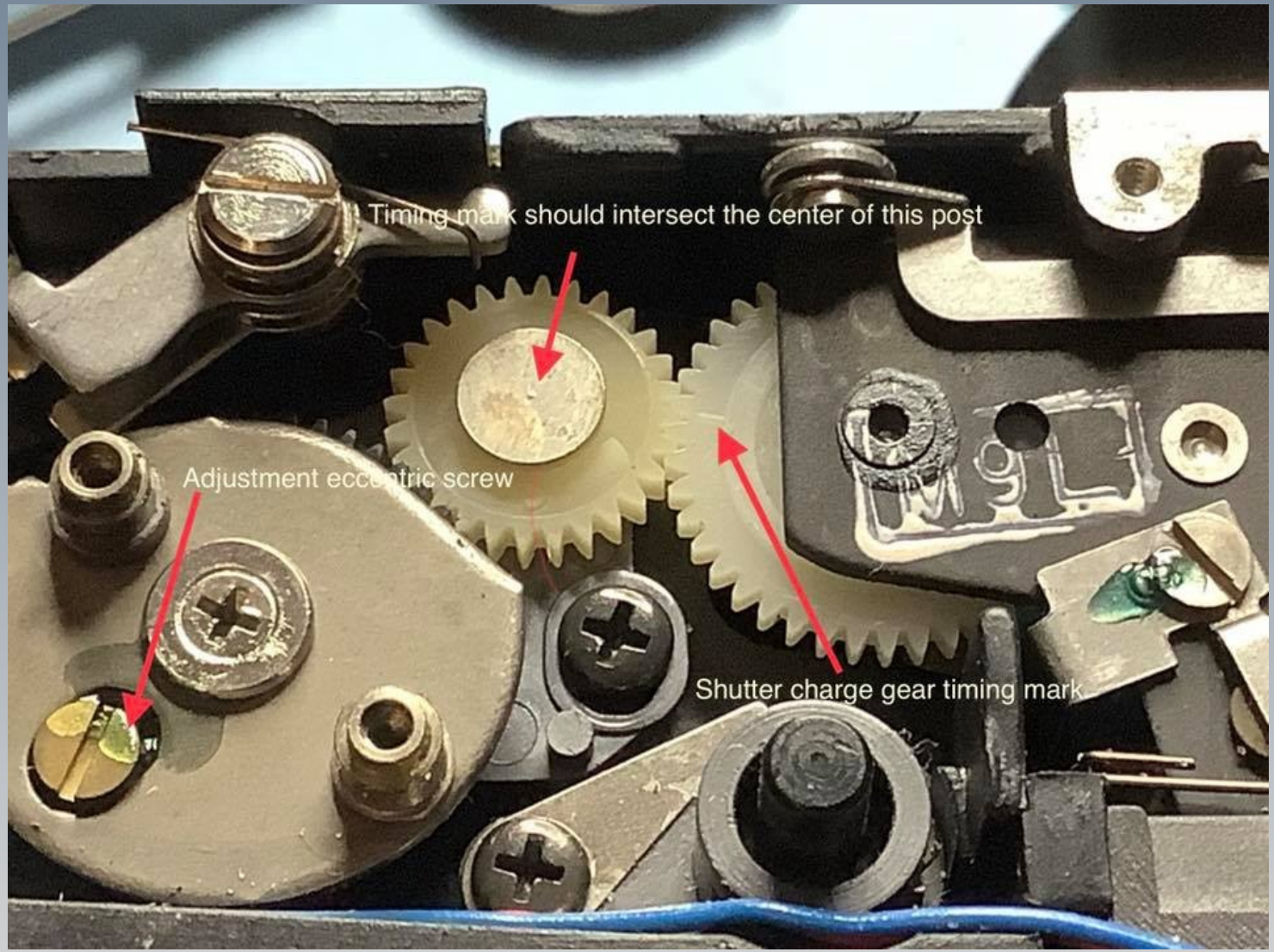
Post #8

https://www.facebook.com/groups/360490091319202/?post_id=594261974608678

I wanted to take a moment to show the shutter charge gear timing and if you look closely you can see why the adjustment is too much resulting in a “less than positive feel” as I mentioned in the first post during the camera checkout procedure...

In the photo the intersecting of the dash mark and the center of the idler gear post is slightly too far clockwise - when the shutter over-travel is adjusted too far it has a “weird spongy feel” at the end of the winding stroke instead of a positive stop...

If you leave the adjustment in this manner the customer will not be happy with the “feel”, if it’s your camera you won’t like it either... ideally you may have to work back and forth sometimes to get the feel right and still have a slight over-travel - I’ll show the actual place on the shutter where it latches so you can better understand the “shutter over-travel” or as it’s sometimes referred to as “shutter over-charge” in a later post as I’m reassembling the camera and making final adjustments.


Timing mark should intersect the center of this post
Adjustment eccentric screw
Shutter charge gear timing mark

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Post #9

https://www.facebook.com/groups/360490091319202/?post_id=594268531274689

Remove the left & right front leatherette- Minolta used a double-stick tape to affix the leatherette so it's easy to remove and you'll often see Minolta cameras of this series with the leatherette coming up at the edges as the double-stick tap ages and loses its tackiness...

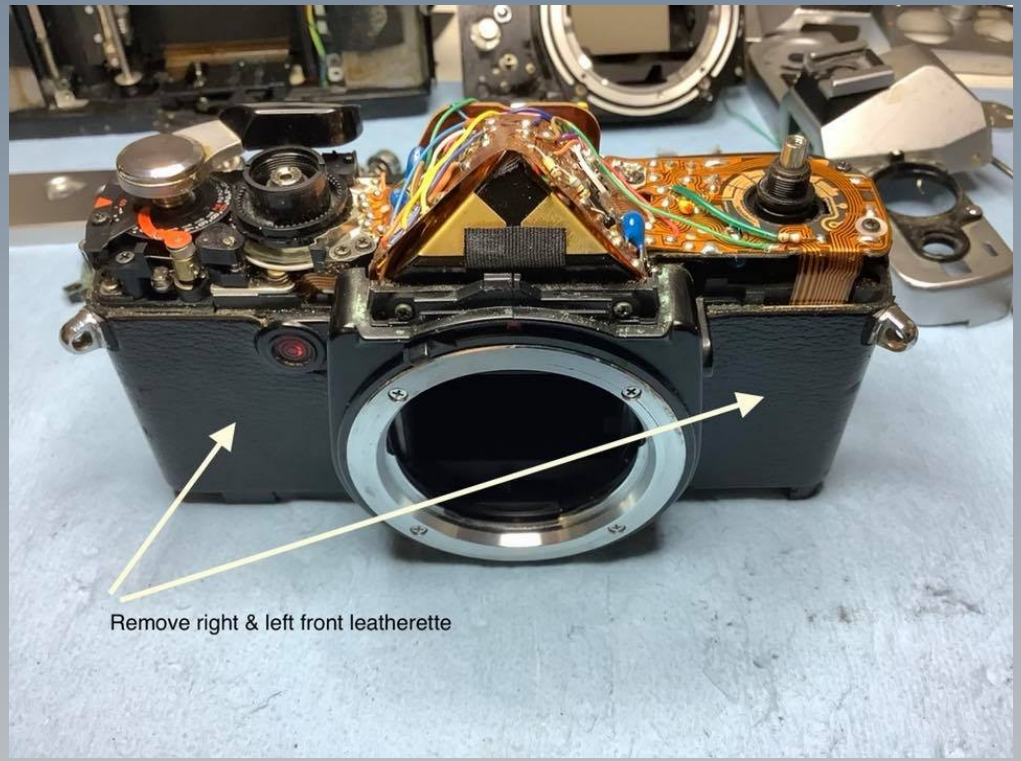
There an aluminum cover plate on the rewind-side front that may stay with the leatherette, if not remove it and set it aside - free the part of the FPC that sits under that cover plate in preparation to remove the front plate/mirror and shutter as an assembly.

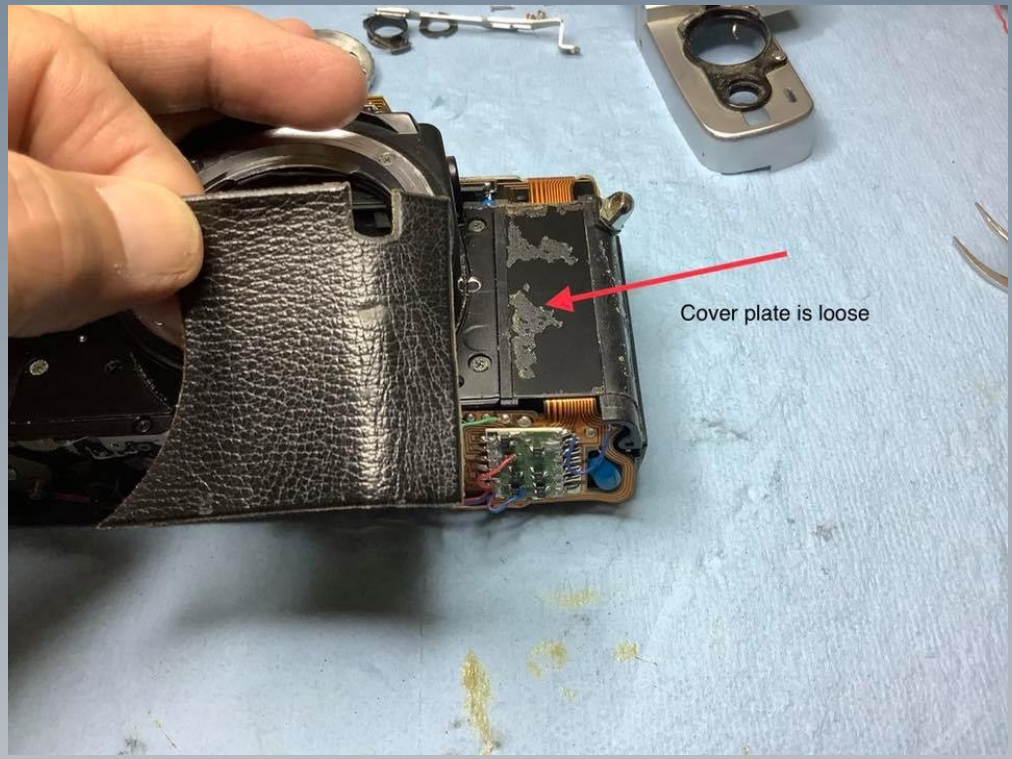
Move to the top rewind-side FPC and remove the two retaining screws and note the position of the plastic washer - may sure you put it back in the same location upon reassembly - free the rewind-side FPC.

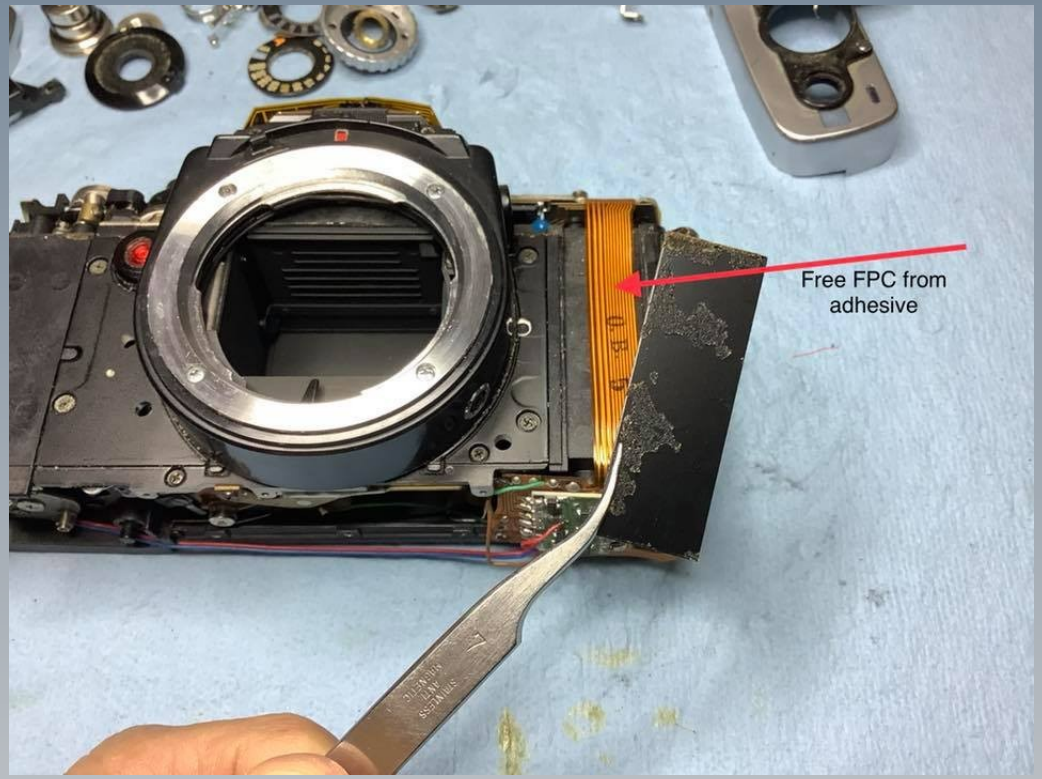
Remove the two screws holding the eyepiece frame, the eyepiece and not shown is a loose plastic eyepiece spacer that can fall out and get lost, set those parts aside and free the photocell board, note also not shown is a small frame that fits below the plastic part... I'll include a photo of this part, it's the last photo...

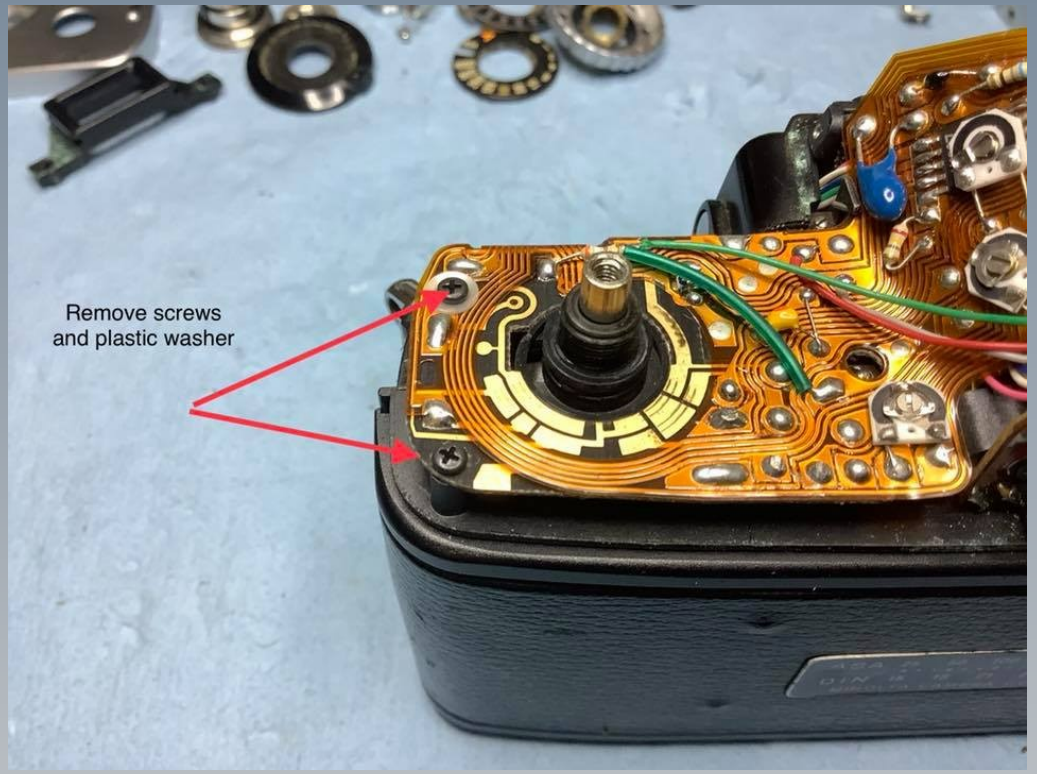
Move over to the winding side, remove the small screw at the rear of the shutter speed selector assembly, the long screw at the front left holding part of the selector detent spring and loosen the slotted screw that is also a guide for the auto-manual lock lever - free the selector assembly.

Be careful not to damage the FPC or wiring!


Remove right & left front leatherette


Cover plate is loose


Free FPC from
adhesive

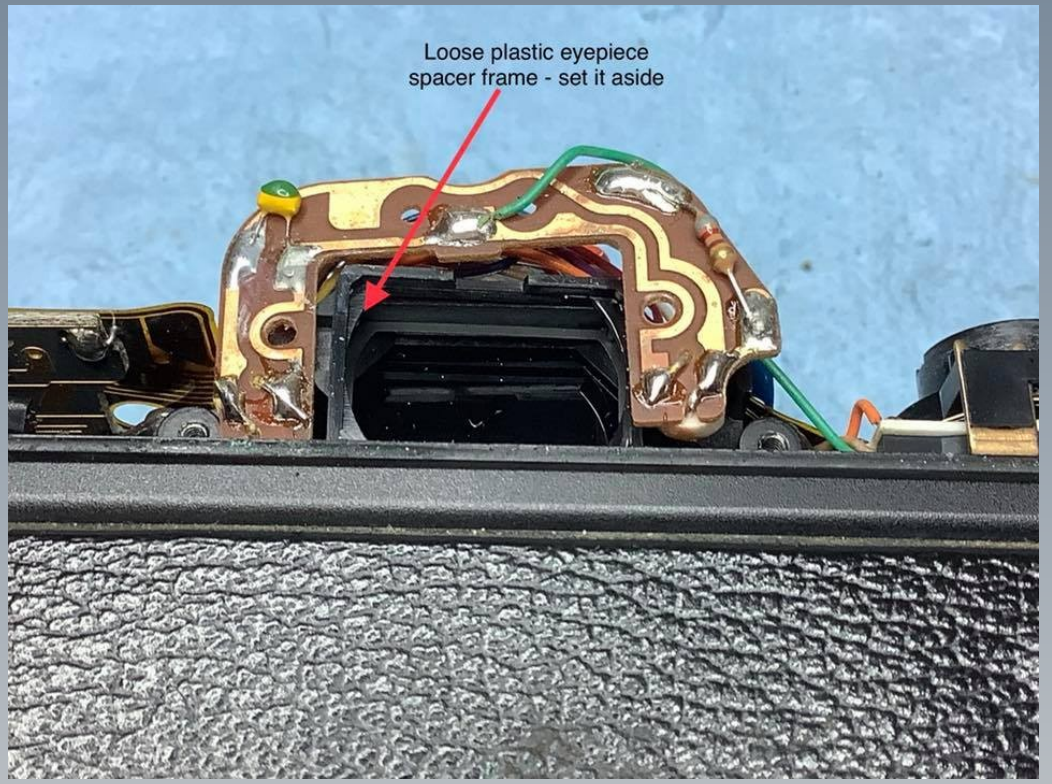

Remove screws
and plastic washer

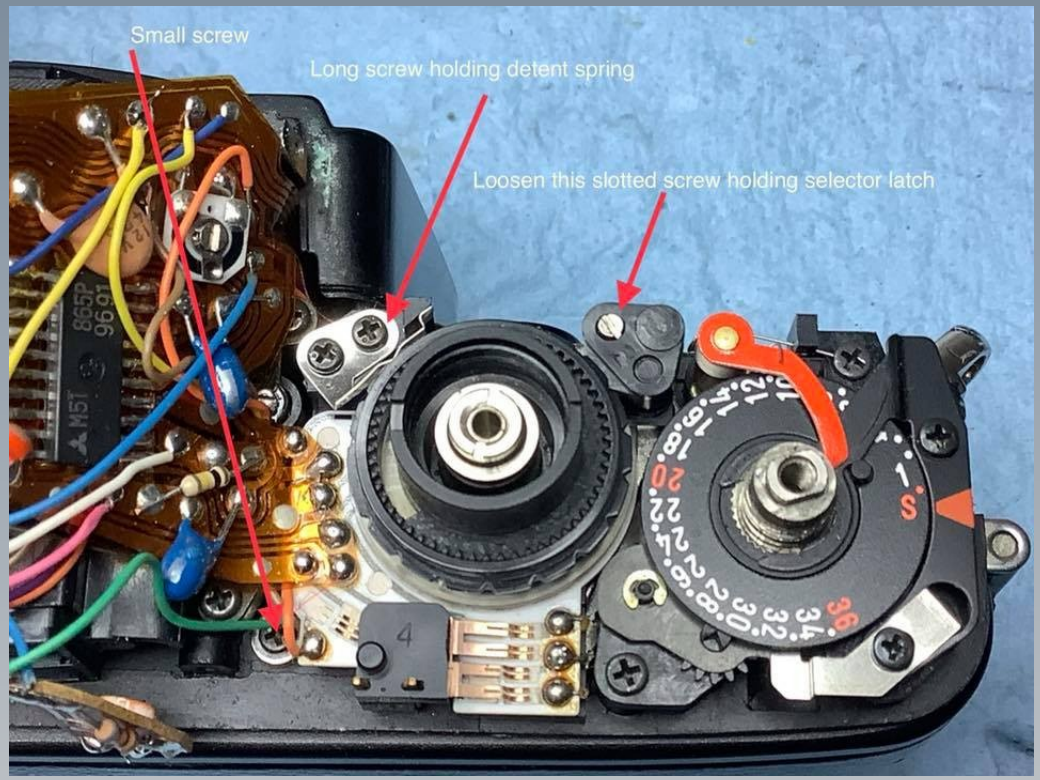

Lift FPC slightly to free it up

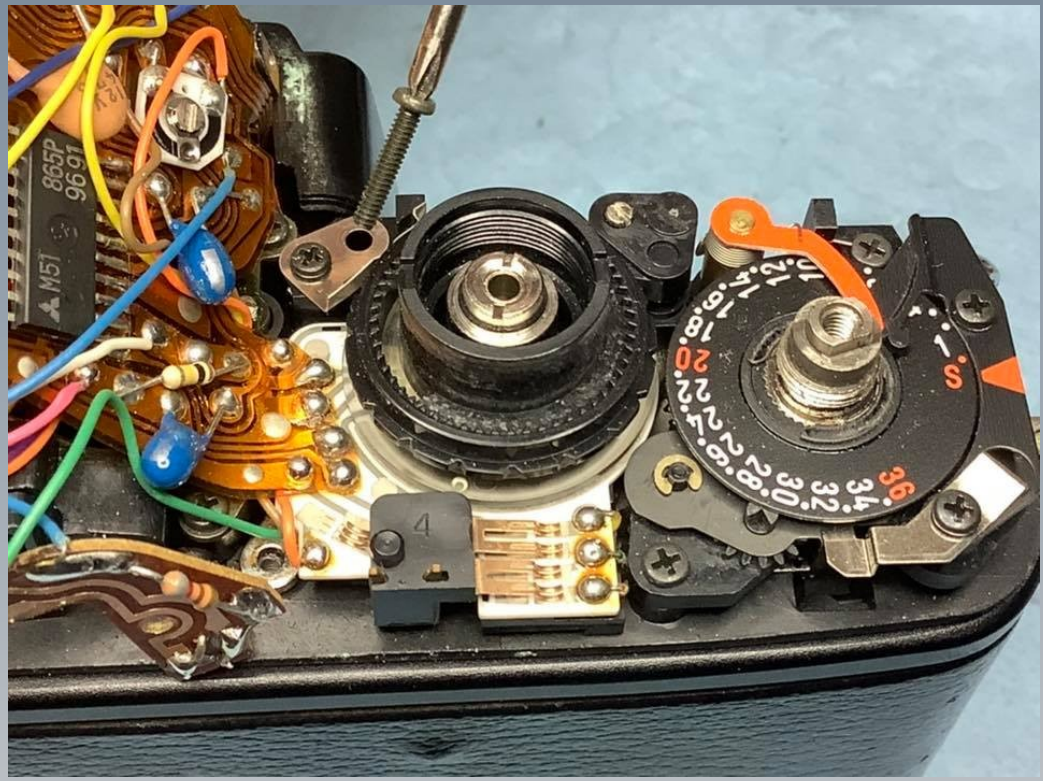

Remove eyepiece frame screws
& eyepiece, free photocell board
ASA 25 50 100 200 400 800 1600
DIN 15 18 21 24 27 30 33
MINOLTA CAMERA CO.,LTD. JAPAN

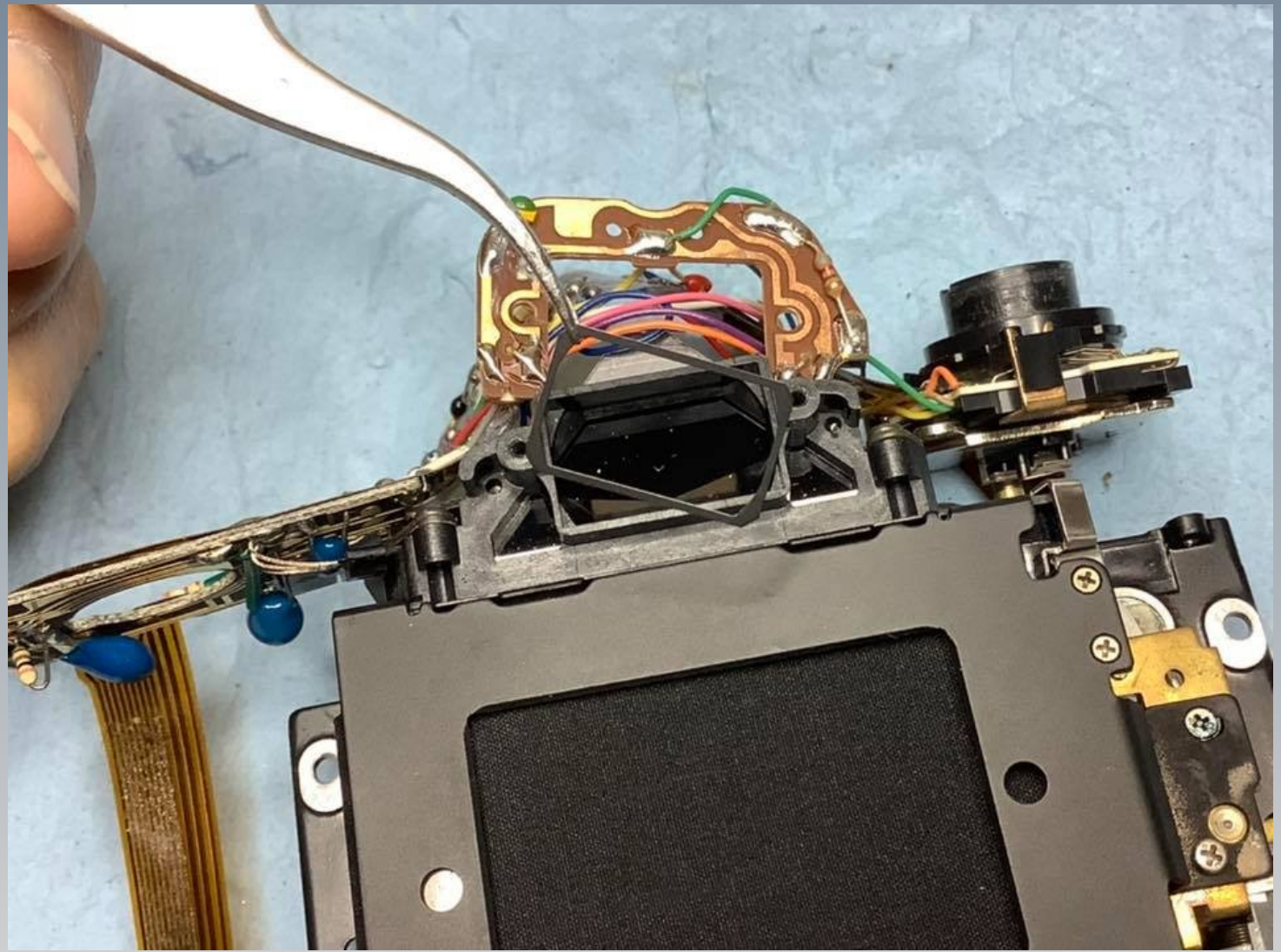

ASA 25 50 100 200 400 800 1600
DIN 15 18 21 24 27 30 33
MINOLTA CAMERA CO.,LTD. JAPAN


ASA 25 50 100 200 400 800 1600
DIN 15 18 21 24 27 30 33
MINOLTA CAMERA CO.,LTD. JAPAN

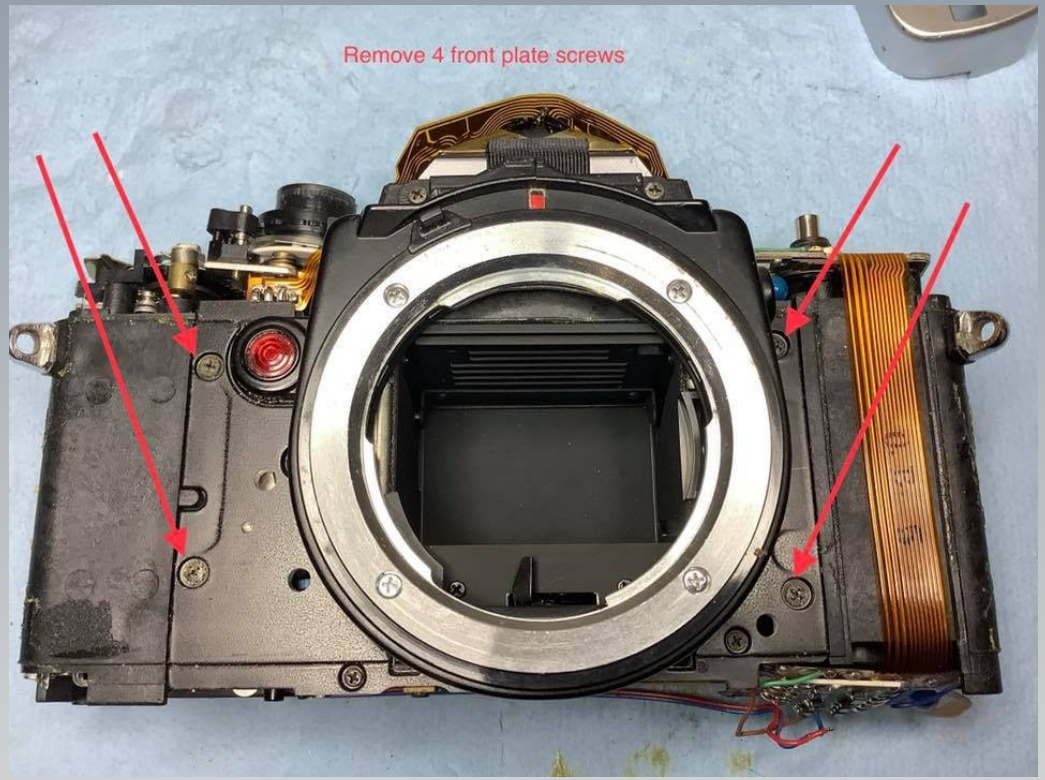

Loose plastic eyepiece
spacer frame - set it aside

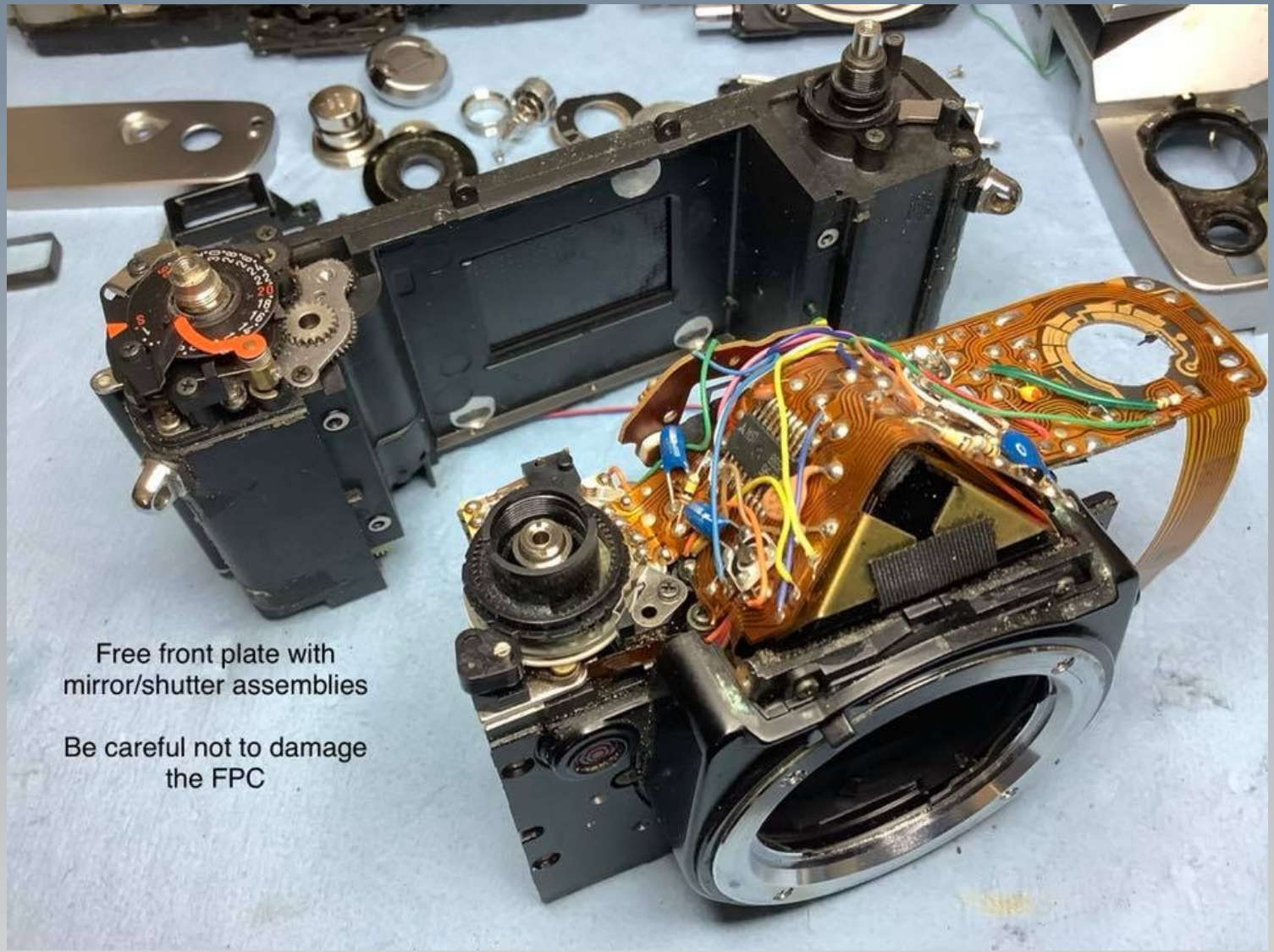

Small screw
Long screw holding detent spring
Loosen this slotted screw holding selector latch





Post #10
https://www.facebook.com/groups/360490091319202/?post_id=594276761273866
Remove the 4 front plate screws holding the front plate/mirror/shutter assemblies.
Carefully separate the body from the front plate/mirror/shutter assemblies...
Take lots of photos and make carefull notes, in the next series of posts I'm going to separate each assembly, start cleaning, replacing any bad parts and lubricating the mechanisms as I begin reassembly.




Free front plate with
mirror/shutter assemblies
Be careful not to damage
the FPC

Post #11

https://www.facebook.com/groups/360490091319202/?post_id=594875144547361

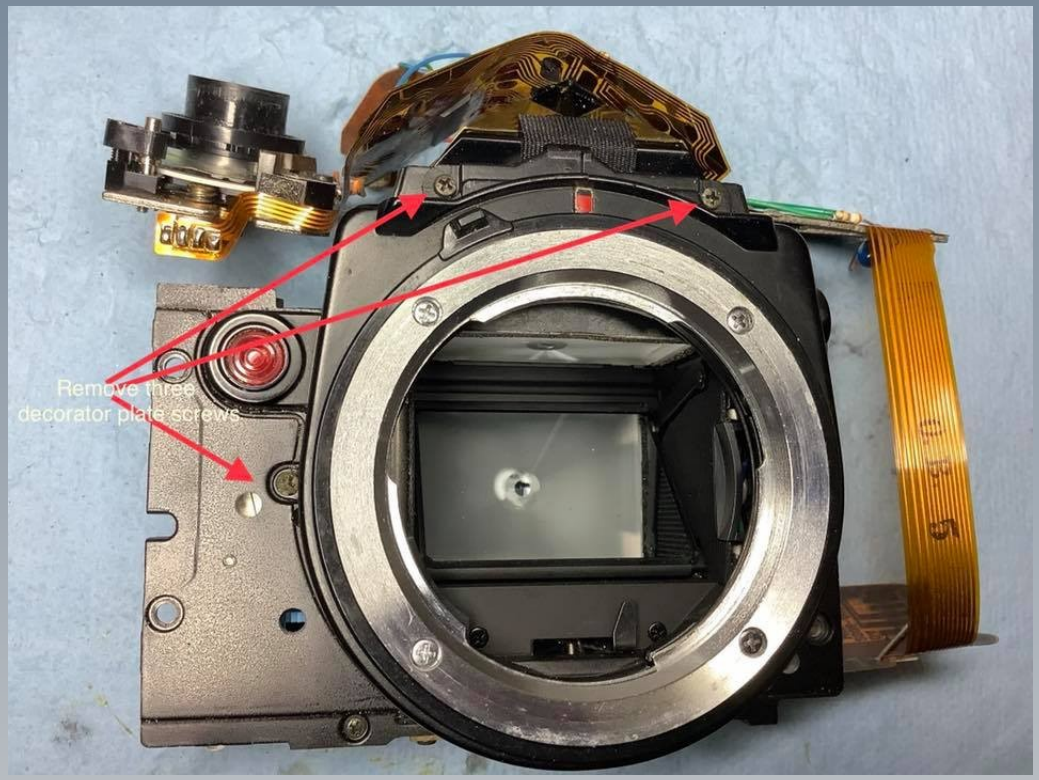
Front Plate/Mirror Box/ Shutter Disasembly

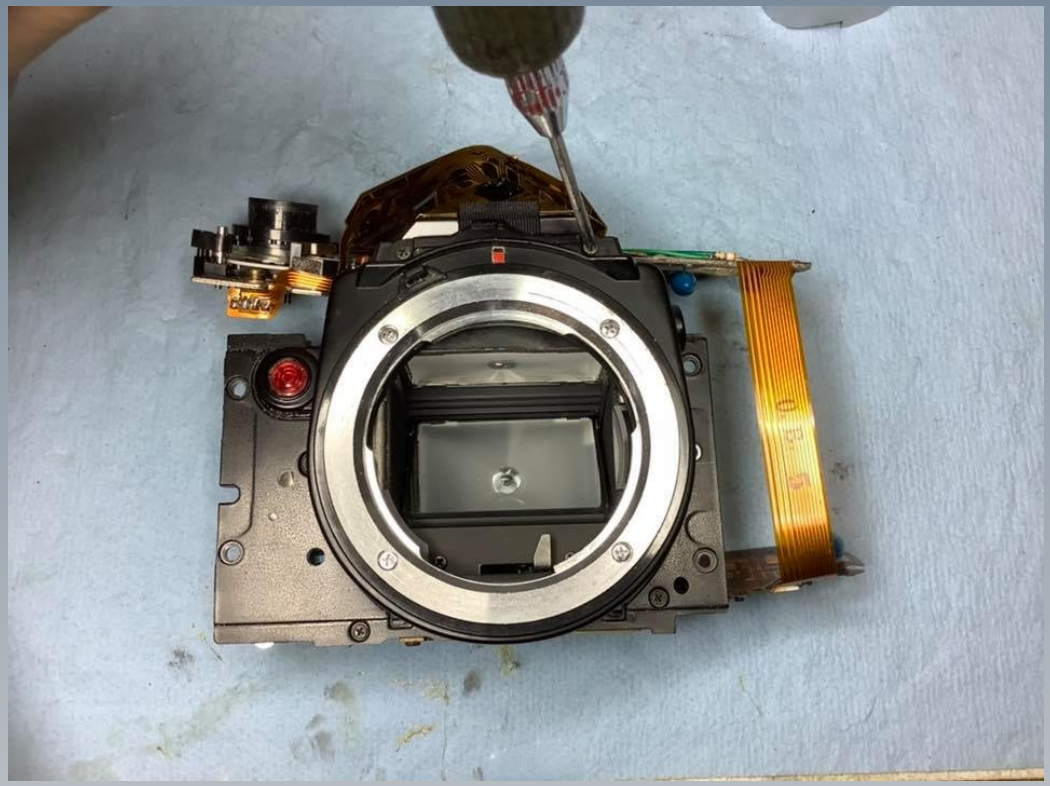
Remove the three screws holding the black plastic front decorator plate - two at the top and one on the wind side noted in the photo... (in some models there are two screws holding the sides of the front decorator plate, one on each side).

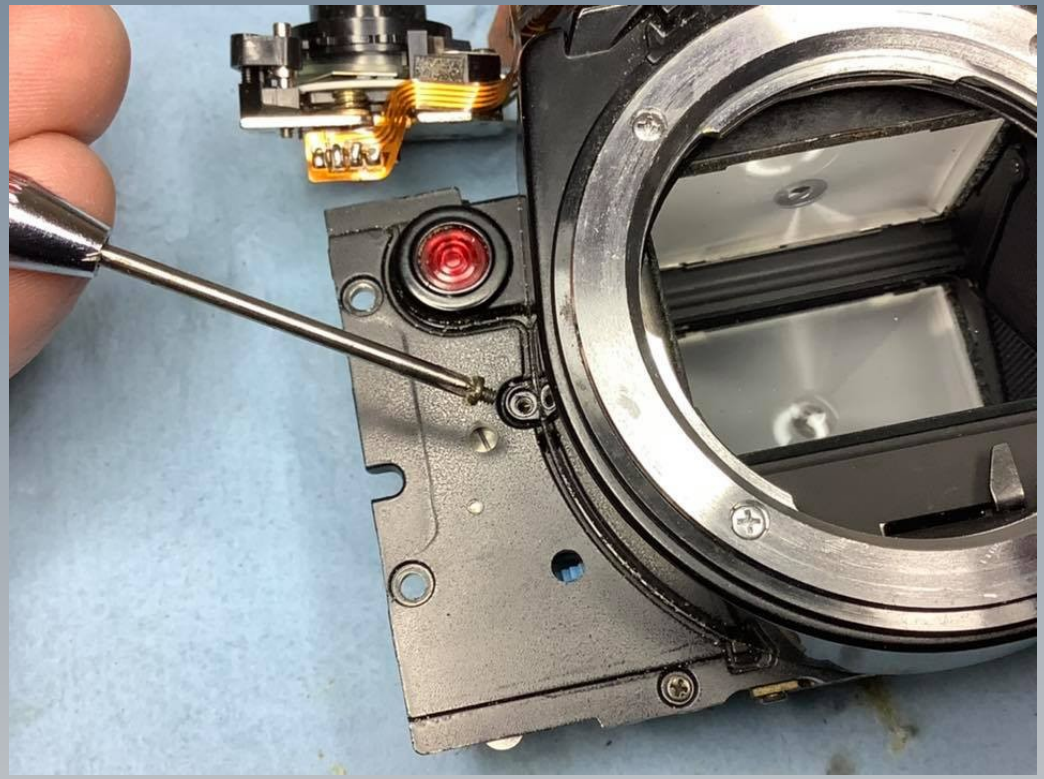
Using a tool or tweezers unlatch the top of the decorator plate first, move to the rewind side and pop the decorator plate off the cable release socket and the PC Sync Terminal - using the same tool pop the wind side loose that covers the Self-Timer LED red cover - spread both sides slightly and lift the decorator plate off... the “red dot or indicator” may come loose - don’t lose it, sometimes it sticks to the plastic decorator plate.

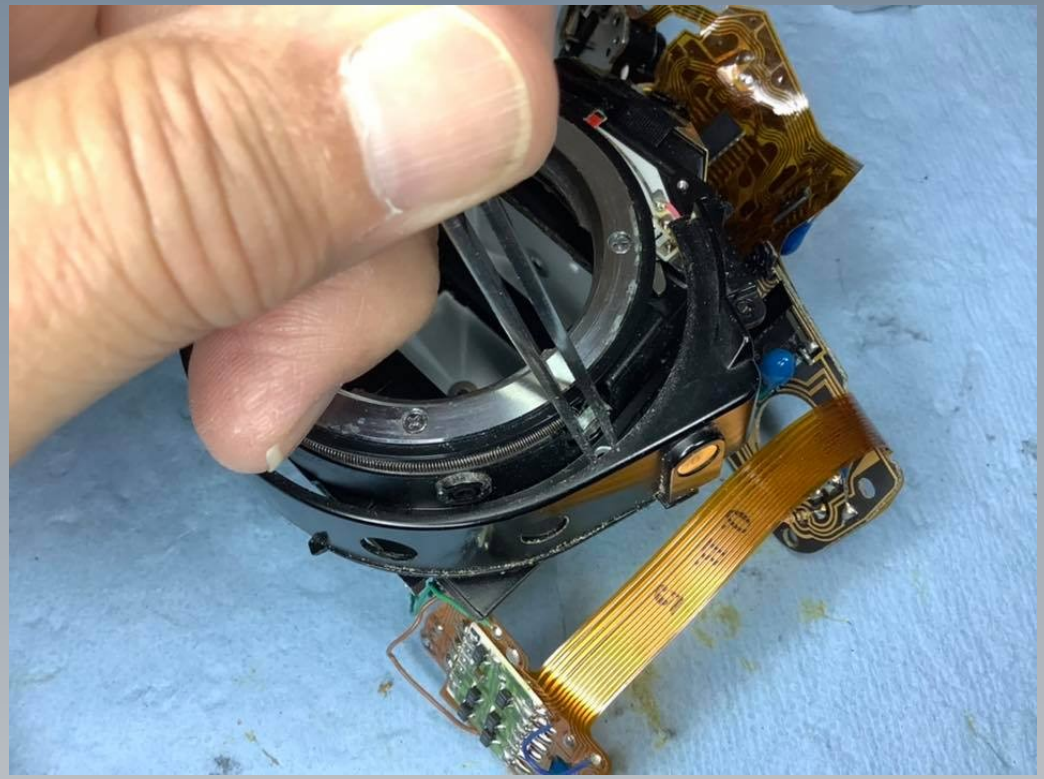
It’s a good time to examine the mount, aperture ring/resistor assembly and spring hooking points before we remove the mount and aperture ring.

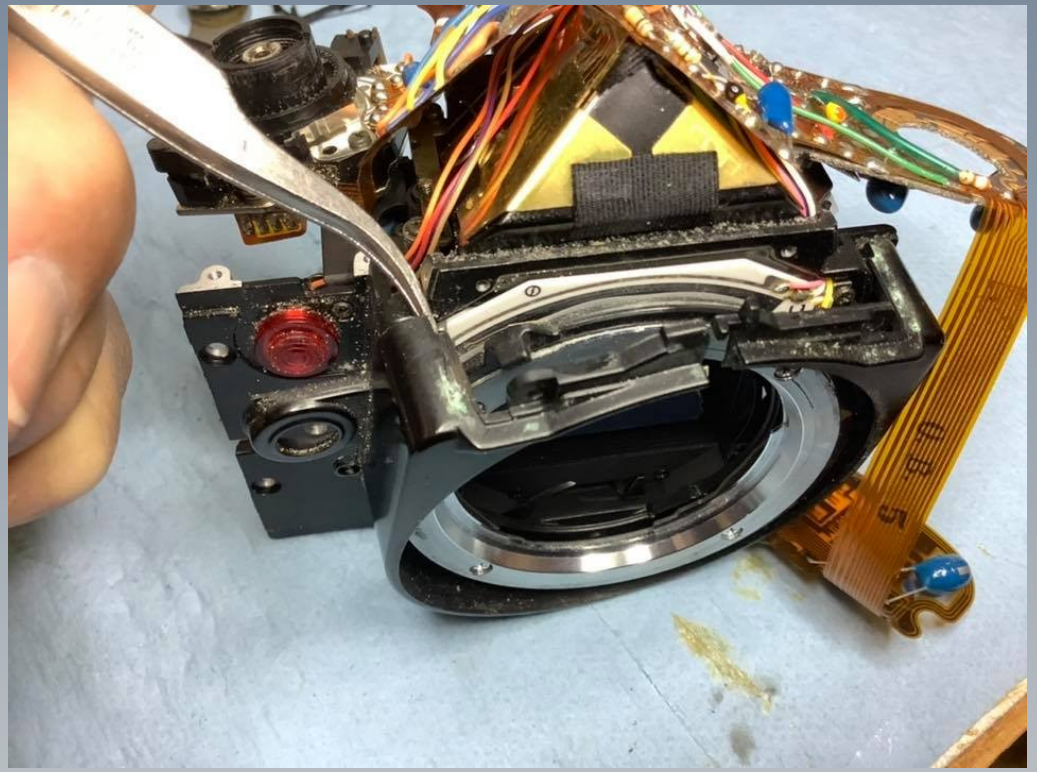
You can see a fair amount of sand here...

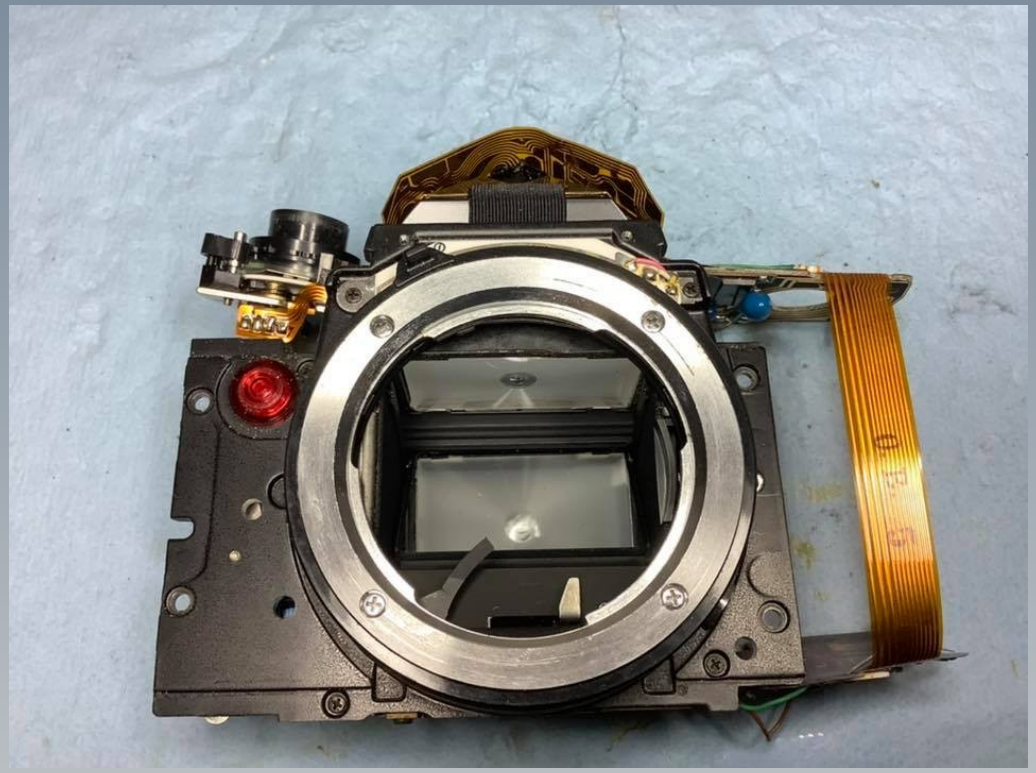

Remove three
decorator plate screws

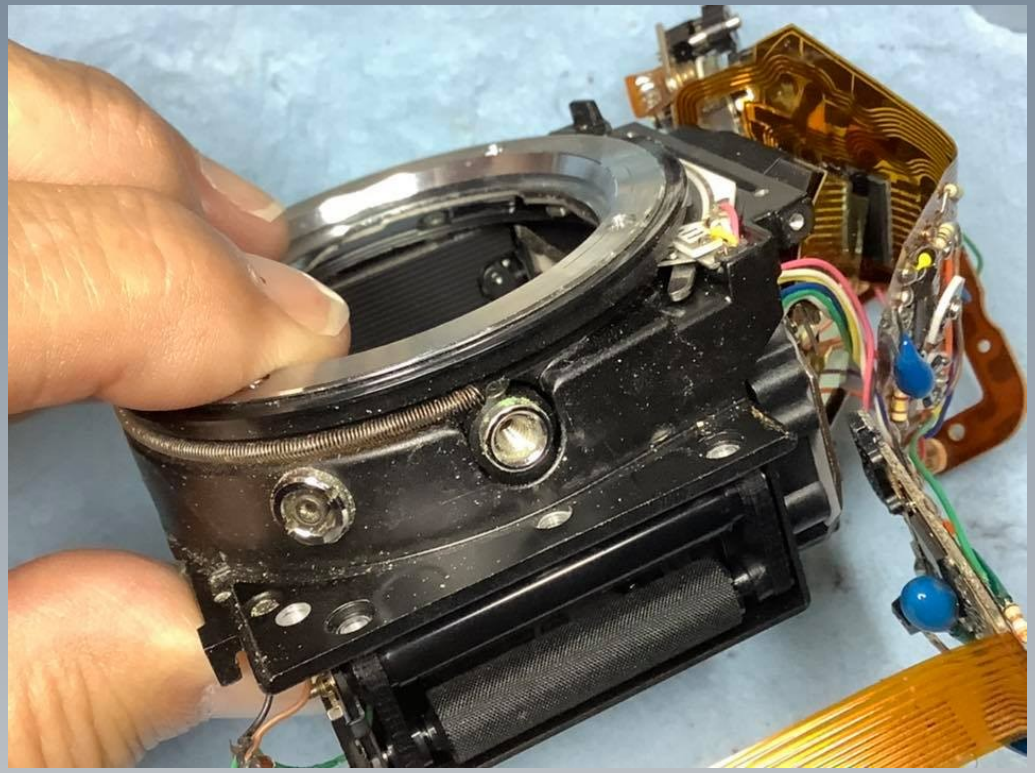


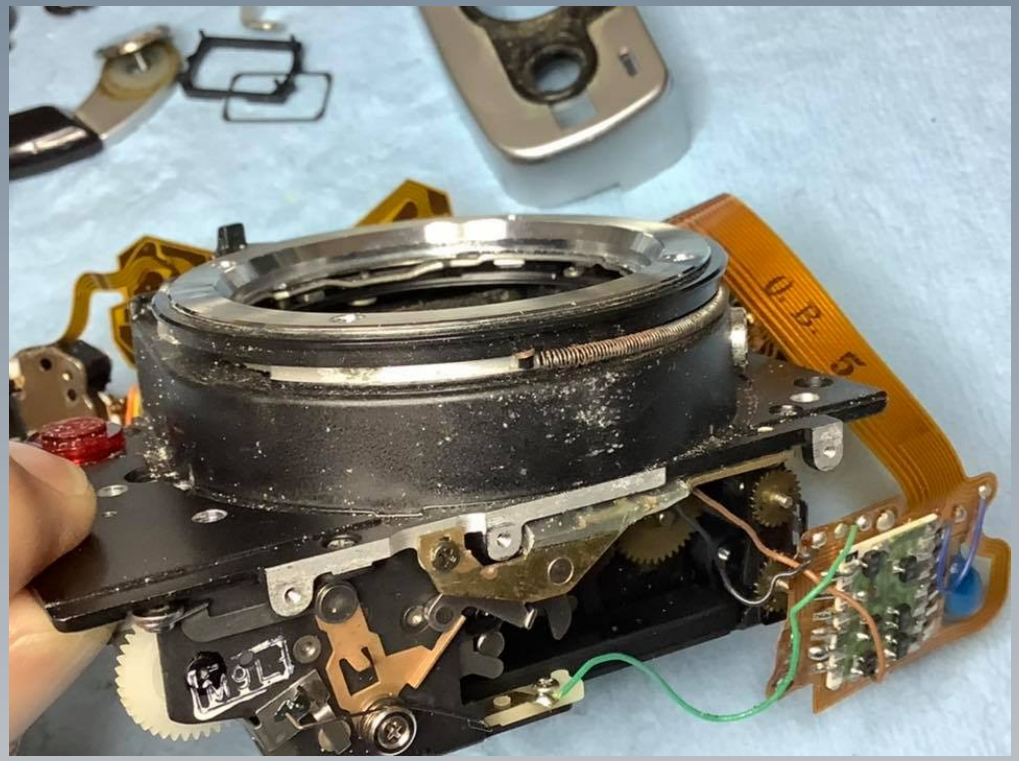











M9

Post #12

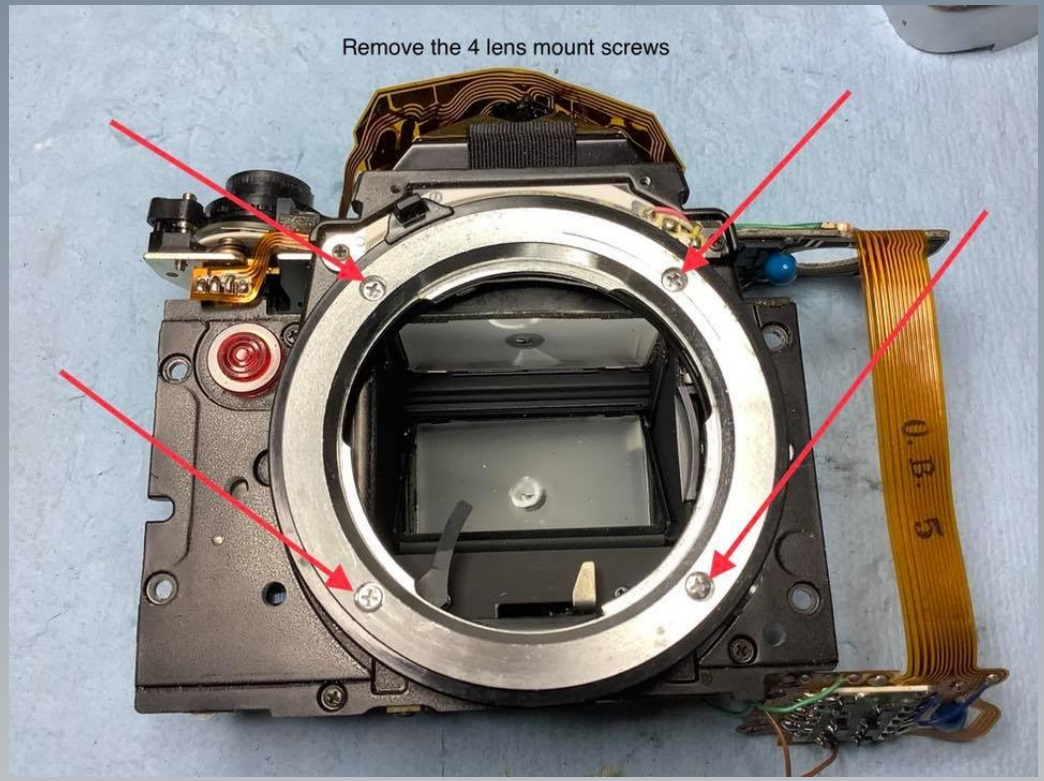
https://www.facebook.com/groups/360490091319202/?post_id=594886887879520

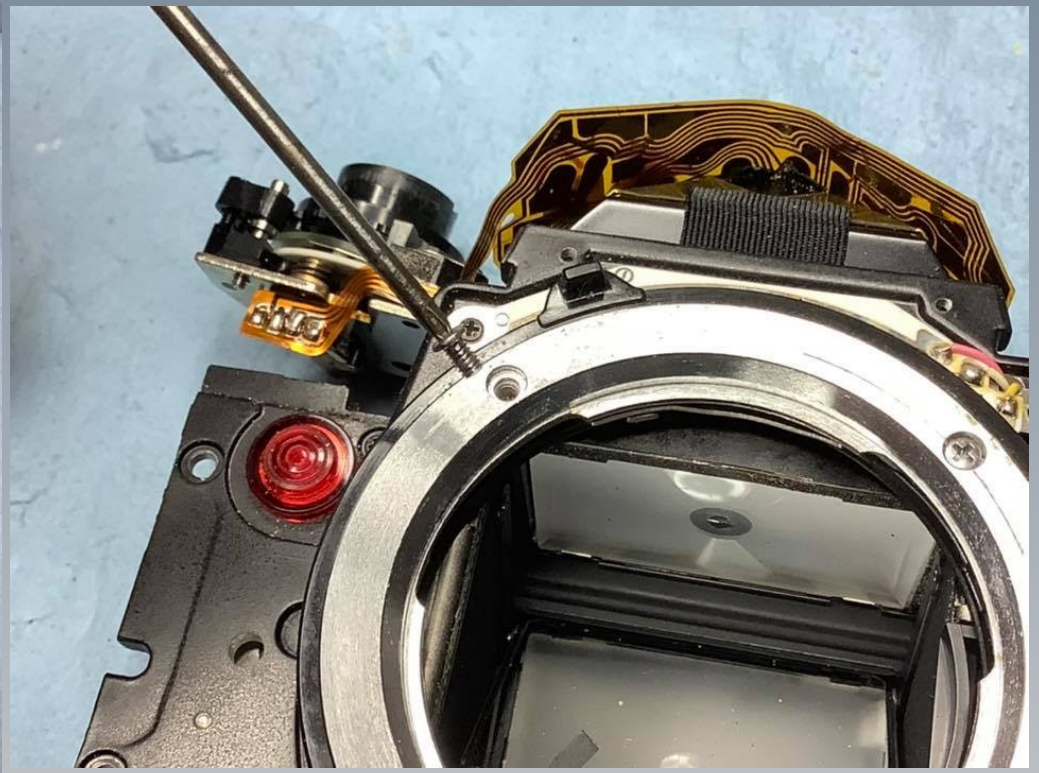
Remove the four lens bayonet mount screws - these screws are hard to remove, the factory applies a thread-locking agent to the threads - using the proper sized JIS driver bit is a must!

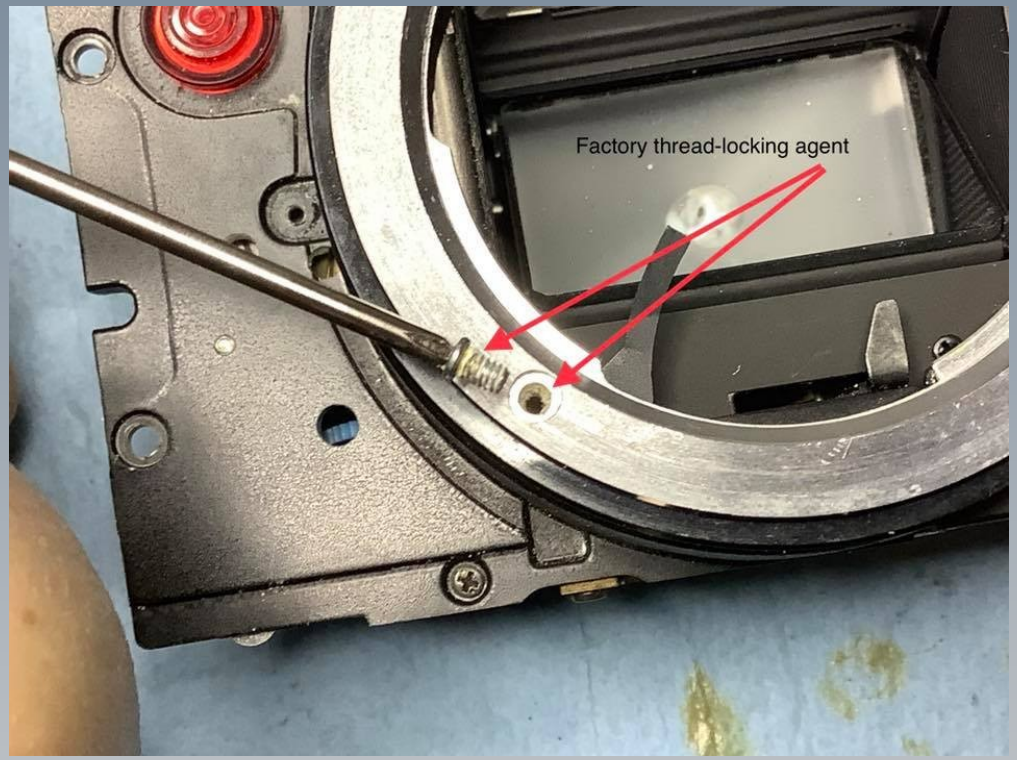
I use a rocking back and fourth motion to help break the seal, be sure to maintain pressure on the screw to avoid slipping and causing inadvertent damage.

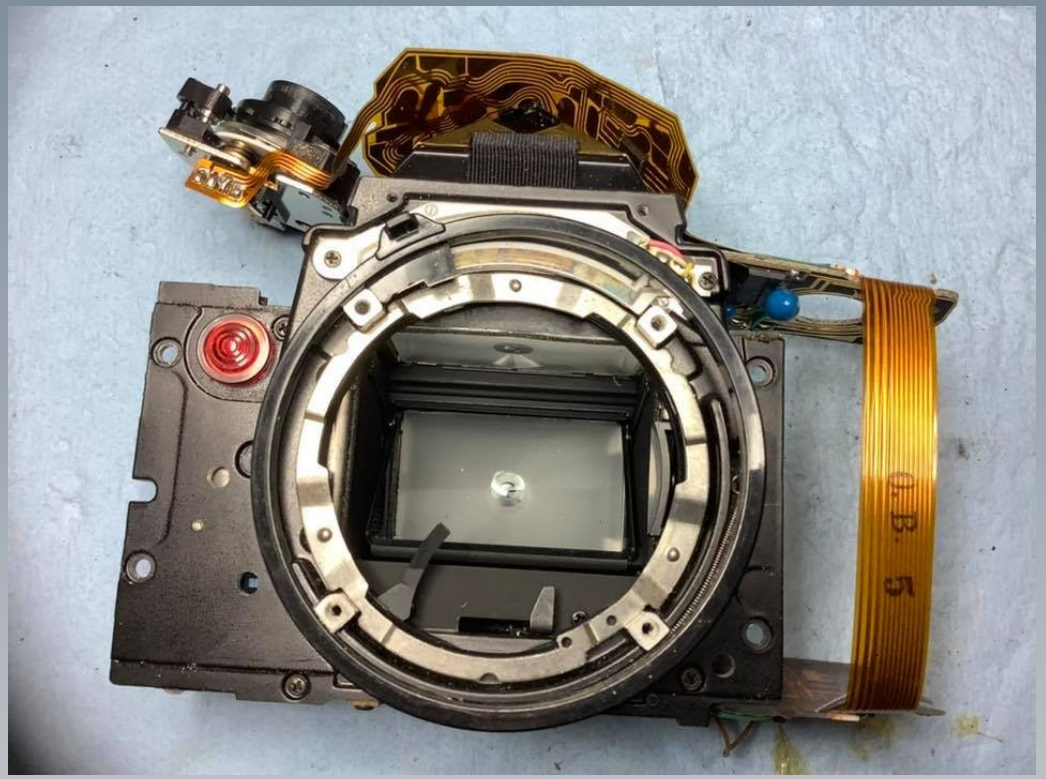
Lift off the mount ring, the aperture ring, unhook the spring where it attaches to the hook on the cable release socket, lift off the bayonet mount spring - this mount spring maintains firm pressure on a mounted lens flange when mounted on the body...

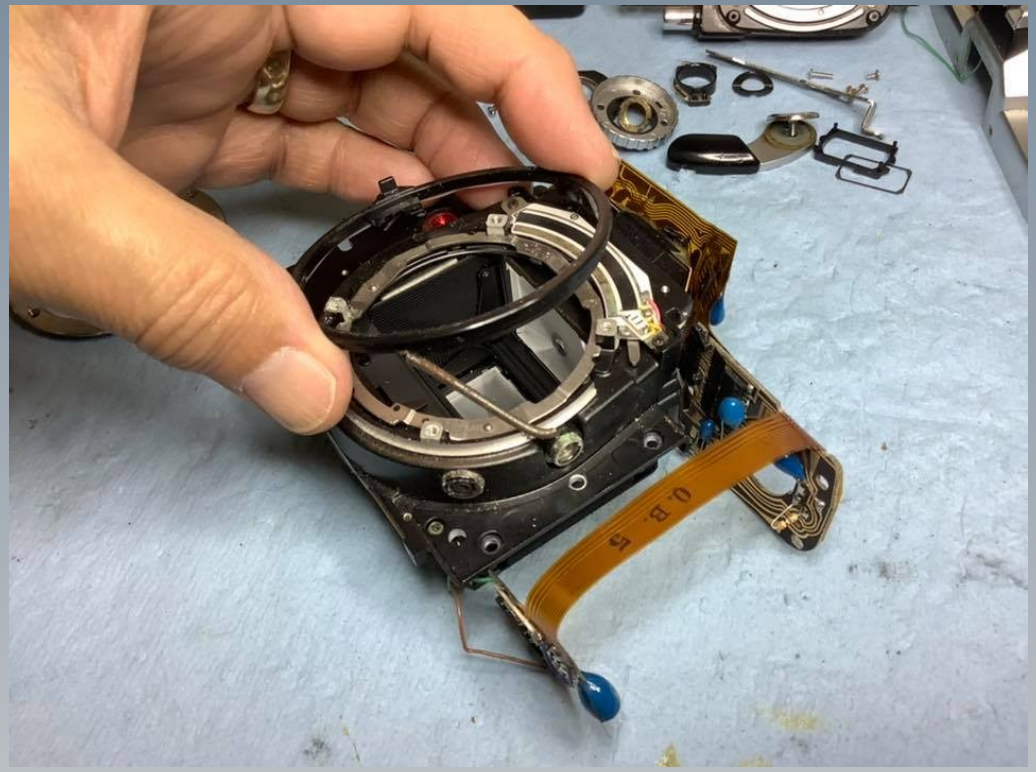
The aperture resistor bands and brush contacts will be cleaned upon re-assembly - make notes of the wiring, take lots of photos.

