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A-dec 371L/571L Dental Light on an A-dec Performer Dental Chair

INSTALLATION GUIDE

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A-dec LED Dental Light on an A-dec Performer Dental Chair

Product Models and Versions Covered in this Document

Model	Versions	Description
371L, 571L	A	Dental Light
Performer 8000	B	Dental Chair

86.0662.00 Rev D

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Before You Begin

IMPORTANT This installation guide explains how to install a 371L or 571L dental light on a new A-dec Performer dental chair and how to replace a previously installed halogen dental light.

If you have not installed the support center yet, install it before proceeding with this installation guide. To install the support center, follow the instructions in the Performer installation guide (p/n 86.0556.00), which is available in the Document Library at www.a-dec.com.

Recommended Tools

- 15/16" socket and ratchet (2)
- Diagonal cutters
- Hex key set
- 1/2", 5/8", 3/4" and 15/16" combination wrenches
- Phillips head screwdriver
- Antistatic wrist strap

Remove the Covers

CAUTION When removing or replacing covers, take care not to damage any wiring or tubing. Verify that the covers are secure after replacing them.

1. Plug the chair into the mains supply.
2. Raise the chair to the full base up position.

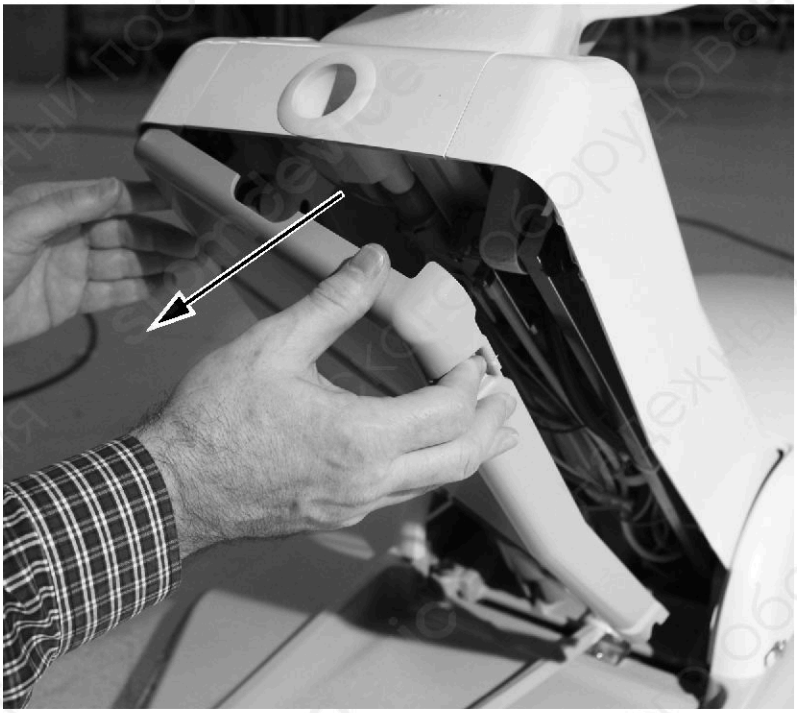
WARNING Failure to turn off or disconnect the power before you begin this procedure can lead to product damage and result in serious injury or death.

3. Unplug the chair from the mains supply.

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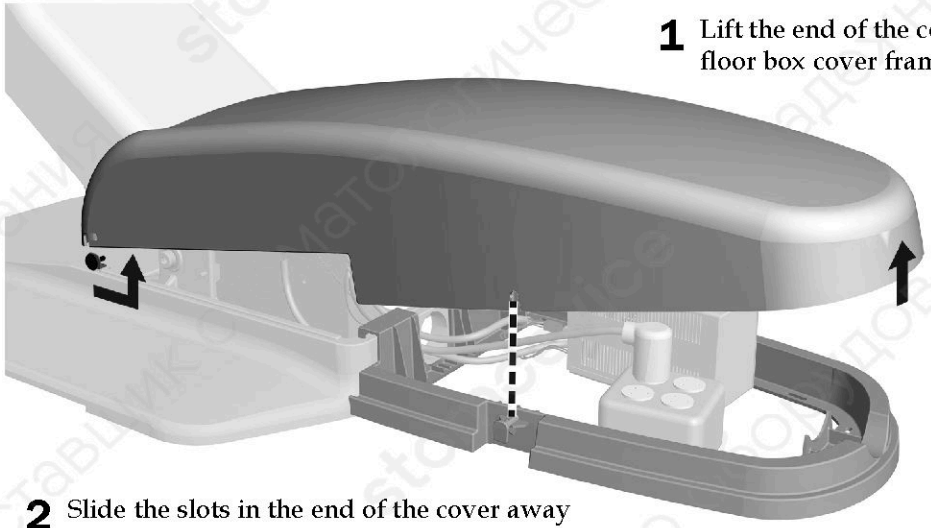
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Remove the Stop Plate



