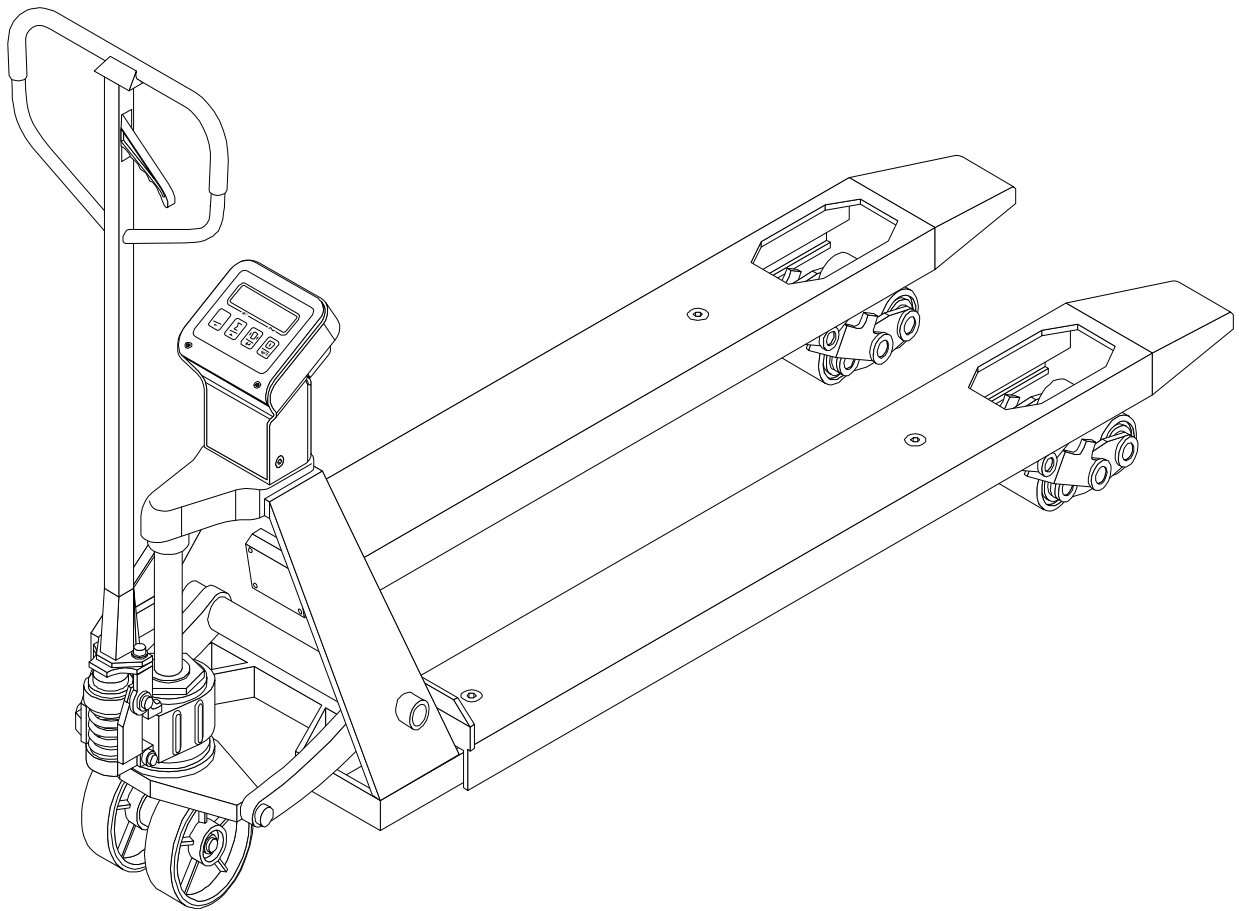


User Manual HP ESR20



Note: Operator MUST read and understand these operating instructions before using this Hand Pallet truck.

OPERATIONAL MANUAL

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Thank you for using this pallet truck with scale. Your pallet truck with scale is made of high quality steel and was designed to give you a durable, reliable and easy to use product. For your safety and correct operation, please carefully read this instruction before using it.

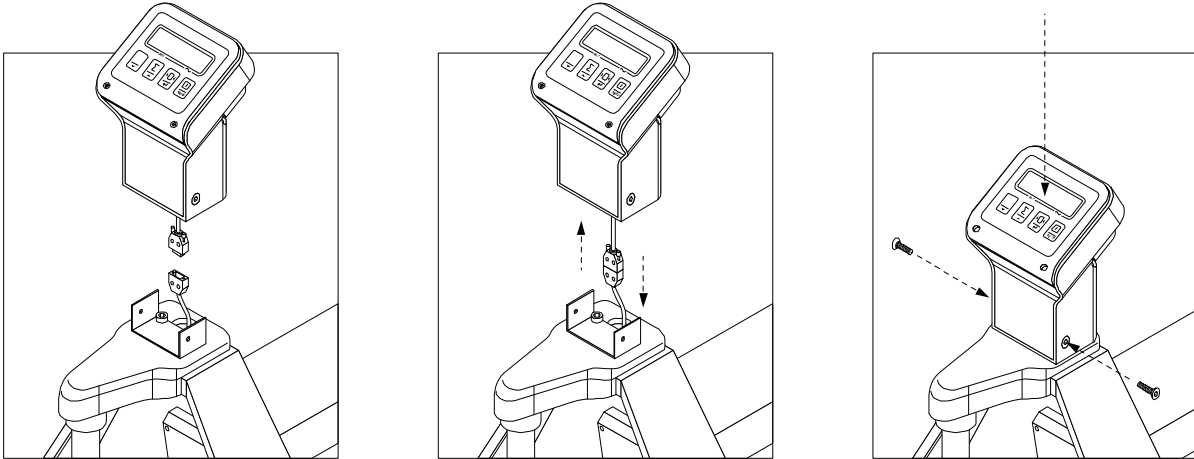
NOTE: All of the information reported herein is based on data available at the moment of printing. We reserve the right to modify our own products at any moment without notice and incurring in any sanction. So, it is suggested to always verify possible updates.

1. GENERAL SPECIFICATIONS

| | | |
|----------------------------|--|------------|
| Capacity | 2,000kg/4,500lbs | |
| Power Source | 4 "AA" penlight batteries | |
| Environment | General purpose, dry | |
| Operating temperature | -10°C to 40°C (14°F to 104°F) with 10 to 95% relative humidity | |
| Min/Max fork height | 76mm/190mm | 88mm/200mm |
| Features weighing accuracy | ±1.0kg for loading 2,000kg | |
| Width over forks | 568mm/703mm | |
| Fork Length | 1150mm/1220mm | |

2. PRE-OPERATION PROCEDURE

2.1. Mounting indicator



2.2. Attaching the handle to pump unit

2.2.1. Insert the draw-bar onto the pump piston (303), then use a hammer to insert the axle with hole (G105) into the hydraulic pump and draw bar from the right to the left (see figure 1).

- 2.2.2. Put the control handle (G117) to the lower position, then pass the adjusting nut (G104), adjusting bolt (G103) and chain (G102) through the hole of the axle (G105) with your hand.
- 2.2.3. Press the draw-bar (G110) down, take away the spring which fixes the Spring Cap (301).
- 2.2.4. Put the control handle (G117) to then raise position, then raise the lever plate (319) with the pin and insert the adjusting bolt (G103) into the front slot of the lever plate (319). Note: keep the adjusting nut (G104) underneath the lever plate.
- 2.2.5. Use a hammer to tap another elastic pin (G106) into the axle with hole (G105). The draw-bar is now assembled to the pump.

3. TO ADJUST RELEASE DEVICE

On the draw-bar of this pallet truck, you can find the control handle (G117) which can be regulated in three positions:

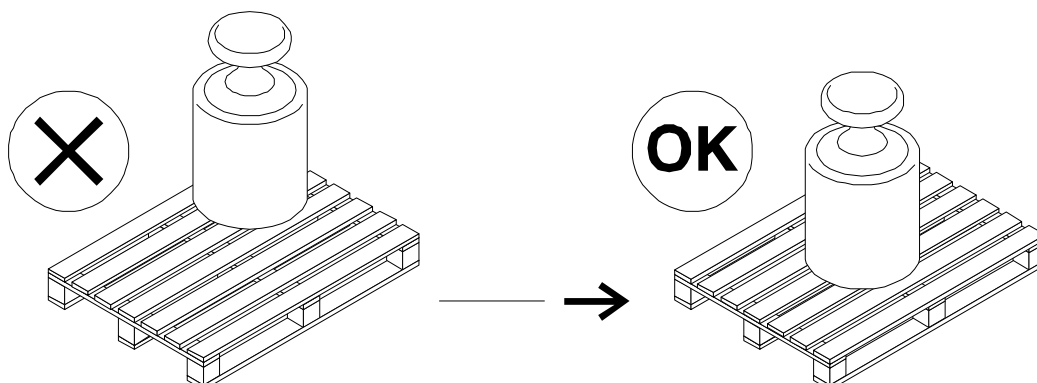
- Raise** - handle down
- Drive** - handle in center
- Lower** - handle up, the lever moves back to the drive position when released.

