



HESHBON 4POST LIFT

Installation/Operation & Maintenance Manual



HL-42L

Please read this manual before you get started.
You must read and understand the precautions for safety to protect your safety
and any damage to your property.

NOTE TO THE USER

Thank you for purchasing HESHBON CAR LIFT

Please read this instruction carefully for safe and proper use of the car lift, and keep it handy for future reference.

- This Manual is for model : HL-42L
- As for the assurance of safety in design and construction of car lift, read this Manual first.
- Please make sure that this manual is delivered to end users for their implementation of safety.
- Don't use the car lift in a potentially explosive atmosphere.

ANY PART OF THIS PRINT MUST NOT BE REPRODUCED IN ANY
FORM WITHOUT PERMISSION.
THIS PRINT IS SUBJECT TO CHANGE WITHOUT NOTICE.

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Introduction

Safety

Installation

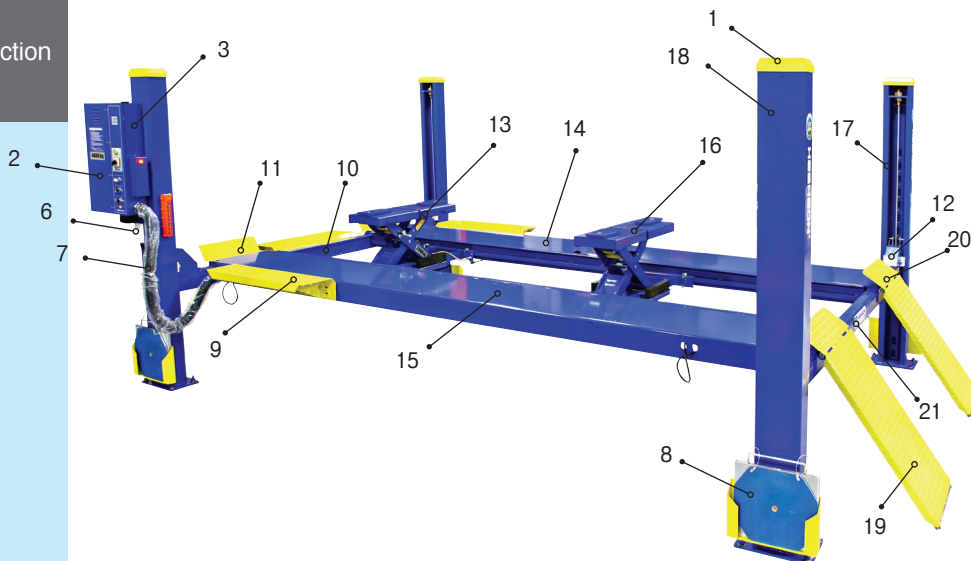
Operation

Maintenance

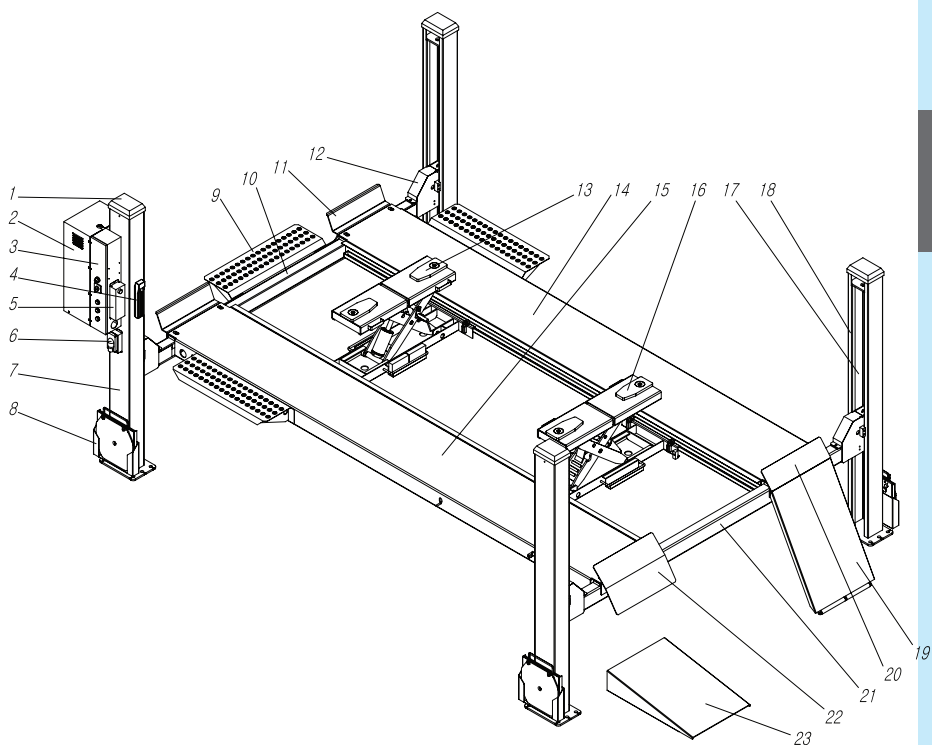
■ This manual was prepared in July 2009 the product specifications contained in this manual are subject to change without notice.

