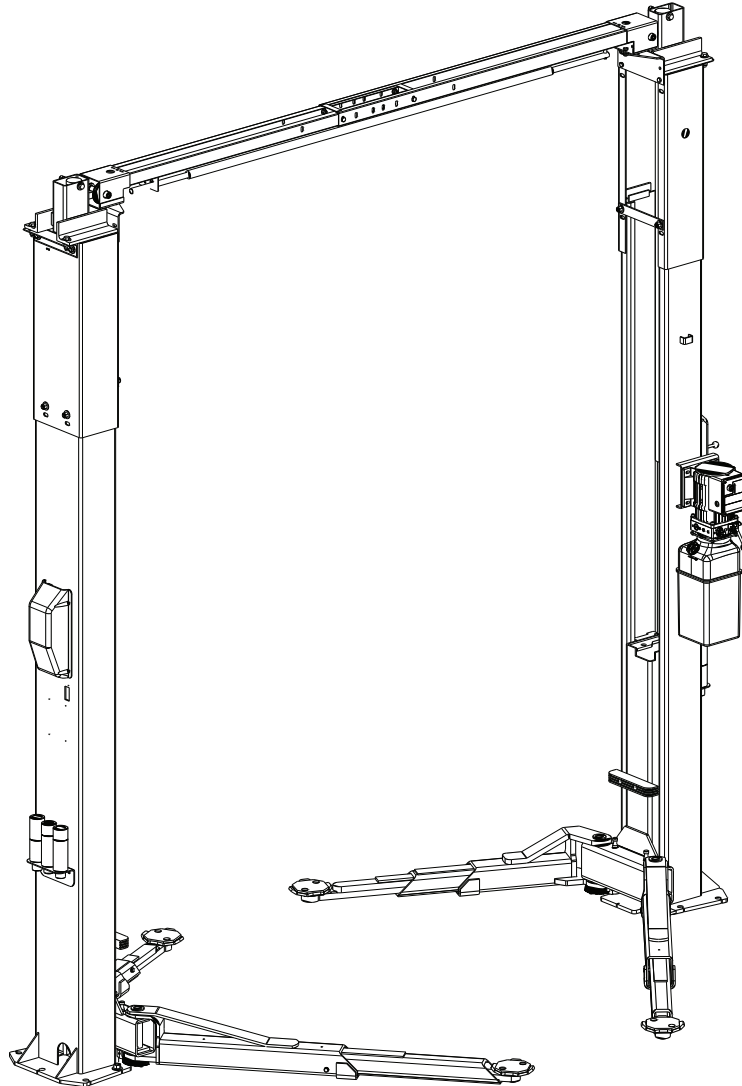


Installation Instructions

Capacity 10,000 lbs.
(100 Series Lift)



▲ IMPORTANT Reference ANSI/ALI ALIS, Safety Requirements for Installation and Service of Automotive Lifts before installing lift.

OPERATING CONDITIONS

Lift is not intended for outdoor use
and has an operating ambient temperature
range of
41°-104°F (5°-40°C)

LP60026

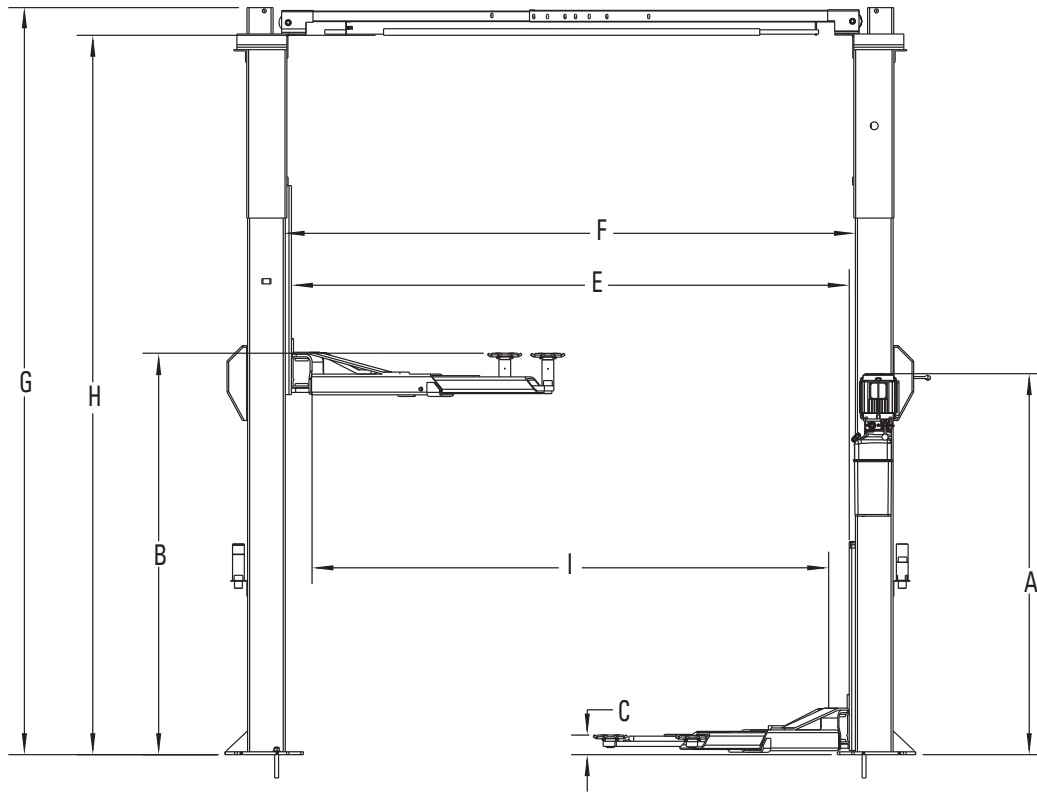


Fig. 1a

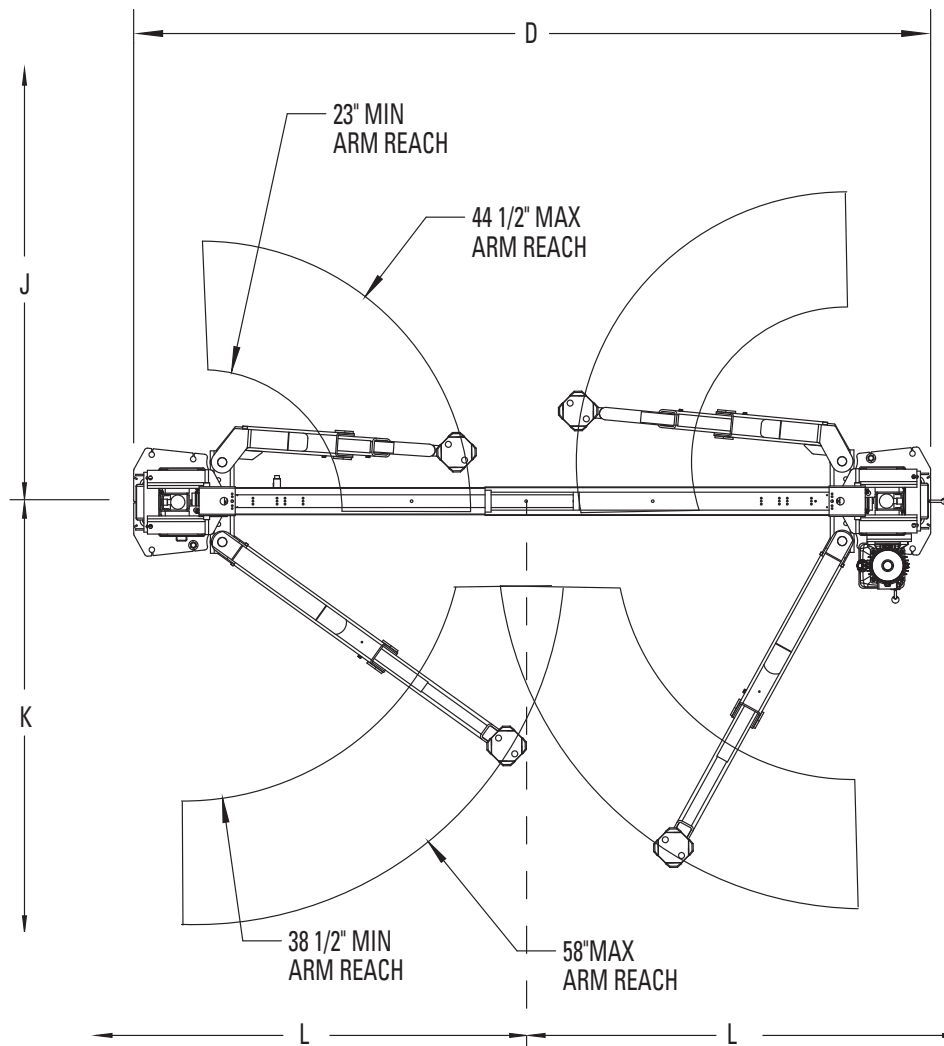


Fig. 1b

1. Lift Location: Use architects plan when available to locate lift. Fig. 1a & Fig. 1b shows dimensions of a typical bay layout.

⚠ WARNING DO NOT install this lift in a pit or depression due to fire or explosion risks.

A	POWER UNIT HEIGHT	72 1/2"
B	LIFTING HEIGHT W/ 5" EXTENSION	76 1/8" W/ 67 1/2" STROKE
C	MIN. LIFT HEIGHT	3 5/8"
	MIN. LIFT HEIGHT W/ 1 3/4" ADAPTER	5 3/8"
	MIN. LIFT HEIGHT W/ 3 1/2" ADAPTER	7 1/8"
	MIN. LIFT HEIGHT W/ 5" ADAPTER	8 5/8"
D	OVERALL FLOOR WIDTH	137"
	OVERALL FLOOR WIDTH (NARROW)	131"
E	WIDTH BETWEEN CARRIAGES	113"
	WIDTH BETWEEN CARRIAGES (NARROW)	107"
F	INSIDE COLUMNS	115"
	INSIDE COLUMNS (NARROW)	109"
G	HEIGHT OVERALL	143 1/2"
	MIN. FLOOR CEILING HEIGHT	144"
H	FLOOR TO OVERHEAD SWITCH	137 5/8"
I	DRIVE THRU CLEARANCE	105"
	DRIVE THRU CLEARANCE (NARROW)	99"
J	MINIMUM TO NEAREST OBSTRUCTION	132"
K	MINIMUM TO NEAREST OBSTRUCTION	156"
L	MINIMUM TO NEAREST OBSTRUCTION	72"

NOTES:

- 1.) ALL HEIGHT DIMENSIONS ARE WITHOUT LEVELING SHIMS.
- 2.) STANDARD HEIGHT LIFT SHOWN.
- 3.) " ANCHORING SYSTEM TESTED TO ANSI/ALI ALCTV 2006.

LIFT CAPACITY	10,000 LBS.
LIFTING SPEED (RISE TIME)	APPROXIMATELY 45 SECONDS UNLOADED APPROXIMATELY 51 SECONDS AT RATED CAPACITY
MOTOR RATING OPTIONS	3 PHASE 208-230/460V 50-60Hz 17/8.5-14/8 AMPS
	SINGLE PHASE 208-230V 60Hz 16 AMPS
	SINGLE PHASE 208-230V 50Hz 15 AMPS
WEIGHT	1505 LBS
MECHANICAL SAFETY LOCKS	AUTOMATIC ALL POSITIONS
MECHANICAL SAFETY RELEASE	MANUAL ALL BOTH COLUMNS
SWING ARM RESTRAINTS	AUTOMATIC ENGAGEMENT ABOVE 2 1/2"
HYDRAULIC SAFETY SYSTEM	AUTOMATIC ALL POSITIONS
CYLINDERS	TWO, ONE PER COLUMN
CARRIAGE BEARINGS	EIGHT PER CARRIAGE, UHMW
SYNCHRONIZATION	EQUALIZATION CABLES
MIN. BAY SIZE	12' X 24' VERIFY WITH SITE PLAN & SERVICE VEHICLES

2. Latch Cable Guides: Install the latch cable conduit guide brackets to column extensions with (1) 1/4" - 20NC x 1" HHCS and 1/4" - 20NC Flanged Locknuts, HHCS should go through hole nearest the edge as shown, Fig. 2.

3. Cylinder Fitting: Prior to standing up lift columns, install the 90° elbow fitting to the cylinder and equalizer cable to the bottom of the carriage Fig 3. Remove plug from the top of the cylinders and install the appropriate fittings per Fig. 12a.

CAUTION Over tightening will damage fitting resulting in fluid leakage.

4. Equalizer Cables

- A.) First, run a cable end up through the small hole in the lower tie-off plate. Fig. 15.
- B.) Push the cable up until the stud is out of the carriage top opening.
- C.) Run a nylon insert locknut onto the cable stud so 1/2" (13mm) of the stud extends out of the locknut.
- D.) Pull the cable back down, Fig. 3.
- E.) Run cable around the lower sheave, then up and out of the top of the column.

5. Tie Bar: Attach tie bar to column with (2) 1/2" - 13x1-3/4" HHCS, (2) 1/2" Flat Washer, and (2) 1/2" - 13 Nylon Locknut, Fig. 3.

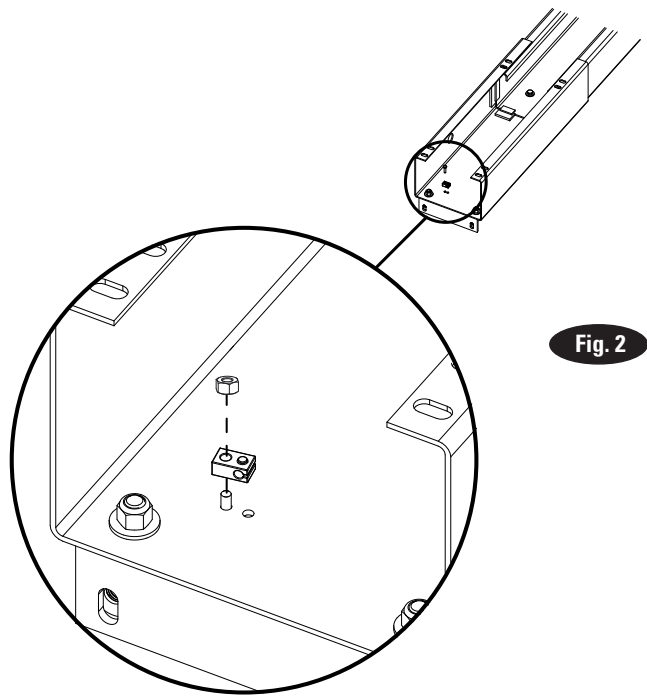


Fig. 2

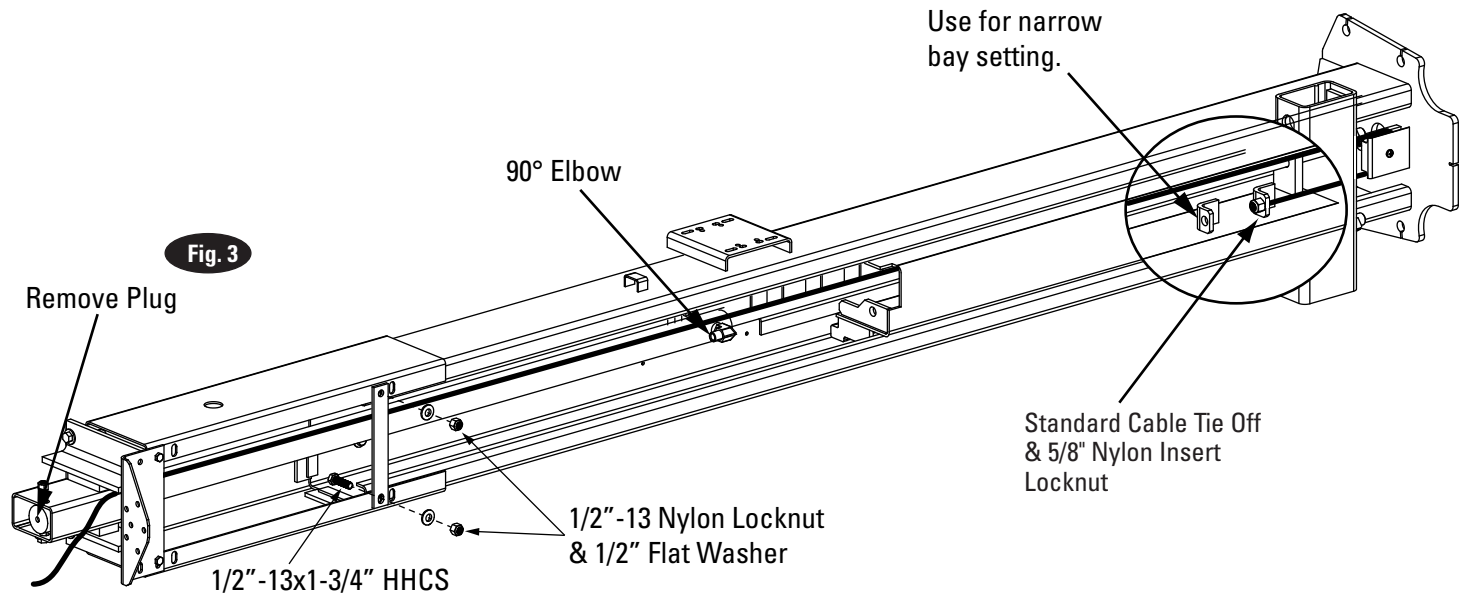


Fig. 3

6. Lift Setting: Position columns in bay using dimensions shown in Fig. 1a & Fig. 1b. Place column with power unit mounting bracket on vehicle passenger side of lift. Both column base plate backs must be square on center line of lift. Notches are cut into each base plate to indicate center line of lift. Use appropriate equipment to raise carriage to first latch position. Be sure locking latch is securely engaged.

