
1 - SAFETY RULES



DANGER !

FAILURE TO OBEY THE INSTRUCTIONS AND SAFETY RULES IN THIS MANUAL WILL RESULT IN DEATH OR SERIOUS INJURY.

DO NOT OPERATE UNLESS:

- You learn and practice the principles of safe machine operation contained in this operator's manual.
 - **Avoid hazardous situations.**
Know and understand the above principle before going on to the next section.
 - Always perform a pre-operation inspection.
 - Always perform function tests prior to use.
 - Inspect the work place.
 - Only use the machine as it was intended.

- You read, understand and obey:
 - Manufacturer's instructions and safety rules and operator's manuals and machine decals
 - Employer's safety rules and worksite regulations
 - Applicable governmental regulations.

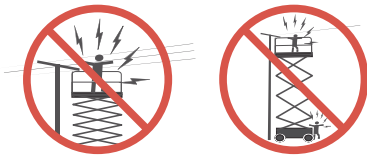
- You are properly trained to operate the machine safely.



DANGER !

DO NOT READ ANY FURTHER UNTIL YOU HAVE VERIFIED THAT THIS IS THE CORRECT OPERATOR'S MANUAL FOR THIS MACHINE. SEE FACING PAGE. CONTACT HAULOTTE IF YOU HAVE ANY QUESTIONS.

1.1 - ELECTROCUTION HAZARDS



- This machine is not electrically insulated and will not provide protection from contact with or proximity to electrical current.
- Respect safe distances from electrical power lines and apparatus in accordance with applicable governmental regulations and the following chart.

Voltage	Minimum safe approach distance	
	Feet	Meters
Phase to phase		
0 to 300 V	Avoid contact	
300 V to 50 kV	10	3.05
50 kV to 200 kV	15	4.60
200 kV to 350 kV	20	6.10
350 kV to 500 kV	25	7.62
500 kV to 750 kV	35	10.67
750 kV to 1000 kV	45	13.72



DANGER!

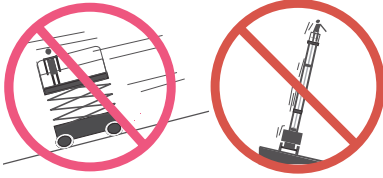
**RISK OF UNCERTAIN
MOVEMENTS OF THE MACHINE
WHEN STANDING NEAR HIGH-
VOLTAGE LINES OR MAGNETIC
FIELDS.**

- Allow for platform movement, electrical line sway or sag and beware of strong or gusty winds.
- Keep away from the machine if it contacts energized power lines. Personnel on the ground or in the platform must not touch or operate the machine until energized power lines are shut off.
- Do not operate the machine during lightning or storms.
- Do not use the machine as a ground for welding.

1.2 - TIP-OVER HAZARDS

Occupants and equipment shall not exceed the maximum capacity or the maximum capacity of the platform extension

	Compact 2032E	Compact 2247E	Compact 2632E	Compact 2747E	Compact 3347E
Maximum capacity Platform retracted	770 lb 350kg	990 lb 450kg	500 lb 230kg	990 lb 450 kg	660 lb 300 kg
Maximum occupants	2	3	2	3	2
Maximum capacity Platform extended Platform only	440 lb 200 kg	660 lb 300 kg	240 lb 110 kg	660 lb 300 kg	330 lb 150 kg
Maximum occupants on extension only	1	1	1	1	1
Maximum capacity Platform extended Extension only	330 lb 150 kg	330 lb 150 kg	260 lb 120 kg	330 lb 150 kg	330 lb 150 kg



- Do not alter or disable the limit switch(es).
- Do not raise or extend the platform unless the machine is on a firm level surface.
- Do not use platform controls to free a platform that is caught, snagged or otherwise prevented from normal motion by an adjacent structure. All personnel must be removed from the platform before attempting to free the platform using the grounds controls.
- Do not depend on the tilt alarm as a level indicator. The tilt alarm sounds when the machine is on a severe slope.

