

**Operating Instructions
Parts List**

**EFS Series
Hand Hydraulic Stacker**

Note: Owner and operator MUST read and understand this operating instructions before use this pallet truck.

Welcome to use our hand stacker EFS series. Your stacker is made of high quality steel and was designed to give a durable, reliable and easy to use product. For your safety and correct operation, please carefully read this instruction book and warnings on the stacker before using it.

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

1. STRUCTURAL DATA FORM

Model		EFS05	EFS05G	EFS10	EFS10G
Capacity	Kg	500	500	1000	1000
Lift Height	mm	1600	1600	1600/	1600
Fork Length	mm	900	1150	900	1150
Width overall Forks	mm	260~790	550	300~800	550
Overall Height	mm	1980	2010	1980	2010
Min. Fork Height	mm	80	85	80	85

2. Installation & Adjustment

*To prevent oil-leaking from oil tank during transportation. Air Screw(part No.FS236) is replaced with oil-sealing screw in the factory but it has to be replaced back when you put this stacker in use.

*How to change: screw out oil-sealing Screw, then screw in Air Screw which is in the spare parts bag, thus keep oil tank always connecting with atmosphere.

3. SAFETY GUIDANCE

- 3.1 Operator should read all warning signs and instructions here and on the stacker before using it.
- 3.2 Do not operate a hand stacker unless you are familiar with it and have been trained or authorized to do so.
- 3.3 Do not operate a hand stacker unless you have checked its condition. Give special attention to the wheels, the handle, the guide frame, the pilot wheel, the doorframe, etc.
- 3.4 Do not use on a slopping ground.
- 3.5 Do not take up any people on the forks.
- 3.6 The operator had better take on gloves for labor protecting.
- 3.7 When the goods have been transported or lifted, all people should be away form the forks for 600mm.
- 3.8 Do not load over maximum capacity.
- 3.9 The weight of goods should be distributed on the two forks, do not use only one fork. The center of gravity of goods should be in the center of two forks.
- 3.10 People forbid standing under the forks.
- 3.11 Do not move the hand stacker when the goods are lifted to the height more than 300mm.

3.12 At other special condition or place, the operator should be carefully to operate the hand stacker.

4. MAINTENANCE

4.1 Hydraulic oil

Please check the oil level every six months. The oil can be hydraulic oil: **ISO VG32**, its viscosity should be 32cSt at 40°C, total volume is about 2.0lt.

4.2 Daily check and maintenance

It is necessary to check the hand stacker daily. Special attention should be paid to the wheels, the axles, as thread, rags, etc., it may block the wheels, the fork and the mast should be checked, too. The forks should be unloaded and lowered in the lowest position when the job is over.

4.3 Lubrication

Use motor oil or grease to lubricate all movable parts.

4.4 Remove the air

The air maybe enter the hydraulic pump during the transportation after the customer buys it. It will cause the piston rod to fail to keep up the raised height. The air can be removed in the following way: pull the control handle(FS107) up and move handle(E110) up and down for several times.

5. TO ADJUST RELEASE DEVICE

On the draw-bar of this hand stacker, you can find the control handle (FS107) which can be regulated in three positions: **LOWER** = to lower the forks; **NEUTRAL** = to move the load, and **LIFT** = to raise the fork. These three positions have been pre-positated at the factory. If however they have been changed, you can adjust according to following step:

4.1 If the forks elevate while pumping in the **NEUTRAL** position, turn the adjusting nut (FS116) on the adjusting bolt (FS115) clockwise or turn the adjusting screw (FS223) clockwise until pumping action does not raise the forks and the **NEUTRAL** position functions properly.

4.2 If the forks descend while pumping in the **NEUTRAL** position, turn the nut (FS116) or the screw (FS223) counter-clockwise until the forks do not lower.

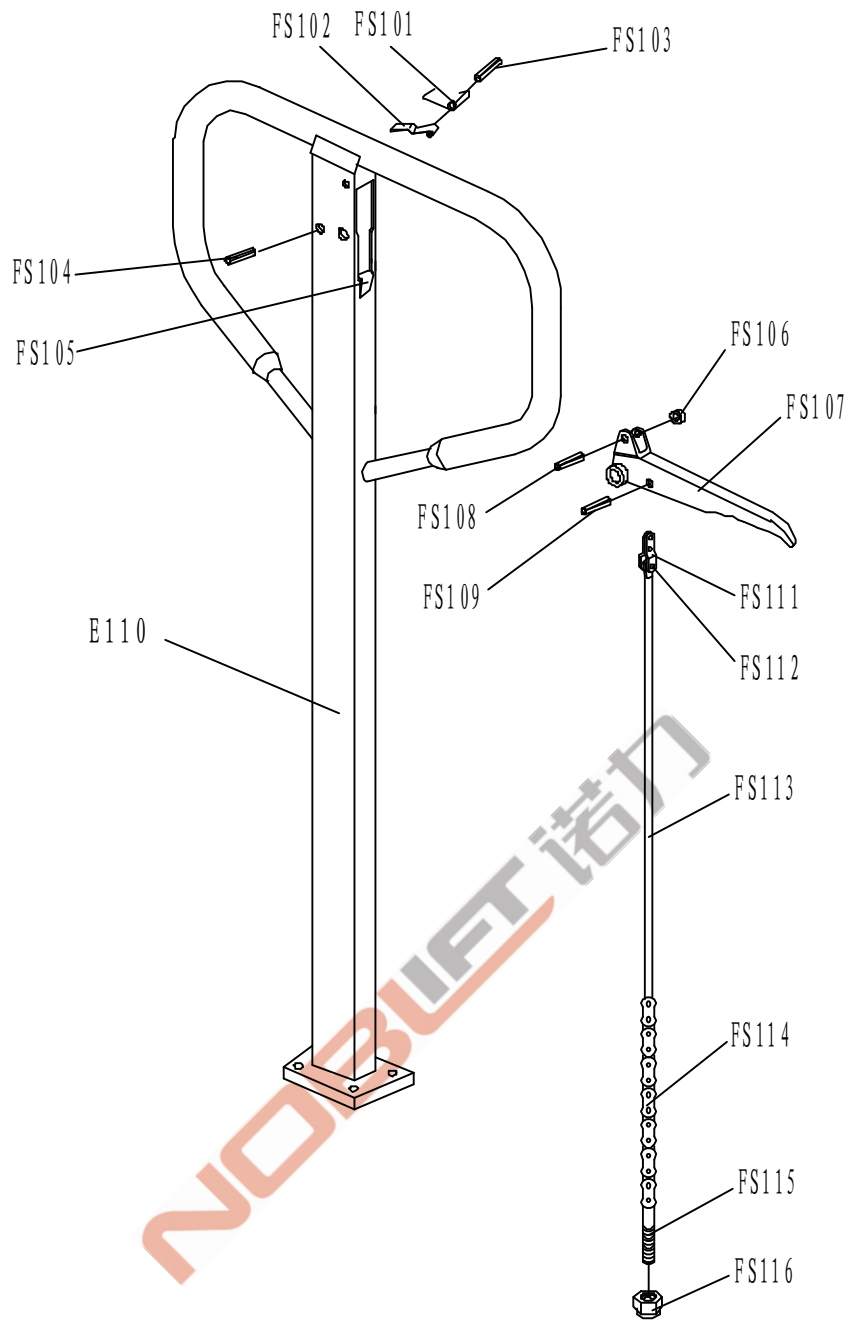
4.3 If the forks do not descent when the control handle (FS107) is in the **LOWER** position, turn the nut (FS116) or the screw (FS223) clockwise until raising the control handle (FS107) lowers the forks. Then check the **NEUTRAL** position according to item 4.1 and 4.2 to be sure the nut (FS116) and the screw (FS223) is in the proper position.

