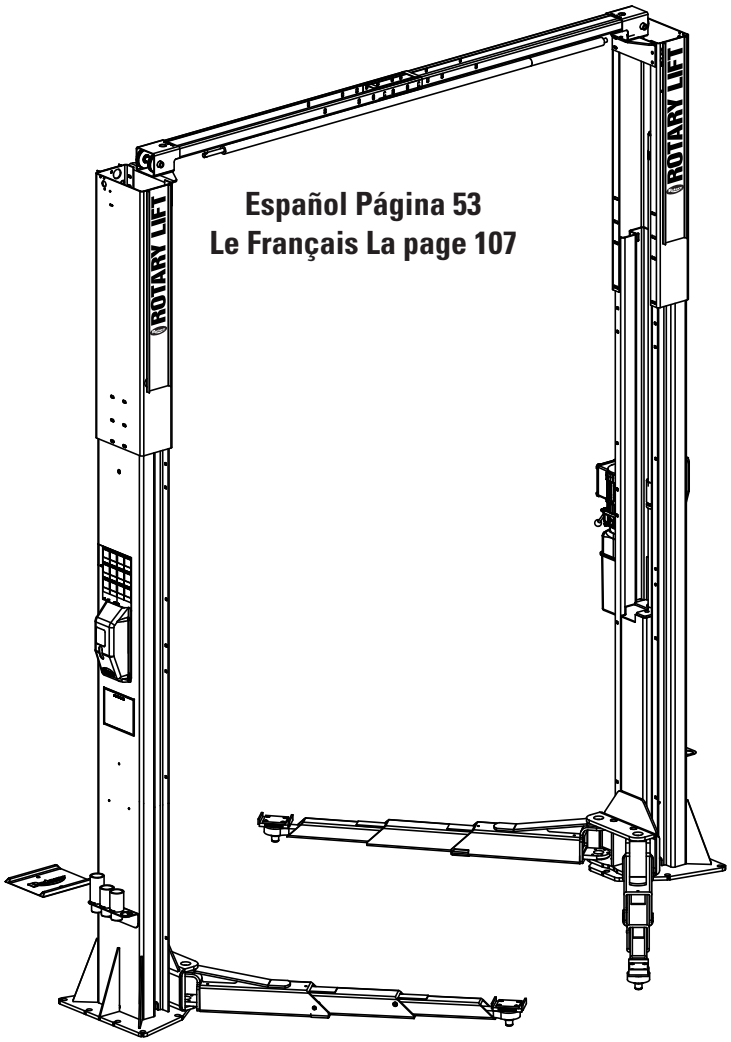
SPO12
Standard/Hummer/Sprinter

Two Post Surface Mounted Swing Arm Frame Engaging Lift

Standard (500/700 Series) Capacity: 12,000 lbs.
Hummer (5W0/7W0 Series) Capacity: 12,000 lbs.
Sprinter (5A0/7A0 Series) Capacity: 9,000 lbs.



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Le Français La page 107

OPERATING CONDITIONS

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

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

INSTALLATION INSTRUCTIONS

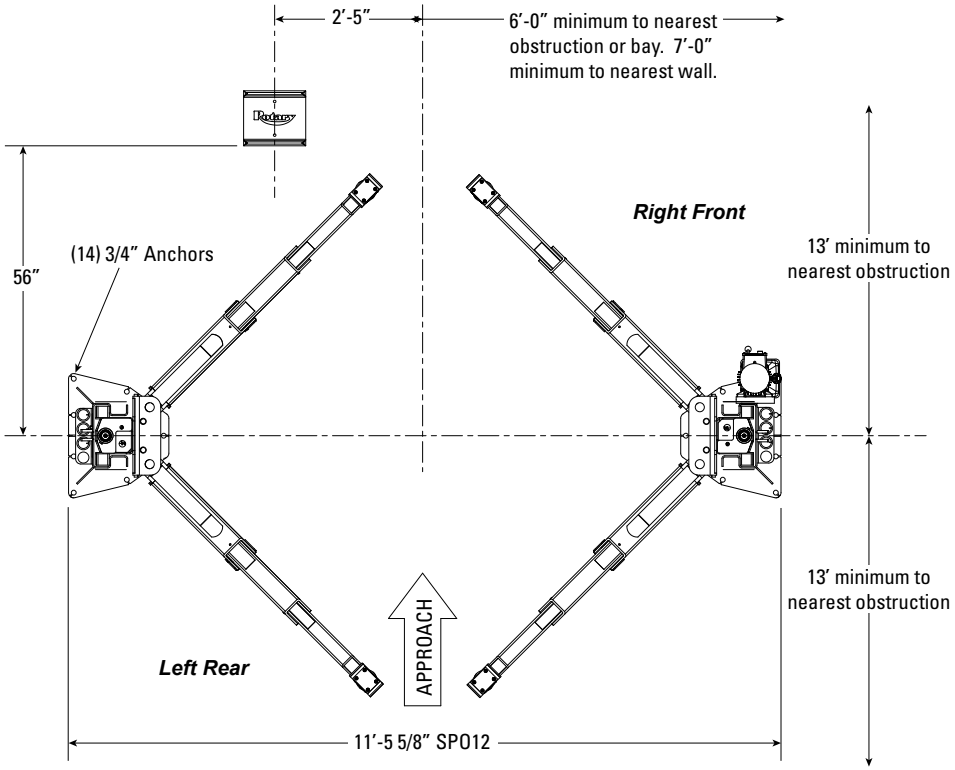
CO11839.3

LPRM2P12K
Rev. C 6.14.22

Column Greasing:
Two post lifts finished with powder coat must have grease applied to the columns. Lifts are greased from the factory, however, it is advised to check and ensure that the columns are still greased when installing the lift. If your lift has a model number that matches the following table, grease the columns with either Lighting grease, Tuf Oil, Sil Glide, or an equivalent grease.

Lift	Series	Model Number
SPO12	1000	SPO12x10xx

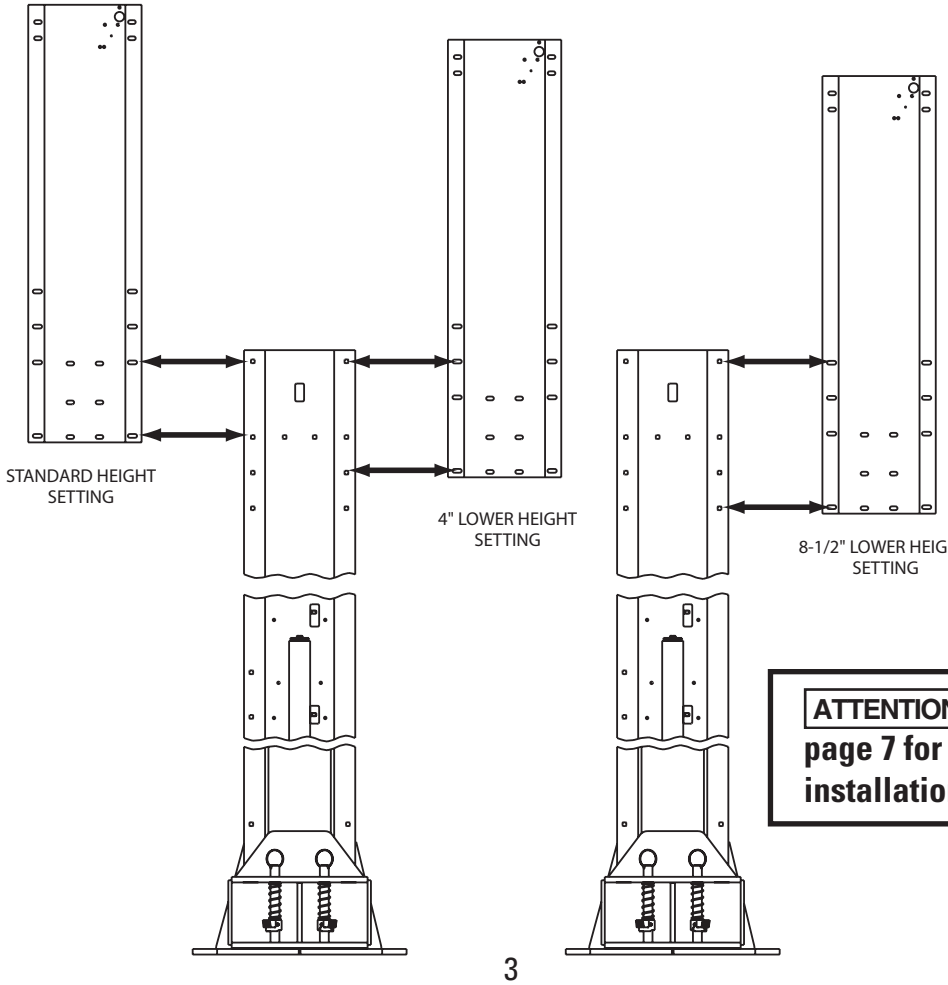
Apply the grease to the columns by wiping on a thin layer and polishing with a rag. Only apply grease on surfaces of the columns where the slider blocks make contact. Be careful not to apply too much grease, only a thin layer is needed, wipe off excess.



SPO12 Standard (500 Series) & SPO12 Sprinter (5A0 Series)
SPO12 Standard (700 Series) & SPO12 Sprinter (7A0 Series)

Fig. 1a

Note: See Pg. 3 for Hummer (5W0/7W0 Series) Lifts.



ATTENTION: Continue to page 7 for SPO12 standard installation.

Fig. 1b

SPO12 Hummer Supplement Instructions

IMPORTANT **If you have ordered a SPO12 Hummer Lift (5W0/7W0 Series) these figures MUST be used in place of the standard instruction figures on page 2.**

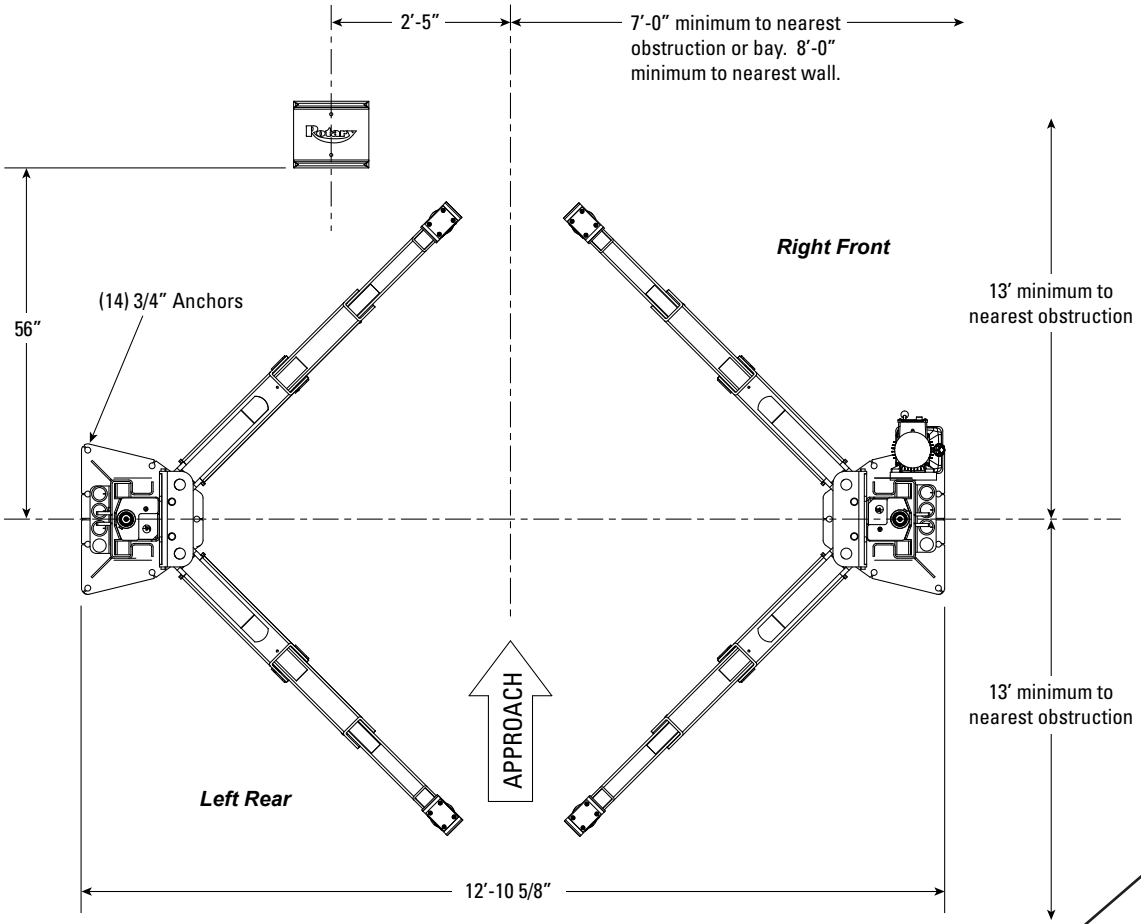
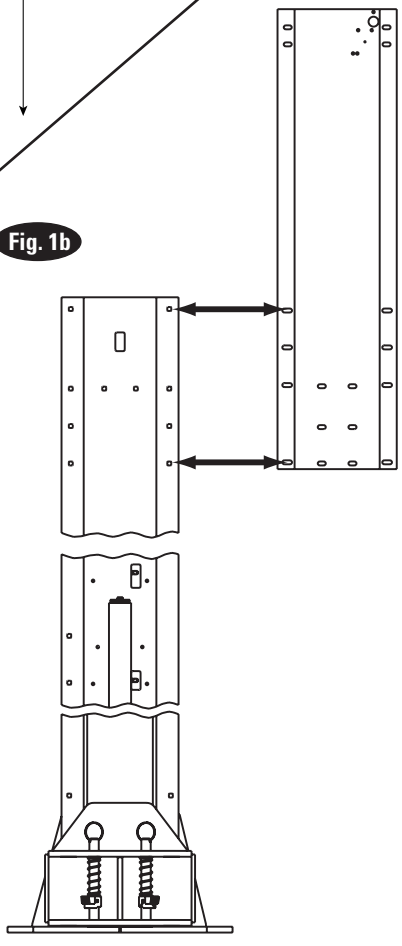


Fig. 1a

SPO12 Hummer Lift (5W0 Series)
SPO12 Hummer Lift (7W0 Series)

Fig. 1b



SP012 Hummer Supplement Instructions

IMPORTANT **If you have ordered a SP012 Hummer Lift (5W0/7W0 Series) these figures MUST be used in place of the standard instruction figures on pages 7 & 8.**

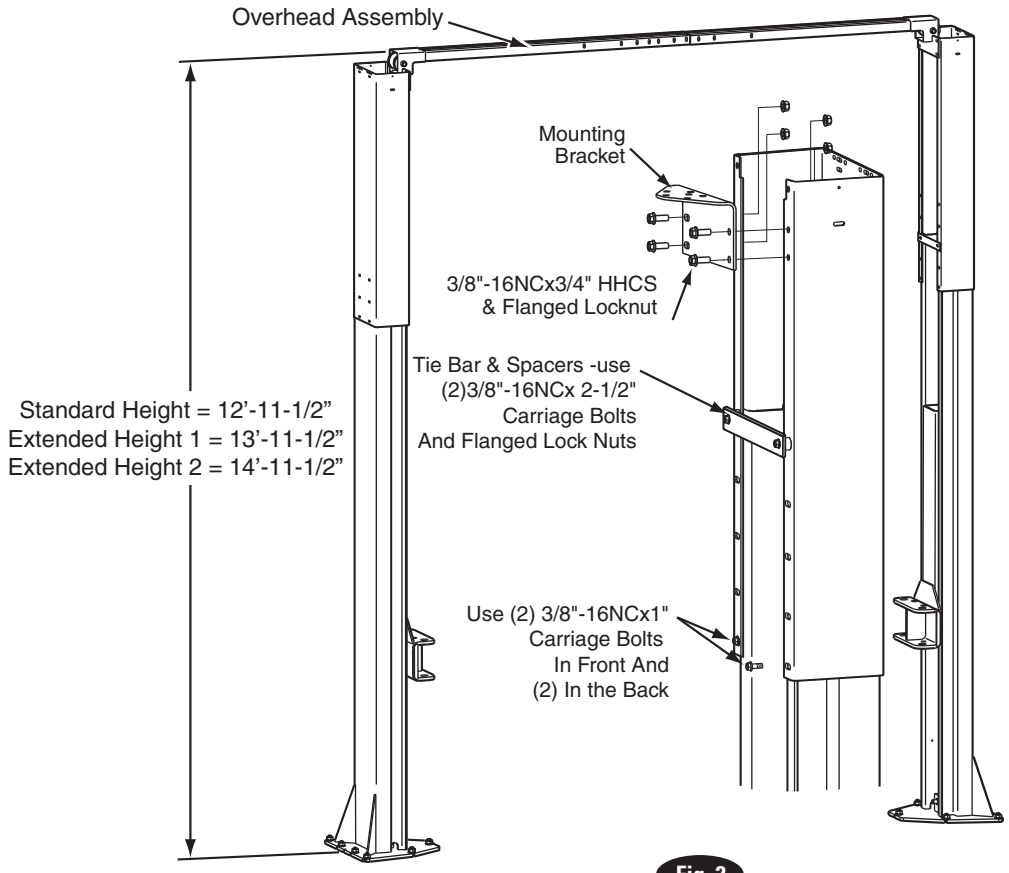


Fig. 2

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

1 Phase Lifts

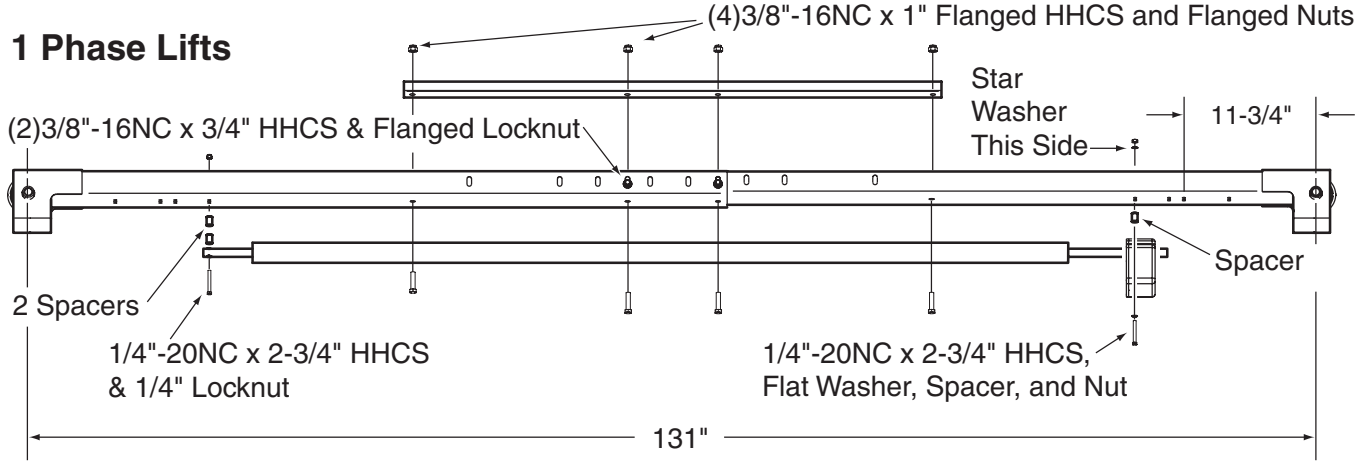


Fig. 6

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

Lift Height: See Fig. 2 for overall lift height of each specific lift model. Add 1" min. to overall height to lowest obstruction.

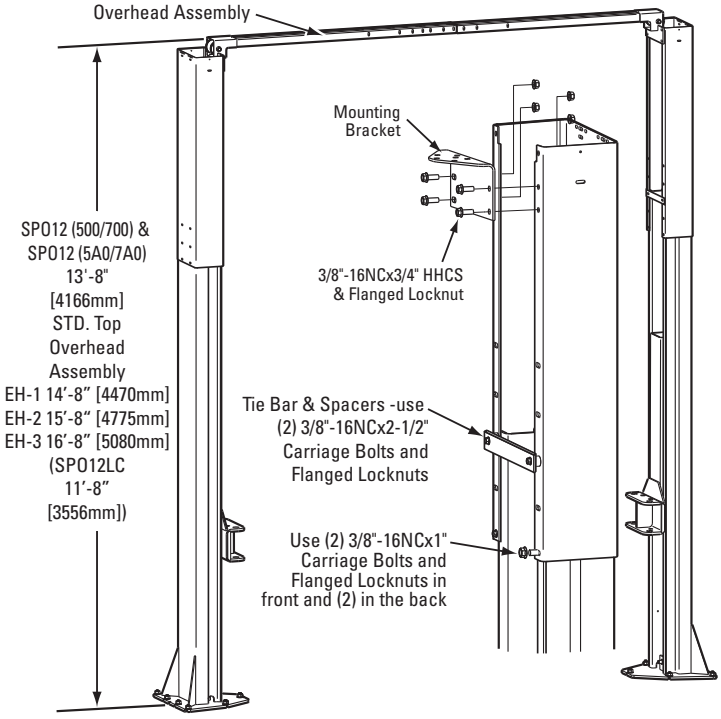


Fig. 2

Note: See Pg. 3 for Hummer (5W0/7W0 Series) Lifts.

