

Preventive Maintenance and Cleaning that You Can Perform to Protect Your Camera and Equipment

In this seminar we will be mainly focusing on SLR type cameras with interchangeable lenses, however, most of these procedures can and do pertain to other type cameras. The best way to keep your camera and equipment clean and in good working order is not to get it dirty in the first place and don't break it by misusing it. I know this is easier said than done, but it's not difficult either.

Most camera and lens failures can be categorized under one of five major causes, which are listed below:

- 1. IMPACT DAMAGE!** Usually the camera or piece of equipment was dropped or something hit it. It doesn't matter how the impact damage occurred, the problem is that it did get damaged, and usually from carelessness. One person brought in his camera that was less than a week old, his dog had chewed on it. Another person brought in her camera after a horse stepped on it. These two instances could have been prevented, yet it cost each of the two owners more than a hundred dollars to repair for parts and labor.
- 2. SAND DAMAGE!** I'd say that four out of every ten cameras that come into the shop have some type of sand damage.
- 3. WATER DAMAGE!** This is the most destructive and most costly of all types of damages. Salt water is extremely corrosive to the electronic circuits as well as to all metal components in any piece of photographic equipment. In most cases of any type of water damage to a point and shoot type camera, it is not cost effective to have it repaired. It's cheaper to replace it. I will get into more specifics on how to handle water damage if you find yourself with a wet piece of equipment.
- 4. TAMPER DAMAGE!** Don't let this be you. If you're not sure exactly what is wrong and know exactly how to repair it, don't try to fix it yourself. You would be surprised how many people bring their equipment to us for repair that are in pieces or that has been partly disassembled. We charge at least 50% or more to repair tamper damaged equipment. It never fails to be noted that more damage is incurred as a result of tampering than what the original problem was in the first place. The end result is let a professional take it apart and repair it and put it back to good working condition.
- 5. SPILL DAMAGE!** This is a little bit different than water damage, and by far the one that we see the most of when it should be the least of. Soda pop is number one on list, it is also the worst of the spill damages as when it dries out, it leaves a very sticky and sugary residue that will freeze up any gears, knobs or levers. With soda pop, you have to use water to clean it up and then you have to use alcohol to clean up the water. Some of the other substances that we see a lot of are coffee, wine, beer, perfume, hand lotion, milk, suntan lotion, toothpaste, and shaving cream. (People put their camera in a luggage bag that gets smashed during flights, putting the equipment through a lot of abuses.) We had one lady bring her camera to us because she put it in the diaper bag with wet and messy diapers, and no, we did not repair that camera. Another person brought in a camera where somebody had vomited all over it. We didn't repair that either. Let me state that spill damage is preventable, so be kind to your equipment and keep it out of harm's way.

At this time, I would like to remind you of several preventative steps that you can and should take to keep your camera and equipment clean and in good working condition.

1. Never force any piece of equipment, especially if it has been impacted or has sand or spill damage.
2. Never set your equipment down where it can be knocked to the floor or ground.
3. Never set your equipment down, even temporarily, around food or drink where it is subject to spill damage.
4. You should always keep a filter on each of your lenses to protect your front lens element. It is a lot cheaper to replace a filter than it is to replace a front element. I recommend using a UV or AI filter for all around general photography.
5. Always keep a lens cap on top of the filter, as this will protect the filter. You should also keep a rear cap on the lenses that are not on the camera. You need to protect the rear element as well as the front element
6. You should always keep your equipment in a good, well padded carrying bag or case.
7. When not using your equipment, keep it in a dry cool place such as a hall or bedroom closet. Don't store it in a basement, garage or attic. These places have high humidity or high heat. Also keep your equipment out of the reach of children and away from adults who don't know how to use it properly. Loan your equipment at your own risk.
8. When not using your equipment for a long period of time, remove the batteries to prevent battery corrosion. You should also check your batteries on a regular basis for any possible swelling or leakage. We recommend changing the batteries in all of your equipment once a year, whether it needs it or not.
9. A very important step for you to take to insure your equipment is kept clean is to make sure your hands are clean and dry when using it.
10. Last, but not least, after each use and before putting the equipment away, is to **EXTERNALLY** clean your equipment so it will be ready for the next photo shoot. I am going to separate the exterior cleaning into two separate functions that I will call field cleaning and home cleaning.

