

Zenit E series E, EM, ET, 11, 12, 12XP, 122

Foam replacement

Ver 1.0 N.L. 24/05/2022

There are Subtle changes between years and models, so there may be some discrepancies. Check in the files section of the Zenit Camera Club Facebook group for updates & other guides.

Please say 'Hi' to me, Nige Last, in the group, if this guide has been useful or additional help is required.

See separate document as to how to remove the top, which can be found in the files section of Facebook in The Zenit Camera Club group.

See separate document how to test for and locate light leaks, which can be found in the files section of Facebook in The Zenit Camera Club group.

It is best to use a lipped tray whilst removing the top. There are a few small parts that could fall out and otherwise get lost. Always lay the parts out in the order you remove them. Taking a photograph of each step can also be beneficial.

NOTE:- WHILST THE TOP IS REMOVED YOU MUST REMOVE THE FOAM ON TOP AND AT THE SIDE OF THE PRISM, ELSE YOUR PRISM WILL BE DESTROYED BY THE ROTTING DEGRATING FOAM.

To do this, remove the metal strap holding the prism by removing the two securing screws. It is easier on non-battery models, as there is no wiring crossing over the top of the prism. The shutter speed board can be unscrewed and gently moved, to aid access, but if doing this be careful to check for small shim washers under the board and ensure they are replaced. They live on top of the spindle, which will be seen when moving the shutter board.

Carefully pick off the old foam from the prism and securing strap. Using I.P.A and cotton buds, carefully remove the sticky goo residue from the prism and the retaining strap. Use an air blower to help remove loose flakes of foam

Note:- rather than buying a bottle of IPA, hand-wipes that come in those little sealed pouches often contain IPA and can be used.

Carefully remove the foam to the side and rear of the prism and again swab residue. Be careful not to damage the meter needle on the TTL model or get any residue though the slot in the side of the prism housing. It is a good idea to also remove the foam below the viewfinder, be careful not to damage the woollen back door seal, as they could be stuck together.

The prism can be removed, again easier on non-battery models as it just lifts out. The Zenit TTL has the light sensor on the front of the prism is held in by two clips, that need to be unscrewed and then both lifted out together. The 12XP has the light sensors on the back of the prism. Try not to touch the clear glass parts of the prism or the focusing screen below. Use a blower brush to remove any foam that has got onto it. **Only remove the prism if you really need to.**

Check inside the top of the camera, there may be foam residue stuck on the top or around the eyepiece, requiring removal.

Replace the prism foam with open cell squashy foam, as the strap is a tight fit. Also put a piece of kitchen foil between the prism and foam, to avoid any future damage caused by rotting foam.

For everything else, self-adhesive dense EPDM is required. I used dense black 1.5mm EPDM sheet. 1mm can be better for the rewind post as it is a tight squeeze against the lighrmeter.

Note:- For battery models, there is no light meter window so there is far less risk of light getting into the top of the camera. The TTL cannot have foam to the side of the prism as it would foul the meter needle. The 12XP has LEDs and does have a piece of foam above it, which should be replaced. Late model 122 cameras thankfully finally did away with the prism rotting foam, the exact date of the change is not known, so please still check for rotting foam.

The back door seals of Zenits are made from wool, so unless damaged do not rot and NEVER need replacing. Similarly, the mirror bump and hinge seals are a felt and again never need replacing.

Photo of a 12XP. The brown rotting foam can be seen above and around the prism. It looks ok, but touching it, it turns to a sticky goo.



The original foam above the prism & the black light sealing foam to the left. Not much remains of this or the foam below the eyepiece, much of it was stuck to the top. Plastic top ET.



Prism strap being removed from the prism on a Zenit TTL, showing all the rotting foam. Note the shutter speed control has been loosened to aid access. Be careful if you do this, as there are very thin shim washers on top of the drum shaft. Note there is no foam between the light meter and the prism housing on the TTL.



Picking off the sticky foam



The photograph below shows a plastic top ET, notorious for light leaks.

The blue arrows show where the original foam light seals were replaced with new EPDM.

The red arrows show the additional light seals added.

