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D-7 SERIES USER MANUAL

Model:

D-7

D-7/X

**FOUR POST PARKING LIFT
7,000 POUND CAPACITY**

Also known as Commander 7000



Rev G 06012016
P/N# 199818



Reference ANSI/ALI ALIOM safety requirements for installation and service of automotive lifts before installing lift.



PLEASE READ THE ENTIRE CONTENTS OF THIS MANUAL PRIOR TO INSTALLATION AND OPERATION. BY PROCEEDING WITH LIFT INSTALLATION AND OPERATION YOU AGREE THAT YOU FULLY UNDERSTAND AND COMPREHEND THE FULL CONTENTS OF THIS MANUAL. FORWARD THIS MANUAL TO ALL OPERATORS. FAILURE TO OPERATE THIS EQUIPMENT AS DIRECTED MAY CAUSE INJURY OR DEATH.

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PRODUCT SPECIFICATIONS

MODEL	D-7	D-7/X
Maximum Lift Capacity	7000-lbs	7000-lbs
Power Unit	110 V, 60 Hz, 13 Amp, Single Ph.	110 V, 60 Hz, 13 Amp, Single Ph.
Power Plug	3-Prong, Grounded	3-Prong, Grounded
Power Cord	12 Gauge	12 Gauge
Max. Lifting Height	75" (1905mm)	85" (2261mm)
Min. Runway Height	4-1/2" (114mm)	4-1/2" (114mm)
Min. Wheelbase for Rail Jacks	128" with two Center Jacks	128" with two Center Jacks
Rail Jack Capacity	3,500-lb Each (Max. 2 per lift)	3,500-lb Each (Max. 2 per lift)
Hydraulic Oil Capacity/Type	10-qt AW-32 Fluid or Dexron III or VI ATF	10-qt AW-32 Fluid or Dexron III or VI ATF
Overall Dimensions	82" H x 203" L x 105" W	92" H x 226" L x 117" W
Shipping Weight	1635-lbs	1895-lbs

IMPORTANT NOTICE

1. Read this manual thoroughly before installing, operating, or maintaining this lift.
2. This lift is designed for indoor use only, and should not be installed in a pit or depression.
3. The floor on which the lift is to be installed must be 4" inch minimum thickness concrete, with a minimum compressive strength of 3000 PSI, and reinforced with steel bar.
4. The lifts have specific electrical requirements as described in the Installation Instructions section of this manual.
5. This lift has a minimum ceiling height requirement as described in the Installation Instructions section of this manual.
6. Failure by the owner to provide the recommended shelter, mounting surface, electrical supply, and ceiling height could result in unsatisfactory lift performance, property damage, or personal injury.
7. Do not attempt to install this lift if you have never been trained on basic automotive lift installation procedures. Reference ANSI/ALI ALIOM Safety requirements for Installation and Service of Automotive Lifts.
8. Never attempt to lift components without proper lifting tools such as forklift or cranes. Stay clear of any moving parts that can fall and cause injury. These instructions must be followed to insure proper installation and operation of your lift. Failure to comply with these instructions can result in serious bodily harm and void product warranty.
9. Dannmar Equipment will assume no liability for loss or damage of any kind, expressed or implied resulting from improper installation or use of this product.

DEFINITIONS OF HAZARD LEVELS

Identify the hazard levels used in this manual with the following definitions and signal words:

Watch for this symbol: Alerts to immediate hazards which will result in severe personal injury or death.



Watch for this symbol: Alerts to hazards or unsafe practices which could result in severe personal injury or death.



Watch for this symbol: Alerts to hazards or unsafe practices which may result in minor personal injury, product or property damage.



Lubricate all cable sheaves, bearings, and shafts with grease prior to operating the lift. Lubricate on an annual basis.

Motors and all electrical components are not sealed against the weather and moisture. Install this lift in a protected indoor location. Failure by the owner to provide the recommended shelter could result in unsatisfactory lift performance, property damage, or personal injury.

IMPORTANT SAFETY INSTRUCTIONS

1. **READ ALL INSTRUCTIONS.**
2. **CARE MUST BE TAKEN** as burns can occur from touching hot parts.
3. **DO NOT** operate equipment with a damaged power cord or if the equipment has been dropped or damaged until it has been examined by a qualified service person.
4. **DO NOT** let the power cord come in contact with hot manifolds or moving fan blades.
5. **IF AN EXTENSION CORD IS NECESSARY**, a cord with a current rating equal to or more than that of the equipment should be used. Cords rated for less current than the equipment may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
6. **ALWAYS UNPLUG EQUIPMENT FROM ELECTRICAL OUTLET WHEN NOT IN USE.** Never use the power cord to pull the power plug from the outlet. Grasp the plug and pull to disconnect.
7. **LET EQUIPMENT COOL COMPLETELY BEFORE PUTTING AWAY.** Loop power cord loosely around equipment when storing.
8. **TO REDUCE THE RISK OF FIRE**, do not operate equipment in the vicinity of open containers of flammable liquids (i.e., gasoline)
9. **ADEQUATE VENTILATION SHOULD BE PROVIDED** when working on operating internal combustion engines.
10. **KEEP HAIR, LOOSE CLOTHING, FINGERS, AND ALL PARTS OF THE BODY AWAY FROM MOVING PARTS.**
11. **TO REDUCE THE RISK OF ELECTRIC SHOCK**, do not use on wet surfaces or expose to rain.
12. **USE ONLY AS DESCRIBED IN THIS MANUAL.** Use only manufacturer's recommended attachments.
13. **DO NOT** raise vehicle on the lift until installation is completed as instructed in this manual.
14. **KEEP HANDS AND FEET CLEAR.** Remove hands and feet from any moving parts. Keep feet clear of lift when lowering. Avoid pinch points.
15. **KEEP WORK AREA CLEAN.** Cluttered work areas invite injuries.
16. **CONSIDER WORK AREA ENVIRONMENT.** Do not expose equipment to rain. **DO NOT** use in damp or wet locations. Keep area well lit.
17. **ONLY TRAINED OPERATORS** should operate this lift. All non-trained personnel should be kept away from work area. Never let non-trained personnel come in contact with, or operate lift.
18. **USE LIFT CORRECTLY.** Use lift in the proper manner. Never use lifting adapters other than what is approved by the manufacturer.
19. **DO NOT** override self closing lift controls.
20. **REMAIN CLEAR** of lift when raising or lowering vehicle.
21. **CLEAR AREA** if vehicle is on danger of falling.

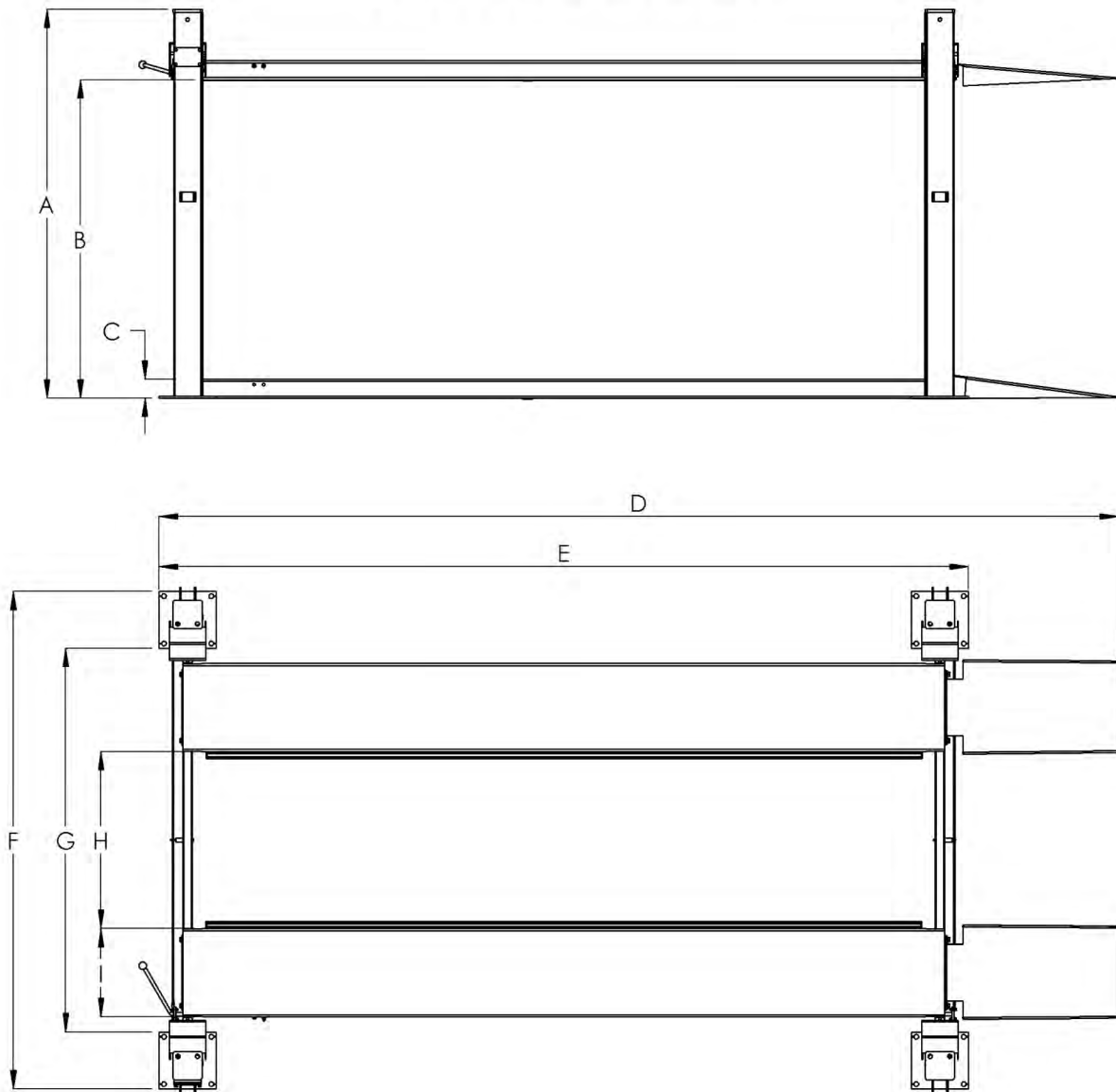
22. **ALWAYS ENSURE** that the safety locks are engaged before any attempt is made to work on or near vehicle.
23. **DRESS PROPERLY.** Non-skid steel-toe footwear is recommended when operating lift.
24. **GUARD AGAINST ELECTRIC SHOCK.** This lift must be grounded while in use to protect the operator from electric shock. Never connect the green power cord wire to a live terminal. This is for ground only.
25. **DANGER!** The power unit used on this lift contains high voltage. Disconnect power at the receptacle before performing any electrical repairs. Secure plug so that it cannot be accidentally plugged in during service.
26. **ALWAYS WEAR SAFETY GLASSES.** Everyday eyeglasses only have impact resistant lenses. They are not safety glasses.
27. **MAINTAIN WITH CARE.** Keep lift clean for better and safe performance. Follow manual for proper lubrication and maintenance instructions. Keep control handles and / or buttons dry, clean and free from grease and oil.
28. **STAY ALERT.** Watch for dangers while working on or around lift.
29. **CHECK FOR DAMAGED PARTS.** Check for alignment of moving parts, breakage of parts or any condition that may affect its operation. Do not use lift if any component is broken or damaged.
30. **NEVER** remove safety related components from the lift. Do not use lift if safety related components are damaged or missing.
31. **NOTE:** If attachments, accessories, or configuration modifying components that are located in the load path, affect operation of the lift, affect the lift electrical listing or affect intended vehicle accommodation are used on this lift and, if they are not certified for use on this lift, then the certification of this lift shall become null and void. Contact Dannmar Equipment for information pertaining to certified attachments, accessories, or configuration modifying component

SAVE THESE INSTRUCTIONS

OWNER / EMPLOYER RESPONSIBILITIES

- 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/SM10-1, ALI Lifting it Right safety manual; ALI/ST-10 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.
- 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 lift inspectors are qualified and that they are adequately trained in the inspection of the lift.
- 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 lift maintenance personnel are qualified and that they are adequately trained in the maintenance of the lift.
- Shall maintain the periodic inspection and maintenance records recommended by the manufacturer or ANSI/ALI ALOIM-2008, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance.
- Shall display the lift manufacturer's operating instructions; ALI/SM10-1, ALI Lifting it Right safety manual; ALI/ST-10 ALI Safety Tips card; ANSI/ALI ALOIM-2008, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; 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.
- Shall not modify the lift in any manner without the prior written consent of the manufacturer.
- 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.

