



Powered USB Hub on A-dec® 300/500 Delivery Systems

INSTALLATION GUIDE

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Product Models and Versions Covered in This Document*

Models	Versions	Description
332pro/333pro	n/a	Delivery System
332/333	A	Delivery System
532pro/533pro/541pro	n/a	Delivery System
532/533/541	B	Delivery System

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

Before You Begin



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.



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.



NOTE The 500B delivery systems are shown in this installation guide. The mounting location for your USB hub may vary for your delivery system, but the wire and cable connections are the same.

Recommended Tools

- Anti-static wrist strap
- Standard and Phillips head screwdrivers
- Wire strippers
- Diagonal cutters
- Umbilical snake

532B/533B: Install the USB Hub

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Prepare the Chair and Delivery System

- 1 Turn on the power to the system.
- 2 Raise the chair to the full base up and full back up position.

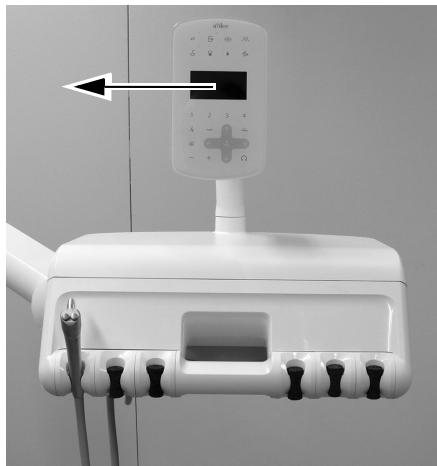


WARNING Failure to turn off or disconnect the power before you continue with this procedure can lead to product damage and result in serious injury or death.

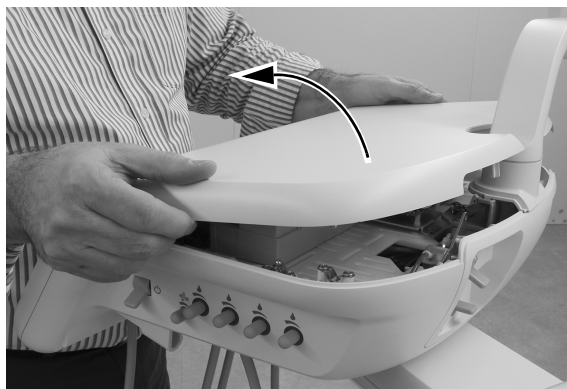
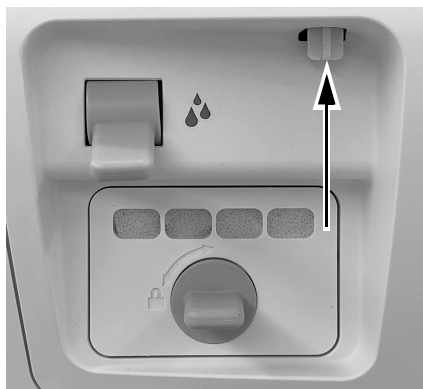
- 3 Turn off the power to the system.

532B: Remove the Delivery System Top Cover

- 1 Swivel the touchpad to the side.



- 2 Push up on the cover release at the back of the control head and lift the top cover off the control head.



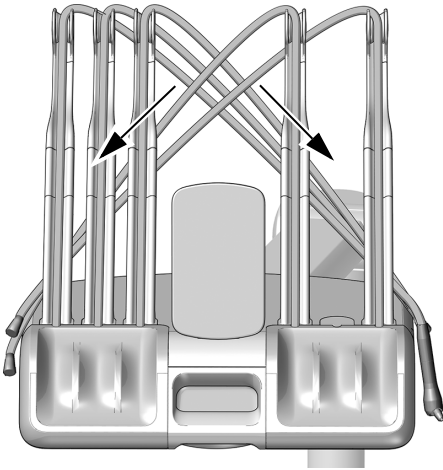
- 3 Place an anti-static wrist strap snugly on one wrist and connect the other end of the wrist strap to the grounding lug mounted on the flush toggle at the back of the control head.



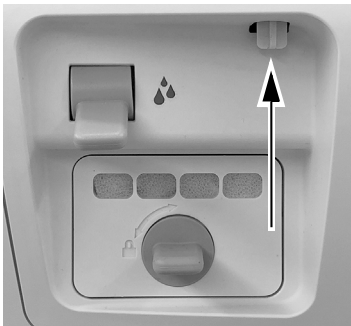
Next Step Continue with "Mount the USB Hub on the Module Shelf" on page 5.

533B: Raise the Delivery System Cover

- 1 Lay each tubing behind the whips on the opposite side of the control head.

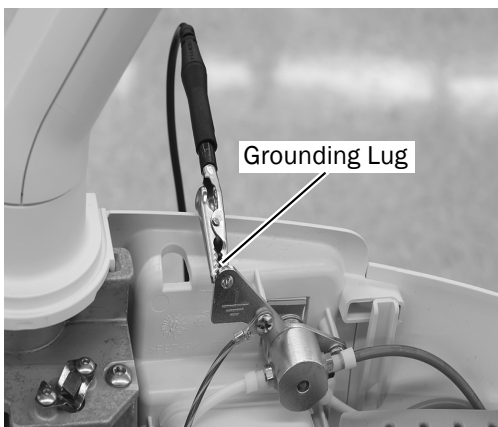


- 2 Push up on the cover release at the back of the control head and lift the top cover up from the control head and rotate the cover all the way forward.



