WARNING

Do not use the stacker before reading and understanding this operating instructions.

NOTE!

Keep for future reference.

Operating Instructions **/** Parts List

SAC-N Pallet Truck with Scale

ATTENTION:

1. **Environmentally hazardous waste, such as batteries and electronics, will have a negative effect on the environment, or health, if handled incorrectly.**

2. **The waste packages should be sorted and put into solid dustbins according to the materials and be collected disposal by local special environment protection bureau. To avoid pollution, it's forbidden to throw away the wastes randomly.**

3. **To avoid leaking during the use of the products, the user should prepare some absorbable materials (scraps of wooden or dry duster cloth) to absorb the leaking oil in time. To avoid second pollution to the environment, the used absorbable materials should be handed in to special departments in terms of local authorities.**

Thank you for using this pallet truck with scale. Your pallet truck with scale is made of high quality steel and is designed to give you a durable, reliable and easy to use product. For your safety and correct operation, please carefully read these instructions and the other handbook "**METTLER TOLEDO HAWK Terminal Technical Manual**" before using it.

NOTE: All 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 or in any sanctions. Therefore, it is suggested to always verify possible updates and change liability.

1. GENERAL SPECIFICATIONS

Capacity	2,000kg/4,500lbs	
Power Source	AC 110V or 220V or six "D" cells10.2VDC	
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 weighting accuracy	±1.0kg for loading 2,000kg	
Width over forks	568mm/703mm	
Fork Length	1150mm/1220mm	

2. PRE-OPERATION PROCEDURE

2.1 To attach the display unit(247)

A) Remove 4 screws (247-2), take away the cover board (247-1).
B) Remove 4 screws (248B) from the head of the fork frame (W201A).
C) Set the fixation box (247) onto the head of pallet truck with one hand and the other hand to tighten the screws (248B).
D) Connect the "D-Sub Male connector " and the "D-Sub Female connector" together.
E) Close the cover board (247-1), then tighten the screws (247-2).

In this way, the display unit is now fixed.

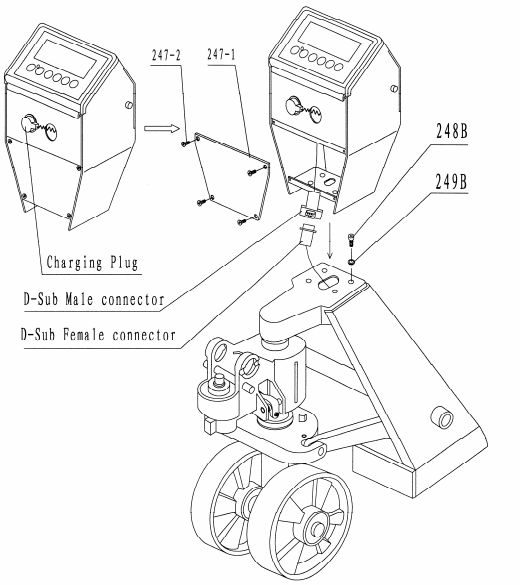


Fig. 1

2.2 To attach draw-bar to the pump unit

When attaching the handle, the operator should squat just behind the pallet truck and do the following:

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 left.** (See fig. 2).

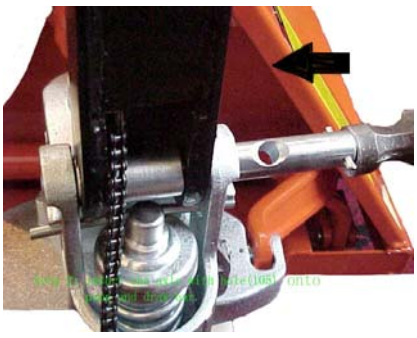


Fig. 2

2.2.2 Let control handle(G117) to the '**LOWER**' position, then pass

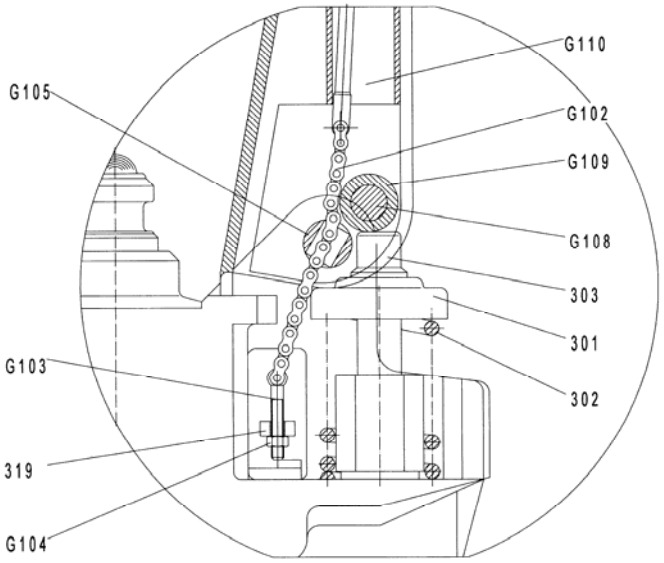
the adjusting nut(G104), adjusting bolt(G103) and chain(G102) through the hole of axle(G105) (See fig. 3).

