

An introduction to your new AHT “UTK” Tailgate Loader **OPERATORS MANUAL**

UTK-1100ST/AL
UTK-1650ST/AL



Thank you for purchasing the “AHT” tailgate loader. It is the finest tailgate loader in the world and will give you many years of good reliable service if you will do just a little preventive maintenance and do it on a regular basis.

This instruction booklet will provide all the information you need for operating and maintaining your new “AHT” tailgate loader.

Please be sure to keep a copy of this manual in the vehicle, so that it will be available when needed for servicing your unit.

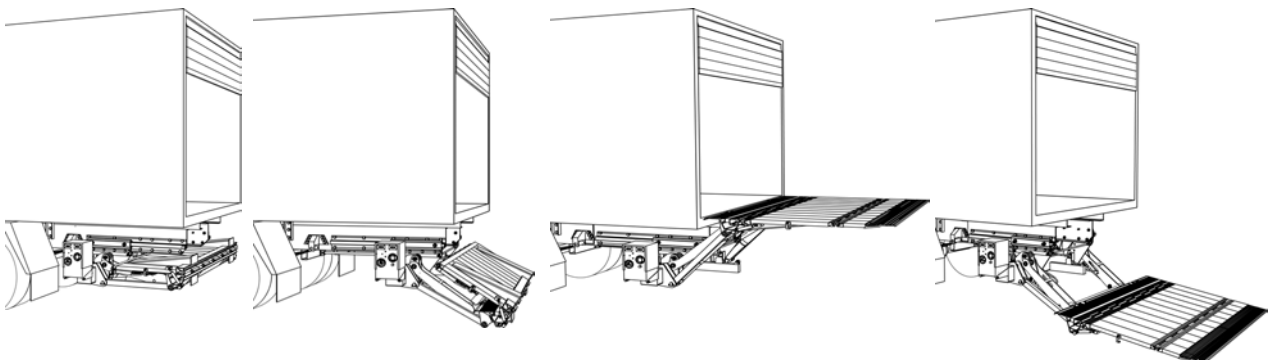
The “AHT” tailgate loader was engineered, and built, to give you long life with very few problems.

Generally, your “AHT” tailgate loader requires only periodic maintenance, but if there is a problem, this booklet will be invaluable for servicing the unit.

If for any reason, there is a problem, and you have difficulty getting the problem solved, please call the factory and we will be happy to help you find some local help.

Most companies, that service other types of liftgates can also do any repair work necessary on the “AHT” tailgate loader.

CAUTION: When steam cleaning the „UTK“ it is very important to be careful around the electrical control box. **DO NOT** point the steam directly on the control box as the electrical connections could be damaged. It is also very important to lubricate the entire unit, after washing, as the grease will have been washed away.



HOW TO USE THE “UTK” TAILGATE LOADER

IT IS NOT PERMITTED TO USE THE “UTK” AS:

- | | |
|-----------------------------------|--|
| -A personal lift or elevator | Only the operator is permitted to ride up and ride down with the load. |
| -As an extension of another body. | Do not use the „UTK“ to load or unload another vehicle. |
| -As a car jack. | It is very unsafe to lift another vehicle with the “UTK” |
| -As a snow plow. | Heavy damage could be done to your new “UTK” |

It is not permitted to overload the platform to a point where the operator does not have enough room to operate the tailgate safely.

USER QUALIFICATIONS TO OPERATE THE “UTK” TAILGATE LOADER

The driver and/or operator should be well trained in the proper procedure for operating the “UTK” before using the tailgate loader.

Carefully read the manual **before starting to operate** the “UTK” tailgate loader.

Only mature adults, age 18 and above, should operate the “UTK” tailgate loader.

The operator should not be physically handicapped. (Bad eyesight or hearing)

The operator should not be overly tired.

The operator should never be under the influence of alcohol or drugs while operating the “UTK”.

The load **must be** stabilized on the platform to avoid damage to equipment or personnel.

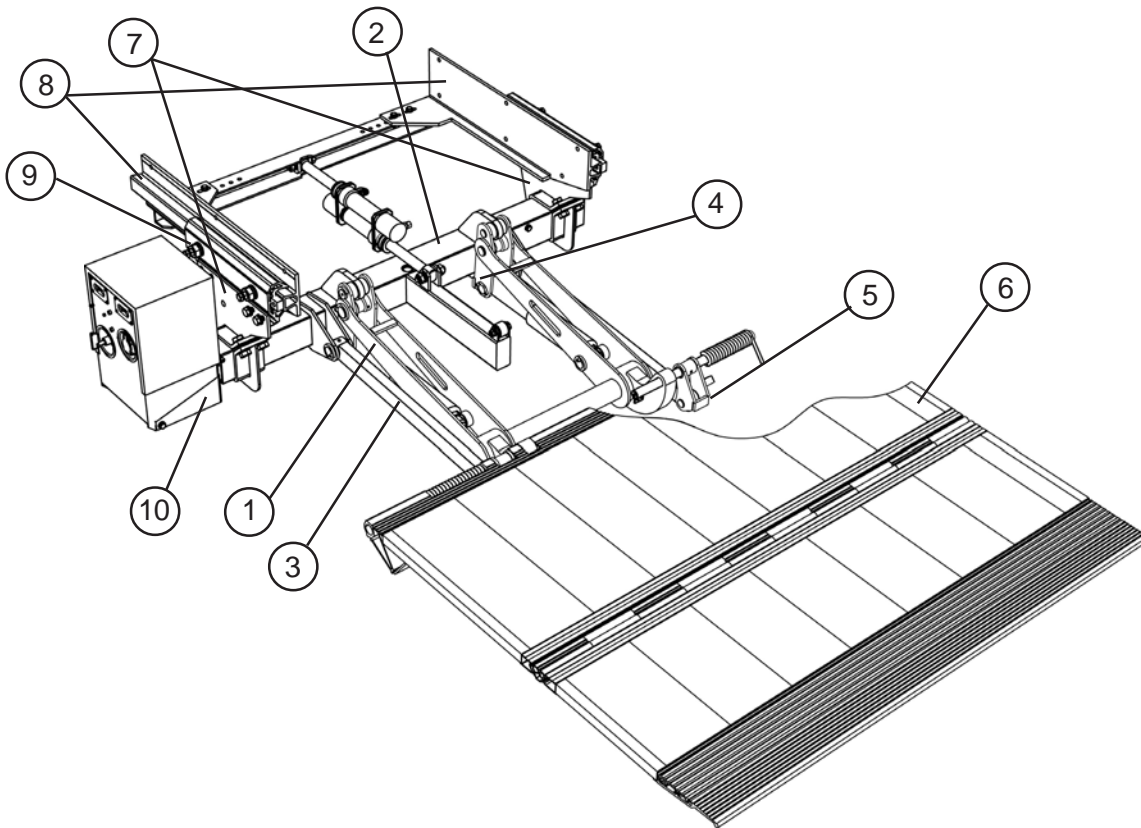
The operator must never load or unload more than the maximum capacity of the “UTK” tailgate loader. **Read the data plate for actual capacity of this „UTK“.**

Always perform the daily check before using the „UTK“ tailgate loader.

TECHNICAL DESCRIPTION OF THE „UTK“ STEEL/ALUMINUM TAILGATE LOADER

The Steel/Aluminum „UTK“ Tailgate Loader has the following components:

- 1) One Hoisting Unit: Made from Steel ST37 (Welded construction)
- 2) One Main Frame: Made from Steel ST37 (Welded construction)
- 3) Two Lever Arms: Made from Steel ST37 (Welded construction)
- 4) Two Tilting Brackets: Aluminum Die Casting (quenched)
- 5) Two Joint Plates: Aluminum Die Casting (quenched)
- 6) One Platform: Made from High Strength Aluminum Profiles
- 7) Two Mounting Brackets: Made from Steel ST37 (Welded construction)
- 8) Two Rails: Made from High Strength Aluminum Profiles
- 9) Two Sliding Brackets: Made from High Strength Aluminum Profiles
- 10) One Bracket for Power Pack: Made from Steel ST37 (Welded construction)



The main frame (2) is mounted to the rails (8) with the sliding brackets (9).

For lifting the load, we use two single-acting aluminum lift cylinders. All cylinders have ceramic-coated, salt and chemical resistant, piston rods for ultra long life span.

Each of the aluminum cylinders is equipped with a mechanical hose burst valve, for safety. In case of hydraulic hose failure, the platform cannot fall to the ground. The failure can be repaired and the „UTK“ can go back to work.

For sliding the „UTK“ in or out we use one oil-gas cylinder.

