

SP-6K
(KERNEL Model 165955)
Single Post Parking Lift
CAPACITY 6000LBS (2700Kg)

INSTALLATION MANUAL
&
OPERATING INSTRUCTIONS
(Version A)



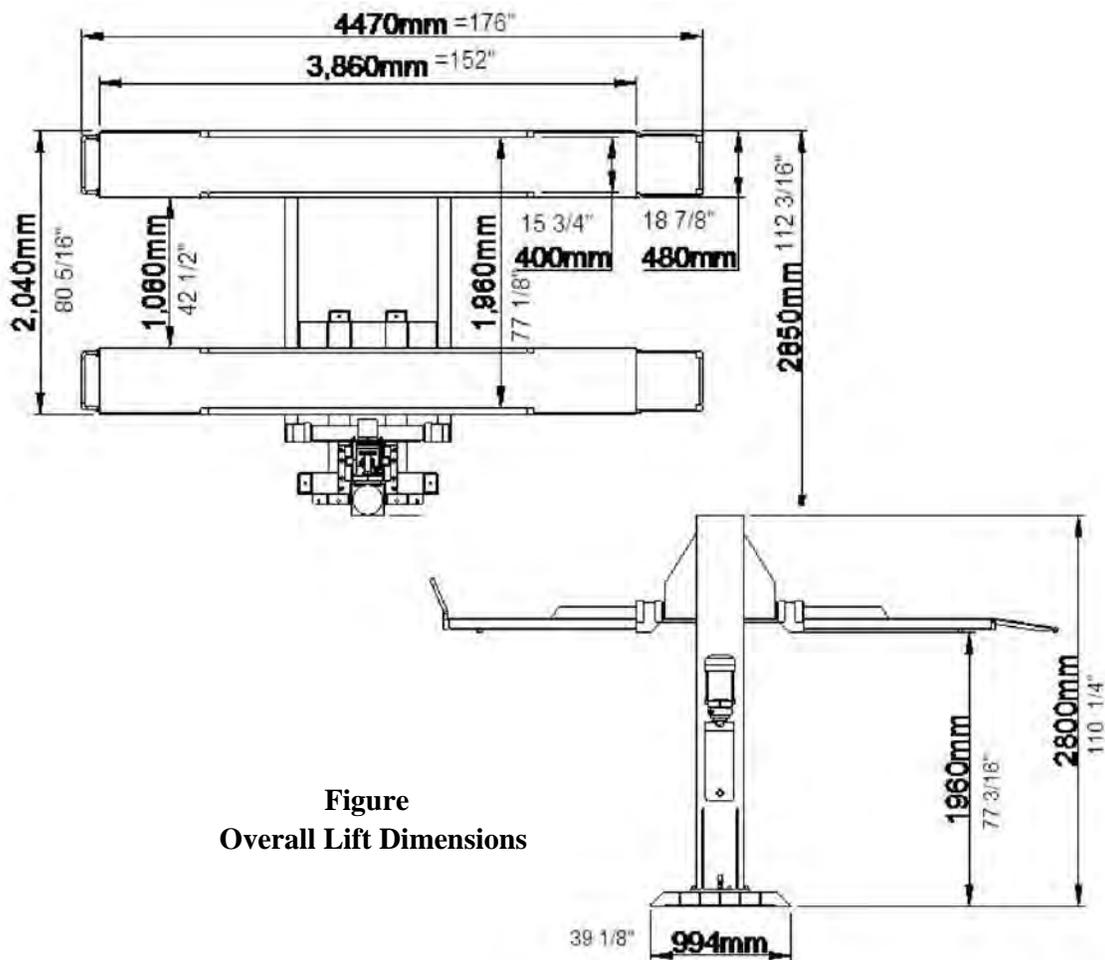
2010. Aug.

Important!

Be sure to read the operating instructions before operating your lift

Getting Ready

Make sure you have made all necessary measurements to assure that your lift will fit in your garage and accommodate the two cars you intend to park with it. Make sure you have enough clearance at the top, and enough width to allow parking a third car on the non-lift side. It is useful to chalk the outlines of the lift on your garage floor, using the manufacturer's dimensions, to see how the lift will fit. Make sure to consider how car doors will open when choosing the side of your garage to install the lift in.



**Figure
Overall Lift Dimensions**

Make sure you have someone to help you. The pieces to this lift are big, heavy, and cumbersome. The lift column weighs about 750 pounds by itself, and arms, base plate and ramps all weigh a couple of hundred pounds a piece. It is possible for two people to install this lift if they have the appropriate lifting and handling equipment, but it is definitely easier and faster if there are several people available to help manhandle the pieces into place. Whichever way you choose to go: several people with a little equipment, or a few people with a lot of equipment, remember to take your time, be careful, and think through the steps carefully. As with any activities involving big heavy materials, safety must be uppermost in your mind. This lift is more difficult to install than some of our other units because of its one-post design, but this very design makes it extremely effective for residential garage use. With proper preparation and installation, you will be very pleased with this lift.