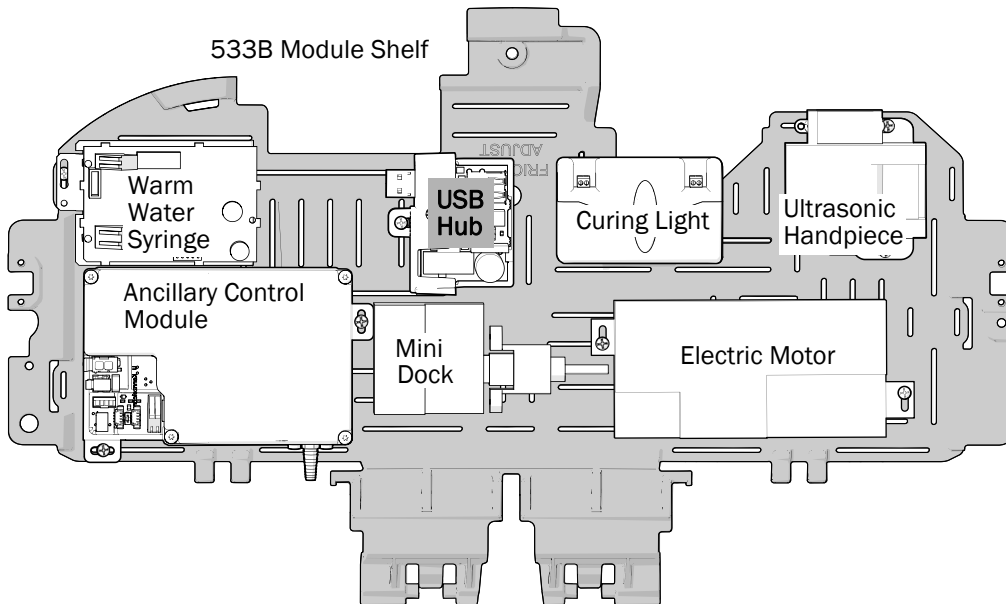
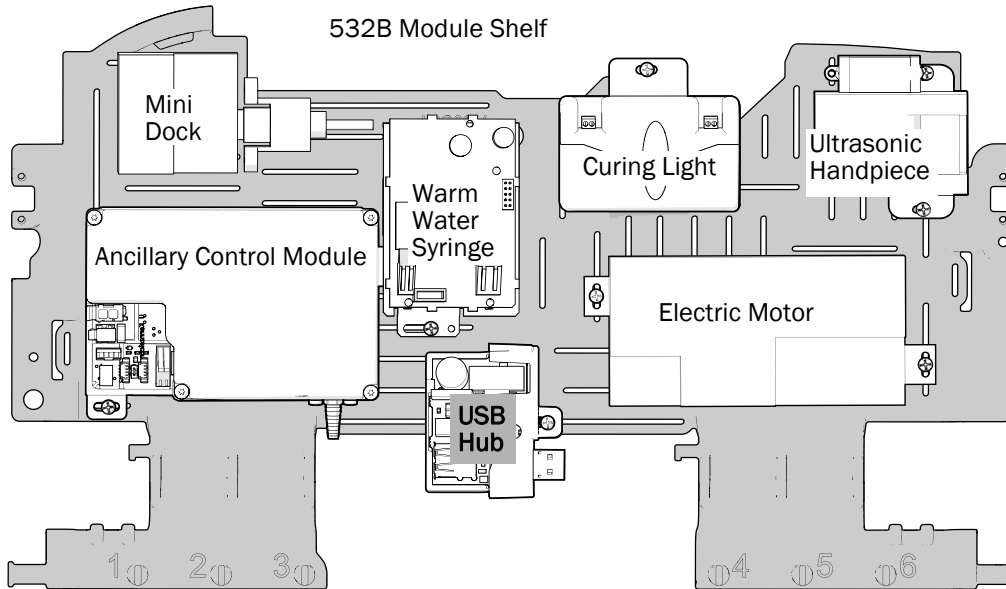
ATTENTION Circuit boards are sensitive to static electricity. Electrostatic Discharge (ESD) precautions are required when touching a circuit board or making connections to or from the circuit board. Circuit boards should be installed only by an electrician or qualified service person.

- 3 Place an anti-static wrist strap snugly on one wrist and connect the other end of the wrist strap to the grounding lug mounted on the flush toggle at the back of the control head.



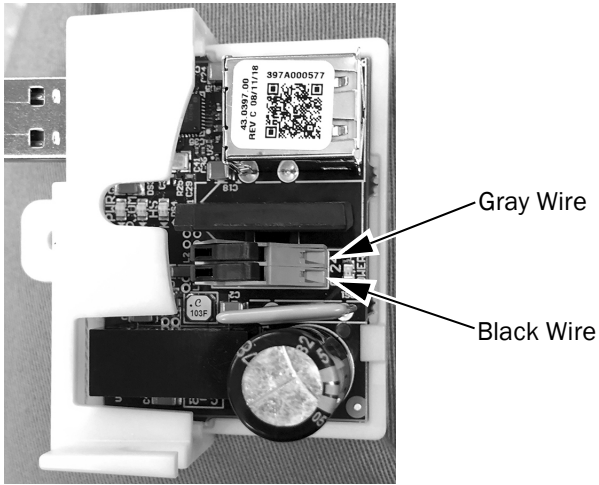
Mount the USB Hub on the Module Shelf

- 1 To ensure maximum flexibility for future installations, note the recommended placement of the USB hub as shown below.

