



## OPERATING INSTRUCTIONS & PARTS LIST

# ECO WEIGH SCALE

---

VERSION	JULY 2014
MODEL	ECO WEIGH SCALE PALLET TRUCK
APPLICABLE PRODUCTS	ECO WEIGH SCALE

---

NOTE: Owner and operator MUST read and understand the operating instructions before using the unit.

# OPERATION MANUAL

## Index

1. General specifications	2
2. Pre-operation procedure	2
2.1. Mounting indicator	2
2.2. Attaching the handle to pump unit	2
3. To adjust release device	3
4. Use of weighing pallet truck	3
4.1. Accurate weighing	3
4.2. Touch panel indicator	4
4.3. 1. Net + 2. Tare = 3. Gross	5
4.4. On / Off	5
4.5. Error messages	6
4.6. Zero and tare functions	8
4.7. Total and reset	9
4.8. Totaling	10
4.9. Printer (Option)	11
4.10. Printout (Option)	12
4.11. Paper change (Option)	13
5. Trouble shooting the scale	14
6. Maintenance	15
6.1. Oil	15
6.2. To remove air from the pump	15
6.3. Daily check and maintenance	15
6.4. Lubrication	15
6.5. Battery replacement	15
6.6. Maintenance of display unit	15
7. Guide to safe operation	15
8. Trouble shooting	16
9. Wiring diagram of scale, junction box, sensor	17

For your safety and correct operation, please carefully read this instruction before using it.

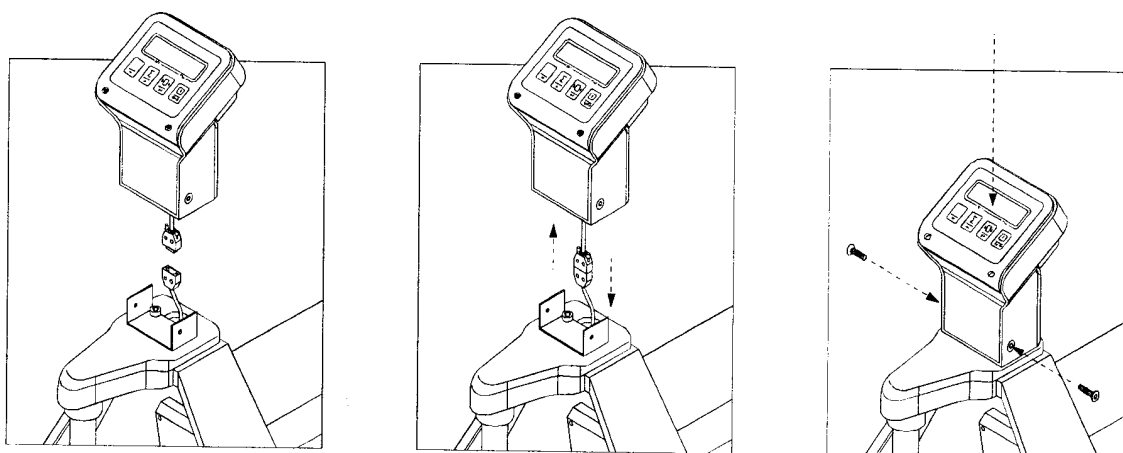
**NOTE:** All of the information reported herein is based on data available at the moment of printing. We reserve the right to modify our own products at any moment without notice and incurring in any sanction.  
It is suggested to always verify possible updates.

## 1. GENERAL SPECIFICATIONS

Capacity	2,000kg / 4,400lbs
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	88mm/200mm / 3.3"/7.8"
Features weighing accuracy	±1.0kg/2.2lbs for loading 2,000kg/4400lbs
Width over forks	570mm/690mm / 22.5" / 27"
Fork Length	1150 or 1220mm / 45 or 48"

## 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

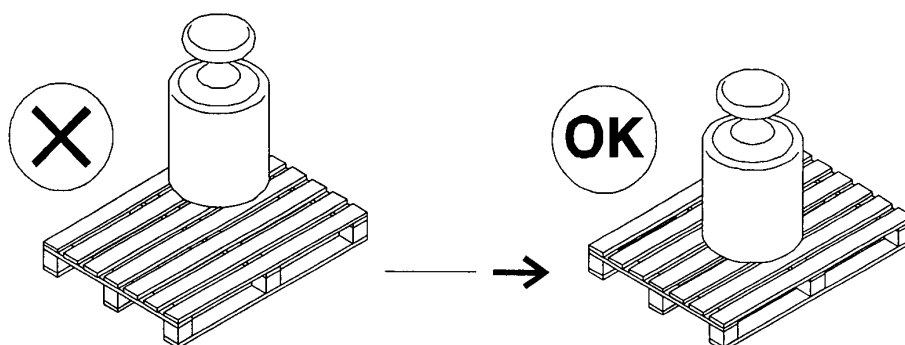
**Lower** - handle up, the lever moves back to the drive position when released.

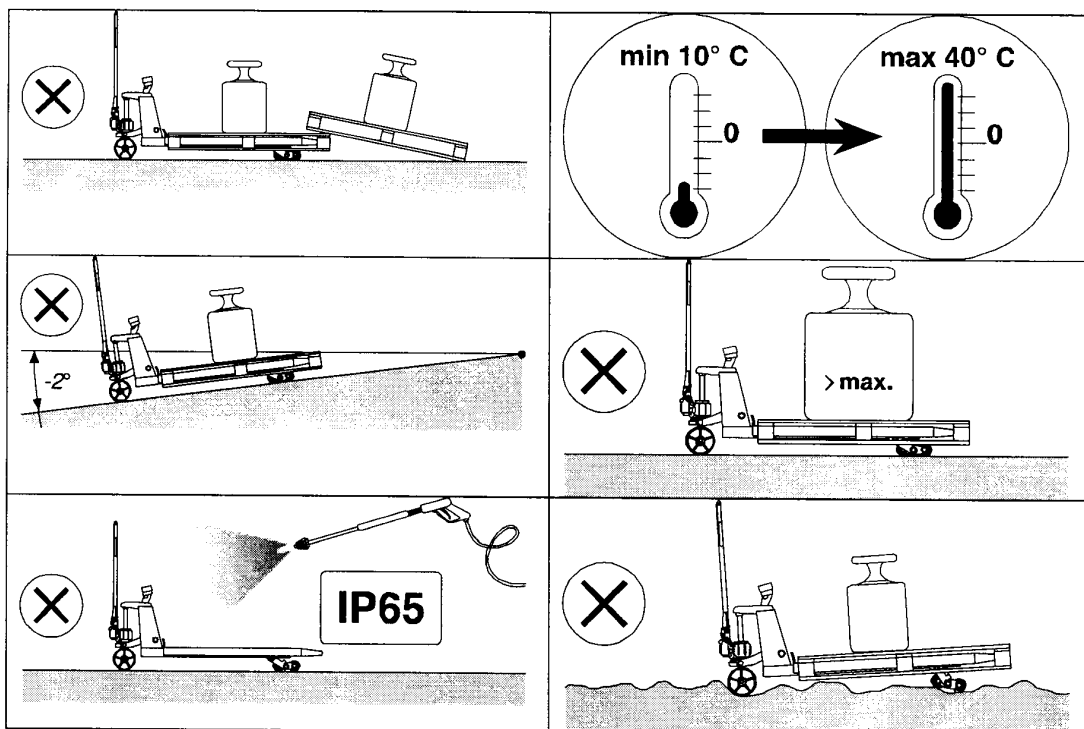
If, however, they have been changed, you can adjust them according to the following instructions:

- 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.

