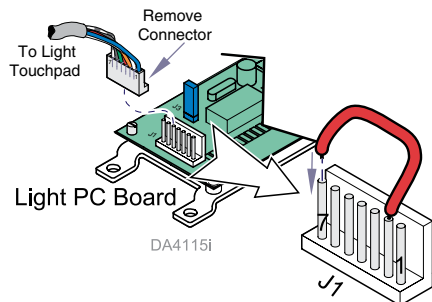
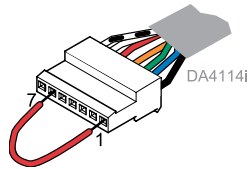
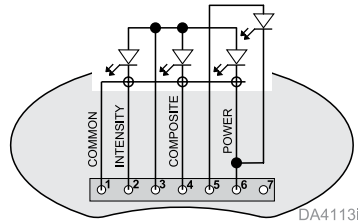


Midmark Halogen Dental Light Troubleshooting Chart

Problem	Symptom	Probable Cause	Check	Solution	
Light will not illuminate.	Light does not illuminate - indicator lamp ON.	Light is in AUTO-ON mode, and flex arm is positioned above horizontal.	Check position of flex arm.	Reposition flex arm. Inform user of proper operation.	
		Damaged / disconnected wiring.	Check wiring from flex arm PC board to bulb socket in lighthouse.	Repair / replace wiring.	
		Faulty bulb.	-	Replace bulb.	
	[Console / LR mounted lights only] Light does not illuminate - indicator lamp OFF.	No air supplied to pressure switch in power supply unit.	Turn Master ON / OFF Switch ON. <i>(Switch located on delivery unit)</i>		Refer to delivery system troubleshooting if necessary.
		Facility circuit breaker.	-		Reset circuit breaker.
		No power to power supply unit.	-		Connect power to power supply unit.
		Power supply unit fuse(s) blown.	Check fuses.		Replace fuses.
		Pressure switch malfunctioning. <i>(Pressure switch located in power supply unit).</i>	Perform continuity test on pressure switch. <i>(With Master ON / OFF switch ON, there should be continuity between N.O. and COM terminals of pressure switch.)</i>		Replace pressure switch.
		Transformer <i>(in power supply unit)</i> malfunctioning.	Unplug light from power supply. Turn Master switch ON. Check voltage across secondary output leads of transformer <i>(should be: 19.4 ±2 VAC)</i>		Replace transformer if necessary.
		Flex arm PC board is malfunctioning.	Check for proper output voltages.		Replace flex arm PC board.
		Damaged / disconnected wiring.	Check red and black wires from: transformer / flex arm PC board / lighthouse.		Repair / replace wiring.
		Light touchpad is malfunctioning.	Check continuity between terminals 1 and 6 of light touchpad while pressing power button on touchpad.		If no continuity, replace touchpad.
		Faulty connection to bulb socket.	Clean bulb socket / secure connections.		Replace bulb socket if necessary.
	[Ceiling / Track / Wall / Cabinet / Universal lights only] Light does not illuminate - indicator lamp OFF.	Facility circuit breaker.	-		Reset circuit breaker.
		Transformer fuse blown. <i>(Fuse typically located inside cover on light mounting plate)</i>	Check fuse.		Replace fuses.
		Transformer malfunctioning. <i>(Transformer typically located inside cover on light mounting plate)</i>	Unplug light from power supply. Check voltage across secondary output leads of transformer <i>(should be: 19.4 ±2 VAC)</i>		Replace transformer if necessary.
		Flex arm PC board is malfunctioning.	Check for proper output voltages.		Replace flex arm PC board.
		Damaged / disconnected wiring.	Check red and black wires from: transformer / flex arm PC board / lighthouse.		Repair / replace wiring.
		Light touchpad is malfunctioning.	Check continuity between terminals 1 and 6 of light touchpad while pressing power button on touchpad.		If no continuity, replace touchpad.
		Faulty connection to bulb socket.	Clean bulb socket / secure connections.		Replace bulb socket if necessary.