PRODUCT DIMENSIONS



MODEL	D-7	D-7/X
A: Height of Columns	82" (2085 mm)	94" (2391 mm)
B: Max. Clearance under Runway	67.2" (1708 mm)	80" (2050 mm)
C: Runway Height	4.5" (118 mm)	4.5" (118 mm)
D: Overall Length	203" (5139 mm)	226" (5748 mm)
E: Outside Length	170.5" (4335 mm)	195" (4944 mm)
F: Overall Width	105" (2667 mm)	117" (2972 mm)
G: Width between Posts	91" (2311 mm)	103" (2616 mm)
H: Width between Runways	37.5" (953 mm)	37.5" (953 mm)
I: Runway Width	18.5" (473 mm)	18.5" (473 mm)

INSTALLATION INSTRUCTIONS

TOOLS REQUIRED

1. Rotary Hammer Drill Or Similar (If Anchoring)
2. 3/4" Masonry Bit (If Anchoring)
3. Hammer
4. Foot Level
5. Open End Wrench Set: Metric
6. Socket And Ratchet Set: Metric
7. Hex Key / Metric Allen Wrench Set
8. Medium Crescent Wrench

IMPORTANT NOTICE!

These instructions must be followed to ensure proper installation and operation of your lift. Failure to comply with these instructions can result in serious bodily harm and void product warranty. Manufacturer will assume no liability for loss or damage of any kind, expressed or implied resulting from improper installation or use of this product.

STEP 1 (Selecting Site)

BEFORE INSTALLING YOUR NEW LIFT, CHECK THE FOLLOWING:

1. **LIFT LOCATION:** Always use architects plans when available. Check layout dimension against floor plan requirements making sure that adequate space is available.
2. **OVERHEAD OBSTRUCTIONS:** The area where the lift will be located should be free of overhead obstructions such as heaters, building supports, electrical lines etc.
3. **CLEARANCES:** Be sure you have 4' on the Power Unit side and 10' on the opposite end to allow space to install long safety linkage rods.

IMPORTANT NOTICE!

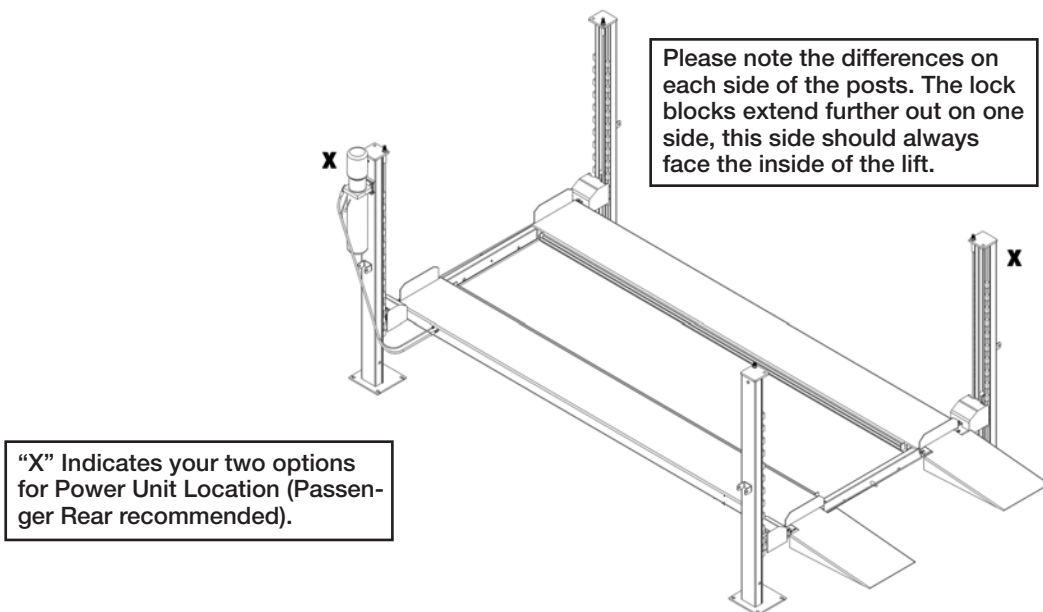
DO NOT install this lift on any asphalt surface or any surface other than concrete.

DO NOT install this lift on expansion seams or on cracked or defective concrete.

DO NOT install this lift on a elevated floor without first consulting building architect.

DO NOT install this lift outdoors unless special consideration has been made to protect the power unit from damp weather conditions.

DO NOT install this lift on slopped floor with more than 3" front to back or 2" side to side.

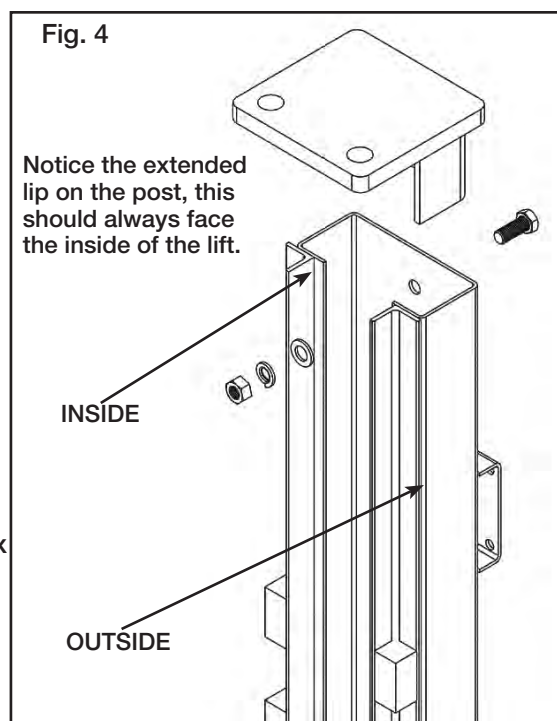


STEP 2 (Column & Cross Bar Installation)

1. **IMPORTANT! DO NOT** begin installation with lift close to wall. It is necessary to leave adequate clearance for installing safety linkage rods. Allow 120" on opposite side of power unit location and 60" on the Safety Handle Side (power unit side) for clearance.
2. Make a chalk line on the floor following the floor plan above to ensure unit is square.
3. Stand the columns in place making sure to position the power unit mounting bracket at the correct location (see "X" above) and making sure the extended lip on all the posts are facing the inside of the lift (see fig. 4) Note: You can also lay the columns down and slide the cross tubes in, you may need to disengage the spring on the primary safety.
4. Remove safety covers for installation and replace when final assembly is done. Raise one of the cross bars (both cross bars are the same) and slide it into the two front columns making sure to position the primary lock device **OUTWARD** and the cable pulleys **INWARD**. Manually clear the lock device on each side of the cross bar and slide the cross bar down until it rests on the safety lock position closest to the floor. (Be sure to re-engage safety spring if it was removed.)
5. Repeat this process for the rear cross bar. You will then have the columns and cross bars in position and spaced properly for the runways.
6. With the columns and cross bars in place, secure the column **TOP CAPS** using the M12 X 130MM Hex Bolt, Nylon Lock Nut & Washer. (See Fig. 4)

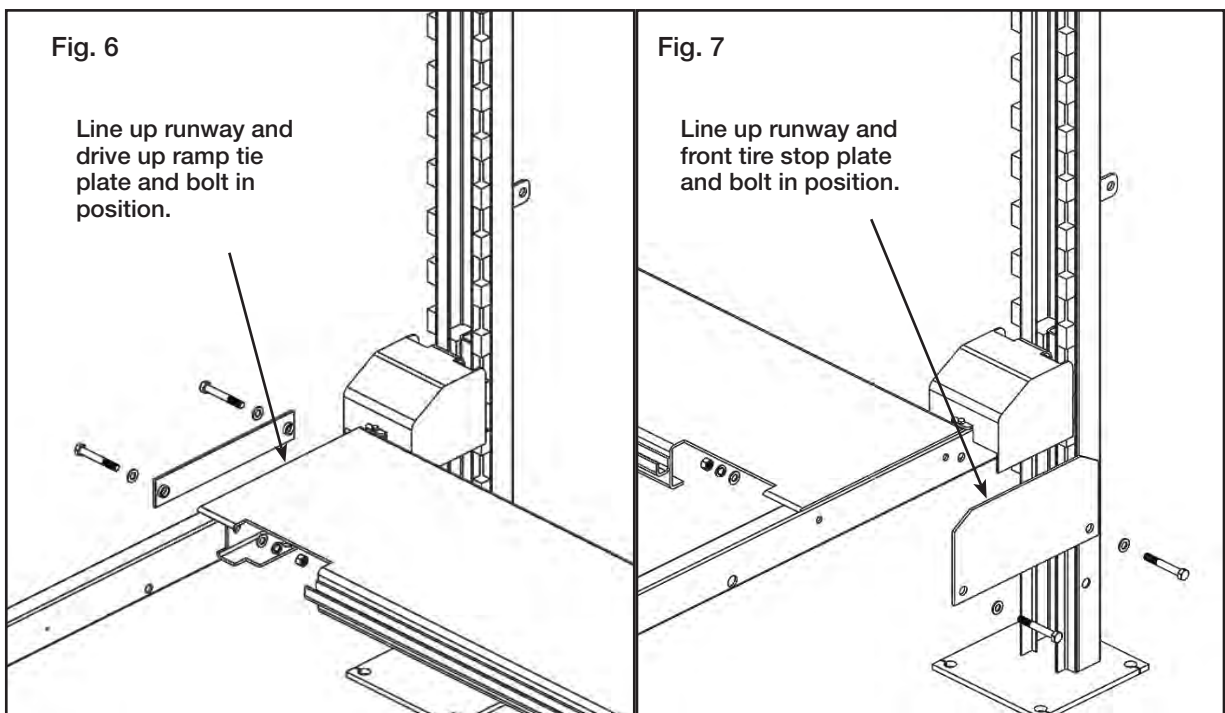
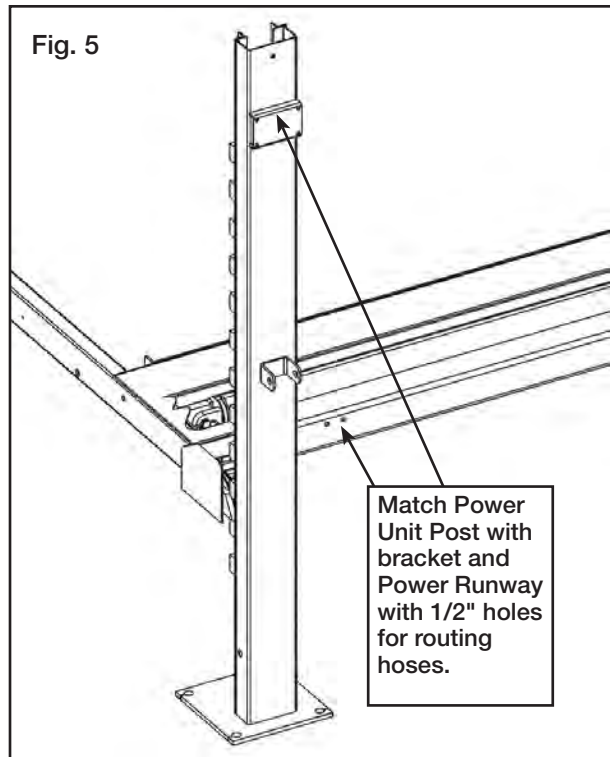
WARNING

Be very careful not to disturb the columns and cross bars at this time as they may tip over causing personal injury or harm.