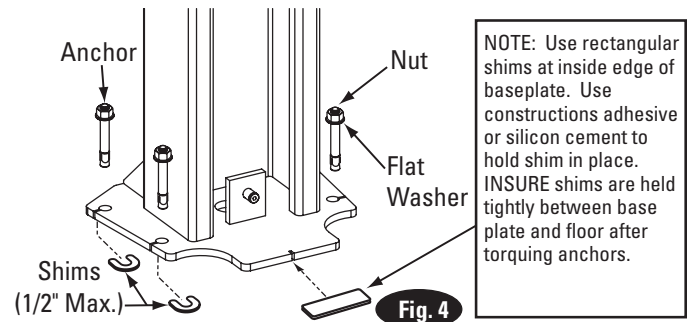
7. Concrete and Anchoring:

Drill (10) 3/4" dia. holes in concrete floor using holes in column base plate as a guide. See Fig. 5 for hole depth, hole spacing, and edge distance requirements.

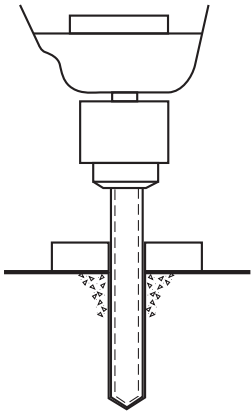
CAUTION DO NOT install on asphalt or other similar unstable surfaces. Columns are supported only by anchors in floor.

IMPORTANT Using the horse shoe shims provided, shim each column base 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 (Reference FA9116 Shim Kit). Recheck columns for plumb. Tighten anchor bolts to an installation torque of 110 ft-lbs. Shim thickness MUST NOT exceed 1/2" when using the 5-1/2" long anchors provided with the lift, Fig. 4. Adjust the column extensions plumb.

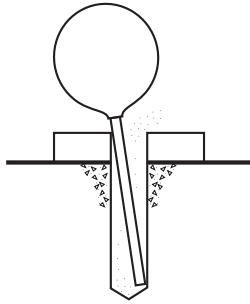
If anchors do not tighten to 110 ft-lbs. installation torque, replace concrete under each column base with a 4' x 4' x 6" thick 3000 PSI minimum concrete pad keyed under and flush with the top of existing floor. Let concrete cure before installing lifts and anchors.



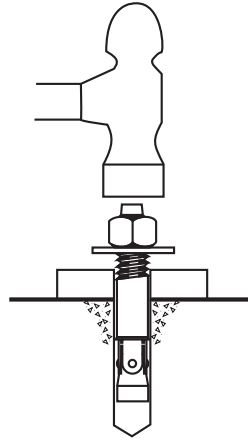
NOTE: If more than 2 horse shoe shims are used at any of the column anchor bolts, pack non-shrink grout under the unsupported area of the column base. Insure shims are held tightly between the baseplate and floor after torquing anchors.



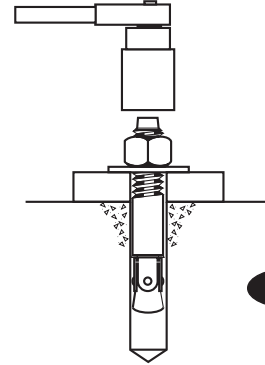
Drill holes using 3/4" carbide tipped masonry drill bit per ANSI B212.15-1994 (R2000)



Clean hole.



Run nut down just below impact section of bolt. Drive anchor into hole until nut and washer contact base.



Tighten nut with Torque wrench to 110 ft.-lbs.

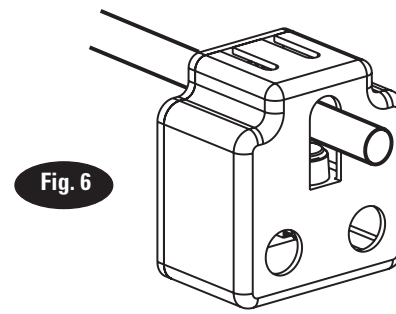
Fig. 5

CONCRETE AND ANCHORING REQUIREMENTS

STANDARD	ANSI/ALI ALCTV	IBC 2006, 2009, 2012		SEISMIC
Minimum Floor Thickness	4-1/4 INCHES	5 INCHES	6 INCHES	Varies by location consult with your structural engineer and manufacturer's representative.
Anchor	Hilti Kwik Bolt III 3/4" x 5-1/2" Anchors supplied with the lift.*	Hilti HIT-HY 150 MAX-SD Adhesive; Hilti HIT-HY 150 MAX Adhesive; HILTI HIT-RE 500-SD Adhesive	Hilti Kwik Bolt III 3/4" x 7"	
Minimum Concrete Strength	3000 PSI	3000 PSI	3000 PSI	
Minimum Anchor Embedment	3-1/4 INCHES	3-1/2 INCHES	3-3/4 INCHES	
Minimum Distance to Concrete Edge, Crack, Expansion Joint, Abandoned Anchor Hole	4-1/2 INCHES	5-1/4 INCHES	3-1/4 INCHES	

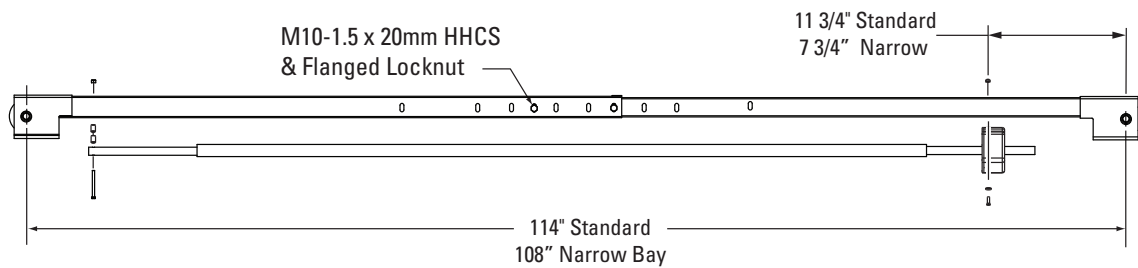
***The supplied concrete fasteners meet the criteria of the American National Standard "Automotive Lifts - Safety Requirements for Construction, Testing, and Validation" ANSI/ALI ALCTV-2011, and the lift owner is responsible for all charges related to any additional anchoring requirements as specified by local codes. Contact customer service for further information at: 800.640.5438**

8a. Overhead Assembly: Fig. 7: Adjust overhead to appropriate dimension. Install (4) M10-1.5 x 20mm HHCS & M10-1.5 Flanged Locknuts, do not tighten. Slide Switch Box Fig. 6 over switch bar ensuring knock out holes face the power unit column. Use (2) 1/4"-20NC x 3/4" lg. HHCS, 1/4" Flat Washer, and 1/4"-20NC Nuts to mount switch box to overhead, see Fig. 7.



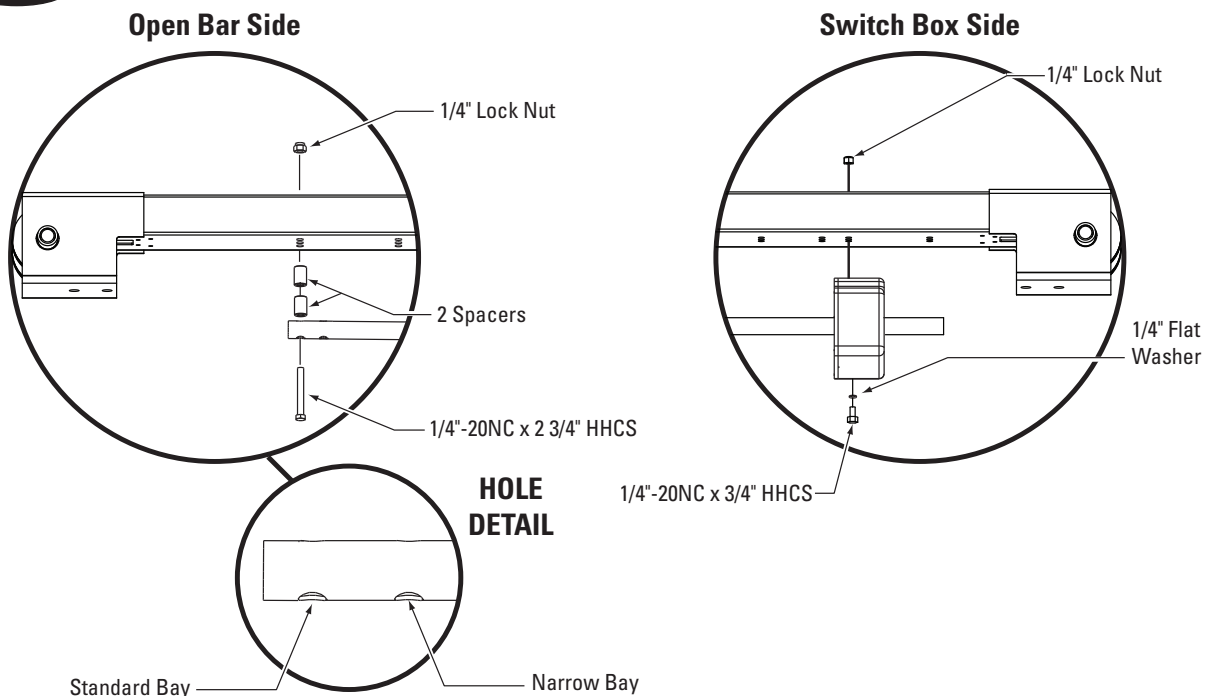
8b. Continued Overhead Assembly:

For single phase lifts: Insert 1/4"-20NC x 2 3/4" HHCS through pivot hole in end of switch bar. Insert opposite end of bar through slot in switch mounting bracket. Then secure HHCS and Switch Bar to overhead as shown, Fig. 7, using (2) 3/4" spacers and 1/4"-20NC Locknut. Tighten Hex bolt leaving 1/16" gap between the spacer and the overhead assembly.



Hardware Detail For Overhead Assembly

Fig. 7



For three phase lifts: Remove Limit Switch cover, Fig. 8. Insert Actuator end of Switch Bar into slot located inside Limit Switch, Fig. 8. A small amount of silicone sealant on the lower part of the actuator will help hold it in place. Insert 1/4"-20NC x 2 3/4" HHCS through pivot hole in end of Switch Bar. Then secure HHCS and Switch Bar to overhead as shown, using (2) 3/4" spacers and 1/4"-20NC Locknut. Tighten Hex bolt leaving 1/16" gap between the spacer and the overhead assembly, Fig. 7. Replace limit switch cover.

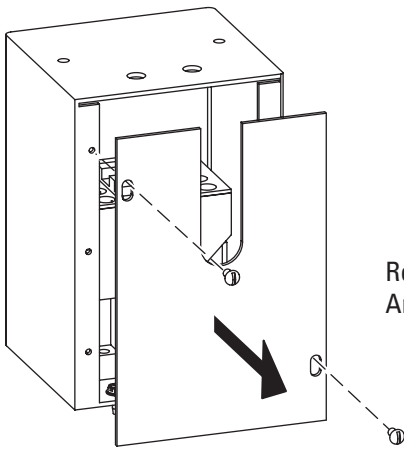
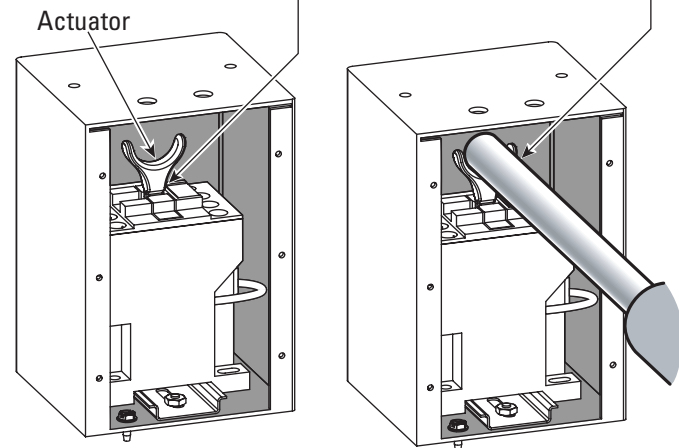


Fig. 8

Place Actuator Here.
A Small Amount Of Silicone Sealant On The Lower Part Of The Actuator Will Help Hold It In Place.



9. Overhead Installation: Install overhead assembly to Mounting Bracket with (4) M10-1.5 x 20mm HHCS, and (4) M10-1.5 Flanged Locknut on both columns Fig. 9. Tighten bolts at center of overhead assembly.

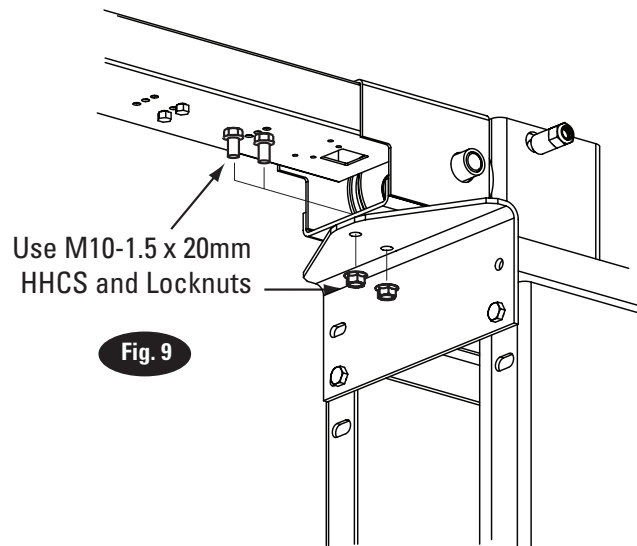


Fig. 9

10. Power Unit: First install a star washer onto all of the (4) 5/16"-18NC x 1-1/2" HHCS. This is very important for grounding. Put the (4) 5/16"-18NC x 1-1/2" HHCS thru holes in power unit bracket, Fig. 9. Mount unit with motor up to column bracket and install (4) 5/16" star washers and 5/16" Nuts. Install and hand tighten fitting to pump until O-ring is seated. Continue to tighten the locknut until the nut and washer bottom out against the pump manifold.

NOTE: You may still be able to rotate the fitting. This is acceptable unless there is seepage at the O-ring. If so, slightly tighten the locknut.

CAUTION Over tightening locknut may tear O-ring or distort threads in pump manifold outlet.

11. Hoses: Clean adapters and hose. Inspect all threads for damage and hose ends to be sure they are crimped, Fig. 11. Install hose and hose clamps, Fig. 12 & Fig. 16a.

Flared Fittings Tightening Procedure

1. Screw the fittings together finger tight. Then, using the proper size wrench, rotate the fitting 2-1/2 hex flats.

IMPORTANT Flare seat MUST NOT rotate when tightening. Only the nut should turn.

2. Back the fitting off one full turn.
3. Again tighten the fittings finger tight; then using a wrench, rotate the fitting 2-1/2 hex flats. This will complete the tightening procedure and develop a pressure tight seal.

CAUTION Over tightening will damage fitting resulting in fluid leakage.

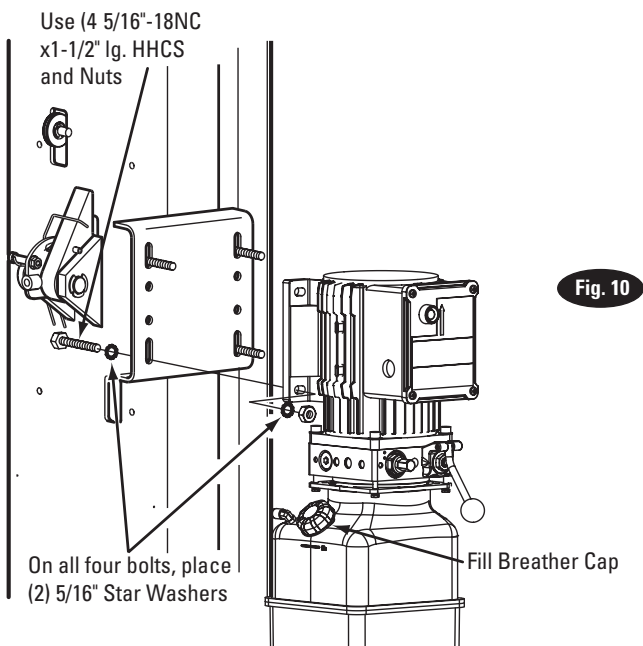


Fig. 10

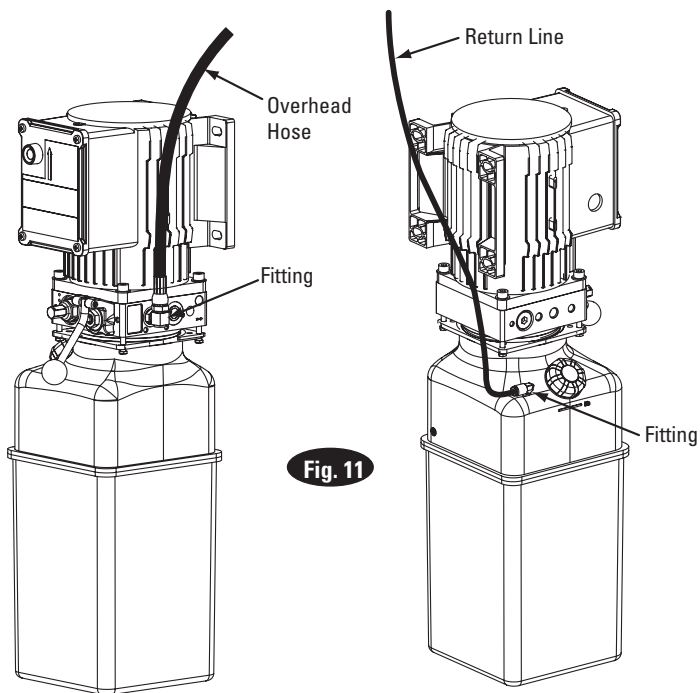


Fig. 11

Adapter & Hose Installation

1. Before installing the hoses into the lift, attach the Overhead hose Pc. (3) and Cylinder hose Pc. (4) to the "T" fitting Pc. (6) as shown in Figure 12b.
2. Route the assembled hose through the overhead but do not attach to either cylinder.
3. Route the Power Unit hose Pc. (5) through the column hole and attach it to the "T" fitting, Fig. 12b.

