



354 Diagnosis and Treatment Light

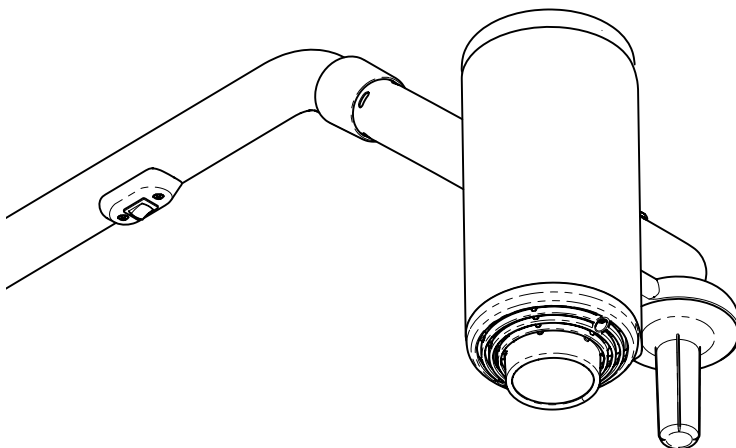
For Models:

Mobile: 354 (-022 / -023)

Ceiling: 354 (-025 thru -035)

Wall: 354 (-043)

*354 portion of 354/355 combo models:
354 (-038 thru -041)*



MA8362i

User's Guide

TP202 Rev. A

003-2430-00 Rev. D (8/15)



Product Information

NOTE: To register your product online, go to www.midmark.com.

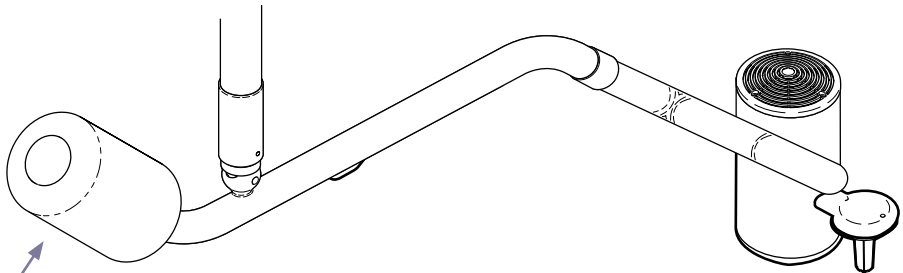
Dealer :

Date of Purchase:

Model / Serial Number:

***Midmark Authorized Service
Company:***

*Ceiling / Wall model shown.
Location on Mobile model is similar.*



MA8342i

***Model / Serial
Number Location***



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Important Information

Safety Symbols



WARNING

Indicates a potentially hazardous situation which could result in serious injury.



Caution

Indicates a potentially hazardous situation which may result in minor or moderate injury. It may also be used to alert against unsafe practices



Equipment Alert

Indicates a potentially hazardous situation which could result in equipment damage.



Type B



Consult User Guide



Fragile



Proper Shipping Orientation



Keep Dry



Dangerous Voltage / Shock Hazard



Hot Surface



Protective Earth Ground



Fuse Rating Specification

Ceiling Mounted / Mobile Models:



Classified by Underwriters Laboratories Inc. with respect to electric shock, fire, and mechanical hazards only in accordance with UL2601-1 and CAN/CSA C22.2, No.601.1.

Wall Mounted Models:



Medical Equipment
with respect to electrical shock, fire and mechanical hazards only
in accordance with UL 60601-1, CAN/CSA C22.2, No. 601-1



Intended Use

354 (-043):

This product is intended to be used in all veterinarian environments where illumination is required for diagnosis or treatment.

354 (-022 / -023) & (-025 thru -035) & combo models 354 (-038 thru -041):

This product is intended to be used in all medical environments where illumination is required for external examinations and procedures.

Electromagnetic Interference

This product is designed and built to minimize electromagnetic interference with other devices. However, if interference is noticed between another device and this product:

- Remove interfering device from room
- Wire this product into isolated circuit
- Increase seperation between this product and interfering device
- Contact Midmark if interference persists

Disposal of Equipment

At the end of product life, the light, accessories, and other consumable goods may become contaminated from normal use. Consult local codes and ordinances for proper disposal of equipment, accessories and other consumable goods.

Transportation / Storage Conditions

Ambient Temperature Range:.....-22°F to 140°F (-30°C to +60°C)
Relative Humidity..... 10% to 90% (non-condensing)
Atmospheric Pressure 500hPa (0.5 bar) to 1060hPa (1.06 bar)

NOTE: This product contains glass. It must be transported and stored with care to limit vibration / shocks.



Operation

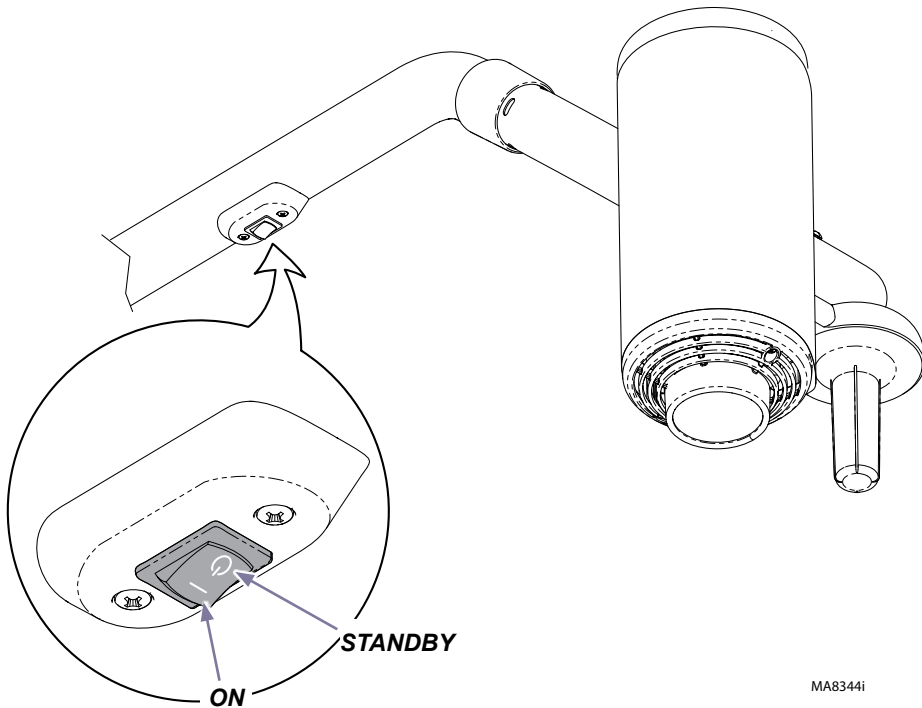
ON / STANDBY Switch

To turn the light ON...

