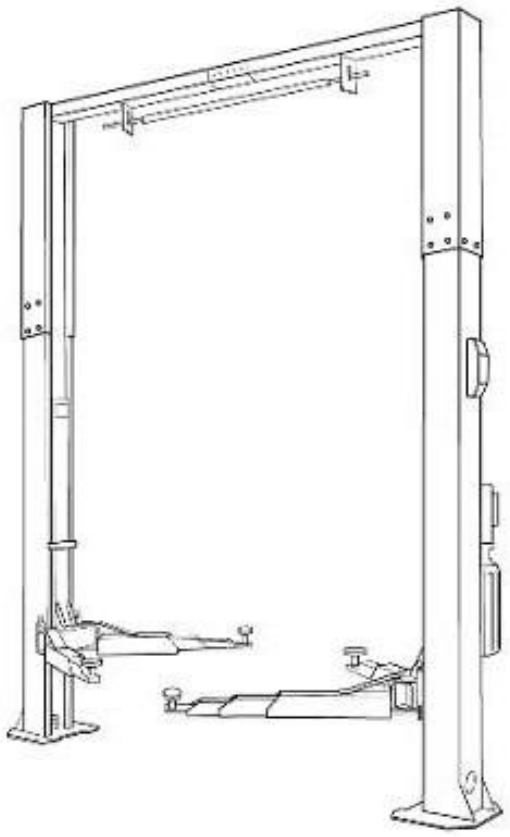
W-9D Automotive Lift

W-9D Installation & Operation Manual

9000 lb. Capacity Overhead
Super-Symmetric Two Post Lift



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READ MANUAL ENTIRELY BEFORE INSTALLING OR OPERATING LIFT

CONTENTS

I. PRODUCT FEATURES AND SPECIFICATIONS

CLEAR-FLOOR DIRECT-DRIVE MODEL FEATURES

Weaver Lift Model W-9D (See Fig. 1)

· Direct-drive design minimizes wear parts and repairs.

· Dual hydraulic cylinders designed and made on ANSI standards, utilizing NOK oil seal for cylinder.

· Self-lubricating UHMW Polyethylene sliders and bronze bushings.

· Single-point safety release and dual safety design.

. Clear-floor design provides for unobstructed floor space.

. Overhead safety shut-off device prevents vehicle damage.

· Super-symmetric (2 in 1) arms design.

. Standard adjustable heights (2) accommodate varying ceiling heights.

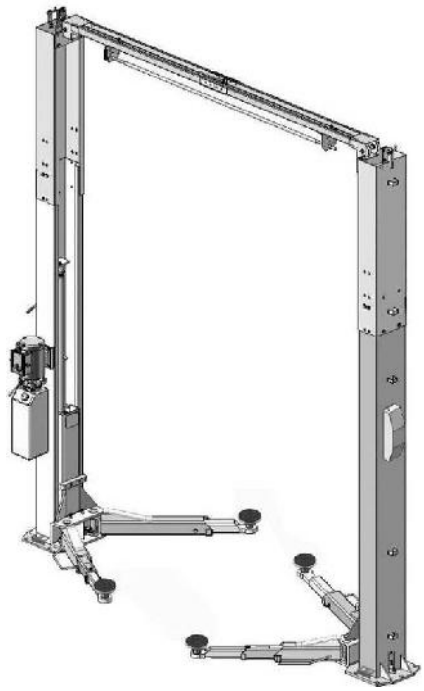


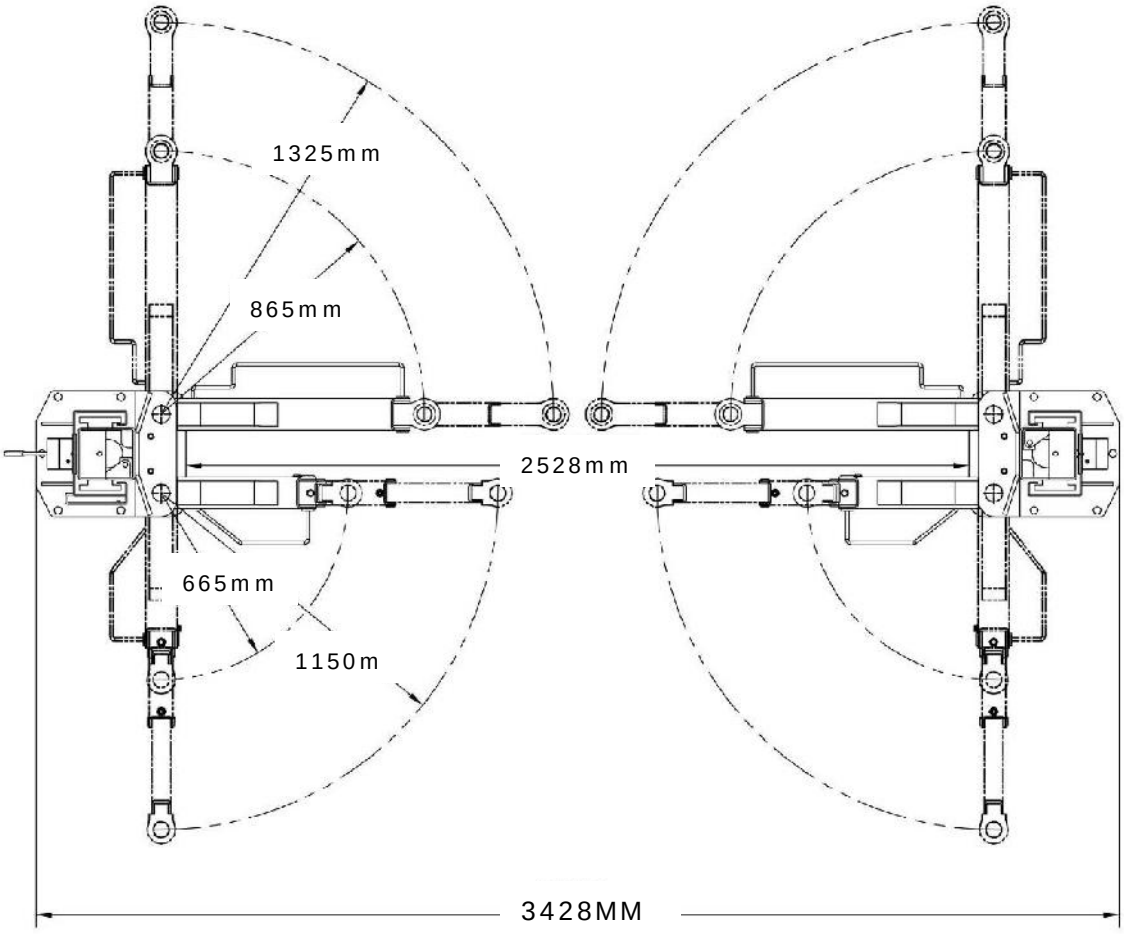
Fig. 1

MODEL Weaver W-9D SPECIFICATIONS

Model	Style	Lifting Capacity	Lifting Time	Lifting Height	Overall Height	Overall Width	Width Between Posts	Minimum Pad Height for screw adapters	Minimum Pad Height for stackable adapter	Motor
W-9D	Clear-floor Direct-drive	4.0 T 9,000 lbs	52 S	1830-2100 mm 72” – 82 1/2”	3621/3821 mm 142 1/2” 150 1/2”	3428 mm 135”	2850 mm 112 1/4”	100 mm 4”	105 mm 4 1/8”	2.0/3.0 HP

Swing Arm View

For Weaver Lift Model W-9D



Overall width 135”

Fig. 2

□. INSTALLATION REQUIREMENT

A. TOOLS REQUIRED

- ✓ Rotary Hammer Drill (Φ19)

- ✓ Carpenter's Chalk

- ✓ Hammer

- ✓ Screw Sets

- ✓ Level Bar

- ✓ Tape Measure (7.5m)

- ✓ English Spanner (12")

- ✓ Pliers

- ✓ Ratchet Spanner With Socket (28#)

- ✓ Socket Head Wrench (3#, 5#, 8#)

- ✓ Wrench set

(8#, 10#, 13#, 14#, 17#, 19#, 24#)

- ✓ Lock Wrench

Fig. 3

B. SPECIFICATIONS OF CONCRETE

Failure to adhere to the specifications of concrete may result in Lift Failure.

FOUNDATION and ANCHORING REQUIREMENTS

1. Concrete shall have compression strength of at least 3,000 PSI and a minimum thickness of 4" in order to achieve a minimum anchor embedment of 3 1/4". NOTE: When using the standard supplied 3/4" x 5 1/2 long anchors, if the top of the anchor exceeds 2 1/4" above the floor grade, you DO NOT have enough embedment.

2. Maintain a 6" minimum distance from any slab edge or seam. Hole to hole spacing should be a minimum 61/2" in any direction. Hole depth should be a minimum of 4". Drilling through the slab is recommended in case an anchor needs to be replaced it can be driven down through the slab.

3. DO NOT install on asphalt or other similar unstable surface. Columns are supported only by anchoring to floor.

4. Using the shims provided, shim each column base as required until each column is plumb. If one column has to be elevated to match the plane of the other column, full size base shim plates should be used. Torque anchors to 100 ft-lbs. Shim thickness MUST NOT exceed 1/2" when using the 5 1/2" long anchors provided with the lift. Adjust the column extensions plumb.

5. If anchors do not tighten to 100 ft-lbs. installation torque, replace the concrete under each column base with a 4' x 4' x 6" thick 3,000 PSI minimum concrete pad keyed under and flush with the top of existing floor. Allow concrete to cure before installing lifts and anchors (typically 2 to 3 weeks).

C. POWER SUPPLY

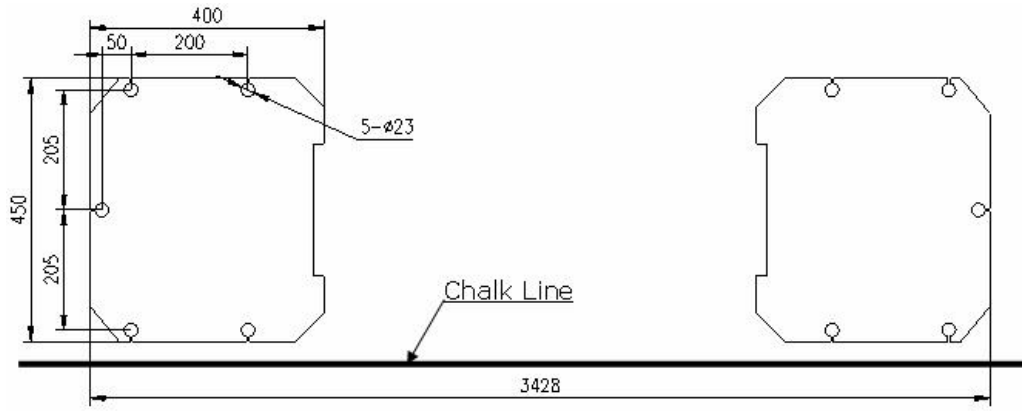
The power requirement is 220 Volt 1 phase power with a 30 amp circuit breaker. Use a minimum of 10 gauge wiring.