4. Take up the slack in the Power Unit side cylinder hose and wire tie the "T" fitting tightly to the power unit side cylinder, Fig. 12b.
5. Secure each hose as needed.
6. Run return line from elbow Pc. (8) to tee Pc. (9). The return line then runs outside of column down and connects to the power unit, Fig. 12a.

NOTE: Overhead hose goes over top end of overhead assembly, Fig. 12a, 12c, Fig. 17a, & Fig. 17b.

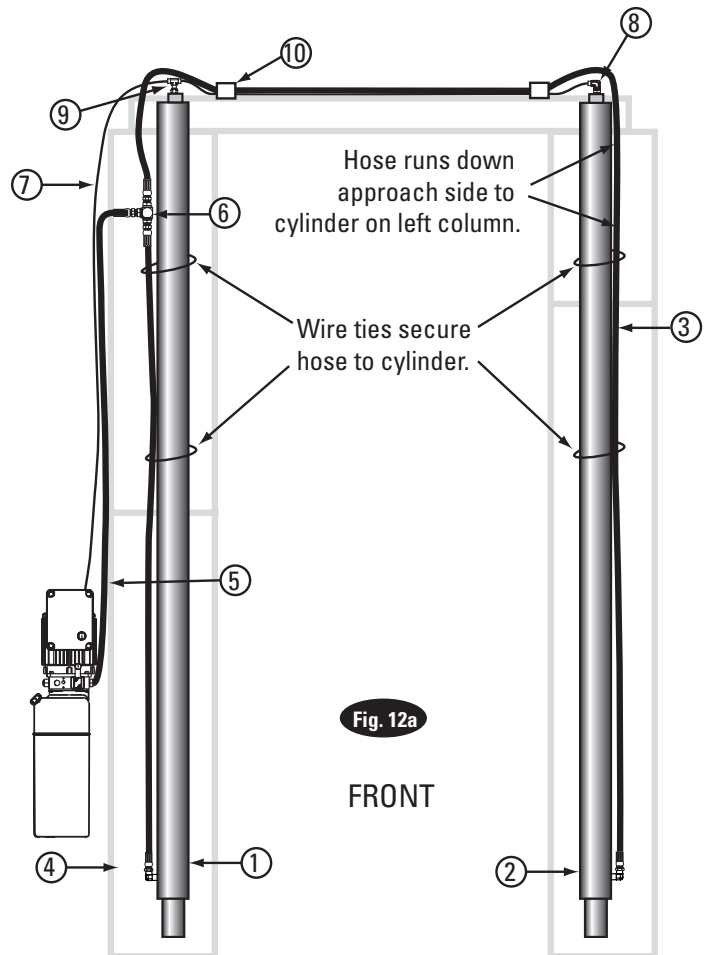


Fig. 12a

ITEM	QTY.	DESCRIPTION
1	1	Power Unit Side Cylinder
2	1	Passenger Side Cylinder
3	1	Passenger Side Hose
4	1	Cylinder Hose
5	1	Power Unit Hose
6	1	3/8" Branch Tee
7	1	Return Line
8	1	1/4" Elbow
9	1	1/4" Branch Tee
10	2	Hose Clamps
	2	M10-1.5 x 20mm HHCS
	2	M10-1.5 Flanged Locknuts

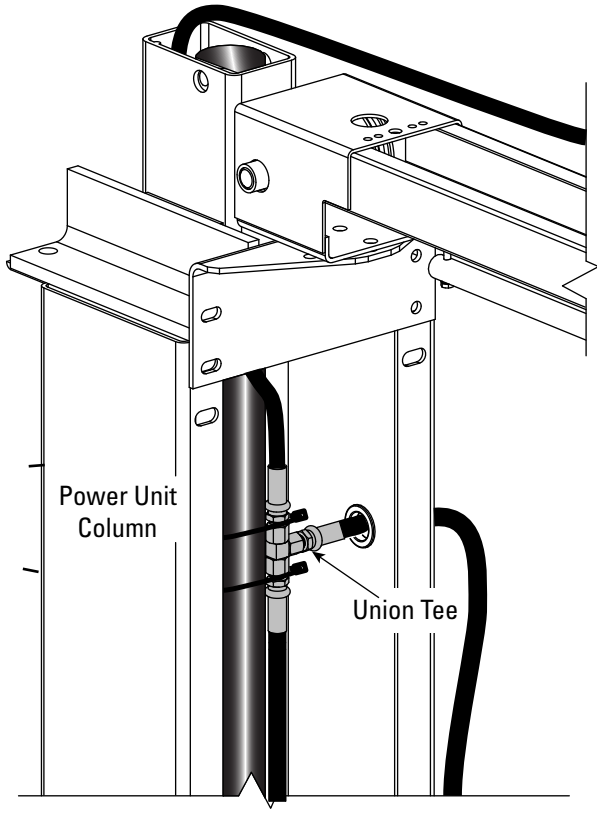
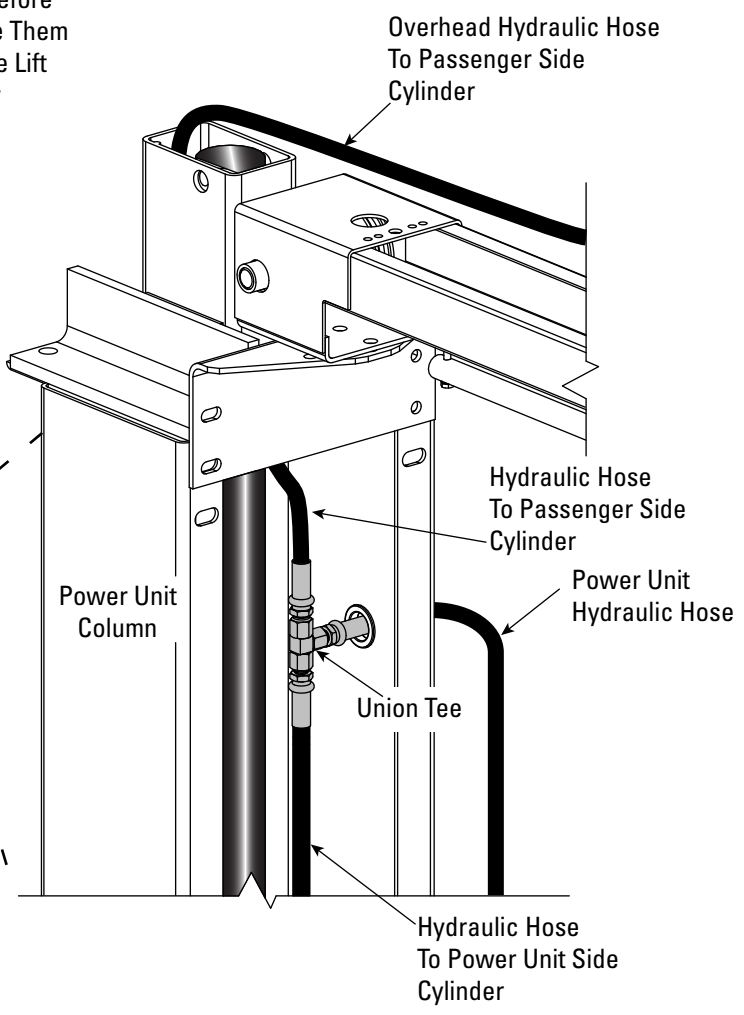
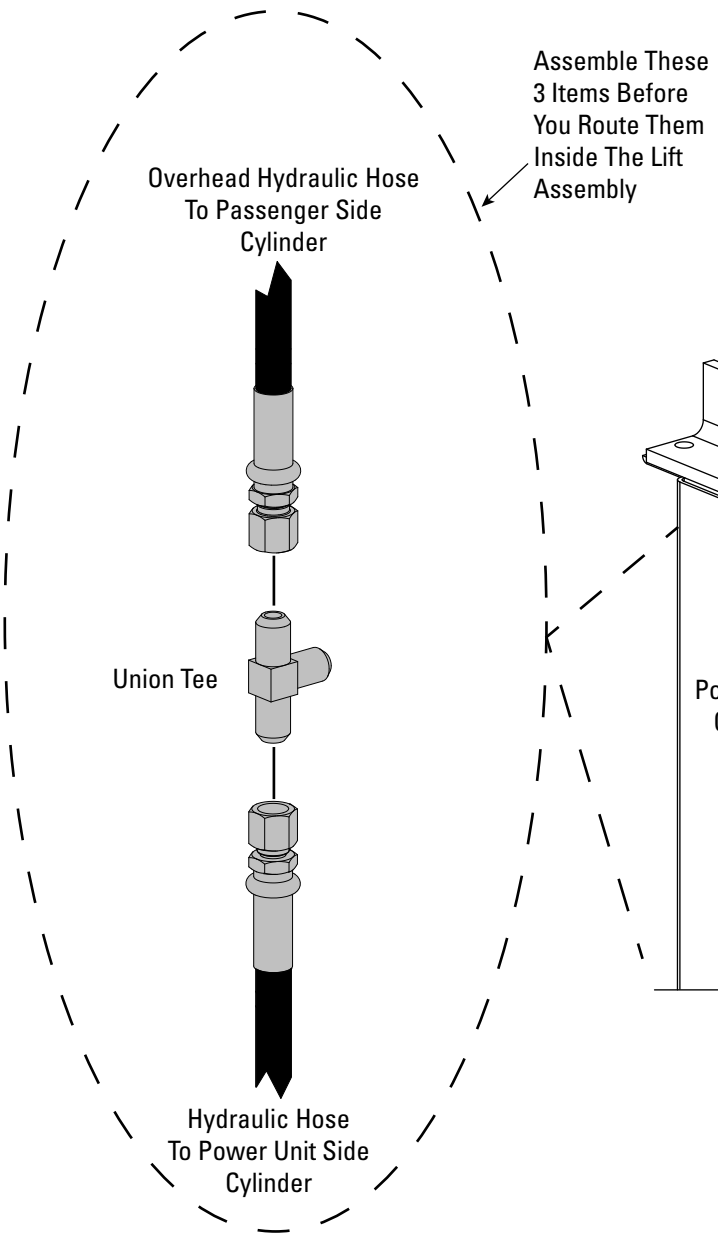
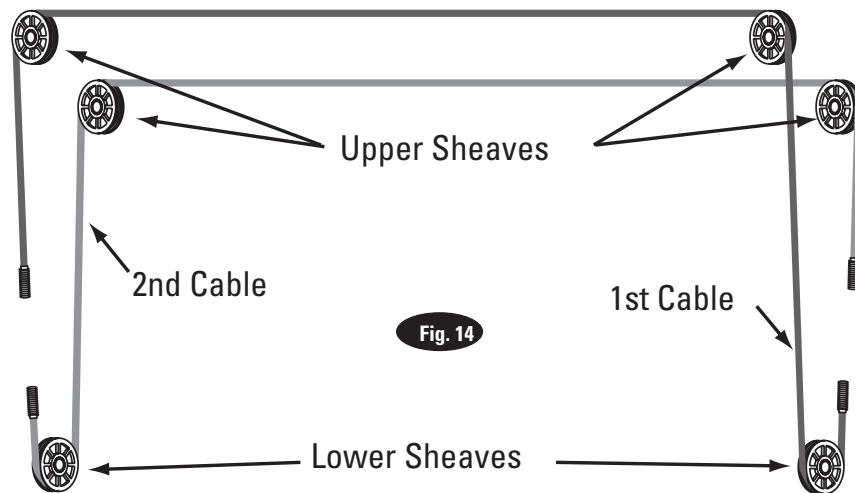
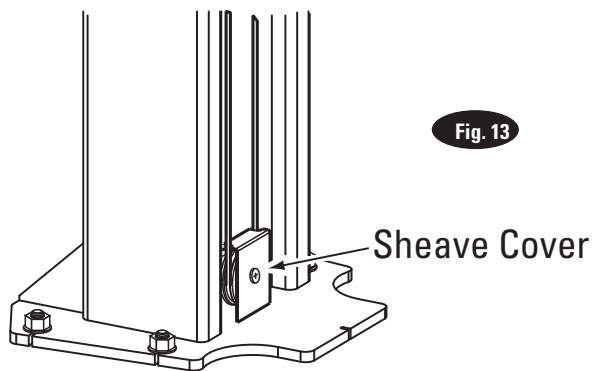
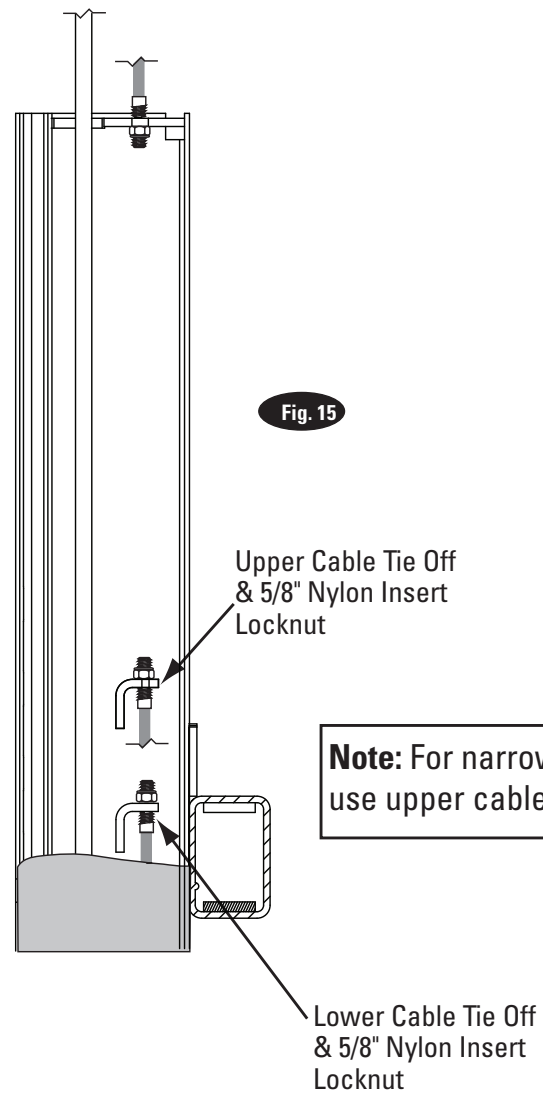


Fig. 12b

IMPORTANT
 Wire Tie Union Tee
 And Hydraulic hoses
 To The Side of The
 Cylinder

12. Equalizing Cables

- A) Refer to Fig. 14 for the general cable arrangement.
- B) Run cable from paragraph 4 around overhead sheave and across and down to the opposite carriage, Fig. 14. Install sheave cover, Fig. 13.
- C) Fasten the cable end to the carriage upper tie-off bracket, Fig. 15. Tighten the locknut enough to apply light tension to the cable.
- D) Adjust the tension of both cables during the final adjustments in paragraph 22.

