This manual contains important information on proper use and care of this surgical lighting fixture. All operators and department heads are urged to carefully review and become familiar with the warnings, cautions, and instructions contained herein. Your new surgical lighting fixture features an advanced, state-of-the-art design, with cool, shadow-reduced light, and ease of maneuverability. It produces light of a quality necessary for the most demanding and complex of surgical procedures.

A thorough preventive maintenance program is essential to safe and proper operation of your surgical light. You are encouraged to contact STERIS concerning our Annual Maintenance Agreement. Under terms of this agreement, preventive maintenance, adjustments, and replacement of worn parts are done on a scheduled basis to assure lighting fixture performance at peak capability and to help avoid untimely or costly downtime. STERIS maintains a nationwide staff of well-equipped, factory-trained technicians to provide this service, as well as expert repair services. Contact your STERIS representative for details.

The Amsco® SQ240 SurgiVision™ Surgical Lighting and Video System from STERIS is a high-resolution video system integrated into the lighthead of an SQ240 light. This video system, designed into the camera housing that accepts the sterilizable handle, enables the Customer to document surgical procedures for a variety of reasons, including teaching and archival purposes.

A remote hand-held wireless control allows the Customer to control the key video functions of the system; zoom, image-field rotation, and focus of the camera. An optional foot control accessory (not available on Hermes-ready systems) is available to activate the video system zoom and rotation functions.

The Hermes-ready system requires the use of a Hermes control center (not supplied by STERIS) that allows the customer to control key video functions (zoom, image-field rotation and focus) using verbal commands or a hand-held touch screen pendant.

The Amsco® SQ240™ Surgical Lighting System provides cool, color-corrected, shadow-controlled illumination of the surgical field during surgical procedures in the operating theatre.

The following is an important message from STERIS about the advantages and limitations associated with the use of high intensity surgical lighting systems.

Because of the variety of surgical procedures performed and the wide range of individual preferences of surgical staffs, it is desirable that the surgical lighting system be capable of selective control across a wide range of illumination intensities. The Illuminating Engineering Society (IES) stresses that in addition to providing control of intensity, surgical lighting systems should provide shadow control, correct color rendition, and a suitable depth of field to provide sharp, consistent lighting into deep body cavities.

The IES states that the surgical lighting system should be capable of providing a minimum of 2,500 footcandles of light directed to the center of the pattern. Although the IES does not recommend a maximum illumination intensity, it cautions that as illumination intensities increase to maximum settings, radiant heat will also increase. The IES further cautions that for most operations, infrared radiant energy in the spectral region of 800 to 1000 nm should be kept to a
minimum. In certain neurosurgical or intestinal procedures on delicate, thin, dry or abnormal tissue, the user of surgical lights should take care to utilize the lowest possible illumination intensity suitable for the procedure.

The Amsco SQ240 Surgical Lighting System has been designed to provide maximum illumination flexibility and at the same time minimize potentially damaging infrared heat in the surgical field. Illumination intensity of the SQ240 Surgical Light can be adjusted through five intensity settings on the Variable Intensity Controller (VIC). Typical illumination performance can be expected to range between approximately 6,000 footcandles at position number 1 on the VIC and 12,000 footcandles at position number 5. For the protection of surgically exposed tissues and for the comfort and efficiency of the surgeon and assistants, radiant energy can be effectively controlled by limiting the time of exposure at the higher intensity settings on the VIC.

NOTE: This device is in compliance with IEC 60601-1-2 (1st Edition, 1993-04), Medical Electrical Equipment – Part 1: General Requirements for Safety; Electromagnetic Compatibility (EMC). There is, however, a potential for electromagnetic or other interference between this equipment and other devices. Should you experience interference, relocate the device or minimize the use of the affected equipment while this device is operating.

EC Authorized Representative

STERIS Ltd.
The Stable Block, Cornbury Park
Charlbury
Oxfordshire OX7 3EH
ENGLAND

Manufactured by:
STERIS Corporation
2720 Gunter Park East
Montgomery, AL 36109 • USA
TEL: 334 277 6660
FAX: 334 271 5450

Class 1 Equipment
Type B Equipment
Ordinary Equipment (enclosed equipment without protection of ingress of water)
Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or oxygen or nitrous oxide.
Suitable for continuous operation.
Power Rating: 110-130 VAC, 50/60 Hz, 3.5 A (Single) / 7 A (Dual)
220-250 VAC, 50/60 Hz, 2 A (Single) / 4 A (Dual)

NOTE: Optional equipment may have other power requirements.

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Italy 39 0141 590429
Japan 81 78 252 1901
Korea 82 2 554 1661
Latin America 305 442 8202
Singapore 65 841 7677
Spain 34 91 658 5920
United Kingdom 44 1 608 811 822

The base language of this document is ENGLISH. Any translations must be made from the base language document.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Listing Of Warnings And Cautions</td>
<td>1-1</td>
</tr>
<tr>
<td></td>
<td>Definition of Symbols</td>
<td>1-3</td>
</tr>
<tr>
<td>2</td>
<td>Installation Verification</td>
<td>2-1</td>
</tr>
<tr>
<td></td>
<td>Pre-operation Checklist</td>
<td>2-1</td>
</tr>
<tr>
<td>3</td>
<td>Operating Instructions</td>
<td>3-1</td>
</tr>
<tr>
<td></td>
<td>Advisory</td>
<td>3-1</td>
</tr>
<tr>
<td></td>
<td>Lighthread Positioning</td>
<td>3-2</td>
</tr>
<tr>
<td></td>
<td>Check Lamp Failure LEDs</td>
<td>3-2</td>
</tr>
<tr>
<td></td>
<td>Variable Intensity Controller</td>
<td>3-2</td>
</tr>
<tr>
<td></td>
<td>Light Pattern Adjustment</td>
<td>3-4</td>
</tr>
<tr>
<td></td>
<td>Sterilizable Handle</td>
<td>3-5</td>
</tr>
<tr>
<td></td>
<td>Camera Installation or Removal</td>
<td>3-7</td>
</tr>
<tr>
<td></td>
<td>Surgivision Camera Operation</td>
<td>3-8</td>
</tr>
<tr>
<td></td>
<td>Install Video Monitor</td>
<td>3-9</td>
</tr>
<tr>
<td></td>
<td>Install Video Cassette Recorder</td>
<td>3-9</td>
</tr>
<tr>
<td>4</td>
<td>Cleaning the Equipment</td>
<td>4-1</td>
</tr>
<tr>
<td></td>
<td>Cleaning Equipment</td>
<td>4-1</td>
</tr>
<tr>
<td></td>
<td>General Cleaning/Disinfecting Procedure</td>
<td>4-3</td>
</tr>
<tr>
<td></td>
<td>Areas To Be Cleaned Before Each Use</td>
<td>4-3</td>
</tr>
<tr>
<td></td>
<td>Areas To Be Cleaned/Disinfected Once A Month</td>
<td>4-3</td>
</tr>
<tr>
<td>5</td>
<td>Operator Troubleshooting</td>
<td>5-1</td>
</tr>
<tr>
<td>6</td>
<td>Maintenance</td>
<td>6-1</td>
</tr>
<tr>
<td></td>
<td>Preventive Maintenance Record</td>
<td>6-1</td>
</tr>
<tr>
<td></td>
<td>Inspect Lamp Change Mechanism</td>
<td>6-3</td>
</tr>
<tr>
<td></td>
<td>Check Vertical Suspension Tube</td>
<td>6-3</td>
</tr>
<tr>
<td></td>
<td>Check Battery Backup (As Applicable)</td>
<td>6-3</td>
</tr>
<tr>
<td></td>
<td>Check Hub Cap (Centra Mount)</td>
<td>6-5</td>
</tr>
<tr>
<td></td>
<td>Check Variable Intensity Controller</td>
<td>6-5</td>
</tr>
<tr>
<td></td>
<td>Check Yoke Plug Button</td>
<td>6-5</td>
</tr>
<tr>
<td></td>
<td>Lamp Replacement</td>
<td>6-6</td>
</tr>
<tr>
<td>7</td>
<td>Replacement Parts</td>
<td>7-1</td>
</tr>
</tbody>
</table>
Amsco SQ240 Lighting System and SQ240 SurgiVision Lighting and Video System
The following is a summary of safety precautions which must be observed when operating or servicing this lighting fixture. WARNINGS indicate the potential for danger to personnel, and CAUTIONS indicate the potential for damage to equipment. The precautions are repeated (in whole or in part), where applicable, throughout the manual. Carefully read all precautions before proceeding to use or service this equipment.

