

INSTALLATION & OPERATION MANUAL



Atlas 90HSC 9,000 lb. Capacity Two-Post Overhead Lift



Atlas Automotive Equipment
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(866) 898-2604

Read this entire manual before operation begins.

Record below the following information which is located on the serial number data plate.

Serial No. _____

Model No. _____

Date of Installation _____

———— Contents ————

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Specifications

9-OHSC Clear Floor, Chain-Drive Features (See Fig. 1)

- Dual hydraulic cylinders designed and made to ANSI standard, utilizing NOK oil seal in cylinder.
- Self-lubricating UHMW Polyethylene sliders and bronze bush.
- Single-point safety release, and dual safety design.
- Clear floor design, provide unobstructed floor space.
- Overhead safety shutoff device.
- Super symmetric arm design with 3-stage front arms and 2-stage rear arms.
- Rubber lift pads with 1.5" and 2.5" stackable extension adaptors.

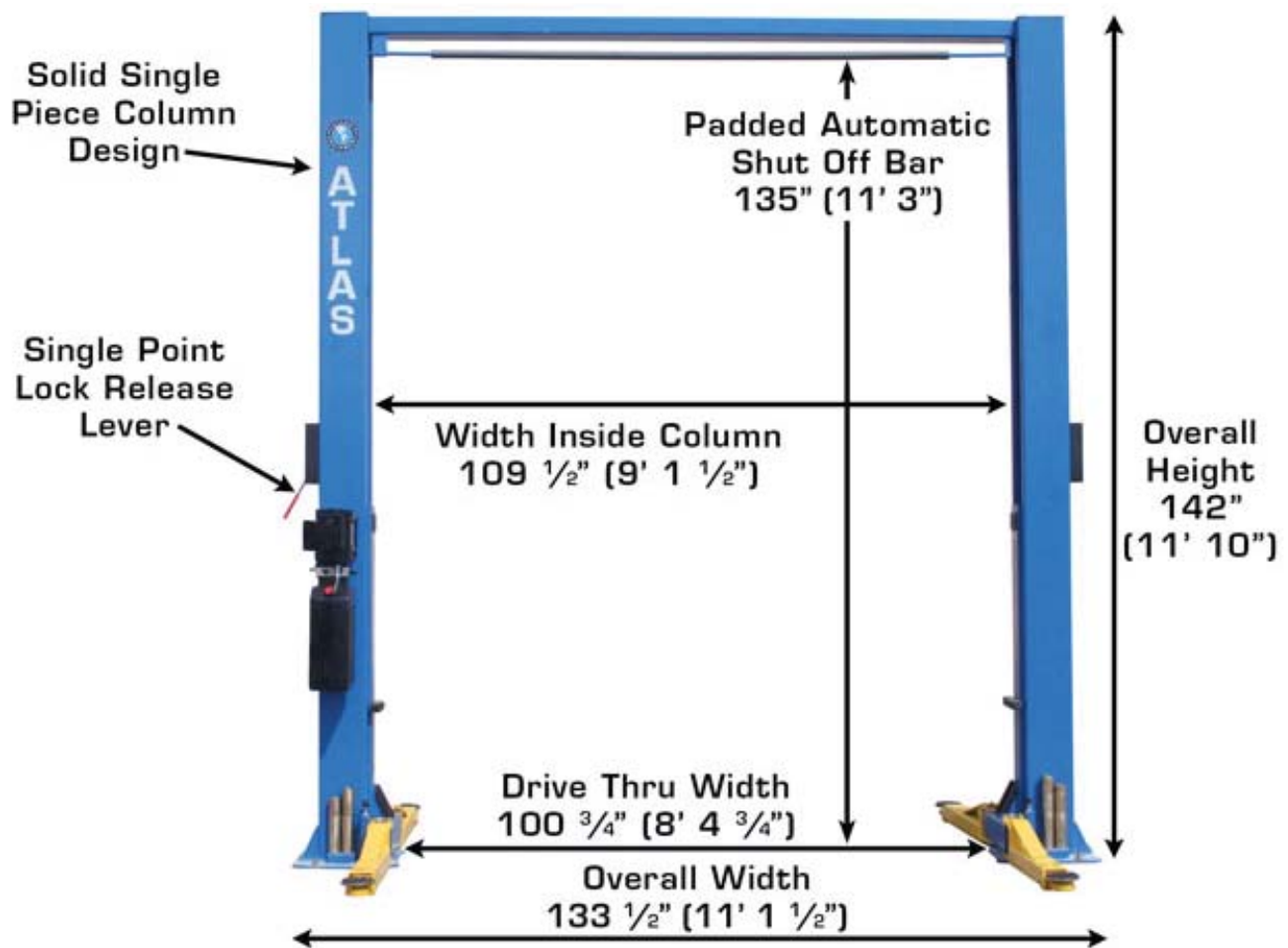


Fig. 1

9-OHSC Specifications

Model	Style	Lifting Capacity	Lifting Time	Lifting Height	Overall Height	Overall Width	Width Between Columns	Minimum Pad Height	Gross Weight	Motor
9-OHSC	Clearfloor Chain-driven	4.5 T 9,000 lbs	45S	71 1/2"– 75 1/2"	141 3/4"	133 1/2"	109 1/2"	3 1/2"	1384lbs	2.0/3.0 HP

Arm Swing View

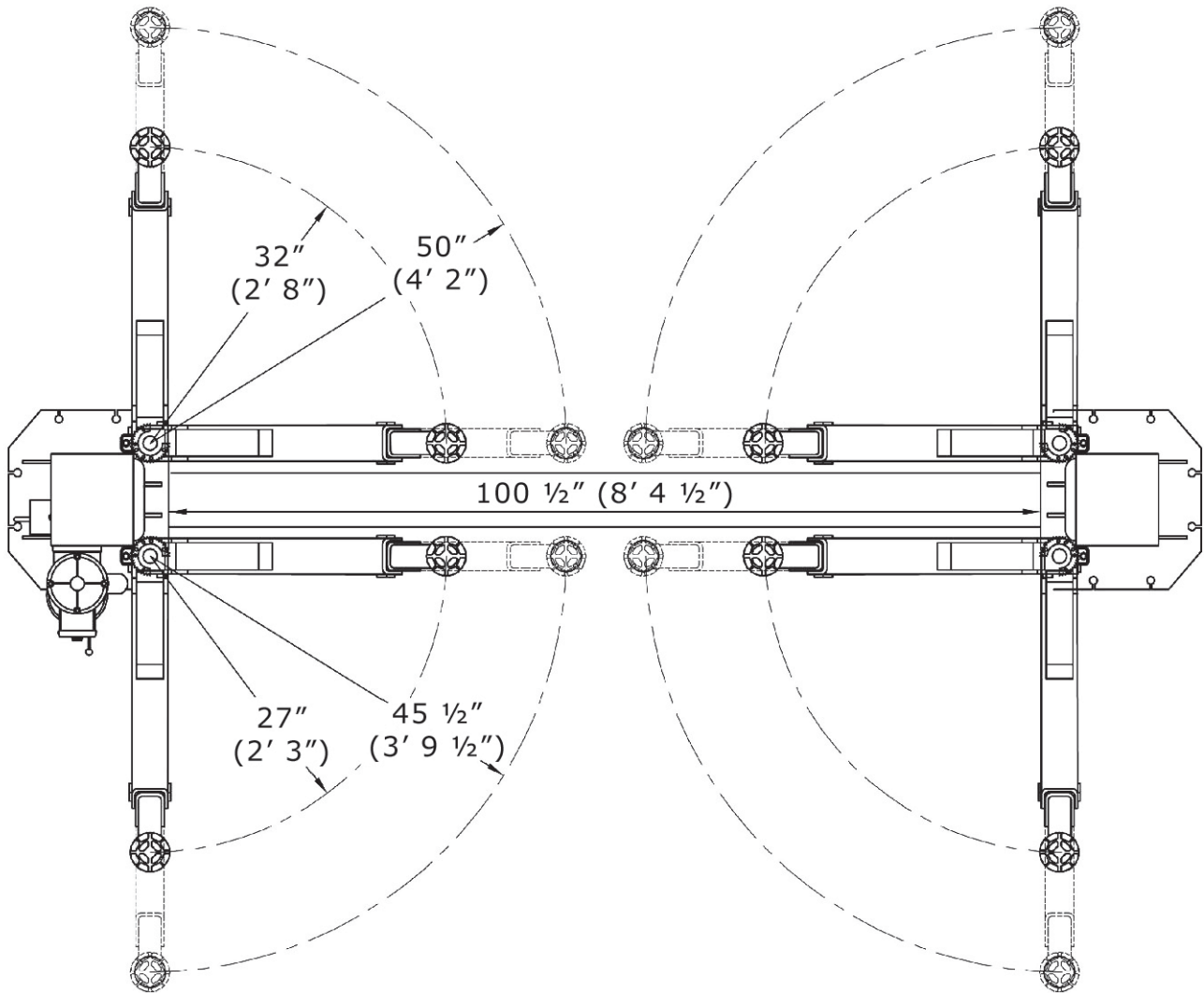


Fig. 2

Installation Requirement

Tools Required

Rotary Hammer Drill ($\Phi 19$)



Carpenter's Chalk



Hammer



Screw Drivers



Level Bar



Tape Measure (25ft)



Crescent Wrench (12")



Pliers



Ratchet Spanner With Socket (28#)



Allen Head Wrench (6#, 3#)



Wrench set
(10#, 13#, 14#, 15#, 17#, 19#, 24#, 27#)



Vise Grips



Fig. 3

Specifications Of Concrete (See Fig. 4)

Concrete must adhere to the following specifications.

Failure to do so may result in the lift and/or vehicle falling.

1. Concrete must be a minimum 4" thick without reinforcing steel bars. Concrete must be totally cured before installation.
2. Concrete must be in good condition and a minimum 3,000 psi. test strength.
3. Floors must be level with no cracks.

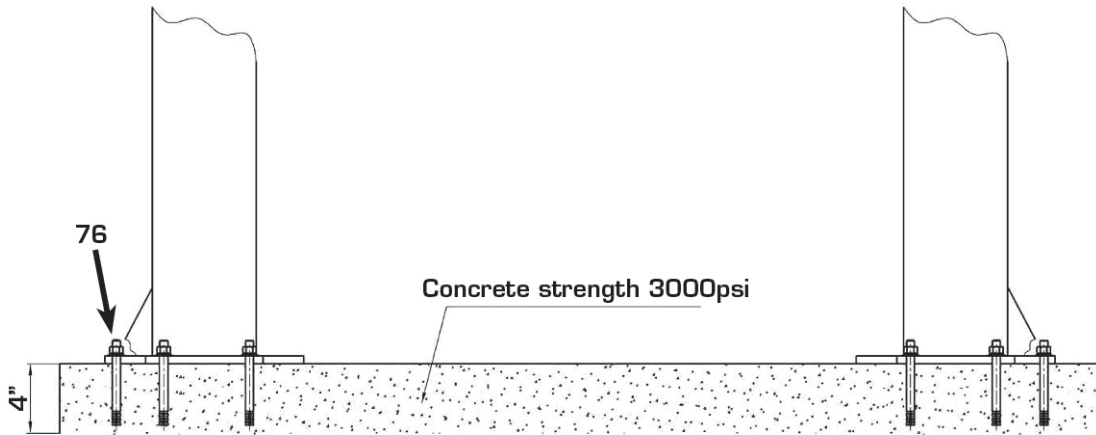


Fig. 4

Power Supply

220 volt single phase 30 amp breaker with minimum of 10 gauge wire

Steps Of Installation

A. Location of Installation

Check and insure the installation location (concrete, layout, space size etc.) is suitable for lift installation.

B. Use a carpenter's chalk line to establish installation layout of baseplate (See Fig. 5).

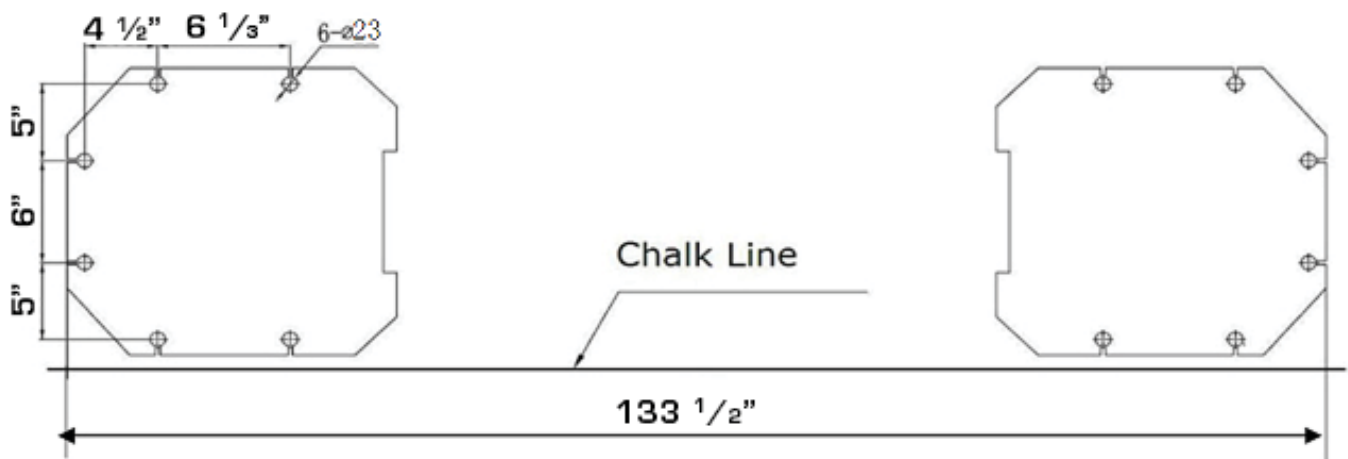


Fig. 5

C. Check the parts before assembly

1. Packaged lift and hydraulic power unit (See Fig. 6)



Fig. 6

2. Move aside the lift with fork lift or hoist, and open the outer packing carefully, take off the parts from upper and inside the column, take out the parts box, check the parts according to the shipment parts list (**See Fig. 7**).

