LGMG North America Inc.

Operation and Safety Manual

SS1230E/SS1432E/SS1932E/AS1930E/ AS1932E/AS2632E/AS2646E/AS3246E/ AS4046E/AS4650E/AS1930/AS1932/ AS2632/AS2646/AS3246/AS4046/AS4650

Mobile Elevating Work Platform

ANSI

⚠ WARNING

Before operation and maintenance, the drivers and service personnel shall always read and thoroughly understand all information in this manual. Failure to do so may result in, fatal accidents or personal injury.

This manual must be kept with this machine at all times.

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Foreword

Thank you for choosing to use this Mobile Elevating Work Platform from LGMG North America. This machine is designed according to A92.20-2018.The information specified in this manual is intended for the safe and proper operation of this machine for its' intended purpose.

For maximum performance and utilization of this machine, thoroughly read and understand all the information in this manual before starting, operating, or performing maintenance on this machine.

Due to continuous product improvements, LGMG North America reserves the right to make specification changes without any prior notifications. For any updated information, contact LGMG North America.

Ensure all preventive maintenance to the machine is performed according to the interval specified in the maintenance schedule.

Keep this manual with this machine for reference at all times. When the ownership of this machine is transferred, this manual shall be transferred with this machine. This manual must be replaced immediately if it is lost, damaged, or becomes illegible.

This manual is copyrighted material. The reproduction or copy of this manual is not allowed without the written approval of LGMG North America.

The information, technical specifications and drawings in this manual are the latest available when this manual is issued. Due to continuous improvement, LGMG North America reserves the right to change the technical specifications and machine design without notice. If any specifications and information in the manual are not consistent with your machine, please contact the service department of LGMG North America.

⚠ WARNING

Only personnel who have been properly trained and qualified to operate or maintain this machine can operate, repair and maintain this machine.

Improper operation, maintenance, and repair are dangerous and can cause personal injury and death.

Before any operation or maintenance, the operator shall thoroughly read this manual. Do not operate, perform any maintenance or make any repairs on this machine before reading and understanding this manual.

The user shall load the platform strictly according to the load rating of the platform. Do not overload the platform or make any modifications to the platform without permission from LGMG North America.

The operation regulations and preventions in this manual are only applicable for the specified use of this machine.

Safety Precautions

The operator of this machine shall understand and follow the existing safety regulations of state and local governments. If these are unavailable, the safety instructions in this manual shall be followed.

To help prevent accidents, read and understand all warnings and precautions in this manual before operation or performing maintenance.

The safety measures are specified in Chapter 1 Safety.

It is impossible to foresee every possible hazard and the safety instructions in this manual may not cover all safety prevention measures. Always ensure the safety of all personnel and protect the machine against any damage. If unable to confirm the safety of some operations, contact LGMG North America.

The operation & maintenance prevention measures listed in this manual are only applicable to the specified uses of this machine. LGMG North America assumes no responsibility if this machine is used beyond the range of this manual. The user and the operator shall be responsible for the safety of such operations.

Do not perform any operation forbidden in this manual in any situation.

The following signal words are applicable for identifying the level of safety information in this manual.

Danger:

An imminent situation, that if not avoided, will result in severe injuries or death. This is also applicable to situations that will cause serious machine damage, if not avoided.

Warning:

A potentially dangerous situation, that if not avoided, may result in severe injuries or death. This is also applicable to situations that may cause serious machine damage, if not avoided.

Notice:

A situation, that if not avoided, may result in minor or intermediate injury. This is also applicable to situations that may cause machine damage or shorten machine service life.

Contents

Chapter 1 Safety

Danger

Death or severe injuries can be caused if the instructions and safety regulations in this manual are not followed.

Warning

Operation of the machine is forbidden, unless:

The safe operation rules of the machine are understood and practiced.

Dangerous conditions are avoided. All safety regulations shall be acknowledged and understood before the next step.

The pre-operation inspection is always completed before operation of the machine.

The function test is always made before operation of the machine.

The workstation is inspected and tested.

The machine is used for its design purposes The manufacturer's instruction and safety regulations-the safe operation manuals and machine labels, shall be read, comprehended and followed.

The safety regulations for user and the site regulations shall be read, comprehended and followed.

All applicable laws and regulations of the government are read, understood and followed.

The appropriate training on safe operation of machine has been completed.

Notice

Classification of hazards

The meanings of symbols, color codes and characters of LGMG North America's products are as follows:

Security warning symbol: are used for warning of potential personal injuries. Observe all safety instructions below these signs, to avoid situations causing potential personal injury and death.

Danger

Red: Signifies dangerous situations. If not avoided, will result in personal death or severe injury.

Warning

Orange: Signifies dangerous situations. If not avoided, may result in personal death or severe injury.

Caution

Yellow: Signifies dangerous situations. If not avoided, may result in minor or intermediate personal injury.

Notice

Blue: Signifies dangerous situations. If not avoided, property loss or damage can occur.

1.1 Description

This machine is a mobile elevating work platform, consisting of a work platform on a scissor mechanism. It is electrically powered and drive power is provided by electric motors.

1.2 Maintenance of Safety Signs and Decals

Replace any missed or damaged safety signs or decals. If necessary, use mild soap and water to clean safety signs. Do not use solvent-based cleaners because they may damage the safety sign material.

1.3 Workstation Safety

Electrocution Danger

This machine is not electrically insulated and does not provide protection from touching or getting close to electrical power lines. Please keep a safe distance from power lines and power equipment according to the applicable laws and regulations. Refer to the following table for safe approach distances for power lines.

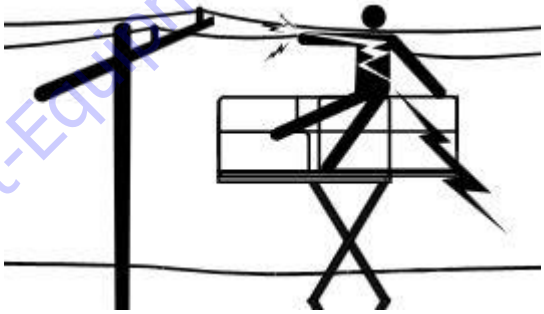


Table 1 Minimum Safe Approach Distance

Voltage	Required Clearance
0 to 50KV	10ft (3.05m)
50KV to 200KV	15ft (4.6m)
200KV to 350KV	20ft (6.10m)
350KV to 500KV	25ft (7.62m)
500KV to 750KV	35ft (10.67m)
750KV to 1000KV	45ft (13.72m)

- Always take into account the influence of strong or gusty winds on the platform and also on the swinging of the electrical power lines.

- Stay away from the machine if it contacts a live electric wire. Do not touch or operate the machine from the ground or the platform before cutting off the power supply.
- Do not operate the machine in inclement weather.
- Do not use the machine as a ground for welding. This could damage electrical components on the machine.
- Do not touch the battery charger when charging the batteries.

⚠ Tip Over Hazard

The personnel, equipment, and material on the platform shall not exceed the maximum bearing capacity of the platform and the extending platform. Refer to Chapter 10 – Specifications for model capacities.

1) The platform can only be elevated on flat, solid ground.

2) The maximum elevated drive speed for models AS1930/AS1930EAS1932E/ AS2632E/AS2646E/ AS3246E/AS4046E/ AS4650E/AS1932/AS2632/ AS2646/ AS3246/AS4046/AS4650 is 0.5mph (0.8 kph). The maximum elevated drive speed for models SS1230E/SS1432E/SS1932E is 0.31 mph (0.5 kph).
3) Do not use the tilt alarm as a level indicator. The tilt alarm only sounds when the machine is severely tilted.
4) If the tilt alarm sounds: lower the platform and move the platform to flat, solid ground. If the tilt alarm sounds when elevating the platform, lower the platform immediately.
5) If the machine is used outdoors, do not elevate the platform when wind speed is above 28mph (12.5 m/s). If wind speed exceeds the limit after elevating the platform, immediately lower the platform and stop all machine operation.
6) If the machine is used indoors, do not elevate the platform when wind speed is above 0mph (0m/s).
7) The ambient temperature range for use of this machine is -4°Fto104°F(-20℃ to 40℃)
8) The relative humidity for use of this machine shall be no greater than 90% (at 68°F [20℃]).
9) The allowable voltage fluctuation of the machine is ±10%.
10) Do not increase the surface area of platform or load. Increasing the exposure area in wind

will reduce the stability of machine.

11) When the platform is caught, stuck or blocked by a nearby item and is unable to normally move, do not try to release the platform using the platform controller. All personnel must be removed from the platform before releasing the platform using the ground controller.

12) Be cautious and lower drive speed when the machine is fully lowered and driving on an uneven road, a gravel road, an unstable or smooth surface, near a hole, or on a slope.

13) Do not drive in high-speed descending any slope.

Caution

Make sure slow speed (turtle) is selected before descending any slope.

14) Do not drive the machine on any uneven or unstable roads or in any other dangerous conditions, when the platform is elevated.

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

Maximum allowable manual force	
Model	Manual Force
SS1230E	Indoor: 400N Outdoor:200N
SS1432E	Indoor use only:400N
SS1932E	Indoor use only:400N
AS1930	Indoor use only:400N
AS1932	Indoor: 400N Outdoor:200N
AS1930E	Indoor use only:400N
AS1932E	Indoor: 400N Outdoor:200N
AS2632	Indoor use only:400N
AS2632E	Indoor use only:400N
AS2646	Indoor: 400N Outdoor:200N
AS3246	Indoor: 400N Outdoor:200N
AS4046	Indoor use only:400N
AS2646E	Indoor: 400N Outdoor:200N
AS3246E	Indoor: 400N Outdoor:200N
AS4046E	Indoor use only:400N
AS4650	Indoor: 400N Outdoor:200N
AS4650E	Indoor: 400N Outdoor:200N

16) Do not use the machine as a crane.

17) Do not place, anchor, or suspend any load from any part of the machine.

18) Do not push the machine or other items using the platform.

19) Do not operate the machine when the chassis tray is pulled out.

20) Do not lean the platform against any nearby structure or wall.

21) Do not modify or limit the use of the limit switch.

22) Do not bind or tie the platform to a nearby structure or wall.

23) Do not place the load outside the platform guard rail.

24) Do not modify or change the aerial work platform without the written consent of the manufacturer. Installing an additional device used for carrying tools or other materials on the platform, pedal, or guard rail will increase platform weight, platform surface area, and load.

25) Do not modify or damage any safety or stability related parts of the machine.

26) Do not replace any key stability-related parts with those with different weights or specifications.

27) It is forbidden to use a battery weighing less than the original battery. The battery installed on the chassis is used and counterweight and is vital for the stability of machine. Every battery has a different weight (as detailed in the following table).

Table 2 Battery Weights

Model	Battery weight
SS1230E	55llb (25Kg)
AS1930	62lbs (28Kg)
AS1930E	
AS1932	
AS1932E	
AS2632	
AS2632E	
AS3246	66lbs (30Kg)
AS3246E	
AS2646	
AS2646E	

Model	Battery weight
SS1432E	86lbs (39Kg)
SS1932E	
AS4046	
AS4046E	
AS4650	82lbs (37Kg)
AS4650E	

The minimum weight of battery tray (including the battery) on the chassis varies with the model type as detailed in the following table.

Table 3 Battery Tray Weights

Model	Weight of battery tray and batteries
SS1230E	173lbs(78.3Kg)
SS1432E	234lbs(106Kg)
SS1932E	
AS1930	322lbs(146Kg)
AS1930E	
AS1932	
AS1932E	
AS2632	331lbs(150Kg)
AS2632E	
AS3246	346lbs(157Kg)
AS3246E	
AS2646	
AS2646E	
AS4046E	425lbs (193Kg)
AS4046	
AS4650	478lbs (216.6Kg)
AS4650E	

28) Do not place the steps, ladders, or scaffolding in the platform or lean them against any part of the machine.

29) Tools and materials, evenly distributed and able to be safely moved by the operator in the platform, can be carried in the platform only.

30) Do not use the machine on a movable

surface or vehicle.

31) Keep all tires in good condition and appropriately tighten the lug nuts.

⚠ Crushing Hazards

- **Do not place arms, hands, or fingers in any position where there is a hazard of potential crushing by the machine's scissors.**
- **When the machine is being driven from the ground using the controller, use good judgment and carefully plan the travel path. Keep a safe distance between the operator, machine and any fixed objects, walls, or buildings.**

⚠ Hazards When Operating on a Slope

Do not drive the machine on a slope that exceeds the slope and side slope rating of the machine. The rated value of slope is applicable to a stowed machine.

Maximum slope rating, stowed position: 	25%(14°)
Maximum side slope rating, stowed position:	25%(14°)

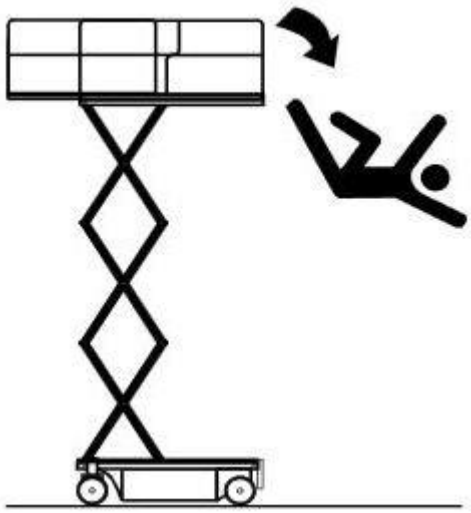
	

Note: Slope rating is subject to ground conditions and adequate traction.

⚠ Falling Hazards

- **All workers in the platform must use approved safety harnesses and attach the lanyard to the provided anchor points in the platform. Each anchor point is limited to one lanyard.**

- **Do not climb on or sit on the guard rail of the platform. Firmly stand on the platform floor at all times.**



- Do not climb down the platform scissors when the machine is elevated.
- Keep the platform floor free from debris.
- Shut down the platform door before operation.
- Do not operate the machine if the guard rail is not correctly installed.
- Do not enter or exit the platform unless the machine is in the stowed position.

⚠ Crash Hazards

- Pay attention to any items or obstacles within the machine's sight line and in any blind spots when starting or running the machine.
- Pay attention to the position of the extending platform when moving the machine.
- Check the workstation to avoid any overhead barriers or other possible hazards in the work site.

- Pay attention to any crushing hazards when holding the guard rail of the platform.
- The operator must follow the manufacturer's service rules for personal protection equipment, the service rules for the workstation, and the laws and regulations made by the local government.
- Observe and follow the traveling arrow and the turning direction arrows on the platform controller and the platform's label and nameplate.
- Do not operate the machine on the line of any crane or movable overhead machine, unless the crane controller is locked and/or the potential bump prevention measure is taken.
- Dangerous driving or careless operation when running the machine are strictly prohibited.
- The platform can be lowered only

when there are no personnel or barriers below the platform.

- Limit travel speed according to ground conditions, traffic, road grade, personnel position, or any other possible bump factors.

Component Damage Hazards

- Do not charge the batteries with anything more than a 24V battery charger.
- Do not use the machine as a ground for welding. This could cause damage to the electrical components on the machine.

Explosion and Fire Hazards

- Do not operate or charge the machine in a location with a potential for inflammable or explosive gas or particles.

Machine Damage Hazards

- Do not use a damaged or malfunctioning machine.
- Make a complete operational and function check before each shift. Attach a tag on a damaged or malfunctioning machine immediately and stop all operation.
- Be sure to perform all maintenance and operation according to the instructions in this manual.
- Be sure to keep all labels and decals at the appropriate locations. Replace any that are not legible.
- Be sure to keep this manual in the manual box of the platform.

Personal Injury Hazards

- Do not operate the machine if it is leaking hydraulic oil. Leaking hydraulic oil under pressure can pierce or burn skin.
- Severe injury may result if any component below the cover is touched by mistake. Only trained technicians can perform maintenance to the components under the cover. The operator shall only perform maintenance before the pre-operation inspection. Be sure to keep all compartments closed and locked during operation of the machine.

1.4 Battery Safety

Combustion hazards

- The battery contains acid. Wear protective clothing and safety goggles when performing maintenance on the battery.

- **Take measures to prevent acid from overflowing out of the battery or being touched. Neutralize the overflowed acid material from the battery with soda and water.**

⚠ Explosion danger

- **Keep the battery away from any sparks or open flames. The battery can release an explosive gas.**
- **Do not touch the battery terminal or the cables with any tool that may cause a spark.**
- **When the vehicle stops for a long time, it is necessary to turn off the main power switch.**

⚠ Component damage hazard

Do not charge the battery with more than a 24V battery charger.

⚠ Electrocution/Burn hazards

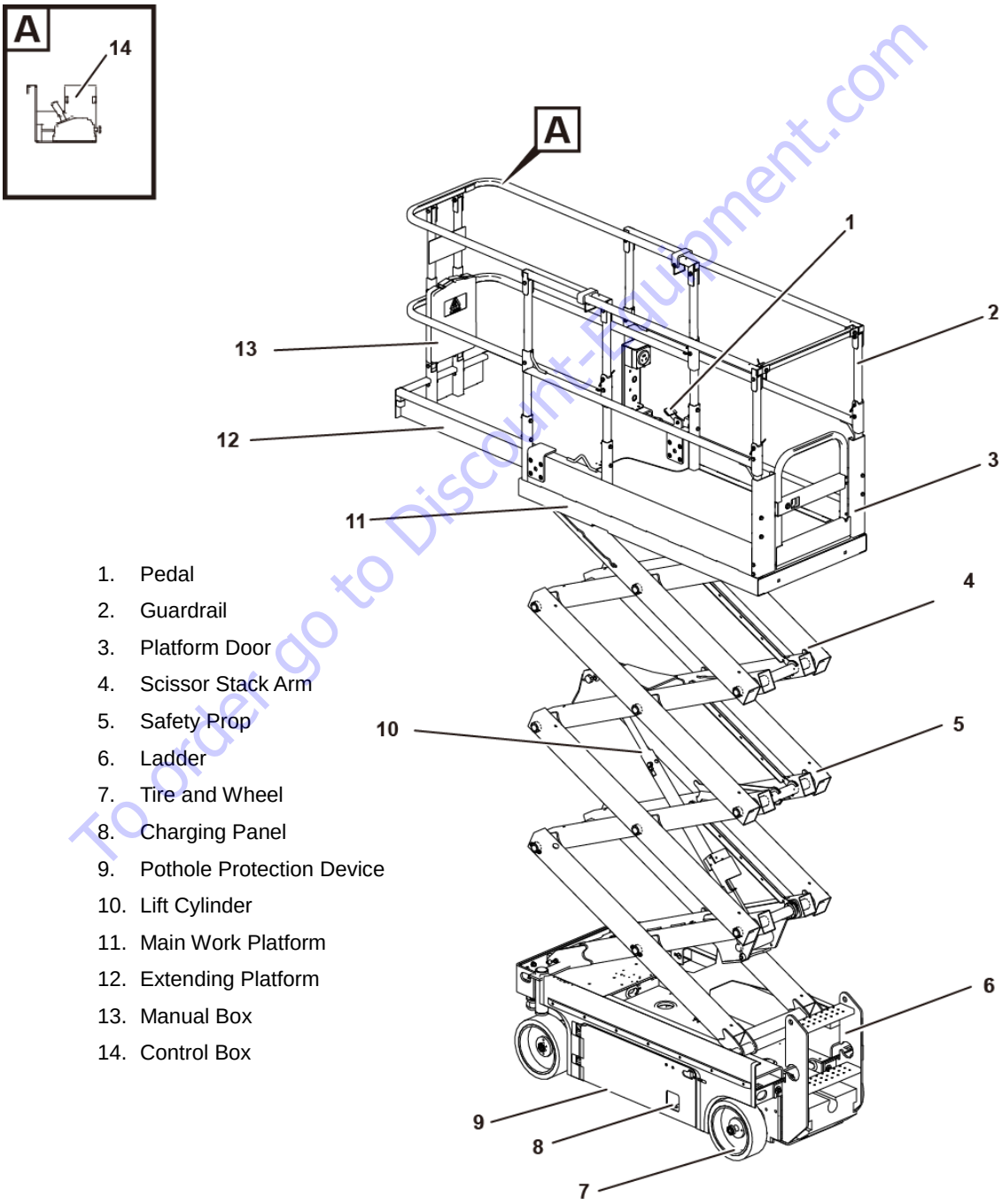
- **The battery charger can be connected to the grounded AC three-wire power socket.**
- **On a daily basis, check to see if the wire cable, electric cable and wiring are damaged. Replace the damaged items before the operation.**
- **Take measures to prevent electric shock from touching the battery terminals. When working on the electrical circuits, remove all jewelry and metallic objects. The battery charger can be connected to the grounded AC three-wire power socket.**

1.5 Lock After Each Use

1) Choose a safe parking position which is solid and horizontal ground where there are no barriers or heavy traffic.
2) Lower the platform.
3) Rotate the key switch to the “OFF” position and pull out the key, to avoid unauthorized use.
4) Charge the battery
5) Disconnect and remove the platform control box
6) Store in a safe location

Chapter 2 Machine Nomenclature

⚠ Notice: This drawing shows an AS1932E, but the nomenclature is common for all other models.