2.2.3 Press the draw-bar (G110) down, take away the pin, which is to fix the Spring Cap(301).

2.2.4 Let the control handle (G117) on '**RAISE**' position, then raise the lever plate (319) with the pin and insert the adjusting bolt(G103) into the front slot of lever plate (319), note to keep the adjusting nut (G104) under 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(117) which can be regulated in three positions :

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

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

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) 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. 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 40^0 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 (G117) 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 to provide with long-life grease at monthly intervals or after each time the truck is cleaned thoroughly to the lubrication points.

4.5 MAINTENANCE OF DISPLAY UNIT

See **METTLER TOLEDO "IND221 & IND226 Industry Terminal User/Service Manual**".

5 GUIDE TO SAFETY OPERATION

5.1 Disconnect all power to the pallet truck with scale before installing, servicing, cleaning or removing the fuse. Failure to do so could result in physical harm and/or property damage.

5.2 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.

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

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

5.5 Do not operate this pallet truck unless you have checked its condition. Give special attention to the wheels, the draw-bar unit, the fork unit and the lever plate, etc.

5.6 Do not use it on a slopping ground.

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

5.8 The operator had better take on gloves for labor protection.

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

5.10 Do not load goods like fig. 5/B, the barycenter of the goods should be on the midline of pallet truck with scale.

5.11 Do not load over the maximum capacity.

5.12 At other special condition or place, the operator should operate the pallet truck carefully.

6. TROUBLES SHOOTING

N	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 (G104) is too high, keep the pumping valve open ● Air gets into the hydraulic oil	● Fill in the oil ● Change the oil ● Adjust the nut(G104) 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 body (322B) is deformed resulting from partial loading slanting to one side or over-loading ● The forks were kept in the high position for long time with piston rod bared to arise in rusting and jamming of the rod ● The adjusting nut (G104) or screw (318) is not in the correct position	● Replace the piston rod (328) or pump body (322B) ● Keep the fork in the lowest position if not using, and pay more attention to lubricate the rod ● Adjust the nut (G104) or screw (318) (see item 3.3)
4	Leaks	● Sealing parts worn or damaged ● Some part cracked or worn into small	● Replace with a new one ● Replace with a new one
5	The forks descend without the release valve worked	● The impurities in the oil causes the release valve unable to close tight ● Some parts of hydraulic system is cracked or bored ● Air gets into the oil ● Sealing parts worn or damaged ● The adjusting nut (G104) 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 a new one ● Adjust the nut (G104) or screw (318). (See item 3.2)
6	The result of scale is incorrect	● The bolts (G225B) scrape the platform (G226B) ● The platform scrapes the fork (G201B)	● Adjust the bolts (G225B) ● Face lifting the platform
7	Nothing is displayed by the terminal	● The battery power is too low	● Replace with a new one
8	Appear error cods:E1, E2, E3…	● See **METTLER TOLEDO "IND221 & IND226 Industry Terminal User/Service Manual**"	

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

7. WEIGHING OPERATION

7.1 Preparation: Put the control lever in the LOWER position and lower the truck to the lowest position.

7.2 Press the "Print" Key until the backlight on. After the indicator being checked by itself，it displays "0Kg".

7.3 Weighing method for gross weight: Put the forks under pallet and judge by eyes it will be balanced load. Put the control handle in the Lower position, pump the handle to make the forks be raised until you can make sure the pallet leaves ground. The stable reading of the indictor is the gross weight of the goods (total weight of the pallet and the goods).

