

USER MANUAL

EL 5.5 JUNIOR

Serial Number: 18011138 – 18XXXXX

Rev. No: 03

ELS LIFT



**OUTPOWER
THE GRAVITY.**

Important

Please read carefully and understand the safety principles and operating instructions before using this machine, and observe them.

Only trained and authorized persons are allowed to operate this machine.

This guide should be considered as an integral reference and should always accompany the machine.

Please contact us if you have any questions.

Contact Details:

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INTRODUCTION



Owners, Users and Operators:

You have purchased an Access Lift. Thank you for preferring our machines.

If you exactly observe the maintenance and use instructions, you will definitely get the best performance.

The purpose of the guide is to help you achieve this.

Please note the following critical points:

- You must comply with the safety instructions relating to the machine itself, its operation and the surrounding area.
- You must use the machine within prescribed performance limits.
- Proper periodic maintenance is essential for maximum lifetime.

During and after the warranty period, ELS after-sales service is always at your disposal.

In case of an inquiry or claim, please contact our after-sales department and indicate the machine type, serial number and operating time.

When ordering consumables or spare parts, please additionally use the “Spare Parts” catalogue to obtain replacement parts secured by excellent performance guarantee. This guide is delivered with your machine.

Danger

Failure to observe the instructions and safety rules in this manual will result in death and serious injury.

Do not operate this machine unless the following conditions are met:

- ✓ Get familiar with and implement the safe operation principles illustrated in this manual.

1. Avoid dangerous conditions.

Get familiar with and understand the safety rules before proceeding with the next section.

1. Always perform a pre-operation inspection.
 2. Always perform function tests before operation.
 3. Examine the service area.
 4. Use this machine appropriately and only for its intended purpose.
- ✓ Read and understand the manufacturer's instructions and safety rules, safety and operating manuals, and machine labels.
 - ✓ Read, understand and observe the employer's safety rules and workplace regulations.
 - ✓ Read, understand and comply with all applicable legal regulations.
 - ✓ Make sure that you are appropriately trained to safely operate this machine.

Classification of Hazards



The labels on this machine contain various symbols, colour codes and warning statements as follows:

Safety warning symbols warn you of potential personal injuries.



Observe all safety statements in this symbol to avoid potential injury or death.

▲ DANGER

Otherwise, hazards would occur, resulting in death or severe injury.

▲ WARNING

Indicates a hazardous condition which, in case of failure to observe the warning statement, may result in mild to moderate injuries.

NOTICE

Indicates a property damage. For information purposes.

Authorized persons should take the necessary measures to keep these labels in good and legible condition. Upon demand, additional labels should be procured from ELS.

Intended Use

This machine is designed to lift workers together with the accompanying tools and materials to access an aerial area.

Maintenance of Safety Signs

Replace all defective or damaged safety signs. Always prioritize the operator safety. Use mild soap and water to clean the safety signs. Do not use solvent-based cleaning agents as they may damage the material used to manufacture the safety sign.