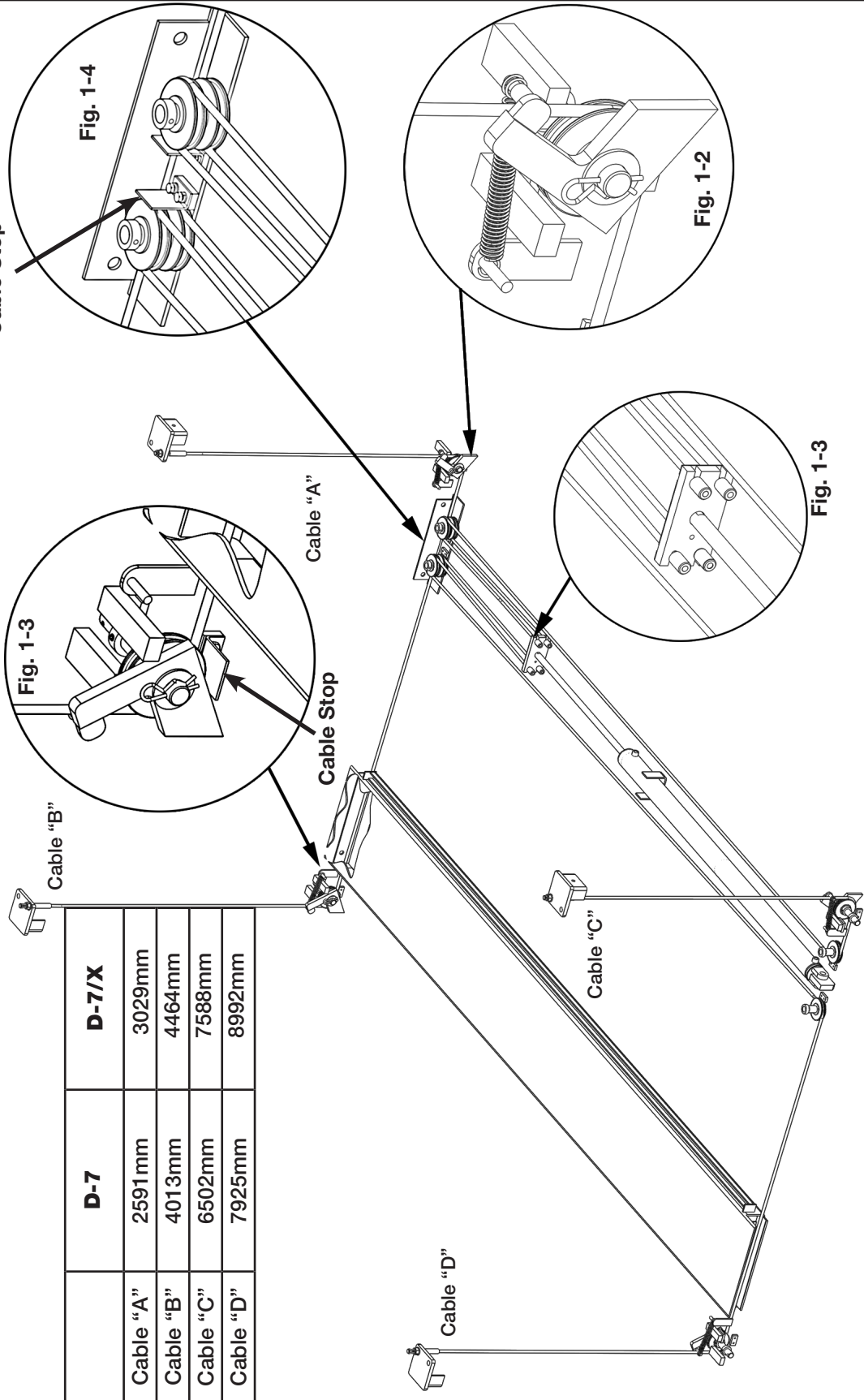


STEP 3 (Runway Installation)

1. Locate the runway with the cylinder attached underneath. This runway will be located adjacent the column with power unit bracket attached.
2. Position the 1/2" holes on the side of the runway near the power unit location. (See Fig. 5)
3. Line up the front of the cylinder runway with the cross bar bolt holes, then temporarily bolt in position using the M14 x 100mm hex bolt, nut and washers making sure to pass bolts through the front tire stops. (See Fig. 7)
4. Line up the rear of the cylinder runway with the cross bar bolt holes, then temporarily bolt in position using the M14 x 100mm hex bolt, nylon nut and washers making sure to pass bolts through the drive up ramp brackets. (See Fig. 6)



CABLE ROUTING



STEP 4

(Cable Installation)

IMPORTANT! Do not damage the chrome cylinder rod during this process. This can ruin the seals of the cylinder resulting in fluid leakage

1. Inspect cylinder nut and tighten if necessary. Be sure to have at least 4-6 threads past the nylon on the nut.
2. Inspect cables to ensure proper lengths. All cables should have ID tags showing proper cable lengths. (See Table on page 11 for proper lengths.)
3. Make sure both the cylinder flange plates are installed with the thin plate backing the nut.
4. In order to install the cables it is necessary to first remove the cylinder port plugs, then use an air blow gun or come along to extend the cylinder.
5. Place the M18 washer and locknut on the threaded end of the cable hand tight. Take the smaller plug end of the cable and begin to route it according to the cable routing guide on the previous page making sure to start the process at the top of the correct column.
6. The threaded end of the cable will end up at the top of each column. Make sure to route the cable on the inside of the slack cable safety as shown in figures 1-2 on the previous page. Run the cable between the slots on the 2 flange plates resting the back of the plug end against the large flange plate as shown in figure 1-3.
7. After the routing of all the cables has been completed install the 8 cable stop plates with the provided M8 x 16mm hex head bolts, M8 flat washers and the M8 spring washers. (See Figures 1-4 and 1-5 on the previous page)

NOTE: The cables will remain loose until start up is completed later in this manual.

STEP 5

(Power Unit Installation)

1. Mount the power unit to the mounting bracket using the M8 x 25mm hex bolts and nylon nuts then fill the reservoir with 10 quarts of 10-wt non foaming hydraulic oil. **IMPORTANT:** Use only a dedicated 120V/20 Amp circuit system and, if necessary, a 12 gauge extension cord. (See Fig. 9, next page.)

STEP 6

(Routing Hydraulic Hoses)

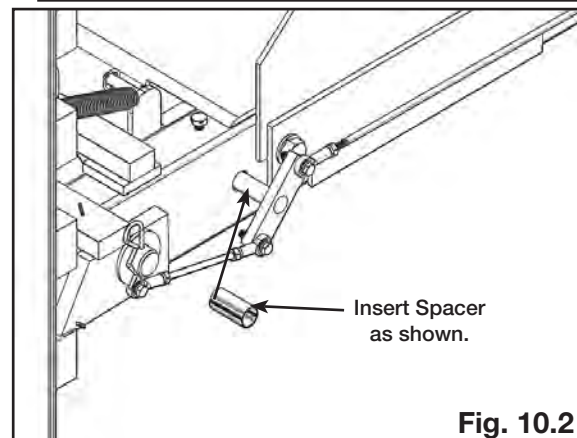
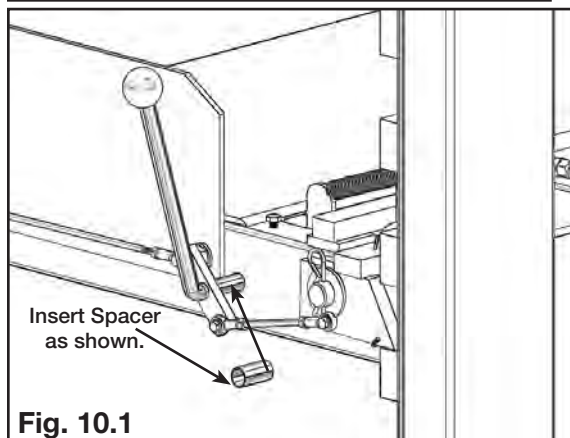
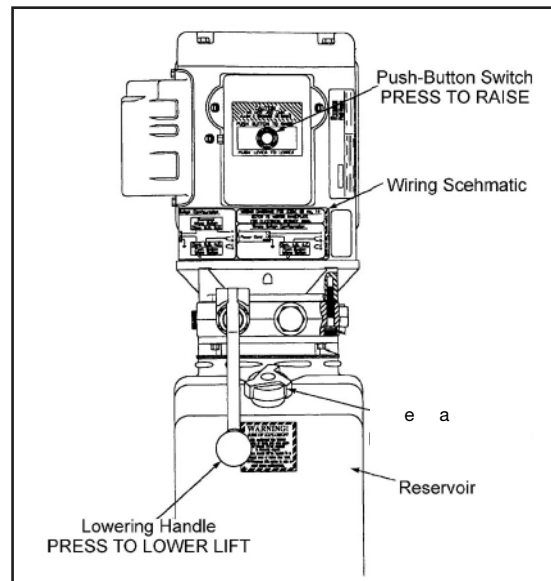
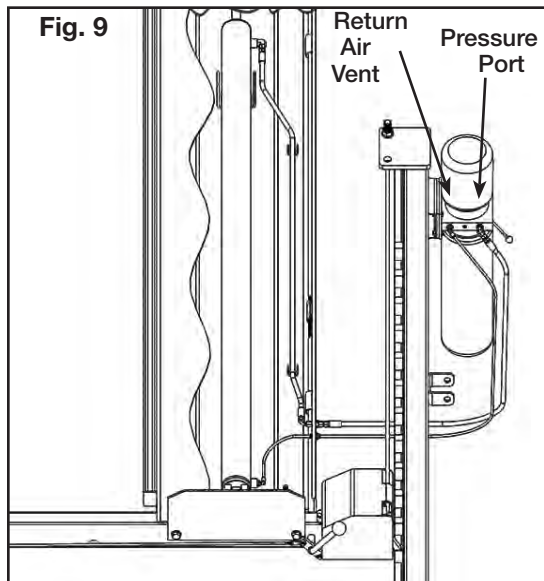
1. Install the one O-ring style 90-degree fitting in the power unit port that has the plastic plug in it. It is not necessary to use Teflon tape on O-ring fittings. Install one of the pneumatic push-to-connect 90-degree fittings with teflon tape in the power unit port with the Allen set screw.
2. Install the JIC straight bulkhead fitting inside the 1/2" hole on the cylinder runway furthest from the power unit. **DO NOT USE TEFLON TAPE** on JIC flared ends.
3. Install the push-to-connect straight bulkhead fitting inside the 1/2" hole on the cylinder runway closest to the power unit.
4. Install the standard 90-degree fitting at the cylinder port furthest from the power unit making

sure to point the fitting towards the power unit. On the pipe thread side of the fitting use teflon tape or pipe sealer. **DO NOT USE TEFLON TAPE** on JIC flared end.

5. Install the pneumatic push-to-connect 90-degree fitting at the cylinder port closest to the power unit making sure to point the fitting towards the power unit. On the pipe thread side of the fitting use Teflon tape or pipe sealer.
6. Connect hydraulic hoses as shown below making sure to first pass through the retaining rings located on the inside of the runway. **MAKE SURE HOSES ARE KEPT CLEAR OF CABLES.**

NOTE: When tightening connections with flared (JIC) fittings, always follow the tightening instructions. Failure to follow these instructions may result in cracked fittings and / or leaks.

1. Screw the fittings in **HAND TIGHT**.
2. The nut portion of the fitting is the only part that should turn during tightening. The fitting **MUST NOT** turn.
3. Then use the proper size wrench to tighten the nut portion of the fitting. Do not over-tighten.
4. Back the nut portion of the fitting off one full turn.
5. Again, tighten the nut portion hand tight without moving the fitting.



STEP 7 **(Connecting Safety Linkage Rods)**

Install the Linkage Rods as shown below, making sure to position the Safety Handle adjacent to the Power Unit. Pay careful attention to assemble the FRONT and REAR Linkage assemblies as shown. Improper assembly will result in Safety Lock failure. (See Fig. 10.1, 10.2 on previous page & 10.3)