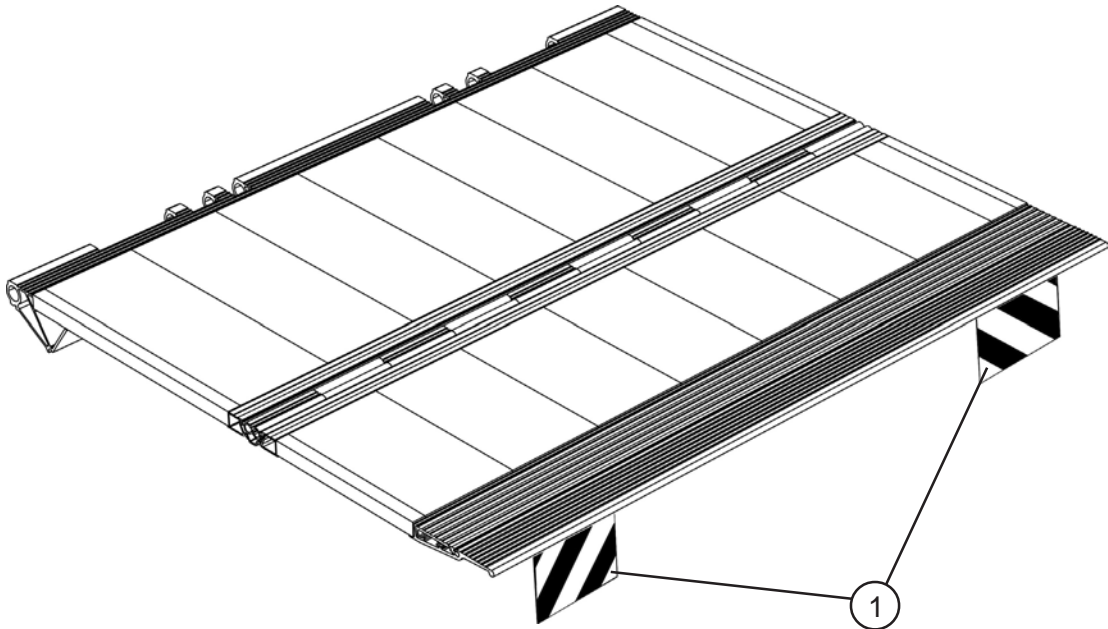
TECHNICAL DESCRIPTION OF THE „UTK“ STEEL/ALUMINUM TAILGATE LOADER

The platform:

The platform is made from aluminum high strength profiles and is designed to maintain the load and keep is stabilized for your safety. The platform is folded 1 times for a smaller transporting length.

The platform is also equipped with:

1. **Safety Flags**
so the platform can be seen, from the rear, while in operation.



TECHNICAL DESCRIPTION FOR THE MHW POWER PACK

The MHW Power Pack:

The power pack enclosure, including the built-in oil reservoir, is made of aluminum and is insulated to achieve a very quiet operation. The **noise level** of the power pack is **less than <70dB** (MSV§74).

The power pack is usually located on the curbside of the vehicle and mounted on the main frame with a bracket. The adjustment for the working pressure, the lowering speed and the IN speed can only be done inside the power pack enclosure. The control buttons are located on the outside of the power pack cover.

CAUTION: Never bottom out the relief valve fully. The power pack and/or the hydraulic system could be damaged. When the "UTK" is steam cleaned, it is very important to be careful around the electrical controls. **Do not point the steam directly at the power pack housing, as the electrical connections are delicate and could be damaged.**

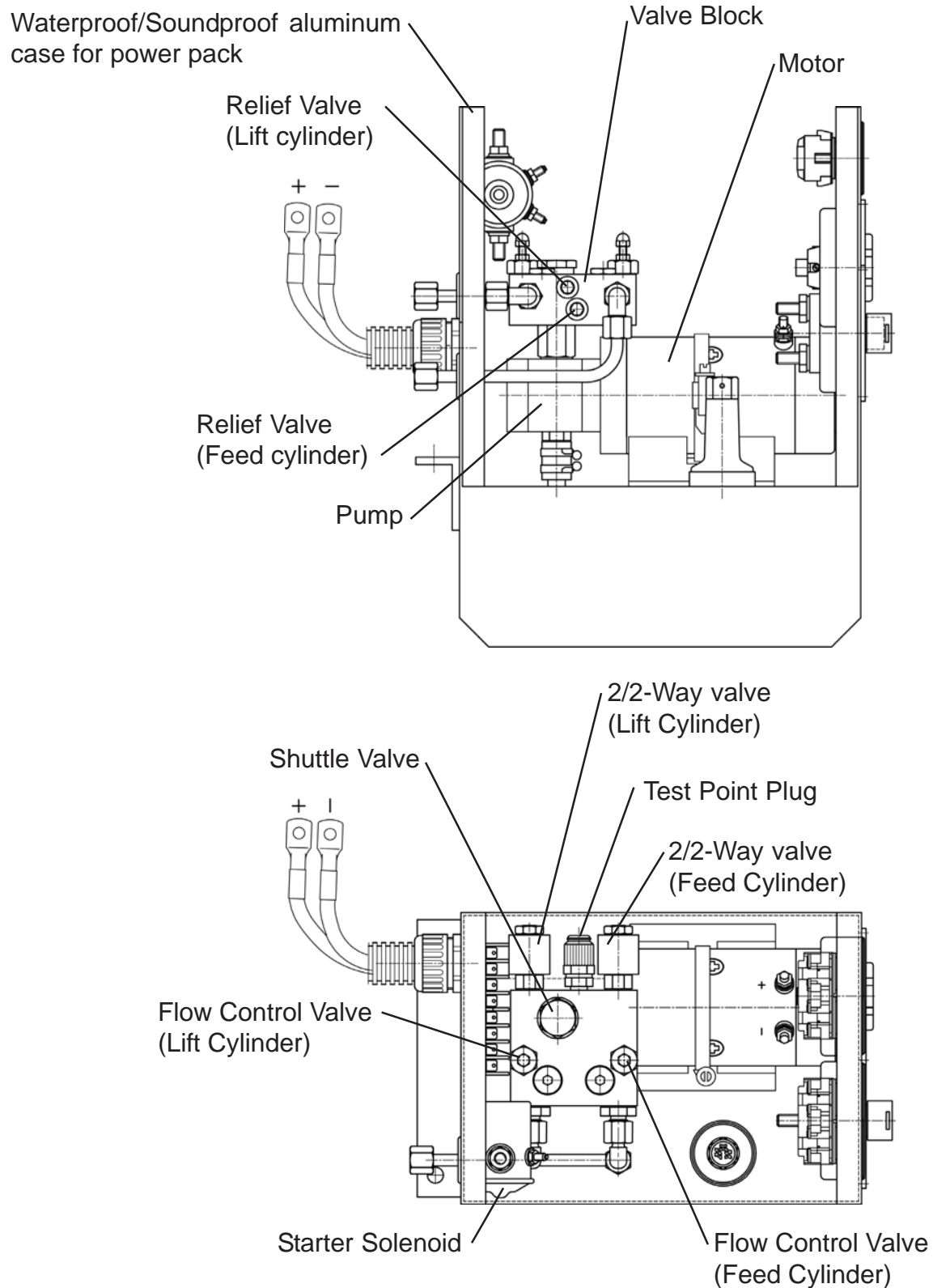
The MHW power pack contains the following components (outside):



TECHNICAL DESCRIPTION FOR THE MHW POWER PACK

The MHW Power Pack:

The MHW power pack contains the following components (inside):



TECHNICAL DESCRIPTION

FLOW CONTROL VALVE

Adjustable flow control valve:

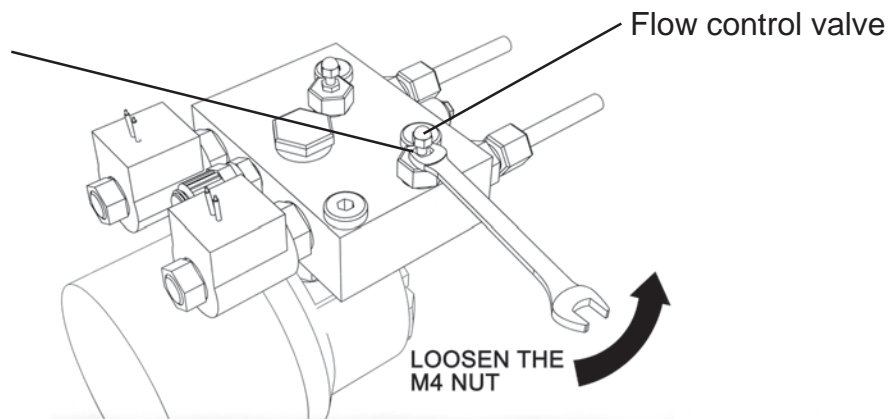
The Lifting speed is not adjustable.

The Out speed is not adjustable.