III. 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 base plate (See Fig. 4).



Overall Width 135"

Fig. 4

C. Check the Parts Before Assembly.

1. Packaged lift and Hydraulic Power Unit (See Fig. 5).

Fig. 5

2. Move aside the lift with fork lift or hoist, and open the outer packing carefully (See Fig. 6).

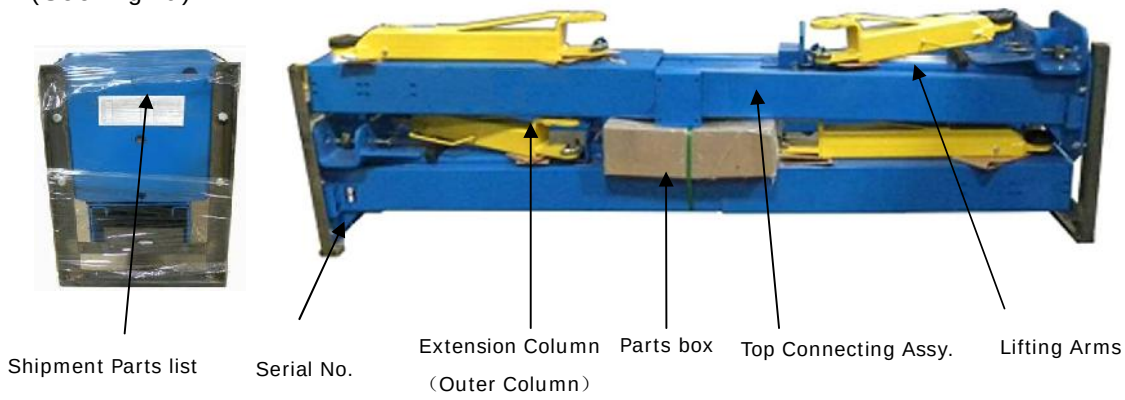


Fig. 6

3. Take off the lifting arms and parts box from upper and inside the column, then move them to location nearby installation site. Loosen the screws of the upper package stand, take off the upper column and remove the package stand (See Fig. 7).

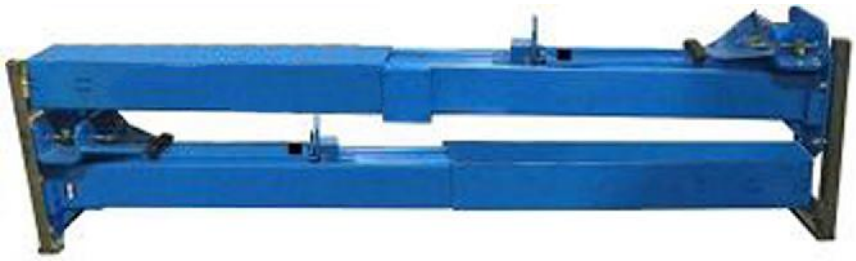


Fig. 7

4. Check the parts according to the shipment parts list (See Fig. 8).

Fig. 8

5. Open the carton of parts and check the parts according to parts box list (See Fig. 9).

Fig. 9 Weaver Lift Model W-9D

6. Check the parts of the parts bag 1& 2 according to parts bag list (See Fig. 10 & Fig. 11).

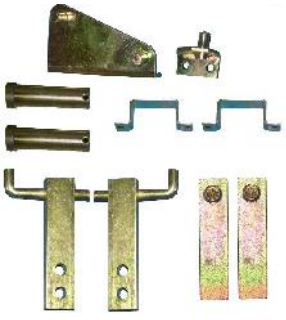
Model Weaver W-9D

Bag 1

Fig. 10

Bag 2

Fig. 11



D. Install parts of extension columns (See Fig. 12).

E. Position Power side Post

Lay down two posts on the installation site parallel to each other. Position the Power side Post according to the actual installation bay. It is suggested to install the Power side Post on the passenger side from which vehicles are driven into the lift. This lift is designed with 2-Section columns. Adjust the height according to the ceiling height when connecting the inner and outer columns. To use the low setting (142.5") the ceiling height should be at least 144" minimum. Connect the outer columns using the upper holes (See Fig.13); To use the high setting (150.5") we recommend to connect the outer columns with the lower holes to make the post higher (See Fig.14).

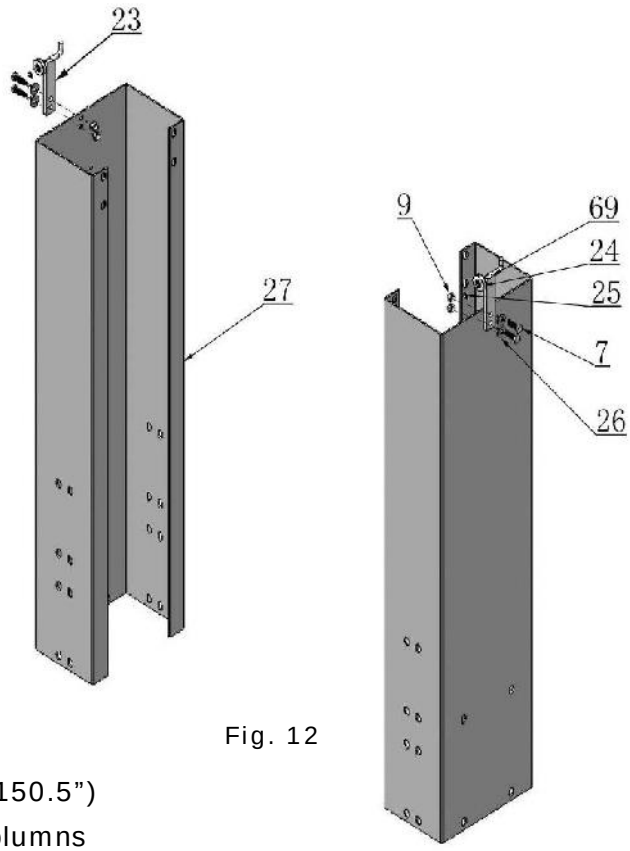


Fig. 12

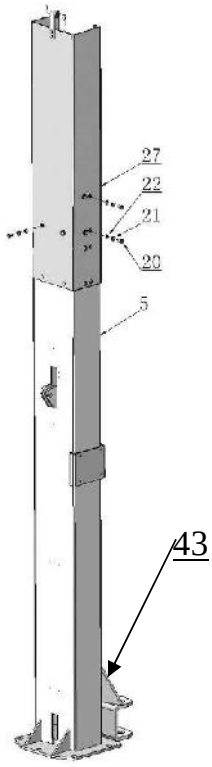


Fig. 13 Low Setting

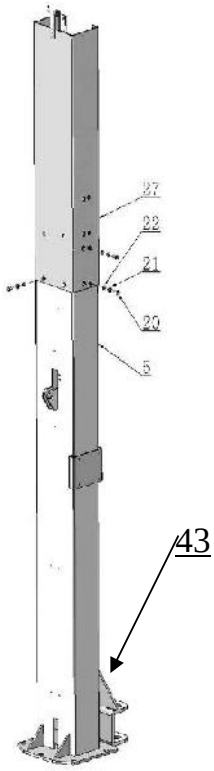


Fig. 14 High Setting

F. Position posts (See Fig. 15)

Position the columns on the installation layout of base plate, shown in step B.

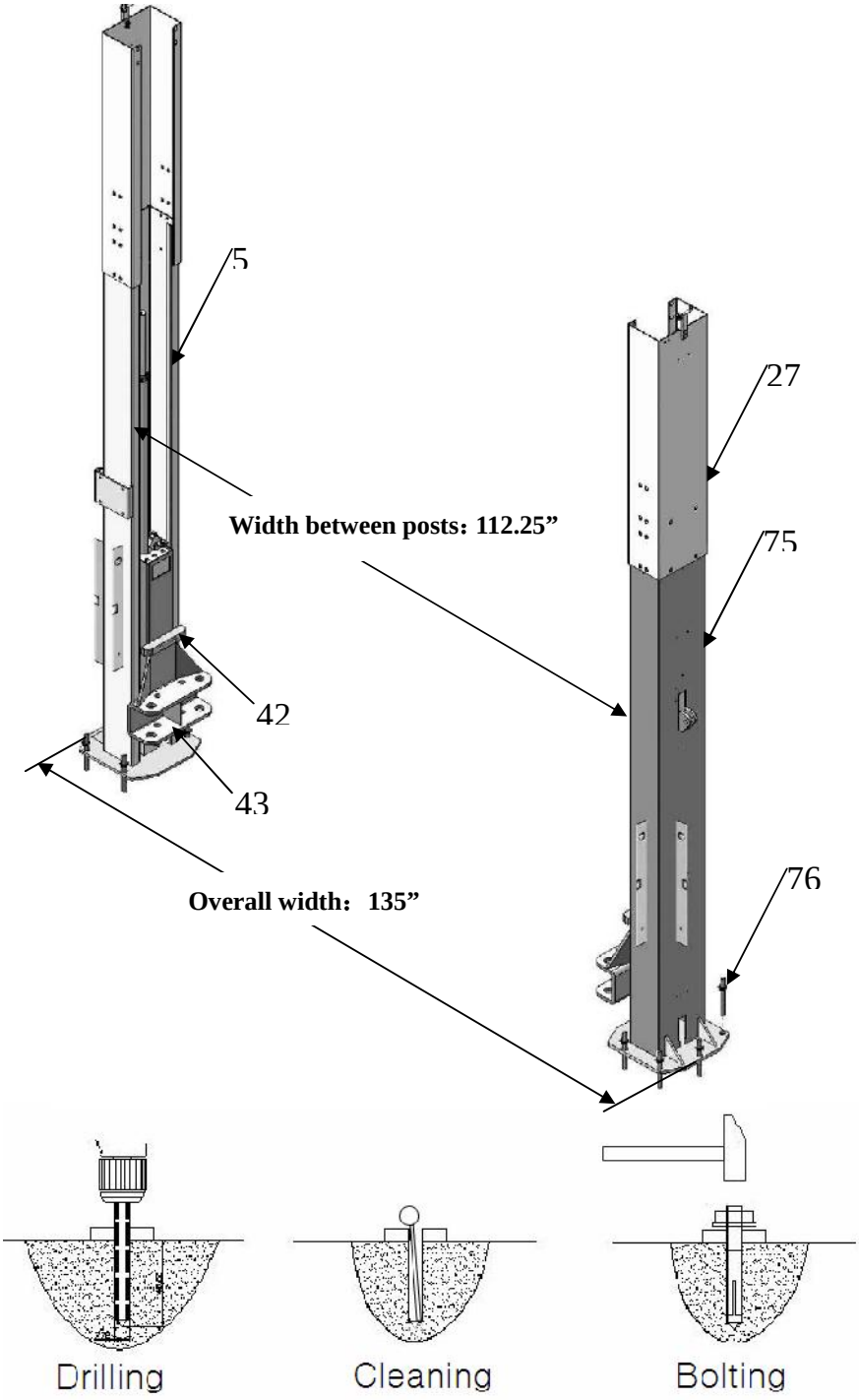


Fig. 15

Install the anchor bolts by drilling through the base plate of one column. Level the

column plumb with a level and adjust with the shims as needed and tighten. The other column will be drilled and shimmed after the assembly of the overhead beam and verifying the base plates are square to the proper width dimension.

G. Install Overhead Top Beam

1. With help of the hook of top beam, put one side of top beam on top of the extension column and connecting the top beam to extension column by bolts, tighten the bolts. Then assemble the connecting bracket (See Fig. 16).