If machine in a slope:

- Lower the platform.
- Move the machine to a firm, level surface.
- If the tilt alarm sounds when the platform is raised, use extreme caution to lower platform.
- Do not operate the machine in strong or gusty winds. Do not increase the surface area of the platform or the load. Increasing the area exposed to the wind will decrease machine stability.
- Do not drive the machine on or near uneven terrain, unstable surfaces or other hazardous conditions with the platform raised.
- Use extreme care and slow speeds while driving the machine in stowed position across uneven terrain, debris, unstable or slippery surfaces and near holes and drop-offs.
- Do not push off or pull toward any object outside the platform.

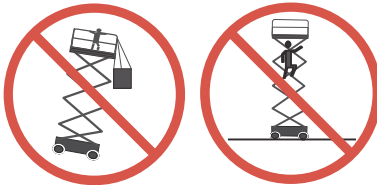


Maximum allowable side force - ANSI & CSA	100 lbs 445 N
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Maximum allowable manual force - CE	90 lbs 400 N
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- Do not alter or disable machine components that in any way affect safety and stability.
- Do not replace items critical to machine stability with items of different weight or specification.
- Do not modify or alter an aerial work platform. Mounting attachments for holding tools or other materials onto the platform, toeboards or guard rail system can increase the weight in the platform and the surface area of the platform or the load.
- Do not place or attach overhanging loads to any part of this machine.
- Do not place ladders or scaffolds in platform or against any part of this machine.
- Do not use machine on a moving or mobile surface or vehicle.
- Be sure all tyres are in good condition and nuts are properly tightened.
- Do not use the machine as a crane.
- Do not push the machine or other objects with the platform.
- Do not contact adjacent structures with the platform.
- Do not tie the platform to adjacent structures.
- Do not place loads outside the platform perimeter.



1.3 - FALL HAZARDS



Occupants must wear a safety belt or harness in accordance with governmental regulations. Attach lanyard to anchor provided in platform.

- It is recommended that operators wear an approved hard hat when operating the machine.
- Do not sit, stand or climb on the platform guard rails. Maintain a firm footing on the platform floor at all times.



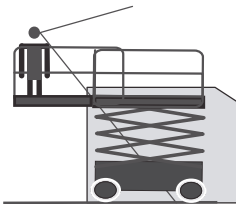
- Do not climb down from the platform when raised. If a power failure should occur, ground personnel should use the manual controls to lower the platform.
- Keep the platform floor clear of debris.
- Do not operate the machine unless the guard rails are properly installed and the entry is secured for operation.

1.4 - BEAUFORT SCALE

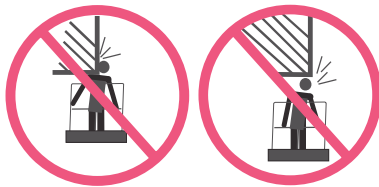
The Beaufort Scale of wind force is accepted internationally and is used when communicating weather conditions. It consists of number 0 - 17, each representing a certain strength or velocity of wind at 10m (33 ft) above ground level in the open.

Description of Wind	Specifications for use on land	MPH	m/s
0 Calm	Calm; smoke rises vertically.	0-1	0-0.2
1 Light Air	Direction of wind shown by smoke.	1-5	0.3-1.5
2 Light Breeze	Wind felt on face; leaves rustle; ordinary vanes moved by wind.	6-11	1.6-3.3
3 Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag.	12-19	3.4-5.4
4 Moderate Breeze	Raises dust and loose paper; small Branches are moved.	20-28	5.5-7.9
5 Fresh Breeze	Small trees in leaf begin to sway; crested wavelets form on inland waterways.	29-38	8.0-10.7
6 Strong Breeze	Large branches in motion; whistling heard in telephone wires; umbrellas used with difficulty.	39-49	10.8-13.8
7 Near Gale	Whole trees in motion; inconvenience felt when walking against wind.	50-61	13.9-17.1
8 Gale	Breaks twigs off trees; generally impedes progress.	62-74	17.2-20.7
9 Strong Gale	Slight structural damage occurs (chimney pots and slates removed).	75-88	20.8-24.4

1.5 - COLLISION HAZARDS



- Be aware of limited sight distance and blind spots when driving.
- Be aware of extended platform position when moving the machine.
- Machine must be on a level surface or secured before releasing brakes.
- It is recommended that operators wear an approved hard hat when operating the machine.
- Check work area for overhead obstructions or other possible hazards.