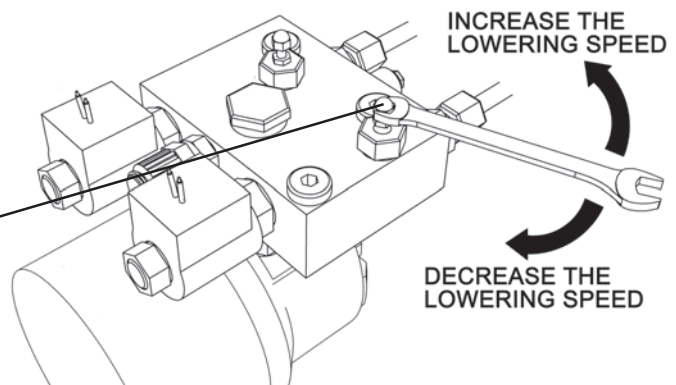
How to adjust the flow control valve:

- Be sure the adjustable flow control valve is not closed. To regulate the lowering speed (IN speed), first loosen the M4 (5/16") nut. Adjust the flow control valve carefully at the hex nut until the correct lowering speed (IN speed) is attained. When the speed is correct, hold the screw in one hand and lock the nut with the other.
- The **lowering speed** should be as follows:
Maximum lowering speed should be 6" (150mm) per second. (Maximum lowering speed is 39" in 7 seconds). (1 m in 7 seconds)

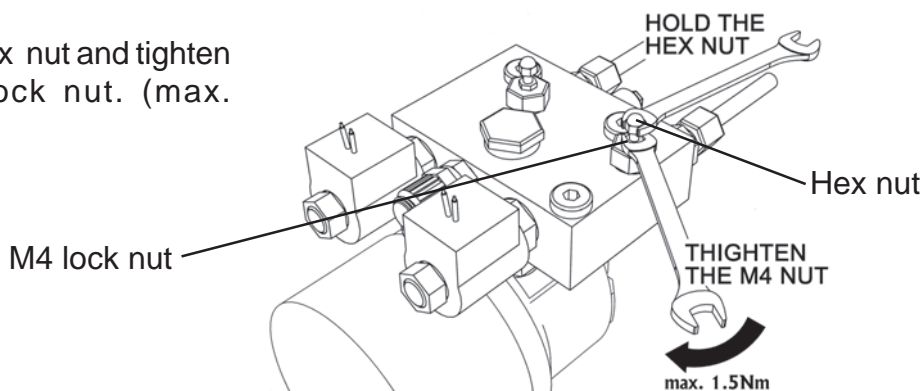
Turn counter-clockwise to loosen the M4-nut



Turning the hex nut **Clockwise**, lowers the speed. Turning the hex nut **Counter-clockwise**, increases the speed. Turn the hex nut 1/4 turn and check speed. Repeat until desired speed is reached.



Hold the hex nut and tighten the M4 lock nut. (max. 1.5Nm)



TECHNICAL DESCRIPTION

RELIEF VALVE

Adjustable relief valve:

Caution: Never bottom the relief valve. The power pack and/or hydraulic system could be damaged.

Attention: The relief valves are sealed at the factory. The seals **must not** be removed unless authorized by the factory. **Warranty is void if seal is broken.**

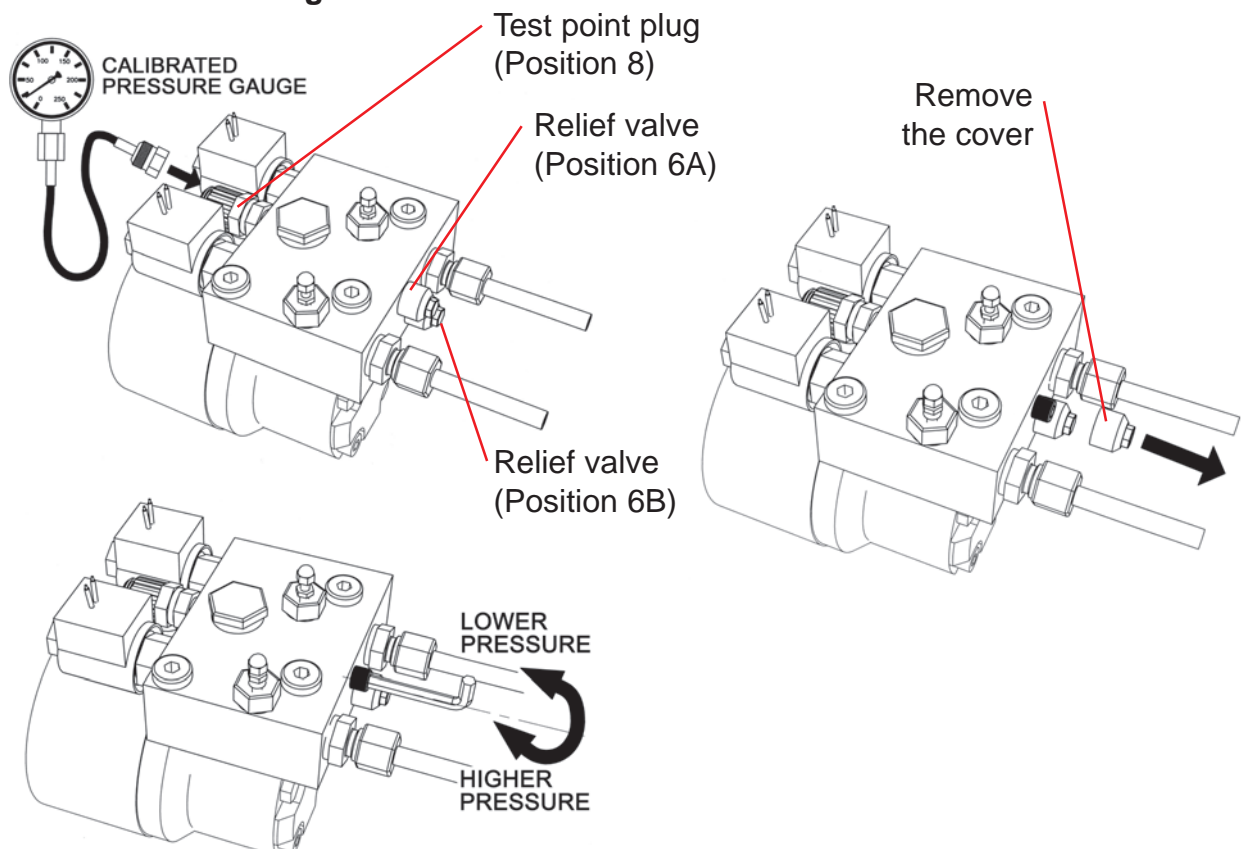
There are 2 different places to adjust the hydraulic pressure:

- 1) Relief Valve 6A is to adjust the lifting pressure (See Hydraulic Schematic)
- 2) Relief Valve 6B is to adjust the slide out pressure (See Hydraulic Schematic)

To adjust pressure, a calibrated pressure gauge **is required** and it should be connected at the test point plug. (Pos. 8)

- 1) Remove the seal and cover from the adjusting nut (Pos. 6A, B).
- 2) Turn the adjusting screw with a hex wrench, clockwise (for higher pressure) or counter-clockwise (for lower pressure) being sure to keep an eye on the pressure gauge. The maximum pressure should be 250 Bar (3600 PSI).
- 3) When pressure is correct, lock the cap screw and check the pressure again to be sure it has not changed. Seal the cover.

Caution: Never bottom the relief valve. The power pack and/or hydraulic system could be damaged.



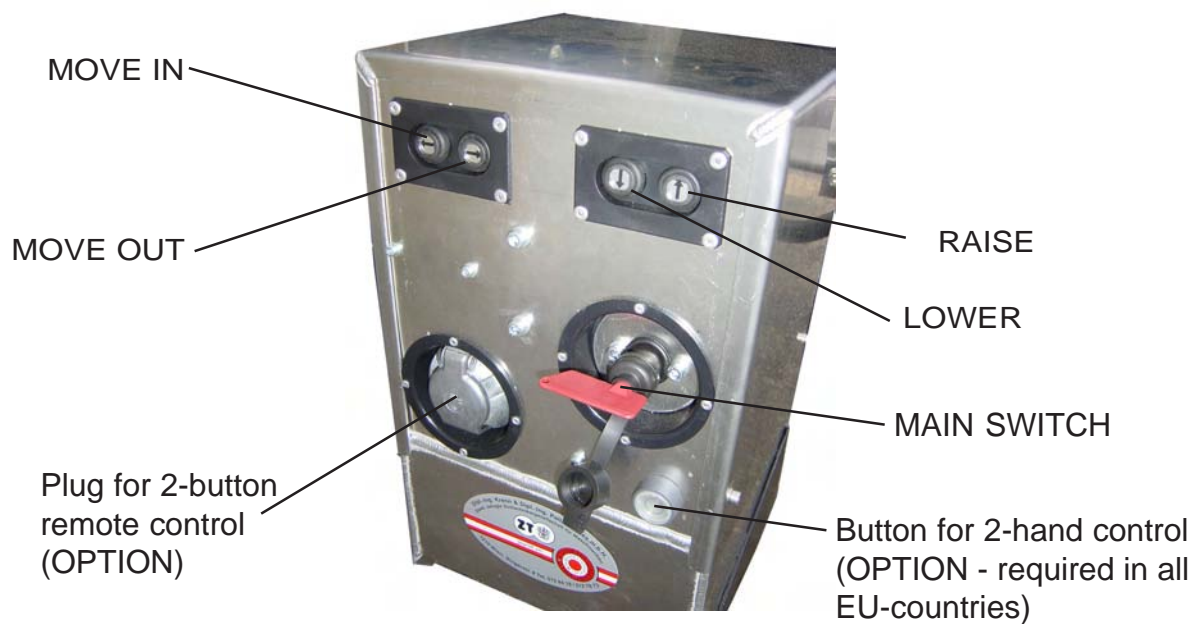
OPERATING INSTRUCTIONS FOR THE “UTK”

CAUTION:

Be sure there is enough room for the operator to safely operate the “UTK”.