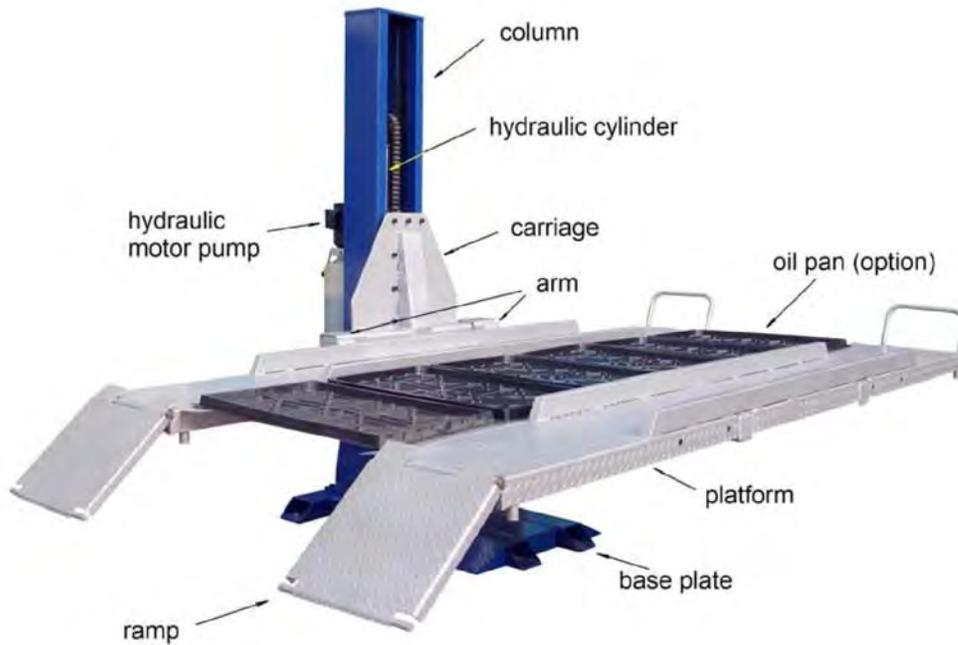


Figure 2
Major Lift Components

Required Tools

- ⌘ Fork Lift to unload lift on delivery
- ⌘ Fork Lift and/or engine hoist for moving pieces and positioning lift leg. You will also need a ten-foot length of 3/8" chain
- ⌘ 1 and 5/16" wrench and socket with ratchet
- ⌘ 1 and 1/8" socket and extension
- ⌘ 1/2" wrench
- ⌘ 11/16" wrench
- ⌘ adjustable wrench
- ⌘ Small crowbar or large screwdriver for aligning bolt holes
- ⌘ Concrete hammer drill with a new 3/4" concrete bit
- ⌘ Pliers
- ⌘ Flat blade screwdriver

Optional Tools (may be helpful, depending on specific installation)

- ⌘ Fence stretcher ("come-along"), for pulling ramps onto lift arms
- ⌘ Hydraulic floor jack on wheels, (for positioning pieces)

Receiving and Handling

When you receive your lift, it will come banded to several wooden pallets, and you will need a forklift to unload it. You can rent a forklift from most tool rental companies, and have it delivered to your home, but make sure it has the capacity to lift approximately 2500 pounds. Also, if you are going to use the forklift to erect your lift, make sure it will fit through your garage door. Many common lifts have a mast that is about 7 feet 4 inches high, and most residential garage door openings are 7 feet high. Smaller forklifts with adequate lifting capacity do exist, but you may have to look around to find the right one to rent. An alternative is to rent a standard forklift to unload the lift and move the parts to the garage, and do the actual assembly inside the garage with a rented engine hoist. Your lift will travel from the manufacturer via a flatbed tractor trailer to a trucking center in or near your city, and then be transferred to a box (enclosed) truck for final transport to your home. You will be contacted by the trucking firm prior to delivery. Make sure they know the lift is being delivered to a residential area that will accommodate the delivery truck, and try to arrange for the lift to be loaded cross-wise on the back of the truck so it will be easy to unload with the forklift. If the lift is loaded length-wise in the truck, it will be more difficult to unload. Alternatively, you can ask the trucking company to deliver the lift on an open truck. When you get the pallets lifted off the truck floor, simply have the driver drive his truck away from you, rather than try to remove the whole assembly from the truck.

Installation

You will need common hand tools that most homeowners have, like a hammer, screwdrivers and pliers, but in addition, you will need some tools that are not common. Each installation is somewhat different, and depends on how much room you have to work around the lift. Here is a chronological sequence of installation steps, with the associated tools.

1 Unloading the lift

You'll need a forklift that can handle about 2500 to 3000 pounds and operate on a smooth surface. They can be rented by the day from many tool rental companies.

2 Un-banding the lift

The steel bands which secure the lift parts to the pallets are heavy duty. You'll need a pair of metal shears or tin snips to cut the bands. Be very careful when doing this because the bands will tend to fly apart when they are cut, and the heavy lift parts may shift when freed from the bands. Stand to the side of the bands when you cut them, and use gloves when removing the cut bands because they have sharp edges.