**WARNING — EXPLOSION HAZARD:**

⚠️ Do not use lighting fixture in the presence of flammable anesthetics.

**WARNING — ELECTRIC SHOCK HAZARD:**

⚠️ Do not remove covers or perform service other than as described in this operator manual. Refer servicing to qualified service personnel. (Maintenance Manual P-764326-998.)

⚠️ Do not remove variable intensity controller covers. Refer servicing to qualified service personnel.

**WARNING — RISK OF FIRE:**

⚠️ Replace fuses (F-1) and (F-2) as noted: 24V- FLM 20 250 V. Contact STERIS Corporation for replacement fuses.

**WARNING — PERSONAL INJURY HAZARD:**

⚠️ Do not use lighting fixture if red band is visible below rubber cap at top of vertical suspension tube.

⚠️ Do not attempt to replace the lamp unless power is turned off at variable intensity controller by disengaging the circuit breaker(s) and the lighthead has cooled sufficiently.

⚠️ Do not attempt to clean lighthead unless power is turned off at variable intensity controller by disengaging the circuit breaker(s) and the lighthead has cooled sufficiently.

⚠️ Do not attempt to adjust suspension system. Refer servicing to qualified service personnel.

**CAUTION: POSSIBLE EQUIPMENT DAMAGE**

⚠️ Do not bump lightheads into walls or other equipment.

⚠️ Use only recommended cleaning/disinfecting and/or anti-static agents on this light. Some degree of staining, pitting, and/or discoloration could occur if a phenolic-, iodophor-, or glutaraldehyde-based disinfectant is used on the surfaces of this light. Also, use of alcohol or aerosol spray cleaner/disinfectants (e.g., Lysol®) containing a substantial amount of alcohol in the formula can damage the acrylic plastic lens.

⚠️ Use of any disinfectant solution other than those listed below may cause discoloration or deformation on the acrylic lens surface: Coverage Spray TB, Germicidal Cloth, Coverage Spray HBV, Coverage HBV Concentrate, T.B.Q., or Coverage Plus. Cleaning solutions other than those listed have NOT been tested for compatibility or effectiveness. Always follow manufacturer instructions for concentrations and use of cleaning products.
Prevent leakage of fluids into interior of lighthead.

Do not scratch optical coating on accessible portions of optical core when cleaning; always wear rubber gloves and use only a clean, white, lint-free cloth when wiping internal surfaces.

Do not touch glass portion of lamp during re-lamping or cleaning.

Manual actuation of the lamp change mechanism may result in permanent damage to the gear motor.

To prevent camera or camera replacement unit from falling, tighten thumb screws securely.

Do not operate circuit breaker with the intensity controller knob in any of the “ON” positions.

Do not use circuit breaker as routine operation ON/OFF switch.

Do not immerse the hand-held control in fluid.
## Definition of Symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>![ON]</td>
<td>ON</td>
</tr>
<tr>
<td>![OFF (Standby)]</td>
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</tr>
<tr>
<td>![ON]</td>
<td>ON</td>
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<tr>
<td>![STANDBY]</td>
<td>STANDBY</td>
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<tr>
<td>![Lamp Out]</td>
<td>Lamp Out</td>
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<tr>
<td>![Protective Earth (Ground)]</td>
<td>Protective Earth (Ground)</td>
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<tr>
<td>![Attention, consult manual for further instructions]</td>
<td>Attention, consult manual for further instructions</td>
</tr>
<tr>
<td>![Hot]</td>
<td>Hot</td>
</tr>
<tr>
<td>![SER. NO.]</td>
<td>Serial Number of Unit</td>
</tr>
<tr>
<td>![V~]</td>
<td>Voltage Rating of Unit, Alternating Current</td>
</tr>
<tr>
<td>![A]</td>
<td>Amperage Rating of Unit</td>
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<tr>
<td>![Hz]</td>
<td>Frequency of Unit</td>
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<tr>
<td>![Zoom]</td>
<td>Zoom</td>
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<tr>
<td>![Rotate]</td>
<td>Rotate</td>
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<tr>
<td>![Manual Focus]</td>
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<td>![Auto Focus]</td>
<td>Auto Focus</td>
</tr>
</tbody>
</table>
An **Equipment Drawing** showing all of the space and utility requirements was sent to the purchaser after the order for this surgical light was received. The clearance space shown on the drawing is necessary for proper installation, operation, and maintenance of this fixture.

**Installation** and **Uncrating Instructions** were furnished with the Lighting Fixture.

*If any of these documents are missing or misplaced, contact STERIS, giving the serial, unit and model numbers of the equipment. Replacement copies will be sent to you promptly.*

Before operating the equipment, complete the pre-operation checklist. It is essential to the safe operation and continuing maintenance of this equipment to ensure the installation is complete and correct. (Refer to Figures 1 through 5 to locate parts.)
**Check Track Mounting For Seismic If Required (see Figure 2-1)**

*NOTE:* 4’6” track uses eight outer holes for seismic and four central holes for non-seismic installations.

*NOTE:* Seismic installations require track to be mounted using the eight hole mounting pattern only (see Figure 2-1). Contact STERIS if there are any questions regarding seismic building code regulations.

![Figure 2-1. Track Mounting Hole Patterns for 9' Track](image-url)
**WARNING - PERSONAL INJURY HAZARD:** Do not use lighting fixture if red band is visible below rubber cap at top of vertical suspension tube.

**Check Vertical Suspension Tube** (see Figure 2-2)

Inspect vertical suspension tube. A red colored band has been applied to the surface of the tube normally hidden under the rubber boot at the top. If the mounting configuration has been properly assembled, the red band will not be visible. If the red band is visible, do not attempt to use the light fixture. Additionally, when properly assembled the vertical suspension tube should not move back and forth or side to side (i.e., “wobble”). If the vertical suspension tube does move back and forth or side to side, do not use the light fixture because the installation is not correct. In either case, call your STERIS service representative immediately.

**Check Suspension Movement**

The lighthead assembly should move smoothly and easily. When positioned, the lighthead should not drift. If any binding or drifting is present in the movement of the lighthead, call your STERIS service representative to make adjustments. Ensure that suspension system (e.g. counterbalance, vertical suspension tube pivot) moves through all articulations smoothly without binding.

