

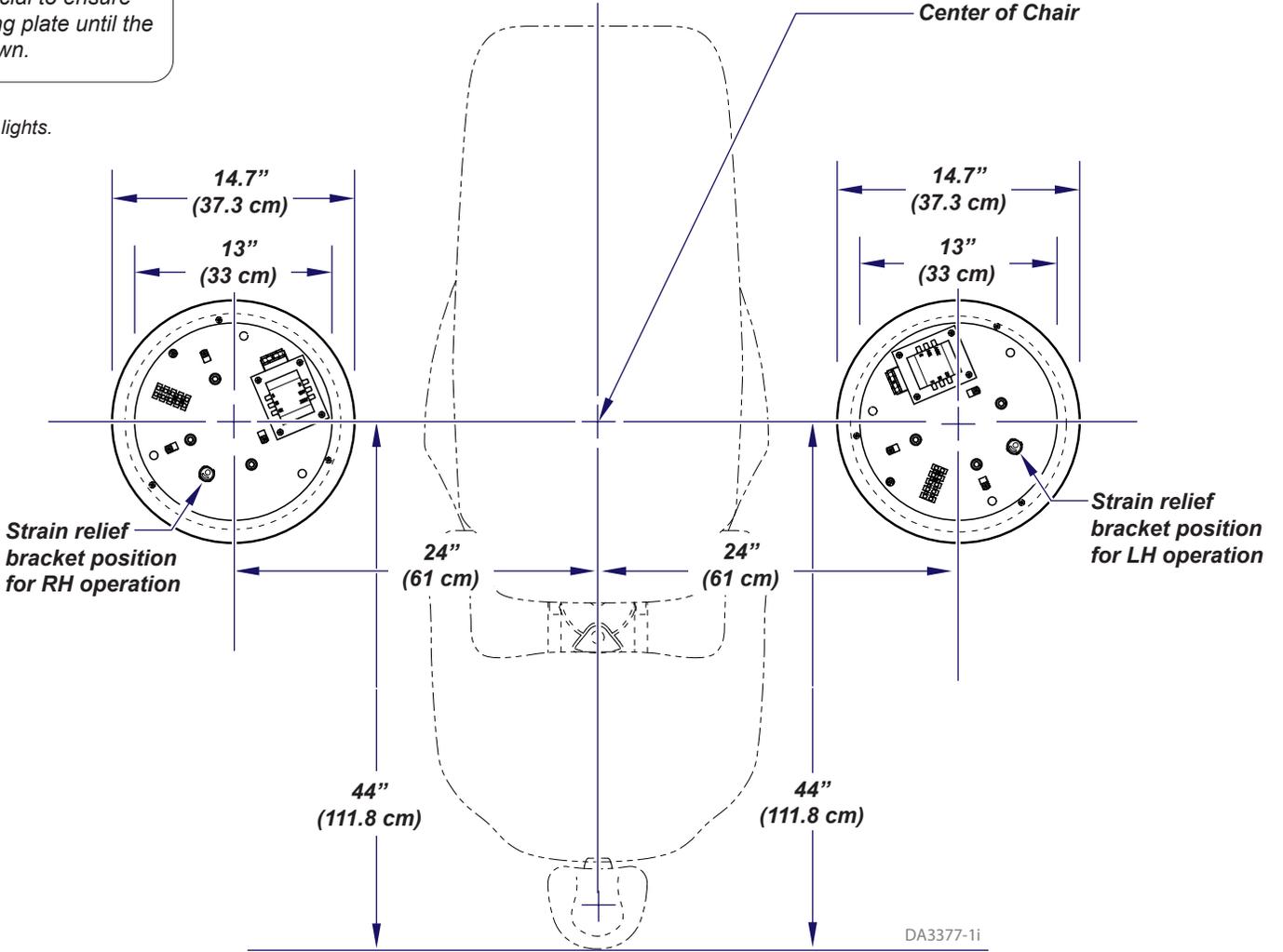
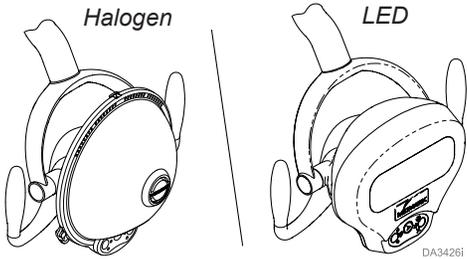
# Ceiling Mounted Light Installation

**Applies to Models:**  
 153637 (-001)  
 153905 (-001)

**Note**  
 Midmark recommends to mount the light on the opposite side of the doctor's normal work position.

**Equipment Alert**  
 The orientation of the ceiling plate is crucial to ensure proper range of motion. Rotate the ceiling plate until the strain relief bracket is positioned as shown.

