

# SERVICE MANUAL

FOR

# MOBILE LOADING RAMP

-----With Support leg



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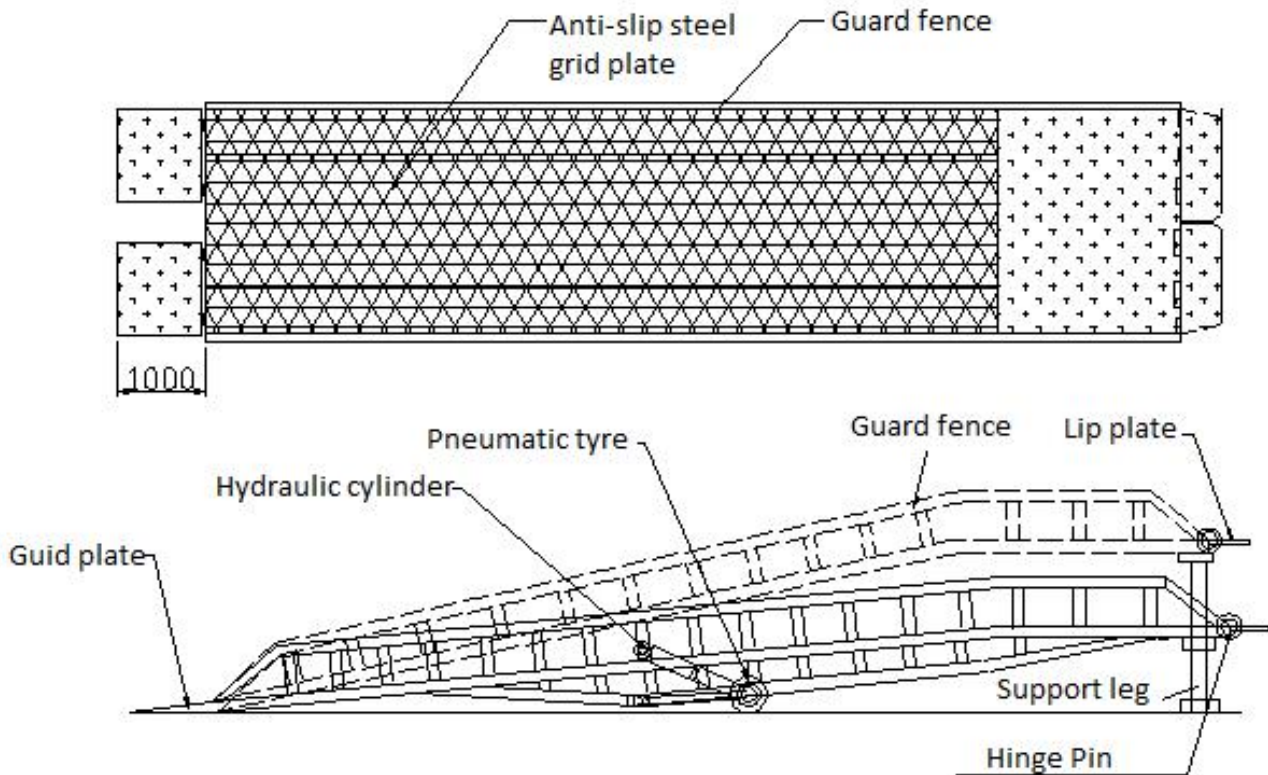
## **INSTRUCTION**

The mobile Loading ramp is a special auxiliary equipment for the cargo loading and unloading, which is usually used together with forklifts. The ramp provides access for the forklifts to move directly into the truck from the ground to load and unload the goods in bulk. The equipment adopts the manual hydraulic drive to load and unload the goods quickly and safely without the electrical power. And only one man is needed to operate. The loading ramp helps enterprises reduce much labor force, double the efficiency of loading and unloading and accelerate the speed of goods circulation, so that the enterprises can gain greater economic benefits.

## **Main Features**

1. The adjustable chain conveniently grapples the truck so that the loading ramp will joint closely with goods all along.
2. The drive from the manual pump, instead of the electrical power, is adopted to easily adjust the height of the ramp.
3. The equipped brake can protect the loading ramp from displacement when loading or unloading.

## PRODUCT OUTSIDE DRAWING



Mobile loading ramp is mainly composed by three parts: mechanical structure, hydraulic system and mobile devices; manual hydraulic pump is power equipment.

