

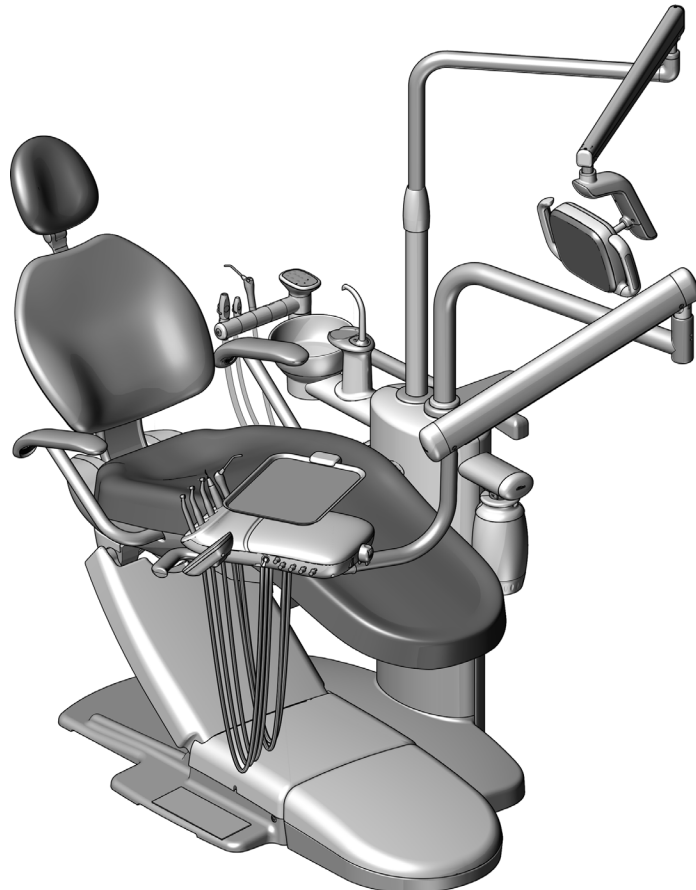


A-dec® 363 Support Center

INSTALLATION GUIDE

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A-dec 363 Support Center on an A-dec 311 Dental Chair

Product Models and Versions Covered in this Document*

| Models | Versions | Description |
|---------------|----------|-----------------------------|
| 352/353 | A | Assistant's Instrumentation |
| 334/335 | A | Delivery System |
| 334pro/335pro | n/a | Delivery System |
| 311flt | n/a | Dental Chair |
| 311 | B | Dental Chair |
| 363 | A | Support Center |

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

Before You Begin



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



READ THIS! The 311 dental chair must be anchored to the floor before you begin these procedures. If the chair is not anchored, see the *A-dec 311 Dental Chair Installation Guide* (p/n 86.0921.00).



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.

Recommended Tools

- Hex key set
- Pliers
- Magnetic level
- 5/16" hex key driver
- Torque wrench with a 5/16" hex bit
- Diagonal cutters
- Adjustable wrench
- Sleeve pusher
- Tape measure
- 1/4" and 3/8" combination wrenches
- Rubber mallet
- Phillips head screwdriver
- Wire stripper

Installation Sequence

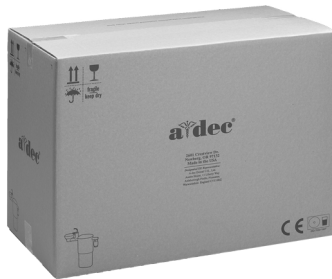
Your installation may not require all modules described in this document. Before you begin:

1. Assess what modules you will install on the support center.
2. Use the installation sequence to note the order of the modules that you will install.



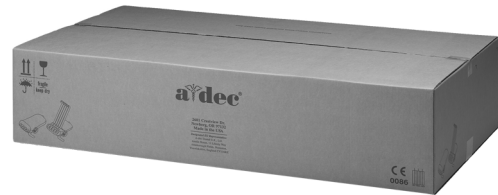
NOTE The box for each module contains all of the parts needed to install that module.

1



Support Center

3



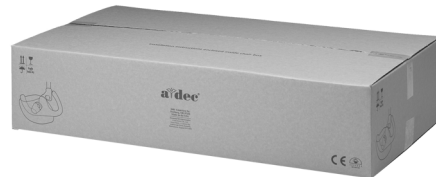
Delivery System

2



Assistant's Instrumentation

4



Dental Light

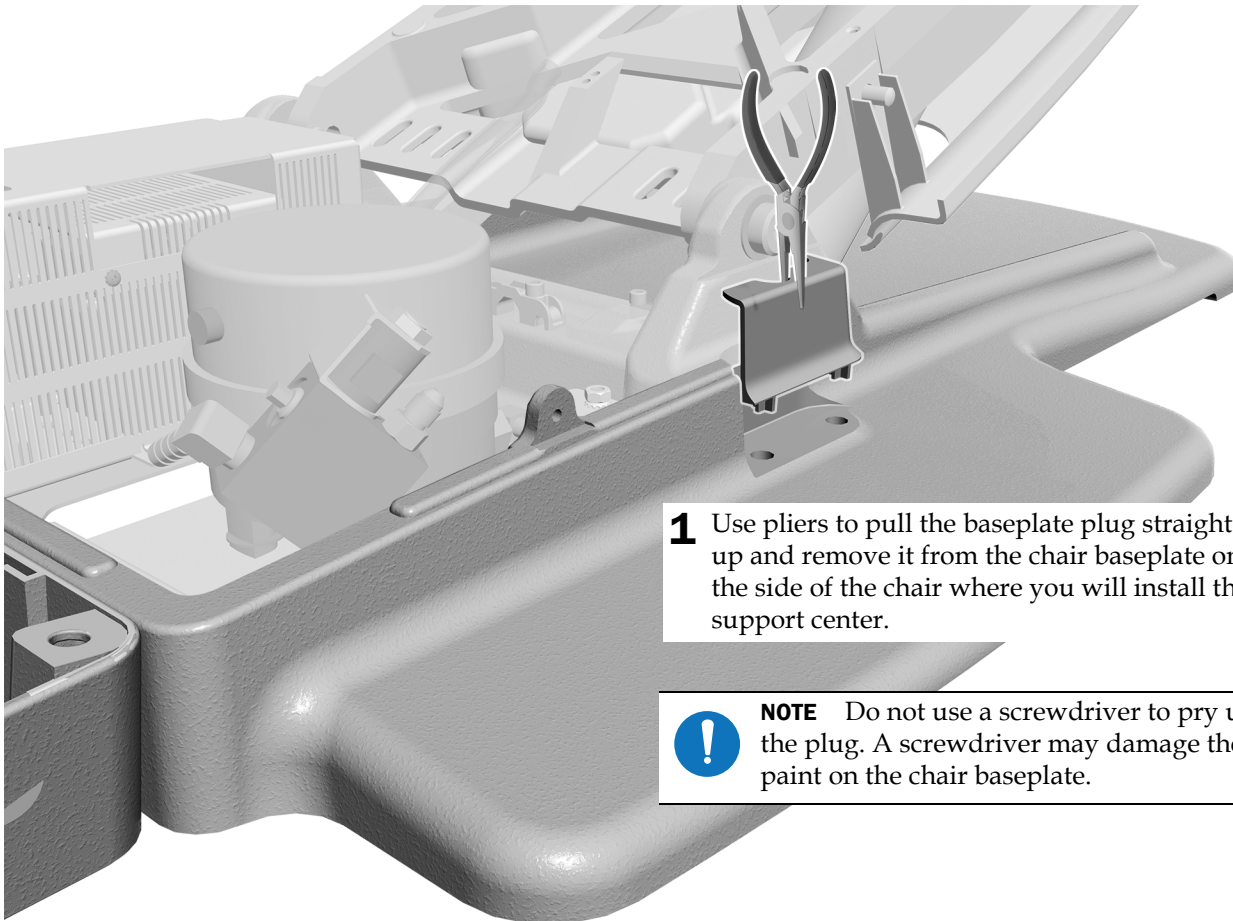
Install the Support Center

The 363 support center can be installed on either side of the chair. These procedures show an installation for a right-handed operator.

Recommended Tools

- Pliers
- Magnetic level
- 1/8", 3/16", and 3/8" hex keys
- 5/16" hex key driver
- Torque wrench with a 5/16" hex bit
- Tape measure

Task 1.

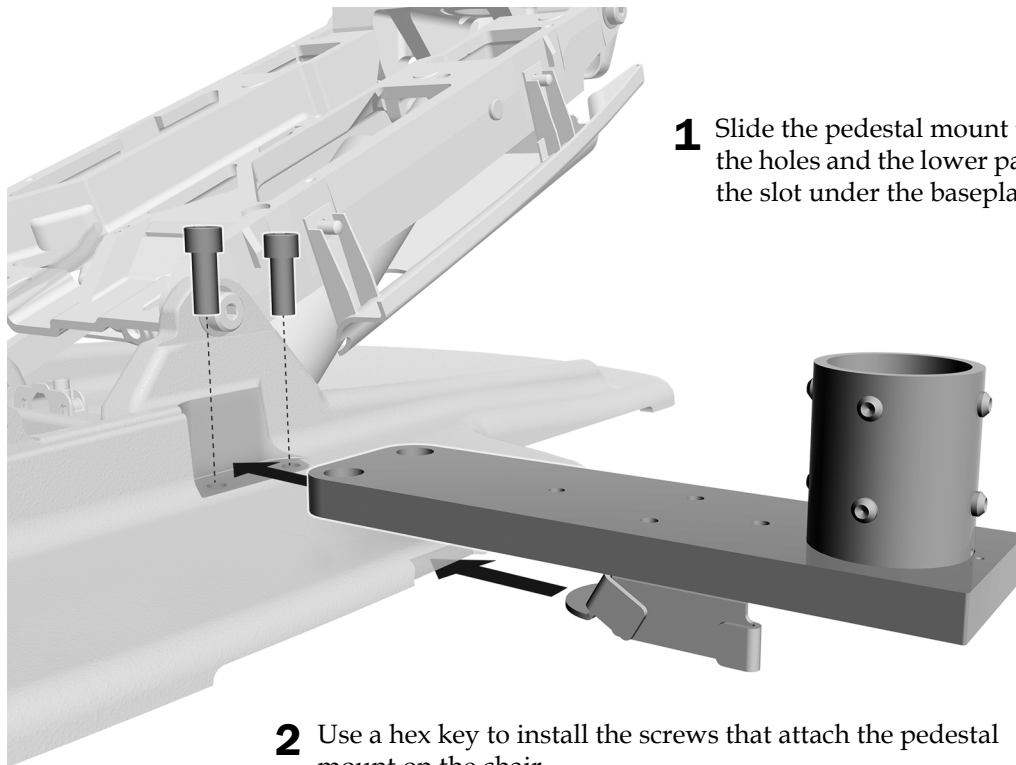


1 Use pliers to pull the baseplate plug straight up and remove it from the chair baseplate on the side of the chair where you will install the support center.



NOTE Do not use a screwdriver to pry up the plug. A screwdriver may damage the paint on the chair baseplate.

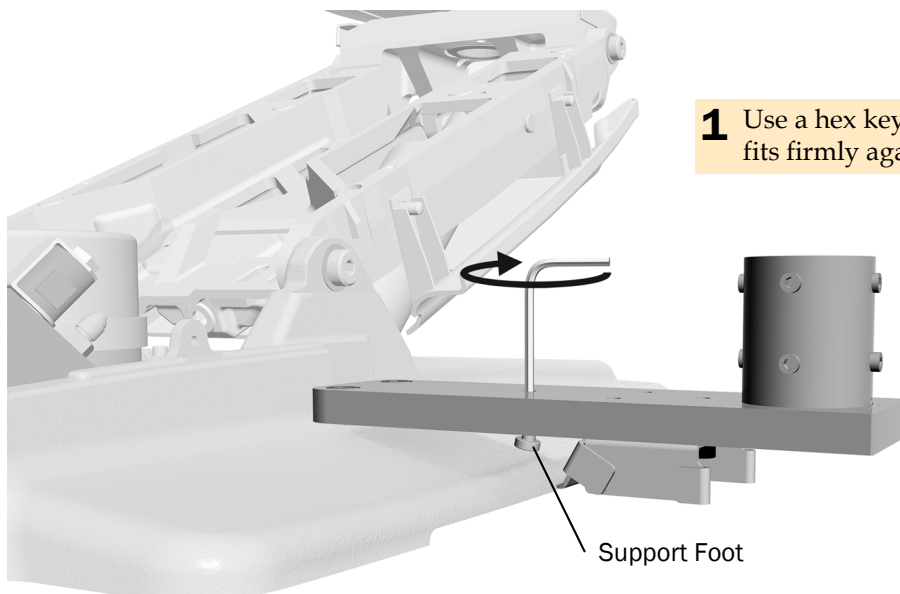
Task 2.



- 1** Slide the pedestal mount toward the chair to align the holes and the lower part of the mount slides into the slot under the baseplate.

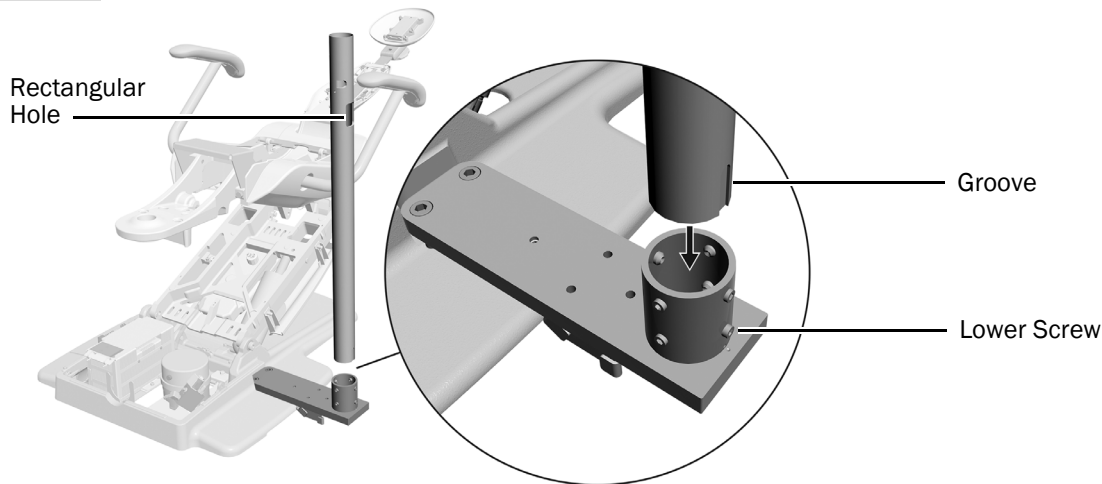
- 2** Use a hex key to install the screws that attach the pedestal mount on the chair.

Task 3.



- 1** Use a hex key to tighten the support foot until it fits firmly against the chair baseplate.

Task 4.



- 1 Place the support center post in the pedestal mount. Orient the rectangular hole and groove toward the right as you face the chair from the toe. Seat the lower screw into the groove.

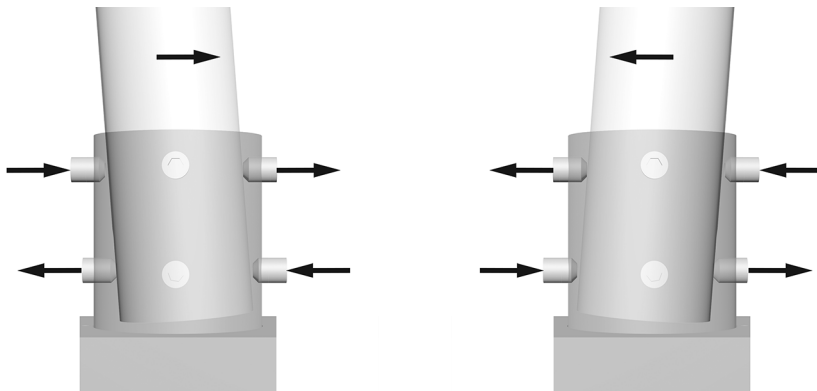
Task 5.

1. Center the post within the mount.
2. Place a level vertically against the post, just above the leveling screws.
3. Tighten the screws around the mount. Keep the post centered in the mount as much as possible.



TIP Start with the screws below the rectangular hole in the post. As you tighten the screws, ensure that a screw is seated in the groove at the bottom of the post.

4. To change the tilt of the post, adjust the leveling screws on the top and bottom of the mount in opposite directions. Which screws you tighten or loosen depends on the direction of the tilt you are trying to correct. Tighten and loosen leveling screws in pairs.



5. Adjust all eight leveling screws around the mount until level is achieved. When the system is level, securely tighten the leveling screws.



NOTE This is the initial leveling of the post. The support center will also require final leveling after all modules are installed.

Task 6.

- 1 Wrap the support center tubing bundle around your arm and lift the support center out of the box.
- 2 Remove the covers from the support center.



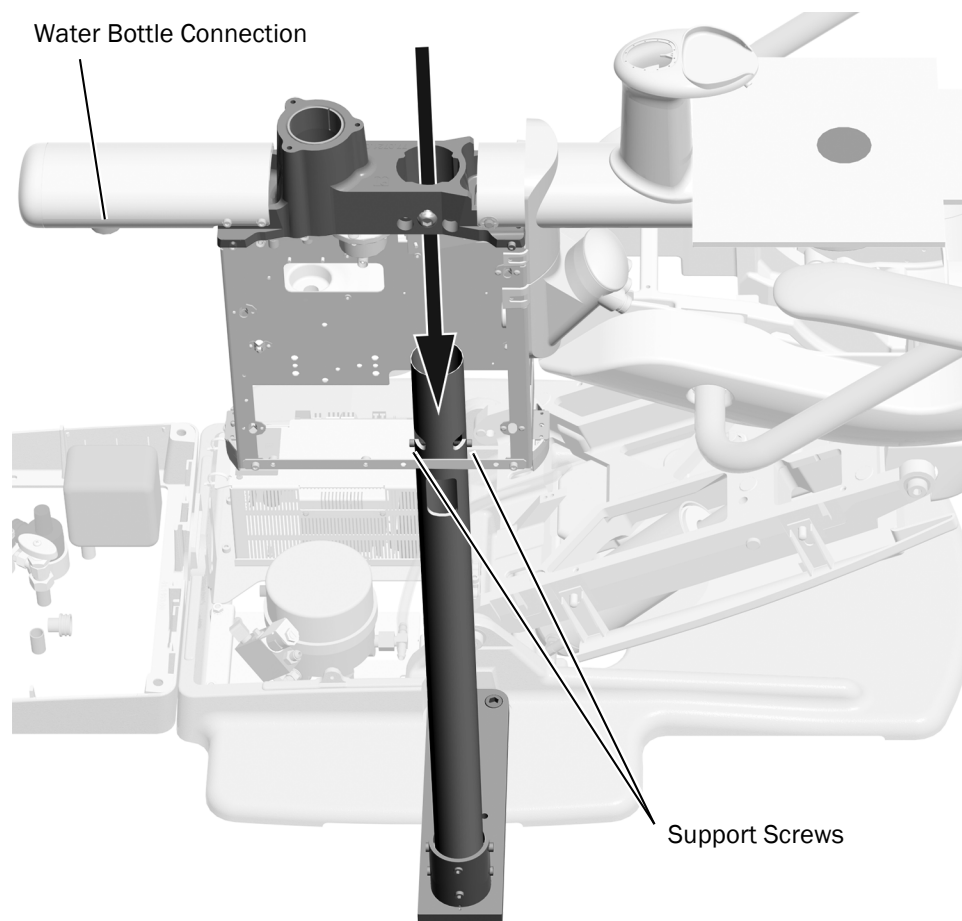
WARNING If the system includes a cuspidor, do not remove the positioning guide that is cable tied to the cuspidor bowl support until the support center is properly aligned. Complete the following section to ensure proper alignment of the support center.

- 3 Hold the support center over the support center post with the water bottle connection toward the toe of the chair.



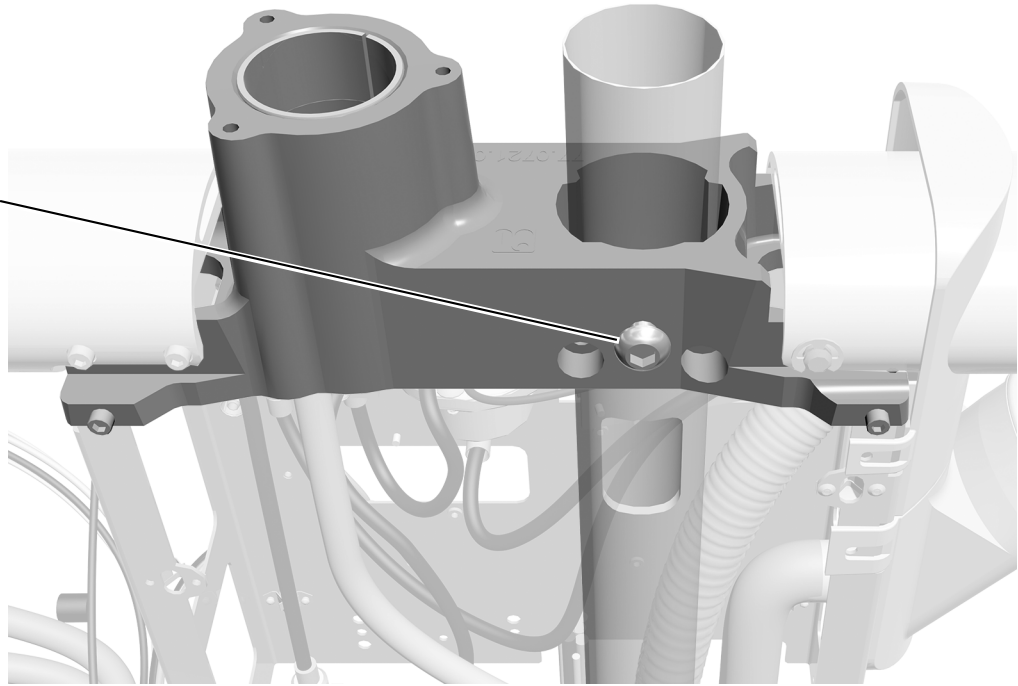
CAUTION Be careful to clear all wires and tubing so they stay on the inside of the support center frame and do not get pinched or kinked.

- 4 Slide the support center down the post until the frame rests on the support screws.



Task 7.

Button Head Screw



- 1** Use a hex key driver to tighten the button head screw so that you can pivot the support center but it does not spin freely.

Task 8.

If your system includes a cuspidor:

- 1** Turn on the power to the chair.
- 2** Unfold the positioning guide.



WARNING The positioning guide must clear the armrest to provide the proper clearance between the cuspidor bowl and armrest.

- 3** Align the support center so the positioning guide clears the armrest but does not leave a gap. (A gap can cause the support center covers to fit incorrectly.)



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.

- 4** To test clearance, use the jumper to move the chair up and down.

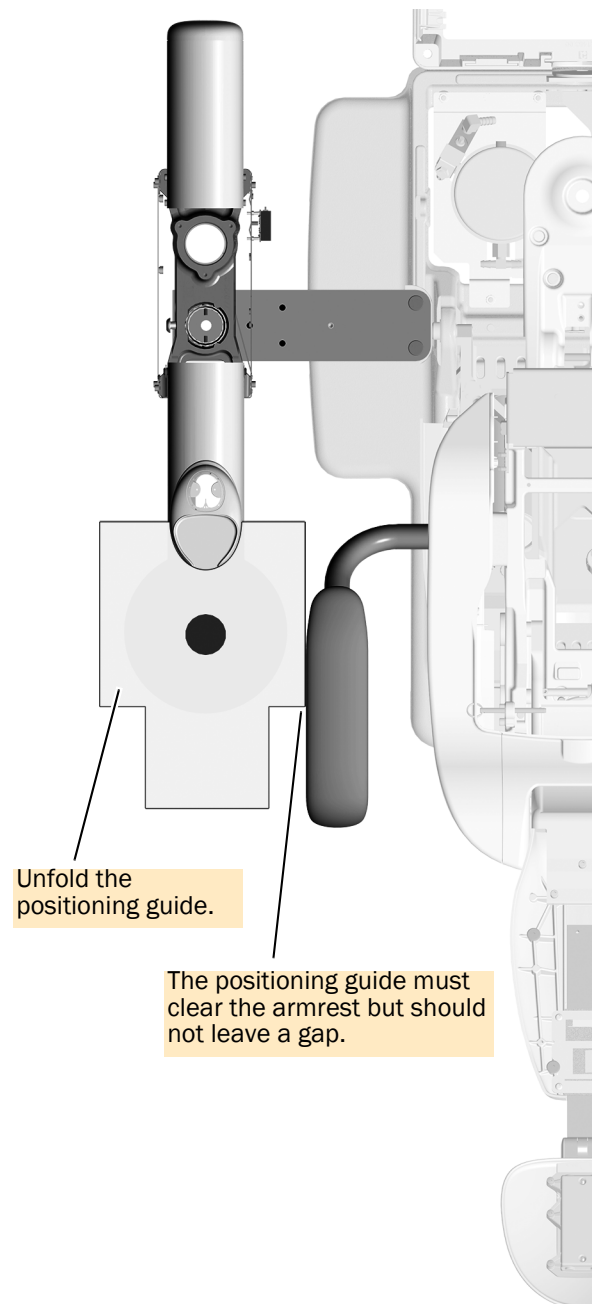


WARNING Failure to turn off or disconnect the power before you begin this procedure can lead to product damage and result in serious injury or death.

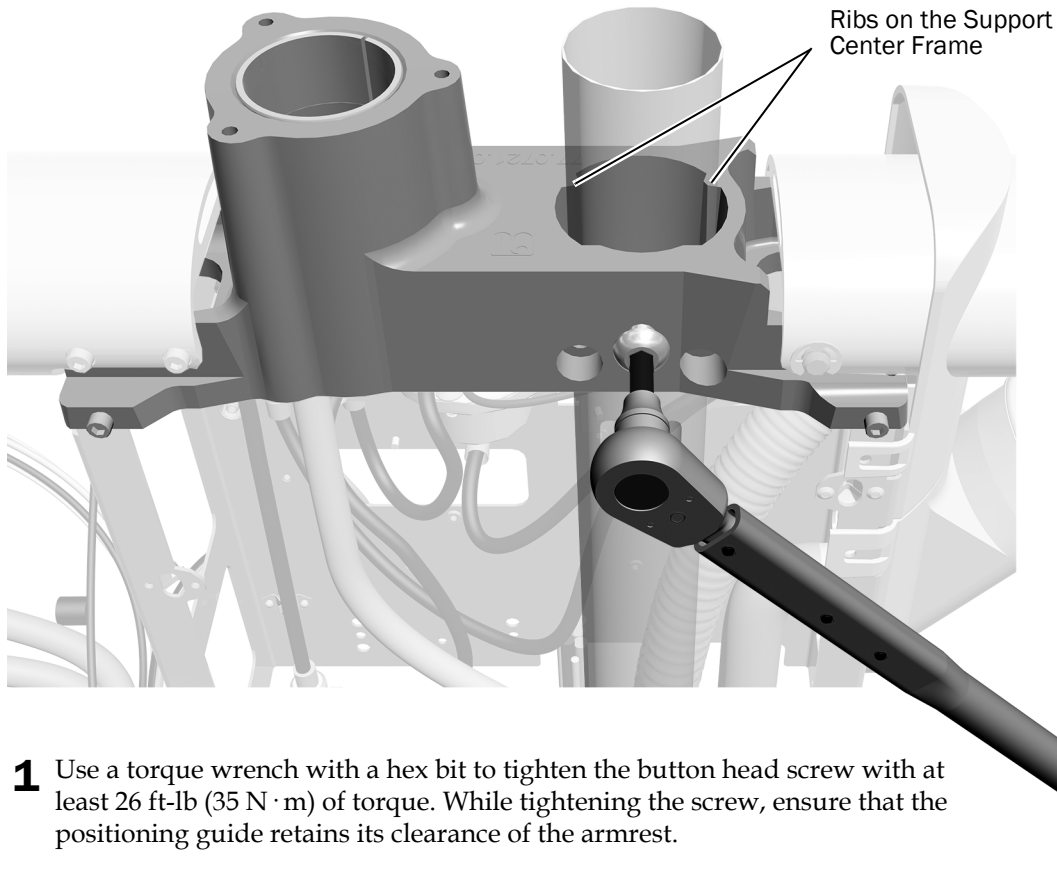
- 5** Turn off the power to the chair.

If your system does not include a cuspidor or the chair does not have an armrest next to the cuspidor:

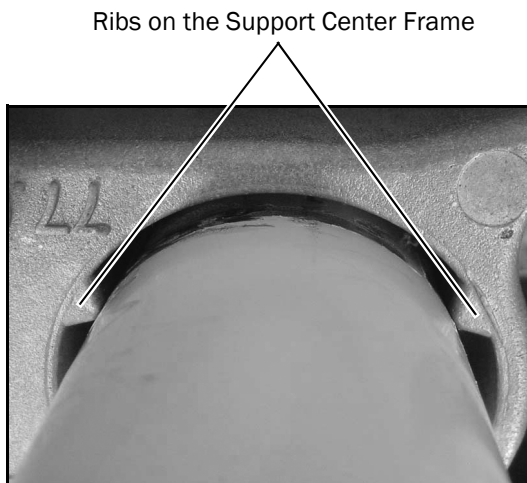
- 1** Align the support center so it is parallel to the dental chair.



Task 9.