1. Pedal
2. Guardrail
3. Platform Door
4. Scissor Stack Arm
5. Safety Prop
6. Ladder
7. Tire and Wheel
8. Charging Panel
9. Pothole Protection Device
10. Lift Cylinder
11. Main Work Platform
12. Extending Platform
13. Manual Box
14. Control Box

Chapter 3 Controls

3.1 Ground Controls

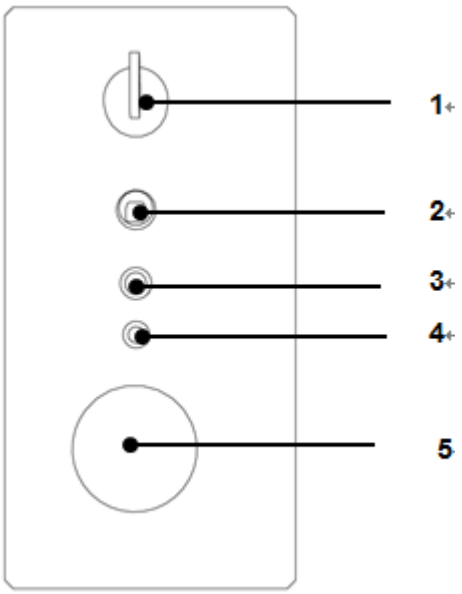


Fig -3.1

1. Key Switch
2. Platform Lift Switch
3. Auto reset fuse (7A)
4. Overload indicator lamp
5. Emergency stop switch

3.1.1 Key Switch

The three-position key switch controls the power supply for the machine. When the switch is set to the left, the platform operation mode will be enabled; when the switch is set to the right position, the chassis operation mode will be enabled; when the switch is set to the center position, the power to the machine will be off.

Notice

The key can be inserted or removed only when the switch is in the center position. Some machines are equipped with optional switches that allow the keys to be inserted or removed at all three positions.

3.1.2 Emergency Stop Switch

The power supply to the machine is disconnected when the emergency stop switch is pressed.

Notice

An emergency stop switch is installed on both the chassis and the platform controller. The two switches operate together in series. Normal operation can be performed when both switches are pulled out. The power supply will be cut off when either emergency stop switch is pressed.

3.1.3 Platform Lift Switch

The platform Lift Switch is only used to control the lifting or lowering of platform.

3.2 Platform Controls

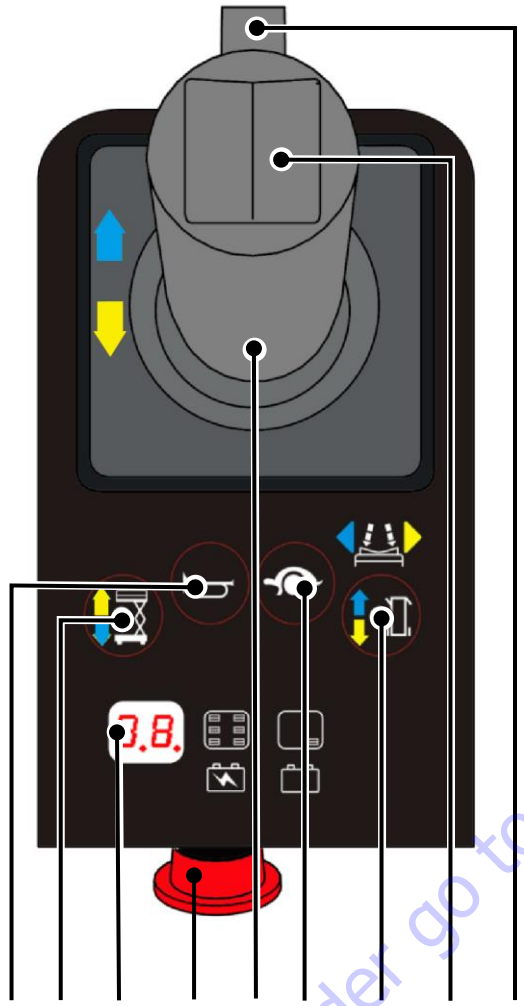


Fig-3.1(If equipped)

1. Horn Button
2. Lift Switch
3. Display
4. Emergency Stop Switch
5. Control Lever
6. Drive Speed Button
7. Drive Function Button
8. Steer Switch
9. Enabling Switch

3.2.1 Horn Button

The horn will sound when this button is pressed, and will stop when the button is released.

3.2.2 Lift Switch

Pressing this switch activates the lift function for the platform.

3.2.3 Display

The Display shows Diagnostic Fault Codes and when charging the batteries, displays charging status.

Table 4-Data on the Display

Operating step	Displayed data
Power on but no moving	Battery capacity
Move forward or backward	Battery capacity
Lift up the platform	Battery capacity
Lower the platform	Battery capacity
A fault occurs	Error code
Chassis control mode	C H

3.2.4 Emergency Stop Switch

The power supply to the machine is disconnected when the emergency stop switch is pressed.

Notice

An emergency stop switch is installed on both the chassis and the platform controller. The switches operate together in series. Operation can be performed when both switches are pulled out. The power supply will be cut off when either emergency stop switch

is pressed.

3.2.5 Drive/Lift Control Lever

Drive function:
After the enabling switch is pressed, the machine will move to the forward when the control lever is moved to the direction (front) indicated by the blue arrow, or to the backward when the control lever is moved to the direction (back) indicated by the yellow arrow.
Lift function:
After the enabling switch is pressed, the platform will raise when the control lever is moved to the backward, or lower when the control lever is moved to the forward.

Notice

When the platform is lowering, the lowering alarm will beep.

Notice

If using emergency lowering, the alarm will not beep.

3.2.6 Drive Speed Button

Pressing this button will select the slow or fast drive function.

3.2.7 Drive Function Button

Pressing this button activates the drive function.

3.2.8 Steer Switch

After the drive function button and the enabling switch on the lever are pressed, the steer switch can be used to control the steering direction of the machine.

3.2.9 Enabling Switch

The driving, steering, lifting or lowering function can be activated only when the enabling switch on the lever is pressed.

3.2.10 Indoor or outdoor mode selection (If equipped)

1) Via the lift button on the handle for indoor or outdoor selection (indoor light, outdoor flashing).
2) When indoor mode is selected, the machine AS4650/AS4650E can be lifted up to 13.8 m ; When outdoor mode is selected, the machine can be lifted up to 8 m and stop lifting.
3) At the retracted state, the indoor/outdoor mode can be switched; at the lifting state, the indoor/outdoor mode cannot be switched.

4) When the machine is restarted at the retracted state: the default mode is outdoor mode. When the machine is restarted at the lifting state: the default mode is the one when the machine is turned off (Key switch off or emergency stop switch off).

⚠ Warning : In case of indoor mode, it is prohibited to move the machine from indoors to outdoors.

Chapter 4 Pre-Operation Inspection

Warning

Operation of this machine is forbidden, unless the safe operation principles of the machine are understood and practiced.

- All dangerous conditions are avoided.
- The pre-operation inspection is always performed.

Notice

Ensure the workstation inspection is fully understood before proceeding to the next step.

- The workstation is inspected and checked.
- The function test is always made before operation.
- The machine is used for its designed purpose.

4.1 Basic Principles

1) The pre-operation inspection and routine maintenance are the responsibilities of the operator.
2) The pre-operation inspection is a visual process, which shall be performed daily by the operator before each work shift. The purpose of the inspection is to check the machine for any significant problems before performing the Function Test.
3) The pre-operation inspection can also be used for confirming if routine maintenance is required. The operator shall only perform routine maintenance as specified in this manual.
4) Check the list in the next page and check every item.
5) If any damage is found or any un-permitted change different to the delivery status is found, tag the controls and stop operation of the machine.
6) Only qualified maintenance technicians are permitted to repair the machine as per LGMG North America. After the required maintenance has been performed, the operator must carry out the pre-operation inspection again before the function test.

4.2 Pre-Operation Inspection

1) Ensure the manual is complete and legible. Keep it in the manual box on the platform.
2) Keep all labels clear and readable and place them appropriately. Go through the label.
3) Check for any hydraulic oil leakage and

proper oil level. Go through the label.

4) Check for any battery fluid leakage and if the liquid level is suitable. Add distilled water, if required.

5) Inspect the entire machine for:

   a) Cracks in welds or structural components.

   b) Machine pitting or damage.

   c) All structural members and other key components have no missing parts, related fasteners and pins are in the correct position, and properly tightened.

   d) Install the guard rail, place the guard rail pin in place, and tighten the retaining bolts.

6) Check the following components for damage, proper installation, and any missing parts or unauthorized changes to components:

   a) Battery pack and connections.

   b) Electric element, wiring and cable.

   c) Nuts, bolts, and all other fasteners.

   d) Hydraulic hoses, connectors, cylinders, and valves.

   e) All Indicator lamps and alarms.

   f) Safety props.

   g) Pothole guards.

   h) Platform overload components (if equipped).

   i) Scissor arm pins and fasteners.

   j) Limit switches, alarms, and horn.

   k) Drive motors.

   l) Tires and wheels.

   m) Slide blocks and liners.

   n) Brake release components.

   o) Ground straps.

   p) Platform entry gate.

   q) Platform control box.

   r) Extending platform deck.

   s) Keep the chassis battery tray and oil pump tray closed and locked. Engage the battery disconnect switch.

Notice

If the platform must be elevated to inspect any machine components, keep the safety prop in the correct position. Refer to Chapter 7 – Operating Instructions.

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Chapter 5 Workstation Inspection

Warning

Operation is forbidden unless the following safe operating principles of the machine are understood and performed.

1) All dangerous work site conditions are avoided.
2) Pre-Operation Inspection has been completed.
3) The workstation has been inspected.

Notice

The workstation inspection must be performed and proper operating procedures understood before the next step.

4) The function test has been performed.
5) The machine is used as described in this manual.

5.1 General Information

1) Using the Workstation Inspection procedures, the operator can determine if the safe operation of machine is possible from the workstation. The operator shall carry out this process before operating the machine from the workstation.
2) Understanding the hazards of the workstation are the responsibilities of the operator. Avoid these hazards while moving, delivering, or operating the machine.

5.2 Workstation Inspection

Be aware of the following hazards:

1) Sudden slopes, holes, or dips in the traveling surface.
2) Bumps, ground barriers, or debris on the ground.
3) Inclined plane.
4) Infirm or unsteady ground surface.
5) Overhead barriers and high-voltage power lines.
6) Dangerous location
7) Supporting surface unable to bear the load of the machine.
8) Wind and inclement weather.
9) Unauthorized personnel.
10) Other possible unsafe conditions.

Chapter 6 Function Test

Warning

Operation is forbidden unless the following safe operating principles of the machine are understood and performed.

1) All dangerous work site conditions are avoided.
2) Pre-Operation Inspection has been completed.
3) The workstation has been inspected.
4) The function test has been performed prior to any operation.

Notice

The function test must be performed and proper operating procedures understood before the next step.

5) The machine is used as described in this manual.

6.1 General Information

1) The purpose of the Function Test is to identify potential component failure before operating the machine.
2) The operator must test all machine functions as outlined in this section.
3) Do not use a damaged or malfunctioning machine. Tag out the control boxes and do not use the machine until repairs have been made.
4) Only qualified maintenance technicians are permitted to repair the machine as per the regulations of the manufacturer.
5) After repairs or maintenance have been performed, the operator must perform out the Pre-Operation inspection and Functional Test again before operating the machine.

6.2 Function Test

1) Carry out the function test on a firm and level surface with no barriers or obstructions.
2) Ensure the battery pack is connected.

6.3 Tests from the Ground Controls

1) Pull out the red emergency stop buttons on the platform controller and the ground controller to the ON position.
2) Turn the key switch to the ground controller position.
3) Observe the LED display on the platform controller for the proper reading.

6.4 Test the Emergency Stop Switch

1) Push the emergency stop switch on the ground control station in to the OFF position. Result: All Functions should be disabled.

2) Pull the emergency stop switch out to the ON position.

6.5 Test of Lifting/Lowering Function

Notice

The alarm system will control the buzzer to output the alarms with different frequencies. The lowering alarm will sound 60 times per minute. If the pothole guards fail to deploy and set, the buzzer will sound 180 times per minute. The buzzer will sound 180 times per minute for any overload.

1) Position the key switch to the platform controller or the OFF position.

2) Push up and hold the platform lift control switch. Result: The platform fails to elevate.

3) Position the key switch to the ground control position.

4) Push up and hold the platform lift control switch. Result: The platform will lift.

5) Push down and hold the platform lift switch. Results: The platform will lower. When the platform is lowering, the alarm shall sound.

6) Push down and hold the platform lift switch again. Result: The platform shall descend to the lowest position. When the platform descends, the alarm will sound.(If equipped)

6.6 Emergency Lowering Function Test

1) Push up the platform lift switch to elevate the platform approximately 24 in (60cm).

2) Pull out the emergency lowering control button at the right front part of the machine. Result: The platform shall descend. The lowering alarm shall not sound.

3) Switch the key switch to the platform controller.

6.7 Platform Controller Test

1) Push the ground Emergency Stop Switch in to the OFF position. Result: All functions will not operate.

2) Pull the Emergency Stop Switch out to the “ON” position. Result: The LED display will light up.

6.8 Horn Test

1) Pull the Emergency Stop Switch out to the “ON” position.

2) Push the Enable Switch and activate a function.

3) Press the horn button. Result: The horn will sound.

6.9 Lift Function and Function Enable Switch Test

1) Do not press the enable switch on the control handle.
2) Slowly move the control handle forward or backward. Result: All lift functions shall not be operational.
3) Press the lift function selector button.
4) Press the enable switch on the control handle.
5) Slowly move the control handle backward. Result: The platform shall elevate and the pothole guards shall be deployed.
6) Release the platform control handle. Result: The platform will stop elevating.
7) Press the enable switch. Slowly move the control handle forward. Result: The platform will lower. When the platform lowers, the lowering alarm will sound.

6.10 Steering Test

Notice

Face the end of the machine that steers when testing the steering and driving functions.

1) Press the drive function selector switch. The drive function indicator will light.
2) Press the enable switch on the control handle.
3) Press the rocker switch on top of control handle according to the direction indicated by leftward arrows on the control panel. Result: The machine will turn left.
4) Press the rocker switch on top of the control handle according to the direction indicated by rightward arrows on the control panel. Result: The machine will turn right.

6.11 Driving and Braking Function Test

1) Press the enable switch on the control handle.

2) Slowly push the control handle as per the direction of the forward arrows on the control panel until the machine is moving and return the handle to the center position. Result: The machine shall move forward and then stop.

3) Slowly move the control handle as per the direction of the backward arrows on the control panel until the machine is moving and return the handle to the center position. Result: The machine shall move backward and then stop.

Notice

The brake must be able to hold the machine on any grade it is able to climb.

6.12 Driving Function Test

1) Press the lift function button; the indicator lamp will light up. Press and hold the enable switch to lift the platform to the height called out in the following table. Result: The pothole guards will be deployed.

Table 5 - Pothole Deployment Height When Driving

Model	Height
AS1930	4.3ft (1.3m)
AS1930E	
AS1932	
AS1932E	
AS2632	6.2ft (1.9m)
AS2632E	
AS3246	6.2ft (1.9m)
AS3246E	
AS4046	
AS4046E	
SS1230E	6.56ft (2m)
SS1432E	
AS2646	7.51ft (2.29m)
AS2646E	
SS1932E	7.97ft（2.43m）
AS4650	8.3ft (2.52m)
AS4650E	

2) Press the drive function selector button. The indicator light will light up.

3) Press the enable switch on the control handle and slowly move the control handle fully forward. Result: The drive speed of the platform will not be greater than 0.5mph (0.8km/h) when the platform is elevated. On models SS1230E/SS1432E/SS1932E, the driving speed of the platform will not be greater than 0.3mph (0.5km/h) when the platform is elevated. If the elevated driving speed of the platform exceeds these limits, immediately tag out the controls and stop operation until repairs are made.

6.13 Operation of Tilt Sensor Test

Notice

This test is performed with the platform controller from the ground. Do not stand in the platform.

1) Completely lower the platform.
2) Drive two wheels on the same side of the machine up on a 1.37×7.9in (3.5×20cm) block.
3) Lift up the platform to a height listed in the following table. Result: The platform will stop moving and the tilt alarm will sound at a rate of 120 times per minute.

Table 6- Drive Cutout Height When Tilted

Model	Height
AS1930	5.6ft (1.7m)
AS1930E	
AS1932	
AS1932E	
SS1230E	6.56ft (2m)
SS1432E	
AS2632	6.9ft (2.1m)
AS2632E	
AS3246	
AS3246E	
AS4046	
AS4046E	
SS1932E	8.53ft (2.6m)
AS2646	
AS2646E	
AS4650	9.2ft (2.8m)
AS4650E	9.2ft (2.8m)

4) Slowly move the control handle to operate drive forward and then driver reverse. Result: The drive function will be disabled in either direction.
5) Lower the platform and drive the machine off of the blocks.

6.14 Pothole Guard Test

Notice:

When the platform is elevated, the pothole guards will be automatically deployed. The pothole guards initialize another limit switch to enable the continuous drive/steer operation of machine. If the pothole guards fails to be deployed, the alarm will sound and the machine will stop all drive and steer functions.

1) Lift the platform. Result: When the platform elevates a given height (as shown in the following table), the pothole guards shall be deployed.

Table 7 - Pothole Deployment Height When Lifting

Model	Height
AS1930	4.3ft (1.3m)
AS1930E	
AS1932	
AS1932E	
AS2632	6.2ft (1.9m)
AS2632E	
AS3246	6.2ft (1.9m)
AS3246E	
AS4046	
AS4046E	
SS1230E	6.56ft (2m)
SS1432E	
AS2646	7.51ft (2.29m)
AS2646E	
SS1932E	7.97ft（2.43m）
AS4650	8.3ft (2.52m)
AS4650E	

2) Press one side of the pothole guard and then other side. Result: The pothole guard will not move.

3) Lower the platform. Result: The pothole guard will be returned to the stowed position.

4) Place blocks under the pothole guards (1.38in×7.9in [3.5cm×20cm] wood block or a similar material) and elevate the platform. Result: When the platform elevates a given height (as shown in the following table), the alarm will sound. The drive function will be disabled.

. **Table 8 – Pothole Guard Not Deployed Alarm Height**

Model	Height
AS1932E	4.9ft (1.5m)
AS1932	
SS1230E	6.56ft (2m)
SS1432E	
AS2632	6.9ft (2.1m)
AS2632E	
AS3246	
AS3246E	
AS4046	
AS4046E	6.9ft (2.1m)
SS1932E	8.53ft (2.6m)
AS2646	
AS2646E	
AS4650	9.1ft (2.78)
AS4650E	

5) Lower the platform and remove the blocks.

Chapter 7 Operating Instructions

⚠ **Warning:**

Operation is forbidden unless the following safe operating principles of the machine are understood and performed.

1） The dangerous conditions are avoided.

2) The pre-operation inspection is always made.

3) The workstation is checked.

4) The function test is always made before the use.

5) The machine is used for its design purposes.

7.1 General Information

1) This machine is an electrically powered mobile elevating work platform, consisting of a work platform on an elevating scissors mechanism. The vibration produced by the running machine causes no hazards to the operators on the work platform. This machine can be used for carrying the workers and their tools to the specified height above the ground and also for reaching the workstation above the machine or equipment.

2) Detailed operating instructions for all functions are outlined in this Operation section. It is the operator's responsibility to follow all safety regulations and descriptions in this operation and maintenance manual.

3) It is prohibited to use the machine for any purpose other than carrying the staff, equipment, tool and material to the overhead workstation.

4) Only trained and authorized personnel can operate this machine. Each operator shall perform the pre-operation inspection, function test and workstation inspection before running the machine.

7.2 Emergency Stop

1) Push the emergency stop switch on the ground or platform controller to the OFF position to disable all functions.

2) The recovery of any operation function must be done by pressing the emergency stop switch.

7.3 Emergency Lowering

Pull the emergency lowering control button outward.

7.4 Operation from the Ground Controls

1) Turn the key switch to the ground position.

2) Pull the emergency stop switch on the ground and the platform to the ON position.

3) Ensure the battery tray is connected before running the machine.

7.5 Platform Positioning

Move the platform lifting and lowering switch according to the mark on the control panel. The driving and turning functions are unavailable from the ground controller.

7.6 Operation from the Platform Controls

1) Turn the key switch to the platform control position.
2) Pull the emergency stop switch out on both ground controls and the platform controls to the ON position.
3) Ensure the battery tray is connected before running the machine

7.7 Platform Positioning

1) Press the lift function selector switch.
2) Press the enable switch on the control handle.
3) The platform will raise when the control lever is moved to the backward, or lower when the control lever is moved to the forward.

7.8 Steering

1) Press the drive function selector switch.
2) Press the enable key on the control handle.
3) Turn the wheels in the desired direction using the rocker switch on the top of control handle.

7.9 Drive

1) Press the drive function selector switch.
2) Hold the enable switch on the control handle.
3) To increase speed, slowly move the control handle away from the centered position. To decrease speed, slowly return the control handle to the center position. To stop, fully return the handle to the center position or release the enable switch.
4) Coordinate machine drive direction with the direction arrows on the platform controller and the platform.
5) When the platform is elevated, the drive speed of the machine is reduced.
6) The status of the battery pack will affect machine performance.
7) When the battery level indicator lamp flashes, driving speed and functional speed of machine will be reduced.

