



INSTRUCTIONS MANUAL

Electric order picker

KSE3000



Please read this manual before using the product and follow the instructions it contains!

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FOREWORD

Congratulations on the purchase of your new order picker. The KSE3000 has been manufactured from high quality materials, specially designed for durable and reliable use. For your own safety and for the correct operation of the reciprocator, be sure to read and follow these operating instructions before commissioning. Keep these operating instructions. Check the KSE3000 for transport damage. Damaged reciprocators must not be pulled into use. The order picking stacker is used to retrieve and transport order picking goods weighing up to 198.42 lbs. Improper handling may result in injury or damage to the reciprocator. Any liability for damages resulting from the improper use of the KSE3000 or the disregard of specifications and rules of conduct of this operating manual is excluded. The operator is responsible for ensuring correct use by trained and authorized personnel.

DEFINITIONS

AUTHORIZED PERSON

Trained and authorized personnel who use this transport equipment, prepare for the activity and carry out appropriate, as well as sufficient instructions for operators. These instructions refer to:

1. Mechanics and auxiliary equipment of the lifting device
2. Maintenance of fluid quality and filter replacement
3. Protective devices
4. Causes and prevention of accidents
5. Tasks of the operator

OPERATOR

Trained personnel authorized by the authorized personnel to use this reciprocator for, among other things, safe use, setup, trial lifts, maintenance, cleaning, avoiding all hazards. Hazards include, but are not limited to, driving too fast in hazardous areas, uneven loading, driving with insufficient visibility, insufficient daily inspection, and improper use.

INTENDED USE

Use this lifting device in accordance with the information provided in these operating instructions.

LIFTING DEVICE

This order picker with additional equipment.

PEE

Personal protective equipment, such as hard helmets, safety glasses, hearing protection, safety shoes, protective gloves, protective clothing, etc.




REASONABLY FORESEEABLE MISAPPLICATION

Use of this transportation device in a manner not envisioned by the constructor, but which may result from readily predictable human behavior.

TARGET GROUP

Group of persons for whom these operating instructions are intended by the manufacturer (authorized person, operator).

USED MARKINGS

Image	Category	Explanation
	Warning	Beware of electric shock
	Warning	Caution against falling parts
	Warning	Correct connection of batteries

SAFETY WARNINGS

- Be sure to read the warning signs on the lifting device and the instructions in this manual before use.
- Only operate the lifting device if you are familiar with it and have received detailed instruction.
- Only adults in full possession of their physical and mental faculties may operate the lifting device.
- Only use the lifting device when you have checked that it is in perfect condition. Pay particular attention to the chains, wheels, drawbar, chassis, control unit, mast, battery, etc.
- Do not bypass the safety devices under any circumstances. These are incorporated for the prevention of operational accidents and ensure safe use.
- Drive slowly and carefully in confined areas and with loads. Keep an eye on the travel path at all times. Do not drive in inadequate lighting.
- Operation must be in at least 50 lux of illumination.
- Drive only on the designated travel lanes of your operation.
- Do not use on heavily soiled floors or in explosive environments.
- Use only on level ground. Do not perform work on slopes.
- The lifting device is only suitable for indoor use.
- Do not use the lifting device in environments that are particularly prone to corrosion.
- It is prohibited to transport persons on the storage platform.
- When lifting the platform, make sure that no one is standing or walking underneath it.
- Wear suitable PPE during use.
- Bystanders should maintain a safety distance of 23.62" when goods are being transported / lifted.
- Never press the lifting button while the lifting device is moving.
- The center of gravity of the goods should be in the middle of the storage platform.
- Observe the goods during unloading/loading and transport. If the goods become unstable and threaten to fall / tip over, immediately stop operation with the emergency stop button.
- Do not load beyond the maximum capacity.
- Suitable for indoor operation at a room temperature between - 4 °F and + 104 °F.
- Store the lifting device in a dry indoor space with usual room temperature. After use, lower the platforms completely and do not leave any loads on them.
- Park the device on a level surface. Do not park it on slopes or ramps.
- Perform regular maintenance and servicing according to the checklist.
- Charging the battery should be carried out in a dry and ventilated place and away from open fire.