Press the ON / STANDBY switch to ON (I).

To turn the light OFF...

Press the ON / STANDBY switch to STANDBY (⏻).



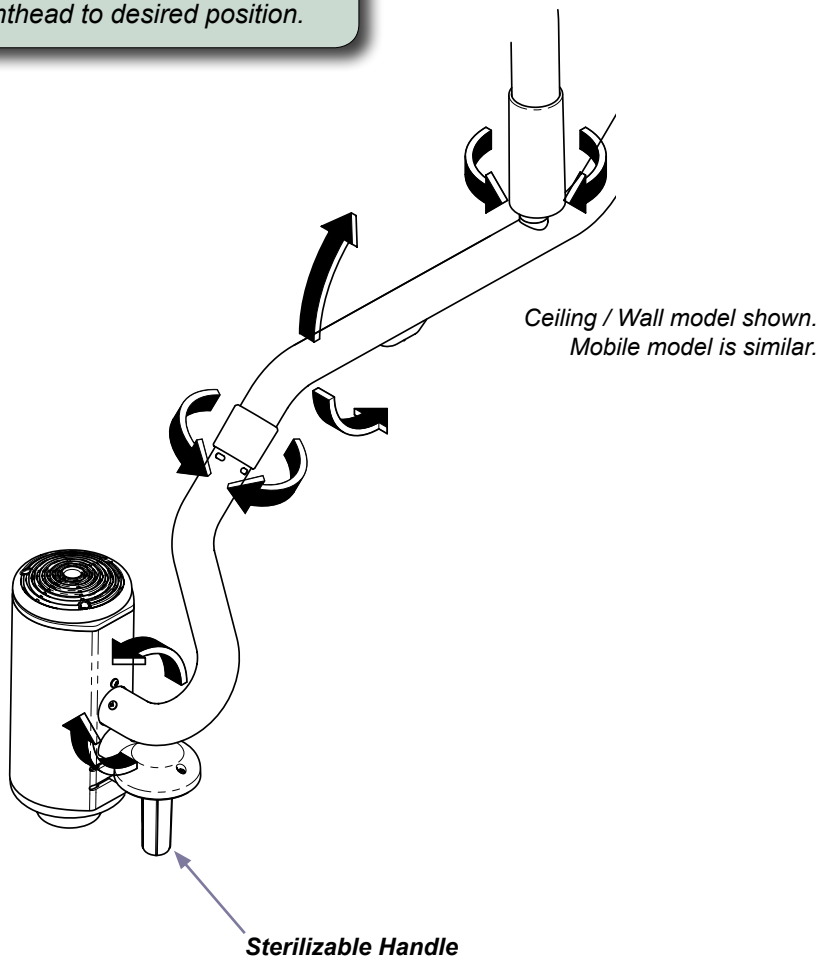
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Positioning the Lighthead

To position the lighthead...

Grasp the sterilizable handle, then rotate the arm / lighthead to desired position.





Maintenance

Cleaning & Disinfecting



WARNING

- Always disconnect power, and allow light to cool before cleaning / disinfecting.
- Prevent fluids from leaking into interior or onto electrical contacts.
- Clean **EXTERNAL SURFACES ONLY** (arm assemblies / lighthouse).
- Do **NOT** attempt to clean / disinfect internal surfaces. Contact an authorized service technician.



Equipment Alert

Use only quaternary disinfectants on light. Staining, pitting, discoloration, or softening could occur if phenolic, iodophor, or glutaraldehyde-based solution is used on plastic surfaces of the lighthouse. Also, using alcohol or aerosol spray cleaners / disinfectants containing substantial amounts of alcohol in the formula may damage the lens.

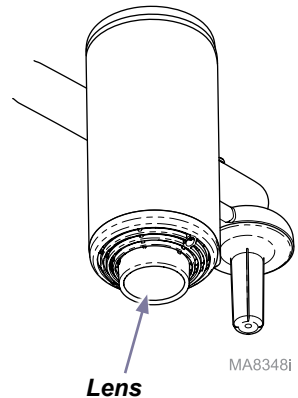


Equipment Alert

Do not use alcohol or abrasive compounds on lens. Wring excess water / solution from cloth before wiping.

To clean external surfaces...

- A) Clean lens with an antistatic acrylic cleaning solution using a soft, clean, cloth.
- B) Wipe external surfaces of arms / lighthouse with a mild detergent and water solution.
- C) Rinse all surfaces with a soft cloth and clean water.
- D) Wipe all surfaces dry.



To disinfect external surfaces...

- A) Apply appropriate disinfecting solution (see EQUIPMENT ALERT) to soft cloth.
- B) Wring excess solution from cloth, then wipe external surfaces of arms / lighthouse.
- C) Do not rinse or dry. Allow solution to air dry.



Sterilizing the Handle



Caution

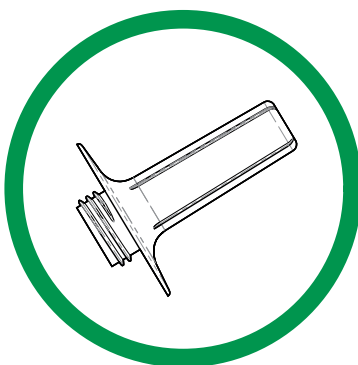
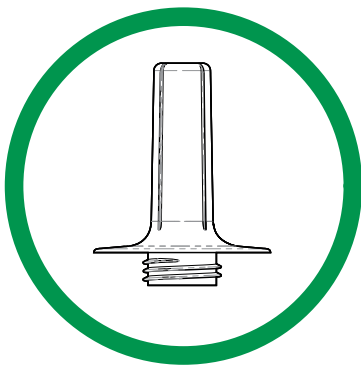
The handle is not sterile when shipped. If your application requires the handle to be sterile, it must be sterilized before use, or covered with a sterile protective barrier.



