EKKO
MATERIAL HANDLING EQUIPMENT
MOVING AHEAD

SEMI-ELECTRIC AERIAL ORDER PICKER

OPERATION INSTRUCTION



WARNING

THE MANUFACTURERS SHALL NOT BE HELD LIABLE IN CASE OF FAULTS OR ACCIDENTS DUE TO NEGLIGENCE, INCAPACITY, INSTALLATION BY UNQUALIFIED TECHNICIANS AND IMPROPER USE OF THE TRUCK.

DO NOT OPERATE THIS MACHINE UNTIL YOU READ AND UNDERSTAND ALL THE DANGERS, WARNINGS AND CAUTIONS IN THE MANUAL.

I PREFACE

Read this Instruction carefully before the machine is taken into use to avoid errors. Correct operations and regular inspections are factors of vital importance for the operating economy and lifetime of the machine.

These important parts are described in the following related sections.

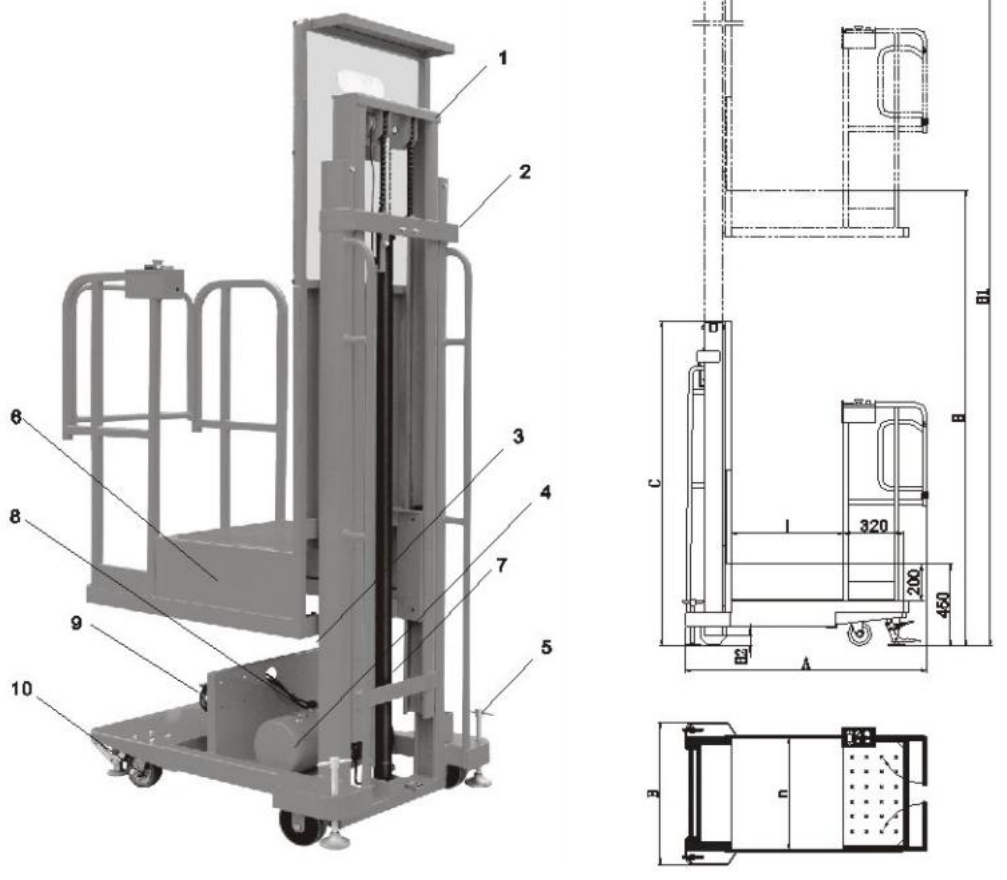
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II APPLICATION

electric Aerial Order Picker is the best equipment for materials picking and handling. It's intended for use on plane and level floors. Easy moving and operating. Lift or fall steadily. Safe and reliable. Suitable for Order picking application in distribution warehouse. Technical

III TECHNICAL SPECIFICATIONS

specifications and major dimensions are shown in TABLE 1 and FIGURE 1, respectively.