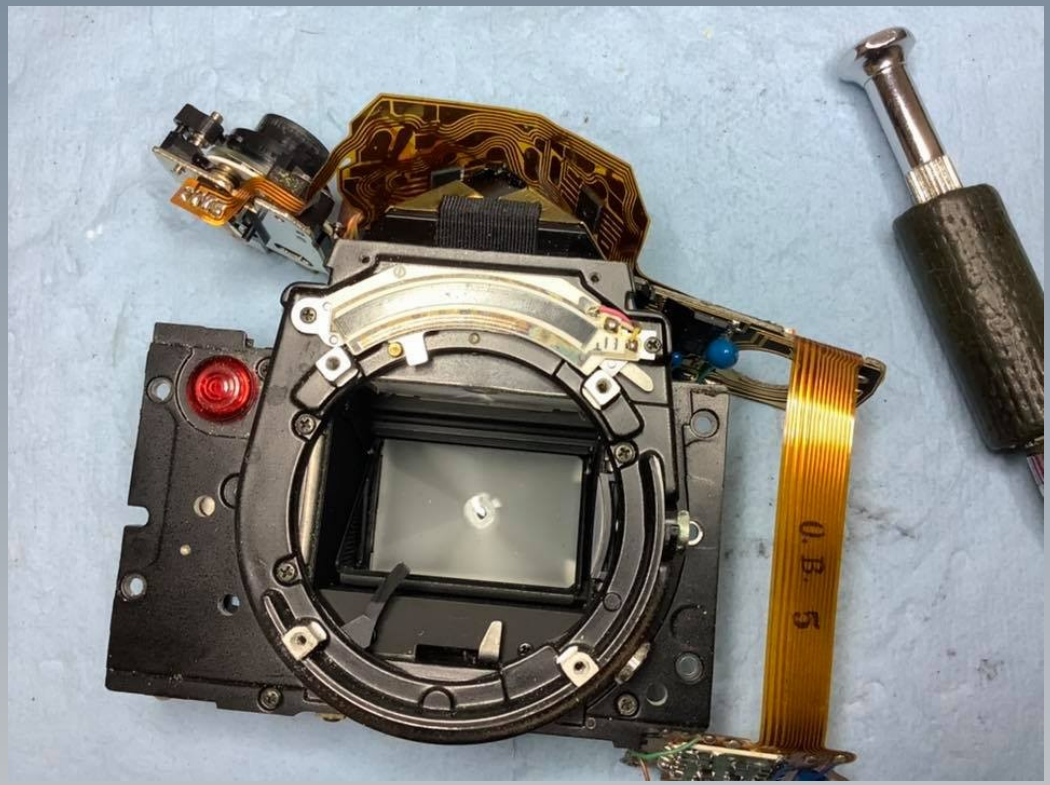

Remove the 4 lens mount screws

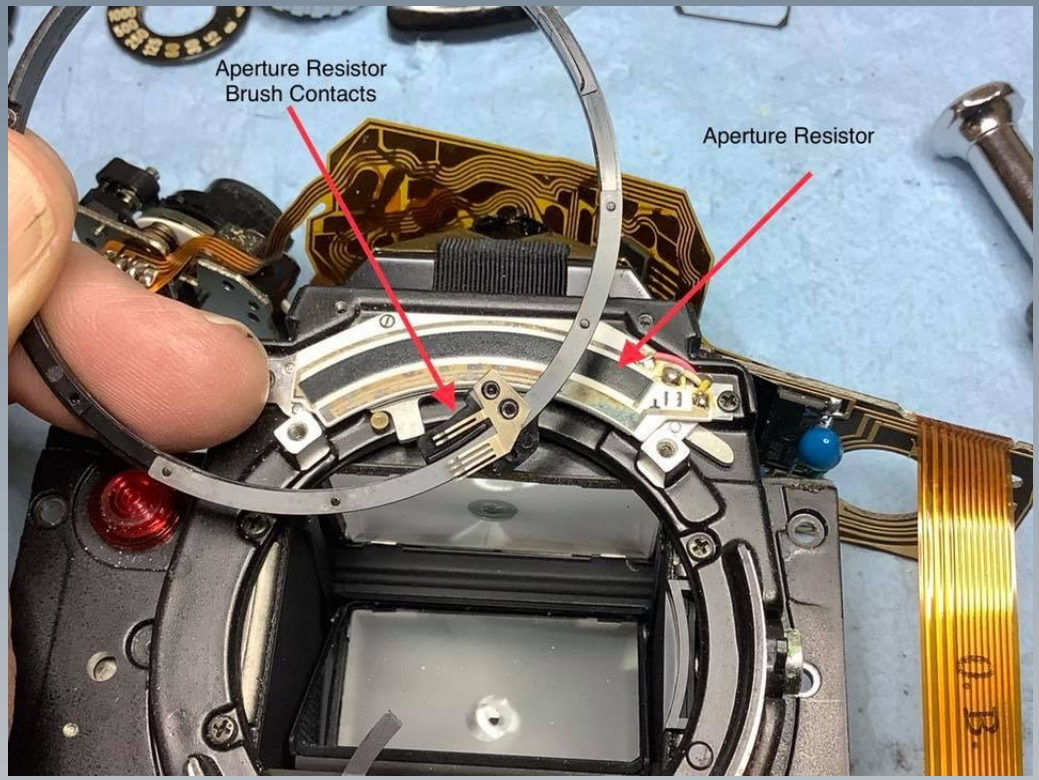


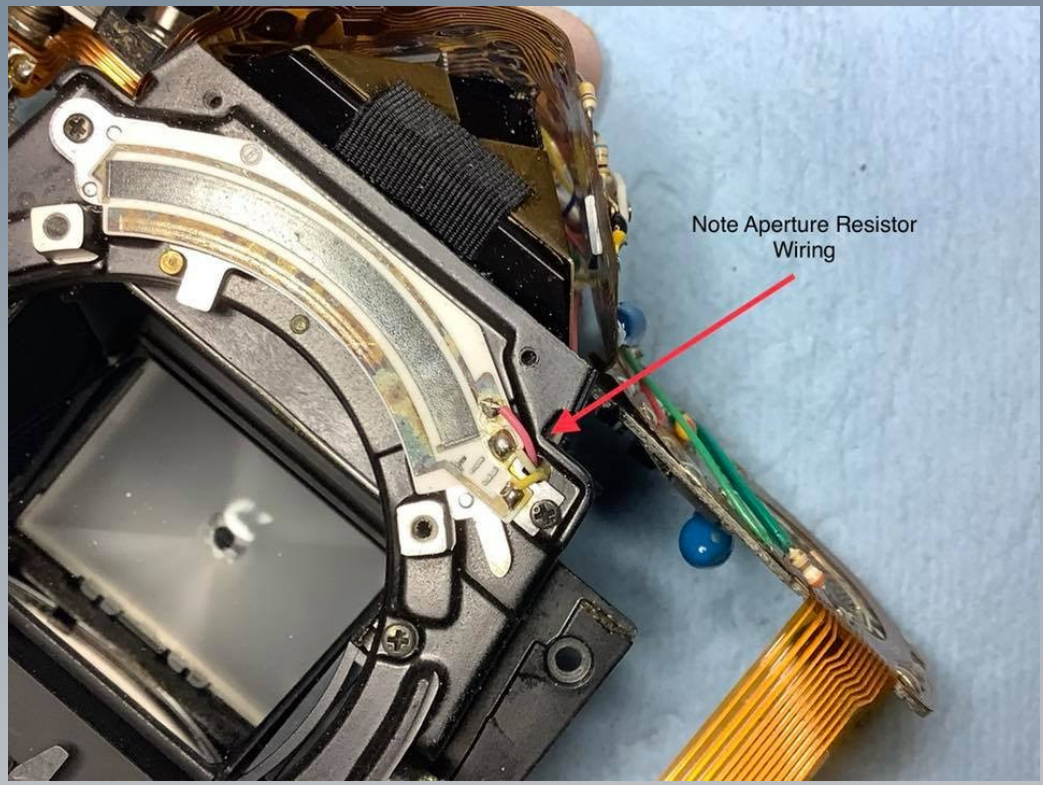

Factory thread-locking agent






O.B. 5


Aperture Resistor
Brush Contacts
Aperture Resistor


Note Aperture Resistor
Wiring

Post #13

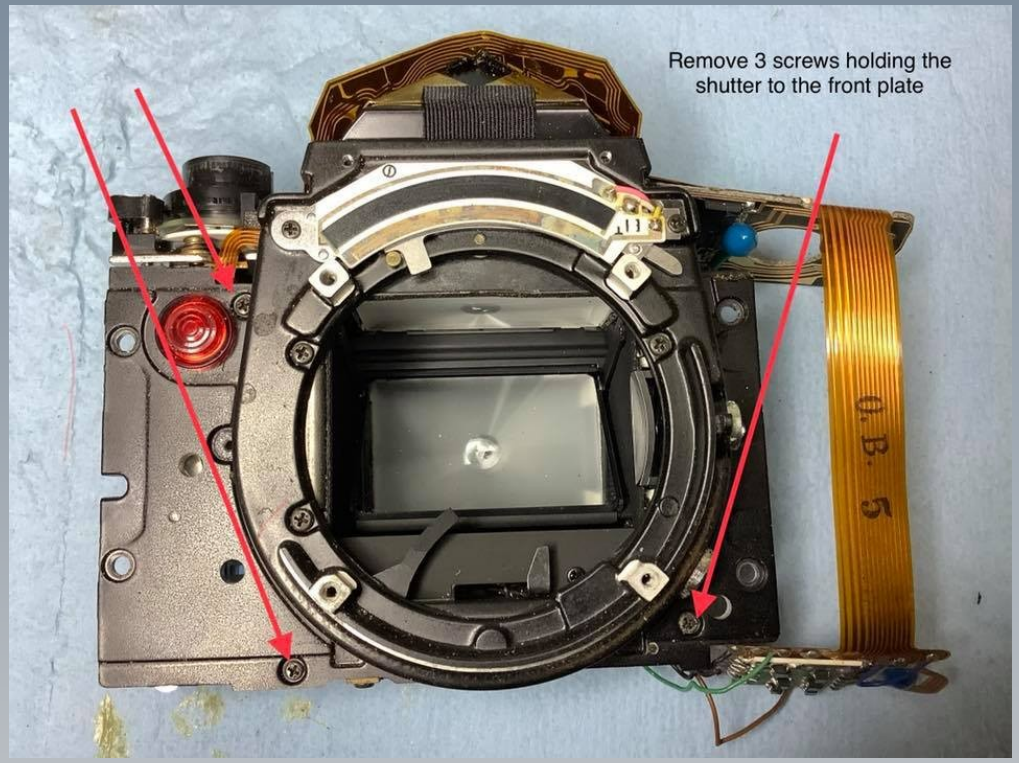
https://www.facebook.com/groups/360490091319202/?post_id=595562371145305

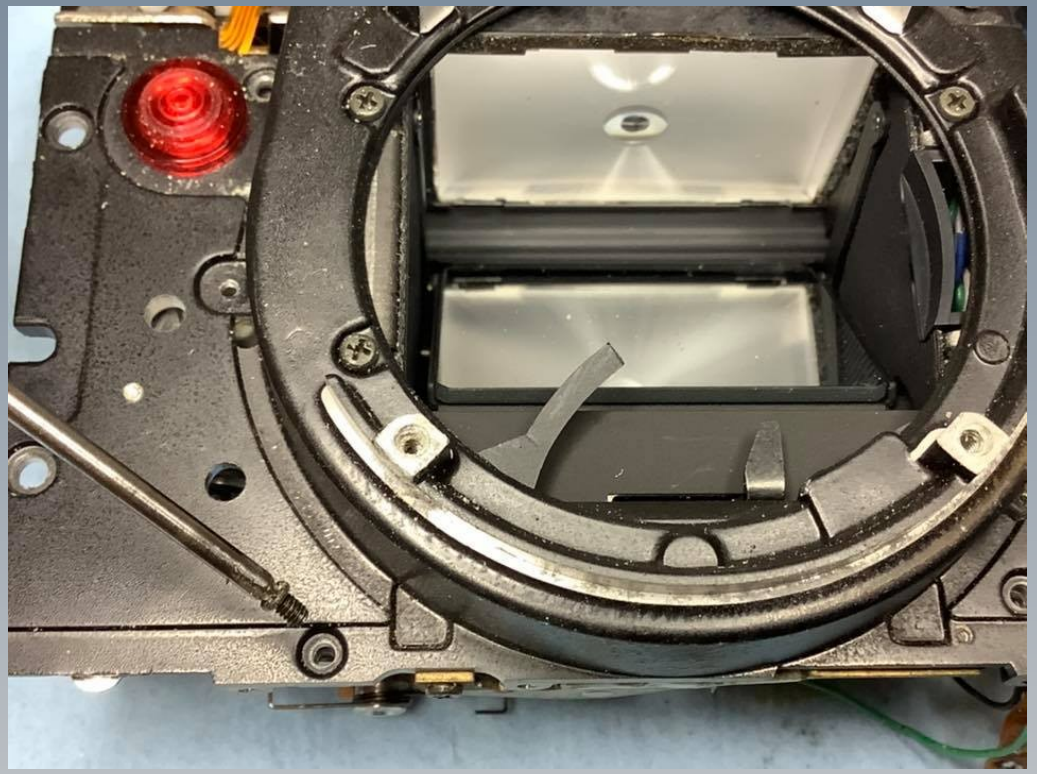
Note the three screws holding the shutter assembly to the front plate/mirror unit - remove the 3 screws and separate the shutter slightly, unsolder the green flash contact sync wire...

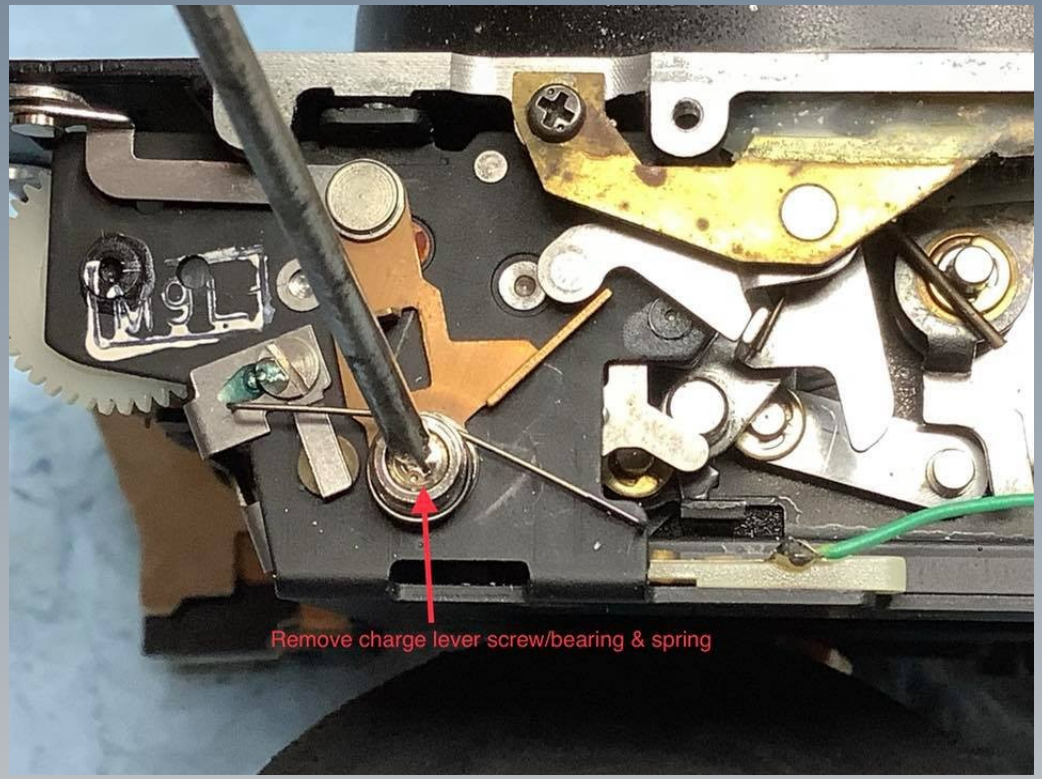
Move the shutter away from the front plate/mirror assembly and note the positions of the wires to the shutter and self-timer LED, unsolder the wires and remove the shutter assembly carefully so no damage is done to the wires or FPC.

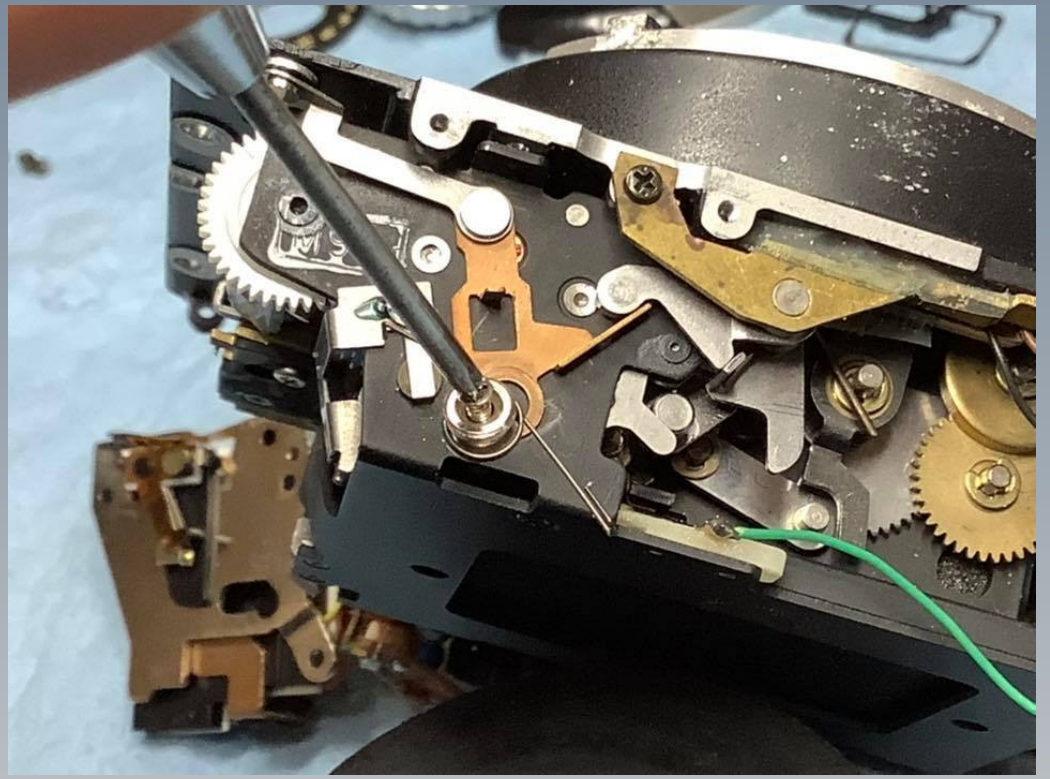
I removed the wires at the contacts instead of the FPC to avoid heating the FPC connections, it really doesn't matter where you un-solder the wires, I'm just used to doing it this way.

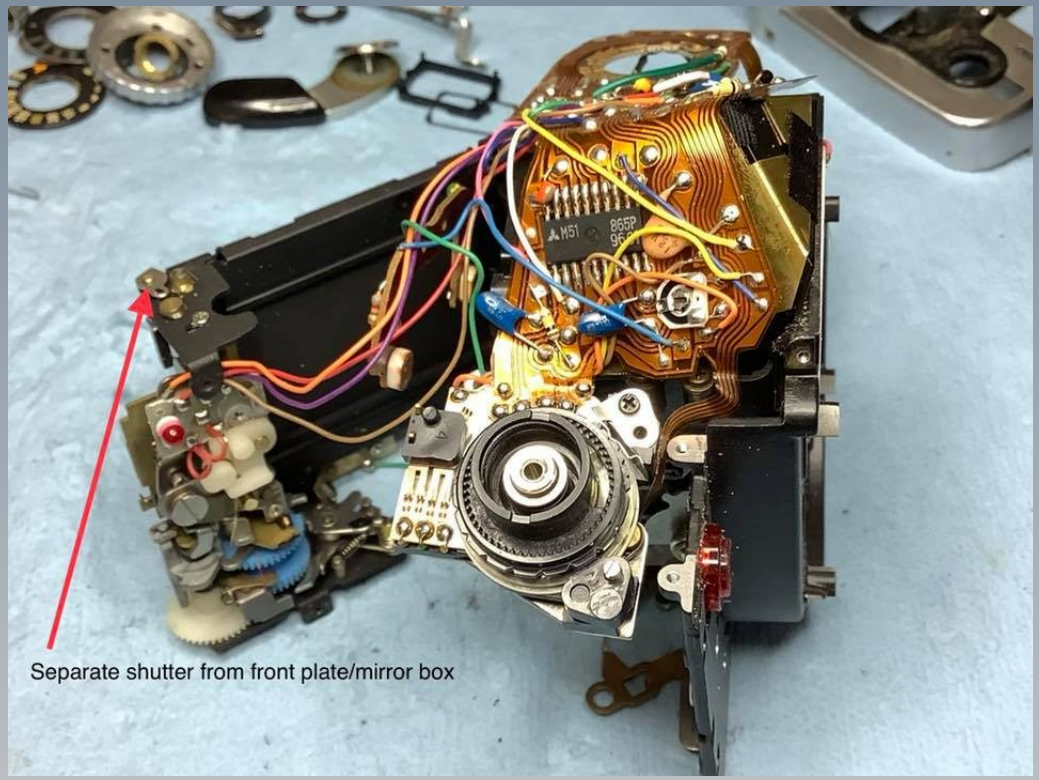
Time to take a moment to examine the shutter, later I'll explain cleaning and lubricating the shutter.

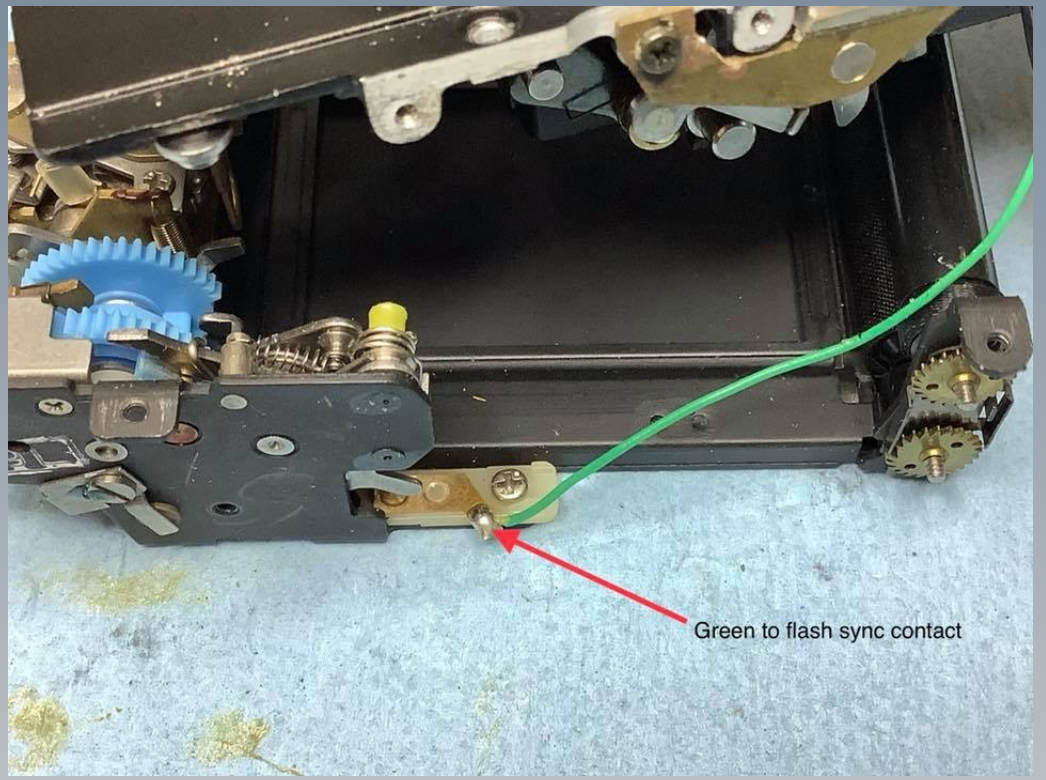

Remove 3 screws holding the
shutter to the front plate

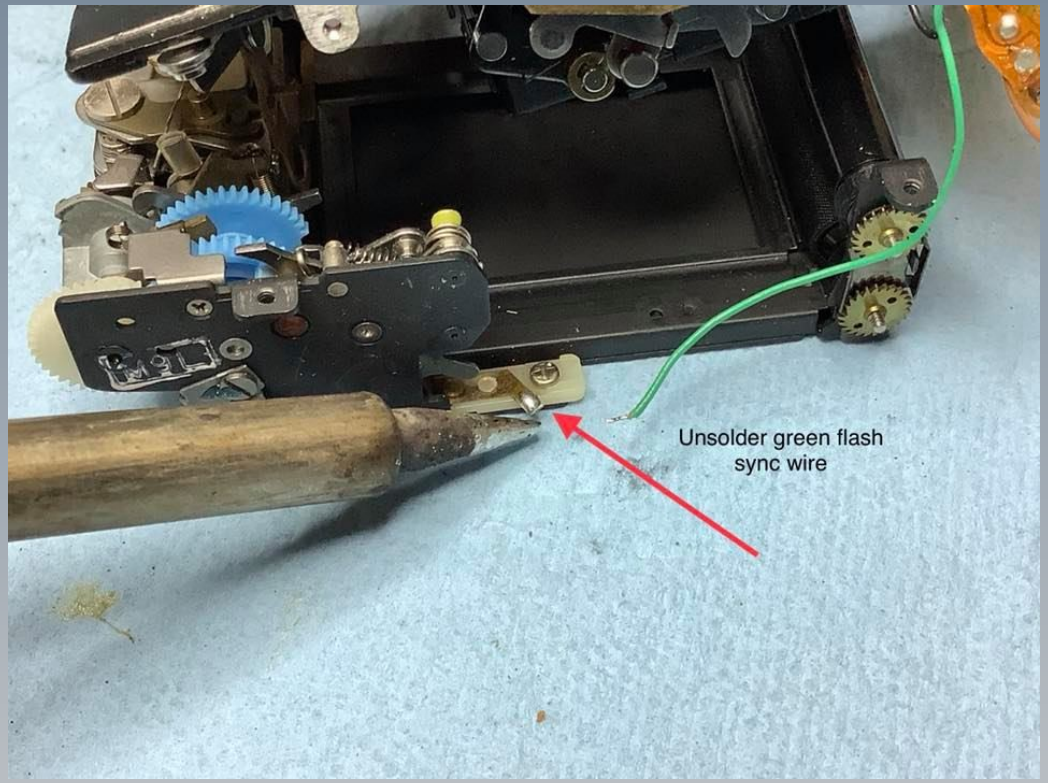


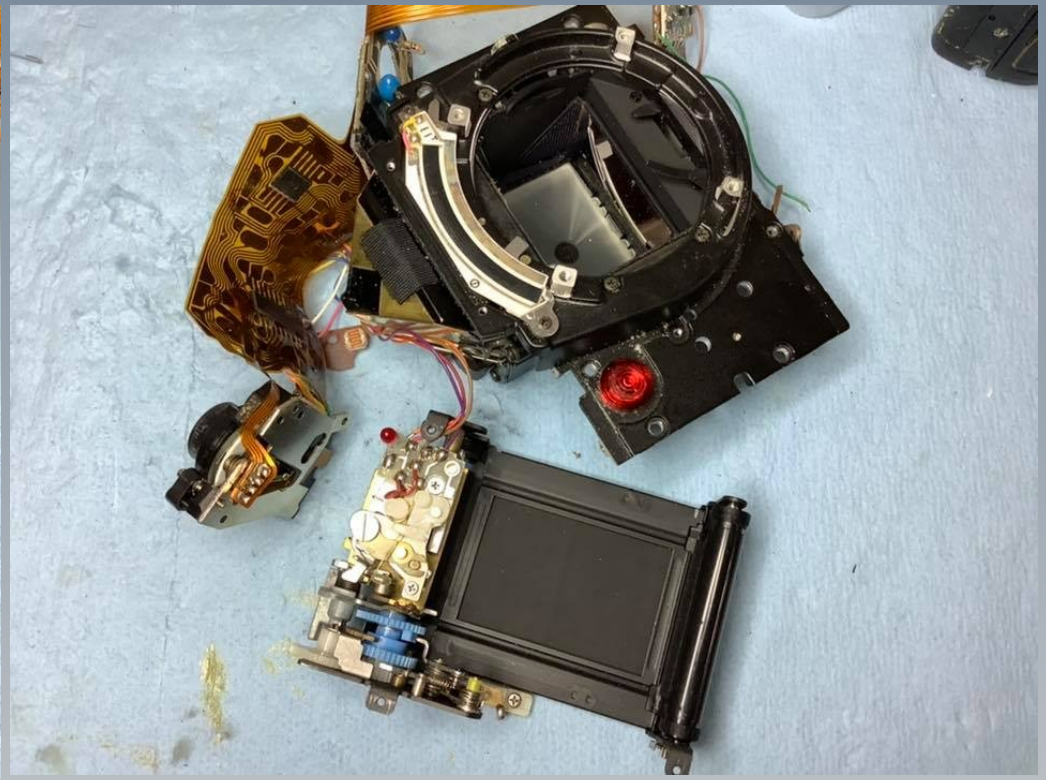

Remove charge lever screw/bearing & spring

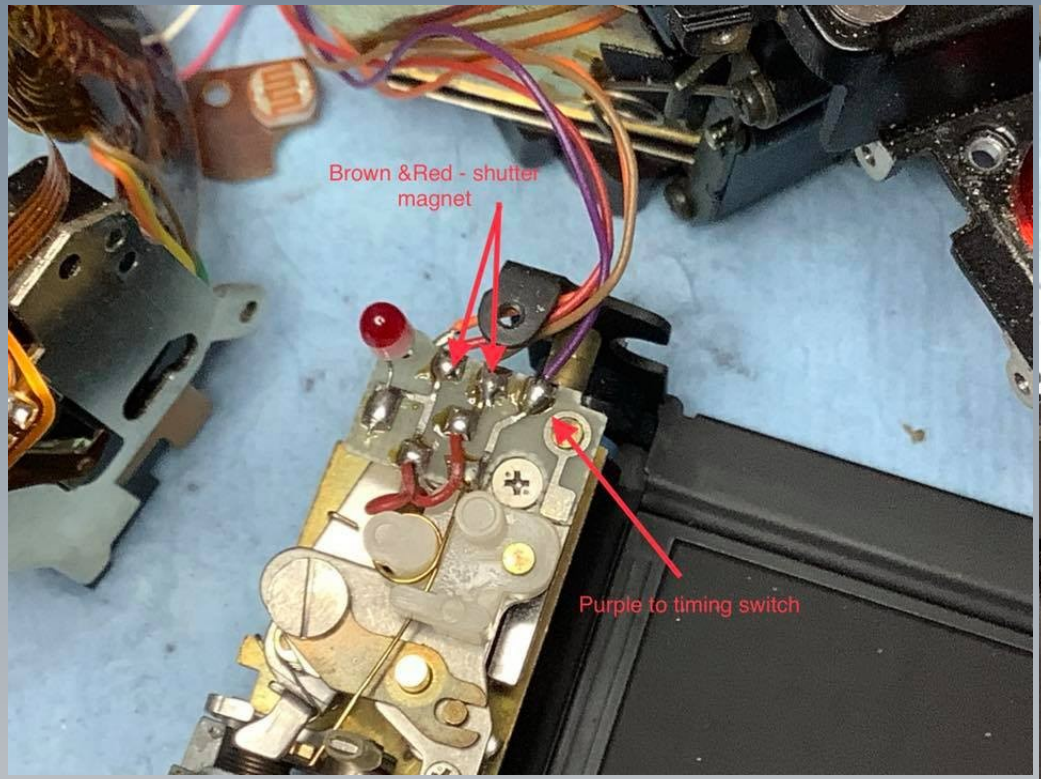


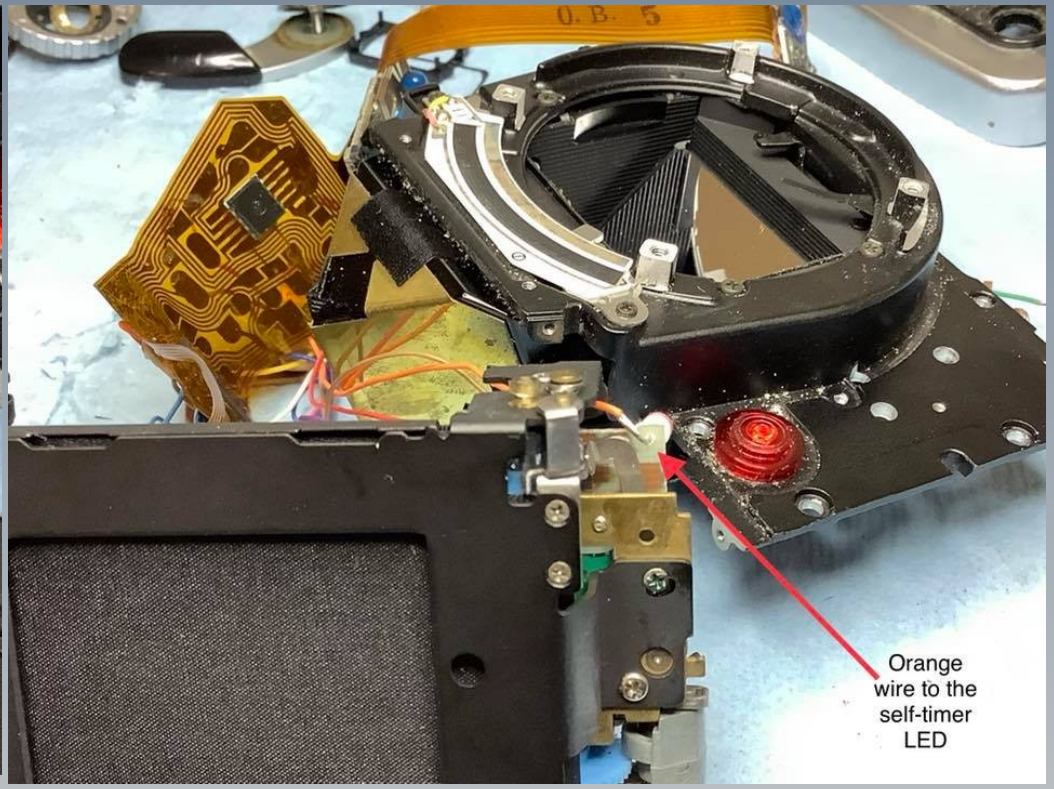

Separate shutter from front plate/mirror box

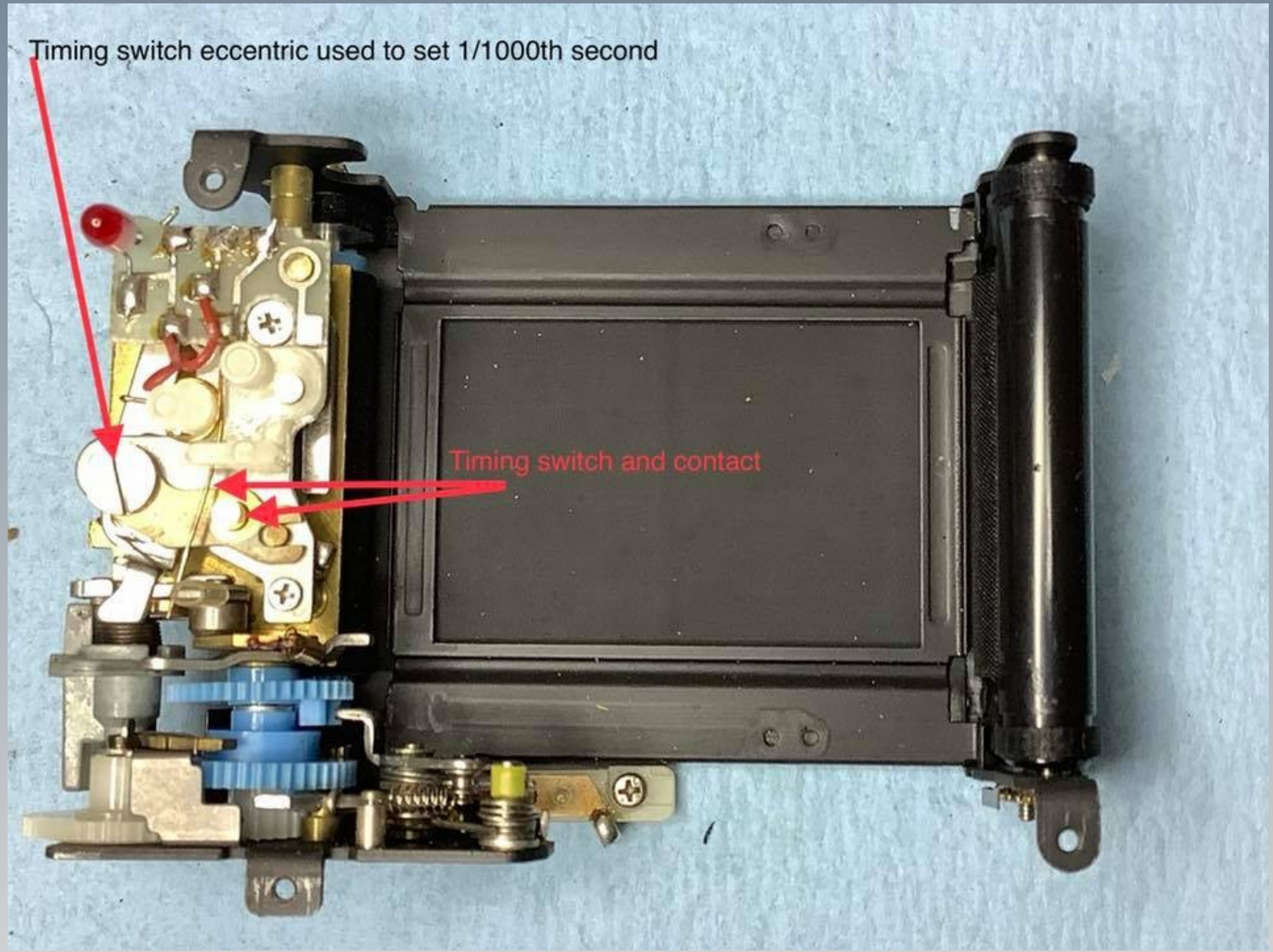

Green to flash sync contact


Unsolder green flash
sync wire




Brown &Red - shutter magnet
Purple to timing switch


Orange wire to the self-timer LED


Timing switch eccentric used to set 1/1000th second
Timing switch and contact

Post #14

https://www.facebook.com/groups/360490091319202/?post_id=595572814477594

There are many questions regarding the shutter curtain or shutter charge over-travel - this should clear up any misunderstandings...

The shutter when wound with the film and charging the mirror assembly has a latching surface for the second shutter curtain latch (seen here in bright aluminum, the latching surface is in blue).

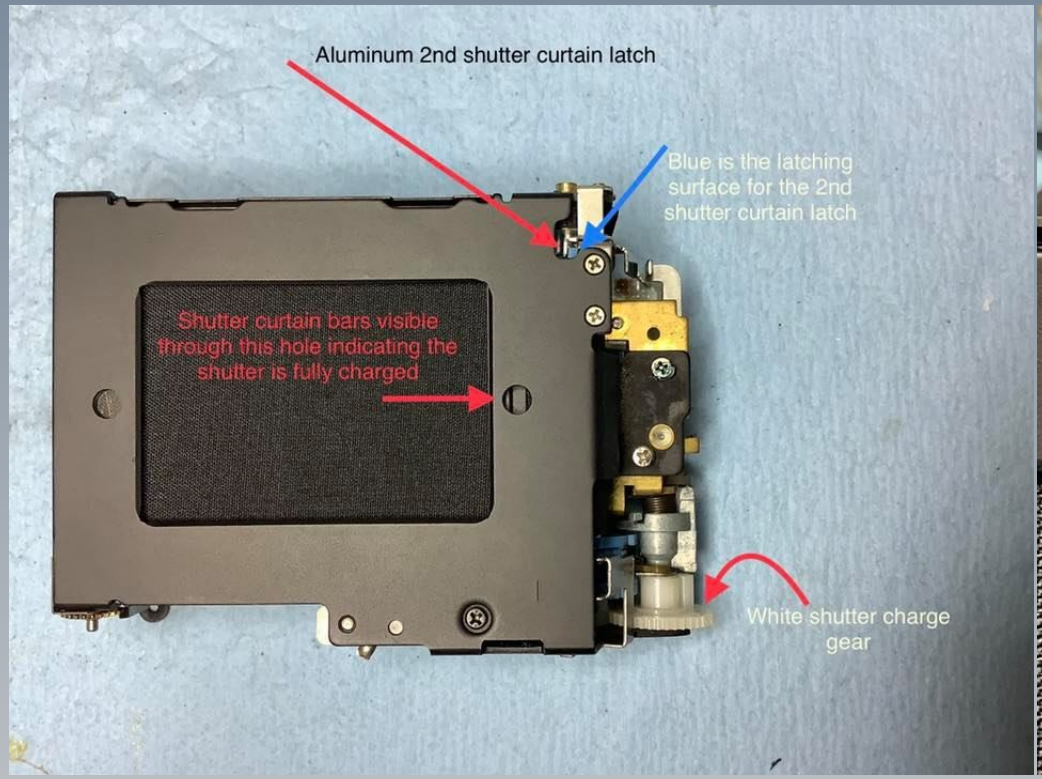
When the shutter is normally wound the blue latching surface moves just past the aluminum latch allowing the spring-loaded latch to fall into place holding the second shutter curtain until the timing circuit fires the second shutter curtain magnet effectively controlling the slit-width as the two shutter curtains travel across the film plane ...

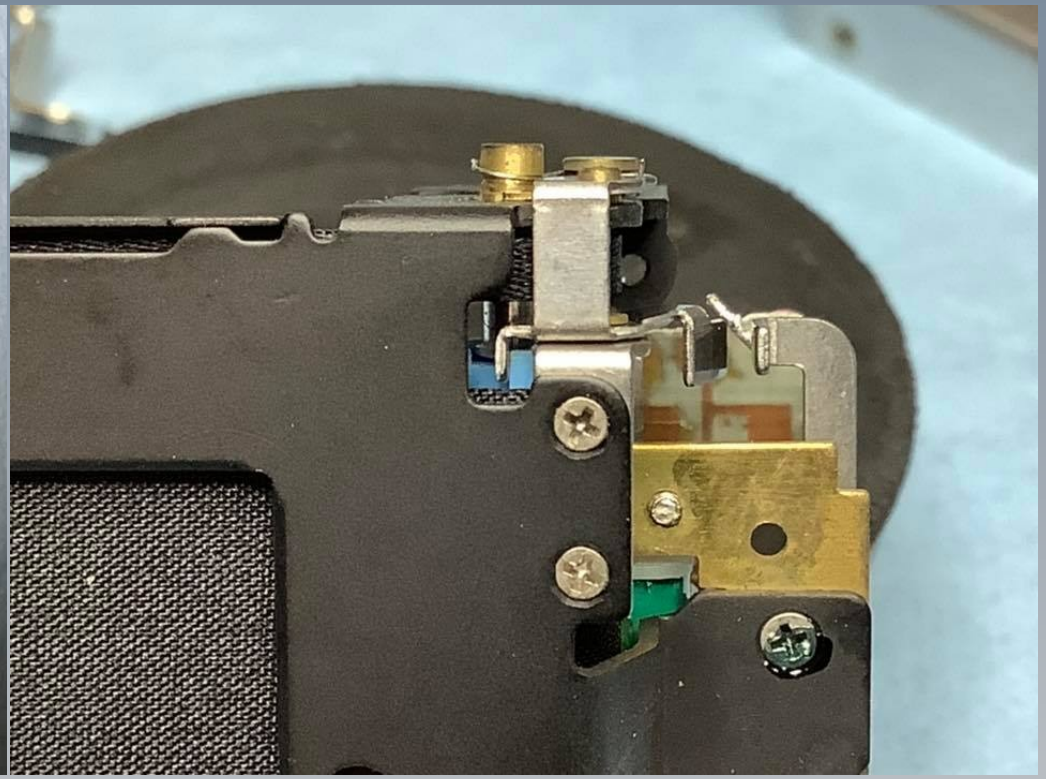
If the over-travel adjustment is insufficient the second curtain doesn’t latch properly and the second curtain follows the first when the shutter is released, often the owner will see this as a partiality exposed negative as the second shutter curtain travels part-way across the film plane, hangs for a spilt-second before completing its travel... the shutter sound isn’t normal as well...

If the over-travel is too far adjusted each winding stroke stresses the curtains because they move to the end of their travel before the winding mechanism is stopped...

Careful adjustment of the over-travel is very important.

Watch the video carefully and see how the second shutter curtain latch works...


Aluminum 2nd shutter curtain latch
Blue is the latching surface for the 2nd shutter curtain latch
Shutter curtain bars visible through this hole indicating the shutter is fully charged
White shutter charge gear



Post #15

https://www.facebook.com/groups/360490091319202/?post_id=598511060850436

Desolder the mirror magnet wires (brown & black)

Remove the 2 screws holding the mirror magnet to the front plate and lift off the magnet assembly.

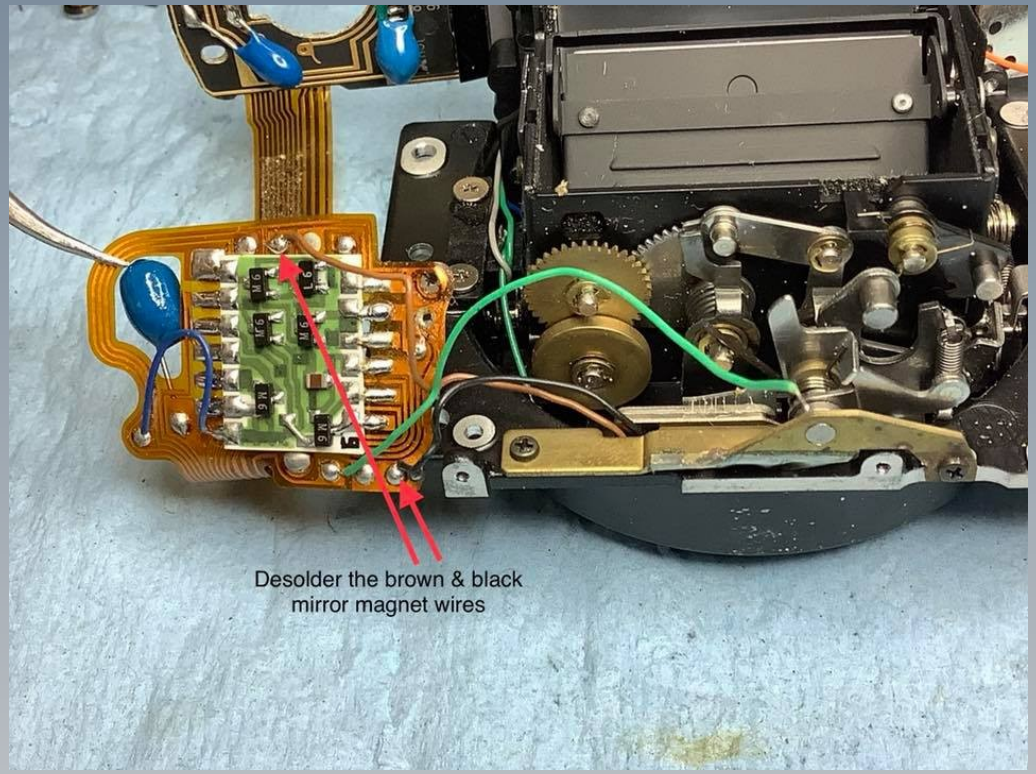
The tape will be removed and the magnet cleaned upon reassembly...

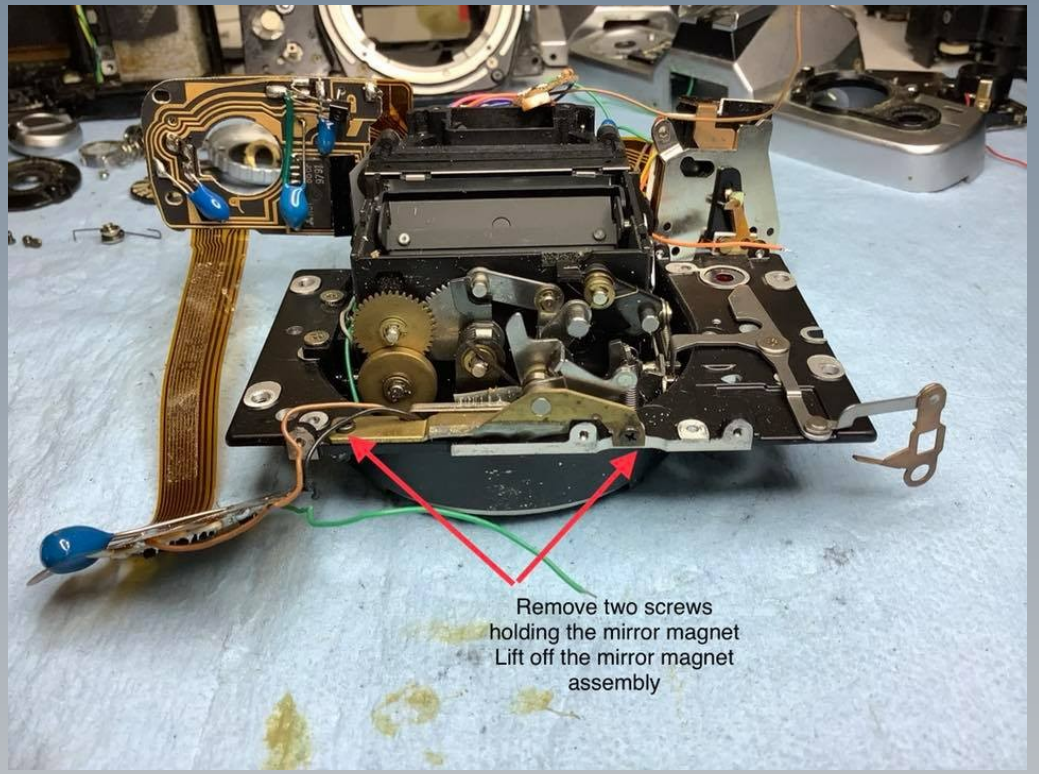
Remove the retaining screw holding the release lever assembly and set the assembly aside...

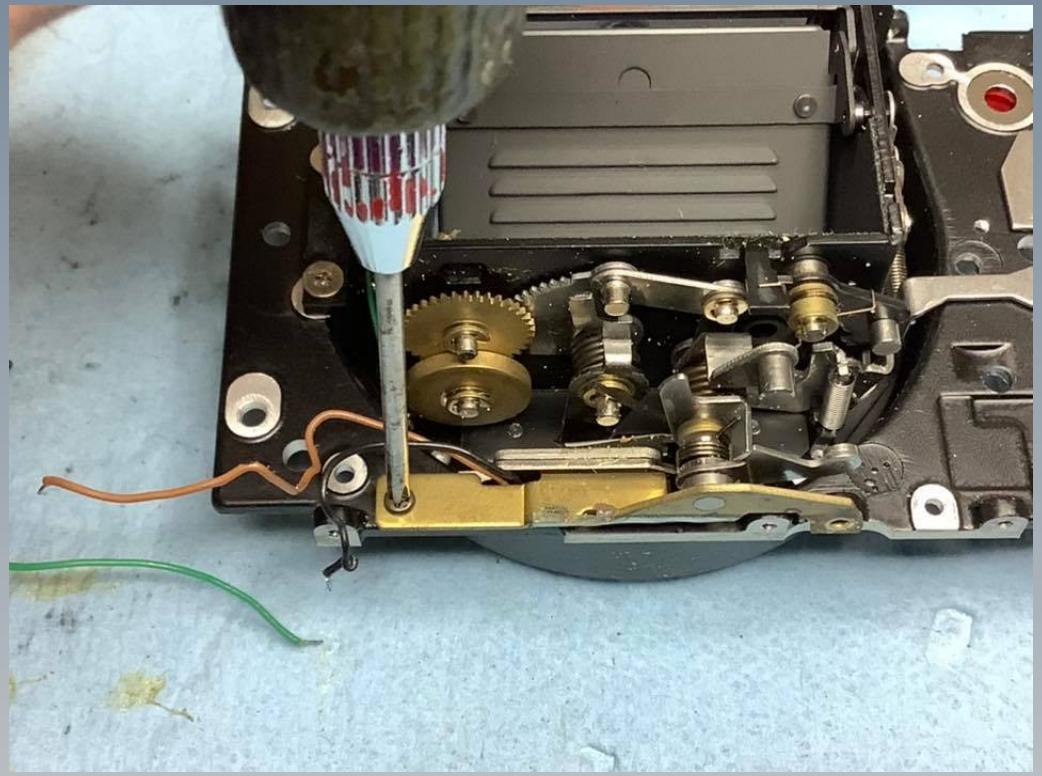
Be careful of the FPC as you turn the front plate/mirror box over, find the 3 mirror box retaining screws (note in many XG models there are 4 screws holding the mirror box to the front plate)

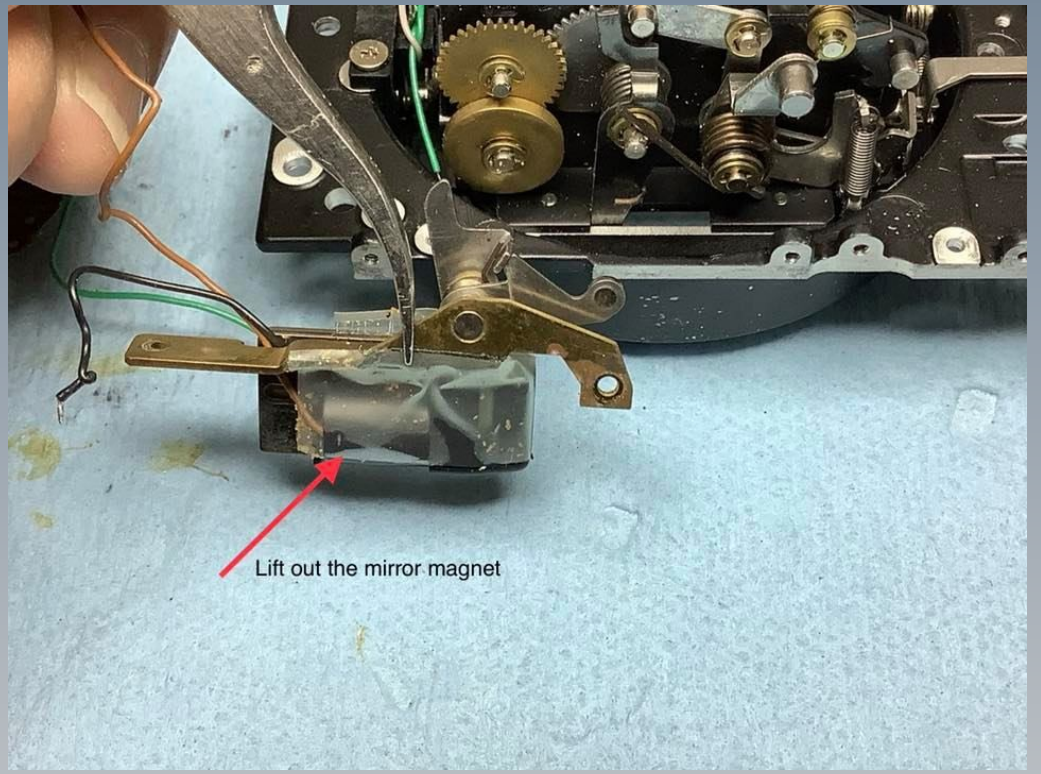
Remove the screws and separate the mirror box from the front plate, if you look carefully you can see the remnants of the mirror box light shield at the bottom front of the mirror box, unseen is the torn piece underneath the single screw at the inside top of the front plate (pointed out in the photo)...

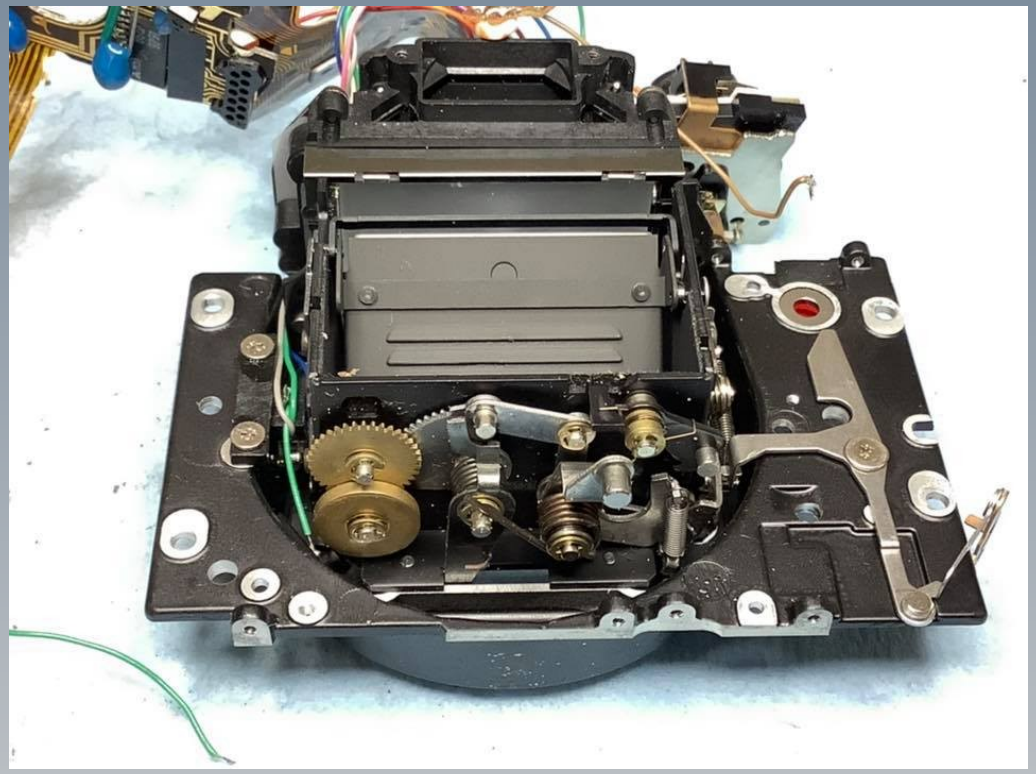
This is as far as I think disassembly will be required to clean, lubricate the mechanisms and of course re-adjust during reassembly - for the purposes of showing how to replace the winding components and sprocket I'll do a complete disassembly of the body.

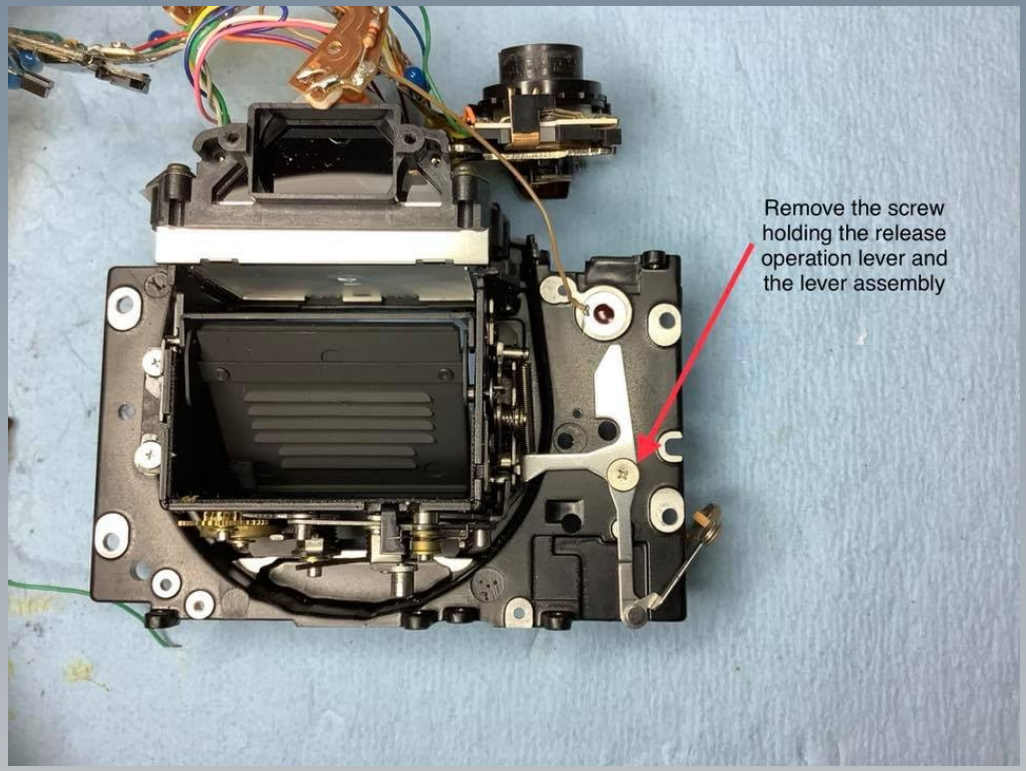

Desolder the brown & black
mirror magnet wires

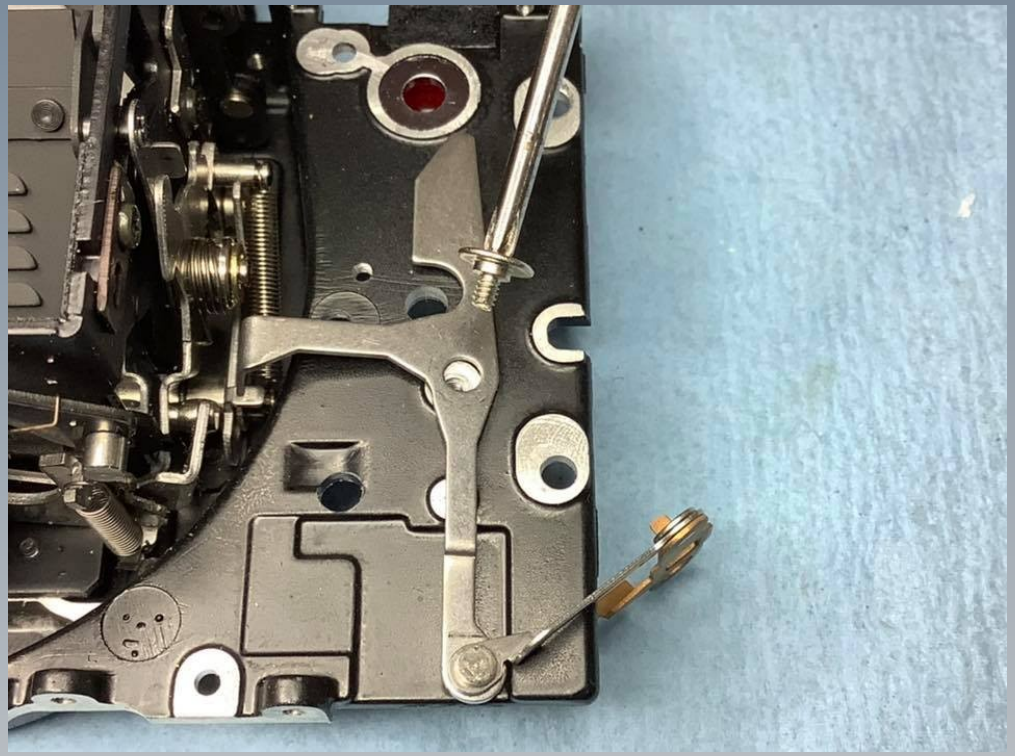

Remove two screws
holding the mirror magnet
Lift off the mirror magnet
assembly

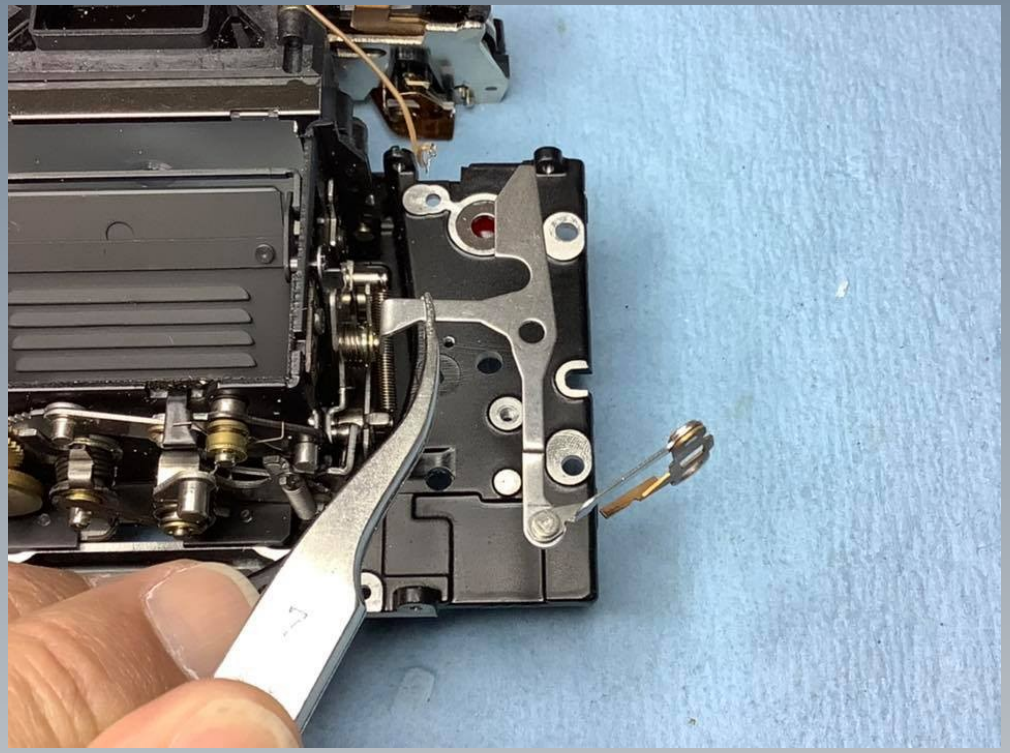


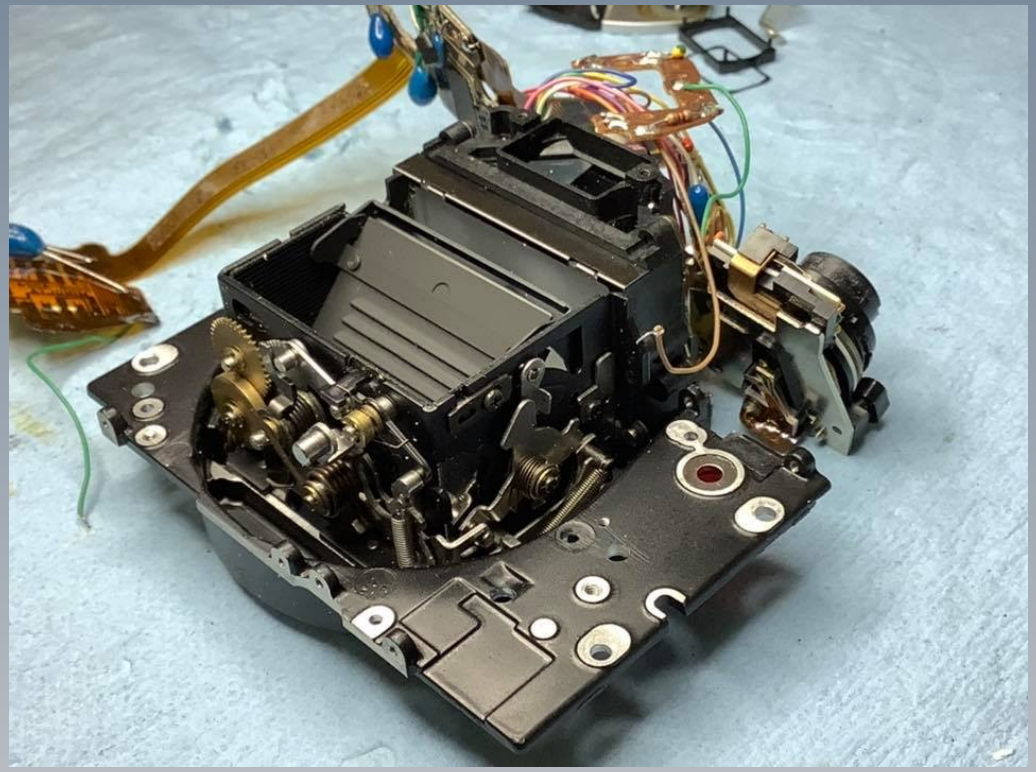

Lift out the mirror magnet

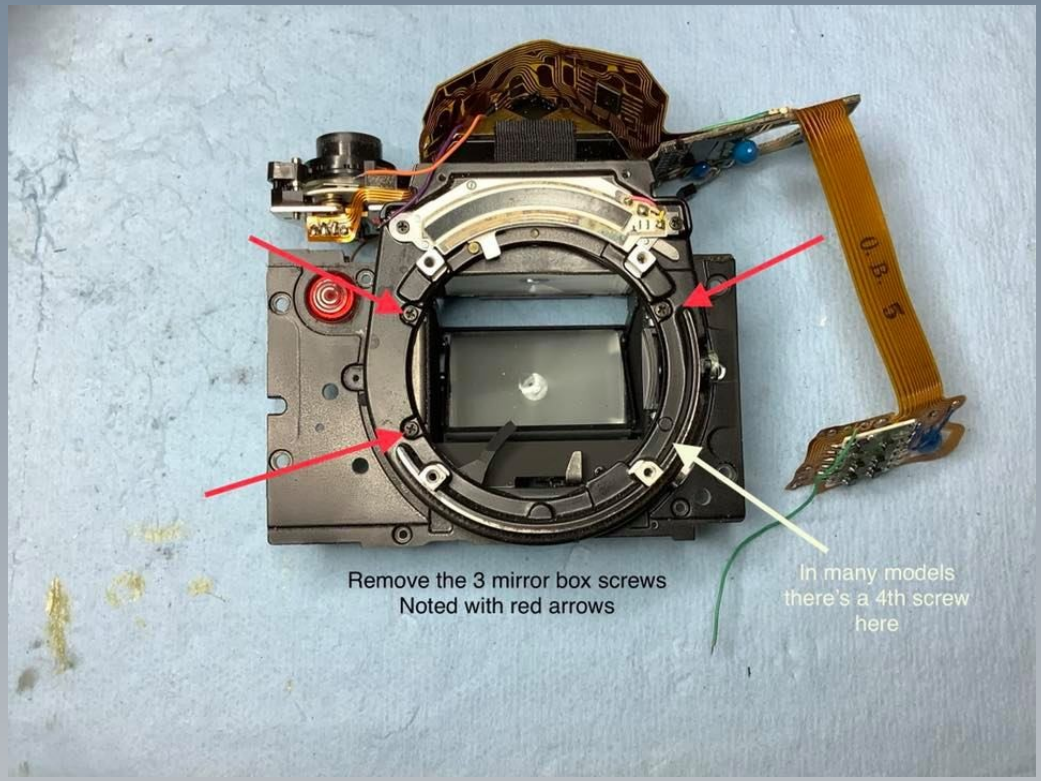


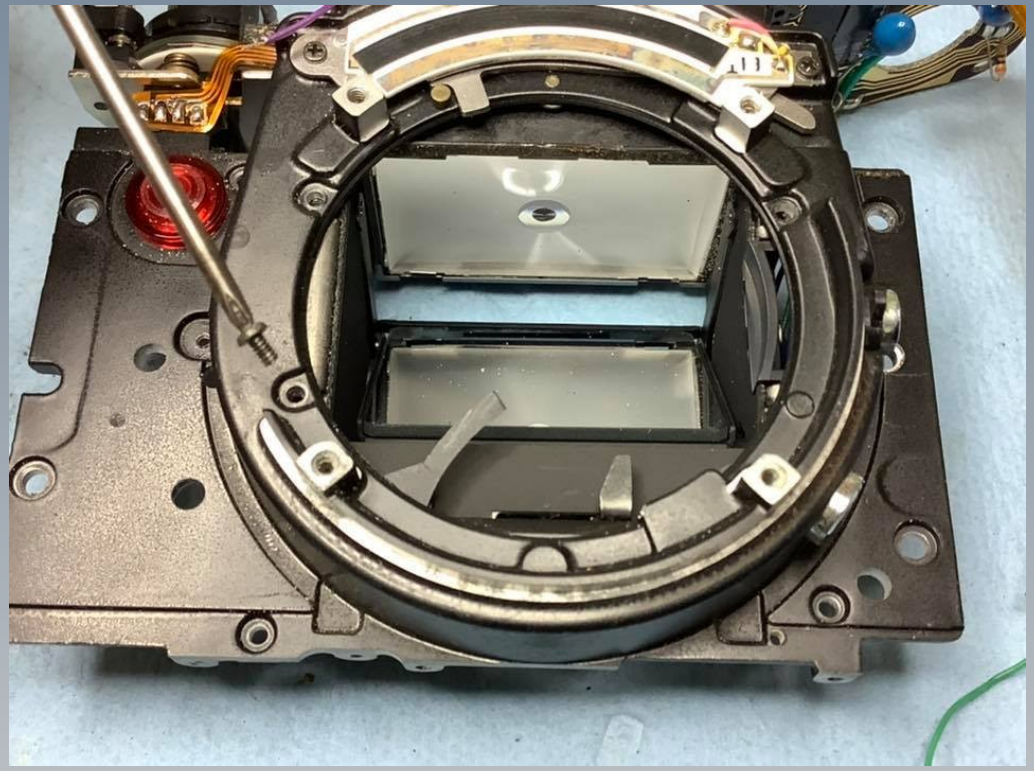

Remove the screw
holding the release
operation lever and
the lever assembly

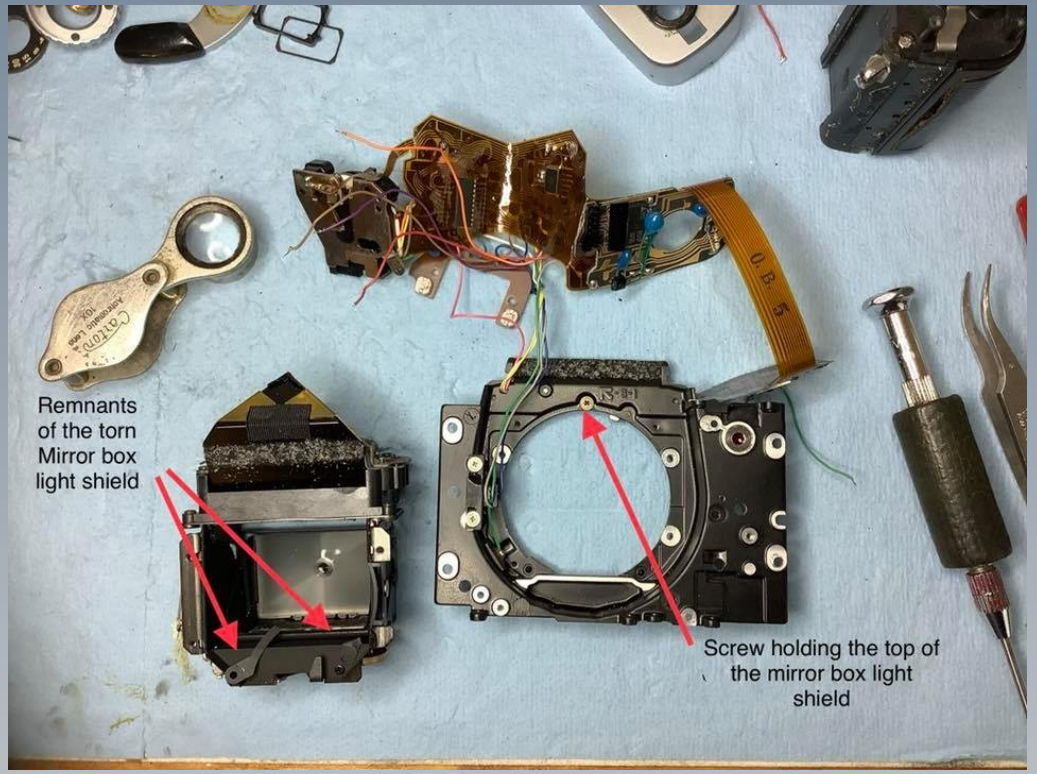


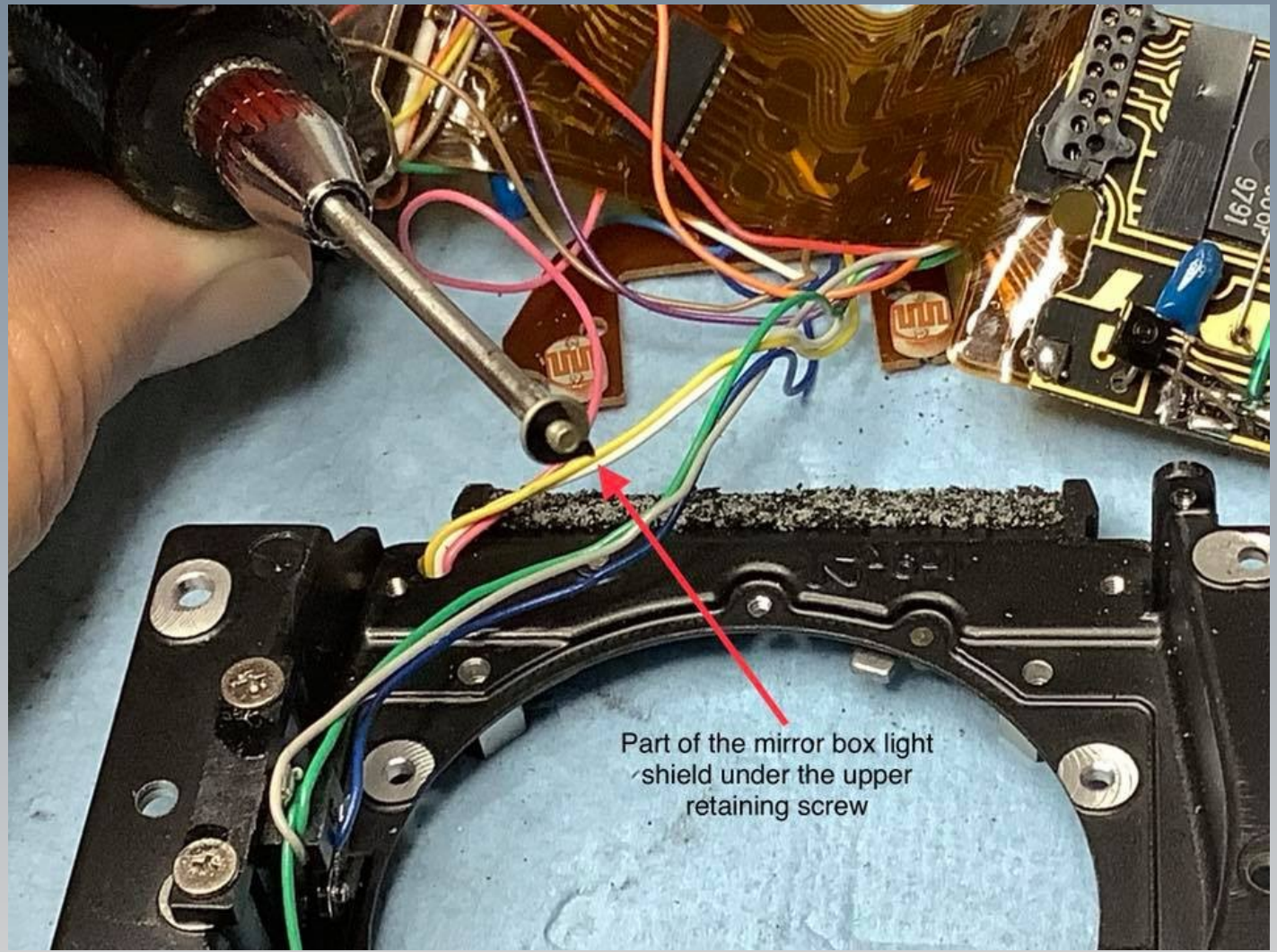





Remove the 3 mirror box screws
Noted with red arrows
In many models
there's a 4th screw
here