Description of Symbols and Hazard Legends



4700015



4700018



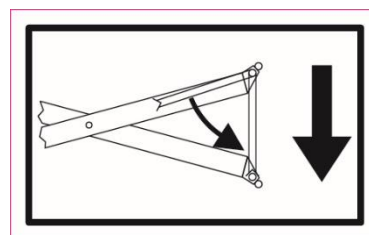
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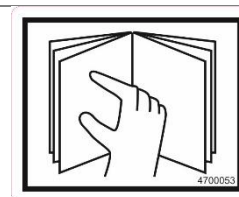
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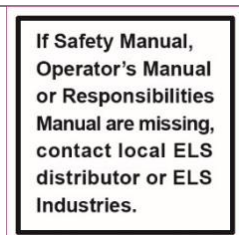
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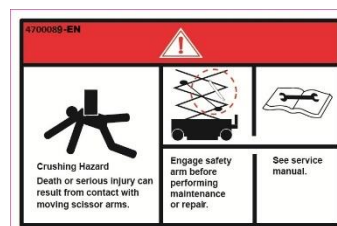
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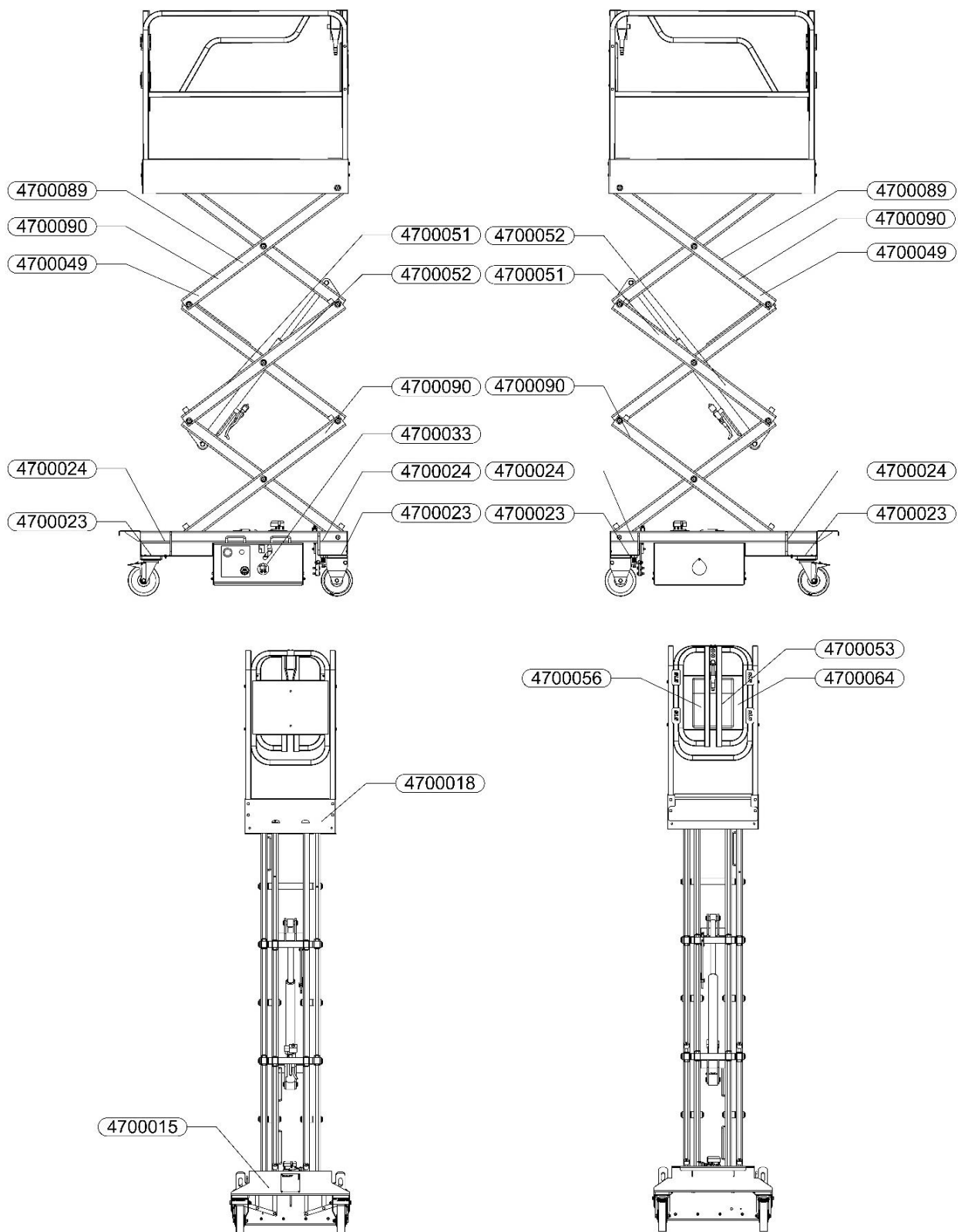
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List of Symbols and Hazard Legends

- 4700015 → Check the tilt sensor
- 4700018 → Place of Manufacture
- 4700023 → Forklift Pockets
- 4700024 → Attachment and Lifting Point
- 4700033 → Battery Charge Plug
- 4700049 → Maintenance Bar
- 4700051 → Keep
- 4700052 → Clear
- 4700053 → Read the Operating Manual
- 4700056 → Guide Inspection
- 4700064 → No Smoking
- 4700089 → Warnings For Use
- 4700090 → Crush Hazard
- 4700134 → Please Keep Locked
- 4700135 → Please wait till to batteries are fully charged. Check battery fluid and fill to batteries after charging batteries.

