



# A-dec® 332pro/333pro/336pro Delivery System on A-dec 311ft/311/411 Dental Chair

## INSTALLATION GUIDE

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A-dec 332pro Delivery System on an A-dec 411 Dental Chair

#### Product Models and Versions Covered in This Document\*

Models	Versions	Description
332pro/333pro/336pro	n/a	Delivery System
311ft	n/a	Dental Chair
311	B	Dental Chair
411	A	Dental Chair

\*Some product models, versions, and options in this document may not be available in certain regions.

## Before You Begin

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**WARNING** Shock hazard. When you remove or replace the covers, take care not to damage any wiring or tubing. Verify that the covers are secure after you replace them.

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**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.

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**NOTE** Information that is critical to a successful installation is shaded like this note throughout the guide.

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- Verify that manual air and water shut-offs are installed.
- Purge any debris from air and water lines.
- Check with local building and code authorities about installation requirements specific to your location.

### Recommended Tools

- Hex key set
- 15/16" socket and ratchet (2)
- 5/16" and 3/8" combination wrench
- Diagonal Cutters
- Voltmeter
- Phillips head screwdriver
- Sleeve pusher
- Level

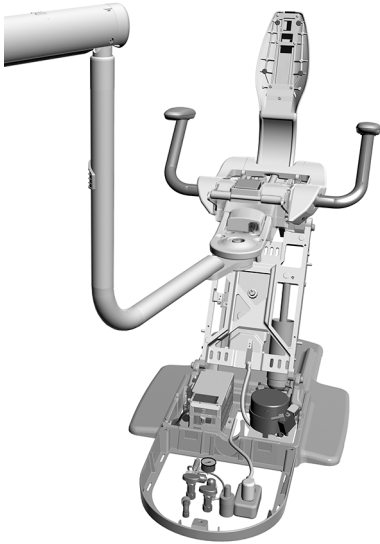
## Install the Rigid Arms

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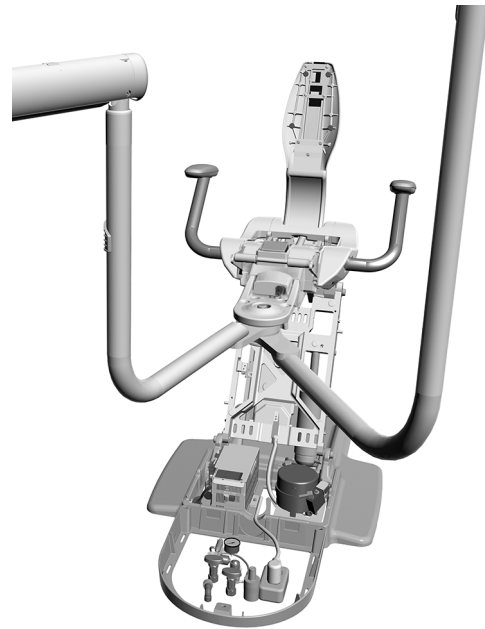
The instructions for installing the rigid arms apply to both the A-dec 311ft/311 and 411 dental chairs.

Complete the instructions for the system's configuration.

<b>Install the Delivery System Rigid Arm Only</b> .....	<b>4</b>
<b>Install Dual Rigid Arms</b> .....	<b>6</b>



**Delivery System Rigid Arm Only**  
(page 4)



**Dual Rigid Arms**  
(page 6)

## Install the Delivery System Rigid Arm Only

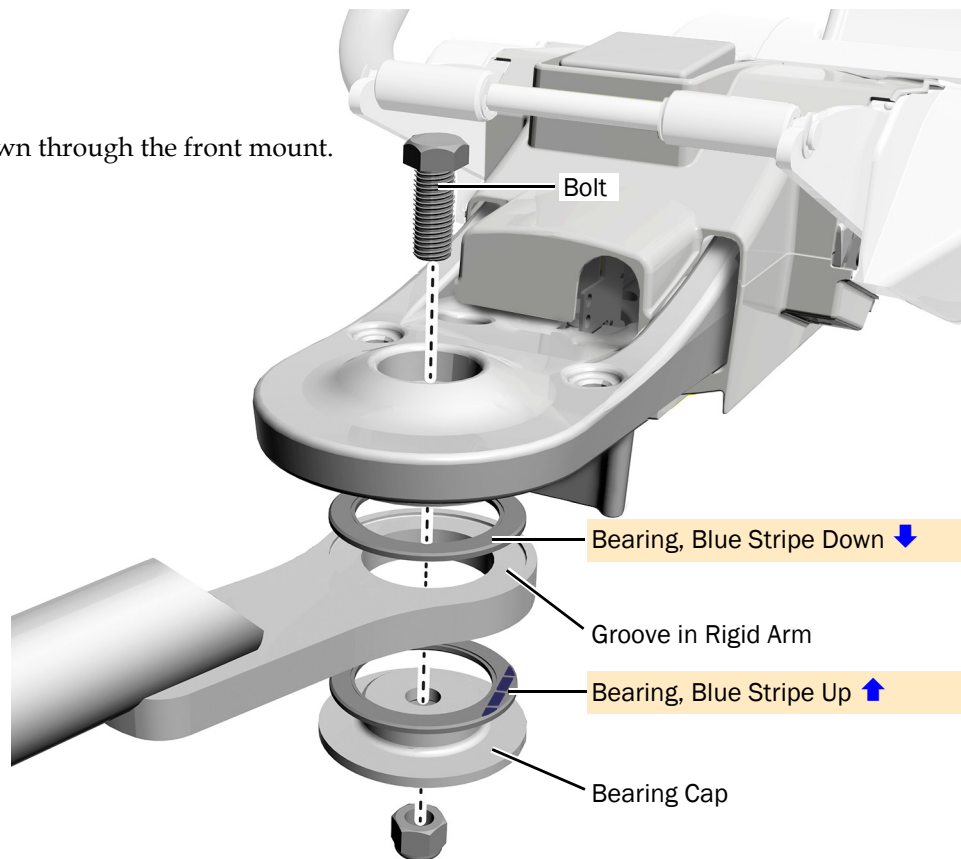
Use these instructions if the system includes only a delivery system attached to the front mount.

### Recommended Tools

- 15/16" socket and ratchet (2)

### Task 1.

- 1 Insert the bolt down through the front mount.

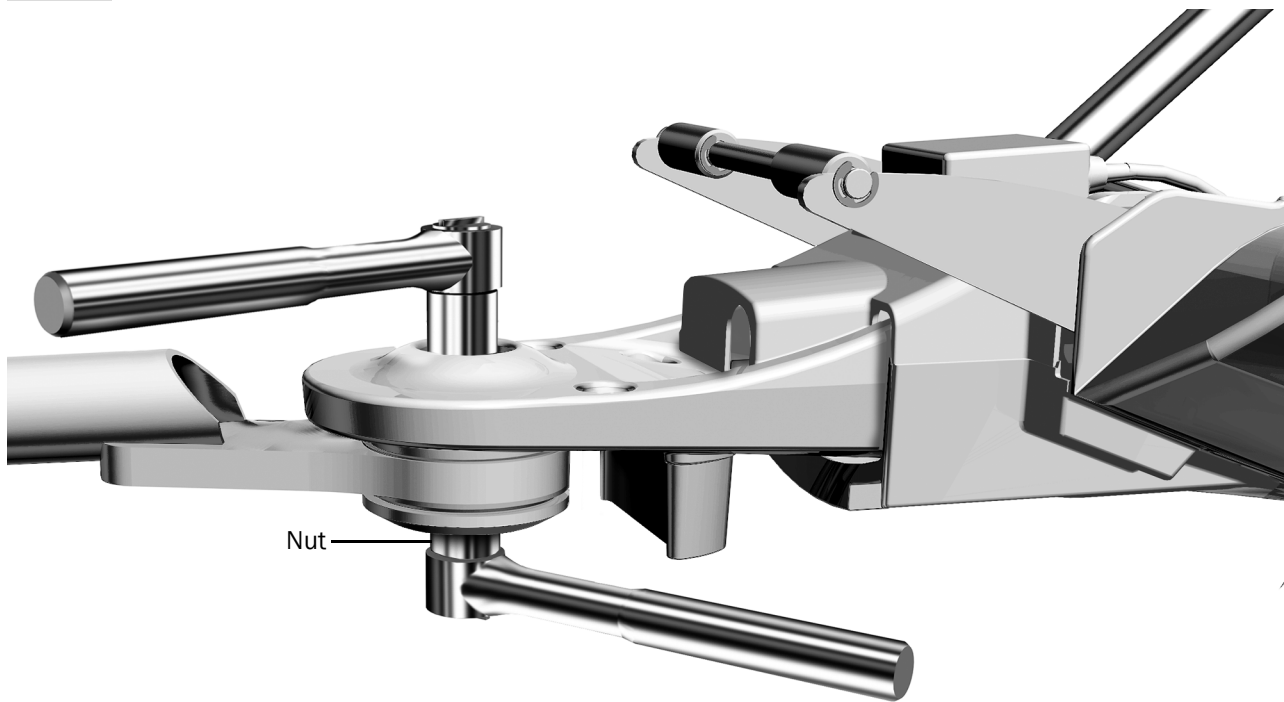


**CAUTION** For the arm to rotate properly the bearings must be fully seated in the grooves in the arm, with the blue stripe in the correct position. Proceed with care to ensure that the bearings do not shift out of position during tightening.

- 2 Install the bearings, rigid arm, and bearing cap onto the bolt.



**Task 2.**



- 1** Tighten the nut until the arm can move smoothly but is not loose and does not drift.

**Next Step** Continue with “Install the Delivery System” on page 9.

## Install Dual Rigid Arms

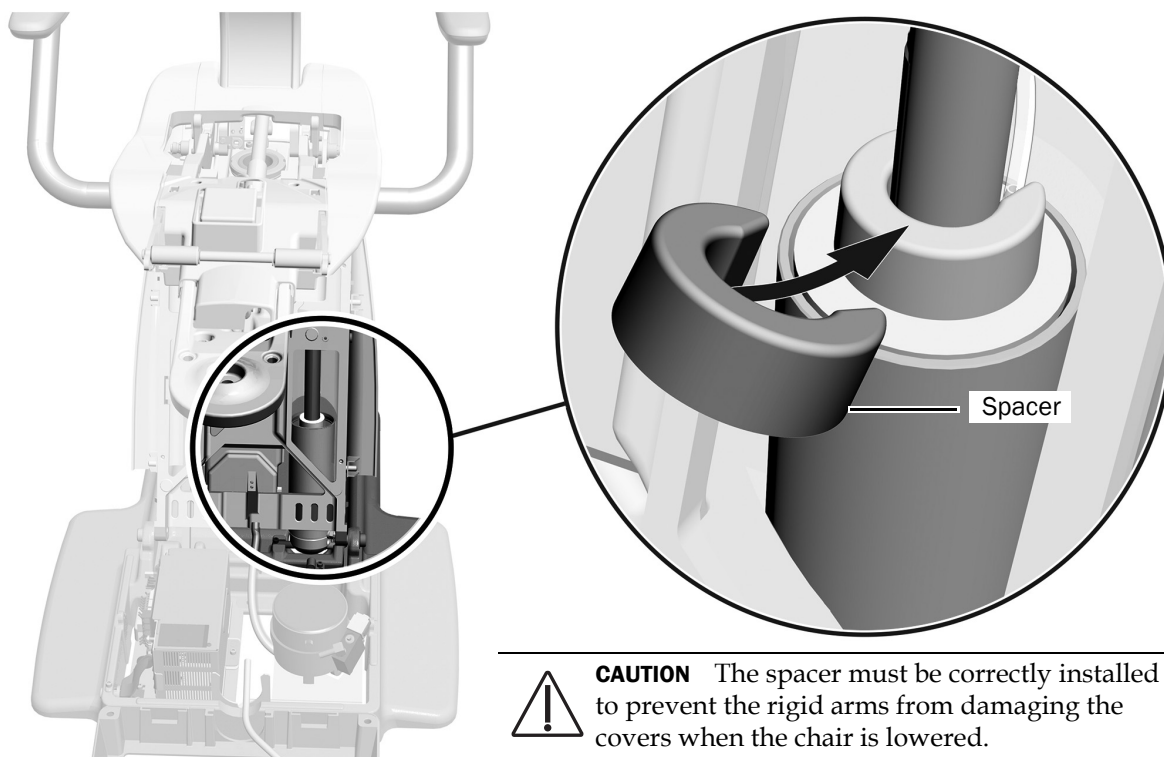
Use these instructions if the system includes a delivery system and a dental light or monitor mount attached to the front mount. The instructions are the same for A-dec 311ft/311 and 411 dental chairs.

### Recommended Tool

- 15/16" socket and ratchet

### Task 1.

- 1 Fully raise the chair base.



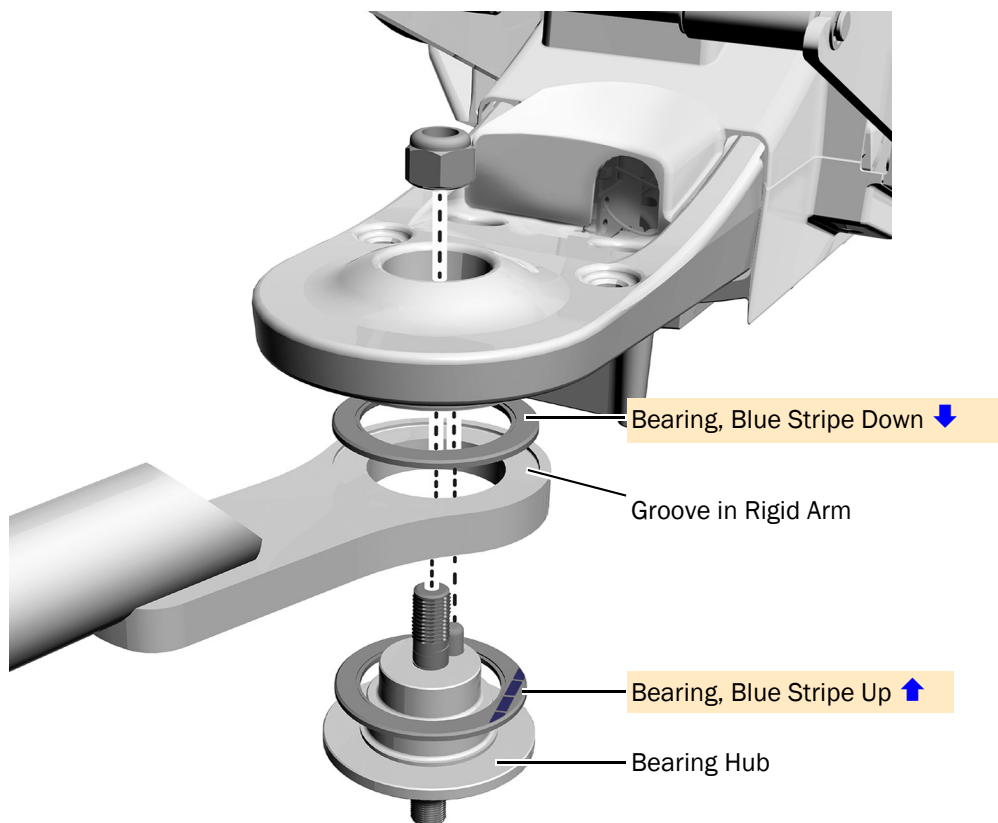
- 2 Place the spacer (which ships with the light and the monitor mount) with its solid side up and its opening toward the low-pressure tubing.

## Task 2.

- 1 Securely install the delivery system rigid arm, bearings, and bearing hub onto the front mount.



**NOTE** The bearing hub ships in its own box with the delivery system.



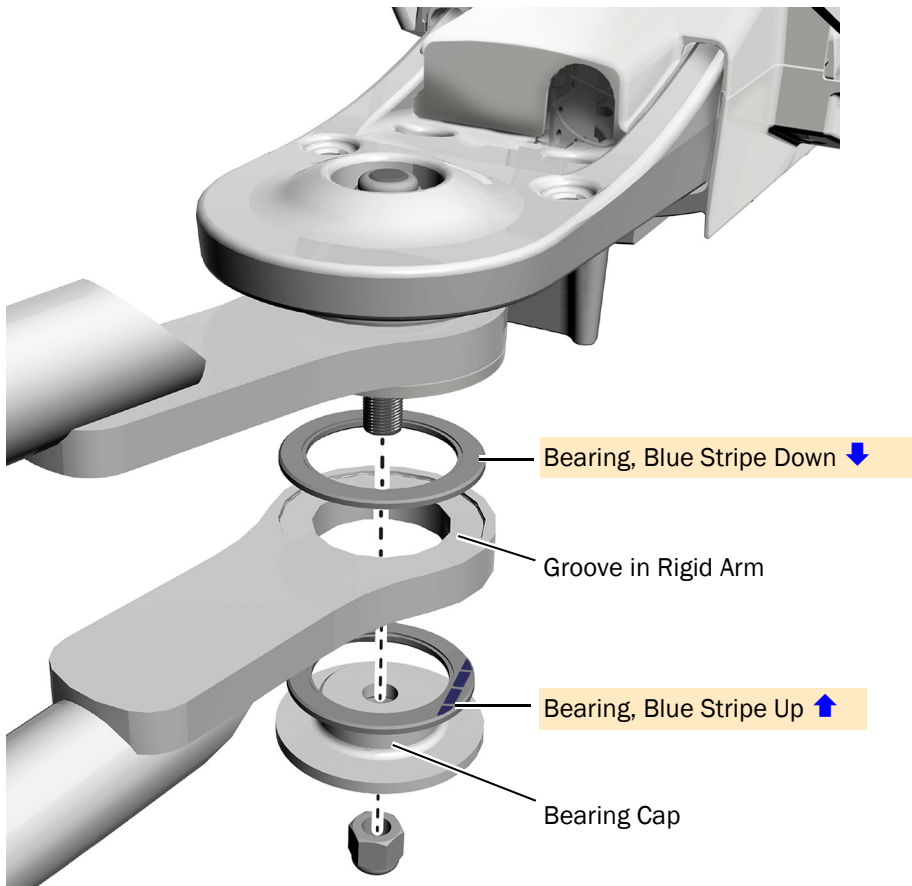
**CAUTION** For the arm to rotate properly the bearings must be fully seated in the grooves in the arm, with the blue stripe in the correct position. Proceed with care to ensure that the bearings do not shift out of position during tightening.

- 2 Tighten the nut until the arm can move smoothly but is not loose and does not drift.



### Task 3.

- 1 Install the dental light/monitor mount rigid arm, bearings, and bearing cap onto the bearing hub.



- 2 Tighten the nut until the arm can move smoothly but is not loose and does not drift.



## Install the Delivery System

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The instructions for installing an A-dec 332pro/333pro/336pro apply to both A-dec 311ft/311 and 411 dental chairs.

### Install the Water Bottle Mount on the Delivery System Rigid Arm (A-dec 332pro/333pro only)



**READ THIS!** If you are installing an A-dec 336pro delivery system, the water bottle mount is installed at the factory. Continue with "Install the A-dec 336pro Delivery System" on page 16.



**READ THIS!** If you are installing a remote water bottle or a support center with a water bottle, do not complete this procedure. Instead, remove the plate from the delivery system rigid arm, and insert the plug from the kit into the hole.

#### Recommended Tool

- 5/16" combination wrench

#### Task 1.



- 1** Use a 5/16" combination wrench to remove the mount screw, washer, and plate from the rigid arm.

**Task 2.**

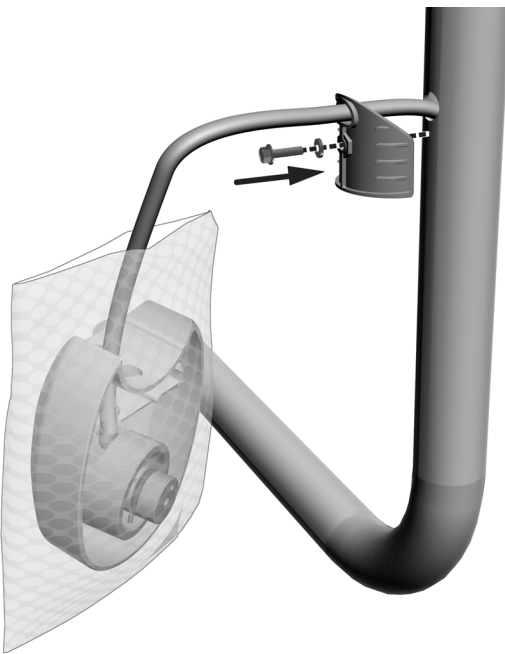


- 1** Route the water bottle tubing through the plate, into the hole in the rigid arm, and out the bottom of the arm.