Remnants
of the torn
Mirror box
light shield
Screw holding the top of
the mirror box light
shield


Part of the mirror box light shield under the upper retaining screw

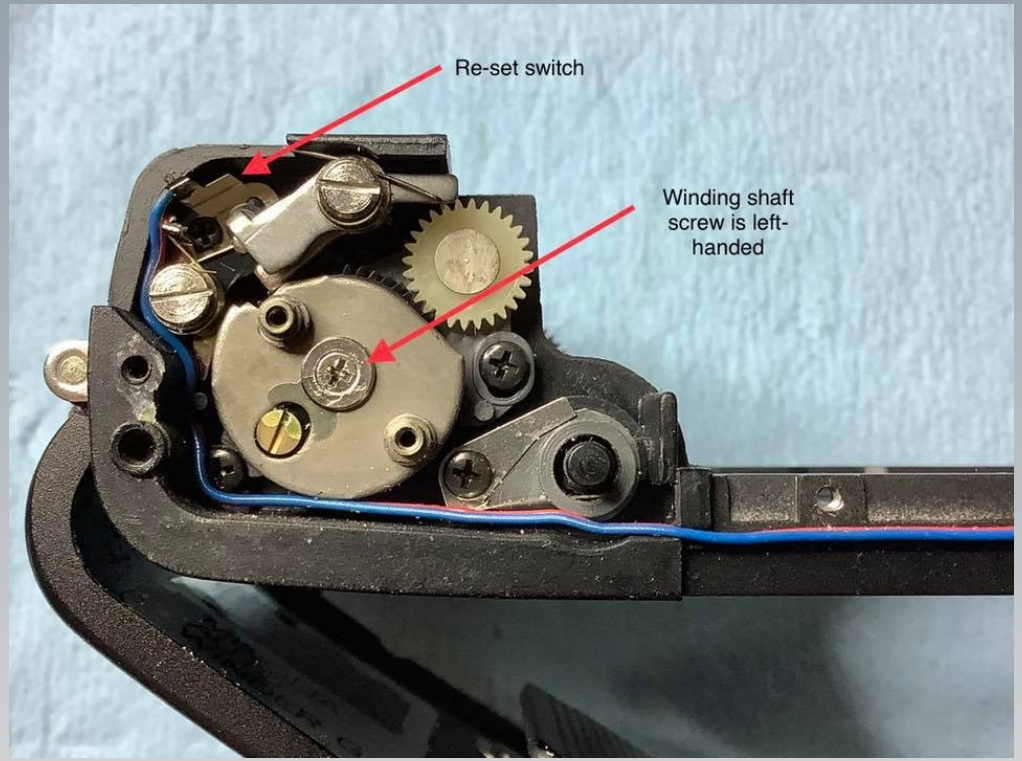
Post #16

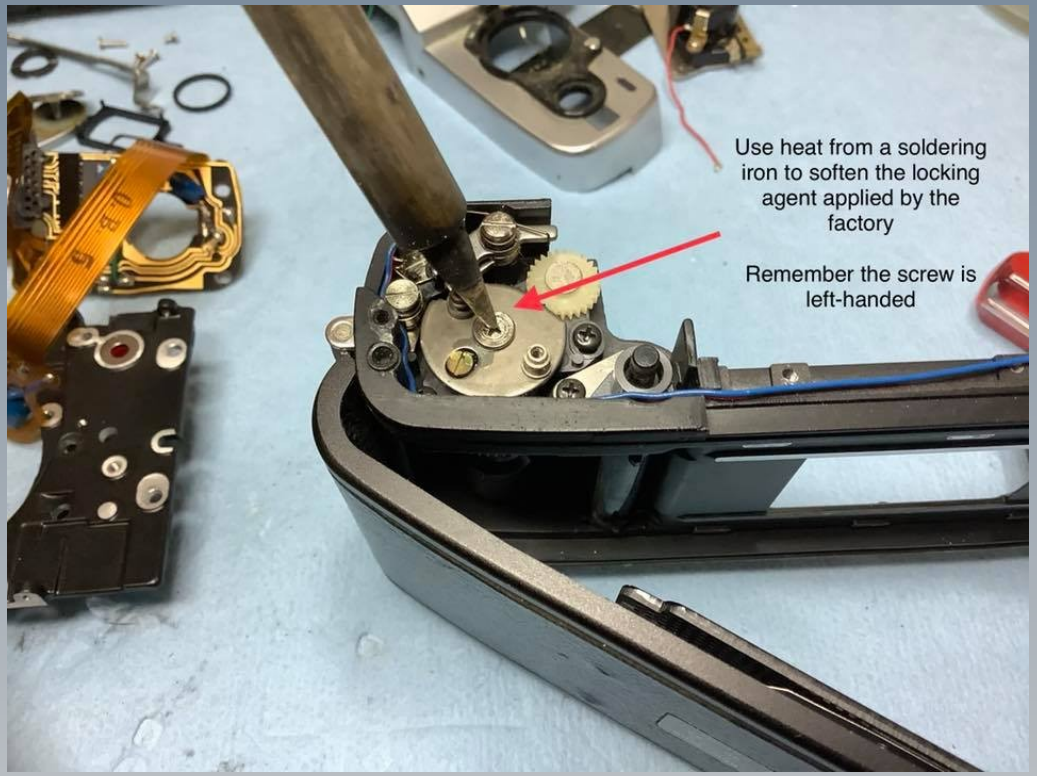
https://www.facebook.com/groups/360490091319202/?post_id=598702784164597

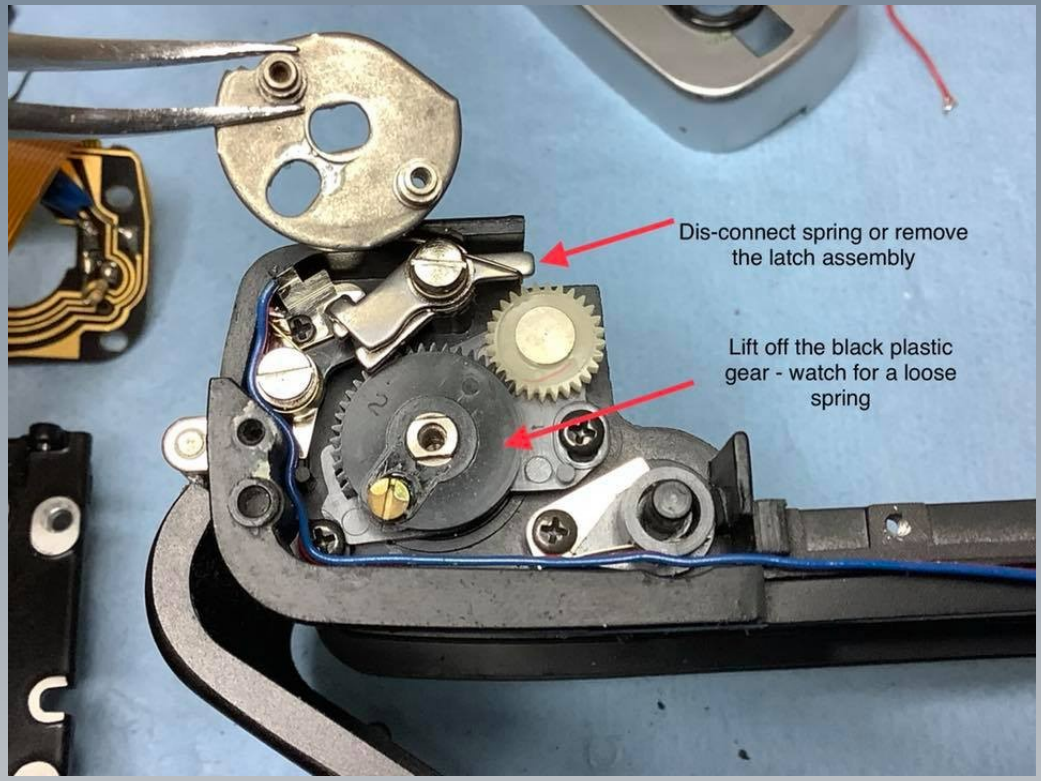
Unhook the winding stop pawl spring and switch the pawl out of the way (the pawl also serves to open and close the re-set switch).

Fire up your soldering iron and heat the left-handed winding shaft retaining screw to soften the locking agent applied at the factory...

Remove the screw and lift off the cam.




Use heat from a soldering iron to soften the locking agent applied by the factory
Remember the screw is left-handed

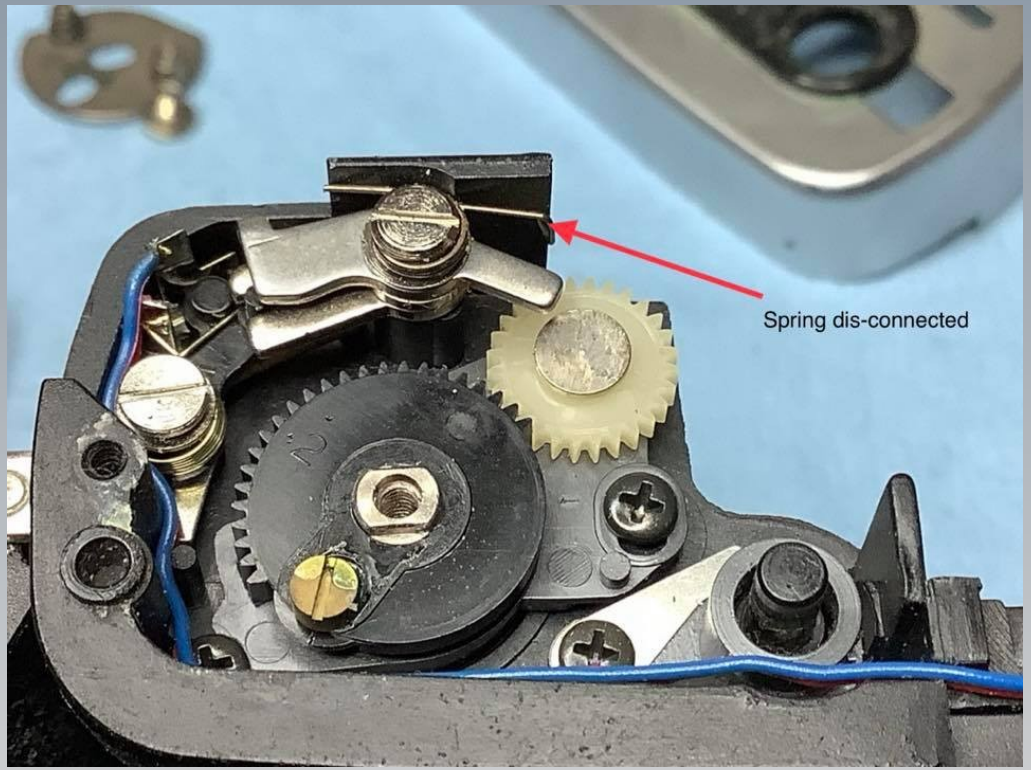

Dis-connect spring or remove the latch assembly
Lift off the black plastic gear - watch for a loose spring

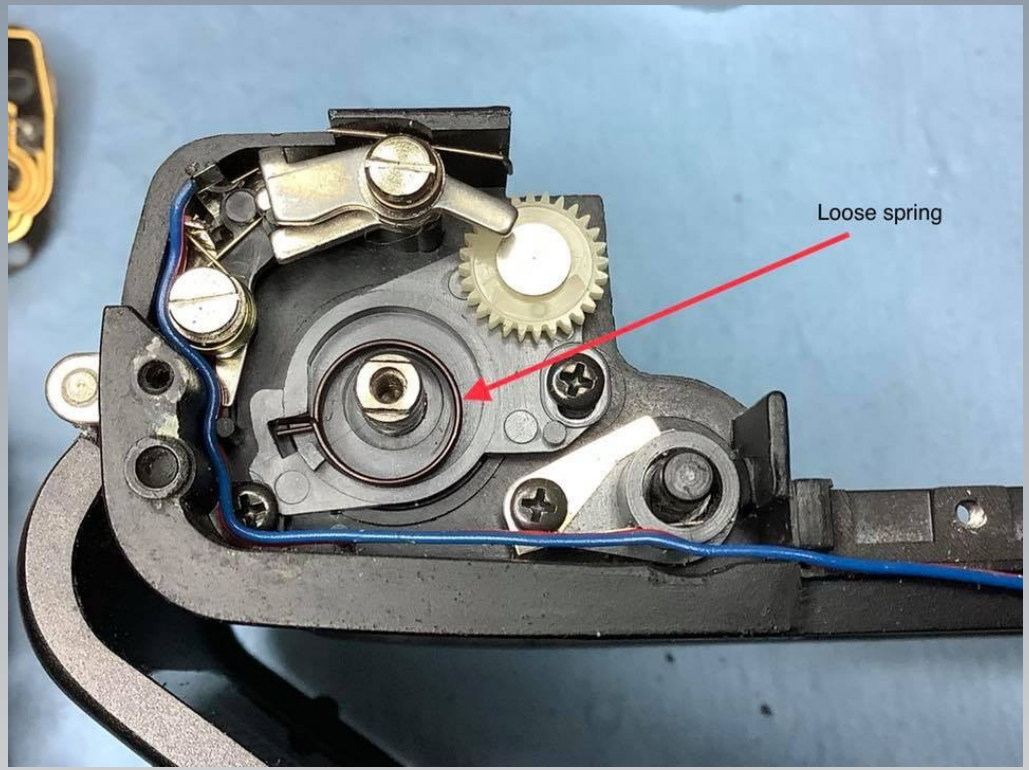
Post #17

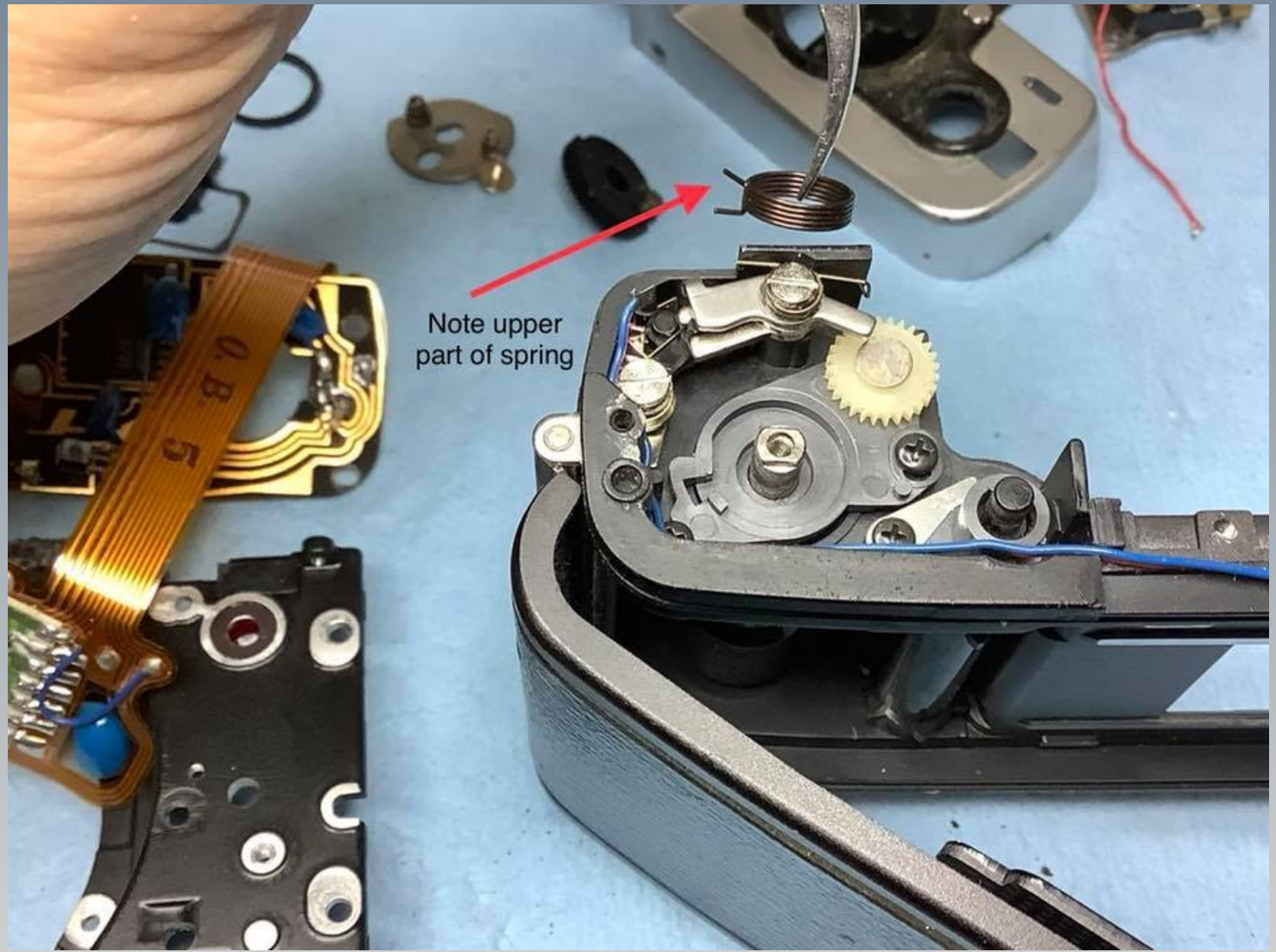
https://www.facebook.com/groups/360490091319202/?post_id=598709334163942

Lift off the black plastic winding gear, note the spring underneath and the orientation of the spring - the upwards bent end goes up under the black gear.

Set the parts aside...



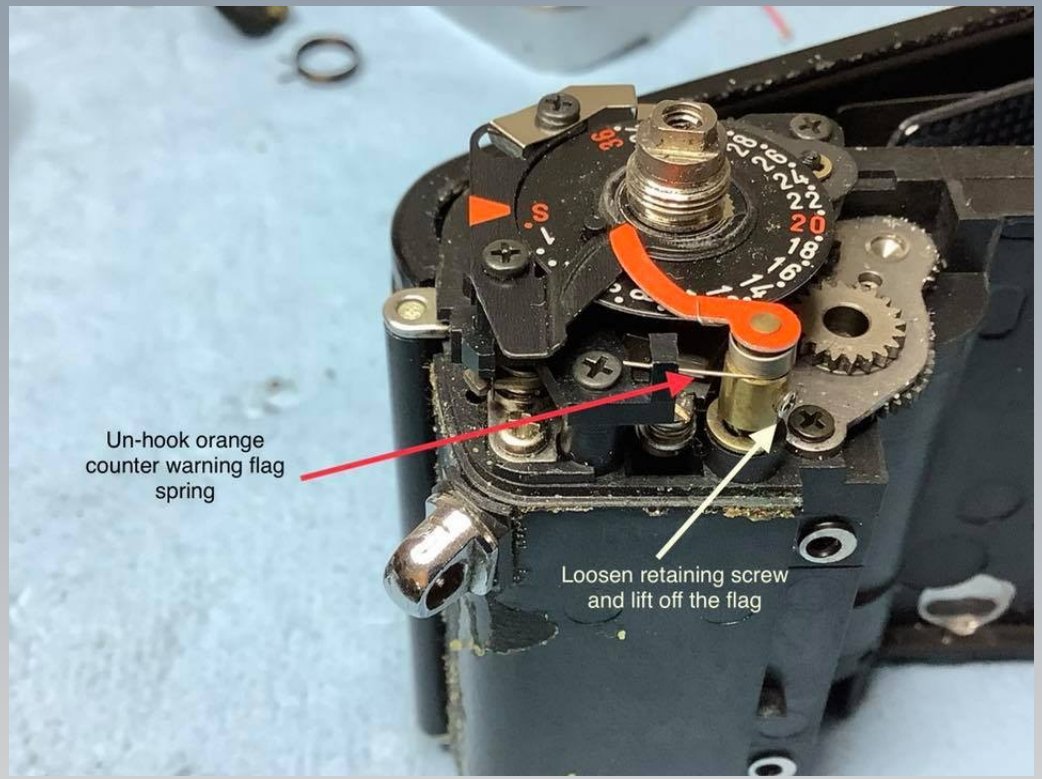


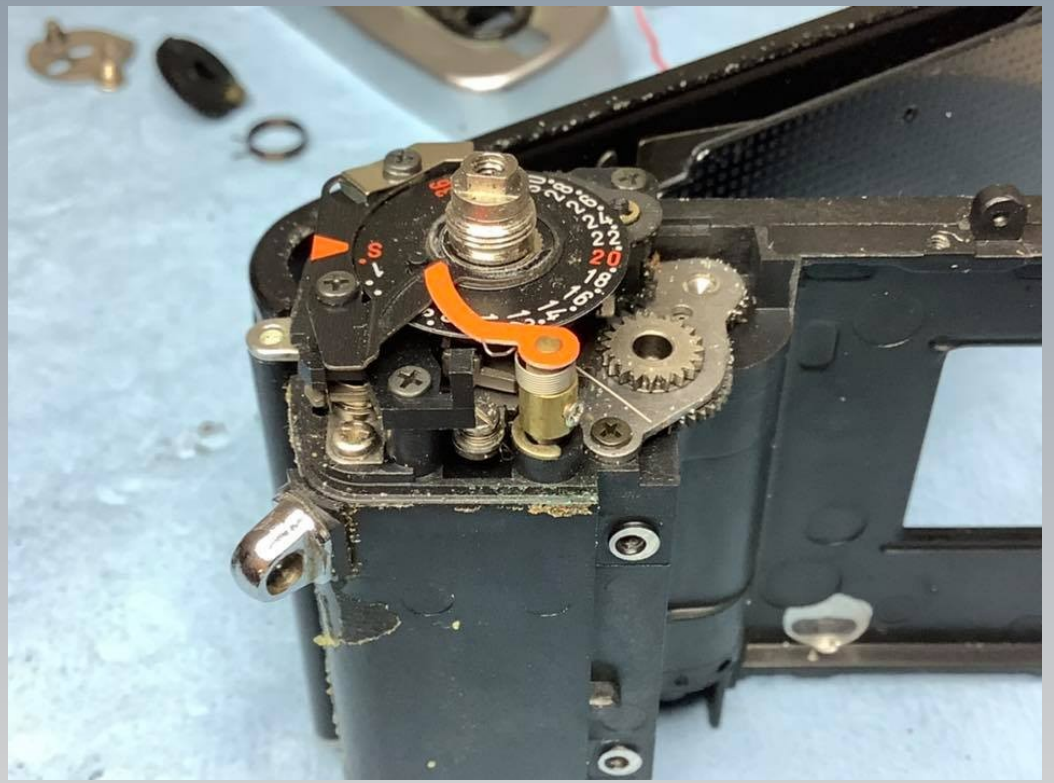

Note upper
part of spring

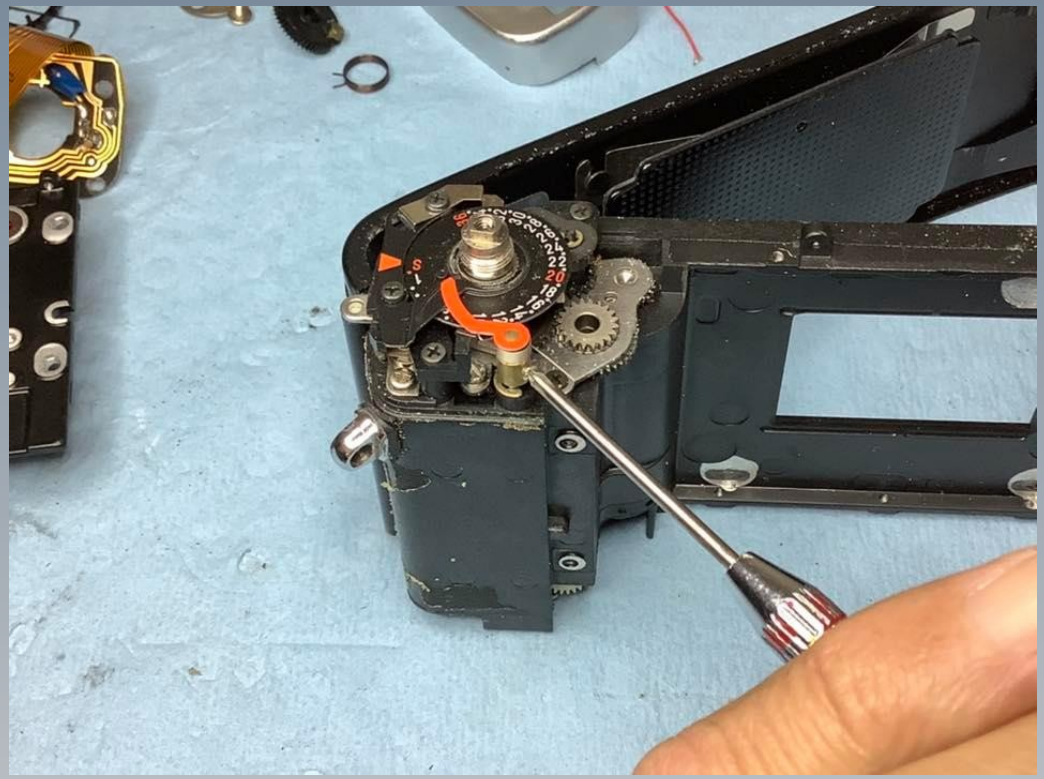
Post #18

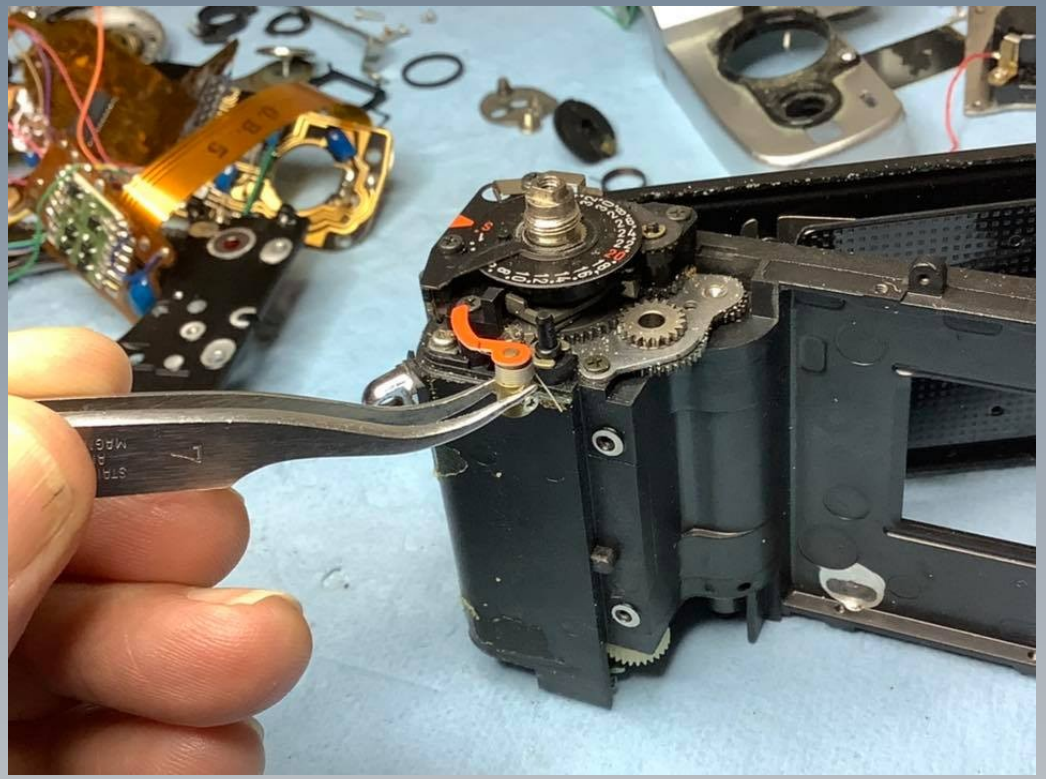
Turn the body over, un-hook the counter progression flag spring, loosen the screw and slide the orange flag off along with its spring and screw.

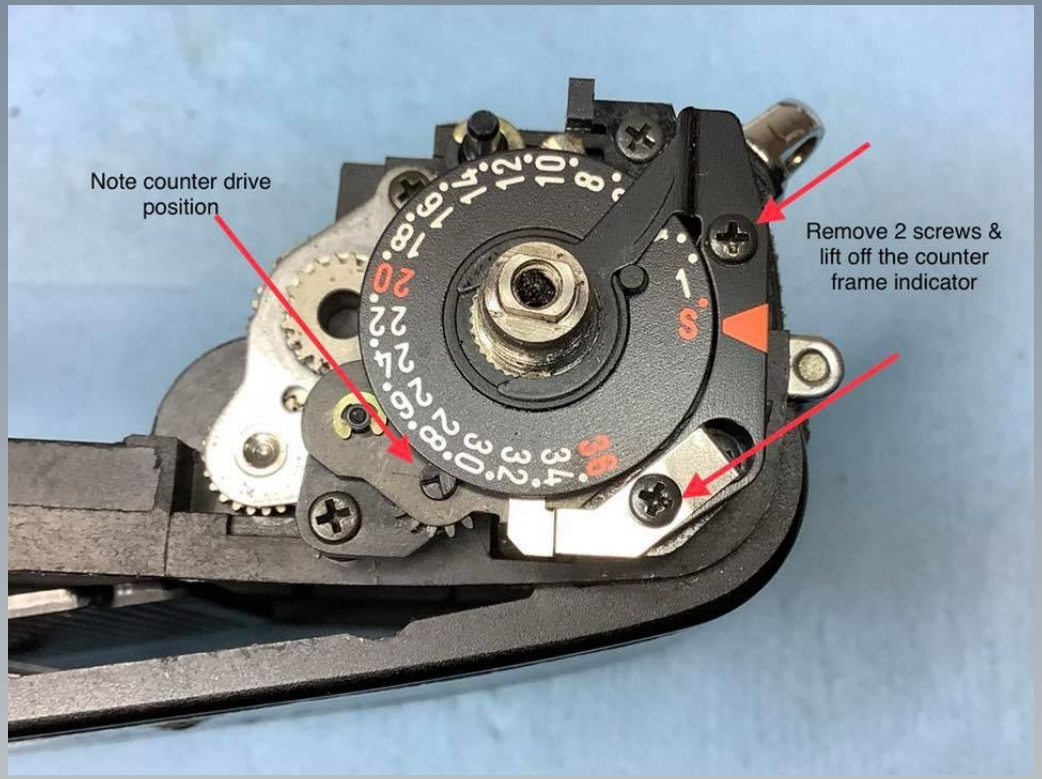
Remove 2 screws and lift off the frame counter indicator plate - slide it counter-clockwise and pull out to remove it - the frame counter will unwind its return spring, note where the spring hooks and set the parts aside.

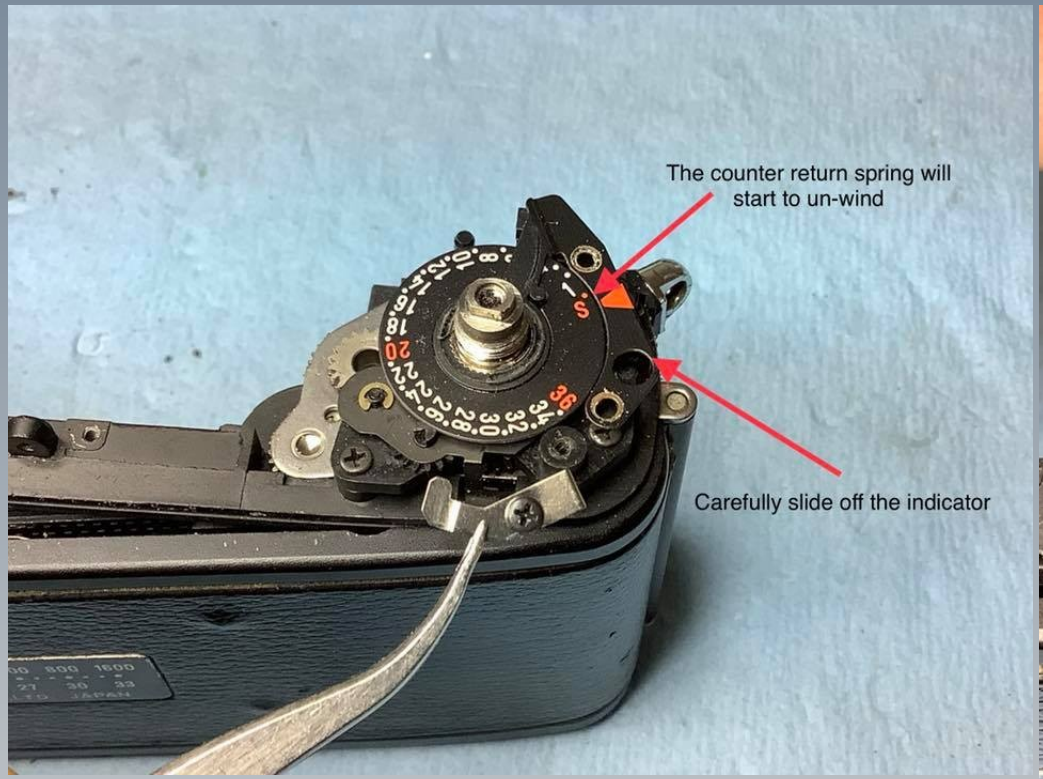


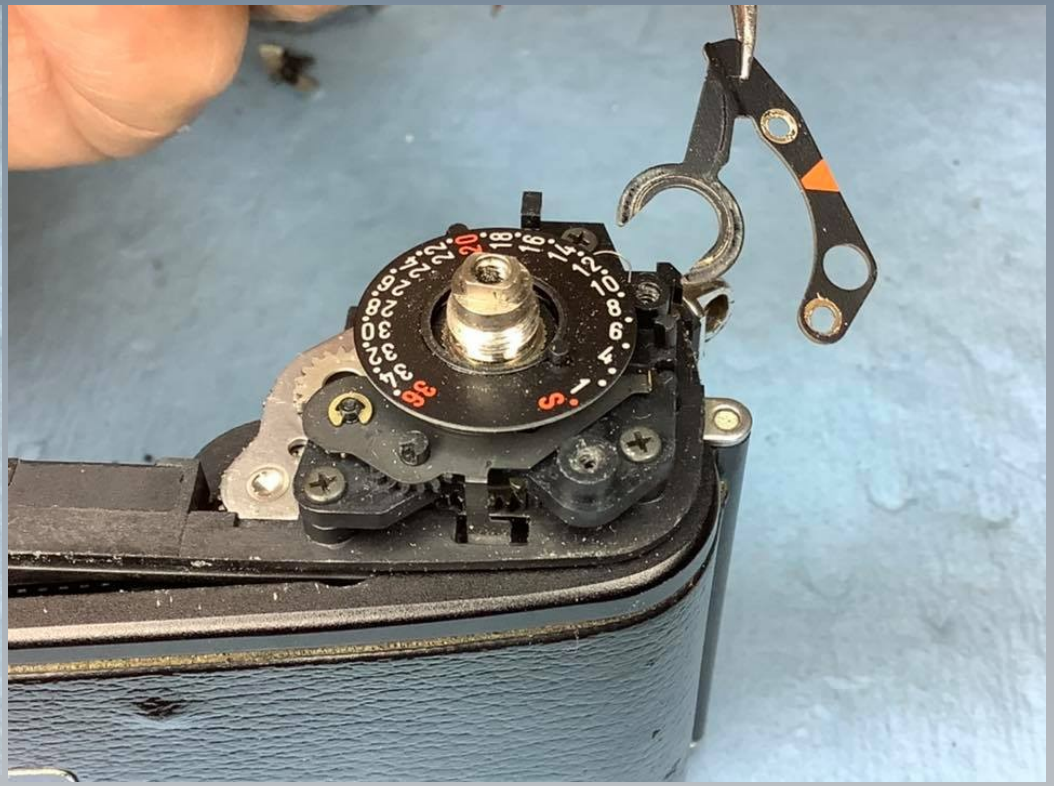


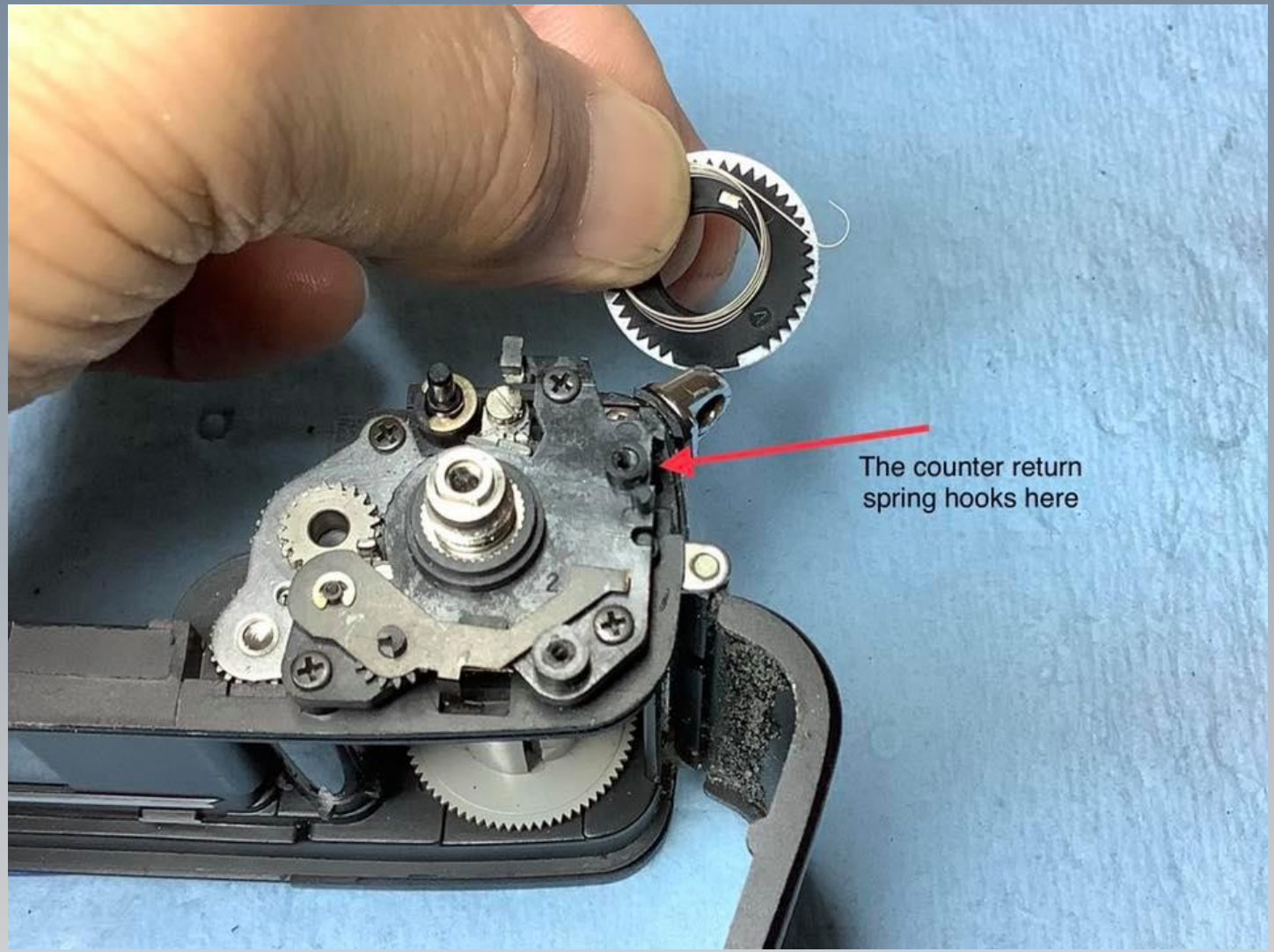





Note counter drive position
Remove 2 screws & lift off the counter frame indicator


The counter return spring will start to un-wind
Carefully slide off the indicator

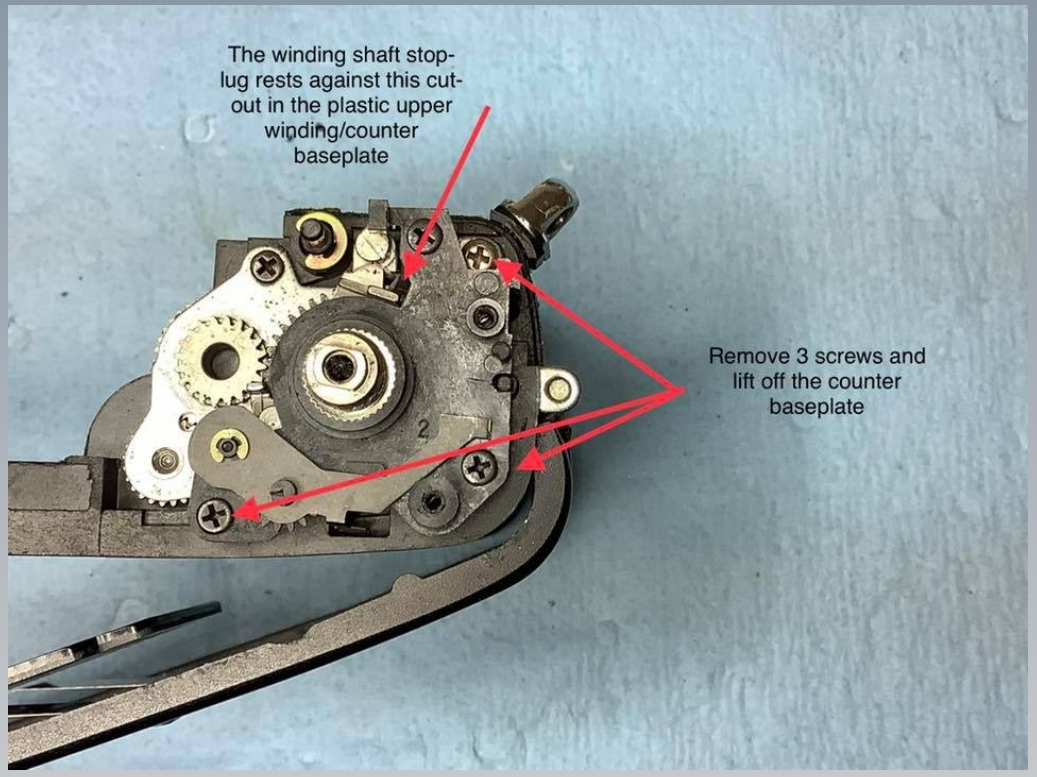


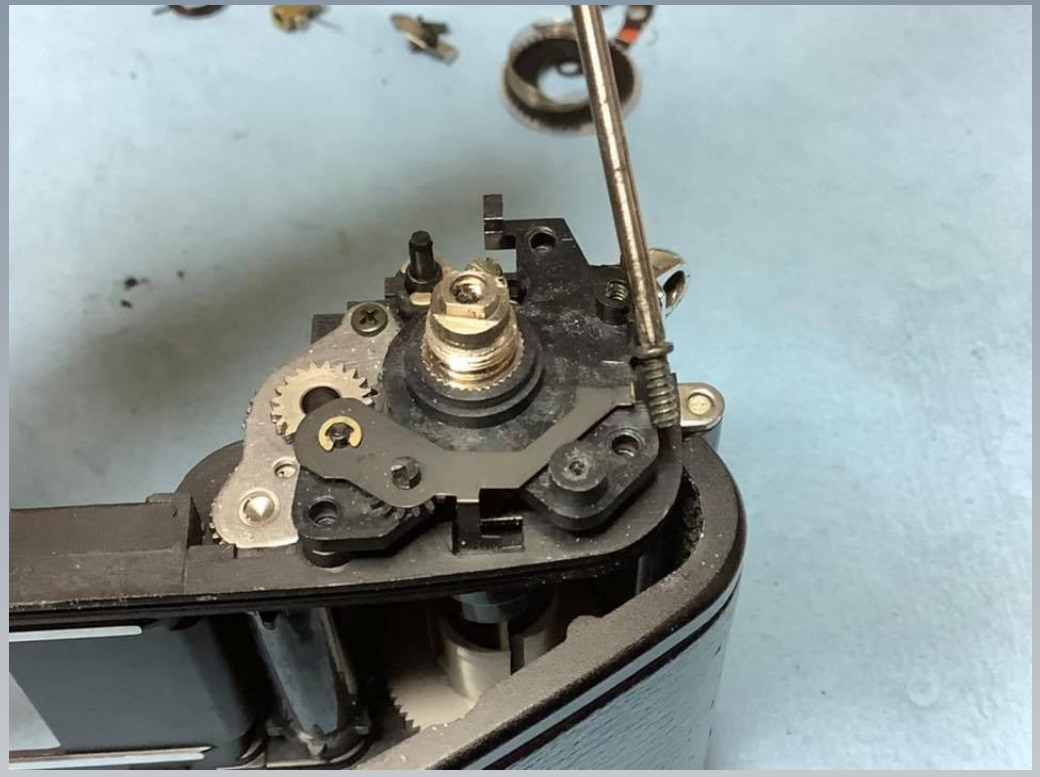

The counter return
spring hooks here

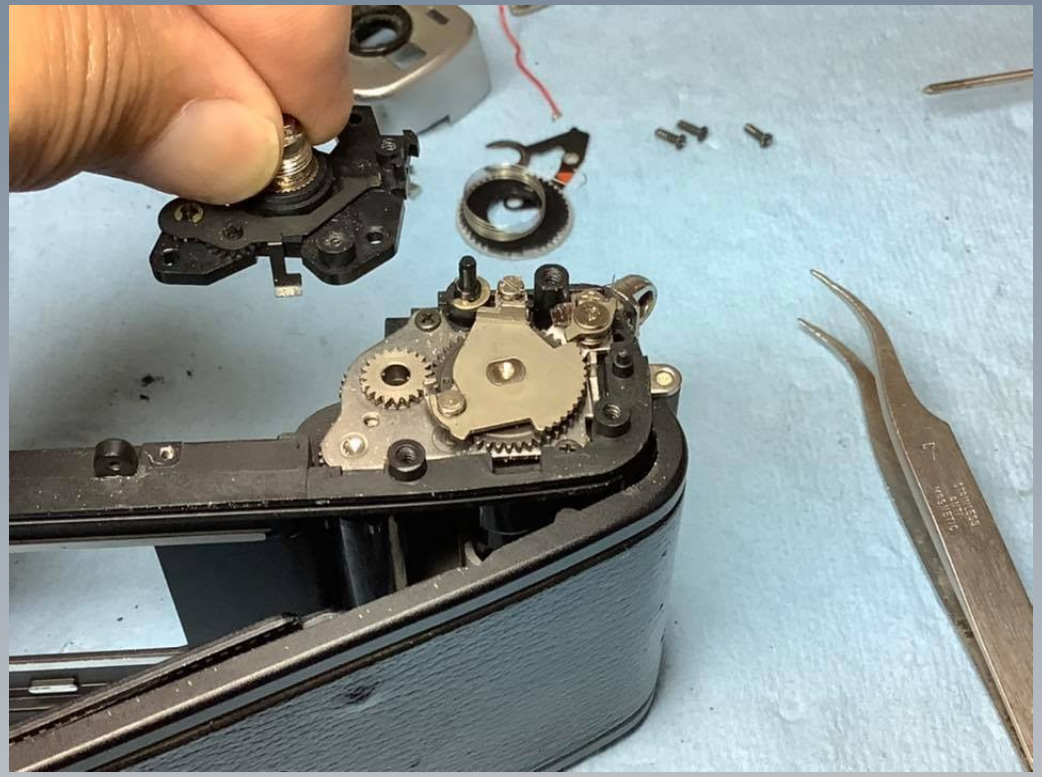
Post #19

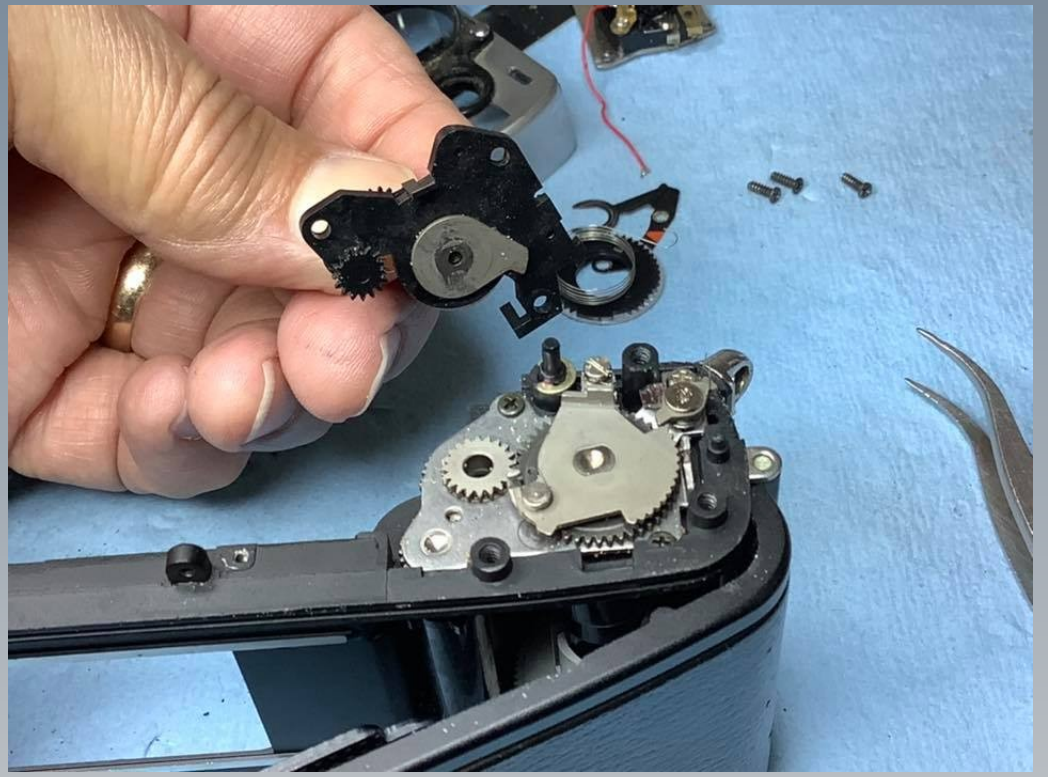
Note the positions of the parts, locate the three retaining screws and lift off the upper winding/counter baseplate.

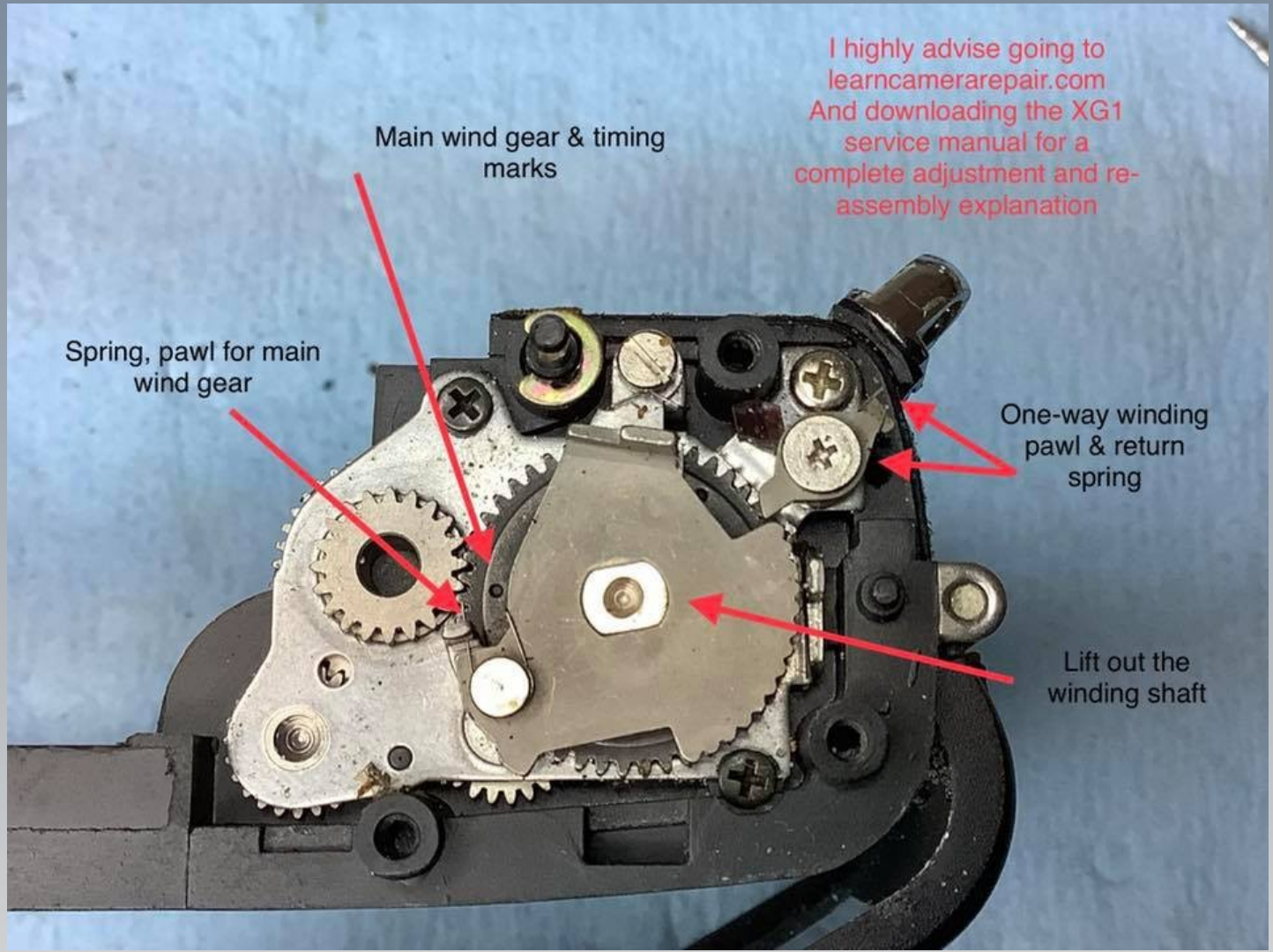
Lift the winding shaft and remove it.










I highly advise going to learncamerarepair.com And downloading the XG1 service manual for a complete adjustment and re-assembly explanation
Main wind gear & timing marks
Spring, pawl for main wind gear
One-way winding pawl & return spring
Lift out the winding shaft

Post #20

https://www.facebook.com/groups/360490091319202/?post_id=598722887495920

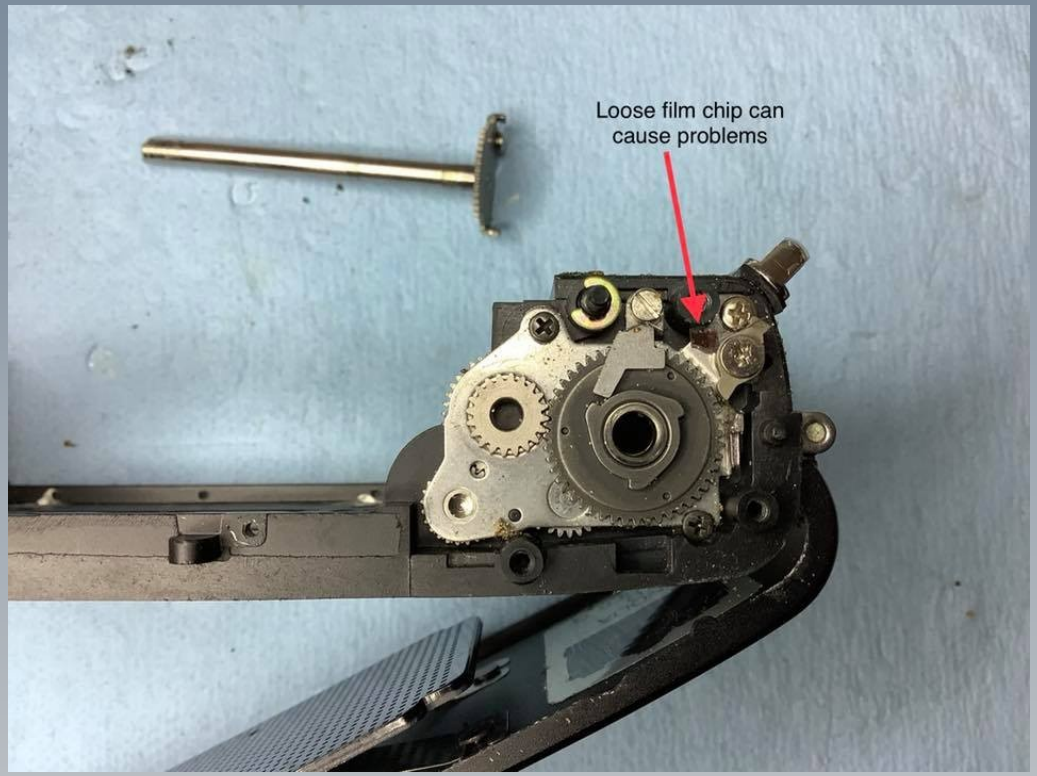
Locate the 3 screws holding the upper winding baseplate, note the chrome screw also holds the strap lug, the plastic spacer is loose when you remove the lug, remove the 3 screws, lift off the baseplate.

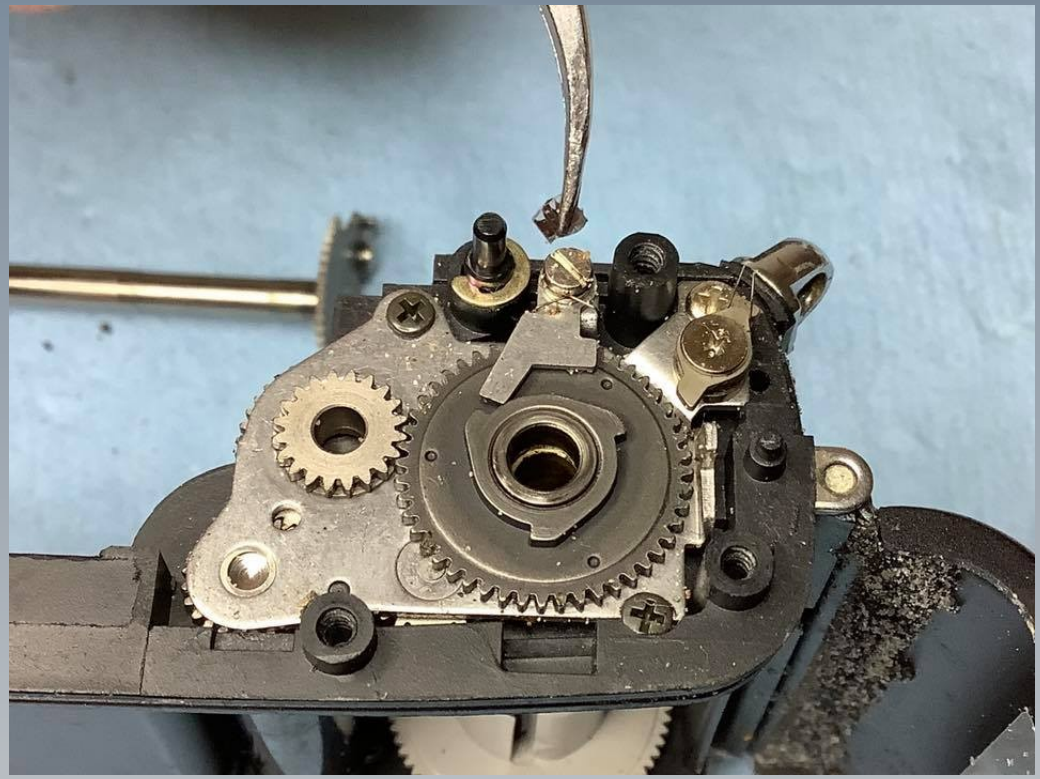
The sprocket drive gear and spring are now loose, note the sprocket gear has a bladed bottom end, it fits into a slot on the top of the sprocket.

