

Operation Manual

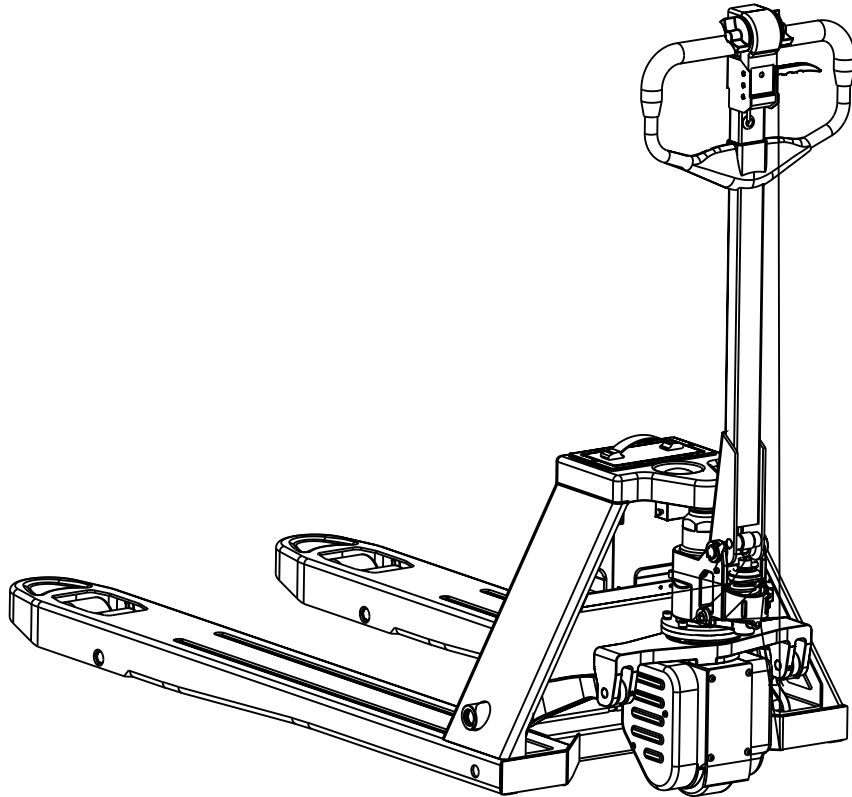
Preface

Thank you for using our semi-electric pallet truck!

This instruction manual will show you correct operation and maintaining skills for the semi-electric pallet truck. For the personal safety and correct operation, users have to read this instruction manual carefully before using the product.

As products are constantly improved, this manual might slightly differ from the actual semi-electric pallet truck you receive. The manual might also differ when your product is customized.

Our products are limited by <Regulations on Safety Supervision of Special Equipment>, users have to use our products in the specified area, like factory, warehouse, supermarket etc. If you have any problems, you can contact our sales department or our dealers.



EPT-S-2748-30-QL (SEMI-ELECTRIC PALLET TRUCK)

Warning!

In order to ensure personal safety and property, the following rules must be strictly observed.

The pallet truck will have hidden danger, if you ignore to maintain it usually. Sufficient maintenance facilities, professional personnel, and maintenance plans are required.

Semi-electric Pallet Truck usage, maintenance method and checking Rules:

1. Users have to check and do maintenance on regular basis.
2. Rules of parking
 - No parking on the ramp.
 - The forks must be lowered completely.
 - Turn off the emergency stop button, remove the key.
3. Before using the pallet truck
 - Users have to stand on the operational position.
 - Do not operate the handle or knobs before turning on power
 - Test lifting, steering, speed, operation, alarm and brake, to ensure all functions are normal.
4. Ensure the availability of firefighting facility in the workplace. Do not use flare to check battery and hydraulic system.
5. Check braking, driving, alarm and safety system on regular basis, maintain them in good working condition.
6. Keep the nameplate and warning stickers clean and readable.
7. Check and maintain lifting system regularly.
8. Check and maintain hydraulic system regularly. Ensure no oil leak of cylinder, hydraulic valve and other hydraulic system parts.
9. Park the semi-electric pallet truck in clean areas, to ensure the lowest possibility of fire.
10. Unauthorized modification is forbidden. Modification with manufacturer's consent should come with updated nameplate and warning stickers.

Usage Rules

The pallet truck is a flat ground transport equipment as mentioned in this instruction. It is used for lifting and transporting goods. Users have to operate and maintain according to instruction rules. Using the product for applications not included in the instruction might cause damage to users, equipment or other property. Overload or unbalanced loading must be avoided. Loading capacity should strictly follow instructions on the nameplate or capacity diagram. Do not use the pallet truck in the area with risk of fire or explosion, or place of corrosion and dust.

Responsibilities and obligations of users:

In the instruction, the user refer to any natural person or legal person who directly uses or appoints someone to use the pallet truck. In the lease agreement, the lessor (Equipment owner) and the lessee (User) must reach an agreement, who carries out the responsibilities and obligations.

In order to ensure user and other peoples safety, users have to use the pallet truck according to semi-electric pallet truck manual. Furthermore, users have to observe accident prevention regulations, other safety technology regulations, operation and maintain regulation. All users have to read and understand this instruction.

If user can not observe these regulations, the warranty period will lose efficacy acquiescently. We have no responsibility to bear the loss because of false operation by users or any other party.

Accessories Installation: Installing extra accessories that have impact on equipment function requires written approval from us. Some modification might require approval from local authorities. Result from local authorities don't represent ours

1. Semi-electric Pallet Truck Introduction

1.1 Usage:

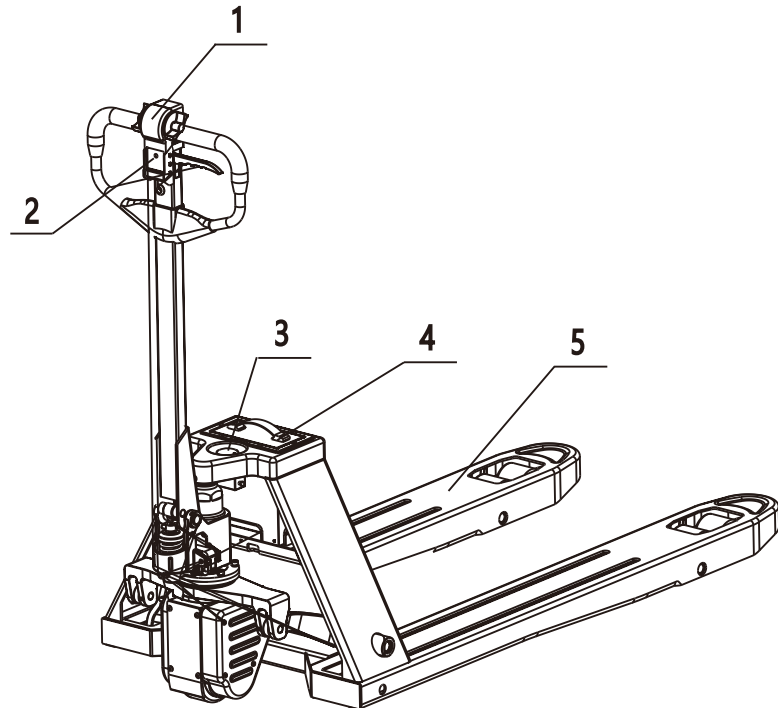
This semi-electric pallet truck series are designed for transporting on flat ground. It can be used for both open & closed pallets.

Temperature requirement

Working temperature range: 5 -40 degree Celsius .

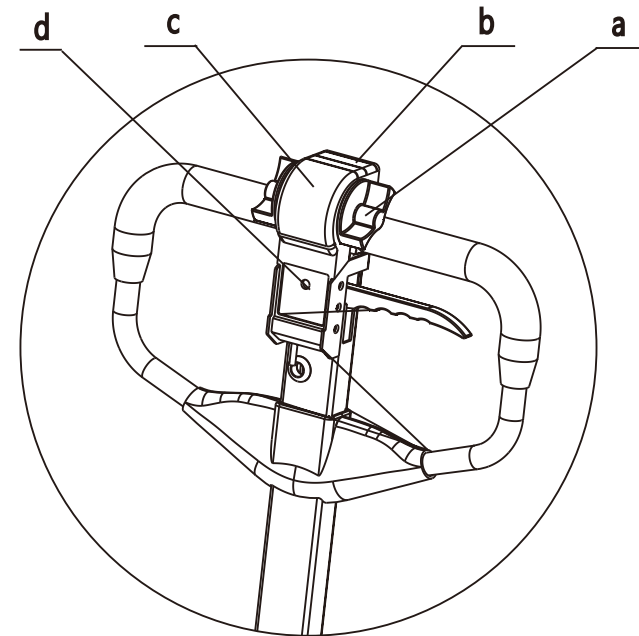
Anti-freezing parts must be applied if the pallet truck is used in cold room with temperature lower than 5 degree Celsius, or workplace with sharp change of temperature or moisture. This modification requires approval from us.