FIELD CLEANING

The five items that I am going to list below should be the minimum that you should carry in your camera bag. You will be able to clean most all-exterior parts of your equipment without having any problems. Remember a little bit goes a long way. Most of these Items will fit in a small zip bag to store in your camera caring bag.

1. Small hand air blower or a small can of compressed air.
2. Soft bristle brush (camel hair is best). I like the one ones that look like a tube of lipstick with a cover over the bristles.
3. Soft cleaning cloths. I recommend the ones that are chemically treated that are designed for camera cleaning. They cost a little over five dollars and they last a long time.
4. A small bottle of liquid lens cleaner (You may use Windex[®] if you prefer.)
5. The last item that you should put in your zip bag is Q-Tips[®], a dozen or so will be plenty. I will demonstrate how to use these in just a few minutes.

HOME CLEANING

This is a lot more thorough type cleaning and should be done when you are ready to put your camera and equipment away for a short or extended period of time. You should have on hand the following items. You should do this cleaning at a kitchen or dining room table, not in the living room while watching television

1. Denatured alcohol
2. ArmorAll®
3. Very mild, low suds detergent
4. Clean, soft cotton rags
5. Liquid lens cleaner, or Windex® window cleaner
6. A soft, old, used toothbrush
7. Air bulb or can of compressed air
8. A bunch of Q-Tips®

Make sure that you don't pour the liquids directly on your equipment.

Before I demonstrate to you the proper procedure in cleaning your equipment, let me add that you should **NEVER, NEVER, EVER** lubricate your equipment. **NEVER** spray any WD40® on any of your equipment.

Let's start by external cleaning of your lenses. Fingerprints and sand are your lens's worst enemies. When you have dust and sand on your lens glass surfaces, don't just wipe it off. You can scratch the lens coating. Blow any loose sand or dust off first. Use your air bulb or your canned air. Next very lightly take your soft bristle brush (Don't touch the bristles with your fingers. The oil from your fingers can and will contaminate the bristles.) Once you have all the sand and dust removed from the glass surfaces, you need to take out your Q-Tips® and put a little bit of lens cleaning fluid or Windex® on the Q-Tip®, just enough to dampen it – don't soak it until it's dripping. Then, in small circles, very lightly clean the glass surfaces. Once this

is done you can take your cleaning cloth or lens cleaning tissue, slightly breath on the lens surface and wipe it clean. The same procedure will apply when you clean your filters.

When cleaning the rest of the lens, remove any loose sand and dust as indicated above. Then take your toothbrush and dampen it with the denatured alcohol and lightly scrub the surfaces till you get all the grime off of it. If you have an auto focus lens make sure you clean the gold contacts on the rear mount with a Q-tip and alcohol. You can then very lightly clean the surfaces with a very damp, almost dry rag that has some ArmorAll® on it. Even better use your chemically treated cloth. Make sure you wipe off all excess cleaning fluids. Your last step in cleaning the lens is to put the filter back on and put the lens caps back on, front and rear. Once you have the lenses cleaned, your next step is to clean the camera body.

If you are not comfortable in cleaning your camera and equipment, and not sure if you want to tackle the job, by all means take it to a reliable repair shop and have it done. Most repair shops will charge between twenty-four and thirty-six dollars for external cleaning. However, it is not difficult to do and it can save you some money. I want to stress that each type of camera differs from one model to another and that procedures for cleaning may vary from one model to another. However, we can still use general cleaning procedures that will cover not all, but most, cameras. If you have a specific question that pertains to your particular model, please ask as we go through the procedures to clean the camera body.

