2 Post Overhead Lift Single (1) Point Manual Release Lifting Capacity 10000 lbs

# Installation & Operation & Maintenance Instructions

Important Note

1. This equipment can not be installed operated or repaired without reading instructions.

2. Electricity must be

3. Do not use this equipment beyond its rated capacity.

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# 1 - Equipment Description

#### 1.1 Description

This 2 Post Overhead Lift is an advanced car maintenance equipment, mainly used for automotive's repair and maintenance.

#### 1.2 Technical Specifications

Lift Capacity	4500kg / 10000lbs
Overall Height	3880mm/152.76"
Overall Width S	3571mm/140.59"
Overall Width A	3682mm/144.96"
Maximum Lifting Height W/O Truck Adaptor	1900mm / 74.81"
Minimum Height	100mm / 3.93"
Lifting Time	55s
Outside Column to Outside Column Width S	3374mm/132.83"
Outside Column to Outside Column Width A	3441mm/135.47"
Inside Column Width S	3011mm / 118.54"
Inside Column Width A	2980mm / 117.32"
Drive Through S	2707mm/106.57"
Drive Through A	2570mm/101.18
Column Thickness of Steel	5.5mm / 0.217"
Carriage Thickness of Steel	4.75mm / 0.187"
Arms Thickness of Steel	5.5mm / 0.217"
Cable Diameter	8.2mm / 0.323"
Voltage	220v
Power	2.2kw / 3hp
Breaker	30A
Hydraulic Fluid Requirment	3-5 Gallons AW32/AW46
Equipment Weight	680kg / 1433lbs

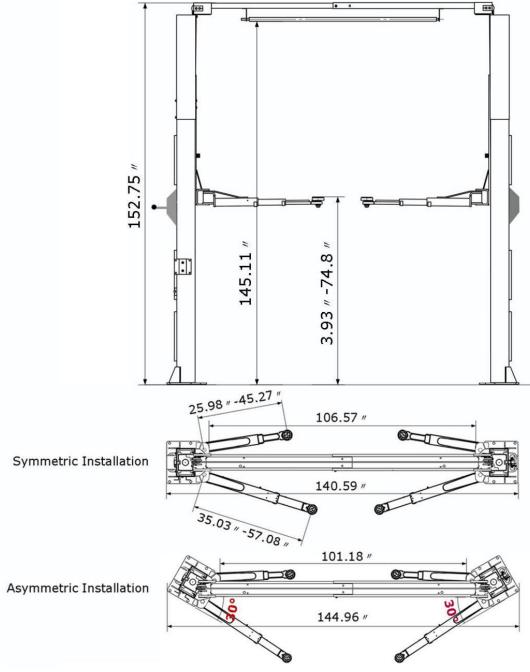


Fig 1 Dimensions

#### 2 - Installation

This 2 Post Overhead Lift is the most common equipment for repairing cars. Its installation is not only related to the maintenance efficiency but also to personal safety of the maintenance technicians. Therefore, the installation must be completed by certified installers according to the User Manual, and in accordance with installation regulations. Recommend to use manufacturer supplied anchor bolts.

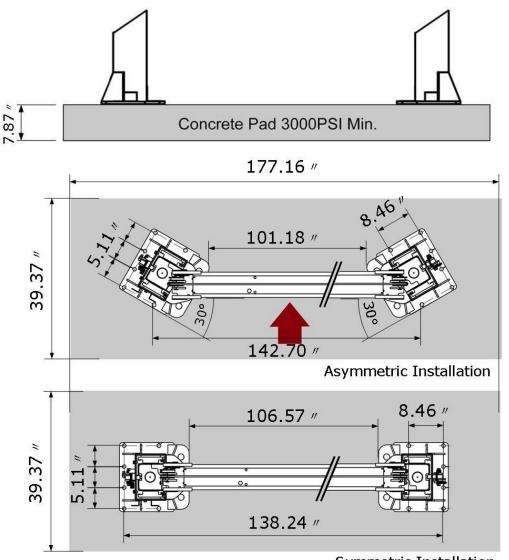
Warning: This equipment has 2 installation methods, which is symmetrical installation and asymmetric installation. No matter which installation method is selected, all installation processes including foundation, beam, column, and cable fixing methods must refer to the corresponding installation method. Failure to do so may result in equipment being unusable or damaged.

#### 2.1 Preparation

#### 2.1.1 Foundation

The lift must be installed on a level concrete foundation with a minimum concrete thickness of 6" (7.87" is recommended) and a strength of 3000 psi or more. The newly poured concrete needs to be dried thoroughly before installation. (Fig 2).

Warning: The size and concrete parameters of the foundation are the minimum strength and foundation depth parameters of the installation. The user needs to adjust the thickness and floor space of the foundation according to the maximum weight. It can also be done at the dealer's suggestion.



Symmetric Installation

Fig 2 Foundation Requirement

#### 2.1.2 Tools Required

Hammer, Socket Wrench Set, Hex Wrench Set, Adjustable Wrench, Screwdriver, Measuring Tape(16'+), Long-Nose Plier, Circlip Pliers, Electric Rotary Hammer, Drill(3/4"), Safety Glasses, Work Gloves, Safety Helmet, Forklift/Crane or something similar.

# 2.2 Equipment Installation

### 2.2.1 Assemble Columns

Assemble main column & extension column, and then stand up the 2 columns (the column with the power unit base plate is the main column and the other one is the vice column) (Fig 3)



Note: Don't drill anchor bolts holes or install anchor bolts now.