1.2 Semi-electric pallet truck units



Number	Item	Number	Item
1	Handle assembly	4	Lithium battery
2	Indication light	5	Chassis
3	Emergency stop button		

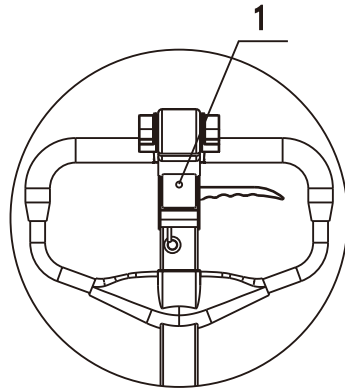
1.2.1 Handle Assembly



Ordinal	Item	Function
a	Stepped switch	Control forward and backward travel. Adjust travel speed
b	Horn button	Warning signal
c	Emergency reverser button cover	Prevent users from being hurt when pallet truck travels backward quickly
d	Power indicator	Show remaining power

1.2.2 Power Indicator

Different light colors stand for different electric power volume range.
As shown in the picture on the right :
Number 1 represents LED light.



LED light color & power volume:

When the truck is properly charged, LED light will be on after users switch on emergency stop button. Different color represents different electric power volume range:

Green, electric power volume range 100%-70%.

Blue, electric power volume range 70%-30%.

Red, electric power volume range 30%-10%.

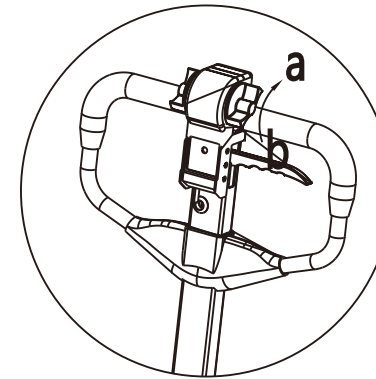
LED light twinkle, electric power volume range 10%-0%.

When the pallet truck working hours reach 200h, the LED light will start twinkle red, green, and blue by cycle. This lashing cycle takes one minute. Users have to maintain the pallet truck immediately.

Maintaining steps:

1. Check the screws. Fix the loose screws should there be any.
2. Check if driving chains needs lubrication
3. Check wheel abrasion, change wheels if need be.
4. Test the brake system. Adjust the clearance of the brake facings, if the clearance is too large.
5. Driving wheel shaft sleeve: It is necessary to change the shaft sleeve if it is too much abrasion.

How to cancel the LED Light indication when working time reaches 200h?



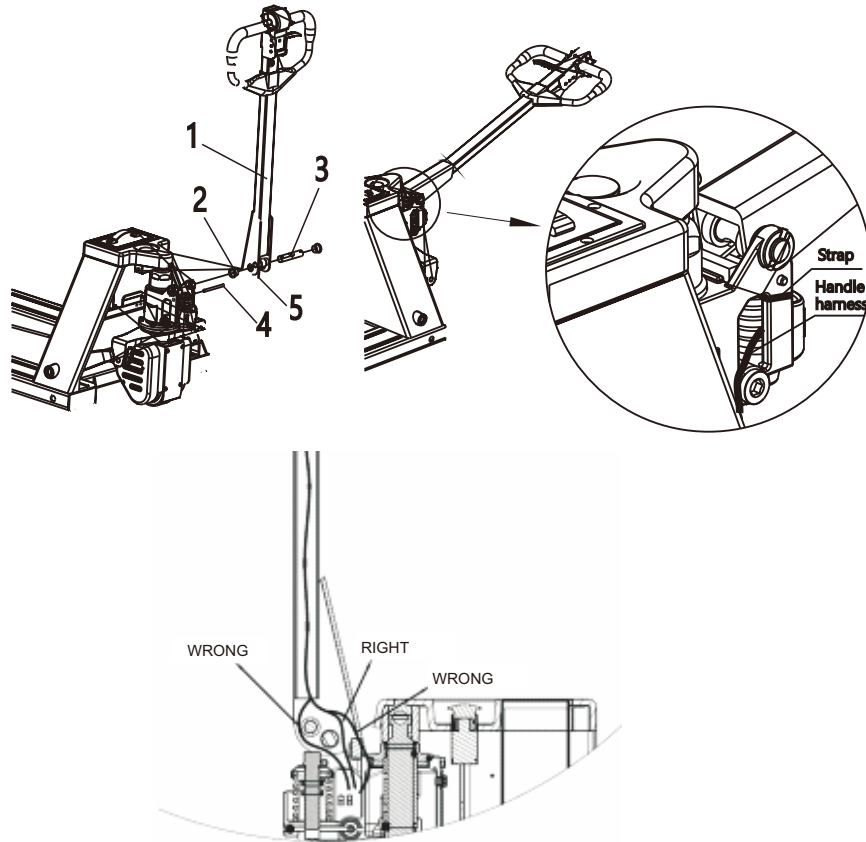
Press the emergency reverse button cover, and meanwhile turn the stepped switch toward a direction.

The 200h working hour light indication will be turned off.

1.2.3 Emergency Stop Button

Press the emergency stop button to cut off electric system, all electric functions stop work and truck will be forced to brake.

1.2.4 Handle Installing

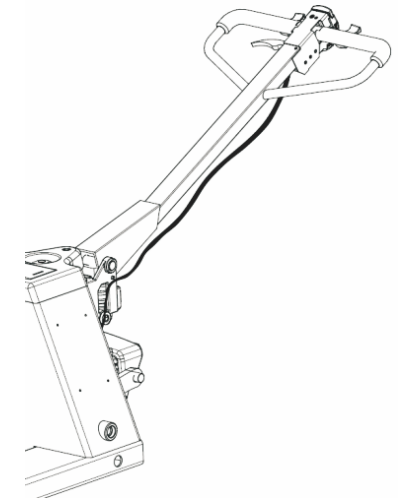
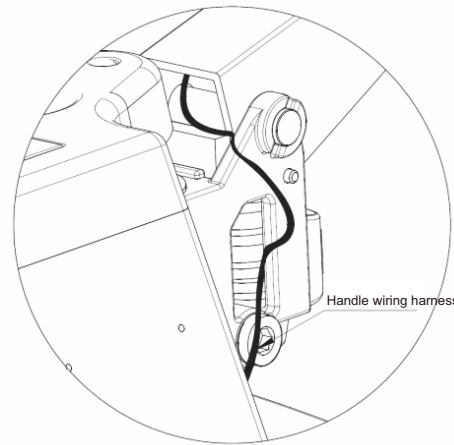


1. Handle(Picture No.1),match the holes of handle and hydraulic system.
2. Handle pins(Picture No.3), the spring safety pin should be well rested in the holes situated on each side of the pump housing.
3. Chain(Picture No.5)chain should be passed through the middle side hole of the handle pin and connected with the pump housing.
4. After above steps, pull the handle down to lowest position, remove the fixed spring safety pin (Picture No.4) carefully to complete handle installing.
5. Handle assembly wire Harness installing: wire harness pass through hand tube, the wire harness twine method should be same as the above pictures.

Wrong Wire Harness Twine Method

1.Wire harness passes through outside handle tube.

2.Wire harness passes through pump unit.



1.3 Nameplate and Item No. Instruction

Semi-electric pallet truck nameplate

SEMI-ELECTRIC PALLET TRUCK		CE
Model No.	Battery capacity(Ah)	
Capacity(Kg)	Selfweight without battery(Kg)	
Fork width(mm)	Serial number	
Fork length(mm)	MFG. YEAR	
NO.S2101		

4

Please offer the model number on the nameplate, if users want to consult after-sales technical service or purchase parts.