4.4 If the forks do not elevate while pumping in the **LIFT** position, turn the nut (FS116) or the screw (FS223) counter-clockwise until the forks elevate while pumping in the **LIFT** position. Then check the **LOWER** and **NEUTRAL** position according to item 4.1, 4.2 and 4.3.

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 (FS116) is too high or the screw (FS223) is too close, keep the pumping valve open. - Air come into the hydraulic oil.	- Fill in the oil. - Change the oil. - Adjust the nut (FS116) or the screw (FS223) .(see item 4.4) - Banish the air.(see item 3.4)
3	The forks can not be descended.	- The piston rod(FS250) or pump body(FS257) or the mast (E301 or E301G) is deformed resulting from 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 (FS116) or the screw (FS223) is not in the correct position. - The rollers (E336) are not lubricated.	- Replace it. - Keeping the fork in the lowest position if not using, and pay more attention to lubricate the rod. - Adjust the nut (FS116) or the screw (FS223). (see item 4.3) - Lubricate its.
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 come into the oil. - Sealing parts worn or damaged. - The adjusting nut (FS116) or the screw (FS223) is not in the correct position.	- Replace with new oil. - Inspect and replace the waste parts. -Banish the air. (See item 3.4) - Replace with the new one. - Adjusting the nut (FS116) or the screw (FS223). (See item 4.2)

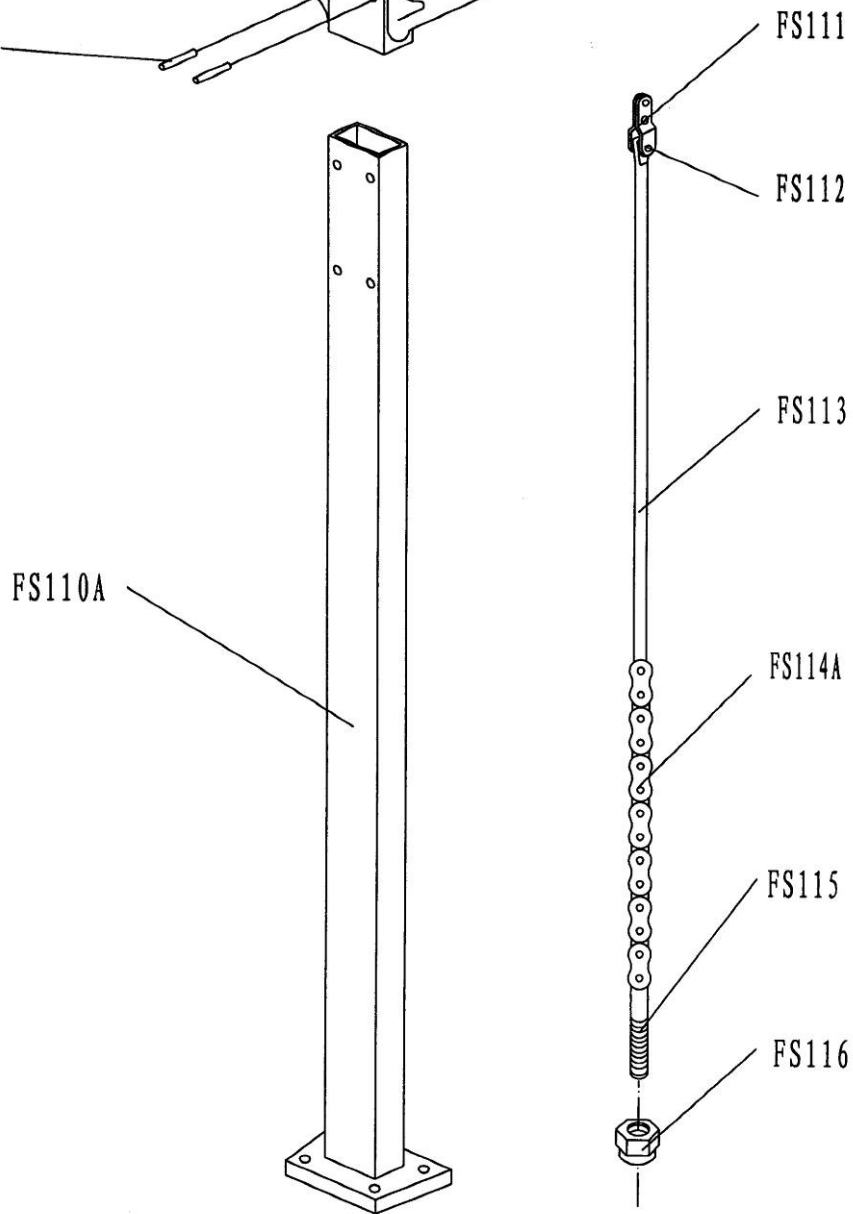
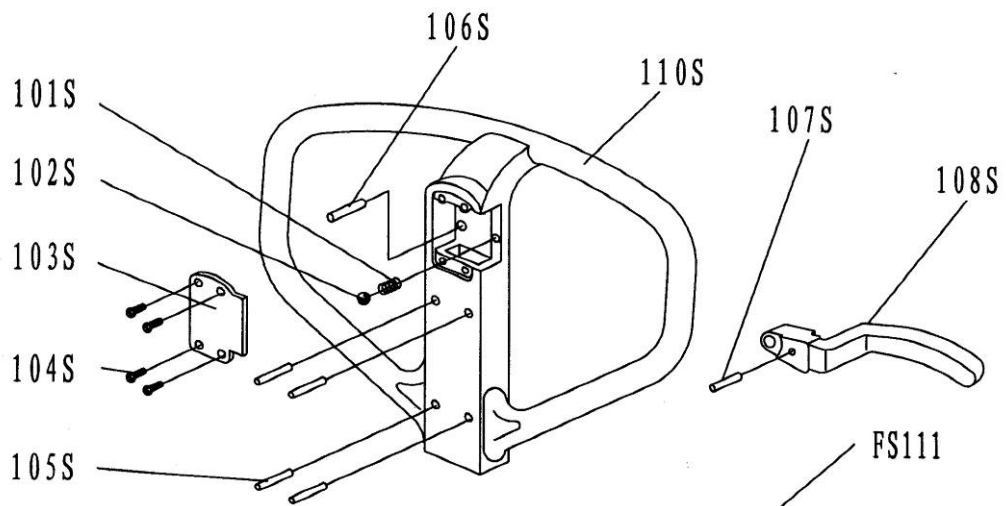
NOTE: DO NOT ATTEMPT TO REPAIR THE PALLET TRUCK UNLESS YOU ARE TRAINED AND AUTHORIZED TO DO SO.



