



## OPERATING INSTRUCTIONS & PARTS LIST

# ECO I-77 PALLET TRUCK

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VERSION	N/A
MODEL	ECO I-77 PALLET TRUCK
APPLICABLE PRODUCTS	N/A

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

Thank you for using our pallet truck. Your pallet truck is made of high quality steel and is designed for the horizontal lifting and transport of loads on a pallet or standardized containers on a level, fixed base. 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

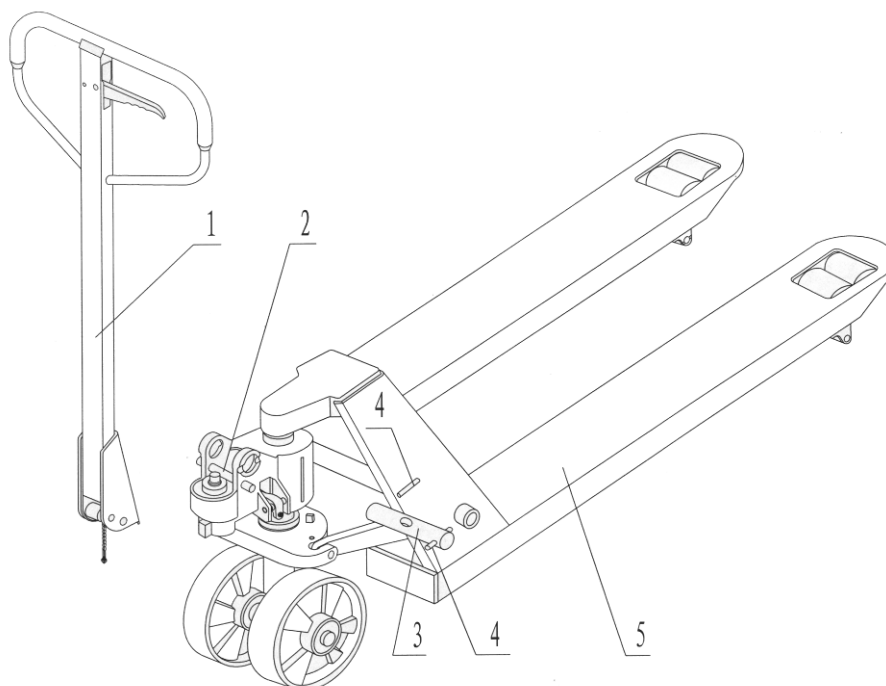
Capacity		3500kg / 7700lbs
Max. Fork Height	(mm)	200mm / 7.9"
Min. Fork Height	(mm)	85mm / 3.3"
Fork Length	(mm)	1150 or 1220mm / 45 or 48"
Width Overall Forks	(mm)	540 or 685mm / 21.25 or 27"
Individual Fork Width	(mm)	160mm / 6.3"
Load Wheel Diameter	(mm)	Ø 82x70 Polyurethane
Steering Wheel Diameter	(mm)	Ø 200 Polyurethane

Materials and specification are subject to change without notice.

## 2. TO ATTACH DRAW-BAR TO PUMP UNIT

If you have purchased a wooden box of pallet truck, some assembly is required. Certainly, you need some tools, a hammer, a pliers, a spanner, etc; and some parts, one axle with hole (105), two elastic pins (106) (**Note one is in the axle (105)**), these parts are putted in a plastic bag, which is putted into the draw-bar.

**NOTE:** The number of draw-bar and pump should be the same.



1. Draw-bar   2. Pin   3. Axle with hole   4. Elastic pin   5. Fork frame

Fig. 1

When attaching the handle, you had better squat just behind the pallet truck. Then you:

**2.1** Insert the draw-bar onto the pump piston (303), then use a hammer to insert the axle with hole (105) into the hydraulic pump and draw-bar **from the right to left**. (See fig. 2 ).



Fig. 2

**2.2** Let control handle(117 or 120G) to the '**LOWER**' position, then pass the adjusting nut(104), adjusting bolt(103) and chain(102) through the hole of axle(105) with your hand (See fig. 3).