1 Press on one side of the stop plate and pull it away from the lift arm.

Remove the Single-Piece Floor Box Cover



1 Lift the end of the cover up over the pins on the floor box cover frame.

2 Slide the slots in the end of the cover away from the chair and up over the pins.

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Remove the Support Center Covers



1 Pull out on the bottoms of the support center side covers to remove them from the support center frame.

Remove the Halogen Dental Light

Recommended Tools

- Phillips head screwdriver
- Diagonal cutters

Disconnect an A-dec Performer Dental Light from the Power Supply

Task 1.

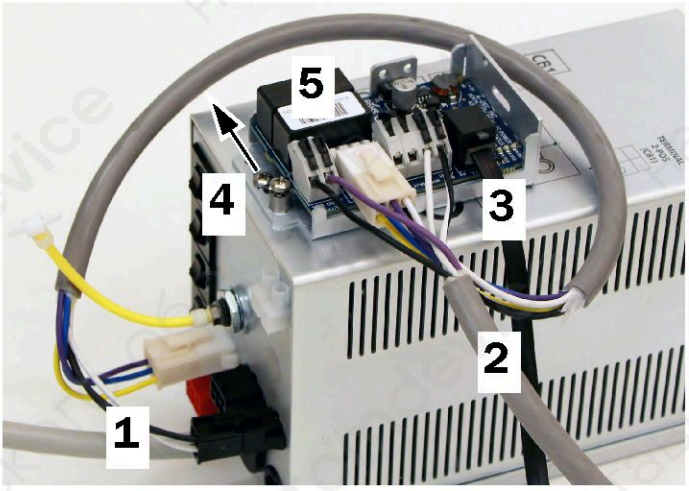
1 Disconnect the dental light circuit board from the power supply by removing the cable adaptors from the power supply.

2 Disconnect the dental light wires from the terminal strips on the dental light relay circuit board.

3 Disconnect the data line from the dental light relay circuit board.

4 Use a Phillips head screwdriver to remove the screw from the top of the power supply that secures the dental light relay circuit board.

5 Remove the dental light relay circuit board from the power supply.

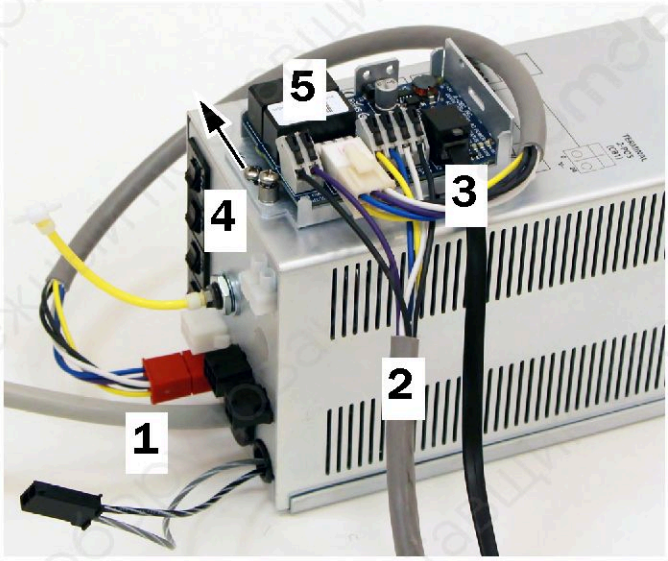


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Disconnect an A-dec 571 Dental Light from the Power Supply