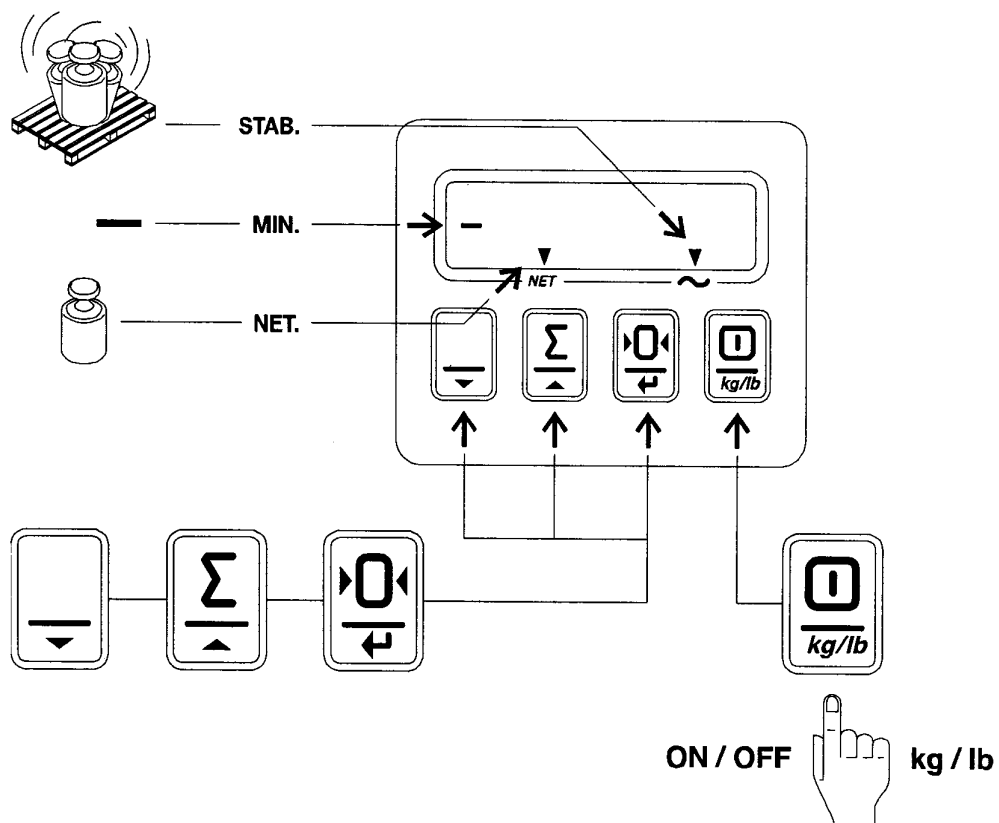
### 4. USE OF WEIGHING PALLET TRUCK

#### 4.1. Accurate weighing

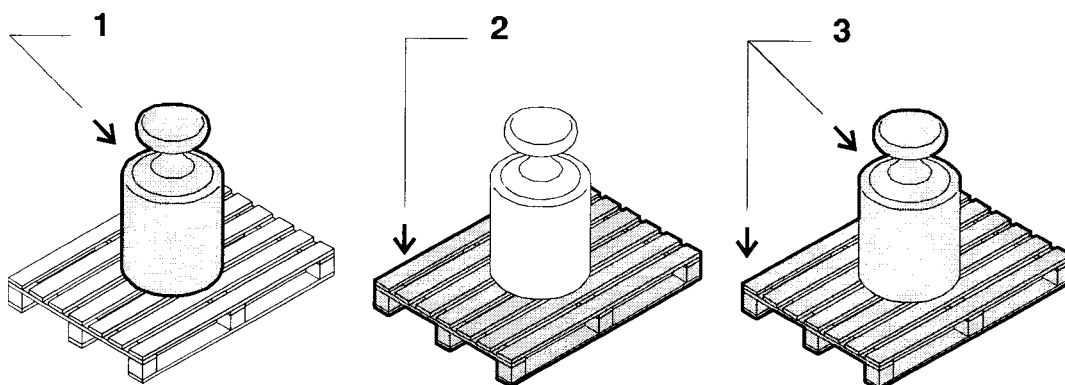




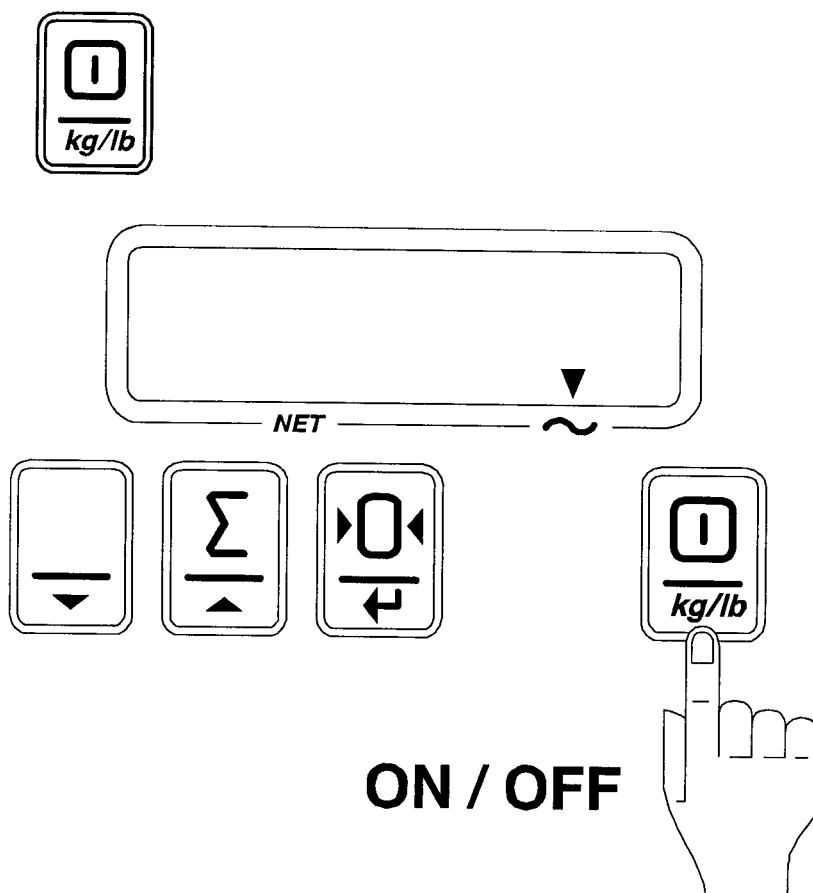
## 4.2. Touch panel indicator



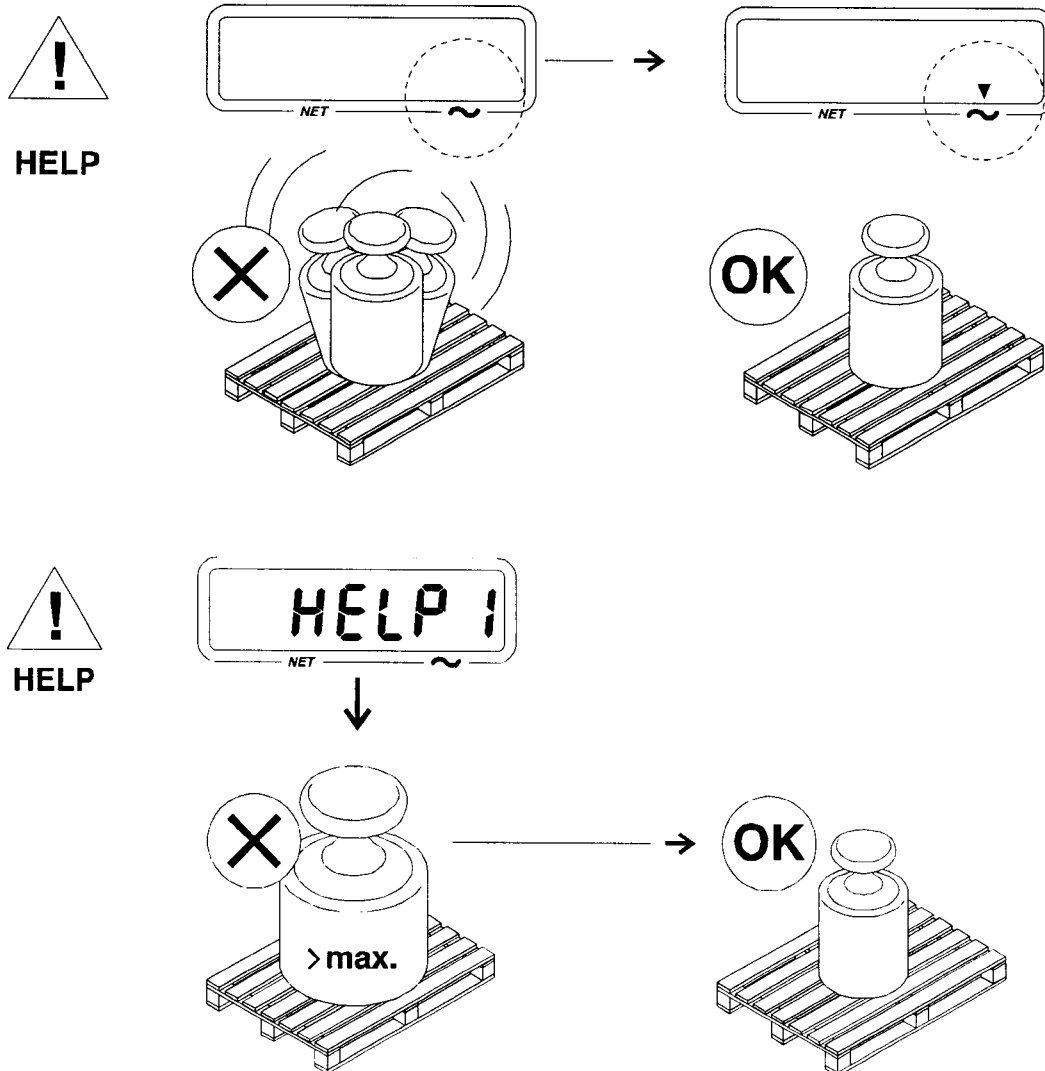
#### 4.3. 1. Net + 2. Tare = 3. Gross

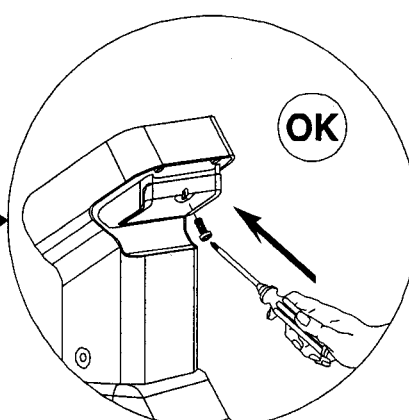
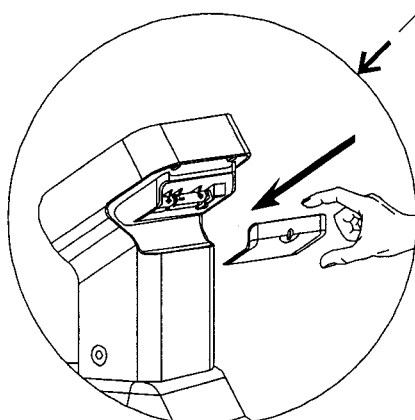
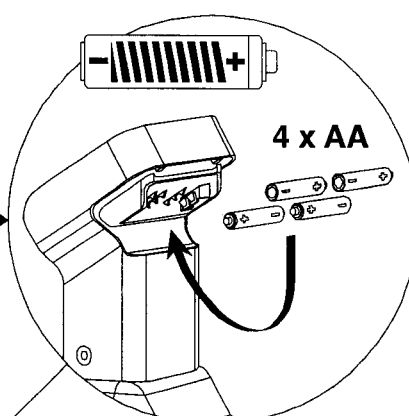