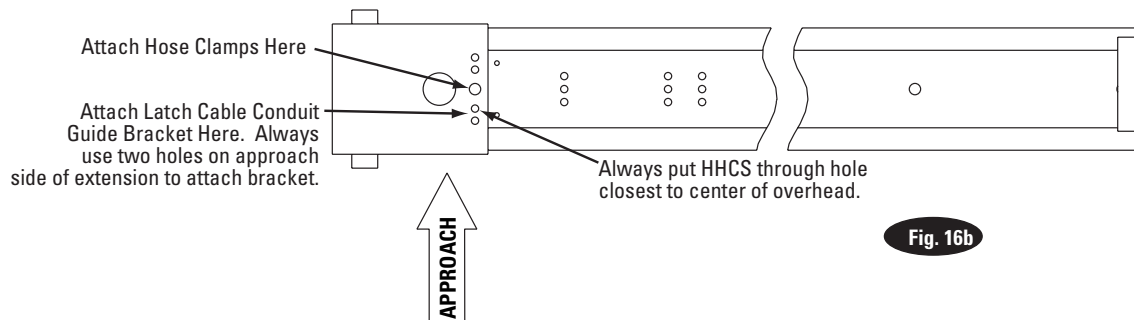
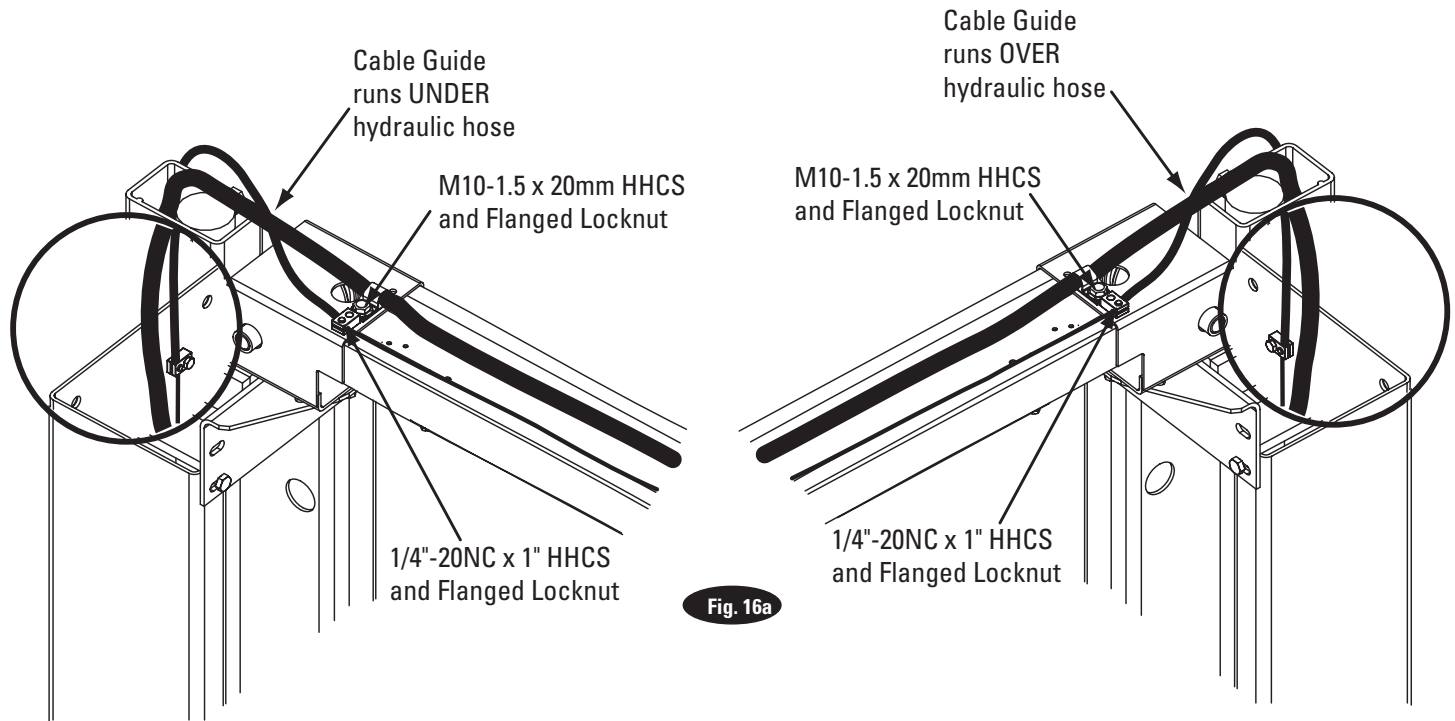


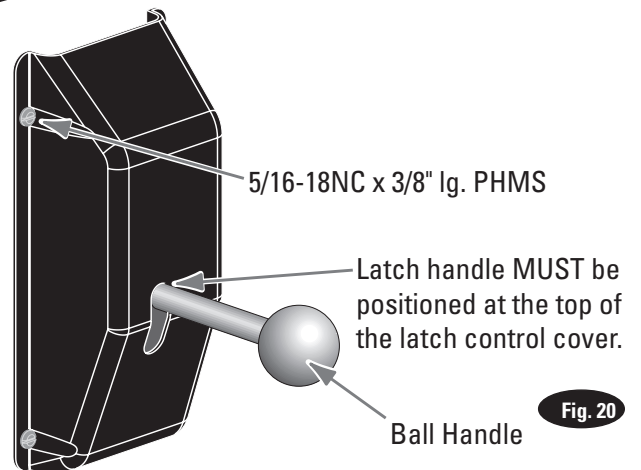
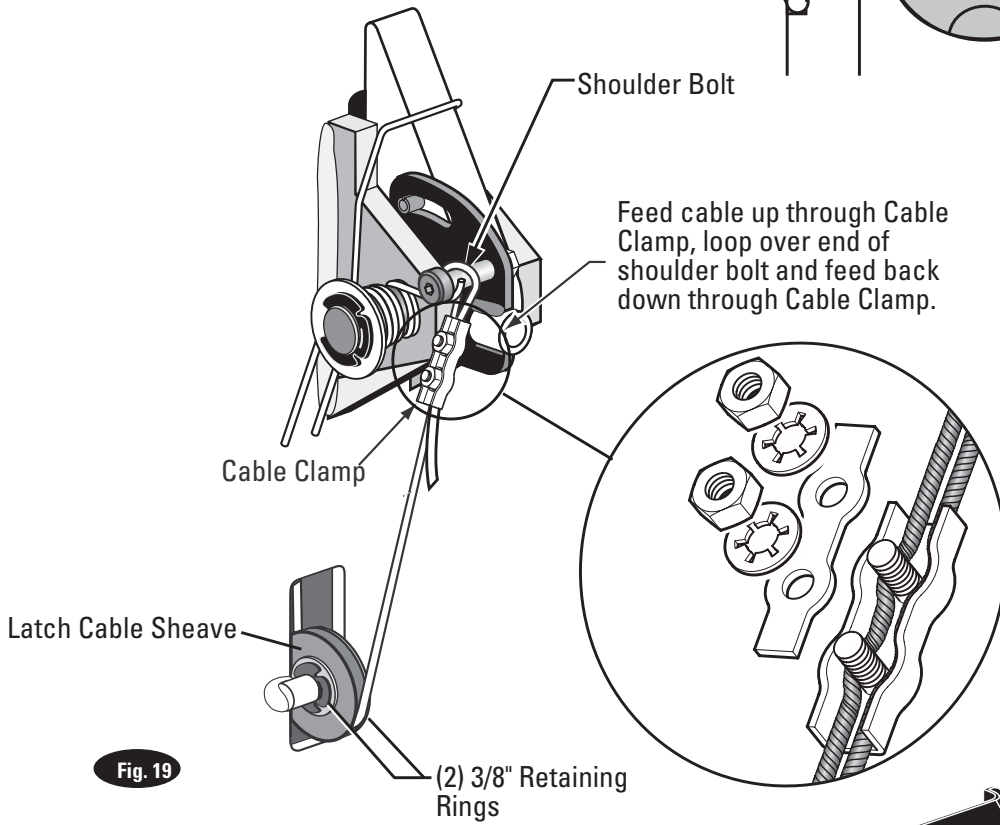
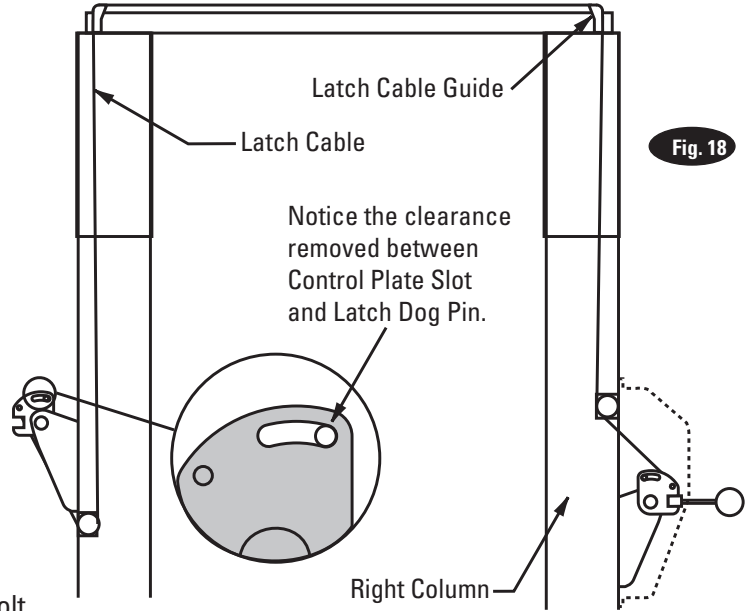
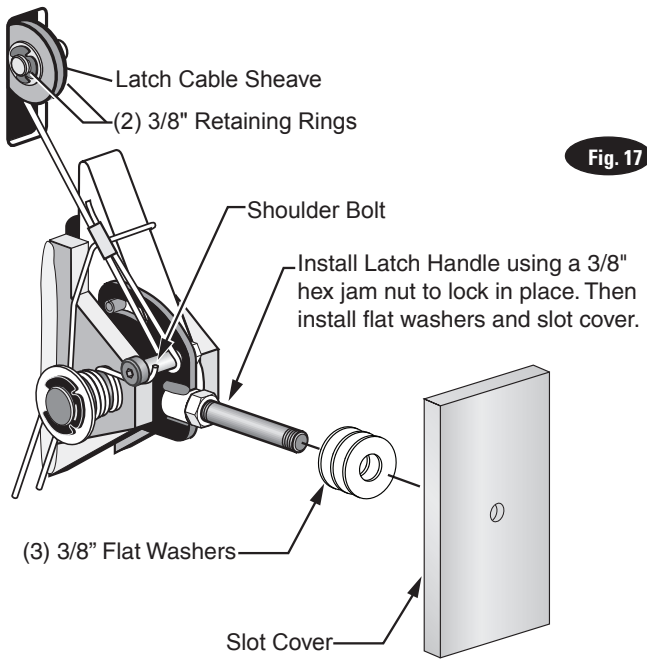
13. Locking Latch Cable

- A) Slip loop end of cable over end of shoulder screw on right side latch control plate, Fig. 17.
- B) Feed the other end of the cable through the latch cable sheave slot making sure that the cable is running under the bottom side of the latch cable sheave and inside the right column, Fig. 17.
- C) Attach latch cable conduit guide brackets to overhead as shown, Fig. 16a & Fig. 16b. Always use the holes on the approach side of the lift. HHCS should be in hole nearest the center of the overhead, Fig. 16b.
- D) Route cable up inside column and through the latch cable guide, Fig. 16a & Fig. 18.

- IMPORTANT** Using wire ties provided, tie off hydraulic hose snug to cylinders to keep hose away from equalizing cable, Fig. 12.
- E) Continue routing cable to the left column latch cable guide, Fig. 16a & Fig. 18, routing the cable through the left column latch cable guide, Fig. 16a.

- F) Bring the cable down inside the left column and feed the end of the cable through the lower latch cable sheave slot so that the cable is now back outside the column, Fig. 19.
- G) Route cable under the bottom side of the latch cable sheave, Fig. 19.
- H) At this point you **MUST** install the latch handle, jam nut, and right column latch cover Fig. 17 & Fig. 20. Install latch handle ball, Fig. 20.
- I) Insert cable in cable clamp along one side, loop around shoulder screw and back down, inserting cable along other side of cable clamp, Fig. 19. Place top back on clamp, barely tightening.
- J) Next, pull the control plate down, Fig. 18 & Fig. 19, to eliminate any clearance between the control plate slot and the latch dog pin, Fig. 18.
- K) Using Pliers, pull cable tight and secure the clamp close to the shoulder screw. Tighten clamp.





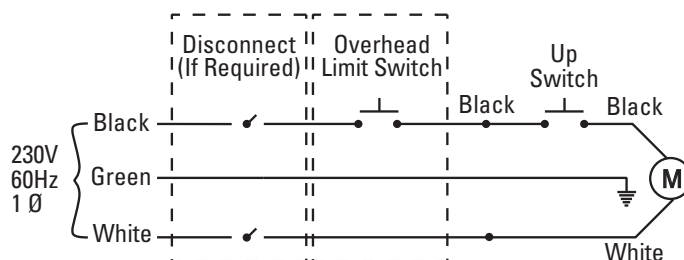
14. Electrical: Have a certified electrician run appropriate power supply to motor, Fig. 21 & 22. Size wire for 20 amp circuit. See Motor Operating Data Table.

CAUTION Never operate the motor on line voltage less than 208V. Motor damage may occur.

IMPORTANT: Use separate circuit for each power unit. Protect each circuit with time delay fuse or circuit breaker. For single phase 208-230V, use 20 amp fuse. Three phase 208-240V, use 20 amp fuse. For three phase 400V and above, use 10 amp fuse. For three phase 380V use 16 amp fuse. For wiring see Fig. 21 & Fig. 22. All wiring must comply with NEC and all local electrical codes.

Single Phase Power Unit

MOTOR OPERATING DATA TABLE - SINGLE PHASE	
LINE VOLTAGE	RUNNING MOTOR VOLTAGE RANGE
208-230V 50Hz.	197-253V
208-230V 60Hz.	197-253V



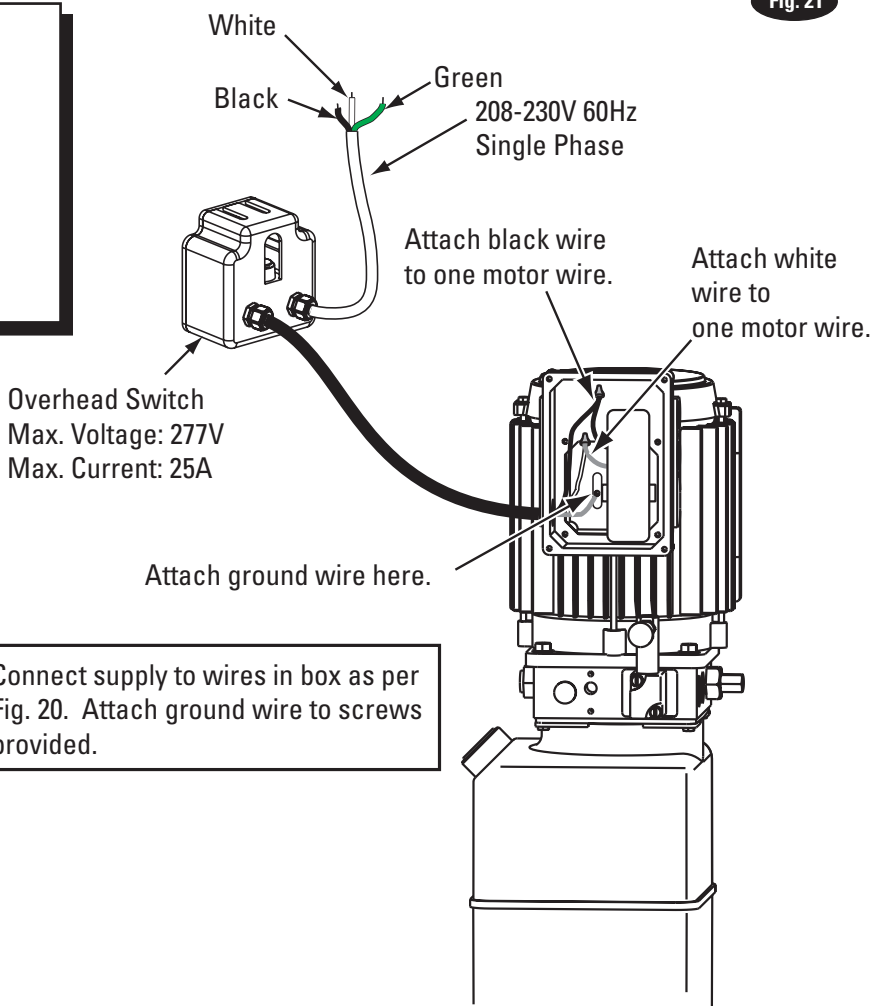
Note: 60Hz. Single phase motor CAN NOT be run on 50Hz. line without a physical change in the motor.

NOTE: Assure cord used for connection between the overhead switch and power unit is of the type specified in:

UL201, Sections 10.1.1.3 & 10.1.1.4

Size for 25 amp circuit. See UL 201, Section 15 for proper wiring requirements for this connection.