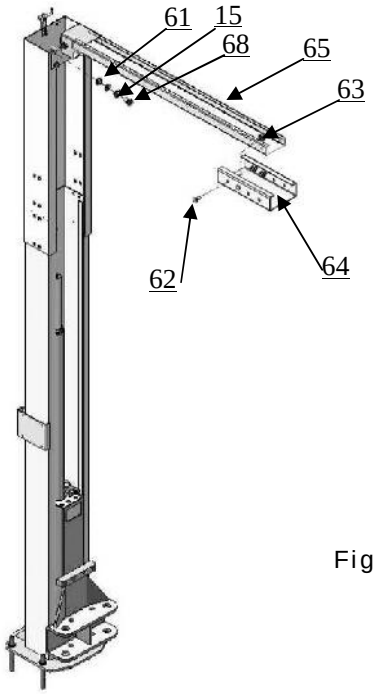
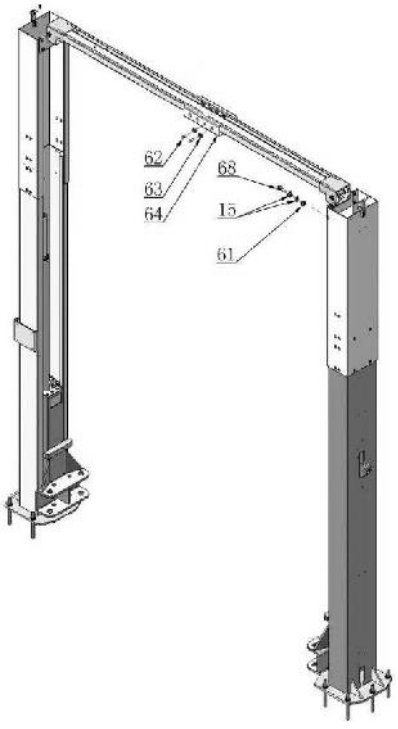
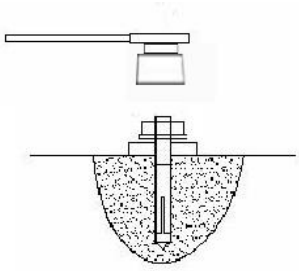


Fig. 16

2. Assemble overhead top beam, tighten all beam bolts. Square and check overall width of columns and adjust unanchored post as needed. Drill, level and anchor the other post. Torque the Anchor Bolts to 100 foot lbs. (See Fig. 17).

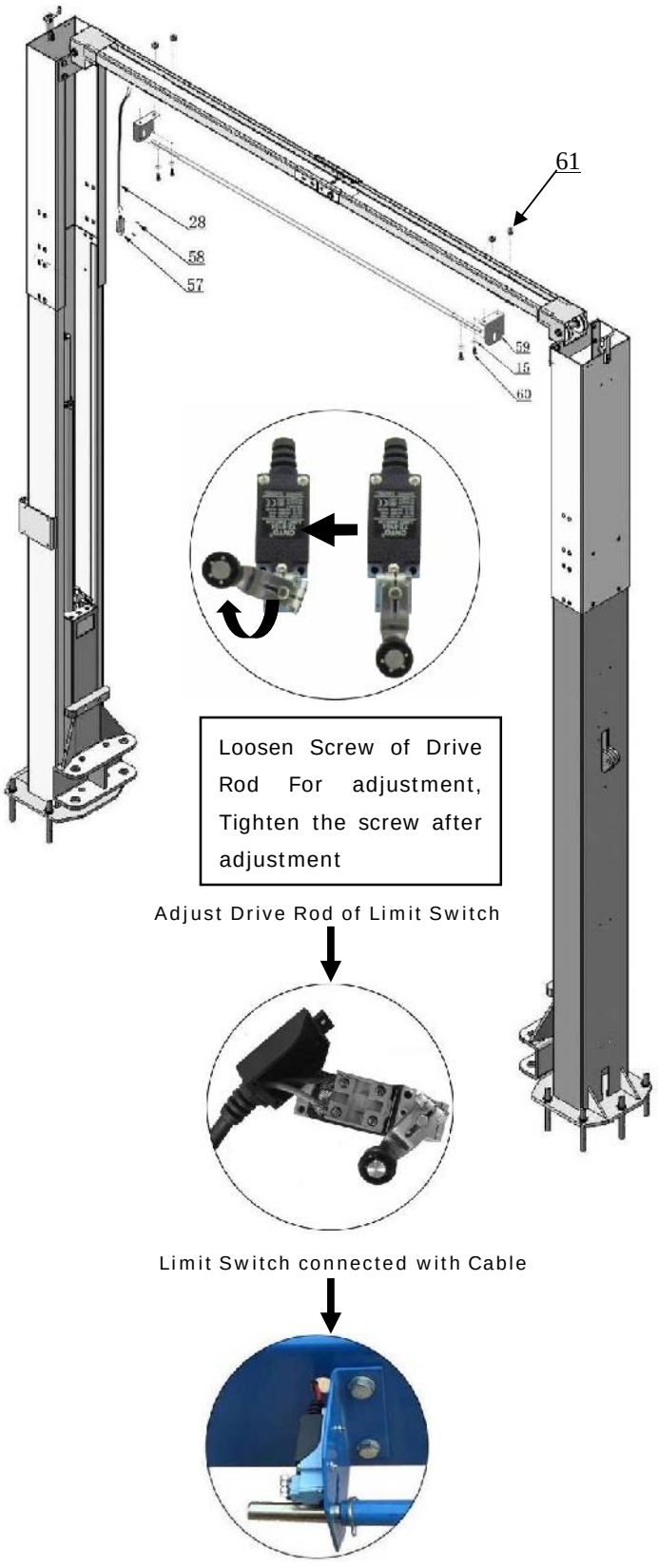




Tighten

Fig. 17

H. Installing the Control Bar and Limit Switch (See Fig. 18).



Installing the Control Bar Bracket and Limit Switch Fig. 18

I. Install Safety Device (See Fig. 19 & Fig. 20).

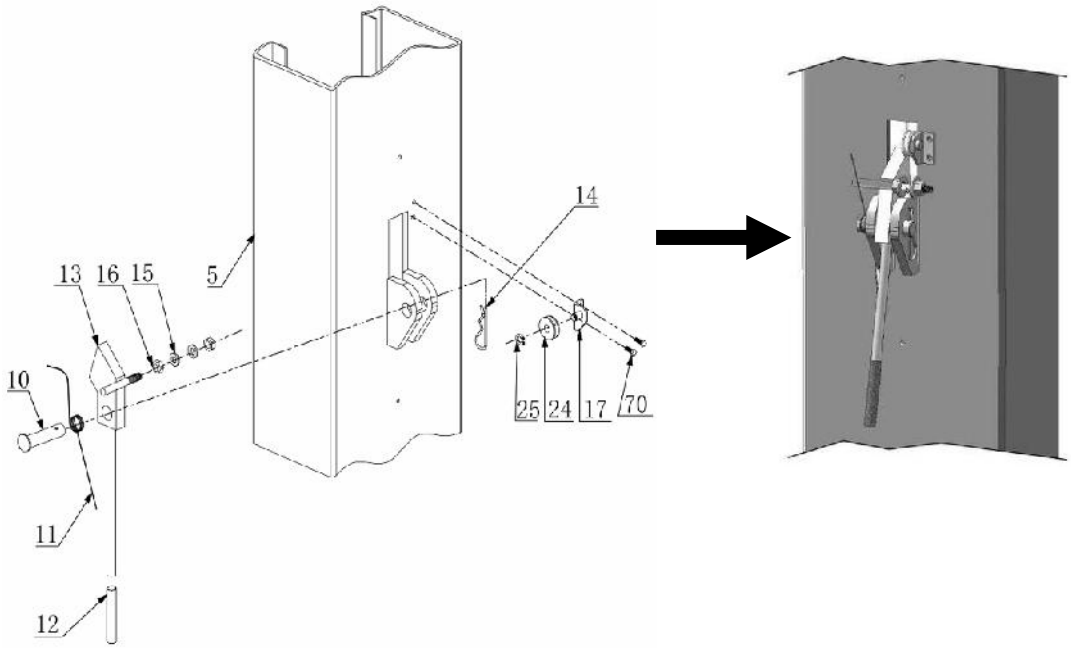


Fig. 19 Power side Safety Device

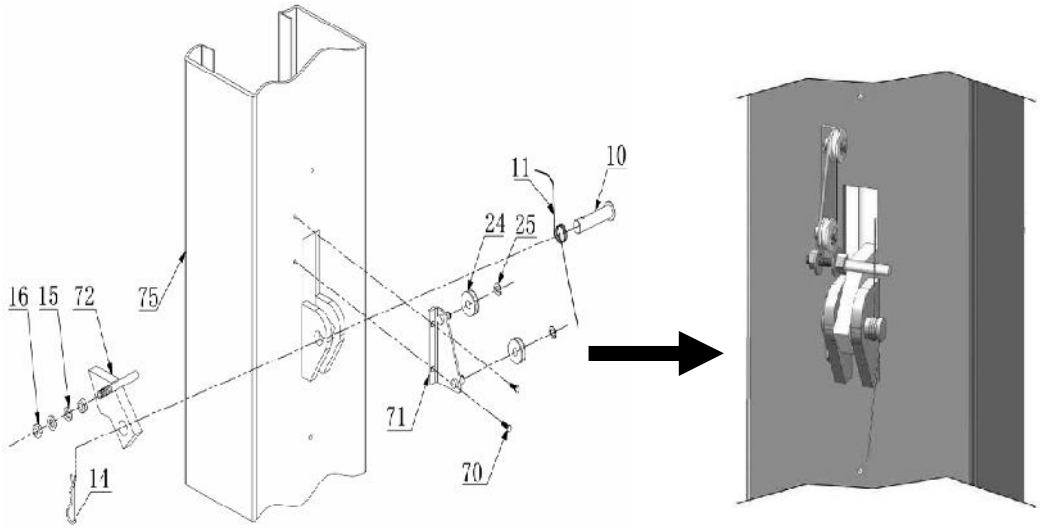


Fig. 20 Offside Safety Device

J. Lift the carriages up to about three feet high (use sufficient lifting means) and set them in the locked position at the same level (See Fig. 21).

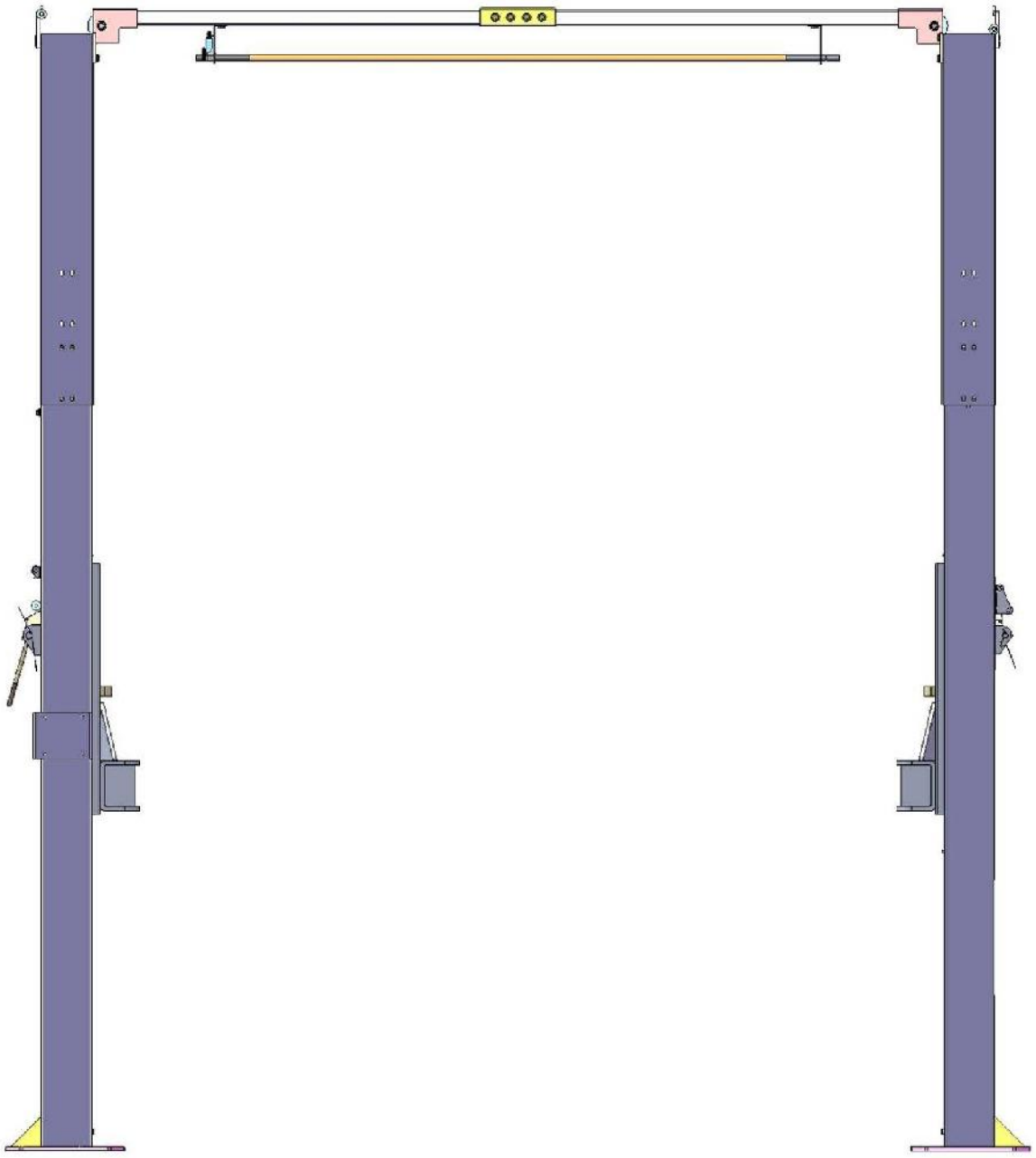


Fig. 21

K. Install Cables

There are two ways of connecting the cables called low setting and high setting connection.

a. For the low setting cable connection (See Fig. 22).

