

# Instruction Manual

HAND PALLET TRUCK

BST SERIES



**Note:** Owner/Operator must read and understand this instruction manual before using the hand pallet truck.

Thank you for choosing our pallet truck. For your safety and correct operation, please carefully read the manual before use.

NOTE: All of the information reported herein is based on data available at the time of printing. The factory reserves the right to modify its own products at any time without notice or incurring in any sanction. Please verify with the factory for possible updates.

## 1. GENERAL SPECIFICATIONS

Standard Model	BST2053	BST2068	BST2553	BST2568	BST3054	BST3068
Capacity (kg)	2000	2000	2500	2500	3000	3000
Max. Fork Height (mm)	205 (or 195)					
Min. Fork Height (mm)	85 (or 75)					
Fork Length (mm)	1150	1220	1150	1220	1150	1200
Width Overall Forks (mm)	530	685	530	685	540	680
Individual Fork Width (mm)	150	150	150	150	160	160
Load Wheel Diameter (mm)	Ø 70X94 Nylon, Polyurethane					
Steering Wheel Diameter (mm)	Ø 180x50 Nylon, Polyurethane, Rubber					
Net Weight (kg)	75	78	77	80	85	88

Special fork length is available 800, 900, 950, 1000, 1500mm.

Materials and specification are subject to change without notice.

## 2. TO ATTACH HANDLE TO PUMP UNIT

- 2.1 Loosen the setting screw (140H) on the crank link (139H).
- 2.2 Remove three screws (H109) and three spring washers (H110) from the base (103).
- 2.3 Place the handle (SH101) on the base (103), please note: Feed the rod and chain (SH106) through the centre of the base (103) and axle (109).
- 2.4 Insert three screws (H109) with spring washers (H110) into the base (103). Then tighten them securely.
- 2.5 Raise the crank link (139H) and put the pin on rod and chain (SH106) into the groove of crank link (139H).

## 3. TO ADJUST RELEASE DEVICE

On the handle of the pallet truck, you will find the control lever (SH108) which can be set in three positions (See Fig. 1):

LOWER=to lower the forks; NEUTRAL=to move the load; ASCENT=to raise the forks.

After assembling the handle, you can adjust the three positions.

- 3.1 First tighten the setting screw (140H) on the crank link (139H) until the LOWER position function works.
- 3.2 If the forks elevate while pumping in the NEUTRAL position, turn the setting screw (140H) clockwise until pumping the handle does not raise the forks and the NEUTRAL position functions correctly.
- 3.3 If the forks descend while pumping in the NEUTRAL position, turn the setting screw (140H) counter-clockwise until the forks do not lower.

- 3.4 If the forks do not descend when the control lever (SH108) is in the LOWER position, turn the setting screw (140H) clockwise until raising the control lever (SH108) lowers the forks. Then check the NEUTRAL position as per item 3.2 and 3.3.
- 3.5 If the forks do not lift while pumping in the ASCENT position, turn the setting screw (140H) counter-clockwise until the forks elevate while pumping in the ASCENT position. Then check the NEUTRAL and LOWER position as per item 3.2, 3.3 and 3.4.

## 4. MAINTENANCE

### 4.1 OIL

Please check the oil level every six months. The oil capacity is about 0.3lt. Restore the fluid level in the rubber reservoir to 5mm below the top; this must be with the forks in the lowered position.

Use the hydraulic oil according to the table below.

Temperature	Oil
-20°C~+40°C	L-HV46 Hydraulic oil

### 4.2 HOW TO EXPEL AIR FROM THE PUMP UNIT

Air may enter the unit when the seals are replaced. Lift the control lever (SH108) to the LOWER position, then move the handle (SH101) up and down for several times.

### 4.3 DAILY CHECK AND MAINTENANCE

Daily check of the pallet truck can limit wear and tear of the unit. Pay special attention to the wheels (127, F1510, F1511), the axles (F1512J, F1515, and F1516), the handle (SH101), the forks (F1504J) and lift and lower control.

### 4.4 LUBRICATION

Use motor oil or grease to lubricate all moveable parts.

## 5. GUIDE TO SAFETY OPERATION

For safe operation of the Hand Pallet Truck, please read all warning signs and instructions here and on the pallet truck prior to use.