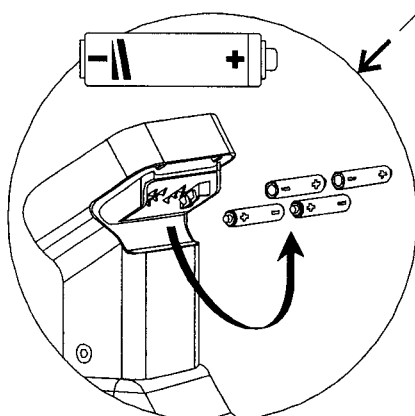
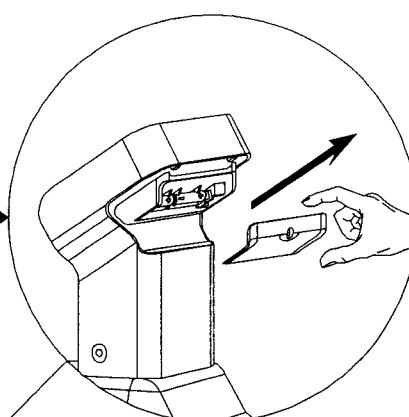
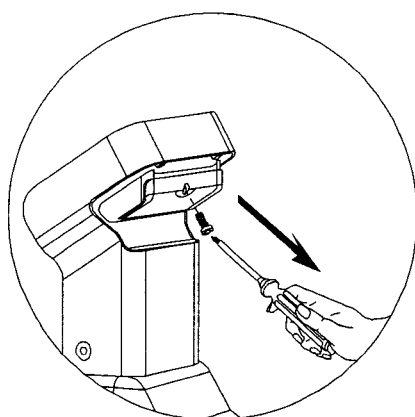
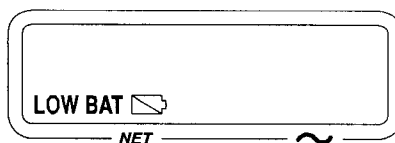


#### 4.4. On / Off



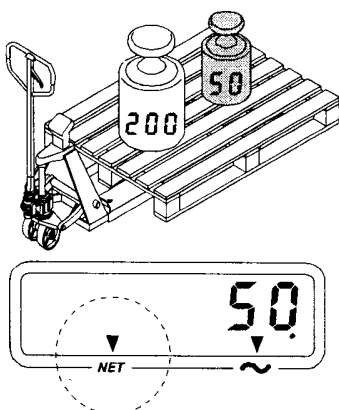
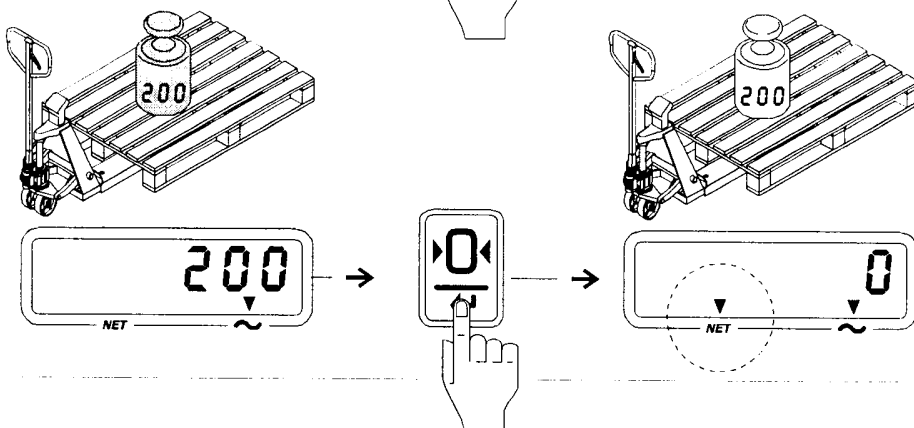
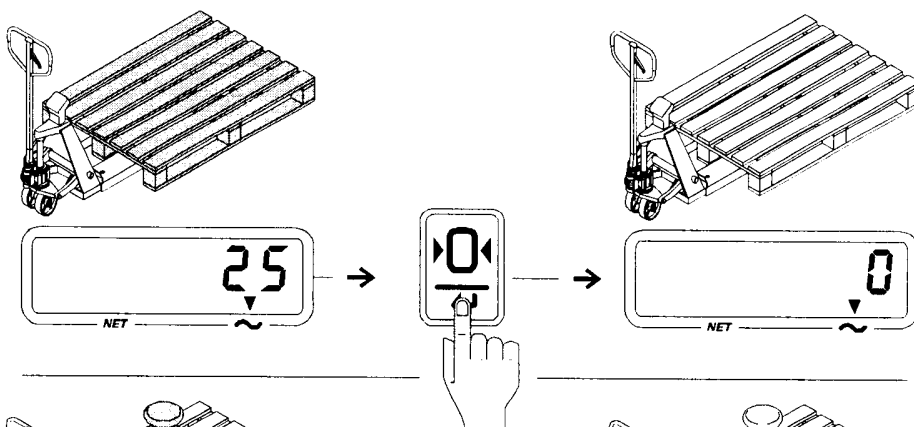
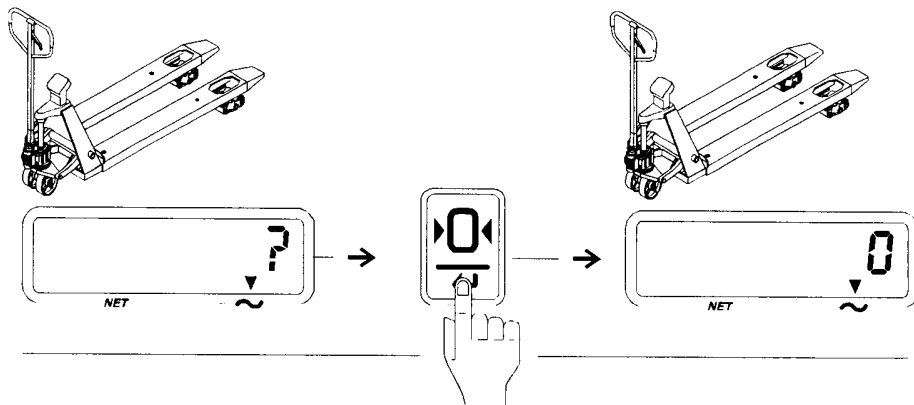
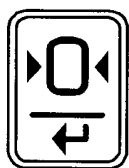
## 4.5. Error messages