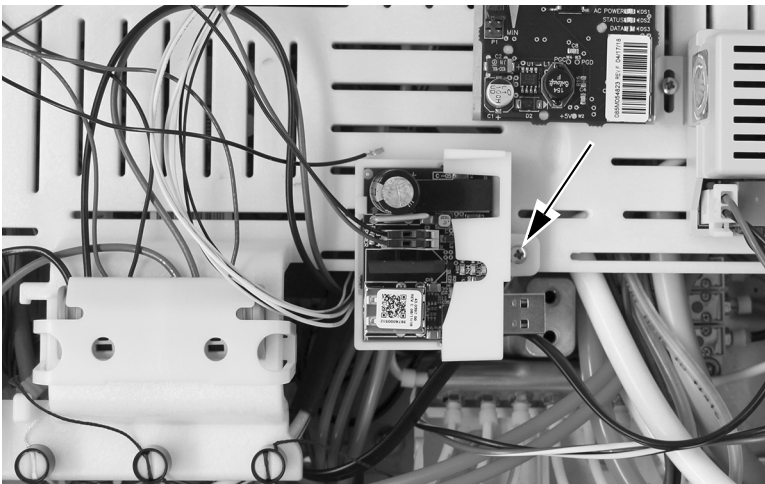


Connect the USB Hub Electrical Wires

- 1 Connect the thin black wire to the 0 V terminal and the thin gray wire to the 24 V terminal on the USB hub.

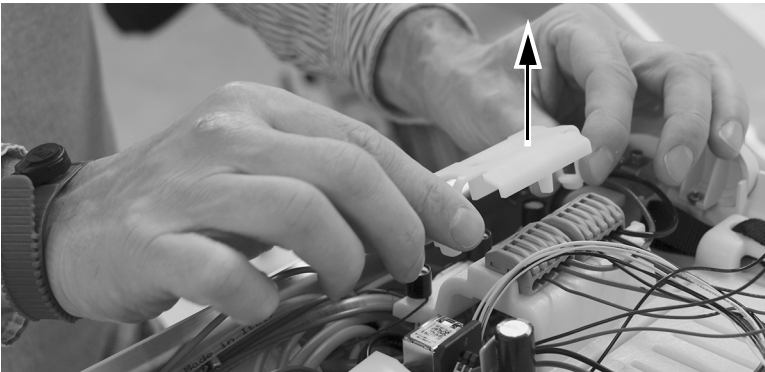


- 2 Secure the USB hub to the module shelf with the provided screw.

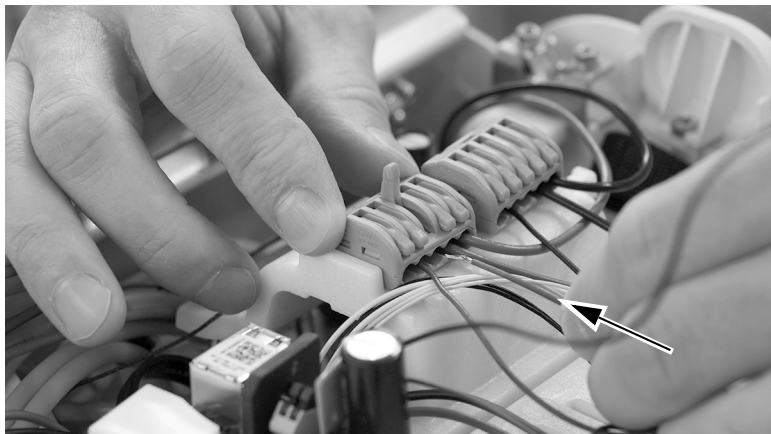


532B Shown

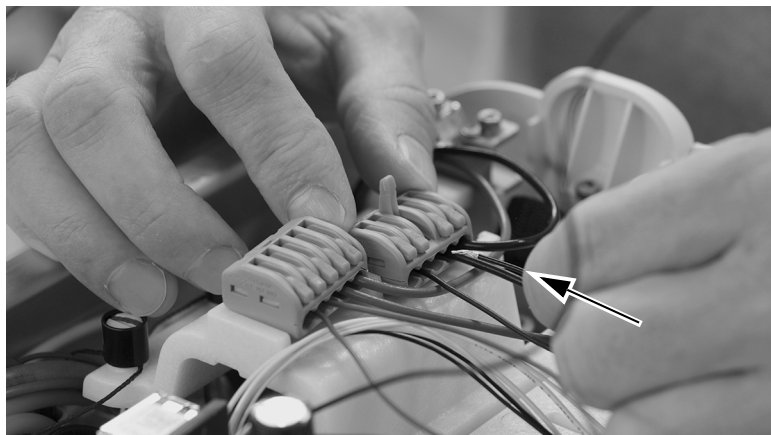
- 3 Remove the wire connectors cover closest to the USB hub.