**NOTE:** This install guide applies to Halogen and LED-style lights.



**Note**

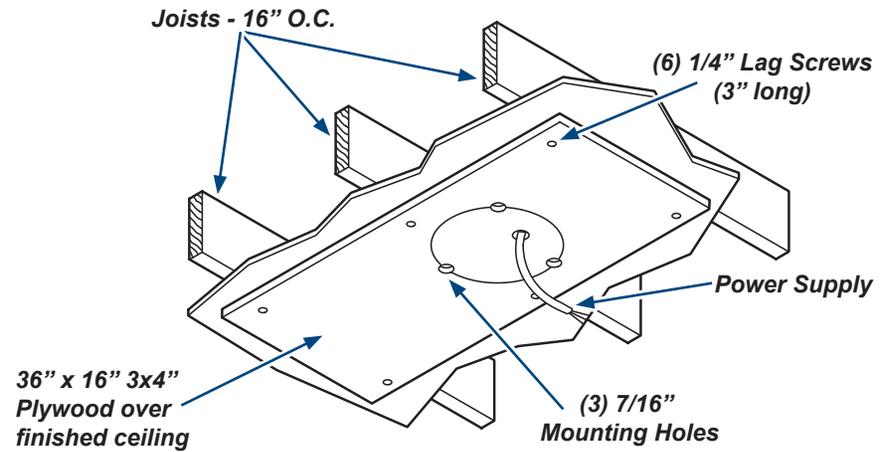
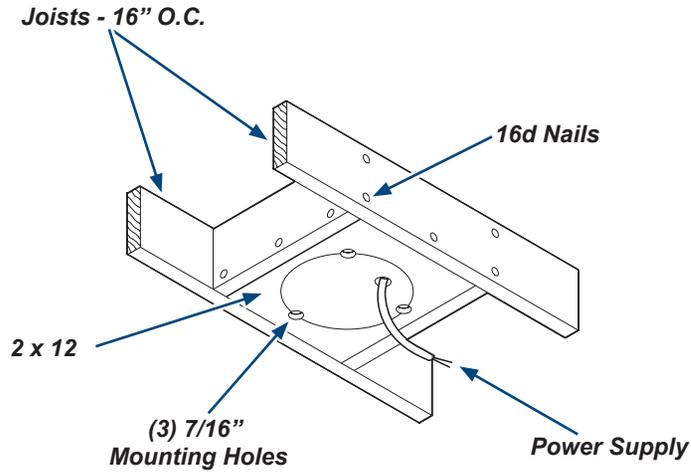
Midmark does not supply the ceiling support structure. The illustrations below are for suggestion only. Consult a qualified professional to install the appropriate support structure for the facility.

Lighting Systems (ONLY)	
Weight (max.)	70 lbs. (31.7 kg.)
Torque (max.)	70 ft-lbs. (94.9 N•m)

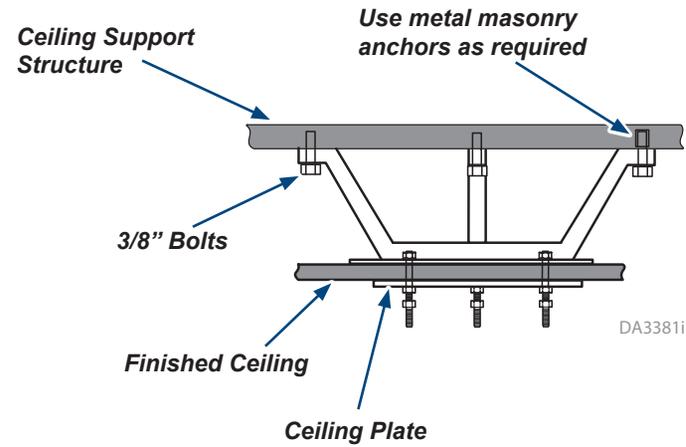
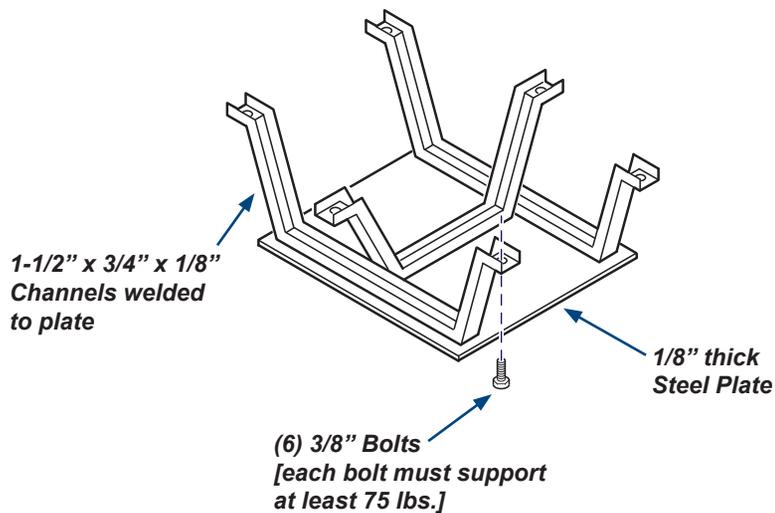
**Note**

The ceiling structure must support the light system without deflection. To prevent the suspension arm from drifting, the ceiling plate must deflect no more than 1/16 in. (1.6 mm) over a 12 in. (30.5 cm) distance.