Names of each part are described

Introduction



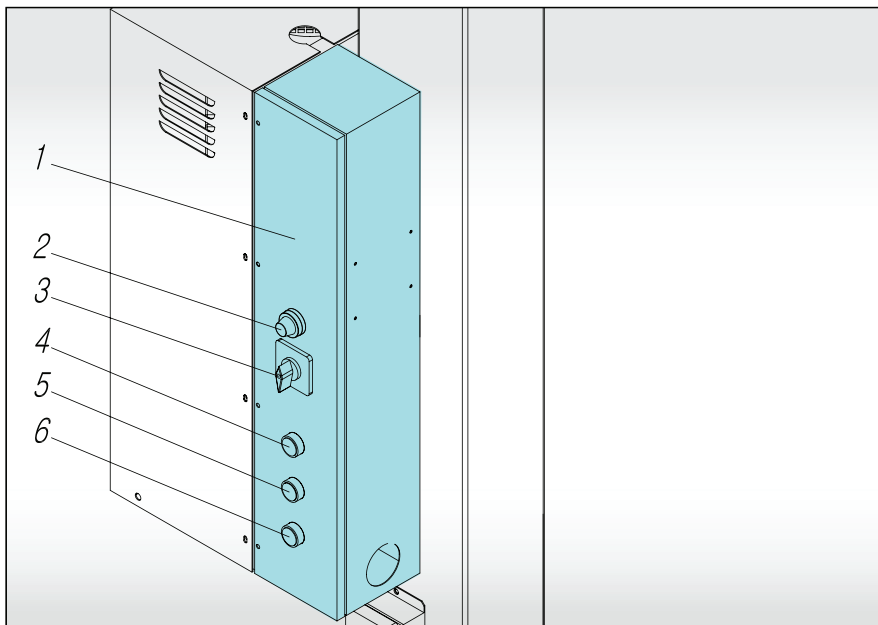
Part No.	Part Name
1	Post Cap
2	Hydraulic Unit
3	Control Panel
6	Power Socket
7	Main Post
8	Turntable Cabinet
9	Foot step
10	Front support beam
11	Stopper
12	Wire pulley cover



Part No.	Part Name
13	Front rolling jack
14	Platform (Slave)
15	Platform (Master)
16	Rear rolling jack
17	Lock rail
18	Post
19	Ramp
20	Ramp stopper
21	Rear support beam
22	Ramp stopper (option)
23	Ramp (option)

Description

■ HL - 42L

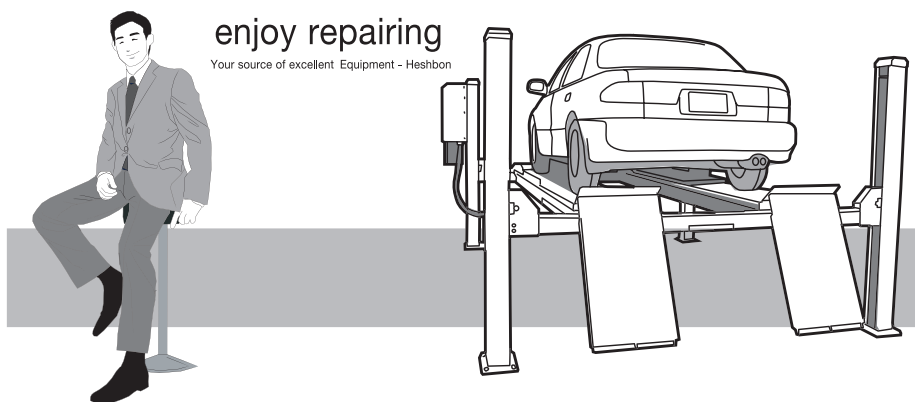


Part No.	Part Name
1	Control Panel
2	Power Lamp
3	Power Switch
4	Ascent Button
5	Lock Button
6	Descent Button

Specification

Model Name	HL - 42L
Capacity	Main Lift: 4,500 Kg / JACK: 2,500 Kg
Max. Height	Main Lift: 1,740 mm / JACK: 455 mm
Min. Height	Main Lift: 174 mm / JACK: 235 mm
Stroke	Main Lift: 1,566 mm
Lifting Time	Main Lift: 40 ~ 60 sec. / JACK: 5 ~ 15 sec.
Lowering Time	Main Lift: 30 ~ 50 sec. / JACK: 5 ~ 15 sec.
Standard Motor	1ph : 2.5HP×4P×220V×60Hz / 3ph : 2HP×4P×220V,380V×60Hz
Net Weight	1,600 kg
Dimension	3,425(W) × 2,215(H) × 5,860(L) mm

Introduction



Danger/Warning/Caution

Rules for illustrations
in the Manual.

These are the rules
for the illustrations
in the manual. Make
sure that you read
them and understand
them. The rules are
applied only to the
manuals of Heshbon
Co., Ltd..



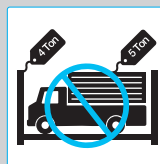
Do not come
under the vehicle
during operation.
► This can cause
injury or death.



Evacuate to a safe
place instantly in
the event that the
vehicle tips.
► This can cause
injury or death.



Do not overload
the rated capacity.
► This can cause
injury or death.



※Not following the
instructions can lead
to a critical accident
involving your life.
Make sure you follow
the instructions.



Make sure you follow the instructions,
otherwise critical injury or death can occur.



Make sure you follow the instructions,
otherwise critical injury or damage can occur.



Make sure you follow the instructions;
otherwise, injury or damage can occur



The terms are described to enhance the
understanding of the equipment.