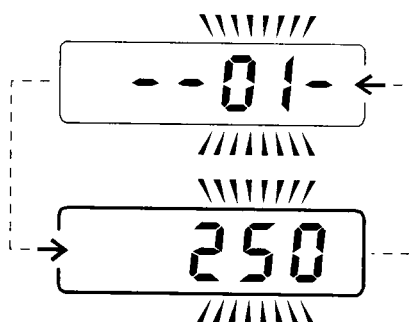
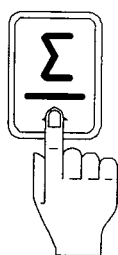
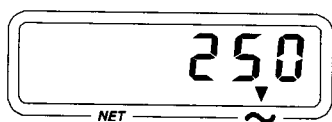
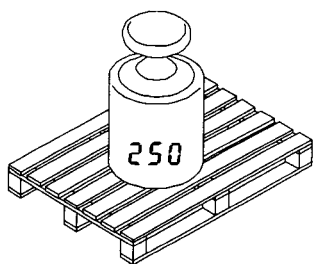
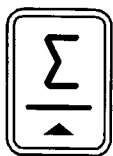




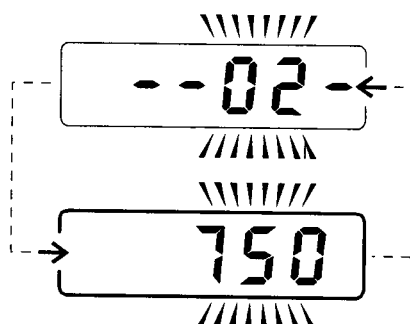
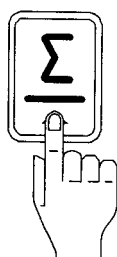
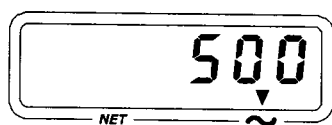
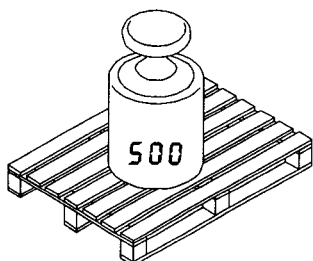
## 4.6. Zero and tare functions



## 4.7. Totalling



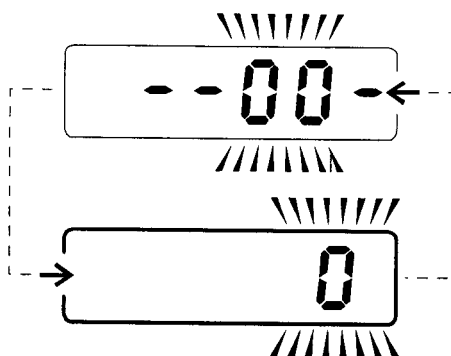
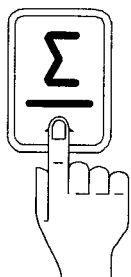
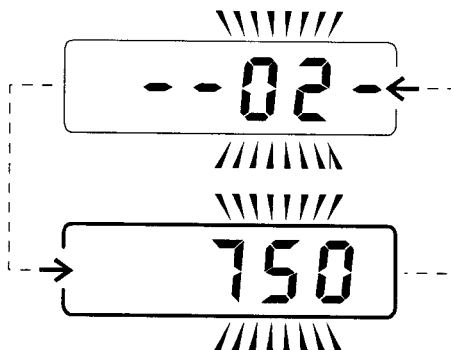
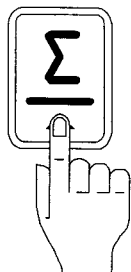
+



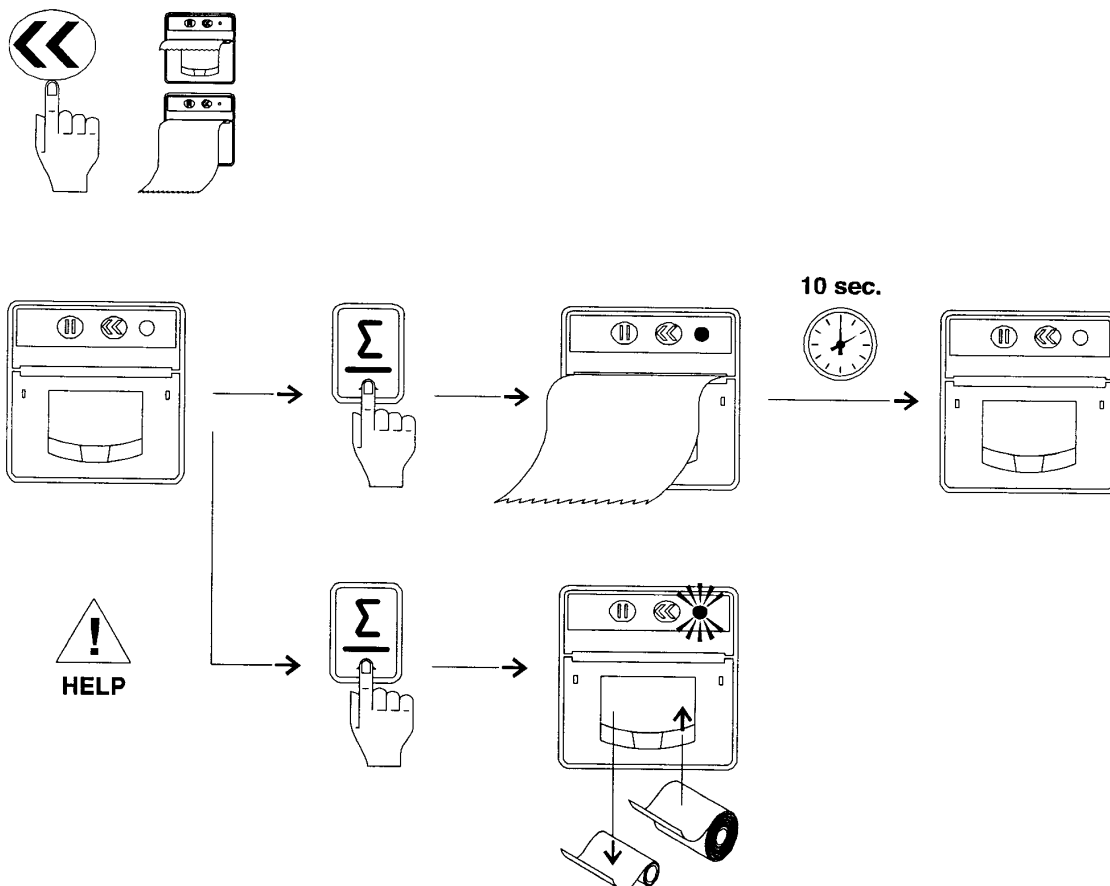
=

#### 4.8. Total and reset

3 sec.