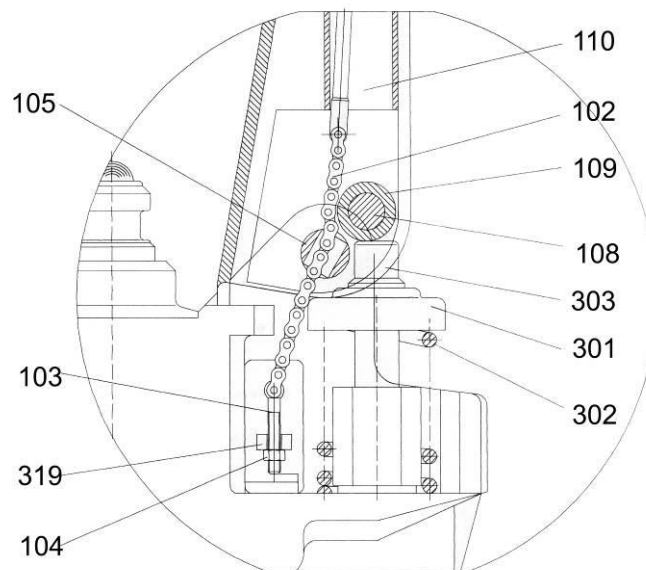


Fig. 3

**2.3** Press the draw-bar (110, 110B or 111G) down, take away the pin(#2) (See Fig. 1).

**2.4** Let the control handle (117 or 120G) on '**RAISE**' position, then raise the lever plate (319) with the pin (#2) and insert the adjusting bolt(103) into the front slot of lever plate (319), note to keep the adjusting nut (104) on the under side of the lever plate.

**2.5** Use a hammer to tap another elastic pin (106) into the axle with hole (105).  
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(117 or 120G) which can be regulated in three positions :

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

If however they have been changed, you can adjust according to following step:

**3.1** If the forks elevate while pumping in the **DRIVE** position, turn the adjusting nut (104) on the adjusting bolt (103) 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 descent when the control handle (117 or 120G) is in the **LOWER** position, turn the nut (104) or screw (318) clockwise until raising the control handle(117 or 120G) 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 item 3.3.

## 4. MAINTENANCE

The pallet truck is largely maintenance-free.

### 4.1 OIL

Please check the oil level every six months. The oil can be hydraulic oil: ISO VG32, its viscosity should be 30cSt at 40<sup>0</sup> C, total volume is about 0.4lt.

### 4.2 TO BANISH THE AIR

The air may come into the hydraulic oil because of transportation or pump in upset position. It can cause that the forks do not elevate while pumping in the **RAISE** position. The air can been removed in the following way: let the control handle (117 or 120G) on the **LOWER** position, then move the draw-bar up and down for several times.

### 4.3 DAILY CHECK AND MAINTENANCE

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

### 4.4 LUBRICATION

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

## 5 GUIDE TO SAFETY OPERATION

- 5.1 Operator should read all warning signs and instructions here and on the pallet truck before using this truck.
- 5.2 Do not use on a slopping ground.
- 5.3 Do not operate a pallet truck unless you are familiar with it and have been trained or authorized to do so.
- 5.4 Do not operate a pallet truck unless you have checked its condition. Give special attention to the wheels or rollers, the draw-bar unit, the fork unit, the lever plate, etc. .
- 5.5 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.
- 5.6 Do not take up any people on the pallet truck.
- 5.7 The operator had better take on gloves for labor protecting.
- 5.8 When the goods have been transported, all people should be away from the forks for 600mm.
- 5.9 Do not load goods like fig. 5/B .
- 5.10 Do not load over maximum capacity.
- 5.11 At other special conditions or places, the operator should be carefully to operate the pallet

truck.