![Figure 2-2 Check Vertical Suspension Tube](image-url)
Check Operation of Fixture

Ensure that electrical power to the Variable Intensity Controller (VIC) is on.

Variable Intensity Controller: Turn the controller on by pressing the circuit breaker(s) to the “ON” position. This control has five discrete intensity settings. Turn the rotary knob clockwise until it points to #1 (lowest intensity setting). The “ON” LED should illuminate to indicate power to the lighthead. Turning the knob clockwise to the #2, #3, #4, and #5 positions will increase the light intensity. Check all five positions for operation and change in intensity. (See Figure 2-3.)

NOTE: Turn power OFF using intensity control knob when testing is complete. (See Figure 2-3.)

Check Lamp Failure LEDs: If the LEDs on the lighthead cover are blinking, one or both of the fixture’s lamps may have to be replaced. (Refer to Lamp Replacement, Section 6.)

Check Operation of SurgiVision Video Camera

Turn the video controller on by pressing the circuit breaker to the “ON” position. Press the power “ON” touch button on the touch pad to turn on camera. (See Figure 2-4.) Verify that power LED illuminates.

Video: Ensure a clear signal is reaching the video display device (monitor) from the camera. (Check cable connection between wall control and monitor, if necessary.)

Wall Control: Verify zoom, rotation and focus functions with the wall control membrane switches.

Hermes-ready Wall Control: Refer to Hermes Control Center operating manual to verify verbal command operation (check Hermes interface cable connections between wall control and Hermes control center if necessary).

Wireless Hand-held Control: Verify zoom, rotation and focus functions with the wireless control. (Check batteries in control if necessary.)

NOTE: Transmitter on wireless control must be within 15 feet (maximum) and directed within 50° of receiver on wall control.

Figure 2-3. SQ240 and SurgiVision Variable Intensity Controller
**Optional Foot Control:** Verify zoom and rotation functions with the optional foot control. (Check cable connection between foot control and wall control, if necessary.)

**NOTE:** When testing is complete, press the power “STANDBY” touch button on the touch pad, then turn circuit breaker “OFF”. (See Figure 2-4.)

---

**Figure 2-4. Standard SurgiVision Wall Control, Hermes-ready Wall Control, Hand-held Wireless Control, and Optional Foot Control**
The following is an important message from STERIS about the advantages and limitations associated with the use of high intensity surgical lighting systems.

Because of the variety of surgical procedures performed and the wide range of individual preferences of surgical staffs, it is desirable that the surgical lighting system be capable of selective control across a wide range of illumination intensities. The Illuminating Engineering Society (IES) stresses that in addition to providing control of intensity, surgical lighting systems should provide shadow control, correct color rendition, and a suitable depth of field to provide sharp, consistent lighting into deep body cavities.

The IES states that the surgical lighting system should be capable of providing a minimum of 2,500 footcandles of light directed to the center of the pattern. Although the IES does not recommend a maximum illumination intensity, it cautions that as illumination intensities increase to maximum settings, radiant heat will also increase. The IES further cautions that for most operations, infrared radiant energy in the spectral region of 800 to 1000 nm should be kept to a minimum. In certain neurosurgical or intestinal procedures on delicate, thin, dry or abnormal tissue, the user of surgical lights should take care to utilize the lowest possible illumination intensity suitable for the procedure.

The Amsco SQ240 Surgical Lighting System has been designed to provide maximum illumination flexibility and at the same time minimize potentially damaging infrared heat in the surgical field. Illumination intensity of the SQ240 Surgical Light can be adjusted through five intensity settings on the Variable Intensity Controller (VIC). Typical illumination performance can be expected to range between approximately 6,000 footcandles at position number 1 on the VIC and 12,000 footcandles at position number 5. For the protection of surgically exposed tissues and for the comfort and efficiency of the surgeon and assistants, radiant energy can be effectively controlled by limiting the time of exposure at the higher intensity settings on the VIC.

NOTE: This device is in compliance with IEC 60601-1-2 (1st Edition, 1993-04), Medical Electrical Equipment – Part 1: General Requirements for Safety; Electromagnetic Compatibility (EMC). There is, however, a potential for electromagnetic or other interference between this equipment and other devices. Should you experience interference, relocate the device or minimize the use of the affected equipment while this device is operating.
A wall-mounted Variable Intensity Controller (see Section 2, Figure 2-3) allows the user to adjust the fixture’s light intensity (brightness) by rotating a control knob. An identifying number on the rotary knob corresponds to the same number on the lighthead suspension knuckle.

**To operate the controller:**

1. Push circuit breaker(s) to the ON position.
2. One or two rotary knobs on the face of the controller are used to adjust the intensity level of lightheads. Generally, rotating a knob clockwise increases intensity, rotating a knob counterclockwise decreases intensity. Each knob can be positioned to five discrete intensity levels.

**Positions:**

**NOTE:** Trying to leave knob indicator at a point between discrete positions can damage the controller.

1. **OFF**
2. **Power ON, indicator LED**
3. **1, 2, 3, 4, 5** (also note increasingly larger circle beside each number). The higher the number (or the larger the circle), the greater level of illumination from the lighthead.

**NOTE:** For longer lamp life, use lowest intensity level suitable for surgical procedure.

3. To turn lighthead OFF, rotate knob until indicator points to the OFF symbol on the controller panel.

Lamp Failure LEDs, with accompanying symbols, are located on the front and back of lighthead cover (see illustration at left for location). These indicators are used to determine if the lighthead is operating on the secondary lamp.

- Check the Lamp Failure LEDs each time the surgical light is used.
- A secondary lamp inside the lighthead turns on when the primary lamp fails and automatically moves into the primary position. This function takes approximately one second.
- If the lamp failure LEDs are blinking, replace the failed lamp(s). (See Lamp Replacement, Section 6.) After the lamp is replaced and power is restored to the lighthead, the LEDs stop blinking, the primary lamp lights and returns to the primary position.

The lighthead movements shown in Figure 3-1 can be made by using either the sterile handle or the four non-sterile handles positioned around the edge of the lens retainer (see Figure 1 for position of handles). The following two paragraphs describe the positioning characteristics of the SQ240 SurgiVision lighthead from outside or within the sterile field. To optimize shadow control, position the lighthead as appropriate before starting the intended surgical procedure.
• **Centra-Mounted**

Lighthouse may (1) rotate continuously around vertical suspension tube; (2) rotate continuously around central hub; (3) rotate continuously about suspension arm; (4) tilt forward or backward in yoke approximately 310 degrees; and (5) move up or down by pivoting at suspension fork 15 degrees up, and 90 degrees down until vertical tube and suspension arm describe a straight line (i.e., full movement up and down through 105 degrees, see Figure 3-1).

• **Track-Mounted**

Lighthouse may (1) provide motion along the length of the track system; (2) rotate continuously around the carriage; (3) rotate continuously about suspension arm; (4) tilt forward or backward in yoke approximately 310 degrees; and (5) move up or down by pivoting at suspension fork 15 degrees up, and 90 degrees down until vertical tube and suspension arm describe a straight line (i.e., full movement up and down through 105 degrees, see Figure 3-1).
• See Figure 3-2

**IMPORTANT:** SQ240 lightheads equipped with the SurgiVision video system (or “SurgiVision-ready” lightheads capable of being equipped with the video system) do not possess the pattern change feature.