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

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, Fig. 3. HHCS should go through hole nearest the edge as shown, Fig. 3.

Overhead Mounting Bracket: Install Mounting Brackets to column extensions as shown, Fig. 2.

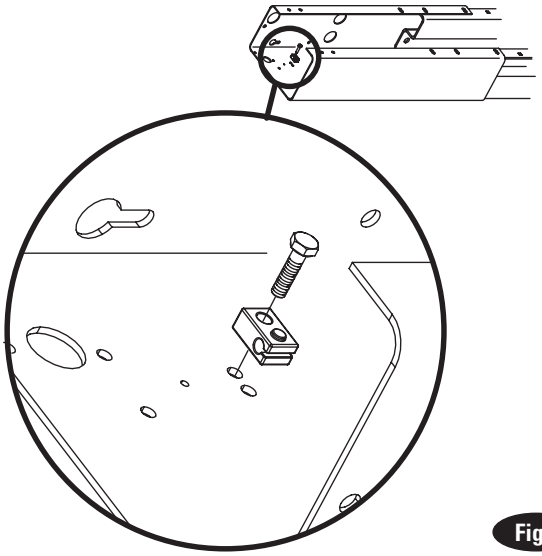


Fig. 3

3. Column Extensions: While column is on the ground, install column extensions using (4) 3/8"-16NC x 1" lg. Carriage Bolt and Flanged Locknut, Fig. 3 & Fig. 1b. Use (2) 3/8"-16NC x 2-1/2" lg. Carriage Bolt and Flanged Locknut to attach the tie bar and the column extension together at the column's uppermost holes, Fig. 3. The tie bar is positioned on the outside of the column extension. Adjust the column extensions plumb.

4. Lift Setting: Position columns in bay using dimensions shown in Fig. 1a. 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.

IMPORTANT: All star washers are to be mounted on the right side column to ensure grounding of overhead limit switch. Star washers are not needed when mounting to left side column. Notice the column extension mounting, Fig. 3 and overhead limit switch mounting as well in Fig. 3 & Fig. 6.

5. Concrete and Anchoring:

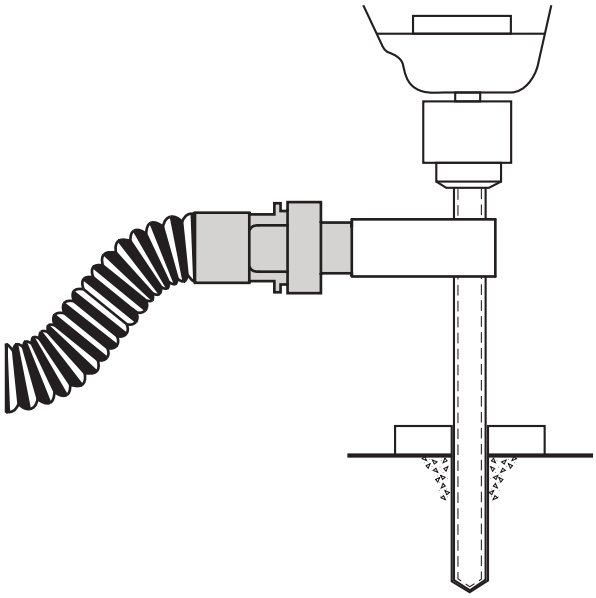
IMPORTANT **Reference IN20294 if Sprinter long arms are going to be used for this installation or if the lift will possibly be retro-fit with them in the future. Different concrete and anchoring requirements are required.**

Drill (14) 3/4" dia. holes in concrete floor using holes in column base plate as a guide. See Figs. 4 and 5 for hole requirements.

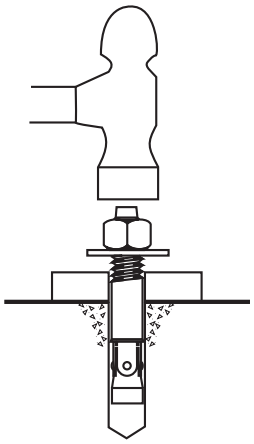
⚠CAUTION **DO NOT install on asphalt or other similar unstable surfaces. Columns are supported only by anchors in floor.**

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 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.

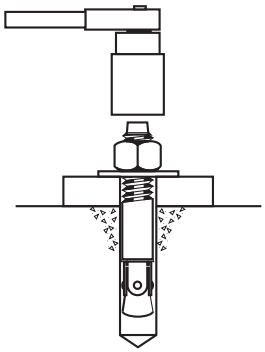
If anchors do not tighten to 110 ft-lbs (149 Nm) installation torque, replace concrete under each column base. See Figs. 5a and 5b.



Drill holes using 3/4" carbide tipped masonry drill bit per ANSI B212.15-1994 (R2000). Construction dust collected per OSHA 29 CFR 1926.1153.



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



Hand Tighten nut with Torque wrench to 110 ft.-lbs. (149 Nm).

Fig. 4

Anchor Installation Reference Guide								
Lift Models:	Anchor:	Min Concrete Thickness	Min Edge Distance	Min Anchor Embedment	Installation Anchor Torque Ft-lbs	Min Concrete PSI Strength - For All Standards	Concrete pad Size If Concrete Does Not Meet Requirements	Maintenance Torque Values**
SP012, S12i	Hilti Kwik Bolt I (3/4" x 5-1/2") *KB1	4-1/4" (108mm)	6-1/4" (159mm)	3-1/4" (83mm)	110	3000	4'x4'x8"	65
	Hilti Kwik Bolt III (3/4" x 5-1/2") KB3	4-1/4" (108mm)	3-3/8" (86mm)	3-1/4" (83mm)	110	3000	4'x4'x8"	65
	"Hilti HY200 epoxy (with HAS threaded rod) 3/4"" Dia."	5" (134mm)	2 1/4" (57mm)	3-1/2" (89mm)	100 / less than 2-1/8" edge distance use Torque Value of 30 FT/LBS	3000	4'x4'x8"	N/A

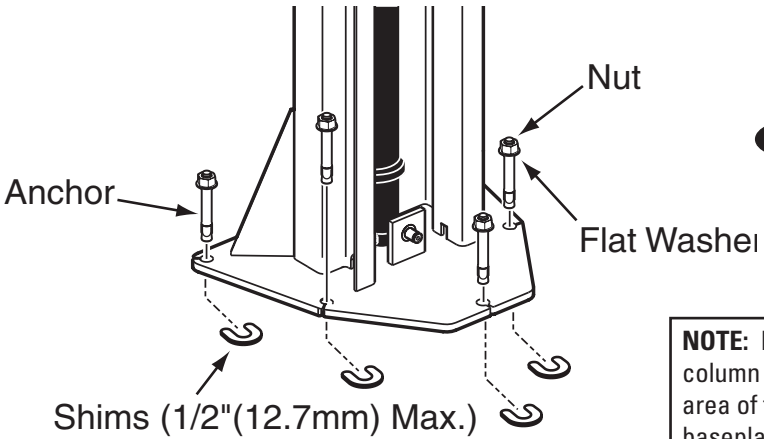


Fig. 5

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.

NOTE: FIG. 5a and 5b were taken from drawing SPEC0475. If you would like the drawing in cad form or PDF please contact customer service.

FOUNDATION NOTES:

1. THE FOUNDATIONS HAVE BEEN DESIGNED BASED ON A PRESUMPTIVE LOAD-BEARING VALUE OF 1500 PSF PER IBC SECTION 1806. AN INSPECTOR OR SOILS ENGINEER SHALL VERIFY LOAD-BEARING VALUE CAPACI
2. FOUNDATIONS SHALL BEAR ON PROPERLY PREPARED AND COMPACTED SOILS CAPABLE OF SUPPORTING 2-POST LIFT (12 KIP MAXIMUM LOAD PER VERTICAL LEG OF LIFT) SURFACE LOADS.
3. PROTECT EXISTING UTILITIES AND STRUCTURES (OVERHEAD OR UNDERGROUND) WITHIN THE WORK AREA AS WELL AS ANY EXISTING FOUNDATION SYSTEM(S).
4. FOUNDATIONS WERE DESIGNED UTILIZING KBC SECTION 1605 ' ALTERNATIVE BASIC LOAD COMBINATIONS WITHOUT THE 1/3 INCREASE IN THE ALLOWABLE BEARING PRESSURES DUE TO SHORT-TERM LOADING.
5. FOUNDATIONS SHALL BE PLACED ACCORDING TO THE DEPTHS SHOWN ON THE DRAWINGS. SHOULD SOIL ENCOUNTERED AT THESE DEPTHS NOT BE APPROVED BY THE INSPECTOR OR SOILS ENGINEER, FOUNDATION ELEVATIONS/DIMENSIONS MAY NEED TO BE MODIFIED BY THE ENGINEER. NOTIFY THE ENGINEER OF RECORD IF THIS IS THE CASE.
6. NOT APPLICABLE FOR AREAS WITH SEISMIC DESIGN CATEGORY D OR GREATER.

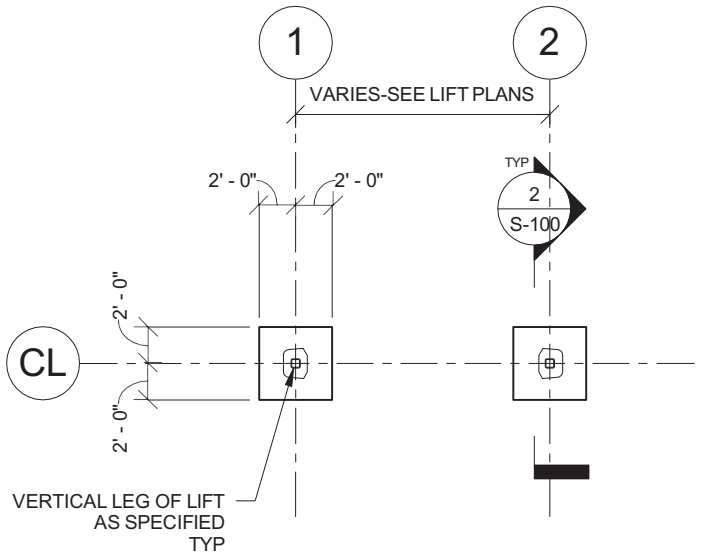
CONCRETE NOTES:

1. CONCRETE COMPRESSIVE STRENGTH - PROVIDE CONCRETE WITH THE FOLLOWING STRENGTHS AT THE LOCATIONS NOTED. MIX DESIGN, SLUMP, AIR ENTRAINMENT, AGGREGATE SIZE, ETC. SHALL BE IN CONFORMANCE WITH THE ACI 301, LATEST EDITION.

LOCATION	STRENGTH (PSI @ 28 DAYS)
SPREAD FOOTING PADS	3000 PSI NORMAL WEIGHT

2. REINFORCING STEEL - ASTM A615 GRADE 60.
3. FABRICATE AND PLACE REINFORCEMENT IN ACCORDANCE WITH ACI PUBLICATION SP-66, ACI DETAILING MANUAL - LATEST EDITION.
4. PLACE CONCRETE IN COMPLIANCE WITH ACI 304. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED.
5. REINFORCING SUPPORT - ALL REINFORCING SHALL BE ADEQUATELY CHAIRED/BOLSTERED. LIFTING OR HOOK IS NOT PERMITTED.

Fig. 5a


1
2
VARIES-SEE LIFT PLANS
2' - 0"
2' - 0"
TYP
2
S-100
CL
2' - 0"
2' - 0"
VERTICAL LEG OF LIFT
AS SPECIFIED
TYP

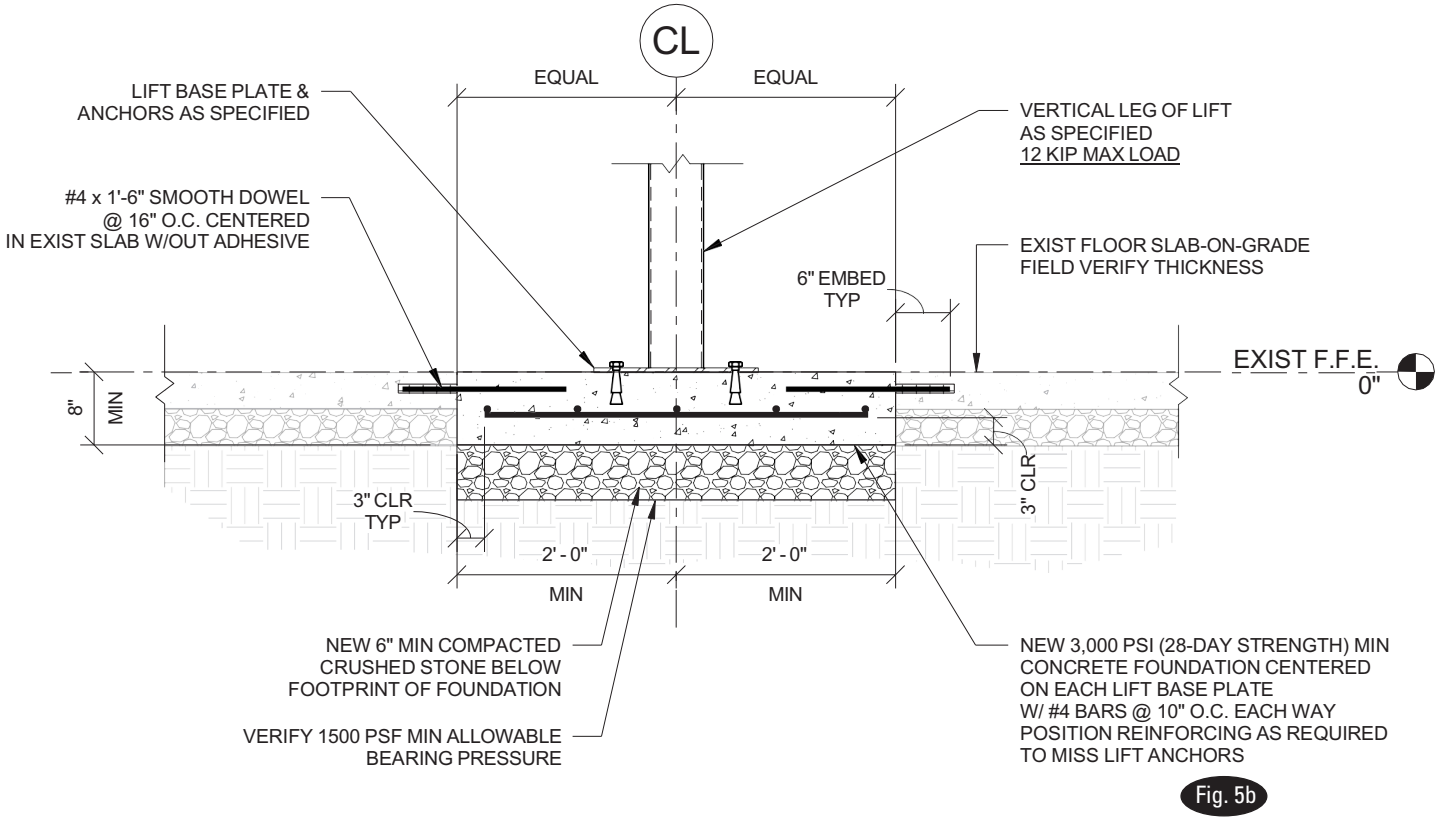
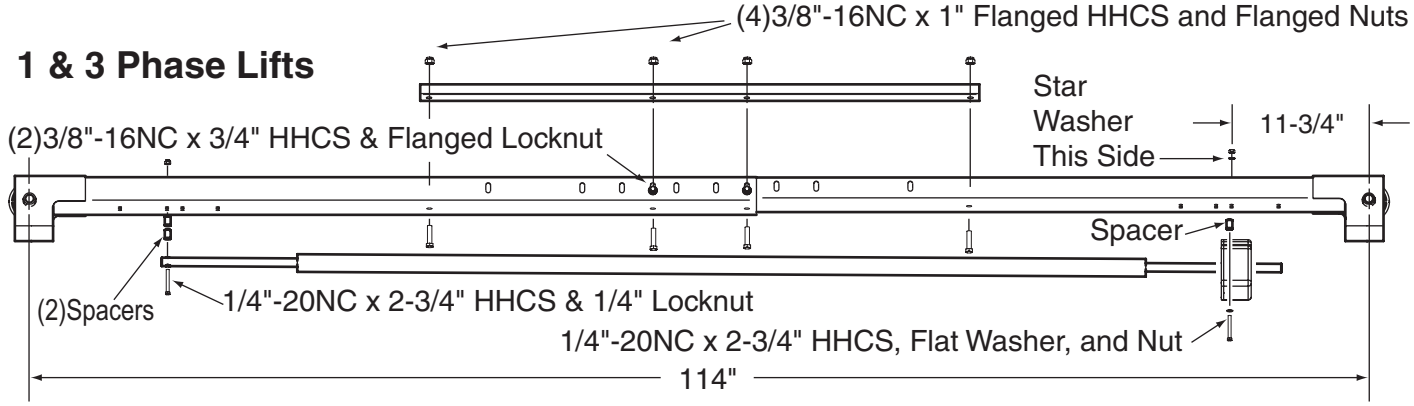

CL
EQUAL
EQUAL
LIFT BASE PLATE &
ANCHORS AS SPECIFIED
#4 x 1'-6" SMOOTH DOWEL
@ 16" O.C. CENTERED
IN EXIST SLAB W/OUT ADHESIVE
VERTICAL LEG OF LIFT
AS SPECIFIED
12 KIP MAX LOAD
EXIST FLOOR SLAB-ON-GRADE
FIELD VERIFY THICKNESS
6" EMBED
TYP
EXIST F.F.E.
0"
8"
MIN
3" CLR
TYP
3" CLR
2' - 0"
MIN
2' - 0"
MIN
NEW 6" MIN COMPACTED
CRUSHED STONE BELOW
FOOTPRINT OF FOUNDATION
VERIFY 1500 PSF MIN ALLOWABLE
BEARING PRESSURE
NEW 3,000 PSI (28-DAY STRENGTH) MIN
CONCRETE FOUNDATION CENTERED
ON EACH LIFT BASE PLATE
W/ #4 BARS @ 10" O.C. EACH WAY
POSITION REINFORCING AS REQUIRED
TO MISS LIFT ANCHORS

Fig. 5b

6. Overhead Assembly: Adjust overhead to 114" between centerline of sheave pins, Fig. 6. Install (4) 3/8"-16NC x 2-3/4" Flanged HHCS & Flanged Locknuts, do not tighten. Install overhead stiffener angle inside center of overhead using (4) 3/8"-16NC x 1" Flanged HHCS and Flanged Locknuts, see Fig. 6. Slide switch box over switch bar ensuring lockout holes face the power unit column. Use (2) 1/4"-20NC x 2-3/4" lg. HHCS, (2) flat washers, (2) 3/4" spacers, and (2) 1/4" star washers and nuts to mount switch box to overhead, Fig. 7a and Fig. 7b.

7. For single phase and three phase lifts with push button control box: Insert (2) 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 add spacers between the limit switch box and the overhead, Fig. 6, using (2) spacers and 1/4"-20NC Locknut. Tighten Hex bolt leaving 1/16" gap between the spacer and the overhead assembly.

Note: For Fig. 6, see Pg. 4 for Hummer (5W0/7W0 Series) Lifts.



Hardware Detail For Overhead Assembly

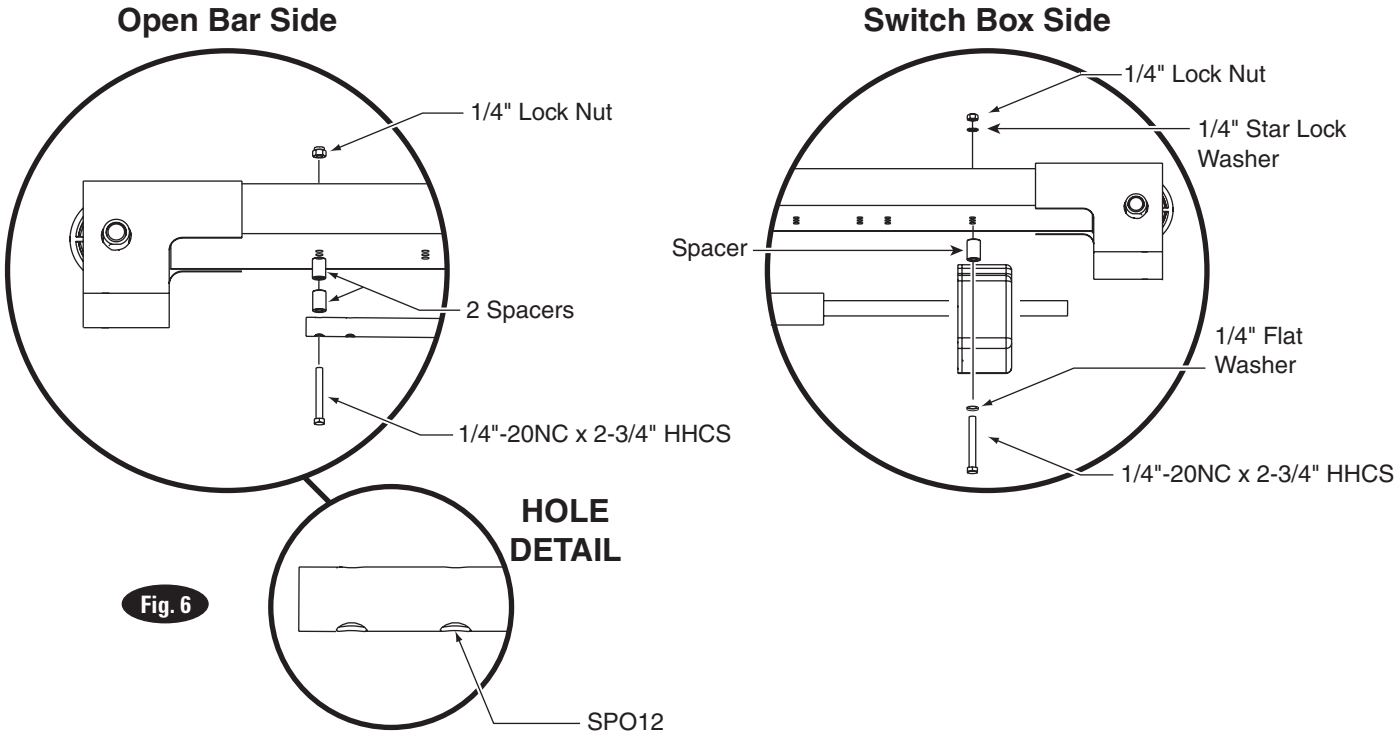


Fig. 6

8. Overhead: Install overhead assembly to Mounting Bracket with (2) 3/8"-16NC x 3/4" Flanged HHCS, (2) 3/8-16NC flanged locknut, Fig. 7c. Ensure limit switch box is mounted on power unit side. Tighten bolts at center of overhead assembly.