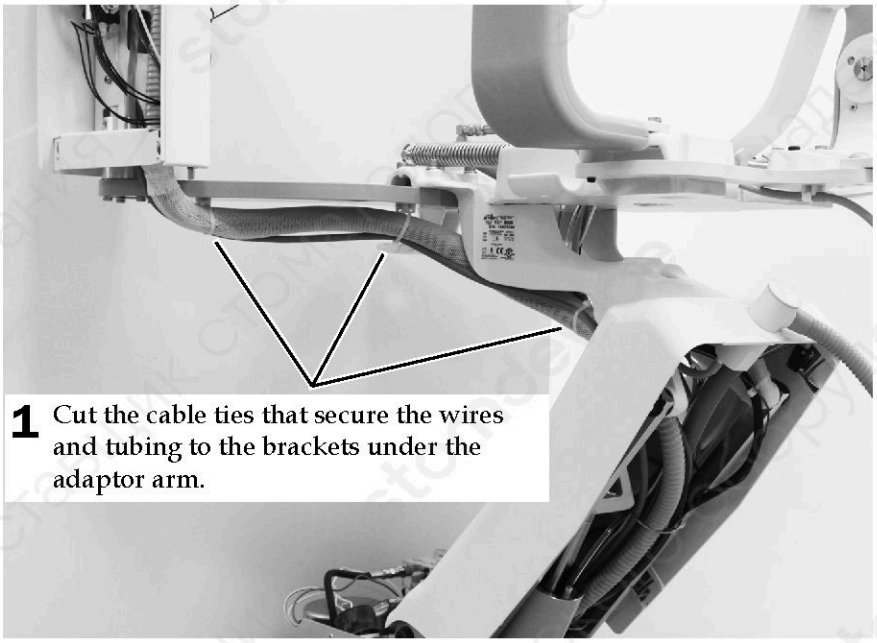
Task 1.



1. Disconnect the power supply from the dental light relay circuit board by removing the red cable adaptor from the power supply.
2. Disconnect the dental light wires from the dental light relay circuit board.
3. Disconnect the data line from the data line connector on the dental light relay circuit board.
4. Remove the dental light relay circuit board from the power supply.
5. Use a Phillips head screwdriver to remove the screw that secures the dental light relay circuit board to the power supply.

Remove the Dental Light Wiring

Task 1.



1. Cut the cable ties that secure the wires and tubing to the brackets under the adaptor arm.

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Task 2.

1 Pull the dental light wires away from the power supply, out from behind the lift arm and away from the adaptor arm.



Task 3.

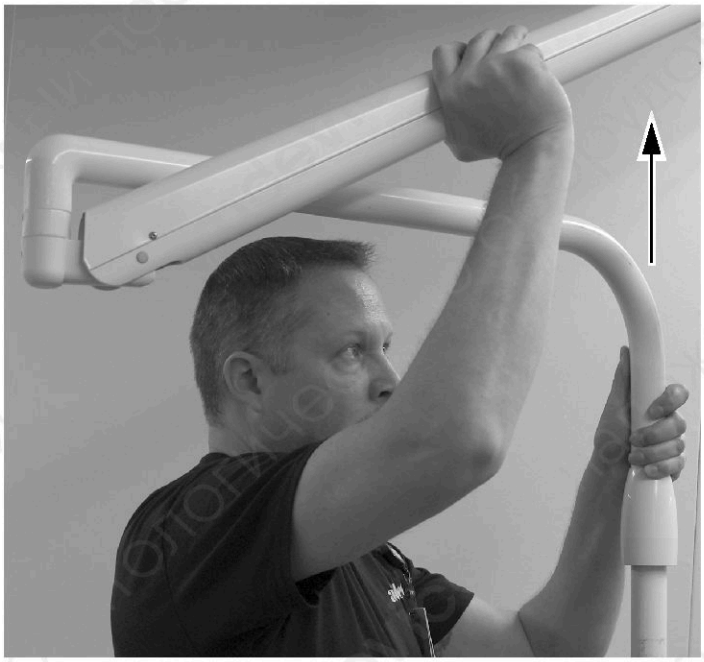


1 Pull the dental light wiring up through the bottom of the support center.

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Task 4.