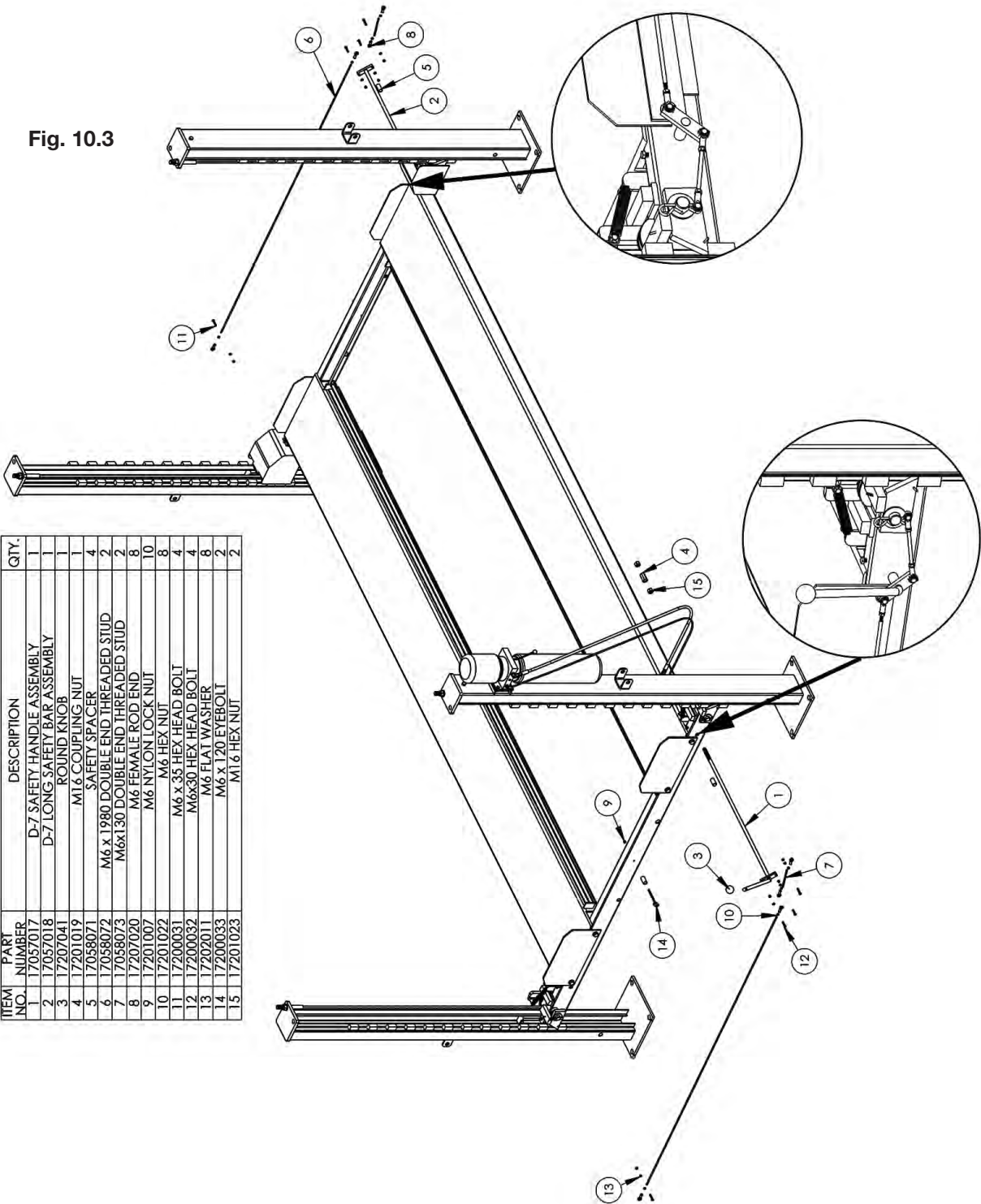


Fig. 10.3

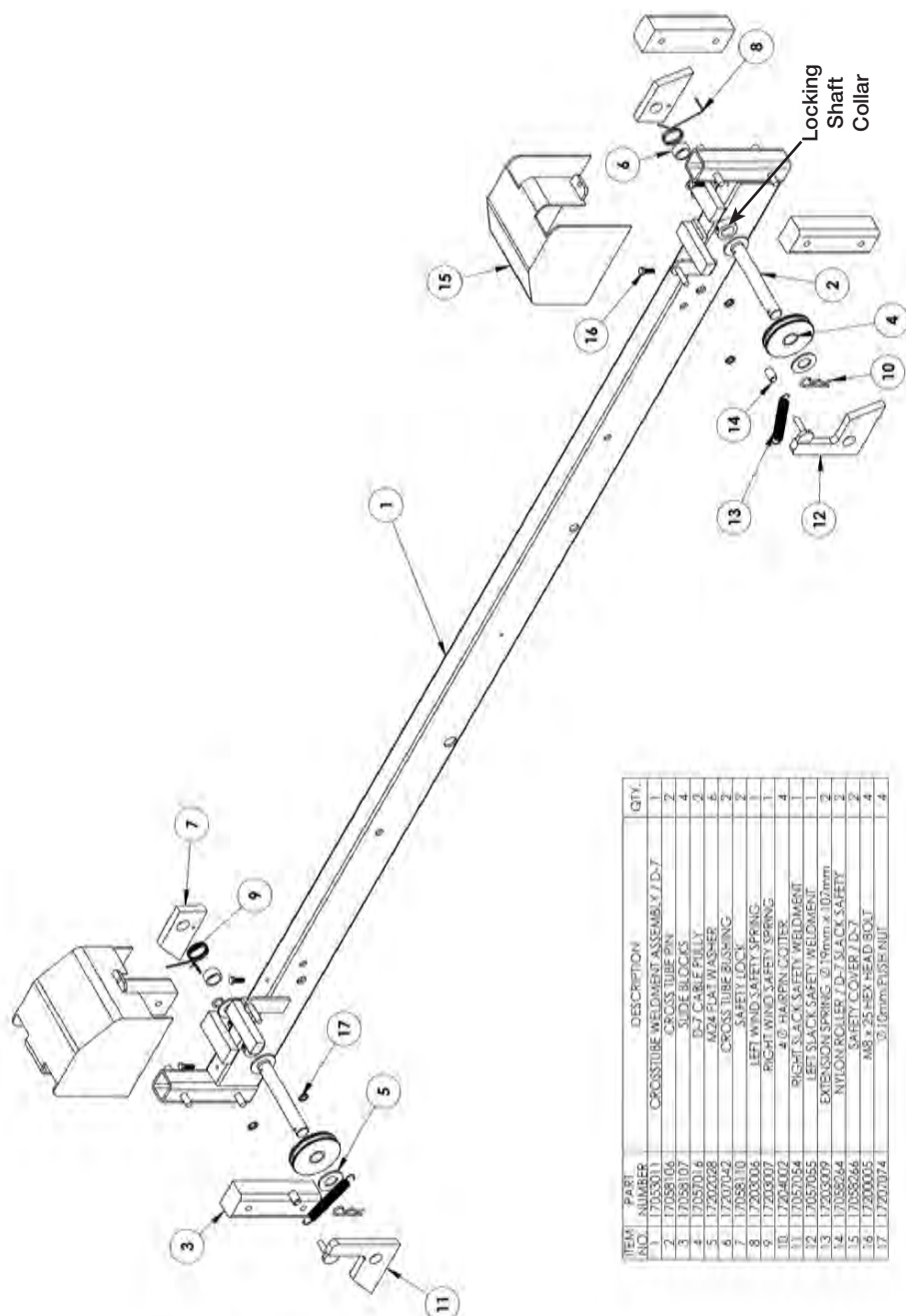
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	17057017	D-7 SAFETY HANDLE ASSEMBLY	1
2	17057018	D-7 LONG SAFETY BAR ASSEMBLY	1
3	17207041	ROUND KNOB	1
4	17201019	M1.6 COUPLING NUT	4
5	17058071	SAFETY SPACER	2
6	17058072	M6 x 1980 DOUBLE END THREADED STUD	2
7	17058073	M6x130 DOUBLE END THREADED STUD	2
8	17207020	M6 FEMALE ROD END	8
9	17201007	M6 NYLON LOCK NUT	10
10	17201022	M6 HEX NUT	8
11	17200031	M6 x 35 HEX HEAD BOLT	4
12	17200032	M6x30 HEX HEAD BOLT	4
13	17202011	M6 FLAT WASHER	8
14	17200033	M6 x 120 EYEBOLT	2
15	17201023	M1.6 HEX NUT	2

STEP 8 (Inspecting Pulley Guards)

1. After the lift is installed, lightly oil the cable roller shafts with lubrication (gear grease).
2. Before proceeding, double check to make sure the locking shaft collars for the cross bar cable pulleys and pulley guards are tightened securely.



To prevent personal injury or death, cross bar lock collars must remain tight at all times. Before reinstalling pulley guard covers, check to make sure the rollers and pins are installed per diagram below.



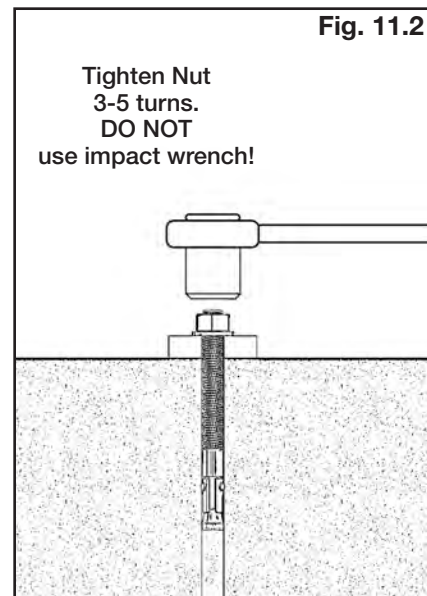
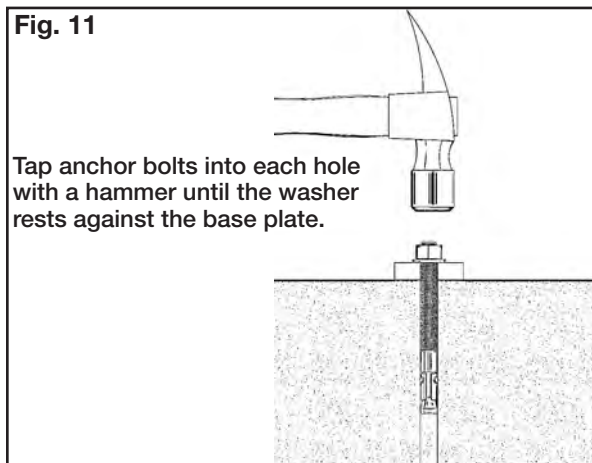
ITEM	QTY	DESCRIPTION	QTY
1	1	CROSS TUBE WELDMENT ASSEMBLY D-T	1
2	2	CROSS TUBE PIN	2
3	2	SLIDE BLOCKS	2
4	2	10-7 CABLE PULLY	2
5	2	10-7 CABLE PULLY	2
6	2	10-7 CABLE PULLY	2
7	2	10-7 CABLE PULLY	2
8	2	10-7 CABLE PULLY	2
9	2	10-7 CABLE PULLY	2
10	2	10-7 CABLE PULLY	2
11	2	10-7 CABLE PULLY	2
12	2	10-7 CABLE PULLY	2
13	2	10-7 CABLE PULLY	2
14	2	10-7 CABLE PULLY	2
15	2	10-7 CABLE PULLY	2
16	2	10-7 CABLE PULLY	2
17	2	10-7 CABLE PULLY	2

STEP 9
(Anchoring: Optional)
Proceed to Step 10 if not anchoring.

1. Concrete shall have compression strength of at least 3,000 PSI and a minimum thickness of 4" in order to achieve a minimum anchor embedment of $3\frac{1}{4}$ ". NOTE: When using ($\frac{3}{4}$ " x $5\frac{1}{2}$ ") long anchors; if the top of the anchor exceeds $2\frac{1}{4}$ " above the floor grade, you DO NOT have enough embedment.
2. Maintain a 6" minimum distance from any slab edge or seam. Hole to hole spacing should be a minimum $6\frac{1}{2}$ " in any direction. Hole depth should be a minimum of 4".
3. Shim each column base as required until each column is plumb. If one column has to be elevated to match the plane of the other column, full size base shim plates should be used. Shim thickness MUST NOT exceed $\frac{1}{2}$ " when using the $5\frac{1}{2}$ " long anchors with the lift. Adjust the column extensions plumb.
4. Before proceeding, double check the measurements and make certain that the bases of each Column are square and aligned with the chalk line. Raise the lift up and down and make sure it operates properly at the locations prescribed by the markings on the floor .
5. Using the base plate on each column as a guide, drill each anchor hole approximately $4\frac{1}{2}$ " deep using a rotary hammer drill and $\frac{3}{4}$ " concrete bit.
6. After drilling, remove dust thoroughly from each hole using compressed air and / or bristle brush. Make certain that the columns remain aligned with the chalk line.
7. Assemble the Washers and Nuts on the anchors then tap each hole with a hammer until the washer rests against base plate. Be sure that if shimming is required, enough threads are left exposed. (see fig. 11)
8. After any necessary shims are installed, tighten each nut 3-5 turns past hand tight. **IMPORTANT** If anchor bolts do not hold when torqued to required amount, concrete must be replaced. Saw cut and remove 24" x 24" square area each column base then re-pour with reinforced 3,000 PSI concrete to a depth of six inches minimum, keying new concrete under existing floor. (See fig. 11,11.2)



ALWAYS WEAR SAFETY GOGGLES!



POST-INSTALLATION CHECK-OFF

- ☒ Columns Properly Shimmed And Stable Anchor Bolts Tightened (Optional)
- ☒ Pivot / Sheave Pins Properly Attached
- ☒ Electric Power Supply Confirmed
- ☒ Cables Adjusted Properly
- ☒ Safety Locks Functioning Properly
- ☒ Slack Cable Safety secure and engaged.
- ☒ Check For Hydraulic Leaks
- ☒ Oil Level
- ☒ Lubrication of Critical Components (Cables, Pulleys, Inside Columns, and all other moving parts)
- ☒ Check For Overhead Obstructions
- ☒ Runways Level
- ☒ All Screws, Bolts, and Pins Secured (Re-install Safety Cover)
- ☒ Surrounding Area Clean
- ☒ Operation, Maintenance and Safety Manuals on Site
- ☒ Cylinder Nut secure.
- ☒ Runway Pulley set screws secure.
- ☒ All Lift Operators have read this manual

STEP 10 (Operational Test)

1. Make sure power unit reservoir is full with 10-qts of AW-32 hydraulic oil or Dexron III or VI ATF.
2. Spray the inside of the columns where the slide blocks glide with a white lithium grease.
3. Press the UP SWITCH on the power unit.
4. The lift will slowly raise.
5. Once the lift starts to raise, simultaneously press the lowering handle at the same time you are pressing the raise button. This will allow any air trapped in the cylinder and lines to escape and vent into the fluid reservoir.
6. Continue raising the lift slowly until all the slack in the cables is taken out. Raise the lift until the safety lock closest to the power unit comes within 1" to the bottom of the lowest lock position.
7. Tighten the cable adjusting nut on top of each column until all remaining safety locks comes within 1" to the bottom of the lowest lock position. This will assure that the cables are adjusted evenly. At this time the lift should raising level and all four safety locks engage simultaneously.

NOTE:

There will be some initial stretching of the cables in the beginning. It will be necessary to re-adjust the cables a week after first use, then every six months thereafter.

8. Run the lift up and down a few times to ensure that the locks are engaging uniformly and that the safety release mechanisms are functioning properly. Re-adjust if necessary.