General Safety

Location of Safety Indicators



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Personal Safety

Anti-Fall Protection **WARNING**

When operating the machine, anti-fall protection must be in place.

Users in the vehicle must wear a safety belt or safety strap in accordance with the legal regulations. Hook the seat belt to the bolt on the platform.

Operators must comply with employer, job site and governmental rules regarding the use of personal protective equipment.

All anti-fall protection equipment must comply with applicable legal regulations and must be inspected and used as per the manufacturer's instructions.

Safety of the Work Area

Electrocution Hazards **WARNING**

This machine is not electrically insulated and will not provide protection from contact with or proximity to electrical current.

Maintain safe distances from electrical power lines and apparatus in accordance with applicable governmental regulations and the following chart.



Line Voltage	Minimum Safe Approach Distance
0 – 50 KV	3.0 m
50 – 200 KV	4.6 m
200 – 350 KV	6.1 m
350 – 500 KV	7.6 m
500 – 750 KV	10.6 m
750 – 1000 KV	13.7 m

Allow for platform movement, electrical line sway or sag and beware of strong or gusty winds.

Keep away from the machine if it contacts energized power lines. Personnel on the ground or in the platform must not touch or operate the machine until the power lines are de-energized.

Do not operate the machine during lightning or storms.

Do not use the machine as a ground for welding.

⚠ Tip-over Hazards **WARNING**

Occupants, equipment and materials must not exceed the maximum platform capacity.

Weight of optional parts and accessories such as pipe skids and panel skids reduce the nominal platform capacity and therefore should be taken into account when calculating the total platform load. Refer to the labels delivered with the optional parts and accessories.

If you are using accessories, read, understand, and observe the accompanying labels and instructions.

Do not alter or disable the limit switches.

Do not raise the platform unless the machine is on a firm, level surface.

Do not depend on the tilt alarm as a level indicator. The tilt alarm sounds on the chassis only when the machine is on a slope.

If the tilt alarm sounds: Lower the platform carefully. Move the machine to a firm, level surface.

When raising the platform, observe the permissible manual force values and number of persons specified below.

Do not operate the machine in strong or gusty winds. Do not increase the surface area of the platform or the load. Increasing the area exposed to the wind will decrease machine stability.



Use extreme care and slow speeds while driving the machine in a stowed position across uneven terrain, debris, unstable or slippery surfaces and near holes and drop-offs.

Do not drive the machine on or near uneven terrain, unstable surfaces or other hazardous conditions with the platform raised.

Do not push off or pull toward any object outside of the platform.

Maximum Manual Force	Maximum Number of Persons
400 N indoor use only	2
200 N outdoor use	1

Do not alter or disable machine components that in any way affect safety and stability.

Do not replace items critical to machine stability with items of different weight or specification.

Do not overload the platform.

Do not modify or alter an aerial work platform without prior written permission from the manufacturer.

Mounting attachments for holding tools or other materials onto the platform, toeboards or guard rail system can increase the weight in the platform and the surface area of the platform or the load.

Do not place or attach fixed or overhanging loads to any part of this machine.

Do not place ladders or scaffolds in the platform or against any part of this machine.



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Do not transport tools and materials unless they are evenly distributed and can be safely handled by person(s) in the platform.

Do not use the machine on a moving or mobile surface or vehicle.

Be sure all tires are in good condition and castle nuts are properly tightened.

Do not use the platform controls to free a platform that is caught, snagged or otherwise prevented from normal motion by an adjacent structure. All personnel must be removed from the platform before attempting to free the platform using the ground controls.

Batteries are used as counterweight and are critical to machine stability. Do not replace the battery box without the manufacturer's permission. Do not use batteries that weigh less than the original equipment.

Do not use the machine as a crane.

Do not tie the platform to adjacent structures.



Hazards Associated With Slopes

WARNING

Do not drive the machine on a slope that exceeds the slope and side slope rating of the machine. Slope rating applies to machines in the stowed position.

Maximum slope rating, stowed	25% (14°)
Maximum side slope rating stacked	15% (9°)

Note: Slope rating is subject to ground conditions and adequate traction. See "Driving on a Slope" in the Operating Instructions section.

Fall Hazards

Users in the vehicle must wear a safety belt or safety strap in accordance with the legal regulations. Hook the pull cord to the bolt on the platform.

