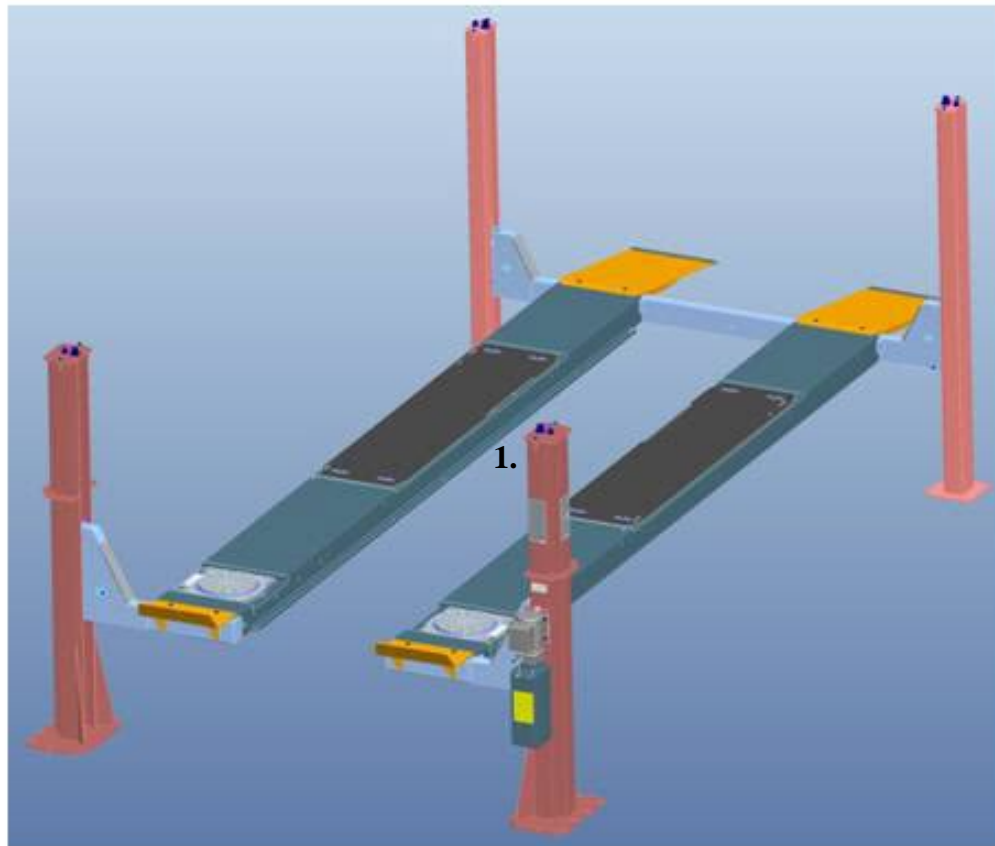




4-POST OPEN FRONT LIFT
14000 LBS.
MODEL: EELR507A



INSTALLATION, OPERATION, MAINTENANCE AND PARTS
MANUAL



309 EXCHANGE AVENUE,
CONWAY, ARKANSAS, 72032
TEL: 501-450-1500 FAX: 501-450-1585

**READ ALL INSTRUCTIONS THOROUGHLY BEFORE INSTALLING,
OPERATING, SERVICING, OR MAINTAINING THE LIFT.**

2. OWNER / EMPLOYER OBLIGATIONS

1. The Owner/Employer shall ensure that lift operators are qualified and that they are trained in the safe use and operation of the lift using the manufacturer's operating instructions; ALI/SM 93-1, **ALI Lifting it Right** safety manual; ALI/ST-90 **ALI Safety Tips** card; ANSI/ALI ALOIM-2008, **American National Standard for Automotive Lifts - Safety Requirements for Operation, Inspection and Maintenance**; ALI/WL Series, **ALI Uniform Warning Label Decals/Placards**; and in the case of frame engaging lifts, ALI/LP-GUIDE, **Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts**.
2. The Owner/Employer shall establish procedures to periodically inspect the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM-2008, **American National Standard for Automotive Lifts - Safety Requirements for Operation, Inspection and Maintenance**; and the Employer shall ensure that the lift inspectors are qualified and that they are adequately trained in the inspection of the lift.
3. The Owner/Employer shall establish procedures to periodically maintain the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM-2008, **American National Standard for Automotive Lifts - Safety Requirements for Operation, Inspection and Maintenance**; and the Employer shall ensure that the lift maintenance personnel are qualified and that they are adequately trained in the maintenance of the lift.
4. The Owner/Employer shall maintain the periodic inspection and maintenance records recommended by the lift manufacturer's instructions or ANSI/ALI ALOIM-2008, **American National Standard for Automotive Lifts - Safety Requirements for Operation, Inspection and Maintenance**
5. The Owner/Employer shall display the lift manufacturer's operating instructions; ALI/SM 93-1, **ALI Lifting it Right** safety manual; ALI/ST-90 **ALI Safety Tips** card; ANSI/ALI ALOIM-2008, **American National Standard for Automotive Lifts - Safety Requirements for Operation, Inspection and Maintenance**; ALI/WL Series, **ALI Uniform Warning Label Decals/Placards**; and in the case of frame engaging lifts, ALI/LP-GUIDE, **Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts** in a conspicuous location in the lift area convenient to the operator.
6. The Owner/Operator shall provide necessary lockout/tagout means for energy sources per ANSI Z244.1-1982 (R1993), **Safety Requirements for the Lockout/Tagout of Energy Sources**, before beginning any lift repairs and maintenance.
7. The Owner/Employer shall not modify the lift in any manner without the prior written consent of the manufacturer.

⚠ WARNING DO NOT ATTEMPT TO OPERATE THIS LIFT IF ANY PART IS NOT WORKING PROPERLY OR YOU HAVE NOT READ THE COMPLETE OPERATING INSTRUCTION MANUAL.

3. IMPORTANT SAFETY INSTRUCTIONS

1. When using this lift, basic safety precautions should always be followed, including the following:
2. Only trained and authorized personnel should operate the lift or rolling jacks. Do not allow customers or bystanders to operate the lift or be in the shop area while lift is in use.
3. Read all instructions in this manual and on the lift. Thoroughly train all employees in the use and care of lift and rolling jacks.
4. Inspect lift daily. Do not operate if it malfunctions or problems have been encountered.
5. Ensure no one is standing in front or behind the lift while vehicle is being driven onto, or backed off the lift.
6. Before driving vehicle on, make sure lift is in the fully down position.
7. Before removing the vehicle from the lift, make sure the lift is in the fully down position and ensure that all tools have been removed from the deck surfaces.
8. Always raise the lift off safety locks before lowering.
9. Do not allow rear tires or portion of the vehicle to interfere with ramp.
10. Be sure front wheel stops are always installed on the lift.
11. Never allow front wheels to strike the front wheel stops.
12. Do not permit employees or customers on lift when it is either being raised or lowered.
13. Never raise vehicle with passengers inside.
14. Always stand clear of lift when raising or lowering and observe “Pinch points” warning.
15. Before lowering the lift, check area for any obstructions
16. Never attempt to overload the lift. The manufacturer’s rated capacity is shown on the identification label on the power side column.
17. Do not override the operating controls or safety mechanisms, or the warranty will be void. The mechanical safeties are designed to engage automatically on the way up.
18. Always use wheel chocks to keep the vehicle from rolling freely on the runways. Wheel chocks should be used at the front and back of the same wheel.
- 19. Caution! Never work under the lift unless the mechanical safety locks are engaged.**
20. Always keep the lift area free of obstruction, tools and debris. Grease and oil spills should always be cleaned up immediately.
21. Always keep runways clean.
22. To protect against the risk of fire, do not operate lift in the vicinity of open containers of flammable liquids.
23. Adequate ventilation should be provided when working on internal combustion engines.
24. Replace all caution, warning, or safety related decals on the lift when unable to read or missing.
25. For Rolling Jack Safety Instructions, see Rolling Jack Installation, Operation and Maintenance Instructions in the Rolling Jack box.

3.1 SAFETY WARNING LABELS FOR 4-POST SURFACE MOUNTED ROLL-ON LIFTS

AUTOMOTIVE LIFT INSTITUTE (ALI)

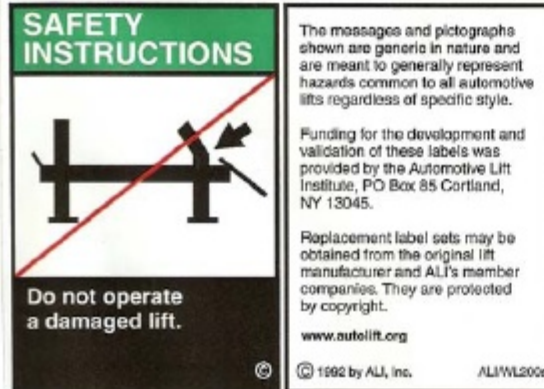


The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045.

Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright.

www.autolift.org ©1992 by ALI, Inc. ALI/WL200a



The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045.

Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright.

www.autolift.org ©1992 by ALI, Inc. ALI/WL200w

SAVE THESE INSTRUCTIONS

4. TABLE OF CONTENTS

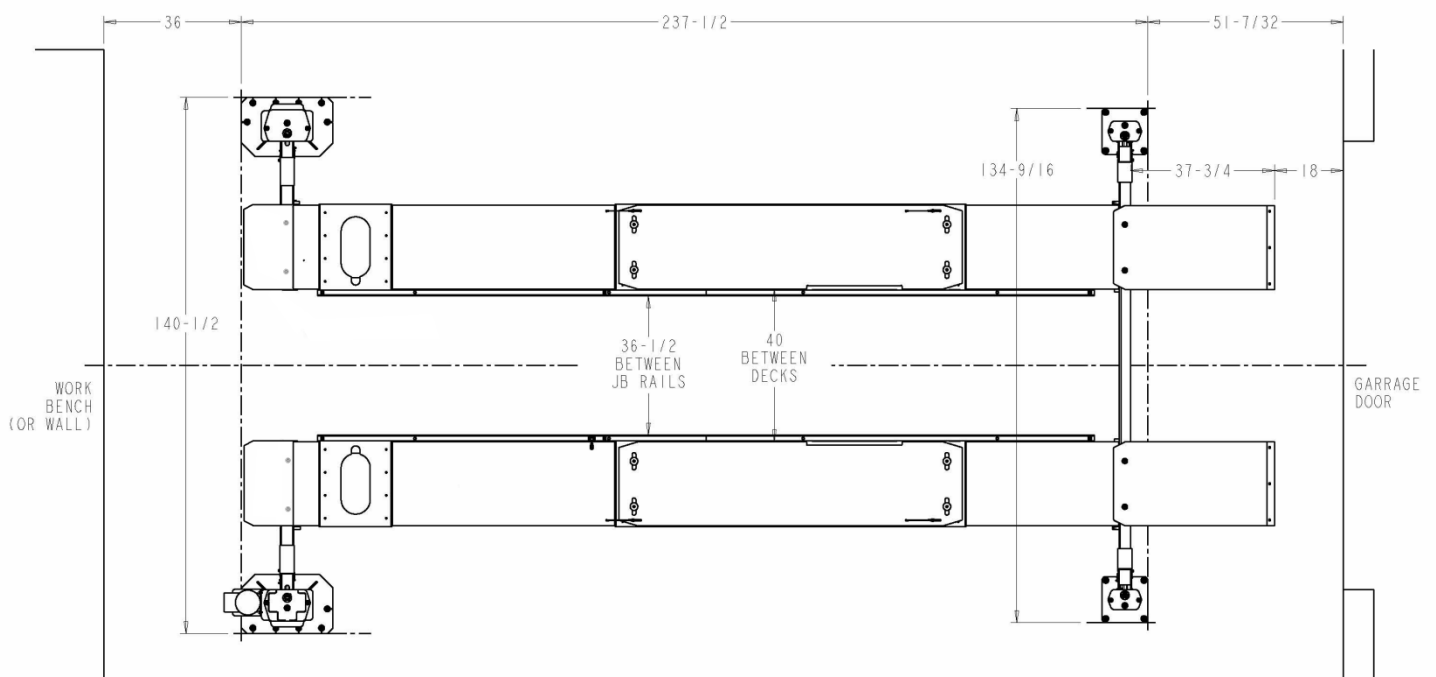
REPLACE WITH PDF TITLE PAGE.....	ERROR! BOOKMARK NOT DEFINED.
1. OWNER / EMPLOYER OBLIGATIONS.....	2
2. IMPORTANT SAFETY INSTRUCTIONS.....	3
2.1 SAFETY WARNING LABELS FOR 4-POST SURFACE MOUNTED ROLL-ON LIFTS.....	4
3. TABLE OF CONTENTS.....	5
4. GENERAL SPECIFICATIONS.....	7
5. TOOLS REQUIRED FOR INSTALLATION.....	8
6. PACKAGING CONTENTS.....	8
7. INSTALLATION INSTRUCTIONS.....	10
7.1 CHALK LINE LAYOUT	11
7.2 IDENTIFICATION OF MAIN LIFT COMPONENTS.....	11
7.3 FRONT CROSS-MEMBERS AND TOWER ASSEMBLIES	13
7.4 ANCHOR FRONT TOWERS	17
7.5 DECK ASSEMBLIES (FRONT)	18
7.6 REAR CROSS-MEMBER AND TOWER ASSEMBLIES.....	19
7.7 DECK ASSEMBLIES (REAR).....	23
7.8 AIR INSTALLATION	24
7.9 INSTALLATION OF HYDRAULIC HOSE.....	29
7.10 CABLE INSTALLATION	29
7.11 INSTALL SHEAVES. FINALIZE CABLE INSTALLATION.....	34
7.12 POWER PACK INSTALLATION	37
7.13 HYDRAULIC INSTALLATION	38
7.14 ELECTRICAL CONNECTIONS.....	38
7.15 DECK LEVELING PROCEDURE	39
7.16 ANCHOR REAR TOWERS.....	40
7.17 APPROACH RAMPS, WHEEL STOPS, PULLEY COVERS.....	43
8. OPERATING INSTRUCTIONS	44
9. RECOMMENDED INSPECTION AND MAINTENANCE.....	45
9.1 WIRE ROPE CONDITIONS GUIDE	45
9.2 DAILY	46
9.3 WEEKLY.....	47
9.4 MONTHLY.....	47
9.5 QUARTELY	48
9.6 SEMI-ANNUALLY	50
10. LIFT LOCKOUT / TAGOUT PROCEDURE	50
10.1 PURPOSE	50
10.2 RESPONSIBILITY	50
10.3 PREPARATION.....	50
10.4 SEQUENCE OF LOCKOUT PROCEDURE	50
10.5 RESTORING EQUIPMENT TO SERVICE.....	50
10.6 RULES FOR USING THE LOCKOUT PROCEDURE	51
11. PARTS LIST	52
11.1 PARTS LIST - LIFT ASSEMBLY	52
11.2 PARTS LIST – FRONT TOWER ASSEMBLY, POWER	54
11.3 PARTS LIST – REAR CROSS-MEMBER	55
11.4 PARTS LIST – FRONT CROSS-MEMBER, LS.....	57
11.5 PARTS LIST – FRONT CROSS-MEMBER, RS	59

11.6	PARTS LIST - DECK ASSEMBLY, LEFT SIDE	61
11.7	PARTS LIST - DECK ASSEMBLY, RIGHT SIDE	62
11.8	PARTS LIST - CYLINDER ASSEMBLY - P/N: 4-1348	63
11.9	PARTS LIST - HYDRAULIC CYLINDER - P/N: 4-1335	63
11.10	PARTS LIST - CABLE ROUTING	64
11.11	PARTS LIST - AIR AND HYDRAULICS	65
11.12	PARTS LIST - POWER PACK	67

5. GENERAL SPECIFICATIONS

Maximum Capacity	14,000 lb	6350 kg
Maximum Wheelbase – General Service	192”	4876 mm
Maximum Wheelbase – 2-Wheel Alignment	188”	4775 mm
Maximum Wheelbase – 4-Wheel Alignment	158”	4013 mm
Minimum Wheelbase – 4-Wheel Alignment	70”	1778 mm
Overall Length	269 ¼”	6839 mm
Overall Width	140 ½”	3569 mm
Lowered Runway Height	7”	178 mm
Maximum Lifting Height (to runway surface)	74”	1879 mm
Ramp approach angle (no shims)	10°	
Power Requirements	230V AC, 1PH., 20A, 60 Hz	
Shipping Weight	3,800 lb	1724 kg

6.



NOTE:

Dimensions in *Figure 1* and *Figure 2* are reference dimensions, It is critical to ensure that front cross-members are positioned during installation as defined in *Figure 14* at page 17.

Figure 1

TOOLS REQUIRED FOR INSTALLATION

ROTARY HAMMER DRILL
3/4" CONCRETE DRILL BIT
4' LEVEL
HAMMER (for anchor installation)
PRY BAR (for shim installation)
CHALK LINE (lift location)
TAPE MEASURE
ELECTRICAL TAPE
STEP LADDER (adjusting cables and/or safety ladder in posts)
SIDE CUTTERS (for cutting shipping straps)
4 WORK STANDS (set up)
STANDARD SOCKETS AND WRENCHES
ALLEN KEY SET
SCREWDRIVER SET
FLOOR JACK OR ENGINE HOIST
BOX CUTTER / SNIPS (to remove packaging)

7. PACKAGING CONTENTS

The lift is packaged to protect it from damage during shipping. The two deck assemblies and cross-members are packaged together with the accessory boxes strapped to them.

Main Structural Components:

- 1 - Left Side Deck Assembly (complete with hydraulic cylinder)
- 1 - Right Side Deck Assembly
- 1 - Front LS Cross-member Assembly (with air cylinder release locks)
- 1 - Front RS Cross-member Assembly (with air cylinder release locks)
- 1 - Rear Cross-member Assembly (with air cylinder release locks)

Accessory Box Contents:

Table 1: Accessory Box Contents

Hardware Kit (with separate packaging list)	1
Top plate, Front Towers	2
Top plate, rear towers	2
Cross-member sheave pin	4
Deck Sheave pin	5
Sheave Weldment/Assembly	11
Spacer, Sheave, 1-11/16" Lg.	2
Spacer, Sheave, 3-3/16"	1
Spacer, Sheave, 1/4" Lg.	1

Spacer, Sheave, 1" Lg.	3
Spacer, Sheave, 2-1/4" Lg.	2
Spacer, Sheave, 7/8" Lg.	8
Glide Block Spacer	4
Front Sheave Cover	2
Rear Sheave Cover	2
Plastic Glide Block, Swivel (rear cross-member)	4
Plastic Insert	4
Shim, 20GA, for Slider Blocks	8
Glide (Slider Block, front cross-member)	8
Front Left Cable, 391" Lg.	1
Rear Left Cable, 155-1/2" Lg.	1
Rear Right Cable, 217-1/2" Lg.	1
Front Right Cable, 433" Lg.	1
Hose Guard	1
Air valve and Air Filter Assembly	1
Hydraulic Hose Assembly (16ft. lg.)	1
Power Unit	1
Duty Cycle Decal	1
Headed pin (approach ramp, wheel stop)	8
Wheel Stop Weldment	2
Approach Ramp Assembly	2
Rubber Wheel Chock	2
Polytube, 1/4" OD, Black	45ft
Polytube, 3/8" OD, Black	16.67ft
Installation & Operation Manual	1
Lift it Right Manual "ALI"	1
Lift it Right Safety Tips	1
"ALI" Standards	1
"ALI" Quick Reference Guide	1

8. INSTALLATION INSTRUCTIONS

PLEASE TAKE THE TIME TO READ THESE INSTRUCTIONS COMPLETELY. A QUICK CHECK OF THE CONTENTS OF THE ACCESSORY BOX WOULD ALSO DECREASE THE INSTALLATION TIME.

- Gather the tools and materials required for the installation.
- Select the location best suited for your lift.

NOTE: In determining lift area check for the following:

- Ease of driving a vehicle on and off the lift.
- Overhead obstructions, low ceiling height, overhead doors, overhead heaters etc. Minimum ceiling clearance must be 12 ft. Lower ceiling heights may interfere with servicing some vehicles
- Floor obstructions, drains, uneven floor in lift area, work benches, electrical wiring in floor, etc.



ATTENTION! This lift is intended for indoor installation only. It is prohibited to install this product outdoors. Operating environment temperature range should be 41 – 104 °F (5 – 40 °C). Failure to adhere will result in decertification, loss of warranty, and possible damage to the equipment.

IMPORTANT: It is the user's responsibility to provide a satisfactory installation area for the lift. Lifts should only be installed on level concrete floors with a minimum thickness of five (5) inches or 130mm. Concrete must have a minimum strength of 4000 psi or 30 MPa and should be aged thirty (30) days prior to installation. Please consult the architect, contractor or engineer if doubt exists as to the strength and feasibility of the floor to enable proper lift installation and operation.

It is the user's responsibility to provide all wiring for electrical hook-up prior to installation and to insure that the electrical installation conforms to local building codes. Where required, it is the user's responsibility to provide an electrical isolation switch located in close proximity to the lift that will enable emergency stop capability and isolate electrical power from the lift for any servicing requirements.

Recommended clearance around the lift is 3 to 4 feet. Ensure clearance conforms to local building and fire codes. Recommended overhead clearance is a minimum twelve (12) foot ceiling providing 6 feet for the maximum lift height and 6 feet for the supported vehicle. For vehicles taller than 6 feet it is recommended that the user provides additional overhead clearance or a shut off mechanism to stop the lift from raising the vehicle too high.

An outline matching the dimensions shown in **Figure 2** will need to be marked on the floor. Refer to Figure 2 for outline dimensions. Refer to General Lift Specifications for overall lift dimensions.



DO NOT install the lift on asphalt or other unstable surface. Lift columns are supported only by anchors in floor.

INSTALLER: PLEASE RETURN THIS BOOKLET TO LIFT OWNER/OPERATOR AFTER COMPLETING INSTALLATION

8.1 CHALK LINE LAYOUT

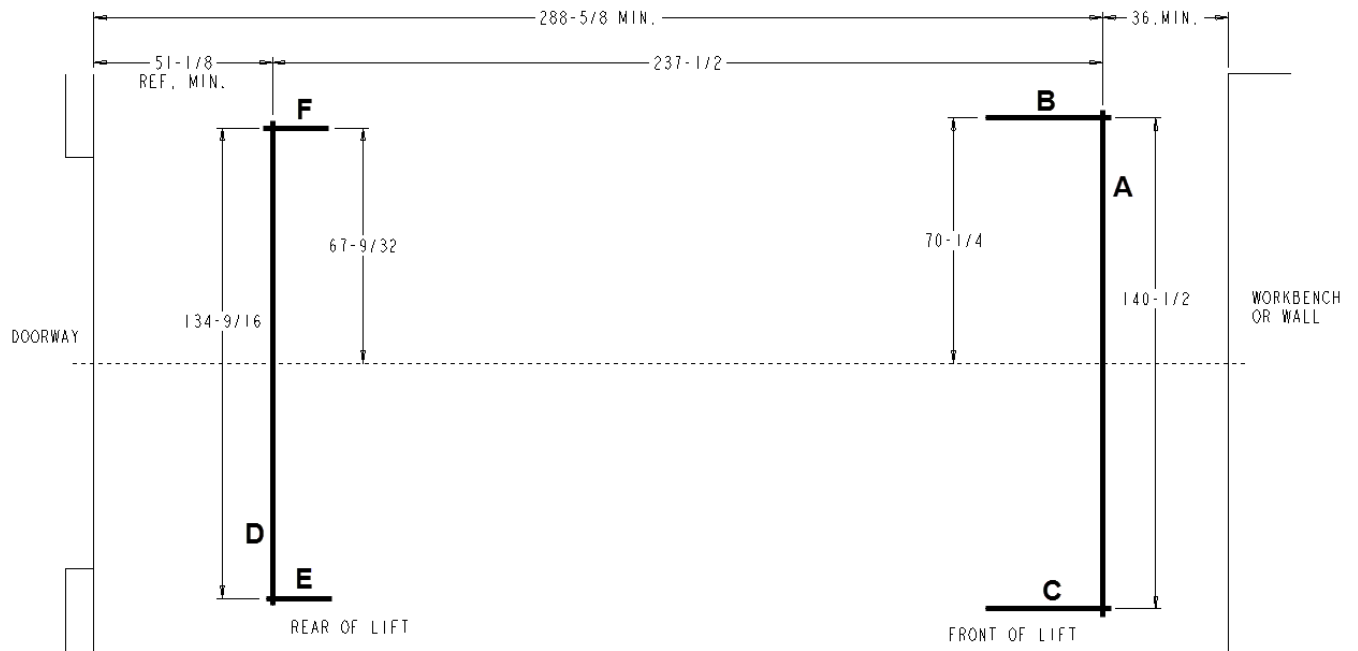


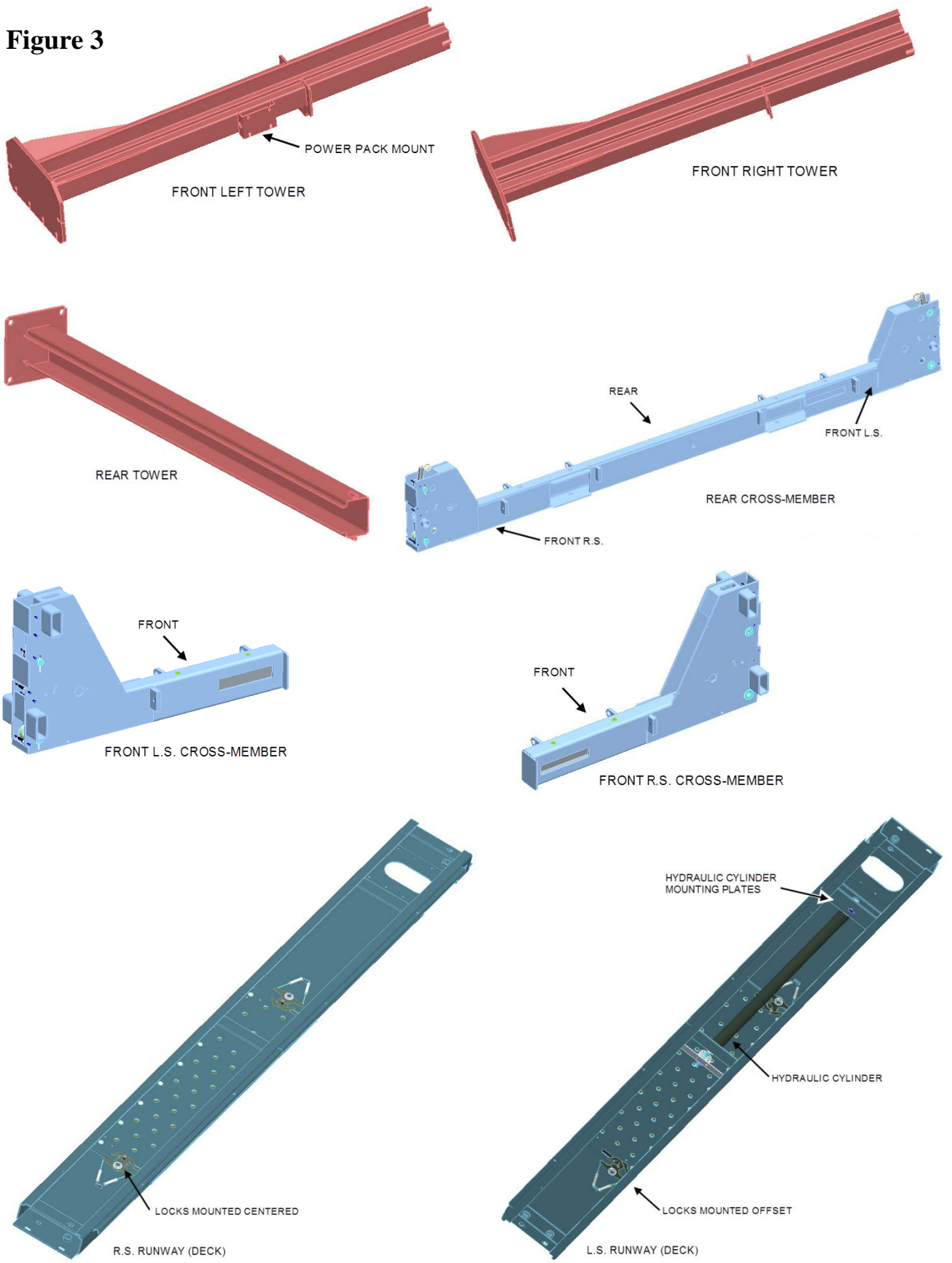
Figure 2

- **Refer to Figure 2.** Make a chalk line parallel to the doorway at least 288-5/8" from the doorway. This will be the location for the front edges of the front tower base plates. Call this line "A".
- Determine the center of the doorway and bay. Make a centerline to intersect with line "A".
- Make two chalk lines spaced 70-1/4" to the left and right side of the centerline (140-1/2" apart). Call these lines "B" and "C" respectively. These will be the locations of the outside edges of the front tower base plates.
- Make a chalk line spaced 237-1/2" to the back from line "A". Call this line "D". This is the position of the rear edges of the rear tower base plates.
- Make two chalk lines spaced 67-9/32" to the left and right side of the centerline (134-9/16" apart). Call these lines "E" and "F" respectively. These will be the locations of the outside edges of the rear tower base plates.