CAUTION:

- **Normally, the power pack is mounted on the curbside of the vehicle, on the main frame with a bracket.**
- All of the control buttons are located on the front of the power pack.
- A second button, for two-hand control, is required in all European countries. This button must be energized to operate the taillift. It is located on the lower right corner of the power pack.
- A master switch can be placed in the cab to switch off the current to the control buttons.



- 1) Insert the **RED KEY** into the main switch and turn it clock-wise. This switch could be located in the cab of the vehicle.

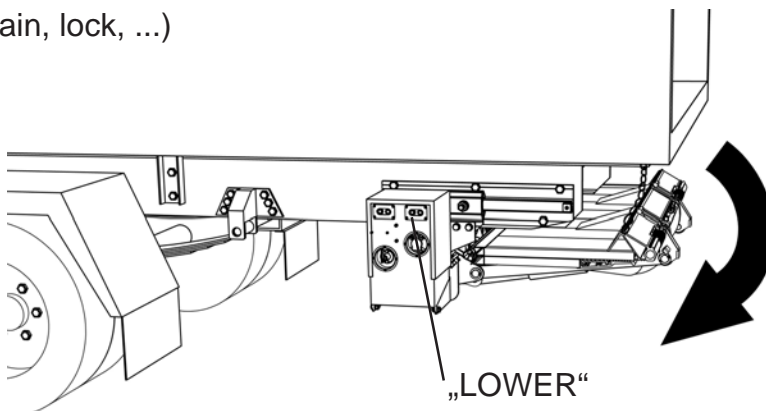


OPERATING INSTRUCTIONS FOR THE „UTK“

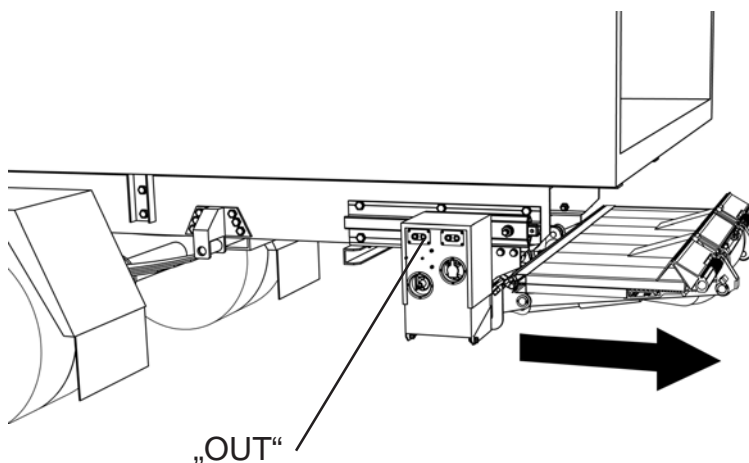
2) Sliding the „UTK“ to the OUT Position

At first, **unlock** the tailgate (chain, lock, ...)

Press the **LOWER** button, momentarily, so the „UTK“ can be moved out.



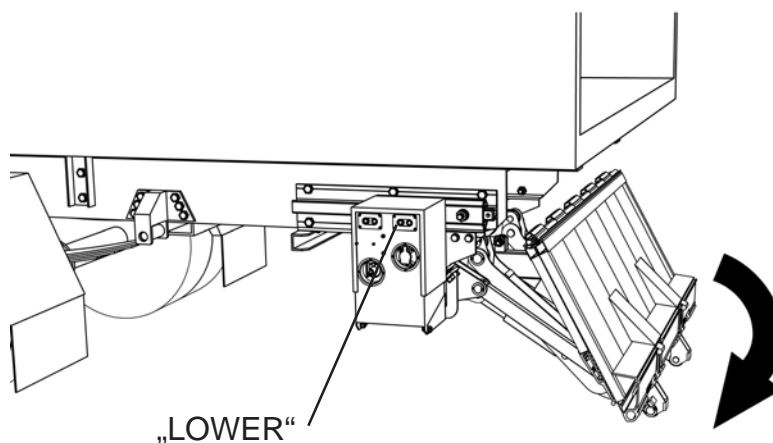
Press the **OUT** button to slide the „UTK“ to the outer most position. **(Against the stop)**



Always be sure the area behind the vehicle is clear and safe. Be sure no one is standing in or near the platform working area.

3) Lower the Hoisting unit to ground level.

To unfold the platform, you have to **LOWER** the hoisting unit to ground level.

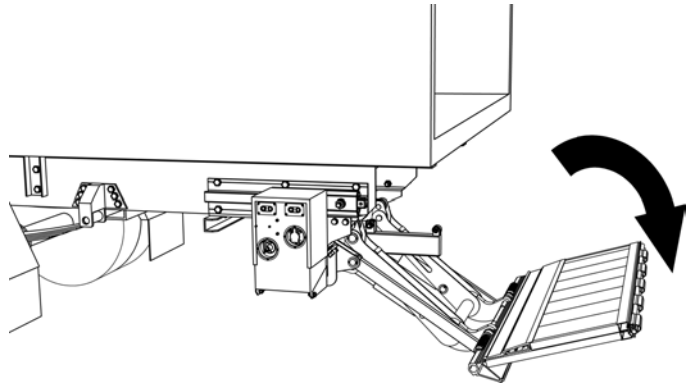


OPERATING INSTRUCTIONS FOR THE “UTK”

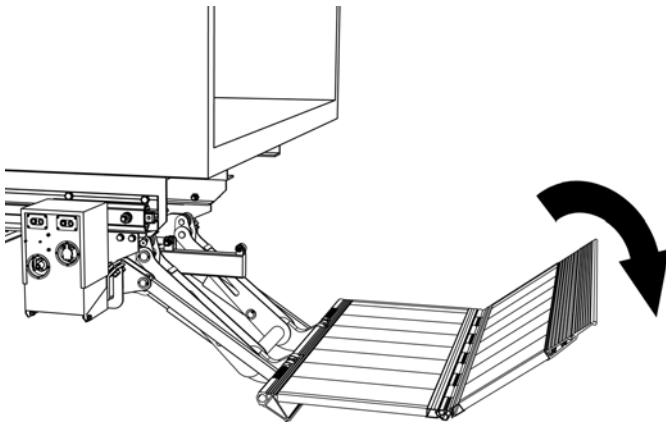
4) Unfold the platform

Unfold the platform 1 times. Care should be taken when opening the platform manually. The operator must stand in a good lifting position and have both hands available to open the platform.

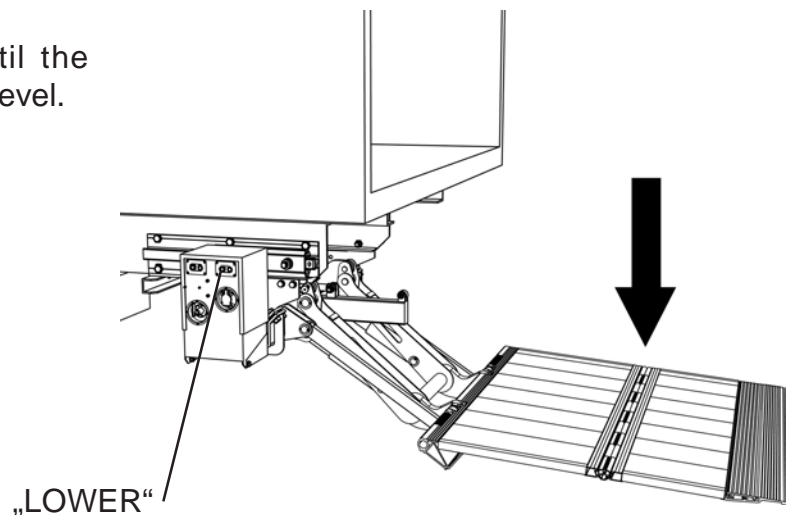
Do not drop the platform as it will eventually become damaged.



Manually unfold the platform tip.
Now the tailgate loader is ready to use.