Do not sit, stand or climb on the platform guard rails.

Maintain a firm footing on the platform floor at all times.

Do not climb down from the platform when raised.

Keep the platform floor clear of debris.

Attach the platform entry chain or close the entry gate before operating.

Do not enter in or exit the platform if the machine is in stowed position and platform is not at ground level.



⚠ Collision Hazards**⚠ WARNING**

Be aware of limited sight distance and blind spots when driving or operating.



Be aware of extended platform position when moving the machine.



Check the work area for overhead obstructions or other possible hazards.



Be aware of crushing hazards when grasping the platform guard rail.

Operators must comply with employer, job site and governmental rules regarding the use of personal protective equipment.

Observe and use colour-coded direction arrows on the platform controls and platform decal plate for drive and steer functions.

Do not lower the platform unless the area below is clear of personnel and obstructions.



Limit travel speed according to the condition of the ground surface, congestion, slope, location of personnel, and any other factors which may cause collision.



Do not operate a machine in the path of any crane unless the controls of the crane have been locked out and/or precautions have been taken to prevent any potential collision.

No stunt driving or horseplay while operating a machine. The machine must be on a level surface or secured before releasing the brakes.

⚠ Explosion and Fire Hazards**⚠ WARNING**

Charge the battery only in a well-ventilated area cleared of sparks, flames and lighted tobacco.

Do not operate the machine or charge the battery in hazardous locations or locations where potentially flammable or explosive gases or particles may be present.

⚠ Bodily Injury Hazard**⚠ WARNING**

Do not operate the machine with a hydraulic oil or air leak. An air leak or hydraulic leak can penetrate and/or burn skin.

Improper contact with components under any cover will cause serious injury.

Only trained maintenance personnel must access compartments. Access by the operator is only advised when performing a pre-operation inspection. All compartments must remain closed and secured during operation.

Damaged Machine Hazards **WARNING**

Do not use a damaged or malfunctioning machine.

Conduct a thorough pre-operation inspection of the machine and test all functions before each work shift. Immediately tag and remove from service a damaged or malfunctioning machine.

Be sure all maintenance has been performed as specified in this manual and the appropriate service manual.

Be sure all decals are in place and legible.

Be sure the operator's, safety, and responsibilities manuals are complete, legible and in the storage container located on the platform.

Component Damage Hazard **WARNING**

Do not use the machine as a ground for welding. Do not use any battery charger greater than 24V to charge the batteries. Only use the chargers recommended by ELS.

Battery Safety

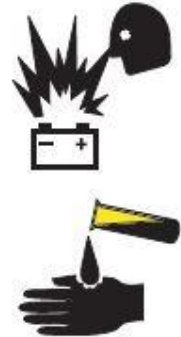
Burn Hazards **WARNING**

Batteries contain acid. Always wear protective clothing and eyewear when working with batteries. Avoid spilling or contacting battery acid.

Neutralize battery acid spills with baking soda and water.

The battery pack should be in upright position.

Do not expose the batteries or the charger to water or rain during charging.



Explosion Hazards

Keep sparks, flames and lighted tobacco away from batteries.

Batteries emit an explosive gas.

The battery tray should remain open during the entire charging cycle.

Do not contact the battery terminals or the cable clamps with tools that may cause sparks.



Electrocution Hazards

Connect the battery charger to a grounded, AC 3-wire electrical outlet only.

Inspect daily for damaged cords, cables and wires.

Replace damaged items before operating.

Avoid electrical shock from contact with battery terminals. Remove all rings, watches and other jewellery during the operation.



Tip-Over Hazard

Do not use batteries that weigh less than the original equipment. Batteries are used as counterweight and are critical to machine stability. Do not replace the battery box without the manufacturer's permission.

