

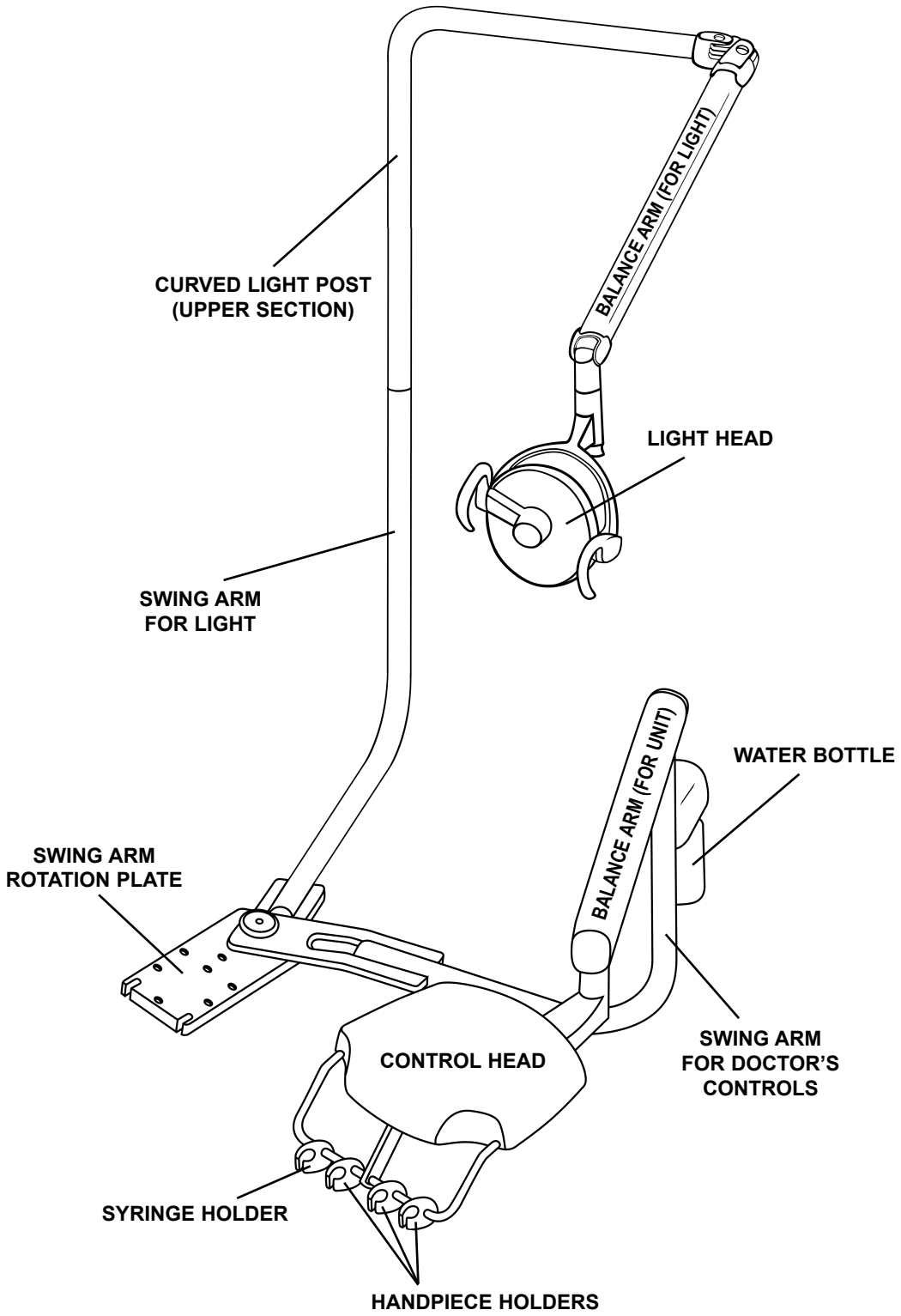
Belmont Dental Delivery Systems

*Installation Instructions:
Swing Mounted Units*

BDS-2575

X-Calibur™ Units

Swing-Mounted Style



*Installation Instructions
for BDS-2575
X-Calibur Dental Units*

10-24-06

BDS Swing Mounted Units

Installation Time: Approximately 2 hours

Shipping Packages:

3 Boxes:

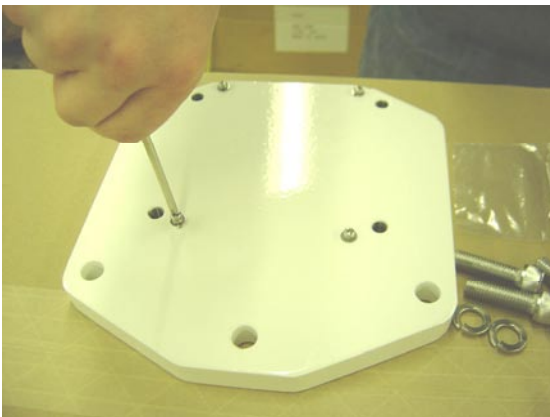
- 1- Doctor Table/Arm Assembly
- 1- Swing Arm Assembly
- 1- Umbilical & J-Box Components

Tools Needed:

- hex key wrench set or socket drive set
- Adjustable wrench
- Flat screwdriver
- Phillips head screwdriver
- Bubble Level
- Wire cutter
- Masking Tape
- (Silicone Spray Lube)

1.) Open large shipping package that contains the Swing Arm Assembly. This package contains a smaller carton where the Swing Mount Bracket and Mounting Hardware are located. Remove Swing Mount Bracket and bag of hardware.

2.) Locate and install (4) 4mm x10 mm screws into the bottom side of the Swing Mount Bracket using a Phillips screwdriver, as shown below.



Bel-20/Bel 50 Swing Mount Bracket
(8-Sided Plate)



AcuTrac Swing Mount Bracket
(Rectangular Plate)

3.) Attach the Swing Mount Bracket to chair using hardware provided.

(Note: Bracket side with (4) 4mm x 10mm screw heads faces down toward the floor- visible on AcuTrac Bracket in photo, lower right)

For Bel-20 and Bel-50

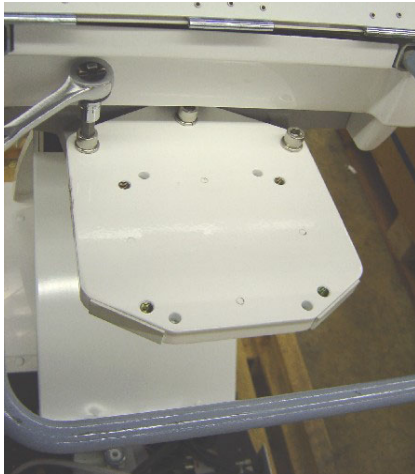
Swing Mount Bracket mounts on the top of the Gray chair casting extension.

Attach Bracket to chair using a 10 mm hex key wrench to tighten **(3)** 12mm x 55 mm socket bolts with 12mm spring washers.

For AcuTrac

Swing Mount Bracket mounts underneath the chair casting.

Attach Bracket to chair using an 8 mm hex key wrench to tighten **(4)** 10mm x 40 mm socket bolts with 10 mm spring washers.



Swing Mount Bracket Mounts on top of the Gray extension casting on Bel-20 & Bel-50 Chairs



Swing Mount Bracket attaches below the AcuTrac seat casting

4) Attaching the Swing Arm Assembly

IMPORTANT! :

Reset lower chair limit position after attaching the Swing Arm Assembly to the chair.

Damage to J-Box, chair base & lift arm covers and swing arm can result from improperly set lower limit position.

Please refer to chair manufacturer's instructions for setting lower limit of travel.

Remove Swing Arm Assembly from shipping package and place the Swing Arm Assembly Rotation Plate on the top side of the Swing Mounting Bracket.

Use an 8 mm hex key wrench to partially tighten Swing Arm Assembly to Swing Mounting Bracket as follows:

For Units with external umbilical and J-Box

Add **(2)** 10mm x 40mm socket bolts with spring washers to front recessed holes on Swing Arm Rotation Plate and partially tighten to support Swing Arm Assembly.

Place the Bracket for Umbilical Hose on top of the Swing Arm Rotation Plate and align 2 mounting holes with slots on the rear portion of the Rotation Plate.

Add remaining **(2)** 10mm x 40mm socket bolts with 10mm spring washers and 10 mm flat washers. Use an 8 mm wrench to partially tighten assembly.