7.4 Net weight weighing method: To weigh the goods packed in the same type standard pallet, please operate as following:

7.4.1 Weigh single standard pallet, for example: weight of pallet: 40Kg.

7.4.2 Press the key of “TARE”, then the indicator displays “0kg”.

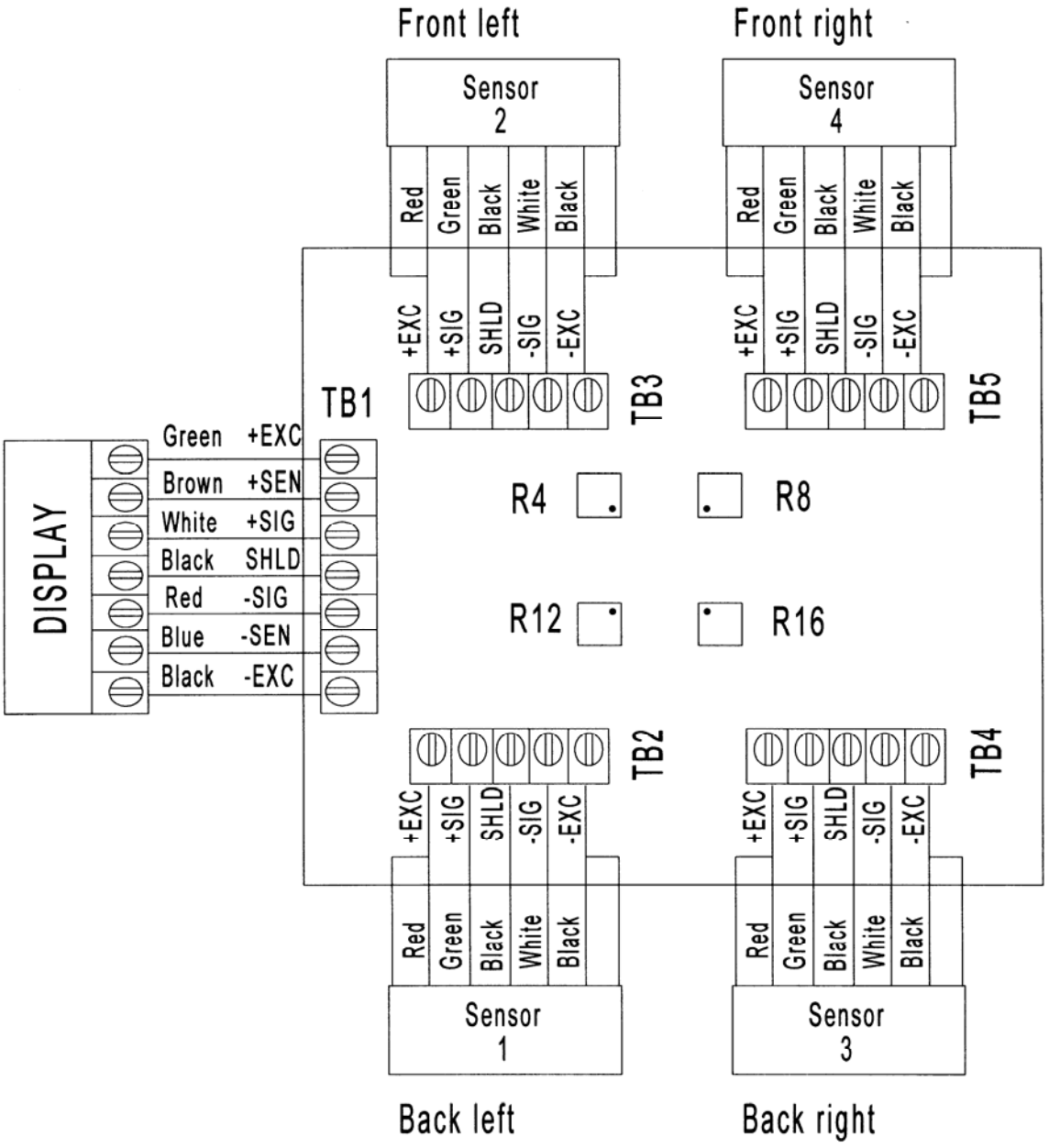
7.4.3 Remove the pallet from the fork, then the indicator displays “-40kg”.

7.4.4 Weigh the palletized goods according to the method of 7.3, the stable reading of the indicator is the net weigh of the goods.

7.5 The Switch of kilogram and pound. When the reading of indicator is in unit of kilogram, press the key of “FUNCTION”, the unit of reading is switched to pound. Press the key of “FUNCTION” again, the unit of reading is switched to kilogram again.

7.6 Turn off the Indicator: When the Indicator works normally, press the key of “PRINT” until the Indicator displays “OFF”. Loosen the key can turn off the Indicator.