- Be aware of crushing hazard when grasping the platform guard rail.
- Observe and use color-coded direction arrows on the platform controls and ground controls for drive and steer functions.
- Do not operate a machine in a path of any crane or moving overhead machinery unless the controls of the crane have been locked out and/or precautions have been taken to prevent any potential collision.



- No stunt driving or horseplay while operating a machine.
- Do not lower the platform unless the area below is clear of personnel and obstructions.
- Limit travel speed according to ground surface condition, congestion, slope, location of personnel and any other factors which may cause collision.

1.6 - COMPONENT DAMAGE HAZARD

- Do not use any battery or charger greater than 12V to jump-start engine.
- Do not use machine as a ground for welding.
- Be sure hydraulic shut-off valves (located by hydraulic tank) are open before starting engine.

1.7 - EXPLOSION AND FIRE HAZARDS

- Do not operate machine if you smell or detect liquid petroleum gas (LPG), gasoline, diesel fuel or other explosive substances.
- Charge batteries only in an open, well-ventilated area away from sparks, flames and lighted tobacco.
- Do not operate machine in hazardous locations or locations where potentially flammable or explosive gases or particles may be present.

1.8 - DAMAGED MACHINE HAZARDS

- Do not use a damaged or malfunctioning machine.
- Conduct a thorough pre-operation inspection of the machine and test all functions before each work shift. Immediately tag and remove from service a damaged or malfunctioning machine.
- Be sure all decals are in place and legible.
- Be sure safety, responsibility and operator's manual are legible and in a storage box located on the platform.

1.9 - CRUSHING HAZARDS

- Keep hands and limbs out of scissors.
- Use common sense and planning when operating the machine with the controller from the ground.
- Maintain safe distances between the operator, the machine and fixed objects.
- Maintain firm grasp on the platform rail when pulling the snap pin.
- Do not allow the platform guard rails to fall.

1.10 - BODILY INJURY HAZARD

- Always operate machine in a well-ventilated area to avoid carbon monoxide poisoning.
- Do not operate the machine with a hydraulic oil leak or air leak. An air or hydraulic leak can penetrate and/or burn skin.

1.11 - DECAL LEGEND

- HAULOTTE product decals use color coding and signal words to identify the following.



Red - used to indicate the presence of a hazard that will cause death or serious injury.

Orange - used to indicate the presence of a hazard that may cause death or serious injury.

Yellow - used to indicate the presence of a hazard that will or may cause serious injury or damage to the machine.

Green - used to indicate operation or maintenance information.

1.12 - BATTERY SAFETY

1.12.1 -Burn hazards



- Batteries contain acid. Always wear protective clothing and eyewear when working with batteries.
- Avoid spilling or contacting battery acid. Neutralize battery acid spills with baking soda or water.
- The battery pack must remain in upright position.
- Do not expose battery or charger to water and/or rain.

1.12.2 -Explosion hazards



- Keep sparks, flames and lighted tobacco away from batteries. Batteries emit explosive gas.
- The battery pack cover must remain off during charging.
- Do not contact battery terminals or cable clamps with tools that may cause sparks.