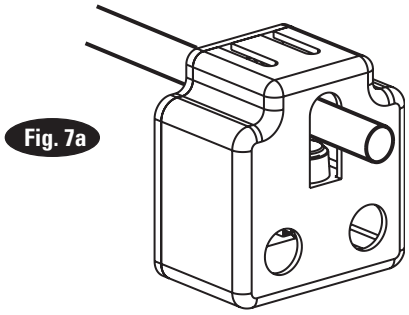


Fig. 7a

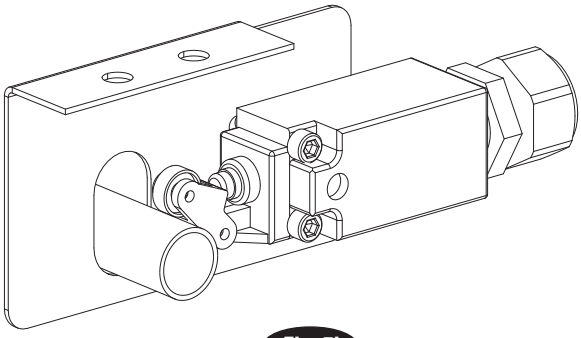
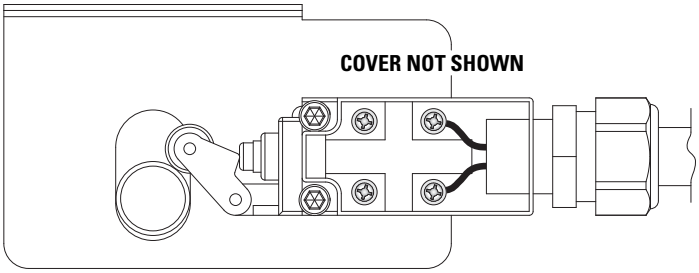


Fig. 7b



9. Power Unit: Put the (4) 5/16"-18NC x 1-1/2" flanged locking HHCS thru holes in power unit bracket using Push-Nuts to hold in place, Fig. 8a. Mount unit with motor up to column bracket and install (2) 5/16" Flanged locking Nuts. Install and hand tighten Branch Tee to pump until O-ring is seated. Continue to tighten the locknut to 10-15 ft-lbs., or until the nut and washer bottom out against the pump manifold. **NOTE:** You may still be able to rotate the Branch Tee. 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.

10. Hoses: Clean adapters and hose. Inspect all threads for damage and hose ends to be sure they are crimped, Fig. 8b. Install hose and hose clamps, Fig. 9a & Fig. 9d.

Flared Fittings Tightening Procedure

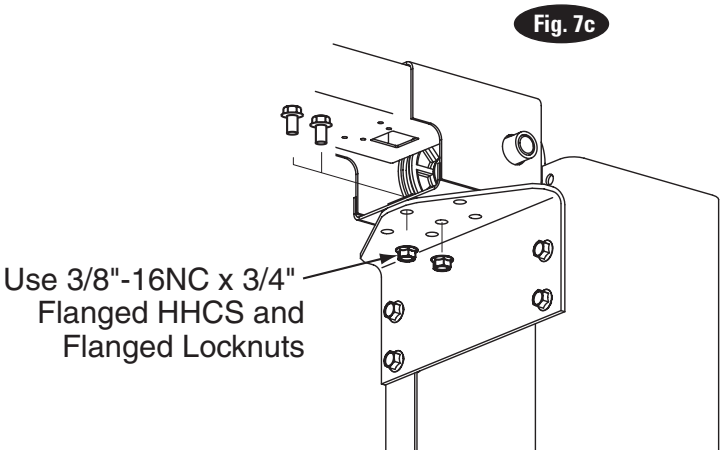
1. Screw the fittings together finger tight. Then, using the proper size wrench, rotate the fitting 2-1/2 hex flats.

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 Overtightening will damage fitting resulting in fluid leakage.

Fig. 7c



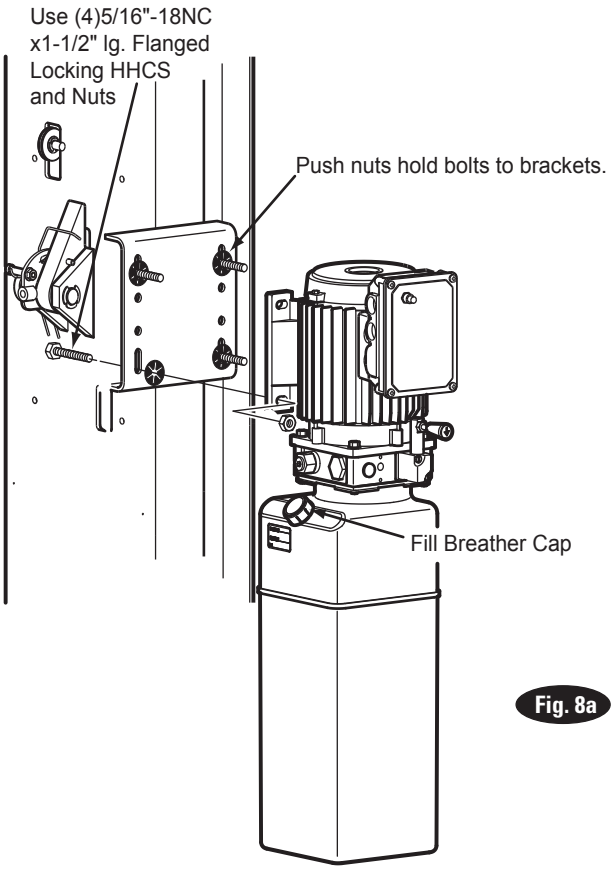


Fig. 8a

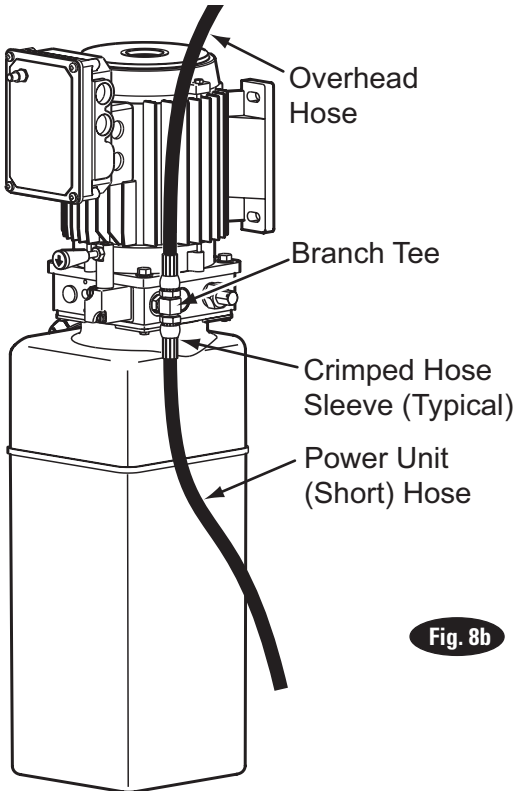


Fig. 8b

Adapter & Hose Installation (see Fig. 9a)

1. Install Pc. (2) with metal hose clamps, on power unit column side connecting it to the cylinder (1) first.
2. Install Pc. (3) with plastic hose clamps starting at opposite column cylinder (1) and working toward the power unit column. All excess hose should be at bends & inside overhead assembly.
3. Install Pc. (4) into power unit.
4. Connect Pc. (2) & Pc. (3) to Tee (4).

NOTE: Route Power Unit hose inside columns using slots provided at column base, Fig. 9b. Route Overhead Hose in column channel on outside of column, Fig. 9b. Overhead hose goes over top end of overhead assembly, Fig. 11a.

11. Equalizing Cables

A) Refer to Fig. 10a for the general cable arrangement. First, run a cable end up through the small hole in the lower tie-off plate. Fig. 10b.
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. 10b
E) Run cable around the lower sheave, then up and around overhead sheave and across and down to the opposite carriage. Fig. 10a.
F) Fasten the cable end to the carriage upper tie-off bracket. Tighten the locknut enough to apply light tension to the cable.
G) Repeat procedure for the second cable. Complete lift assembly. Adjust the tension of both cables during the final adjustments.

NOTE: Overhead hose crosses and runs down approach side of left column to cylinder.

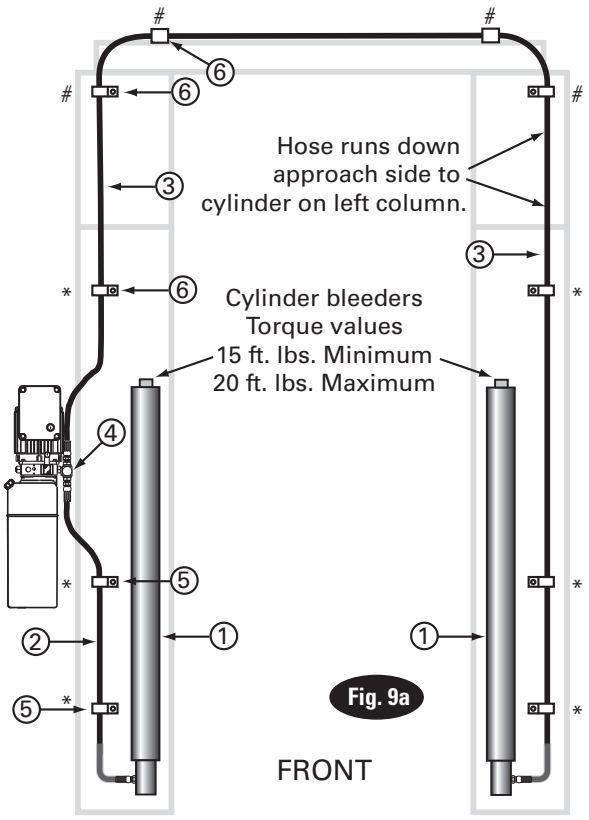


Fig. 9a

ITEM	QTY.	DESCRIPTION
1	2	Hydraulic Cylinder
2	1	Power Unit Hose
3	1	Overhead Hose
4	1	Branch Tee
5	2	Metal Hose Clips
6	8	Plastic Hose Clips
	*6	3/8-16NC x 3/4" lg. Carriage Bolts
	*6	3/8"-16NC Flanged Locknuts
	#4	3/8-16NC x 3/4" lg. Flanged HHCS
	#4	3/8"-16NC Flanged Locknuts

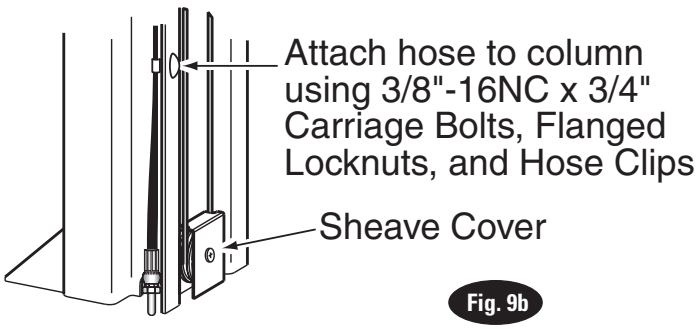


Fig. 9b

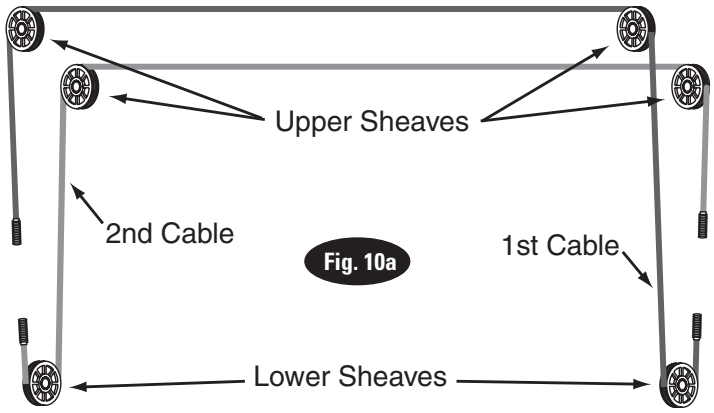
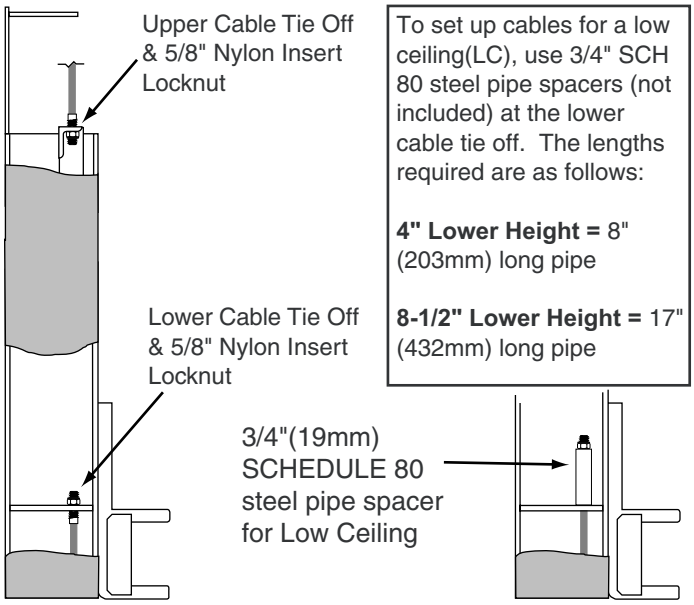


Fig. 10a



To set up cables for a low ceiling(LC), use 3/4" SCH 80 steel pipe spacers (not included) at the lower cable tie off. The lengths required are as follows:

4" Lower Height = 8" (203mm) long pipe

8-1/2" Lower Height = 17" (432mm) long pipe

Fig. 10b

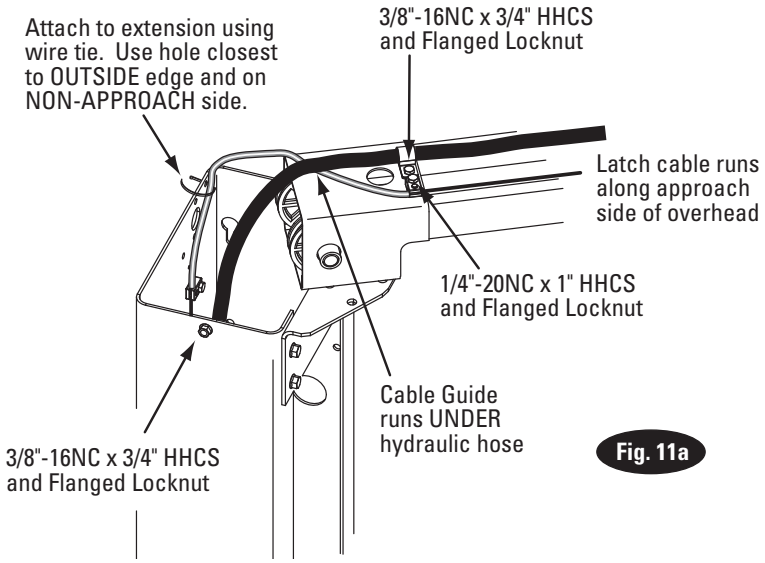


Fig. 11a

IMPORTANT Using wire ties provided, tie off cable guide to column extension as shown, Fig. 11a. Guide must be attached in hole closest to the outside edge of the column on the NON-APPROACH side.

G) 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. 13.

H) Install latch cable sheave and retaining rings in lower slot of non-power unit column as shown, Fig. 13.

I) Route cable under the bottom side of the latch cable sheave, Fig. 13.

J) At this point you MUST install the latch handle, jam nut, and right column latch cover Fig. 11c & Fig. 14. Install latch handle ball, Fig. 14.

12. Locking Latch Cable

A) Install latch cable sheave and retaining rings in upper slot of power unit column as shown, Fig. 11c.

B) Slip loop end of cable over end of shoulder screw on right side latch control plate, Fig. 11c.

C) 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. 11c.

D) Attach latch cable conduit guide brackets to overhead as shown, Fig. 11a & Fig. 11b. Always use the holes on the approach side of the lift. HHCS should be in hole nearest the center of the overhead, Fig. 11b.

E) Route cable up inside column and through the latch cable guide, Fig. 11a & Fig. 12.

IMPORTANT Using wire ties provided, tie off cable guide to column extension as shown, Fig. 11a. Guide must be attached in hole closest to the outside edge of the column on the NON-APPROACH side.

F) Continue routing cable to the left column latch cable guide, Fig. 11a & Fig. 12, routing the cable through the left column latch cable guide, Fig. 11a.

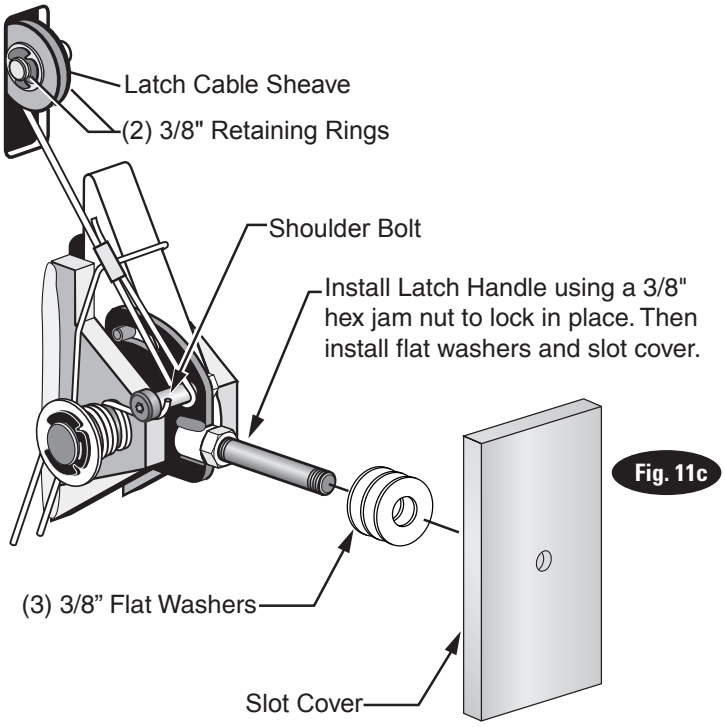


Fig. 11c

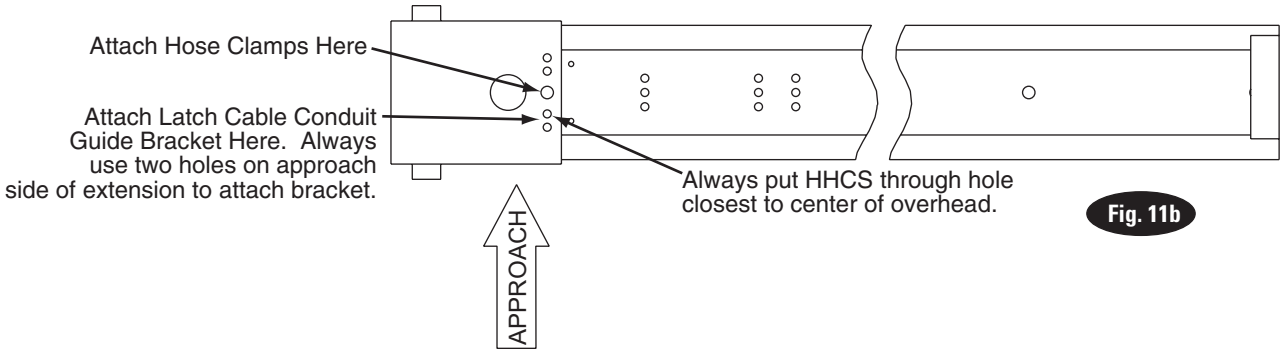


Fig. 11b

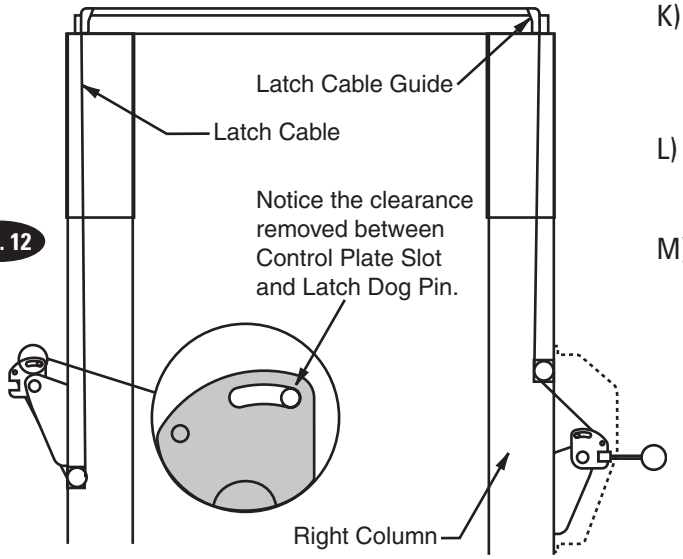


Fig. 12

K) Insert cable in cable clamp along one side, loop around shoulder screw and back down, inserting cable along other side of cable clamp, Fig. 13. Place top back on clamp, barely tightening.