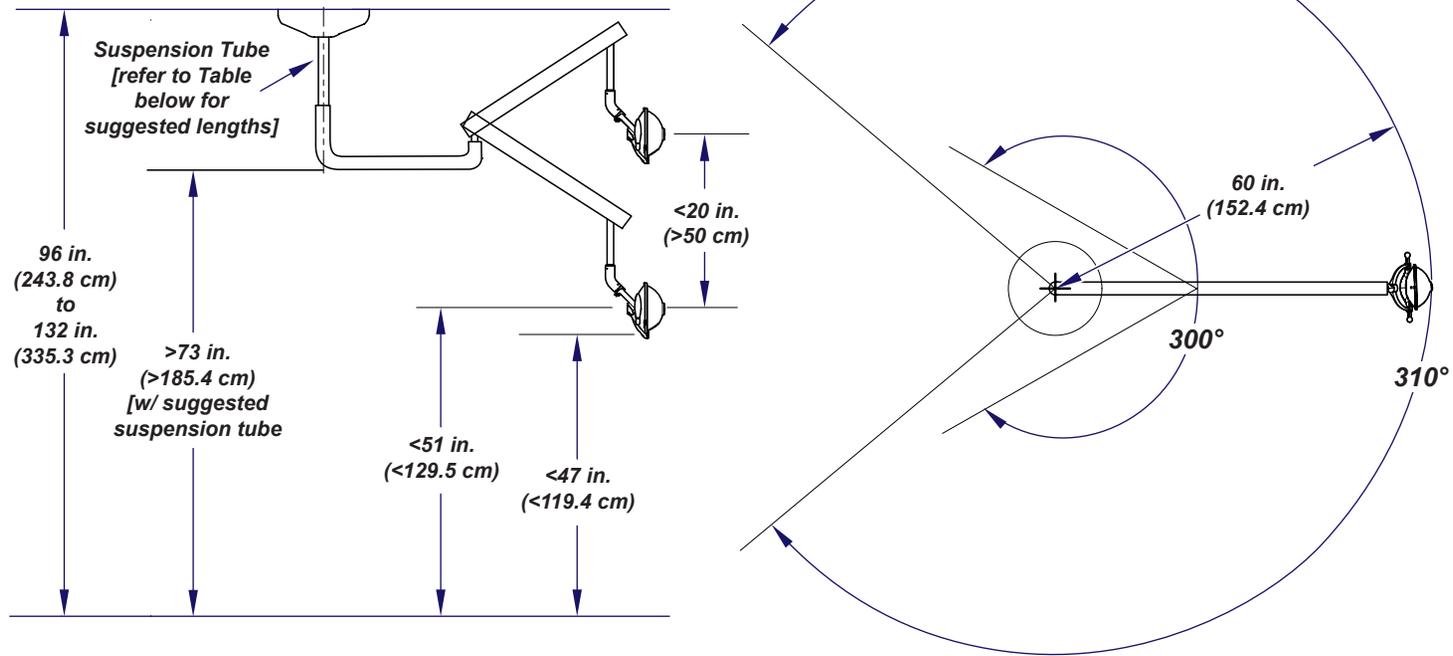
**Wood Frame Ceiling**



**Suspended Ceiling**



### Halogen Shown



DA3383I

### Suspension Tube Recommendations

Mounting Height	Suspension Tube Part Number	Suspension Tube Length
96 to 98 in. (243.8 to 248.9 cm)	029-11856-00-216	11.71 in. (29.7cm)
99 to 102 in. (251.5 to 259.1 cm)	029-11856-01-216	15.71 in. (39.9 cm)
103 to 106 in. (261.6 to 269.2 cm)	029-11856-02-216	19.71 in. (50.1 cm)
107 to 110 in. (271.8 to 279.4 cm)	029-11856-03-216	23.71 in. (60.2 cm)
111 to 114 in. (281.9 to 289.5 cm)	029-11856-04-216	27.71 in. (70.4 cm)
115 to 118 in. (292.1 to 299.7 cm)	029-11856-05-216	31.71 in. (80.5 cm)
119 to 122 in. (302.3 to 309.9 cm)	029-11856-06-216	35.71 in. (90.7cm)
123 to 126 in. (312.4 to 320.0 cm)	029-11856-07-216	39.71 in. (100.9 cm)
127 to 130 in. (322.6 to 330.2 cm)	029-11856-08-216	43.71 in. (111 cm)
>130 in. (>330.2 cm)	029-11856-09-216	47.71 in. (121.2 cm)



### WARNING

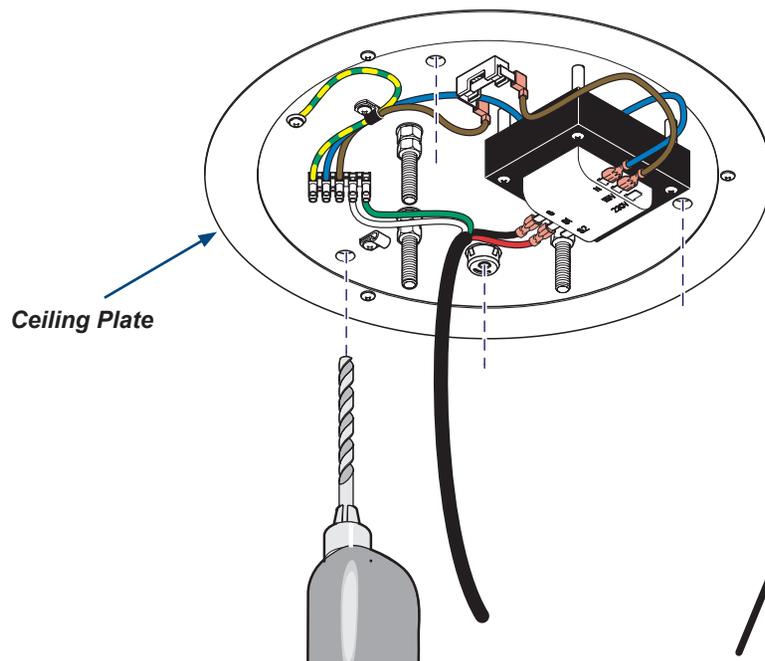
Disconnect facility power before performing this installation. Failure to comply could result in serious personal injury.