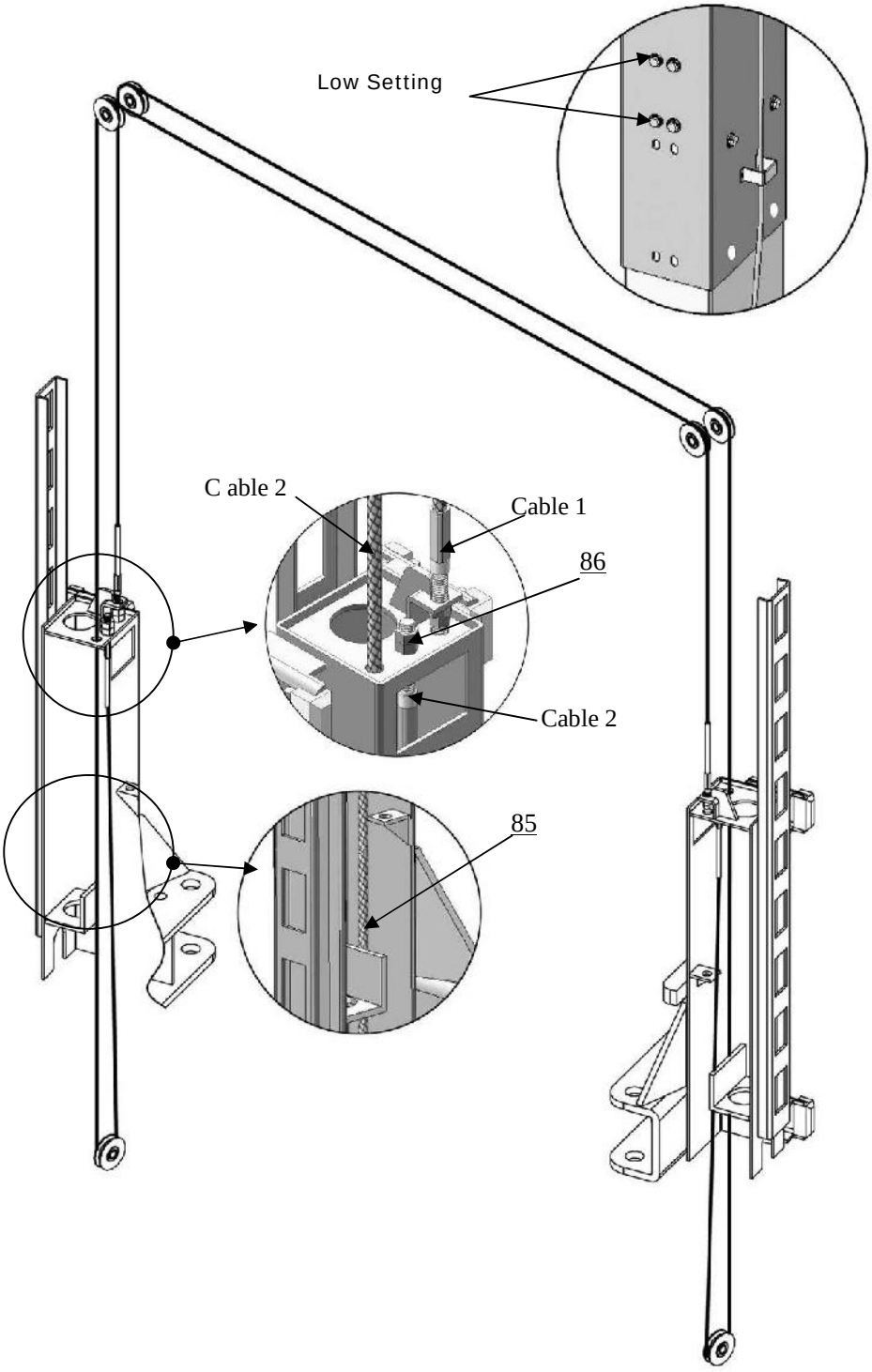


Fig. 22

b. For the high setting cable connection (see Fig. 23).

1. Cable passes through from the bottom of the carriages and can be pulled out from the access hole in front of carriages, then screw the two Cable Nuts (See Fig. 23).

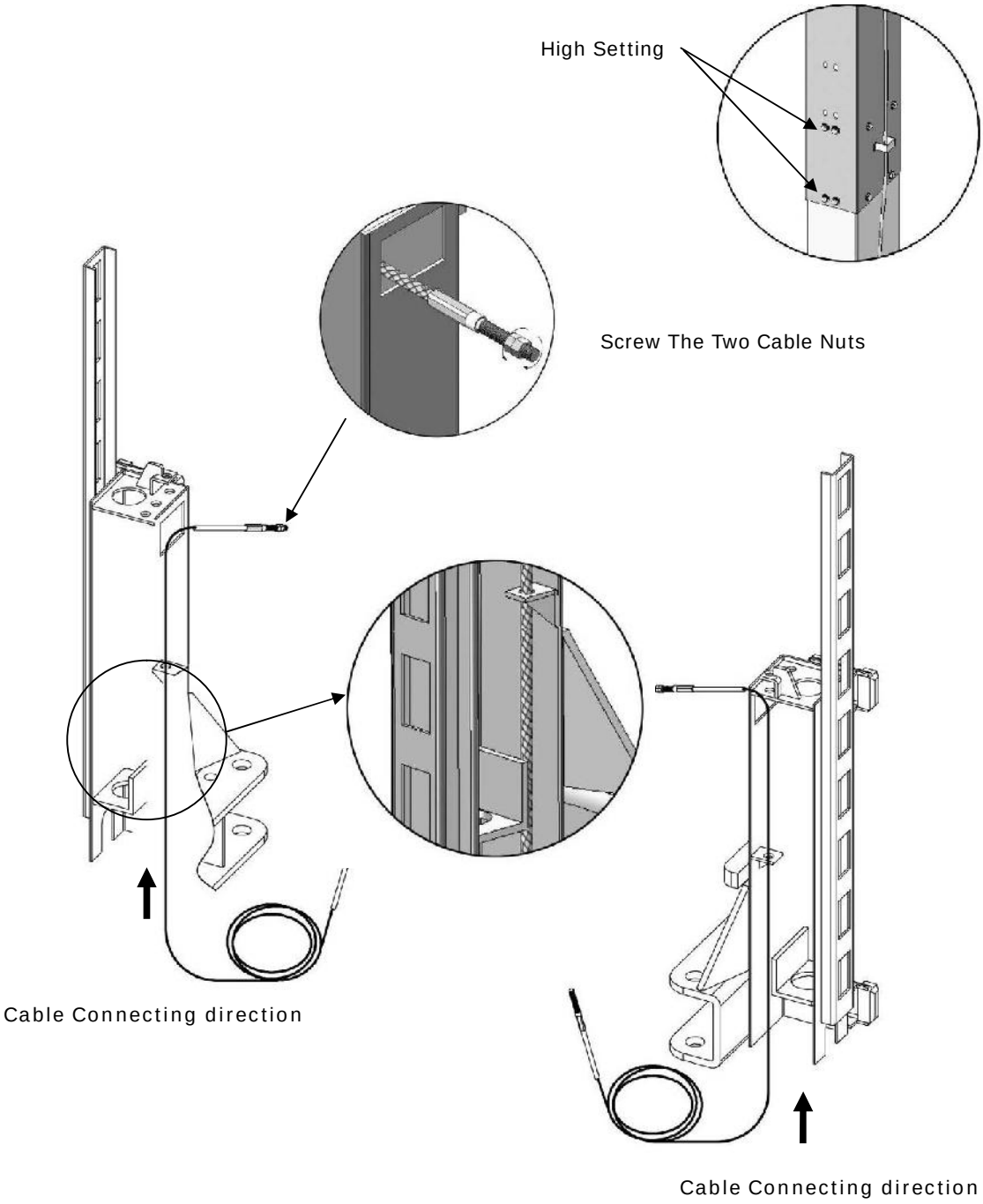


Fig. 23

2. Connecting Cable for high setting (See Fig. 24).

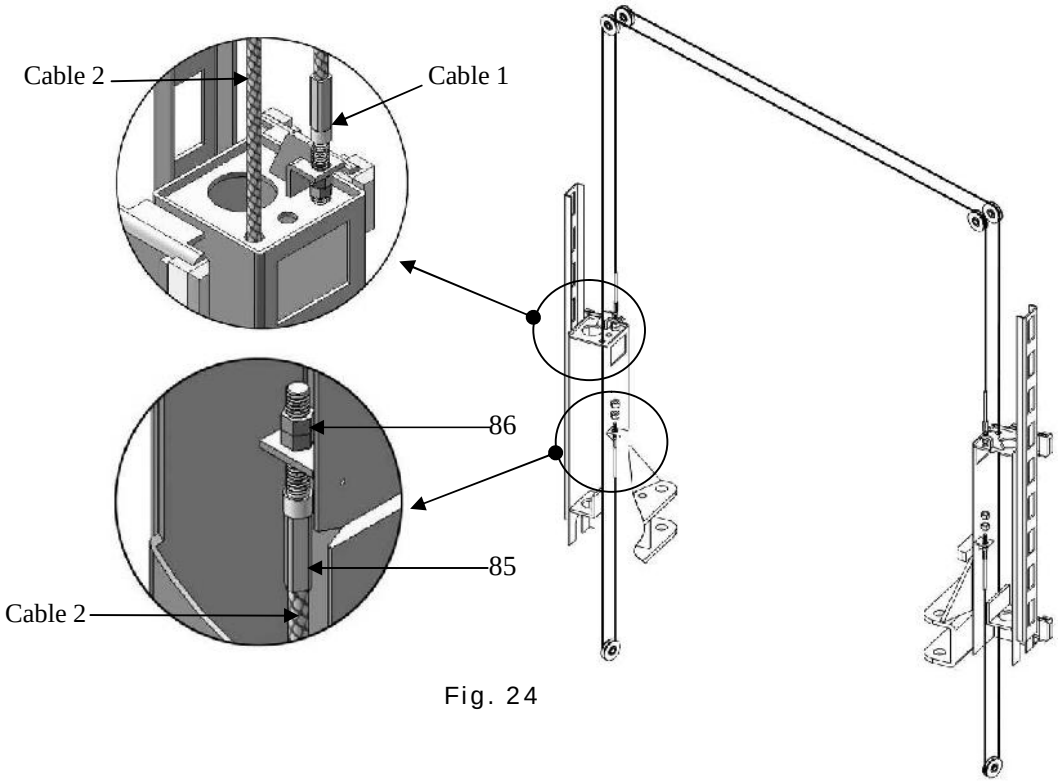


Fig. 24

L. Install Hydraulic Power Unit and Oil Hose Assy. (See Fig. 25).

Tighten all the hydraulic fittings, and fill the Reservoir with Hydraulic Oil (AW 32, 46 or equal non detergent SAE 10 hydraulic oil).