- Comply with country-specific standards and regulations.
- No warranty on modified items. Altering or modifying the lifting device is only permitted with the written consent of the manufacturer.

TECHNICAL DATA

GENERAL

Type	Unit	Value
Brand		SolidHub
Model		KSE3000
Max. load standing platform	lbs	286.60
Max. load storage platform	lbs	198.42
Max. load on lower level	lbs	330.69
Operating weight with battery	lbs	1653.46
Noise level	dB (A)	≤ 70

DIMENSIONS

Type	Unit	Value
Width	"	29.53
Depth	"	59.06
Height	"	62.60 - 167.52
Max. stand height	"	118.11
Min. aisle width	"	68.90
Stand platform size	"	14.96 x 19.29
Storage platform size	"	19.69 x 27.56
Working height	"	196.85
Min. ground clearance	"	2.56
Wheelbase	"	45.08

WHEELS

Type	Unit	Value
Material		PU
Tire size front	"	7.09 x 1.97
Tire size rear	"	9.84 x 2.36
Quantity (front / rear)		2 / 2

PERFORMANCE

Type	Unit	Value
Traction motor	kW	0.5
Hoist motor	kW	2.2
Travel speed	m/h	0.75 – 2.80
Lifting speed	"/s	5.51
Lowering speed	"/s	5.12
Gradeability	%	5
Brake type		Electromagnetic
Control type		Electric DC

BATTERY

Type	Unit	Value
Rated voltage	V	24
Rated capacity	Ah	105
Operating time	h	4
Charging time	h	8
Width	"	10.24
Depth	"	6.61
Height	"	8.54
Weight	lbs	57.32

MAIN COMPONENTS AT A GLANCE



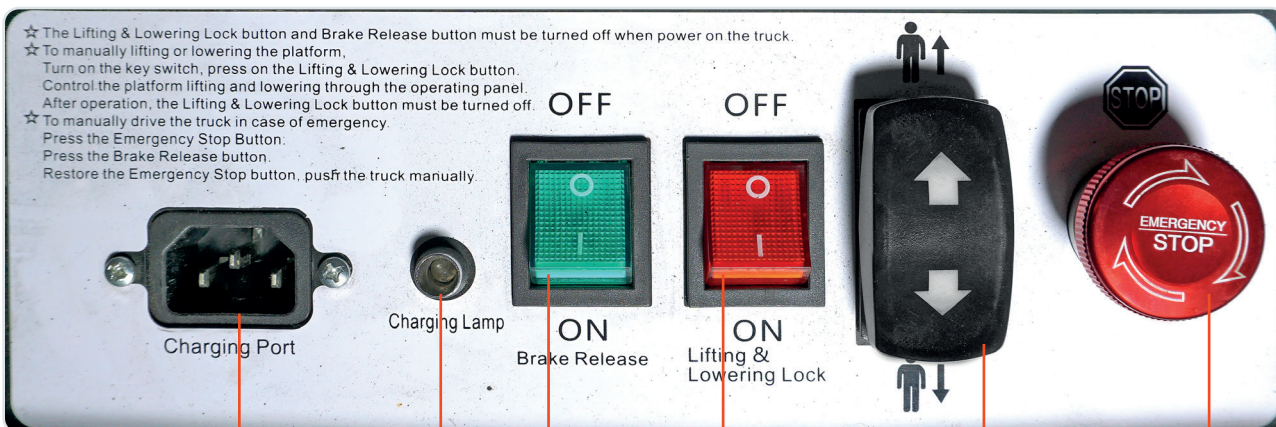
No.	Description
1	Swing door / safety bar
2	Railing
3	Standing platform
4	Drive rollers
5	Swivel castors
6	Front control unit
7	Storage platform below
8	Mast
9	Storage platform top
10	Drawbar control
11	Ignition lock with key
12	Charge level indicator
13	Speed toggle switch
14	Steering switch
15	Acceleration switch
16	Horn
17	Lift switch
18	Emergency stop switch
19	Charging socket
20	Charging lamp
21	Parking brake drive motor
22	Parking brake lifting motor
23	Lifting switch
24	Emergency stop switch



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OPERATING INSTRUCTIONS



Carry out a daily function and visual inspection. If any damage is detected, the order picker must be pulled out of service immediately and serviced.