Information to use the equipment
efficiently.



Precautions or check points for the use
of the equipment.



Please refer to the page

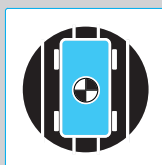


Warning before using the equipment

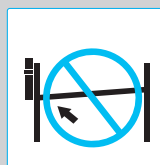
Only trained
personnel may
operate the
equipment.
Inexperience can
cause accidents.



Position the vehicle
to make sure that
it is balanced front
and rear, right and
left (otherwise the
vehicle may fall off).



Do not operate
damaged equipment(a
critical accident could
occur – contact your
Heshbon supplier)



After that a vehicle
is placed on the
lift make sure that
the hand brake is
applied. Passenger
transport is
forbidden.



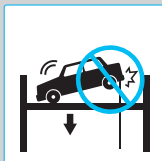


Warning while operating

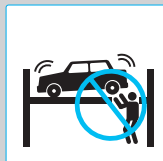
Allow no unauthorized persons in the work area.



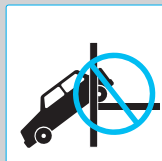
Before lowering the lift, check that there are no obstructions under the vehicle or the lift arms.



When the vehicle is lifted, do not rock it as this may dislodge it.

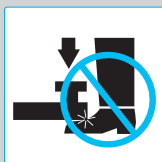


Do not lift a vehicle using one pair of arms only.

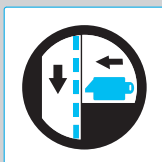


Warning while operating

To avoid injury, keep your feet clear of the arms and carriages.



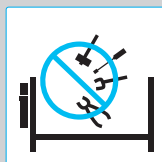
Before going under the lift, make sure that the safety pawls are engaged.



To avoid being electrocuted, disconnect the main power before opening the control panel.



Do not modify the control panel or the safety functions as this may impair their function.

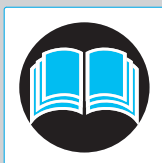


Warning when operatingoperating

Do not rock the vehicle when lifted. Do not use a high pressure cleaner as the vehicle lower part.



Read and fully understand the manual before using the lift

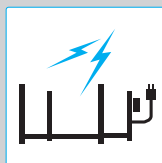


Warning before using the equipment

Check the safety devices to see that they are clean and operable.



If the lift is idle for a long time, disconnect the main power supply. In the event of thunder storm, disconnect the main power supply.



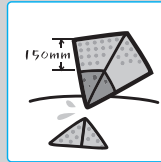


The lift should be installed by skilled engineers either from Heshbon or from Heshbon's appointed representatives. Failure to observe this makes the lift warranty invalid. If the lift is to be moved to another site at a later date, it must be reinstalled by skilled engineers either from Heshbon or from Heshbon's appointed representatives.

Checklist before installing

Installation site

The site must be flat and horizontal. The floor must have minimum 150mm depth of reinforced concrete.



Surface load under the posts must be minimum 25N/mm².

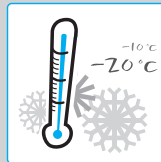


To maintain the warranty, the lift is intended for indoor installation only. In the event that it is installed outside it should be protected from snow and rain. Outdoor installation makes the warranty invalid.

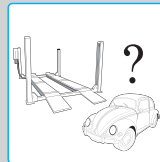


Installation site

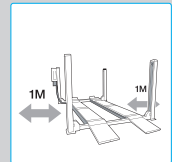
Ambient temperature -10°C to 50°C. Do not operate under freezing conditions.



Vehicle access to the lift must be safe and easy.



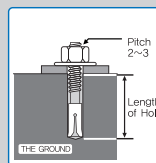
There must be a safe working distance of minimum 1m between the lift and the wall or any fixed object.



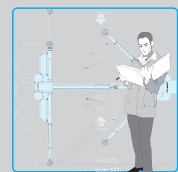
Installation site

- Hoist to be installed in dry location.
- If hoist is installed in a Pit sufficient drainage should be allowed to keep hoist dry.
- If hoist gets does get wet make sure all electrical wiring is dried before operation as could cause electric shock or damage to PCB.

To ensure that the anchor is secure, the hole for an anchor bolt must be more than 2/3 of the bolt length.