- 1** Use a torque wrench with a hex bit to tighten the button head screw with at least 26 ft-lb (35 N · m) of torque. While tightening the screw, ensure that the positioning guide retains its clearance of the armrest.

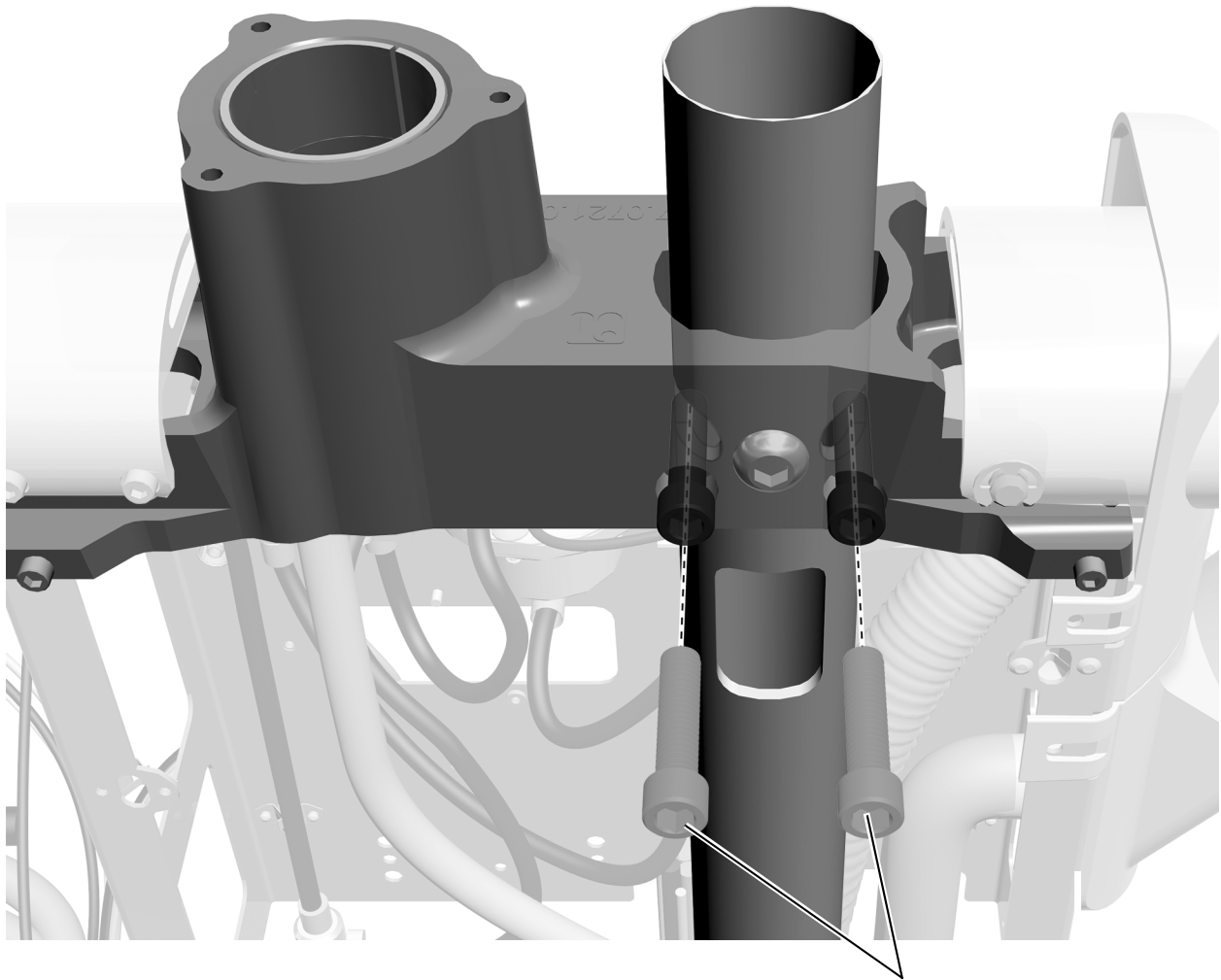


- 2** Confirm that the ribs on the support center frame are fully seated against the post. If necessary, tighten the button head screw with more torque.

NOTE The entire length of the ribs on the support center frame must be fully seated against the post. Incomplete seating will cause problems with leveling later in the installation process.

Task 10.

- 1 Use a hex key driver to install the two 1-1/2" socket head screws. Alternately tighten the screws until they evenly touch the back of the holes in the support center post and are firmly secure.



Socket Head Screws



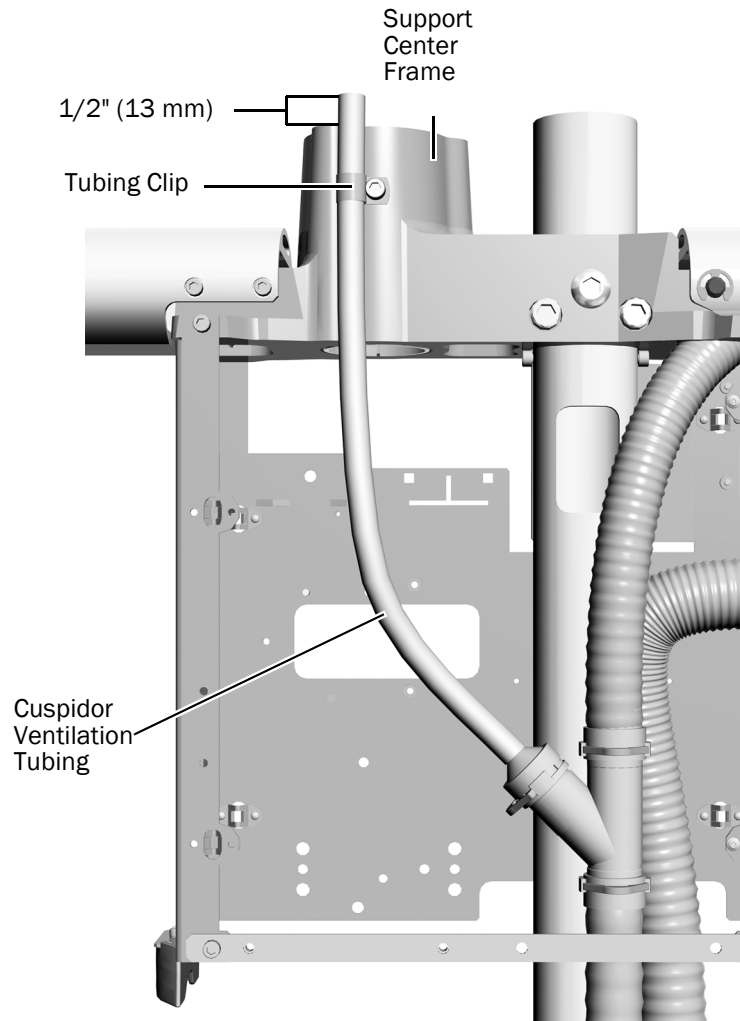
NOTE As you tighten the screws, ensure that the positioning guide retains its clearance of the armrest.

Task 11.



CAUTION Verify that the end of the cuspidor ventilation tubing is 1/2" (13 mm) above the support center frame. This ensures that the cuspidor drains properly.

- 1** If it is necessary to adjust the length of the cuspidor ventilation tubing, use a hex key to loosen the clip securing the cuspidor ventilation tubing on the support center.
- 2** Shift the tubing up so that the end is 1/2" (13 mm) above the support center frame.
- 3** Tighten the clip to secure the ventilation tubing in the correct position.



Install the A-dec 352/353 Assistant's Instrumentation

Complete the appropriate instructions to install the assistant's instrumentation.

Install the A-dec 352 Assistant's Instrumentation Mounted on a Telescoping Arm 13

Install the A-dec 353 Cuspidor-Mounted Assistant's Instrumentation 17



A-dec 352 Telescoping Assistant's Instrumentation with Optional Touchpad



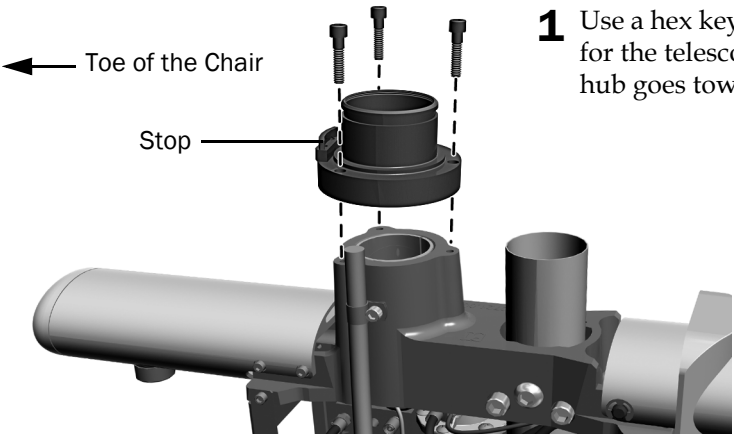
A-dec 353 Cuspidor-Mounted Assistant's Instrumentation with Optional Touchpad

Install the A-dec 352 Assistant's Instrumentation Mounted on a Telescoping Arm

Recommended Tools

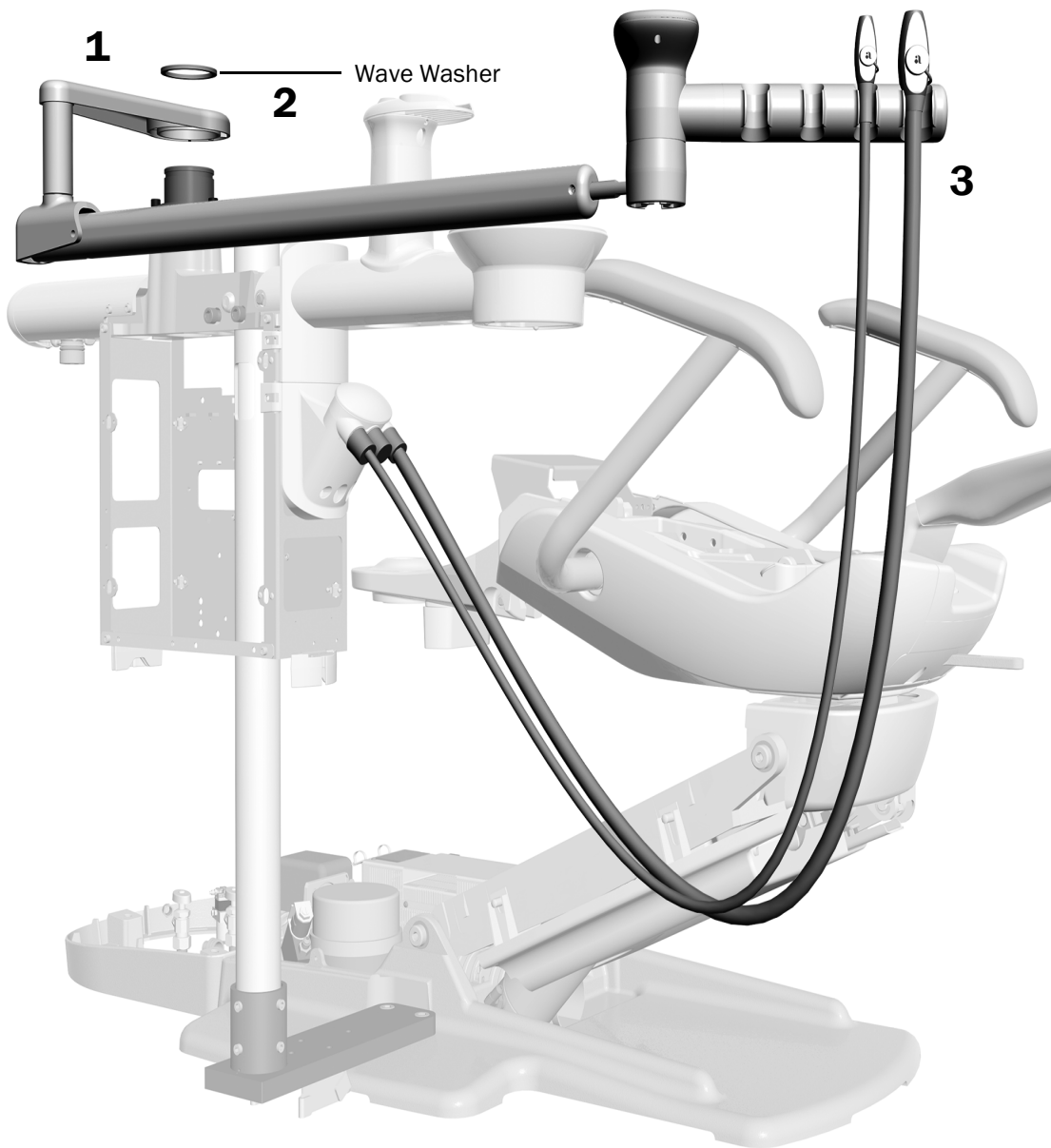
- 3/16" hex key
- Diagonal cutters

Task 1.



1 Use a hex key and three 1" socket head screws to mount the hub for the telescoping arm on the support center. The stop on the hub goes toward the toe of the chair.

Task 2.



1. Set the assistant's arm on the hub.
2. Push down one end of the wave washer and catch it on the hub ridge. Continue to work systematically around the hub to push the washer down until it is completely installed.
3. Place the HVE and saliva ejector in their holders, and then attach their tubing to the vacuum canister.

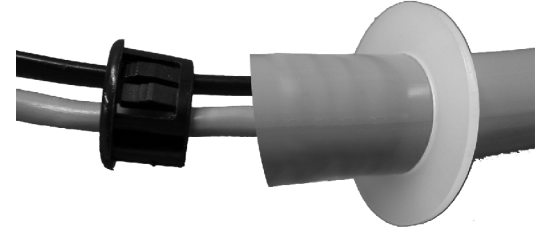


NOTE If the system includes an air vacuum system, the HVE and saliva ejector are installed before the product is shipped and cannot be removed.

Task 3.

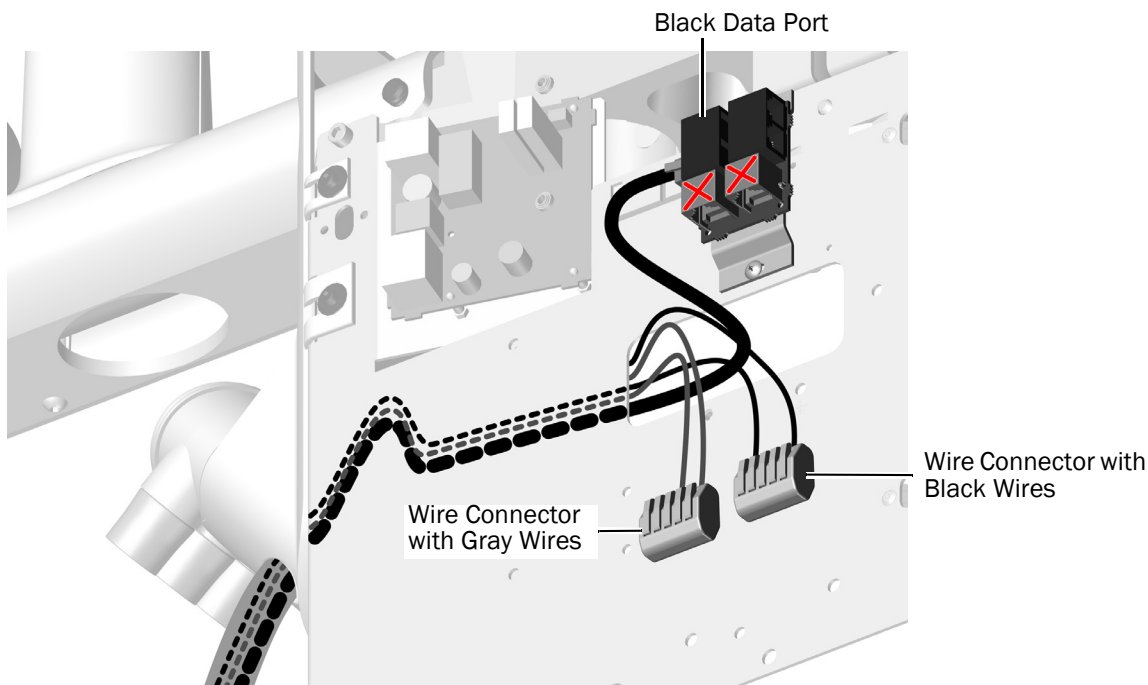
ATTENTION Circuit boards are sensitive to static electricity. Electrostatic Discharge (ESD) precautions are required when touching a circuit board or making connections to or from the circuit board. Circuit boards should be installed only by an electrician or qualified service person.

- 1** If the system includes a touchpad, route the touchpad tubing under the vacuum canister through the hole on the right (it is the largest hole).
- 2** Install the strain relief for the touchpad tubing by placing the washer on the tubing and then inserting the bushing into the tubing.



TIP When setting the strain relief, leave enough tubing to match the drape of the instrument tubing.

- 3** Route the touchpad data line and power cables through the support center and through the rectangular hole to the outside of the support center frame.

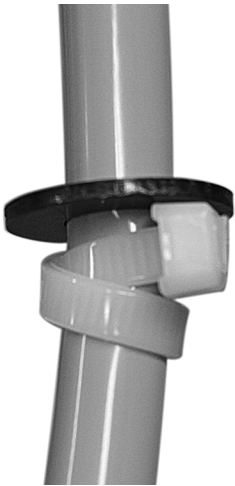
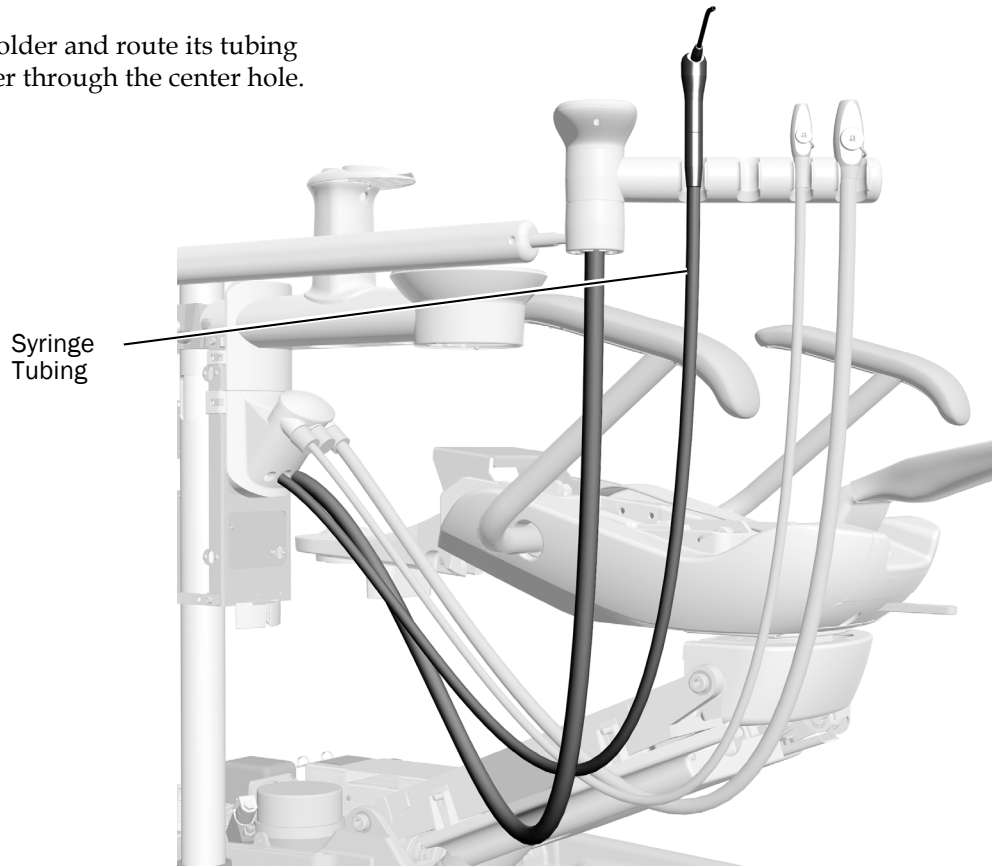


CAUTION Plugging the black DCS1 data line into a gray DCS2 port can damage the product.

- 4** Plug the data line into a black DCS1 data port.
- 5** Attach each power wire to the wire connector with the same color of wire.

Task 4.

- 1** Place the syringe in the holder and route its tubing under the vacuum canister through the center hole.



- 2** Use a cable tie and the black washer to create a strain relief for the syringe tubing. Make a double loop with the cable tie to firmly hold the tubing.



TIP When setting the strain relief, leave enough tubing to match the drape of the instrument tubing.

Install the A-dec 353 Cuspidor-Mounted Assistant's Instrumentation

Recommended Tools

- Diagonal cutters
- Hex key set

Task 1.

- 1 Use diagonal cutters to cut the cable tie and remove the cuspidor positioning guide and foam plug.

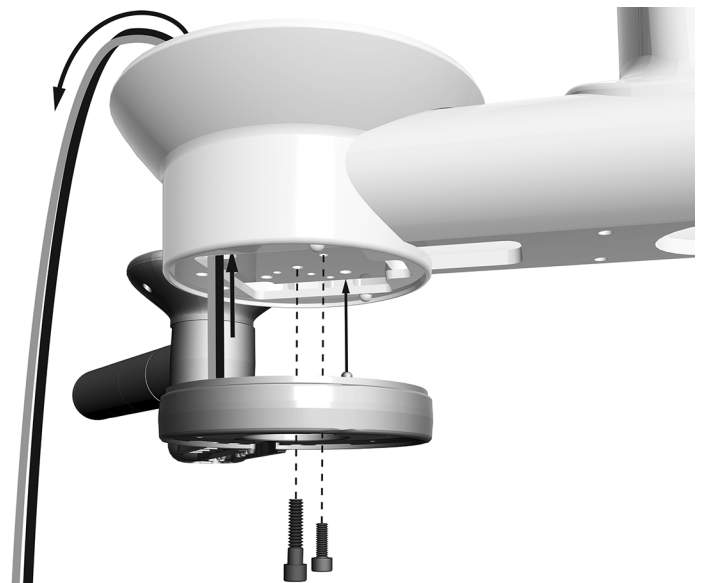


NOTE Save the positioning guide and the foam plug holding it in the cuspidor bowl support. You will need it later to verify proper clearance between the cuspidor bowl and armrest. For more information, see "Verify the Clearance for the Cuspidor Bowl" on page 56.

- 2 If the system includes an air vacuum system (AVS), use a hex key to remove the two screws connecting the toggle assembly to the bottom of the cuspidor bowl support.

Task 2.

- 1 If the assistant's instrumentation includes a touchpad, route the power cable and data line up into the cuspidor holder.
- 2 Place the assistant's instrumentation under the cuspidor holder and rotate it away from the chair until the post fits into the hole in the bottom of the cuspidor bowl support.
- 3 Attach the assistant's instrumentation to the bottom of the cuspidor holder.
 - Use a hex key to install the middle screw.
 - Use a hex key to install the screw in the large, off-center recessed hole.
- 4 If you disconnected the AVS toggle assembly in step 2 of Task 1, reconnect it now.



Socket Head Screws (Actual Size Shown)



For the Middle Hole
(1/4-20 x 1" Screw)



For the Recessed Hole
(10-32 x 5/8" Screw)

Task 3.

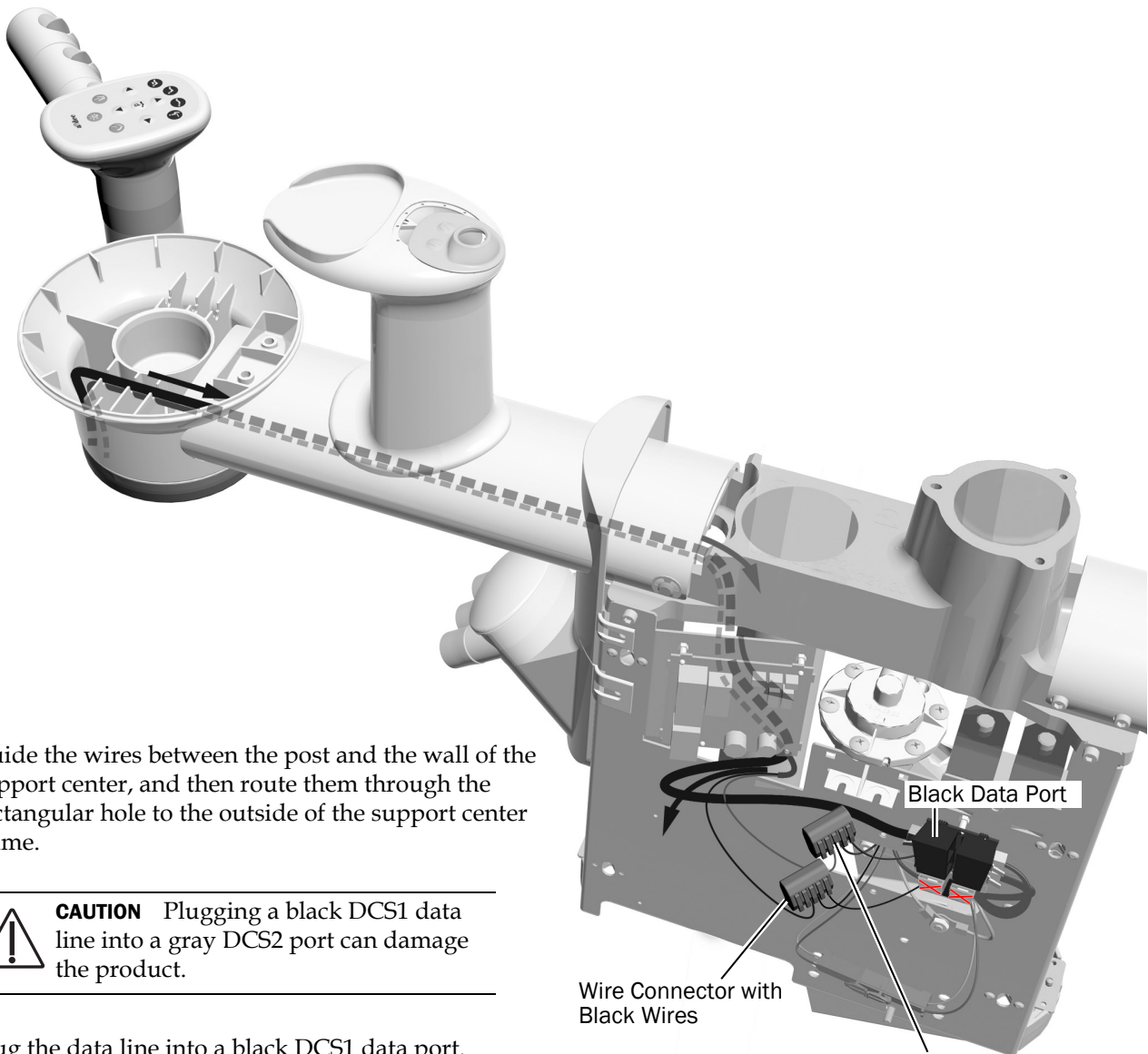
If the assistant's instrumentation includes a touchpad:

- 1 Route the power cable and data line through the cuspidor arm and into the support center.



TIP Attach a cable tie to the end of the wires to route them through the cuspidor arm.

- 2 Route the power cable and the data line through the cuspidor grooves.



- 3 Guide the wires between the post and the wall of the support center, and then route them through the rectangular hole to the outside of the support center frame.



CAUTION Plugging a black DCS1 data line into a gray DCS2 port can damage the product.

- 4 Plug the data line into a black DCS1 data port.
- 5 Attach each power wire to the wire connector with the same color of wire.

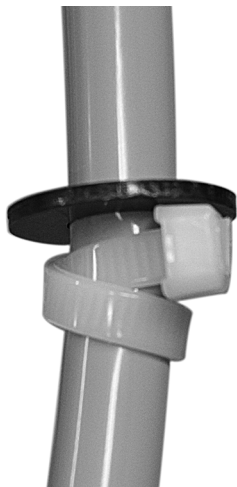
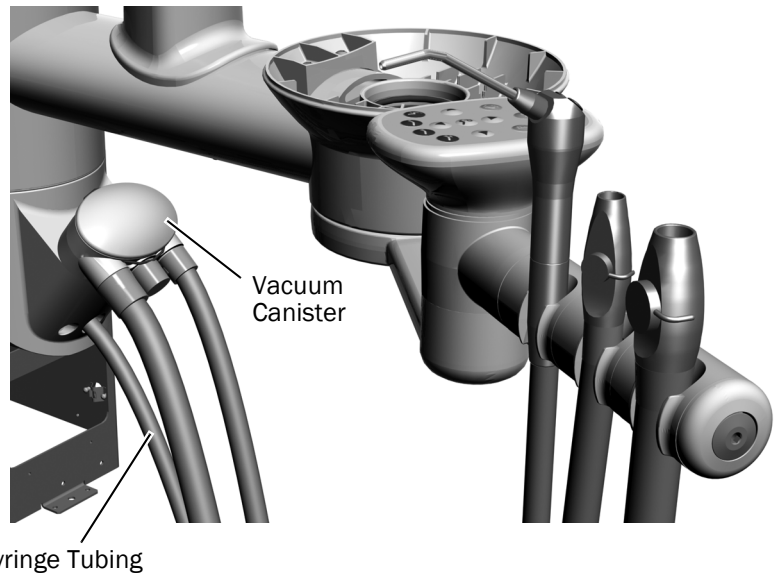
Task 4.