3 Moving pieces

You can move the pieces to the garage with the forklift. Some of the smaller pieces can be moved by two or more people carrying them, but the base plate, the lifting column, the arms and the runways will probably require the forklift. If you have several people helping, some of the larger pieces can be moved manually. A piece of 3/8" chain about 10 feet long will be useful for moving heavy pieces by wrapping around the pieces and the forks of the forklift or the engine hoist hook, if that's what you're using.

4. Installing steps

STEP 1

The lift comes packaged in the order that the pieces need to be installed. The first piece to be positioned is the base plate. Place it on the garage floor as close to its final position as possible. After the base plate is in place, you'll fix it on the ground by anchors. (Fig. 3, 4, 5)



Fig. 3,



plate



STEP 2

The next major piece is the lift column. It will have the carriage unit, the hydraulic piston and chain assembly, the hydraulic hose and safety latch cable already assembled in it. The hydraulic cylinder in the column will appear to be loose, and "wobble" around. This is normal. As soon as a load is placed on the lift, the cylinder will right itself and remain righted. The objective of this

step is to pick the column up from a horizontal position, lift it vertically high enough to set it on the base plate until the mounting holes line up. This can be accomplished with the forklift or with an engine hoist. Wrap your lifting chain around the column between the four control unit bolts, and loop the other end of the chain (bolted together) over the forks of the forklift, or the lift hook of the engine hoist. If using the forklift, use a heavy “C” clamp on the fork after the chained is looped on, to keep the chain from sliding off the fork during the lift. Begin to lift the column slowly, and observe how the column is moving as it rises off the floor. It may be necessary to reposition the lift chain a few times till you find the optimum point that will allow the top to move high enough and the column to come into a nearly vertical position. Be careful if moving the column with an engine hoist, that sudden weight shifts do not cause the hoist to tip over. Set the column on the base plate and maneuver it around to line up the mounting holes. The column is easier to maneuver when it is vertical on the base plate. If possible, do not remove the lift chain from the column until you have got the mounting bolts started into the base plate. (Fig. 6, 7, 8)

After you’ve put the leg into position, you’ll bolt it to the base plate with bolts. You’ll need a wrench or a socket with a ratchet to tighten some of these bolts.



Figure 6, 7, 8 Lift column in place

STEP 3

Mount the motor pump on the back of column. Fix it using bolts. Connect the hose from the cylinder to the motor pump. (Fig. 9 , 10 , 11) The hose has slightly different fittings on each end, so make sure you match up the end of the hose with the cylinder. There is an O-ring on the end of the cylinder tube. Make sure these fittings are tight.

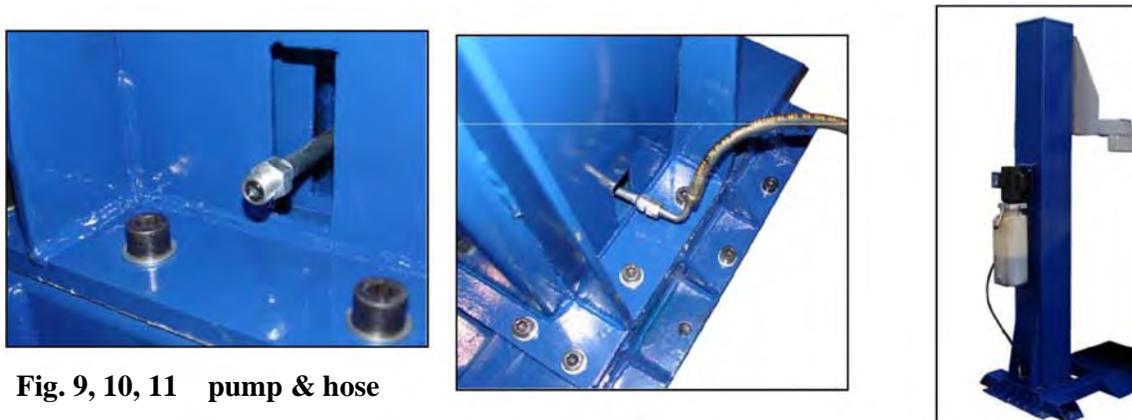


Fig. 9, 10, 11 pump & hose

Fill the tank with hydraulic oil. It is suggested to be AW 32/46 Non-Detergent Non-Foaming Anti-Wear Hydraulic Oil SAE-10 (12 quarts).

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STEP 4

The next task is to position the carriage board on the carriage with bolts. (Fig. 12, 13)

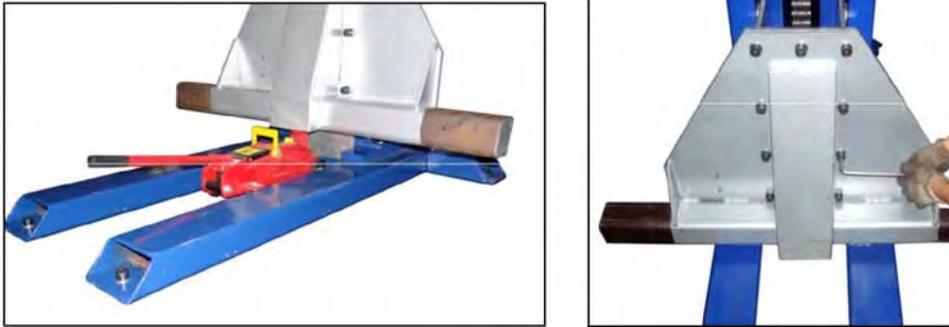


Figure 12, 13 carriage board

STEP 5

After that, position the two lift arms to the carriage board. (Fig. 14, 15)

