Solaria One/Solaria One+

Service Manual

020-101039-02

CHRISTIE®

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Service Manual

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NOTICES

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REGULATORY

The product has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a commercial environment. The product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of the product in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense.

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

이 기기는 업무용 (A 급) 으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이점을 주의하시기 바라며 , 가정 외의 지역에서 사용하는 것을 목적으로 합니다 .

GENERAL

Every effort has been made to Make sure accuracy, however in some cases changes in the products or availability could occur which may not be reflected in this document. Christie reserves the right to make changes to specifications at any time without notice. Performance specifications are typical, but may vary depending on conditions beyond Christie's control such as maintenance of the product in proper working conditions. Performance specifications are based on information available at the time of printing. Christie makes no warranty of any kind with regard to this material, including, but not limited to, implied warranties of fitness for a particular purpose. Christie will not be liable for errors contained herein or for incidental or consequential damages in connection with the performance or use of this material.
The product is designed and manufactured with high-quality materials and components that can be recycled and reused. This symbol  means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from regular waste. Please dispose of the product appropriately and according to local regulations. In the European Union, there are separate collection systems for used electrical and electronic products. Please help us to conserve the environment we live in!

Canadian manufacturing facility is ISO 9001 and 14001 certified.

GENERAL WARRANTY STATEMENTS

For complete information about Christie's limited warranty, please contact your Christie dealer. In addition to the other limitations that may be specified in Christie's limited warranty, the warranty does not cover:

a. Damage occurring during shipment, in either direction.
b. Projector lamps (See Christie's separate lamp program policy).
c. Damage caused by use of a projector lamp beyond the recommended lamp life, or use of a lamp supplied by a supplier other than Christie.
d. Problems caused by combination of the product with non-Christie equipment, such as distribution systems, cameras, video tape recorders, etc., or use of the product with any non-Christie interface device.
e. Damage caused by misuse, improper power source, accident, fire, flood, lightening, earthquake or other natural disaster.
f. Damage caused by improper installation/alignment, or by product modification, if by other than a Christie authorized repair service provider.
g. For LCD projectors, the warranty period specified applies only where the LCD projector is in "normal use." "Normal use" means the LCD projector is not used more than 8 hours a day, 5 days a week. For any LCD projector where "normal use" is exceeded, warranty coverage under this warranty terminates after 6000 hours of operation.
h. Failure due to normal wear and tear.

PREVENTATIVE MAINTENANCE

Preventative maintenance is an important part of the continued and proper operation of your product. Please see the Maintenance section for specific maintenance items as they relate to your product. Failure to perform maintenance as required, and in accordance with the maintenance schedule specified by Christie, will void the warranty.

1: Introduction

2: Adjust the Image

3: Parts and Module Replacement

4: Backup, Restore, and Upgrade Projector Files

5: Troubleshooting

6: Available Replacement Parts and Modules

7: Interconnections

8: Exploded Views

CHRISTIE

1 Introduction

This manual provides technical information for assisting qualified Christie authorized service technicians in the servicing and repair of Solaria One and Solaria One+ projectors. Unless otherwise noted, all images in this document are of the Solaria One+ projector.

Every effort has been made to make sure the information in this manual is accurate and complete. However, due to continuing research all information is subject to change without notice. Christie assumes no responsibility for omissions or inaccuracies.

1.1 Safety Information

1.1.1 Projector Skins

 **UV HAZARD! When servicing the projector and the top lid is removed everyone within the immediate vicinity must wear safety glasses with side shields and Christie approved protective safety clothing (598900-95). Failure to comply results in death or serious injury.**

⚠ WARNING Never operate the projector or the fans without all the covers installed. Failure to comply could result in death or serious injury.

Durable covers protect the components within the projector. Several removable covers (also called skins) let you access serviceable components without disassembling the projector completely.

1.1.2 Lamp

 **Only service technicians trained specifically by Christie on lamp replacement and lamp safety may handle the lamp. The high-pressure lamp may explode if improperly handled. Always wear Christie approved protective safety clothing (598900-95) whenever the internal lamp door is open. Failure to comply results in death or serious injury.**

 **EXPLOSION HAZARD! Lamp replacement must be performed by Christie trained personnel only. Wear authorized protective clothing (598900-95) whenever the lamp door is opened and when handling the lamp. Never apply a twisting or bending force to the quartz lamp body. Use the correct wattage lamp supplied by Christie. Make sure those within the facility of the projector are also wearing protective safety clothing. Failure to comply results in death or serious injury.**

 **Never attempt to remove the lamp when it is hot. The lamp is pressurized when hot and may explode. Allow the lamp to cool completely. Failure to comply results in death or serious injury.**

Replace the lamp when it reaches its warranted lifetime. An older lamp becomes increasingly fragile and more susceptible to sudden failure or explosion. To determine how many hours the lamp has been operating, on the projector touch panel controller (TPC) tap the status icon in the top left corner and then tap **Lamp Info** in the left pane. The number of lamp operational hours is displayed in the **Total Hours on Installed Lamp** field.

1.1.3 Lamp Power Supply

The lamp power supply (LPS) is located at the rear of the projector. The LPS supplies the lamp with power.

⚠ DANGER The LPS is cannot be serviced. Never attempt to open or service the LPS. A faulty supply must be replaced. Failure to comply results in death or serious injury.

1.1.4 Power

Power supplies are not serviceable. Any faulty power supply module must be replaced. Never open or attempt to service a power supply. Contact Technical Support for a replacement.

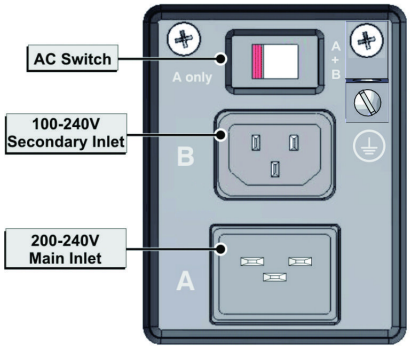
⚠ DANGER High voltages may be exposed—Qualified personnel only. Always turn the projector off and disconnect it from AC power prior to disassembly. Failure to comply results in death or serious injury.

⚠ WARNING Do not operate the projector if the AC supply is not within the voltage range specified on the license label on the back of the projector. Always turn the projector off before you unplug the AC power cord. Wait 15 minutes for the main exhaust fan to turn OFF and for the lamp to cool before you unplug the projector. Failure to comply could result in death or serious injury.

⚠ WARNING A dedicated earth wire must be installed on the projector before it can be connected to power. The dedicated earth wire can only be installed by a Christie accredited service technician or an electrician. All installations must meet the electrical codes for your area. The protected earth wire must be green/yellow 12 AWG minimum. Failure to comply could result in death or serious injury.

Power remains available to the projector even after lamp shutdown (STANDBY mode) so that online monitoring and software upgrades can be performed. The projector is powered by 200–240VAC power from the theater. The switching LPS (Lamp Power Supply) provides a well-regulated DC current up to 97 amps with a maximum LPS power of 2.3kW. The power output from the LPS is controlled by the PIB through a dedicated 'RS232' connection from the backplane to the LPS. A secondary 100–240VAC inlet can be selected using a switch, which allows the main electronics to be powered separately through a universal 100–240VAC UPS. The main LPS is powered through the main 200–240VAC inlet. A discrete AC switch above the 2 inlets lets you select how the main electronics are powered.

- From the main inlet: **A only**, which requires only one power cord to supply the entire unit.
- From the secondary inlet supplied by the UPS: **A+B** using an additional power cord (not provided).



1.1.5 UV Light

UV HAZARD! Never look directly into the lens or into an open projector. The extreme light output could cause permanent eye damage. Wear ultraviolet-blocking eye wear with side-guards if servicing with the lamp ON. Failure to comply results in death or serious injury.

The projector lamp is an intense source of light and heat. One component of the lamp light is ultraviolet (UV) light, which can produce the same effect on the skin and eyes as sunlight. Avoid exposure to UV radiation by keeping the lamp fully enclosed when you operate the projector and by wearing authorized protective clothing (598900-95) before opening the lamp door. DO NOT operate the lamp without the lamp door in place.

NOTES: 1) *The American Conference of Governmental Industrial Hygienists (ACGIH) recommends that occupational UV exposure for an 8-hour day be less than 0.1 microwatts per square centimeters of effective UV radiation. An evaluation of your workplace is advised to Make sure that employees are not exposed to cumulative radiation levels exceeding the government guidelines for your area.* **2)** *Be aware that some medications are known to increase sensitivity to UV radiation.*

This projector must be operated in an environment that meets the operating range specifications.

1.1.6 High Temperature

⚠ DANGER Only Christie authorized service technicians trained specifically on lamp replacement and lamp safety may handle the lamp. A high-pressure lamp may explode if improperly handled. Always wear Christie approved protective safety clothing (598900-95) whenever the lamp door is open or while handling the lamp. Never attempt to access the lamp while it is running. Wait at least 15 minutes after turning the lamp off before turning the projector off, disconnecting it from AC, and opening the lamp door. Failure to comply results in death or serious injury.

The projector lamp operates at very high temperatures and pressures. If you do not let the bulb cool sufficiently prior to handling, the lamp could explode and cause personal injury or property damage. After powering the lamp off, you must wait at least 15 minutes before disconnecting AC and opening the lamp door. This practice provides enough time for the internal lamp cooling fans to cool the bulb. Always cool the bulb completely before handling. Always wear Christie-approved protective safety gear (598900-095) before opening the lamp door.

1.1.7 Power Cord

⚠ WARNING Do not operate the projector if the AC supply is not within the specified voltage and power range. Power rating information for the projector is provided on the license label on the back of the projector. Always power down the projector before unplugging the AC power cord. Wait 15 minutes for the main exhaust fan to turn off and for the lamp to cool sufficiently before unplugging the projector. Failure to comply could result in death or serious injury.

Use only the power cord provided with the projector. DO NOT compromise safety by using other connectors.

1.1.8 Lead Dress

Before you service the projector, always observe the original lead dress carefully. Take extra precautions to secure all harnessing properly, especially in the high voltage circuitry areas (that is, lamp cables). Replace any wire that appears to have damaged insulation. Always replace ground connections.

1.1.9 Ground/Earth Connections

DANGER! Never defeat the ground/earth connection of the projector for any reason. Failure to comply results in death or serious injury.

After you service a projector, it is a critical safety requirement to make sure that all ground/earth connections are properly connected before turning the projector on. Failure to ground/earth the projector properly can allow a potentially hazardous current to pass from any exposed metal on the projector through your body. Maintain the ground/earth connection of the projector during all operations.

1.1.10 Cleaning

ELECTRICAL SHOCK HAZARD! Make sure that the projector is completely powered down and disconnected from AC power before the lens or any of the projection head covers or doors are loosened and removed. Wear gloves when handling internal components. Failure to comply results in death or serious injury

You must keep all internal components clean during any service procedure. In particular, all of the projector optics must remain free of contaminants to perform at the level specified for the projector. Even a small amount of dust or a fingerprint can degrade the image or cause a noticeable reduction of brightness. When you service the projector, take all necessary measures to avoid touching or contaminating optical surfaces. Always wear gloves (provided) when you handle internal components. Make sure that the projector is OFF and disconnected from AC before you clean it.

If you follow the proper precautions, a minimum amount of cleaning is required during and after servicing.

1.2 Security Roles

Only Christie authorized service technicians should perform field repair and service to the unit. Marriage must also only be performed by Christie authorized service technicians. Theater personnel may only perform diagnostic functions, such as running the Interrogator

1.3 Technical Support

For immediate assistance with common problems, see *Troubleshooting, on page 5-1*.

If you are unable to resolve your issue, contact Christie support:

- North and South America: +1-800-221-8025 or *tech-support@christiedigital.com*
- Europe, Middle East, and Africa: +44 (0) 1189 778111 or *techsupport-emea@christiedigital.com*
- Asia Pacific: *tech-asia@christiedigital.com*

In order that a support representative can better assist you, have the model and serial number of your projector ready.

2 Adjust the Image

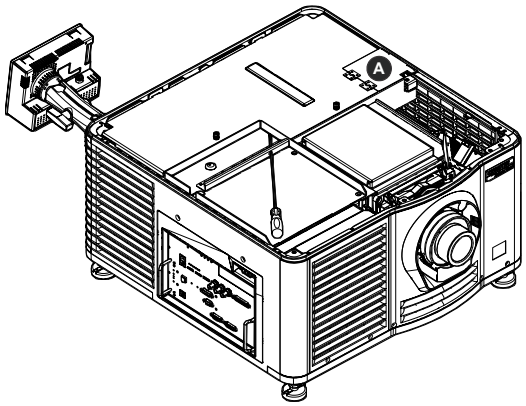
This section provides information and procedures for adjusting the projector image.

2.1 Rotate the Integrator Rod

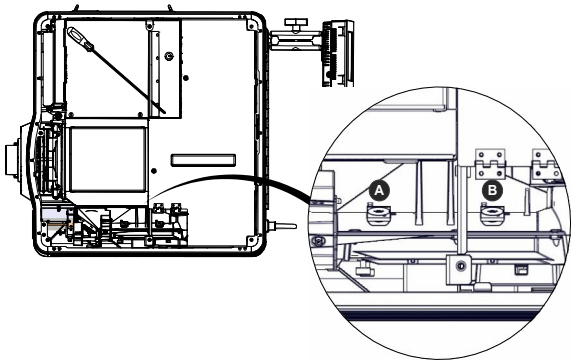
UV HAZARD! When servicing the projector with the top lid removed anyone within the immediate vicinity must wear safety glasses with side shields.

Whenever the integrator module is moved or replaced, its rotation must be corrected for proper focus and full illumination of the three digital micromirror devices (DMDs).

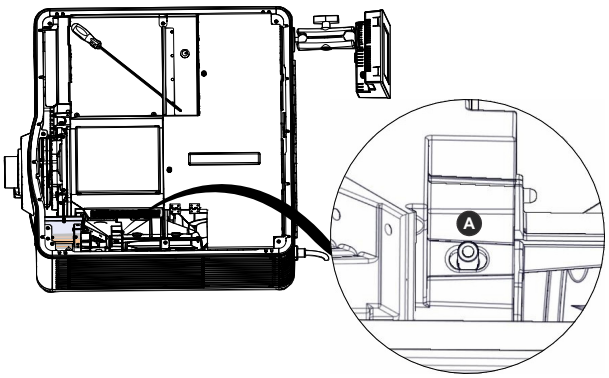
1. Display a full white field test pattern:
   a. On the touch panel controller (TPC), tap the **Test Pattern** icon ( ) in the task bar.
   b. Tap **All Test Patterns**.
   c. Tap **RGB-12bit-Full Screen White**.
2. Remove the top lid. See *Remove the Top Lid on page 3-4*.
3. Put on a pair of heat resistant gloves and UV resistant glasses.
4. Open the integrator rod access door (**A**).



5. Loosen the 2 integrator rod set screws (**A**) and (**B**).



6. If the image is not parallel to the screen, rotate the integrator rod.
7. If the edges of the image are not in focus, loosen the two set screws on the end of the optical housing and then move the handle (**A**) attached to the lens backward and forward.

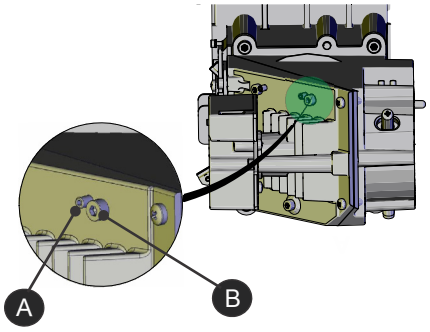


8. Verify there an no shadows on the screen. If shadows appear, see *Align the Fold Mirror on page 2-2*.
9. Tighten all of the integrator rod set screws.
10. Replace the top lid.

2.2 Align the Fold Mirror

If a corner or edge of an image is missing, the fold mirror might be misaligned with the optical system. To correct this issue:

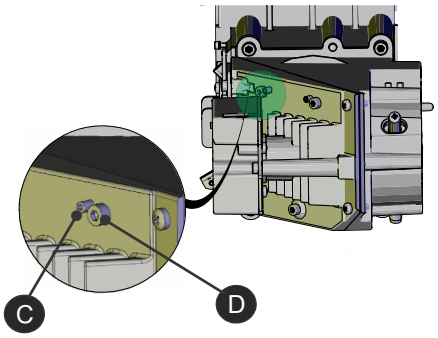
1. Remove the top lid and set it aside. See *Remove the Top Lid on page 3-4*.
2. Display a full white test pattern:
   a. On the touch panel controller (TPC), tap the **Test Pattern** icon ( ) in the task bar.
   b. Tap **All Test Patterns**.
   c. Tap **RBG-12bit-Full Screen White**.
3. Insert a hex driver in the first set screw (A) and a hex driver in the first cap screw (B).



A	Set Screw (x2)
B	Cap Screw (x2)

4. Equally turn the set screw (A) and cap screw (B) in opposite directions until the black corner is removed.

5. If the black corner remains, insert a hex driver in the second set screw (C) and a hex driver in the second cap screw (D).



C	Set Screw (x2)
D	Cap Screw (x2)

6. Equally turn the set screw (A) and cap screw (B) in opposite directions until the black corner is removed.
7. Replace the top lid.

2.3 Adjust Vertical Boresight Angle

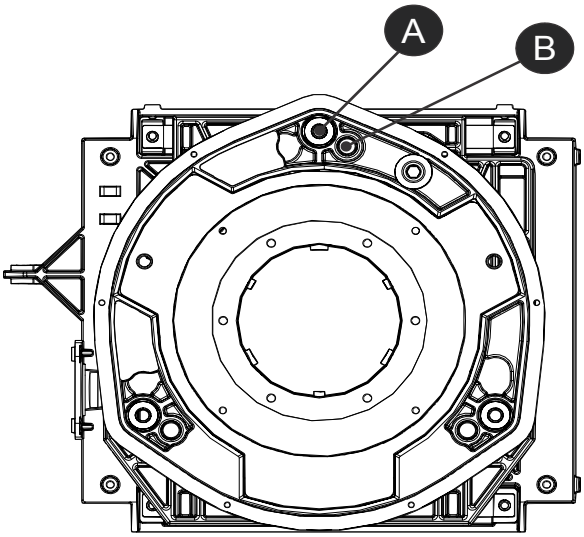
⚠ WARNING A boresight adjustment should only be made when the image cannot be focused uniformly on the screen by aligning the projector to the screen and focusing the lens. When adjusting boresight, you must maintain the boresight distance from the lens to the prism plane set by Christie. For example, when you move the top screw outward, turn the bottom two boresight screws to maintain the overall distance.

⚠ CAUTION Only adjust vertical boresight 1/8 of a turn or less at one time to maintain optimal lens performance (i.e. factory setup of absolute lens distance to the prism). It is critical that each turn of the cap screws is tracked to ensure adjustments are accurate.

It is recommended that you complete a top and bottom boresight adjustment before adjusting the horizontal boresight.

1. Remove the lens surround.
2. Display the DC2K Framing2 test pattern:
   a. On the touch panel controller (TPC), tap the **Test Pattern** icon ( ) in the task bar.
   b. Tap **All Test Patterns**.
   c. Tap **DC2K Framing 2**.

3. Loosen the set screw (B).



A	Cap Screw - Adjusts top and bottom boresight
B	Set Screw - Locks or unlocks the cap screw

4. Turn the vertical cap screw (A) 1/8 of a turn counter-clockwise.
5. Adjust both left and right horizontal adjusters by half the number of turns, in the opposite direction of the vertical adjust. For example, if the vertical adjust cap screw was turned 1/8 of a turn, the left and right horizontal cap screws should be turned 1/16 of a turn in the opposite direction.
6. Check the screen each time an adjustment is made. If the quality of the projected image has degraded, turn the vertical adjust cap screw 1/8 of turn clockwise. Ensure the left and right horizontal adjusters are adjusted equally in the opposite direction to correct axial focus. **NOTE:** *The 1/8 of a turn is a suggestion only and can be less if needed; however, it should never be exceeded. Always compensate both left and right horizontal adjustments according to the vertical adjustment.*
7. Check the image after each adjustment. Continue to make adjustments until both top and bottom are equally sharp. To make sure the lens is in the same relative position, adjust the left and right horizontal adjusters in the opposite direction at the same time.
8. When the top and bottom of the image are equally in focus lock the set screw to hold it in position. Recheck the image.
9. If additional adjustment is required, see *Adjust Horizontal Boresight on page 2-4*.
10. Replace the lens surround.