- 1 Place the high volume evacuation (HVE) and saliva ejector in their holders, and then attach their tubing to the vacuum canister.



NOTE If the system includes an AVS, the HVE and saliva ejector are installed before the product is shipped and cannot be removed.

- 2 Place the syringe in the holder and route its tubing under the vacuum canister through the center hole.



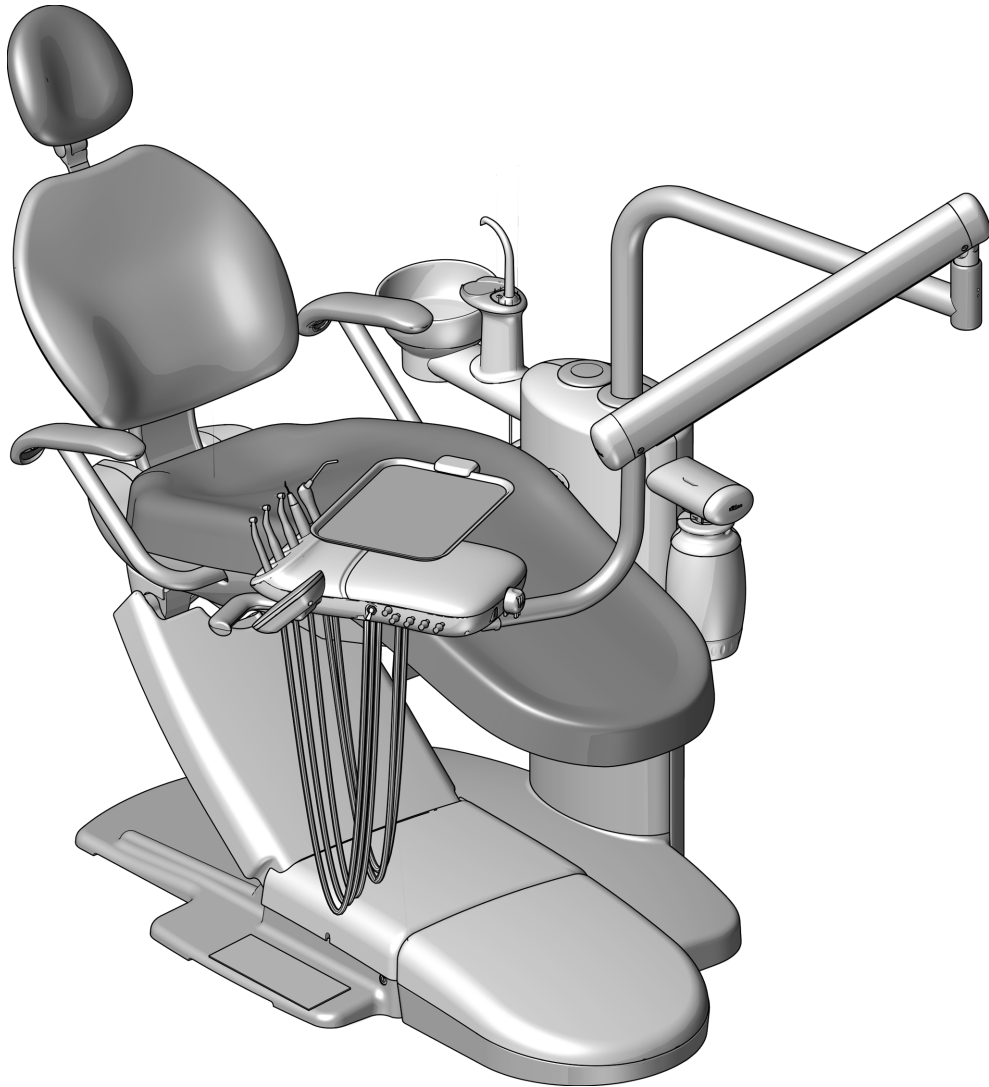
- 3 Use a cable tie and the black washer to create a strain relief for the syringe tubing. Make a double loop with the cable tie to firmly hold the tubing.



TIP When setting the strain relief, leave enough tubing to match the drape of the instrument tubing.

Install the A-dec 334pro/335pro/334/335 Delivery System

The A-dec support center can be configured with a Traditional (A-dec 334pro/334) or Continental® (A-dec 335pro/335) delivery system. The installation steps are the same for both types of delivery system.



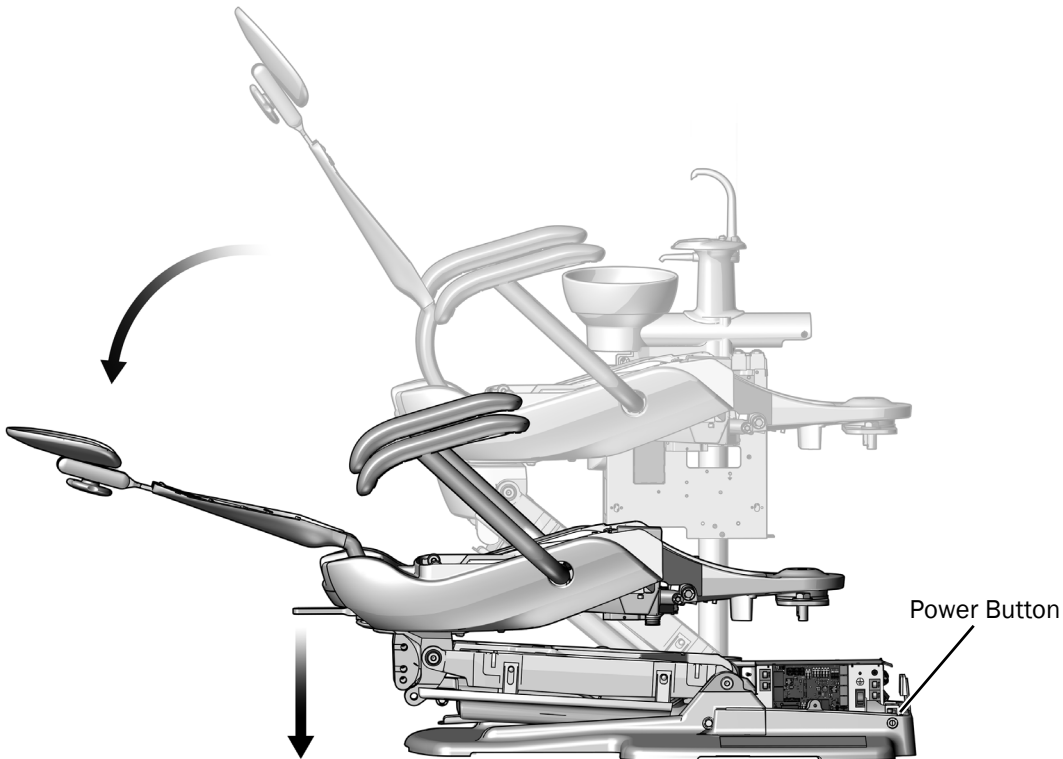
A-dec 334pro Traditional Delivery System

Recommended Tools

- Hex key set
- 3/8" combination wrench
- Diagonal cutters

Install the Delivery System Components

Task 1.



- 1** Turn on the power to the chair.



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** Use the jumper to fully lower the chair.

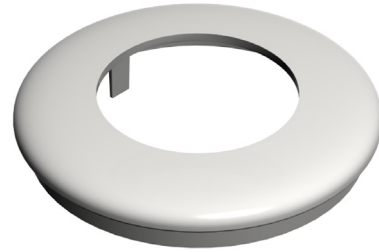


WARNING Failure to turn off or disconnect the power before you begin this procedure can lead to product damage and result in serious injury or death.

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

Task 2.

- 1 Ensure the correct trim ring is on the delivery system post.
 - If the system includes a delivery system but no assistant's instrumentation mounted on a telescoping arm, use the trim ring that ships on the delivery system post.



Trim Ring Used With Delivery System and no Assistant's Instrumentation

- If the system includes a delivery system and an A-dec 352 assistant's instrumentation mounted on a telescoping arm, use the trim ring that ships in the kit.



Trim Ring Used With Delivery System and an A-dec 352 Assistant's Instrumentation Mounted on a Telescoping Arm

Task 3.

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

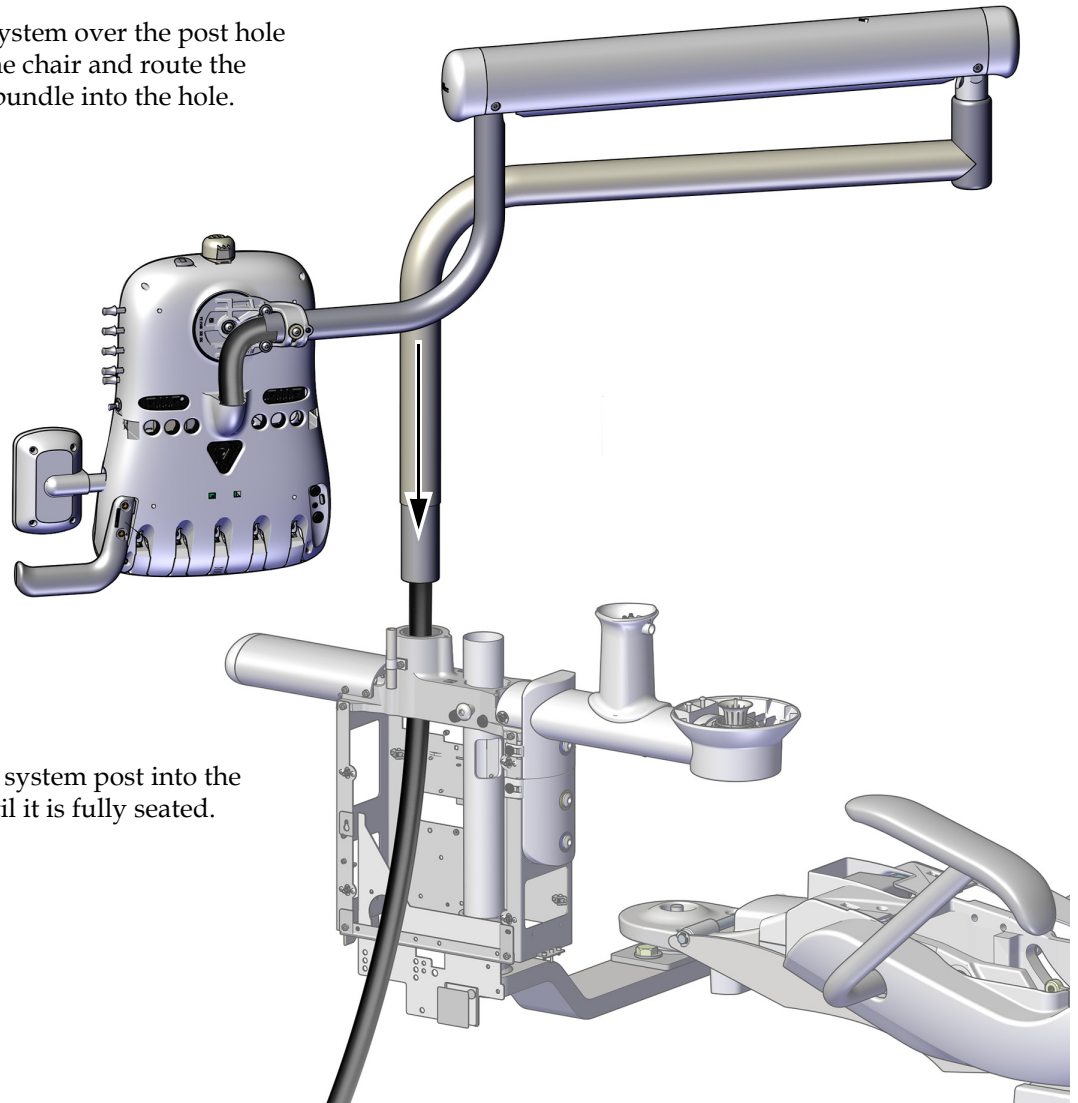


A-dec 334pro Shown

Task 4.

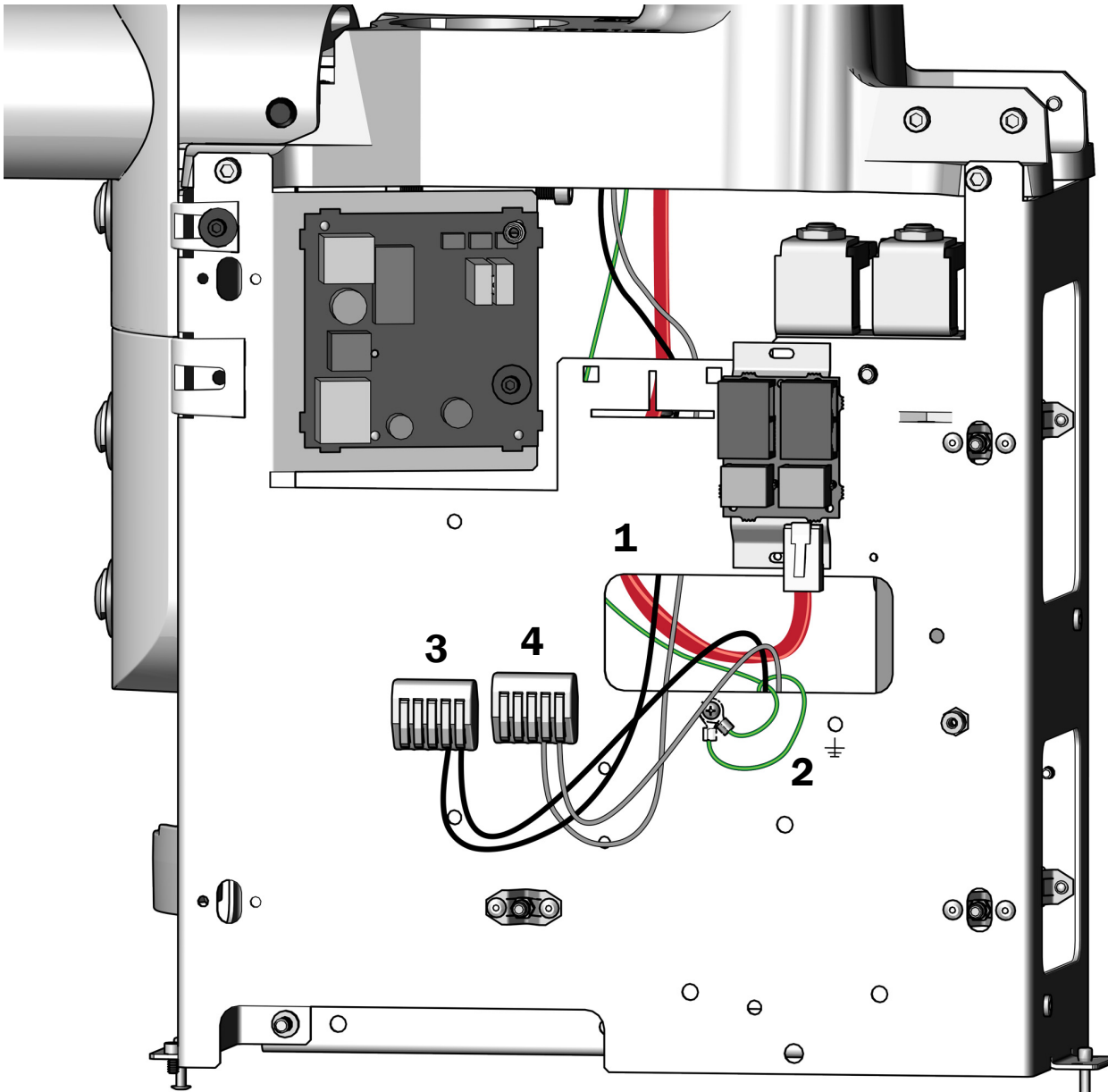
- 1** Hold the delivery system over the post hole toward the toe of the chair and route the tubing and wiring bundle into the hole.

A-dec 335pro Shown



- 2** Insert the delivery system post into the support center until it is fully seated.

Task 5.



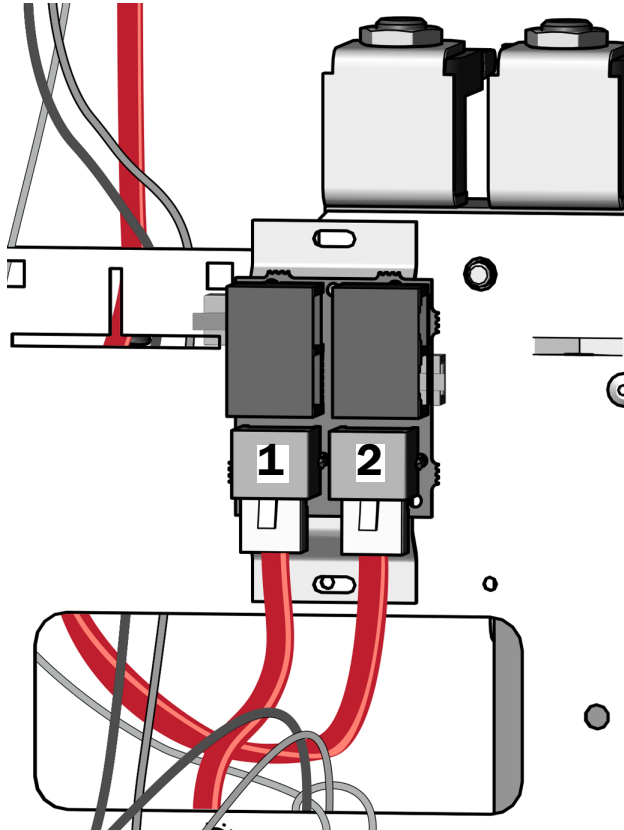
Wires and a Red DCS2 Data Line From a 334pro/335pro Shown

- 1** Route the wires and data line from the delivery system through the rectangular hole to the outside of the support center frame.
- 2** Attach the ground wire.
- 3** Connect the black wire to the wire connector with a black wire already attached.
- 4** Connect the gray wire to the wire connector with a gray wire already attached.

Task 6.

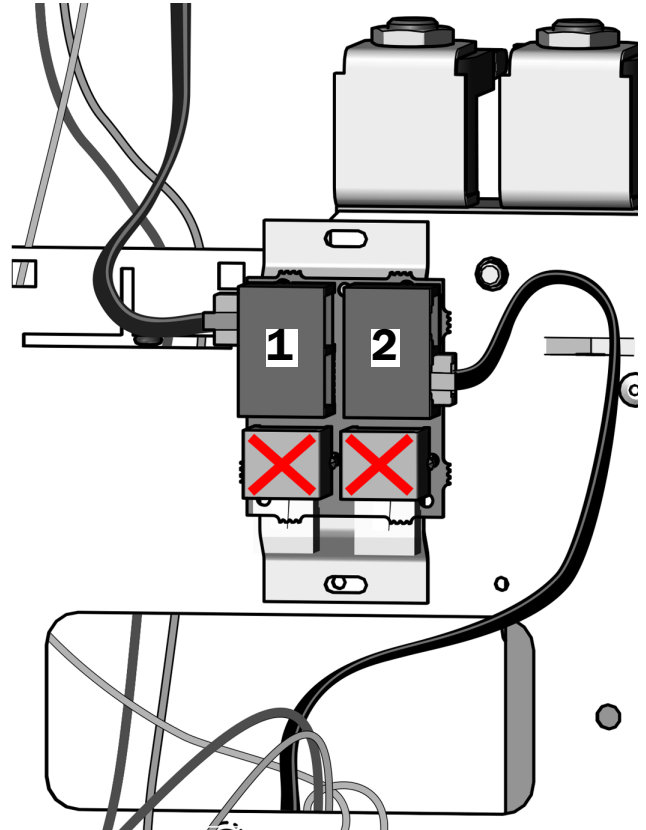
Complete one of the following:

A-dec 334pro/335pro Delivery Systems



- 1** Route the **red** DCS2 data line from the chair circuit board through the hole and connect it to a **gray** DCS2 data port.
- 2** Plug the **red** DCS2 data line from the delivery system into a **gray** DCS2 data port.
- 3** Connect the two-position black connector to the black 24 VAC isolated lead, if present.
- 4** Coil the excess wire and store it in the support center.

A-dec 334/335 Delivery Systems



CAUTION Plugging a black DCS1 data line into a gray DCS2 port can damage the product.

- 1** Plug the **black** DCS1 data line from the delivery system into a **black** DCS1 data port.
- 2** Route the **black** DCS1 data line from the chair circuit board through the hole and connect it to a **black** DCS1 data port.
- 3** Connect the two-position black connector to the black 24 VAC isolated lead, if present.
- 4** Coil the excess wire and store it in the support center.

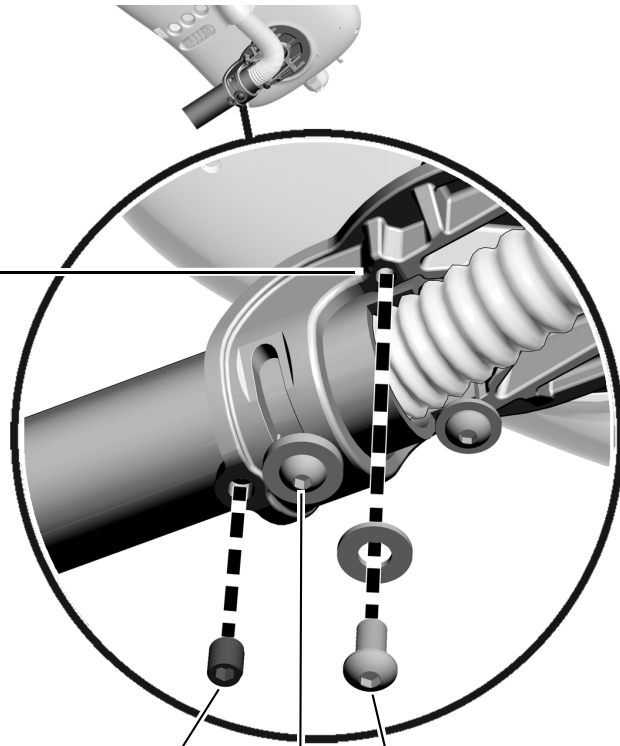
Task 7.

1. Loosen the button head screw.



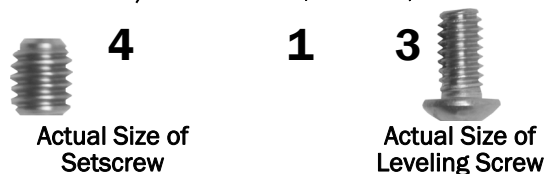
NOTE Do not back out the button head screw all of the way. Only loosen it enough to be able to move the control head.

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.



Install the Handpiece Tubing and Adjustment Keys (A-dec 334pro/334/335 only)

A-dec 334pro Shown



Task 8.

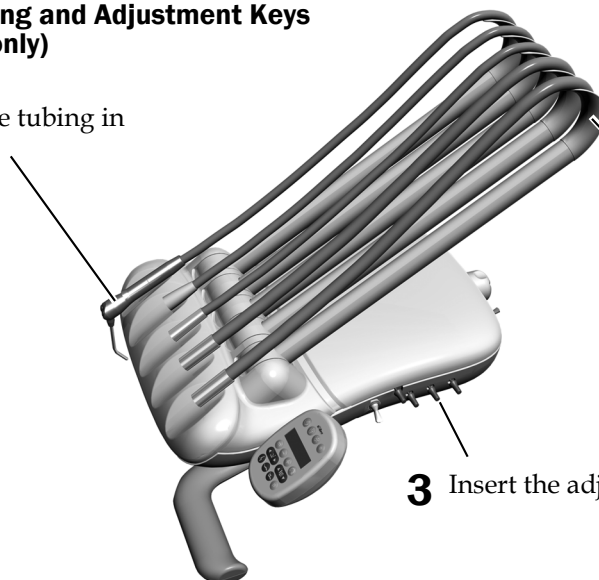
Install the Handpiece Tubing and Adjustment Keys (A-dec 334pro/334/335 only)

- 1 Place the handpiece tubing in position for use.

- 2 A-dec 335 Continental delivery systems only. Insert the whip hooks.

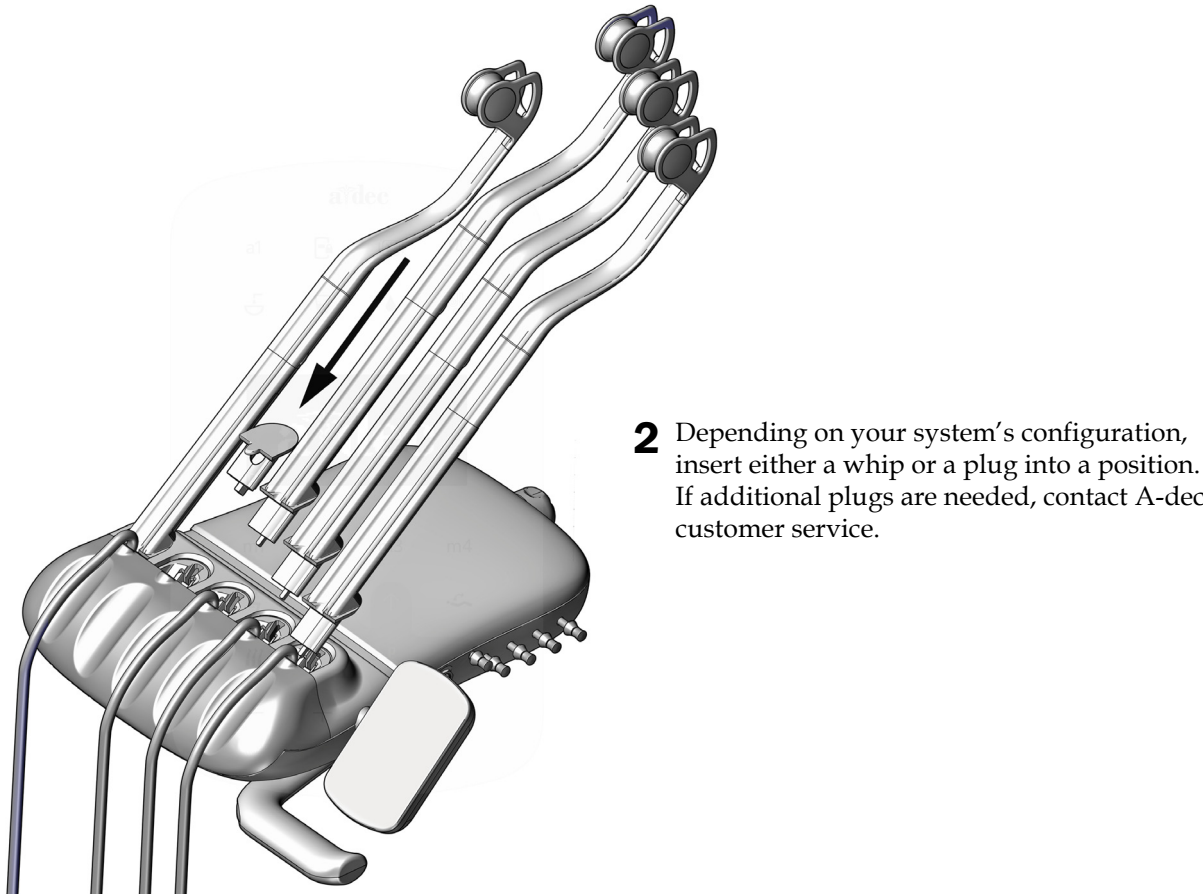
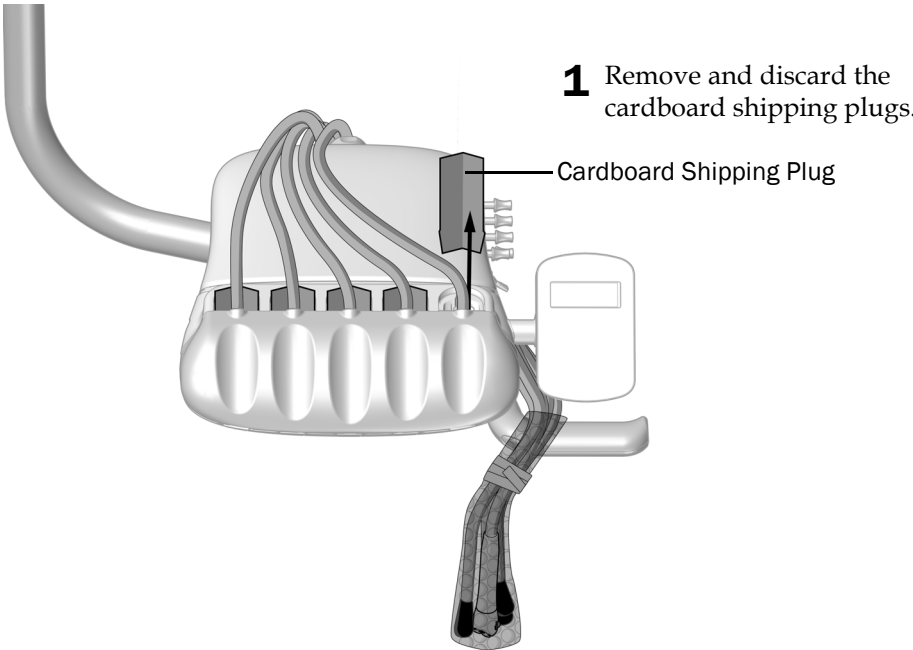
- 3 Insert the adjustment keys.