8.2 IDENTIFICATION OF MAIN LIFT COMPONENTS

- Identify and unpack major lift components (cables, columns, traverse beams) and place them where they belong (front left, front right etc.) See **Fig.3**.
- Place components in their approximate locations. Do not unwind cables at this point. Leave cables coiled, close to their respective towers.
- Place runways (decks) about 40" apart and about 3 ft behind line "A"

Figure 3



- Identify and place coiled cables as follows, close to their respective towers (Table 2):

CABLE P/N	LOCATION	LENGTH
2-2796	FRONT LEFT	391"
2-2797	REAR LEFT	155-1/2"
2-2798	REAR RIGHT	217-1/2"
2-2799	FRONT RIGHT	443"

Table 2: Cable part numbers

8.3 FRONT CROSS-MEMBERS AND TOWER ASSEMBLIES

- Lay front left tower on its back, with base plate close to its final position (see chalk lines) and top pointing to the rear of the lift and slightly to the left.
- Position left front cross-member to the end of front left tower, as shown in **Figure 4**.
- Insert safety plate (ladder) into front left cross-member, non-stud end first, as shown in **Fig.4** and **Fig.5** Insert safety ladder until main safety latch (dog) engages into 4th safety cutout. **See Fig. 5**

NOTE: When installing the Safety Ladders, ensure they pass in-between the guide rollers as shown.

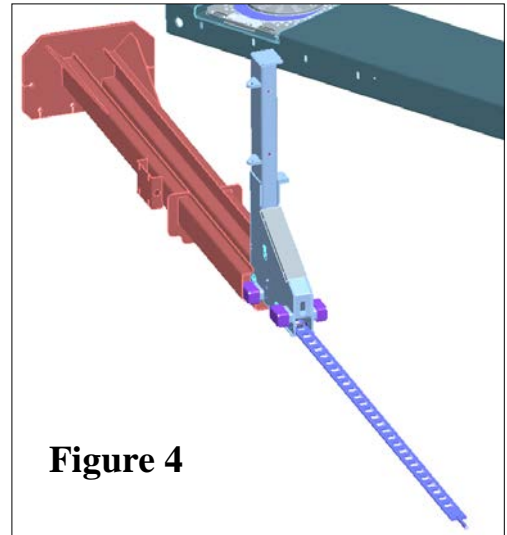


Figure 4

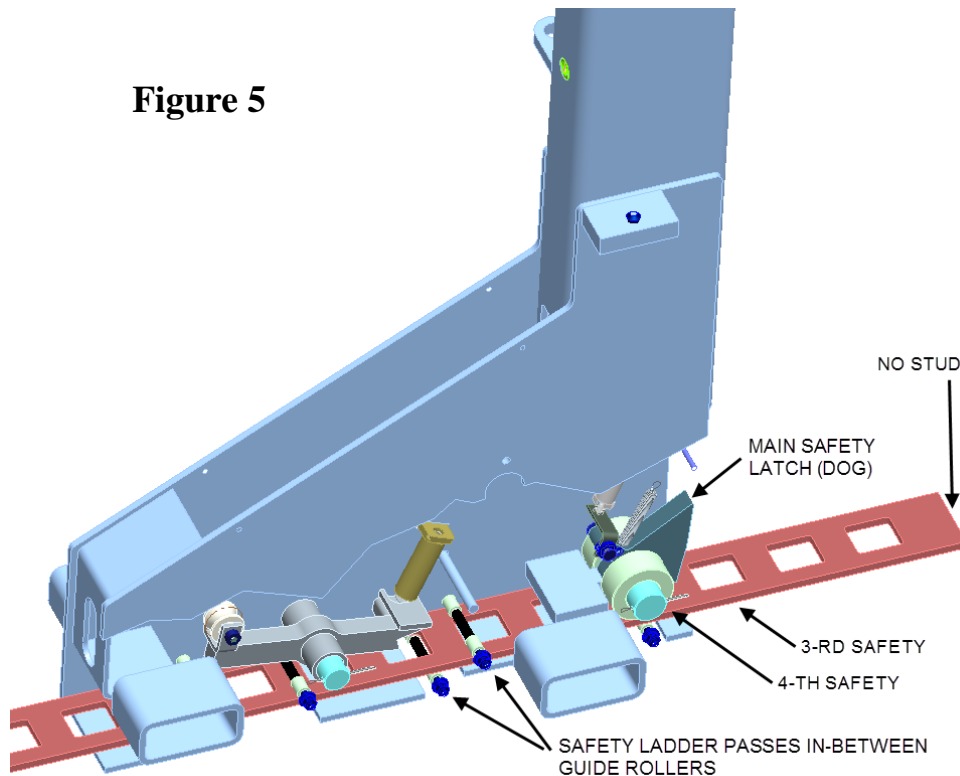


Figure 5

- Assemble slider blocks to front cross-member (See **Figure 6**) with a shim under each block (additional shims may be required)

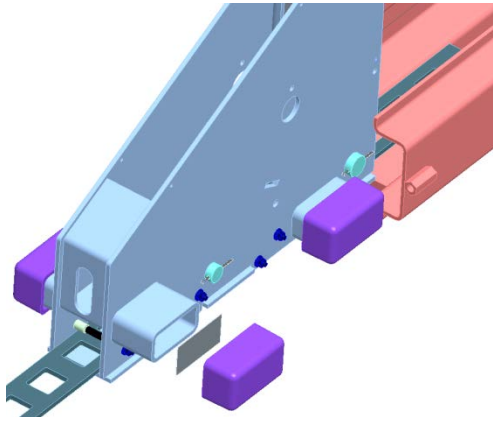


Figure 6

- Slide front cross-member (with safety ladder mounted) into front tower, until safety ladder has approximately 2-1/2" clearance to tower base plate (**Figure.7**).

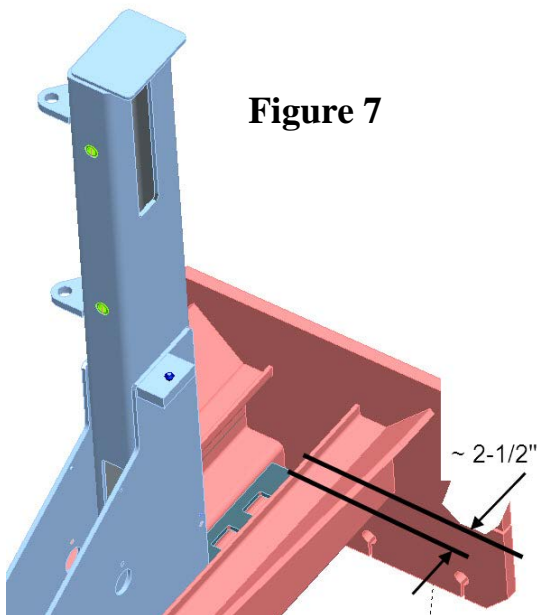


Figure 7

- Retrieve front tower top plate (**Figure 8**) in accessory box. Retrieve 2 flat washers (1/2" ID), 2 lock washers (1/2" ID), 2 HHCS (1/2 UNC x 1-3/4 LG), 2 SAE flat washers (3/4" ID), 4 hex nuts (5/8 UNC) and 1 spacer from the hardware kit.
- Assemble top plate to front tower and safety ladder to top plate as shown (**Figure 9**)

Figure 8

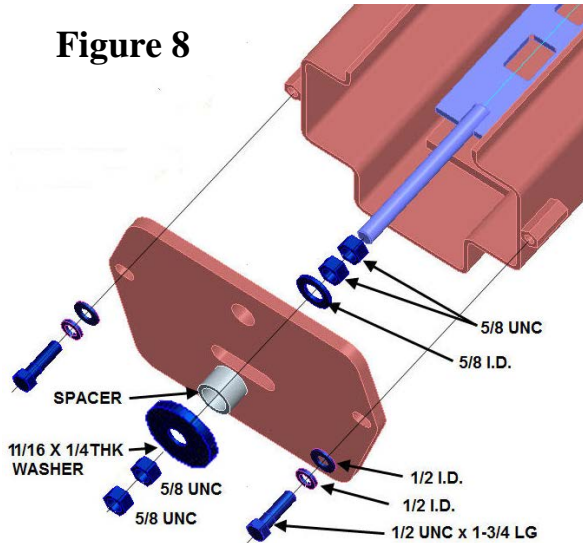
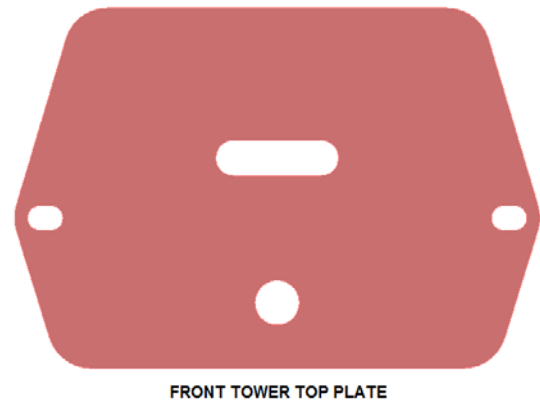
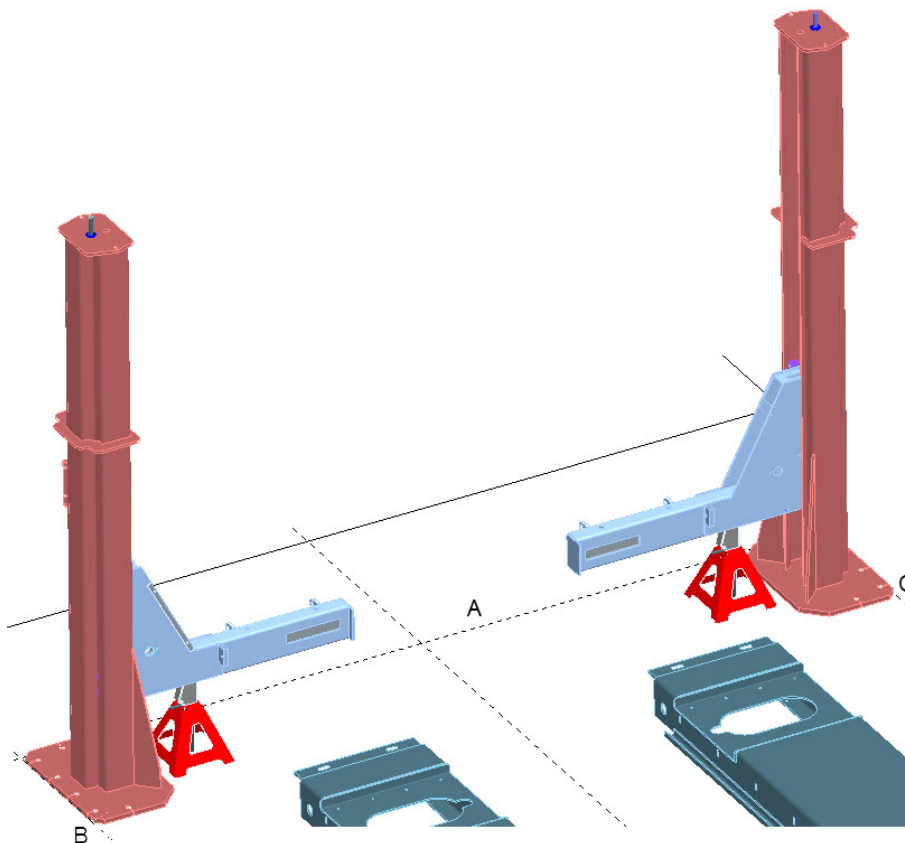


Figure 9



- Stand up tower, move into position at the front of the lift (see Fig.10), and line up with lines “A” and “B”. **Handle tower and front cross-member only by the tower.** As the cross-member is only restrained to the tower by safety locks, care must be taken when handling tower with cross-member.
- Support front cross-member with a jack stand as shown (Fig.10). Stand should be placed close to tower.
- Repeat above steps for front right tower and right front cross-member. Align to lines “A” and “C” (See Figure 10)

Figure 10



- Use a 4' level, to level the posts vertically (shim if necessary) as shown in **Figure 11** and **Figure 12**.



Figure 11

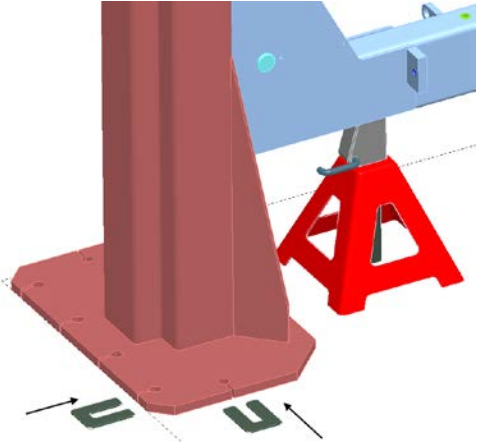


Figure 12

⚠ WARNING IF THE TOWERS ARE LEANING INTO THE LIFT, THE CROSS MEMBERS CAN BECOME WEDGED INTO THE TOWERS AS THE LIFT RAISES.

- Level columns so that they are plumb to each other, making sure the distance between deck contact surfaces of the runway stoppers (surfaces “A” and “B”) is 40” (**Fig.13**).

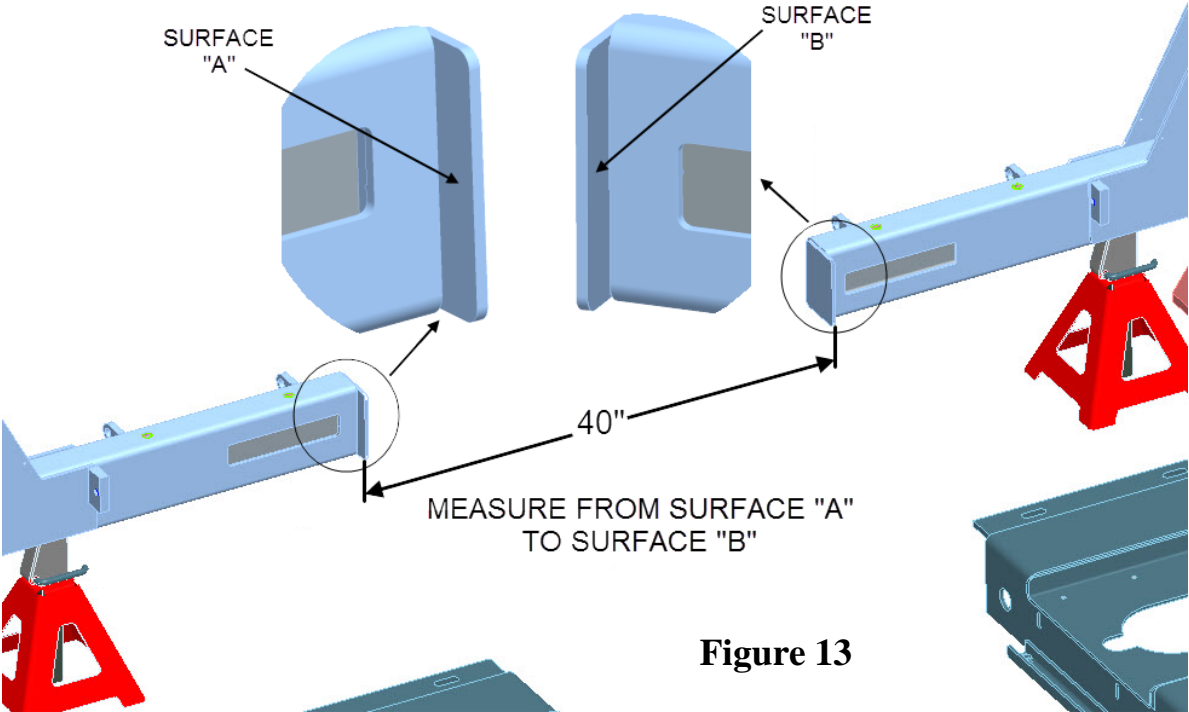


Figure 13

- Use a straight edge (string line) along front side of beams along with 1/8" column shim provided and ensure equal spacing throughout entire area of both beams (**Fig.14**).

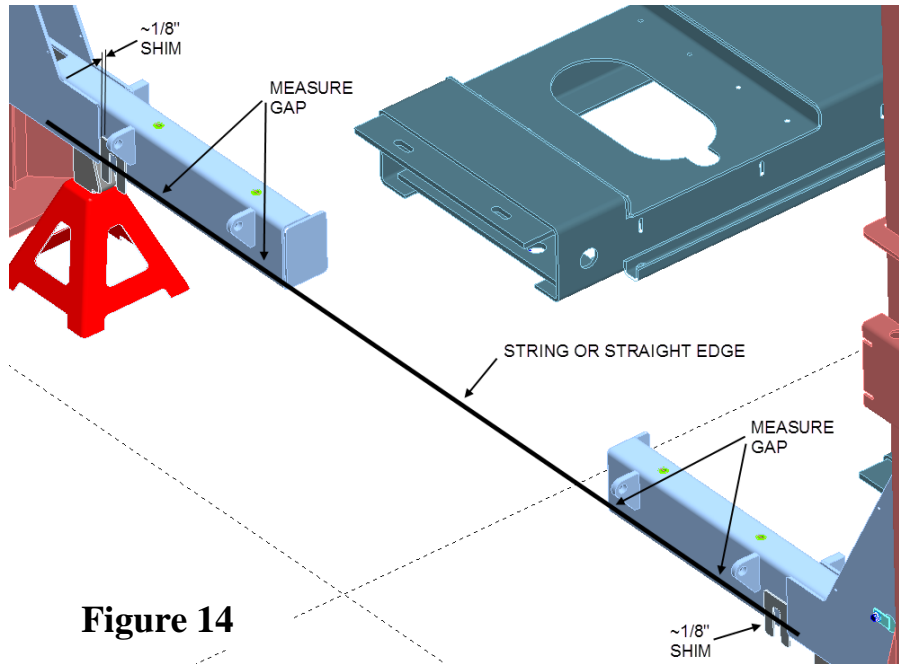


Figure 14

8.4 ANCHOR FRONT TOWERS

- Prior to installing anchors, assemble the nut and washer onto anchors. A minimum of six threads must be visible below the surface of the nut. Refer to the **Figure 15** while reading through the following instructions.

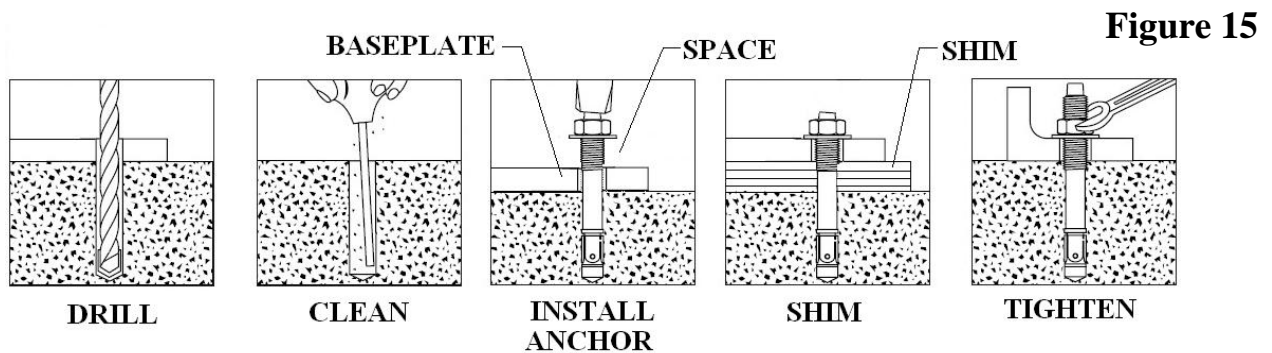


Figure 15

- If shop floor is not level, determine which front tower sits on higher floor
- Using a 3/4" concrete drill bit and rotary hammer drill, drill 3/4" holes for the anchor bolts on the high side column. Drill completely through the Concrete floor (**Fig.16**). In case longer anchors are required, supplied anchors can be hammered through concrete.

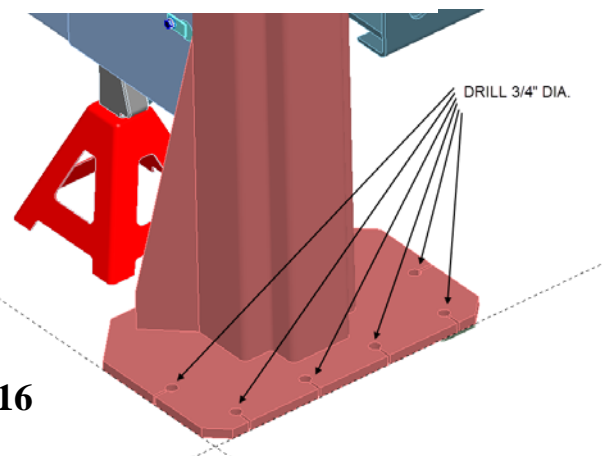


Figure 16

- Clean out the drilling dust from the holes and hammer in the anchor bolts until they make contact with the base plate. Hand-tighten all anchor bolts.
- Check that the column is level front to rear and side to side. Adjust shims as required.
- If excessive shimming (greater than 5/16") is required, grout or additional support is required under the towers.
- Torque all anchor bolts to 150 ft-lbs. (203 Nm), continually checking that the column is level as you proceed.

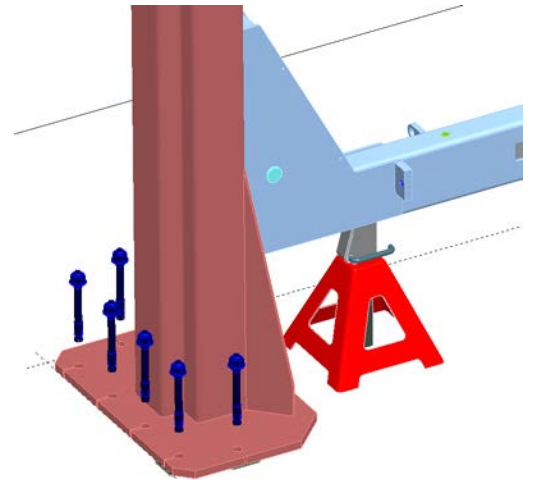
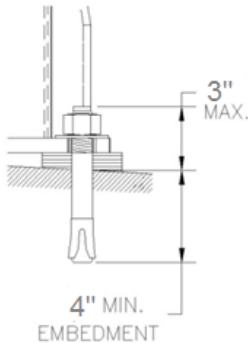


Figure 17



NOTE: The 3/4" x 7" lg. wedge anchor bolts supplied must have a minimum embedment of 4" into the concrete floor.

NOTE: If anchors do not tighten to required torque, OR project more than 3" above the concrete surface, the concrete under the towers may not be sufficient and need to be replaced by an appropriate concrete pad.

NOTE: In cases where the floor is extremely out of level, the mechanical safety latches may not engage on the same lock

WARNING DO NOT use more than 1/2" (13mm) of shims. Anchor bolts supplied allow for a maximum of 1/2" (13mm) of shim. If more than 1/2" (13mm) of shims are required, DO NOT proceed with installation and contact Product Manufacturer / Supplier for further details.

NOTE: Refer to Fig.1 and Fig.2 to ensure that the column is still in the proper position.

- Repeat procedure for the other front tower.

8.5 DECK ASSEMBLIES (FRONT)

- Raise left side deck and place the front end plate of deck rests on top of front cross-member. Ensure the mounting slots in deck end plate line up with (threaded) mounting holes in cross-member (**Fig.18**). Support rear end on a jack stands (**Fig.19**).
- Bolt front end to cross-member tube, using 1/2"-13 HHCS x 1-1/2" long bolts, 1/2" washers and 1/2" lock washers found in the hardware kit. **Do not tighten bolts.**

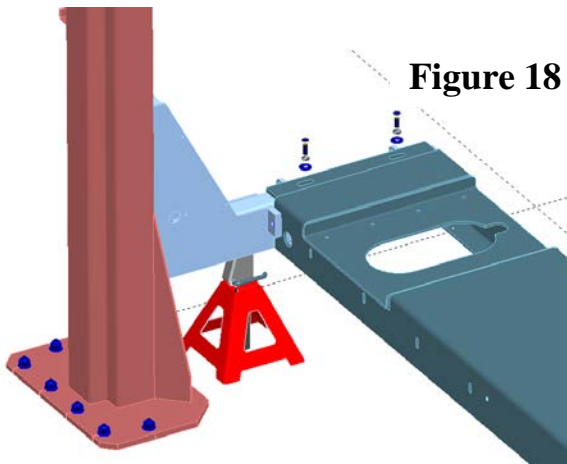


Figure 18

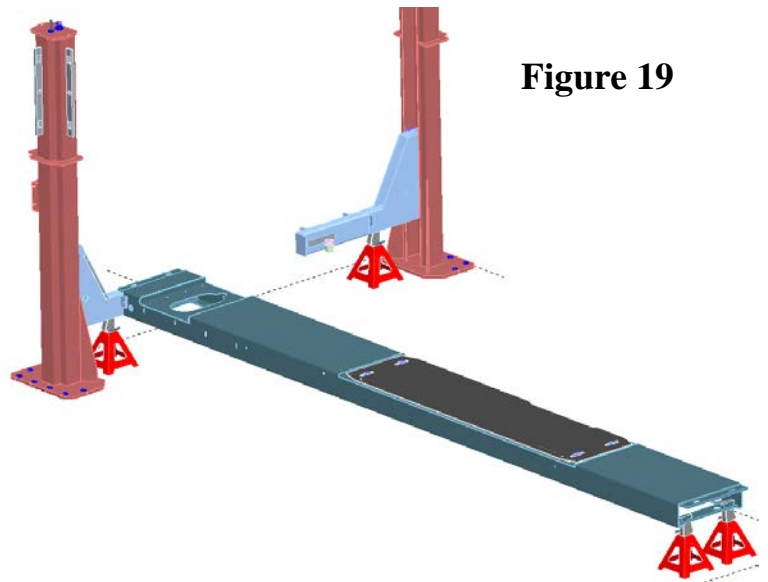


Figure 19

- Repeat procedure for the right side deck.