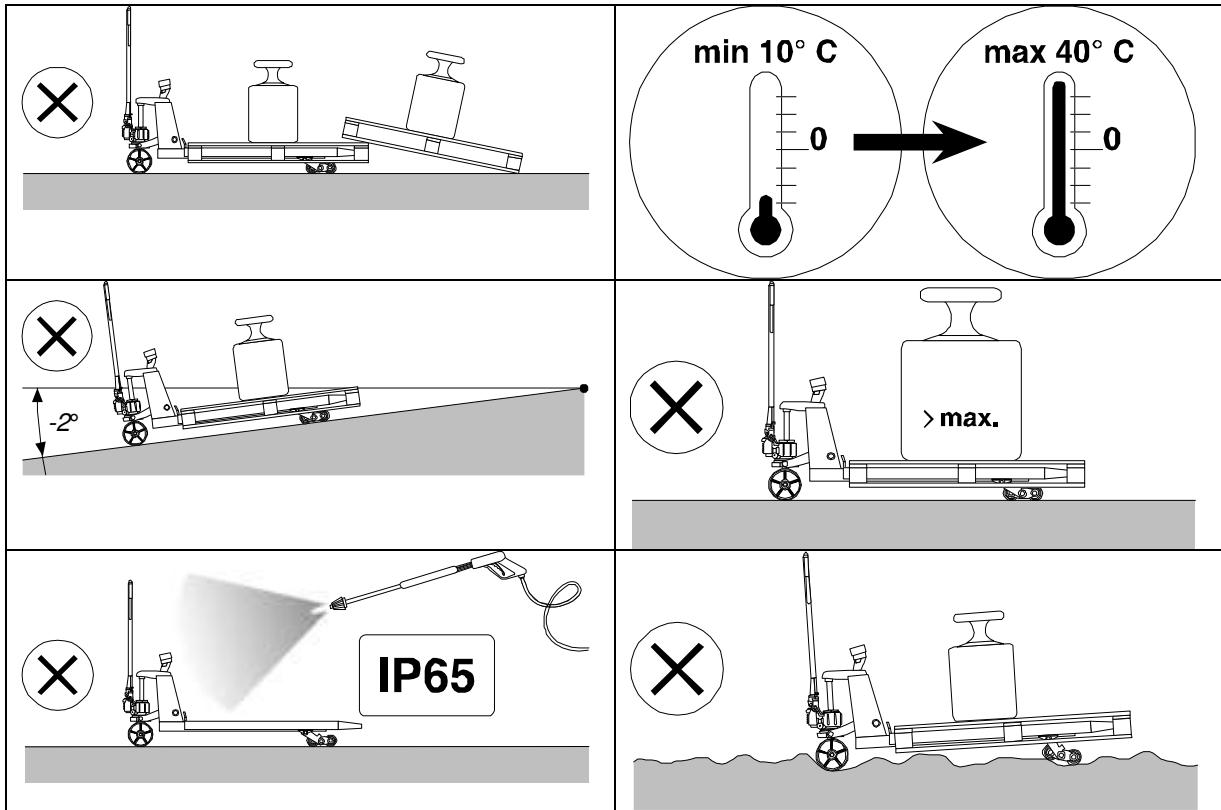
If, however, they have been changed, you can adjust them according to the following instructions:

- 3.1. If the forks elevate while pumping in the **drive** position, turn the adjusting nut (G104) on the adjusting bolt (G103) or screw (318) clockwise until pumping action does not raise the forks and the **drive** position functions properly.
- 3.2. If the forks descend while pumping in the **drive** position, turn the nut(104) or screw(318) counter-clockwise until the forks do not lower.
- 3.3. If the forks do not descend when the control handle (117) is in the **lower** position, turn the nut(104) or screw (318) clockwise until raising the control handle(117) lowers the forks. Then check the **drive** position according to item 3.1 and 3.2 to be sure the nut (104) and screw(318) is in the proper position.
- 3.4. If the forks do not elevate while pumping in the **raise** position, turn the nut (104) or screw (318) counter-clockwise until the forks elevate while pumping in the **raise** position. Then check the **lower** and **drive** position according to item 3.1, 3.2 and 3.3.

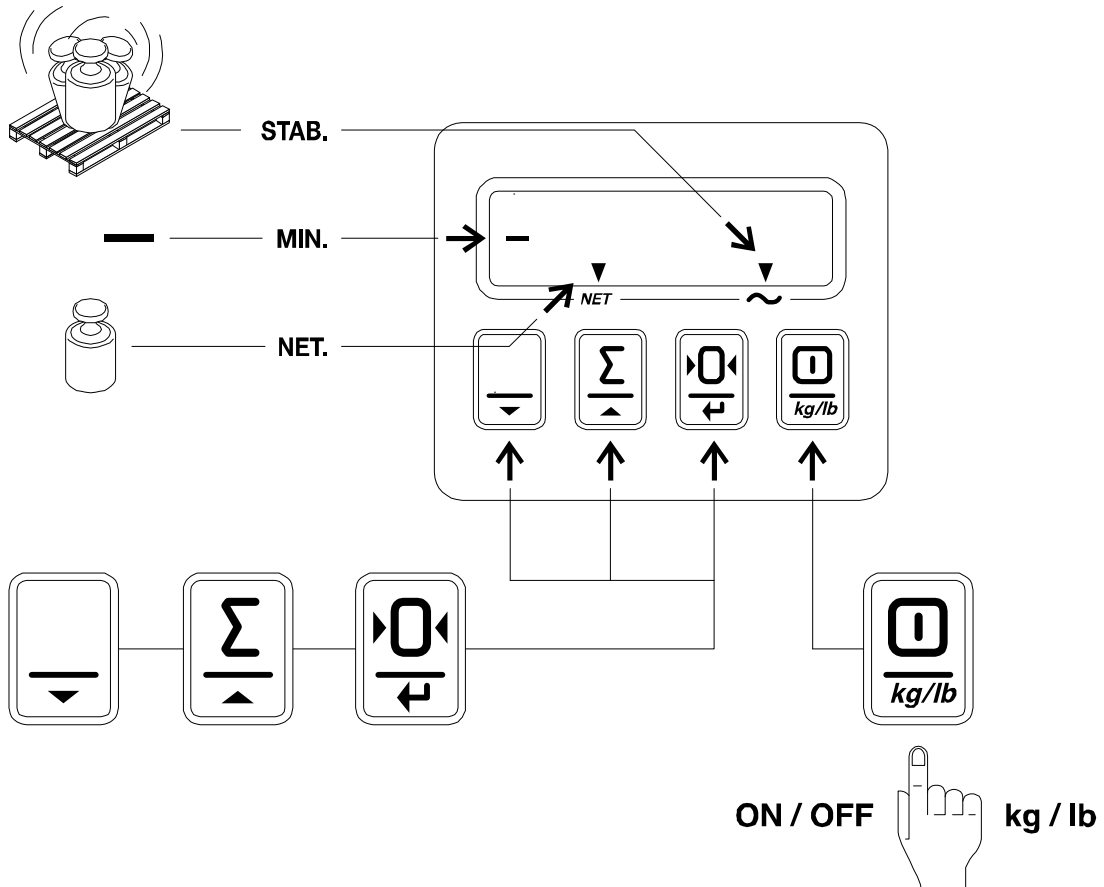
4. USE OF WEIGHING PALLET TRUCK

4.1. Accurate weighing

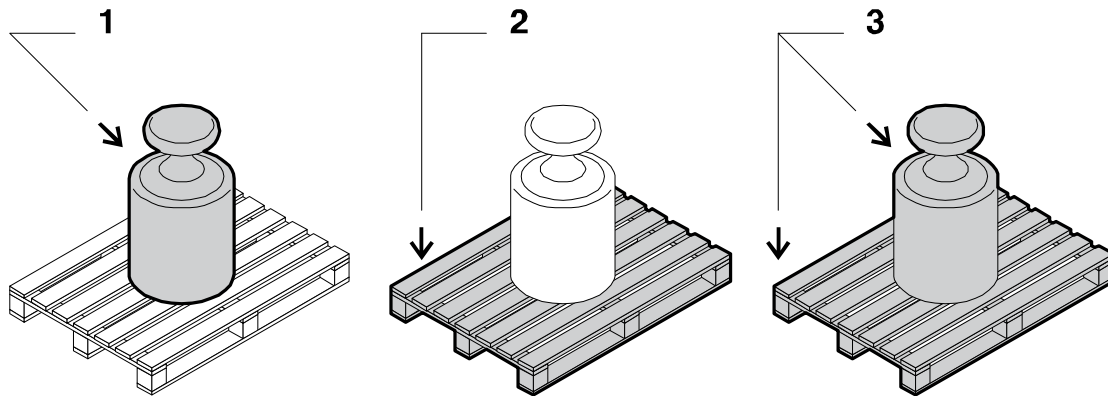




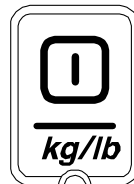
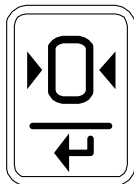
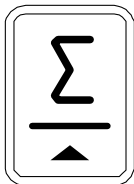
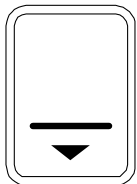
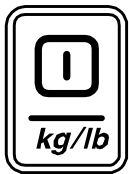
4.2. Touch panel indicator