- Adjust the light pattern by rotating the sterilizable handle counterclockwise to decrease pattern size. Rotate the handle clockwise to increase pattern size.
- A pattern adjustment symbol on the sterile handle support indicates direction of rotation to increase or decrease the size of the light pattern.

---

**Figure 3-2. Light Pattern Adjustment**
**Sterilizable Handle**

- **Refer to Figure 3-3**

The sterile handle is used to position the SQ240 lighthead and to adjust the light pattern size.

The SurgiVision light fixture can be used without the video camera. When used without the camera, an optional sterile handle fixture is attached to the camera mounting plate.

- The sterilizable handle can be removed for sterilization by unscrewing it from the threaded, white nylon extension.
- An optional disposable cover can be used over the sterilizable handle. (Disposable cover not supplied by STERIS.)
- The handle can be sterilized using standard hospital cycles. Always sterilize handle between surgical procedures.
- When reinstalling the sterilizable handle on the white, nylon extension, ensure that the handle is firmly tightened before usage.

**Figure 3-3. Sterilizable Handles**
Sterilizable Handle (SQ240 SurgiVision with camera attached)

Refer to Figure 3-4

When the lighthead is used with the camera, a sterile handle is attached to the camera housing. The sterile handle is used to position the lighthead, and direct illumination from the lighthead.

- The sterilizable handle can be removed for sterilization by unscrewing it from the threaded nylon extension.

- An optional disposable cover can be used over the sterilizable handle. (Disposable cover not supplied by STERIS.)

- Handle can be re-sterilized using standard hospital cycles. Always sterilize handle between surgical procedures.
  - Following sterilization allow the handle to air cool for three to five minutes before installing on camera housing.
  - Do Not immerse the handle in a sterile solution to aid cooling.

- When reinstalling the sterilizable handle on the nylon extension, ensure that the handle is firmly tightened before usage.

Figure 3-4. Metal Sterilizable Handle
• **Installation**

1. Rotate lighthead until lens faces the room ceiling.

2. Loosen two knurled-head thumb screws to either side of sterile hand support, and remove sterile handle support.

3. Refer to Figures 3-5 and 3-6.

   The camera is secured to the lighthead by two knurled-head thumb screws.

   a. Align the camera drive gear and connector properly, and install camera assembly to lighthead.

   b. Tighten thumb screws until screw heads are snug against camera housing. Rotate lighthead until lens and camera face room floor.

4. Position wall control circuit breaker to ON (switch should be illuminated).

5. Press the ON touch pad on the face of the wall control. (Power LED should be lit.)

6. Verify that all functions of the camera operate correctly using the positioning controls on the wall control. Then verify functions using the wireless hand-held control (and the optional foot control, if applicable).

7. Once camera functions are verified, press the STANDBY touch pad on the face of the wall control.

8. Turn off circuit breaker when the camera is not in use.

• **Removal**

1. Rotate lighthead until lens faces the room ceiling.

2. Loosen two knurled-head thumb screws to either side of camera body and remove camera.

3. If necessary, install sterile handle support.

---

**CAUTION:** To prevent camera or replacement unit from falling, tighten thumb screws securely.

![Figure 3-5. Align Camera Drive Gear and Video Connector](image1)

![Figure 3-6. Tighten Thumb Screws Until Secure](image2)
General: STERIS recommends connecting a monitor approved for medical applications to the SQ240 SurgiVision system. The wall control provides two different output signals: Composite and SVHS.

Recommended monitor for use with SQ240 SurgiVision: SONY® PVM-20M2MDU

NOTE: This SONY monitor is recommended due to its conformance with medical safety standards, including UL 2601-1, CSA 601.1 and EN 60601-1, and is available directly from STERIS Corporation.

1. Determine the required type of output signal:
   - For Composite signals, use cable P-134470-549
   - For SVHS signals, use cable P-134470-550

2. Refer to the monitor's instruction manual for specific details, and connect the appropriate cable between the wall control and the monitor.

For Hermes-ready systems, refer to the Hermes control center operating manual for additional monitor connections.

General: STERIS recommends connecting a Video Cassette Recorder (VCR) approved for medical applications to the SQ240 SurgiVision system. The wall control provides both Composite and SVHS output signals.

Recommended VCR for use with SQ240 SurgiVision: SONY® SVO-9500MD S-VHS Videocassette Recorder.

NOTE: This SONY VCR is recommended due to its conformance with safety standards, including UL 544, and is available directly from STERIS Corporation.

1. Determine the required type of output signal and select the appropriate cable from those provided with the VCR.

2. Refer to the VCR instruction manual for specific details, and connect the appropriate cable between the wall control and the VCR.

3. Connect monitor to VCR following instruction provided with the VCR and monitor.

SONY® is a registered trademark of Sony Corporation of America.
The SurgiVision camera is integrated into the sterile handle of the lighthead. The camera itself is provided with a metal sterilizable handle. This handle allows the camera to be grasped and used in the same way as a standard sterile handle, both to direct light from the fixture for optimal illumination, and to position the video image field for the best view of the procedure.

The metal sterilizable handle must be removed from the camera and sterilized between procedures. Use a general purpose hospital steam cycle to sterilize the camera cover. Following sterilization allow the handle to air cool for three to five minutes before installing on the camera housing. Do Not immerse the handle in a sterile solution to aid cooling.

The SurgiVision video and control signals are turned on or off at the wall control, the wall control and the hand-held wireless control provide the same control functions.

Camera functions may be controlled by three remote devices: a **hand-held wireless control**, **Hermes control center** (verbal commands and hand-held pendant) or an optional **foot control** (not available on Hermes-ready systems).

The wall control functions by transmitting signals along the main control cable to the camera located in the lighthead. The wireless control functions by transmitting infra-red signals to the wall control. To initiate camera functions with either control press the appropriate touch pad on the control face panel. The hand-held control’s IR (infra-red) transmitter must be within approximately 15 feet maximum and 50° of the wall control receiver. The control touch pads are used to control the following camera functions:

**Zoom**—for determining the level of detail visible in the image field. The Zoom function adjusts the image field continuously between two extremes:

- **+(Telephoto)**. At extreme telephoto, the camera captures an image showing great detail in a small area.

  **NOTE:** At extreme telephoto, any motion of the lighthead/camera will be exaggerated (jerky). The field of focus has little depth at this extreme, forcing the Auto Focus function (if enabled) to refocus the camera when any object (such as a hand) enters the image field, or if camera position is adjusted. The camera is also sensitive to light level changes at extreme telephoto.

- **-(Wide Angle)**. At extreme wide angle, the camera captures a large, image with less detail than telephoto.

  **NOTE:** At extreme wide angle, the image field possesses a greater depth of focus and less sensitivity to light level changes.

**Rotate**—Use this function to change orientation of the video field. Image field can be rotated in either **clockwise** or **counter-clockwise** directions.

**Manual Focus**—Use this function to manually set the focus for close-up shots or other special applications. The Auto Focus function must be toggled off to enable manual focusing. Adjust the clarity of focus by pressing the **+** or **−** touchpads.

**NOTE:** **+** touch pad moves the lens slightly **CLOSER** to subject; **−** touch pad moves the lens slightly **AWAY** from subject.
Figure 3-8. Optional Foot control

Control Cable Connects to Keyed Jack on Bottom of Wall Control

Activate Foot Control Functions by Pressing on Appropriate Side of Foot Pedals.

