

Operating manual for the HESTAL 855 Liftmaster

1. General

The HESTAL855 Liftmaster is a hydropneumatic device for lifting the roof of a commercial vehicle. on one or both sides, in order to make use of the total load volume. and to make loading and unloading easier.

2. Regulations

In addition to these operating instructions, the following regulations and guidelines must be observed for operating the HESTAL 855 Liftmaster.

- BG (Employer's Insurance) "General Regulations" (BGV A1)
- BG "Winching, Lifting and Traction Equipment" regulations (BGV D8)
- BG "Vehicles" regulations (BGV D29)
- Safety Regulations for Hydraulic Hoses (ZH1/74)
- BG "Vehicle Inspection by Vehicle Personnel" principles (BGG 915)
- BG "Vehicle Inspection by Experts" principles (BGG 916)
- BG "Vehicle Maintenance" regulations (BGR 157)
- StVZO (Road Traffic Licensing Regulations)

3. Technical description of the Hestal 855 Liftmaster

The HESTAL 855 Liftmaster is used for lifting the roof of the vehicle body, by 580mm on the right or the left side, by means of air pressure or hydraulic oil.

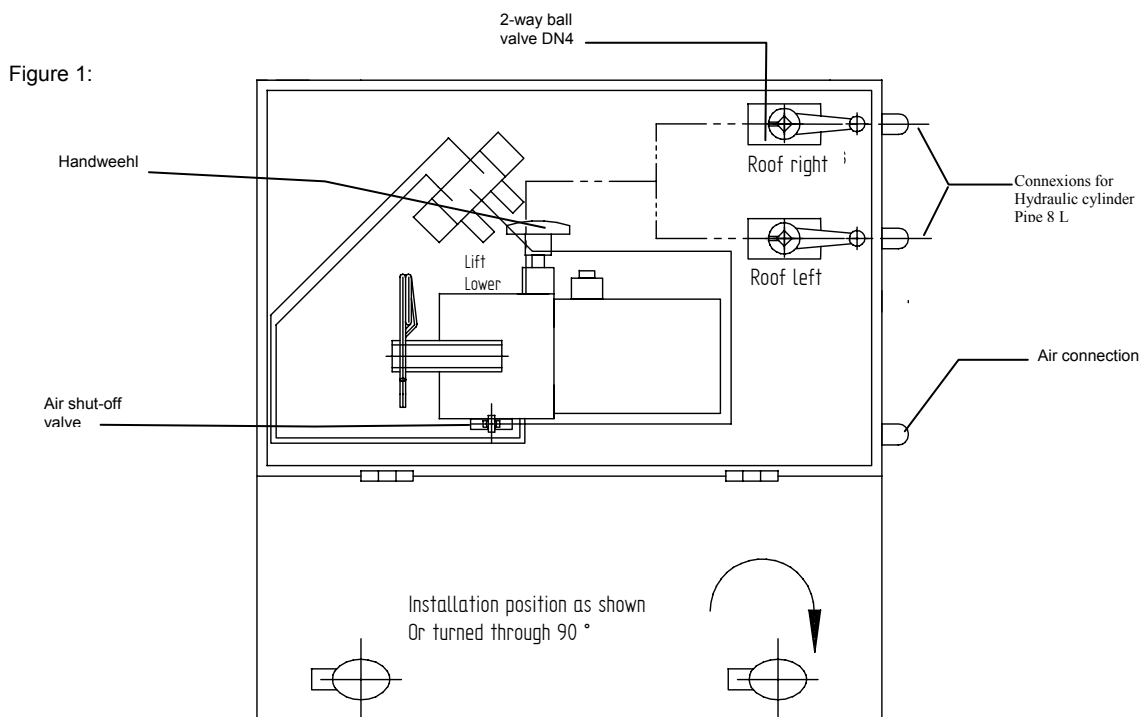
The total load volume can then be used, as the roof frame section no longer restricts the loading height after lifting.

The side of the roof to be raised is selected in advance by a ball valve for each side. (Fig. 1)

The pump is started by opening the air shut-off valve.
The hydraulic oil pumped out is brought back into the tank via the pressure control valve.

When the handwheel is closed and the air shut-off valve is opened, the vehicle roof is raised.
The lifting process may be interrupted at any position by closing the air shut-off valve.

Emergency operation is possible through the use of a hand pump, if there is not enough suitable compressed air available.



4. Raising and lowering the roof by means of control unit and pump unit on baseplate

Preselect roof side Switching the ball valve for the right or left side of the roof determines which side is to be raised.

Raise roof The pump is switched on by opening the air shut-off valve (Switch is parallel to the pipe). The vehicle roof is now raised. This procedure may be interrupted at any point you choose, by switching the pump off again.
When both roof sides have to be raised, the ball valve of the raised roof side must be closed before.



On completion of the raising procedure, the pump must be switched off by means of the air shut-off valve.

Lower roof The vehicle roof is lowered by opening the handwheel. This procedure may be interrupted at any point you choose, by closing the handwheel. Only the side with opened pipe can be lowered (select ball valve)
When the lowering process is complete, the handwheel must be closed again.



