

INSTALLATION & OPERATION MANUAL



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



Atlas Automotive Equipment
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Revised: 12/8/2020

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

- 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.

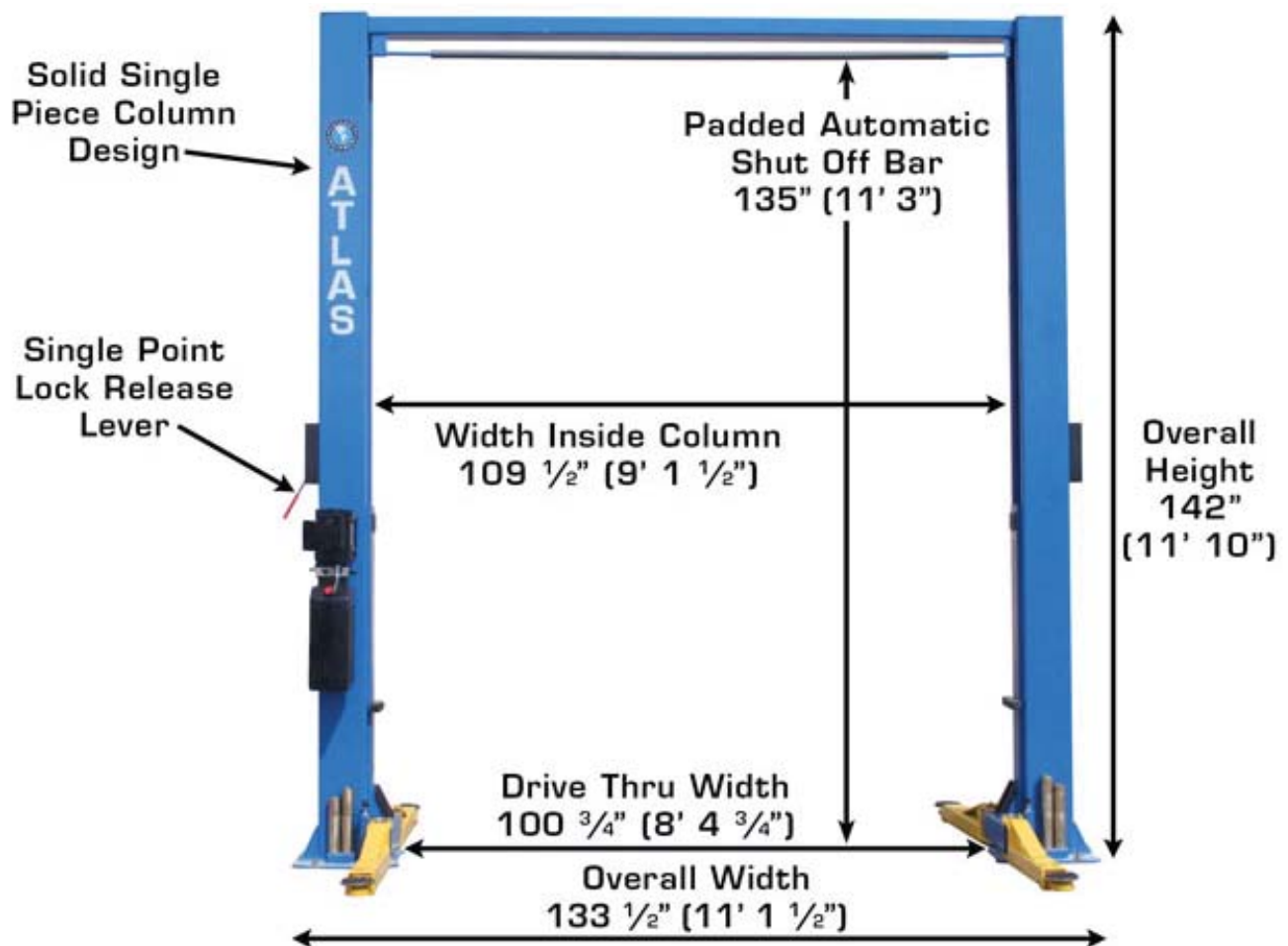


Fig. 1

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

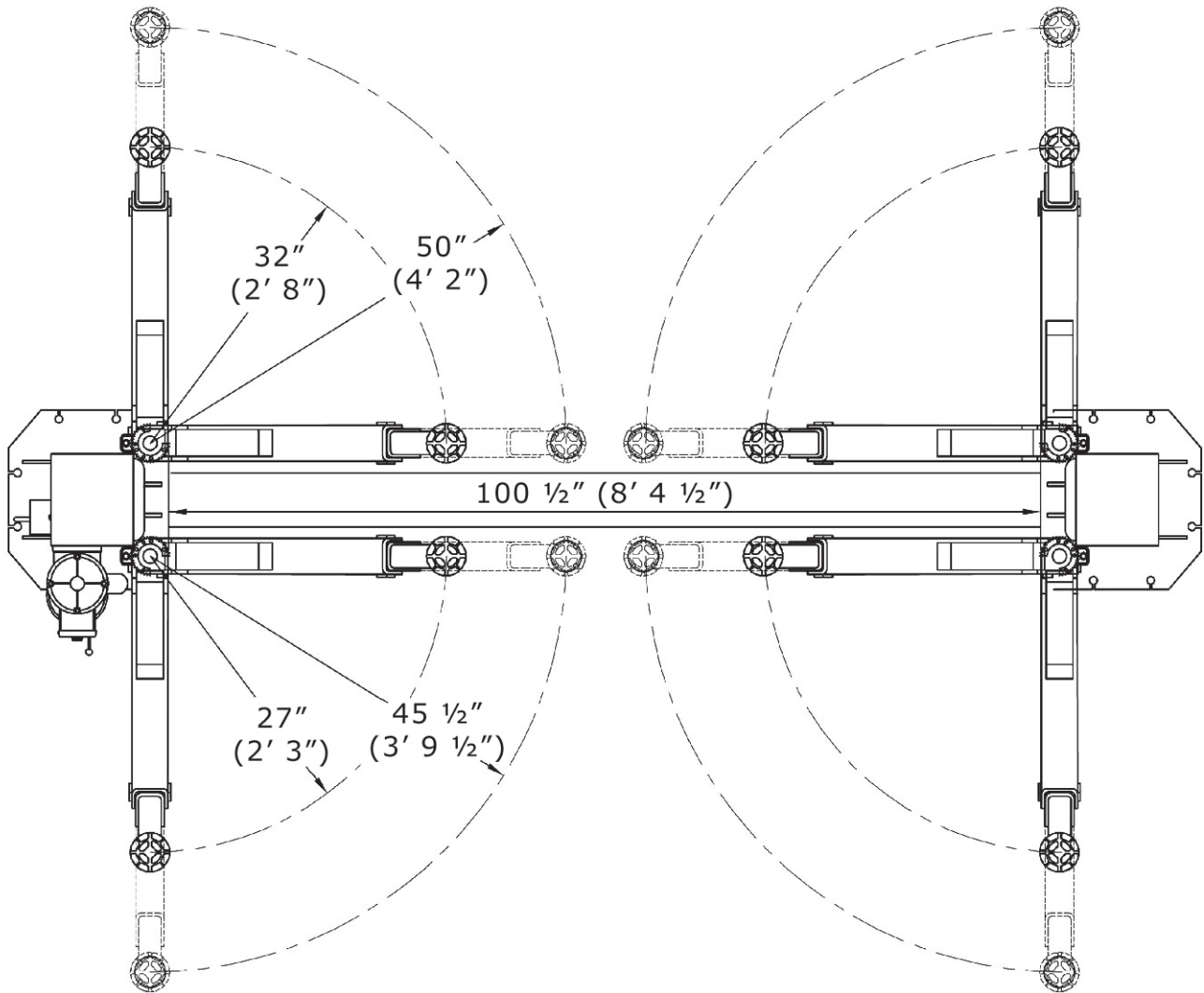


Fig. 2

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

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.