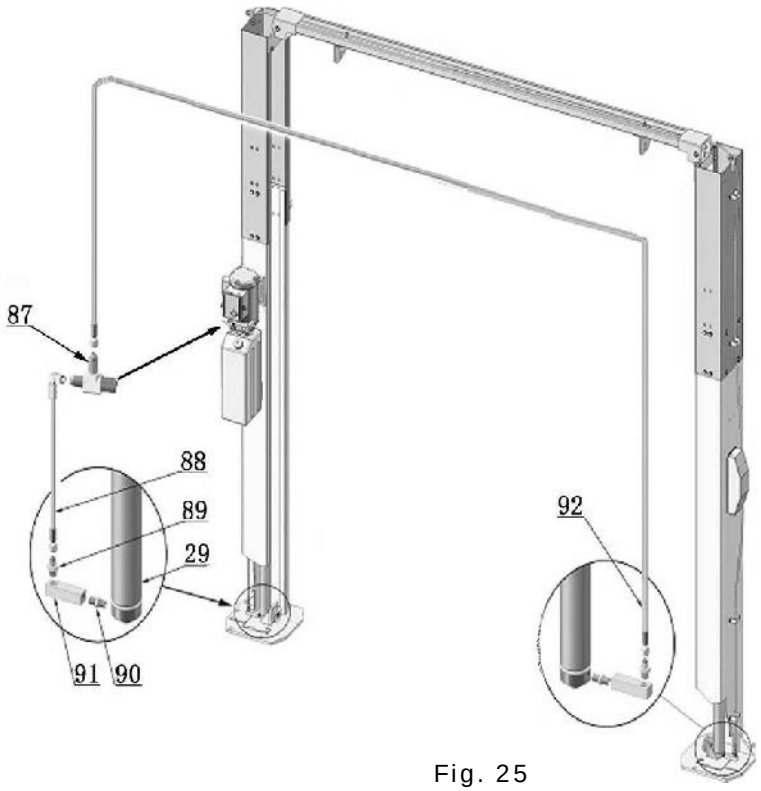
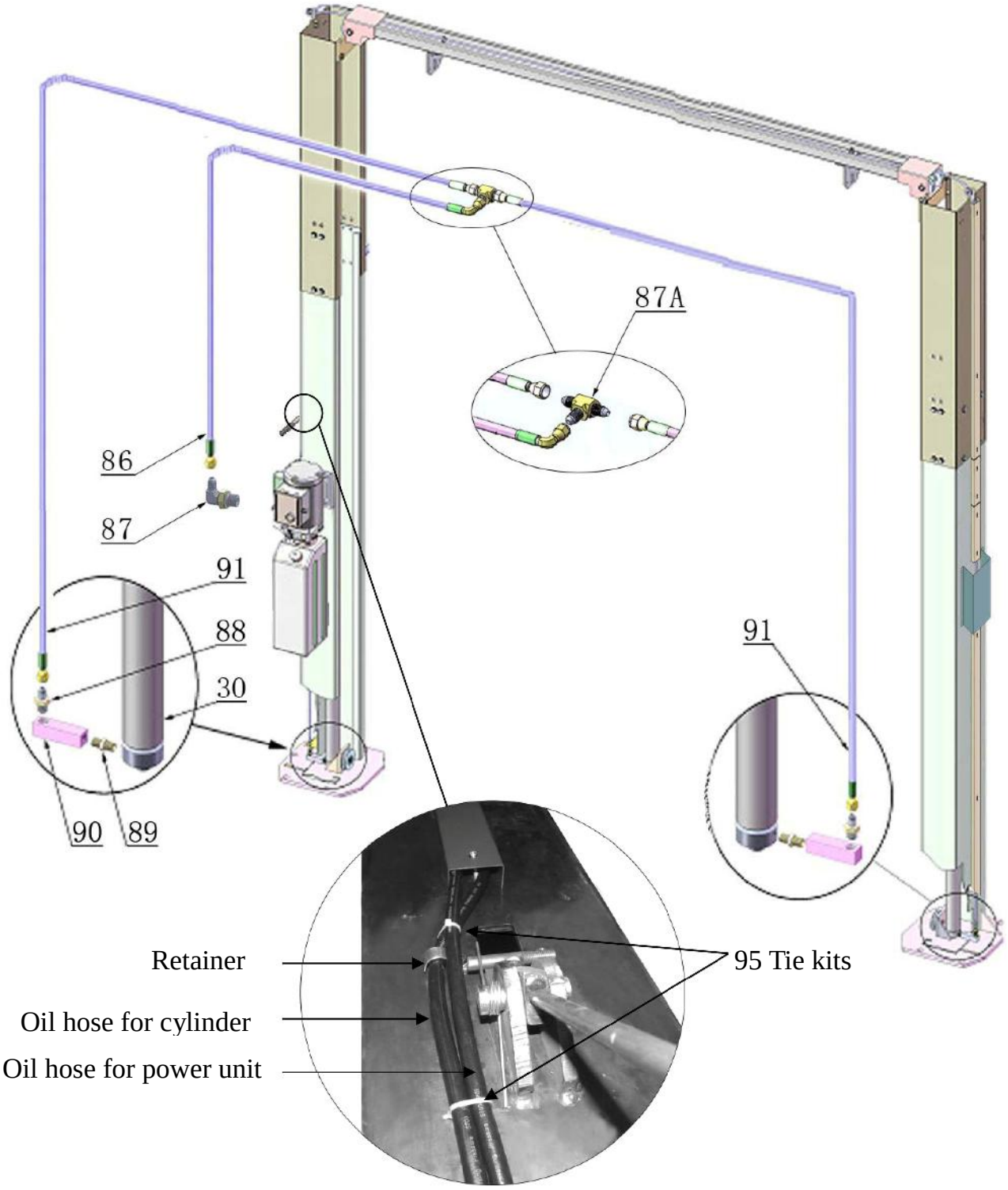


Fig. 25

W-9D New Oil Hose System Installation



Use the retainer to fix the oil hose of cylinder then tighten two oil hoses with tie kits.

No.	Part NO.	Description	Qty/W-9D	
91	206130	Oil hose L=5350mm	2	
87	209060	90° fitting for power unit	1	
86	206132	Oil hose L=4470mm	1	
87A	211016	T fitting	1	

Parts for New Hose System

	Part NO.	Description	Qty/W-9D	
	206074A	Oil hose L=1480mm	1	
	206073	T fitting for power unit	1	
	206061C	Oil hose L=9880mm	1	
	206061D	Oil hose L=11100mm	0	

Parts for Old Hose System

M. Install Safety Cable (See Fig. 26)

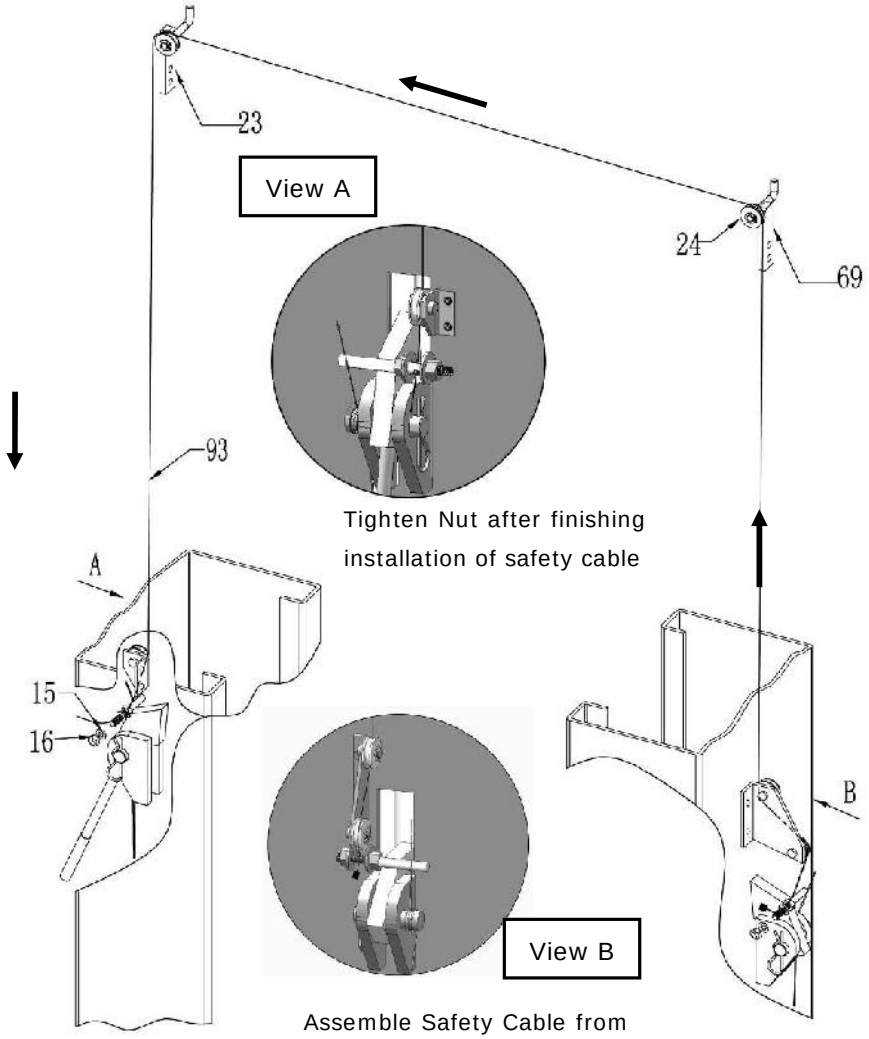
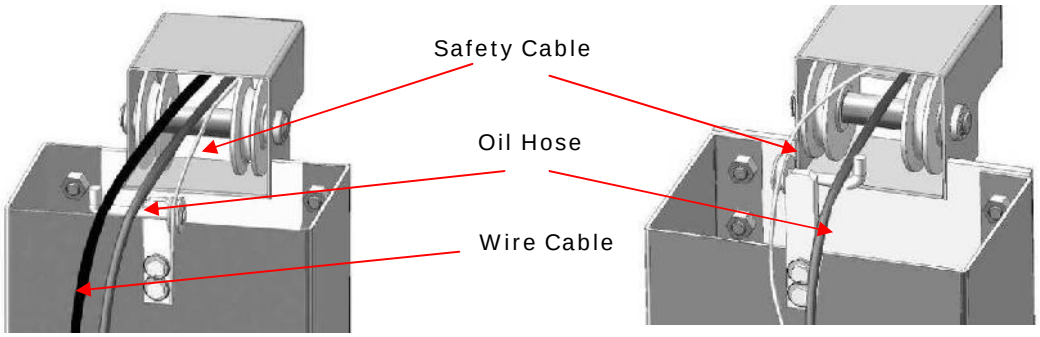


Fig. 26

N. Assembly Cable Retainer

1. Install Oil Hose.

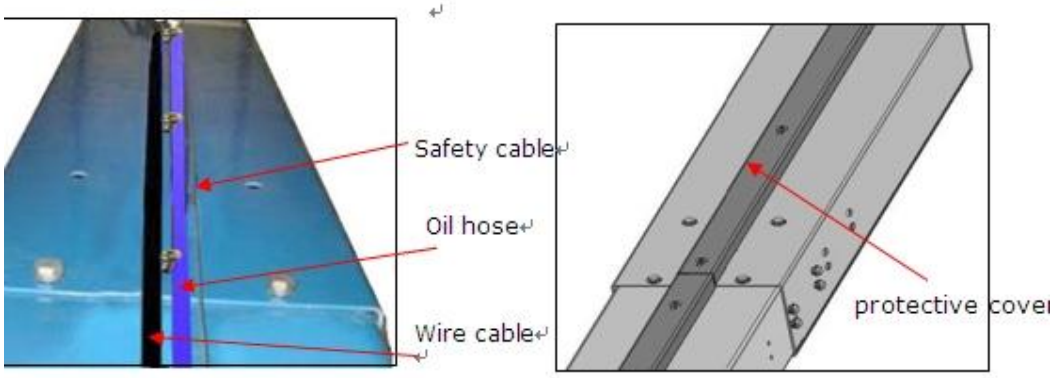
Note: Don't cross the oil hose and safety cable together (See Fig. 27 & Fig. 28).