### Note

The customer must provide the wiring to power the lighting system. The lighting system requires 115/230 VAC input voltage. Wiring should be two conductor w/ground, 14 gauge copper, rated for 300 VAC (minimum). Connect and route wiring according to state and local codes.

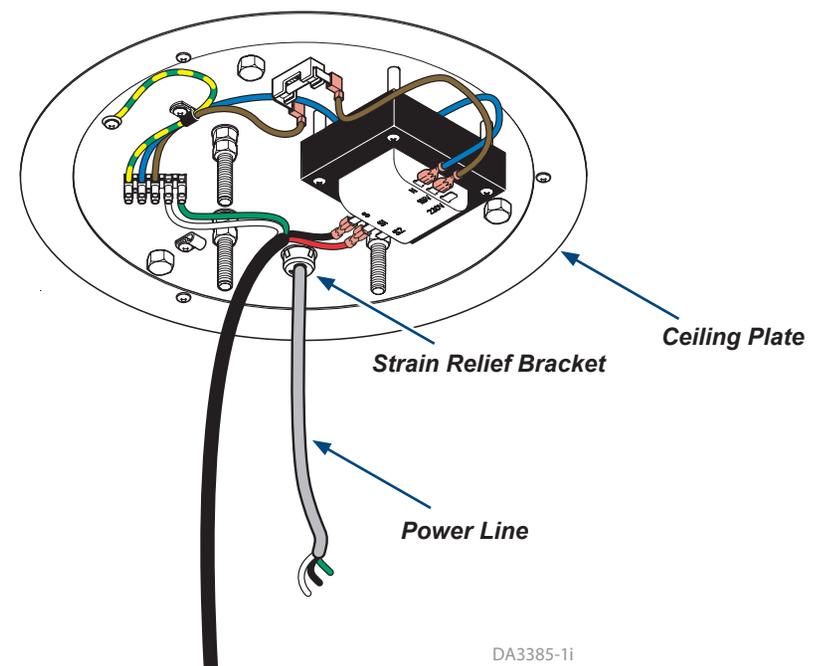
### Step 2: Routing power line.

- A) Route power line thru ceiling access hole.
- B) Pull power line thru strain relief bracket on ceiling plate.



### Step 1: Marking hole location.

- A) Position ceiling plate or template (supplied on carton.)
- B) Mark three mounting holes and power line hole.
- C) Drill holes.

