HA32RTJ PRO - HA100RTJ PRO - HA41RTJ PRO - HA130RTJ PRO

Operator's manual

HA32RTJ PRO - HA100RTJ PRO - HA41RTJ PRO - HA130RTJ PRO

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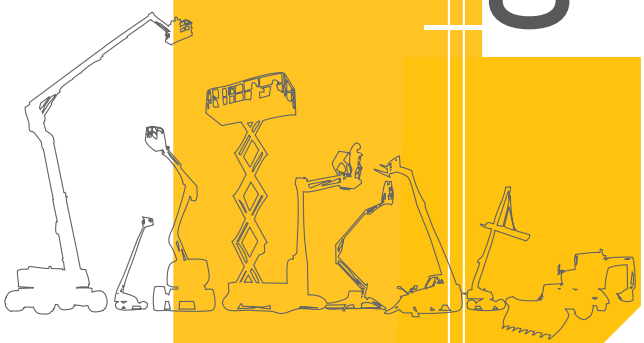

F

MAINTENANCE

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OTHER INFORMATION

A- Foreword

You have just purchased a HAULOTTE® product and we would like to thank you for your business.

The Aerial Work Platform is a mechanical device primarily designed and manufactured with the intent to position people with the necessary tools and material to overhead elevated temporary workplaces. All other uses or alterations/modifications to the aerial work platform must be approved by HAULOTTE®.

This manual shall be considered a permanent component of the machine and shall be kept with the aerial work platform in the designated Manual Holder, at all times.

Safe operation of this product can only be assured if you follow the operating instructions contained in this manual. To ensure proper and safe use of this equipment, it is strongly recommended that only trained and authorized personnel operate and maintain the aerial work platform.

We would particularly like to draw your attention to 2 essential points :

- Comply with safety instructions.
- Use the equipment within the specified/published performance limits.

With regard to the designation of our equipment, we stress that this is purely for commercial purposes and not to be confused with the technical specifications. Only the specifications in this manual should be used to study the suitability of the equipment for the intended use.

This operator's manual is specific to the HAULOTTE® products listed on the cover page of this manual.

Original language and version :

Manuals in English and French are the original instructions. Manuals in other languages are translations of the original instructions.

The operator's manual does not replace the basic training required for equipment operators. HAULOTTE® has compiled this manual to assist in safe and efficient operation of the products covered in the manual.

The manual must be available to all operators and must be kept in a legible condition. Additional copies can be ordered from HAULOTTE Services®.

Stay Safe and keep working with HAULOTTE® !

1 - User responsibility

1.1 - OWNER'S RESPONSIBILITY

The owner (or hirer) has the obligation :

- To inform operators of the instructions contained in the Operator's Manual.
- For applying the local regulations regarding operation of the machine.
- To replace all manuals or decals that are either missing or not legible. Additional copies can be ordered from HAULOTTE Services®.
- To establish a preventive maintenance program in accordance with the manufacturer's recommendations, taking into account the environment and severity of use of the machine.
- To perform periodic inspections in accordance with HAULOTTE® recommendations and local regulations.

All malfunctions and problems identified during the inspection shall be corrected before the aerial work platform is returned to service.

1.2 - EMPLOYER'S RESPONSIBILITY

The employer has the obligation :

- To authorize the operator to use the machine.
- To inform and familiarize the operator with the local regulations.

Forbid anyone from operating the machine if :

- Under the influence of drugs, alcohol, etc.
- Subject to fits, loss of motor skills, dizziness, etc.

1.3 - TRAINER'S RESPONSIBILITY

The trainer must be qualified to provide training to operators in accordance with applicable local regulations. The training must be given in an obstacle-free area until the trainee is considered competent as defined by the training program undertaken.

1.4 - OPERATOR'S RESPONSIBILITY

The operator has the obligation to :

- Read and understand the contents of this manual and familiarize himself with the decals affixed on the machine.
- To inspect the machine before use according to HAULOTTE®'s recommendations..
- To inform the owner (or hirer) if the manual or any decals are missing or are not legible.
- To inform of any malfunctioning of the machine.

The operator shall ensure that frequent inspections were conducted by the owners and the operator may only operate the machine for the purpose intended by the manufacturer.

Only authorized and qualified operators may operate HAULOTTE® machines.

All operators must become familiar with and fully understand the emergency controls and be able to operate the machine in an emergency.

The operator has the obligation to stop using the machine in the event of malfunction or safety problems on the machine or in the work area and report the problem immediately to his/her supervisor.

2 - Safety

2.1 - SAFETY INSTRUCTIONS

2.1.1 - Misuse Hazards

- Do not use the machine for any other purpose than to position people, their tools and material to the overhead/elevated temporary work places.
- Do not use the machine as a crane, material lift or elevator. Only use the machine as it was intended.
- Do not attach overhanging loads when raising or lowering the platform.
- Do not tie the boom or platform to an adjacent fixed or mobile structure.
- Do not use/operate the machine when alone. A survey person or immediate Supervisor must be present on the ground in case of emergency.
- Do not use a faulty or poorly maintained machine. Remove defective/damaged machine from service.
- Do not climb onto the compartment covers of the machine.
- Do not replace items critical to machine stability with items of different weight or specification.
- Do not replace factory-installed tires with tires of different specifications or ply rating.
- Do not alter or disable machine components that in any way affect safety and stability.
- Do not disable the safety devices.

2.1.2 - Falling Hazards

To enter or exit from the platform :

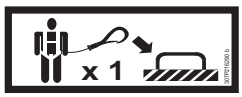
- The machine must be completely stowed.
- Face the machine to access the entry opening to the platform.
- Keep 3 points of contact (both hands and a foot) on the steps and the guardrail.

Before commencing operation :

- Ensure that guard rails are correctly installed and secured.
- Ensure that gate or sliding bar is in it's proper closed position.
- Remove oil or grease from the steps, floor, handrail and the guardrails.
- Clear the platform floor free of debris.

When in the platform :

- Occupants must wear a fall arrest harness with lanyard and energy absorber, in accordance with applicable governmental regulations. Attach the lanyard to the designated fall arrest anchor provided in the platform.
- The correct use of the harness requires the lanyard to be connected to an anchorage point designated by the decals. Refer to this decal located on the platform.
- Hold on securely to the guardrails.



- Always keep your feet firmly on the floor of the platform.
- Do not sit, stand, or climb on the platform guard rails.
- Work only within the platform guardrails area and do not lean over guardrails to perform work.
- Do not exit the platform until it is in the completely stowed position.
- Do not use the guardrail as a means of access to climb in or out of the platform.

2.1.3 - Overturning / Tip-over Hazards

Before positioning and operating the machine :

- Ensure that the surface is capable of supporting the machine weight including the rated capacity. Check the load bearing capacity of the supporting ground.
- Remain vigilant of driving direction reversal at the platform. Check the driving direction with the help of the red or green arrow on the chassis relative to the red and green arrows on the platform control box.

- Do not exceed the maximum rated capacity that includes the weight of both material and allowed number of occupants. Do not exceed the allowable number of occupants.
- Place the loads uniformly distributed on the platform floor.

- Do not increase the working height (using extensions, ladder, etc.).
- Do not place ladders or scaffolds in the platform or against any part of this machine.
- Do not use the machine in winds exceeding the permissible limit.

- Do not increase the surface area of the platform exposed to wind. This includes adding panels, mesh, banners. Be aware when working with materials with a large surface area. This will add to the wind load on the machine.
- Do not raise the platform or drive with platform elevated on an incline exceeding the rated slope for the machine.
- Do not drive the machine on slopes or grades exceeding the specified limits.

- Do not replace components critical to stability with components of different weight or specification.
- Do not use the machine with material or objects hanging from the guardrail or the boom.

- Do not pull or push towards any object outside of the platform. Do not exceed the maximum allowable side force stated in the performance specifications.
- Do not use the machine to support any external structure.
- Do not use the machine to tow other machines or to drag materials.

A- Foreword

Using a machine on a slope

Do not exceed the slope limit for each operation. Section B 4.1Technical specifications.

Gradeability :

- Driving in stowed position UP or DOWN a slope.

Rated slope :

- Operating with platform elevated.

- If the tilt alarm sounds with the platform uphill : First lower the boom and then retract the boom.
- If the tilt alarm sounds with the platform facing downhill : First retract the boom and then lower the boom.
- While driving, always place the boom above the rear axle, in the direction of movement.
- While driving on a slope:
  - Always orientate the machine in the direction of the slope.
  - Always place the boom and the arms in fully retracted and in stowed position.
  - Do not travel down slopes in high speed.
  - Do not drive fast in narrow or cluttered areas. Keep speed under control while making turns or sharp bends.

WIND : The aerial work platform can operate up to a maximum wind speed as indicated in the specifications. To identify the local wind speed, use the Beaufort scale below, use a wind gauge or an anemometer.

A- Foreword

N.B.-:-THE BEAUFORT SCALE OF WIND FORCE IS ACCEPTED INTERNATIONALLY AND IS USED WHEN COMMUNICATING WEATHER CONDITIONS. A WIND SPEED RANGE AT 10 M (32 FT 9 IN) ABOVE FLAT, CLEAR LAND IS ASSOCIATED WITH EACH DEGREE.

Beaufort scale

Force	Meteorological description	Observed effects	m/s	km/h	mph
0	Calm	Smoke rises vertically.	0 - 0,2	0 - 1	0 - 0,62
1	Very light breeze	Smoke indicates the wind direction.	0,3 - 1,5	1 - 5	0,62 - 3,11
2	Light breeze	Wind felt on the face. Leaves rustle. Weather vanes turn.	1,6 - 3,3	6 - 11	3,72 - 6,84
3	Slight breeze	Leaves and small twigs in constant motion. Flags move slightly.	3,4 - 5,4	12 - 19	7,46 - 11,8
4	Nice breeze	Raised dust and loose papers. Small branches are moved.	5,5 - 7,9	20 - 28	12,43 - 17,4
5	Nice breeze	Small trees in leaf to sway. Crested wavelets form on inland waterways.	8,0 - 10,7	29 - 38	18,02 - 23,6
6	Cool wind	Large branches in motion. Power lines and chimneys 'sing'. Umbrellas used with difficulty.	10,8 - 13,8	39 - 49	24,23 - 30,45
7	Near gale	Whole trees in motion. Inconvenience felt when walking against wind.	13,9 - 17,1	50 - 61	31 - 37,9
8	Squall	Some branches break. Generally we cannot walk against the wind.	17,2 - 20,7	62 - 74	38,53 - 45,98
9	Strong squall	The wind causes slight damage to buildings. Tiles and chimney stacks are blown off.	20,8 - 24,4	75 - 88	46,60 - 54,68

2.1.4 - Electrocution Hazards

The machine is not electrically insulated and does not provide protection from contact or proximity to electrically charged conductors.

Always position the lift at a safe distance from electrically charged conductors to ensure that no part of the machine is within an unsafe area.

Respect the local rules and the minimum safety distance from power lines.

Minimum safe approach distances

Electric voltage	Minimum safety distance	
	Mètre	Feet
0 - 300 V	Avoid contact	
300 V - 50 kV	3	10
50 - 200 kV	5	15
200 - 350 kV	6	20
350 - 500 kV	8	25
500 - 750 kV	11	35
750 - 1000 kV	14	45

N.B.-:-USE THIS TABLE EXCEPT WHERE LOCAL REGULATIONS INDICATE OTHERWISE.

- Do not operate the machine when close to live power lines, consider the movement of the machine and the sway of the electric power lines particularly in windy conditions.
- Do not operate the machine during lightning, thunderstorms, snow/ice or any weather condition that could compromise operator safety.
- Do not use the machine as a ground for welding.
- Do not weld on the machine without first disconnecting the battery terminals.
- Always disconnect ground cable first.
- The machine must not be used while charging the batteries.
- When using the AC power supply, ensure it is protected with a circuit breaker and residual current device.

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.

2.1.5 - Explosion / Fire Hazards

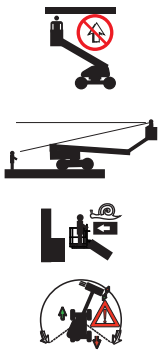
Always wear protective clothing and eye wear when working with batteries and power sources/systems.

N.B.-:-ACID IS NEUTRALIZED WITH SODIUM BICARBONATE AND WATER.

- Do not start the engine if you smell or detect liquid propane gas (LPG), gasoline, diesel fuel or other explosive substances.
- Do not work on or operate a machine in an explosive or flammable atmosphere / environment.
- Do not touch hot components.
- Do not bridge the battery terminals with metallic objects.
- Do not service the battery in proximity of spark, open flame, lit cigarettes.
- Do not fill up the fuel tank, when the engine is running and/or near a flame.

2.1.6 - Crushing / Collision Hazards

When in the platform :



- Check the work area for overhead clearance, for any obstacles besides and below the platform when raising/lowering the platform and or before driving.
- During movement, keep all the parts of the body inside the platform. Hold onto the guardrails on the opposite side to any surrounding structures. Take care to avoid trapping hands whilst holding the guardrails.
- To position machine close to a building/structure, it is recommended using the upper boom and or arms movement control functions to position, rather than driving machine closer to structure.
- Always cordon off the area around the base of the machine to keep personnel and other equipment away from the machine while in use.
- Warn personnel not to work, stand, or walk under a raised boom/platform.
- Do not drive in reverse direction (opposite the field of vision).
- Be aware of the boom position and tail swing when rotating the turret (turntable).
- Always ensure that the chassis is never driven any closer than 1 m (3 ft 3 in) to holes, bumps, slopes, obstructions, debris and ground coverings that may hide holes and other dangers.
- Keep non-operating personnel at least 5 m (16 ft 5 in) away from the machine when driving and slewing.

- Be aware of driving direction.
  - When turret is slewed/rotated 180°, the platform is now facing the rear of the machine.
  - Check the driving direction with the help of the red or green arrow on the chassis relative to the red and green arrows on the platform control box.
  - Also note that when changing the driving direction (Forward <> Reverse) the joysticks or switches must return to the neutral position before reversing the drive direction and for movement to occur.
- When driving, position the platform so as to provide the best possible visibility and to avoid any blind spots.
- Hold on securely to the guardrails.
- Occupants must wear a fall arrest harness with lanyard and energy absorber, in accordance with applicable governmental regulations. Attach the lanyard to the designated fall arrest anchor provided in the platform.
- Avoid contact with fixed or mobile obstacles (other machines).
- Other machines (crane, aerial work platform, etc.) operating in the work area increase the risk of crushing or collision. Restrict the operation of machines moving within the aerial work platform work area.
- Take into consideration the stopping distance, reduced visibility and blind spots of the machine.
- Limit travel speed to suit the ground surface condition, slope (incline), and people in the vicinity.

2.1.7 - Uncontrolled movement Hazards

Do not use a damaged or malfunctioning machine.

Be aware of uncontrolled movement and always respect the following :

- Maintain clearance from high voltage lines.
- Maintain clearance from generators, radar, electromagnetic fields.
- Never expose the batteries or electrical components to water (high pressure washer, rain).
- Never tow the machine over extended distances.
- In case of a machine breakdown, it is possible to tow short distance to load it onto a trailer.
- Never leave the hydraulic cylinders fully extended before switching off the machine, or when stationary for an extended period of time.
- Retract the boom and lower the arms to the stowed position.
- Rotate the turntable so that the boom is between the non-steering wheels.
- Select a safe parking location, on a firm level surface, clear of obstruction and traffic.
- Ensure all compartments are closed and secured.
- Chock the wheels.
- Operator must remove the foot from the footswitch when any movement has ceased.

3 - Safety inquiries

Inquiries relating to design criteria/specifications of a product, standards compliance, or overall machine safety should be sent to the HAULOTTE® PRODUCT SAFETY department.

Each inquiry or request should include all relevant information; including contact name, telephone number, mailing address, email address, plus the machine model and serial number.

The HAULOTTE® Product Safety department will evaluate each request/inquiry and will provide a written response.