Equipment Alert

Use only steam sterilization on the handle.

To sterilize, process the handle in a dynamic air removal steam sterilizer (sterilizer that uses pressure pulses and / or vacuum purges to remove air from the chamber) at a temperature of 270° F (132° C) for four minutes minimum. If using a Midmark M9 or M11 sterilizer, use the “POUCHES” cycle. It is recommended that the handle be pouched or wrapped for sterilization to maintain its sterility until placed on the light. When pouching or wrapping the handle, use only sterilizer pouches or wraps that have been cleared by the FDA and labeled for use with the steam sterilization cycle parameters (e.g. temperature and exposure time) of the sterilization cycle being used. Place the handle on the sterilizer tray so steam can enter the opening and air and any steam condensate can drain from the handle (see illustration below).



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Replacing the Bulb



WARNING

The maximum bulb wattage for this light is 150 Watts. There is a risk of fire if this limit is exceeded. Use Midmark part number: 002-0605-00.

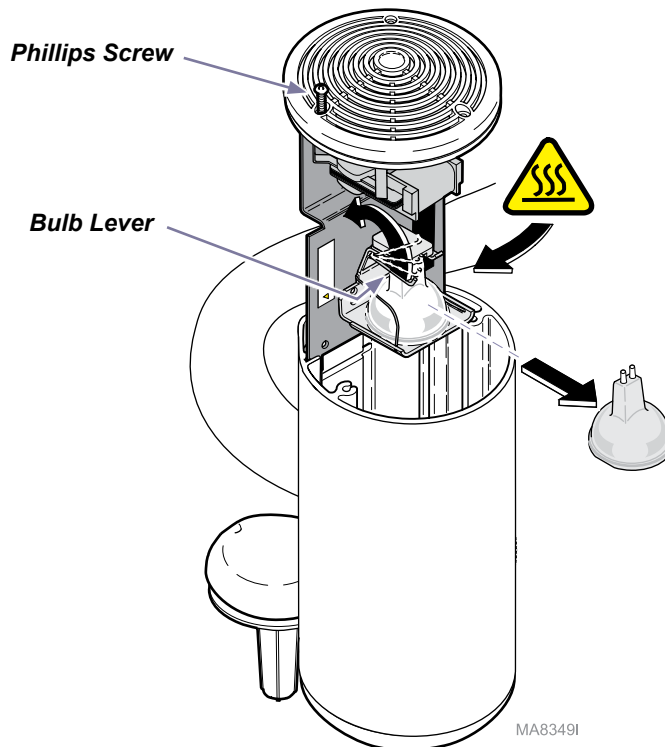


Caution

- To prevent electrical shock, the light must be in **STANDBY** mode (⏻).
- Allow the light to cool before removing bulb.
- Move the lighthead away from the exam site to prevent contaminants from falling into the area.

To remove old bulb..

- Turn light switch to **STANDBY** (⏻).
- Loosen** one phillips screw on top of lighthead.
(Do not attempt to remove this screw).
- Slide bulb carriage out of housing.
- Lift the bulb lever upward, then remove bulb.





Replacing the Bulb - continued

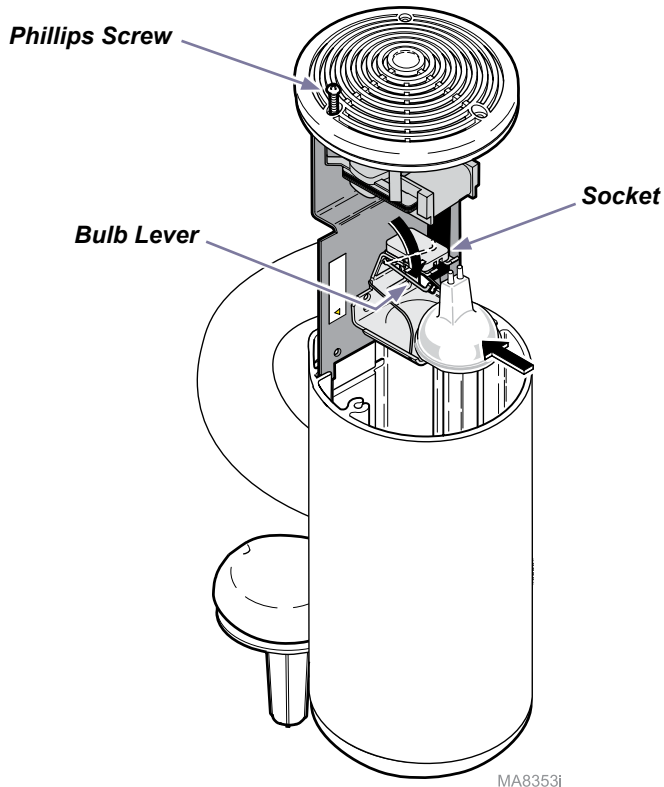


Equipment Alert

Halogen bulbs are sensitive to body oils. Do not touch the front glass portion of the bulb. If the glass portion of the bulb is handled, wipe with a clean soft lint-free cloth. Wipe with alcohol, then pat dry.

To install new bulb..

- A) Push the bulb lever down.
- B) Align two prongs on bulb with slots in socket, then push bulb inward until it is secure.
- C) Slide the bulb carriage into housing.
- D) Tighten phillips screw.