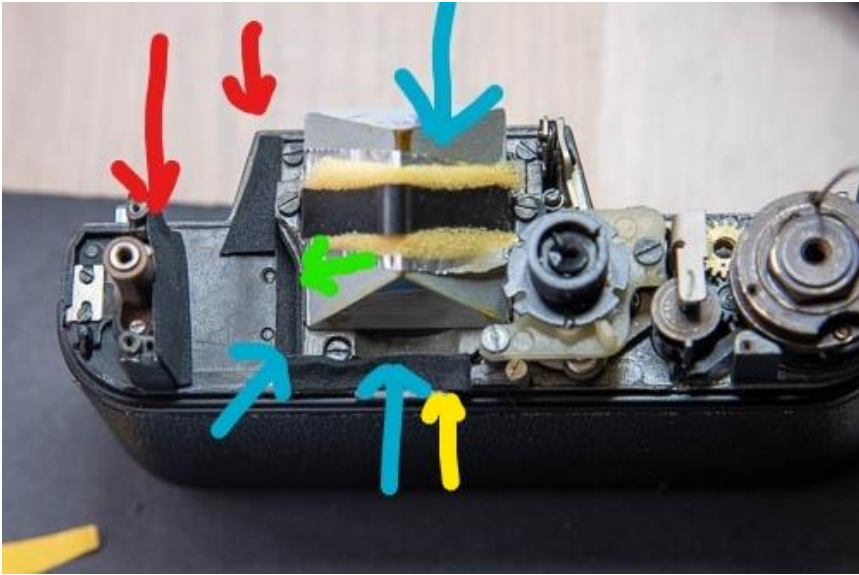
The green arrows show where light gets into the mirror-box, between the prism & prism housing.

The yellow arrow shows the slight change on this model (plastic topped ET), the casting has been extended to separate the door back seals (these are wool and never need replacing) and the foam under the eyepiece. Most cameras do not have this extrusion, so much care must be taken not to damage the wool back door seal when removing the foam seal that will be stuck to the wool.

Between the top of the prism and the securing strip lives the foam that rots and destroys the prism. The photo shows the foam replaced, with aluminium foil between the new foam and the prism, to avoid direct contact.

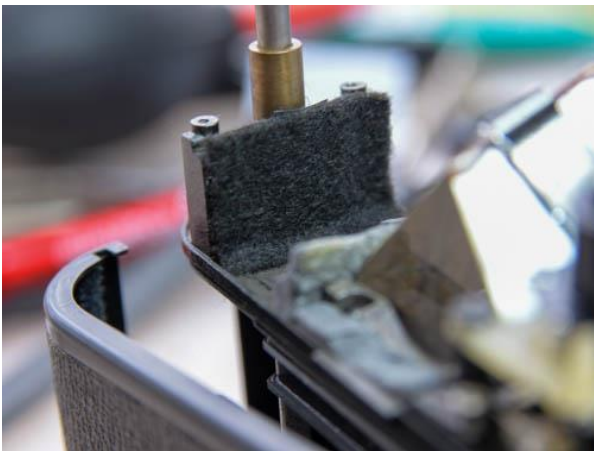
There is very little space between the rewind post and the side of the prism for the light meter to sit (on top mounted light meter models).

The EPDM can easily be cut to shape with scissors or a scalpel. Test fit the top when replacing and adding the seals, to ensure they do not foul the light meter.



Note the triangular piece of EPDM added to the front of the camera & left of the prism (top red arrow). This blocks the gap between the cast chassis and the pressed steel light baffle. In the same place on the other side of the prism, lives the lens diaphragm lever, which go into the mirror box, so this side cannot be blocked, more on this later.

Self-adhesive 1.5mm EPDM dense foam was added to the side of the rewind post. Newer cameras are hollow there, which lets light into the camera back. 1mm thick would be better here.



Cut a slot in the foam this side, to allow the door lock to lift.



A cardboard baffle was made and secured under the prism retaining strip screw and stuck to the EPDM foam (purple arrow). It was deliberately not affixed to the prism. (Paranoia about damaging the silvering with adhesives).