Fig. 21



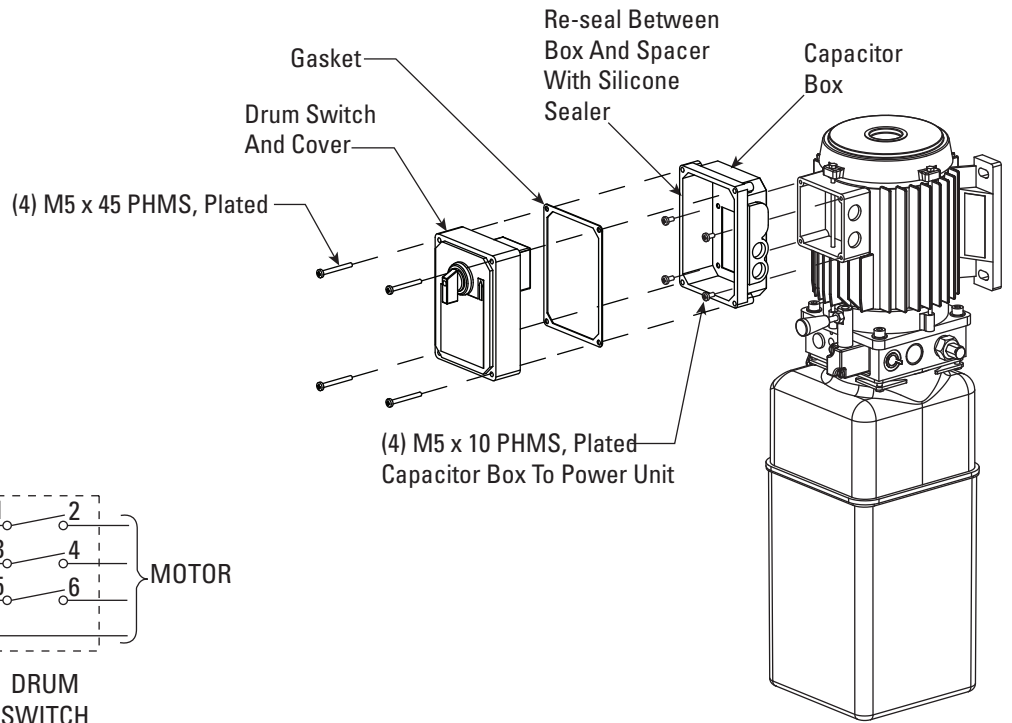
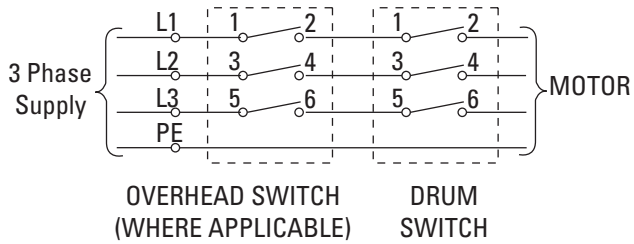
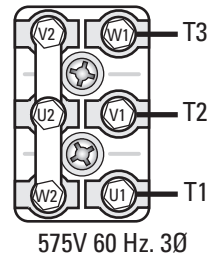
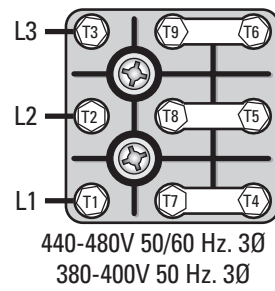
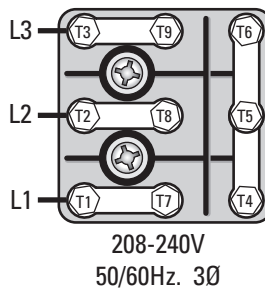


Fig. 22



Three Phase Power Unit

MOTOR OPERATING DATA TABLE - THREE PHASE	
LINE VOLTAGE	RUNNING MOTOR VOLTAGE RANGE
208-240V 50/60Hz.	197-253V
400V 50Hz.	360-440V
440-480V 50/60Hz.	396V-528V
575V 60Hz.	518V-632V



15. Oil Filling & Bleeding: Use Dexron III ATF, or Hydraulic Fluid that meets ISO 32 specifications. Remove fill-breather cap, Fig. 10. Pour in (8) quarts of fluid. Start unit, raise lift to full rise several times until lift operates smoothly.

CAUTION If fill-breather cap is lost or broken, order replacement. Reservoir must be vented.

16. Overhead switch: Check overhead switch assembly to assure that switch bar is depressing switch plunger sufficiently to actuate the switch. The overhead switch is wired normally open, see Fig. 21 & Fig. 22. Lift will not operate until weight of switch bar is depressing switch plunger. Verify that Power Unit stops working when switch bar is raised, and re-starts when the bar is released.

17. Arms & Restraints: Before installing arms, raise carriages to a convenient height. Grease swivel arm pins and holes with Lithium grease. Slide arm into yoke, Fig. 23a. Install 1-3/4" diameter arm pin(s) and arm stop, Fig. 23a.

Note: Arm stop will be required on the drive in side of the power unit side. Install at same time as arm pin, Fig. 23b. Notice the orientation of arm stop in Fig. 23c.

After installing arms and pins, install arm Restraint Gears as follows: Install Restraint Gear onto arm clevis, as shown, Fig. 24a. Ensure side of gear marked **TOP** is facing upward, Fig. 24a.

NOTE: **TOP** is stamped on top side of gear. You may need to pull up on the pin to allow enough room to install Restraint Gear.

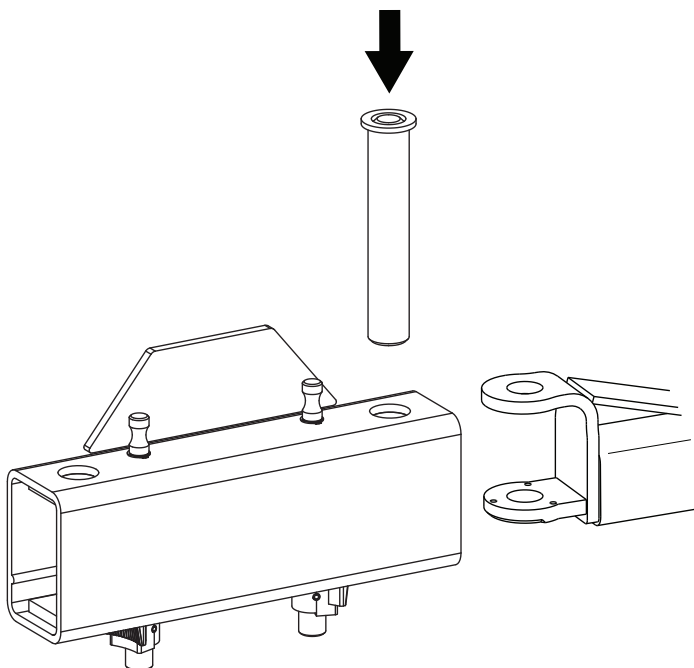
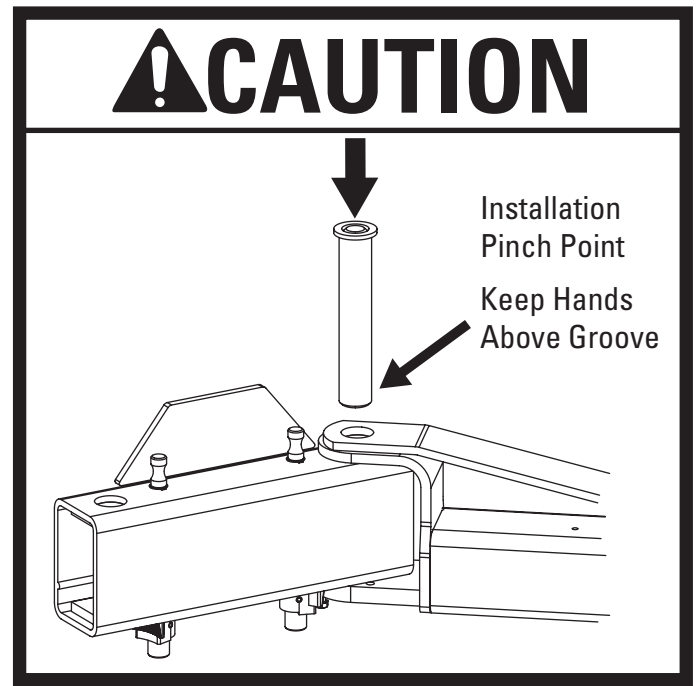


Fig. 23a



Arms With 3 Holes In Bearing Bars: Then, install the (2) 3/8" -16NC x 1-1/2" Lg. HHCS ((8) total for all (4) arms) into the gear and arm. Reference Fig. 22b and Fig. 25.

Torque the Restraint Gear bolts to 30-34 ft.-lbs.

NOTE: To check operation of arm restraints, raise carriage 1" min. from full down position. Pull up on pin and adjust arms to desired position. To engage restraint, let pin-ring down allowing gear teeth to mesh together. It may be necessary to rotate arm slightly to engage gear teeth.

NOTE: Pin, Spring, & Gear Block are all pre-assembled.

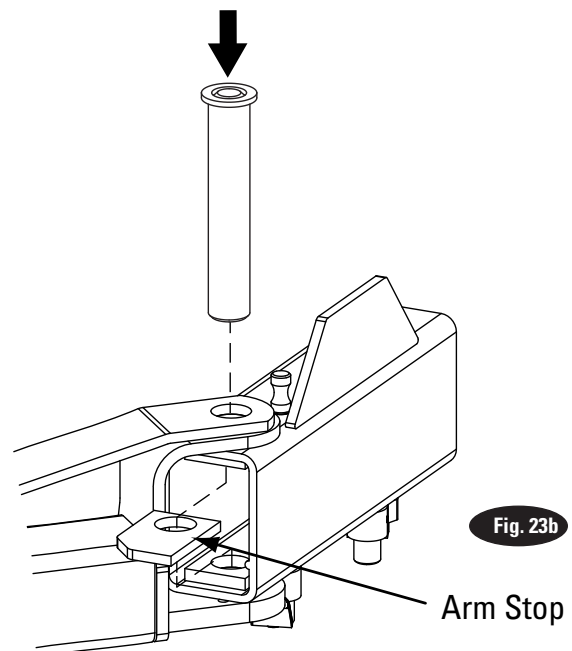


Fig. 23b

Note: Location and Orientation of Arm Stop

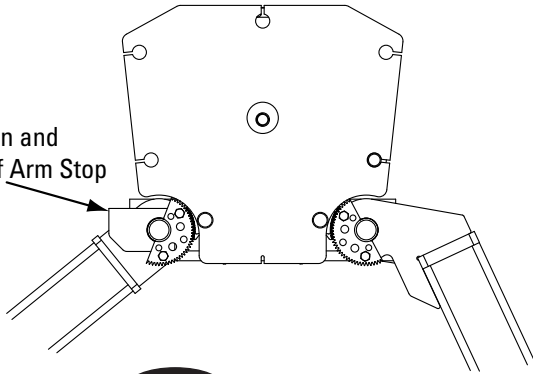


Fig. 23c

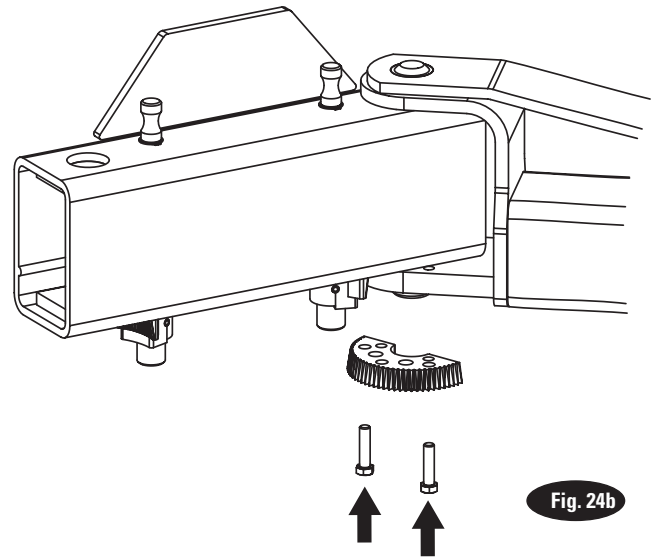


Fig. 24b

NOTE: Once arm is installed in yoke, pull up actuator pin and swing arm fully around, being sure that the Restraint Gear and Gear Block always stay aligned. If they do not stay aligned, remove restraint gear and install in the opposite position.

TOP will be marked on top side of restraint gear

NOTE beveled gear orientation

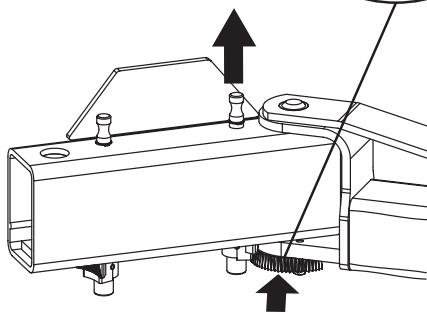
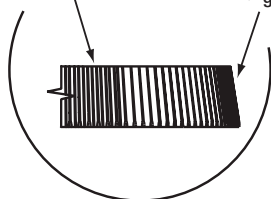
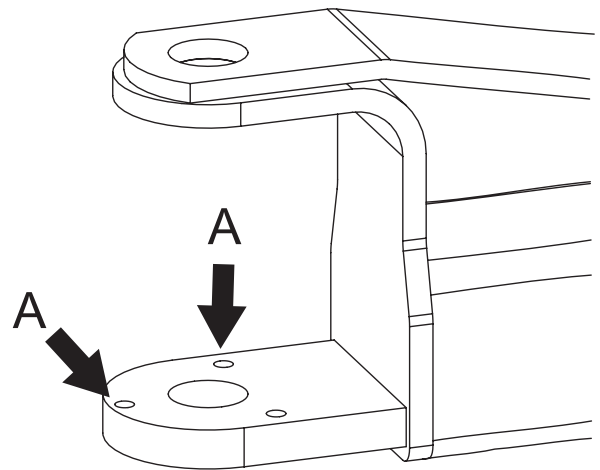
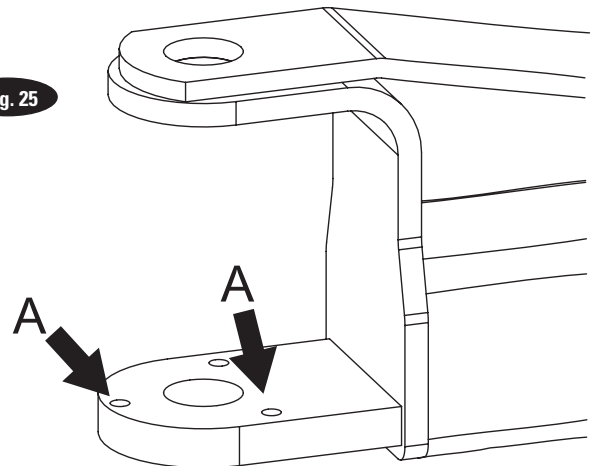


Fig. 24a



Use holes marked "A" for Right Front and Left Rear.

Fig. 25



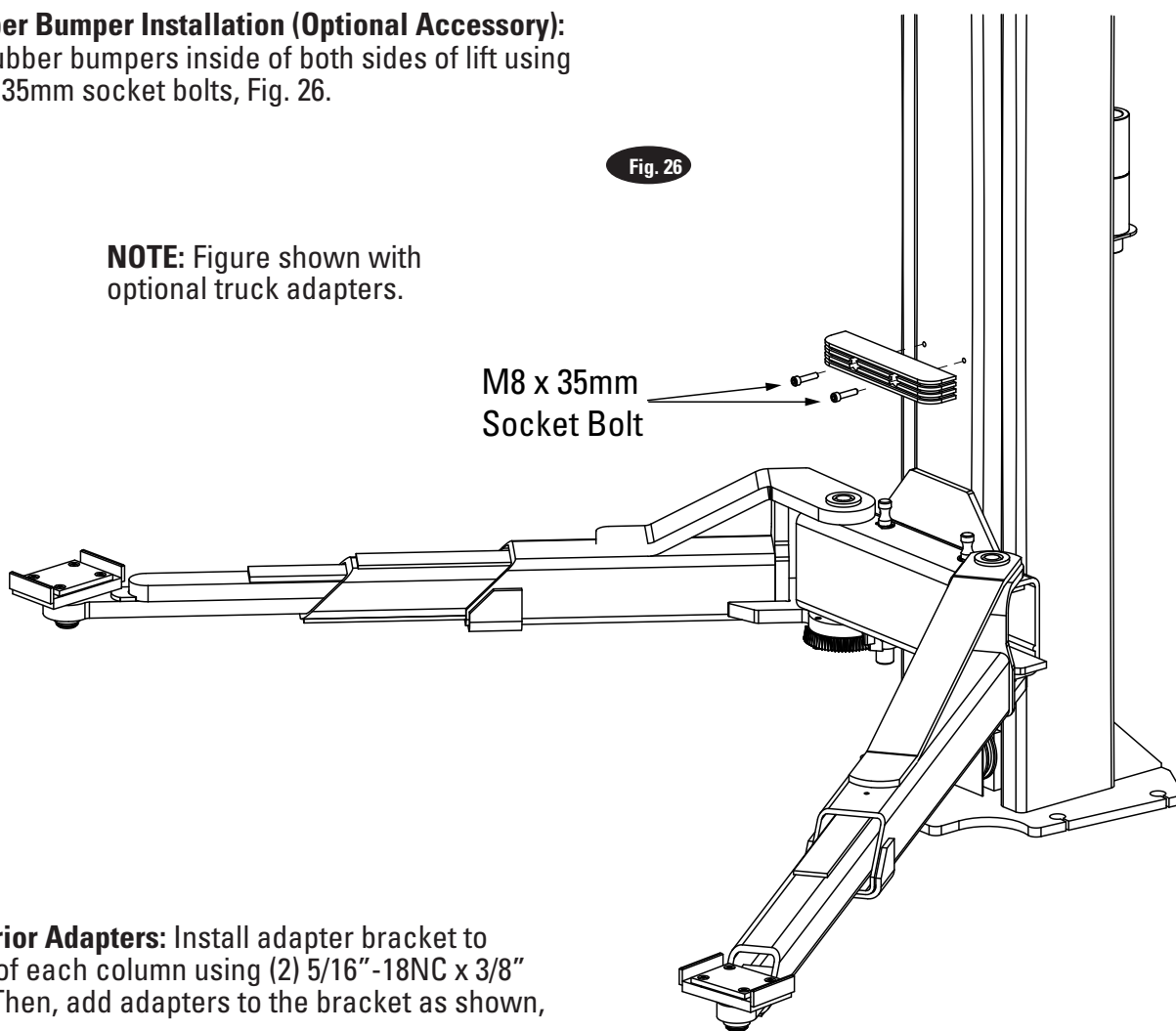
Use holes marked "A" for Left Front and Right Rear.