The three major areas on an SLR type camera that you can and should keep clean are the mirror box area, film chamber area and the outside areas. I want to stress that cleaning the mirror box area, mirror and focusing screen as well as the sub-mirror in auto focus models along with the film chamber must be done with

extreme care and only if you are competent with knowing how to clean these areas. It is very easy to damage a mirror or a focusing screen or put a finger through a shutter if you aren't careful. Normally I start with the exterior or outside parts of the camera body. There are four sides to a camera, top, front, back and bottom. Most all of these sides have buttons, dials or levers, or some type of plugs for connectors such as remote pc plugs or power winder connectors, etc. There are a lot of tiny cracks and crevices where dust, sand, dirt and grime can get into to play havoc with your equipment.

Start out by blowing any loose particles away. Then with your toothbrush (dry), clean all four sides of the camera by getting into the cracks and crevices and remove any grime that may still be there. You now are ready to dampen the toothbrush with the low suds mild detergent Go over the entire camera body by lightly scrubbing. Make sure you don't get any in the mirror box area or in the film chamber area. I would recommend keeping the film door closed and a body cap on the camera when doing this type of cleaning. I do want to stress a damp toothbrush and not a wet one. Your next step is to dry the camera body using the clean soft cotton rag. You may have to use some air to get any moisture in the small cracks and crevices blown out. Once that is done you, should get your chemically treated cloth and wipe the surfaces. The next step is to dampen a cloth with some ArmorAll® and wipe the surfaces clean. And the last step is to take your soft clean cotton cloth (dry) and wipe all four sides down. You're not done yet, as you have to clean any plastic windows with a damp Q-tip using the lens cleaner or Windex®.

Once you have the exterior (outside) cleaned, you can and should stop here if you are not sure about cleaning the film chamber and mirror box assembly. If you do decide to clean the film chamber be extra careful and don't touch the shutter curtains. If you damage them, it's big bucks to fix them. Step one is

open the film door like you are going to load film. Remove any loose dirt, sand or film chips; be sure you don't get anything on the shutter or shutter blades. You then can take your soft toothbrush (dry) and brush in the cracks and crevices to remove any stubborn particles that have been left behind. Clean both the body and film door, especially around the door hinge area. Be careful not to damage the foam light seals. If they are damaged, they need to be replaced. Take a damp (not wet) cloth with some alcohol on it and wipe out the film cassette chamber area or you can use a damp Q-tip. Also clean the film rails and the pressure plate with the alcohol. You should then clean your sprocket and take-up spool area. You are now ready to close the film door, as there is no more to be done in cleaning the film chamber area.

Last but not least is the mirror box area. Let me state here and now, if it is dirty, it will never affect your pictures, so don't clean it unless you absolutely have to. The only thing that you should ever use is air to blow any loose dust, dirt, or sand out. If you have to, take a damp Q-tip and very lightly wipe the mirror clean. Use your mild diluted detergent water to clean the mirror. Don't touch the focusing screen. I can't stress enough to be careful when cleaning the mirror and mirror box area and the film chamber areas. Never touch the sub mirrors on auto focus cameras.

Just a couple more items to cover and then we will bring this to a close. In the event that you did leave your batteries in your equipment and they did leak and you got battery corrosion built up in your equipment, use white vinegar to neutralize the battery acid. Then take a dry Q-tip to remove the vinegar. You can use a pencil eraser to clean the battery contacts once you have removed the corrosion.

As I stated earlier, in the event that you have the misfortune of getting your camera or equipment wet, you need to take the following steps to reduce the effects of the water damage.

1. Immediately remove the battery. This will reduce the chance of short-circuiting the electronic circuits.
2. Remove the lens and any other components such as a flash or motor drive. Make sure you remove the batteries from these components also.
3. Remove the filters and caps from the lenses.
4. Remove the film (if possible) and keep the film door open if possible.
5. Drain out as much water from the equipment as you can. Don't let it dry completely out, if at all possible. Keep it damp.
6. Place the wet equipment in a plastic zip lock bag or plastic bag. Pour out any accumulated water as often as needed.
7. Immediately take the equipment to an authorized repair facility so it can be disassembled, cleaned, and lubed as needed.

This concludes our seminar on how to externally clean your equipment and how to properly maintain it. Remember, keep it clean and keep it safe. If you do that then it will do its part in taking pictures for you.

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