1.12.3 -Component damage hazards

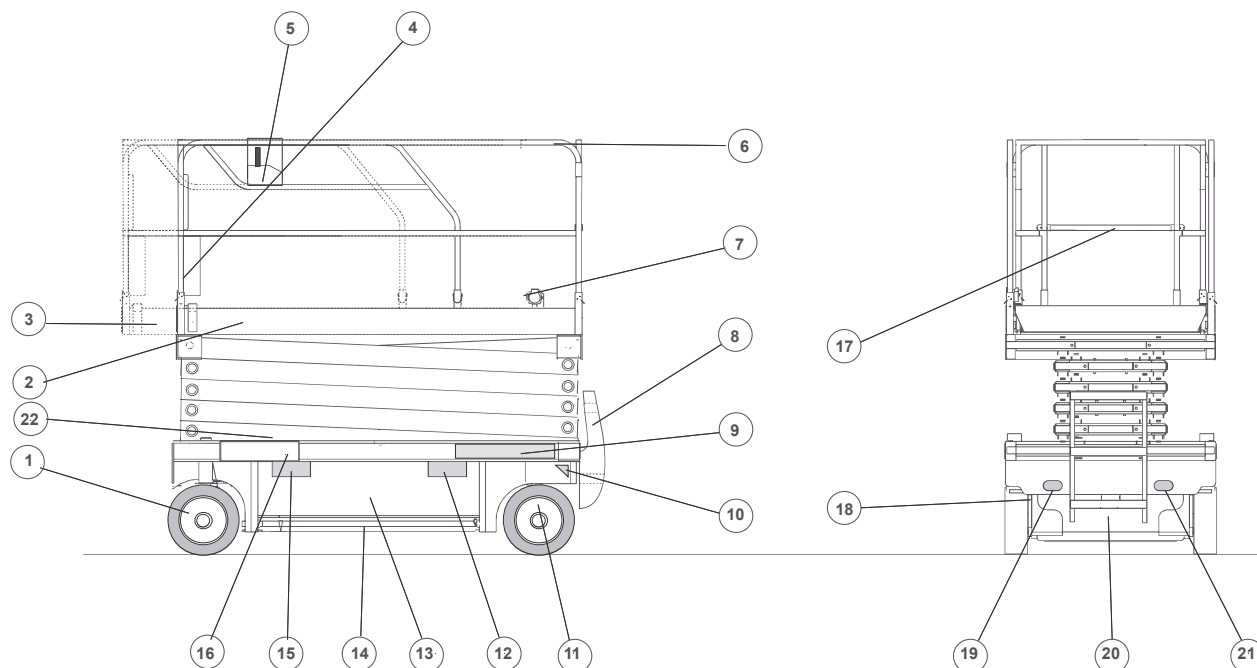
- Both battery packs must be charged together.
- Disconnect battery pack plug before removing battery pack.



1.12.4 -Electrocution hazards

- Inspect machine daily for damaged cord, cables and wires.
- Replace damaged items before operating.
- Avoid electrical shock from contact with battery terminals. Remove all rings, watches and other jewelry.
- Remove any tools or any metal items that may fall from your pockets.

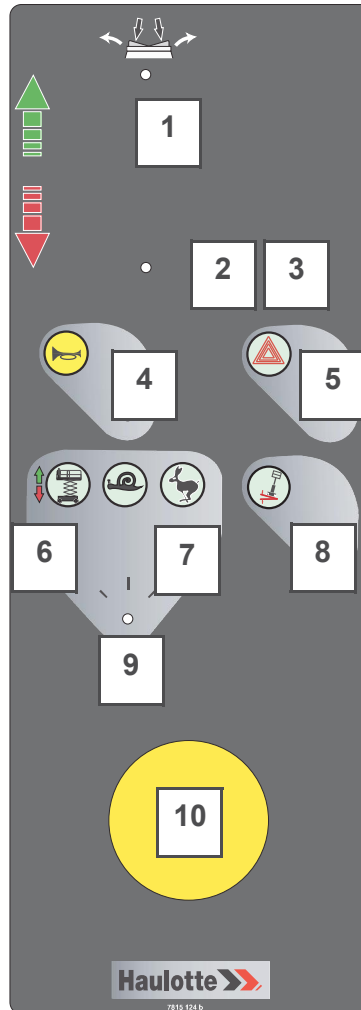
2 - LEGEND



1 - Drive/steered front wheel	11 - Rear wheel
2 - Platform	12, 15 - Location for the fork-lift truck forks
3 - Platform extensions	13 - Cover
4 - Manual storage container	14 - Anti-tipping over device (retractation)
5 - Platform control	16 - Chassis
6 - Protective bar	17 - Platform entry gate
7 - 110V plug	18 - Battery tray locking
8 - Entry ladder	19, 21 - Anchoring points
9 - Ground control	20 - Battery tray
10 - Anchoring point	22 - Tilt sensor

3 - CONTROLS

3.1 - PLATFORM CONTROL



1 - Thumb rocker switch for steer function
2 - Proportional control handle for drive function
3 - Dead man
4- Horn switch
5 - Error indicator light
6 - Platform lifting or lowering movement light indicator
7 - Low speed or high speed light indicator
8 - Platform lifting /lowering and low speed/ high speed selection switch
9 - Tilt indicator
10 - Emergency stop button

3.2 - GROUND CONTROL

1- Key switch for platform/off/ground control selection
2- Raising / OFF/ lowering switch
3- Hour counter / battery charge state
4- Revolving light control
5- Emergency assistance pull rod

4 - PRE-OPERATION INSPECTION

DO NOT OPERATE UNLESS:

- You learn and practice the principles of safe machine operation contained in this operator's manual.
 - Avoid hazardous situations.
 - **Always perform a pre-operation inspection.**
 - Know and understand the pre-operation inspection before going on to the next section.**
 - Always perform function tests prior to use.
 - Inspect the work place.
 - Only use the machine as it was intended.