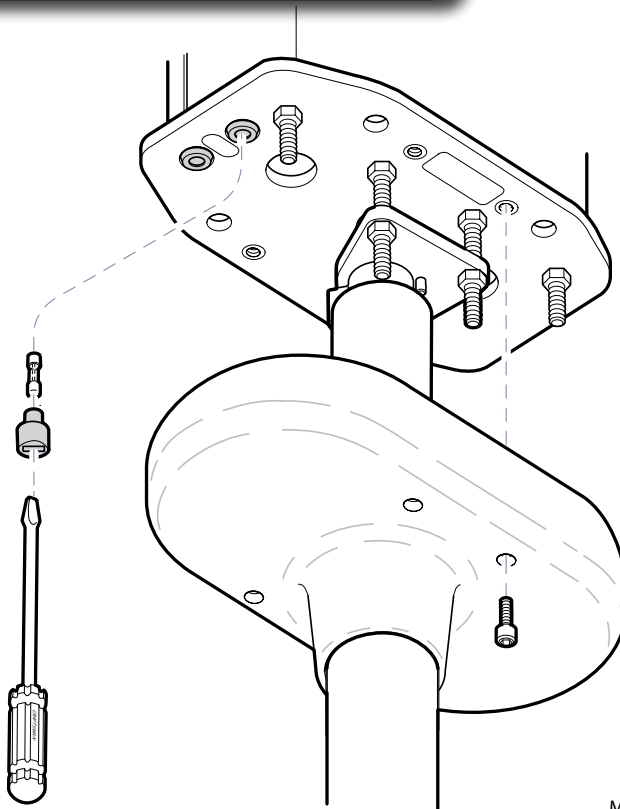
Replacing the Fuses

Ceiling Mounted Lights

To replace fuses...

- A) Turn light switch to **STANDBY** (⏻).
- B) Remove four screws, then lower ceiling cover.
- C) Using a flat-bladed screwdriver, rotate fuse cap counter-clockwise 1/4 turn, while pushing upward.
- D) Pull fuse out of fuse cap to inspect.
- E) Insert fuse into fuse cap.
- F) Using a flat-bladed screwdriver, rotate fuse cap clockwise 1/4 turn, while pushing into fuse socket.
- G) Install ceiling cover.

NOTE: There are **two** fuses on this light. After removing the fuse, inspect it to determine whether it is faulty.



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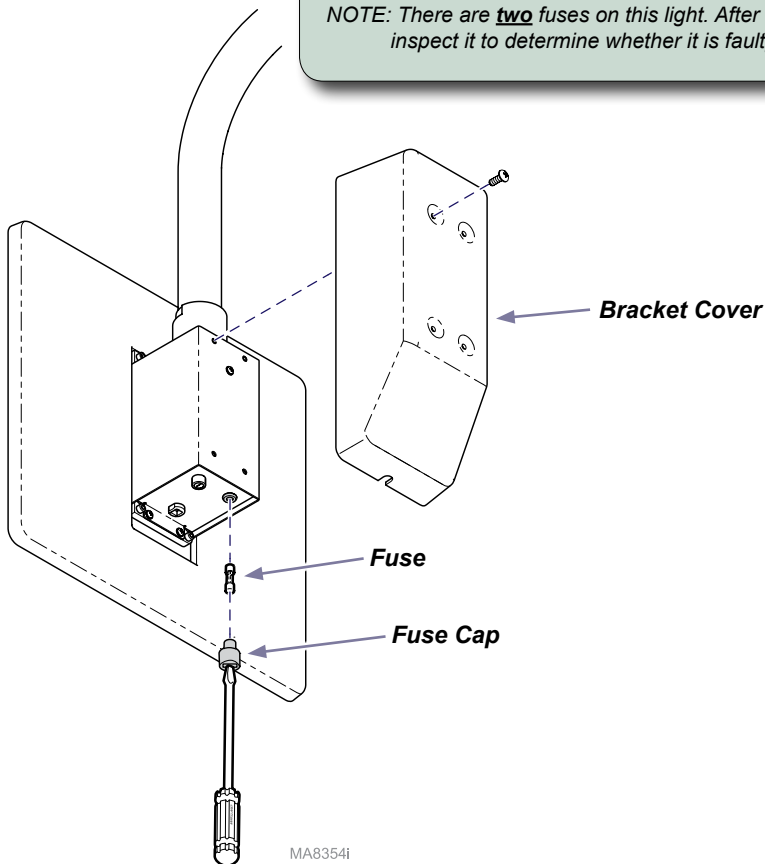
Replacing the Fuses - continued

Wall Mounted Lights

To replace fuses...

- A) Turn light switch to **STANDBY** (⏻).
- B) Remove bracket cover.
- C) Using a flat-bladed screwdriver, rotate fuse cap counter-clockwise 1/4 turn, while pushing upward.
- D) Pull fuse out of fuse cap.
- E) Insert fuse into fuse cap.
- F) Using a flat-bladed screwdriver, rotate fuse cap clockwise 1/4 turn, while pushing into fuse socket.
- G) Install bracket cover.

NOTE: There are **two** fuses on this light. After removing the fuse, inspect it to determine whether it is faulty.

