

Replacing the Cinema 2K-RGB diffuser and depolarizer

Christie has identified two optical components (diffuser and depolarizer) in the light path that may degrade and cause a significant reduction in brightness. If this occurs, brightness can be recovered by replacing the diffuser and depolarizer (which are found in the rear IOS assembly).



The illustrations in this document are for representation only and may not depict your projector model exactly.

Affected products

The following products are affected.

- Christie CP2309-RGB
- Christie CP2315-RGB
- Christie CP2320-RGB
- Christie CP2415-RGB
- Christie CP2420-RGB

Required components

Depending on the issue being solved, one of the following components is required.

- Diffuser service kit (P/N: 003-006886-XX)
- Depolarizer service kit (P/N: 003-108417-XX)

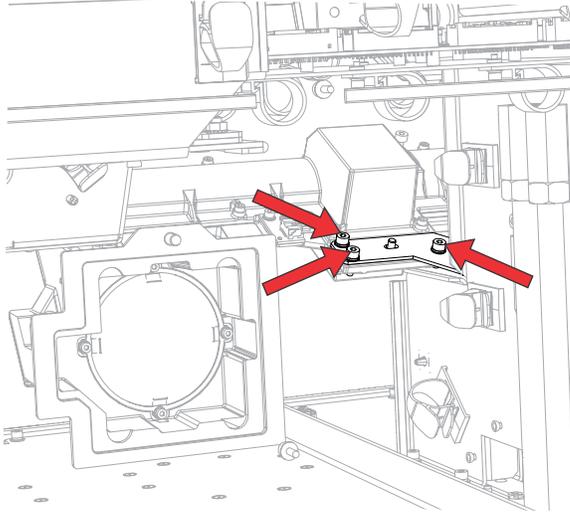
Removing the integrator assembly

Although the integrator assembly removal is not necessary to replace the diffuser, it may be easier to access the short rod integrator assembly if the integrator assembly is first removed. The integrator assembly must be removed to replace the depolarizer.

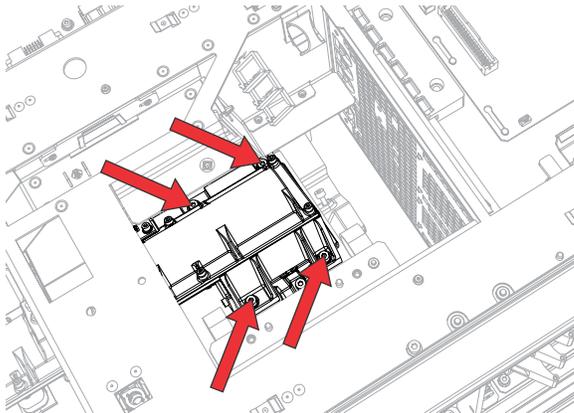
For details on removing components, refer to the *Cinema 2K-RGB Service guide* (P/N: 020-102770-XX) or *Cinema 2415-RGB and CP2420-RGB Service guide* (P/N: 020-103272-XX).

1. Remove the electronics-side, side-intake, front, and top covers.
2. Remove the light engine security and Digital Cinema Initiative (DCI) security covers.

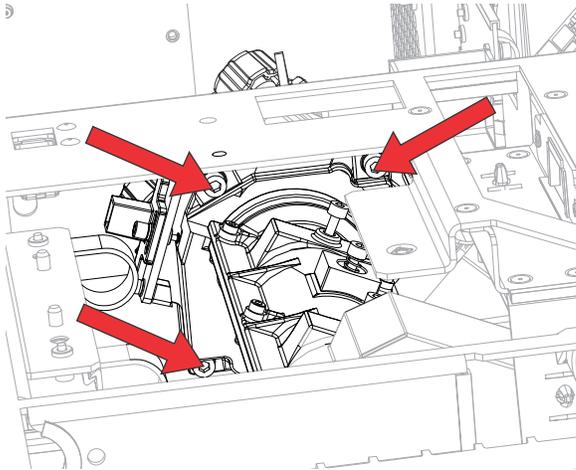
3. Remove the card cage inlet fan bracket.
4. Remove the laser optical subsystem (LOS) radiator.
5. Remove the LOS.
6. Remove the three screws securing the integrator assembly to the integrator bracket.



7. To release the integrator assembly from the projector, remove the four highlighted screws.



8. To release the integrator assembly from the optical path, remove the three highlighted screws.

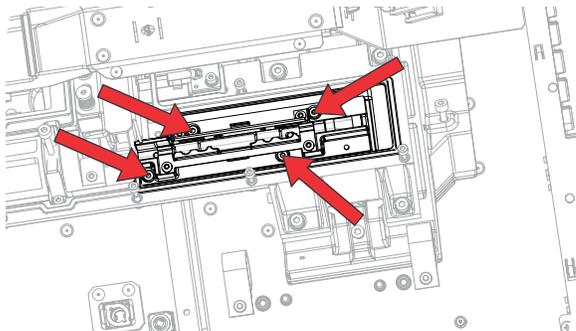


9. Carefully slide the integrator assembly towards the rear of the projector and lift it out.
10. Place the integrator assembly on a clean, flat surface.
To prevent the ingress of dust and other contaminants, Christie recommends covering the LOS opening with a lint free cloth.