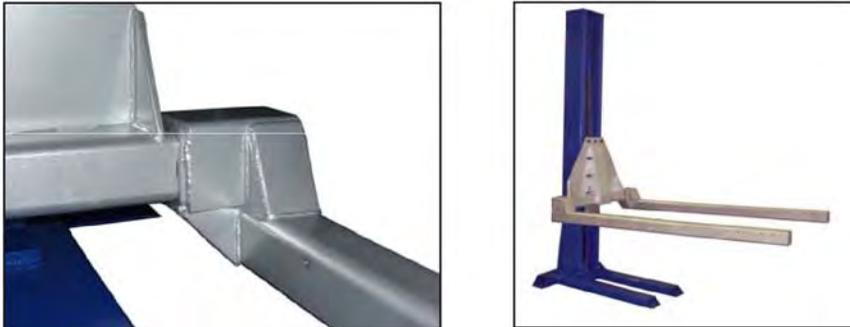


Figure 14, 15, lift arm

STEP 6

Fix the O-ring bracket on the back of carriage board. Put the safety-release cable through it. (Fig. 16, 17)



Fig. 16, 17 re-lease cable

STEP 7

The next job is to install the platforms. They are identical. The platforms are designed to fit snugly over the lift arms, but you will need to wiggle lift arms a little to fit the platforms. Before bolt the platforms with the arms, raise the lift about 6 inches off the floor and stop. Do not raise the lift arms any farther than this, because the unit hasn't been fastened to the garage floor yet. Do not lift any weight with lift until it has been properly fastened to the floor. If the platforms are hard to slide, silicone spray on the lift arms may help. If they are still hard to move, you can use a chain and a fence-stretcher (come-along), to help persuade them. Position the platforms according to the position of fixing holes on the arms. Fig. 18, 19.



Fig. 18, 19 platforms

STEP 8

The next step is to put the on the ramps of the platform, ram support. Pay attention to those circlips. They shall be in their position. (Fig. 20, 21, 22)

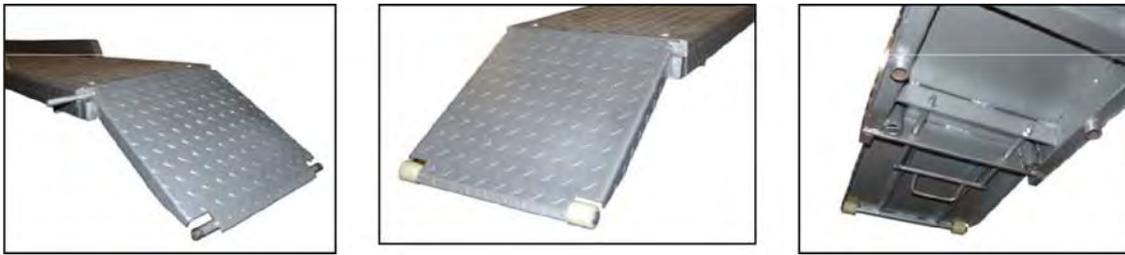


Fig. 20, 21, 22, 23 ramp and wheel stop

STEP 9

Put on the wheel stop (Fig. 24). Bolt the ramp fixing board on the base plate. Put on the ground ramps and middle board. (Fig. 25, 26)



Fig. 24, 25, 26 wheel stop and ground ramp

**Check again all the bolts and nuts and tighten them on necessary.
Now the lift is ready for using.**

OPERATING INSTRUCTIONS

The lift is very simple to operate. The start button on the control unit is pushed in and held to activate the switch which turns the electric motor on. The motor operates an internal pump that forces hydraulic oil into the lift piston, which extends the roller chain and raises the lift.

(Fig.27)



Fig. 27, 28, 29 wheel stop and ground ramp

As the lift rises, an internal safety latch will pass over the steel stops (rectangular blocks which protrude from the back, inside of the lift leg), and you will hear “clanks” as it does so. This sound is normal, and indicates that the safety latch is passing over the stops properly. The lift is raised to the desired height by holding the button in while it is rising, and releasing the button when the lift has reached its desired position. For safety, every time it is suggested to lock the lift by pressing down the lowering handle (Fig. 28).

To lower the lift, you must first raise the lift a little to get the lock block engaged. Then pull the latch-release cable to get lock block released (Fig. 29). Then depress the handled release valve and hold it, at the same time the lift will lower down. The weight of the lift will cause the lift to lower by gravity. No power is required to lower the lift.

After the installation is complete, before first-time application, raise the lift about two feet and then lower it. Repeat this process two or three times, and then top off the hydraulic oil reservoir again, if necessary. This assures that hydraulic oil is distributed everywhere in the system that it needs to be.