BEFORE FIRST USE

- Visual inspection of the packaging, chassis and lifting devices.
- Charge the device until the charge level indicator shows a full battery charge.
- Functional check of all safety devices. This includes, but is not limited to, the emergency stop switches, horn, and sensors.
- Perform a test lift without load.
- Perform test lift with load.
- Test the drive control.

DAILY USE

SWITCHING ON THE LIFTING DEVICE

1. Switch on the lifting device by turning the key clockwise in the ignition lock (11).
2. Switch off the lifting device by turning the key in the ignition lock (11) counterclockwise.
3. Switch off the two parking brakes (21) and (22) to fully activate the lifting device.

LIFTING AND LOWERING

- Stand on the standing platform (3). The weight switch is activated and the system detects that someone is standing on the platform.
- Hold the tiller handles on the left and right of the mast. The safety sensor is activated and the system detects that the operator is holding the tiller.
- The safety system registers that the operator is holding on properly. Now the platforms can be driven up.
- Drive up to the side of the rack.
- Drive the platforms up by holding down the lift switch (17) for a long time.
- Remove and pick the goods. Place the picked goods on the storage platform (9). Pay attention to the maximum load and distribute the goods evenly on the storage platform.
- Slowly move the platforms back down by pressing and holding the lift switch (17) in the other direction.
- Use the lift switch (23) to lower the platform from the floor.

DRIVING

- Press the steering switch (14) forward to steer to the left.
- Press the steering switch (14) backward to steer to the right.
- Press the acceleration switch (15) forward to drive forward.
- Press the acceleration switch (15) backward to drive backward.
- Use the speed switch (13) to adjust the speed to your environment.



In a hazardous situation, press the emergency stop button (18, 24) to disconnect the system from the power supply and stop the lifting device.

PARKING

- Drive onto a level surface. Park the lifting device in a place where it is not in the way.
- Always park the lifting device in dry rooms at room temperature.
- Switch it off by turning the ignition key counterclockwise and then removing it.
- Press the parking brakes (21) and (22) and the emergency stop switches (18) and (24).

MOVING MANUALLY

- Press the emergency stop button to switch off the device completely.
- Activate the parking brake of the travel motor (21).
- Pull the emergency stop switch out again by briefly turning it clockwise.
- Now the order picker can be moved manually.



To ensure the order picker functions properly, both toggle switches under the front cover plate must be set to OFF when the transport device is switched on. Otherwise, the motors are not activated.

LOADING THE LIFTING DEVICE

- Park the lifting device properly.
- Switch off the lifting device and press the parking brakes (21) and (22), as well as the emergency stop switches (18) and (24).
- Plug the charging cable into the charging socket (19) on the lifting device.
- Plug in the power plug of the charging cable. The device starts charging and the indicator light (20) starts flashing.
- Unplug the power plug and then the charging cable from the charging socket (19) when the charging process is complete.

EMERGENCY RELIEF VALVE



In the event of an emergency, use the emergency relief valve. This can still be operated manually even if the power supply to the hydraulic motor has completely failed.

1. Press the emergency stop button to ensure that the motor is de-energized.



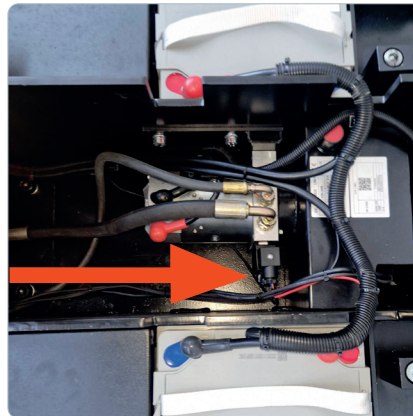
2. Remove the blue cover of the housing, using a flathead screwdriver.