Handle (A) Part List

No.	Description	Qty.	No.	Description	Qty.
FS101	Spring	1	FS109	Elastic Pin	1
FS102	Blade Spring	1	E110	Handle	1
FS103	Elastic Pin	1	FS111	Pull Board	1
FS104	Elastic Pin	1	FS112	Pin	1
FS105	Rubber Washer	1	FS113	Release Rod	1
FS106	Roller	1	FS114	Chain	1
FS107	Control Handle	1	FS115	Adjusting Bolt	1
FS108	Elastic Pin	1	FS116	Adjusting Nut	1

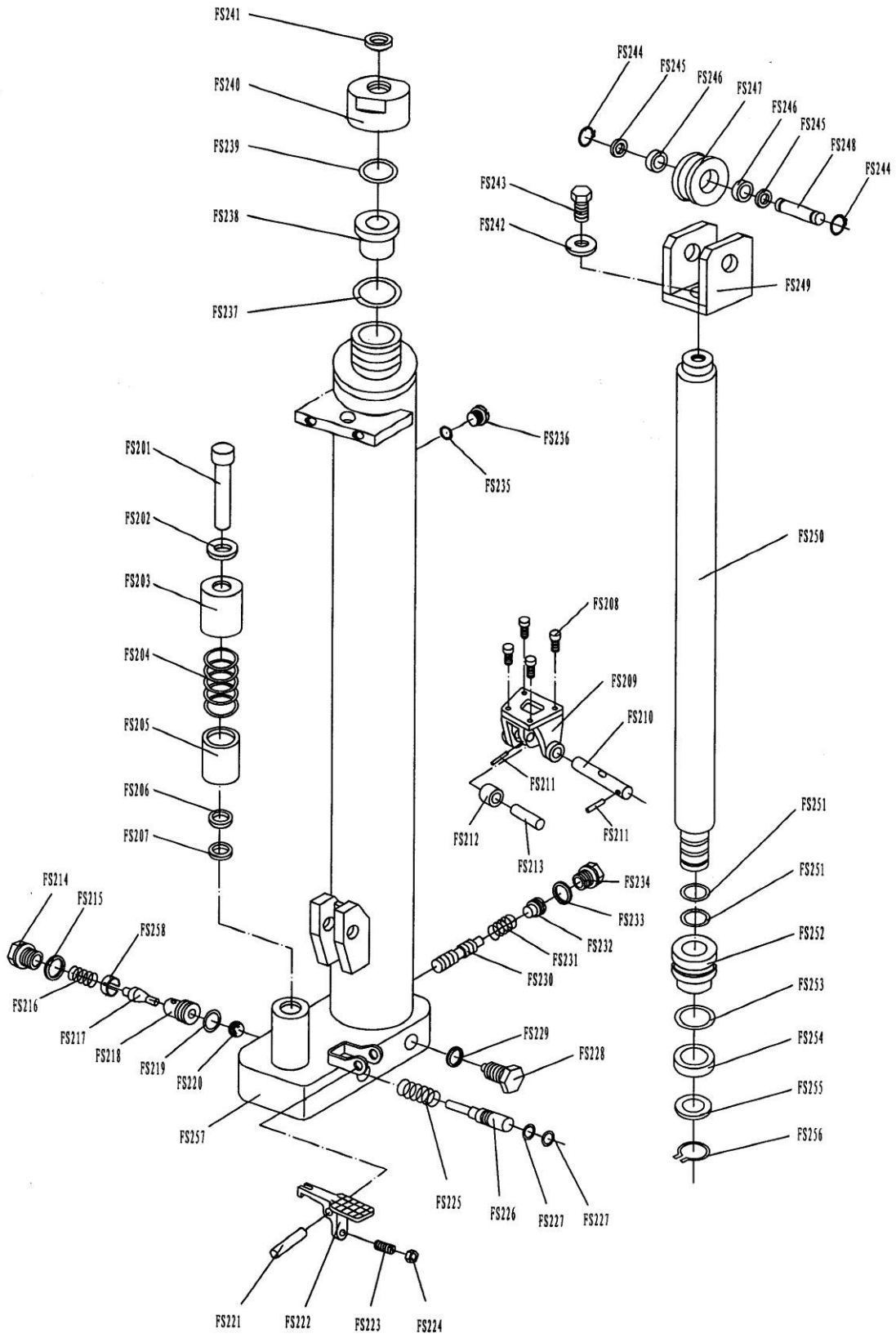
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Handle (D) Part List