L) Next, pull the control plate down, Fig. 12 & Fig. 13, to eliminate any clearance between the control plate slot and the latch dog pin, Fig. 12.

M) Using Pliers, pull cable tight and secure the clamp close to the shoulder screw. Tighten clamp.

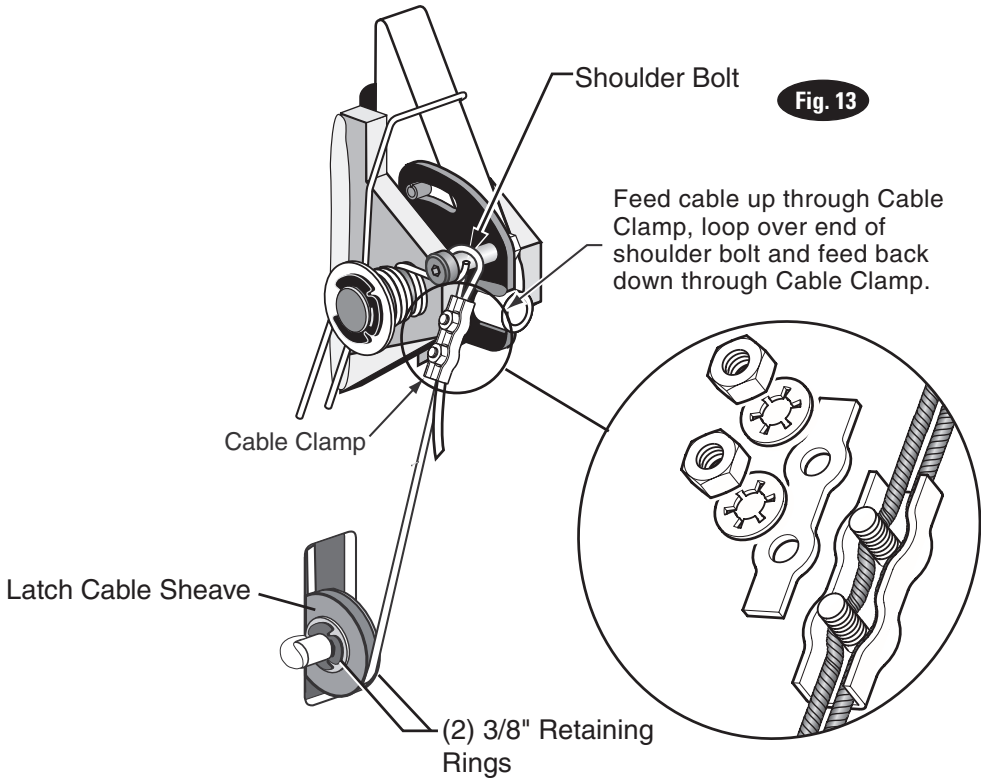


Fig. 13

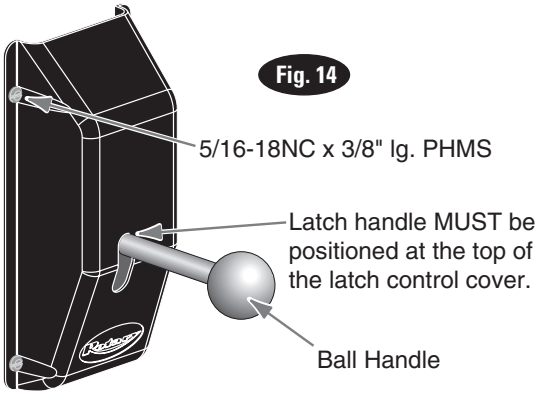


Fig. 14

13. Electrical: Have a certified electrician run appropriate power supply to motor, Fig. 15 & 16. Size wire for 20 amp circuit. For single phase 4HP motor wire for 30 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. For single phase 4HP motor use 30 amp fuse. Three phase 208-240V, use 20 amp fuse. For three phase 400V and above, use 10 amp fuse. For wiring see Fig. 15, Fig. 16, and Fig.16b. All wiring must comply with NEC and all local electrical codes.

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:

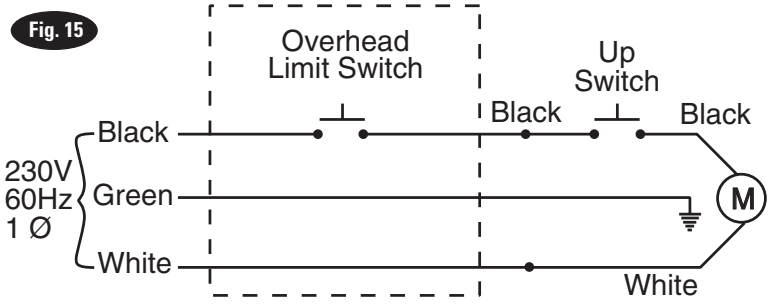
UL201, Sections 10.1.1.3 & 10.1.1.4

(Example: SO, G, STO) Size for 25 amp circuit. See UL 201, Section 15 for proper wiring requirements for this connection.

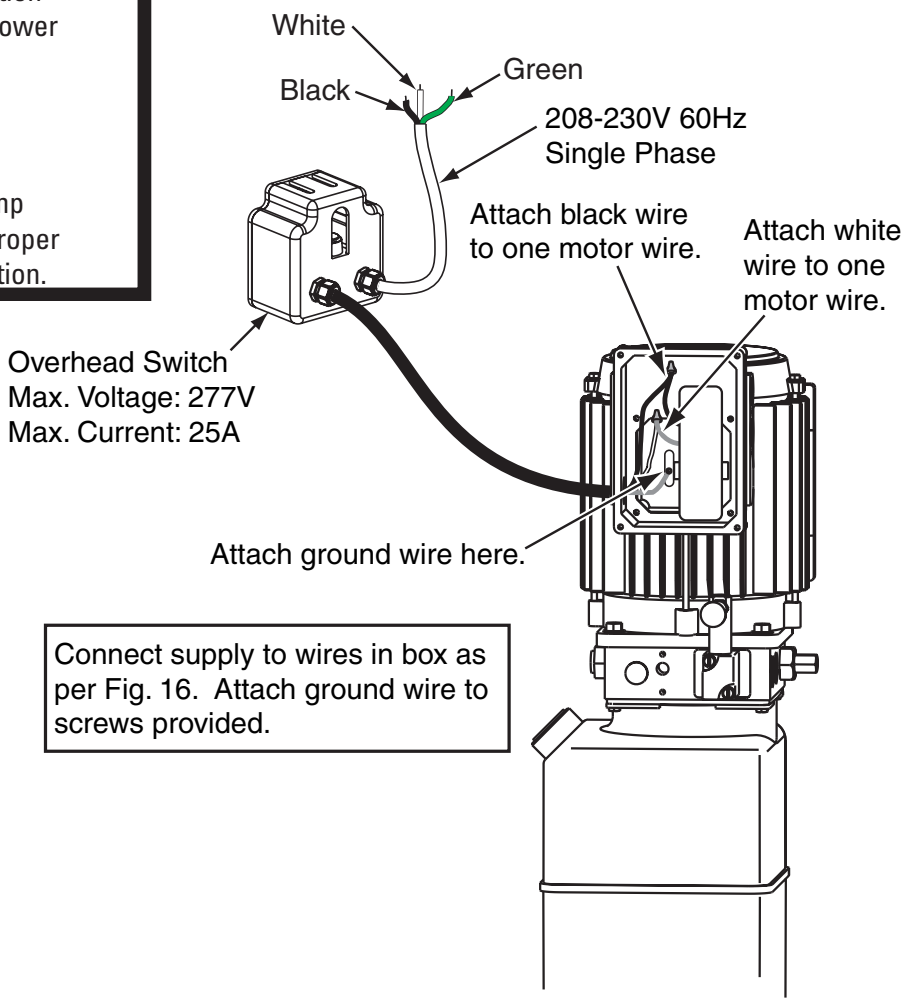
Single Phase Power Unit

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

Fig. 15



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

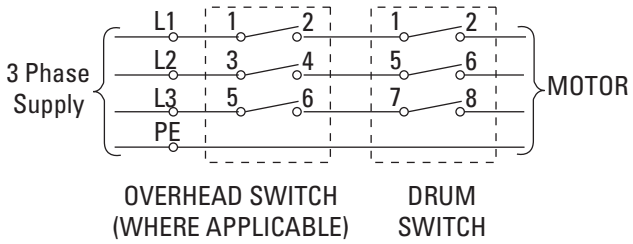


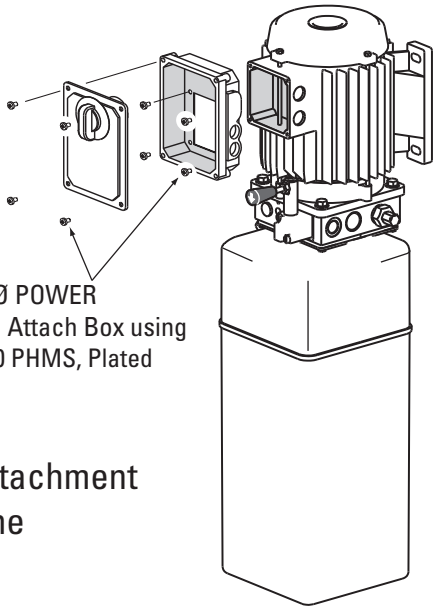
Connect supply to wires in box as per Fig. 16. Attach ground wire to screws provided.

NOTE: Two Different Drum Switches were used please select one of the two options below. Newer model three phase lifts use the push button control box with contactor. Its instructions follow the Drum Switch instructions.

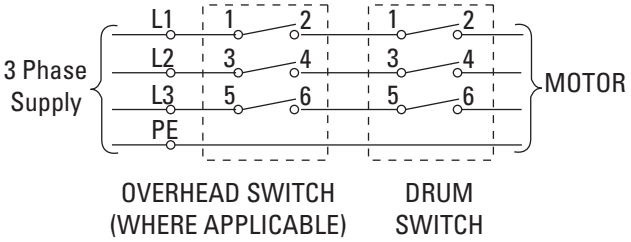
NOTES:

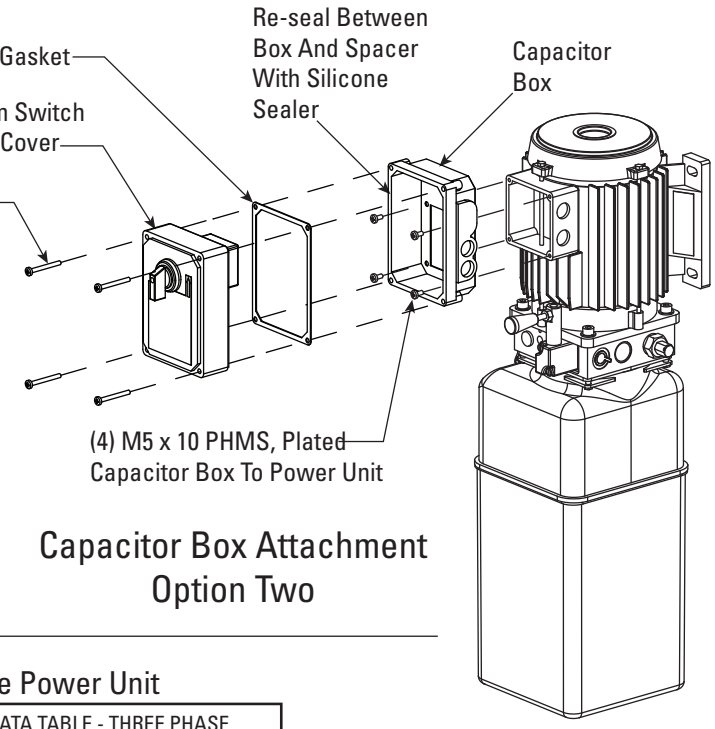
1. Unit not suitable for use in unusual conditions. Contact Rotary for moisture and dust environment duty unit.
2. Control Box must be field mounted to power unit.
3. Motor rotation is counter clockwise from top of motor.





Capacitor Box Attachment Option One





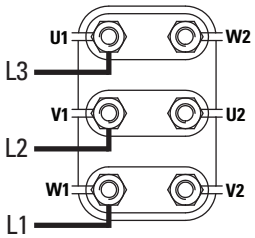
Capacitor Box Attachment Option Two

Three Phase Power Unit

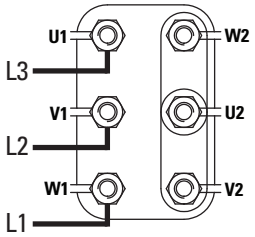
MOTOR OPERATING DATA TABLE - THREE PHASE	
LINE VOLTAGE	RUNNING MOTOR VOLTAGE RANGE
208-240V 50/60Hz.	197-253V
400V 50Hz.	360-440V
440-480V 50/60Hz.	396V-528V
575V 60Hz.	518V-632V

Fig. 16

Current Pin Layouts

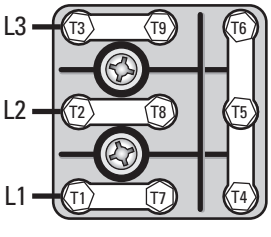


208-240V
50/60Hz. 3Ø

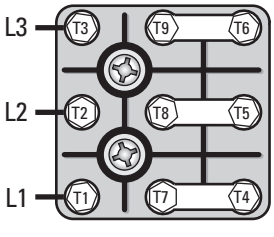


440-480V 50/60 Hz. 3Ø
380-400V 50 Hz. 3Ø

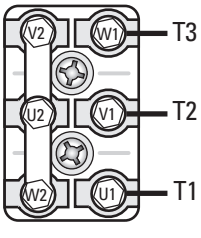
Older Pin Layouts



208-240V
50/60Hz. 3Ø



440-480V 50/60 Hz. 3Ø
380-400V 50 Hz. 3Ø



575V 60 Hz. 3Ø

14. 3ø Control Box Installation:

A) Attach Mounting Bracket on column, as shown in Fig. 16a, using (1) 5/16"-18NC x 1/2" Socket Head Counter Sunk Machine Screw, (2) 5/16"-18NC x 1/2" HHCS, and (2) 5/16" Flat Washers.

B) Attach Control Box to Bracket using (4) 1/4"-20NC x 1/2" HHCS, (4) 1/4" Flat Washers, and (4) 1/4" Star Washers.

C) Route cord through strain relief on motor and connect per table on the bottom of page 15.

Note:
The contactor in the control box has a 480V coil. For installations where the electric supply is 230V, the coil must be replaced with the extra 230V coil shipped with the control box. For 575V electric supply, the coil must be replaced with the extra 575V coil shipped with the lift.

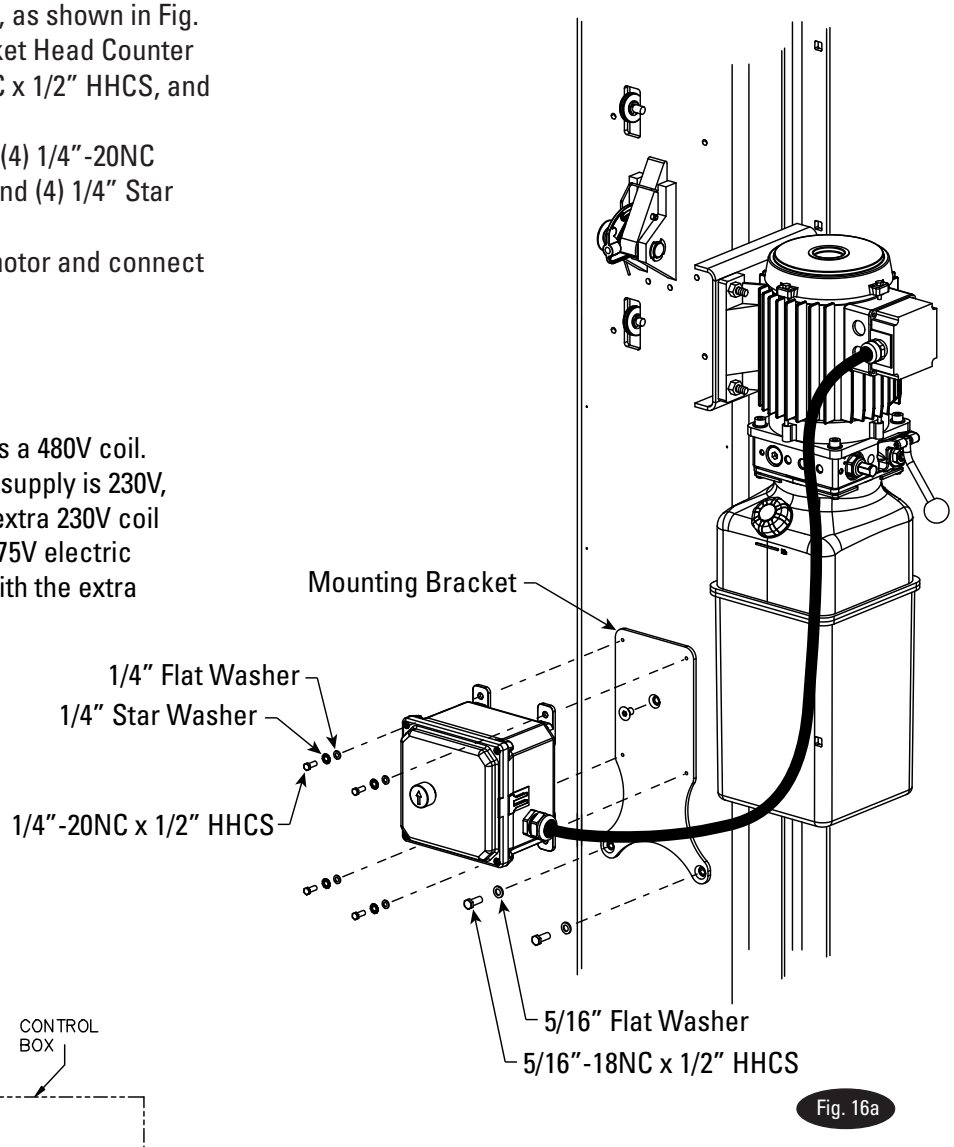


Fig. 16a

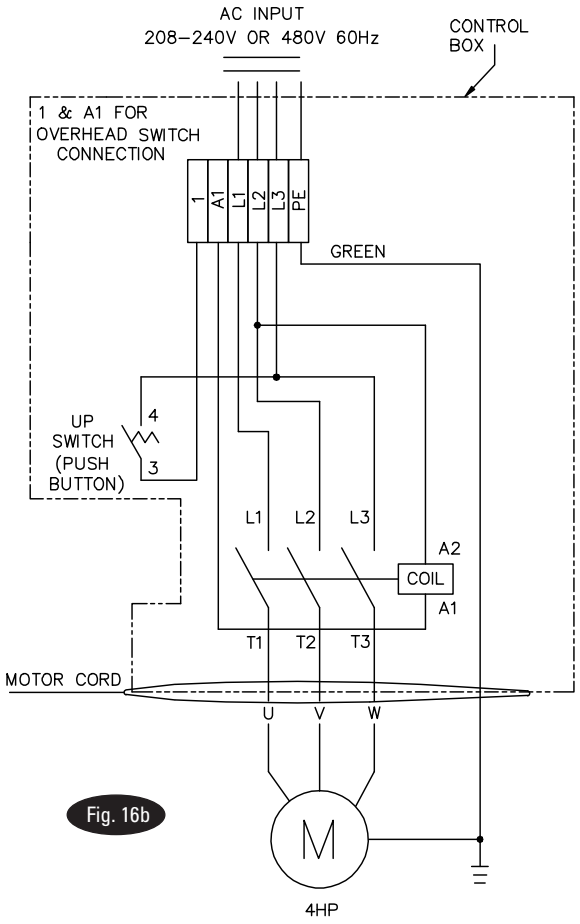


Fig. 16b

15. Oil Filling & Bleeding: Use Dexron III ATF, or Hydraulic Fluid that meets ISO 32 specifications. Remove fill-breather cap, Fig. 8a. Pour in (8) quarts of fluid. Start unit, raise lift about 2 ft. Open cylinder bleeders approximately 2 turns, Fig. 9a.