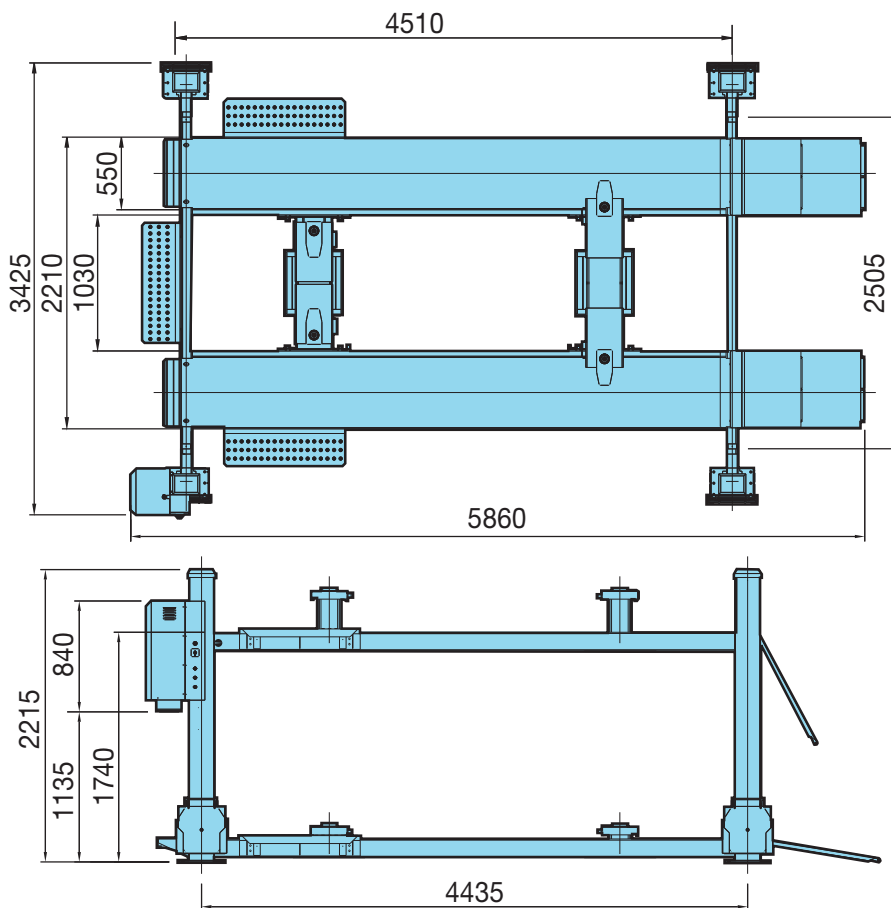
Skilled engineers of Heshbon or its sale representative agency shall install the lift, otherwise a failure may occur.



Place of installation (Layout)

Checkpoints before selecting the place of installation

- ① Distance from the wall or any fixed object
- ② Drive-on direction
- ③ position of power post and slave posts
- ④ Ceiling height



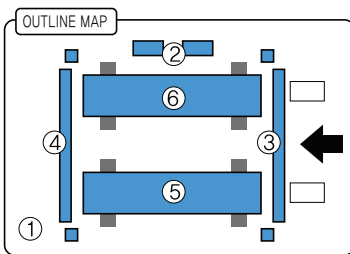
Installation Process

■ Placing lift on the installation location

- Place the main parts on the appropriate position in reference to the following outline diagram.

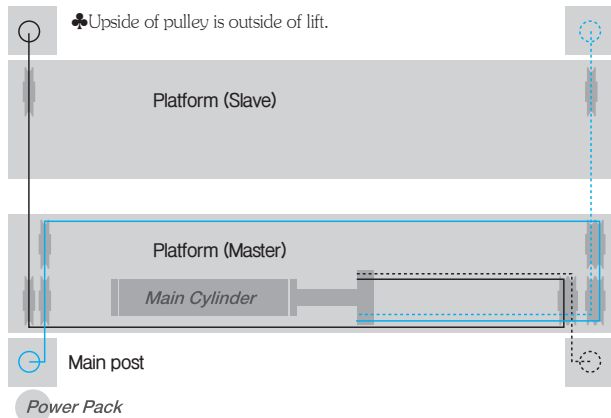
1 Order of part placement

- ① Post
 - a. Master(1) – Place the posts standing against the wall on the appropriate position of (1) on the outline diagram.
 - b. Slave (3) – Place the posts lying on the appropriate position of (2) of the outline diagram.
- ② Jack (2) – Move a jack by two people to the designated position.
- ③ Support beam for plate – Place support of drop plate on (3) , and support for front stopper on (4) .
- ④ Place lockrail, ramp, drop plate and stopper.
- ⑤ Plate – Place drive (driver's seat) plate on (5) and driven (next to driver's seat) plate on (6).
- ※ Make the interval of 900mm between plates in consideration of width of the jack.
 - (1) Make sure to put plate on wooden bar. (Size of wooden bar : $120 \times 120 \times 700(H)$) in order to provide convenience of the work, pull out the jack hydraulic hose from drive plate, place it on the main body.



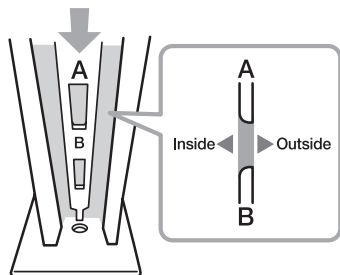
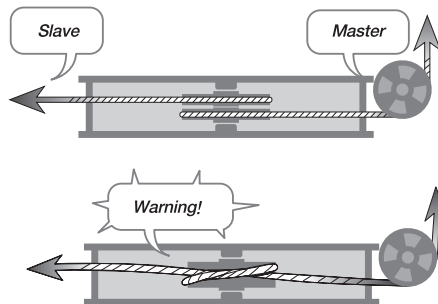
■ Wire diagram

- Please refer to this diagram for connecting the wire.

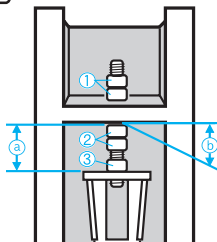




► Put the lower wire to the wire pulley of front support beam, and the upper wire to the wire pulley of rear support beam.