NOTE: Only top off the reservoir with the lift in the “down” position. If you fill the reservoir in the “up” position and then lower the lift, there will be too much hydraulic oil in the system, and it will squirt out of the top of the control unit.

RAISING A VEHICLE

Drive the vehicle onto the ramps until it is about centered. Set the parking brake. Depress the “up” button and the vehicle will rise. Raise the vehicle until it is

BE CAREFUL NOT TO RAISE THE VEHICLE SO HIGH THAT IT STRIKES THE CEILING! MAKE SURE ANTENNAS ARE REMOVED, IF NECESSARY, AND BE AWARE OF ANYTHING THAT PROTRUDES FROM THE CEILING, LIKE LIGHTBULBS, GARAGE DOOR OPENERS OR DOOR TRACKS. IT IS VERY HELPFUL IF YOU HAVE A “SPOTTER” ON A LADDER TO TELL YOU WHEN YOU ARE NEAR THE CEILING FOR THE FIRST LIFT!

When the vehicle is in the correct position, it is useful to mark the position of the carriage relative to the lift leg with two pieces of electrical tape or a felt tip marker. When you make future lifts, all you have to do is operate the lift till the reference marks line up, and you will know that the car is in the right position. If you alternate vehicles that you will lift, you will need a separate set of reference marks for each. The higher you lift the “raised” vehicle, the more headroom you will have to enter and exit the one you park underneath.



Figure 30, 31 ramp and it support.

In order to maximize the height underneath the platforms, the ramp support can be pulled back. The ramp rests on the support as in Fig 30. Before loading or unloading the vehicle on the platform, the ramp support should be pulled forward as in Fig. 31.

MISCELLANEOUS

Depending on the size of your garage, and the size of vehicles, you should take care when moving around the lift until you get used to it being there. It is useful to spray paint the ends of the ramps and the ends of the lift arms a bright fluorescent color to help catch your eye and avoid head bumps. You may also wish to repaint dings and scrapes in the lift paint that occurred during shipping and installation. The inside corners of the lift leg should be re-greased with a general-purpose axle grease every year, or so, as it becomes obvious that it needs it.