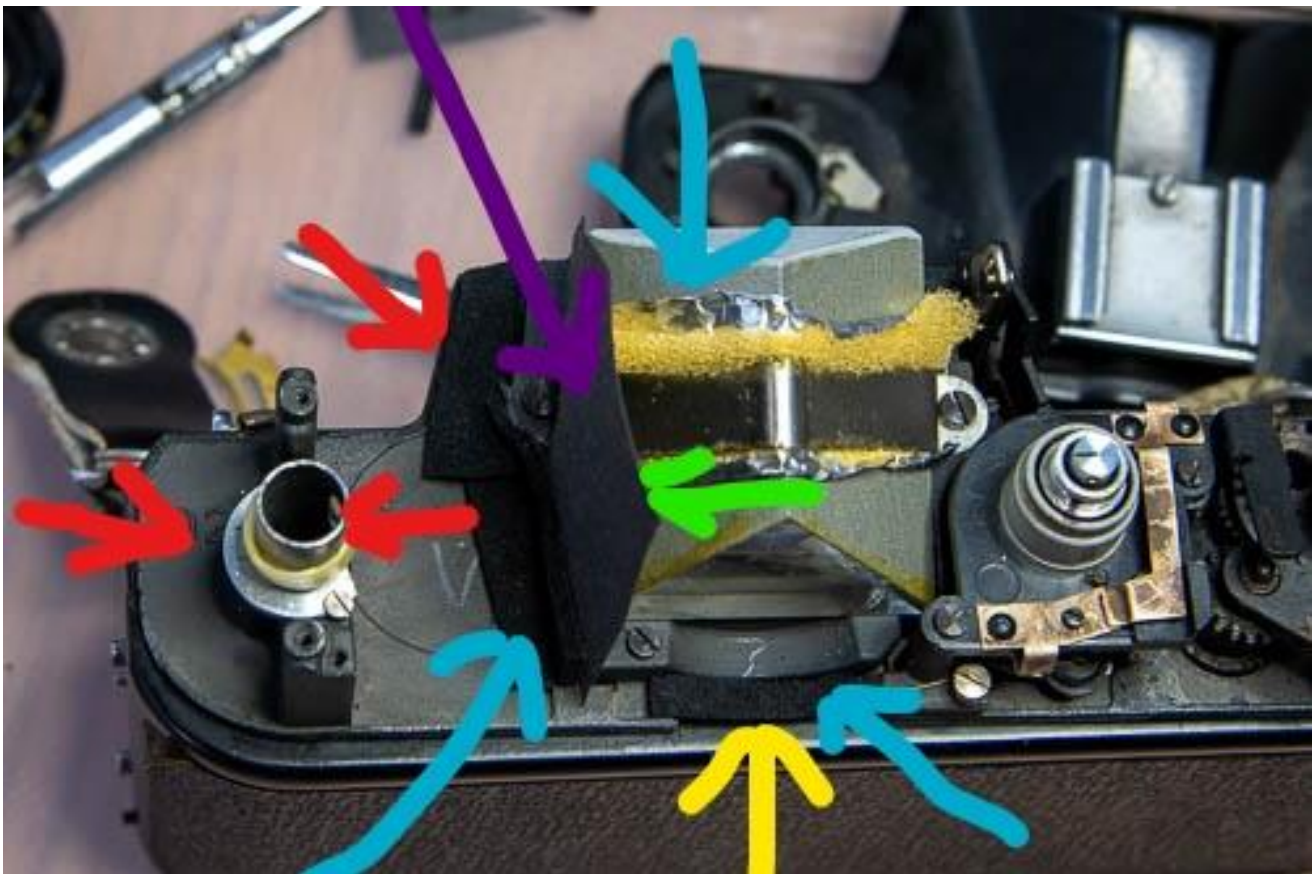
This stops light getting down the side of the prism (green arrow). It also blocks light getting to the far side of the prism and down the diaphragm lever hole.

Note:- This is an addition to the factory light sealing. Only needed on models with a top mounted light meter and was added to a plastic topped ET, which are notorious for light leaks, so every possible source was sealed.

New EPDM foam can be seen below where the eyepiece will sit.

The new prism foam & foil can be seen.

This is a Zenit EM. 1.5mm EPDM sheet has been used for the light sealing. Purple arrow shows the additional light baffle.



This photo shows the top of the Zenit, a plastic ET. The light-meter can be seen (gold colour) and it sits very low. Check in the roof and around the eyepiece for bits of rotting foam or goo & remove it all.