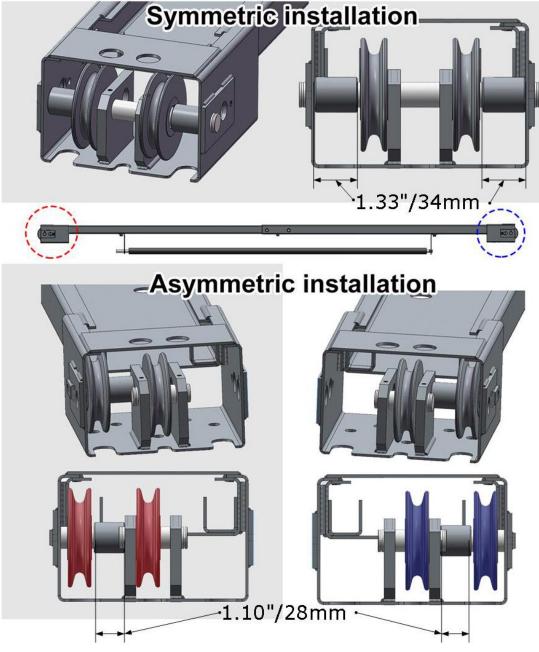
Fig 4 Assemble overhead top beam

2. Install the overhead beam cable pulley (Fig 5)

Warning: Symmetrical installation and asymmetrical installation of the cable pulley positions are not universal. Incorrect installation of the pulley positions may cause damage to the cable or the lift.

A.For symmetrical installation, use the long shaft and the long shaft sleeve (1.33 "/ 34mm) to fix the cable pulley (pre-installed).

B.For asymmetric installation, use 4 short shafts and 2 short shaft sleeves (1.10 "/ 28mm) in the accessory box to fix the cable pulley.





C.Mounting position of cable pulley (Fig 6)

Note: During the installation, the positions of the cable pulley at both ends of the overhead beam should be installed correspondingly. There may be a gap between the cable pulley and the shaft sleeve, this is for the cable can be automatically aligned, normal abrasion. Do not add shim to fix the position of pulley, it may cause abnormal wear of the lift.

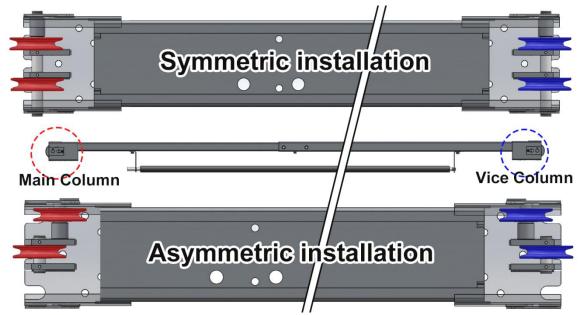


Fig 6 Cable Pulley Position

#### 2.2.3 Position Columns

Check if the columns are vertical to the ground with level, insert thin shims (come with package) to adjust when necessary.

1.Symmetric Installation (Fig 7)

2.Asymmetric Installation (Fig 8)

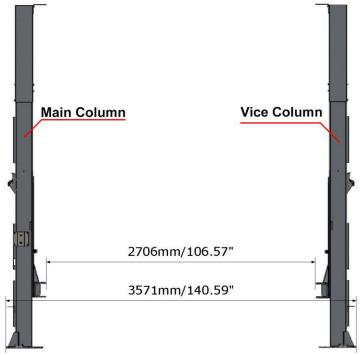


Fig 7 Symmetric installation position columns



Fig 8 Asymmetric installation position columns

#### 2.2.4 Install overhead top beam

1. When symmetrical installation method is adopted, cable pulley (refer to Fig. 6) should be installed according in a symmetrical manner and fix the 6 screws underneath the overhead beam (Fig. 9)

2. When asymmetrical installation is adopted, cable pulley (refer to Fig. 6) should be installed according in asymmetrical manner and fix the 5 screws underneath the overhead beam (Fig. 10).

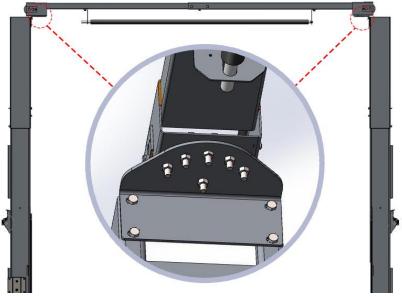


Fig 9 Symmetric Install overhead top beam

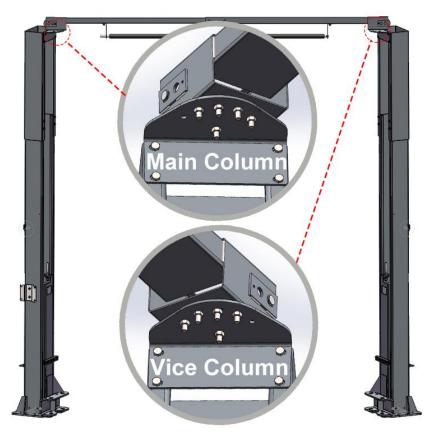
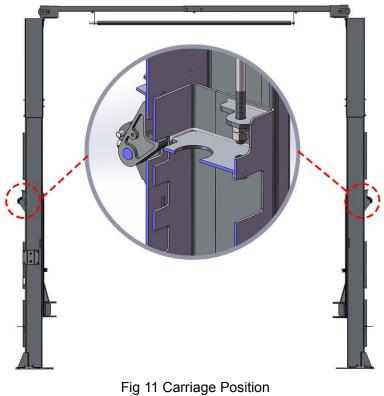


Fig 10 Asymmetric Install overhead top beam

#### 2.2.5 Adjust Carriage

Raise the carriage to the 1st locking position located at the bottom of the column(Fig 11). Note: You can hear "click" once locked (the 1st locking position is about 11.8" from the ground)



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#### 2.2.6 Install Cables (2 Cables in total)

Note: Please pay attention to the change of the hanging point of the cable during symmetrical installation (Fig12) and asymmetrical installation (Fig13) during the installation.