A-dec 335 Shown

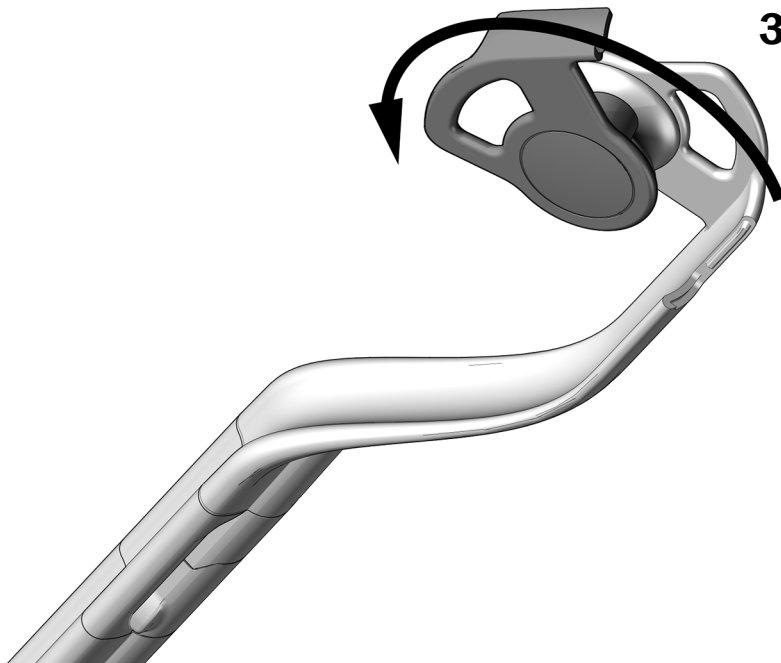


Task 9.

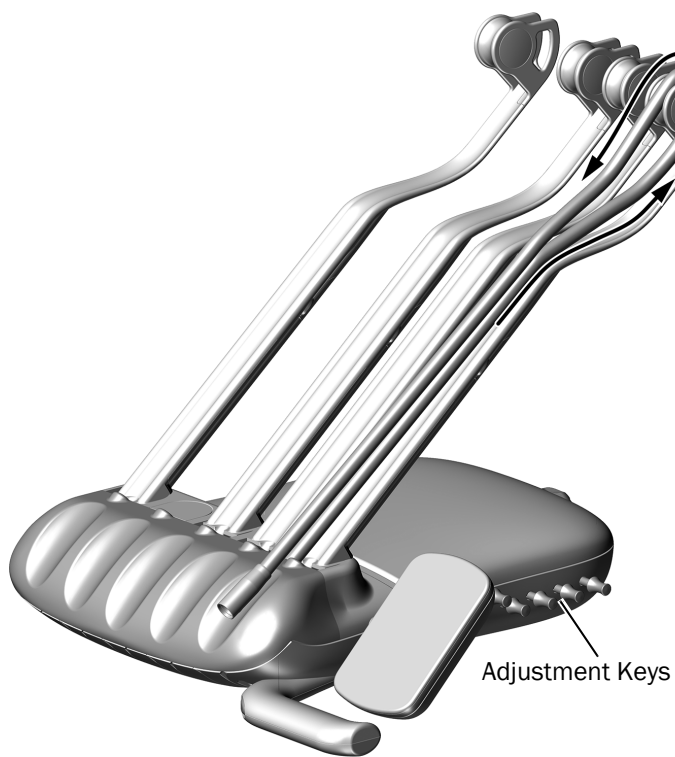
Install the Continental Whips and Adjustment Keys (A-dec 335pro only)



- 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.

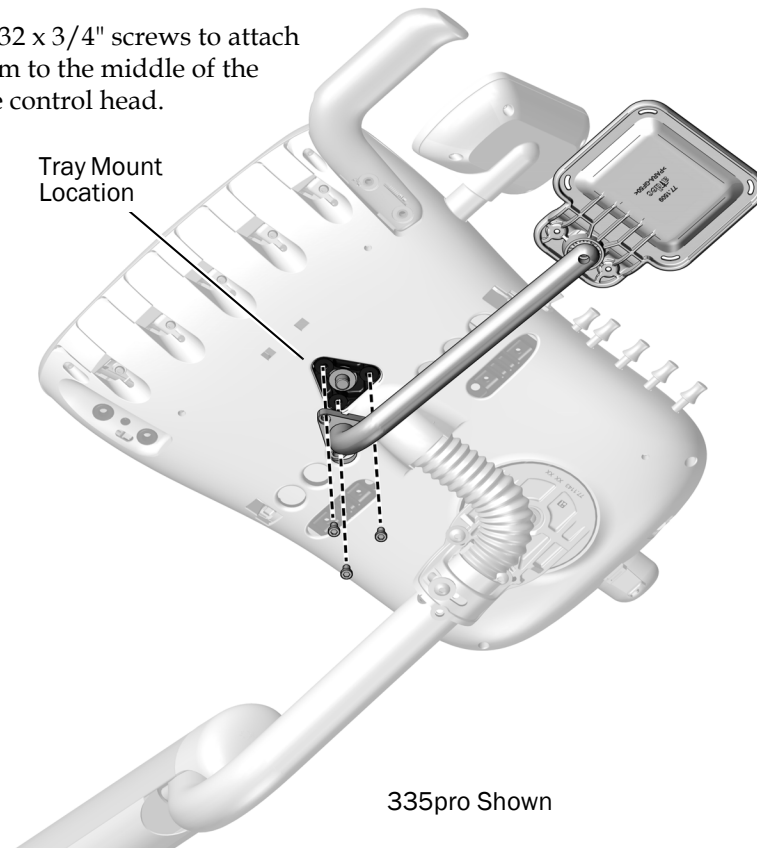


Install the Tray Holder Mount (Optional)

To install the tray holder, select the type of delivery system and complete the steps.

Continental Delivery System

- 1 Use three 10-32 x 3/4" screws to attach the mount arm to the middle of the bottom of the control head.



Traditional Delivery System

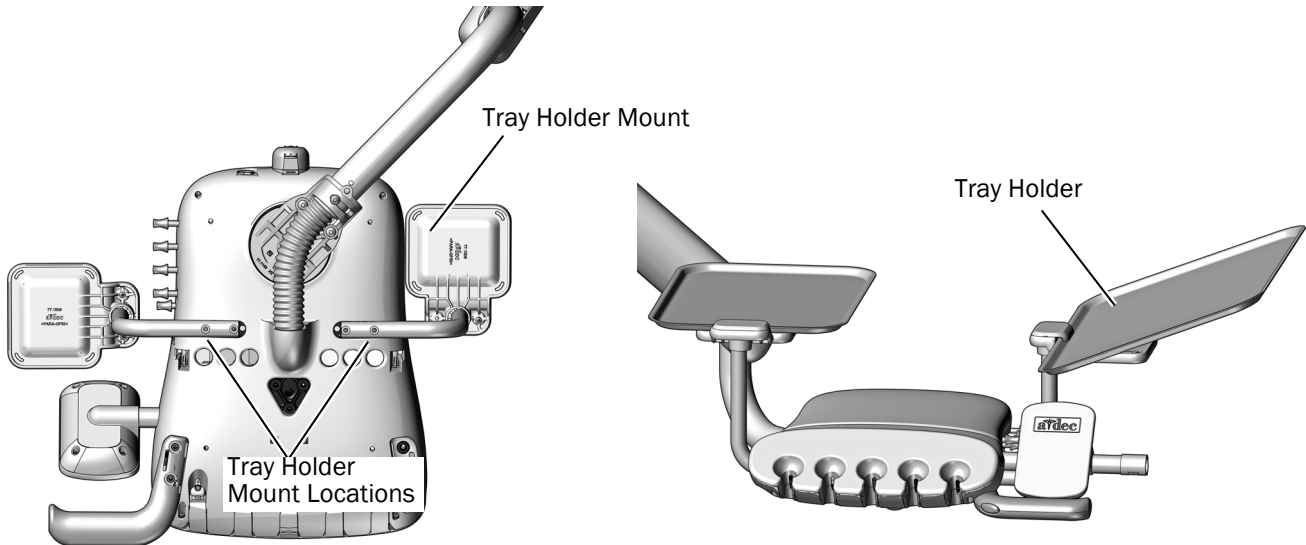


NOTE Large tray holders attach to mount arms in a different orientation than small tray holders. For proper orientation, see the illustrations below.

- 1 Use two 10-32 x 1" button head screws to attach the tray holder support arm to the side of the bottom of the control head.
- 2 Tilt one end of the tray holder up and place the lip of the tray holder under the edge of the tray holder support and lower the tray holder into place.



TIP While the tray holder can be installed on either side of the control head, it is helpful to mount it on the side opposite of the adjustment keys to provide better access to the keys.



334pro Shown

Install the A-dec Dental Light

If your system includes a dental light, install it now. See the installation guide that ships with the dental light.

Install the Monitor Mount

If your system includes a monitor mount, install it now. See the installation guide that ships with the monitor mount.

Install the Cuspidor



Recommended Tool

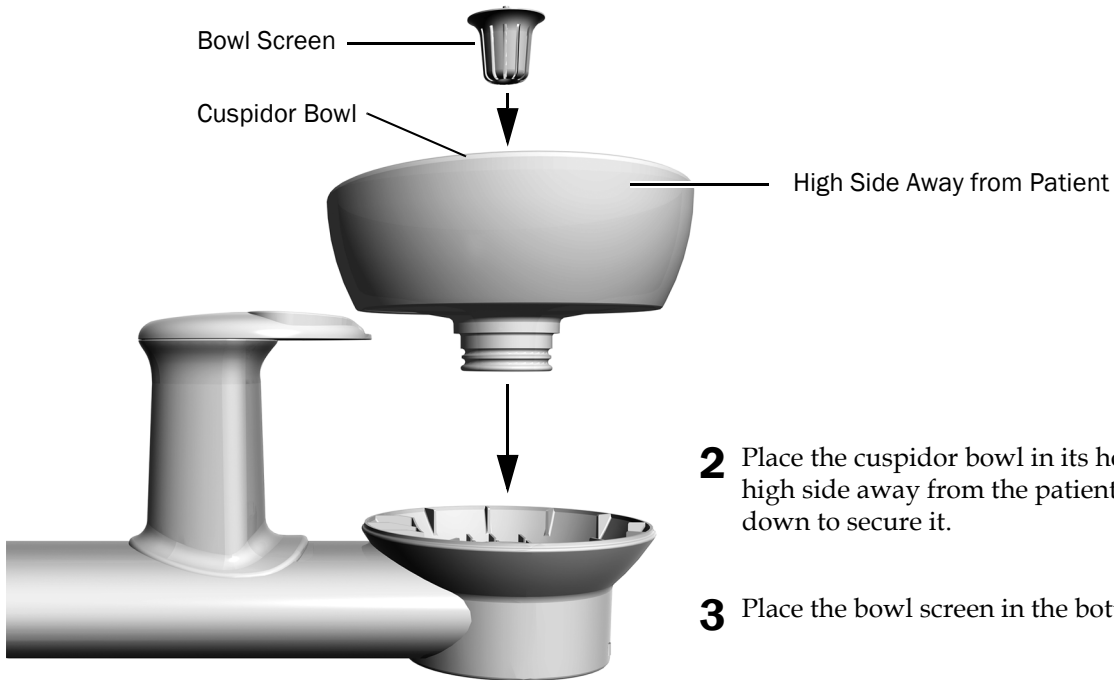
- Diagonal cutters

Task 1.

- 1 Use diagonal cutters to cut the cable tie and remove the positioning guide and foam plug.

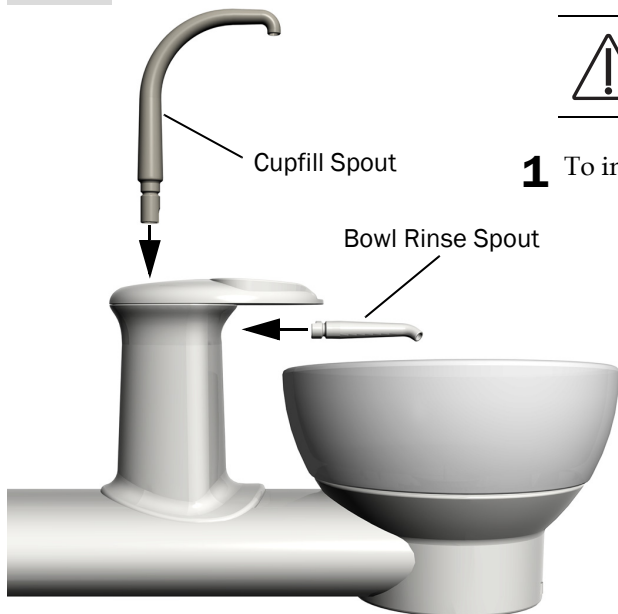


NOTE Save the positioning guide and the foam plug holding it in the cuspidor bowl support. You will need them later to verify proper clearance between the cuspidor bowl and armrest.



- 2 Place the cuspidor bowl in its holder with the high side away from the patient. Firmly press it down to secure it.
- 3 Place the bowl screen in the bottom of the bowl.

Task 2.



CAUTION When installing the cupfill spout, do not rotate it or it may break.

- 1 To install the cupfill spout, push it straight down.
- 2 To install the bowl rinse spout, push it straight in.

Install the Floor Box

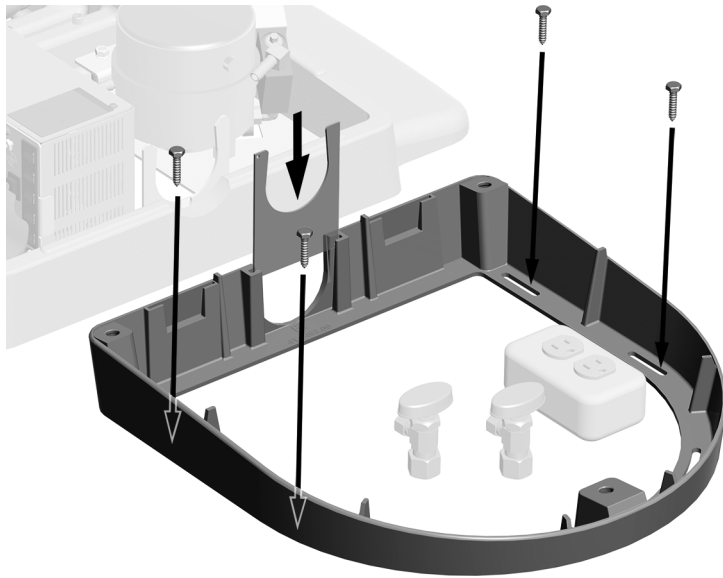


NOTE Install all of the system's modules before completing this procedure.

Recommended Tools

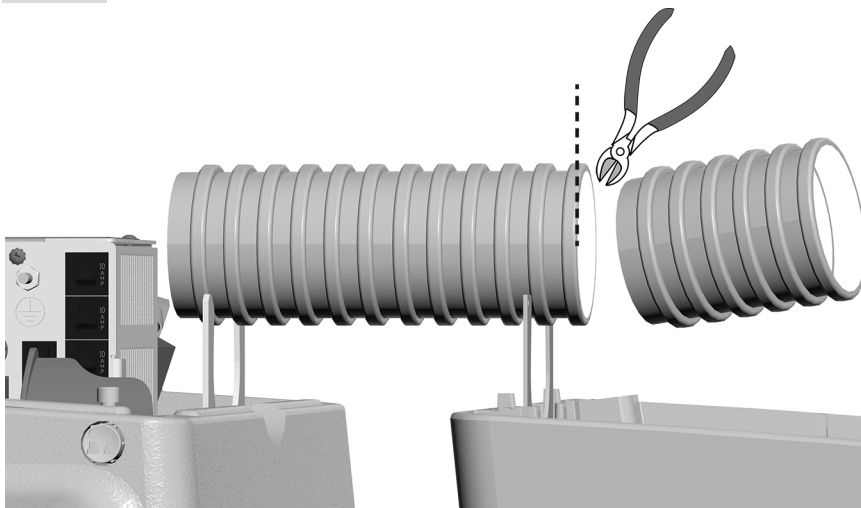
- Phillips head screwdriver
- Diagonal cutters

Task 1.



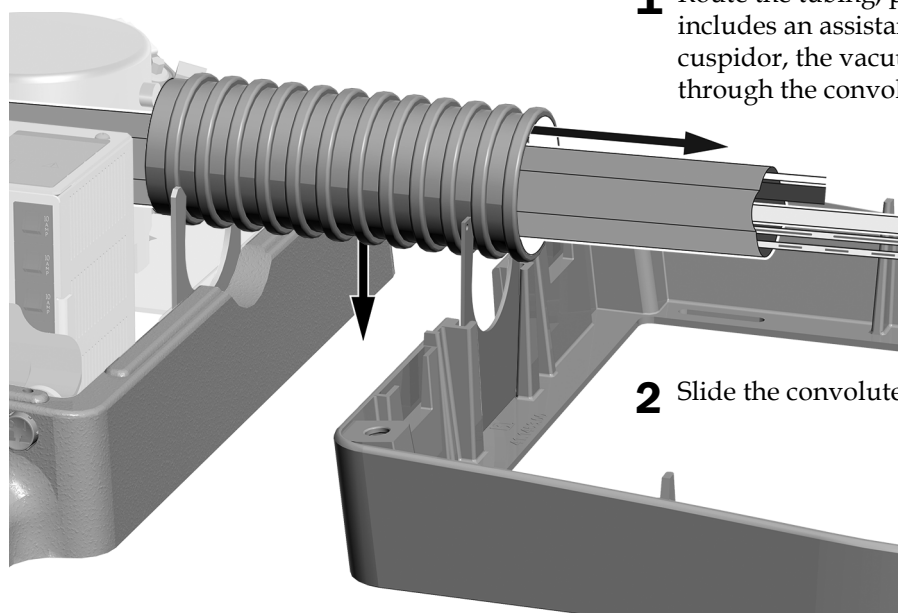
- 1** Place the floor box frame around the utilities.
- 2** Use four of the following to attach the frame to the floor:
 - **Wood floors:** 1-1/4" screws
 - **Concrete floors:** 2" anchors

Task 2.



- 1** Measure the distance between the chair and the floor box.
- 2** Cut the convolute to size.

Task 3.



1 Route the tubing, power cord, and if the system includes an assistant's instrumentation or cuspidor, the vacuum line and drain tubing through the convolute.

2 Slide the convolute into the clips.

Next Step

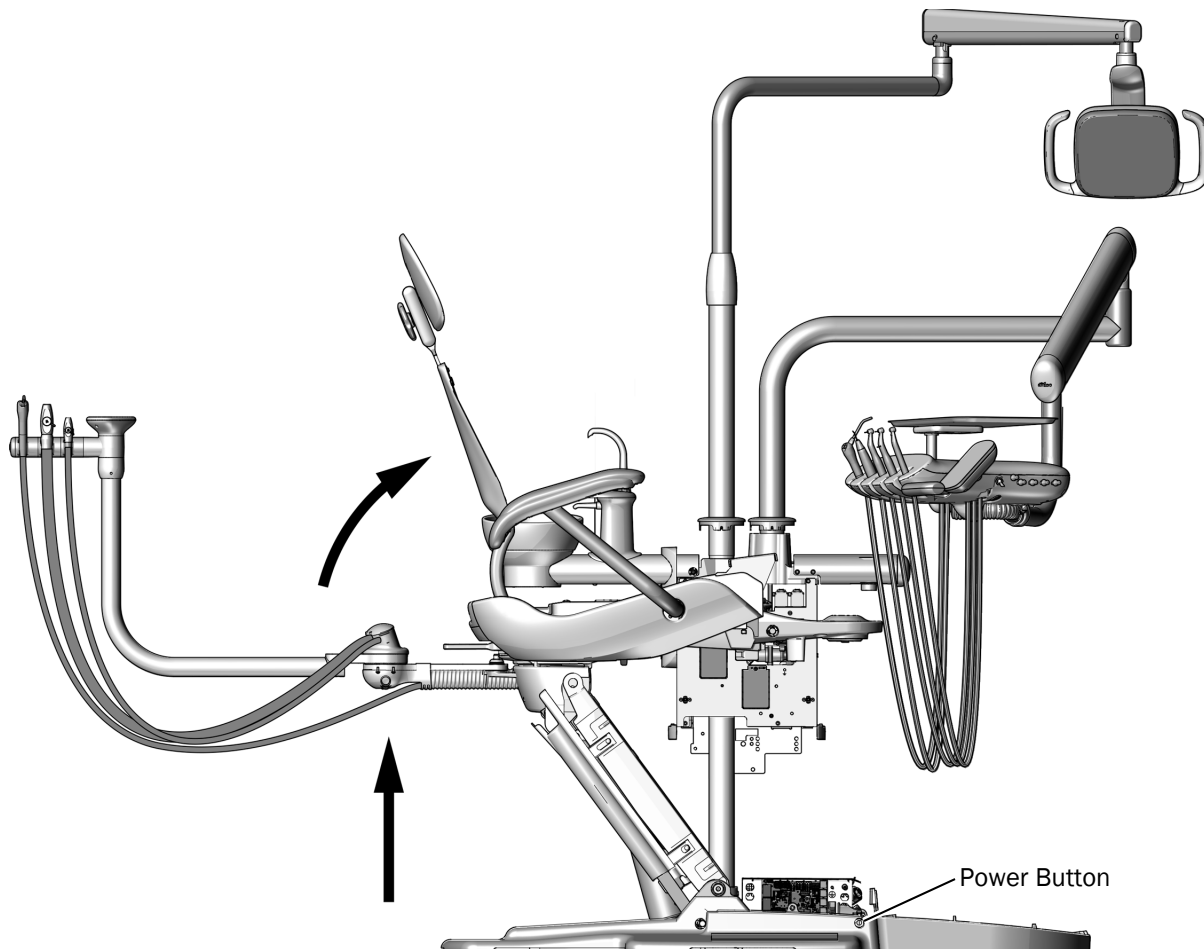
In the order listed, install all of the modules for your system. If you do not need to install a module, skip to the next one:

- If your system has the optional Air Vacuum System (AVS), continue with “Appendix: Install the Air Vacuum System (AVS)” on page 69.
- Proceed with “Route and Connect the Utilities” on page 35.

Route and Connect the Utilities



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



- 1 Turn on the power to the system.
- 2 Make sure the chair base and back 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.

- 3 Turn off the power to the chair.

Route the Tubing and Wires to the Chair Base and Floor Box

Recommended Tool

- Hex key



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.

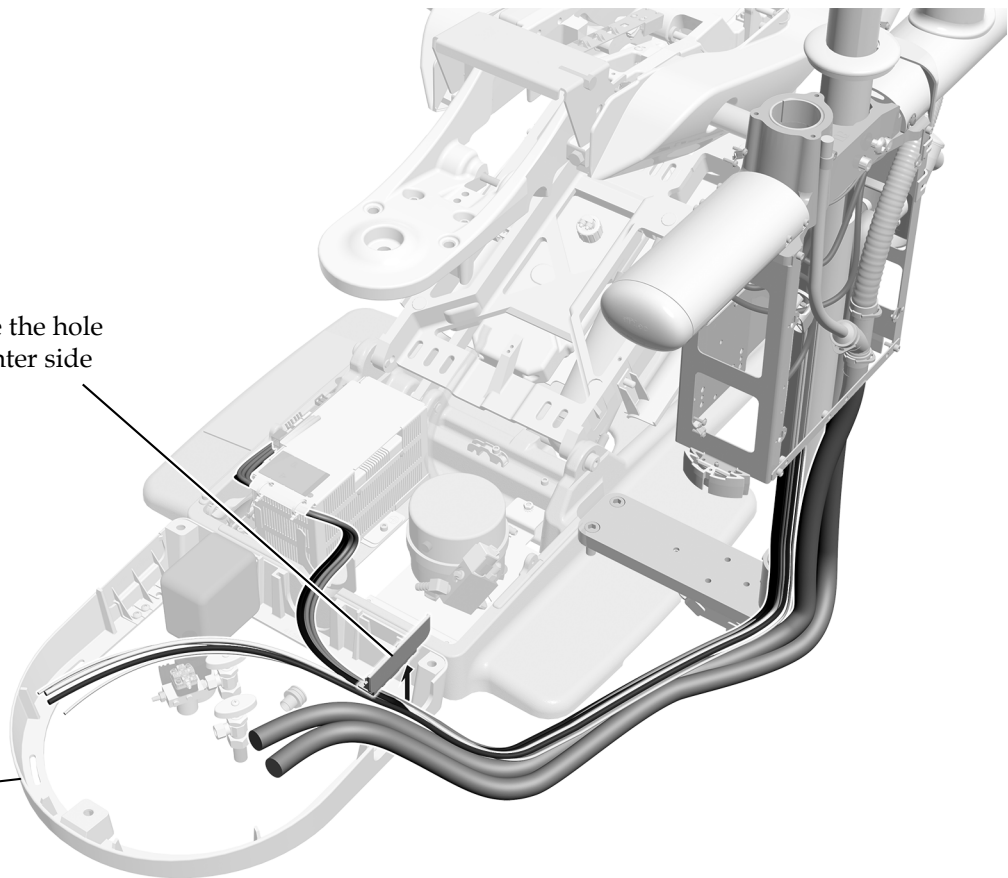


WARNING Shock hazard. When you remove or replace the covers, take care not to damage any wiring or tubing. Verify that the covers are secure after you replace them.

Task 1.

- 1** Use a hex key to remove the hole cover on the support center side of the floor box.

Floor Box



- 2** Loosely guide the tubing and wiring bundle along the side of the chair baseplate and into the floor box.

Task 2.

- 1 Separate from the bundle the electrical wires, the data line, the USB cable, and the dental light cable.
- 2 Route all of the wiring toward the power supply.



CAUTION Leave extra length in the drain lines and tubing. Later in the installation process, you will secure the tubing to the support center post and route it underneath covers.



CAUTION Before you trim the drain lines and tubing, confirm that no electrical wires or cables are in the bundle.

- 3 Trim the drain lines and tubing so that they end inside the floor box.



NOTE The wires, cables, and tubing for the 363 support center do not use a convolute or umbilical wrap. They are hidden by the pedestal mount cover, which is installed after all other installation steps are completed.

Route the Foot Control Tubing

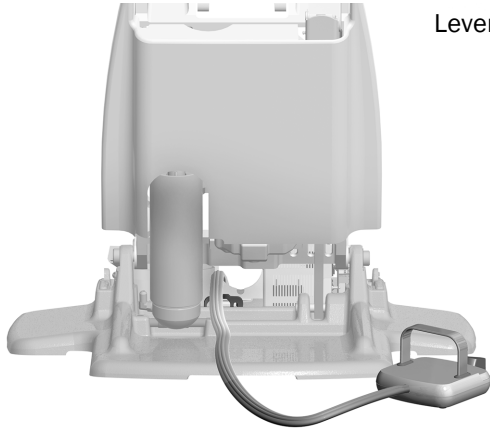
Recommended Tools

- 3/16" and 5/32" hex keys



NOTE The following instructions apply to both the disk and lever foot controls.

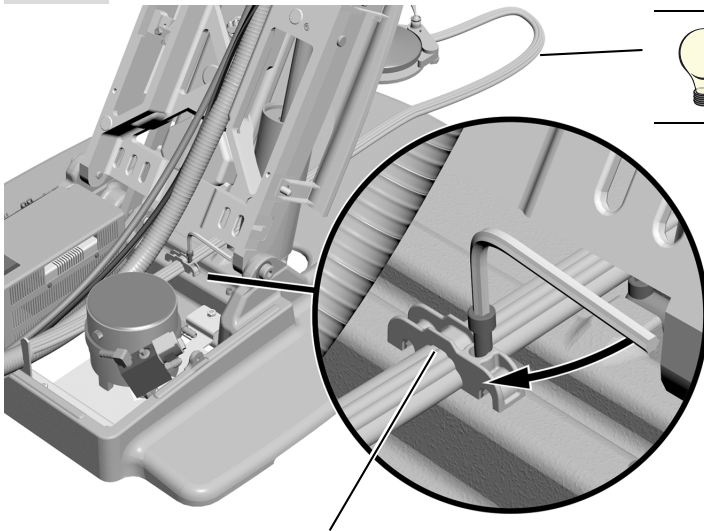
Task 1.



Lever Foot Control Shown

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

Task 2.



TIP Allow 6-10" (152-254 mm) of tubing between the chair base and the foot control.