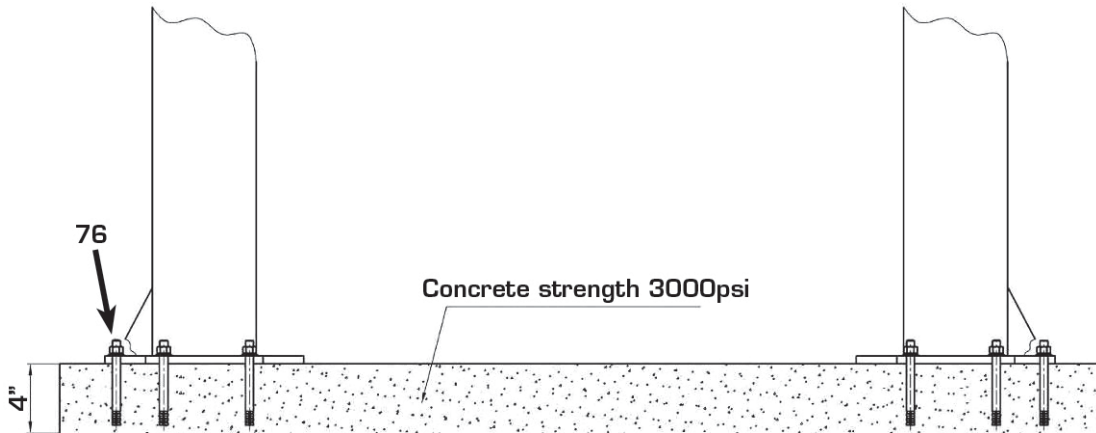


Fig. 4

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

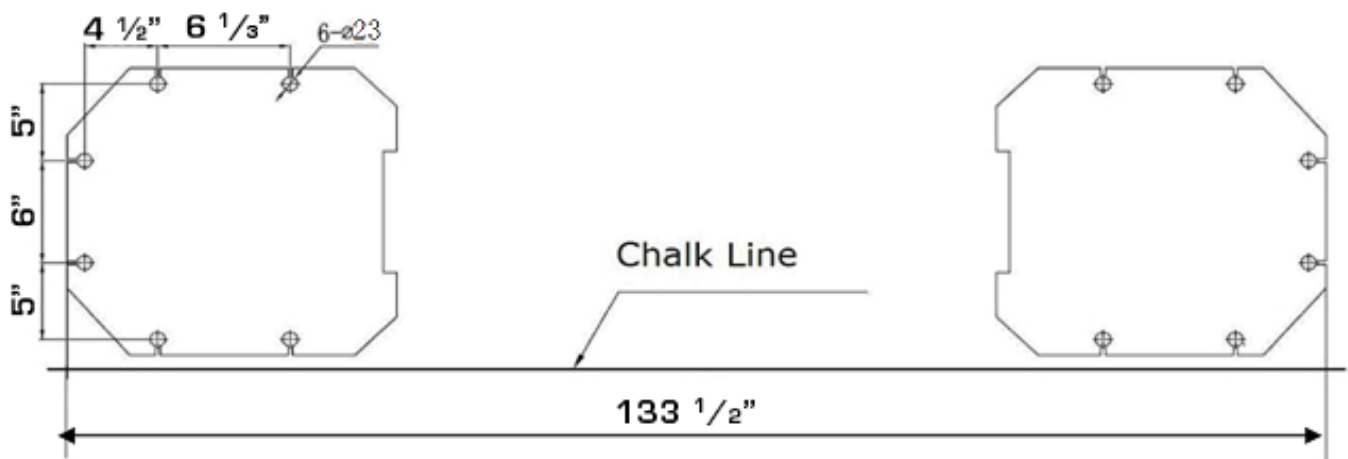


Fig. 5

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)**.

