



Telecab

HOME LIFT



INSTALLATION GUIDE

Part No. 000628, Rev. 024
11-m01-2024

Standard notations

The following notations may be used throughout this guide to emphasize important safety information, mechanical concerns, and other important information. Please review and follow all of these messages.

 DANGER	Danger messages indicate an imminently hazardous situation, which, if not avoided, results in death or serious injury. All danger messages feature a standard ISO safety alert symbol followed by the signal word DANGER in capitalized black lettering on a red background.
 WARNING	Warning messages indicate a potentially hazardous situation, which, if not avoided, could result in death or serious injury. All warning messages feature a standard ISO safety alert symbol followed by the signal word WARNING in capitalized black lettering on a dark yellow background.
 CAUTION	Caution messages indicate a potentially hazardous situation, which, if not avoided, could result in death or serious injury. All caution messages feature a standard ISO safety alert symbol followed by the signal word CAUTION in capitalized black lettering on a yellow background.
CAUTION	Caution messages that do not include the ISO safety alert symbol indicate a potentially hazardous situation for the machine only, which, if not avoided, could result in damage to the machine. All caution messages include the signal word CAUTION in capitalized black lettering on a yellow background.
NOTE	Note messages provide information, such as reminders, general information about a previous statement, or additional guidelines that do not fit into the flow of the preceding text. All note messages include the signal word NOTE in capitalized white lettering on a blue background.

Hazards and warnings

 **ELECTRICAL SHOCK HAZARD**

Do not connect or disconnect wiring while the power is on. Before servicing, disconnect all power to the equipment.

 **WARNING**

SUDDEN MOVEMENT HAZARD
System may start unexpectedly upon application of power. Unpredictable equipment operation may result in death or serious injury.

 **ELECTRICAL SHOCK HAZARD**

Savaria Concord Lifts, Inc. is not responsible for any modifications of the product made by the user.
Do not allow unqualified personnel to use equipment. Failure to comply could result in death or serious injury. Maintenance, inspection, and replacement of parts must be performed only by authorized personnel familiar with installation, adjustment, and maintenance.
Do not remove covers or touch circuit boards while the power is on.

 **WARNING**

FIRE HAZARD
Do not use an improper voltage source. Verify that the rated voltage matches the voltage of the incoming power supply before applying power.

 **DANGER**

HAZARD WARNING
Be aware that during the installation, service and maintenance of this equipment, you could or will be exposed to unsafe crushing, shearing and falling hazards.

IMPORTANT

APPLICABLE CODES
You must ensure that your installation conforms to all local codes and standards including the applicable electrical, building, and lift/lift codes. Each region will use a specific year of the code and it is the responsibility of the installing company to confirm which year of the code is applicable. For the TELECAB, the following lift/lift codes apply:

- ASME A17.1 Section 5 1996
- CSA A17.1/B44-2007 Sec 5.3
- CSA A17.1/B44-2010 Sec 5.3

Disclaimer

Savaria Concord Lifts, Inc. disclaims liability for any personal injury or property damage resulting from the operation of a product that has been modified from the original Savaria design. No person or company is authorized to change the design of this product without written authorization by Savaria.

Job site tools

Tools and materials used for installation:

- Allen wrenches
- Screwdrivers (slotted, Phillips, Robertson)
- Socket and wrench set
- Needle-nose pliers
- Side cutters
- Large crescent wrench
- Pry bar
- Vise-grip pliers (standard and wide-jaw welder's type)
- Drift pin punch
- Rubber mallet
- Box cutter/knife
- Scissors
- 10" medium cut file (for filing joints) - optional
- Wall anchors
- 25' tape measure
- Carpenter's level and square
- Plumb bob and line
- Chalk line
- Metal and wood stud finder
- Reversible hand drill
- Concrete drill bits 1/4", 3/8", 1/2"
- Hammer drill for concrete fasteners
- Trouble light for hoistway
- 25 feet of 1/2" rope - optional
- 100' (30 m) extension cord (minimum 14 gauge wire) - optional
- Assorted butt electrical wire connectors and crimping tool
- 1/2" electrical box connectors (strain reliefs) - provided
- Wire puller (50 feet of 1/8" fish tape) - optional
- Wire marker tape
- Wire crimper
- Wire strippers
- Tie-wraps
- Volt-ohm (multi) meter
- Safety items: hard hats, safety glasses, steel toe shoes, heavy gloves, safety harnesses, etc.
- Chain hoist - optional
- Hand dolly
- Scaffolding or ladders and planks for tower assembly
- Shop vac
- Rags and cleaning solvent
- General purpose grease
- Silicone sealant
- Materials to close off area during installation

Revision history of this guide

- March 10, 2010 – Initial release of new format
- September 2, 2010- Steps 3 and 10 – updated cab types; Step 11 – updated hydraulic fluids; Step 26 – updated service panels
- November 11, 2010- Step 12 – added note to affix stickers – manual lowering box
- December 15, 2010- Step 10 – updated Figure 13; Step 16 – updated number of underpan switches; Step 19 – changed how to install underpan (chains); Step 23 – removed reference to Telecab junction box; Step 25 – updated COP drawing; Step 28 – clarified installation of ceiling inside the cab; Appendix B – removed Appendix B
- December 22, 2010- Step 16 – corrected text about wiring of underpan switches
- March 22, 2011- Updated flowchart on page 4; Added new Step 4 on page 7 to determine type of controller being used; Steps 13, 14, 21, 22, 23, 24 – added note regarding Electrical Schematics for new version controller board (PN 242831); Step 15 – added note if unit has new controller board (PN 242831), you cannot use relays to run lift; you must use temporary run pendant instead; Step 17 – updated underpan switch procedure to ensure the two normally open (NO) underpan switches for the platform are installed with the switch arm up
- April 12, 2011- Added “Connect travelling cable” and “Verify door unlocks in emergency” to flowchart on page 4; Updated all photos of hydraulics to current version; Added new Step 12 – connect travelling cable; Updated Step 17 – described jumper harness to use with temp run buttons and how to use temp run buttons; Updated Step 20 - included both methods for installing underpan; Added new Step 25 – added procedure to verify that door will unlock in an emergency; Removed previous Step 28 – cab ceiling is pre installed at the factory; Updated Step 27 – updated procedure to set pressure relief valve to reflect current pump; Removed Appendix A and added Installation Notes section
- April 19, 2011- Added new Step 12 to install plastic cab panels (if required)
- October 19, 2011- Clarified Step 13 on page 15, travelling cable; Added Group 22F battery spec to Step 17 on page 17; Updated Step 18, sub-step 3 on pg. 18 – temp run buttons to travel up or down; Added note to Step 19 on page 19 where underpan jumper is located; Added new Step 31 on pg. 33 install tower cap; Added new Step 32 on pg. 33 to wrap ceiling wires
- February 6, 2012- Updated manual (where applicable) for new version controller board (PN 242835)
- April 16, 2013- Revised drawing of new controller on page 7; Added note to preassemble tower extensions together for low overhead situations on page 11; Added note re: adding jumpers if not using separate power supply for lighting page 16; Revised Step 23 on page 17; Revised underpan installation procedure on page 20; Added procedure to set up pressure on page 29; Revised Maintenance section on page 35; Added troubleshooting section on page 36
- October 10, 2013- Added new STEP 18 to install shoring pins on page 17; Revised text on page 27; Added chain maintenance section on page 36
- May 12, 2014 - Added new photo to STEP 15 on page 16; Revised Figure 40 (page 25); Added note to turn gauge shutoff valve off when not in use (page 29); Added new Appendix B Reference Drawings on page 38
- March 31, 2015 - Added Important notice regarding Applicable Codes on page 3; Revised Figure 15 on page 14; Revised Note in sub-step 4 of STEP 19 on page 19
- April 8, 2016 - Revised to Savaria Concord Lifts, Inc.; Added text on page 27 to Adjust Chain Tension section
- August 25, 2016 - Added new STEP 5 on page 8; Revised Step 29 on page 27; Revised Set Pressure Relief Valve procedure on page 29
- August 8, 2018 - Added important note re: phone verification on page 25
- August 24, 2018 - Added important note re: anchors on pages 11, 13 and 14
- January 10, 2019 – Added bullet to sub-step 8 in Set Pressure Relief Valve procedure on page 29
- December 9, 2019 – Added new Appendix C: Bounce and Noise Checklist on page 42
- July 30, 2020 – Added danger warning on page 2
- February 25, 2021 – Corrected verbiage of unit classification throughout
- May 14, 2021 - Removed 12V DC battery information.
- January 19, 2023 - Added cleaning Appendix on page 37
- January 11, 2024 - Revised Maintenance table on page 39, added revision number

List of installation steps



WARNING

Follow the steps provided to ensure your safety during installation. Failure to follow instructions renders the Limited Warranty null and void. In addition, any party installing the product who deviates from the installation instructions agrees to indemnify, save, and hold harmless the manufacturer from any and all loss, liability, or damage that may occur as a result of the deviation.

Steps	Page
Double-check site specifics	7
Unpack and check shipment	7
Verify cab type	8
Determine controller type	9
Mark wall with tower centerline	10
Stand tower in position	11
Temporarily anchor tower to wall	12
Install yoke guide slider	13
Install tower extensions (as required)	14
Permanently anchor tower to wall	15
Install cab	16
Install plastic panels (if required)	17
Connect travelling cable	18
Fill tank with hydraulic fluid	18
Install remote manual lowering device	19
Connect to main power supply	19
Install shoring pins	20
Run lift (as required)	20
Install underpan switches	22
Install underpan	23
Install cab floor panel	24
Install floor plug	24
Install phone (as required)	26
Install hall calls (as required)	26
Connect remaining wiring	27
Verify door unlocks in emergency	27
Establish landing positions and set limit switches	28
Test operation and adjust (as required)	29
Install service panels	32
Install tower cap	36
Wrap ceiling wires (as required)	36
Re-install back panels on cab	37
Before leaving job site	37
Appendix A: Cleaning	38
Appendix B: Maintenance and Troubleshooting	40
Appendix C: Reference Drawings	44
Appendix D: Noise and Bounce Checklist	47

Installation flow chart



Step 1 Double-check site specifics

Double-check all site specifics and preparatory work by others prior to installation.

Procedure

- 1 Prior to delivery, ensure that you have clear access into the building and a clear route to the installation site.
- 2 For job site verification, use the following information sources:
 - Plan drawings (also referred to as installation drawings or shop drawings)
 - Written and verbal direction from the customer, electrical contractors, mechanical contractors, inspector, and architect.
- 3 Ensure the floor is flat and level, and free of debris, and will support the lift's load per the plan drawings.
- 4 Ensure the floor cut-out is square with the dimensions specified in the plan drawings to avoid any running clearance faults. Ensure the floor cut-out will support the lift's load per the plan drawings.
- 5 Verify the travel, minimum bottom ceiling height, and minimum overhead clearance are per the plan drawings. If they do not match, contact Savaria's *Technical Support* at 1 (800) 791-7999 for immediate assistance.
- 6 Ensure the finished runway length and width dimensions are no smaller than the minimum dimensions on the plan drawings. If they do not match, contact Savaria's *Technical Support* for immediate assistance.
- 7 Ensure the electrical installation of a permanent power source complies with the electrical requirements provided on the plan drawings.
- 8 Ensure there are no fire and safety issues. Contact Savaria's *Technical Support* if there are any fire and safety issues.
- 9 Verify there is adequate lighting at the landings.

Step 2 Unpack and check shipment

Unpack and check the contents of the shipment.

Procedure

- 1 Prior to installation, unpack the shipment and check the contents.
- 2 Check the condition of the shipment for any damage; installing damaged parts can lead to safety violations and void the limited warranty. Contact Savaria's *Technical Support* if any parts are damaged.

NOTE

If possible, take a photograph of any damaged part(s).

Step 3 Verify cab type

Verify the type of cab.

Procedure

Prior to installation, it is important to know what type of cab is being used. This will determine where the tower is to be installed.

Cab sizes are listed below. Type 5 (30" x 46") is the standard size; the other types are optional.

- Type 5 – 30" x 46", front access only (standard)
- Type 5 – 32" x 53", front access only (optional)
- Type 1L – 30" x 47", left access (optional)
- Type 1L – 32" x 54", left access (optional)
- Type 1R – 30" x 47", right access (optional)
- Type 1R – 32" x 54", right access (optional)
- Type 2 – 30" x 47", left and right access (optional)
- Type 2 – 32" x 54", left and right access (optional)

Figure 1
Type 5

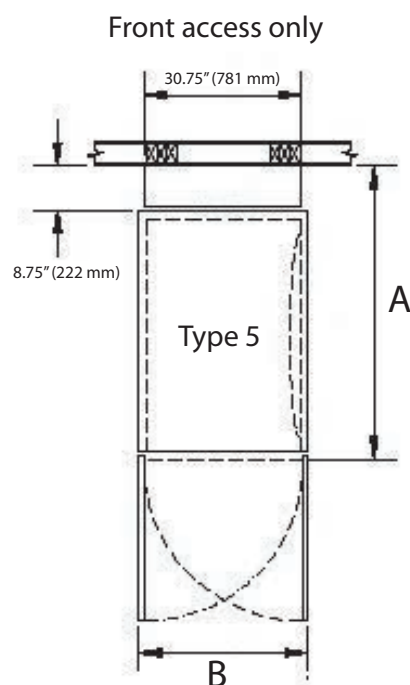
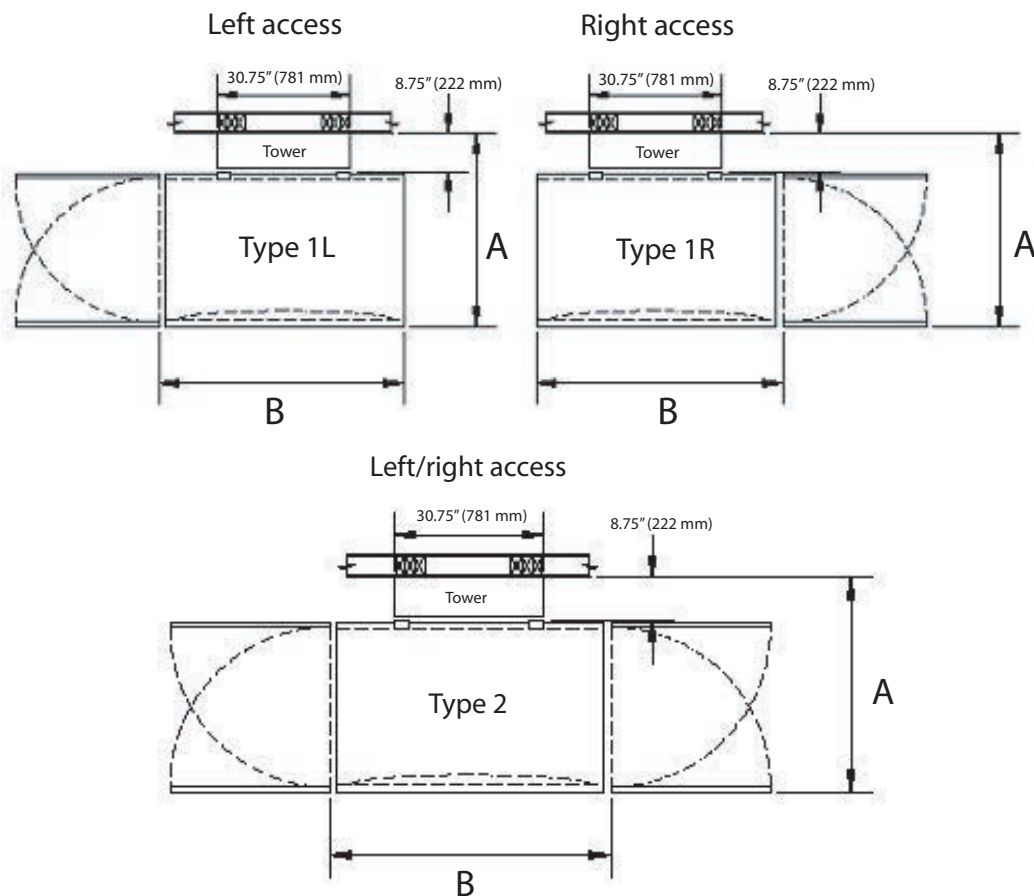


Figure 2
Type 1L, 1R, and 2



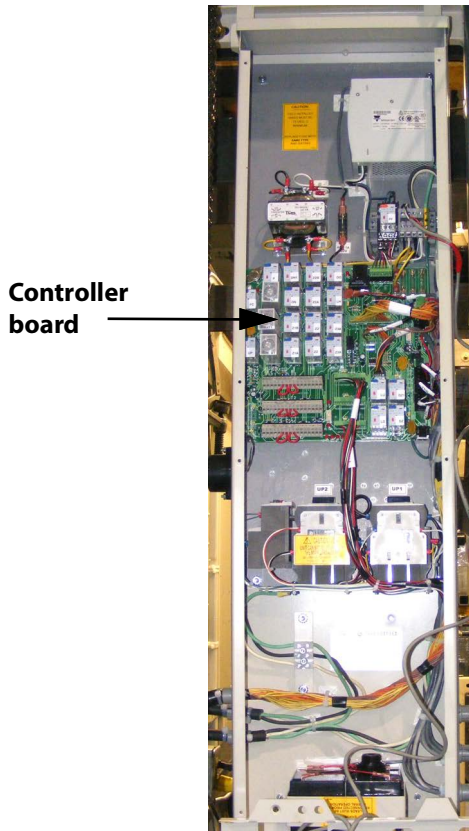
Step 4 Determine controller type

Determine the type of controller installed in the tower.