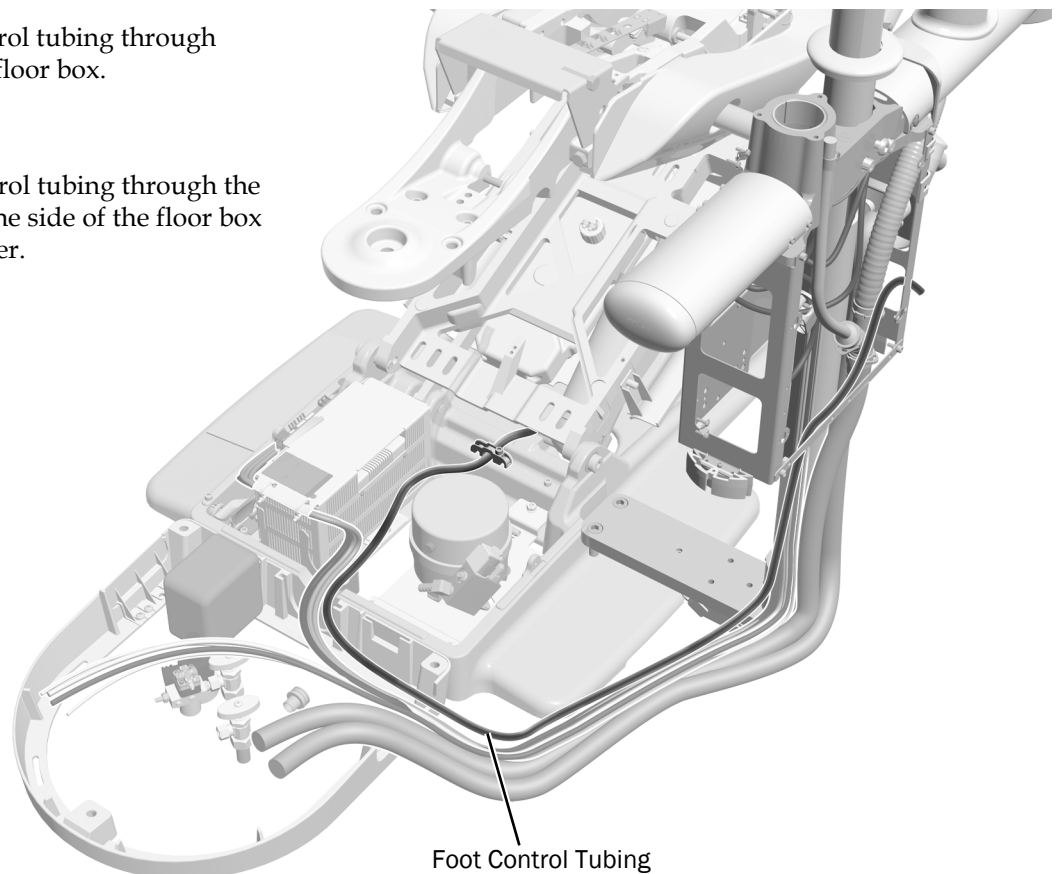
- 1** Use a hex key to secure the foot control tubing to the chair base in the strain relief.



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

Task 3.

- 1** Route the foot control tubing through chair base into the floor box.
- 2** Route the foot control tubing through the floor box and out the side of the floor box to the support center.



Connect the Support Center Tubing

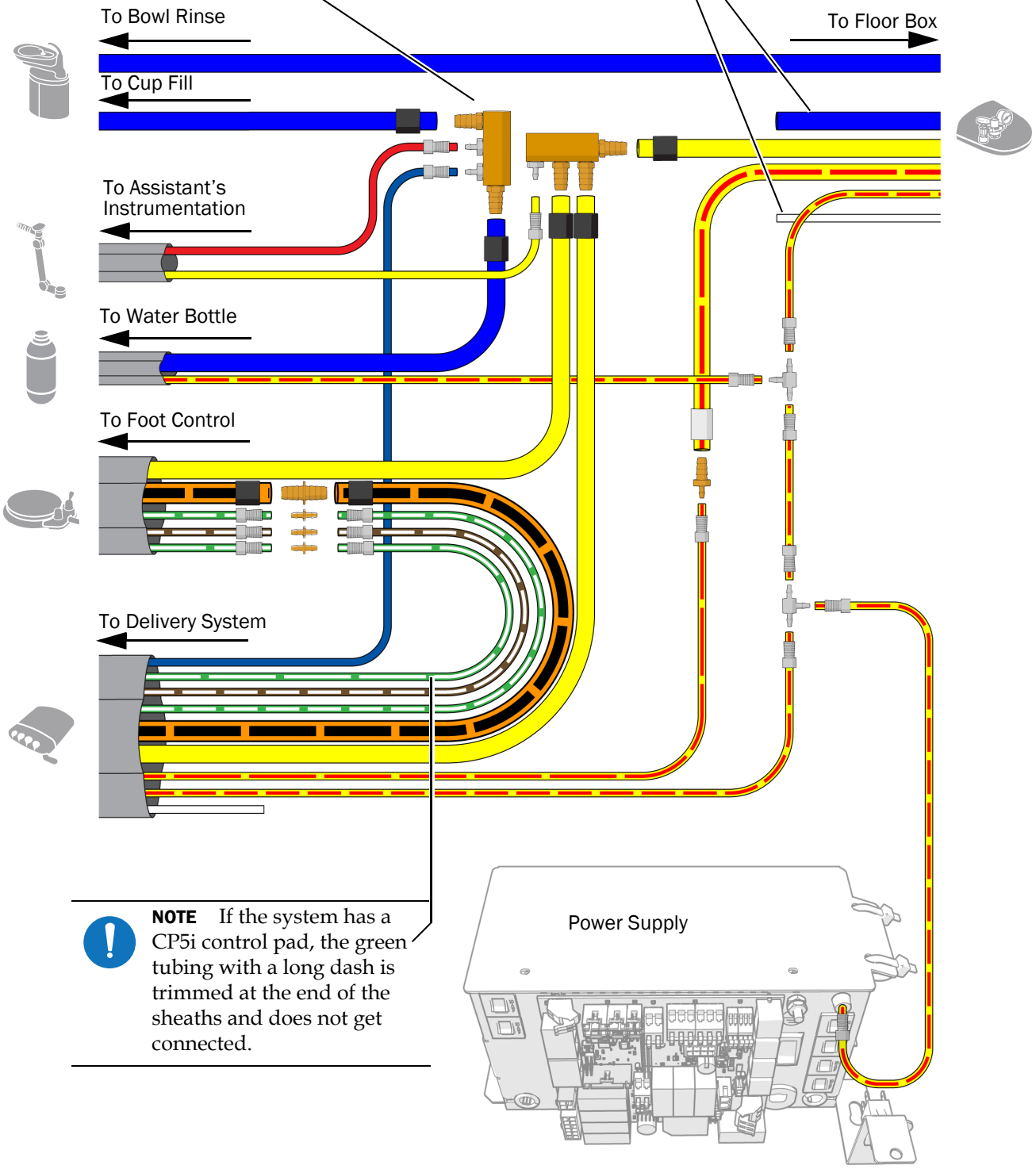
Recommended Tools

- Diagonal cutters
- Sleeve pusher

Connect the tubing according to the flow diagram on the following page.

NOTE When you install the water manifold, connect to the barb on the end to prevent standing water in the manifold.

CAUTION Do not connect the white or blue tubing.



NOTE If the system has 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 Support Center Wires and Data Line to the Power Supply



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



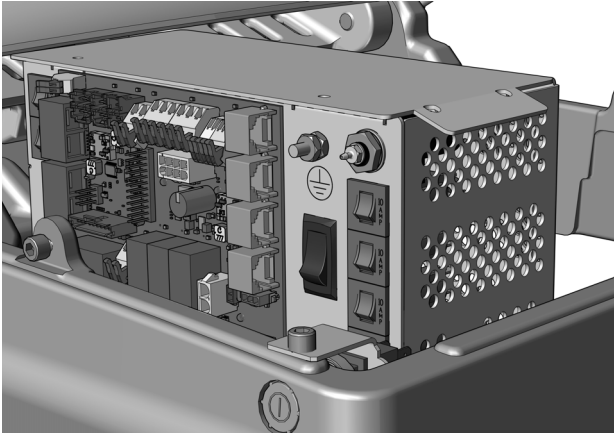
ATTENTION Circuit boards are sensitive to static electricity. Electrostatic Discharge (ESD) precautions are required when touching a circuit board or making connections to or from the circuit board. Circuit boards should be installed only by an electrician or qualified service person.



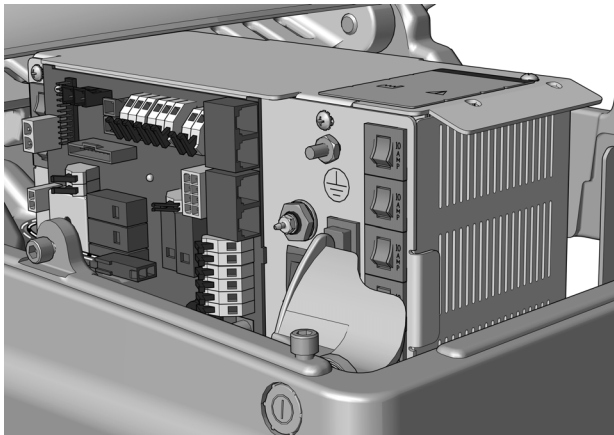
WARNING Failure to turn off or disconnect the power before you begin this procedure can lead to product damage and result in serious injury or death.

- 1. Turn off the power to the system.

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



Connect the Support Center Wires and Data Line to an A-dec Universal Power Supply Manufactured After June 202342



Connect the Support Center Wires and Data Line to an A-dec 311/411 Power Supply Manufactured Before June 2023 44

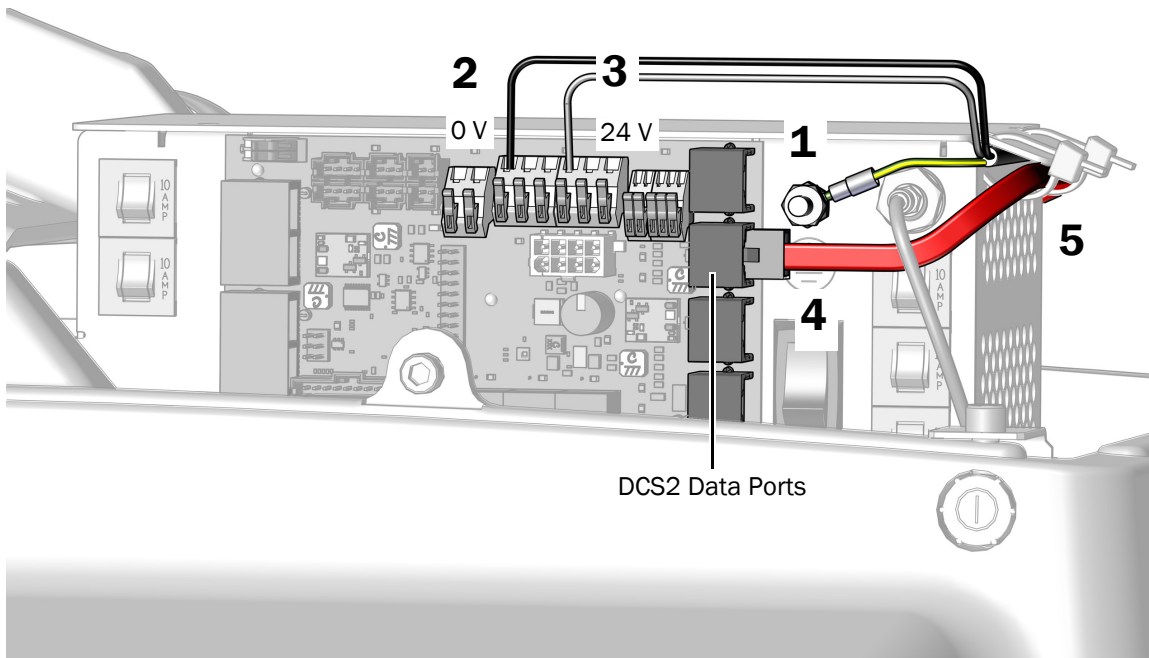
Connect the Support Center Wires and Data Line to an A-dec Universal Power Supply Manufactured After June 2023

Recommended Tools

- 3/8" combination wrench
- Diagonal cutter

Connect a A-dec 334pro/335pro Delivery System to an A-dec Universal Power Supply Manufactured After June 2023

1. Connect the green/yellow ground wire to the ground terminal on the power supply housing.
2. Connect the black wire(s) to 0 VAC.
3. Connect the gray wire(s) to 24 VAC.
4. Plug the red data line into a DCS2 data port. It does not matter which data port the data line plugs into.
5. Use cable ties to secure the wires under the lip.



Connect an A-dec 334/335 Delivery System to an A-dec Universal Power Supply Manufactured After June 2023

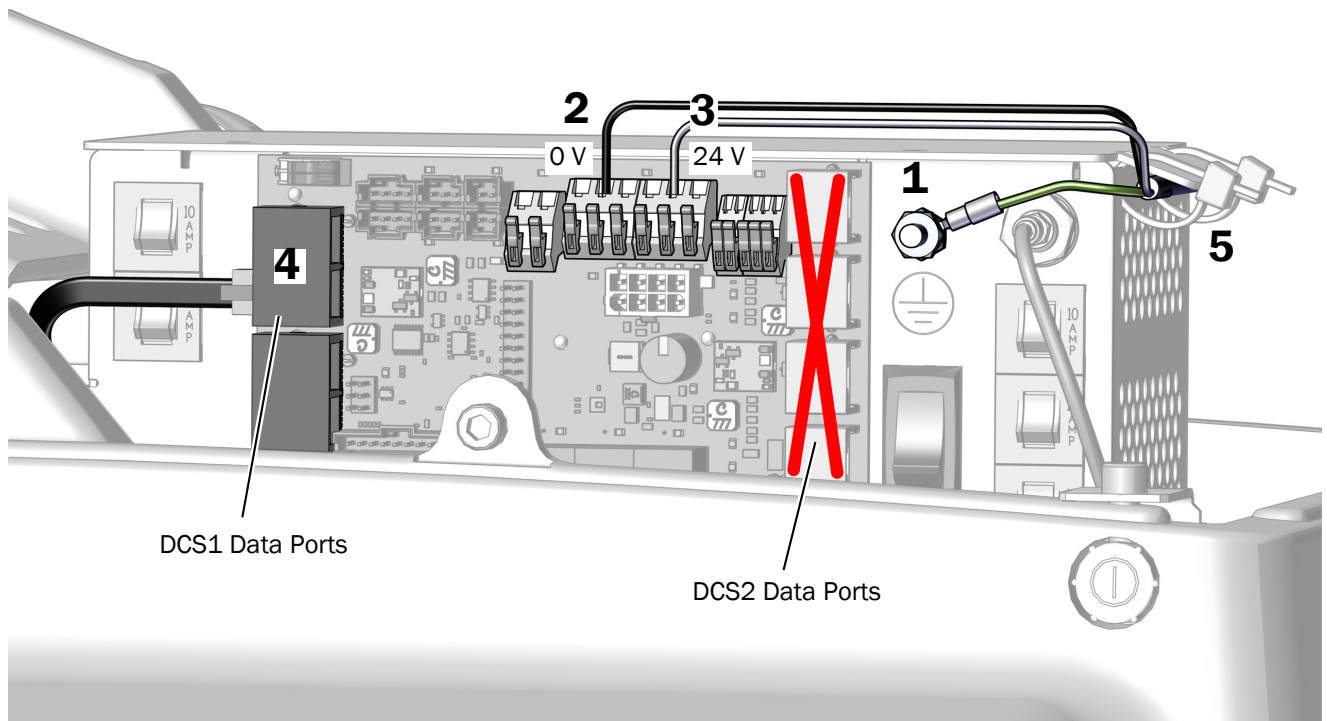
Task 1.

1. Attach the ground wire.
2. Connect the black wire to the support center (SPRT CTR) 0 V~ connection on the chair circuit board.
3. Connect the gray wire to the support center (SPRT CTR) 24 V~ connection on the chair circuit board.



CAUTION Plugging the black DCS1 data line into a DCS2 data port can damage the product.

4. Plug the black data line into a DCS1 data port on head side of the chair circuit board.
5. Use cable ties to secure all of the wires, cables, and tubing under the lip on the power supply.
6. Loop and tie all of the excess cables and store them in the floor box.



Connect the Support Center Wires and Data Line to an A-dec 311/411 Power Supply Manufactured Before June 2023

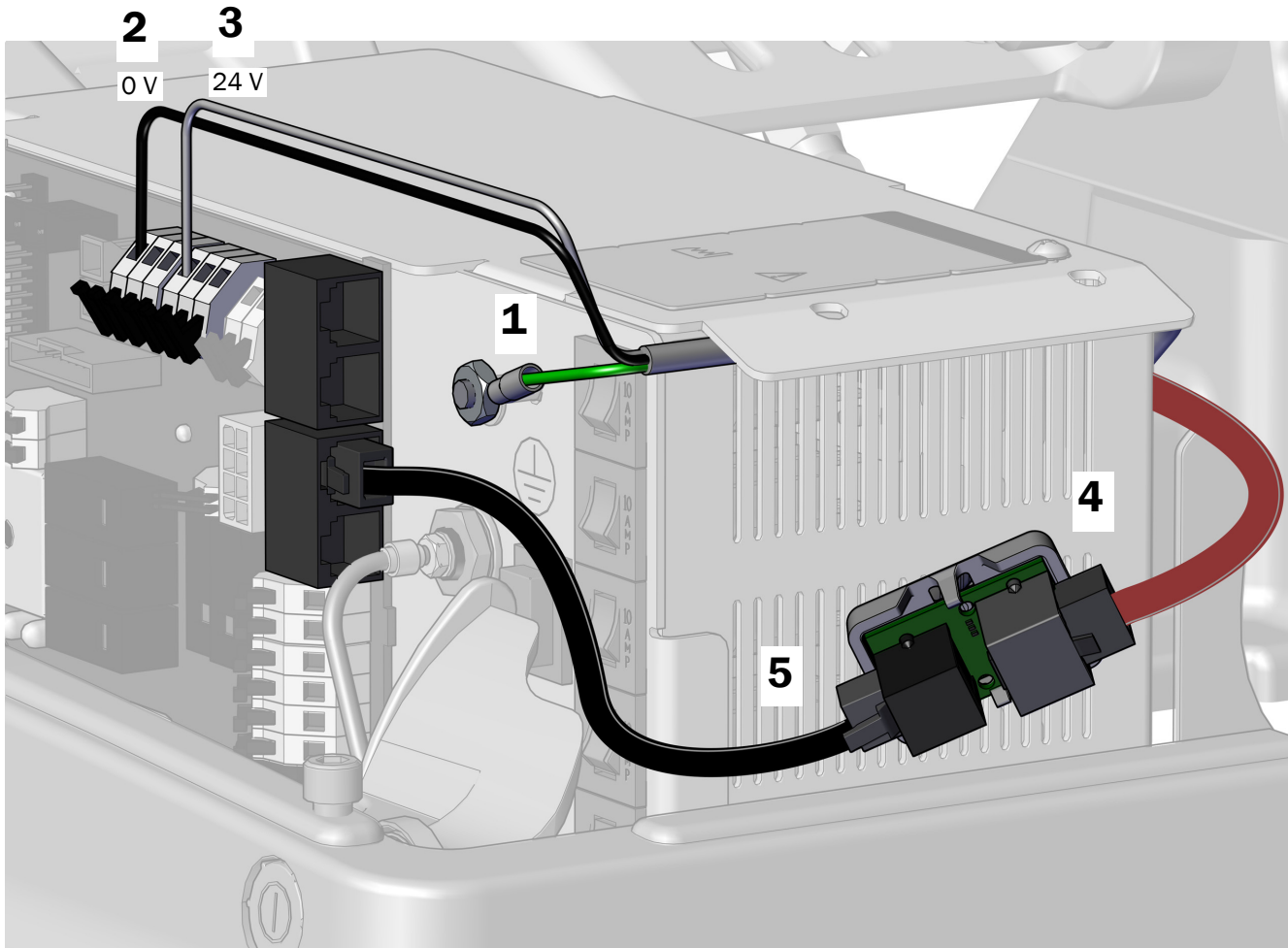
Connect an A-dec 334pro/335pro Delivery System to an A-dec 311/411 Power Supply Manufactured Before June 2023

Recommended Tools

- 3/8" combination wrench
- Diagonal cutter

Task 1.

1. Attach 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.



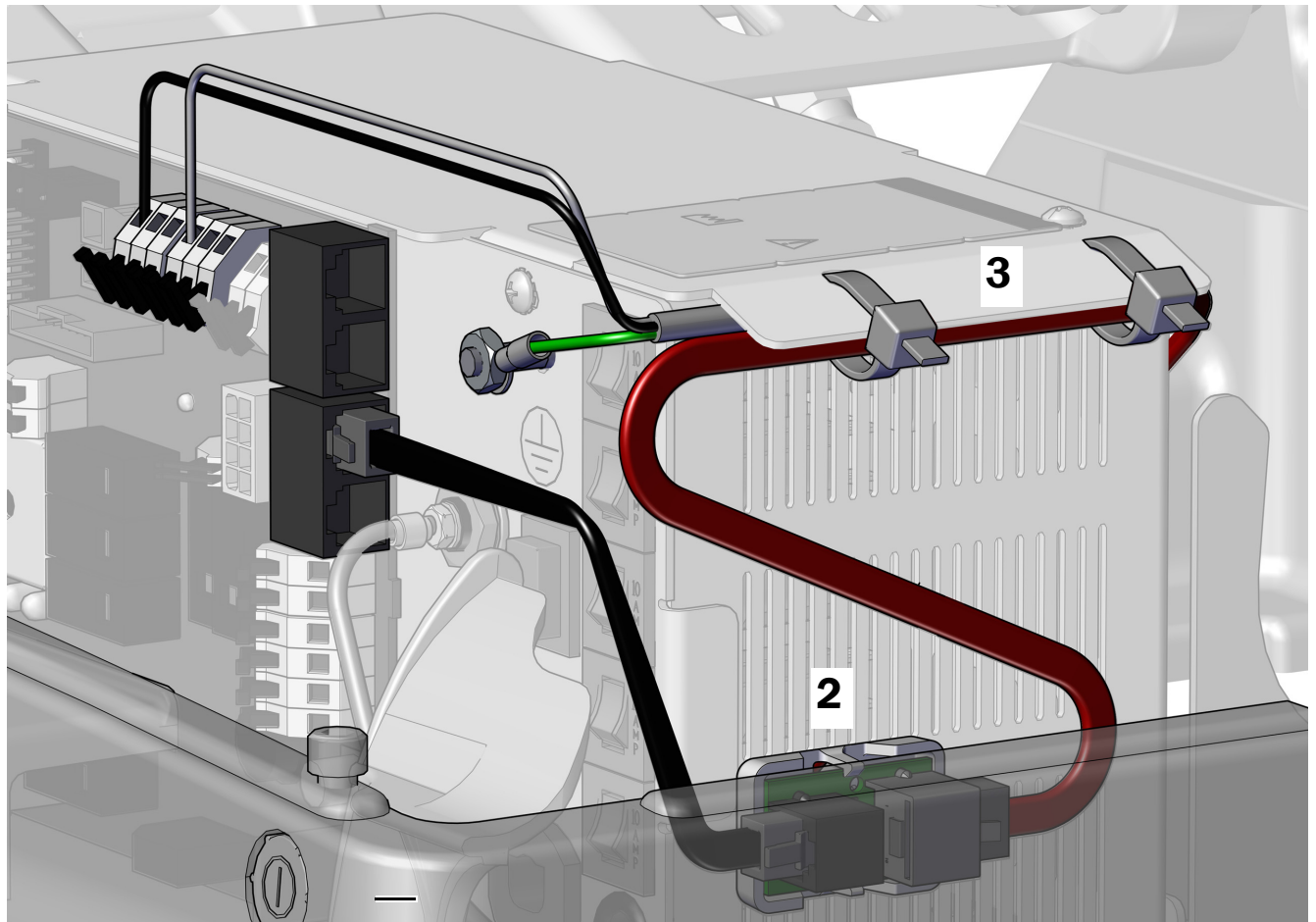
CAUTION The translator board must be attached in this position to prevent damage or interference with other equipment.

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.

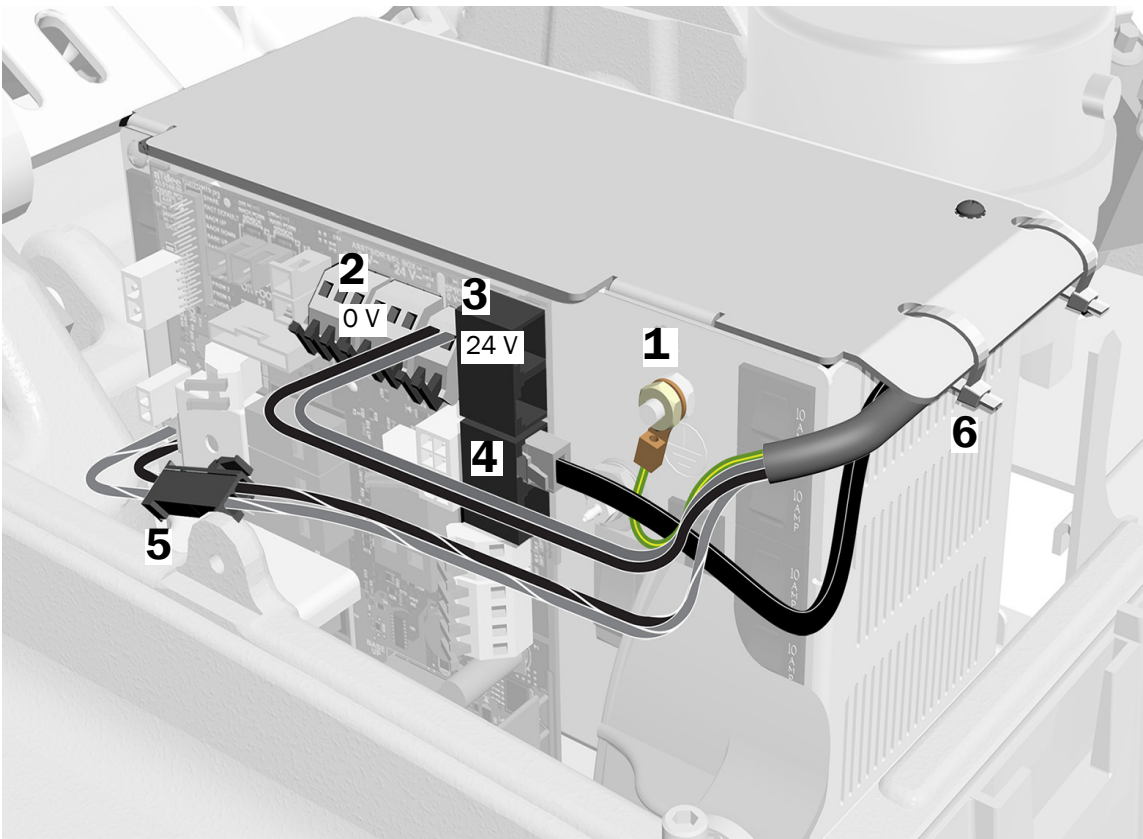
3. When all modules have been connected to the power supply, secure the wires under the lip on the power supply.



Connect an A-dec 334/335 Delivery System to an A-dec 311/411 Power Supply Manufactured Before June 2023

Task 1.

1. Attach the ground wire.
2. Connect the black wire to the support center (SPRT CTR) 0 V connection on the chair circuit board.
3. Connect the gray wire to the support center (SPRT CTR) 24 V connection on the chair circuit board.
4. Plug the data line into a data port on the chair circuit board.
5. Connect the two-position black connector to the black 24 VAC isolated lead, if present.
6. Use cable ties to secure all of the wires, cables, and tubing under the lip on the power supply.
7. Loop and tie all of the excess cables and store them in the floor box.



Connect the Floor Box Utilities

Complete the connections for the system's configuration.