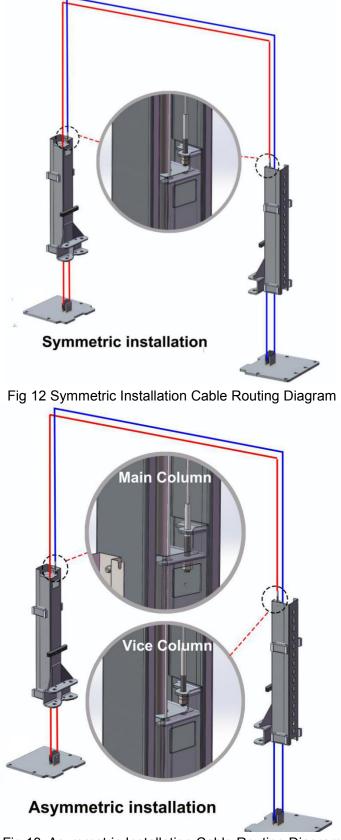


Fig 13 Asymmetric Installation Cable Routing Diagram

#### 2.2.7 Install Hydraulic Hose (2 Hose in total)

Connect the longer hose in between the 2 cylinders, connect the short hose in between the cylinder and the power unit. Please hand tighten to avoid thread damage, then use hand wrench to fasten completely. (Fig 14)

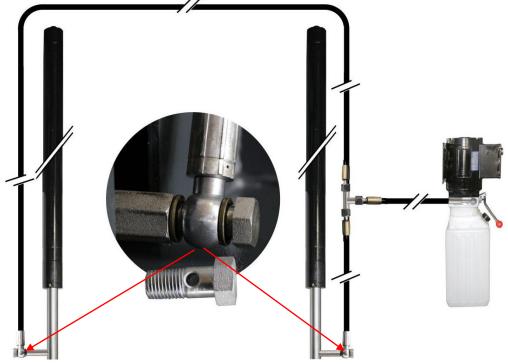


Fig 14 Hydraulic Hose Diagram

#### 2.2.8 Install Safety Lock Release Cable

1. The safety lock has been pre-installed.

2. Install safety lock release cable to connect the safety lock on the main column and vice column. (Fig 15)

3.Install safety lock cover.

NOTE: Press the single point lock release lever on the main column to check if this lever can release the mechanisms in both columns at the same time. Adjust the safety lock release cable adjustment screw if necessary until the lever can release the mechanisms in both columns at the same time.

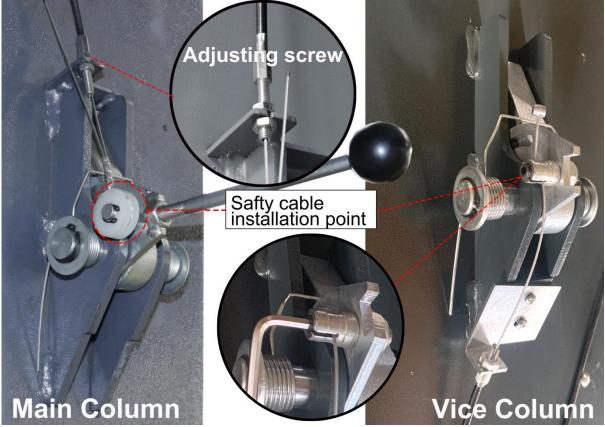


Fig 15 Safety lock release cable installation diagram

#### 2.2.9 Install Power Unit

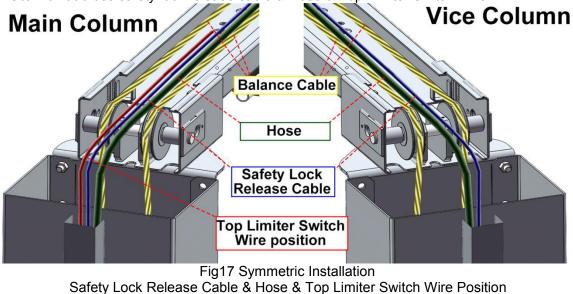
Install power unit & Motor mounting plate on the main column with M8 screws (Fig 16).



Fig 16 Power Unit Installation Diagram

#### 2.2.10 Safety Lock Release Cable & Hose & Top Limiter Switch Wire Protection cover.

1. Safety Lock Release Cable & Hose & Top Limiter Switch Wire Position (Fig 17&Fig 18) **NOte:**Don't across safety lock release cable & Hose & Top Limiter Switch Wire



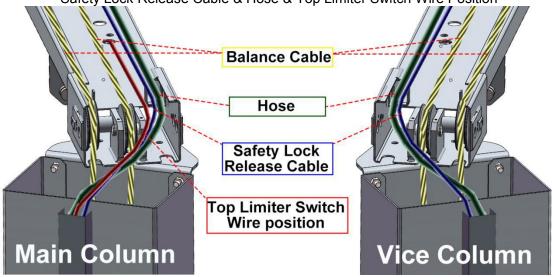


Fig 18 Asymmetric Installation Safety Lock Release Cable & Hose & Top Limiter Switch Wire Position 2.Install protection cover (Fig 19)

NOTE: The protection cover on the extension column for safety lock release cable & hose & top limiter switch has already welded on, and you only need to install the Protection cover on the main column.

