

## ProSeal Instructions for Nikon EM style SLR

Please read these instructions **completely** before you start. Knowledge strengthens confidence, and like most jobs, this is better done right the first time. I think you'll find it rewarding and fun, and I've tried to keep things as easy and logical as possible. This is a very popular and well-designed SLR, and the job you're doing now is very important in repairing one of its most common problems.

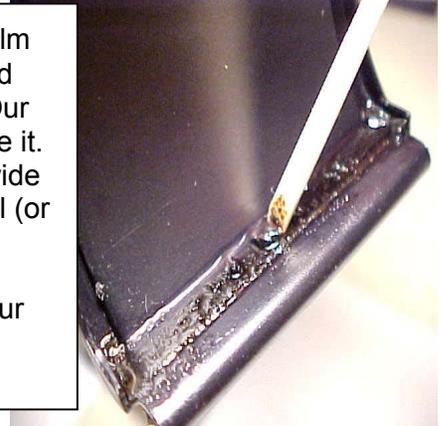
Here are some things you may need: (1) a safe surface to work on—I like to use a piece of cardboard about 1.5' by 1.5', but you can work on fiberboard, newspaper or anything else handy—the important thing is to protect the surface beneath you. (2) Solvent: Naphtha (cigarette lighter fluid is the same thing) or denatured alcohol. Denatured alcohol may be the better choice in some regards. (3) 2 or 3 paper towels. (4) some toothpicks or your bamboo tool—if you have access to a wooden cuticle stick, this is a handy tool. (5) a safety razor blade, hobby knife, or small scissors. (6) a small screwdriver (7) a pair of tweezers. (8) a metal straightedge. Now, let's take a look at the bottom of your camera:



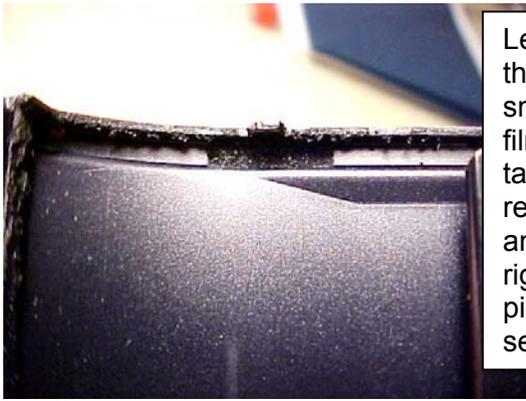
As you look at the hinge end of the bottom plate, you'll see a small Phillips head screw. Loosen it, or remove it, and lift up gently on this end of the bottom. You'll be able to remove the film door, and this is what I want you to do. Once the film door has been removed, replace the Phillips head screw and tighten it...we don't want to risk losing it. Removing your film door will make it much easier to clean and replace the old seal material.



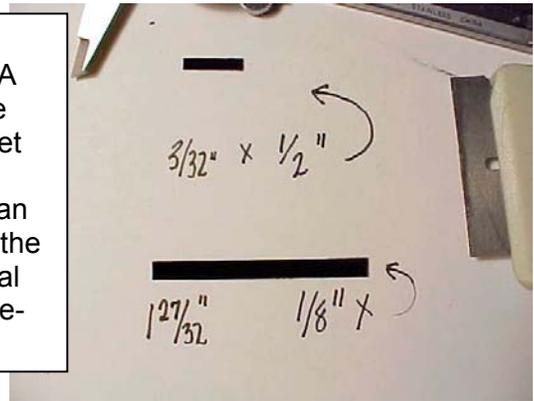
←As you look at your film door, you will see the old seal foam at the end. Our first job will be to remove it. Using solvent and the wide end of your bamboo tool (or similar wood scraper), carefully remove the old material as shown to your right and described below.→



Use your small screwdriver as a dropper (or an old dropper bottle) to carefully drop solvent on the hinge end seal. I normally use enough to saturate it, but not to the point of dripping. Let it sit a minute or so and then begin scraping it off. You may use a toothpick with the end broken off, the wide end of your bamboo tool, a wooden cuticle stick, or anything that will not damage the paint. Your work will go better if you are patient and give the solvent time to dissolve and loosen the old adhesive. **IMPORTANT NOTE:** Observe the precautions on the solvent can. Work in a well-ventilated area and avoid too much skin contact or contact with eyes, and don't drink it. You will probably see black seal residue on the film door edges—you may wipe that off at any time with solvent on a bit of paper towel.



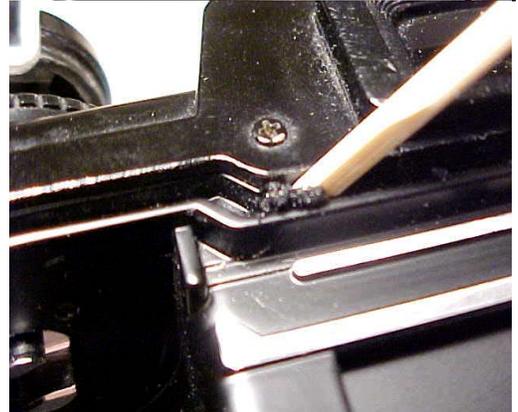
Left: You will see two things in this picture. A small seal beneath the film frame counter reset tang, and old seal residue. Carefully clean and remove both. To the right, you'll see the seal pieces we will use to re-seal your film door.



