



Film Push and Pull Exercise

After successfully completing the Exposure Index and Developing Time test for normal conditions, you are in a position to explore *pushing* and *pulling* of film. Pushing is a deliberate increase in development, while pulling is a deliberate decrease. Pushing and pulling have a dramatic impact on negative contrast, and subsequently, on the appearance of the resulting prints.

Materials Required

Three rolls of film and the camera used for the Exposure Index and Developing Time Test are required. Also needed are your tested developers and print paper.

Test Summary

Expose one frame of a roll of film to an even-toned surface using the metered exposure. Use the ISO that you found in the Exposure Index and Developing Time Test to make the exposure. Take pictures with the remaining film and develop normally. Make a proper proof and mark the frame shot at the metered exposure. This contact sheet will provide a metered-exposure patch for further comparison.

Expose another roll to the even-toned surface for ASA/ISO settings ranging from your tested number through 3 stops higher in 1/3 or 1/2 stop intervals. Use only the metered exposure at each new ASA/ISO for this part of the test. Do this by actually changing the ASA/ISO on your camera and making the exposures as indicated for each of the settings. (Remember that each halving or doubling of the ASA/ISO is a one stop change.) Develop this roll 150% (one and a half times) as long as your normal developing time found through earlier testing. Make a proper proof and find the frame in the contact sheet that matches the frame shot at the metered exposure in the normally processed roll. Note the ASA/ISO used for the matching frame in the pushed roll. This is the ASA/ISO you should use for pushing a roll of film.

Expose a third roll at each metered exposure for ASA/ISO settings ranging from the tested num-

ber through 2 stops lower in 1/3 or 1/2 stop intervals. As above, do this by changing the ASA/ISO settings on the camera and making the exposures indicated at each of the different ASA/ISO settings. Develop this roll for 60% of your tested normal time. ($60\% \text{ time} = \text{time} \times 0.6$). If you use T-Max film, develop for 80% of normal time. Next, make a proper proof. Find the frame in the proof that matches the proof of the frame shot at the metered exposure in the normally processed roll. Note the ISO used for the matching frame in the pulled roll.

Notes

Please note all exposures made (f/stops and shutter speeds) as well as the ASA/ISO setting used for each of the frames. Note your film type, developer type, dilution, time and temperature. Proofs should be made with the same type of paper on which you normally make enlargements and you should note the type of paper in your test. Your conclusions should note what new ASA/ISO you found for the pushed film and for the pulled film. Do this test carefully. You will use these results for the next assignment.

Progression of ASA/ISO Numbers in 1/3 Stop Intervals

8 10 12 16 20 25 32 40 50 64 80 100
125 160 200 250 320 400 500 640 800
1000 1200 1600 2000 2500 3200 4000
5000 6400 8000 10,000