Procedure

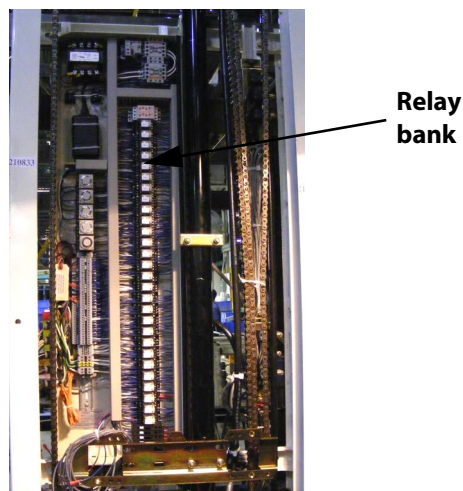
- 1 The new version controller (with controller board 242835) is illustrated below.

Figure 3
New version controller



- 2 The old version controller (with the relay bank) is illustrated below.

Figure 4
Old version controller



Step 5 Check/adjust cylinder plumbness

Check that the cylinder is plumb. If it is not, adjust as required.

Procedure

For short travel units, follow this procedure to check/adjust the plumbness of the cylinder in the base tower.

For long travel units, you will need to check the intermediate and top sections once they are installed on the base tower.

- 1 With the base tower section laying on a flat surface, place a level across with width of the tower above the pillar.
- 2 Check that the distance between the level and the pillar is constant.

Figure 5
Check distance between level and pillar

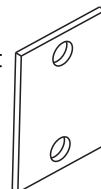


- 3 If it is not, add/remove shims behind the cylinder bracket to ensure the distance is constant. The shims (V0100121, V0100122, V0100123, and V0100124) are provided in the small parts box.
- 4 Repeat the above steps for the cylinder frame and cylinder piston, adding/removing shims as necessary.

Figure 6
Add/remove shims behind cylinder bracket



Shim behind bracket



Step 6

Mark wall with tower centerline

Mark the load-bearing wall with the centerline of the tower.

Procedure

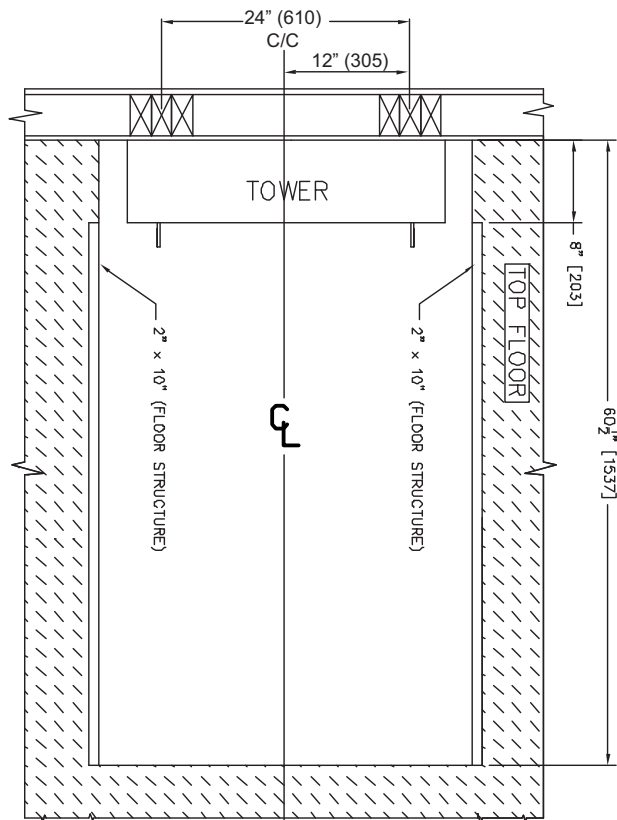
- 1 Ensure the floor is flat, level and clear of debris.

NOTE

Ensure the elevation and floor cut-out dimensions are the same as those in the plan drawings.

- 2 Ensure the shipped tower height matches the plan drawings for the job site.
- 3 **Refer to the plan drawings for the job site** and determine and mark the tower centerline to use when positioning the tower assembly. See the sample drawing below showing the centerline C_L .

Figure 7
Sample drawing showing centerline



Step 7 Stand tower in position

Stand the tower in position against the load-bearing wall.

Procedure

- 1 Stand the tower in position against the load-bearing wall.
- 2 Position the tower according to the centerline marked on the floor in Step 5 on the previous page.
 - a. Line up the centerline of the tower with the centerline marked on the load-bearing wall. **Refer to the plan drawings for the job site to determine the centerline of the tower.**
- 3 Once the tower is in position, ensure it is plumb and level. Use shims as necessary.

Figure 8
Centerline measurements

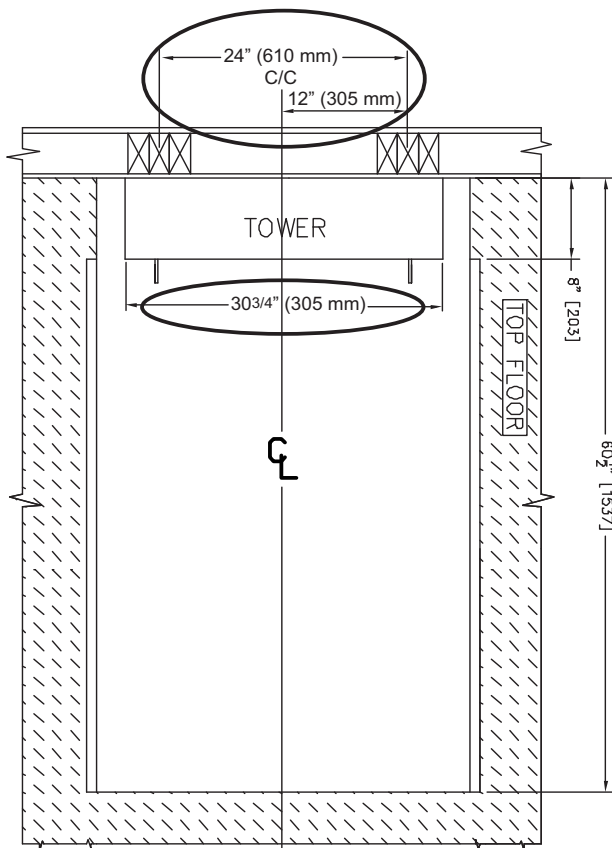
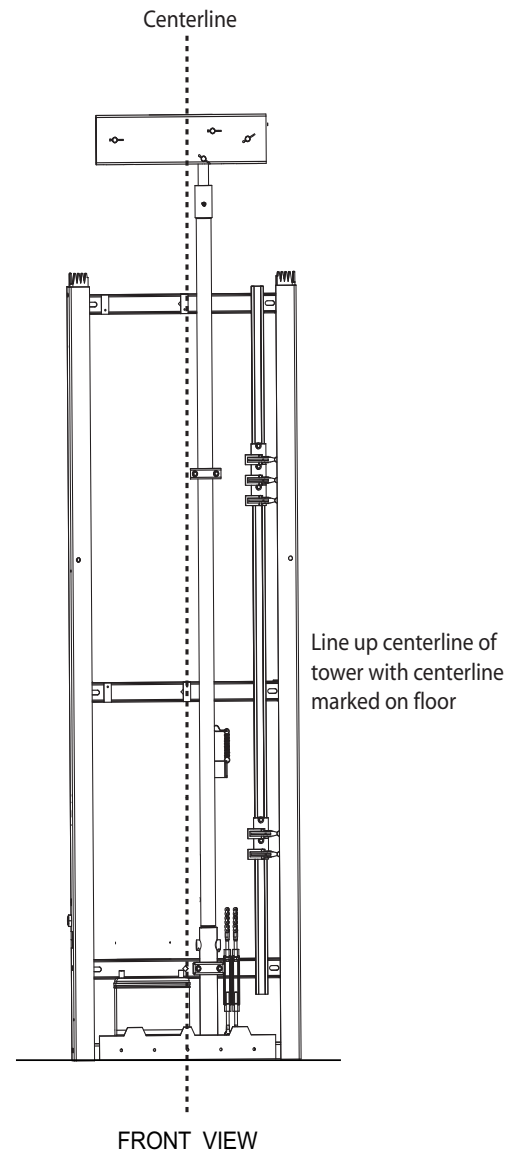


Figure 9
Position tower according to centerline



Step 8

Temporarily anchor tower to wall

Temporarily anchor the tower to the load-bearing wall to ensure your safety during installation.

Procedure

- 1 Drill through the tower cross brace holes into the wall.
- 2 Apply shims 320651 as needed to ensure the tower is plumb and level.
- 3 Temporarily anchor the tower to the load-bearing wall using two bolts installed through one of the three tower cross braces (there are two slots per cross brace). Use the appropriate hardware from one of the kits below (anchor wedge bolts for concrete or lag bolts/thru bolts for wood/drywall).

IMPORTANT

Note that the anchors provided by Savaria are standard/typical anchors and are not suitable for all site conditions. Always make sure the anchors used are proper for the type of wall on site.



CAUTION

Use **at least** two anchors. Use more at your discretion to ensure your safety during installation.

Attach with...hardware in concrete bolt kit 207125

Part number	Description	Qty
102251	Anchor wedge bolt 1/2"x4-1/14"	6
104531	Flat washer .56idx1.375odx.11Znc	6
102193	Lock washer 1/2"	6
101106	Hex nut 1/2"-13	6

Attach with...hardware in lag bolt kit 207124

Part number	Description	Qty
100220	Lag bolt HH 1/2" x 3"	6
104531	Flat washer .56idx1.375odx.11Znc	6
102193	Lock washer 1/2"	6

Attach with...hardware in thru bolt rod kit 200181

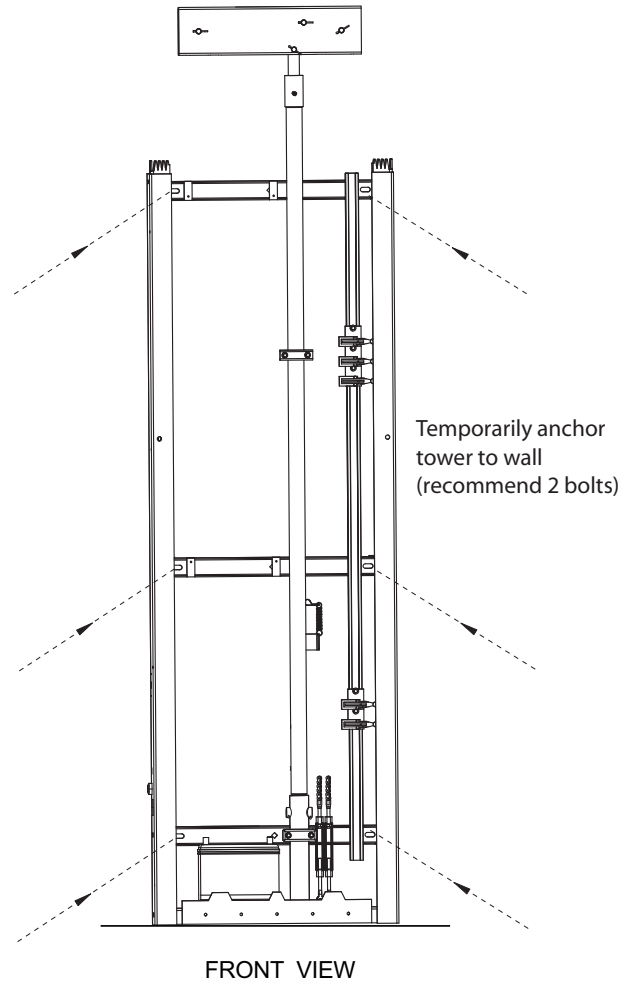
Part number	Description	Qty
200180	Thru bolt plate	6
101188	* Threaded rod 1/2"-13x36"	6

* Note that the threaded rod needs to be cut in half.

Attach with...hardware in thru bolt h/w kit 207042

Part number	Description	Qty
104531	Flat washer .56idx1.375odx.11Znc	6
102193	Lock washer 1/2"	6
101106	Hex nut 1/2"-13	6

Figure 10
Temporarily anchor tower to load-bearing wall



Step 9

Install yoke guide slider

Install the yoke guide slider in the unistrut channel of the tower.

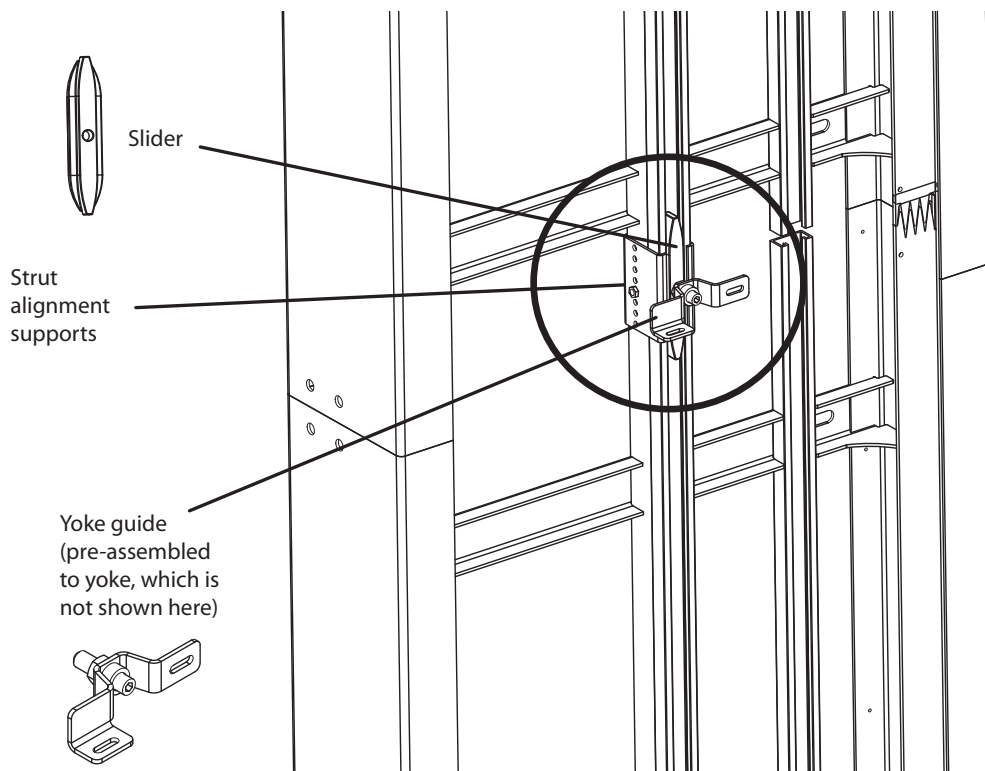
Procedure

Note that the yoke guide comes pre-assembled to the yoke (not shown in the picture below).

Follow these steps to install the slider in the unistrut channel and attach it to the yoke guide.

- 1 From the top of the tower, drop the slider down into the unistrut channel.
- 2 Attach the slider to the yoke guide as shown below.
- 3 Ensure the slider can slide in the unistrut channel without binding.
- 4 If you are installing a tower extension, you need to install the strut alignment supports on either side of the unistrut channel (at the joint) and secure them in place using the bolt, washer and nut provided (see below).

Figure 11
Install yoke guide slider



Step 10 Install tower extensions (as required)

Install the tower extensions (as required).

Procedure



DANGER

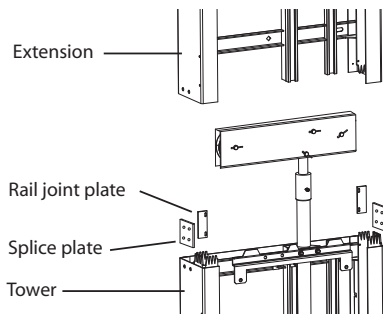
Be very careful when installing the tower extensions.

- 1 Lift the first extension and place it on top of the tower. **To ease installation in small overhead situations, preassemble the top tower extensions together.**
- 2 Verify that the tower and extension rails line up properly. **Ensure the extension is oriented so the teeth are at the top.**

NOTE

It is very difficult to correct alignment problems once the tower and extension(s) are joined together. Take the time to verify proper alignment before joining.

Figure 12
Install tower extension

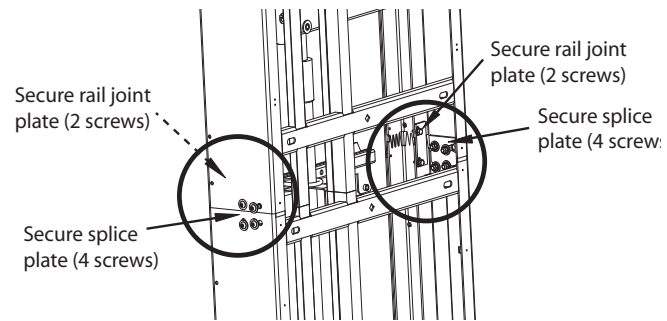


- 3 Secure the extension(s) to the tower using the hardware supplied in the tower extension kit 243231.
 - a. To secure the rail joint plate on each side of the tower (inside), use two screws per side with a lock washer and flat washer on the head side of each screw.
 - b. To secure the splice plate on each side of the tower (outside), use four screws per side with a flat washer on the head side of each screw and a flat washer and nut on the stem side of each screw. Note that 7/16" hardware is also provided if the 1/2" doesn't fit.

Attach with...hardware in tower ext. kit 243231

Part number	Description	Qty
V100076	Rail joint plate	2
100155-Y	HHCS 1/4"-20x1/2"	4
103443	Flat washer 1/4" small OD S/S	4
101213	Lock washer 1/4" med split zinc	4
V0100072	Splice plate	2
106374	Screw BHSC 1/2"-13x1.25" SS	8
104487	Flat washer 1/2" small OD S/S	16
105315	Nut hex 1/2"-13 jam nylok S/S	8

Figure 13
Secure extension to tower



- 4 Anchor the tower extension to the hoistway wall.
 - a. Drill through the cross braces into the wall.
 - b. Apply shims 320651 as needed to ensure the extension is plumb and level.
 - c. Secure the tower extension to the hoistway wall using the appropriate hardware from one of the kits below (anchor wedge bolts for concrete or lag bolts/thru bolts for wood/drywall).