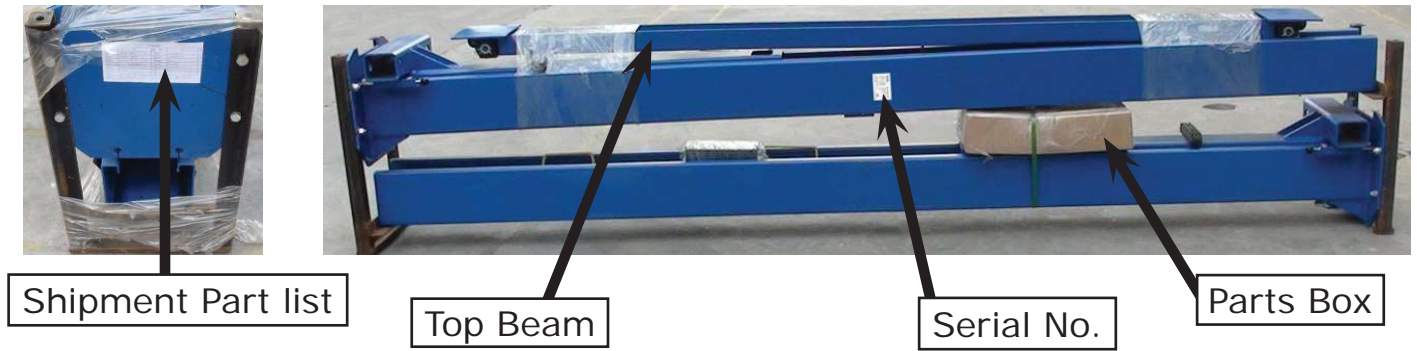


Fig. 7

3. Loosen the screws of the upper package stand, take off the upper column and remove the package stand.
4. Move aside the parts and check the parts according to the shipment parts list (**See Fig. 8, Fig. 9**).



Fig. 8 - Parts in the shipment parts list | Fig. 9 - Parts in the parts box (77)

5. Open the bag of parts and check the parts according to parts box list (See Fig.10).

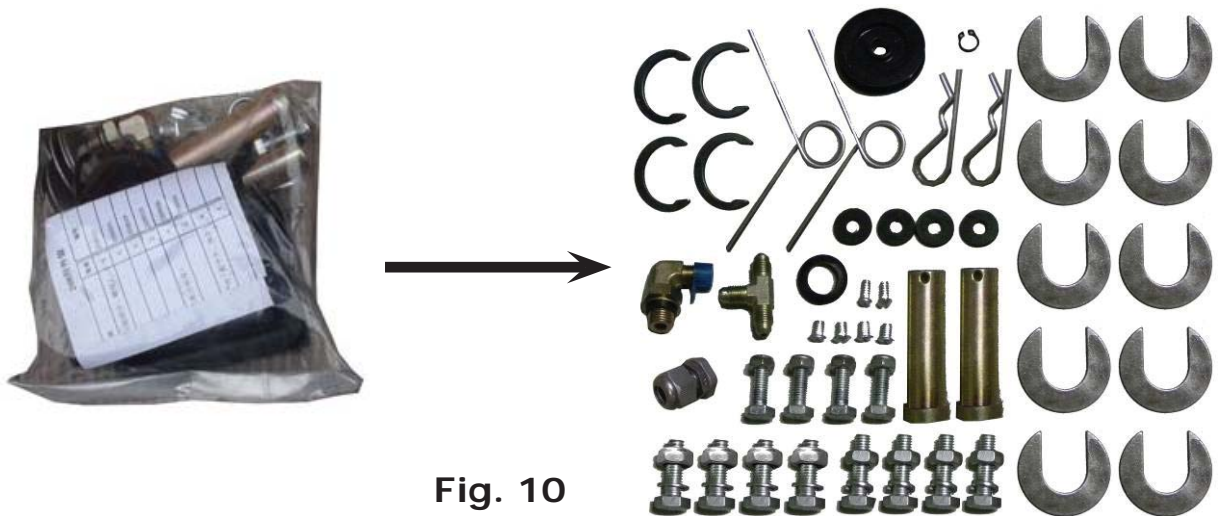


Fig. 10

D. Position powerside column

Lay down the two columns on the installation site parallel to each other. Position the powerside column according to the actual installation site. Usually, it is suggested to install the powerside column on the front-right side from which vehicles are driven to the lift. Then install the overhead top beam (See Fig. 11).