4.3. 1. Net + 2. Tare = 3. Gross



4.4. On / Off

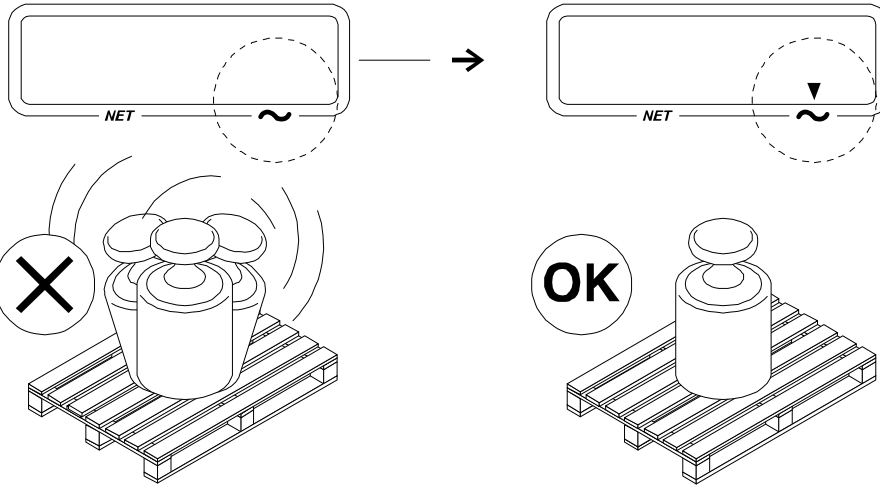


ON / OFF

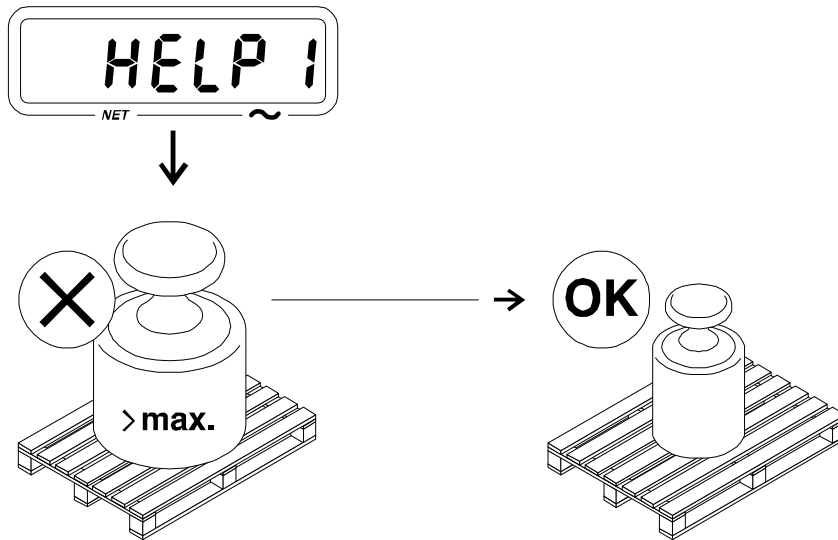
4.5. Error messages

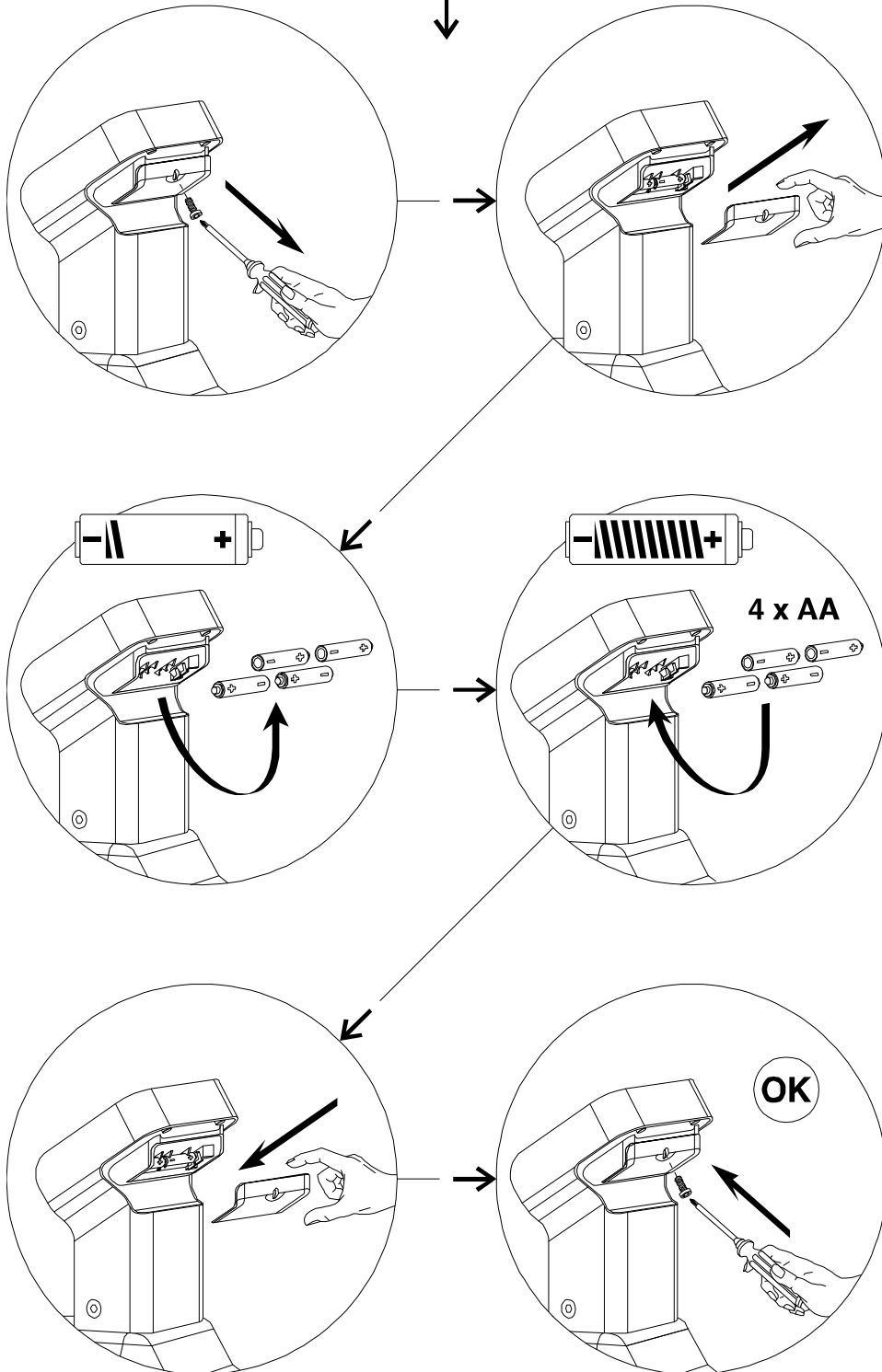
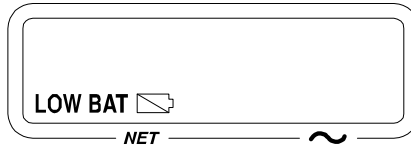