4 - Incident notification

Notify HAULOTTE® immediately when a HAULOTTE® product has been involved in an incident/ accident leading to personal injury or death, or when there is a major property damage.

HAULOTTE Group - EUROPE Product Safety Department Address : La Péronnière - BP 9 - 42152 L'Horme - France Tel : +33 (0)4 77 29 24 24 Email : ProductSafety@haulotte.com	HAULOTTE Group - Australia, India and Asia Product Safety Department Address : No.26 Changi North Way - Sinpapore 498812 - Singapore Tel : +65 6546 6150 Email : ProductSafety@haulotte.com	HAULOTTE Group - North & South America Product Safety Department Address : 3409 Chandler Creek Rd. - Virginia Beach, VA 23453 - United States Tel : +1 757 689 2146 Email : ProductSafety@haulotte.com

5 - Compliance

5.1 - PRODUCT INFORMATION

Without the written permission from Haulotte, modifying a HAULOTTE® product is a Safety concern. Any modification may violate Haulotte design parameters, government regulations and industry standards.

If you desire a modification to the product, submit a request in writing to HAULOTTE®.

With the utmost care to ensure enhanced reliability and greater safety of the HAULOTTE® products, it is pertinent that when a "Service or Safety Bulletin" is issued, action is taken immediately. Once the bulletin has been addressed, make sure that the completed form is submitted to HAULOTTE®.

Do not hesitate to contact HAULOTTE Services®, should you have any questions relating to the issued bulletin(s) or with questions on the policy itself.

5.1.1 - Change of Ownership Notification

It is important and necessary to keep HAULOTTE Services® updated with current ownership of the machine. This way, HAULOTTE® will be able to provide the necessary support for the product. If you have sold or transferred this machine(s); it is your responsibility to notify HAULOTTE Services®. It is not required to include Lessees/Renters of Leased/Rented machines on this form.

Use the HAULOTTE® Product Status Notification form to report scrapped, stolen, missing or recovered machine(s).

5.1.2 - Owner information update form

Owner information update form	
Complete this form and mail or fax it to :	
HAULOTTE® subsidiary Name :	Address 1 :
Fax :	Address 2 :
e.mail address :	Address 3 :
Product information :	
Model :	Machine serial number :
Owner / Servicing information : Do not include leased or rented units in this form	
Current product owner 1 :	Current product owner 2 :
Name :	Name :
Company :	Company :
Address 1 :	Address 1 :
Address 2 :	Address 2 :
Country :	Country :
Phone :	Phone :
Date of ownership :	Date of ownership :
Signature :	Signature :
Date :	Date :
Company stamp is mandatory :	Company stamp is mandatory :
Tick here if the machine has been permanently removed from service (scrapped). The manufacturer's nameplate must be removed and returned to HAULOTTE Group when the unit is removed from service.	
Reason for removal :	

5.2 - PRODUCT SPECIFICATIONS

HAULOTTE® cannot be held liable for any changes to the technical characteristics/ specifications contained in this manual. HAULOTTE® has a continuous improvement policy in place for its product range; given this policy, the Company reserves the right to modify their products technical characteristics / specifications without notice.

Certain options can modify the machine's operating characteristics and its' associated safety. If your machine was originally delivered with options fitted, replacing a safety component associated with a particular option does not require any particular precaution other than those associated with the installation itself (static test).

Otherwise, it is essential to follow the manufacturer's recommendations as stated below :

- Installation by authorised HAULOTTE® personnel only.
- Update the manufacturer's identification plate.
- Have stability tests carried out by a certified agency/competent person.
- Ensure decals are updated.

A- Foreword

Notes

1 - General safety

1.1 - INTENDED USE

To ensure the safe use of an Aerial Work Platform, support personnel must always be available on the ground. If necessary, support personnel will be required to operate the emergency functions of the machine and in rescuing the operator.

Do not operate the product in the following situations :

- On soft, unstable or cluttered ground.
- With wind blowing faster than the permissible limit.
  - Check the allowable wind speed specified in the performace specifications tabulation.
  - Consult the Beaufort scale.
- Close to power lines. Keep a safe distance.
- Outside of the temperature range -20°C / + 50°C (-4°F / +122°F).
- In an explosive atmosphere / environment.
- During storms.
- In the presence of strong electromagnetic fields.

N.B.-:-USE THE MACHINE UNDER "NORMAL" CLIMATIC CONDITIONS. IF YOU NEED TO USE THE MACHINE IN CLIMATIC CONDITIONS LIKELY TO CAUSE DETERIORATION (EXTREME : HUMIDITY, TEMPERATURES, SALINITY, CORROSIVENESS, ATMOSPHERIC PRESSURE), CONTACT HAULOTTE SERVICES®. REDUCE INTERVALS BETWEEN SERVICING.

N.B.-:-WHILE THE MACHINE IS NOT IN USE, CARE MUST BE TAKEN TO BRING THE MACHINE TO THE FULLY STOWED POSITION. ENSURE THAT THE MACHINE IS LOCKED IN A SECURE LOCATION, AND THE CONTROL KEY IS REMOVED TO PREVENT UNAUTHORISED USE OF THE MACHINE.

1.2 - DECAL CONTENT

Decals are provided to alert the user of hazards inherent with the Aerial Work Platforms.

Decals provide the following information :

- The level of severity.
- The specific hazard.
- A method to avoid, suppress or reduce the hazard.
- Descriptive text (where required).

Familiarize yourself with the decals and the hazard severity levels.

CE and AS standards

ANSI and CSA standards

Marking	Description
1	Hazard symbol
2	Level of severity
3	Avoidance symbol pictorial
4	Avoidance text

Decals must be kept in good legible condition.

Familiarize yourself with the decals and their respective color codes.

Additional decals can be ordered from HAULOTTE Services®.

B - Familiarization

1.3 - SYMBOLS AND COLORS

Symbols and colors are used to alert the operator of safety precautions and/or to highlight important safety information.

The following safety symbols are used throughout this manual to indicate specific hazards and the hazard severity level when operating or maintaining the Aerial Work Platform.

Symbol	Description
	Danger : Risk of injury or death
	Caution : Risk of material damage
	Prohibited action
	Reminder to use good practice or follow pre-operation checks
	Cross-reference to another part of the manual
	Cross-reference to another manual
	Cross-reference to repair (contact HAULOTTE Services®)
N.B. :	Additional technical information

1.4 - LEVEL OF SEVERITY

Color	Title	Description
	DANGER	Danger : Indicates a hazardous situation which if not avoided, WILL result in death or serious injury.
	WARNING	Warning : Indicates a hazardous situation which if not avoided, COULD result in death or serious injury.
	CAUTION	Caution : Failure to comply could result in minor or moderate injury.
	NOTICE	Notice : Indicates recommended practices if not followed, may result in a malfunction or damage the machine or its components.
	PROCEDURE	Procedure : Indicates a maintenance operation.

B - Familiarization

1.5 - SYMBOLS LEGEND AND DEFINITIONS

Symbols are used throughout this manual to depict hazards, avoidance measures and indicate when information is required.

Refer to the following table to familiarize yourself with these symbols.

Symbol	Description	Symbol	Description	Symbol	Description
	Body crushing hazard		Foot crushing hazard		High pressure fluid ejection hazard
			Hand crushing hazard		Entanglement hazard
			Health/safety hazards related to chemicals		Health-damaging effects from hot work environment
	Electrical contact or lightning strike		Burns and scalds from contact with flames, explosion or radiation from heat sources		Injury from Electric arcs - Energy supply disconnecting devices - Batteries fire, emissions, etc
	Risk of operator(s) falling		Tip over due to excessive loading / wind load and excessive ground slope		Relate and coordinate directional arrows on the chassis with those on the control box
	Do not put foot in this area		Do not put your hand in this area		Keep away from product working area
	Never expose batteries and electrical component to high pressure washer		Ensure entry drop rail is down		
	Flames prohibited		Maintain safe clearance from high voltage electrically charged conductors as described in manual - Do not use in thunderstorms		Overload
	Refer to operator manual		Safety belt		Use appropriate lanyard attached to dedicated anchor point.
	Wheel pressure		Enable switch		Use safety prop before attempting any maintenance work
	Tow point		Tie down point		Lift point
	Keep away from hot surfaces		Wear protective equipment		

B - Familiarization

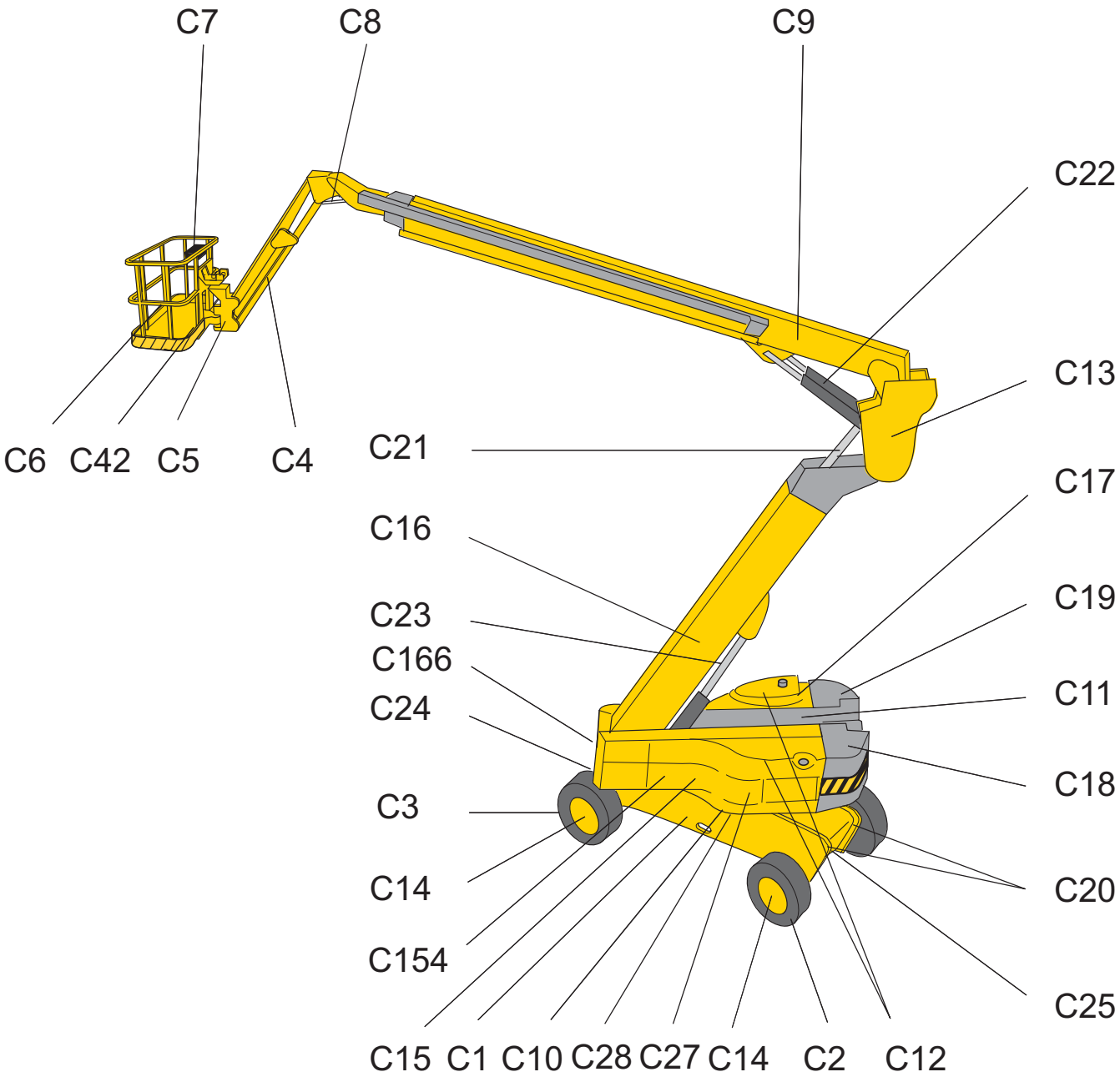
2 - Models description

Regulation	Models
ANSI and CSA standards	HA100RTJ PRO
	HA130RTJ PRO
CE, AS and EAC standards	HA32RTJ PRO
	HA41RTJ PRO

3 - Primary machine components

3.1 - LAYOUT

HA32RTJ PRO - HA100RTJ PRO - HA41RTJ PRO - HA130RTJ PRO



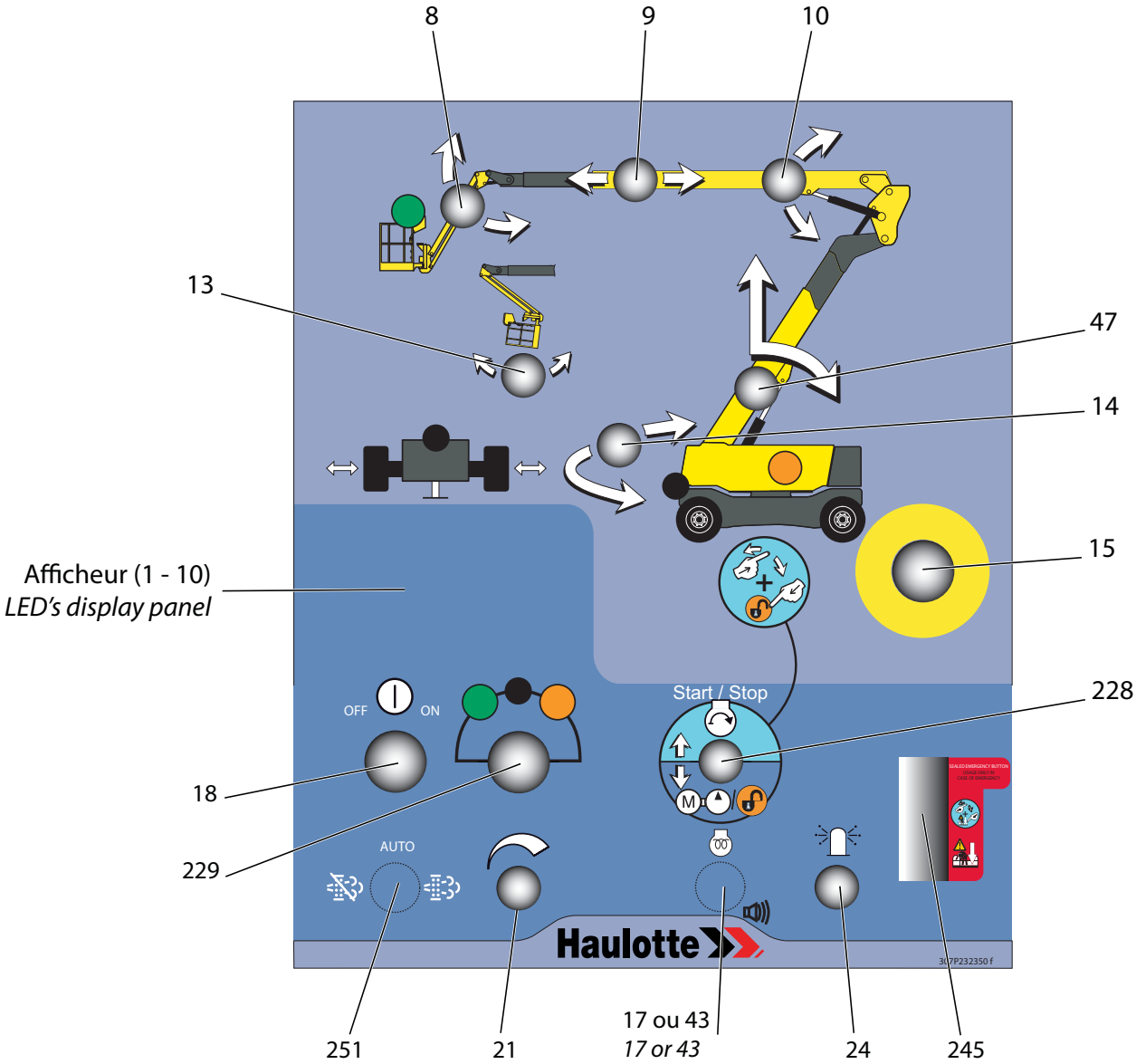
B - Familiarization

Marking	Description	Marking	Description
C1	Chassis	C17	Left side compartment (engine, pump and starter battery)
C2	Front driven steering axle	C18	Right counterweight
C3	Rear drive and/or steer wheel	C19	Left counterweight
C4	Jib	C20	Tie-down (and/or lifting) points
C6	Platform	C21	Link piece compensation cylinder
C7	Platform control box	C22	Boom lift cylinder
C8	Input jib compensation cylinder	C23	Arm lifting cylinder
C9	Upper boom	C24	Extendable fixed axle
C10	Slew ring	C25	Extendable swing axle
C11	Turntable assembly	C27	Ground control box
C12	Side cover	C28	Tilt sensor
C13	Arm/Boom link piece	C29	Platform rotation cylinder
		C35	Document holder
C14	Hydraulic drive motor and reducer	C42	'Enable Switch' pedal
C15	Right side compartment (hydraulic oil tank and fuel tank)	C154	For Russia and the Ukraine only : Temperature probe relays
C16	Lower arm	C166	Axle extension control box