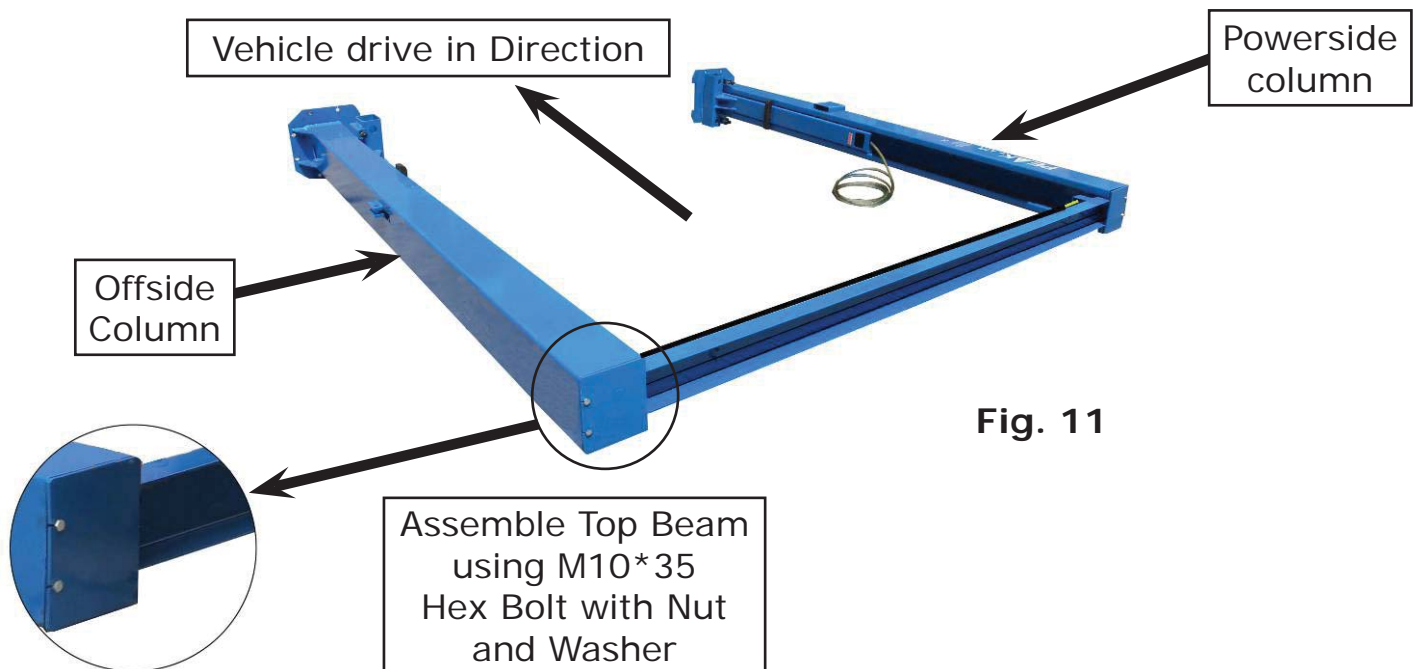


Fig. 11

E. Install cables (See Fig. 12)

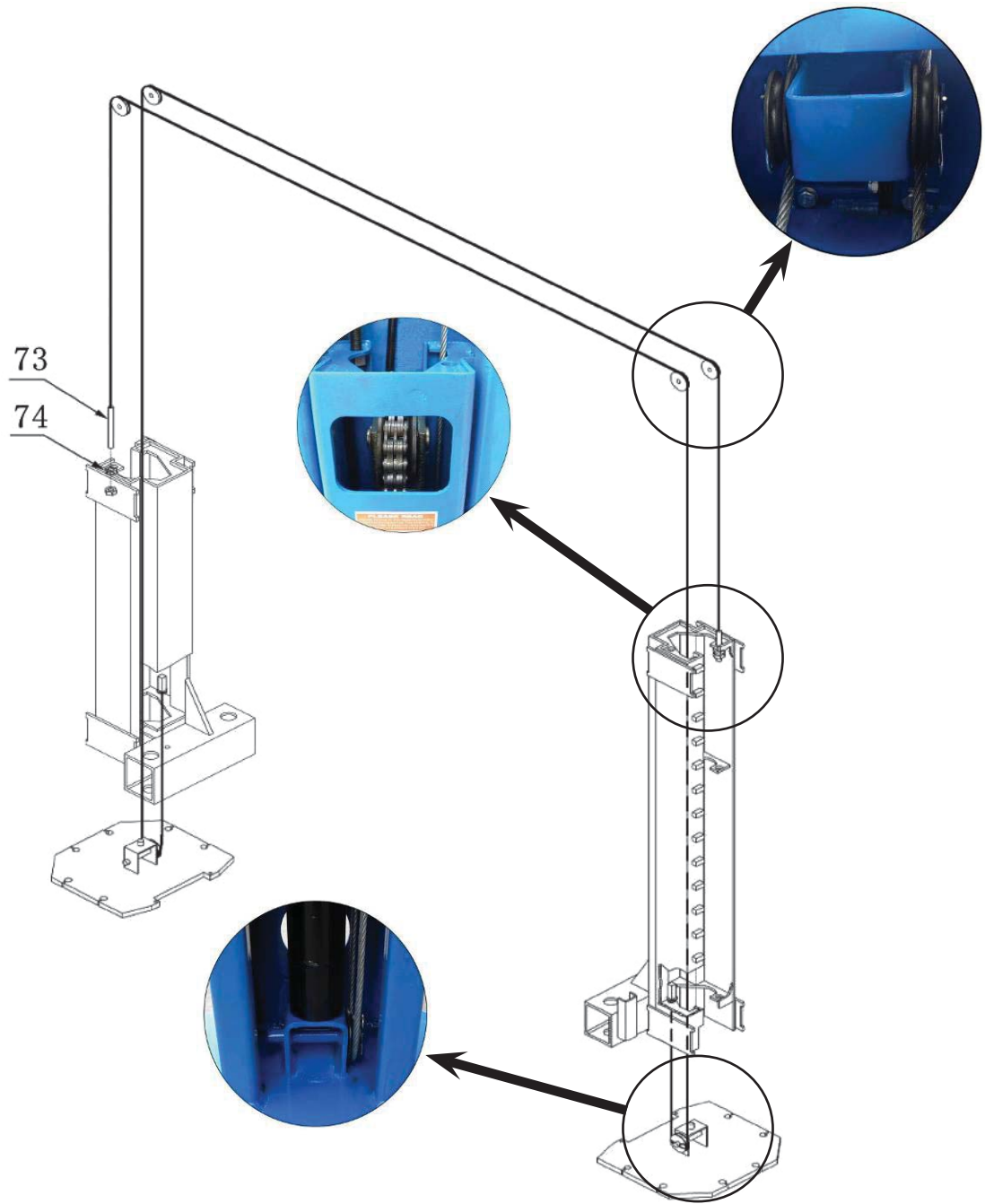


Fig. 12

F. Oil hose assembly (See Fig. 13)

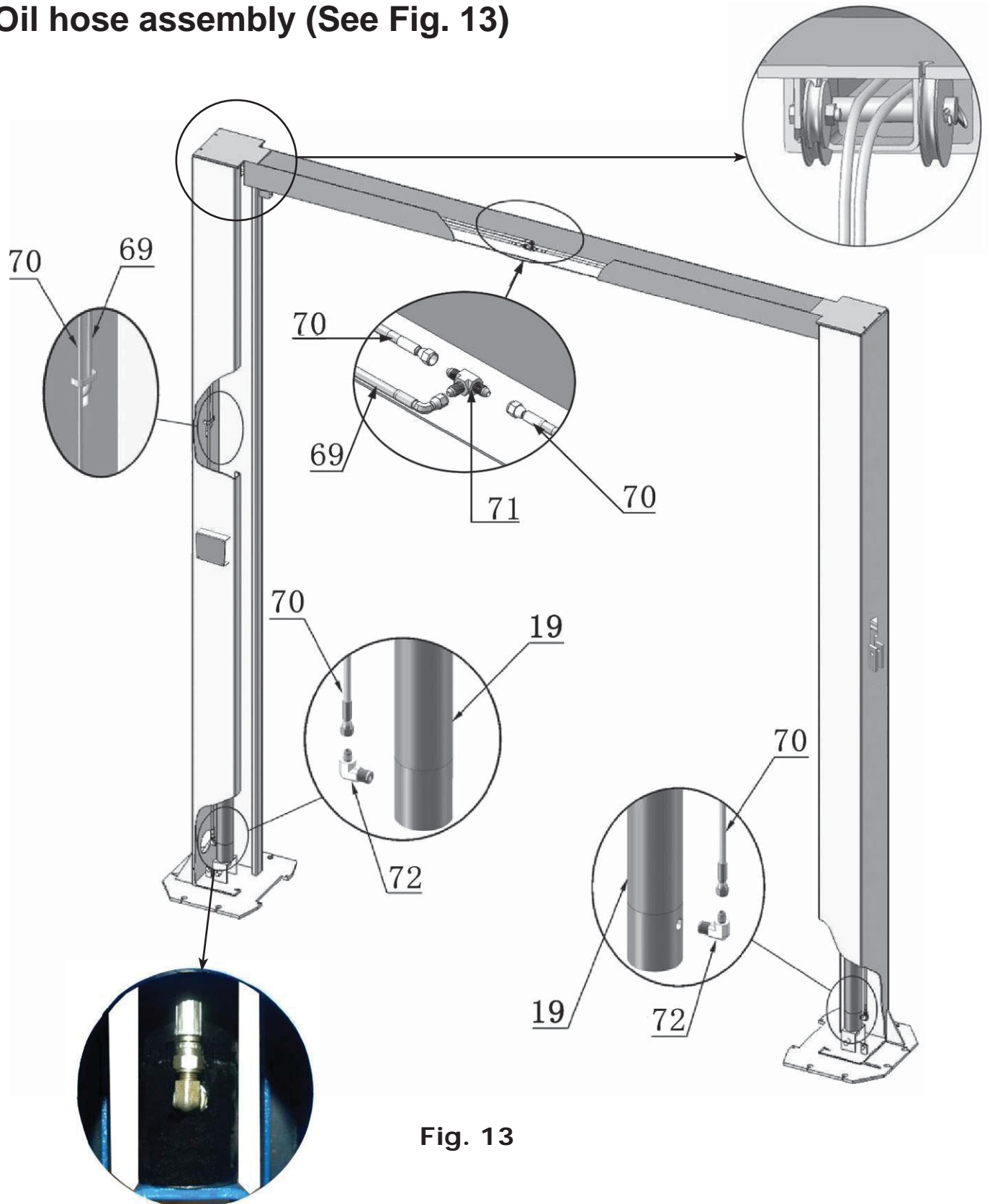


Fig. 13

G. Install locks and lock release cables (See Fig. 14)

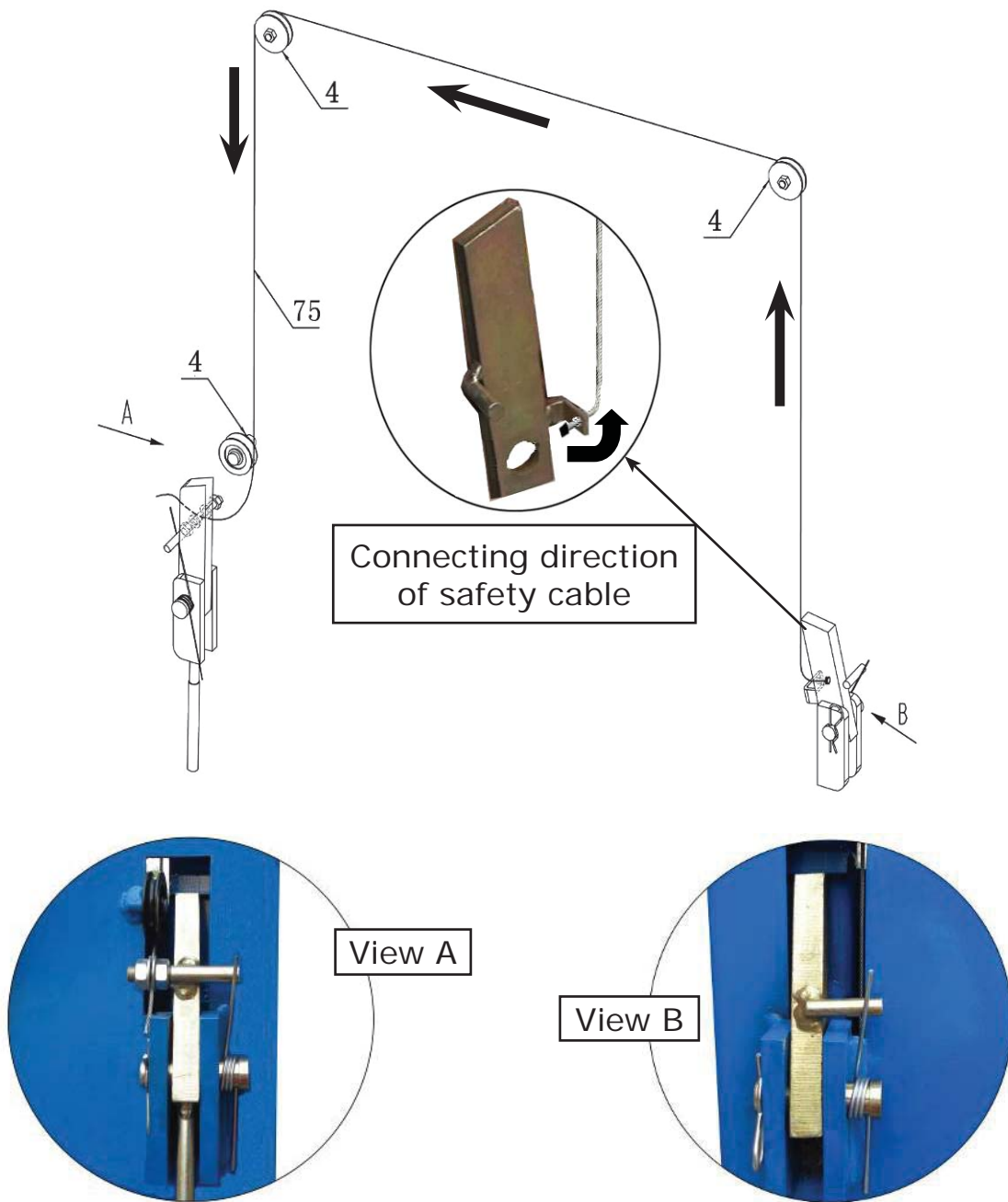
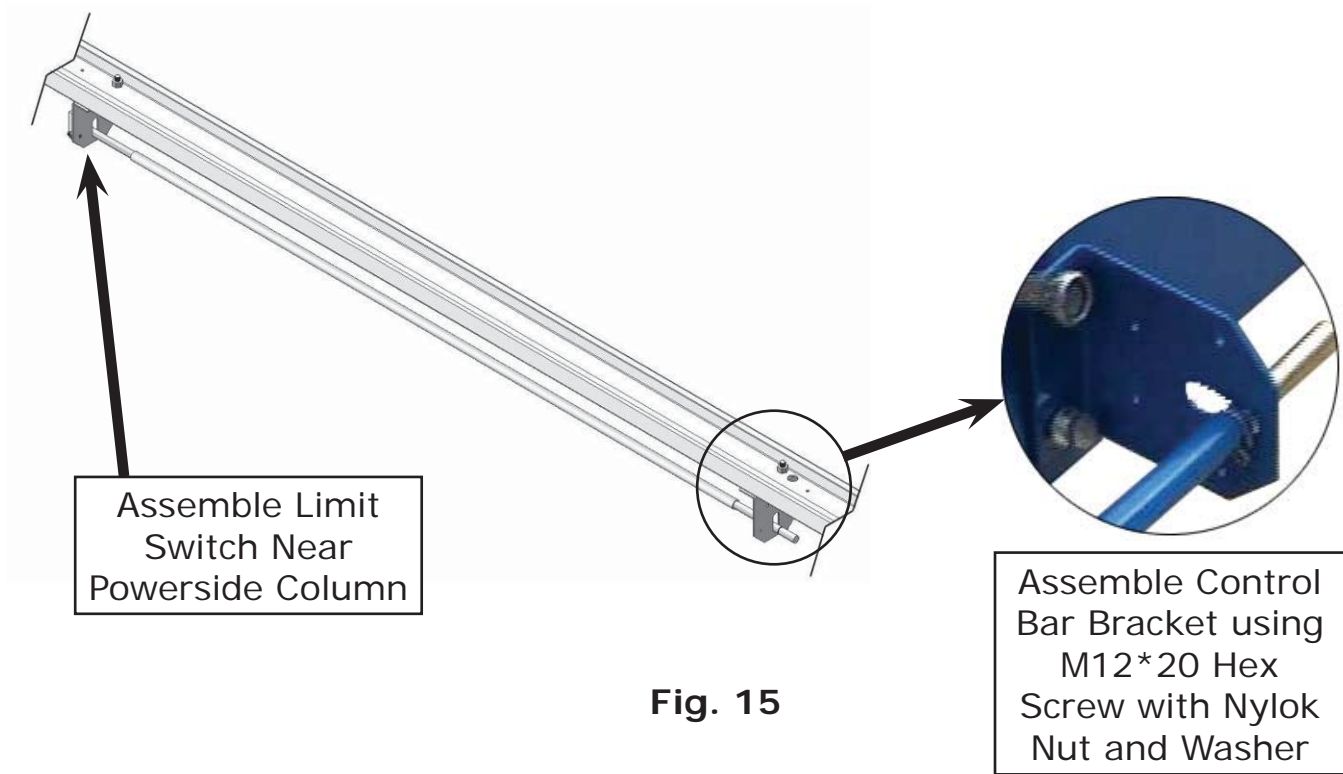
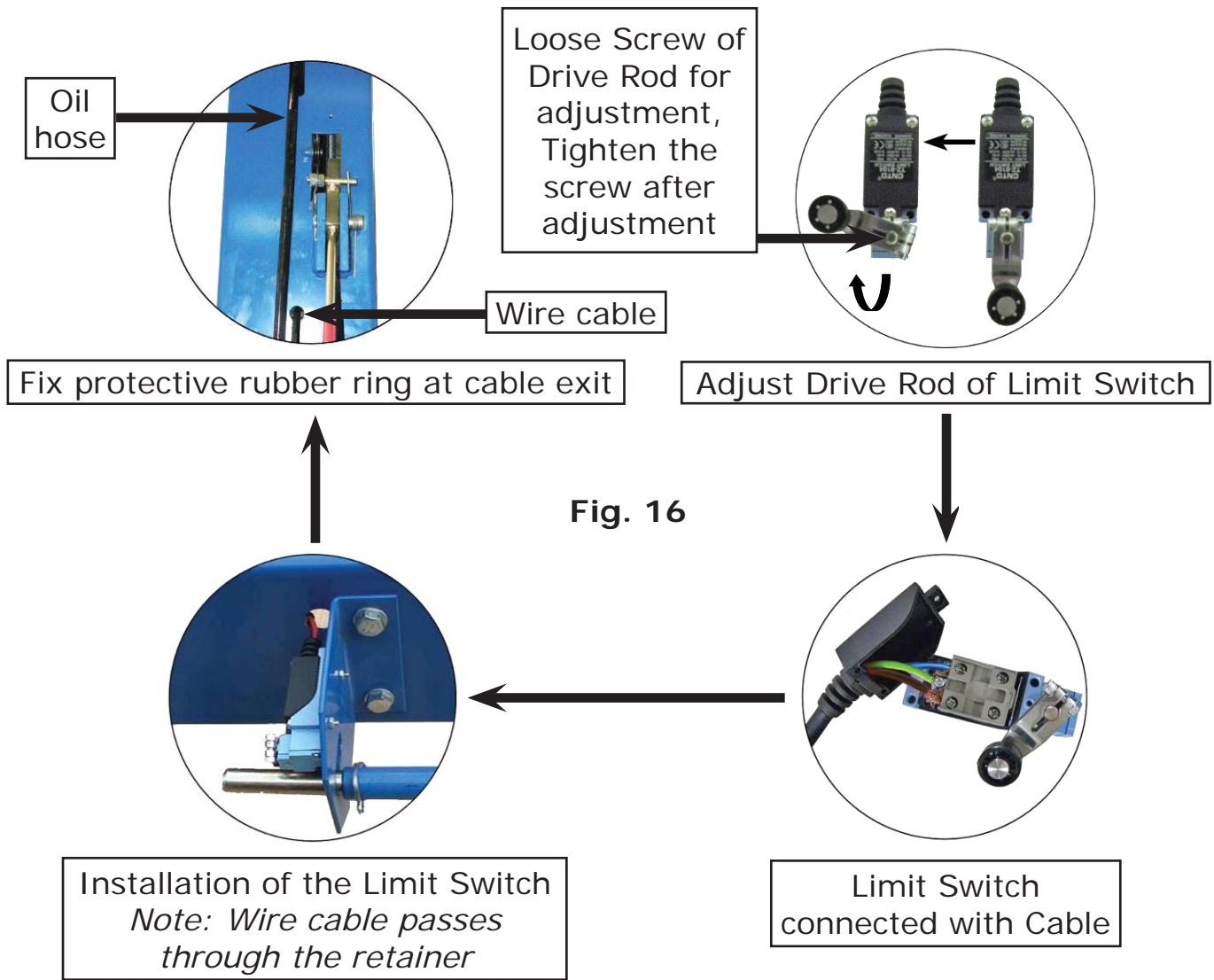


Fig. 14

H. Install limit switch control bar (See Fig. 15)



I. Install limit switch (See Fig. 16)



Connecting the wire cable on the limit switch.