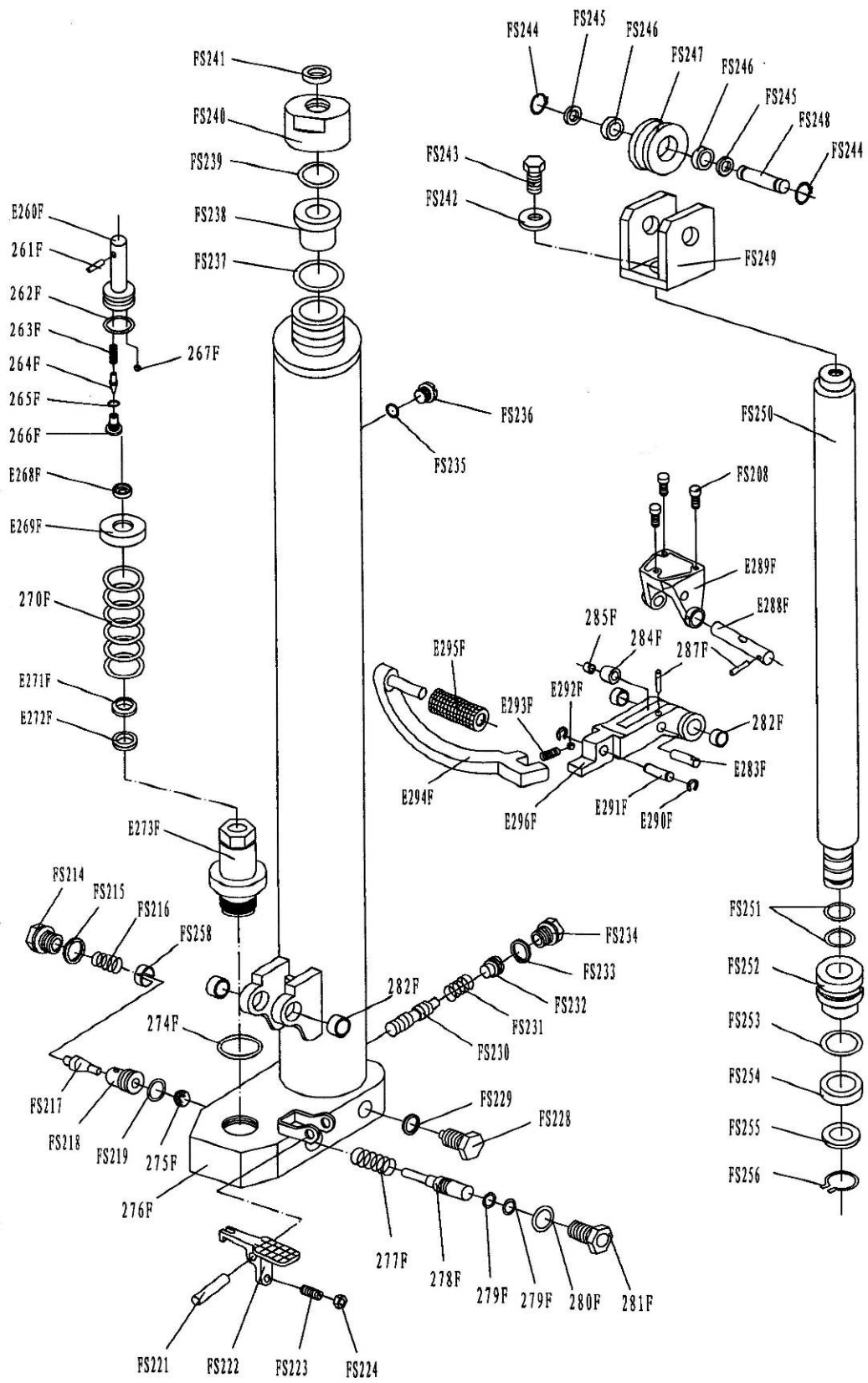
No.	Description	Qty.	No.	Description	Qty.
101S	Spring	1	FS111	Pull Board	1
102S	Steel Ball	1	FS112	Pin	1
103S	Cover	1	110S	Handle	1
104S	Screw	4	FS110A	Draw-bar	1
105S	Pin	4	FS113	Release Rod	1
106S	Elastic Pin	1	FS114A	Chain	1
107S	Elastic Pin	1	FS115	Adjusting Bolt	1
108S	Control Handle	1	FS116	Adjusting Nut	1

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Pump Part List(EFS0516/EFS1016)