Close bleeders when fluid streams. Torque values for the bleeders are 15 ft. lb. minimum and 20 ft lb. maximum.Fully lower lift. Add more fluid until it reaches the MIN_____ mark on the tank. Replace fill-breather cap.

⚠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. 15, Fig. 16, and Fig. 16b. 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 restarts when the bar is released.

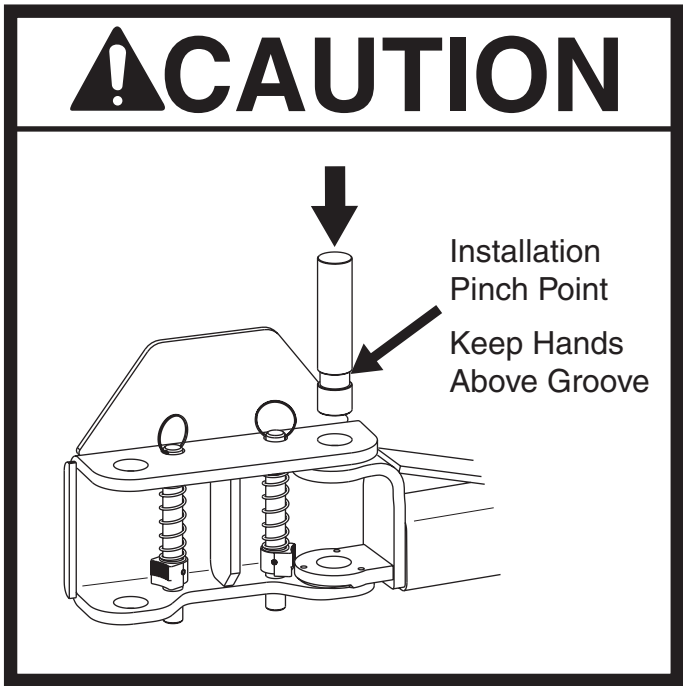
17. Arms & Restraints: Before installing arms, raise carriages to a convenient height. Grease swivel arm pins and holes with Lithium grease. Slide arm into yoke, Fig. 17a. Install 1-3/4" diameter arm pin(s), Fig. 17a.

After installing arms and pins, install arm Restraint Gears as follows: Install Restraint Gear onto arm clevis, as shown, Fig. 17b. Ensure side of gear marked **TOP** is facing upward, Fig. 17b.

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

Then, install the (2) 3/8"-16NC x 1-1/2" HHCS (8 total for all 4 arms) and 3/8" Spring Lockwashers into the gear and arm, but do not tighten. Reference Fig. 17c, Fig. 18, and Fig. 19.

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



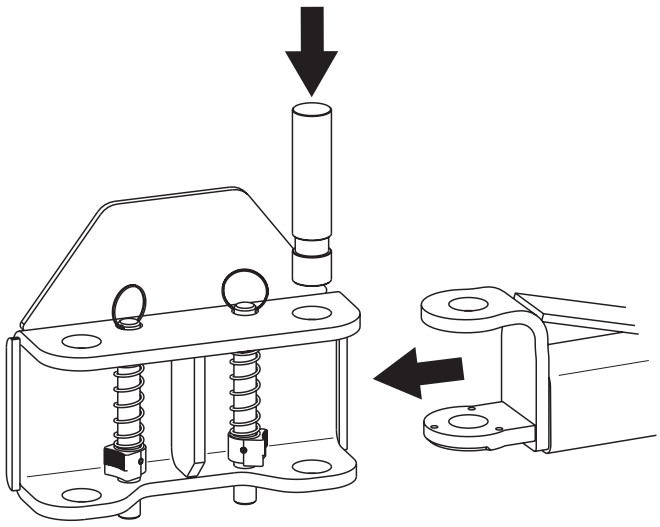


Fig. 17a

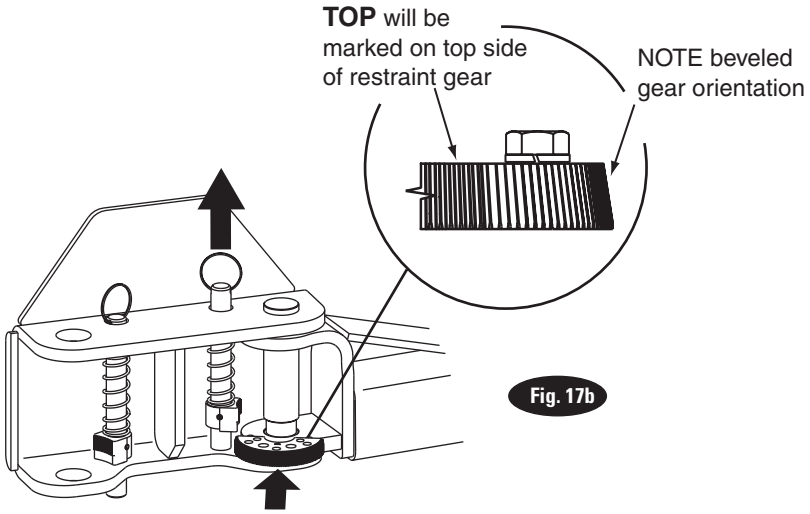


Fig. 17b

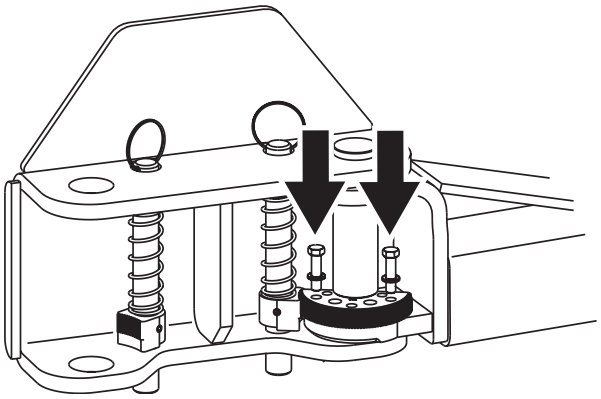


Fig. 17c

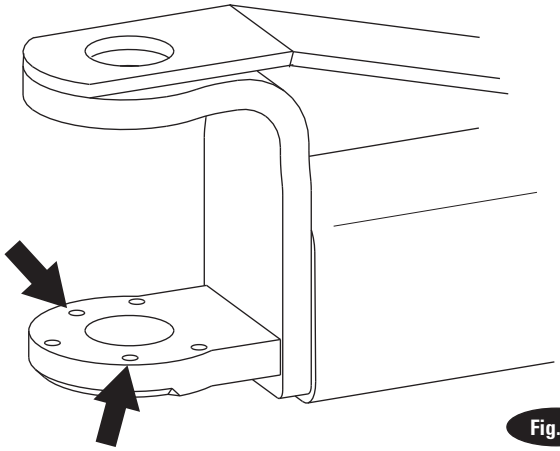


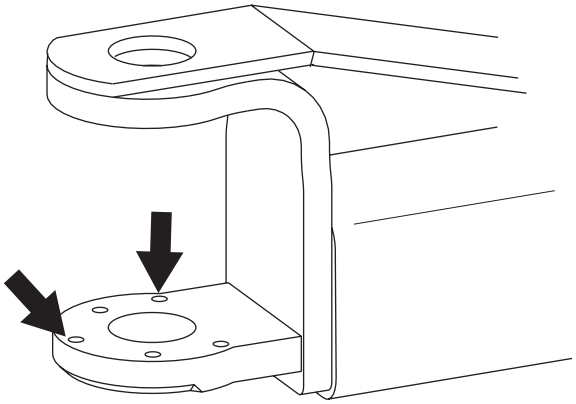
Fig. 18

DO NOT use holes marked with arrows.

NOTE: To check operation of arm restraints, raise carriage 1" min. from full down position. Pull up on pin-ring 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.

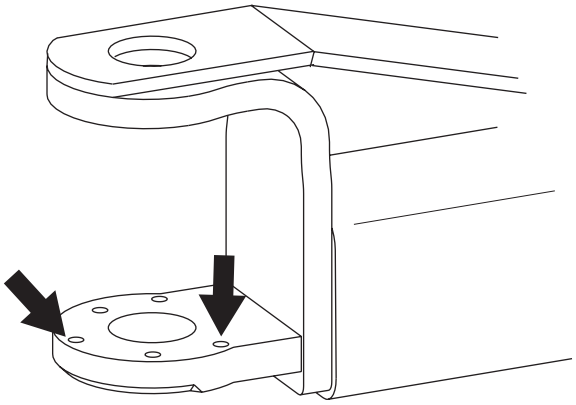
NOTE: Pin & Ring, Spring, & Gear Block are all preassembled.

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.



Use holes marked with arrow for Right Front and Left Rear.

Fig. 19



Use holes marked with arrow for Left Front and Right Rear.

18. Installation of Rack for Adapter Extensions: Install racks as shown, Fig. 20, using 5/16"-18NC x 3/8" PHMS.

19. Door Bumper Installation:

1) Press long bumper on column edge, Fig. 21a.
2) Press short bumper on top edge of carriage tube, Fig. 21a.

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.

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.

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.

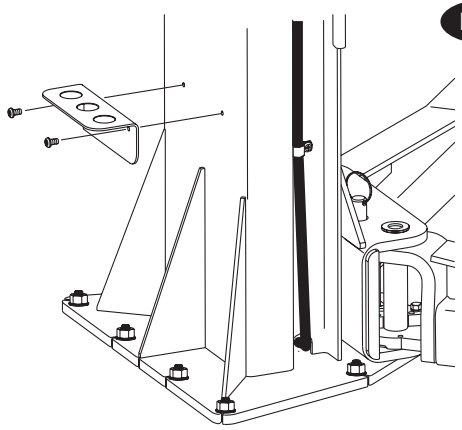


Fig. 20

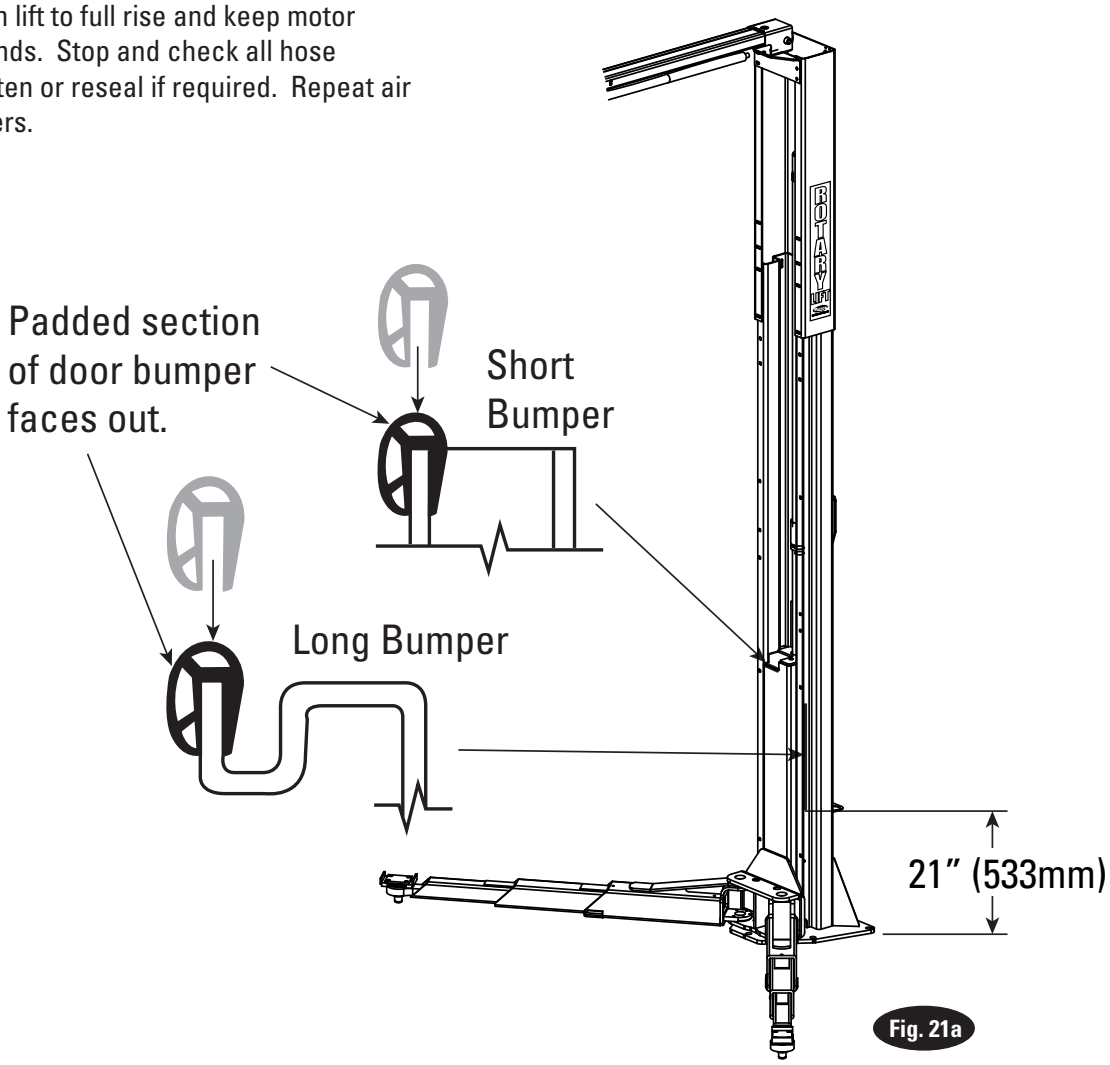


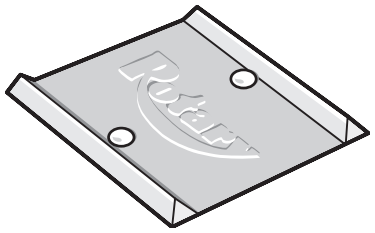
Fig. 21a

22. **Equalizer Cable Adjustments:** 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. Adjust at upper tie-offs Fig. 21b.

23. **Latch Release Decal:** Install latch release decal on cover above latch release handle, Fig. 22.

24. **Pinch Point Decal Location:** Install enclosed pinch point decals. Place (1) decal on each column, Fig. 23.

25. **Wheel Spotting Dish:** Position wheel spotting dish as illustrated in Fig. 1. Drill (2) 3/8" holes 2-1/2" deep in concrete floor using holes in wheel spotting dish as guide. Drive both anchors, provided, into concrete to secure dish.



26. **Upon completion** of the assembly of the lift, the lift is to be operated to assure proper function. Observe for locks operating in all locking positions, each side lifts equally, hydraulics do not leak, all electrical controls function as labeled, all pneumatics are functional and leak free, ramps rotate freely (if applicable), and proper clearances with all items in bay have been maintained.

    Operate the lift with a typical vehicle and observe to assure the same items for proper functioning.

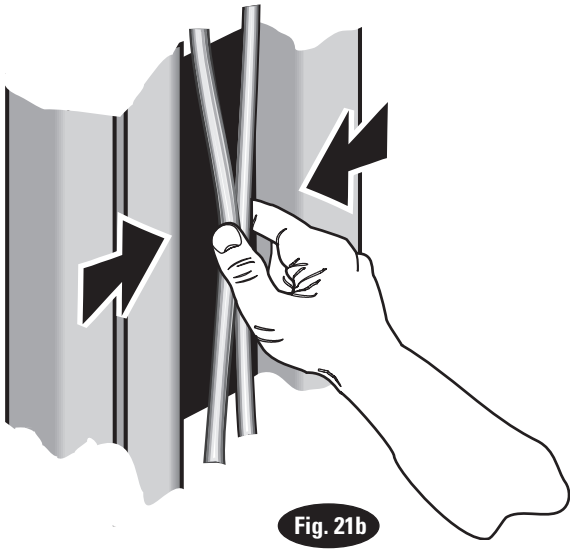


Fig. 21b

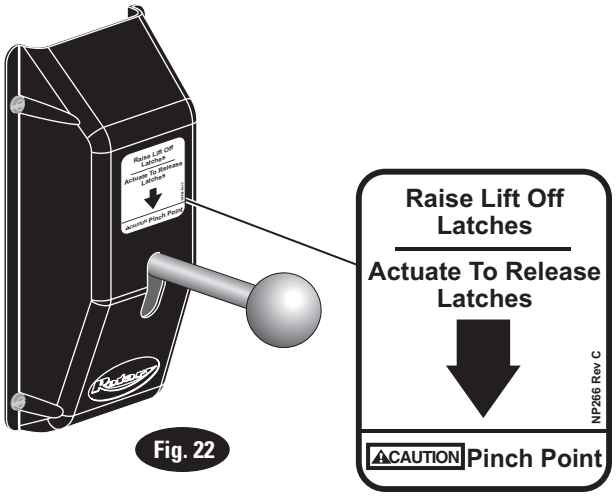
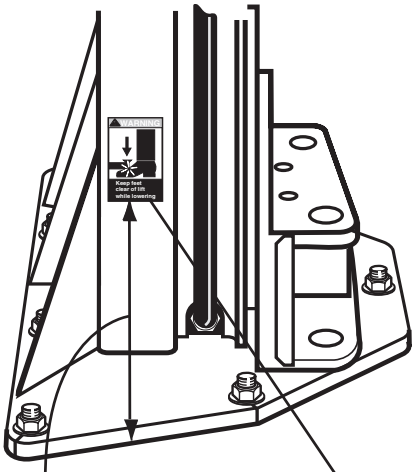


Fig. 22



Place WARNING decal a minimum of 8" from the bottom of the decal to the ground.

Fig. 23

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

Thank You

Trained Operators and Regular Maintenance Ensures Satisfactory Performance of Your Lift.

Contact Your Nearest Authorized Rotary Parts Distributor for Genuine Rotary Replacement Parts. See Literature Package for Parts Breakdown.

Rotary World Headquarters
2700 Lanier Drive
Madison, IN 47250, USA
www.rotarylift.com

North America Contact Information
Tech. Support:
p 800.445.5438
f 800.578.5438
e userlink@rotarylift.com
Sales: p 800.640.5438
f 800.578.5438
e userlink@rotarylift.com

World Wide Contact Information
World Headquarters/USA: 1.812.273.1622
Canada: 1.905.812.9920
European Headquarters/Germany: +49.771.9233.0
United Kingdom: +44.178.747.7711
Australasia: +60.3.7660.0285
Latin America / Caribbean: +54.3488.431.608
Middle East / Northern Africa: +49.771.9233.0

SP012
Standard/Hummer/Sprinter

Two Post Surface Mounted Swing Arm Frame Engaging Lift

Includes Shockwave™ Models

Standard (700 Series) Capacity: 12,000 lbs.

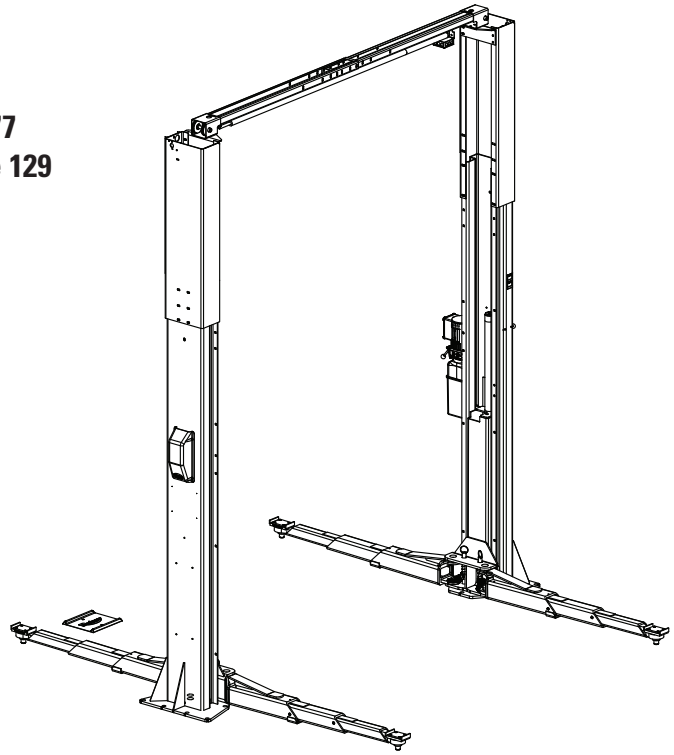
Hummer (7W0 Series) Capacity: 12,000 lbs.

Sprinter (7A0 Series) Capacity: 9,000 lbs.

PARTS BREAKDOWN

Español Página 77

Le Français La page 129



IMPORTANT: When ordering parts or requesting service always give exact model and power unit serial number. Model number is shown on nameplate attached to power unit column. Power unit serial number is located on side of power unit.

OWNERS RECORD
Complete information at right and keep in a safe place.