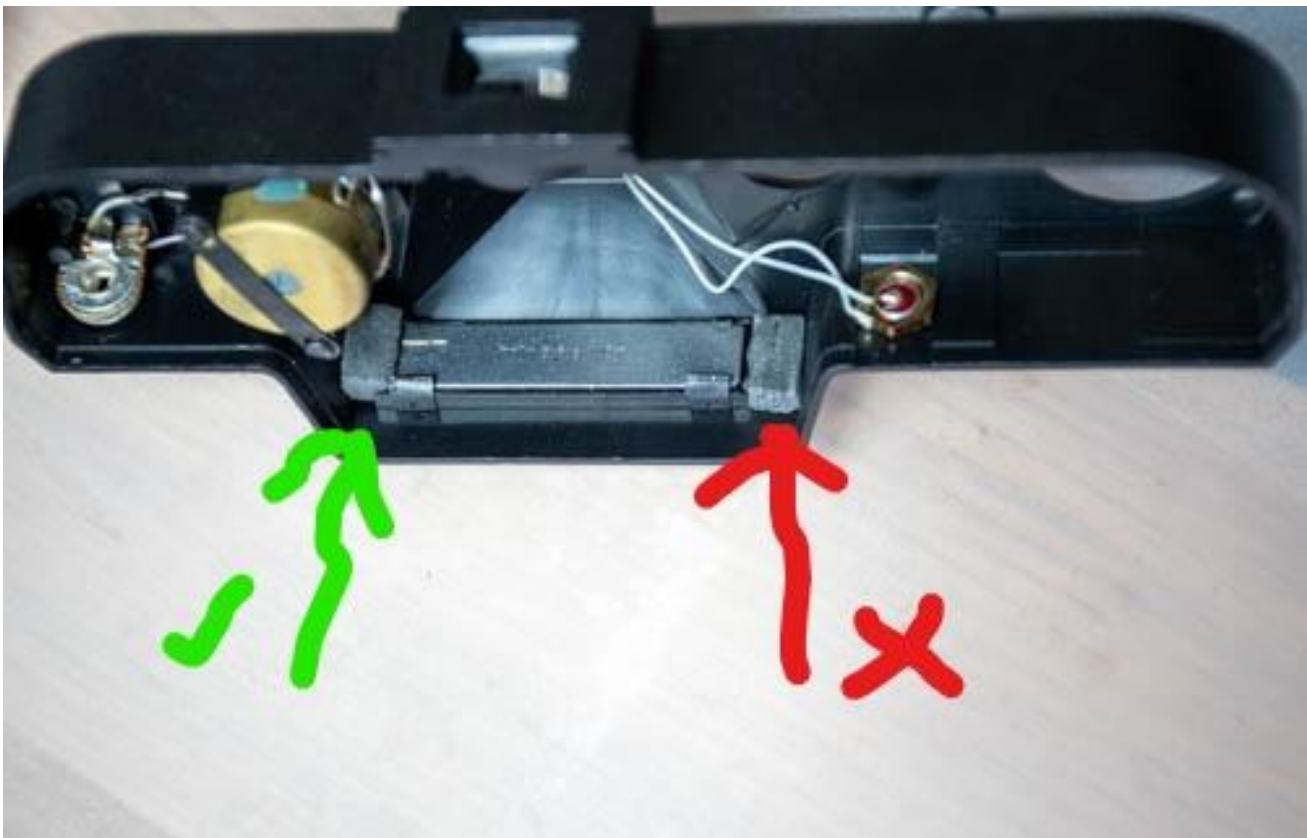
For models with a front mounted light sensor, shine a torch onto and to the left and right of it, whilst observing by looking inside. On this model, much light could get in either side of the light-meter, shown by the green & red arrows.

EPDM foam was put where the green arrow is, to block the light. Be careful as this is also where the wires connect to the light-sensor. This blocked the light 100%

EPDM foam was added to the other side (red arrow) but on assembly it was found to foul the diaphragm lever (remember the big hole there that goes into the front of the camera)?

The foam (red arrow) was substituted for black vinyl tape (similar to electricians tape, but does not shrink & go sticky) and when rechecked, also blocked the light 100%

1.5mm EPDM sheet would probably be ok here.