① 55~60mm
② 3mm



■ Assembling post 1

► Assemble the post with support beam

1 Assembling lockrail

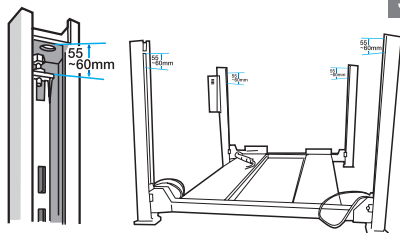
Put the lockrails to support beam for plate

2 Assemble the lock rail 2 - (upside)

Fasten two ① nuts (16mm). As shown in the figure, fasten the upper nut clockwise and the lower nut counterclockwise, maintaining the space to the lockrail for 55mm~60mm. Fasten two ② nuts (11.5mm), each to opposite direction, maintaining 2~3 threads (3mm) between the nuts. Fix ③ nut tight to the lockrail.

3 Assemble the lock rail 3 - (4 post)

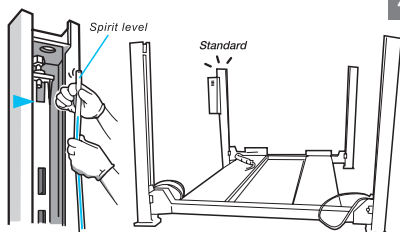
Set up 4 posts, maintaining the space of 55~60mm between fixing plate of the top of the post and lockrail upper bracket.



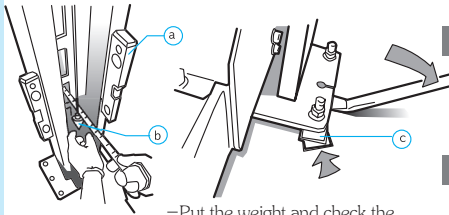
4 Make leveling of 4 post

Based on the lower part of the top hole of the lockrail (No.1) of the reference post (the highest post), measure the height of the remaining 3 posts (No. 2, 3 and 4), and measure the length.

※ It is required to match the heights of the 4 posts.



① Water level ② Weight ③ Liner



—Put the weight and check the verticality and level of 4 points.

■ Fixation horizon of the base.

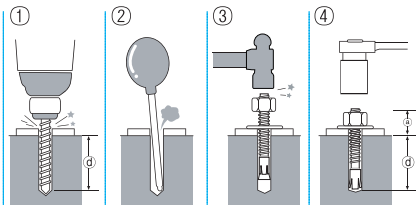
►After adjusts horizon of the product precisely, fix up using anchor bolt.

1 Adjustment the horizon of the base.

After measure the horizontal status, lay down the lie. (in case of precise adjustment, use 'a' bolt.)

2 Fixation of base (anchor)

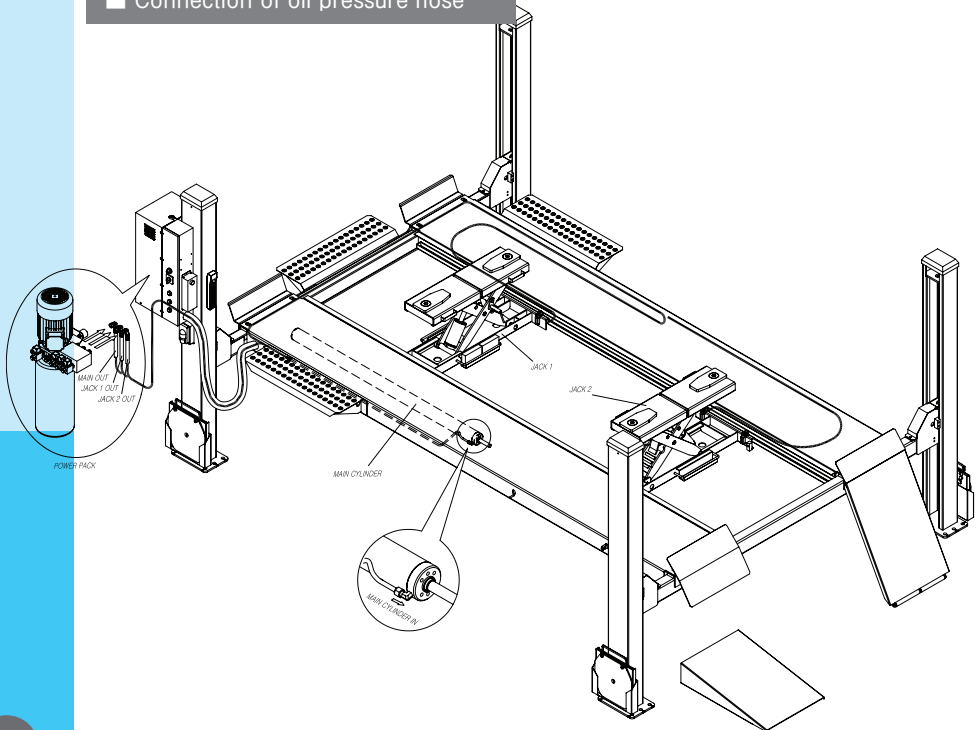
After adjusts horizon, fix up the base platform using anchor.



Anchor bolt installation.