Hand-Held Wireless Control

Wall Control

Figure 3-7. SurgiVision Controls

Control Touch Pad
Infrared Transmitter
Zoom: "+" close (tight)
"-" far (wide)
Auto Focus:
"+" moves lens closer to subject
"-" moves lens further from subject

Infrared Receiver
Buttons:
ZOOM
ROTATE
MANUAL FOCUS
AUTOMATIC FOCUS
POWER
VIDEO OUT
SVHS COMPOSITE
ON/STANDBY Switches

Circuit Breaker

Figure 3-8. Optional Foot control
**Auto Focus**—Use this function to toggle Auto Focus on or off. When Auto Focus is ON, the camera automatically focuses on the object in the image field closest to the camera lens. When Auto Focus is turned OFF, the camera maintains focus on the last object upon which it was focused, until Auto Focus is turned back on.

*NOTE: It may be necessary to toggle Auto Focus OFF when using the camera at extreme telephoto (or close up), to prevent the camera from refocusing on hands and other objects introduced into the image field during the shot.*

**HERMES-Ready Control Center**—The Hermes Control Center functions by transmitting signals through a interface cable connected to the wall control. When used, the interface cable should be routed to avoid surgical personnel foot traffic. The control center is intended to allow personnel within the sterile field to operate all camera functions using verbal commands or a hand-held pendant. Refer to the Hermes operating manual for more information.

» **Optional Foot Control**

The foot control functions by transmitting signals through a cable connected to the wall control. When the foot control is used, the cable should be routed to avoid surgical personnel foot traffic. The foot control is intended to allow personnel within the sterile field to operate the zoom and rotation functions of the camera.

Foot control is used to control **zoom** and **rotation** functions. Press on appropriate sides of foot pedals to activate foot control functions. Functions controlled through the foot control unit are identical to those controlled through the hand-held wireless control or wall control. See Figure 3-8.

» **Guidelines for Maximizing Video Image**

The following steps will aid in maximizing video imaging effectiveness.

- Energize the light at setting 3 on the variable intensity controller (VIC), and position the lighthead approximately 42” (1067 mm) from the surgical site.

- Using the hand-held remote, or the wall control, zoom in or out (+ or -) until the desired image fills the viewing screen of the monitor.

*NOTE: Zooming completely out causes image distortion within the illuminated area.*

If the light pattern (white circle) does not fill the monitor’s screen (shaded square), the image inside the pattern will be distorted.

Reposition the camera to orient the focal point (center of the desired image) at the center of the viewing screen.

Adjust zoom and rotation as needed:

- The camera may be zoomed to the full 12x zoom and rotation orientation adjusted as needed.

- Clockwise and/or counterclockwise orientation is adjusted by using the curved arrow(s) on the hand-held control, the wall control or the optional foot control.
» Engage Manual Focus (Optional)  

As instruments are introduced and removed from the surgical field, the auto focus will attempt to focus on the nearest object, causing the image to blur intermittently. To prevent this effect, once the camera has been positioned and focused onto the surgical site, the manual focus mode may be engaged to maintain image clarity during the procedure.

For deep cavity illumination, it may be necessary to engage the manual focus to focus beyond the nearest object (i.e., the surface area surrounding the incision) so that the desired image can be viewed clearly.
CLEANING THE EQUIPMENT

Cleaning Equipment

WARNING - PERSONAL INJURY HAZARD: Do not attempt to clean lighthead unless power is turned off at variable intensity controller by disengaging the circuit breaker(s) and the lighthead has cooled sufficiently.

Use of any disinfectant solution other than those listed below may cause discoloration or deformation on the acrylic lens surface: Coverage Spray TB, Germicidal Cloth, Coverage Spray HB, Coverage HB Concentrate, T.B.Q., or Coverage Plus. Cleaning solutions other than those listed have NOT been tested for compatibility or effectiveness. Always follow manufacturer instructions for concentrations and use of cleaning products.

- Pail
- Sponge
- Cloth Wipes
- Rubber Gloves
- Mild Household Detergent (e.g., Joy)
- Disinfectant cleaners such as:
  » Coverage® Spray TB (1424-63)
  » Germicidal Cloth (NK350, NK352)
  » Coverage® Spray HB (1424-63)
  » Coverage® HB Concentrate (1420-08)
  » T.B.Q.® (6345-08)
  » Coverage Plus® (6367-08)

All listed disinfectant cleaning products are available from STERIS for use on this equipment.
General Cleaning/Disinfecting Procedure

1. Wear rubber gloves
2. Use sponge and a mild detergent and water solution. The following cleaning/disinfecting agents are compatible with the outer surfaces of the suspension arm, yoke, lighthead and acrylic lens when used in accordance with label instructions: Coverage Spray TB, Germicidal Cloth, Coverage Spray HB, Coverage HB Concentrate, T.B.Q., or Coverage Plus.
3. Prepare cleaning or disinfecting solution in accordance with directions on the container labels.
4. Using a soft cloth and the cleaning solution, thoroughly wipe the areas to be cleaned (see Figure 4-1). Make sure to wring out excess solution before wiping.
5. Rinse all surfaces with a soft cloth wipe and clear water.
6. Wipe all surfaces dry with a clean, dry cloth.
7. Ensure sterile camera cover or sterile handle is sterilized between each procedure using a standard hospital cycle.

Cleaning Hand-held Control

Clean the hand-held control once a day, or as needed between procedures.
1. Soak a soft cloth in a solution of water and a recommended agent. Wring the cloth until excess moisture has been eliminated.
2. Wipe all surfaces of the hand-held control, removing any accumulated debris or soil.
3. Using a clean, dry cloth, wipe the surfaces of the control until completely dry.

WARNING - PERSONAL INJURY HAZARD: Do not attempt to clean lighthead unless power is turned off at variable intensity controller by disengaging the circuit breaker(s) and the lighthead has cooled sufficiently.

CAUTION: Use of any disinfectant solution other than those listed below may cause discoloration or deformation on the acrylic lens surface: Coverage Spray TB, Germicidal Cloth, Coverage Spray HB, Coverage HB Concentrate, T.B.Q., or Coverage Plus. Cleaning solutions other than those listed have NOT been tested for compatibility or effectiveness. Always follow manufacturer instructions for concentrations and use of cleaning products.

CAUTION: Do not immerse the hand-held control in fluid.
Areas To Be Cleaned Before Each Use

**CAUTION:** Use only recommended cleaning/disinfecting and/or anti-static agents on this light. Some degree of staining, pitting, and/or discoloration could occur if a phenolic-, iodo-phor-, or glutaraldehyde-based disinfectant is used on the surfaces of this light. Also, use of alcohol or aerosol spray cleaner/disinfectants (e.g., Lysol®) containing a substantial amount of alcohol in the formula can damage the acrylic plastic lens.

**CAUTION:** Do not scratch optical coating on accessible portions of optical core when cleaning; always wear rubber gloves and use only a clean, white, lint-free cloth when wiping internal surfaces.

**CAUTION:** Prevent leakage of fluids into interior of lighthead.

Areas To Be Cleaned/Disinfected Once a Month

**WARNING - PERSONAL INJURY HAZARD:** Do not attempt to clean lighthead unless power is turned off at variable intensity controller by disengaging the circuit breaker(s) and the lighthead has cooled sufficiently.