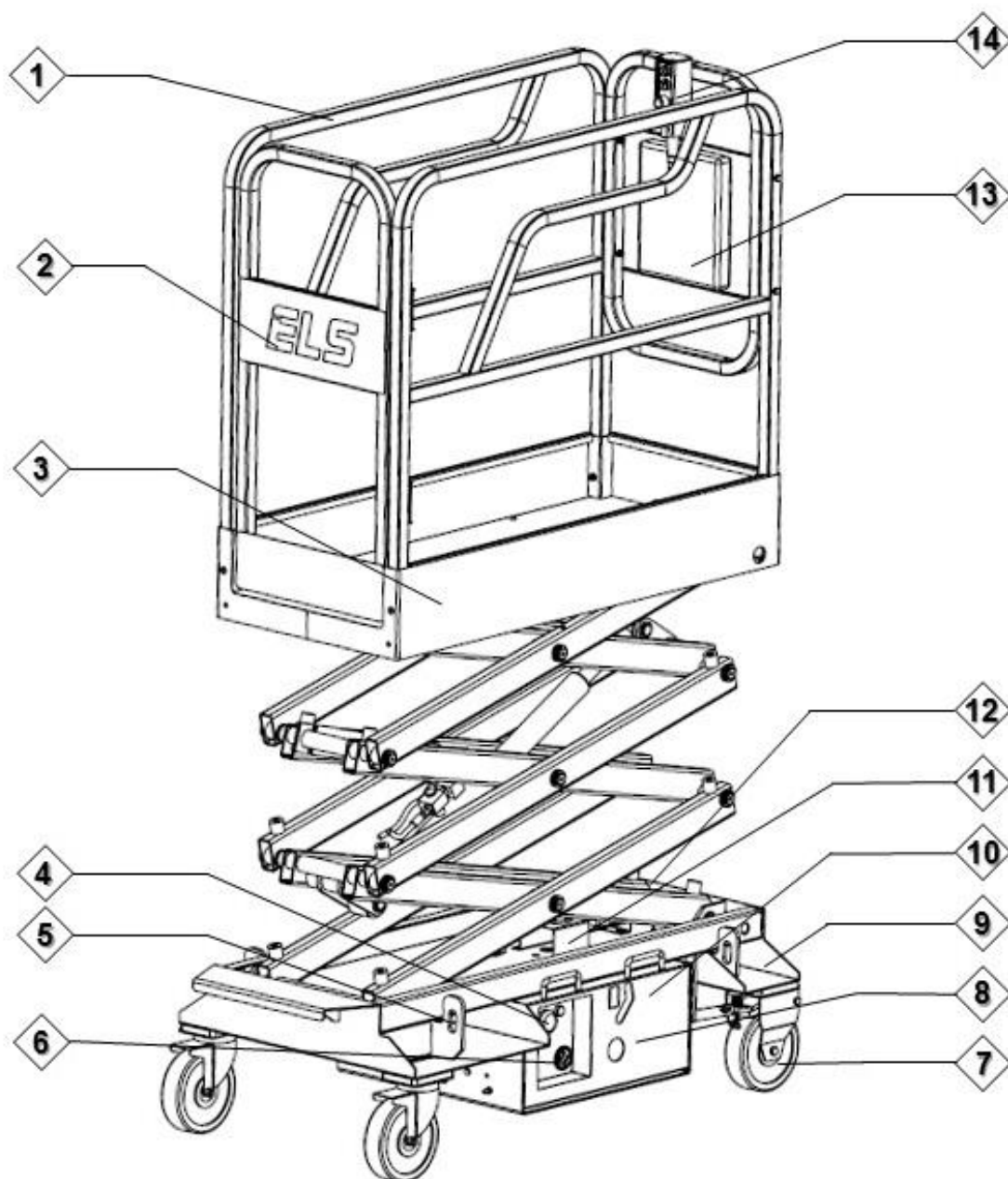
Lifting Hazard

Use appropriate lifting means and proper lifting techniques when lifting batteries.

After Each Use

- ✓ Select a safe parking location—firm level surface, clear of obstruction and traffic.
- ✓ Lower the platform.
- ✓ Turn the key switch to the off position and remove the key to secure from unauthorized use.
- ✓ Charge the batteries.