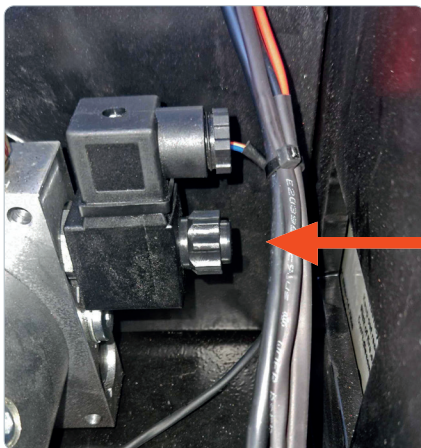
3. Remove the black cover plate to expose the motor and hydraulic pump underneath.



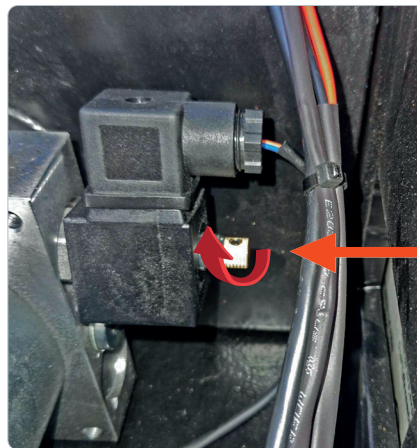
4. The emergency drain valve is located on the left side of the hydraulic pump.



5. Remove the black cover cap from the solenoid valve.



6. Unscrew the solenoid valve using an elongated object, e.g. a narrow screwdriver.



7. Slowly lower the order picker until it has reached the lowest position. Pay attention to the platform and the descending mast. There is a risk of crushing.
8. Close the valve and mount the cover plates.



Pay attention to the mast when lowering the stand-on platform. There is a risk of crushing during manual lowering. Keep body parts away from the mast and the standing platform.

CHECKLIST FOR MAINTENANCE / INSPECTIONS

No.	Component / Process	Time interval			
		Daily	Monthly	Semiannual	Semiannual
Brake system					
1	Clean the steering gear	•			
2	Check the brake slack. It should be between 0.01 – 0.03 "		•		
3	Clean the brake disc. Check it for wear			•	
Battery					
4	Cleaning the battery		•		
5	Checking the connections to the battery			•	
6	Checking the power cable and socket			•	
7	Check the fuses			•	
8	Check by an electrician				•
Mechanics					
9	Checking the switches and knobs for proper function	•			
10	Checking the keyhole		•		
11	Checking the chassis			•	
12	Checking the screw connections			•	
13	Wheels and other moving parts			•	
14	Lubricating the chains and connections		•		
Hydraulic system					
15	Check oil pump for function			•	
16	Check oil level of hydraulic oil		•		
17	Check hydraulic hoses and connections		•		
18	Check lifting cylinder for damage and wear			•	
19	Check lift motor for wear			•	
Electrics					
20	Check plug for function	•			
21	Check electrical connections		•		
22	Check control unit			•	
23	Check contactor			•	
24	Check traction motor			•	
25	Check hoist motor			•	
26	Check fuses for function			•	
27	Ignition lock	•			
28	Emergency stop switch	•			
29	Toggle switch on control unit	•			
30	Horn	•			
31	Lift switch / test lift with load		•		
32	Driving / full turn in when cornering		•		
33	Sensor test		•		
34	Testing the safety devices		•		