4.1 - FUNDAMENTALS

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

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

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

Refer to the list on § 4.2, page 17 and check each of the items and locations for modifications, damage or loose or missing parts.

A damage or modified machine must never be used. If damage or any variation from factory delivered condition is discovered, the machine must be tagged and removed from service.

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

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

4.2 - PRE-OPERATION INSPECTION

- Be sure that the operator's, the safety and the responsibilities manuals are legible and in the storage container located on the platform.
- Be sure that all decals are legible and in place (see Chapter 8, page 31).
- Check the engine oil, hydraulic oil, coolant and fuel levels. Check for leaks.
- Check the following components or areas for damage and improperly installed or missing parts:
 - Electrical components, wiring and electrical cables.
 - Hydraulic power units, hoses, fittings, cylinders and manifolds.
 - Hydraulic tank.
 - Drive motors
 - Wear pads.
 - Tires and wheels.
 - Limit switches.
 - Alarms, horn and beacon.
 - Nuts, bolts and other fasteners.
 - Platform entry mid-rail/gate.
 - Platform extension.
 - Safety arm.
 - Scissor pins and retaining fasteners.
 - Platform control joystick.

- Check entire machine for:
 - Cracks in welds or structural components.
 - Dents or damage to machine.
- Be sure that all structural and other critical components are present and all associated fasteners and pins are in place and properly tightened.
- Side rails are installed and snaps pins and bolts are fastened.
- After you complete your inspection, be sure that all compartment covers are in place and secured.

5 - MACHINE OPERATION

DO NOT OPERATE UNLESS:

- You learn and practice the principles of safe machine operation contained in this operator's manual.
 - Avoid hazardous situations.
 - Always perform a pre-operation inspection.
 - Always perform function tests prior to use.
- Know and understand the above principles before going on to the next section.
 - Inspect the work place.
 - Only use the machine as it was intended.

5.1 - FUNDAMENTALS

The tests are designed to discover any malfunctions before the machine is put into service.

A malfunctioning machine must never be used. If malfunctions are discovered, the machine must be tagged and removed from service. Repairs to the machine may only be made by a qualified service technician, according to the manufacturer's specifications.

After repairs are completed, the operator must perform a pre-operation inspection before putting the machine into service.

5.2 - AT THE GROUND CONTROLS

Select a test area that is firm, level and free of obstruction.

Photo 1



5.2.1 - Starting the machine

- Be sure both ground and platform red emergency stop buttons are pulled out to the ON position.
- At ground controls, turn key switch to ground position.
- Check that the hour meter and battery are working properly.

5.2.2 - Stopping the machine

- At ground controls, turn key switch to OFF position.
- All ground and platform control functions should not operate.
- Push in the red emergency stop button to the OFF position.

5.2.3 - Emergency stop

- Push in the red emergency stop button to the OFF position.
 - All ground and platform control functions should not operate.
- Pull out the red emergency stop button to the ON position and restart the machine.



Photo 2

5.2.4 - Machine functions

- Keep your hands and limbs away from cross-pieces.
- Use common sense and good preparation when operating the machine with the ground control. Keep a safe distance between the machine and fixed obstacles.
- From the ground controls, only the raising and lowering controls are possible.

⚠ DANGER !
BEFORE ANY MOVEMENT MAKE SURE THAT NO OBSTACLE CAN INTERFERE WITH THE OPERATIONS.

5.2.4.1 -Raising

- Pull the circuit-breaker.
- Turn the key holding it so as to see the five LEDS come on according to the charge in the batteries.
- Holding the key, raise the platform for simple verification or for a rescue using the switch.
- In order to stop an operation, release the key or the switch.