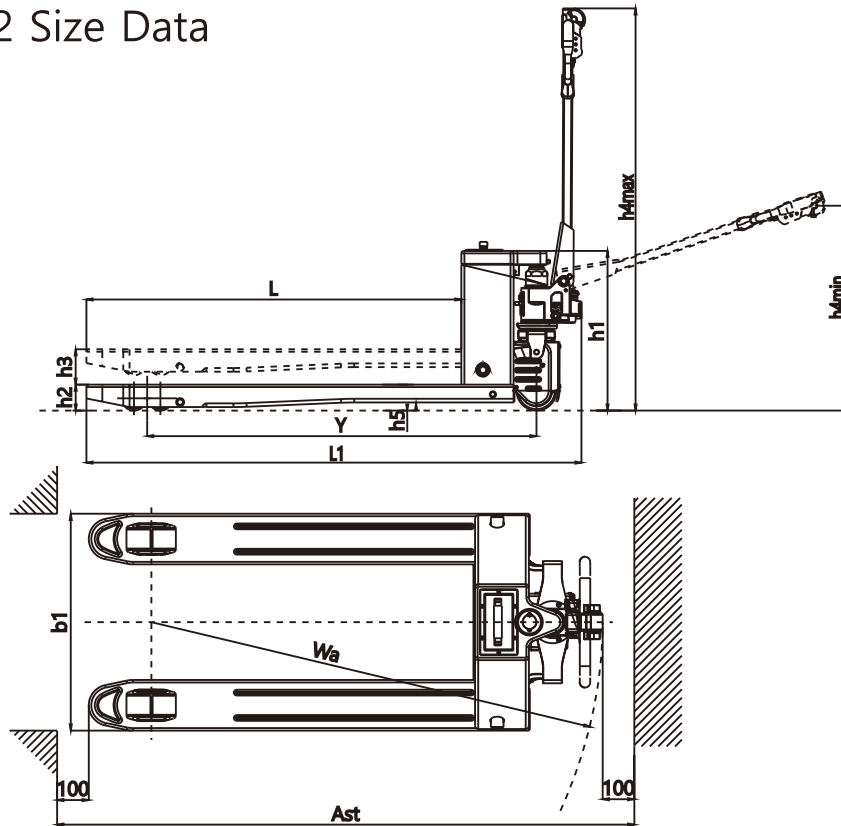
1.4 Pallet Truck Specifications

The following data is according to standard GB/T27542-2011, editor have rights to correct and update the data.

1.4.1 EPT-S-2748-30-QL Semi-Electric Pallet Truck Specifications:

No.	Item	Data	
1	Capacity Q	3,000	lbs
2	Load center C	23-5/8	inch
3	Travel speed	Laden	1.8 mph
		Unladen	2.1 mph
4	Gradeability (5 min)	Laden	2 %
		Unladen	3 %
5	Brake	Electromagnetic	
6	Service weight	With battery	270 lbs
7	Motor	Driving	DC0.45 Kw
		Lifting	
8	Wheel Type: Driving /Bearing wheels	PU/PU	
9	Driving Wheel Size(DIAxW)	Ø5.1x2.1	inch
10	Bearing Wheel Size(DIAxW)	3.1x2.75	inch
11	Lithium Battery	Voltage/ Capacity	24/20 V/Ah
		Weight	11 lbs

1.4.2 Size Data



Code	Item	Data	
Y	Wheel base	1267	mm
h3	Lifting height	200	mm
h2	Lowered height of fork	Min. 85	mm
h4	Height of tiller arm in driving position	Min. 785	mm
		Max. 1308	mm
L1	Overall length	1540/1610	mm
b1	Overall width	550/685	mm
S	Fork size	Thickness 5.8	mm
E		Width 160	mm
L		Length 1150/1220	mm
b1	Overall fork width	550/685	mm
h5	Clearance	27	mm
Wa	Min. Turning radius	1426	mm
Ast	Aisle Width	1000X1200	1912 mm
		800X1200	1872 mm

Transport & First Time Operation

2.1 Pallet Truck Transporting

Transporting, loading & unloading

1. Transporting equipment must bear the pallet truck weight.
2. Capacity of the transporting equipment must be bigger than pallet truck gross weight (with battery and wooden pallet weight).
3. The wooden pallet or box should be strong enough to bear the pallet truck weight, and big enough to pack it.
 - Park the pallet truck as instructed.
 - Truck forks should embed into the pallet completely to transport.

Notice!

- Avoid the fork legs were scratched by ground, when load the pallet truck into pallet.
- Avoid the pallet truck were scratched, please carry them on the flat ground.
- Avoid the pallet truck drop down, please lifting and lowering the pallet carefully.

2.2 First Time Operation

Pallet truck should be driven by battery power only.
Please check and test the pallet truck after transporting.

- Check if the equipment is complete in good working condition.
- Test if hydraulic system is working.
- Install the battery, avoid electric wires damage.
- Charge the battery.
- Wheels have ductility, it will have a little distortion after long time parking. This is normal. The wheels will restore to original shape after some time use

2.3 Running-in Period Notice

The running-in period is 100h. In the running-in period, the pallet truck cannot load too heavy things. Notices as the following shows:

1. Please charge the battery when the electric power is under 30%.
2. Maintain the pallet truck according to this instruction completely.
3. Do not drive, brake and turn the pallet truck abruptly
4. Change the oil and lube on schedule.
5. Loading weight should be limited in the 70~80% of capacity.

3. Operation

3.1 Safety Rules

Operation Authority

Operator should be trained how to use the pallet truck by specific department. The operator need passed the test of operation skill and emergency processing, must be authorized by user or owner.

Operator Responsibilities, Obligations and Regulations:

The operators should be trained operation rules and passed tests by the grantors who must authorize the operator to use the pallet truck.

The operators have obligations to learn and understand this instruction completely.

The operators have responsibility to operate the pallet truck according to relevant rules and regulations.

It is important that the operators have to put on protective boots before operating the pallet truck.

Authorization and Operation Limits

Do not operate the pallet truck except authorized person.

Do not use the pallet truck to carry and lift person.

Operators have responsibility of personal safety and pallet truck safety when they are operating the pallet truck.

Equipment problems process:

Please inform the supervisor when the pallet truck has any problems.

Example: Wheels abrasion and brake stop working etc. It must be used after repair.

Repair

Do not repair and refit the pallet truck without authorization, especially the switch and safety device.

Dangerous Area

Dangerous area is the area where person will be hurt. The main threats from pallet truck broken, bearing parts broken, driving, lifting & lowering goods.

Example: area where the goods or parts will drop down.

- People cannot be allowed in the dangerous area except operator.
- Dangerous area must has the warning signs.
- Please stop working when other people in the dangerous area.

Protective Devices & Warning Signs

Installing the protective devices and warning signs according to the regulations of this instruction.

3.2 Pallet Truck Operation

3.2.1 Preparing before use

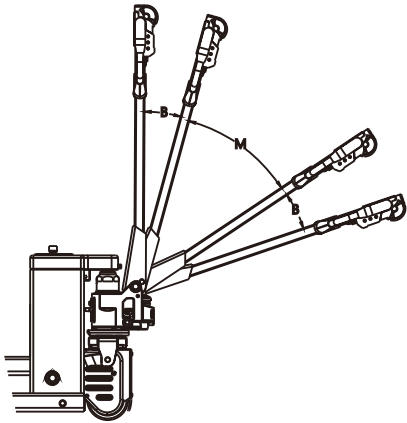
Operator must ensure there is no people in the dangerous area before working.

Checking and testing the pallet truck before working.

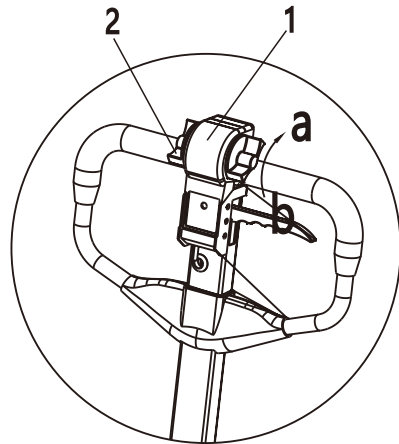
- Using the pallet truck after resolve any problems.

3.2.2 Travelling Driving

As the following picture shows (Picture 3.2-1), the driving power will be opened when pull-down the handle into the M driving area. Driving knobs (Picture 3.2-2) were turned to a is backward driving, b is forward driving. The knobs turning angle is bigger, the driving speed is bigger.