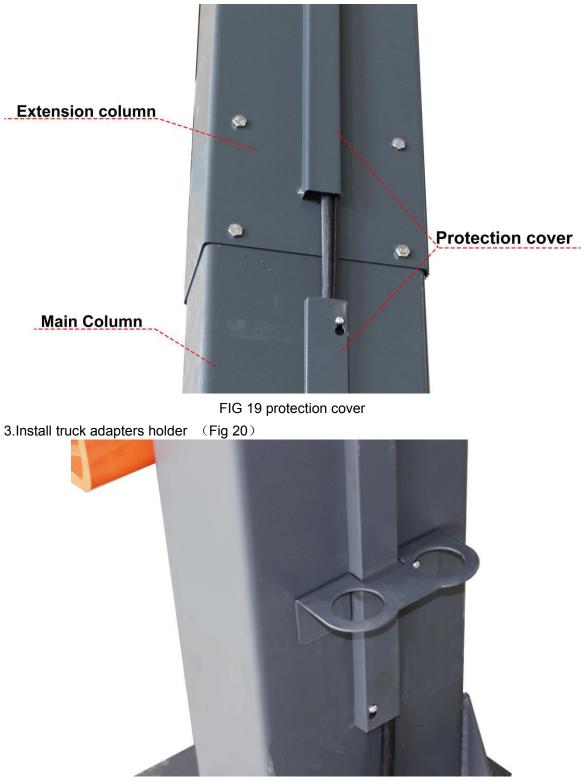


Fig 20 Place of the truck adapters

#### 2.2.11 Install Anchor Bolts (Fig 21)

- 1. Adjust the distance between 2 columns as required dimensions (Fig 1).
- 2. Adjust the opening direction of the two columns in a straight line (visible).
- 3. Install Anchor Bolts (Suggest to use 3/4" Drill)

#### Note: Don't Fasten/Tighten Nuts now in case any adjustment needed.

- 4. Adjust the verticality of the columns (visible) and use U-shape washer(come with package) if necessary.
- 5. Tighten anchor bolts nuts in diagonal order (Foot Pounds of Torque: 90+, suggest to use hand wrench to tighten nuts.)

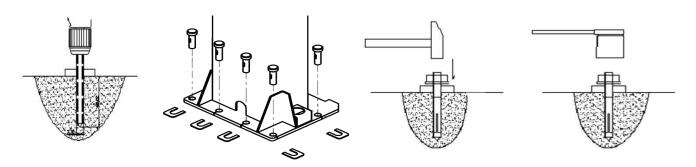


Fig 21 Anchor Bolts Installation Diagram

#### 2.2.12 Install Arms and Pulling Rod

Install arms and pulling rod (Fig 22 and Fig 23).

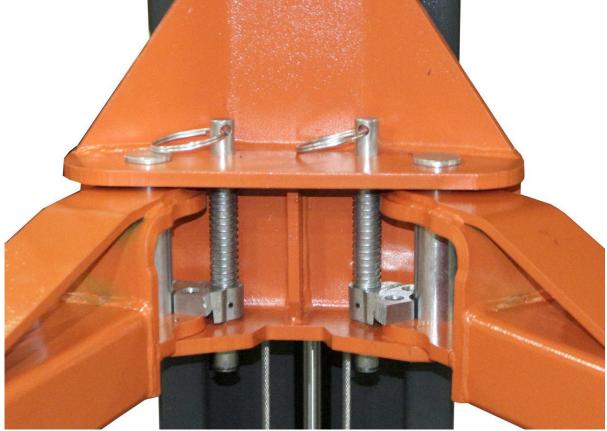


Fig 22 Arm Installation Diagram

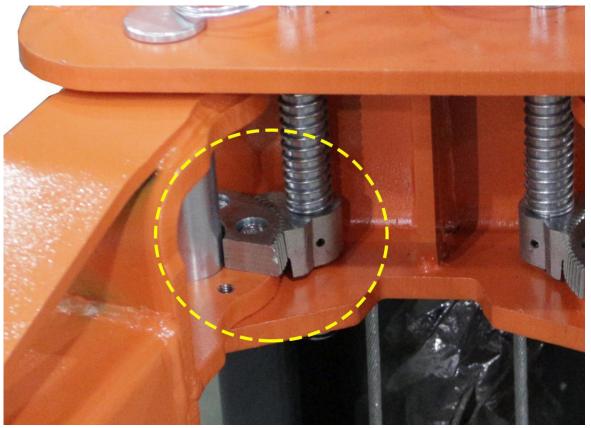


Fig 23 Pulling Rod Installation Diagram

#### 3 - Check Before Start

#### 3.1 Mechanical Installation Check

- 1. Check anchor bolts, nuts, fittings and etc have been installed properly.
- 2. Check if all moving parts move freely.
- 3. Make sure inside of the columns is clean and no other objects.
- 4. Supply grease between slide blocks and columns, cables and pulleys.
- 5. Check if the arm lock is locked while raising processing, and adjust lock if necessary.
- Note: Loose the screw to adjust when necessary(Fig 23).

#### **3.2 Electrical Hook Up Check**

Make sure all wiring are same as below circuit diagram (Fig 24).

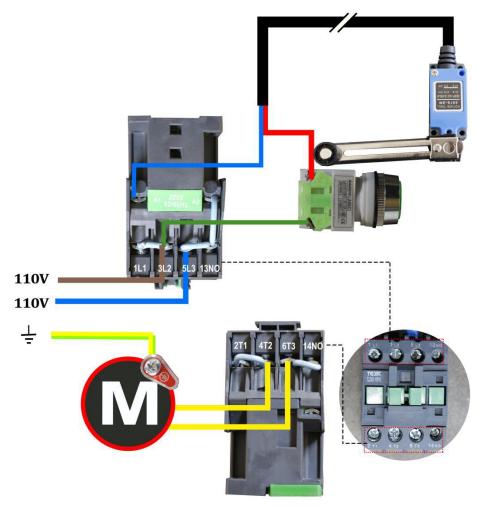


Fig 24 Power Unit Wiring Diagram (Voltage: 220V)

Attention: electrical system connection must be done by licensed electrician . Warning: When installing the power cord for the first time, remove the test cable(short wire) from the motor and replace it with a cable(wire) less than #12 gauge.The time interval between motor starts is at least more than 2 seconds.Otherwise the motor or AC contactor may be burnt out.

suggest to use min 30A breaker (not higher than the wire load).

#### 3.3 Hydraulic System Testing

1. Add about 2.5 gallons of hydraulic oil to the hydraulic fluid reservoir, AW32 during winter time(cold weather), and AW46 during summer time(hot weather).