8.6 REAR CROSS-MEMBER AND TOWER ASSEMBLIES

- Remove rear cross-member from packaging and place it with cut-outs pointing up and the ends close to the rear towers tops, lying on the floor.
- Depending on the space available on the shop floor, rear towers and cross-members will be laid out in one of the 2 following situations:

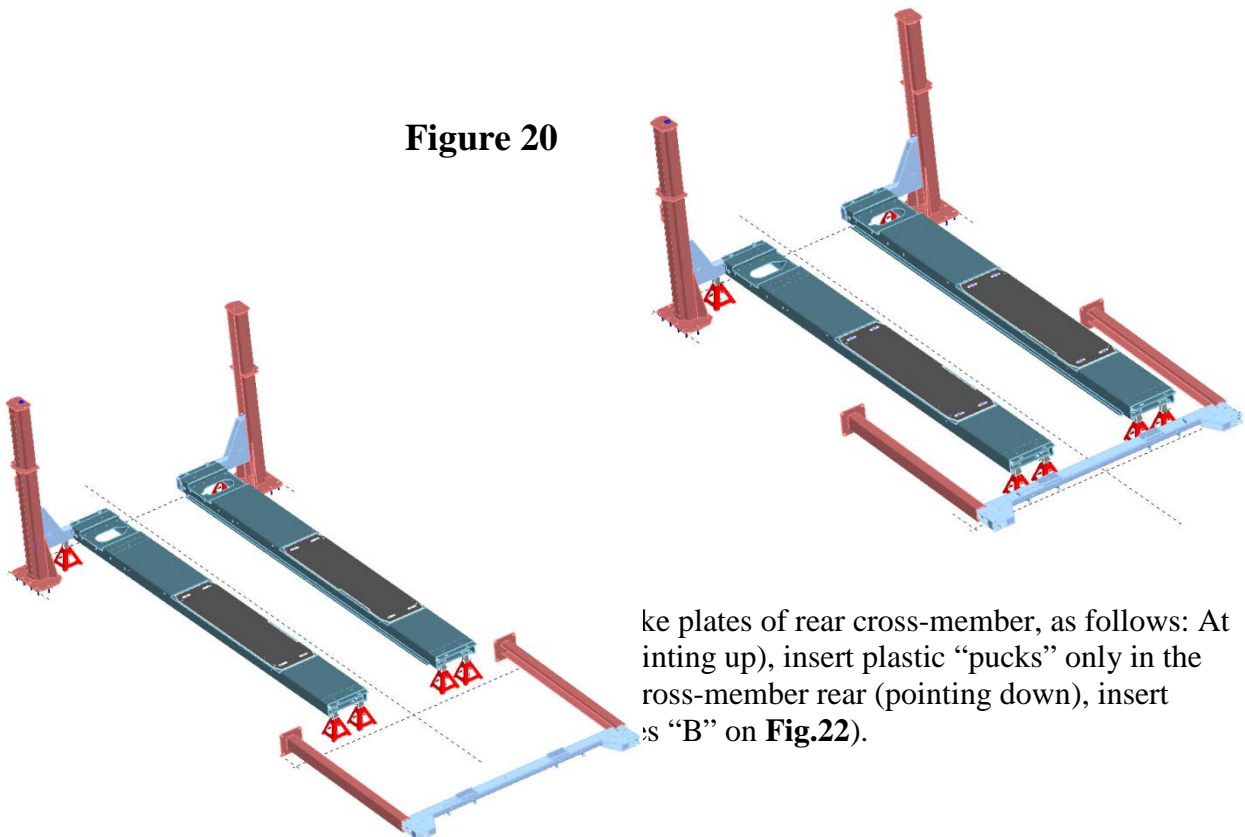


Figure 20

- ...ke plates of rear cross-member, as follows: At
...inting up), insert plastic “pucks” only in the
...ross-member rear (pointing down), insert
...s “B” on Fig.22).

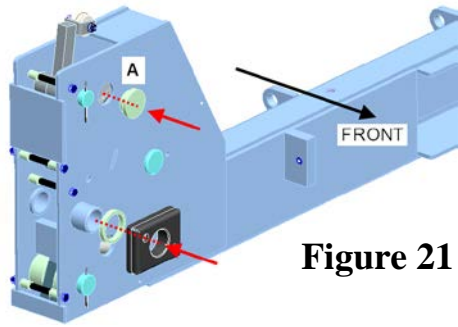


Figure 21

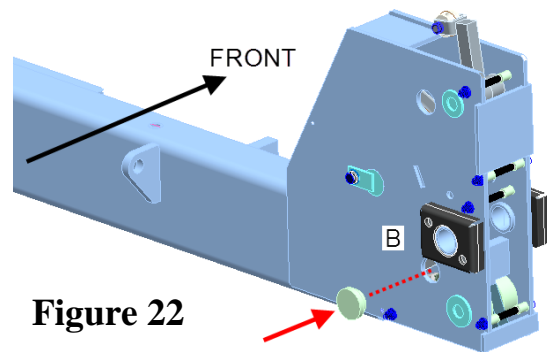


Figure 22

- Insert safety plates (ladders) into rear cross-member, non-stud end first, as shown in **Fig.23**. Insert safety ladder until main safety latch (dog) engages into 4th safety cutout. See **Fig.23**.

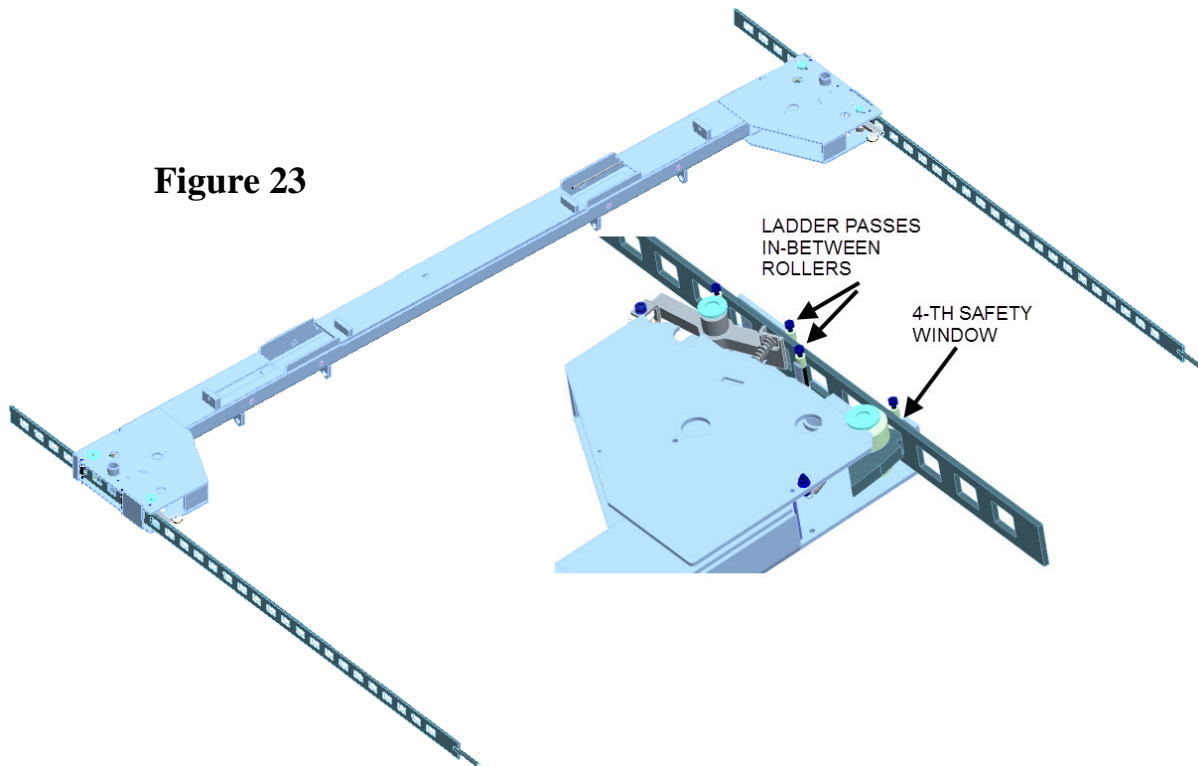


Figure 23

- Partially insert rear cross-member into rear towers, up to the slider blocks. Ensure the wear pads stay in place during insertion.
- Assemble slider spacers and sliders into the rear cross-member (**Fig.24**).

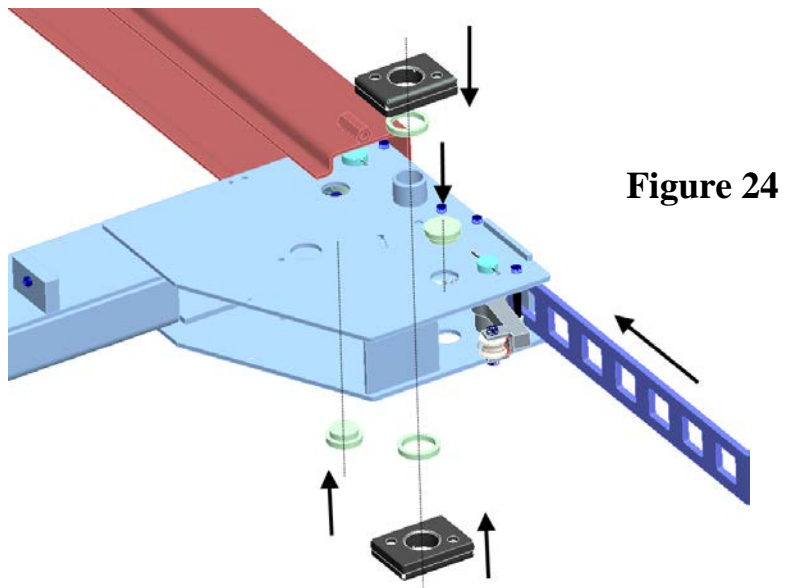


Figure 24

- Depending on the layout chosen for rear towers and cross-member, insert the cross-member in one of two ways:
 - Keep towers fixed on the floor and push rear cross-member toward the lift (**Fig.25**).
 - Push towers toward the back and gradually lift cross-member (**Fig.26**).

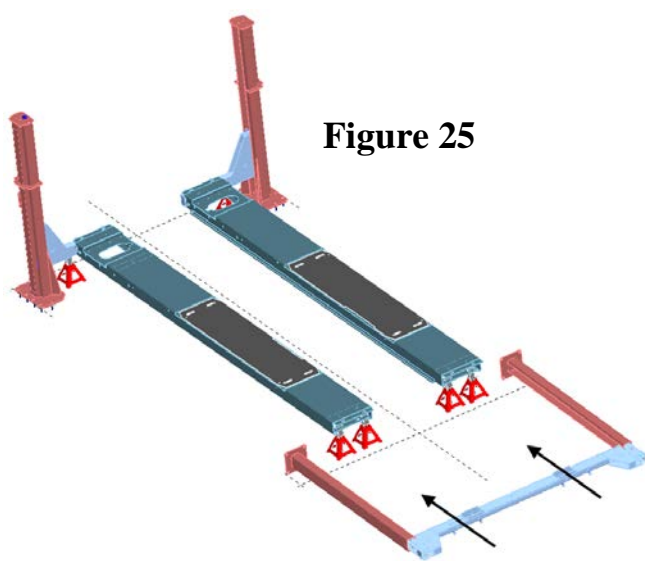


Figure 25

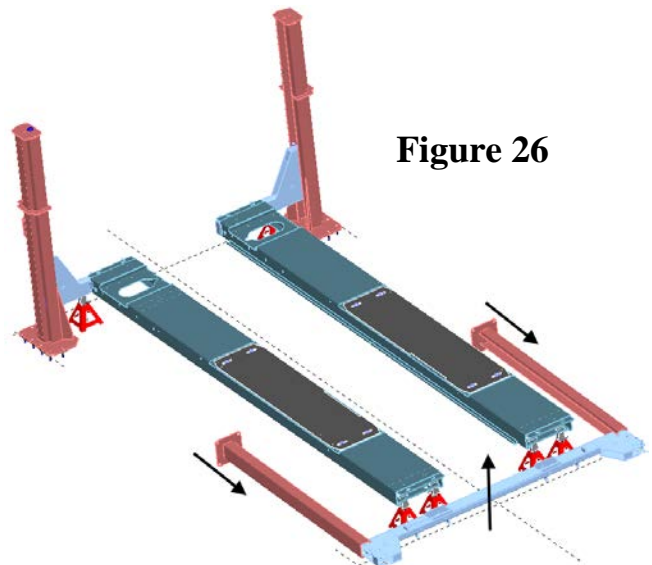


Figure 26

- Slide rear cross-member (with safety ladders mounted in) into rear towers, until safety ladder has approximately 2-1/2” clearance to tower base plate (**Fig.27-a**).
- Note orientation of slider block inside rear tower (**Fig.27-b**).

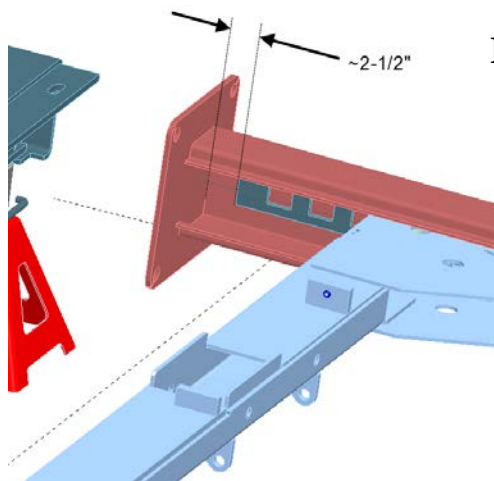


Figure 27-a

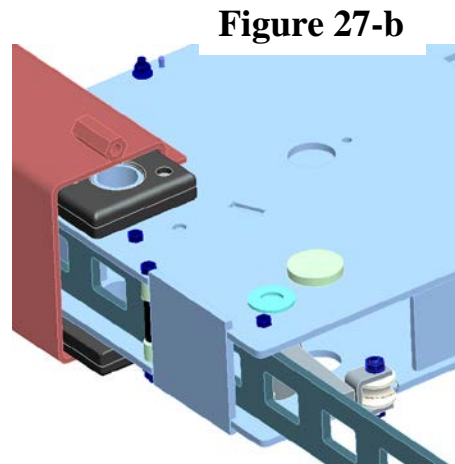


Figure 27-b

- Retrieve rear tower top plate in accessory box. Retrieve 2 flat washers (1/2" ID), 2 lock washers (1/2" ID), 2 HHCS (1/2 UNC x 1-3/4 LG), 1 SAE flat washers (5/8" ID), 4 hex nuts (5/8 UNC), 1 Ø11/16" x Ø2" x 1/4" THK washer and 1 Ø5/8" x Ø3/4" x 19/32" LG spacer from the hardware kit.
- Assemble top plate to rear tower and safety ladder to top plate as shown (**Fig.28**)
- Repeat operation for second rear tower.

Note: Front tower shown in illustration as assembly is the same.

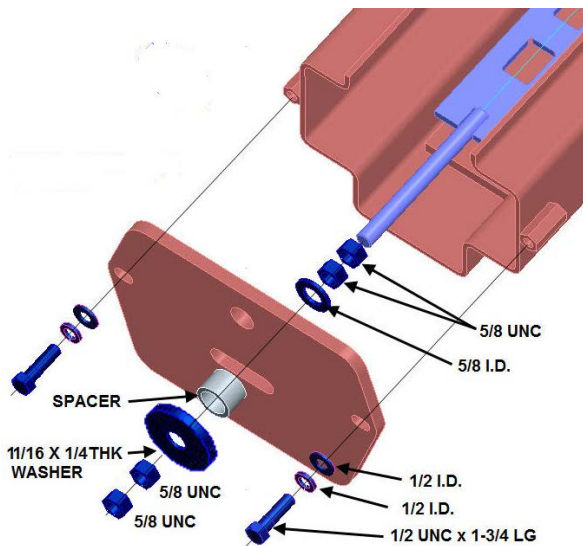
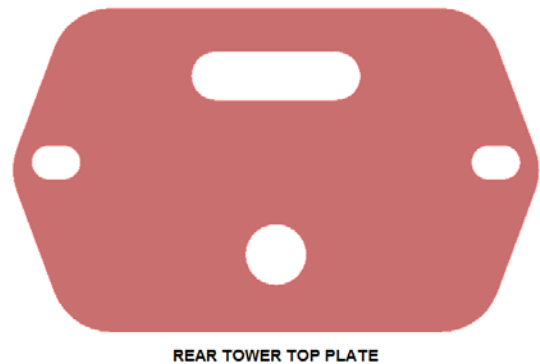


Figure 28



- Stand up towers, move into position at the back of the lift (see **Fig.2** and **Fig.29**), and line up with lines "F" and "D". As the cross-member is only restrained to the tower by safety locks, care must be taken when handling tower with cross-member.
- Support rear cross-member with a jack stand as shown (**Fig.29**). Stand should be placed close to tower.
- If sub-assembly consisting of rear towers and rear cross-members are unstable, provide additional support for both towers

8.7 DECK ASSEMBLIES (REAR)

- Adjust height of decks or rear cross-member until end plates of decks rest on top of rear cross-member and mounting slots in deck end plate line up with (threaded) mounting holes in cross-member.

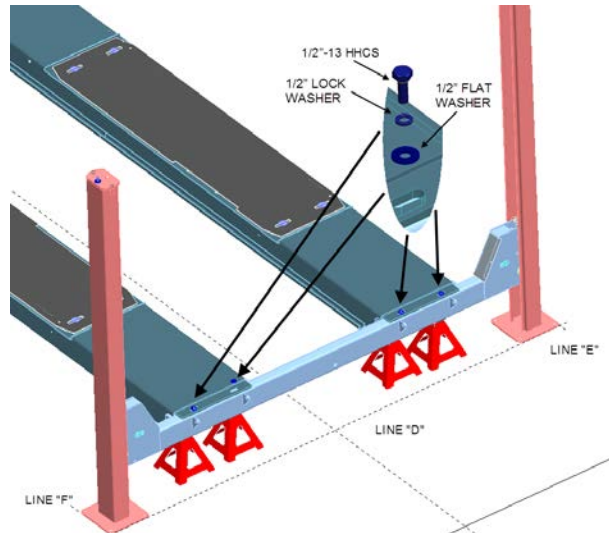


Figure 29

- Bolt deck end to cross-member tube, using 1/2"-13 HHCS x 1-1/2" long bolts, 1/2" washers and 1/2" lock washers found in the hardware kit (**Fig.29**). **Do not tighten bolts.**
- Transfer jack stands from under the decks to under rear cross-member (**Fig.30**).

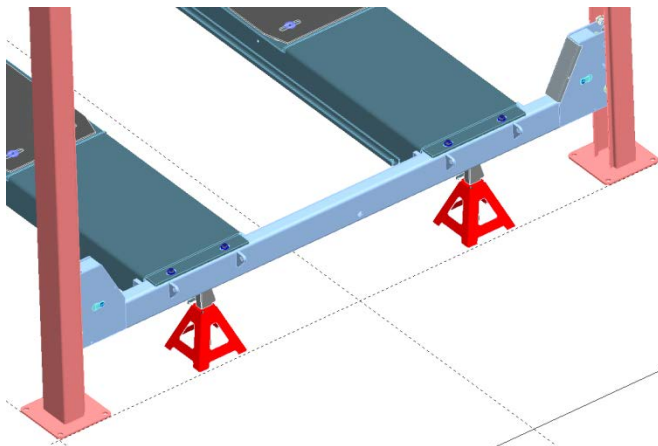


Figure 30

- Retrieve 90° elbow 1/4" NPT to 3/8" push-lock from the hardware kit. Retrieve the 3/4" terminal bolt, and the 1/4" brass T-fitting from the hardware kit. Assemble on the left side deck as shown below. The 2 output ports of the T-fitting should be approximately parallel after installation with the jacking beam rail (**Fig.31**).

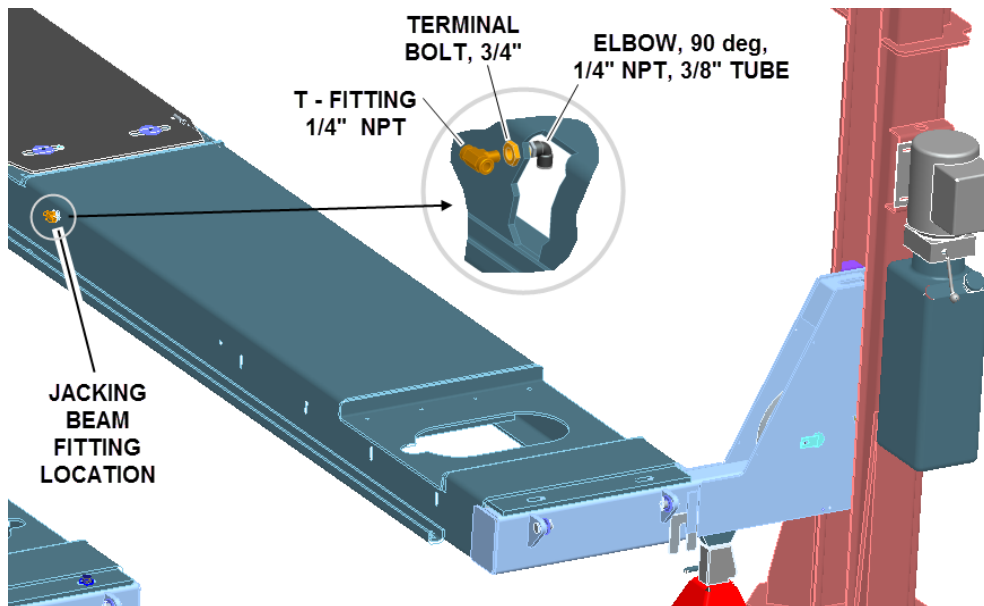


Figure 31

8.8 AIR INSTALLATION

NOTE: Please refer to the air and hydraulics parts list, pages 66, 67, **Fig.80**.

- Install the air valve and filter assembly (found in the accessory box) to the mounting bracket on the power post. Orient air valve assembly as shown in **Fig.32**. For assembly, pull off the pushbutton and unscrew the plastic nut. Slide the assembly into the mounting bracket and re-fasten the plastic nut so that the assembly is attached to the top hole. Replace the pushbutton by pressing it firmly back onto the air valve and filter assembly.

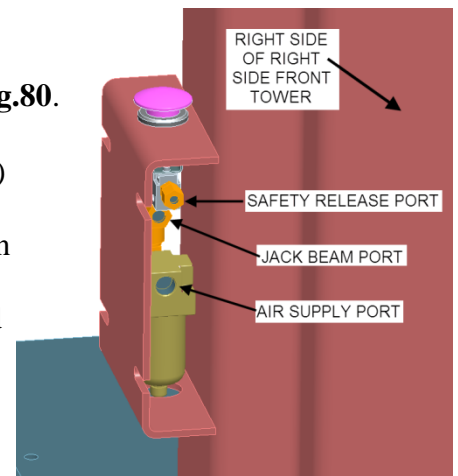


Figure 32

NOTE: WHEN CUTTING POLYTUBE BE SURE TO MAKE SQUARE CUTS.
FAILURE TO DO SO MAY RESULT IN LEAKS AT THE AIR CONNECTIONS.

8.8.1 SAFETY RELEASE AIR LINES

- Retrieve from the accessory box the 5 ft hose guard and insert with one end into the $\text{Ø}1\text{-}3/4$ " hole in the front left side of the left side deck.
- Cut a 5 ft long piece of polytube (1/4" OD) from the 45 ft coil provided in the accessory box. Attach one end to the 1/8 NPT to 1/4" adapter fitting on the valve assembly (safety release port, see **Fig.32**). Run the other end into the left side deck, thru the cable guard, inside front of LS deck, thru cable tie "A", and connect to the T-fitting found in the window of the front left cross-member (see Fig.33).

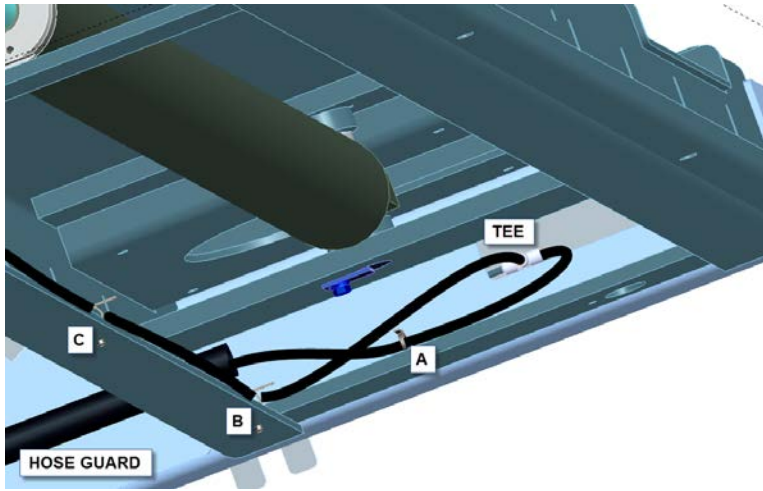


Figure 33

- Cut a 20 ft long piece of 1/4" dia. polytube from same coil. Connect one end to the T-fitting mentioned above (on the front left cross-member). Run the other end above and along the left lower lip of the left side deck, thru cable ties: "B", "C", "D", then up to cable tie "E" on rear alignment pan (**Fig.34**).