When lowering the lift pay careful attention. ALWAYS make sure that all four locks are disengaged. If one of the locks inadvertently locks on descent the lift and / or vehicle may disrupt causing personal injury or death.

9. Install the approach ramps on the entry side of the lift. Drive a vehicle onto the lift runways then remove the ramps and install the rear tire stops. Run the lift up and down a few times to ensure that the locks are engaging uniformly and that the safety release mechanisms are functioning properly. Re-adjust if necessary.

IMPORTANT INSTRUCTIONS PLEASE READ! LIFT OPERATION:

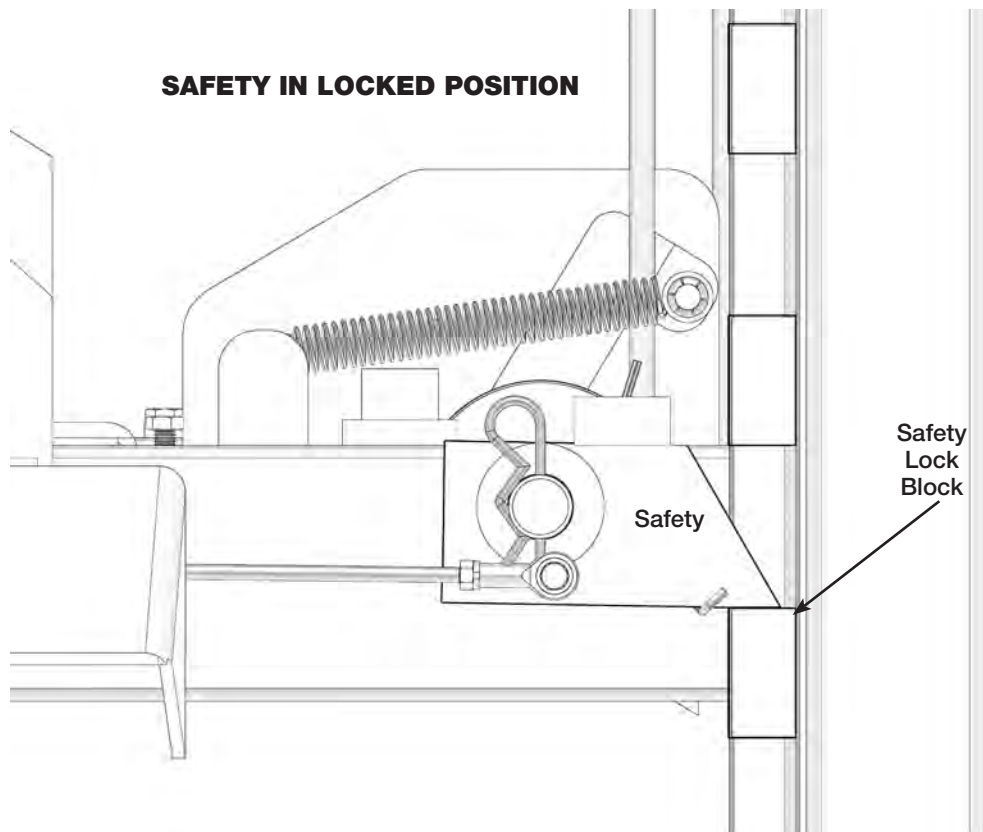
To Raise Lift:

1. Position vehicle tires in the center of each runway.
2. Set parking brake and use wheel chocks to hold vehicle in position.
3. Before raising the vehicle make sure you replace the drive up ramps with the tire stops, make sure all personnel are clear of the lift and surrounding area. Pay careful attention to overhead clearances.
4. Raise the lift to the desired height by pressing the push button of the power unit.
5. Lower lift on nearest safety ladder to support load.
6. Do not permit the cables to go slack.



VISUALLY CONFIRM THAT ALL PRIMARY SAFETY LOCKS ARE ENGAGED BEFORE ENTERING WORK AREA.

Hydraulic components used on this lift are intended to raise and lower lift only and are not meant to be load holding devices. Remain clear of elevated lift unless visual confirmation is made that all primary safety locks are fully engaged and the lift is lowered onto the safety locks. Refer to manual for proper safety lock procedures.



TO LOWER THE LIFT:

1. First, raise the lift to clear the safety locks.
2. Depress air safety release button and hold. (If not so equipped, release safety locks manually.)
3. Push the lowering handle and hold until the lift has descended completely.
4. If the lift is shaking, vibrating, or swaying, reduce the descending speed.

WEEKLY MAINTENANCE:

1. Lubricate all rollers with general purpose lubricating oil.
2. Check all connections, bolts, and pins to ensure proper mounting.
3. Lubricate primary safety pivot pin with white lithium grease.

MONTHLY MAINTENANCE:

1. Check all safety devices to make sure they are in good operating condition.
2. Inspect all anchor bolts and retighten if necessary.
3. Make a visual inspection of all moving parts for wear. If worn parts are evident, **DO NOT USE LIFT**. Replace all worn parts before lift is put back into operation.



1. If any component of the lift is found to be defective, **DO NOT USE LIFT!**
2. Never operate the lift with any person or equipment below.
3. Always stand clear of lift when lowering or raising.
4. Never exceed the rated capacity.
5. Always ensure the safety devices are engaged before any attempt is made to work on or near the vehicle. Never leave lift in an elevated position unless the safety devices are engaged.

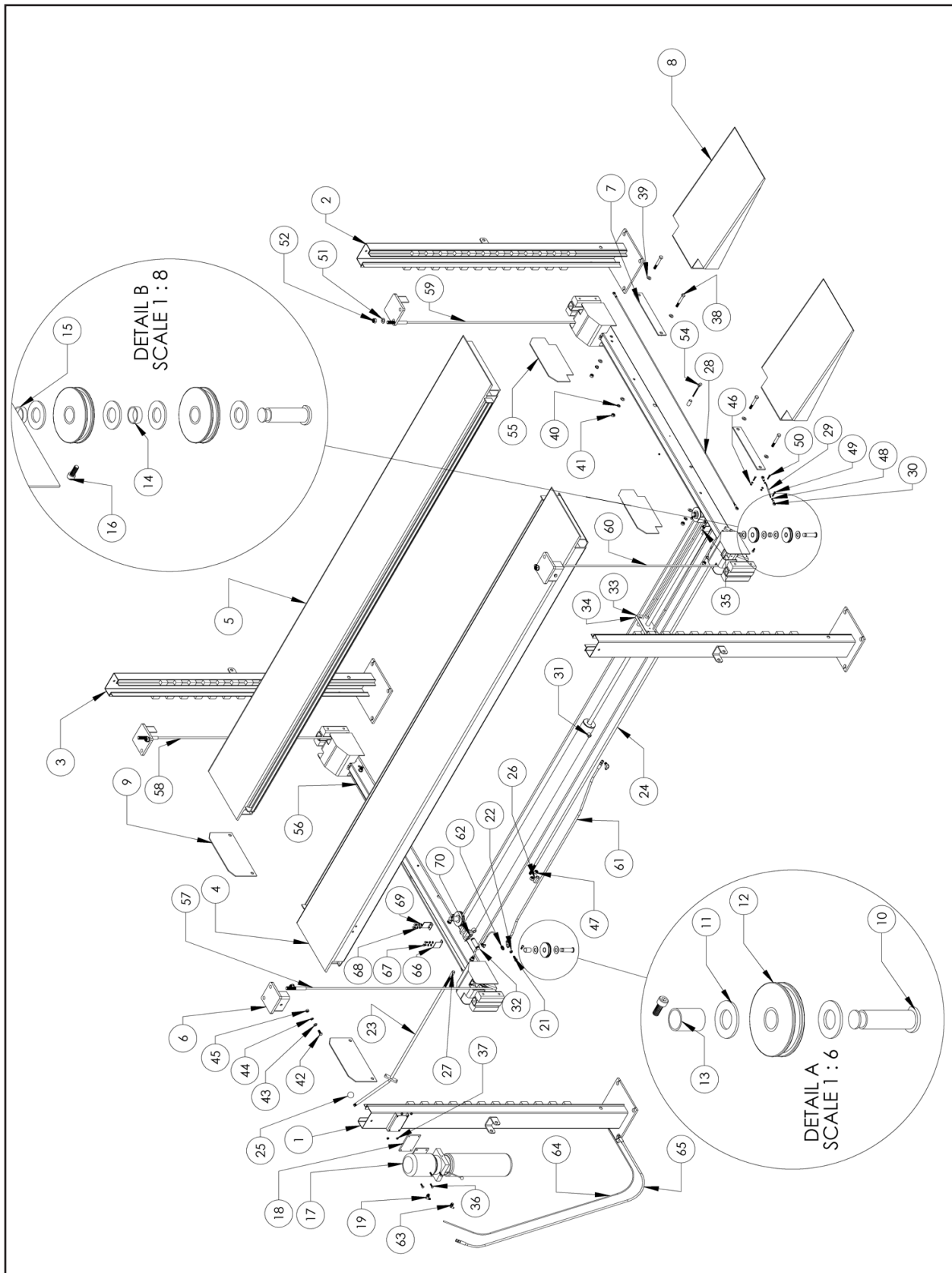
D-7 PARTS LIST

ITEM #	PART #	DESCRIPTION	QTY.
1	17051003	D-7 POWERSIDE POST ASSEMBLY	1
2	17051005	D-7 RIGHT POST ASSEMBLY	1
3	17051004	D-7 LEFT POST ASSEMBLY	2
4	17052005	D-7 POWERSIDE RAMP ASSEMBLY	1
5	17052006	OFF SIDE RAMP ASSEMBLY	1
6	17057014	POST TOP PLATE ASSEMBLY (PARTS BOX)	4
7	17057015	DRIVE TIE PLATE ASSEMBLY (PARTS BOX)	2
8	17058066	DRIVE UP RAMP	2
9	17058067	REAR STOP PLATE	2
10	17204012	25 X 90MM CLEVIS PIN (PRE-ASSEMBLED)	4
11	17202021	M20 FLAT WASHER (PARTS BOX)	12
12	17057016	D-7 CABLE PULLEY (PRE-ASSEMBLED)	6
13	17058068	LARGE PULLEY SPACER (PRE-ASSEMBLED)	2
14	17058069	MEDIUM PULLEY SPACER (PRE-ASSEMBLED)	2
15	17058070	SMALL PULLEY SPACER (PRE-ASSEMBLED)	2
16	17200018	M8 X 20 SOCKET HEAD CAP SCREW (PRE-ASSEMBLED)	4
17	17300004	POWER UNIT ASSEMBLY 110/220V	1
18	17207015	POWER UNIT VIBRATION DAMPENER (PARTS BOX)	1
19	17206013	STRAIGHT THREAD O-RING POWER UNIT FITTING (PARTS BAG)	1
20	17206008	MALE HYD 90 DEGREE ELBOW CYLINDER FITTING (PARTS BAG)	1
21	17206022	STRAIGHT BULKHEAD HYD FITTING (PARTS BAG)	1
22	17201018	7/16 JAM NUT (PARTS BAG)	1
24	17057017	D-7 SAFETY HANDLE ASSEMBLY	1
24	17057018	D-7 LONG SAFETY BAR ASSEMBLY	1
25	17207041	ROUND BLACK KNOB (ATTACHED TO SAFETY HANDLE)	1
26	17201019	M16 CUPLING NUT	1
27	17058071	SAFETY SPACER	4
28	17058072	M6 X 1980 MM DOUBLE ENDED THREADED STUD	2
30	17058073	M6 X 130 MM DOUBLE ENDED THREADED STUD	2
30	17207020	M6 FEMALE ROD END (PARTS BAG)	8
31	17250008	CYLINDER ASSEMBLY (PRE ASSEMBLED)	1
32	17058074	25 X 89 MM CYLINDER PIN (PRE ASSEMBLED)	1

D-7 PARTS LIST

ITEM #	PART #	DESCRIPTION	
33	17058075	CYLINDER BLOCK ASSEMBLY	1
34	17058076	LARGE CYLINDER BLOCK SUPPORT	1
35	17201020	1-14 NYLON LOCK NUT	1
36	17200005	M8 x 25 HEX HEAD BOLT	4
37	17201010	M8 NYLON LOCK NUT	4
38	17200025	M14 x 100 HEX HEAD BOLT	8
39	17202022	M14 FLAT WASHER	16
40	17202023	M14 SPRING WASHER	8
41	17201021	M14 HEX NUT	8
42	17200030	M12 x 30 HEX HEAD BOLT	4
43	17202005	M12 FLAT WASHER	4
44	17202001	M12 SPRING WASHER	4
45	17201004	M12 HEX NUT	4
46	17201007	M6 NYLON LOCK NUT	10
47	17201023	M16 HEX NUT	2
48	17201022	M6 HEX NUT	8
49	17200031	M6 x 35 HEX HEAD BOLT	4
50	17200032	M6x30 HEX HEAD BOLT	4
51	17202006	M18 FLAT WASHER	4
52	17201005	M18 NYLON LOCK NUT	4
53	17202011	M6 FLAT WASHER	8
54	17200033	M6 x 120 EYEBOLT	2
55	17058077	FRONT STOP PLATE	2
56	17053010	CROSSTUBE ASSEMBLY / D-7	2
57	17055005	D-7 CABLE ASSEMBLY 6502mm (D)	1
58	17055006	D-7 CABLE ASSEMBLY 7925mm (C)	1
59	17055007	D-7 CABLE ASSEMBLY 4013mm (B)	1
60	17055008	D-7 CABLE ASSEMBLY 2591mm (A)	1
61	17056002	HYDRAULIC HOSE ASSEMBLY 1855MM	1
62	17056004	HYDRAULIC HOSE ASSEMBLY 1600MM	1
63	17206031	1/4" PUSH-TO-CONNECT THROUGH-WALL COUPLING	1
64	17206010	3/8" MALE PIPE 90 ELBOW 1/4" PUSH-TO-CONNECT FITTING	2
65	17058265	1/4" POLY-FLO TUBING 3	1