**TIP** Leave the water bottle mount in the bubble wrap to protect the post.

**Task 3.**



- 1** Reinstall the plate. Leave the screw protruding enough for the water bottle mount to slide over it.

**Task 4.**



- 1** Slide the water bottle mount down over the screw and secure it to the arm.

## Install the A-dec 332pro/333pro Delivery System



**READ THIS!** If you are installing an A-dec 336pro delivery system, do not use this procedure. See "Install the A-dec 336pro Delivery System" on page 16.

### Recommended Tool

- 5/32" hex key

### Task 1.

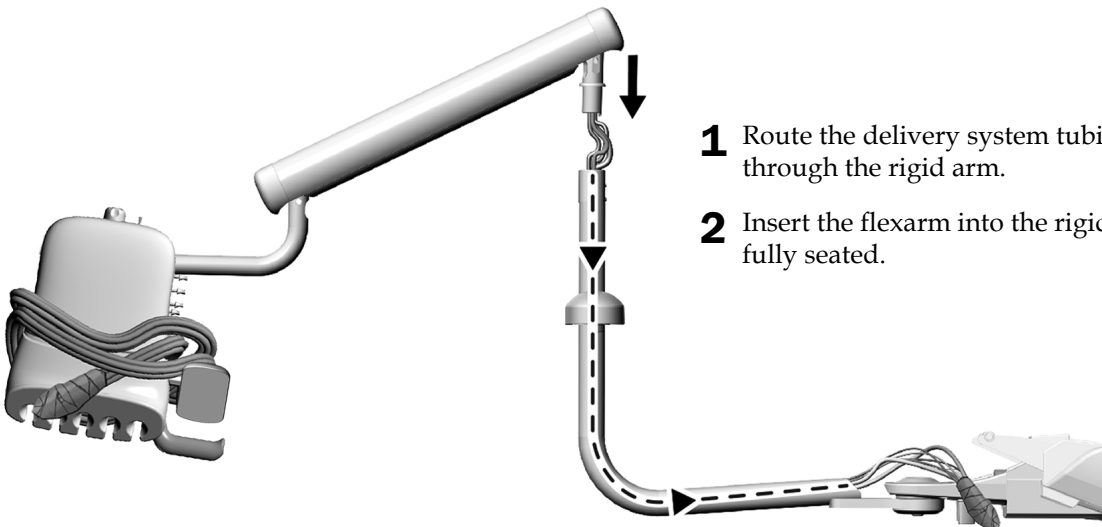


- 1** Fully lower the chair base.
- 2** Pick up the delivery system and put it over your shoulder so one hand is free to route the tubing bundle.



**TIP** To make it easier to handle, wrap the Traditional delivery system handpiece tubing around the control head before picking up the delivery system.

### Task 2.



- 1** Route the delivery system tubing down through the rigid arm.
- 2** Insert the flexarm into the rigid arm until it is fully seated.

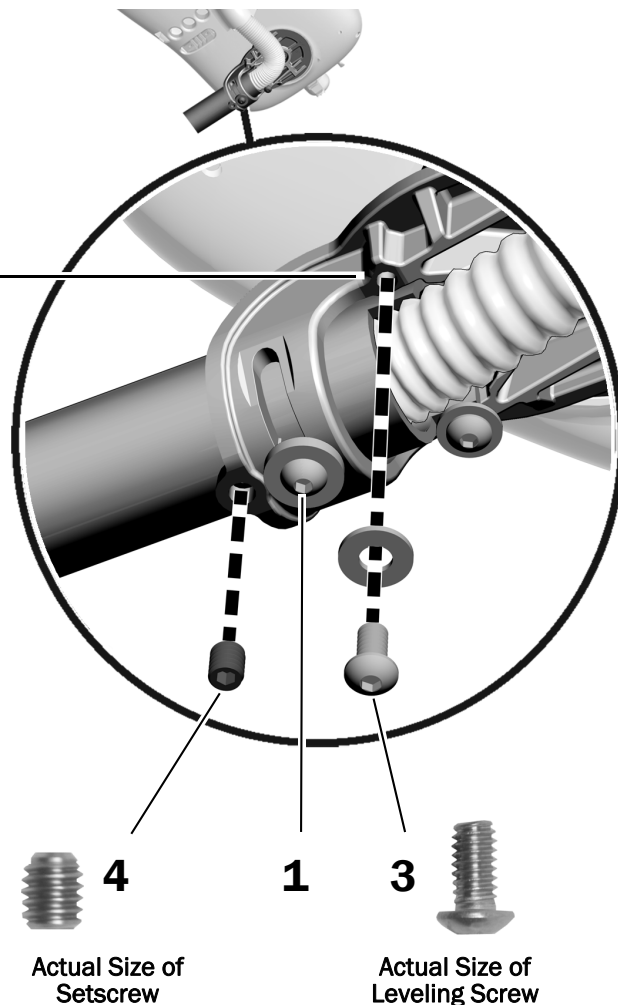
### Task 3.

1. Loosen the button head screw.



**NOTE** Do not back out the button head screw all of the way. Only loosen it enough to be able to move the control head.

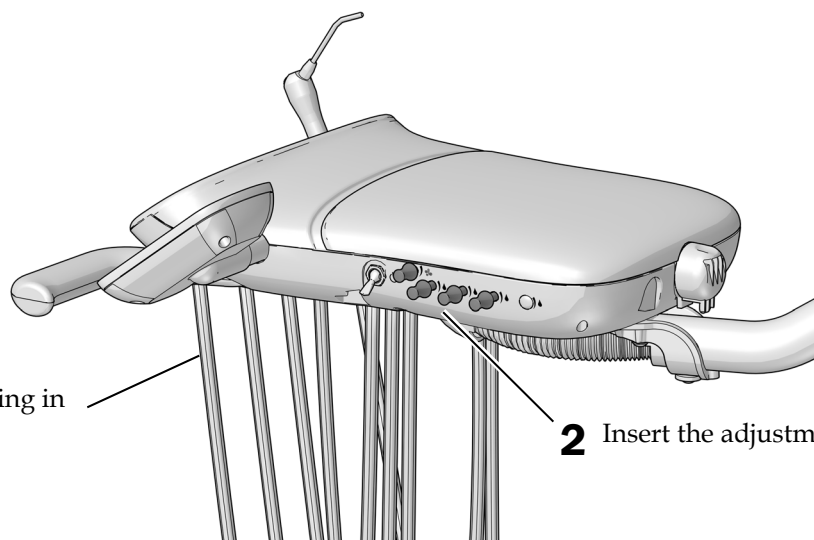
2. Rotate the control head so it is positioned over the hole for the missing leveling screw.
3. Install and tighten the 1/4-20 x 1/2" leveling screw and washer.
4. Install the 3/8" setscrew.
5. Tighten the button head screw.



### Task 4.

#### Install the Handpiece Tubing and Adjustment Keys (A-dec 332pro only)

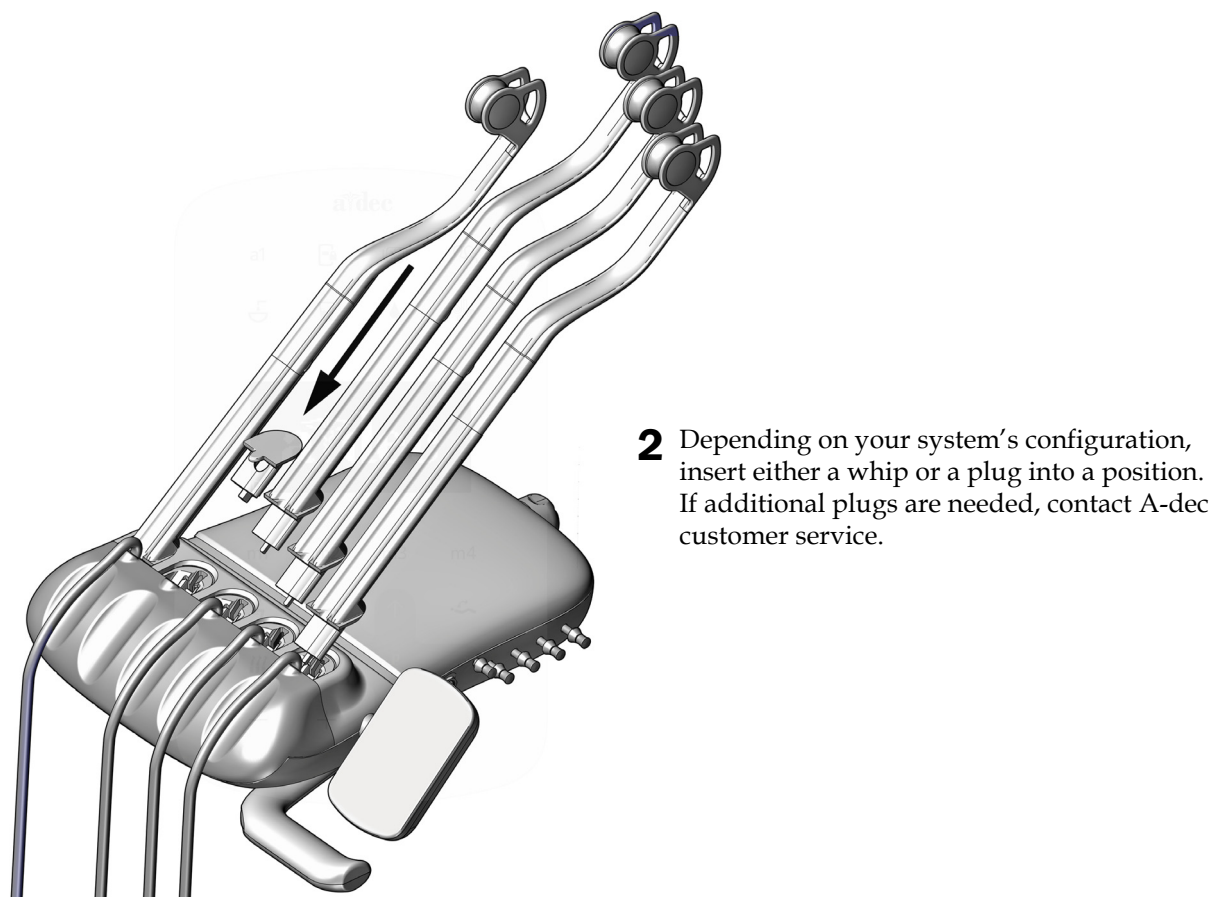
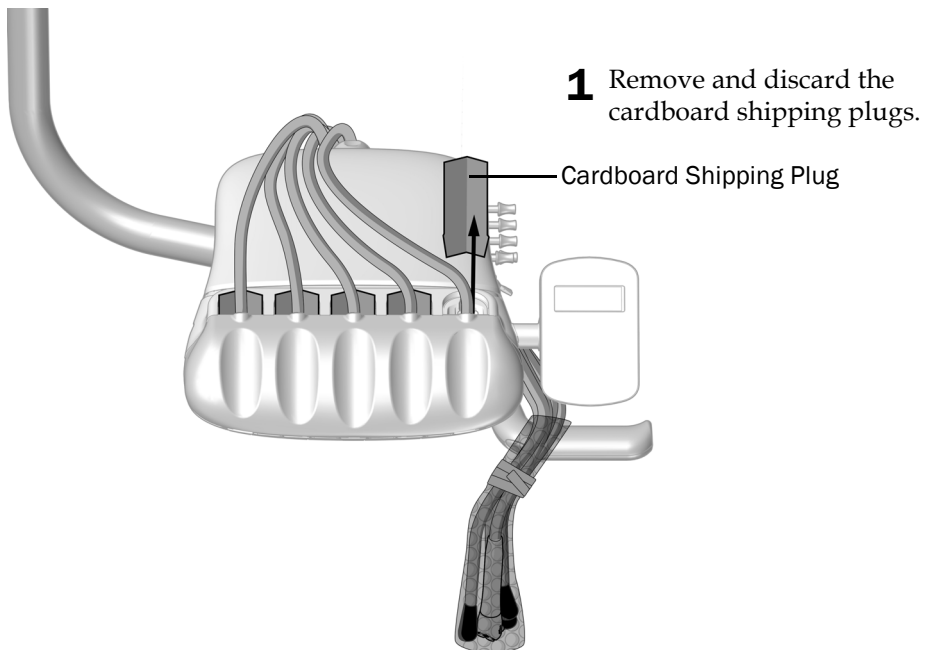
- 1 Place the handpiece tubing in position for use.

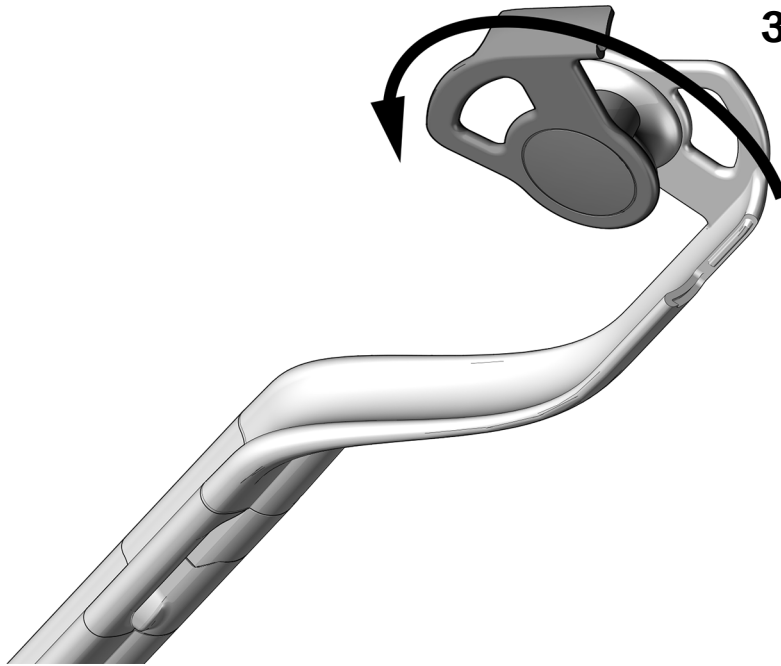


- 2 Insert the adjustment keys.

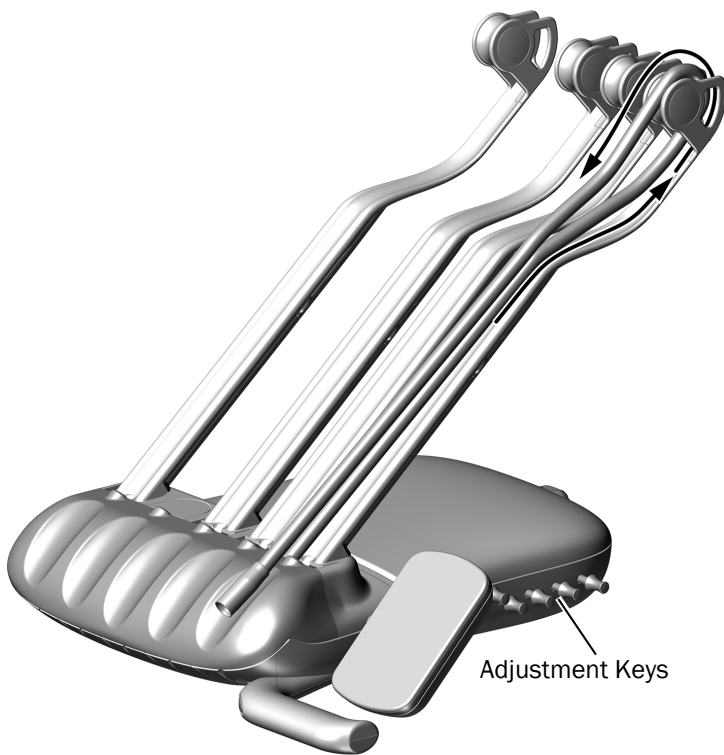
## Task 5.

### Install the Continental Whips and Adjustment Keys (A-dec 333pro only)





- 3** To open the whip, rotate the tubing guide 90° counterclockwise.



- 4** Route the tubing through the whip assemblies.
- 5** Close the tubing guide and make sure it snaps shut.
- 6** Place the handpiece tubing in the holders and insert the adjustment keys into the holes on the side of the control head.

## Install the A-dec 336pro Delivery System

### Recommended Tool

- 3/32" hex key



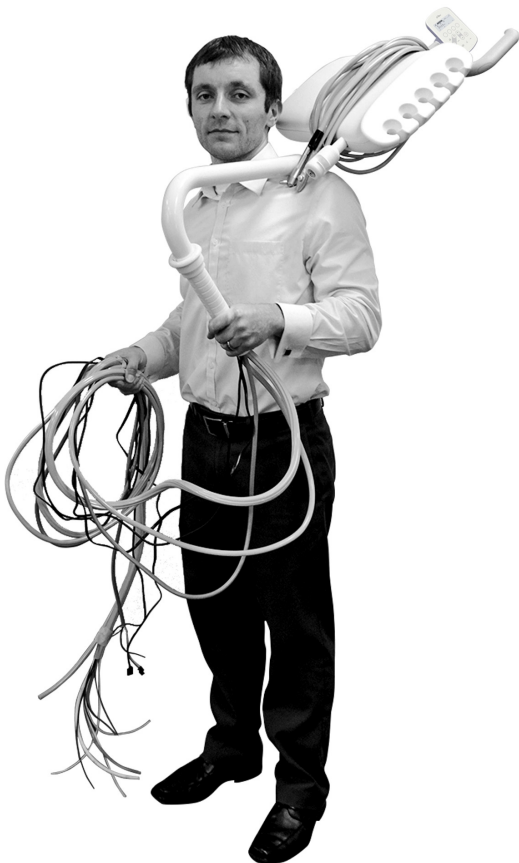
**NOTE** To avoid problems, read all of this procedure before attempting to install the delivery system.

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### Task 1.

- 1** If there is room, place the box containing the delivery system next to the chair. If you can't place the box next to the chair, proceed with Task 2.
- 2** Route as much of the tubing into the rigid arm as you can.

### Task 2.



- 1** Pick up the delivery system and put it over your shoulder so one hand is free to route the tubing bundle.



**TIP** To make it easier to handle, wrap the delivery system handpiece tubing around the control head before picking up the delivery system.

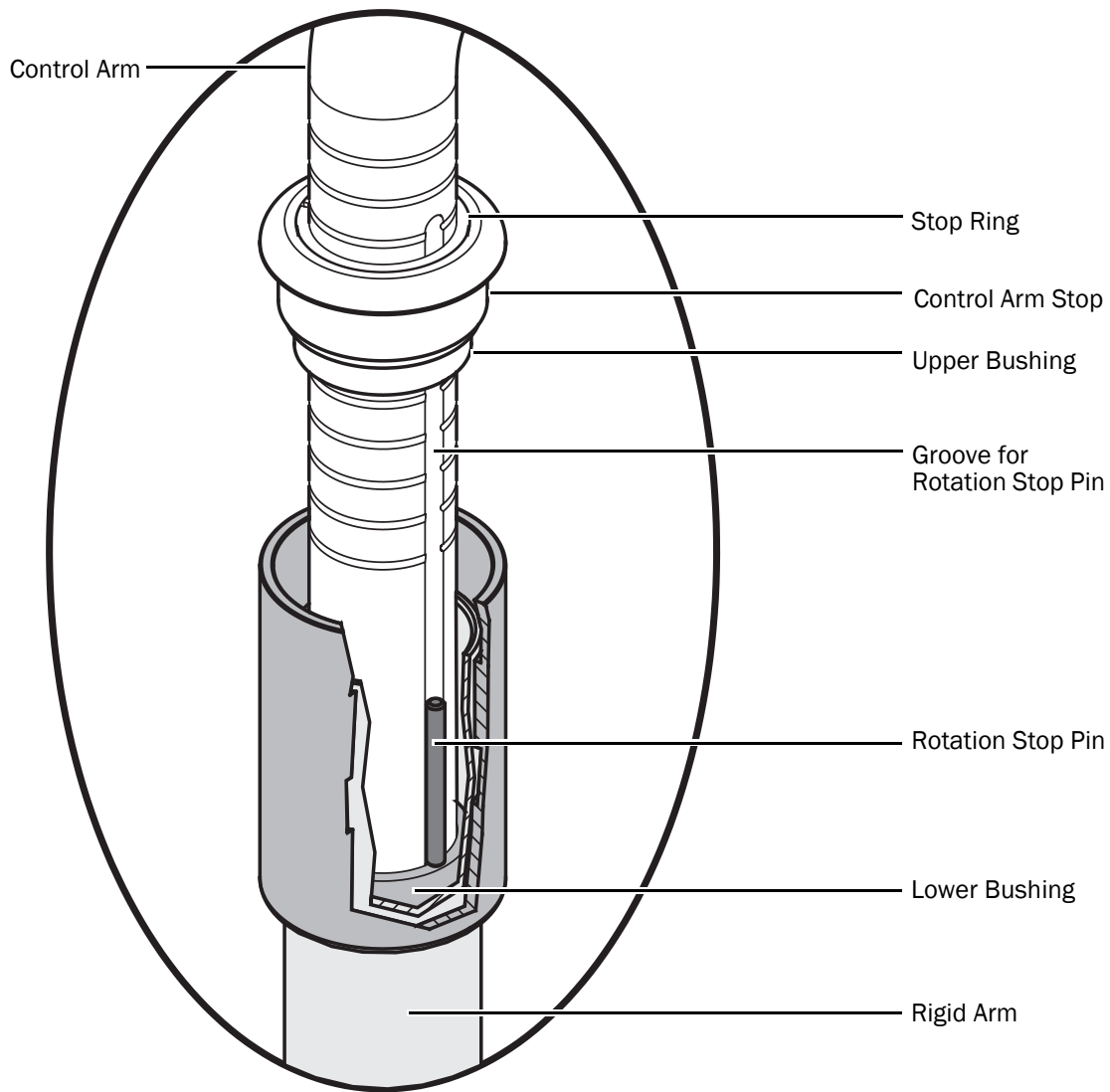
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### Task 3.