Midmark Halogen Dental Light Troubleshooting Chart

Problem	Symptom	Probable Cause	Check	Solution
Light flashes intermittently.	Light flashes (or goes out) when lighththead or flex arm is moved.	Damaged / disconnected wiring.	Check red and black wires from: transformer / flex arm PC board / lighththead.	Repair / replace wiring.
Light does not operate properly.	Some functions work, some do not.	Touchpad malfunctioning. Disconnect touchpad and use a meter to check continuity at terminals on back	Check continuity of touchpad. For POWER switch: Check terminals 1 and 6 of light touchpad while pressing Power button on touchpad. For COMPOSITE switch: Check terminals 1 and 4 of light touchpad while pressing Composite button on touchpad. For INTENSITY switch: Check terminals 1 and 2 of light touchpad while pressing Intensity button on touchpad	<u>If no continuity, replace touchpad.</u>
		Damaged / disconnected wiring harness. Use a jumper wire to short out two receptors on the touchpad harness connector.	Check continuity at the touchpad harness connector, coming from the flex arm PC board. Check POWER : function by shorting receptors 1 and 6 of touchpad wire harness connector. Check COMPOSITE : function by shorting receptors 1 and 4 of touchpad wire harness connector. Check INTENSITY : function by shorting receptors 1 and 2 of touchpad wire harness connector.	Repair / replace wiring.
		Flex arm PC board is malfunctioning. Remove the wire harness connector from J1 on the light PC Board. Use a jumper wire to short out two terminals.	Check PC Board functionality by shorting out two terminals on J1 on the PC Board in the flex arm. DO THIS FIRST to turn power on. Check Light ON / OFF function by shorting terminals 2 and 6 at J1, on the PC Board. Check COMPOSITE, lowest light setting : function by shorting receptors 2 and 5 at J1, on the PC Board. Check INTENSITY function by shorting receptors 2 and 7 at J1, on the PC Board.	<u>Replace PC board in flex arm</u>



Midmark Halogen Dental Light Troubleshooting Chart

Problem	Symptom	Probable Cause	Check	Solution
Auto-On function does not work.	Photo switch on flex arm PC board malfunctioning.	Select Auto-On function. Remove flex arm cover. Lower flex arm below horizontal so trigger is between two posts of photo switch (set point line). <i>(Light should illuminate).</i>		
Light pattern is not 3" x 8" (8 x 20 cm) oval at desired depth.	Light beam out of focus.	Check light pattern at focus depth between 21" to 39" (53 to 90 cm).	Adjust light beam focus.	
Light illuminates, but not at proper intensity.	Bulb malfunctioning.	-	Replace bulb.	
	Facility voltage is too low.	Facility voltage should be: 115 VAC \pm 11.5 V	Correct voltage problem.	
	Flex arm PC board is malfunctioning.	Check for proper output voltages.	Replace flex arm PC board.	
	Transformer malfunctioning.	Unplug light from power supply. Check voltage across secondary output leads of transformer (<i>should be: 19.4 \pm2 VAC</i>)	Replace transformer if necessary.	
	Shield assembly is clouded. <i>(This can be caused by cleaning solution)</i>	Inspect shield.	Clean shield. Replace if necessary.	
Light does not operate properly	Light touchpad buttons work, but indicator lamp(s) do not illuminate.	LEDs on touchpad burnt out.		Replace light touch pad.
	[Console / LR mounted lights only] Light stays ON when Master switch is turned OFF.	Pressure switch malfunctioning. <i>(Pressure switch located in power supply unit).</i>	Perform continuity test on pressure switch. <i>(With Master ON / OFF switch OFF, there should <u>not</u> be continuity between N.O. and COM terminals of pressure switch.)</i>	Replace pressure switch.
Auto-On mode is out of adjustment.	Light will not turn ON / OFF in Auto-On mode.	Auto-On mode is out of adjustment.	Select Auto-On function. Remove flex arm cover. Lower flex arm below horizontal so trigger is between two posts of photo switch (set point line). <i>(Light should illuminate).</i>	Adjust trigger to cross set point line earlier / later as necessary.
Lighthouse / arm(s) do not rotate freely or drift when released.	Lighthouse does not rotate freely or drifts when released.	Pivot joints out of adjustment.	-	Adjust pivot joint tension.
	Flex arm drifts down on its own, or requires excessive force to lower.	Flex arm spring tension out of adjustment.	-	Adjust flex arm spring tension.
	One pivot joint will not rotate, or requires excessive force to move.	Bearing in joint is dirty or damaged.	Remove & clean bearing.	Replace bearing if necessary.
	Lighthouse / arm(s) drift to one side.	Light arm is not leveled properly.	Place a level on vertical arm of light.	Adjust light until level.
	Flex arm rotates farther than it should.	Stop pin is missing.	Check for missing stop pin.	Install stop pin.
	Flex arm will not rotate thru its full range of motion.	Stop washer installed incorrectly.	Check orientation of stop washer.	Reposition stop washer.