- 5.1 Do not operate the pallet truck unless you are familiar with it and have been trained or authorized to do so.
- 5.2 Do not operate the truck unless you have been trained and authorised. Give special attention to the wheels, the handle assembly, the forks, and the lower control.
- 5.3 Do not use the truck on sloping ground.
- 5.4 Never place any part of your body in the lifting mechanism or under the forks or load. Do not carry passengers.
- 5.5 We advise that operators should wear gloves and safety shoes.
- 5.6 Do not handle unstable or loosely stacked loads.
- 5.7 Do not overload the truck.
- 5.8 Always place loads centrally across the forks and not at the end of the forks (See Fig. 2).
- 5.9 The capacity of the truck assumes an evenly distributed load with the centre of the load being at the halfway point of the length of the forks.
- 5.10 Make sure that length of the forks matches the length of the pallet.
- 5.11 Lower the forks to lowest height when the truck is not being used.
- 5.12 In other specific conditions the operators should take extra care in operating the truck.

## 6. TROUBLE SHOOTING

NO	TROUBLE	CAUSE	ACTION
1	The forks do not lift to maximum height.	-Not enough hydraulic oil.	-Add more oil.
2	The forks do not lift up.	-Not enough hydraulic oil. -The oil has impurities. -Discharge valve is out of adjustment. -Air in the hydraulic oil.	-Pour in more filtered oil. -Change the oil. -Adjust the setting screw (140H) (See item 3.5). -Expel the air (See item 4.2).
3	The forks do not descend.	-The rod (102) and the cylinder (159H) are deformed resulting from a seriously unbalanced load. -A part has been broken or been deformed resulting from unbalanced load. -The setting screw (140H) is not in the correct position.	-Replace the rod (102) or cylinder (159H).  -Repair or replace component.  -Adjust the setting screw (140H) (See item 3.4).
4	Leaks	-Seals worn out or damaged.  -Some parts may be cracked or worn out.	-Replace seals with new ones.  -Check and replace with new ones.
5	The forks descend without being lowered.	-Impurities in the oil cause the discharge valve (B) to fail to close. -Air in the oil. -Seals worn or damaged. -Discharge valve (B) is out of adjustment.	-Replace with filtered oil.  -Expel the air (See item 4.2). -Replace with new ones. -Adjust the setting screw (140H) (See item 3.3).