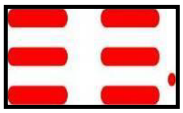
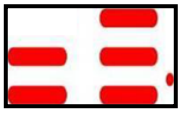
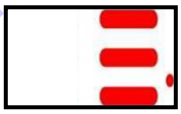
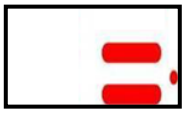
7.10 Drive Speed Option

The drive controller can be operated at two different drive speeds. When the drive speed selector switch indicator lights up, slow driving speed mode is enabled. When the driving speed selector switch lamp goes out, the high speed drive mode is enabled. Press the driving speed selector switch to select the desired driving speed.

7.11 Using platform controller to drive the machine on the ground

1) Keep a safe distance between the operator, machine, and any stationary object.
2) Be cautious and aware of the driving direction of machine when using the controller from the ground.
3) Identify the battery level with the LED display.

Table 9 - Battery Level as Shown on LED Display

Platform Display	Battery Percentage (%)	Description
	90-100	The battery capacity is full
	70	Percentage of remaining battery capacity
	50	Percentage of remaining battery capacity
	30	Percentage of remaining battery capacity
	20	The battery must be charged
	10	The battery capacity is very low

Notice

When the battery capacity is very low (≤10%), the machine will change to low speed mode automatically.

7.12 Driving on a slope

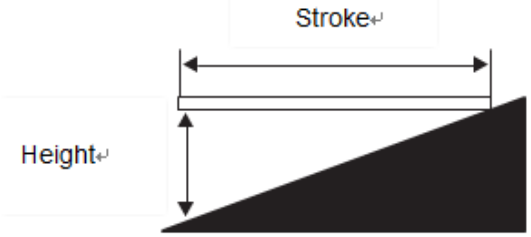
Determine the slope and side slope ratings for the machine and determine the slope grade.

Maximum slope rating, stowed position: 	25%(14°)
Maximum side slope rating, stowed position: 	25%(14°)

Note: Slope rating is subject to ground conditions with one person in the platform and adequate traction. Additional platform weight may reduce slope rating.

Measure the slope by using a digital inclinometer or as per the following steps.

- ✓ Required tools: Carpenters rule, straight wood block (with length of at least 1m), tape measure and other tools.
- ✓ Place the wood block on the slope, place the carpenters rule on the upper limb of the wood block at the end of down-slope, and lift the end of the wood block until it is horizontal.
- ✓ Keep the wood block in the horizontal state, and measure vertical height from the bottom of the wood block to the ground.
- ✓ Height is divided by the length of wood block (stroke), i.e.,



Stroke=3.6m/11.8ft

lifting height=0.3m/1ft

0.3÷3.6=0.083=8.3%

If the slope exceeds the maximum uphill, downhill or side slope rating, the vehicle must be winched or transported up or down the slope.

7.13 Using the Safety Prop

1) Elevate the platform a specified height above the ground (for elevation height, refer to the following table).

Model	Height
SS1230E	7.9ft (2.4m)
SS1432E	
AS1930	
AS1930E	
AS1932	
AS1932E	
SS1932E	9.09ft (2.77m)
AS2632	10.5ft (3.2m)
AS2632E	
AS2646	
AS2646E	

AS3246	
AS3246E	
AS4046	13.1ft (4m)
AS4046E	
AS4650	
AS4650E	

2) Lift the safety prop, move it to the center of the scissor cross tube and rotate it upward until it is vertical.

3) Lower the platform height until the safety prop completely contacts the shaft tube. Keep the platform away from the movable parts during the lowering process.

Danger

Do not carry any load in the platform when the safety prop is being used. No long time (8 hours) to use safety prop in empty state.

7.14 How to Stow the Guardrail

.On models SS1230E/SS1432E/SS1932E/ AS1930/AS1930E/AS1932 / AS1932E/ AS2632/AS2632E, the platform guardrail system consists of a folding guardrail on an extended platform and a folding guardrail on the main platform.

1) Fully lower the platform and lock it into the extended platform.
2) Remove the platform controller.
3) Remove the M-shaped fixed seat between the guardrails of the main platform and the extended platform from the inside of the platform and place it in the platform.
4) Remove the two retaining pins at the front of the extended platform from the inside of the main platform.
5) Fold the front guardrail of the extended platform inward. Do not place your hands in places where there may be a pinch point. At the same time, prevent the left and right guardrails of the extended platform from tilting over.
6) Install the two retaining pins which were removed back to the guardrail on each side.
7) Fold the left guardrail of the extending platform inward. Do not place your hands in places where there may be a pinch point. At the same time, prevent the right guardrails of the extended platform from tilting over.
8) Fold the right guardrail of the extending platform inward. Do not place your hands in places where there may be a pinch point.
9) Remove the two retaining pins on the upper part of the door.
10) Fold the door guardrail from the ladder or the ground inward. Do not place your hands in places where there may be a pinch point. At the same time, prevent the guardrails of the extended platform from tilting over.
11) Fold the left guardrail of main platform from the ladder or the ground inward. Do not place your hands in places where there may be a pinch point. At the same time, prevent the right guardrails of the main platform from tilting over.

12) Fold the right guardrail of main platform from the ladder or the ground inward. Do not place your hands in places where there may be a pinch point.
13) Install the two retaining pins which were removed back to the guardrail on each side.

On models , AS2646/AS2646E/AS3246/ AS3246E/ AS4046 /AS4046E/AS4650/ AS4650E, the platform guardrail system consists of a folding guardrail on an extended platform and a folding guardrail on the main platform.

1) Fully lower the platform and lock it into the extended platform.
2) Remove the platform controller.
3) Remove the M-shaped fixed seat between the guardrails of the main platform and the extended platform from the inside of the platform and place it in the platform.
4) Remove the two retaining pins at the front of the extended platform from the inside of the main platform.
5) Fold the front guardrail of the extended platform inward. Do not place your hands in places where there may be a pinch point. At the same time, prevent the left and right guardrails of the extended platform from tilting over.
6) Install the two retaining pins which were removed back to the guardrail on each side.
7) Fold the left guardrail of the extending platform inward. Do not place your hands in places where there may be a pinch point. At the same time, prevent the right guardrails of the extended platform from tilting over.
8) Fold the right guardrail of the extending platform inward. Do not place your hands in places where there may be a pinch point.
9) Remove the two retaining pins on the upper part of the door.
10) Fold the door guardrail from the ladder or the ground inward. Do not place your hands in places where there may be a pinch point. At the same time, prevent the left and right guardrails of the extended platform from tilting over.
11) Rotate the semi-revolving door until the right and left guardrails can be folded smoothly , from the ladder or the ground inward. Do not place your hands in places where there may be a pinch point. At the same time, prevent the guardrails of the main platform from tilting over.
12) Install the two retaining pins which were removed back to the guardrail on each side.

7.15 How to Erect the Guardrail

To erect the guardrails, reverse the sequence outlined in How to Stow the Guardrail.

7.16 Extending and Retracting the Extending Platform Deck

1) Step on the positioning pedal on the extending platform.

2) Push the guardrail of the extending platform to extend the platform to the desired position.

Notice

Do not stand on the extending platform deck while extending it.

7.17 Power Supply Switch

1. DC power switch (If equipped)

Press the DC power switch, power supply of the whole machine will be disconnected.

Pull out the DC power switch and power supply of the whole machine will be connected.

2. Anderson connector (if equipped)

Connect

Disconnect

Notice:

Disconnect the main power switch when the machine is in transportation/ repaired or not used for a long time. (DC power switch or Anderson connector)

7.18 Error Codes

Notice

When an error code is present, the code will flash once per second on the screens of the ECU and PCU.

Table 10 - Error Codes

Display	Description	Response
01	System initialization error	Stop all actions
02	System communication error	Stop all actions
03	No machine code is set during the first use	Stop all actions
04	The set code is invalid	Stop all actions
06	Prompt of successful release of the remote parameter	Display alarm only
07	Secondary lock alarm	Disable lifting and running
08	Prompt of successful release of weight calibration data	Display alarm only
09	Incorrect feature configuration settings	Disallow all actions
12	Chassis lifting or lowering button opening error during start	Stop all chassis controls
18	Pothole protection error	Stop lifting and running
27	Proportional solenoid valve failure	Stop lifting and running
31	Pressure sensor error	Stop lifting and running
32	Angle sensor error	Stop lifting and running
33	1412 light load mode data calibration error	No lifting
35	Calibration data error	Display alarm only
36	Low battery alarm	Speed reduced to walking speed after lifting
38	Activated overload function and uncompleted weight calibration error	No lifting
39	The battery level switch detects the low level of the battery.	Display alarm only
40	Alarm of failed ECU and GPS handshake	No lifting or walking
41	Lock vehicle status through platform (only applicable to the ECU with the GPS function)	No lifting
42	Platform left turn button pressing error during start	Display alarm only
43	Platform right turn button pressing error during start	Display alarm only
46	Platform handle enable switch button pressing error during start	Stop platform control

47	“The platform handle is not in the middle position” error during start	The speed is reduced to the speed after lifting
52	Forward coil error	Stop lifting and running
53	Backward coil error	Stop lifting and running
54	Lifting error of lifting coil	Stop lifting and running
55	Lifting error of lowering coil	Stop lifting and running
56	Right turn coil error	Stop lifting and running
57	Left turn coil error	Stop lifting and running
58	Brake coil error (because the brake coil is optional, this function is temporarily shielded)	Stop lifting and running
60	Motor controller error	Stop lifting and running（Triplat only）
61	Electric drive motor controller current sensor error (overheating of running or lifting motor)	Display alarm only
62	Motor controller hardware damage error	Display alarm only
63	Motor controller motor output error	Display alarm only
64	Motor controller SRO error	Display alarm only
65	Motor controller throttle valve error	Display alarm only
66	Motor controller emergency reverse error	Display alarm only
67	Motor controller HPD error	Display alarm only
68	Low voltage alarm	Stop all actions
69	High neutral current (MC is detecting current in the motor, but there shall be no current in this case)	Stop lifting and running
70	The steering input is beyond the range (the improper voltage is in the steering input)	Stop lifting and running
71	Motor controller main contactor error	Stop lifting and running
72	Motor controller overvoltage error	Display alarm only
73	Motor controller heat reduction error	Display alarm only
74	Motor controller motor error	Display alarm only
75	Motor controller pump motor error	Display alarm only
76	Motor controller left drive motor error	Stop lifting and running
77	Motor controller right drive motor error	Triplat prohibits lifting and walking combiacx shows only alarms
78	Pump motor short circuit error	Triplat show only alarms combiacx prohibits lifting and walking
79	Left drive motor short circuit error	Stop lifting and running
80	Alarm of exceeding 80% load	Alarm only
81	Right drive motor short circuit error	Stop lifting and running
82	Left brake coil error	Stop lifting and running
83	Right brake coil error	Stop lifting and running

84	Motor controller short circuit error	Stop lifting and running
85	Brake release switch error	Alarm only
86	Brake release not open error	Alarm only
87	Brake application failure	Alarm only
89	Motor protection open error	Stop lifting and running
90	Alarm of exceeding 90% load	Alarm only
91	Short circuit of left drive motor protection	Stop lifting and running
92	Right drive motor protection short circuit	Stop lifting and running
99	Alarm of exceeding 99% load	Alarm only
OL	Platform overload alarm	Stop all actions
LL	"The machine tilts over the safety limit" error	Stop lifting and running

Table 11 - Troubleshooting Guide

Display	Description
01	System initialization error: The ECU may have fault, replace the ECU.
02	System communication error: Check connection between the communication line and other cables. If fault still exists, please replace the PCU or the ECU.
03	Invalid option setting error: Set proper options for the machine
04	The selected machine code is not within the application range, make selection again based on the model
06	Prompt of successful release of the parameter: Restart it
07	Determine whether the GPS platform issues a car lock command
08	Prompt of successful release of calibration data: Restart it
09	Whether the function bit is not configured
12	Chassis lifting or lowering button opening error during start: Check the wiring of the toggle switch or check whether the toggle switch is jammed.
18	Pothole protection error: Check whether the pothole protection is activated, and check the pothole protection limit switch. Check the wiring of the switch, lower limit switch and wiring.
27	Check that the proportional valve is wired correctly.
31	Pressure sensor error: Check the sensor wiring and the sensor. Check to confirm that the correct machine option with overload detection is selected.
32	Angle sensor error: Check the sensor wiring and the sensor. Check to confirm that the correct machine option with overload detection is selected.
33	1412 light load mode unsuccessful overload weight function data calibration error: Carry out weight calibration again.
35	Check whether the calibration process is reversed
36	Check whether the vehicle voltage is too low and whether it needs to be charged.
38	Error of unsuccessful overload weight function calibration: Carry out weight calibration again.
39	Too low level of the battery: Check the battery level and fill the electrolyte if liquid level is too low. Check whether the liquid level switch is installed correctly.

Display	Description
40	GPS reconnection error: Check connection status
41	Release unlocking instruction through platform (only applicable to the ECU with the GPS function)
42	Platform left turn button pressing error during start: Ensure that buttons on the handle are not pressed. If not, consider replacing the handle or the PCU.
43	Platform right turn button pressing error during start: Ensure that buttons on the handle are not pressed. If not, consider replacing the handle or the PCU.
46	Platform handle enable switch button pressing error during start: Ensure that the enable switch on the handle is not pressed. If not, consider replacing the handle or the PCU.
47	"The platform handle is not in the middle position" error during start: Confirm that the handle is in the middle position, and check the middle position parameter setting. If normal, consider replacing the handle or the PCU.
52	Forward coil error: Check the connection of the coil and confirm that it is normal. If normal, check the coil for short circuit or open circuit.
53	Backward coil error: Check the connection of the coil and confirm that it is normal. If normal, check the coil for short circuit or open circuit.
54	Lifting error of lifting coil: Check the connection of the coil and confirm that it is normal. If normal, check the coil for short circuit or open circuit.
55	Lifting error of lowering coil: Check the connection of the coil and confirm that it is normal. If normal, check the coil for short circuit or open circuit.
56	Right turn coil error: Check the connection of the coil and confirm that it is normal. If normal, check the coil for short circuit or open circuit.
57	Left turn coil error: Check the connection of the coil and confirm that it is normal. If normal, check the coil for short circuit or open circuit.
58	Brake coil error: Check the connection of the coil and confirm that it is normal. If normal, check the coil for short circuit or open circuit.
60	Check the motor controller.
61	Cool down the machine, and check the wiring. If the wiring is OK, replace the motor controller
62	Restart the machine, if fault exists, check the root cause; if fault still exists, replace the motor controller
63	Check the wiring, and then restart it, and replace the motor controller if necessary
64	Check whether the motor parameter enable delay is too short, and confirm that the parameter is correct
65	Check the wiring, and ensure that the correct throttle type is selected in the motor controller
66	Ensure that the emergency reverse check parameter in the motor controller is set to off
67	The motor enable delay may be too short, and confirm that parameter of other motor controllers is correct
68	Low voltage error: Check the battery voltage and charge if necessary. Check connection between the battery and the switch, reinforce or clean it. Check whether the voltage of the PCU and the ECU is normal.
69	MC is detecting current in the motor, but there shall be no current in this case. MC thinks that the brake is turned on
70	Adjust the ZAPI and/or check the toggle voltage due to loose wiring
71	Check wiring of main contactor, replace contactor if necessary, or replace motor controller
72	Check the battery voltage, check if it is charging. If the fault still exists, try to replace the motor controller
73	Cool down the restart machine or replace the motor controller
74	Check the wiring of the motor or replace the motor controller

Display	Description
75	Check the wiring of the pump motor, restart the machine or replace the motor controller
76	Check the wiring of the left drive motor, restart the machine or replace the motor controller
77	Check the wiring of the motor, restart the machine or replace the motor controller
78	Check the wiring of the pump motor, restart the machine or replace the motor controller
79	Check the motor connection and ensure that they are tightened, and check the motor for short circuit
80	Alarm of exceeding 80% load: As the platform is close to the load limit, it is not recommended to increase the load.
81	Check the motor connection and ensure that they are tightened, and check the motor for short circuit
82	Check the connection of the coil terminal and ensure that they are tightened, and check whether the coil is connected properly
83	Check the connection of the coil terminal and ensure that they are tightened, and check whether the coil is connected properly
85	Check that the brake connection is correct
86	Check that the brake connection is correct
87	Check that the brake connection is correct
89	Check motor circuit connection status
90	Alarm of exceeding 90% load: As the platform is close to the load limit, it is not recommended to increase the load.
91	Check if the left drive motor is shorted
92	Check if the right drive motor is shorted
99	Alarm of exceeding 99% load: As the platform has reached the load limit, do not to increase the load.
OL	Platform overload alarm: Remove excessive loads immediately.
LL	"The machine tilts over the safety limit" error: If the machine tilts, try to make it recover horizontal status. If the machine is horizontal, check the wiring of the level sensor or the sensor.

Historical error status

1) The controller can display the latest 10 error alarm codes. Press the right turn key on top of handle and hold it for 10 seconds (do not press the enable switch of the handle) to log in the historical error status.

2) Press the left turn switch to view the previous error code until reaching the first one. Press the right turn switch, to view the historical error code in the reverse sequence until reaching the latest one. For error codes, please refer to the table above.

3) Push the enable switch on the handle to recover the normal operation status.

Chapter 8 Transport and Lifting Instructions

Warning

Obey these instructions.

- When lifting the machine with a crane, ensure the crane has the proper capacity and rigging to handle the weight of the machine.
- Only qualified personnel are allowed to load and unload the machine onto a truck for transport.
- The hauling vehicle must be parked on firm, level ground.
- When loading the machine, be sure to chock the wheels of the hauling vehicle to ensure it won't move.
- Ensure vehicle capacity, load surface, and tie down equipment is adequate for bearing the weight of the machine. Refer to the nameplate on the machine for gross weight.
- Be sure to load the machine on a flat, level surface and chock the wheels before releasing the brake.
- Do not drive the machine when traveling up and down a slope or when driving on a slope exceeding the rated gradeability for the machine. For driving on a slope, refer to Chapter 7 – Operating Instructions. If the loading ramp of the hauling vehicle exceeds the maximum rated travel grade of the machine, load and unload the machine with a winch as per the instruction for brake releasing operation.

8.1 Releasing the Brake

Collision Hazard

Failure to secure machine before releasing brakes will result in death or serious injury.

1. Make sure machine is on a firm, level surface or secured.
2. Chock wheels.
3. Release brakes.

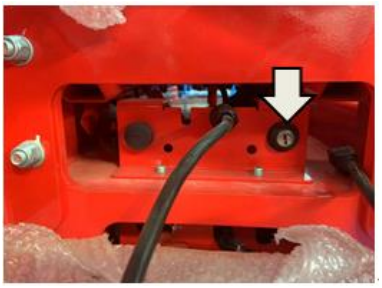
Brake Release Operation (For electric drive models)

Notice:

Before release the brake, the main power supply should be connected, and the emergency stop switch on the chassis and platform must be cut off.

1. Chock wheels to prevent machine from rolling.
2. Be sure winch line is properly secured to drive chassis tie points and path is clear of all obstructions.

3. Turn the key switch to the right side to release the brake.



After brake release operation:

1. Chock wheels to prevent machine from rolling.
2. Turn the key switch to the off position to engage the brake.
3. If system voltage is lower than 16.8v, operate the drive motor according to the following procedure.

①Unscrew the drive motor end cover;

②Screw the M6*25 bolt into the screw holes in the brake disc, see Figure2 ;

⚠ Notice: For SS1230E/SS1432E/SS1932E models, screw the M3*20bolt into the screw holes in the brake disc.

③. Turn the bolt clockwise. When the brake clearance is greater than 0.003in (0.08 mm), the brake is released.

④Repeat the above procedure on opposite drive motor. With both drive motor brake released the machine can be moved manually.

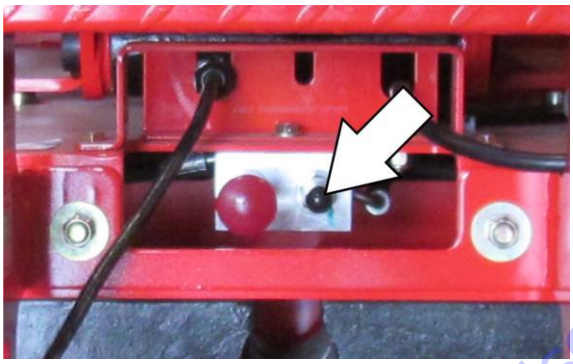
⑤After moving the machine，reinstall both drive motors to the original conditions.

Brake Release Operation (For hydraulic drive models)

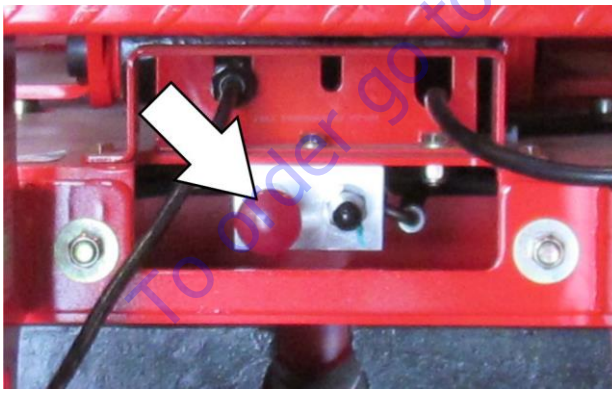
1) Chock the wheels to prevent the machine from moving.

