

# ARRI Camera Sensor Cover Glass Cleaning

Technical Information

Date: 16 February 2021

## Version History

Version	Author	Change Note
2021-02-16	JP	Initial Release

## Disclaimer

Please read this document in its entirety before cleaning a sensor cover glass. Understanding the complete process is beneficial for preserving the highest optical quality.

The information contained in this Technical Information is current as of November 2020 and replaces all previous ARRI product information relating to sensor cover glass cleaning. ARRI reserves the right to change the information contained in this brochure without prior notice. ARRI has used reasonable endeavors to ensure the accuracy and reliability of the information contained in this brochure and, to the extent permitted by law, will not be liable for any inaccuracies, omissions, or errors in this information nor for any actions taken in reliance on this information.

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## Table of Contents

<b>Version History</b> .....	<b>2</b>
<b>Disclaimer</b> .....	<b>2</b>
<b>Table of Contents</b> .....	<b>3</b>
<b>Introduction</b> .....	<b>4</b>
<b>1 Inspecting for dust/dirt</b> .....	<b>4</b>
Instructions .....	4
<b>2 Recommended Cleaning Sequences</b> .....	<b>5</b>
2.1 Contact free cleaning.....	5
2.2 Wet Cleaning .....	5
Instructions .....	5
<b>3 General Precautions</b> .....	<b>6</b>
<b>Contact</b> .....	<b>6</b>

## Introduction

During normal use, changing the lens of a camera allows dust or dirt to enter the lens bay. Some of these particles may settle on the protective sensor cover glass, resulting in image artifacts. Regular inspection and cleaning of the sensor cover glass reduces the risk of these artifacts showing up.

Cleaning is always performed on the protective cover glass, which is the top sheet of the optical filter array located in front of the sensor. The sensor itself is sealed to protect it from environmental influences.

Perform all cleaning in a protected environment (e.g. clean room or laminar flowbox), to avoid additional contamination during the cleaning process.

The following instructions are the ARRI recommended techniques, which are applied in our service centers and have proven to be effective.

Any cleaning is performed at your own risk. ARRI takes no responsibility for damages caused by improper cleaning.

## 1 Inspecting for dust/dirt

By inspecting the sensor cover glass for dust and dirt, one can easily determine whether cleaning is necessary.

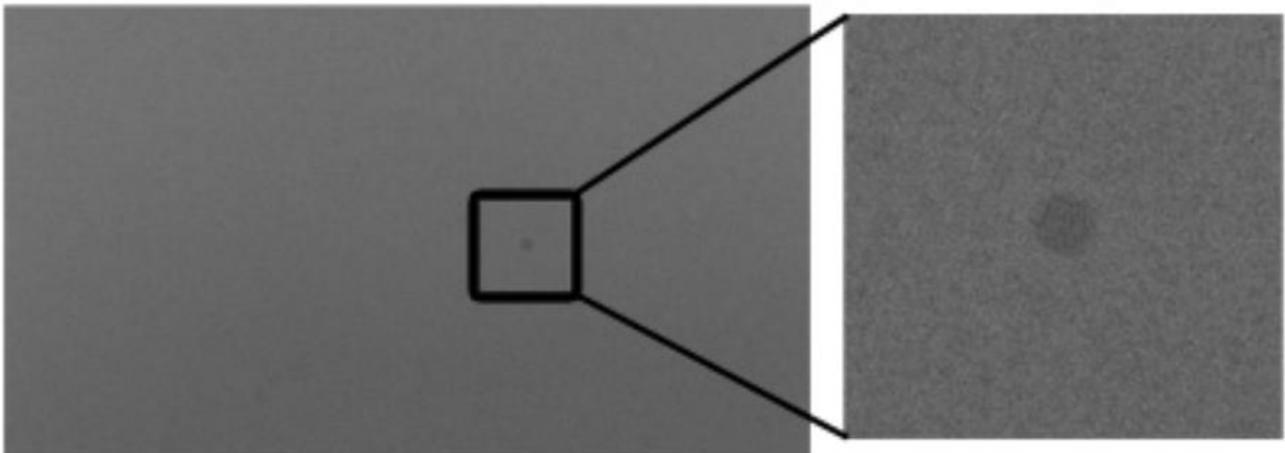
Required materials:

- Camera lens
- HD Monitor
- Uniform white image target area

### Instructions

- Attach the lens to the camera.
- Set the lens focus to infinity.
- Set the lens aperture to T22. (Note: Dust specs are less visible at wider apertures.)
- Connect the HD monitor to the camera image output.
- Aim the camera at the image target.
- Adjust the exposure of the image through camera FPS, Shutter Angle/Exposure Time or Exposure Index. Variation of exposure level may be required. Signal clipping must be avoided.
- Inspect the image of the HD monitor for dust and dirt.