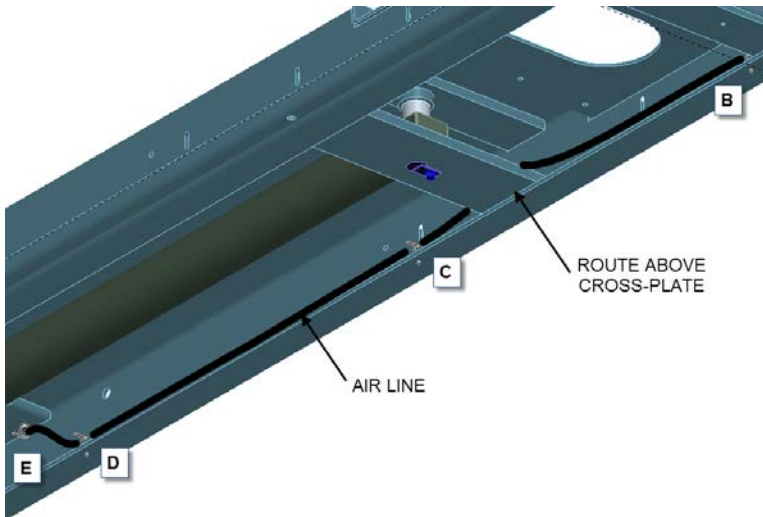


Figure 34

- Continue routing air line through ties: "F", "G", "H", "I" on rear alignment pan (**Fig.35**).

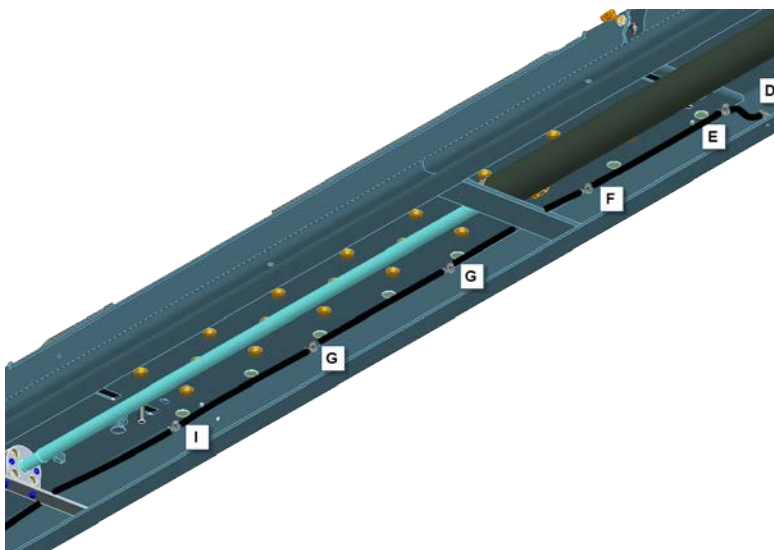


Figure 35

- Route air line thru tie “J” on deck and connect to the T-fitting on the left side of the rear cross-member. If necessary, reach with the hand thru window “W” in rear cross-member to hold T-fitting while inserting air line. (**Fig.36**). Ensure that the air line runs above the cross-deck stiffener bars.

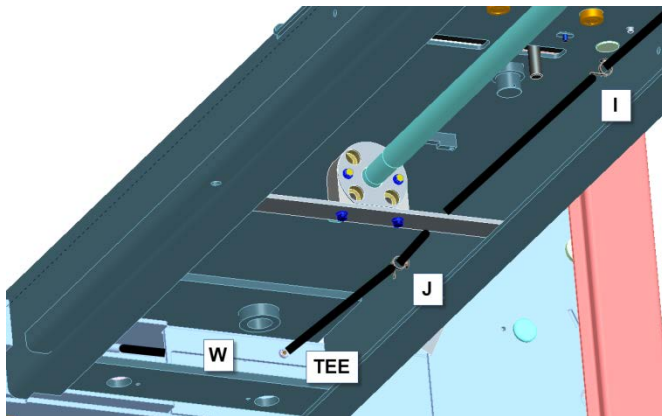


Figure 36

- Retrieve the remaining 20 ft long piece of 1/4" dia. polytube. Connect one end to the T-fitting on the right side of the rear cross-member. Run the air line through ties “K”, “L” on the left side of the right deck. (**Fig.37**). toward the front of the lift. Ensure that the air line runs above the cross-deck stiffener bars.

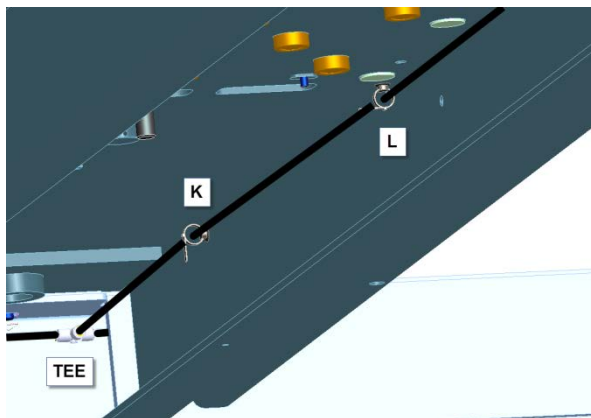


Figure 37

- Continue routing through ties “M”, “N”, “O”, “P” on the rear right alignment pan (**Fig.38**) and ties “Q”, “R”, “S” on the lower left lip of the right side deck (**Fig.39**).
- Connect the free end to the union fitting “U” on the front left cross-member. (**Fig.39**).

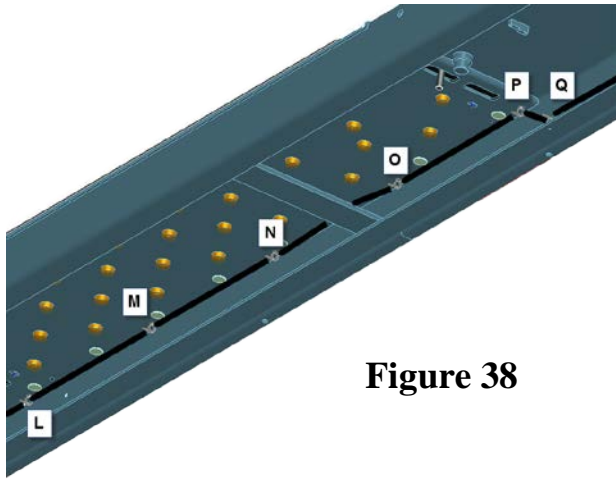


Figure 38

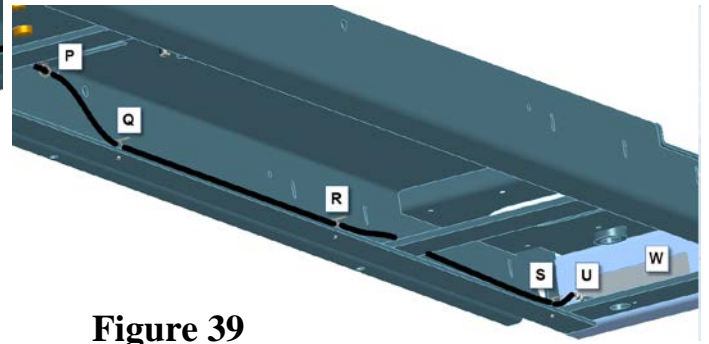


Figure 39

- Fasten air line to deck with “tree mount” cable ties, using the holes provided in the deck skin.

NOTE: AN (OPTIONAL) JACK BEAM AIR KIT SHOULD BE USED TO MAKE THE NECESSARY CONNECTIONS BETWEEN THE AIR SUPPLY AND THE JACK BEAMS.

- Hook up an air supply to the inlet of the air filter on the air valve and filter assembly located on the front left post (**Fig.32**). Set the air regulator to 90-100 psi if shop air has higher pressure.
- Check for air leaks.
- Check the operation of the air cylinder locks by pressing the push-button on the air valve and Filter Assembly on the front left post. This should cause the safety locks to be retracted, releasing the lift from the safety racks.

NOTE: MAKE CERTAIN THAT THE MECHANICAL SAFETY LOCKS ARE WORKING PROPERLY.

8.8.2 JACKING BEAM AIR LINE

- Retrieve the (200 in long) 3/8 in dia. air line from the accessory box. Connect one end to the 3/8” tube port on the valve assembly before shut-off valve (**Fig.32**). Run the air line along the 1/4” air line previously installed, thru the hose guard, down to the front end of the left side deck. Run the 3/8” air line through ties “B” and “C” on the lower left lip of the left side deck. Do not route through tie “D”; instead, pass 3/8” air line over the hydraulic cylinder (see **Fig. 40**) inside the left side deck, and to the push-in 3/8” cable fitting.

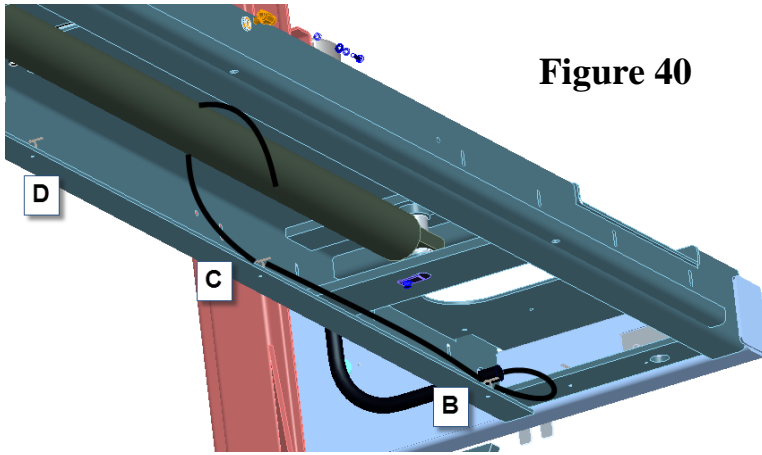


Figure 40

- Install 1/4" NPTF Tee fitting on the outside of the deck, into the terminal bolt, as shown in **Fig.41**. At the end of installation, ensure that the branches of the Tee are approximately horizontal

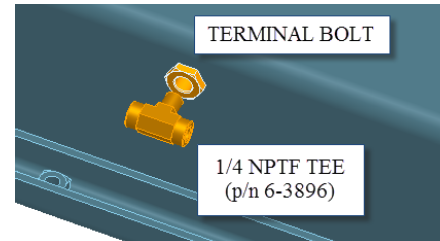


Figure 41

- Install 1/4" NPTM to 3/8" tube push-in elbow on the inside of the deck, into the terminal bolt, as shown in **Fig.42**.

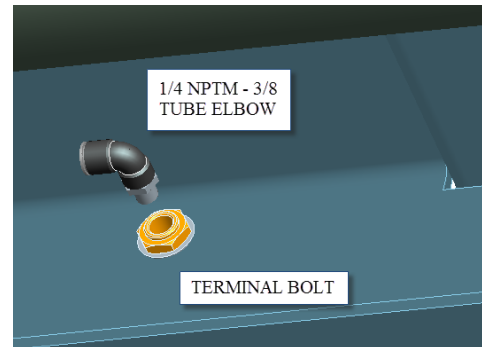


Figure 42

- Route 3/8" tube to the push-in elbow, as shown in **Fig.43**.

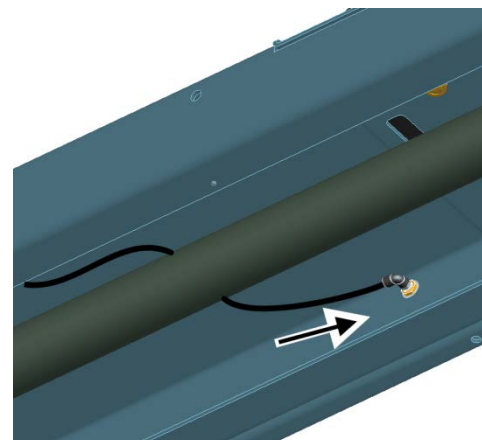


Figure 43

8.9 INSTALLATION OF HYDRAULIC HOSE

- Retrieve the hydraulic hose from the accessory box. Insert any end of the hydraulic hose through the hose guard, into the front end of the left side deck.
- Route hydraulic hose through ties “B”, “C”, “D”, “E” and fasten to the flow control “X” on the hydraulic cylinder (**Fig.44**)
- **Do not over-tighten hydraulic fittings**

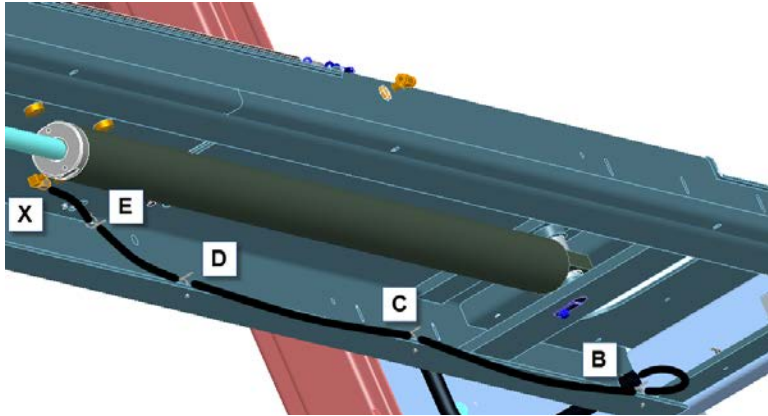


Figure 44

8.10 CABLE INSTALLATION

REFER TO [Fig.56-a] FOR GENERAL CABLE ROUTING DIAGRAM.

8.10.1 Routing Front Left Cable

- Anchor threaded end of the front left cable into the top plate of the front left tower (**Fig.45**). Use one 7/8” ID flat washer and two 7/8-14 UNF hex nuts (see hardware kit).

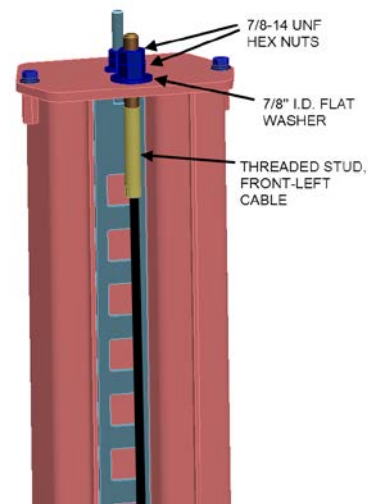


Figure 45

- Continue routing the cable, non-threaded sleeve first, through the slot in the top stiffener plate, through the front left cross-member (**Fig.46**). Pull sleeve end of the cable through the cross-member opening under the front of the left side runway (**Fig.47**)

NOTE: It is very important to route the cable inside a cross-member **IN FRONT** of the cable retainer shaft (see detail in **Fig.46**). Routing the cable behind the cable retainer shaft will not allow the cable to sit in the pulley groove and will cause damage to the lift.

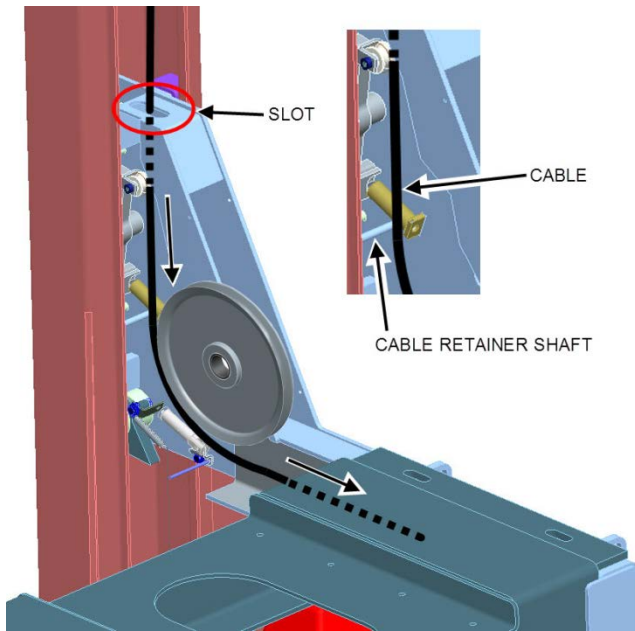


Figure 46

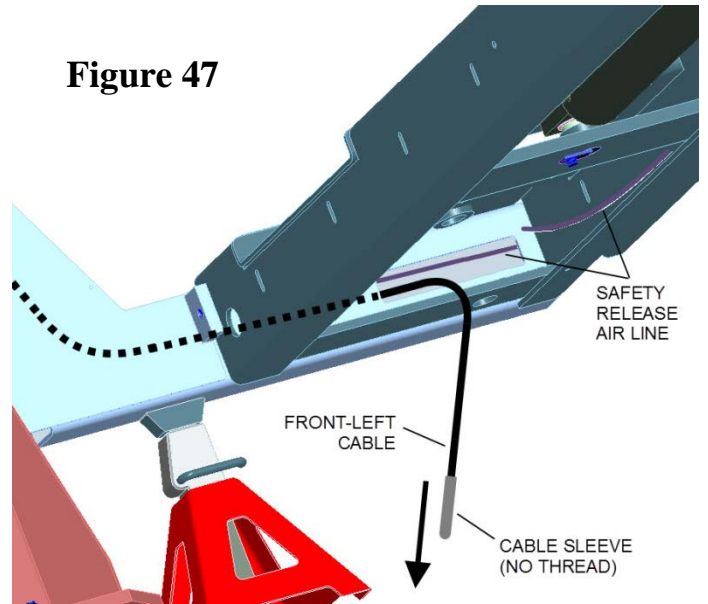


Figure 47

NOTE: While running the cables through the cross-members, be careful not to run them around the polytube lines. If this occurs, the lines could be pulled out of the air cylinders when the lift powers up or the polytubes could be subjected to excessive wear against the cables.

- At this point it is recommended to reach inside the opening of the front left cross-member, retrieve and pull out the end of the safety release air line. Ensure that air line is not entangled in other components or with the cable. Do not pull excessively, as the air line may be pulled out of the safety release cylinder (**Fig.47**).

8.10.2 Routing Rear Left Cable

- Anchor threaded end of the rear left cable into the top plate of the rear left tower (**Fig.48**). Use one 7/8" ID flat washer and two 7/8-14 UNF hex nuts (see hardware kit).

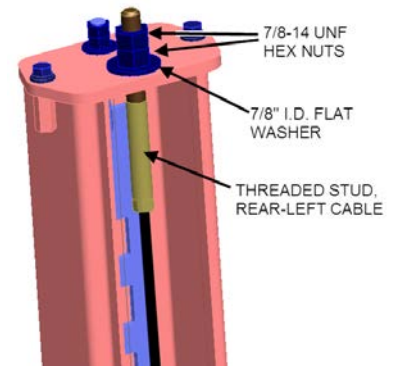


Figure 48

- Continue routing the cable, non-threaded sleeve first, through the rear cross-member. Pull sleeve end of the cable through the smaller opening under the rear of the left side runway (**Fig.49**).

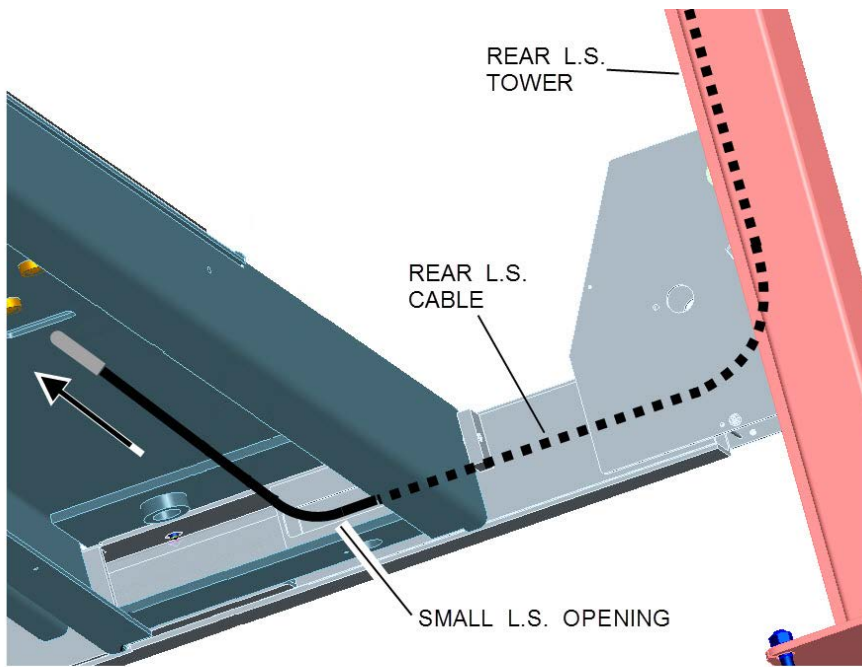


Figure 49

NOTE: It is very important to route the cable inside a cross-member **IN FRONT** of the cable retainer shaft (see detail in **Fig.46**). Routing the cable behind the cable retainer shaft will not allow the cable to sit in the pulley groove and will cause damage to the lift.

NOTE: While running the cables through the cross-member, be careful not to run them around the polytube lines. If this occurs, the lines could be pulled out of the air cylinders when the lift powers up or the polytubes could be subjected to excessive wear against the cables. Do not twist cables inside the tubes.

8.10.3 Routing Rear Right Cable

- Anchor threaded end of the rear right cable into the top plate of the rear right tower. Use one 7/8" ID flat washer and two 7/8-14 UNF hex nuts (see hardware kit). Refer to **Fig.48**.
- Continue routing the cable, non-threaded sleeve first, through the rear cross-member. Pull sleeve end of the cable through the rear cross-member. Do not pull cable through the right side opening (**Fig.50**). Continue pulling to the **LARGE** opening under the rear of the left side runway (**Fig.51**).

NOTE: It is very important to route the cable inside a cross-member **IN FRONT** of the cable retainer shaft (see detail in **Fig.46**). Routing the cable behind the cable retainer shaft will not allow the cable to sit in the pulley groove and will cause important damage to the lift.

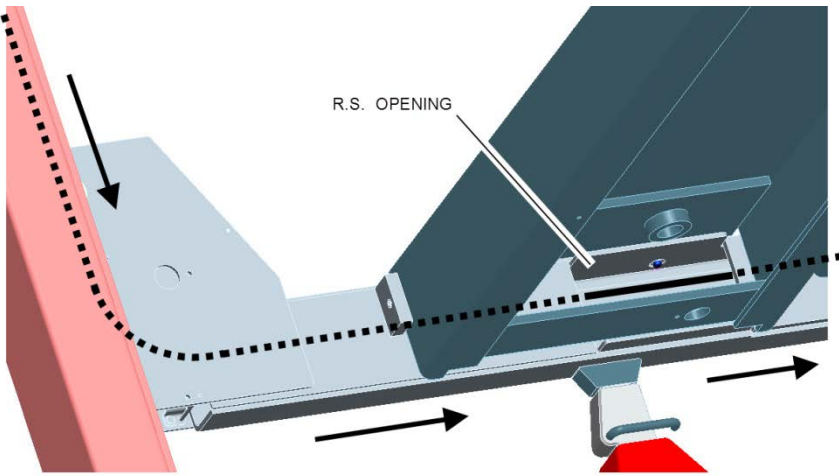


Figure 50

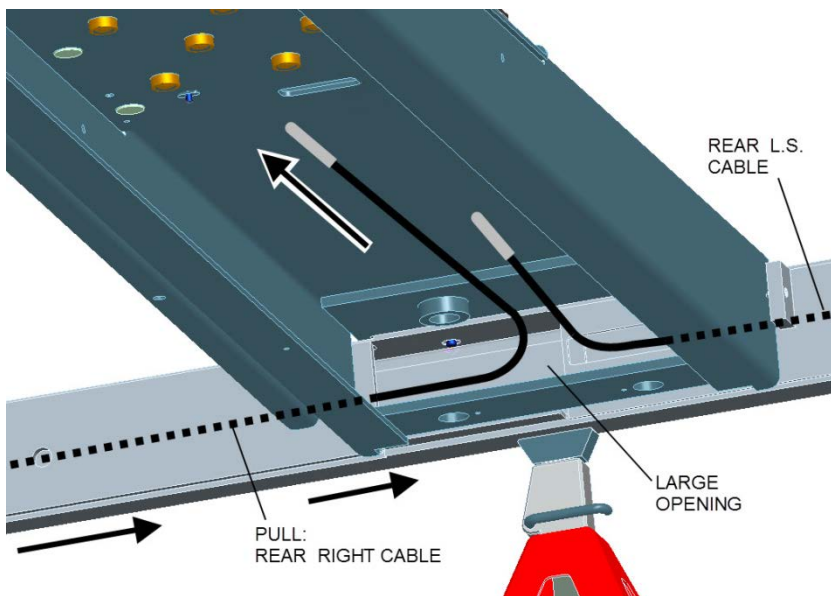


Figure 51

NOTE: While running the cables through the cross-members, be careful not to run them around the polytube lines. If this occurs, the lines could be pulled out of the air cylinders when the lift powers up or the polytubes could be subjected to excessive wear against the cables.

8.10.4 Routing Front Right Cable

- Anchor threaded end of the front right cable into the top plate of the front right tower. Use one 7/8" ID flat washer and two 7/8-14 UNF hex nuts (see hardware kit). Refer to **Fig.45**.
- Continue routing the cable, non-threaded sleeve first, through the slot (Ref. **Fig.46**) in the top stiffener plate, through the front right cross-member. Pull sleeve end of the cable through the cross-member opening under the front of the right side runway (**Fig.52**).

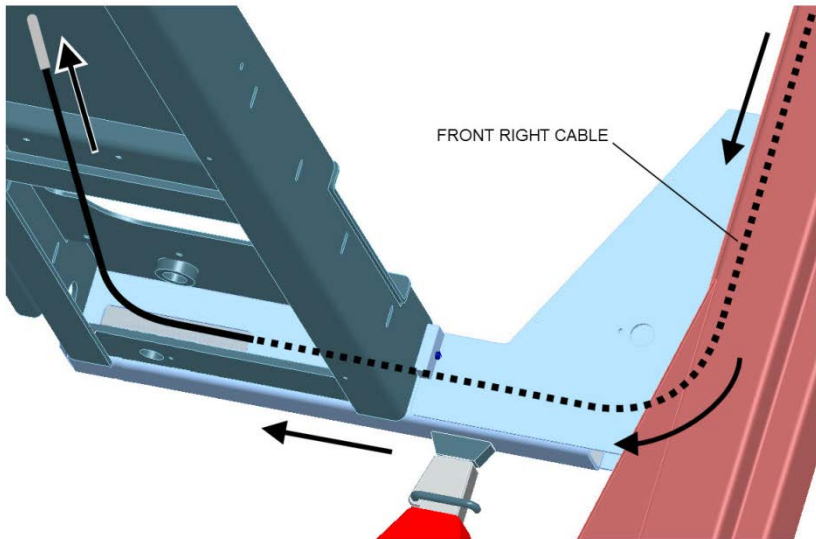


Figure 52

- Continue routing the cable toward the rear of the right side runway (deck)
- On the passenger side, at the rear (**Fig.53**), take the non-threaded plugs of the rear right cable and front right cable and tape them together with the RS rear cable on top, and feed both cables thru the window of the traverse beam.