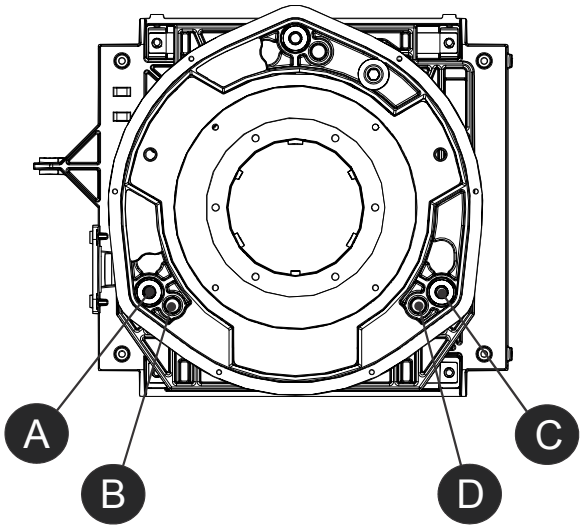
2.4 Adjust Horizontal Boresight

⚠ WARNING A boresight adjustment should only be made when the image cannot be focused uniformly on the screen by aligning the projector to the screen and focusing the lens. When adjusting boresight, you must maintain the boresight distance from the lens to the prism plane set by Christie. For example, when you move the top screw outward, turn the bottom two boresight screws to maintain the overall distance.

⚠ CAUTION Only adjust horizontal boresight 1/8 of a turn or less at one time to maintain optimal lens performance (i.e. factory setup of absolute lens distance to the prism). It is critical that you count each turn of the cap screws to ensure accurate adjustment.

Typically, horizontal boresight does not require adjustment. It should only be adjusted if a large horizontal angular offset to the screen is required.

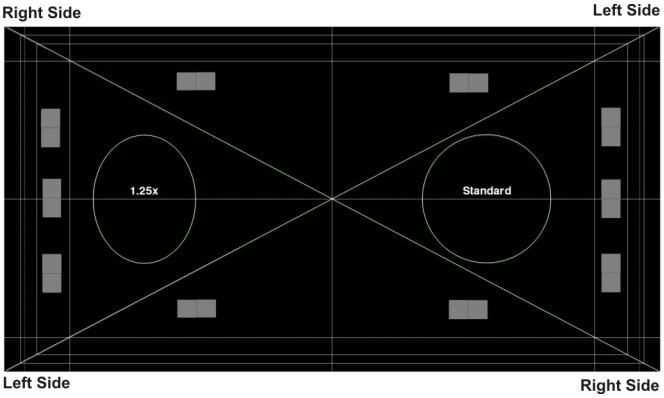
1. Remove the lens surround.
2. Display the DC2K Framing test pattern:
   a. On the touch panel controller (TPC), tap the **Test Pattern** icon () in the task bar.
   b. Tap **All Test Patterns**.
   c. Tap **DC2K Framing**.
3. Loosen the right boresight set screw (B).



A	Right Boresight Cap Screw
B	Right Boresight Set Screw
C	Left Boresight Cap Screw
D	Left Boresight Set Screw

4. Turn the right boresight cap screw (A) 1/16 of a turn clockwise.
5. Adjust the left boresight cap screw (C) equally in the opposite direction.
6. If the quality of the projected image has not improved, turn the right boresight cap screw 1/16 of turn counter-clockwise. Make sure the left adjuster is adjusted equally in the opposite direction.

7. Check the screen each time an adjustment is made. The right-side adjustments affect the top right and bottom left points on the screen. Once both cross hairs are in focus lock the set screw for right boresight.



8. Repeat Steps 5 to 7 for the left-side.
9. Each corner of the screen should be equally in focus when horizontal boresight is completed correctly. If necessary, repeat vertical boresight. Only adjust vertical boresight 1/8 of a turn or less at one time to maintain optimal lens performance (i.e. factory setup of absolute lens distance to the prism). It is critical that each turn of the cap screws is tracked to ensure adjustments are accurate.

2.5 Yellow Notch Filter Color Calibration

UV HAZARD! When servicing the projector with the top lid removed anyone within the immediate vicinity must wear safety glasses with side shields.

Complete this procedure whenever the yellow notch filter is moved or replaced, or when a new IOS (Illumination Optics System) is installed.

1. Set up a spectroradiometer in front of the viewing screen and aim it at the center of the screen.
2. Create an MCGD file:
   a. Tap **Menu** > **Advanced Setup** > **MCGD File Setup**.
   b. Tap **Save As**.
   c. Enter a name for the MCGD file in the **Filename** field and then tap **OK**.
   d. Tap the option button in the red area of the chromaticity image to display the red test pattern.
   e. Measure the red chromaticity with a spectroradiometer.
   f. Record the red chromaticity value.
   g. Repeat steps d to f for the green, blue, and white chromaticity measurements. Select the test pattern that matches the color you are measuring.
   h. Enter the chromaticity measurements you recorded in step f in the red, green, blue, white, and black x and y fields.
   i. If the MCGD file will be associated with a 3D channel, tap **Enable 3D** and select a frame rate in the **Frame Rate N:M** list.
   j. Tap **Save**.
3. Create a channel that includes the new MCGD file:

a. Tap **Menu** > **Channel Setup**.

b. Select a channel in the **Channel Name** list.

c. Tap the **Launch Dialog**  icon.

d. Enter a name for the channel and tap **Enter**.

e. Complete these fields on the Config 1 screen:

Field	Description
Icon	The icon associated with the channel.
Input	The location or connection for the current input.
Data Format	The source color depth (8-10-12 bit) for the channel.
Source File	The resolution and aspect ratio for the channel.
Screen File	The screen type, masking, cropping, and lens settings for the channel.
Use PCF	Associates the channel with a Projector Configuration File (PCF) and prevents Channel adjustments.
PCF	The PCF file associated with the channel.
Lamp File	The lamp file associated with the channel. Tap the **Launch Dialog** icon to edit the lamp file settings. Any changes made to the Lamp File settings are applied to all channels that use this lamp file.

f. Tap Config 2 in the left pane and then complete these fields:

Field	Description
Measured Color	The name of the Measured Color Gamut Data (MCGD) file you created in step 5.
Target Color	The Target Color Gamut Data (TCGD) value. Select **Color Verification**.
Color Space	The method of color decoding for the current source. The default is YCbCr for all DVI sources. The default for all cinema sources is Unity RGB. This option is not available when **Use PCF** is selected.
Gamma	The gamma correction required for the proper tonal range of the source material.This option is not available when **Use PCF** is selected.
LUT_CLUT	Applies a 3D color cube for increased color accuracy. This option is not available when **Use PCF** is selected.
Scan Type	The video scan type. The default is **Progressive**.
Automatic Scan Type Detection	Automatically performs scan type detection. This feature is supported for PIBS1 inputs only.
Use PCT	Applies Christie Pureformity Color Technology (PCT) to the channel.
PCT File	Identifies the Christie Pureformity Color Technology (PCT) file associated with the channel.

g. Tap **3D Control** in the left pane if the channel will be used to display 3D content. Complete these fields:

Field	Description
Enable 3D	Enables 3D.
3D Test Patterns	Displays 3D test patterns.

Field	Description
3D Sync Input Mode	Specifies whether a specific frame of input data has left eye or right eye data. Select Use White Line Code (true and inverted) if you are using a single 3D input signal in which an embedded white line at the bottom of each frame identifies left and right, and an additional separate 3D stereo sync input at the GPIO port is not present. The bottom row of the left-eye sub-field should be pure white for the left-most 25% of the pixel row and pure black for the remainder of the row. The bottom row of the right-eye sub-field should be pure white for the left-most 75% of the pixel row and pure black for the remainder of the row. Select Use Line Interleave for 3D source data only. When specified, the ICP will de-interleave each line into the left image or right image in memory as specified. Line interleave can be used with PsF 3D data (left and right data for one field, then left and right data for second field).
L/R Display Reference	Specifies which frame of eye data to display during a specific display frame. This signal is referenced to the display frame rate which is specified by the Frame Rate N:M.
Frame Rate N:M	Sets how many frames to display per number of frames that form one complete image. Increase the display frame rate to reduce flicker from your source(s).
L/R Display Sequence	Defines the frame order (L-R or R-L) required for 3D perspective. This option only has meaning when the Frame Rate factor M is equal to 2. For this case, 2 input frames of data are required to constitute a complete frame of image data. This parameter tells the system which frames go together to make a complete image. **NOTE**: *When using **Line Interleave** as the **3D Sync Input Mode**, ensure that **Left (L1R1 L2R2)** is selected.*
3D Sync Polarity	Keeps 3D stereo sync output the same as input (true) or reversed (inverted). **True**: 3D L/R sync output from GPO will match L/R sync input. **Inverted**: 3D L/R sync output from GPO will be the opposite of sync input (left = right, right = left).
Dark Time	Creates a blank time interval between left and right frames to allow for LCD shutter glasses, Z screen, or rotating 3D wheel to synchronize the output. See Dark Time and Output Delay Notes below. Values between 0 and 65535 are accepted. Tap the **Launch Dialog** button  to enter the dark time value.
Output Delay	The non-image time in Microseconds (µ). Offset 3D stereo sync output in relation to dark time interval. Acceptable values are between -32768 and 32767 are accepted where a positive offset = delay and negative offset = start early. Tap **Launch Dialog** to enter the output delay value.
Phase Delay	The degree of reference between the left and right sync output. Values between -180 and 180 are accepted. Tap **Launch Dialog** to enter the phase delay value.

h. Tap **Activate** to activate the channel.

4. Display a RGB-12bit-Full Screen White test pattern:

a. On the touch panel controller (TPC), tap the **Test Pattern** icon ( ) in the task bar.

b. Tap **All Test Patterns**.

c. Tap **RBG-12bit-Full Screen White**.

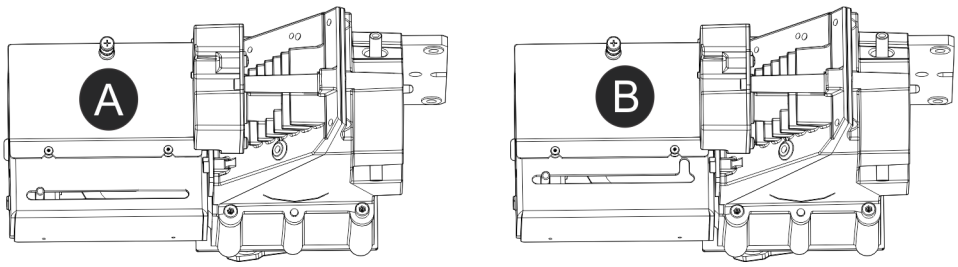
5. Measure the color point of the pattern with the spectroradiometer and verify that the values are within these tolerances:

Color	X	Tolerance	Y	Tolerance
Red	0.640	+/- 0.002	0.320	+/- 0.002
Green	0.280	+/- 0.002	0.640	+/- 0.002
Blue	0.160	+/- 0.002	0.100	+/- 0.002
White	0.314	+/- 0.002	0.351	+/- 0.002

If the values are outside the tolerances:

a. Remove the top lid. See *Remove the Top Lid on page 3-4*.

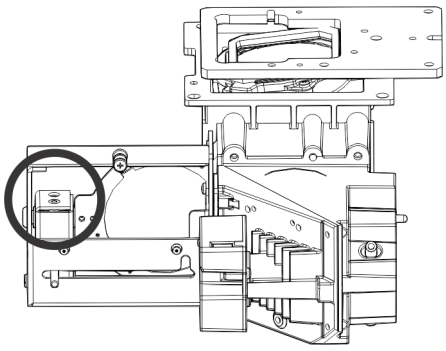
b. Remove the screw holding the yellow notch filter cover.



Note: Two different yellow notch filter assemblies are used in the Solaria One and Solaria One+ projectors; version A and version B. Version B allows greater adjustment of the yellow notch filter and a cut out holds the adjustment lever in position.

c. Adjust the position of the yellow notch filter:

- For version A, loosen the set screw and then manually rotate the yellow notch filter. Tighten the set screw when the adjustment is complete.



- For version B, loosen or tighten the set screw to increase or decrease the angle of the yellow notch filter.

d. Repeat steps 4 and 5. Replace the yellow notch filter if these corrective measures do not work.

e. Replace the yellow notch filter cover.

f. Replace the top lid.

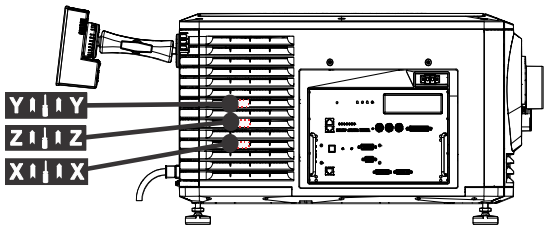
6. Repeat steps 4 and 5 for the RBG-12bit-Full Screen Red, Green, and Blue test patterns.

2.6 Align the Lamp

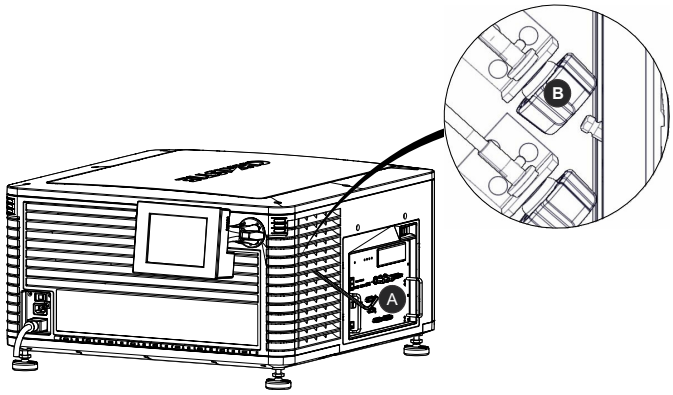
You must adjust the lamp position whenever you install a lamp. Before you adjust the lamp, turn the lamp on and open the douser.

1. Tap **Menu** > **Advanced Setup** > **Lamp Power**.
2. Verify the value in the **Power%** field is at a level suitable for your requirements.
3. Tap **Menu** > **Advanced Setup** > **Light Adjust**.
4. Record the number in the **Intensity** field.
5. Tap **Display Full Screen White Test Pattern**.
6. Complete a coarse lamp adjustment:

   a. Locate the Y axis adjustment label on the operator side of the projector.



   b. Insert a 5 mm hex driver (**A**) through the louvers at an angle below the Y axis adjustment label until it is firmly seated on the Y axis adjustment screw (**B**).



   c. Turn the screw clockwise or counterclockwise until the value in the **Intensity** field peaks and then reduces.

   d. Remove the hex driver and repeat steps a to c to adjust the Z and X axis.

7. Allow the lamp to warm for a minimum of 10 minutes.
8. Complete a fine lamp adjustment:

   a. Locate the Y axis adjustment label on the operator side of the projector.

b. Insert a 5 mm hex driver through the louvers until it is firmly seated on the Y axis adjustment screw.

c. Turn the screw slowly clockwise or counterclockwise until you determine the highest value.

d. Remove the hex driver and repeat steps a to c to adjust the Z and X axis.

9. Verify the value in the **Intensity** field is greater or equal to the number you recorded in step 4. If value is lower, repeat step 8.

2.7 DMD Convergence

⚠ CAUTION Do not wear an ESD strap when performing convergence on a live unit. Frequently contact a bare metal surface to prevent static build-up.

NOTICE! This procedure should only be performed by Christie accredited technicians.

NOTICE! To prevent overheating of the Satellite Formatter Board FPGA's and DMDs, do not run the projector with the light engine blower duct removed.

The projector uses three separate DMD panels to produce three separate red, green and blue image components. To ensure the most accurate color representation across the whole image it is essential the three panels are perfectly aligned so that all pixels line up. Read this section in its entirety before performing a convergence adjustment.

2.7.1 Preparation

- Reset the red, green, and blue digital micromirror device (DMD) values to their default settings:
  - Tap **Menu** > **Service Setup** > **Digital Convergence** > **Default**
- Make sure the projected image is centered and focused on the screen. If it is not, a boresight alignment might be required. See *Adjust Vertical Boresight Angle on page 2-3*.
- Make sure the primary lens is installed.
- Configure the projector for maximum usable brightness for the installed application:
  - 14FL for Standard 2D
  - ~25-30FL for Single Projector 3D with a silver screen
  - 25FL per projector for Dual Projector 3D
- Allow the projector to operate for 15 minutes or longer.
- Monitor the prism temperature during the convergence adjustment and keep it within a few degrees of the nominal temperature. Lower the lamp power to reduce the temperature.
- The active screen file should be 2048 x 1080 no crop to prevent any scaling of your reference test pattern.
- Use a 2.5 mm driver with heat-shrink tubing (2.0 inch and 6.5 inch lengths).
- The red image component is used as the fixed reference; no adjustment is required. The recommended convergence adjustments are from green to red and blue to green.
- Complete the vertical and rotation adjustment first and then the horizontal adjustment.

2.7.2 Evaluate Convergence

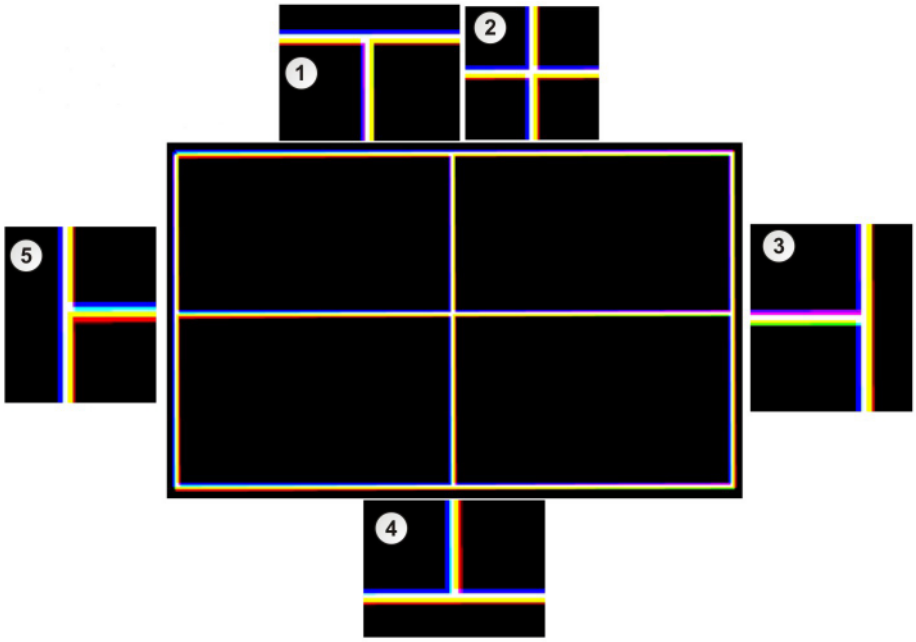
1. Display the DC2K Framing test pattern:

   a. On the touch panel controller (TPC), tap the **Test Pattern** icon () in the task bar.

   b. Tap **All Test Patterns**.

c. Tap **DC2K Framing**.

2. Turn the zoom adjustment ring on the lens until the entire outer edge of the test pattern frame fits the screen.
3. Verify one color at a time.
4. Look for “twist” using the center vertical and horizontal lines – scan from one side of the screen to the other, observing any change in vertical position of the color in question relative to the point where you started. In this example, red is twisted counter-clockwise and blue is high and to the left with no apparent twist.