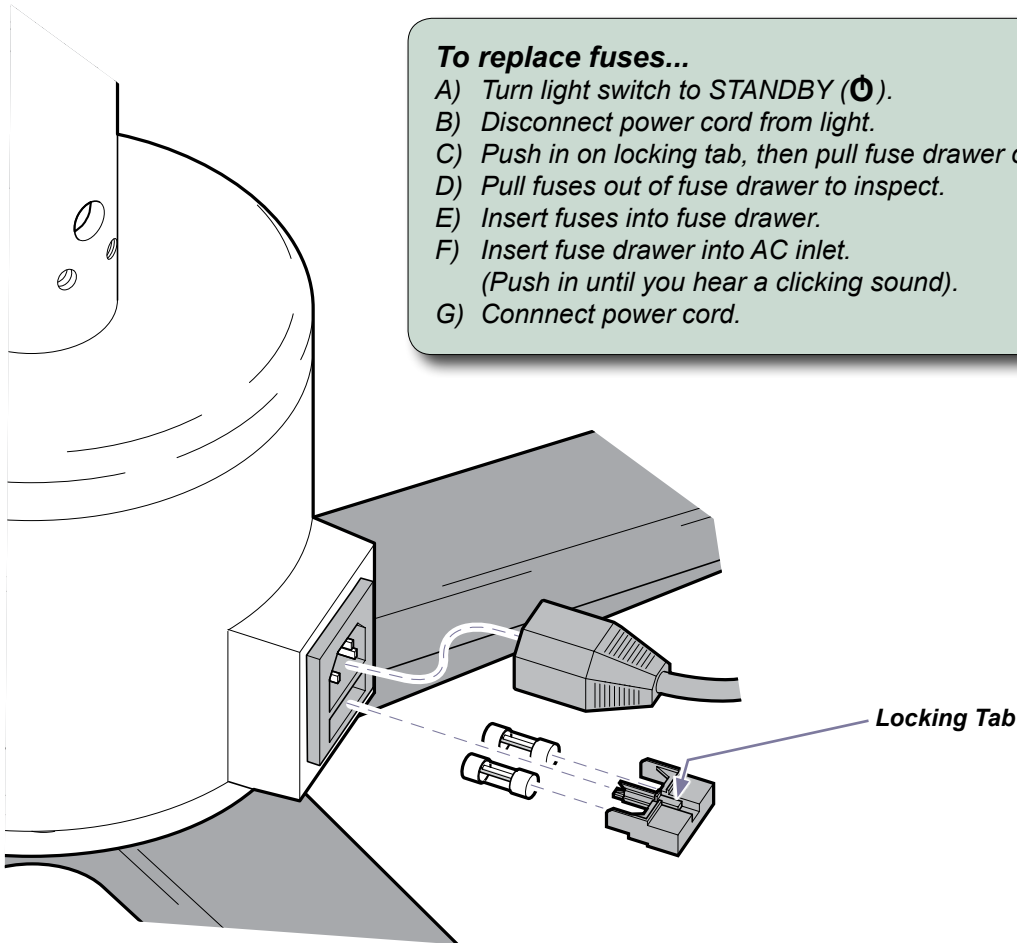


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Replacing the Fuses - continued

Mobile Lights



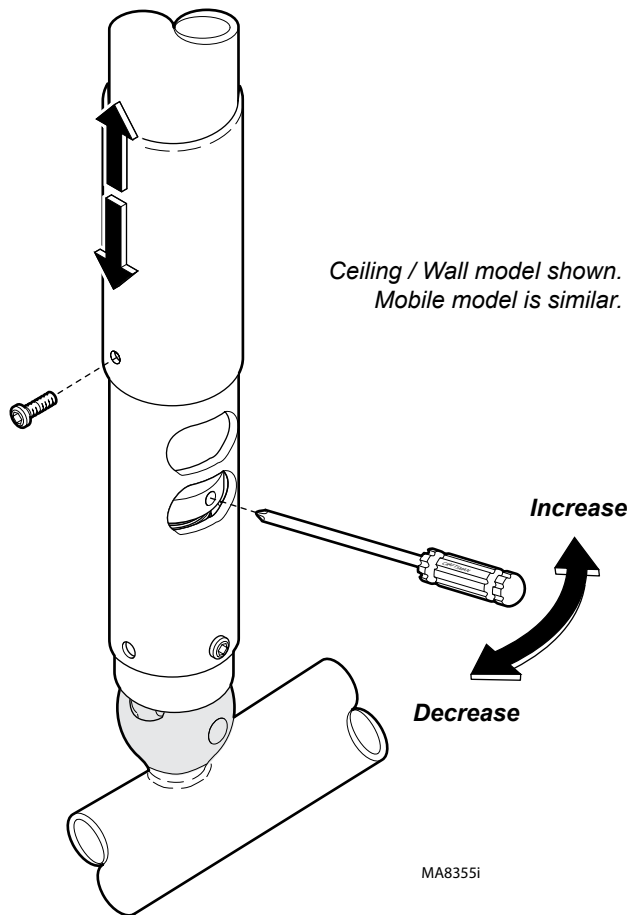
MA8475i



Ball Pivot Tension Adjustment

To adjust ball pivot tension...

- A) Remove screw, then slide sleeve up to expose opening.
- B) Insert screwdriver into adjustment hole.
- C) Move the screwdriver LEFT / RIGHT to adjust tension setting
(LEFT: **decreases** tension / RIGHT: **increases** tension)
- D) Remove screwdriver, and check for desired tension.
Repeat Step C until desired tension is achieved.
- E) Slide sleeve down, then install screw.

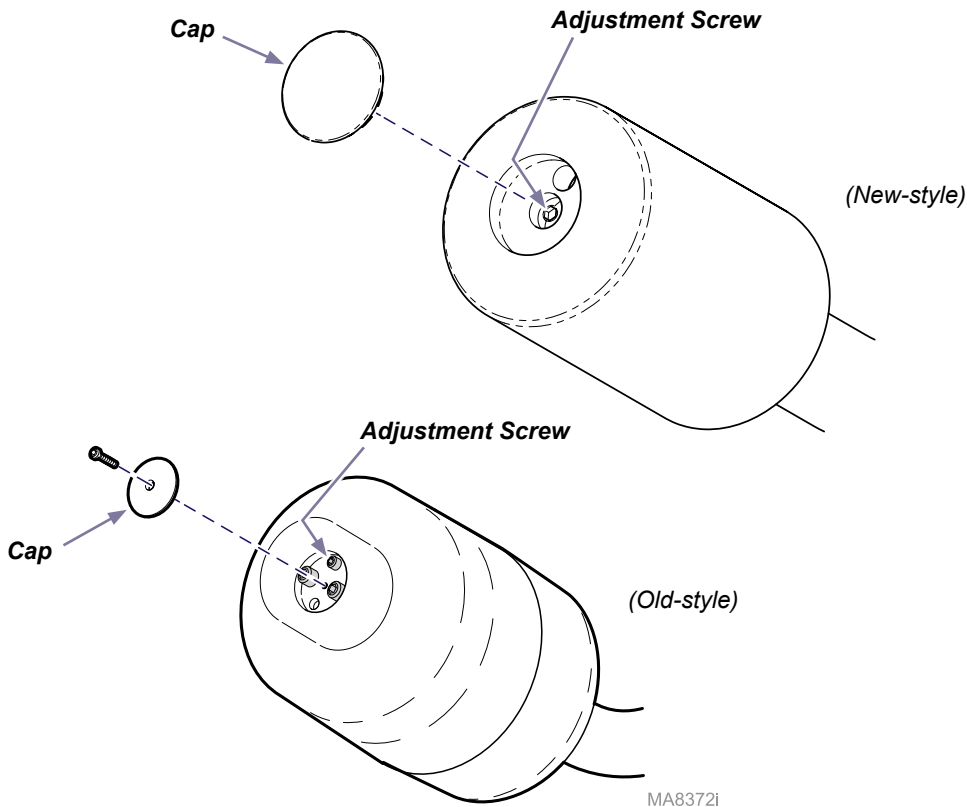




Cross Tube Counterbalance Adjustment

To adjust cross tube counterbalance...