3.2 - GROUND CONTROL BOX

3.2.1 - Layout

General view



Controls and indicators

Marking	Description	Function
8	Jib lifting / lowering switch	Move upwards : Jib lifting
		Move downwards : Jib lowering
9	Boom telescoping switch	Move to the left : Boom extends
		Move to the right : Boom retracts
10	Boom raising switch	Move upwards : Boom raising
		Move downwards : Boom lowering
13	Platform levelling	Move to the right : Platform leveling lowered or placed in transport position
		Move to the left : Platform leveling raised or placed in operating position
14	Turntable rotation switch	Move to the left : Counter clockwise (CCW) rotation
		Move to the right : Clockwise (CW) rotation
15	E-stop button	Pulled out : E-stop activated
		Pushed in : E-stop deactivated
17	Engine pre-heating selector[1]	Move downwards : Engine pre-heating
18	ON/OFF selector	ON : Power turned ON
		OFF : Power turned OFF
21	Engine revs selector	Move to the right : Engine speed increases
		Move to the left : Engine idle speed
24	Beacon light on/off [2]	Move to the right : Beacon light on
		Move to the left : Beacon light off
43	Horn button [3]	Horn
47	Arm telescoping or lifting selector	Move upwards : Telescope extension or arm lifting
		Move downwards : Telescope retraction or arm lowering
228	'Enable Switch' selector / Back-up unit selector	Move upwards : Engine start
		Move downwards : Enable switch. If the engine is switched off, the emergency electropump is engaged automatically.
229	Control box energizing selector	Left : Platform control box energized
		Center : Axle extension box activation
		Right : Ground control box energized
245	"Overriding system" switch under cover	Emergency lowering system enabled when the cover is lifted. This must be used ONLY when normal operation from the ground box is unavailable - use in emergencies ONLY.
251	DPF[4]	

1. *For machines fitted with*
2. *For machines fitted with*
3. *For machines fitted with*
4. *For machines fitted with*

B - Familiarization

3.2.2 - Display Panel (LED'S 1 - 10)

Indicators / Cluster

Marking	Description
LED 1	**Overriding system :** • Permanently lighted while the overriding switch is being used
LED 2	**Fault :** • Rapid flashing if a fault is active (current defect) • Flashing if the service counter is at zero
LED 3[1]	**Radius limitation** • Flashing : Calibration fault or automatic reach limitation • Permanently lighted : Movement disabled by the reach limitation system
LED 4	**Overload (For CE standard only) :** • Rapid flashing : Faulty weighing system • Illuminated in case of overload
LED 5	**Combustion engine pre-heating** • Illuminated while engine is pre-heating • Off if engine started and if post-heating
LED 6	**Engine warning** • Flashing : 5 flashes when ignition is switched on if service counter is less than 20 hours • Constantly on : If the service counter is at zero
LED 7	**Engine shutdown :** • Lighted in case of major engine fault (e.g. engine overheating, oil pressure, alternator fault, etc.) • Lighted in case of faults managed by the engine ECU
LED 8[2]	**DPF regeneration inhibited (DPF : Diesel Particulate Filter)**
LED 9[3]	**DPF regeneration required :** • Permanently lighted if the particle filter requires regeneration with a high clogging level (DPF : Diesel Particulate Filter)
LED 10[4]	**DPF regeneration in progress, high temperature in the exhaust system (HEST) (HEST : High Exhaust System Temperature)**

1. *If machine equipped with dual load*
2. *If engine quipped with Particulate Filter Regeneration*
3. *If engine quipped with Particulate Filter Regeneration*
4. *If engine quipped with Particulate Filter Regeneration*

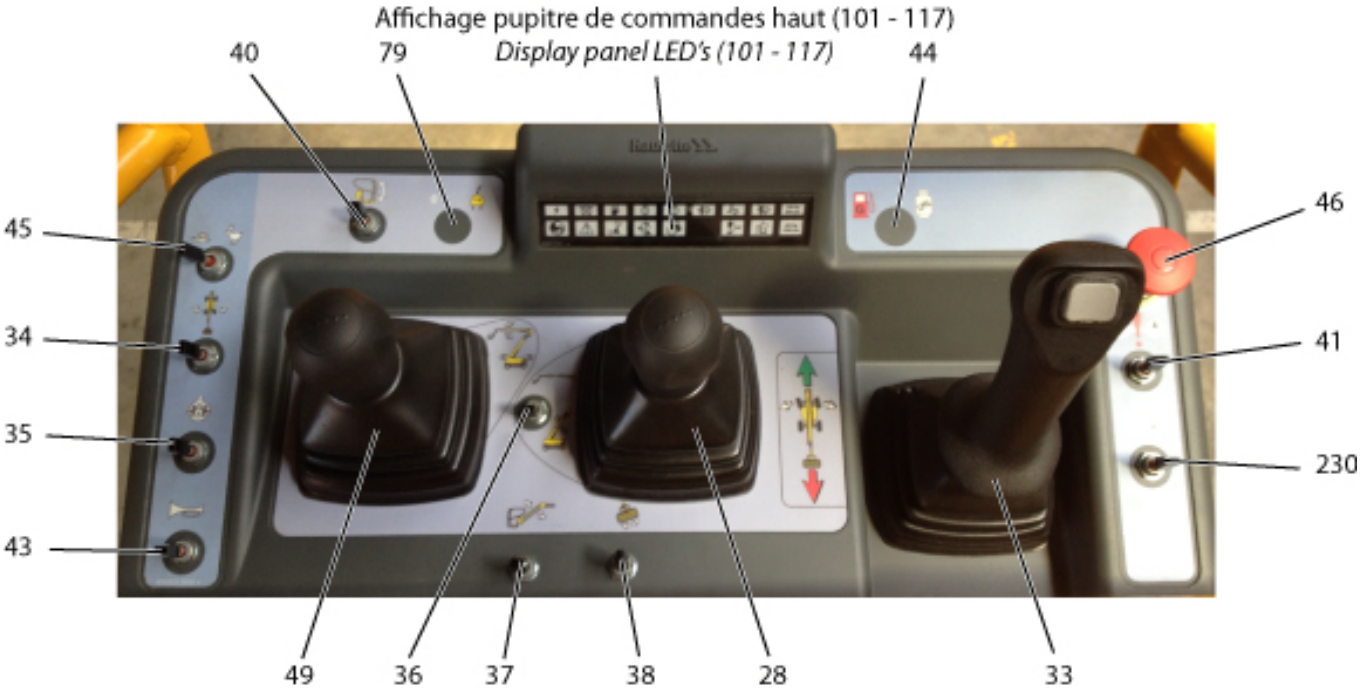
B - Familiarization

Symbol	Description
	**Illuminated when service counter is displayed**
	• Illuminated when engine is not running or when hour meter is displayed
	**Low fuel level**
	**Illuminated when engine is not running, or if the engine is running and there is an alternator fault**
	**Display of service counter for 3 s when the machine is switched on, then display of the hour meter for 3 s.** **Then :** 1. Display of one or more faults, if present, with scrolling of faults every 2 s 2. Display of service counter if it is at zero 3. Display of hour meter
	**Indicates the engine speed**
	• Indicates engine temperature, if available on the engine • All the bars flash if engine overheating

3.3 - PLATFORM CONTROL BOX

3.3.1 - Layout

General view



B - Familiarization

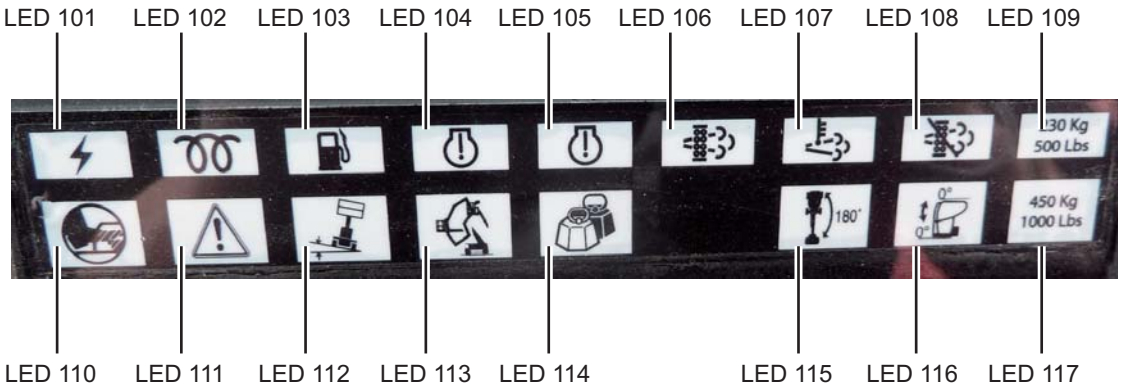
Controls and indicators

Marking	Description	Function
28	Boom telescope or arm lifting/lowering joystick	Move forward : Boom retraction or arm lowering / Arm telescope extension
		Move backwards : Boom extension or arm lifting / Arm telescope retraction
33	Drive joystick	Move forward : Forward drive
		Move backwards : Reverse drive
	Front axle steering selector	Press right side of button : Right-hand steering
		Press left side of button : Left-hand steering
34	Rear axle steering selector	Move to the right : Right-hand steering
		Move to the left : Left-hand steering
35	Differential lock selector	Toggle and hold (activated) : Maximum drive torque (on difficult or sloping ground)
		Release (deactivated) : Standard torque
36	Boom or arm position selector	Up : Boom selection
		Down : Arm selection
37	Jib switch	Move upwards : Jib lifting
		Move downwards : Jib lowering
38	Platform rotation switch	Move to the right : Counter clockwise (CCW) rotation
		Move to the left : Clockwise (CW) rotation
40	Platform leveling switch	Move forward : Raise platform
		Move backwards : Platform lowers
41	Auxiliary power switch	Toggle and hold : Back-up unit activated
		Release : Back-up unit deactivated
43	Horn button	Horn
44	Fuel selector[1]	LPG : Propane Gas supply
		G : Petrol/Liquid propane gas or diesel supply
45	Drive speed selector	 High-speed drivie
		 Low-speed drive
46	E-stop button	Pulled out : Platform control box energized
		Pressed in : De-energizes control system (Engine stopped)
49	Turntable rotation joystick	Move to the right : Counter clockwise (CCW) rotation
		Move to the left : Clockwise (CW) rotation
	Boom lift joystick	Move forward : Boom up
		Move backwards : Lower boom
79	Generator selector[2]	Move to the left : Generator deactivated
		Move to the right : Generator activated
230	Engine start-up / stop selector	Start or stop the engine (depending on the machine's operating status) by moving the toggle switch

1. *For machines fitted with*
2. *For machines fitted with*

3.3.2 - Display Panel (LED'S 101 - 117)

Platform control box display



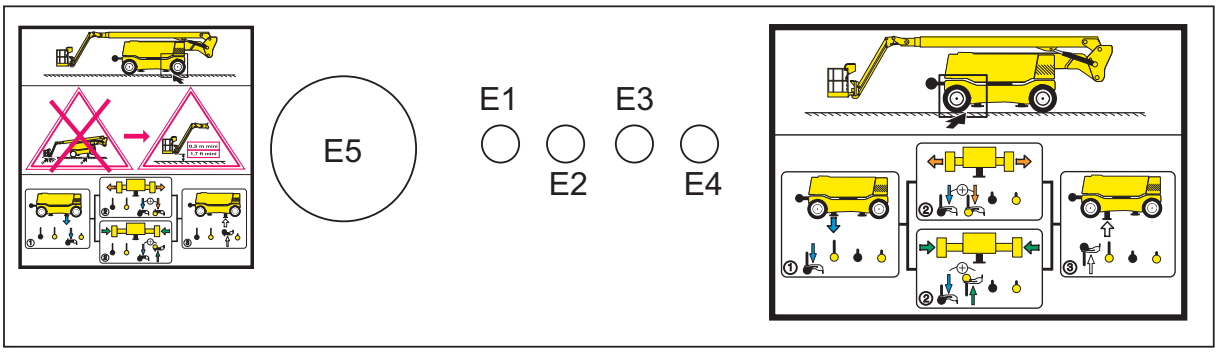
Marking	Symbol	Function	Marking	Symbol	Function
LED 101		Power ON	LED 110		Foot pedal switch
LED 102		Combustion engine pre-heating	LED 111		Fault
LED 103		Low fuel level	LED 112		Tilt
LED 104		Engine warning	LED 113		Not used
LED 105		Engine shutdown	LED 114		Overload
LED 106		DPF disable	LED 115	180°	Turret at 180°
LED 107		DPF disable	LED 116	0° 0°	Platform compensation
LED 108		DPF disable	LED 117[1]	450 kg 1000 lbs	Not used
LED 109[2]	230 kg 500 lbs	Not used			

1. *If machine equipped with dual load*
2. *If machine equipped with dual load*

3.4 - AXLE EXTENSION CONTROL BOX

3.4.1 - Layout

General view



Controls and indicators

Marking	Function
E1	Outrigger cylinder lifting/lowering (chassis is lowered/raised) (Rear fixed axle)
E2	Fixed axle extension/retraction (Rear)
E3	Outrigger cylinder lifting/lowering (chassis is lowered/raised) (Front swing axle)
E4	Oscillating axle extension/retraction (Front)
E5	E-stop button

4 - Performance Specifications

4.1 - TECHNICAL CHARACTERISTICS

Use the table to select the right Haulotte machine for the job.