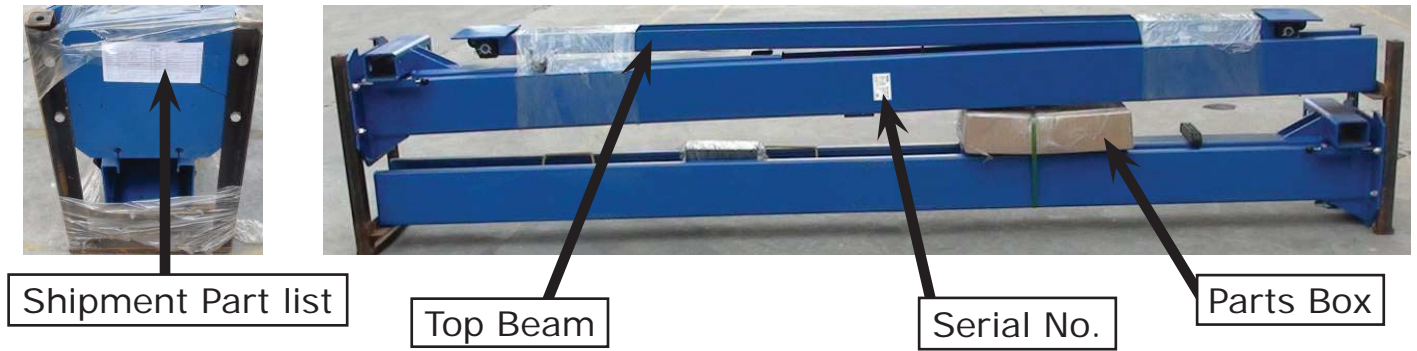


Fig. 7

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)

E. Install Cables

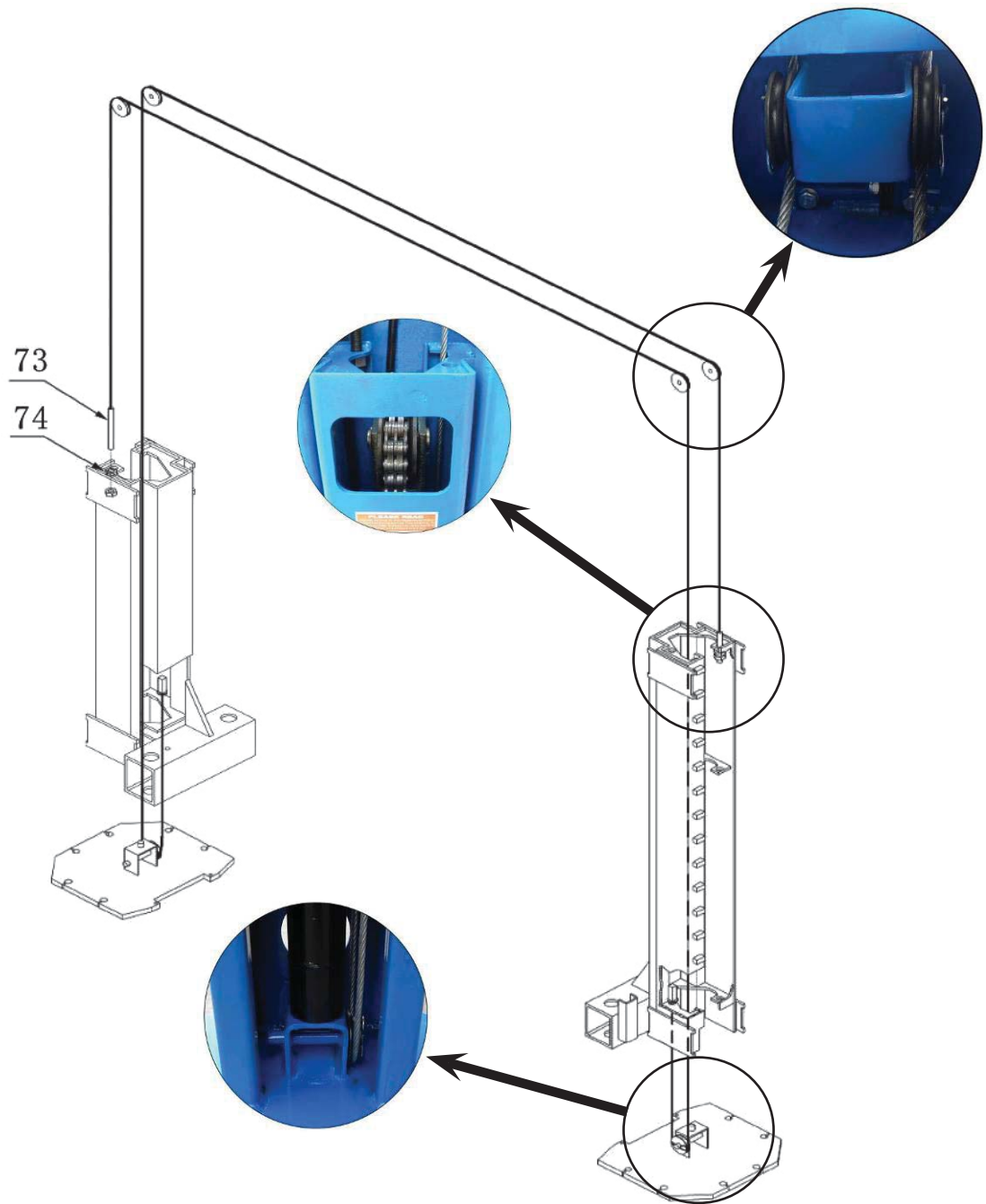
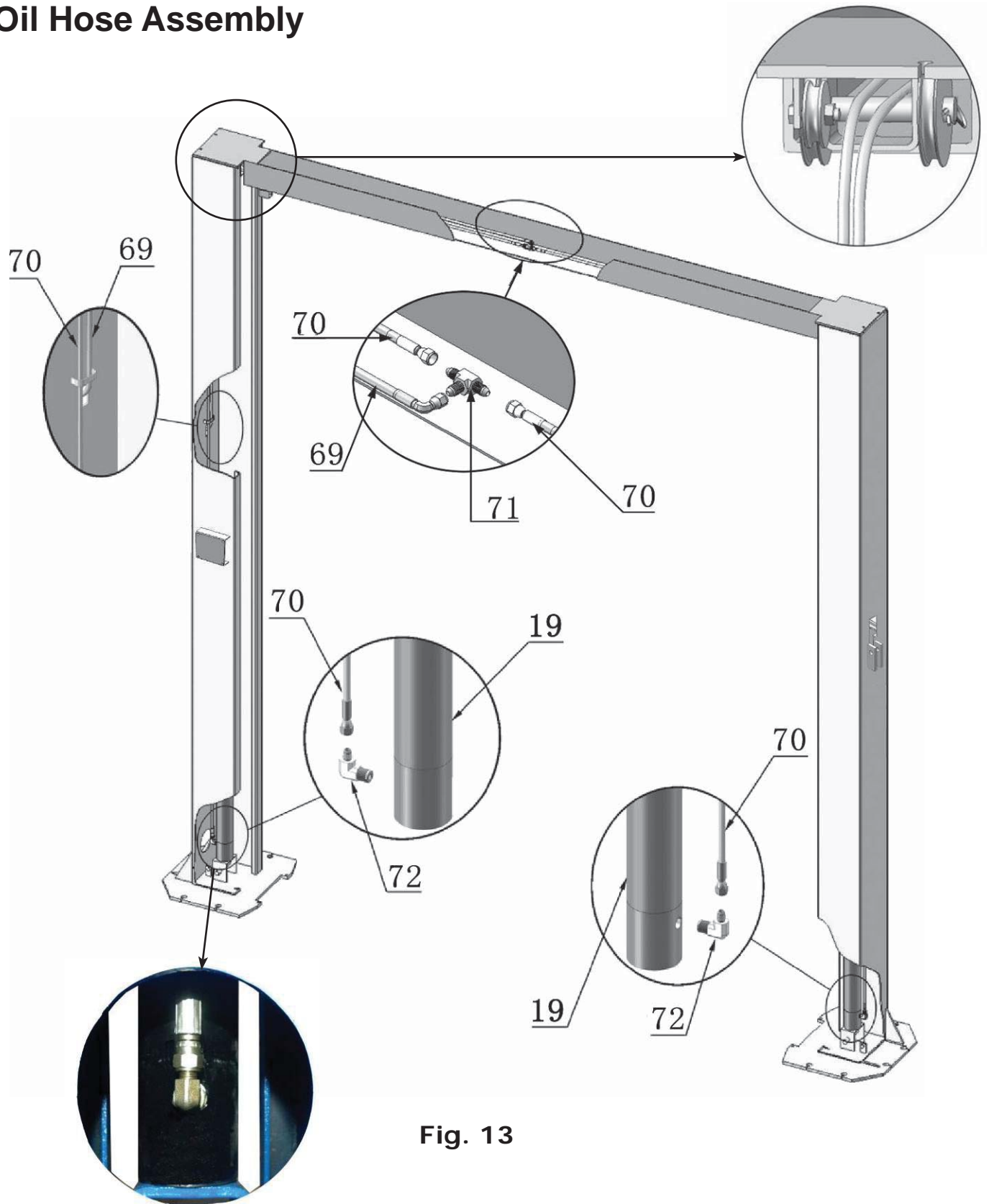