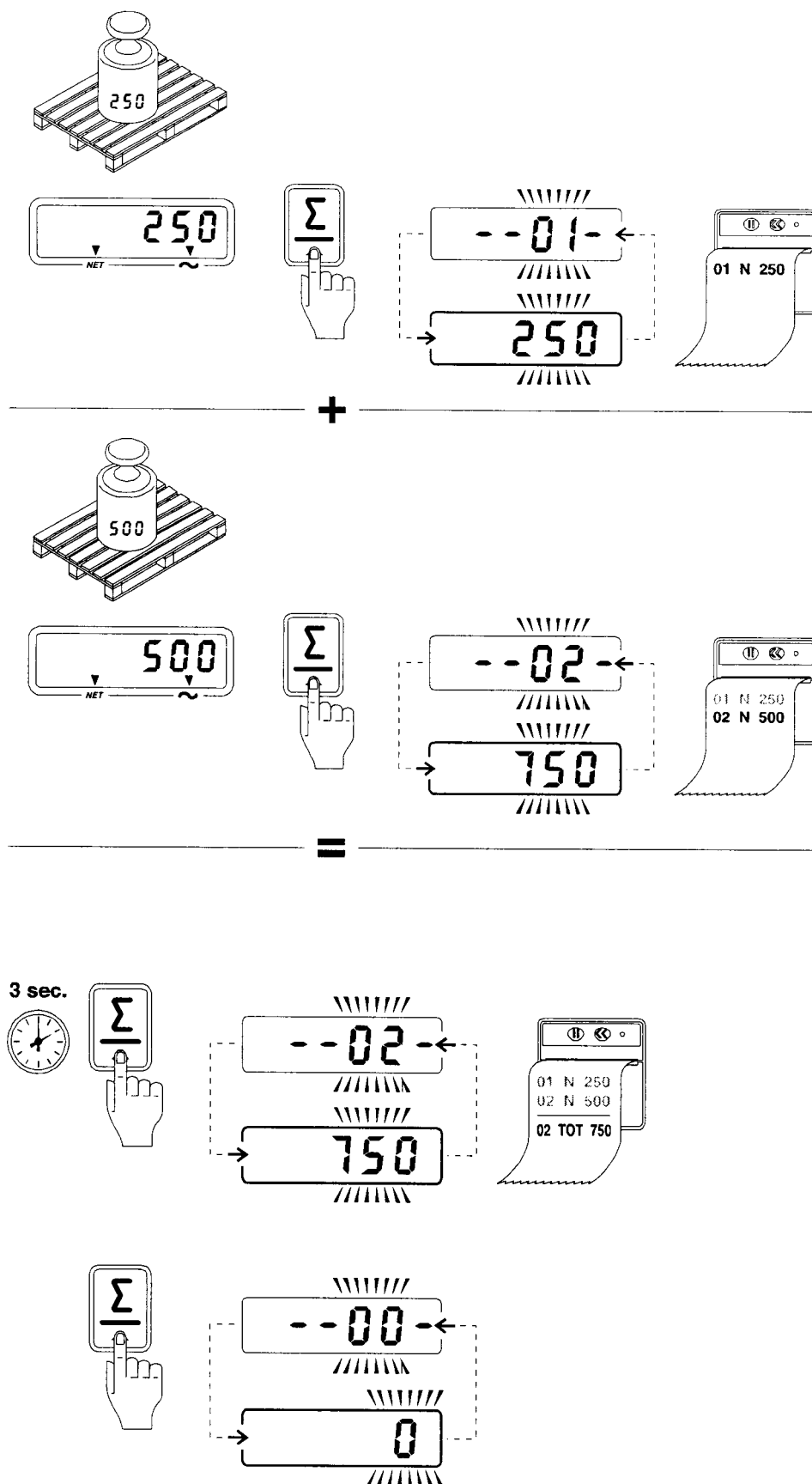


## 4.9. Printer (Option)

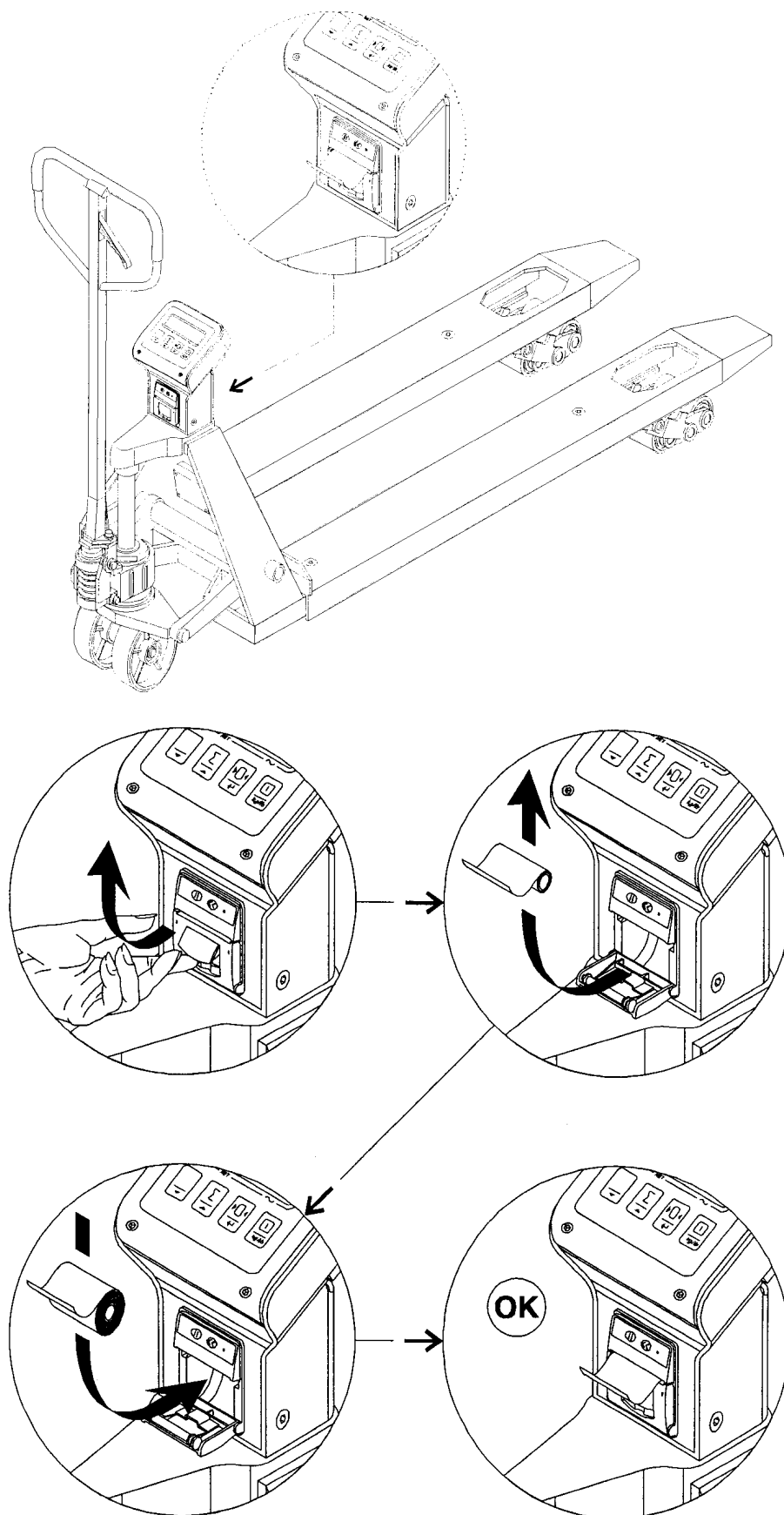


Printer	:Thermal	Print speed	:up to 45 mm/sec.
Functionality	:Manual paper feed	Temperature range	:0 tot +40°C
Paper	:Thermal roll, roll diameter maximum 32 mm, width 58mm	Dimensions	:77 x 77 x 44 mm
Resolution	:203 DPI	Power supply	:6 Vdc

## 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 <b>Attention,</b> 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 40°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 sloping ground.