5.2.4.2 -Lowering

- Pull the circuit-breaker.
- Turn the key holding it so as to see the five LEDS come on according to the charge in the batteries.
- Holding the key, lower the platform for simple verification or for a rescue using the switch. Lowering finishes with the horn.
- In order to stop an operation, release the key or the switch.

5.2.4.3 -Tilt sensor

- Pull out the platform red emergency stop button to the ON position. Turn the key switch to ground control.
- Locate the tilt sensor under the scissors.
- Press down one side of the tilt sensor.
 - The alarm should sound.

Photo 3



NOTA : *With the machine extended, the tilt sensor gives an audible signal indicating to the operator that he must not raise the scissors.*


5.3 - AT THE PLATFORM CONTROL

- Do not operate the machine if the guard rails are not correctly installed and if the entrance is not closed in the operating position.
- Beware of reduced visibility and blind spots when travelling or when operating the machine.
- Make sure that the platform is correctly positioned in extension when moving the machine.
- Operators are strongly recommended to wear an officially approved helmet when operating the machine.
- Inspect the work place, looking for overhead obstructions or other possible dangers.
- Do not drive the machine acrobatically and do not sit astride the machine.
- Adapt the travel speed to suit the conditions of the ground, traffic and slope, the position of people and any other factor which could cause a collision.
- Do not operate a machine where a crane or other machine is operating high up, except if the crane's controls have been locked and/or precautions have been taken to avoid any collision.

The platform emergency stop cuts the line switch (circuit-breaker).

5.3.1 - Machine functions

- Turn the key switch to platform position.

 **DANGER !**
BEFORE ANY MOVEMENT MAKE SURE THAT NO OBSTACLE CAN INTERFERE WITH THE OPERATIONS.

5.3.1.1 -To steer

- Turn steering wheels with the thumb rocker located on top of the drive control handle in the direction identified by the arrows on the control panel.
- Press the dead man switch.
 - The wheels should move.

5.3.1.2 -Driving and braking

Move the proportional control handle in the direction identified by the arrows on the control panel.

- Press the dead man switch.
- Test the service horn switch.
 - The machine should move, then come to an abrupt stop.
- Two speeds are possible in the lift's bottom. This two speeds need to be selected using the speed selection switch.

NOTA : Operate the proportional control handle slowly: progressiveness of operation = progressiveness of movement.

5.3.1.3 -Raising

- Select the raising mode using the switch.
- Operate the control handle to raise the lift after depressing the dead man's handle.

5.3.1.4 -Lowering

- Select the lowering mode using the switch.
- Operate the control handle to lower the lift after depressing the dead man's handle.

5.4 - MANUAL EXTENSION

The platforms are equipped with a single manual extension with two possible notches.

- Depress the pedal and push as far as the first or second notch according to the desired extension.
- When transporting the platform on a trailer or vehicle, it is essential for the manual extension to be locked and for the extension to be retracted.
- It is recommended not to exceed the advocated load in order to make the manual move of the extension easier.

Photo 4



Photo 5



Photo 6

5.5 - TRAVEL SPEED

- The high travel speed is authorized when the platform is in the low position or below 4 ft 11 in (1.50 m).
- The low speed is possible when the platform is in the low position or below 4 ft 11 in (1.50 m).
- The crawling speed is triggered automatically when the platform is above 4 ft 11 in (1.50 m).

5.6 - POTHOLE SAFETY SYSTEM

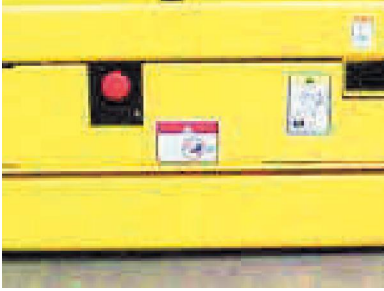


Photo 7

- When the platform is raised above 4 ft 11 in (1.50 m), the pothole protection system deploys itself automatically. Only the crawling speed is then possible in travel.
- They retract automatically when the platform is lowered below 4 ft 11 in (1.50 m) and when high or low speed drive is engaged.
- If the pothole safety systems are not deployed, the crawling speed and raising are automatically cut off.