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

Fig.1

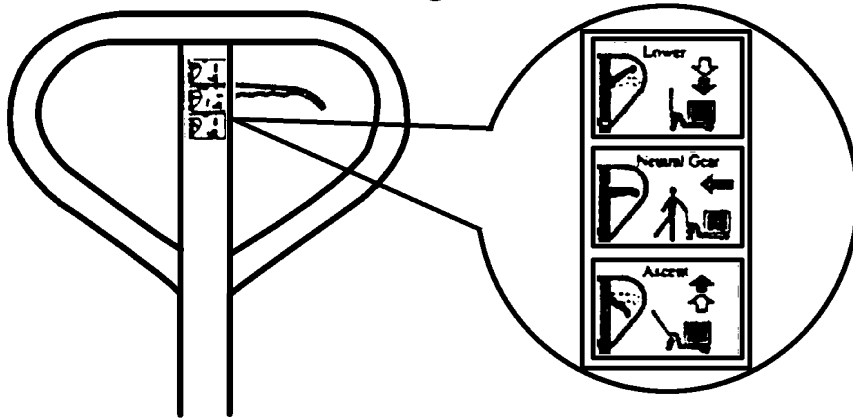
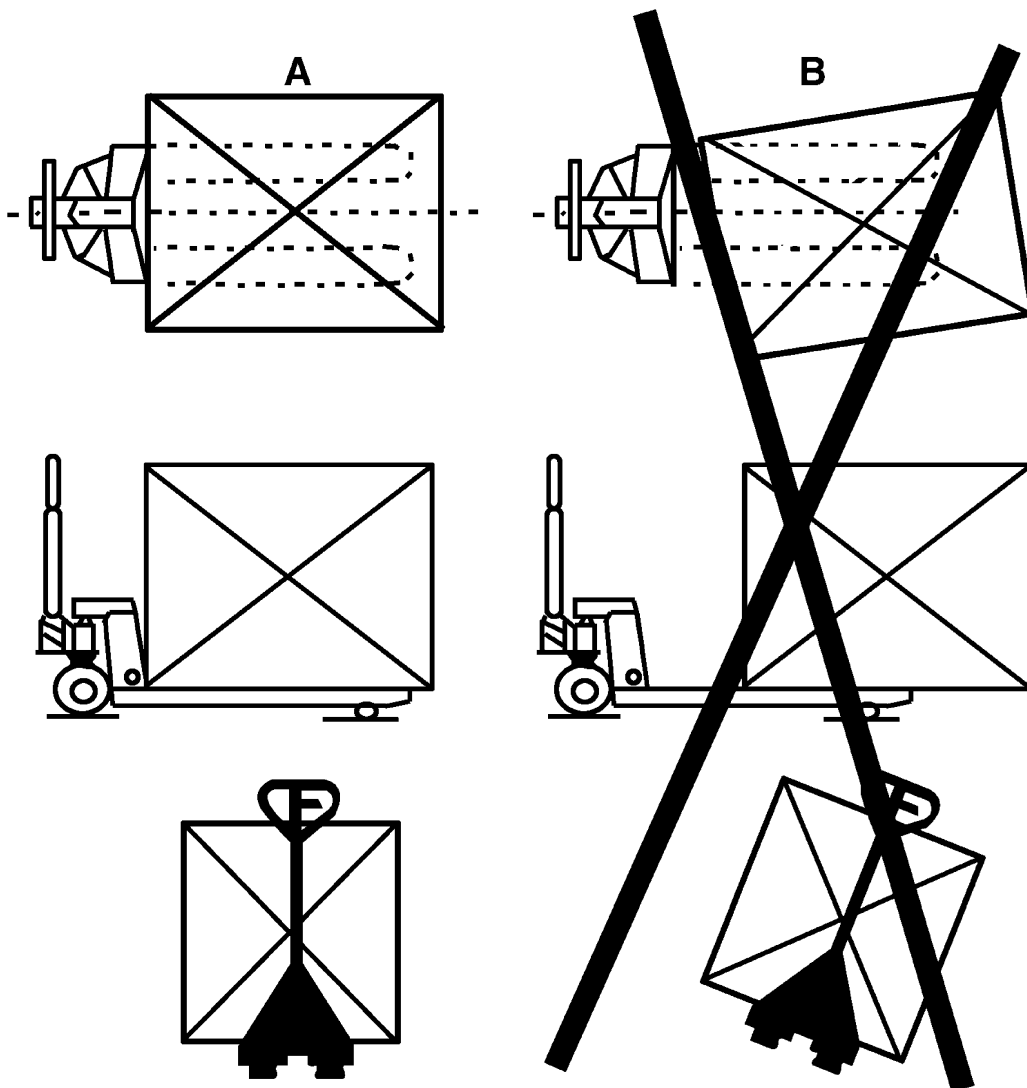
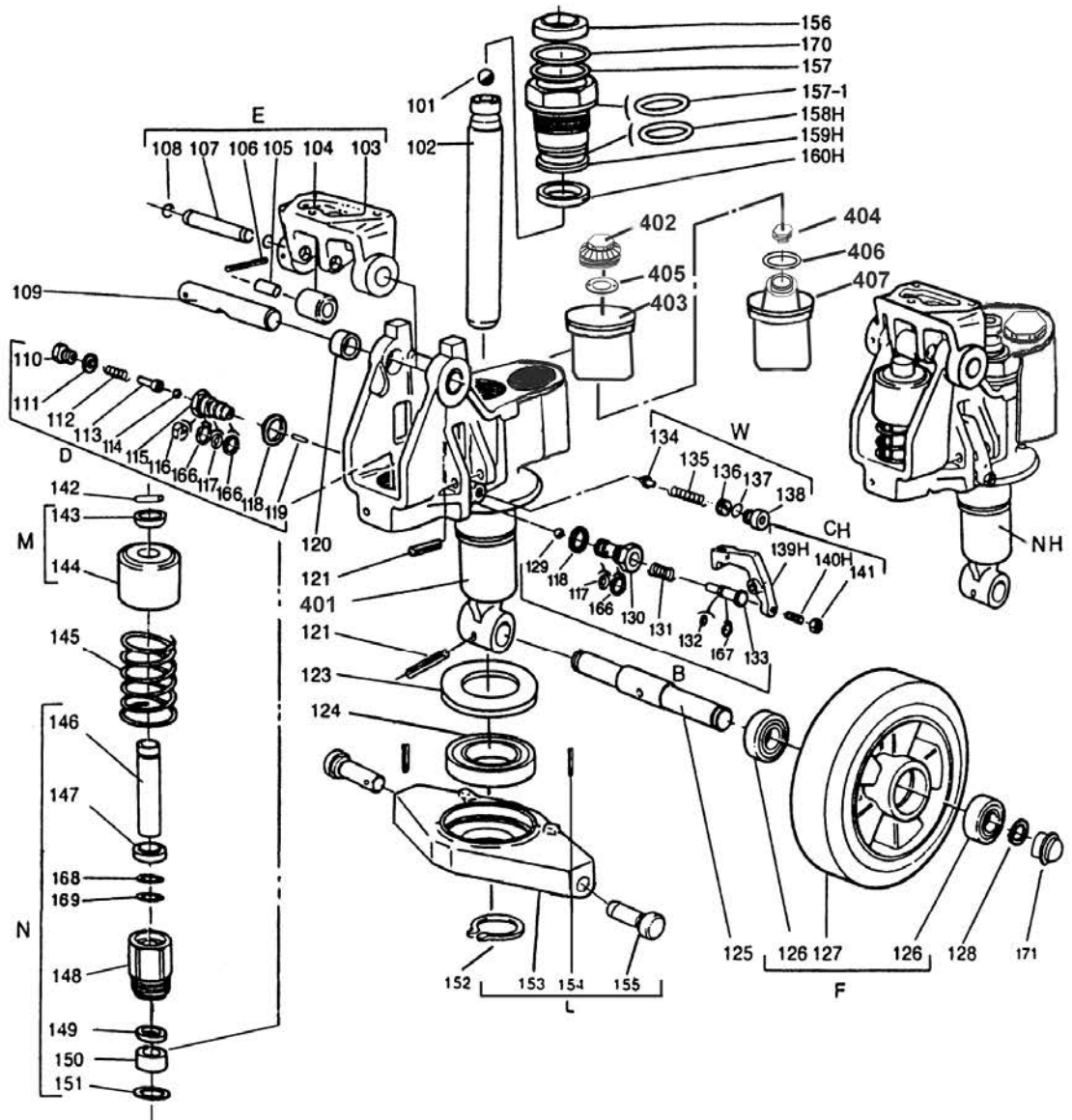