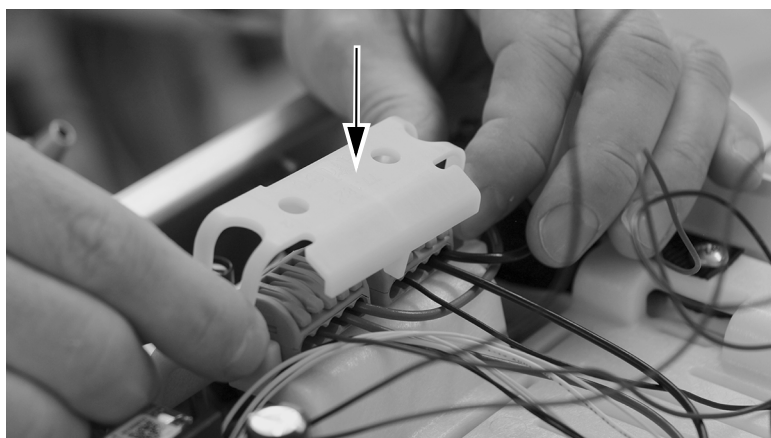
4 Insert the gray wire from the USB hub into the wire connector with the gray wires.



5 Insert the black wire from the USB hub into the wire connector with the black wires.

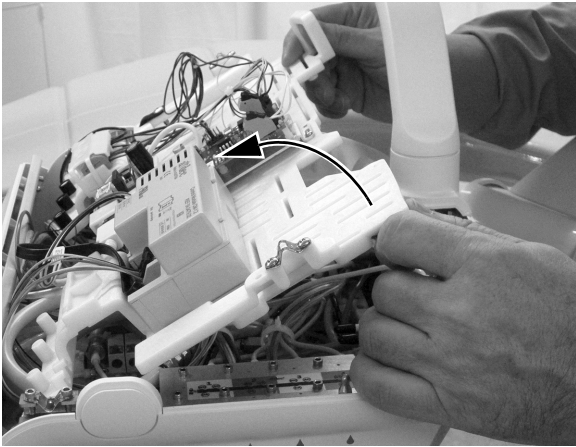


6 Reinstall the wire connectors cover.



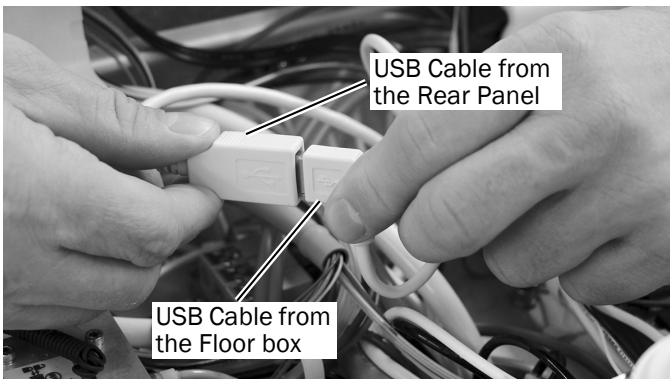
Connect the USB Cables to the Hub

- 1 Lift the module shelf all the way up.



532B Shown

- 2 Locate the USB cable that comes up through the bottom of the control head from the floor box. Disconnect the cable from the rear-panel USB port from the USB cable from the floor box.



532B Shown

- 3 Route the USB cable from the rear-panel USB port to the front of the control head.



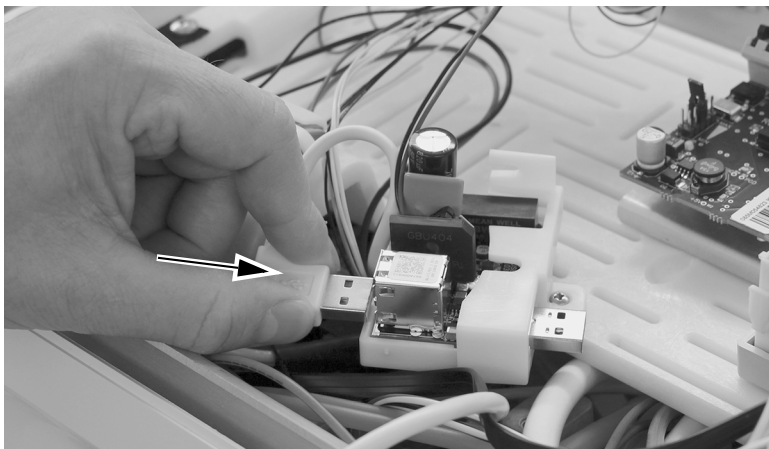
532B Shown

- 4** Route the USB cable that comes into the control head from the floor box to the front of the control head.