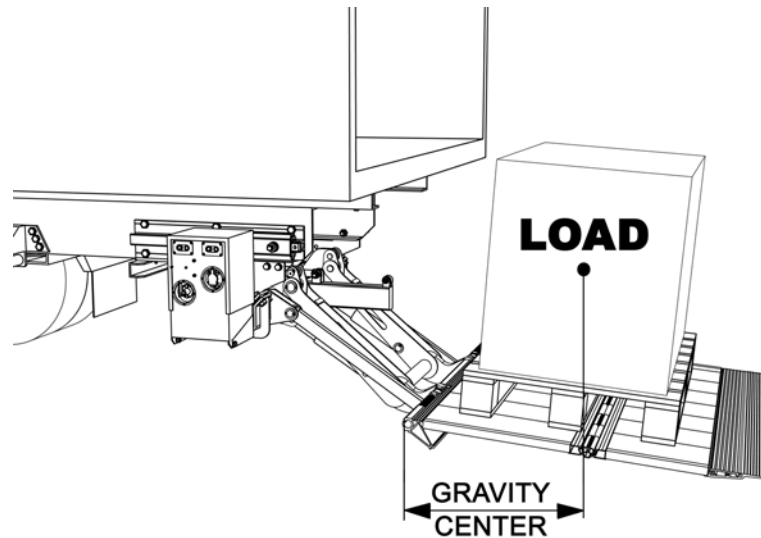
Press the **LOWER** button until the platform tip reaches the ground level.



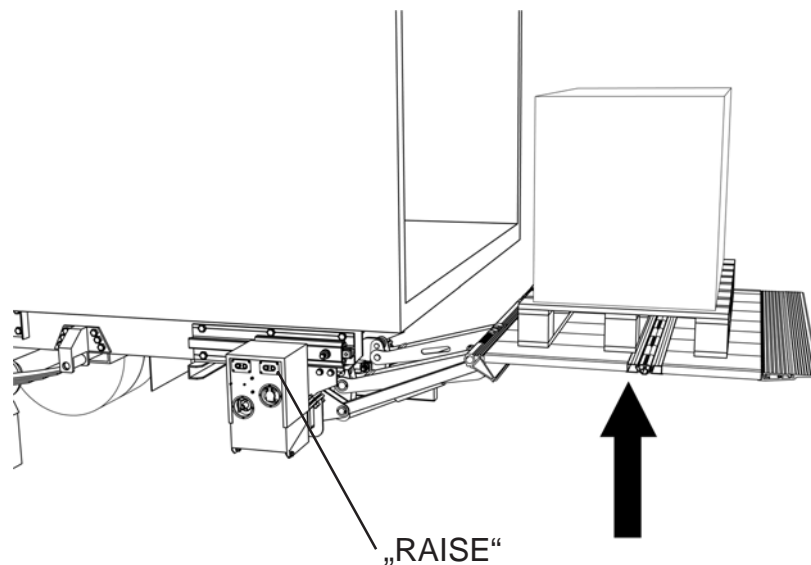
OPERATING INSTRUCTIONS FOR THE “UTK”

5) Lifting the Platform

CAUTION: Always consult the data plate, to be sure you are not overloading the platform. Always consider the weight of the pallet jack, pallet and the person. Load must always be centered on the platform and as close to the truck as possible.



Press the **RAISE** button to raise the platform to truck floor level. The platform tip will level automatically.



OPERATING INSTRUCTIONS FOR THE “UTK”

6) Lower the platform

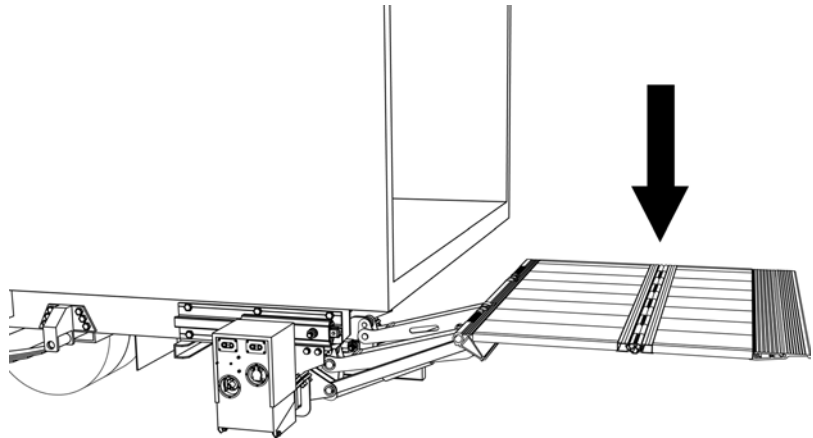
Press the **LOWER** button to lower the platform to ground level.

CAUTION: Always consult the data plate, to be sure you are not overloading the platform. Always consider the weight of the pallet jack, pallet and the person. Load must always be centered on the platform and as close to the truck as possible.

If you want to change the lowering speed of the platform, you must readjust the flow control valve located in the power pack.

(Ask your supervisor for the correct instructions). Maximum lowering speed is 6“ per second.

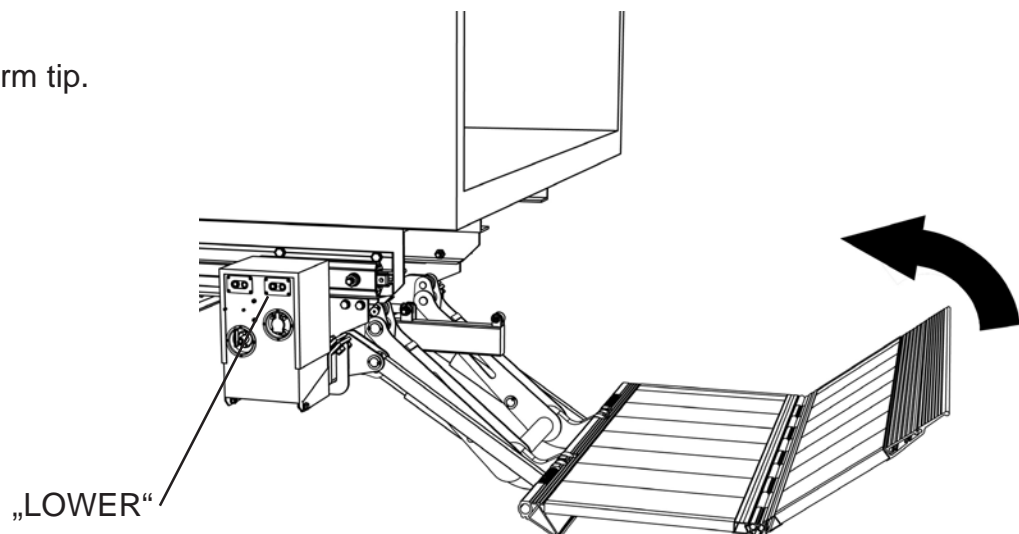
Press the **LOWER** button to lower the platform to ground level. The platform tip will level automatically.



7) Sliding the „UTK“ to the traveling position

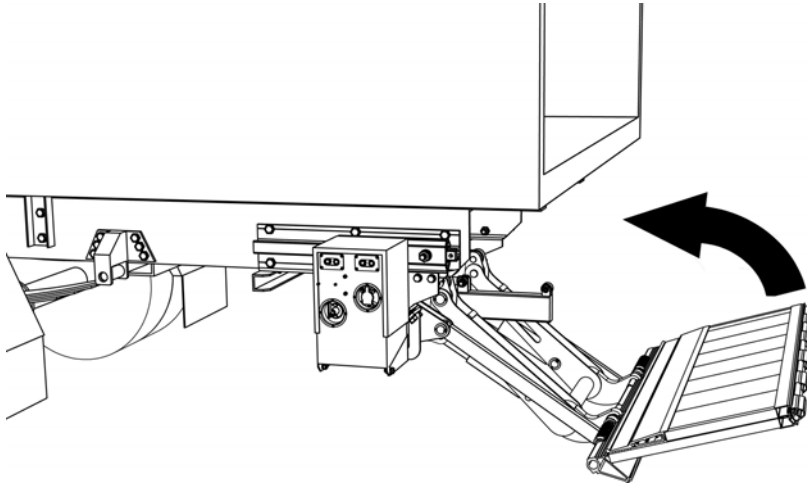
To fold the platform you have to **LOWER** the platform to ground level. Now you can manually fold the platform.

Fold the platform tip.

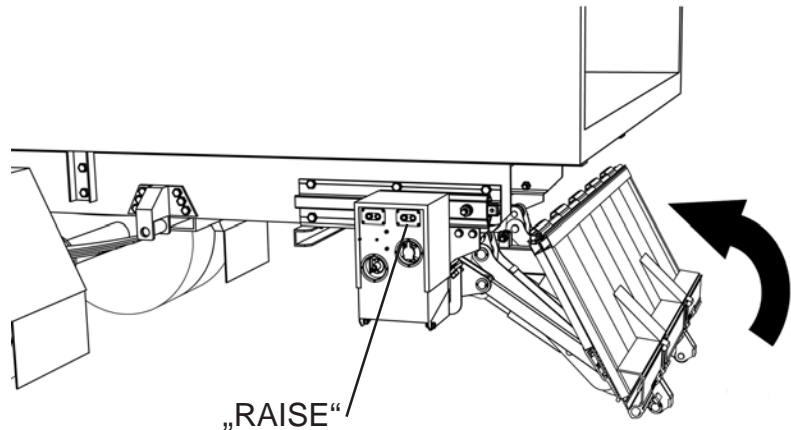


OPERATING INSTRUCTIONS FOR THE “UTK”

Care should be taken when closing the platform manually. The operator must stand in a good lifting position and have both hands available to open the platform. Do not drop the platform as it will eventually become damaged.