## 6. TROUBLES 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 got 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.	-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 got into the oil. -Sealing parts worn or damaged. -The adjusting nut (104) or screw (318) is not in the correct position.	-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)

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

Fig. 4

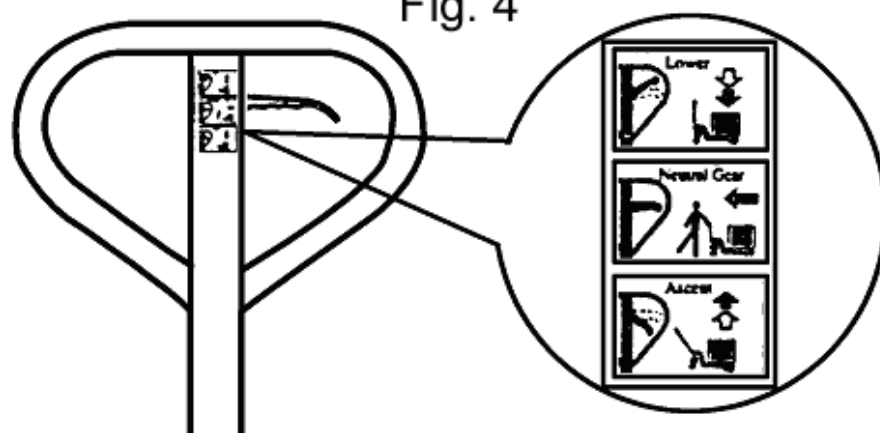
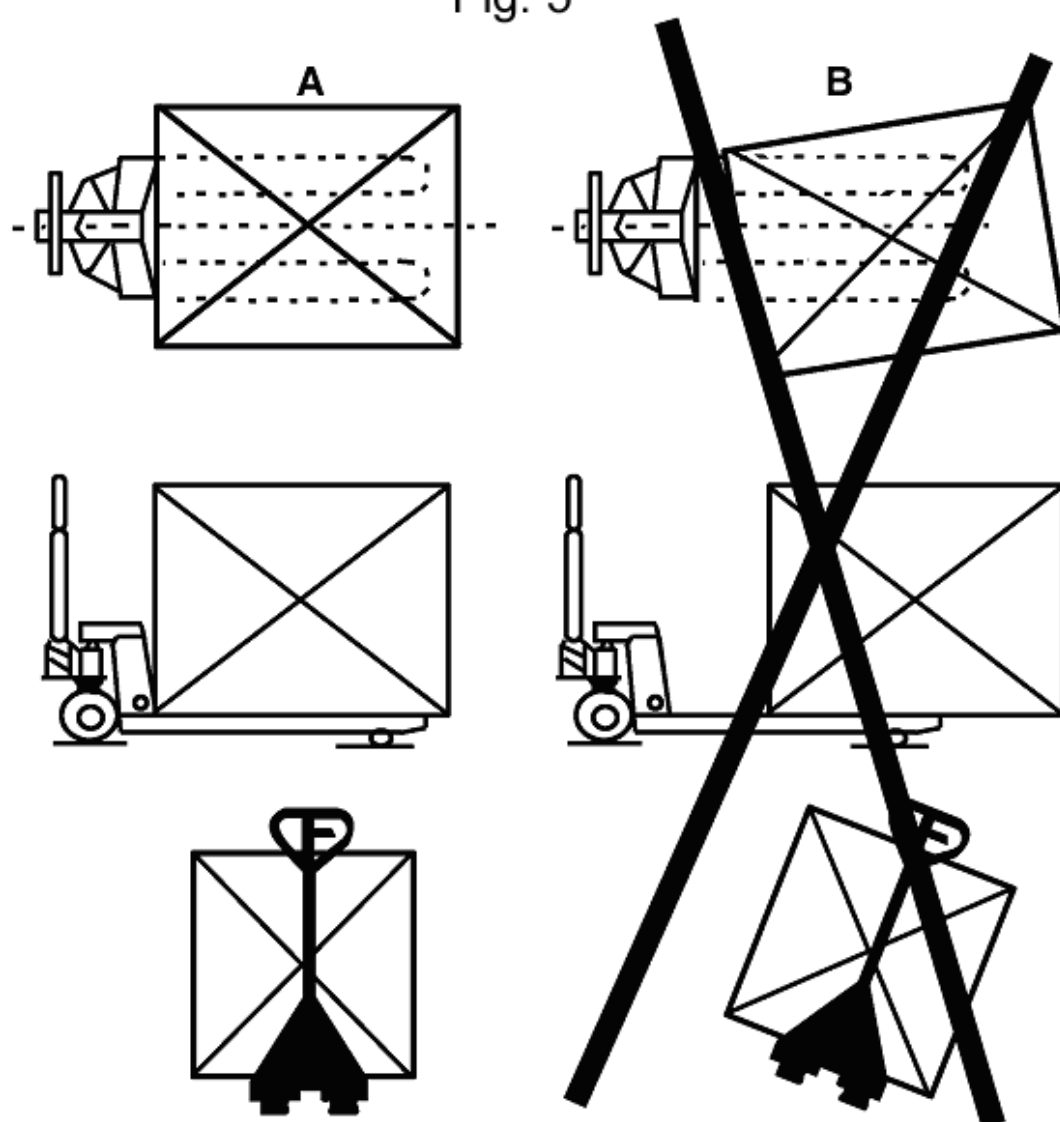
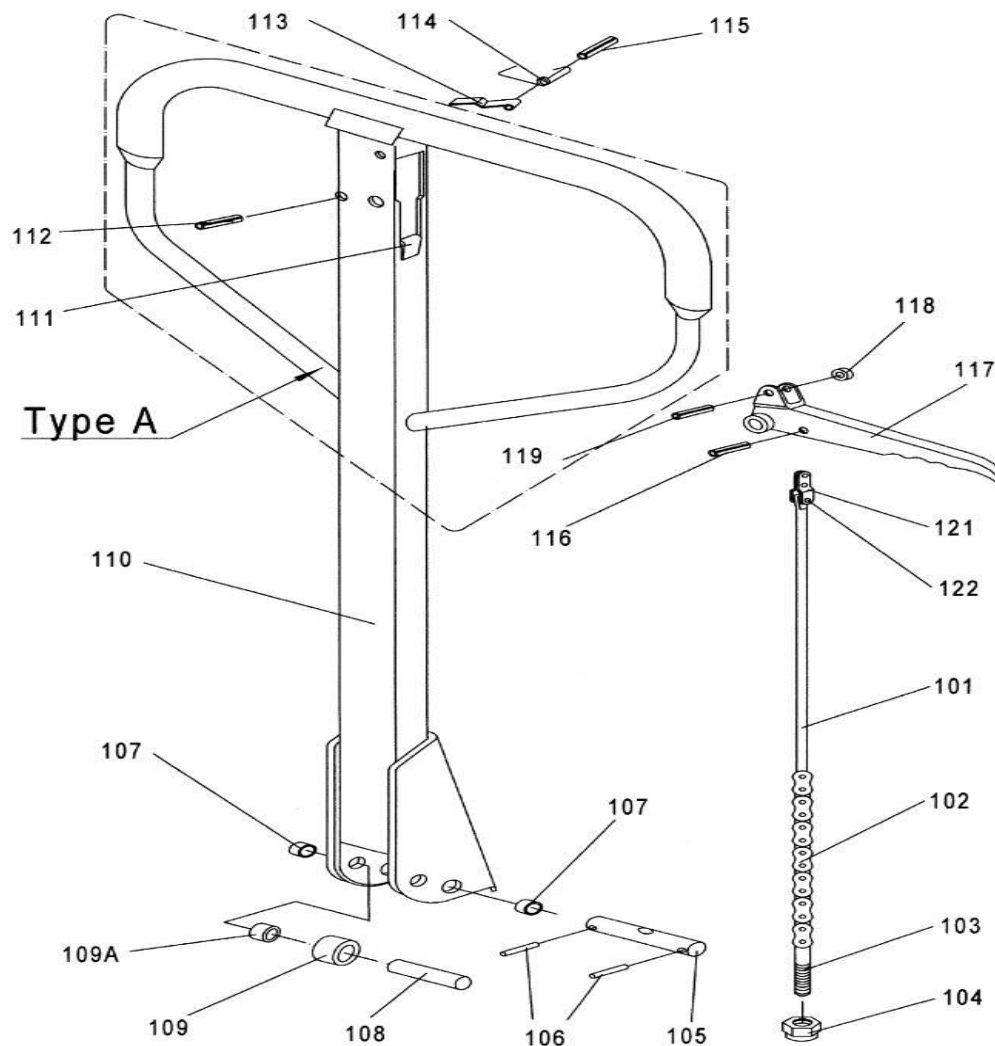