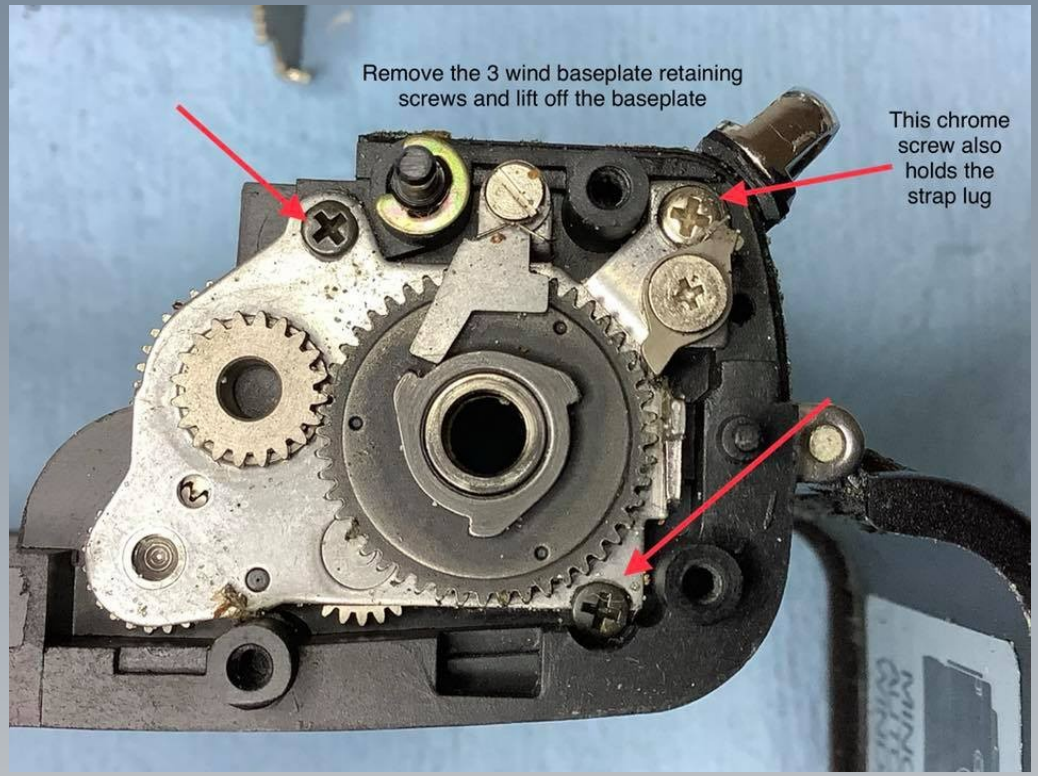
Remove the loose parts, set them aside. Lift out the take up spool one-way clutch assembly and at this point you can remove the take up spool (a common repair is replacing this part when the owner loads the film too far into the “fingers” and they start to break off).

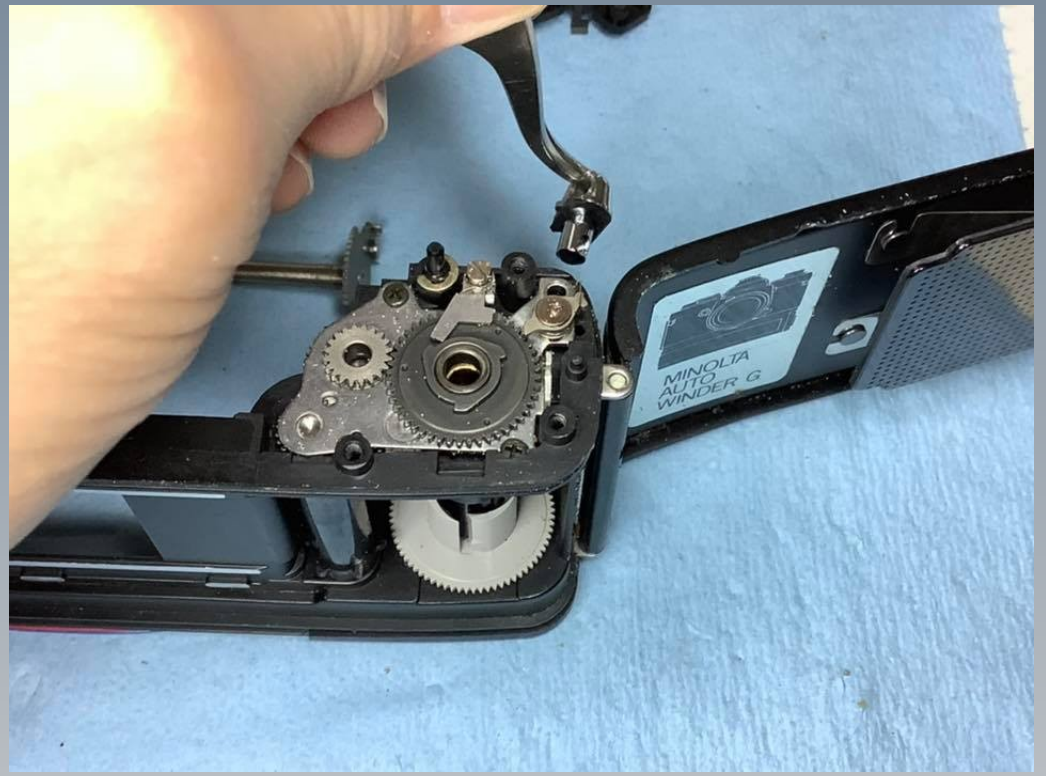
At this point he only thing holding the sprocket in at the bottom is the flat spring and the 2 screws holding the “receiver”...

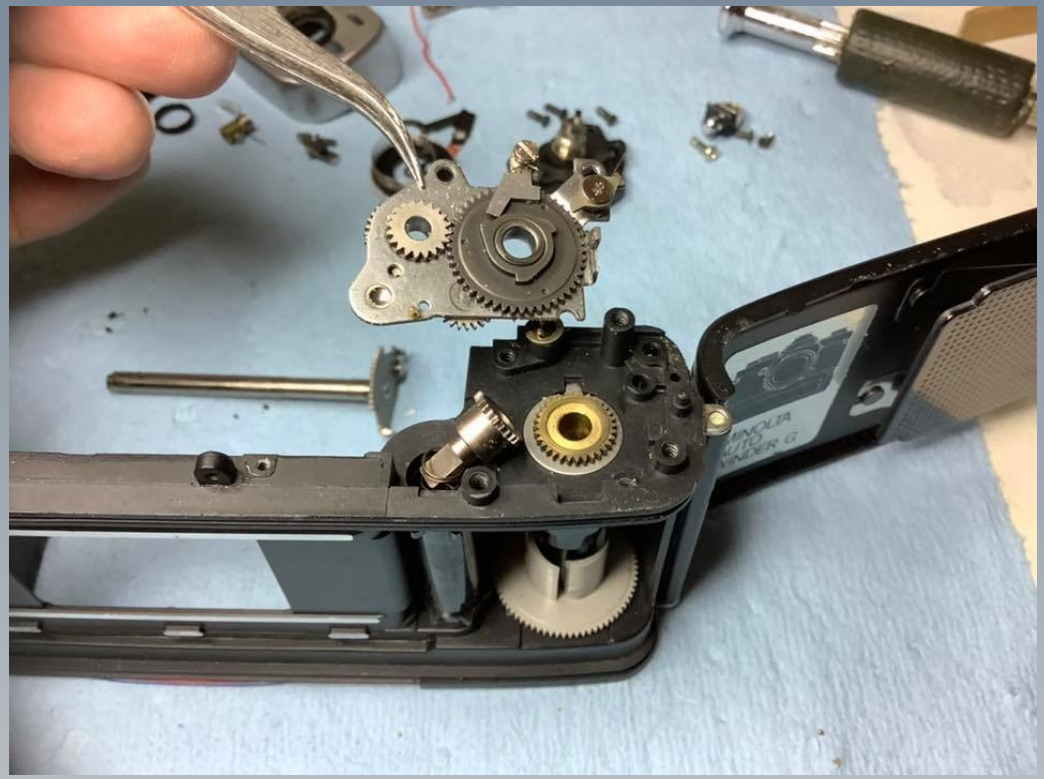
In the next series of posts I’ll be repairing, cleaning, replacing bad parts, lubricating and getting this camera back together.

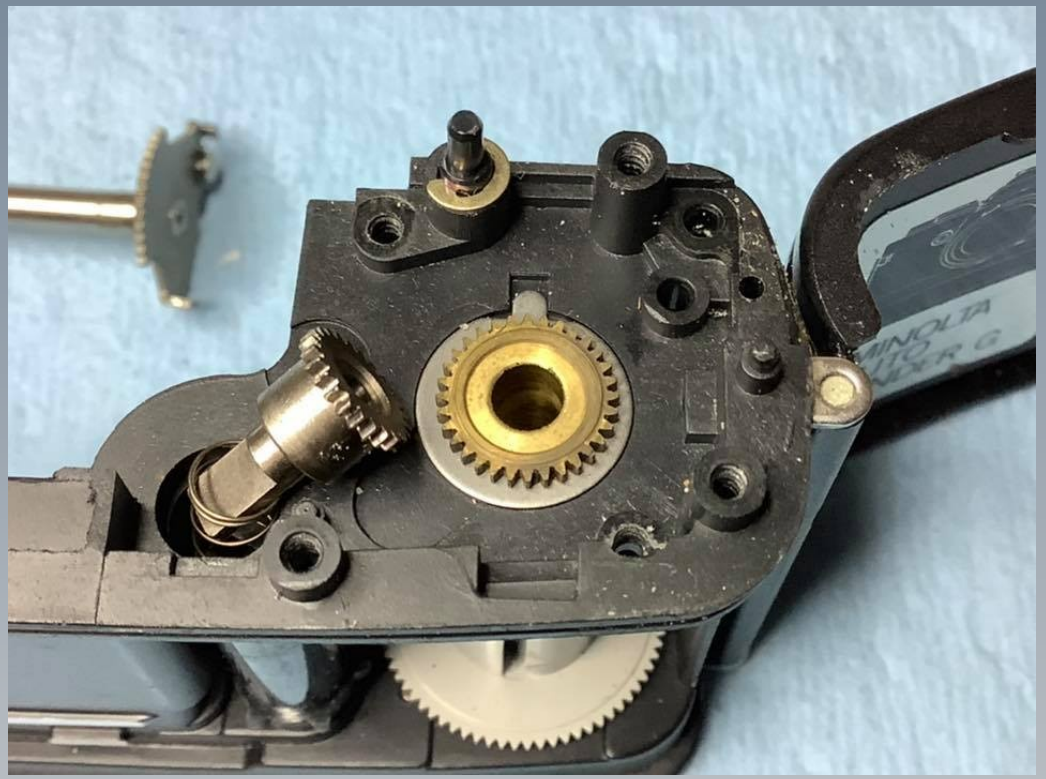

Loose film chip can
cause problems




Remove the 3 wind baseplate retaining screws and lift off the baseplate
This chrome screw also holds the strap lug

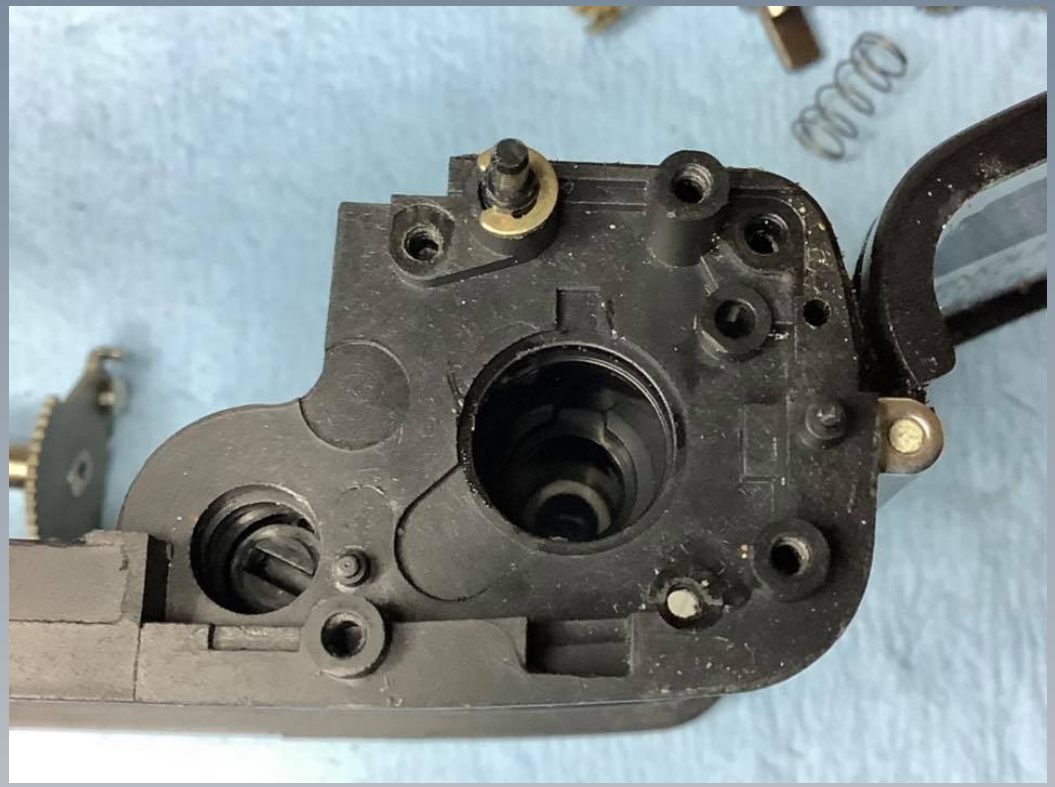

MINOLTA
AUTO
WINDER G

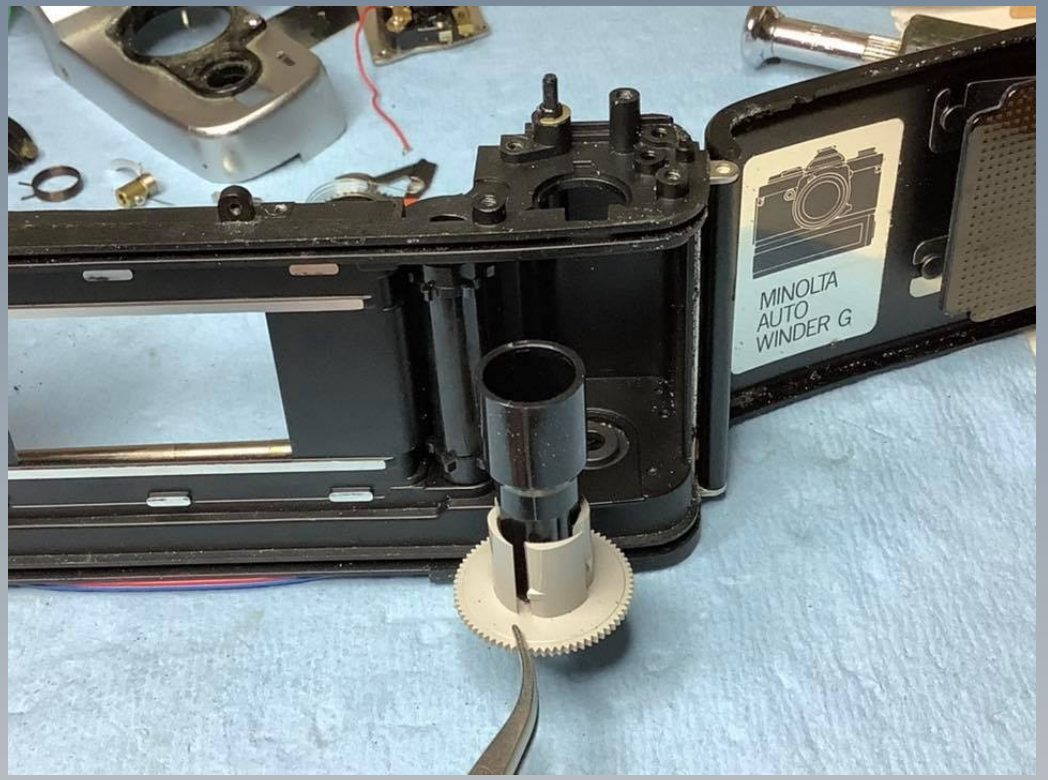




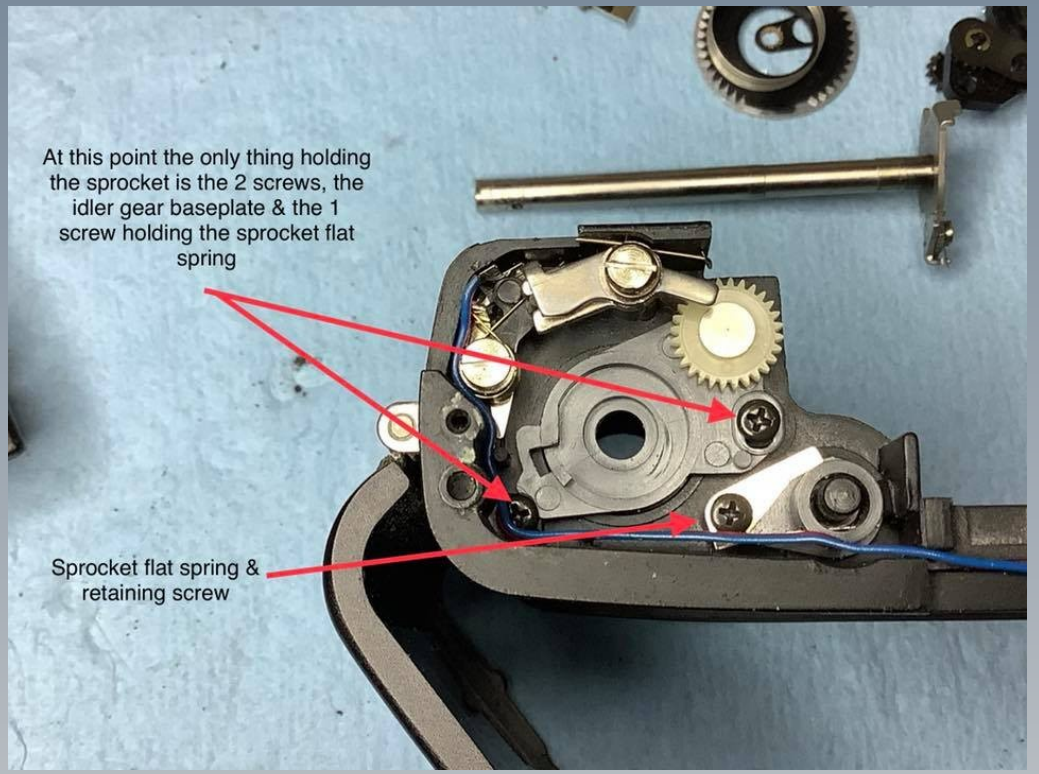

MINOLTA
AUTO
WINDER G


MINOLTA
AUTO
WINDER G




MINOLTA
AUTO
WINDER G


MINOLTA
AUTO
WINDER G


At this point the only thing holding the sprocket is the 2 screws, the idler gear baseplate & the 1 screw holding the sprocket flat spring
Sprocket flat spring & retaining screw

Post #21

https://www.facebook.com/groups/360490091319202/?post_id=600994000602142

While the body is stripped down I think it’s a great time to start cleaning it and replacing the light seals, some I have are pre-cut with adhesive backing and others I cut from bulk sheets such as mirror cushions and film door hinge seals.

Next I’ll install the sprocket spring and gear, slide the film advance progress arm towards the rear of the take-up spool compartment, install the take-up spool, spool clutch and upper winding baseplate after cleaning the parts and lubricating the main gear - one of the most important points the National Camera Repair Course makes early in the lessons is to test each part as it’s installed and understand its function (the repair course is available on learncamerarepair.com)

Don’t forget to install the strap lug and the black plastic spacer...

In the next post I’ll install the winding shaft and upper winding/counter baseplate...


This is the best time to replace the
body light seals
MINOLTA
AUTO
WINDER G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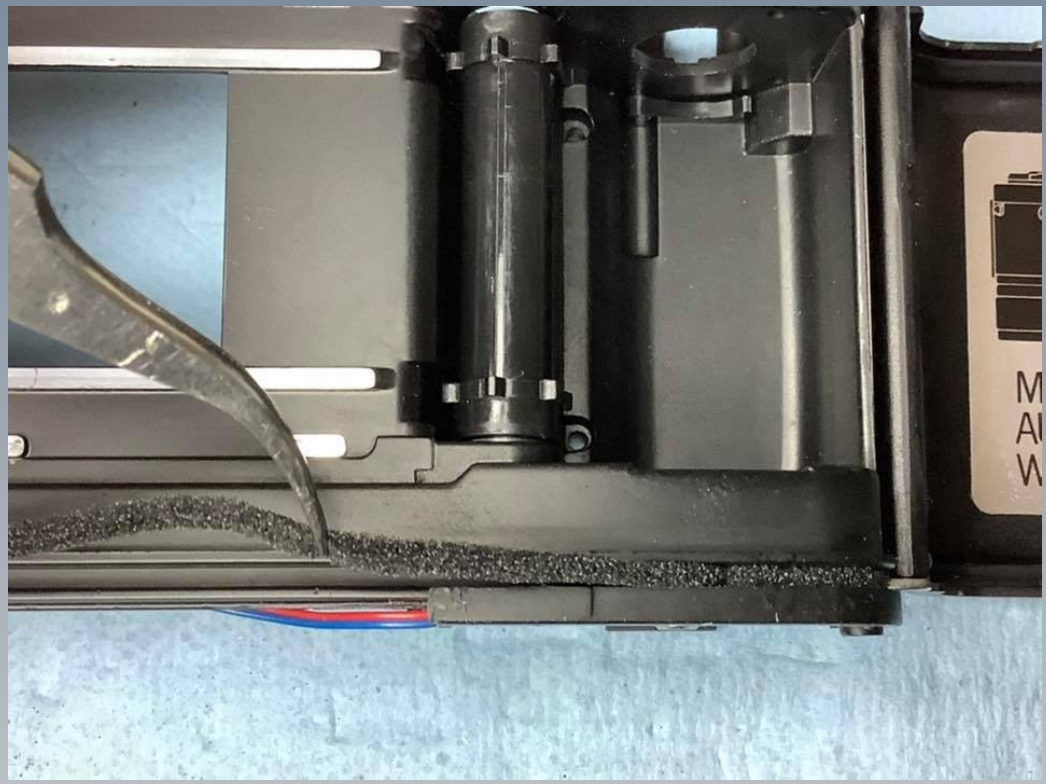
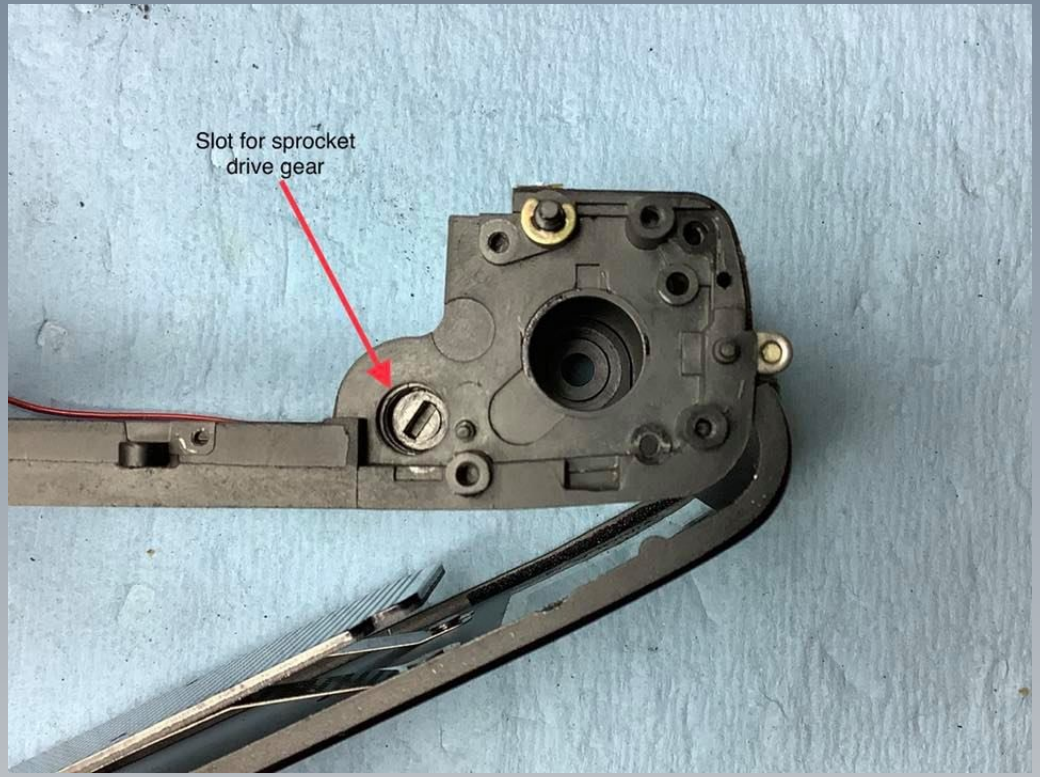
AUTO
WINDER G

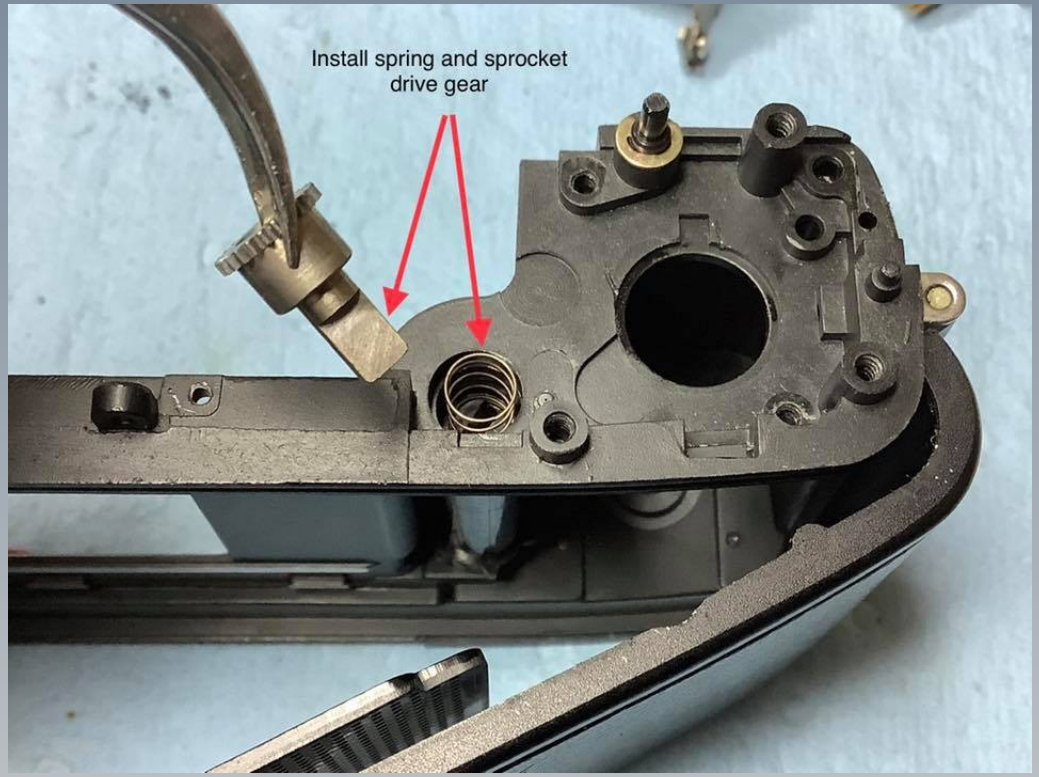

MINOLTA
AUTO
WINDER G

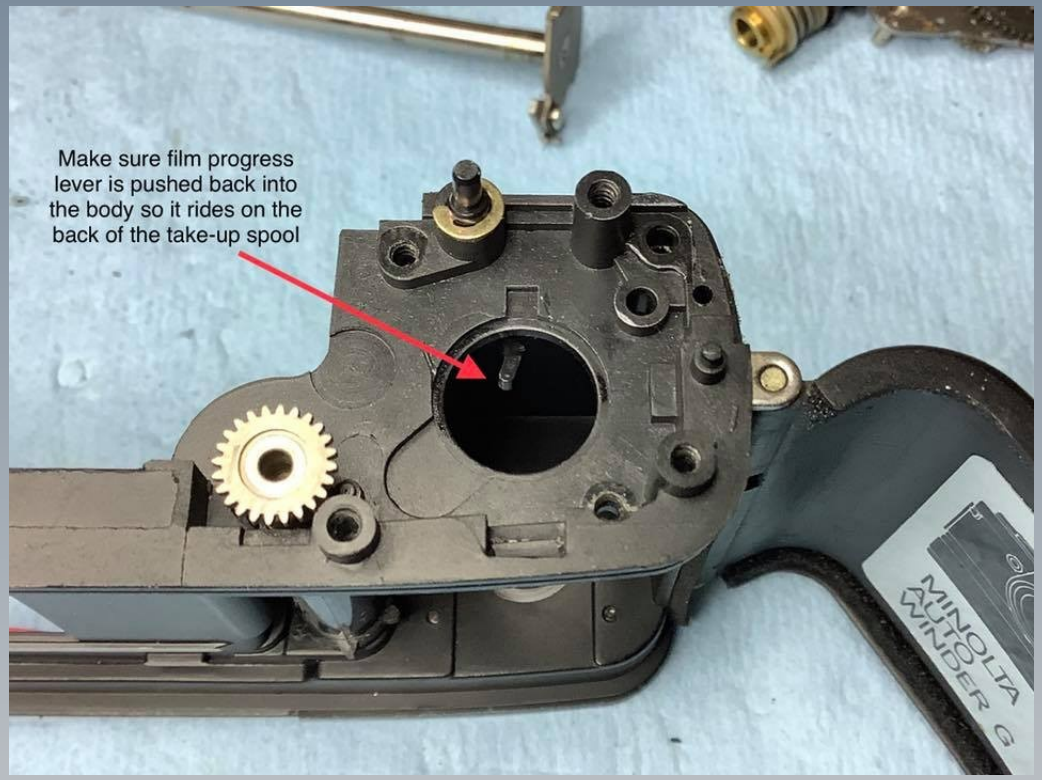


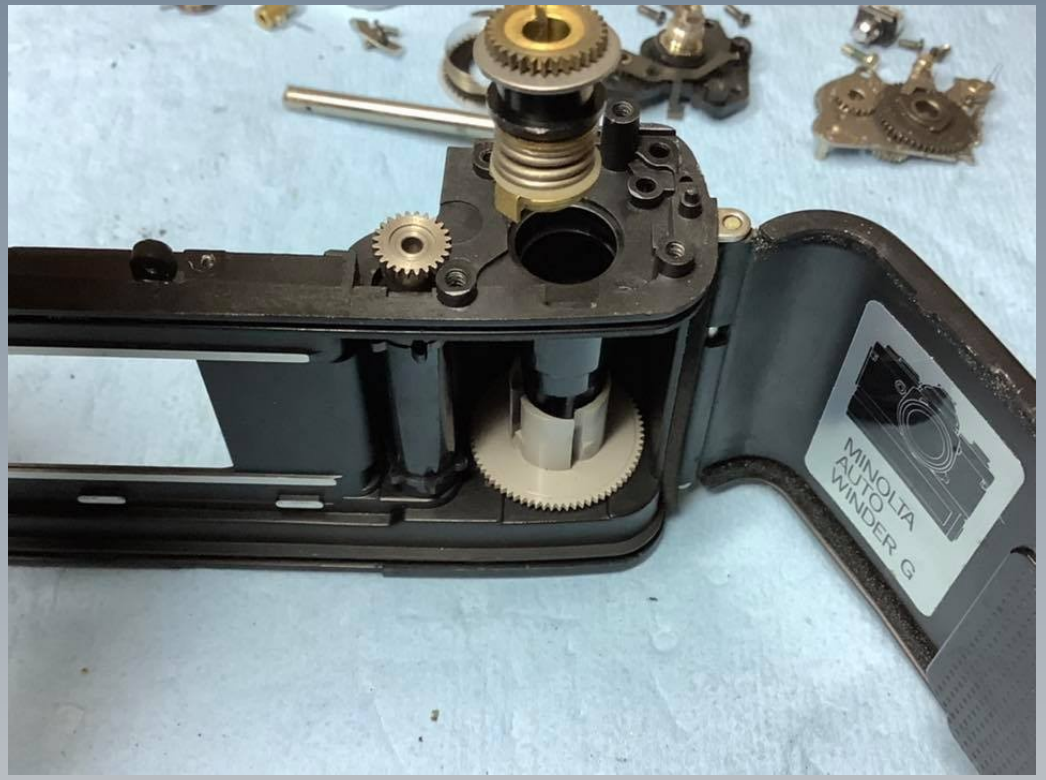

ALVIN 1533
MADE IN U.S.A.

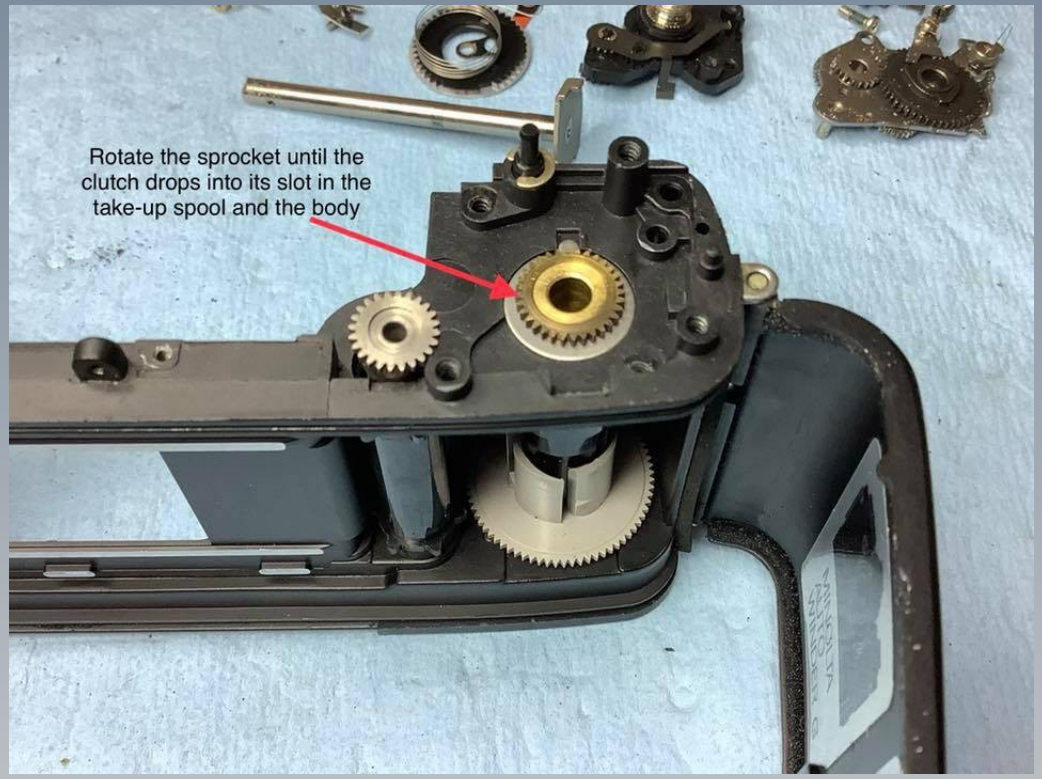

MINOLTA
AUTO
WINDER G

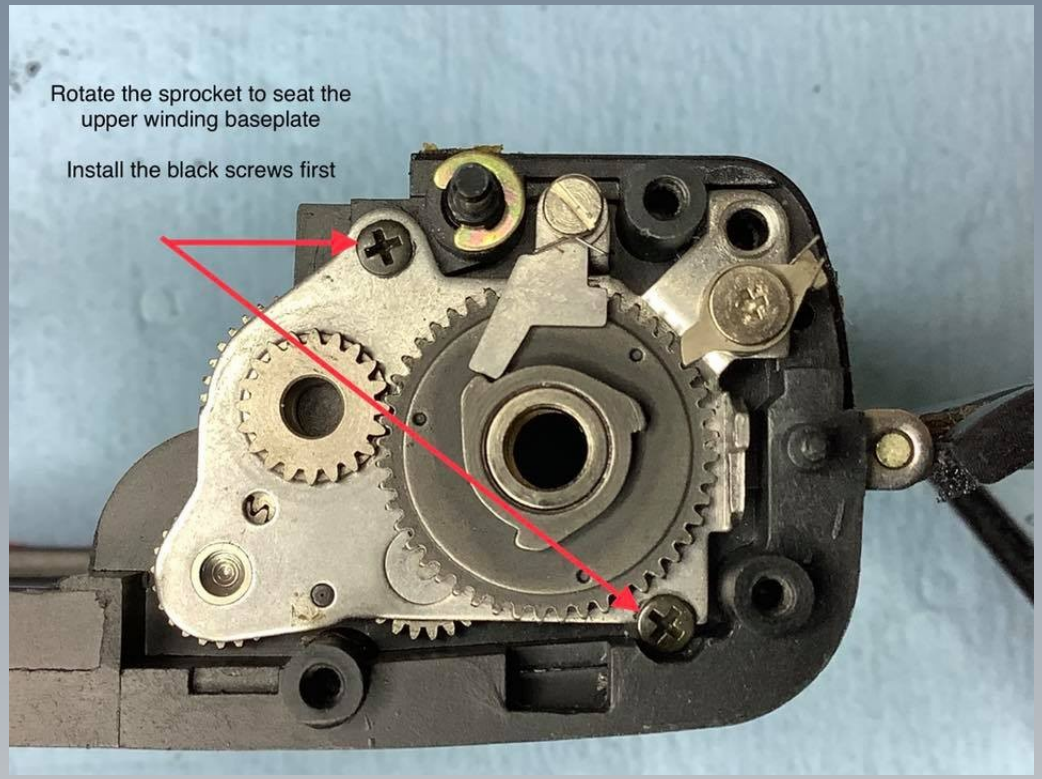

Slot for sprocket
drive gear

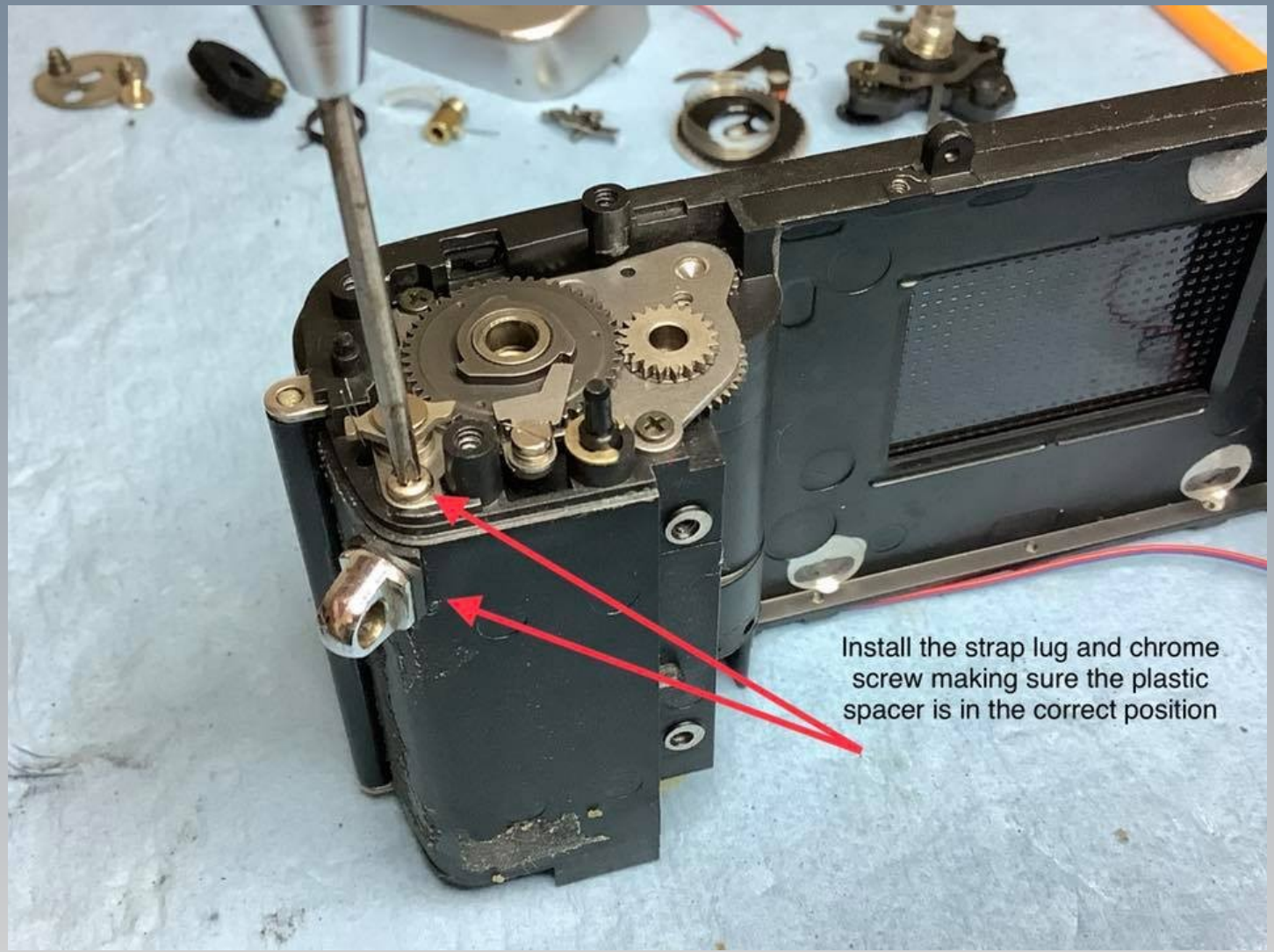

Install spring and sprocket
drive gear


Make sure film progress lever is pushed back into the body so it rides on the back of the take-up spool
MINOLTA AUTO WINDER G


MINOLTA AUTO WINDER G


Rotate the sprocket until the
clutch drops into its slot in the
take-up spool and the body


Rotate the sprocket to seat the
upper winding baseplate
Install the black screws first


Install the strap lug and chrome screw making sure the plastic spacer is in the correct position

Post #22

https://www.facebook.com/groups/360490091319202/?post_id=601052007263008

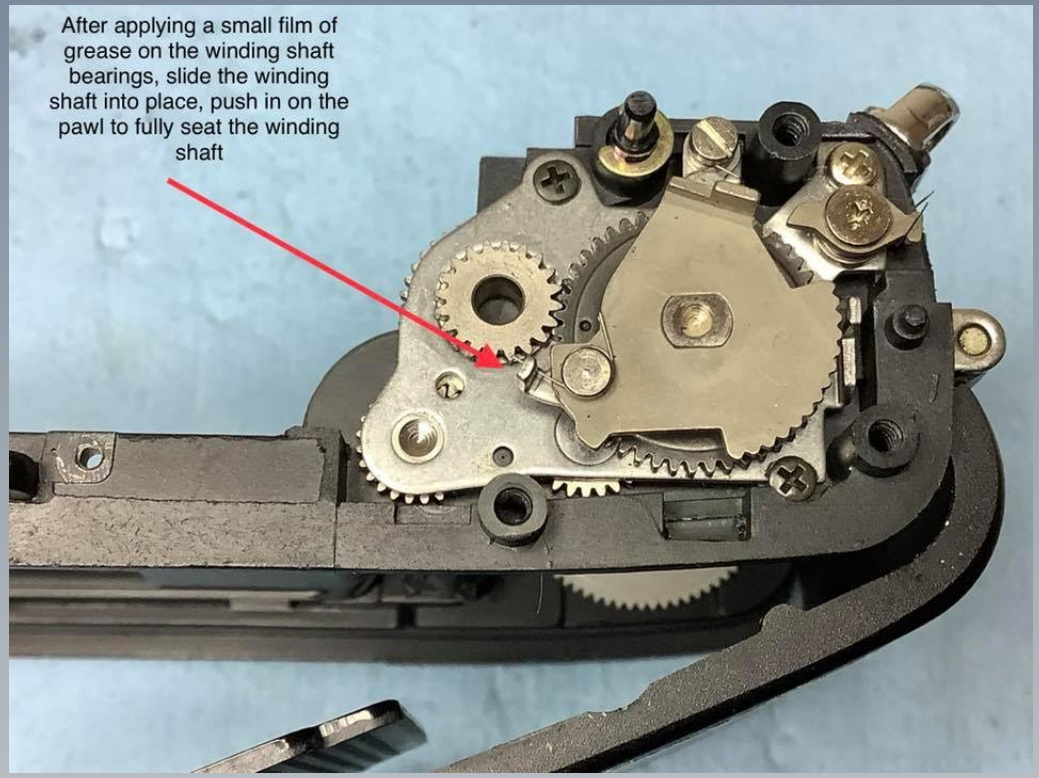
Apply a small film of grease to the winding shaft bearing surfaces, drop it into place, hold the drive pawl aside to seat it fully.

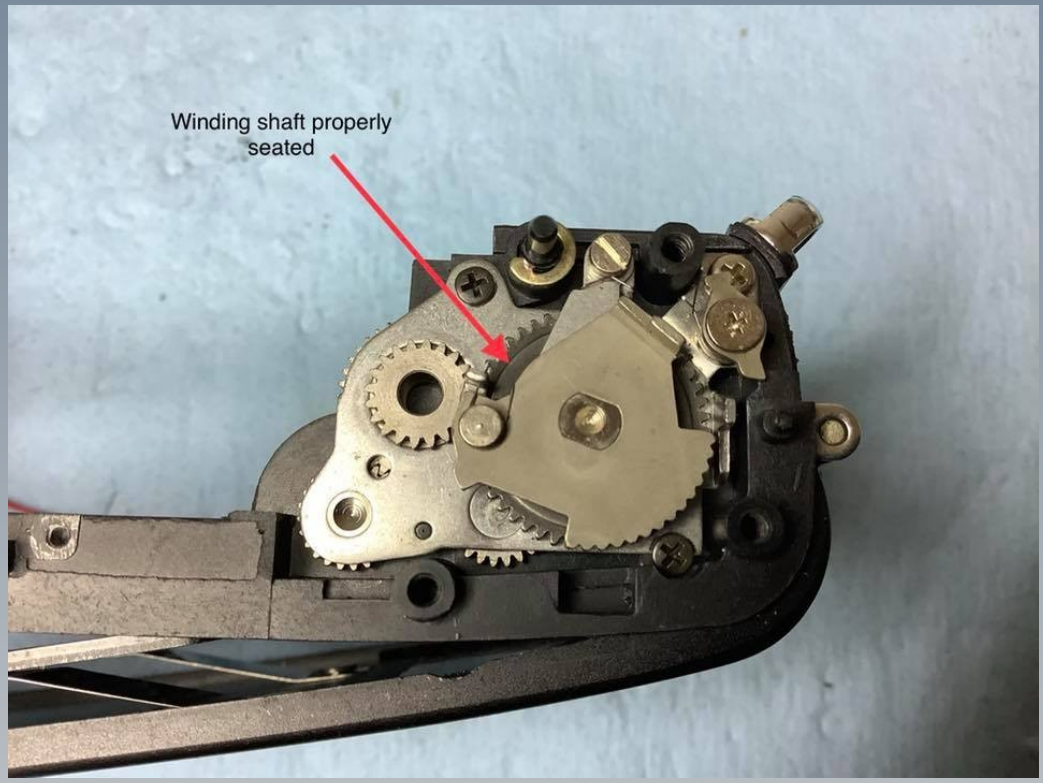
Watch the spring and pawl positions as you seat the upper winding/counter baseplate, observe the operation, at this point the winding shaft is in place, turn the body over and install the black plastic winding gear and it’s return spring, finish that by installing the metal cam and the left-handed retaining screw - a locking agent will be applied after any adjustments are made during testing to keep the eccentric and retaining screw in place.

Little known fact -

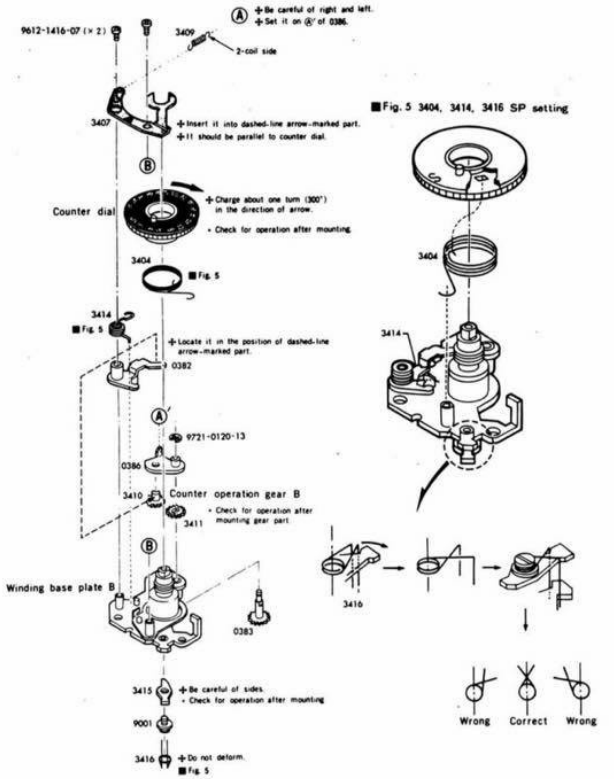
Refer to the XG7 service manual on learncamerarepair.com for adjustment/installation instructions, since the XG7 was the first model all subsequent models and service manuals are intended to be supplemental and not all service information is included in the XG1 manual...

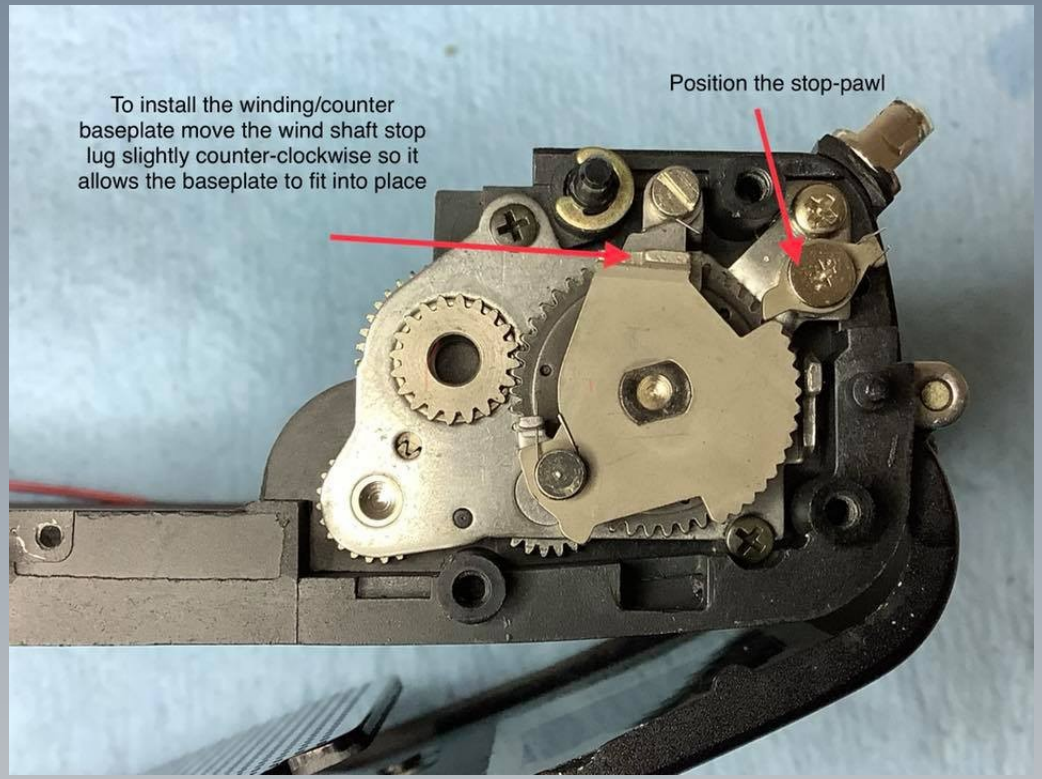
Those bastards! ... Nikon and other manufacturers do the same thing, be aware of that when buying or using service manuals

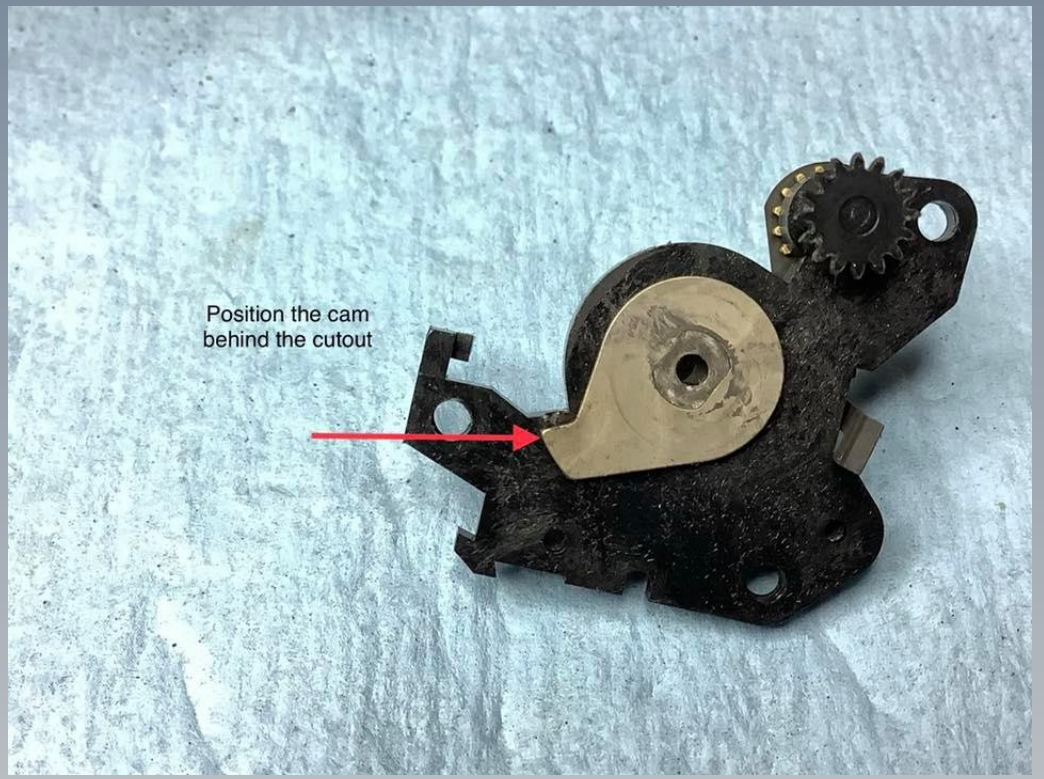

After applying a small film of grease on the winding shaft bearings, slide the winding shaft into place, push in on the pawl to fully seat the winding shaft

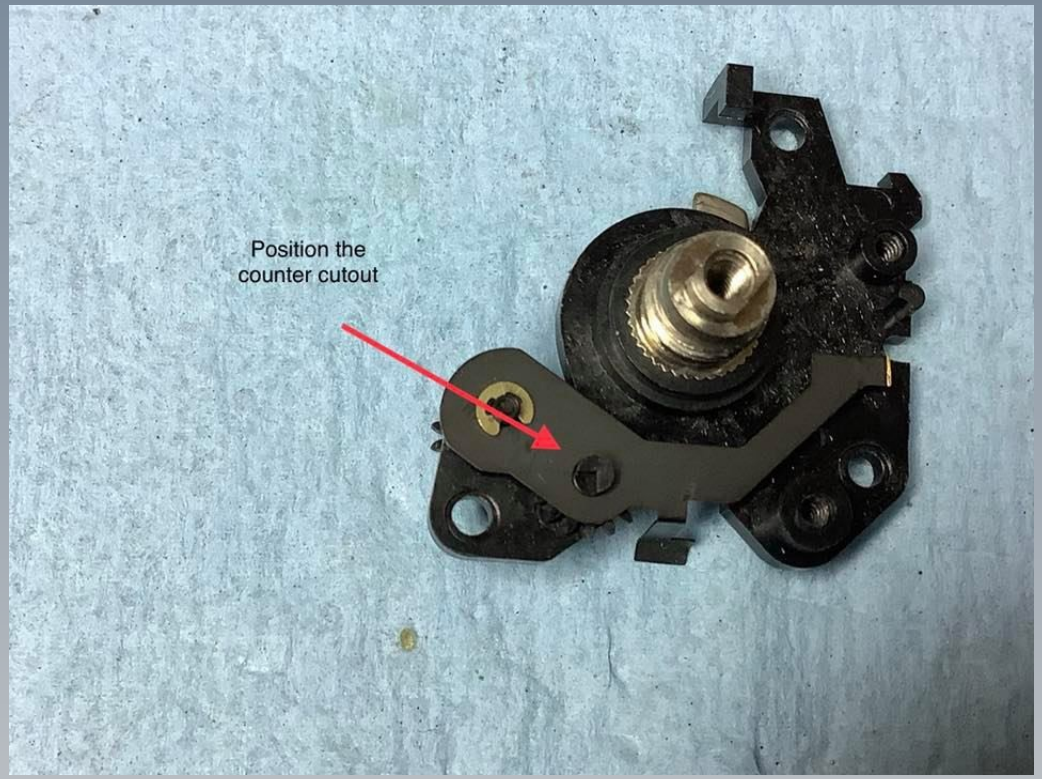

Winding shaft properly seated

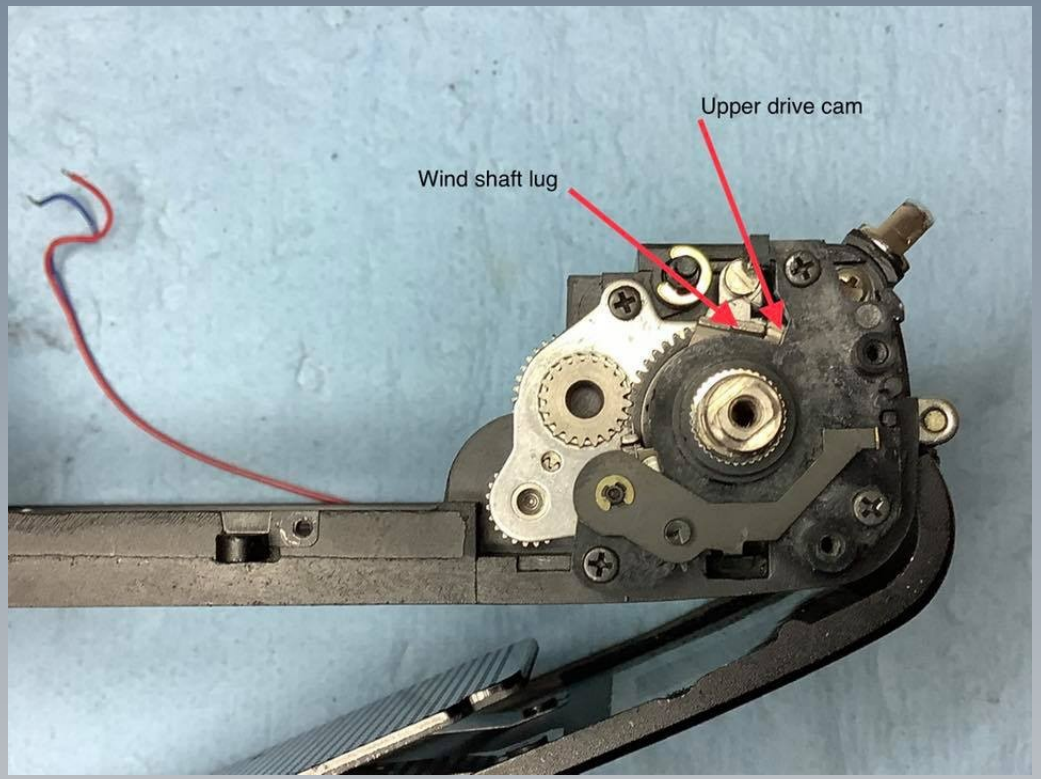
■Winding base plate B assembly

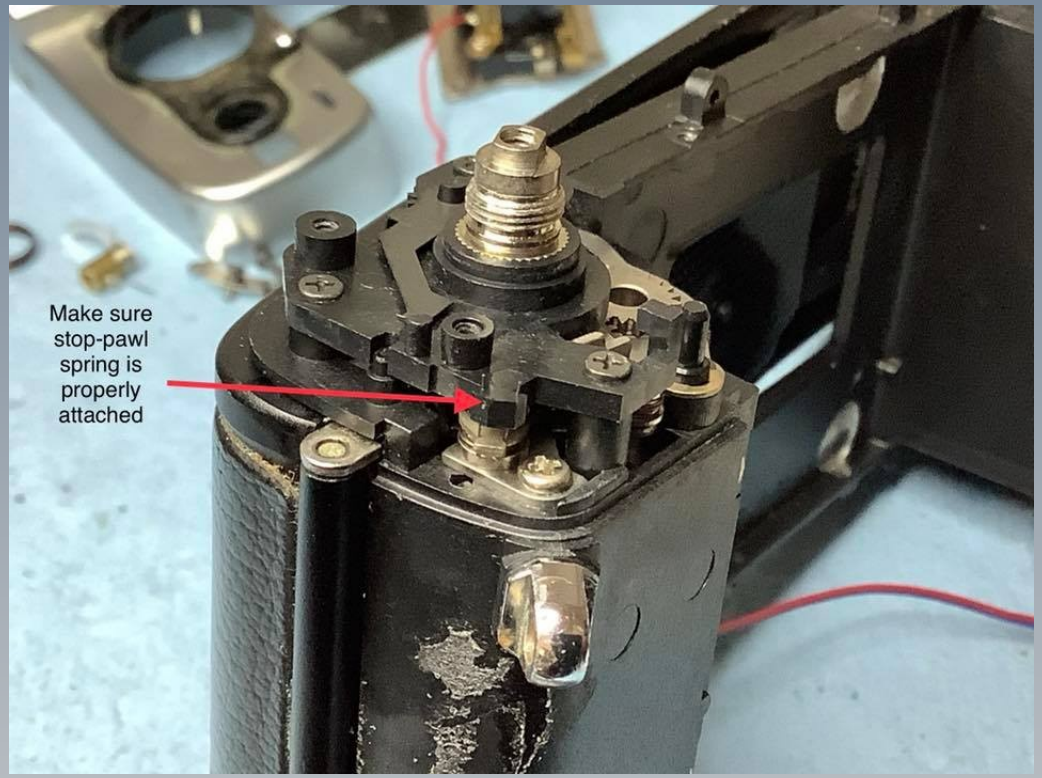


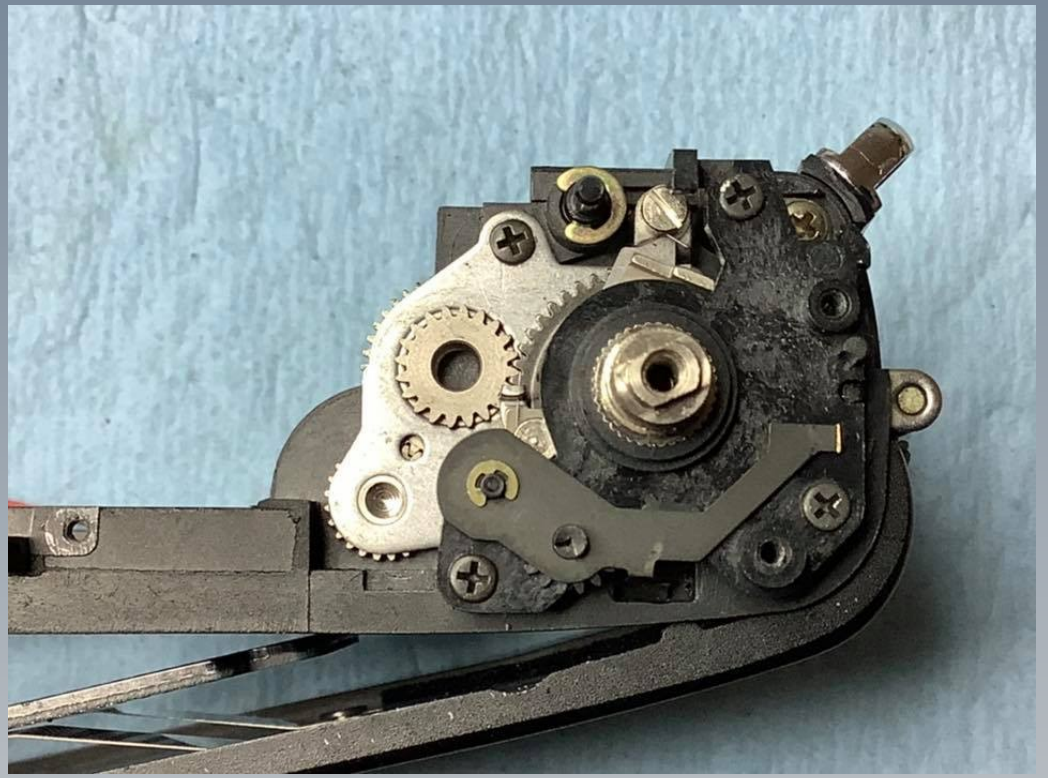

To install the winding/counter baseplate move the wind shaft stop lug slightly counter-clockwise so it allows the baseplate to fit into place
Position the stop-pawl

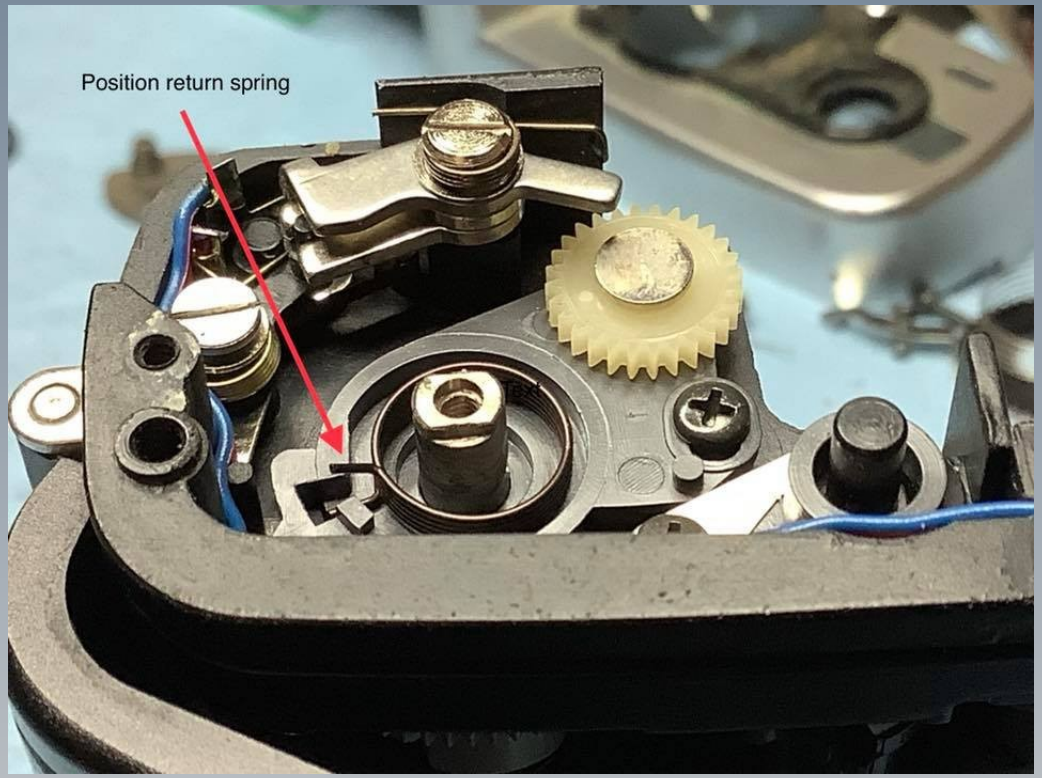

Position the cam behind the cutout


Position the
counter cutout

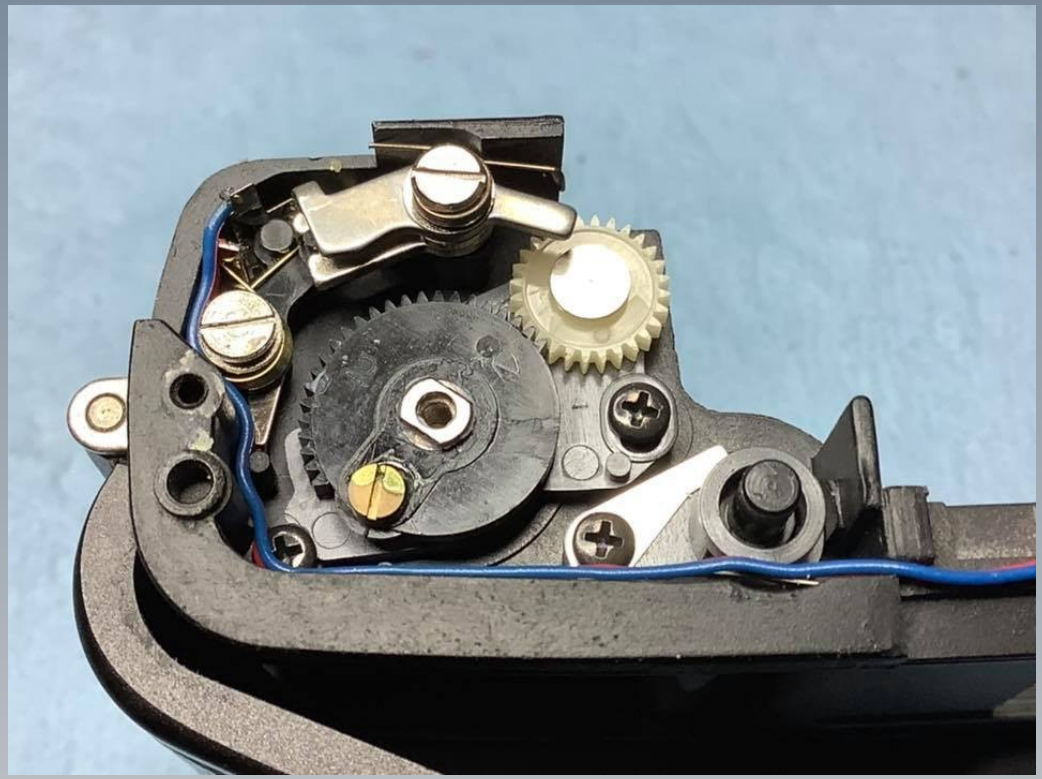

Upper drive cam
Wind shaft lug

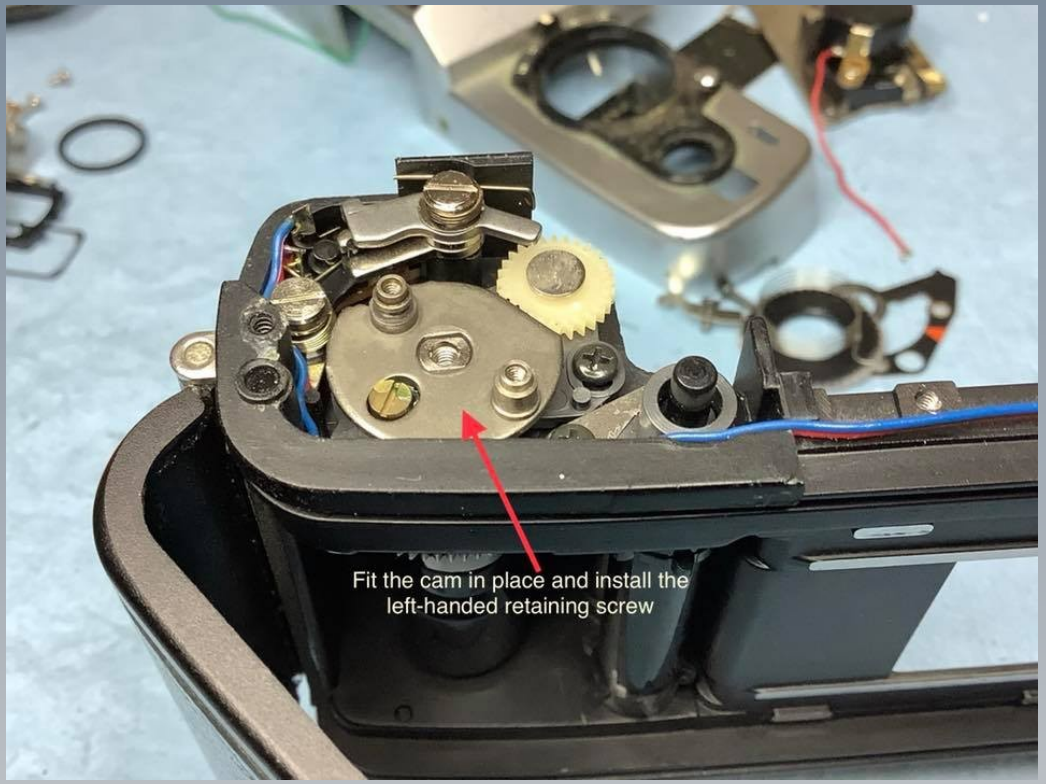

Make sure
stop-pawl
spring is
properly
attached

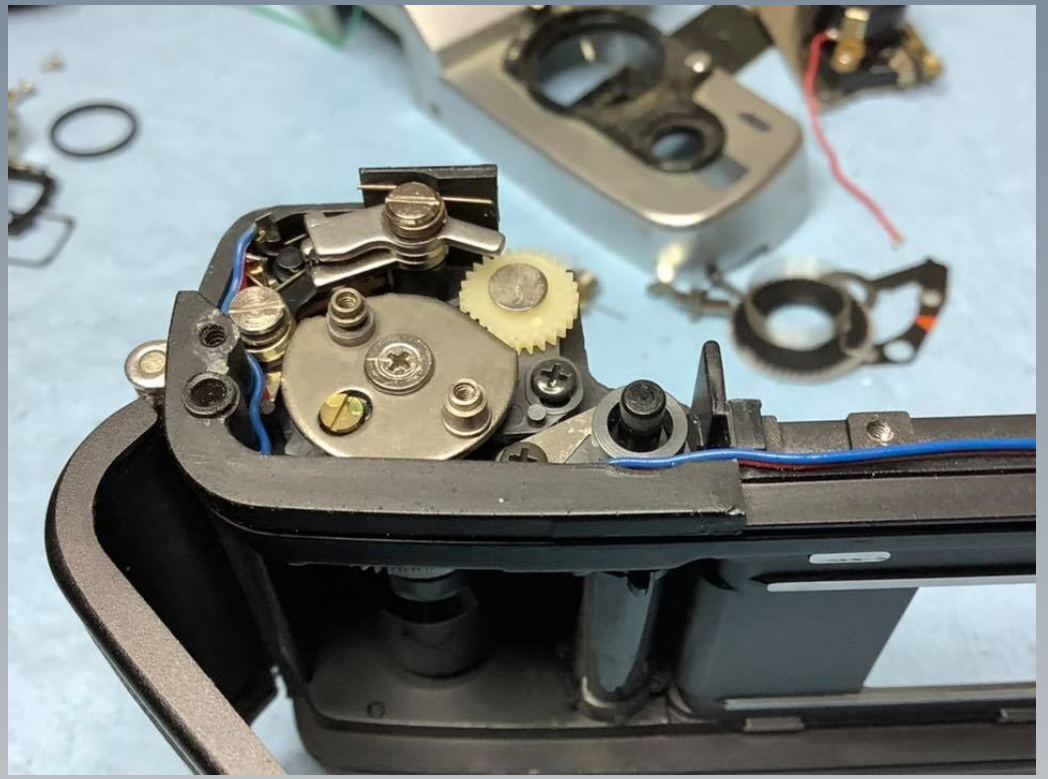



Position return spring


Upward bent end of the return spring fits into this slot
Fit the gear over the spring and turn the gear clock-wise until it drops into place with the spring tensioned




Fit the cam in place and install the
left-handed retaining screw



Post #23

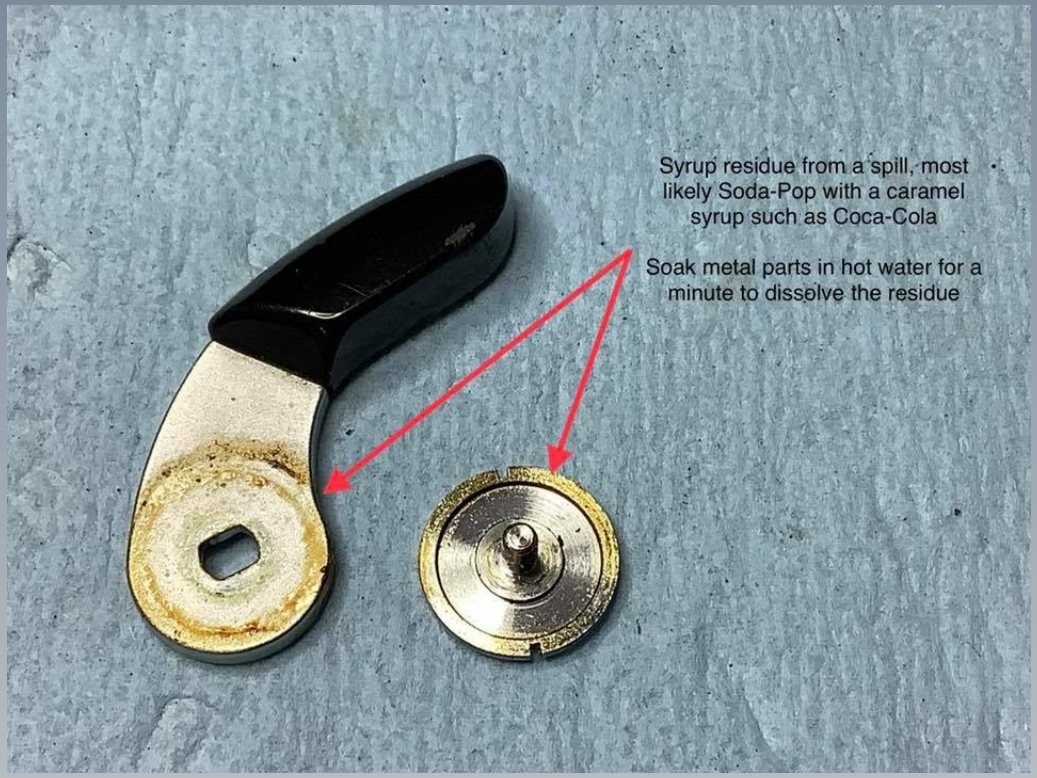
Often I get cameras in that have frozen controls and it’s usually the result of something being spilled or splashed on the camera - on the wind lever and cap-screw there’s a syrup residue, probably from a Soda like Pepsi or CocaCola. Soaking metal or plastic parts in hot or running hot water will dissolve that residue.