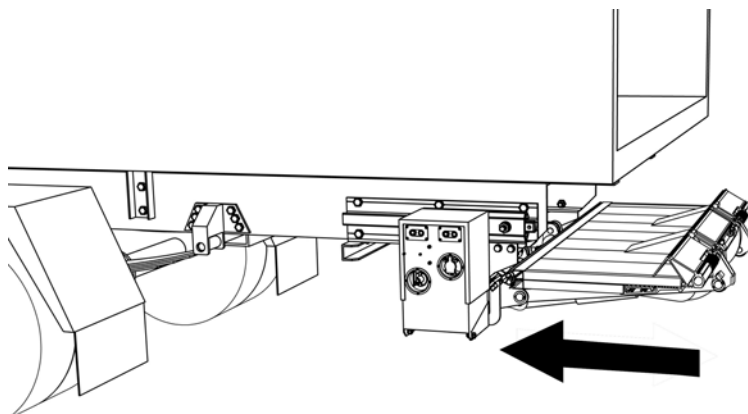


Press the **RAISE** button until the platform is in horizontal position.



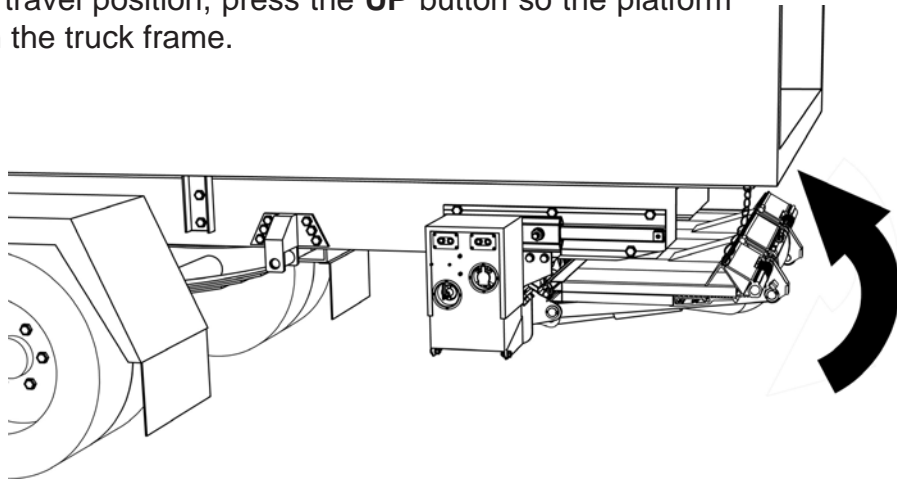
ATTENTION: Be careful while sliding the „UTK“ into the travel position. It must not interfere with any object and become damaged.

Press the **IN** button to slide the „UTK“ to the full IN position. **(Against the stop).**



OPERATING INSTRUCTIONS FOR THE “UTK”

When the „UTK“ is in travel position, press the **UP** button so the platform will make contact with the truck frame.



8) Turn off the „UTK“

Turn the **RED KEY** counter clockwise, and remove it from the switch. This removes all electrical current from the “UTK”. Place the key in a safe place for later use.



9) LOCK THE TAILGATE

CAUTION: Before the truck is moved, be sure all goods are secure and fork truck and trolleys are tightly secured.

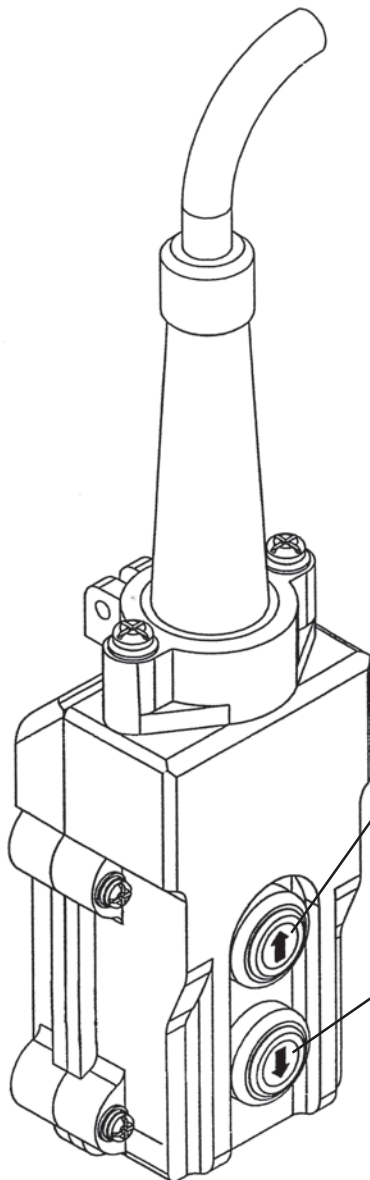
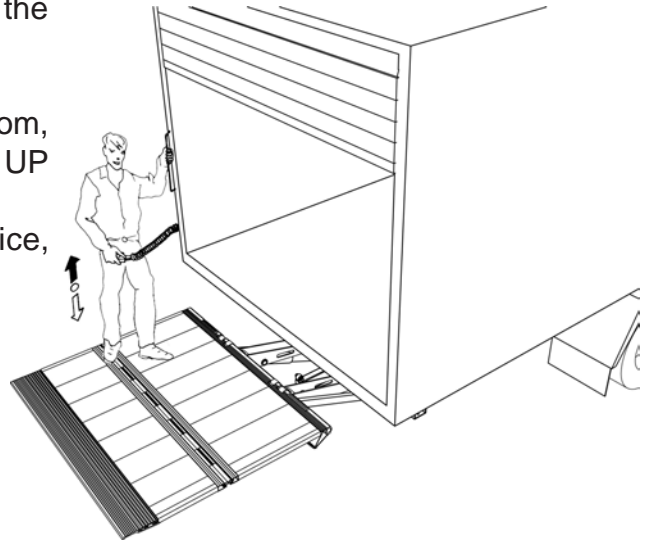
USING THE 2-BUTTON-REMOTE CONTROL (OPTION):

This 2-button remote control is usually mounted on the inside of the van body and is connected to the power pack, by a flexible cable.

When using this 2-button remote control, the operator can ride the platform, with the load, and it is only possible to raise and lower the platform.

CAUTION: Be sure that there is enough room, and a safe place, for the operator to ride UP and DOWN on the platform.

Operator should hold onto a safety device, attached to the van body, for safety.



UP Button:

For lifting the platform at ground level simply press the **UP** button. The platform will automatically raise to the horizontal position and then raise to your preferred height up to floor level.

DOWN Button:

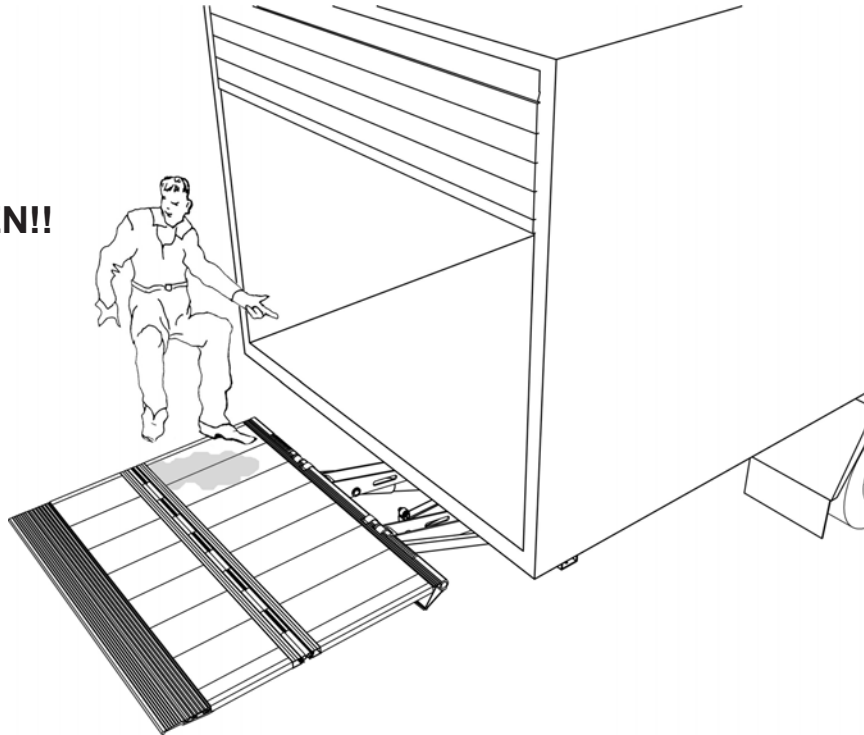
The platform can be lowered to any desired level or to the ground. When the lift arms touch the ground **and you continue to hold the DOWN button**, the platform will automatically tilt to ground level for removing the product safely.