Description

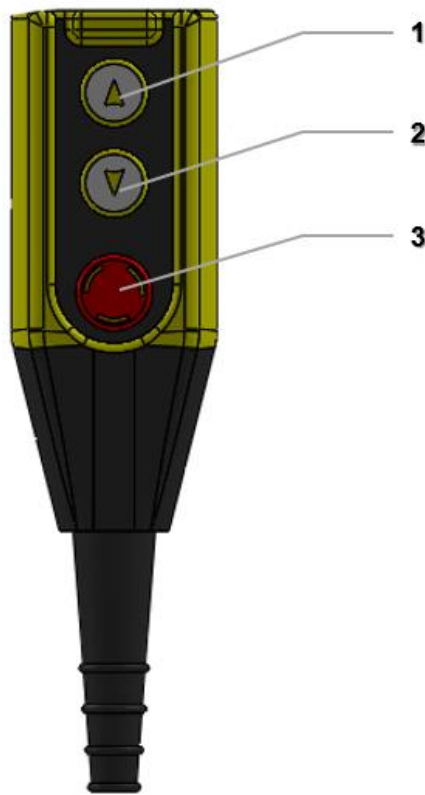


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1. Platform Guide Rails
2. Platform Entry Gate
3. Platform
4. Emergency Stop Button
5. Transport and Securing Bolt
6. Charge Indicator
7. Wheels
8. Battery Charge Plug
9. Forklift Pocket
10. Batteries
11. Tilt Sensor
12. Guide Storage Container
13. Platform Control Panel

Platform Control Panel



1. Platform up button
 - To move the platform up, press the platform up button.
2. Platform down button
 - To move the platform down, press the platform down button.
3. Emergency Stop button
 - Pull out to activate the Emergency Stop button to enable all functions. Push the Emergency Stop button to off position to shut all functions.

Inspection



Do not operate this machine unless the following conditions are met:

- ✓ Get familiar with and implement the safe operation principles illustrated in this manual.
- 1. Avoid dangerous conditions.
- 2. Always perform a pre-operation inspection.

Get familiar with and understand the pre-operation inspection before proceeding with the next section.

1. Always perform function tests before operation.
2. Examine the service area.
3. Use this machine appropriately and only for its intended purpose.

Pre-operation Inspection Fundamentals

It is the responsibility of the operator to perform a pre-operation inspection and routine maintenance.

The pre-operation inspection is a visual inspection performed by the operator prior to each work shift.

The inspection is designed to discover if anything is apparently wrong with a machine before the operator performs the function tests.

The pre-operation inspection also serves to determine if routine maintenance procedures are required. Only the routine maintenance items specified in this manual may be performed by the operator.

Refer to the list on the next page and check each of the items.

If damage or any unauthorized variation from factory delivered condition is discovered, the machine must be tagged and removed from service.

Repairs to the machine may only be made by a qualified service technician, according to the manufacturer's specifications. After repairs are completed, the operator must perform a pre-operation inspection again before proceeding with the function tests.

Scheduled maintenance inspections shall be performed only by qualified service technicians, according to the manufacturer's specifications and the requirements listed in the responsibilities manual.

Pre-operation Inspection

- ✓ Be sure the operator's, safety, and responsibilities manuals are complete, legible and in the storage container located on the platform.
- ✓ Be sure that all decals are legible and in place. See the Inspections section.
- ✓ Check for hydraulic oil leaks and proper oil level. Add oil if needed. See the Maintenance section.
- ✓ Check for battery fluid leaks and proper fluid level. Add distilled water if needed. See the Maintenance section.

Check the following components or areas for damage, improperly installed or missing parts and unauthorized modifications:

- ✓ Electrical components, wiring and electrical cables
- ✓ Hydraulic hoses, fittings, cylinders and manifolds
- ✓ Hydraulic tank
- ✓ Motors
- ✓ Wear pads
- ✓ Tires and wheels
- ✓ Limit switches and horn
- ✓ Beacon and alarms (if equipped)
- ✓ Nuts, bolts and other fasteners
- ✓ Platform extension
- ✓ Earth wire
- ✓ Battery pack and connections
- ✓ Platform control joystick
- ✓ Platform entry gate

Check entire machine for:

- ✓ Cracks in welds or structural components
- ✓ Dents or damage to machine
- ✓ Excessive rust, corrosion or oxidation
- ✓ Be sure that all structural and other critical components are present and all associated fasteners and pins are in place and properly tightened.
- ✓ Make sure that batteries are in place and properly connected.
- ✓ After the inspection is complete, be sure that all component covers are in place and latched.

Inspection at the Ground Control Panel

Emergency Stop Test

Switch the Emergency Stop button on the ground to off position. After this procedure, no function should be active.

Inspection at the Platform Control Panel

Emergency Stop Test

Switch the Emergency Stop button on the platform to off position. After this procedure, no function should be active.