Number	Location	Description
1	Top Center	Note Yellow to the right, Magenta/Blue to the left, and Yellow in the middle. This shows that Blue is separated from Green to the left. Blue above shows that Blue is higher than both Green and Red.
2	Center	Shows that Blue is high and to the left and Red is twisted.
3	Right	Note Blue to the left, Yellow to the right, and White in the middle.This shows that Blue is separated from Green to the left. Compare to the left, where Magenta is to the top on the right, Red is on the bottom to the left. This is evidence of counter-clockwise twist in Red and that Blue is high.
4	Bottom Center	Note Blue to the left, Yellow/Red to the right, Cyan in the middle. This shows that Blue is separated from Green to the left and upward. Compare with Top Center where Red is to the right on the bottom, to the left on the top. This is evidence of counter-clockwise twist.
5	Left	Note Blue to the left, Yellow/Red to the right, and White in the middle. This shows that Blue is separated from Green to the left. Compare to the right, where Red is to the bottom on the left, Magenta is on the top to the right. This is evidence of counter-clockwise twist in Red and that Blue is high

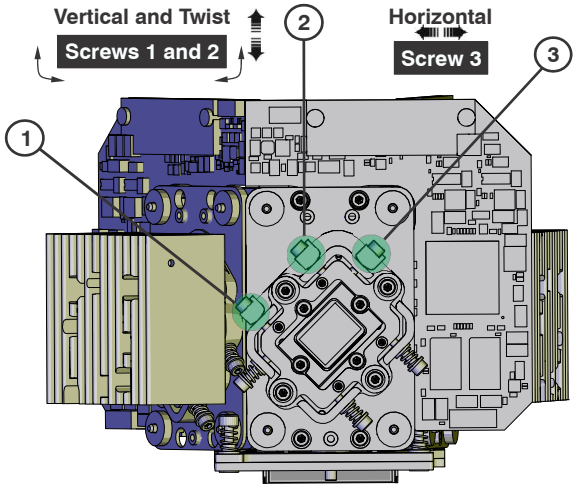
2.7.3 Adjust Red/Green/Blue Formatter Convergence

⚠ CAUTION

Remove all jewelry before you adjust convergence.

NOTE: *Do not apply excessive force on the adjustment screws. This might cause the convergence adjustment to become misaligned after you remove the adjustment tool.*

The Red and Green Formatters are identical in design and adjuster function, but Red cannot be adjusted due to space limitations. The Blue formatter board physical design is different, but the adjustment functions are the same. The vertical and twist adjustments work together on the horizontal axis.



Light Engine Rear View - Heat Sink Hidden
Adjust Blue and Green Channels Only

Screen/Screw	1	2	3
↻	↻	↻	N/A
↺	↺	↺	N/A
⇧	↻	↻	N/A
⇩	↺	↺	N/A
⇦	N/A	N/A	↻
⇨	N/A	N/A	↺

The physical layout of the Formatter boards determines the behavior of the Twist and Vertical adjustments:

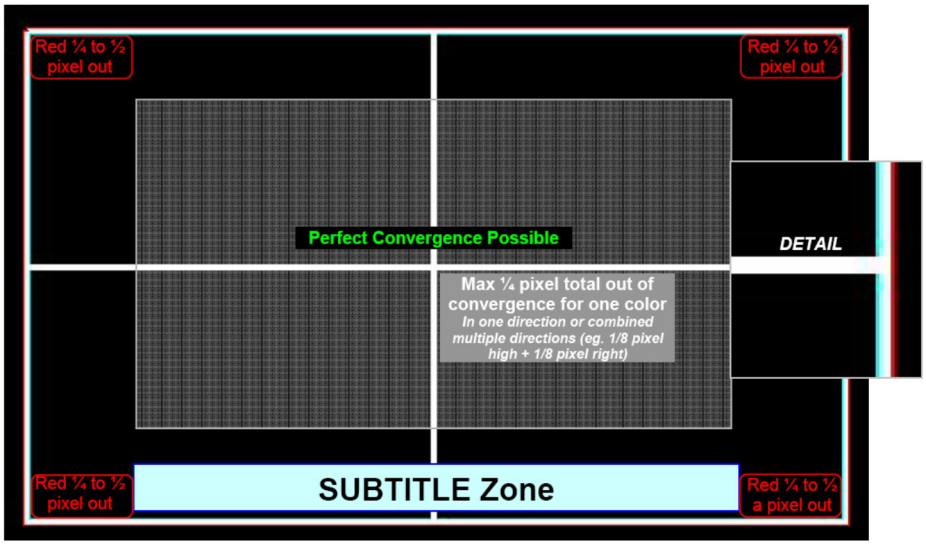
- The vertical adjustment screw and twist adjustment screw interact with each other such that if one is turned in the opposite direction of the other, the twist is affected.
- If both screws are turned equal amounts in the same direction, the image moves vertically.
- The horizontal adjustment screw is independent of the vertical and twist adjustments.

You do not always have to turn the screws simultaneously. However, if you adjust one screw at a time you will need to complete an equal or equal and opposite turn on the other screw to prevent binding and to achieve the correct adjustment.

2.7.4 Evaluate Convergence Adjustments

When your convergence adjustment is complete, the test pattern should have these characteristics:

- The center area should be perfectly aligned and display solid white pixels.
- The Red should be evenly 1/4 to 1/2 a pixel out all the way around the outer area and display cyan (green+blue) toward the center of the screen.
- Green and Blue should always be perfectly aligned to each-other (to within ¼ pixel total in one or a combination of directions.)

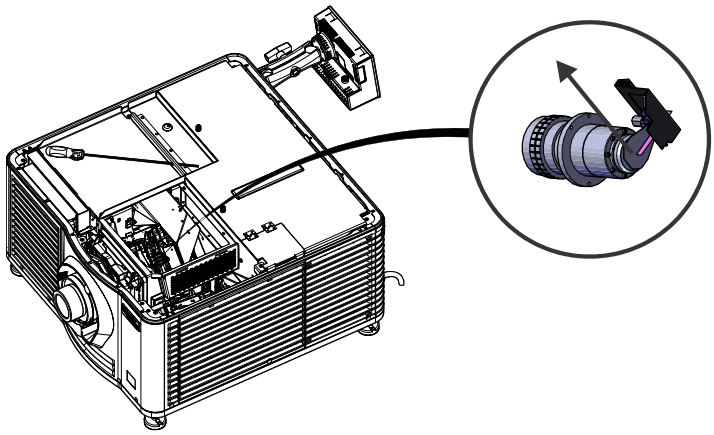


2.8 Manually Override the Shutter

Use this procedure to override the shutter when it remains partially open or closed. When time permits, replace the shutter assembly.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid.
4. Remove the high security lid.

5. Manually open or close the shutter.



6. Replace the high security lid and the top lid.
7. Replace the lens.
8. Reconnect the projector to AC power and turn it on.

3 Parts and Module Replacement

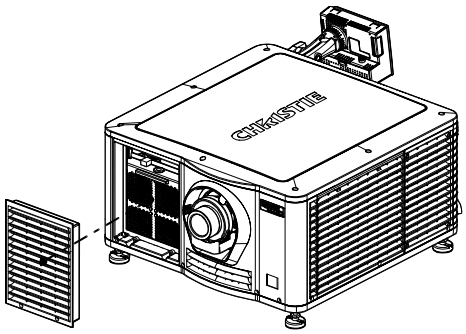
When you order replacement parts, provide this information found on the product license label on the rear of the projector.

- Projector Model
- Projector Serial Number
- Manufacture Date

3.1 Inspect the Card Cage Filter

⚠ CAUTION Use only high efficiency Christie approved filters. Never operate the projector without the filter installed.

You should check the condition of the card cage air filter monthly. Clean or replace the card cage air filter sooner if you are operating the projector in a dusty or dirty environment. The filter is located on the left side of the projector behind the air filter cover.



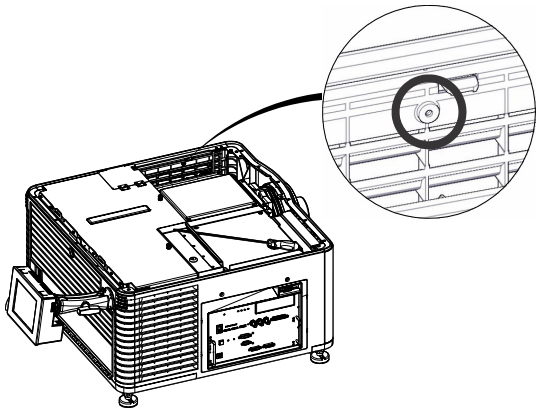
1. Loosen the 2 captive screws on the bottom of the filter cover.
2. Pull the cover out and down.
3. Slide the air filter out and inspect it.

   If the filter appears dirty and you cannot see through it, replace it with a new paper filter, or clean it if it is a washable filter. See *Clean a Washable Filter, on page 3-3* for cleaning instructions.

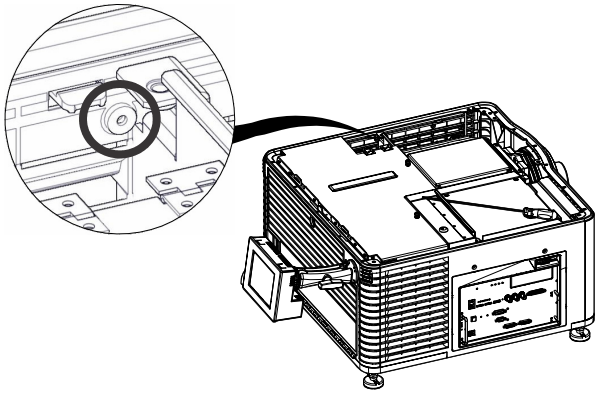
   If the filter appears clean, continue to step 4.
4. Replace the air filter with the airflow indicator facing toward the projector.
5. Install the air filter cover by inserting the 2 bottom tabs and then pushing the cover closed.
6. Tighten the 2 captive screws.

3.2 Inspect the Light Engine Compartment Filter

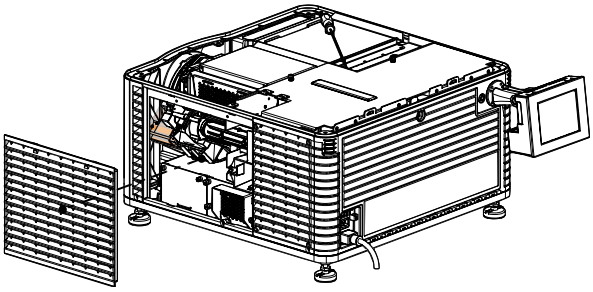
1. Remove the top lid.
2. Reach into the projector and then loosen the first service panel screw.



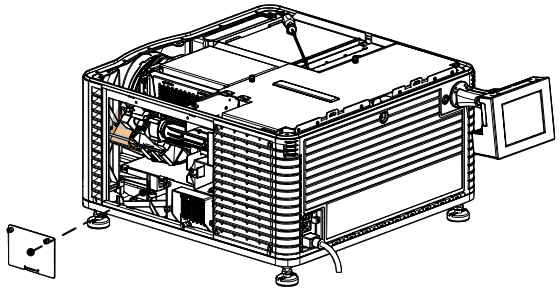
3. Open the integrator rod access door and loosen the second service panel screw.



4. Push the clips on the top of the service panel down and out to remove the service panel.



5. Loosen the 2 captive screws on the cap plate and then remove it.



6. Slide the air filter out and inspect it.

   If the filter appears dirty, replace it with a new paper filter, or clean it if it is a washable filter. See *Clean a Washable Filter, on page 3-3* for cleaning instructions.

   If the filter appears clean, continue to step 7.

7. Insert the air filter with the airflow indicator facing toward the projector.
8. Install the cap plate and tighten the 2 captive screws.
9. Install the service panel and then tighten the 2 screws.
10. Install the top lid.

3.3 Clean a Washable Filter

If the amount of dirt on the filter is minimal, use a vacuum or compressed air to remove it. If you use compressed air, the air must move through the filter in the opposite direction of the air flow indicator on the side of the filter.

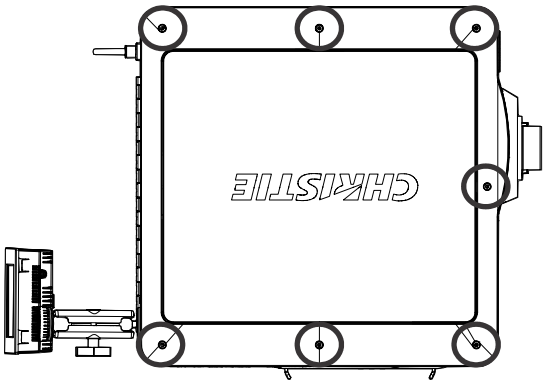
⚠ WARNING The installation of a filter that has not been allowed to dry completely can cause an electrical short and damage the projector.

1. Hold the filter on an angle under warm running water so the water flows through the filter in the opposite direction of the air flow indicator on the side of the filter.
2. Rinse the filter thoroughly.
3. Submerge the filter for a minimum of 30 minutes in a container of warm water and two tablespoons of mild detergent or liquid dish soap.

   If the filter is extremely dirty, move the filter from side to side occasionally, or remove the excess dirt by brushing both sides of the filter with a soft brush.
4. Rinse the filter thoroughly by holding it on an angle under cool running water. The air flow arrow on the side of the filter should face down.
5. Repeat steps 3 and 4 if the filter still appears dirty.
6. Shake the filter over a container until most of the water is removed.
7. Place the filter on its edge on a flat, stable surface and allow it to dry thoroughly.
8. To confirm that the filter is dry, place it over a dry paper towel and shake it. If the paper towel remains dry, the filter can be installed in the projector.
9. Record the date the filter was cleaned.
10. Replace the filter following the instructions for the specific filter. See *Inspect the Card Cage Filter, on page 3-1* or *Inspect the Light Engine Compartment Filter, on page 3-2*.

3.4 Remove the Top Lid

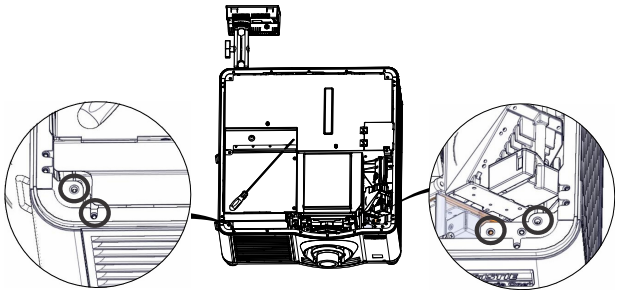
1. Loosen the seven screws that secure the top lid to the projector.



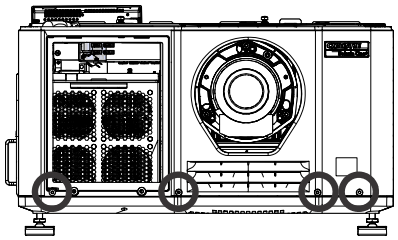
2. Lift the lid up from the rear of the projector.

3.5 Remove the Front Skin

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the cardcage intake air filter cover. See *Inspect the Card Cage Filter on page 3-1*.
5. Remove the lens surround.
6. Remove the 4 screws that secure the skin to the projector structure.



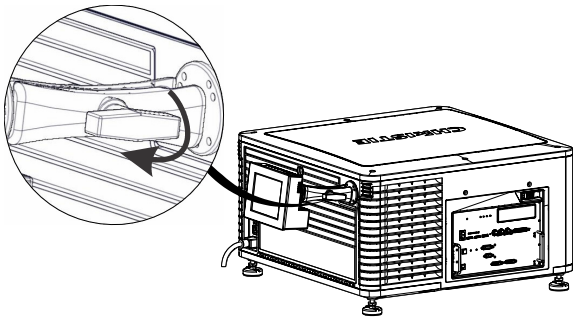
7. On a Solaria One projector, remove the set screws from the horizontal and vertical lens adjustment knobs and then remove the knobs.
8. Remove the 3 screws from the front skin and the 1 screw behind the filter cover.



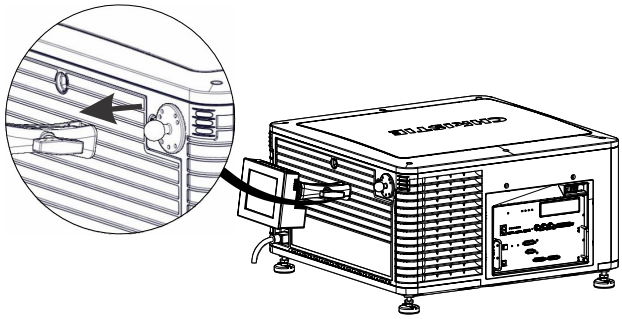
9. Pull the front skin forward to remove it.

3.6 Remove the Touch Panel Controller

1. Loosen the clamp holding the extension arm to the TPC ball joint.



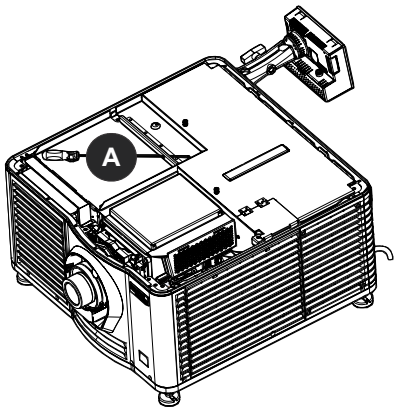
2. Pull the TPC outward and away from the extension arm.



3. Disconnect the TPC harness.
4. Remove the 3 screws securing the ball mount to the projector and then remove the ball mount.

3.7 Remove the High Security and Light Engine Lid

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Unlock the high security (**A**) lid with the high security key.



5. Lift the lid up and out.
6. Remove the 2 screws securing the light engine lid to the center structure and then lift the lid up and out of the projector.

3.8 Remove the High Security Interlock Switch

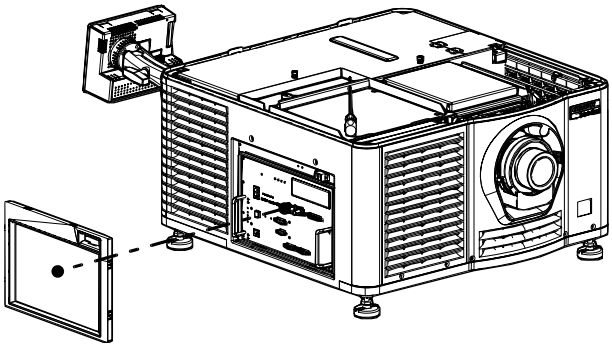
The Lamp Door Interlock is located at the rear of the projector and is activated when you open the firewall door.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4.*
4. Remove the high security lid. See *Remove the High Security and Light Engine Lid on page 3-5.*
5. Disconnect the red and black leads from the switch.
6. Remove the two nuts securing the switch to the frame and then remove the interlock switch.

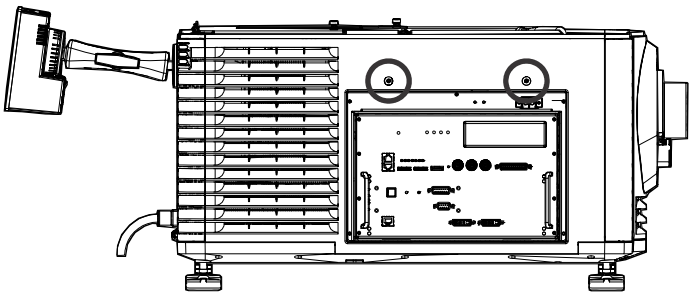
3.9 Remove the Cardcage Skin

This cardcage skin should never need to be removed unless it is damaged and requires replacement. From the rear of the projector, the cardcage skin is on the right-side of the projector.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the card cage surround.



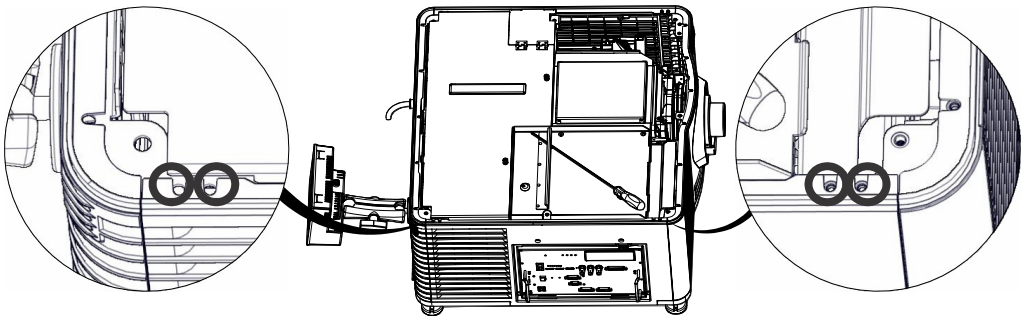
5. Remove the 2 screws above the cardcage.



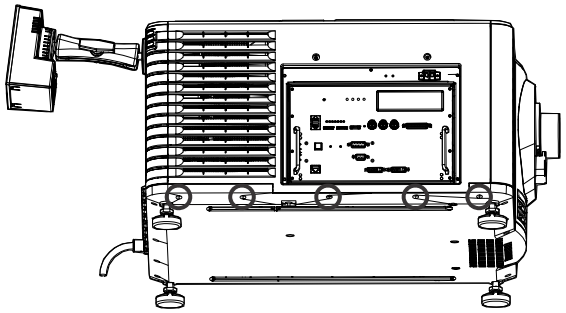
6. Remove the card cage. See *Remove the Cardcage on page 3-25*.