SAFETY INSTRUCTIONS FOR THE “UTK” TAILGATE LOADER

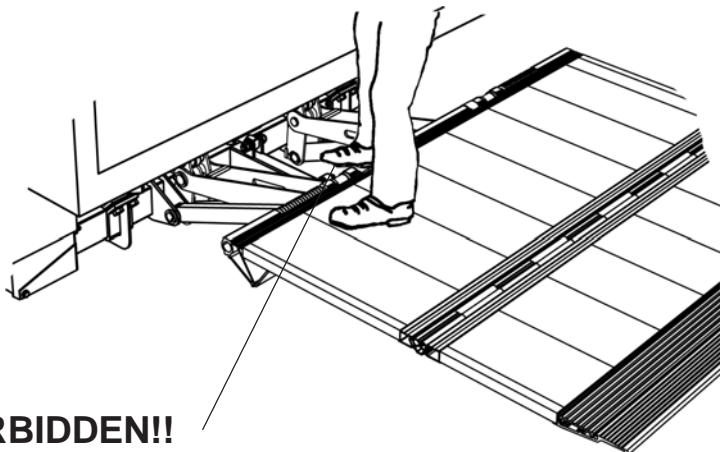
If you ride on the platform, using the 2-button remote control, you should always be very careful to follow these rules:

- 1) Be sure to wear good shoes. No hard or rubber soles.
- 2) Do not horseplay on the platform. **Always be conscience of your safety.**
- 3) Be sure there is enough room for the operator to safely operate the UTK.
- 4) When operating the „UTK“ and riding on the platform, it is important to hold onto the vehicle to prevent falling.

FORBIDDEN!!

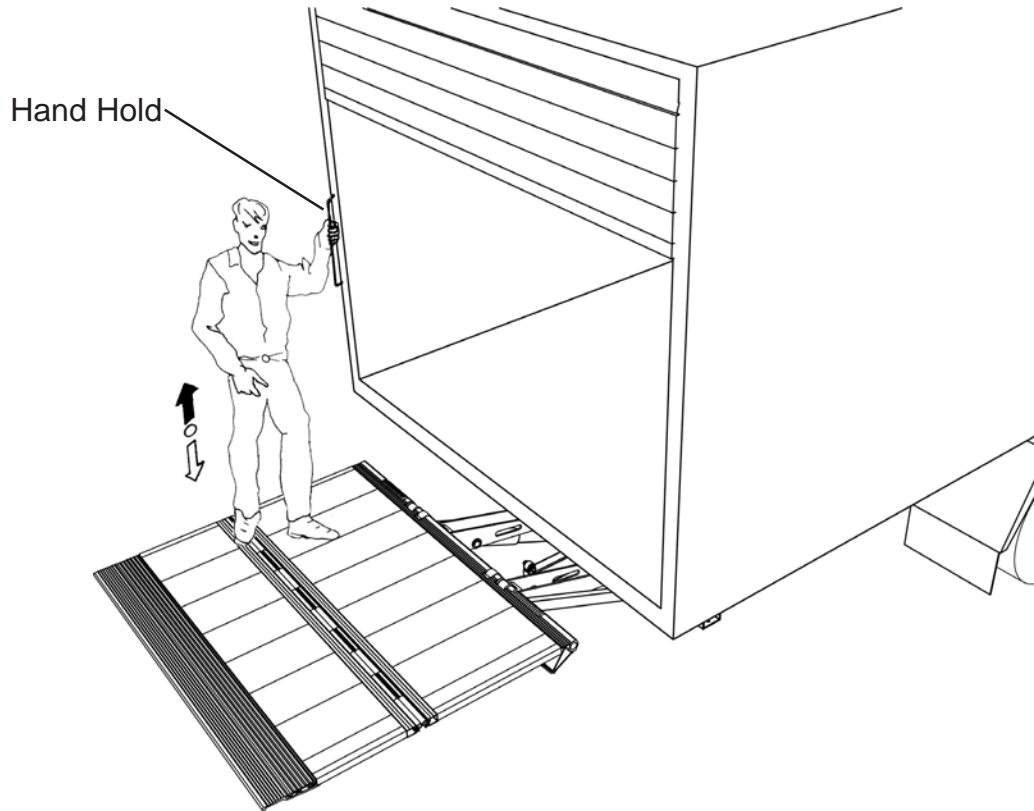


Never place your foot outside of the platform. Your foot could be crushed.



SAFETY INSTRUCTIONS FOR THE “UTK” TAILGATE LOADER

The operator should always hold onto a safety device while riding the platform.



ADJUSTING THE MECHANICAL HOSE BURST VALVE

(Not needed if electrical hose burst valves are installed)

If the platform stops, **while being lowered**, a mechanical hose burst valve could be defective.

This could happen in the winter time when it is much colder and the hydraulic oil is heavier.

The mechanical hose burst valve can be adjusted to remedy this situation by simply making the "S" measurement larger. (See diagram below)

The mechanical hose burst valves are screwed into the cylinders and connected to the hoses.

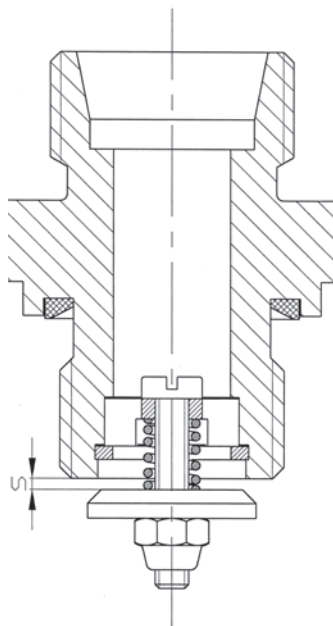
How to make this adjustment:

- **Lift the platform to floor level** and secure it into place with clamps.
- Press the **DOWN** button, so there is no pressure in the cylinders.
- Remove the **PIN** lift cylinder - hoisting unit.
- Now you can swing the lift cylinder to the floor. **(Be careful, it will come apart)**
- Remove the high-pressure hose, the elbow fitting and the fitting with the mechanical hose burst valve.
- If you make the measurement "S" larger, the problem will be solved.
- The normal factory adjustment is 0.85 mm.
- Hold the hexagon socket head cap screw and turn the locknut M2.5

Counter-clockwise.

NOTE: A half turn = 0.45mm gap enlargement

- Install the fitting with the mechanical hose burst valve, elbow fitting and high-pressure hose.
- Reinstall the lift cylinder and energize the hydraulic system.
- Press the **UP** button until the relief valve is bypassed. (Dead-end the cylinder)
- Remove the clamps from the platform.
- Press the **DOWN** button until you reach the ground. Then press the **UP** button to cycle the system. (This should be done several times to remove all excess air from the cylinders).

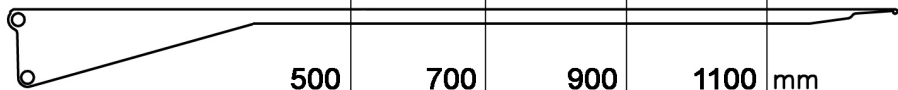
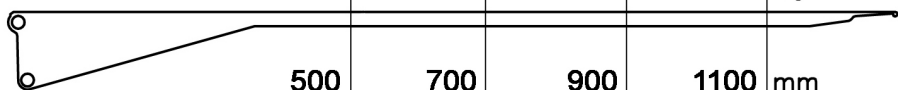


CENTER OF GRAVITY AND LOADING DIAGRAM

- 1) Be sure driver and/or operator are well trained in the proper procedure before using the “UTK” tailgate loader. A good training session will save a lot of heartaches later.
- 2) Please be conscious of the total lifting capacity of the “UTK”

Product	Pounds	Kilogram
One person	180	90
Pallet Jack	170	80
Pallet	65	30
Product	???	???

- 3) Total weight should be **equal** to the Lifting Capacity of the “UTK” or **less**.
- 4) Please consult the data plate on your “UTK” tailgate loader to be sure the maximum capacity is not exceeded.

UTK-500ST/AL		500	325	230	XXX	kg
		500	700	900	1100	mm
UTK-750ST/AL		750	480	340	270	kg
		500	700	900	1100	mm

Do not operate the “UTK” until you have read the operator’s manual

GENERAL OPERATING AND MAINTENANCE INSTRUCTIONS

Hydraulic equipment is usually a part of another piece of equipment, such as a truck. To ensure a long and trouble free operation, always read the manufacturers instructions carefully.

