

Parking. Lower the forks to the lowest position and park the Hand pallet truck on a smooth and even level ground where the truck not disturbs any other operations

Lifting. Check that the load does not exceed the loading capacity of the pallet truck. Roll the pallet truck with its forks slowly under the pallet/load until the back end of the fork rests against the load (Pic. 6). Shift the operating lever down to the Lifting position. Lift the load by up- and down movements of the tiller arm. The load must be evenly distributed across both forks.

Lowering. Lower the load by shift the operating lever up to the lowering position carefully. By releasing the lever, the lowering movement will stop. Ensure there is adequate clearance behind, then move the pallet truck away.

Moving:

- Do not operate the truck on a slope or inclined surface.
- Watch difference of floor level when moving lifter. Load could fall down.
- Make the load stable to prevent it from falling down.

Move the truck by pushing or pulling the tiller arm. The tiller arm is connected to the steering rollers. The wheels are steered automatically by moving or steering the tiller arm.

Malfunctions. If there are any malfunctions or the truck is inoperative, please stop using it. Place the truck at a safe place. Avoid further usage.

4 TROUBLE SHOOTING

Symptom	Possible Causes	Corrective action
Forks don't raise, don't raise fully, or raise slowly	1. Low hydraulic fluid level or impurities in oil.	1. Add approved hydraulic fluid as noted in chapter 2.2.
	2. Control lever is out of adjustment.	2. Follow the procedure for adjusting the control lever in chapter 2.1.
	3. Load is too heavy. Overload release valve is being activated.	3. Reduce load.
	4. Temperature is too low and the hydraulic oil has become too thick.	4. Move truck to a warmer location.
	5. Air in the hydraulic oil.	5. Deaerate the hydraulic pump (see chapter 2.2).
Forks don't lower or don't lower fully	1. Obstacle located under truck, in fork mechanism, etc.	1. Use caution removing the obstacle.
	2. Control lever is out of adjustment.	2. Follow the procedure for adjusting the control lever in chapter 2.1
	3. Fork was left in a raised position for an extended time causing exposed piston rod to rust.	3. Keep fork in the lowest position when not in use and keep piston rod well lubricated.
	4. The piston rod or pump is deformed due to over-loading or uneven loading.	4. Replace the piston rod or pump.
Forks lower without putting the control lever in the "lower" position	1. Oil impurities are preventing the release valve from fully closing.	1. Drain and replace hydraulic fluid with approved fluid as noted in chapter 2.2.
	2. Some hydraulic components or seals are cracked or worn.	2. Inspect and replace components as needed.
	3. Control lever is out of adjustment.	3. Follow the procedure for adjusting the control lever in chapter 2.1.
Oil leakage	1. Worn or damaged seals.	1. Replace seals.
	2. Other cracked or worn parts.	2. Replace damaged parts.

5 WARRANTY

The goods are warranted in accordance with the laws and specifics of each country. The warranty started from the date of sale to the end user. Claims are accepted for factory defects provided that the hand pallet truck is operated in accordance with the requirements of this manual.

The producer: ECO GROUP HONG KONG LIMITED. UNIT 617, 6/F, 131-132 CONNAUGHT ROAD WEST, SOLO WORKSHOPS, HONG KONG, CHINA.



Hand pallet truck 3tn STARTUL AUTO

USER MANUAL FOR MODEL ST8048-03

NOTE! All the information is based on the data obtained at the time of printing. The company will have the right to change the product at any time without any prior notice in case these changes do not impair the consumer properties and quality of the product.



WARNING

Do not use the truck before reading and understanding this user manual.



1 DESCRIPTION OF THE HAND PALLET TRUCK

1.1 Main purpose

This truck is a manually operated hand pallet truck designed to lift and transport the rated load on industrial pallets. Do not lift or carry person and don't use this truck for other purpose than its intended use. A wrong usage can cause human injuries or can damage equipment. The truck has to be used on substantially firm, smooth, level and prepared surfaces.