Swing Arm Rotation Plate is shown being secured to Bel-50 Mounting Plate.

Bracket for Umbilical Hose is secured using rear socket bolts with spring washers and flat washers against the Umbilical Bracket.

For Units with internal umbilical on AcuTrac chairs only

Place **(2)** 10mm flat washers over slots along the rear edge of the Rotation Plate and add **(4)** 10mm x 40mm socket bolts with spring washers to fasten Swing Arm Rotation Plate to the Mounting Bracket. Partially tighten socket bolts to support Swing Arm Assembly.



Swing Arm Rotation Plate is shown being secured to an AcuTrac Mounting Plate. Flat washers and spring washers are used for bolts used on slotted holes at the rear of the Rotation Plate. Note 4 leveling setscrews are installed in the threaded holes on top of the Swing Arm Rotation Plate.

5.) Swing Arm Leveling

- a) Using an 8mm hex key wrench, add **(4)** M10x20 Leveling Set Screws to the top of Rotation Plate.
- b) Place a spirit level on top of the flat surface of the Rotation Plate and check Swing Arm Assembly leveling. Adjust the **(4)** M10x 20 Set Screws for rough leveling, as indicated by level.
- c) Gradually tighten **(4)** M10 x 40 Socket Bolts to secure Rotation Adapter to Swing Mounting Bracket, making adjustments to Leveling Set Screws, as necessary.

NOTE:

Final leveling of Swing Arm Assembly should be repeated and adjusted after Doctor Table/ Balance Arm Assembly has been attached to the Swing Arm Assembly in step 7



Adjusting leveling Set Screws for rough leveling of Swing Arm Assembly with Umbilical Bracket attached



Adjusting leveling Set Screws for rough leveling of Swing Arm Assembly without Umbilical Bracket attached

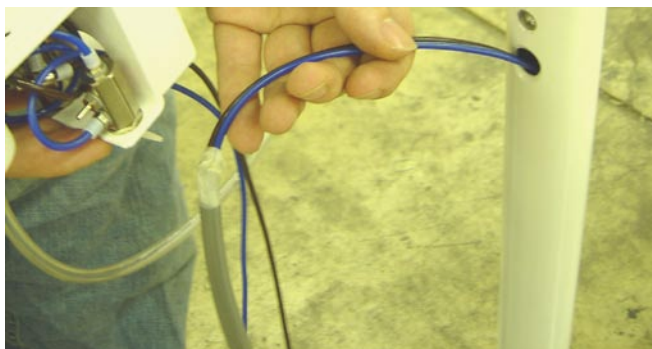
6). Attaching the Swing Arm Bottled Water System Assembly

- a) Using a Phillips screwdriver, remove 6mm x 20 mm mounting screw for water bottle bracket from unit Swing Arm.



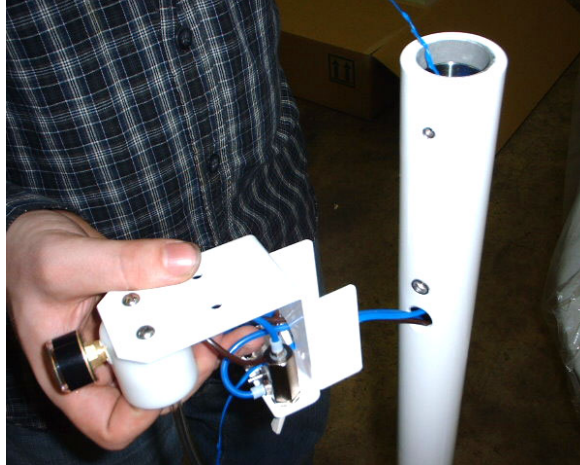
Use Philips screw driver to remove 6mm x 20mm water bracket mounting screw

- b) Remove Bottled Water System assembly and Cover from box containing J-Box Accessories. Insert 1/8" blue and 1/8" brown tubing (with gray outer sleeve) from water system into hole on the side of the swing arm and route downward through swing arm.