Testing the Up/Down Function

- Switch the Emergency Stop button to on position.
- Press the platform up button.
- The platform should move up

- Switch the Emergency Stop button to on position.
- Press the platform down button.
- The platform should move down.

Testing the Braking System

- Switch the Emergency Stop button to on position.
- Press the platform up button.
- Raise the platform.
- Try to push around the platform.
- The platform should not move around.

Instructions for Use

1. Switch the Emergency Stop button to on position.
2. Push the platform safely to the area where you want to work.
3. Position the platform using the up and down buttons on the platform control unit.

Battery level affects the machine performance. If the battery level is low, machine functions slow down.

Charging the Battery

Be sure the batteries are connected before charging the batteries.

1. Open the battery compartment. The compartment should remain open for the entire charging cycle.

Maintenance - free batteries

1. Connect the battery charger to a grounded AC circuit.
2. The charger will indicate when the battery is fully charged.

Standard Batteries

1. Open the rotary plate covers. Covers should remain open for the entire charging cycle.
2. Switch the red Emergency Stop button on the rotary plate to on position.
3. Remove the battery vent caps and check the battery electrolyte level. If necessary, add distilled water in an amount such that water level exceeds the plate in each battery cell by 1 cm. Do not overfill.
4. Do not charge the battery if battery electrolyte temperature is above 40°C. Allow the electrolyte to cool down before charging the batteries.
5. Clean and re-place the battery vent caps.
6. Connect the battery charger to a grounded AC circuit. Do not interrupt the charging cycle on it has started. A typical charging cycle lasts almost 10 hours and requires that batteries are depleted by 70% to 80%.

7. The charger will indicate when the battery is fully charged.
 8. Once charging cycle is complete, remove the battery vent caps and check the battery electrolyte level. Replenish with distilled water in an amount such that water level exceeds the plate in each battery cell by 1 cm. Do not overfill.
 9. Re-place the battery vent caps.
 10. Unplug the charger from the AC power supply.
 11. Close and lock the battery vent caps.
 12. Pull the red Emergency Stop button to on position.
8. Once charging cycle is complete, remove the battery vent caps and check the battery electrolyte level. Replenish with distilled water in an amount such that water level exceeds the plate in each battery cell by 1 cm. Do not overfill.

Dry Battery Filling and Charging Instructions

1. Open the rotary plate covers. Covers should remain open for the entire charging cycle.
2. Remove the battery vent caps and permanently remove the plastic seal from the battery vent openings.
3. Fill each cell with battery electrolyte until the level is sufficient to cover the plates. Do not fill to maximum level until the battery charge cycle is complete. Overfilling can cause the battery acid to overflow during charging. Neutralize battery acid spills with baking soda and water.
4. Re-place the battery vent caps.
5. Press the red Emergency Stop button.
6. Connect the battery charger to a grounded AC circuit. Do not interrupt the charging cycle on it has started.
7. The charger will indicate when the battery is fully charged.

Transport and Lifting Instructions



- ✓ Only qualified aerial lifting operators should load or unload the machine on/from a truck.
- ✓ The transport vehicle must be parked on a level surface.
- ✓ The transport vehicle must be secured to prevent rolling while the machine is being loaded.
- ✓ Be sure the vehicle capacity, loading surfaces and chains or straps are sufficient to withstand the machine weight. See the serial plate for the machine weight.
- ✓ Do not drive the machine on a slope that exceeds the slope or side slope rating. See "Driving on a Slope" in the Operating Instructions.
- ✓ If the slope of the transport vehicle bed exceeds the maximum slope rating, the machine must be loaded and unloaded using a winch as described. See "Specifications" for slope ratings.

Securing to Truck or Trailer for Transit

Turn the key switch to the off position and remove the key before transporting.

Inspect the entire machine for loose or unsecured items.

Use chains in case load volume is high.

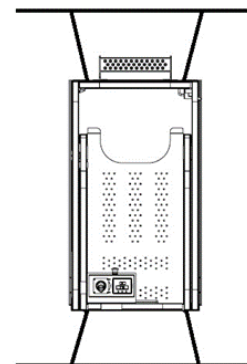
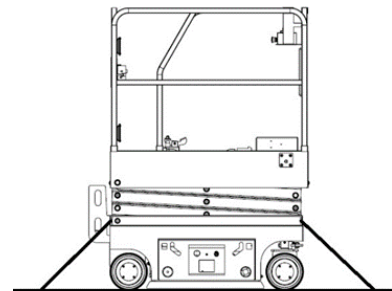
Make sure that chains or straps are of ample load capacity.