1 Lift the light out of the lower post.
Set the light aside.

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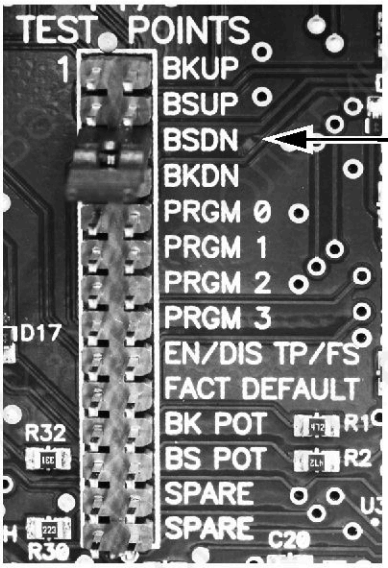
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Install the LED Dental Light on the Support Center

Task 1.

1 Plug the chair into the mains supply.

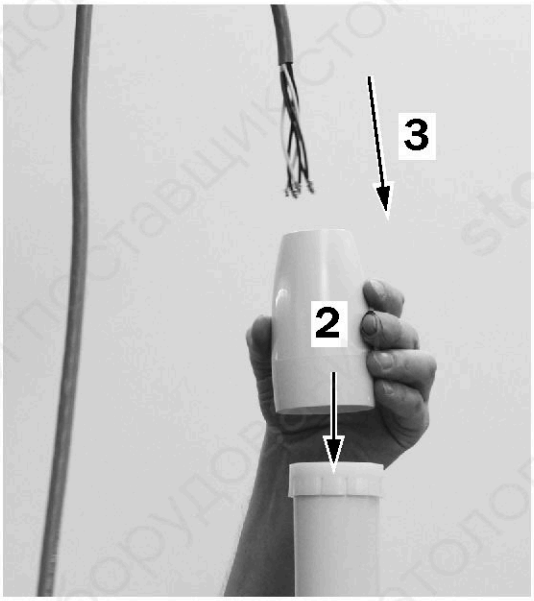
ATTENTION Circuit boards are sensitive to static electricity. Electrostatic Discharge (ESD) precautions are required when touching a circuit board or making connections to or from the circuit board. Circuit boards should be installed only by an electrician or qualified service person.



2 To make the light installation easier, use the jumper to move the chair base down (BSDN).

3 Unplug the chair from the mains supply.

Task 2.



1 Apply lubricant, from the kit, all the way around the end of the upper rigid arm.

2 Place the trim cover on top of the bearing.

3 Route the wiring into the support center post.

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Task 3.



1 Route the wiring through the rectangular hole in the post into the support center.

Task 4.



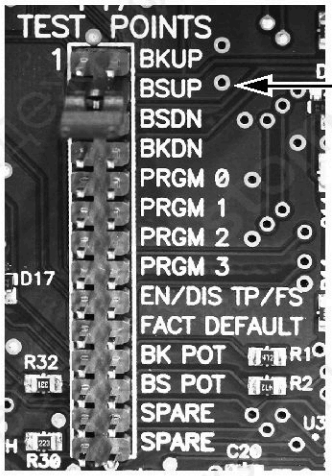
1 Insert the light into the lower post.

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Task 5.