TROUBLESHOOTING

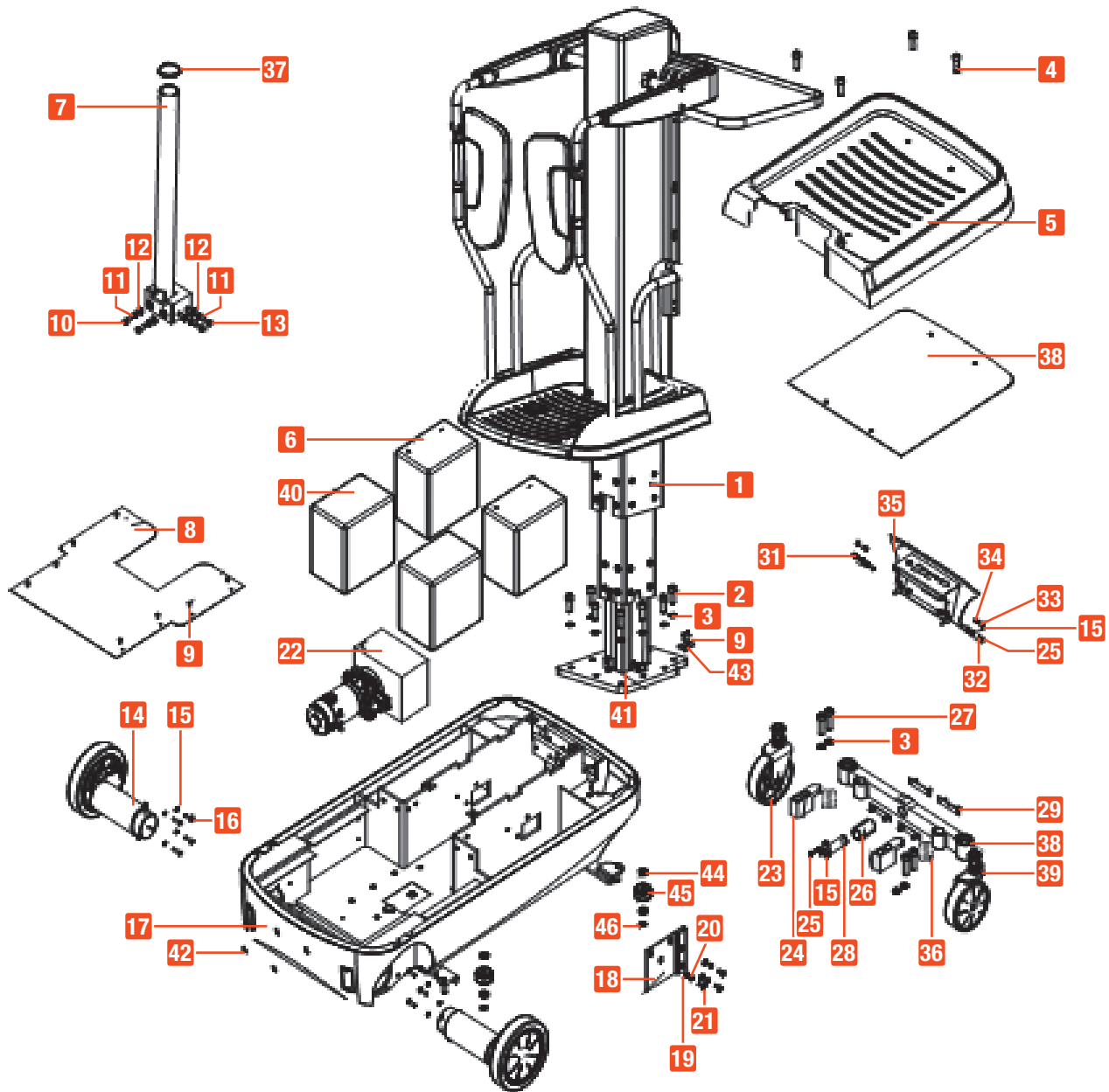
Problem	Reason	Solution
The order picker does not start	The fuse has been tripped	Insert a new fuse
	One of the two emergency stop switches is pressed	Loosen the emergency stop switches
	The sensor system has a bad connection to the control unit	Check the cables and connections of the sensors. Replace them if necessary
	The battery has a bad connection	Check the cable connections of the batteries
	The drive wheel brake does not release and the truck is braked	Check the brake. Replace if necessary. Contact the customer service
	Magnetic control coil of the drive motor is disconnected or has bad contact	Check the solenoid control coil and replace it if necessary.
	Contactors contacts have poor contacting performance	Replace the component if necessary
The order picker can only drive	Contactors contacts damaged; moving contact cannot be restored	Replace the component if necessary. Contact the customer service
The brake does not work	Brake has poor connection to control module	Check the cable connections and reconnect them firmly
	Brake disc is worn	Replace the brake disc
Platforms do not go up	Pressure of pressure relief valve too low	Increase the pressure
	Internal leakage of the lifting oil cylinder	Replace the cylinder seals.
	Insufficient hydraulic oil in the system	Add more hydraulic oil
	Insufficient battery voltage	Recharge the reciprocator
	Pump motor is damaged	Replace the component
	Oil pump damaged	Replace the component
Platform cannot be lowered after lifting	Lift switch damaged	Replace the component
	Mast bent due to overloading	Do not overload the storage platform. Replace the deformed component
	Hydraulic pump solenoid valve out of order	Replace the damaged component