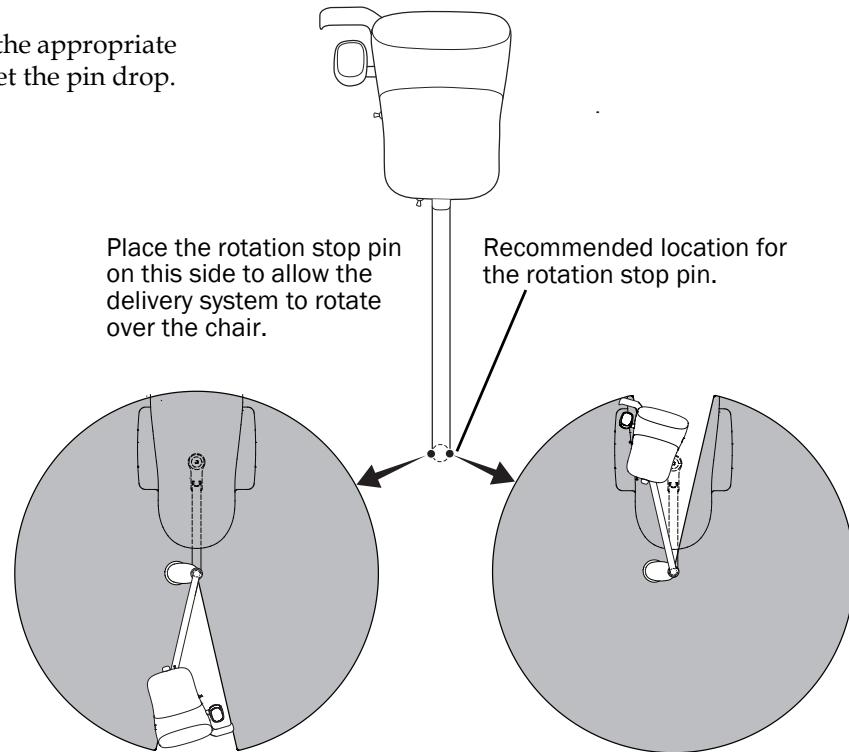
- 1** Remove the rotation stop pin (that is taped to the control arm) from the control arm.
- 2** Route the delivery system tubing through the rigid arm.
- 3** Carefully lower the control arm into the rigid arm until the end of the control arm is past the top of the lower bushing.

**NOTE** If the end of the control arm is not inserted past the lower bushing, the rotation stop pin can fall into the rigid arm. The rotation stop pin prevents the delivery system from rotating continuously and twisting the delivery system tubing.



### Task 4.

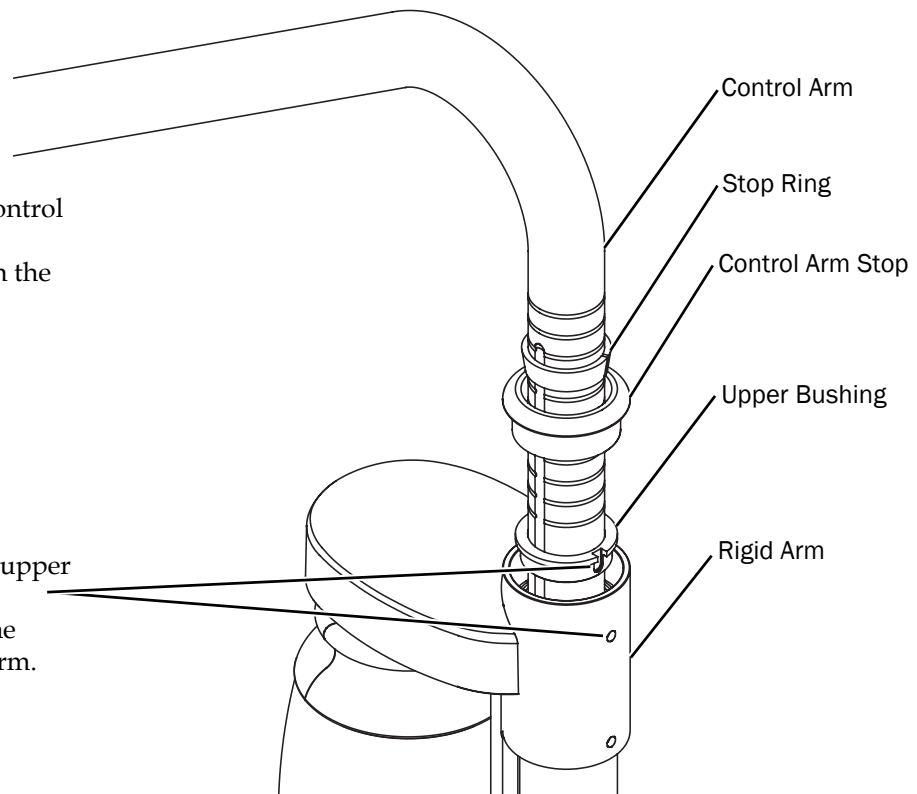
- 1 Place the rotation stop pin into the appropriate groove in the control arm and let the pin drop.



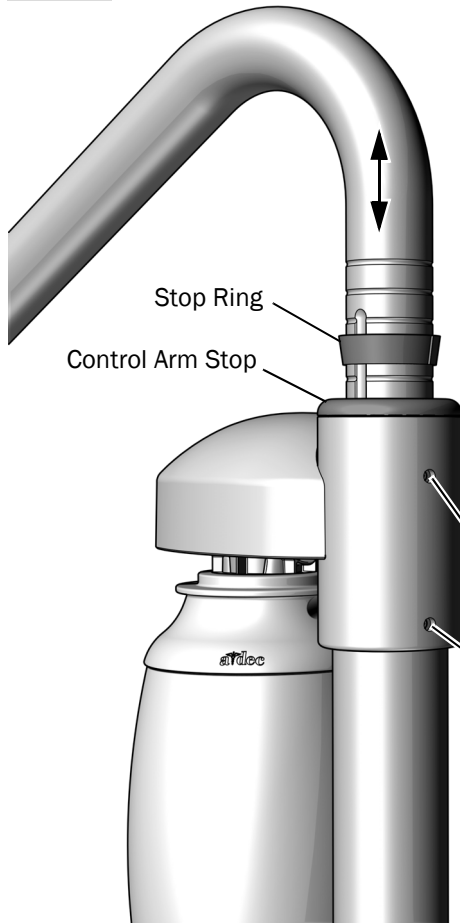
### Task 5.

- 1 While holding the stop ring, control arm stop, and upper bushing together, remove the tape from the control arm.

- 2 Carefully align the hole in the upper bushing with the top tension adjustment setscrew. Lower the upper bushing into the rigid arm.



**Task 6.**



- 1** Tighten the top tension adjustment setscrew.
- 2** Lower the control arm stop into the rigid arm.
- 3** Move the stop ring to the lowest position along the control arm to set the maximum height of the delivery system.

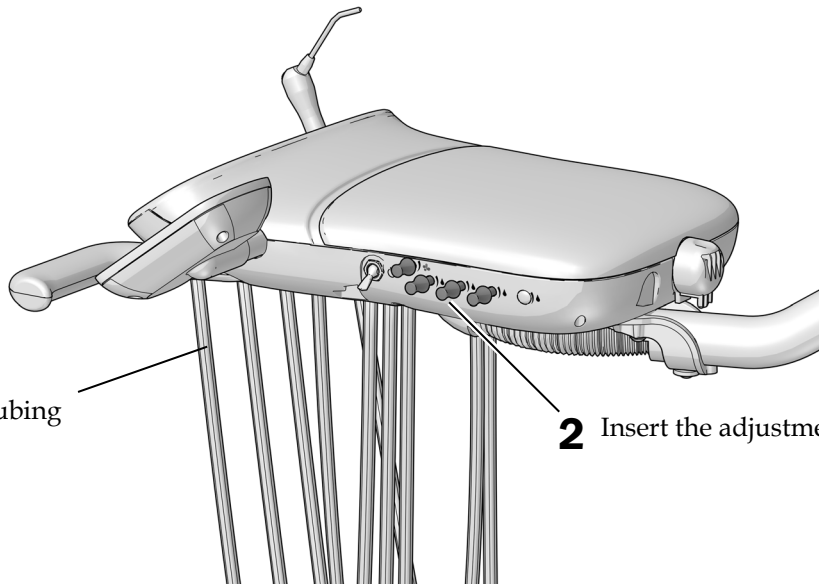


**NOTE** Position the control arm at its maximum height before trimming the tubing to ensure enough tubing remains for the control head to move through its full range of motion.

- 4** Lower the upper control arm until the stop ring fits into the upper control arm stop.
- 5** Use a 3/32" hex key to tighten the upper and lower tension setscrews.
- 6** Check for drift and tighten the setscrews, if necessary.

Tension Adjustment Setscrews

**Task 7.**



- 1** Place the handpiece tubing in position for use.

- 2** Insert the adjustment keys.

## Route the Tubing and Wiring

Complete the instructions for the system's configuration.

**Route the Tubing and Wiring on an A-dec 311ft/311 Dental Chair . . . . . 20**

**Route the Tubing and Wiring on an A-dec 411 Dental Chair . . . . . 23**

### Route the Tubing and Wiring on an A-dec 311ft/311 Dental Chair

#### Recommended Tools

- 3/16" hex key
- Diagonal cutters

#### Task 1.

- 1** Make sure the chair back and base are fully raised.



**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.

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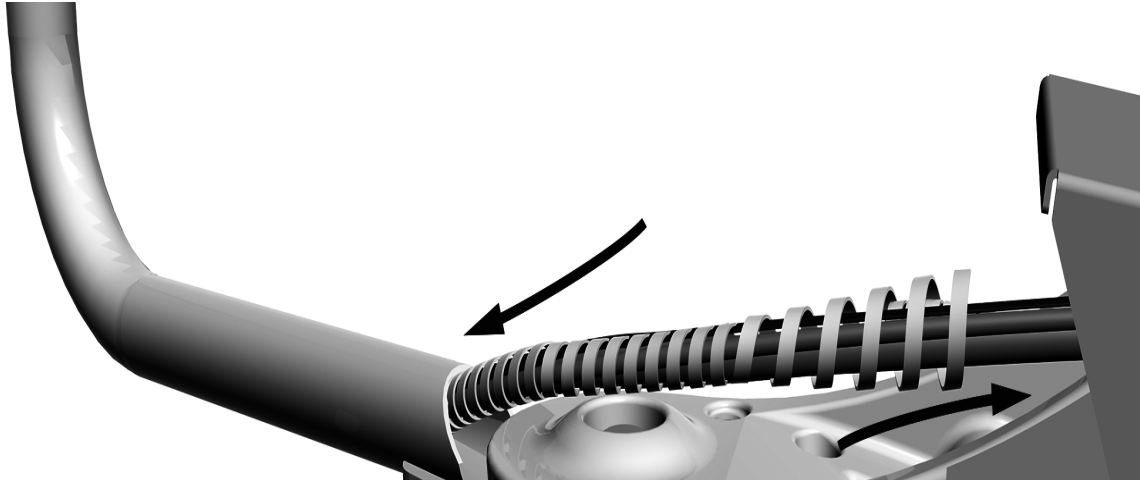
**ATTENTION** Circuit boards are sensitive to static electricity. Electrostatic Discharge (ESD) precautions are required when touching a circuit board or making connections to or from the circuit board. Circuit boards should be installed only by an electrician or qualified service person.

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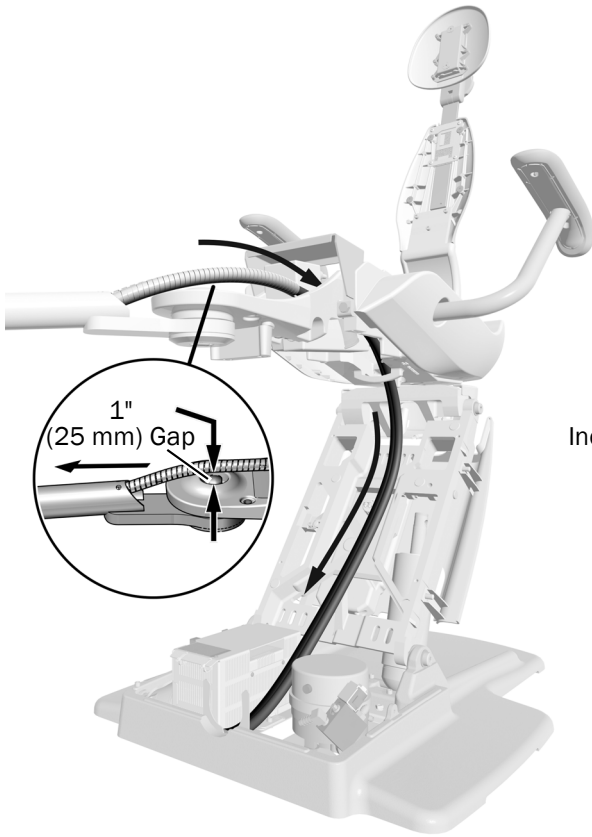
- 2** Turn off the power to the chair.

**Task 2.**

- 1** Install the wrap around the tubing for the water bottle and delivery system.
- 2** Slide the wrap slightly into the rigid arm.

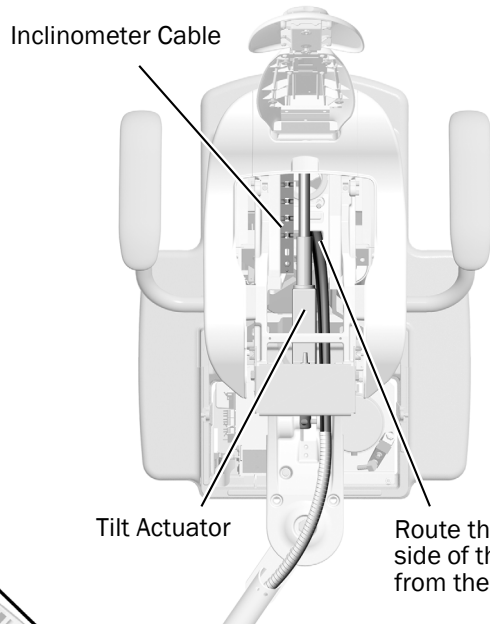


### Task 3.

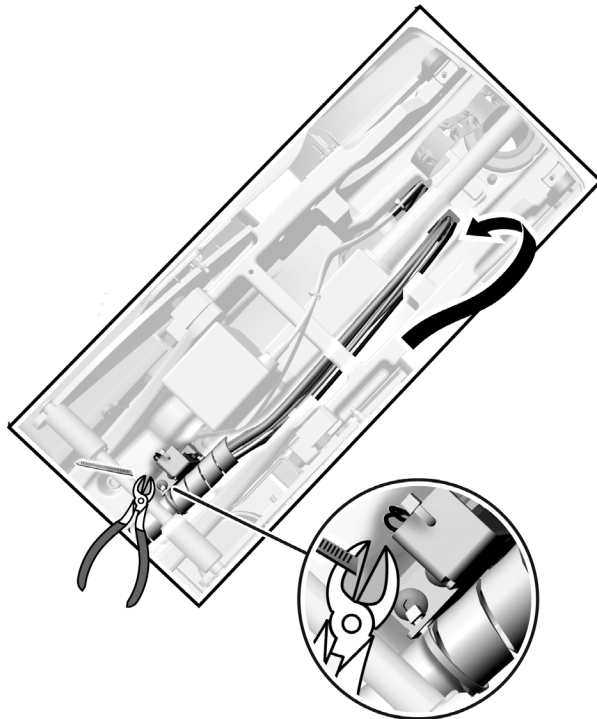


**NOTE** To provide proper range of motion and prevent the umbilical from interfering with the flexarm cover, do not pull the umbilical completely tight when routing it through the rigid arm.

- 1** Position the rigid arm straight out from the chair, then pull the umbilical over the mount, through the top of the chair frame along the left side of the actuator, and down the lift arm.



- 2** Remove the tape from the umbilical.



- 3** Ensure there is a 1" (25 mm) gap between the umbilical and the top of the front mount, then secure the umbilical with the cable tie.

- 4** Trim the excess cable tie.

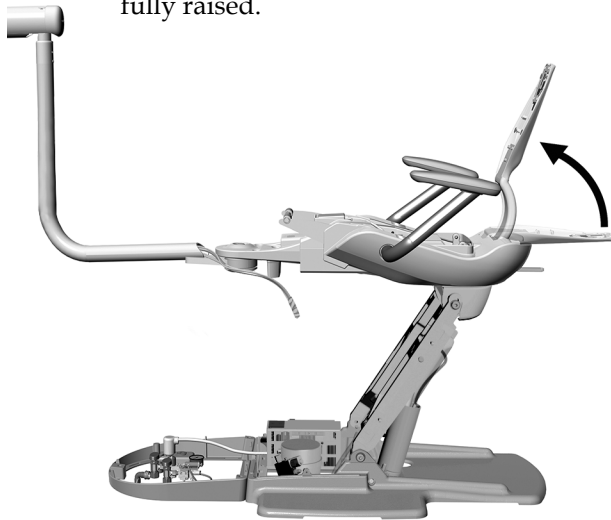
## Route the Tubing and Wiring on an A-dec 411 Dental Chair

### Recommended Tools

- 3/16" hex key
- Diagonal cutters

### Task 1.

- 1** Make sure the chair back and base are fully raised.



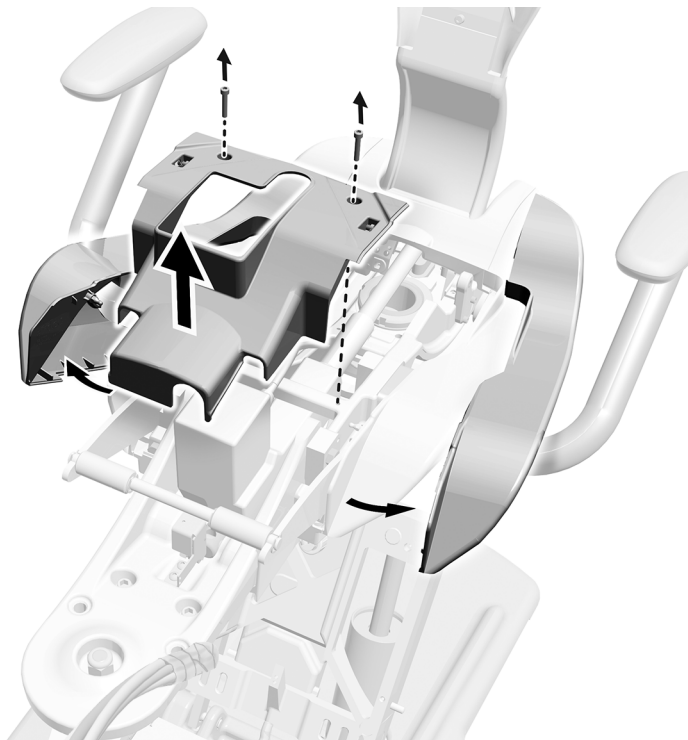
**WARNING** Failure to turn off or disconnect the power before you begin this procedure can lead to product damage and result in serious injury or death.