Date Installed _____

Installed in Bay # _____

Power Unit Serial # _____

Power Unit Model # _____

Lift Serial # _____

Lift Model # _____

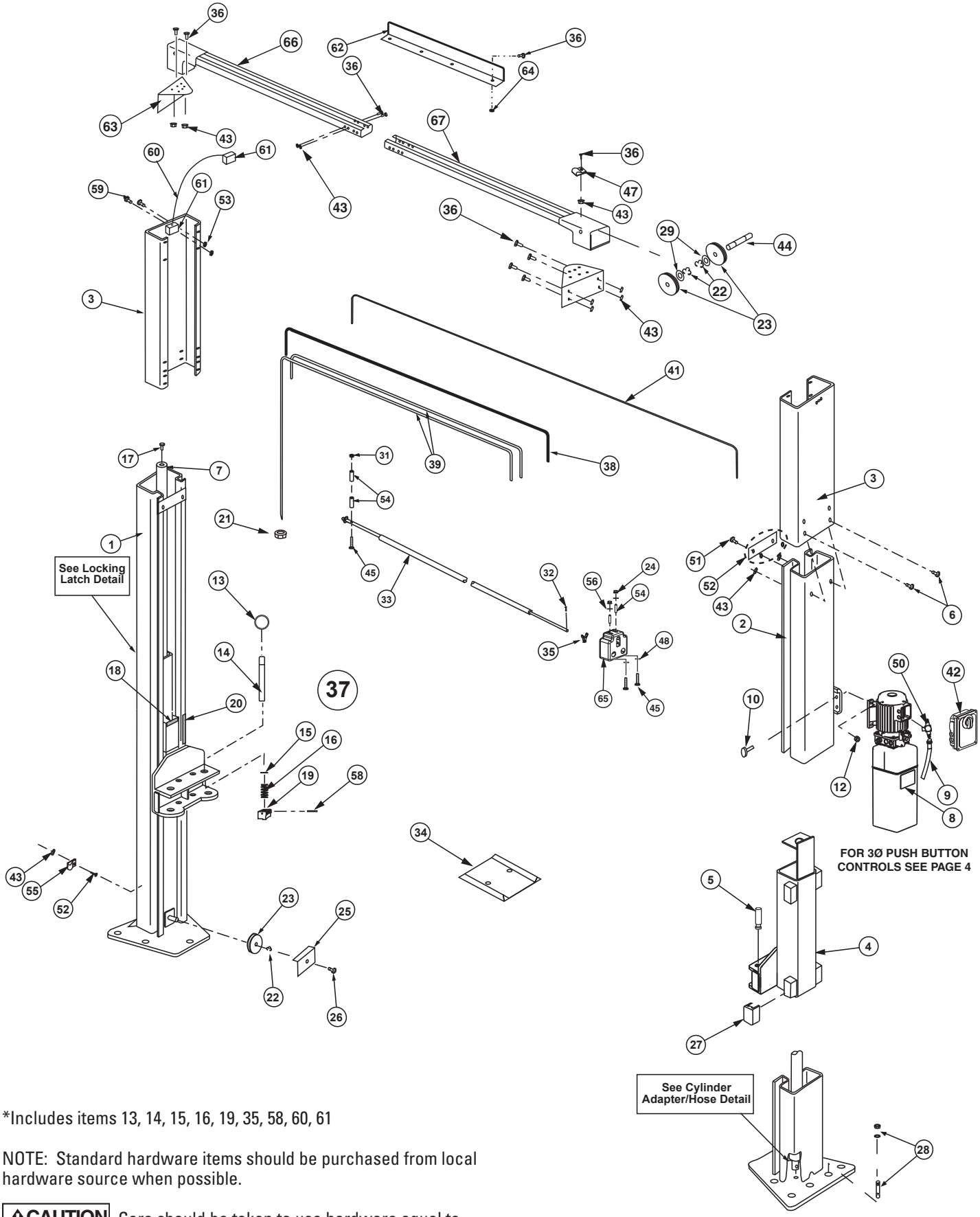
NOTE: For replacement parts -See your nearest Rotary Parts Distributor.

CO11893.3

LPRM2P12K
Rev. C 6.14.22

1	L.H. Column Weldment	N754
2	R.H. Column Weldment	N757
3	Column Extension	
	Low Ceiling MODEL (700/7A0/7T0 Series)	N495
	Std Height MODEL (700/7A0/7T0 Series)	N477
	EH-1 MODEL (ALL 7XX Series)	N478
	EH-2 MODEL (ALL 7XX Series)	N479
	EH-3 MODEL (ALL 7XX Series)	N4116
4	Carriage Yoke Weldment	N826
5	Arm Pin	N2154
6	3/8"-16NC x 1" Carriage Bolt	N/A
7	Hydraulic Cylinder Assembly	
	68" Rise	N346-1
	71" Rise	N347
8	Power Unit	
	SINGLE PHASE	P3391
	SINGLE PHASE 50Hz.	P3575
	4 HP SINGLE PHASE	P3500
	THREE PHASE	P3395
	575 Volt	P3360
9	Power Unit Hose	FJ837
10	5/16"-18NC x 1-1/2" Flanged HHCS	40509
11	NA	NA
12	5/16"-18NC Hex Flanged Lock Nut	40678
13	Actuator Pin Handle	FJ7985-1
14	Actuator Pin	N121-1
15	Retaining Pin	N119-3
16	Arm Restraint Spring	FJ7656-2
17	Bleeder Screw (Specify Manufacturer)	2REQ'D
18	Carriage Bumper	FJ7391-2
19	Arm Restraint Panel	N2121
20	Approach Bumper (door-18" Lg-2 req'd)	FJ7391-1
21	5/8"-11NC Hex Nylon Insert Locknut	40743
22	Truarc #5304-75 Klipring for 3/4" Shaft	41411
23	Sheave	N417-1
24	1/4"-20NC Zinc Hex Nut	40627
25	Sheave Cover	N119-1
26	1/4"-20NC x 3/8" Lg. PHMS Plated (2 pcs.)	40063
27	Slider block	FJ7360
28	3/4" Concrete Anchor (14 req'd)	FJ7380
29	1-1/2" O.D. x .760-.770" I.D. x .045" Bushing	41388
30	N/A	N/A
31	1/4"-20NC Insert Locknut	41423
32	1/8" x 1" Lg. Cotter Pin (3Ø Only)	41200
33a	Switch Bar Assembly 1Ø / 3Ø w/ Push Button	N467
	Switch Bar Assembly 3Ø	N434
33b	Switch Bar Assy (7WO Series) 1Ø / 3Ø w/ Push Button	N464
	Switch Bar Assembly (7WO Series) 3Ø	N466
34	Spotting Wheel Dish Kit	FF729
35	Actuator Assembly (3Ø Only)	N432-5
36	3/8"-16 NC x 3/4" Long Flanged HHCS	40124

37*	Arm Restraint Kit (1 arm)	*N2148
38	Overhead Hose	
	Low Ceiling MODEL (700/7A0/7T0 Series)	FJ839
	Standard Height MODEL (700/7A0/7T0 Series)	FJ843
	EH-1 MODEL (ALL 7XX Series)	FJ844
	EH-2 MODEL (ALL 7XX Series)	FJ845
	EH-3 MODEL (ALL 7XX Series)	N3159
39	Equalizer Cables	
	Low Ceiling MODEL (700/7A0/7T0 Series)	N390
	Standard Height (700/7A0/7T0 Series)	N387
	EH-1 MODEL (ALL 7XX Series)	N388
	EH-2 MODEL (ALL 7XX Series)	N389
	EH-3 MODEL (ALL 7XX Series)	N3158
40	N/A	N/A
41	Locking Latch Cable	
	Standard	FJ7600
	EH-3 MODEL (ALL 7XX Series)	N629
42	Capacitor Box	FA7147-1
	Capacitor Box Cover Plate	FA7366-1
	Drum Switch	FA7364
	Drum Switch Lever	FA7364-1
	M5 x 45 PHMS, Plated	41672
43	3/8"-16NC Flanged Locknut	40664
44	Sheave Shaft	FJ7444-8
45	1/4"-20NC x 2-3/4" HHCS Grade 5	40114
46	Latch Cable Guide	N69
47	Hose Clip	N383
48	1/4" Flat Washer	40795
49	5/16"-18NC x 3/8" PHMS (6 req'd-Column)	40227
50	Branch Tee	FJ7668
51	3/8"-16NC x 2-1/2" Lg. Carriage Bolt	40183
52	Tie Bar Kit	N1243
	Tie Bar	N1243-1
	Spacer	N1162-2
53	1/4"-20NC Flanged Locknut	40641
54	3/4" Spacer	FJ7871
55	3/8"-16NC x 3/4" Lg. Carriage Bolt	40696
56	1/4" External Tooth Lockwasher	40779
57	3/8" External Tooth Lockwasher	40845
58	Spring Pin-1/4" dia. x 1-1/2" Lg. (Stainless)	14427
59	1/4"-20NC x 1" HHCS Grade 5	40108
60	Cable Guide	N618
61	Cable End Bracket	N619
62	Stiffener Angle (700/7AO/7T0 Series)	N417-3
	Stiffener Angle (7W0 Series)	N463
63	Column Mounting Bracket	N440
64	3/8"-16NC Flanged Locknut	40664
65	1Ø Limit Switch Assembly	N413
	3Ø Limit Switch Assembly	N412
66	L.H. Overhead Weldment (Outer)	
	(700/7A0/7T0 Series)	N480-1
	(7W0 Series)	N493-1
67	R.H. Overhead Weldment (Inner)	
	(700/7A0/7T0 Series)	N481-1
	(7W0 Series)	N494-1

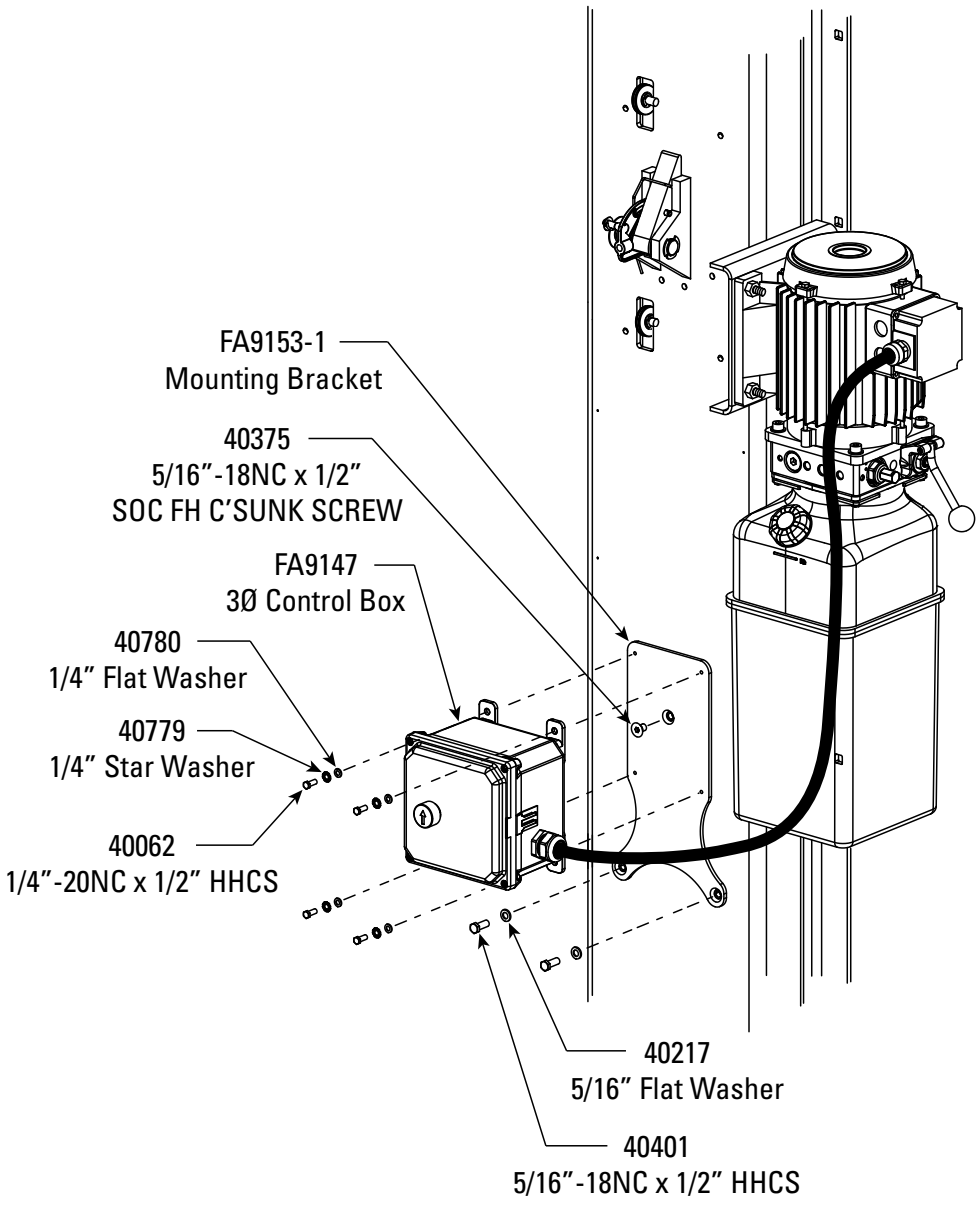


*Includes items 13, 14, 15, 16, 19, 35, 58, 60, 61

NOTE: Standard hardware items should be purchased from local hardware source when possible.

⚠CAUTION Care should be taken to use hardware equal to that specified in this listing. (If grade is not specified, use Grade 2 minimum.)

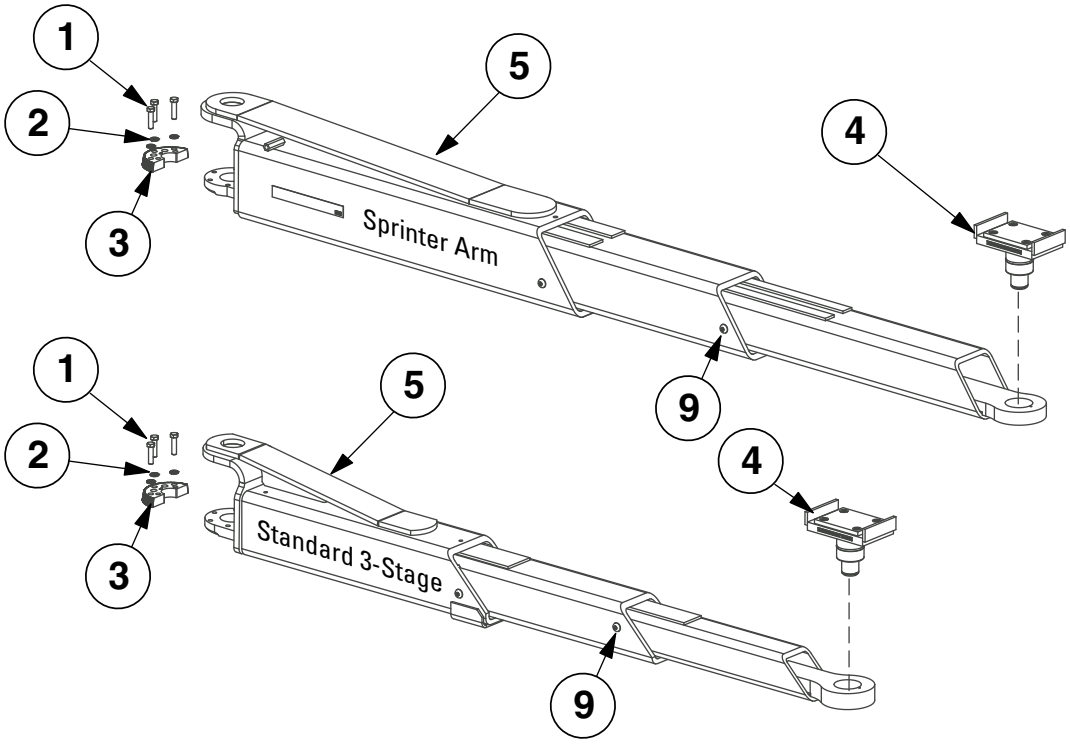
3Ø POWER UNIT

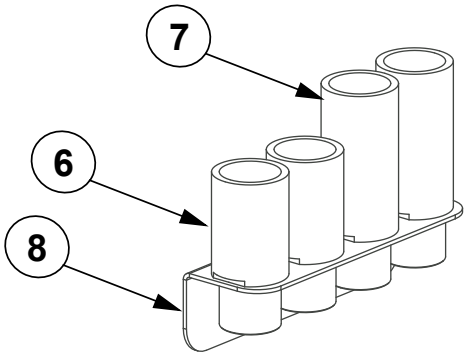


FA9147 Includes Items:	
FA9147-1	3Ø Control Box Enclosure with Gasket
FA9147-2	25 AMP Contactor, 3 Pole with 480 Volt Coil GE CR553AB3CAA
FA9147-6	Contactor Coil DB1AB 208-240 Volt for Contactor GE CR553A
FA9147-8	Switch Momentary Push Button with Contact Block
FA9147-9	Cord 600 Volt 4-Wire 42" Long with Ring Terminals

FA9147-12	550-600 Volt Coil GE Pin PB1AD for 575 Volt Lifts Only

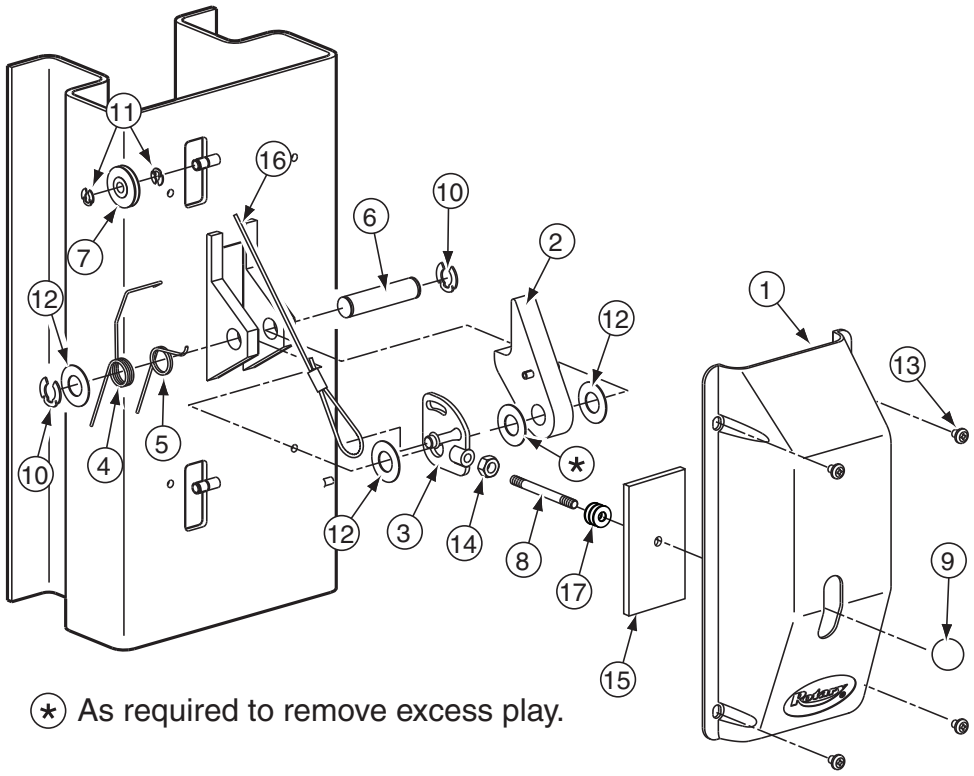
Sprinter 7A0 Series/Hummer 7W0 Series/3 Stage 7T0 Series





1.	3/8″-16NC x 1-1/2″ HHCS Grade 5	40200
2.	3/8" Spring Washers	40818
3.	Restraint Gear	N2122
4.	Adapter	FJ6214
5.	Arm	
	7A0 Series (Sprinter Arm)	N2272
	7T0 Series (Standard 3-Stage Arm)	N2273
	7W0 Series (Standard 3-Stage Arm)	N2273
6.	3-1/2" (90mm) Adapter Extension	FJ6171-1
7.	5-1/4" (130mm) Adapter Extension	FJ6171-2
8.	Adapter Rack	FJ6127
9.	Stop Bolt	N2264-15

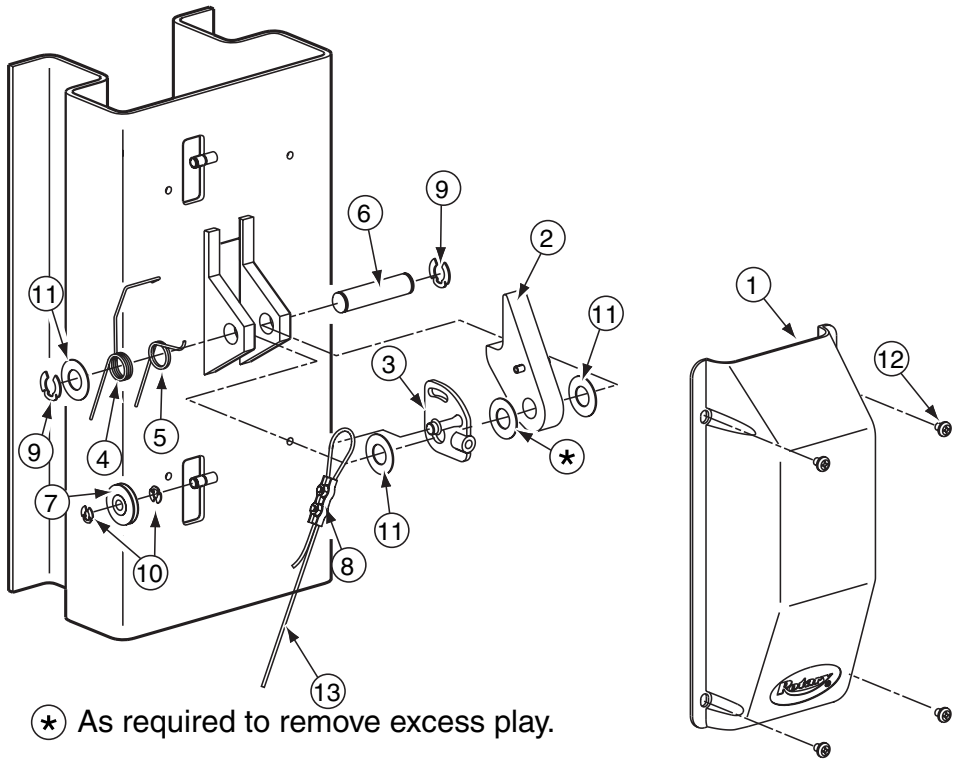
Locking Latch Detail (Right Column)



* As required to remove excess play.