   Note: When replacing the card cage, you must replace the anti-tamper label on the side of the cardcage

7. Remove the four screws that secure the skin to the corner brackets.



8. Remove the five screws from the bottom edge of the skin.



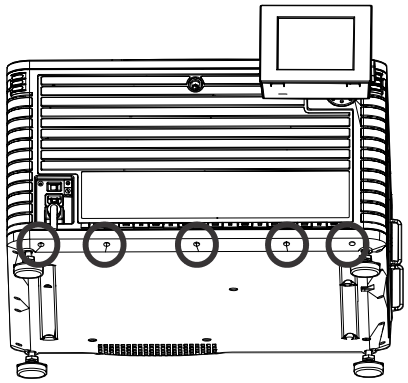
9. Pull the cardcage panel out.

3.10 Remove the Rear Skin

The rear access frame interlocks with the side skins.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the touch panel controller (TPC). See *Remove the Touch Panel Controller on page 3-5*.
5. Remove the safety shield. See *Remove the Safety Shield on page 3-9*.
6. Remove the 2 screws securing the TPC harness to the rear skin.

7. Remove the five screws from the bottom edge of the skin.

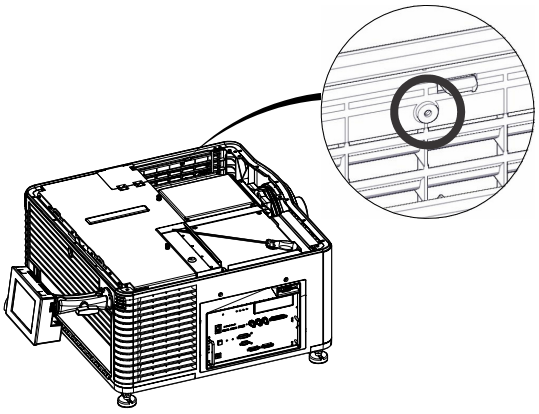


8. Remove the screw from the AC receptacle.
9. Remove the nut and washer securing the ground lug to the projector and then remove the ground lug.
10. Open the lamp door.
11. Loosen the 5 top skin screws.
12. Pull the skin forward and out.

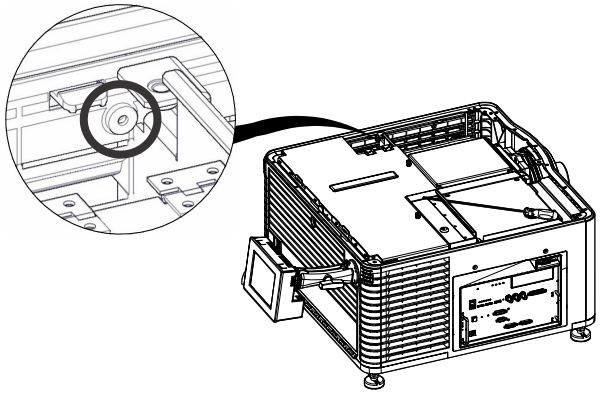
3.11 Remove the Service Door

The side skin service door allows access to the Low Voltage Power Supply (LVPS), integrator, fold mirror, and light engine air filter.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Reach into the projector and then loosen the first service panel screw.



5. Open the integrator rod access door and loosen the second service panel screw.



6. Push the clips on the top of the service panel down and out to remove the service panel.

3.12 Remove the Exhaust Panel Skin

The exhaust panel is located on the left when facing the rear of the projector. The exhaust panel skin includes the service panel that you can remove separately to access to optical components. The exhaust panel skin rarely needs to be replaced because you can remove the side skin service door to access internal components.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the service door. See *Remove the Service Door on page 3-8*.
5. Loosen the 3 screws from the bottom of the exhaust panel skin.
6. Remove the top 4 hex screws.
7. Pull the skin forward and out.

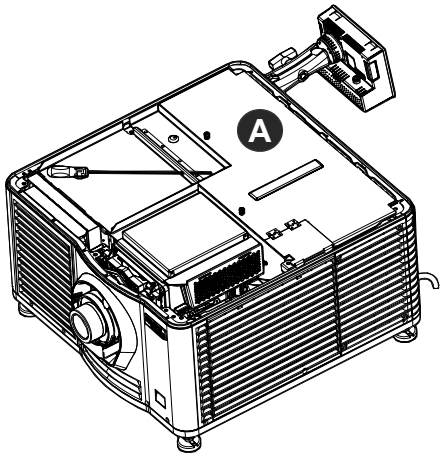
3.13 Remove the Safety Shield

⚠ DANGER EXPLOSION HAZARD! Wear Christie approved protective clothing (598900-95) whenever the safety shield is open and when handling the lamp.

The safety shield is positioned above the lamp reflector and is used to block UV light.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Loosen the 2 captive screws.

5. Pull the safety shield (**A**) up and outward from the locking tabs.



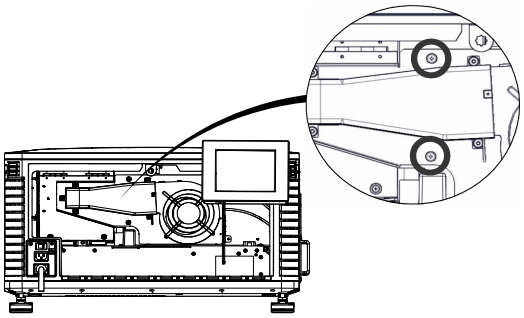
3.14 Replace the Lamp

⚠ DANGER 1)Lamp replacement must be performed by a qualified service technician. 2) EXPLOSION HAZARD. Wear authorized protective clothing whenever the lamp door is open and when handling the lamp. Never twist or bend the quartz lamp body. Use the correct wattage lamp supplied by Christie. 3) Ensure those within the vicinity of the projector are also wearing protective safety clothing including a full face shield, Kevlar gloves, and a ballistic nylon jacket. 4) Never attempt to remove the lamp when it is hot. The lamp is under pressure when hot and may explode, causing personal injury, death, or property damage. Allow the lamp to cool completely before replacing it.

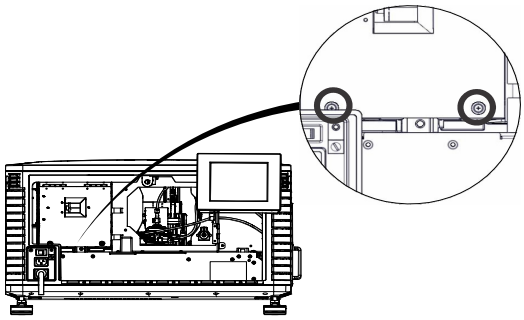
⚠ WARNING Improper installation of the lamp can damage the projector.

3.14.1 Remove the Existing Lamp

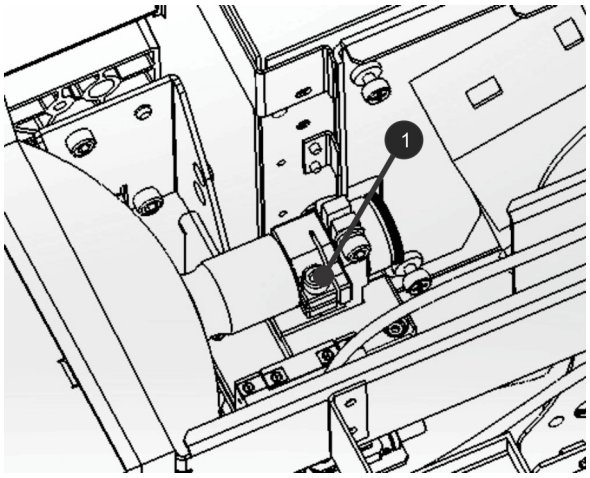
1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Put on your protective clothing and face shield.
4. Insert the key in the lock on the lamp door, turn the key, and then open the lamp door. Do not place heavy objects on the open lamp door.
5. Loosen the 2 thumbscrews and open the firewall door.



6. Loosen the two thumbscrews and open the lamp access door.

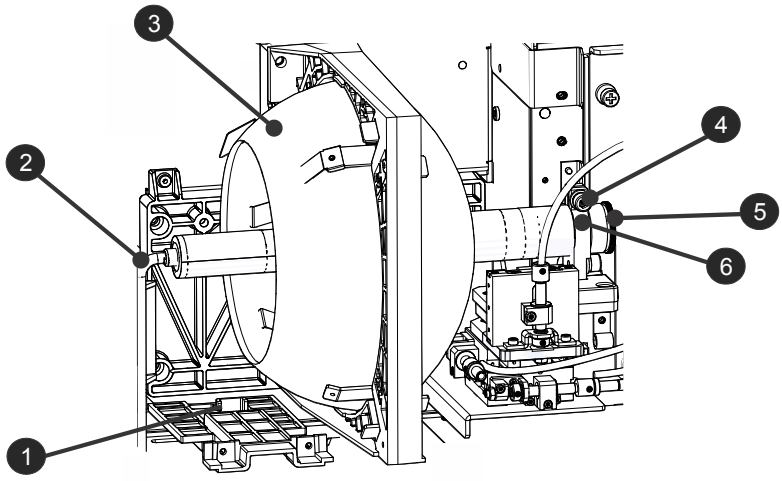


7. Remove the screw securing the anode wire. It is recommended that you use a 5 mm magnetized ball driver.
8. **For CDXL-14 or CDXL-16 lamps**:
   a. Loosen the extension nut screw (**1**).



   b. Hold the cathode end of the lamp with your right hand and the anode end with your left hand and carefully turn the lamp with your right hand so that it unthreads from the extension nut. Make sure the lamp does not contact the reflector or the UV filter.
   c. With your left hand guide the cathode end of the lamp out of the reflector, on an angle through the lamp access door.

9. **For the CDXL-21S1 lamp**:
   a. Loosen the cathode screw (**4**) on the cathode clamp (**6**).



1	Anode Terminal
2	Anode Wire
3	Reflector
4	Cathode Screw
5	Cathode Nut
6	Cathode Clamp

   b. Hold the anode end of the lamp with your left hand and then carefully unscrew and remove the cathode nut with your right hand (**5**).
   c. As you hold the anode end of the lamp, carefully guide the lamp through the reflector ensuring not to make contact with the reflector.
   d. With your right hand guide the cathode end out of the reflector, on an angle through the lamp access door.
10. Open a protective lamp case and then place the old lamp into the case. Thread the cathode nut onto the lamp, close the protective case, and then place the lamp within the case, on the floor where it cannot fall or be bumped. **WARNING! Handle the protective case with extreme caution - the lamp is hazardous even when packaged. Dispose of lamp box according to local area safety regulations.**
11. Install the new lamp. See *Install the New Lamp on page 3-12*.

3.14.2 Install the New Lamp

⚠ CAUTION Handle the lamp by the cathode/anode end shafts only, never the glass. DO NOT over-tighten. DO NOT stress the glass in any way. Check leads. Ensure the anode (+) lead between the lamp and igniter is well away from any projector metal, such as the reflector or fire wall.

1. Remove the existing lamp. See *Remove the Existing Lamp on page 3-10*.
2. Open the box containing the new lamp and then remove the tape from the ends of the protective case.

3. Remove the plastic packing material from the lamp.
4. Remove the cathode nut from the lamp before removing it from the case.
5. **For CDXL-14 or CDXL-16 lamps**:
   a. Install the lamp extension nut on the cathode clamp. To provide access to the locking screw on the extension nut, rotate the extension nut until the locking screw faces upward toward the projector lid.
   b. Tighten the cathode screw (**4**) with a hex key. See diagram page 3-12.
   c. Thread on and hand-tighten the cathode nut. Ensure the smooth portion of the nut is against the cathode clamp.
   d. Hold the anode end of the new lamp in your left hand and angle it up through the hole in the back of the reflector assembly. To help guide the lamp into position, insert your right index and middle finger through the back of the reflector and thread the cathode end of the lamp into the extension nut. When threading the lamp into the extension nut, make sure the anode wire does not hit the reflector or the UV filter.
   e. Tighten the extension nut screw.
   f. Move to step 7.
6. **For the CDXL-21S1 lamp**:
   a. Hold the anode end of the new lamp in your left hand and angle it up through the hole in the back of the reflector assembly. Insert your right index and middle finger through the back of the reflector and guide the lamp onto the cathode clamp. Be careful not to hit the lamp against the reflector
   b. Thread on and hand-tighten the cathode nut. Ensure the smooth portion of the nut is against the cathode clamp.
   c. Tighten the cathode screw (**4**) with a hex key. See diagram page 3-12.
7. Align the ring terminal on the anode wire (**2**) with the mounting position ensuring the crimped side of the wire is facing out. Tighten the anode screw (**1**). See diagram page 3-12. **NOTE:** *Route anode lead away from nearby metal surfaces.*
8. Close the lamp access door and tighten the 2 thumbscrews.
9. Close the firewall door and tighten the 2 thumbscrews.
10. Close and lock the rear access door. **NOTE:** *Ensure the hex key is placed back into its holder before closing the rear access door.*
11. Add the lamp to the lamp history. See *Add the Lamp to the Lamp History on page 3-13*.

3.14.3 Add the Lamp to the Lamp History

1. Connect the projector to AC power and then turn the projector on.
2. Tap **Menu** > **Advanced Setup** > **Lamp Change Wizard**.
3. Tap **Next**.

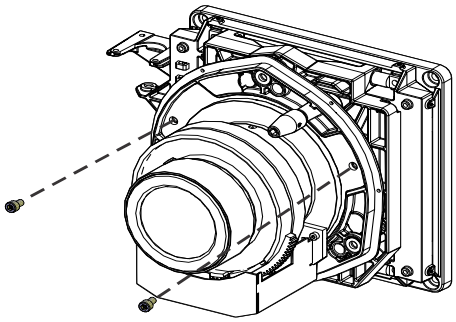
4. Complete these fields:

Field	Description
Type	The lamp type.
Serial Number	The lamp serial number.
Reason for Change	The reason the lamp was changed.
Lamp Expiry (Hours)	The number of hours the lamp can operate before replacement.
Hours Used	The number of hours the lamp has operated before installation.

5. Tap **Save**.
6. Tap **Next**.
7. Align the lamp. See *Align the Lamp on page 2-10*.

3.15 Remove the Lens

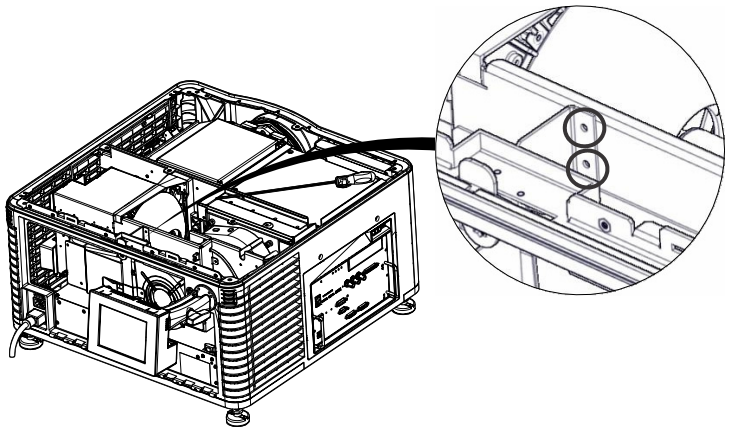
1. Tap and hold the red power button  on the TPC **Main** panel to turn the lamp and projector off.
2. Allow the lamp to cool for a minimum of 15 minutes.
3. Disconnect the projector from AC power or turn the circuit breaker off.
4. Remove the lens surround.
5. Install the lens cap and turn the lens clamp to the open position with a hex key.
6. If necessary, remove the 2 cap screws securing the lens to the lens mount using a hex key.



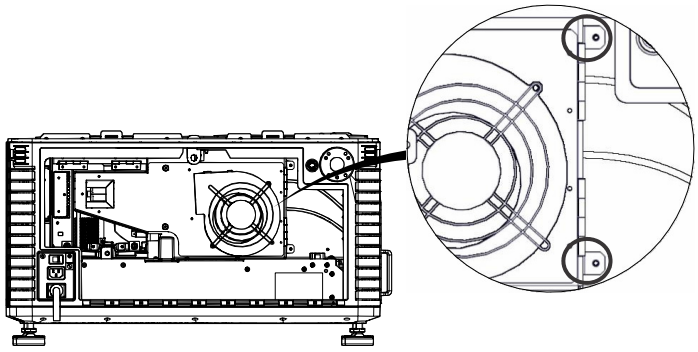
7. Pull the lens out of the lens mount and then install a small lens cap on the rear of the lens.
8. Remove the small rear cap from the new lens. Keep the front cap on.
9. Align the tabs on the lens plate with the lens mount. Insert the lens until it connects with the magnets on the mount. When the lens contacts the magnetic plates it is seated correctly.
10. Secure the lens clamp by rotating it clockwise with a hex key.
11. Install the lens mount cap screws for added stability.
12. Replace the lens surround.
13. Remove the lens cap from the front of the lens.

3.16 Remove the Anode Lamp Firewall

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the lamp and place it into a protective case and reinstall the cathode nut. See *Remove the Existing Lamp on page 3-10*.
5. Remove the safety shield. See *Remove the Safety Shield on page 3-9*.
6. Remove the 2 screws from the top firewall bracket and then remove the bracket.



7. Remove the 2 screws holding the firewall to the cathode blower assembly.



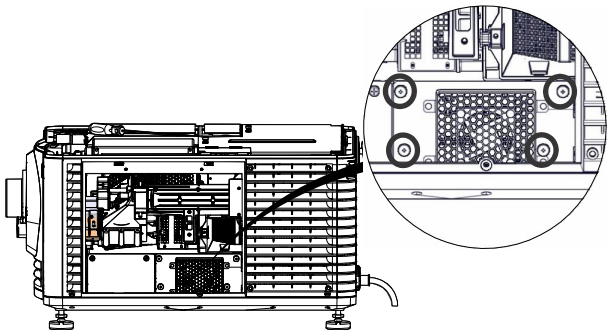
8. Disconnect the fan1 harness from the firewall.
9. Lift the firewall up and out of the top of the projector.

3.17 Replace the Standby Power Supply

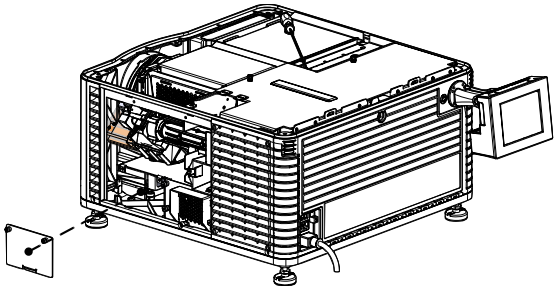
The standby power supply is installed next to the low voltage power supply (LVPS).

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Slide the card cage forward to access the standby power supply inline connector. See *Remove the Cardcage on page 3-25*.
4. Remove the top lid. See *Remove the Top Lid on page 3-4*.

5. Remove the service door. See *Remove the Service Door on page 3-8*.
6. Loosen the 4 thumbscrews and remove the front plate.



7. Pull the tray forward and out of the projector until the wire terminals are exposed.
8. Disconnect all of the wires that are attached to the LVPS and disconnect the stand by power supply AC input connector.
9. Remove the tray with the LVPS and the standby power supply from the projector.
10. Disconnect the standby power supply inline connector behind the card cage.
11. Loosen the 2 captive screws on the cap plate and then remove it.

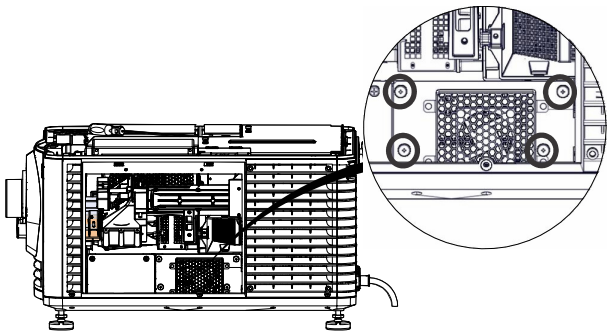


12. Pull the standby power supply harness out of the projector through the cap plate opening.
13. Remove the clip holding the stand by wire to the LVPS,
14. Remove the two screws from the standby power supply bracket and then remove the bracket and set it aside.
15. Remove the standby power supply.