**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** Turn off the power to the chair.

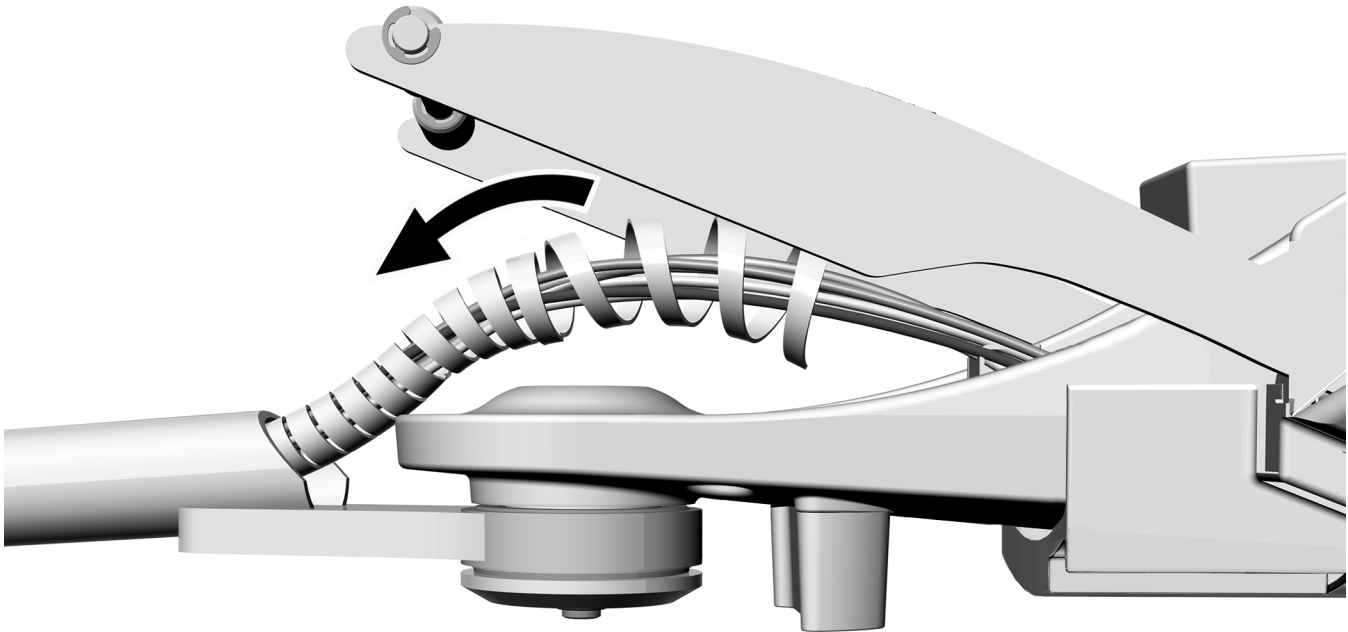
### Task 2.



- 1** Remove the two screws securing the guard.
- 2** Pull out the side covers.
- 3** Remove the guard.

**Task 3.**

- 1** Install the wrap around the tubing for the water bottle and delivery system.
- 2** Slide the wrap slightly into the rigid arm.





## Task 4.



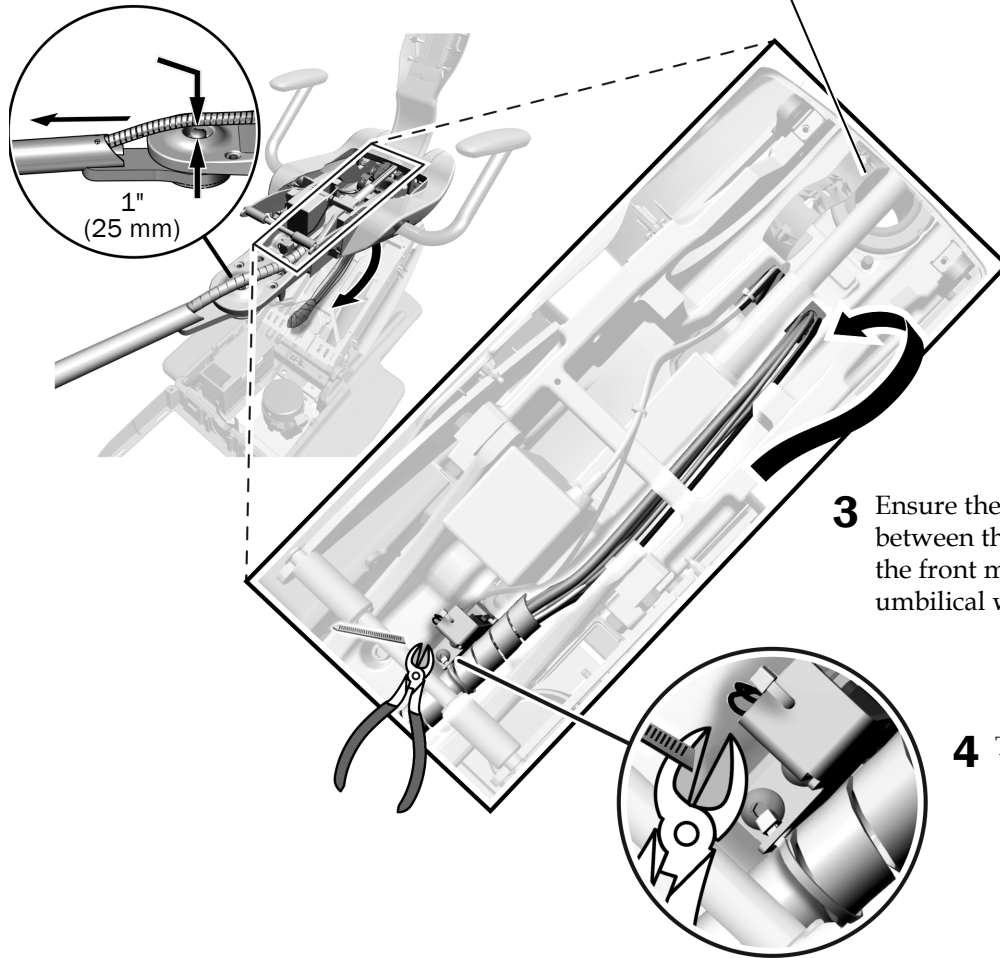
**NOTE** To provide proper range of motion and prevent the umbilical from interfering with the flexarm cover, do not pull the umbilical completely tight when routing it through the rigid arm.

- 1** Position the rigid arm straight out from the chair, then pull the umbilical over the mount, through the cable tie, and down the lift arm.

- 2** Remove the tape from the umbilical.



**CAUTION** Do not route the umbilical down this hole. It will interfere with the chair back movement.



- 3** Ensure there is a 1" (25 mm) gap between the umbilical and the top of the front mount, then secure the umbilical with the cable tie.

- 4** Trim the excess cable tie.



**CAUTION** Failure to reinstall the side covers could cause damage to the equipment.

- 5** Reinstall the guard and side covers (they were removed on page 23).

## Install the Tray Holder Mount (optional)

Select the procedure for the system's type of control head.

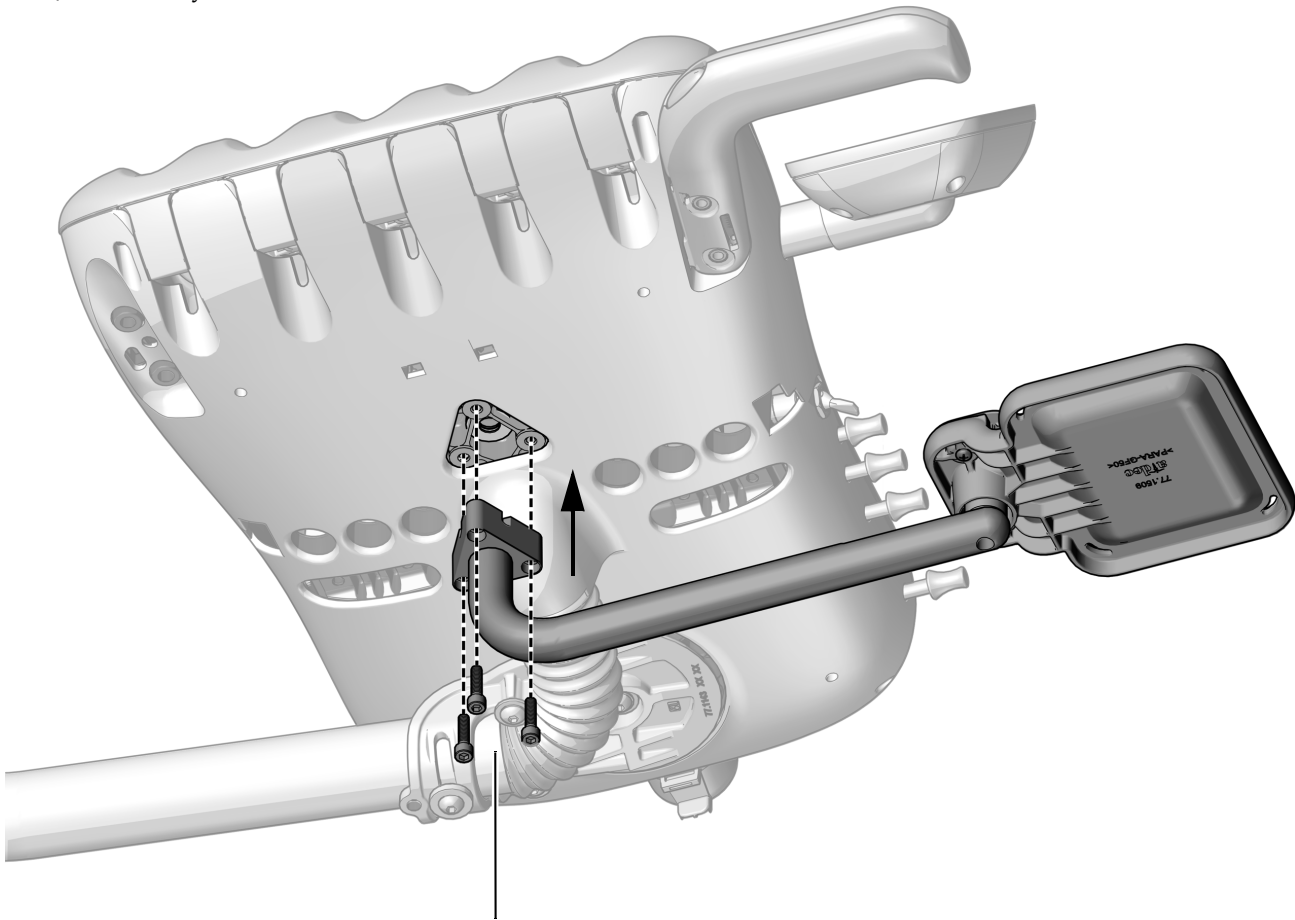
**Install the Tray Holder Mount on a Continental Delivery System** .....26

**Install the Tray Holder Mount on a Traditional Delivery System** .....27

### Install the Tray Holder Mount on a Continental Delivery System

#### Recommended Tool

- 5/32" hex key



- 1** Use three 10-32 x 3/4" screws to attach the mount arm.

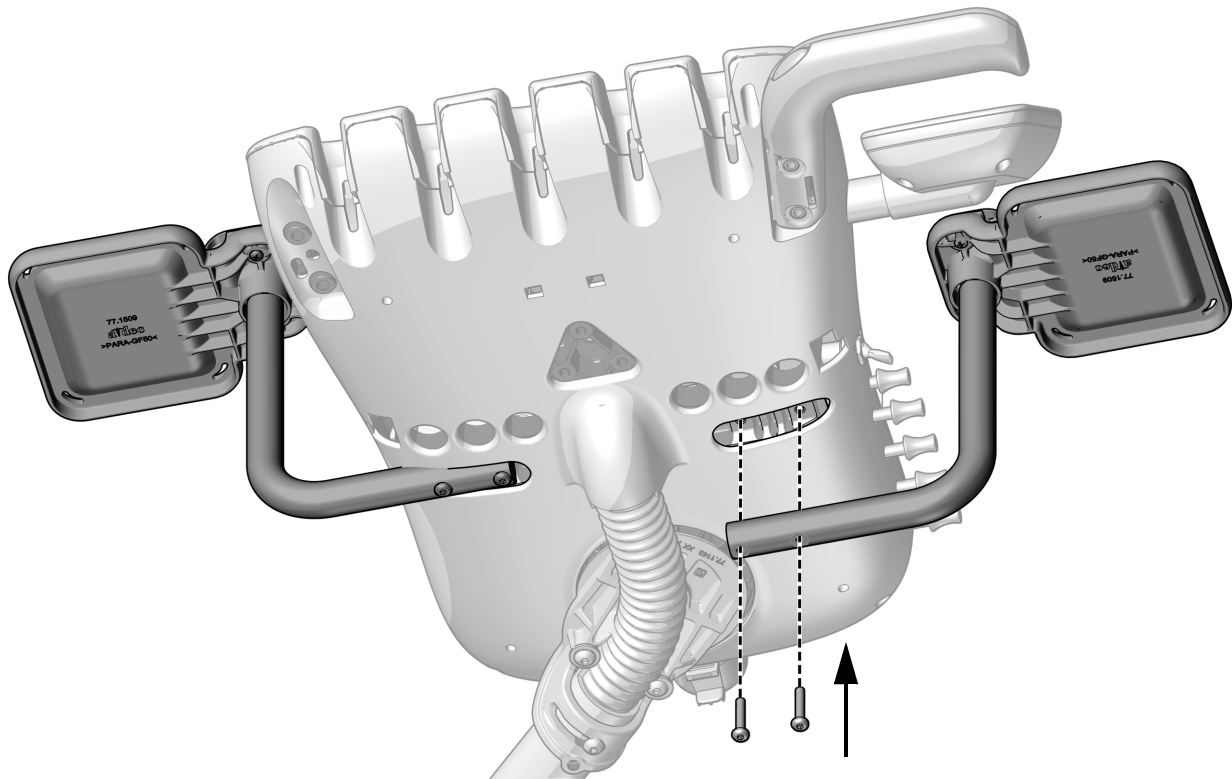
## Install the Tray Holder Mount on a Traditional Delivery System

### Recommended Tool

- 1/8" hex key



**TIP** To provide better access to the adjustment keys, mount the tray holder on the side of the control head opposite of the keys.



- 1** Use two 10-32 x 1" button head screws to attach the mount arm to either side of the bottom of the control head.

## Connect the Wires and Data Line

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The connections on an A-dec 311ft/311 are the same as the connections for the A-dec 411.



**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.

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**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.

---



**CAUTION** To avoid damaging or disconnecting wires and tubing, don't connect anything until all of the system's modules are installed.

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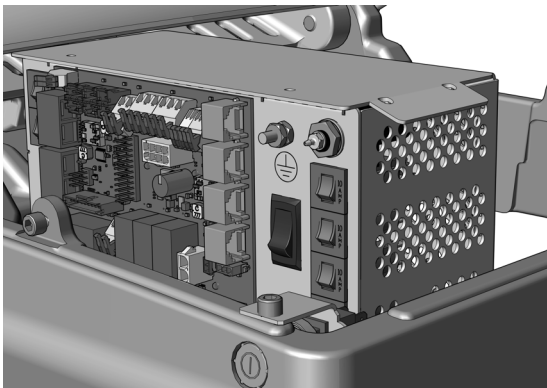


**NOTE** The top of the power supply has a diagram of the electrical connections for the chair circuit board.

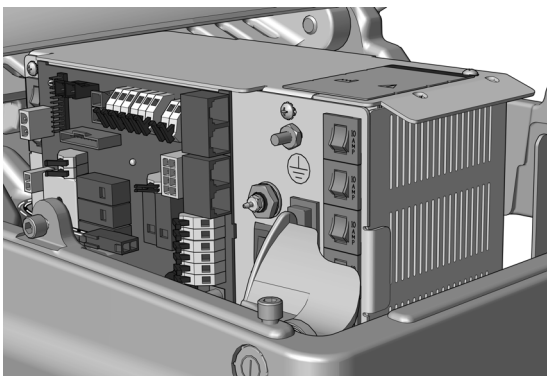
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1. Turn off the power to the chair.

Complete the following section according to which power supply the system includes.



**Connect the Wires and Data Line to an A-dec Universal Power Supply Manufactured After June 2023 . . . . . 29**



**Connect the Wires and Data line to an A-dec 311/411 Power Supply Manufactured Before June 2023 . . . . 30**

## Connect the Wires and Data Line to an A-dec Universal Power Supply Manufactured After June 2023

### Recommended Tools

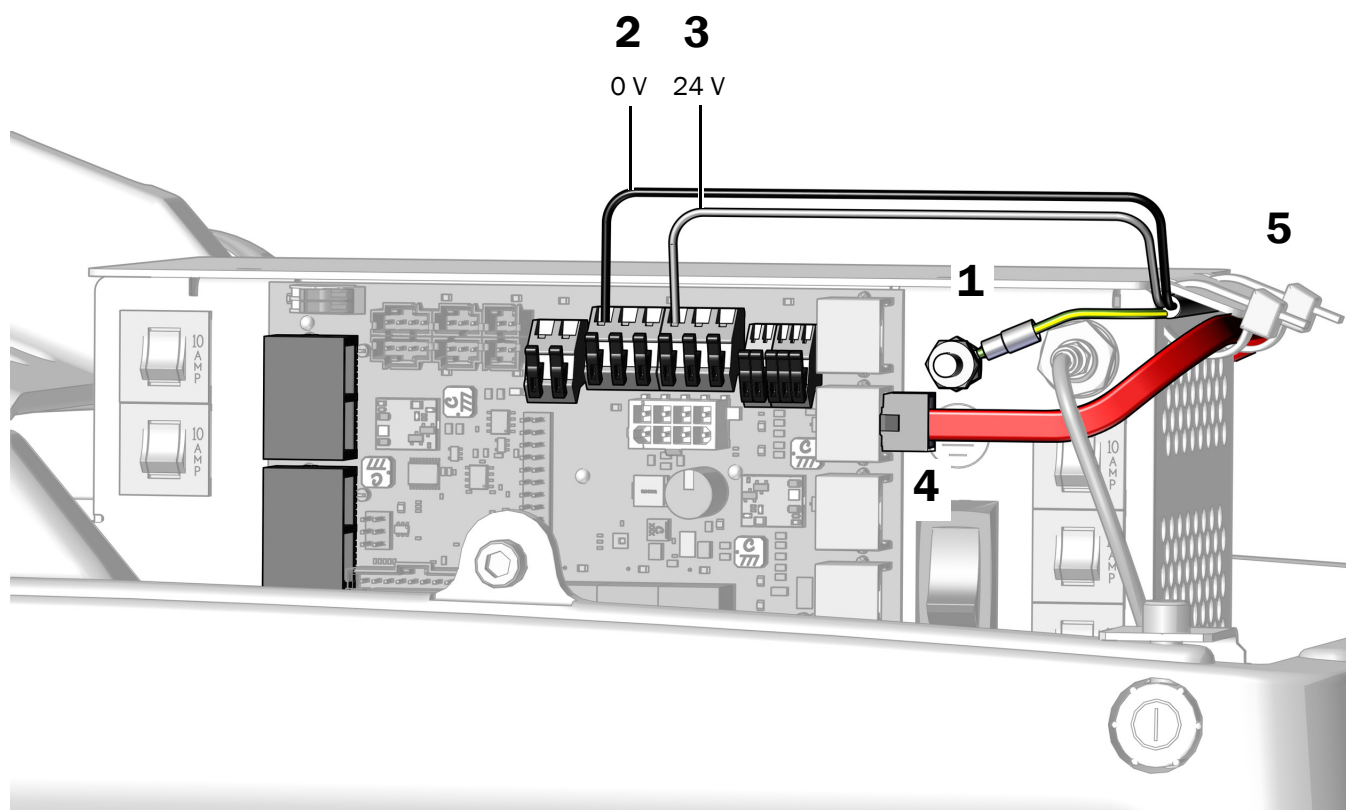
- 3/8" combination wrench
- Diagonal cutters

1. Attach the delivery system's ground wire.
2. Connect the black wire from the delivery system cable to the 0 V wire connector.
3. Connect the gray wire from the delivery system cable to the 24 V wire connector.



**NOTE** If needed, you can connect more than one wire to a single terminal.

4. Plug the red DCS2 data line into a port toward the toe of the chair.
5. After all of the electrical connections have been made for the system's modules, secure the wires and red DCS2 data line under the lip on the power supply.