Auto-ON Adjustment

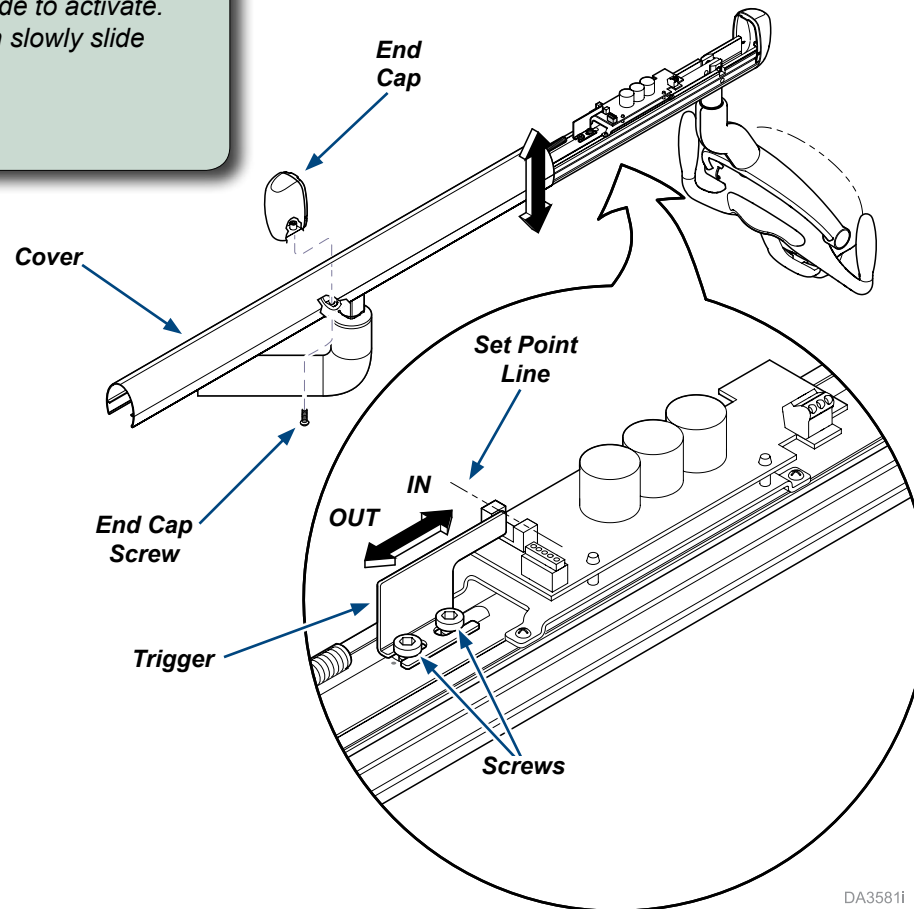


WARNING

Use caution when operating equipment with covers removed.

Step 1: To adjust AUTO ON mode.

- A) Remove end cap screw and end cap, then slide cover back.
- B) Position light arm at desired height for AUTO ON mode to activate.
- C) Loosen two screws, slide trigger all the way out, then slowly slide trigger in until lighthouse turns ON at set point line.
- D) Tighten two screws to secure trigger.