1.Inner mast 2.Outer mast 3. Stop block 4.Hydraulic pump unit 5.Brake shoe
6. Platform 7.Jack 8.Charger 9.Battery 10. Brake

TABLE 1

m ber Mt. Pl a		EOPS	EOPS-130
t (H)(n)Mk. Machine He	in	1t 7	13$_8$
o undC le ance Lit R 2) G	in	158	193
Pl tf o m Sz e (l X ity 2	in	1.1	
6 View Lift g Mot 1	lbs	440	
Aw d Bolt ery v/	in	23.21 23.2	23.eg 25.2
/15 ver l Le	/A12	ngth(A	
) (B) erall Wt	hove	rall H	
el ght (C	)oo	ve re l	
Net Wel ght 30 1. l	in	le e	
ker has b een pl c	in	3t	e e
duri ng t ransp or t	in	69.3	8 .e
not be put l nto s	lbs	595	7 5.5

IV OPERATING GUIDE
PRE-SERVICE CHECK

and you should immediately contact your dealer. 2. The picker has been lubricated before delivery, and the hydraulic unit has been filled with hydraulic oil. 3. If a battery has been supplied with the picker, the battery is charged. Check that the acid level is correct in each cell and that the specific gravity is in order. (See "Maintenance Guide") 1. Turn the key and switch on, the display indicator shows 2. The platform rises when

OPERATION OF PICKER

you turn the SWITCH button to its on position and the UP button is pressed at the same time. Upon loosening the buttons, the platform stops. 3. The platform fails when you turn the SWITCH button to its on position and the DOWN button is pressed at the same time. Upon loosening the buttons, the platform stops. 4. A big mushroom-shaped button is provided for emergency stop. This should be used only when other means to stop the platform moving fails. Reset the button by turning the knob in the direction shown by the arrow. Do not pull the knob.

Ⅴ MATTERS NEEDING ATTENTION

1.Please use Brakes and Brake shoes when it is working.

2.The goods should be put on the platform evenly. And forbid to overload.

3.The platform should fall down to the bottom when you are moving the picker to other working place.

4.Forbid to stand under the platform when it is working

5.Forbid to lay the picker on the slope.

6.Please use Stop block during overhaul Hydraulic pump unit or battery.

Ⅵ MAINTENANCE GUIDE
CONTROL CHECK

Preventive overhaul based on regular checks of the machine will limit wear, and possible defects may be corrected before serious breakdowns take place.

The battery is the source of energy of the picker. It is necessary to follow the instructions given to obtain full output, satisfactory battery lifetime, and to keep the machine in a best condition.

DAILY CHECK

1.Check that the battery is full charged (see also the section of the battery).

2.Lift the platform to its top position to check that there is enough hydraulic oil in the system. Refill if necessary with YA-N32 or a similar oil.

WEEKLY CHECK

The user of the picker should spend a few minutes every week on cleaning.

Special attention should be paid to the wheels and axles, see if there is thread, rags and the like blocked on.

HALF-YEAR CHECK

1.Lubricate the lifting chain. Check the chain for wear.

2.Check and tighten possible loose screws and nuts and the cable joints of the battery.

3.Check brush wear in the pump motor, and take away possible irregular so that a good contact is maintained.

OIL CHANGE IN THE HYDRAULIC SYSTEM

We recommend to change the hydraulic oil after one month's operation (or 200 hours), and even if the operation time has not reached, change the oil once a year. Use hydraulic oil YA-N32 or the like. Oil should be filtered clean and maintained adequate.

When you have lifted and levered the platform 2 or 3 times, there is no more air in the system, and the machine will again work normally. If the lift height has not been obtained it is necessary to refill.

Forbid to dump the dirty hydraulic oil anywhere at random after the hydraulic oil is changed. The dirty hydraulic oil must be subject to special prescription and comply with the current legal provisions in the area and country where the machine is used.

BATTERY

Maintenance: To ensure the battery's better performance and prolong its usage life, examine the liquid level regularly. If the liquid level is below the lower line, please add distilled water or purified water till the level reaches the upper line. Refilling must not take place until charging has been finished, as the acid expands during charging. The battery surface must be kept clean and dry, as dirt and wet will cause leakage of current and consequently reduced battery capacity. Battery charging: Turn the key and switch on , when the display indicated voltage is below 11 volt, please charge up the battery. Loose the screw bolt of liquid box before charging. Under the normal situation, 1/10 electric current of the battery's capacity should be charged for 3~5 hours. After charging, the terminal voltage of the battery should be above 12.6 Otherwise, charge up the battery again.