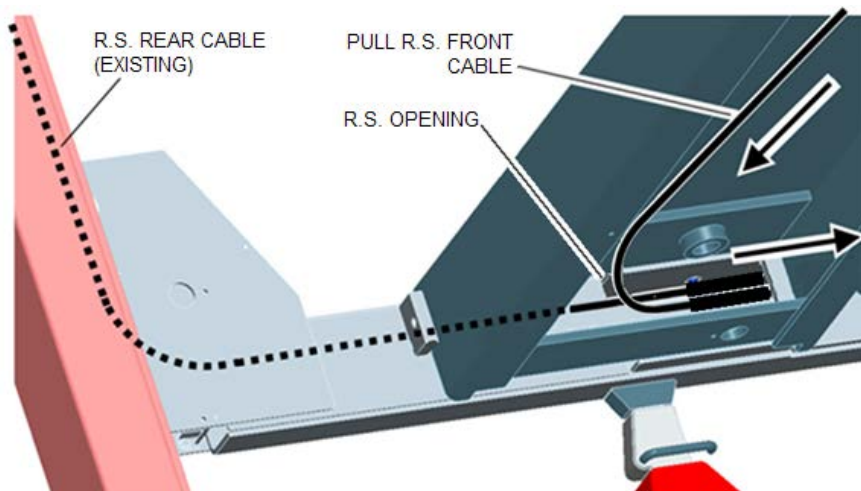


Figure 53

- Ensure that air lines are not entangled in other components or with the cable. Do not pull excessively, as the air lines may be pulled out of the safety release cylinder or other fitting (not shown on view).
- Pull cable out through the LARGE opening of the rear cross-member (**Fig.54**).

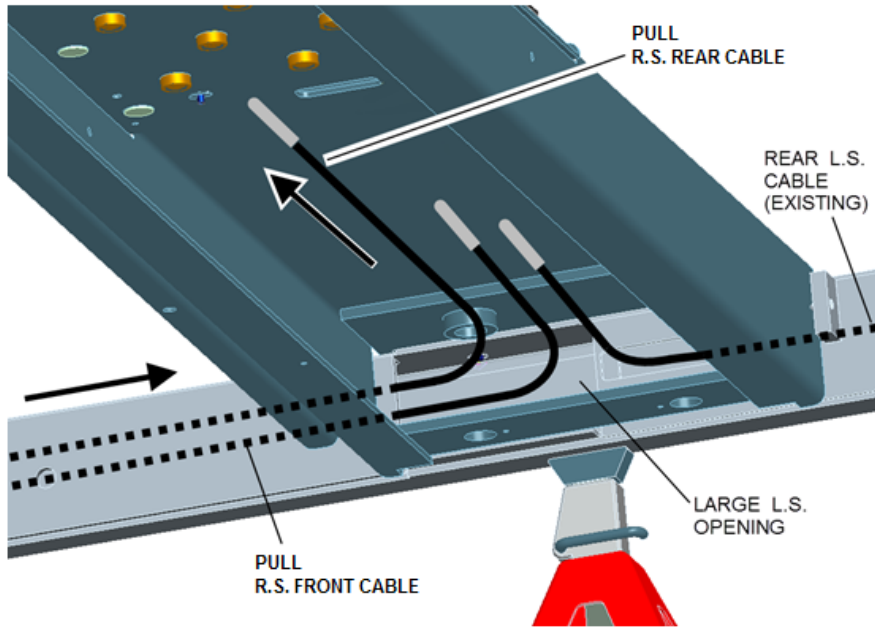


Figure 54

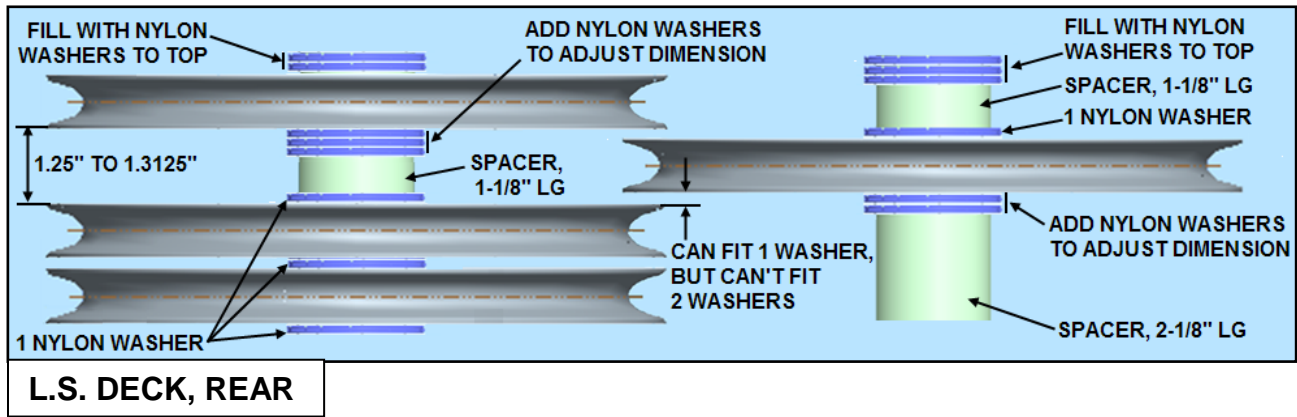
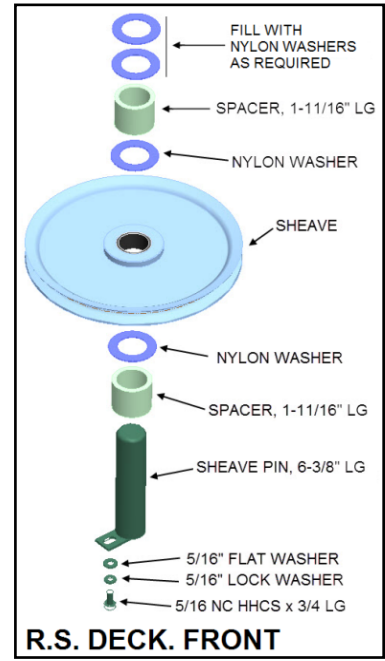
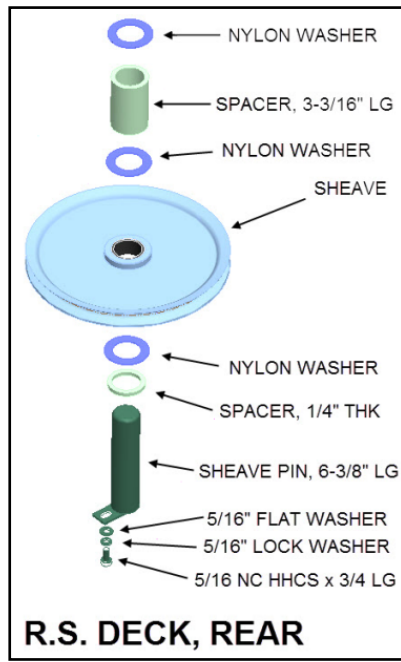
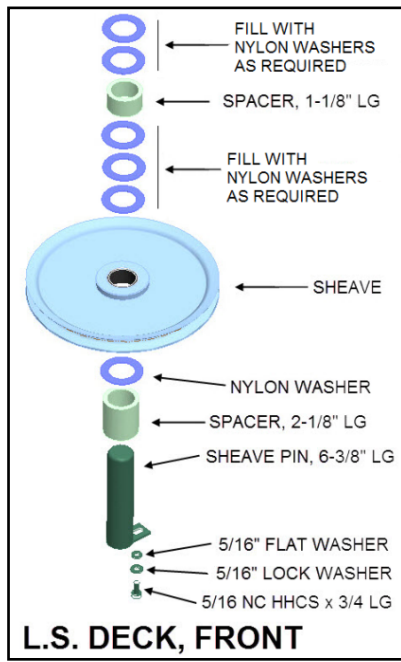
8.11 INSTALL SHEAVES. FINALIZE CABLE INSTALLATION

NOTE: THE CYLINDER ROD MUST BE FULLY EXTENDED IN ORDER TO ATTACH THE NON-THREADED ENDS (SLEEVES) OF THE CABLES TO THE CABLE FLANGE ON CYLINDER ROD. USE COMPRESSED AIR IN THE SHOP AND AN AIR NOZZLE AT THE BREATHER END TO EXTEND THE CYLINDER ROD.

- Retrieve the deck sheaves, deck sheave pins (Ø1-1/2 x 6 3/8" long), and deck sheave spacers from the accessory box. Retrieve the nylon thrust washers from the hardware kit. Please see following table for sheave spacer dimensions and location.
- See **TABLE-3** for position of sheave spacers.
Note: Failure to install spacers and Nylon washers will result in premature cable or sheave failure and void warranty.

Table 3: Pulley spacers size and location

OD	ID	Length	Qty/lift	Location(s)
2"	1-9/16"	1-11/16"	2	RS deck: front sheave - top and bottom
2"	1-9/16"	3-3/16"	1	RS deck: rear sheave - top
2"	1-9/16"	1/4"	1	RS deck: rear sheave - bottom
2"	1-9/16"	1"	3	LS deck: front sheave – top; rear single sheave – top; sheave stack - between top sheave and bottom 2 sheaves
2"	1-9/16"	2-1/4"	2	LS deck: front sheave – bottom; rear single sheave - bottom



- Remove the two hex head bolts retaining the cable retainer to the cable flange at the threaded end of the hydraulic cylinder. Carefully slide the retainer towards the cylinder.
- Route the cables through the sheaves as identified in Figure 56-a and 56-b. The threaded end must be secured to the top of the tower. The unthreaded stud must be secured to the cable flange. Ensure that the stud end is properly seated in the counter bores of the cable flange.
- Install the unthreaded stud end of the cables to the cable flange in the positions noted in figure 56-c.
- Once all cable have been routed, re-install the cable retainer and 2 hex head bolts.

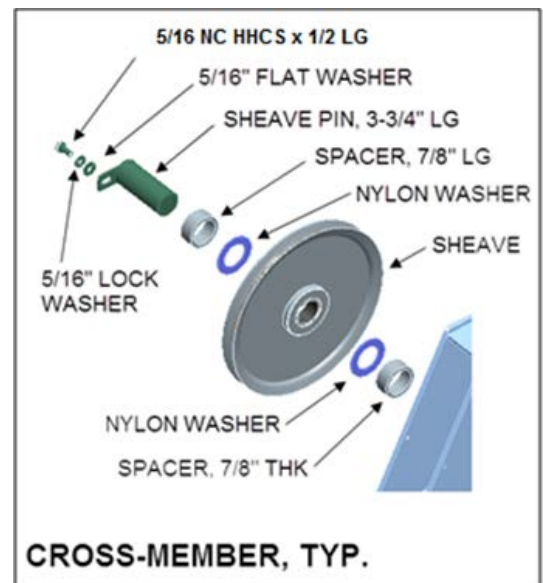
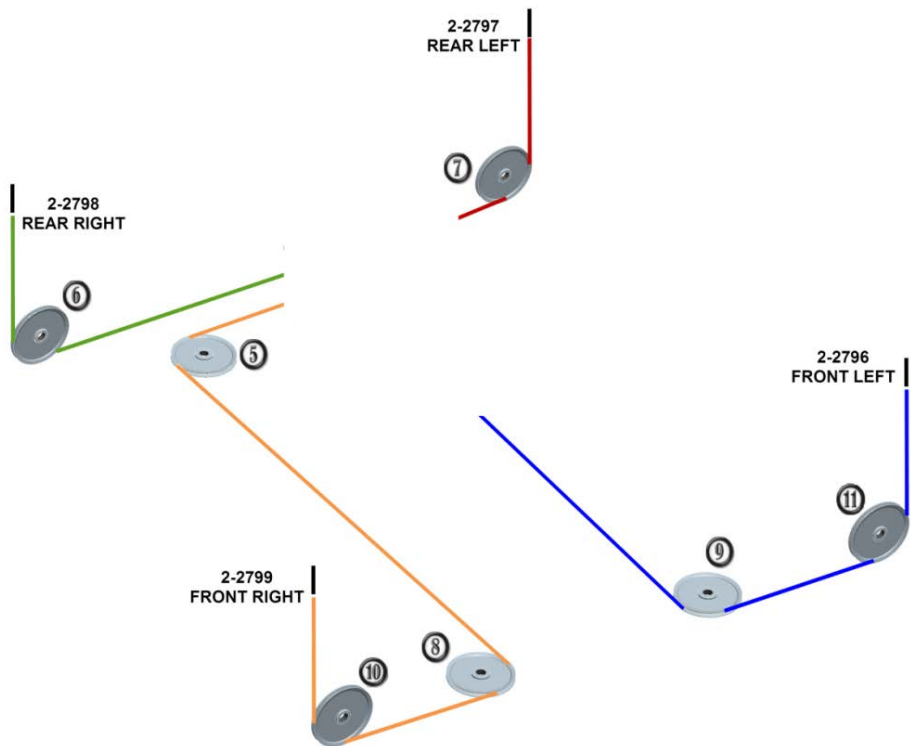
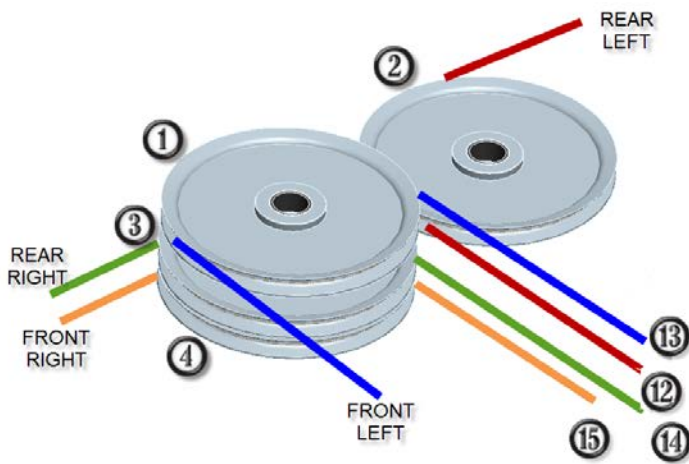


Figure 55

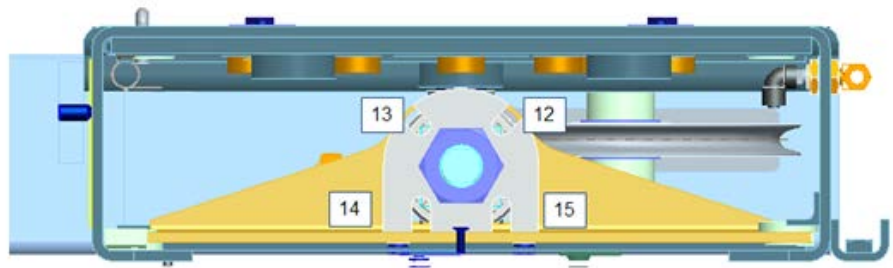
**Figure 56-a
Cable Routing**



**Figure 56-b
Rear Pulleys Detail**



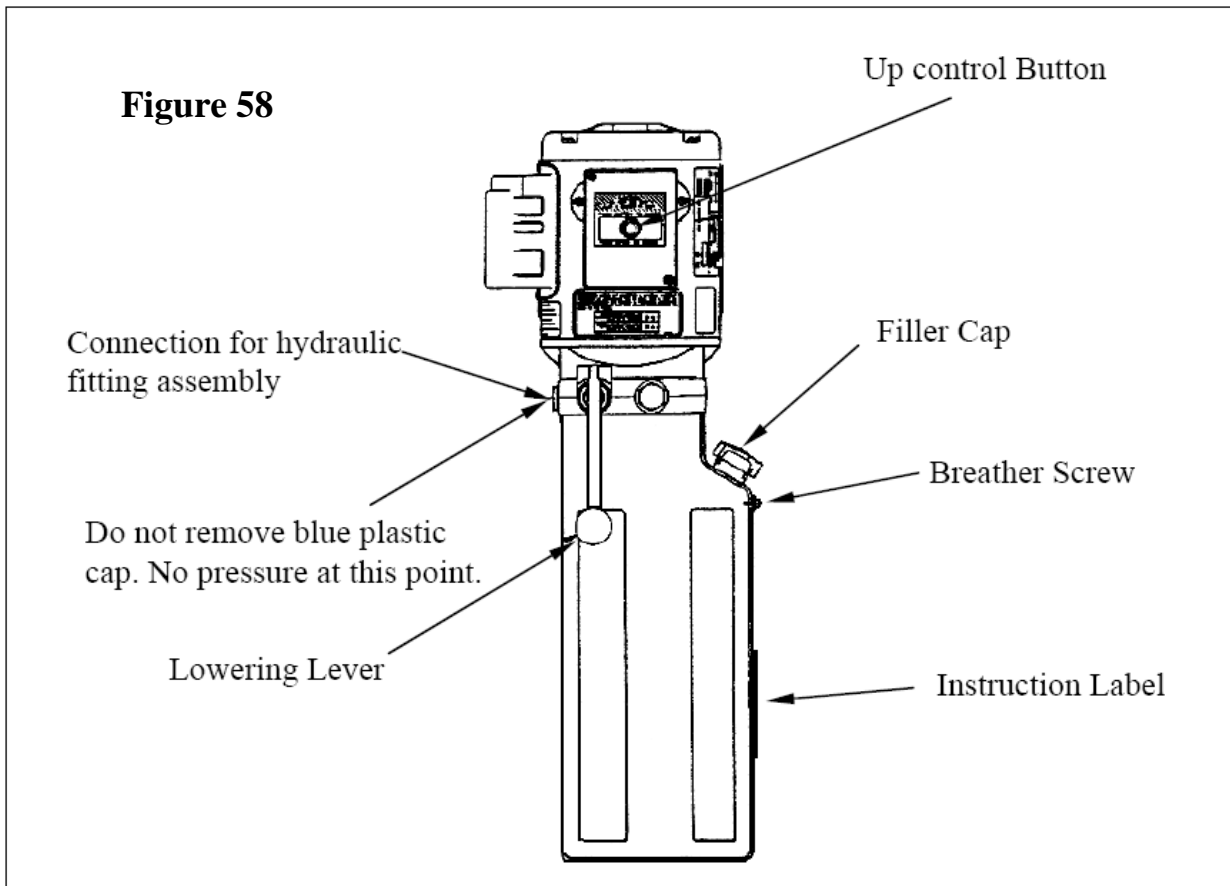
**Figure 56-c
Cable Flange Detail
(Viewed towards front of lift)**



8.12 POWER PACK INSTALLATION

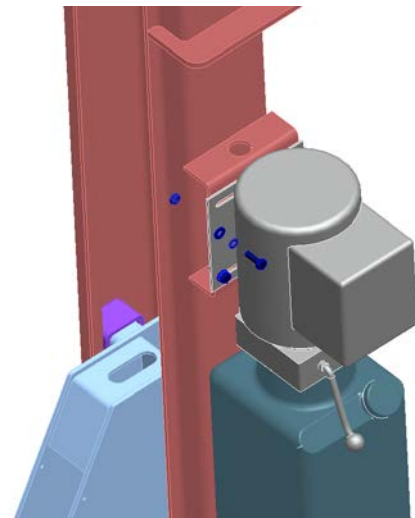
NOTE: WHEN WORKING WITH HYDRAULIC LINES AND VALVES, IT IS IMPORTANT TO KEEP ALL COMPONENTS CLEAN AND FREE OF DIRT.

POWER PACK DETAILS



- Install the power pack to the mounting bracket on the front face of the left front post using the 5/16"-18UNC × 1"LG. hex head bolts and 5/16" washers, lock washers and hex nuts, found in the hardware kit (**Fig.59**).

Figure 59



8.13 HYDRAULIC INSTALLATION

- Retrieve the 5 ft cable guard from the accessory box and insert about 4”...6” of it into the deck hose access hole at the front of the left side deck.
- Locate the 3/8" flexible hydraulic line (hose) (16ft.) in the accessory box.
- Connect the end of the flexible hydraulic hose (3/8" JIC, F SWIVEL) to the flow control on the cylinder. **DO NOT OVER TIGHTEN.**
- Route the hose on the outside edge of the (left side) deck and through the hole in the deck skin at the front of the lift. Run the hose through the 5 ft section of hose guard (found in the accessory box) and connect the remaining end of the flexible hydraulic hose (3/8" JIC, F SWIVEL) to the power unit, using the 90° elbow in the hardware kit.
- Use the frame clips found in the hardware kit to hold the hydraulic line under the deck.

NOTE: Be sure to keep the hydraulic line clear of the cables under the deck.

- Fill the reservoir on the power unit with 14 Liters of ISO 32 (10 Hydraulic Weight) hydraulic fluid.

8.14 ELECTRICAL CONNECTIONS



A QUALIFIED ELECTRICIAN SHOULD MAKE ALL ELECTRICAL CONNECTIONS.

Refer to **Figure 60** for electrical connections.

Electrical Breaker Size Recommendation: 20Amps

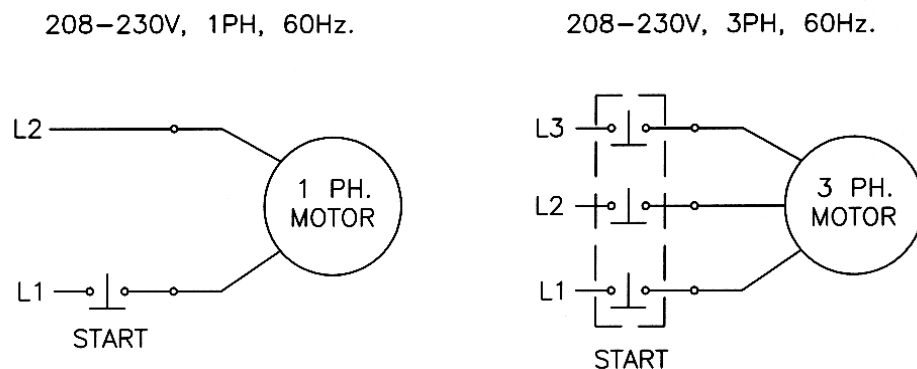


Figure 60 – Electrical Diagram

8.15 DECK LEVELING PROCEDURE

SAFETY LADDERS:

- Raise the lift to a comfortable working height using the hydraulic power pack.
- Lower the lift onto the nearest safety
- Using a 4' level, check the level of the decks front to rear and side to side as shown in **Fig.62**.
- Determine the highest corner of the lift.
- The other 3 corners will need to be raised to the level of the highest corner. This is accomplished by tightening the safety ladder retaining nuts on the top of the tower.

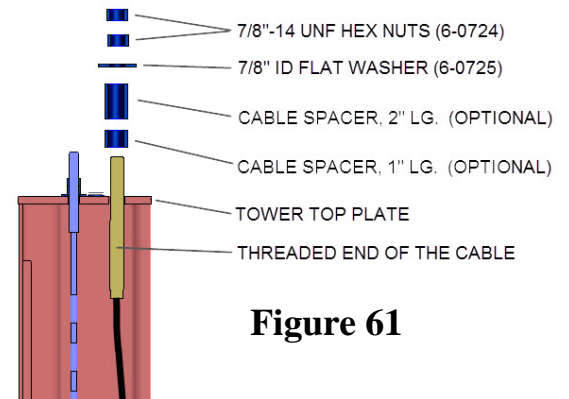


Figure 61

NOTE: The lower safety ladder retaining nuts will need to be adjusted at the same time. It may be easier to remove the cable to gain access to the lower safety ladder retaining nuts. Re-install the cable once the adjustment is complete.

- Repeat this procedure for all 3 corners while checking the level of the decks.

CABLES:

- Raise the lift off the safety ladders.
- Using a 4' level, check the level of the decks front to rear and side to side as shown in **Fig.62**.
- Determine the highest corner of the lift.
- The other 3 corners will need to be raised to the level of the highest corner. This is accomplished by tightening the cable retaining nut on the top of the tower.

NOTE: There should be two nuts retaining the cable to the top plate of the tower. The upper nut is used as a jam nut to prevent the lower nut from loosening. Both nuts should be installed after the adjustment is completed.

- Repeat the preceding steps until the lift is completely level when supported by the cables. Tighten the jam nut after the adjustment is completed.
- Raise the lift and check that the ladders engage evenly.
- Lower the lift onto a mechanical safety position. Raise the lift from this position and ensure the lift rises evenly and level from the mechanical locks.

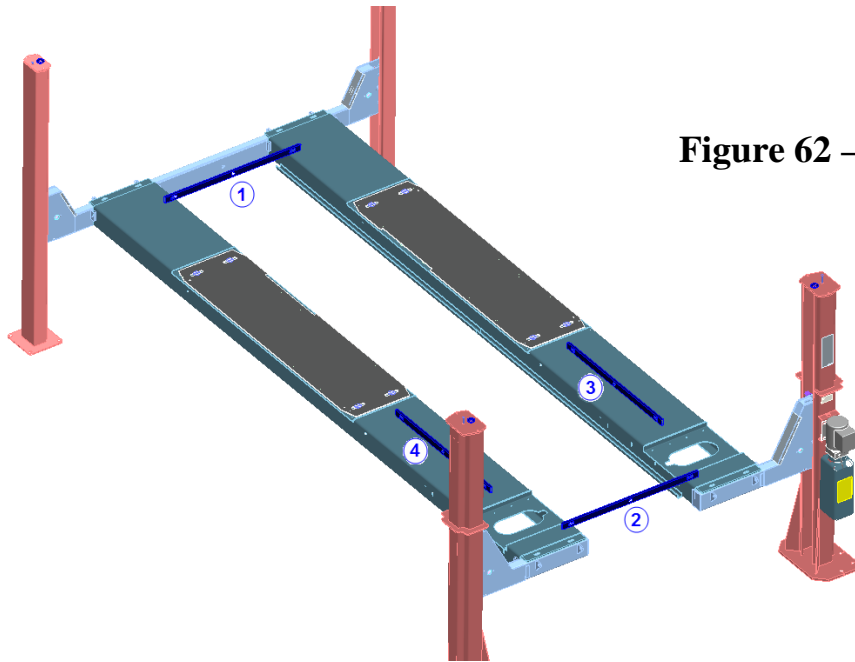


Figure 62 – Deck Leveling

8.16 ANCHOR REAR TOWERS

- Before proceeding, check that the layout dimensions on Figure 1 and Figure 2 before continuing with anchor installation. Measure diagonally lift dimensions over 2 decks, and distance between decks, and then tighten decks to cross-members. Diagonal distances should be equal within 1/4".
- Check if rear towers have moved off chalk lines “D”, “E”, “F” during deck placement, and adjust if necessary.
- Use a 4’ level, to level the posts vertically (shim if necessary) as shown in **Figure 63**.

NOTE: IF THE TOWERS ARE LEANING INTO THE LIFT, THE CROSS-MEMBERS CAN BECOME WEDGED INTO THE TOWERS AS THE LIFT RAISES.

- Prior to installing anchors, assemble the nut and washer onto anchors. A minimum of six threads must be visible below the surface of the nut. Refer to the **Figure 15** for anchoring instructions.