CE, AS and EAC standards

Machine	HA32RTJ PRO		HA41RTJ PRO	
Characteristics - Dimensions	**SI**	**Imp.**	**SI**	**Imp.**
Maximum working height	31,80 m	104 ft 4 in	41,50 m	136 ft 2 in
Maximum platform height	29,80 m	97 ft 9 in	39,50 m	129 ft 7 in
Maximum horizontal reach	21,60 m	70 ft 10 in	20,10 m	65 ft 11 in
Maximum outreach above the ground	21,10 m	69 ft 3 in	19,60 m	64 ft 4 in
Maximum platform height before driving speed restriction	2,02 m	7 ft 3in	2,50 m	8 ft 3 in
Maximum boom articulation point height	11,40 m	37 ft 3 in	17,50 m	57 ft 5 in
Turret rotation	360 °			
Platform rotation	180° (+90° / -90°)			
Jib working range	140° (+70° / -70°)			
Boom rotation angle	+70 / -40°			
Total weight	20100 kg	44,321 lb	23900 kg	52691 lb
Maximum platform capacity	250 kg	551 lb	230 kg	500 lb
Maximum number of occupants allowed	2			
Maximum wind speed allowed	60 km/h	37 mph	45 km/h	28 mph
Manual force - CE - AS	400 N - 90 lbf			
Gradeability - Forwards drive	40 %			
Gradeability - Reverse drive	40 %			
Maximum rated slope allowed - CE - AS	5°		4°	
Maximum load on wheel	10260 kg	22619 lbs	12650 kg	27888 lbs
Maximum ground pressure of wheel on paved ground	10,8 daN/cm²	22120 lb/ft²	13,2 daN/cm²	27036 lb/ft²
Drive speed : • Unfolded machine maximum speed - Micro-speed • Folded machine maximum speed - High speed	0,5 km/h 5 km/h	0.3 m/h 3.1 m/h	0,5 km/h 5 km/h	0.3 m/h 3.1 m/h
Maximum freewheel speed during towed operation	5 km/h	3.1 m/h	5 km/h	3.1 m/h
Outside turning radius (without retracted axle adjustment)	5,07 m (16 ft 8 in)			
Inside turning radius (with axles retracted)	2,75 m (9 ft 0 in)			
Engine - PERKINS				
Diesel engine	Perkins 1104D-44 Turbo - 62 kW - 84 Hp			
CO emission	0,89 g/kWh			
Particles emission	0,26 g/kWh			
Av fuel consumption : • BSFC/CSE • 70% power usage • Maximum power	230 g/kWh 10,7 L/h 55 kW			
Engine - DEUTZ				
Diesel engine	Deutz 2,9 TCD - 55,4 kW			
CO emission	0,025 g/kWh			
Particles emission	0,021 g/kWh			
Av fuel consumption : • BSFC/CSE • 70% power usage • Maximum power	215 g/kWh 5,7L/h 55 kW			
Specifications - Performance				
Operating temperature	- 15° C/ + 35° C (- 59° F / + 95° F)			

B - Familiarization

Machine	HA32RTJ PRO HA41RTJ PRO
Storage temperature	- 30° C / + 45° C (-22° F / + 113° F)
Energy storage	
Type of battery	12 V 135 Ah
Battery amperage	900 A
Battery voltage	12 V
Battery capacity	155 Ah
Hydraulic tank capacity	240 L (63 gal US)
Fuel tank capacity	140 L (37 gal US)

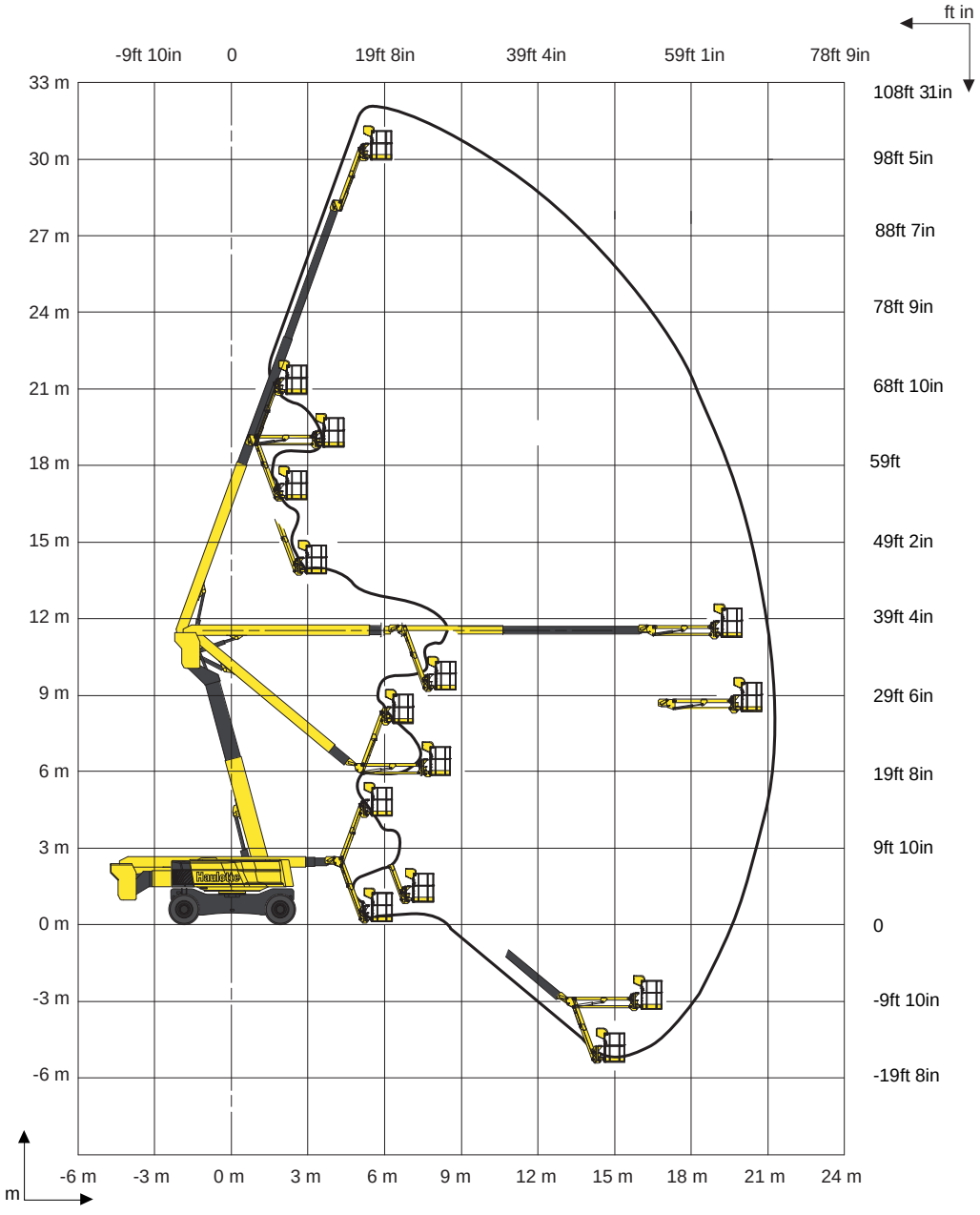
B - Familiarization

ANSI and CSA standards

Machine	HA100RTJ PRO		HA130RTJ PRO	
Characteristics - Dimensions	**SI**	**Imp.**	**SI**	**Imp.**
Maximum working height	31,80 m	104 ft 4 in	41,50 m	136 ft 2 in
Maximum platform height	29,80 m	97 ft 9 in	39,50 m	129 ft 7 in
Maximum horizontal reach	21,60 m	70 ft 10 in	20,10 m	65 ft 11 in
Maximum outreach above the ground	21,10 m	69 ft 3 in	19,60 m	64 ft 4 in
Maximum platform height before driving speed restriction	2,20 m	7 ft 3in	2,50 m	8 ft 3 in
Maximum boom articulation point height	11,40 m	37 ft 3 in	17,50 m	57 ft 5 in
Maximum platform height before driving speed restriction	22 m	72 ft 2 in	25,10 m	82 ft 4 in
Maximum boom articulation point height	11,35 m	37 ft 3 in	17,50 m	57 ft 5 in
Turret rotation	360 °			
Platform rotation	180° (+90° / -90°)			
Jib working range	140° (+70° / -70°)			
Boom rotation angle	+70 / -40°			
Total weight	20100 kg	44,321 lbs	23900 kg	52691 lb
Maximum platform capacity	250 kg	551 lb	230 kg	500 lb
Maximum number of occupants allowed	2			
Maximum wind speed allowed	60 km/h	37 mph	45 km/h	28 mph
Manual force - ANSI - CSA	666 N - 150 lbf			
Gradeability - Forwards drive	40 %			
Gradeability - Reverse drive	40 %			
Maximum rated slope allowed - ANSI - CSA	0°			
Maximum load on wheel	10260 kg	22619 lbs	12650 kg	27888 lbs
Maximum ground pressure of wheel on paved ground	10,8 daN/cm²	22120 lb/ft²	13,2 daN/cm²	27036 lb/ft²
Drive speed : • Unfolded machine maximum speed - Micro-speed • Folded machine maximum speed - High speed	 0,5 km/h 5 km/h	 0.3 m/h 3.1 m/h	 0,5 km/h 5 km/h	 0.3 m/h 3.1 m/h
Maximum freewheel speed during towed operation	5 km/h	3.1 m/h	5 km/h	3.1 m/h
Outside turning radius (without retracted axle adjustment)	5,07 m (16 ft 8 in)			
Inside turning radius (with axles retracted)	2,75 m (9 ft 0 in)			
Engine				
Diesel engine	Perkins 1104D-44 Turbo - 62 kW - 84 Hp			
CO emission	0,89 g/kWh			
Particles emission	0,26 g/kWh			
Av fuel consumption : • BSFC/CSE • 70% power usage • Maximum power	 230 g/kWh 10,7 L/h 55 kW			
Specifications - Performance				
Operating temperature	- 15° C/ + 35° C (- 59° F / + 95° F)			
Storage temperature	- 30° C / + 45° C (-22° F / + 113° F)			
Energy storage				
Type of battery	12 V 135 Ah			
Battery amperage	900 A			
Battery voltage	12 V			
Battery capacity	155 Ah			
Hydraulic tank capacity	240 L (63 gal US)			
Fuel tank capacity	140 L (37 gal US)			