Powerside Safety Device
Fig. 27

Offside Safety Device
Fig. 28

2. Install Safety Cable and Oil Hose. (See Fig.29 & Fig. 30 & Fig. 31)



Before install the wire protective cover

After install the wire protective cover

Fig. 29

Fig. 30

The Safety Cable can not be put inside cable clamp on top of Overhead Beam

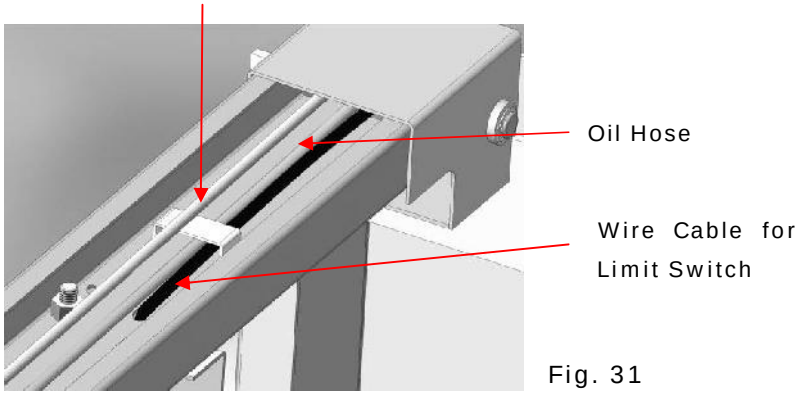


Fig. 31

O. Install Lifting Arms And Adjust The Arm Locks.

1. Install the Lifting Arms (See Fig. 32).

2. Lower the carriages down to the lowest position and then use the 8# Socket Head Wrench to loosen the Socket Bolt (See Fig. 33).

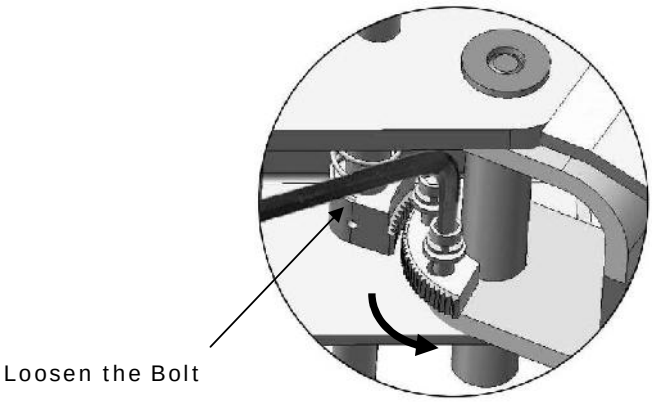


Fig. 32

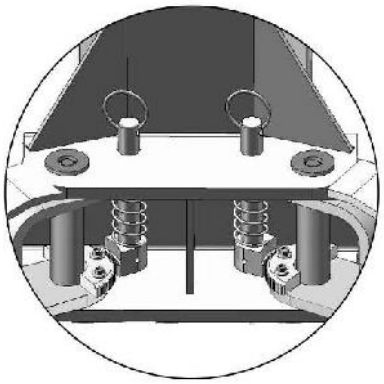


Fig. 33

3. Adjust the arm locks as shown by arrow direction (See Fig. 34)

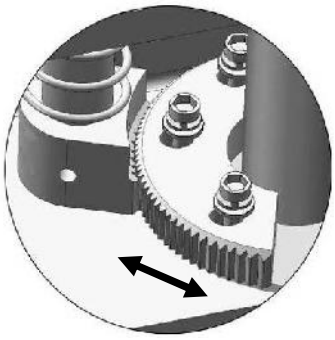


Fig. 34

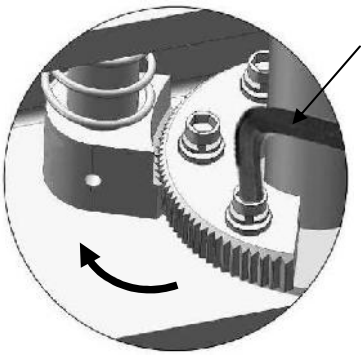


Fig. 35

4. Adjust the Teeth of Arm Locks assy. So it meshes with the Gear of the Lifting Arm. Tighten the Socket Bolts of Arm Lock assy... (See Fig. 35).

P. Install Electrical System

Connect the power source as guided on the data plate of Power Unit.

Note: 1. For the safety of operators, the power wiring must be properly grounded.

Single phase motor (See Fig. 36).

1. Connect the two power supply lines (fire wire L and zero wire N) to terminals of AC contactor marked L1, L2 respectively.
2. Connecting the two motor wires to terminals of AC contactor marked T1, T2.
3. Connecting A2 to L2 of AC contactor.
4. Connect the Limit Switch: Remove the line of Connecting Terminal 4# of control button and A1 of AC contactor first (See Fig. 37), then connect wire12# of Limit Switch with Terminal 4# of control button and connect wire 11# with terminals A1 of AC contactor. (See Fig. 38)