**Next Step** See "Connect the Tubing" on page 32.

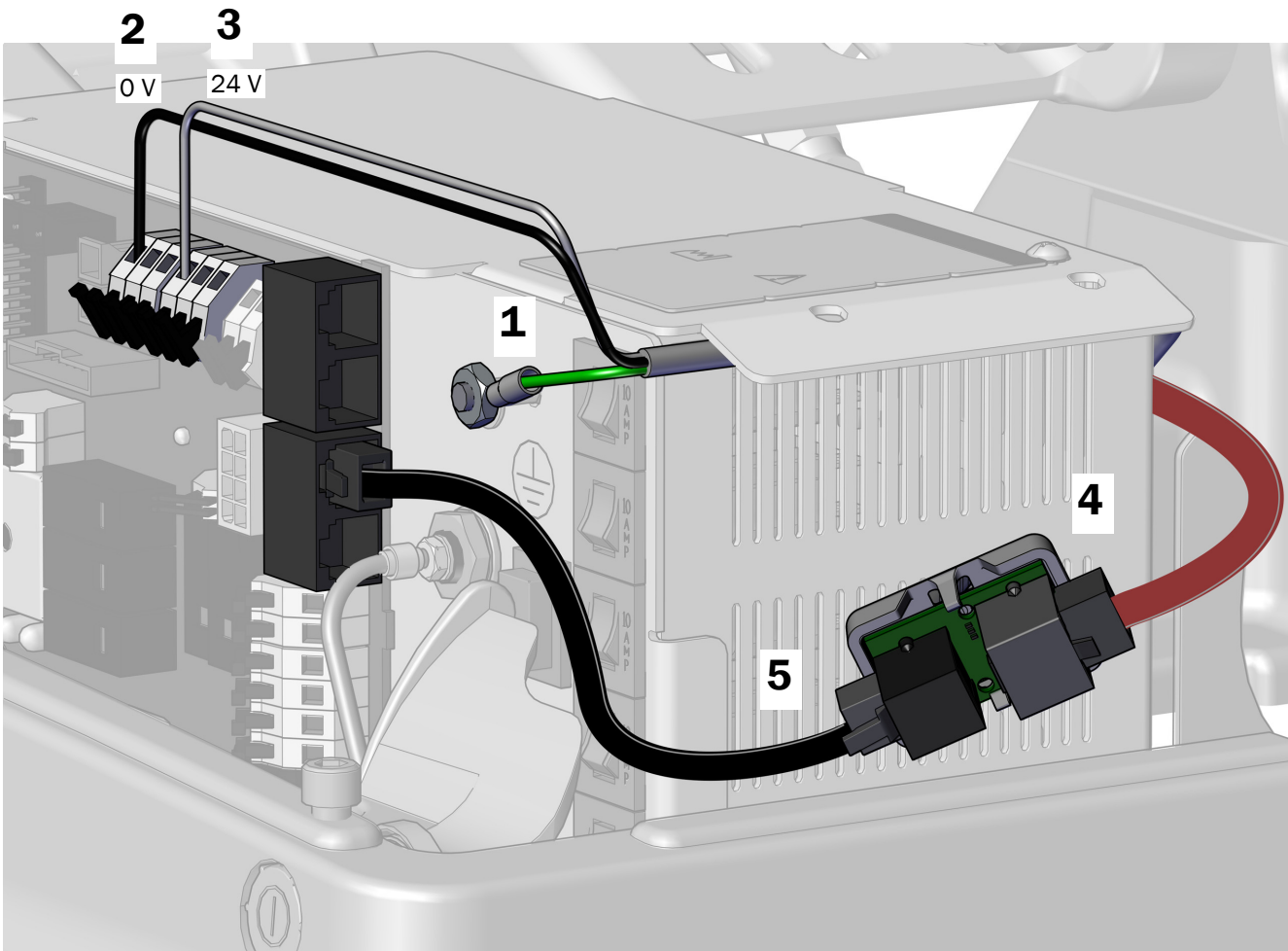
## Connect the Wires and Data line to an A-dec 311/411 Power Supply Manufactured Before June 2023

### Recommended Tools

- 3/8" combination wrench
- Diagonal cutters

### Task 1.

1. Attached the ground wire to the post on the power supply.
2. Connect the black wire to 0 V.
3. Connect the gray wire to 24 V.
4. With the gray port on the translator board positioned to the back of the power supply, connect the red DCS2 data line to the gray port.
5. Connect the black DCS1 data line from the translator board's black port to any data port on the power supply.



## Task 2.

1. Peel off the protective paper from the translator board.



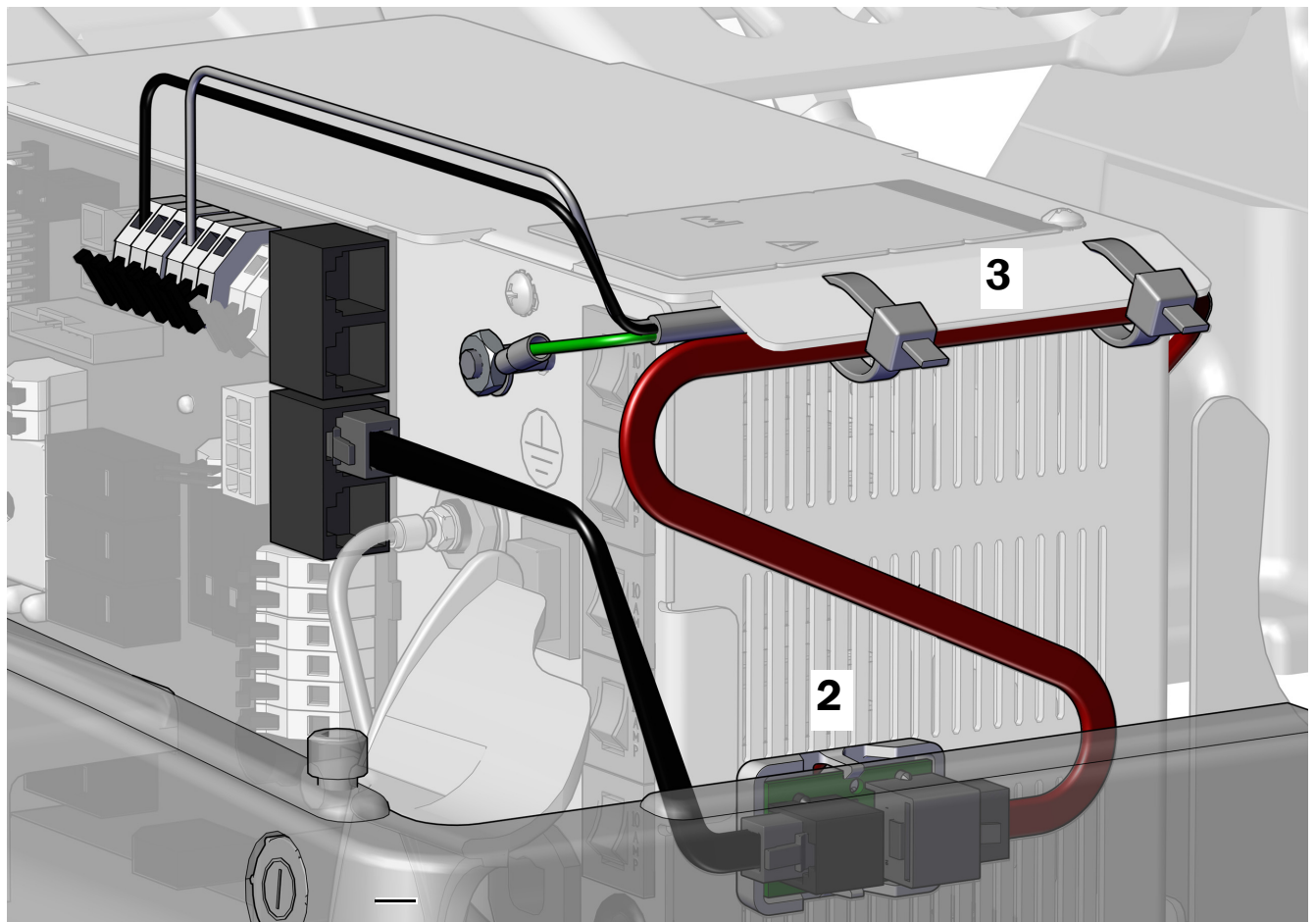
**CAUTION** The translator board must be attached in this position to prevent damage or interference with other equipment.

2. Attach the translator board to the side of the power supply toward the toe of the chair. Align it with the stub and the bottom of the middle vents.



**NOTE** If there is already an adaptor board for an LED light attached to the power supply, stack the translator board below it.

3. When all modules have been connected to the power supply, secure the wires under the lip on the power supply.



## Connect the Tubing

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**CAUTION** To avoid damaging or disconnecting wires and tubing, don't connect anything until all of the system's modules are installed.

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## Route the Foot Control Tubing

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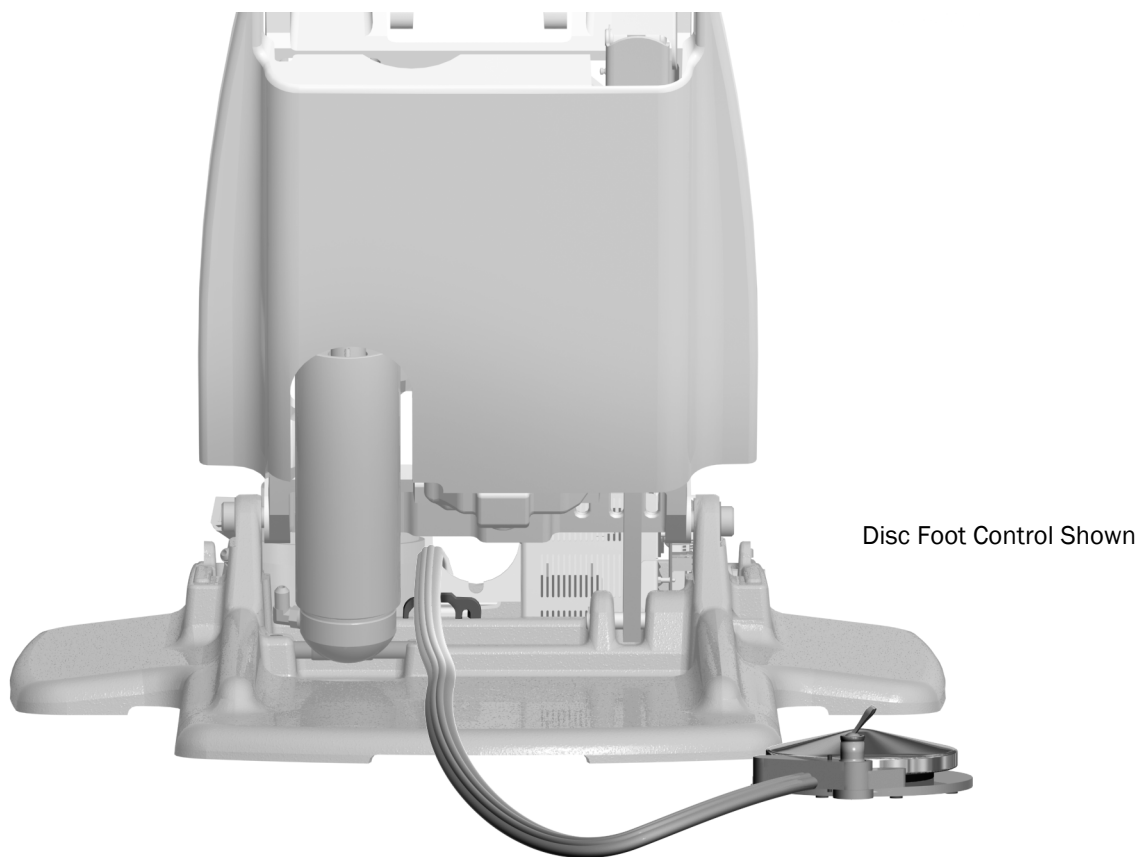
**NOTE** The connections for the disc foot control and the lever foot control are the same.

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### Recommended Tool

- 3/16" hex key

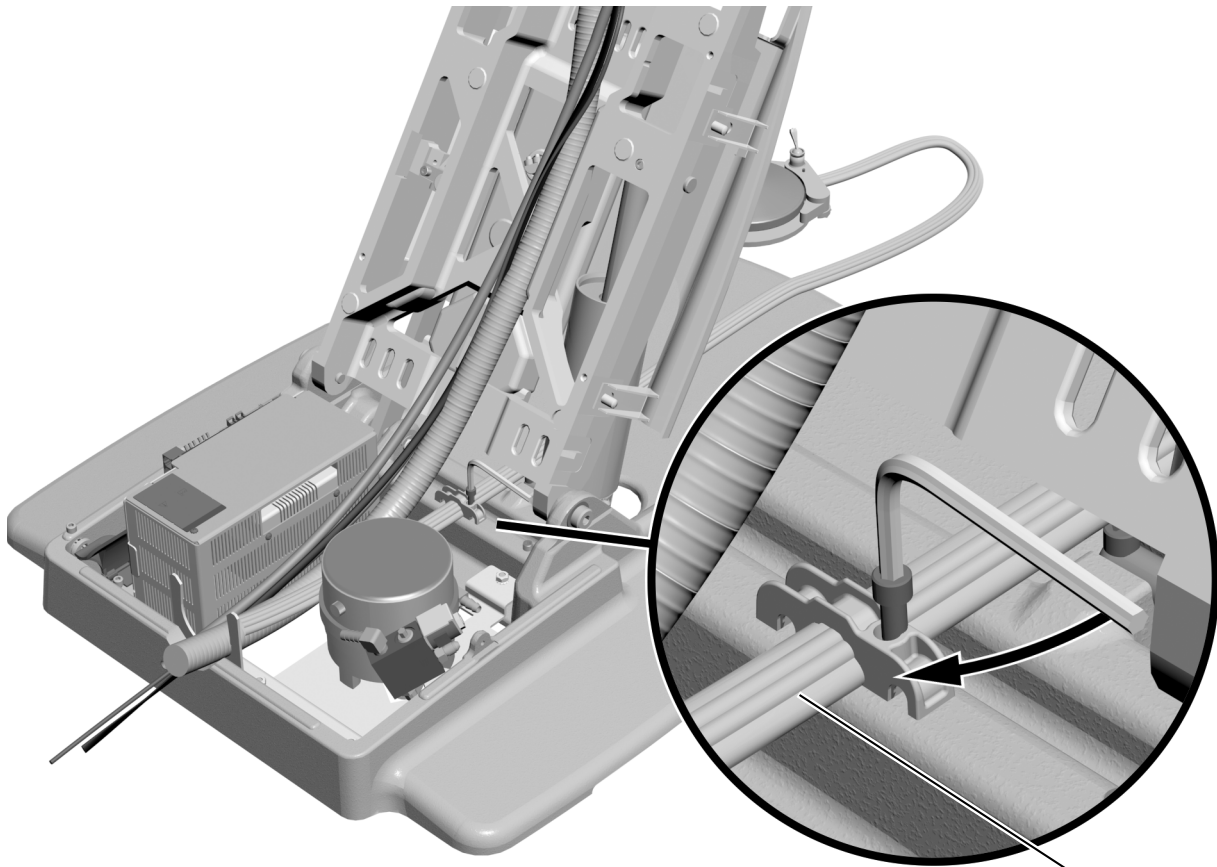
### Task 1.



- 1** From the back of the chair, route the foot control tubing over the strain relief and behind the power supply.



**Task 2.**



- 1** Use a 3/16" hex key to secure the foot control tubing to the chair base in the strain relief.



**NOTE** For proper positioning, the ridges on the foot control tubing face up to match the grooves in the strain relief.

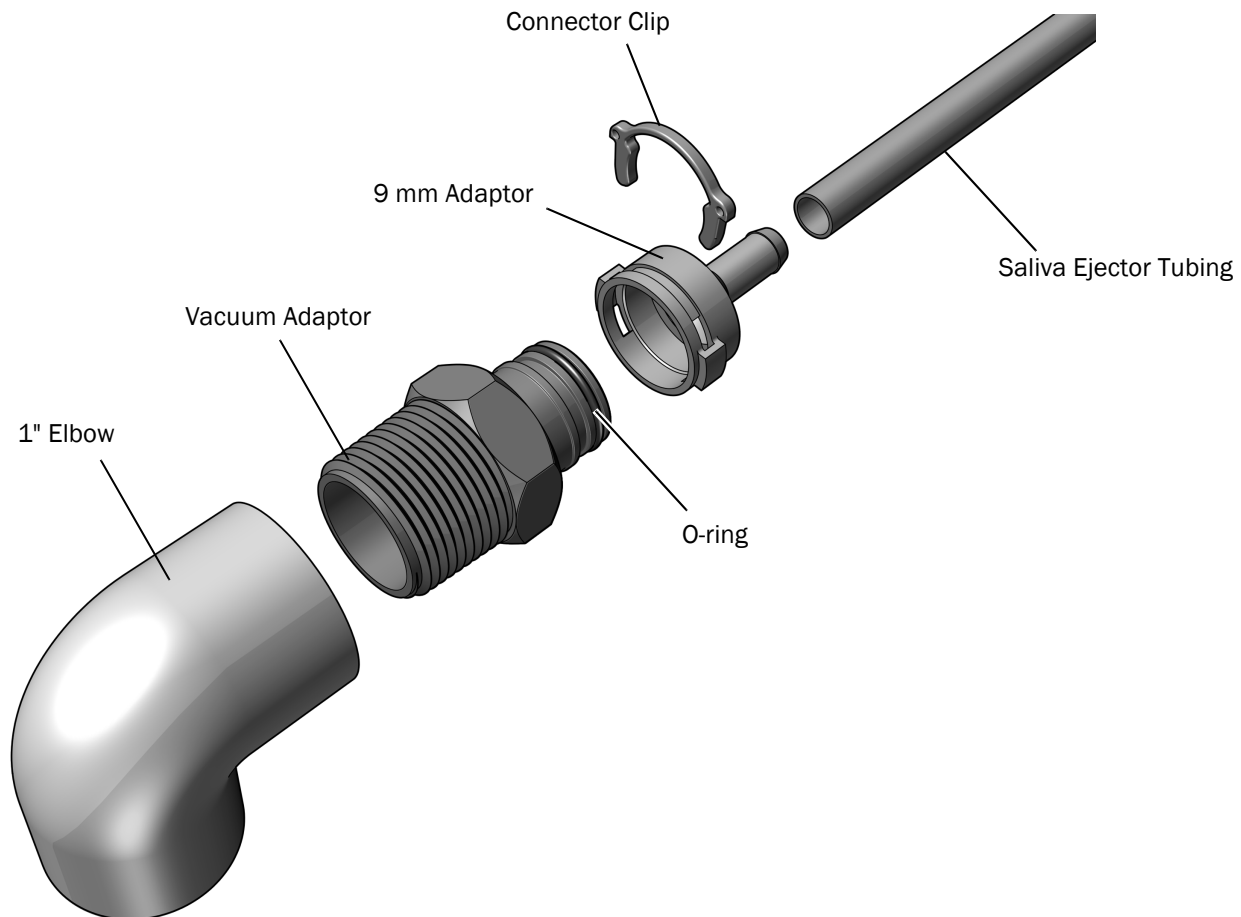
## Connect the A-dec 336pro Saliva Ejector Tubing (optional)

If you installed an A-dec 336pro Delivery System with the optional saliva ejector, follow this procedure to connect the vacuum line for it.