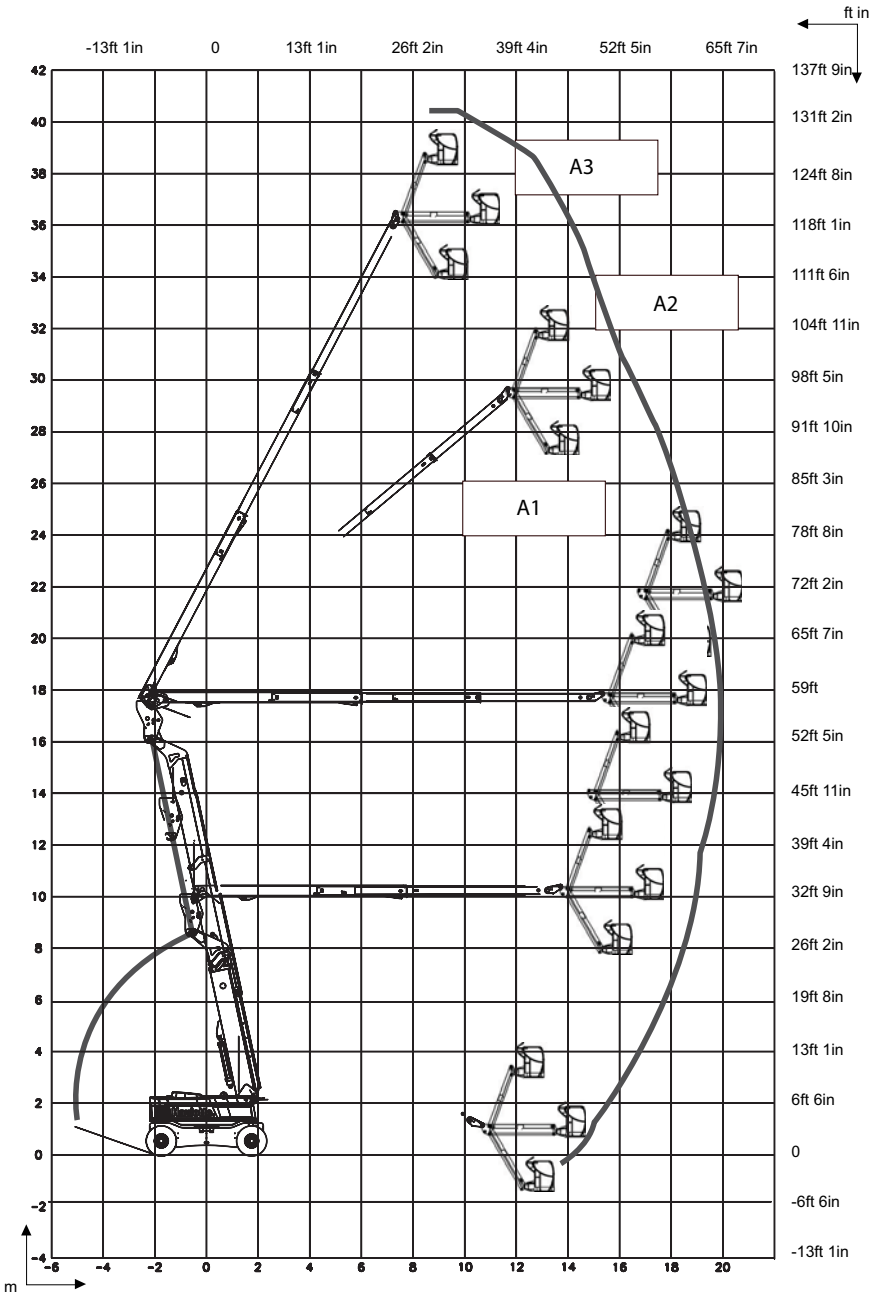
4.2 - WORKING AREA / RANGE OF MOTION

HA32RTJ PRO - HA100RTJ PRO



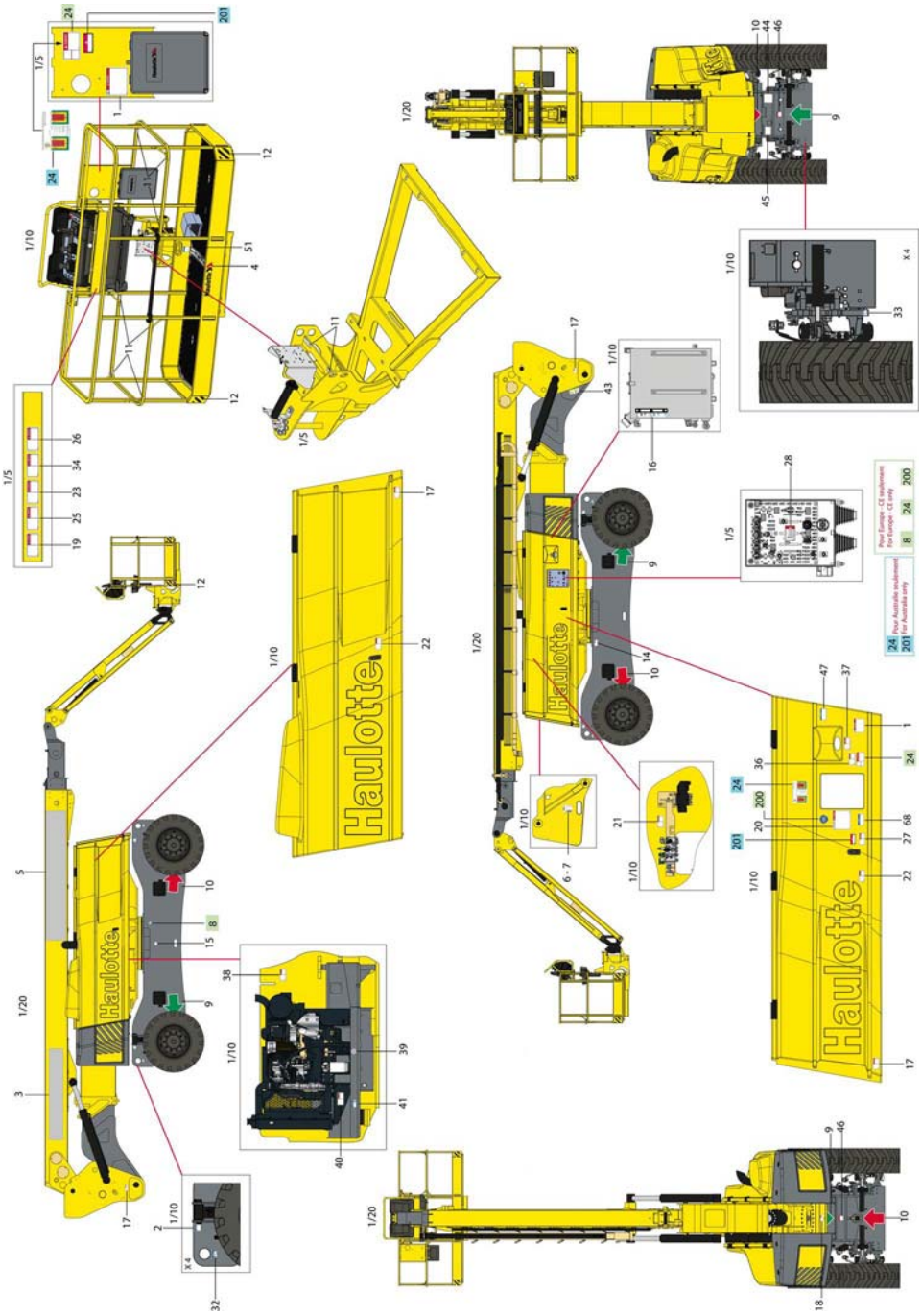
B - Familiarization

HA41RTJ PRO - HA130RTJ PRO



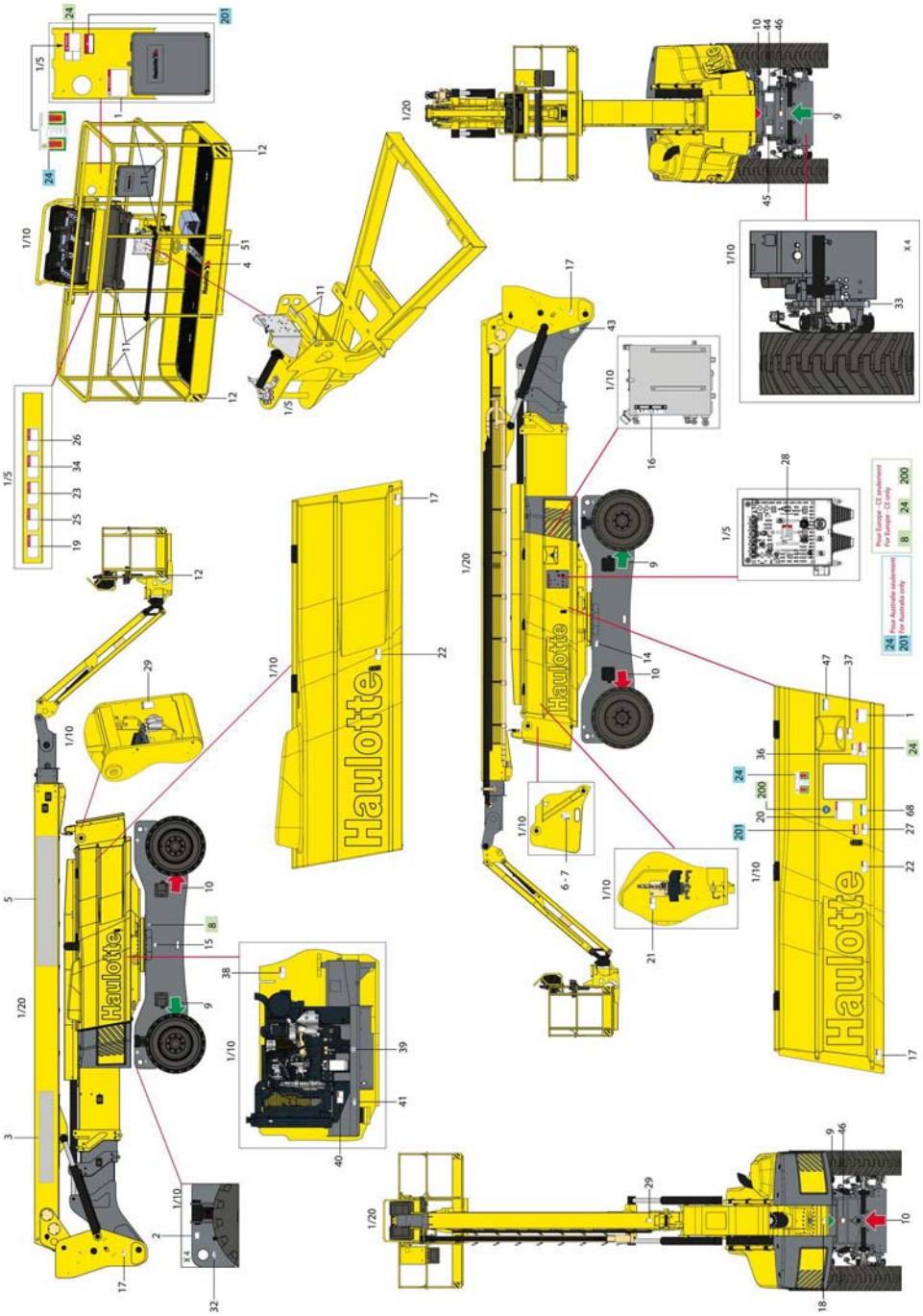
5 - Decals and markings locations

CE and AS standards : HA32RTJ PRO



B - Familiarization

CE and AS standards : HA41RTJ PRO



B - Familiarization

CE and AS standards : HA32RTJ PRO - HA41RTJ PRO

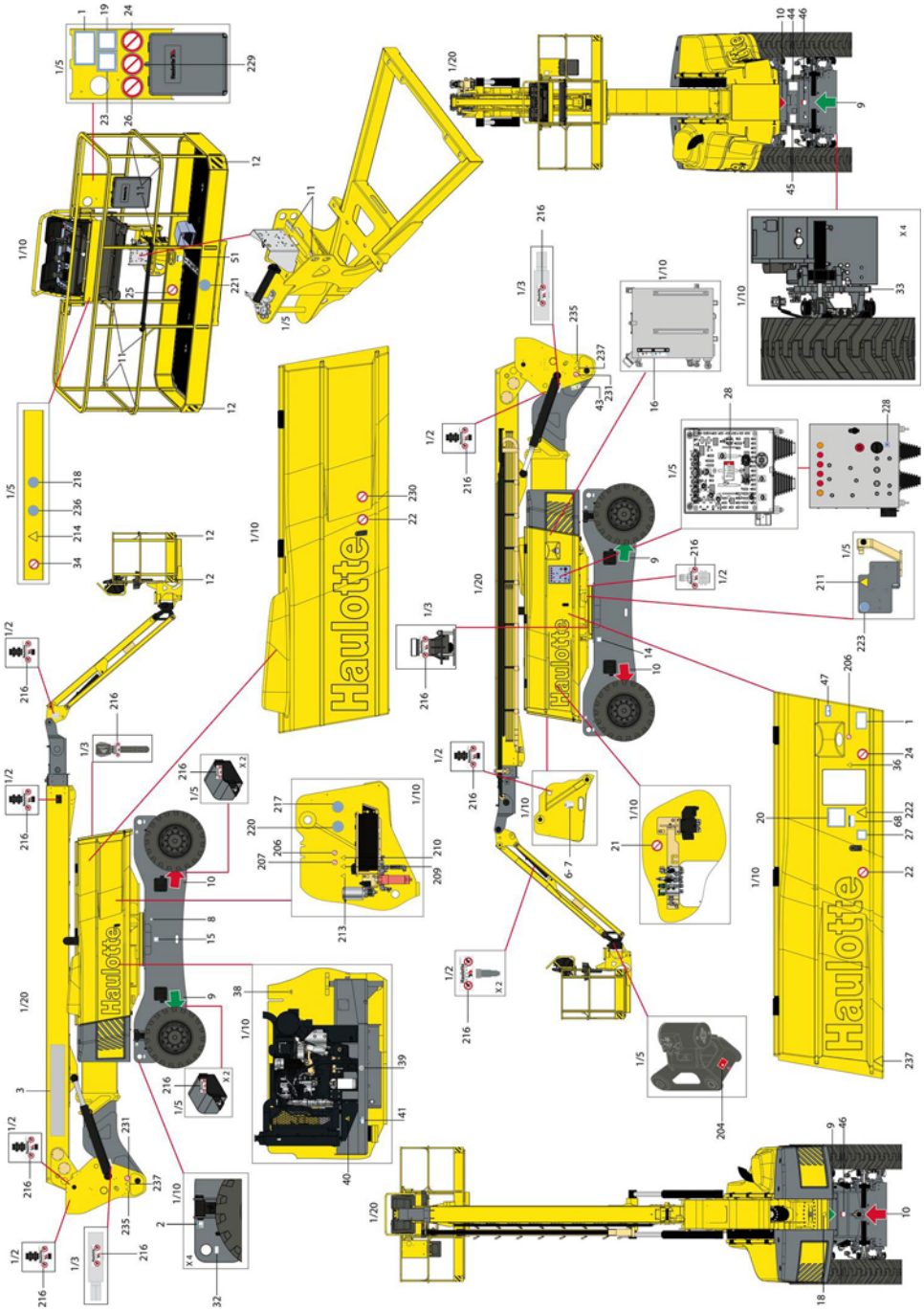
Marking	Color	Description	Quantity	HA32RTJ PRO	HA41RTJ PRO
1	Red	Height of the floor and load	2	4000204060	4000137570
2	Blue	Maximum Pressure per Tire - Floor Loading	4	4000204100	4000414290
3	Other	Commercial name - Bright machine	1	4000313270	4000364350
3	Other	Commercial name - Dark machine	1	4000313280	4000364340
4	Other	Small format HAULOTTE® logo - Bright machine	1	307P217080	
4	Other	Small format HAULOTTE® logo - Dark machine	1	307P224740	
4	Other	Small format HAULOTTE® logo - Red machine	1	307P220360	
5	Other	Large format HAULOTTE® logo - Bright machine	1	4000365570	
5	Other	Large format HAULOTTE® logo - Dark machine	1	4000390040	
5	Other	Large format HAULOTTE® logo - Red machine	1	4000390030	
6	Other	Identification plate	1	307P218070	
8	Other	Noise emission level	1	CE standard only 3078148740	
9	Other	Control of movements - GREEN directional arrow	4	3078143930	
10	Other	Control of movements - RED directional arrow	4	3078143940	
11	Other	Lanyard attachment points	9	307P216290	
12	Other	Material risk - Yellow and black adhesive tape	4	4000421700	
14	Red	Remove the blocking pin before rotating	1	4000027080	
15	Green	Greasing the turntable rotation gear	1	4000025160	
16	Other	Max and min oil level	1	4000044210	
17	Red	Risk of crushing	4	4000024800	
18	Orange	Hand crushing hazard - Risk of crushed hands	1	4000024890	
19	Red	Operation instructions	1	4000025140	
20	Red	Operation instructions	1	In german (CE standard) : 307P222730 In english (CE and AS standards) : 307P222740 In croatian (CE standard) : 4000360810 In danish (CE standard) : 307P222760 In spanish (CE standard) : 307P222770 In estonian (CE standard) : 4000360870 In finish (CE standard) : 307P222780 In french (CE standard) : 3078149030 In greek (CE standard) : 4000561810 In dutch (CE standard) : 307P222790 In hungarian (CE standard) : 4000360890 In italian (CE standard) : 307P222800 In japanese (CE standard) : 4000359830 In latvian (CE standard) : 4000359840 In lithuanian (CE standard) : 4000359850 In norwegian (CE standard) : 4000359900 In polish (CE standard) : 4000359860 In portuguese (CE standard) : 307P222810 In romanian (CE standard) : 4000359870 In Russian (CE standard) : 4000359920 In slovakian (CE standard) : 4000359880 In slovenian (CE standard) : 4000359890 In swedish (CE standard) : 307P222820 In ukrainian (CE standard) : 4000359910	

B - Familiarization

Marking	Color	Description	Quantity	HA32RTJ PRO	HA41RTJ PRO
21	Red	Prohibited use of the PVG	1	4000027070	
22	Orange	Wound foot - Do not place foot	2	4000027090	
23	Red	Risk of crushing - Driving direction	1	4000024690	
24	Red	Danger of electrocution	2	CE standard only : 4000025070 AS standard only : 4000227500	
25	Red	Risk of crushing - Closing drop rail	1	4000025080	
26	Red	Danger of electrocution - Ground for welding	1	4000027100	
27	Red	Verification of tilt operation	1	4000027110	
28	Red	Do not interchange	1	3078145180	
29	Red	Calibration	2	NA	307P216930
32	Blue	Anchorage point - Traction	4	4000027310	
33	Blue	Anchorage point - Elevation	4	4000027330	
34	Red	Risk of electrocution - Water projection	1	4000025130	
36	Red	Risk of crushing - Platform	1	4000027460	
37	Red	Explosion hazard	1	4000027370	
38	Orange	Hand crushing hazard - Heat burns	1	4000027450	
39	Other	Oil CJ 4 (if fitted)	1	4000019700	
40	Orange	Hand crushing hazard - Fan	1	4000027430	
41	Yellow	Revolving cradle	1	3078151730	
43	Red	Arm compensation	1	307P223210	
44	Other	Oscillating axle extension/retraction	1	307P215120	
45	Other	Fixed axle extension/retraction	1	3078153600	
46	Red	Maximum effort on the stabilizers	2	307P219880	
47	Blue	Information - Explanation - LOW SULFUR - For Tiers IV only	1	307P232480	
51	Yellow	Socket - 240 V	1	4000027120	
68	Other	Transport height	1	4000417500	4000417510
200	Other	"Made in Europe"	1	CE standard only : 4000137690	
201	Red	Wearing of a safety harness is essential	2	AS standard only : 3078144520	
Not shown	Other	Working area / Range of motion	1	4000507800	4000507910