HELP

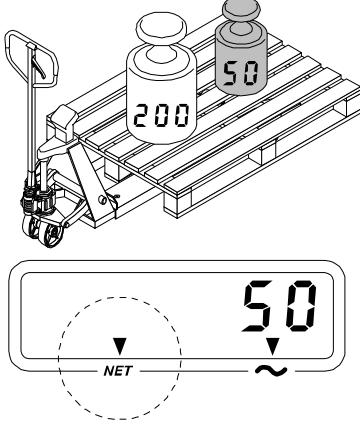
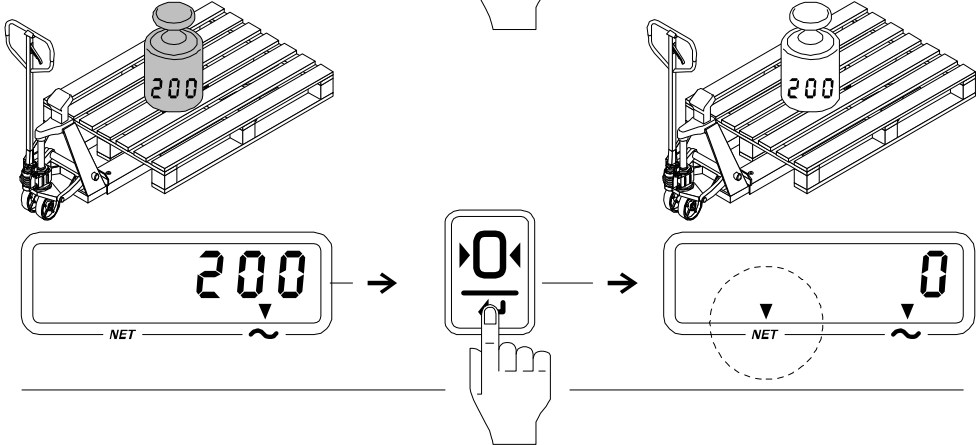
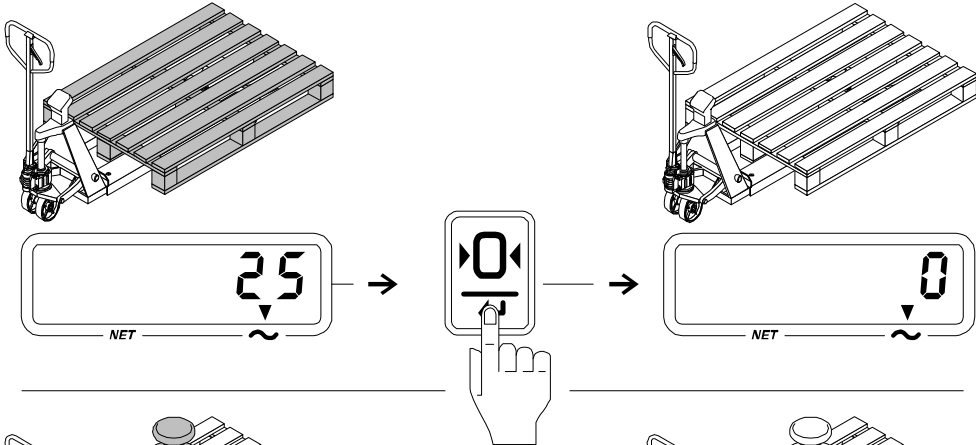
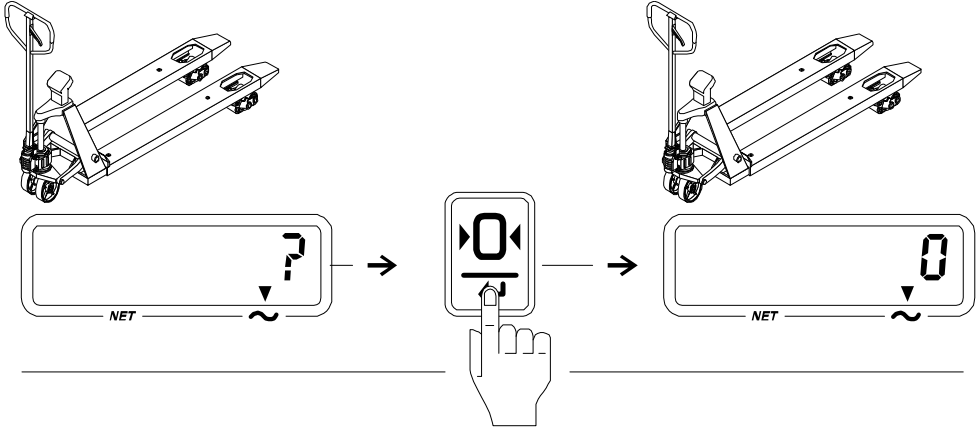
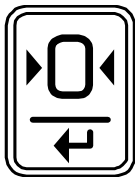


HELP

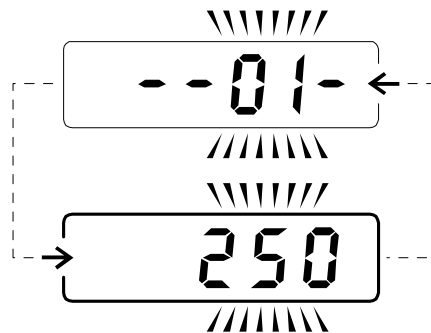
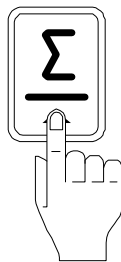
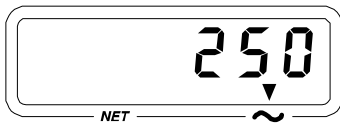
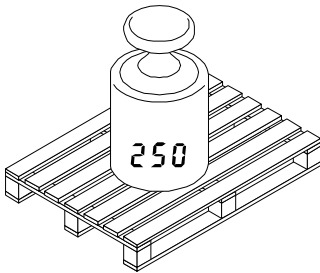
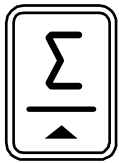




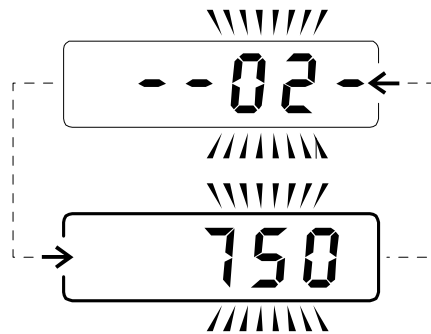
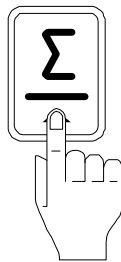
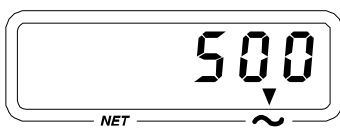
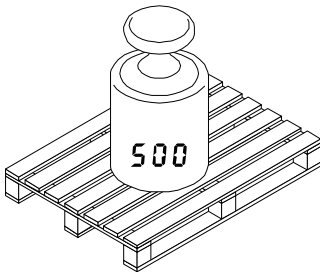
4.6. Zero and tare functions



4.7. Totalling



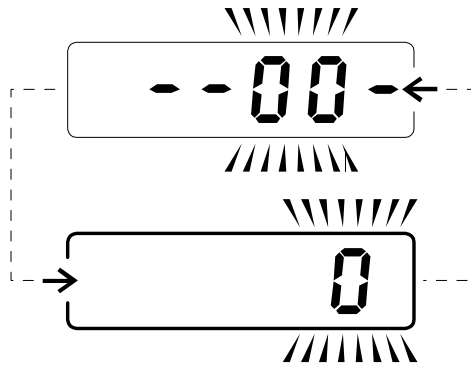
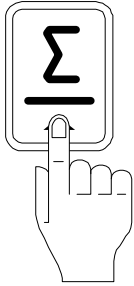
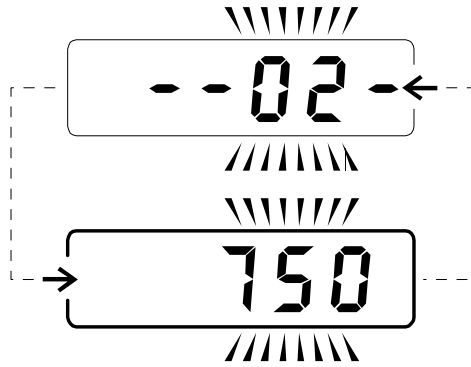
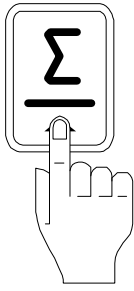
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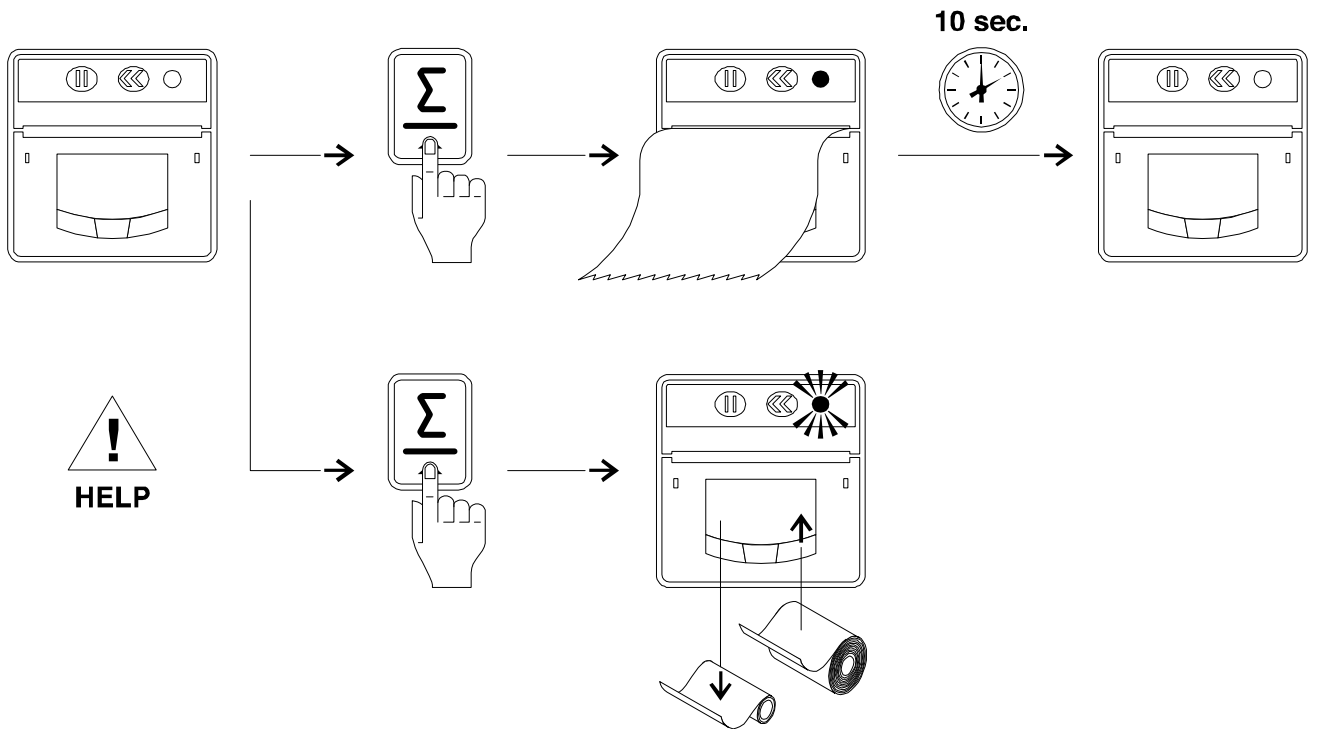
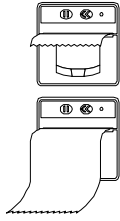
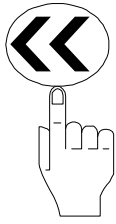
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4.8. Total and reset