Battery charging should be done in a well ventilated place and there is no naked flames, no sparks and no heat radiation sources nearby.

After finishing charging, turn the screw bolt of liquid box tight, wash the surface of battery with clean water and clean it gently with wet cloth. When charging up the battery, if the liquid temperature of the battery is above 45℃, stop charging immediately, continue charging only after the liquid temperature drops.

Ⅶ HANDLING AND STORAGE

The SEMI-Electric Aerial Order Picker must be stored in a horizontal position, in order to prevent the oil and the electrolyte will overflow, when transporting and storing.

When stores it, it must be kept clean and keep far away from the damp and bad climate. The temperature of environment should not be more than 40℃. If the battery isn't worked for a long time, it should be recharged timely.

Ⅷ COMMON FAULTS AND SOLUTIONS

Faults	Source of faults	Solutions
Turn the key and switch on, The electricity indicator is not on	Loose terminals, interruption of electric current, bad contact of switch	Examine the terminals of battery, screw tight the screw bolt of all joints, switch contact should be closed
Extending speed of piston rod of lifting oil tank is uneven	Air existence in the oil tank when lifting	Start the machine for two or three times, discharge the air in the oil tank
Lifting oil tank can't lift	Shortage of hydraulic oil	Add hydraulic oil
	Voltage of storage battery is below the allowable value	Charge up the battery
	Oil leakage	Examine and repair, replace the seal piece and screw the joint of pipe tight
	Overload	The lifting load should not exceed the rating value
Transmission chain is pressed singly	Abrasion of transmission chain and chain wheel caused by long-term use	Piston pole of oil tank should be at the lowest position, press the chains with hands to compare the forces, make the looseness of two chains consistent, screw tight the regulation nuts
Strange noise of power system during the process of lifting	Shortage of hydraulic oil or dirty oil	Add enough hydraulic oil or replace dirty hydraulic oil with clean oil
	Displacement caused by blocking up of electric machinery and its shell	Screw and fix screws
	Excessive humidity of the surroundings	Surrounding humidity ≤90%

Ⅸ SPARE PARTS

ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY
1	Outer mast frame	1	41	Chain	2
2	Brake	2	42	Chain tightener	2
3	Washer	38	43	Roller	8
4	Caster	2	44	Bearing	8
5	Bolt	18	45	Circlip	8
6	Nut M10	22	46	Piston rod	1
7	Tightening pin	2	47	Spacer sleeve	1
8	Rear wheel assembly	2	48	O-ring	1
9	Axle	2	49	Piston	1
10	Bolt	6	50	Gasket ring	1
11	Grower washer	10	51	Nut	1
12	Brake shoe	2	52	Retainer pin	1
13	Bolt	2	53	Explosion relief valve	1
14	Circlip	5	57	Cylinder	1
15	Stop block	1	58	Anchor loop	1
16	Roller	2	59	Rubber pad	1
17	Bush	2	60	Nut	4
18	Circlip	4	61	O-ring	1
19	Pin	2	62	O-ring	1
20	Bolt	2	63	Cylinder cap	1
21	Tightening cap	2	64	Dust seal	1
22	Transition joint	2	65	Plastic clamp	2
23	Joint	1	66	Protective screen	1
24	Conduit pipe	1	67	Adjusting screw	2
25	Pin	1	68	Nut	4
26	Circlip	2	69	Lateral roller	4
27	Oil hose assembly	1	70	Bush	4
28	Hydraulic power pack	1	71	Lateral roller retainer	2
29	Cable assembly	1	72	Pin	4
30	Battery	1	73	Circlip	8
31	Circlip	9	74	Work platform	1
32	Nylon pulley	1	75	Tightening pin	2
33	Sprocket shaft	1	76	Rod	2
34	Spacer	1	77	Spring	2
35	Inner mast assembly	1	78	Gate	2
36	Bolt	1	79	Panel box	1
37	Sprocket shaft	1	80	Guardrail	2
38	Circlip	1			
39	Bearing	2			
40	Sprocket	2			

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