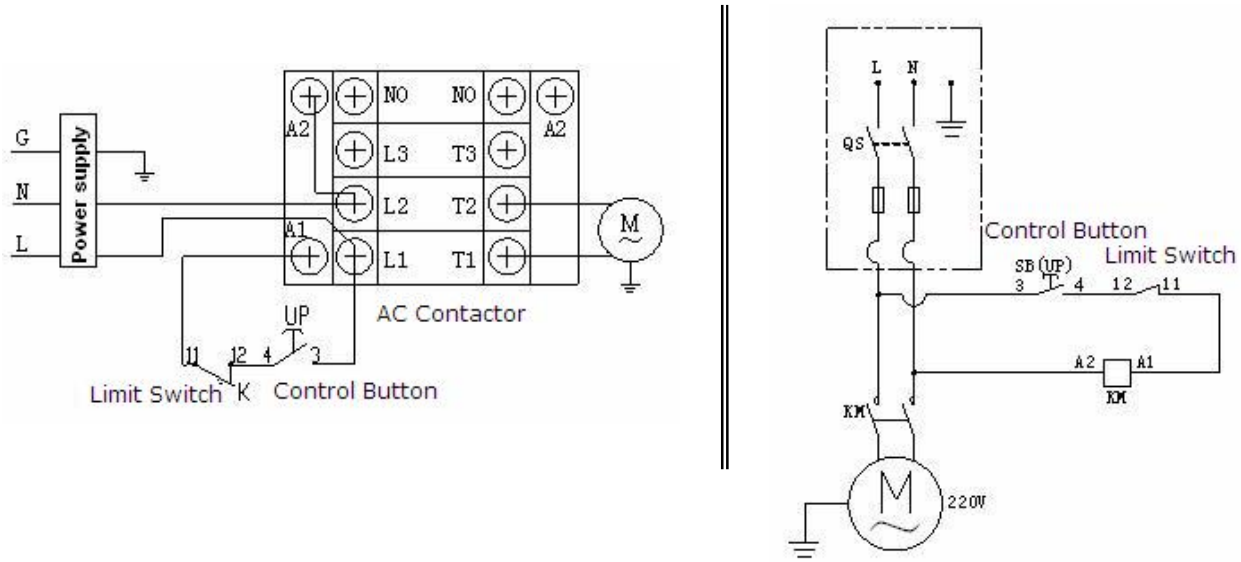


Fig. 36

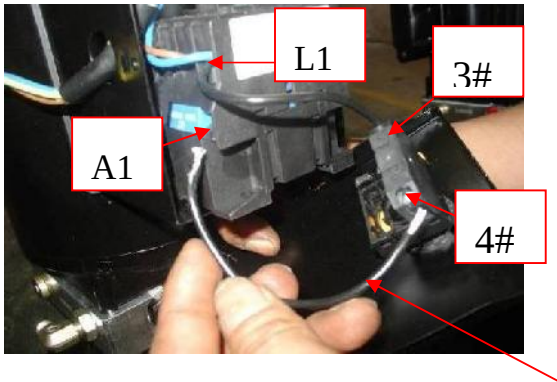


Fig. 37

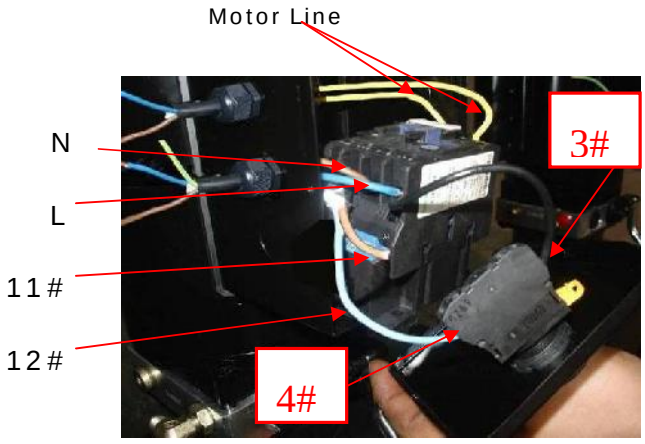


Fig. 38

Remove this line before connecting the Limit Switch

IV. EXPLODED VIEW

Model Weaver Model W-9D

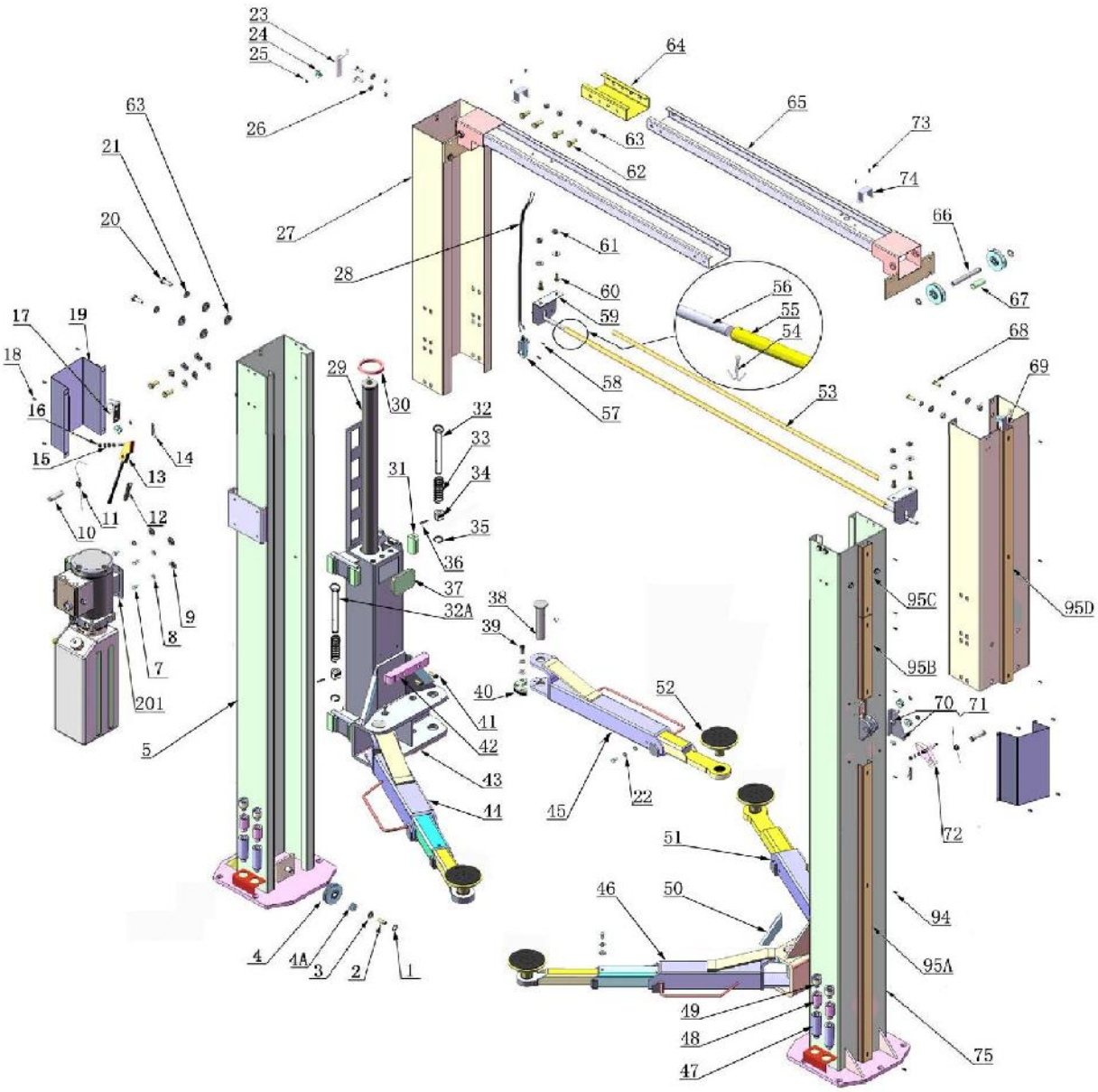


Fig.39

Cylinders

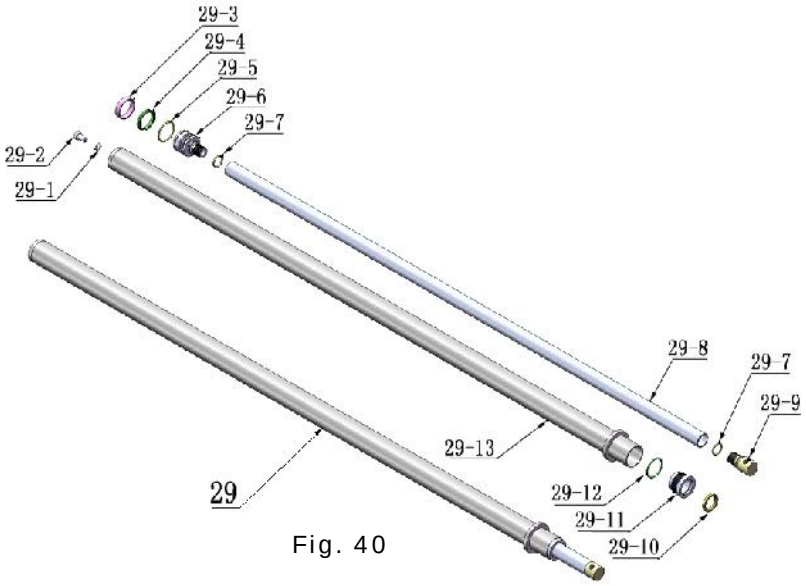
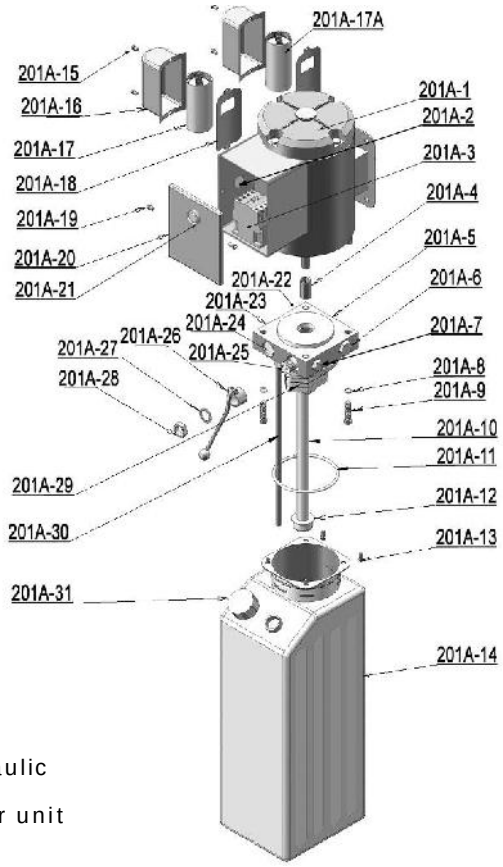


Fig. 40

Hydraulic Power Unit



Hydraulic power unit

Fig. 41

Illustration of Hydraulic Valve for hydraulic power unit

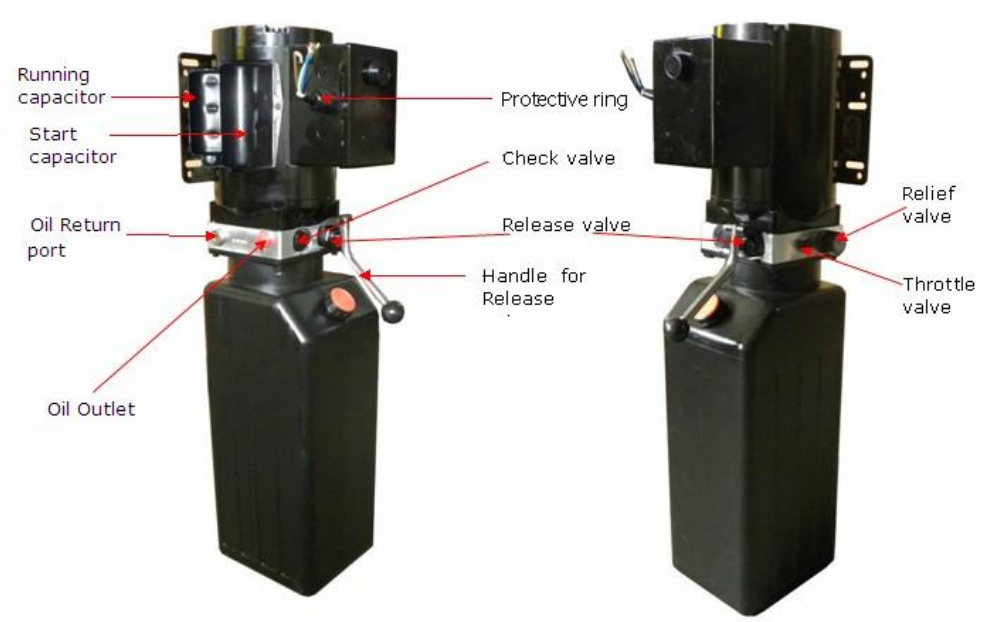


Fig. 42

V. TEST RUN

1. Adjust Synchronous Cable (See Fig. 43)

Use Vise Grips to hold the cable fitting while using a wrench to tighten the cable nut. Make sure the two cables have the same tension so the two carriage locks engage synchronously. Install the plastic cover onto the carriage.

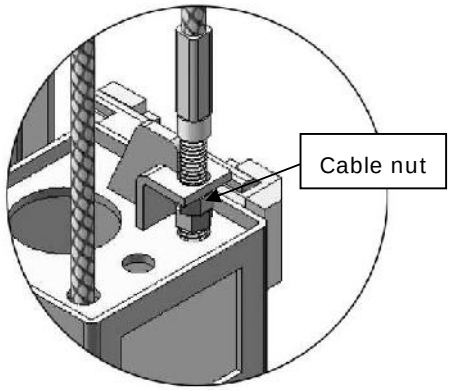


Fig. 43

If the carriages do not Synchronize when lifting, adjust

As follows: (See Fig. 44 & Fig. 45)

a. Press UP button to lift the carriages to the first safety lock. Make sure both have cleared the first safety lock and lower the lift completely so both carriages rest in the locked position.

b. Loosen the cable by adjusting the lock nuts, release the safety lock of the side that the carriage is in higher position. The other side safety lock is in engaged. Then lower the lift, the side with carriage in lower position would be locked, and the other side is unlocked. Continue to lower down the lift till both carriages are at the same level.

c. Tightening the cable nut of the synchronize cables, and tightening the safety cable with the lock nuts, try to lift again, adjust the cables if needed.