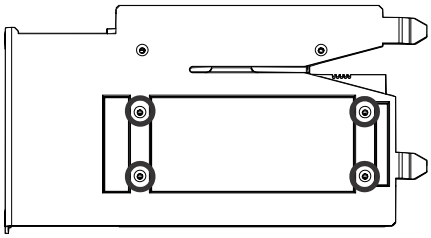
3.18 Remove the Low Voltage Power Supply

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the service door. See *Remove the Service Door on page 3-8*.

5. Loosen the 4 thumbscrews and remove the front LVPS compartment plate.



6. Pull the tray forward and out of the projector until the wire terminals are exposed.
7. Disconnect all of the wires that are attached to the LVPS and disconnect the stand by power supply AC input connector.
8. Pull out the tray with the LVPS and then remove the 2 screws securing the stand by bracket.
9. Remove the tray with the LVPS and the stand by power supply from the projector.
10. Remove the 4 screws that secure the LVPS to the mounting plate.



11. Remove the screw securing the cable clamp.
12. Remove the clip securing the standby cable to the LVPS.

3.19 Remove the Projector Feet

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Prop up the appropriate end of the projector, or shift the projector off of the table or pedestal to create enough clearance.

   To remove the front feet, 6in. (15 cm) of clearance is required. To remove the rear feet, 9in. (23cm) of clearance is required.
4. Remove the rear skin to remove the rear feet or remove the front skin to remove the front feet. See *Remove the Rear Skin on page 3-7* or *Remove the Front Skin on page 3-4*.
5. Hold the top nut with a ratchet and then turn the locking nut on the foot to remove it.
6. Remove the foot.

3.20 Remove the Lamp Door Interlock

The lamp door interlock is located at the rear of the projector. The interlock is activated when the low security key is used to open the lamp door.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Unlock and then open the lamp door.
4. Remove the 2 screws from the anode firewall.
5. Remove the 2 nuts from the switch.
6. Disconnect the two switch wires.

3.21 Replace the Lamp Power Supply

The LPS comes with the lamp igniter built in. The LPS is located at the rear of the projector, attached to the base plate.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the lamp. See *Remove the Existing Lamp on page 3-10*.
4. Remove the rear skin. See *Remove the Rear Skin on page 3-7*.
5. Remove the anode blower firewall. See *Remove the Anode Lamp Firewall on page 3-15*.
6. Remove the cathode lamp blower. See *Remove the Cathode Lamp Blower (Fan 2) on page 3-30*.
7. Remove the reflector assembly. See *Remove the Reflector Assembly on page 3-19*.
8. Remove the lamp adjust assembly. See *Remove the Lamp Adjust Assembly on page 3-18*.
9. Remove the 3 screws securing the LPS to the projector base.
10. Remove the screw securing the LPS to the center structure.
11. Remove the 4 screws from the LPS AC harness.
12. Disconnect the AC power and communication harnesses.
13. Tilt the LPS up and slide it out of the lamp door.

3.22 Remove the Lamp Adjust Assembly

The lamp adjust assembly is located at the rear of the projector between the reflector assembly and the lamp blower.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the lamp. See *Remove the Existing Lamp on page 3-10*.
4. Remove the anode lamp firewall. See *Remove the Anode Lamp Firewall on page 3-15*.
5. Remove the 2 screws securing the lamp adjust assembly to the center structure.

6. Disconnect the X Y Z cables from the lamp adjust assembly.
7. Disconnect the cathode lead connector from the lamp power supply.
8. Tip the lamp adjust assembly toward the front of the projector and then slide it past the reflector and out of the lamp access door.
9. Disconnect the cathode lead connector from the lamp adjust assembly and set it aside. You will reuse the cable when you install the new lamp adjust assembly.

3.23 Remove the Reflector Assembly

NOTICE: *Wear clean, lint-free gloves when removing the reflector assembly.*

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the lamp. See *Remove the Existing Lamp on page 3-10*.
5. Remove the touch panel controller (TPC). See *Remove the Touch Panel Controller on page 3-5*.
6. Remove the anode blower and firewall. See *Remove the Anode Lamp Firewall on page 3-15.*
7. Remove the 2 screws securing the lamp over temperature sensor.
8. Remove the 2 P-clips from the lamp over temperature sensor bracket and push the bracket aside.
9. Remove the 4 screws that secure the reflector module. Three of these screws are located on the bracket outside the reflector. The fourth screw is located inside the casing below the reflector.
10. Carefully lift the reflector assembly straight up and out of the projector; do not touch the UV filter glass or the reflector.

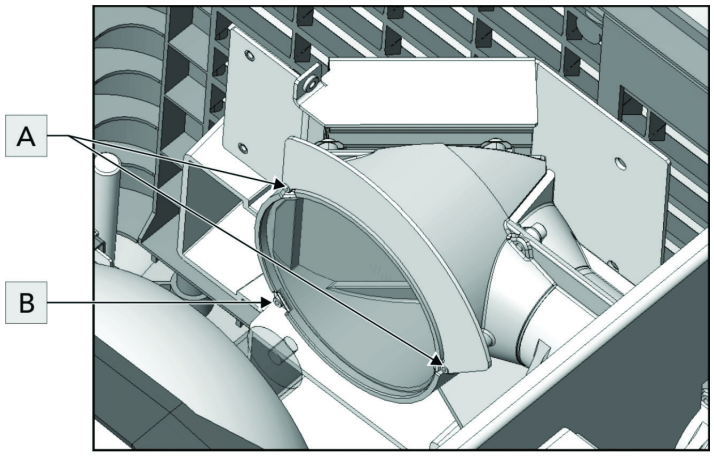
3.24 Replace the UV Filter

NOTICE: *Wear clean, lint-free gloves, and handle the UV filter by its edges.*

The UV filter is secured to the end of the light tube. If a lamp explodes, the UV filter must be replaced.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Open the lamp access door.
4. Remove the top lid. See *Remove the Top Lid on page 3-4*.
5. Remove the lamp. See *Remove the Existing Lamp on page 3-10*.
6. Remove the reflector assembly. See *Remove the Reflector Assembly on page 3-19*.

7. Remove the top 2 screws and the attached clamps from the UV filter housing.



A	Top screws
B	Bottom screw

8. Slowly loosen the bottom screw until you can remove the UV filter.
9. To reinstall the UV filter, perform the steps in reverse order. Make sure that the filter is installed with the arrow indicator on the edge of the filter pointing towards the lamp.

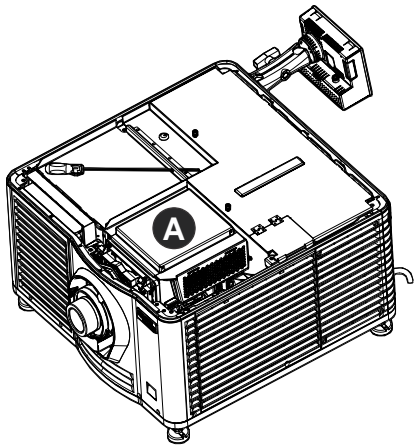
3.25 Replace the Light Engine

⚠ CAUTION Wear gloves and an electro-static bracelet when working with the light engine.

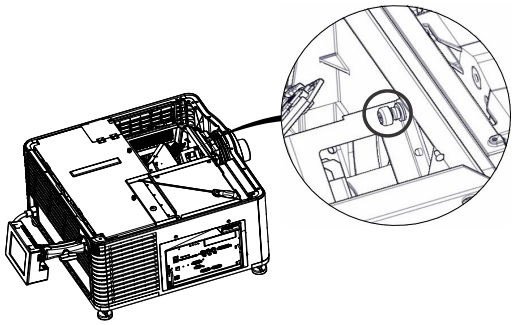
The light engine can be removed as an assembly with the harnesses still attached. Removing the light engine this way reduces the risk of damage to other projector components.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the lens. See *Remove the Lens on page 3-14*.
4. Remove the top lid. See *Remove the Top Lid on page 3-4*.
5. Remove the high security lid. See *Remove the High Security and Light Engine Lid on page 3-5*.

6. Remove the 2 screws that secure the light engine cover (**A**).

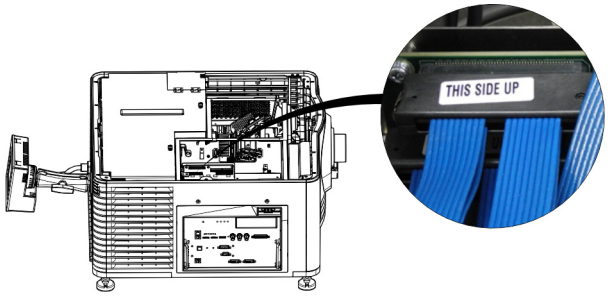


7. Remove the light engine blower. See *Remove the Light Engine Blower (Fan 4) on page 3-32*.
8. Remove the light dump.
   a. Disconnect the douser cable.
   b. Loosen the captive screw securing the light dump and then lift the light dump up and out of the projector.



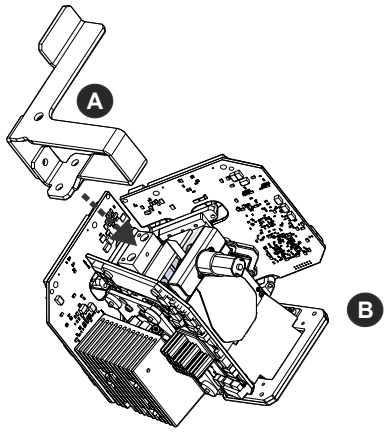
9. Disconnect the LVDS cables from the backplane:
   a. Press both latches on the sides of the cable connector with equal pressure.
   b. Pull the cable connector outward with even pressure. Do not use a twisting motion to disconnect the cable connector.

   Note: When replacing the LVDS cables, the This Side Up label on the connector must face outward. Twisting or pulling the connector with unequal pressure can permanently damage it.



10. Remove the LVDS cables from the harness clips holding them to the center structure.

11. Attach the handle (**A**) included with the service assembly to the light engine (**B**).

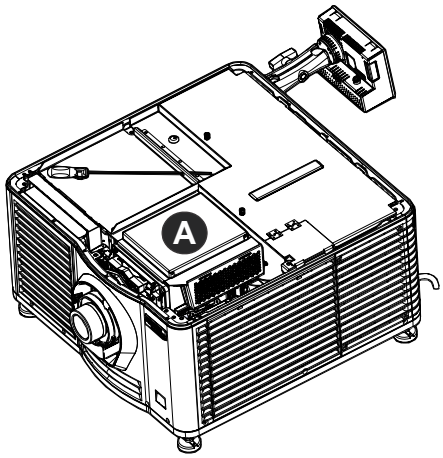


12. Loosen the three captive screws securing the light engine to the light tube with a 3 mm hex key.
13. Remove the light engine from the projector.
14. Remove the 2 screws securing the douser bracket to the new light engine and then remove the douser.
15. Cover the light engine with an electro-static protective cover.

3.26 Replace the Douser Assembly

The douser is attached to the light engine prism. It can be removed on its own, or with the light engine.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the high security lid. See *Remove the High Security and Light Engine Lid on page 3-5*.
5. Remove the 2 screws that secure the light engine cover (**A**).



6. Remove the light engine blower. See *Remove the Light Engine Blower (Fan 4) on page 3-32.*
7. Remove the 2 screws that secure the douser to the light engine.
8. Lift the douser on an angle up and out of the projector.

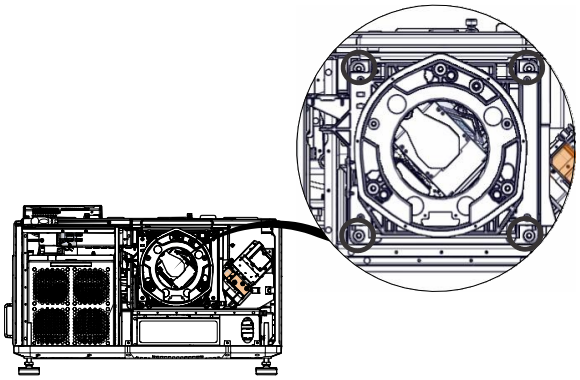
3.27 Remove the IMCB

This procedure is applicable to the Solaria One+ projector only.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the high security lid. See *Remove the High Security and Light Engine Lid on page 3-5*.
5. Disconnect the IMCB cable connector.
6. Loosen the captive screw.
7. Slide the IMCB toward the operator side of the projector to disengage the locking pins.
8. Lift the IMCB through the top of the projector.

3.28 Remove the Lens Mount

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the lens surround.
4. Remove the lens. See *Remove the Lens on page 3-14*.
5. Remove the top lid. See *Remove the Top Lid on page 3-4*.
6. Remove the front skin. See *Remove the Front Skin on page 3-4*.
7. Remove the plate between the lens mount and the blower intake.
8. Remove the light engine blower assembly. See *Remove the Light Engine Blower (Fan 4) on page 3-32*.
9. Disconnect the IMCB connectors.
10. Remove the 4 lens mount screws. It might be necessary to adjust the horizontal or vertical position of the lens to access the screws.

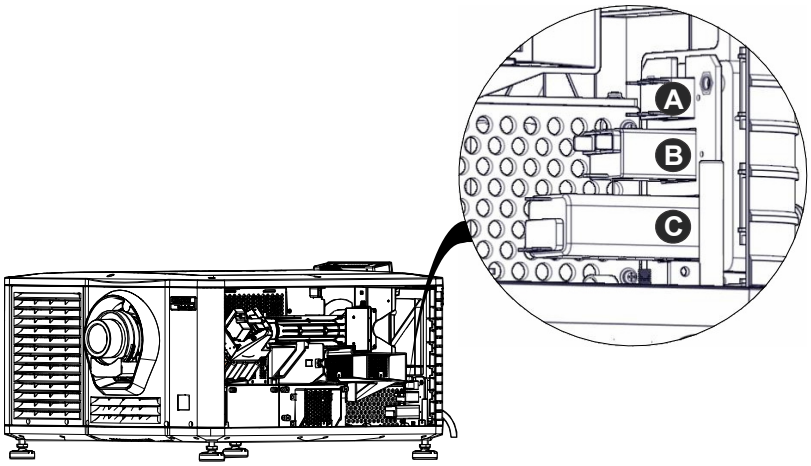


11. Disengage the IMCB harness assembly from the cable clamps and remove the assembly through the front of the projector.
12. Remove the lens mount.

3.29 Remove the AC Line Filters

The AC line filters and A/C selector switch are located at the rear-left corner of the projector.

- The 110V filter is for the optional UPS hookup. Use the UPS to keep the projector's electronics powered ON in the event of a power loss so that the lamp can be struck as soon as full power is reapplied without having to wait for the electronics to restart.
- The 220V filter is required to power the LPS and strike the lamp.
- The A/C selector switch is used to select between the 110V and 220V power source.



A	A/C Selector Switch
B	110V Filter
C	220V Filter

3.29.1 110V AC Line Filter

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the lamp. See *Remove the Existing Lamp on page 3-10*.
4. Remove the side and rear projector skins. See *Remove the Exhaust Panel Skin on page 3-9* and *Remove the Rear Skin on page 3-7*.
5. Remove the 2 screws that secure the AC line filter to the bracket.
6. Disconnect the 2 harnesses from the 110V AC line filter.

3.29.2 220V AC Line Filter

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the lamp. See *Remove the Existing Lamp on page 3-10*.

4. Remove the side and rear projector skins. See *Remove the Exhaust Panel Skin on page 3-9* and *Remove the Rear Skin on page 3-7*.
5. Remove the 2 screws that secure the AC line filter to the bracket.
6. Disconnect the 2 harnesses from the 220V AC line filter.

3.30 Cardcage

Only Christie authorized service technicians should open the high security lid or access the electronics inside the card cage.

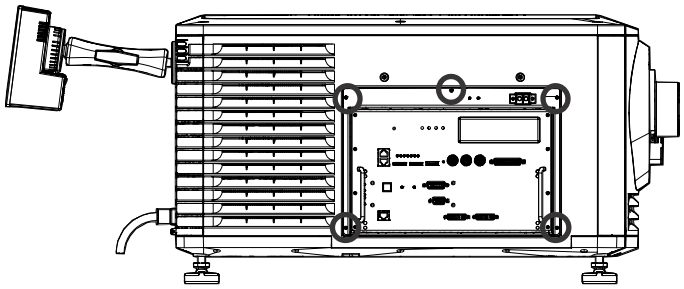
When replacing the card cage, you must replace the anti-tamper label on the side of the cardcage

3.30.1 Remove the Cardcage

The cardcage module consists of the PIBS1, PIBS1 faceplate board, ICP, Christie IMB, and backplane.

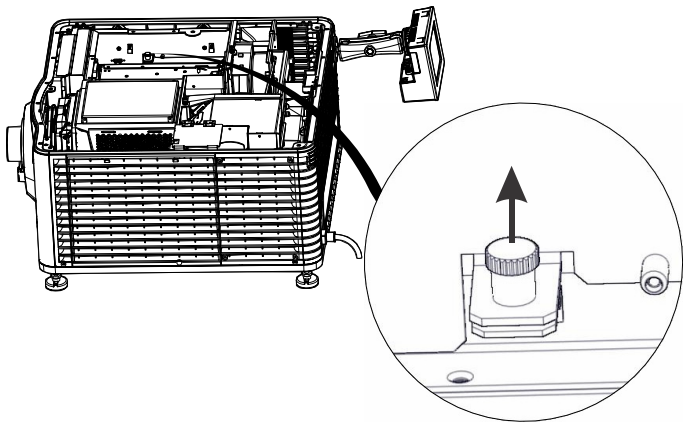
Note: When replacing the cardcage, you must replace the anti-tamper label on the side of the cardcage.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the high security lid. See *Remove the High Security and Light Engine Lid on page 3-5*.
5. Remove the light engine blower. See *Remove the Light Engine Fan (Fan 3) on page 3-31*.
6. Reach into the top of the projector and disconnect the 3 light engine harnesses and the backplane harness:
   a. Press both latches on the sides of the cable connectors with equal pressure.
   b. Pull the cable connectors outward with even pressure. Do not use a twisting motion to disconnect the cable connectors.
7. Remove the card cage surround.
8. Remove the 5 screws that secure the cardcage.



9. Remove the fire alarm interlock jumper.

10. Pull up the release screw on the top of the cardcage and then slide the cardcage out along the guides.



11. Tilt the cardcage up and out to remove it.

3.30.2 Remove the Projector Intelligence Board

The PIBS1 is located in the cardcage on the operator side of the projector. It is the main controller for alternative content.

- The marriage status light on the PIBS1 lights up when the high security lid is unlocked. To remarry the projector, see *Activate Marriage* in the Solaria One or Solaria One^{+} user manuals.
- The system files (for examples, serial number, channel setting, hours, and so on) are stored on three modules: the PIBS1, ICP, and TPC.
- All of the internal processor components have fixed IP addresses. This simplifies board configuration, as well as component swapping between projectors.

When boards are replaced, the system stores a copy of the latest software version on the projector so that it can be selected through the TPC and updated.

Note: When replacing the projector intelligence board, you must replace the anti-tamper label on the side of the cardcage.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the card cage surround.
4. Remove the 8 card cage faceplate screws.
5. Remove the card cage faceplate by the handles.
6. Disconnect the communication cable between PIBS1 and PIBS1 faceplate board.
7. Remove the rear support bracket between the PIBS1 and Christie IMB.
8. Remove the 4 screws from the HDMI A Left and HDMI B Right connectors.
9. Remove the 2 screws securing the PIBS1 to the front faceplate.

   When reinstalling the PIBS1 and PIBS1 faceplate board you must perform Marriage so you can continue to play encrypted content. See *Activate Marriage* in the Solaria One or Solaria One^{+} user manuals.

3.30.3 Remove the Projector Intelligence Faceplate Board

Note: When replacing the projector intelligence faceplate board, you must replace the anti-tamper label on the side of the cardcage.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the card cage shroud.
4. Remove the 8 card cage faceplate screws.
5. Remove the card cage by the handles.
6. Remove the 4 screws from the RS232 PIBS1 and 3D Sync connectors.
7. Disconnect the communication cable between PIBS1 and PIBS1 faceplate board.
8. Remove the 4 hex screws securing the PIBS1 faceplate board to the faceplate.
9. Remove the PIBS1 faceplate board.