Below is a short list of “Do’s” and “Don’ts”

DO’s:

- When mounting the power pack, make sure it is level to the frame and has easy access for filling the reservoir, doing maintenance, etc.
- The satisfactory functioning, long life, reliability and efficiency of hydraulic equipment is greatly affected by the selection of the most suitable type of hydraulic fluid. We highly recommend hydraulic oil with 22 viscosity.
- NEVER USE AUTOMATIC TRANSMISSION FLUID
- In case of very low temperature, less than 0°C (+32°F), use oil with a 10 viscosity.
- Fill the reservoir with a good grade of hydraulic oil. Always use a filtered funnel and clean oil.
- The UTK tailgate loader will permit the use of biodegradable or any normal hydraulic oil.

DON’T’s:

- **NEVER** work on the hydraulic system while it is under pressure.
- **NEVER** use tape or pipe dope on the hydraulic fittings. They will seal without any outside help.
- **VERY IMPORTANT:** If you wish to paint the equipment or weld on it, always mask off all moving parts, flexible connections and nameplates before doing so.

CAUTION: When the “UTK” is steam cleaned, it is very important to be careful around the electrical control box. **DO NOT** point the steam directly on the control box as the electrical connections could be damaged.

It is also very important to lubricate the entire unit, after washing, as the grease has been washed away.

SERVICING THE UTK TAILGATE LOADER:

Three types of checks need to be made on a regular basis.

- The daily check
- The monthly check
- The annual check

(Report any defects to your supervisor immediately)

***THE DAILY CHECK:**

Check all bolts and pins for tightness.

Check for leaks, **under the vehicle**, and inside the hydraulic system.

Check the switches, RAISE, LOWER, IN and OUT for proper operation.

Check the hydraulic oil level, if any leaks are apparent.

The platform must be on the ground, and open all the way, to check the proper oil level

***THE MONTHLY CHECK:**

Complete the daily check, plus the following:

Pressure wash the entire unit, being careful not to pressure wash inside power pack

Check all bolts for looseness and tighten if necessary.

Check all welds for cracks and repair if necessary.

Lubricate all grease fittings.

Replace any worn or broken parts

Check the lowering speed **(Be sure it is safe)**

Check the oil level, and add if necessary **(Do not overfill)**

***THE ANNUAL CHECK:**

Complete the daily check

Complete the monthly check, plus the following:

Check all electrical cables for chafing or breaking, repair if necessary

Check all hydraulic lines for leaks, cracks or chafing, repair if necessary

Drain the hydraulic reservoir; clean the filter and the reservoir

Fill reservoir with a good, clean grade of hydraulic oil. (22 viscosity)

Check the lifting capacity (Consult the data plate for correct capacity of this unit)

Check all safety devices (Flags, Roll stops, etc.) for proper operation

Check the wear plates and/or rollers and replace, if necessary

Check all electrical connections for corrosion and tightness. Repair if necessary

****We recommend a biodegradable hydraulic oil that is good for us and good for the environment.**

Note: Depending on frequency of use, the hydraulic hoses should be changed after approximately three years.

Only **clean** hydraulic oil will allow proper operation of your equipment.

The hydraulic oil **should** be changed once a year. The power pack requests oil of 22cst (usage of 10cst oil during very low temperatures, under minus 10°C).

A H T WARRANTY CERTIFICATE

AHT warrants to the original purchaser, for a period of TWO YEARS all manufactured parts and ONE YEAR for supplier parts, from the date of installation, any new AHT product , including accessories and/or spare parts. These items are warranted against defects in material and/or workmanship. AHT will, at its own descretion, either repair or replace any defective parts with equivalent parts, subject to the conditions listed below.

Type: _____ Serial #: _____ Year of Mfg: _____
Customers Name: _____ Date of Installation: _____

1. Replacement or repair of parts will be provided from the factory, subject to any applicable Federal, State or Local taxes. Labor charges are not covered unless specifically authorized by AHT, prior to the actual repair and subject to our published flat rate schedule.
2. Defective parts must be reported to AHT within 30 days of discovery and must be submitted on an official warranty claim form, or the warranty is void.
3. Warranty is valid only if the Warranty Registration Form is returned, within 15 days of installation, to AHT.
4. Warranty shall not apply if equipment is operated at capacities in excess of factory recommendations.
5. Warranty does not apply to defects caused by accident, misuse, alterations of design, improper installation, poor maintenance practices, or any other cause beyond the control of AHT.
6. Warranty shall not apply to any cargo loss, loss of use, or any other incidental or consequential damages arising out of the use of this product, including travel time.
7. Warranty as provided herein shall be the purchaser's exclusive and limited remedy, and AHT shall not be liable for consequential or other damages.

IT IS EXPRESSLY UNDERSTOOD AND AGREED THAT THERE ARE NO WARRANTIES MADE BY THE MANUFACTURER OR ITS AGENTS, REPRESENTATIVES OR DEALERS, EITHER EXPRESSED, IMPLIED OR IMPLIED BY LAW, EXCEPT THOSE EXPRESSLY STATED HEREIN ABOVE IN THIS STANDARD LIMITED WARRANTY AGAINST DEFECTS IN MATERIAL AND WORKMANSHIP, AND THE MANUFACTURER AND ITS AGENTS. REPRESENTATIVES AND DEALERS SPECIFICALLY DISCLAIM ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

Customer

AHT Representative



CONFORMITY CERTIFICATE for TUV

For machinery in accordance with EG-Directive 98/37/EG

Manufacturer: AHT-Aluhebeteknik Ges.m.b.H.
Bahnstraße 34
A-2474 Gattendorf

Product: Electro-Hydraulic Tailgate Loader

Design: Hydraulic Tailgate Loader Steel-Aluminum

Type: UTK-500ST/AL UTK-750ST/AL
max. Capacity (kg): 500 750

max. Hydraulic Pressure (Bar): 250

Description: Electro-Hydraulic tailgate loader for mounting on wheeled vehicles.

Serial numbers:

The above machinery meets the following laws:

- Machinery Safety Law: MSV: BGBl.306/1994
- EG-Machinery Directive: 98/37/EG and 91/368/EWG
- EN 292
- EN1756-1

Items tested: Check of technical files
Check of static calculation
Practical tests of operation and loading
Check of operators manual and installation manual

Testing place:: **AHT-Aluhebeteknik Ges.m.b.H.**
A-2474 Gattendorf, Bahnstraße 34

Result: The above mentioned product has met all requirements and this certificate is issued, based on the test specimen and the technical documentation subjected to the test.

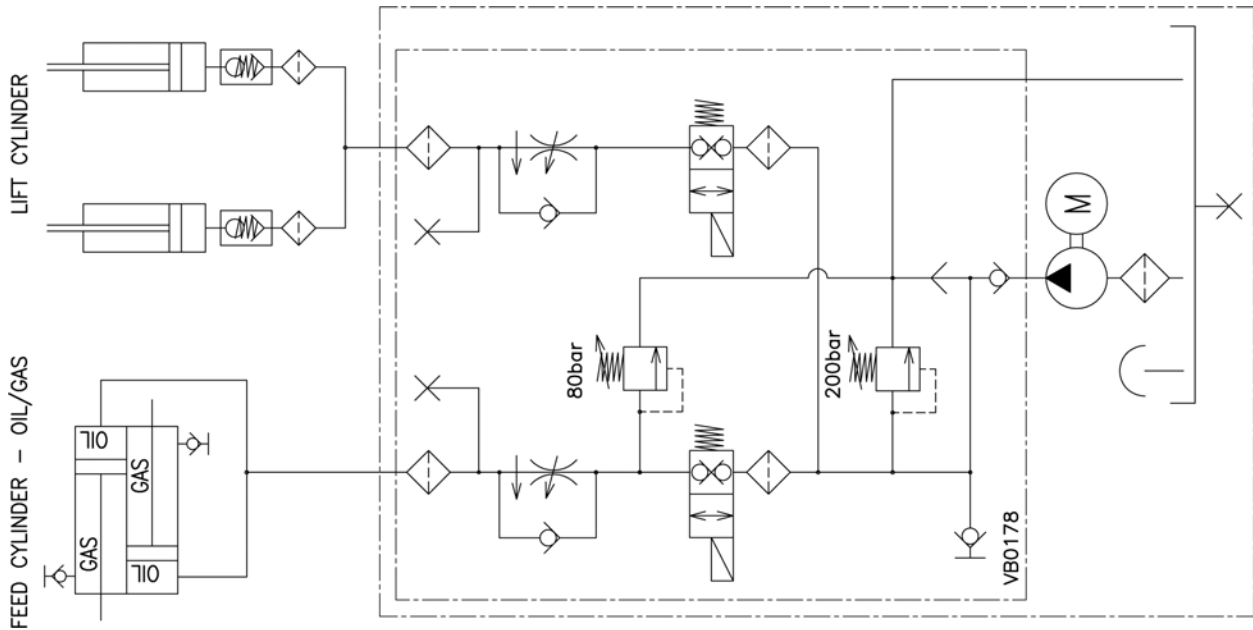
Company:_____

Signature:_____

Place/Date:_____

Name/Title:_____

HYDRAULIC SCHEMATIC



ELECTRIC SCHEMATIC