### Connect the Saliva Ejector Tubing on a Chair Without Assistant's Instrumentation

#### Task 1.

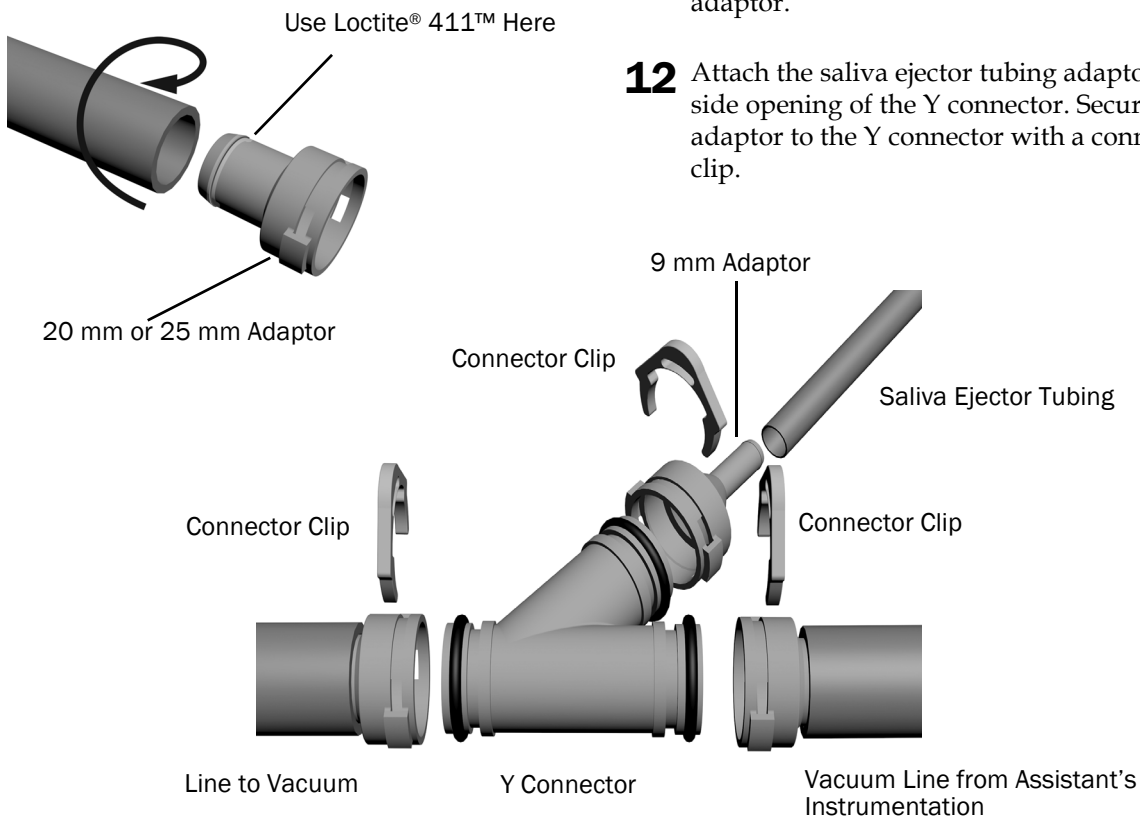
- 1** Locate the 5/16" saliva ejector tubing in the delivery system tubing bundle.
- 2** Route the saliva ejector tubing through the convolute into the floor box.
- 3** Connect the vacuum adaptor (copper with a brass collar attached) to the vacuum line.
- 4** Route the saliva ejector tubing to the vacuum adaptor. Trim the tubing to remove excess tubing leaving enough tubing for a service loop.
- 5** Push the saliva ejector tubing onto the 9 mm adaptor.
- 6** Verify that an O-ring is installed on the vacuum adaptor. If it is not, install an O-ring in the first groove on the adaptor.
- 7** Attach the saliva ejector 9 mm adaptor to the vacuum adaptor. Secure the tubing connector to the vacuum adaptor with the connector clip.



## Connect the Saliva Ejector Tubing on a Chair With A-dec 351 or 551 Assistant's Instrumentation

### Task 1.

- 1** Route the assistant's instrumentation vacuum line through the convolute into the floor box.
- 2** Route the saliva ejector tubing through the convolute into the floor box.
- 3** Position the Y connector in the floor box next to the assistant's instrumentation vacuum line. Cut the vacuum line at a point next to the top of the Y connector.
- 4** Spread Loctite® 411™ around the lip on one of the adaptors. If a 351 is installed, use 20 mm adaptors. If a 551 is installed, use 25 mm adaptors.
- 5** Use a twisting motion to push the side of the vacuum line that comes from the convolute onto the adaptor.
- 6** Attach the adaptor to the main top opening of the Y connector. Secure the adaptor to the Y connector with a connector clip.
- 7** Spread Loctite® 411™ around the lip on one of the remaining adaptors.
- 8** Use a twisting motion to push the remaining piece of vacuum line onto the adaptor.
- 9** Connect the vacuum line to the vacuum source.
- 10** Attach the adaptor to the lower opening of the Y connector. Secure the adaptor to the Y connector with a connector clip.
- 11** Push the saliva ejector tubing onto the 9 mm adaptor.
- 12** Attach the saliva ejector tubing adaptor to the side opening of the Y connector. Secure the adaptor to the Y connector with a connector clip.



## Prepare and Connect the Tubing

### Recommended Tools

- Diagonal cutters
- Sleeve pusher

1. Strip and remove 3' (1 m) of the sheath from around the water bottle tubing.
2. Connect the tubing according to the flow diagram on the following page.



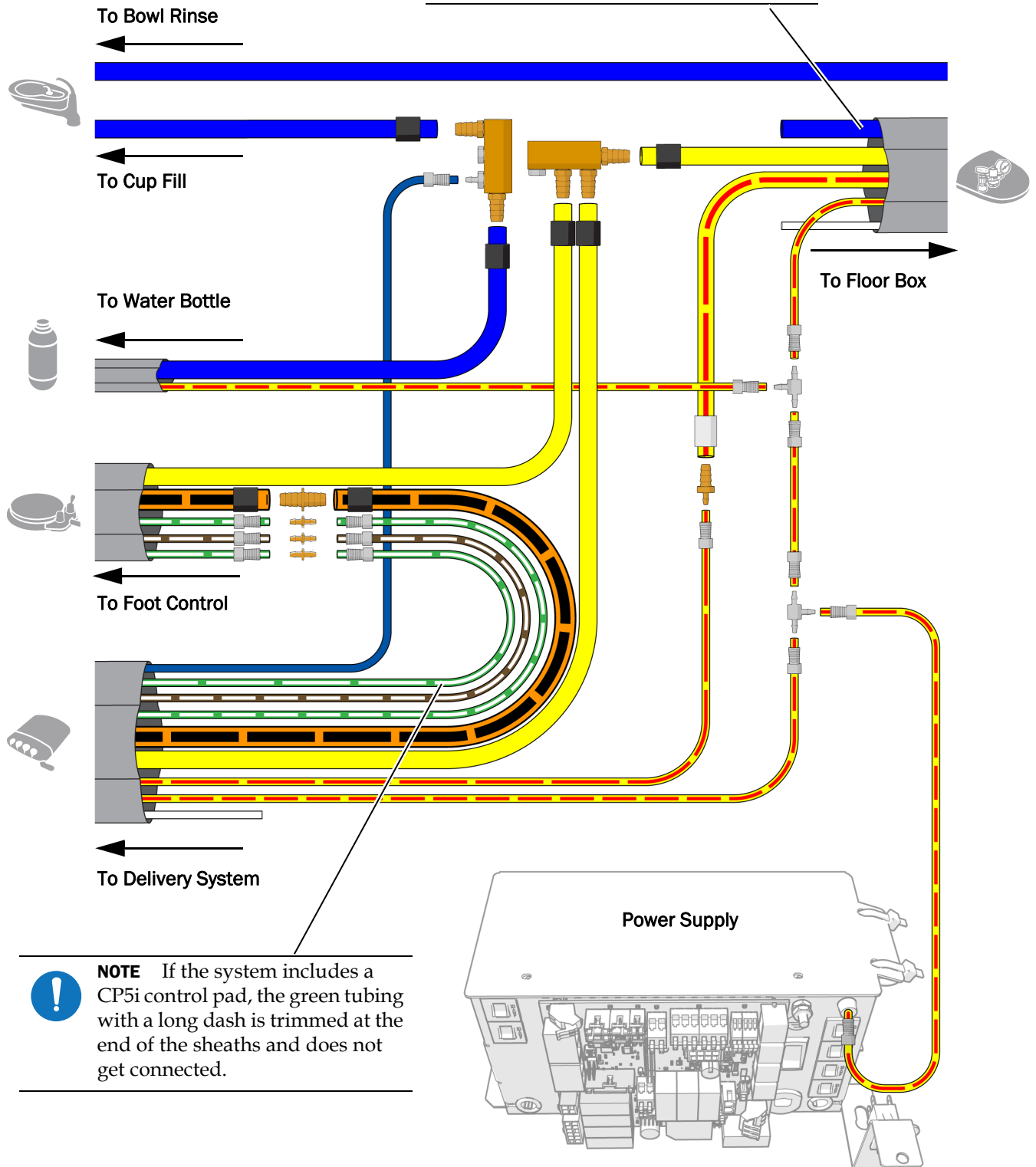
**READ THIS!** Be sure to position the control arm of the A-dec 336pro at its maximum height before trimming its tubing to retain the full range of motion for the control head. For instructions on setting the control arm to its maximum height, see "Adjust the Control Head Height" on page 44.



**NOTE** When installing the water manifold, be sure to connect to the barb on the end to prevent standing water in the manifold.



**NOTE** Do not connect the blue or white tubing in the sheath.



**NOTE** If the system includes a CP5i control pad, the green tubing with a long dash is trimmed at the end of the sheaths and does not get connected.

## Connect the Floor Box Utilities

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Complete the connections for the system's configuration.

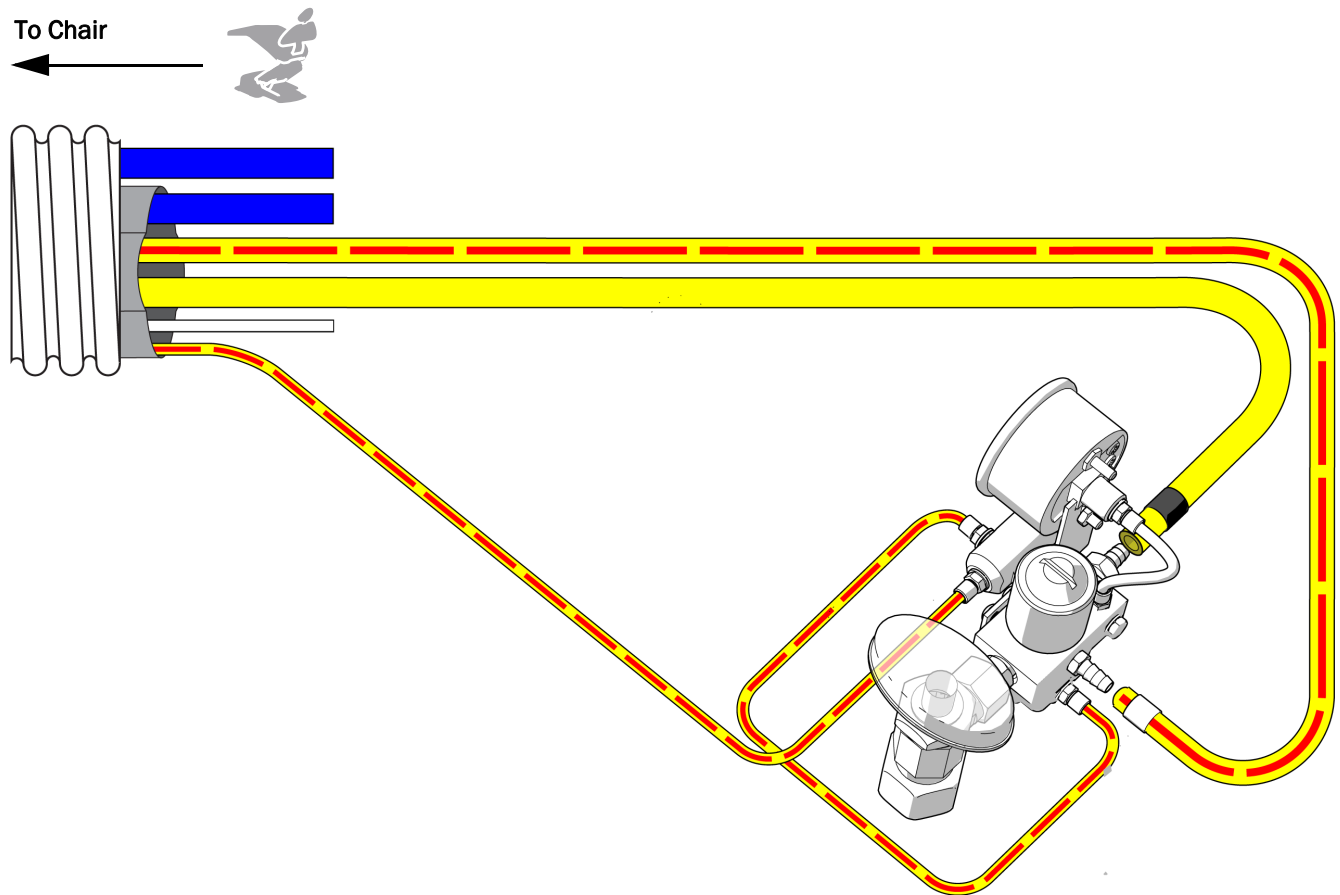
<b>Connect a Delivery System Only</b> .....	<b>38</b>
<b>Connect a System with Multiple Modules</b> .....	<b>39</b>

### Connect a Delivery System Only

Use this diagram if the system does not include any other modules except a delivery system.

#### Recommended Tools

- Diagonal cutters
- Sleeve pusher

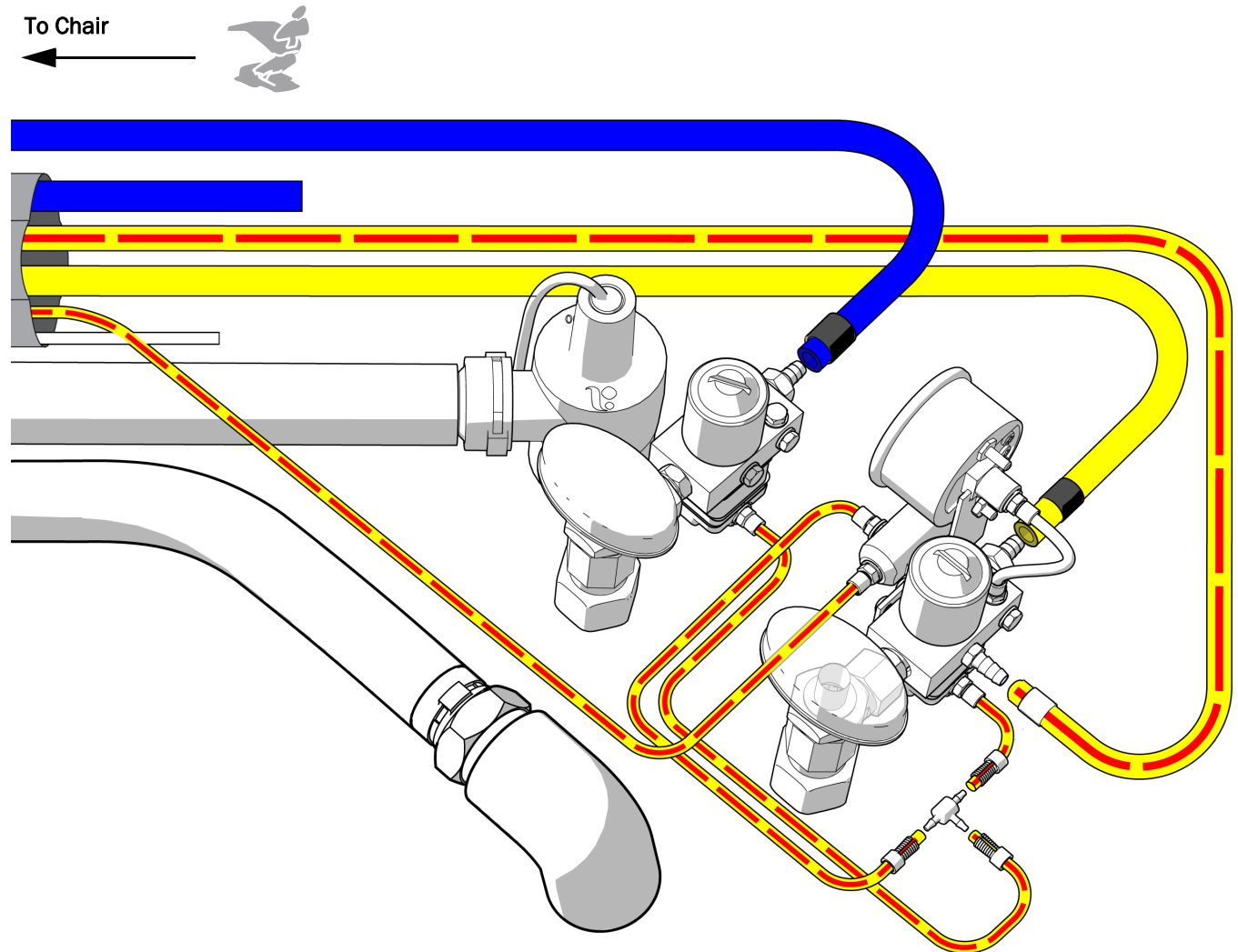


## Connect a System with Multiple Modules

Use this diagram if the system includes any modules in addition to a delivery system.

### Recommended Tools

- Diagonal cutters
- Sleeve pusher



## Install the Moisture Separator (Optional)

To install the moisture separator, follow the directions included in the moisture separator kit.

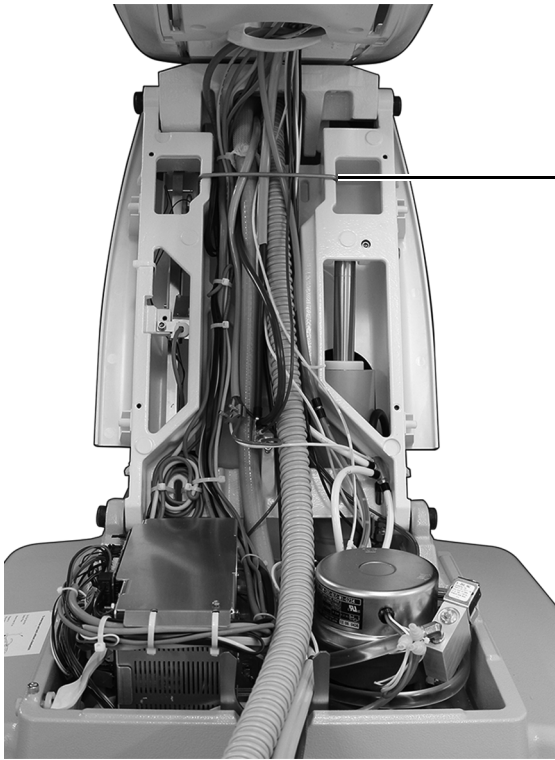
## Prepare and Adjust the System

---

### Secure the Wires and Tubing

#### Recommend Tool

- Diagonal cutters



- 1** Install the bail. It ships in the floor box kit.



Bail



**CAUTION** Do not secure the tubing to the lift arm. The tubing needs to move freely when the chair moves.

---

- 2** Use cable ties to group the tubing and wiring for a neat appearance.



**NOTE** 336pro only - Once the tubing is connected and secured, set the control arm to the doctor's preferred height. For instructions, see "Adjust the Control Head Height" on page 44.

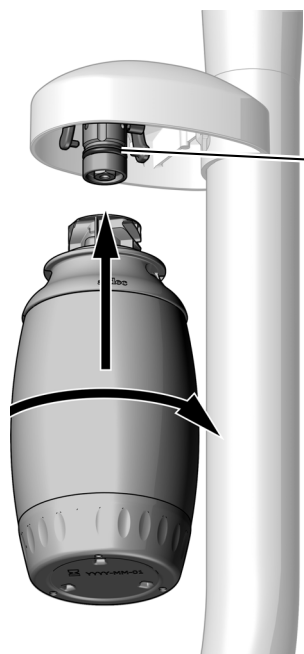
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## Install the Water Bottle



**IMPORTANT** A-dec recommends that the dental team perform a shock treatment on the dental unit waterlines before they use the system for the first time, and establish an ongoing waterline maintenance program. For more information, see the *Waterline Maintenance Guide* (p/n 85.0983.00) and *A-dec Self-Contained Water System Instructions For Use* (p/n 86.0609.00).



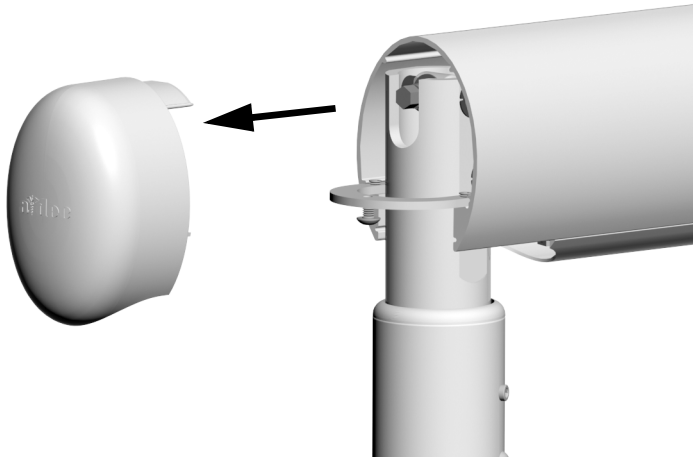
- 1** Apply A-dec silicone lubricant on the receptacle O-ring.
- 2** Push the water bottle up onto the water bottle receptacle and turn it to the right.