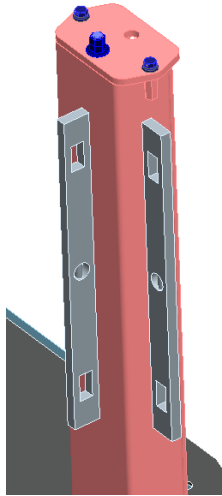
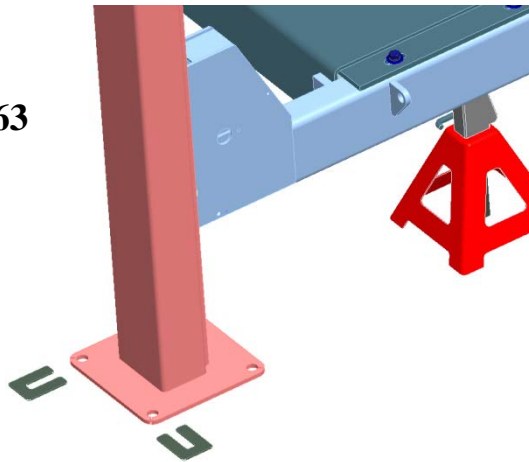


Figure 63



- Using a 3/4" concrete drill bit and rotary hammer drill, drill 3/4" holes for the anchor bolts on the (high side) column. Drill completely through the concrete floor. (**Fig.64**). In case longer anchors are required, supplied anchors can be hammered through concrete

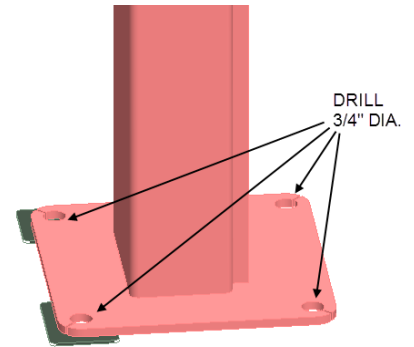


Figure 64

- Clean out the drilling dust from the holes and hammer in the anchor bolts until they make contact with the base plate. Tighten all anchor bolts (**Fig.65**).
- Check that the column is level front to rear and side to side. Adjust shims as required.
- Ensure that the base plate is completely supported by shims, including near the center, where it does not contact the floor. If excessive shimming (greater than 5/16") is required, grout or additional support is required under the towers.
- Torque all anchor bolts to 150 ft-lbs. (203 Nm), continually checking that the column is level as you proceed.

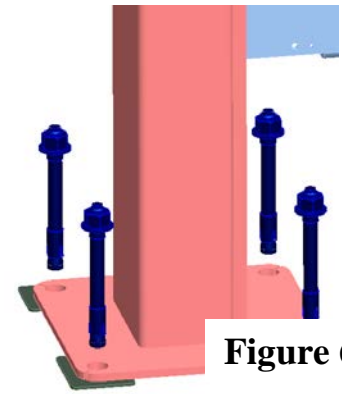
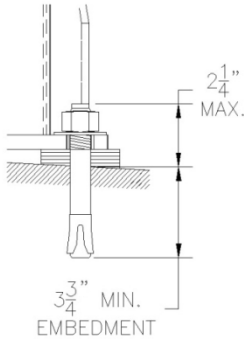


Figure 65



NOTE: The 3/4" × 7" lg. wedge anchor bolts supplied must have a minimum embedment of 3-3/4" into the concrete floor.

NOTE: If anchors do not tighten to required torque, OR project more than 2 1/4" above the concrete surface due to floor slope, contact a foundation engineer to determine the best course of action.

NOTE: In cases where the floor is extremely out of level, the mechanical safety latches may not engage on the same lock

⚠ WARNING DO NOT use more than 1/2" (13mm) of shims. Anchor bolts supplied allow for a maximum of 1/2" (13mm) of shim. If more than 1/2" (13mm) of shims are required, DO NOT proceed with installation and contact Product Manufacturer / Supplier for further details.

NOTE: Refer to Bay Layout above to ensure that the column is still in the proper position.

- Repeat procedure for the other rear tower.

NOTE: THE 40" DIMENSION SHOWN IN FIGURE 1 AND FIGURE 2 IS CRITICAL, AS IT IS NECESSARY TO ALLOW THE JACKING BEAMS TO ROLL FREELY.

- After checking all dimensions, install 1/2" UNC set screws on the jacking plates on cross-members, to hold decks in place (**Fig.66**). The 1/2" UNC set screws are found in the hardware kit. Also tighten bolts mounting decks to front and rear cross-members (see **Fig.18** and **Fig.29**).

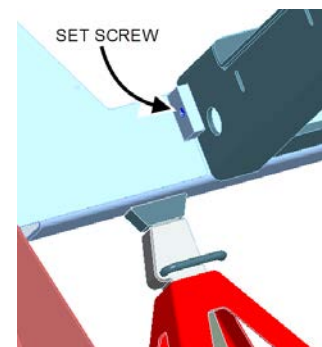


Figure 66

8.17 APPROACH RAMPS, WHEEL STOPS, PULLEY COVERS

- Retrieve the approach ramps, wheel stops and pulley covers from the accessory box. Install short pulley covers to rear cross-members. Install long pulley covers to front cross-members.
- Install the front wheel stops at the front of the decks, using $\text{Ø}3/4''$ x 1-1/2'' LG headed pins, $\text{Ø}3/4''$ SAE washers and $\text{Ø}1/8''$ x 1-1/2 LG cotter pins (Qty.2 per each wheel stop).

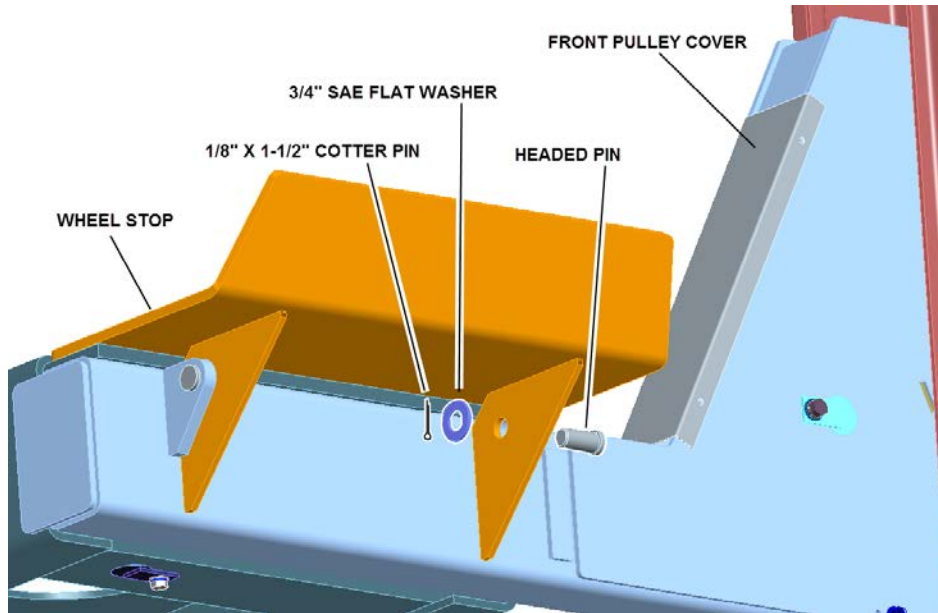


Figure 67

- Headed pins are found in the accessory box. Cotter pins and washers are found in hardware kit.
- Install the approach ramps at the rear of the decks with $\text{Ø}3/4''$ x 1-1/2'' LG headed pins, $\text{Ø}3/4''$ SAE washers and $\text{Ø}1/8''$ x 1-1/2 LG cotter pins (Qty.2 per each approach ramp).

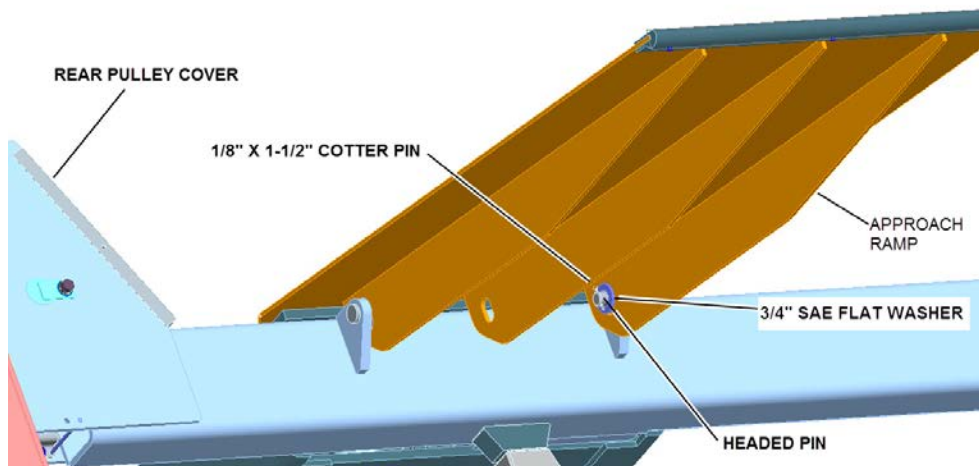


Figure 68

- Ensure the proper operation of the ramps.
- Cycle the lift several times to check proper operation of the cables, safety lock, air locks, etc. with & without load.

STOP IMMEDIATELY IF THE LIFT IS NOT OPERATING PROPERLY!

- Make any necessary adjustments and check again for proper operation.

NOTE: IF THE LIFT IS EQUIPPED WITH JACKING BEAMS, THIS IS THE APPROPRIATE TIME TO INSTALL THEM. CONSULT THE JACKING BEAM INSTRUCTION MANUALS FOUND IN EACH JACKING BEAM BOX.

9. OPERATING INSTRUCTIONS

WARNING

To avoid personal injury and/or property damage, permit only trained personnel to operate the lift.

After reviewing these instructions, get familiar with lift controls, by running the lift through a few cycles before loading vehicle on lift.

Observe and heed SAFETY and WARNING labels on the lift.

LIFT OPERATION

- **Loading:** Lift must be fully lowered, and no one in the service bay while the vehicle is brought in. If the lift is equipped with rolling jacks, jacks must be fully lowered and the rear jack pushed toward center of lift, to provide under-car clearance.
- Stop vehicle before it contacts the front wheel stops. At all times, be sure the rear wheels are forward on the ramps/chocks and the ramps/chocks will clear the tires when the lift is raised. Driver must exit the vehicle before rising.
- Place triangular wheel chocks on front and rear of one of the rear tires.
- **To raise the lift:** Push the “**RAISE**” button on the power unit. Release button at desired height.
- After raising the lift to the desired height, press and hold the lowering lever on the hydraulic power unit, until lift stops on safety latches. Cross-members should be stopped on safety latches in all 4 towers before any work can start on the raised vehicle. If any of the safety latches is not engaged, try to raise or lower the lift to the next higher or lower safety position, and observe again if all 4 safety latches have engaged. If the problem persists, lower and unload the vehicle, solve the lift safety problem, and only then resume vehicle service.
- **Before lowering lift:** be sure no one is in the lift area and that all tools, tool trays, etc. have been removed from under the lift and vehicle. If the lift is equipped with rolling jacks, jacks must be fully lowered and the rear jack pushed toward center of lift, to provide under-car clearance.

WARNING

The runways, ramps, and cross-members are designed to rest on the floor when fully lowered. Observe pinch point warning decals.

- **To lower lift:** if lift has been resting on the safety latches, the lift has to be raised high enough for all 4 safety latches to clear the openings in the latch plate (safety ladder).
- Actuate the latch release valve on the power unit column to disengage all four locking latches. Hold actuator until lift is fully lowered.

NOTE: If actuator on air valve is released, the latches will automatically reset to the engaged position.

- Push the lowering handle on the power unit to lower the lift.
- Observe lift and vehicle to be sure lift is level while being lowered. If not, STOP the lift and try to resume lowering as explained above.
- Fully lower lift, remove the triangular wheel chocks and check to be sure area is clear before removing vehicle from lift.
- If lift is not operating properly, do not use until adjustment or repairs have been made by qualified lift service personnel.
- For Rolling Jack operating instructions, see Rolling Jack Installation, Operation and maintenance Instructions in the rolling jack shipping box.

⚠ WARNING Do not operate lift with pulley covers removed from cross-member ends. Keep hands clear of the cross-member ends when lift is being raised or lowered.

⚠ WARNING Do not raise or lower the lift while the jack beams are loaded.

10. RECOMMENDED INSPECTION AND MAINTENANCE

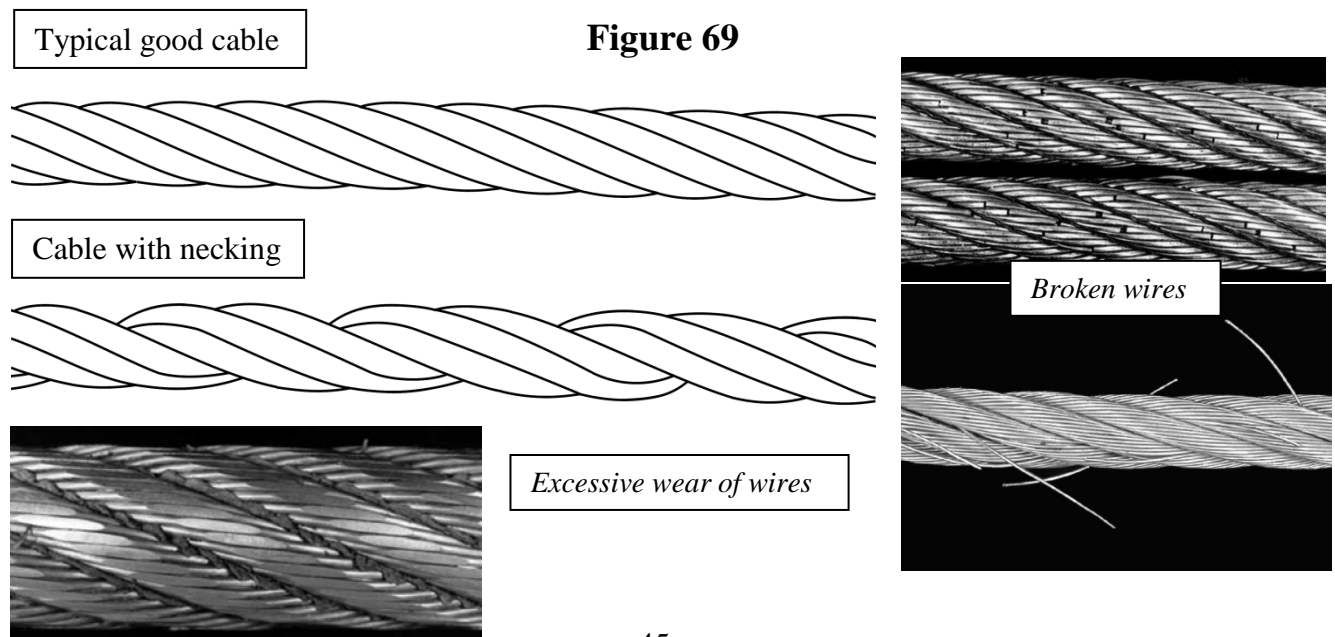
⚠ WARNING If you are not completely familiar with automotive lift maintenance procedures, STOP. Contact factory for instructions. To avoid personal injury, permit only qualified lift service personnel to perform maintenance on this equipment.

Always raise lift when cleaning floor area with solvents and/or cleaning compounds.

Always replace cable break safety springs when replacing cables.

Wire rope tension adjustment should be performed every three months

10.1 WIRE ROPE CONDITIONS GUIDE





Rust on sheave stack and ropes



Corrugated sheave groove

**Figure 69
(continued)**

10.2 DAILY

10.2.1 CLEANLINESS

Wire ropes, columns, runways and other lift parts should be kept free of corrosive agents, solvents, and road salts. If such agents are spilled or splashed on any lift component, immediately rinse thoroughly with water and wipe down with a clean rag. Lubricate wire rope as required with wire rope lubricant (i.e. 2001 MONOLEC®) and wipe down.

⚠ WARNING

Failure to keep the lift free of corrosive agents and solvents will lead to reduced component service life, cable failure, etc., which could result in property damage and/or personal injury.

10.2.2 FASTENERS

Check all the attaching bolts and nuts for tightness.

Note: Air cylinder bolts and nuts should to allow movement of the cylinder.

10.2.3 WIRE ROPES

Check wire rope cables for wear or damage. Wipe cables with a rag to detect hard to see small broken or frayed cable strands. Any cable with broken wires, severe corrosion, excessive stretch, deformed strands variations in diameter (necking), or any change from its normal appearance, must be replaced. If any cable is found to be in need of replacement, the entire cable set, pulleys and safety rollers must be replaced immediately. See **9.1**, cable conditions guide.

10.2.4 SHEAVES

Check sheaves for wear and damage, i.e. wobble (tilt), cracks, loose on pin, or excessive noise during operation. Replace if any of these conditions occur.

10.2.5 SHEAVE PINS

Check for loose sheave pins, loose or missing fasteners to hold sheave pins in place. Remediate situation immediately.

10.2.6 SAFETY LATCHES (DOGS) AND CABLE BREAK SAFETY MECHANISM

Watch and listen to safety latch operation during lift operation, to ensure that latches move as required, have not lost spring preload, and line up with slots in latch plates (safety ladders) in columns. Watch for broken traction springs on safety latches, or broken compression springs or

springs not seated properly on cable break safety mechanism. With lift not loaded, all four cable break levers should produce deflection of the lift cables. Watch cable tracking properly on cable break safety rollers. Stop using lift if any malfunction or damage is observed.

10.2.7 COMPRESSED AIR SUPPLY

Check filter/regulator/lubricator in air line to lift. Drain water trap filter bowl and adjust oil feed according to manufacturer's instructions. Check operation of air release valve for air leaks.

10.2.8 RAMPS, CHOCKS, FRONT WHEEL STOPS

Inspect for excessive wear or damage. Repair or replace if required.

10.2.9 GENERAL LIFT OPERATION

Check general operation of lift. Observe any structural noise, imbalance, binding, or other malfunctions.

10.3 WEEKLY

Clean foreign debris from front turn tables and rear slip plates by blowing out with compressed air. Check torque on the column anchor bolts as specified in this manual.

10.4 MONTHLY

10.4.1 WIRE ROPES

Clean wire rope cables with lift in both lowered and raised position, by spraying them with wire rope lubricant (i.e. 2001 MONOLEC®) and wiping the cable down. Adjust cables if lifting is uneven. Never make adjustments with weight on lift. If running out of adjustment threads, cables need to be replaced. Do not add washers or other spacers to re-use previously used adjustment threads.

10.4.2 RUNWAYS

Check level of runways. Adjust as required.

10.4.3 SHEAVES

Bushings inside sheaves work best in "dry" condition. Applying oil will diminish their performance and greases will degrade performance even further. **DO NOT GREASE SHEAVE BUSHINGS OR SHAFTS.**

Check all pulleys on cross-members and under the runways for wear or play. Replace immediately if needed. Pulley shafts are held in place by a 3/8" - 16 x 1" lg. Hex Hd Bolt. Make certain that this bolt is in position and tight. Check all fasteners and tighten as required.

10.4.4 SLACK CABLE DEVICE, SAFETY LATCHES (DOGS) AND LATCH PLATES (SAFETY LADDERS)

Inspect slack cable device as follows:

Check for missing or damaged parts. Check if the compression spring is properly seated in the support tube and in the holder on the cable break safety lever. Check if cable is properly guided through the safety roller. Check if the safety roller and bolt are properly attached to the cable break safety lever. Verify that the cable break safety lever is centered within the cross-member, and that it

lines up with the openings in the safety ladder. Verify using hand force or a light lever that the cable break safety lever pivots on the shaft.

Check and adjust safety ladders if lift is not level on safety, or if safeties do not engage properly. Check all fasteners and tighten as required.

10.4.5 COLUMN ANCHOR BOLTS

Check column anchor bolts for tightness (if loose, re-torque to 150 ft. lb). If anchors do not tighten to required torque, or continue to loosen, replace concrete under column base with a 4' x 4' x 6" thick 4,000 psi concrete pad, keyed under and flush with the top of existing floor. **Concrete should be aged 30 days prior to the installation of the lift.**

10.4.6 COLUMNS

Check columns for corrosion, giving special attention to the area at the base of the column. Check severely corroded areas by pecking with an awl or welder's chipping hammer. If column is corroded through at any point, it must be replaced immediately. If not corroded through, remove old paint and rust scale, then coat with a high quality corrosion resistant paint.

10.4.7 FASTENERS

Check all fasteners and tighten as required.

10.4.8 HYDRAULIC AND PNEUMATIC COMPONENTS

Check all air and hydraulic hoses, fittings and cylinders for leaks.

Check level of oil in power pack reservoir when lift is in the lowered position. Add if required.

10.4.9 FRONT AND REAR STEER PLATES

Check and clean steer plates. Lubricate with oil or light grease.

10.5 QUARTELY

10.5.1 CABLES

Inspect cables in both lowered and raised position. Check the following:

- That cables have no broken wires visible.
- That cables are free of severe corrosion and pitting. A light surface corrosion on outer wires is normal. Lubricate cables.
- That there are no areas on the cable that have a greatly reduced diameter, or "necking". When a cable is found to have excessive necking, all cables must be replaced immediately.
- That cables do not have excessive stretch. It is normal for new cable to require adjustment during "break-in", after which small periodic adjustments may be required. However, if a cable that has been in service for 6 months should suddenly require frequent adjustments or has used all the cable adjustment available, all cables must be replaced immediately.
- If any cable is found to be in need of replacement, the entire cable set must be replaced immediately.
- Cables are expendable items and should be replaced as a set every 20,000 cycles (estimated) or every 6 years, unless earlier replacement is indicated during inspection.

10.5.2 SHEAVES AND PINS

Inspect sheaves and pins in cross-members and in runways. Sheaves are expendable items. Sheaves and pins should be replaced when worn. Use of sheaves and pins with excessive wear will lead to reduced service life of the cables.

- Inspect sheaves in cross-members with lift in lowered position or resting on the safety latches
- Hold lowering handle on power unit down and pull on cable in column to create slack in cables.
- Check for excessive side to side wobble. Grasp rim of sheave and attempt to wobble (tilt) side to side. If sheaves wobble (tilt) more than 3/16" (4.8 mm) side to side or move up and down on shaft more than 1/32" (0.8 mm), the sheave and pin (shaft) should be replaced.
- Check sheaves and replace if cracks are found.
- Check for ease of rotation. If sheaves do not turn freely, the sheave and sheave pin should be removed, inspected, fixed or replaced.
- Fully raise lift, to inspect sheaves in runways. Hold lowering handle down to lower lift onto safety latches
- Visually inspect alignment of sheaves. Misalignment of sheaves indicates excessive wear. Remove, inspect, and, if needed replace sheave and pin.
- Pull on cables in runway to create slack in cables.
- Check sheaves for excessive side to side wobble. Grasp rim of sheave and attempt to wobble (tilt) side to side. If sheaves wobble (tilt) more than 1/16" (1.6 mm) side to side, or move in and out more than 1/32 (0.8 mm), the sheave and sheave pin (shaft) should be replaced.

10.5.3 HYDRAULIC CYLINDER

Inspect the hydraulic cylinder mounting to the runway. Inspect cylinder and hydraulic hose for leaks. Repair or replace as required.

Check and tighten the hydraulic cylinder rod nuts holding the cable flange.

Inspect bolts holding anti-rotation bar onto cable flange and tighten if required.

Inspect sliders on anti-rotation bar for excessive wear or damage. Replace if required.

10.5.4 TRACKS FOR ROLLING JACK AND OIL DRAIN PAN

Inspect rolling jack / oil drain pan tracks for cleanliness, corrosion, excessive wear or damage. Clean dirty tracks. Worn or damaged tracks should be repaired immediately.

WARNING

Failure to do so will lead to reduced service life, which could result in property damage and/or personal injury.

10.5.5 ANTI-SKID SURFACES

Inspect the non-skid coating on all vehicle traffic and walking surfaces, such as ramps, top of runways for wear. All areas found to be worn smooth should be resurfaced with an Anti-Slip abrasive floor tread tape or a heavy duty Anti-Slip Floor Coating.

10.5.6 FRONT AND REAR STEER PLATES

Remove top Slip Plate covers by first removing the four (4) shoulder bolts on each cover.

Clean runway surface and touch up any paint wear with a rust resistant paint. Allow paint to dry thoroughly. Quarterly maintenance will optimize performance and contribute to longer slip plate life.

10.6 SEMI-ANNUALLY

10.6.1 HYDRAULIC SYSTEM

Check fluid level of lift power unit and refill if needed. If refill was needed, inspect all fittings, hoses and seals. Tighten, repair or replace as required.

10.6.2 RAMPS, CHOCKS, WHEEL STOPS

Inspect hinge pins. Replace if excessively worn. Lubricate if in good condition

11. LIFT LOCKOUT / TAGOUT PROCEDURE

11.1 PURPOSE

This procedure establishes the minimum requirements for the lockout of energy that could cause injury to personnel by the operation of lifts in need of repair or being serviced. All employees shall comply with this procedure.

11.2 RESPONSIBILITY

The responsibility for assuring that this procedure is followed is binding upon all employees and service personnel from outside service companies (i.e. Authorized Snap-on Installers, contractors, etc.). All employees shall be instructed in the safety significance of the lockout procedure by the facility owner/manager. (or assigned designee) in the purpose and use of the lockout procedure.

11.3 PREPARATION

Employees authorized to perform lockout shall ensure that the appropriate energy isolating device (i.e. circuit breaker, fuse, disconnect, etc.) is identified for the lift being locked out. Other such devices for other equipment may be located in close proximity of the appropriate energy isolating device. If the identity of the device is in question, see the shop supervisor for resolution. Assure that proper authorization is received prior to performing the lockout procedure.

11.4 SEQUENCE OF LOCKOUT PROCEDURE

- a. Notify all affected employees that a lockout is being performed and the reason for it.
- b. Unload the subject lift. Shut it down and assure the disconnect switch is "OFF" if one is provided on the lift
 - If this is a lockable device, the authorized lockout person places the assigned padlock on the device to prevent its unintentional reactivation. An appropriate tag is applied stating the person's name, at least 3"x6" in size, an easily noticeable color, and states not to operate device or remove tag.
 - If this device is a non-lockable circuit breaker or fuse, replace with a "dummy" device and tag it appropriately as mentioned above.
- c. Attempt to operate lift, to assure that lockout is working. Be sure to return any switches to the "OFF" position.
- d. The equipment is now locked and ready for the required maintenance or service.

11.5 RESTORING EQUIPMENT TO SERVICE

- a. Assure the work on the lift is complete and the area is clear of tools, vehicles, and personnel.

- b. At this point, the authorized person can remove the lock (or dummy circuit breaker or fuse) and tag, and activate the energy isolating device so that the lift may again be placed into operation.

11.6 RULES FOR USING THE LOCKOUT PROCEDURE

Use the Lockout Procedure whenever the lift is being repaired or serviced, waiting for repair when current operation could cause possible injury to personnel, or for any other situation when unintentional operation could injure personnel. No attempt shall be made to operate the lift when the energy isolating device is locked out.