No.	Description	Qty.	No.	Description	Qty.
FS201	Pumping Piston Rod	1	FS231	Spring	1
FS202	Washer	1	FS232	Adjusting Bolt	1
FS203	Upper Cap of Spring	1	FS233	Seal Washer	1
FS204	Spring	1	FS234	Screw	1
FS205	Lower Cap of Spring	1	FS235	Seal Washer	1
FS206	Dust Ring	1	FS236	Air Screw	1
FS207	Y-Ring	1	FS237	Seal Washer	1
FS208	Screw	4	FS238	Conduit	1
FS209	Bracket	1	FS239	O-Ring	1
FS210	Shaft for Roller	1	FS240	Cover	1
FS211	Elastic Pin	2	FS241	Dust Ring	1
FS212	Pressure Roller	1	FS242	Washer	1
FS213	Shaft for Roller	1	FS243	Screw	1
FS214	Screw	1	FS244	Locking Ring	2
FS215	Seal Washer	1	FS245	Washer	2
FS216	Spring	1	FS246	Bearing	2
FS217	Valve Spindle of Pump	1	FS247	Roller for Chain	1
FS218	O-Ring	1	FS248	Shaft	1
FS219	Seat of Pump Valve	1	FS249	Joint Head	1
FS220	Steel Ball	1	FS250	Piston Rod	1
FS221	Elastic Pin	1	FS251	O-Ring	2
FS222	Lever Plate	1	FS252	Piston	1
FS223	Adjusting Screw	1	FS253	O-Ring	2
FS224	Nut	1	FS254	Y-Ring	1
FS225	Spring	1	FS255	Washer	1
FS226	Strike Pin	1	FS256	Locking Ring	1
FS227	O-Ring	2	FS257	Pump Body	1
FS228	Screw	1			
FS229	Seal Washer	1	FS258	Sleeve for Adjusting Speed	1
FS230	Valve Spindle for Adjusting Speed	1	FS236A	Oil-Sealing Screw	1

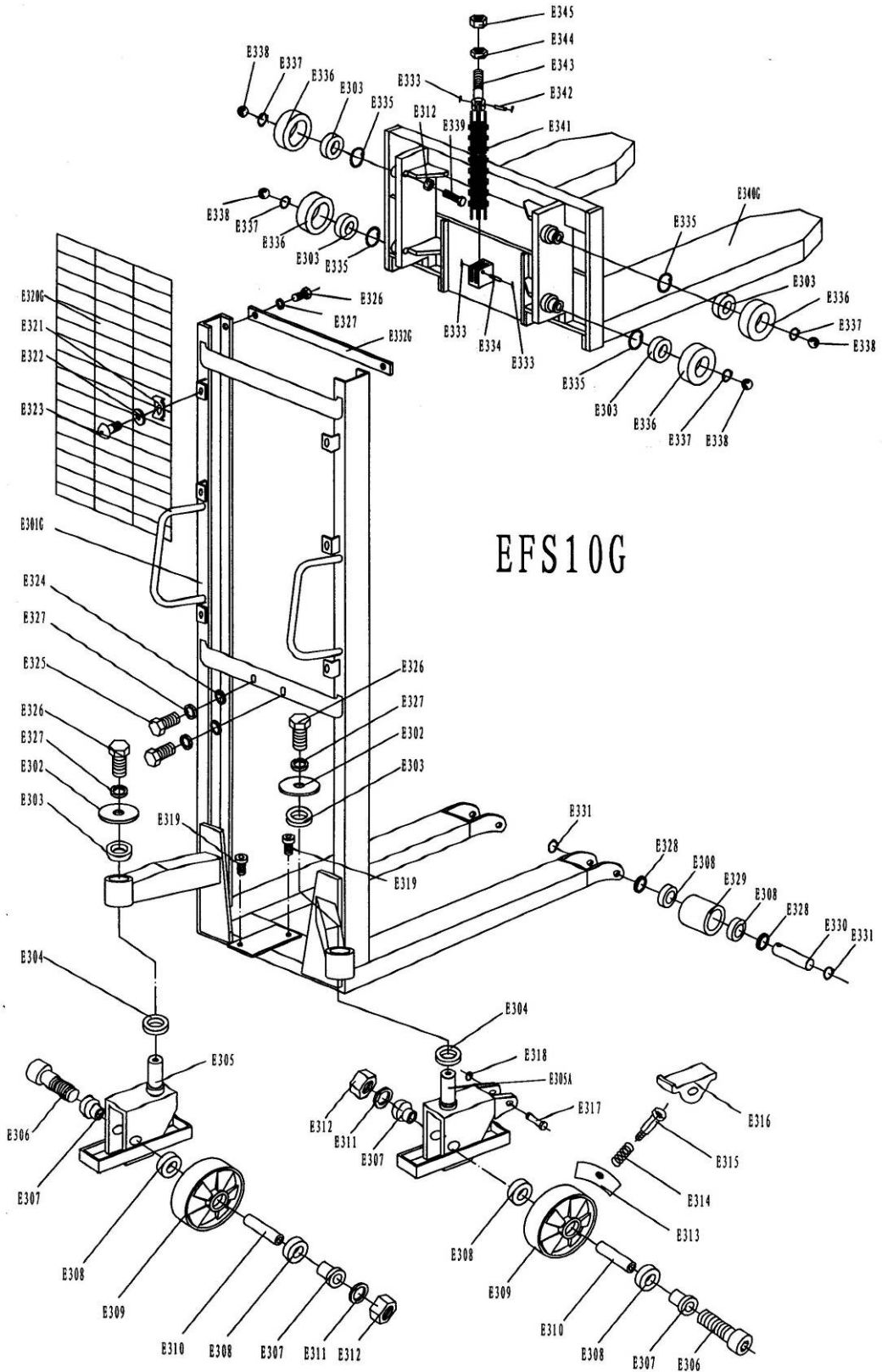


Pump Part List for Fast Lifting(EFS0516/EFS1016)