5.7 - USING THE ON-BOARD CHARGER

- Avoid recharging the batteries if the temperature of the electrolyte is over 40°C. Let it cool down.
- Keep the top of the batteries dry and clean. An incorrect connection or corrosion can cause considerable loss of power.
- If new batteries are fitted, recharge after 3 or 4 hours of use and do so 3 to 5 times.
- The charger has been adjusted in the factory with the cable with which it is equipped. If the cable is replaced, it is important to contact us.

⚠ DANGER!
PUSH IN THE CHASSIS
EMERGENCY STOP TO
THE OFF POSITION
BEFORE RECHARGING.

5.7.1 - Characteristics

The traction batteries must be charged provided for this purpose. DO NOT OVERCHARGE THEM.

- Rated supply voltage : 120V +10/-15%
- Mains frequency : 60 Hz
- Inrush current : limited by NTC
- Max. output power : 720W +/- 3%
- Max. output current : 30A +/- 2%
- Rated battery voltage : 24V
- Voltage tolerance at threshold U : 1%

⚠ DANGER!
In cold weather, the charging
time increases.

5.7.2 - Starting charging

Starting is automatic on connection to the mains. The charger is equipped with 1 indicator light :

- The indicator signals charging in progress.

State	Description
RED on	Machine charging
YELLOW on	80% charged
GREEN on	Machine charging complete

Photo 8



5.8 - USING BATTERIES

Photo 9



The batteries are your platform's energy source.

- Check that the electrolyte level is correct.
- Use the batteries sparingly during the initial cycles.
- Make sure that you do not exceed discharges greater than 80% of the rated capacity.
- The batteries give their full capacity after about ten work cycles. Do not add water before these ten cycles.

5.8.1 - Discharging

If the traction battery is discharged and only a single charge monitor LED is ON, it is impossible to raise the platform. Lowering and driving remains possible.

5.8.2 - Charging

NOTE : *All the controls are cut off when the 110V plug is connected for charging the batteries.*



Photo 10

- Make sure that the mains is suited to the charger's consumption.
- Open the cover.
- Use the machine's on-board charger. It has a charging rate appropriate to the capacity of the batteries.
- During charging: do not remove or open the caps on the elements; make sure that the temperature of the elements does not exceed 45°C.
- After charging: top up with electrolyte if necessary.

5.9 - AFTER EACH USE

- Select a safe parking location-firm level surface, clear of obstruction and traffic.
- Lower the platform.
- Turn key switch to the OFF position and remove key to secure from unauthorized use.
- Chock wheels.

5.10 - RESCUE AND REPAIR OPERATIONS



DANGER !

Only a competent operator may perform repairs or rescue operations.

5.10.1 -Emergency lowering

This is the case in which the operator on the platform is no longer able to control the movements, even though the machine is functioning as normal. A competent operator on the ground may operate the control station at the base-frame with the main power supply to bring the operator on the platform back down.

Rescue procedure:

- place the key selector from selection of control station to position "ground control" (no. 1). In this position the controls of the control station at the platform will be cancelled.
- Continuing to hold the key (on the chassis side), lower the platform using the switch provided if you need to help the person on the platform.
- To stop an operation, release the key.



NOTE : *During rescue and emergency manoeuvres from the ground with the extension deployed, it is essential to ensure that there are no obstacles under the platform (wall, beam, power line, etc.).*



DANGER !

It is prohibited to lower overloads using emergency lowering at the risk of overturning the lift.

5.10.2 -Manual repair

Photo 11



If an operating fault prevents the operator on the platform from coming back down, a competent operator may bring the platform back down from the control station at the base-frame.

Procedure of manual lowering of the platform

- In the event of a breakdown, lowering of the platform can be carried out thanks to the standby pull rod on the bottom control box (see Photo 11).
- Release to stop the platform when being lowered.

5.11 - BRAKE RELEASE

⚠ DANGER !

It is vital to use a traction bar between the towing vehicle and the front of the machine in order to avoid any risk that it might career out of control.

These towing operations must be carried out at low speed, and must remain under the responsibility of the of the operator.

Brake release is carried out manually (see Photo 12).

Procedure :

- Screw valve NV1
- Operate hand pump until brake release is complete
- Unscrew NV2
- Drive at low speed
- Once in place :
 - Screw NV2
 - Unscrew NV1

Photo 12



NV2 MK4

NV1

After any manual braking and once the machine has been put back into operation, check that the brakes are functioning on a ramp of maximum admissible incline.