Fig.2



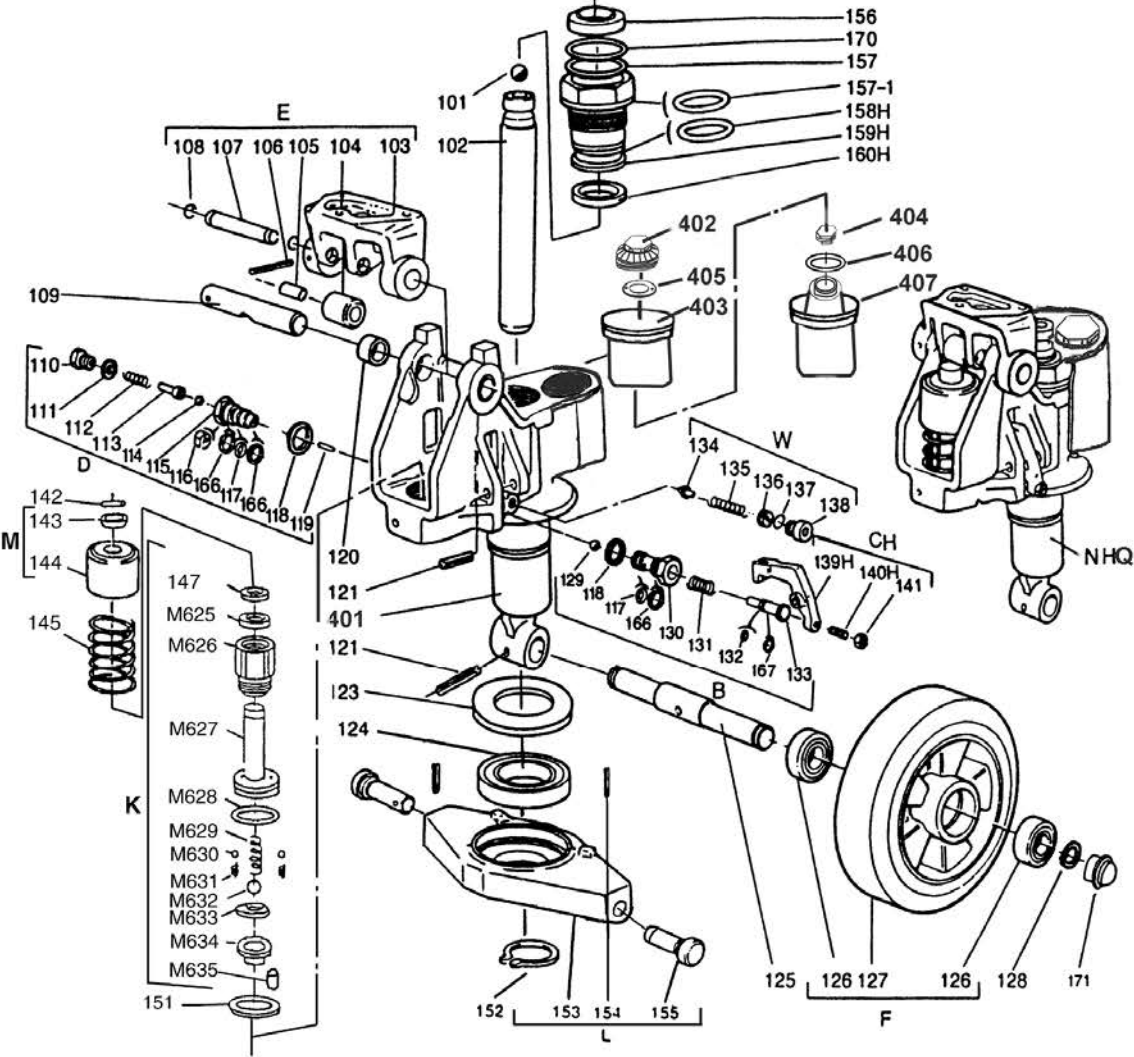
# Pump Assembly



## Parts List of Pump Assembly

PARTS NO.	DESCRIPTION	Q'TY	PARTS NO.	DESCRIPTION	Q'TY
401	Pump body	1	130	Discharge valve body	1
402	Reservoir cover	1	131	Spring	1
403	Casing	1	132	O-ring	1
404	Screw	1	133	Discharge valve shaft	1
405	Pressboard	1	134	Valve taper core	1
406	O-ring	1	135	Spring	1
407	Reservoir	1	136	Pressure regulating screw	1
101	Steel ball	1	137	O-ring	1
102	Rod	1	138	Screw	1
103	Base	1	139H	Crank link	1
104	Steel roller	1	140H	Setting screw	1
105	Bushing	1	141	Nut	1
106	Pin	1	142	Parallel pin	1
107	Shaft	1	143	Retaining cover	1
108	Retaining ring	2	144	Spring cover	1
109	Axle	1	145	Spring	1
110	Screw	1	146	Pump rod	1
111	Washer	1	147	Dust proof ring	1
112	Spring	1	148	Pump cylinder	1
113	Pressure rod	1	149	Seal ring	1
114	Steel ball	1	150	Nylon bushing	1
115	Pressure valve body	1	151	Red copper washer	1
116	Split ring	1	152	Retaining ring	1
117	O-ring	2	153	Rhombus plate	1
118	Washer	2	154	Pin	2
119	Steel needle	1	155	Dowel pin	2
120	Bushing	2	156	Dust proof ring	1
121	Pin	2	157	O-ring	1
123	Dust cover	1	157-1	O-ring	1
124	Bearing	1	158H	O-ring	1
125	Steering wheel axle	1	159H	Cylinder	1
126	Bearing	4	160H	Seal ring	1
127A	Steering wheel, Nylon	2	166	Retainer	3
127B	Steering wheel, Polyurethane	2	167	Retainer	1
127C	Steering wheel, Poly/Nylon	2	168	Retainer	1
127D	Steering wheel, Rubber	2	169	O-ring	1
128	Retaining ring	2	170	Retainer	1
129	Steel ball	1	171	Dust cover	2