Fig. 32 parking two cars

Parts code and drawing of parking lift 167255

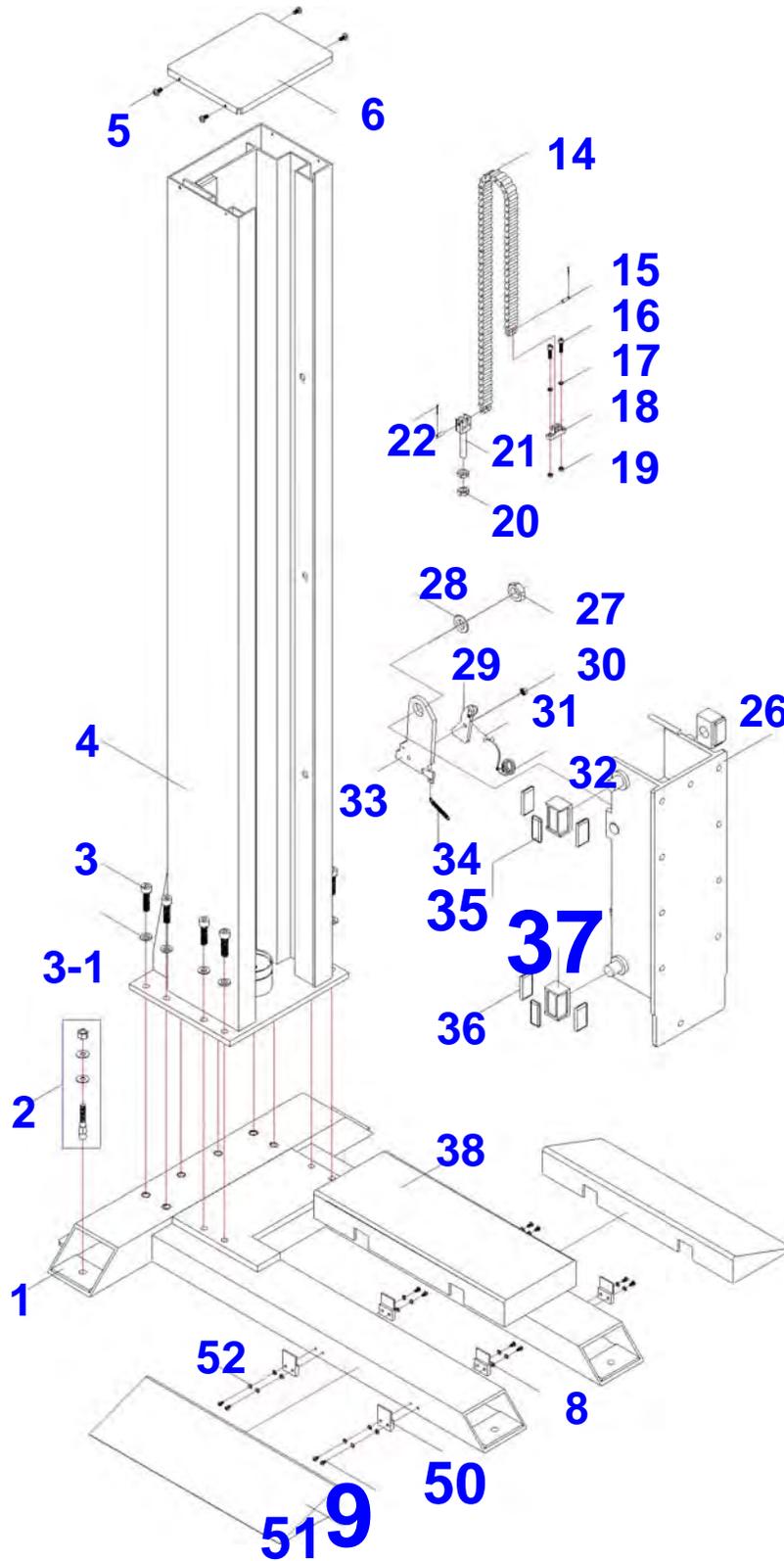


Fig . 33

Parts code and drawing of parking lift 167255

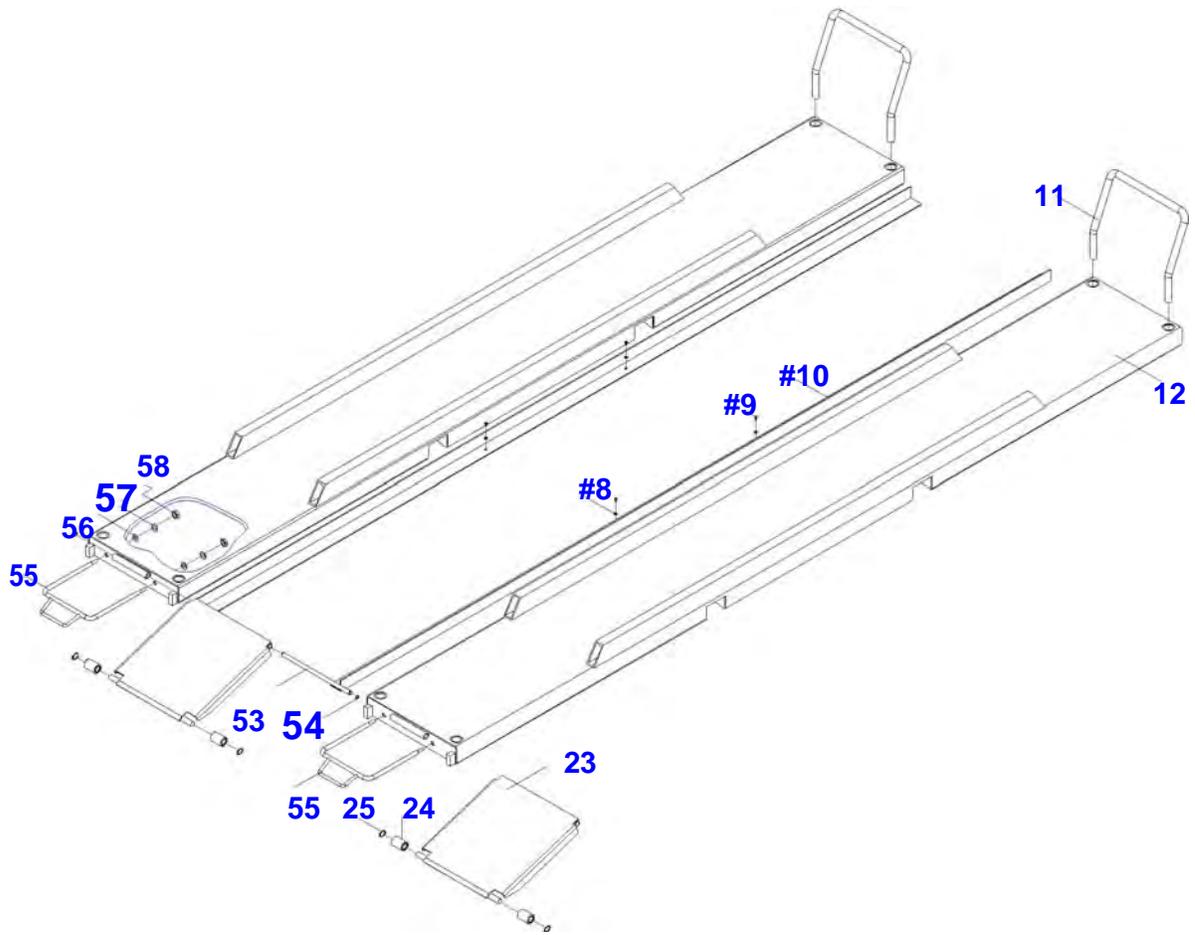


Fig. 34

Parts code and drawing of parking lift 167255

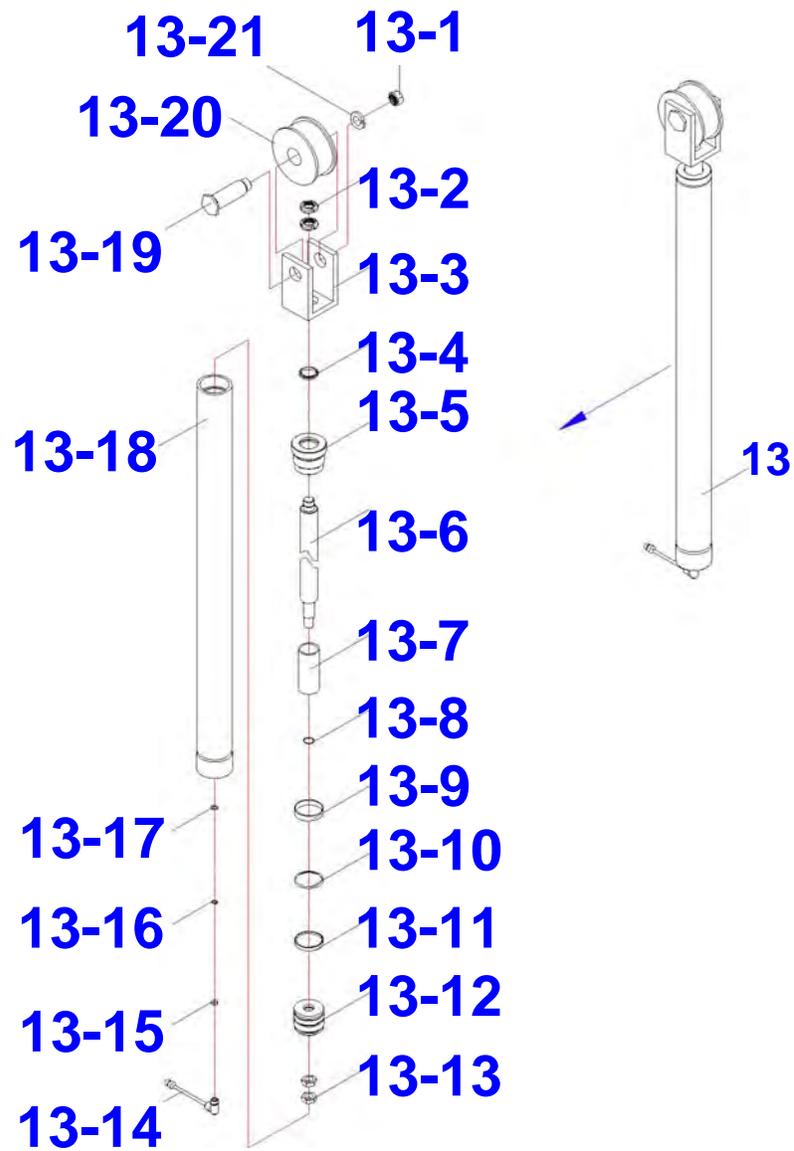


Fig. 35

Parts code and drawing of parking lift 167255

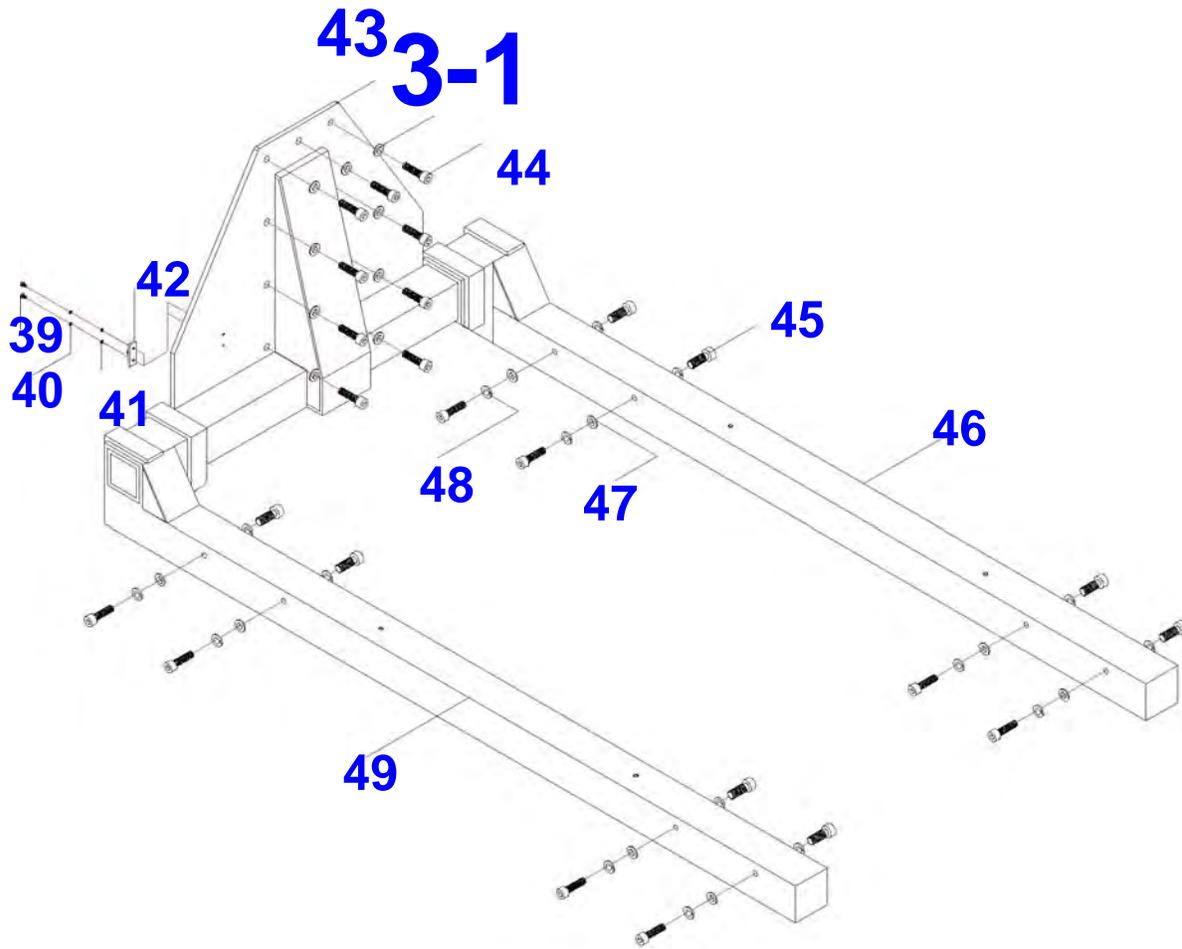


Fig. 36

Parts code list of parking lift 167255

ITEM	CODE	DESCRIPTION	QTY
1	167255*01-001	Base plate	1
2	167255*01-002	anchor	10
3	167255*01-003	Bolt	10
3-1	167255*01-003-1	Flat washer	19
4	167255*01-004	column	1
5	167255*01-005	Screw	4
6	167255*01-006	upper cover board	1
8	165955*01-008	Flat washer	12
#8	165955*02-0#8	Flat washer	16
9	165955*01-009	Screw	12
#9	165955*02-0#9	Screw	4
#10	165955*02-010	Side extension	2
11	165955*02-011	stop rod	2
12	165955*02-012	Platform	2
13	165955*03-013	Hydraulic cylinder	1
13-1	165955*03-013-1	Thin nut	1
13-2	165955*03-013-2	Round Nut	2
13-3	165955*03-013-3	Wheel support	1