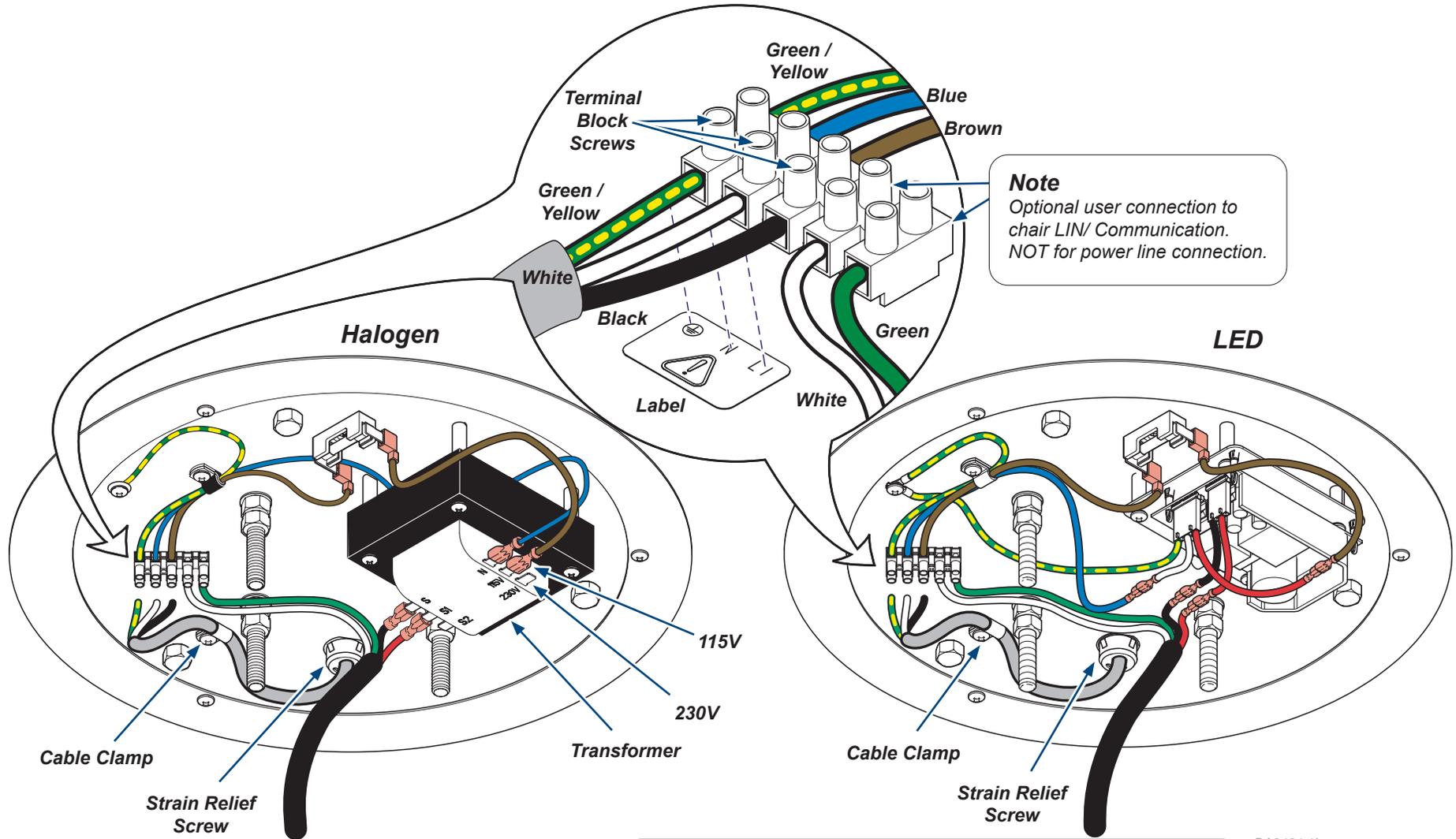


### Step 3: Secure ceiling plate.

- A) Align ceiling plate to ceiling support structure.
- B) Secure ceiling plate via 1/2" holes with appropriate hardware [not provided].

#### Step 4: Wiring Installation.

- A) Use label for insert wires from power line into terminal block.
- B) Secure wires with terminal block screws.



#### Equipment Alert (Halogen ONLY)

If ceiling light unit is being powered by 230 VAC (nominal), disconnect wire from 115 VAC transformer terminal and reconnect to 230 VAC transformer terminal.

#### Step 5: Securing power line to ceiling plate.

- A) Secure facility power line to ceiling plate with cable clamp.
- B) Tighten strain relief screw(s) to secure power line.

Note: Assure adequate facility line slack prior to mounting.

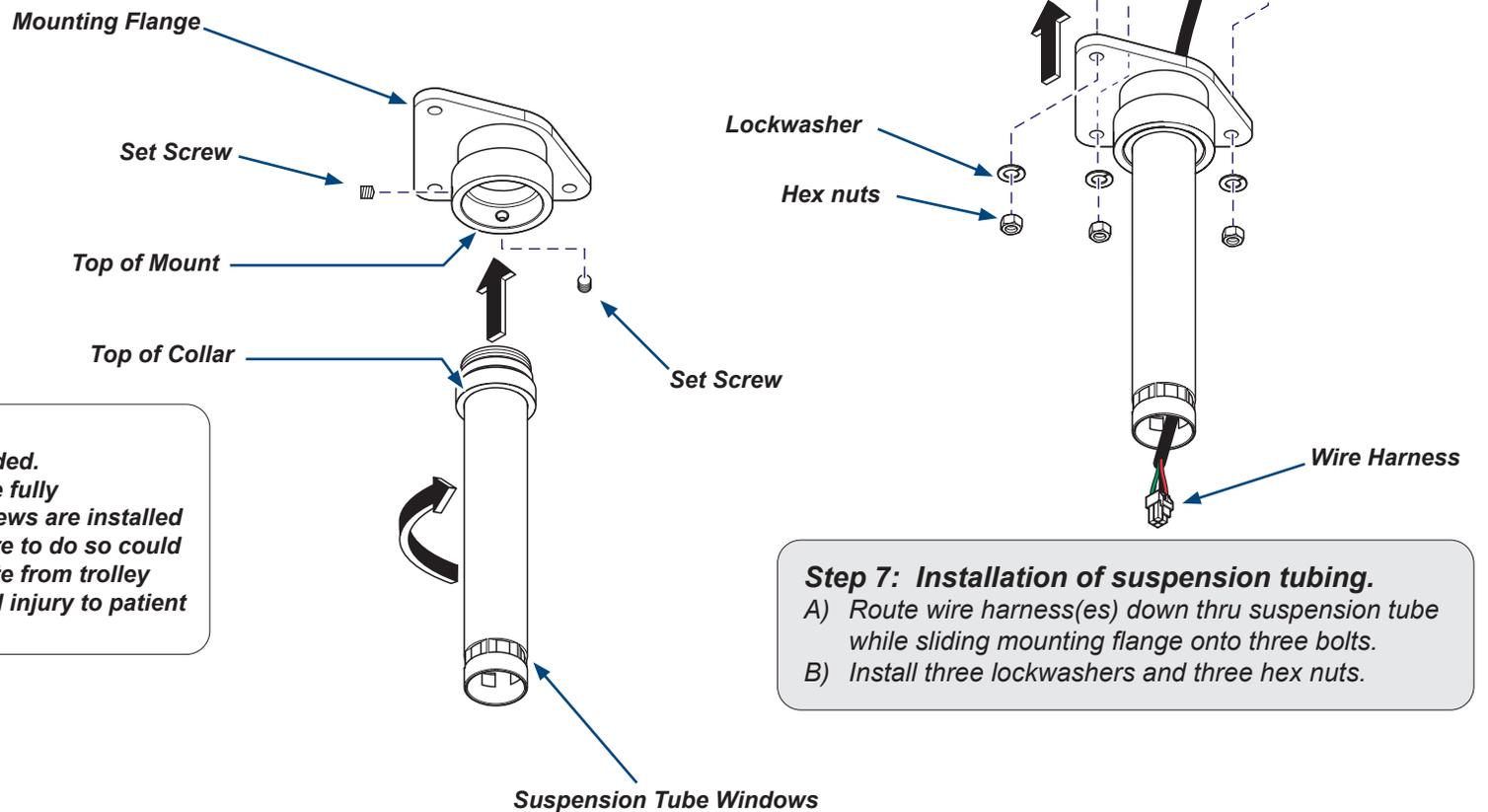
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**Step 6: Installation of suspension tubing.**

- A) Screw suspension tube into mounting flange until tight, and the top of mount and top of collar are at least flush.
- B) Secure suspension tube in mounting flange with set screws.
- C) Check that tube will not unscrew after set screws are tightened.