1 Plug the chair into the mains supply.

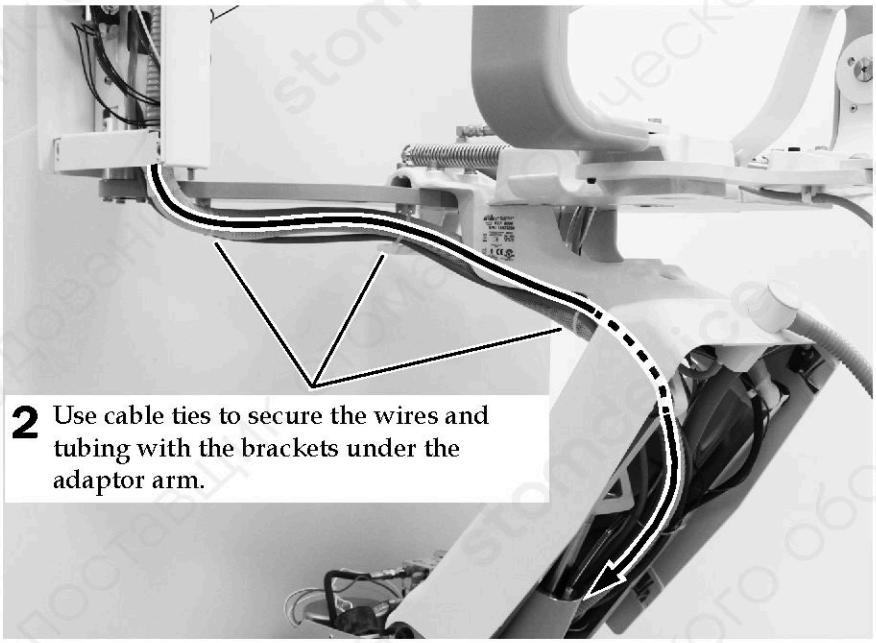


2 To make routing the tubing and wires easier, use the jumper to move the chair base up (BSUP).

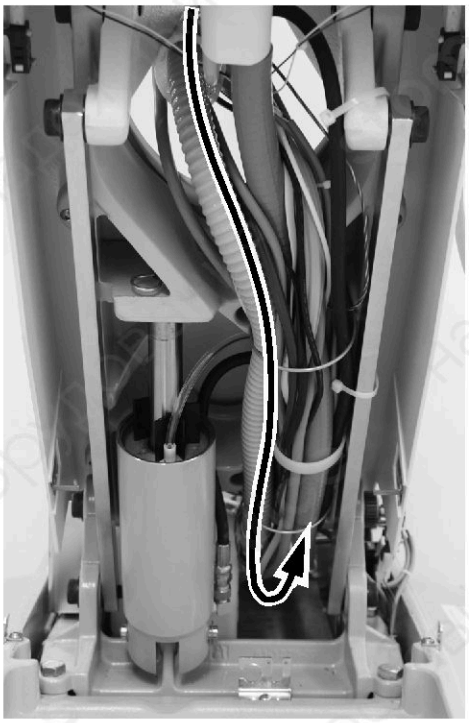
3 Unplug the chair from the mains supply.

Task 6.

1 Route the wires out of the bottom of the support center, under the adaptor arm, and through the upper structure to the floor box.