Fig. 12

F. Oil Hose Assembly



G. Install Locks And Lock Release Cables

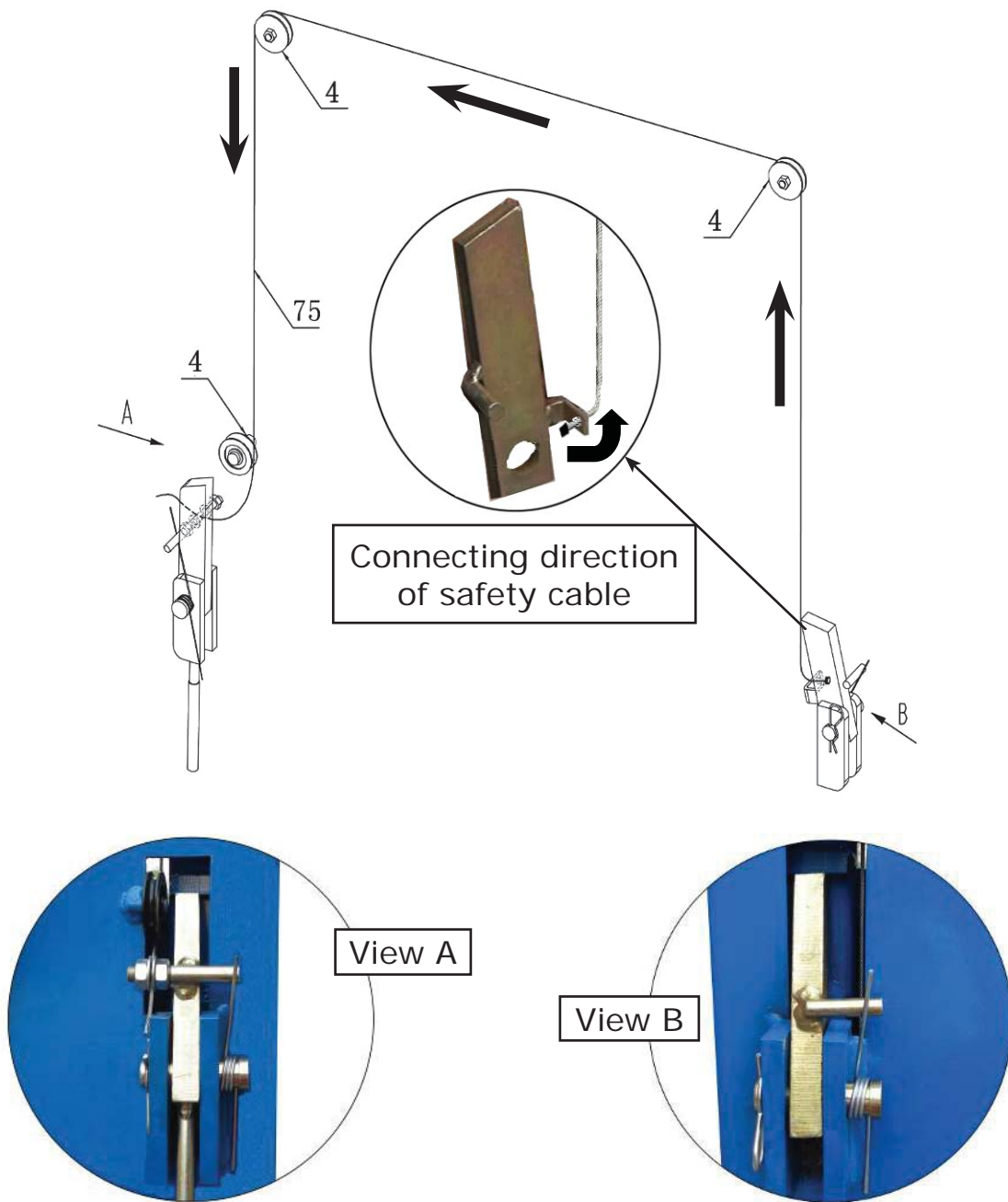
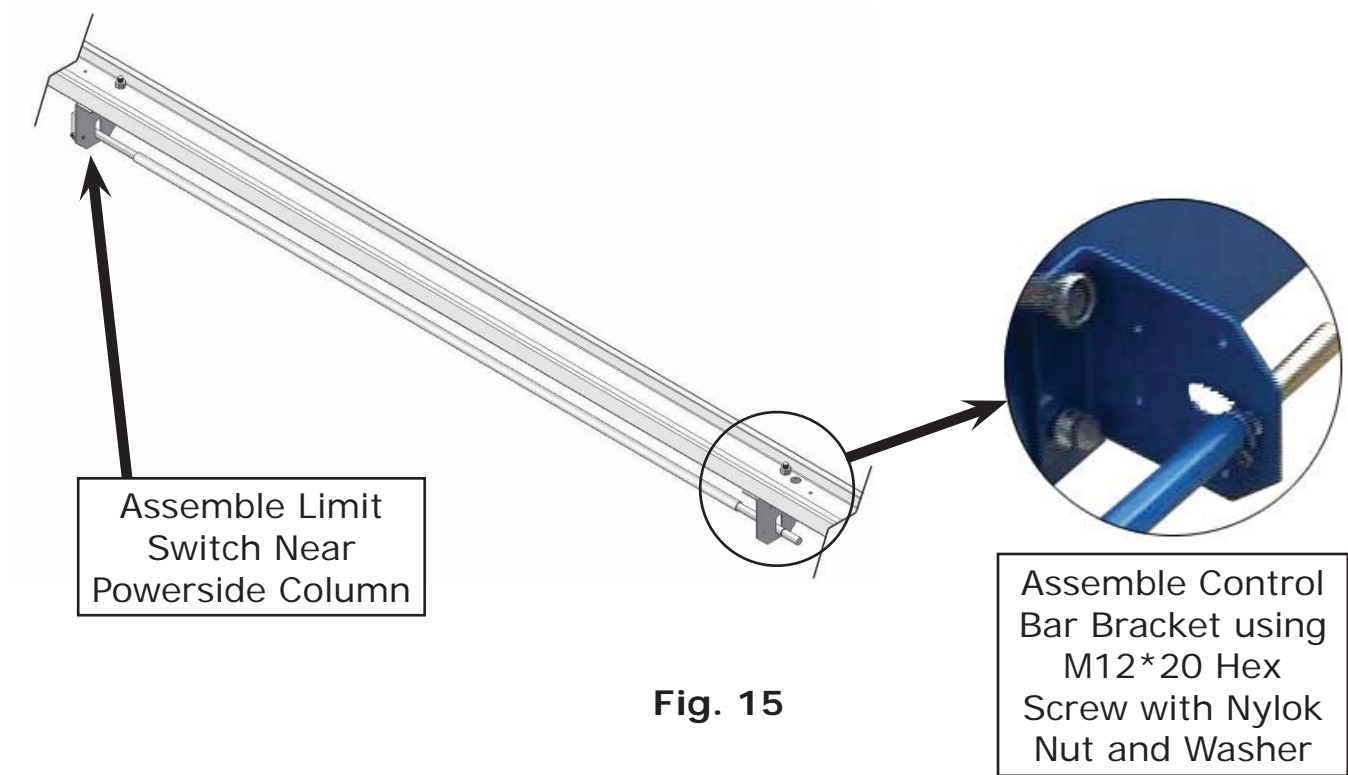
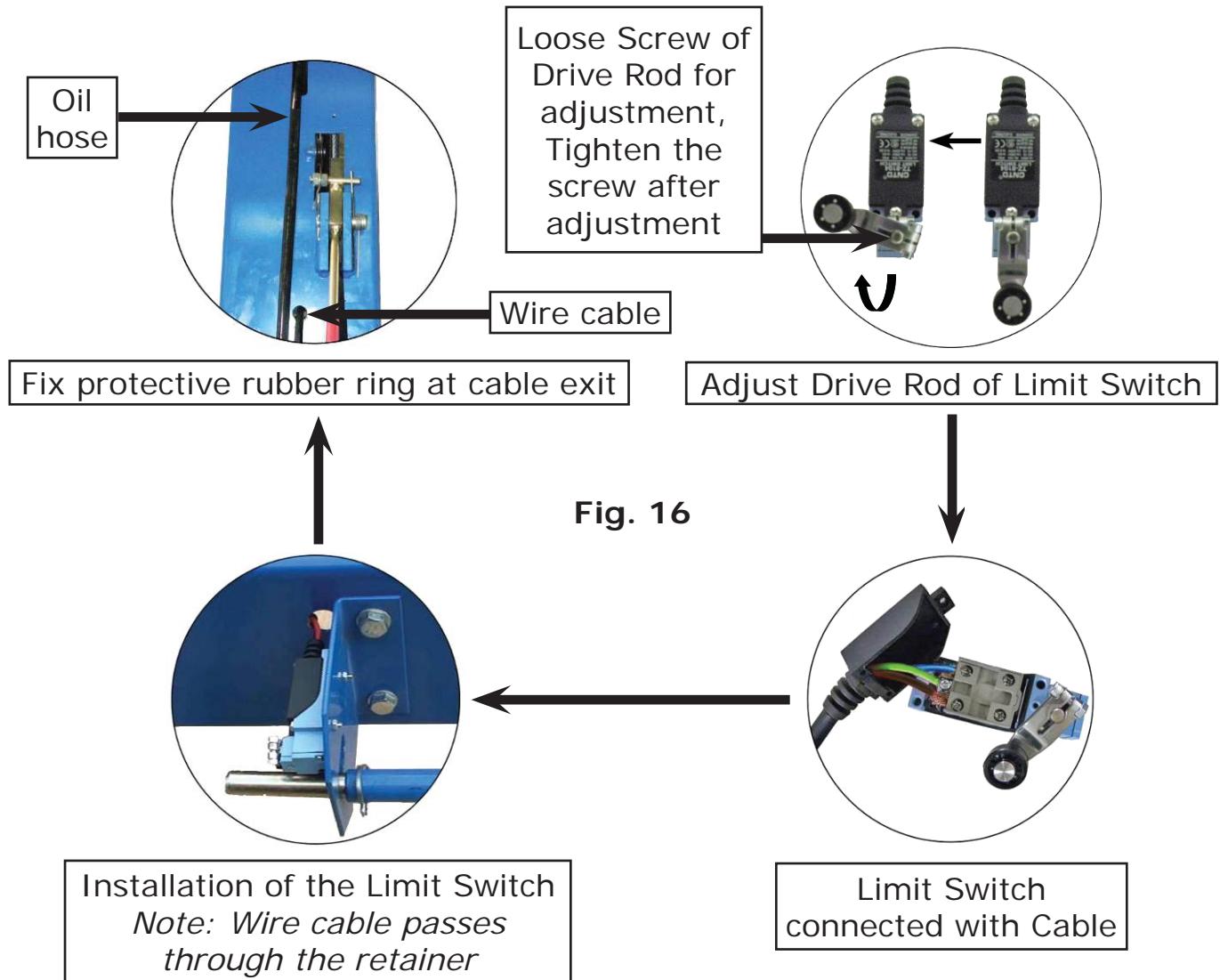