Picture 3.2-1



Picture 3.2-2

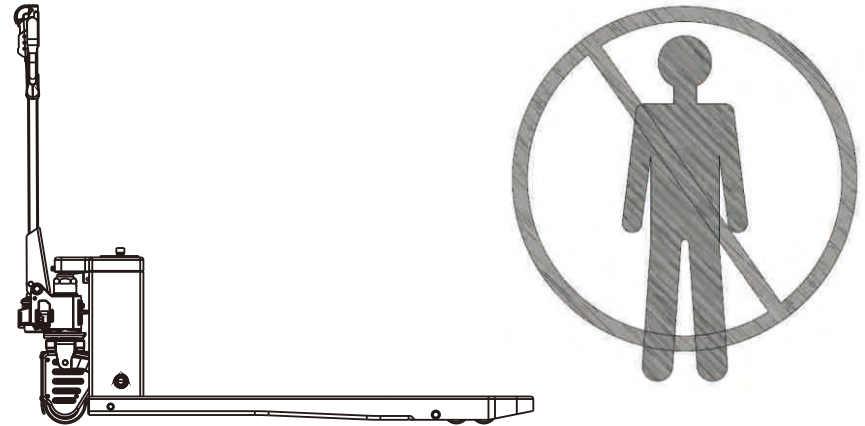
Handle Vertical Driving

It is a function for working in narrow aisle and corner. Press emergency reverser button and driving knob to forward at same time.

Cancel Vertical Driving

Press the emergency stop button to reset the electric power.

Warning!



People cannot be allowed to stand on the pallet truck (or Forks) front, when open the vertical driving function. Pallet truck will travel while person press the emergency reverser button or turn the driving knob.

Steering

Pull the handle to left side or right side.

Braking

Emergency Stop Button

Press the emergency stop button, all of electric devices will stop working.

Forced Brake

Method 1: Release the handle.

Method 2: Pull-down the handle into the B range (Picture 3.2-1).

Method 3: Pull-down the handle to lowest position.

Notice !

If the pallet truck still move slowly when the handle in the forced brake position, it is a problem, truck should be fixed immediately.

Electric Regenerative Braking

Release the driving knob, the speed will be 0 km/h.

Notice!

The driving knob should back to original position rapidly while it was released. If not, there are some problems.

Plug Braking

Turning the driving knob to reversed side, the pallet truck stop until begin to travel reversed side.

Notice !

For reference only, please take the forced braking or plug braking when pallet truck threaten safety.

3.2.3 Pick & Place Goods

It is dangerous that the goods Was stacked irregularly.

Notice !

Before tacking the goods, please confirm the goods with good pallets. Weight not more than the load capacity, do not take the good in longer side.

-Please inform the person to leave the dangerous area of pallet truck. Operator must stop working if someone in the dangerous area.

-Pallet truck was used to transport regular packing goods. Please take the protective measures when the goods drop down

-Do not transport goods by broken loading equipment (Example: Pallet, pallet truck etc.)

-Do not close the equipment when it was lifting.

-Not allow person enter the bearing parts.

-Do not use the pallet truck to lift person.

-Forks should be touch the correct Position of the goods.

Notice !

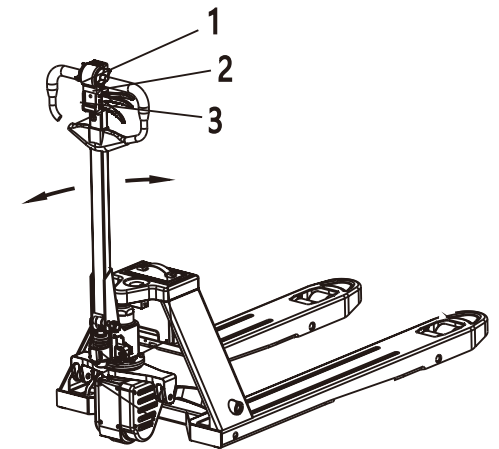
Do not lift the forks to highest frequently that the maintain cycle will be shorten.

Lifting

As the picture shows (3.2-3), press the trigger to up position 3. Move handle up and down until fork reach enough height.

Lowering

Pull the trigger to down position 1, then press it to middle position 2 until lower the forks to lowest Position.



3.2.4 Parking Regulation

Please park the pallet truck in the safety area when you leave.

Keep the forks on lowest position.

Press the emergency stop button

And take off the switch keys.

Notice !

Do not park on the ramp.

Battery Usage & Maintenance

4.1 Safety Instructions

4.1.1 Battery System Safety

Failure to operate in accordance with installation and use methods in this manual might cause threat to your life and property.

Avoid fire

- Do not expose the lithium battery to an environment over 60 degree Celsius
- Do not put the lithium battery near any heat source, eg. stove, fireplace etc.
- Avoid direct sunlight
- Do not place the lithium battery near flammable and explosive objects.

Avoid explosion

- Prohibit strong impact
- Prohibit piercing
- Prohibit throwing into fire

Avoid electricity leakage

- Do not open the lithium battery
- Do not touch the lithium battery with wet hands
- Do not expose the lithium battery to moisture or liquids
- Do not place the lithium battery within easy reach of children or animals

Avoid damage to battery system

- Prohibit contact with liquids and corrosive chemicals
- Prohibit high temperature and high pressure
- Prohibit stamping, dismantling, or hitting

4.2 Installation and Operating

4.2.1 Installation Environment

The environmental temperature of installing lithium battery should be between 0 degree and 40 degree, with no excessive humidity, to ensure the best operating environment;

Avoid big temperature gap between two sides of the battery (5degree Maximal)

4.2.2 Technical Parameters

Item	
Voltage	24V
Capacity	20Ah
Charging temperature	0~45°C
Discharging temperature	-20~55°C
Storage temperature	-40~55°C

4.3 Emergency Handling

Emergencies handling methods as below

4.3.1 Fire

If the product gets smoke and fire, please leave the site immediately. Disassembling or unauthorized repairing is strictly prohibited. Please contact our company or the authorized dealer for technical support as soon as possible.

4.3.2 Water

If the product becomes immersed in water, please leave the site immediately. Disassembling or unauthorized repairing is strictly prohibited. Please contact our company or the authorized dealer for technical support as soon as possible.

4.3.3 Unusual Smell

If the battery produces a distinct unusual smell, please remove the battery pack immediately. Avoid contact with leaked liquids and gases. Any sort of contact requires immediate cleaning up.

4.3.4 Necessary Safety Equipment

Self-contained breathing apparatus and personal protective equipment
Heptafluoride propane fire extinguishing system

4.4 Supporting facilities and Precautions

4.4.1 Charging Requirements

Battery has built-in protection system, when the system has occurred discharge, the internal MOS will cut off the input, showing a high impedance state (OD), it need to charge the charger to activate. The maximum charge voltage of charger is 29V, use three-stage constant voltage charging, charging cut-off current is 0.3~0.5A.

4. 4. 2 Precautions

1.The battery is prohibited to charge in less than 0 degrees Celsius otherwise it will cause serious battery recession, or even a security incident.

2. The battery is prohibited to charge at low temperatures, but can use in not less than -20 degrees Celsius environment. But the capacity will be inadequate, this is a normal phenomenon.

Usage environment	Capacity
25°C	100%
0°C	90%
-20°C	70%
-30°C	50%

Note: Although the battery can be discharged at very low temperatures, but during the process of taking the battery out of charging is easy to produce condensate water droplets, will break the battery internal electronic devices to cause unpredictable dangers. If take from the cold environment, it need to wait at least 4 hours then charging.

3. The battery protection class is IP20, when install in the machine is able to achieve IP50, so please do not wash the battery directly with water.

4. Lithium battery assembly if no use for a long time, please do not fully charged to storage, as far as possible to keep in half electric state Storage (battery assembly voltage between 24.5 ~ 26V).

5. LED Trouble Shooting

When controller detects failure, it stops working. LED gives fault identification codes continuously until fault is corrected.

The LED uses two-digit code.

For example: Code 1.1 appears as below.



Code 2.1 appears as below



LED Flashes one second flash interval

Fault Code	Failure	Possible Reason
1,1	Wrong settings	Settings were wrongly made
1,2	Overcurrent	Controller overcurrent, motor short circuit, controller overcurrent protection
1,4	M + current 0 bit error detection	Controller is damaged
1,5	M - current 0 bit error detection	Controller is damaged
1,8	Emergency reverse switch failure	Emergency reverse switch is depressed when turned on, or the switch is damaged
2,1	Potentiometer failure	Accelerated potentiometer damage
2,2	Overheat current limit	Controller is overheated, thus in a current-limited state
2,3	Overheating protection	Controller is overheated and stops working
2,6	Motor locked rotor	Motor locked rotor protection
3,1	Battery voltage low current limit	Low battery voltage, in current limit working state
3,2	Low battery voltage protection	Low battery voltage, in shutdown state
3,3	Over high battery voltage	Over high battery voltage
3,7	Electromagnetic brake failure	Electromagnetic brake damage

EPT-S-2748-30-QL Series

Quality Parts

Semi-Electric Pallet Truck

Warning Read and observe all warnings on this unit before operating it.