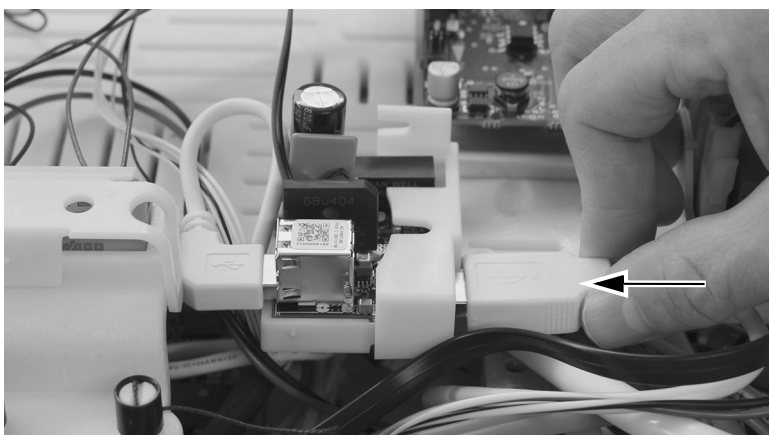
532B Shown

- 5** Plug the USB cable from the rear-panel connector into one of the stacked USB sockets on the USB hub.



532B Shown

- 6** Plug the USB cable from the floor box into the single USB socket on the USB hub.



Next Step Continue with “Connect the Delivery System USB Cable to a PC” on page 15.

541B: Install the USB Hub

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Mount the USB Hub on the 12 O'Clock Frame Unit	11
Connect the USB Hub Electrical Wires	13
Connect the USB Cable to the Hub	13

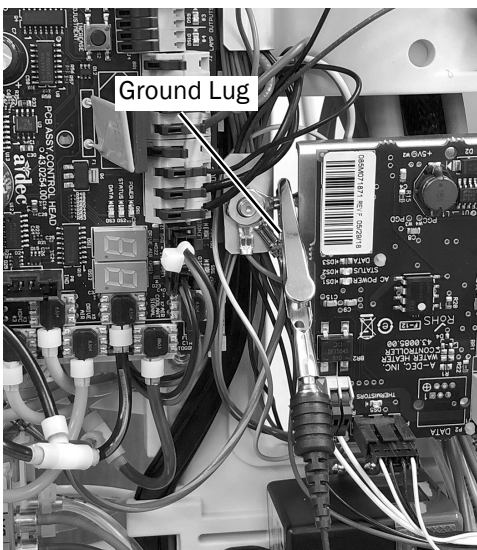
Remove the Delivery System Covers

- 1 Pull a cover out at the bottom and pull it away from the delivery system. Remove both side covers.



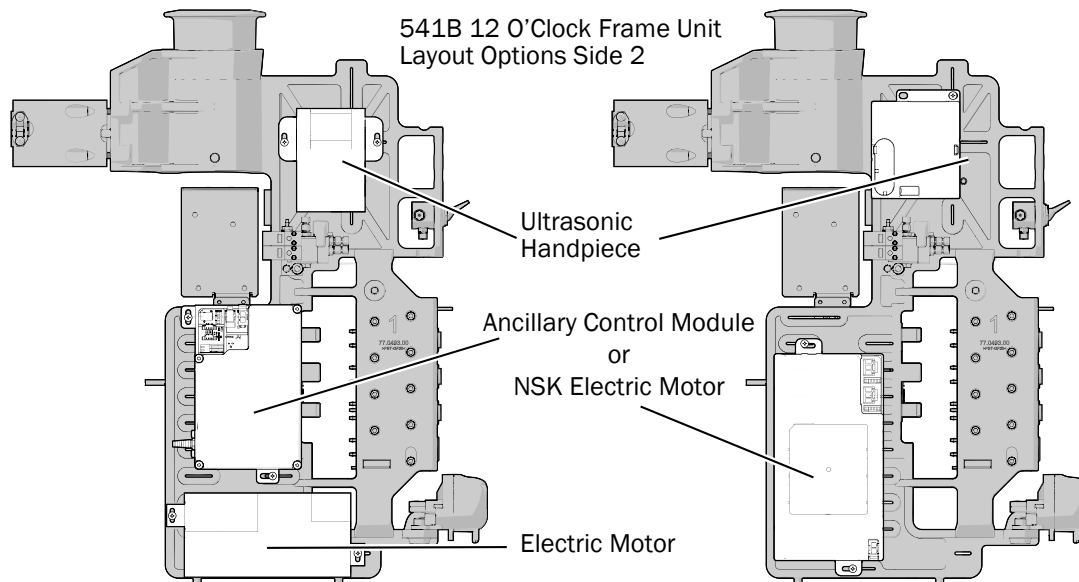
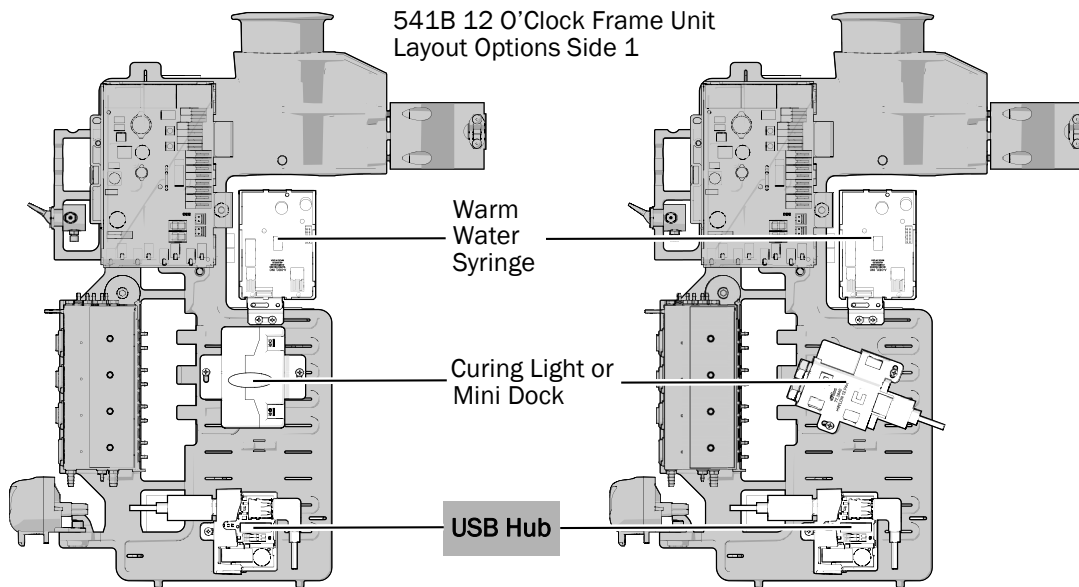
ATTENTION Circuit boards are sensitive to static electricity. Electrostatic Discharge (ESD) precautions are required when touching a circuit board or making connections to or from the circuit board. Circuit boards should be installed only by an electrician or qualified service person.