Fig. 14

H. Install Limit Switch Control Bar

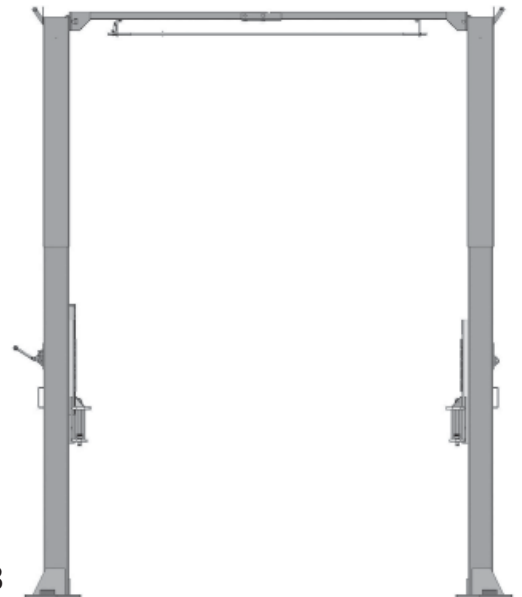


I. Install Limit Switch



J. Lift The Carriages Up Manually And Lock Them On The 1st Set Of Locks

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

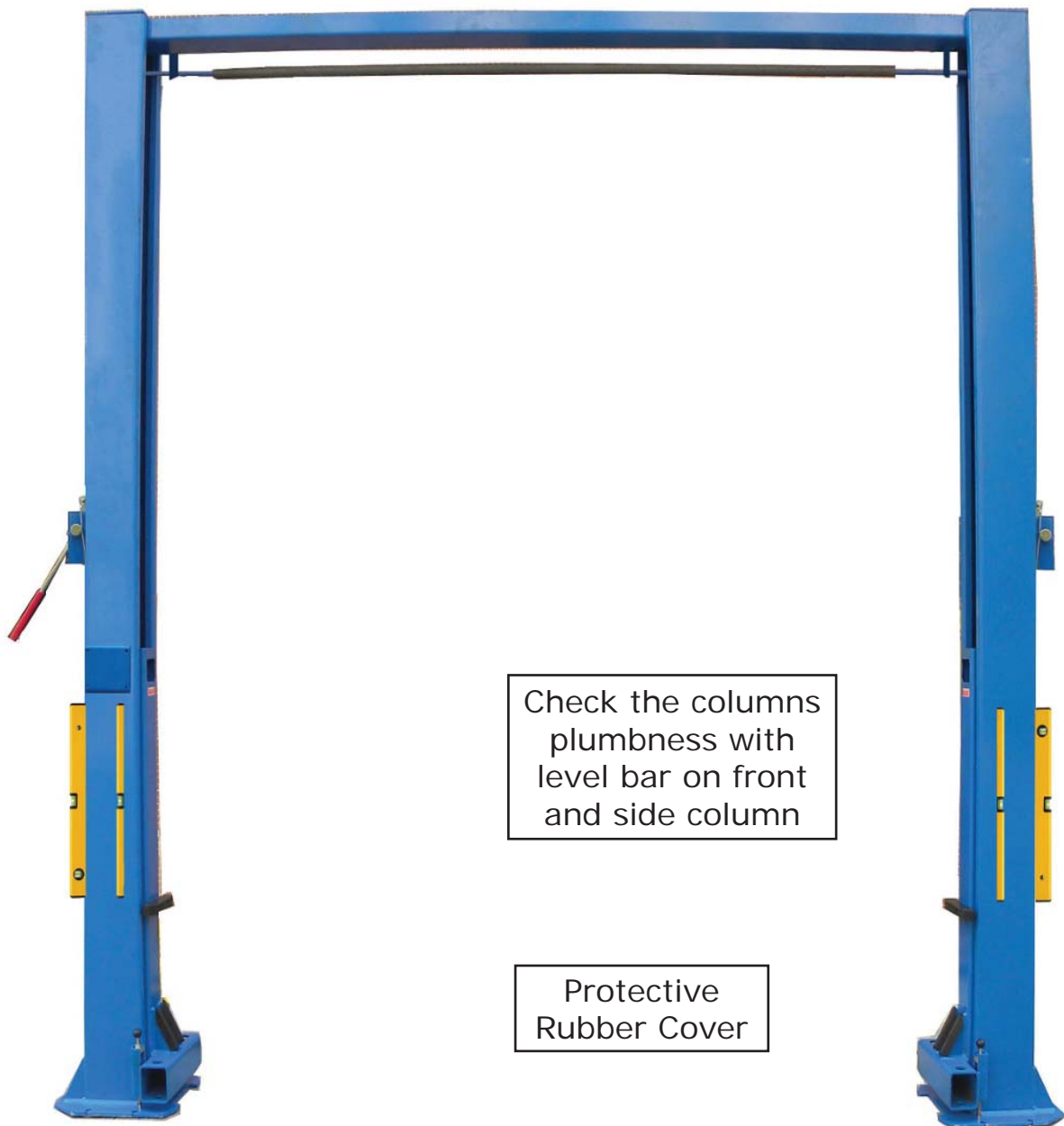


Fig. 19

L. Install Power Unit And Oil Hose

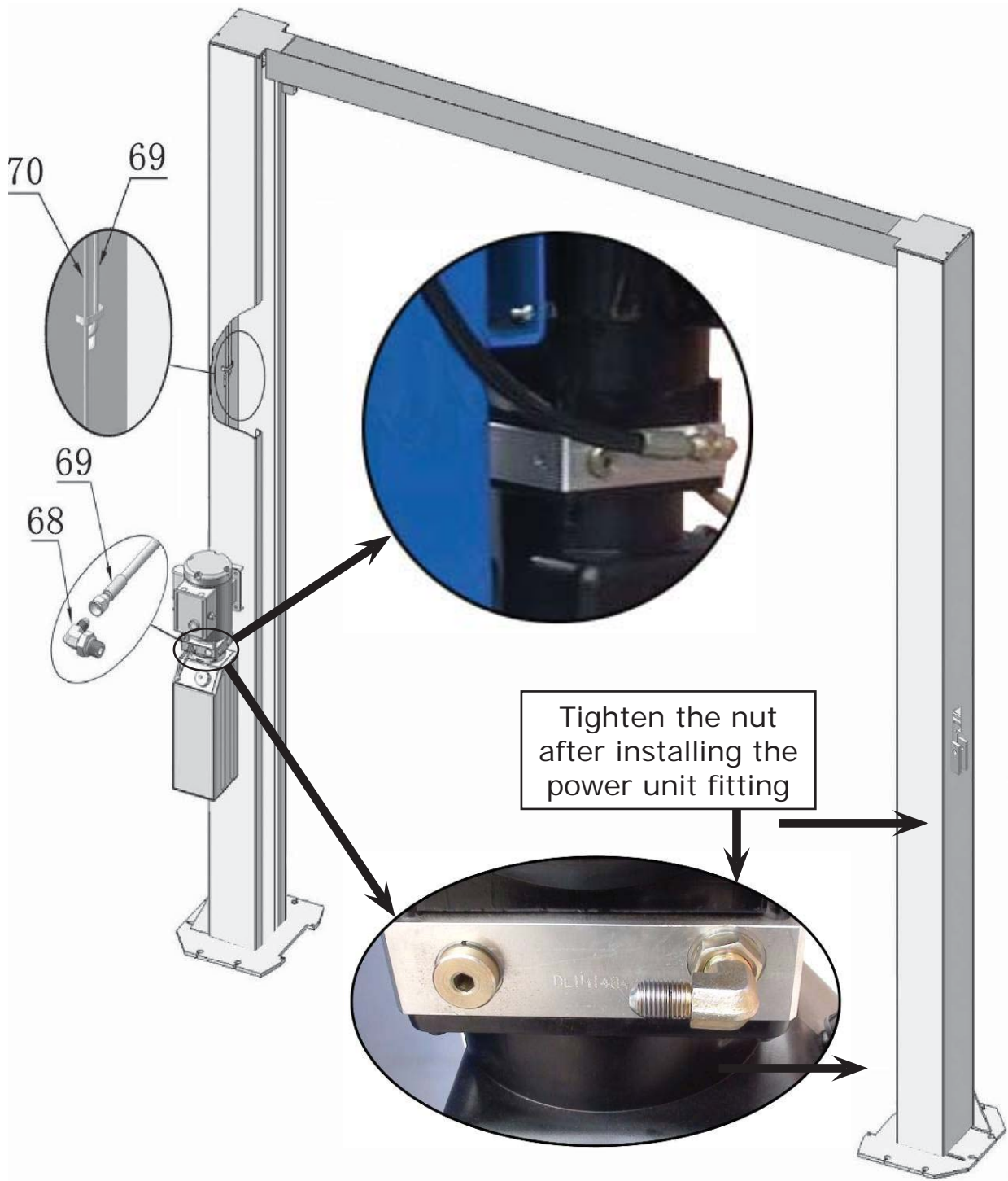


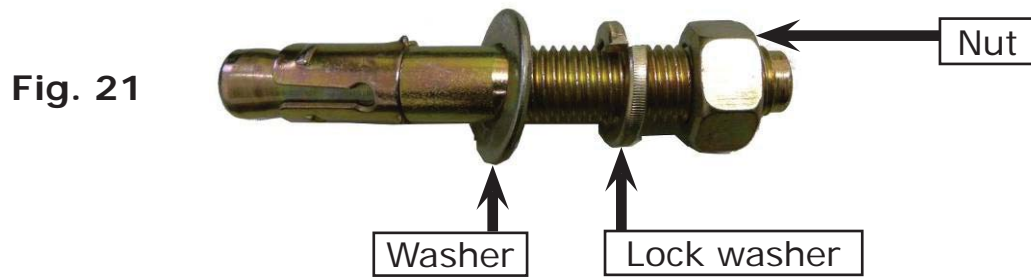
Fig. 20

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".