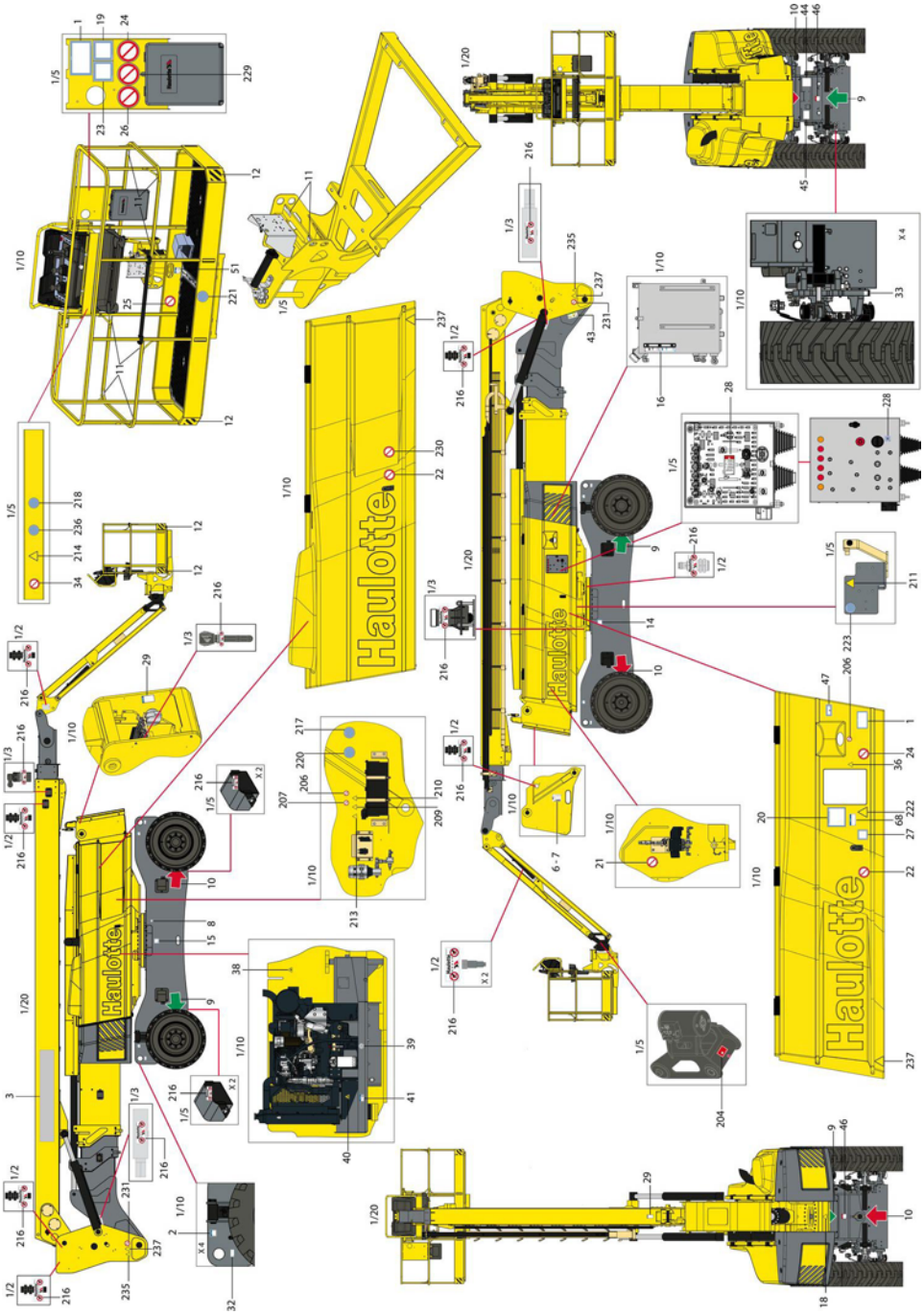
B - Familiarization

EAC standard - HA32RTJ PRO



B - Familiarization

EAC standard - HA41RTJ PRO



B - Familiarization

EAC standard

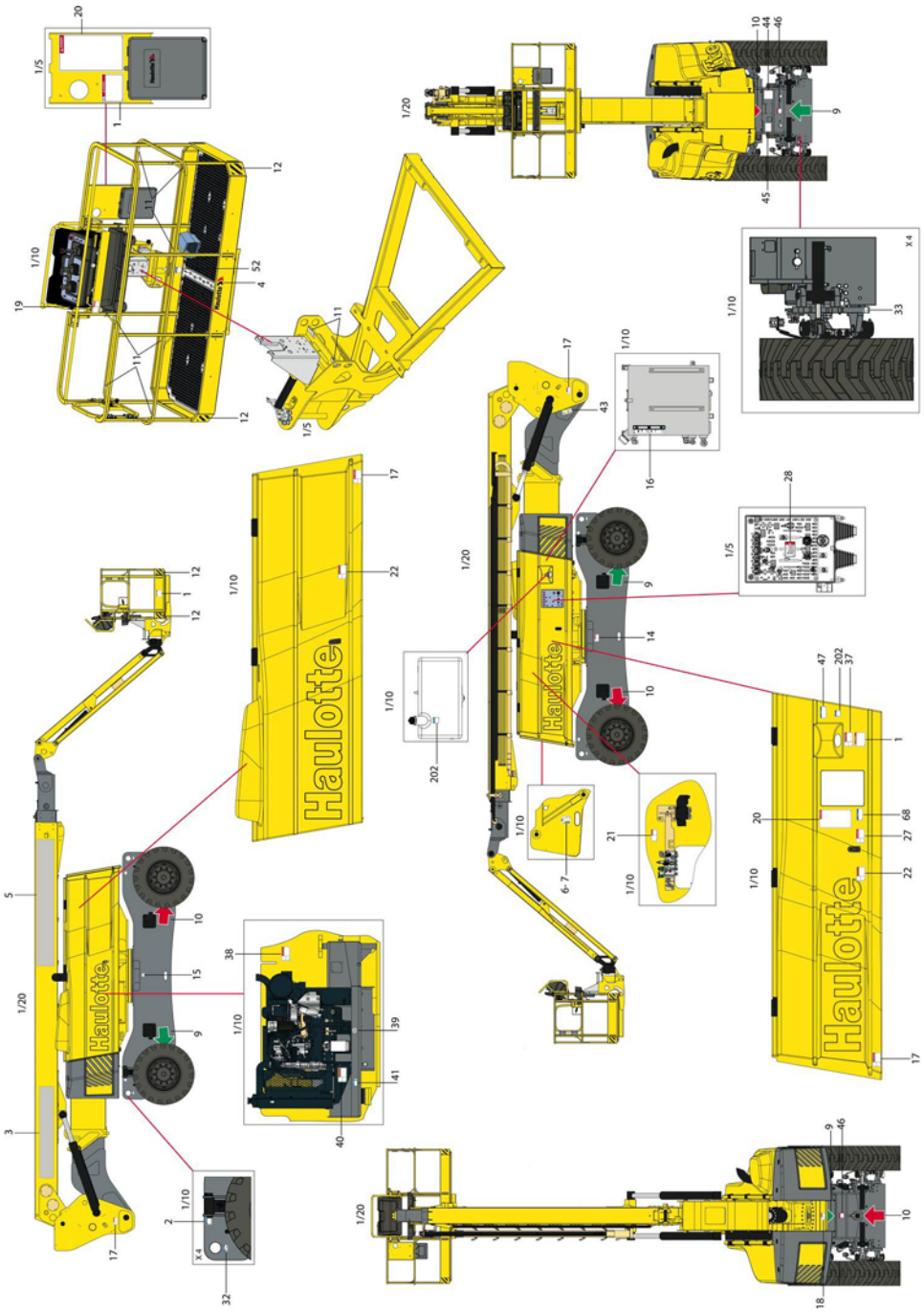
Marking	Color	Description	Quantity	HA32RTJ PRO	HA41RTJ PRO
1	Red	Height of the floor and load	2	4000011950	4000011990
2	Blue	Maximum Pressure per Tire - Floor Loading	4	4000204100	4000414290
3	Other	Commercial name - Bright machine	1	4000313270	4000364350
3	Other	Commercial name - Dark machine	1	4000313280	4000364340
6	Other	Identification plate	1	For Russia : 4000278870 For Ukraine : 307P227830	
8	Other	Noise emission level	1	3078148740	
9	Other	Control of movements - GREEN directional arrow	4	3078143930	
10	Other	Control of movements - RED directional arrow	4	3078143940	
11	Blue	Lanyard attachment points	9	307P216290	
12	Other	Material risk - Yellow and black adhesive tape	4	4000421700	
14	Red	Remove the blocking pin before rotating	1	307P227810	
15	Green	Greasing the turntable rotation gear	1	307P227020	
16	Other	Max and min oil level	1	4000044210	
18	Yellow	Hand crushing hazard - Risk of crushed hands	1	307P227660	
19	Blue	Operation instructions	1	For Russia : 307P227190 For Ukraine : 307P227840	
20	Red	Operation instructions	1	For Russia : 4000359920 For Ukraine : 4000359910	
21	Red	Prohibited use of the PVG	1	4000079680	
22	Red	Wound foot - Do not place foot	2	307P227010	
23	Blue	Risk of crushing - Driving direction	1	307P227040	
24	Red	Danger of electrocution	2	307P226960	
25	Red	Risk of crushing - Closing drop rail	1	307P226950	
26	Red	Danger of electrocution - Ground for welding	1	307P226970	
27	Blue	Verification of tilt operation	1	For Russia : 307P227060 For Ukraine : 307P227870	
28	Red	Do not interchange	1	3078145180	
29	Red	Calibration	2	NA	307P216930
32	Blue	Anchorage point - Traction	4	4000135970	
33	Blue	Anchorage point - Elevation	4	4000135960	
34	Red	Electrocution Hazard - Water projection	1	307P226780	
36	Yellow	Risk of crushing - Platform	1	4000014290	
38	Yellow	Hand crushing hazard - Heat burns	1	4000200810	
39	Other	Oil CJ 4 (if fitted)	1	4000318680	
40	Yellow	Hand crushing hazard - Fan	1	307P226940	
41	Yellow	Revolving cradle	1	307P215290	
43	Red	Arm compensation	1	307P223210	
44	Other	Oscillating axle extension/retraction	1	307P215120	
45	Other	Fixed axle extension/retraction	1	3078153600	
46	Red	Maximum effort on the stabilizers	2	307P219890	
47	Blue	Information - Explanation - LOW SULFUR	1	For Russia : 4000416640 For Ukraine : 4000416650	
51	Yellow	Socket - 240 V	1	4000027120	
68	Other	Transport height	1	4000417500	4000417510

B - Familiarization

Marking	Color	Description	Quantity	HA32RTJ PRO	HA41RTJ PRO
204	Red	Lubrication point	1	307P219370	
206	Red	Flames prohibited	2	307P226750	
207	Red	Smoking forbidden	1	307P226760	
209	Yellow	Battery danger	1	307P226790	
210	Yellow	Fire Hazard	1	307P226800	
211	Yellow	Electrical danger	1	307P226810	
213	Yellow	Corrosion hazard	1	307P226830	
214	Yellow	Danger unstable side	1	307P226930	
216	Other	Tamper-proof	HA32RTJ PRO : 16 HA41RTJ PRO : 17	307P227450	
217	Blue	Caution glasses	1	307P227460	
218	Blue	Caution helmet compulsory	1	307P226680	
220	Blue	hand protection compulsory	1	307P227490	
221	Blue	Obligatory routing	1	307P227510	
222	Yellow	Danger unstable side	1	307P227680	
223	Blue	Plug12 V	1	307P227700	
228	Other	Horn	1	4000014830	
229	Red	Do not travel down slopes in high speed	1	307P226990	
230	Red	No admittance to unauthorized persons	1	307P227560	
231	Red	Do not park in the work area	2	307P227000	
235	Yellow	Vertical crushing of the body	2	4000014270	
236	Blue	Caution glasses	1	307P226670	
237	Yellow	Risk of crushing	HA32RTJ PRO : 2 HA41RTJ PRO : 3	307P227670	
Not shown	Other	Working area / Range of motion	1	4000507800	4000507910

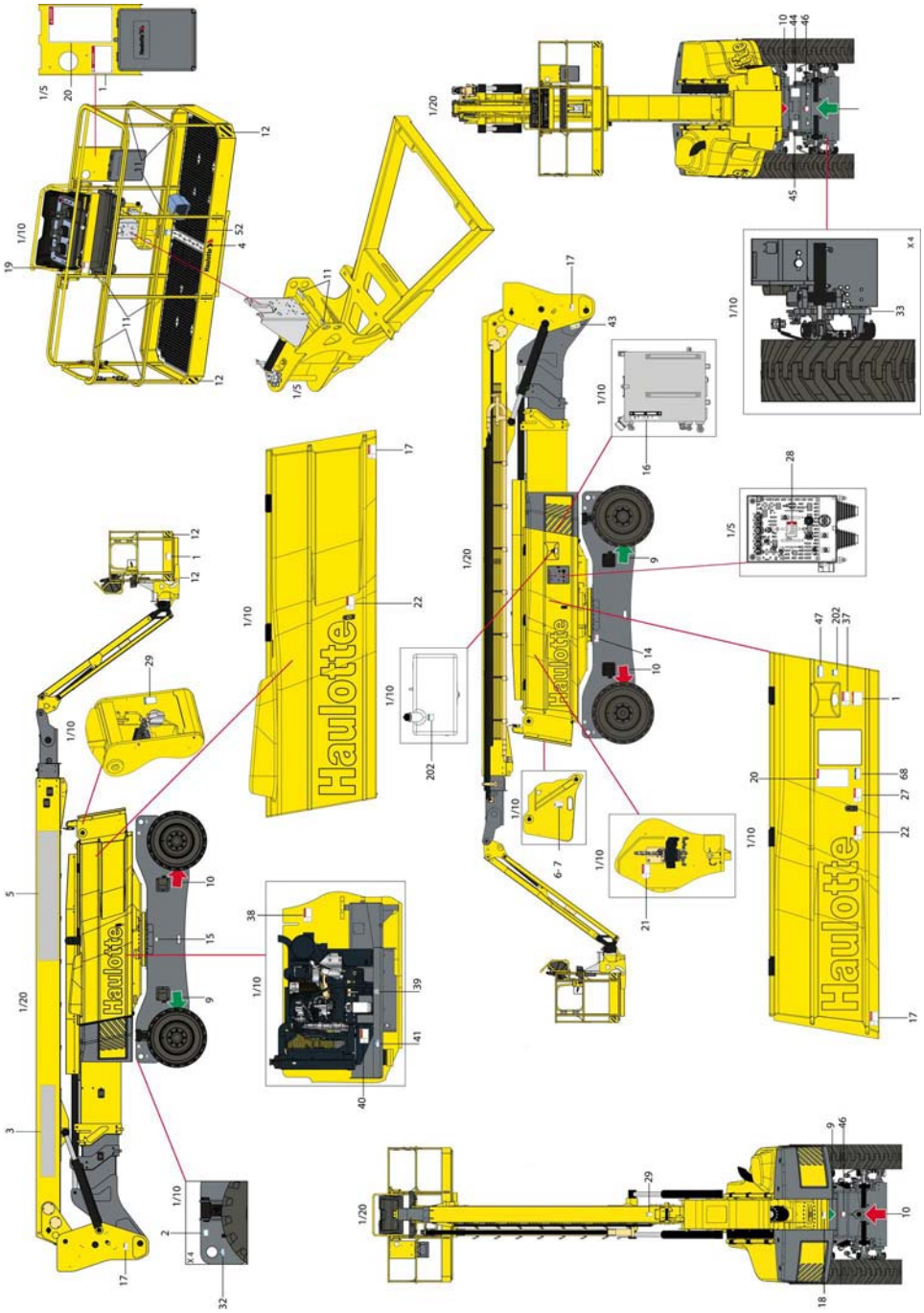
B - Familiarization

ANSI and CSA standards - HA100RTJ PRO



B - Familiarization

ANSI and CSA standards - HA130RTJ PRO



B - Familiarization

ANSI and CSA standards

Marking	Color	Description	Quantity	HA100RTJ PRO	HA130RTJ PRO
1	Red	Height of the floor and load - Single load machine	3	In english : 4000204110 In french : 4000204120 In spanish : 4000204130	In english : 4000137590 In french : 4000137600 In spanish : 4000137610
2	Blue	Maximum Pressure per Tire - Floor Loading	4	4000204100	4000414290
3	Other	Commercial name - Bright machine	1	4000364330	4000364370
3	Other	Commercial name - Dark machine	1	4000364320	4000364400
4	Other	Small format HAULOTTE® logo - Bright machine	1	307P217080	
4	Other	Small format HAULOTTE® logo - Dark machine	1	307P224740	
4	Other	Small format HAULOTTE® logo - Red machine	1	307P220360	
5	Other	Large format HAULOTTE® logo - Bright machine	1	4000365570	
5	Other	Large format HAULOTTE® logo - Dark machine	1	4000390040	
5	Other	Large format HAULOTTE® logo - Red machine	1	4000390030	
6	Other	Identification plate	1	307P218170	
9	Other	Control of movements - GREEN directional arrow	4	3078143930	
10	Other	Control of movements - RED directional arrow	4	3078143940	
11	Other	Lanyard attachment points	9	307P216290	
12	Other	Material risk - Yellow and black adhesive tape	4	4000421700	
14	Red	Remove the blocking pin before rotating	1	In english : 4000024830 In french : 4000068080 In spanish : 4000086510	
15	Green	Greasing the turntable rotation gear	1	4000025160	
16	Other	Max and min oil level	1	4000044210	
17	Red	Risk of crushing	4	In english : 4000024640 In french : 4000067680 In spanish : 4000086460	
18	Orange	Hand crushing hazard - Risk of crushed hands	1	In english : 4000024770 In french : 4000067110 In spanish : 4000086490	
19	Red	Operation instructions	1	4000025140	
20	Red	Operation instructions	2	In english : 4000027570 In french : 4000068880 In spanish : 4000086640	
21	Red	Prohibited use of the PVG	1	In english : 4000024820 In french : 4000067690 In spanish : 4000086470	
22	Orange	Wound foot - Do not place foot	2	In english : 4000024840 In french : 4000068180 In spanish : 4000086610	
27	Red	Verification of tilt operation	1	In english : 4000024860 In french : 4000068090 In spanish : 4000086520	
28	Red	Do not interchange	1	3078145180	
29	Red	Calibration	2	NA	307P216930
32	Blue	Anchorage point - Traction	4	4000027310	

B - Familiarization

Marking	Color	Description	Quantity	HA100RTJ PRO	HA130RTJ PRO
33	Blue	Anchorage point - Elevation	4	4000027330	
37	Red	Explosion hazard	1	In english : 4000025010 In french : 4000068130 In spanish : 4000086560	
38	Orange	Hand crushing hazard - Heat burns	1	In english : 4000025040 In french : 4000068110 In spanish : 4000086540	
39	Other	Oil CJ 4 (if fitted)	1	4000019700	
40	Orange	Hand crushing hazard - Fan	1	In english : 4000025020 In french : 4000068100 In spanish : 4000086530	
41	Yellow	Revolving cradle	1	3078151730	
43	Red	Arm compensation	1	307P223210	
44	Other	Oscillating axle extension/retraction	1	307P215120	
45	Other	Fixed axle extension/retraction	1	3078153600	
46	Red	Maximum effort on the stabilizers	2	307P219880	
47	Blue	Information - Explanation - LOW SULFUR	1	307P232480	
52	Blue	Socket - 110 V	1	4000027590	
68	Blue	Information-Transport height	1	4000417500	4000417510
202	Blue	Diesel Fuel Only	2	4000201430	
Not shown	Other	Working area / Range of motion	1	4000507800	4000507910

C - Pre-operation inspection

1 - Recommendations

The owner, the site manager, the supervisor and the operator are all responsible to ensure the machine is fit for the work it is to perform; i.e. that the machine is suitable to carry out the work in complete safety and in compliance with this Operator's Manual. All managers who are responsible for persons operating the machine must be familiar with the local regulations currently applicable in the country of use and ensure that they are adhered to.