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

The operator should wear gloves for protection.

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.

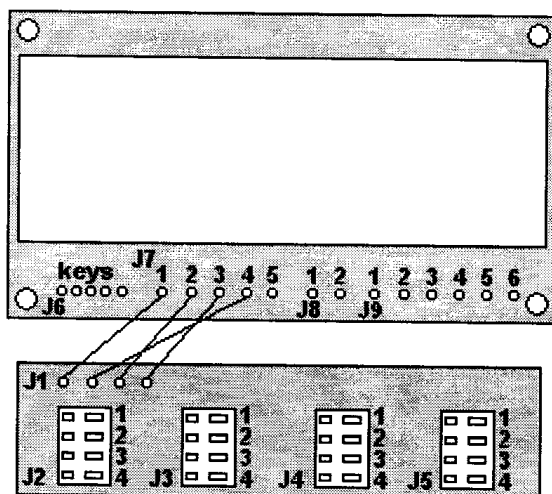
## 8. TROUBLE SHOOTING

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 comes 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 has cracked or worn small.	- Replace with the new one.  - Replace with the new one.
5	The fork descends without the release valve worked.	-The impurities in the oil cause the release valve to be unable to close tight. -Some part of hydraulic system is cracked or bored. -Air comes into the oil.	-Replace with new oil.  -Inspect and replace the waste parts. -Banish the air. (See item 4.2)

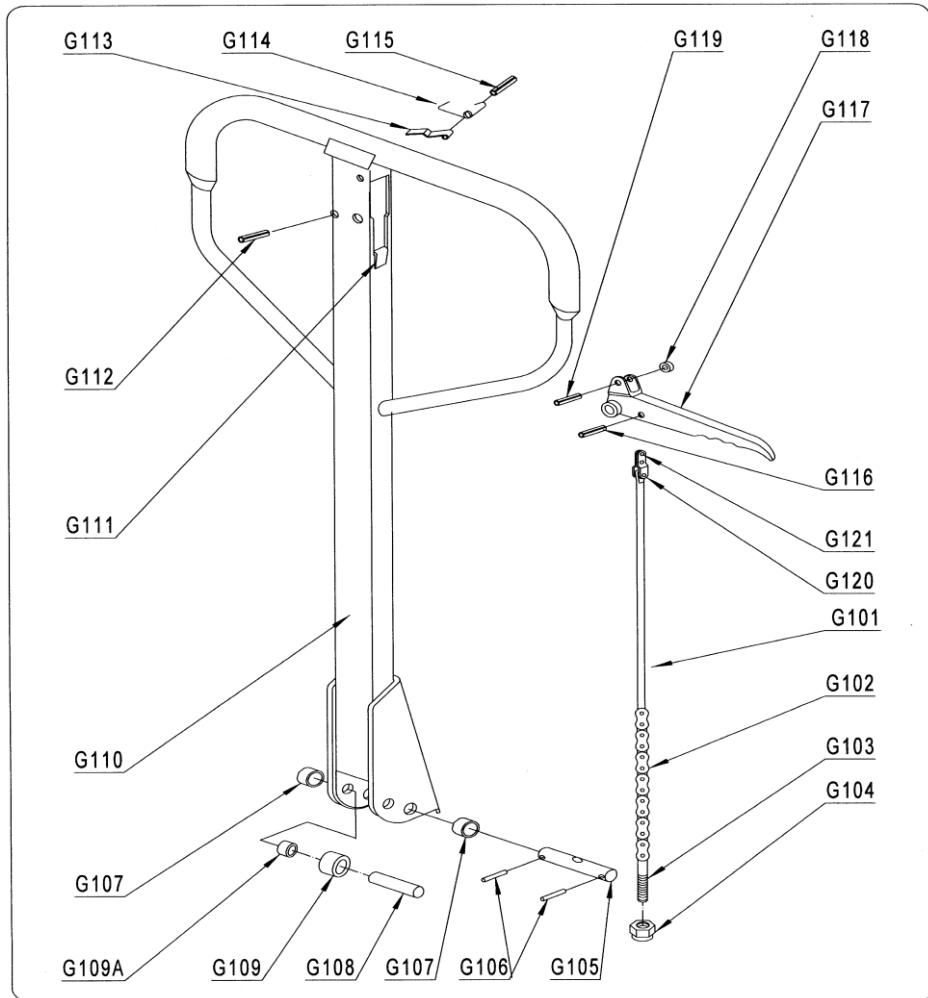
		-Sealing parts worn or damaged. -The adjusting nut (104) or screw (318) is not in the correct position.	-Replace with the new one. -Adjusting the nut (104) or screw (318). (See item 3.2)
6	The result of scale is incorrect.	- The bolts (224) scrape the platform (223) - The platform scrapes the fork (218)	-Adjust the bolts (224) -Face lifting the platform.
7	Nothing is displayed by the terminal.	- The battery power is too lower.	-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