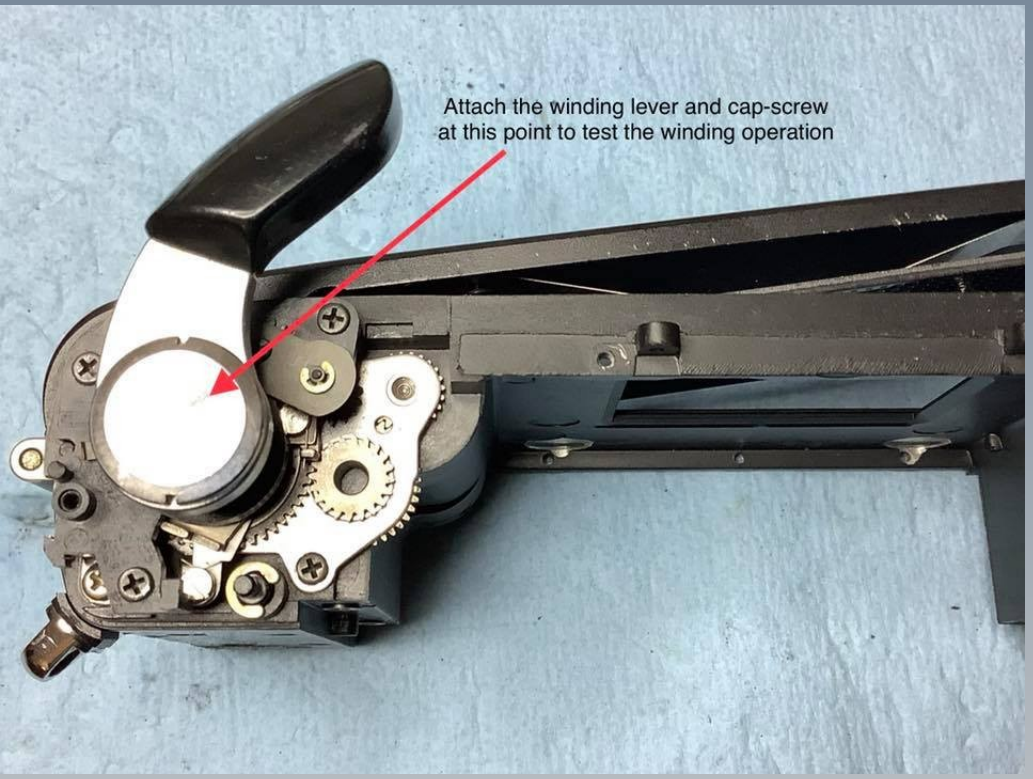
Temporarily install the wind lever to test the winding operation -

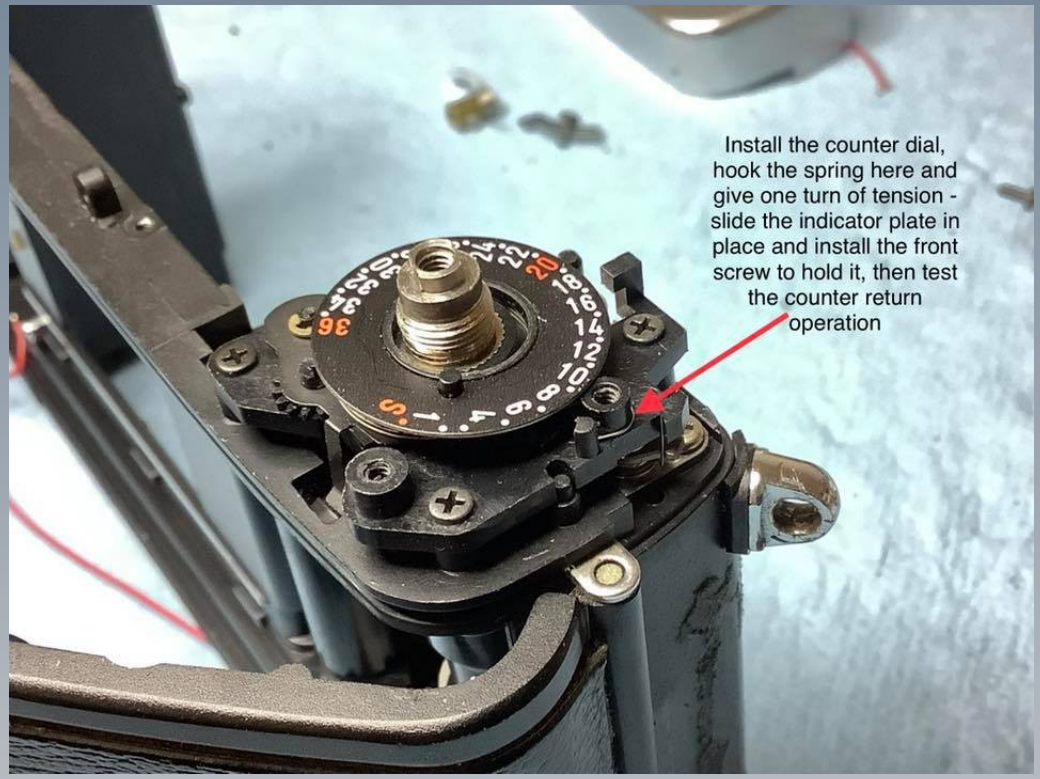
Move onto installing the counter dial, give the counter return spring one turn of clock-wise tension, slip the indicator plate into the thin grove in the upper winding baseplate, hold it in place with the front-most screw, double check the “V” cutout on the counter drive gear is in its correct position, install the counter actuating arm spring and it’s screw - test operation each time you install a part.

Install the film progression bar, make sure to follow the adjustment procedure.

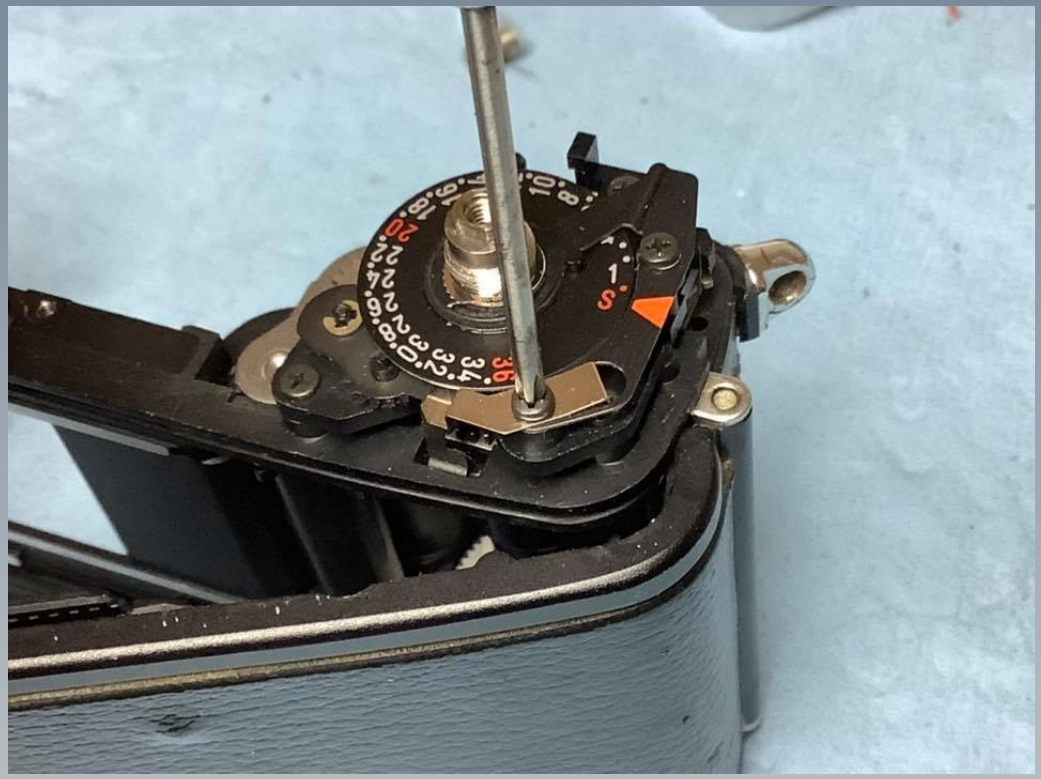
Follow the service manual(s) on learncamerarepair.com for specific adjustment information.


Syrup residue from a spill, most likely Soda-Pop with a caramel syrup such as Coca-Cola
Soak metal parts in hot water for a minute to dissolve the residue

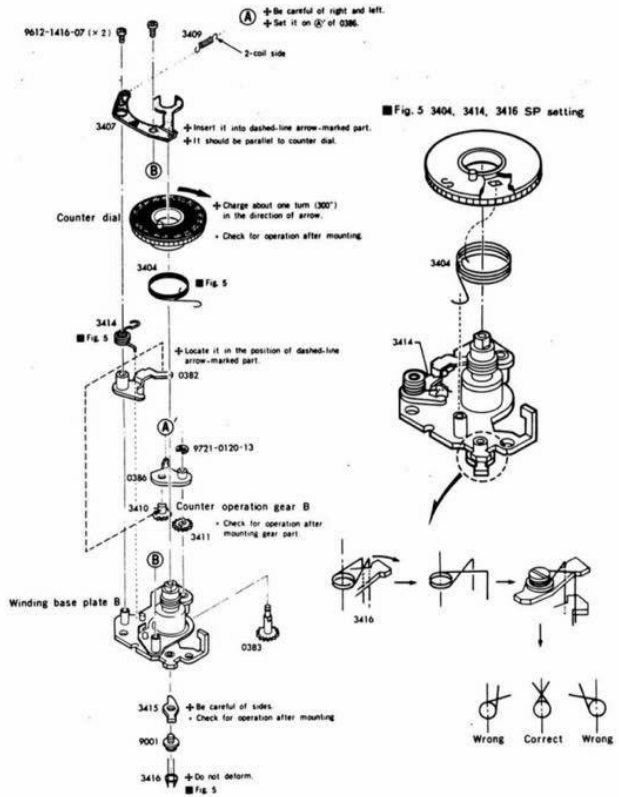

Attach the winding lever and cap-screw
at this point to test the winding operation


Install the counter dial,
hook the spring here and
give one turn of tension -
slide the indicator plate in
place and install the front
screw to hold it, then test
the counter return
operation

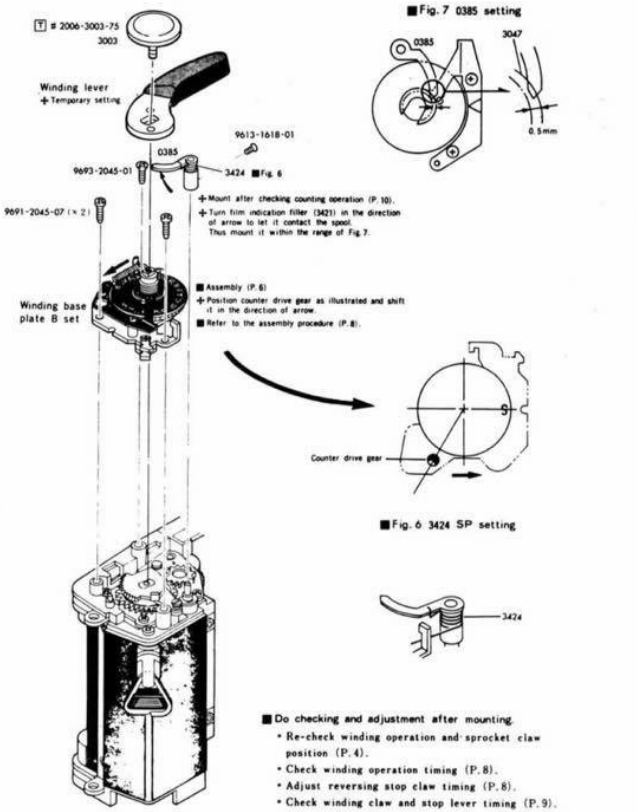

1"
S
36
20

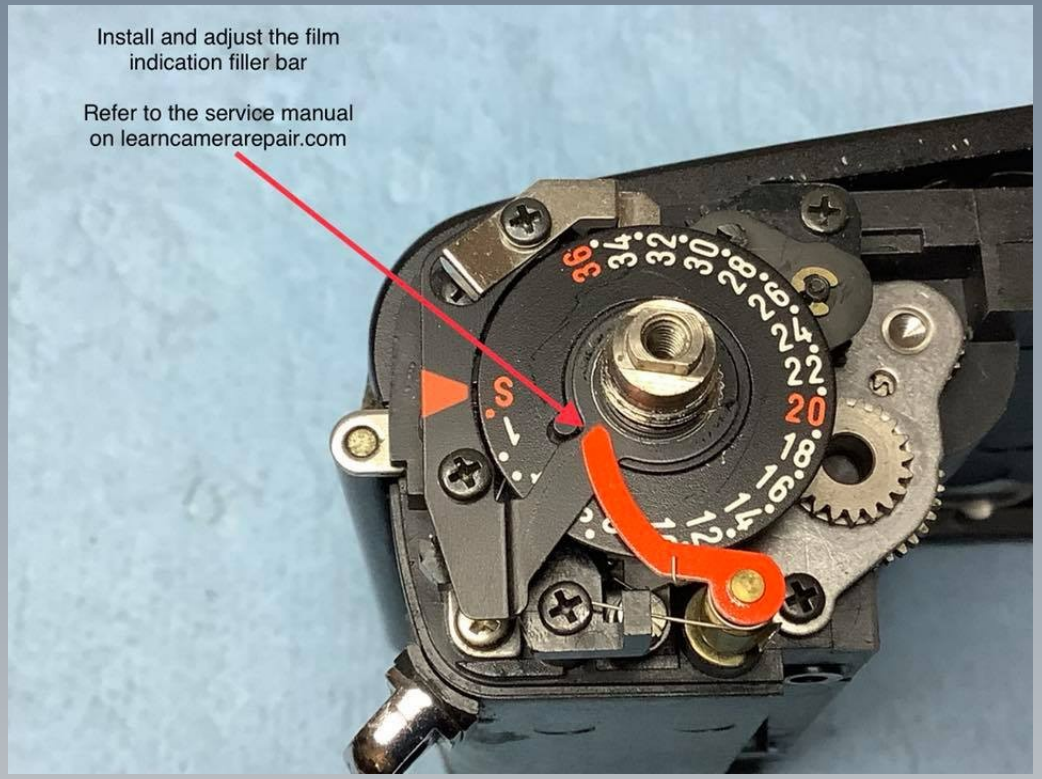

1"
S
36
20

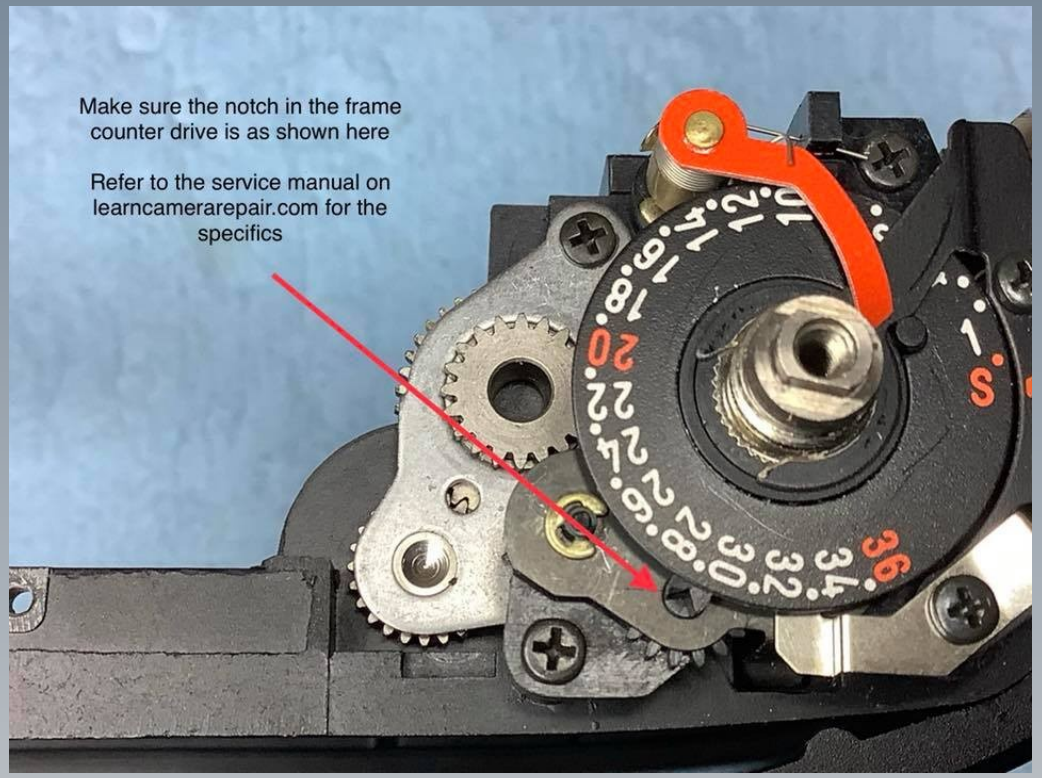
■ Winding base plate B assembly



5 Winding base plate B set




Install and adjust the film indication filler bar
Refer to the service manual on learncamerarepair.com

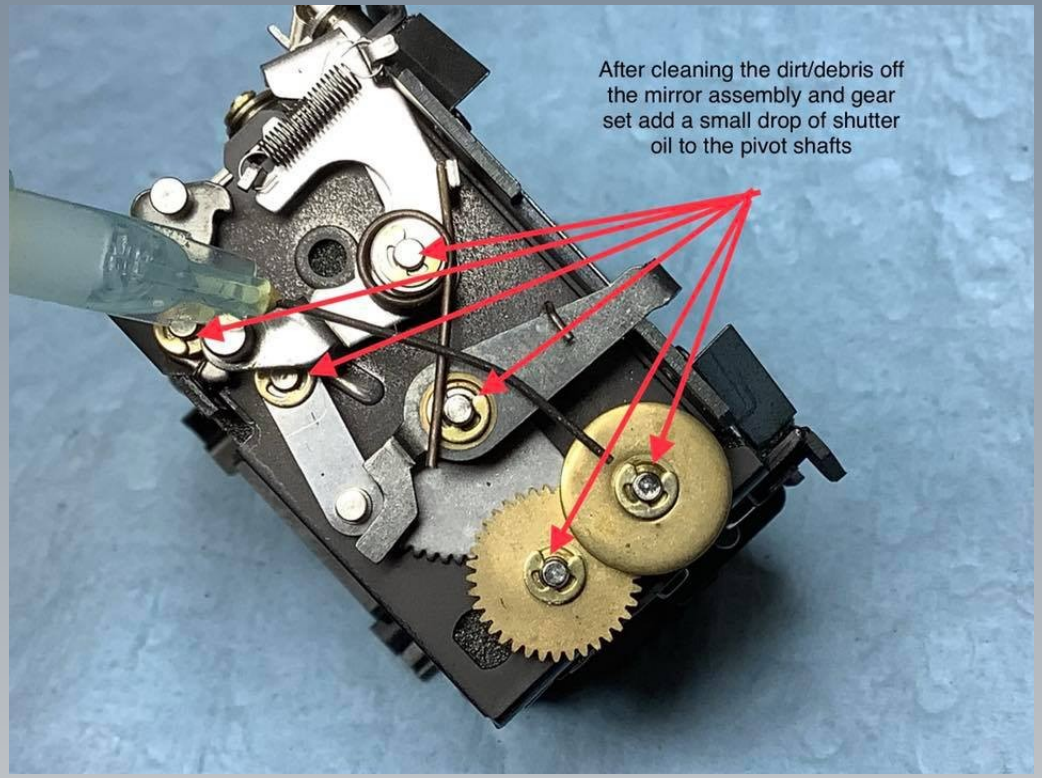

Make sure the notch in the frame counter drive is as shown here
Refer to the service manual on learncamerarepair.com for the specifics

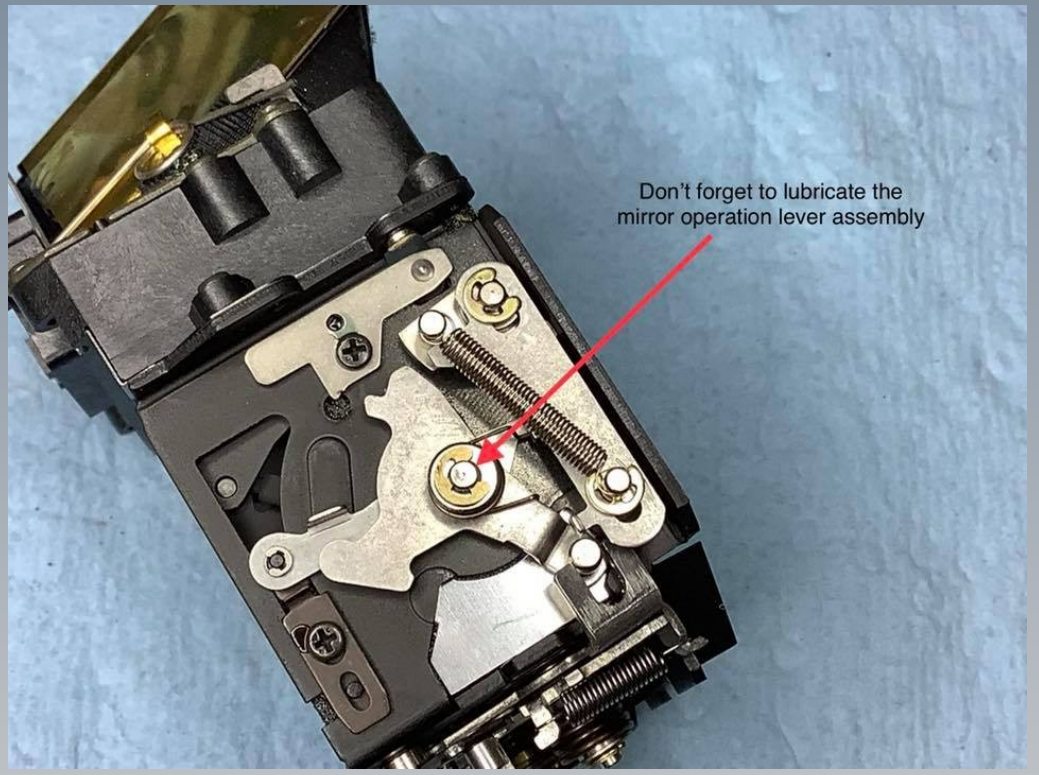
Post #24 Reassembly

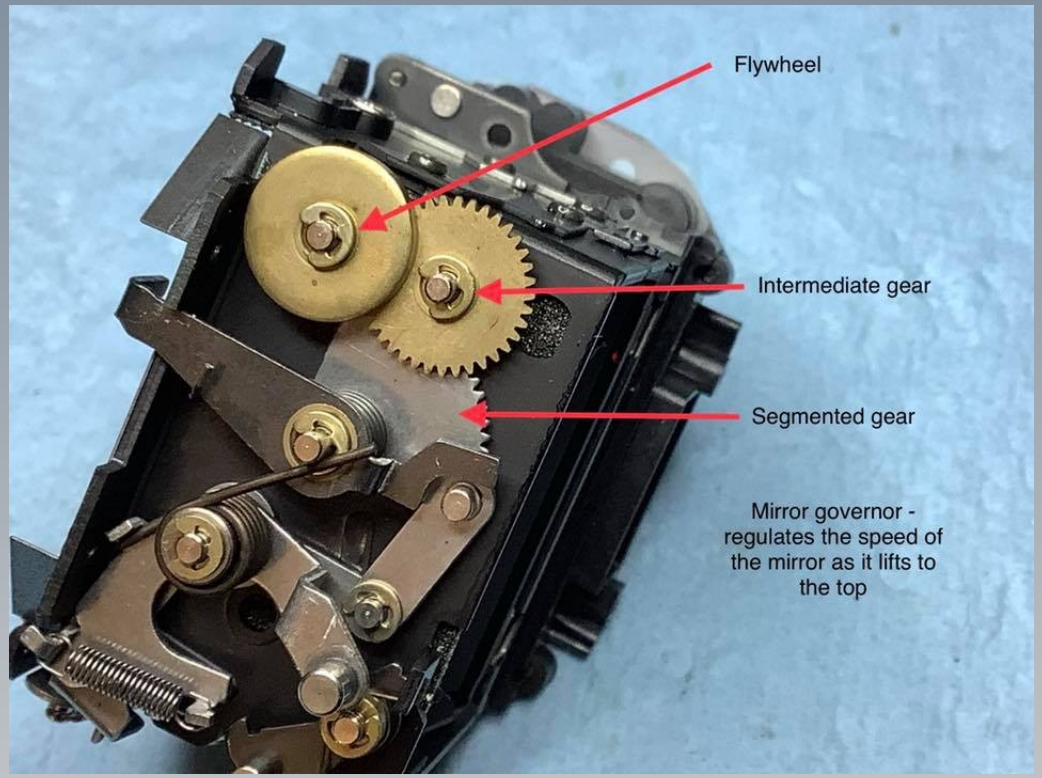
https://www.facebook.com/groups/360490091319202/?post_id=607847773250098

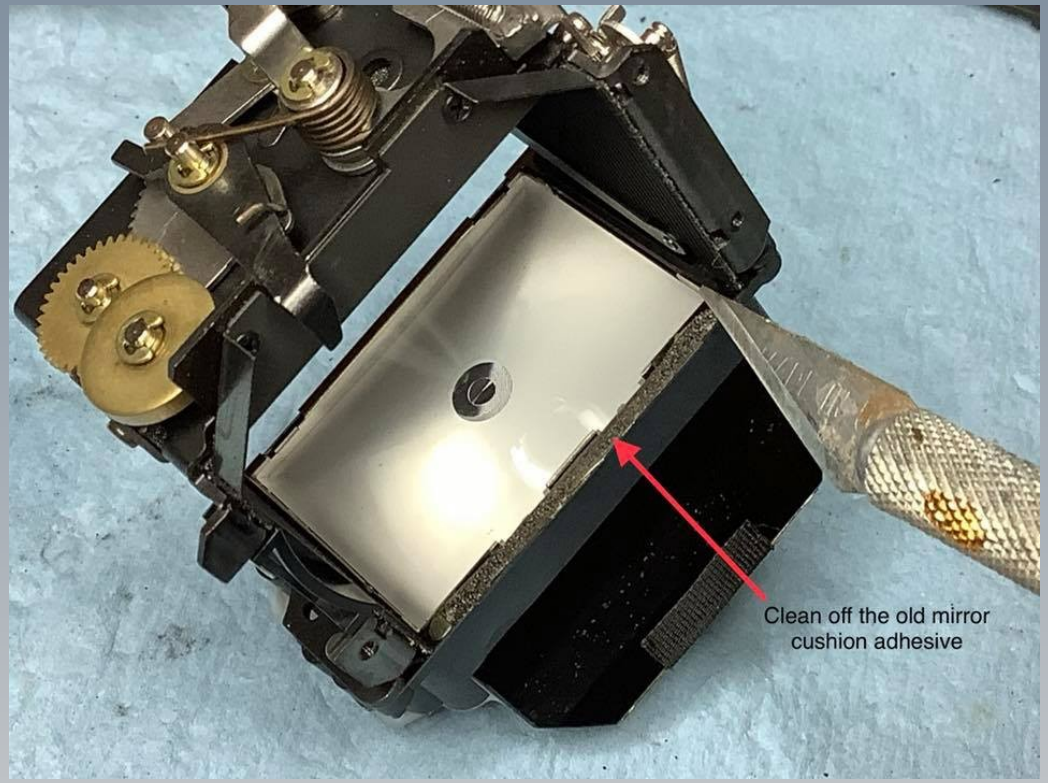
Time to begin cleaning and lubricating the mirror box, I used a small brush, an air compressor set at a low PSI, then applied shutter oil to the bearing surfaces of the operating levers, tested the mirror box, replaced the mirror-up cushion, cut a new cushion for the front plate where the prism rests and installed a new (old stock) mirror light shield replacing the damaged one that was in pieces when the camera arrived for service. Finally I re-installed the mirror box on the front plate (be careful not to pinch any wires or damage the FPC).

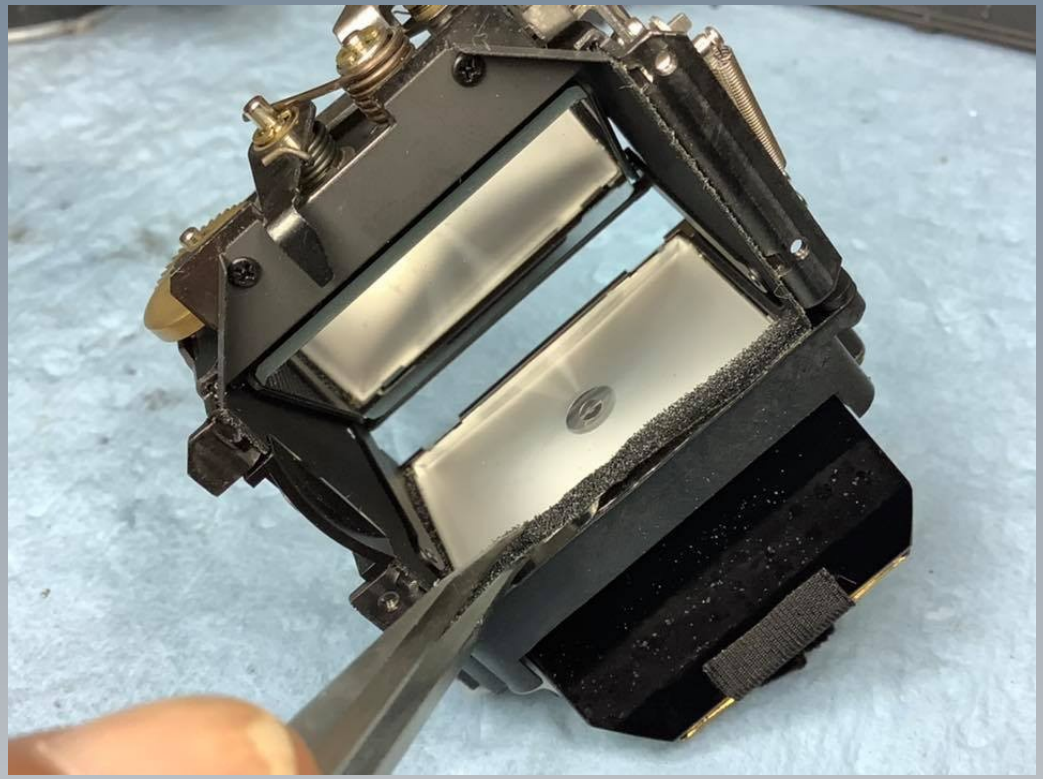
In the next post I'll clean the magnet assembly, AV resistor bands, clean and lubricate the shutter and start assembly of the front plate/mount.

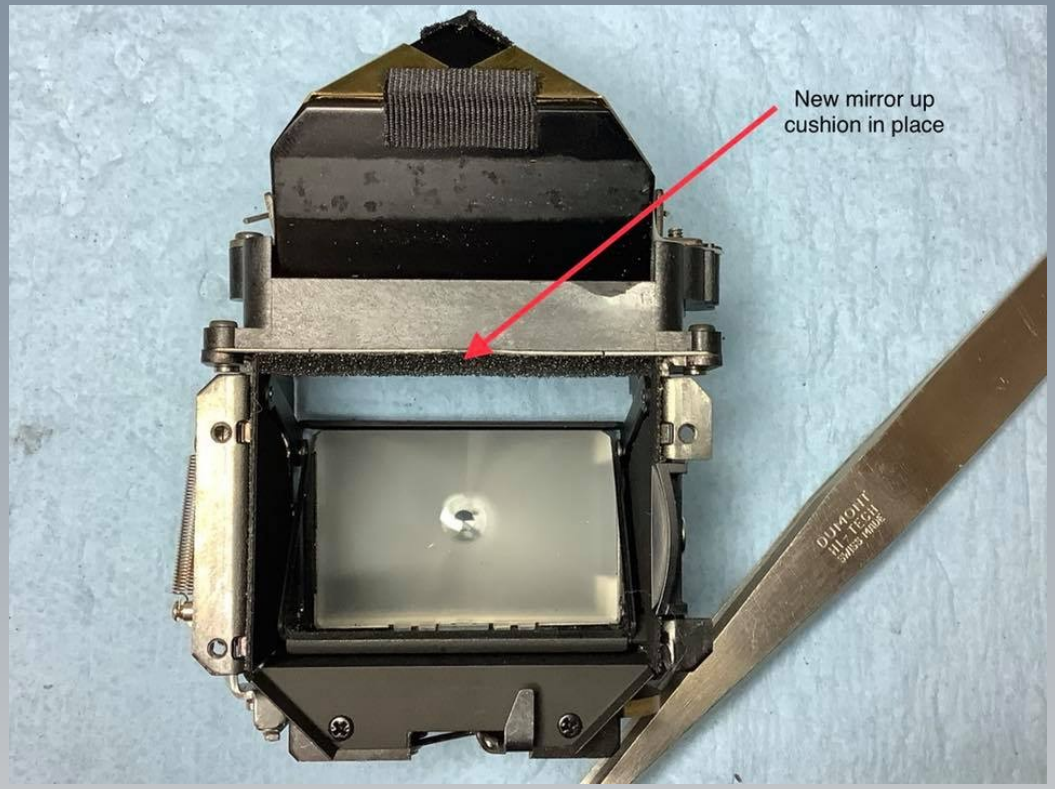

After cleaning the dirt/debris off
the mirror assembly and gear
set add a small drop of shutter
oil to the pivot shafts

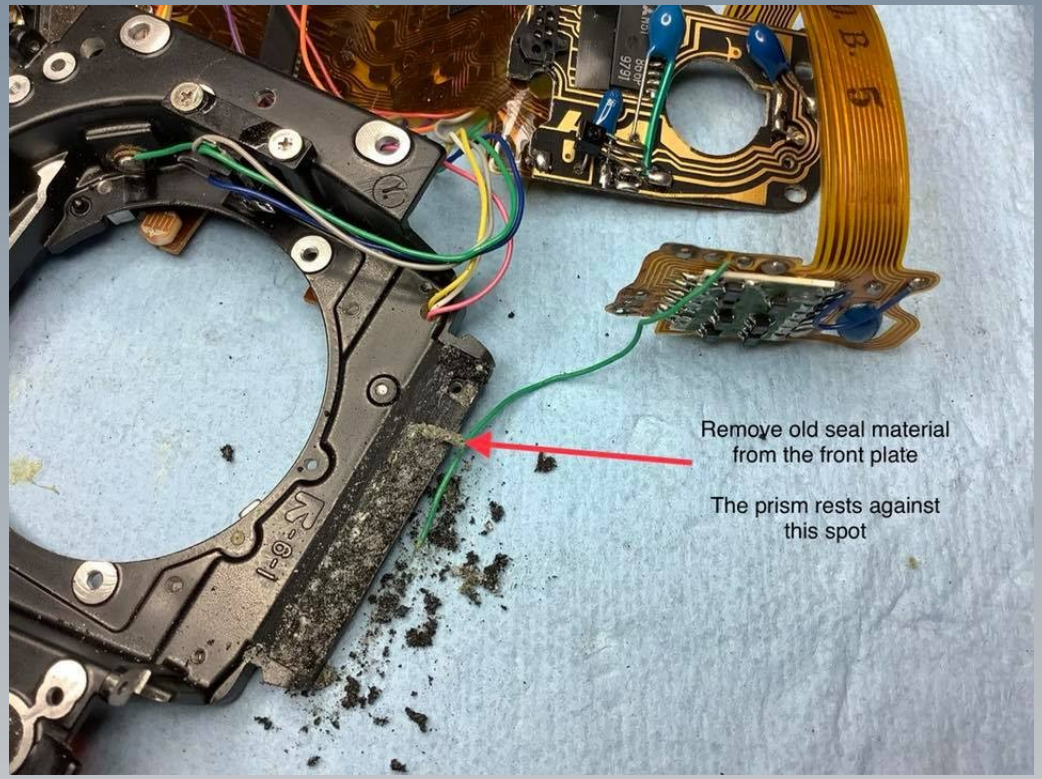

Don’t forget to lubricate the
mirror operation lever assembly


Flywheel
Intermediate gear
Segmented gear
Mirror governor - regulates the speed of the mirror as it lifts to the top


Clean off the old mirror cushion adhesive

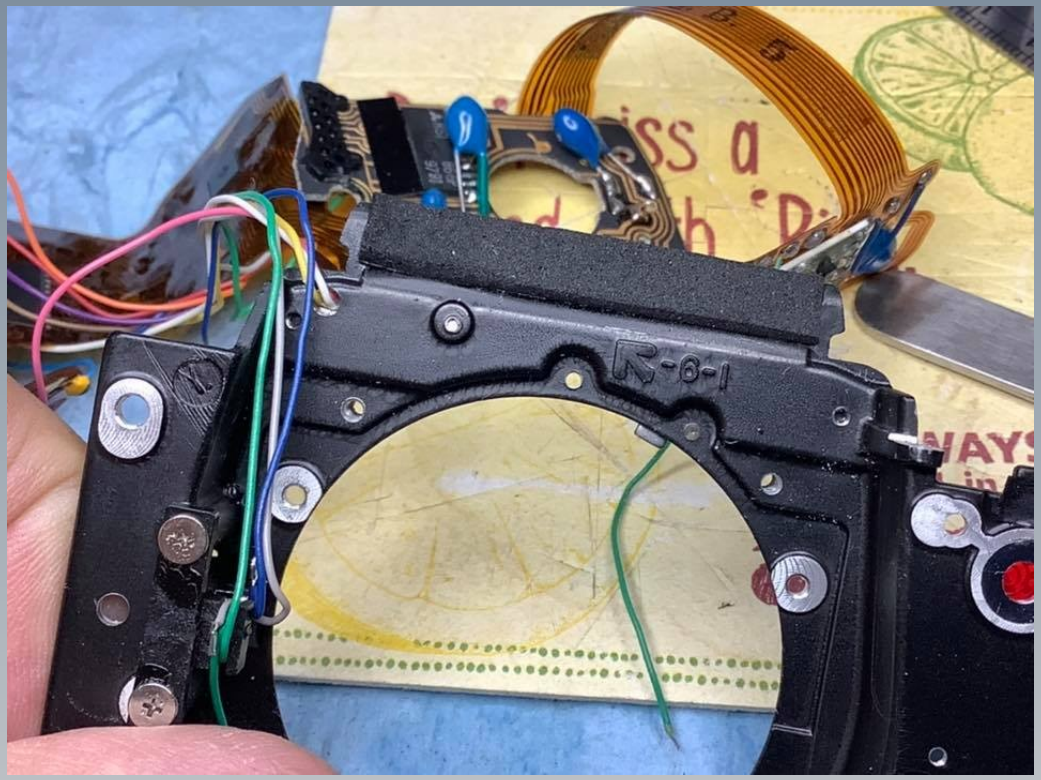


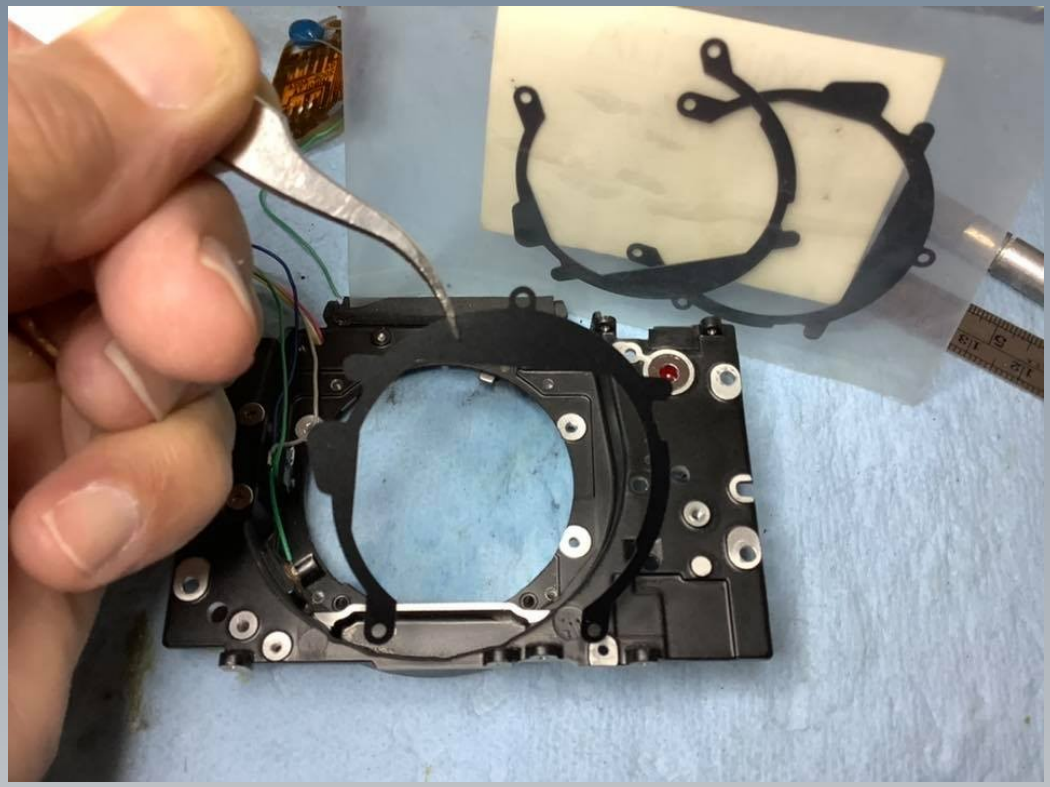

New mirror up
cushion in place

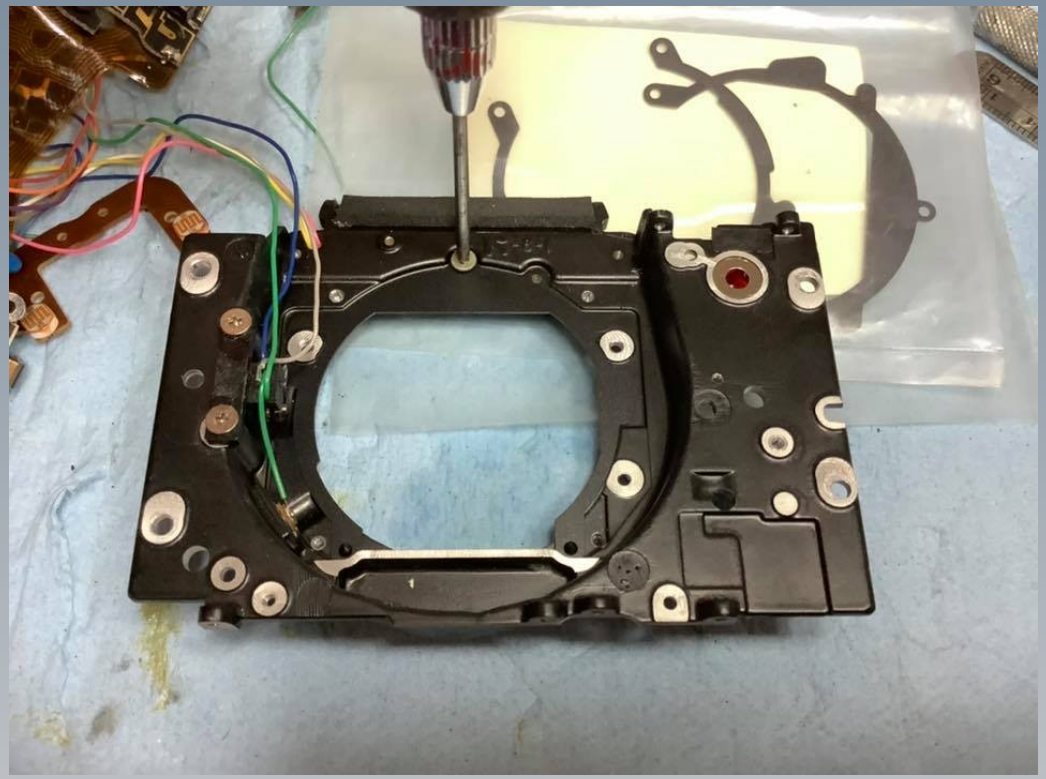

Remove old seal material
from the front plate
The prism rests against
this spot

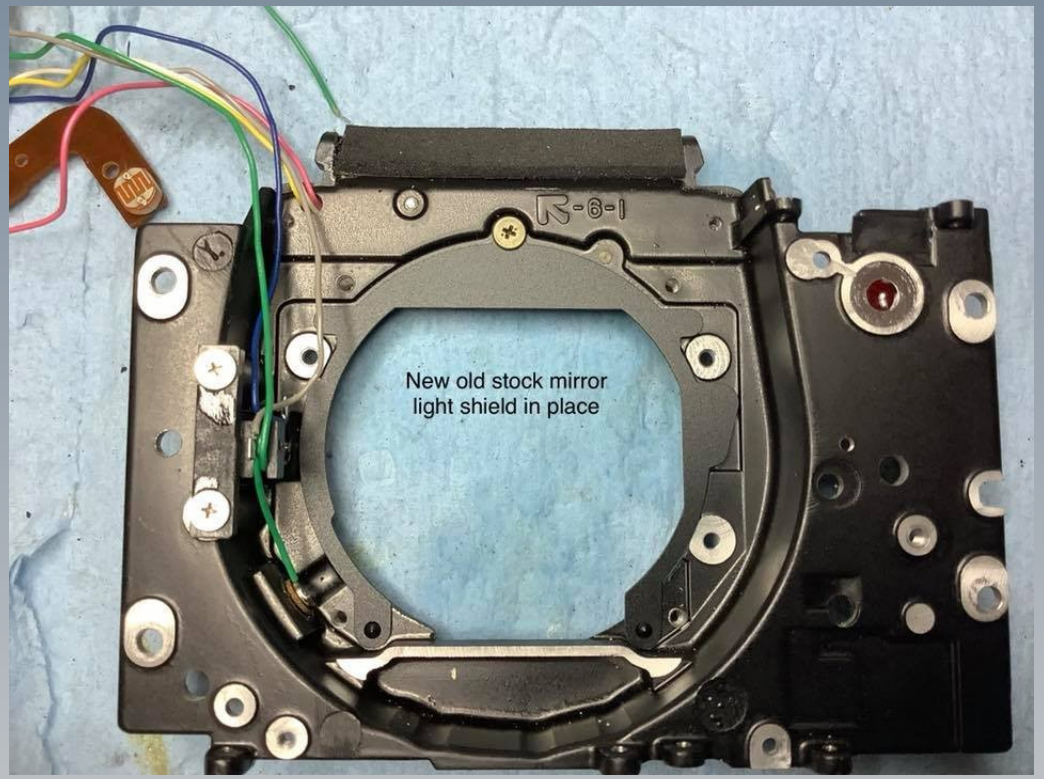

Don't miss a
Rita.
R-8-1

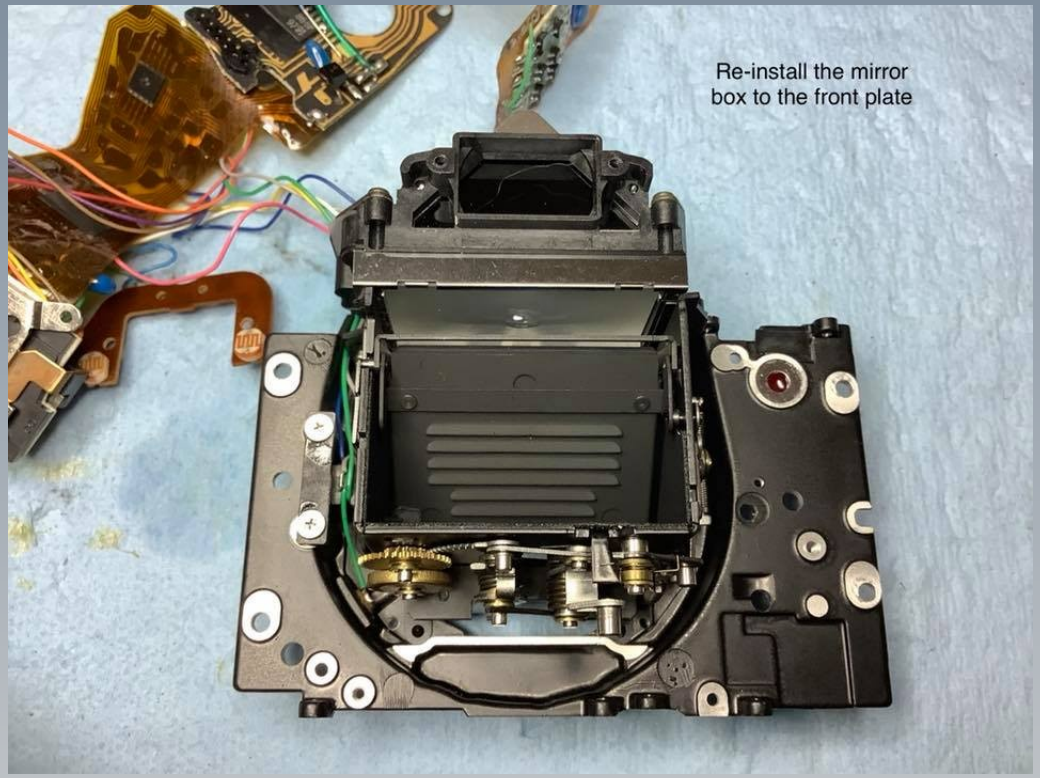

Don't miss a
Rita.
OUTBA
R-8-1

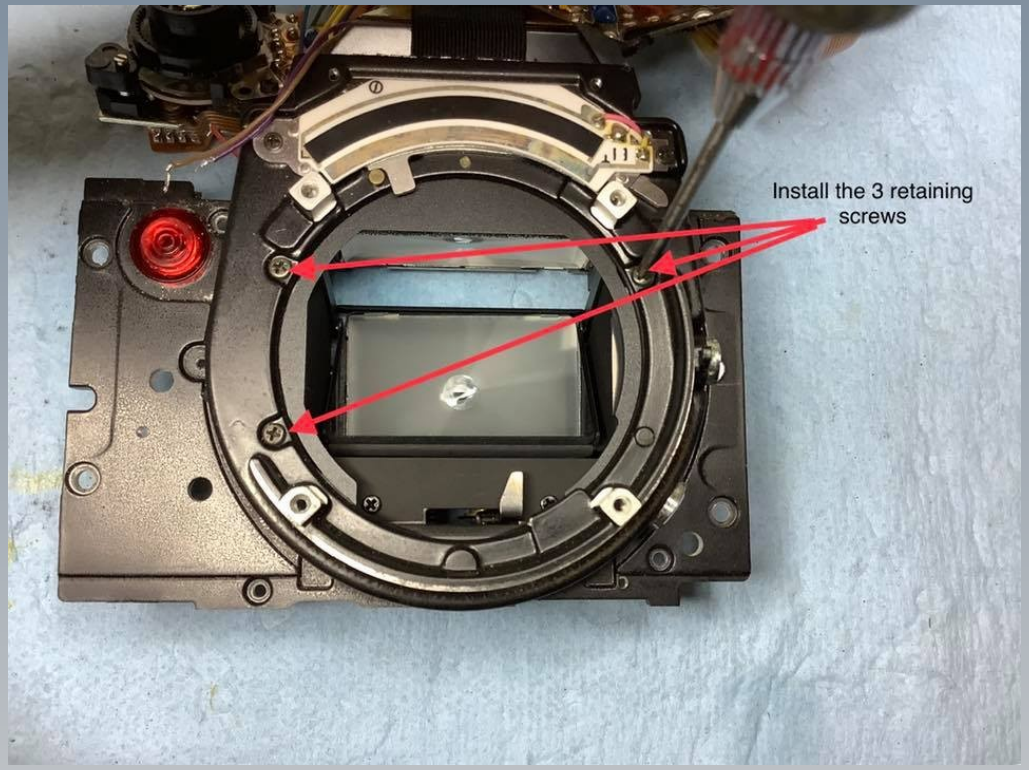

R-6-1






New old stock mirror
light shield in place


Re-install the mirror
box to the front plate


Install the 3 retaining
screws

Post #25 Reassembly

https://www.facebook.com/groups/360490091319202/?post_id=608471823187693

After the front plate/mirror box are cleaned, lubricated, seals and cushions are installed, clean and lubricate the shutter -

The shutter is a modular shutter and back in the good ol'days rarely required lubrication but over the years I've found the XG and X series cameras become hard to wind and what I mean by that is you can feel the gears are too dry -

The first thing to do is blow all the dirt/debris off the shutter and lubricate the shutter with shutter oil and apply a grease to the latching and rubbing surfaces (the photos don't show the complete lubrication points because there's just too many)...

Apply one small drop of shutter oil to each shutter curtain roller bearing, move the curtain roller up and down with your finger to expose the bare metal pinion rod and bronze bearings (if it moves lubricate it - sparingly)

Apply shutter oil to the shutter white and blue plastic charge gear shafts, a grease to the latches and rubbing surfaces - sparingly - no excess lubricant, this action will help make the winding action feel smoother.

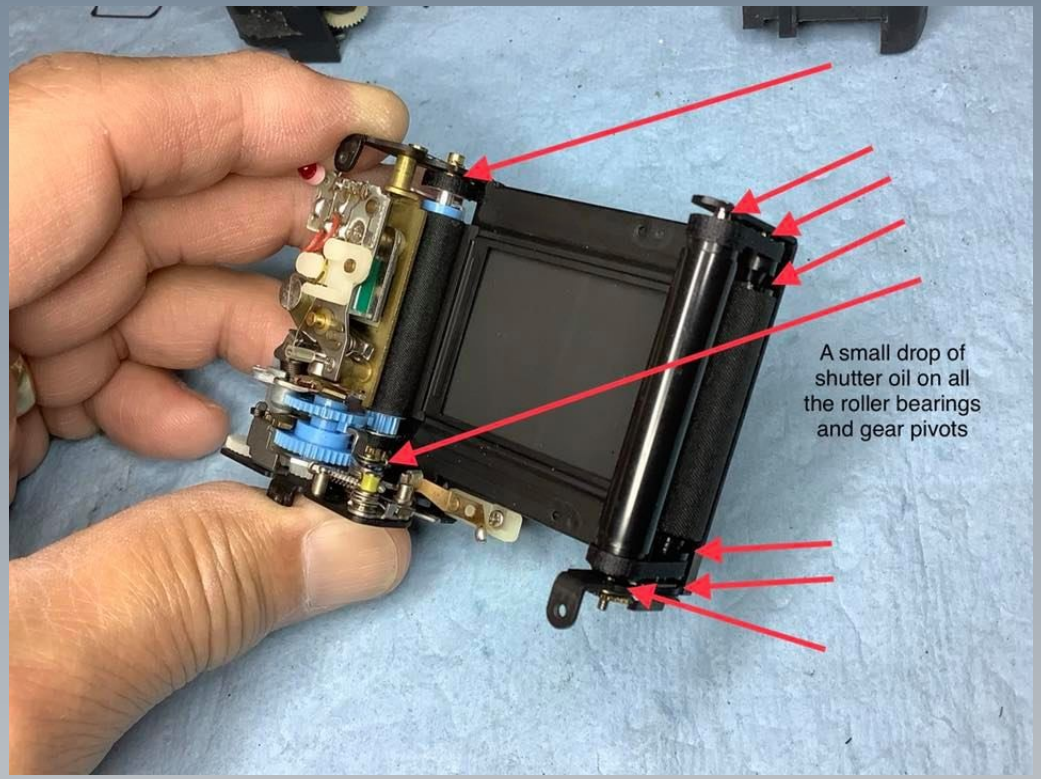
Clean the trigger switch contact and the eccentric post (used for the 1/1000 adjustment).

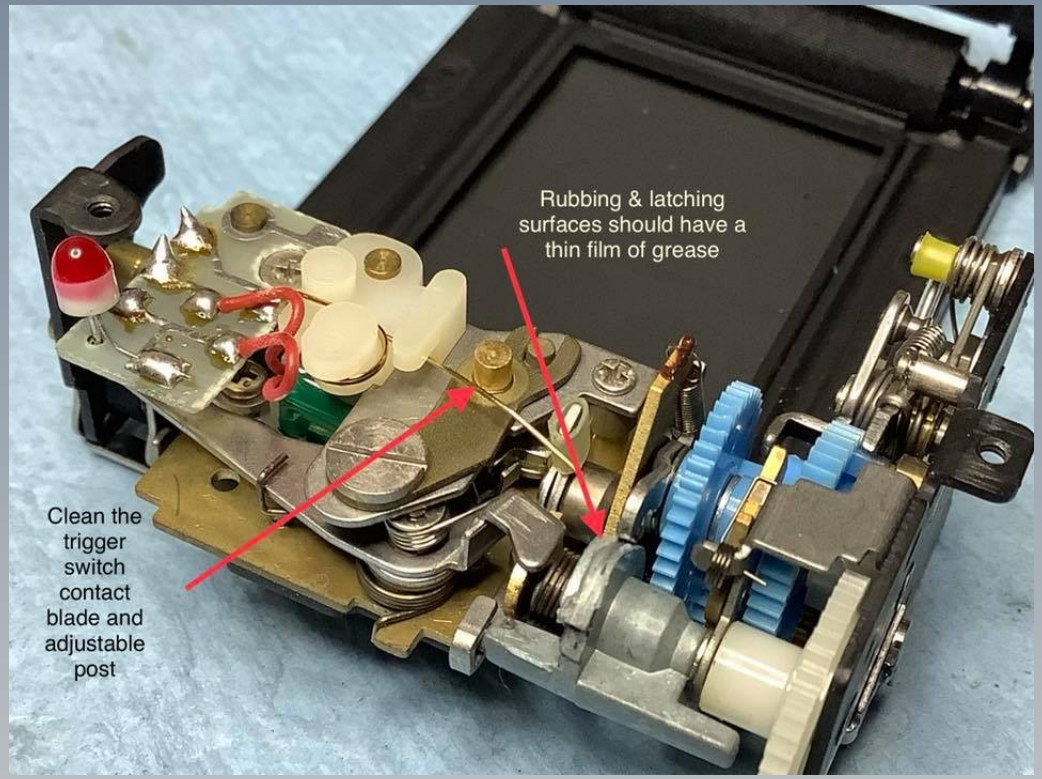
Clean the shutter magnet surfaces (upper and lower).

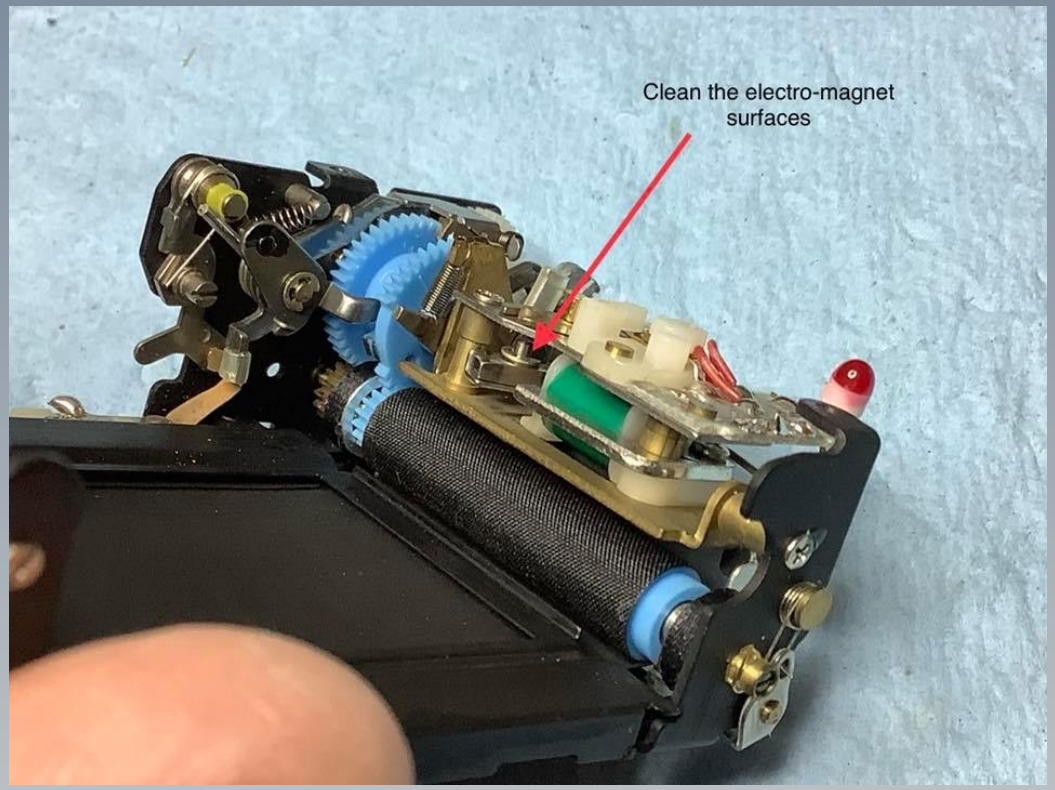
Next, re-solder the shutter wires, orange to the self-timer LED, red to the 1st magnet contact, brown to the 2nd and purple to the trigger switch contact...