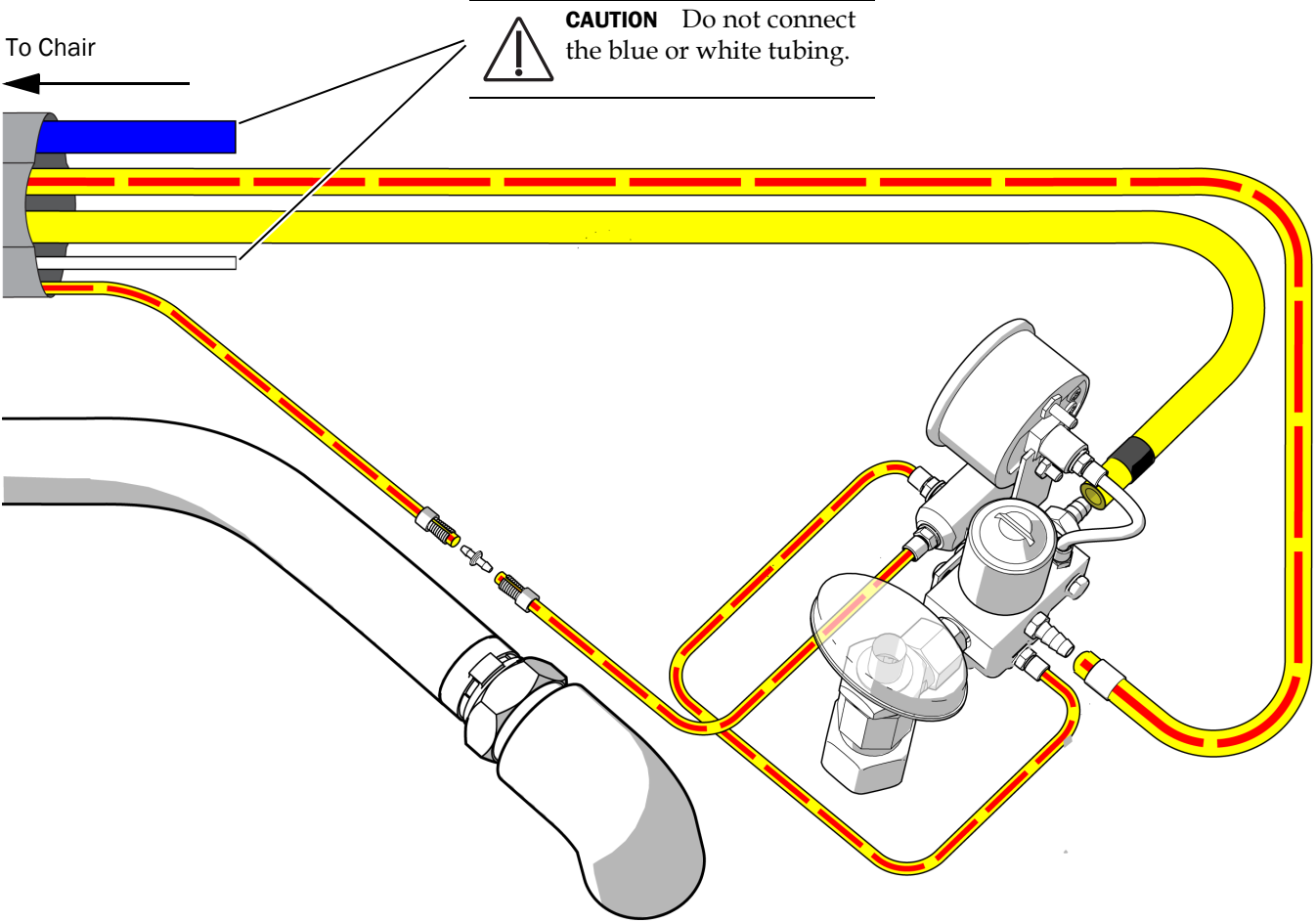
Connect a Delivery System Only47
Connect a System with Multiple Modules48

Recommended Tools

- Diagonal cutters
- Sleeve pusher

Connect a Delivery System Only

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

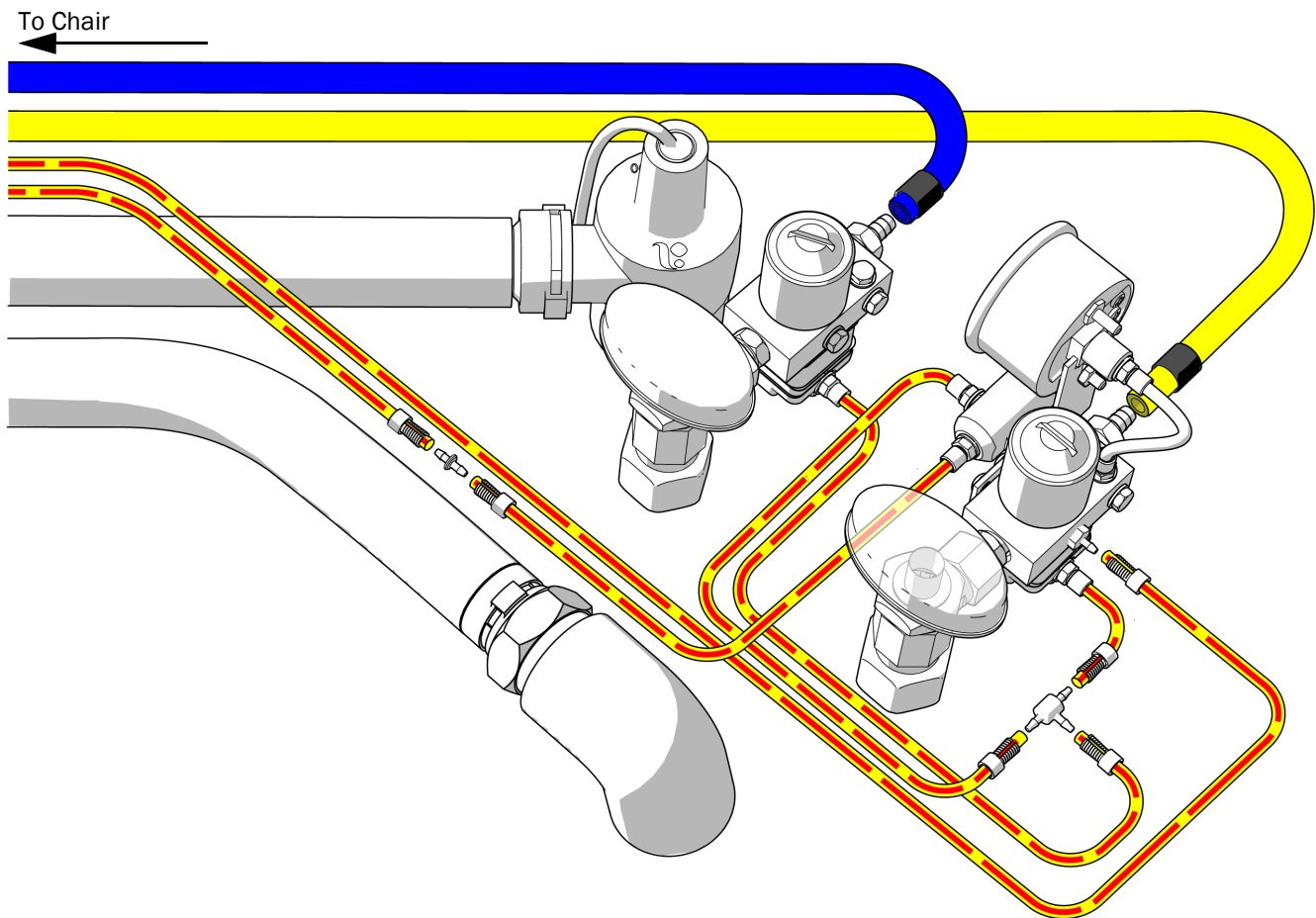


Connect a System with Multiple Modules

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

Recommended Tools

- Diagonal cutters
- Sleeve pusher



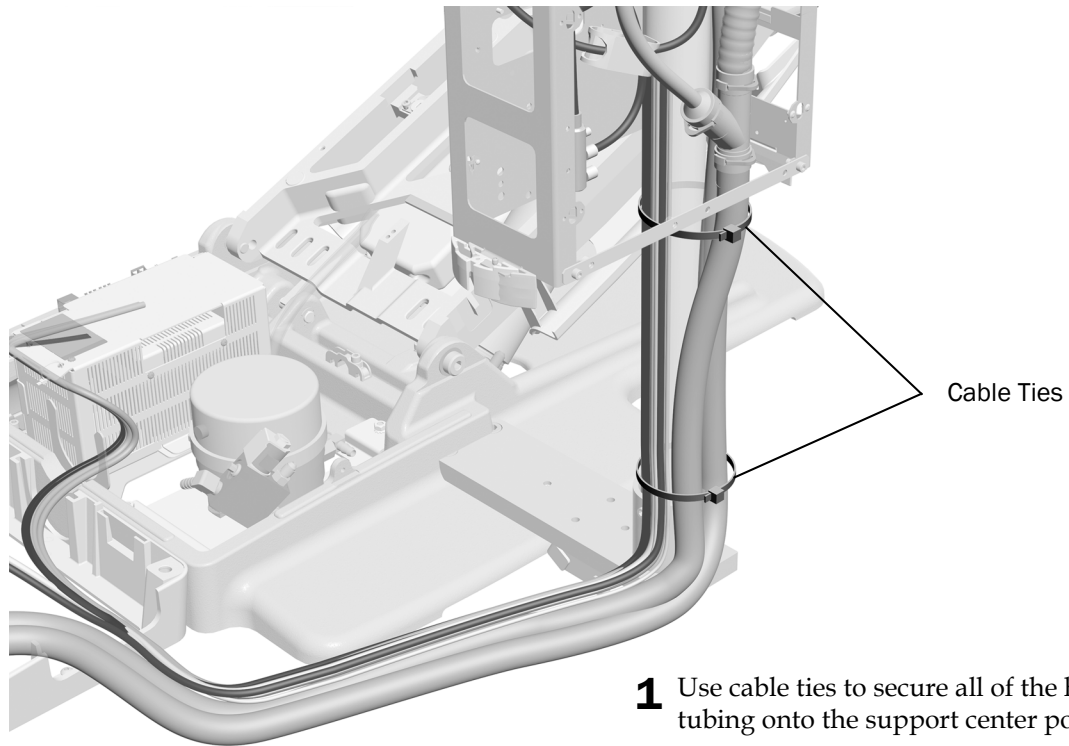
Install the Moisture Separator (Optional)

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

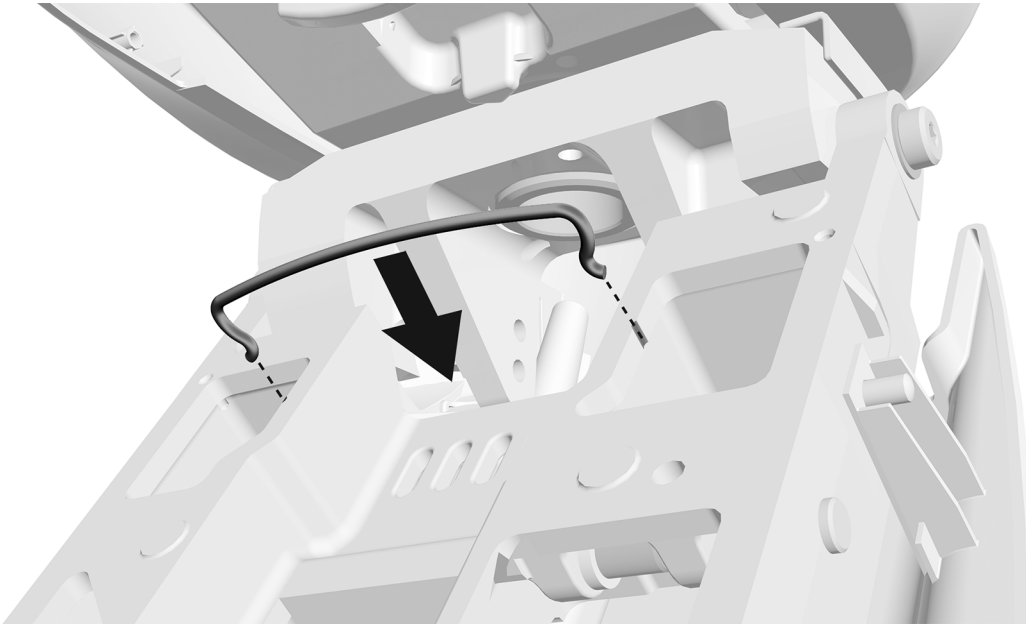
Prepare the System

Secure the Wires and Tubing

Task 1.



Task 2.



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

Install the Water Bottle



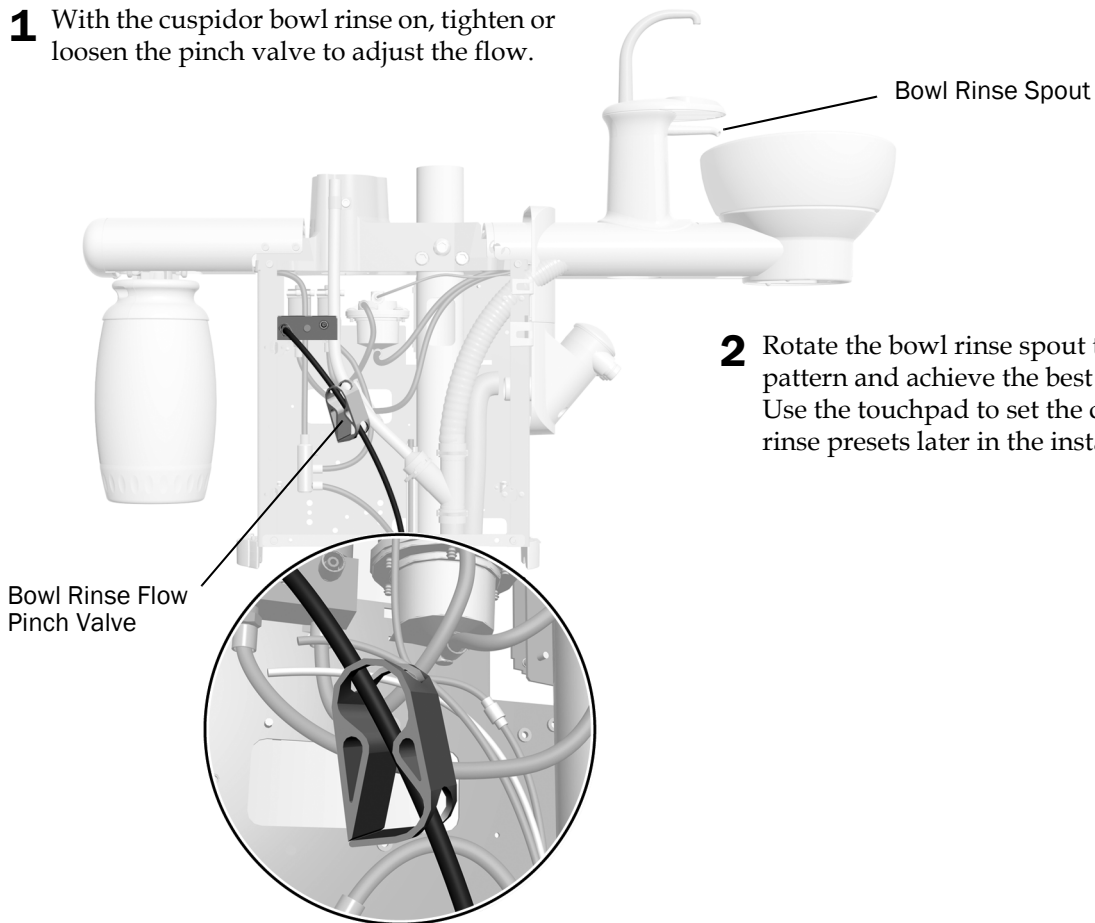
IMPORTANT A-dec recommends that the dental team perform a shock treatment on the dental unit waterlines before they use the system for the first time, and establish an ongoing waterline maintenance program. For more information, see the *Waterline Maintenance Guide* (p/n 85.0983.00) and *A-dec Self-Contained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

- 1 With the cuspidor bowl rinse on, tighten or loosen the pinch valve to adjust the flow.



- 2 Rotate the bowl rinse spout to adjust the flow pattern and achieve the best rinsing action. Use the touchpad to set the cupfill and bowl rinse presets later in the installation process.

Adjust the System

For instructions about adjusting the system's modules, see the installation guides that ship with the equipment.

Level the System

Complete the following sections to level the system. A level system prevents the modules from drifting and instruments from rolling around the tray.



NOTE To successfully level the system, it is important to complete the following sections in the order that they are listed.

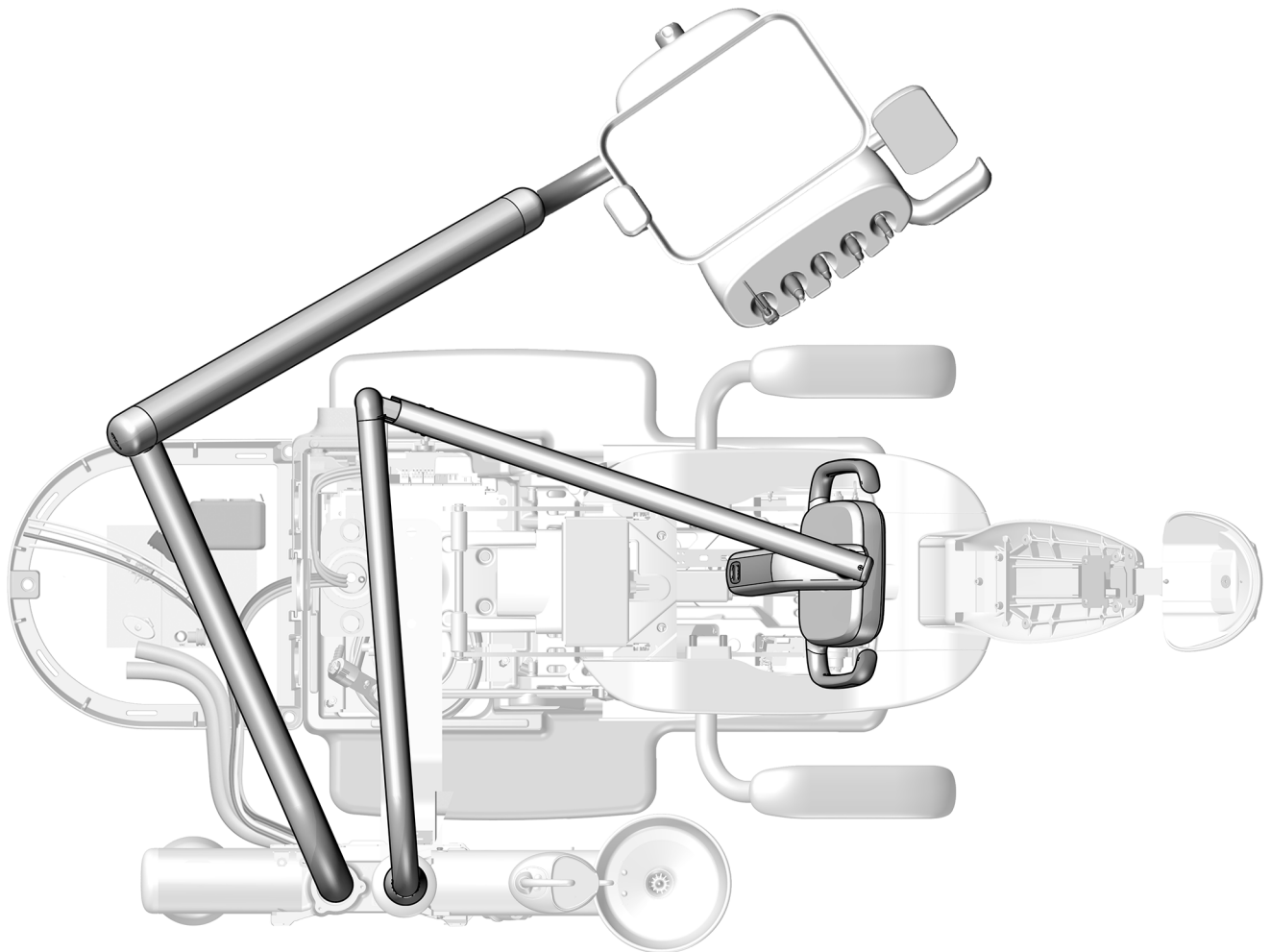
Recommended Tools

- Magnetic level
- 1/8" and 3/16" hex keys

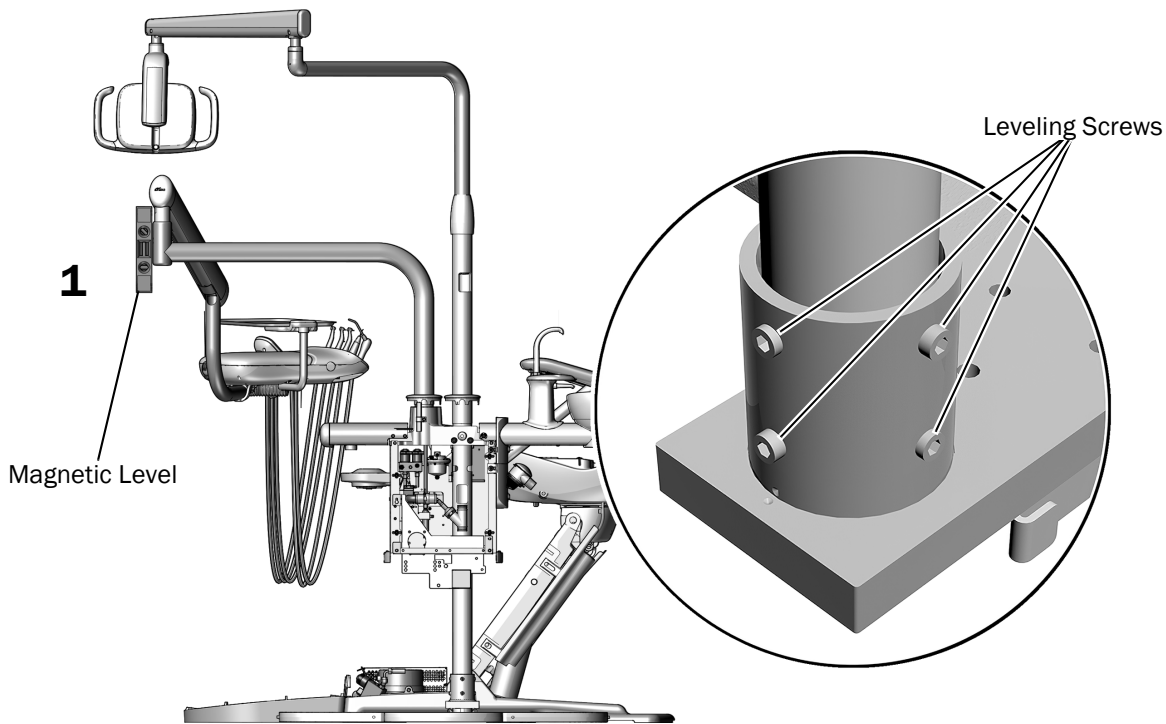
Level the Support Center

Task 1.

- 1** Move the chair, control head, and dental light into the normal working position for the doctor.



Task 2.



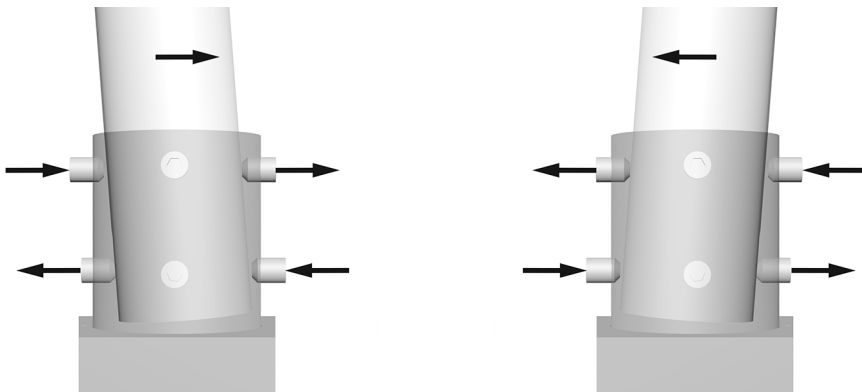
- 1 Place a magnetic level vertically on the knuckle of the delivery system's rigid arm. Align the level by adjusting the leveling screws in the mount at the base of the post.



TIP If needed, use a piece of tape to hold the level in place.

Task 3.

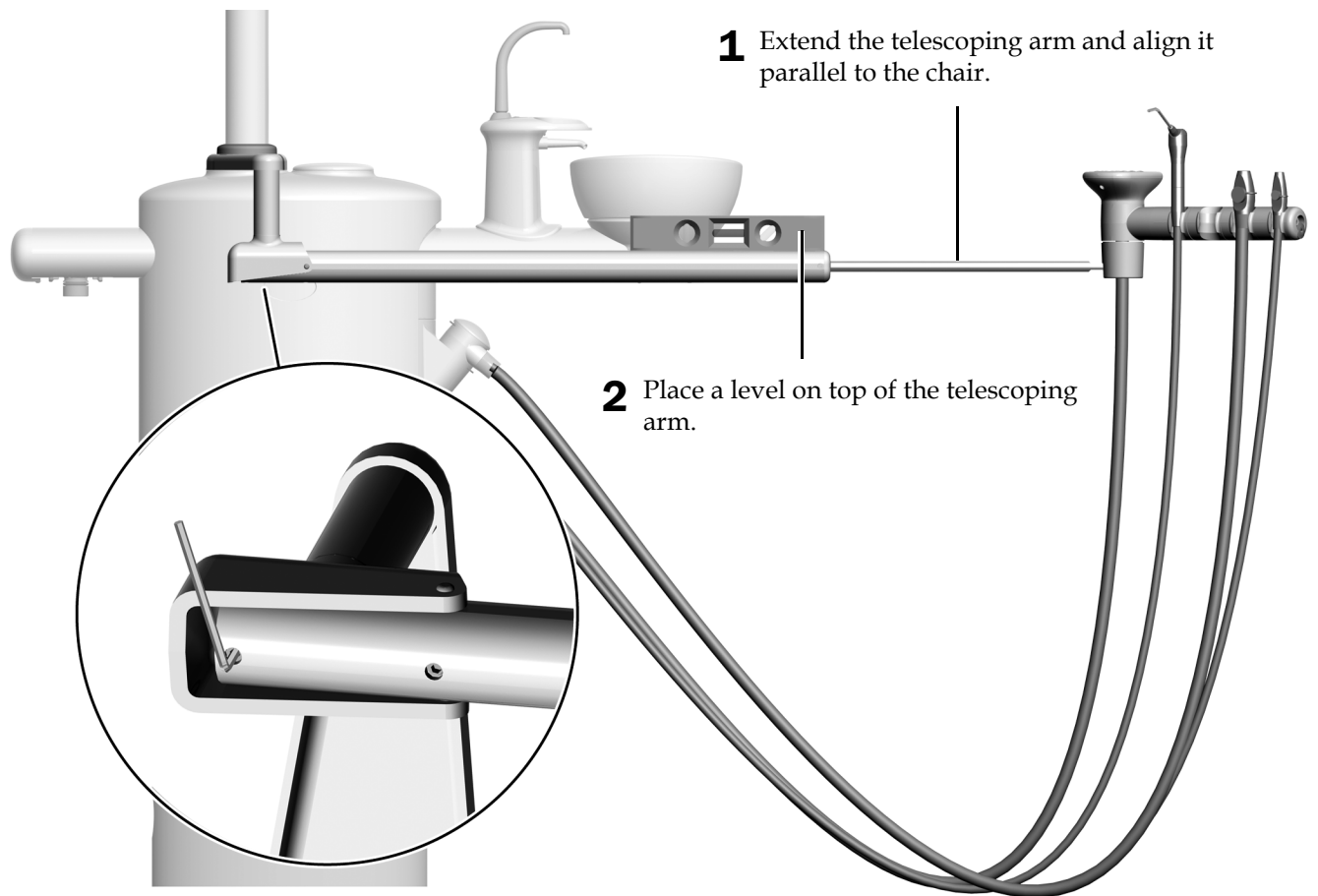
- 1 To change the tilt of the post, adjust the leveling screws on the top and bottom of the mount in opposite directions. Which screws you tighten or loosen depends on the direction of the tilt you are trying to correct. Tighten and loosen leveling screws in pairs.



- 2 Adjust all eight leveling screws around the mount until the post is plumb and there is no drift of the delivery system.

Task 4.

Level the Assistant's Instrumentation Telescoping Arm



1 Extend the telescoping arm and align it parallel to the chair.

2 Place a level on top of the telescoping arm.

3 Use a hex key to level the arm.

Verify the Clearance for the Cuspidor Bowl



NOTE If you have a support center without a cuspidor, or the chair does not have an armrest next to the cuspidor, skip this section and see “Install the Covers” on page 61.

Recommended Tool

- 5/16" hex key driver

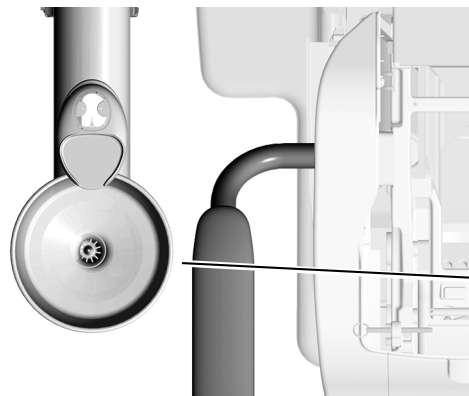
Task 1.

- 1** Remove the cuspidor bowl.
- 2** Place the positioning guide on the cuspidor bowl support with the tab toward the head of the chair and secure it with the foam plug in the center of the guide.
- 3** Unfold the positioning guide.
- 4** Raise and lower the chair to confirm that the positioning guide clears the armrest but does not leave a gap. (A gap can cause the support center covers to fit incorrectly.)



WARNING The positioning guide must clear the armrest to provide the proper clearance between the cuspidor bowl and armrest.

- If the clearance should be adjusted, continue to Task 2.
- If the clearance is correct, see “Install the Covers” on page 61.



Unfold the positioning guide.

The positioning guide must clear the armrest but should not leave a gap.

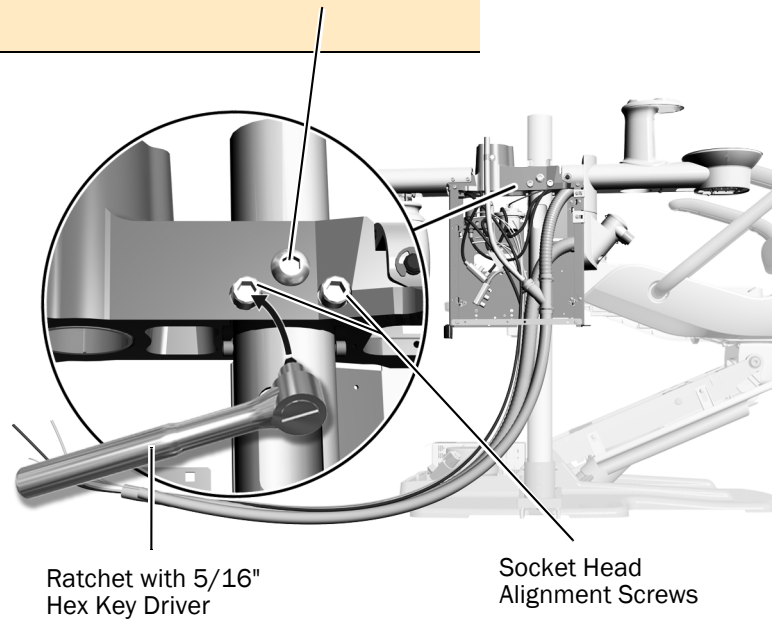


TIP If you do not have a positioning guide, measure 1-1/8" (29 mm) between the edge of the bowl and the armrest.

