

Manual dust abatement

Our goal for dust abatement is to balance the cost of abatement with the overall goals of the project and the primary objective, to protect and preserve the original assets.

The following is an example of film that requires significant dust abatement strategies.

The majority of the dust on this frame can be easily removed with dry light/high pressure air or light dusting with a brush. The use of cans of compressed air is common in the industry but the bitterant can leave a residue. A better practice is to use an oilless compressor followed by a water/particulate trap and a commercial air dryer.

Step1: Light Dusting:

For the digitization of a large collection it is common to perform a light dusting to create the 16base (2048 x 3072) imagery. This imagery will allow the curator to identify the list of priority or "A" frames. Light dusting is a dusting of both sides at a distance of one to two inches.

The results of light dusting on the sample frame selected are shown below.

Red: items that are on the first scan prior to dusting

Green: Items that are on the first scan but are eliminated after light air dusting

Orange: Items or dust that moved from an adjacent frame or moved within the frame from one location to another



Step 2: Brush and High Pressure Air:

Depending on the amount of dust present on the originals, the curator may opt for a more aggressive attempt to remove attached particulate matter with a horsehair brush followed by a high pressure dusting. Commonly this process is limited to the priority frames in a collection because of the time dedicated to each frame. The following demonstrates the results of more advanced cleaning techniques.



Results:

Light Dusting:

8 Items removed
8 Items remain
4 items moved or introduced

Horsehair Brush + High Pressure Dusting

11 Items removed
5 Items remain
0 items moved or introduced

The next steps for dust removal would be a cleaning solution or reprocessing of the film followed by air drying, however it is often more economical to move to a digital restoration strategy as it can be more cost effective. The chemical process involves a wiping of the film which can introduce the potential for particulate to be dragged across the film causing scratches.

Due to the age and the location that the collection in the sample above was taken it was determined that the remaining particulate was embedded in the substrate and digital restoration would be required.