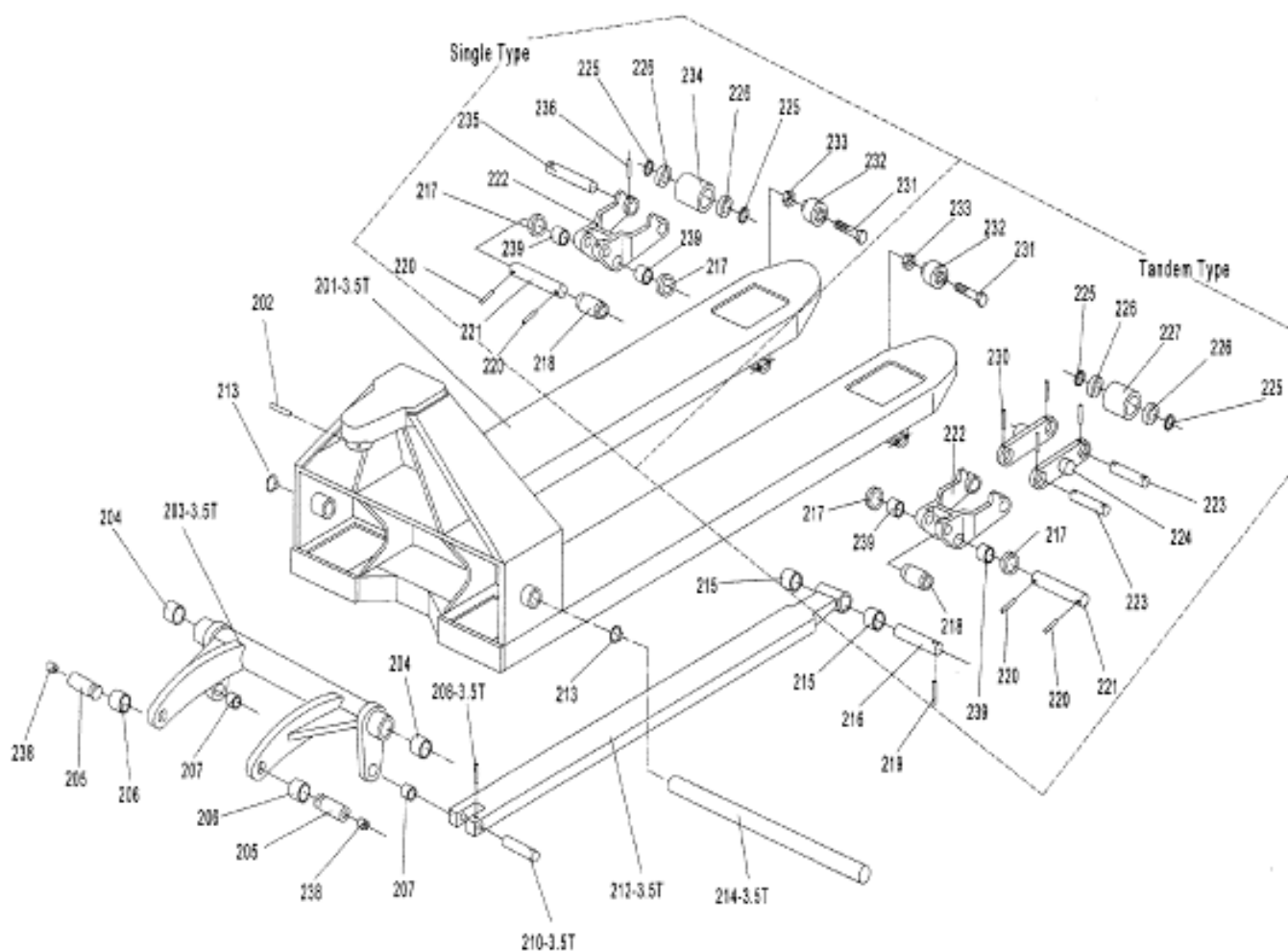
Fig. 5





**LIST of DRAW-BAR**

No.	Mobile #	Description	Qty.	Remark
101	I77E101	Release Rod	1	
102	18E102+103	Chain	1	
103		Adjusting Bolt	1	
104	18E104	Adjusting Nut	1	
105	18E105	Axle with Hole	1	
106	18E106	Elastic Pin	2	
107	18E107	Bushing	2	
108	18E108	Roller Pin	1	
109	18E109	Pressure Roller	1	
109A	18E109A	Bushing	1	
111	18E111	Stop Rubber	1	
112	18E112	Elastic Pin	1	
113	18E113	Blade Spring	1	
114	18E114	Spring	1	
115	18E115	Elastic Pin	1	
116	18E116	Elastic Pin	1	
117	18E117	Control Handle	1	
118	18E118	Roller	1	