SERVICE & CONTACT

Contact our product experts and find help and solutions for your product. Here you will find all contact information listed by country and language: www.topregal.us/en-us/service

Responsible for the content:
 TOPREGAL US Corp.
 729 North Route 83, Suite 309
 Bensenville, IL 60106
 United States of America
www.topregal.us

PARTS LIST



No.	Description	Quantity
1	Mast main group	1
2	Screw M16 x 40	9
3	Washer	13
4	Screw	4
5	Plastic cover	1
6	Electrical system	1
7	Steel tube	1
8	Cover plate	1
9	Screw M5 x 12	8
10	Screw M12 x 20	2
11	Washer	4
12	Washer	4
13	Screw M12 x 25	2
14	Drive wheel with horizontally mounted main motor	2
15	Washer	15
16	Screw M8 x 30	12
17	Vehicle frame mounted	1
18	Fixed plate	1
19	Washer	3
20	Washer	3
21	Screw M10 x 20	3
22	Hydraulic system	1
23	Left universal gear assembly	1
24	Clamping plate	2
25	Screw M8 x 20	3
26	Bearing SF-1-30.40	1
27	Screw M16 x 60	4
28	L-pin Shaft	1
29	Mounting seat	4
30	Rocker arm assembly	1
31	M10 x 30 bolt	2
32	Nut M10	2
33	Nut M10	2
34	Screw M10 x 22	2
35	Cover plate	1
36	Compressed spring	2
37	Sleeve	1
38	Cover plate	1
39	Universal wheel, right	1
40	Counterweight	2
41	Chain joint	1
42	Rubber cover	2
43	Rectangular plate	1
44	Washer	8
45	Bearing 6202-ZZ	4
46	Circlip 15	4

EU Declaration of Conformity

The manufacturer

**TOPREGAL US Corp.
729 North Route 83
Suite 309
60106 Bensenville, IL
USA**

hereby declares that the following product

Product designation:

**SolidHub
Electric order picker**

Type:

KSE3000

Serial number:

KSE3000-1000000000-KSE3000-9999999999

complies with all relevant provisions of the applicable legal regulations (hereinafter) - including their amendments in force at the time of the declaration. The sole responsibility for issuing this declaration of conformity lies with the manufacturer. This declaration refers only to the machine in the condition in which it was placed on the market; parts and / or interventions subsequently fitted by the end user are not taken into account.

Conforms to the provisions of the following European directives:

2006/42/EG Machinery directive

Conforms to the provisions of the following standards:

**EN ISO 3691-1
EN 16307-1
EN 1175-1
EN ISO 12100**

Name and address of the person who is authorized, compile the technical documentation:

TOPREGAL US Corp.
729 North Route 83
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60106 Bensenville, IL
USA



Place: Bensenville
Date: 03-30-2022

Juergen Effner
Chief Executive Officer

SolidHub