18. Rubber Bumper Installation (Optional Accessory):

Install rubber bumpers inside of both sides of lift using (2) M8 x 35mm socket bolts, Fig. 26.

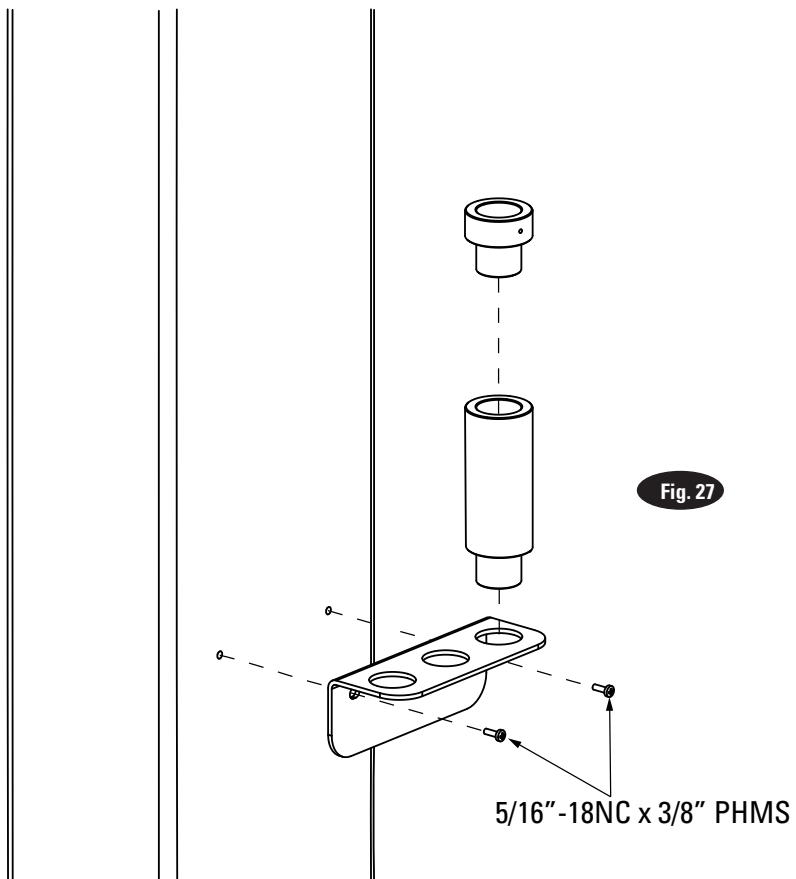
Fig. 26

NOTE: Figure shown with optional truck adapters.



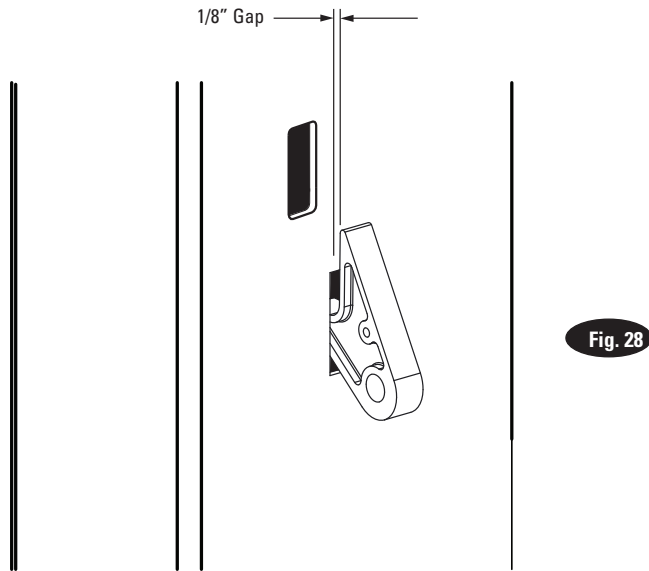
19. Exterior Adapters: Install adapter bracket to outside of each column using (2) 5/16" -18NC x 3/8" PHMS. Then, add adapters to the bracket as shown, Fig. 27.

Fig. 27

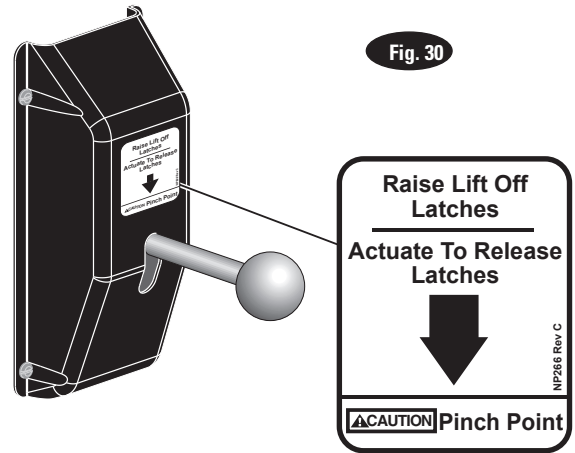


20. Latch Cable Adjustment:

- A) Check to make sure the latch will properly engage and disengage. Slowly release the latch handle. A 1/8" gap between the top of the latch dog and the column is allowable, Fig. 28.
- B) When raising, listen to latches to be sure that both latch dogs fall into latch slots. If they do not, loosen clamp and adjust tension as necessary.
- C) Install left latch cover using 5/16-18NC x 3/8" lg PHMS.

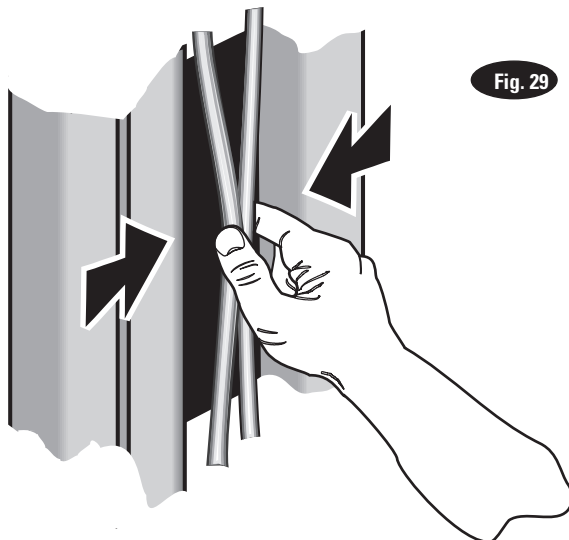


23. Latch Release Decal: Install latch release decal on cover above latch release handle, Fig. 30.



21. Pressure Test: Run lift to full rise and keep motor running for 5 seconds. Stop and check all hose connections. Tighten or reseal if required. Repeat air bleeding of cylinders.

22. Equalizer Cable Adjustment: Raise lift to check equalizer cable tension. Below carriage, grasp adjacent cables between thumb and forefinger, with about 15 lbs. effort you should just pull the cables together, Fig. 29. Adjust at upper tie-offs Fig. 15.



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2-Post Lift Operations and Maintenance Manual

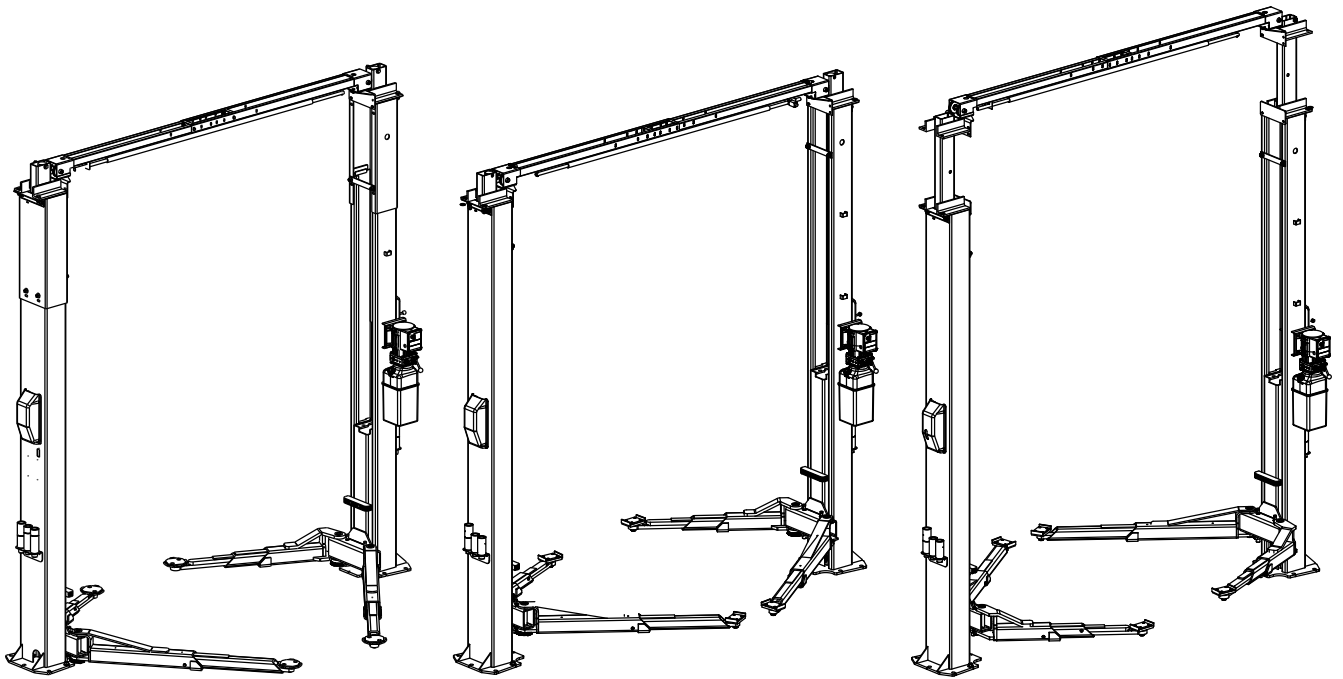


Table Of Contents

Safety Instructions	2
Owner/Employer Responsibilities / Operating Conditions	3
Operating Instructions	4
Maintenance Instructions	7
Trouble Shooting	8
Lift Lockout/Tagout Procedure	9

Installer: Please return this booklet to literature package and give to lift owner/operator.

SAFETY INSTRUCTIONS

SAFETY INSTRUCTIONS

Proper maintenance and inspection is necessary for safe operation. ©

SAFETY INSTRUCTIONS

Do not operate a damaged lift. ©

CAUTION

Lift to be used by trained operator only. ©

CAUTION

Authorized personnel only in lift area. ©

SAFETY INSTRUCTIONS

Read operating and safety manuals before using lift. ©

WARNING

Position vehicle with center of gravity midway between adapters. ©

CAUTION

Use vehicle manufacturer's lift points. ©

WARNING

Do not override self-closing lift controls. ©

WARNING

Position vehicle with center of gravity midway between adapters. ©

WARNING

Remain clear of lift when raising or lowering vehicle. ©

CAUTION

Always use safety stands when removing or installing heavy components. ©

WARNING

Avoid excessive rocking of vehicle while on lift. ©

WARNING

Clear area if vehicle is in danger of falling. ©

CAUTION

Auxiliary adapters may reduce load capacity. ©

- Daily inspect your lift. Never operate if it malfunctions or if it has broken or damaged parts. Use only qualified lift service personnel and genuine parts to make repairs.
- Thoroughly train all employees in use and care of lift, using manufacturer's instructions and "Lifting It Right" and "Safety Tips" supplied with the lift.
- Never allow unauthorized or untrained persons to position vehicle or operate lift.
- Prohibit unauthorized persons from being in shop area while lift is in use.
- Do Not permit anyone on lift or inside vehicle when it is either being raised or lowered.
- Always keep area around lift free of tools, debris, grease and oil.
- Never overload lift. Capacity of lift is shown on nameplate affixed to the lift.
- Do Not stand in front of the vehicle while it is being positioned in lift bay.
- Do Not hit or run over lift arms or adapters. This could damage lift or vehicle. Before driving vehicle into lift bay, position arms and adapters to provide unobstructed entrance onto lift.
- Load vehicle on lift carefully. Position lift adapters to contact at the vehicle manufacturer's recommended lift points. Raise lift until adapters contact vehicle. Check adapters for secure contact with vehicle. Raise lift to desired working height.

CAUTION DO NOT go under vehicle if locking latches are not engaged.

- Do Not block open or override self-closing lift controls; they are designed to return to the "Off" or Neutral position when released.
- Do Not remove or disable arm restraints.
- Remain clear of lift when raising or lowering vehicle.
- Always use safety stands when removing or installing heavy components.
- Avoid excessive rocking of vehicle while on lift.
- Clear area if vehicle is in danger of falling.
- Remove tool trays, stands, etc. before lowering lift.
- Release locking latches before attempting to lower lift.
- Position lift arms and adapters to provide an unobstructed exit before removing vehicle from lift area.

OWNER/EMPLOYER RESPONSIBILITIES

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/SM01-1, 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.
- 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/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; 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 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.
- Shall not modify the lift in any manner without the prior written consent of the manufacturer.

OPERATING CONDITIONS

Lift is not intended for outdoor use and has an operating ambient temperature range of 41°-104°F (5°-40°C).

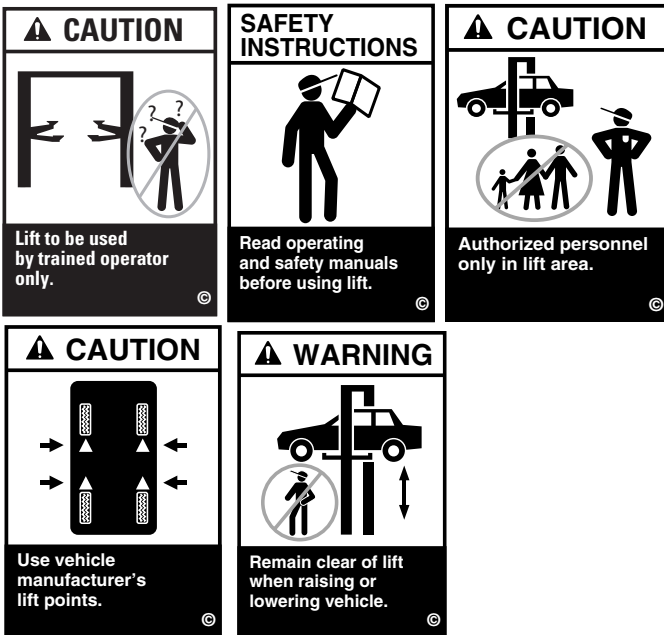
OPERATING INSTRUCTIONS

⚠️ WARNING

To avoid personal injury and/or property damage, permit only trained personnel to operate lift. After reviewing these instructions, get familiar with lift controls by running the lift through a few cycles before loading vehicle on lift.

IMPORTANT

Always lift the vehicle using all four adapters. NEVER raise just one end, one corner, or one side of vehicle.



Observe and heed Safety, CAUTION and Warning labels on the lift.

1. Before Loading: Lift must be fully lowered and service bay clear of all personnel before the vehicle is brought on lift. Swing arms out to full drive-thru position.
2. Spot vehicle over lift. Make sure you are using the correct adapter, Fig. 1.
3. Loading: Swing arms under vehicle and position adapters at vehicle manufacturer's recommended lift points, Fig. 2. Use intermediate, high step, or optional adapters for under body clearance when required.

Note: Allow (2) seconds between motor starts. Failure to comply may cause motor burnout.

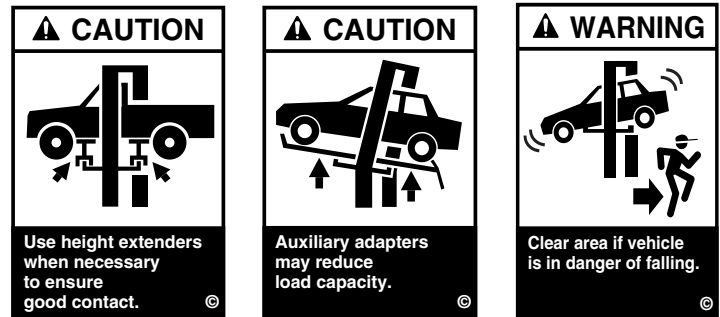
IMPORTANT

DO NOT rest adapter against edge of arm.