1.2 Technical data

Characteristics	Meaning
Model	ST8048-03
Load capacity, kg	3 000
Max. lift height, mm	200
Lowered fork height, mm	85
Fork length, mm	1 150
Fork width, mm	550
Fork wheel size, mm	80x70
Wheel material	Polyurethane
Net weight / Gross weight, kg	73/75

2 COMMISSIONING, MAINTENANCE AND WORK

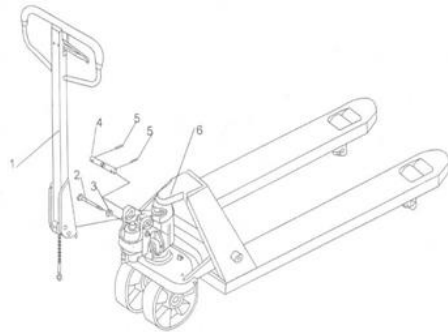
2.1 Commissioning

- | | |
|---------------------|-----------------------|
| 1 Forks | 5 Steering wheels |
| 2 Tiller arm | 6 Load wheels |
| 3 Hydraulic pump | 7 Control lever |
| 4 Lifting mechanism | 8 Safety instructions |

Commissioning of tiller assembling

After receiving the new hand pallet truck you may have to do following before firstly operating the truck:

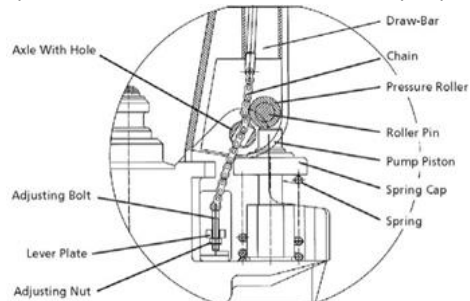
- Check if are all parts included and not damaged.
- Do the work according to the daily inspections as well as functional checks.
- Eventually assemble the truck according to following instructions.



Picture 2

- a) Insert the tiller arm(1) into the pump piston, then use a hammer to insert the axle with hole into the hydraulic pump and tiller arm from the right to the left (Pic. 3).
- b) Set the control lever of the handle to the 'LOWER' position, then pass the adjusting nut, adjusting bolt through the hole of the axle with your hand (Pic. 4).
- c) Press the tiller arm down; take away the pin (2, Pic 2).
- d) Set the control lever of the handle to 'RAISE' position, then raise the lever plate with the pin (2, Pic. 2) and insert the adjusting bolt into the front slot of lever plate. Note: Keep the adjusting nut under the lever plate.

- e) Use a hammer to insert the 2nd dowel pin (5, Pic. 2) into the 2nd hole of the axle. The draw-bar is now assembled to the pump.



Picture 4

Before assembling, please make sure, that the following supplied parts are included and not damaged:

- 1 pc axle with hole (4)
- 2 pc dowel pin (5)
- 1 pc pre-assembled tiller arm (1)
- 1 pc pre-assembled forks with pump unit (6)

NOTE: The marked number on the tiller arm package and the forks should be the same.
When attaching the handle, you had better squat just in front of the pallet truck.

- | | |
|-------------|------------------------|
| 1 Tillerarm | 4 Axle with hole |
| 2 Pin | 5 Dowel pin |
| 3.Nut | 6 Forks with pump unit |

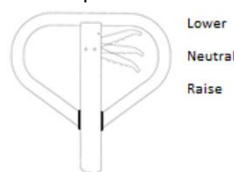
Commissioning of hydraulic valve adjustment

On the tiller of the pallet truck, you will find the control lever, which can be regulated in three positions:

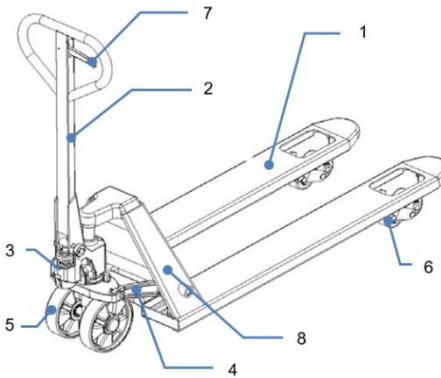
- Lower:** handle up, the lever moves back to the neutral, when released
- Neutral:** handle in center position
- Raise:** handle down



Picture 3



Picture 5



Picture 1

If necessary, you can adjust the lever according to following steps (Pic. 5):

- a) If the forks elevate while pumping in the **Neutral** position, turn the adjusting nut on the adjusting bolt clockwise until pumping action does not raise the forks and the **Neutral** position works properly.
- b) If the forks descend while pumping in the **Neutral** position, turn the adjusting nut counter-clockwise until the forks do not lower.
- c) If the forks do not descent when the control handle is in the **Lower** position, turn the adjusting nut clockwise until raising the control handle lowers the forks. Then check the **Neutral** position according to Pic. 5 and be sure that the adjusting nut is in the proper position.
- d) If the forks do not elevate while pumping in the **Raise** position, turn the adjusting nut counter-clockwise until the forks elevate while pumping in the **Raise** position. Then check the **Lower** and **Raise** position.

NOTE: It is not necessary to fill in the hydraulic oil before starting work. The hand pallet truck is ready for operation.

2.2 Maintenance

Only qualified and trained personnel are allowed to do service on this truck.

Daily inspection is effective to find the malfunction or fault on the truck and can maximize the lifetime. Remove load from truck and lower the forks to the lowest position. Check the truck on the following points before operation:

- Visually check for structural deformation or cracks of arms, forks, or any other component; and unusual noise or binding of the lifting mechanism.
- Check if there is any oil leakage.
- Check the vertical creep of the lifting mechanism.
- Check the smooth movement of the wheels.
- Check if there are any particles or damages on the wheels.
- Check if all the bolts and nuts are tightened firmly.
- Verify that all labels are in place.

Monthly:

- Long-life grease of bearings and shafts should be applied to the lubrication points at monthly intervals or after each time the truck is cleaned. Clean off dirt and debris.

Every three month:

- Add oil. The required hydraulic fluid type is ISO VG32, its viscosity should be 30cSt at 40°C, total volume is about 0.3l.

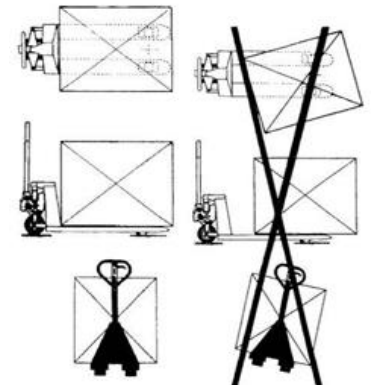
Deaeration of the hydraulic system. Air may find its way into the pump during transportation, tilting or usage on uneven ground. It can result in not elevating forks whilst pumping in the **Raise** position. The air can be removed in the following way: move the control handle to the **Lower** position, move then the tiller down several times. Thereafter normal operation can be resumed.

Adding hydraulic oil to the pump reservoir:

- Ensure forks are in lowered position.
- Lay pallet truck on either side. Position drain plug of hydraulic cylinder up.
- Remove the screw plug.
- Add hydraulic oil until level of oil is at bottom of hole.
- Replace drain plug, upright the truck

3 OPERATING INSTRUCTIONS

- When operating the truck, the operator has to wear safety shoes.
- The truck is intended to be used for indoor applications with ambient temperatures between +5°C and + 40°C.
- The operating lighting must be minimum 50 Lux.
- It is not allowed to use the truck on angled surfaces.
- Never leave a loaded pallet truck unattended.
- Do not overload the truck.
- Do not put foot or hand under the lifting mechanism.



Picture 6