Replacing the static diffuser for CP23xx-RGB

Follow these steps to replace the static diffuser for CP2309-RGB, CP2315-RGB, and CP2320-RGB.

1. Remove the rotating diffuser.
2. To remove the short rod integrator assembly, remove the four screws.



3. Lift the short rod integrator assembly from the housing.
4. Remove the two screws and remove the diffuser clip.

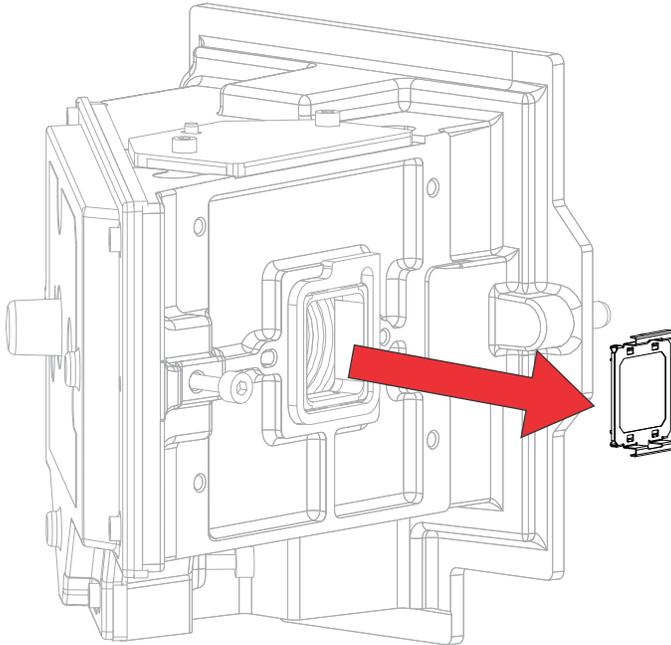


5. Install the new static diffuser element with the diffusion side towards the integrator rod. The diffusion side appears like frosted glass, while the non-diffused surface should cleanly reflect light.
6. Install the diffuser retaining clip.
 - a) Place the clip with the spring features down on the diffuser.
 - b) Loosely install the two silver screws and then tighten the screws while holding the clip in place to prevent movement.

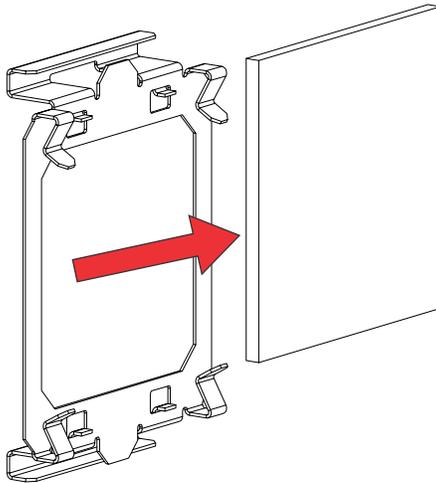
Replacing the static diffuser for CP2415-RGB and CP2420-RGB

Follow these steps to replace the static diffuser for CP2415-RGB and CP2420-RGB.

1. Remove the laser optical subsystem (LOS) coupling elbow.
2. Remove the diffuser holder from the elbow by lifting the static diffuser assembly up and out.



3. Remove the static diffuser from the holder sliding it out.

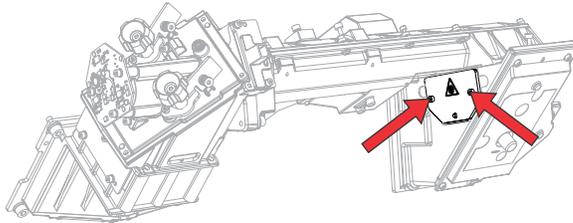


4. Install the new static diffuser by sliding it into the holder.

Replacing the depolarizer

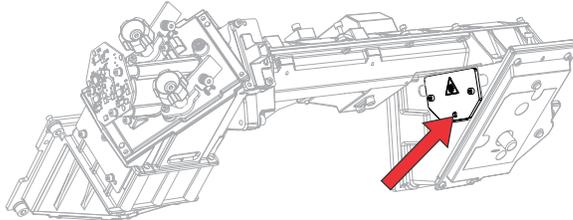
After replacing the diffuser, replace the depolarizer.

1. Remove the laser optical subsystem (LOS) radiator.
2. Remove the two screws securing the depolarizer.



3. Remove the depolarizer and replace it.

When installing the new depolarizer, use the dowel pin to correctly orient it before installing and tightening the two screws.



Completing the installation

After replacing the diffuser and depolarizer, re-install the projector components and complete laser configurations.

1. Re-install the integrator assembly and other projector components removed to access the integrator assembly.

2. Complete the following laser configurations:

- Run LiteLOC calibration.
See the "Performing the LiteLOC™ v1 calibration" topic in the *Upgrading the color sensor board instruction sheet (P/N: 020-103100-XX)* or *LiteLOC™ calibration for cinema projectors instruction sheet (P/N: 020-103436-XX)*.
- Create or adjust the laser configuration files.
- Create MCGD files.
- Create PCT files, if applicable.

Technical support

Technical support for Christie Cinema products is available at:

- Support.cinema@christiedigital.com
- +1-877-334-4267
- Christie Professional Services: +1-800-550-3061 or NOC@christiedigital.com