2) Make sure all lifting devices are properly fastened at the designated tie down/lifting points on the chassis, and there are no obstacles in the way.

3) Push the black brake release knob to open the brake valve.



4) Pull the red brake release pump knob.



⑤Repeat the above procedure on opposite drive motor. With both drive motor brake released the machine can be moved manually.

⑥After moving the machine，return both drive motors to the original conditions.

8.2 Transport Safety

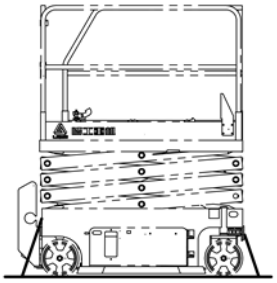
1) Chock the machine wheels when preparing for transport.

2) Retract and secure the extending platform.

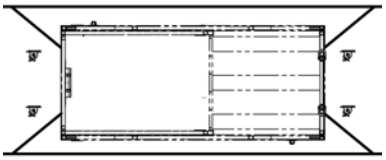
3) Switch the key switch to the OFF position and take out the key before transporting the machine. Disconnect and remove the platform control box. Store in a safe location prior to transporting the machine.

4) Ensure the front and rear wheels are securely chocked and the machine is inspected to ensure there are no loose or unsecured parts.

5) Secure the machine on the transport surface using the tie down areas on the chassis.



6) Use at least four chains or tie straps.



7) Be sure to use chains or tie straps of sufficient load capacity.

8) Secure the folded guard rail (if any) with a tie

strap before transport

Warning

Obey the following instructions.

- Only personnel qualified in loading and transporting heavy equipment can rig lifting equipment and lift the machine.

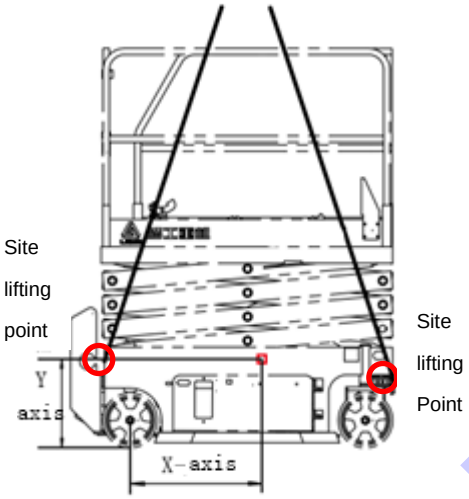


Table 12 - Center of Gravity

Model	X-axis	Y-axis
SS1230E	21.77in (553mm)	20.51in (521mm)
SS1432E	22.29in (566.2mm)	19.88in (504.95mm)
SS1932E	32.88in (835.1mm)	22.8in (579.4mm)
AS1930E	22.2in (564mm)	18.85in (478.8mm)
AS1932E	21.5in (546.3mm)	19.2in (487.5mm)
AS2632E	33.9in (860.2mm)	25.4in (645.6mm)
AS2646E	33.37in (847.8mm)	23.86in (606.13mm)
AS3246E	33.8in (858.5mm)	25.4in (645mm)
AS4046E	47.32in (1202mm)	26.9in (683.15mm)
AS4650E	42.9in (1090mm)	33.6in (853mm)
AS1930	22.2in (564mm)	18.85in (478.8mm)
AS1932	21.5in (546.3mm)	19.2in (487.5mm)
AS2632	33.9in (860.2mm)	25.4in (645.6mm)
AS2646	33.37in (847.8mm)	23.86in (606.13mm)
AS3246	33.8in (858.5mm)	25.4in (645mm)
AS4046	47.32in (1202mm)	26.9in (683.15mm)
AS4650	42.9in (1090mm)	33.6in (853mm)

- Only personnel qualified in forklift operation qualification are permitted to load and unload the machine with a forklift.

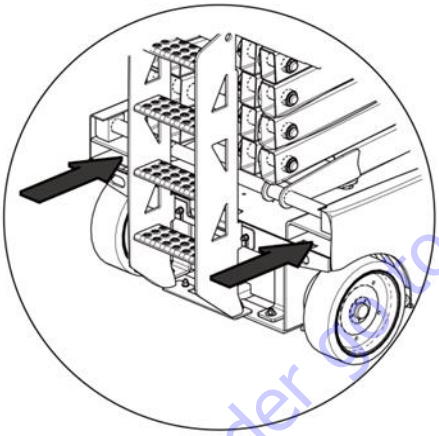
- Ensure that the lifting capacity, loading surface, loading straps, or rope of the crane is sufficient to bear the machine weight. For serial number, please refer to the nameplate。

8.3 Loading the Machine with a Forklift

1) Be sure to secure the extending platform, the controller and the chassis tray. Remove all movable components from the machine.

2) Completely lower the platform. Keep the platform folded in each transport process.

3) Use the forklift pockets on both sides of the ladder.



4) Place the forks of the forklift into the forklift pockets.

5) Drive the forklift forward to completely insert the fork into the pockets.

6) Lift the machine by 6in (15cm) and slightly tilt the fork backward to keep the machine stable.

7) Keep the machine level when lowering the fork.

Notice

Component damage may result from the machine being lifted from its' side.

8.4 Lifting Precautions

1) Completely lower the platform. Be sure to secure the extending platform, the controller and the chassis tray. Remove all movable components from the machine.

Notice

Use the center of gravity shown on the lifting decal on the machine.

2) The spreader can only be attached to the specified lifting point on the machine shown.

3) There are two lifting holes in the front panel of the machine, and there are two lifting holes in the rear end board to use for lifting the machine.

4) Adjust the lock tool in such a way that the machine is not damaged and the machine is kept horizontal.

8.5 Parking and Storage

Follow the parking and storage instructions below：

1) Drive the machine to a well-protected and well-ventilated area.

2) Be sure to completely lower the platform.

3) Push the emergency stop switch in to the OFF position.

4) If necessary, cover the control panel and the warning signs to protect them against the environment.

5) If the machine is parked for a long period, cover the wheels on both sides with a blocking board.

6) Turn the power supply selector switch to the OFF position and pull out the key to avoid starting and unauthorized use of equipment.

7) If equipped with the optional anti-vandalism package, the working station and ground control box can be covered and locked to prevent vandalism.

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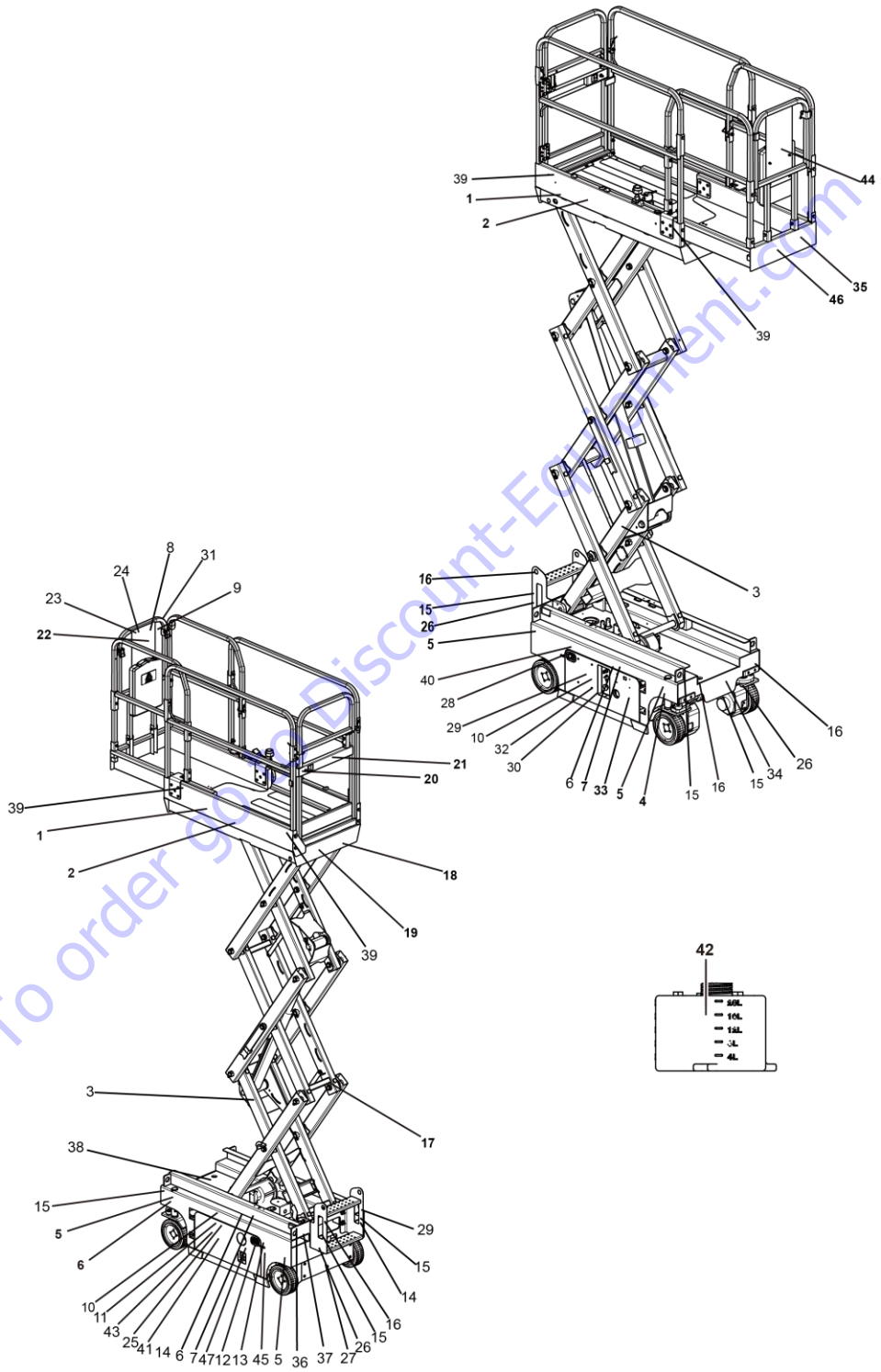
Chapter 9 Decals and Warning Labels

SS1230E Decal Diagram



SS1230E Decal List

Item #	Description	Item #	Description
1	Company Logo	24	Description of file loss
2	Model identification	25	Annual inspection instruction
3	Stay away from machine sign	26	Transportation sign
4	Direction indicator sign	27	Electric shock sign
5	Wheel load capacity sign	28	Indicator for lower control panel
6	Pressure hazard identification	29	Prohibition of sparks sign
7	Electric shock hazard	30	Attention in overhaul
8	Notices indication	31	Suspension position sign
9	Safety rules description sign	32	Attention mark of skin infraction
10	Close the chassis bracket warning sign	33	Emergency drop mark
11	Warning signs for explosive burns	34	Whole machine nameplate
12	Battery charging sign	35	Warning line
13	Warning sign	36	Forklift Fork Position
14	Battery connection indicator identification	37	Battery charging sign
15	Hanger sign	38	Tilting hazard sign
16	Lifting Position	39	Lanyard Anchorage Point
17	Forklift safety arm sign	40	Danger statement
18	Maximum manual force sign	41	Turn off power identification
19	Platform safety warning mark	42	Oil position sign
20	Operation sign	43	Battery for counterweight warning sign
21	Instructions sign	44	Company Logo
22	Reduce platform warning sign	45	Annual Inspection
23	Arrow indication sign	46	Brake release safety warning sign

SS1230E Decals

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		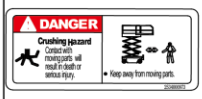	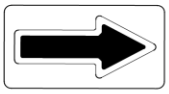	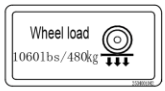	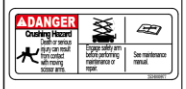
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			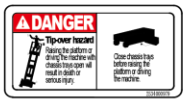		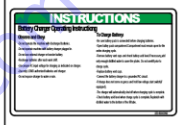
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	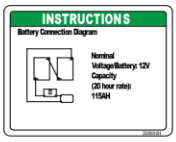				
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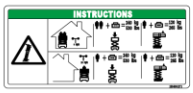			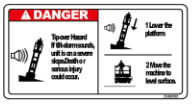	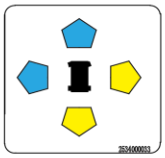	
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	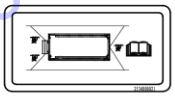		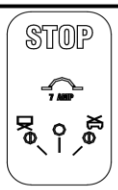		
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			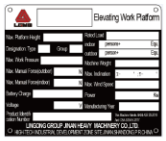	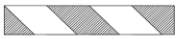	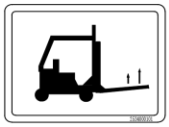

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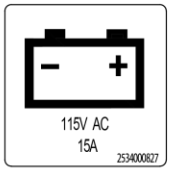	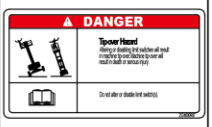			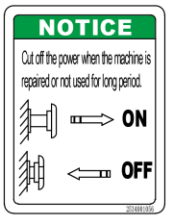	
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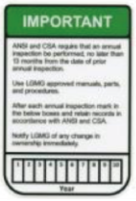
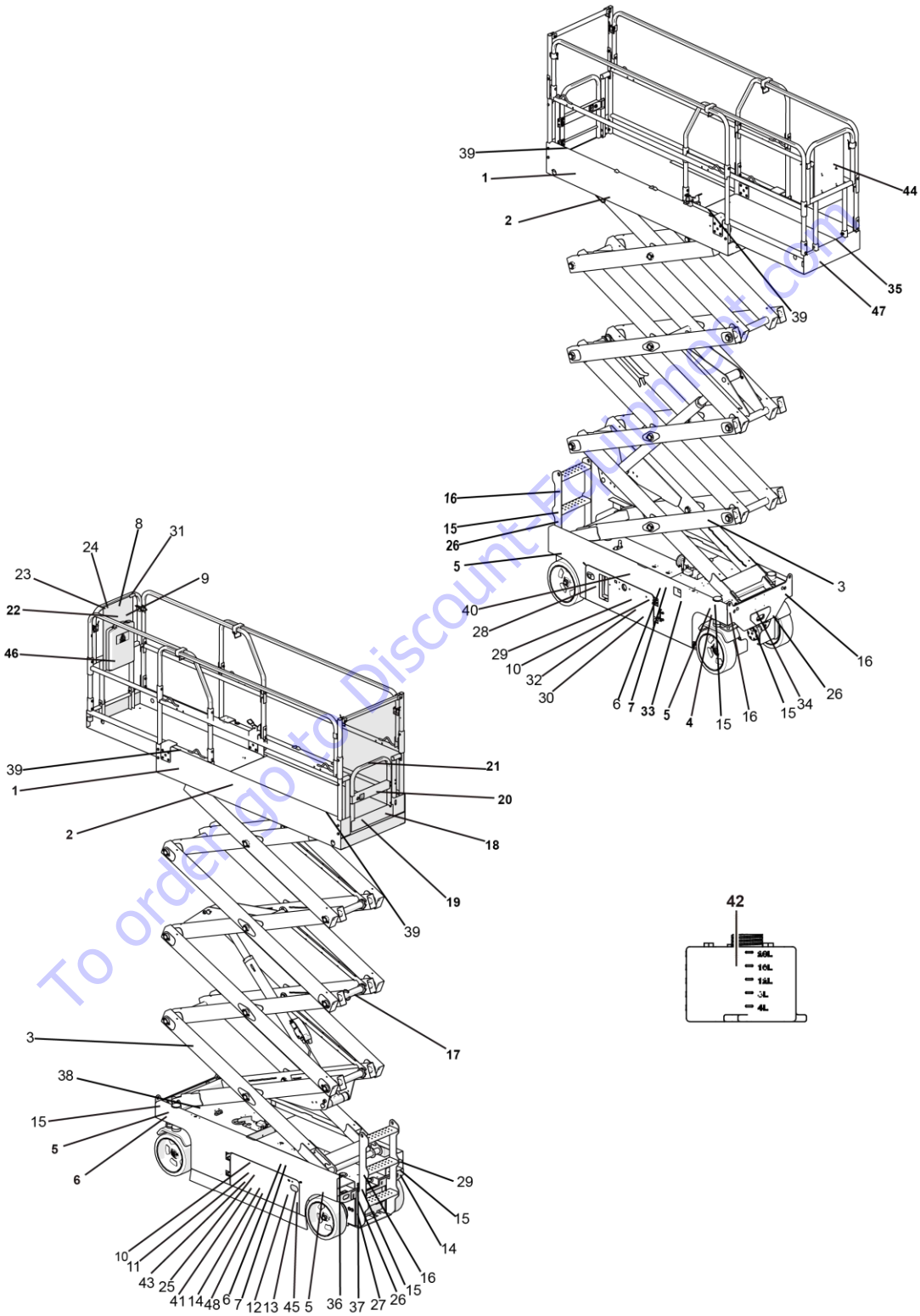
					

SS1432E /SS1932E Decal Diagram



SS1432E/SS1932E Decal List

Item #	Description	Item #	Description
1	Company Logo	25	Annual inspection instruction
2	Model identification	26	Transportation sign
3	Stay away from machine sign	27	Electric shock sign
4	Direction indicator sign	28	Indicator for lower control panel
5	Wheel load capacity sign	29	Prohibition of sparks sign
6	Pressure hazard identification	30	Attention in overhaul
7	Electric shock hazard	31	Suspension position sign
8	Notices indication	32	Attention mark of skin infraction
9	Safety rules description sign	33	Emergency lowing mark
10	Close the chassis bracket warning sign	34	Whole machine nameplate
11	Warning signs for explosive burns	35	Warning line
12	Battery charging sign	36	Forklift Fork Position
13	Warning sign	37	Battery charging sign
14	Battery connection indicator identification	38	Tilting hazard sign
15	Hanger sign	39	Lanyard Anchorage Point
16	Lifting Position	40	Danger statement
17	Forklift safety arm sign	41	Turn off power identification
18	Maximum manual force sign	42	Oil position sign
19	Platform safety warning mark	43	Battery for counterweight warning sign
20	Operation sign	44	Company Logo
21	Instructions sign	45	Annual Inspection
22	Reduce platform warning sign	46	Indoor Only
23	Arrow indication sign	47	Brake release safety warning sign
24	Description of file loss		

SS1432E/SS1932E Decals

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		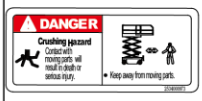	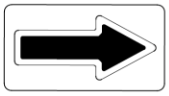	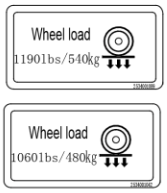	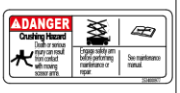
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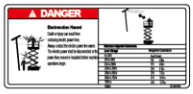					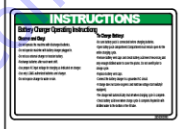
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	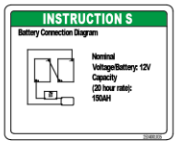				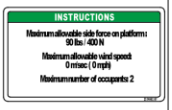
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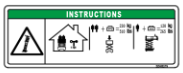			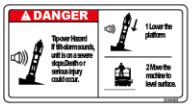	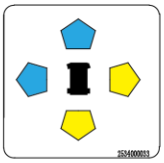	
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	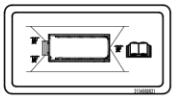		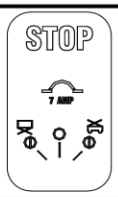		
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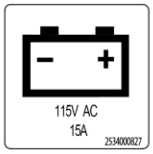
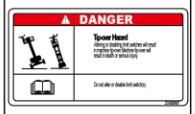
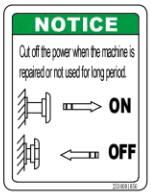
37-2534000827	38-2534000987	39-2534000017	40-2534000978	41-2534001056	42-2534000100
					