IMPORTANT

Note that the anchors provided by Savaria are standard/typical anchors and are not suitable for all site conditions. Always make sure the anchors used are proper for the type of wall on site.

Attach with...hardware in concrete bolt kit 207125

Part number	Description	Qty
102251	Anchor wedge bolt 1/2"x4-1/14"	6
104531	Flat washer .56idx1.375odx.11Znc	6
102193	Lock washer 1/2"	6
101106	Hex nut 1/2"-13	6

Attach with...hardware in lag bolt kit 207124

Part number	Description	Qty
100220	Lag bolt HH 1/2" x 3"	6
104531	Flat washer .56idx1.375odx.11Znc	6
102193	Lock washer 1/2"	6

Attach with...hardware in thru bolt rod kit 200181

Part number	Description	Qty
200180	Thru bolt plate	6
101188	Threaded rod 1/2"-13x36"	6

Attach with...hardware in thru bolt h/w kit 207042

Part number	Description	Qty
104531	Flat washer .56idx1.375odx.11Znc	6
102193	Lock washer 1/2"	6
101106	Hex nut 1/2"-13	6

- 5 If necessary, install the second extension on top of the first and secure it as described above.

Step 11

Permanently anchor tower to wall

Permanently anchor the tower to the load-bearing wall.

Procedure**IMPORTANT**

It is imperative that the tower assembly is plumb and level before permanently anchoring it to the wall.

- 1 Ensure the tower assembly is plumb and level. Use shims as required.
- 2 Permanently anchor the tower to the load-bearing wall using the appropriate hardware from one of the kits below (anchor wedge bolts for concrete or lag bolts/thru bolts for wood/drywall).

IMPORTANT

Note that the anchors provided by Savaria are standard/typical anchors and are not suitable for all site conditions. Always make sure the anchors used are proper for the type of wall on site.

**CAUTION**

Use **at least** two anchors. Use more at your discretion to ensure your safety during installation.

Attach with...hardware in concrete bolt kit 207125

Part number	Description	Qty
102251	Anchor wedge bolt 1/2"x4-1/14"	6
104531	Flat washer .56idx1.375odx.11Znc	6
102193	Lock washer 1/2"	6
101106	Hex nut 1/2"-13	6

Attach with...hardware in lag bolt kit 207124

Part number	Description	Qty
100220	Lag bolt HH 1/2" x 3"	6
104531	Flat washer .56idx1.375odx.11Znc	6
102193	Lock washer 1/2"	6

Attach with...hardware in thru bolt rod kit 200181

Part number	Description	Qty
200180	Thru bolt plate	6
101188	* Threaded rod 1/2"-13x36"	6

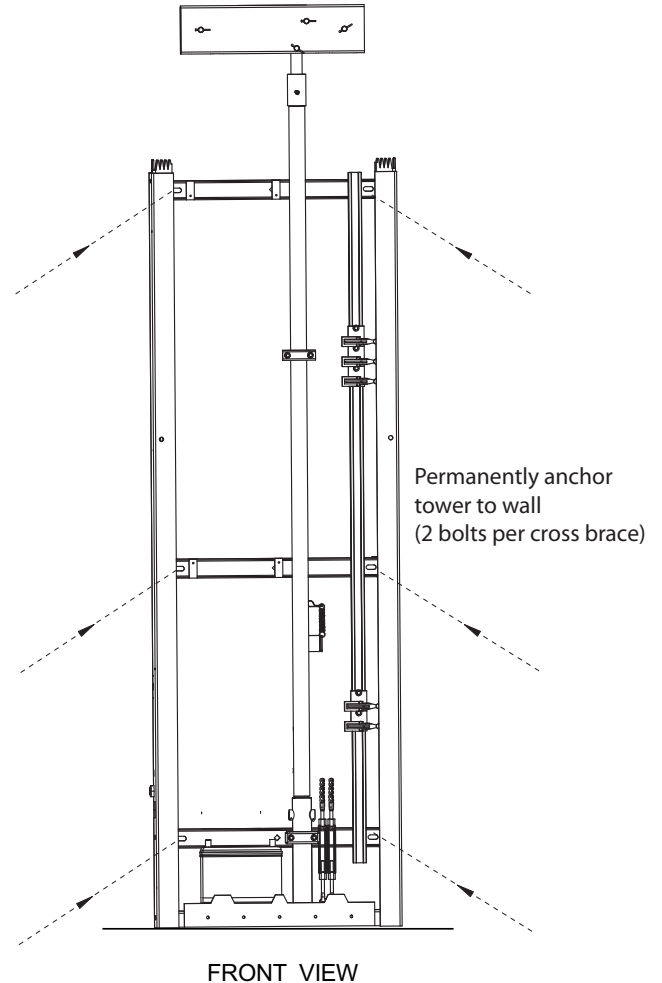
* Note that the threaded rod needs to be cut in half.

Attach with...hardware in thru bolt h/w kit 207042

Part number	Description	Qty
104531	Flat washer .56idx1.375odx.11Znc	6
102193	Lock washer 1/2"	6
101106	Hex nut 1/2"-13	6

Figure 14

Permanently anchor tower to load-bearing wall



Step 12 Install cab

Install the cab.

Procedure

The possible cab types are shown below.

Figure 15
Type 5

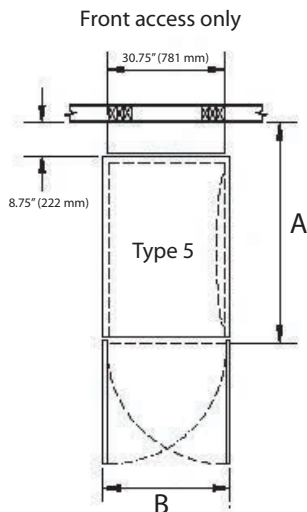
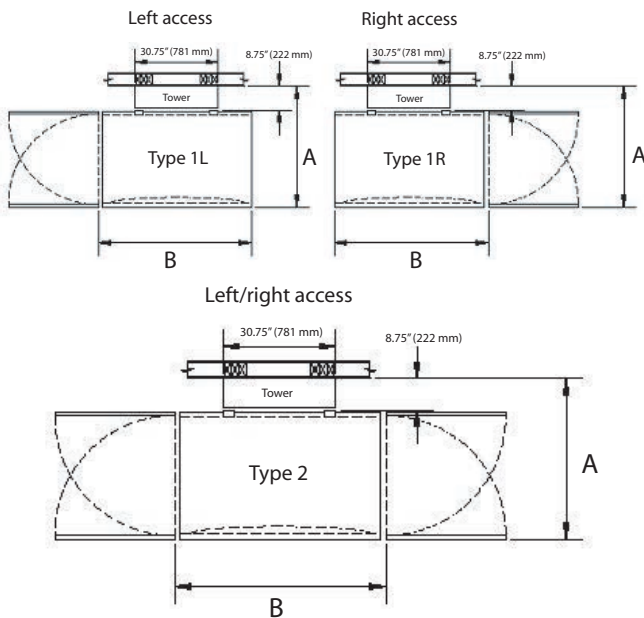


Figure 16
Type 1L, 1R, and 2



NOTE

The cab is completely assembled at the factory and should only be disassembled if you cannot get it into the installation area in one piece.

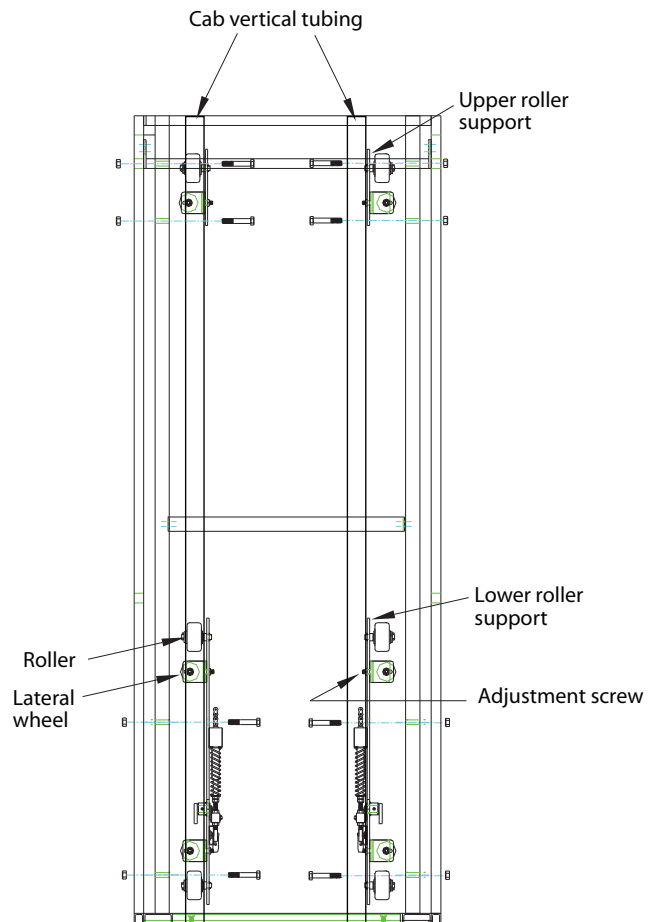
IMPORTANT

Verify that the cylinders plumb before attaching the cab to the tower.

Attach the cab to the tower.

- 1 Remove the panels on the back of the cab so you can access the tower rails through the cab. Set aside the panels and hardware for re-installation.
- 2 Move the cab into position.
- 3 Install the lower roller supports and secure them to the cab vertical tubing using two 1/2" diameter bolts and associated hardware per side.
- 4 Install the upper roller supports ensuring that the 3" roller is oriented towards the top of the cab. Secure the upper roller supports to the cab vertical tubing using two 1/2" diameter bolts and associated hardware per side.

Figure 17
Install roller supports



Step 13 Install plastic panels (if required)

Install the plastic panels (if required) on the corners of the cab, the edges of the door, and the header.

Procedure

The cab may come with the plastic cab panels already installed. If not, follow the procedure below to install them.

- 1 Install the four plastic panels on the four corners of the cab. Note that the panel for the door lock corner of the cab will have a cutout.
 - a. Peel off the covering from the adhesive tape on the panels.
 - b. Affix the panels to the corners of the cab.
- 2 Install the two plastic panels on the outer edges of the door. Note that the panel for the lock edge will have a cutout.
 - a. Peel off the covering from the adhesive tape on the panels.
 - b. Affix the panels to the outer edges of the door.
- 3 Install the plastic panel on the header above the door.

Figure 18
Install cab panels

NOTE: This photo shows the cab panel (with cutout) for the door lock corner of the cab



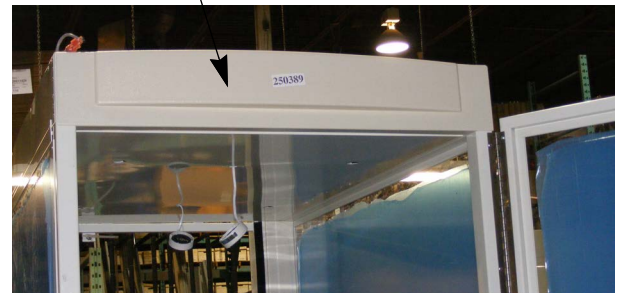
Figure 19
Install door edge panels



NOTE: This photo shows the door panel (with cutout) for the lock edge of the door

Figure 20
Install header panel

Cab header panel



Step 14
Connect travelling cable

Connect the travelling cable.

Procedure

Refer to the Travelling Cable Connection Diagram on page 6 of the Electrical Schematics (P/N 000797). The travelling cable has already been routed on the Telecab; therefore, all you need to do is connect it to the COP cable on the cab.

Step 15
Fill tank with hydraulic fluid

Fill the tank with the appropriate hydraulic fluid.

Procedure

- 1 Remove the cap from the tank and fill it with the appropriate type of hydraulic fluid.
 - Indoor applications: Univis 32 hydraulic oil
 - Outdoor applications (wide seasonal temperature variations): Univis HVI 26 hydraulic oil
 - Outdoor applications (cold temperatures): automatic transmission fluid (DEXRON)

NOTE

Do not use indoor fluid for outdoor applications.

NOTE

When filled to capacity, the tank will hold a maximum of 2.5 U.S. gallons (10 liters or 2 Imperial gallons).

- 2 Put the cap back on the tank and tighten it.

Figure 21
Hydraulic fluid tank



NOTE

If the unit has a heater blanket (for outdoor applications), it will be pre-installed behind the hydraulic fluid tank.

Step 16 Install remote manual lowering device

Install the remote manual lowering device on the side of the tower.

Procedure

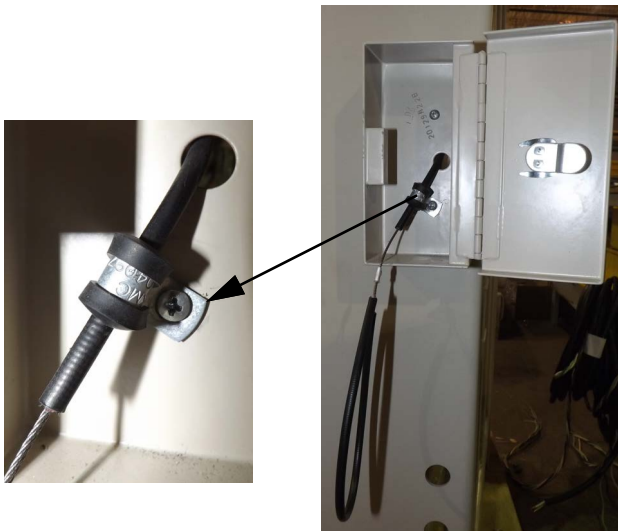
- 1 There is a length of cable for the manual lowering device wrapped up inside the tower. Remove the tie-wrap, route the cable behind the tank, and feed it out through the hole in the side of the tower.

Figure 22
Manual lowering lever and cable in tower



- 2 Feed the cable into the manual lowering junction box through the back opening in the junction box.
- 3 Mount the junction box on the side of the tower and secure it using the two screws provided.

Figure 23
Manual lowering junction box



- 4 Mount the junction box on the side of the tower and secure it using the two screws. Be sure to attach the cable to the lower screw as shown in the photo above.
- 5 Affix the two stickers provided – one on the manual lowering box (identifying the box) and one above the box (identifying the emergency lowering procedure).

Step 17 Connect to main power supply

Make electrical connections to the main power supply.

Procedure

The Telecab may be supplied with a power cord to be plugged directly into a dedicated wall outlet.



WARNING

Do NOT plug the power cord in at this time.

Depending on the applicable safety code, the job may require a power supply from a lockable fused disconnect with auxiliary contact.

- 1 Make connections from the main power supply disconnect to the controller according to the Electrical Schematics shipped with the unit.
 - a. Feed the main power cable through the fitting located on the lower side of the tower below the cutout for the pit switch.
 - b. Route the cable up to the controller and connect it to the terminal strip at L1, L2 and GND or L1, N and GND (near the bottom of the terminal strip).

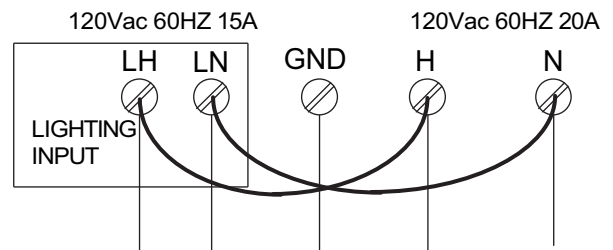


WARNING

Do NOT turn on the main disconnect at this time.

NOTE

If a separate power supply is not being used for the cab lighting, install jumpers from Lighting Input LH to Main H and Lighting Input LN to Main N (see below).



Step 18 Install shoring pins

Install the shoring pins on both sides of the tower.

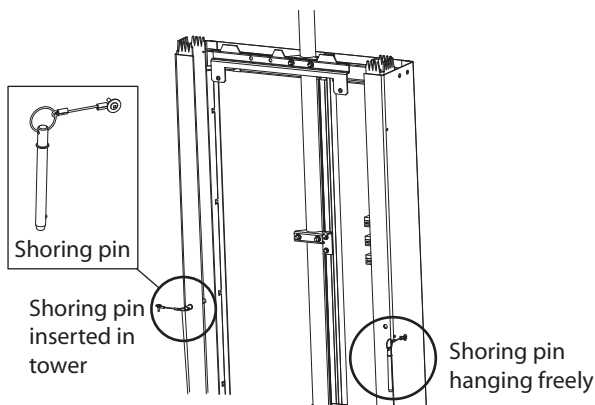
Procedure

- 1 Attach the shoring pin cable to the tower using the self-tapping screw 105794.
- 2 To use, insert the shoring pin into the hole in the front of the tower. When not in use, the shoring pin will hang freely against the sides of the tower.
- 3 Repeat for the shoring pin on the other side.

NOTE

For low travel height, install the shoring pins at the lower hole locations (600 mm). The following illustration shows the pins installed at the upper hole locations (1500 mm).

Figure 24
Install shoring pins



Step 19 Run lift (as required)

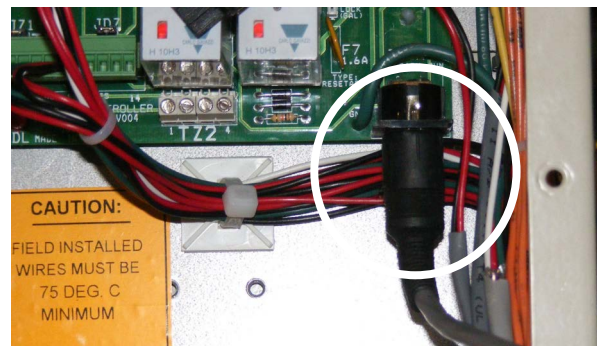
Run the lift (as required) using either the temporary run buttons (for units with the new version controller) or the main contactors (for units with the old version controller).