12. PARTS LIST

12.1 PARTS LIST - LIFT ASSEMBLY

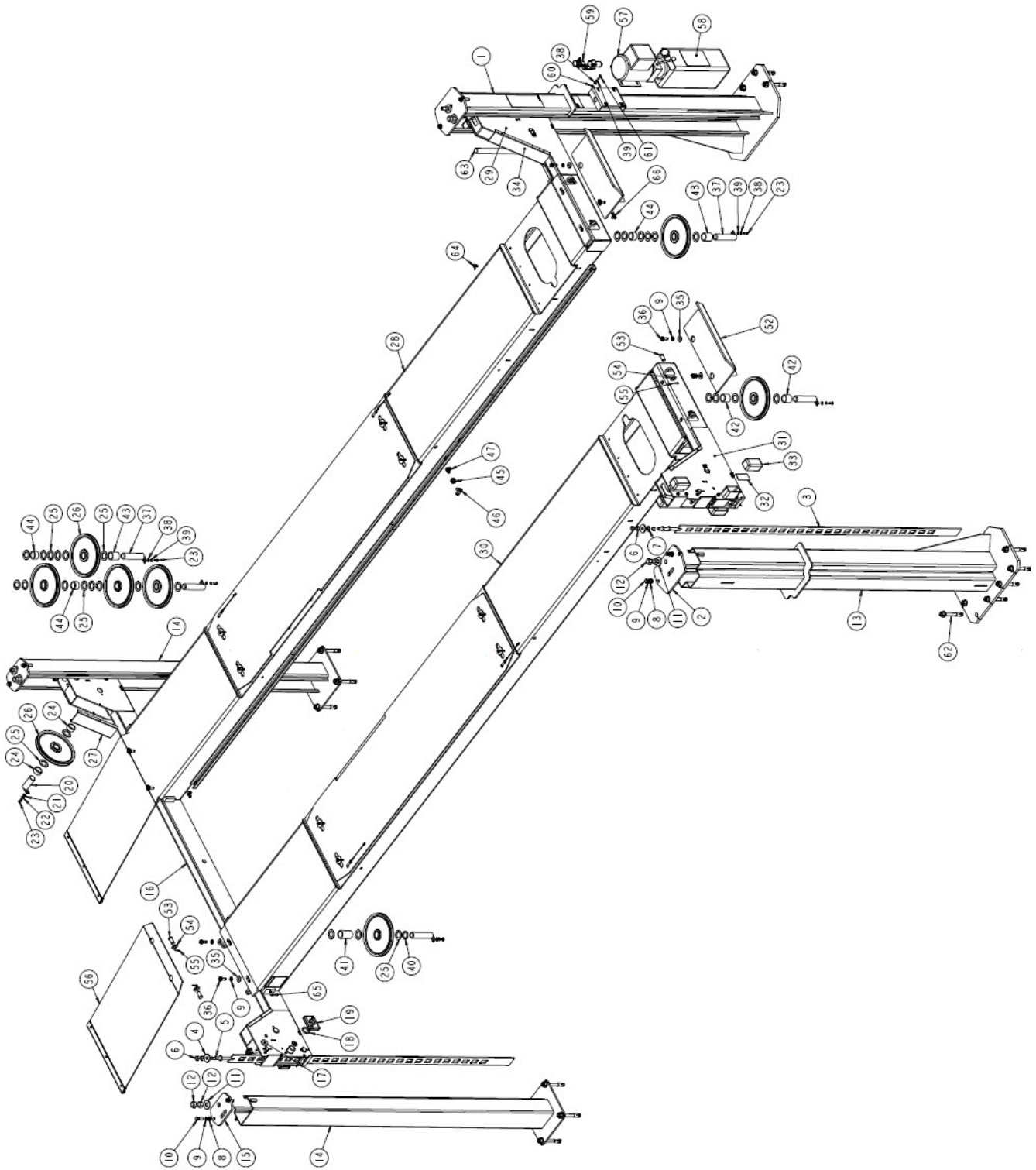
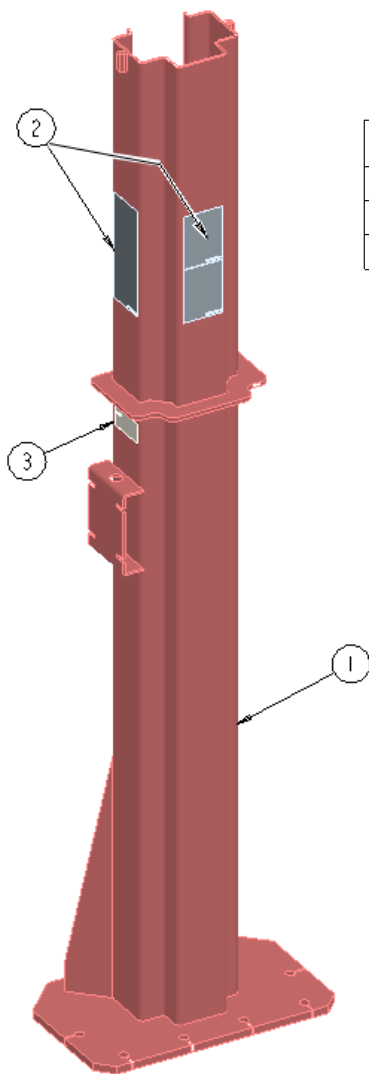


Figure 70

Item#	Part #	Description	Qty.	Item#	Part #	Description	Qty.
1	3-1083	TOWER ASSEMBLY, FRONT, POWER	1	34	2-2848	PULLEY COVER, FRONT	2
2	1-3810	TOP PLATE - FLAMECUT	2	35	6-0063	FLAT WASHER, 1/2"	8
3	3-1082	SAFETY RACK WELDMENT	4	36	6-0291	Hex Bolt, 1/2"-13UNC X 1 1/2 LG.	8
4	1-3932	WASHER, 9/16 X 2 X 1/4	4	37	2-0566	DECK SHEAVE PIN	5
5	1-3931	SPACER	4	38	6-0295	FLAT WASHER, 5/16" I.D.	9
6	6-0673	5/8" HEX NUT, GRADE 8	12	39	6-0874	LOCK WASHER, 5/16 I.D.	9
7	6-1401	WASHER, FLAT, 5/8 DIA	3	40	1-3875	SHEAVE SPACER	1
8	6-0248	Flat Washer, 1/2 ID SAE	8	41	1-3874	SHEAVE SPACER	1
9	6-0059	Lock Washer, 1/2"	16	42	1-3876	SPACER, FRONT, RS, TOP	2
10	6-0047	HEX HD BOLT, 1/2-13 X 1-3/4 LG, GR.5, PL	8	43	1-3878	SHEAVE SPACER	2
11	6-0725	7/8 ID FLAT WASHER	4	44	1-3936	SHEAVE SPACER 1-1/8" LG	3
12	6-0724	Hex Nut, 7/8"-14UNF	8	45	6-0713	TERMINAL BOLT, 3/4", SHORT	1
13	4-1331	FRONT POST WELDM'T, SLAVE	1	46	6-3896	PNEUMATIC TEE FITTING	1
14	3-1085	REAR TOWER WELDMENT	2	47	6-3010	90 DEG. ELBOW, PNEU. 1/4" NPT M - 3/8" F, PUSH	1
15	2-2856	TOP PLATE - FLAMECUT	2	48	2-2796	LEFT FRONT CABLE, 391", RIGHT LAY	1
16	4-1329	REAR TRAVERSE BEAM ASSEMBLY	1	49	2-2797	LEFT REAR CABLE, 155-1/5", RIGHT LAY	1
17	1-3762	PLASTIC INSERT	4	50	2-2798	RIGHT REAR CABLE, 217-1/2", RIGHT LAY	1
18	1-3872	SPACER, REAR SLIDER	4	51	2-2799	RIGHT FRONT CABLE, 443", RIGHT LAY	1
19	2-2725	GLIDE BLOCK	4	52	2-2868	WHEEL STOP WELDMENT	2
20	1-3862	CROSSMEMBER SHEAVE PIN	4	53	1-1887	HEADED PIN	8
21	6-0062	FLAT WASHER, 3/8 ID SAE	4	54	6-0738	FLAT WASHER 3/4" SAE	8
22	6-0058	LOCK WASHER, 3/8"	4	55	6-0287	Cotter Pin, 1/8" Dia. x 1" LG.	8
23	6-0423	Hex Bolt, 5/16"-18UNC x 3/4" LG.	9	56	3-1089	APPROACH RAMP ASS'Y	2
24	1-3863	SHEAVE SPACER, 7/8", CROSS-MEMBER	8	57	6-1936	Power Pack, 208-230 V, 1 PH	1
25	1-0757	NYLON THRUST WASHER	35	58	6-4045	FOUR POST OPERATING INSTRUCTIONS	1
26	3-1078	SHEAVE WELDMENT/ASS'Y	11	59	2-1394	AIR VALVE & AIR FILTER ASSY.	1
27	2-2852	PULLEY COVER, REAR	2	60	6-0294	HEX NUT, 5/16-18 UNC	4
28	4-1334	DECK ASSEMBLY, LS, ALIGNMENT	1	61	6-0293	HEX HEAD BOLT, 5/16-18UNC x 1" LG.	4
29	4-1327	FRONT CROSSMEMBER ASSY, LS	1	62	6-4044	WEDGE ANCHOR, KB3, 3/4" x 7" LG	20
30	4-1333	DECK ASSEMBLY, RS, ALIGNMENT	1	63	6-0714	HOSE GUARD	1
31	4-1326	FRONT CROSSMEMBER ASSY, RS	1	64	6-3998	TREE MOUNT CABLE TIE, 8'LG.	18
32	1-2657	SHIM SLIDER BLOCK	8	65	6-0726	SET SCREW, 1/2-13 UNC X 1 LG	4
33	2-0772	SLIDER BLOCK	8	66	6-2971	FITTING, TEE, 1/4" POLYTUBE, PUSH-LOCK	1

12.2 11.2 PARTS LIST – FRONT TOWER ASSEMBLY, POWER

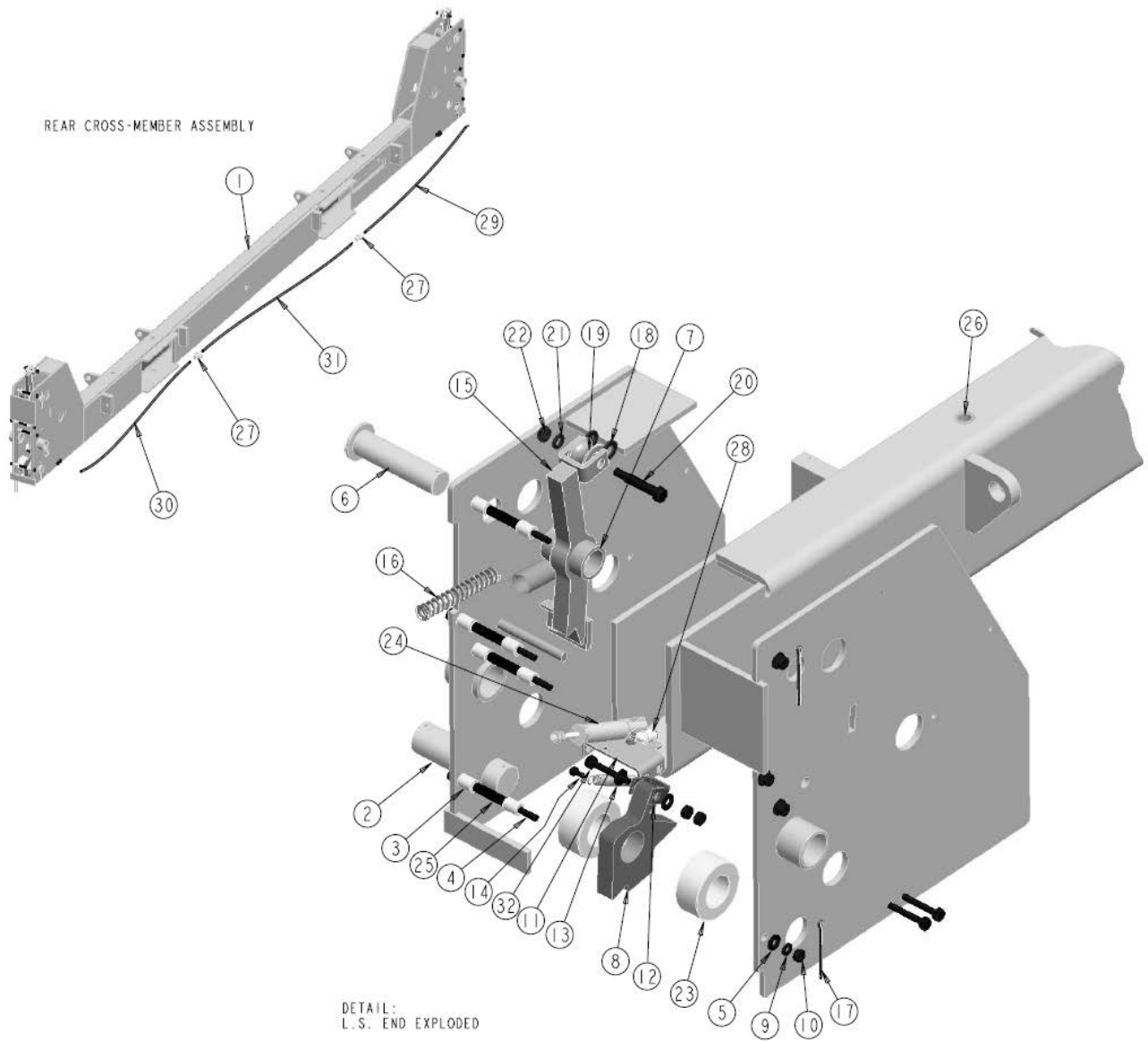


Item#	Part #	Description	Qty.
1	4-1330	FRONT POST WELDM'T, POWER	1
2	6-0988	DECAL SET, ALI/WL 200	1
3	6-1637	SAFETY DECAL	1

Figure 71

12.3 PARTS LIST – REAR CROSS-MEMBER

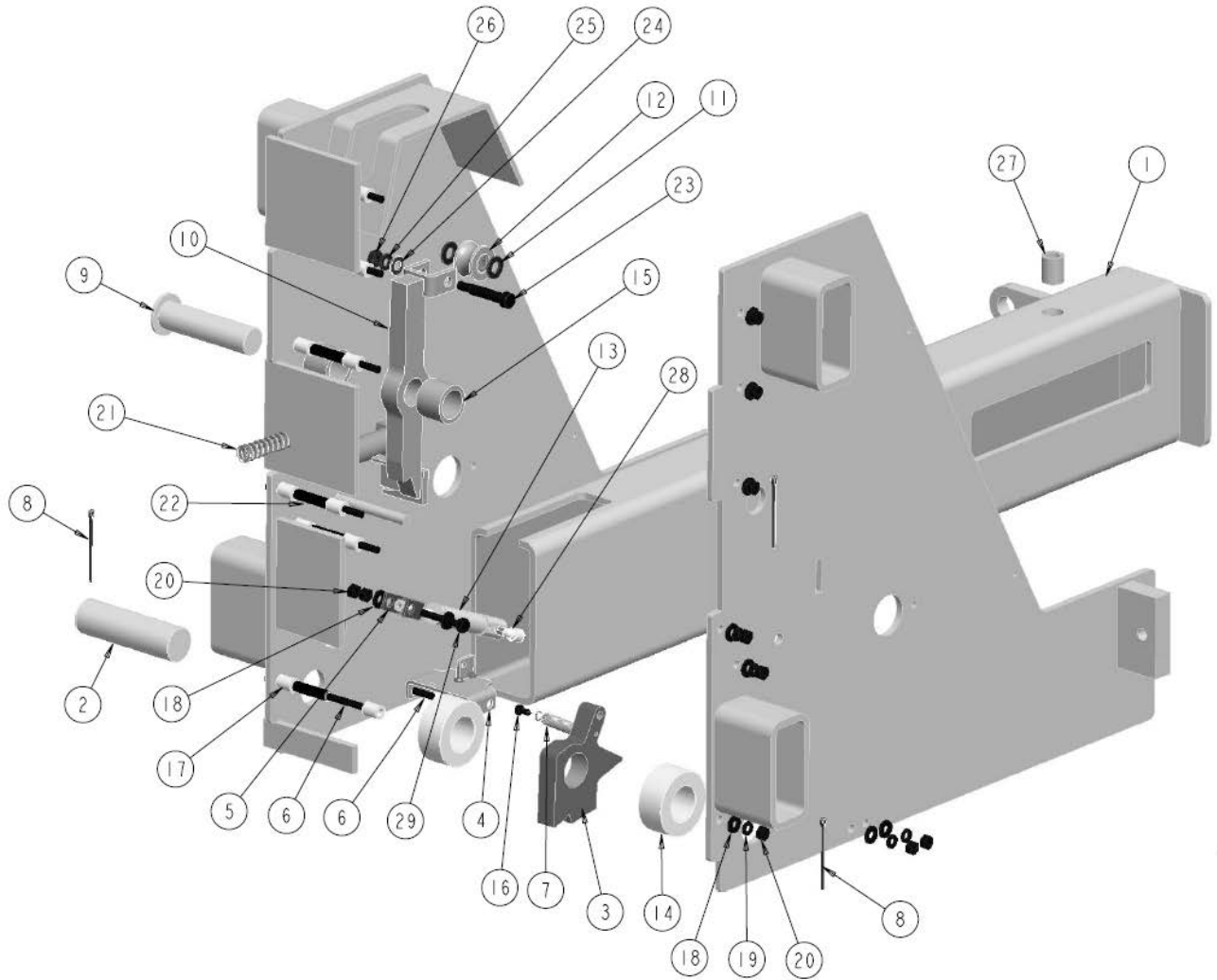
Figure 72



Item#	Part #	Description	Qty.
1	4-1328	REAR CROSSMEMBER, WELDMENT	1
2	1-3891	LOCK SAFETY PIN	2
3	6-3990	ROLLER, SAFETY LADDER	16
4	6-3997	HEX HD. BOLT, 1/4-20 UNC x 4" LG.	14
5	6-0060	FLAT WASHER, 1/4" I.D.	18
6	1-3865	LOCK SAFETY PIN	2
7	1-3812	SAFETY SPACER	4
8	2-2847	SAFETY DOG	2
9	6-0056	LOCK WASHER, 1/4" I.D.	14
10	6-0032	Hex Nut, 1/4"-20UNC	16
11	2-2898	CYLINDER MOUNT, WELDED	2
12	1-3935	ROD CLEVIS	2
13	1-1115	SAFETY SPRING	2
14	6-0169	SELF-TAPPING SCREW, #10 X 3/8" LG	2
15	2-2854	AUX. SAFETY WELDMENT, REAR	2
16	6-3986	SAFETY SPRING	2
17	6-0115	COTTER PIN, 1/8 DIA X 2 LG	6
18	6-0062	FLAT WASHER, 3/8 ID SAE	4
19	1-0766	CABLE ROLLER ASSEMBLY	2
20	6-0801	SHOULDER BOLT , 3/8 x 1 1/2 LG.	2
21	6-0674	LOCK WASHER, 5/16 I.D.	2
22	6-0294	HEX NUT, 5/16-18 UNC	2
23	1-3798	ROLLER RETAINER	4
24	6-3989	SAFETY CYLINDER	2
25	1-3868	POLYTUBE SPACER	8
26	6-2432	THREADED INSERT, 1/2-13 UNC, 215-112	4
27	6-2971	FITTING, TEE, 1/4" POLYTUBE, PUSH-LOCK	-
28	6-4040	ELBOW 90DEG 1/4" POLYTUBE - #10-32 UNF M	2
29	8-0141_4-1329_1	POLYTUBE, 1/4" DIA x 0.038" WALL x 32" LG.	-
30	8-0141_4-1329_2	POLYTUBE, 1/4" DIA x 0.038" WALL x 32" LG.	-
31	8-0141_4-1329_3	POLYTUBE, 1/4" DIA x 0.038" WALL x 67" LG	-
32	6-0028	HEX HD CS, 1/4 20UNC x 1 3/4" LG	2

12.4 PARTS LIST – FRONT CROSS-MEMBER, LS

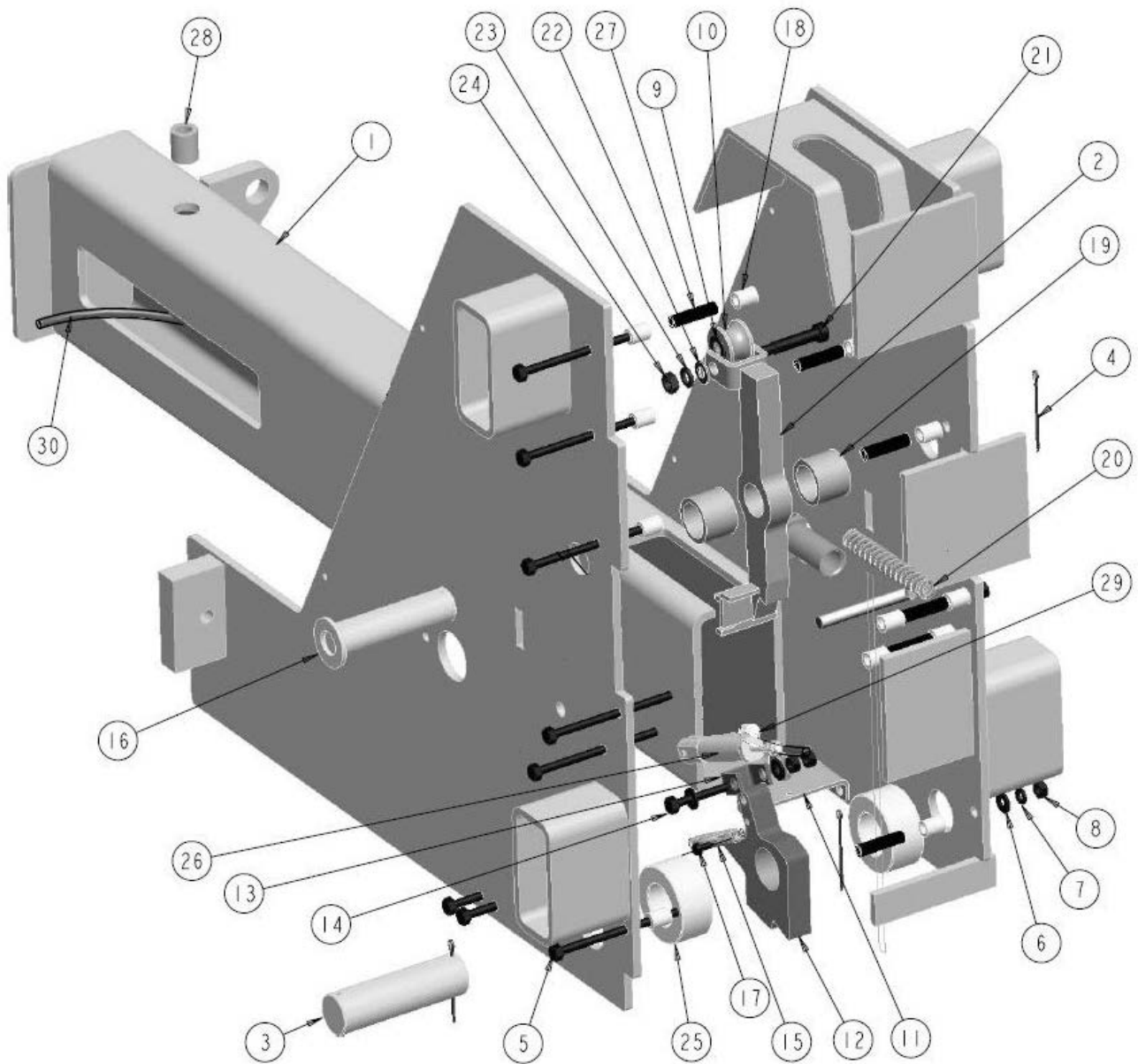
Figure 73



Item#	Part #	Description	Qty.
1	4-1324	FR. CROSSMEMBER WELDMENT, LS	1
2	1-3891	LOCK SAFETY PIN	1
3	2-2847	SAFETY DOG	1
4	2-2898	CYLINDER MOUNT, WELDED	1
5	1-3935	ROD CLEVIS	1
6	6-3997	HEX HD. BOLT, 1/4-20 UNC x 4" LG.	8
7	1-1115	SAFETY SPRING	1
8	6-0115	COTTER PIN, 1/8 DIA X 2 LG	3
9	1-3865	LOCK SAFETY PIN	1
10	2-2845	AUX. SAFETY WELDMENT, FRONT	1
11	6-0062	FLAT WASHER, 3/8 ID SAE	2
12	1-0766	CABLE ROLLER ASSEMBLY	1
13	6-3989	SAFETY CYLINDER	1
14	1-3798	ROLLER RETAINER	2
15	1-3812	SAFETY SPACER	2
16	6-0169	SELF-TAPPING SCREW, #10 X 3/8" LG	1
17	6-3990	ROLLER, SAFETY LADDER	12
18	6-0060	FLAT WASHER, 1/4" I.D.	10
19	6-0056	LOCK WASHER, 1/4" I.D.	8
20	6-0032	Hex Nut, 1/4"-20UNC	10
21	6-3986	SAFETY SPRING	1
22	1-3868	POLYTUBE SPACER	6
23	6-0801	SHOULDER BOLT , 3/8 x 1 1/2 LG.	1
24	6-0295	FLAT WASHER, 5/16" I.D.	1
25	6-0674	LOCK WASHER, 5/16 I.D.	1
26	6-0294	HEX NUT, 5/16-18 UNC	1
27	6-2432	THREADED INSERT, 1/2-13 UNC, 215-112	2
28	6-4040	ELBOW 90DEG 1/4" POLYTUBE - #10-32 UNF M	1
29	6-0028	HEX HD CS, 1/4 20UNCx1 3/4"LG	1