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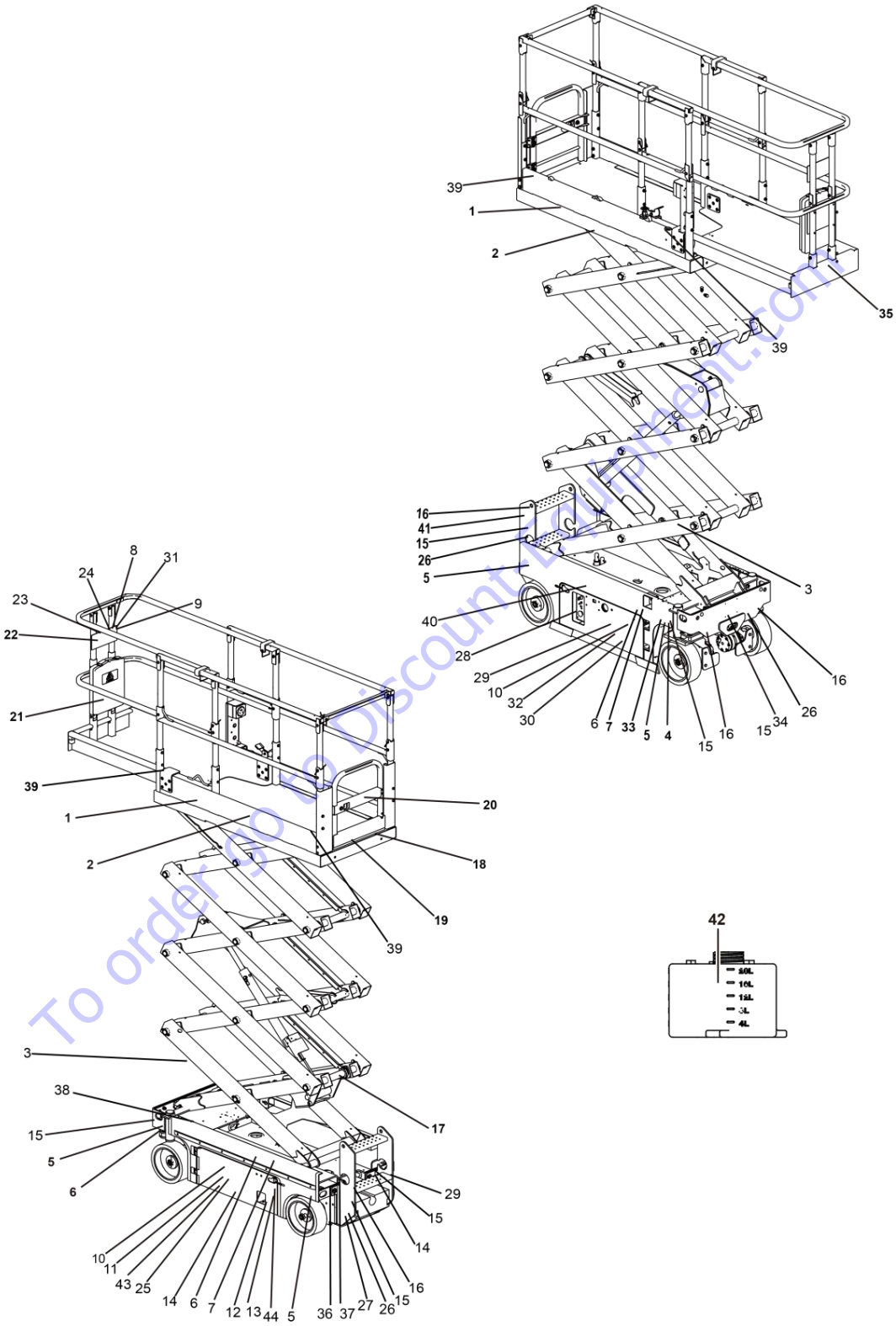
AS1930E/AS1932E Decal Diagram



AS1930E/AS1932E Decal List

Item #	Description	Item #	Description
1	Company Logo	24	Description of file loss
2	Model identification	25	Annual inspection instruction
3	Stay away from machine sign	26	Transportation sign
4	Direction indicator sign	27	Electric shock sign
5	Wheel load capacity sign	28	Indicator for lower control panel
6	Pressure hazard identification	29	Prohibition of sparks sign
7	Electric shock hazard	30	Attention in overhaul
8	Notices indication	31	Suspension position sign
9	Safety rules description sign	32	Attention mark of skin infraction
10	Close the chassis bracket warning sign	33	Emergency drop mark
11	Warning signs for explosive burns	34	Whole machine nameplate
12	Battery charging sign	35	Warning line
13	Warning sign	36	Forklift Fork Position
14	Battery connection indicator identification	37	Battery charging sign
15	Hanger sign	38	Tilting hazard sign
16	Lifting Position	39	Lanyard Anchorage Point
17	Forklift safety arm sign	40	Danger statement
18	Maximum manual force sign	41	Brake release safety warning sign
19	Platform safety warning mark	42	Oil position sign
20	Operation sign	43	Battery for counterweight warning sign
21	Instructions sign	44	Annual Inspection
22	Reduce platform warning sign		
23	Arrow indication sign		

AS1930E/AS1932E Decals

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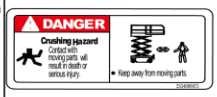
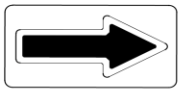
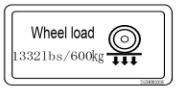
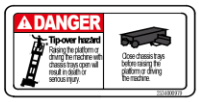
					
7-2534000982	8-2534000983	9-2534000984	10-2534000979	11-2534000988	12-2534000990
					
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	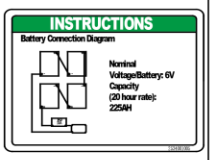	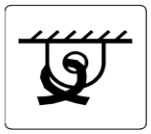	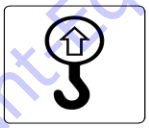		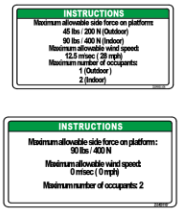
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				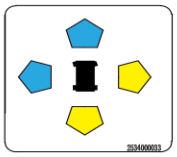	
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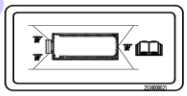
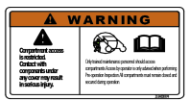
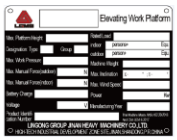
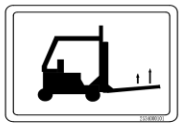
					
31-2534000975	32-2534000980	33-2534000981	34-2534001126	35-2534000024	36-2534000101
					

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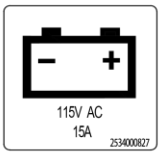					
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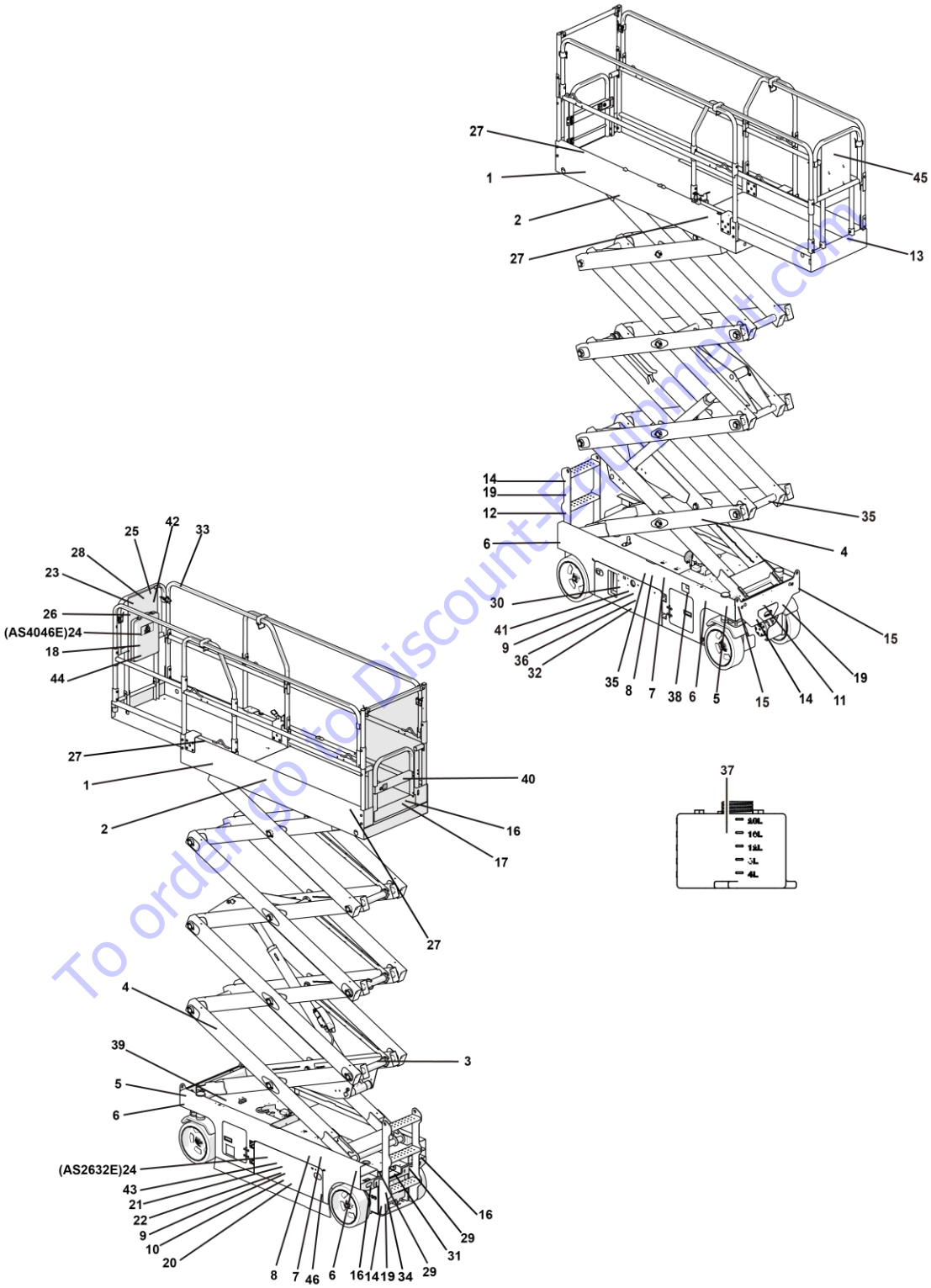
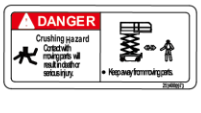
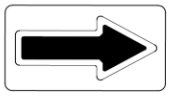
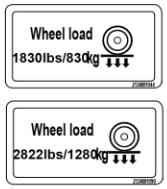
AS2632E/AS4046E Decal Diagram



AS2632E/AS4046E Decal List

Item #	Description	Item #	Description
1	Company Logo	25	Arrow indication sign
2	Model identification	26	Notices indication
3	Forklift safety arm sign	27	Lanyard Anchorage Point
4	Stay away from machine sign	28	Reduce platform warning sign
5	Direction indicator sign	29	Forklift Fork Position
6	Wheel load capacity sign	30	Indicator for lower control panel
7	Electric shock hazard	31	Battery charging sign
8	Pressure hazard identification	32	Attention in overhaul
9	Close the chassis bracket warning sign	33	Suspension position sign
10	Warning signs for explosive burns	34	Electric shock sign
11	Whole machine nameplate	35	Danger description
12	Fasting mark of transportation parts	36	Attention mark of skin infraction
13	Warning line	37	Oil position sign
14	Hanger sign	38	Emergency lowing mark
15	Lifting Position	39	Tilting hazard sign
16	Maximum manual force sign	40	Operation sign
17	Platform safety warning sign	41	Prohibition of sparks sign
18	Instructions sign	42	Description of file loss
19	Transportation sign	43	Battery for counterweight warning sign
20	Battery charging sign	44	Indoor Only
21	Battery connection indicator identification	45	Company Logo
22	Warning sign	46	Annual Inspection
23	Annual inspection instruction		
24	Safety rules description sign		

AS2632E/AS4046E Decals

1-2534000219	2-2534000907/1119	3-2534000992	4-2534000973	5-2534000102	6-2534001044/90
					
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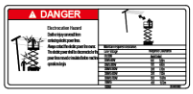
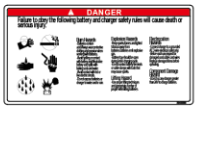
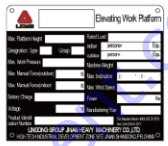
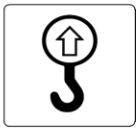
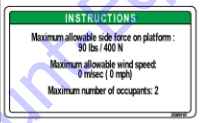
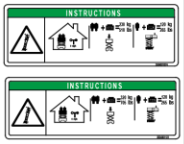
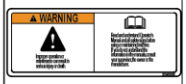
					
13-2534000024	14-2831990027	15-2534000828	16-2534001107	17-2534001074/1121	18-2534000986
					
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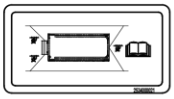	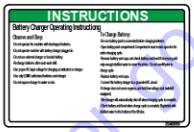	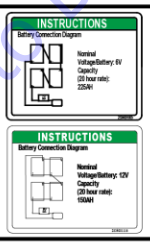			
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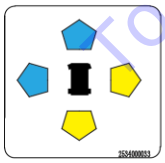			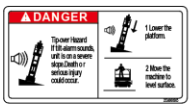		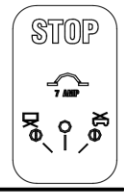
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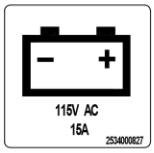				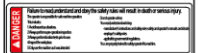	

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			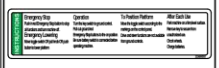		
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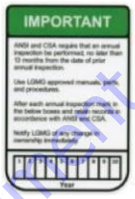
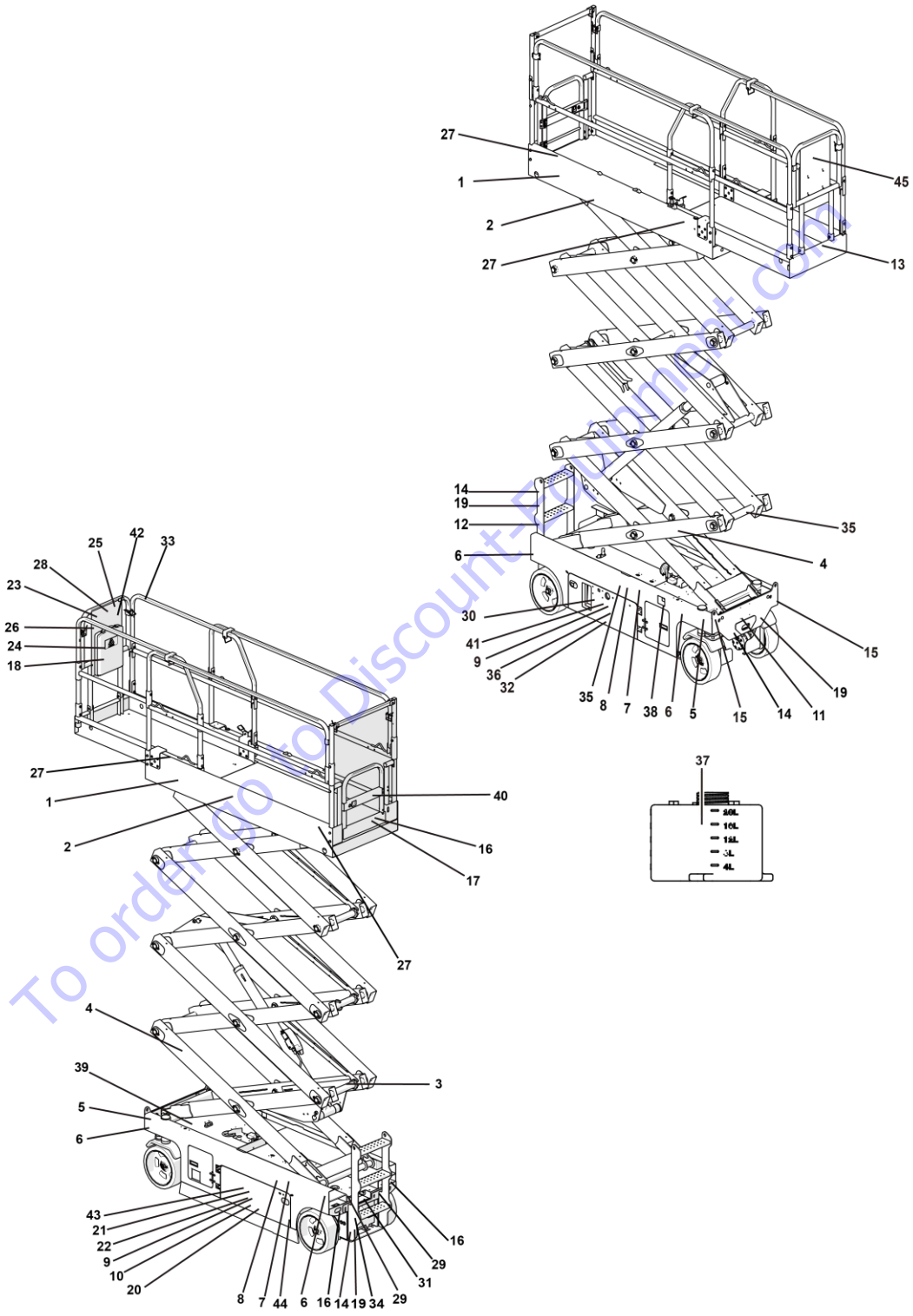
					

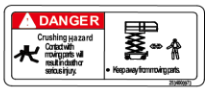
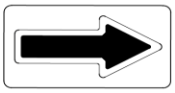
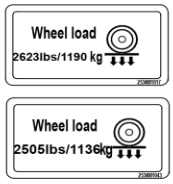
AS2646E/AS3246E Decal Diagram



AS2646E/AS3246E Decal List

Item #	Description	Item #	Description
1	Company Logo	24	Safety rules description sign
2	Model identification	25	Arrow indication sign
3	Forklift safety arm sign	26	Notices indication
4	Stay away from machine sign	27	Lanyard Anchorage Point
5	Direction indicator sign	28	Reduce platform warning sign
6	Wheel load capacity sign	29	Forklift Fork Position
7	Electric shock hazard	30	Indicator for lower control panel
8	Pressure hazard identification	31	Battery charging sign
9	Close the chassis bracket warning sign	32	Attention in overhaul
10	Warning signs for explosive burns	33	Suspension position sign
11	Whole machine nameplate	34	Electric shock sign
12	Fasting mark of transportation parts	35	Danger description
13	Warning line	36	Attention mark of skin infraction
14	Hanger sign	37	Oil position sign
15	Lifting Position	38	Emergency lowing mark
16	Maximum manual force sign	39	Tilting hazard sign
17	Platform safety warning sign	40	Operation sign
18	Instructions sign	41	Prohibition of sparks sign
19	Transportation sign	42	Description of file loss
20	Battery charging sign	43	Battery for counterweight warning sign
21	Battery connection indicator identification	44	Annual Inspection
22	Warning sign	45	Company Logo
23	Annual inspection instruction		

AS2646E/AS3246E Decals

1-2534000219	2-2534001110/0910	3-2534000992	4-2534000973	5-2534000102	6-2534001017/43
					
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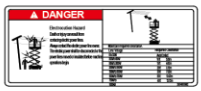
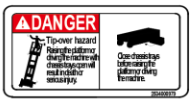
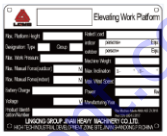
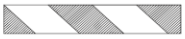
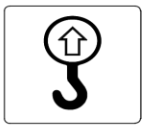
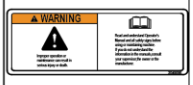
					
13-2534000024	14-2831990027	15-2534000828	16-2534001106	17-2534001072/1073	18-2534000986
					
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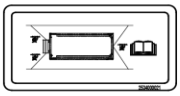	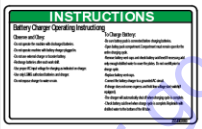	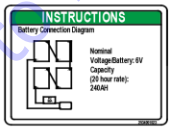			
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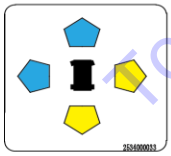			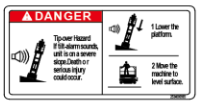	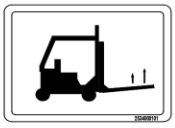	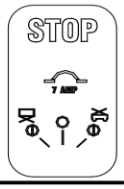
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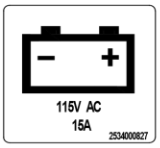
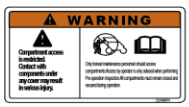
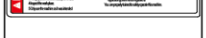
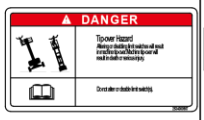
					

37-2534000100	38-2534000981	39-2534000987	40-2534000997	41-2534000998	42-2534001015
					