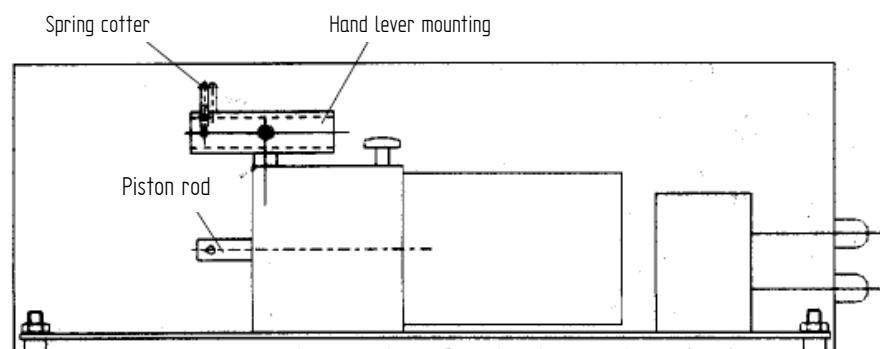
5. Emergency manual operation with control unit and pump unit on baseplate

If there is not enough suitable compressed air available (pressure chamber empty or air pressure too low), the vehicle roof can be raised by the emergency hand pump. For this purpose, the spring cotter has to be pulled out of the hand lever mount. Then the hand lever mount is turned inward through 90° and locked by the spring cotter on the piston rod. Then a hand lever (not included in delivery), pipe or metal bar with an external diameter of 22mm (e.g. bar for car jack) can be inserted in the hand lever mount. To raise or lower the vehicle roof you should, generally speaking, proceed as described in Section 4, except that you must also use the hand lever for pumping.

Attention:

When emergency manual operation is completed, the hand lever must be withdrawn again and the hand lever mount with spring cotter must be replaced in the starting position shown (see Fig. 2).

Figure 2:



6. Raising and lowering the roof with the hand pump /a hand pump for each side of the vehicle

Raise roof Insert pump lever in hand pump mount and start pumping process. The vehicle roof is now raised. This procedure may be interrupted at any point you choose.

Lower roof The vehicle roof is lowered by opening the handwheel. This procedure may be interrupted at any point you choose, by closing the handwheel.

When the lowering process is complete, the handwheel must be closed again!

7. Operation

Attention:

The HESTAL 855 Liftmaster may only be operated by suitably trained personnel.

During the (lowering) operation, there must be no one in the loading area or on the load itself!

Tarp fasteners must be open!

Any loads on top of the roof (snow, ice etc.) must have been removed previously.

The centre supports must be fitted with a telescope (e.g. HESTAL 700.7 Centre pillar with telescope) and be located in the attachment points provided on the vehicle frame.

There must be a minimum clearance of 700mm above the vehicle superstructure.

The inlet air pressure must not be in excess of 10 bar.

Operation with pressurised air devices unsuitable for vehicles is not permitted.

The side of the vehicle opposite the control unit is not visible. Care must be taken to ensure that there is no one in this danger area or that this area is supervised by a trained person during raising and lowering operations.

In the case of vehicles not fitted with a spring-loaded brake, the mechanical handbrake must be applied and chocks placed in position!

It is totally forbidden to lift single external loads using the HESTAL 855 Liftmaster!



Driving with the roof raised (even only slightly) is not permitted!

Prior to starting any journey, ensure that...

- the roof is lowered completely and the centre supports are locked in the attachment points provided.
- the tarp fasteners are properly closed
- the air shut-off valve and both ball valves are closed and there are no leaks in the compressed air lines.
- the hinged control unit lid is properly closed (and the key removed).
- the control unit fixture is in perfect condition!

For work in moving traffic, a suitable safety vest must be worn!

8. Maintenance

After approximately 5 hours operation, all bolted connexions must be retightened, as they settle after some time.

Pipes, connexions, pipe fittings and hydraulic cylinders must be regularly checked for secure fit and tight seal.

The fastening and connexions of the mechanical parts and of those for the control unit must be regularly checked to ensure they are in perfect condition.

The hydraulic oil must be regularly inspected to ensure that it is free of water (no cloudiness) and air (no milky colour) and it must be checked for any other contamination; the oil must be changed if necessary.

The maximum oil-change interval is 1,500 operating hours and at least every two years, in any case. A mineral oil in the HLP 10 oil category, in accordance with DIN 51524 T1 and T2, must be used.

Only genuine HESTAL parts may be used to replace wearing parts. See also BG "Vehicles" regulations BGV A1 §56 and §57.

If there are no manufacturer's stipulations, the hydraulic hoses must be replaced (because of age) within a maximum of six years.

9. Troubleshooting and eliminating faults

Fault	Cause	Remedy
Roof cannot be raised.	No/not enough oil in tank	Top up oil
	Roof superstructure jammed.	Ensure perfect movement in the support guides.
	Tarps not freed.	Free or loosen tarps.
	Air valve closed or air hose broken.	Open air valve Remove broken section
	Insufficient air pressure	Check air connexions Raise air pressure
	Pillars not fitted with telescope	Release and unlock pillars completely
Roof lopsided when lowered	Roof superstructure jammed on one side	See above
Roof or single cylinder does not remain in raised position (when pump is switched off)	Pipe leaking	Check and possibly tighten pipes
	Handwheel not closed	Close handwheel