


How to clean your DSLR sensor

By Gerry Gerling

1. Required equipment -

- a. A lens cleaning kit which consists of sensor swabs, cleaning fluid and a sensor cleaning brush. VISIBLE DUST makes a neat kit and it is the one that I use. You can order it from Amazon for about \$52. They are available in full frame and crop sensor sizes. (There are other brands available but I have not tried them.)

 SENSOR CLEANING™ VisibleDust



1.6x
16 mm

Patented  Canada

Includes:
Sensor Brush® (1),
MXD-100 Vsawbs® 1.6x (5)
Sensor Clean™ (1,15 ml)



b. A rocket blower is a device which blows filtered air and is good for cleaning your sensor and the mirror cavity of your camera.

Everybody should have one.



c. An illuminated magnifier specifically for inspecting sensors, and I highly recommend them, but you could get by with a suitable magnifier and a small flashlight.

The magnifier is so much better but if you don't want to buy one on your own as you would not use it very often, you could partner with one or more friends and split the cost.





- d. A small clean glass or tin which would hold the swabs and the brush upside down so the ends would not be touching anything.



e. A fully charged battery for your camera.

2. Determine where the dirt is situated on the sensor -

Point the camera at a plain featureless light background such as a clear sky and take a picture at a small aperture e.g. f/16. Any plain surface would do but do not focus on the surface.

View the picture on your computer and make note of the size and location of every dirt spot. (The image will be inverted.)

Remove the lens, lock the shutter up for cleaning and look for the dirt with your magnifier.

At this point you still don't know what the dirt is so we are going to assume it is loose dust. (Best case scenario.)

3. Dust the sensor -

Turn the camera upside down and repeatedly blow air onto the sensor with the rocket blower being careful not to touch the sensor. (You may find it easier to mount the camera on your tripod which will save you from having to hold the camera upside down with one hand.)

Inspect the sensor again to see if you have removed any dust. Chances are that you will have removed some but something may still remain. Note where the remaining dirt is located.

Remove the sensor brush from the kit being very careful not to touch anything with the brush, especially your (probably oily) fingers.

The brush can be "charged" by vigorously blasting the bristles with the rocket blower or with a good quality air can. (It should be charged before each use.)

Brush the sensor then place the brush upside down in the glass.

Use the rocket blower again as you did before to clear any stray dust.

Re-inspect the sensor to see the results.



If the dirt is gone and the sensor appears to be clean, it was just loose dust and your job is finished. Verify your work by taking another picture of the sky.

However, if some dirt still remains it is probably some unknown substance which is stuck to the sensor.

4. Swab the sensor -

Take a swab from the kit and remove the protective cover. With a pen, mark a 'I' on one on the base of one side of the white part and mark a 'II' on the other side being careful not to touch the white tip of the swab with anything.

Add some cleaning solution to the tip of the swab to wet it all across the edge. Wait briefly for the solution to saturate the swab evenly but do not let it dry out.

With the camera suitably and steadily positioned, insert the swab with the long side in line with the long side of the sensor, then when it is just above the sensor, rotate it a quarter turn and place the fanned out edge of the swab exactly on one end of the sensor.

Put enough pressure on the swab to bend it as you pull it across to the other end once, being sure to swab the entire sensor.