1. Connect the blue wire to terminal #11 on limit switch and terminal A1 on AC contactor of power unit;
2. Connect the brown wire to terminal #12 on limit switch and terminal #4 on button of power unit;
3. Connect the yellow and green wire to earth wire terminal on limit switch and earth wire terminal of power unit

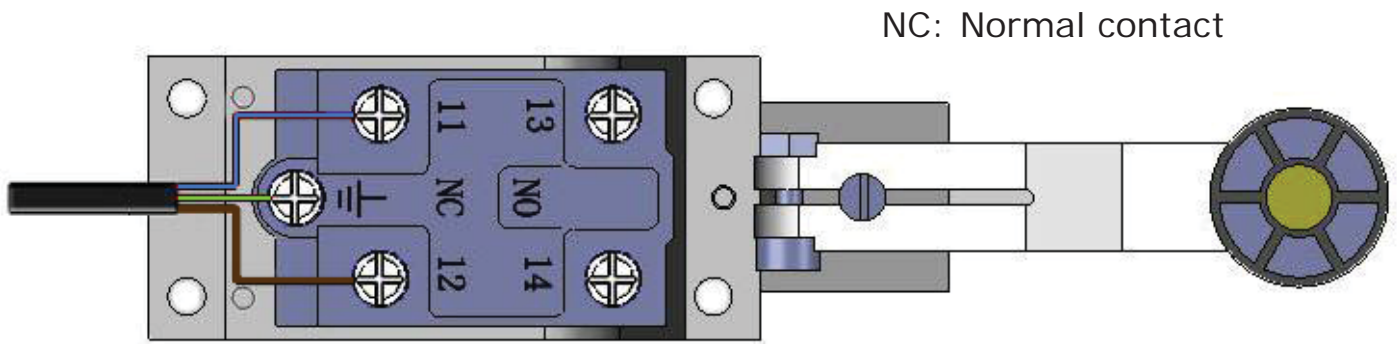


Fig. 17

J. After finishing the above steps of installing the cable, safety cable and oil hose assembly push the carriages to the bottom of the columns (See Fig. 18).



Fig. 18

K. Position column, making sure the baseplate aligns with the chalk line, then install the protective rubber covers. Check the columns plumbness with level bar, and adjust with the shims if the columns are not level (See Fig. 19).

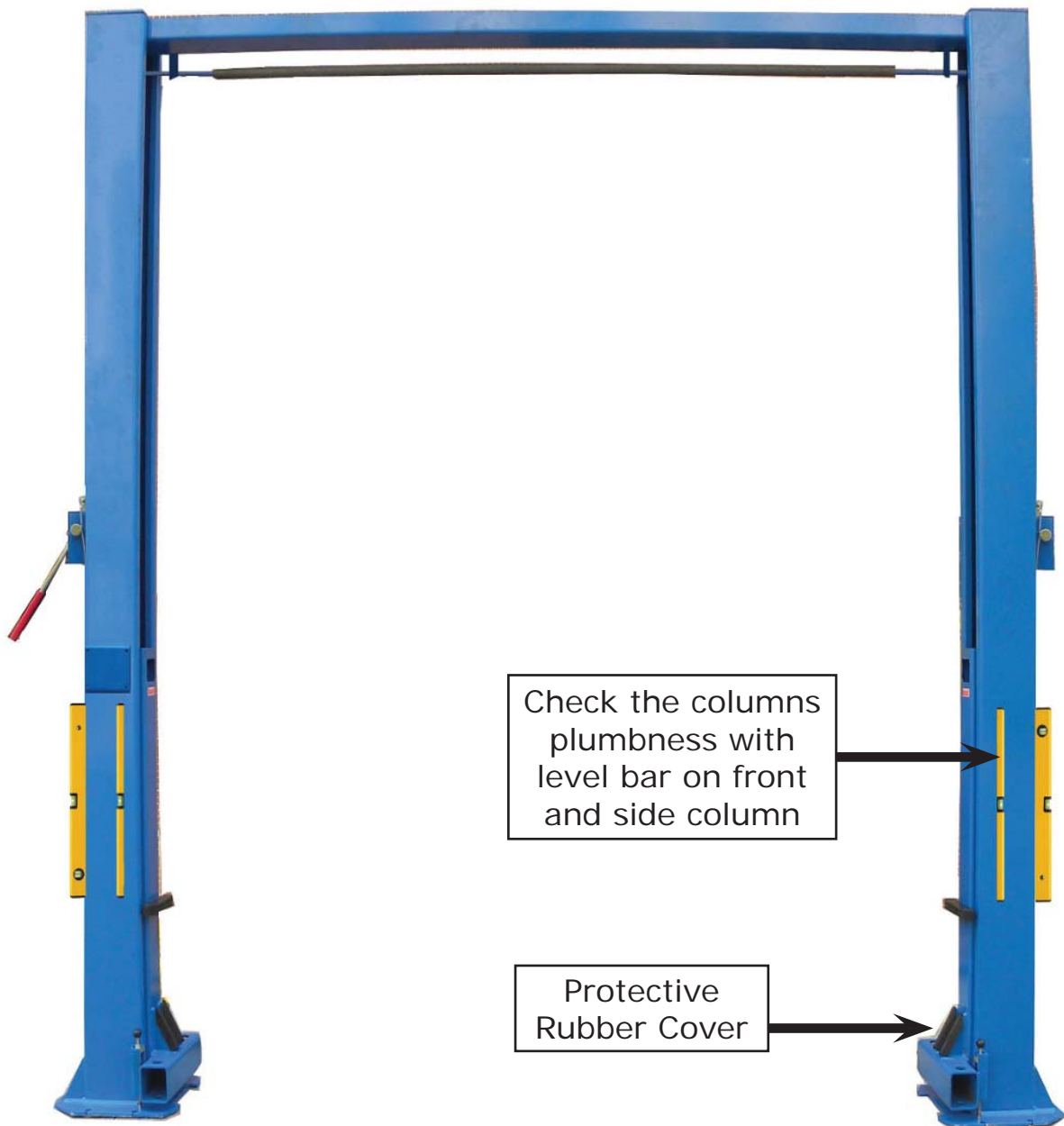


Fig. 19

L. Install power unit and oil hose (See Fig. 20)

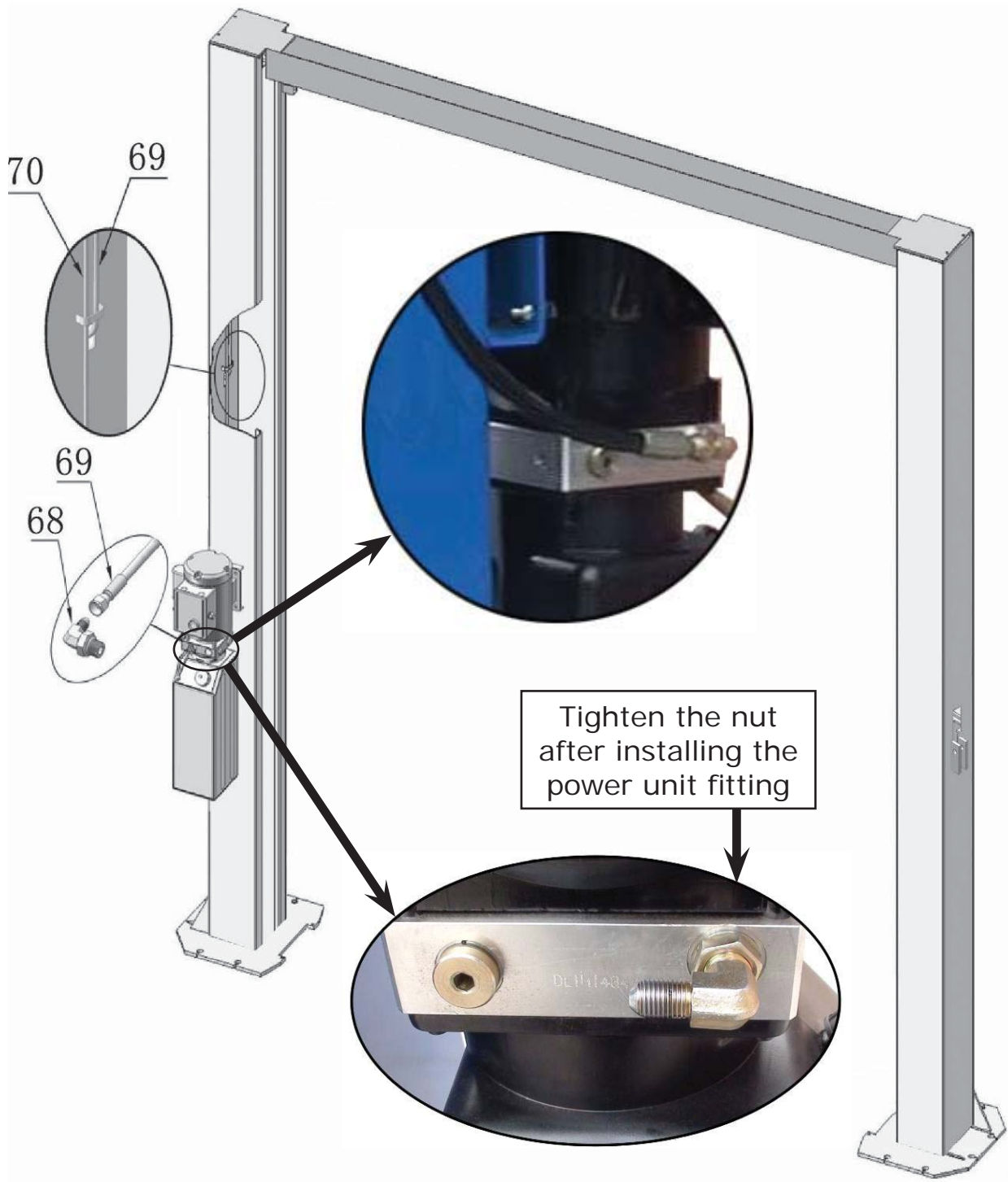


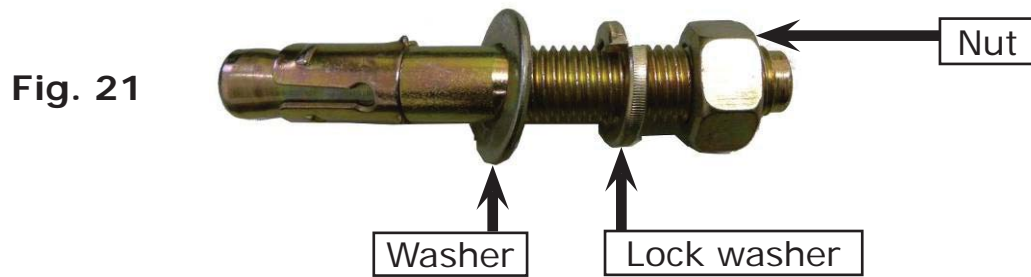
Fig. 20

Tighten all hydraulic fittings, and fill the reservoir with hydraulic oil.

Note: For maximum reliability and durability of your Atlas hydraulic power unit please use Hydraulic Oil AW32.

M. Fix anchor bolts

1. Prepare the anchor bolts (See Fig. 21).



2. Using the rotary hammer drill, drill all anchor holes and install the anchor bolts. Make the columns plumb and adjust with the shims if not. Then tighten the anchor bolts (See Fig. 22).

Note: Torque anchor bolts to 86 foot pounds.

Minimum embedment of anchors is 4".