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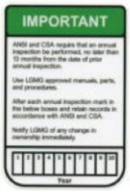
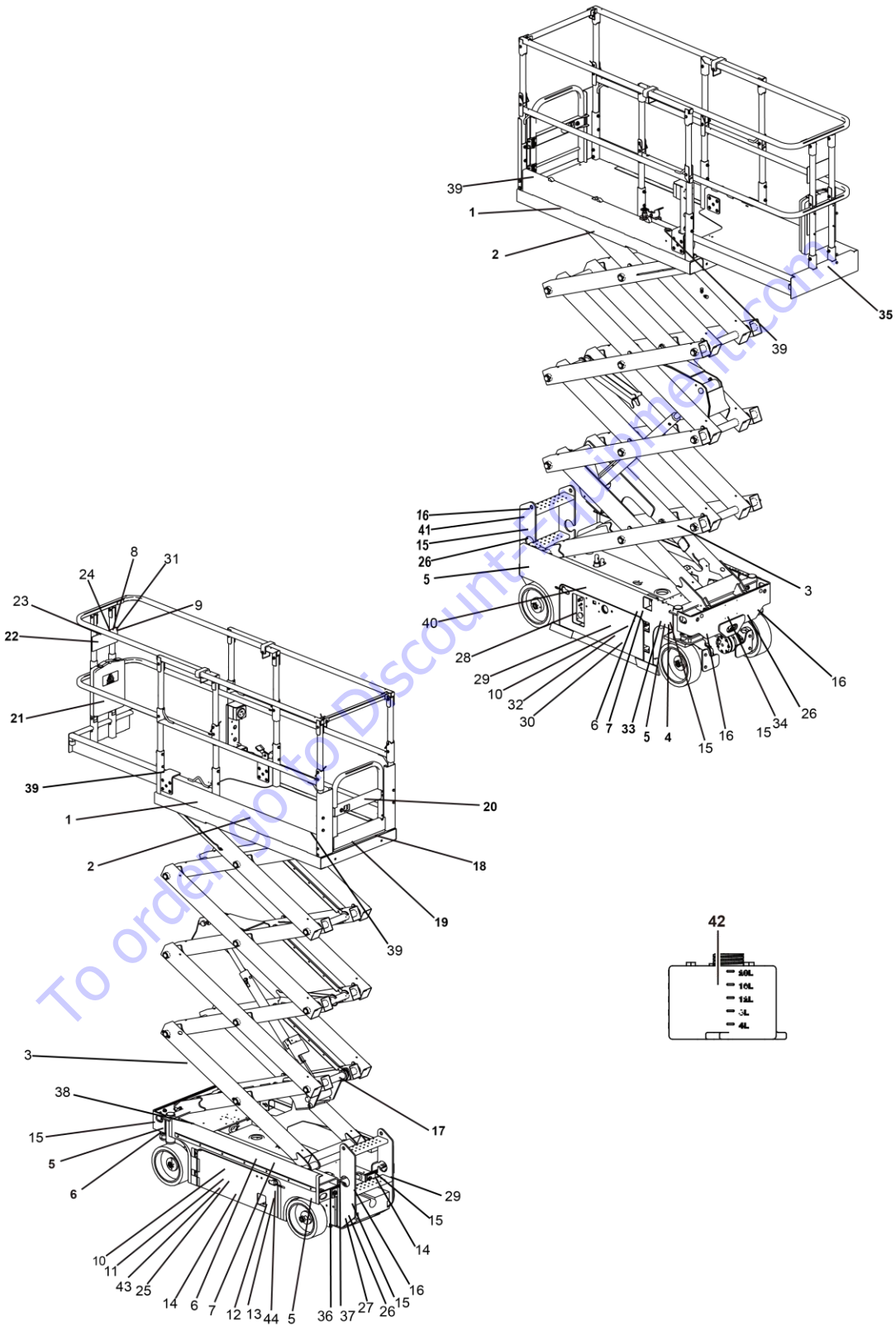
					

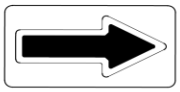
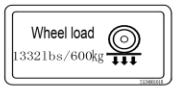
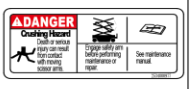
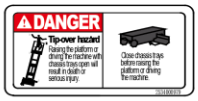
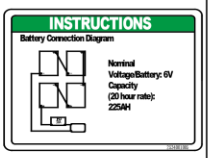
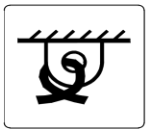
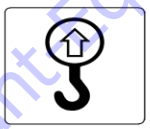
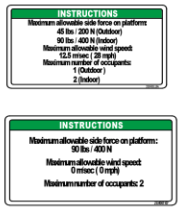
AS1930/AS1932 Decal Diagram



AS1930/AS1932 Decal List

Item #	Description	Item #	Description
1	Company Logo	24	Description of file loss
2	Model identification	25	Annual inspection instruction
3	Stay away from machine sign	26	Transportation sign
4	Direction indicator sign	27	Electric shock sign
5	Wheel load capacity sign	28	Indicator for lower control panel
6	Pressure hazard identification	29	Prohibition of sparks sign
7	Electric shock hazard	30	Attention in overhaul
8	Notices indication	31	Suspension position sign
9	Safety rules description sign	32	Attention mark of skin infraction
10	Close the chassis bracket warning sign	33	Emergency drop mark
11	Warning signs for explosive burns	34	Whole machine nameplate
12	Battery charging sign	35	Warning line
13	Warning sign	36	Forklift Fork Position
14	Battery connection indicator identification	37	Battery charging sign
15	Hanger sign	38	Tilting hazard sign
16	Lifting Position	39	Lanyard Anchorage Point
17	Forklift safety arm sign	40	Danger statement
18	Maximum manual force sign	41	Brake release safety warning sign
19	Platform safety warning mark	42	Oil position sign
20	Operation sign	43	Battery for counterweight warning sign
21	Instructions sign	44	Annual Inspection
22	Reduce platform warning sign		
23	Arrow indication sign		

AS1930/AS1932/ Decals

1-2534000218	2-2534001125/0904	3-2534000973	4-2534000102	5-2534001018	6-2534000977
					
7-2534000982	8-2534000983	9-2534000984	10-2534000979	11-2534000988	12-2534000990
					
13-254001004	14-2534001005	15-2831990027	16-2534000828	17-2534000032	18-2534001106/7
					
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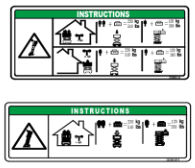				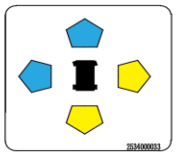	
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	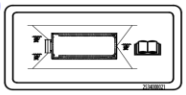				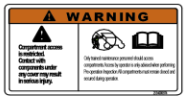
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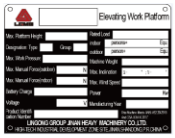
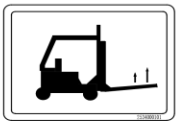
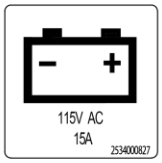
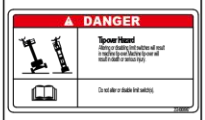
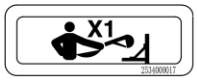
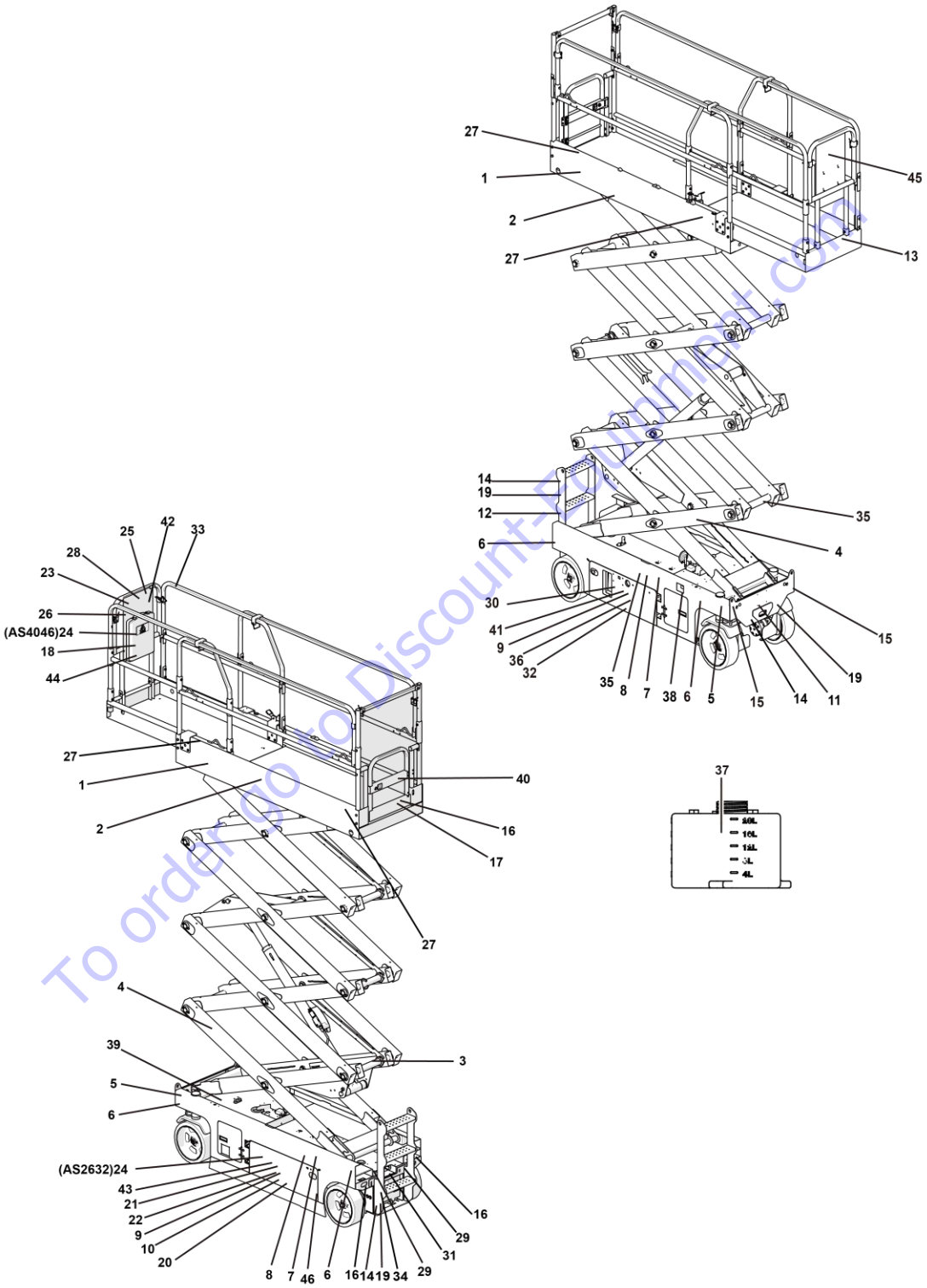
					

37-2534000827	38-2534000987	39-2534000017	40-2534000978	41-2534000991	42-2534000100
					
43-2534001037	44-1720100001				
					

AS2632/AS4046 Decal Diagram



AS2632/AS4046 Decal List

Item #	Description	Item #	Description
1	Company Logo	25	Arrow indication sign
2	Model identification	26	Notices indication
3	Forklift safety arm sign	27	Lanyard Anchorage Point
4	Stay away from machine sign	28	Reduce platform warning sign
5	Direction indicator sign	29	Forklift Fork Position
6	Wheel load capacity sign	30	Indicator for lower control panel
7	Electric shock hazard	31	Battery charging sign
8	Pressure hazard identification	32	Attention in overhaul
9	Close the chassis bracket warning sign	33	Suspension position sign
10	Warning signs for explosive burns	34	Electric shock sign
11	Whole machine nameplate	35	Danger description
12	Fasting mark of transportation parts	36	Attention mark of skin infraction
13	Warning line	37	Oil position sign
14	Hanger sign	38	Emergency lowing mark
15	Lifting Position	39	Tilting hazard sign
16	Maximum manual force sign	40	Operation sign
17	Platform safety warning sign	41	Prohibition of sparks sign
18	Instructions sign	42	Description of file loss
19	Transportation sign	43	Battery for counterweight warning sign
20	Battery charging sign	44	Indoor Only
21	Battery connection indicator identification	45	Company Logo
22	Warning sign	46	Annual Inspection
23	Annual inspection instruction		
24	Safety rules description sign		

AS2632/AS4046 Decals

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			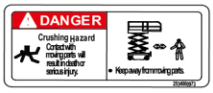	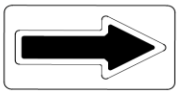	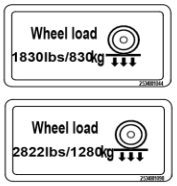
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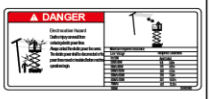				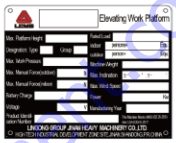	
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		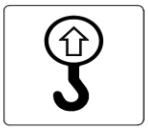		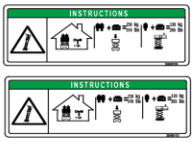	
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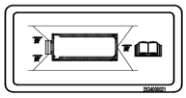	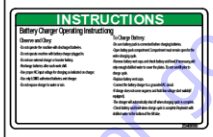	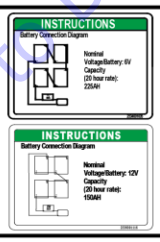			
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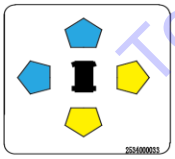				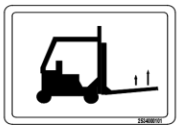	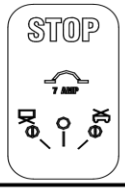
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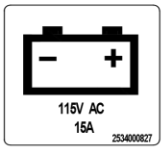	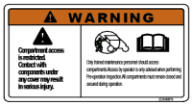				

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		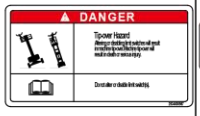	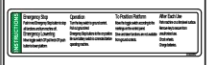		
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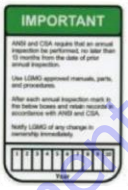
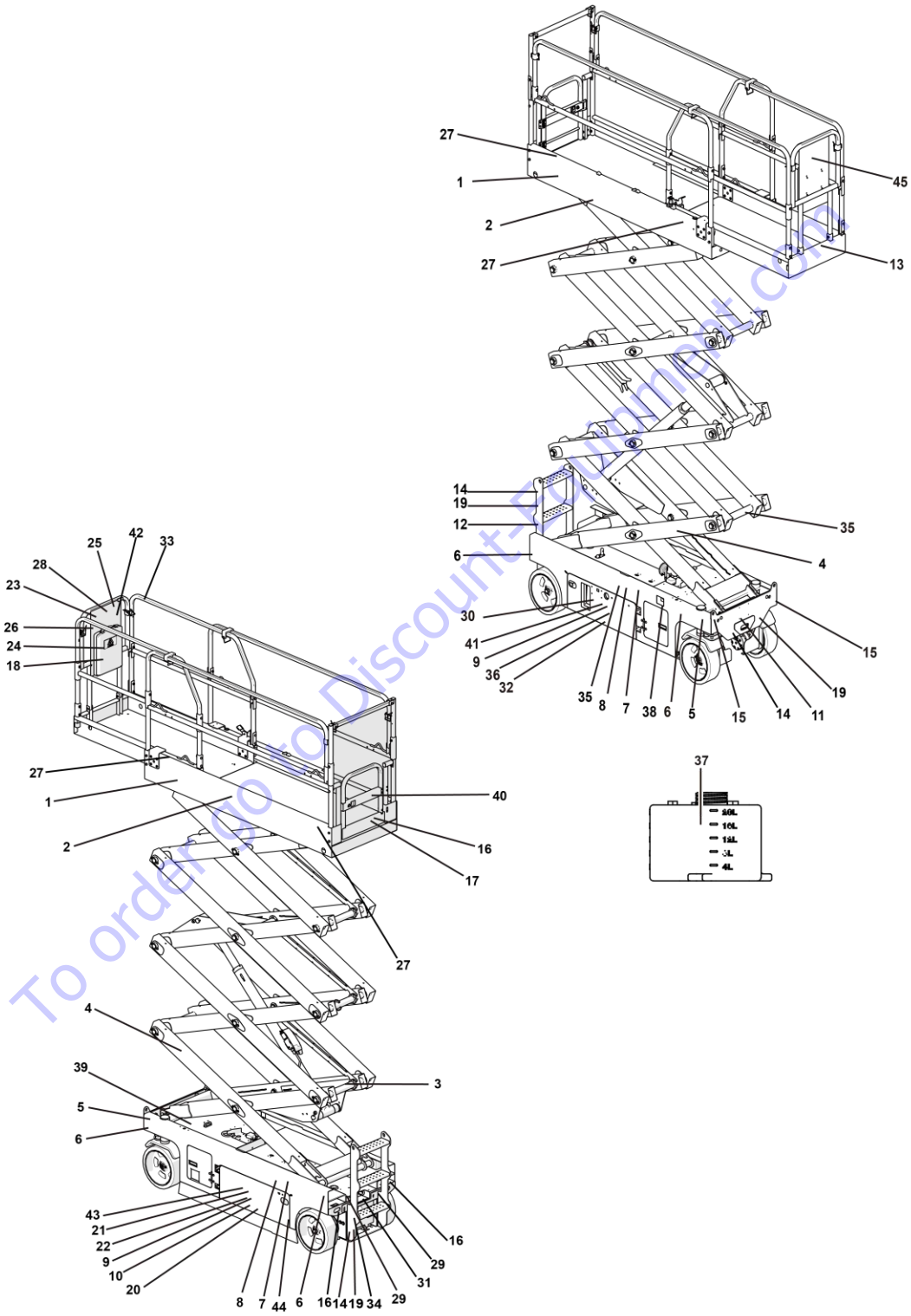
					

AS2646/AS3246 Decal Diagram



AS2646/AS3246 Decal List

Item #	Description	Item #	Description
1	Company Logo	24	Safety rules description sign
2	Model identification	25	Arrow indication sign
3	Forklift safety arm sign	26	Notices indication
4	Stay away from machine sign	27	Lanyard Anchorage Point
5	Direction indicator sign	28	Reduce platform warning sign
6	Wheel load capacity sign	29	Forklift Fork Position
7	Electric shock hazard	30	Indicator for lower control panel
8	Pressure hazard identification	31	Battery charging sign
9	Close the chassis bracket warning sign	32	Attention in overhaul
10	Warning signs for explosive burns	33	Suspension position sign
11	Whole machine nameplate	34	Electric shock sign
12	Fasting mark of transportation parts	35	Danger description
13	Warning line	36	Attention mark of skin infraction
14	Hanger sign	37	Oil position sign
15	Lifting Position	38	Emergency lowing mark
16	Maximum manual force sign	39	Tilting hazard sign
17	Platform safety warning sign	40	Operation sign
18	Instructions sign	41	Prohibition of sparks sign
19	Transportation sign	42	Description of file loss
20	Battery charging sign	43	Battery for counterweight warning sign
21	Battery connection indicator identification	44	Annual Inspection
22	Warning sign	45	Company Logo
23	Annual inspection instruction		

AS2646E/AS3246E Decals

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		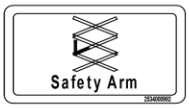	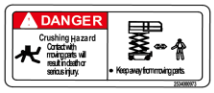	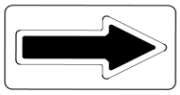	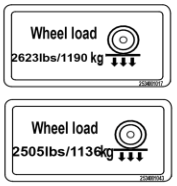
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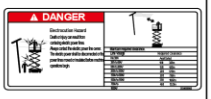		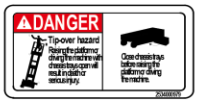	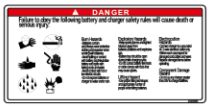	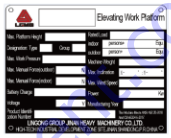	
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		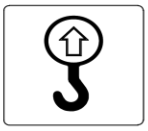		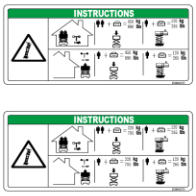	
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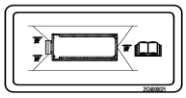	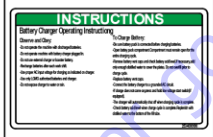	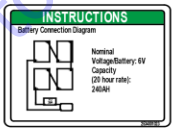			
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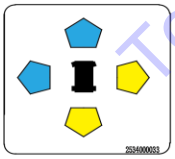				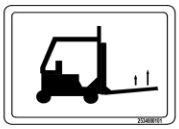	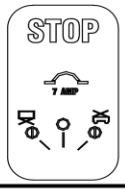
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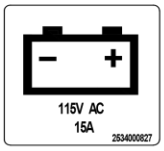	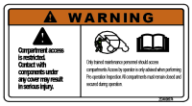				