Note: If suspension tube is 26 in. (66 cm) or longer, connect wire harness extension(s) [included w/suspension tube] before performing Step 7.

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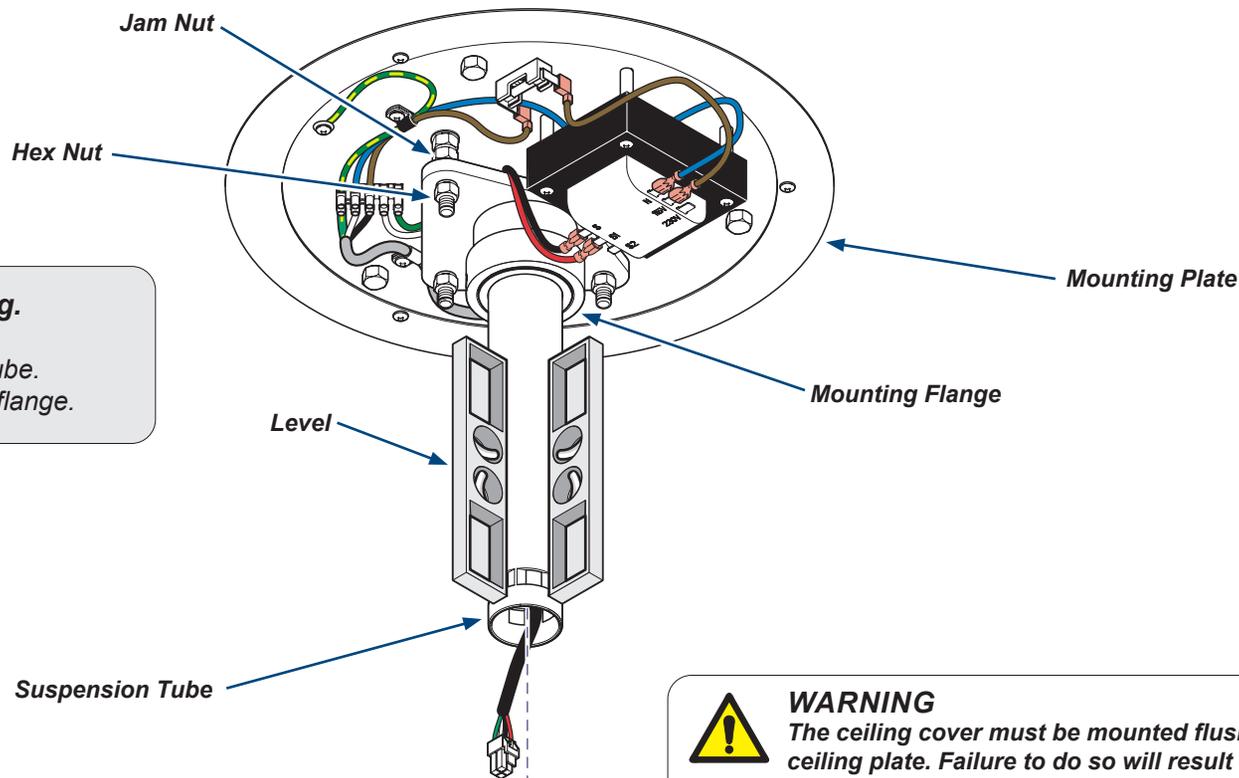


**WARNING**

*These are easily cross-threaded. Ensure suspension tubes are fully threaded in to castings and all set screws are installed in place and securely tightened. Failure to do so could allow monitor or light tubes to separate from trolley castings, resulting in serious personal injury to patient or staff.*

**Step 7: Installation of suspension tubing.**

- A) Route wire harness(es) down thru suspension tube while sliding mounting flange onto three bolts.
- B) Install three lockwashers and three hex nuts.



**Step 8: Leveling suspension tubing.**

- A) Place level on suspension tube.
- B) Adjust hex nuts to level suspension tube.
- C) Tighten jam nuts to secure mounting flange.

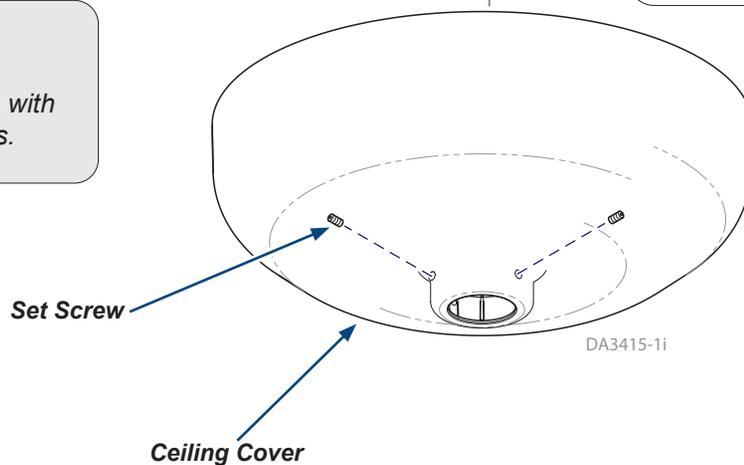


**WARNING**

The ceiling cover must be mounted flush with the ceiling plate. Failure to do so will result in shock and/or fire hazard due to exposed electrical connections.