Warning DO NOT operate this equipment unless all factory installed guards and shields are properly secured in place.

PARTS ORDERING INSTRUCTIONS

HOW TO ORDER

When ordering the parts, please supply part number, parts name, quantity, model and serial number of your machine. Supplying this information will assure prompt, efficient handling of your order.

Since your dealer carries many parts in stock and maintains up-to-date prices on all parts, he will be able to process your order immediately. If, for some reasons, the parts is not in stock, he will order it from the factory. In either event, he maintains a current file of service manuals, which give all available parts ordering or technical information.

WHERE TO ORDER

Always order parts from the dealer who sold you the machine. If it is necessary for the dealer to order parts from the factory, he is able to get prompt service for you. Parts are shipped in accordance with shipping instructions given on the order.

INSTRUCTION FOR RETURNING PARTS

Under NO CIRCUMSTANCES parts will be accepted at the factory for credit without prior approval. We can not accept responsibility for parts returned without authorization.

If you have some parts which must be returned, contact your dealer. If he believes parts be returned, he will arrange for authorization to return the parts.

CHANGES

When changes are made to the machine, revised pages for this manual will be issued. These pages must be inserted in your parts manual as soon as they are received. Failure to keep your parts manuals up to date will result in confusion and may cause you to order wrong parts.

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2017-9 1st EDITION

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Fig. 1 Handle assembly

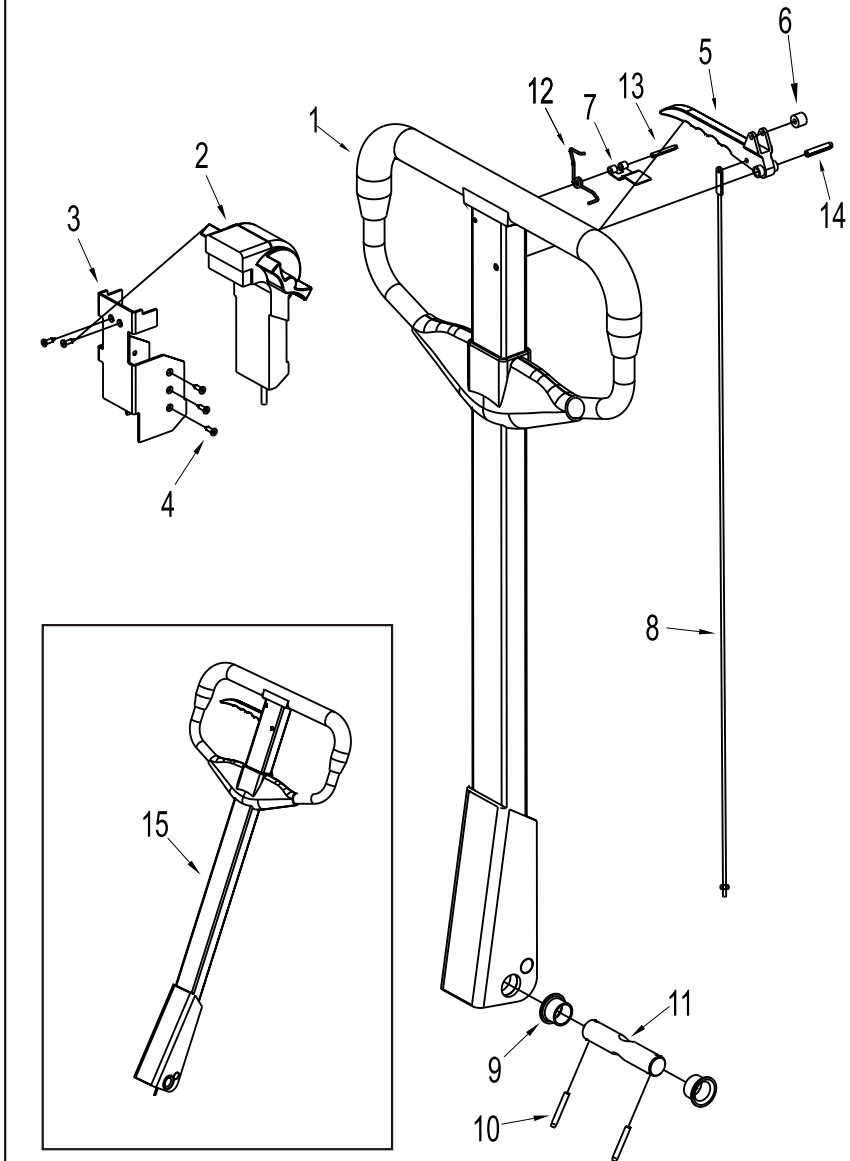


Fig.1 Handle assembly

ITEM #	PART#	NAME	#FOR ASSY.
1	30101029	Handle body	1
2	30101030	Switch box assembly	1
3	30102086	Switch box bracket	1
4	20301001	Screw	8
5	30102087	Relief handle	1
6	30102088	Positioning roller	1
7	30102089	Coach Spring	1
8	30102090	Chain	1
9	21402003	Self-lubricating bearing	2
10	20901001	Spring Pin	2
11	30102020	Shaft	1
12	30102091	Spring	1
13	20901005	Spring Pin	1
14	20901006	Spring Pin	1
15	30101022	Handle assembly	1