- 2. Make sure there is no oil leak.
- 3. Repeatedly raise and lower the lift to bleed trapped air from the cylinders.
- 4. Power unit testing (Fig 25)

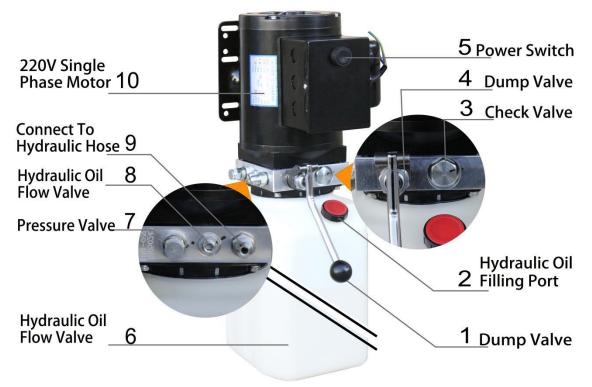


Fig 25 Power Unit Diagram

#### \*\*Important Information\*\*

8 Pressure Valve: Clockwise adjustment increases pressure to make the power unit to have more power, counterclockwise adjustment decreases pressure to make the power unit to have less power.

2 Hydraulic oil Flow Valve: Clockwise adjustment to speed up, counterclockwise adjustment to slow down.

#### 3.4 Load Test

Before testing, check anchor bolts to make sure they are completely tightened, and also make sure 2 carriage on both sides are at the same level (height difference should be less than 10mm/0.39"). Adjust the cable nut on the shorter carriage to make sure 2 carriage height at the same level and the 2 cables are similar tension.

#### 4 - Operation and Use

#### 4.1 Operation

Place the lifting arm at the support point specified by the vehicle and adjust the rubber tray to the same height.

Check the position of the rubber tray under the vehicle chassis before each single raising or when vehicle is lowered to the ground and need to raise again.

#### 4.2 Raising/Lifting

Press the power switch until the vehicle reaches desired height. When the vehicle is raised, the safety lock automatically engaged.

During raising/lifting, check whether the arm lock has been locked, it can be visually checked when it is raised to a certain height (stop and check).

#### \* Danger\* : Unlocked arms can cause vehicle fall off from the lift.

#### 4.3 Stopping

After raising to desired height, press the lower lever and the lift will automatically lower to a safe position, the safety lock will be engaged and the lift will be locked.

#### 4.4 Lowering

The safety lock must be released before lowering.

- 1. Press the power switch to raise the car by approximately 30mm/1.2".
- 2. Pull down to unlock the handle.

3. Press the lower lever to start lowering process, the arm lock will be automatically released and allow the arm rotating when the vehicle is completely lowered to the ground.

#### 5 - Safety

Please read this manual carefully as it contains important safety information that the operators need to know.

\*WARNING\*: The design and construction of this lift is only suitable for lifting whole vehicle. All other uses are unauthorized, this lift CAN NOT be used to: wash vehicles, build lifting platforms, lifting personnel, use as cargo lifts and use as lifting partial of the vehicles.

#### 5.1 Important Reminder: Personal and Equipment Safety

- 1. During vehicle lifting process, operators should be at a safe position/area.
- 2. Turn off the vehicle engine and manual brake on.
- 3. Load vehicle correctly (Fig 26).
- 4. The vehicle CAN NOT exceed the rated lifting capacity and required size.

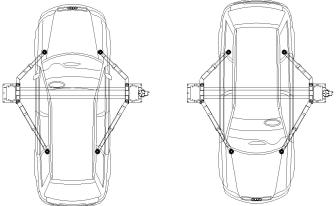


Fig 26 correct way to load vehicle

#### 5.2 Vehicle Position

Once the vehicle is raised, vehicle CAN NOT be moved backwards or forwards as it may cause falling.

\*WARNING\*: Do not attempt to move the vehicle while it is parked on the lift.

#### 5.3 Risk of Vehicle Falling Off From The Lift

Note that when positioning the vehicle on the lift, incorrect center of gravity of the vehicle can cause the vehicle falling off from the lift (Fig 27).

Important Note: Make sure that the front and rear of the vehicle need to be balanced and the cables on both sides also need to be balanced. Do not board/step on the vehicle or the lift when the lift is raised.

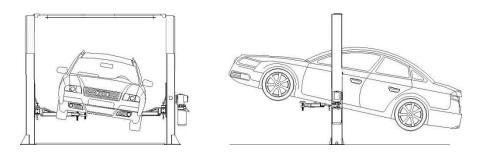


Fig 27 Risk of vehicle falling off

Below actions may cause the vehicle fall off from the lift (Fig 28)

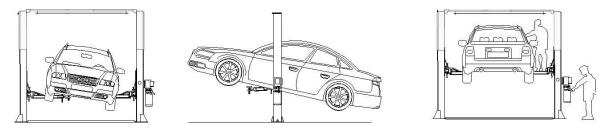


Fig 28 DO NOT do

#### 6 - Maintenance

#### 6.1 Every Month

Hydraulic System

- 1. Check hydraulic oil level, fill hydraulic oil if necessary.
- 2. Check the pump, hose and cylinder and see if there is hydraulic oil leaking.

#### 6.2 Every 3 Month

Safety Maintenance

- 1. Check the condition of the safety lock and the wear of the stop block.
- 2. Check the anchor bolts, tighten nuts if necessary.
- 3. Check if any nuts are loose, tighten nuts if necessary.
- 4. Check if the arm locking system is working properly.
- 5. Lubricate/grease all moving parts.
- 6. Check the tension of the balance cables and check if there is any broken.
- 7. Check if the 2 carriage on both sides are at the same level.

#### 6.3 Every 6 Month

Hydraulic Pump

1. Check the condition and aging of the hydraulic fluid. Unqualified hydraulic fluid is the main reason to cause valve failure and reduces the life of the gear pump.