   When reinstalling the PIBS1 and PIBS1 faceplate board you must perform Marriage so you can continue to play encrypted content. See *Activate Marriage* in the Solaria One or Solaria One^{+} user manuals.

3.30.4 Remove the Integrated Cinema Processor

The ICP is located in the cardcage on the operator side of the projector. The ICP is the image processing electronics for incoming video signals.

Note: When replacing the ICP, you must replace the anti-tamper label on the side of the cardcage.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the card cage shroud.
4. Remove the 8 card cage faceplate screws.
5. Pull the card cage faceplate out by the handles.
6. Remove the ICP from the cardcage by pushing the 2 white tabs.

   When reinstalling the ICP, you must perform Marriage so you can continue to play encrypted content. See *Activate Marriage* in the Solaria One or Solaria One^{+} user manuals

3.30.5 Remove the Christie IMB

The Christie IMB is located in the cardcage on the operator side of the projector.

Note: When replacing the Christie IMB, you must replace the anti-tamper label on the side of the cardcage.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the card cage surround.
4. Remove the 8 card cage faceplate screws.
5. Remove the card cage faceplate by the handles.
6. Remove the Gen Lock, Synch Out and LTC Out, and AES 3 faceplate connections.
7. Remove the rear support bracket between the PIBS1 and Christie IMB.
8. Remove the 2 screws securing the Christie IMB to the faceplate.

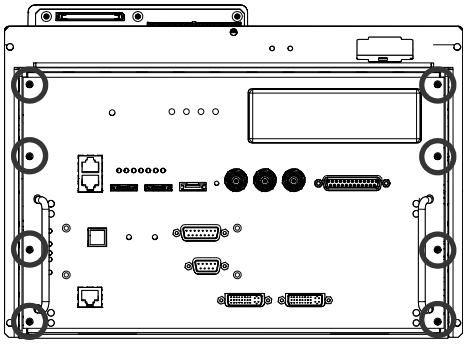
   When reinstalling the Christie IMB you must perform Marriage so you can continue to play encrypted content. See *Activate Marriage* in the Solaria One or Solaria One^{+} user manuals.

3.30.6 Remove the Backplane

The backplane is located at the back of the cardcage. The PIBS1, IMB, and ICP board are connected directly to the backplane.

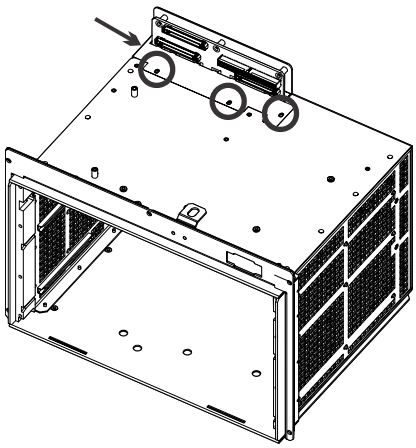
Note: When replacing the backplane, you must replace the anti-tamper label on the side of the cardcage.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the card cage. See *Remove the Cardcage on page 3-25*.
4. Remove the 8 screws securing the cardcage faceplate to the cardcage.



5. Remove the cardcage faceplate with the Christie IMB and PIBS1 and set them aside.
6. Remove the ICP. See *Remove the Integrated Cinema Processor on page 3-27*.

7. Remove the 4 screws securing the EMI shield to the top of the card cage and then remove the EMI shield and set it aside.



8. Remove the 18 screws securing the backplane to the card cage.
9. Slide the backplane on an angle out of the cardcage so that it does not contact the cardcage.

   When reinstalling the backplane, you must perform Marriage so you can continue to play encrypted content. See *Activate Marriage* in the Solaria One or Solaria One^{+} user manuals.

3.31 Fans

3.31.1 Remove the Anode Lamp Blower (Fan 1)

EXPLOSION HAZARD! Always wear protective safety clothing and a face shield when performing service with the service safety shield removed and a lamp installed.

The anode lamp blower is located at the rear of the projector, behind the lamp access door.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Put on your protective clothing and face shield, and then unlock the lamp door. **NOTE:** *The safety interlock switch on the lamp door turns lamp power OFF and prevents it from being turned ON when the door is open. The interlock wiring connects directly to the LPS.* **NOTICE:** *DO NOT place heavy objects on the open rear access door.*
4. Unlock and then open the lamp door.
5. Remove the 2 screws holding the blower to the anode firewall door.
6. Disconnect the anode blower harness.
7. Remove the anode blower through the lamp door opening.

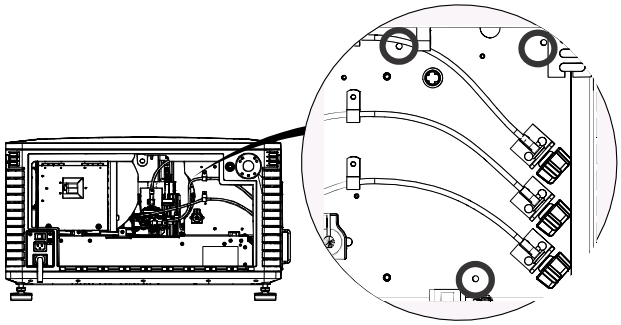
3.31.2 Remove the Cathode Lamp Blower (Fan 2)

EXPLOSION HAZARD! Always wear protective safety clothing and a face shield when performing service with the service safety shield removed and a lamp installed.

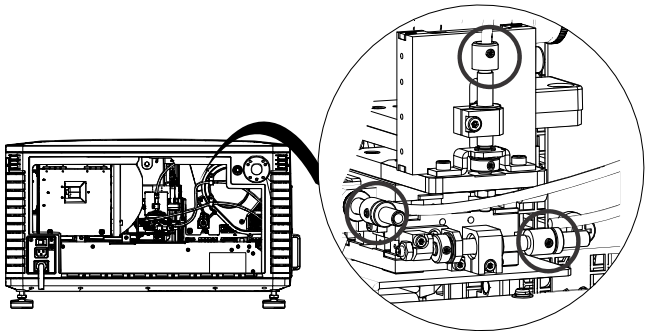
The cathode lamp blower is located at the rear of the projector, behind the lamp access door.

Note: When replacing the cathode lamp blower, you must replace the anti-tamper label on the side of the lamp blower assembly.

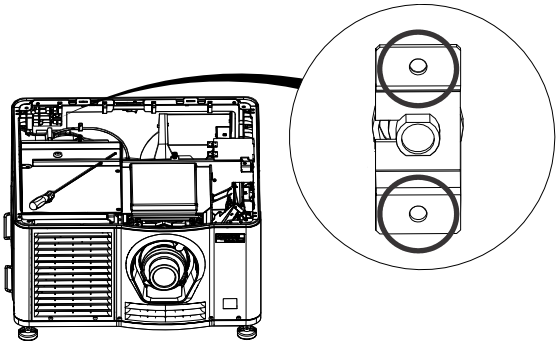
1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the anode blower firewall. See *Remove the Anode Lamp Firewall on page 3-15*.
4. Remove the 3 screws holding the lamp adjust cable plate to the blower.



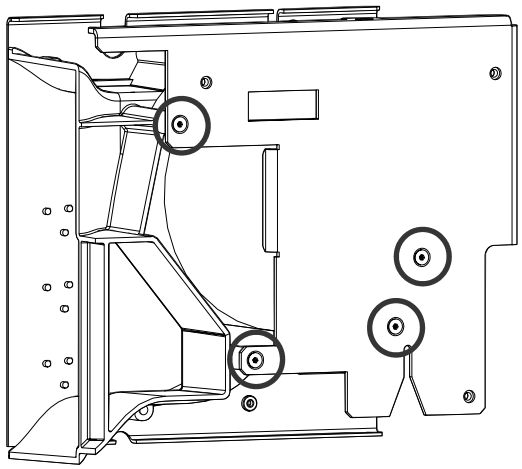
5. Loosen the set screws securing the flexible shafts to the lamp adjust and then disconnect the flexible shafts.



6. Remove the 2 screws securing the internal touch panel controller (TPC) harness.



7. Disconnect the cathode blower fan harness.
8. Remove the lamp adjust cable plate with the flexible shafts through the top of the projector.
9. Loosen the 3 thumbscrews securing the cathode blower assembly to the center structure.
10. Remove the cathode blower assembly through the top of the projector.
11. Remove the 4 screws holding the bracket plate and duct.



12. Remove the 2 screws holding the blower to the duct.

3.31.3 Remove the Light Engine Fan (Fan 3)

⚠ DANGER Use caution when working in and around fan assemblies. Fingers can get caught in fan blades.

The light engine intake fan draws filtered air through the front air filter.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Pull the cardcage outward to access the fan connectors. See *Remove the Cardcage on page 3-25.*
5. Remove the service door. See *Remove the Service Door on page 3-8*.
6. Loosen the 2 captive screws securing the filter access door and then remove the filter access door.
7. Loosen the 2 captive screws securing the fan mounting plate to the center structure.
8. Push the fan and its mounting plate backward until they are released from the stand-offs. Remove the fan and mounting plate.

   When re-installing the fan and mounting plate, align the slots on the mounting plate with the stand-offs located inside the projector. The fan airflow must be directed toward the light engine compartment.
9. Disconnect the number three fan harness.
10. Lift the fan up and away from the rubber isolators.

3.31.4 Remove the Light Engine Blower (Fan 4)

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the high security lid. See *Remove the High Security and Light Engine Lid on page 3-5*.
5. Disconnect the harness.
6. Remove the 3 screws securing the intake duct.
7. Remove the intake duct.
8. Remove the 2 screws securing the light engine blower.

3.31.5 Remove the Fan Pack (Fans 5, 6, 7, and 8)

⚠ DANGER Use caution when working in and around fan assemblies. Fingers can get caught in fan blades.

The fan pack is located directly behind the air filter on the front of the projector and consists of four fans. If one fan fails, the entire fan pack must be replaced.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the cardcage air intake filter cover and filter. See *Inspect the Card Cage Filter on page 3-1*.
5. Remove the front skin. See *Remove the Front Skin on page 3-4*.
6. Remove the high security lid. See *Remove the High Security and Light Engine Lid on page 3-5*.
7. Disconnect the four inline connectors from the fan power harnesses.
8. Pull the release located in the high security compartment to release the fan pack.
9. Remove the fan pack.
10. Remove a fan and then install its replacement with the airflow directional arrow facing the direction of the airflow. **NOTE:** *Use needle nose pliers to pull the rubber isolators through the fan mounting holes.*

3.31.6 Remove the Low Voltage Power Supply Fan (Fan 9)

⚠ DANGER Use caution when working in and around fan assemblies. Fingers can get caught in fan blades.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the service door. See *Remove the Service Door on page 3-8*.
5. Loosen the 4 screws securing the LVPS cover.
6. Disconnect the fan harness.

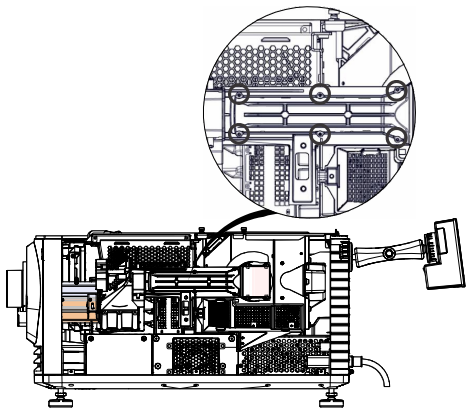
7. Remove the fan and the mounting plate.
8. Pull up on the 4 rubber isolators to separate the fan from the mounting plate.
9. To reinstall the fan, perform the steps in reverse order. When reinstalling the fan, make sure the air flow directional arrow faces outward.

3.32 Integrator Assembly

NOTICE: *The integrator rod glass should be flush with the output aperture with the black finish. If the glass is damaged, contact Christie Technical Support staff immediately. Always wear gloves when you handle the integrator assembly.*

The integrator assembly is mounted in the light tube of the IOS. It runs through a firewall cutout that separates the lamp housing from the light engine.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the service door. See *Remove the Service Door on page 3-8*.
5. Remove the 6 integrator housing screws.



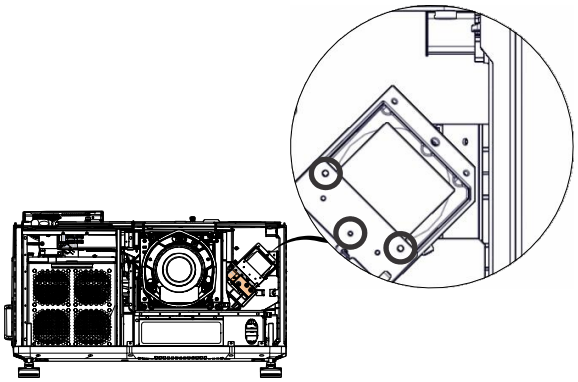
6. Remove the housing.
7. Remove the 2 rotational integrator adjustment screws.
8. Slide the integrator rod back and tilt it to remove it from the casting.

3.32.1 Remove the Contrast Aperture

The contrast aperture is located after the fold mirror in the light path within the IOS.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the lens surround.
5. Remove the front skin. See *Remove the Front Skin on page 3-4*.

6. Remove the yellow notch filter. See *Yellow Notch Filter (YNF) on page 3-37*.
7. Remove the three screws that secure the contrast aperture to the IOS.

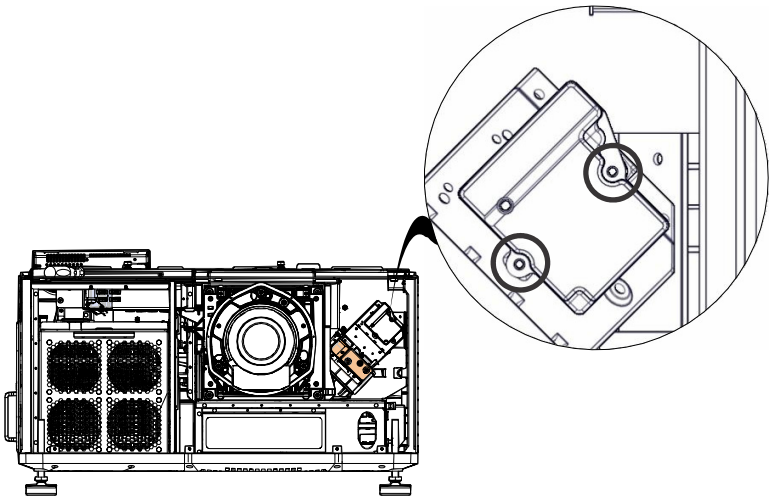


8. Slide the aperture out along the slotted tracks inside the IOS.

3.32.2 Remove the Light Sensor Module

The light sensor module, mounted to the side of the IOS, is orientated to sample the light coming through the fold mirror.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4.*
4. Remove the front skin. See *Remove the Front Skin on page 3-4*.
5. Disconnect the harness from the light sensor module.
6. Remove the 2 screws that secure the sensor to the IOS. **NOTE:** *The middle screw is used to adjust light tolerances.*



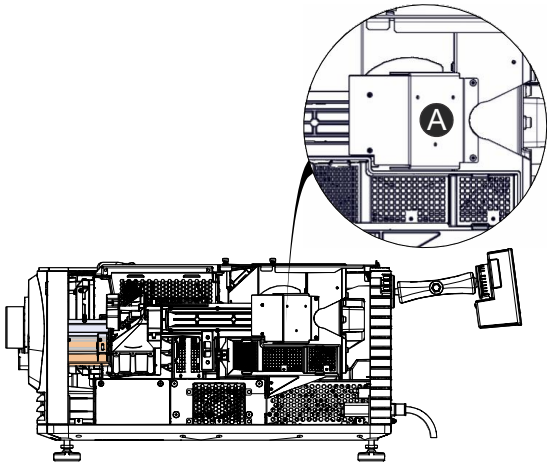
When reinstalling the light sensor module, recalibrate the footLambert (fL) readings for minimum and maximum power. See the Solaria One or Solaria One+ user manuals.

3.32.3 Remove the Cold Mirror

UV HAZARD! Always wear protective safety clothing and a face shield when performing service with the safety shield removed and a lamp installed.

NOTICE: *Wear gloves when you handle the cold mirror.*

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the lamp. See *Replace the Lamp on page 3-10*.
4. Remove the side projector skin. See *Remove the Exhaust Panel Skin on page 3-9*.
5. Remove the 4 cold mirror heat sink plate screws and then remove the heat sink (**A**).



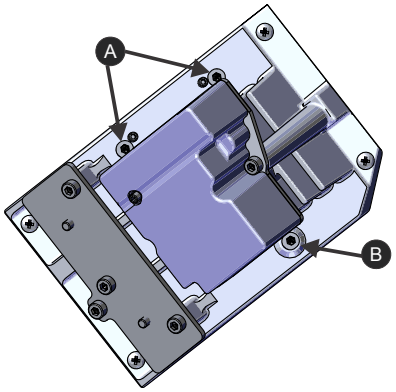
6. Remove the top 2 hex screws and clips holding the cold mirror.
7. Loosen the bottom 2 hex screws holding the cold mirror.
8. Grasp the top corners of the mirror, and then pull it up and out. When reinstalling the cold mirror, make sure that the reflective surface faces inwards. Also, you must recalibrate MCGD. See the Solaria One or Solaria One+ user manuals.

3.32.4 Remove the Fold Mirror

NOTICE: *Wear gloves when you handle the fold mirror.*

Fold Mirror 1 is accessed from the front left-corner of the projector. The alignment screws are positioned along the top of the light tube, which allows them to be easily adjusted.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the side skin. See *Remove the Exhaust Panel Skin on page 3-9*.
5. Remove the contrast aperture. See *Remove the Contrast Aperture on page 3-33*.
6. Remove the light sensor module and move it aside. See *Remove the Light Sensor Module on page 3-34*.
7. Loosen the 2.5mm locking hex screw and remove the 2 2.5mm hex screws that secure the fold mirror to the bracket.



A	Hex Screw (1 of 2)
B	2.5mm Locking Hex Screw

8. Remove the fold mirror.

   When reinstalling the fold mirror, make that the reflective surface faces inwards. Also, you must recalibrate MCGD. See the Solaria One or Solaria One+ user manuals.

3.32.5 Yellow Notch Filter (YNF)

The YNF is located in the light path just after the contrast aperture.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the front skin. See *Remove the Front Skin on page 3-4*.
5. Remove the screw from the yellow notch filter cover and then remove the cover.
6. Loosen the thumb screw inside the yellow notch filter connecting it to the IOS.
7. Remove the two hex screws that secure the yellow notch filter to the IOS. If necessary, loosen the center nut.
8. Carefully pull the filter out of the IOS.

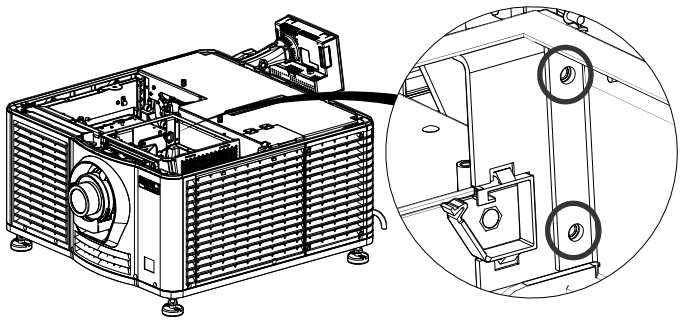
   When reinstalling the yellow notch filter, recalibrate MCGD and green primary. See *Yellow Notch Filter Color Calibration, on page 2-6*.

3.32.6 Remove the Illumination Optic System

UV HAZARD! Always wear protective safety clothing and a face shield when performing service with the safety shield removed and a lamp installed.

The IOS is a magnesium frame that holds the light engine. The light tube and most optical components are fastened to the IOS. All components except the second fold mirror can be removed on their own; therefore, the need to replace the IOS is low.

1. Turn the lamp off and cool the projector for at least 15 minutes.
2. Turn the projector off and then disconnect it from AC power.
3. Remove the top lid. See *Remove the Top Lid on page 3-4*.
4. Remove the light engine lid. See *Remove the High Security and Light Engine Lid on page 3-5*.
5. Remove the light engine blower. See *Remove the Light Engine Blower (Fan 4) on page 3-32*.
6. Remove the light engine. See *Replace the Light Engine on page 3-20.*
7. Remove the reflector assembly. See *Remove the Reflector Assembly on page 3-19*.
8. Remove the lamp adjust. See *Remove the Lamp Adjust Assembly on page 3-18*.
9. Remove the 2 screws that secure the firewall that separates the lamp housing from the light engine.