No.	Description	Qty.	No.	Description	Qty.
FS208	Screw	3	FS256	Locking Ring	1
FS214	Screw	1	FS258	Sleeve for Adjusting	1
FS215	Seal Washer	1	E260F	Pumping Piston Rod	1
FS216	Spring	1	261F	Elastic Pin	1
FS217	Valve Spindle of Pump	1	262F	O-Ring	1
FS218	O-Ring	1	263F	Spring	1
FS219	Seat of Pump Valve	1	264F	Spindle Pin	1
FS221	Elastic Pin	1	265F	O-Ring	1
FS222	Lever Plate	1	266F	Screw	1
FS223	Adjusting Screw	1	267F	Steel Ball	1
FS224	Nut	1	E268F	Outer Cap	1
FS228	Screw	1	E269F	Cap of Spring	1
FS229	Seal Washer	1	270F	Spring	1
FS230	Valve Spindle for	1	E271F	Dust Ring	1
FS231	Spring	1	E272F	Y-Ring	1
FS232	Adjusting Bolt	1	E273F	Pumping Cylinder	1
FS233	Seal Washer	1	274F	O-Ring	1
FS234	Screw	1	275F	Steel Ball	1
FS235	Seal Washer	1	276F	Pump Body	1
FS236	Air Screw	1	277F	Spring	1
FS237	Seal Washer	1	278F	Strike Pin	1
FS238	Conduit	1	279F	O-Ring	2
FS239	O-Ring	1	280F	O-Ring	1
FS240	Cover	1	281F	Sleeve of Strike Pin	1
FS241	Dust Ring	1	282F	Bushing	4
FS242	Washer	1	E283F	Shaft for Roller	1
FS243	Screw	1	284F	Pressure Roller	1
FS244	Locking Ring	2	285F	Bushing	1
FS245	Washer	2	287F	Elastic Pin	2
FS246	Bearing	2	E288F	Shaft With Hole	1
FS247	Roller for Chain	1	E289F	Bracket	1
FS248	Shaft	1	E290F	Retaining Ring	2
FS249	Joint Head	1	E291F	Shaft	1
FS250	Piston Rod	1	E292F	Steel Ball	1
FS251	O-Ring	2	E293F	Spring	1

FS252	Piston	1	E294F	Pedal	1
FS253	O-Ring	2	E295F	Rubber Sleeve	1
FS254	Y-Ring	1	E296F	Connecting plank	1
FS255	Washer	1	FS236A	Oil-Sealing Screw	1

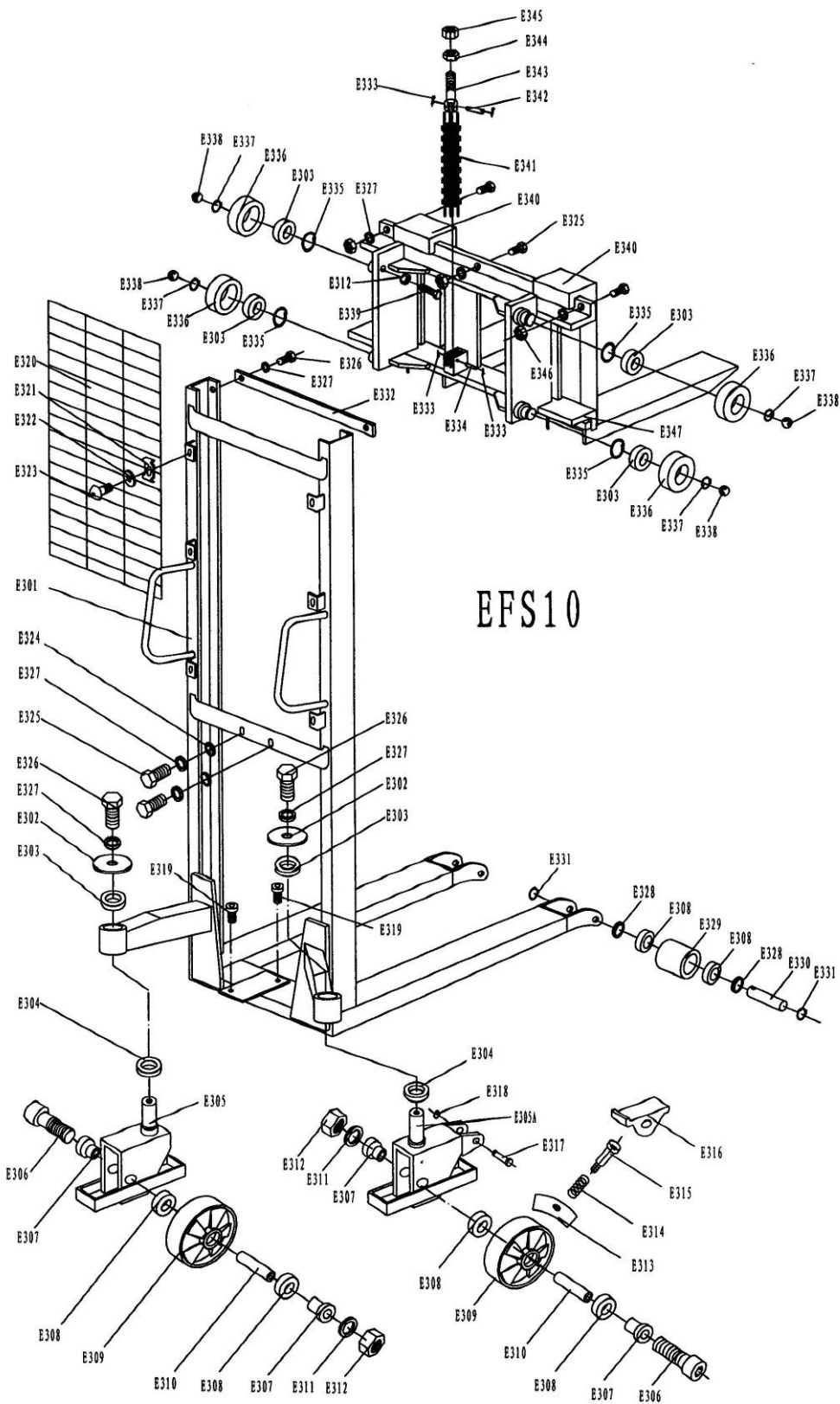
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EFS10G