Procedure (units with new version controller)

If the unit has the **new version controller** board P/N 242835, use the temporary run buttons to run the lift.

- 1 Turn the main power on and ensure that the DC PWR LED, LVC LED and +24VRT LED are lit.
- 2 Connect the temporary run buttons (shown in Figure 24 on the next page) to the TDIN Temporary Run socket in the bottom right hand of the controller board (shown below).

Figure 25
Connect temporary run buttons



- 3 Turn the main shutoff valve on the manifold to the ON position.
- 4 Run the lift up using the temporary run buttons until the chains are tight.
 - To travel up, press the UP DIRECTION and SLOW SPEED or FAST SPEED buttons.
 - To travel down, press the DOWN DIRECTION and SLOW SPEED or FAST SPEED buttons.
 - Note: If a temporary run pendant is not available, momentarily jump connector TMS-1 to TCT-2 with a piece of wire to run the lift up until the chains are tight.
- 5 Ensure LEDs SC, DC and DL are lit. If not, check the slack chain switches.

Figure 26
Temporary run buttons



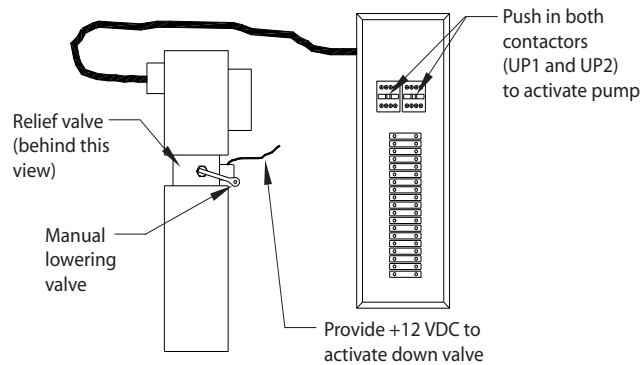
Procedure (units with old version controller)

If the unit has the **old version controller**, activate the pump to run the lift as described in the procedure below.

110V pump

- 1 Verify the pump is grounded.
- 2 To activate the pump (for the lift to travel up), push in the center part of BOTH main contactors (UP1 and UP2) in the controller at the same time.
- 3 To activate the down valve (for the lift to travel down), provide +12 VDC to the wire coming out of the pump or use the manual lowering valve.

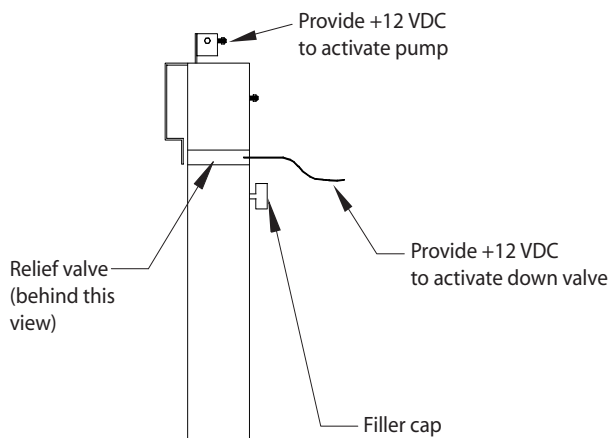
Figure 27
To activate 110V pump



12V pump

- 1 Verify the pump is grounded.
- 2 To activate the pump (for the lift to travel up), provide +12 VDC to the pump solenoid.
- 3 To activate the down valve (for the lift to travel down), provide +12 VDC to the wire coming out of the pump.

Figure 28
To activate 12V pump



Step 20 Install underpan switches

Install the underpan switches.

Procedure



DANGER

Always use the shoring pins when working under the cab.
Be extremely careful when working under the cab.

- 1 Ensure there is clearance around the cab and check for potential obstructions in the pathway of the cab.
- 2 Raise the Telecab to the required level.
- 3 Disconnect power before wiring the underpan switches (switch PN 105747; arm PN 105743). The illustration at the right shows their locations.
- 4 Install the 8 underpan switches at the locations circled in the illustration below. There are 6 normally closed (NC) switches for the underpan and 2 normally open (NO) switches for the platform.
- 5 Route the harness in series and connect the wiring to the switches using the normally closed terminals for the NC switches and the normally open terminals for the NO switches. **Note that there should be continuity through the contacts when the underpan is not activated.**
- 6 **IMPORTANT:** The two normally open (NO) switches MUST be installed so the arm is UP as shown in the photo below. Adjust these two switches so the steel platform pushes them down to close them. If the steel platform edge gets caught and is bent up or raised, these switches will stop downward motion.

Figure 29
Normally open switch with arm up

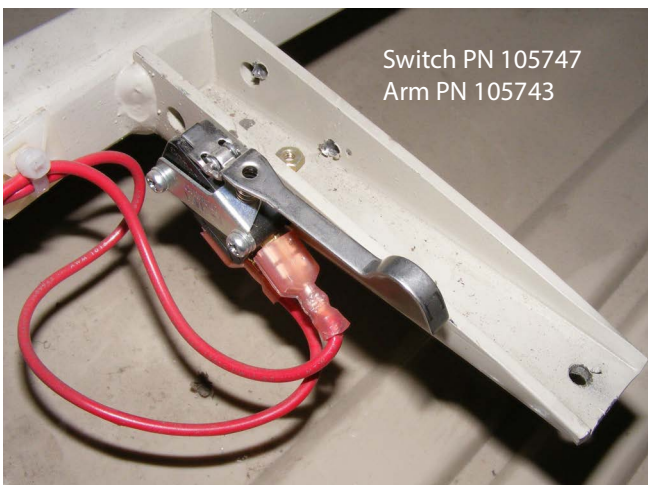
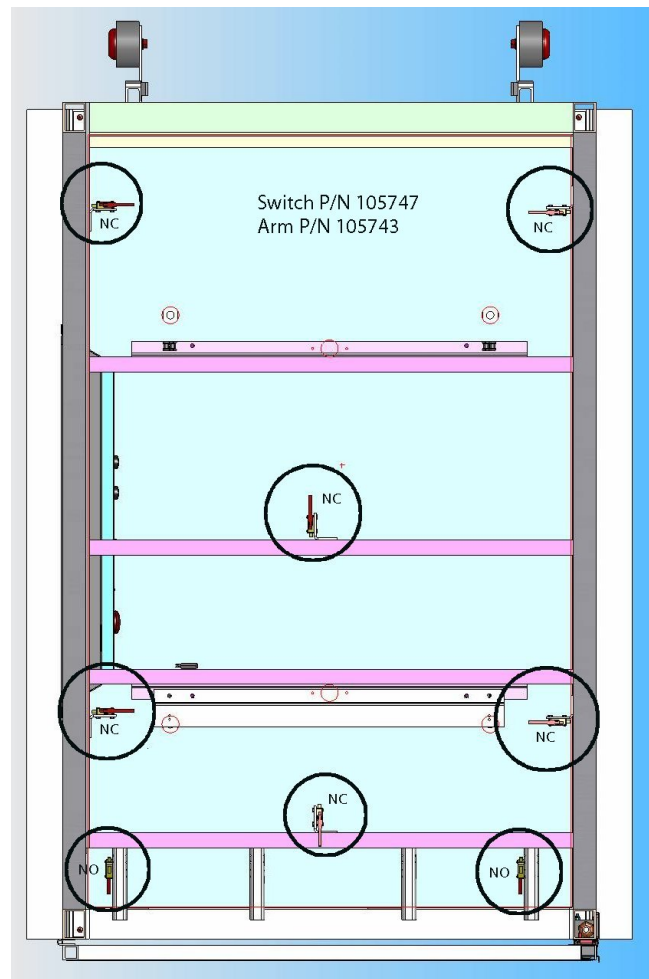


Figure 30
Underpan microswitches



NOTE

If you need to test the underpan, you can jump out T207 (down underpan harness connector) on the COP junction board.

Step 21 Install underpan

Install the underpan using ONE of the following methods.

Procedure



DANGER

Always use the shoring pins when working under the cab.
Be extremely careful when working under the cab.

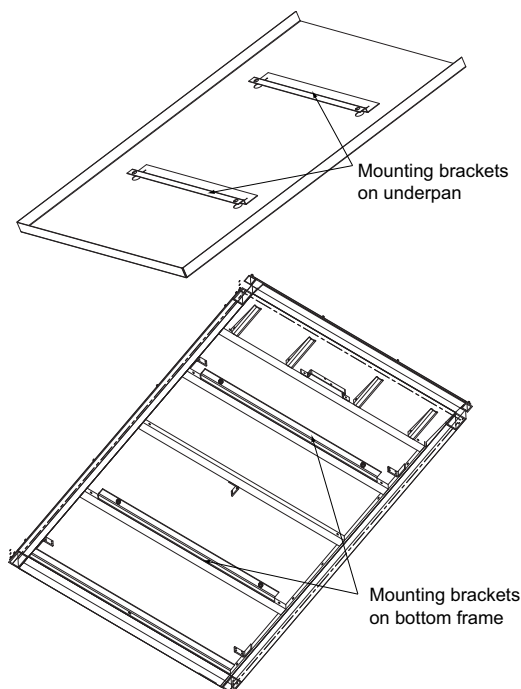
Install the underpan using ONE of the following methods.
Hardware is provided for both methods of installation.

Method 1 – no chains

- 1 Ensure there is clearance around the cab and check for potential obstructions in the pathway of the cab.
- 2 Raise the Telecab to the required level.
- 3 The underpan has two mounting brackets.
- 4 Orient the underpan beneath the bottom frame of the Telecab so the underpan mounting brackets line up with the two mounting brackets on the bottom frame. See Figure 30 below.
- 5 Secure the underpan to the frame using the four 0.25-20 hex bolts and nuts provided.
- 6 Bend the arm of each switch (photo at right) so it touches the underpan in order to achieve the right sensitivity.
- 7 Cover the holes using the plugs provided in the kit.



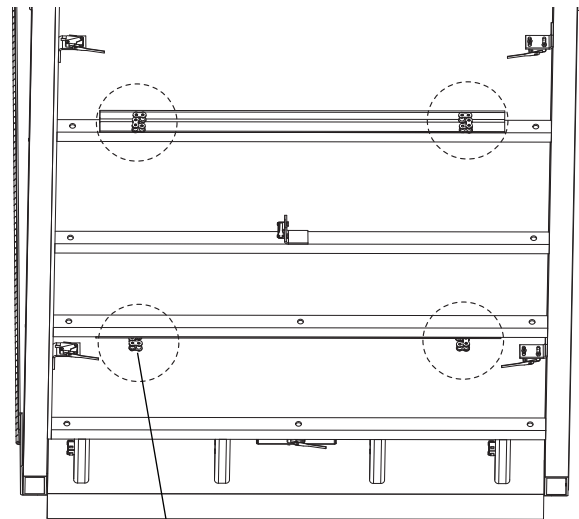
Figure 31
Install underpan



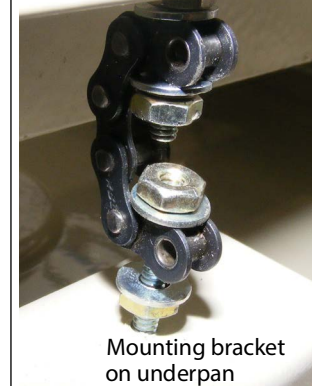
Method 2 – with chains

- 1 Ensure there is clearance around the cab and check for potential obstructions in the pathway of the cab.
- 2 Raise the Telecab to the required level.
- 3 The underpan has two mounting brackets.
- 4 Orient the underpan beneath the bottom frame of the Telecab so the underpan mounting brackets line up with the two mounting brackets on the bottom frame. See Figure 30 at the left.
- 5 Secure the underpan to the frame at four locations using the #25 link chains with nuts, washers, and lock washers provided. See Figure 31 below.
- 6 Bend the arm of each switch (see the photo at left) so it touches the underpan in order to achieve the right sensitivity.
- 7 Cover the holes using the plugs provided in the kit.

Figure 32
Underpan chains (5-links per chain)



Mounting bracket on
bottom frame



Mounting bracket
on underpan

Step 22 Install cab floor panel

Install the floor panel in the cab.

Procedure

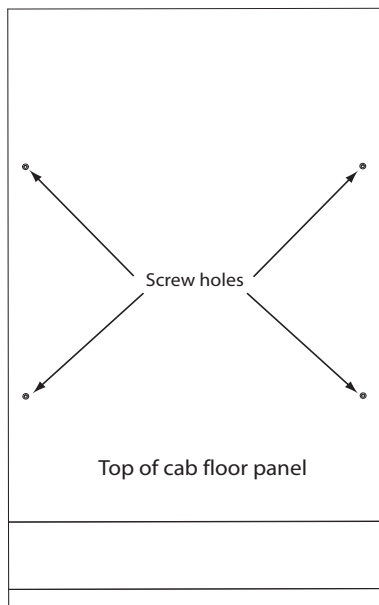
- 1 Put the floor panel in place on top of the bottom frame in the cab.
- 2 Secure it to the two corresponding cross braces of the bottom frame using the four 10-24 x 5/8" screws provided (two screws per cross brace).

Figure 33
Install cab floor panel



Secure floor panel
at these 4 locations

Insert this end into cab first

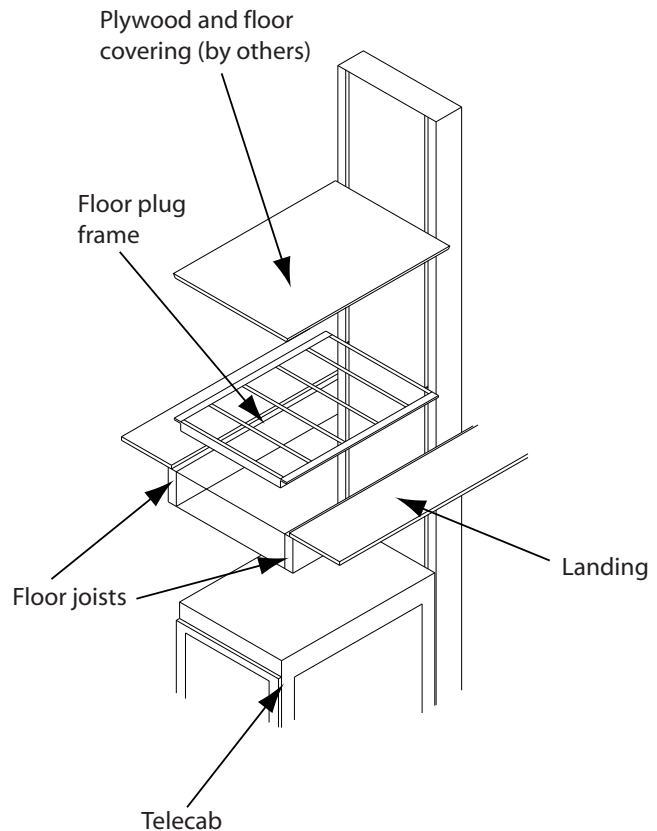


Step 23 Install floor plug

Install the floor plug.

Procedure

Figure 34
Floor plug location

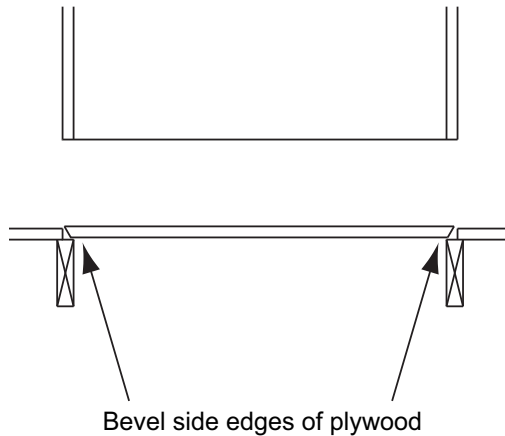


- 1 Loosen the wheels so they can be adjusted.
- 2 Remove the cab ceiling panel from under the floor plug.
 - a. Remove the four plugs from the holes in the ceiling.
 - b. Loosen the nuts on the bolts that are holding the ceiling in place.
 - c.
- 3 Put the floor plug for the second floor in place.
- 4 Run the Telecab up until it almost touches the floor plug.
- 5 Center the floor plug so that the push rods of the floor plug align with the switches.
- 6 Raise the Telecab with the floor plug resting on the cab ceiling.
- 7 Tighten the wheels in place. This will set the position of the floor plug.
- 8 Cut a piece of plywood (of the required thickness) that will fit tightly over the opening in the landing (leaving about 1/8" all around). Bevel the side edges of the plywood to allow it to self-center in the hole (when coming down).

NOTE

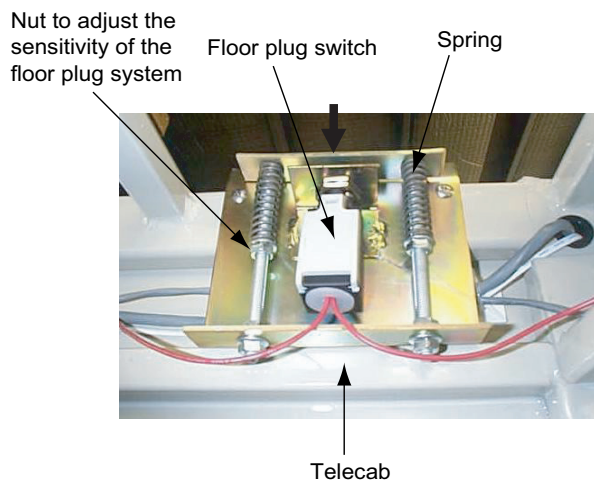
The piece of plywood must fit tightly over the opening in the landing to prevent any movement of the floor plug when the Telecab is down (and the plug is not in contact with the cab). This is to ensure proper alignment between the cab switches and the floor plug at all times.