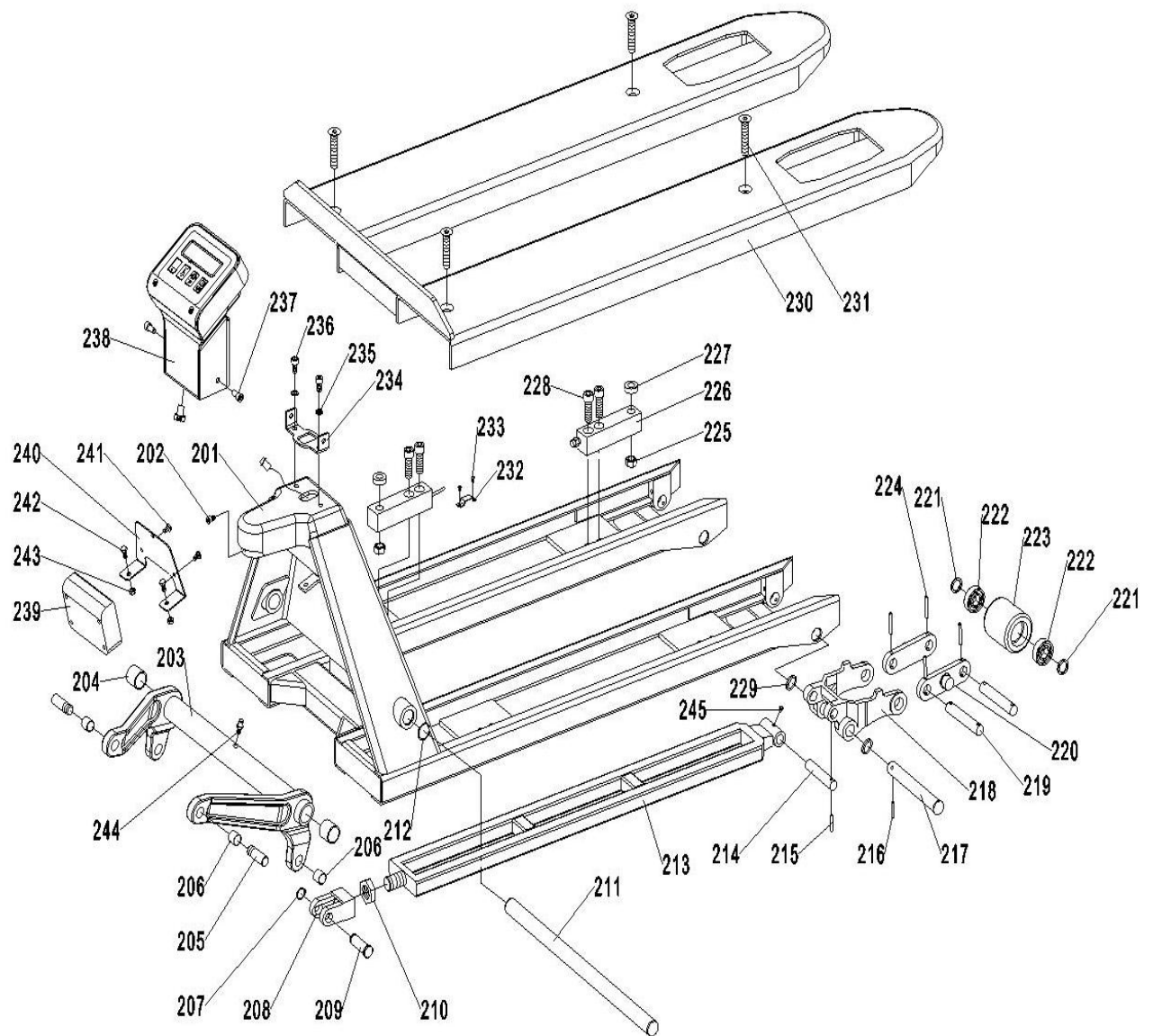


J1 – Connection to indicator board		
1	brown	Ex-
2	yellow	Ex+
3	white	sig-
4	green	sig+
J2 – J4 Connection from load cells		
1	green	sig+
2	white	sig-
3	red	Ex+
4	black	Ex-
J6 – Connection to touch panel		
J7 – Connection from load cell board		
1	brown	Ex-
2	white	sig-
3	green	sig+
4	yellow	Ex+
5		Sh
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		



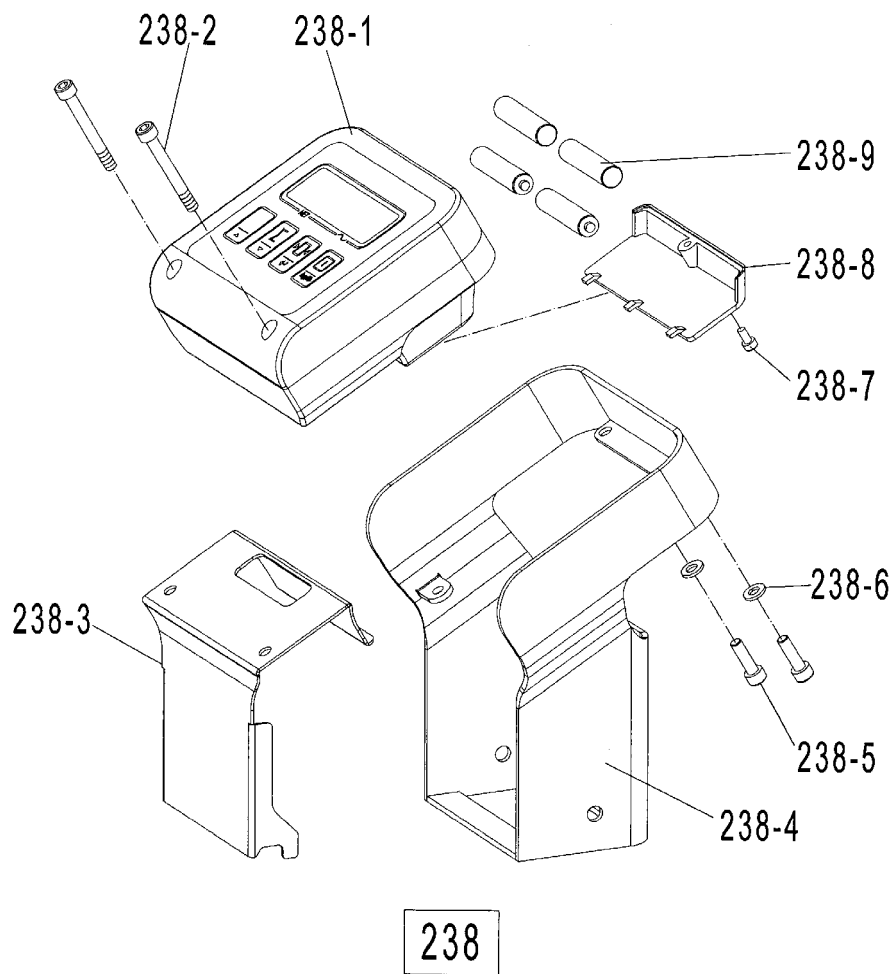
No.	Mobile #	Description	Qty.
G101	18E101	Release Rod	1
G102	18E10203	Chain	1
G103		Adjusting Bolt	1
G104	18E104	Adjusting Nut	1
G105	18E105	Axle with Hole	1
G106	18E106	Elastic Pin	2
G107	18E107	Bushing	2
G108	18E108	Roller Pin	1
G109	18E109	Pressure Roller	1
G109A	18E109A	Bushing	1
G110	18E110	Draw-bar	1
G111	18E111	Stop Rubber	1
G112	18E112	Elastic Pin	1
G113	18E113	Blade Spring	1
G114	18E114	Spring	1
G115	18E115	Elastic Pin	1
G116	18E116	Elastic Pin	1
G117	18E117	Control Handle	1
G118	18E118	Roller	1
G119	18E119	Elastic Pin	1
G120	18E120	Pin	1
G121	18E121	Pull Board	1

## Fork Frame Unit



<b>No.</b>	<b>Mobile #</b>	<b>Description</b>	<b>Qty.</b>
201	18E201WL	Pallet truck chassis	1
202	18E202WL	Bolt	1
203	18E203WL	Rock-Arm	1
204	18E204WL	Bushing	2
205	18E205WL	Shaft	2
206	18E206WL	Bushing	4
207	18E207WL	Retaining Ring	2
208	18E208WL	Joint	2
209	18E209WL	Pin	2
210	18E210WL	Nut	2
211	18E211WL	Long Shaft	1
212	18E212WL	Retaining Ring	2
213	18E213WL	Pushing Rod	2
214	18E214WL	Shaft	2
215	18E215WL	Elastic Pin	2
216	18E216WL	Elastic Pin	2
217	18E217WL	Shaft	2
218	18E218WL	Frame of Roller	2
219	18E219WL	Shaft for Roller	4
220	18E220WL	Linking Plate	4
221	18E221WL	Washer	8
222	18E222WL	Bearing	8
223	18E223WL	Loading Roller	4
224	18E224WL	Elastic Pin	8
225	18E225WL	Nut	4
226	18E226WL	Load cell	4
227	18E227WL	Washer	4
228	18E228WL	Bolt	8
229	18E229WL	Washer	4
230	18E230WL	Fork shoe	1
231	18E231WL	Fork shoe bolt	4
232	18E232WL	Clamp for cable	2
233	18E233WL	Screw	4
234	18E234WL	Indicator support mounting bracket	1
235	18E235WL	Bolt ring	2
236	18E236WL	Bolt	2
237	18E237WL	Bolt	2
238	18E238WL	Display Unit	1
239	18E239WL	Junction box	1
240	18E240WL	Junction box mounting bracket	1
241	18E241WL	Screw	2
242	18E242WL	Bolt	2
243	18E243WL	Nut	2
244	18E244WL	Grease cup	1
245	18E245WL	Grease cup	2