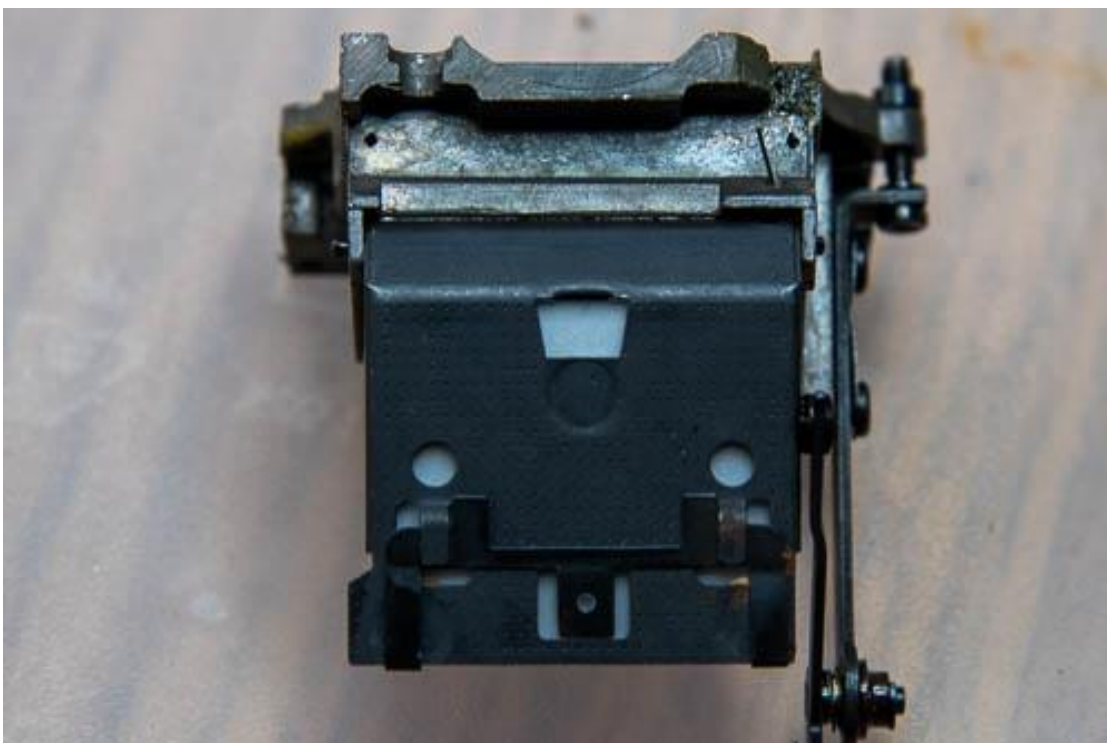
The camera was reassembled and tested with film, also offering the camera to bright sunlight, at all angles. The film was perfect, no light leaks.

Additional photos:-

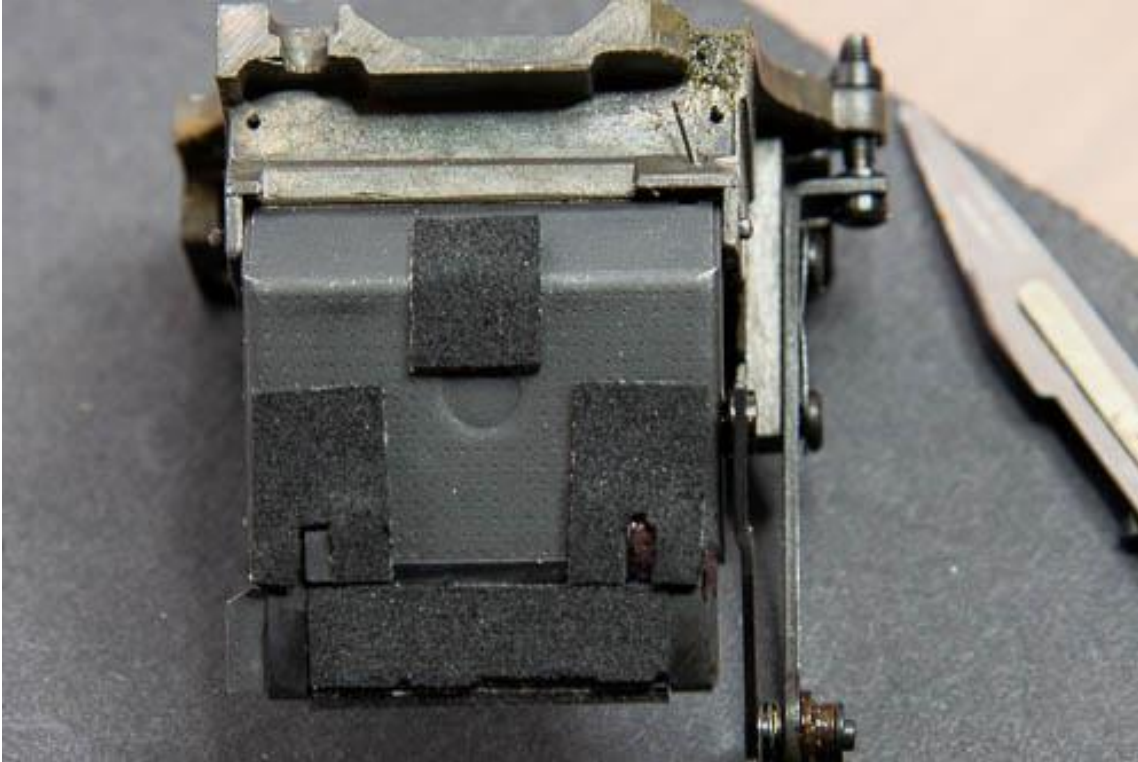
Late model 122. The prism foam has been replaced by a black plastic spacer and the strap screws have springs to allow for expansion.