119	18E119	Elastic Pin	1	
121	18E121	Pull Board	1	
122	18E122	Pin	1	
	18E1	Complete Handle Assembly	1	



#### LIST OF FORK FRAME

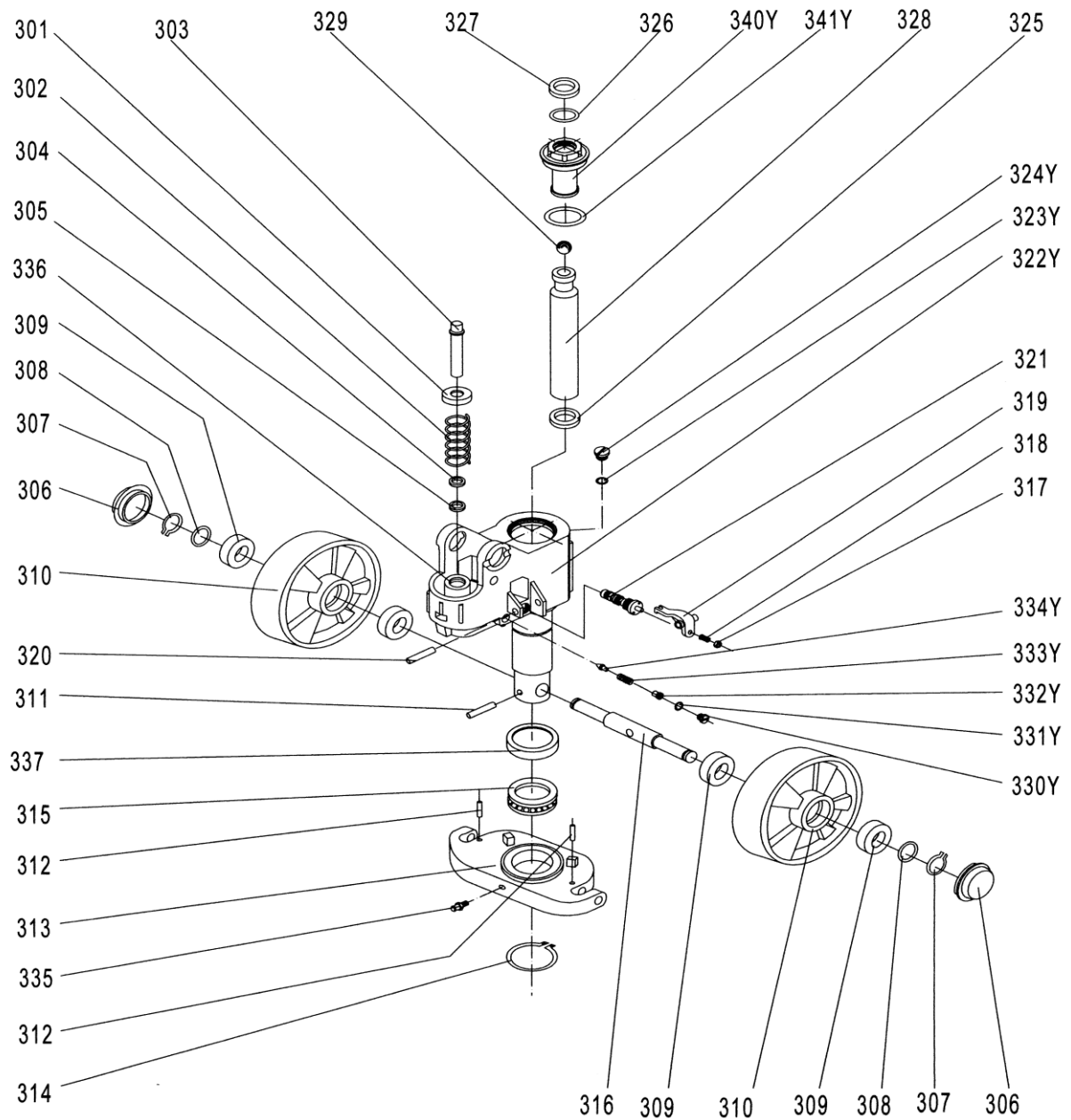
No.	Mobile #	Description	Qty.	Remark
202	18E202	Elastic Pin	1	
203-3.5T	18E203-77	Rock - Arm	1	
204	18E204	Bushing	2	
205	18E205	Shaft	2	
206	18E206	Bushing	2	
207	18E207	Bushing	2	
208-3.5T	18E208-77	Elastic Pin	2	
210-3.5T	18E210-77	Pin	2	
212-3.5T	18E212-77	Pushing Rod	2	
213	18E213	Retaining Ring	2	
214-3.5T	18E214-77	Shaft	1	
215	18E215	Bushing	4	
216	18E216	Shaft	2	
217	18E217	Intermediate Roller	4	