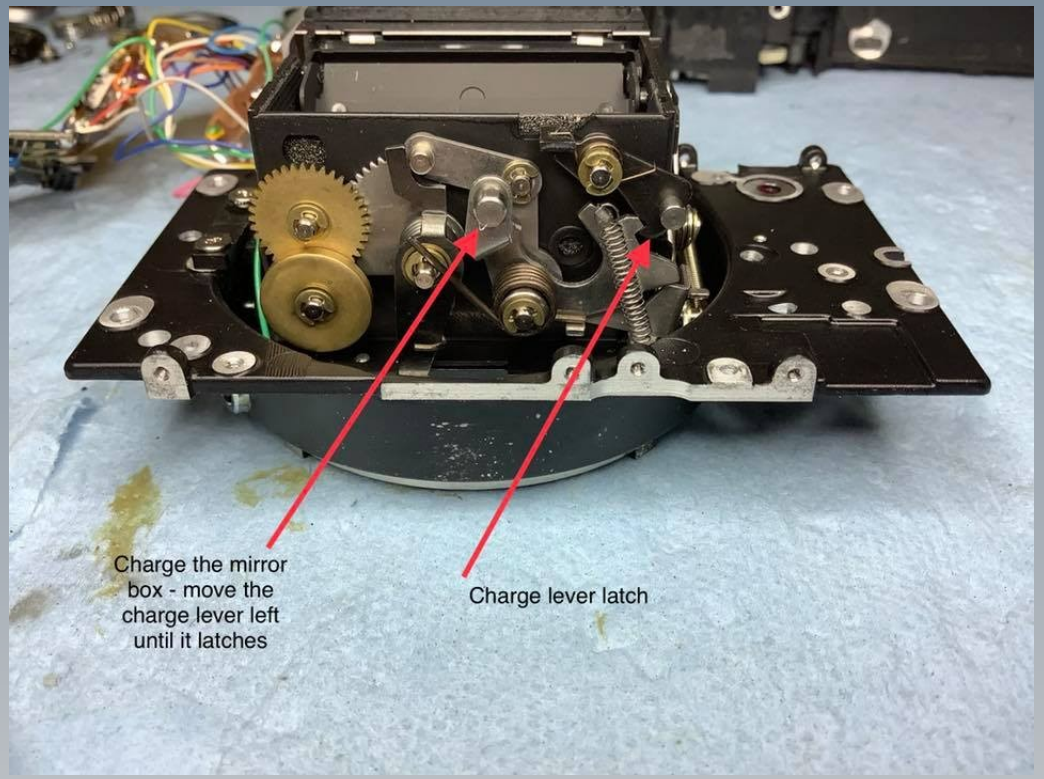
Reinstall the mirror operation lever where it attaches to the front plate, be sure to place the notch over the correct part in the mirror box - test the free movement after installing the shoulder-type screw...

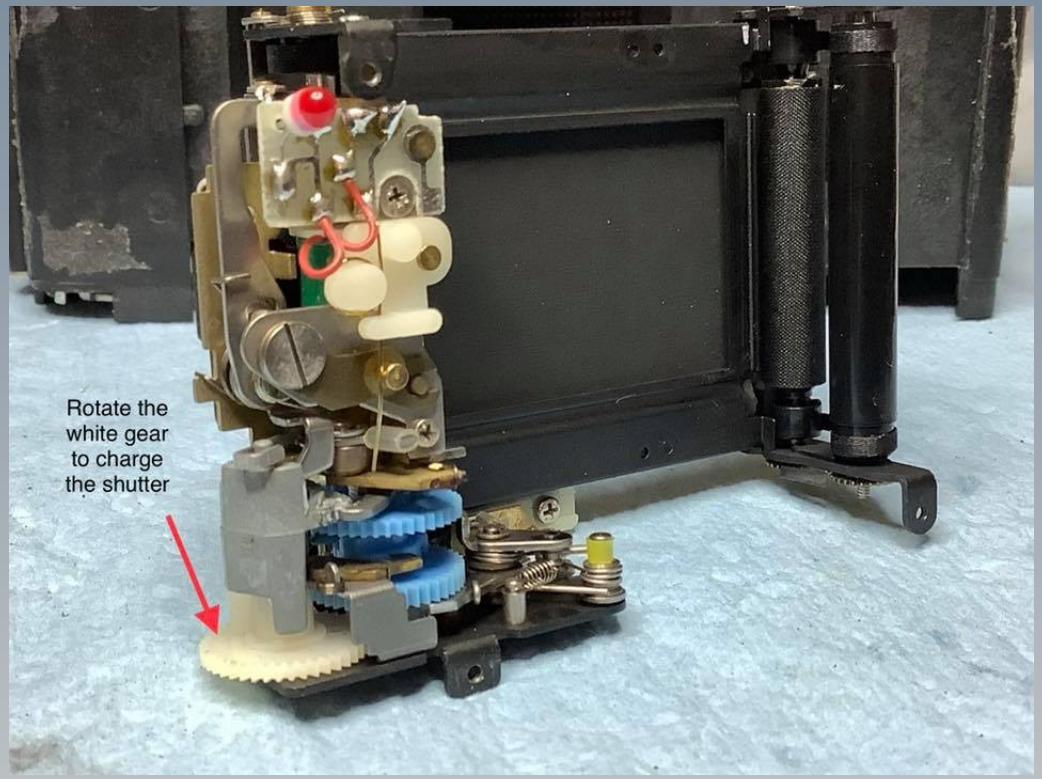
Charge the shutter and the mirror box, route the shutter wires properly so they don't become pinched and short as you position the shutter unit in place - holding the shutter and mirror/front plate together with one hand turn the assembly over and install the three shutter retaining screws - since the shutter and mirror are charged (cocked and ready) test the operation by actuating the mirror operation lever.

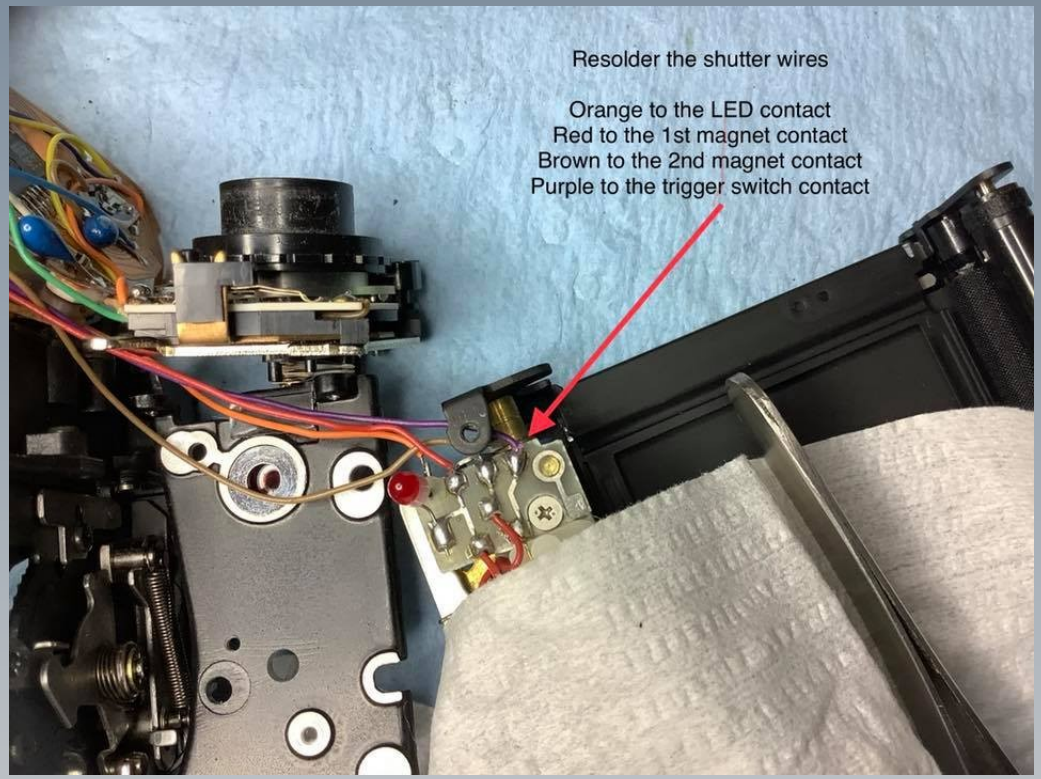

A small drop of shutter oil on all the roller bearings and gear pivots

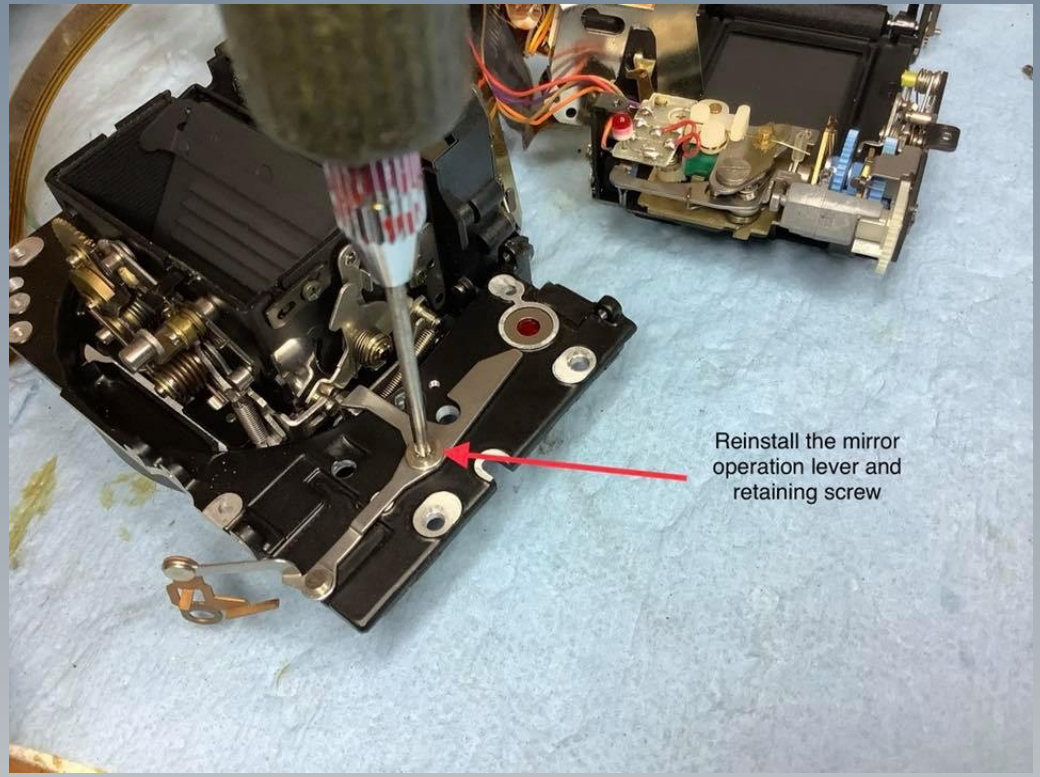

Rubbing & latching surfaces should have a thin film of grease
Clean the trigger switch contact blade and adjustable post

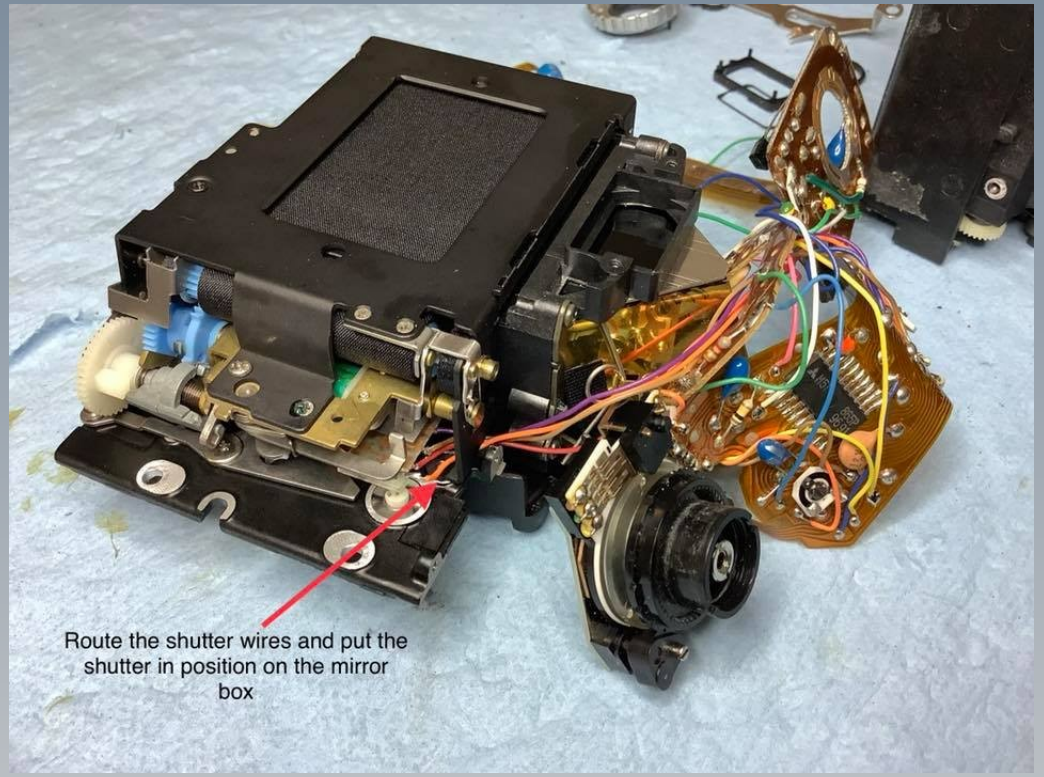

Clean the electro-magnet surfaces

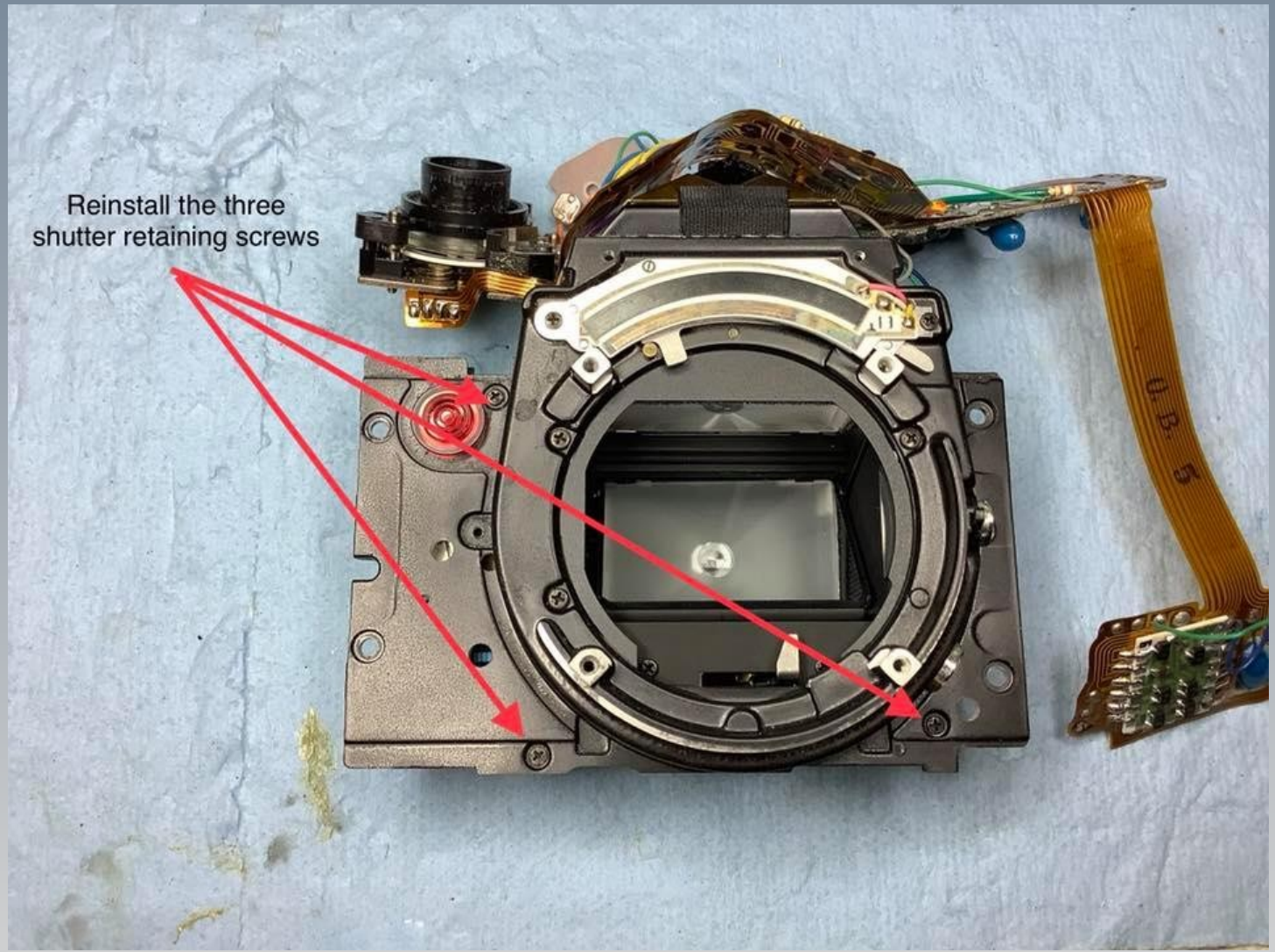

Charge the mirror box - move the charge lever left until it latches
Charge lever latch


Rotate the
white gear
to charge
the shutter


Resolder the shutter wires
Orange to the LED contact
Red to the 1st magnet contact
Brown to the 2nd magnet contact
Purple to the trigger switch contact


Reinstall the mirror operation lever and retaining screw


Route the shutter wires and put the shutter in position on the mirror box


Reinstall the three
shutter retaining screws

Post #26 Reassembly

https://www.facebook.com/groups/360490091319202/?post_id=612395226128686

Clean and reinstall the eyepiece mask, plastic eyepiece frame, eyepiece, set the photocell PCB in place and install the metal eyepiece frame.

Clean and lubricate, make any obvious adjustments as you work...

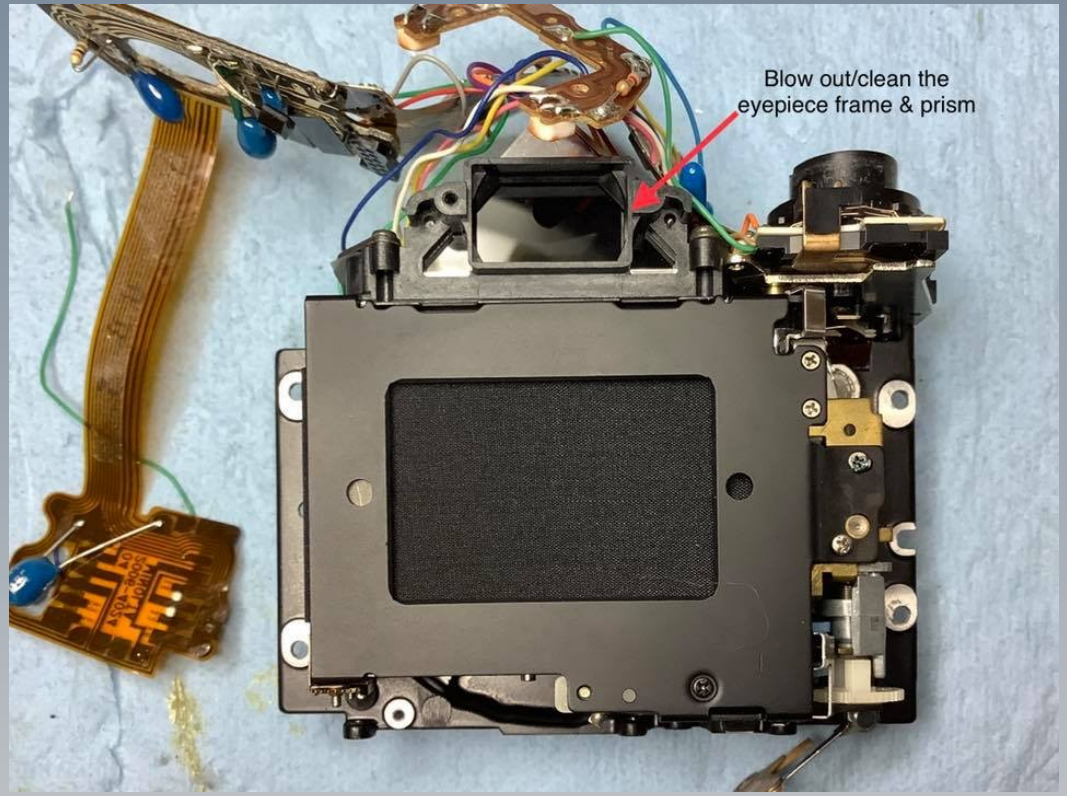
Move to the front, I've temporarily set the shutter speed PCB in place for ease of handling without causing any damage (FPC'c can be brittle with age, handle them with care)

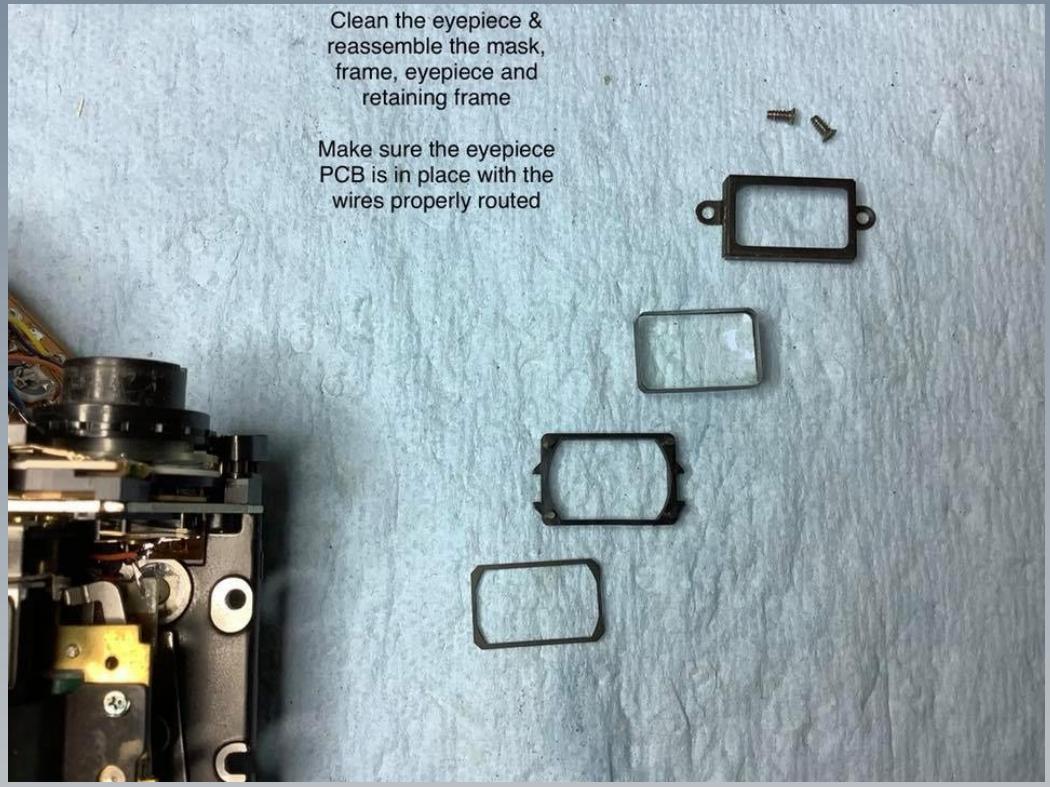
Clean the aperture resistor bands and the aperture ring brush contacts, I use clean with alcohol first, then I use an eraser to "polish" the contacts and surfaces (I've seen some techs use a dielectric grease on these contacts but I leave them dry because the grease attracts dirt/dust).

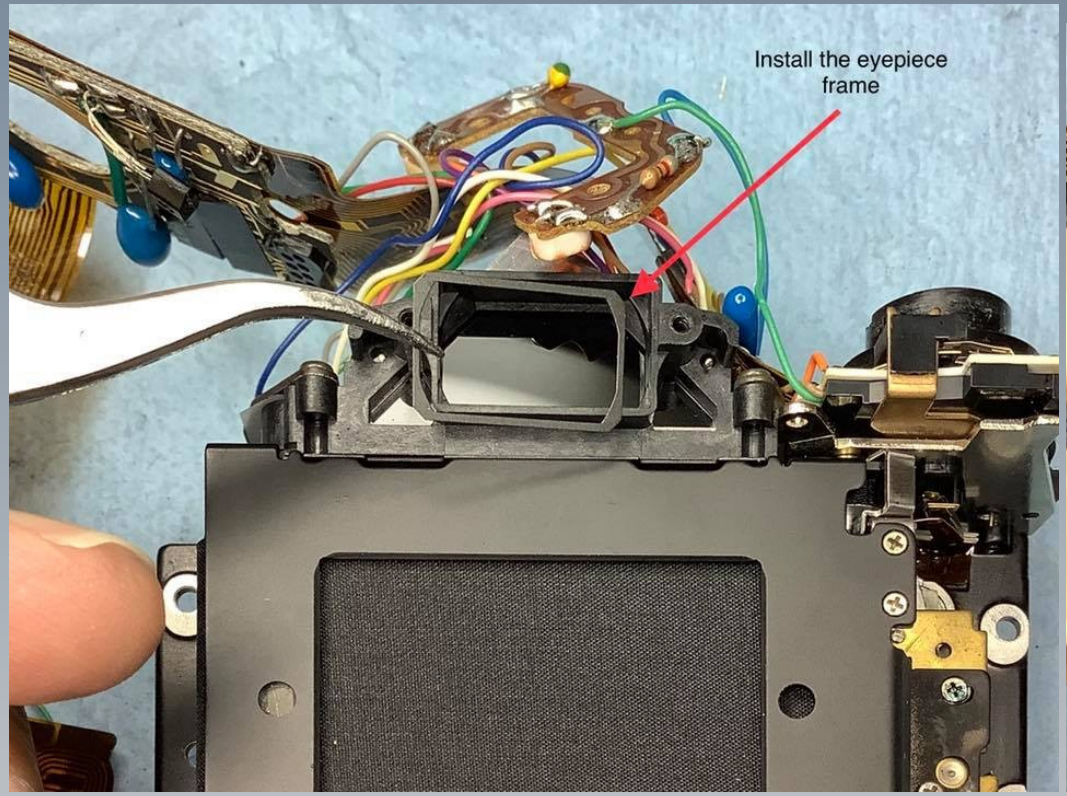
Clean the lens mounting tension spring, turn it over and notice where the lens mount flanges are held, it's an obvious rubbing point, apply a very thin film of grease to make mounting the lens smoothly and prevent premature wear - when you get a Minolta XG/X Series camera in and the lens mount is tight but the lens moves a bit too much, chances are the culprit is this mount spring.

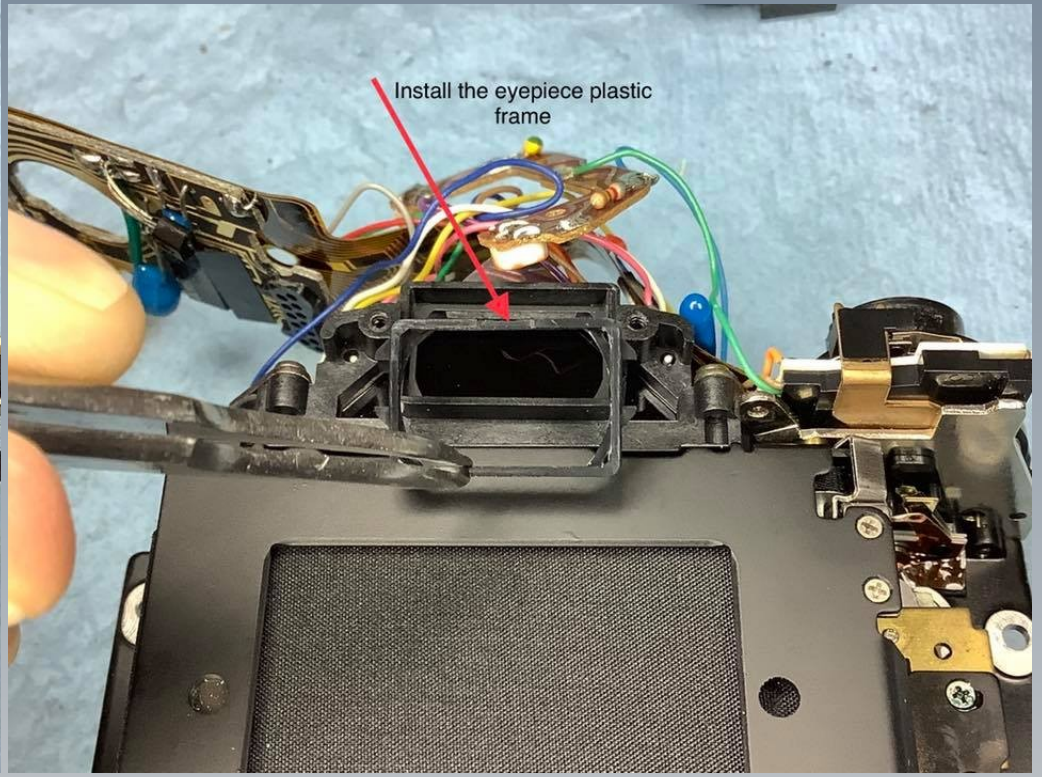
Install the mount spring, aperture ring, use the hook above the remote cable release socket for the aperture ring spring hooking point, tension the ring and spring, hold it in place, set the mount ring in place the install the screws, test the ring operation for free and quick movement.

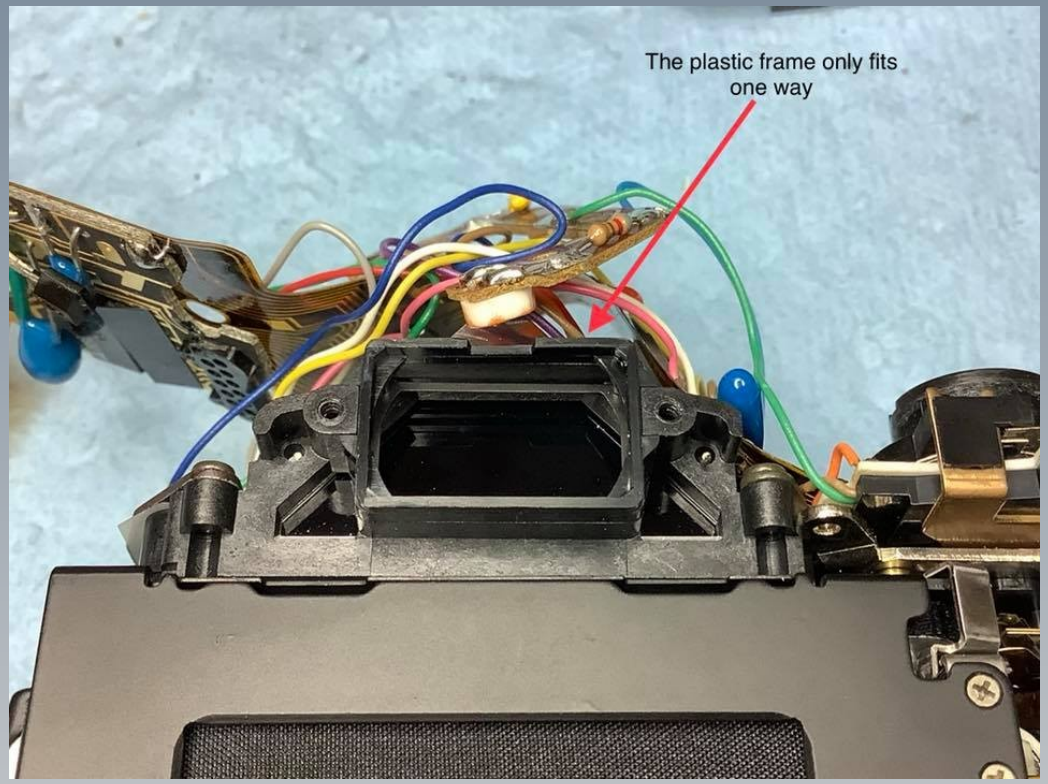
For references the XG Series Service Manuals can be found on my website learncamerarepair.com -

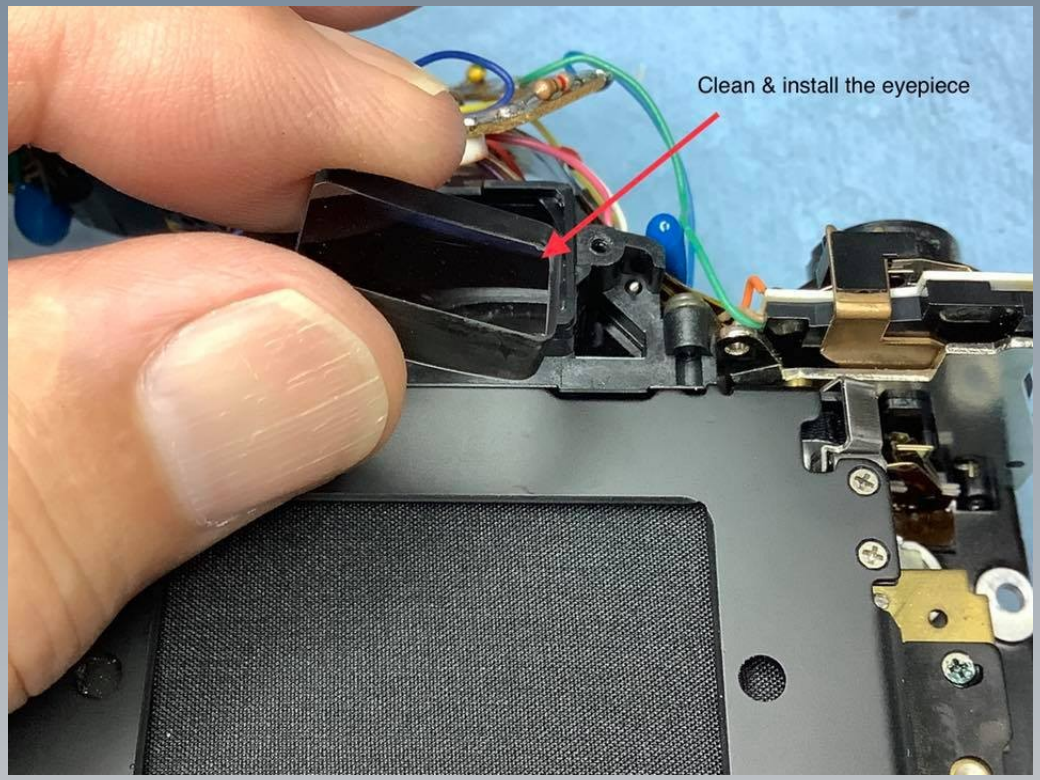

Blow out/clean the
eyepiece frame & prism

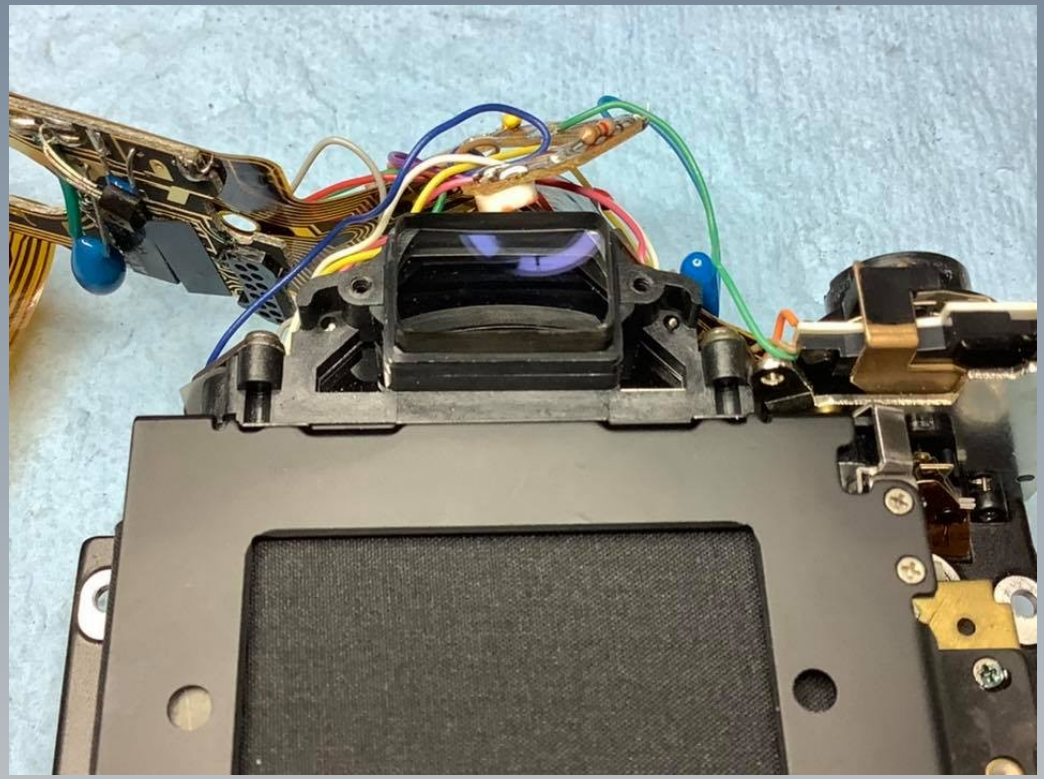

Clean the eyepiece &
reassemble the mask,
frame, eyepiece and
retaining frame
Make sure the eyepiece
PCB is in place with the
wires properly routed

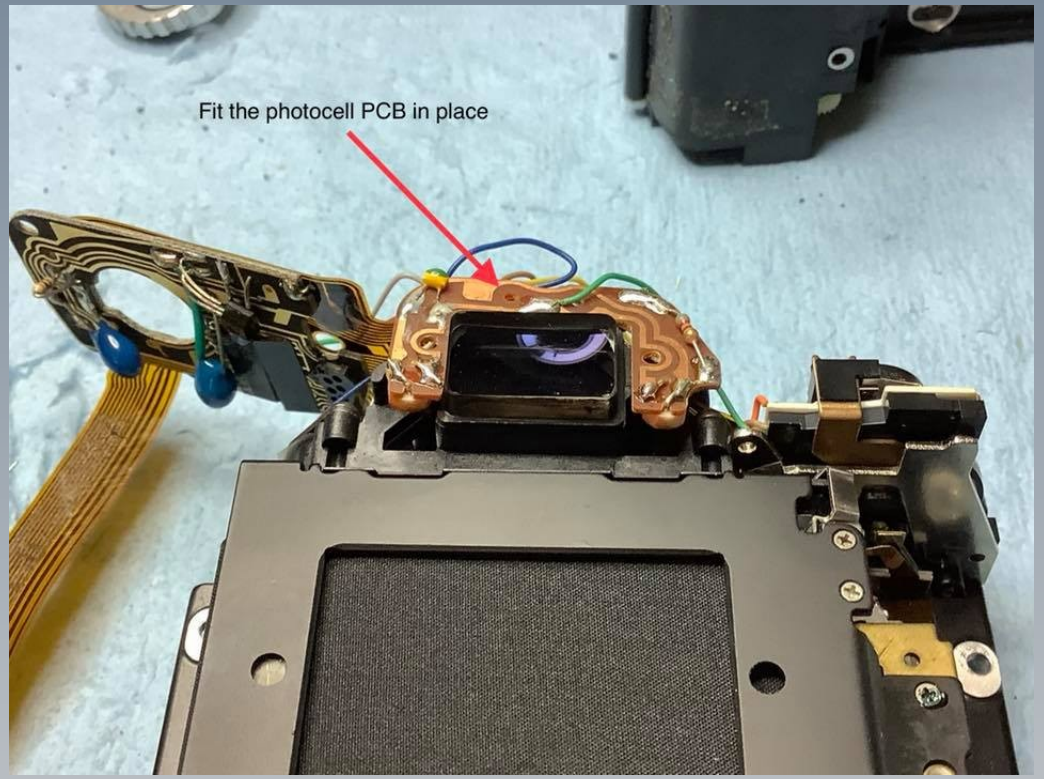

Install the eyepiece
frame

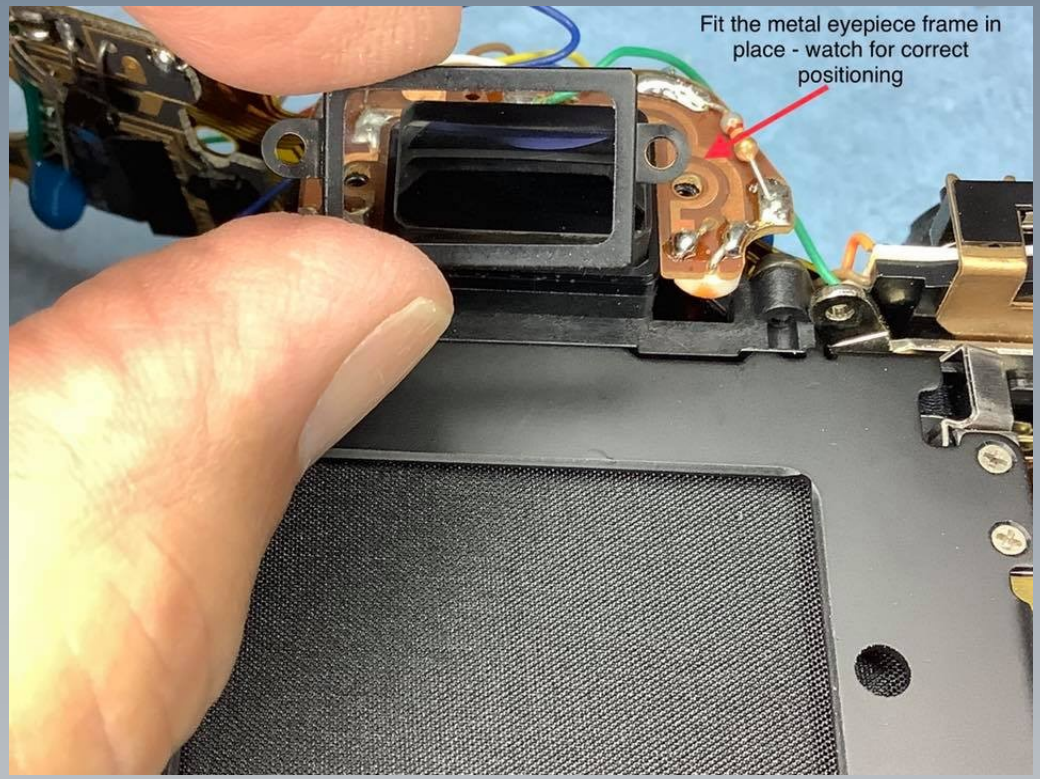

Install the eyepiece plastic
frame

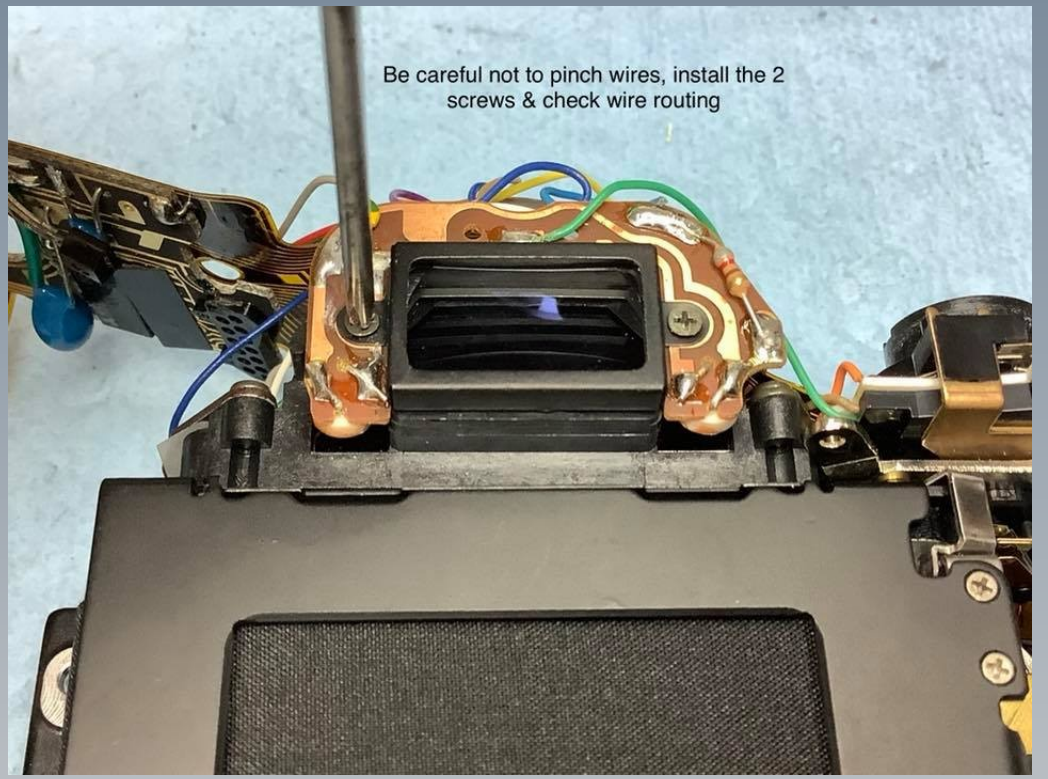

The plastic frame only fits
one way

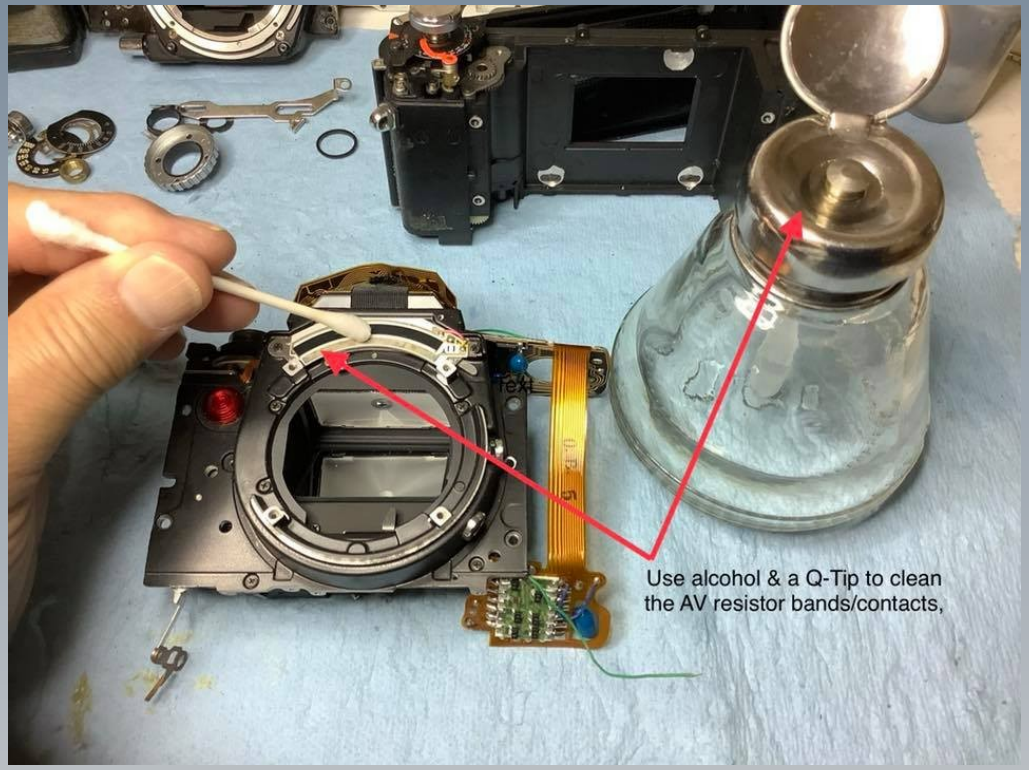

Clean & install the eyepiece

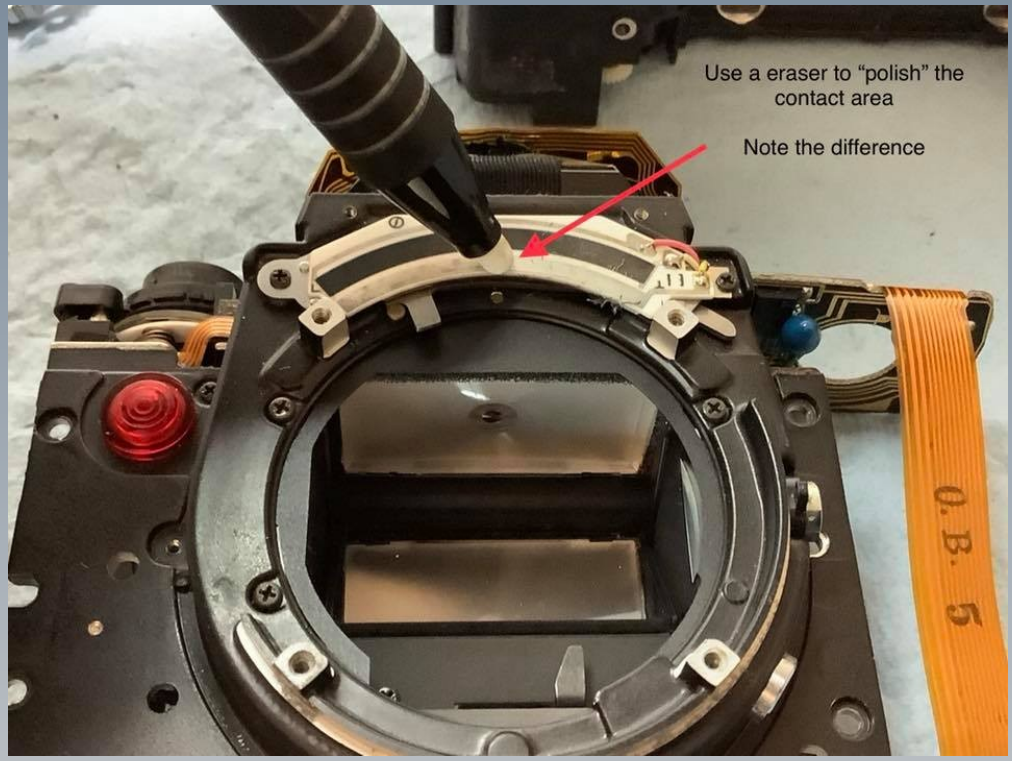


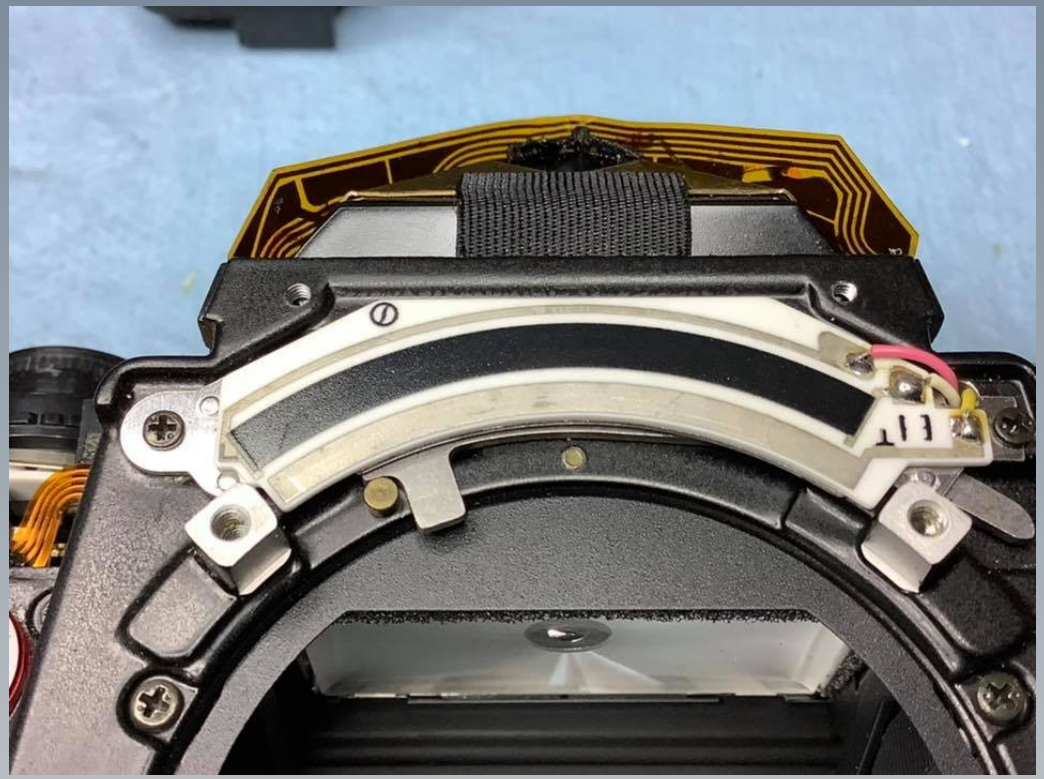

Fit the photocell PCB in place

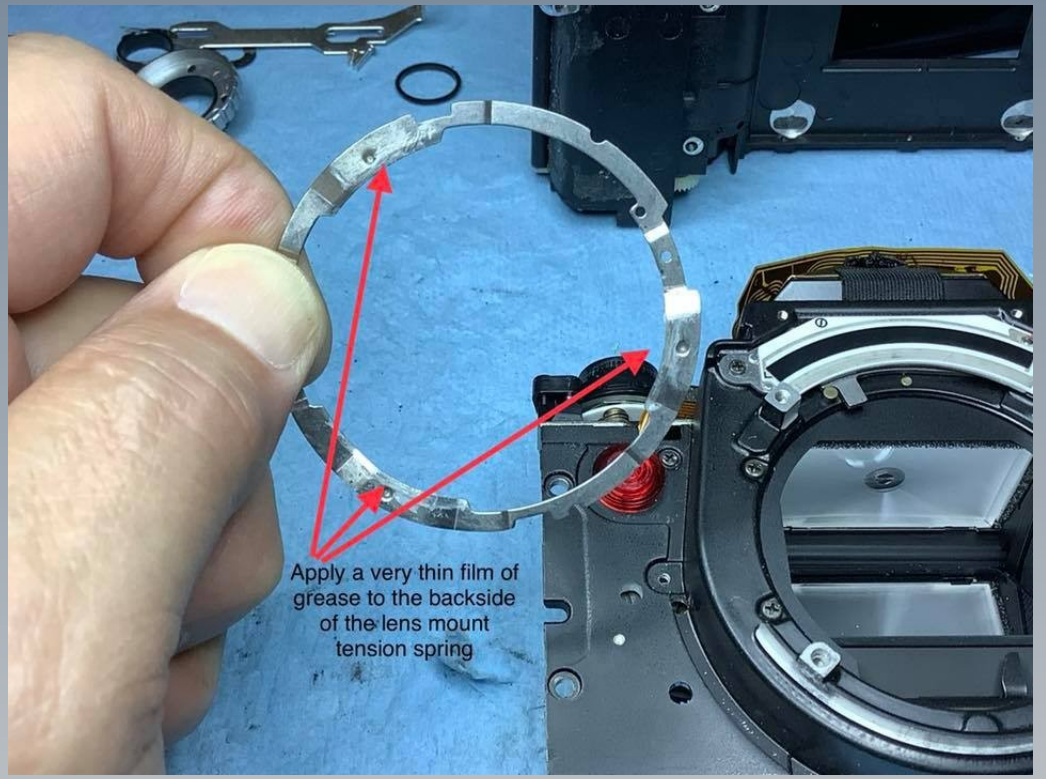

Fit the metal eyepiece frame in place - watch for correct positioning

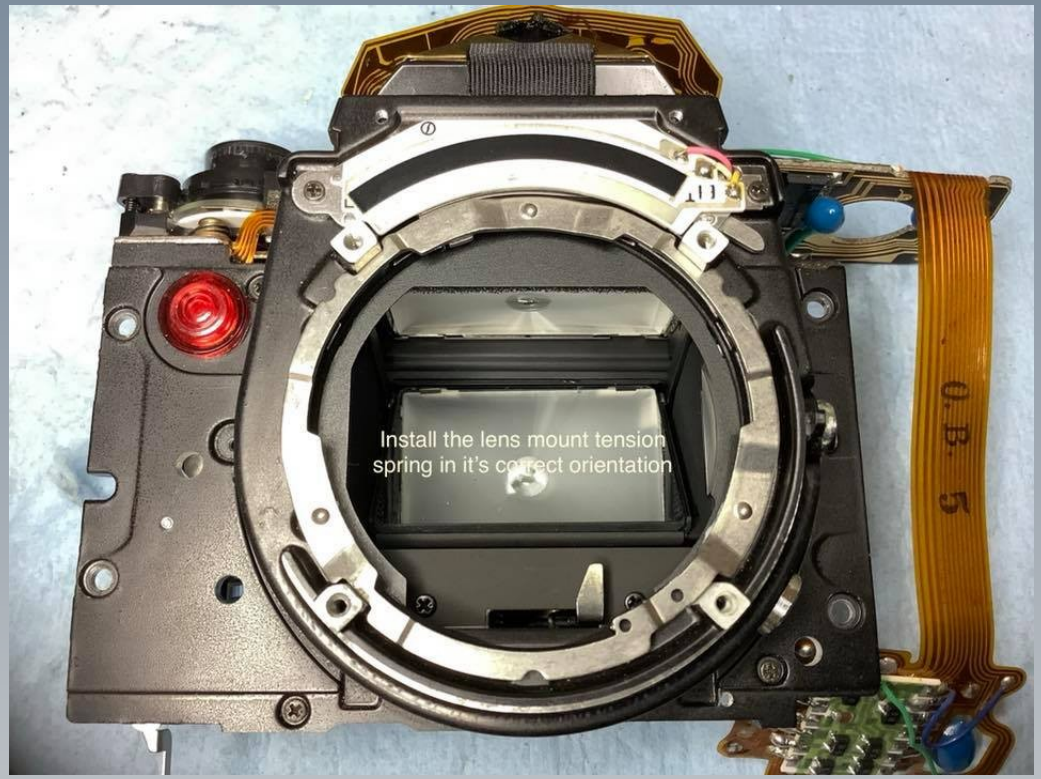

Be careful not to pinch wires, install the 2 screws & check wire routing

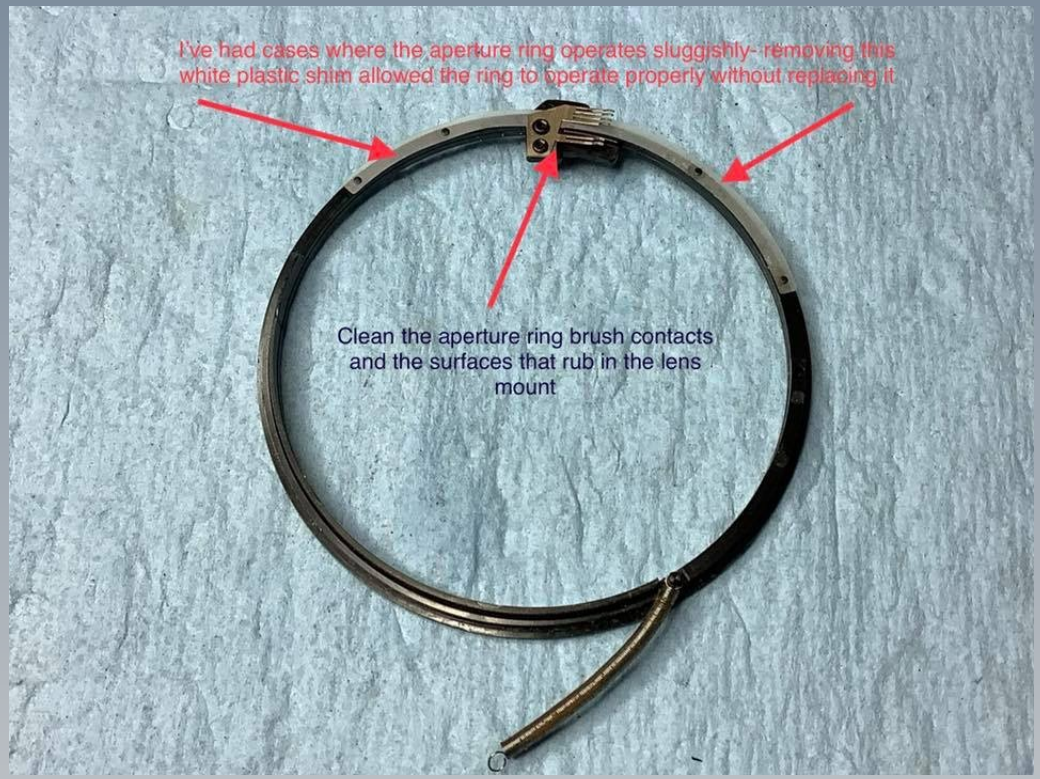

Use alcohol & a Q-Tip to clean
the AV resistor bands/contacts,


Use a eraser to “polish” the
contact area
Note the difference

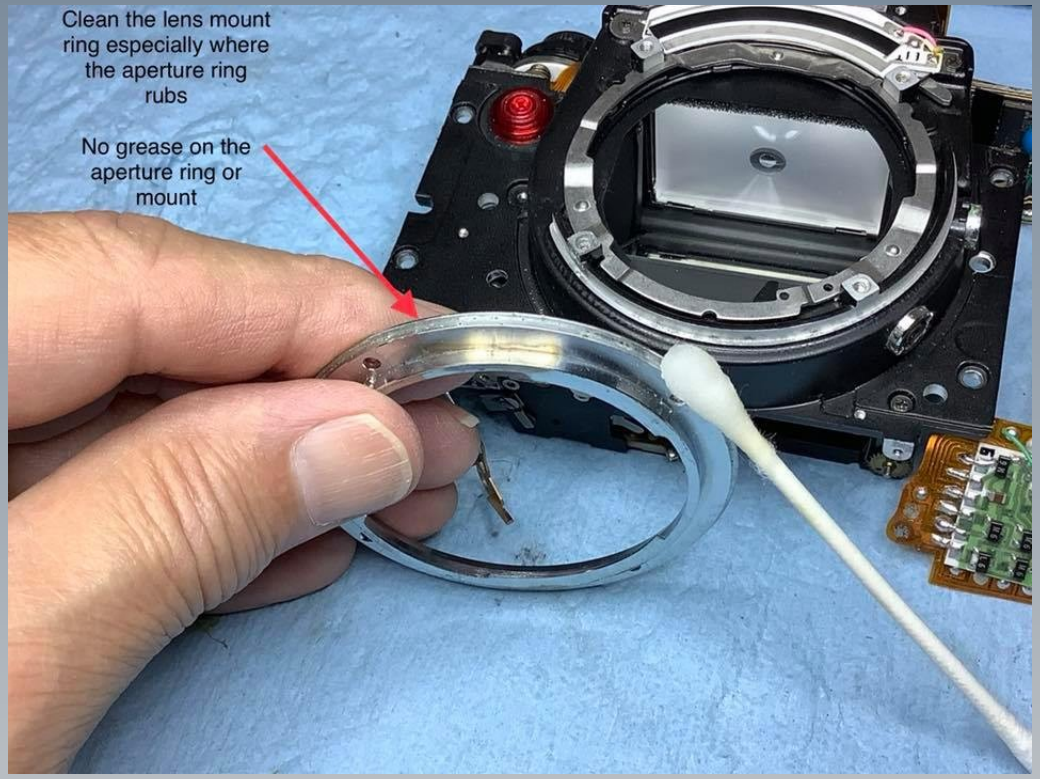



Apply a very thin film of
grease to the backside
of the lens mount
tension spring

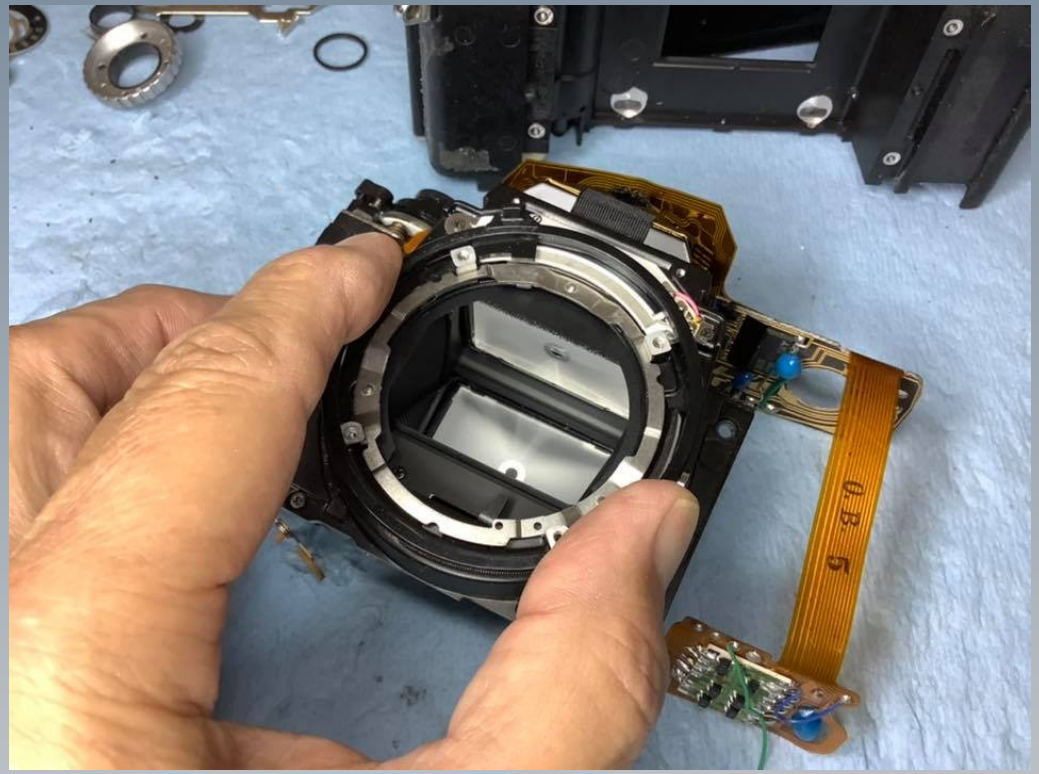

Install the lens mount tension spring in it's correct orientation

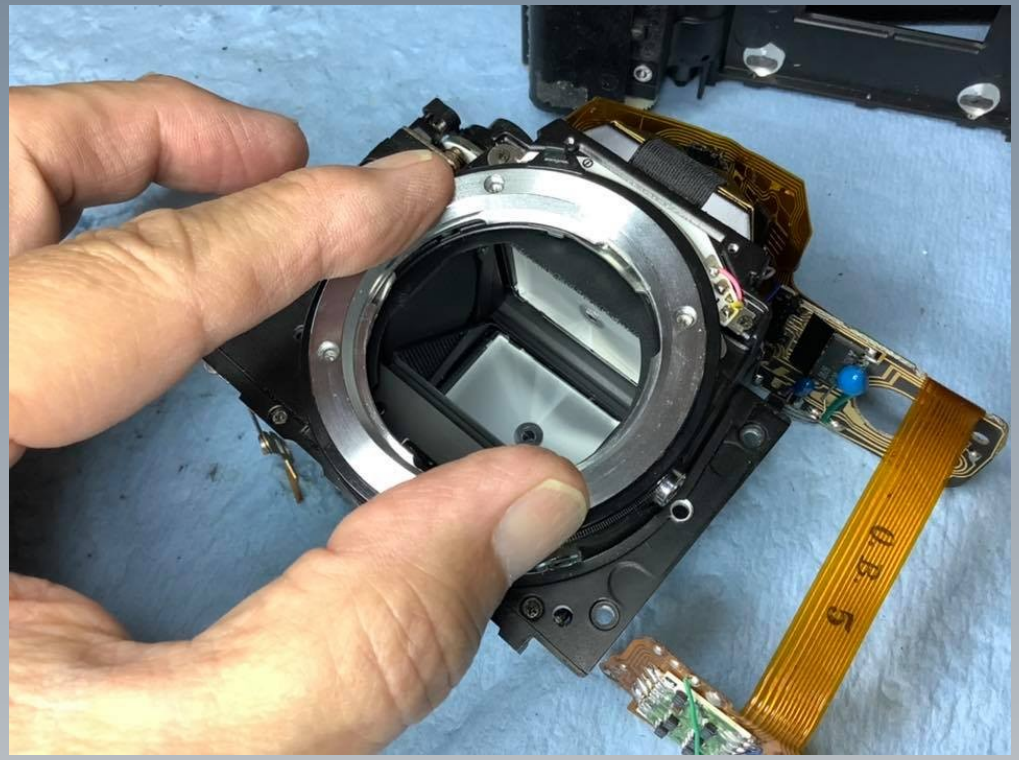

I've had cases where the aperture ring operates sluggishly- removing this white plastic shim allowed the ring to operate properly without replacing it
Clean the aperture ring brush contacts and the surfaces that rub in the lens mount

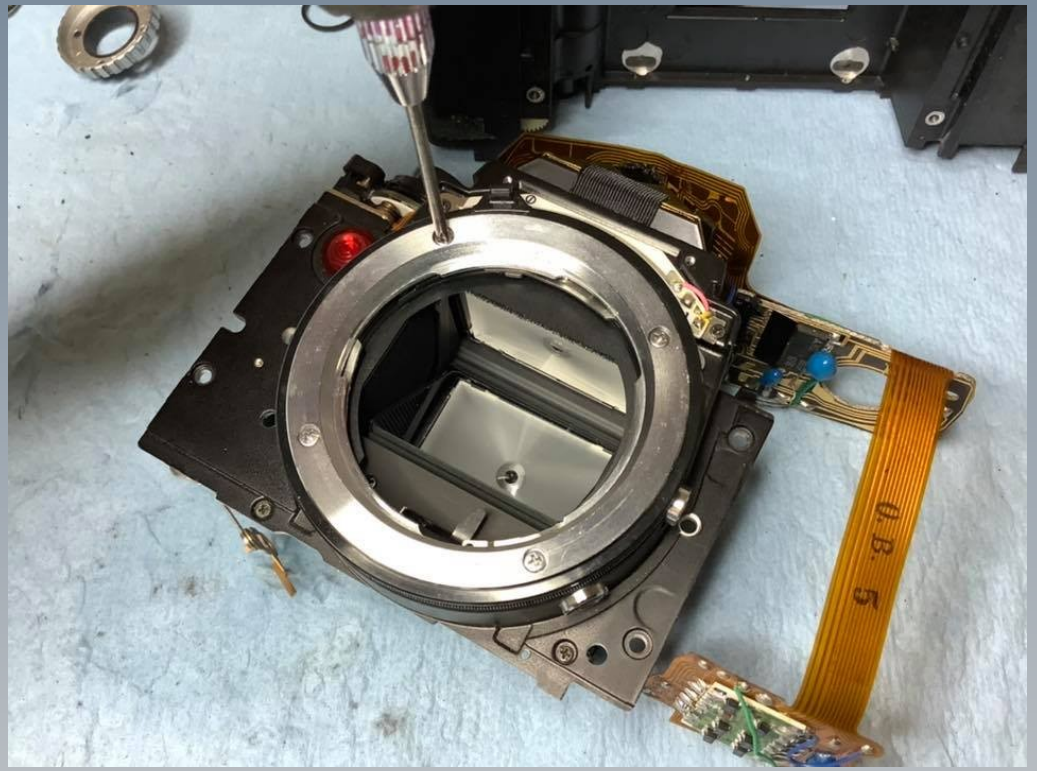

I don't normally do this but you can see the surface rust on the aperture ring return coil spring
Applying a small amount of shutter oil and then wiping it dry as possible leaves a thin film of rust preventive on the spring


Clean the lens mount ring especially where the aperture ring rubs
No grease on the aperture ring or mount


Hook the aperture ring return spring here above the remote cable release socket







Post #27 Reassembly
https://www.facebook.com/groups/360490091319202/?post_id=613181859383356

Next up - clean the mirror magnet assembly, the factory applies a transparent tape over the magnet as a dust shield - indeed if you look closely sand/dirt and debris has stuck to the sticky underside of the tape.