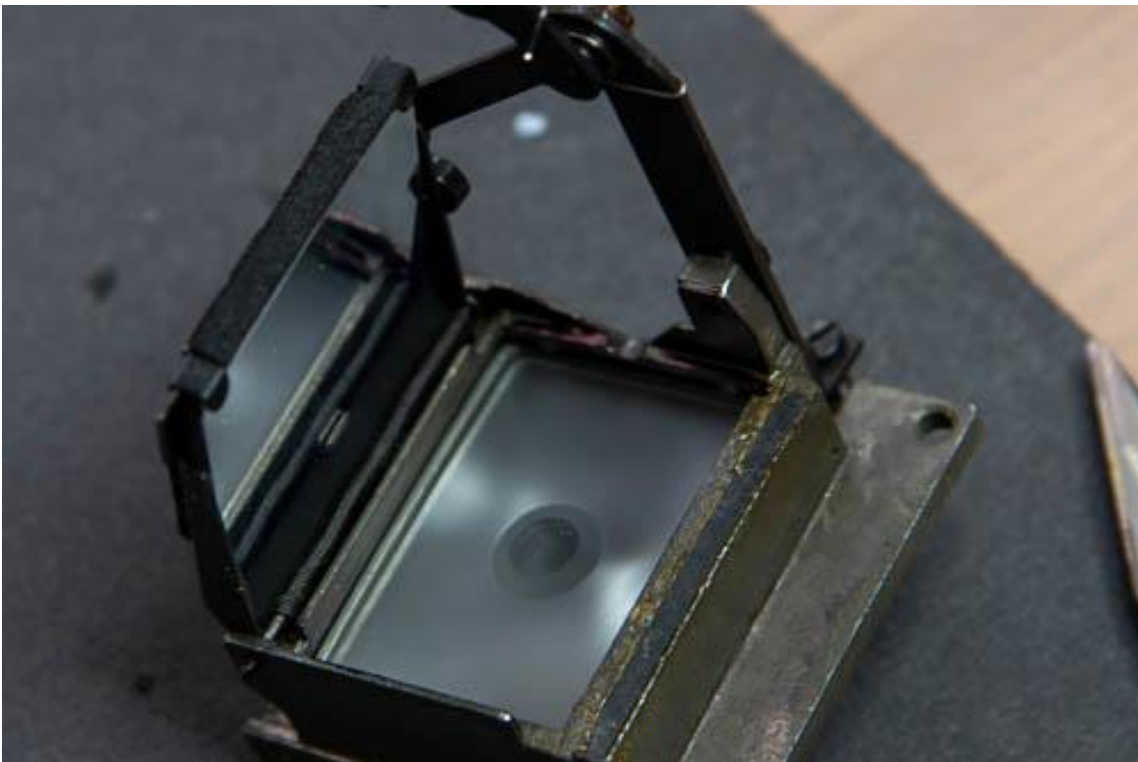
This is the mirror mech taken from the plastic topped ET. As this model is notorious for light leaks, every single possibility was addressed. Here it can be seen that there are holes in the metal tray. Light getting into the eyepiece can find it's way through these holes. Older models had a very thin leatherette on the underside of the mirror. I have been unable to source any similar material.



The holes were covered with 1mm EPDM, which was the thinnest suitable material I could find. The cut-outs in the EPDM were to avoid the EPDM possibly getting into the picture.