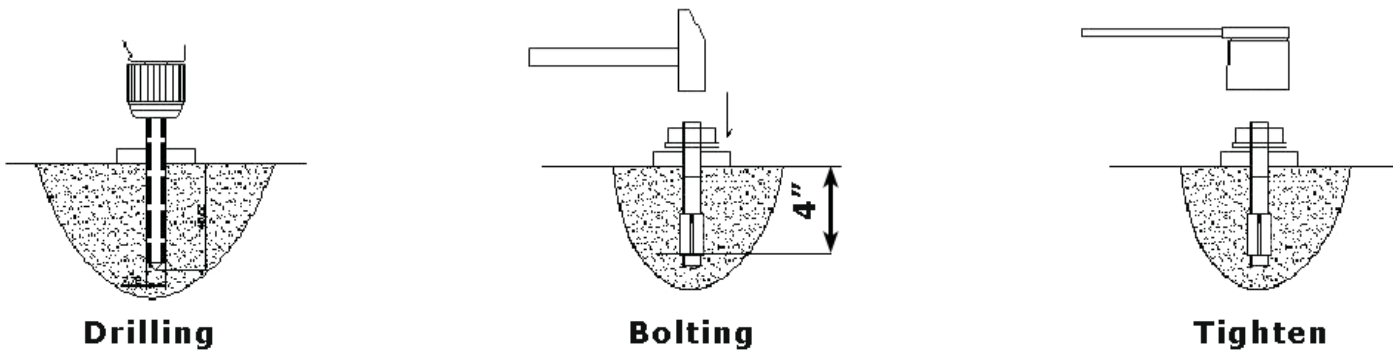


Fig. 22

N. Install lifting arms and adjust the arm locks

1. Install the lifting arms (See Fig. 23)
2. Lower the carriages down to the lowest position and loosen the nut (See Fig. 24)

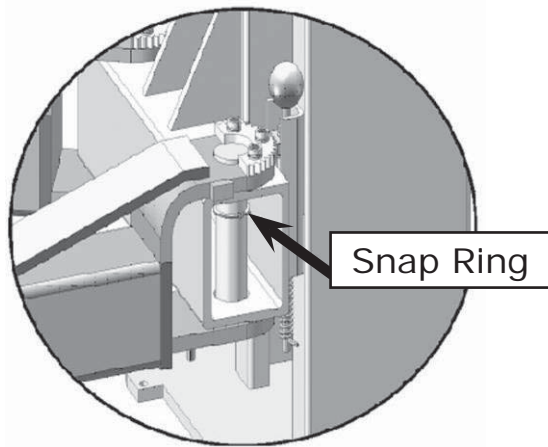


Fig. 23

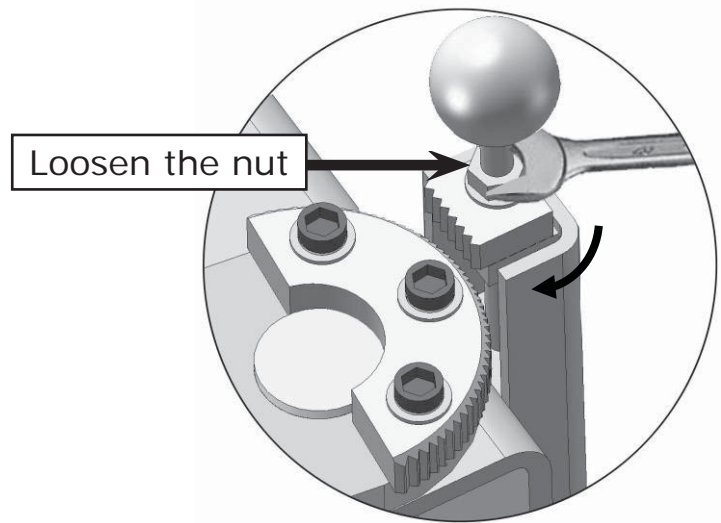


Fig. 24

3. Adjust the arm lock in the arrow direction (See Fig. 25).
4. Adjust the moon gear and arm lock, then tighten the nut of arm lock (See Fig. 26).

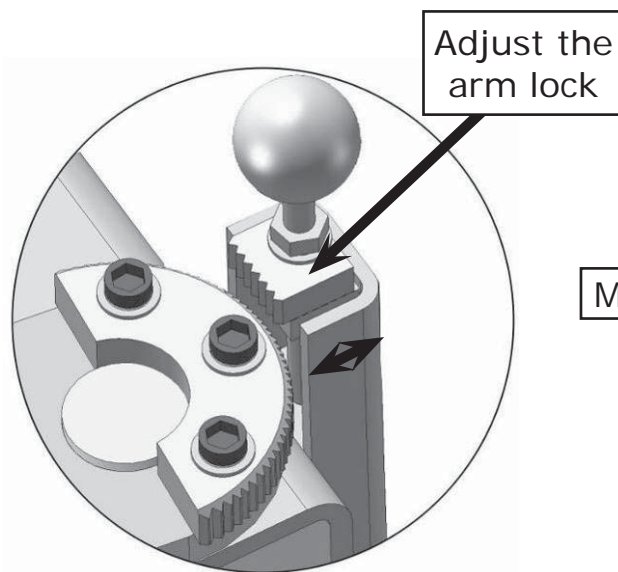


Fig. 25

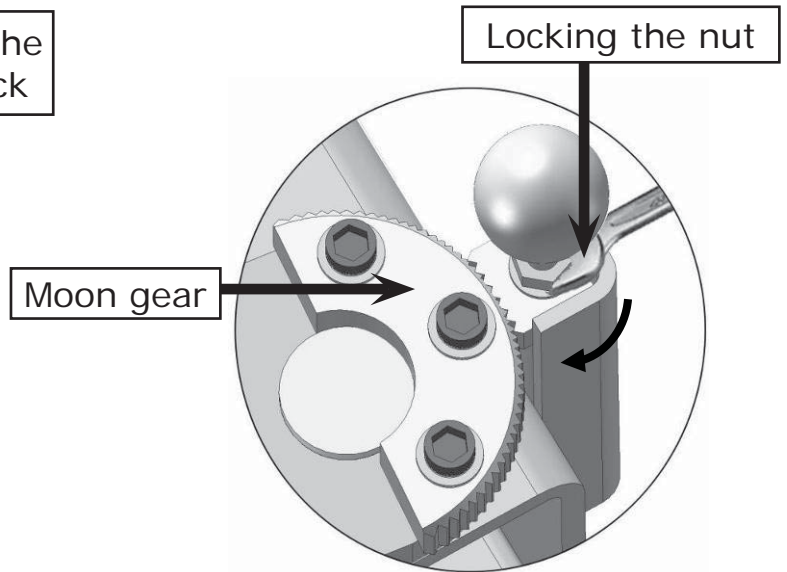
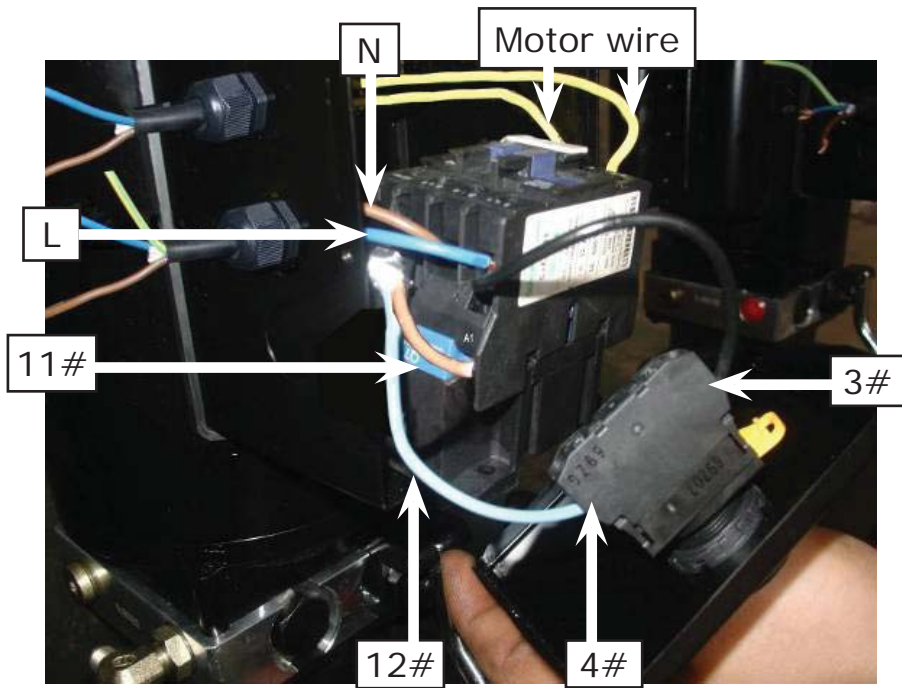
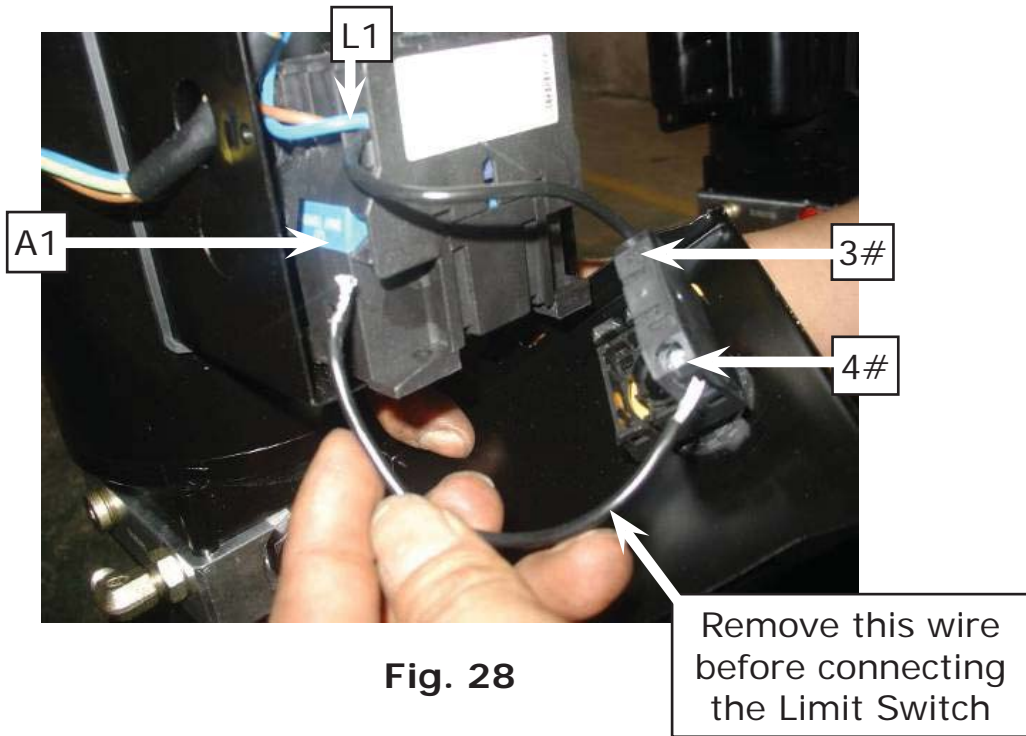


Fig. 26



SPX single phase motor (See Fig. 30)

1. Power supply line (neutral wire **N**) is connected with wire **5#** of motor.
2. Blue wire **11#** of limit switch is connected with wire **6#** of motor.
3. Brown wire **12#** of limit switch is connected with wire **4#** of control button.
4. Yellow and green earth wire on the limit switch is connected with the earth wire terminal on the motor.
5. Connecting wire **3#** on the control button with the power supply active wire (**L**).

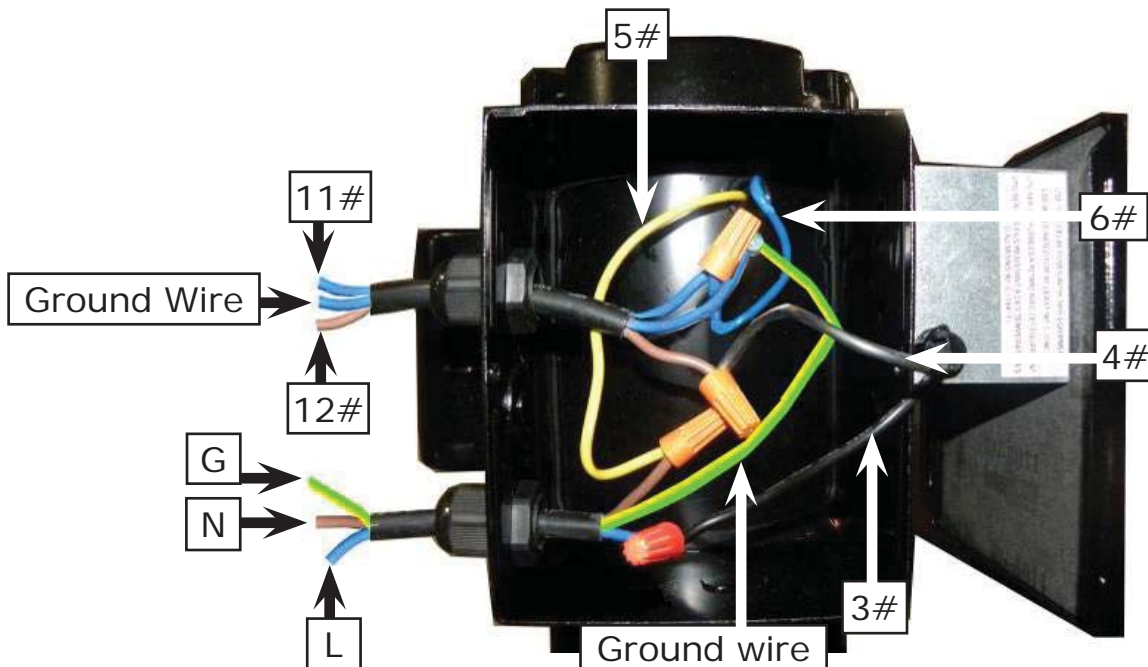
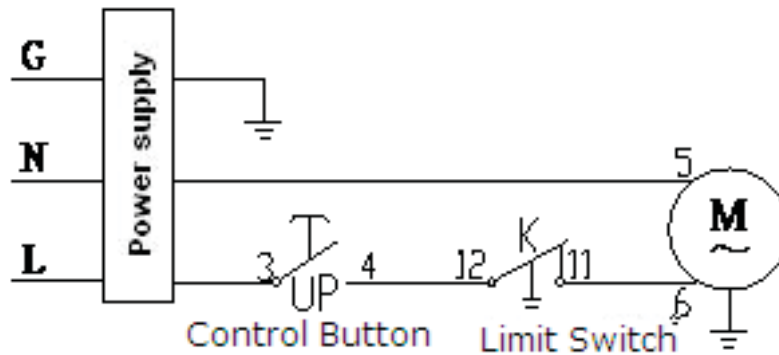


Fig. 30

6. Connection step (See Fig. 31)

- The power supply wires (**L1, L2, L3**) are connected with terminals of AC contactor marked **L1, L2, L3** respectively.
- Terminal **4#** of control button is connected with brown wire **12#** of limit switch; Blue wire **11#** is connected with terminal **A1** of AC contactor. Connecting the earth wire (green and yellow color) of the limit switch with earth wire terminal on motor.
- Terminals **3#** of control button connected with **L1** terminals of AC contactor.