13-4	165955*03-013-4	Dust-ring	1
13-5	165955*03-013-5	Guiding ring	1
13-6	165955*03-013-6	ram	1
13-7	165955*03-013-7	Bush	1
13-8	165955*03-013-8	O-ring	1
13-9	165955*03-013-9	Guide-ring	1
13-10	165955*03-013-10	O-ring	1
13-11	165955*03-013-11	U-ring	1
13-12	165955*03-013-12	Piston	1
13-13	165955*03-013-13	Nut	2
13-14	165955*03-013-14	Connection tube	1
13-15	165955*03-013-15	flow-limit washer	1
13-16	165955*03-013-16	Cricilp for hole	1
13-17	165955*03-013-17	copper Washer	1
13-18	165955*03-013-18	cylinder tube	1
13-19	165955*03-013-19	Shaft	1
13-20	165955*03-013-20	chain Wheel	1
13-21	165955*03-013-21	Spring washer	1
14	167255*01-014	Chain	1
15	167255*01-015	chain pin	2
16	167255*01-016	Bolt	2
17	167255*01-017	Spring washer	2
18	167255*01-018	down block	1
19	167255*01-019	Nut	2
20	167255*01-020	Nut	2
21	167255*01-021	upper block	1
22	167255*01-022	spring pin	4

ITEM	CODE	DESCRIPTION	QTY
23	165955*02-023	ramp	2
24	165955*02-024	nylon Wheel	4
25	165955*02-025	Cricilp for shaft	4