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		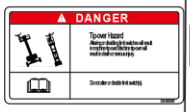			
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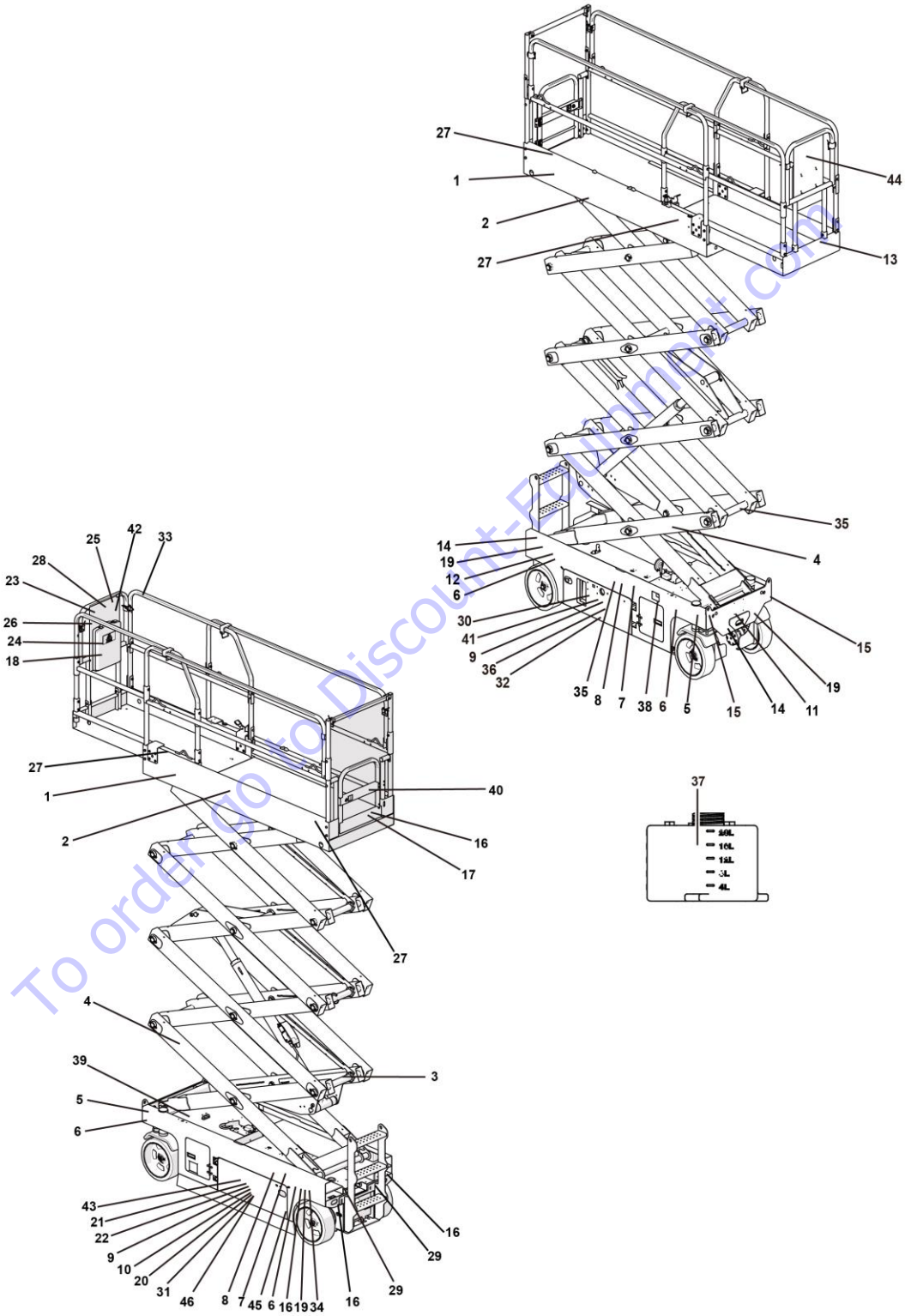
AS4650/AS4650E Decal Diagram



AS4650/AS4650E Decals

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			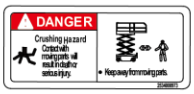	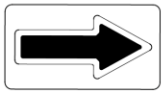	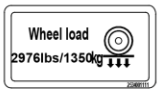
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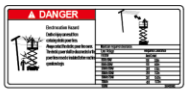		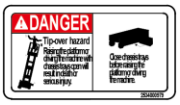			
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			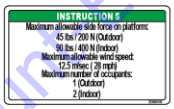	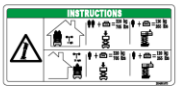	
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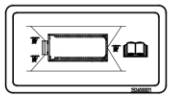	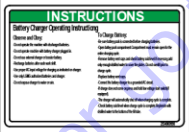	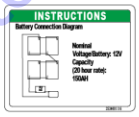			
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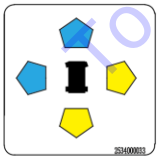		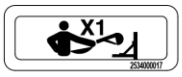	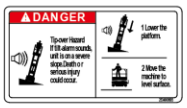	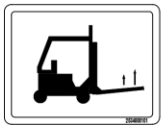	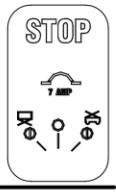
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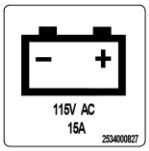	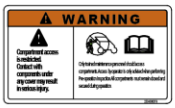				

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			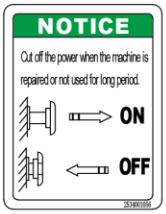	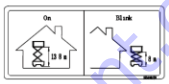	

AS4650/AS4650E Decal List

Item #	Description	Item #	Description
1	Company Logo	25	Arrow indication sign
2	Model identification	26	Notices indication
3	Forklift safety arm sign	27	Lanyard Anchorage Point
4	Stay away from machine sign	28	Reduce platform warning sign
5	Direction indicator sign	29	Forklift Fork Position
6	Wheel load capacity sign	30	Indicator for lower control panel
7	Electric shock hazard	31	Battery charging sign
8	Pressure hazard identification	32	Attention in overhaul
9	Close the chassis bracket warning sign	33	Suspension position sign
10	Warning signs for explosive burns	34	Electric shock sign
11	Whole machine nameplate	35	Danger description
12	Fasting mark of transportation parts	36	Attention mark of skin infraction
13	Warning line	37	Oil position sign
14	Hanger sign	38	Emergency lowing mark
15	Lifting Position	39	Tilting hazard sign
16	Maximum manual force sign	40	Operation sign
17	Platform safety warning sign	41	Prohibition of sparks sign
18	Instructions sign	42	Description of file loss
19	Transportation sign	43	Battery for counterweight warning sign
20	Battery charging sign	44	Company Logo
21	Battery connection indicator identification	45	Annual Inspection
22	Warning sign	46	Turn off the power sign
23	Annual inspection instruction	47	Warning signs for switch
24	Safety rules description sign		

Chapter 10 Specifications

Table 13 - Platform Load Capacity

Model	**SS1432E**			
Maximum occupant capacity	indoor	2	outdoor	-
Maximum working load of platform	indoor	510lbs	outdoor	-
Recommend load capacity of extension deck	indoor	265lbs	outdoor	-
Model	**SS1932E**			
Maximum occupant capacity	indoor	2	outdoor	-
Maximum working load of platform	indoor	510lbs	outdoor	-
Recommend load capacity of extension deck	indoor	265lbs	outdoor	-
Model	**AS2632E**			
Maximum occupant capacity	indoor	2	outdoor	-
Maximum working load of platform	indoor	510lbs	outdoor	-
Recommend load capacity of extension deck	indoor	265lbs	outdoor	-
Model	**AS4046E**			
Maximum occupant capacity	indoor	2	outdoor	-
Maximum working load of platform	indoor	705lbs	outdoor	-
Recommend load capacity of extension deck	indoor	265lbs	outdoor	-

Table 14 - Platform Load Capacity

Model	**SS1230E**			
Maximum occupant capacity	indoor	2	outdoor	1
Maximum working load of platform	indoor	530lbs	outdoor	530lbs
Recommend load capacity of extension deck	indoor	265lbs	outdoor	265lbs
Model	**AS1932E**			
Maximum occupant capacity	indoor	2	outdoor	1
Maximum working load of platform	indoor	510lbs	outdoor	510lbs
Recommend load capacity of extension deck	indoor	265lbs	outdoor	265lbs
Model	**AS2646E**			
Maximum occupant capacity	indoor	2	outdoor	1
Maximum working load of platform	indoor	990lbs	outdoor	990lbs
Recommend load capacity of extension deck	indoor	265lbs	outdoor	265lbs
Model	**AS3246E**			
Maximum occupant capacity	indoor	2	outdoor	1
Maximum working load of platform	indoor	705lbs	outdoor	705lbs
Recommend load capacity of extension deck	indoor	265lbs	outdoor	265lbs

Table 15 - Platform Load Capacity

Model	AS1930E			
Maximum occupant capacity	indoor	2	outdoor	-
Maximum working load of platform	indoor	510lbs	outdoor	-
Recommend load capacity of extension deck	indoor	265lbs	outdoor	-
Model	**AS1930**			
Maximum occupant capacity	indoor	2	outdoor	-
Maximum working load of platform	indoor	510lbs	outdoor	-
Recommend load capacity of extension deck	indoor	265lbs	outdoor	-
Model	**AS2632**			
Maximum occupant capacity	indoor	2	outdoor	-
Maximum working load of platform	indoor	510lbs	outdoor	-
Recommend load capacity of extension deck	indoor	265lbs	outdoor	-
Model	**AS4046**			
Maximum occupant capacity	indoor	2	outdoor	-
Maximum working load of platform	indoor	705lbs	outdoor	-
Recommend load capacity of extension deck	indoor	265lbs	outdoor	-

Table 16- Platform Load Capacity

Model	AS1932			
Maximum occupant capacity	indoor	2	outdoor	1
Maximum working load of platform	indoor	510lbs	outdoor	510lbs
Recommend load capacity of extension deck	indoor	265lbs	outdoor	265lbs
Model	**AS2646**			
Maximum occupant capacity	indoor	2	outdoor	1
Maximum working load of platform	indoor	990lbs	outdoor	990lbs
Recommend load capacity of extension deck	indoor	265lbs	outdoor	265lbs
Model	**AS3246**			
Maximum occupant capacity	indoor	2	outdoor	1
Maximum working load of platform	indoor	705lbs	outdoor	705lbs
Recommend load capacity of extension deck	indoor	265lbs	outdoor	265lbs
Model	**AS4650**			
Maximum occupant capacity	indoor	2	outdoor	1
Maximum working load of platform	indoor	705lbs	outdoor	705lbs
Recommend load capacity of extension deck	indoor	265lbs	outdoor	265lbs
Model	**AS4650E**			
Maximum occupant capacity	indoor	2	outdoor	1
Maximum working load of platform	indoor	705lbs	outdoor	705lbs
Recommend load capacity of extension deck	indoor	265lbs	outdoor	265lbs

Table 17-SS1230E Operating Specifications

(Indoor Outdoor)

Item		Parameter
Maximum working height		18.4ft (5.6m)
Maximum height of platform		12ft (3.6m)
Extending size of platform		2ft (0.6m)
Maximum allowable working angle (forward)		3°
Maximum allowable working angle (backward)		3°
Maximum allowable working angle (sideward)		1.5°
Max Traveling speed (Stowed)		2mph (3.2Km/h)
Max Traveling speed (Elevated)		0.3mph (0.5Km/h)
Lifting/lowering speed (S)		25/18
Minimum turning radius		4.9ft (1.5m)
Gradeability		25%
Overall length	With ladder	5ft (1.53m)
	Without ladder	4.4ft (1.35m)
Tire size (diameter×width)		9.1in×3.1in (230mm×80mm)
Overall width		2.5ft (0.76m)
Dimension of working platform (L×W)		4.4ft×2.3ft (1.35m×0.7m)
Wheelbase (front/rear)		44.1in(1120mm)
Ground clearance (stowed/lifting position)		1.97in/0.63in (50mm/16mm)
Overall height	Rails Folding	6ft (1.82m)
	Rails un-folding	6.8ft (2.06m)
Overall weight		1940lbs (880Kg)
Battery	Output Voltage(V)	12
	Capacity (Ah)	115
Charger	Nom. AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	15
	Nominal DC Output Voltage (V)	24
Ground environment noise radiation		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure		1884psi (13MPa)
Tire contact pressure		162psi (1116.71KPa)
Ground pressure		223.7psf (10.71KPa)

Table 16 - SS1432E Operating Specifications

(In door)

Item		Parameter
Maximum working height		20.7ft (6.3m)
Maximum height of platform		14.1ft (4.3m)
Extending size of platform		2ft (0.6m)
Maximum allowable working angle (forward)		3°
Maximum allowable working angle (backward)		3°
Maximum allowable working angle (sideward)		1.5°
Traveling speed of machine (Stowed position)		2mph (3.2Km/h)
Traveling speed of machine (lifting position)		0.3mph (0.5Km/h)
Lifting/lowering speed (S)		25/20
Minimum turning radius		4.9ft (1.5m)
Gradeability		25%
Overall length	With ladder	5ft (1.53m)
	Without ladder	4.4ft (1.35m)
Overall width		2.65ft (0.81m)
Tire size (diameter×width)		9.1in×3.1in (230mm×80mm)
Dimension of working platform (L×W)		4.4ft×2.3ft (1.35m×0.7m)
Wheelbase (front/rear)		44.1in(1120mm)
Ground clearance (stowed/lifting position)		1.97in/0.63in (50mm/16mm)
Overall height	Rails Folding	6.2ft (1.9m)
	Rails un-folding	7.1ft (2.15m)
Overall weight		2172lbs (985Kg)
Battery	Output Voltage(V)	12
	Capacity (Ah)	150
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	15
	Nominal DC Output Voltage (V)	24
Ground environment noise radiation		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure		2174psi (15MPa)
Tire contact pressure		213.4psi (1471.5KPa)
Ground pressure		228.5psf (10.94KPa)

Table 19 - SS1932E Operating Specifications

(In door)

Item		Parameter
Maximum working height		24.6ft (7.5m)
Maximum height of platform		18ft (5.5m)
Extending size of platform		2ft (0.6m)
Maximum allowable working angle (forward)		3°
Maximum allowable working angle (backward)		3°
Maximum allowable working angle (sideward)		1.5°
Max Traveling speed (Stowed)		2 mph (3.2Km/h)
Max Traveling speed (Elevated)		0.3mph (0.5Km/h)
Lifting/lowering speed (S)		32/27
Minimum turning radius		4.9ft (1.5m)
Gradeability		25%
Overall length	With ladder	5.02ft (1.53m)
	Without ladder	4.4ft (1.35m)
Overall width		2.65ft (0.81m)
Tire size (diameter×width)		9.1in×3.1in (230mm×80mm)
Dimension of working platform (L×W)		4.4ft×2.3ft (1.35m×0.7m)
Wheelbase (front/rear)		44.1in(1120mm)
Ground clearance (stowed/lifting position)		1.97in/0.63in (50mm/16mm)
Overall height	Rails Folding	6.56ft (2.0m)
	Rails un-folding	7.46ft (2.27m)
Overall weight		2866lbs (1300Kg)
Battery	Output Voltage(V)	12
	Capacity (Ah)	150
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	15
	Nominal DC Output Voltage (V)	24
Ground environment noise radiation		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure	2176psi (15MPa)	
Tire contact pressure	211psi(1454.66KPa)	
Ground pressure	281.1psf(13.46Kpa)	

Table 20-AS1930E Operating Specifications

(Indoor)

Item		Parameter
Maximum working height		25.6ft (7.8m)
Maximum height of platform		19ft (5.8m)
Extending size of platform		3ft (0.9m)
Maximum allowable working angle (forward)		3°
Maximum allowable working angle (backward)		3°
Maximum allowable working angle (sideward)		1.5°
Max Traveling speed (Stowed)		2.2mph (3.5Km/h)
Max Traveling speed (Elevated)		0.5mph (0.8Km/h)
Lifting/lowering speed (S)		16/28
Minimum turning radius (exterior)		5.6ft (1.72m)
Gradeability		25%
Overall length	With ladder	6.1ft (1.86m)
	Without ladder	5.51ft (1.68m)
Overall width		2.5ft (0.76m)
Tire size (diameter×width)		12.7in×4in 323mm×100mm
Dimension of working platform (L×W)		5.3ft×2.4ft (1.63m×0.74m)
Wheelbase (front/rear)		53in (1350mm)
Ground clearance (stowed/lifting position)		3.15in/0.79in (80mm/20mm)
Overall height	Rails Folding	6ft (1.84m)
	Rails un-folding	7ft (2.14m)
Overall weight		3549lbs (1610Kg)
Battery	Output Voltage(V)	6
	Capacity (Ah)	225
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	30
	Nominal DC Output Voltage (V)	24
Ground environment noise radiation		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure	3046psi (21MPa)	
Tire contact pressure	156psi (1074.83 KPa)	
Ground pressure	283.8psf (13.5 9KPa)	

Table 21-AS1932E Operating Specifications

(Indoor Outdoor)

Item		Parameter
Maximum working height		25.6ft (7.8m)
Maximum height of platform		19ft (5.8m)
Extending size of platform		3ft (0.9m)
Maximum allowable working angle (forward)		3°
Maximum allowable working angle (backward)		3°
Maximum allowable working angle (sideward)		1.5°
Max Traveling speed (Stowed)		2.2mph (3.5Km/h)
Max Traveling speed (Elevated)		0.5mph (0.8Km/h)
Lifting/lowering speed (S)		16/28
Minimum turning radius (exterior)		5.74ft (1.75m)
Gradeability		25%
Overall length	With ladder	6.1ft (1.86m)
	Without ladder	5.51ft (1.68m)
Overall width		2.7ft (0.81m)
Tire size (diameter×width)		12.7in×4in 323mm×100mm
Dimension of working platform (L×W)		5.3ft×2.4ft (1.63m×0.74m)
Wheelbase (front/rear)		53in (1350mm)
Ground clearance (stowed/lifting position)		3.15in/0.79in (80mm/20mm)
Overall height	Rails Folding	6ft (1.84m)
	Rails un-folding	7ft (2.14m)
Overall weight		3571lbs (1620Kg)
Battery	Output Voltage(V)	6
	Capacity (Ah)	225
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	30
	Nominal DC Output Voltage (V)	24
Ground environment noise radiation		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure	3046psi (21MPa)	
Tire contact pressure	156psi (1074.83 KPa)	
Ground pressure	283.8psf (13.5 9KPa)	

Table 22 - AS2632E Operating Specifications

(In door)

Item		Parameter
Maximum working height		32.8ft (10m)
Maximum height of platform		26.2ft (8m)
Extending size of platform		3ft (0.9m)
Maximum allowable working angle (forward)		3°
Maximum allowable working angle (backward)		3°
Maximum allowable working angle (sideward)		1.5°
Max Traveling speed (Stowed)		2.2mph (3.5Km/h)
Max Traveling speed (Elevated)		0.5mph (0.8Km/h)
Lifting/lowering speed (S)		31/40
Minimum turning radius		7ft (2.15m)
Gradeability		25%
Overall length	With ladder	7.9ft (2.4m)
	Without ladder	7.4ft (2.25m)
Overall width		2.7ft(0.83m)
Tire size (diameter×width)		15in×5.1in 380mm×130mm
Dimension of working platform (L×W)		7.4ft×2.7ft (2.26m×0.81m)
Wheelbase (front/rear)		73in(1850mm)
Ground clearance (stowed/lifting position)		3.94in/0.98in (100mm/25mm)
Overall height	Rails Folding	6.4ft (1.95m)
	Rails un-folding	7.6ft (2.32m)
Overall weight		4718lbs (2140Kg)
Battery	Output Voltage(V)	6
	Capacity (Ah)	225
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	30
	Nominal DC Output Voltage (V)	24
Ground environment noise radiation		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure	3046psi (21MPa)	
Tire contact pressure	126.3psi (871.10KPa)	
Ground pressure	264.4psf (12.66KPa)	

Table 23 - AS2646E Operating Specifications

(Indoor Outdoor)

Item		Parameter
Maximum working height		32.8ft (10m)
Maximum height of platform		26.2ft (8m)
Extending size of platform		3ft (0.9m)
Maximum allowable working angle (forward)		3°
Maximum allowable working angle (backward)		3°
Maximum allowable working angle (sideward)		1.5°
Max. Traveling speed (Stowed)		2.2mph (3.5Km/h)
Max. Traveling speed (Elevated)		0.5mph (0.8Km/h)
Lifting/lowering speed (S)		35/40
Minimum turning radius		7.5ft (2.3m)
Gradeability		25%
Overall length	With ladder	8ft (2.42m)
	Without ladder	7.4ft (2.25m)
Overall width		3.9ft (1.18m)
Tire size (diameter×width)		15in×5.1in 380mm×130mm
Dimension of working platform (L×W)		7.4ft×3.7ft (2.26m×1.12m)
Wheelbase (front/rear)		73in(1850mm)
Ground clearance (stowed/lifting position)		3.94in/0.79in (100mm/20mm)
Overall height	Rails Folding	5.7ft (1.73m)
	Rails un-folding	7.5ft (2.30m)
Overall weight		5357lbs (2430Kg)
Battery	Output Voltage(V)	6
	Capacity (Ah)	240
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	30
	Nominal DC Output Voltage (V)	24
Ground environment noise radiation		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure	3046psi (21MPa)	
Tire contact pressure	177.76psi (1225.62KPa)	
Ground pressure	222.85psf (10.67KPa)	

Table 24-AS3246E Operating Specifications

(Indoor Outdoor)

Item		Parameter
Maximum working height		39.4ft (12m)
Maximum height of platform		32.8ft (10m)
Extending size of platform		3ft (0.9m)
Maximum allowable working angle (forward)		3°
Maximum allowable working angle (backward)		3°
Maximum allowable working angle (sideward)		1.5°
Traveling speed of machine (Stowed position)		2.2mph (3.5Km/h)
Traveling speed of machine (lifting position)		0.5mph (0.8Km/h)
Lifting/lowering speed (S)）		58/48
Minimum turning radius		7.5ft (2.3m)
Gradeability		25%
Overall length	With ladder	8ft (2.42m)
	Without ladder	7.4ft (2.25m)
Overall width		3.9ft (1.18m)
Tire size (diameter×width)		15in×5.1in 380mm×130mm
Dimension of working platform (L×W)		7.4ft×3.7ft (2.26m×1.12m)
Wheelbase (front/rear)		73in (1850mm)
Ground clearance (stowed/lifting position)		3.94in/0.79in (100mm/20mm)
Overall height	Rails Folding	5.7ft (1.73m)
	Rails un-folding	7.5ft (2.30m)
Overall weight		6614lbs (3000Kg)
Battery	Output Voltage(V)	6
	Capacity (Ah)	240
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	30
	Nominal DC Output Voltage (V)	24
Ground environment noise		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure		3046psi 21(MPa)
Tire Contact Pressure		163.3psi 1225.25 kPa
Ground pressure		247.5psf 11.85KPa