Task 2.

NOTE Do not loosen the button head screw.

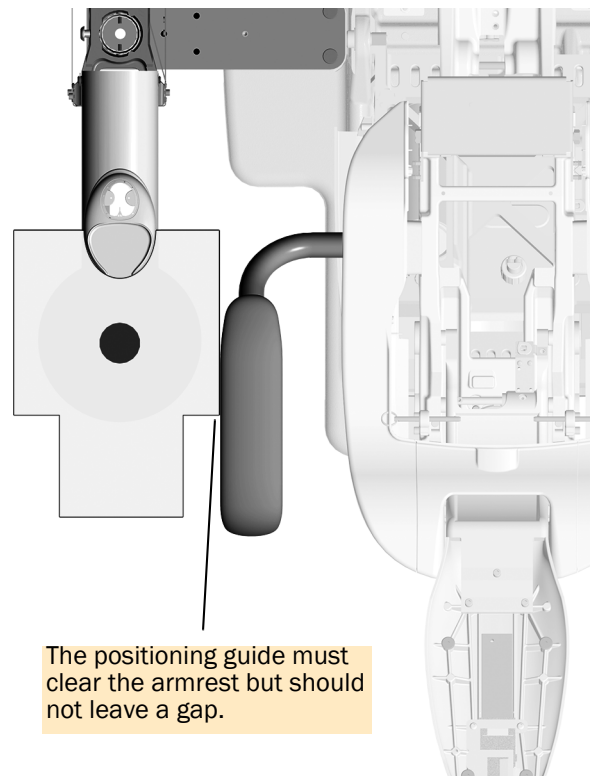
- 1** If the system includes a delivery system and light, position them over the support center.
- 2** Use a hex key driver to adjust the socket head alignment screws. Loosen one screw and tighten the other to force the end with the loose screw to pivot toward the chair.
- 3** Continue adjusting the screws until the positioning guide properly clears the armrest but does not leave a gap.

**Task 3.**

- 1** Raise and lower the chair to confirm that the positioning guide clears the armrest but does not leave a gap.

If the guide does not properly clear the armrest, repeat Task 2.

- 2** Verify that the support center is level. If it needs to be adjusted, complete the steps in "Level the Support Center" on page 53.
- 3** Remove and discard the positioning guide and plug.
- 4** Reinstall the cuspidor bowl.



Touch Control Operations

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

| | |
|--|-----------|
| Operate the Cuspidor with a CP5i/CP5 Control Pad | 58 |
| Operate the Cuspidor with an A-dec 300 Deluxe/Standard Touchpad | 59 |
| Operate Installed Modules | 60 |



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

Operate the Cuspidor with a CP5i/CP5 Control Pad



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.



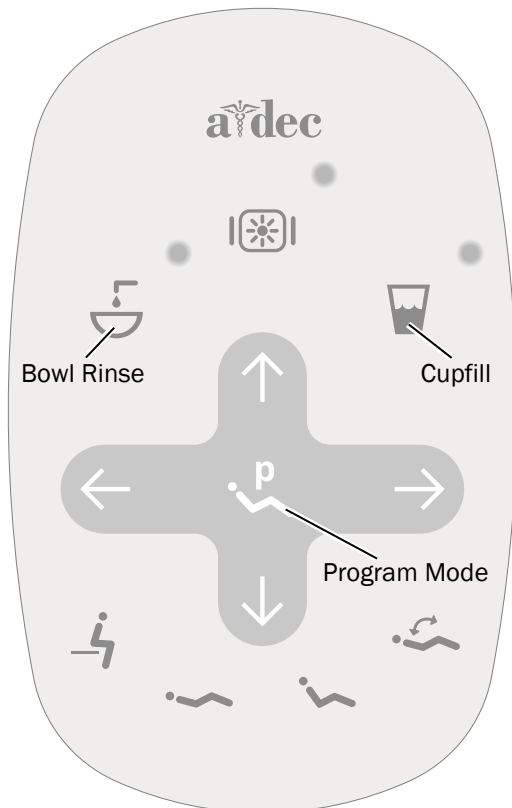
For configuring connectivity features, see the *A-dec+™ Software Platform Instructions for Use* (p/n 86.1030.00) at a-dec.com/connectivity-manual.



Operate the Cuspidor with an A-dec 300 Deluxe/Standard Touchpad







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



Standard Touchpad Shown

Turn On/Turn Off Cupfill and Bowl Rinse




Use the touchpad icons or the cuspidor buttons to control cupfill and bowl rinse functions.

| Icon/Function | Actions/Options |
|---|---|
| Cupfill Touchpad  Cuspidor  | Controls water flow from the cuspidor into a cup. <ul style="list-style-type: none"> Press once for a timed operation. The factory preset is a 2.5 second fill. Press and hold for manual operation. |
| Bowl Rinse Touchpad  Cuspidor  | Provides rinse water for the cuspidor bowl. <ul style="list-style-type: none"> Press for a timed operation. The factory preset is a 30 second rinse. Press twice for continuous flow, then press once to stop the flow. Press and hold for manual operation. Release to stop the flow. |





Customize Cupfill and Bowl Rinse Timing

Cupfill and bowl rinse timing can be set at the touchpad or the cuspidor.

Customize Timing From the Touchpad

- Press and hold  on the touchpad. Release when you hear one beep.
- Within five seconds, press and hold  or  for the desired amount of time.
- Three beeps indicate the new setting is saved.

Customize Timing From the Cuspidor

- Press and hold  and  under the cupfill spout. Release when you hear one beep.
- Within five seconds, press and hold  or  for the desired amount of time.
- Three beeps indicate the new setting is saved.

Operate Installed Modules

For touch control settings for the system's modules, see the installation guides that ship with the equipment.

Test the System

After you have completed the installation of the support center and modules, use the following checklist to test the system.

Utilities

- Regulated air pressure is at 80 psi.
- 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.

Assistant's Instrumentation, Cuspidor, and Cupfill

- Vacuum/suction is set to the following specifications:
 - **Wet vacuum** - 10 ± 2 inches of Hg (34 ± 7 KPa), 9 SCFM (255 sl/min) minimum
 - **Dry/semi-dry vacuum** - 4.5 ± 1 inches of Hg (16 ± 3.5 KPa), 12 SCFM (340 sl/min) minimum
- Air and water syringe buttons operate smoothly
- Valves on HVE and saliva ejector move freely
- Cupfill timing is set properly
- Cuspidor flow pattern effectively rinses the bowl, bowl drains properly
- The end of the cuspidor ventilation tube is 1/2" (13 mm) above the support center frame
- There is 1-1/8" (29 mm) clearance between the cuspidor bowl and armrest

Additional Modules

For test checklists for additional modules such as a delivery system or dental light, see the installation guides that ship with the equipment.

Install 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.



NOTE Adjust and test the system before installing the covers. See “Touch Control Operations” on page 58.



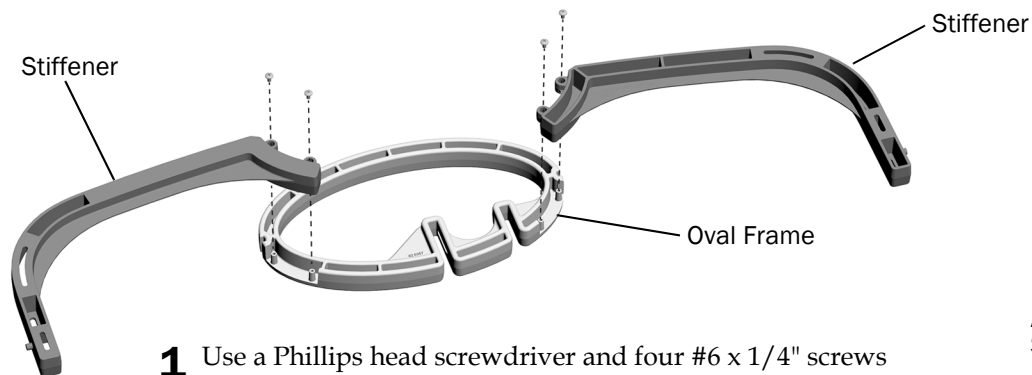
NOTE If you connected the optional AVS, skip to Task 3 on page 63.

Recommended Tools

- Diagonal cutters
- Phillips head screwdriver
- Rubber mallet

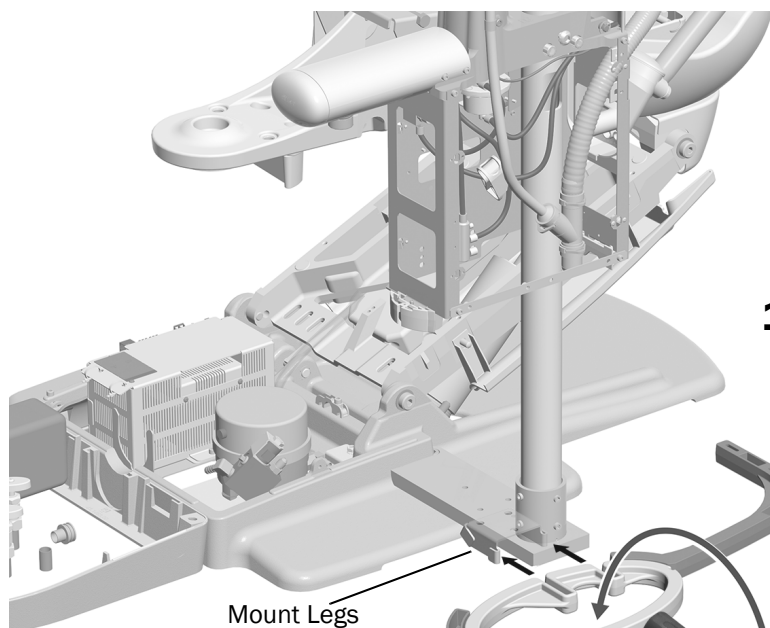
Install the Pedestal Mount Covers and Umbilical Wrap

Task 1.




- 1** Use a Phillips head screwdriver and four #6 x 1/4" screws to attach the stiffeners to the oval frame.

Task 2.



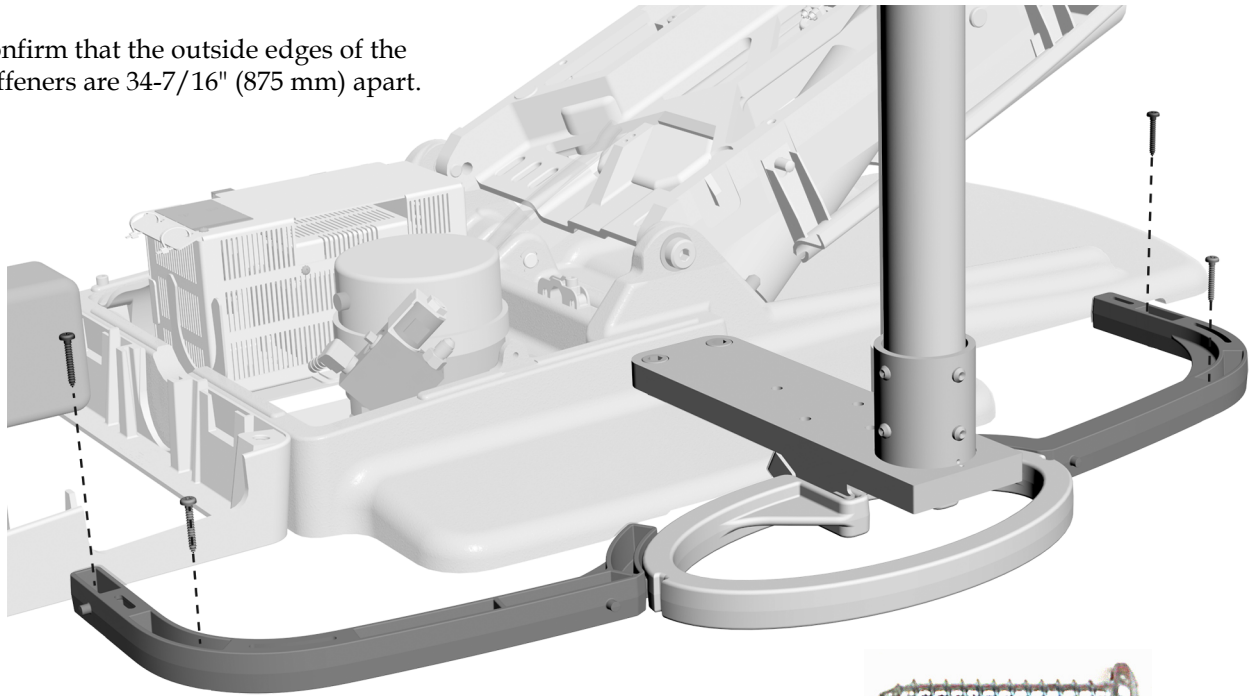
1 Position the floor frame so that the shorter slot in the oval frame is the slot closest to the back of the chair.

2 Use a rubber mallet to push the floor frame into place at the bottom of the pedestal mount until it is flush against the mount legs.

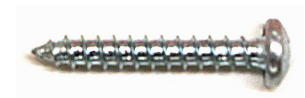
 **TIP** You may need to firmly tap the floor frame to install it flush against the mount legs.

Task 3.

- 1** Confirm that the outside edges of the stiffeners are 34-7/16" (875 mm) apart.

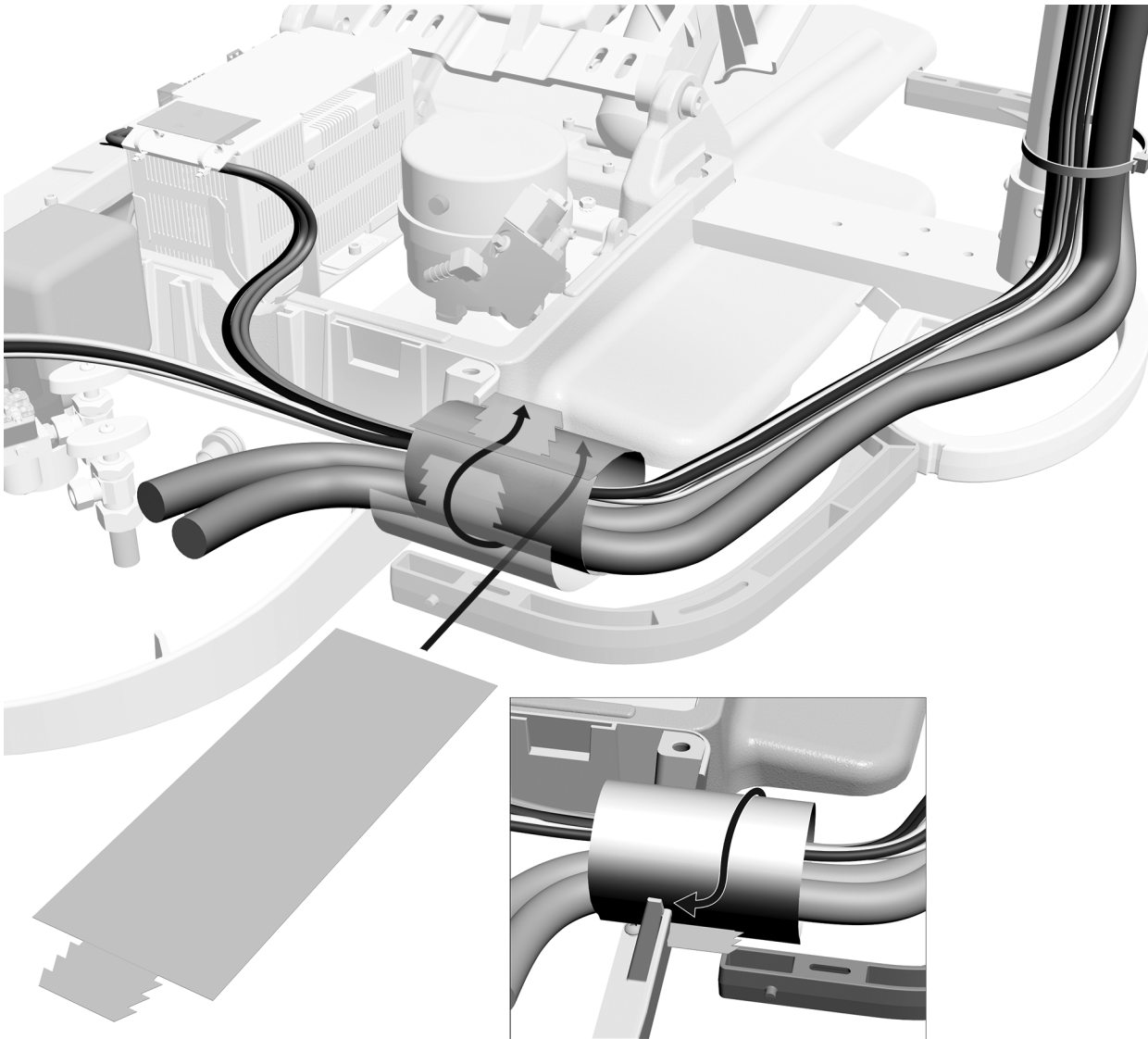


- 2** Use a Phillips head screwdriver and four #10 x 1-1/4" screws to secure the floor frame to the floor.



Actual Size of the Floor Screws

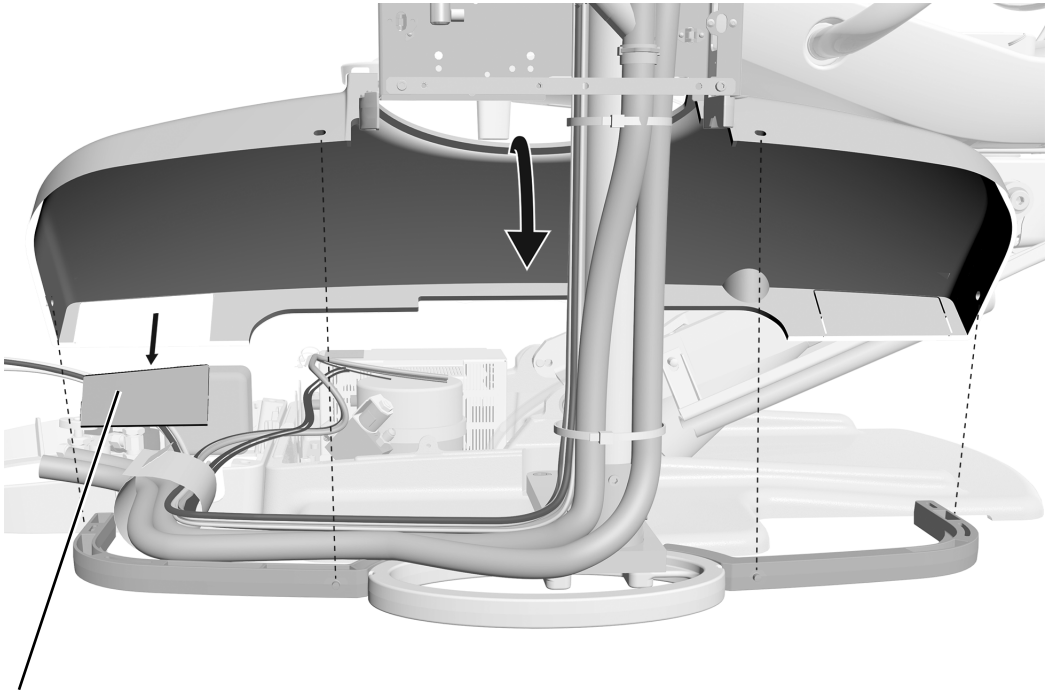
Task 4.



- 1** At the floor box opening, wrap the support center cables and tubing with the plastic cover (gray side out). Secure the cover and turn the seam down toward the floor.

- 2** Move the plastic cover so that it is centered on the edge of the floor box frame.

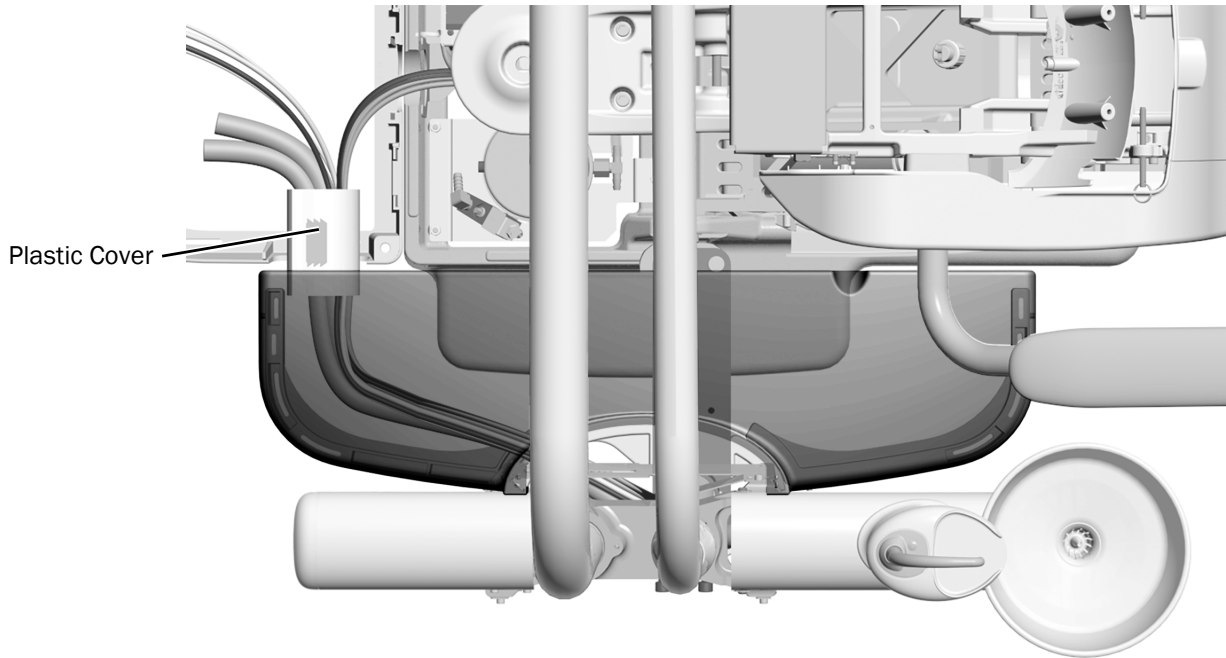
Task 5.



1 On the pedestal mount cover, remove the plug so that the tubing can pass under the cover into the floor box.

2 Fit the pedestal mount cover into the pins on the floor frame.

Task 6.



1 Verify that the plastic cover hides the cords and tubing at the gap between the pedestal mount cover and the floor box.

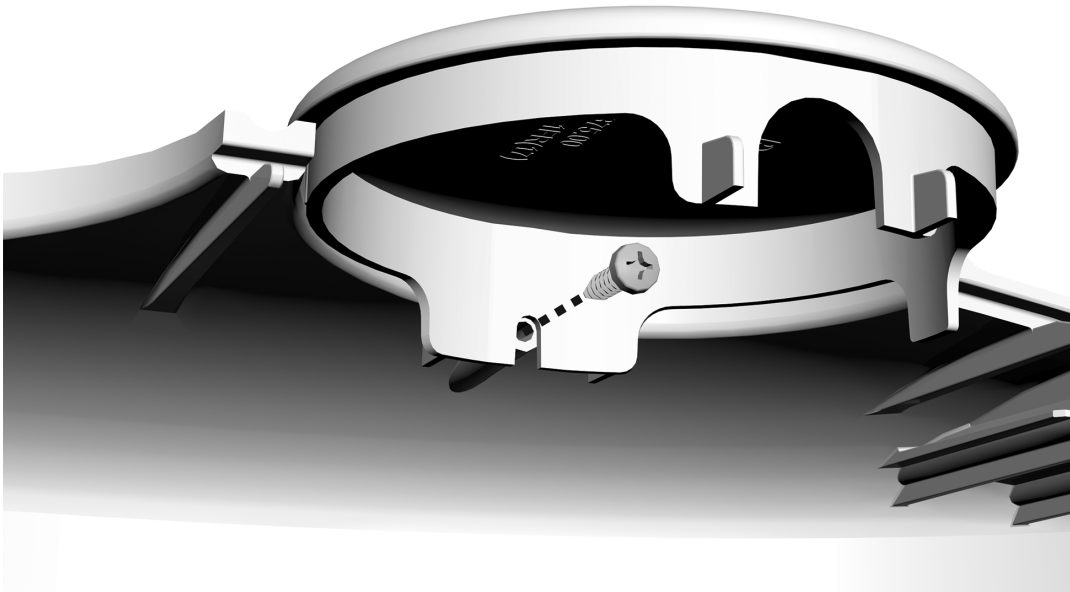
Install the Trim Caps

If the system does not have a delivery system, dental light, or monitor, install trim caps to cover the post holes for those modules.

If the system does not have a delivery system, dental light, or monitor, install caps to cover the post holes for those modules:

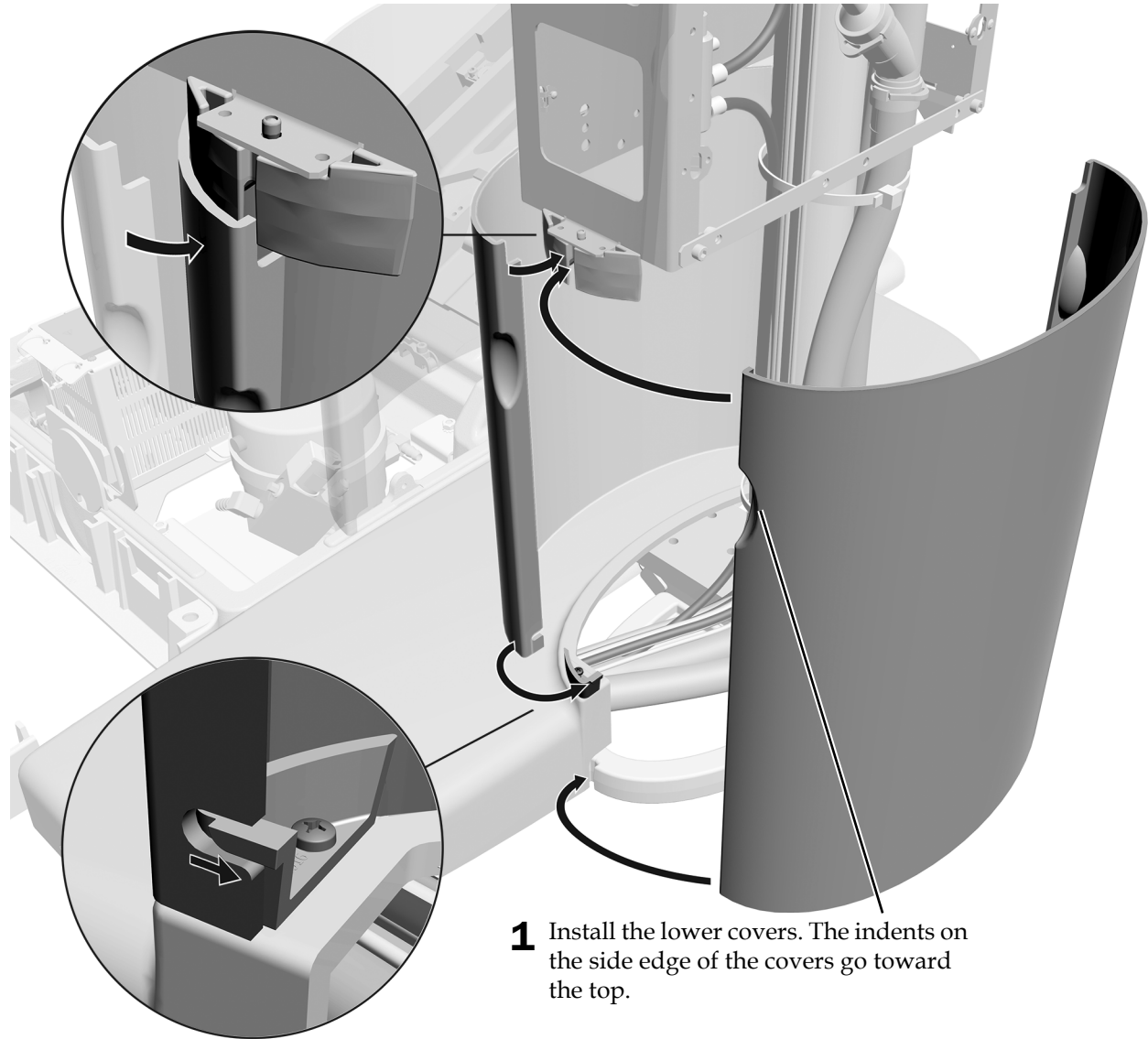
- **Support Center Post Holes:** Use a Phillips head screwdriver and a 6-19 x 1.2" screw to attach the trim cap to the support center cover that does not have the flow diagram.
- **Intermediate Post:** If the system has a monitor mounted on the intermediate post but does not include a dental light, push the trim cap onto the end of the intermediate post.
- **Assistant's Instrumentation Hub:** If the system includes an assistant's instrumentation mounted on a telescoping arm but does not include a delivery system, push the trim cap onto the top of the hub.