- **Lens**
  - IMPORTANT: Clean only the exterior surface of the lens.
  1. Remove the sterile handle.
  2. Clean/disinfect the outer surface of the lens as outlined in General Cleaning/Disinfecting Procedure.
  3. Wipe the outer surface of the lens with an antistatic acrylic cleaner and soft cloth.
  4. Do not reinstall a sterile handle until immediately before the light is to be used in a surgical procedure. Always sterilize handle between surgical procedures.

  **NOTE:** Always sterilize handle between each surgical procedures using conventional hospital sterilization procedures and a standard sterilization prevacuum or gravity cycle.

Refer to Figure 4-1

The following areas of the lighthead must be cleaned and disinfected before each use of the lighthead (see "General Cleaning/Disinfecting Procedure" for instructions):

- **Suspension Arm** – Wipe the entire suspension arm, including the suspension fork and yoke.
- **Lighthead** – Wipe both top and side surfaces.
- **Sterile Handle Support** – Wipe all areas of the support, including those covered when the handle is installed.

![Figure 4-1. Areas To Be Cleaned](image-url)
## OPERATOR TROUBLESHOOTING

### WARNING - PERSONAL INJURY HAZARD:
Do not attempt to replace the lamp unless power is turned off at variable intensity controller by disengaging the circuit breaker(s) and the light-head has cooled sufficiently.

### WARNING - PERSONAL INJURY HAZARD:
Do not attempt to clean light-head unless power is turned off at variable intensity controller by disengaging the circuit breaker(s) and the light-head has cooled sufficiently.

### WARNING - PERSONAL INJURY HAZARD:
Do not attempt to adjust suspension system. Refer servicing to qualified service personnel.

Use the following Troubleshooting Chart to identify problems and probable causes should they occur.

If you are unable to correct the problem with this Troubleshooting Chart, or if a problem occurs not described on the chart, please call your STERIS representative, who will arrange to have your equipment promptly put into working order by a factory-trained representative. **Never permit unqualified persons to service the lightheads or suspension arms.**

### PROBLEM POSSIBLE CAUSE AND/OR CORRECTION

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>POSSIBLE CAUSE AND/OR CORRECTION</th>
</tr>
</thead>
</table>
2. Centra Mount not level — call your service representative, or — if qualified — consult section concerning suspension arm adjustments in Maintenance Manual P-764326-998.  
3. Centra Mount Units — Track Mount not level — call your service representative, or — if qualified — consult Section concerning suspension arm adjustments in Maintenance Manual P-764326-998. |
| 2. Light flickers when moved. | 1. Possible contact problem at yoke commutator, horizontal/vertical arm commutator, or centra hub commutator — contact STERIS Service.  
2. Track Mount Units — Possible contact problem with electrical brushes (at carriage; internal and external brushes; and at the yoke/horizontal arm assembly; commutator assembly)—contact STERIS Service. |
<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>POSSIBLE CAUSE AND/OR CORRECTION</th>
</tr>
</thead>
</table>
| 3. Light will not turn on. | 1. Possible malfunctions at variable intensity controller — check circuit breakers and turn ON if tripped to OFF.  
2. Check fuses — replace if failed.  
**IMPORTANT:** If fuses fail again immediately, call your service representative. Do not attempt to use the light.  
3. Both lamps in lamp change mechanism may have failed — replace if failed. Lamp failure LEDs on lighthead will be blinking if both lamps have failed. |
| 4. Lamp change mechanism will not work. | 1. Inspect lamp change mechanism to ensure secondary lamp has intact filament, or is fully seated in socket.  
2. If lamps appear operable, refer problem to qualified STERIS or STERIS-trained service technician. |
| 5. Poor light pattern. | 1. Bent lamp filament; lightheads knocked together while lit — check lamp filament position. Replace lamp if bent. |
| 6. Light pattern will not change. | 1. Refer problem to qualified STERIS or STERIS-trained service technician. |
| 7. Video system does not respond to commands from hand-held wireless control or optional foot controls. | 1. Hand-held Wireless control:  
   - Check batteries in hand-held wireless control.  
   - Ensure wall control receiver is not covered.  
2. Foot Control:  
   - Check connection of foot control cable to wall control. |
| 8. Video system does not respond to verbal commands or hand-held pendant. | 1. Check Hermes interface cable connection from Hermes control center to wall control (refer to Hermes control center operating manual). |
### SCHEDULE

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Frequency</th>
<th>Paragraph (if applicable**)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspect lamp change mechanism and lamp</td>
<td>each inspection</td>
<td>Inspect Lamp Change Mechanism</td>
</tr>
<tr>
<td>Change secondary lamp</td>
<td>every year</td>
<td>Lamp Replacement</td>
</tr>
<tr>
<td>Check for movement in vertical suspension tube and for red band at top of vertical suspension tube.</td>
<td>each inspection</td>
<td>Check Vertical Suspension Tube</td>
</tr>
<tr>
<td>Ensure all three yoke plug buttons are securely seated and tethered</td>
<td>each inspection</td>
<td></td>
</tr>
<tr>
<td>Check light pattern and illumination levels</td>
<td>every year</td>
<td></td>
</tr>
<tr>
<td>Inspect lighthead and arm wiring for deterioration</td>
<td>every 6 months</td>
<td></td>
</tr>
<tr>
<td>Inspect arm assembly for ease of movement</td>
<td>each inspection</td>
<td></td>
</tr>
<tr>
<td>Ensure force required to raise and lower arm is similar</td>
<td>each inspection</td>
<td></td>
</tr>
<tr>
<td>Check suspension system for drift</td>
<td>each inspection</td>
<td></td>
</tr>
<tr>
<td>Ensure Centra hub rubber cap is secure</td>
<td>each inspection</td>
<td>Check Hub Cap (Centra Mount)</td>
</tr>
<tr>
<td>Check variable intensity control</td>
<td>each inspection</td>
<td>Check Light Intensity Control</td>
</tr>
<tr>
<td>Ensure lighthead moves through entire range of articulation</td>
<td>each inspection</td>
<td>Lighthead Positioning</td>
</tr>
<tr>
<td>Check battery backup option (if applicable)</td>
<td>each inspection</td>
<td>Check Battery Backup</td>
</tr>
<tr>
<td>Check camera controls for smooth movement and full range of motion.</td>
<td>every 6 months</td>
<td></td>
</tr>
<tr>
<td>• Verify proper operation of zoom controls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Verify proper operation of rotation controls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Verify Manual Focus and Auto Focus (ON/OFF and function)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Check batteries in remote control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Check operation of optional foot control (if applicable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedure</td>
<td>Frequency</td>
<td>Paragraph (if applicable**)</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Verify secure mechanical attachment of camera assembly to mounting plate.</td>
<td>each inspection</td>
<td></td>
</tr>
<tr>
<td>Verify security of electrical connections between the wall control and camera</td>
<td>each inspection</td>
<td></td>
</tr>
<tr>
<td>Verify secure attachment of sterile handle assemblies to lighthouse, including replacement handle of camera mount.</td>
<td>each inspection</td>
<td></td>
</tr>
<tr>
<td>Inspect camera lens, clean if necessary.</td>
<td>each inspection</td>
<td></td>
</tr>
<tr>
<td>Inspect plug buttons or other components that may attach to the camera or arm</td>
<td>each inspection</td>
<td></td>
</tr>
</tbody>
</table>

**When no paragraph is listed, operation should be performed by or referred to STERIS service representative (or other qualified technician). Refer to Maintenance Manual P-764326-998.**

*NOTE: Any repairs or adjustments to lighthouse and its suspension system should only be made by qualified STERIS or STERIS trained service personnel while referring to Maintenance Manual P-764326-998.*
**Inspect Lamp Change Mechanism**

- **WARNING - PERSONAL INJURY HAZARD:** Do not attempt to replace the lamp unless power is turned off at variable intensity controller by disengaging the circuit breaker(s) and the lighthead has cooled sufficiently.