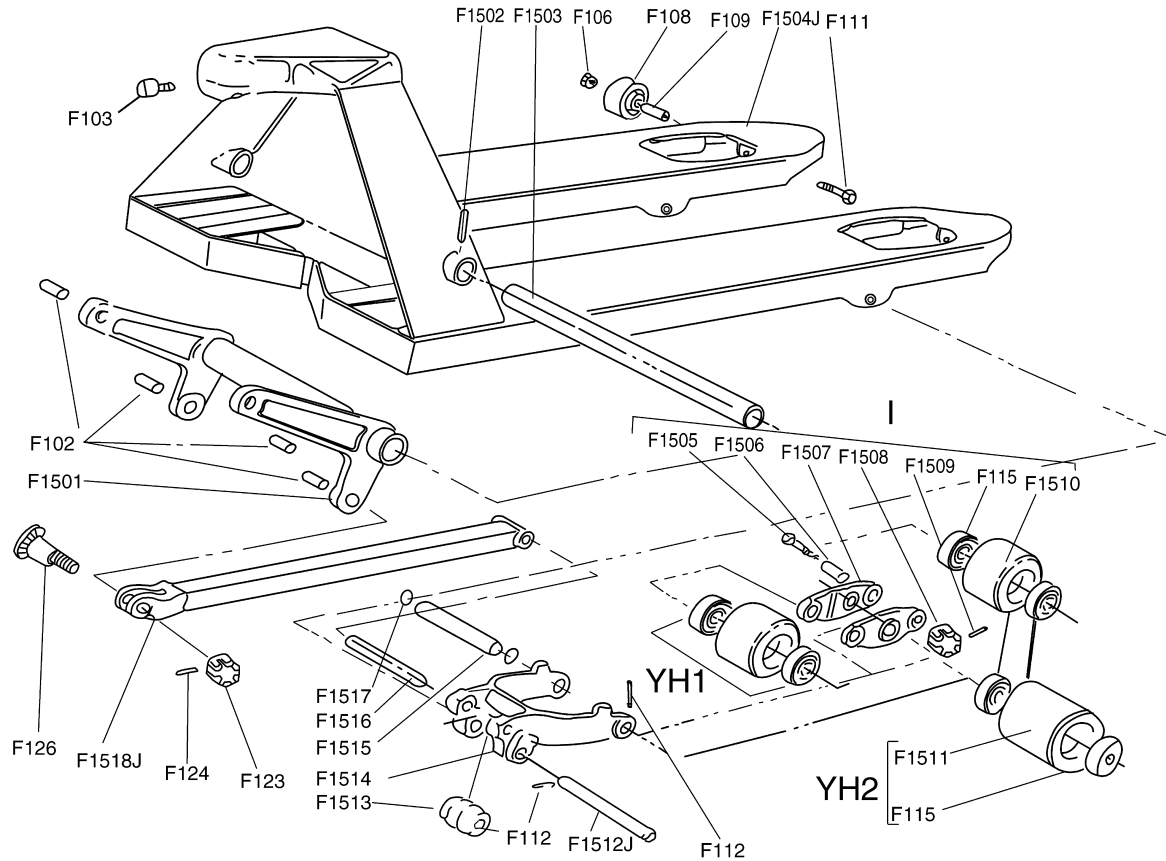
# Quick Lift Pump Assembly