3 sec.

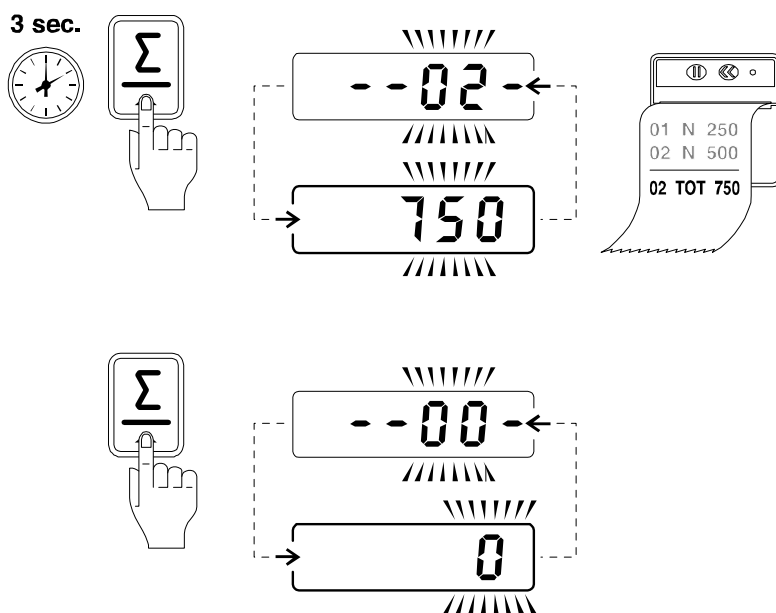
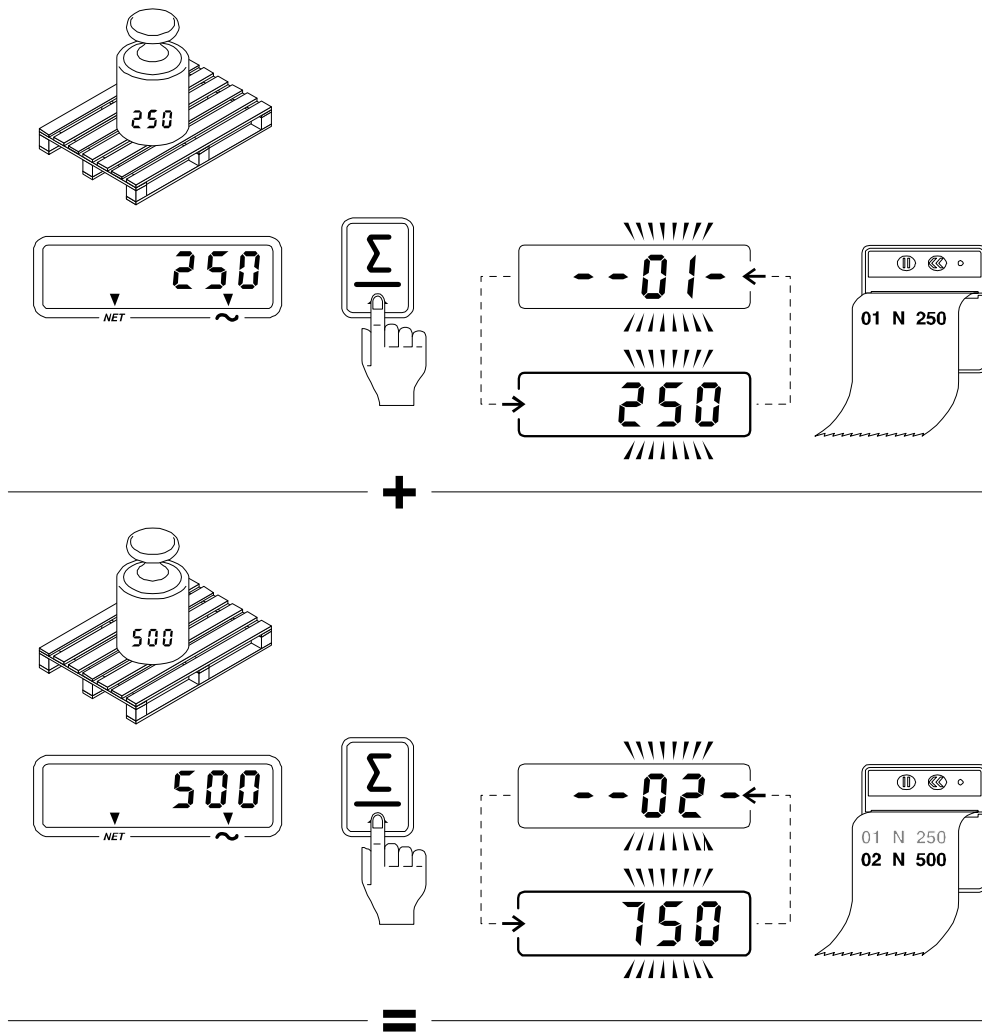