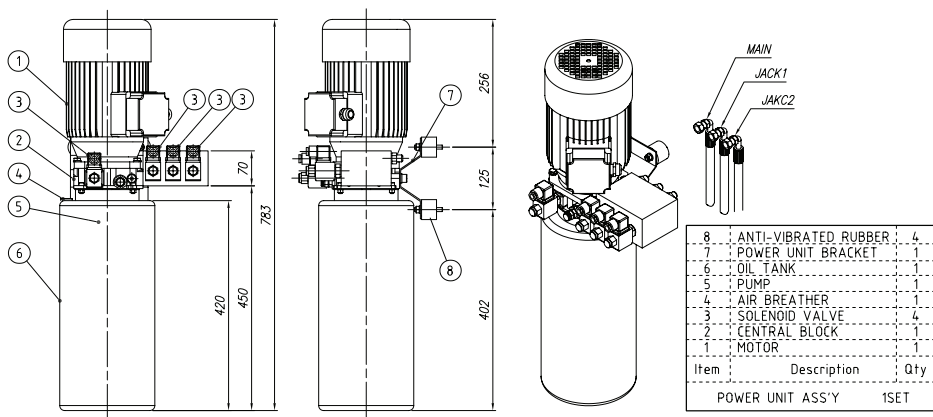
- (1) Drill a hole (d: hole depth)
- (2) Clean the inside of the hole
- (3) Put the anchor bolt into the hole and hammer in until it reaches the bottom of the hole
- (4) Tighten the bolt with a spanner.
(a: 35~45mm)
— Torque : 125Nm/700kg.cm

■ Connection of oil pressure hose

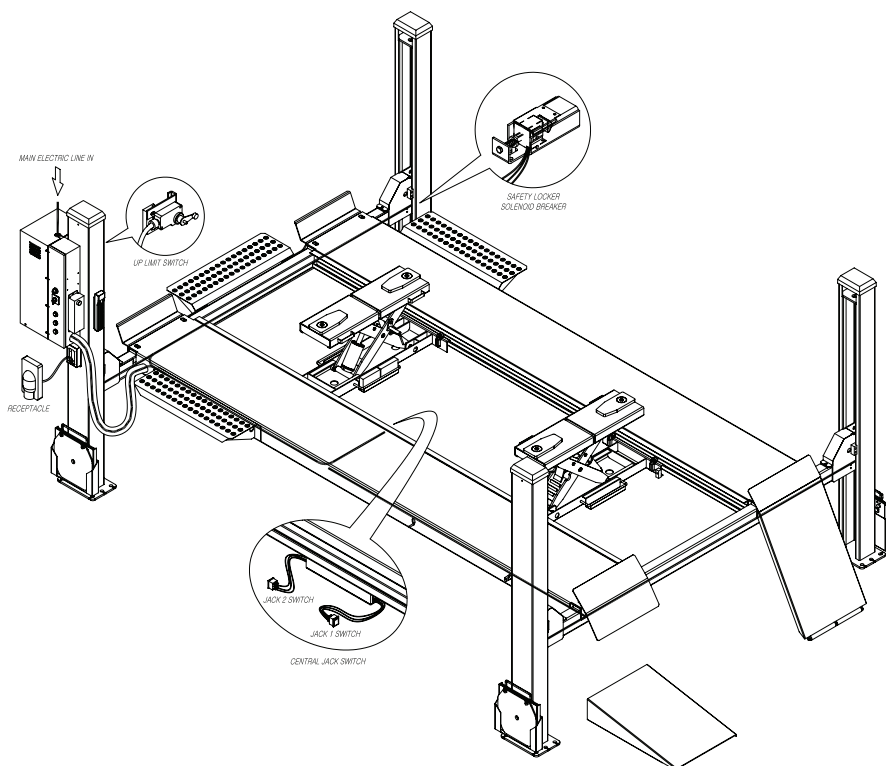


■ Connection of oil pressure hose

▶ Connect oil pressure hose by referring oil pressure line diagram. (Refer to part list oil pressure circuit)

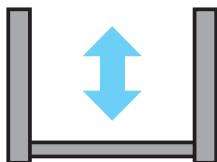


■ Connection of electronic line



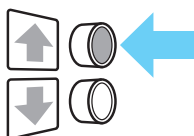
Check points before operation

Before loading the lift, check the following points.



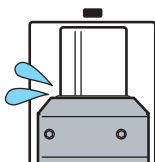
■ Test operation

► Operate ascent and descent 2~3 times under no load condition.



■ Switch operation

► Check that the ascent and descent push buttons are working correctly.



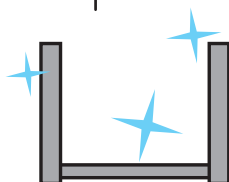
■ Hydraulic check

► Check if there are no hydraulic leaks from either cylinders, pipes, or hose joins.



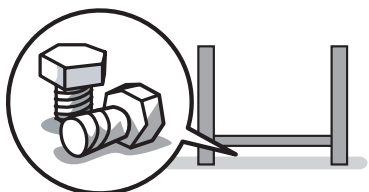
■ Mechanical check

► Check the tightness of all nuts, bolts, etc.



■ Exterior check

► Check the exterior of the lift to ensure that there is no obvious damage.



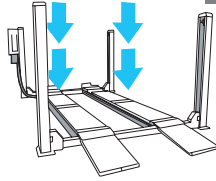
■ Cleanliness

► Check every day that the lift is clean and that the work area is clean and free from debris or obstructions.

Inspect the lift everyday to operate the lift safely for a long time.