Fig. 2 Driving system

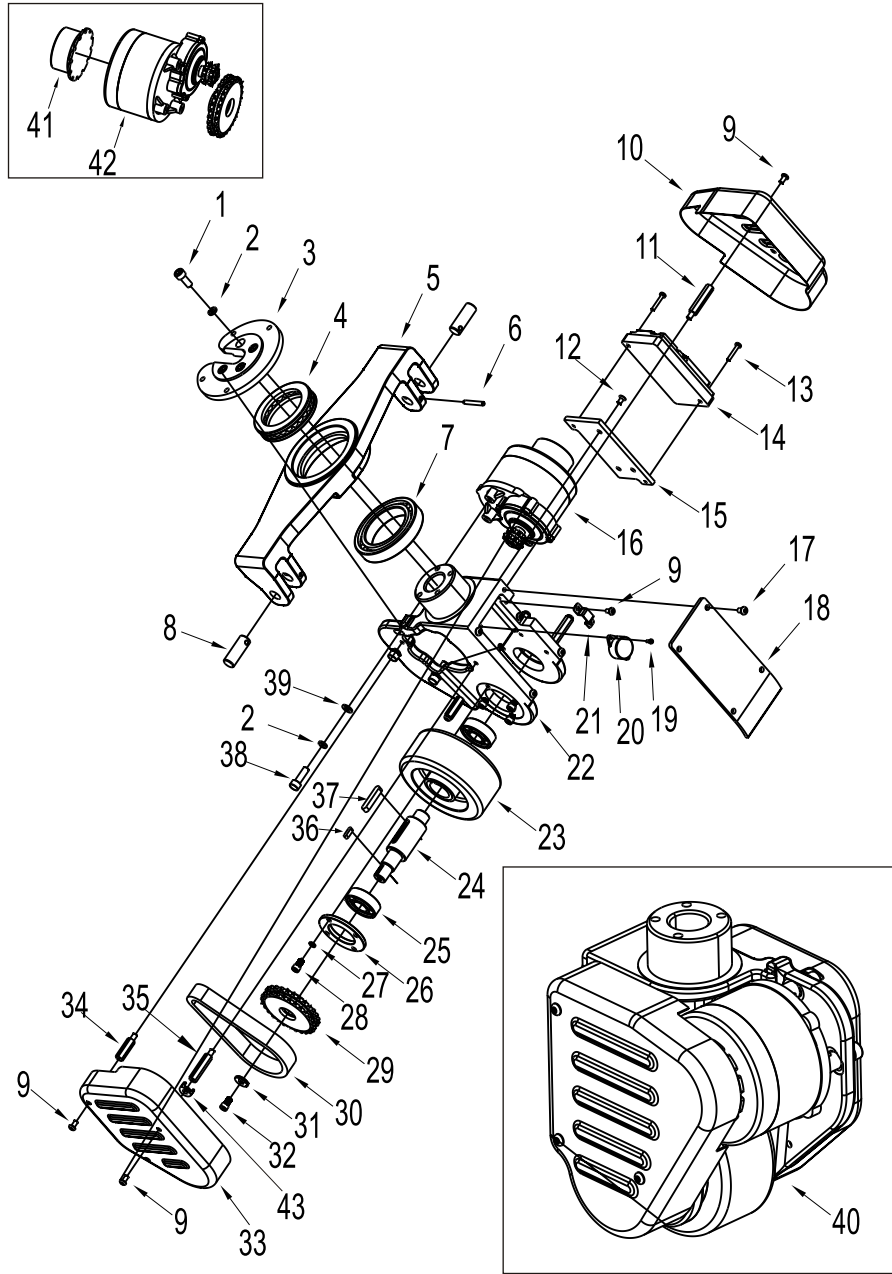


Fig. 2 Driving system

ITEM #	PART#	NAME	#FOR ASSY.
1	20101801	Screw	4
2	20601001	Washer	7
3	30102008	Connecting plate	1
4	20503001	Bearing	1
5	30102006	Connecting frame	1
6	20901002	Spring pin	2
7	20501002	Bearing	1
8	30102007	Axle	2
9	20102501	Screw	8
10	30102004	Right cover	1
11	30102012	Connecting post	3
12	20103501	Screw	3
13	20102401	Screw	2
14	10301004	Controller	1
15	30102013	Mounting plate	1
16	30101003	Motor assembly	1
17	20102601	Screw	4
18	30102003	Cover plate	1
19	20302003	Screw	2
20	10301001	Buzzer	1
21	30102009	Plate	1
22	30102002	Driving wheel support	1
23	30102015	Driving wheel	1
24	30102016	Axle	1
25	20501001	Bearing	2
26	30102083	Cover plate	1
27	20601002	Washer	4
28	20101602	Screw	4
29	30102092	Sprocket	1
30	21301001	Chain	1
31	30102010	Washer	1
32	20101601	Screw	1
33	30102005	Left cover plate	1
34	30102085	Connecting post 3	2
35	30102084	Connecting post 2	1
36	30102011	Key	1
37	30102014	Key	1
38	20101803	Screw	3
39	20701001	Washer	3
40	30101024	Drive assembly	1
41	30101027	Brake assy	1
42	30101028	Motor	1
43	30102111	Anti noise pad	6

Fig. 3 Hydraulic system-(standard pump)

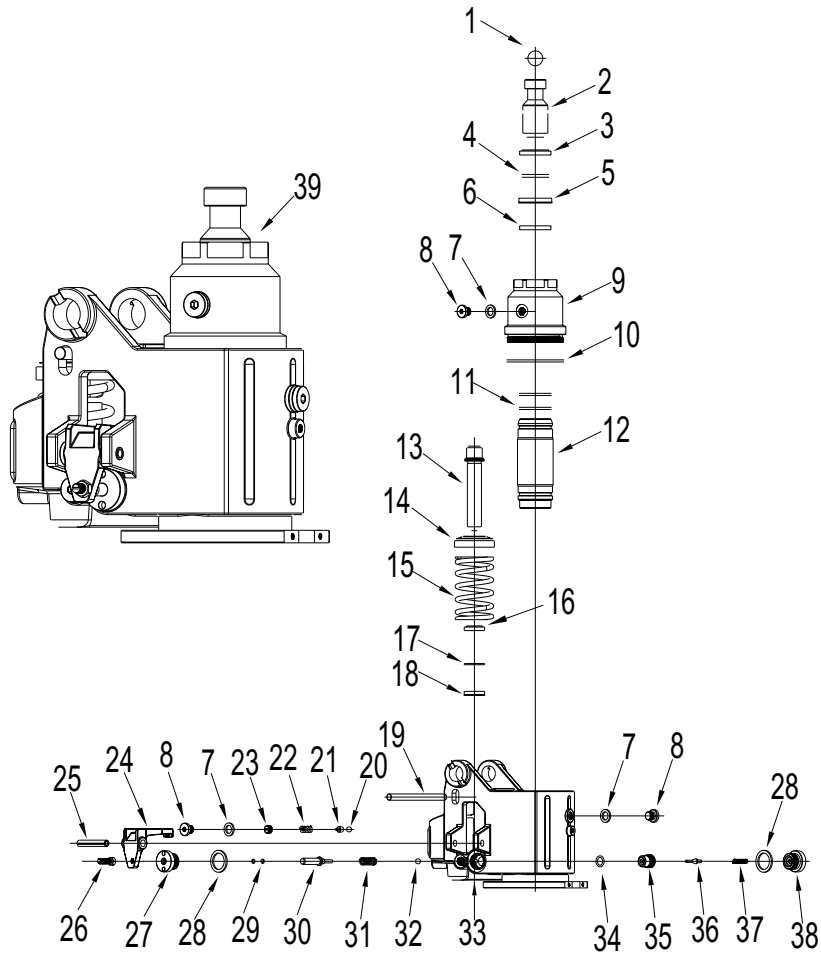


Fig. 3 Hydraulic system-(standard pump)

ITEM #	PART#	NAME	#FOR ASSY.
1	30102146	Steel ball	1
2	30102147	Piston rod	1
3	30102148	Dust ring	1
4	30102149	O-ring	1
5	30102150	Seal washer	1
6	30102151	Wear-resistant belt	1
7	30102152	Washer	3
8	30102153	Plug	3
9	30102154	Outer cylinder	1
10	30102155	O-ring	1
11	30102156	O-ring	2
12	30102157	Inner cylinder	1
13	30102158	Small pump core	1
14	30102159	Spring cap	1
15	30102160	Pump core spring	1
16	30102161	Dust ring	1
17	30102162	Sealing washer	1
18	30102163	Seal washer	1
19	30102164	Positioning rod	1
20	30102165	Steel ball	1
21	30102166	Safety valve seat	1
22	30102167	Spring	1
23	30102168	Screw	1
24	30102169	Switch board	1
25	30102170	Spring pin	1
26	30102171	Screw	1
27	30102172	Nut	1
28	30102173	Washer	2
29	30102174	O-ring	2
30	30102175	Push rod	1
31	30102176	Spring	1
32	30102177	Steel ball	1
33	30102178	Oil pump body	1
34	30102179	O-ring	1
35	30102180	Valve body	1
36	30102181	Spool	1
37	30102182	Spring	1
38	30102183	Screw	1
39	30101005	Hydraulic system	1

Fig.4 Hydraulic system -2(Quick-lift pump)

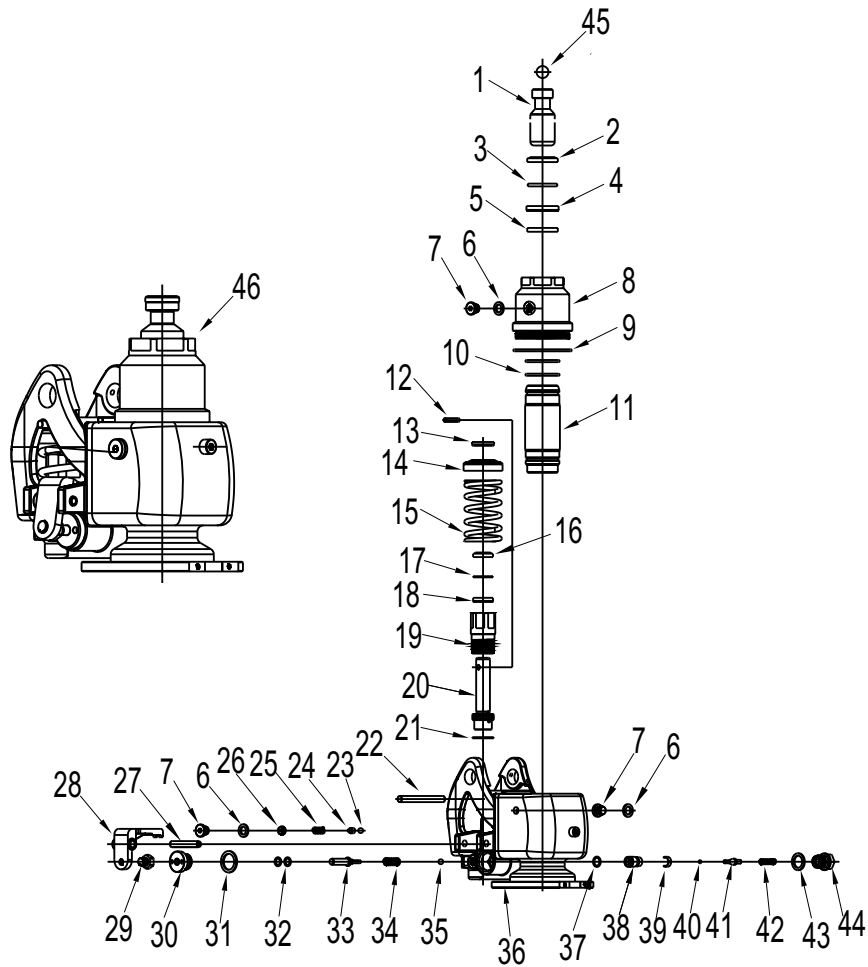


Fig.4 Hydraulic system -2(Quick-lift pump)