8. Wiring diagram of scale, junction box, sensor



Note: Adjust corresponding relation

R12	**Adjust Sensor 1**	**R4**	**Adjust Sensor 2**
R16	**Adjust Sensor 3**	**R8**	**Adjust Sensor 4**

Fig. 4

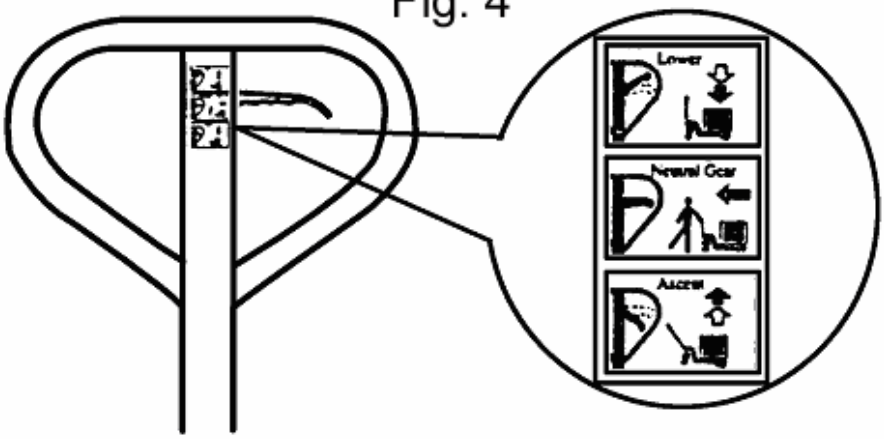
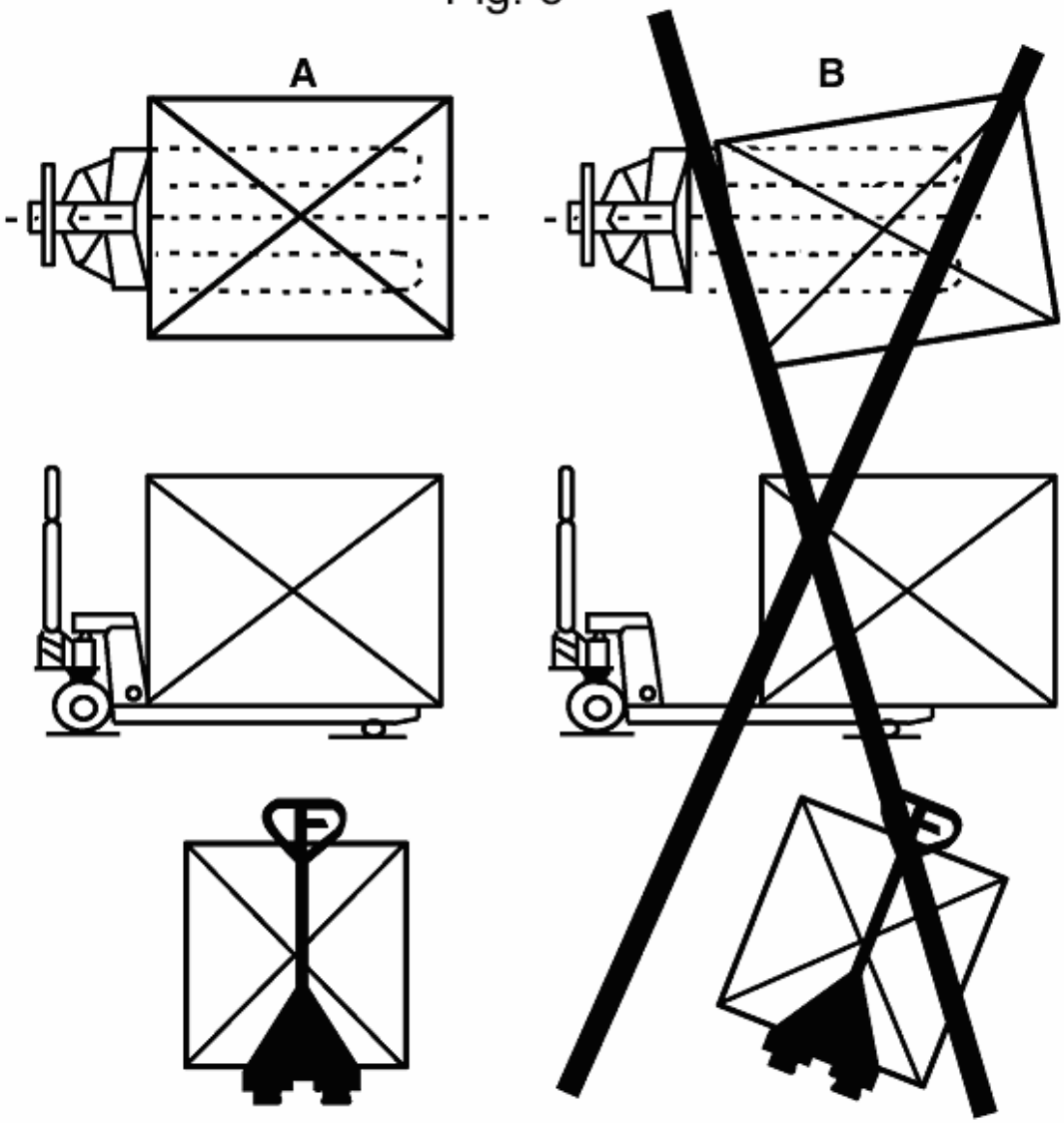
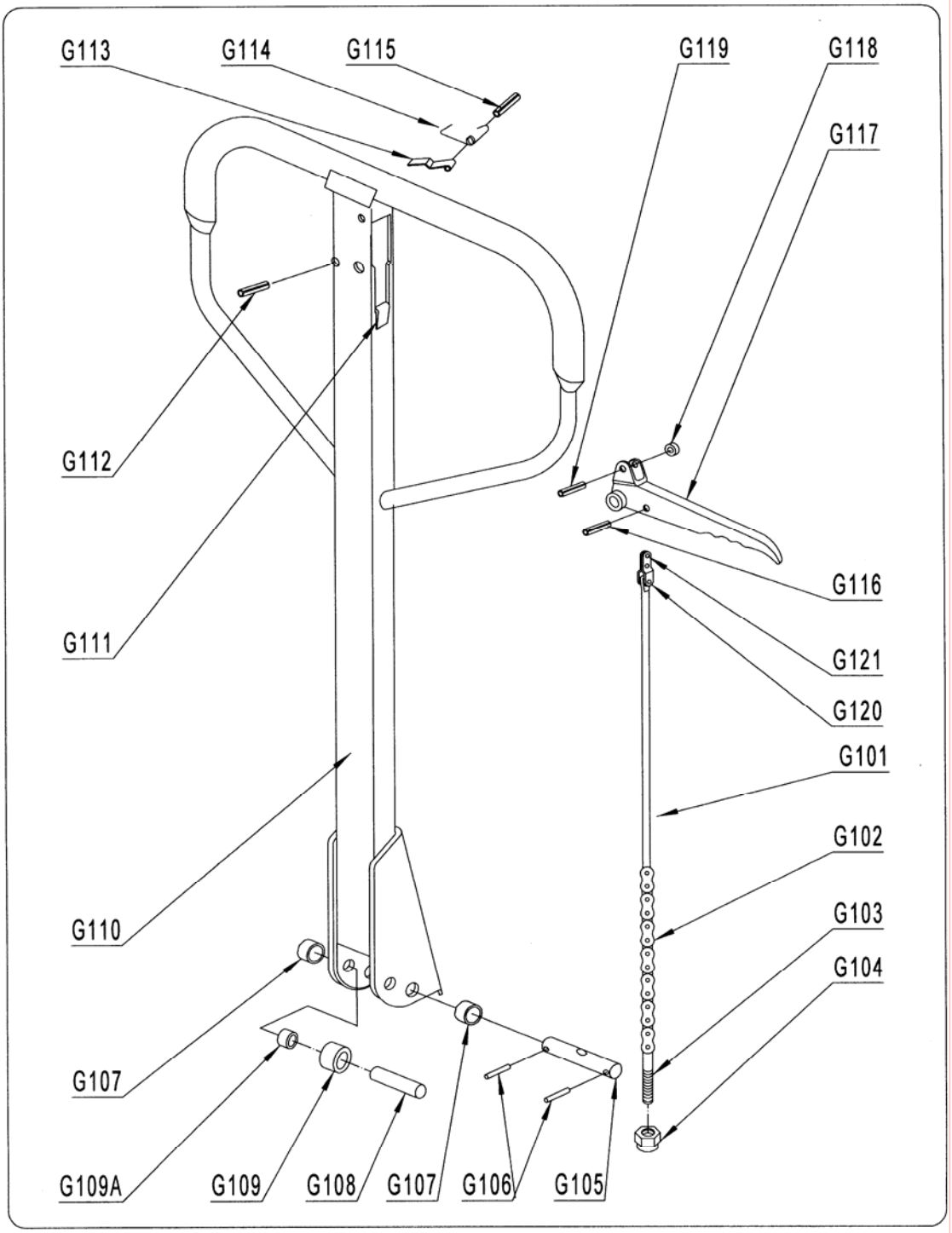