12.5 PARTS LIST – FRONT CROSS-MEMBER, RS

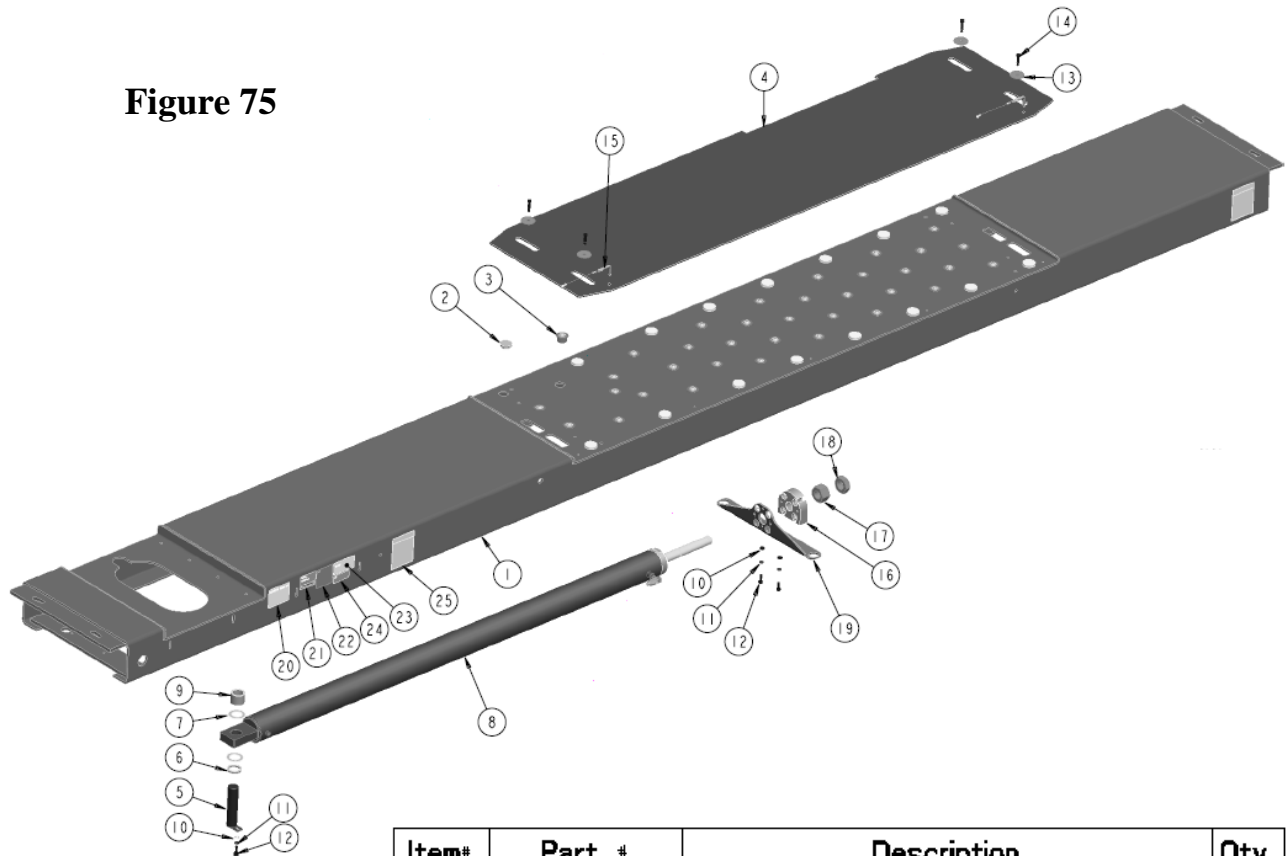
Figure 74



Item#	Part #	Description	Qty.
1	4-1325	FRONT CROSSMEMBER WELDMENT, RS	1
2	2-2845	AUX. SAFETY WELDMENT, FRONT	1
3	1-3891	LOCK SAFETY PIN	1
4	6-0115	COTTER PIN, 1/8 DIA X 2 LG	3
5	6-3997	HEX HD. BOLT, 1/4-20 UNC x 4" LG.	8
6	6-0060	FLAT WASHER, 1/4" I.D.	10
7	6-0056	LOCK WASHER, 1/4" I.D.	8
8	6-0032	Hex Nut, 1/4"-20UNC	10
9	6-0062	FLAT WASHER, 3/8 ID SAE	2
10	1-0766	CABLE ROLLER ASSEMBLY	1
11	2-2898	CYLINDER MOUNT, WELDED	1
12	2-2847	SAFETY DOG	1
13	1-3935	ROD CLEVIS	1
14	6-0028	HEX HD CS, 1/4 20UNC x 1 3/4" LG	1
15	1-1115	SAFETY SPRING	1
16	1-3865	LOCK SAFETY PIN	1
17	6-0169	SELF-TAPPING SCREW, #10 X 3/8" LG	1
18	6-3990	ROLLER, SAFETY LADDER	12
19	1-3812	SAFETY SPACER	2
20	6-3986	SAFETY SPRING	1
21	6-0801	SHOULDER BOLT , 3/8 x 1 1/2 LG.	1
22	6-0295	FLAT WASHER, 5/16" I.D.	1
23	6-0674	LOCK WASHER, 5/16 I.D.	1
24	6-0294	HEX NUT, 5/16-18 UNC	1
25	1-3798	ROLLER RETAINER	2
26	6-3989	SAFETY CYLINDER	1
27	1-3868	POLYTUBE SPACER	6
28	6-2432	THREADED INSERT, 1/2-13 UNC, 215-112	2
29	6-4040	ELBOW 90DEG 1/4" POLYTUBE - #10-32 UNF M	1
30	8-0141_4-1326	POLYTUBE, 1/4" DIA x 0.038" WALL, BLACK, 40" LG	1

12.6 PARTS LIST - DECK ASSEMBLY, LEFT SIDE

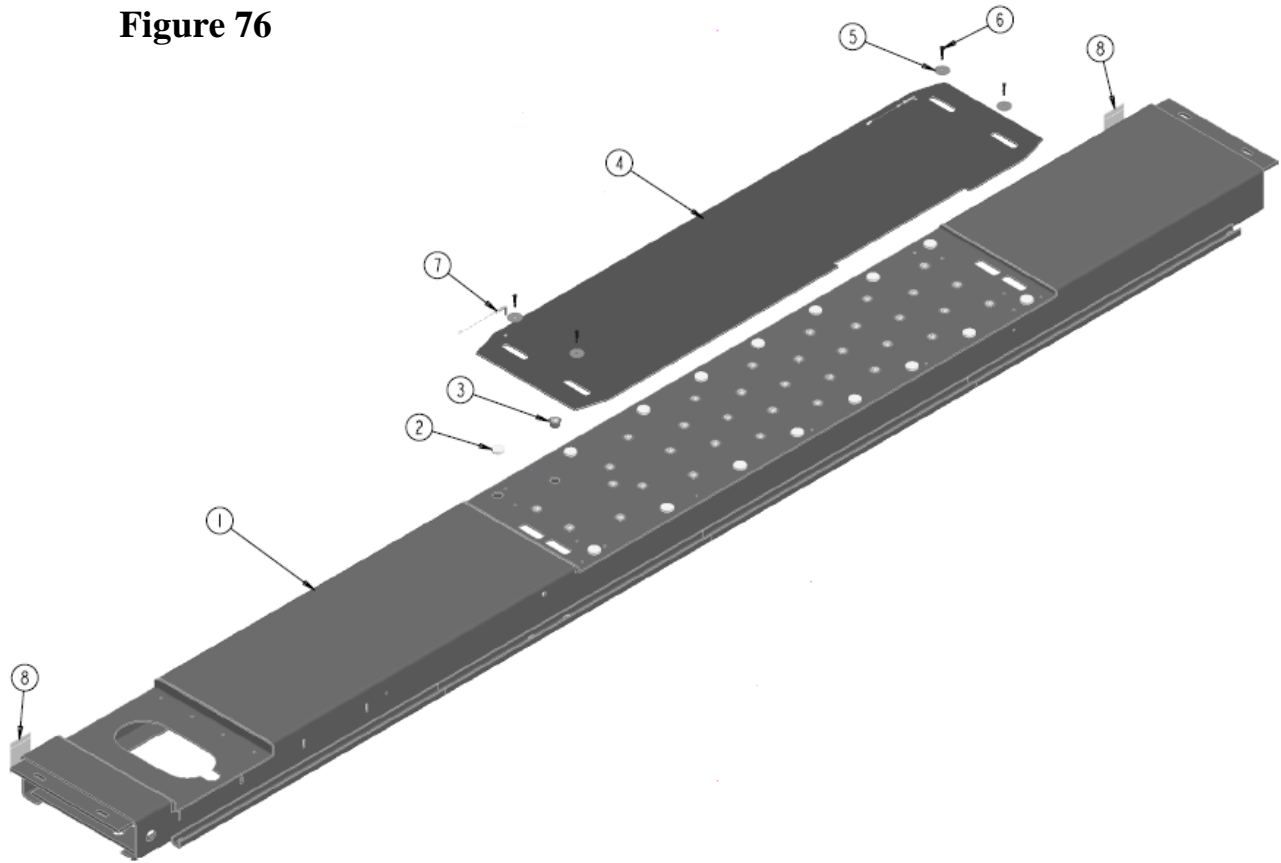
Figure 75



Item#	Part #	Description	Qty.
1	4-1322	DECK WELDMENT, L.S.	1
2	1-3762	PLASTIC INSERT	18
3	6-2940	BALL TRANSFER	35
4	2-2857	REAR SLIP PLATE	1
5	2-0566	DECK SHEAVE PIN	1
6	1-3885	CYLINDER SPACER	1
7	1-0757	NYLON THRUST WASHER	2
8	4-1348	HYDRAULIC CYLINDER KIT	1
9	1-3883	CYLINDER SPACER	1
10	6-0295	FLAT WASHER, 5/16" I.D.	3
11	6-0674	LOCK WASHER, 5/16 I.D.	3
12	6-0293	HEX HEAD BOLT, 5/16-18UNC x 1" LG.	3
13	6-0426	FLAT WASHER	4
14	6-0206	SHOULDER BOLT, 3/8" DIA. X 1" LG.	4
15	2-0637	LOCKING PIN ASSEMBLY	2
16	2-2866	CABLE FLANGE	1
17	6-3991	HEX NUT, 1-3/8 - 12 UNF	1
18	6-3992	HEX JAM NUT, 1-3/8 - 12 UNF	1
19	1-3887	ANTI-ROTATION BAR, FORMED	2
20	6-1763	CAPACITY DECAL, 14,000 LB	1
21	SERIAL_N	SERIAL NUMBER, MODEL NUMBER DECAL	1
22	6-2810	ALI GOLD DECAL	1
23	6-1637	SAFETY DECAL	1
24	ALI_DECAL	ALI GOLD DECAL	1
25	KY089004	WARNING DECAL	2

12.7 PARTS LIST - DECK ASSEMBLY, RIGHT SIDE

Figure 76



Item#	Part #	Description	Qty.
1	4-1323	DECK WELDMENT, R.S.	1
2	1-3762	PLASTIC INSERT	16
3	6-2940	BALL TRANSFER	35
4	2-2857	REAR SLIP PLATE	1
5	6-0426	FLAT WASHER	4
6	6-0206	SHOULDER BOLT, 3/8" DIA. X 1" LG.	4
7	2-0637	LOCKING PIN ASSEMBLY	2
8	KY089004	WARNING DECAL	2

12.8 PARTS LIST – CYLINDER ASSEMBLY – P/N: 4-1348

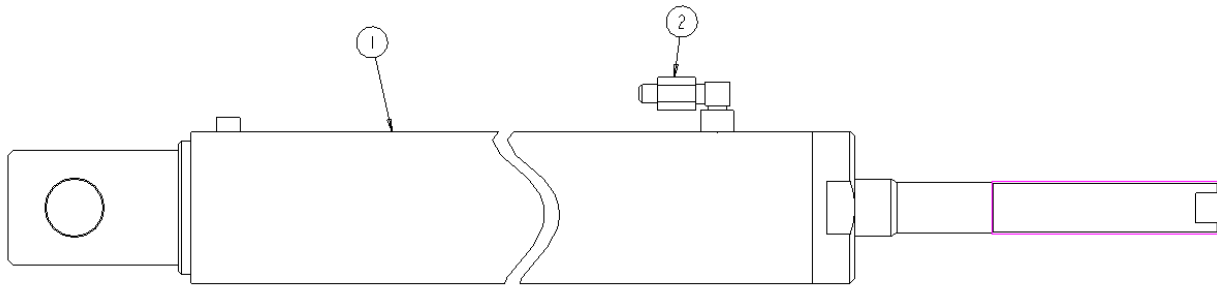


Figure 77

Item#	Part #	Description	Qty.
1	4-1335	HYDRAULIC CYLINDER	1
2	6-2436	FLOW CONTROL 4P	1

12.9 PARTS LIST – HYDRAULIC CYLINDER – P/N: 4-1335

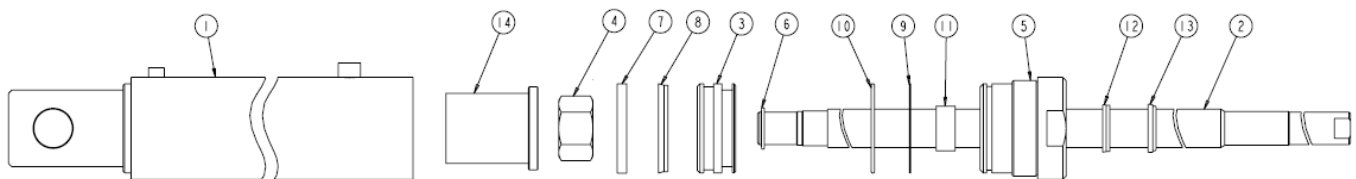


Figure 78

Item#	Part #	Description	Qty.
1	2-2861	CYL. BARREL WELDMENT	1
2	2-2862	PISTON ROD	1
3	2-2863	PISTON, MACHINED	1
4	6-3991	HEX NUT, 1-3/8 - 12 UNF	1
5	2-2864	GLAND, MACHINED	1
6	6-4047	O-RING HALLITE AS568-220 1-3/8 ID x 1-5/8 OD x 1/8 CS	1
7	6-0004	WEAR RING 3/8" WIDE X 1/8" THK. 3 1/2" O.D.	1
8	6-4036	SEAL, HALLITE 4364900, 1-1/2 ID x 1 7/8 OD x 5/16	1
9	6-0938	BACK-UP RING, PARKER N0300-236	2
10	6-0655	O-RING 3.5" O.D. X 1/8" C/S	1
11	6-1473	WEAR RING, HALLITE F30337, 1.75 OD x 1.5 ID x 3/4"	1
12	6-1304	ROD SEAL, HALLITE 4346200, 1-1/2 ID x 1 7/8 OD x 5/16	1
13	6-0001	ROD WIPER, HALLITE 8881210, 1-1/2 ID x 1-7/8 OD	1
14	1-3943	CYLINDER SPACER, WELDMENT	1

12.10 PARTS LIST - CABLE ROUTING

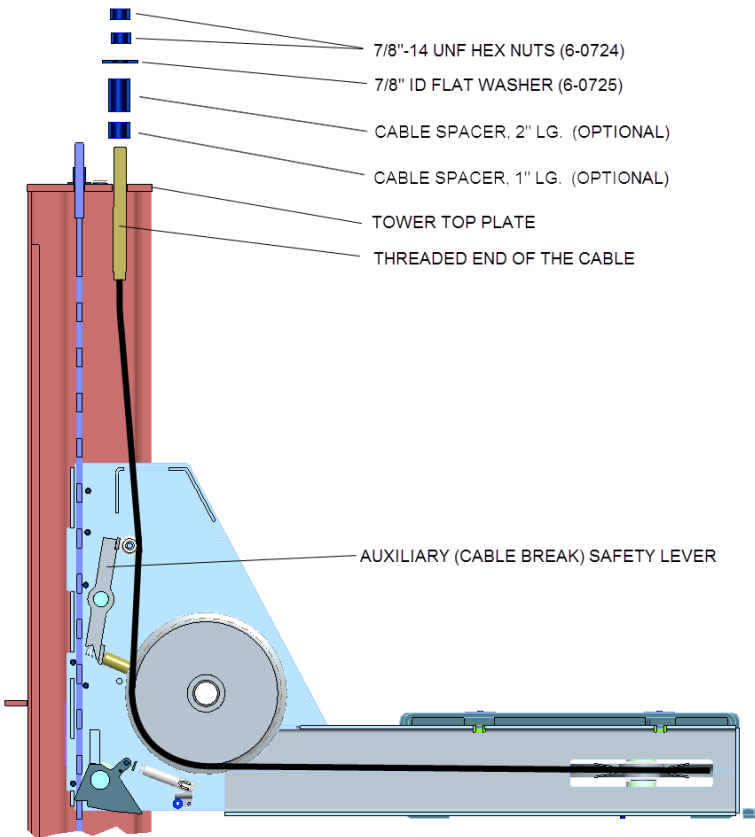
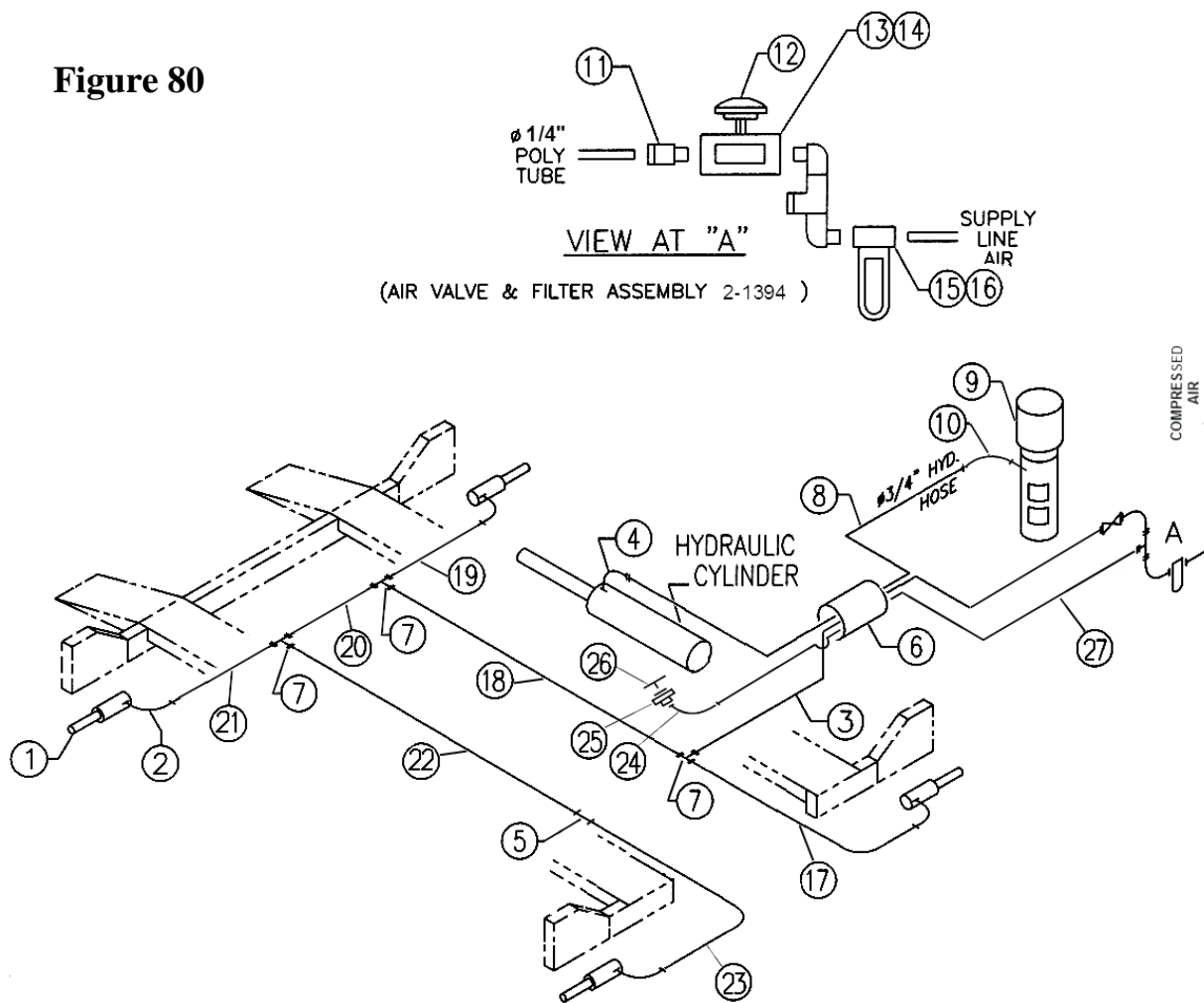


Figure 79

ITEM	QTY.	DESCRIPTION	PART #
	1	CABLE ASSY. - FRONT LEFT	2-2796
	1	CABLE ASSY. - FRONT RIGHT	2-2799
	1	CABLE ASSY. - REAR LEFT	2-2797
	1	CABLE ASSY. - REAR RIGHT	2-2798
	8	HEX NUT, 7/8"-14UNF GR8	6-0724
	4	CABLE SPACER, 2"LG (use optional)	1-0800
	4	FLAT WASHER, 7/8"ID	6-0725
	4	CABLE SPACER, 1"LG (use optional)	1-0801

12.11 PARTS LIST – AIR AND HYDRAULICS

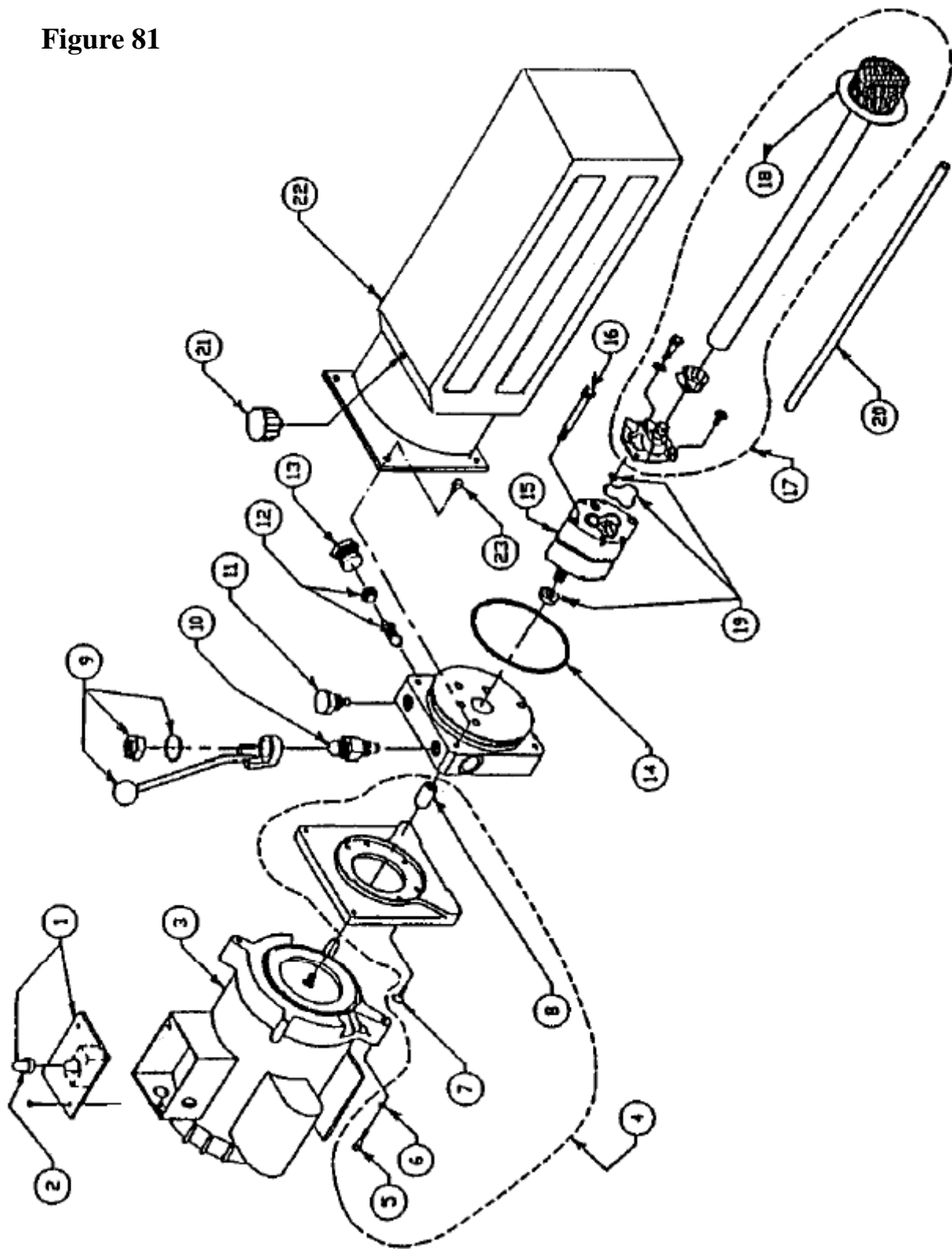
Figure 80



ITEM#	QTY.	DESCRIPTION	PART#
1	4	AIR CYLINDER, SAFETY RELEASE	6-3989
2	4	ELBOW, 90 DEG, 1/4" POLYTUBE TO #10-32 UNF	6-4040
3	77"	1/4" POLYTUBE, BLACK	8-0141
4	1	FLOW CONTROL	6-2436
5	1	FITTING, UNION, 1/4" POLYTUBE, PUSH-LOCK	6-3202
6	5FT	HOSE GUARD	6-0714
7	3	UNION, TEE, 1/4" POLYTUBE	6-2971
8	1	HYDRAULIC HOSE, 16FT	6-1692
9	1	POWER UNIT, 220V, 1PH	6-1936
	1	POWER UNIT, 220V, 3PH	6-1165
10	1	ELBOW 90DEG, 9/16" SAE TO #6 JIC	6-0804
11	1	ADDAPTER 1/8" NPT TO 1/4" POLYTUBE	6-0708
12	1	AIR VALVE PUSHBUTTON KIT	6-1777
13	1	3-WAY AIR VALVE	6-1775
14	4	PHILLIPS HD SCREW, #8-32 X 1"	6-1094
15	1	AIR FILTER ASSEMBLY	6-0772
16	1	AIR FILTER ELEMENT, (REPLACEMENT)	6-0180
17	40"	1/4" POLYTUBE	8-0141
18	222"	1/4" POLYTUBE	8-0141
19	32"	1/4" POLYTUBE	8-0141
20	67"	1/4" POLYTUBE	8-0141
21	32"	1/4" POLYTUBE	8-0141
22	222"	1/4" POLYTUBE	8-0141
23	40"	1/4" POLYTUBE	8-0141
24	1	ELBOW, 90 DEG, 1/4" NPT TO 3/8" POLYTUBE	6-3010
25	1	TERMINAL BOLT, 3/4", SHORT	6-0713
26	1	TEE FITTING, 1/4" NPT, F	6-3896
27	182"	3/8" POLYTUBE, BLACK	8-0142

12.12 PARTS LIST - POWER PACK

Figure 81



#6-1398, 208-230V/1PH/60Hz

#6-2614, 208-230V/3PH/60Hz

ITEM	QTY.	DESCRIPTION	PART#
1	1	MICROSWITCH AND WIRING ASSEMBLY	6-0881
2	1	MICROSWITCH BOOT	6-1084
3	1	MOTOR, 230V AC, 1 PHASE, 60 HERTZ, 3HP	6-1959
	1	MOTOR, 230V AC, 3 PHASE, 60 HERTZ	6-1079
4	1	MOTOR ADAPTER KIT	0-0197
5	4	SOCKET HD.CAP SCW. 1/4"-20UNC X 1 5/8"LG.	6-1085
6	4	LOCK WASHER, 1/4" I.D.	6-0056
7	4	ALLEN FLAT HD.SCW. 1/4"-20UNC X 3/4"LG.	6-1086
8	1	COUPLING	6-0774
9	1	RELEASE BRACKET & HANDLE ASSEMBLY	6-0776
10	1	VALVE CARTRIDGE RELEASE	6-0880
11	1	VALVE CARTRIDGE CHECK	6-1087
12	1	FIXED RELIEF VALVE ASSEMBLY (RV 23)	6-1323
13	1	RELIEF VALVE CAP	6-1089
14	1	RESERVOIR "O" RING	6-0875
15	1	PUMP ASSEMBLY, 2.5CC/REV	6-1958
16	2	PUMP MOUNTING BOLT	6-1090
17	1	INLET PLUMBING KIT	0-0198
18	1	INLET HOSE / FILTER ASSEMBLY	6-0786
19	1	PUMP "O" RING KIT	0-0199
20	1	RETURN TUBE	6-0783
21	1	BREATHER FILLER CAP	6-0784
22	1	RESERVOIR	6-0785
23	4	RESERVOIR SCREW	6-1091

Records of all lift maintenance and operator training should be recorded in the following table.

Maintenance and Training Performed	Date	By	Notes

* Make copies of this form as required.