D-7 ASSEMBLY DIAGRAM



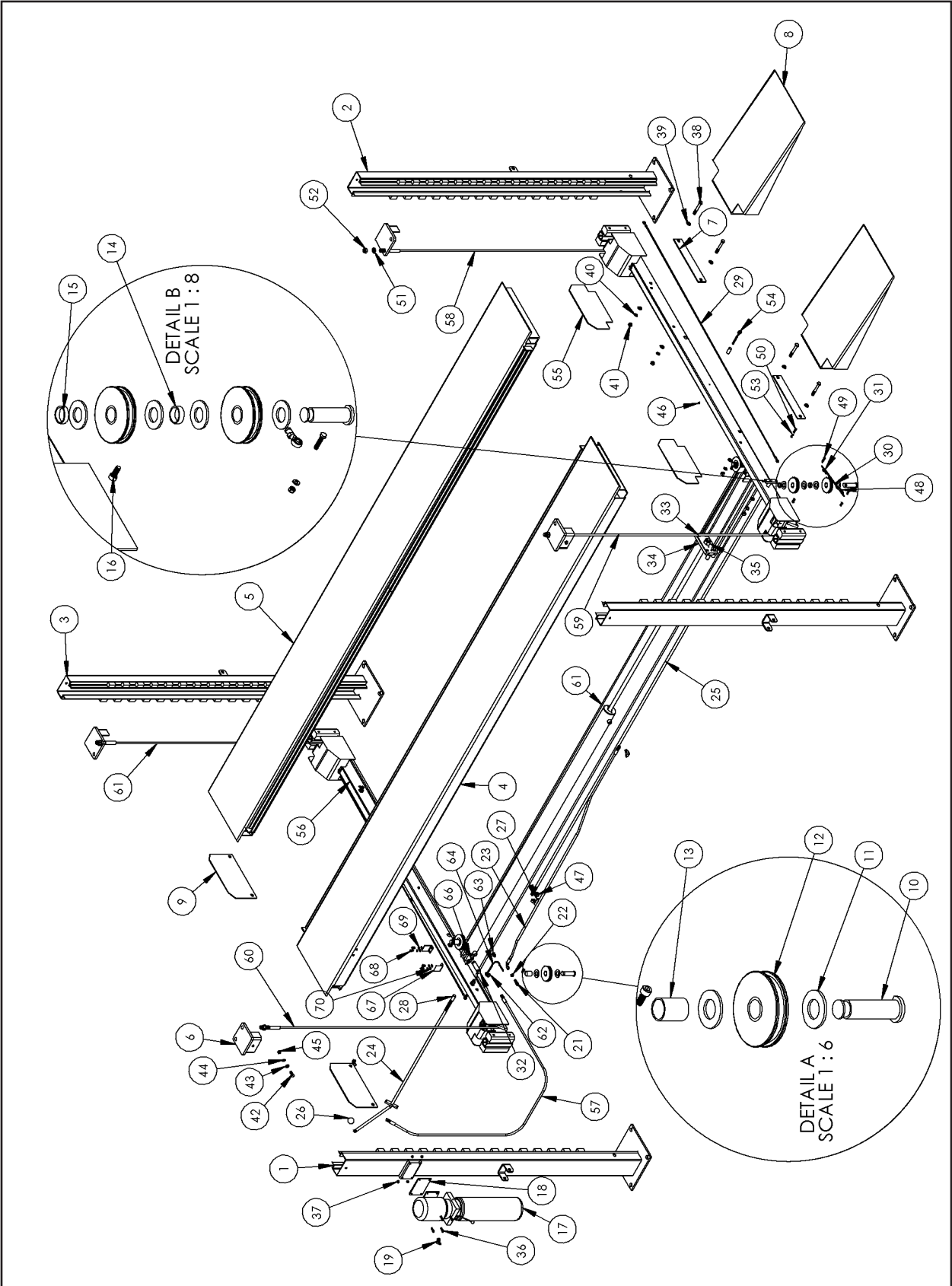
D-7/X PARTS LIST

ITEM #	PART #	DESCRIPTION	QTY.
1	17051007	D-7/X POWERSIDE POST ASSEMBLY	1
2	17051008	D-7/X LEFT POST ASSEMBLY	1
3	17051009	D-7/X RIGHT POST ASSEMBLY	2
4	17052009	D-7/X POWER SIDE RAMP ASSEMBLY	1
5	17052010	OFFSIDE RAMP ASSEMBLY	1
6	17057014	POST TOP PLATE ASSEMBLY	4
7	17057015	DRIVE TIE PLATE ASSEMBLY	2
8	17058066	DRIVE-UP RAMP	2
9	17058067	REAR STOP PLATE (PARTS BOX)	2
10	17204012	25 x 90mm CLEVIS PIN (PRE-ASSEMBLED)	4
11	17202021	M20 FLAT WASHER (PARTS BOX)	12
12	17057016	D-7/X CABLE PULLY (PRE-ASSEMBLED)	6
13	17058068	LARGE PULLEY SPACER (PRE-ASSEMBLED)	2
14	17058069	MEDIUM PULLEY SPACER (PRE-ASSEMBLED)	2
15	17058070	SMALL PULLEY SPACER (PRE-ASSEMBLED)	2
16	17200018	M8 x 20 SOCKET HEAD CAP SCREW (PRE-ASSEMBLED)	4
17	17300004	POWER UNIT ASSEMBLY	1
18	17207015	POWER UNIT VIBRATION DAMPENER (PARTS BOX)	1
19	17206013	STRAIGHT THREAD 90 ELBOW W/ O-RING SEAL 6801-04-06-NWO	1
20	17206008	MALE 90 ELBOW 2501-04-06 (PARTS BAG)	1
21	17206022	STRAIGHT BULKHEAD 2700-04-04 (PARTS BAG)	1
22	17201018	7/16-20 JAM NUT (PARTS BAG)	1
23	17056005	HYDRAULIC HOSE ASSEMBLY 1920MM (PARTS BOX)	1
24	17057017	D-7/X SAFETY HANDLE ASSEMBLY	1
25	17057019	D-7X LONG SAFETY BAR ASSEMBLY	1
26	17207041	ROUND KNOB	1
27	17201019	M16 COUPLING NUT (PARTS BAG)	1
28	17058071	SAFETY SPACER (PARTS BAG)	4
29	17058121	M6x2140 DOUBLE END THREADED STUD	2
30	17058122	M6x280 DOUBLE END THREADED STUD	2
31	17207020	M6 FEMALE ROD END (PARTS BAG)	8
32	17250004	CYLINDER Ø3.0 x 82 (PRE-ASSEMBLED)	1
33	17058074	25x89mm CYLINDER PIN (PRE-ASSEMBLED)	1

D-7/X PARTS LIST

ITEM #	PART #	DESCRIPTION	QTY.
34	17058075	CYLINDER BLOCK SUPPORT	1
35	17058076	LARGE CYLINDER BLOCK SUPPORT	1
36	17201020	1-14 NYLON LOCK NUT	1
37	17200005	M8 x 25 HEX HEAD BOLT	4
38	17201010	M8 NYLON LOCK NUT	4
39	17200025	M14 x 100 HEX HEAD BOLT	8
40	17202022	M14 FLAT WASHER	18
41	17202023	M14 SPRING WASHER	8
42	17201021	M14 HEX NUT	8
43	17200030	M12 x 30 HEX HEAD BOLT	4
44	17202005	M12 FLAT WASHER	4
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50	17200031	M6 x 35 HEX HEAD BOLT	4
51	17200032	M6x30 HEX HEAD BOLT	4
52	17202006	M18 FLAT WASHER	4
53	17201005	M18 NYLON LOCK NUT	4
54	17202011	M6 FLAT WASHER	8
55	17200033	M6 x 120 EYEBOLT	2
56	17058077	FRONT STOP PLATE	2
57	17053012	CROSSTUBE ASSEMBLY / D-7/X	2
58	17056006	HYDRAULIC HOSE ASSEMBLY 2108MM	1
59	17055009	D-7X CABLE ASSEMBLY 4464mm (B)	1
60	17055010	D-7X CABLE ASSEMBLY 3029mm (A)	1
61	17055011	D-7X CABLE ASSEMBLY 7588mm (C)	1
62	17055012	D-7X CABLE ASSEMBLY 8992mm (D)	1
63	17206010	3/8" MALE PIPE 90 ELBOW 1/4" PUSH-TO-CONNECT FITTING	1
64	17206031	1/4" PUSH-TO-CONNECT THROUGH-WALL COUPLING	2
65	17058265	1/4" POLY-FLO TUBING 3000mm/118"	1

D-7/X ASSEMBLY DIAGRAM



TROUBLESHOOTING GUIDE

1. Power Unit does not raise:

- 1.1 Verify electrical source matches motor specifications.
- 1.2 Verify breaker is not tripped or not working.
- 1.3 Verify correct voltage to motor.

2. The Power Unit runs but will not lift:

- 2.1 Check oil level.
- 2.2 Check that the lowering valve is not stuck open.
- 2.3 Check and verify all hose connections are complete.

3. The power unit raises the lift empty but will not lift a vehicle.

- 3.1 Make sure the vehicle is not above the rated capacity.
- 3.2 Clean the lowering valve by running the motor for 30 seconds while hold down the lowering handle.
- 3.3 Check the motor voltage.

4. Lift drifts down:

- 4.1 Check for external leaks.
- 4.2 Clean the lowering valve by running the motor for 30 seconds while holding down the lowering handle.
- 4.3 Clean the check valve seat.

5. Slow Lifting and or oil foaming up:

- 5.1 Check that oil used meets the specification in the Installation Instructions section of this manual.
- 5.2 Tighten all hoses and fittings

6. Anchors continually work loose:

- 6.1 Holes drilled too large, relocate the lift per the Installation Instructions section of this manual.
- 6.2 Floor is not sufficient to provide the necessary resistance. Remove an area of concrete and repour as described in the Installation Instruction section in this manual.

7. Lift does not raise and lower smoothly.

- 7.1 Reposition vehicle for a more even weight distribution.
- 7.2 Check to make sure all the columns are lubricated with white lithium grease, check for rough edges/burrs and remove.

7.3 Check and make sure the platform is level, adjust cables if necessary as described in the Installation Instruction section of this manual.

7.4 Check oil level.

7.5 Make sure there is no air in the system, bleed as described in the Installation Instruction section of this manual.

8. Lift lowers approximately 1" and stops.

8.1 Check and make sure all safety locks are released.

9. At full height the latch will not release and the lift will not lower.

9.1 If the equalizer cables are out of adjustment, the platform is out of sync. When the lift is at full rise, one of the safety latches may not have cleared the ladder and will not allow the lift to lower.

9.2 To lower the lift:

9.3 Raise the lift to full height.

9.4 Make sure all 4 latches are engaged.

9.5 Use a hydraulic jack and a fitted pipe to raise the corner that is sticking and release the safety latch.

9.6 Pull the latch release handle to disengage the latches.

9.7 Remove the jack and pipe.

9.8 Lower the lift and remove the vehicle.

9.9 Re adjust the cables as described in the Installation Instruction section of this manual.

LIFT LOCKOUT/TAGOUT PROCEDURE

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.

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 installers, contactors, etc.). All employees shall be instructed in the safety significance of the lockout procedure by the facility owner/manager. Each new or transferred employee along with visiting outside service personnel shall be instructed by the owner/manager (or assigned designee) in the purpose and use of the lockout procedure.

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. Ensure that proper authorization is received prior to performing the lockout procedure.

Sequence of Lockout Procedure:

1. Notify all affected employees that a lockout is being performed and the reason for it.
2. Unload the subject lift. Shut it down and assure the disconnect switch is "OFF" if one is provided on the lift.
3. The authorized lockout person operates the main energy isolation device removing power to the subject 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" x 6" in size, an easily noticeably 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.
4. Attempt to operate lift to assure the lockout is working. Be sure to return any switches to the "OFF" position.
5. The equipment is now locked out and ready for the required maintenance or service.