- A) Remove cap from counterbalance.
- B) Loosen / tighten the adjustment screw until the cross tube balances in horizontal position.
- C) Install cap onto counterbalance.





Preventative Maintenance

Frequency	Activity
Semi-annually	Inspect rotation of lighthead / arms at all pivot points. Arms should move freely, without noise. Arms should not drift when released. Check for excessive rotation. (<i>This would indicate internal stops may be broken</i>). Use the Range of Motion section in this manual as a reference.
	Turn light ON. Rotate lighthead / arms at all pivot points. Light should not flicker or flash at any time.
	Inspect the inside of the lighthead for signs of damage. If damage is apparent, stop using the light immediately.
	Turn light ON. Verify that the fan is operating. If fan is not operating, stop using the light immediately. (NOTE: Using the light without the fan may cause lenses to melt).

Specifications

Specifications	
Beam Diameter @ 36 in. (91.4 cm):	Variable from 3 to 10 in. (7.6 to 25.4 cm)
Bulb:	21.0 VAC, 150W Halogen
Color Temperature:	4,200K
Color Rendering Index (CRI):	>88
Total Irradiance:	116 w/m ²
Focal Length:	36 in. (91.4 cm)
Illumination @ 24 in. (60.9 cm):	7000 fc (75,300 lux)
Illumination @ 36 in. (91.4 cm):	4000 fc (43,000 lux)
Electrical Requirements:	120 VAC, 60 Hz, 1.5 amps, single phase
Fuse Rating:	1.6A, 250V, 5mm x 20mm, Type T, low breaking capacity, IEC 127-2/3
Range of Motion / Height:	Refer to Range of Motion section in this manual
Power Cord (<i>Mobile Models only</i>):	96 in. (2.4 m) long, Hospital Grade grounding plug
Classifications:	Class 1, Type B, continuous operation
Certifications:	
Ceiling / Mobile Models	Classified by Underwriters Laboratories Inc. with respect to electric shock, fire, and mechanical hazards only in accordance with UL2601-1 and CAN/CSA C22.2, No.601.1.
Wall Mounted Models	UL60601-1, 1 st Ed., 2006-04-26 (2 nd Ed.) CAN / CSA C22.2. #601.1-M90, 2005



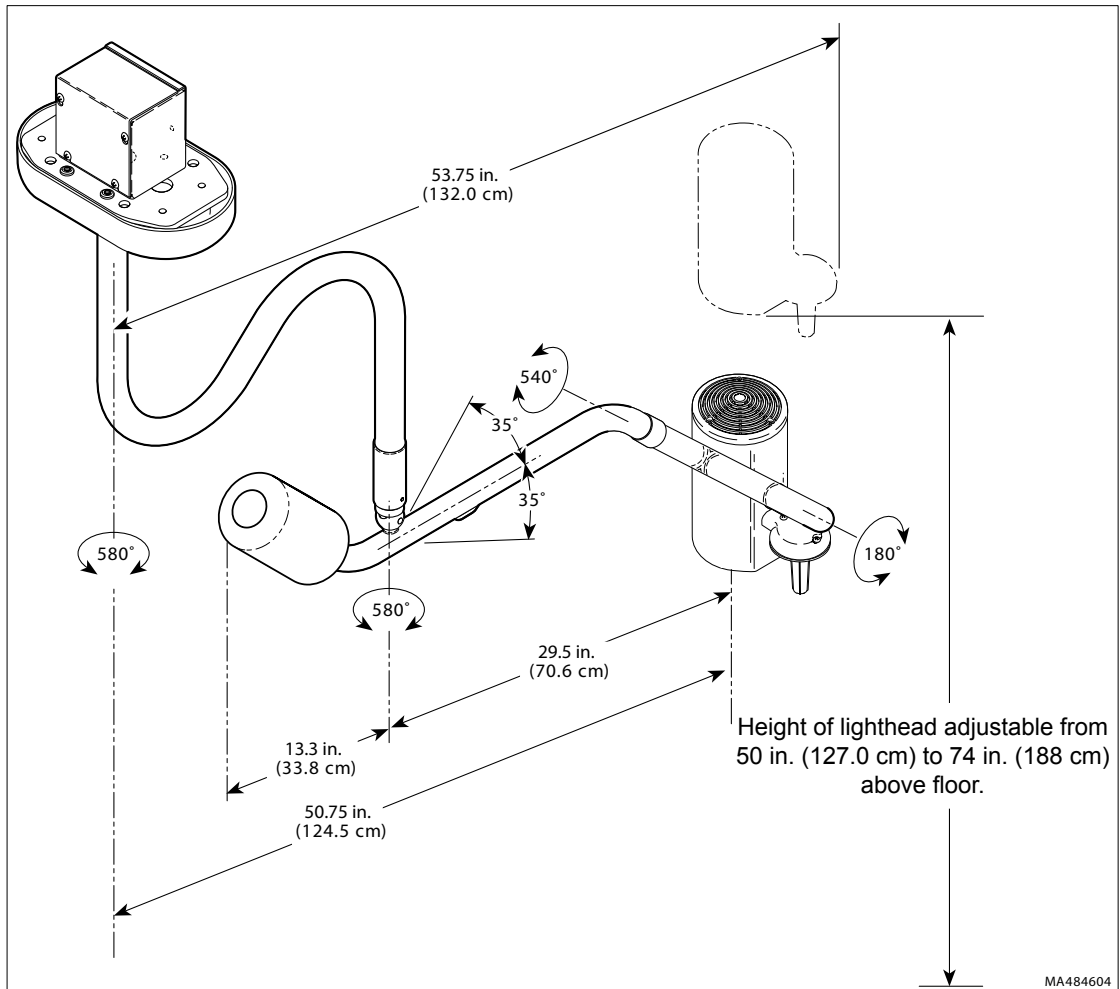
Specifications - continued

Specifications - continued	
Weight:	
<i>Mobile Models</i>	59 lbs (26.8 kg)
<i>Wall Mounted Model</i>	110 lbs. (49.9 kg)
<i>Ceiling Mounted Models:</i>	
<i>single light (8 ft. ceiling)</i>	59 lbs (26.8 kg)
<i>single light (9 ft. ceiling)</i>	60 lbs (27.2 kg)
<i>dual light (8 ft. ceiling)</i>	105 lbs (47.6 kg)
<i>dual light (9 ft. ceiling)</i>	107 lbs (48.5 kg)
WARNING <i>Equipment not suitable for use in the presence of a flammable anesthetic mixture.</i> <i>Clarification: Equipment is suitable for use in the presence of oxygen, air, or nitrous oxide.</i>	