2. Check the noise variation of the motor and gear pump while normal operating.

#### 6.4 Every 12 Month

1. Visually inspect all structural and mechanical parts to make sure there is no abnormalities have occurred.

2. Check and see if there is anything wrong with the motor, wiring, top limiter switch and circuit breaker.

#### 6.5 Regular Lubrication

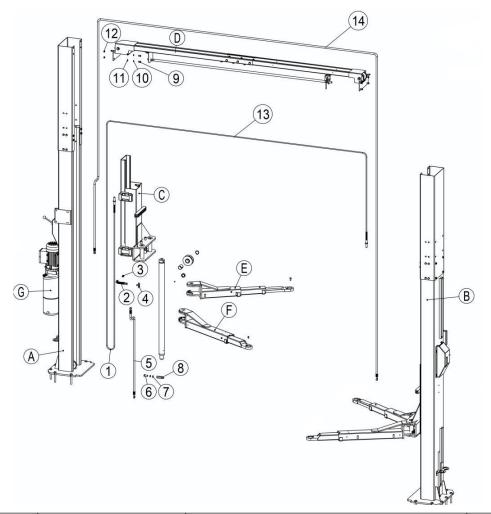
Use high quality grease to regularly lubricate all moving parts of this lift.

7	- Trouble	shooting	Guide
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Malfunction	Malfunction Possible reason Solution					
Manufiction		30101011				
The motor does not work	<ol> <li>Check the air switch.</li> <li>Check if the voltage is correct.</li> <li>The motor burned.</li> <li>Start switch burned.</li> <li>Top limiter switch burned.</li> <li>AC contactor burned.</li> </ol>	<ol> <li>Turn off or replace the air switch.</li> <li>User correct power supply.</li> <li>Replace the motor.</li> <li>Replace the start switch.</li> <li>Replace the top limiter switch.</li> <li>Replace the AC contactor.</li> </ol>				
The motor works but can't lift	<ol> <li>Pressure valve pressure is too small.</li> <li>Pump station takes in air.</li> <li>Hydraulic oil suction hose is detached or broken.</li> <li>Insufficient hydraulic oil</li> </ol>	<ol> <li>Colockwise adjust the pressure valve (fine adjustment).</li> <li>Unscrew check valve on the power unit, and then start the motor until hydraulic oil flows out from the check valve, then tighten the check valve.</li> <li>Install/replace the suction hose.</li> <li>Fill more hydraulic oil.</li> </ol>				
Does not lowering	<ol> <li>Safety lock engaged</li> <li>Other object inside the columns stops the carriage.</li> <li>The flow valve needs to be adjusted.</li> </ol>	<ol> <li>Slightly raise the device and then pull the safety lock release cable.</li> <li>Check and remove the objects.</li> <li>Counterclockwise adjust the flow valve(fine adjustment).</li> </ol>				
Self-Lowering	<ol> <li>1.Dump valve failure.</li> <li>2.Hydraulic oil leaks.</li> <li>3.The valve body of the power unit has holes.</li> </ol>	<ol> <li>Replace the dump valve.</li> <li>Check and repair.</li> <li>Replace the valve body.</li> </ol>				
Raise without load, but does't raise with load	<ol> <li>The voltage is too low.</li> <li>Objects in the dump valve.</li> <li>The pressure valve pressure is too small.</li> <li>Overload.</li> </ol>	<ol> <li>Install the voltage stabilizer.</li> <li>Remove objects from the dump valve.</li> <li>Increase pressure properly (fine adjust the pressure valve).</li> <li>This operation is prohibited.</li> </ol>				
Lifting is not leveled	1.The cables are not balanced.	1. Balance cables by adjusting the cables' length.				
Loud motor noise	<ol> <li>After raising to the highest point, the motor is still working and the top limiter switch is disabled.</li> <li>Hydraulic oil pollution.</li> <li>Overload.</li> </ol>	<ol> <li>Replace the top limiter switch.</li> <li>Replace the hydraulic oil.</li> <li>This operation is prohibited.</li> </ol>				

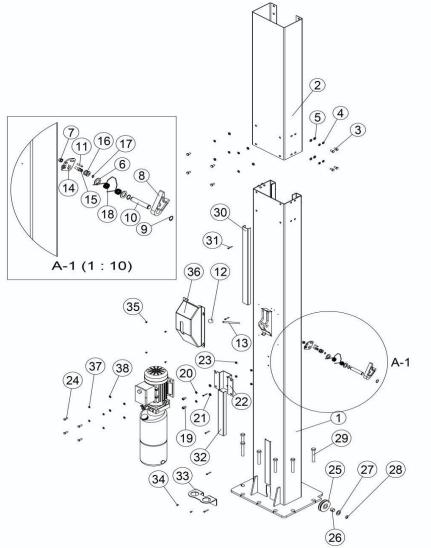
# 8 - Structure and Parts List

8.1 Equipment Assembling Diagram



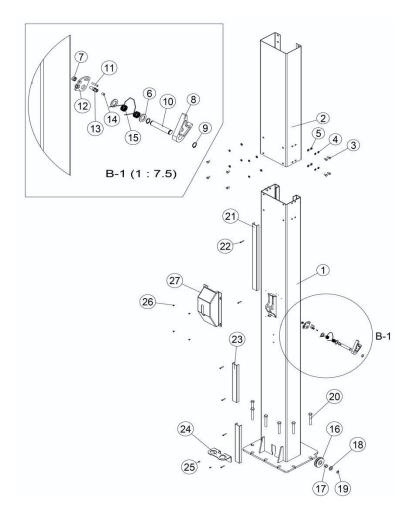
No.	Part#	Name	Qty
А	001-A	Main column assy	1
В	001-B	Vice column assy	1
С	001-C	Carriage assembly	2
D	001-D	Overhead beam assy	1
E	001-E	Three stages arms assy	2
F	001-F	Two stages arms assy	2
G	001-G	Pump assy	1
Н	001-H	Hydraulic cylinder assy	2
1	Ф8Х9980 M16	Equalizing cable assy Φ8X9980,thread head M16	2
2	Ф8Х350/M16Х1.5	Pump hose assy Φ8X350,fitting M16X15	1
3	ZG3/8-M16X1.5	M16X1.5	1
4	M16X1.5	Fitting M16X15	1
5	Ф8Х900/M16X1.5Q	Hose	1
6	M16X1.5	Special bolt for q-joint	2
7	Φ16	Sealing ring	4
8	ZG3/8-M16X1.5	Fitting	2
9	H001030	Outer hexagon bolt M10X30	8
10	LW001000	Spring washer Φ 10	8
11	W001000	Flat washer Φ 10	8
12	HN001000	Hexagon nut M10	8
13	Ф8Х9900/M16X1.5Q	Hose	1