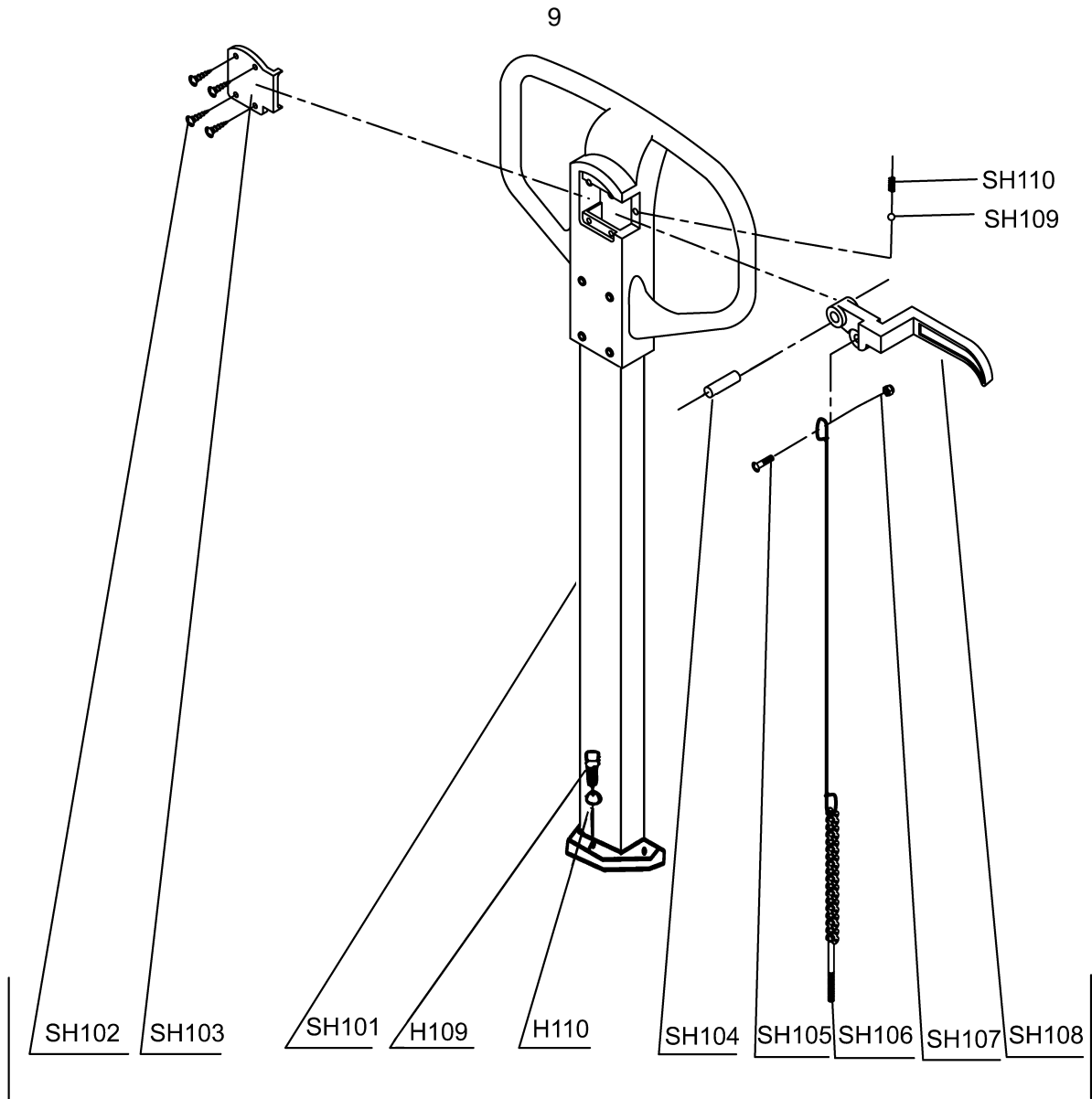
## Parts List of Quick Lift Pump Assembly