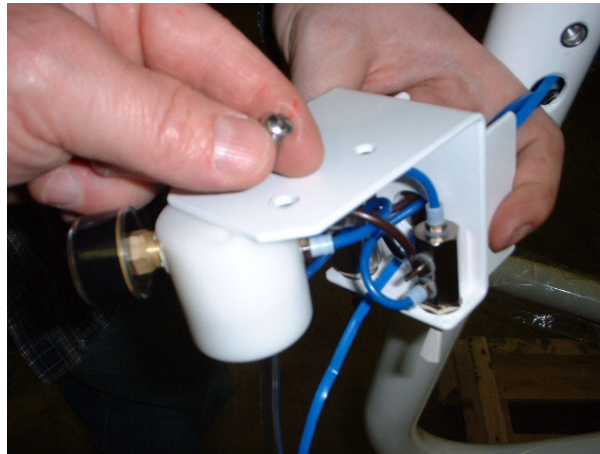


Insert 1/8" blue & brown tubing into the hole on the side of the swing arm and feed tubing down through bottom end of the Swing Arm

- c) Feed lower end of the blue flexible ribbon wire through center hole in the Water Bottle Mounting Bracket.



- d) Use a slotted screwdriver to remove one 10-32 x 1/2" screw from top of the Water Bottle Mounting Bracket and loosen the second screw. Rotate Water Bottle Manifold to get better access for tightening the Water Bottle Mounting Bracket to the Swing Arm.



- e) Replace 6mm x 20 mm Phillips mounting screw and tighten Water Bottle Mounting Bracket to Swing Arm.



7.) Installing Doctor Table/Balance Arm Assembly onto Swing Arm

- a) Open Doctor Table/ Balance Arm Assembly shipping carton.
- b) Remove plastic fitting bag tied to the end of the unit umbilical.
- c) Attach green flexible ribbon from Balance Arm Assembly umbilical to blue flexible ribbon at top of Swing Arm. Pull flexible ribbon through Water Bottle Mounting Bracket.
- d) Insert end of Touchpad Wire Harness (gray insulation) into the top of the Swing Arm and feed downward.
- e) Lift Doctor Table/ Balance Arm Assembly out of the shipping carton and support on shoulder. Feed main umbilical down into Swing Arm.
Push Umbilical and Touch Pad wire Harness downward, while gradually pulling green ribbon attached to 1/8" brown and 1/8" blue tubing through Water Bottle Mounting Bracket.



Pull flexible ribbon wire with blue & brown tubing from unit umbilical down & out through the routing hole of the Water Bottle Mounting Bracket.



Feed Touch Pad Wire Harness down through Swing Arm.

(Note: A light application of Silicone Spray to the outside of main umbilical tubing and wire harnesses will ease passage through the Swing Arm)



Mount Doctor Table/ Balance Arm Assembly to Swing Arm.
Feed umbilical and touchpad wire harness downward and gradually pull green flexible ribbon attached to ends of 1/8" brown & 1/8" blue tubing through hole in Water Bottle Mounting Bracket.



Mount Balance Arm onto Swing Arm.

Note: plated Balance Arm joint must be fully seated onto Swing Arm.

- f) Remove brass friction disc, 6mm x 5mm set screw and 4mm hex key wrench from the small bag attached to water bottle (shipped inside J-Box carton).
Insert first the brass friction disc and then the set screw into the threaded hole at the top of the Swing arm.
Tighten set screw to minimize drift of Doctor Table/Balance arm Assembly.

IMPORTANT !:
Do Not Over Tighten Set Screw.
Over tightening will strip the thread inside the Swing Arm.



Friction Disc, Set Screw and Hex Key Wrench are shipped in a bag attached to the water bottle inside of the J-Box. Insert Friction Disc into threaded hole on the Swing Arm and tighten the 6mm x 5mm set screw using hex key wrench provided.

DO NOT OVERTIGHTEN SET SCREW

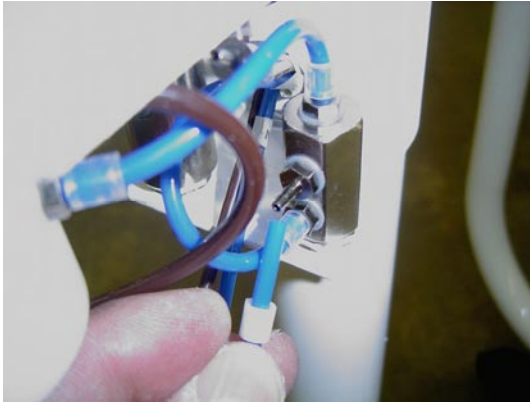
8. Connecting Bottled Water System to Doctor Table Section

- a) Trim 1/8" brown tubing from Dr. Table/ Balance Arm Assembly to desired length for connection to the open barb on the Tee fitting on the Water Bottle System Bracket.
Note: Allow enough tubing length to prevent kinking.
Slip 1/8" tubing collar onto tubing and connect and secure tubing to Tee Fitting.