Dimensions / Range of Motion

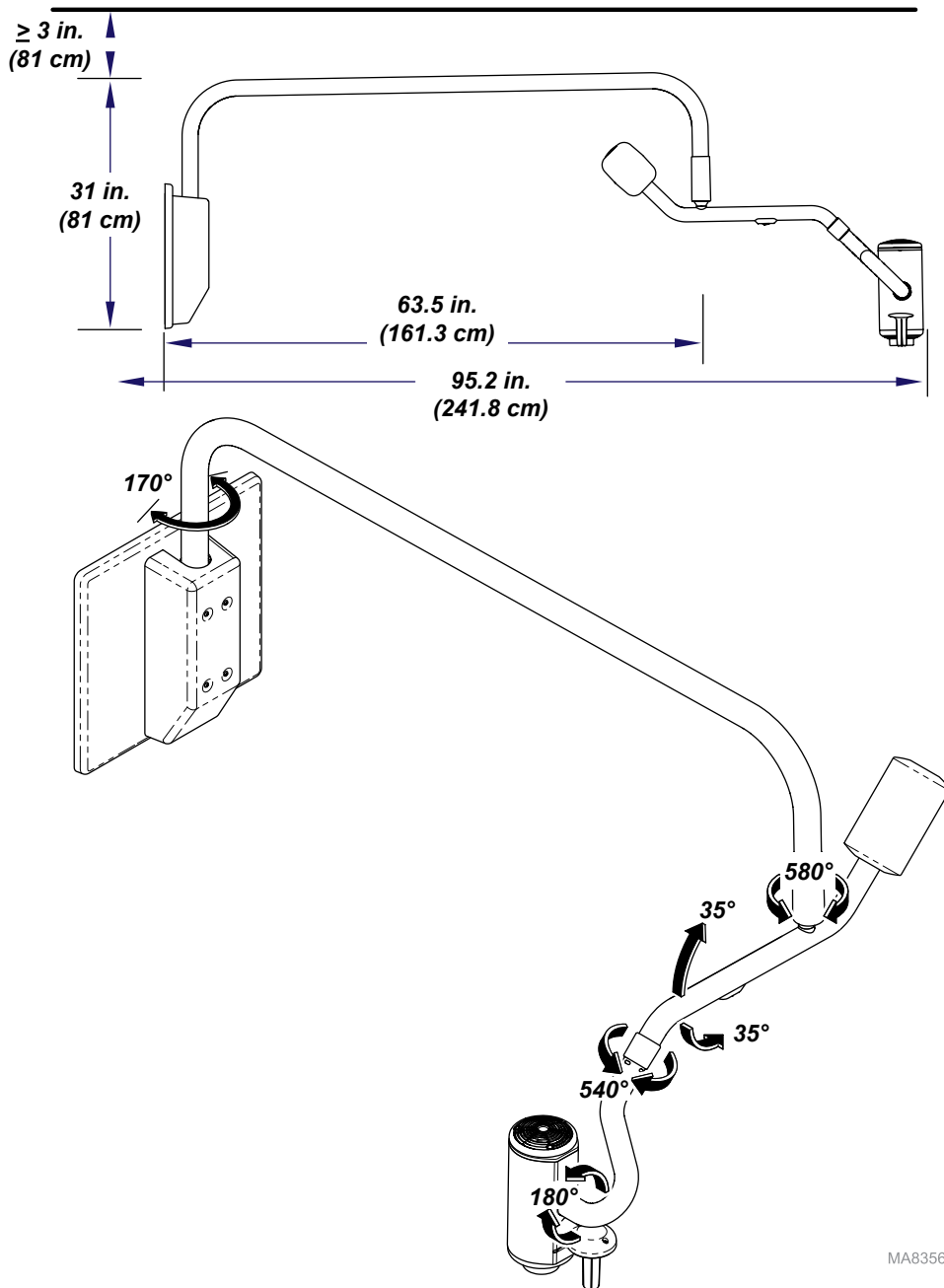
Ceiling Mounted Lights





Dimensions / Range of Motion - continued

Wall Mounted Lights

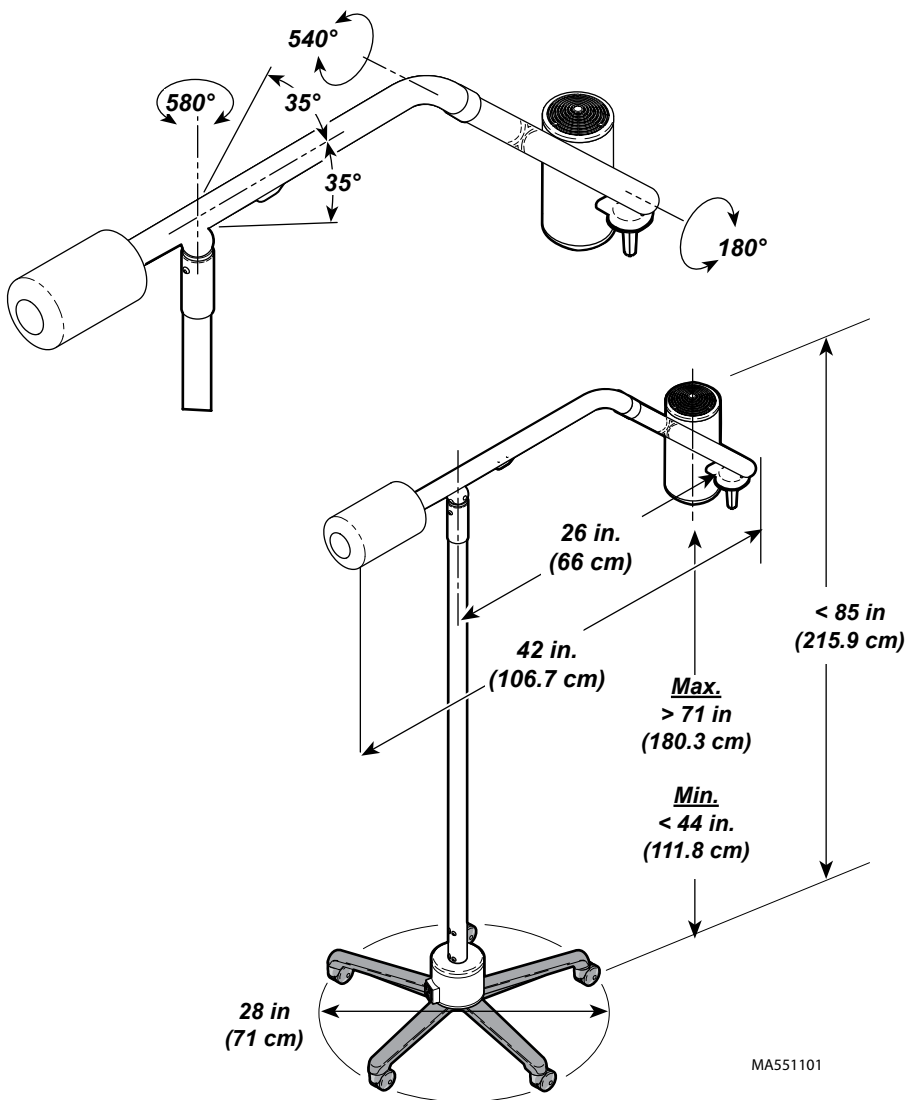


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Dimensions / Range of Motion - continued

Mobile Lights





Troubleshooting

Problem	Possible Cause	Solution
Light will not illuminate.	Light is in STANDBY mode.	Turn ON / STANDBY switch ON.
Light will not illuminate. Switch is ON.	Faulty bulb.	Replace bulb.
	Faulty fuse(s).	Replace fuse(s).
	No power to light.	Check facility circuit breaker.
	Faulty light transformer.	Call for service.
Light will not illuminate. Switch ON / Fuse & Bulb - OK Light flashes when lighthouse or arms are moved.	Faulty / malfunctioning electrical connection(s)	Call for service.
Cross tube tension is too tight / loose.	Tension adjustment required.	Adjust Pivot Joint Tension.

Calling for Service

Note: Model / serial number information is required when calling for service.

If service is required, contact your authorized Midmark dealer.
To contact Midmark directly:

1-800-MIDMARK (1-800-643-6275)
8:00 am until 5:00 pm Monday - Friday (EST)
www.midmark.com



Warranty Information

SCOPE OF WARRANTY

Midmark Corporation ("Midmark") warrants to the original retail purchaser that it will repair or replace components of the domestic and international medical products manufactured by Midmark (except for components not warranted under "Exclusions") that are defective in material or workmanship under normal use and service. Midmark's obligation under this warranty is limited to the repair or replacement, at Midmark's option, of the applicable components. This limited warranty shall only apply to defects that are reported to Midmark within the applicable warranty period and which, upon examination by Midmark, prove to be defective. This warranty extends only to the first retail purchaser of a product and is not transferable or assignable.

APPLICABLE WARRANTY PERIOD

The applicable warranty period, measured from the date of delivery to the original user, shall be one (1) year for all warranted products and components.

OBTAINING WARRANTY SERVICE

Warranty service must be obtained through either Midmark or an authorized dealer in the Midmark product line for which warranty service is requested. Midmark may be contacted for warranty service inquiries or issues via email at www.midmark.com; by phone at 1-800-MIDMARK; by facsimile at 1-800-365-8631; or by mail to Midmark Corporation, 60 Vista Drive, Versailles, Ohio 45380.