<b>PARTS NO.</b>	<b>DESCRIPTION</b>	<b>Q'TY</b>	<b>PARTS NO.</b>	<b>DESCRIPTION</b>	<b>Q'TY</b>
401	Pump body	1	133	Discharge valve shaft	1
402	Reservoir cover	1	134	Valve taper core	1
403	Casing	1	135	Spring	1
404	Screw	1	136	Pressure regulating screw	1
405	Pressboard	1	137	O-ring	1
406	O-ring	1	138	Screw	1
407	Reservoir	1	139H	Crank link	1
101	Steel ball	1	140H	Setting screw	1
102	Rod	1	141	Nut	1
103	Base	1	142	Parallel pin	1
104	Steel roller	1	143	Retaining cover	1
105	Bushing	1	144	Spring cover	1
106	Pin	1	145	Spring	1
107	Shaft	1	147	Dust proof ring	1
108	Retaining ring	2	151	Red copper washer	1
109	Axle	1	152	Retaining ring	1
110	Screw	1	153	Rhombus plate	1
111	Washer	1	154	Pin	2
112	Spring	1	155	Dowel pin	2
113	Pressure rod	1	156	Dust proof ring	1
114	Steel ball	1	157	O-ring	1
115	Pressure valve body	1	157-1	O-ring	1
116	Split ring	1	158H	O-ring	1
117	O-ring	2	159H	Cylinder	1
118	Washer	2	160H	Seal ring	1
119	Steel needle	1	166	Retainer	3
120	Bushing	2	167	Retainer	1
121	Pin	2	170	Retainer	1
123	Dust cover	1	171	Dust cover	2
124	Bearing	1	M625	Seal ring	1
125	Steering wheel axle	1	M626	Pump cylinder	1
126	Bearing	4	M627	Pump rod	1
127A	Steering wheel, Nylon	2	M628	O-ring	1
127B	Steering wheel, Polyurethane	2	M629	Big spring	1
127C	Steering wheel, Poly/Nylon	2	M630	Steel ball	2
127D	Steering wheel, Rubber	2	M631	Small spring	2
128	Retaining ring	2	M632	Steel ball	1
129	Steel ball	1	M633	Spring base	1
130	Discharge valve body	1	M634	Plug	1
131	Spring	1	M635	Pin	1
132	O-ring	1			



## Parts List of Frame

PARTS NO.	DESCRIPTION	Q'TY	PARTS NO.	DESCRIPTION	Q'TY
F1501	Torsion tube assembly	1	F1514	H-link	2
F1502	Spring pin	1	F1515	Axle	2
F1503	Torsion tube shaft	1	F1516	Axle	2
F1504J	Frame	1	F1517	Washer	4
F1505	Bolt	4	F1518J	Pull rod	2
F1506	Bushing	4	F102	Bushing	4
F1507	Plate	4	F103	Screw	1
F1508	Nut	4	F106	Nut	2
F1509	Pin	4	F108	Roller	2
F1510A	Nylon load roller, tandem type	4	F109	Bushing	2
F1510B	Poly load roller, tandem type	4	F111	Bolt	2
F1510C	Poly/Nylon load roller, tandem type	4	F112	Spring pin	4
F1511A	Nylon load roller, single type	2	F115	Bearing	8/4
F1511B	Nylon load roller, single type	2	F123	Nut	2
F1511C	Poly load roller, single type	2	F124	Pin	2
F1512J	Poly/Nylon load roller, single type	2	F126	Pin	2
F1513	Axle Roller	2			



### Parts List of Handle

PARTS NO.	DESCRIPTION	Q'TY	PARTS NO.	DESCRIPTION	Q'TY
SH101	Handle	1	SH107	Nut	1
SH102	Screw	4	SH108	Control lever	1
SH103	Plate	1	SH109	Steel ball	1
SH104	Pin	1	SH110	Spring	1
SH105	Bolt	1	H109	Screw	3
SH106	Rod and chain	1	H110	Spring washer	3

# Assembly list

Assembly	Description
NH	Pump unit
NHQ	Quick lift pump unit
B	Lowering valve ass'y
CH	Lowering screw ass'y
D	Hydraulic valve ass'y
E	Handle seat ass'y
F1	Nylon steering wheel ass'y
F2	Polyurethane steering wheel ass'y
F3	Polyurethane/Nylon steering wheel ass'y
F4	Rubber steering wheel ass'y
G-BST	Handle ass'y
YH1A	Nylon load roller ass'y (tandem type)
YH1B	Polyurethane load roller ass'y (tandem type)
YH1C	Polyurethane/Nylon load roller ass'y (tandem type)
YH2A	Nylon load roller ass'y (single type)
YH2B	Polyurethane load roller (single type)
YH2C	Polyurethane/Nylon load roller ass'y (single type)
I	Tandem nylon load roller system ass'y
L	Rhombus plate ass'y
K	Quick lift pump piston ass'y
M	Spring cover ass'y
N	Pump piston ass'y
W	Safety valve ass'y
SH	*Seal kit
SHQ	*Seal kit

\*Note: Seal kit include following parts: 111, 117, 118, 132, 137, 147, 149, 151, 156, 157, 157-1, 158H, 160H, 169, M625, M628, 406.