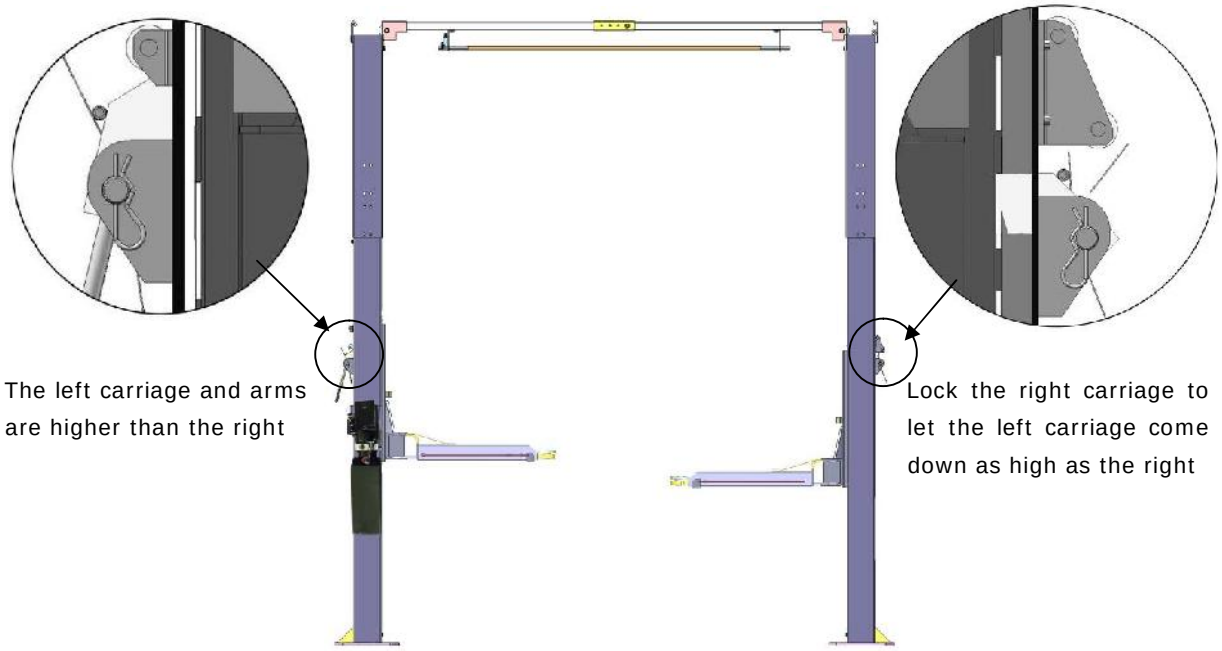


Fig. 44

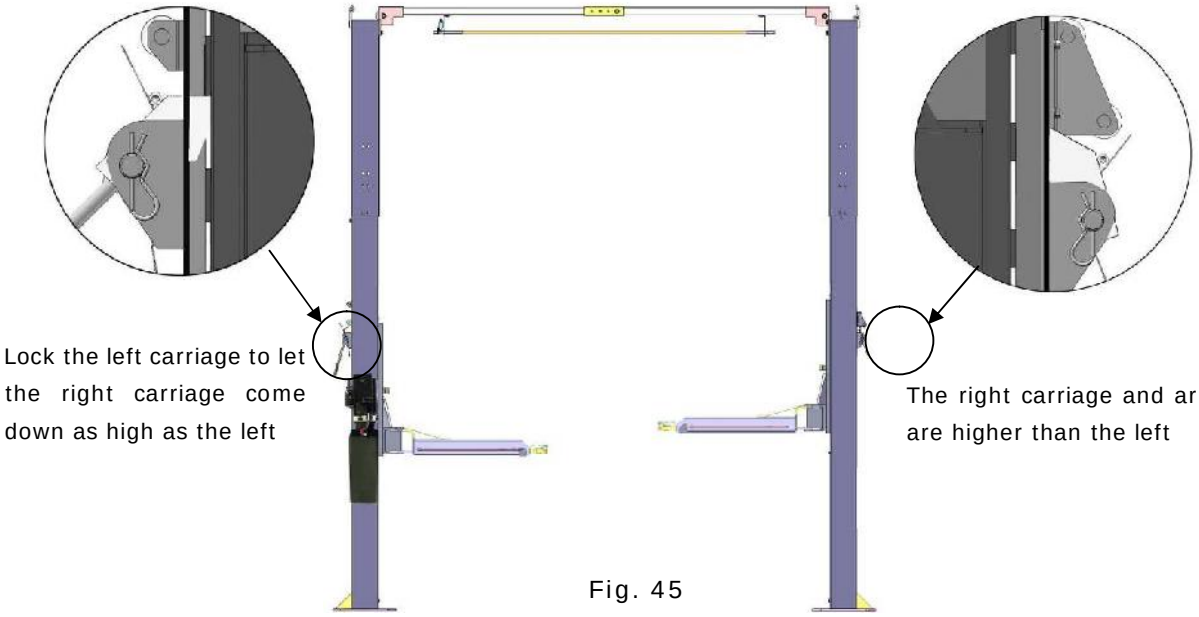


Fig. 45

2. Adjust Safety Cable

Lifting the carriage 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.

4. Test with load

After finishing the above adjustment, perform a test run of the lift with a load. Run the lift in low positions the first few cycles, making sure the lift can rise and lower synchronously. The Safety Device should lock and release synchronously. Test run the lift to the top completely. If there is anything improper or out of adjustment, repeat the above adjustments until correct.

NOTE: The Lift may vibrate during the first lifting cycles. Use the Lift with a load for several times and the air will bleed out through the power unit return line and the vibration should go away. Hold the down lever several seconds after reaches the ground level to release air.

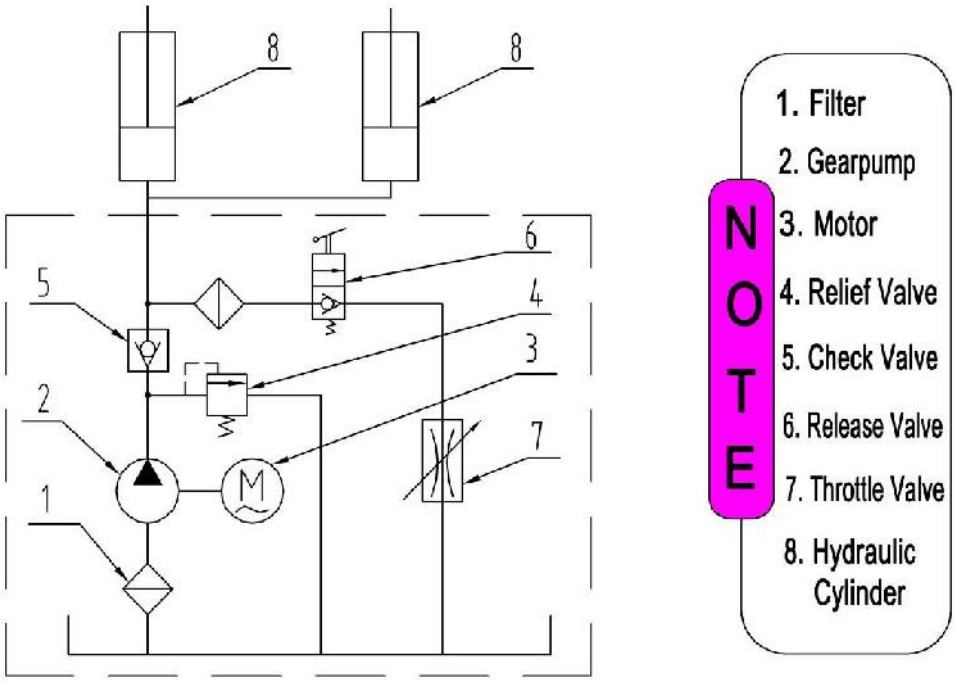


Fig. 46 Hydraulic System

Ⅵ. OPERATION INSTRUCTIONS

Please read the safety tips carefully before operating the lift

To lift vehicle

1. Keep the Lift bay work area clean
2. Position lift arms to the lowest position
3. Shorten the lift arms
4. Open lift arms
5. Position vehicle between columns
6. Move arms to the vehicle's lifting point as guided by the vehicle manufacturer.

   Note: The four lift arms must contact the vehicle's lifting points where manufacturer recommends at the same time.
7. Press the UP button until the lift pads contact underside of vehicle. Recheck to make sure vehicle is secure.
8. Continue to raise the lift slowly to the desired working height, ensuring the balance of vehicle;
9. Push lowering handle to lower lift onto the nearest safety locked position. The vehicle is ready to repair.

To lower vehicle

1. Be sure area under and near the lift is clear, only leaving operator in lift area;
2. Press the button of UP to raise the vehicle slightly, and then release the safety device, lower 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.

VII.MAINTENANCE SCHEDULE

Monthly:

1. Re-torque the anchor bolts to 100 foot lbs.
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 device and make sure proper condition;
6. Lubricate all Rollers and Pins with 90wt. Gear oil or equivalent;

Note: All anchor bolts should take full torque. If any of the bolts does 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 and adjust as necessary, equalize tension of the cables to insure level lifting.
3. Check columns for plumb and level.
4. Check Rubber Pads and replace as necessary.
5. Check Safety device and make sure proper condition.

□. TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Motor does not run	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	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	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	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	1. Release Valve out of work 2. Relief Valve or Check Valve leakage 3. Cylinder or Fittings leaks	Repair or replace
Lift raises slowly	1. Oil line is jammed 2. Motor running on low voltage 3. Oil mixed with air 4. Gear Pump leaks 5. Overload lifting	1. Clean the oil line 2. Check Electrical System 3. Fill tank 4. Replace Pump 5. Check load
Lift can not lower	1. Safety device are in activated 2. Release Valve in damage 3. Safety cable broken 4. Oil system is jammed	1. Release the safeties 2. Repair or replace 3. Replace 4. Clean the oil system

IX. Parts List For Weaver Lift Model W-9D (See Fig. 39)

Item.	Part No.	Description	Qty.		Note
			W-9D		
1	206019	Snap Ring	6		
2	206058	Bolt	2		
3	206059	Washer	2		
4	206020	Pulley	6		
4A	209057A	Bronze Bush For Pulley	6		
5	206001	Powerside Inner Column	1		
201	209002	Manual Power Unit	1		
7	209003	Hex Bolt	8		
8	209004	Rubber Ring	4		
9	209005	Nylok Nut	8		
10	206002	Safety Pin	2		
11	209007	Safety Spring	2		
12	206003	Handle Protective Plastic cushion	1		
13	206004	Powerside Safety Lock	1		
14	209012	Hair Pin	2		
15	206006	Washer	24		
16	206023A	Hex Nut	4		
17	206004A	Safety Pulley Bracket	1		
18	209009	Cup Head Bolt	8		
19	206081	Safety Cover	2		
20	209126	Hex Bolt	20		
21	209022	Washer	58		
22	209039	Lock Washer	18		
23	206010	Safety Pulley Bracket	1		
24	206009	Plastic Pulley	5		
25	209010	Snap Ring	5		
26	209033	Washer	4		
27	206008	Extension Column	2		
	206008A		0		
28	206015A	Wire Cable	1		
	206015B		0		
29	217056	Hydraulic Cylinder	2		
30	209111	Protective Ring For Cylinder	2		
31	206044	Slider Block	16		
32	206046A	Arm Lock Bar	2		

Item.	Part No.	Description	Qty.		Note
			W-9D		
32A	206046B	Arm Lock Bar	2		
33	206050A	Spring	4		
34	217044	Arm Lock	4		
35	206032	Snap Ring	4		
36	206036	Hair Pin	4		
37	209016	Carriage Plastic Cover	2		
38	217047	Arm Pin	4		
39	206048	Socket Bolt	12		
40	206049	Moon Gear	4		
41	206046	Self-tapping Screw	4		
42	206045	Protective Rubber	2		
43	206052A	Carriage	2		
44	206075	Lifting Arm – Front Right (drop-in)	1		
45	206076	Lifting Arm – Rear Right (drop-in)	1		
46	206077	Lifting Arm – Front Left (drop-in)	1		
47	209053	Stackable Adapter (6”)	4		
48	209052	Stackable Adapter (3”)	4		
49	209051	Stackable Adapter (1.5”)	4		
50	206072	Protective Rubber Set	4		
51	206078	Lifting Arm – Rear Left (drop-in)	1		
52	680030	Rubber Pad Frame Support	4		
53	206025A	Foam Cushion	1		
54	201005	Split Pin	2		
55	206025	Control Bar	1		
56	206025C	Connecting Pin for Control Bar	2		
57	206013	Limit Switch	1		
58	206011	Cup Head Bolt	2		
59	206042	Control Bar Support Bracket	2		
60	206041	Hex Bolt	4		
61	206023	Nylok Nut	12		
62	206017	Hex Bolt	8		
63	209056	Nylok Nut	28		
64	206016	Connecting Bracket	1		
65	206018	Top Beam W/Bracket	2		
66	206021	Pin For Pulley	2		
67	206022	Top Pulley Tube	2		
68	206024	Hex Bolt	8		
69	206010A	Safety Pulley Bracket	1		
70	206008A	Hex Bolt	4		

Item.	Part No.	Description	Qty.		Note
			W-9D		
71	206008B	Safety Pulley Bracket	1		
72	206026	Offside Safety Lock	1		
73	206028	Cup Head Bolt	4		
74	206029	Retainer	2		
75	206030	Offside Inner column	1		
76	209059	Anchor Bolts	10		
94	206079	Cup Head Bolt	20		
95A	206080-1	Protective Cover A	2		
95B	206080-2	Protective Cover B	2		
95C	206080-3	Protective Cover C	2		
95D	206080-4	Protective Cover D	2		
Parts For Oil Hose, Fitting & Cable (See Fig. 22, Fig. 24, Fig. 25, Fig. 26)					
85	206064A	Cable	2		
	206064B		0		
86	209066	Cable Nut	8		
87	206073	T- Fitting For Power Unit	1		
88	206074	Hose	1		
89	209064	Straight Fitting	2		
90	206062	Straight Fitting	2		
91	233009	Pipe Fitting	2		
92	206061A	Hose	1		
	206061B		0		
93	206065	Safety Cable	1		
	206065A		0		
96	217048	Retainer	2		
Parts For Hydraulic Cylinder (See Fig. 40)					
29-1	209069	O-Ring	2		
29-2	209070	Bleeding Plug	2		
29-3	209071	Support Ring	2		
29-4	209072	Y-Ring	2		
29-5	209073	O-Ring	2		
29-6	209074	Piston	2		
29-7	209075	O-Ring	2		
29-8	209076A	Piston Rod	2		
29-9	209077	Piston Rod Fitting	2		
29-10	209078	Dust Ring	2		
29-11	209079	Head Cap	2		
29-12	209080	O-Ring	2		

Item.	Part No.	Description	Qty.		Note
			W-9D		
29-13	209081A	Bore Weldment	2		
Parts For Power Unit (See Fig. 41)					
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-17 A	209095B	Running 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		