4.9. Printer (Option)

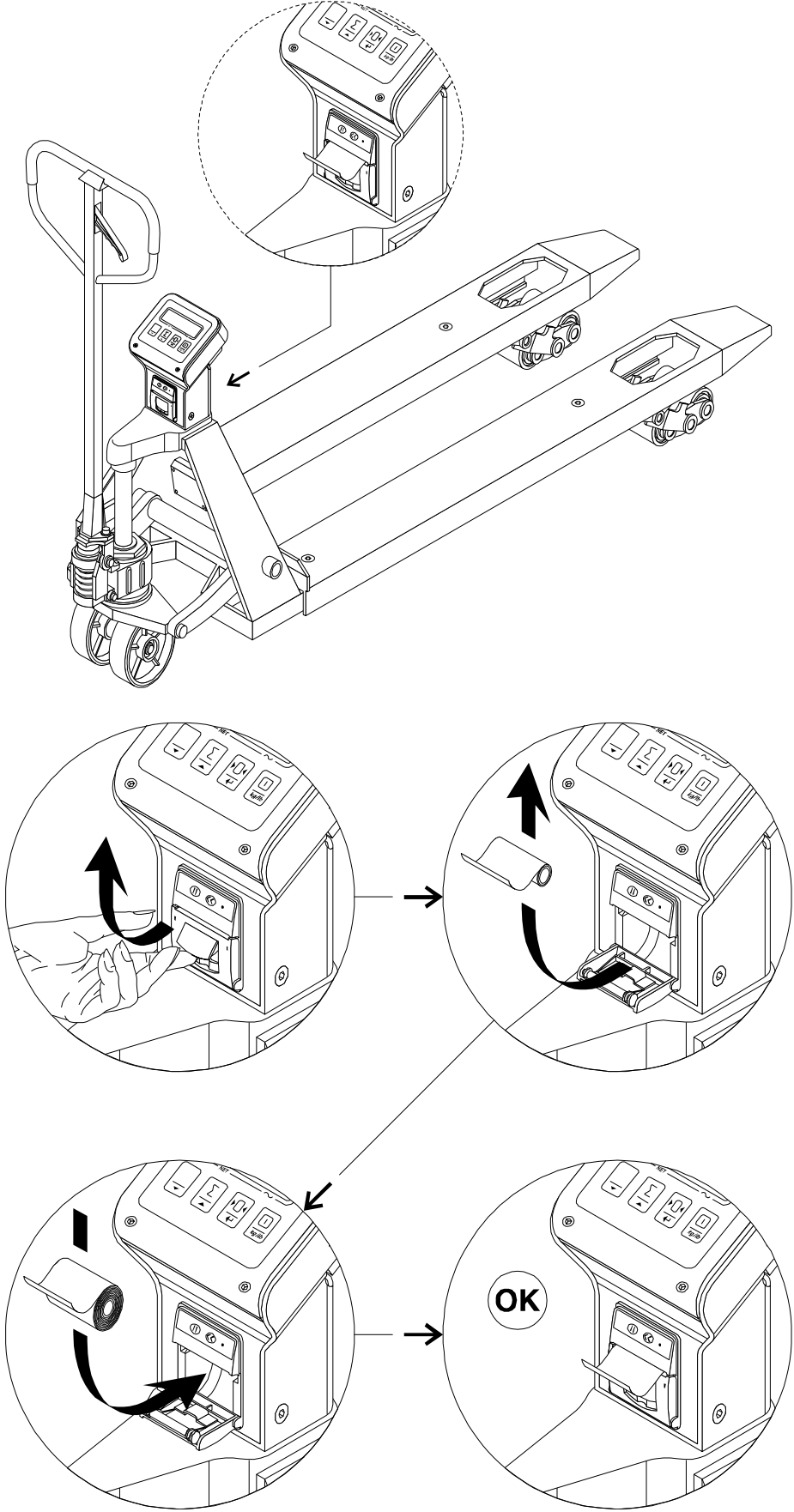


| | | | |
|---------------|--|-------------------|-------------------|
| Printer | :Thermal | Print speed | :up to 45 mm/sec. |
| Functionality | :Manual paper feed | Temperature range | :0 tot +40 °C |
| Paper | :Thermal roll, roll diameter maximum 32 mm, width 58mm | Dimensions | :77 x 77 x 44 mm |
| Resolution | :203 DPI | Power supply | :6 Vdc |

4.10. Printout (Option)



4.11. Paper change (Option)



5. TROUBLE SHOOTING THE SCALE

| NO | TROUBLE | CAUSE | SHOOTING |
|----|---|--|---|
| 1 | HELP1 in the display | -The load is too big for the scale | -Remove the load immediately. |
| 2 | Text is not printed clearly on the ticket | -Battery voltage is too low | -Change the batteries. |
| 3 | The scale is not accurate | -The fork shoe is touching the bottom part of the scale -Cable in junction box is loose -1 of the load cells is broken | -Remove anything that restricts the movement of the scale. -Check the connection in junction box confirming safe. -Stand on the 4 corners of the scale. The load cell in the corner with a different weight should be replaced. |
| 4 | Indicator can't be turned on. | -Battery voltage is too low. -Battery life is complete. | -Change the batteries. -Change the batteries. |
| 5 | Printer does not work Attention , printer is switched off automatically after printing. Line feed will only operate 3 seconds after a printout. | -The LED should be on for 30 seconds. If not: -The batteries are low. -The paper is finished -The printer is off line -Weight too small -The scale has not been unloaded -The paper is jammed -The paper is incorrect -The paper has been loaded upside down | -Change the batteries -Replace paper roll -Button 1 is disabled to prevent the printer from being turned off-line. Check if this is the case by pushing the button once again -Lift a large weight (above 20kg). -Take off a weight before printing next weight -Reload the paper roll. -Make sure you are using thermal printer paper. -Turn the paper roll around. |

6. MAINTENANCE

The pallet truck is largely maintenance free.

6.1. Oil

Please check the oil level every six months. The oil can be hydraulic oil: ISO VG32, its viscosity should be 30cSt at 40⁰ C, total volume is about 0.4lt.

6.2. To remove air from the pump

Air may come into the hydraulic oil during transportation or if the pump has been turned upside down. It can cause the forks not to elevate while pumping in the **raise** position. The air can be removed in the following way: put the control handle (117) to the **lower** position, then move the draw-bar up and down several times.

6.3. Daily check and maintenance

Daily check of the pallet truck with scale can limit wear as much as possible. Special attention should be paid to the wheels, the axles, as thread, rags, etc. may block the wheels. The forks should be unloaded and lowered in the lowest position when the job is over.

6.4. Lubrication

All bearings and shafts are provided with long-life grease at the factory. You only need add long-life grease at monthly intervals or after each time the lubrication points of the truck are cleaned thoroughly.

6.5. Battery replacement

- A) Remove the screw (238-7) and the battery cover (238-8).
- B) Use 4 new "AA" batteries (238-9) to replace the old ones.
- C) Replace the battery cover (238-8) and tighten the screw (238-7) securely.

6.6. Maintenance of display unit

The weighing system meets up to the protection class IP65. This means that dust or moisture (rain or water beam from all sides), will not influence the operation of the electronics. However, high-pressure cleansing in combination with warm water or chemical cleansers will lead to the entry of moisture and therefore negatively influence the operation of the system.

7. GUIDE TO SAFE OPERATION

To pull the truck, always move the control handle into the drive position. This makes the draw-bar easier to move and depressurizes the pump section of the hydraulics. This preserves the hydraulic seals and the valve components. A long service life can be expected.

Operator should read all warning signs and instructions here and on the pallet truck before using this truck with scale.

Do not operate a pallet truck with scale unless you are familiar with it and have been trained or authorized to do so.

Do not operate a pallet truck unless you have checked its condition. Give special attention to the wheels (227 or 234, 310), the draw-bar unit, the fork unit, the lever plate (319), etc.

Do not use on a slopping ground.

Do not take any people on the pallet truck when moving.

The operator had better wear on gloves for labour protecting.

When the goods have been transported, all people should be away from the forks for 600mm.

The center of gravity of the goods should be on the midline of pallet truck with scale.

Do not load over maximum capacity.

At others special condition or place, the operator should be careful to operate the pallet truck.

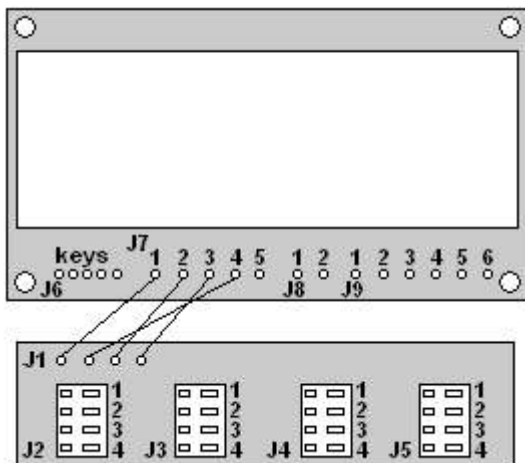
8. TROUBLE SHOOTING

| No | Trouble | Clause | Fixing Methods |
|----|--|---|--|
| 1 | The forks can not be up the max. height. | -The hydraulic oil is not enough. | -Pour in the oil. |
| 2 | The forks can not be lifted up. | -Without hydraulic oil. -The oil has impurities. -The nut (104) is too high, keep the pumping valve open. -Air come into the hydraulic oil. | -Fill in the oil. -Change the oil. -Adjust the nut(104) or screw (318) (see item 3.4) -Banish the air.(see item 4.2) |
| 3 | The forks can not be descended. | -The piston rod(328) or pump (322) is deformed resulting from partial loading slanting to one side or over-loading. -The fork was kept in the high position for long time with piston rod bared to arise in rusting and jamming of the rod. -The adjusting nut (104) or screw (318) is not in correct position. | -Replace the piston rod (328) or pump (322). -Keeping the fork in the lowest position if not using, and pay more attention to lubricate the rod. -Adjust the nut (104) or screw (318) (see item 3.3) |
| 4 | Leaks | -Sealing parts worn or damaged. -Some part cracked or worn into small. | - Replace with the new one. - Replace with the new one. |