Remove the tape, 2 screws holding the magnet armature assembly to the core for cleaning - don't try to pull off the plastic cover as that often just damages the magnet coil. Clean the magnet surfaces (I use alcohol and a Q-Tip, blow dry with low pressure compressed air to remove any loose fibers).

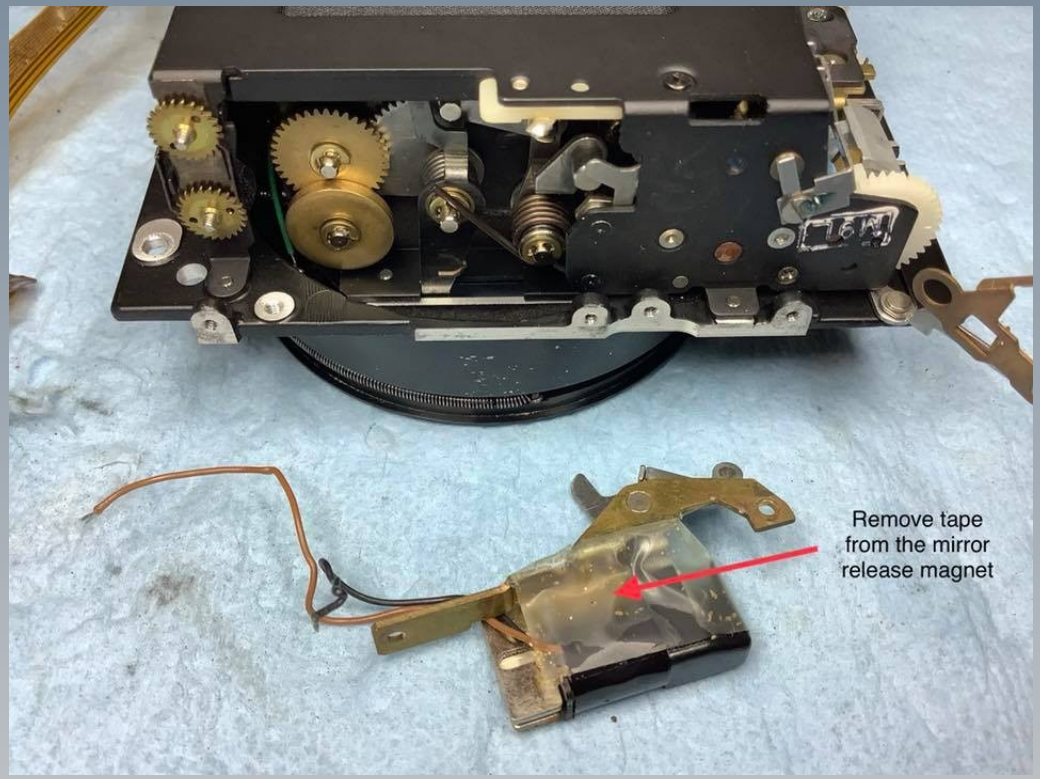
Re-apply the tape (new tape you cheap sonofagun)...

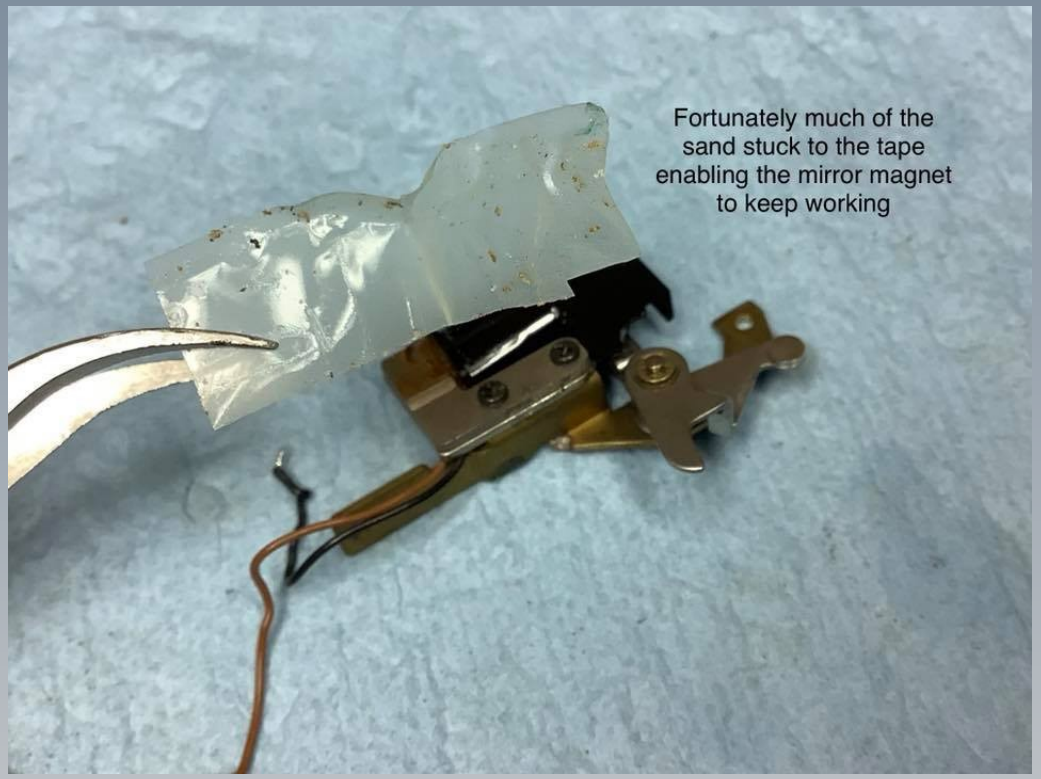
Fit the magnet assembly in place, tighten the 2 retaining screws -

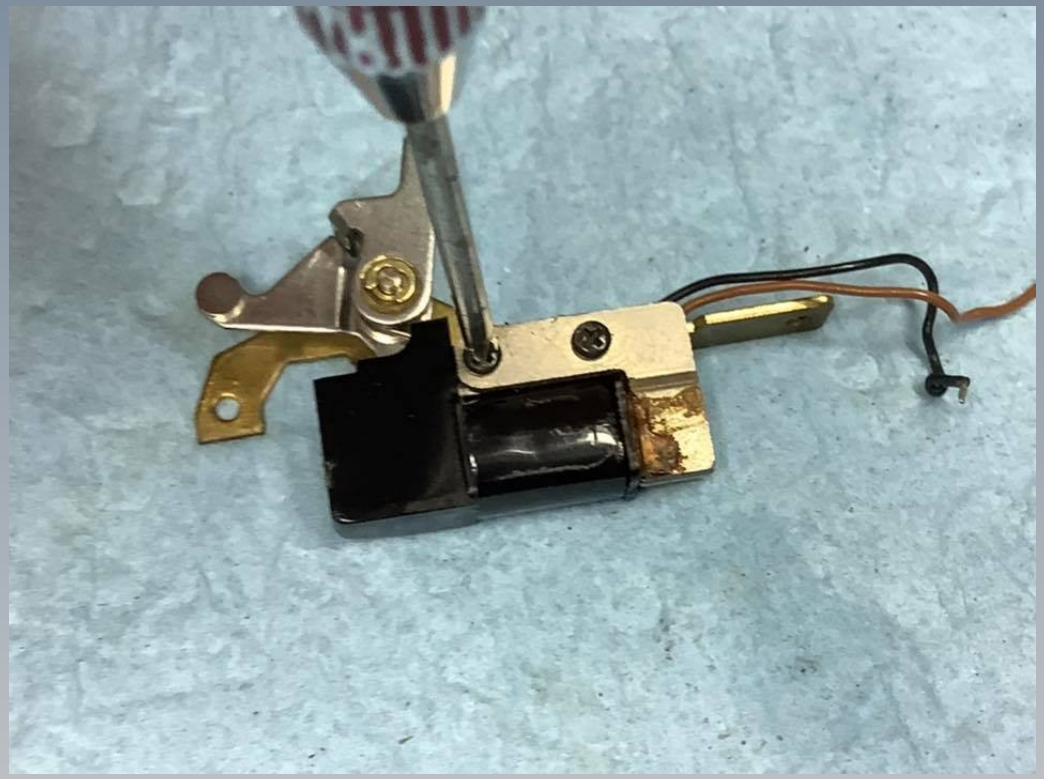
Turn the body over, loosen the white plastic idler gear that engages the shutter charge gear, fit the mirror/shutter/front plate to the body (watch the wire and main flex routing) and install the 4 front plate screws.

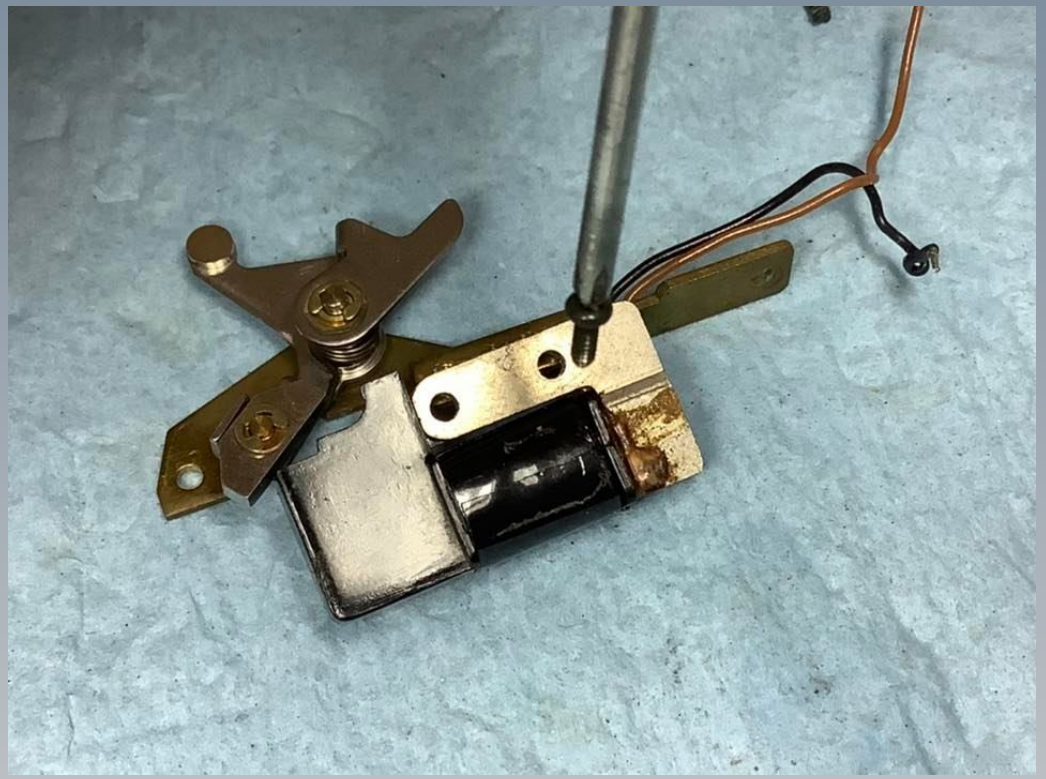
Next I'll clean the TV resistor assembly and on/off switch brush contacts as I begging to complete the reassembly and get ready for any needed adjustments.

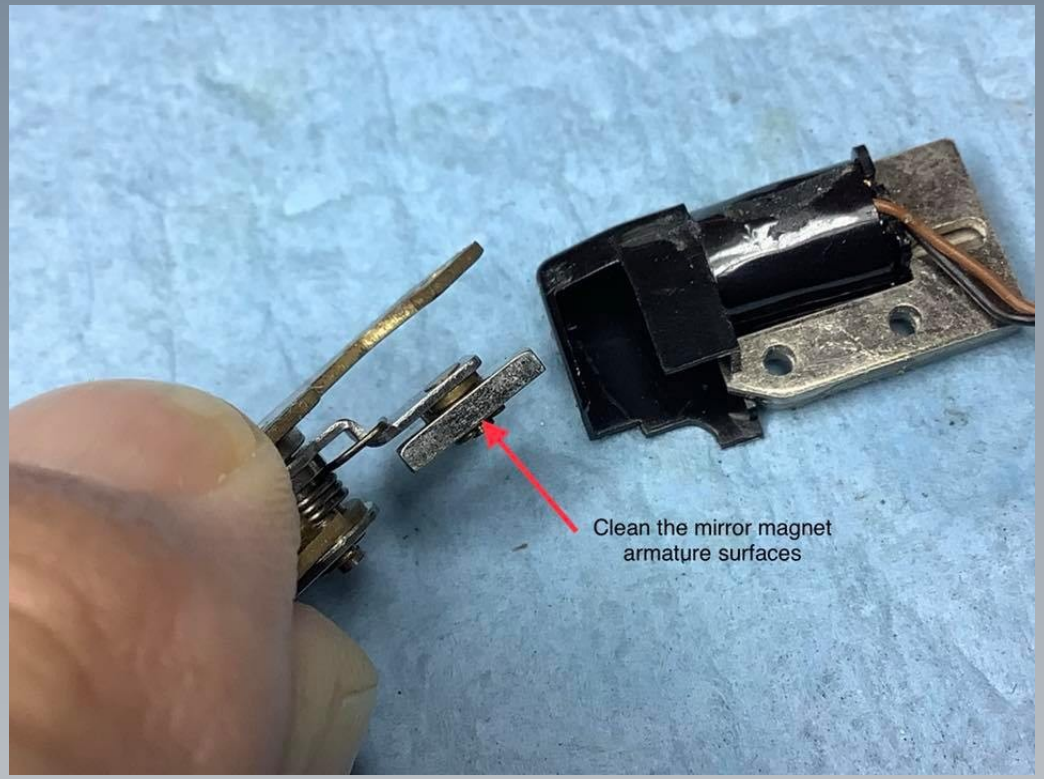
Don't forget the free service manual downloads can be found on learncamerarepair.com

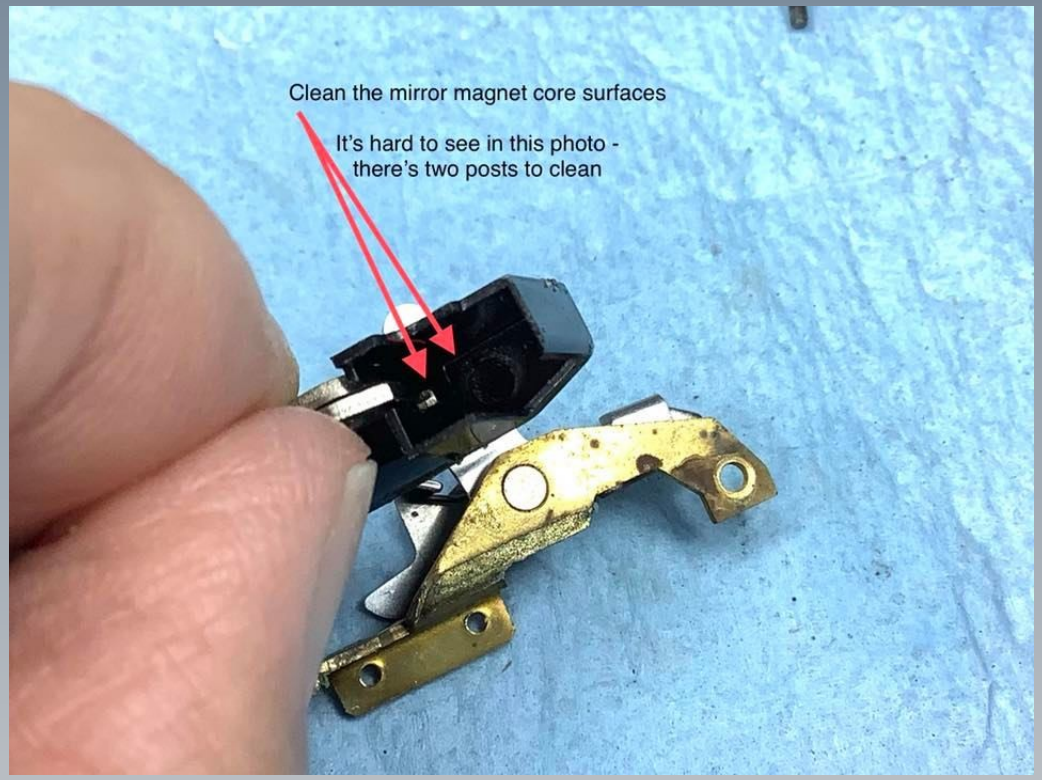

Remove tape
from the mirror
release magnet

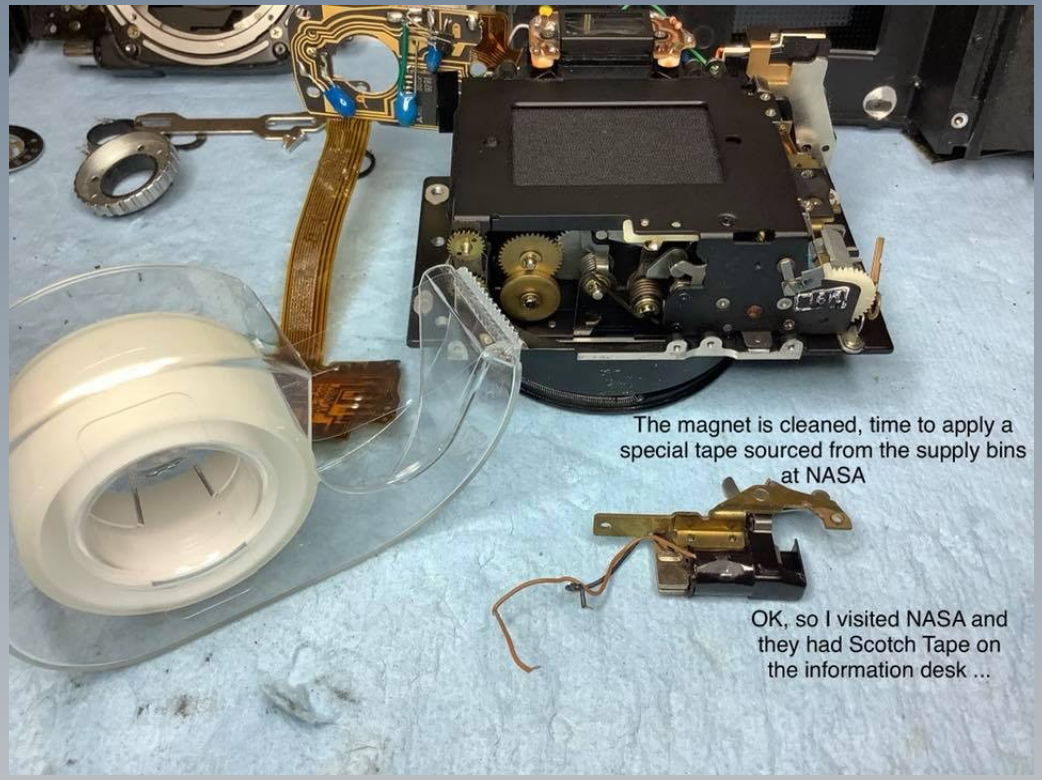

Fortunately much of the
sand stuck to the tape
enabling the mirror magnet
to keep working

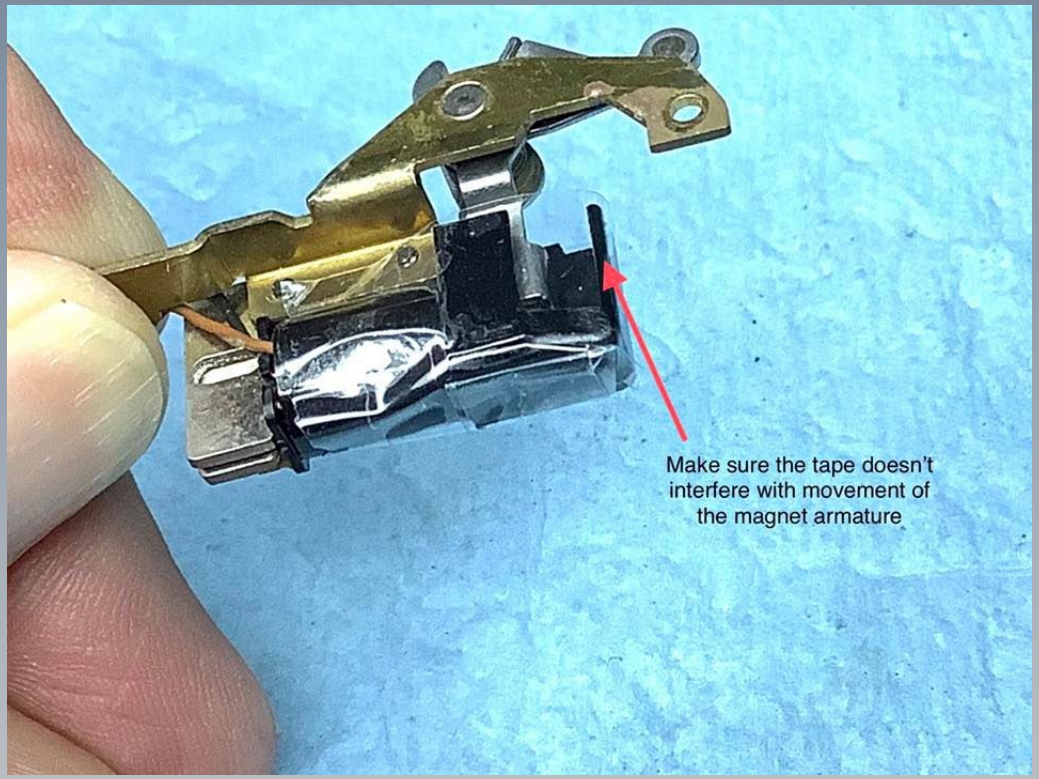


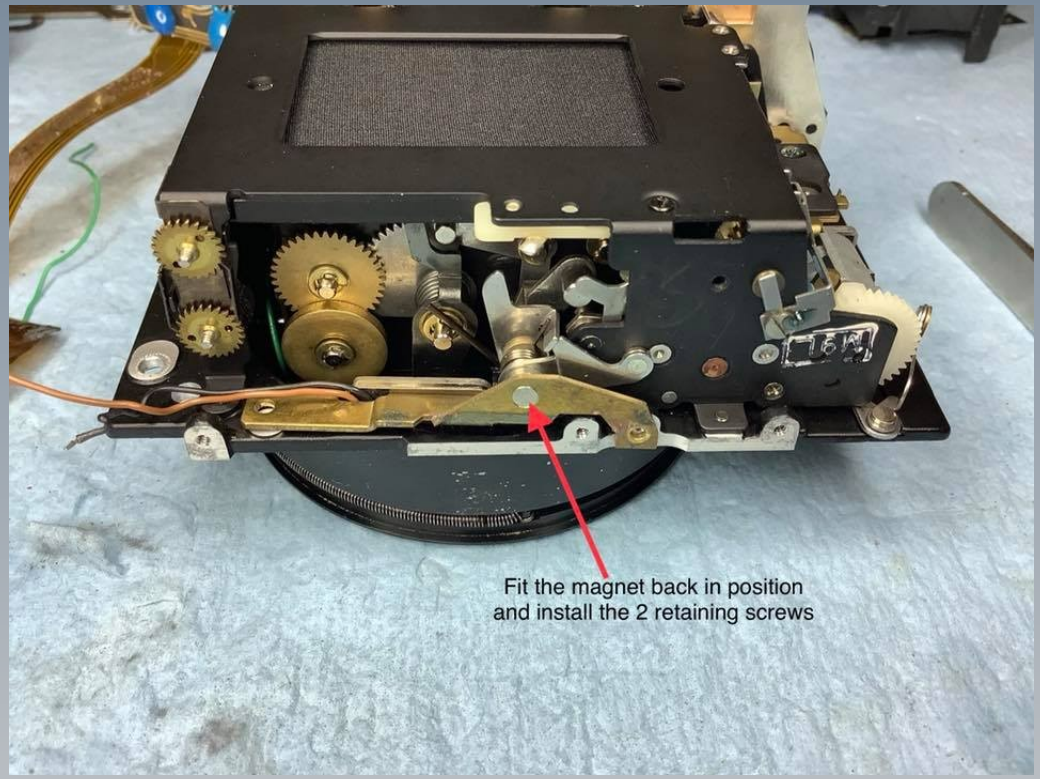


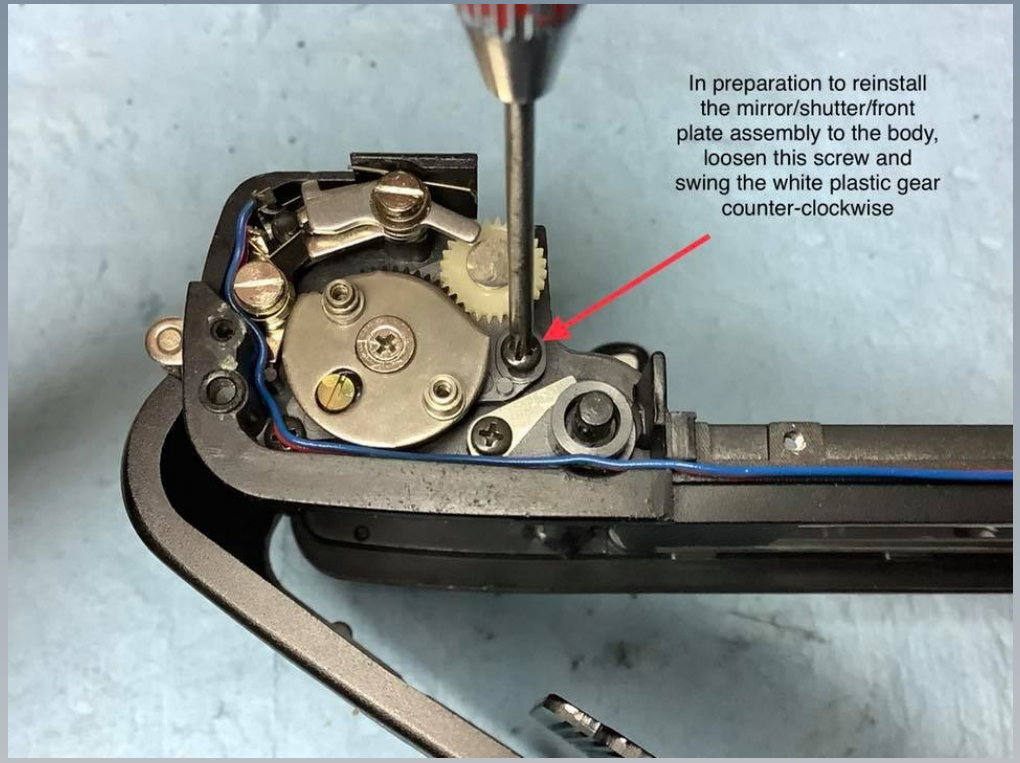

Clean the mirror magnet
armature surfaces

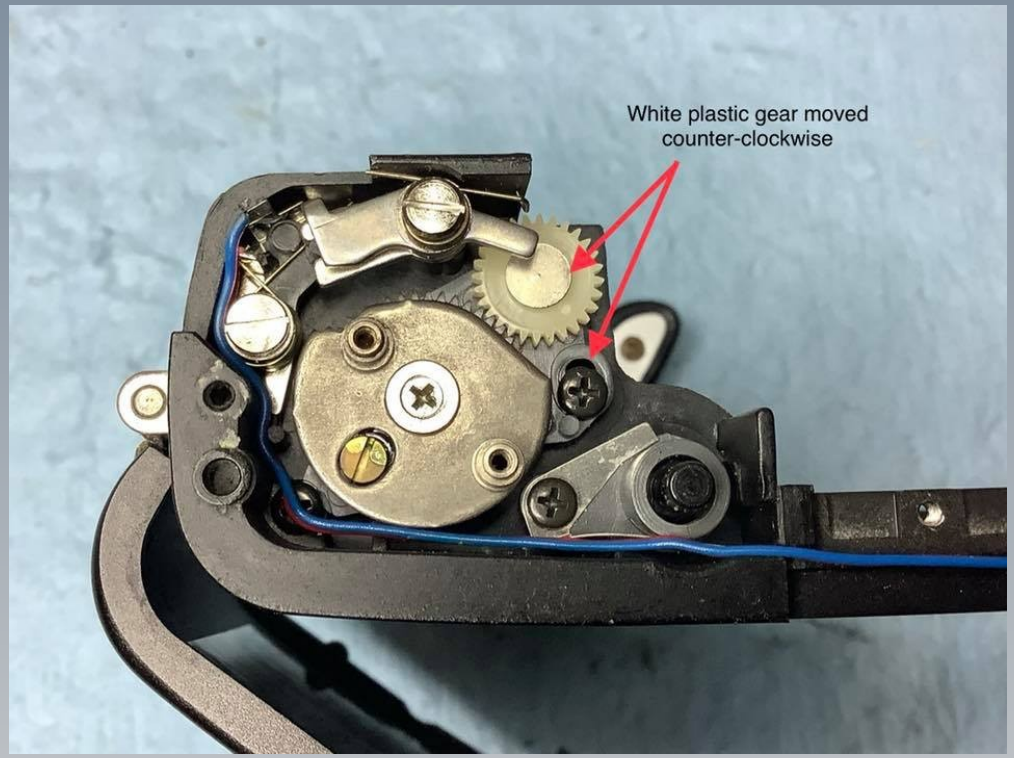

Clean the mirror magnet core surfaces
It's hard to see in this photo -
there's two posts to clean

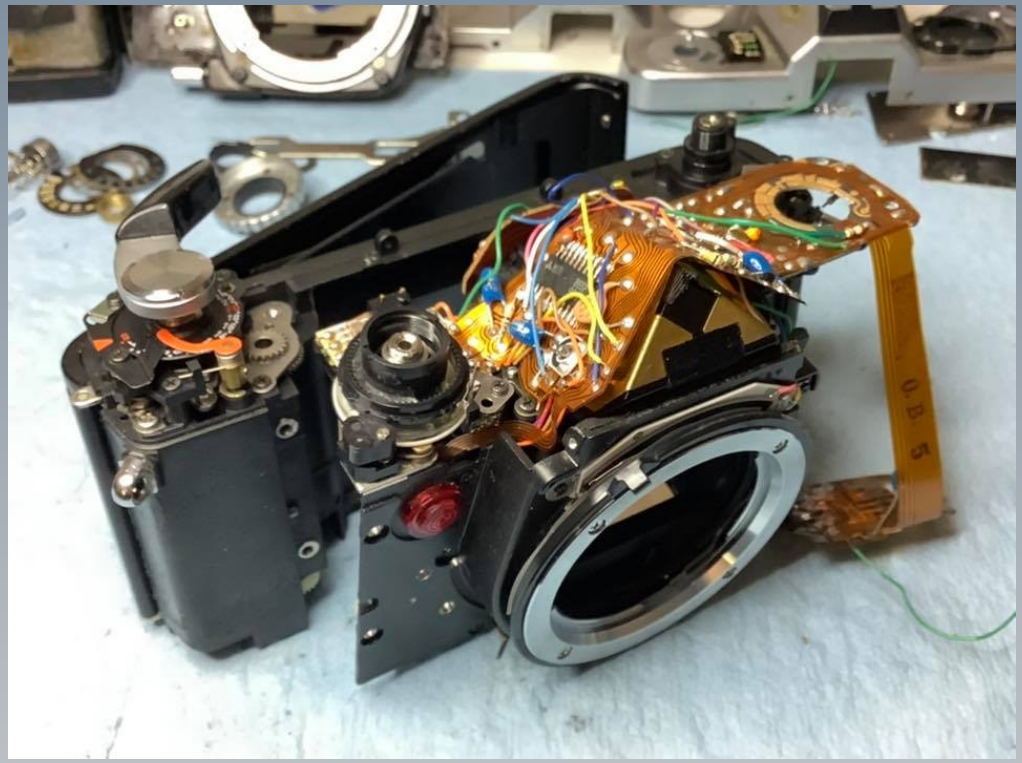

The magnet is cleaned, time to apply a special tape sourced from the supply bins at NASA
OK, so I visited NASA and they had Scotch Tape on the information desk ...

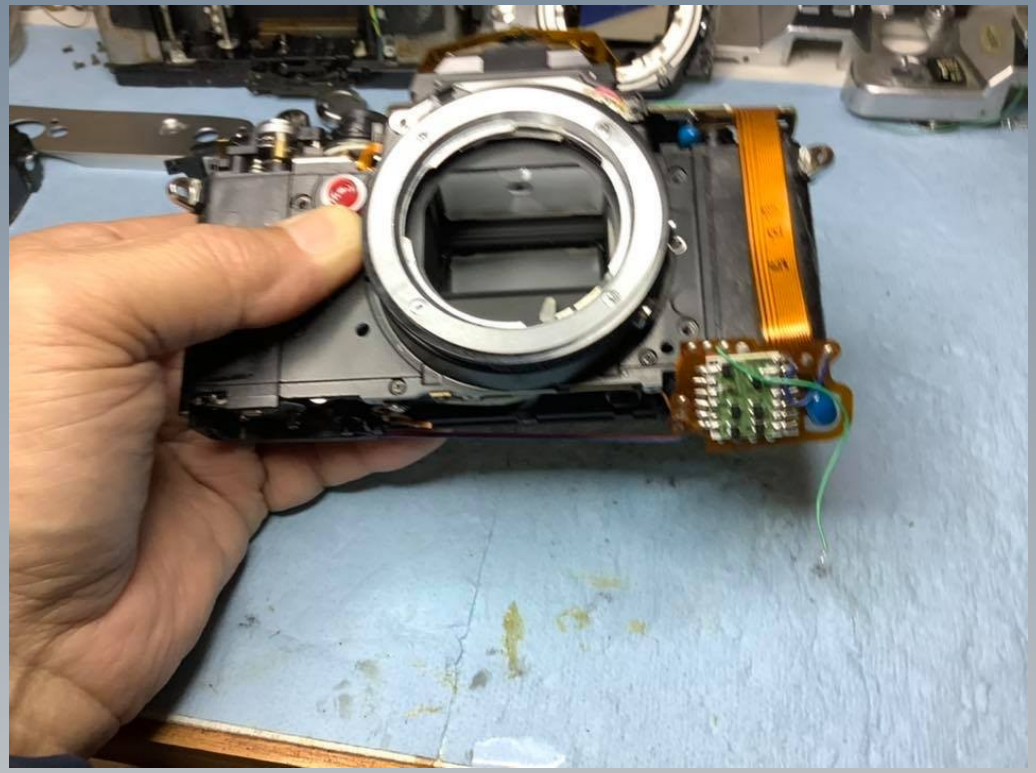

Make sure the tape doesn't
interfere with movement of
the magnet armature


Fit the magnet back in position
and install the 2 retaining screws


In preparation to reinstall the mirror/shutter/front plate assembly to the body, loosen this screw and swing the white plastic gear counter-clockwise


White plastic gear moved
counter-clockwise






Check the wire routing, set the main FPC in place,
install the mirror/shutter/front plate assembly and
install the 4 front plate screws

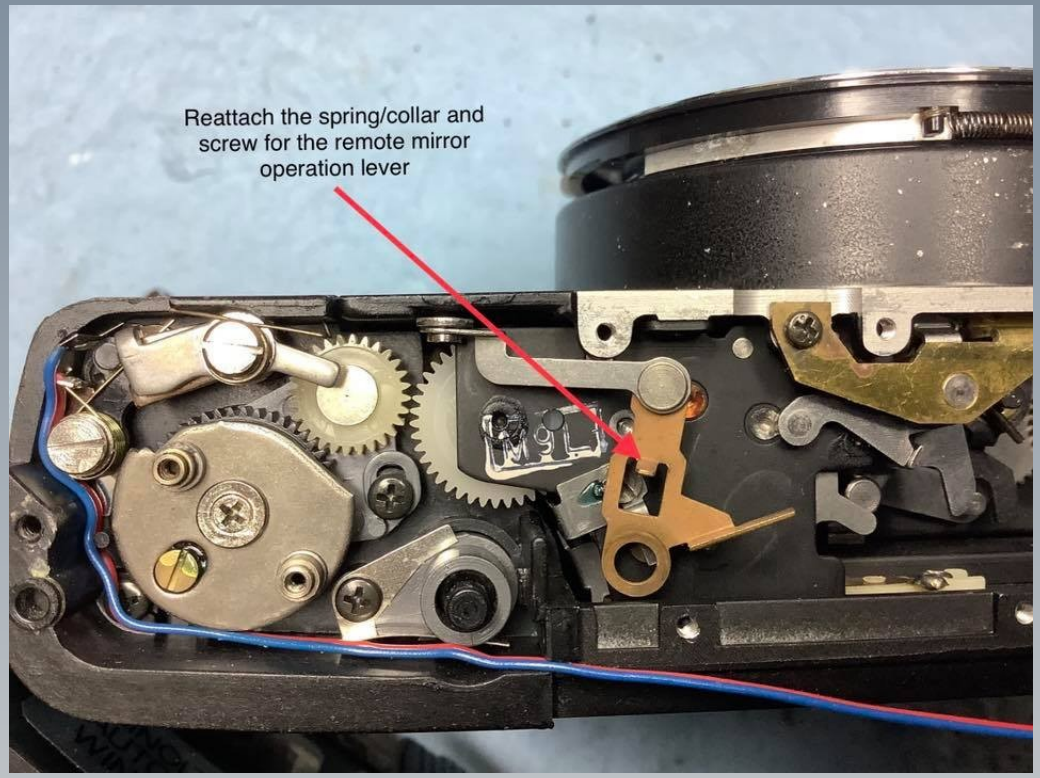
Post #28 Reassembly
https://www.facebook.com/groups/360490091319202/?post_id=615299922504883

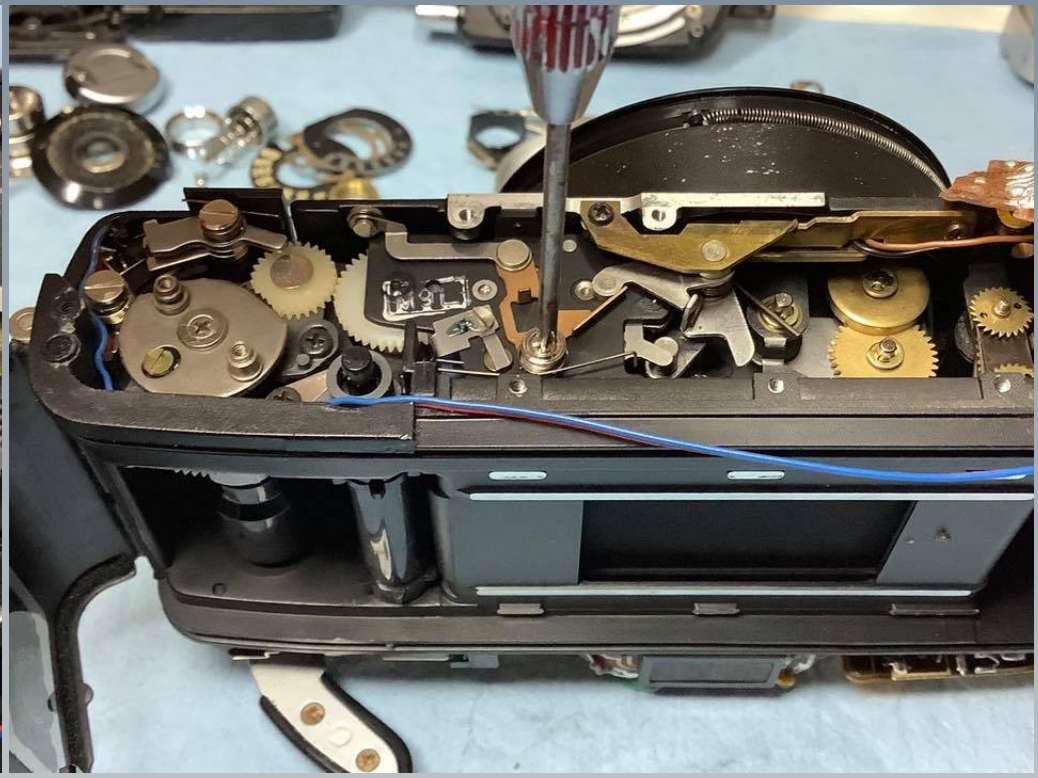
Reinstall the remote mirror release lever/collar/spring and screw.

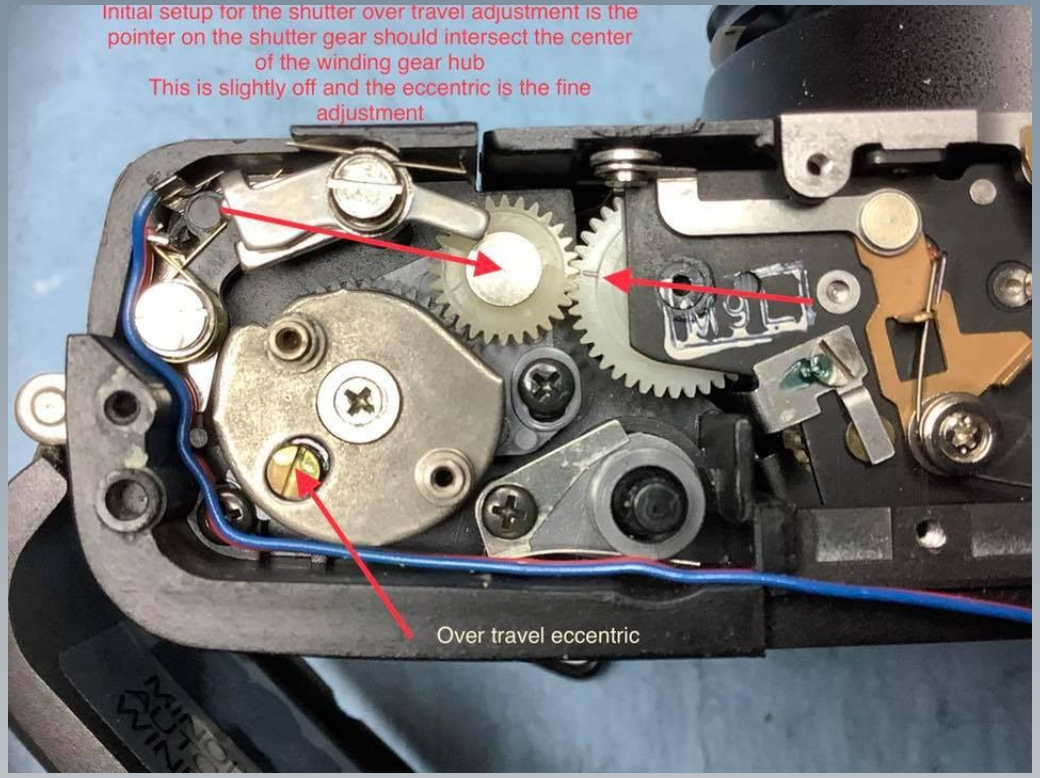
Setup the initial shutter charge overtravel adjustment - the line on the shutter charge gear should intersect the center of the idler gear hub, the fine adjustment will be the brass eccentric screw, when you tighten the adjustment screw make sure the gears aren’t meshed too tightly as that will cause the winding to be rough and may cause the winding assembly to hang up or be sluggish.

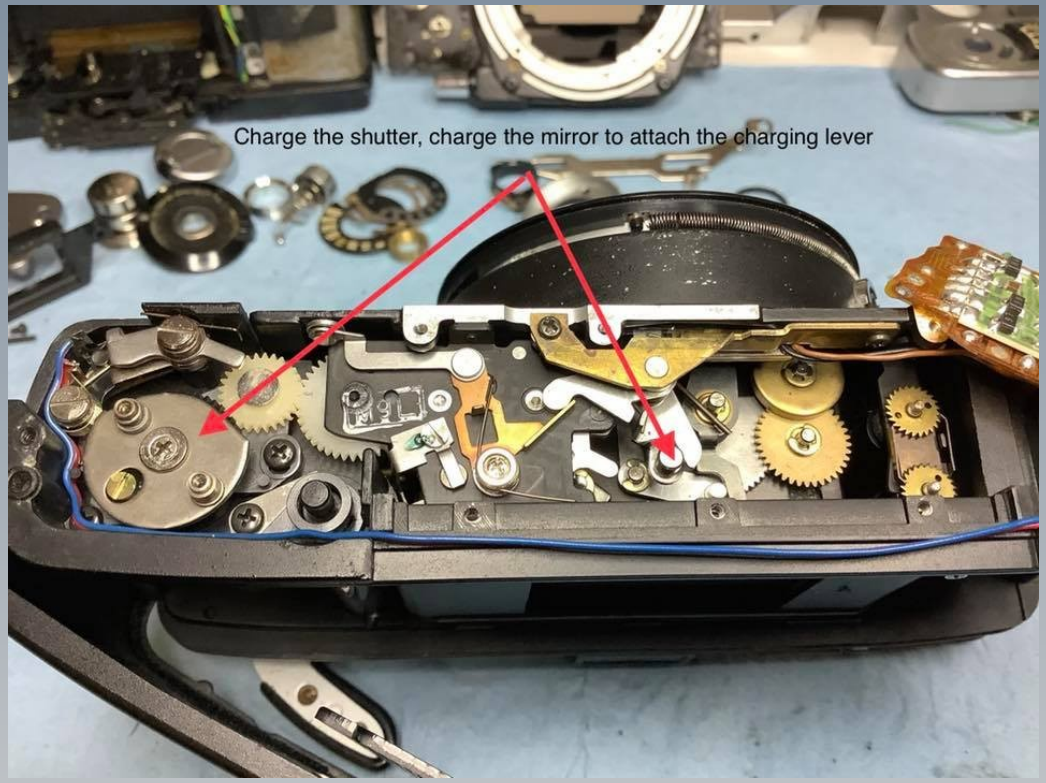
Use the winding lever charge the shutter, use a tool or tweezers to charge the mirror assembly and fit the charge lever over the mirror charge lever post, hook the return spring, move the charge lever to the rewind side slightly to allow the fork to straddle the post on the winding cam.

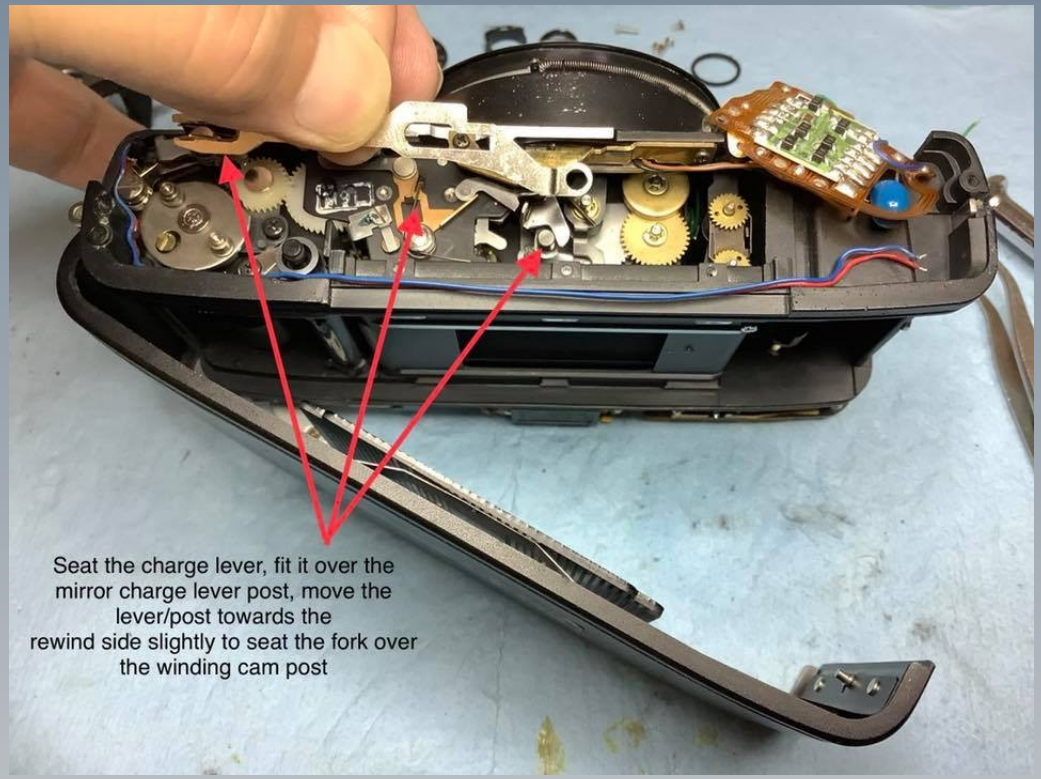
When the charge lever is installed you can trip the shutter/mirror assembly manually by moving the remote mirror release lever towards the rewind side - the assemblies should release and be ready to wind again, test it several times to ensure the assemblies are working properly.

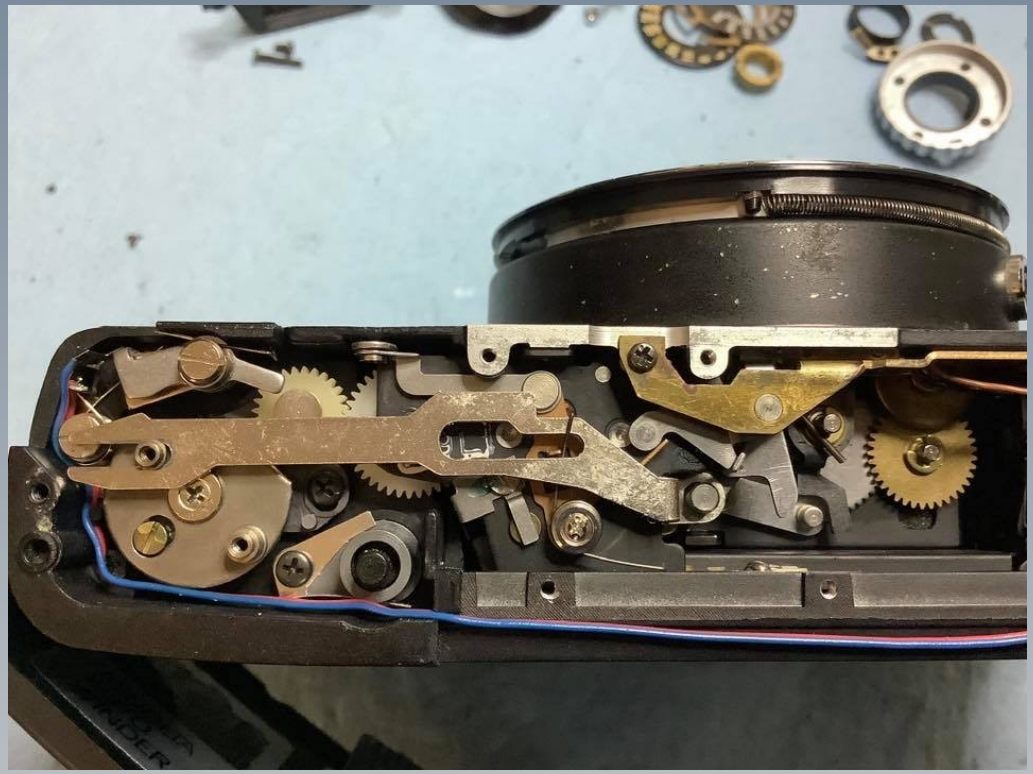

Reattach the spring/collar and
screw for the remote mirror
operation lever




Initial setup for the shutter over travel adjustment is the pointer on the shutter gear should intersect the center of the winding gear hub
This is slightly off and the eccentric is the fine adjustment
Over travel eccentric


Charge the shutter, charge the mirror to attach the charging lever


Seat the charge lever, fit it over the
mirror charge lever post, move the
lever/post towards the
rewind side slightly to seat the fork over
the winding cam post

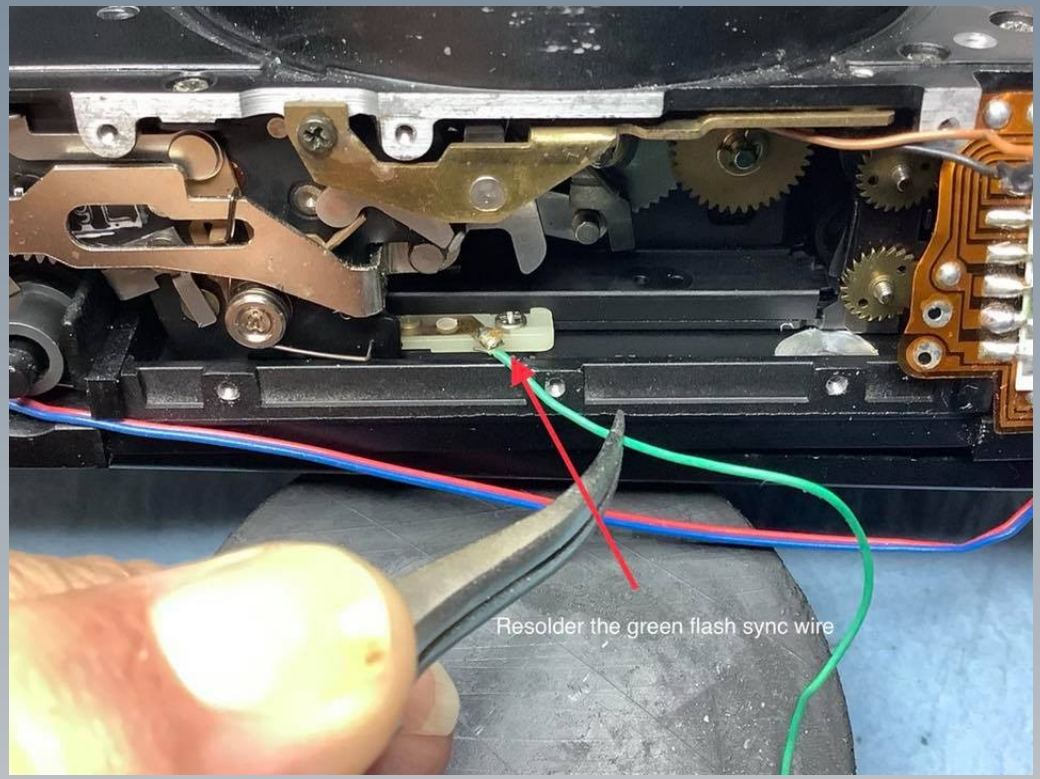


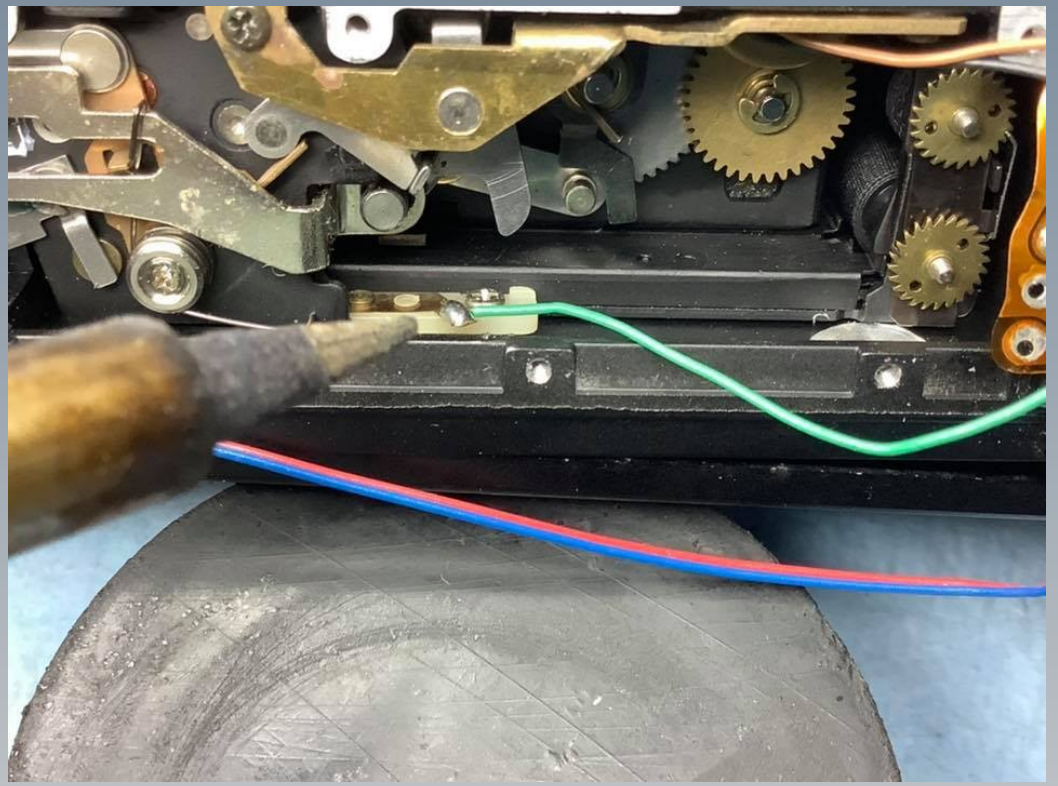
Post #29 Reassembly
https://www.facebook.com/groups/360490091319202/?post_id=615307679170774

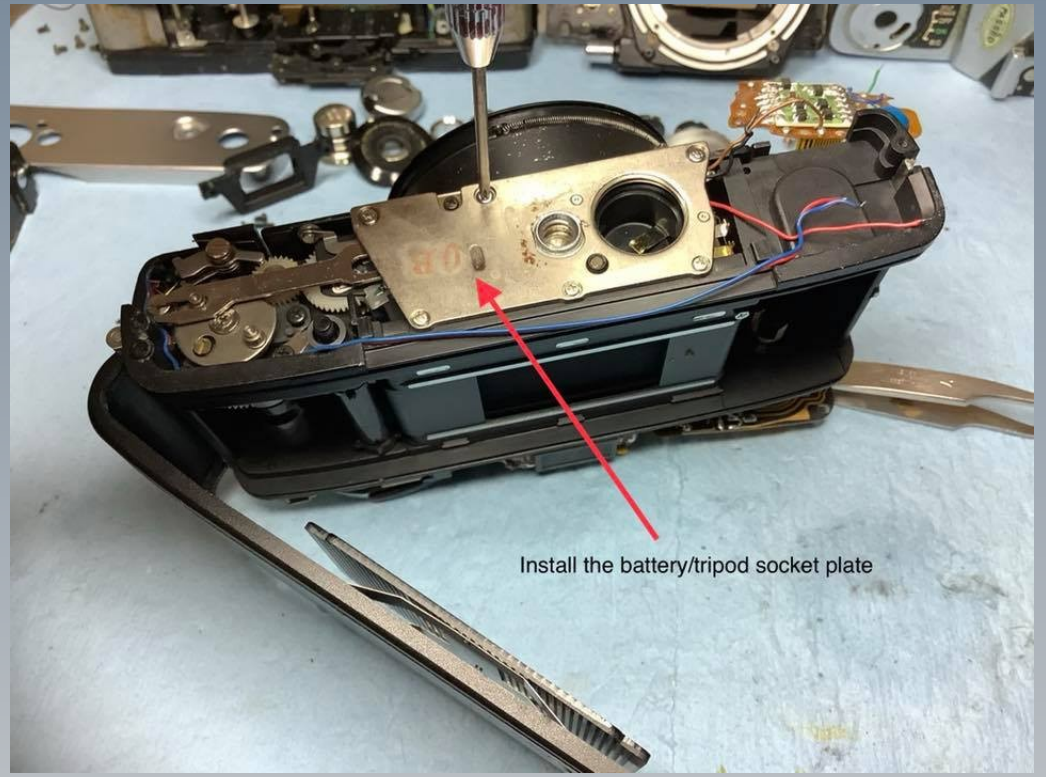
Solder the green sync wire to the flash sync contact on the shutter, set the battery chamber/tripod support plate in place, install the 6 screws.

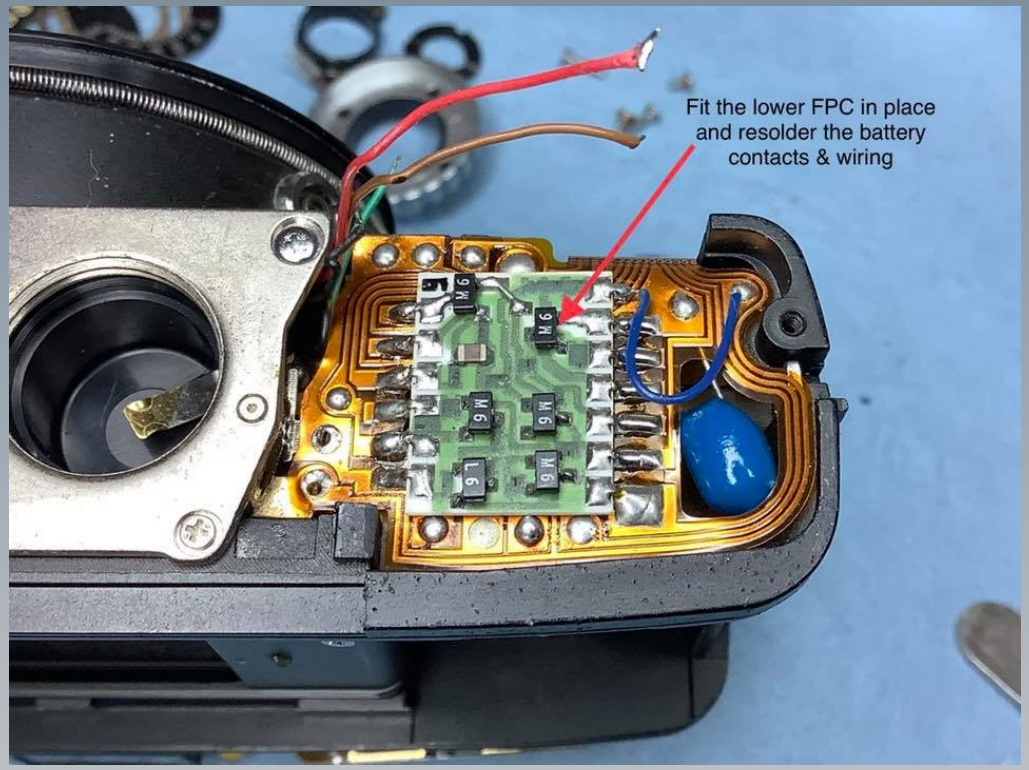
Fit the lower FPC in place, make sure the battery connections pass through the holes, solder the battery contacts first, then solder the blue and red reset switch wires, the black and brown mirror magnet wires, the red battery chamber wire. Don’t forget to clean any residual flux from the FPC and connections.

Properly route the wires to prevent a chance of pinching a wire.

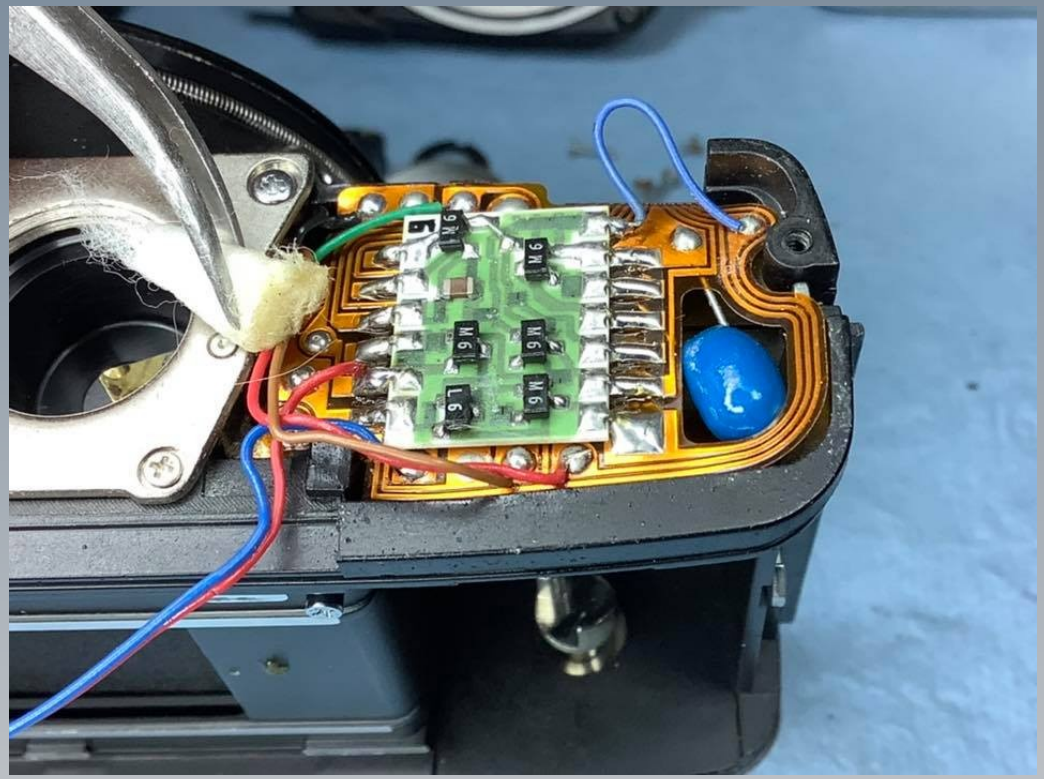

Resolder the green flash sync wire

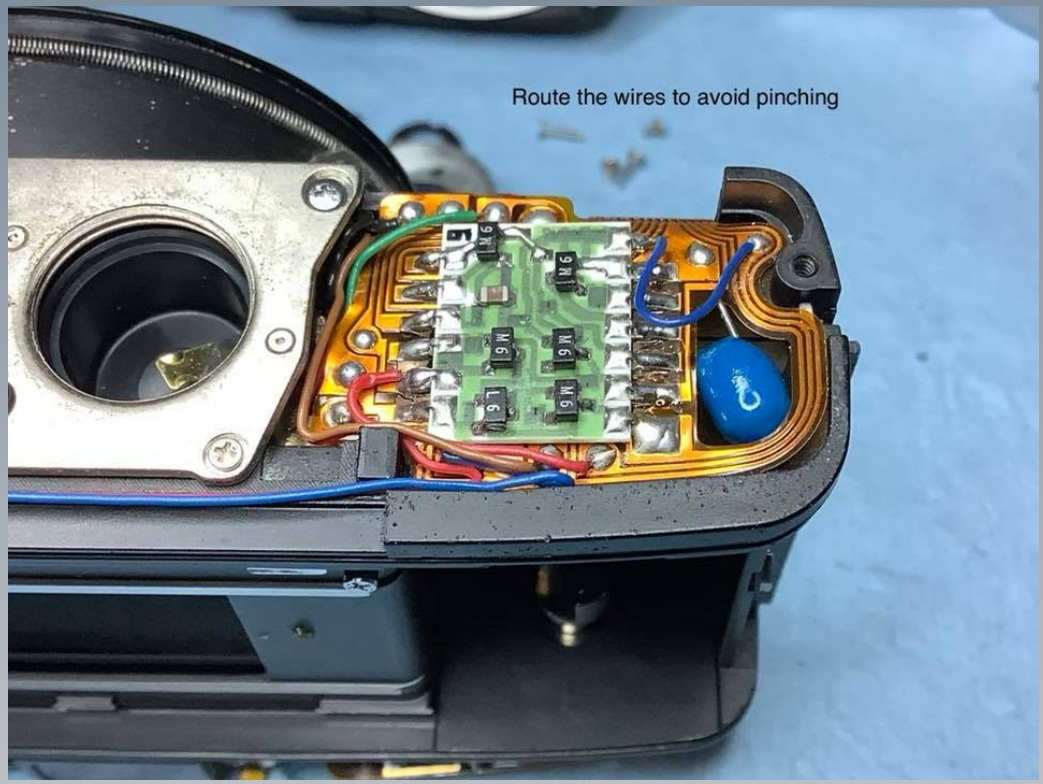



Install the battery/tripod socket plate


Fit the lower FPC in place
and resolder the battery
contacts & wiring


After making sure the solder connections are
good make sure to clean the residual flux off
the FPC connections




Route the wires to avoid pinching

Post #30 Reassembly
https://www.facebook.com/groups/360490091319202/?post_id=615312735836935

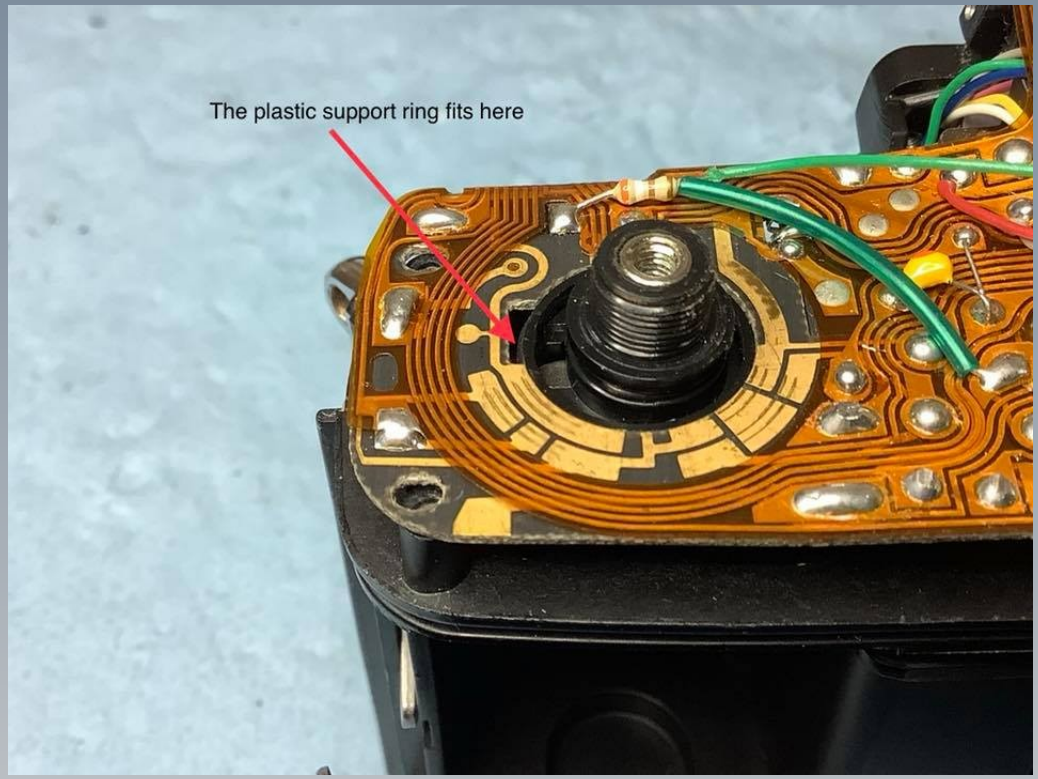
Set the body upright, place the black plastic support ring under the on/off PCB, reassemble the rewind side FPC/PCB and clean the contacts.