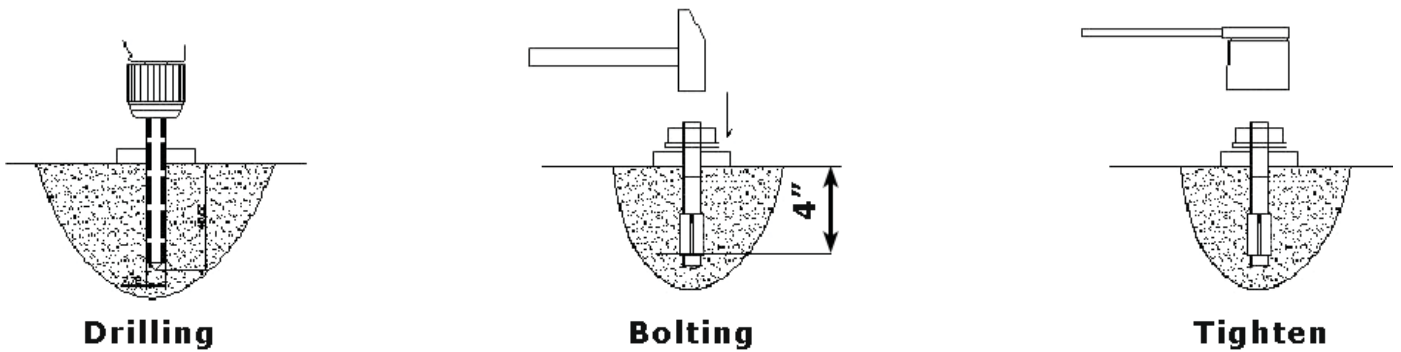


Fig. 22

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)

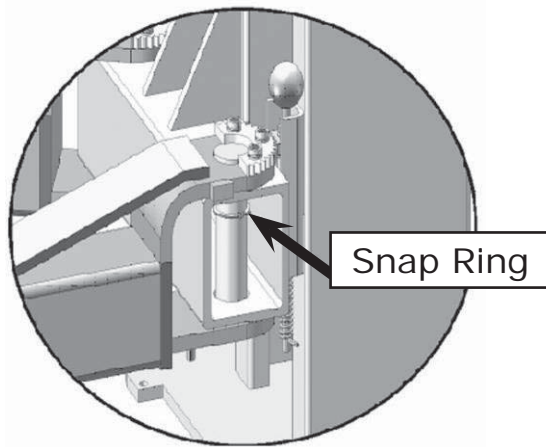


Fig. 23

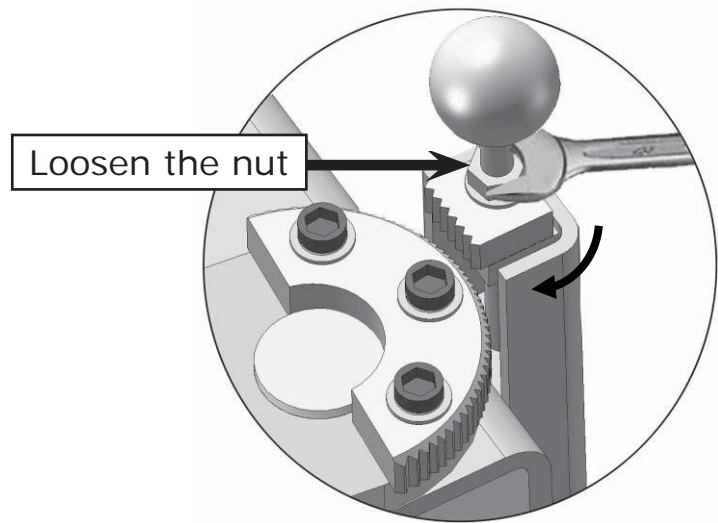


Fig. 24

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).

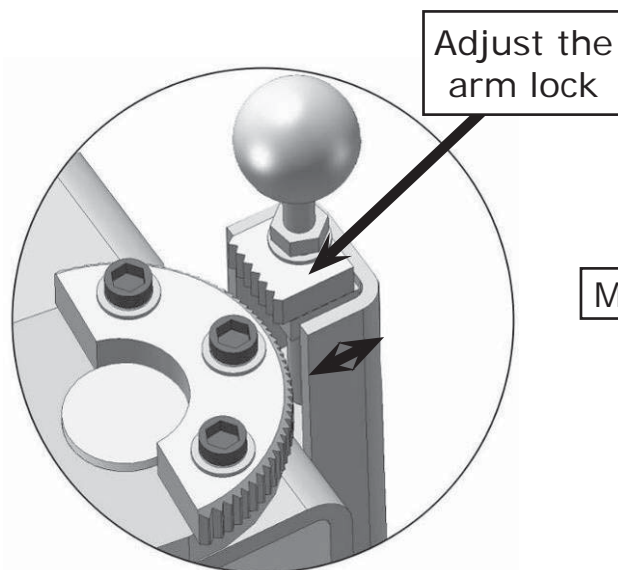


Fig. 25

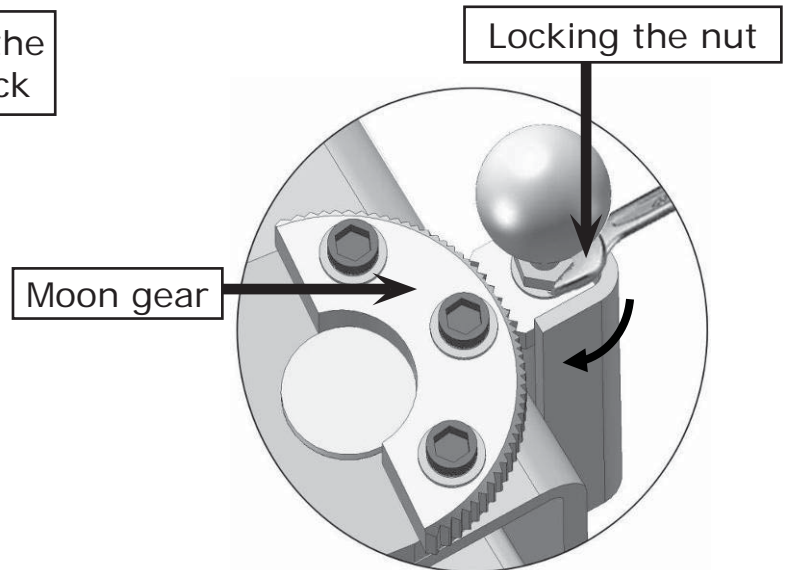


Fig. 26

O. Install Electrical System

Connect the power source on the data plate of power unit.

Make sure the connection of the limit switch is correct.

Note: For the safety of operators, the power wiring must contact the floor well.

Test Run

1. Adjust synchronous cable

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.

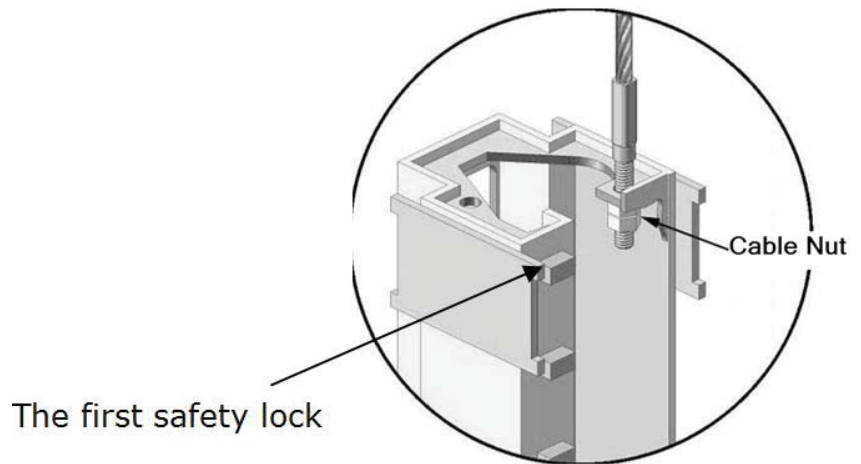


Fig. 36

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.

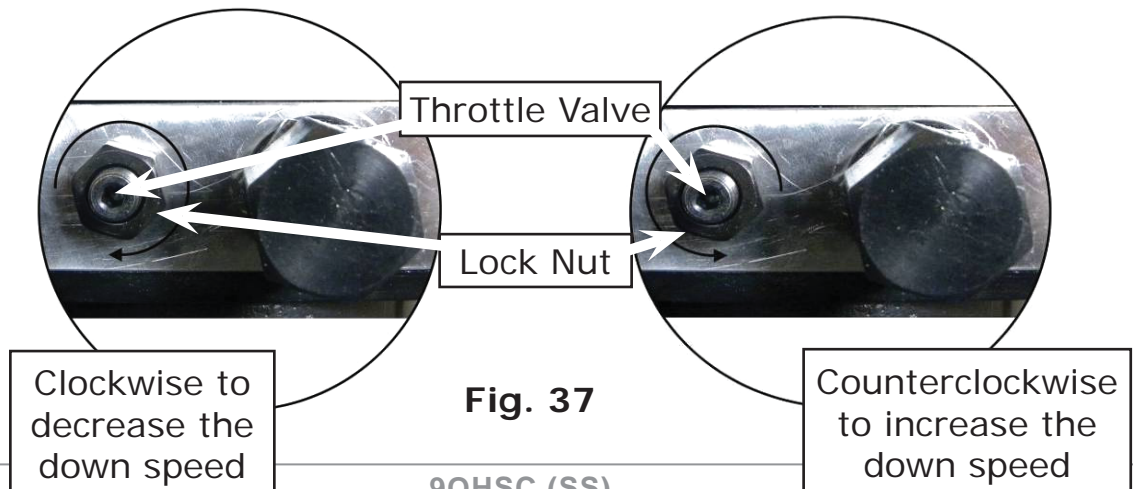


Fig. 37

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.