## Adjust the Delivery System Spring-Assisted Flexarm

### Recommended Tools

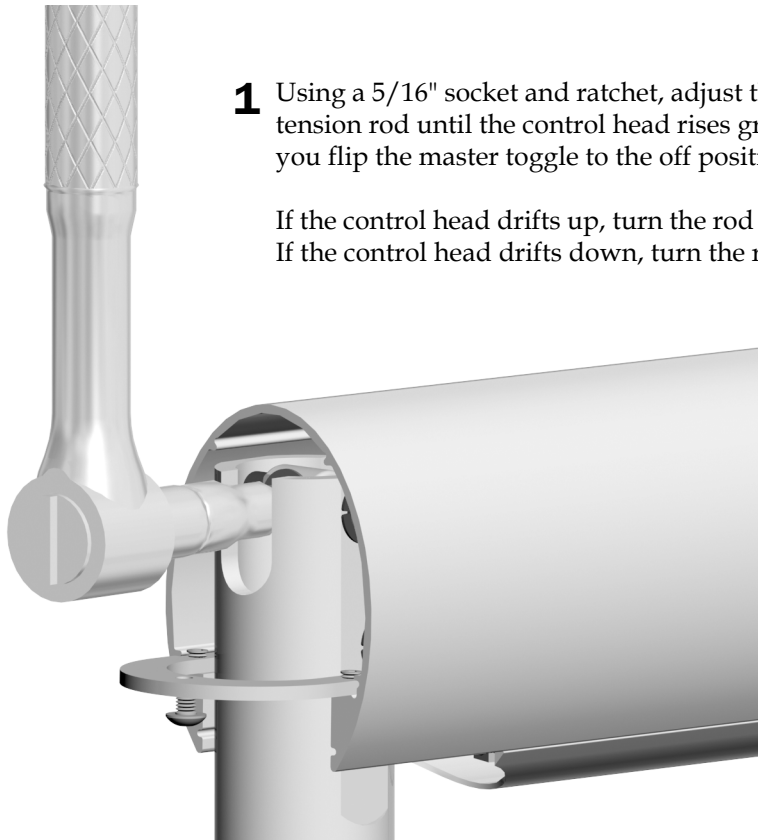
- 1/8" hex key
- 5/16" socket and ratchet

### Task 1.



- 1** Flip the master toggle to the on position.
- 2** Load the control head for normal use, attaching handpieces and placing a tray on the tray holder.
- 3** Position the control head so the flexarm is level.
- 4** Use a 1/8" hex key to remove the end cap farthest from the control head.
- 5** Flip the master toggle to the off position.

### Task 2.



- 1** Using a 5/16" socket and ratchet, adjust the flexarm spring tension rod until the control head rises gradually when you flip the master toggle to the off position.

If the control head drifts up, turn the rod counterclockwise.  
If the control head drifts down, turn the rod clockwise.

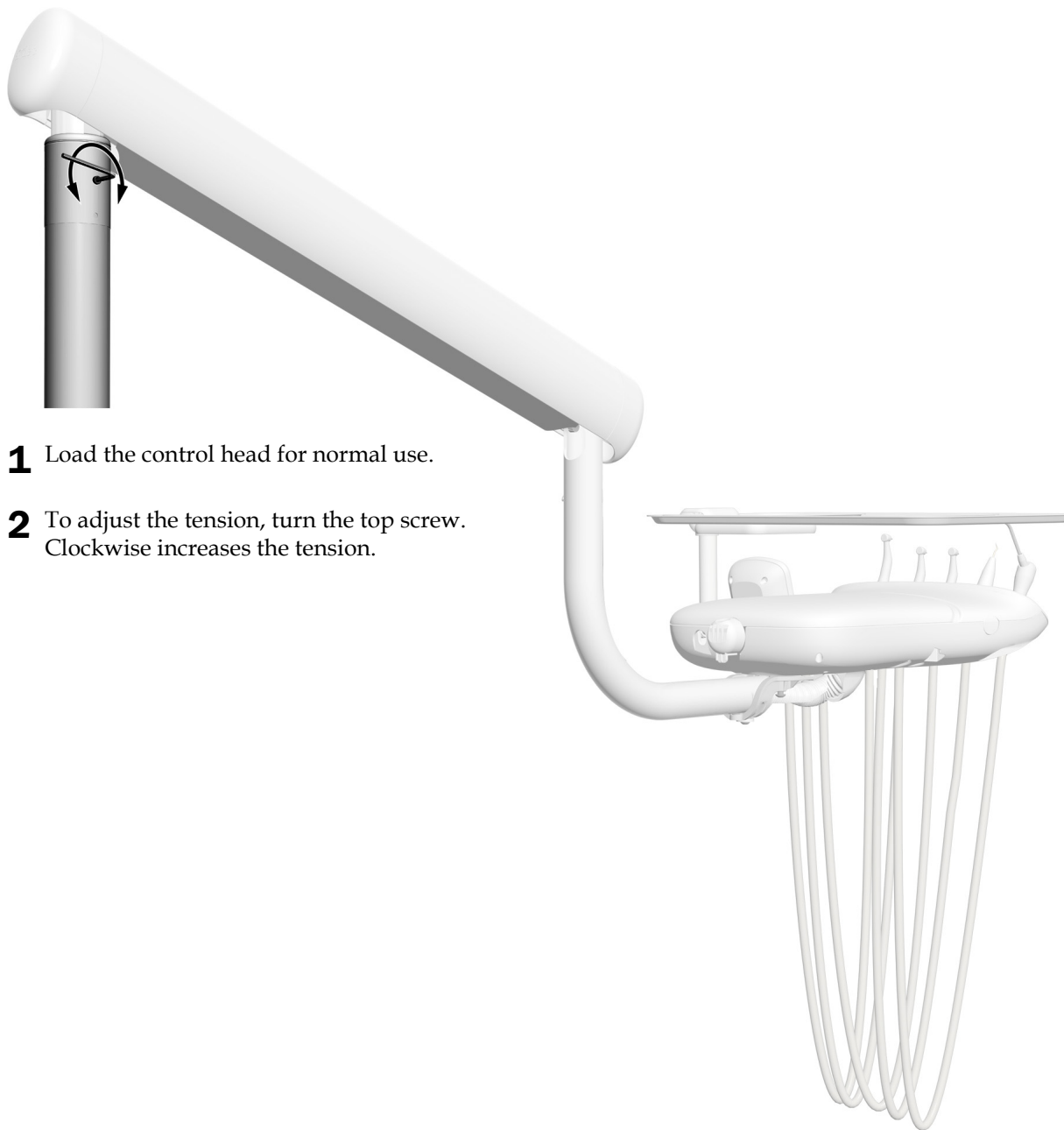
## Adjust the Delivery System Flexarm Rotation Tension

If the delivery system flexarm drifts, complete the following steps to adjust the tension of the flexarm rotation.

### Recommended Tool

- 1/8" hex key

If the delivery system arm drifts, complete the following steps to adjust the tension of the flexarm rotation.



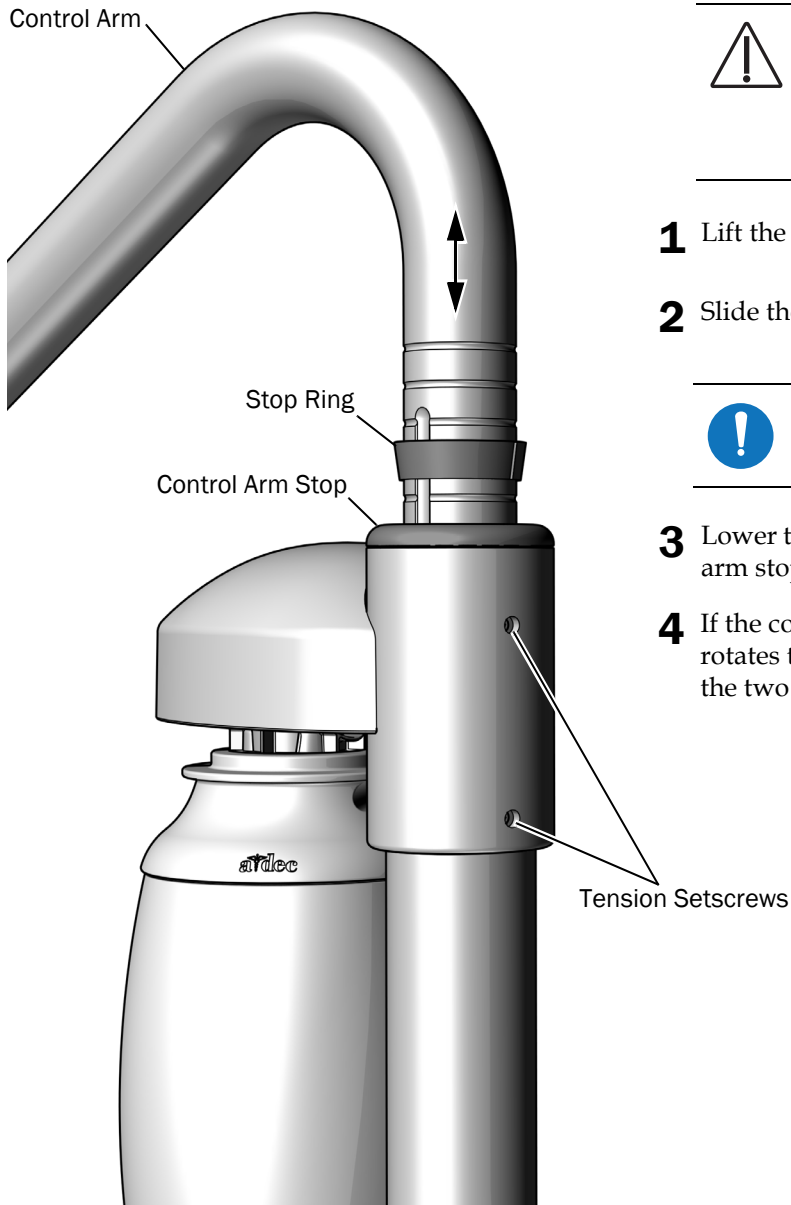
- 1** Load the control head for normal use.
- 2** To adjust the tension, turn the top screw. Clockwise increases the tension.

## Adjust the Control Head Height (A-dec 336pro only)

Check the height of the manual height adjustment delivery system. Use the following procedure if it needs to be adjusted.

### Recommended Tool

- 3/32" hex key



**CAUTION** Do not raise the control arm more than five inches. If you do, the rotation stop pin can fall into the rigid arm and you will have to remove the arm to recover the rotation stop pin.

- 1** Lift the control arm.
- 2** Slide the stop ring to the desired height groove.



**NOTE** The height adjustment range for the control arm is 5" (127 mm).

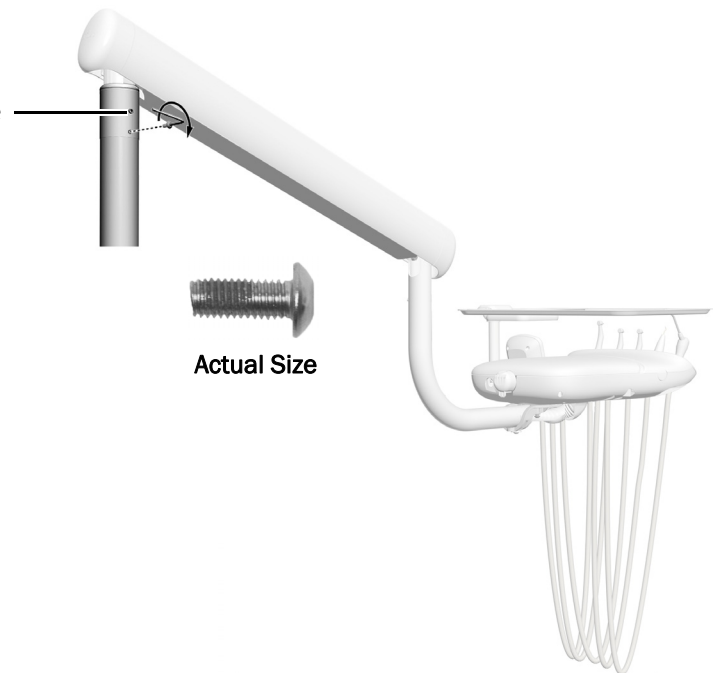
- 3** Lower the control arm and stop ring into the control arm stop.
- 4** If the control arm is difficult to lift or rotate, or rotates too freely, use a hex key to loosen or tighten the two tension setscrews.

## Install the Delivery System Flexarm Rotation Stop Screw

### Recommended Tool

- 1/8" hex key

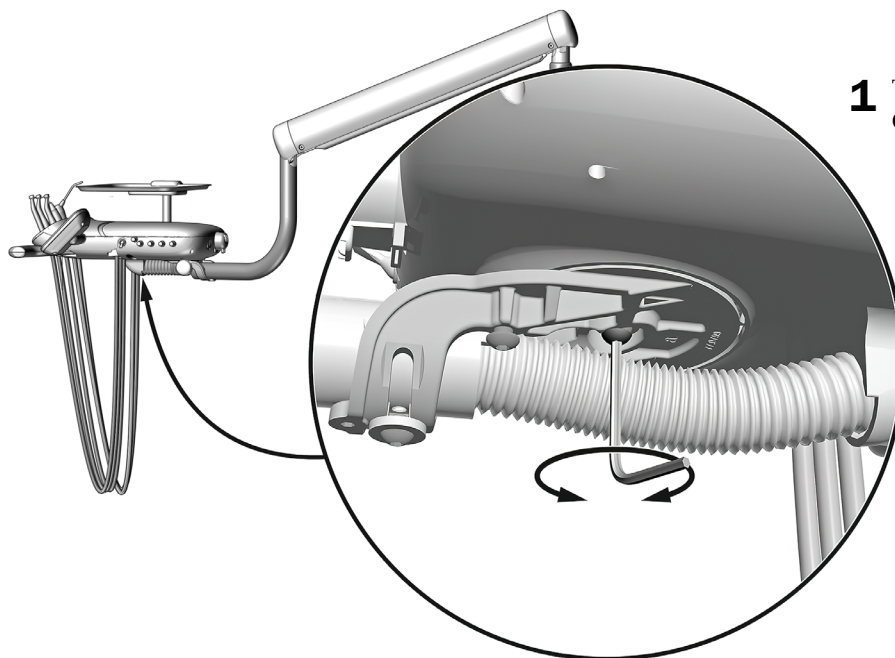
- 1** Install the 10-32 x 1/2" button head screw in the bottom hole.  
Tighten it all the way down.



## Adjust the Control Head Rotation Tension

### Recommended Tool

- 5/32" hex key

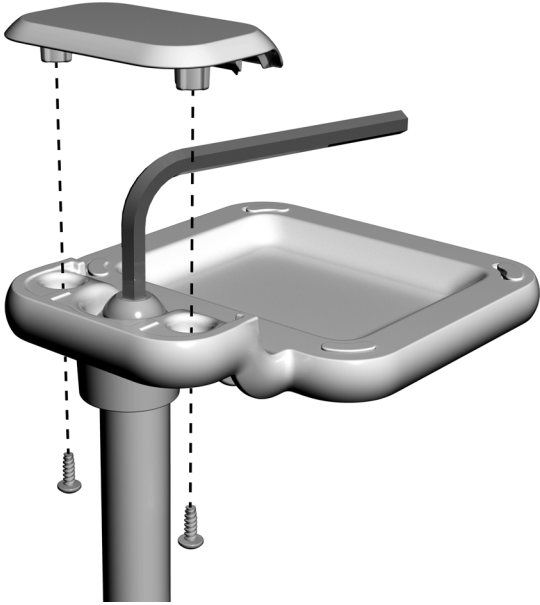


- 1** To adjust the tension, turn the screw.  
Clockwise increases the tension.

## Adjust the Tray Holder Mount Rotation Tension

### Recommended Tool

- Phillips head screwdriver
- 7/32" hex key

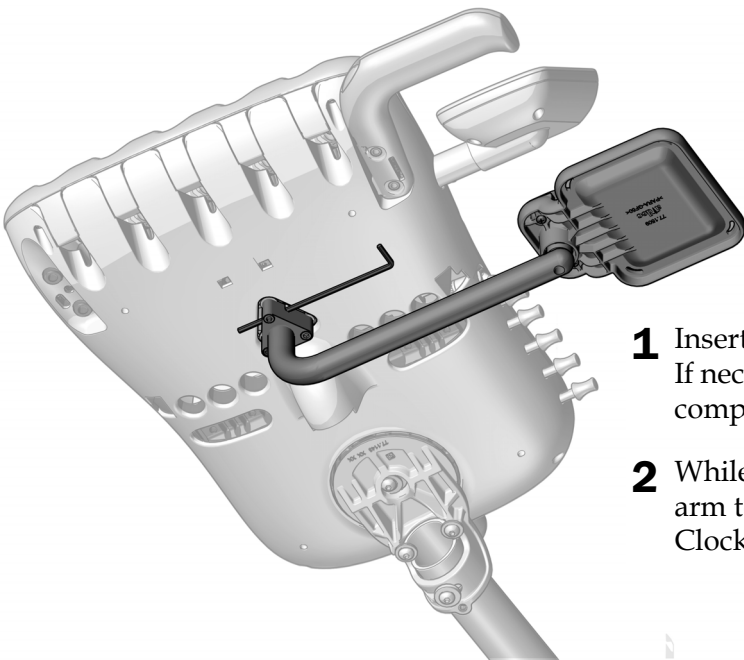


- 1** Use a Phillips head screwdriver to remove the cap screws. Remove the cap.
- 2** Insert the hex key into the tension bolt and turn clockwise to increase the tension.

## Adjust the Tray Holder Mount Arm Rotation Tension (Continental only)

### Recommended Tool

- 9/64" hex key



- 1** Insert the hex key through the mounting bracket. If necessary, rotate the arm until the hex key slides completely into the mounting bracket.
- 2** While holding the bracket stationary, turn the arm to adjust the tension. Clockwise increases the tension.

## Adjust the Intraoral Light Source Voltage

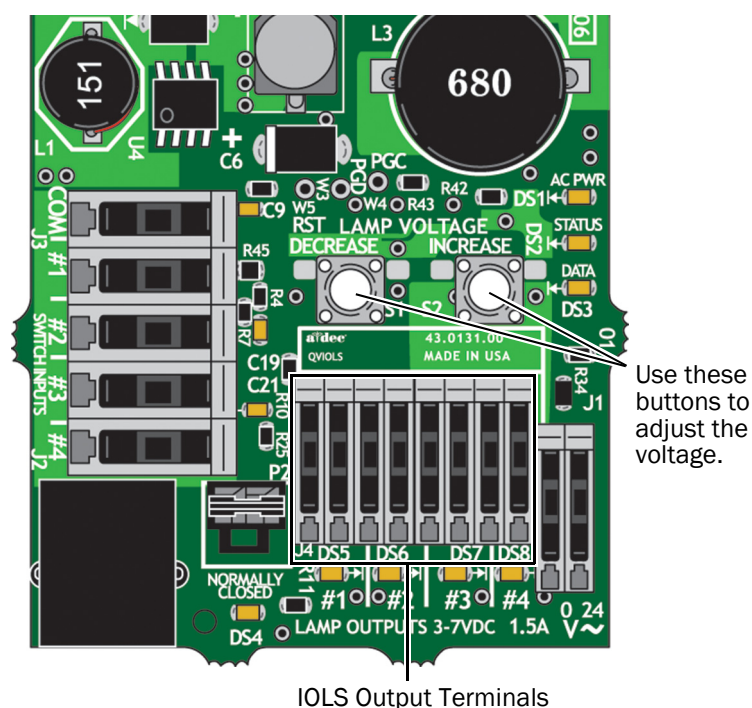
### Recommended Tools

- 7/64" hex key
- Voltmeter



**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.

1. Use a 7/64" hex key to remove the control head back cover.
2. Set the voltmeter to DC voltage and place its probes on the IOLS output terminals for the handpiece you're adjusting.



3. Lift the handpiece from its holder and turn the light on.
4. Use the buttons behind the terminal to adjust the voltage according to the Table on page 48.



**CAUTION** The values in the following table are valid only for fiber optics with 26 AWG wires. For fiber optics powered with 30 AWG wires and other ratings, use the equation  $T = (Z \times 0.006 \times Y) + X$  where:

**T** = Terminal strip voltage (VDC)

**X** = Desired voltage at bulb (VDC)

**Y** = Rated lamp/load current (Amps)

**Z** = Length of 30 AWG wire (inches) from terminal strip to bulb

For devices with a wire gauge other than 26 AWG, please contact A-dec customer service.