ITEM #	PART#	NAME	#FOR ASSY.
1	30102184	Piston rod	1
2	30102185	Dust ring	1
3	30102186	O-ring	1
4	30102187	Seal washer	1
5	30102188	Wear-resistant belt	1
6	30102152	Washer	3
7	30102153	Plug	3
8	30102189	Outer cylinder	1
9	30102190	O-ring	1
10	30102191	O-ring	2
11	30102192	Inner cylinder	1
12	30102193	Cylindrical pin	1
13	30102194	Spring cap	1
14	30102159	Spring cap	1
15	30102195	Pump core spring	1
16	30102161	Dust ring	1
17	30102162	Sealing washer	1
18	30102163	Seal washer	1
19	30102196	Inner cylinder	1
20	30102197	Small pump core	1
21	30102198	Copper mat	1
22	30102164	Positioning rod	1
23	30102165	Steel ball	1
24	30102199	Safety valve seat	1
25	30102167	Spring	1
26	30102200	Screw	1
27	30102170	Spring pin	1
28	30102169	Switch board	1
29	30102201	Screw	1
30	30102172	Nut	1
31	30102173	Washer	1
32	30102174	O-ring	2
33	30102175	Push rod	1
34	30102176	Spring	1
35	30102177	Steel ball	1
36	30102202	Oil pump body	1
37	30102203	O-ring	1
38	30102204	Valve body	1

Fig.4 Hydraulic system -2(Quick-lift pump)

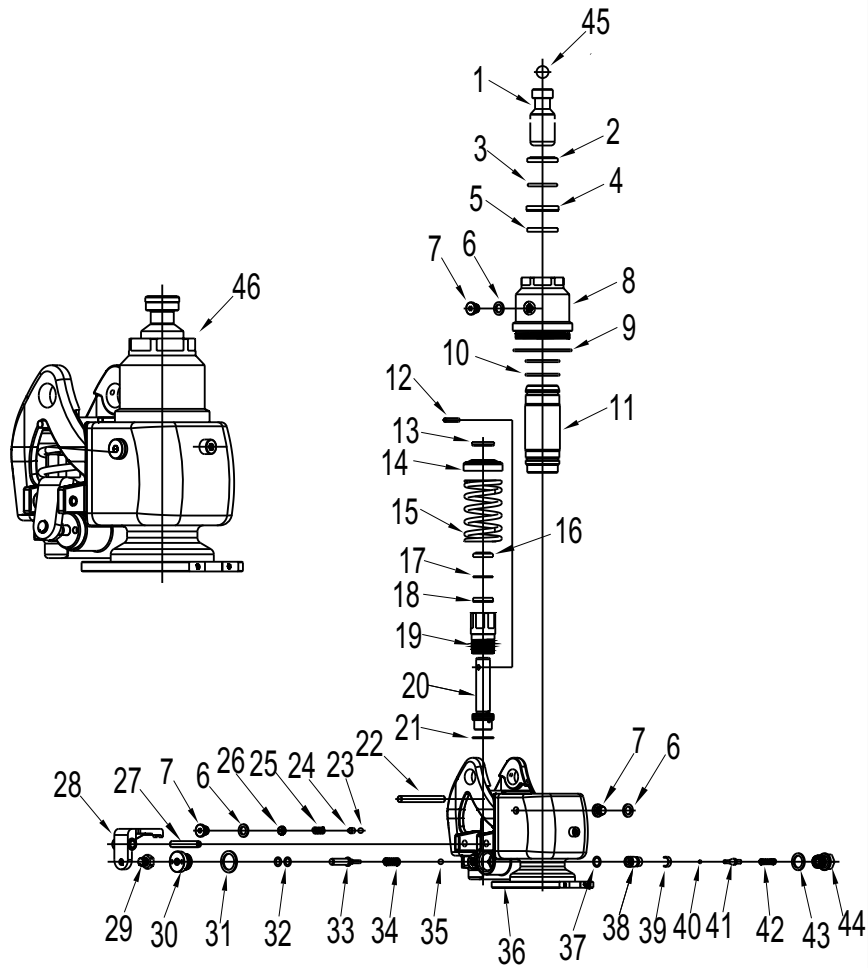


Fig.4 Hydraulic system -2(Quick-lift pump)

ITEM #	PART#	NAME	#FOR ASSY.
39	30102205	Slow drop shrapnel	1
40	30102206	Screw	1
41	30102207	Spool	1
42	30102208	Spring	1
43	30102209	Washer	1
44	30102210	Screw	1
45	30102146	Steel ball	1
46	30101046	Hydraulic system	1

Fig. 5 Frame

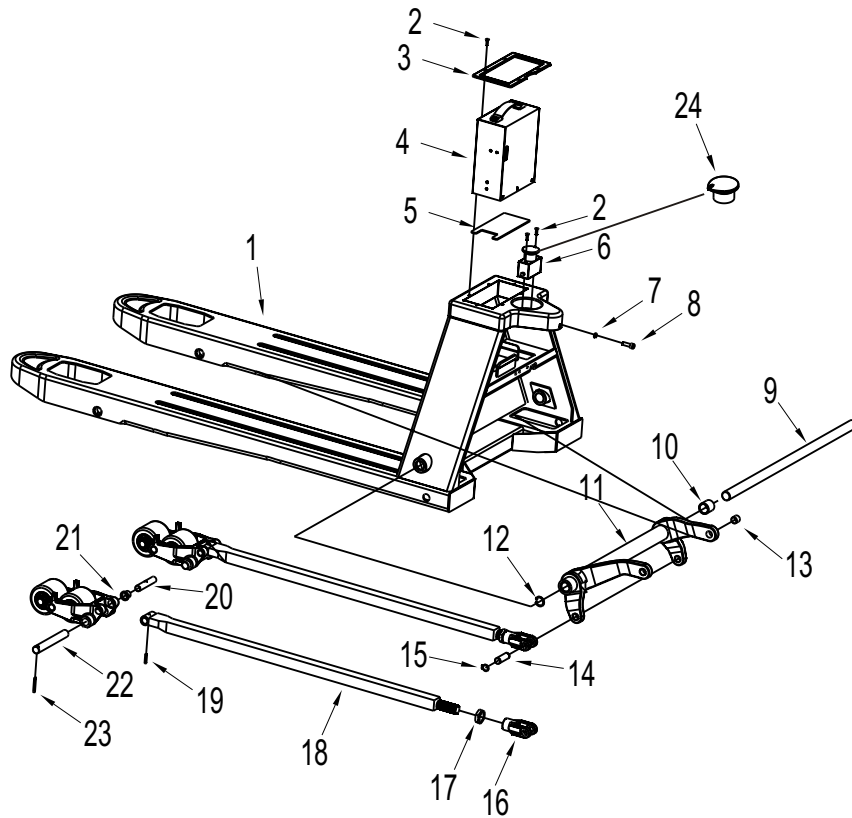


Fig. 5 Frame

ITEM			#FOR
#	PART#	NAME	ASSY.
1	30101019	Frame	1
2	20103501	Screw	2
3	30102023	Decorative board	1
4	10301003	Battery (20Ah Li)	1
5	30102022	Block	1
6	10301002	Emergency switch	1
7	20601001	Washer	1
8	20101802	Screw	1
9	30102021	Long axis550	1
	30102031	Long axis685	1
10	21401001	Bearing	2
11	30101016	Bracket arm550	1
	30101017	Bracket arm685	1
12	20802002	Ring	2
13	21401002	Bearing	4
14	30102024	Axle	2
15	20801001	Ring	4
16	30102059	Joint	2
17	20403001	Nut	2
18	30101014	Connecting rod1150	2
	30101015	Connecting rod1220	2
19	20901004	Spring pin	2
20	30102058	Axle	2
21	21402002	Bearing	4
22	30102025	Axle	2
23	20901002	Spring pin	2
24	10301008	Emergency switch cover	1