Figure 35
Bevel side edges of plywood



- 9 Run the Telecab down and verify alignment of the floor plug with the cab. Place the plywood over the floor plug and center it. While inside the cab, fasten the floor plug to the plywood from underneath using wood screws through the steel angles welded to the floor plug.
- 10 Verify adjustment of the floor plug switches. When the floor plug is compressed on the cab and the angles are resting entirely on the frame, the switches should be activated but not forced beyond their normal travel.

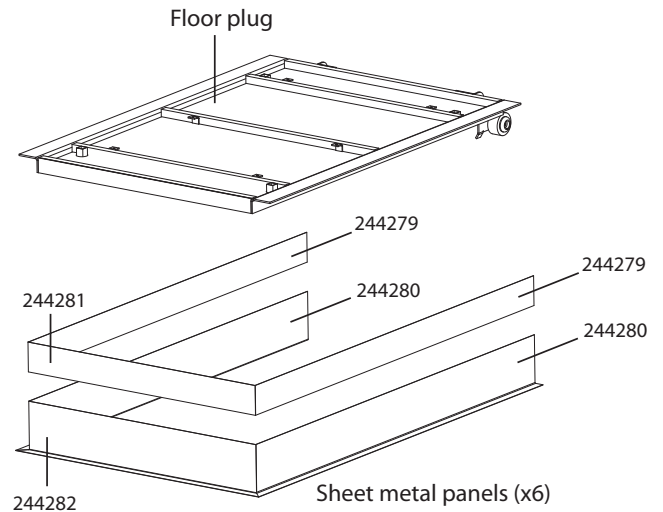
Figure 36
Floor plug switch



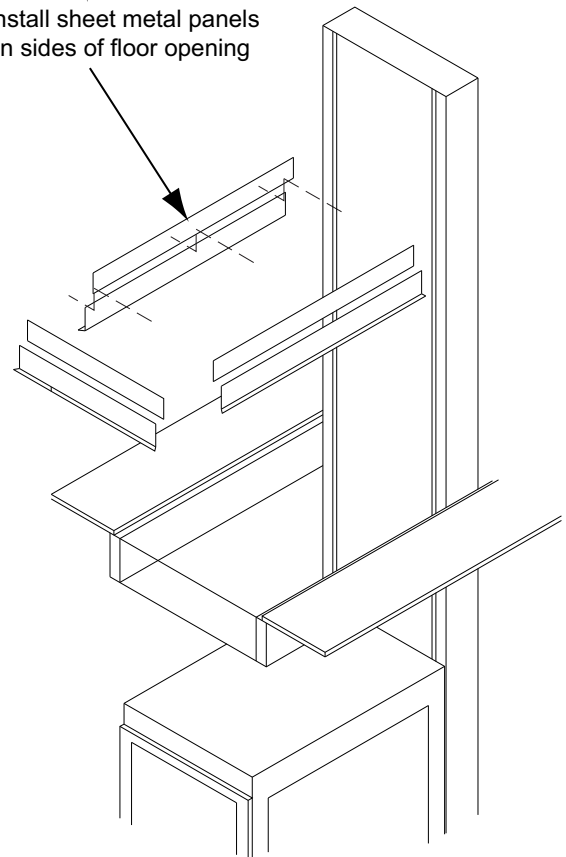
- 11 The sensitivity of the floor plug can be adjusted by changing the preload on the springs using the nuts just below the springs. **Do not move the nuts at the top of the springs.**

- 12 Install the sheet metal panels provided for the sides of the floor opening as shown below.

Figure 37
Install sheet metal panels



Install sheet metal panels
on sides of floor opening



Step 24 Install phone (as required)

Install the phone (as required).

Procedure

Follow the steps below to install the phone.

- 1 Install the phone into the phone mount on the COP wall and secure it to the wall using two screws. The phone mount is located on the left-hand side of the wall below the COP.
- 2 Feed the phone cable down through the cutout in the bottom of the phone mount and connect it per the Electrical Schematics shipped with the unit.
- 3 Connect the phone service line (not provided by Savaria) per the Electrical Schematics shipped with the unit.

IMPORTANT

Do NOT turn over the lift prior to having an active phone line and having properly tested the phone or automatic dialer phone (as applicable).

Step 25 Install hall calls (as required)

Install the hall calls as required.

Procedure

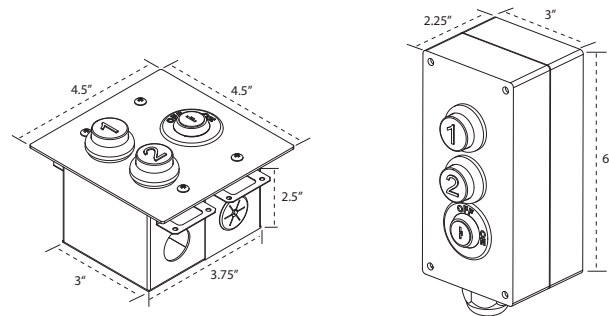
The hall calls may be flush mount, surface mount or in-frame, depending on the job specifications.

NOTE

The installation of hall calls is specific to each job site.

- 1 Mount the hall call at each landing using the hardware supplied with the hall call.

Figure 38
Sample hall calls



Flush mount

Surface mount

- 2 Route the wiring from the hall call to the controller and connect it per the Electrical Schematics shipped with the unit.

Step 26 Connect remaining wiring

Connect any remaining wiring to the controller.

Procedure

Connect any remaining wiring to the controller according to the Electrical Schematics shipped with the unit.

NOTE

The controller is located in the main tower.

Step 27 Verify door unlocks in emergency

Follow the procedures below to unlock the WR-500 lock in an emergency situation.

Procedure

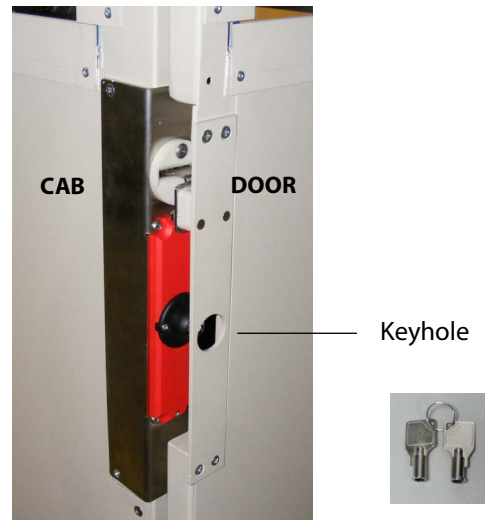
The WR-500 lock is pre-installed and pre-wired at the factory.

The door should *unlock* automatically upon arrival at a landing; the door should remain *locked* when the lift is operating or not at a landing.

In an emergency, the door can be unlocked from the *outside* using the key provided, or from *inside* the cab using the access hole that is in line with the lock.

To unlock the door from the *outside*, insert the key into the keyhole and turn it a half turn clockwise to unlock.

Figure 39
Key to unlock door from outside



To unlock the door from the *inside* the cab:

- 1 Remove the access hole plug that is in line with the lock.
- 2 Insert a small screwdriver through the access hole and push downward on the plastic piece inside the hole.
- 3 The lock should release and the door can be opened.
- 4 Insert the plug back into the lock access hole.

Figure 40
Lock access hole to unlock door from inside



Step 28

Establish landing positions and set limit switches

Cycle the lift as required to establish the landing positions and set the positions of the limit switches.

Procedure

NOTE

Each landing has a specific configuration of limit switches and will vary for each job site. Refer to the Electrical Schematics shipped with the unit.

Figure 41
Sample limit switch configuration

Upper switches



UFL

UNL

AC/DZ

Lower switches



DZ/LFL

DNL

AC

- 1 To set the travel limits, move the limit switch assembly bracket up or down along the rail to the desired level and then lock it in place.
- 2 Each switch is activated by a cam. Loosen the screw on the arm of the switch to adjust the angle of the arm as required for proper activation of the cam and then tighten the screw.
 - a. Adjust the Up Final Limit (UFL) switch so that if the lift goes past the upper landing, this switch will activate, breaking the safety circuit so the lift will no longer function.
 - b. Adjust the Up Normal Limit (UNL) switch so that when this switch is activated, the lift will be even with the upper landing.
 - c. Adjust the Anticreep (AC/DZ) switch so that if the unit creeps down more than 20 mm, the UNL switch will deactivate, while the AC/DZ switch stays activated. This causes the unit to level back up automatically if it creeps below the landing for any reason.
 - d. Adjust the Down Normal Limit (DNL) switch so that when this switch is activated, the lift will be even with the lower landing.
 - e. Adjust the Anticreep (AC) switch so that if the unit creeps down, it will activate the anti-creep function before the unit bottoms out in the pit and goes on slack chain.
 - One way to do this in shallow pits is to rotate the black plastic piece upside down.
 - Then rotate the switch so it is pointing the same as the others.
 - Then put a small 45-degree bend in the switch, then roughly another 1/2" later, bring it back straight. This makes it so the switches will not hit each other.
 - f. On systems where a mechanical lock (GAL) is used on a landing door, a Door Zone (DZ) switch is present. Note that the Door Zone switch must be activated before the lock unlocks, otherwise the lift will stop running. The Door Zone switch activates when the cab is within 2" of the landing.
 - g. Three-stop units will have a set of three limit switches at the center landing. The cab will only stop at the center landing if all three limit switches are activated. Adjust the arm of the limit switches to ensure the cab stops properly at the center landing.

Step 29

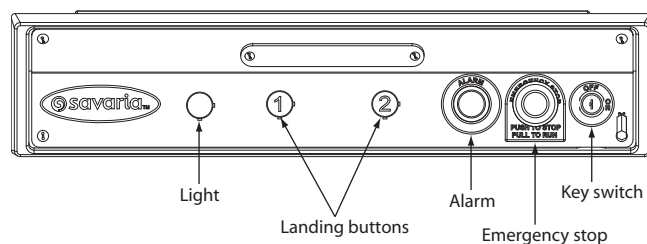
Test operation and adjust (as required)

Test the operation of the lift and make adjustments as required.

**Verify correct operation**

- 1 Turn the COP key switch in the cab to the ON position.

Figure 42
COP controls



- 2 To operate the lift in up direction, press and hold the corresponding landing button on the COP.
- 3 Check that the cab is running clear of all obstructions and has the proper clearances. Refer to the site plan drawings and check local code.
- 4 Run the cab to the top landing and make sure the limit switches stop the cab there. If the cab does not stop level with the floor, adjust the *upper limit switch assembly* up or down as required.
- 5 Run the cab to the bottom landing and check that the *lower limit switch assembly* stops the cab level with the floor.

Verify safety features are operational

- 1 **Cab Key Switch and Landing Controls (if equipped)**
 - a. In commercial applications, verify that when the cab key switch is turned to the ON position, the landing hall call buttons are inoperable.
 - b. In residential applications, verify that when the cab key switch is turned to the ON position, the landing hall call buttons and cab controls are operable. When the cab key switch is turned to the OFF position, only the cab controls are disabled; the landing hall call buttons are active all the time.
 - c. Also verify that controls are inoperable whenever the landing door or cab gate is left open.
- 2 **Emergency Stop/Alarm (if equipped)**
 - a. Press the Emergency Stop button to verify that all power is removed from the unit and the cab comes to a complete stop.
 - b. Press the Alarm button to ensure that the Alarm buzzer activates.
- 3 **Door Lock**

Verify that when the door is left open, the cab will not run in any direction from any station. Check all controls from all stations.

4 Directional Limit Switches

Verify that the lift is inoperable in the up direction when the UNL switch is activated or in the down direction when the DNL switch is activated.

5 Pit Switch (if equipped)

The pit switch is located on the lower landing side at the base of the tower. Press the pit switch and verify that all controls are inoperable.

6 Slack Chain Safety Device

The safety device must be tested annually, or more frequently, depending on usage. Refer to the procedure "Verify safety brake operation" later in this document.

7 Emergency Lighting (if equipped)

Verify that the emergency cab light turns ON whenever the main power to the lift is interrupted.

8 Emergency Lowering of Cab

Verify that when power to the lift is disconnected, the cable-operated manual lowering device allows the cab to operate in the down direction.

9 Underpan Sensor (if equipped)

Verify that the underpan does not stick up when the sensor switches are activated.

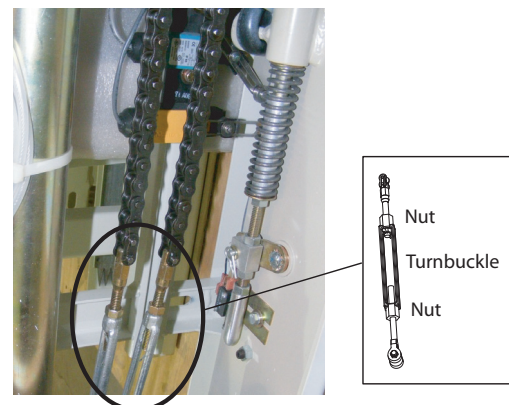
Adjust chain tension

Adjust the chain tension in such a way to prevent the unit from going on slack chain. Ensure the cylinder head/yoke is 1/8" from the pre-extension to prevent a slack chain situation in the event of a power failure. There are two chain tensioner assemblies located at the bottom of the tower. To adjust the chain tension:

- 1 Loosen the nuts above and below the turnbuckle as required.
- 2 Rotate the turnbuckle until the desired tension is achieved.
- 3 Tighten the nuts to lock the tensioner in place.

NOTE: To verify the adjustment is correct, with the unit located at the bottom floor, pull on the manual lowering cable and the unit should NOT go on slack chain. The unit should still be able to run.

Figure 43
Adjust chain tension



Verify safety brake operation

The purpose of the safety brakes is to stop the platform from free-falling in the event of a chain failure (breakage).

Adjustment of the safety brakes is made by moving the small cube along the threaded rod. This movement rotates the cam and brings it closer to the rail or further away from the rail. Note that moving the cube UP moves the cam further away from the rail.

Under normal use, the cam must be close enough to the rail to wedge quickly, and far enough away from the rail to prevent accidental engagement when travelling down without a load. This adjustment is factory set, but may require re-adjustment.

To verify the safety brake operation:

- 1 Lower the platform or cab onto a 40" long 2" x 4" wooden beam that is standing up. This will remove all weight from the chains and create 6" of slack in them.
- 2 At this point, the brake cams should have rotated and movement of the brake mechanism should have been visible. If the brake has not moved, find out what is preventing it from doing so.

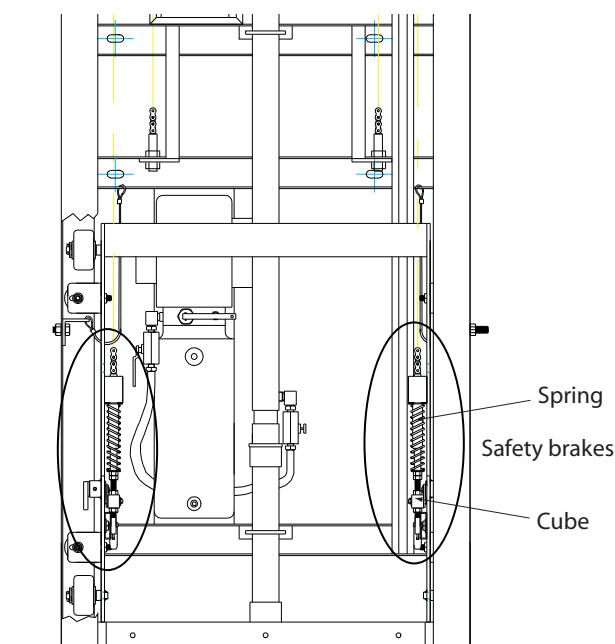


DANGER

Make sure there is no-one underneath the cab.

- 3 If the brake has moved, knock down the beam from under the cab using a long beam or bar. The cab should stay in place with the suspension chains still slack.
- 4 If the cab is resting on the chains, the safety brake did not work properly. Verify that the brake mechanism moves freely. If it does, re-adjust the cam by moving the cube along the threaded rod.
- 5 To disengage the safety brakes, activate the pump to put tension on the chains.

Figure 44
Safety brakes



Set pressure relief valve

The pressure relief valve must be set to a maximum of 125% of the working pressure when the lift has a full rated load on it. DO NOT exceed 2000 psi maximum.

- 1 Remove the tower service panel and locate the hydraulic pump assembly.
- 2 Locate the manifold near the bottom of the jack and open the pressure gauge shutoff valve by turning it one full turn counter-clockwise. Note that the pressure gauge shutoff valve is turned all the way clockwise to shut it off from the factory.
- 3 Place the rated load (standard load is 500 lb./227 kg) on the lift and run the lift up in normal operating mode or with the temporary run pendant.
- 4 Note the normal working pressure indicated on the pressure gauge and mark it down (for example, 1500 psi).
- 5 Locate the pressure relief valve on the pump block near the manual lowering valve on the right side (see below).

Figure 45
Set the pressure relief valve



- 6 Remove the hex head coupling to access the pressure relief set screw (3/16" Allen head).
- 7 Remove the load from the lift and then run the lift up using the temporary run pendant until the yoke (ram head) hits the mechanical stop or the piston hits the stop ring.
- 8 Using a 3/16" Allen key, adjust the relief pressure to a maximum of 125% of the normal working pressure. For example, if the normal working pressure is 1500 psi, the maximum relief pressure cannot exceed 1875 psi (1500 psi x 125%).
 - Turn counter-clockwise to relieve at lower pressure and clockwise to relieve at higher pressure.
- 9 Reinstall and tighten the hex head coupling.
- 10 Shut off the pressure gauge valve all the way.