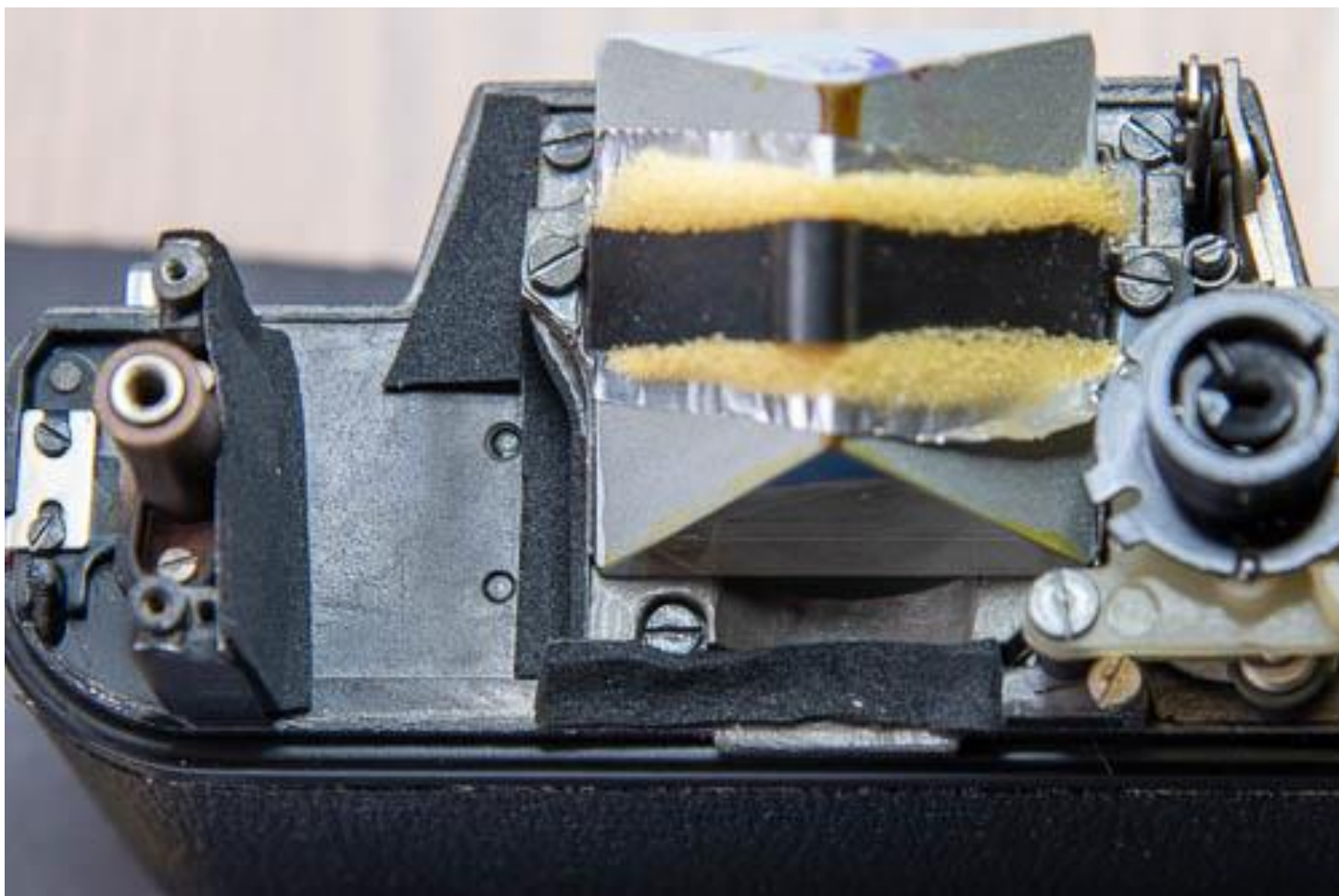


The front edge of the mirror has no sealing (older models had a lip on the metal mirror tray) so a 1mm piece of EPDM was added.



Removing the mirror mech is outside the scope of this document and should really not be necessary. An alternate, should you wish to do so, would be to fire the shutter on 'B' and lock the shutter button down by twisting. This will keep the mirror up, allowing CAREFUL access through the lens opening.

A larger picture showing new prism foam & foil and light sealing added to a plastic topped Zenit ET.



Please visit the Facebook Zenit Camera Club Group, to say ‘thanks’ if this guide was useful