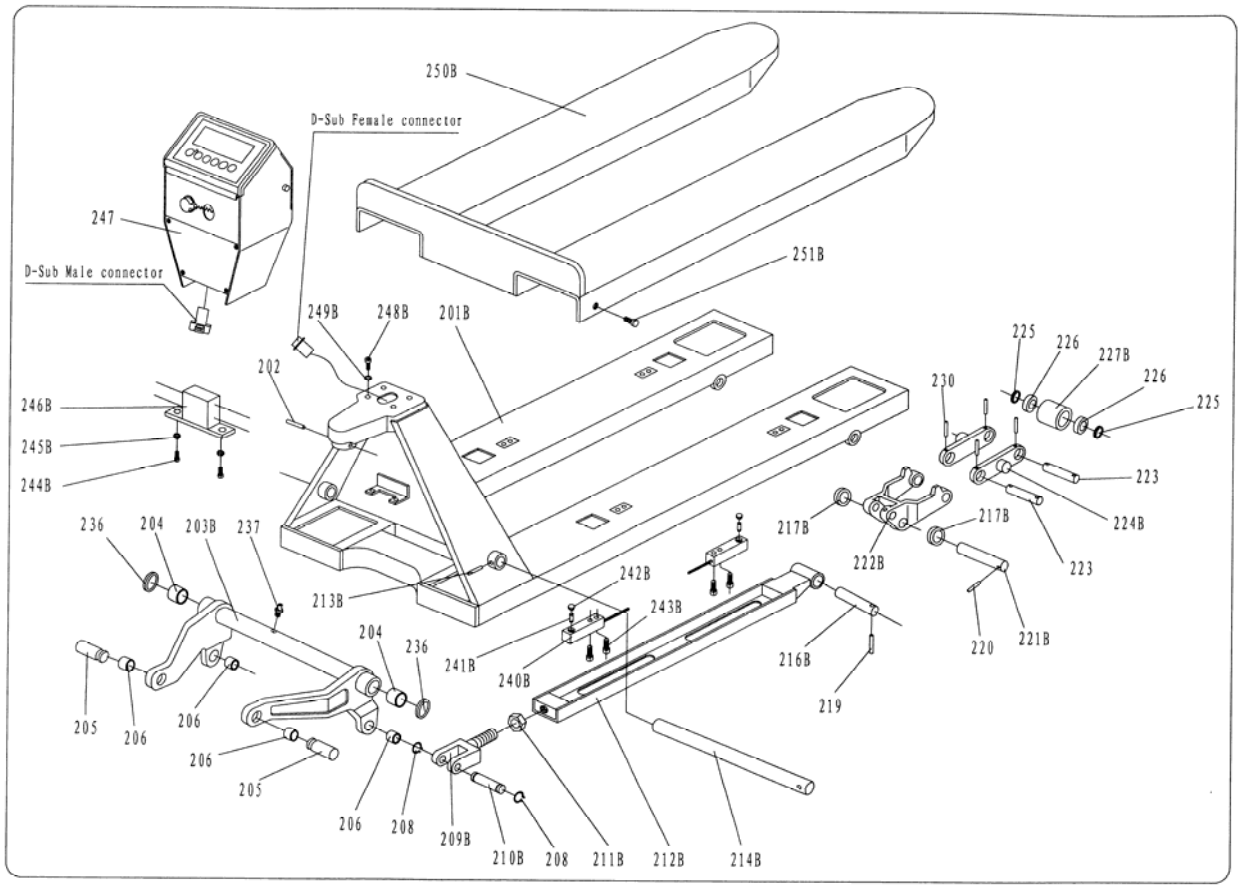
Fig. 5





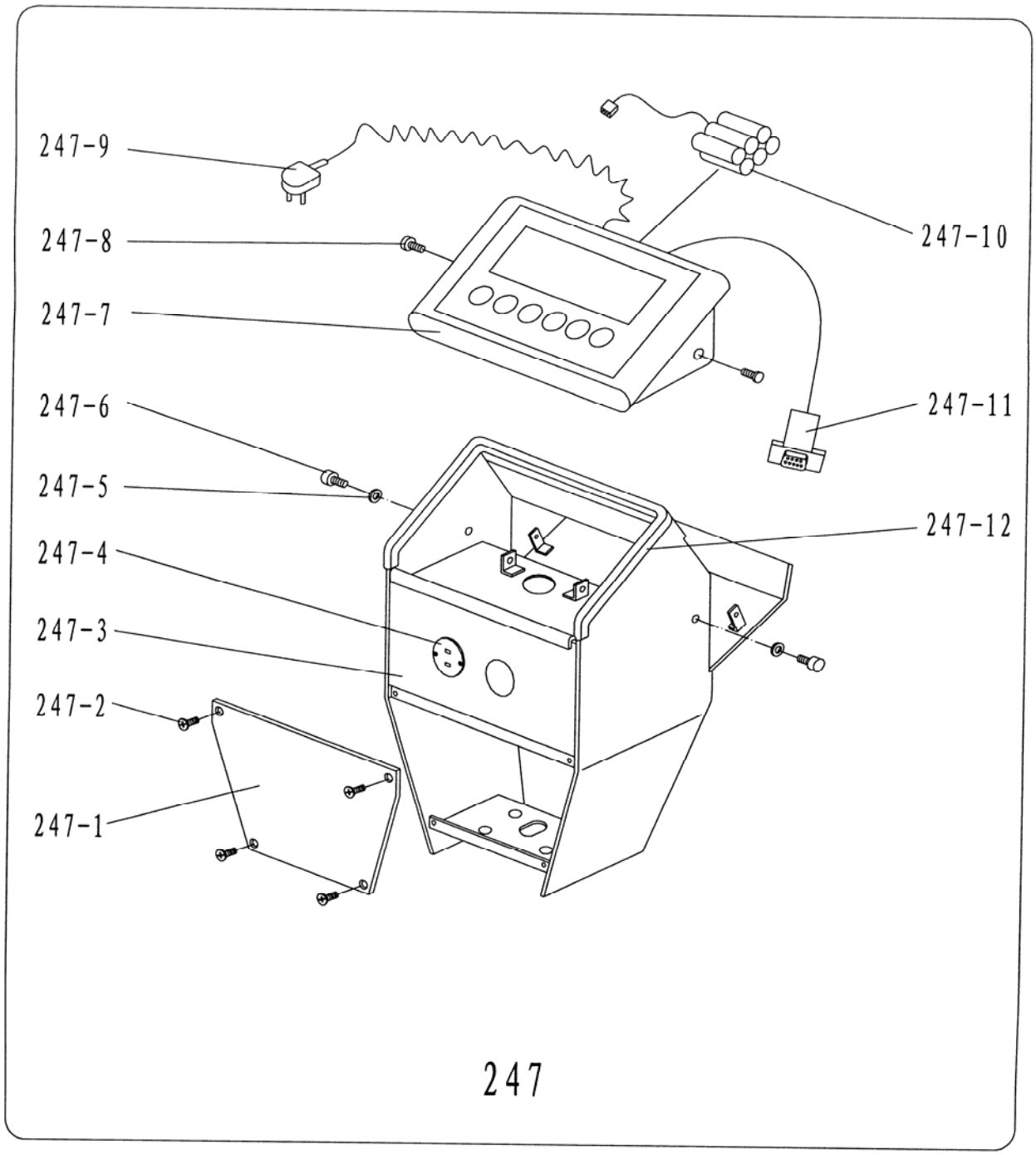
No.	Description	Qty.	No.	Description	Qty.
G101	Release Rod	1	G111	Stop Rubber	1
G102	Chain	1	G112	Elastic Pin	1
G103	Adjusting Bolt	1	G113	Blade Spring	1
G104	Adjusting Nut	1	G114	Spring	1
G105	Axle with Hole	1	G115	Elastic Pin	1
G106	Elastic Pin	2	G116	Elastic Pin	1
G107	Bushing	2	G117	Control Handle	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