It is the retail purchaser's obligation to arrange for delivery of a product to Midmark or one of its authorized dealers for warranty service, which delivery shall be at retail purchaser's expense. It is also the retail purchaser's obligation to comply with the warranty service instructions provided either by Midmark or its authorized dealer. The retail purchaser must provide Midmark with completed warranty registration information within thirty (30) days after purchase in order to obtain the benefits of this warranty.

EXCLUSIONS

This warranty does not cover, and Midmark shall not be liable, for the following:

- (1) defects, damage or other conditions caused, in whole or in part, by misuse, abuse, negligence, alteration, accident, freight damage, tampering or failure to seek and obtain repair or replacement in a timely manner;
- (2) products which are not installed, used, and properly cleaned and maintained as required in the Midmark "Installation" and/or "Installation/Operation Manual" for the applicable product;
- (3) products considered to be of a consumable nature;
- (4) accessories or parts not manufactured by Midmark;
- (5) charges by anyone for adjustments, repairs, replacement parts, installation or other work performed upon or in connection with such products which are not expressly authorized in writing in advance by Midmark;
- (6) costs and expenses of routine maintenance and cleaning; and
- (7) representations and warranties made by any person or entity other than Midmark.

EXCLUSIVE REMEDY; CONSEQUENTIAL DAMAGES DISCLAIMER:

MIDMARK'S ONLY OBLIGATION UNDER THIS WARRANTY IS THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS. MIDMARK SHALL NOT BE LIABLE FOR AND HEREBY DISCLAIMS ANY DIRECT, SPECIAL, INDIRECT, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES OR DELAYS, INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFITS OR INCOME, LOSS OF USE, DOWNTIME, COVER AND EMPLOYEE OR INDEPENDENT CONTRACTOR WAGES, PAYMENTS AND BENEFITS.

NO AUTHORIZATION

No person or firm is authorized to create or approve for Midmark any other obligation or liability in connection with the products.

WARRANTY DISCLAIMER

THIS WARRANTY IS MIDMARK'S ONLY WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. MIDMARK MAKES NO IMPLIED WARRANTIES OF ANY KIND INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS.

STATUTE OF LIMITATIONS

No action may be brought against Midmark for breach of this limited warranty, an implied warranty, if any, or for any other claim arising out of or relating to the products, more than ninety (90) days following expiration of the limited warranty period.



Midmark Corporation

60 Vista Drive

Versailles, OH 45380 USA

1-800-643-6275

1-937-526-3662



Because we care.