Trim Cap for Support Center Post Holes



Install the Support Center Covers

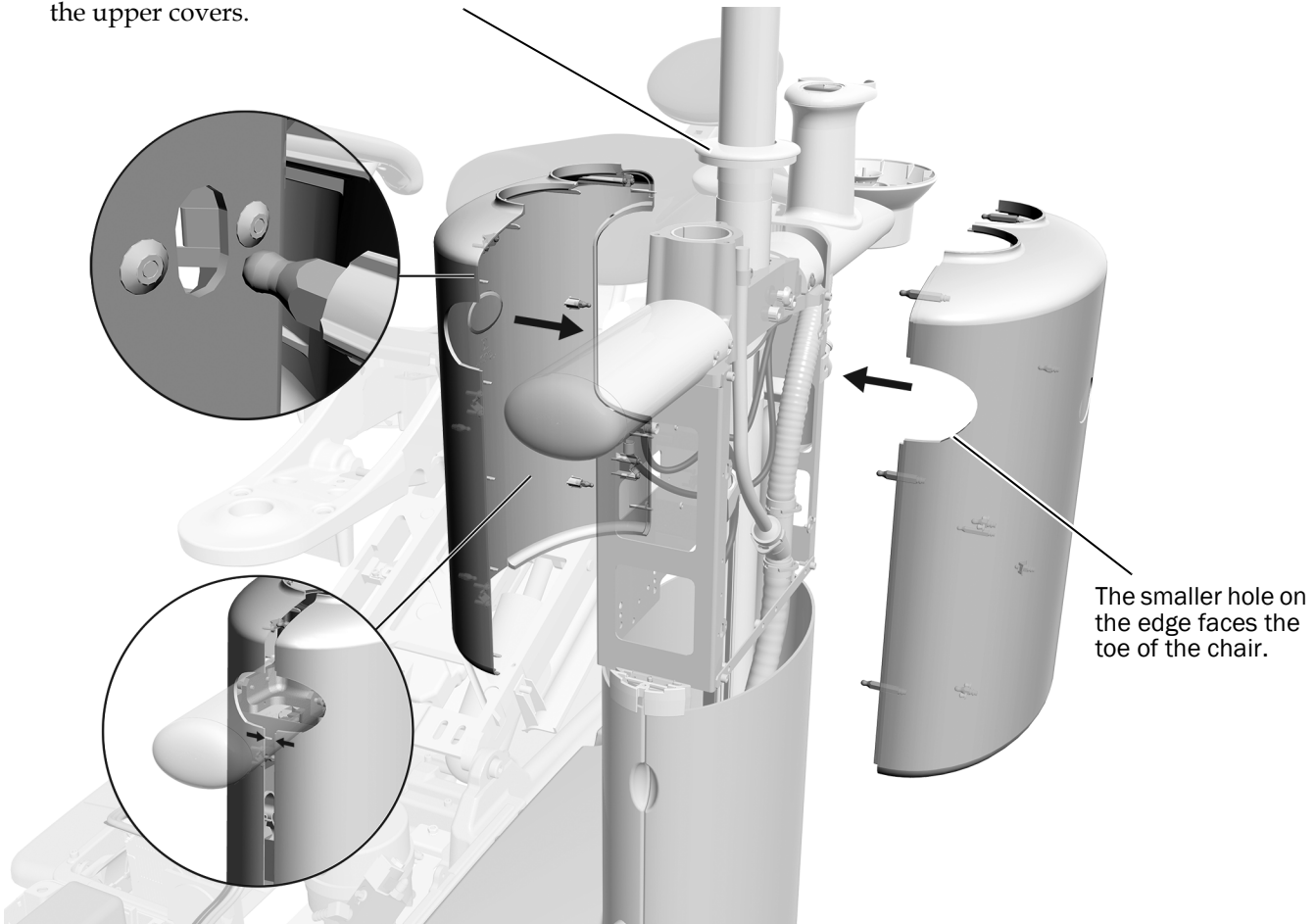
Task 1.



TIP If the lower covers do not align correctly, check the clearance of the cuspidor and the armrest. A gap between the positioning guide and the armrest can misalign the lower covers. See "Verify the Clearance for the Cuspidor Bowl" on page 56.

Task 2.

- 1 If the system includes a dental light or monitor mount, slide the post trim ring up before installing the upper covers.



- 2 Orient the covers on the correct sides of the support center. The smaller hole on the edge faces the toe of the chair.
- 3 Attach the upper covers to the support center frame. Insert the small pins on the covers into the holes in the frame and the larger pins on the one cover into the connectors on the other cover.
- 4 If the system includes a dental light or monitor mount, slide the trim ring down to the support center cover.

Next Step See *Install the Upholstery* in the *A-dec 311 Dental Chair Installation Guide* (p/n 86.0921.00).

Appendix: Install the Air Vacuum System (AVS)

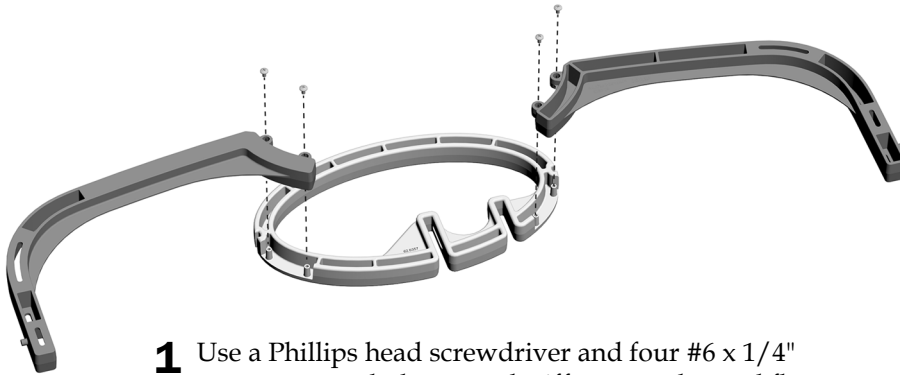
The Air Vacuum System (AVS) generates a vacuum using an air supply at 70 psi (483 kPa) minimum when a central vacuum system is not available. It also separates moisture and air that flows through the system and discharges them through a drain and air outlet.

Recommended Tools

- 5/64" and 7/64" hex keys
- Phillips head screwdriver
- 1/4" combination wrench

Install the Floor Frame and Liquid Separator Tank

Task 1.



- 1** Use a Phillips head screwdriver and four #6 x 1/4" screws to attach the curved stiffeners to the oval floor frame.



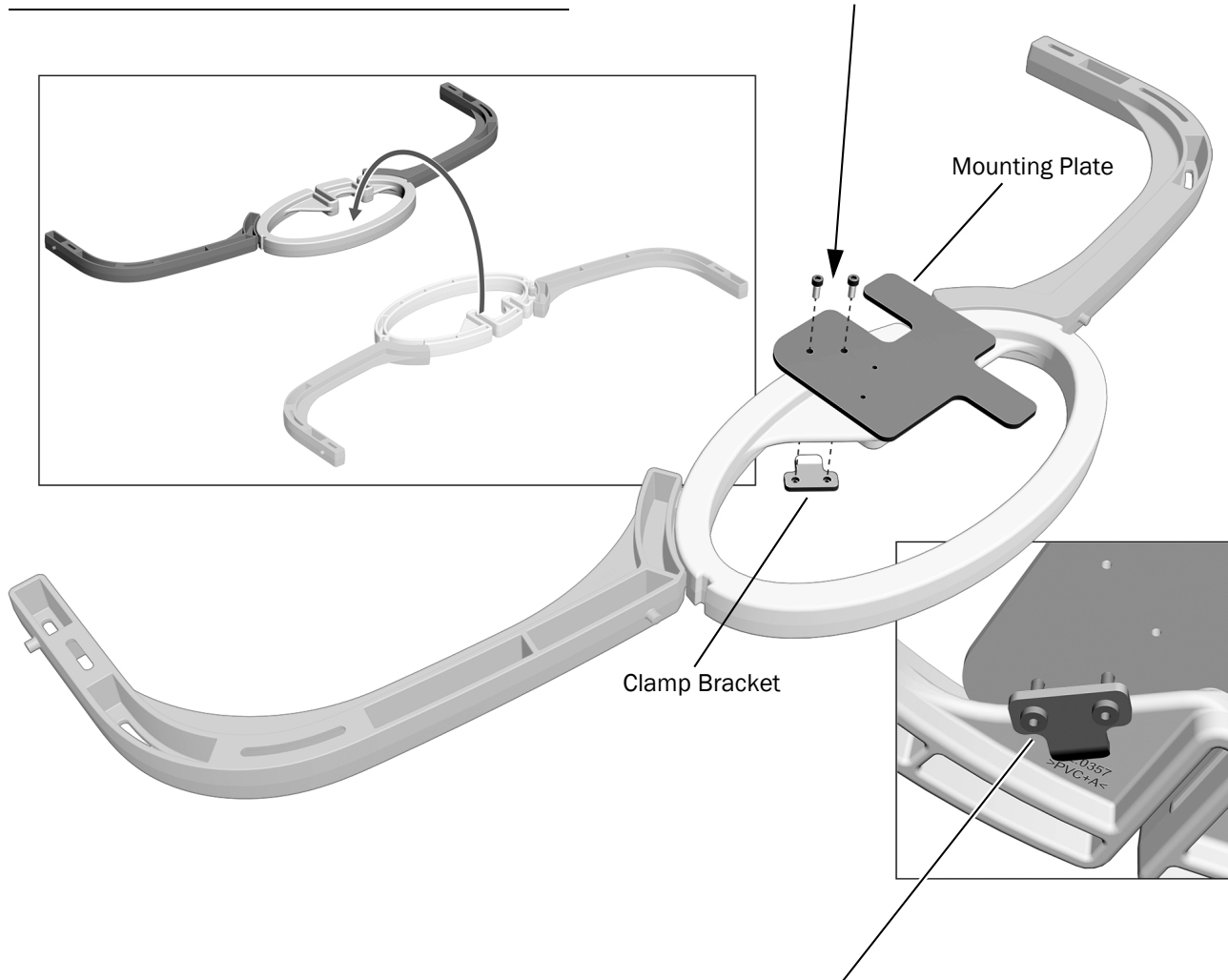
Actual Size of the Stiffener Screws

Task 2.



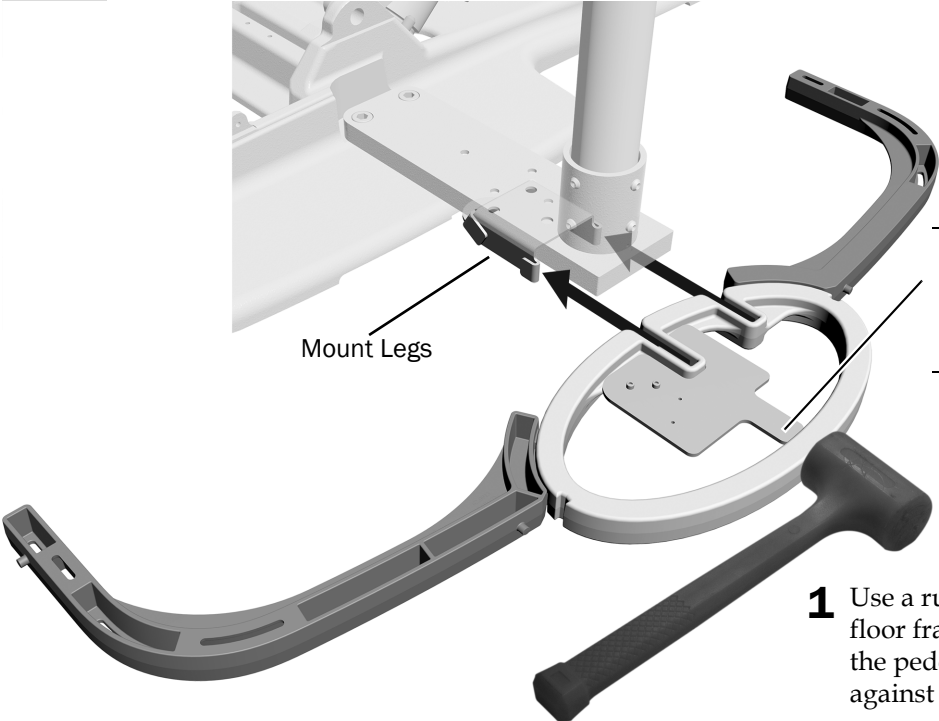
NOTE Flip the floor frame over as needed so that the open side of the floor frame is next to the chair.

- 1** Use two 6-32 x 5/8" screws to secure the clamp bracket to the mounting plate. Leave the screws loose.



- 2** Place the mounting plate and clamp bracket on the oval frame. The curve in the clamp bracket should face toward the oval. Tighten the screws to secure the mounting plate so it does not move.

Task 3.



NOTE The mounting plate arm should be positioned inside the oval frame.

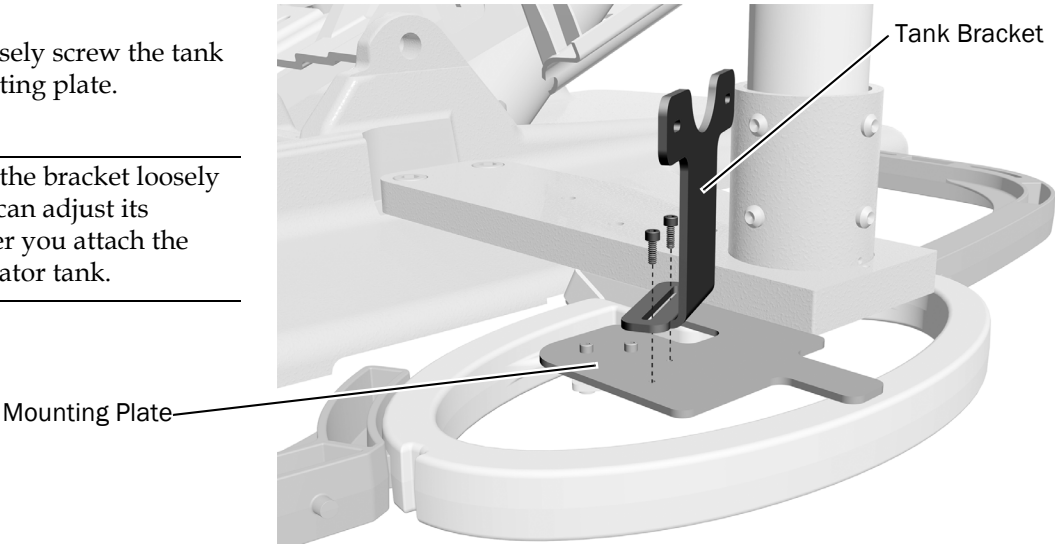
1 Use a rubber mallet to push the oval floor frame into place at the bottom of the pedestal mount until it is flush against the mount legs.

TIP You may need to firmly tap the floor frame to install it flush against the mount legs.

Task 4.

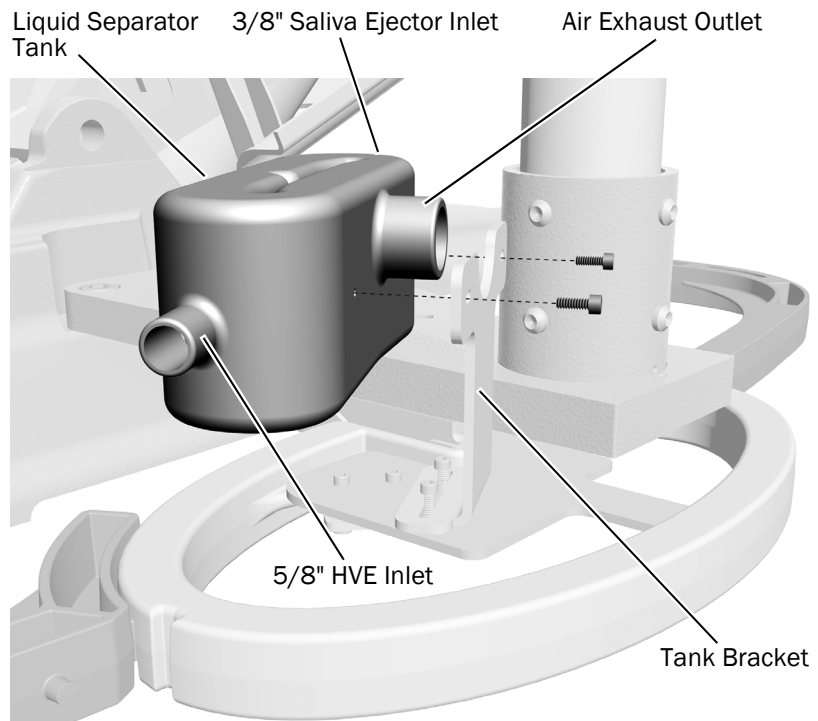
1 Use a hex key to loosely screw the tank bracket to the mounting plate.

TIP Attach the bracket loosely so that you can adjust its position after you attach the liquid separator tank.



Task 5.

- 1** Use a hex key and two 6-32 x 3/8" button head screws to attach the liquid separator tank loosely to the tank bracket.
- 2** Adjust the position of the liquid separator tank and bracket to provide clearance on either end for the HVE and saliva ejector tubing to clear the lower covers (which fit up against the oval frame).
- 3** Once you have positioned the tank and bracket, use a hex key to tighten the screws that secure the bracket to the mounting plate.
- 4** Use a hex key to tighten the screws that secure the tank to the bracket.



Connect the Air Exhaust and Tubing

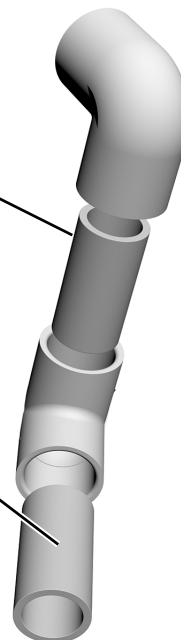
Task 1.

- 1** To build the air exhaust assembly, use a splicer to connect the two elbows.



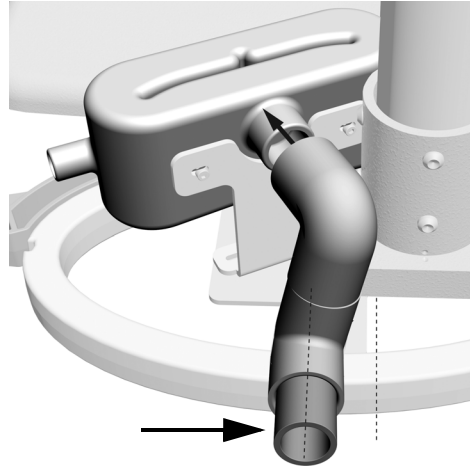
NOTE Do not use Loctite[®] between the elbows and the splicers.

- 2** Insert a splicer into one of the elbows.



Task 2.

- 1** Connect the elbow assembly to the air exhaust outlet.
- 2** Adjust the air exhaust assembly so that the end rests perpendicular to the oval floor frame.



Task 3.

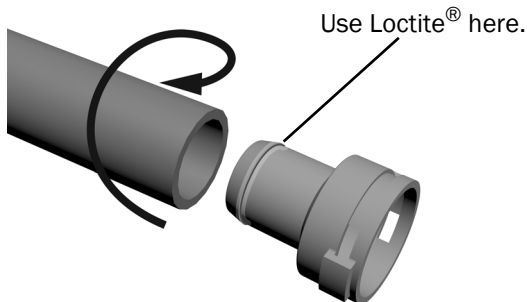
- 1** Route the cuspidor drain tubing over the air exhaust assembly and under the HVE inlet.



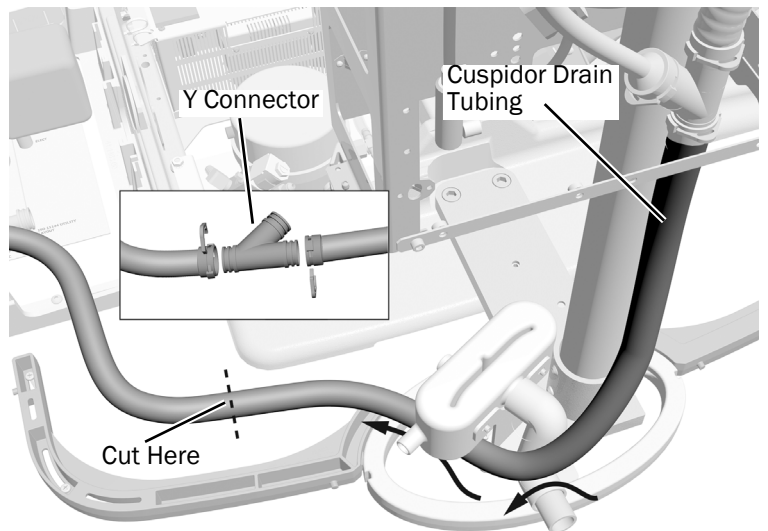
TIP Keep the tubing as compact as possible so that the bottom covers will fit on the support center.

- 2** Remove the clips that secure the three adaptors to the Y connector body. Pull the adaptors off the Y connector.
- 3** Position the Y connector at the front edge of the chair baseplate and cut the cuspidor drain tubing to meet the main top branch of the Y.

- 4** Spread Loctite® 411™ around the lip on one of the adaptors.



- 5** Use a twisting motion to push the cuspidor drain tubing on to the adaptor.



- 6** Attach the cuspidor drain tubing to the Y connector. Secure the adaptor to the Y connector with a connector clip.
- 7** Attach the provided 20 mm tubing to a Y connector adaptor using Loctite® 411™. Secure the adaptor to the Y connector with a connector clip.
- 8** Route the end of the 20 mm tubing to the drain. Trim the excess tubing.



NOTE Connect the drain according to local plumbing codes.

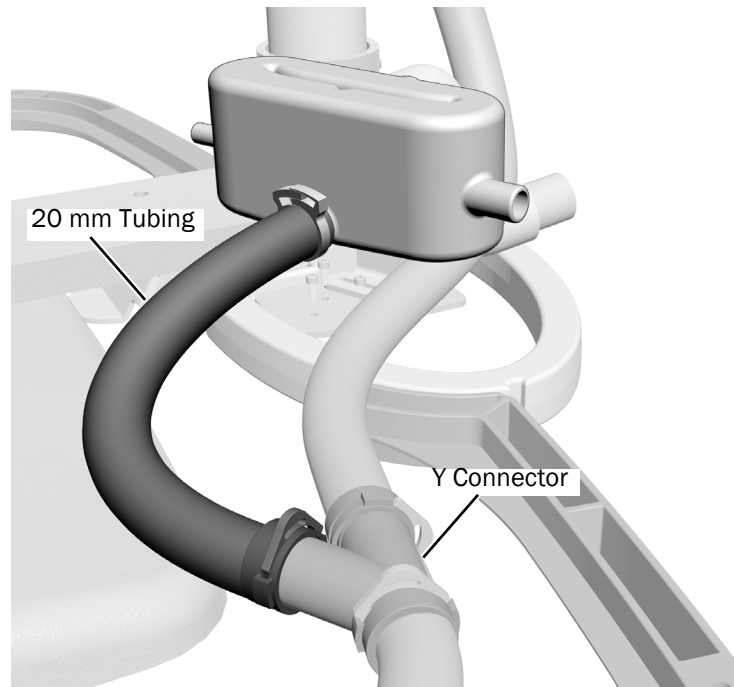
Task 4.

- 1 Attach the remaining 20 mm tubing to the liquid separator drain. Use a 20 mm adaptor and pliers to secure the clamp.



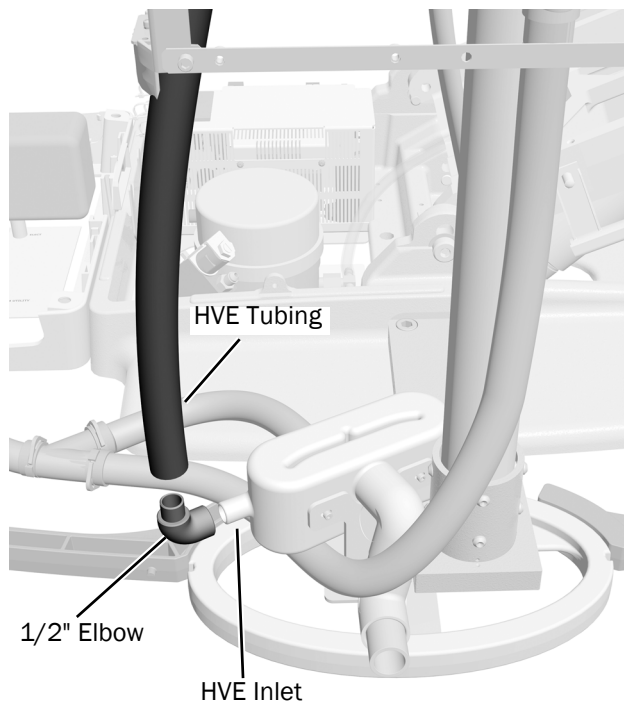
NOTE Loctite® 411™ is essential for attaching and sealing the drain tubing connections in this system.

- 2 Route the tubing from the liquid separator drain to the open end at the top of the Y connector and trim the tubing as needed.
- 3 Attach the tubing to the last Y connector adaptor using Loctite® 411™.
- 4 Attach the liquid separator drain tubing to the top of the Y connector. Secure the adaptor to the Y connector with a connector clip.



Task 5.

- 1 Guide the HVE tubing (5/8") to the HVE inlet.
- 2 Trim the tubing so that the route is as straight as possible.
- 3 Use Loctite® 411™ to secure the HVE tubing to a 1/2" elbow.
- 4 Attach the 1/2" elbow to the HVE inlet on the tank.



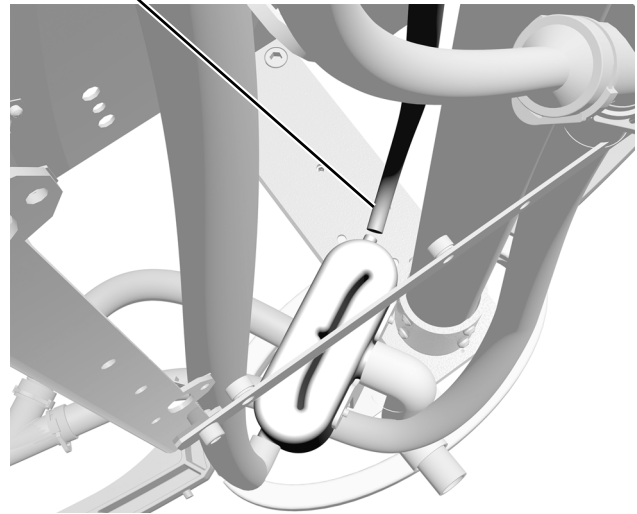
Task 6.

- 1 Connect the saliva ejector tubing (3/8") coming off the AVS to the saliva ejector inlet. Trim as necessary.



NOTE Ensure that there are no kinks in the saliva ejector tubing.

Saliva Ejector Tubing



Task 7.

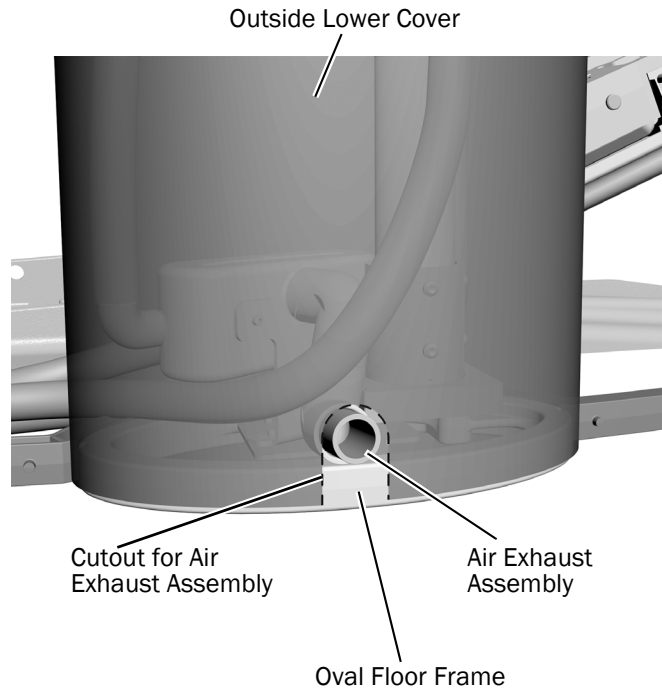


- 1 Use a 1/4" combination wrench to replace one of the plugs on the air filter/regulator with a 5/16" barb.
- 2 Slide a sleeve on the end of the 5/16" yellow tubing that comes off the T-connector in the air vacuum system and connect it to the barb on the air filter/regulator.

Replace either of these plugs with a barb.

Task 8.

- 1** Locate the lower cover that goes on the outside of the support center. The lower cover is dark gray and the outside cover is taller than the inside cover.
- 2** Turn the cover so that the indents on the side edges are at the top and place the cover roughly in position in front of the floor frame.
- 3** Note the position of the exhaust assembly and mark its position on the cover. Cut out an arched hole at the bottom of the support center cover to create an opening for the air exhaust assembly. The opening should be about 2-3/4" high by 1-1/2" wide.
- 4** Install the cover to verify the hole for the exhaust assembly is properly placed. Trim the hole for the exhaust assembly as needed so the cover fits properly against the oval frame.
- 5** Connect the 25 mm tubing to the end of the air exhaust assembly and route the tubing to an appropriate exhaust vent.
- 6** Remove the lower cover and set it aside. It will be reinstalled later.



Next Step Continue with "Route and Connect the Utilities" on page 35.

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.



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

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2601 Crestview Drive
Newberg, OR 97132 USA
Tel: 1.800.547.1883 Within USA/CAN
Tel: +1.503.538.7478 Outside USA/CAN
www.a-dec.com

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