2 Use cable ties to secure the wires and tubing with the brackets under the adaptor arm.

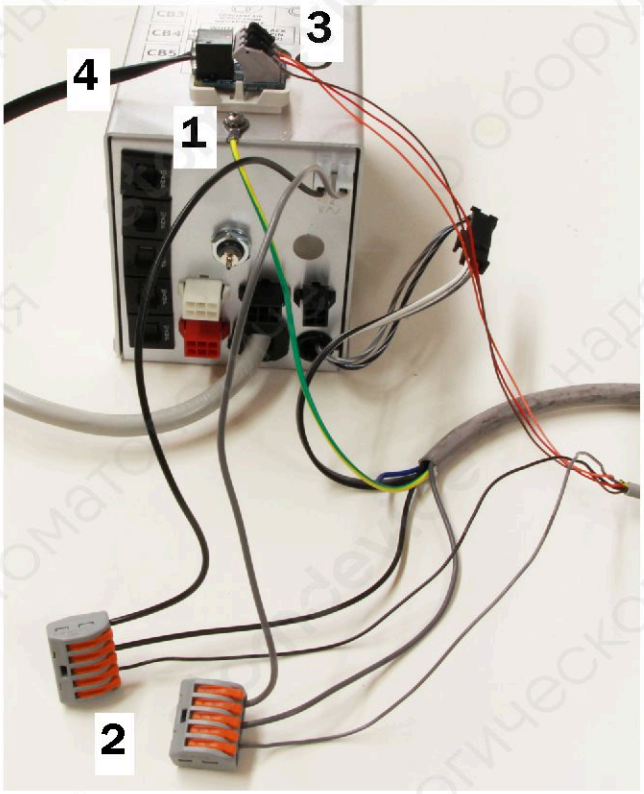


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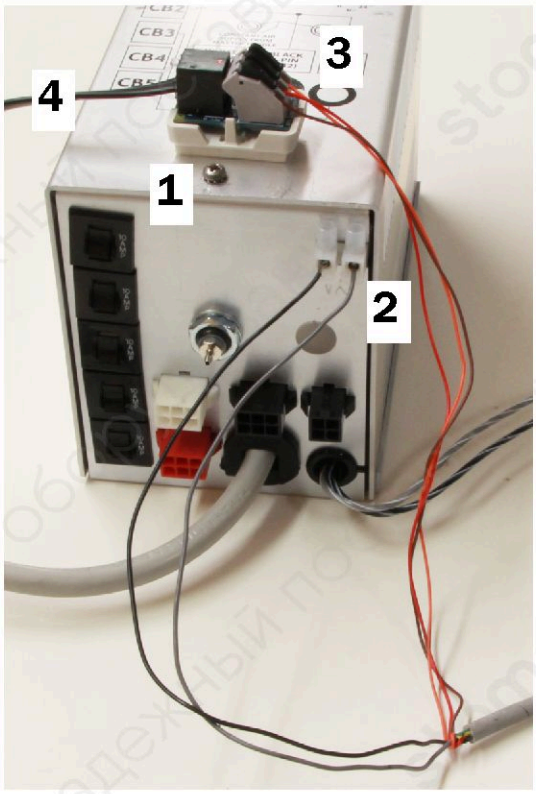
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Connect the LED Dental Light to the Power Supply

Connect the 371L with Touchpad Functionality or 571L Dental Light



Connections With a Delivery System



Connections Without a Delivery System

1 Peel off the protective paper from the adaptor board. Attach the adaptor board to the top of the power supply.

2 Connect the black and gray wires as shown above.

- **If a delivery system is installed:**
  - **(1)** Disconnect the delivery system black and gray wires from the power supply.
  - **(2)** Connect the supplied WAGO® connectors and wires to the 0 V and 24 V terminals on the power supply. Connect the black wire to 0 V. Connect the gray wire to 24 V.
  - **(3)** Connect the delivery system and light cable black wires to the WAGO connector with the black wire.
  - **(4)** Connect the delivery system and light cable gray wires to the WAGO connector with the gray wire.
- **If a delivery system in not installed:** Connect the black wire to the 0 V terminal on the power supply and the light cable gray wire to the 24 V terminal.

3 Connect the colored wires to the positions on the adaptor board as labeled; brown to BRN, red to RED, and orange to ORN.

4 Connect a data line from the adaptor board to a port on the chair circuit board.

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Connect the 371L without Touchpad Functionality to the Power Supply



1 Connect the dental light power cable black wire to the 0 V terminal on the power supply and the gray wire to the 24 V terminal.

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Prepare and Adjust the Dental Light

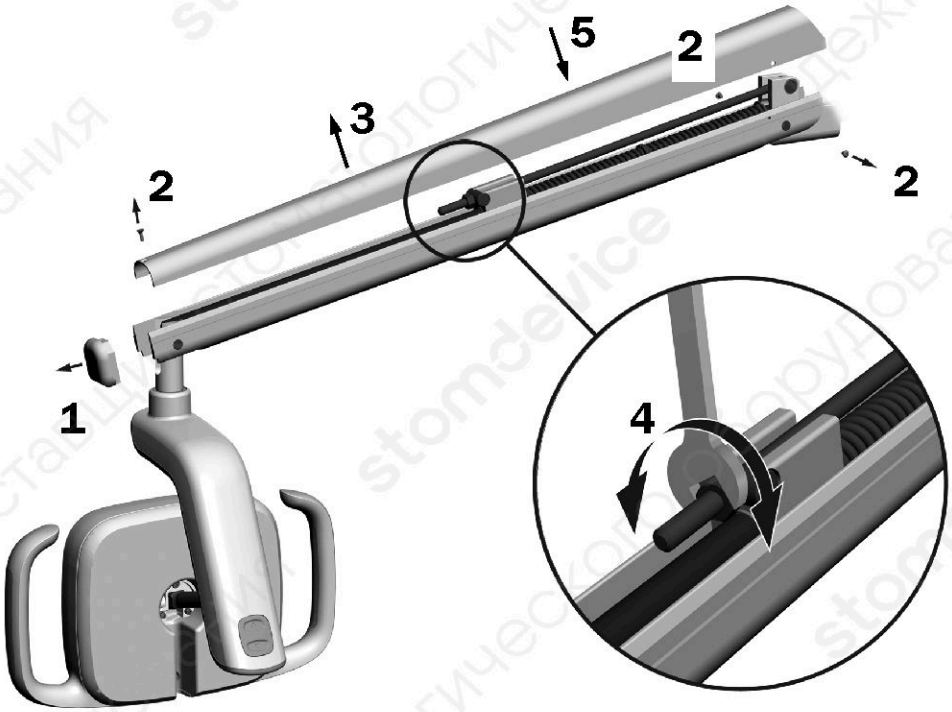
Adjust the Dental Light Flexarm Counterbalance

Recommended Tools

- Phillips head screwdriver
- 5/64" hex key
- 1/2" combination wrench

NOTE Complete this procedure to minimize the amount of unintentional dental light flexarm movement when adjusting the position of the light.