**Step 9: Installation of Ceiling Cover.**

- A) Slide ceiling cover onto suspension tube.
- B) Check to make sure ceiling cover is flush with mounting plate then tightening set screws.





### Caution - Equipment Alert

To ensure quiet operation, apply a thin coat of lubricant (included w/light) to inside of suspension tube and bearing shaft of fixed arm before performing the following steps.

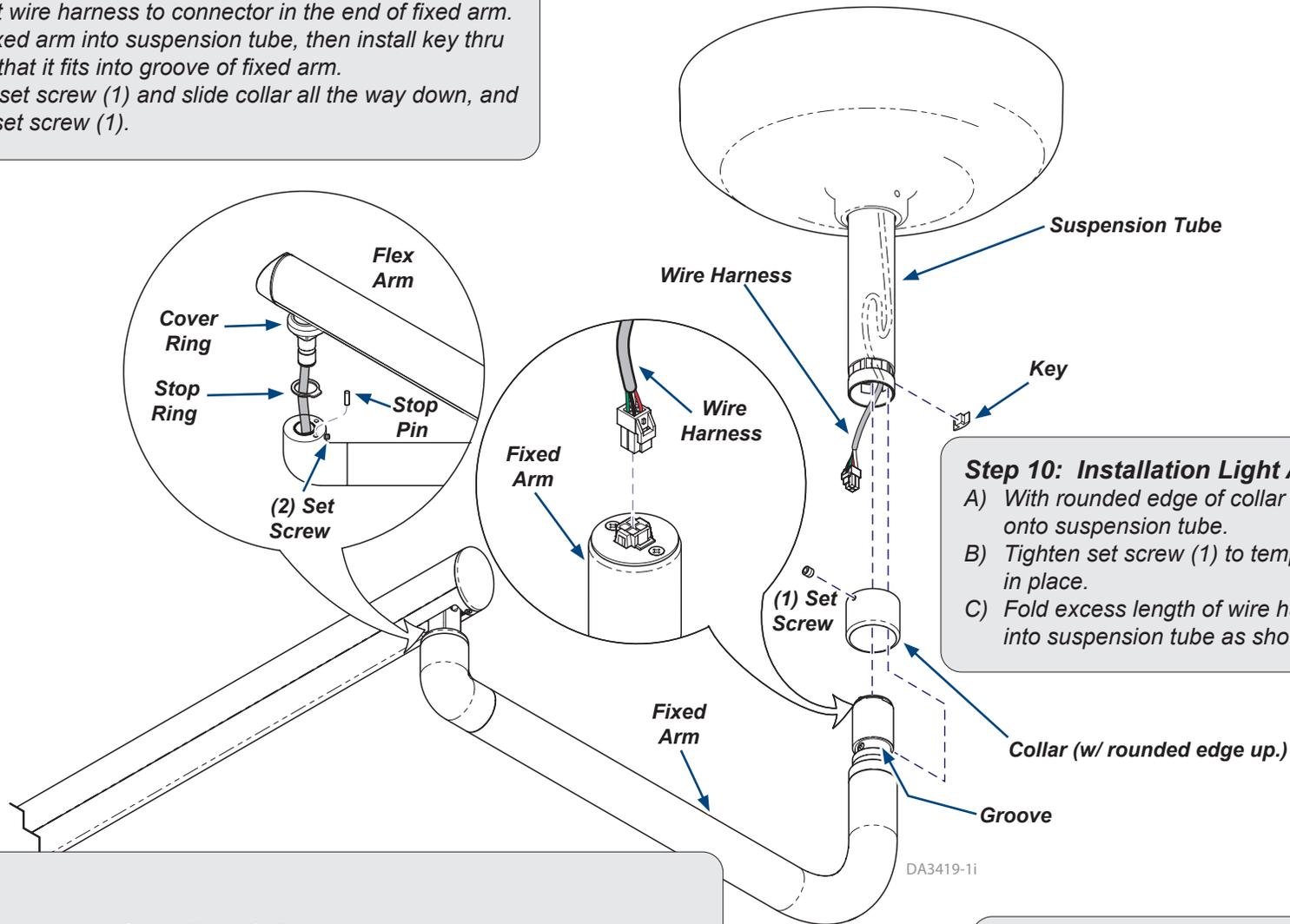
### Step 11: Installation Fixed Arm.

- A) Connect wire harness to connector in the end of fixed arm.
- B) Insert fixed arm into suspension tube, then install key thru hole so that it fits into groove of fixed arm.
- C) Loosen set screw (1) and slide collar all the way down, and tighten set screw (1).



### Equipment Alert

Use an assistant to secure fixed arm assembly when performing following steps. Failure to do so could result in damage to lighthead.



### Step 10: Installation Light Arm.

- A) With rounded edge of collar upward, slide collar onto suspension tube.
- B) Tighten set screw (1) to temporarily hold collar in place.
- C) Fold excess length of wire harness and push up into suspension tube as shown.