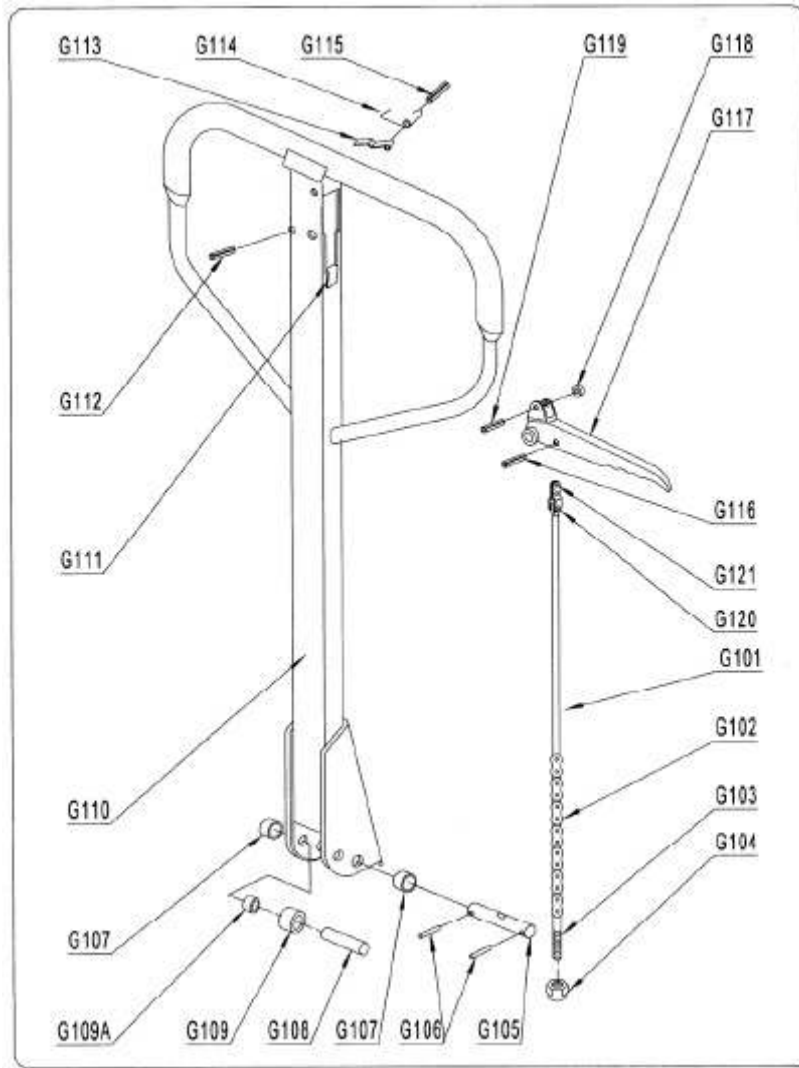
| | | | |
|---|---|--|---|
| 5 | The fork descends without the release valve worked. | <ul style="list-style-type: none"> -The impurities in the oil cause the release valve to be unable to close tight. -Some parts of hydraulic system is cracked or bored. -Air come into the oil. -Sealing parts worn or damaged. -The adjusting nut (104) or screw (318) is not in the correct position. | <ul style="list-style-type: none"> -Replace with new oil. -Inspect and replace the waste parts. -Banish the air. (See item 4.2) -Replace with the new one. -Adjusting the nut (104) or screw (318). (See item 3.2) |
| 6 | The result of scale is incorrect. | <ul style="list-style-type: none"> -The bolts (224) scrape the platform (223) -The platform scrapes the fork (218) | <ul style="list-style-type: none"> -Adjust the bolts (224) -Face lifting the platform. |
| 7 | Nothing is displayed by the terminal. | <ul style="list-style-type: none"> -The battery power is too lower. | <ul style="list-style-type: none"> -Replace with new one. |
| 8 | Appear error codes on scale | See chapter | |

NOTE: DO NOT ATTEMPT TO REPAIR THE PALLET TRUCK UNLESS YOU ARE TRAINED AND AUTHORIZED TO DO SO.

9. WIRING DIAGRAM OF SCALE, JUNCTION BOX, SENSOR

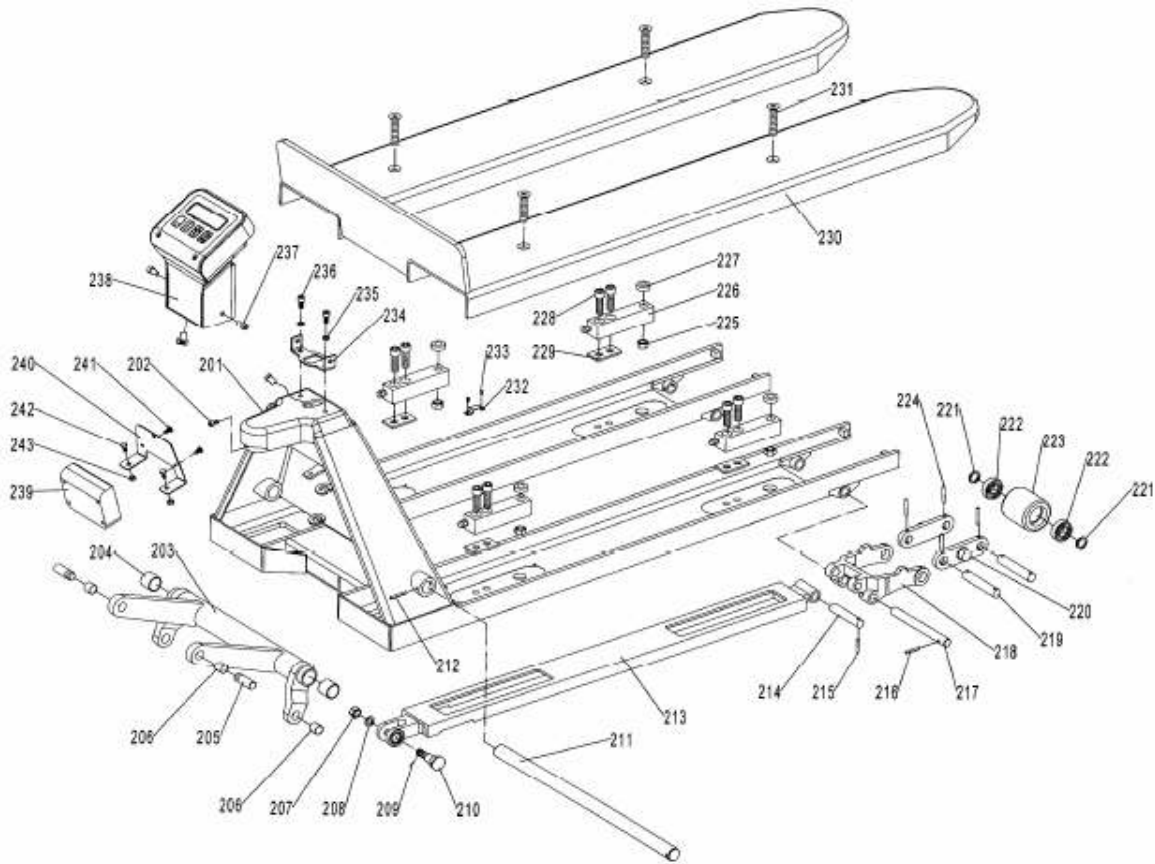


| | | |
|--------------------------------------|--------|---------------------|
| J1 – Connection to indicator board | | |
| 1 | brown | Ex- |
| 2 | yellow | Ex+ |
| 3 | white | sig- |
| 4 | green | sig+ |
| J2 – J4 Connection from load cells | | |
| 1 | green | sig+ |
| 2 | white | sig- |
| 3 | red | Ex+ |
| 4 | black | Ex- |
| J6 – Connection to touch panel | | |
| J7 – Connection from load cell board | | |
| 1 | brown | Ex- |
| 2 | white | sig- |
| 3 | green | sig+ |
| 4 | yellow | Ex+ |
| 5 | | Sh |
| J8 – Connection from power supply | | |
| 1 | black | Gnd |
| 2 | red | +6v |
| J9 – Connection to printer | | |
| 1 | black | - supply to printer |
| 2 | red | + supply to printer |
| 3 | green | TX |
| 4 | | |
| 5 | white | CTS |
| 6 | | |



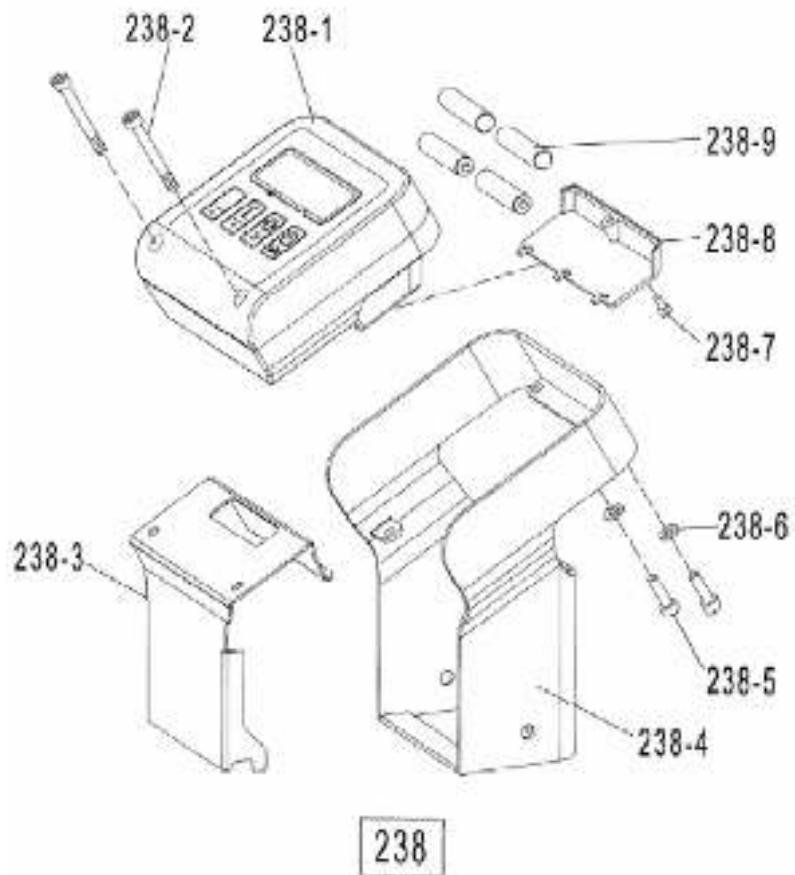
| No. | Description | Qty. | No. | Description | Qty. |
|-------|-----------------|------|------|----------------|------|
| G101 | Release Rod | 1 | G111 | Stop Rubber | 1 |
| G102 | Chain | 1 | G112 | Elastic Pin | 1 |
| G103 | Adjusting Bolt | 1 | G113 | Blade Spring | 1 |
| G104 | Adjusting Nut | 1 | G114 | Spring | 1 |
| G105 | Axle with Hole | 1 | G115 | Elastic Pin | 1 |
| G106 | Elastic Pin | 2 | G116 | Elastic Pin | 1 |
| G107 | Bushing | 2 | G117 | Control Handle | 1 |
| G108 | Roller Pin | 1 | G118 | Roller | 1 |
| G109 | Pressure Roller | 1 | G119 | Elastic Pin | 1 |
| G109A | Bushing | 1 | G120 | Pin | 1 |
| G110 | Draw-bar | 1 | G121 | Pull Board | 1 |