1. Remove the end cap on the flexarm.
2. Remove the three screws that secure the cover.
3. Remove the cover.
4. Adjust the nut on the end of the spring.
   If the dental light drifts up, turn the nut counterclockwise.
   If the dental light drifts down, turn the nut clockwise.
5. Set the cover back onto the flexarm (but do not reattach it yet). Check for drift.
6. Repeat steps 4 and 5 until drift is eliminated.
7. Reinstall the screws that secure the cover and reinstall the end cap.



NOTE An optional travel stop limit kit (p/n 90.1044.00) can be installed to limit the upward and downward motion of the flexarm.

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Adjust the Dental Light Rotation Tension Settings

Recommended Tool

- 7/64" hex key

Test the rotation tension of the light head. If it needs to be adjusted, follow the directions for the type of tension that you will adjust.

Adjust the Vertical Tension



1 To adjust the tension, turn the screw. Clockwise increases the tension.

Adjust the Horizontal and Diagonal Tension

Task 1.

1 Remove the two screws securing the driver housing cover.



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Task 2.

1 Grasp the driver housing and use your thumbs to push the driver housing cover away from the driver housing.



Task 3.

1 To adjust horizontal tension, rotate the friction adjustment. Clockwise increases the tension.



2 To adjust diagonal tension, turn the setscrew. Clockwise increases the tension.



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Test the Dental Light

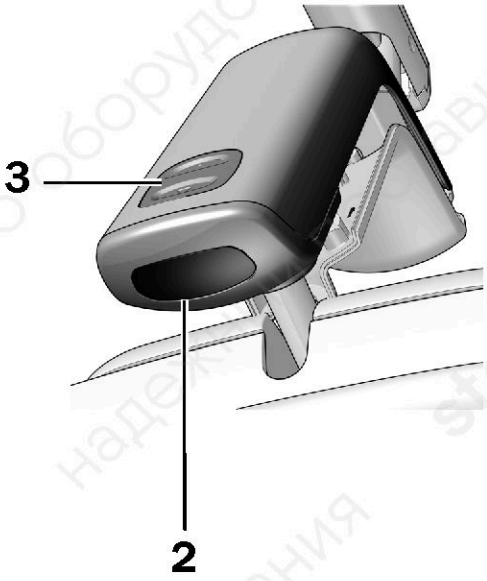
Perform the test procedure appropriate to your light:

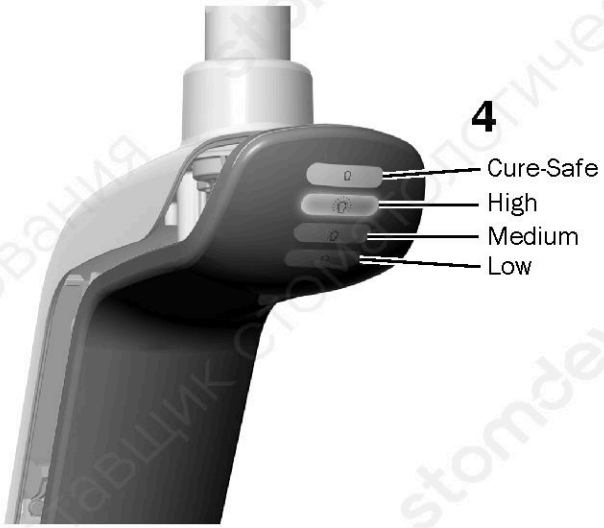
A-dec 571L Procedure **16**
A-dec 371L Procedure **17**
Test the Dental Light Using the Touchpad **17**
Reinstall the Driver Housing Cover **18**

A-dec 571L Procedure

Task 1.

1. Plug the chair into the mains supply.
2. Move your hand within 3" (76 mm) of the touchless on/off sensor to turn on the light.
3. Press the mode button to test the light in each mode.
4. For each mode, verify that the correct light on the driver housing cover is illuminated.
5. If it doesn't work properly, check the wiring connections.