10. Remove the 4 screws from the bottom of the IOS.
11. Lift the light engine enclosure and the IOS out of the projector housing.

    When reinstalling the IOS, you must complete these tasks:

    a. Adjust the aperture shadows.
    b. Reshoot the MCGD.
    c. Verify the TCGD correction.
    d. Create new screen files.
    e. Verify the brightness uniformity.
12. Remove the 4 screws securing the IOS to the light engine enclosure.

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4 Backup, Restore, and Upgrade Projector Files

4.1 Add an Upgrade File

You need Administrator or Service permissions to complete this procedure.

1. Tap **Menu** > **Administrator Setup** > **Upgrade**.
2. Tap **Upload**.
3. Select the location of the upgrade file in the **Drive Letter** list.
4. Browse to the location of the upgrade file in the **Folder** list.
5. Tap the upgrade file and then tap **Open**.

4.2 Remove an Upgrade File

You need Administrator or Service permissions to complete this procedure.

1. Tap **Menu** > **Administrator Setup** > **Upgrade**.
2. Tap an upgrade file in the **Available Upgrade Files** list.
3. Tap **Remove**.

4.3 Install an Upgrade

You need Administrator or Service permissions to complete this procedure.

1. Tap **Menu** > **Administrator Setup** > **Upgrade**.
2. Tap an upgrade file in the **Available Upgrade Files** list.
3. Tap **Next**.
4. Tap a component in the **Component** list.
5. Select one of these options:

Option	Description
Upgrade Different Components Only	Upgrades system components that are newer or older than the currently installed version.
ICP Only Force Install	Forces an ICP install regardless of what current version is installed.
Force Upgrade All	Upgrades all components in the upgrade package.
Factory Install	Removes all configurations and upgrades all components.

6. Tap **Next**.

4.4 Back up Projector Settings and Information

You need Service permissions to complete this procedure.

1. Tap **Menu** > **Service Setup** > **File Management**.
2. Tap **Backup**.

4.5 Restore a File

You need Service permissions to complete this procedure. You can restore configuration, preference, channel, user, and ICP files.

1. Tap **Menu** > **Service Setup** > **File Management**.
2. Tap **Browse** to the right of the **File to restore** field.
3. Select the location of the upgrade file in the **Drive Letter** list.
4. Browse to the location of the upgrade file in the **Folder** list.
5. Tap the upgrade file and then tap **Open**.
6. Select the type of file to restore in the **Select type** list.
7. Tap **Restore**.
8. Tap **Yes**.

4.6 Restore Factory Default Settings

You need Service permissions to complete this procedure. You can restore configuration, preference, channel, and user files.

1. Tap **Menu** > **Service Setup** > **File Management**.
2. Select a file type to restore in the **Select type** list.
3. Tap **Reset Defaults**.
4. Tap **Yes**.

4.7 Move Files to the Projector

You need Service permissions to complete this procedure.

1. To move files from a USB Flash drive, insert the USB flash drive into the USB port on the side of the touch panel controller (TPC).
2. Tap **Menu** > **Service Setup** > **File Maintenance**.
3. Select a file type in the **File Type** list.
4. Tap and drag a file from the **TPC Files** pane to the **Projector Files** pane.

4.8 Delete Projector Files

You need Service permissions to complete this procedure.

1. Tap **Menu** > **Service Setup** > **File Maintenance**.
2. Select a file type in the **File Type** list.
3. Tap and drag a file from the **Projector Files** pane to the trash can icon.
4. Tap **Yes**.

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5 Troubleshooting

This section provides information and procedures for resolving common projector issues. If you cannot resolve a projector issue, contact Christie support. In order that a support representative can better assist you, have the model and serial number of your projector ready. For contact information for your region, see the back cover of this document.

5.1 Projector Functionality

Projector Does Not Turn On

- Verify the power cord is connected to the projector and the AC power supply correctly and the input selector switch is in the correct position.
- Verify the wall circuit breaker is on. If there is a problem with the wall circuit breaker turning off, contact a certified electrician.
- Verify the touch panel controller (TPC) is on and the LEDs on the input panel are illuminated. If the TPC is off and there are no LEDS illuminated, verify the AC outlet to which the projector is connected is working and the TPC is connected to the projector. If the AC outlet is working and the TPC is connected to the projector, contact Christie support.
- If the TPC is connected to the projector and the LEDs on the input panel are illuminated, on the TPC, verify in the **Operational Status** region of the **Main** panel does not indicate a PIBS1 failure.

Touch Panel Controller

- Make sure the TPC is connected to the projector.
- If the TPC fails to initialize, make sure the compact flash on the left side is installed correctly.
- If the TPC fails to initialize, restart the projector.
- If the location of button presses on the screen are not interpreted correctly, the TPC screen may need recalibrating. Tap **Menu** > **Administrator Setup > Preferences**. Tap **Calibrate Screen** and follow the on screen instructions.

Cannot Establish Communication with Projector

Verify all input devices have the same subnet mask and gateway and unique IP addresses.

Projector Does Not Move from Standby to Full Power Mode

- Check the touch panel controller (TPC) for error messages.
- If a failure with PIB communications exists, reseat the board.
- Check the Ethernet status LED on the rear of the TPC.
- Verify that the internal fans are operating.
- Look through the service panel and verify that the green LED is lit. This indicates the LVPS is operating.
- Check all of the harness connections between LVPS and backplane. Pay particular attention to the small, white connecter on the LVPS.
- Replace the LVPS.

DMD Over-temperature Warning

- Tap **Menu** > **Status** and then **Temperatures** in the left pane. Verify if the DMD temperatures are too high. If the temperatures are too high, turn the lamp off and allow the cooling fans to cool the projector.
- Check the condition of the air filters and clean or replace them if they appear to be dirty.
- Verify that all fans are operating.

5.2 Lamp Functionality

Lamp Does Not Ignite

- Tap **Menu** > **Advanced Setup** > **Lamp History** and verify the number of hours the lamp has operated. Replace a lamp nearing the end of its operational life.
- Tap **Menu** > **Status** and then **Interlocks** in the left pane. Check and correct all interlock failures.
- Tap **Menu** > **Status** and then **All Alarms** in the left pane. If a ballast communication error has occurred, restart the projector and turn the lamp on.
- Tap **Menu** > **Status** and then **Temperatures** in the left pane. Verify if the DMD temperatures are too high. If the temperatures are too high, turn the lamp off and allow the cooling fans to cool the projector. Ensure the projector is properly ventilated and the air filters are not blocked.
- Listen for a clicking noise that indicates the ballast is attempting to strike the lamp. If you do not hear a clicking noise, there might be a problem with the ballast. Contact a Christie accredited service technician to resolve the issue.
- If you hear a brief clicking noise, but the lamp does not ignite, replace the lamp.

Lamp Suddenly Turns Off

- Tap **Menu** > **Advanced Setup** > **Lamp Power/LiteLOC Setup**. Increase the lamp power.
- Tap **Menu** > **Status** and then **Interlocks** in the left pane. Review and correct all interlock failures.
- Tap **Menu** > **Status** and then **Temperatures** in the left pane. Verify if the DMD temperatures are too high. If the temperatures are too high, turn the lamp off and allow the cooling fans to cool the projector. Ensure the projector is properly ventilated and the air filters are not blocked.
- Replace the lamp.

LiteLOC™ Not Working

- Tap **Menu** > **Advanced Setup** > **LampPower/LiteLOC™ Setup.** Tap **Enable LiteLOC™**.
- If the lamp power is at the maximum setting to maintain a LiteLOC™ setting, LiteLOC™ is automatically disabled. Reduce the LiteLOC™ setting, or install a new lamp.

5.3 Display Issues

No Image Appears

- Make sure the lamp is on.
- Make sure the douser is open.
- Make sure a white test pattern is selected.
- Make sure the service doors are closed.
- Verify the marriage icon on the main window of the touch panel controller (TPC) is green.

- Make sure the FIPS LED on the Christie IMB is green. If the FIPS LED is red, put the projector in standby mode and then full power mode. If the FIPS LED remains red, contact Christie support. For contact information for your region, see the back cover of this document.
- Make sure the battery is charged and that the Christie IMB keys and certificate are present.
- Make sure the Christie IMB is selected as the input device for the channel:
  - Tap **Menu** > **Channel Setup**.
  - Select a channel in the **Channel Name** list.
  - Tap **Config 1** in the left pane.
  - Select **IMB-Internal** in the **Input** list.
- Tap **Menu** and then tap the IMB icon in the status bar at the bottom of the TPC. Make sure there are no critical alarms preventing the Christie IMB from operating.

Flicker, Shadows, or Dimness

- Ensure the douser is open.
- Align the lamp.
- Tap **Menu** > **Advanced Setup** > **LampPower/LiteLOC™ Setup**. Monitor the **Power %** field to determine if the power is consistent or if it varies. Increase the lamp power. Lamps which are near end of service may not operate reliably at a lower power setting.
- Fold mirror misalignment. Contact your Christie accredited service technician to resolve the issue.
- Integrator rod misalignment. Contact your Christie accredited service technician to resolve the issue.

Blank Screen, No Display of Cinema Image

- Ensure the lens cap is not on either end of the lens.
- Ensure the lamp is **ON**.
- Confirm all power connections are still OK.
- Ensure the douser is **OPEN** by verifying the state of the douser on **Main** panel.
- Ensure any test pattern other than the full black test pattern displays properly.
- Verify the correct display file is selected.
- For cinema connections, verify the correct port is selected.

Severe Motion Artifacts

Verify if there is a synchronization problem with reversed 3-2 pull-down in the 60Hz-to-24Hz film-to digital conversion and correct it at the source.

Image Appears Vertically Stretched or Squeezed into Center of Screen

Open the Source File Setup window and verify the resolution and aspect ratio settings. Open the Screen File Setup window and verify the lens factor settings

Inaccurate Display Colors

Tap **Menu** > **Channel Setup**. Tap **Config 1** in the left pane and verify the correct value is selected in the **PCF** list. Tap **Config 2** in the left pane and verify the correct value is selected in the **Color Space** field.

Display is Not Rectangular

- Verify the projector is level and the lens surface and screen are parallel to one another.
- Tap **Menu** > **Advanced Setup** > **Screen File Setup** and verify the settings for the screen file are correct.

Display is Noisy

- Verify the cables connecting the input device to the projector meet the minimum requirements.
- Add signal amplification or conditioning if the distance between the input device and the projector exceeds 25 feet.
- Turn the projector off and then on again.

Display has Suddenly Frozen

Turn off the projector and unplug the power cord from the power source. Plug the projector power cord into a power source and turn the projector on.

The Projector is On, but Alternate Content Does Not Display

- Make sure the lens cover is removed from the lens.
- Make sure the lamp is on.
- Make sure the douser is open.
- Tap on the main TPC screen.
- Tap **Menu** > **Channel Setup**. Verify the correct channel is selected and the settings are correct.
- Ensure an active source is connected properly. Check the cable connections and make sure the alternative source is selected.
- Verify you can select test patterns. If you can, check your source connections again.

The Display is Jittery or Unstable

- Verify that the input device is connected properly. If the input device is not connected properly, the projector repeatedly attempts to display an image.
- The horizontal or vertical scan frequency of the input signal may be out of range for the projector.
- The sync signal may be inadequate. Correct the source problem.

Portions of the Display are Cut Off

If you have resized the image, adjust the resizing settings until the entire image is visible and centered.

Inconsistent Picture Quality

- Verify the quality of the signal from the input source.

During playback, flashes of light appear on the screen

There might be insufficient bandwidth to stream content from the NAS or DAS device to the Christie IMB. To correct this issue:

- Test your NAS device to determine if it can maintain the required bandwidth to stream content to the Christie IMB.
- Change the file system protocol on the NAS device to Network File System (NFS).
- Verify that the NAS device is connected directly to the Christie IMB NAS port.
- Verify that no other devices are connected to the Christie IMB NAS port.

5.4 Christie IMB

For troubleshooting information, see the Christie Integrated Media Block User manual available for download on the Christie web site (*http://www.christiedigital.com/en-us/products/accessories/Pages/Christie-IMB-011-103895-XX.aspx*).

CHRISTIE

6 Available Replacement Parts and Modules

The tables in this section list the parts and accessories that are available for the Solaria One+ projector.

6.1 Lamp and Filter Assemblies

Part Name/Description	Christie Service Kit Part #
Replacement Light Engine Paper Air Filter (5PK)	003-004460-xx
Replacement Light Engine Washable Air Filter	003-004654-xx
Replacement Card Cage Paper Air Filter	003-002311-XX
Replacement Card Cage Washable Air Filter	003-004655-xx
Lamp CDXL-14M (1.4 kW Xenon)	003-003066-xx
Lamp CDXL-16M (1.6 kW Xenon)	003-003900-xx
Lamp CDXL-21S1 (2.1 kW Xenon)	003-004258-xx
Light Engine Blower Assembly	003-110862-xx

6.2 Light Engine

Part Name/Description	Christie Service Kit Part #
Harness Kit - LVDS SFB to CBP	003-111832-xx
Light Engine Assembly	003-102958-xx

6.3 Lamp Power Supply, Igniter, and Power Supplies

Part Name/Description	Christie Service Kit Part #
Lamp Power Supply (LPS)	003-120704-xx
Low Voltage Power Supply	003-120705-xx
Low Voltage Power Supply 60W (Standby)	003-120509-xx

6.4 Optical Assemblies

Part Name/Description	Christie Service Kit Part #
Cold Mirror	003-004459-xx
Fold Mirror #1	003-001979-xx
Fold Mirror #2	003-001980-xx
Integrator Assembly (includes holder and rod; frame and cover are separate)	003-103096-xx
IOS (does not include integrator and LiteLOC™)	003-103267-xx
UV Filter	003-004458-xx
Yellow Notch Filter	003-103098-xx

6.5 PCB Assemblies

Part Name/Description	Christie Service Kit Part #
Backplane PCB	003-111666-xx
ICP PCB	003-103173-xx
Christie IMB	003-103110-xx
Light Sensor Assembly	003-111904-xx
PIBS1 Faceplate Board	003-111847-xx
Projector Intelligence Board (PIBS1)	003-111833-xx

6.6 Fan Assemblies

Part Name/Description	Christie Service Kit Part #
Fan 12V 1.6A 4-wire 150mm (Fans 1,2,4)	003-110862-xx
Fan 12V 0.5A 4-wire 92mm (Fans 3,5,6,7,8)	003-110827-xx
Fan 12V 0.45A 4-wire 60mm (Fan 9)	003-111709-xx

6.7 Miscellaneous

Part Name/Description	Christie Service Kit Part #
AC Line Filter 15A	003-004457-xx
AC Line Filter 20A	003-004456-xx
ASSY Knob LM Plastic - Horizontal (Solaria One)	003-004462-xx
ASSY Knob LM Plastic - Vertical (Solaria One)	003-004463-xx
ASSY Temperature Sensor	003-100618-xx
Feet (4x adjustable/front feet 120mm and back feet 203mm)	003-002146-xx
Flexible Shaft X- Lamp Adjust	003-103248-xx
Flexible Shaft Y- Lamp Adjust	003-103249-xx
Flexible Shaft Z- Lamp Adjust	003-103250-xx
Interlock Switch	003-001559-xx
Key - High Security	003-001526-xx
Lamp Adjust	003-103111-xx
Lens Mount (Solaria One)	003-103071-xx
Motorized Lens Mount (Solaria One$^+$)	003-103553-xx
Lens Mount Stepper Motor (Solaria One$^+$)	003-100702-xx
IMCB (Solaria One$^+$)	003-111426-xx
Lens Mount Lockdown Handle	003-004461-xx
LVDS Harness	003-111832-xx
Reflector/Lamp Housing (includes sheet metal housing and lint free gloves)	003-103082-xx
Shutter Assembly	003-102988-xx
TPC	003-102075-xx
TPC Mounting Hardware	003-003326-xx
TPC Harness	003-111169-xx

6.8 Optional Accessories

Part Name/Description	Christie Service Kit Part #
Exhaust duct	119-103105-xx
Foot Brackets	119-100101-xx
Protective Clothing Safety Kit (Kevlar gloves, ballistic nylon jacket, face	598900-095
Rack Stand Full	108-416102-xx
Dual Polarizer Frame Kit	108-462103-xx

6.9 Optional Lenses - Solaria One

Part Name/Description	Christie Service Kit Part #
1.2 - 1.72.69” DLPCine Zoom Lens	108-458108-xx
1.33 - 2.1.69” DLPCine Zoom Lens	108-459109-xx
1.62 - 2.7.69” DLPCine Zoom Lens	108-460101-xx
2.09 - 3.9.69” DLPCine Zoom Lens	108-461102-xx

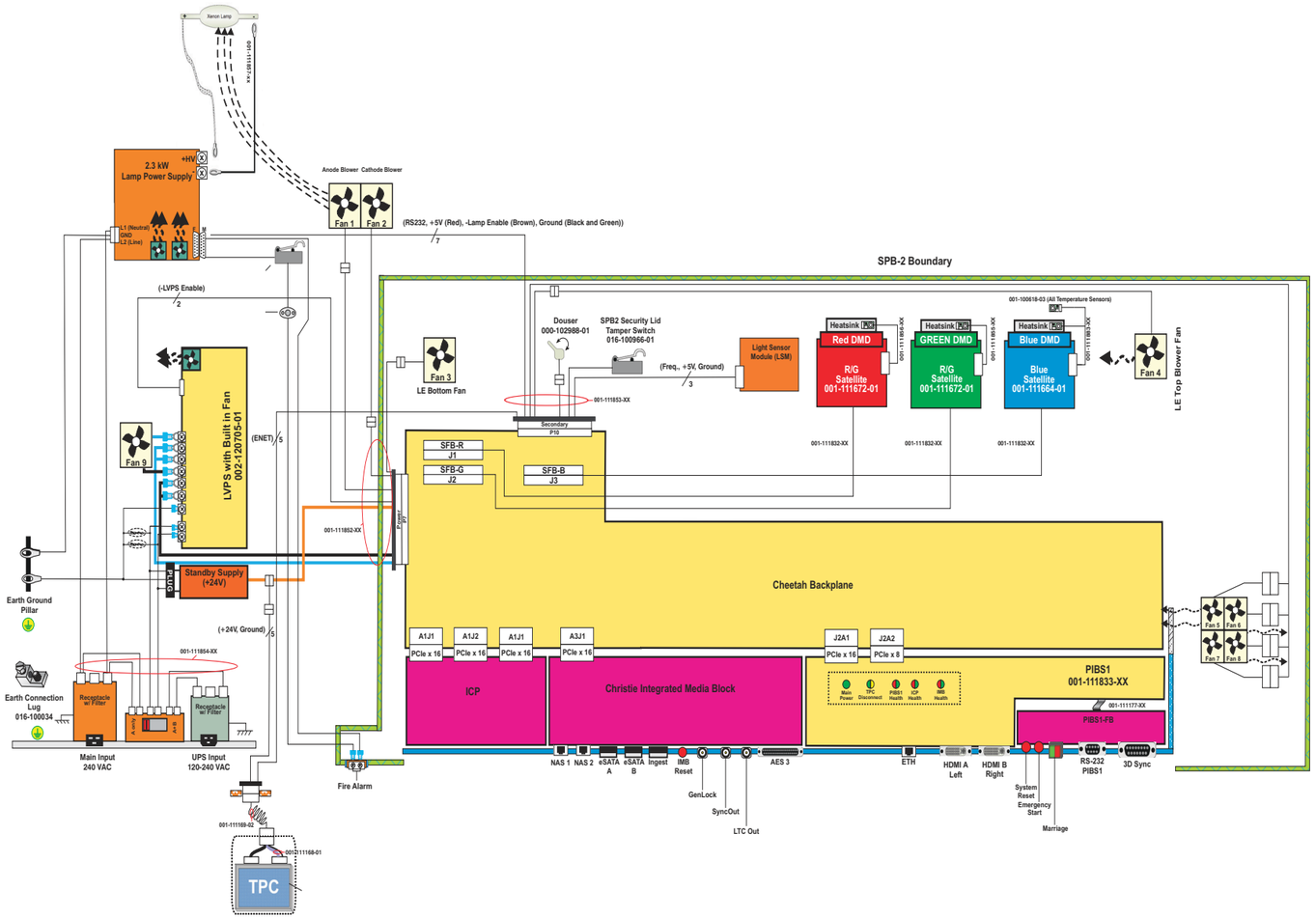
6.10 Optional Lenses - Solaria One+

Part Name/Description	Christie Service Kit Part #
1.2-1.7 .69” DLPCine Zoom Lens	108-464105-xx
1.34-1.9 .69”DLPCine Zoom Lens	108-465106-xx
1.5-2.15 .69”DLPCine Zoom Lens	108-466107-xx
1.7-2.55 .69”DLPCine Zoom Lens	108-467108-xx
2.0-3.9 .69”DLPCine Zoom Lens	108-468109-xx