- **CAUTION:** Do not touch glass portion of lamp during re-lamping or cleaning.

- **CAUTION:** Manual actuation of the lamp change mechanism may result in permanent damage to the gear motor.

**Check Battery Backup (as applicable)**

- **WARNING - ELECTRIC SHOCK HAZARD:** Do not remove variable intensity controller covers refer servicing to qualified service personnel.

**Check Vertical Suspension Tube**

- **WARNING - PERSONAL INJURY HAZARD:** Do not use lighting fixture if red band is visible below rubber cap at top of vertical suspension tube.

---

**Refer to Figure 6-1**

1. The lamp change mechanism assembly is accessed by removing the sterilizable handle, if present. Loosen the four quarter-turn, wing-head fasteners and carefully lower camera or handle mount until the lamp change mechanism is visible. The assembly pivots to the side, allowing access to the lamps. The active lamp is positioned higher, and toward the center of the assembly.

2. Inspect the lamps for damage or discoloration. Be sure the element of the lamp in the secondary position is intact. Replace if necessary.

3. Check that lamps are firmly seated in their sockets.

4. Raise the lamp change mechanism into the lighthead and secure quarter-turn, wing-head mounting fasteners. Do not re-install the sterilizable camera cover or sterilizable handle until the fixture is to be used. (Sterilize handle, before returning to light.)

---

**Check Vertical Suspension Tube**

1. Turn on light.

2. Turn off AC power to Variable Intensity Controller.

3. Check that the battery backup indicator LED’s and light are still on.

4. Restore AC power and check that the indicator LED’s have gone out.

---

**Refer to Figure 6-2**

1. Inspect vertical suspension tube. A red colored band has been applied to the surface of the tube normally hidden under the rubber boot at the top of the tube. If the mounting configuration has been properly assembled, the red band will not be visible. If the red band is visible, do not attempt to use the light fixture. Call your STERIS service representative immediately.

2. Attempt to push the vertical suspension tube back and forth or side to side. If the tube “wobbles,” mounting configuration has not been assembled correctly. Call your STERIS service representative immediately.

3. Loosen screw and pull the lower plastic cap on the vertical tube away from the top of the suspension fork. Inspect the four bolts at the bottom of the tube. If any bolts have become loose, tighten them and replace the cap.
Figure 6-1. Inspect Lamp Change Mechanism

Ensure that the vertical suspension tube cannot move back-and-forth or side-to-side.

Figure 6-2. Check Vertical Suspension Tube

Figure 6-3. Check Yoke Plug Button
**Check Yoke Plug Button**

1. Remove the three plug buttons from the yoke assembly. Plug buttons are located on both sides of the lighthead and in the center of the yoke where the suspension arm is connected.

2. Check and make sure that the tether cable is not frayed or cut, if so, replace with kit (P-764315-856).

   **NOTE:** Make sure that the tab with the tether attached to it is bent inward toward the plug’s center.

---

**Check Hub Cap (Centra Mount)**

1. Visually inspect fit of hub cap to central hub mount. There should be no gaps between hub cap outer edge and surface of the mount at any point of 360 degree rotation. (See Figure 6-4.)

2. If any gaps are detected, contact qualified service technician to tighten hub cap mounting screws.

---

**Check Variable Intensity Controller**

1. Check operation of circuit breaker by cycling several times, insuring that breaker latches ON each time it is pressed.

2. Rotate controller knob(s) from OFF to ON position, and then from lowest intensity position ("1") through maximum intensity position ("5"). Make sure that the lighthead produces a higher intensity with each increase in the intensity position.

---

**WARNING:** ELECTRIC SHOCK HAZARD: Do not remove covers or perform service other than those described in this equipment manual. Refer servicing to qualified service personnel. (Maintenance Manual P-764326-998.)
Lamp Replacement

**Refer to Figure 6-5 and 6-6**
Each lighthead is equipped with two lamps. One of these lamps, called the primary, is always positioned at a point in the optical core to provide best focus and illumination. When the primary lamp fails, a secondary lamp lights immediately and automatically moves to replace the primary lamp, yielding equivalent optical performance. In this process, transmission of light to the operating table is interrupted for less than one second.

If one lamp in the lighthead fails, the failure is indicated by a blinking LED on the side of the outer cover. Do not allow the lighthead to operate for any length of time with only one functional lamp. Always replace a failed lamp at the earliest opportunity. Primary lamp returns to position after it is replaced.

**IMPORTANT:** The procedure for accessing the lamps is slightly different, depending on the type of lighthead. Types of lightheads can be separated into two categories:
- SQ240 Lightheads (or SurgiVision lightheads without camera installed), or
- SurgiVision lightheads with camera installed.

To replace a failed lamp, complete the appropriate procedure below:

### Lamp Replacement Procedure for SQ240 Lightheads or SurgiVision Lightheads without Camera installed

1. Turn OFF power to the lighthead at the circuit breaker on the variable intensity controller.
2. Remove sterilizable handle, if present.
3. Loosen four quarter-turn fasteners.
4. Lower lamp change mechanism through circular aperture in the center of the lens. The assembly pivots to the side, allowing access to the lamps. Refer to Figure 6-5.
5. Normally, the failed lamp is in the lower of the two lamp sockets in the lighthead. Remove failed lamps and replace with new lamps.
   - If fixture provides no light at all, and LEDs on outer cover of lighthead are blinking, both lamps may have failed.

Remove each failed lamp by grasping the socket in one hand and the lamp base in the other, then gently move the lamp base back-and-forth while pulling it from the socket.

**NOTE:** Grasp the lamp base and lamp socket firmly when installing a new lamp to prevent movement of the lamp change mechanism. Manual actuation may cause permanent damage to the gear motor.

6. Grasp the new lamp by its ceramic base (do not remove protective wrapper do not touch glass) and press into the lower lamp holder. After replacing either lamp, remove wrapper(s) and inspect both lamps to ensure both have intact filaments.

**WARNING:** ELECTRIC SHOCK HAZARD: Do not remove covers or perform service other than as described in this equipment manual. Refer servicing to qualified service personnel. (Maintenance Manual P-764326-998.)

**WARNING - PERSONAL INJURY HAZARD:** Do not attempt to replace the lamp unless power is turned off at variable intensity controller by disengaging the circuit breaker(s) and the lighthead has cooled sufficiently.

**CAUTION:** Do not touch glass portion of lamp during e-lamping or cleaning.

**CAUTION:** Manual actuation of the lamp change mechanism may result in permanent damage to the gear motor.
Figure 6-5. Lamp Replacement Procedure for SQ240 Lightheads or SurgiVision Lightheads without Camera installed
7. Raise the lamp change mechanism into the lighthouse, and tighten quarter-turn fasteners. Do not re-install the sterilizable handle until the fixture is to be used. (Sterilize handle, if necessary, before returning to light.)