Dust/dirt particles appear as local changes in image brightness. If particles are visible, cleaning is recommended.



## 2 Recommended Cleaning Sequences

### 2.1 Contact free cleaning

Start by blowing dirt off the sensor cover glass with a bulb blower.



**Never** touch the sensor cover glass.

**Never** use blowers with compressed air or gas. The flowing air might cool down the cover glass until it cracks. Bottled air also contains propellants that may deposit on the cover glass.

**Never** use air blowers with high pressure. They might damage optical surfaces.

**Never** use air dust-guns.

**Never** use blow-brushes. The brushes catch dust and distribute it instead of removing it.

### 2.2 Wet Cleaning

Wet cleaning is recommended to remove grease or sticky dirt that cannot be removed by contact-free cleaning.

Prepare three different liquids in spray or drop dispensing bottles:

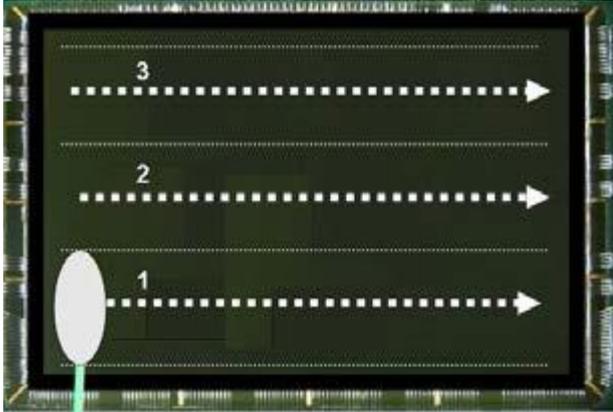
1. a neutral window detergent
2. deionized distilled water
3. spectroscopy grade isopropyl alcohol.

Always use these liquids in this sequence when cleaning

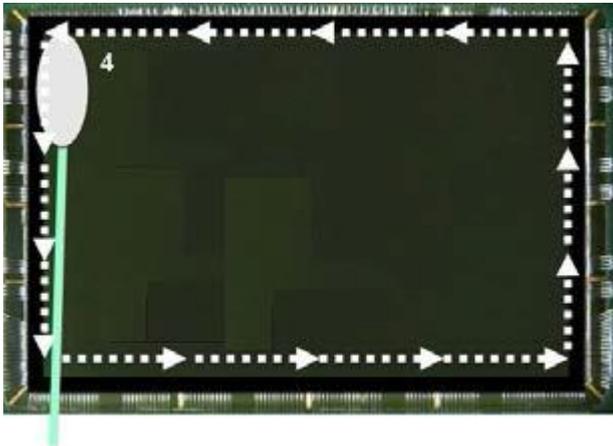
#### Instructions

1. Use "Texwipe Absorbond® Swab TX762 with Long Handle"
2. Always store swabs inside original bag. Remove one by one for use. Store swab bag in a dust-protected environment.
3. Pour cleaning liquid into separate container. Never apply liquid to swab directly from storage container.
4. Apply cleaning liquid to swab.
5. Use swab with gentle touch. Never apply pressure.

6. Swab the sensor cover glass horizontally in 3 or more steps. Do not touch the border.



7. Swab around the border.



### 3 General Precautions

Always place a lens or a lens mount protective cap on a lens mount to prevent dirt or dust from entering the camera.

Read the camera user manual for additional information.

### Contact

In case you have questions or recommendations, please contact the ARRI Camera Service via phone: +49 (0)89 3809-2121

or email: [service@arri.de](mailto:service@arri.de)

or visit <https://www.arri.com/en/technical-service/technical-support/service-requests>