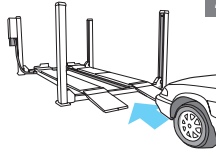
Operation

1 Prior to use

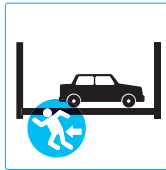


Check that the platforms are parked at floor level by using the descent button. Check that the auxiliary lift is at the down position.

2 Prior to vehicle entry

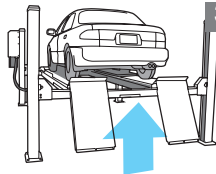


Check that the position of the righthand (movable) platform is suitable for the majority of the vehicles to be lifted. Fix the platform at this position with the bolts provided.



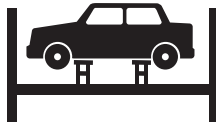
- After you drive into the lift, hold the side break.
- After you drive into the lift, get out of the car.

3 Ascent



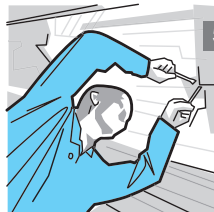
Operate the ascent button until platforms reach the chosen work height. park on the relevant ratchet holes.

4 Auxiliary lift operation



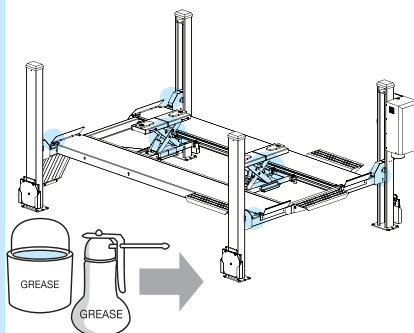
Raise the auxiliary lift app. 50mm to allow adjustment of the rear extensions. Position the rubber blocks provided under the vehicle pick-up points. Again, operate the auxiliary lift ascent button to raise the vehicle to the required work height.

5 Vehicle repair



Perform the necessary repairs and/or maintenance on the vehicle. After completion, lower the auxiliary lift. As soon as the vehicle load is firmly on the platforms, stop the descent of the auxiliary lift, remove the rubber pads, push in the extensions, and lower to bottom position. Lower main lift.

Equipment maintenance and service

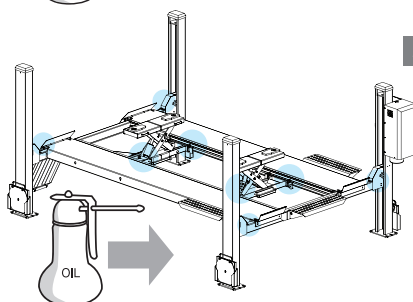


■ Lubrication

- Grease or oil should be applied every 2 or 3 months to the parts shown below.

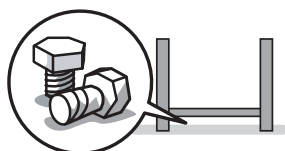
1 Injecting grease

- Inject enough grease at shaft of auxiliary lift and roller. (2~3 month period)
- Auxiliary lift slide rubbing surface



2 Injecting oil

- Location of injecting lubricating oil
 - Paints the lubricant oil to the rubbing surface, base platform every 2~3 month.

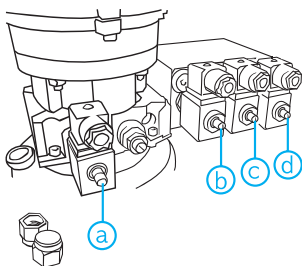
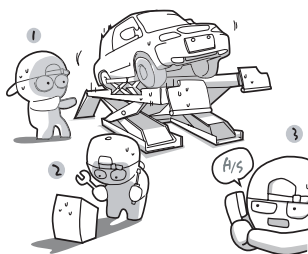
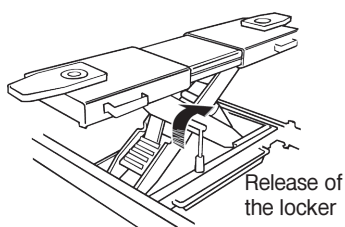
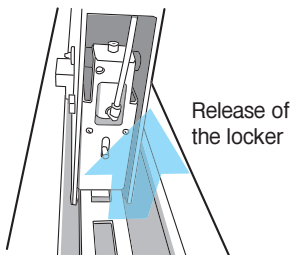


■ Cleanliness

- Check the working area under and around the lift for cleanliness. Check visibly if any nuts or bolts are loose or missing. Replace and retighten as necessary.



- Safety devices
 - Check the area around the safety devices for cleanliness and any obstruction.



Emergency descent

1 How to descend the lift manually in emergency

It is necessary

- ① when a blackout or the hydraulic circuit failure occurs
- ② When the lift cannot descend as specified in the troubleshooting

Preparation before operating

- ① Remove any object under the lift.
- ② Turn off the main power switch and panel power switch.
- ③ Manually release the locker
In case of locking state, releases the locker while another hydraulic device is lifting the locker 30 mm high. .
- ④ After taking to pieces in manually, put the supports between lockers.



This situation is potentially very dangerous. This operation should not be undertaken by unskilled staff. Therefore, if in any doubt, call your lift supplier immediately for after sales service.

Operation procedure of manual descent

*Remove the cover of the powerpack.
Remove the solenoid valve hexagon cap (19mm) in the middle of the pump manifold. Turn the emergency cock lever (a) very slowly anti-clockwise. Too much movement will increase descent speed too much.