Use a minimum of 2 chains or straps.

Adjust the rigging to prevent damage to the chains.

After loading the machine;

1. Chock the wheels to prevent the machine from rolling.
2. Switch the Emergency Stop buttons on the ground and platform control panels to off position.



Observe and Obey:

- ✓ Only qualified crane operators should rig and lift the machine.
- ✓ Be sure the crane capacity, loading surfaces and straps or lines are sufficient to withstand the machine weight. See the serial plate for the machine weight.

Lifting the Machine with a Forklift

1. Turn the key switch to the off position and remove the key before transporting.
2. Inspect the entire machine for loose or unsecured items.
3. Make sure to fully lower the platform.
4. Use the forklift pockets located on both sides of the ladder.
5. Position the forklift forks in position with the forklift pockets.
6. Drive forward to the full extent of the forks.
7. Raise the machine by 0.5 m and then tilt the forks back slightly to keep the machine secure.
8. Be sure the machine is level when lowering the forks.

Never lift the machine from the sides.

Maintenance Instructions

Only the routine maintenance items specified in this manual may be performed by the operator.

Periodic and scheduled maintenance procedures may be carried out only by qualified service technicians.

Use only ELS-approved replacement parts.

Checking the Hydraulic Oil Level

Improper hydraulic oil levels can damage hydraulic components. Maintaining the hydraulic oil at the proper level is essential to machine operation.

1. Be sure that the machine is on a firm, level surface, with the booms in retracted position.
2. Visually inspect the oil level in the hydraulic oil tank.
3. The hydraulic oil level should be as marked on the tank. Add if necessary.
4. Do not overfill.

ELS recommends Shell Tellus S2 M 46 as the hydraulic oil.

Checking the Batteries

Proper battery condition is essential to good machine performance and operational safety. Improper fluid levels or damaged cables and connections can result in component damage and hazardous conditions.

Note: This procedure does not need to be performed on machines with sealed or maintenance-free batteries.

Electrocution hazard. Contact with hot or live circuits may result in death or serious injury. Remove all rings, watches and other jewellery.

Batteries contain acid. Avoid spilling or contacting battery acid.

Neutralize battery acid spills with baking soda and water.

Perform this test after fully charging the batteries.

1. Put on protective clothing and eye wear.
2. Check battery connections. Be sure that they are tight and free of corrosion.
3. Be sure that the battery hold-down brackets are in place and secure.

Maintenance

Periodic Maintenance Schedule

Periodic Maintenance and Inspection	Daily	Every 50 hours	Every 250 hours	Every 1000 hours	Every 2000 hours	Every 3000 hours
Hydraulic oil	•					
Batteries	•					
Battery Charge Level	•					
Sealing of Connectors and Batteries	•					
Hydraulic Oil Filter	•					
Battery Cable Condition		•				
Screws and Bolts		•				
Motor Mounting Screw		•				
Tire Mounting Screw		•				
Battery Charger Connection			•			
Battery Water Levels			•			
Draining the Hydraulic Oil Tank				•		
Hydraulic Oil Change					•	
Replacement of Electrical Cables and Hydraulic Hoses						•

Specifications

Model	JUNIOR 5.5
Working Height	5.50 m
Platform Height (maximum)	3.50 m
Machine Height, stowed	1.78 m
Width	0.75 m
Length, stowed	1.50 m
Maximum Load Capacity	240 kg
Maximum Wind Speed, Outdoor	45 km/h
Wheelbase	1.25 m
Power Supply	12 V / 105 A/h
Vibration	max. 2.5m/s ²
Ground Clearance	0.07 m
Weight	440 kg
Sound pressure level at the ground workstation <70 dBA	
Sound pressure level at the platform workstation <70 dBA	
Platform Dimensions	0.59x1.33 m
Controls	12V DC Proportional
System Voltage	24 V
Maximum slope rating,	14° stowed
Maximum side slope rating,	9° stowed

(Note: Slope rating is subject to ground conditions and adequate traction.)

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