# 8.2 Main column



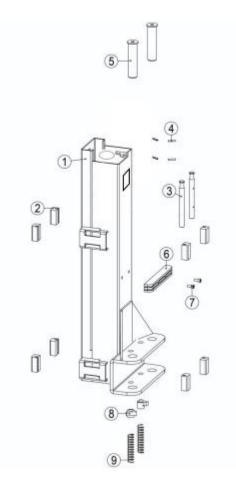
	5.44				<b>–</b>		<u> </u>
No.	Part#	Name	Qty	No.	Part#	Name	Qty
1	DBLM-01-01- 00	Main column weldment	1	20	LW001000	Lock washer Φ10	2
2	DBLM-01-02- 00	Extension cotumn weldment	1	21	RE001000	WasherФ10	2
3	H001020	Hex bolt M10X20	16	22	DBLM-00-08	Pump bracket	1
4	LW001000	Lock washer Φ10	16	23	HN000800	Hex nut M8	4
5	W001000	Washer Φ10	16	24	H000820	Hex bolt M8X20	4
6	W002000	Washer Φ20	2	25	DBLM-00-09	Equlizing cable pulley	1
7	SL001000	Self lock nut M10	2	26	SF-2020	Bronze bush Sf-2020	1
8	DBLM-00-01	Lock block	1	27	W002000	Washer	1
9	RE002000	Retaining ring extemal 420	2	28	RE002000	Retaining ring extemal Φ20	1
10	DBLM-00-02	Lock block shaft	1	29	DBLM-00-10	Anchor bolt M20X160	6
11	SP000630	Expansion pin Ф6X30	1	30	DBLM-00-11	Oil tube upper trough	1
12	DBLM-00-03	Handle ball	1	31	RH000530	Round head bolt M5X30	4
13	DBLM-00-04	lock release Stick	1	32	DBLM-00-12	Oil tube lower trough	1
14	DBLM-00-05	Main lock plate	1	33	DBLM-00-13	Extension bracket	1
15	DBLM-00-06	Safety lock releasing cable	1	34	RH000510	Round head bolt M5X10	2
16	DBLM-00-07	Pulley of lock releasing cable	1	35	RH000512	Round head bolt M5X12	4
17	RE001000	Retining ring extemal	1	36	DBLM-00-14	Lock cover	1
18	SS261402	Lock spring	1	37	LW000800	Lock washer Φ8	4
19	IH001012	Inside Hex bolt/M10X12	2	38	W000800	Washer Φ8	4

# 8.3 Vice column



No.	Part#	Name	Qty	No.	Part#	Name	Qty
1	DBLM-02-01-00	Secondary post weldment	1	15	SS261402	Lock spring	15
2	DBLM-02-02-00	Extension column weldment	1	16	DBLM-00-07	Equlizing cable pulley	1
3	H001020	Hex bolt M10X20	16	17	SF-2020	Bronze bush SF-2020	1
4	LW001000	Lock washer Φ10	16	18	W002000	WasherФ20	1
5	W001000	Washer Φ10	16	19	RE002000	Retaining ring extermal Φ20	1
6	W002000	Lock washer Φ20	2	20	DBLM-00-10	Anchor bolt M20X160	6
7	SL001000	Self lock nut M10	2	21	DBLM-00-11	Oil tube upper trough	1
8	DBLM-00-01	Lock block	1	22	RH000530	Round head bolt M5X30	4
9	RE002000	Retaining external Φ20	2	23	DBLM-00-12	Oil tube lower trough	1
10	DBLM-00-02	Lock block shaft	1	24	DBLM-00-13	Exte nsion bracket	1
11	SP000630	Expan sion pin Ф6Х30	1	25	RH000510	Round head bolt M5X10	2
12	DBLM-00-15	Secon dary lock plate	1	26	RH000512	Round head bolt M5X12	4
13	DBLM-00-16	Lock cable fix knot	1	27	DBLM-00-14	Lock Cover	1
14	ST000812	Fastening screw M8X12	1				

# 8.4 Carriages



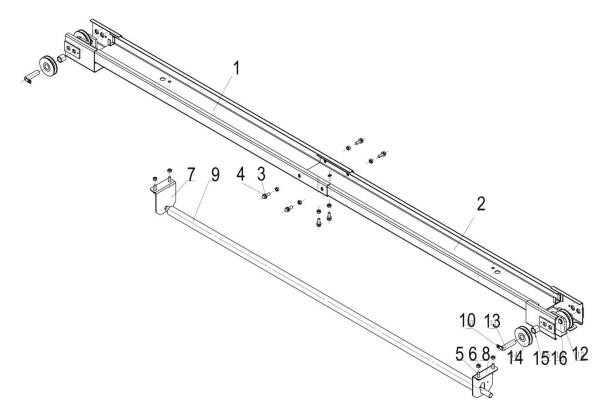
No.	Part#	Name	Qty
1	DBLM-03-01-00	Carriage weldment	1
2	DBLM-00-16	UHMW polyethylene slide block	8
3	DBLM-00-17	Arm lock pin	2
4	S000630	Expansion pinФ6X32	2
5	DBLM-00-18	Arm fix shaft	2
6	DBLM-00-19	Prote ctive rubber	1
7	SH000825	Sunk bolt M8X25	2
8	DBLM-00-20	Arm lock	2
9	DBLM-00-21	Arm lock spring Φ26Χ140ΧΦ2	2
10	W001000	Washer Φ10	2
11	DBLM-00-30	lock rod spring	2
12	DBLM-00-31	circlip (B-shape)	2
13	DBLM-00-32	Locked teeth block	2
14	DBLM-00-33	Unlock lever	2
15	DBLM-00-34	Handle ball	2