Next Step See "Test the Dental Light Using the Touchpad" on page 17.

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A-dec 371L Procedure

Task 1.

1. Plug the chair into the mains supply.
2. **371L Dental Light with Touchpad Functionality:** Press the power button several times to verify the light turns on and off. Leave the light off.

   371L Dental Light without Touchpad Functionality: Press the power button repeatedly to verify the light cycles between high, composite/low, and off intensity modes.

If it doesn't work properly, check the wiring connections.

NOTE If you installed a dental light without touchpad functionality and you inadvertently press the dental light button on the touchpad, the indicator light will turn on. To turn off the indicator light, press and hold the dental light button.



Test the Dental Light Using the Touchpad

1 To verify the light turns on and toggles between intensity modes (371L with touchpad functionality: high and composite/low; 571L: high, medium, and low, plus cure-safe mode) repeatedly press and release . To turn off the light, press and hold the button.

NOTE When the 371L with touchpad functionality is in the composite/low mode or the 571L is in the cure-safe mode, the light indicator on the touchpad flashes.

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2 To disable the auto on/off feature, press and hold P and ❄ at the same time for three seconds. One beep indicates that the auto on/off function is off. To re-enable, repeat this step. Three beeps indicate that the auto on/off feature is activated.

Standard Touchpad



A-dec 300 Deluxe Touchpad



3 Unplug the chair from the mains supply.

Reinstall the Driver Housing Cover

Task 1.

CAUTION When removing or replacing covers, take care not to damage any wiring. Verify that the covers are secure after replacing them.

1 Position the driver housing cover so the keyhole fits around the post; then push the driver housing cover into position with your palm.



2 Use two screws to secure the cover.



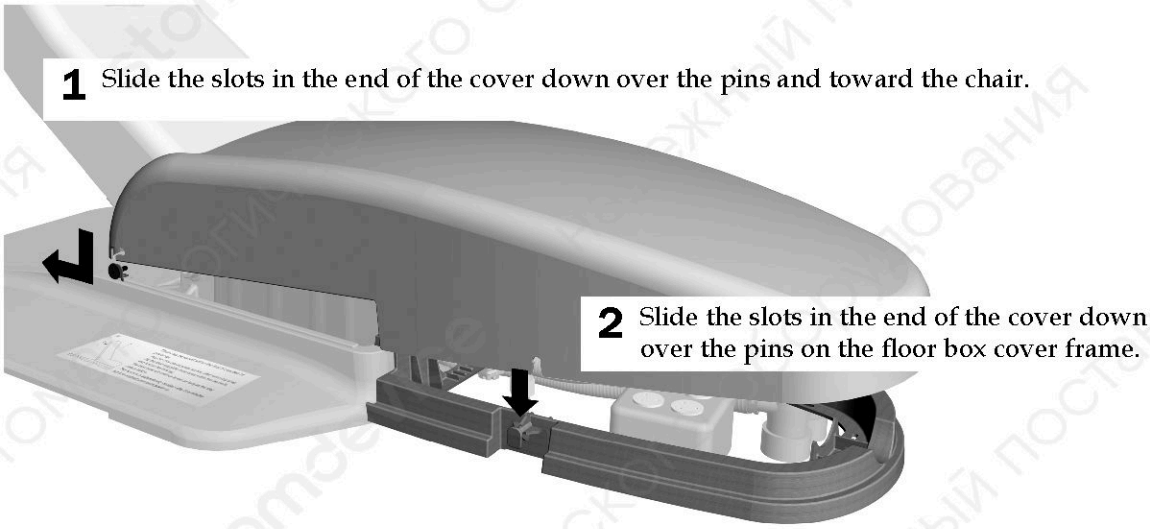
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Reinstall the Covers

CAUTION When removing or replacing covers, take care not to damage any wiring or tubing. Verify that the covers are secure after replacing them.

Reinstall the Single Piece Floor Box Cover



Install the Stop Plate



1 Reinstall the stop plate.

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Install the Support Center Covers



1 Snap the support center side covers onto both sides of the support center frame.

Regulatory Information

For required regulatory information and the A-dec warranty, see the *Regulatory Information, Specifications, and Warranty* document (p/n 86.0221.00) available in the Resource Center at www.a-dec.com.

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