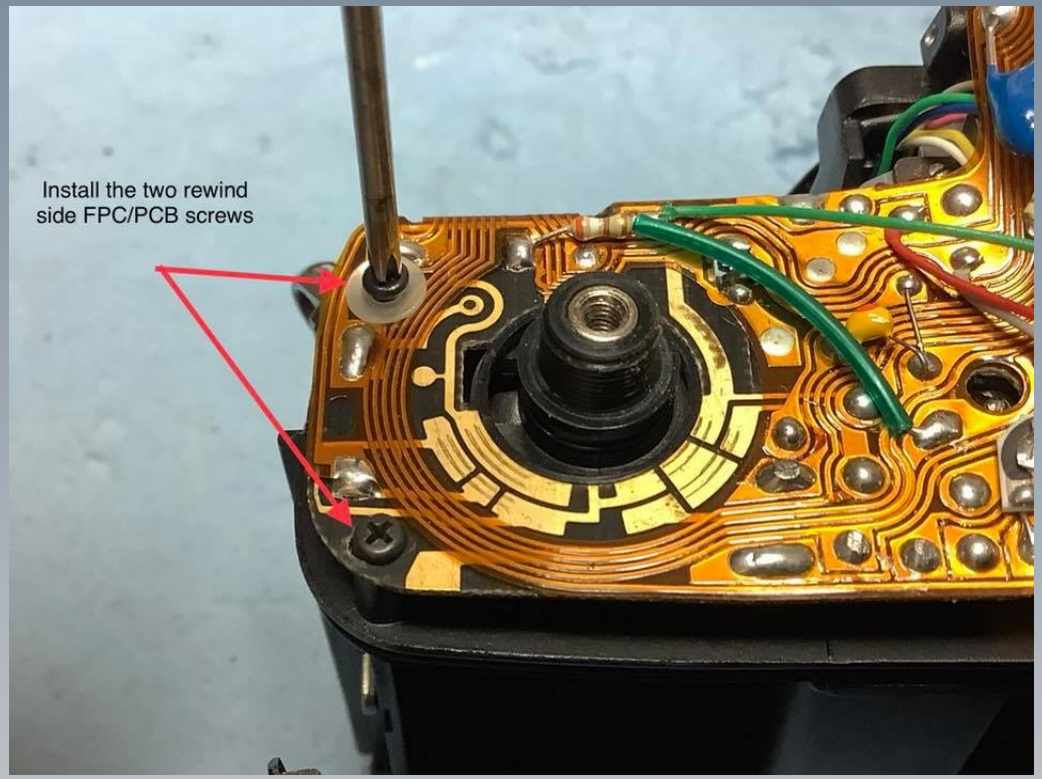
Move over to the winding side, reinstall the speed selector retaining screws, tighten the lock button post.

Use a spanner and remove the TV assembly collar, lift off the TV contact, the lock button and spring, the SV contact assembly - using a tool such as flat head screwdriver pry off the A/M switch assembly.

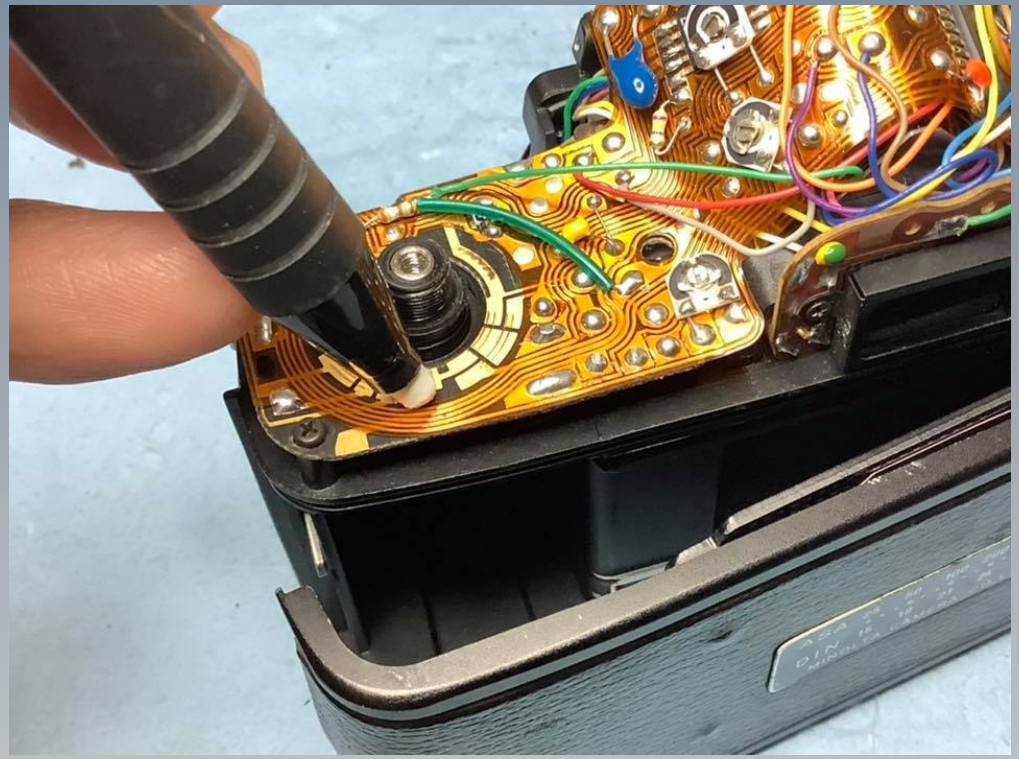
Clean all the resistor bands and brush contacts from each switch - reassembly is the reverse of disassembly - be sure the move the flat TV assembly detent spring into its position and you can feel the “click stops between shutter speeds” rotating the TV assembly you should see the lock button lock the dial in Auto and the A/M switch contact assembly move when you switch from Auto to Manual.

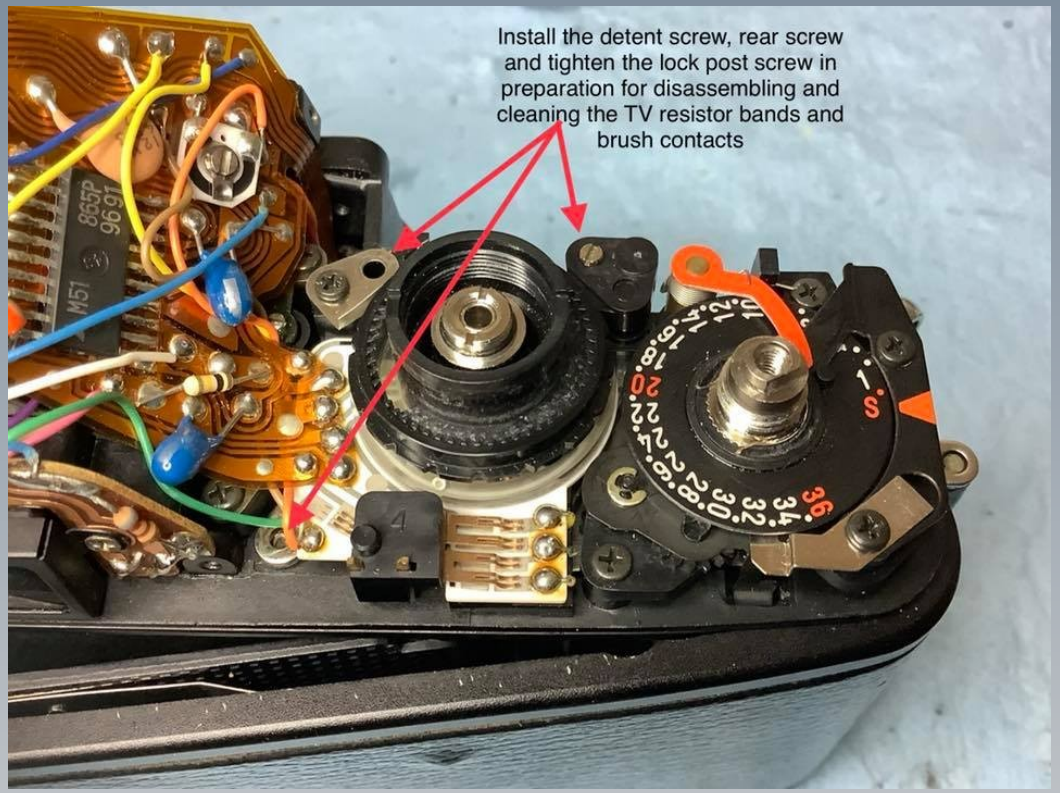

Place the plastic support
ring over the rewind bearing

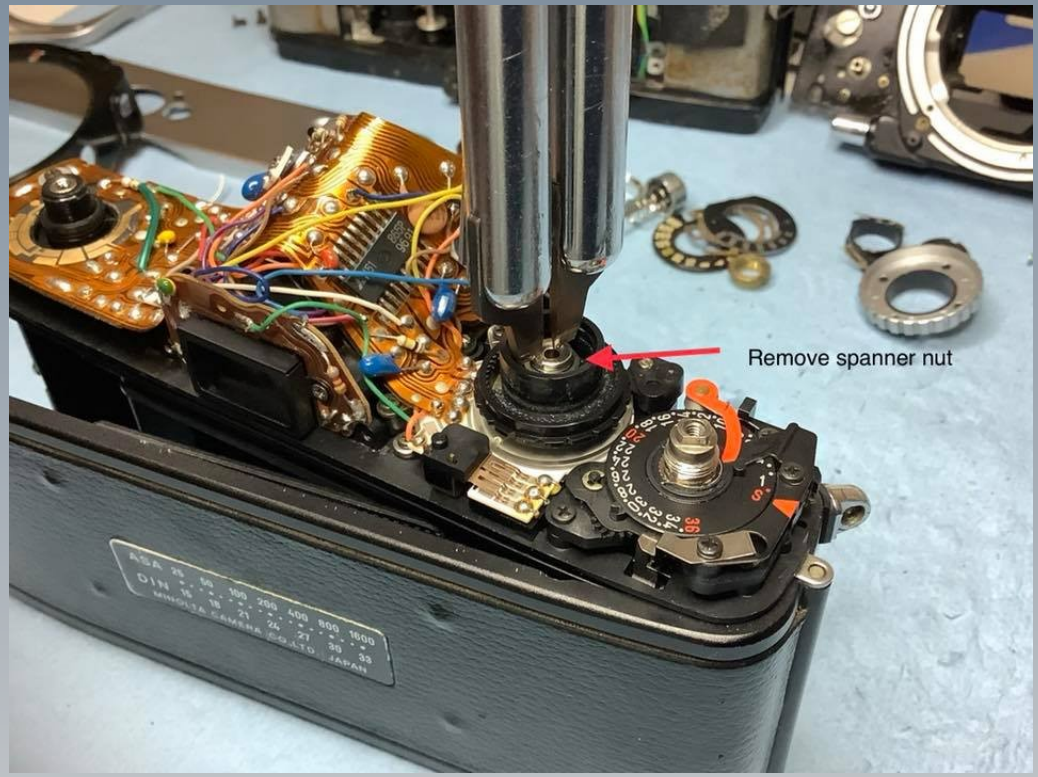

The plastic support ring fits here


Install the two rewind
side FPC/PCB screws


Clean the on/off
switch contacts




Install the detent screw, rear screw and tighten the lock post screw in preparation for disassembling and cleaning the TV resistor bands and brush contacts


Remove spanner nut


TV contact assembly
Speed dial lock button
SV contact assembly
A/M changeover switch


1
S
20
36

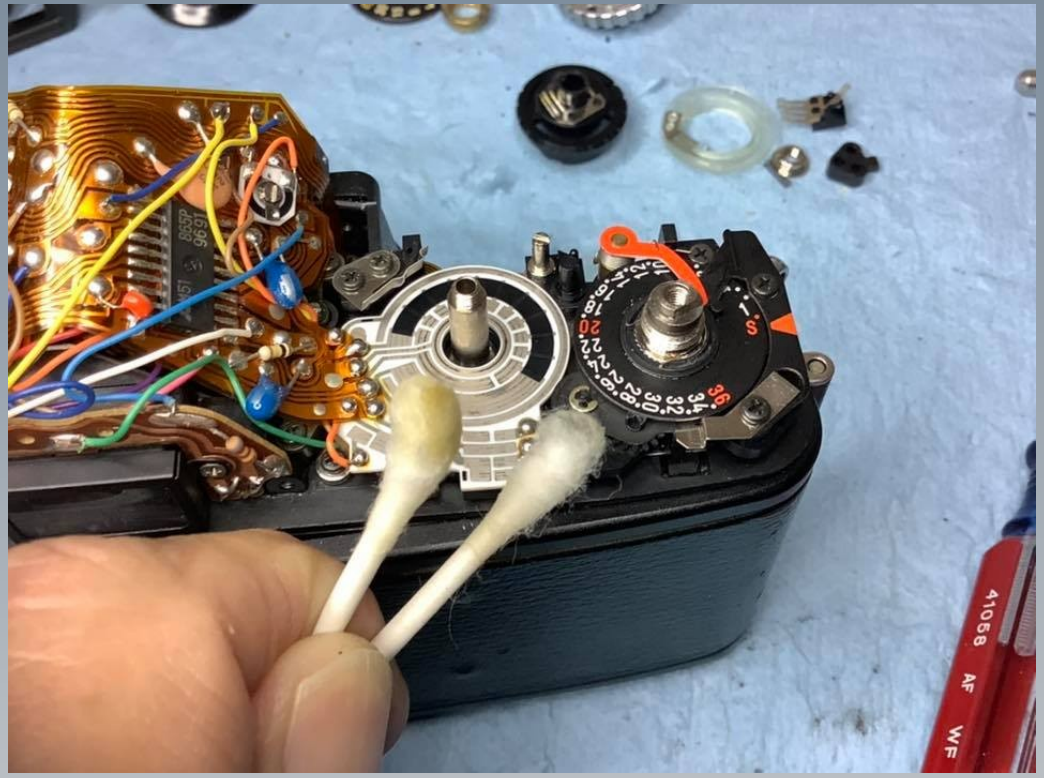

1
S
20
36

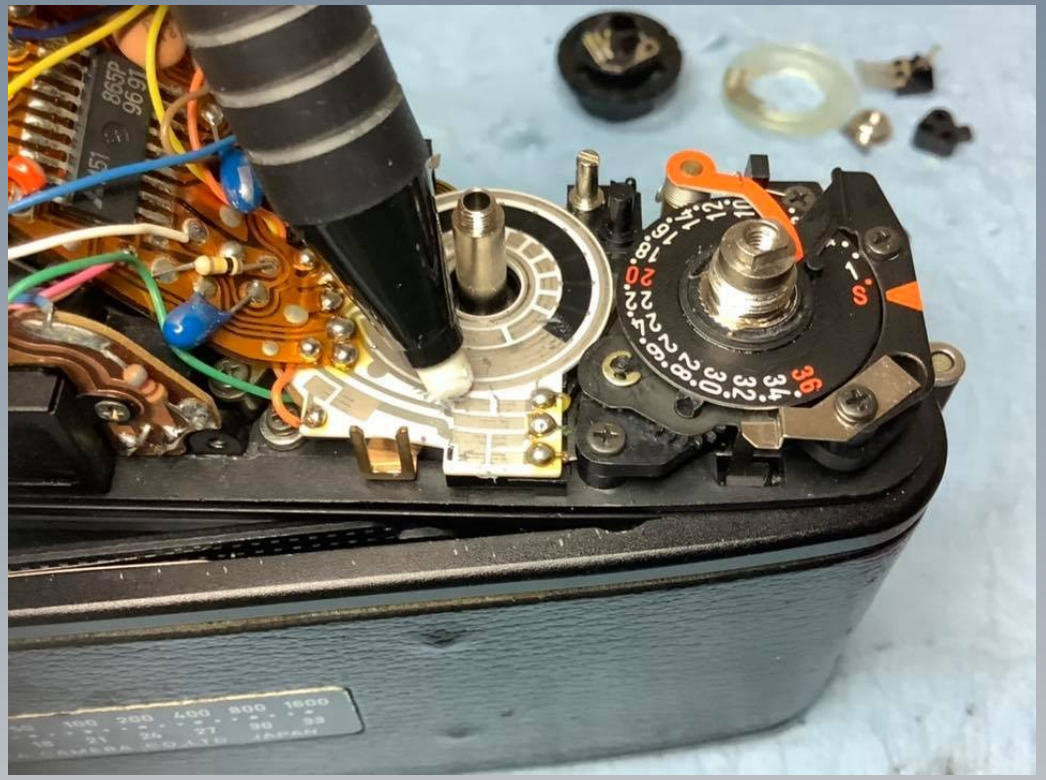

25 50 100 200 400 800 1600
MINOLTA CAMERA CO.,LTD. JAPAN


50 100 200 1600
30 33

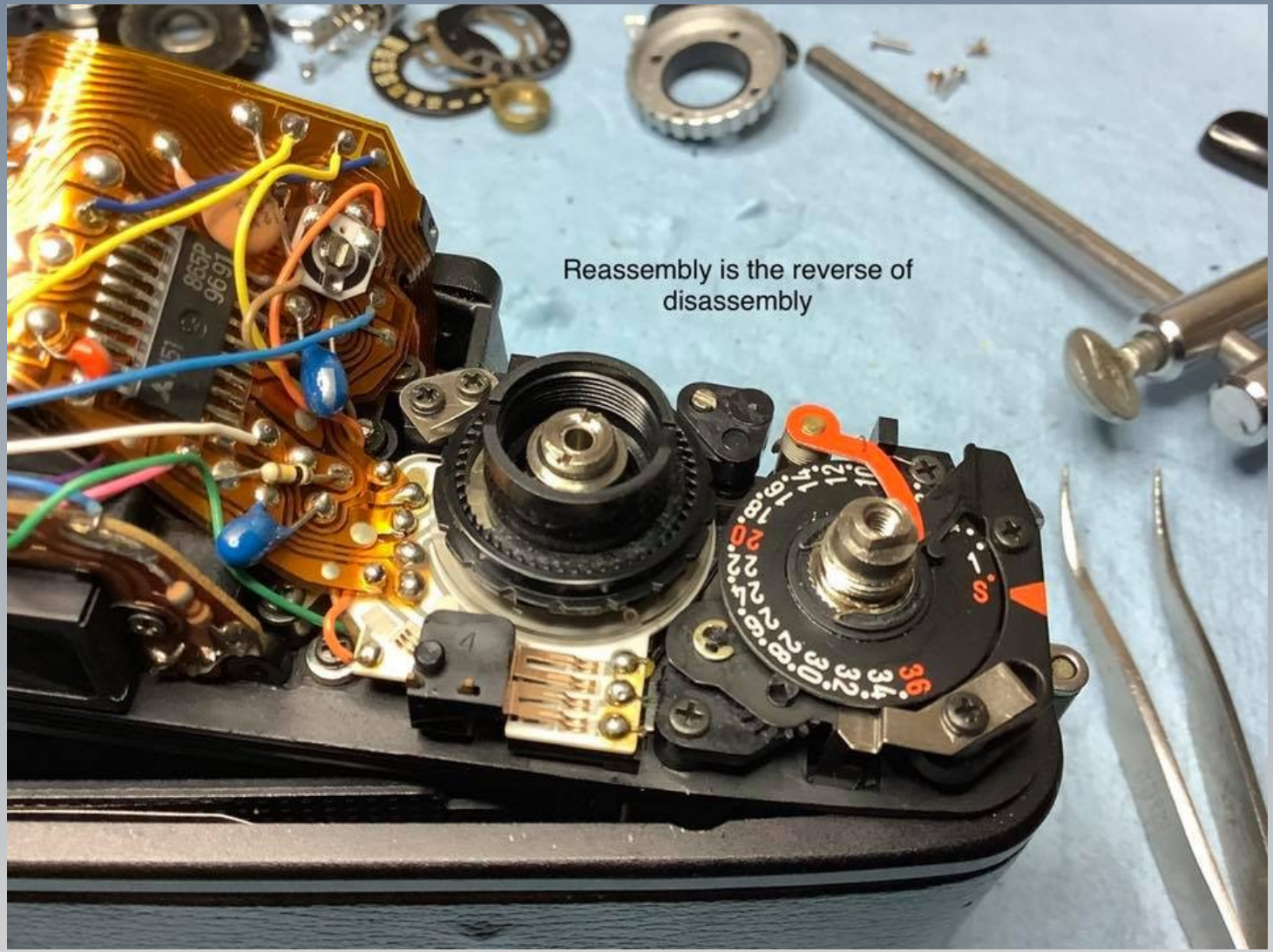

400 800 1600
24 27 30 33
CO.,LTD. JAPAN


Clean the TV/SV resistor bands & the A/M contacts


41058 AF WF



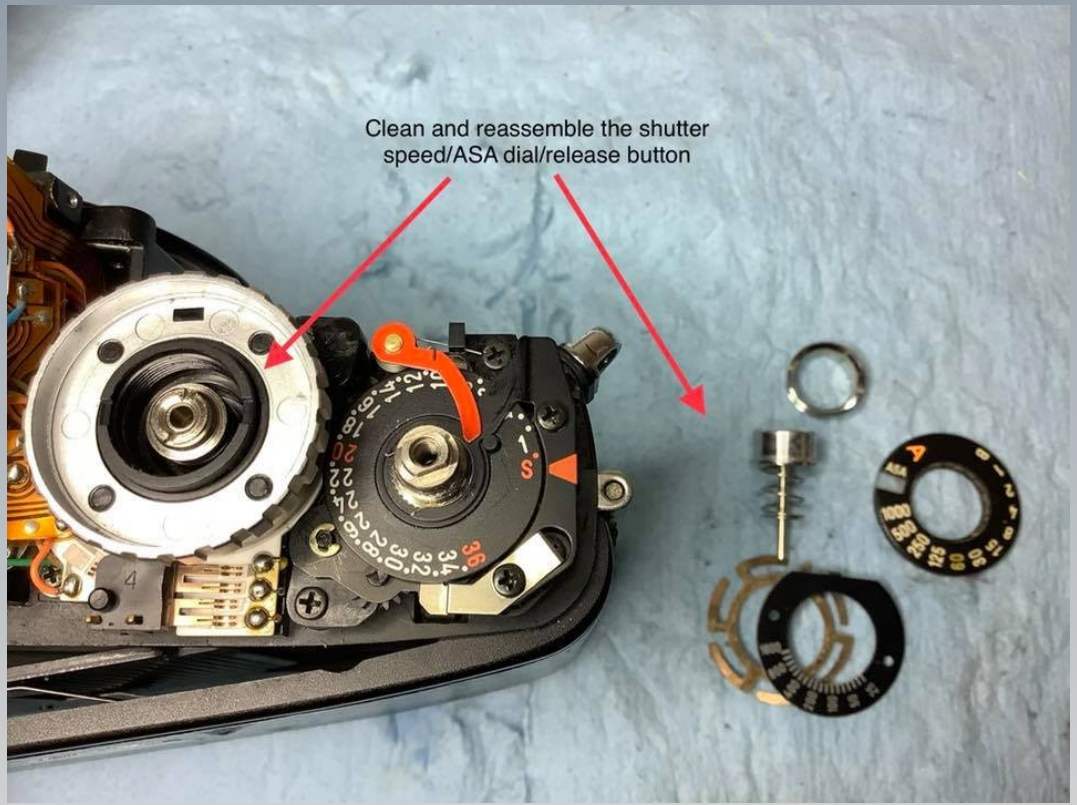

Clean all the brush contacts from each switch
Be careful not to bend/mangle them

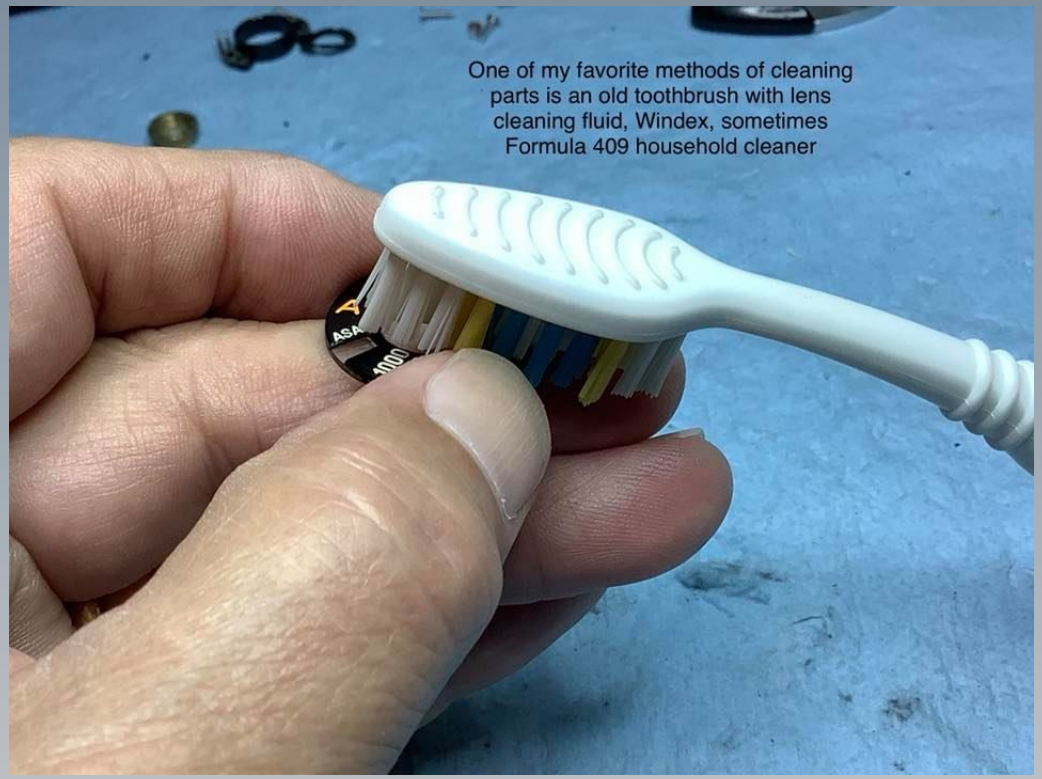

Reassembly is the reverse of
disassembly

Post #31 Reassembly
https://www.facebook.com/groups/360490091319202/permalink/615694029132139/

Clean as you go - install the shutter speed selector, winding lever, on/off switch assembly (use the spanner nut upside down to hold the on/off switch).

Install fresh batteries or use a regulated power supply and test the camera operation.



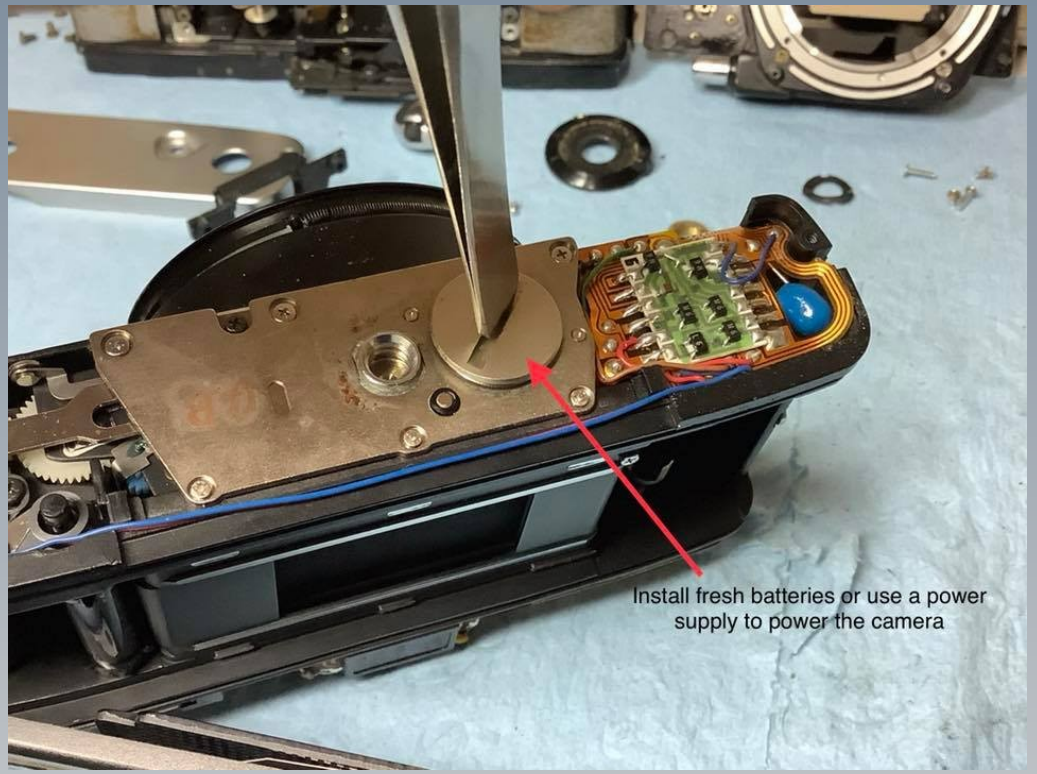

One of my favorite methods of cleaning parts is an old toothbrush with lens cleaning fluid, Windex, sometimes Formula 409 household cleaner


A
ASA
8
15
30
60
125
250
500
1000
S


Temporarily attach the winding lever and capscrew
B
A
ASA
100
30
60
125
250
500
1000


Clean the On/Off switch


Turn the On/Off switch spanner nut upside
down & use it to hold the switch in place


Install fresh batteries or use a power
supply to power the camera

Post #32 Reassembly & Adjustment
https://www.facebook.com/groups/360490091319202/permalink/617313435636865/

To start check the manual highest shutter speed 1/1000 and make any required adjustments - the eccentric on the shutter accessible through the front plate is the manual adjustment and the factory manual sets 1/1000, and double check 1/30 and 1 second...

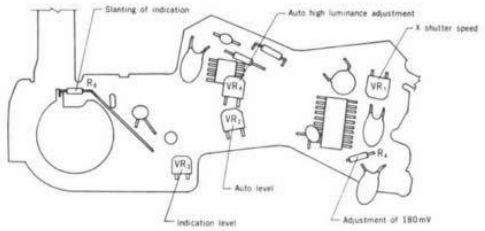
As it often happens after a proper lubrication the manual speeds required little or no adjustment.

I moved on to the auto speeds and made a slight adjustment to the auto speeds level and the exposure meter indication level - the adjustments were ok before adjusting but I like to get these as close as possible.

Next I'll finish reassembling the covers and do a final clean up and wrap it up.

■ Adjustment of auto exposure

■ Adjustment of variable and fixed resistors.

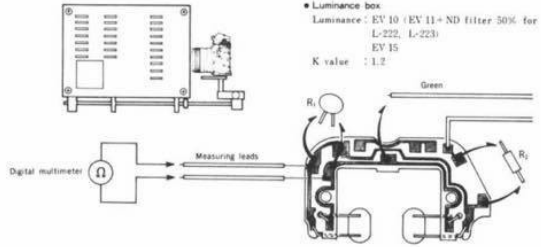


1 Measurement of CdS resistance value and selection of R_1, R_2

■ Measuring instruments : Luminance box (MODEL L-2101, L-222, L-223)
: Digital multimeter (Type 2508, 3476, 2507)
: Standard lens (50mm/F 1.4)

■ Measuring procedure

1. Remove the lead (green) of CdS board and R_1, R_2 as shown below. Solder the 2 measuring leads to the part of R_1, and make the connection to the tester.



2. Measurement of R_{BV} 5 (If the measured value is outside the range from 12 to 40 Kohm, replace CdS.)
Measure the resistance value with the luminance box set to EV 10 (EV 11+ND filter 50% for L-222, L-223).
3. Measurement of R_{BV} 10 (If the measured value is outside the range from 1.6 to 5.6 Kohm, replace CdS.)
Measure the resistance value with the luminance box set to EV 15.

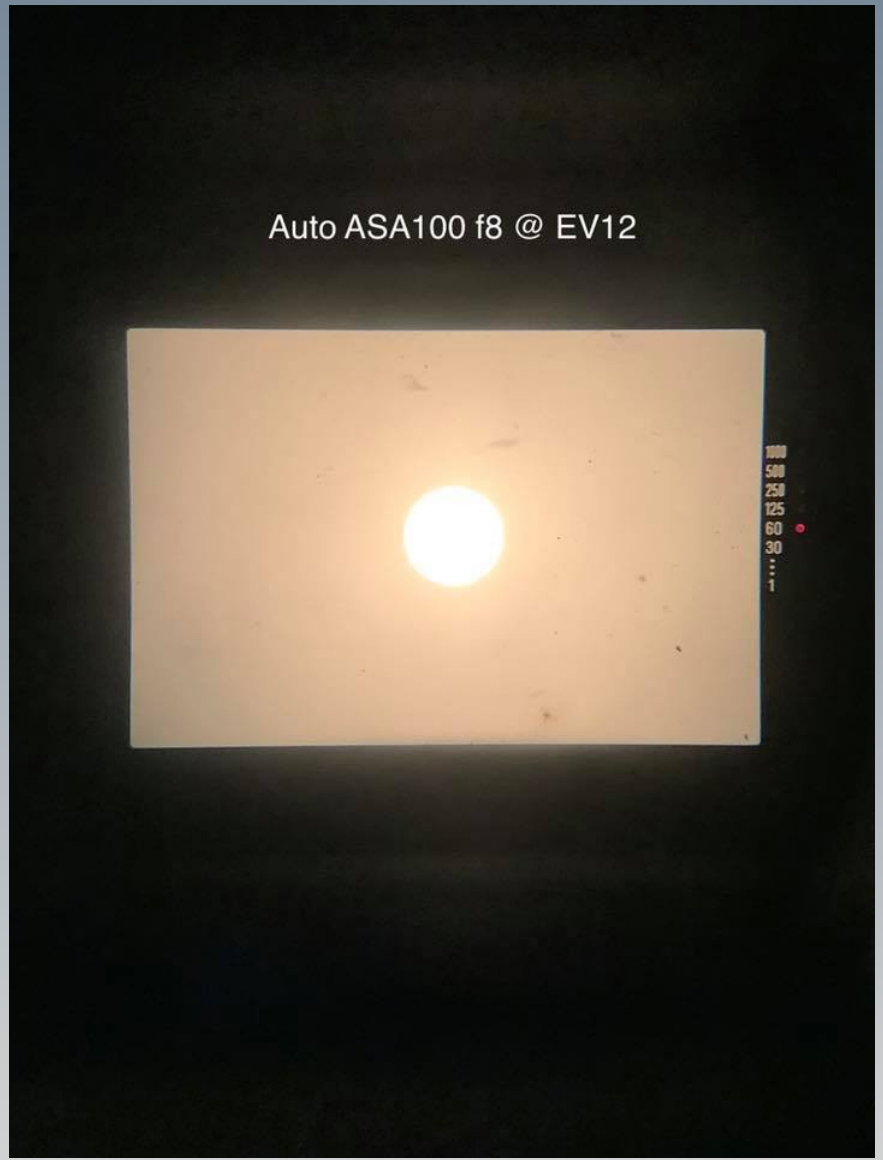
■ Selection of R_1, R_2

Decide R_1 and R_2 from the measured values (or approximate values) of R_{BV} 5 and R_{BV} 10 with reference to the table on the next page, and fit them on the CdS board.

102


1/60 @f8
ZTS TESTER V
ERROR IN f-STOPS
.24
Ev - Av
TIME IN MILLISECONDS
SHUTTER SPEED
019.51
OPENING CURTAIN
11.48
CLOSING CURTAIN
10.79
ISO
100 200 400 800
ADJ Av
CURTAIN TRAVEL
REVERSE
ZTS LIGHT STANDARD
12.0
LIGHT VALUE


1/15 @ f5.6
ZTS TESTER V
ERROR IN f-STOPS
.04
Ev - Av
TIME IN MILLISECONDS
SHUTTER SPEED
019.51
OPENING CURTAIN
11.48
CLOSING CURTAIN
10.79
ISO
100
200
400
800
ADJ
Av
CURTAIN TRAVEL
REVERSE
ZTS LIGHT STANDARD
10.0
LIGHT VALUE


Auto ASA100 f8 @ EV12
1000
500
250
125
60
30
1

CLA Final Post #33
https://www.facebook.com/groups/360490091319202/permalink/624987374869471

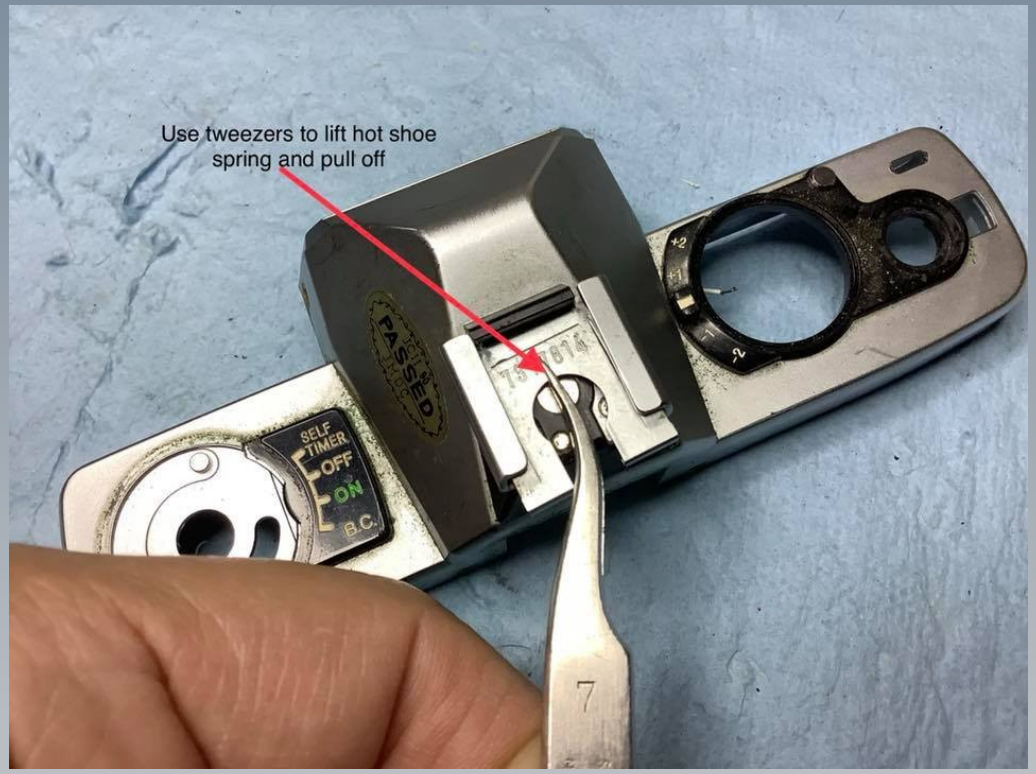
Time to do final cleaning and reassembling, it goes without saying that the reassembly is the reverse of disassembly...

The Hot Shoe was loose, I removed the spring and tightened the screws, cleaned the parts, reassembled the winding lever parts, shutter speed dial parts, and the on/off switch ... of special note is the reassembly of the spanner nut on the on/off switch - take care not to over tighten the nut because the rewind bearing is plastic, tighten it by hand and when it stops just add a slight nudge to keep it tight, any more than that will be enough to break the rewind bearing...

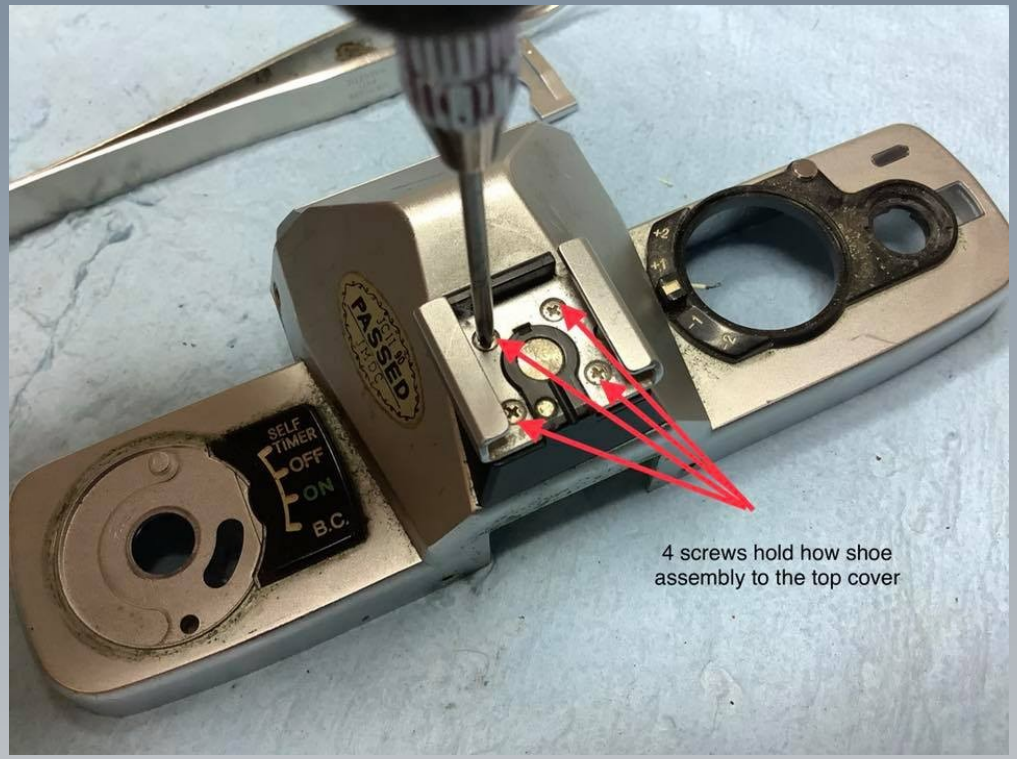
For a 42 year old camera made in 1978 this camera will give years of enjoyment, it’s easy to operate, and it’s accuracy is as good as when it left the Minolta factory...

It’s not a collectible, definitely a user as it’s obviously not been kept in a ever-ready (never-ready) case, there’s small imperfections, some pitting in the finish and some light wear marks...

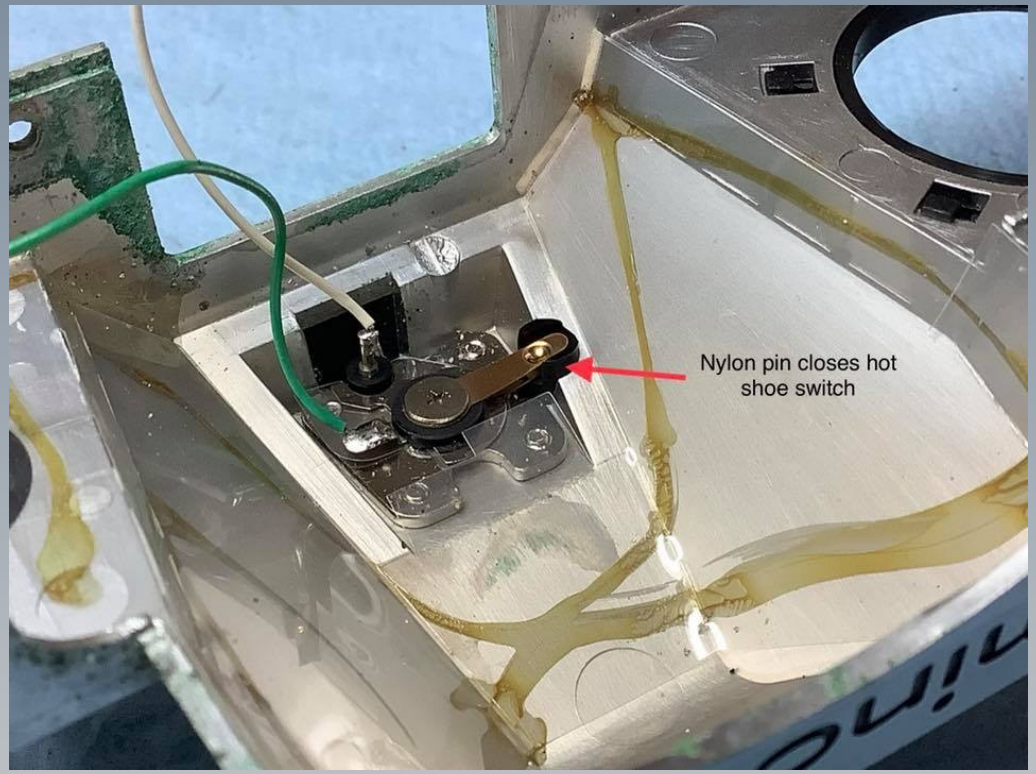

If the hot shoe feels loose, fit the tweezers tip into this slot, lift and pull back to remove the hot shoe spring and expose the retaining screws and switch pin


Use tweezers to lift hot shoe spring and pull off
SELF TIMER
OFF
ON
B.C.
PASSED


SELF TIMER
OFF
ON
B.C.
PASSED

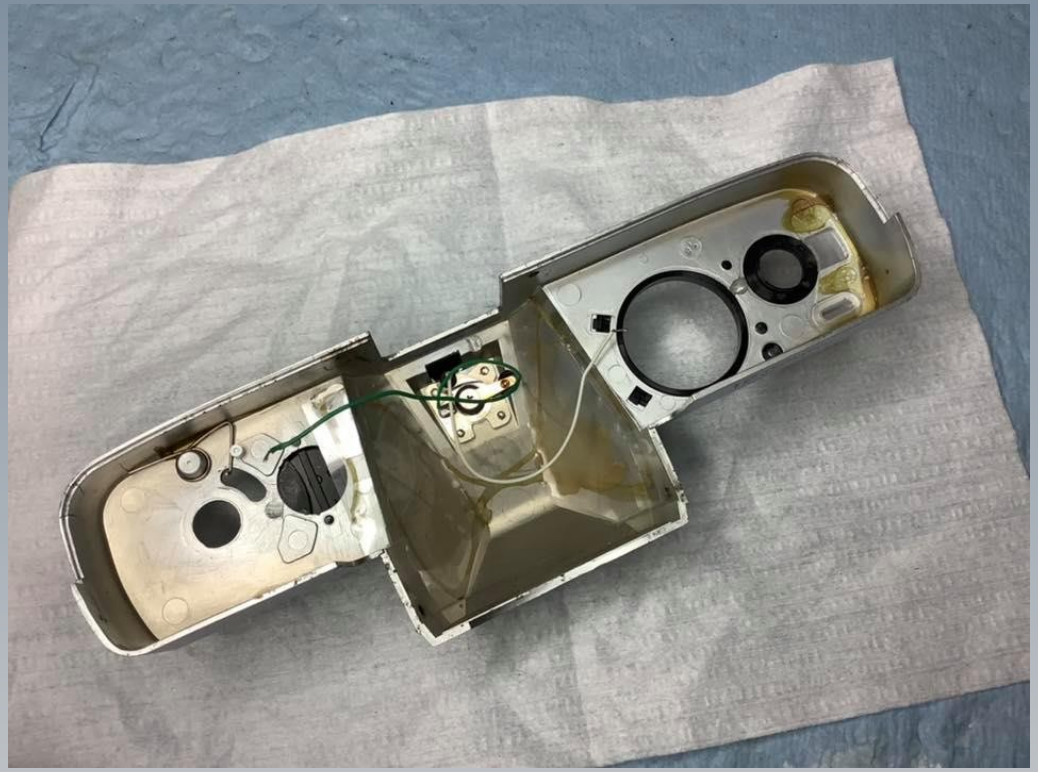

SELF TIMER
OFF
ON
B.C.
JCII 90
PASSED
JMDC
4 screws hold how shoe assembly to the top cover

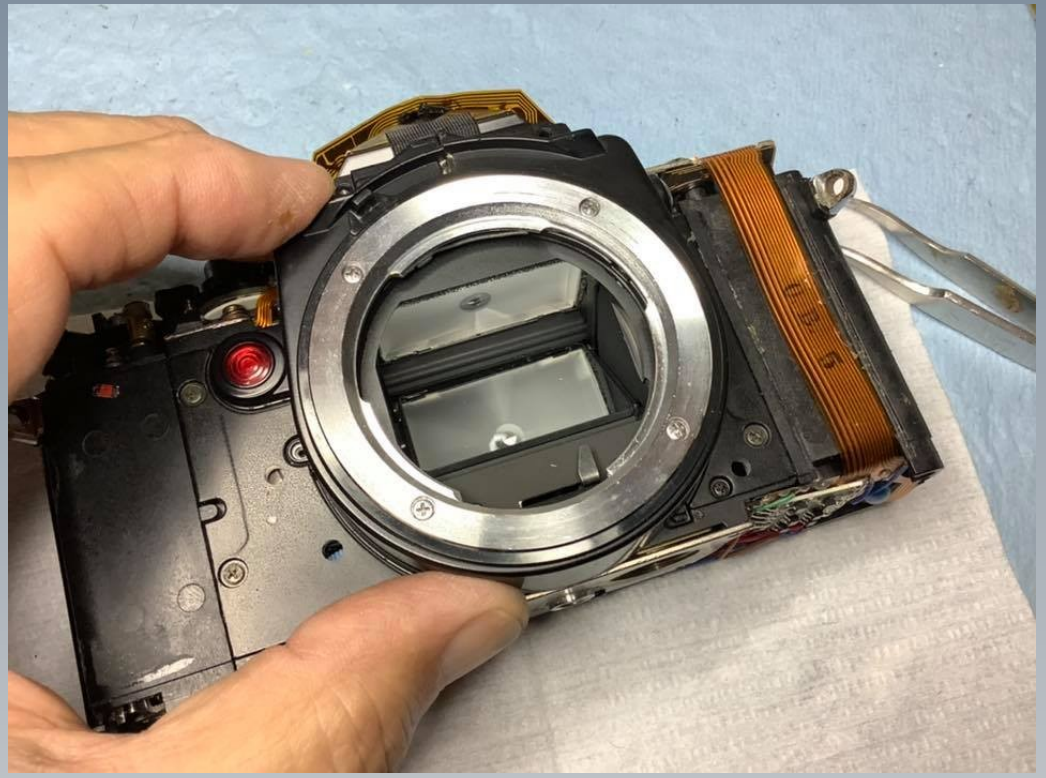

Nylon pin - don't lose or damage this pin
JCII 90
PASSED
JMDC
B.C.

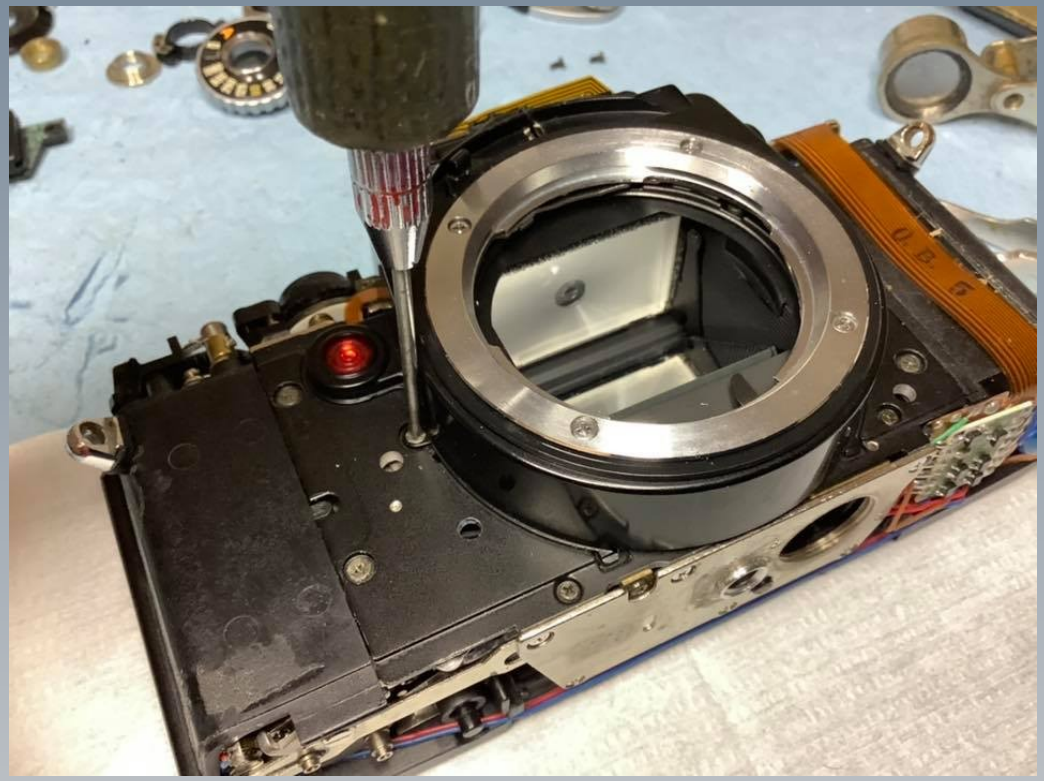

Nylon pin closes hot
shoe switch

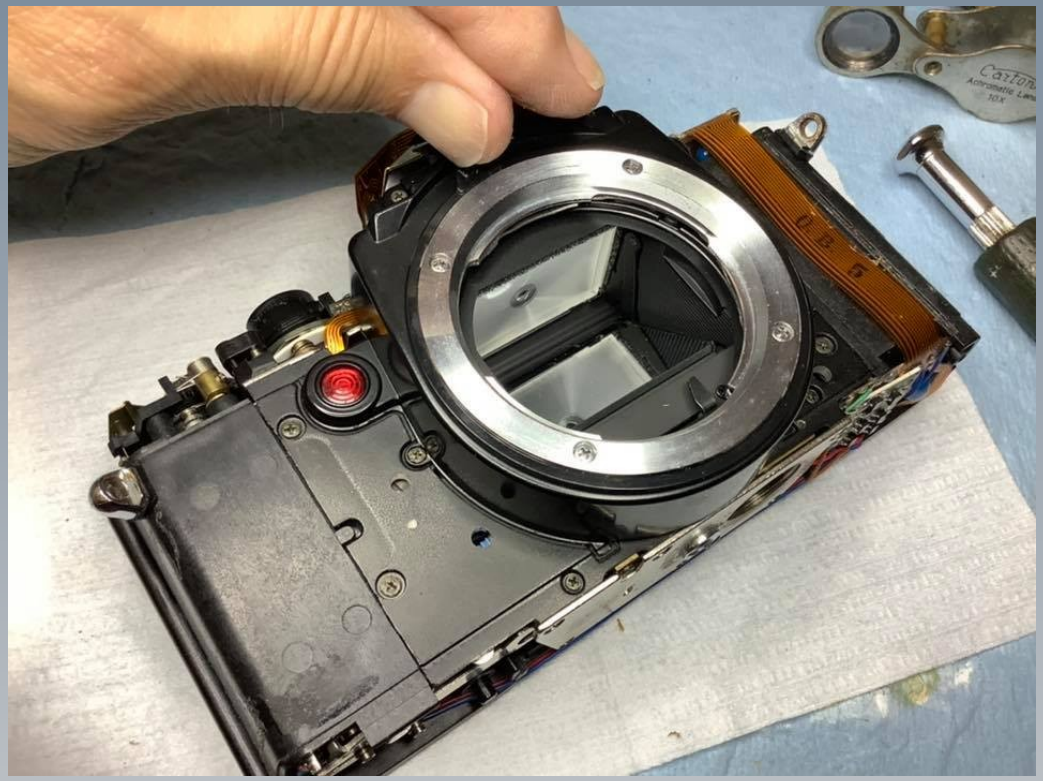

SELF TIMER
OFF
ON
B.C.
PASSED


SELF TIMER
OFF
ON
B.C.
PASSED

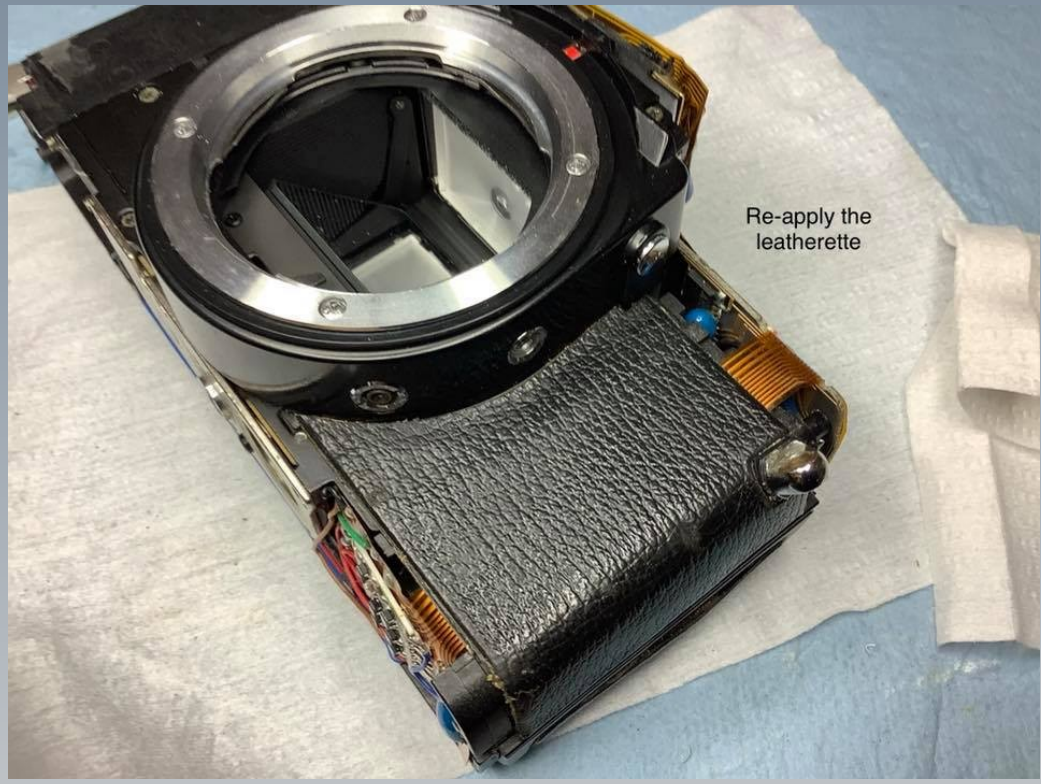


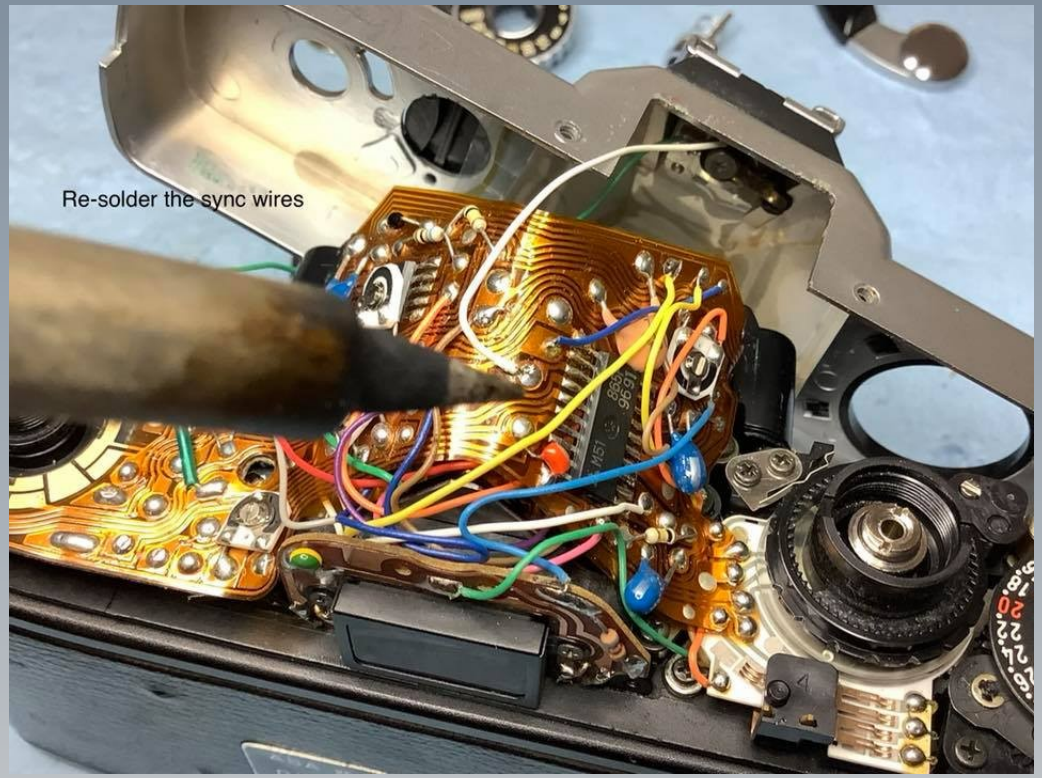







Re-apply the red lens
mount indicator mark

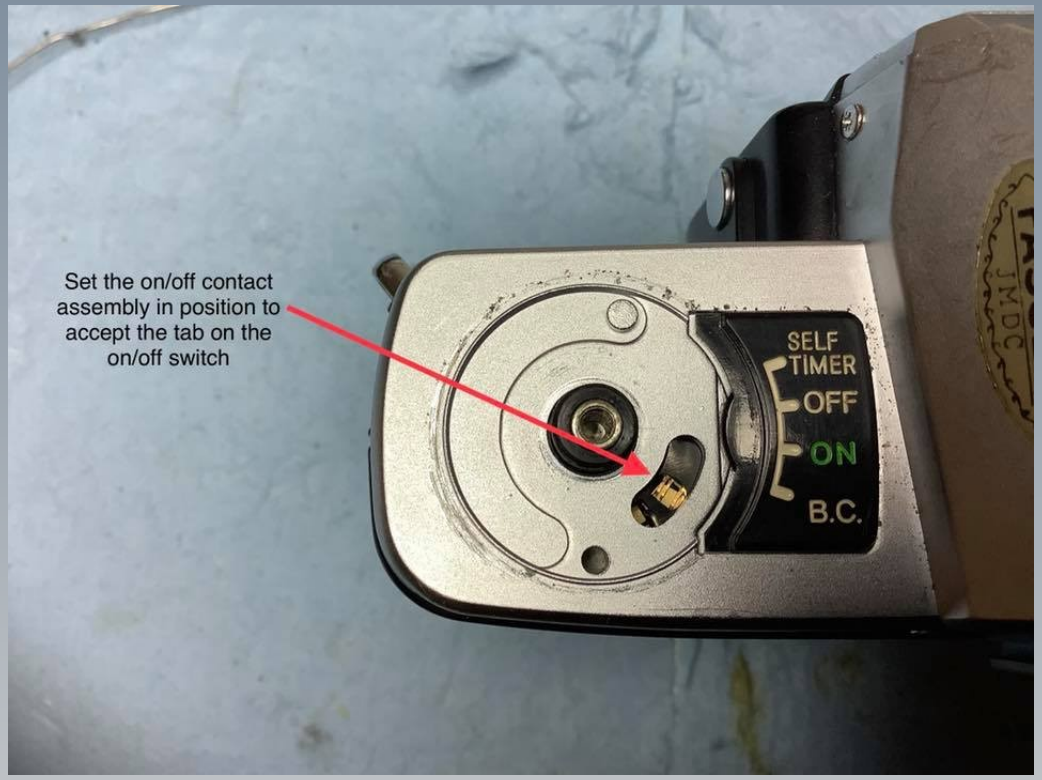

Re-apply the
leatherette


Re-solder the sync wires


SELF TIMER
OFF
ON
B.C.

Install the 4 top,cover screws, 2 long screws by the eyepiece and the short ones on each side of the prism

Start reassembly of the top cover controls, check for freedom of movement


Set the on/off contact assembly in position to accept the tab on the on/off switch
SELF TIMER
OFF
ON
B.C.


PASSED
SELF TIMER
OFF
ON
B.C.
Install the detent spring and ball - apply a light grease to the detent positions

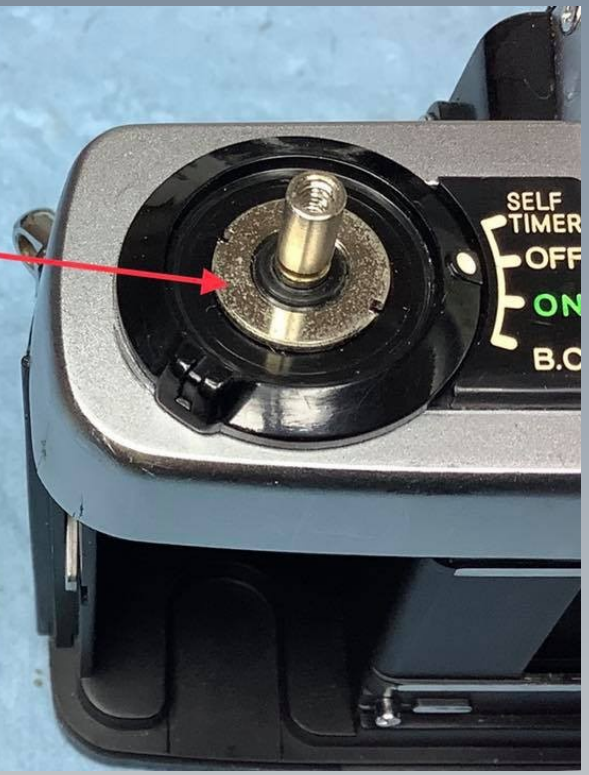
Install the spanner nut

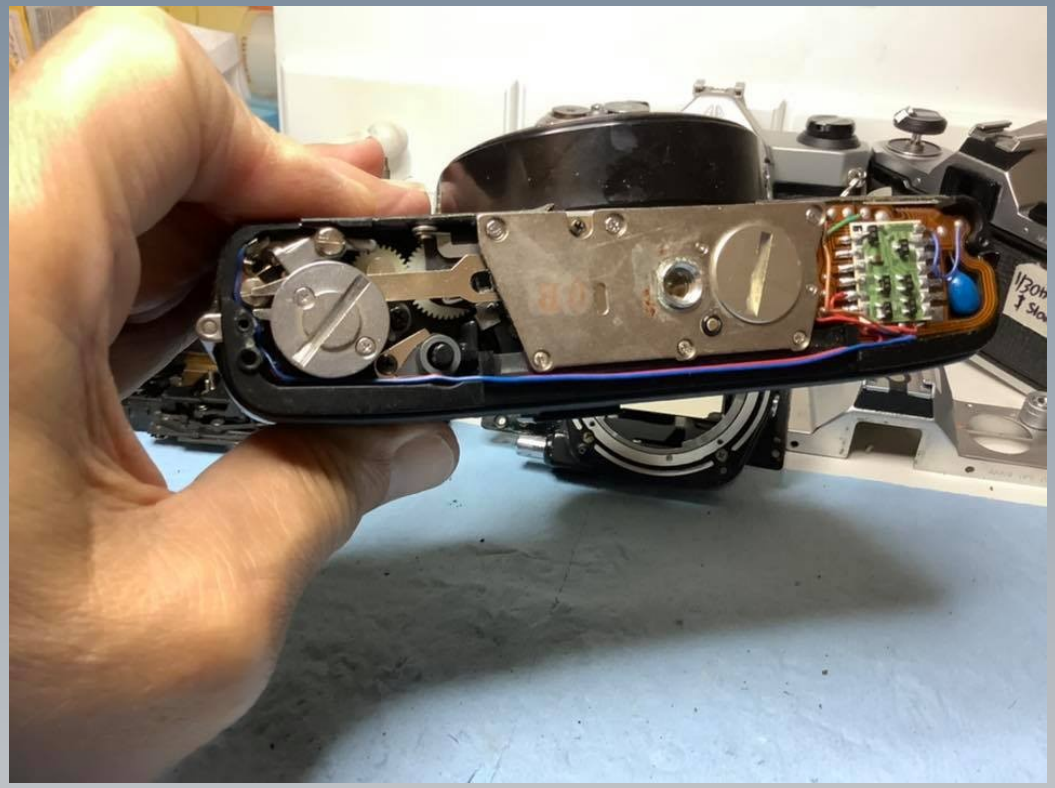
Note!

This is a plastic rewind bearing, finger tighten the nut until it stops and then give it only a slight nudge ...

Any more pressure than that will break the rewind bearing and your day will be ruined...

There's a method I've developed to repair the broken rewind bearing but it takes some careful hands, I'll cover that in detail if anyone needs it...






ZTS TESTER V
ERROR IN f-STOPS
-.00
Ev - Av
TIME IN MILLISECONDS
SHUTTER SPEED
019.23
OPENING CURTAIN
95.84
CLOSING CURTAIN
44.46
ISO
100
200
400
800
ADJ
Av
CURTAIN TRAVEL
REVERSE
ZTS LIGHT STANDARD
12.1
LIGHT VALUE


ZTS TESTER V
ERROR IN I-STOPS
TIME IN MILLISECONDS
SHUTTER SPEED
Ev - Av
OPENING CURTAIN
CLOSING CURTAIN
ISO
100
200
400
800
ADJ
Av
CURTAIN TRAVEL
REVERSE
minolta
XG1
MINOLTA
MD 50mm 1:2 JAPAN