ITEM	DESCRIPTION	PART#
1.	Control Side Cover	FJ7452
2.	Locking Latch Dog	N615
3.	Control Plate	FJ7594-2
4.	Spring	FJ7566-10
5.	Spring	FJ7382-9
6.	Latch Shaft	FJ7382-34
7.	Locking Latch Sheave	FJ7322
8.	Handle	FJ7382-18
9.	Ball Handle	FC134-91
10.	Truarc Klipring #5304-75 for 3/4" Shaft	41411
11.	Truarc Klipring #5304-37 for 3/8" Shaft	41410
12.	1-1/2" O.D. x 3/4" I.D. x .045" Mach. Bush.	41388
13.	5/16"-18NC x 3/8" Lg. PHMS	40227
14.	3/8" - 16NC Hex Jam Nut	40658
15.	Slot Cover	N617
16.	Locking Latch Cable	FJ7600
17.	3/8" Flat Washer	40820

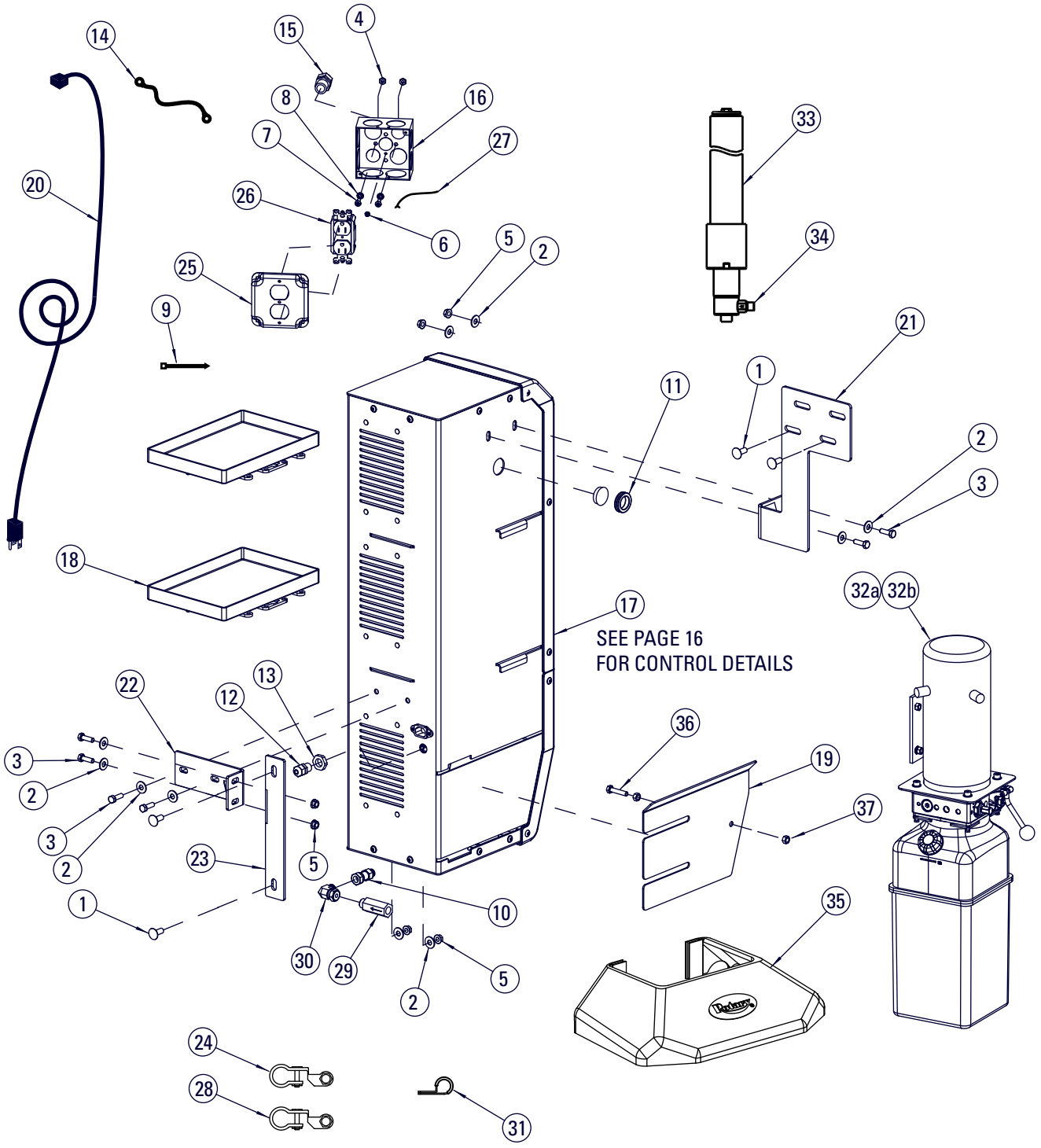
Locking Latch Detail (Left Column)



* As required to remove excess play.

ITEM	DESCRIPTION	PART#
1.	Latch Cover	FJ7451
2.	Locking Latch Dog	N615
3.	Control Plate	FJ7594-2
4.	Spring	FJ7566-10
5.	Spring	FJ7382-9
6.	Latch Shaft	FJ7382-34
7.	Locking Latch Sheave	FJ7322
8.	Latch Cable Clamp	N63-1
9.	Truarc Klipring #5304-75 for 3/4" Shaft	41411
10.	Truarc Klipring #5304-37 for 3/8" Shaft	41410
11.	1-1/2" O.D. x 3/4" I.D. x .045" Mach. Bush.	41388
12.	5/16"-18NC x 3/8" Lg. PHMS	40227
13.	Locking Latch Cable	FJ7600

Shockwave Detail

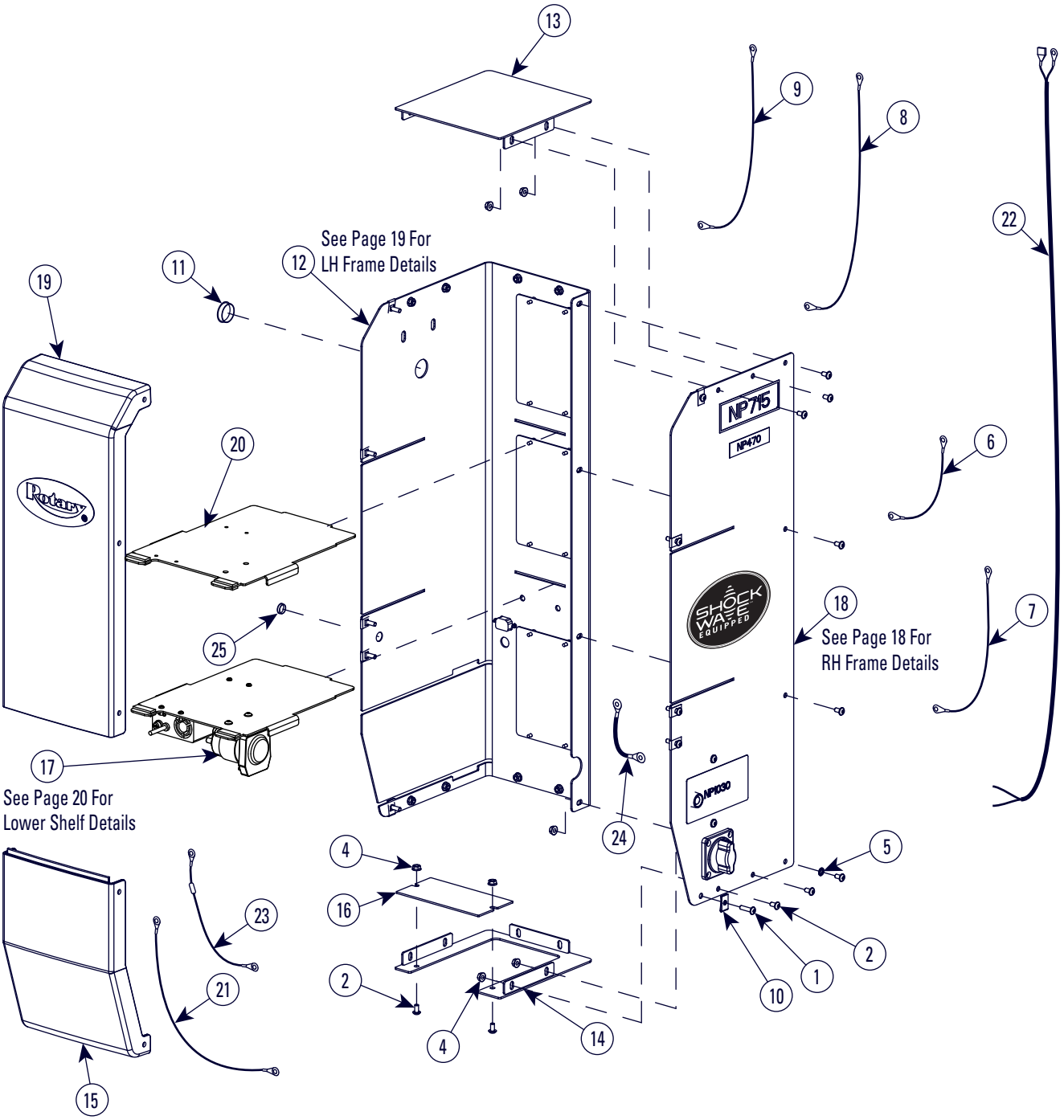


DC CONTROL MOUNTING

Shockwave Detail

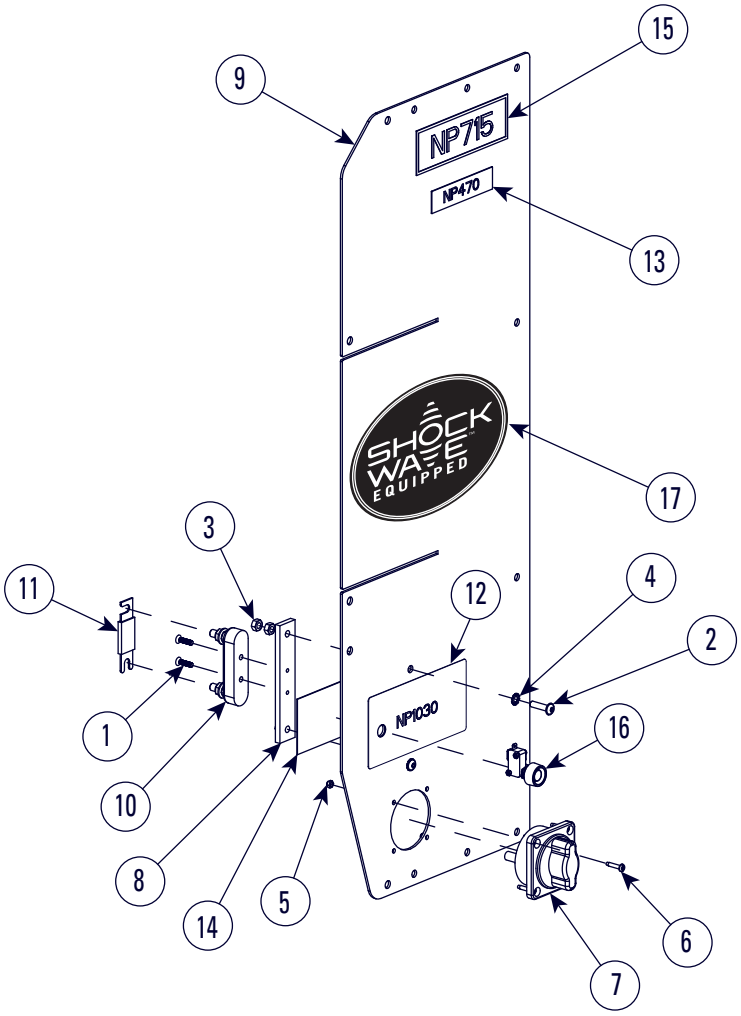
ITEM	PART NO.	DESCRIPTION
1	40167	3/8"-16NC x 1" Lg. CAR. BOLT, Gr. 5, PLTD.
2	40217	5/16" USS FLAT WASHER, PLTD
3	40221	5/16"-18NC x 1" Lg HHCS, GRD5 PLTD
4	40650	#12-24NC HEX NUT, PLTD
5	40678	5/16"-18NC HEX FLGD WZLOCK NUT, PLTD
6	FA997-1	#10-32 x 1/4" Lg. HEX WHSFTS, PLTD, COLORED GREEN
7	41526	#12-24NC x 3/4" Lg. PHIL. PHMS, PLTD
8	41527	#12 EXT TOOTH LW, PLTD
9	629888	TY-RAP CABLE TIE, NYLON, BLACK, 11 1
10	EFX60010319	ADAPTER, STRAIGHT THREAD/ SWIVEL (ORB/ORFS 6X6)
11	FA7180-31	WIRE GROMMET
12	FA7189-14	3/8" NPT STRAIN RELIEF
13	FA7189-15	3/8" NPT LOCKNUT
14	FA7616	BATTERY-BATTERY CABLE
15	FA7958-28	CORD GRIP
16	FA997	JUNCTION BOX
17	FA966	DC CONTROL ASSEMBLY
18	FA966-16	BATTERY TRAY
19	FA966-47	BATTERY CABINET 2-POST SPLASH SHIELD
20	FA966-51	10FT UNIVERSAL POWER CORD (NEMA 5-15P TO IEC320C13)
21	FA966-55	BATTERY CABINET UPPER MOUNTING BRKT WELD
22	FA966-56	BATTERY CABINET MOUNTING BRKT WELD
23	FA966-57	BATTERY CABINET MOUNTING COLUMN BRKT WELD
24	FA979	POSITIVE BATTERY TERMINAL END
25	FA980-1	DUPLEX RECEPTACLE COVER 4" SQUARE BOX
26	FA980-2	DUPLEX FEMALE RECEPTACLE
27	FA980-3	GROUND WIRE
28	FA981	NEGATIVE BATTERY TERMINAL END
29	FJ71003	FLOW REGULATOR
30	FJ71007	MALE ORFS x FEMALE ORFS SWIVEL ELBOW
31	FJ7669	COLUMN HOSE CLAMP
32a	P3577	DC POWER UNIT - PAD LIFT
32b	P3579	DC POWER UNIT - ARM LIFT
32c	P3586	DC POWER UNIT - SPO12
33	N3151Y	HYDRAULIC CYLINDER
34	FJ7352-3	ADAPTER
35	N539	BASE PLATE COVER (FOR SPOA10 & SPO10 MODELS ONLY)
36	40271	5/16"-18NC x 1-1/2" HHCS FULL THREAD
37	40670	5/16"-18NC HEX NUT

Shockwave Detail



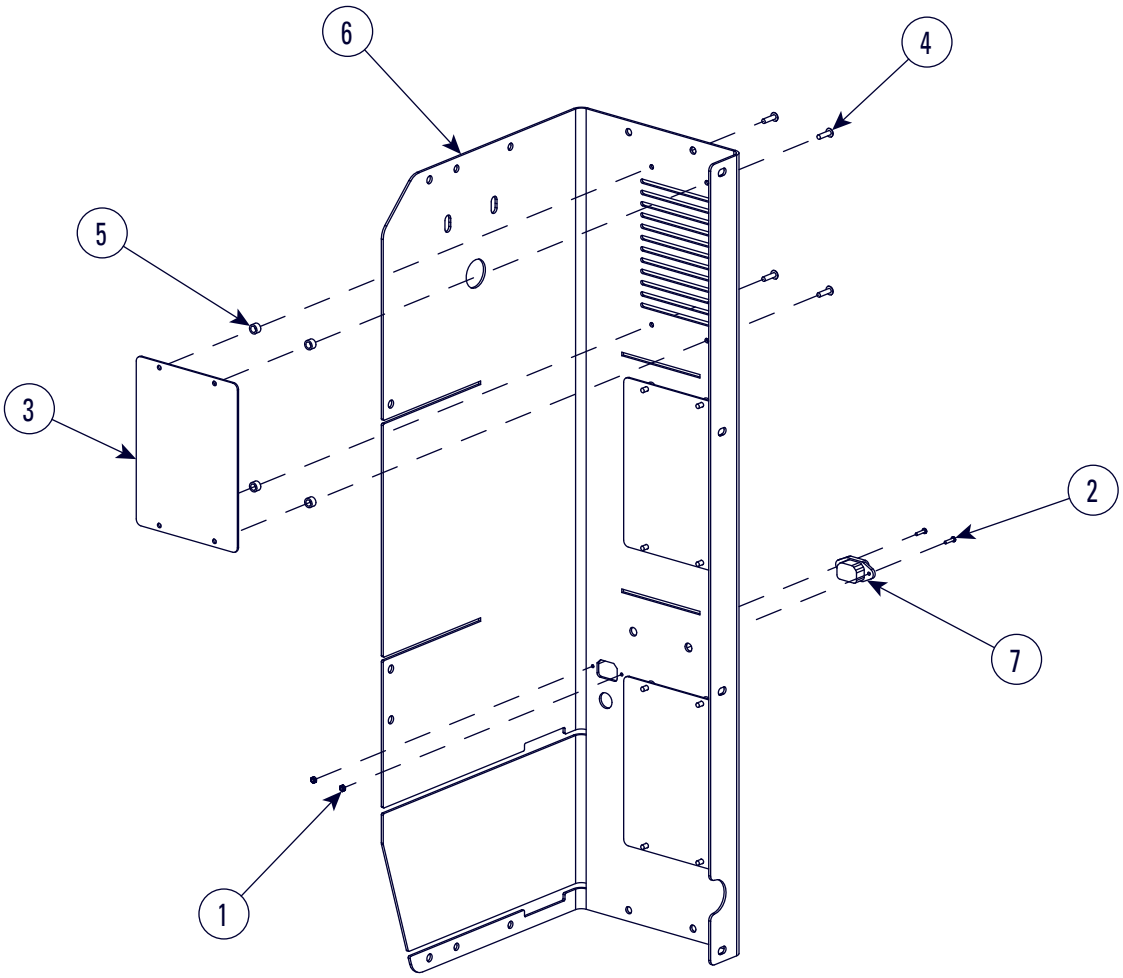
DC CONTROL		
ITEM	PART NO.	DESCRIPTION
1	40077	1/4"-20NC x 1" Lg FLGD HEX SOC BHCS, GRD2
2	40094	1/4"-20NC x 1/2" Lg FLGD HEX SOC BHCS
3	NA	NA
4	40641	1/4"-20NC HEX FLGD WZLOCK NUT, PLTD
5	40779	1/4" EXT TOOTH LW
6	FA7618	DISCONNECT-FUSE CABLE
7	FA7619	FUSE-CONTACTOR CABLE
8	FA7667	BATTERY-DISCONNECT CABLE
9	FA7668	BATTERY-MOTOR CABLE
10	FA966-22	CLIP-ON NUT
11	FA966-34	1-1/4" HOLE PLUG
12	FA966-37	BATTERY CABINET LH FRAME ASSY
13	FA966-39	BATTERY CABINET TOP COVER WELDMENT
14	FA966-42	BATTERY CABINET BOTTOM COVER WELDMENT
15	FA966-45	BATTERY CABINET FRONT BOTTOM COVER
16	FA966-46	BATTERY CABINET SMALL BOTTOM COVER
17	FA966-48	BATTERY CABINET LOWER SHELF ASSEMBLY
18	FA986-1	BATTERY CABINET RH FRAME ASSEMBLY
19	FA966-50	BATTERY CABINET FRONT TOP COVER ASSY
20	FA966-58	BATTERY CABINET SHELF WELD
21	FA970	CONTACTOR HARNESS
22	FA971	OVERHEAD HARNESS
23	FA978	DISCONNECT HARNESS
24	FA982	GROUND WIRE
25	FA966-60	TRANSPARENT HOLE PLUG