### Step 12: Installation of Stop Ring & Pin.

- A) Position tab of rotation stop ring in line with flex arm so that it is facing lighthead.
- B) Insert flex arm shaft into curved arm assembly and secure with set screw (2).
- C) Lift cover ring and install stop pin into hole in curved arm assembly.

### Step 13: Verify Operation of Light.

Note: If necessary, refer to User's Manual for operation.

## Tension Adjustments

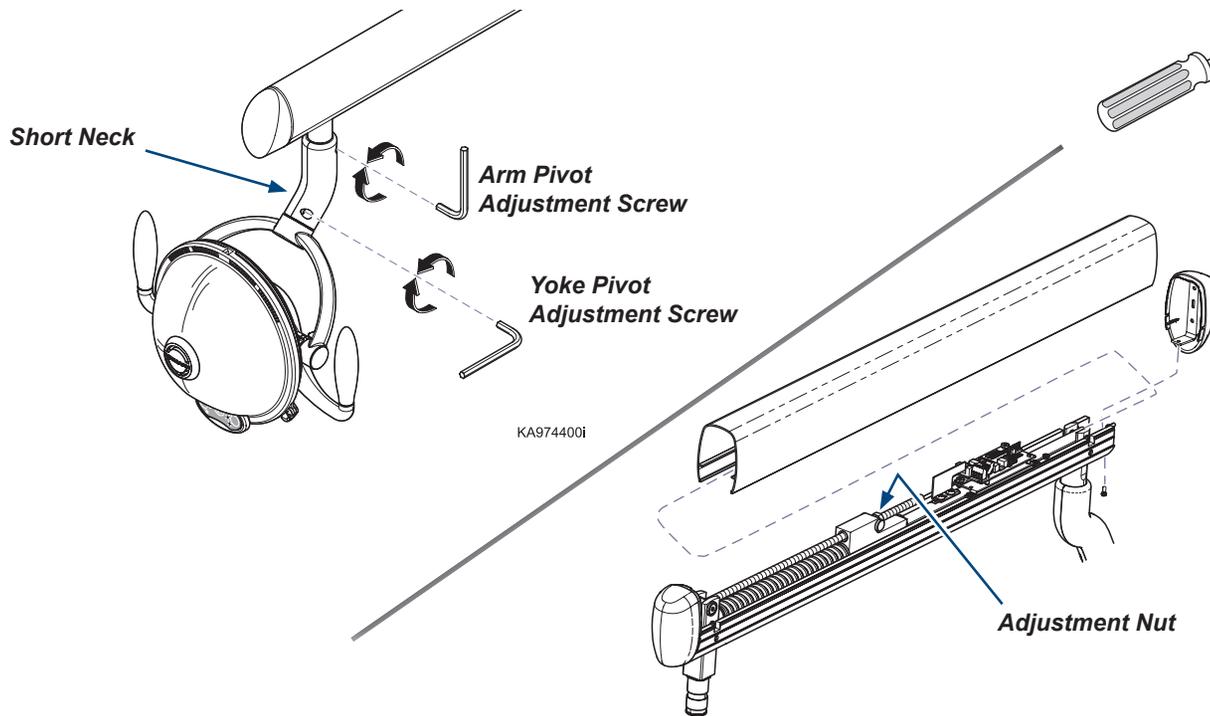
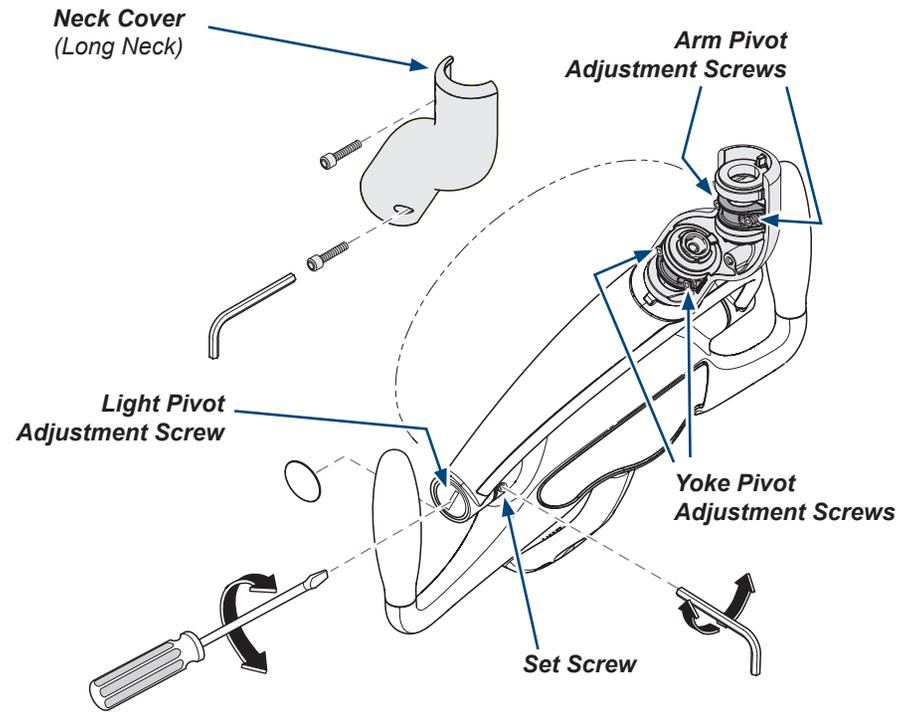
### To adjust tension at Light pivot joint...

- 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.