Carefully cut from the thinnest fabric seal in your kit (1mm thick) the small piece shown above. This is  $3/32$ " by  $1/2$ " inch long (or about 2mm x 13mm). The hinge end seal is  $1\ 27/32$ " by  $1/8$ " wide or 3.5mm x 47.5mm and the hinge end seal should be cut from 1.5mm thick open-celled foam. Remove the adhesive backing (catch a piece of it with the edge or tip of your razor blade), **lick the adhesive side** (to temporarily de-activate it), and carefully install the pieces on your film door. While still damp, you can position them as you wish.



Pretty! Like new again. It is so nice to be using professional materials in your camera, isn't it? A proper job assures you that your camera will be leak free for years to come.



As you can see to the left above, there will be seal residue on your camera's body. We need to clean it with a paper towel and solvent. When finished, begin removing the old seal residue from the long thin slots of the body. Use the thin end of your bamboo tool or a blunt toothpick as shown in the image to the above right. Next, place a bit of paper towel or paper napkin in the slot, moisten with solvent and use your bamboo tool to guide it through the slot to clean the old residue out completely. You will have to do this a number of times to get all the old goop out, and be careful to avoid the film frame reset lever. You do not want to force any old seal material or solvent under it or into the camera body. When the top slot is finished, do the same with the bottom slot.



Left: A view of how I will clean the body slots. A drop of solvent onto the paper towel piece and then push it through the slots until all is clean. You will need to do this several times to get them nice and clean. Next, we replace those seals. Three images below tell the story...



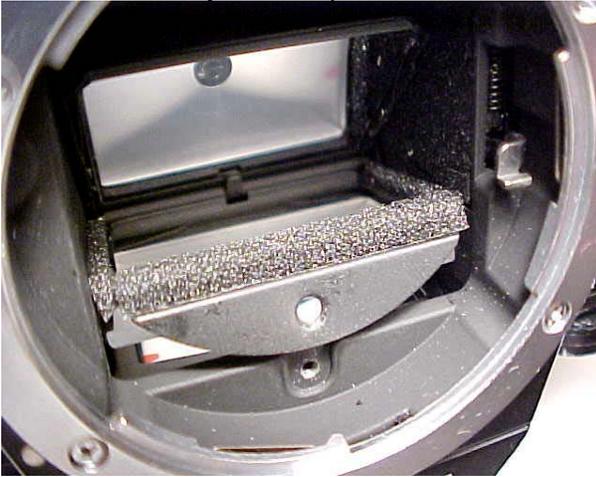
Begin at the end of the slot (as in the first image above). Push the "seal strip" into place with the thin end of your bamboo tool. Install the strip with the slick or glossy side facing outward (there are two slick sides). Follow through the slot around the corner and trim it so it ends right at the film frame reset lever (barely visible in the final frame above). Repeat for the remainder of the slot, starting at the film frame counter reset and progressing to the latch end of the camera. Repeat for the bottom slot, also. Do not worry that no adhesive is used. This strip has been carefully designed so that sidewall pressure will keep it in the slot indefinitely.

Once you've finished the film door and the slots, you may replace the film door. Loosen the Phillips head screw, lift up on the bottom plate and fit the door pins back in place. Replace the screw, tighten and we're done. Now to the mirror damper...



There are three pictures above. The first one shows the mirror damper after it has been re-done. I did not show the "before" picture, because in this camera, the damper was almost all gone. The middle picture shows the damper frame without the focus screen (with the front piece of foam

installed) and the final picture shows how the focus screen is held to the frame. Many of you may have a dirty focus screen. This could be a chance for you to clean it, and we'll talk about that in a minute. First, remove the Phillips head screw holding the assembly in place. It is in the middle of this frame, and you can see it in the first picture above. Once that screw is removed, carefully lift the assembly up and out. IMPORTANT NOTE: There are two sides to the focus screen. One is a matte finish, and the other is smooth. The matte finish faces the pentaprism and the smooth finish faces the mirror. When the assembly is out, you may separate the focus screen from the little clips easily. You can wash old goop or smudged mirror damper foam off with naphtha, and you can then carefully clean the screen in warm soapy water and rinse with clear water. Allow it to air dry, or dry with a clean lint-free cloth. Clean all old mirror damper foam from the frame with solvent, and replace with 2.5mm damper foam—cut it 7/32" wide by 1 15/32" long (or 6mm x 37mm). Run a thin piece of 1.5mm thick open-celled foam down both sides, also. These pieces are 1.5mm~2mm wide by 15/16" long (or 24mm). You can see how I've done this above. Replace the focus screen into the clips, and set the assembly back in place in the camera. Please see below:



First, set the focus screen/damper assembly back in place carefully (as per the first frame above). Next, with the camera set to "B", cock the shutter and press and hold the shutter release button. This causes the mirror to snap up and hold the damper assembly where it needs to be. While holding the shutter button down, replace and tighten the Phillips screw (you can see the hole where it goes in the second frame above). When all is back, test your shutter a time or two in order to be sure all is working fine.

Guess what? You're finished, and your camera is back to "like new" condition and ready to enjoy again.

#### ~~NOTES~~

These instructions were given to you as an accompaniment to a general seal kit, or for any of several reasons. You should be able to easily cut your own seal pieces from my seal material, and you should **never** use inferior materials as a substitute. Using the best costs no more. Please remember—your camera is a precision piece of equipment. Do not compromise it or risk damaging it by using low-grade foam or foam of an improper thickness or density.

About licking the adhesive side: You'll be working with small pieces of foam with one sticky side, and you'll be working in close quarters. Make it easy on yourself by licking the adhesive side before you install the pieces. This will de-activate the adhesive temporarily and keep the material from sticking to your fingers or tweezers, also. After 15 to 20 minutes, your saliva will have dried, and you can press the piece down for a final seal.