- 2 Place an anti-static wrist strap snugly on one wrist and connect the other end of the wrist strap to the grounding lug located near the edge of the delivery system circuit board.

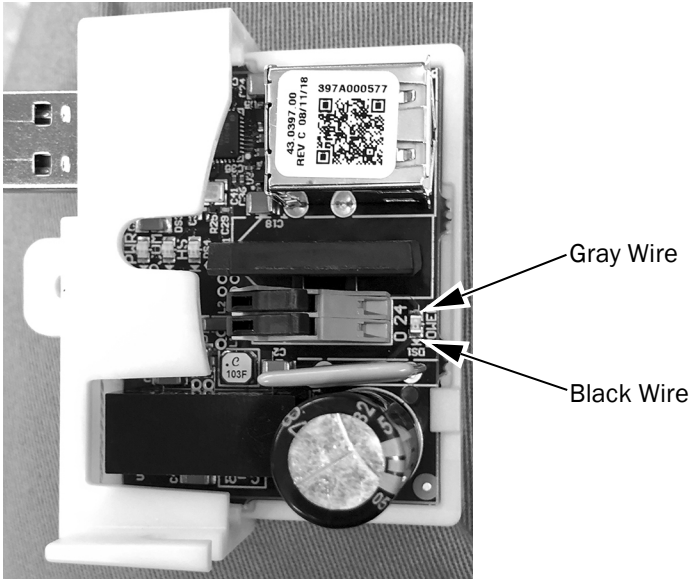


Mount the USB Hub on the 12 O'Clock Frame Unit

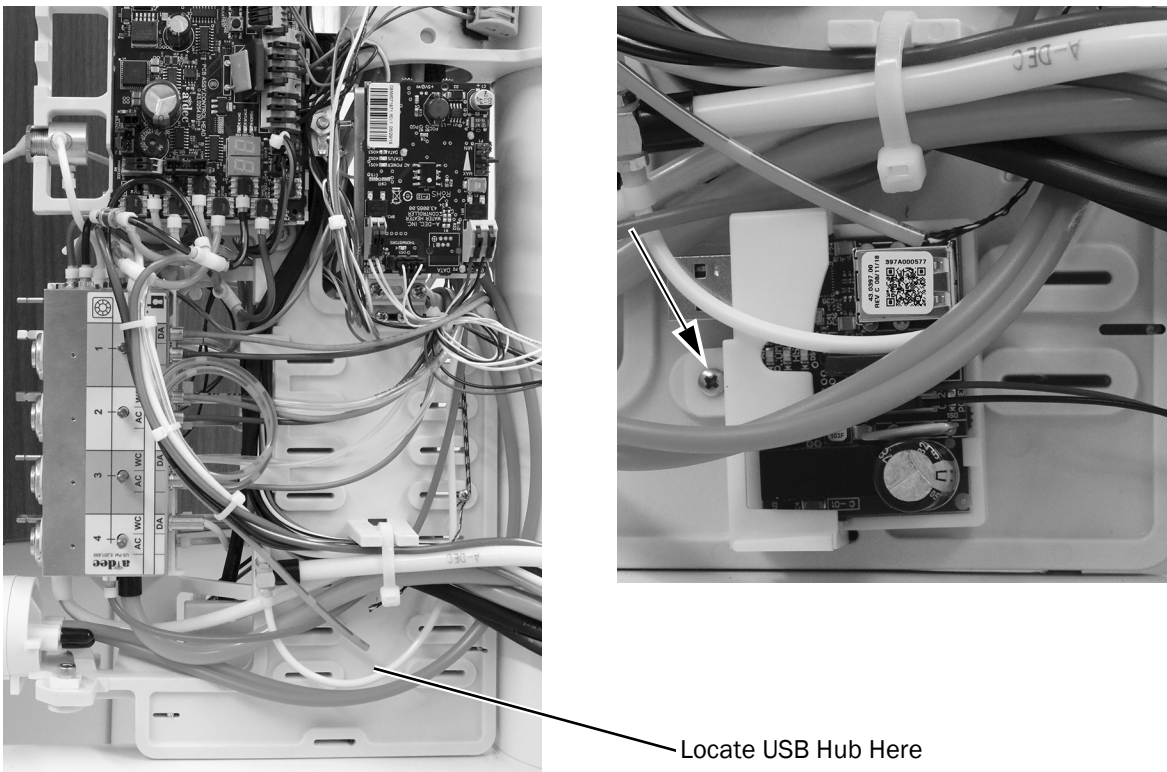
- 1 To ensure maximum flexibility for future installations, note the recommended placement of the USB hub as shown below.