Fig. 6 Double loadingwheel assembly

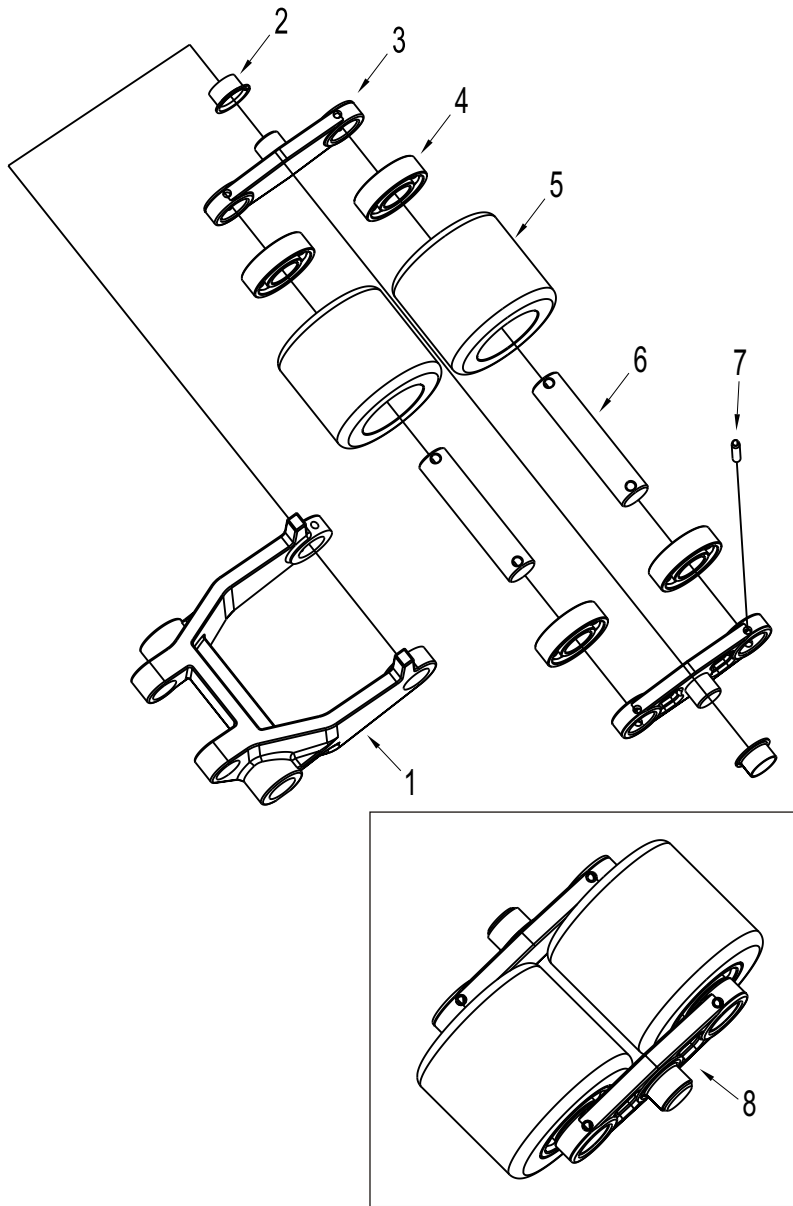


Fig. 6 Double loadingwheel assembly

ITEM			
#	PART#	NAME	#FOR ASSY.
1	30102057	Wheel Fork	2
2	21402001	Self-lubricating bearing	4
3	30102027	Splint	4
4	20501001	Bearing	8
5	30102029	Double loading PU wheel	4
6	30102028	Axle	4
7	20901003	Spring pin	8
8	30101025	Double loading wheel assy	2

Fig. 7 Single loading wheel assembly

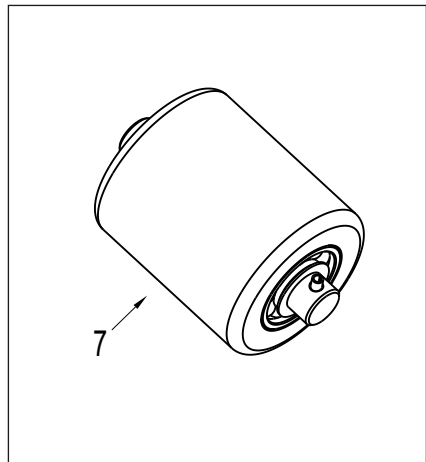
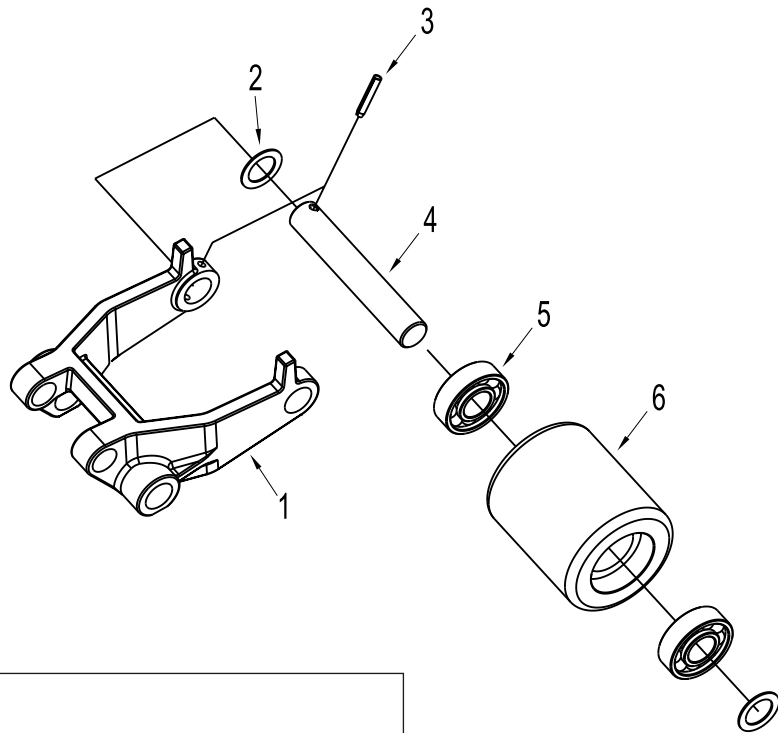


Fig. 7 Single loading wheel assembly

ITEM			#FOR
#	PART#	NAME	ASSY.
1	30102057	Wheel Fork	2
2	30102082	Washer	4
3	20901003	Spring pin	2
4	30102080	Axle	2
5	20501001	Bearing	4
6	30102081	Single loading wheel	2
7	30101026	Single loading wheel	2

Fig. 8 Charger

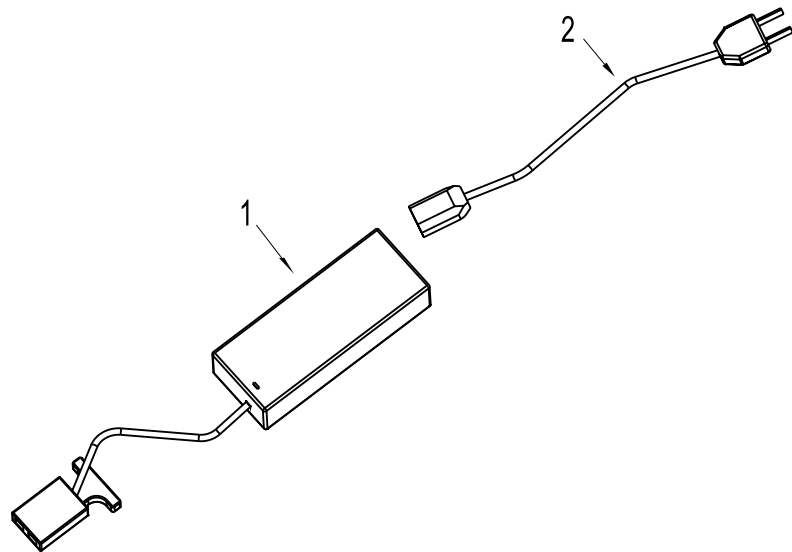


Fig. 8 Charger

ITEM #	PART#	NAME	#FOR ASSY.
1	10301005	Charger	1
	10301006	Charger	1
2	10302002	Plug (European standard)	1
	10302003	Plug (Australian Standard National standard)	1
	10302001	Plug (American Standard)	1
	10302004	Plug (British Standard)	1