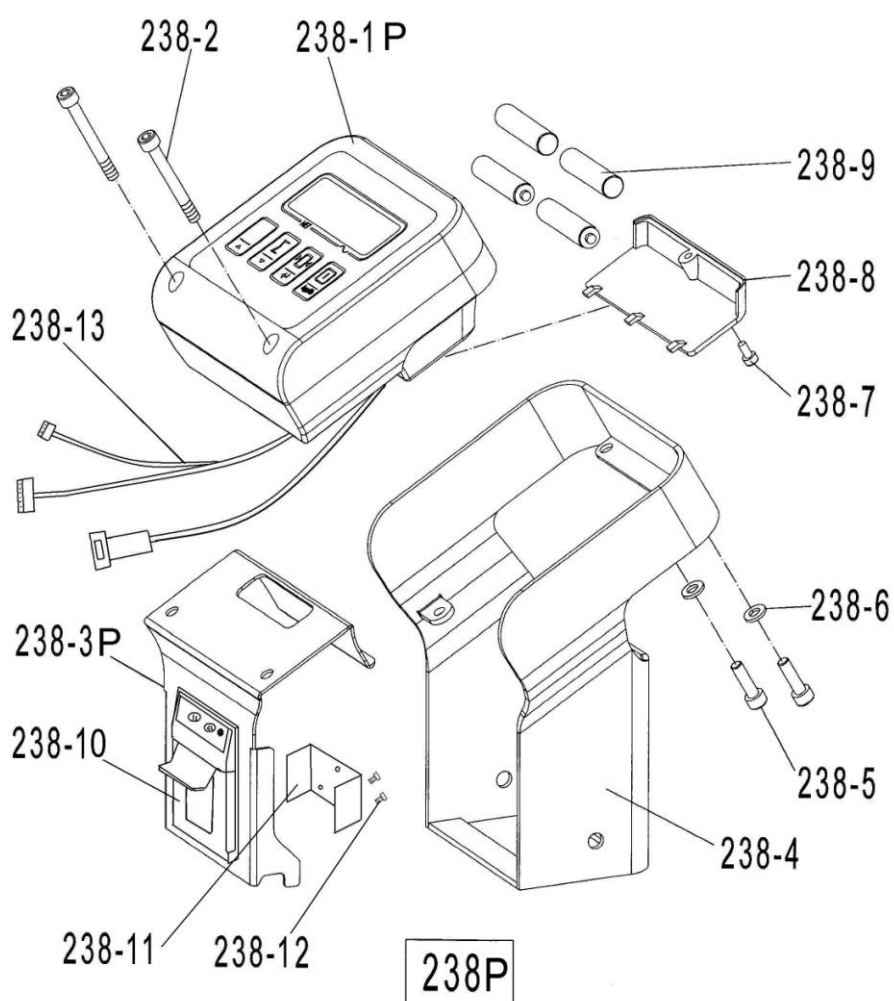
## Display Unit



238

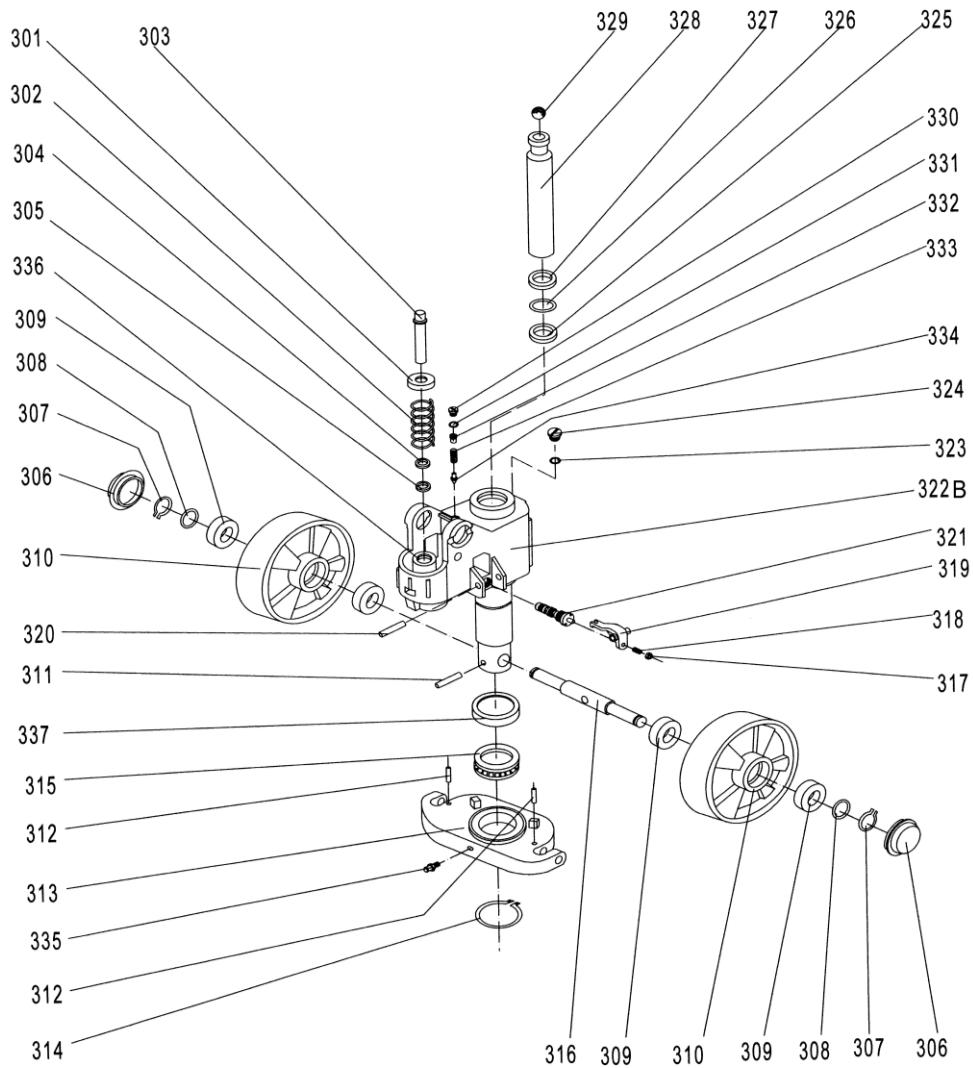
No.	Mobile #	Description	Qty.
238-1	18E238-1WL	Indicator	1
238-2	18E238-2WL	Bolt	2
238-3	18E238-3WL	Indicator complete	1
238-4	18E238-4WL	Indicator support	1
238-5	18E238-5WL	Bolt	2
238-6	18E238-6WL	Washer	2
238-7	18E238-7WL	Bolt	1
238-8	18E238-8WL	Battery cover	1
238-9	18E238-9WL	Batteries AA, 1.5V	4

## Display With Printer Unit



No.	Mobile #	Description	Qty.
238-1P	18E238-1PWL	Indicator	1
238-2	18E238-2WL	Bolt	2
238-3P	18E238-3PWL	Indicator complete with printer	1
238-4	18E238-4WL	Indicator support	1
238-5	18E238-5WL	Bolt	2
238-6	18E238-6WL	Washer	2
238-7	18E238-7WL	Bolt	1
238-8	18E238-8WL	Battery cover	1
238-9	18E238-9WL	Batteries AA,1.5V	4
238-10	18E238-10WL	Printer	1
238-11	18E238-11WL	baffle plate	1
238-12	18E238-12WL	Bolt	2
238-13	18E238-13WL	Connect Printer Cable	1

## Hydraulic Pump Unit



No.	Mobile #	Description	Qty.
301	18E301	Spring Cap	1
302	18E302	Spring	1
303	18E303	Pump Piston	1
304	18E304	Dust Ring	1
305	18E305	Seal	1
306	18E306	Dust Cover	2
307	18E307	Locking Ring	2
308	18E308	Washer	2
309	18E309	Bearing	4
310	18E310	Loading Wheel	2



No.	Mobile #	Description	Qty.
311	18E311	Elastic Pin	1
312	18E312	Elastic Pin	2
313	18E3131	Thrust Plate	1
314	18E314	Retaining Ring	1
315	18E315	Bearing	1
316	18E316	Shaft of Loading Wheel	1
317	18E317	Nut	1
318	18E318	Screw	1
319	18E319	Lever Plate	1
320	18E320	Elastic Pin	1
321	18E321	Valve Cartridge	1
322B	18E322B	Pump Body	1
323	18E323	Seal Washer	1
324	18E324	Screw Plug	1
325	18E325	Seal	1
326	18E326	O-Ring	1
327	18E327	Dust Ring	1
328	18E328	Piston Rod	1
329	18E329	Steel Ball	1
330	18E330	Screw Plug	1
331	18E331	O-Ring	1
332	18E332	Bolt	1
333	18E333	Spring	1
334	18E334	Spindle of Safety Valve	1
335	18E335	Grease Cup	1
336	18E336	Cylinder	1
337	18E337	Cover of Bearing	1



MOBILE INDUSTRIES, INC.  
37508 Laird Rd - Unit 2 & 3  
Mississauga ON, L5L 0R6  
Canada

Toll Free: 1 800 527 4612 • Local 905 279 5370  
Email: [info@mobilept.com](mailto:info@mobilept.com)

**MOBILEPT.COM**