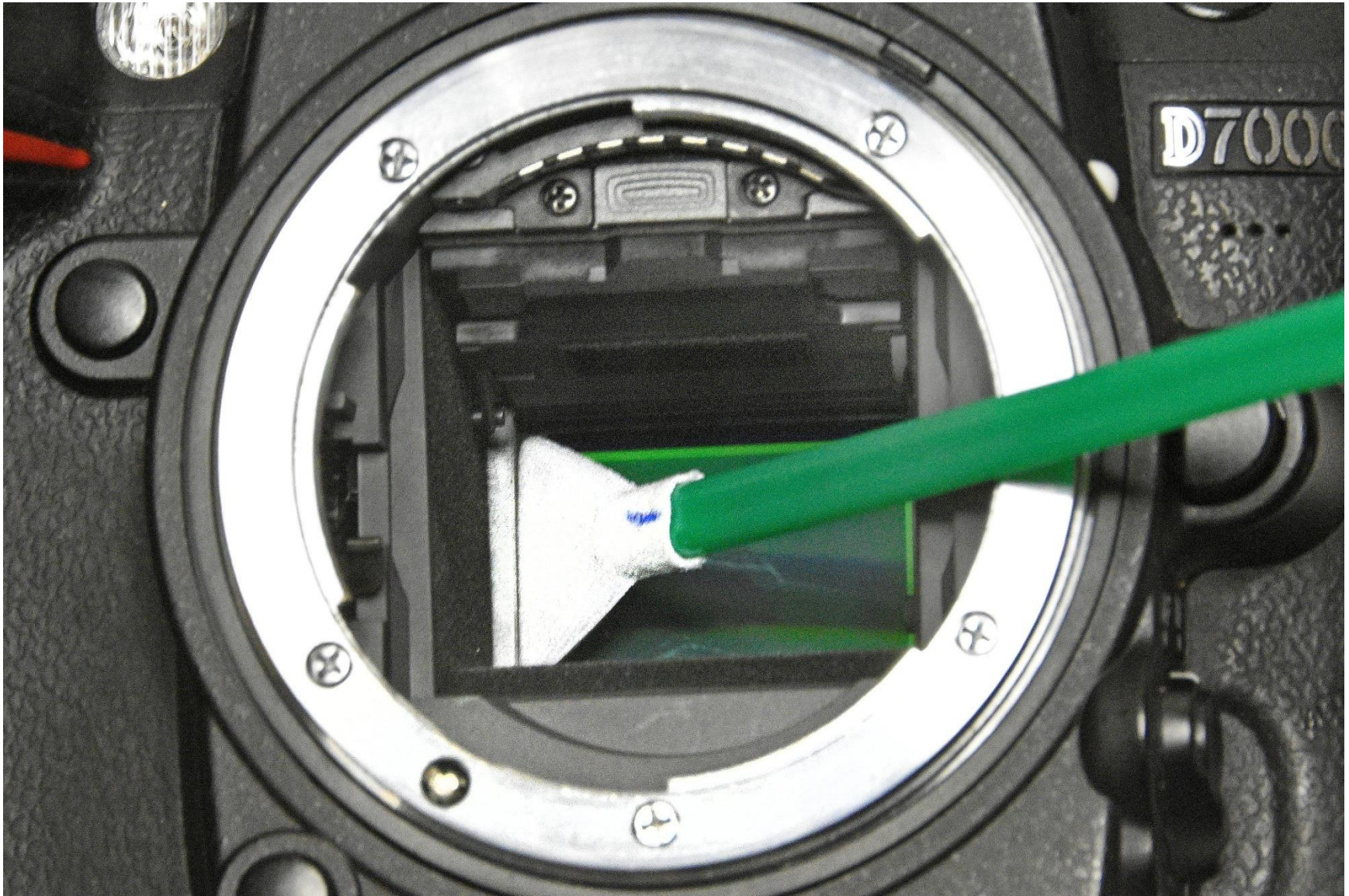
Lift it off, rotate it a quarter turn and remove it from the mirror cavity.

Note which side of the swab you just used. If you used the side marked 'I' you can use the side marked 'II' if you need another wet swipe.

Place the swab upside down in the glass and let the sensor dry.

Re-inspect the sensor with the magnifier to see if you indeed removed all of the dirt.

If the dirt is gone but the sensor is not perfectly clear the solution may have partially dissolved a light haze of grime which may have been on the sensor. Another wet swipe with the clean side of a swab should clear it.



Take another picture if necessary to verify that no dirt remains on the sensor. If there is still some dirt left you can wet other side of the swab and give it another swipe.

It would take a very dirty sensor to have to be cleaned further.

If you have something on the sensor which you cannot remove, there is a stronger Visible Dust solution called 'Smear Away' which can be ordered from Amazon.

*Smear Away*TM

8 ml

DSLR sensor smears removal formula

VisibleDust

www.visible-dust.com

Put the cap back on the cleaning solution and put the brush in a suitable container like a zip-loc bag to keep it clean.

5. Additional notes -

- Avoid changing lenses in dusty environments.
- always use a rear lens cap.
- Each side of the swab is only good for one swipe of the very delicate sensor but you could re-use it to clean the mirror and the bottom lens of the pentaprism above the mirror. You should do this from time to time because you want them clean too.

- Some cameras have an automatic built-in sensor cleaning system. You can access it from the menu and choose when and how often you want it to actuate. It works by vibrating the sensor and hopefully knocks off any loose dust. There is a sticky pad below the sensor which should trap and hold the dust. If your camera has this feature you should take advantage of it.

(P.S. I may clean sensors but I don't do windows!)