- 2** Connect the thin black wire to the 0 V terminal and the thin gray wire to the 24 V terminal on the USB hub.

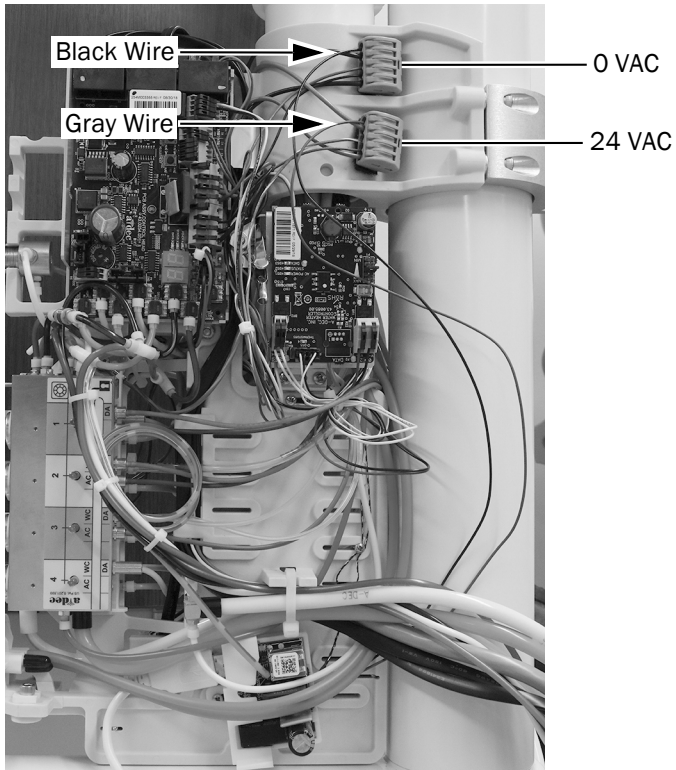


- 3** Position the USB hub on the 12 o'clock frame unit, and then use one stainless steel screw to secure it.



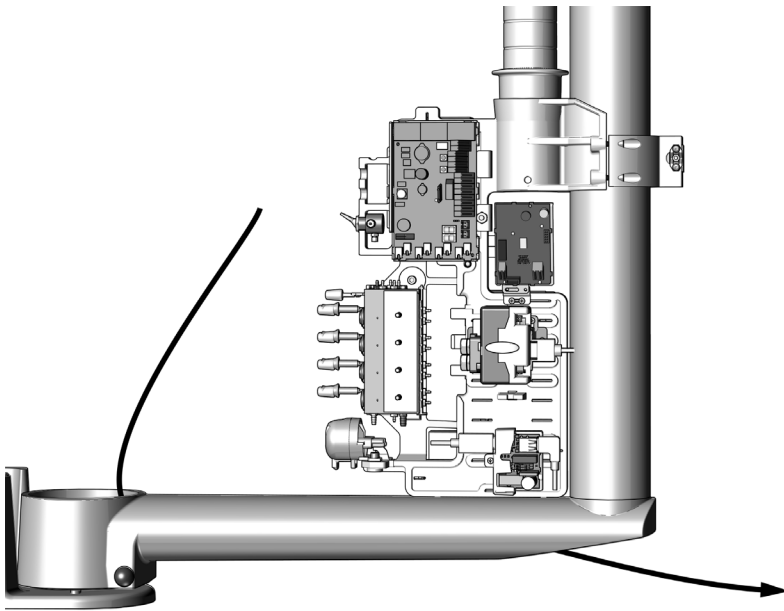
Connect the USB Hub Electrical Wires

- 1 Connect the black and gray wires to the wire connectors attached to the frame. Connect the black wire to the 0 VAC terminal. Connect the gray wire to the 24 VAC terminal.

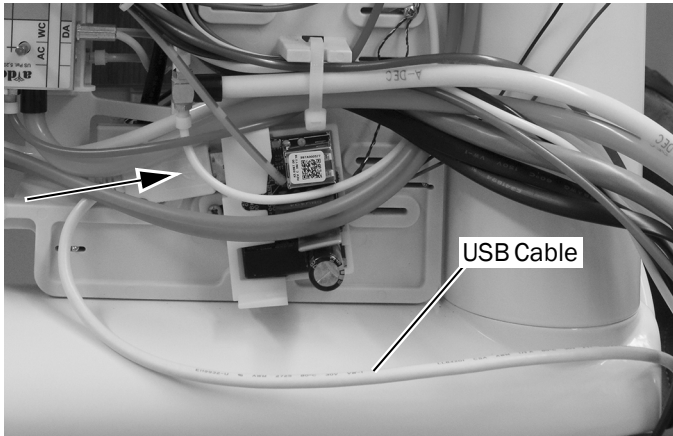


Connect the USB Cable to the Hub

- 1 Use an umbilical snake to route the supplied USB cable through the lower assembly.