Restoring Equipment to Service:

1. Assure the work on the lift is complete and the area is clear of tools, vehicles, and personnel.
2. At this point, the authorized person can remove the lock (or dummy circuit breaker or fuse) & tag and activate the energy isolating device so that the lift may again be placed into operation.

Rules for Using 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.

PREVENTIVE MAINTENANCE SCHEDULE

1. The periodic Preventive Maintenance Schedule given is the suggested minimum requirements and minimum intervals; accumulated hours or monthly period, which ever comes sooner.
2. Periodic maintenance is to be performed on a daily, weekly, and yearly basis as given in the following paragraphs:
3. In the event you need replacement parts, use only Direct Lift replacement parts available from your local Dannmar Lift distributor.
4. Do not modify the lift in any manner without the prior written consent of the manufacturer.
5. Occupational Safety and Health Administration (OSHA) and the American National Standards Institute (ANSI) requires users to inspect lifting equipment at the start of every shift. These and other periodic inspections are the responsibility of the user.
6. Failure to perform the daily pre operational check can result in expensive property damage, lost production time, serious personal injury, and even death. The safety latch system must be checked and working properly before the lift is put to use.
7. Failure to heed this warning can result in death or serious injury, or damage to equipment. If you hear a noise not associated with normal lift operation, or, if there is any indications of impending lift failure - CEASE OPERATION IMMEDIATELY! - Inspect, correct and/or replace parts as required. Use only Dannmar replacement parts available from your local Dannmar distributor.

DAILY PRE-OPERATION CHECK (8-HOURS):

1. Check safety lock audibly and visually while in operation
2. Check safety latches for free movement and full engagement with rack.
3. Check hydraulic connections, and hoses for leakage.
4. Check cables connections bends, cracks and for loose fittings
5. Check for frayed cables in both raised and lowered position.
6. Check snap rings at all rollers and sheaves.
7. Check bolts, nuts, and screws and tighten if needed.
8. Check wiring & switches for damage.
9. Check floor for stress cracks near columns.
10. Check Lubrications on cable sheaves and shafts.

WEEKLY MAINTENANCE (EVERY 40-HOURS):

1. If lift is anchored to floor check anchor bolts to torque to 170 ft-lbs for the 3/4" anchor bolts. Do not use an impact wrench to tighten anchor bolts.
2. Check floor for stress cracks near columns.
3. Check hydraulic oil level.

4. Check and tighten bolts, nuts, and screws.
5. Check all cable sheaves/assembly for free movement or excessive wear on cable sheave shaft.

MONTHLY MAINTENANCE:

1. Lubricate the inside of each column with gear grease.
2. With the lift in the lowered position, check the hydraulic fluid level. Add oil if necessary as described in the Installation section of this manual.
3. Check synchronization of all four locks and assure they all click together. If necessary adjust cables to synchronize as described in the Installation section of this manual.
4. Check tightness of all bolts, adjust if necessary.
5. Replace worn or broken parts with genuine Dannmar replacement parts.

YEARLY MAINTENANCE:

1. Lubricate the cable sheave shaft by using grease gun at least once a year after the lift is in service.
2. Check for excessive wear of cable. Replace them if necessary.
3. Change the hydraulic fluid, good maintenance procedure makes it mandatory to keep hydraulic fluid clean. No hard fast rules can be established; operating temperature, type of service, contamination levels, filtration, and chemical composition of fluid should be considered. If operating in dusty environment shorter intervals may be required.

SPECIAL MAINTENANCE TASKS:

NOTE: The following items should only be performed by a trained maintenance expert:

1. Replacement of hydraulic hoses.
2. Replacement of cables and sheaves.
3. Replacement or rebuilding air and hydraulic cylinders as required.
4. Replacement or rebuilding pumps / motors as required.
5. Checking of hydraulic cylinder rod and rod end (threads) for deformation or damage

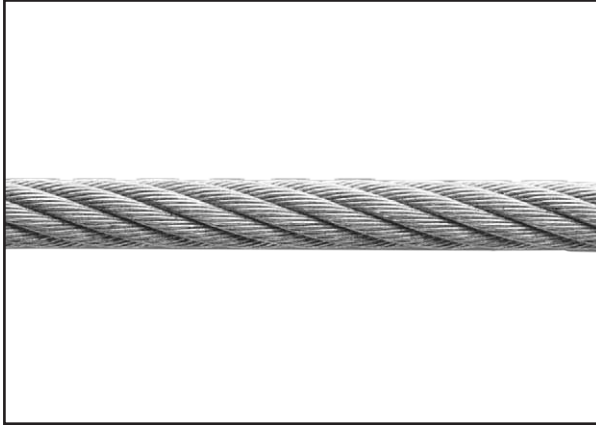
IMPORTANT:

Relocating or changing components may cause problems. Each component in the system must be compatible. An undersized or restricted line will cause a drop in pressure. All valve, pump, and hose connections should be sealed and/or capped until just prior to use. Air hoses can be used to clean fittings and other components. However, the air supply must be filtered and dry to prevent contamination. Most important is cleanliness. Contamination is the most frequent cause of malfunction or failure of hydraulic equipment.

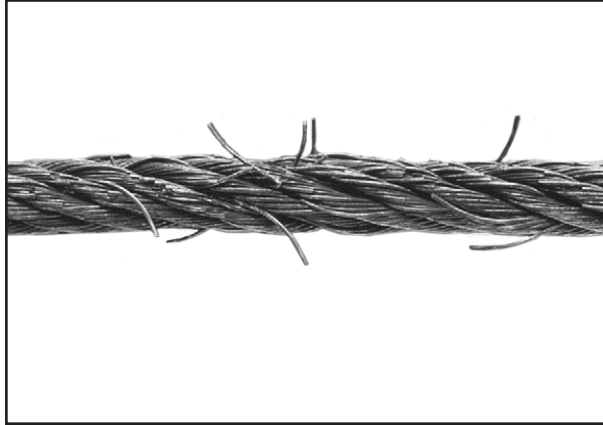
CABLE INSPECTION GUIDE

Nom. Cable Diameters 3/8" to 1/2" Max.

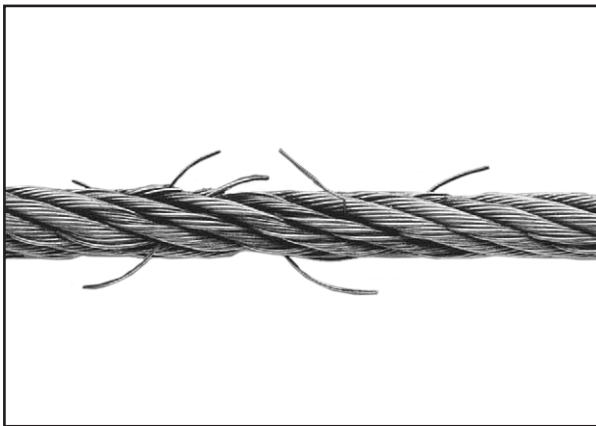
Reduction in Diameter 1/32"



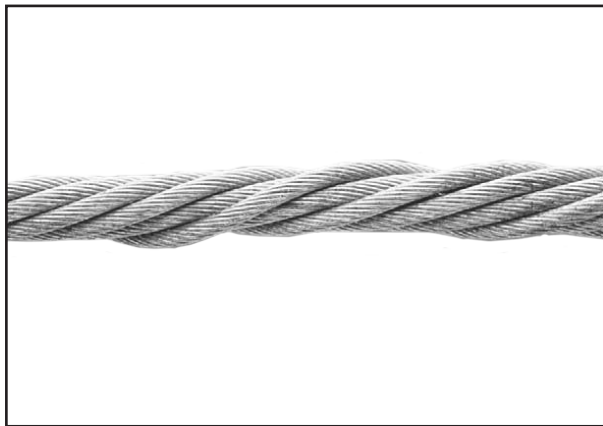
Typical Good Cable



Cable with Broken Wires



Cable with Severe Corrosion



Cable with Nicking

Daily Inspection & Maintenance:

1. **Cleanliness:** Cables, 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. Spray wire rope cables as required with penetrating oil and wipe down. Failure to keep 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.
2. **Fasteners:** Check all the attaching bolts and nuts for tightness.
3. **Cables:** Check wire rope cables for wear or damage. 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 must be replaced immediately. Refer to figures on previous page.
4. **Sheaves:** Check sheaves (pulleys) for wear or damage, i.e. wobble (tilt), cracks, loose on pin, or

excessive noise during operation.

5. Sheave Pins: Check for loose or missing sheave (pulley) pins.
6. Locking Latches and Slack Cable Devices: Watch locking latches and slack cable devices during lift operation to ensure that latches work properly and line up with slots in latch plate located in columns.

Monthly Inspection & Maintenance:

CABLES:

1. Clean wire rope cables with lift in both lowered and raised position by spraying with penetrating oil and wiping the cable down.
2. Adjust cables using procedures on following pages.
3. Slack Cable Device: Inspect slack cable devices using procedure on page 5.

COLUMN ANCHOR BOLTS:

1. Check column anchor bolts for tightness. Re-torque anchors bolts to 65 ft./lbs. If anchors do not tighten to the required installation torque, replace concrete under each column base per installation instructions. Let concrete cure before installing lifts and anchors.

COLUMNS:

1. Look 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, remove old paint and rust scale, then coat with a high quality corrosion resistant paint.

A thorough inspection of the lifting system must be performed quarterly by qualified lift service personnel; more frequently (monthly) under extreme service conditions such as outside installations or high usage (10 or more cycles per day, etc.).

Quarterly Inspection & Maintenance:

CABLES:

1. Inspect cables in both lowered and raised position. The cables may also be viewed through various inspection holes and openings in yokes and runways.
2. That cables have no broken wires visible. (Reference Daily Inspection & Maintenance.)
3. That cables are free of severe corrosion and pitting, reference Daily Inspection & Maintenance. A light surface corrosion on exposed outer wires is normal. Penetrating oil should be applied during monthly periodic inspection.
4. That there are no areas on the cable that have a greatly reduced diameter or "necking", reference Daily Inspection & Maintenance. When any cable is found with excessive necking, all cables must be replaced immediately.
5. That cables do not have excessive stretch. It is normal for new cable to require adjustment during

“breakin”, 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.

6. If any cable is found to be in need of replacement, the entire cable set must be replaced immediately.
7. 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.

SHEAVES AND PINS:

1. Inspect sheaves and pins in yokes and 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 cables.
2. Inspect sheaves (pulleys) in yoke ends with lift in lowered position or resting on the locking latches.
3. Hold lowering handle down and pull on cable in column to create slack in cables.
4. 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, refer to Figures below.
5. Check sheaves and replace if cracks are found.
6. Check for ease of rotation. If sheaves do not turn freely, the sheave and sheave pin should be removed, inspected, lubricated, and reinstalled or replaced.
7. Fully raise lift. Inspect sheaves (pulleys) in runway ends with lift in raised position.
8. Visually inspect alignment of sheaves, see figure above. Misalignment of sheave(s) indicates excessive wear; the sheave(s) and sheave pin should be removed and inspected. Replace as required.
9. Hold lowering handle down to lower lift onto latches. Pull on cables under runway to create cable slack. Check for excessive side to side wobble. Grasp rim of sheave and attempt to wobble (tilt) side to side, refer to figures above. 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.