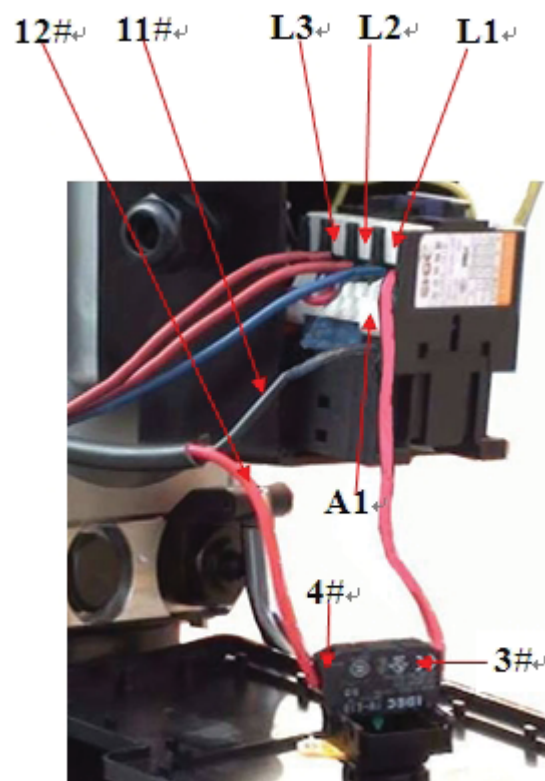
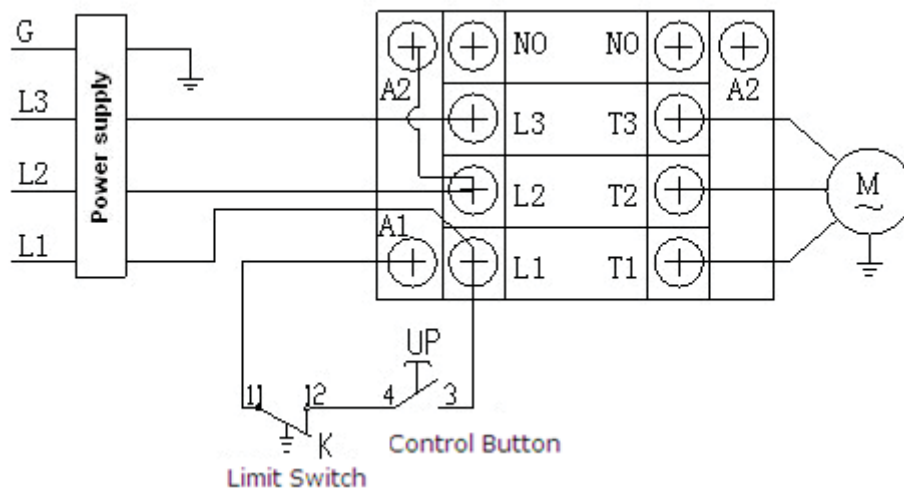


Fig. 31

Exploded View

Model 9-OHSC

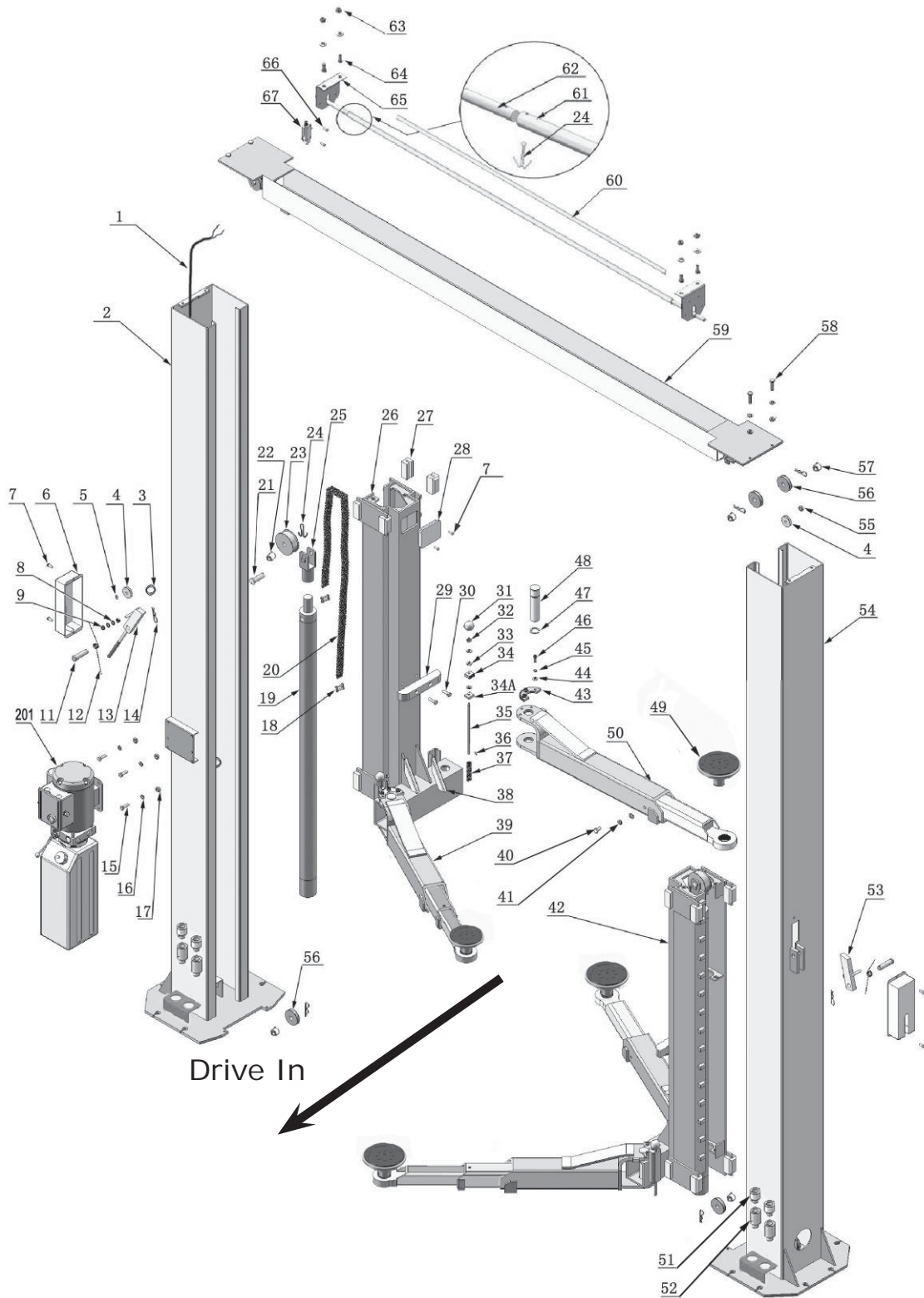


Fig. 32

Cylinders

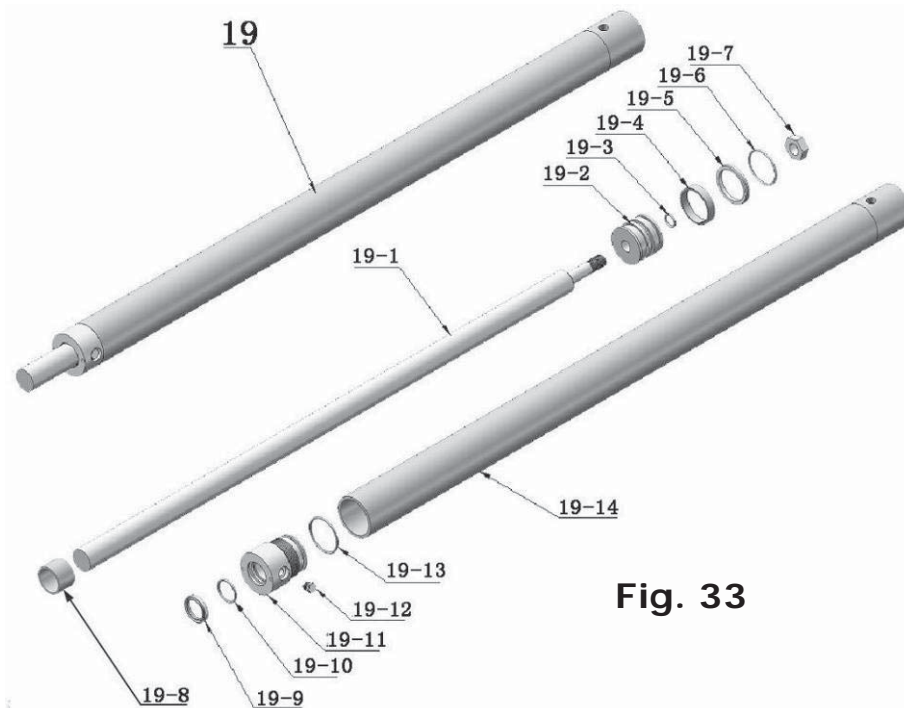


Fig. 33

SPX Manual Power Unit, 220V/60Hz, Single phase

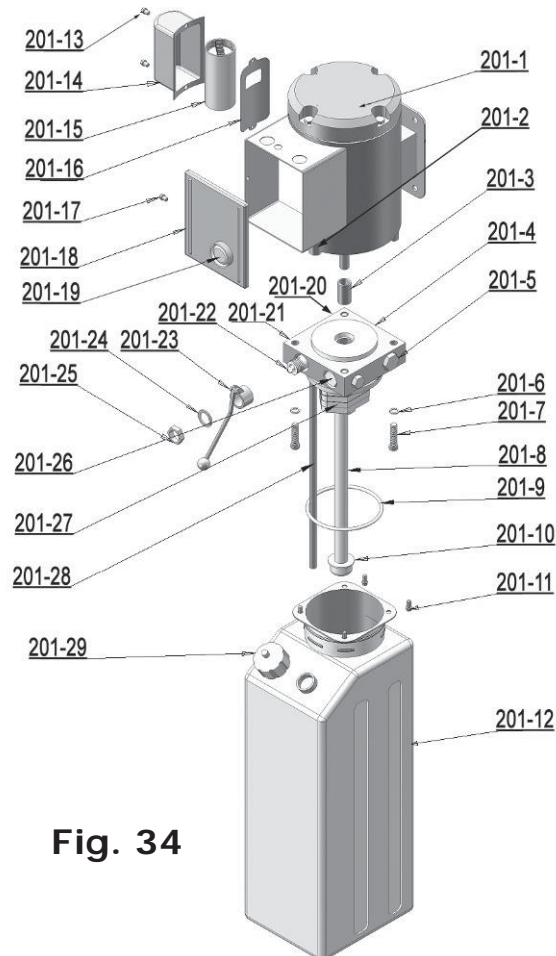


Fig. 34

Atlas Manual Power Unit

220V/60HZ/1 phase

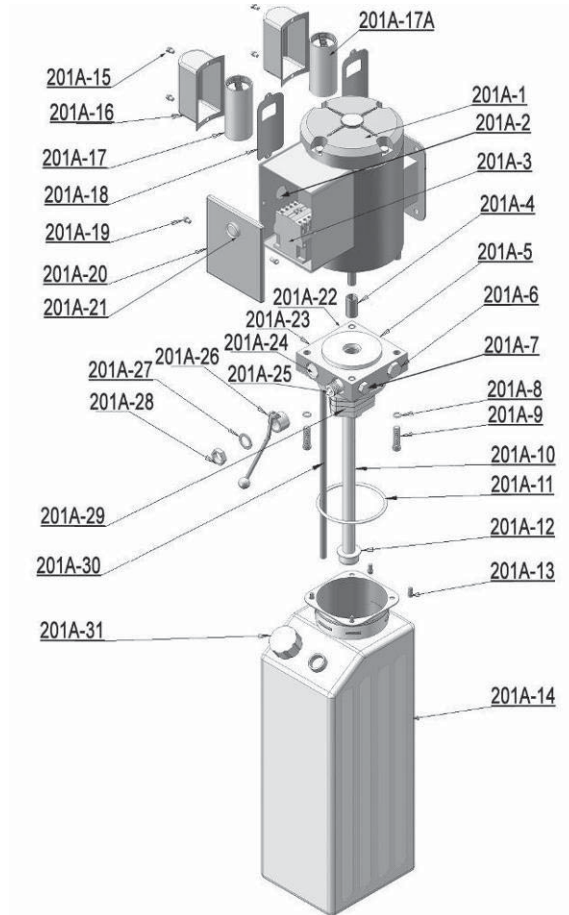


Fig. 35

Illustration of hydraulic valve for SPX & ATLAS power unit

a. SPX manual power unit, 220V/60HZ, Single Phase (See Fig. 36)