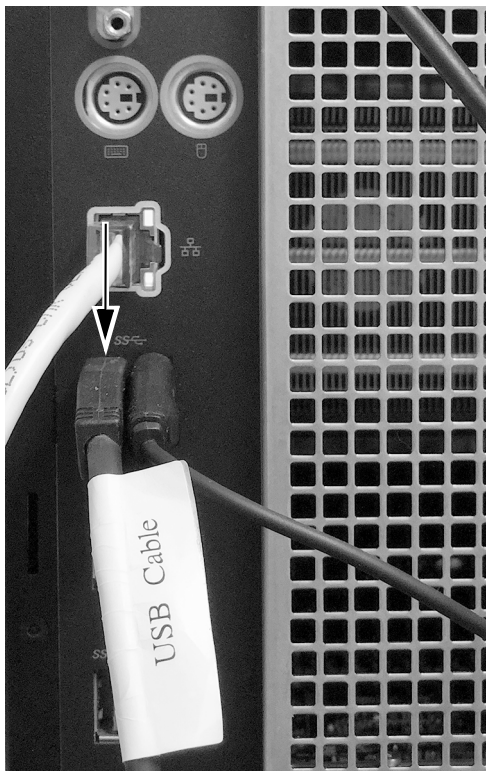


2 Plug the USB cable that you routed through the lower assembly into the USB hub.



Connect the Delivery System USB Cable to a PC

- 1 Locate the delivery system USB cable in the floor box or cabinet.
- 2 Connect the cable to a PC.



Test the Installation

- 1 Turn on the power to the system using the master toggle.
- 2 Turn on the power to the PC.
- 3 Verify that the green POWER LED on the USB hub is illuminated. If the LED is not illuminated, check the power connections.



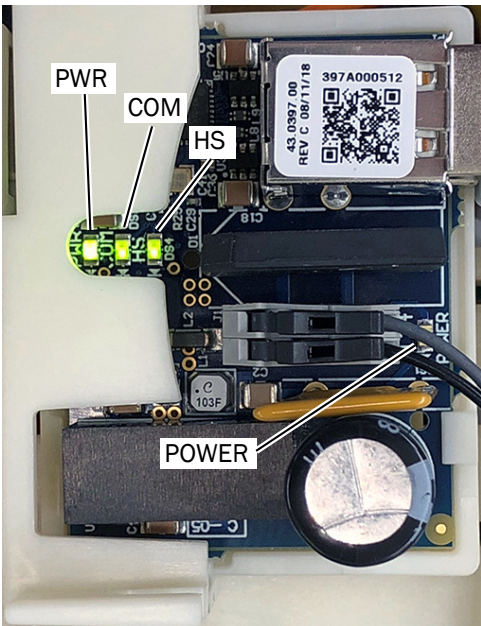
POWER LED

USB Hub LED Indicators without PC Connected

- 4 Verify that the center LED, of the three LEDs grouped together, is illuminated. The LED will not illuminate if the USB signal from the PC is not active.



NOTE It can take a minute or two for enumeration to occur between the USB hub and the PC. Until enumeration is completed, not all the LEDs will be illuminated.



USB Hub LED Indicators with PC Connected

When lit, the LEDs indicate:

- PWR - Host computer power is detected.
- COM - Communication is established, enumeration complete.
- HS - High Speed Mode active (480 mbps maximum data rate).
- POWER - Delivery system power is applied.

Reinstall the Delivery System Covers

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532B: Reinstall the Top Cover



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.

- 1** Place the top cover onto the control head. Squeeze the back of the cover and the control head together to ensure the cover is fully seated on the control head.

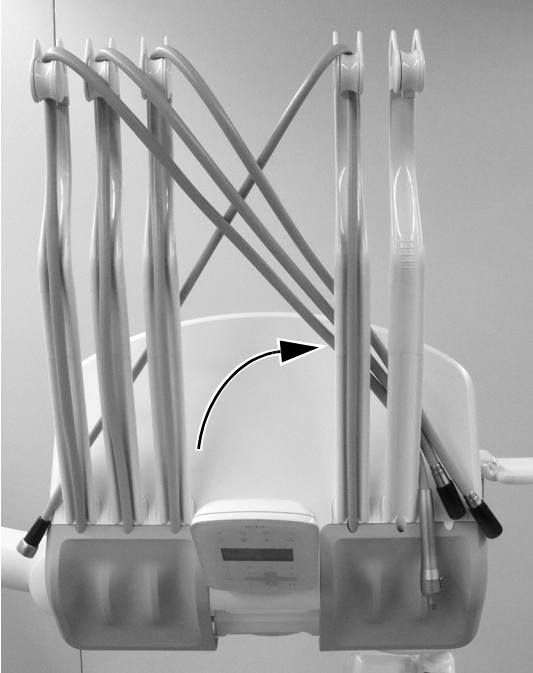


533B: Close the Cover



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.

- 1** Lower the top cover. Squeeze the back of the cover and the control head together to ensure the cover is fully seated on the control head.



- 2** Replace the handpiece tubing in their normal position on the whips.

541B: Reinstall the Side 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.

- 1 Reinstall the side covers.



Regulatory Information and Warranty

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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