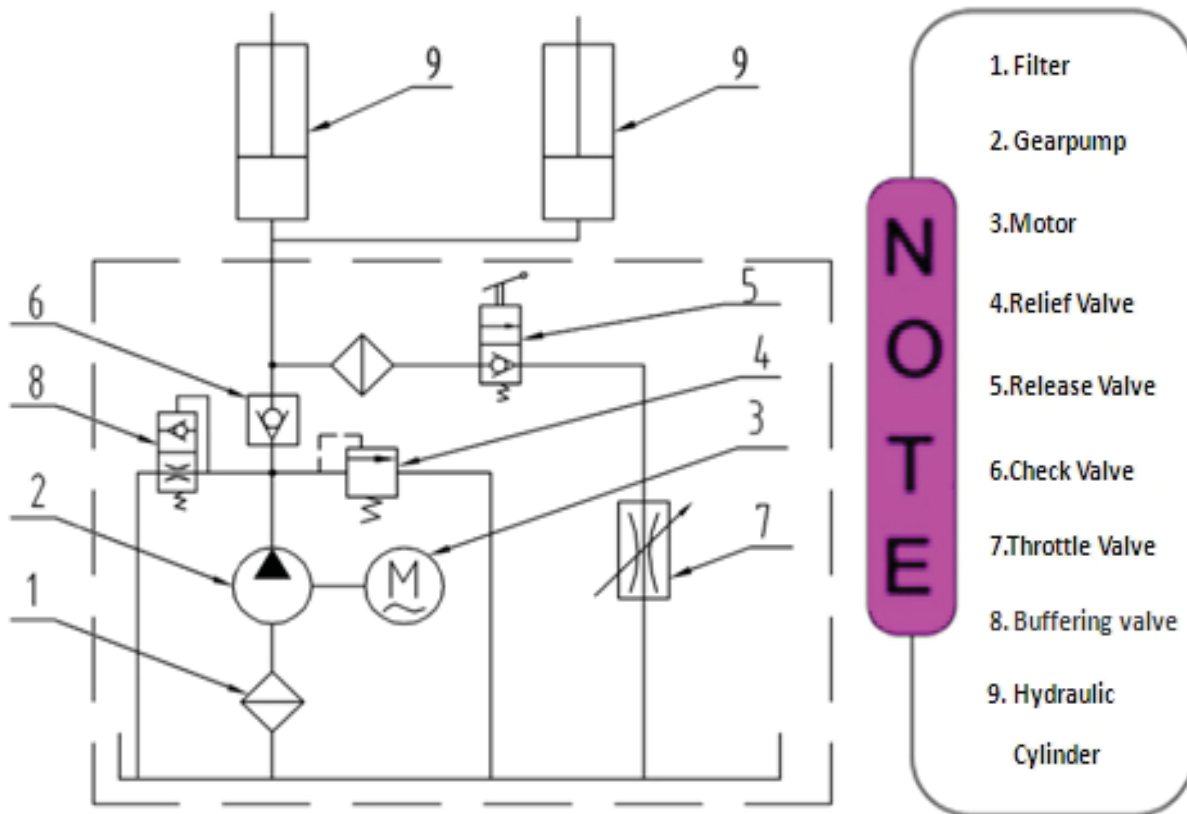


Fig. 38 - Hydraulic System

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 |

Exploded View

Model 9-OHSC

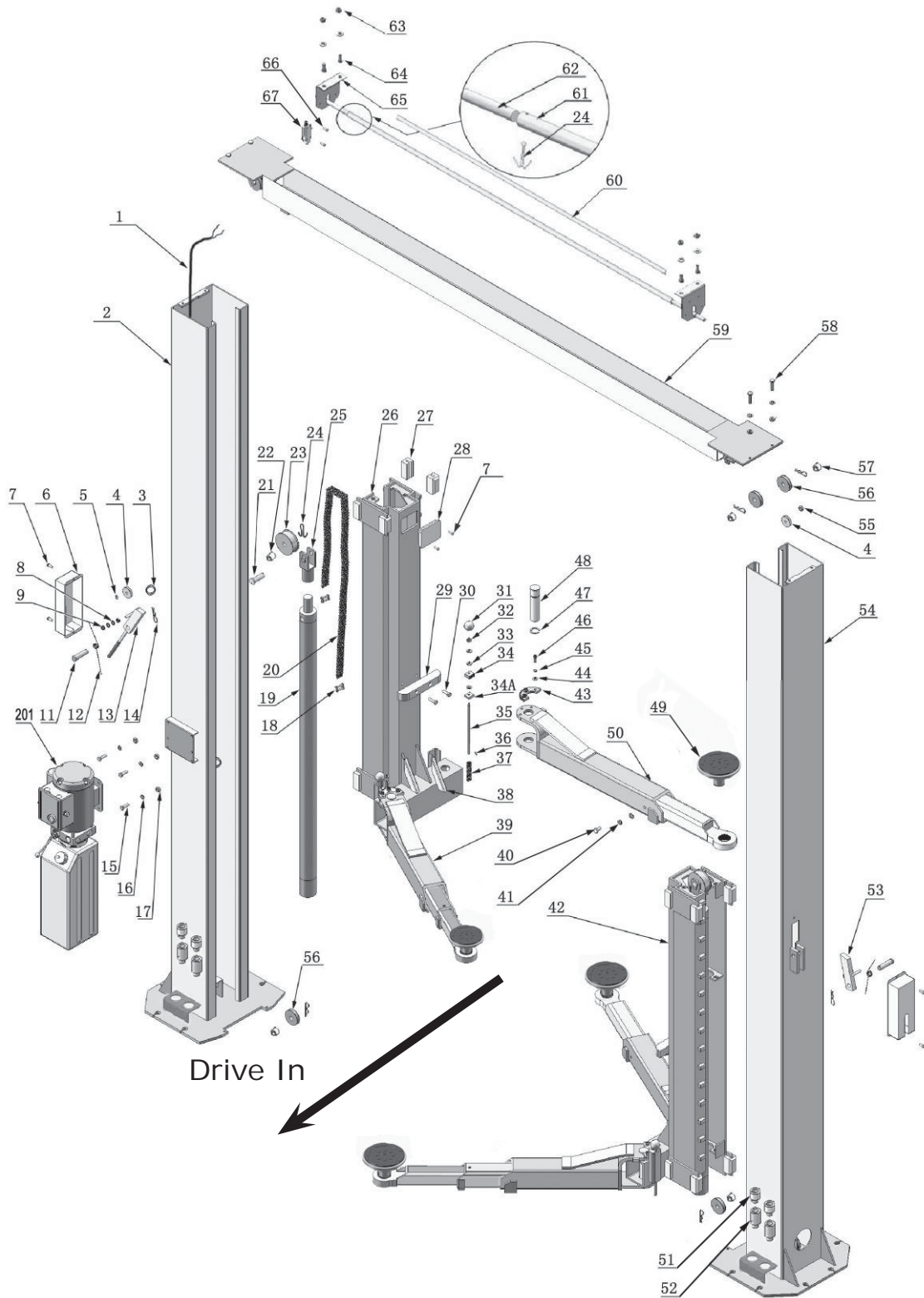


Fig. 32

Cylinders

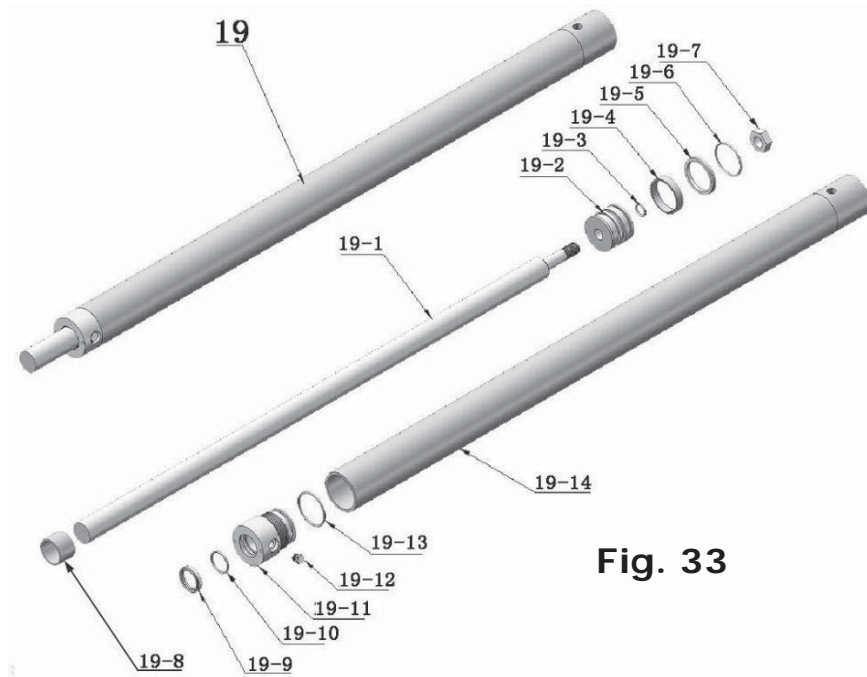


Fig. 33

Atlas Manual Power Unit

220V/60HZ/1 phase

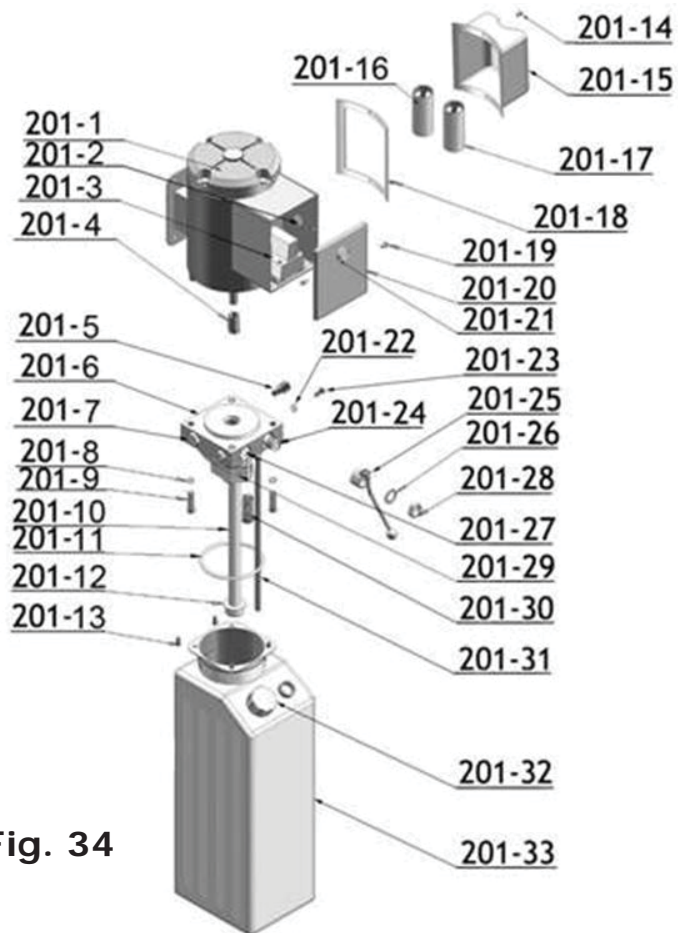


Fig. 34

Illustration Of Hydraulic Valve

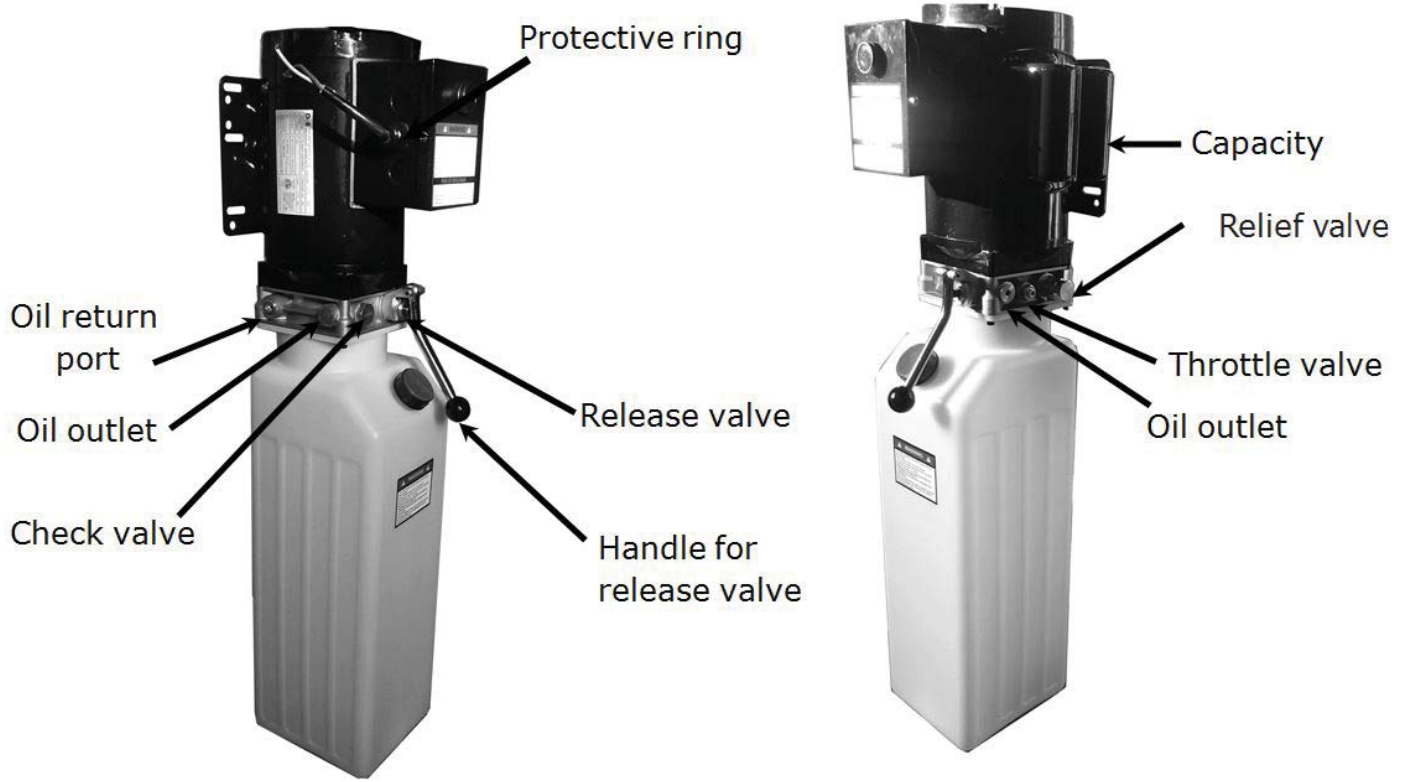


Fig. 35

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 | |
| 78 | 209053B | Adapter (5") | 4 | |

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 Hydraulic Power Unit, 220V/50Hz/1 phase

| Item | Part# | Description | Qty. | Note |
|--------|----------|-----------------------------|------|------|
| 201-1 | 81400152 | Motor (ETL certificate) | 1 | |
| 201-2 | 81400209 | Cover of Motor Terminal Box | 1 | |
| 201-3 | 81400252 | Contacto | 1 | |
| 201-4 | 81400127 | Motor Connecting Shaft | 1 | |
| 201-5 | 81100175 | Relief Valve | 1 | |
| 201-6 | 81400210 | Valve Body | 1 | |
| 201-7 | 81400143 | Plug | 1 | |
| 201-8 | 209149 | Spring washer | 2 | |