Tension Adjustments

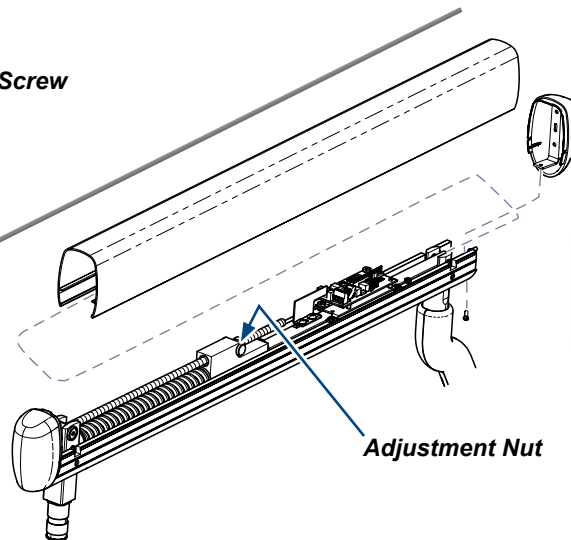
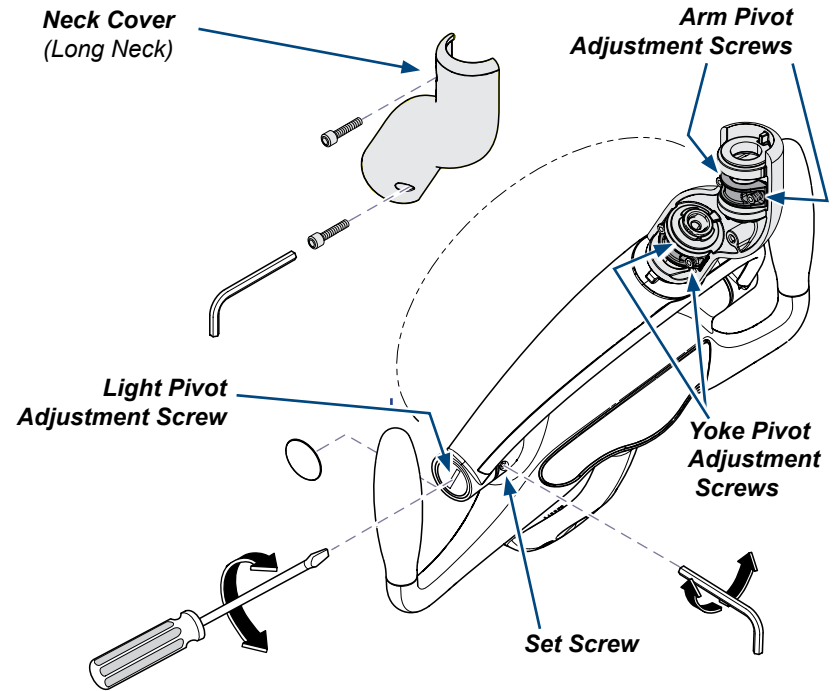
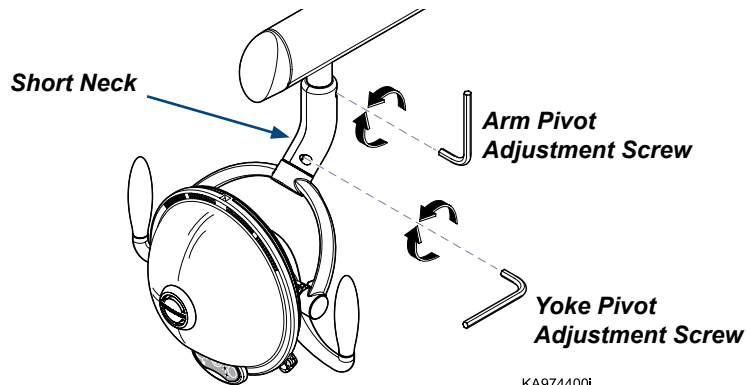
To adjust tension at Light pivot joint...

- A) Remove screw cover as shown.
- B) Loosen set screw.
- C) Loosen or tighten light pivot adjustment screw.
- D) Tighten set screw.

To adjust tension at Arm / Yoke pivot joints...

- A) Remove neck cover as shown (see Note).
- B) Loosen or tighten appropriate screws to adjust tension.

Note: Some halogen models have a short neck on the lighthouse. It is not necessary to remove the neck cover on these models.



To adjust Flex Arm tension...

- A) Remove end cap and top cover as shown.
- B) Loosen or tighten adjustment nut as desired.