Slip tubing collar over trimmed end of 1/8" brown tubing and insert tubing onto Tee. Secure tubing collar down over barbed tubing connection.

- b) Trim 1/8" blue tubing from Dr. Table/ Balance Arm Assembly to desired length for connection to the open barbed fitting on the Water Selector Valve attached to the Water Bottle System Bracket. Allow a little extra length of tubing to prevent kinking.
Slip 1/8" tubing collar onto tubing and connect and secure tubing to barbed fitting on the Water Selector Valve.



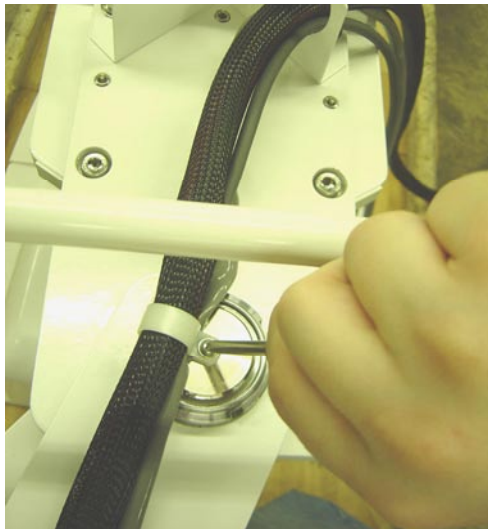
Slip tubing collar over trimmed end of 1/8" blue tubing and insert tubing onto Water Selector Valve. Secure tubing collar down over barbed tubing connection.

c) Replace 10-32 slotted screw from step 6, d) and re-tighten both screws.

d) Attach Water Bottle System Assembly Housing Cover to Bracket using (2) 4mm x 16mm self-tapping Philips screws, as shown below.



e) Secure Unit umbilical to Swing Arm Pivot using Nylon C-clamp and 4mm x 10 mm Philips screw provided.



9. Umbilical

Note: Consult Floor Template supplied with each delivery system . Plumbing for the delivery system must be in accordance with all state and local codes.

Separate the touchpad wire harness from main umbilical bundle.

Units With External Umbilical (skip to step f, if unit is attached to an AcuTrac chair with Internal Umbilical)

- a) Apply a light coating of silicone spray to the outside of umbilical tubing. Feed umbilical through the grey corrugated duct hose, then snap Umbilical Duct Hose Connector into the Umbilical Bracket up on the unit Rotation Plate.



Apply a light coating of silicone spray to outside of the tubing.



Umbilical is shown installed into Duct Hose. Duct Hose is connected to the Umbilical Bracket.

- b) Secure J-Box frame to the floor using mounting holes provided, at desired location.
- c) Connect lower end of Umbilical Duct Hose to J-Box Frame.
- d) Attach the manual shut-off valves to the J-Box air and water supply pipes. Purge lines prior to attaching air/ water assemblies and umbilical tubing to shut-off valves.
Attach Air & Water regulator assemblies to umbilical tubing.
- e) Test the Delivery System to verify that there is no air or water leakage and that the unit is fully functional.
Place J-Box Cover over Frame and secure with **(4)** 10-32 x 1/2" slotted screws provided.

Units with Internal Umbilical Installation (AcuTrac chairs only)

- f) Plug-in the chair and raise the seat to the highest position, while lowering the backrest as far as possible. Shut-off the chair power switch.