| 201-9 | 81400148 | Socket bolt | 2 | |
| 201-10 | 81400135 | Oil inlet Pipe | 1 | |
| 201-11 | 81400144 | O- Ring | 1 | |
| 201-12 | 81400150 | Filter | 1 | |
| 201-13 | 81400145 | Socket bolt | 4 | |
| 201-14 | 420148 | Cup Head Bolt | 4 | |
| 201-15 | 81400203 | Cover of Capacitor | 1 | |
| 201-16 | 81400250 | Start Capacitor | 1 | |
| 201-17 | 81400200 | Running Capacitor | 1 | |
| 201-18 | 81400204 | Rubber Gasket | 1 | |
| 201-19 | 420148 | Cup Head Bolt | 2 | |
| 201-20 | 81400050 | Cover of Motor Terminal Box | 1 | |
| 201-21 | 81400045 | Push Button | 1 | |
| 201-22 | 81400147 | Bonded Washer | 1 | |
| 201-23 | 81400146 | Plug | 1 | |
| 201-24 | 81400075 | Release Valve | 1 | |
| 201-25 | 81400117 | Handle For Release Valve | 1 | |
| 201-26 | 81400181 | Washer | 1 | |
| 201-27 | 81400044 | Check Valve | 1 | |
| 201-28 | 81400182 | Hex nut | 1 | |
| 201-29 | 81400040 | Gear Pump | 1 | |
| 201-30 | 81400068 | Buffer valve | 1 | |
| 201-31 | 81400136 | Oil Return Pipe | 1 | |
| 201-32 | 81400202 | Filler Cap | 1 | |
| 201-33 | 81400154 | 12L white reservoir | 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.