HYDRAULIC CYLINDER:

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

REQUIRED SAFETY LABELS

<div style="background-color: orange; text-align: center; padding: 2px;">⚠ WARNING</div>  <div style="background-color: black; color: white; padding: 5px; text-align: center;"> Clear area if vehicle is in danger of falling. </div> <div style="text-align: right; font-size: small;">©</div>	<div style="background-color: orange; text-align: center; padding: 2px;">⚠ WARNING</div>  <div style="background-color: black; color: white; padding: 5px; text-align: center;"> Remain clear of lift when raising or lowering vehicle. </div> <div style="text-align: right; font-size: small;">©</div>	<div style="background-color: blue; text-align: center; padding: 2px;">NOTICE</div>  <div style="background-color: black; color: white; padding: 5px; text-align: center;"> Read operating and safety manuals before using lift. </div> <div style="text-align: right; font-size: small;">©</div>	<div style="background-color: blue; text-align: center; padding: 2px;">NOTICE</div>  <div style="background-color: black; color: white; padding: 5px; text-align: center;"> Proper maintenance and inspection is necessary for safe operation. </div> <div style="text-align: right; font-size: small;">©</div>
<div style="background-color: orange; text-align: center; padding: 2px;">⚠ WARNING</div>  <div style="background-color: black; color: white; padding: 5px; text-align: center;"> Keep clear of pinch points when lift is moving. </div> <div style="text-align: right; font-size: small;">©</div>	<div style="background-color: orange; text-align: center; padding: 2px;">⚠ WARNING</div>  <div style="background-color: black; color: white; padding: 5px; text-align: center;"> Keep feet clear of lift while lowering. </div> <div style="text-align: right; font-size: small;">©</div>	<div style="background-color: blue; text-align: center; padding: 2px;">NOTICE</div>  <div style="background-color: black; color: white; padding: 5px; text-align: center;"> Do not operate a damaged lift. </div> <div style="text-align: right; font-size: small;">©</div> <div style="font-size: x-small; padding-top: 10px;"> <p>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.</p> <p>Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045.</p> <p>Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright.</p> <p>www.autolift.org</p> <p style="display: flex; justify-content: space-between;"> © 2009 by ALI, Inc. ALI/WL200s </p> </div>	
<div style="background-color: orange; text-align: center; padding: 2px;">⚠ WARNING</div>  <div style="background-color: black; color: white; padding: 5px; text-align: center;"> Do not override self-closing lift controls. </div> <div style="text-align: right; font-size: small;">©</div>	<div style="background-color: orange; text-align: center; padding: 2px;">⚠ WARNING</div>  <div style="background-color: black; color: white; padding: 5px; text-align: center;"> Chock wheel to prevent vehicle movement. </div> <div style="text-align: right; font-size: small;">©</div>	<div style="background-color: yellow; text-align: center; padding: 2px;">⚠ CAUTION</div>  <div style="background-color: black; color: white; padding: 5px; text-align: center;"> Lift to be used by trained operator ONLY. </div> <div style="text-align: right; font-size: small;">©</div>	<div style="background-color: yellow; text-align: center; padding: 2px;">⚠ CAUTION</div>  <div style="background-color: black; color: white; padding: 5px; text-align: center;"> Authorized personnel only in lift area. </div> <div style="text-align: right; font-size: small;">©</div>
<div style="font-size: x-small; padding-top: 10px;"> <p>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.</p> <p>Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045.</p> <p>Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright.</p> <p>www.autolift.org</p> <p style="display: flex; justify-content: space-between;"> © 2010 by ALI, Inc. ALI/WL200w </p> </div>		<div style="font-size: x-small; padding-top: 10px;"> <p>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.</p> <p>Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 85 Cortland, NY 13045.</p> <p>Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright.</p> <p>www.autolift.org</p> <p style="display: flex; justify-content: space-between;"> © 2009 by ALI, Inc. ALI/WL200c </p> </div>	

WARRANTY INFORMATION

FOUR POST AUTO LIFT

READ THIS ENTIRE MANUAL BEFORE OPERATION BEGINS.

This instruction manual has been prepared especially for you.
Your new lift is the product of over 25 years of continuous research, testing and development and is the most technically advanced lift on the market today.

**RECORD HERE THE FOLLOWING INFORMATION
WHICH IS LOCATED ON THE SERIAL NUMBER DATA PLATE**

Serial No. _____

Model No. _____

Manufacturing date _____

WARRANTY

Your new lift is warranted for three years on equipment structure; one year on all operating components to the original purchaser, to be free of defects in material and workmanship. The manufacturer shall repair or replace at their option for this period those parts returned to the factory freight prepaid which prove upon inspection to be defective.

This warranty does not extend to defects caused by ordinary wear, abuse, misuse, shipping damage, or lack of required maintenance.

This warranty is exclusive and in lieu of all other warranties expressed or implied. In no event shall the manufacturer be liable for special, consequential or incidental damages for the breach or delay in performance of the warranty.

The manufacturer reserves the right to make design changes or add improvements to its product line without incurring any obligation to make such changes on product sold previously. Warranty adjustments within the above stated policies are based on the model and serial number of the equipment. This data must be furnished with all warranty claims.

***Extended Warranty Available:
Please call for details. 877-432-6627 US and Canada.***

LIMITED WARRANTY - TWO-POST LIFTS/FOUR-POST LIFTS

Better Products - Better Service - Better Value

Duration: From the date of purchase by original Purchaser or 36/12 months from the date of shipment by DANNMAR or whichever comes first.

- ✓ **Three Years (36-Months) Warranty** on the lift structure
- ✓ **One Year (12-Months) Warranty** on operating components

Limited Warranty

1. Who offers this warranty (Warrantor): DANNMAR Inc., 646 Flinn Ave. Moorpark, CA 93021
2. Who receives this warranty (Purchaser): The original Purchaser (other than for purpose of resale)
3. What products are covered by this warranty: Any DANNMAR Two-Post or Four-Post Vehicle Service Lift
4. What is covered under this warranty: manufacturer defects due to material and/or workmanship with the exceptions noted below.
5. What is not covered under this warranty:
 - a. Any failure that results from Purchaser's abuse, neglect or failure to install, operate, maintain or service product in accordance with instructions provided in the owner's manual(s) supplied
 - b. Any damage caused by overloading lift beyond rated capacity
 - c. Items or service normally required to maintain the product, i.e. lubricants, oil, etc.
 - d. Items considered general wear parts such as rubber pads, lifting cables, etc. unless wear or failure is a direct result of manufacturer defect due to material and/or workmanship
 - e. Any component damaged in shipment or any failure caused in whole or in part by installing or operating lift under conditions not in accordance with installation and operation guidelines or damaged by contact with tools or surroundings
 - f. Motor or pump failure caused by rain, excessive humidity, corrosive environments or other contaminants
 - g. Rusted components due to improper maintenance or corrosive environments
 - h. Cosmetic defects that do not interfere with product functionality
 - i. Damage due to incorrect voltage or improper wiring
 - j. Any incidental, indirect, or consequential loss, damage, or expense that may result from any defect, failure, or malfunction of DANNMAR Inc. product
 - k. All electrical components (excluding power unit) are guaranteed for one year against defects in workmanship and/or materials when the lift is installed and used according to specifications.
 - l. The cost of labor to make repairs or replacements.
 - m. Shipping costs.
6. Responsibilities of Warrantor under this warranty: Repair or replace, at Warrantor's option, component which is defective, has malfunctioned and/or failed to conform within duration of the warranty period. DANNMAR will not pay labor costs.
7. Responsibilities of Purchaser under this warranty:
 - a. Provide dated proof of purchase and maintenance records
 - b. In some cases, components may be required to be shipped to the nearest DANNMAR Authorized Service center. Freight costs must be borne by the Purchaser
 - c. Use reasonable care in the installation, operation and maintenance of the products as described in the owner's manual(s).
8. When Warrantor will perform repair or replacement under this warranty: Repair or replacement will be scheduled and serviced according to the normal work flow at the servicing location, and depending on the availability of replacement parts.
9. The warranty will be voided if the product is not installed in accordance with the instructions provided by DANNMAR.
10. This Warranty is further limited by DANNMAR'S General Disclaimer and Terms and Conditions of Sale.

Limitation of Liability

DANNMAR shall have no obligation pursuant to this Warranty with respect to products which in our sole judgment have been altered, damaged, misused, abused, badly worn, lost or improperly installed or maintained. This Warranty is null and void if the customer or any other person other than an authorized representative of DANNMAR has made any attempt to service or modify the tool prior to its return to DANNMAR under this Warranty. In no event will either party be liable for any damage caused by the other party's failure to fulfill its responsibilities, under these terms and conditions. In no event will either party be liable for any lost profits, lost savings, incidental damage, or other economic consequential damages. **DANNMAR products are provided and sold as is without any express or implied warranties including warranties of merchantability or fitness for particular purpose.** No warranties, expressed or implied, will apply after the period set forth in this Limited Warranty. DANNMAR may modify these terms and conditions at any time by either providing the customer with written notice or posting such revised terms on www.DANNMAR.com. Such revised terms shall be effective thirty days from the date of such written notice or posting.

GENERAL DISCLAIMER

In addition to all claims listed on each of the following individual WARRANTY pages, the following GENERAL DISCLAIMERS apply.

1. The purchaser of any DANNMAR product (Buyer) assumes the risk of verifying all materials or resources used or relied on. In no event will DANNMAR be liable to the Buyer or to anyone else for any decision made or action taken in reliance on information obtained from any DANNMAR website or from any DANNMAR dealer, or third-party website, or any online or published catalog.
2. DANNMAR has exclusive title and ownership rights including all intellectual property right throughout the world for all material and content contained on any DANNMAR website or from any DANNMAR online or published catalog.
3. DANNMAR warrants that all products shown on any DANNMAR website or in any online or published catalog conform to DANNMAR published specifications only and are free from defects in material or workmanship as more fully set forth in the Warranty for the specific product.
4. DANNMAR websites may contain hypertext or other links to websites not owned or controlled by DANNMAR. Links to other computer systems or websites are not supervised nor regularly reviewed by DANNMAR. DANNMAR specifically disavows legal responsibility for any information, personal opinions, guidance, advice or instruction that a Buyer receives from others or other websites.
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7. DANNMAR makes no promises, guarantees or assurances that our products meet any state, county, federal or international mandated permit, license, code, standard, certification, or any other mandate other than what is listed or shown on DANNMAR website(s), or any DANNMAR online or published catalog. Not all DANNMAR lift models meet the standards as prescribed by ANSI/ALI ALCTV-(current edition) or ANSI/UL 201. Consult www.autolift.org for a complete list of lift models that meet ANSI/ALI ALCTV-(current edition) or ANSI/UL 201, or contact DANNMAR via info@dannmar.com or [1-800-444-4444](tel:1-800-444-4444). Buyer assumes full responsibility for any state, county, federal or international mandated permit, license, code, standard, certification, or any other mandate required related to the installation and/or operation at any DANNMAR product. DANNMAR will not be responsible for any charges, fines, liens, or other levies imposed on the Buyer related to any special or regional structural, seismic or any other building code and/or codes such as the Uniform Building Code (UBC), International Building Code (IBC) or any other state, county, federal or international mandated permit, license, code, standard, certification, or other mandate, law, rule, regulation or directive by any other agency, government, administrations, or corporations whether state, county, federal, or international mandated.
8. In no event will DANNMAR be liable for any special, incidental, or consequential damages based on breach of warrant, breach of contract, negligence, strict tort, or any other legal theory. Damages that DANNMAR will not be responsible for include, but are not limited to: loss of profits; loss of savings or revenue; loss of use of the product or any associated equipment; cost of capital; cost of any substitute equipment, facilities, or services; downtime; the claims of third parties, including customers; and injury to property. This limitation does not apply to damages caused by breach of the warranty of title and against infringements or to claims for personal injury.
9. Unless modified in a writing signed by both parties, it is understood that DANNMAR published Warranties and

DANNMAR Terms and conditions of Sale are to be the complete and exclusive agreement (Agreement) between the parties superseding all oral or written prior agreements and all other communications between the parties relating to the subject matter of said Agreement, including statements made by sales persons. No employee of DANNMAR or any other party is authorized to make any warranty in addition to those made in the Agreement. The buyer is warned, therefore, to check all Warranties and review in full detail the Terms and Conditions of Sale carefully to see that it correctly reflects those terms that are important to the Buyer.

10. The Agreement allocates the risks of product failure between DANNMAR and the buyer. This allocation is recognized by both parties and is reflected in the price of the goods. Buyer acknowledges that they have read and fully understand the Agreement, and are bound by its terms. Some States do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to some Buyers. This warranty gives the Buyer specific legal rights. The Buyer may have other rights also which vary from State to State.
11. ANY ACTION FOR BREACH OF WARRANTY MUST BE COMMENCED WITHIN 60-DAYS FOLLOWING EXPIRATION DATE OF ANY WARRANTY PROVISION OR TERM.

[illegible][illegible]

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

FOR TECHNICAL QUESTIONS, CALL (877)432-6627

Some other great Dannmar products that may interest you:



Dannmar Tripod Stand

2-Ton capacity
Minimum height: 68.7"
Maximum height: 78.7"



Rolling Work Seat

Capacity (each): 250 lbs. / 113.4 kg.
Depth: 14.5" / 368.3 mm.
Overall Height: 14" / 355.6 mm.



Dannmar 20-Gal Oil Drain

Working pressure: 10 PSI
Height adjusts from 45" - 72.5"
8' evacuation hose



Dannmar 8-Gal Oil Drain

Minimum height: 48"
Max Height: 67"
Wide drain pipe drains oil quickly



Dannmar Round Lift Pad

For use with Dannmar 2-Post lifts. Sold as pad-only or with full assembly.



Frame Cradle Pad

Sturdy steel construction
Tactile rubber mat reduces slippage and protects finish



Dannmar Hose Reel

Includes 50 ft of 3/8" rubber hose.
Working Pressure: 250 PSI
Max CFM: 25



Dannmar Transmission Jack

Min Adjustable Height: 34" / 863.6 mm
Max Adjustable Height: 71" / 1803.4 mm
First Stage Capacity: 1,000 lbs / 453.59 kg



Dannmar Caster Kit with Polyurethane Wheels

For use with Dannmar D-7 / D-7/X.



FOR PARTS OR SERVICE CONTACT:

**Dannmar Equipment, Inc.
646 Flinn Ave. Suite A
Moorpark, CA. 93021
Tel: 877-432-6627
Fax: 805-530-1909**

www.dannmar.com

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