**Length and Voltage Table for Bulbs Rated at 3.20 VDC**

A-dec Tubing Length		Voltage at terminal strip resulting in recommended 3.20 VDC +/- 0.03 bulb voltage (measure with IOLS on)		
(in)	(cm)	0.200 A	0.380 A	0.750 A
50	127	3.37	3.52	3.84
64	163	3.42	3.61	4.02
85	216	3.49	3.75	4.28

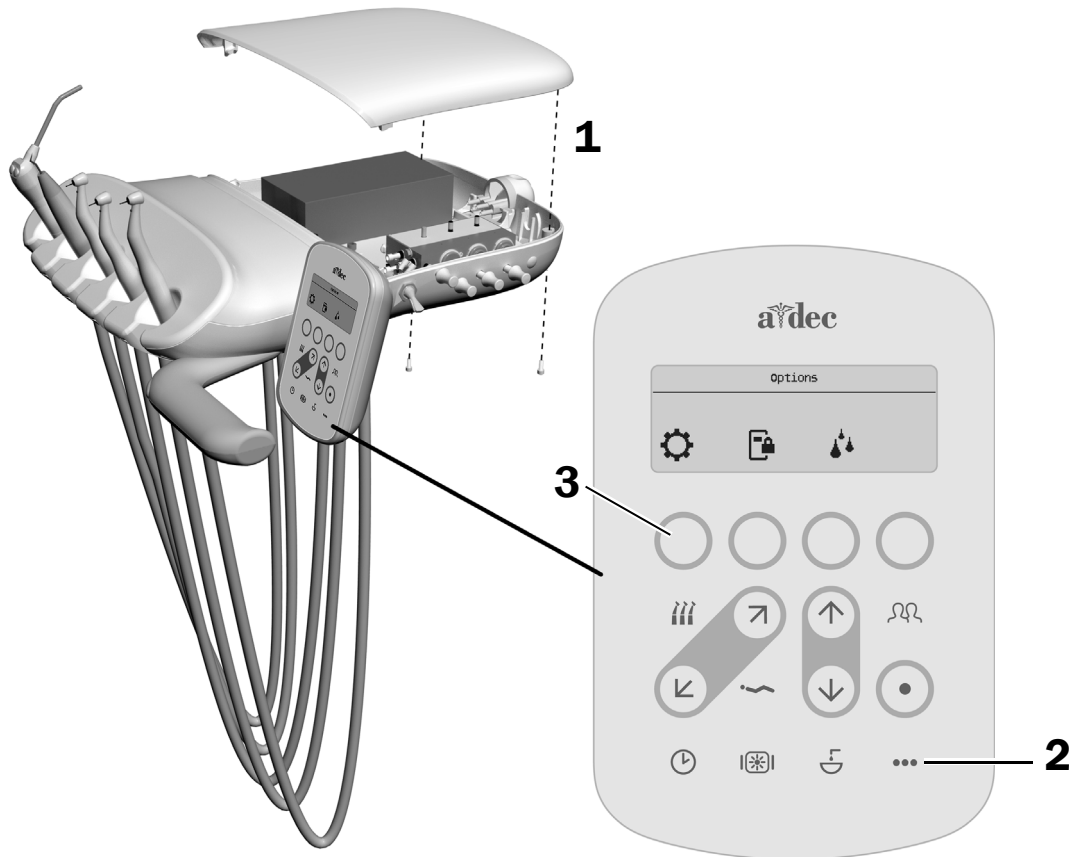


## Adjust the Handpiece Drive Air Pressure

### Recommended Tool

- 7/64" hex key

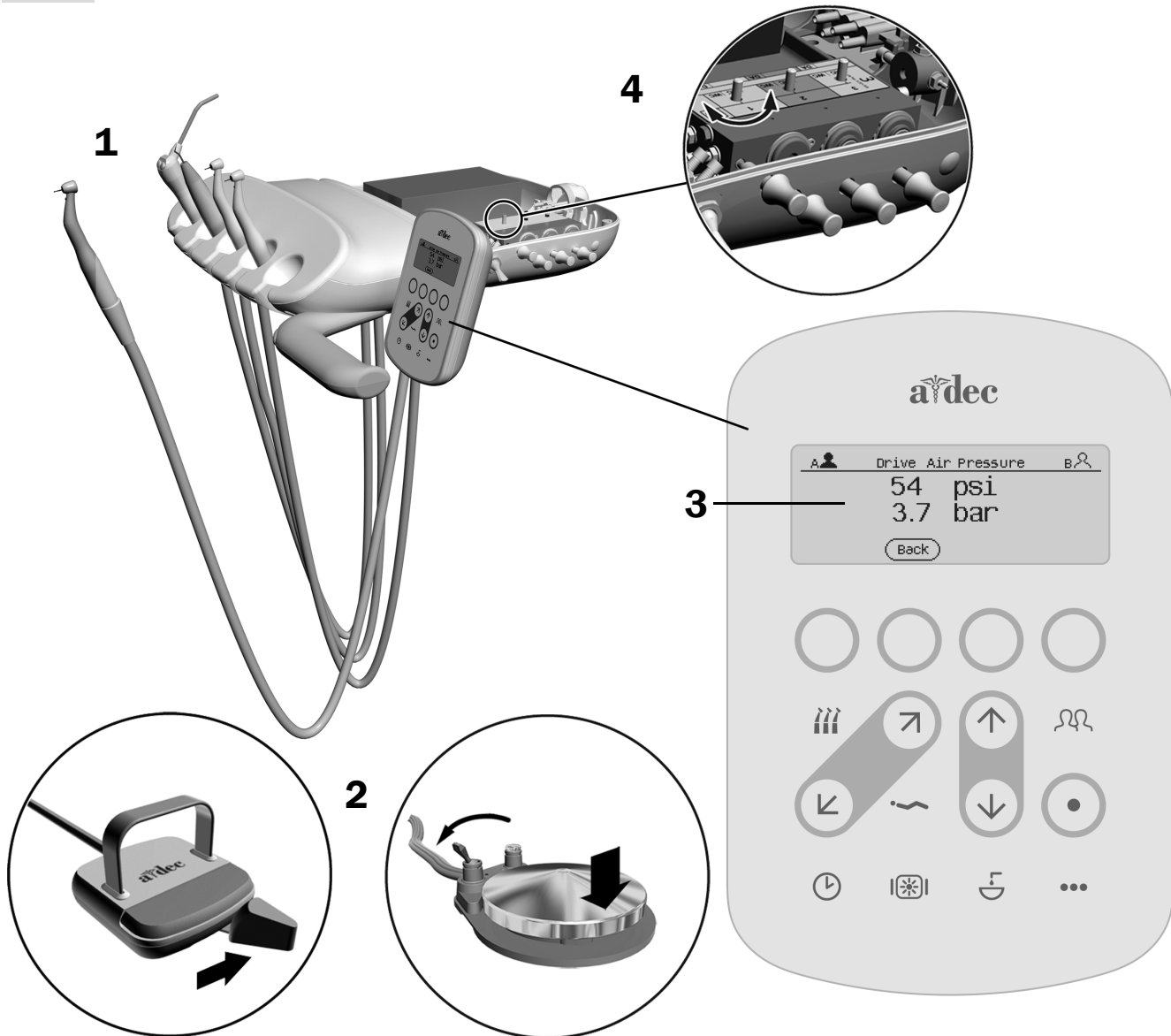
### Task 1.



**NOTE** Drive air pressure may be lower at the handpiece than what is shown on the touch control. Pressure can also be measured with a handpiece pressure gauge.

1. Use a hex key to remove the control head cover screws. Remove the cover and locate the drive air pressure controls inside.
2. On the control pad, press ●●● to access the **Options** menu.
3. Press the soft key under the ⚙ icon.
4. Select **Diagnostics**.
5. Scroll down and select **Drive Air Pressure**.

## Task 2.



1. Withdraw a handpiece.
2. Turn off the water coolant and press the foot control or move the lever until the handpiece is running at full speed.
3. Check the control pad screen to see the pressure reading.



**CAUTION** Exceeding the manufacturer's recommended drive air pressure increases the risk of damage and may significantly decrease the life of your handpiece components.  
For the proper drive air pressure, see the handpiece manufacturer's Instructions for Use.

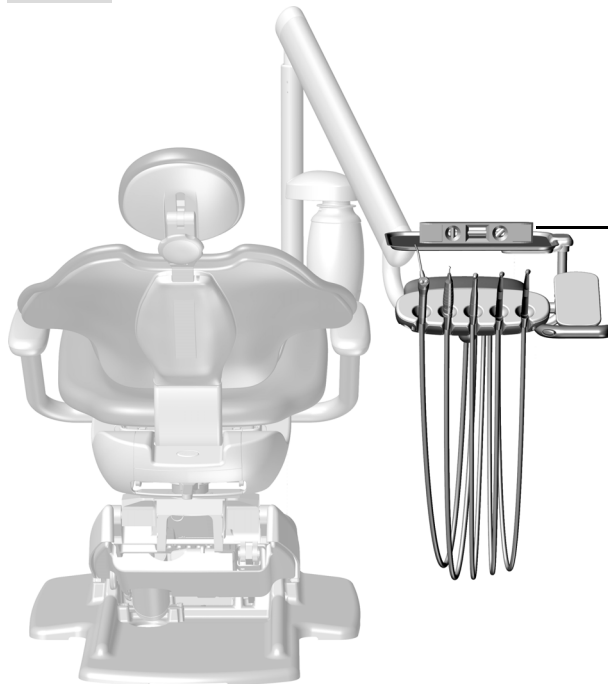
4. Adjust the pressure to meet the manufacturer's specifications. Turn the stem clockwise to decrease pressure.

## Level the Control Head

### Recommended Tools

- 5/32" hex key
- Level

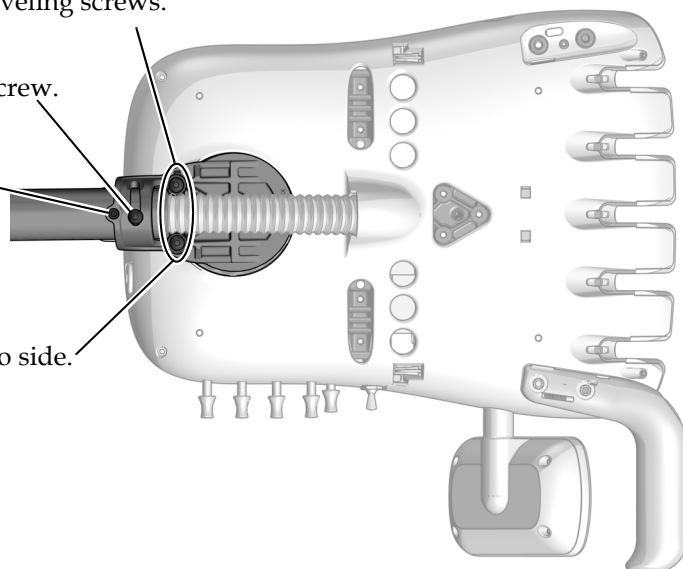
### Task 1.



- 1** With the control head in the normal working position, turn it so it faces straight out from the flexarm.
- 2** Place a level on the tray holder or on top of the control head.

### Task 2.

- 1** Slightly loosen the leveling screws.
- 2** Slightly loosen the button head screw.
- 3** Adjust to level front to back.
- 4** Adjust to level side to side.
- 5** Tighten the button head screw.



## Customize Touch Control and Handpiece Settings

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See the section for the type of control interface on your system.



**NOTE** Touch control symbols and icons are proprietary to A-dec, Inc.

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### CP5i/CP5 Control Pads



For touchscreen and control pad use, see the *A-dec DS7/CP5i/CP5 Touch Controls Instructions for Use* (p/n 86.0857.00) at [a-dec.com/touchscreen-manual](http://a-dec.com/touchscreen-manual).



For configuring connectivity features, see the *A-dec+™ Software Platform Instructions for Use* (p/n 86.1030.00) at [a-dec.com/connectivity-manual](http://a-dec.com/connectivity-manual).



## Test the System

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Complete the following checklist to test the system, then follow up with the customer.

### Delivery System

- The handpieces function properly and are set to doctor's preferences:
  - Water coolant, air coolant, and spray.
  - Handpiece tubing flush.
  - Handpiece holder valves and switches.
  - Handpiece drive air pressure.
- Spring-assisted flexarm is counter-balanced properly.
- Rotation stop pin is installed and functioning properly.
- Flexarm air brake functions properly.
- Height of manual adjustment arm and rotation tension is set.
- Control head is level as measured on tray.
- Articulating arms do not drift.
- Foot control operates properly.

### Utilities

- Regulated air pressure is at 80 psi (552 kPa).
- Floor box is free of air and water leaks.
- Tubing and connections are not kinked and are free of air and water leaks.
- Excess tubing and wires are coiled and stored away from moving parts.

## Install the Covers

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**NOTE** Be sure to adjust and test the system before installing the covers.

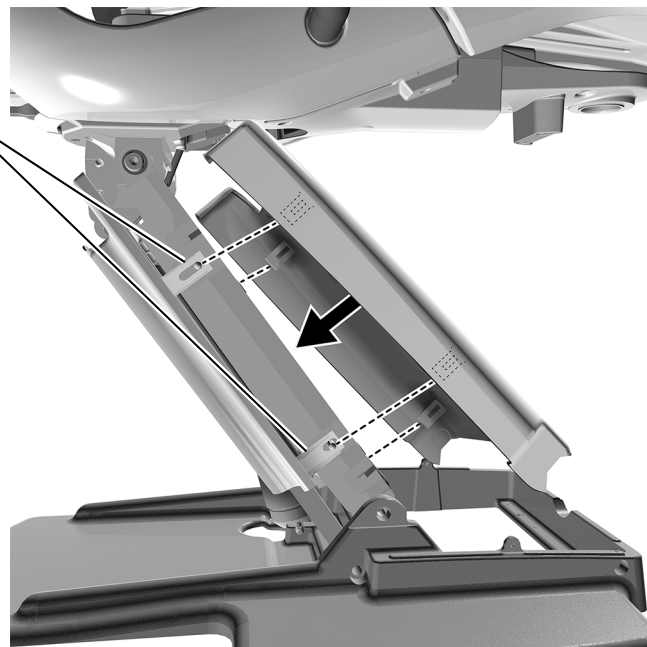


**WARNING** Shock hazard. When you remove or replace the covers, take care not to damage any wiring or tubing. Verify that the covers are secure after you replace them.

---

### Install the Lift Arm Cover

- 1** Position the chair so that it is raised halfway up.
- 2** Insert the posts on the lift arm into the slots on one side of the cover.
- 3** Insert the posts into the slots on the other side of the cover.



## Install the Pump and Floor Box Covers

### Recommended Tool

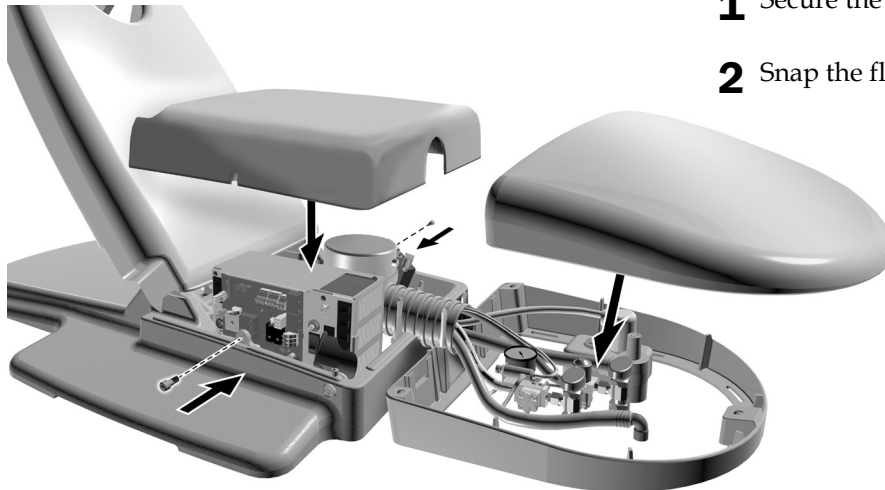
- 3/16" hex key

### Task 1.



- 1** If the system includes a floor box, remove the slot from the front of the pump cover.

### Task 2.

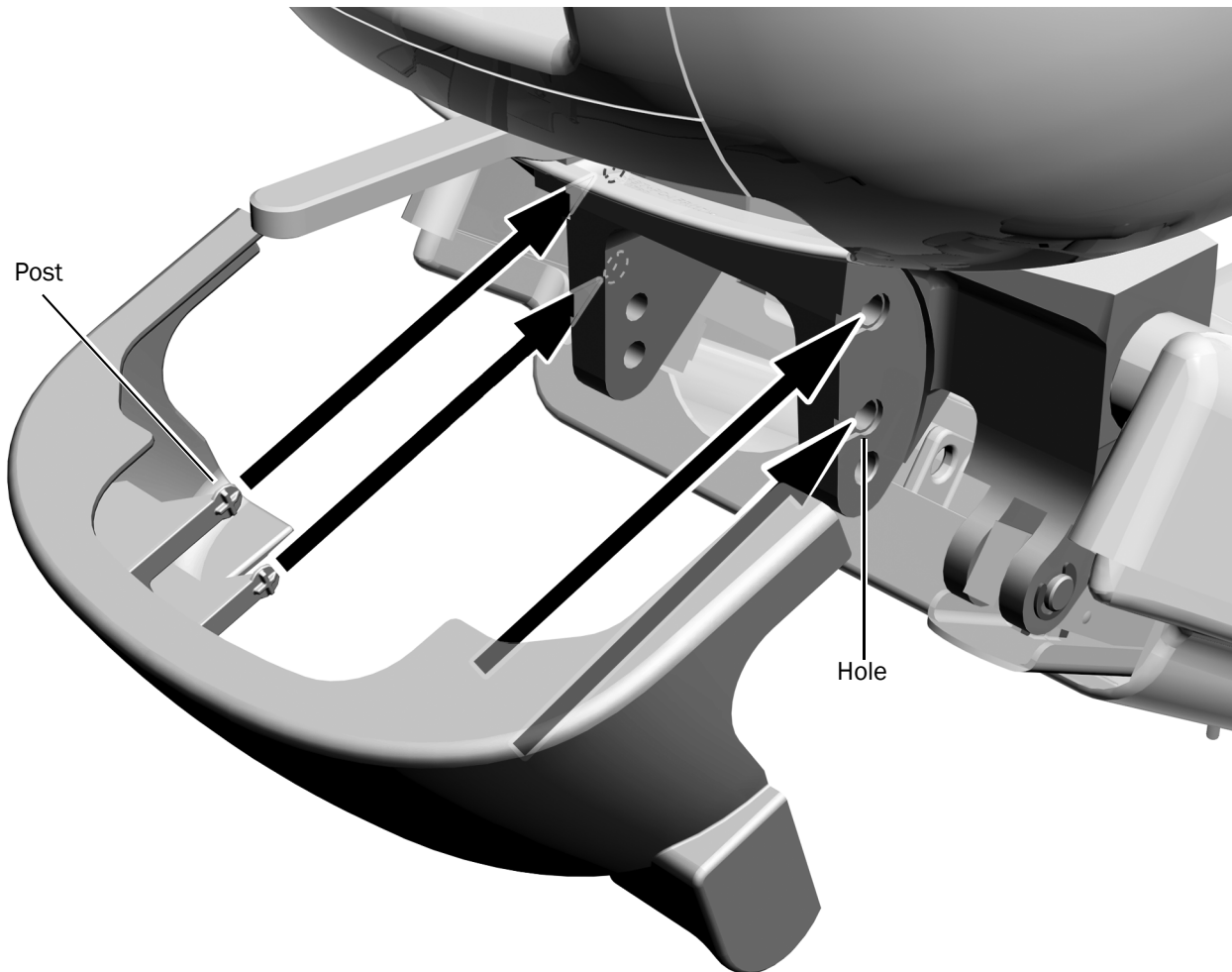


- 1** Secure the pump cover.
- 2** Snap the floor box cover into place.

## Install the Mount Cover



**NOTE** Wait to install this cover until after all modules are installed. If the system includes a support link, use the slotted back mount cover that fits around the link.



- 1** Snap the mount cover in place. The four posts go into the holes on the mount.









## Regulatory Information and Warranty


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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](http://www.a-dec.com).



For quick access to this document online, scan, tap, or click this QR code, which points to [a-dec.com/regulatory-guide](http://a-dec.com/regulatory-guide).

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