Shockwave Detail



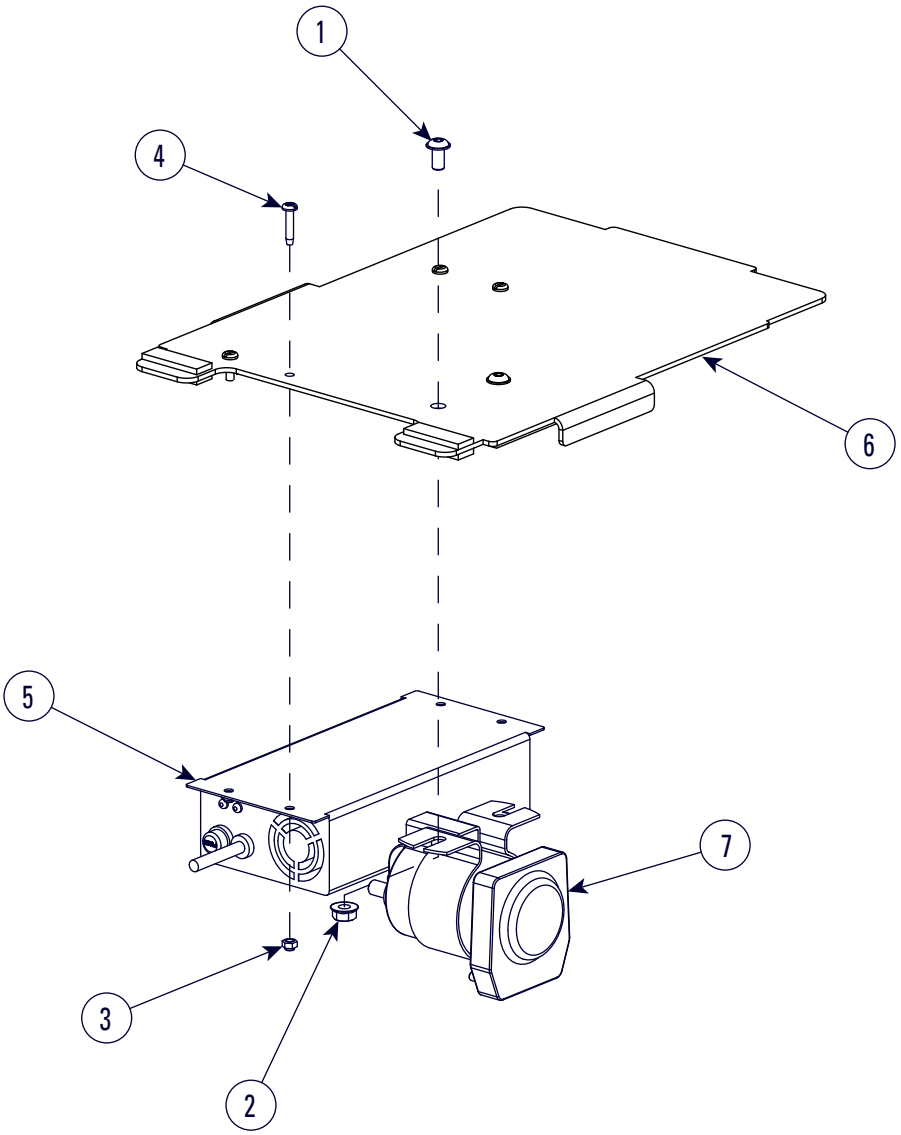
RIGHT HAND FRAME ASSEMBLY		
ITEM	PART NO.	DESCRIPTION
1	40004	#10-24 x 5/8 PFHMS, McMASTER-CARR # 90471A315 or EQUAL
2	40077	1/4"-20NC x 1" Lg FLGD HEX SOC BHCS, GRD2
3	40627	1/4"-20NC HEX NUT, PLTD
4	40779	1/4" EXT TOOTH LW
5	450957	#8-32NC NYLON LOCKNUTS
6	40022	#8-32NC X 1/2" Lg PHMS
7	FA7958-4	DC DISCONNECT SWITCH
8	FA966-8	FUSE HOLDER MOUNTING BRACKET
9	FA986-10	BATTERY CABINET RH FRAME
10	FA975	FUSE HOLDER
11	FA975-1	350 AMP FUSE
12	NP1030	PUSHBUTTON NAMEPLATE
13	NP470	MOTOR LOCATION WARNING LABEL
14	NP692	NAMEPLATE
	NP1066	NAMEPLATE
15	NP715	NAMEPLATE
16	P1483	LIMIT SWITCH ASSEMBLY
17	NP1067	SHOCKWAVE DECAL

Shockwave Detail



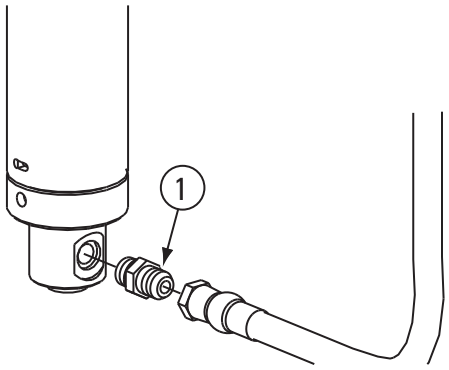
LEFT HAND FRAME ASSEMBLY		
ITEM	PART NO.	DESCRIPTION
1	41628	#4-40 NYLON INSERT LOCKNUT MMC #90633A005
2	796443	#4-40 x 1/2 Lg. PHMS, PLTD
3	FA966-17	SPLASH SHIELD
4	FA966-18	DOME HEAD RIVET
5	FA966-21	SPACER
6	FA966-52	BATTERY CABINET LH FRAME FORMING
7	FA983	CHARGER INTERNAL POWER CORD

Shockwave Detail



LOWER SHELF ASSEMBLY		
ITEM	PART NO.	DESCRIPTION
1	40094	1/4"-20NC x 1/2" Lg FLGD HEX SOC BHCS
2	40641	1/4"-20NC HEX FLGD WZLOCK NUT, PLTD
3	450957	#8-32NC NYLON LOCK NUT
4	40022	#8-32NC x 1/2" LG. PHMS
5	FA7958-48	24V 5A CHARGER
6	FA966-58	BATTERY CABINET SHELF WELD
7	FA976	DC CONTACTOR

Cylinder Hose Adapter Detail



ITEM	DESCRIPTION	PART#
1.	Straight Adapter	FJ7352-3

Rotary World Headquarters
2700 Lanier Drive
Madison, IN 47250, USA
www.rotarylift.com

North America Contact Information
Tech. Support:
p 800.445.5438
f 800.578.5438
e userlink@rotarylift.com
Sales: p 800.640.5438
f 800.578.5438
e userlink@rotarylift.com

World Wide Contact Information
World Headquarters/USA: 1.812.273.1622
Canada: 1.905.812.9920
European Headquarters/Germany: +49.771.9233.0
United Kingdom: +44.178.747.7711
Australasia: +60.3.7660.0285
Latin America / Caribbean: +54.3488.431.608
Middle East / Northern Africa: +49.771.9233.0

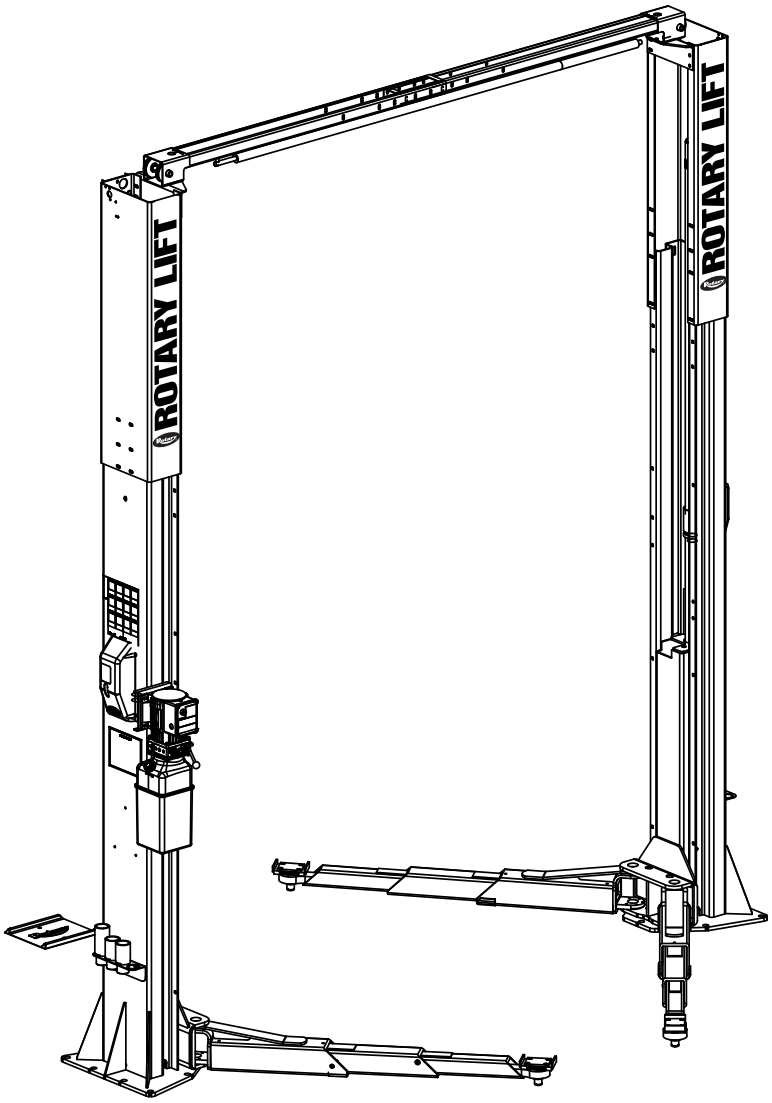
SPO12
Standard/Hummer/Sprinter

Two Post Surface Mounted Swing Arm Frame Engaging Lift

Standard (500/700 Series) Capacity: 12,000 lbs.

Hummer (5W0/7W0 Series) Capacity: 12,000 lbs.

Sprinter (5A0/7W0 Series) Capacity: 9,000 lbs.

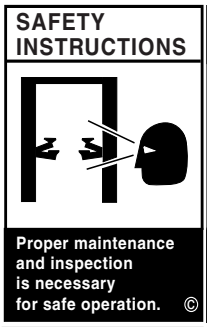


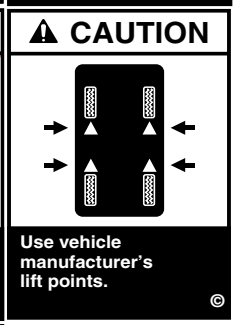
OPERATION & MAINTENANCE MANUAL

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

 CO11839.3

LPRM2P12K
Rev. C 6.14.22





- 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 Rotary 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 lift or 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.

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.

⚠CAUTION

- 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-2000, *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-2000, *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-2000, *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-2000, *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-2000, *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.

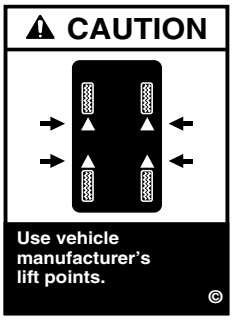
OPERATING INSTRUCTIONS

Surface Mounted Frame Engaging Lifts

⚠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. 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 with left front wheel in proper spotting dish position, Fig. 1.

3. Loading: Swing arms under vehicle and position adapters at vehicle manufacturer's recommended lift points, Fig. 2. Use optional adapter extensions for under body clearance when required.

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

4. To Raise Lift:

A. 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.

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

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

A. Vehicle frame is strong enough to support it's 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.

IMPORTANT For 500 Series lifts, adapter extensions are furnished in 4" & 8" increments. The stack-up height should not exceed 12". For 700 Series lifts, adapter extensions are furnished in 3-1/2" & 5" increments. The stack-up height should not exceed 10-1/2". Use adapter extension combination to keep vehicle as level as possible while it is being supported by the lift.

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. Pull 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.

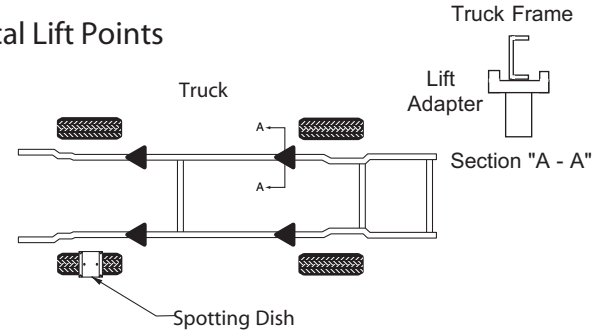
7. Remain clear of lift when lowering vehicle. Observe pinch point warning decals.

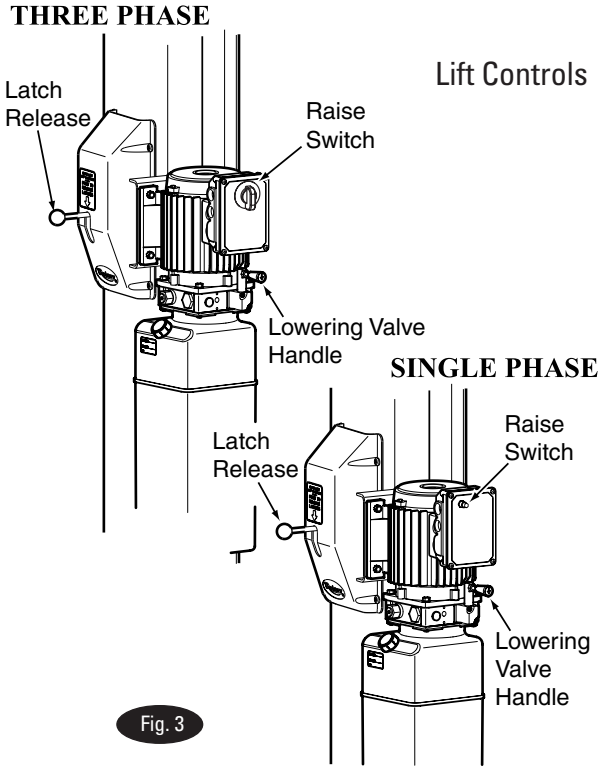
8. Remove adapters from under vehicle and swing arms to full drive-thru position before moving vehicle.

9. If lift is not operating properly, Do Not use until adjustment or repairs are made by qualified lift service personnel.

*Maximum operation pressure is:
3263 psi for Standard
3263 psi for Hummer
3263 psi for Sprinter

Typical Lift Points

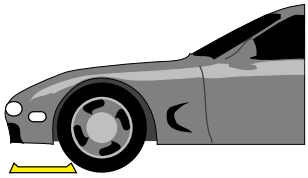




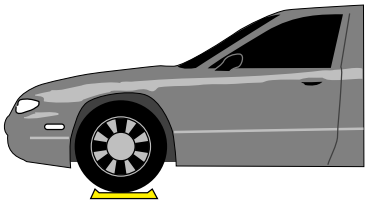
Lift Controls

Fig. 3

Typical Wheel Spotting Positions

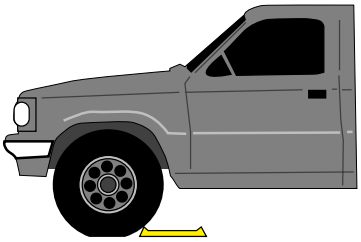


Less than 105" wheelbase: position left front wheel on approach side of wheel dish.



105"-127" wheelbase: position left front wheel in wheel dish.

Fig. 1



Larger than 127" wheelbase: position left front wheel just forward of wheel dish.

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

Positioning the vehicle

Due to varying centers of gravity within different vehicle classes, use the dish as a guide only and locate the arms between the vehicle pickup points. Always position vehicle with its center of gravity in line with lift columns. Slightly raise vehicle and check for stability. Do this by pushing up & down on the front and rear bumpers. The vehicle should sit firmly on all pickup points. If necessary, relocate arms and/or vehicle to attain a stable condition. Also refer to the ALI Safety Manual included with the lift.

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. Replace worn parts as required with genuine Rotary parts.
- 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 Rotary 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 locking latch shafts. Push latch handle several times for oil to penetrate joints.
- Every 3 Months: Check anchor bolts for tightness Anchors should be torqued to 65 ft/lbs.
- Semi-Annually: Check fluid level of lift power unit and refill if required per lift installation instructions.
- If Lift stops short of full rise or chatters, check fluid level and bleed both cylinders per lift installation instructions.
- Replace all caution, warning or safety related decals on the lift if unable to read or missing. Reorder labels from Rotary Lift.

Column Greasing:

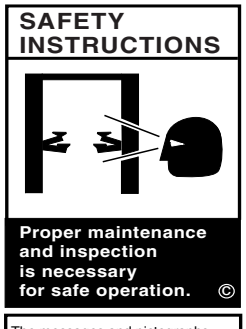
Two post lifts finished with powder coat must have grease applied to the columns. Columns need to be re-greased every 5000 cycles or six months, whichever comes sooner. If your lift has a model number that matches the following table, grease the columns with either Lighting grease, Tuf Oil, Sil Glide, or an equivalent grease.

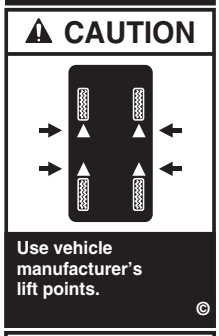
Lift	Series	Model Number
SPO12	1000	SPO12x10xx

Apply the grease to the columns by wiping on a thin layer and polishing with a rag. Only apply grease on surfaces of the columns where the slider blocks make contact. Be careful not to apply too much grease, only a thin layer is needed, wipe off excess.

INSPECTION and MAINTENANCE

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





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

Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 33116 Indialantic, FL. 32903-3116.

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TROUBLE SHOOTING

Trouble	Cause	Remedy
Motor does not run.	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.	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.	1. Open lowering valve. 2. Pump sucking air. 3. Suction stub off pump. 4. Low oil level.	1. Repair or replace lowering valve. 2. Tighten all suction line fittings. 3. Replace suction stub. 4. Fill tank with Dexron III ATF or ISOVG32 Hydraulic Oil.
Motor runs—raises unloaded lift but will not raise vehicle.	1. Motor running on low voltage. 2. Debris in lowering valve. 3. Improper relief valve adjustment. 4. Overloading lift.	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.	1. Debris in check valve seat. 2. Debris in lowering valve seat. 3. External oil leaks.	1. Clean check valve. 2. Clean lowering valve. 3. Repair external leaks.
Slow lifting speed or oil blowing out filler breather cap.	1. Air mixed with oil. 2. Air mixed with oil suction. 3. Oil return tube loose.	1. Change oil to Dexron III ATF. 2. Tighten all suction line fittings. 3. Reinstall oil return tube.
Lift going up unlevel.	1. Equalizer cables out of adjustment. 2. Lift installed on unlevel floor.	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 level per lift installation instructions.
Anchors will not stay tight.	1. Holes drilled oversize. 2. Concrete floor thickness or holding strength not sufficient.	1. Relocate lift using a new bit to drill holes. 2. Break out old concrete and repour new pads for lift per lift installation instruction.
Locking latches do not engage.	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.	1. Remove covers, oil latch mechanism. Depress latch release handle several times to allow oil to coat shaft. 2. Replace broken spring. 3. Adjust clamps at cable end per lift installation instructions.
Locking latches do not disengage.	1. Latch cable is broken. 2. Latch cable conduit is out of guide brackets. 3. Latch cable is loose.	1. Replace cable. 2. Install conduit back in bracket; adjust cable tension. 3. Adjust cable tension.

TROUBLE SHOOTING

Trouble	Cause	Remedy
Lift will not raise off of latches.	1. Motor, pump, or cylinder failure.	1. Contact lift manufacturer's Customer Service.

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 Rotary 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 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.

OPERATING CONDITIONS

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

APPROVED ACCESSORIES		
Item	Capacity	Part Number
Air/Electric Utility Box		FA5911
Air/Electric Utility Box Without FRL		FA5910
Filter/Regulator/Lubricator (FRL)		FA5166

Certificate of Compliance

Rotary Lift is authorized to apply ETL & cETL Listing Marks/Labels to this AC Motor. Authorization: ETL Report No. J98007541-003, FAM. This ETL test certifies that this AC Motor complies with Underwriters Laboratories, Inc. standard ANSI/UL 201 & CSA standard C22.2 No. 68.

SV0021 B Rev. 5/2/14

Trained Operators and Regular Maintenance Ensures Satisfactory Performance of Your Rotary Lift.

Replacement Parts: See installers package for parts breakdown sheet. Order Genuine Rotary replacement parts from your nearest Authorized Parts Distributor.

Maintenance Assistance: Contact your local Rotary distributor.

Should further assistance be required, contact Rotary Lift, at one of the phone numbers listed below.

Rotary World Headquarters
2700 Lanier Drive
Madison, IN 47250, USA
www.rotarylift.com

North America Contact Information
Tech. Support:
p 800.445.5438
f 800.578.5438
e userlink@rotarylift.com
Sales: p 800.640.5438
f 800.578.5438
e userlink@rotarylift.com

World Wide Contact Information
World Headquarters/USA: 1.812.273.1622
Canada: 1.905.812.9920
European Headquarters/Germany: +49.771.9233.0
United Kingdom: +44.178.747.7711
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