26	167255*01-026	carriage	1
27	167255*01-027	lock Nut	1
28	167255*01-028	Flat washer	1
29	167255*01-029	Unlock board	1
30	167255*01-030	lock Nut	1
31	167255*01-031	Latch-release cable	1
32	167255*01-032	ring	1
33	167255*01-033	Safety lock board	1
34	167255*01-034	Spring	1
35	167255*01-035	upper Rubber block	4
36	167255*01-036	side Rubber block	8
37	167255*01-037	block support	4
38	167255*01-038	middle board	1
39	165955*04-039	Screw	2
40	165955*04-040	Spring washer	2
41	165955*04-041	Flat washer	2
42	165955*04-042	release-cable Hook	1
43	165955*04-043	carriage board	1
44	165955*04-044	Bolt	9
45	165955*04-045	Screw	16
46	165955*04-046	Right arm	1
47	165955*04-047	Flat washer	16
48	165955*04-048	Spring washer	16
49	165955*04-049	Left arm	1
50	167255*01-050	ramp fixing board	6
51	167255*01-051	ground ramp	2
52	167255*01-052	Spring washer	12
53	165955*02-053	Spindle	2
54	165955*02-054	Cricilp for shaft	4
55	167255*02-055	ram support	2
56	167255*02-056	Flat washer	4
57	167255*02-057	Spring washer	4
58	167255*02-058	Nut	4