Warning: Pull the plug from the electrical outlet to prevent injuries caused by the accidental operation of the chair during internal umbilical installation



*AcuTrac chair is raised to the upper limit of travel.
The backrest is fully reclined to relieve spring tension.*

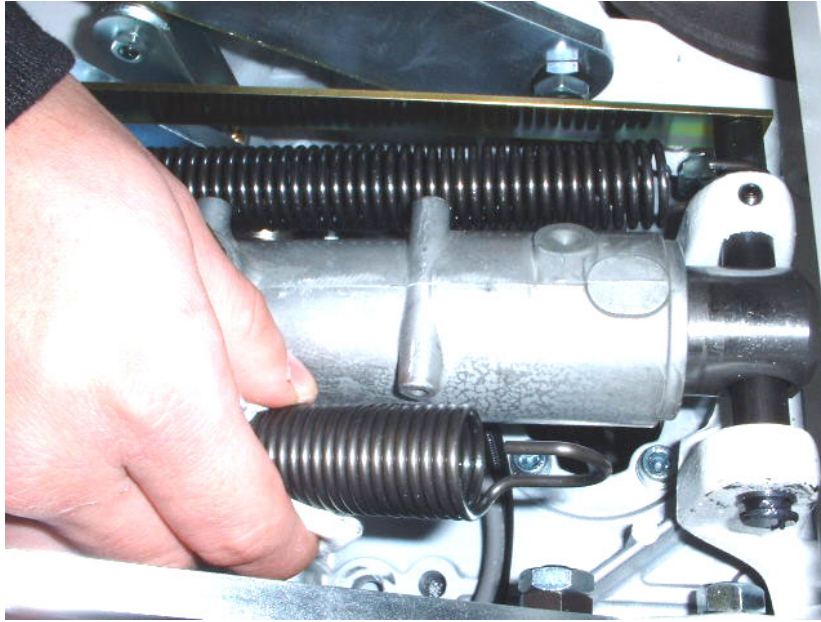
- g) Remove the Phillips screws from the each side of the sub-link cover at the base of the chair. Pull lower edges of the sub-link cover outward slightly, in order to release the safety shut-off plate. (This allows access beneath the seat during installation of the umbilical).



Removing the Phillips screws to release the sub-link cover and the safety shut-off plate.

- h) Remove one extension spring inside of the seat casting to improve access for feeding the umbilical through the center of the seat rotation pivot.

Grasp the spring with a rag. Stretch the spring slightly and un-hook it.

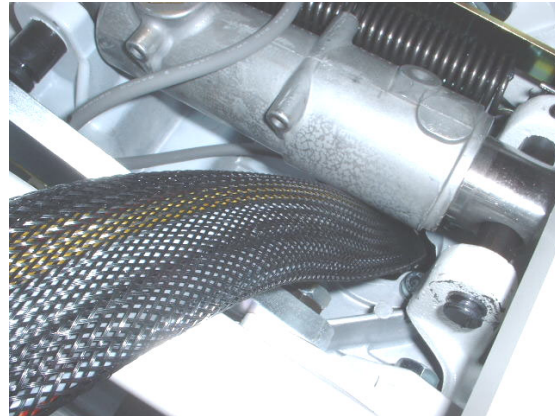


Removal of the spring on the side of the chair which the unit will be mounted. This allows access for routing the umbilical through the center of the seat rotation pivot.

- i) Feed unit umbilical, touchpad harness and accessory harness through the hole cut-out on the front of the seat cover. Push umbilical end down through the seat rotation pivot.



*Routing umbilical through hole cut-out into the chair.
Note: Umbilical shown secured to Swing Arm Pivot using C-clamp provided.*



Route umbilical down through the seat rotation pivot.

- j) Route the end of internal umbilical underneath the lift arm pivot, along the chair base and between the control box and the pump, and out through the front of the chair to the J-Box. Umbilical and hoses can be secured to the chair lift arm frame with a cable tie.



Umbilical and hoses are routed between the relay box and pump to the location of the J-Box.



*Umbilical and hoses are routed under the lift arm pivot. A cable tie may be used to secure the hoses to the side of the sub-link arm.
Note: safety plate is in the down position.*

- k) Replace the safety shut-off plate inside of the sub-link cover, and refasten cover to the base of the chair.
- l) Re-attach the extension spring for the backrest inside of the seat casting (from Step 9, h)
- m) Attach the manual shut-off valves to the J-Box air and water supply pipes. Purge lines prior to attaching air/ water assemblies and lower umbilical. Attach Air & Water regulator assemblies to umbilical tubing. Attach Accessory Wire Harness from umbilical, as required.
- n) Test the Delivery System to verify that there is no air or water leakage and that the unit is fully functional. Cover floor utilities with Long Pump Cover for AcuTrac chairs.

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