Fork Frame Unit



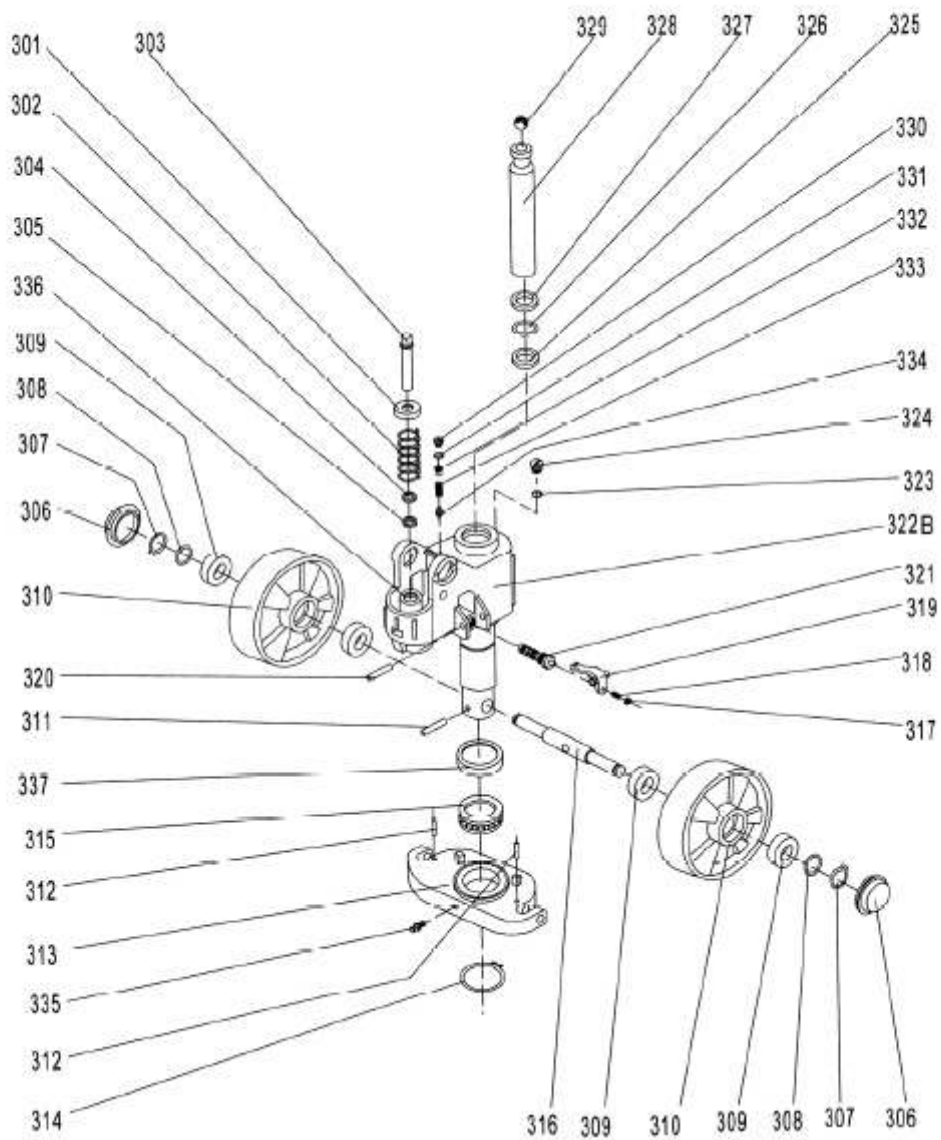
| No. | Description | Qty. | No. | Description | Qty. |
|-----|----------------------|------|-----|------------------------------------|------|
| 201 | Pallet truck chassis | 1 | 223 | Loading Roller | 4 |
| 202 | Bolt | 1 | 224 | Elastic Pin | 8 |
| 203 | Rock-Arm | 1 | 225 | Nut | 4 |
| 204 | Bushing | 2 | 226 | Load cell | 4 |
| 205 | Shaft | 2 | 227 | Washer | 4 |
| 206 | Bushing | 4 | 228 | Bolt | 8 |
| 207 | Nut | 2 | 229 | Load cell mounting plate | 4 |
| 208 | Washer | 2 | 230 | Fork shoe | 1 |
| 209 | Spilt Pin | 2 | 231 | Fork shoe bolt | 4 |
| 210 | Bolt | 2 | 232 | Clamp for cable | 2 |
| 211 | Long Shaft | 1 | 233 | Screw | 4 |
| 212 | Elastic Pin | 1 | 234 | Indicator support mounting bracket | 1 |
| 213 | Pushing Rod | 2 | 235 | Bolt ring | 2 |
| 214 | Shaft | 2 | 236 | Bolt | 2 |
| 215 | Elastic Pin | 2 | 237 | Bolt | 2 |
| 216 | Elastic Pin | 2 | 238 | Display Unit | 1 |
| 217 | Shaft | 2 | 239 | Junction box | 1 |
| 218 | Frame of Roller | 2 | 240 | Junction box mounting bracket | 1 |
| 219 | Axle for Roller | 4 | 241 | Screw | 2 |
| 220 | Linking Plate | 4 | 242 | Bolt | 2 |
| 221 | Washer | 8 | 243 | Nut | 2 |
| 222 | Bearing | 8 | | | |

Display Unit



| No. | Description | Qty. | No. | Description | Qty. |
|-------|--------------------|------|-------|-------------------|------|
| 238-1 | Indicator | 1 | 238-7 | Bolt | 1 |
| 238-2 | Bolt | 2 | 238-8 | Battery cover | 1 |
| 238-3 | Indicator complete | 1 | 238-9 | Batteries AA,1.5V | 4 |
| 238-4 | Indicator support | 1 | 238-5 | Bolt | 2 |
| 238-6 | Washer | 2 | | | |

Hydraulic Pump Unit



| No. | Description | Quantity |
|-----|---------------|----------|
| 301 | Spring Cap | 1 |
| 302 | Spring | 1 |
| 303 | Pump Piston | 1 |
| 304 | Dust Ring | 1 |
| 305 | Seal | 1 |
| 306 | Dust Cover | 2 |
| 307 | Locking Ring | 2 |
| 308 | Washer | 2 |
| 309 | Bearing | 4 |
| 310 | Loading Wheel | 2 |

| | | |
|------|-------------------------|---|
| 311 | Elastic Pin | 1 |
| 312 | Elastic Pin | 2 |
| 313 | Thrust Plate | 1 |
| 314 | Retaining Ring | 1 |
| 315 | Bearing | 1 |
| 316 | Shaft of loading Wheel | 1 |
| 317 | Nut | 1 |
| 318 | Screw | 1 |
| 319 | Lever Plate | 1 |
| 320 | Elastic Pin | 1 |
| 321 | Valve Cartridge | 1 |
| 322B | Pump Body | 1 |
| 323 | Seal Washer | 1 |
| 324 | Screw Plug | 1 |
| 325 | Seal | 1 |
| 326 | O – Ring | 1 |
| 327 | Dust Ring | 1 |
| 328 | Piston Rod | 1 |
| 329 | Steel Ball | 1 |
| 330 | Screw Plug | 1 |
| 331 | O - Ring | 1 |
| 332 | Bolt | 1 |
| 333 | Spring | 1 |
| 334 | Spindle of Safety Valve | 1 |
| 335 | Grease Cup | 1 |
| 336 | Cylinder | 1 |
| 337 | Cover of Bearing | 1 |