Before using the machine, read the previous chapters in this manual. Ensure that you have understood the following points :

- Safety precautions.
- Operator's responsibilities.
- Conditions and the operating principles of the machine.

C - Pre-operation inspection

2 - Working area assessment

To ensure safety during operation, the following should be considered :

- Segregate other site traffic (delivery vehicles, dumpers, etc) from the work area.
- Check the work area for localized features, e.g. manholes, service ducts, potholes, etc.
- Check ground covers (temporary and permanent) are strong enough to withstand the applied pressure.
- Check ground covers are secured and monitor them. Take similar action for permanent covers.
- Check the load bearing capacity (distributed load and point loading, e.g. outriggers) when working inside a building, or on a structure.
- Check the load bearing capacity (distributed load and point loading, e.g. outriggers) of the supporting ground.
- Provide supervision to ensure safe systems of work are appropriate and being used.
- Check for overhead crushing and contact hazards.
- Check weather conditions have not altered ground conditions (e.g. heavy or prolonged rain).
- Establish limits for safe operation (e.g. maximum wind speed). Remember conditions can change internally (e.g. if roller doors are opened).
- Comply with permit to work systems where sites have them (e.g. chemical plants).
- Provide a rescue plan for all risks, including falls and crush hazards. Ensure personnel understand and are appropriately trained in the rescuing procedures. Site based personnel trained in operation of functions and in the emergency lowering systems from the ground control box should be present. Ensure that access to the ground controls is available.
- Assess other alternative work methods or equipment before operating near a steep slope. If the machine must be placed near an edge or steep slope, ensure barriers are available to support the weight of the machine. Take into consideration the machine's stopping distance. If this is not possible, evaluate and establish the placement of machine and sequence of operations so that the aerial work platform can operate in a safe manner (e.g. machine is in line with the edge rather than towards the edge).

Extra care must be taken if aerial work platforms are used to manoeuvre up through several levels of steelwork. There is a risk of the operator being trapped should the basket strike the steelwork.

This risk increases with the number of steelwork levels and if material is piled up on lower level reducing the spacing between levels.

C - Pre-operation inspection

3 - Inspection and Functional test

3.1 - DAILY INSPECTION

Each day before the beginning of a new work session and with each change of operator, the machine must be subjected to a visual inspection and a complete functional test.

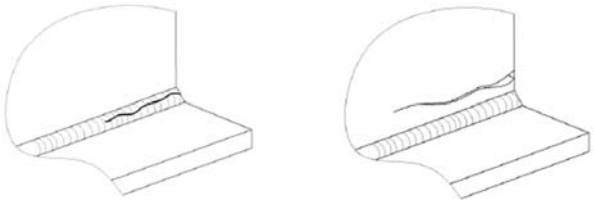
- **Never use a defective or a malfunctioning aerial work platform.**
- **If any item on the check list is marked "No" during the inspection; machine must be tagged and placed out of service.**
- **Do not operate the machine until all identified items are corrected and it has been declared safe for operation.**

In case of loose fasteners, refer to torque table value in maintenance book.

In case of leaks, replace the damaged part before use.

In case of structural part deformation, cracks, broken weld, paint chips, replace the part before use.

Sample of broken welds



Inspection Forms are provided to assist your inspection process.

We recommend these forms to be completed daily and stored to assist with your maintenance schedule.

Each action is depicted in the daily inspection sheet using the following symbols.

	Visual inspection without disassembly		Lubrication-Grease		Functional adjustments
	Drain		Test and validate		Tighten
	Check levels		Systematic replacement		
	Visual inspection with small disassembly or movement needed to reach the part. Replacement is necessary.		Proof tests : Need HAULOTTE Services® authorization. For countries where machines are not subject to controlled periodic maintenance.		

C - Pre-operation inspection

Haulotte GROUP	Daily inspection				
	Visual inspection without disassembly		Check level		
			To check by test		
			Yes	No	Corrected	Not applicable
Manuals and displays. Clean or replace if necessary.						
Presence, cleanliness and legibility of the manufacturer's plate						
Presence, cleanliness and legibility of operator's and maintenance manuals						
Presence and cleanliness of load chart of the machine						
Control box (Ground and Platform)						
Presence and cleanliness of the control box						
No visible damage						
All decals at the control boxes are clean and legible						
Operation of start / stop device						
Operation of E-stop button device						
Operation of enable switch						
Operation of horn from platform control box						
Operation of movement from platform control box						
Test warning alarm lights and buzzer						
Overriding indicators turn off after 1 sec						
No abnormal noise and jerky movements from platform control box						
Joysticks and movement switches return to neutral						
Work Platform. Floor, guardrails, access and extensions						
Absence of cracks, broken parts, damaged paint						
No deterioration and visible damage						
Harness anchor points are not cracked or damaged, with the decal attached and legible						
No screws missing / loose parts						
Entry bar/gate closes automatically and is not prevented from closing.						
Folding guard-rail (if fitted) is fixed securely in position						

C - Pre-operation inspection

Lift assembly (jib, boom, mast, arm, turret)					
Absence of cracks, broken parts, damaged paint					
No deterioration and visible damage					
No screws missing / loose parts					
No foreign body in joints or slides					
Presence of securely fitted maintenance devices (safety stand)					
All compartments covers open and lock properly					
Frame, axle, steering system, stabilizers arms ...					
Absence of cracks, broken parts, damaged paint					
No deterioration and visible damage					
No screws missing / loose parts					
No foreign body in joints or slides					
Condition of tires/tyres (wear, cutting, damage ...)					
Wheel reducer is undamaged and operates smoothly					
All compartments covers open and lock properly					
Rotation system : orientation turret, basket and jib					
Absence of cracks, broken parts, damaged paint					
No deterioration and visible damage					
No screws missing / loose parts					
No foreign body in joints or slides					
Exterior gear wheel greasing					
Pin, pin stop, bearing ...					
Presence of the turret pin and its locking device					
No bent, cracked or broken pins, pin stops, bushes or bearings					
Pulleys, chains and wire rope					
No cracked or broken chains, links and fittings					
Pulleys and clamps are not worn, rusted or damaged					
Cylinder and hydraulic component : pumps, filters, manifold					
No leaks on the pump, tank or fittings					
No deformation, visible damage, broken weld or leaks on hydraulic cylinder					
No screws missing / loose parts					
Presence and operation of hydraulic filter (no clogged)					

C - Pre-operation inspection

Check hydraulic oil level is above the minimum level (Machine folded)					
Energy storage and motorisation: tanks, batteries and engine					
Engine oil level (add in stowed position)					
Fuel level (add in stowed position)					
No screws missing / loose parts					
Presence and good condition of hydraulic hose					
Presence and good condition of engine components					
Presence and good condition of the batteries: terminations and clamps, electrolyte level ...					
Electric cables					
No torn or split wire sheaths					
No evidence of chemical damage or corrosion on all cables					
No oxidation or corrosion on terminals					
Sensors and safety device					
Activation of Activ'Shield Bar					
Stabilizers operate correctly and lock securely in position					
Slope limiting device operates properly					
Axle locking device operate properly					
Pothole safety device operate properly (if equipped)					
Test of load sensing system (visual warning at control box)					

Serial number : Hours of operation : HAULOTTE Services® contract reference : Intervention record number : Date : Name :	Model : Signature :

4 - Safety functional checks

To protect the user and the machine, safety systems prevent the movement of the machine beyond its operating limits. These safety systems when activated immobilize the machine and prevent further movement.

The operator must be familiar with this technology and understand that is not a malfunction but an indication that the machine has reached an operation limit.

Aerial Work platforms are equipped with two control boxes which allow operators to safely use the machine. An auxiliary device (overriding system) is available on ground control box when primary power source fails. Each control box is equipped with an E-Stop button, which cuts all movements when pushed in.

The following checks describe the operation of the machine and the specific controls required.

For the location and description of these controls :  refer to section B 3.2 and D 2 Ground control box and B 3.3 and D 3 Platform control box.

4.1 - E-STOP BUTTON CHECK

Ground control box E-stop button

Step	Action
1	Pull both E-Stop buttons (15) at ground box and (46) at platform box.
2	Set the ON/OFF key switch (18) at ground box to the ON position.
3	Turn the selector switch (229) knob to the right to energize the ground control box. LED's (1 - 10) on the display will light up.
4	Start the engine by moving the enable/auxiliary power switch (228) upwards.
5	Push the E-stop button (15).
6	Check that the engine stops running.
7	No movements are functional.

Platform control box E-stop button

Step	Action
1	Pull out the E-Stop button (15) at ground box.
2	Set the ON/OFF key switch (18) at ground box to the ON position.
3	Turn the selector switch knob (229) at ground box to the left to energize platform box.
4	Pull out the E-Stop button (46) at platform box.
5	Start the engine from platform using Start/Stop switch (230).
6	Push in E-Stop button (46) at platform.
7	Check that the engine stops running.
8	No movements are functional.

Axle extension control box E-Stop button

Step	Action
1	Pull the E-stop buttons(15, 46, E5).
2	Set the ON/OFF key switch (18) to ON position.
3	Turn the control box activation selector switch (229) to the centre to activate the axle control box. The indicators light up.
4	Push the E-stop button (E5). The indicator goes out.

4.2 - ACTIVATION OF CONTROLS

The enable switch must be active to allow all movements.

The "Enable Switch" system depends on the machine configuration and will consist of one of the following :

- Joystick trigger at platform box (if fitted).
- Foot pedal switch in the basket.
- Enable switch button at ground box.

4.3 - FAULT DETECTOR

The machine is equipped with an on-board fault detection system, which indicates the type of fault to the operator.

The fault is identified by a default code.

The default code is displayed at the ground control box.

According to the type of fault, the machine MAY switch into DOWNONLY mode and certain movements are prevented to maintain Operator's safety.

Do not use the machine until the fault has been corrected.

4.3.1 - Indicators/LED's test

From the ground control box

Step	Action
1	Pull both the E-Stop buttons (46) at platform box and (15) at ground box.
2	Set the ON/OFF key switch (18) to ON position.
3	Check that the LED's (1 - 10) light up on the display box.
4	Check that the LED's on the display are all turned off after 1 sec.

From the platform control box

Step	Action
1	Pull E-Stop button (15) at ground box.
2	Turn the ON/OFF key switch (18) at ground box to ON position.
3	Turn the energizing selector switch (229) to the left to energize platform control box.
4	First push in the E-Stop button (46) at platform box, then pull out.
5	Check that the LED's (101 - 117) light up on the platform display panel.
6	Check that the LED's (101 - 117) on the display are all turned off after 1 sec.

4.3.2 - Buzzers test

From the ground control box

Step	Action
1	Pull both E-Stop buttons (15) at ground box and (46) at platform box.
2	Set the ON/OFF key switch (18) to ON position.
3	Buzzers at ground and platform will beep.

4.4 - AUTOMATIC ENGINE CUT-OUT

The engine automatically cuts out in the following conditions :

- The alternator is not functioning.
- Engine temperature is too high.
- Oil pressure is too low.
- E-Stop(s) are pushed in.
- The machine is switched off.

4.5 - OVERLOAD SENSING SYSTEM

If the platform load exceeds the maximum allowed load, no movement is possible from the 2 control boxes.

At ground and platform control boxes a buzzer sounds and an indicator light warns the operator

To return the machine to normal operation remove weight from the platform until the load is below the maximum allowed load.

Daily check that the LED's illuminate when the machine is switched on :

- Verify that the Overload system is active : Refer to Indicators (6) at ground and (30) at platform.
- Verify that the buzzers are functioning : Refer to Buzzers test

A periodic inspection of this device must be performed according to the recommendation in Maintenance Schedule.

4.6 - OSCILLATING AXLES

To improve the driving capability on rough terrain, the front axle is equipped with an oscillating mechanism. When the extending structure is retracted and is in the stowed position, oscillating mechanism is unlocked to adapt itself to the features of ground operation. When the extending structure is out of the stowed position, a safety device locks the oscillating mechanism to reduce overturning hazard.

A visual inspection must be performed periodically to ensure the absence of leaks from the oscillating cylinder and associated plumbing connections including the hydraulic hoses.

A periodic inspection of this device must be conducted according to the recommendation in the maintenance schedule.

4.7 - SLOPE WARNING DEVICE

From each control box, a buzzer alerts the operator that the machine is not folded/stowed and is positioned on a slope exceeding the slope allowed.

On slope, as long as the extendable structure is out of the stowed position, the drive is forbidden (CE and AS standards).

All movements are allowed.

In this case, fully lower the platform and reposition the machine on level ground before raising the platform again.

To restore the drive function, perform the sequences of following movements :

1. Completely retract the boom.
2. Lower the boom.
3. Lower the arm.

To check the tilt sensor at ground control box

Step	Action
1	Open the right hand compartment cover (component location diagrams) and locate the tilt sensor (C28) on the left side of the ground control box.
2	Pull both E-Stop buttons; (15) at ground box and (46) at platform box.
3	Set the ON/OFF key (18) switch to ON position.
4	Turn the selector switch (229) knob to the right to energize ground control box.
5	Start the engine by moving the enable/auxiliary power switch (228) upwards.
6	Stow the telescoping boom by actuating the boom raise/lower switch (10), boom telescope switch (9) and arm lifting switch (47).
7	While manually tilting the sensor (228), move it towards the front and hold.
8	Raise the boom to more than 10 degrees above horizontal using the raise/lower switch (10).
9	Check that the audible beep sounds and the movement is slowed.

4.8 - TRAVEL SPEED LIMITATION

The machine has a selector of 2 driving speeds - low and high.

All driving speeds are enabled when the machine is not elevated. Adjust position of Jib (if equipped) to enhance field of vision during driving.

When the machine is elevated, drive speed is automatically reduced, regardless of the drive speed chosen.

Daily check that the speed is limited to less than 1 km/h (0.6 mph) when :

- The boom is raised by more than 10° above horizontal.
- The boom is telescoped/extended more than 400 mm (16 in.).
- The arm is raised by more than 2 m (6 ft 7 in) above horizontal.

C - Pre-operation inspection

4.9 - MOVEMENT SPEED

The movement speed of the following elements is regulated by the movement speed selector switch :

- Jib lifting/rotation.
- Platform rotation/compensation.

The movement speed depends on the user's choices and the environment.

N.B.-:-JOYSTICK PROPORTIONALITY MUST BE USED TO ADJUST THE SPEED OF THE OTHER MOVEMENTS.

4.10 - ON-BOARD ELECTRONICS

The machine is equipped with a specific calculator configured for this machine's functionalities.

Do not interchange the Calculator (calibration restoration) between machines..