No.	Mobile #	Description	Qty.	Remark
218	18E218	Extending Roller	2	
219	18E219	Elastic Pin	2	
220	18E220	Elastic Pin	4	
221	18E221	Shaft	2	
222	18E222	Frame of Roller	2	
225	18E225	Washer	8 or 4	
226	18E226	Bearing	8 or 4	
230	18E230	Elastic Pin	8 or 2	
231	18E231	Bolt	2	
232	18E232	Enter Roller	2	
233	18E233	Locking Nut	2	
234#	18E234N-7	Loading Roller	2	
235#	18E235	Shaft for Roller	2	
236	18E236	Elastic Pin	2	
	18E155	Seal Kit	1	

**NOTE: \*-- For double wheel; #-- For single wheel**

# Type Y Pump



## Type Y hydraulic pump

No.	Mobile #	Description	Qty.	Remark
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	18E310P-1	PU steering wheel	2	
311	18E311	Elastic Pin	1	
312	18E312	Elastic Pin	2	
313	18E313	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	
323Y	18E323Y	Seal Washer	1	Only for Type Y Pump
324Y	18E324Y	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	
330Y	18E330Y	Screw Plug	1	
331Y	18E331Y	O - Ring	1	Only for Type Y Pump
332Y	18E332Y	Bolt	1	
333Y	18E333Y	Spring	1	
334Y	18E334Y	Spindle of Safety Valve	1	
335	18E335	Grease Cup	1	
336	18E336	Cylinder	1	
337	18E337	Cover of Bearing	1	
340Y	18E340Y	Cover with Screw	1	
341Y	18E341Y	O - Ring	1	Only for Type Y Pump
	18E0	Complete Pump Assembly	1	



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