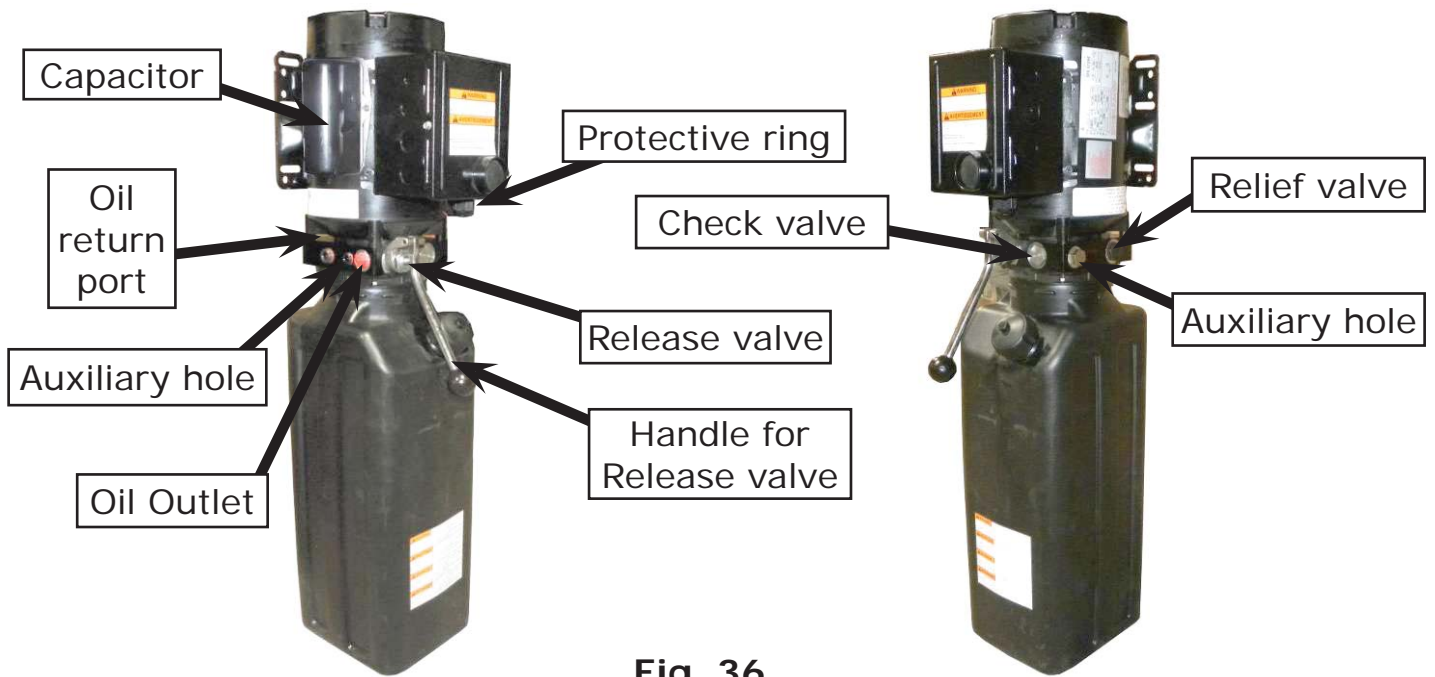


Fig. 36

b. ATLAS manual power unit, 220V/60HZ, Single Phase (See Fig. 37)

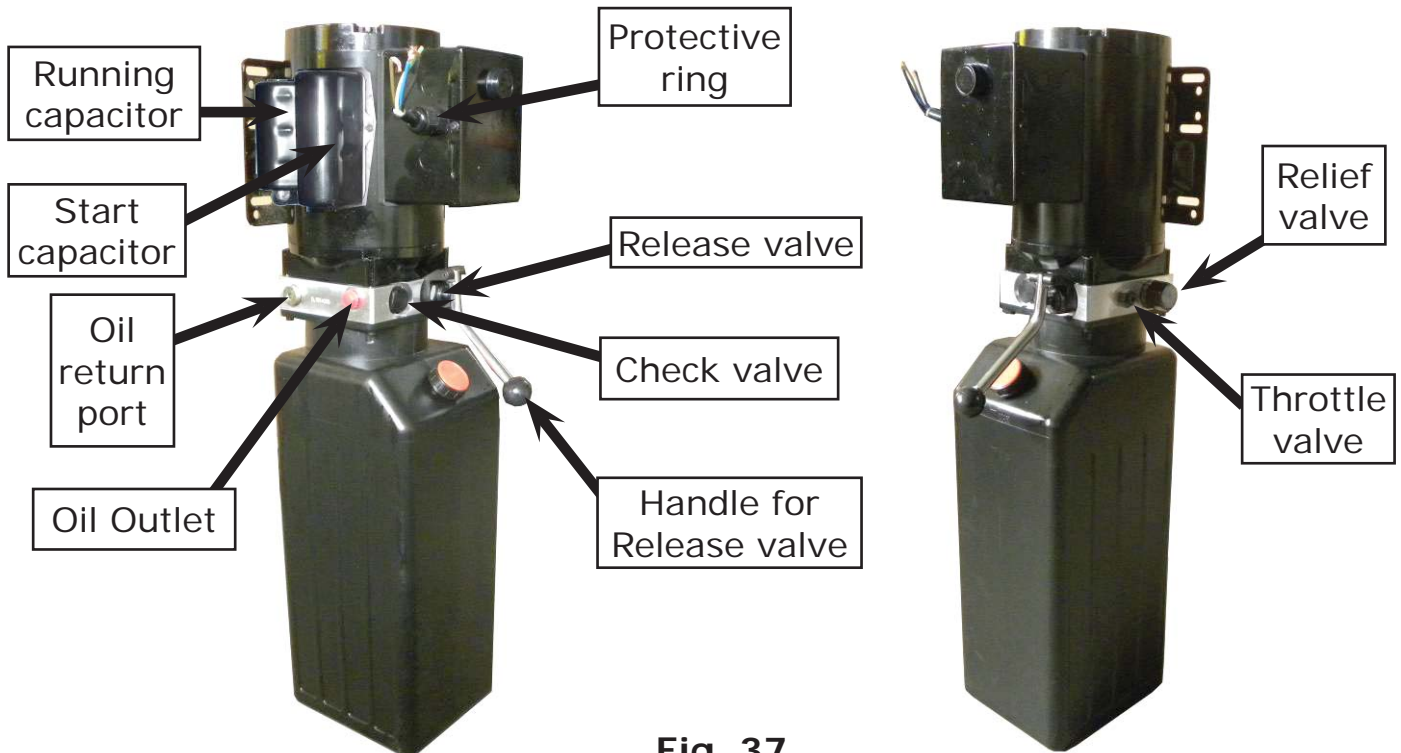


Fig. 37

Test Run

1. Adjust synchronous cable (See Fig. 38)

Press **UP** button to lift the carriages up to the position of the cable nut higher than chain pulley. Use wrench to hold the cable fitting, meanwhile use ratchet spanner to tighten the cable nut. Make sure two cables are in the same tension so that two lifting carriages can work synchronously.

If the carriages does not Synchronize when lifting, please tighten the cable nut of lower side carriage.

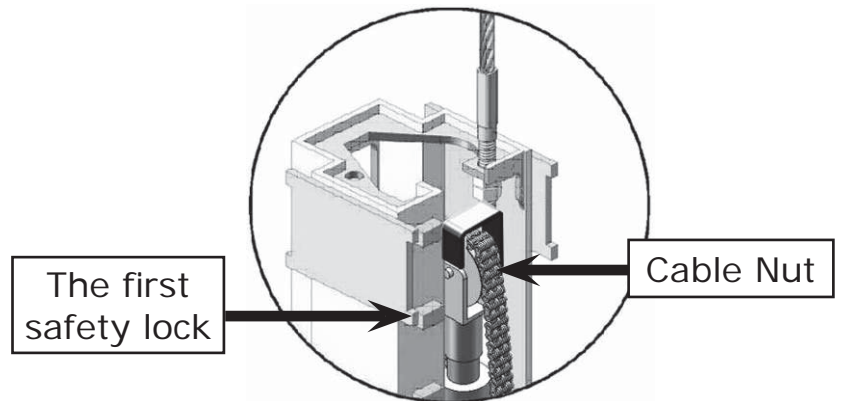


Fig. 38

2. Adjust safety cable

Lifting the carriages and lock at the same height, strain the safety cable and then release a little, and then tighten the cable nuts. Make sure the safety device can always be worked properly. Assemble carriages cover at last step.

3. Adjust the lower speed (only for ATLAS power unit)

You can adjust the lower speed of the lift if needing: Loosen the fixing nut of the throttle valve, and then turn the throttle valve clockwise to decrease the lower speed, or counterclockwise to increase the lower speed. Do not forget to tighten the fixing nut after the lower speed adjustment has been done.

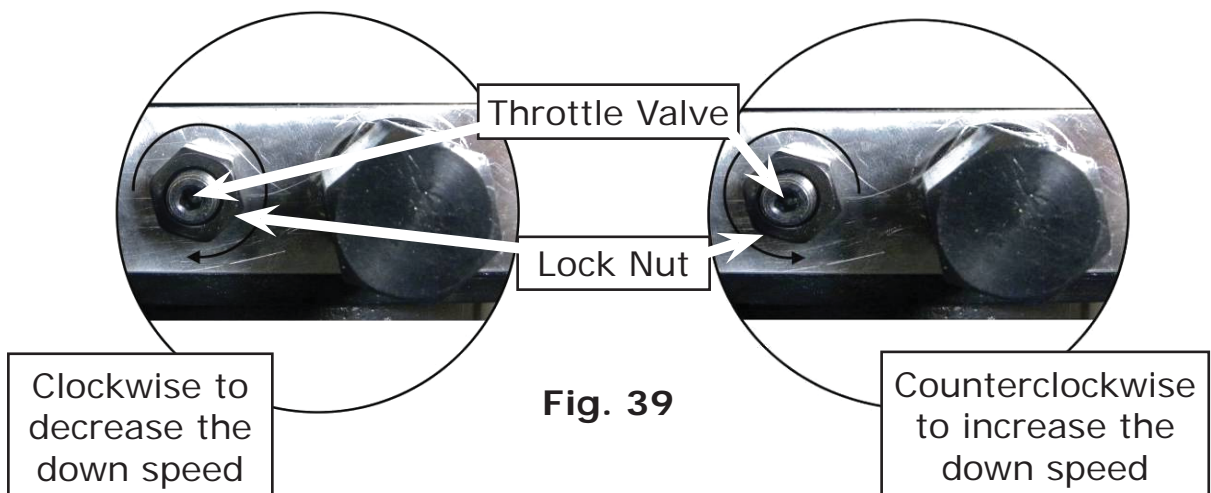


Fig. 39

4. Test with load

After finishing the above adjustment, test run the lift with a load. Run the lift to a low position several times first to make sure the lift can raise and lower synchronously and the locks can lock and release synchronously. Then test run the lift to the top completely. If there is anything improper, repeat the above adjustment.

NOTE: The lift may vibrate at first start. Lifting it with a load several times will bleed the air and the vibration will disappear automatically.

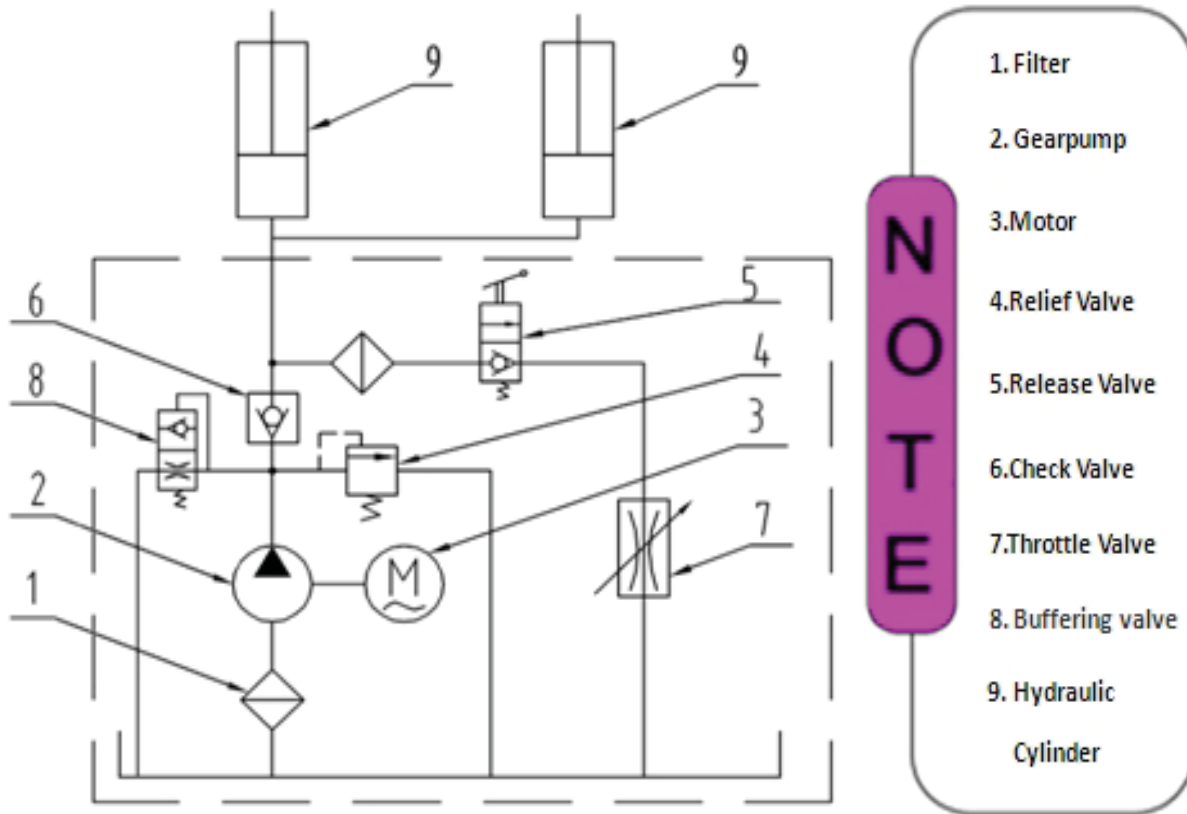


Fig. 40 - Hydraulic System

Operation Instructions

Please read the safety tips carefully before operating the lift

To lift vehicle

1. Keep the lift area free of clutter;
2. Position lift arms to the lowest position;
3. Open lift arms;
4. Position vehicle between columns;
5. Move arms to the vehicle's lifting point;

Note: The four lift arms must make contact at the manufacturers recommended lifting points.