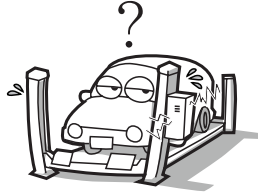
Steps after completing the operation

Turn the lever clockwise and lock it securely when the lift reaches bottom position. Replace and refit the hexagon cap. Request after sales service to check the lift.



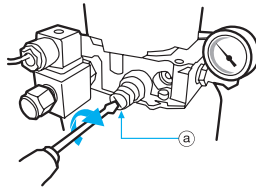
Turn the emergency cock lever very slowly to ensure that descent speed is slow and safe, especially if there is a vehicle on the lift.

2 Powerpack pressure



The pressure is set by the factory. The lift may be damaged if the operator increases the pressure. If the equipment does not lift the rated capacity, contact your lift supplier for engineer assistance.

Information for the authorized service engineer only



Open the control panel and install a pressure gauge in the pump manifold as shown. The pressure adjusting screw (a) is sealed by the factory.

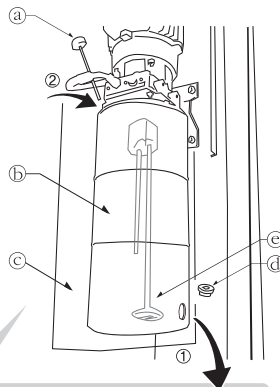
Remove the seal and adjust the pressure with a screwdriver. This should be done while pressing the ascent button at the same time.

3 Oil change

Oil should be changed 3 months after installation and thereafter annually.

Oil change procedure

- ① Remove the cover of the hydraulic unit.
- ② Remove the oil filter cap and dipstick. Carefully remove the oil drain plug and allow the oil to discharge into a suitable container.
- ③ Refit the drain plug and tighten
- ④ Refill the oil tank with new oil.
- ⑤ Check with the dipstick that the level is correct, raise and lower the lift and recheck that the level is still correct.



- a Cap of the oil tank
- b Oil tank
- c Cover of the hydraulic unit
- d Oil nozzle cap
- e Pump filter

- ① Oil injection
- ② Oil discharge



At the annual oil change, after having drained the oil tank, remove the oil tank from the pump and check the condition of the pump filter. Clean or replace as necessary. Replace tank and follow the above procedure.

Trouble Shooting

	Symptoms	Check point	Corrective Action to be taken
Hydraulic Cylinder And its units	The abnormal noise at motor listened.	1. Rated capacity is exceeded. 2. Relief pressure is low. 3. Shortage of hydraulic oil.	1. Operate within rated capacity. 2. Adjust to 2.7 ton 3. Let air out of the hydraulic unit after supplying the oil.
	Hydraulic Oil is leaked.	1. Defect in hydraulic hoses. 2. Leakage from connecting parts. 3. Bad cylinder packing.	1. Replace the hydraulic hose. 2. Tighten the connection. 3. Request A/S.
	Oil is contaminated.	Check if an water or Foreign substance comes into the cylinder.	Exchange oil (annually) (Hydraulic oil: 32CST/12(liter))
	The lift is not move up.	Check if the oil is leaked or hydraulic pump are damaged.	Contact customer service department.
	The lift is not lowered.	Check if the valve is properly operated.	Contact customer service department.
	The fitting parts is rusted.	Check if the grease is not sufficiently injected.	Inject the grease every 1 month.
Electric Devices	Motor is not operated and the abnormal noise at motor is listened	1. Check if the motor is damaged. 2. Check if the fuse is opened. 3. Check if the push button is damaged. 4. Check if the upper limit is operated. 5. Check if wiring gauge is proper. 6. Check if the input power less than 200V is supplied.	1. Replace the motor (Request A/S). 2. Replace the fuse after solving trouble. 3. Replace the push button (Request A/S). 4. Re-operate after lowering the lift. 5. Replace to the cable with over 3.5mm ² diameter. 6. Increase the input power capacity.
	Fuse is snapped	1. Check the Contact of magnetic contactor. 2. Check the capacity of circuit breaker. 3. Check if the wire is damaged.	1. Replacement (Request A/S). 2. Replacement (Request A/S). 3. Replacement after checking.
	Motor is operating but lift is not moved up.	1. Check if the rotating direction of motor is correct. 2. Check if hydraulic lines is damaged.	1. Re-operate after changing the phase connection. 2. Refer to check points for hydraulic cylinder and unit.

Check list and periodic maintenance

Inspection period	Points to be checked	Items to be checked	Inspection method	Action to be taken	Replacement period
1 week	Rubber Support for adjustment	Abrasion and deformation	Visual	Replacement	1 year
	Magnetic contactor	Damage of contact	Measurement	Replacement	2 year
3 months	Wire Rope	Abrasion, deformation and Breaking of wire	Visual	Replacement	2 year
	Post Guide	Abrasion	Visual	Replacement	4 year
	DU bush	Abrasion	Visual	Replacement	4 year
	Axle for wire pulley	Noise and abrasion	Visual	Replacement	5 year
	Wire pulley	Abrasion	Visual	Replacement	5 year
6 months	Electrical components	Damage of components	Measurement	Replacement	3 year
	Hydraulic Oil	Shortage of oil	Visual	Replacement	1 year
1 year	Piston Seal Kit	Oil leak or deformation	Visual	Replacement	3 year
	Load Seal Kit	Oil leak or deformation	Visual	Replacement	3 year



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