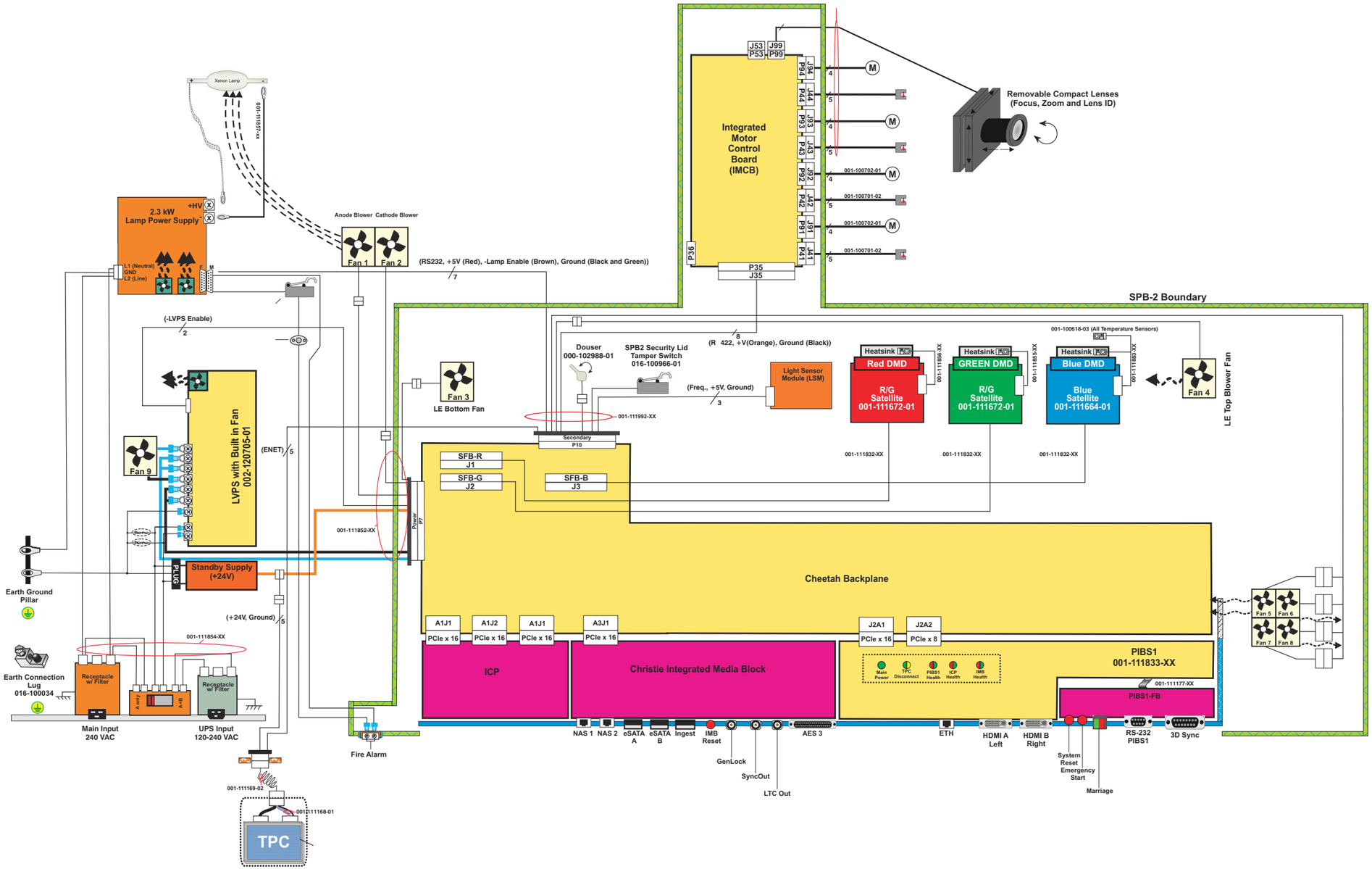
7 Interconnections

The interconnect drawings illustrate the path of electrical connections between modules.

7.1 Solaria One

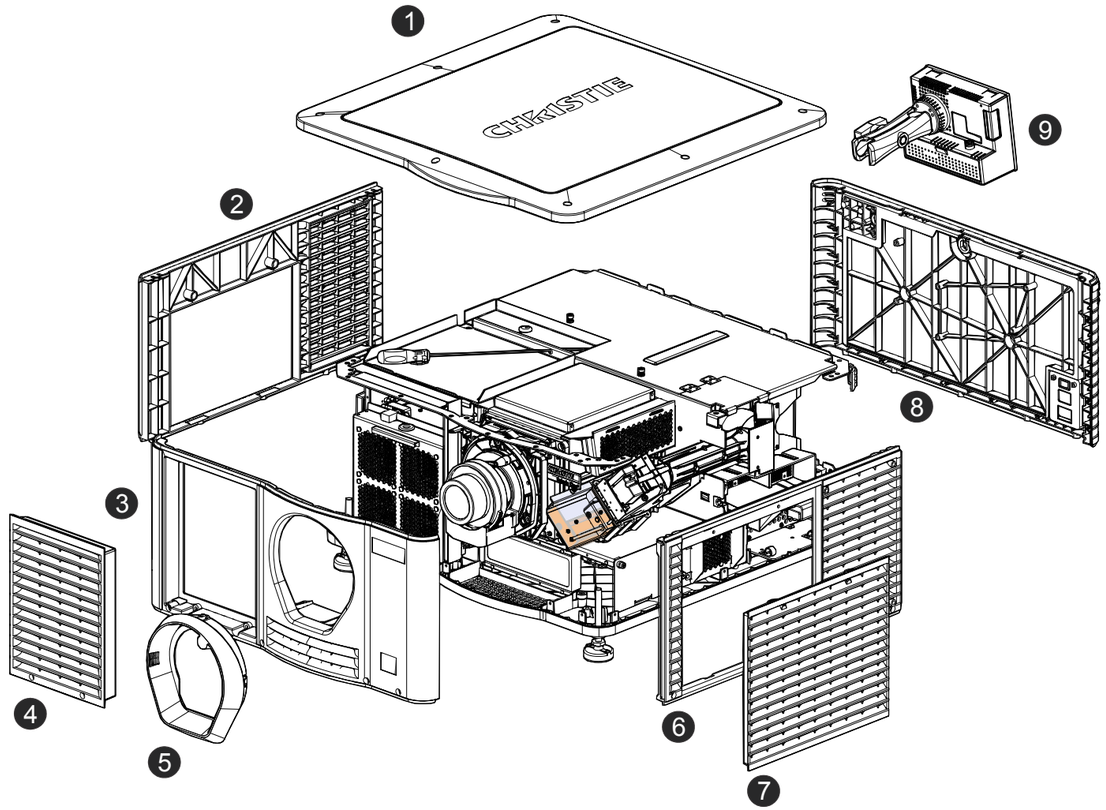


7.2 Solaria One+



8 Exploded Views

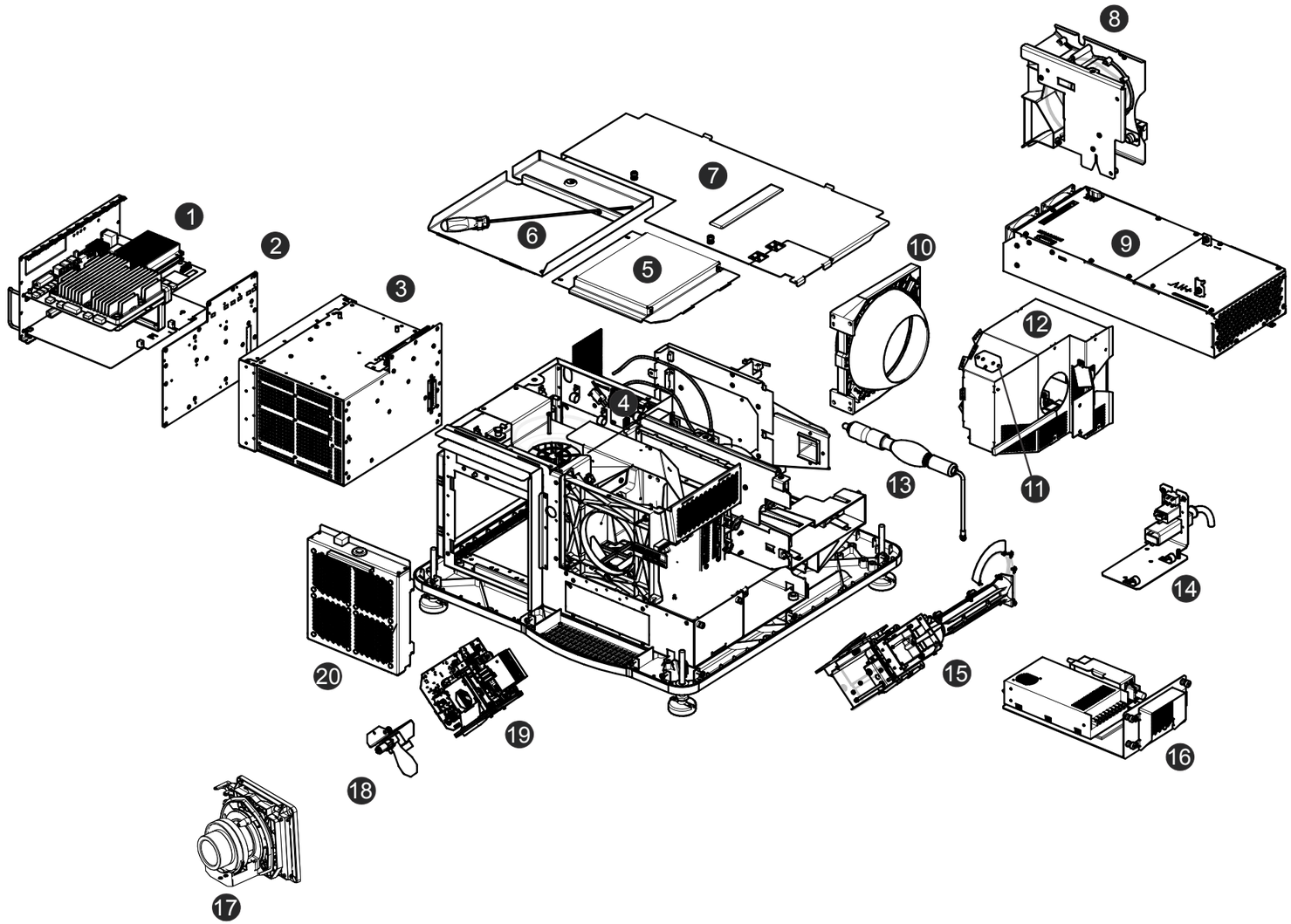
8.1 External View - Solaria One and Solaria One+



NOTE: The horizontal and vertical lens adjustment knobs on the Solaria One projector are not illustrated. To remove the front skin, you must first remove these knobs.

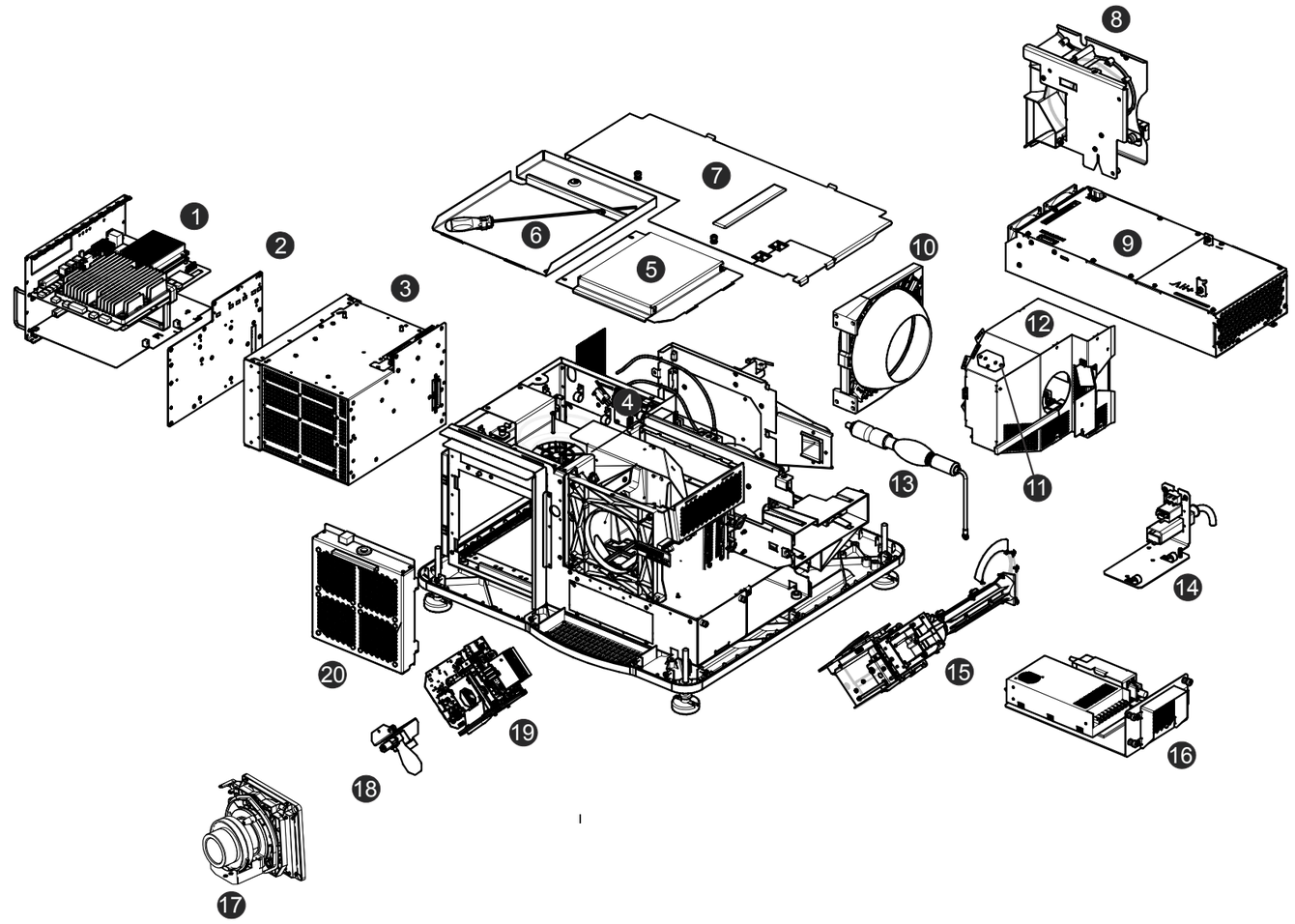
LABEL	DESCRIPTION
1	Top Lid
2	Cardcage Panel Skin
3	Front Face Skin
4	Air Filter Cover
5	Lens Surround
6	Exhaust Panel Skin
7	Service Door
8	Rear Lamp Door
9	touch panel controller (TPC)

8.2 Internal View - Solaria One



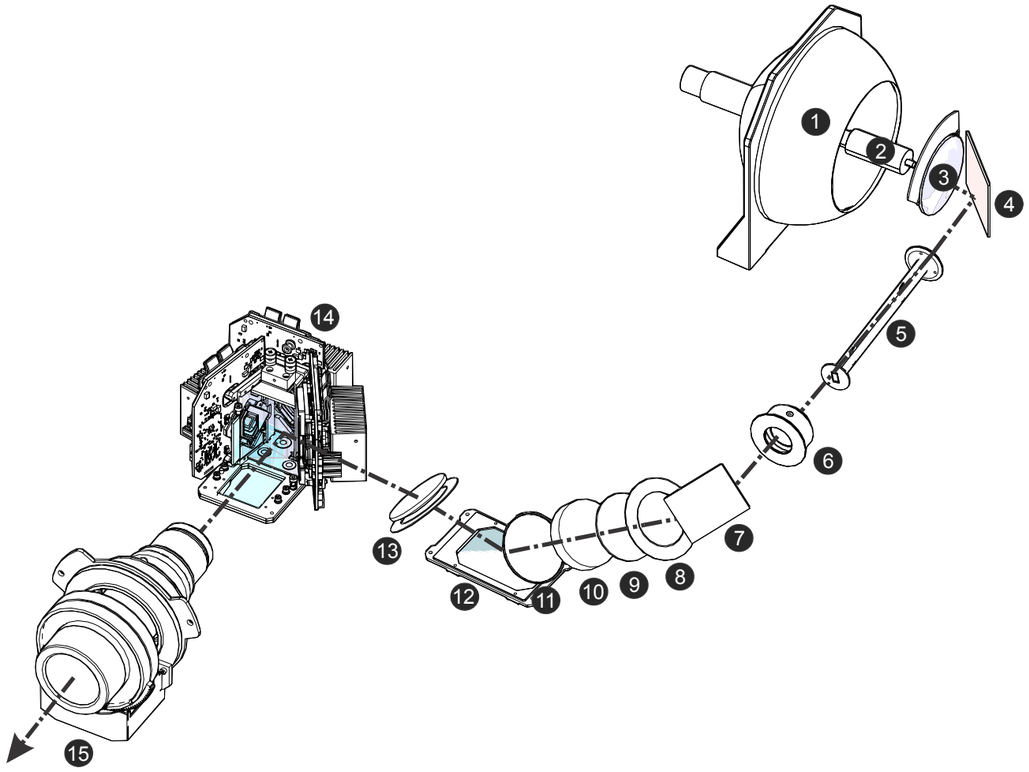
LABEL	DESCRIPTION	LABEL	DESCRIPTION	LABEL	DESCRIPTION
1	Christie IMB, PIBS1, and PIBS1 faceplate	8	Ballast	15	Power Supply Tray
2	Backplane	9	Reflector	16	Lens Mount
3	Cardcage	10	Lamp Temperature Sensor	17	Douser Assembly
4	Light Engine Cover	11	Lamp Cover	18	Light Engine
5	High Security Lid	12	Lamp	19	Card Cage Fan Pack Assembly
6	Safety Shield	13	AC Line Filters		
7	Cathode Blower Assembly	14	IOS Assembly		

8.3 Internal View - Solaria One+



LABEL	DESCRIPTION	LABEL	DESCRIPTION	LABEL	DESCRIPTION
1	Christie IMB, PIBS1, and PIBS1 faceplate board	**8**	Cathode Blower Assembly	**15**	IOS Assembly
2	Backplane	**9**	Ballast	**16**	Power Supply Tray
3	Cardcage	**10**	Reflector	**17**	Lens Mount
4	IMCB	**11**	Lamp Temperature Sensor	**18**	Douser Assembly
5	Light Engine Cover	**12**	Lamp Cover	**19**	Light Engine
6	High Security Lid	**13**	Lamp	**20**	Card Cage Fan Pack Assembly
7	Safety Shield	**14**	AC Line Filters		

8.4 Light Path



LABEL	DESCRIPTION
1	Reflector
2	Lamp
3	UV Filter
4	Cold Mirror
5	Integrator Rod
6	Lens 1
7	Fold Mirror 1
8	Lens 2
9	Yellow Notch Filter
10	Lens 3
11	Lens 4
12	Fold Mirror 2
13	Lens 5
14	Light Engine
15	Lens

Corporate offices

USA – Cypress
ph: 714-236-8610

Canada – Kitchener
ph: 519-744-8005

Worldwide offices

United Kingdom
ph: +44 118 977 8000

France
ph: +33 (0) 1 41 21 00 36

Germany
ph: +49 2161 664540

Eastern Europe
ph: +36 (0) 1 47 48 100

Middle East
ph: +971 (0) 4 299 7575

Spain
ph: + 34 91 633 9990

Singapore
ph: +65 6877-8737

Beijing
ph: +86 10 6561 0240

Shanghai
ph: +86 21 6278 7708

Japan
ph: 81-3-3599-7481

South Korea
ph: +82 2 702 1601

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