Mast Part List for EFS10G

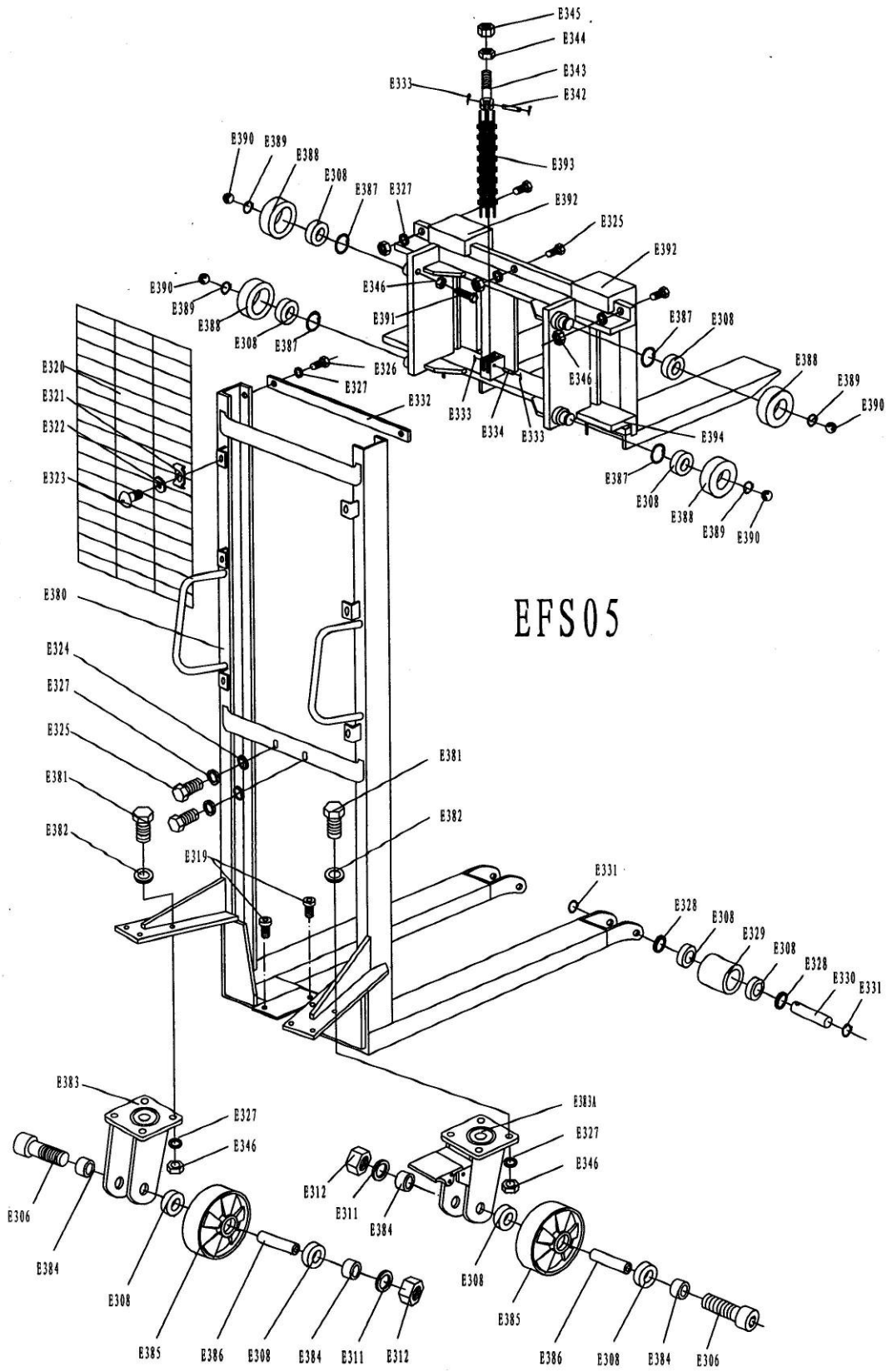
No.	Description	Qty	No.	Description	Qty
E301G	Mast	1	E325	Screw	2
E302	Cover	2	E326	Screw	4
E303	Bearing	6	E327	Elastic Washer	4
E304	Bearing	2	E328	Washer	4
E305	Frame of Wheel	1	E329	Loading Roller	2
E305A	Frame of Wheel With Brake	1	E330	Shaft of Roller	2
E306	Screw	2	E331	Locking Ring	4
E307	Washer	4	E332G	Linking Plate	1
E308	Bearing	8	E333	Cotter Pin	4
E309	Wheel	2	E334	Pin with Hole	1
E310	Sleeve	2	E335	Locking Ring	4
E311	Elastic Washer	2	E336	Roller	4
E312	Nut	4	E337	Locking Ring	4
E313	Brake	1	E338	Steel Ball	4
E314	Spring	1	E339	Bolt	4
E315	Pushing Bolt	1	E340G	Fork	1
E316	Pedal	1	E341	Chain	1
E317	Shaft	1	E342	Pin with Hole	1
E318	Locking Ring	1	E343	Screw	1
E319	Screw	2	E344	Nut	1
E320G	Reticulation	1	E345	Nut	1
E321	Clip	6			
E322	Washer	6			
E323	Screw	6			
E324	Washer	2			