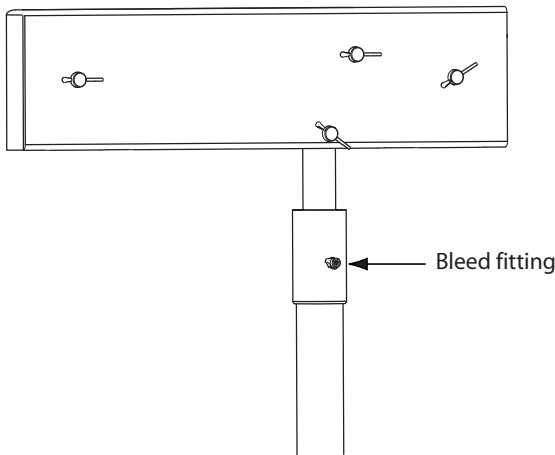
Bleed hydraulic cylinder

If the cab bounces during normal travel, the hydraulic system may have an air bubble trapped inside. You will need to bleed (or release) the air from the cylinder to enable normal travel.

Perform the following procedure to ensure all trapped air is released.

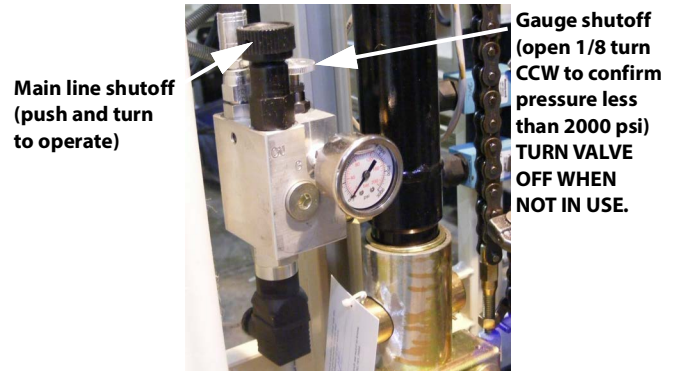
- 1 Position the lift to allow access to the bleed fitting near the top of the hydraulic cylinder. Note that the jack must be extended to a minimum of 6". Ensure there is weight on the cab platform.
- 2 Disconnect all power from the lift and/or press the pit switch (if equipped).
- 3 Slowly turn the bleed fitting counter-clockwise to allow the air to escape from the cylinder. **Note that the platform will lower slowly.**
- 4 When the hydraulic fluid begins to flow from the fitting, turn the wrench clockwise to tighten the fitting. DO NOT overtighten to avoid damage to the bleed fitting.
- 5 Reconnect power and/or release the pit switch (if equipped).
- 6 If the cab continues to bounce after several attempts, contact Savaria's *Technical Support*.

Figure 46
Hydraulic cylinder bleed fitting



Open shutoff gauge (for systems with newer version hydraulics)

For systems with the new version hydraulics (shown below), flow control adjustment is NOT required. You will however have to open the silver-coloured gauge shutoff as it is shipped in the closed position. Turn the gauge shutoff 1/8 of a turn counter-clockwise (maximum) to open it. **TURN VALVE OFF WHEN NOT IN USE.**



Adjust flow control (for systems with older version hydraulics only)

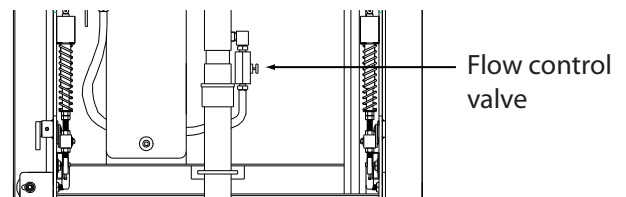
For systems with the older version hydraulics (shown below), you will need to adjust the flow control. Perform this procedure with the platform at the top landing and the shoring pins in place. DO NOT perform speed testing or run the lift in the DOWN direction with anyone underneath the platform.



Make sure there is no-one underneath the cab.

- 1 Press the pit switch (if equipped).
- 2 Locate the hydraulic pump assembly on the left side in the lower section of the tower.
- 3 Locate the adjustment screw on the flow control valve and turn it out completely counter-clockwise. Note that the flow control valve limits the flow in the direction of the arrow and lets the oil circulate freely in the opposite direction. Ensure the arrow is pointing in the direction of the oil going back into the tank.
- 4 Turn the adjustment screw clockwise in half turn increments until the flow rate and speed of the platform are affected.
- 5 Release the pit switch (if equipped), remove the shoring pins, and run the platform up and down to check the speed.
- 6 Once the flow rate and speed of the platform are at the desired level, turn the adjustment screw out by a quarter- turn and lock to set the flow rate.

Figure 47
Flow control valve (older version hydraulic line)



Set up pressure switch (as required)

The pressure switch is factory set at the lowest value of the adjustment range. In order to increase the setting of the switch, follow the steps below.

Figure 48
Location of pressure switch



- 1 Pressurize the switch to the desired setting.
- 2 Insert a 3/32" allen key through the opening on the top center of the switch.
- 3 Turn the allen key clockwise until the contact changes state, i.e. from normally open to normally closed, or vice-versa. Refer to the following table for an approximation of the number of turns required. All specifications in the table are in PSI.

Operating Characteristics

Model	Adjustment Range	Average Differential	Proof Pressure	Adjustment PSI per Turn (approx.)
SMA-1	30 - 500	15 - 80	9000	200
SMA-1A	300 - 2500	50 - 250	9000	600
SMA-2	2300 - 6000	200 - 300	9000	1300
SMA-4	30 - 120	9 - 20	9000	20
SMA-5	75 - 300	12 - 36	9000	50
SMA-6	300 - 1200	69 - 180	9000	220
SMA-7	1000 - 3000	180 - 360	9000	600
SMA-8	2000 - 5000	200 - 400	9000	1300

- 4 Operate the switch through its normal cycle and make any necessary adjustments to the setting to as necessary. Turn the allen key clockwise to increase the setting and counter-clockwise to decrease.

Step 30 Install service panels

Install the service panels on the front of the tower.

Procedure

Depending on the travel of the unit, there are different mounting bracket configurations required to install the service panels.

SHORT TRAVEL UNITS

Refer to the service panel layout shown on your job-specific Installation Drawings.

For units with **short travel** (units that do not require the panel mounting extension), the following service panel mounting brackets are pre-installed in the tower:

- Service panel pit mount – pre-installed at the bottom of the tower.
- Lower panel mounting bracket 320681 (2") or 320683 (2.5") – pre-installed in the correct position to mount the lower service panel. See Figure 48 below.
- Top panel mounting bracket 320766 – pre-installed at the top of the tower. See Figure 49 at the top of the next page.

Figure 49
Lower panel mounting bracket (pre-installed)

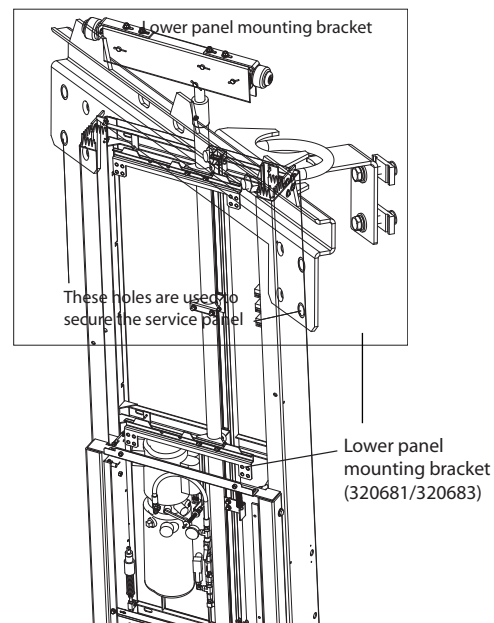
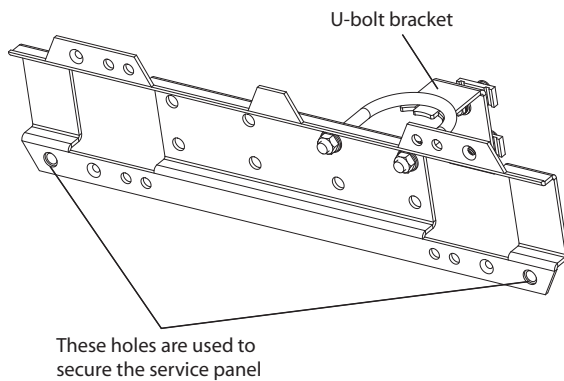


Figure 50
Top panel mounting bracket (pre-installed)



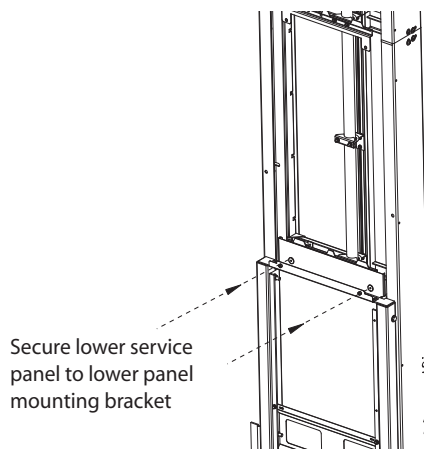
- 1 Before installing the service panels, install the tower cap first and secure it in place using the hardware provided.
- 2 Install the service panels as follows using hardware from the service panel kit 320703.

Attach with...hardware in service panel kit 320703

Part number	Description	Qty
104660	Bolt platform special S/S	4

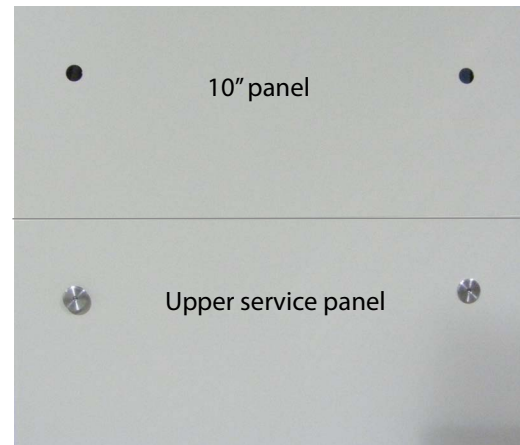
- a. Fit the lower service panel onto the service panel pit mount at the bottom of the tower. Secure the top of the panel to the lower panel mounting bracket using two bolts from the service panel kit 320703. See Figure 50.

Figure 51
Attach lower service panel



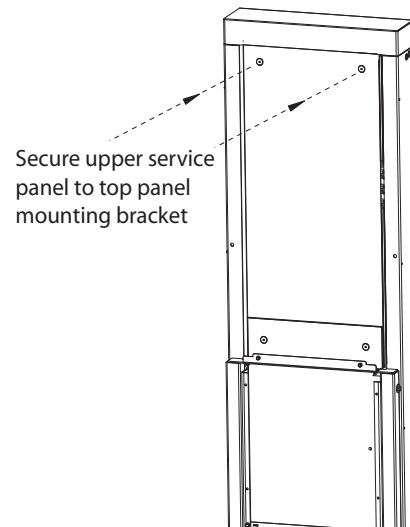
- b. Depending on the total travel of the unit, there may be a 10" service panel that you need to attach to the top of the upper service panel before installing it.
 - Slide the bottom of the 10" panel in behind the top of the upper service panel.
 - Line up the holes and secure the panels together using two bolts from the service panel kit 320703.

Figure 52
Attach 10" panel to top of upper service panel



- c. Slide the upper service panel into place, fitting it on top of the lower panel mounting bracket. Secure the top of the panel to the top panel mounting bracket using two bolts from the service panel kit 320703. See Figure 52.

Figure 53
Attach upper service panel



LONG TRAVEL UNITS

Refer to the service panel layout shown on your job-specific Installation Drawings.

For units with **long travel**, the following parts are required to mount the service panels:

- Service panel pit mount (pre-installed at the bottom of the tower).
- Panel mounting extension which is composed of the components shown in Figure 53 below.
- Top panel mounting bracket 320766 – pre-installed at the top of the tower. See Figure 53 below.



WARNING

The panel mounting extension is heavy. Be very careful when lifting it up to install it. Two people are required to install and secure it in place.

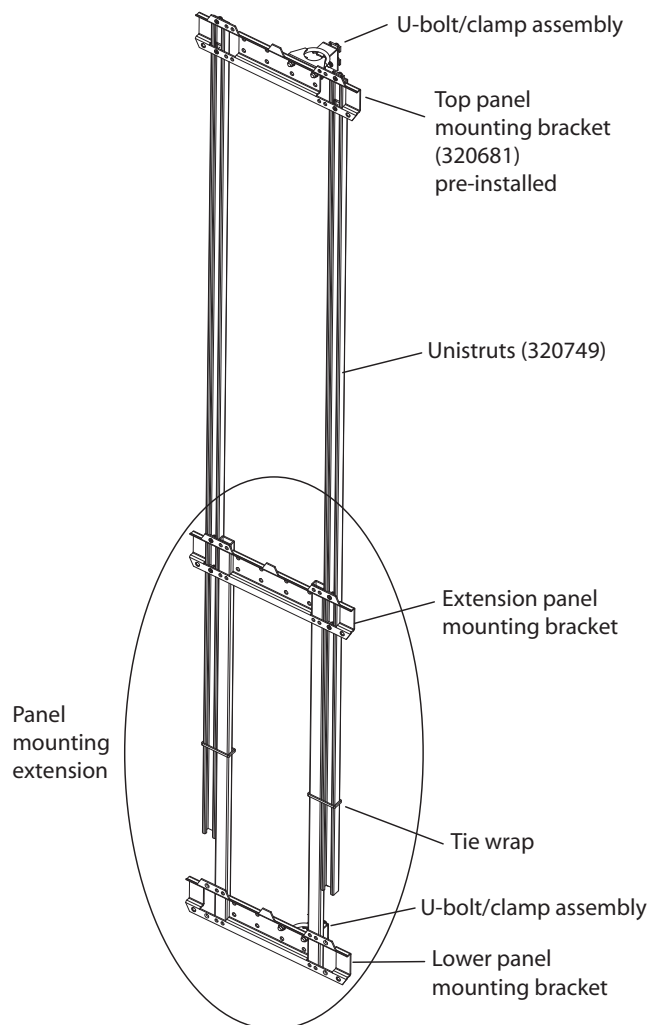
Figure 54
Panel mounting extension and top mounting bracket

Panel mounting assembly P/Ns:

320756 - 46"

320757 - 70"

320648 - 94"



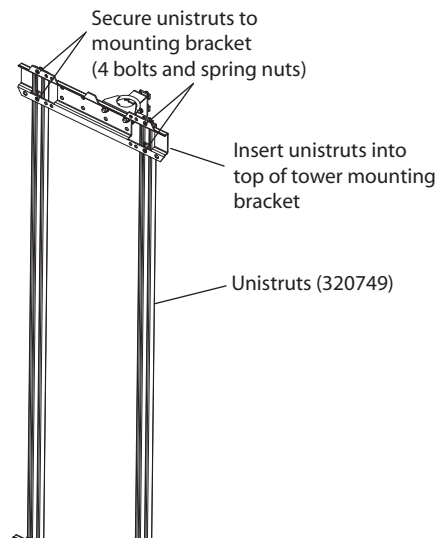
1 Install the panel mounting extension as follows:

- BE VERY CAREFUL WHEN LIFTING THE PANEL MOUNTING EXTENSION. HAVE TWO PEOPLE TO INSTALL AND SECURE IT IN PLACE.**

Orient the panel mounting extension as required so you can insert the unistruts at the top of the extension into the top panel mounting bracket. See Figure 54.

- Secure the unistruts to the top panel mounting bracket using four bolts and spring nuts.

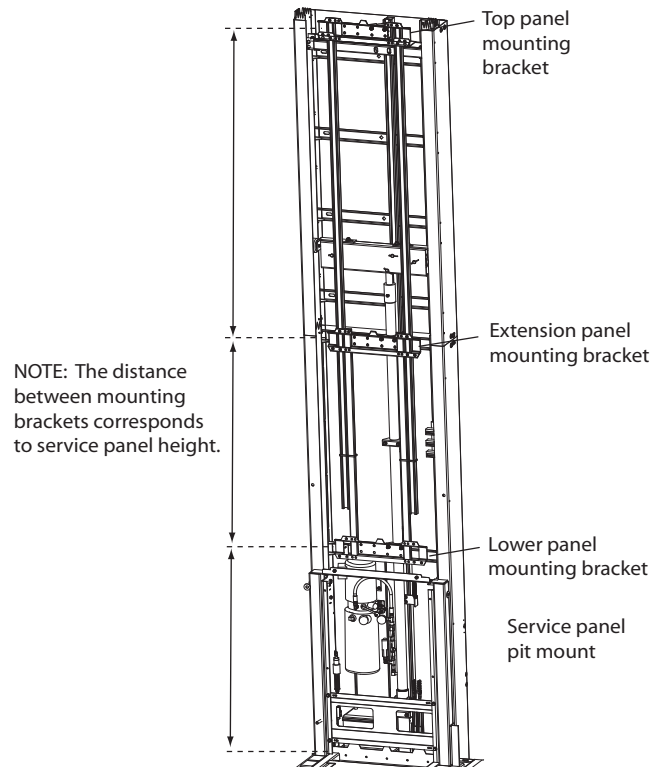
Figure 55
Secure unistruts to top of tower mounting bracket



- Slightly loosen the unistrut bolts in the extension panel mounting bracket.
- Pull downward on the extension panel mounting bracket as required until the lower panel mounting bracket of the extension is in line with the lower U-bolt/clamp assembly (pre-installed).
- Secure the lower panel mounting bracket to the pre-installed U-bolt/clamp assembly using two flange nuts 105283.
- Tighten the unistrut bolts in the extension panel mounting bracket.
- Tie-wrap the unistruts to the panel mounting extension bars to hold them in place. See Figure 53.