6. Press the **UP** button until the lift pads contact underside of vehicle totally. Recheck to make sure vehicle is secure;
7. Continue to raise the lift slowly to the desired working height, ensuring the balance of vehicle;
8. Push lowering handle to lower lift onto the nearest safety. The vehicle is ready to repair.

To lower vehicle

1. Keep the lift area free of clutter;
2. Press the button to raise the vehicle slightly, release the safety locks, and lower the vehicle by pushing lowering handle.
3. Open the arms and position them to the shortest length;
4. Drive the vehicle away.
5. Turn off the power.

Maintenance Schedule

Monthly:

1. Re-torque the anchor bolts to 86 foot pounds;
2. Check all connectors, bolts and pins to insure proper mounting;
3. Lubricate cable with lubricant;
4. Make a visual inspection of all hydraulic hoses/lines for possible wear or leakage;
5. Check Safety locks to make sure all are in proper condition;
6. Lubricate all Rollers and Pins with 90wt. Gear oil or equivalent;
7. Lubricate all 4 corners of the inside of the column as needed with White Lithium or something similar. This provides good coverage, saves the life of the wear blocks, and keeps the carriage true to the column).

Note: All anchor bolts should take full torque. If any of the bolts do not function for any reason, DO NOT use the lift until the bolt has been replaced.

Every six months:

1. Make a visual inspection of all moving parts for possible wear, interference or damage.
2. Check for equal tension of the cables and adjust as necessary to insure level lifting.
3. Check columns for plumbness.
4. Check Rubber Pads and replace as necessary.
5. Check Safety locks to make sure all are in proper condition.

Trouble Shooting

TROUBLE	CAUSE	REMEDY
Motor does not run	<ol style="list-style-type: none"> 1. Button does not work 2. Wiring connections are not in good condition 3. Motor burned out 4. Height limit switch is damaged 5. AC contactor burned out 	<ol style="list-style-type: none"> 1. Replace button 2. Repair all wiring connections 3. Repair or replace motor 4. Replace the limit switch 5. Replace AC contactor
Motor runs but the lift is not raised	<ol style="list-style-type: none"> 1. Motor runs in reverse rotation 2. Gear pump out of operation 3. Release valve in damage 4. Relief valve or check valve in damage 5. Low oil level 	<ol style="list-style-type: none"> 1. Reverse two power wire 2. Repair or replace 3. Repair or replace 4. Repair or replace 5. Fill tank
Lift does not stay up	<ol style="list-style-type: none"> 1. Release valve out of work 2. Relief valve or check valve leakage 3. Cylinder or Fittings leaks 	Repair or replace
Lift raises slowly	<ol style="list-style-type: none"> 1. Oil line is jammed 2. Motor running on low voltage 3. Oil mixed with air 4. Gear Pump leaks 5. Overload lifting 	<ol style="list-style-type: none"> 1. Clean the oil line 2. Check Electrical System 3. Fill tank 4. Replace Pump 5. Check load
Lift will not lower	<ol style="list-style-type: none"> 1. Safety device are locking 2. Release valve in damage 3. Safety cable broken 4. Oil system is jammed 	<ol style="list-style-type: none"> 1. Release the safeties 2. Repair or replace 3. Replace 4. Clean the oil system

9-OHSC Parts List

Item	Part#	Description	Qty.	Note
1	211010B	Wire Cable	1	
2	202001B	Powerside Column	1	
3	620059	Protective Ring	1	
4	209049	Plastic Pulley	3	
5	209010	Snap Ring	1	
6	209008	Safety Cover	2	
7	209009	Cup Head Bolt	8	
8	206006	Washer	2	
9	206023A	Hex Nut	2	
201	209002	Manual Power Unit	1	
11	206002	Safety Pin	2	
12	209007	Safety Spring	2	
13	209013	Powerside Safety Lock	1	
14	209012	Hair Pin	8	
15	209003	Hex Bolt	4	
16	209004	Rubber Ring	4	
17	209005	Nylok Nut	4	
18	201010	Chain Connector	4	
19	201008B	Hydraulic Cylinder	2	
20	201009A	Chain	2	
21	201007A	Pin For Chain Pulley	2	
22	203004A	Bronze Bush For Chain Pulley	4	
23	201006	Chain Pulley	2	
24	201005	Split Pin	4	
25	201004	Chain Pulley Assembly	2	
26	202002	Powerside Carriage	1	
27	206044	Slider	16	
28	201038	Carriage Plastic Cover	2	
29	206045	Protective Rubber	2	
30	206046	Bolt	4	
31	209020	Plastic Ball	4	
32	209021	Hex Nut	8	

Item	Part#	Description	Qty.	Note
33	209022	Washer	10	
34	209023A	Arm Lock	4	
34A	201041	Limit Ring	4	
35	209024	Arm Lock Bar	4	
36	209025	Hair Pin	4	
37	209026	Spring	4	
38	209027	Protective Rubber Set	4	
39	201043A	Lifting Arm-Front	2	
39A	201047	Outer Arm-Front	2	
39B	201048	Middle Arm-Front	2	
39C	201049A	Inner Arm-Front	2	
40	209038	Hex Bolt	6	
41	209039	Lock Washer	10	
42	202003	Offside Carriage	1	
43	209035	Moon Gear	4	
44	209033	Washer	12	
45	209034	Lock Washer	12	
46	209032	Socket Bolt	12	
47	209031	Snap Ring	4	
48	209030A	Arm Pin	4	
49	201046A	Rubber Pad Assembly	4	
49A	420138	Socket bolt	4	
49B	209134	Rubber Pad	4	
49C	680030C	Rubber Pad Frame	4	
50	201039B	Lifting Arm-Rear	2	
50A	201050	Outer Arm-Rear	2	
50B	201051A	Inner Arm-Rear	2	
51	209051B	Adaptor (1.5")	4	
52	209052B	Adaptor (2.5")	4	
53	211013	Offside Safety Lock	1	
54	202006B	Offside Column	1	
55	209056	Nylok Nut	2	
56	209057	Small Pulley	6	
57	209057A	Bronze Bush For Pulley	6	
58	209046	Hex Bolt	4	
59	202005A	Top Beam W/Bracket	2	
60	206025A	Foam Cushion	1	

Item	Part#	Description	Qty.	Note
61	202011	Control Bar	1	
62	206025C	Connecting Pin for Control Bar	2	
63	206023	Nylok Nut	4	
64	206041	Hex Bolt	4	
65	206042	Control Bar Support Bracket	2	
66	206011	Cup Head Bolt	2	
67	206013	Limit Switch	1	
68	209060	900 Fitting for Hydraulic Power Unit	1	
69	202007A	Oil Hose	1	
70	202008A	Oil Hose	2	
71	211016	T-Fitting	1	
72	201020	900 Fitting	2	
73	202009A	Cable	2	
74	209066	Cable Nut	4	
75	202010A	Safety Cable	1	
76	209059B	Anchor Bolt	12	
77	202500A	Parts Box	1	

Parts For Hydraulic Cylinder

19-1	201027A	Piston Rod	2	
19-2	201028	Piston	2	
19-3	206069	O-Ring	2	
19-4	201029	Support Ring	2	
19-5	201030	Y-Ring	2	
19-6	201031	O-Ring	2	
19-7	206071	Hex Nut	2	
19-8	201037	Adjustment Tube	2	
19-9	209078	Dust Seal	2	
19-10	201032	O-Ring	2	
19-11	201033	Head Cap	2	
19-12	201034	Bleeding Plug	2	
19-13	201035	O-Ring	2	
19-14	201036B	Bore Weldment	2	

Parts For SPX Manual Power Unit, 220V/50Hz/1 phase

Item	Part#	Description	Qty.	Note
201-1	209082	Motor	1	
201-2	209109	Protective Ring	1	
201-3	209083	Motor Connecting Shaft	1	
201-4	209084	Valve Body	1	
201-5	209085	Relief Valve	1	
201-6	209086	Lock Washer	4	
201-7	209087	Socket Bolt	4	
201-8	209088	Inlet Pipe	1	
201-9	209089	O-Ring	1	
201-10	209090	Filter	1	
201-11	209091	Hex bolt	4	
201-12	209092	Reservoir	1	
201-13	209093	Bolt	2	
201-14	209094	Cover of Capacitor	1	
201-15	209095	Capacitor	1	
201-16	209096	Rubber Gasket	1	
201-17	209097	Hex Bolt	1	
201-18	209098	Cover of Motor Terminal Box	1	
201-19	209099	Push Button	1	
201-20	209110	Oil Return Port	1	
201-21	209100	Oil Outlet	1	
201-22	209101	Release Valve	1	
201-23	209102	Handle For Release Valve	1	
201-24	209103	Washer	1	
201-25	209104	Hex Nut	1	
201-26	209105	Check Valve	1	
201-27	209106	Gear Pump	1	
201-28	209107	Oil Return Pipe	1	
201-29	209108	Filler Cap	1	

Parts For ATLAS Manual Power Unit, 220V/50Hz/1 phase

Item	Part#	Description	Qty.	Note
201A-1	209082A	Motor	1	
201A-2	209109	Protective Ring	1	
201A-3	209112	AC Contactor	1	
201A-4	209083A	Motor Connecting Shaft	1	
201A-5	209084A	Valve Body	1	
201A-6	209085A	Relief Valve	1	
201A-7	209113	Throttle Valve	1	
201A-8	209086A	Lock Washer	4	
201A-9	209087A	Socket Bolt	4	
201A-10	209088A	Inlet Pipe	1	
201A-11	209089A	O-Ring	1	
201A-12	209090A	Filter	1	
201A-13	209091A	Socket Bolt	4	
201A-14	209092A	Reservoir	1	
201A-15	209093A	Cup Head Bolt With Washer	4	
201A-16	209094A	Cover of Capacitor	2	
201A-17	209095A	Start Capacitor	1	
201A-17A	209095B	Run Capacitor	1	
201A-18	209096A	Rubber Gasket	2	
201A-19	209097A	Cup Head Bolt With Washer	2	
201A-20	209098A	Cover of Motor Terminal Box	1	
201A-21	209099A	Push Button	1	
201A-22	209110A	Oil Return Port	1	
201A-23	209100A	Oil Outlet	1	
201A-24	209105A	Check Valve	1	
201A-25	209101A	Release Valve	1	
201A-26	209102A	Handle For Release Valve	1	
201A-27	209103A	Washer	1	
201A-28	209104A	Hex Nut	1	
201A-29	209106A	Gear Pump	1	
201A-30	209107A	Oil Return Pipe	1	
201A-31	209108A	Filler Cap	1	

Warranty



This item is warranted for five (5) years on structural components, two (2) years on hydraulic cylinders, and one (1) year on electric or air / hydraulic power units from invoice date. Wear items are covered by a 90 day warranty.

This LIMITED warranty policy does **not include a labor** warranty.

NOTE: ALL WARRANTY CLAIMS MUST BE PRE-APPROVED BY THE MANUFACTURER TO BE VALID.

The Manufacturer shall repair or replace at their option for this period those parts returned to the factory freight prepaid, which prove after inspection to be defective. This warranty will not apply unless the product is installed, used and maintained in accordance with the Manufacturers installation, operation and maintenance instructions.

This warranty applies to the ORIGINAL purchaser only, and is non-transferable. The warranty covers the products to be free of defects in material and workmanship but, does not cover normal maintenance or adjustments, damage or malfunction caused by: improper handling, installation, abuse, misuse, negligence, carelessness of operation or normal wear and tear. In addition, this warranty does not cover equipment when repairs or alterations have been made or attempted to the Manufacturer's products.

THIS WARRANTY IS EXCLUSIVE AND IS LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR ANY IMPLIED WARRANTY OF FITNESS FROM A PARTICULAR PURPOSE, AND ALL SUCH IMPLIED WARRANTIES ARE EXPRESSLY EXCLUDED.

THE REMEDIES DESCRIBED ARE EXCLUSIVE AND IN NO EVENT SHALL THE MANUFACTURER, NOR ANY SALES AGENT OR OTHER COMPANY AFFILIATED WITH IT OR THEM, BE LIABLE FOR SPECIAL CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OF OR DELAY IN PERFORMANCE OF THIS WARRANTY. THIS INCLUDES, BUT IS NOT LIMITED TO, LOSS OF PROFIT, RENTAL OR SUBSTITUTE EQUIPMENT OR OTHER COMMERCIAL LOSS.

PRICES: Prices and specifications are subject to change without notice. All orders will be invoiced at prices prevailing at time of shipment. Prices do not include any local, state or federal taxes.

RETURNS: Products may not be returned without prior written approval from the Manufacturer.

DUE TO THE COMPETITIVENESS OF THE SELLING PRICE OF THESE LIFTS, THIS WARRANTY POLICY WILL BE STRICTLY ADMINISTERED AND ADHERED TO.