Table 25 - AS4046E Operating Specifications (In door)

Item		Parameter
Maximum working height		46ft (14m)
Maximum height of platform		39.4ft (12m)
Extending size of platform		3ft (0.9m)
Maximum allowable working angle (forward)		3°
Maximum allowable working angle (backward)		3°
Maximum allowable working angle (sideward)		1.5°
Traveling speed of machine (Stowed position)		2.2mph (3.5Km/h)
Traveling speed of machine (lifting position)		0.5mph (0.8Km/h)
Lifting/lowering speed (S)		58/60
Minimum turning radius (exterior)		7.5ft (2.3m)
Gradeability		25%
Overall length	With ladder	8.1ft (2.47m)
	Without ladder	7.4ft (2.25m)
Overall width		3.9ft(1.18m)
Tire size (diameter×width)		15in×5.1in 380mm×130mm
Dimension of working platform (L×W)		7.4ft×3.7ft (2.26m×1.12m)
Wheelbase (front/rear)		73in(1850mm)
Ground clearance (stowed/lifting position)		3.94in/0.79in (100mm/20mm)
Overall height	Rails Folding	6.5ft (1.99m)
	Rails un-folding	8.4ft (2.56m)
Overall weight		6967lbs (3160Kg)
Battery	Output Voltage(V)	12
	Capacity (Ah)	150
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	30
	Nominal DC Output Voltage (V)	24
Ground environment noise radiation		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure	3046psi (21MPa)	
Tire contact pressure	190.98psi (1316.78KPa)	
Ground pressure	280.07psf (13.41KPa)	

Table 26 – AS4650E Operating Specifications (In door/Out door)

Item		Parameter
Maximum working height	In door	51.8ft (15.8m)
	Out door	32.8ft (10m)
Maximum height of platform	In door	45.3ft (13.8m)
	Out door	26.2ft (8m)
Extending size of platform		3ft (0.9m)
Maximum allowable working angle (forward/ backward)		3°
Maximum allowable working angle (sideward)		1.5°
Traveling speed of machine (Stowed position)		2.2mph (3.5Km/h)
Traveling speed of machine (lifting position)		0.5mph (0.8Km/h)
Lifting/lowering speed (S)		80/65
Minimum turning radius (exterior)		9.35ft (2.85m)
Gradeability		25%
Overall length	With ladder	9.2ft (2.80m)
	Without ladder	8.7ft (2.65m)
Overall width		4.3ft(1.3m)
Tire size (diameter×width)		15in×5.1in 380mm×130mm
Dimension of working platform (L×W)		8.66ft×3.7ft (2.64m×1.12m)
Wheelbase (front/rear)		87.4in(2220mm)
Ground clearance (stowed/lifting position)		4.1in/0.79in (105mm/20mm)
Overall height	Rails Folding	6.4ft (1.94m)
	Rails un-folding	9ft (2.74m)
Overall weight		7716lbs (3500Kg)
Battery	Output Voltage(V)	12
	Capacity (Ah)	150
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	30
	Nominal DC Output Voltage (V)	24
Ground environment noise radiation		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure	3046psi (21MPa)	
Tire contact pressure	226.7psi (1563.13KPa)	
Ground pressure	231.4psf (11.08KPa)	

Table 27 – AS1930 Operating Specifications

(Indoor)

Item		Parameter
Maximum working height		25.6ft (7.8m)
Maximum height of platform		19ft (5.8m)
Extending size of platform		3ft (0.9m)
Maximum allowable working angle (forward)		3°
Maximum allowable working angle (backward)		3°
Maximum allowable working angle (sideward)		1.5°
Max Traveling speed (Stowed)		2 mph (3.2Km/h)
Max Traveling speed (Elevated)		0.5mph (0.8Km/h)
Lifting/lowering speed (S)		16/28
Minimum turning radius		5.4ft (1.65m)
Gradeability		25%
Overall length	With ladder	6ft (1.83m)
	Without ladder	5.4ft (1.65m)
Overall width		2.7ft (0.81m)
Dimension of working platform (L×W)		5.3ft×2.4ft (1.63m×0.74m)
Wheelbase (front/rear)		52in (1320mm)
Ground clearance (stowed/lifting position)		2.36in/0.79in (60mm/20mm)
Overall height	Rails Folding	6ft (1.82m)
	Rails un-folding	7ft (2.12m)
Overall weight		3483lbs (1580Kg)
Battery	Output Voltage(V)	6
	Capacity (Ah)	225
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	30
	Nominal DC Output Voltage (V)	24
Ground environment noise radiation		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure	3481psi (24MPa)	
Tire contact pressure	156psi (1074.83 KPa)	
Ground pressure	283.8psf (13.5 9KPa)	

Table 28 – AS1932 Operating Specifications

(Indoor Outdoor)

Item		Parameter
Maximum working height		25.6ft (7.8m)
Maximum height of platform		19ft (5.8m)
Extending size of platform		3ft (0.9m)
Maximum allowable working angle (forward)		3°
Maximum allowable working angle (backward)		3°
Maximum allowable working angle (sideward)		1.5°
Max Traveling speed (Stowed)		2 mph (3.2Km/h)
Max Traveling speed (Elevated)		0.5mph (0.8Km/h)
Lifting/lowering speed (S)		16/28
Minimum turning radius		5.6ft (1.7m)
Gradeability		25%
Overall length	With ladder	6.ft (1.83m)
	Without ladder	5.41ft (1.65m)
Overall width		2.7ft (0.81m)
Dimension of working platform (L×W)		5.3ft×2.4ft (1.63m×0.74m)
Wheelbase (front/rear)		52in (1320mm)
Ground clearance (stowed/lifting position)		2.36in/0.79in (60mm/20mm)
Overall height	Rails Folding	6ft (1.82m)
	Rails un-folding	7ft (2.12m)
Overall weight		3527lbs (1600Kg)
Battery	Output Voltage(V)	6
	Capacity (Ah)	225
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	30
	Nominal DC Output Voltage (V)	24
Ground environment noise radiation		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure	3481psi (24MPa)	
Tire contact pressure	156psi (1074.83 KPa)	
Ground pressure	283.8psf (13.5 9KPa)	

Table 29 – AS2632 Operating Specifications

(In door)

Item		Parameter
Maximum working height		32.8ft (10m)
Maximum height of platform		26.2ft (8m)
Extending size of platform		3ft (0.9m)
Maximum allowable working angle (forward)		3°
Maximum allowable working angle (backward)		3°
Maximum allowable working angle (sideward)		1.5°
Max Traveling speed (Stowed)		1.9mph (3Km/h)
Max Traveling speed (Elevated)		0.5mph (0.8Km/h)
Lifting/lowering speed (S)		31/40
Minimum turning radius		7ft (2.15m)
Gradeability		25%
Overall length	With ladder	7.9ft (2.4m)
	Without ladder	7.4ft (2.25m)
Overall width		2.7ft(0.83m)
Tire size (diameter×width)		15in×5.1in 380mm×130mm
Dimension of working platform (L×W)		7.4ft×2.7ft (2.26m×0.81m)
Wheel tread		27.6in(700mm)
Wheelbase (front/rear)		73in(1850mm)
Ground clearance (stowed/lifting position)		3.94in/0.98in (100mm/25mm)
Overall height	Rails Folding	6.4ft (1.95m)
	Rails un-folding	7.6ft (2.32m)
Overall weight		4718lbs (2140Kg)
Battery	Output Voltage(V)	6
	Capacity (Ah)	225
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	30
	Nominal DC Output Voltage (V)	24
Ground environment noise radiation		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure	3481psi (24MPa)	
Tire contact pressure	126.3psi (871.10KPa)	
Ground pressure	264.4psf (12.66KPa)	

Table 30 - AS2646 Operating Specifications

(Indoor Outdoor)

Item		Parameter
Maximum occupant capacity		2
Maximum working height		32.8ft (10m)
Maximum height of platform		26.2ft (8m)
Extending size of platform		3ft (0.9m)
Maximum allowable working angle (forward)		3°
Maximum allowable working angle (backward)		3°
Maximum allowable working angle (sideward)		1.5°
Max Traveling speed (Stowed)		1.9mph (3Km/h)
Max Traveling speed (Elevated)		0.5mph (0.8Km/h)
Lifting/lowering speed (S)		35/40
Minimum turning radius		7.5ft(2.3m)
Gradeability		25%
Overall length	With ladder	8ft (2.42m)
	Without ladder	7.4ft (2.25m)
Overall width		3.9ft(1.18m)
Dimension of working platform (L×W)		7.4ft×3.7ft (2.26m×1.12m)
Wheel tread		41in(1040mm)
Wheelbase (front/rear)		73in(1850mm)
Ground clearance (stowed/lifting position)		3.94in/0.79in (100mm/20mm)
Overall height	Rails Folding	5.7ft (1.73m)
	Rails un-folding	7.5ft (2.30m)
Overall weight		5357lbs (2430Kg)
Battery	Output Voltage(V)	6
	Capacity (Ah)	240
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	30
	Nominal DC Output Voltage (V)	24
Ground environment noise radiation		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure	3481psi (24MPa)	
Tire contact pressure	177.76psi (1225.62KPa)	
Ground pressure	217.4psf (10.41KPa)	

Table 31 - AS3246 Operating Specifications (Indoor Outdoor)

Item		Parameter
Maximum working height		39.4ft (12m)
Maximum height of platform		32.8ft (10m)
Extending size of platform		3ft (0.9m)
Maximum allowable working angle (forward)		3°
Maximum allowable working angle (backward)		3°
Maximum allowable working angle (sideward)		1.5°
Max Traveling speed (Stowed)		1.9mph (3 Km/h)
Max Traveling speed (Elevated)		0.5mph (0.8Km/h)
Lifting/lowering speed (S)）		58/48
Minimum turning radius		7.5ft (2.3m)
Gradeability		25%
Overall length	With ladder	8.1ft (2.47m)
	Without ladder	7.4ft (2.25m)
Overall width		3.9ft (1.18m)
Dimension of working platform (L×W)		7.4ft×3.7ft (2.26m×1.12m)
Wheelbase (front/rear)		73in (1850mm)
Ground clearance (stowed/lifting position)		3.94in/0.79in (100mm/20mm)
Overall height	Rails Folding	6.1ft (1.86m)
	Rails un-folding	8ft (2.43m)
Overall weight		6614lbs (3000Kg)
Battery	Output Voltage(V)	6
	Capacity (Ah)	240
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	30
	Nominal DC Output Voltage (V)	24
Ground environment noise		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure		3481psi 24(MPa)
Tire Contact Pressure		163.3psi 1225.62KPa
Ground pressure		247.5psf 11.85KPa

Table 32 – AS4046 Operating Specifications (In door)

Item		Parameter
Maximum occupant capacity		2
Maximum working height		46ft (14m)
Maximum height of platform		39.4ft (12m)
Extending size of platform		3ft (0.9m)
Maximum allowable working angle (forward)		3°
Maximum allowable working angle (backward)		3°
Maximum allowable working angle (sideward)		1.5°
Max Traveling speed (Stowed)		1.9mph (3Km/h)
Max Traveling speed (Elevated)		0.5mph (0.8Km/h)
Lifting/lowering speed (S)）		65/60
Minimum turning radius (exterior)		7.5ft (2.3m)
Gradeability		25%
Overall length	With ladder	8.1ft (2.47m)
	Without ladder	7.4ft (2.25m)
Overall width		3.9ft (1.18m)
Dimension of working platform (L×W)		7.4ft×3.7ft (2.26m×1.12m)
Wheelbase (front/rear)		73in(1850mm)
Ground clearance (stowed/lifting position)		3.94in/0.79in (100mm/20mm)
Overall height	Rails Folding	6.5ft (1.99m)
	Rails un-folding	8.4ft (2.56m)
Overall weight		6967lbs (3160Kg)
Battery	Output Voltage(V)	12
	Capacity (Ah)	150
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	30
	Nominal DC Output Voltage (V)	24
Ground environment noise		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure		3481psi (24MPa)
Tire Contact Pressure		190.98psi (1316.78KPa)
Ground pressure		280.07psf (13.41KPa)

Table 33 – AS4650 Operating Specifications

(In door/ Out door)

Item		Parameter
Maximum working height	In door	51.8ft (15.8m)
	Out door	32.8ft (10m)
Maximum height of platform	In door	45.3ft (13.8m)
	Out door	26.2ft (8m)
Extending size of platform		3ft (0.9m)
Maximum allowable working angle (forward/ backward)		3°
Maximum allowable working angle (sideward)		1.5°
Traveling speed of machine (Stowed position)		1.9mph (3Km/h)
Traveling speed of machine (lifting position)		0.5mph (0.8Km/h)
Lifting/lowering speed (S)		80/65
Minimum turning radius (exterior)		9.35ft (2.85m)
Gradeability		25%
Overall length	With ladder	9.2ft (2.80m)
	Without ladder	8.7ft (2.65m)
Overall width		4.3ft(1.3m)
Tire size (diameter×width)		15in×5.1in 380mm×130mm
Dimension of working platform (L×W)		8.66ft×3.7ft (2.64m×1.12m)
Wheelbase (front/rear)		87.4in(2220mm)
Ground clearance (stowed/lifting position)		4.1in/0.79in (105mm/20mm)
Overall height	Rails Folding	6.4ft (1.94m)
	Rails un-folding	9ft (2.74m)
Overall weight		7716lbs (3500Kg)
Battery	Output Voltage(V)	12
	Capacity (Ah)	150
Charger	Nominal AC Input Voltage	100-240VAC
	Maximum DC Output Current (A)	30
	Nominal DC Output Voltage (V)	24
Ground environment noise radiation		< 70dBA
Platform environment noise radiation		< 70dBA
System pressure	3626psi (25MPa)	
Tire contact pressure	226.7psi (1563.13KPa)	
Ground pressure	231.4psf (11.08KPa)	

10.1 Hydraulic Oil Specifications

Notice

When filling the hydraulic oil tank, it is a requirement to use the proper hydraulic oil in accordance with the work site environment and ambient temperature with reference to the following:

- L-HM 46 antiwear hydraulic oil: minimum air temperature＞15.8℉(-9℃);
- L-HV 46 low temperature hydraulic oil: (-33℃)-27.4℉＜minimum air temperature≤15.8℉(-9℃);
- L-HS 46 Ultralow temperature hydraulic oil: (-39℃)-38.2℉＜minimum air temperature≤-27.4℉(-33℃)
- 10# aviation hydraulic oil: minimum air temperature ≤-38.2℉(-39℃);
- Oil level in the oil tank when SS1230E/SS1432E/SS1932E is stowed after the whole machine has been fully elevated, steered from stop-to-stop, and driven is 1 gal. (4L).
- Oil level in the oil tank when AS1930/ AS1930EAS1932/AS1932E is stowed after the whole machine has been fully elevated, steered from stop-to-stop, and driven is 1.6 gal. (6L).

- Oil level in the oil tank when AS2632E/ AS2632E is stowed after the whole machine has been fully elevated, steered stop-to-stop, and driven is 2.5 gal. (9.5L).
- Oil level in the oil tank when AS2646/

  AS2646E is stowed after the whole machine has been fully elevated, steered from stop-to-stop, and driven is 3 gal. (11.5L).
- Oil level in the oil tank when AS3246/ AS3246E/AS4046/AS4046E is stowed after the whole machine has been fully elevated, steered from stop-to-stop, and driven: is 3.7 gal. (14L).
- Oil level in the oil tank when AS4650 /AS4650E is stowed after the whole machine has been fully elevated, steered from stop-to-stop, and driven: is 5.8 gal. (22L).

Notice:

The ground bearing information is approximate information, and the different options are not included. The information can be used only if the safety factor is high enough.

- The weight of the machine varies according to the configuration of the selected part.

Chapter 11 Maintenance Schedule

Routine inspection and maintenance interval table

Maintenance level	Routine inspection	Level I	Level II	Level III	Level IV	Level V
Maintenance period	Every day	25h/1m	50h/3m	100h/6m	200h/12m	400h/24m

Notice: Working hours are based on those shown on the hourmeter.

Maintenance items of every level are given in the following tables

Item	Description	Maintenance Level					
		Routine inspection	I	II	III	IV	V
Electric system	Check battery capacity	●	●	●	●	●	●
	Check that all buttons/switches on the PCU panel function normally	●	●	●	●	●	●
	Ensure the PCU emergency stop switch is secure	●	●	●	●	●	●
	Check if all switches operate properly	●	●	●	●	●	●
	Check if any wiring harnesses are damaged	●	●	●	●	●	●
	Ensure the PCU wiring harness connector is secure	●	●	●	●	●	●
	Check if the PCU wiring harness connector is not damaged	●	●	●	●	●	●
	Check if the PCU wiring harness is crimped or damaged	●	●	●	●	●	●
	Check if the pressure switch wiring is secure and not damaged	●	●	●	●	●	●
	Check if the lowering solenoid valve is secure and not damaged	●	●	●	●	●	●
	Check if the wirings of horizon sensor and inclination sensor are secure and not damaged	●	●	●	●	●	●
	Check the position and wiring of every limit switch rocker arm	●	●	●	●	●	●
	Ensure the angle sensor wiring harness	●	●	●	●	●	●

Item	Description	Maintenance Level					
		Routine inspection	I	II	III	IV	V
	and connector are secure and not damaged						
	Ensure the emergency stop switch, key switch and plug switch on the lowering control panel and their wiring are secure and not damaged	•	•	•	•	•	•
	Ensure the warning lamp and horn function normally	•	•	•	•	•	•
	Ensure the motor, motor controller, relay and ECU wirings are secure and not damaged	•	•	•	•	•	•
	Ensure the wiring of every solenoid valve on the main valve block is secure and not damaged	•	•	•	•	•	•
	Ensure the charger wiring is secure and not corroded	•	•	•	•	•	•
	Ensure the battery posts are secure and not corroded	•	•	•	•	•	•
	Check the battery is secure and not damaged	•					
	Check machine performance and various limit switches	•					
	Check if any connector is loose, damaged or corroded	•	•	•	•	•	•
Hydraulic System	Check if the pressure of the hydraulic system is normal	•	•	•	•	•	•
	Check if the lift system hydraulic pressure is normal	•	•	•	•	•	•
	Check if the steering system hydraulic pressure is normal	•	•	•	•	•	•
	Check if the driving system hydraulic pressure is normal	•	•	•	•	•	•
	Check if any oil line or connector is loose or damaged	•	•	•	•	•	•
	Check all hydraulic cylinders for damage or leaking	•	•	•	•	•	•
	Check every hydraulic valve for damage or leaking	•	•	•	•	•	•
	Check if the scissor stack arm oil line is securely fastened or damaged	•	•	•	•	•	•
	Check if the driving oil pipe clip is loose	•	•	•	•	•	•
	Check oil level in the hydraulic tank	•	•	•	•	•	•
	Replace the hydraulic oil	Yearly					

Item	Description	Maintenance Level					
		Routine inspection	I	II	III	IV	V
	Hydraulic oil return filter element	Every 6 months					
	Check the hydraulic oil tank vent cap for leaks	●	●	●	●	●	●
	Replace the hydraulic oil tank vent cap			●	●	●	
	Replace the reducer lubricating oil	Firstly 50 hours, every 200 hours					
Whole machine	Check the fork sliding block for abnormal noise					●	●
	Check and replace the sliding block					●	●
	Check for loose or damaged bolts or abnormal noise	●					
	Check if any circlip or washer on fork arms are damaged, worn, or missing	●					
	Check if the emergency lowering system operates properly	●					
	Check if the platform, scissor stack arm, and chassis are deformed or have broken welds	●					
	Check if the paint is excessively chips or peels off	●					
	Check if the decals and safety signs are correct and legible	●					
	Check if the manuals are with the machine	●					
	Machine performance and limit switches operate properly	●					
Lubrication	Lubricate the steering knuckle	Once a month					

Hydraulic Oil Specifications

Use temperature	Oil type
Minimum air temperature ＞15.8℉(-9℃)	L-HM 46 antiwear hydraulic oil
(-33℃)-27.4℉＜minimum air temperature≤15.8℉(-9℃)	L-HV 46 low temperature hudraulic oil
(-39℃)-38.2℉＜ minimum air temperature ≤-27.4℉(-33℃)	L-HS 46ultralow temperature hudraulic oil
Minimum air temperature ≤-38.2℉(-39℃)	10# aviation hydraulic oil

Annual Inspection Record

Legend description			
Y=Yes, completed			
N=No, un-completed			
R=Repaired			
Evaluation			
Annual Inspection	Y	N	R
Operation inspection completed			
Maintenance item completed			
Function test completed			
Model			
Serial number			
Manufacturing Date			
Owner			
Inspector			
Title of inspector			
Inspection company			
Inspection Date			
Last Annual Inspection Date			

California Proposition 65

WARNING

Operating, servicing and maintaining this equipment can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. These chemicals can be emitted from or contained in other various parts and systems, fluids and some component wear by-products. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your equipment and vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your equipment or vehicle and after operation. For more information go to www.P65Warnings.ca.gov/passenger-vehicle.

Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to www.P65warnings.ca.gov/diesel.

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Mobile Elevating Work Platform
Operation and Safety Manual

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