- 2 Figure 55 shows an example of the panel mounting brackets in place. Note that there are different mounting bracket configurations depending on the total travel of the unit. Refer to the service panel layout shown on your job-specific Installation Drawings.

Figure 56
Service panel mounting brackets



- 3 Install the service panels as follows using hardware from the service panel kit 320703.

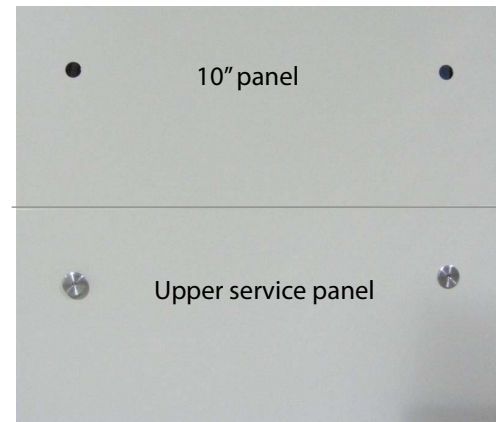
Attach with...hardware in service panel kit 320703

Part number	Description	Qty
104660	Bolt platform special S/S	6

- Fit the lower service panel onto the service panel pit mount at the bottom of the tower. Secure the top of the panel to the lower panel mounting bracket using two bolts from the service panel kit 320703.
- Slide the next service panel into place, fitting it on top of the lower panel mounting bracket. Secure the top of the panel to the extension panel mounting bracket using two bolts from the service panel kit 320703.
- Repeat step b for each panel until you get to the upper service panel.

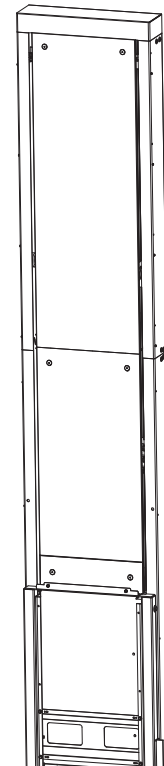
- Depending on the total travel of the unit, there may be a 10" service panel that you need to attach to the top of the upper service panel before installing it.
 - Slide the bottom of the 10" panel in behind the top of the upper service panel.
 - Line up the holes and secure the panels together using two bolts from the service panel kit 320703.

Figure 57
Attach 10" panel to top of upper service panel



- Slide the upper service panel into place, fitting it on top of the extension panel mounting bracket. Secure the top of the panel to the top panel mounting bracket using two bolts from the service panel kit 320703. See Figure 52.

Figure 58
All service panels installed



Step 31 Install tower cap

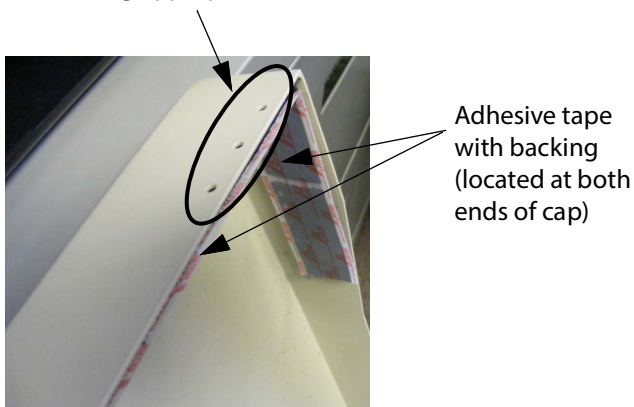
Install the tower cap.

Procedure

- 1 Remove the backing from the adhesive tape on the inside edges at both ends of the tower cap.
- 2 Position the tower cap on top of the tower and affix in place.
- 3 If you need extra support for the tower cap, you can drill three 1/8" (3.18 mm) diameter holes in each end of the tower cap (near the front of the cap) and secure to the tower using the appropriate hardware. Make sure the holes are at least 1/4" (6.35 mm) from the bottom edge of the tower cap.

Figure 59
Install tower cap

Drill 3 holes at each end of cap (if extra support needed); secure to tower using appropriate hardware



Step 32 Wrap ceiling wires (as required)

Wrap any visible ceiling wires with plastic tubing (as required).

Procedure

- 1 From inside the cab, wrap any visible ceiling wires (if applicable) with the pre-split plastic tubing provided.

Figure 60
Plastic tubing



Step 33
Re-install back panels on cab

Re-install the back panels on the cab.

Procedure

- 1 Re-install the back panels on the cab (using the hardware you set aside in Step 11).
- 2 Cover the screws with the small caps provided.

Step 34
Before leaving job site

Before leaving the job site, make sure the work area is clean and the lift is safe and operational.

Procedure

- 1 Clean up the work area.
- 2 Make sure all hardware has been tightened.
- 3 Explain the operation of the lift to the customer.
- 4 Assist the customer on an orientation ride.
- 5 Provide a copy of the Owner's Manual and Warranty to the customer. Be sure to record all required details per the Owner's Manual.

IMPORTANT

Do NOT turn over the lift prior to having an active phone line and having properly tested the phone or automatic dialer phone (as applicable).

Appendix A: Cleaning

CLEANING - Metal Surfaces

X DANGER

Under no circumstances should you ever attempt to remove panels for cleaning!

*** NOTE**

DO NOT use any cleaning product anywhere on the entire unit that contain any amount of citrus, ammonia or petroleum. This includes Windex® and most traditional glass cleaners, as well as many “natural” cleaning solutions.

*** NOTE**

DO NOT use window cleaning sprays, kitchen scouring compounds or solvents such as acetone, gasoline, benzene, alcohol, carbon tetrachloride, or lacquer thinner. These can scratch the finish of the metal and damage nearby acrylic panels.

Washing (Metal Surfaces)

Clean the Metal Surfaces with a mild soap and water solution using a new microfiber cloth or with a melamine sponge such as a Mr. Clean Magic Eraser with water. Use a clean soft cloth, applying only light pressure. Rinse with clean water and dry by blotting with a damp cloth or chamois.

Not using harsh chemicals will preserve not only the look and texture of the powder coated metal, but also protect the acrylic sheets.

The fumes from many chemical cleaners (including citrus-based cleaners) will cause the acrylic to have surface cracks or create cracks that can go all the way through and can result in safety hazards.

Dusting (Metal Surfaces)

Dust the painted surfaces with a soft, damp microfiber cloth or chamois. Dry, gritty or previously used cloths may cause surface scratches.

CLEANING - Acrylic Panels

X DANGER

Under no circumstances should you ever attempt to remove panels for cleaning!

*** NOTE**

DO NOT use any cleaning product anywhere on the entire unit that contain any amount of citrus, ammonia or petroleum. This includes Windex® and most traditional glass cleaners, as well as many “Natural” cleaning solutions.

*** NOTE**

DO NOT use window cleaning sprays, kitchen scouring compounds or solvents such as acetone, gasoline, benzene, alcohol, carbon tetrachloride, or lacquer thinner. These can scratch the sheet’s surface and/or weaken the sheet causing small surface cracks called “crazing”.

Washing (Acrylic Panels)

Wash the acrylic panels with a microfiber cloth damp with water or with acrylic cleaner (see the list on the next page). Some precautions must be taken to ensure a long operating life and to maintain the acrylic panel clarity on your unit, including not using chemicals to clean the acrylic sheets. Use a clean soft cloth, applying only light pressure. Rinse with clean water and dry by blotting with a damp cloth or chamois.

Dusting (Acrylic Panels)

Dust acrylic panels with a soft, damp cloth or chamois. Dry or gritty cloths may cause surface scratches and create a static electric charge on the surface (refer to the section on Neutralizing Static Electricity on the next page).

Polishing (Acrylic Panels)

Protect the acrylic panels and maintain their surface gloss by occasional polishing with a good plastic cleaner and polish (refer to the section on Cleaners for a list of acceptable cleaners and polishes).

Apply a thin, even coat with a soft clean cloth and polish slightly with cotton flannel or a microfiber towel. Then wipe with a damp cloth to help eliminate electrostatic charges that can attract dust particles.

Neutralizing Static Electricity (Acrylic Panels)



NOTE

A de-ionizing tool can be used during installation to eliminate a majority of the static electricity (causes the dust to fall away).



NOTE

Damage caused by inappropriate cleaners and techniques is not covered under warranty.

A static electrical charge can develop on the acrylic panels during handling and processing. This is not unique to the acrylic panels, but is common to many materials, particularly plastics.

When the paper or film masking is stripped off the acrylic sheet, a static charge is created on the sheet surface. Static electricity attracts dust, chips, etc. floating in the air or on nearby work surfaces and holds these contaminants tightly to the surface. A compressed air gun will remove some of this surface dirt, but much of it continues to cling to the sheet.

Several anti-static cleaners for plastics are also available which will reduce static electricity and dust attraction. Wiping with a soft damp cloth or chamois is all that is necessary to keep the acrylic panels dust-free between applications of these cleaners.

Cleaners

Cleaners which ***MAY BE USED*** for acrylic panels:

- Plexus® (Anti-Static Cleaner)
- Novus® #1, 2, and 3 Acrylic Cleaner and Polish
- ATM Mirage Glass and Acrylic Cleaner
- Zep® Commercial Glass Cleaner (must state for use on Plexiglas®)
- Plexi-Clean (Anti-Static Cleaner)
- Prist Aerospace Anti-Static Acrylic, Plastic & Glass Cleaner
- Cleaners which explicitly state "Safe for use with plastics and acrylic"

Cleaners which ***SHALL NEVER BE USED*** for acrylic panels:

- Windex® Glass Cleaner
- Sprayway Ammonia-Free Glass Cleaner
- Goo-Gone®
- Natural 100% Citrus Solvent De-greaser
- Any citrus-based cleaners.

These above lists are for reference only and are not comprehensive. If you have any questions about the acceptability of a specific cleaner, please contact your authorized dealer.

Appendix B: Maintenance and Troubleshooting

Maintenance Schedule (General)

Verification	Frequency (Commercial/Exterior)	Frequency (Residential)
For units with an interlock, the lift should not move if any door is not closed and locked. For units with a GAL lock, the lift should not move if any door is not closed. The lift should not move beyond the door zone (usually less than four inches away from the landing in either direction) if the door is not locked.	Every 6 months	Normal: Every Year Heavy: Every Year Excessive: Every 6 months
Verify the underpan is working. Be sure to insert the shoring pins.	Every 6 months	Normal: Every Year Heavy: Every Year Excessive: Every 6 months
Verify correct operation of the phone (where applicable).	Every 6 months	Normal: Every Year Heavy: Every Year Excessive: Every 6 months
Confirm doors or gates are all self-closing.	Every 6 months	Normal: Every Year Heavy: Every Year Excessive: Every 6 months
Check that the Stop button works correctly	Every 6 months	Normal: Every Year Heavy: Every Year Excessive: Every 6 months
Verify the door lock operation: - The lift is operational when the door is locked - The lift is NOT operational when the door is open at a landing - Insert the lock key to manually unlock the door and ensure the following: - The lift is NOT operational when the door is manually unlocked with the key - The key cannot be removed from the lock when the door is manually unlocked	Every 6 months	Normal: Every Year Heavy: Every Year Excessive: Every 6 months
Check the suspension system: - Chains - Connecting links - Chain pulleys and shafts - Parts holding the chains on the roller supports - Chain tensioners on the rail (they should be tight)	Every 6 months	Normal: Every Year Heavy: Every Year Excessive: Every 6 months
- Cylinder head (cotter pins, cracks, welds) - Up relays - if you have two up relays (solenoids or contactors), make sure one of them is not stuck in the activated position. Use a multimeter to verify that every N.O. contact is open when the relays are not being activated.	Every 6 months	Normal: Every Year Heavy: Every Year Excessive: Every 6 months
Check the safety brake.	Every 6 months	Normal: Every Year Heavy: Every Year Excessive: Every 6 months
Check for oil leaks.	Every 6 months	Normal: Every Year Heavy: Every Year Excessive: Every 6 months

Maintenance Schedule (General, Cont.)

Check the rollers.	Every 6 months	Normal: Every Year Heavy: Every Year Excessive: Every 6 months
Ensure that all filler panels (aluminum, Plexiglas or glass) are securely fastened in the enclosure, doors and gates.	Every 6 months	Normal: Every Year Heavy: Every Year Excessive: Every 6 months

Maintenance Schedule (Adjusted)

Some Jurisdictions have their own state, county or local code that deviate from national code. Please fill out the below information with the requirements of your region:

Savaria Job Number: _____

Installation Address: _____

Verification	Adjusted
For units with an interlock, the lift should not move if any door is not closed and locked. For units with a GAL lock, the lift should not move if any door is not closed. The lift should not move beyond the door zone (usually less than four inches away from the landing in either direction) if the door is not locked.	
Verify the underpan is working. Be sure to insert the shoring pins.	
Verify correct operation of the phone (where applicable).	
Confirm doors or gates are all self-closing.	
Check that the Stop button works correctly	
Verify the door lock operation: • The lift is operational when the door is locked • The lift is NOT operational when the door is open at a landing • Insert the lock key to manually unlock the door and ensure the following: • The lift is NOT operational when the door is manually unlocked with the key • The key cannot be removed from the lock when the door is manually unlocked	
Check the suspension system: • Chains • Connecting links • Chain pulleys and shafts • Parts holding the chains on the roller supports • Chain tensioners on the rail (they should be tight)	
• Cylinder head (cotter pins, cracks, welds) • Up relays - if you have two up relays (solenoids or contactors), make sure one of them is not stuck in the activated position. Use a multimeter to verify that every N.O. contact is open when the relays are not being activated.	
Check the safety brake.	
Check for oil leaks.	
Check the rollers.	
Ensure that all filler panels (aluminum, Plexiglas or glass) are securely fastened in the enclosure, doors and gates.	

NOTE

To prevent possible corrosion on outdoor units, all metal surfaces (for example, stainless steel) should be cleaned and waxed regularly with the appropriate cleaner and wax.

Chain maintenance

Purpose

To check chain wear and lubricate or replace as necessary (every six months).

Measuring Chain Wear

Chain wear is determined by measuring the amount a chain has stretched. This can be done using a large digital caliper or by estimating using a wear scale as described below. The wear limit of a standard roller chain is 2% of the chain's pitch. If the stretch is more than 2%, it's time to replace the chain. Pitch is defined as the distance between the center of each bushing in a link.

Figure 61
Pitch



(1) Caliper Method

The easiest way to measure using a digital caliper is to measure from one reference point (for example, the centre of the bushing) to the same reference point a number of pitches away (see below). The key is to measure over as many pitches as possible, since 2% is a very small number. Measuring over many pitches makes the stretch more noticeable and easier to calculate. After measuring, you simply divide by the nominal pitch to get the stretch.

For example, measure a length of RS60 chain (3/4" pitch) from the centre of one roller to the centre of another roller 10P away. If this distance is measured as 7.6", the nominal pitch is then calculated as $(0.75" \text{ per pitch}) \times (10 \text{ pitches}) = 7.5"$. You then, divide 7.6" by 7.5" to get 1.01333, or a stretch of 1.33%. In this example, the chain is still usable since the stretch is below 2%.

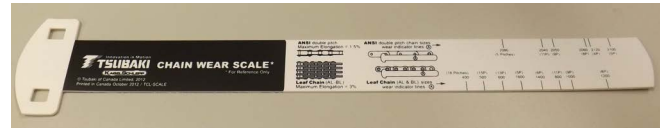
Figure 62
Digital caliper



(2) Wear Scale Method

Using a chain wear scale (shown below) makes the process much easier. The wear scale is 'T' shaped, which allows you to butt the chain pin into the corner of the 'T'. Using the different measurements marked along the stick portion of the 'T', you simply find the measurement for your chain and then check to see if the centre of that pin lines up with the measurement on the wear scale. If not, then you know the chain is stretched.

Figure 63
Chain wear scale



Lubrication

Proper lubrication depends on the operating conditions, temperature and size of the chain. The chain comes pre-lubricated with a lubricant developed to thoroughly penetrate all parts of the chain, especially the critical areas where the pin and bushing surfaces make contact under full load.

Proper lubrication is essential for peak performance and maximum chain life. Follow the lubrication schedule carefully as improper lubrication will shorten chain life and decrease performance.

Since wear between pins and bushings of the chain causes chain elongation, lubrication must be maintained on all contact surfaces. The lubricant must be selected and applied according to the application and working conditions of the chain. Once applied, the lubricant should NOT be wiped off.

Recommended Lubricants

Only high-grade oil of suitable viscosity should be used for chain lubrication. The amount and type depends on the chain specifications, working conditions and lubricating systems. DO NOT use heavy oil, low-grade oil, impure oil or grease, or used oil. These types will reduce chain life or cause chain damage or breakage.

Troubleshooting

Bouncing Cab/Chain Vibration

If you have a problem with the cab “bouncing” and/or the chain vibrating, take the following actions in the order given to help resolve the issue.