8. Return power to lighthouse by pressing the circuit breaker at Variable Intensity Controller to ON.

9. Verify that the Lamp Failure LEDs are not blinking. If the LEDs are still blinking, access lamp change mechanism again and examine the filaments of both lamps to ensure that one was not damaged during the lamp replacement procedure.

» Lamp Replacement Procedure for SurgiVision Lighthouse with Camera installed

1. Turn OFF power to the lighthouse at the circuit breaker on the variable intensity controller.

2. Turn off power to the camera by pressing the STANDBY button on the SurgiVision wall control, if present.

3. Remove sterilizable camera handle, if present.

4. Rotate lighthouse until lens faces ceiling.

5. Loosen four quarter-turn fasteners around the base of the camera.

6. Grasp camera body and raise assembly out of lighthouse until hinges in support cams are exposed.

7. Rotate lighthouse approximately 90° and gently lower lamp change mechanism and camera assembly until it rests against the face of the lens. Refer to Figure 6-6.

   NOTE: Next step may required the assistance of a second person to steady the lighthouse.

8. Normally, the failed lamp is in the lower of the two lamp sockets in the lighthouse. Remove failed lamps and replace with new lamps.

   • If fixture provides no light at all, and LEDs on outer cover of lighthouse are blinking, both lamps may have failed.

   Remove failed lamps by grasping the socket in one hand and the lamp base in the other, then gently move the lamp base back-and-forth while pulling it from the socket.

   NOTE: Grasp the lamp base and lamp socket firmly when installing a new lamp to prevent movement of the lamp change mechanism. Manual actuation may cause permanent damage to the gear motor.

9. Grasp the new lamp by its ceramic base (do not remove protective wrapper do not touch glass) and press into the lower lamp holder. After replacing either lamp, remove wrapper(s) and inspect both lamps to ensure both have intact filaments.

10. Return the lamp change mechanism into the lighthouse, and tighten quarter-turn fasteners. Do not re-install the sterilizable camera cover until the fixture is to be used. (Sterilize camera cover, if necessary, before returning to light.)

CAUTION: Do not touch glass portion of lamp during re-lamping or cleaning.

CAUTION: Manual actuation of the lamp change mechanism may result in permanent damage to the gear motor.
Figure 6-6. Lamp Replacement Procedure for SurgiVision Lightheads with Camera Installed.
11. Return power to lighthead by pressing the circuit breaker at Variable Intensity Controller to ON.

12. Verify that the Lamp Failure LEDs are not blinking. If the LEDs are still blinking, access lamp change mechanism again and examine the filaments of both lamps to ensure that one was not damaged during the lamp replacement procedure.
REPLACEMENT PARTS

Parts listed in this section are those that would be necessary to do minor maintenance on the lighting fixture. Quantities listed are the minimum number of spares that we recommend you keep on hand.

When ordering, please include the part number, description, and quantity for each replacement part requested.

Send your order directly to your nearest STERIS Regional Office.

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
<th>Recommended Spares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuse 20 Amp</td>
<td>P-129362-213</td>
<td>5</td>
</tr>
<tr>
<td>Lamp</td>
<td>P-129362-228</td>
<td>3</td>
</tr>
<tr>
<td>Sterilizable Handle</td>
<td>P-93184-001</td>
<td>3</td>
</tr>
<tr>
<td>Sterilizable Camera Cover</td>
<td>P-134470-429</td>
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</tr>
<tr>
<td>• Quartz Lens Only</td>
<td>P-134470-447</td>
<td>2</td>
</tr>
<tr>
<td>• Housing Only</td>
<td>P-056938-816</td>
<td>1</td>
</tr>
<tr>
<td>Hermes Interface Cable</td>
<td>P-134469-380</td>
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Associated Publications

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Associated Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-129362-443</td>
<td>Uncrating Instructions (Centra Mount)</td>
</tr>
<tr>
<td>P-150824-819</td>
<td>Installation Instructions (Centra Mount)</td>
</tr>
<tr>
<td>P-764326-998</td>
<td>Maintenance Manual</td>
</tr>
<tr>
<td>P-150824-929</td>
<td>Uncrating Instructions (SQ-Track Mount)</td>
</tr>
<tr>
<td>P-150824-930</td>
<td>Installation Instructions (SQ-Track Mount)</td>
</tr>
</tbody>
</table>

Equipment Drawings

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Equipment Drawings</th>
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<tbody>
<tr>
<td>P-129378-078</td>
<td>SQ240 Centra Mounted, One 36˝ Arm, One Lighthead</td>
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<tr>
<td>P-129378-079</td>
<td>SQ240 Centra Mounted, Two 36˝ Arms, Two Lightheads</td>
</tr>
<tr>
<td>P-129378-080</td>
<td>SQ240 Centra Mounted, Three 36˝ Arms, Three Lightheads</td>
</tr>
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Equipment Drawings (Wall Mounted Controls)

<table>
<thead>
<tr>
<th>Part Number</th>
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<tbody>
<tr>
<td>P-150824-833</td>
<td>SQ240 Single, Surface Mounted VIC</td>
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<tr>
<td>P-150824-834</td>
<td>SQ240 Single, Recess Mounted VIC</td>
</tr>
<tr>
<td>P-150824-835</td>
<td>SQ240 Dual, Surface Mounted VIC</td>
</tr>
<tr>
<td>P-150824-836</td>
<td>SQ240 Dual, Recess Mounted VIC</td>
</tr>
<tr>
<td>P-129378-082</td>
<td>SQ240 SurgiVision Wall Control Mount</td>
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</table>

Continued on next page
## Associated Publications

<table>
<thead>
<tr>
<th>Equipment Drawings (Centra Mounted Fixture)</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQ240 Centra Mounted, One 36&quot; Arm, One Lighthead</td>
<td>P-150824-837</td>
</tr>
<tr>
<td>SQ240 Centra Mounted, Two 36&quot; Arms, Two Lightheads</td>
<td>P-150824-838</td>
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<tr>
<td>SQ240 Centra Mounted, One 24&quot; Arm &amp; One 36&quot; Arm, Two Lightheads</td>
<td>P-150824-948</td>
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<tr>
<td>SQ240 Centra Mounted, Three 36&quot; Arms, Three Lightheads (with provision for future lighthead addition)</td>
<td>P-150824-839</td>
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<tr>
<td>SQ240 Centra Mounted, One 36&quot; Arm, One Lighthead (with provision for future lighthead addition)</td>
<td>P-150824-840</td>
</tr>
<tr>
<td>SQ240 Centra Mounted, Two 36&quot; Arms, Two Lightheads (with provision for future lighthead addition)</td>
<td>P-150824-841</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equipment Drawings (Track Mounted Fixture)</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQ240 4'6&quot; Surface Mounted Track, One Lighthead</td>
<td>P-150824-922</td>
</tr>
<tr>
<td>SQ240 4'6&quot; Recessed Mounted Track, One Lighthead</td>
<td>P-150824-923</td>
</tr>
<tr>
<td>SQ240 9' Surface Mounted Track, One Lighthead</td>
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<tr>
<td>SQ240 9' Recessed Mounted Track, One Lighthead</td>
<td>P-150824-925</td>
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<tr>
<td>SQ240 9' Surface Mounted Track, Two Lightheads</td>
<td>P-150824-944</td>
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<tr>
<td>SQ240 9' Recessed Mounted Track, Two Lightheads</td>
<td>P-150824-945</td>
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