EFS10

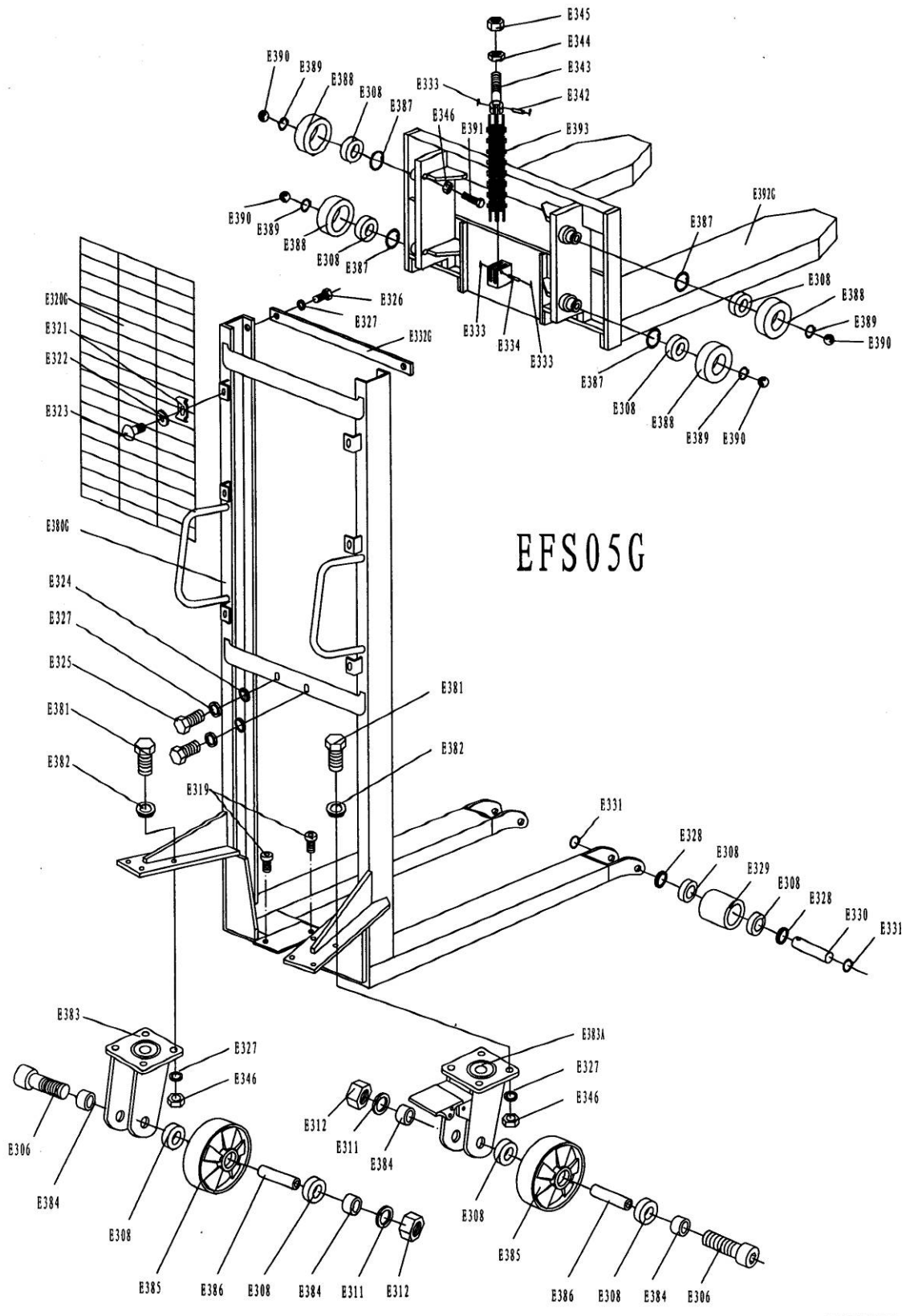
Mast Part List for EFS10

No.	Description	Qty	No.	Description	Qty
E301	Mast	1	E325	Screw	2
E302	Cover	2	E326	Bolt	4
E303	Bearing	6	E327	Elastic Washer	4
E304	Bearing	2	E328	Washer	4
E305	Frame of Wheel	1	E329	Loading Roller	2
E305A	Frame of Wheel With Brake	1	E330	Shaft of Roller	2
E306	Screw	2	E331	Locking Ring	4
E307	Washer	4	E332	Linking Plate	1
E308	Bearing	8	E333	Cotter Pin	4
E309	Wheel	2	E334	Pin with Hole	1
E310	Sleeve	2	E335	Locking Ring	4
E311	Elastic Washer	2	E336	Roller	4
E312	Nut	4	E337	Locking Ring	4
E313	Brake	1	E338	Steel Ball	4
E314	Spring	1	E339	Bolt	4
E315	Pushing Bolt	1	E340	Fork	1
E316	Pedal	1	E341	Chain	1
E317	Shaft	1	E342	Pin with Hole	1
E318	Locking Ring	1	E343	Screw	1
E319	Screw	2	E344	Nut	1
E320	Reticulation	1	E345	Nut	1
E321	Clip	6	E346	Nut	3
E322	Washer	6	E347	Stock	1
E323	Screw	6			
E324	Washer	2			



Mast Part List for EFS05

No.	Description	Qty	No.	Description	Qty
E380	Mast	1	E328	Washer	4
E381	Screw	8	E329	Loading Roller	2
E382	Washer	8	E330	Shaft of Roller	2
E383	Frame of Wheel	1	E331	Locking Ring	4
E383A	Frame of Wheel With Brake	1	E332	Linking Plate	1
E306	Screw	2	E333	Cotter Pin	4
E384	Washer	4	E334	Pin with Hole	1
E308	Bearing	12	E387	Locking Ring	4
E385	Wheel	2	E388	Roller	4
E386	Sleeve	2	E389	Locking Ring	4
E311	Elastic Washer	2	E390	Steel Ball	4
E312	Nut	2	E391	Screw	4
E319	Screw	2	E392	Fork	2
E320	Reticulation	1	E393	Chain	1
E321	Clip	6	E394	Stock	1
E322	Washer	6	E342	Pin with Hole	1
E323	Screw	6	E343	Screw	1
E324	Washer	2	E344	Nut	1
E325	Screw	2	E345	Nut	1
E326	Screw	2	E346	Nut	15
E327	Elastic Washer	10			



EFS05G

Mast Part List for EFS05G

No.	Description	Qty	No.	Description	Qty
E380G	Mast	1	E328	Washer	4
E381	Screw	8	E329	Loading Roller	2
E382	Washer	8	E330	Shaft of Roller	2
E383	Frame of Wheel	1	E331	Locking Ring	4
E383A	Frame of Wheel With Brake	1	E332G	Linking Plate	1
E306	Screw	2	E333	Cotter Pin	4
E384	Washer	4	E334	Pin with Hole	1
E308	Bearing	12	E387	Locking Ring	4
E385	Wheel	2	E388	Roller	4
E386	Sleeve	2	E389	Locking Ring	4
E311	Elastic Washer	2	E390	Steel Ball	4
E312	Nut	2	E391	Screw	4
E319	Screw	2	E392G	Fork	1
E320G	Reticulation	1	E393	Chain	1
E321	Clip	6	E342	Pin with Hole	1
E322	Washer	6	E343	Screw	1
E323	Screw	6	E344	Nut	1
E324	Washer	2	E345	Nut	1
E325	Screw	2	E346	Nut	12
E326	Screw	2			
E327	Elastic Washer	10			