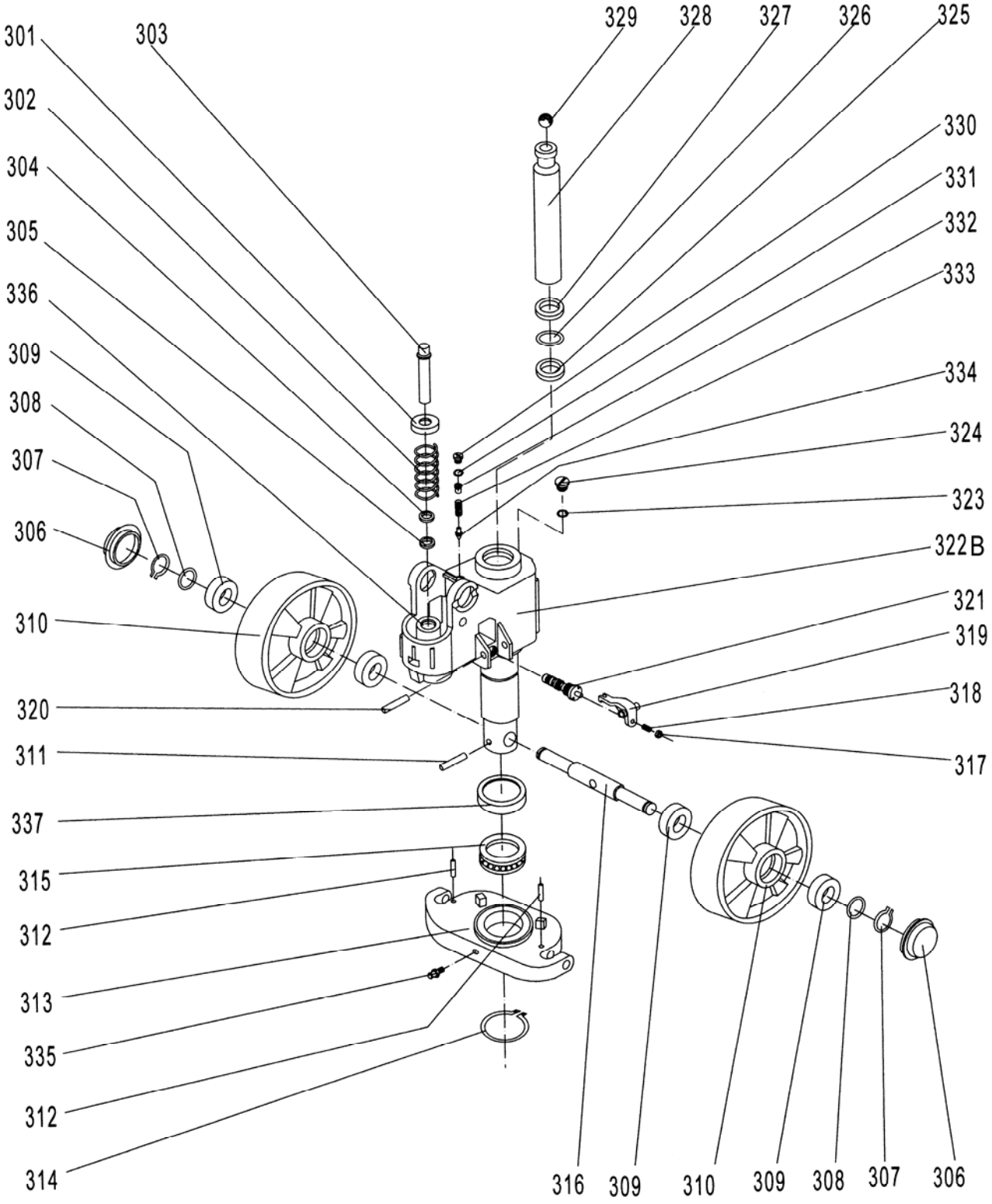
No.	Description	Qty.	No.	Description	Qty.
201B	Fork Frame	1	224B	Link Plate	4
202	Elastic Pin	1	225	Washer	8
203B	Rock - Arm	1	226	Bearing	8
204	Bushing	2	227B	Loading Roller	4
205	Shaft	2	230	Elastic Pin	8
206	Bushing	4	236	Washer	2
208	Retaining Ring	4	237	Grease Cup	1
209B	Joint	2			
210B	Pin	2	240B	Load Cell	4
211B	Nut	2	241B	Pin	4
212B	Pushing Rod	2	242B	Holding Seat	4
213B	Elastic Pin	1	243B	Screw	8
214B	Long Shaft	1	244B	Screw	2
216B	Shaft	2	245B	Nut	2
217B	Washer	4	246B	Box of Cable	1
219	Elastic Pin	2	247	Display Unit	1
220	Elastic Pin	2	248B	Screw	4
221B	Shaft	2	249B	Washer	4
222B	Frame of Roller	2	250B	Platform	1
223	Shaft for Roller	4	251B	Screw	2

Display Unit



No.	Description	Qty.	No.	Description	Qty.
247-1	Cover Plate	1	247-7	Display Unit	1
247-2	Screw	4	247-8	Bolt	2
247-3	Indicator Case	1	247-9	charge Plug	1
247-4	socket	1	247-10	Battery	1
247-5	Rubber Washer	2	247-11	Plug	1
247-6	Round Screw	2	247-12	Rubber	1

Hydraulic Pump Unit



Hydraulic Pump Unit

No.	Description	Quantity	Remark
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	