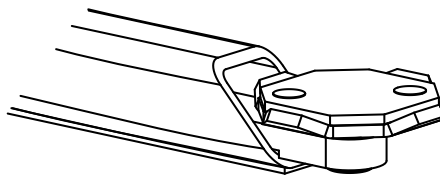
*Maximum operation pressure is:
2755 psi for DP10, RTP10

4. To Raise Lift:

- A. For all lifts. Push Raise switch on power unit, Fig. 3.
- B. Stop before making contact with vehicle. Check arm restraint pins for engagement. If required, slightly move arm to allow restraint gear and pawl to mesh. DO NOT hammer pin down as this will damage the restraint gear teeth.
- C. Raise vehicle until tires clear the floor.
- D. Stop and check adapters for secure contact at vehicle manufacturer's recommended lift points.
- E. Continue to raise to desired height only if vehicle is secure on lift.
- F. Do Not go under vehicle if all four adapters are not in secure contact at vehicle manufacturer's recommended lift points.
- G. Repeat complete spotting, loading and raising procedures if required.
- H. Lower lift onto locking latches.



Adapter Recommendations



This style adapter recommended for lifting Unibody Vehicles.

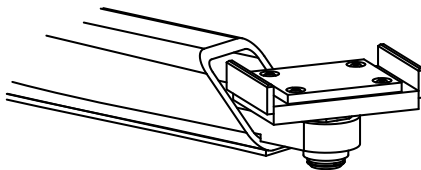


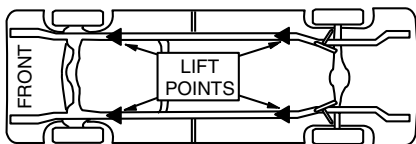
Fig. 1

This style adapter recommended for lifting Frame, Stub Frames, and Perimeter Frame Vehicles.

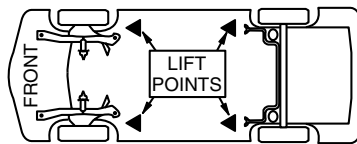


Most specialty or modified vehicles cannot be raised on a frame engaging lift. Contact vehicle manufacturer for raising or jacking details.

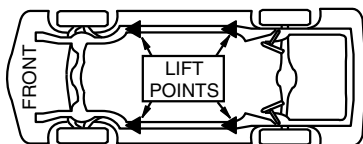
Typical Lifting Points



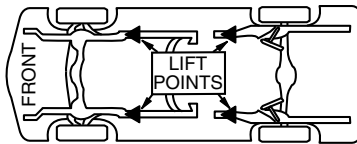
Pickup Truck



Unibody



Perimeter Frame



Stub Frame

NOTE: Some vehicles may have the manufacturer's Service Garage Lift Point locations identified by triangle shape marks on it's undercarriage (reference ANSI/SAE J2184-1992). Also, there may be a label located on the right front door lock face showing specific vehicle lift points. If the specific vehicle lift points are not identified, refer to the "Typical Lift Points" illustrated herein. ALWAYS follow the operating instructions supplied with the lift.

Fig. 2

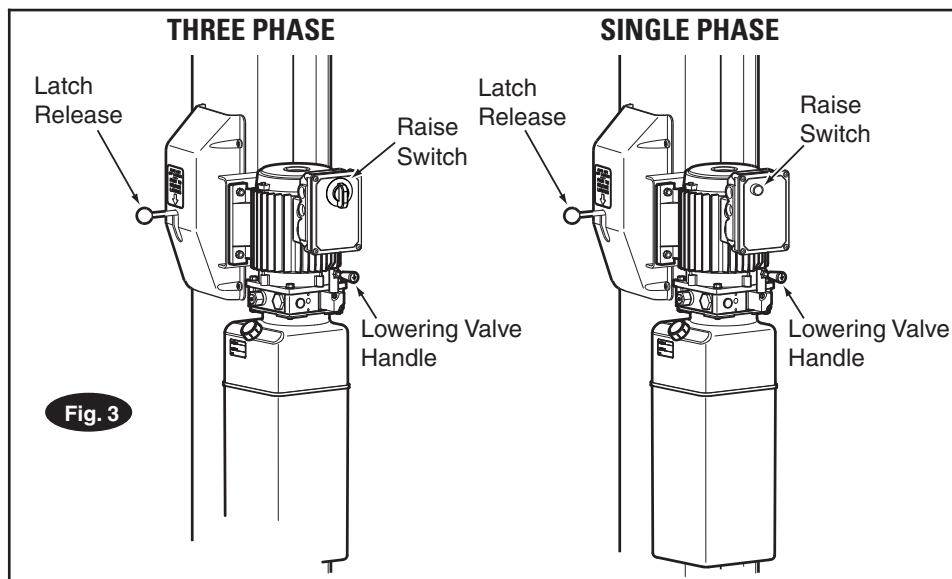


Fig. 3



DO NOT go under vehicle if locking latches are not engaged.



Before attempting to lift pickup trucks or other truck frame vehicles, be sure that:

- A. Vehicle frame is strong enough to support its weight and has not been weakened by modification or corrosion.
- B. Vehicle individual axle weight does not exceed one-half lift capacity.
- C. Adapters are in secure contact with frame at vehicle manufacturers recommended lift points.
- D. Vehicle is stable on lift and neither front nor "tail" heavy.
- E. The overhead switch bar will contact the highest point on the vehicle.

5. While Using Lift:

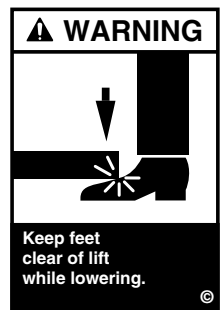
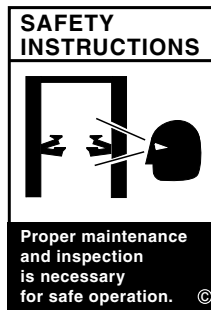
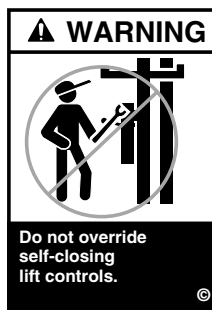
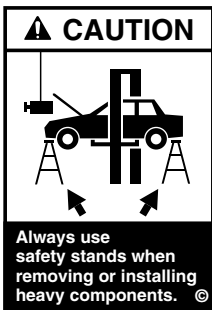
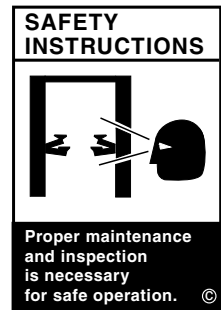
- A. Avoid excessive rocking of vehicle while on lift.
- B. Always use safety stands as needed or when removing or installing heavy components.

6. To Lower Lift:

- A. Remove all tools or other objects from lift area.
- B. Raise lift off locking latches.
- C. Pull latch release handle fully and hold.
- D. Push lowering valve handle to lower, Fig. 3.

Note: Both latch release and lowering valve handles are deadman-type design. Each must be held down to lower lift. Do not override self-closing lift controls.

- 7. Remain clear of lift when lowering vehicle. Observe pinch point warning decals.
- 8. Remove adapters from under vehicle and swing arms to full drive-thru position before moving vehicle.
- 9. If lift is not operating properly, Do Not use until adjustment or repairs are made by qualified lift service personnel.



MAINTENANCE INSTRUCTIONS

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

- Always keep bolts tight. Check periodically.
- Always keep lift components clean.
- Always if oil leakage is observed, call local service representative.
- Always if electrical problems develop, call local service representative.
- Daily: Check cables and sheaves for wear. Observe for frayed cable strands. Wipe cables with a rag to detect hard to see small broken cable strands. Replace cables showing any broken strands. Replace worn parts as required with genuine parts.

- Daily: Inspect adapters for damage or excessive wear. Replace as required with genuine parts.
- Monthly: Check equalizer cable tension. Adjust per lift installation instructions. If there are no more threads available for adjustment, replace the cable. Do not use washers to stand off the nut to use previously used threads.
- Monthly: Lubricate the four inside corners of the columns with heavy duty bearing grease.
- Monthly: Lubricate locking latch shafts. Push latch handle several times for oil to penetrate pivot points.
- Every 3 Months: Check anchor bolts for tightness. Anchors should be torqued to 90 ft/lbs.
- Semi-Annually: Check fluid level of lift power unit and refill if required per lift installation instructions.
- Replace all caution, warning or safety related decals on the lift if unable to read or missing.

▲ WARNING	▲ WARNING	▲ CAUTION	▲ CAUTION
Clear area if vehicle is in danger of falling. ©	Position vehicle with center of gravity midway between adapters. ©	Lift to be used by trained operator only. ©	Authorized personnel only in lift area. ©
▲ WARNING	▲ WARNING	▲ CAUTION	▲ CAUTION
Remain clear of lift when raising or lowering vehicle. ©	Avoid excessive rocking of vehicle while on lift. ©	Use vehicle manufacturer's lift points. ©	Always use safety stands when removing or installing heavy components. ©
▲ WARNING	▲ WARNING	▲ CAUTION	▲ CAUTION
Do not override self-closing lift controls. ©	Keep feet clear of lift while lowering. ©	Use height extenders when necessary to ensure good contact. ©	Auxiliary adapters may reduce load capacity. ©
<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 33116 Indialantic, FL, 32903-3116.</p> <p>They are protected by copyright. Set of labels may be obtained from ALI or its member companies.</p> <p style="text-align: right;">© 1992 by ALL Inc. ALIWL101w</p>		<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 33116 Indialantic, FL, 32903-3116.</p> <p>They are protected by copyright. Set of labels may be obtained from ALI or its member companies.</p> <p style="text-align: right;">© 1992 by ALL Inc. ALIWL101c</p>	

INSPECTION and MAINTENANCE
See ANSI/ALI ALOIM booklet for periodic inspection checklist and maintenance log sheet.

SAFETY INSTRUCTIONS	SAFETY INSTRUCTIONS
Read operating and safety manuals before using lift. ©	Proper maintenance and inspection is necessary for safe operation. ©
SAFETY INSTRUCTIONS	<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 33116 Indialantic, FL, 32903-3116.</p> <p>They are protected by copyright. Set of labels may be obtained from ALI or its member companies.</p> <p style="text-align: right;">© 1992 by ALL Inc. ALIWL101s</p>
Do not operate a damaged lift. ©	

TROUBLE SHOOTING

Trouble	Cause	Remedy
Motor does not run.	<ol style="list-style-type: none"> 1. Blown fuse or circuit breaker. 2. Incorrect voltage to motor. 3. Bad wiring connections. 4. Motor up switch burned out. 5. Overhead limit switch burned out. 6. Motor windings burned out. 	<ol style="list-style-type: none"> 1. Replace blown fuse or reset circuit breaker. 2. Supply correct voltage to motor. 3. Repair and insulate all connections. 4. Replace switch. 5. Replace switch. 6. Replace motor.
Motor runs but will not raise lift.	<ol style="list-style-type: none"> 1. Open lowering valve. 2. Pump sucking air. 3. Suction stub off pump. 4. Low oil level. 	<ol style="list-style-type: none"> 1. Repair or replace lowering valve. 2. Tighten all suction line fittings. 3. Replace suction stub. 4. Fill tank to proper level with ISOVG32 Hydraulic Oil or Dexron III ATF.
Motor runs—raises unloaded lift but will not raise vehicle.	<ol style="list-style-type: none"> 1. Motor running on low voltage. 2. Debris in lowering valve. 3. Improper relief valve adjustment. 4. Overloading lift. 	<ol style="list-style-type: none"> 1. Supply correct voltage to motor. 2. Clean lowering valve. 3. Replace relief valve cartridge. 4. Check vehicle weight and/or balance vehicle weight on lift.
Lift slowly settles down.	<ol style="list-style-type: none"> 1. Debris in check valve seat. 2. Debris in lowering valve seat. 3. External oil leaks. 	<ol style="list-style-type: none"> 1. Clean check valve. 2. Clean lowering valve. 3. Repair external leaks.
Slow lifting speed or oil blowing out filler breather cap.	<ol style="list-style-type: none"> 1. Air mixed with oil. 2. Air mixed with oil suction. 3. Oil return tube loose. 	<ol style="list-style-type: none"> 1. Change oil using ISOVG32 Hydraulic Oil or Dexron III ATF. 2. Tighten all suction line fittings. 3. Reinstall oil return tube.
Lift going up unlevel.	<ol style="list-style-type: none"> 1. Equalizer cables out of adjustment. 2. Lift installed on unlevel floor. 	<ol style="list-style-type: none"> 1. Adjust equalizer cables to correct tension. 2. Shim lift to level columns (Not to exceed 1/2"). If over 1/2" break out floor and repour per lift installation instructions.
Anchors will not stay tight.	<ol style="list-style-type: none"> 1. Holes drilled oversize. 2. Concrete floor thickness or holding strength not sufficient. 	<ol style="list-style-type: none"> 1. Relocate lift using a new bit to drill holes. Reference installation instructions for minimum spacing requirements. 2. Break out old concrete and repour new pads for lift per lift installation instructions.
Locking latches do not engage.	<ol style="list-style-type: none"> 1. Latch shafts rusted. (Usually occurs on outside installations or in high humidity areas such as vehicle wash bays.) 2. Latch spring broken. 3. Latch cable needs adjustment. 	<ol style="list-style-type: none"> 1. Remove covers, oil latch mechanism. Actuate latch release handle several times to allow oil to coat shaft. 2. Replace broken spring. 3. Adjust clamp at cable end per lift installation instructions.
Locking latches do not disengage.	<ol style="list-style-type: none"> 1. Latch cable is broken. 2. Cable is off sheaves/upper guides. 3. Latch cable is loose. 	<ol style="list-style-type: none"> 1. Replace cable. 2. Check position of cable on sheaves/upper guides; adjust cable tension. 3. Adjust cable tension.
Lift stops short of full rise or chatters.	<ol style="list-style-type: none"> 1. Low oil level. 2. Air in hydraulic lines/cylinder. 	<ol style="list-style-type: none"> 1. Fill tank to proper level with ISOVG32 Hydraulic Oil or Dexron III ATF. 2. Bleed lift per installation instructions.* <p style="text-align: center;">*Lifts with bleeders only.</p>
Lift will not raise off of latches	<ol style="list-style-type: none"> 1. Motor, pump, or cylinder failure. 	<ol style="list-style-type: none"> 1. Contact lift manufacturer's Customer Service.

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 Lift 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. Assure 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 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.
- 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.

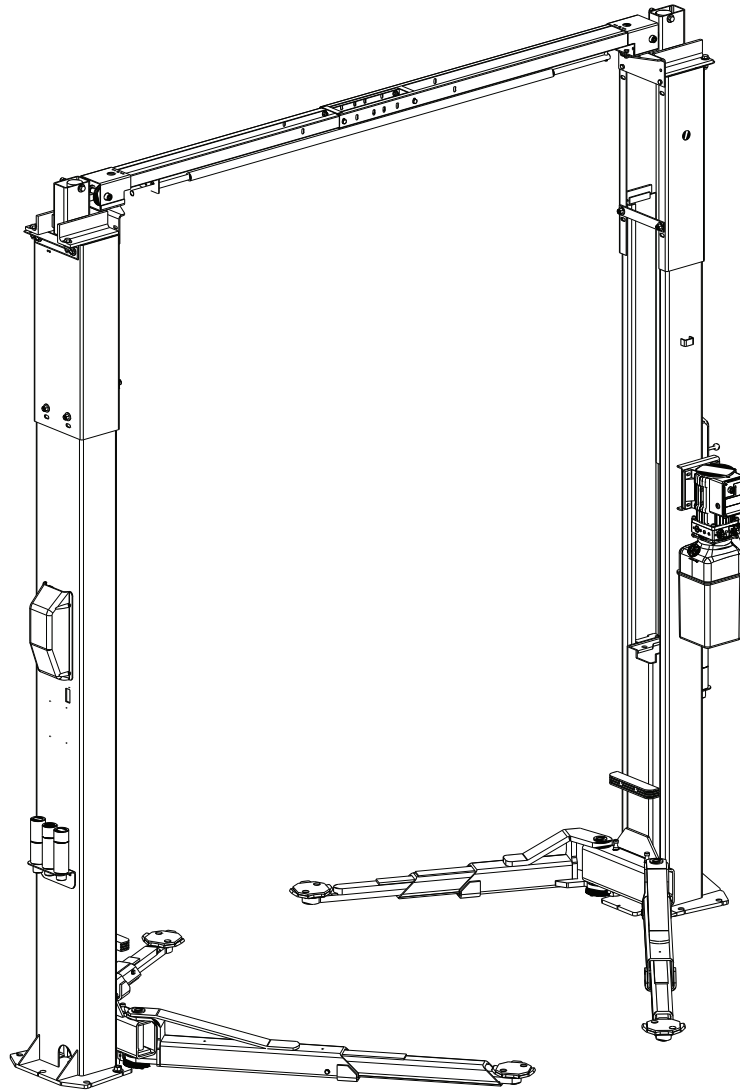
Vehicle Service GroupSM
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Parts Breakdown