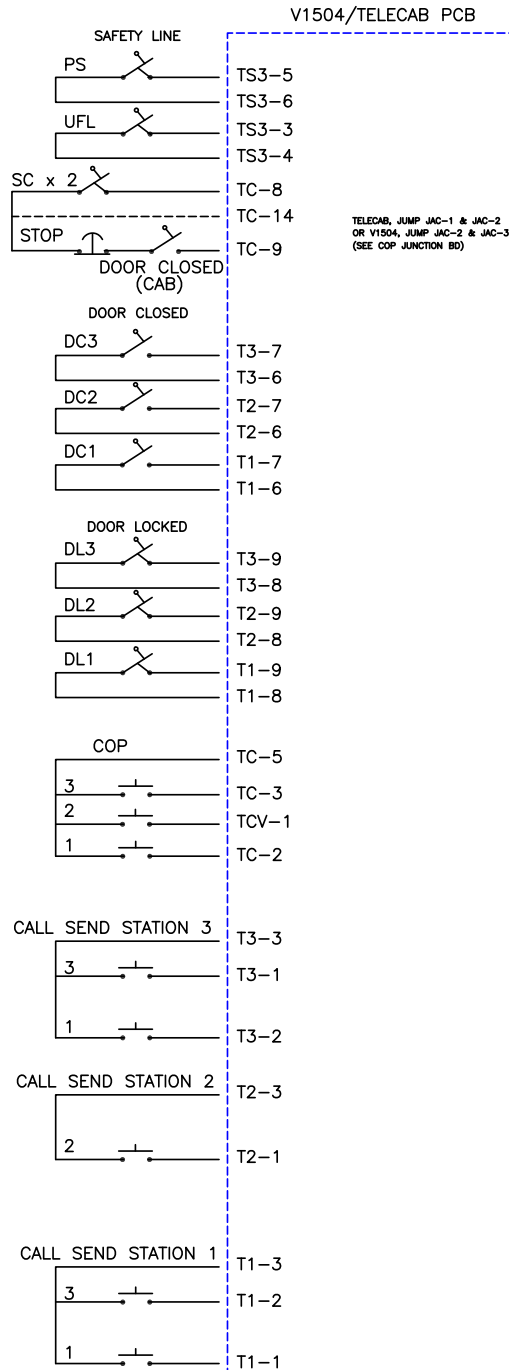
- 1 Make sure the cylinder is perfectly plumb.
- 2 Ensure the hydraulic hose has a minimum burst pressure of 17,000 psi.
- 3 Ensure there is no air in the hydraulic lines.
- 4 Ensure the DBG (Distance Between Guides) is maintained. Make sure the skate guides are not getting too tight inside the tower.
- 5 Ensure an adequate level of hydraulic oil in the tank.
- 6 Check for proper operation of the hydraulic valve.
- 7 Add one tablespoon of maxiglide oil additive to the cylinder head and a half gallon to the hydraulic tank.
- 8 Replace the manifold with the old style manifold.

Appendix C: Reference Drawings

This appendix provides the following reference drawings:

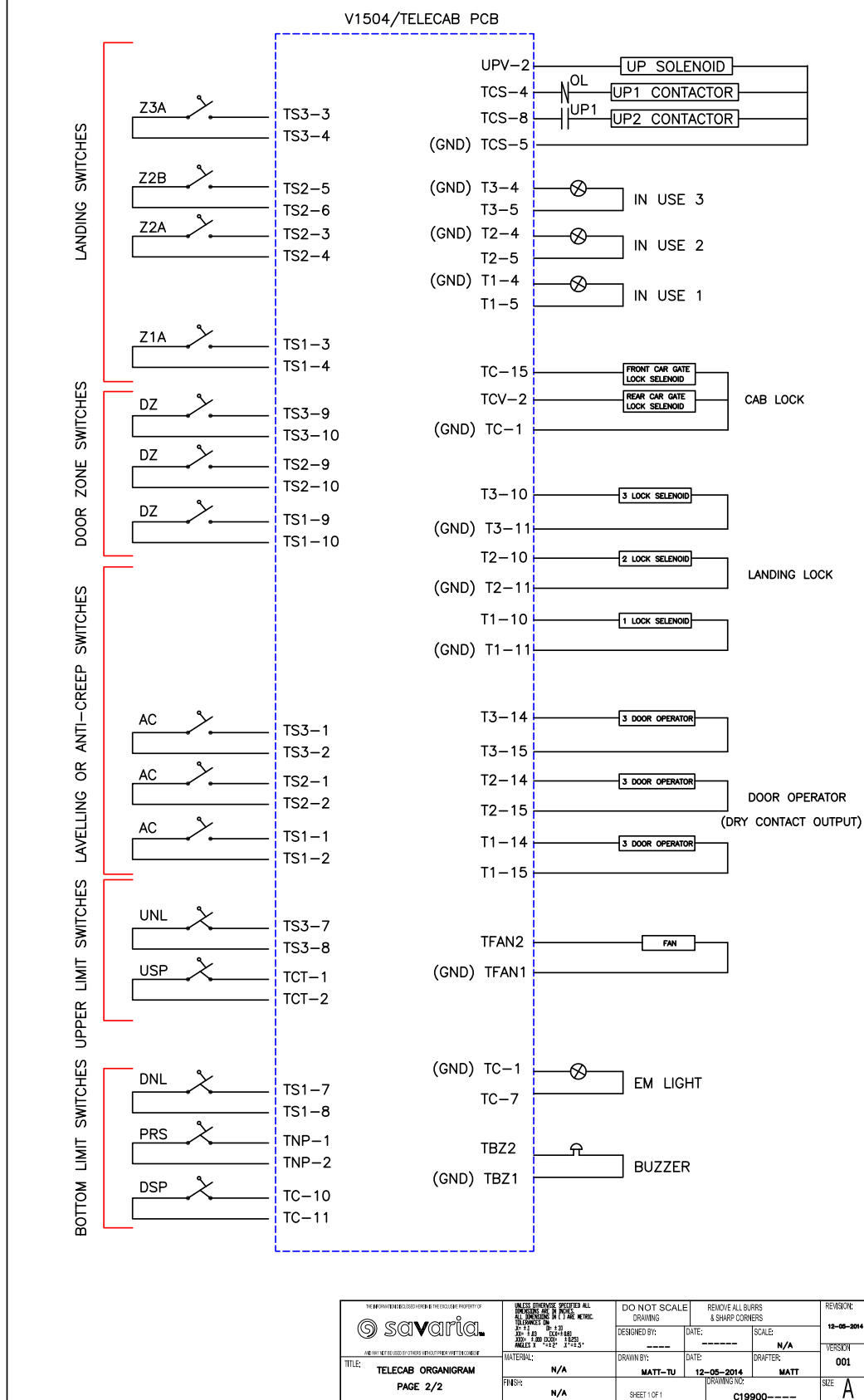
- Input/output (sheet 1)
- Input/output (sheet 2)

TELECAB Organigram 1/2



THE INFORMATION CONTAINED HEREIN IS THE EXCLUSIVE PROPERTY OF 		DO NOT SCALE DESIGNED BY: DATE: SCALE:		REVISION: 12-05-2014
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED FINISH: N/A		REMOVE ALL BURRS & SHARP CORNERS DATE: SCALE:		VERSION 1.14
AND NOT BE USED BY OTHERS WITHOUT WRITTEN PERMISSION TELECAB ORGANIGRAM PAGE 1/2		MATERIAL: N/A	FINISH: N/A	DRAWN BY: MATT-TU DATE: 12-05-2014 DRAFTING NO.: C19900----
		SHEET 1 OF 1		SIZE A

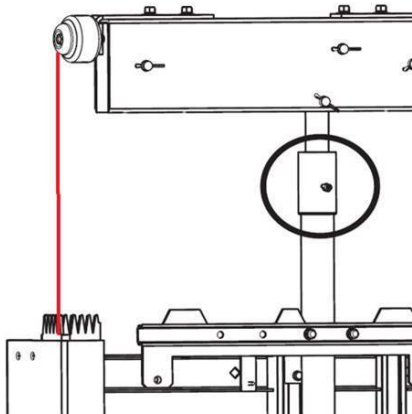
TELECAB Organigram 2/2



Appendix D: Noise and Bounce Checklist

Where does the sound come from – skates, yoke, or cylinder?

- 1 Check the pressure.
 - a. What is the pressure going up full load and no load?
 - b. What is the pressure going down full load and no load?
 - c. It should be 1200 to 1600 with load and 300 to 600 no load.
 - If the pressure is too high, check #3, #4 and #5.
 - If the pressure is normal, check #2 and #6.
- 2 Yoke (change in temperature could explain the noise coming and going).
 - a. Grease the yoke shafts. You will have to remove the chains and then remove the yoke from the cylinder to proceed with the greasing properly.
- 3 For Telecab or V-1504 with back yoke guides instead of side yoke guides, check the following:
 - a. Is the tower straight (guide section specifically)? If not, level the tower and readjust the guide tension.
 - b. Is the guide under too much tension? If so, adjust the tension.
 - c. In both cases, it might be too late and the cylinder packing may be permanently damaged. If so, the cylinder packing will have to be changed.
- 4 Is the cylinder level (up, down and side-ways)? If not, perform the procedure “**Check/Adjust Cylinder for Plumb**” provided on the next page.
- 5 Check the white side wheels on the yoke.



- a. Are they rubbing against the side of the tower?
- b. Are they bouncing at the same time?
- c. Ensure the DBG outside the tower is 30 3/4".
- d. Ensure the skates are level (90 degrees) to the sling.
- e. Review “**Troubleshooting Bouncing Cab/Chain Vibration**” provided on the next page.
- 6 Does the oil seem clean? If not, perform the procedure “**Cleaning the V-1504 Hydraulic System**” provided on the next page and change the cylinder packing as required.
- 7 Does the noise sound like metal rubbing? Check that the service panels are level and positioned properly. They need to be centered; if not, the skates or Telecab floor plug stabilizer might rub against the service panel.

Procedure 1: Check/Adjust Cylinder for Plumb

Check that the cylinder is plumb. If it is not, adjust as required.

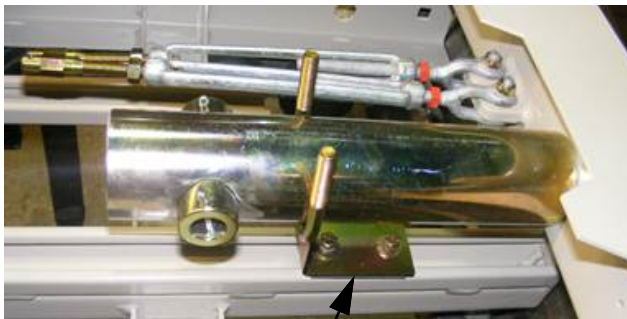
For short travel units, follow this procedure to check/adjust the plumbness of the cylinder in the base tower.

For long travel units, you will need to check the intermediate and top sections once they are installed on the base tower.

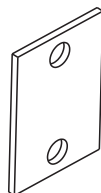
- 1 With the base tower section laying on a flat surface, place a level across with width of the tower above the pillar.
- 2 Check that the distance between the level and the pillar is constant.



- 3 If it is not, add/remove shims behind the cylinder bracket to ensure the distance is constant. The shims (V0100121, V0100122, V0100123, and V0100124) are provided in the small parts box.
- 4 Repeat the above steps for the cylinder frame and cylinder piston, adding/removing shims as necessary.



Shim behind bracket



Procedure 2: Troubleshooting Bouncing Cab/Chain Vibration

If you have a problem with the cab “bouncing” and/or the chain vibrating, take the following actions in the order given to help resolve the issue.

- 1 Make sure the cylinder is perfectly plumb.
- 2 Ensure the hydraulic hose has a minimum burst pressure of 17,000 psi.
- 3 Ensure there is no air in the hydraulic lines.
- 4 Ensure the DBG (Distance Between Guides) is maintained. Make sure the skate guides are not getting too tight inside the tower.
- 5 Ensure an adequate level of hydraulic oil in the tank.
- 6 Check for proper operation of the hydraulic valve.
- 7 Add one tablespoon of maxiglide oil additive to the cylinder head and a half gallon to the hydraulic tank.
- 8 Replace the manifold with the old style manifold.

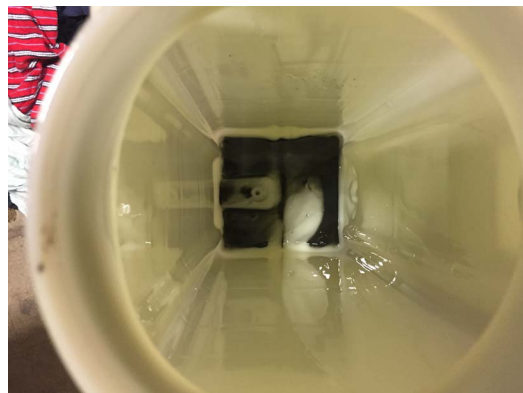
Procedure 3: Cleaning the Hydraulic System

IMPORTANT

The cleaning process will consume oil (up to 10 gallons). Be sure you have enough oil on hand.

- 1 Send the cab to the second floor.
- 2 Install the shoring pins.
- 3 Install jumpers on the slack cables (TC 8-14) and the bottom floor DC/DCL contacts.
- 4 Bring the cab down using the manual lowering valve until it rests on the shoring pins and the piston head is all the way down.
- 5 Remove the tank from the pump and empty out all the oil. The inside of the oil tank is shown below.

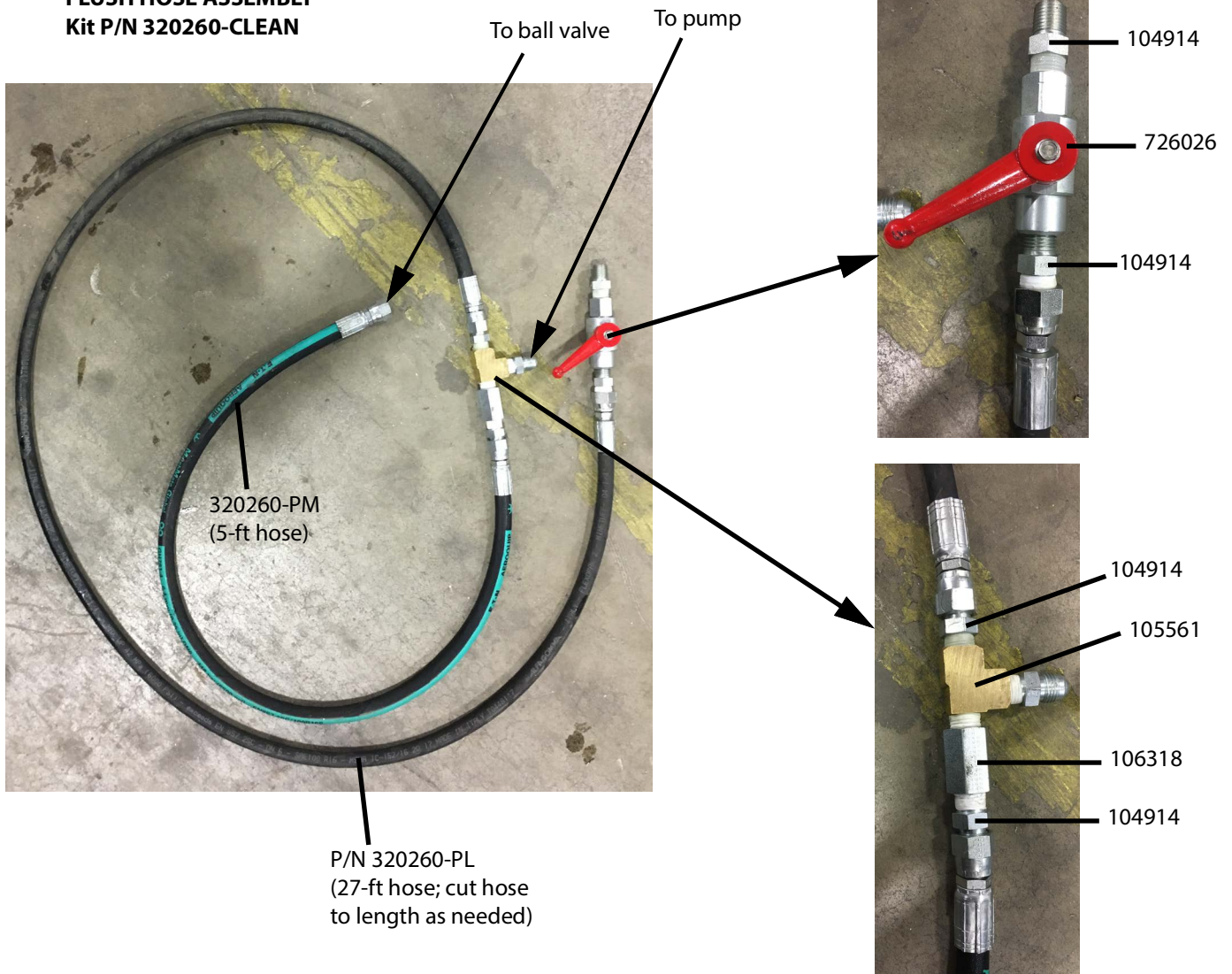
INSIDE OF OIL TANK



- 6 Clean the tank PERFECTLY and then reinstall it.
- 7 Fill the tank with enough fresh oil to send the cylinder all the way up.

- 8 Install the flush hose assembly between the existing hose and the ball valve of the manifold.
- The picture below shows the parts of the cleaning hose assembly.
 - The picture on the next page shows the cleaning hose assembly installed.

FLUSH HOSE ASSEMBLY
Kit P/N 320260-CLEAN



FLUSH HOSE ASSEMBLY INSTALLED



- 9 Send the cab all the way up **while making sure the traveling cable is still on the pulley.**
- 10 Slowly open the ball valve on the flush line to empty the cylinder oil into a clean bucket until the piston is all the way down.
- 11 Close the flush line ball valve and bring the cab all the way up.
- 12 Repeat steps 7 through 11 five times, or more if the oil coming out is not perfectly clean.
 - **Note that you need to use fresh oil each time you perform the procedure.**
- 13 Change the pump, manifold and oil line.
- 14 Flush any air in the system with the piston bleeder.
- 15 Remove all jumpers.

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Telecab Home Lift INSTALLATION GUIDE

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