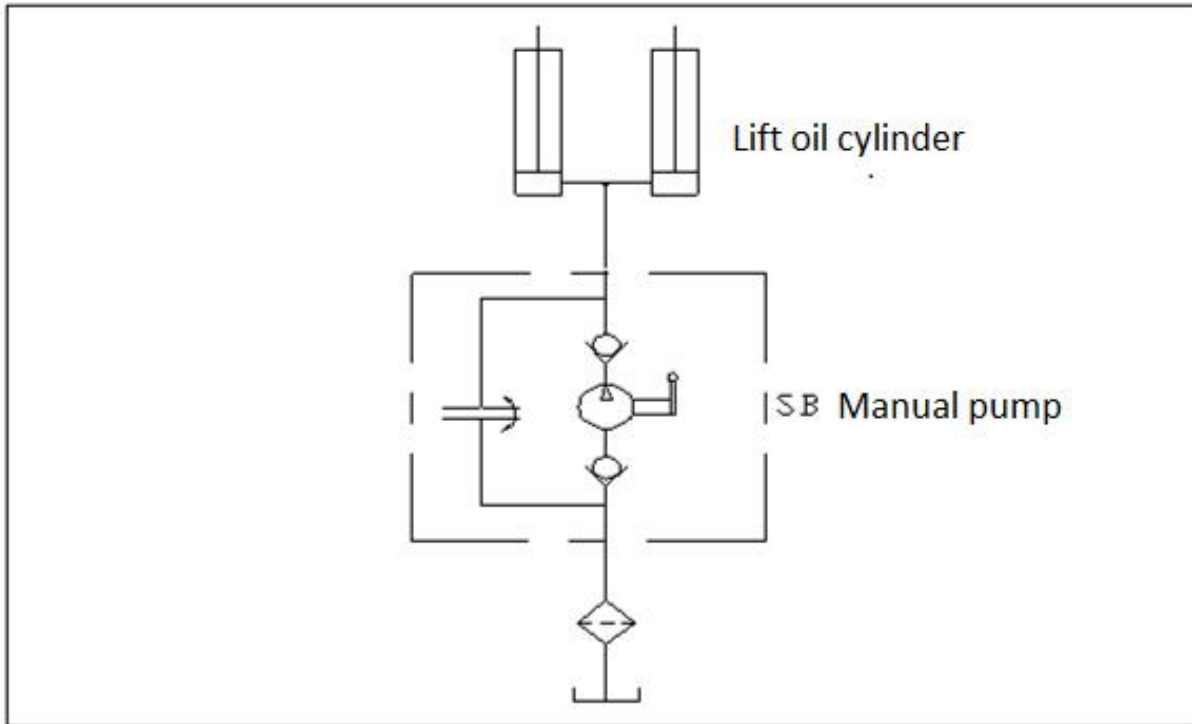
### Structure

The mechanical structure of mobile loading ramp is composed by ramp plate, skid-plate, mobile components. ramp plate is made up with square tubes. The surface of the platform is grid steel. While take use of the  $\varnothing 500$  airless tyre.

### Specification of hydraulic System

Use the manual hydraulic pump to pump oil from the tank, to press the pistons in the cylinder, to lift the ramp up; when falling down, just to adjust the hydraulic oil by the limited valve to return to the tank by one-direction valve.

## HYDRAULIC PRINCIPLE DIAGRAM



Notice : The symbols in the dotted line only express the basic working and processing system. The hydraulic component is called supporting valve for hydraulic lifting and falling, which is research and produced by our own factory according to the special requirements of loading ramp.

## APPLICATION METHOD

In order to make sure the safety, please keep the machine in good working conditions, it is necessary to check the appearance and performance before using . Checking content should includes:

- 1) Make sure all parts for the equipment are ready, and no damage.
- 2) Checking if there is oil leaking for the oil tube;
- 3) Checking all the screws are fastened of every crossing structures
- 4) Checking if there is barrier on slope benching。

### Operation steps

1. Adjusting the height of the loading ramp to make the connecting plate onto the truck;
2. Make sure the chains are hooked with the truck, and adjust the length of the chains(too short is also not suitable).
3. If with landing legs, rotate the handle to support the landing legs, make sure the sole of the legs completely get onto the floor. It is forbidden to adjust the height of the legs with any loading on the ramps.
4. Install the brake pads well.
5. After finishing above steps, loose the screw for oil returning of the manual hydraulic pump, and make the hydraulic cylinder fall down which promise the safety of the hydraulic system safe. Forklift is forbidden to run to the loading ramp before loosing the screw on the manual hydraulic pump.
6. Please do not move the loading ramp in work process. Observe carefully when the truck move forward or backward, it is necessary to release the hook and adjust the height of loading ramp in time to avoid any hit or pull the ramps by the truck.

**Notice for use**

- 1) Work according to fixed load, forbid overload. Exceed not more than 10% under special conditions.
- 2) It is forbidden for forklift to climb onto the ramp before releasing the oil returning screw on the manual hydraulic pump.
- 3) Can not move loading ramp in the course of working or be in rising position.
- 4) Operators need to master how to operate and the loading ramp and know how to maintain the machine, and also know the systematic function and configuration of the machine is needed. Some training before operating is necessary.

## MAINTENANCE AND ATTENTION

### Safety Notice

1. Make sure to get rid of pressure before removing any part of hydraulic system to prevent ejection of pressure oil as well as the sudden descent of work table.
2. On atrocious working conditions, it is necessary to take devices to protect the equipment from damage, such as in rainy day to cover the machine with some water-proof cover. Most attention to protect the hydraulic power system well.

### Monthly Maintenance

- 1) Check the idler wheel, middle shaft and bearing, oil cylinder pin shaft and bearing, arm bracket joint shaft and other parts to make sure they are fine.
- 2) Add some lubrication for the above parts to prolong bearing's life-span. (50% lithium soap grease and 50% machine oil mixed grease)
- 3) Check the quality and position of hydraulic oil. The lift table is rising during the whole journey. At this position, the hydraulic oil should be 40—50mm higher than the oil tank's bottom. If the oil becomes dark, sticky, or there is sand or other foreign bodies in it, replace immediately (32# hydraulic oil)

### Annual maintenance

1. Examine all the hydraulic pipeline and joints. The pipelines should not be broken, and joint should not be loose, screw down all the joints.
2. Remove and take descent valve apart, blow the post plunge clean with compressed air, then put it on again.
3. Let all the hydraulic oil out, screw down the joint and take out the filter, then put it back to oil tank after washing and cleaning with compressed air, and connect pipeline at last.
4. Replace the used oil with new one, or the running parts in the system will wear and tear speedily.



## COMMON FAILURES AND SOLUTIONS

Failure	Causes	Solutions
Lift table auto down	Leakage in the hydraulic pump	Check and replace the one-direction descent valve. And clean the dirty things away.
	Leakage in the oil cylinder	Replace the sealing parts of hydraulic cylinder.
Lift table not down	The descent valve does not work	Check and replace the one-direction descent valve. The descent valve should keep clean, and move flexibly.