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No.	Part#	Name	Qty
1	YL-SC10C1001	Overhead Beam A	1
2	YL-SC10C1002	Overhead Beam B	1
3	YL-SC10C1003	Overhead Beam Connecting Screw	6
4	YL-SC10C1004	Overhead Beam Connecting Nut	6
5	YL-SC10C1005	Limiter Switch Fixing Screw	4
6	YL-SC10C1006	Limiter Switch Fixing Nut	4
7	YL-SC10C1007	Limit Plate A	1
8	YL-SC10C1008	Limit Plate B	1
9	YL-SC10C1009	Limit Beam	1
10	YL-SC10C10010	Shaft Sleeve 34mm	4
11	YL-SC10C10011	Cable Pulley	4
12	YL-SC10C10012	Shaft	4
13	YL-SC10C10013	Circlip	4

# 8.5 Over head beam

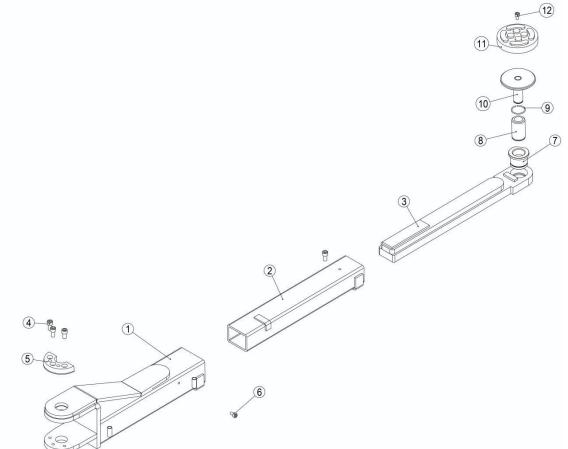
8.5.1 Symmetric over head beam



8.5.2 Asymmetric ov	er head beam
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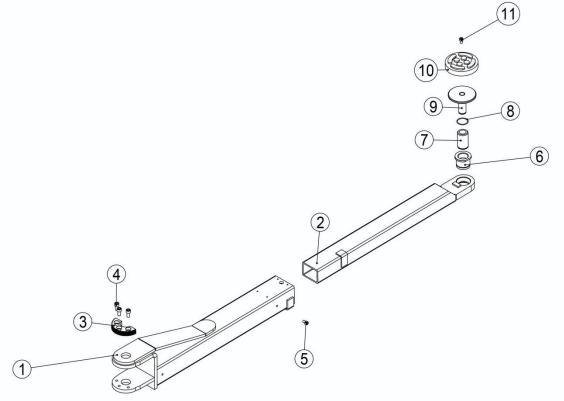
No.	Part#	Name	Qty
1	YL-SC10C1001	Overhead Beam A	1
2	YL-SC10C1002	Overhead Beam B	1
3	YL-SC10C1003	Overhead Beam Connecting Screw	6
4	YL-SC10C1004	Overhead Beam Connecting Nut	6
5	YL-SC10C1005	Limit Plate Fixing Screw	4
6	YL-SC10C1006	Limit Plate Fixing Nut	4
7	YL-SC10C1007	Limit Plate A	1
8	YL-SC10C1008	Limit Plate B	1
9	YL-SC10C1009	Limit Beam	1
10	YL-SC10C10010	Outter Shaft Fixing Screw (fixed by screws)	2
12	YL-SC10C10012	Inner shaft (fixed by Circlip)	2
13	YL-SC10C10013	Outter Shaft (fixed by Screws)	2
14	YL-SC10C10014	Cable Pulley	2
15	YL-SC10C10015	Shaft Sleeve 28mm	2
16	YL-SC10C10016	Circlip	

# 8.6 3-stage arm



No.	Part#	Name	Qty
1	DNLM-05-01-00	Inner arm of three stage arms	2
2	DNLM-05-02-00	Middle arm of three stage arms	2
3	DNLM-05-03-00	Outer arm of three stage arms	2
4	IH001020	Inside hex bolt M10X20	6
5	DBLM-00-25	Moon gear	2
6	IH000810	Inside hex bolt M8X10	4
7	DBLM-00-26	Sleeve of one stage screwed pad	2
8	DBLM-00-27	Exte nsion	2
9	DBLM-00-28	Stop steel ring externalΦ20	2
10	DBLM-00-29	Screwed pad	2
11	DBLM-00-30	Rubber cover	2
12	IH001020	Inside hex bolt M10X20	2

# 8.7 2-stage arm



No.	Part#	Name	Qty
1	DBLM-06-01-00	Inner arm of two stage arms	2
2	DBLM-06-02-00	Outer arm of two stage arms	2
3	DBLM-00-25	Moon gear	2
4	IH001020	Inside hex bolt M10X20	6
5	IH000820	Inside hex bolt M10X10	2
6	DBLM-00-26	Sleeve of one stage screwed pad	2
7	DBLM-00-27	Extension	2
8	DBLM-00-28	Stop steel ring external Φ20	2
9	DBLM-00-29	Screwed pad	2
10	DBLM-00-30	Rubber cover	2
11	IH001020	Inside hex bolt M10X20	2