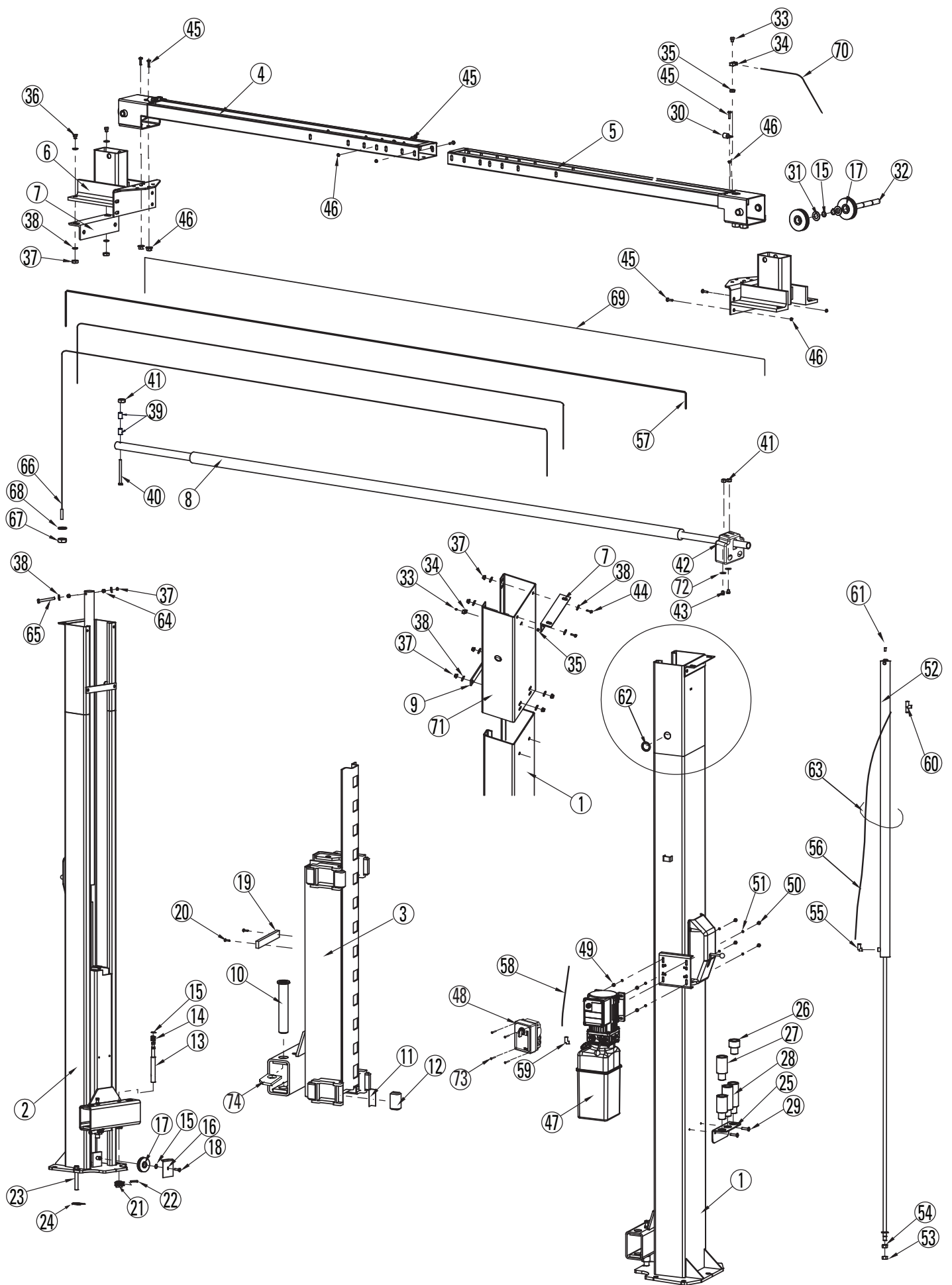
Capacity 10,000 lbs.
(100 Series Lift)

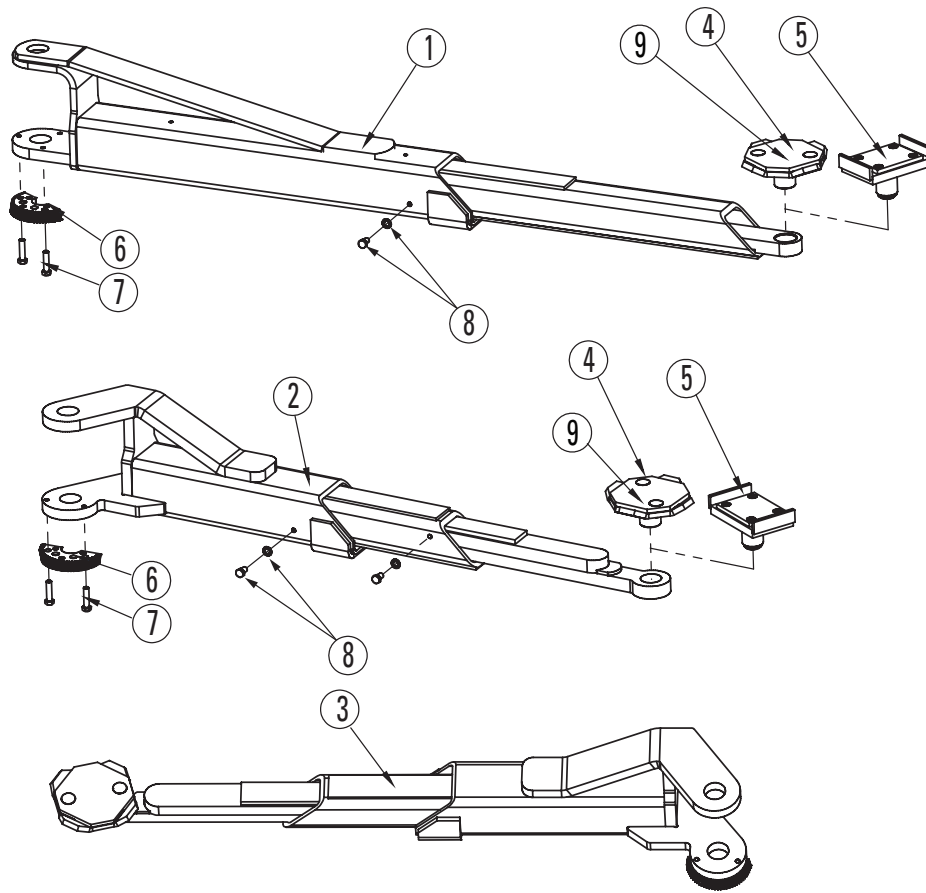


LP60026

ITEM	PART #	DESCRIPTION
1	TPB10-1000	R.H. Column Weldment
2	TPB10-1100	L.H. Column Weldment
3	TP10-2000	Carriage Weldment
4	N480-1	L.H. Overhead
5	N481-1	R.H. Overhead
6	TP10-3001	Top Bracket Weldment
7	TP10-1003	Top Bracket Connection
8		Switch Bar Assembly
	N415	1 Phase Switch Bar Assembly
	N434	3 Phase Switch Bar Assembly
9	TPB10-2002	Column Reinforce
10	995430 (DP9-5300)	Arm Pin
11	30400-5025G	Slider Block Shim (As Required)
12	TP10-6003	Slider Block
13	DP9-3004	Actuator Pin
14	143537	Press Spring
15	41411	Klipring For 3/4" Shaft
16	N119-1	Sheave Cover
17	N377	Sheave
18	40063	1/4"-20NC*3/8"Lg. PHMS Plated
19	PV-3005	Rubber Bumper (Accessory)
20	B20-8*35	M8*35 Socket Bolt (Accessory)
21	N2121	PAWL
22	14427	Spring Pin 1/4"*1-1/2"Lg.
23	FJ7380	Anchor Bolt
24	30400-1025	U SHIM
25	FJ6145Y	ADAPTER BRACKET
26	1070922	1.75" EXT.Adapter
27	1070923	3.5" EXT.Adapter
28	1070924	5" EXT.Adapter
29	40227	5/16"-18NC*3/8"Lg.PHMS
30	G3T-8005 (N3216)	HOSE CLAMP
31	41388	WASHER
32	G3T-4001 (FJ7444-8)	SHEAVE SHAFT
33	40108	1/4"-20NC*1"Lg.HHCS
34	N619	LATCH CABLE BRACKET
35	40641	1/4"-20NC Flanged Lock Nut
36	912671	1/2"-13*1-3/4"HHCS(G.5)
37	40707	1/2"-13NYLON LOCK NUT
38	H4D-2000-10 (40920)	1/2" FLAT WASHER

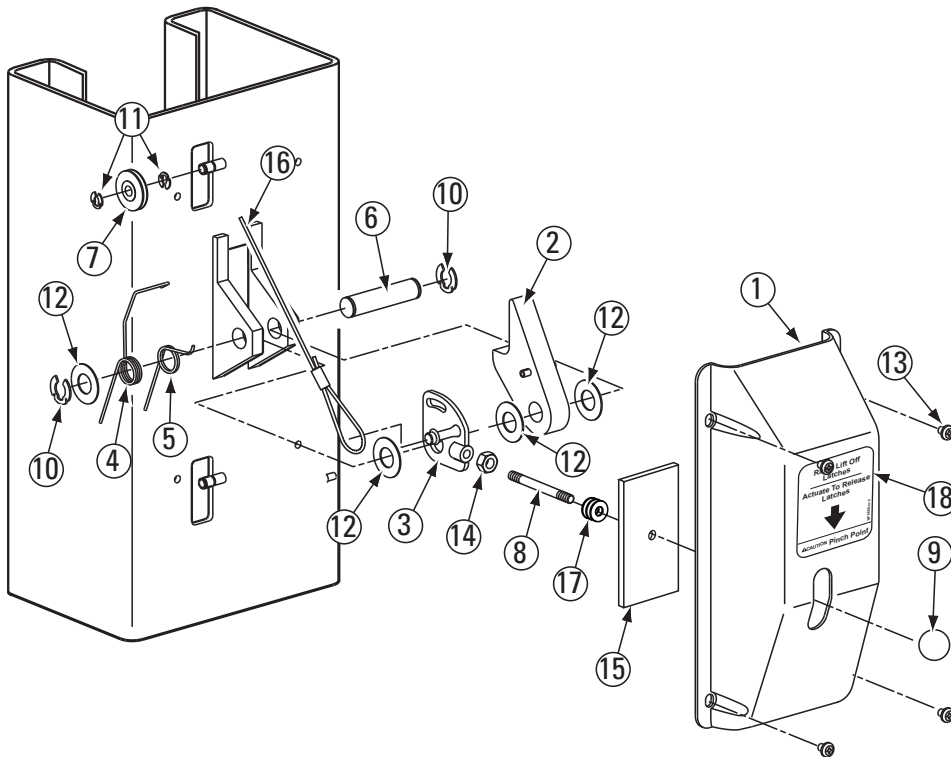
39	G3T-4003 (FJ7871)	LIMITED BAR SPACER
40	40114	1/4"-20NC*2 3/4"Lg.HHCS
41	911403	1/4"-20NC Nylon Lock Nut
42		OVERHEAD SWITCH
	N413	OVERHEAD SWITCH 1 Phase
	N432	OVERHEAD SWITCH 3 Phase
43	40099	1/4"-20NC*3/4"Lg.HHCS
44	40286	1/2"-13*1-1/4"HHCS(G.5)
45	41536	M10-1.5*20Lg. HHCS
46	41655	M10-1.5 Flanged Lock Nut
47		POWER UNIT
	P3397	1 Phase POWER UNIT
	P3414	3 Phase POWER UNIT
48	FA7366	3 Phase Switch Box
49	40670	5/16"-18NC HEX NUT
50	40271	5/16"-18NC*1-1/2 HHCS
51	40854	5/16" External Tooth Lockwasher
52	992317	STD. Rise Cylinder
53	913602 (40760)	3/4"-16 HEX NUT(G.5)
54	913611 (40759)	3/4"-16 HEX JAM NUT(G.5)
55	992402 (SW-003)	3/8 JIC to 3/8 NPT Elbow
56	(2WB-24G)	Mainside Hose
57	NDP10-9801-1G	Overhead Hose STD.
58	992101 (2WB-26)	Power Unit Hose
59	992410 (SW-002)	9/16 O-Ring to 3/8 JIC Elbow
60	992502 (SW-001)	3/8 JIC Tee
61	994202	Air Line Kit STD.
62	DP9-1030	HOSE RUBBER GUIDE
63	991082	Wire Tie
64	DP9-7005	CYLINDER SPACER
65	912781 (40334)	1/2"-13*4-1/2"HHCS(G.8)
66	TP10-6001	EQUALIZER CABLE(STD.)
67	913303 (40743)	NYLON LOCK NUT 5/8"-11
68	913206 (40970)	5/8" FLAT WASHER
69	FJ7600	LATCH RELEASE CABLE
70	N618	LATCH CABLE GUIDE
71	TPB10-2000	EXTENSION WELDMENT
72	B41-6 (40795)	1/4" FLAT WASHER
73	40275	M5x10 PHMS Plated
74	1070120G	Arm Stop





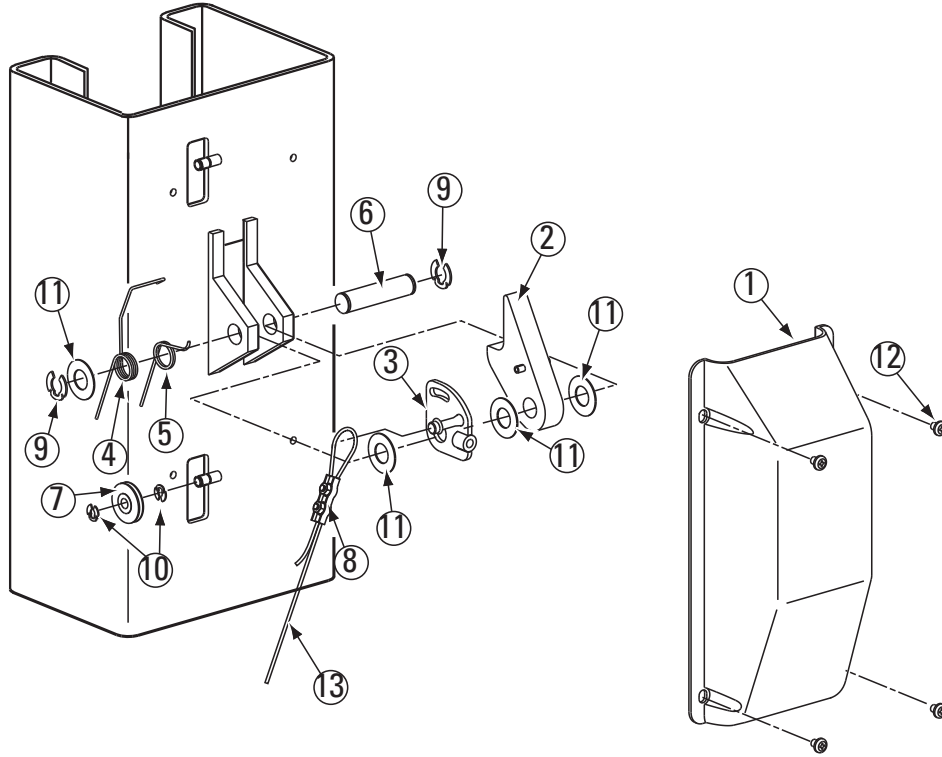
ITEM	PART #	DESCRIPTION
1	TP10-4001	REAR ARM ASSEMBLY
2	TP10-5001	LEFT FRONT ARM ASSEMBLY
3	TP10-5401	RIGHT FRONT ARM ASSEMBLY
4	TP10-3000	ADAPTER ASSEMBLY
5	T100285	TRUCK ADAPTER ASS. ACCESSORY (SET OF 4)
6	N2122	GEAR
7	912061	3/8"-16NC*1-1/2 HHCS
8	N219	STOP BOLT ASSEMBLY
9	994105	RUBBER PAD KIT (SET 4)

Locking Latch Detail (Right Column)



ITEM	PART#	DESCRIPTION
1	TP6-5003	Control Side Cover
2	TP10-1010	Locking Latch Dog
3	FJ7594-2	Control Plate
4	FJ7566-10	Spring
5	FJ7382-9	Spring
6	FJ7382-34	Latch Shaft
7	FJ7322	Locking Latch Sheave
8	FJ7382-18	Handle
9	FC134-91	Ball Handle
10	41411	Truarc Klipring #5304-75 for 3/4" Shaft
11	41410	Truarc Klipring #5304-37 for 3/8" Shaft
12	41388	1-1/2" O.D. x 3/4" I.D. x .045" Mach. Bush.
13	40227	5/16"-18NC x 3/8" Lg. PHMS
14	40658	3/8" - 16NC Hex Jam Nut
15	N617	Slot Cover
16	FJ7600	Locking Latch Cable
17	40820	3/8" Flat Washer
18	NP266	Latch Release Decal

Locking Latch Detail (Left Column)



ITEM	PART#	DESCRIPTION
1	TP6-5004	Latch Cover
2	TP10-1010	Locking Latch Dog
3	FJ7594-2	Control Plate
4	FJ7566-10	Spring
5	FJ7382-9	Spring
6	FJ7382-34	Latch Shaft
7	FJ7322	Locking Latch Sheave
8	N63-1	Latch Cable Clamp
9	41411	Truarc Klipring #5304-75 for 3/4" Shaft
10	41410	Truarc Klipring #5304-37 for 3/8" Shaft
11	41388	1-1/2" O.D. x 3/4" I.D. x .045" Mach. Bush.
12	40227	5/16"-18NC x 3/8" Lg. PHMS
13	FJ7600	Locking Latch Cable

NOTES

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