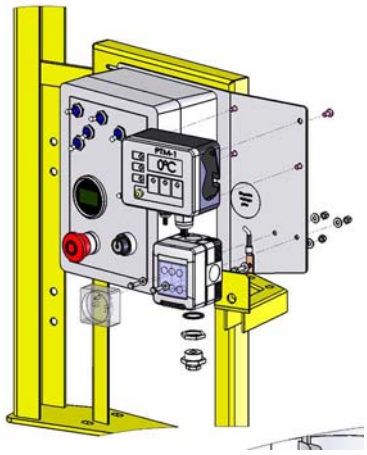
4.11 - OPERATING TEMPERATURE (FOR EAC STANDARD ONLY)

Hydraulic energy to perform machine movements is provided by an electric motor driven hydraulic pump.The operating speed of the pump is governed by a speed regulator. If the temperature limits are reached, an audible alarm alerts the operator. All movements are cut off except getting back to transport position.

Temperature limits :

- Electric machines : from 0° C / 32° F to + 40° C / 104° F
- Fuel-powered machines : from - 20° C / - 4° F to + 40° C / 104° F

Location of operating temperature thermostat



4.12 - RADIUS LIMITATION

N.B.-:-THE PRESENCE OF THIS DEVICE DEPENDS ON THE MACHINE CONFIGURATION.

The radius limit indicator flashes to indicate that a controlled movement has occured to maintain the machine within the stability limit.

Movement is slowed down.

Driving and other additional movements are forbidden.

The radius limit indicator is ON constantly if the operator requests a movement that causes the machine to exceed the radius limit.

For machines over 40 m(131 ft2 in), the red markers located on the telescope are a visual means of checking that the radius limit function is working properly.

4.13 - AXLE EXTENSION

Axle extension improves machine stability.

If the axles are retracted, the machine's capacities are reduced.

Only the following movements are possible :

- Turntable rotation if the boom is in horizontal position.
- Boom raising if the turntable is aligned with the axis.

For HA32RTJ PRO - HA100RTJ PRO :

Risk of overturning : On a slope exceeding 25%, it is forbidden to perform turret orientation movements.

For HA41RTJ PRO - HA130RTJ PRO :

Risk of overturning : On a slope exceeding 19%, it is forbidden to perform turret orientation movements.

If the axles are extended, all movements are possible.

Axle extension is possible if the machine is completely stowed, the jib below horizontal position and the turntable aligned with the axis.

4.14 - DRIVE BUZZER

For Russia and the Ukraine only :

Each travel or lifting movement activates a buzzer (horn).

C - Pre-operation inspection

4.15 - BOOM CONTROL SYSTEM

For HA41RTJ PRO - HA130RTJ PRO only

Machine stowed, extend the telescope from the platform control box.

Telescope extension must stop as soon as the 1 red stop on the right side of the telescope is visible.

If telescope extension continues once the 1 red stop is visible, stop telescope extension immediately.

Contact HAULOTTE Services® to repair the system.

Place barriers around the perimeter of the work area. Never use a faulty machine

C - Pre-operation inspection

Notes

D - Operation instructions

1 - Operation

1.1 - INTRODUCTION

Only trained and authorized personnel shall be permitted to operate this aerial work platform.

Prior to operation :

- Read, understand and obey all instructions and safety precautions in this manual and attached to the aerial work platform.
- Read, understand and obey all Federal, State and local codes and regulations.
- Become familiar with the proper use of all controls and emergency systems.

1.2 - OPERATION FROM THE GROUND CONTROL BOX

- Turning "ON" and "OFF" of the machine is performed with selector key switch (18).
- Activation of a desired control box is achieved by turning the control box energizing selector switch (229) to the desired position.
- The ground control box is energized and is active ONLY when :
  - The E-stop buttons on both ground and platform control boxes are not pressed in (Deactivated).
  - The machine is switched on.
  - Ground control box is selected.
- An E-Stop button at each control box stops all movements when pressed in; including shutting off an engine (if equipped).

D - Operation instructions

N.B.-:-AN E-STOP BUTTON PRESSED IN DOES NOT TURN OFF THE MAIN POWER SUPPLY TO THE MACHINE.

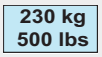
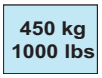
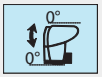
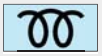
- An enable switch (228) provided must be activated and maintained to authorize one or more function movements. If enable switch (228) is kept engaged without selecting a function movement for more than 8 s; enable switch is automatically de-activated.
- The release of "Enable switch" (228) while performing a movement stops all the movements. The stop of movements is progressive. If the "Enable switch" system is re-pressed, the movement doesn't restart. It could restart only when the selected function switch/joystick is released to neutral position.
- All switches and joystick operating a movement, return automatically to neutral when released.
- At power up, a switch in it's neutral position will be taken into account to authorize movement.
- "Enable switch" selector / Emergency pump
  - Engine running, the switch acts as an "enable switch" only.
  - Engine stopped, the switch acts as the "enable switch" and operate the emergency pump control.
- Overriding system : The ground control box is designed for maintenance and emergency rescue operations only. Refer to Section D 4.2 To rescue operator in platform.
- The status of the switches is tested automatically when the machine is switched on, and checked at every starting. A switch will be active only after it has been detected to be in neutral position. The following switches are not controlled :
  - Accelerator: engine rpm
  - Beacon light (if fitted)
- A switch provides the start and stop of the engine.
- Engine speed (If fitted) : This switch increases the engine rpm to the maximum speed.
- A buzzer beeps in the following conditions :
  - When power is switched on.
  - Overload (if fitted).
  - Slope if machine is out of stowed position.
  - Hydraulic oil overheating.
  - Movements option.
  - Driving option.
  - Movement option and driving.
- Indicators / Cluster : All indicators are checked after powering on the machine.

D - Operation instructions

1.3 - OPERATION FROM THE PLATFORM CONTROL BOX

- The platform control box is energized only when :
  - The E-stop buttons on both ground and platform control boxes are not pressed in.
  - Machine switched on at ground control box.
  - Platform control box selected from ground control box.
  - Overriding system not activated.
- A faulty joystick is not taken into account to control a movement. If this fault disappears, the movement is authorised again.
- An E-stop button is present at each control box, it stops all movement and the engine (if equipped). The E-stop button doesn't have function to turn off the power supply of the machine.
- An "Enable switch" (228) (foot pedal switch in the basket) is present and should be activated to authorize one or more function movements. If the enable switch is kept active for more than 8 seconds without selecting a function movement, then movement is disallowed. The enable switch must be released (reset) before movement can occur.
- The release of "Enable switch" (228) while performing a movement stops all the movements. The stop of movements is progressive. If the "Enable switch" is pressed again quickly within 0,5 s the movement restarts. If the "Enable switch" is not pressed again quickly enough within + 0,5 s the movement will not restart. It could restart only when the selected function switch/joystick is released to neutral position.
- All switches and joystick operating a movement, return automatically to neutral when released.
- At power up, a switch in it's neutral position will be taken into account to authorize movement.
- The status of the switches and joysticks is checked when the machine is switched on. A switch or joystick is only considered validated after it is detected in neutral.
- A buzzer beeps in the following conditions :
  - When power is switched on.
  - Overload (if fitted).
  - Slope if boom is out of the stowed position.
- Emergency pump : See dedicated paragraph
- Indicators - All the indicators are tested
  - When the machine is switched on.
  - When the combustion engine is started from the platform control box.

D - Operation instructions

Symbol	Description
	**Machine switched on :** • Rapid flashing : When the platform control box has not been selected or the upper or ground emergency stop is pressed (machine switched on but control box inactive) • Constantly on : When the machine is switched on
	**Foot pedal switch :** • Constantly on : "Enable switch" pedal activated and validated
	**Faults :** • Rapid flashing : If a fault is active (current fault)
	**Overload (If machine equipped with weighing system) :** • Rapid flashing : Faulty weighing / overload system • Illuminated in case of overload
	**Tilt sensor (if fitted) :** • Permanently on in case of tilting, machine folded or unfolded
	**Radius limitation** • Flashing : Calibration fault or automatic reach limitation • Permanently lighted : Movement disabled by the reach limitation system
	• Constantly on : Valid load selection • Flashing : If the machine leaves the 450 kg zone with the selector on 450 kg[1]
	• Constantly on : Valid load selection • Flashing : If the load selection is changed to 450 kg in the 230 kg zone[2]
	**Platform compensation +/- 10° :** • Illuminated if the angle of the platform reaches +/- 10° in relation to the horizontal and movement control
	**Low fuel level**
	**Combustion engine pre-heating :** • Illuminated while engine is pre-heating • Off if engine started and if post-heating
	**Engine warning :** • Lighted in case of minor engine fault (e;g. water in the diesel, clogged air filter, etc.) • Lighted or flashing in case of fault managed by the engine ECU
	**Engine shutdown :** • Lighted in case of major engine fault (e.g. engine overheating, oil pressure, alternator fault, etc.) • Lighted in case of faults managed by the engine ECU
	**DPF regeneration required :** • Permanently lighted if the particle filter requires regeneration with a high clogging level[3]
	**DPF regeneration in progress, high temperature in the exhaust system (HEST)[4]**
	**DPF regeneration inhibited[5]**

1. *If machine equipped with dual load*
2. *If machine equipped with dual load*
3. *If engine quipped with Particulate Filter Regeneration*
4. *If engine quipped with Particulate Filter Regeneration*
5. *If engine quipped with Particulate Filter Regeneration*

1.4 - OPERATION OF OVERRIDING SYSTEM FROM GROUND CONTROL BOX

Please refer to paragraph D.4.2 To rescue operator in platform.

2 - Ground control box

2.1 - TO START AND STOP THE MACHINE

- At the ground control box, check that the E-stop button (15) is not pressed.
- Turn ON / OFF key switch (18) to the right to turn ON. The LED display panel comes on.
- Turn the control box selector (229) to the right to select ground control box.
- Push the starter selector (228) upwards. During pre-heating, the indicator (LED 5) comes on, preheating is carried out. The engine starts. The indicator goes out.
- Let the engine heat up.

N.B.-:-THE DURATION OF PREHEATING DEPENDS ON THE TEMPERATURE OF THE ENGINE.

To shut-down the machine from the ground control box :

- Push the starter selector (228) upwards. The engine stops.
- Turn the key switch (18) to the OFF position.
- The machine is now switched off. .

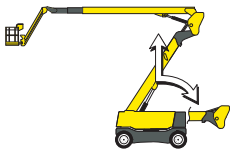
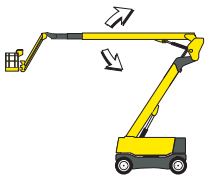
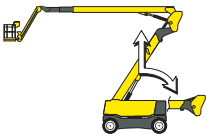
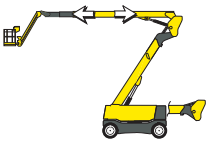
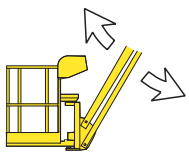
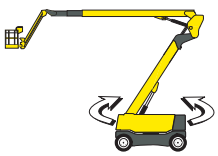
N.B.-:-THIS OPERATION TURNS THE MACHINE OFF AND IT IS REQUIRED TO PREVENT BATTERY DISCHARGE.

2.2 - BOOM AND ARM CONTROLS

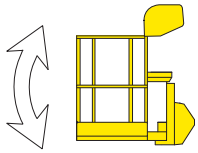
Platform leveling is available, regardless of the work height. Even at low movement speeds, use the controls with caution.

N.B.-:-RELEASING THE ENABLE SWITCH (FOOTPEDAL) WILL STOP ALL MOVEMENTS.

Ground box controls (emergency station)

Control		Action
Lifting/lowering of arm		Push the arm lift/lower selector (47) upwards to raise the arm. Push the arm lift/lower selector (47) downwards to lower the arm.
Lifting / lowering of boom		Push the boom raising switch (10) upwards to lift the boom. Push the boom raising switch (10) downwards to lower the boom.
Arm telescope extension/ retraction		Push the arm telescoping selector (47) upwards to extend the telescope. Push the arm telescoping selector (47) downwards to retract the telescope.
Boom telescope extend/retract		Push the boom telescoping switch (9) to the left to extend the boom. Push the boom telescoping switch (9) to the right to retract the boom.
Jib lifting/lowering		Push the jib switch (8) upwards to lift the jib. Push the jib switch (8) downwards to lower the jib.
Turntable rotation		Push the turntable rotation selector switch (14) to the left for a clockwise (CW) rotation. Push the turntable rotation switch (14) to the right for a counter clockwise (CCW) rotation.

D - Operation instructions

Control		Action
Platform leveling		Move the platform leveling switch (13) to the right to raise the platform. Move the platform leveling switch (13) to the left to lower the platform.

2.3 - ADDITIONAL CONTROLS FROM THE GROUND CONTROL BOX

For the machines equipped with beacon light :

- Push the beacon light selector switch (24) to the right to turn ON the beacon light.
- Push the beacon light selector switch (24) to the left to turn OFF the beacon light.

3 - Platform control box

3.1 - TO START AND STOP THE MACHINE

To start the machine :

At the ground control box :

- Check that the E-stop button (15) is not pressed in.
- Turn ON/OFF key switch (18) to the right to turn ON.
- LED (101) at platform display lights up.
- Turn the control box energizing selector switch (229) to the left to energize platform box.

At the platform control box :

- Check that the E-stop button (46) is not pressed in.
- Push the starter selector switch (230) upwards. During pre-heating LED (102) at platform display panel and LED (5) at ground display panel will light up. Pre-heating begins and the engine starts.
- Allow the engine to heat up and initialize.

To stop the engine :

- Push engine start switch (230) upwards.

D - Operation instructions

3.2 - DRIVE AND STEER CONTROL

To operate driving and steering functions, simultaneously operate the drive joystick (33) and the "Foot pedal / enable switch".

Before driving, locate the green / red orientation arrows on the chassis and platform control box. Move the drive controls in a direction matching the directional arrows.

N.B.-:-ON UNEVEN TERRAIN, LOWER THE BOOM TO IMPROVE THE DRIVE PERFORMANCE.

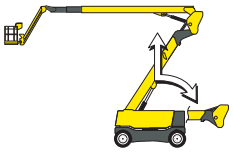
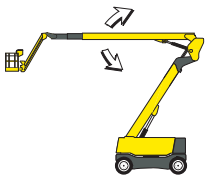
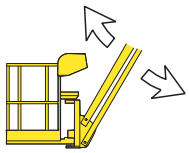
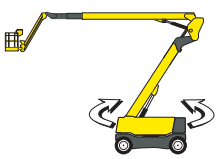
Control		Action
Steering		Press thumb/rocker switch on joystick (33) to the right to steer right.
		Press thumb/rocker switch on joystick (33) to the left to steer left.
Drive speed		Position the drive speed selector switch (45) on  for high-speed driving.
		Position the driving speed selector (45) on  for low-speed driving (short distance, final approach, unloading from lorries/trucks).

D - Operation instructions

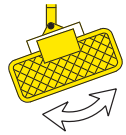
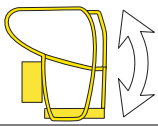
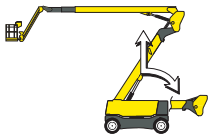
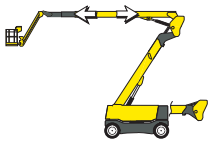
3.3 - BOOM AND ARM CONTROLS

Activate the desired control and the enable switch (foot pedal switch) simultaneously to perform that selected function.

Foot pedal switch

Control		Action
Lifting/lowering of arm		Push the boom or arm position selector (36) downwards. Push the arm lift/lower joystick (28) forwards to raise the arm.
		Push the arm lift/lower joystick (28) backwards to lower the arm.
Lifting / lowering of boom		Push the boom or arm position selector (36) upwards. Push the boom raising joystick (49) forwards to lift the boom.
		Push the boom raising joystick (49) backwards to lower the boom.
Jib lifting/lowering		Push the jib switch (37) upwards to lift the jib.
		Push the jib switch (37) downwards to lower the jib.
Turntable rotation		Push the turntable rotation switch (49) to the left for an clockwise rotation.
		Push the turntable rotation switch (49) to the right for an anti-clockwise rotation.

D - Operation instructions

Control		Action
Platform rotation		Move the platform rotation selector (38) to the right for a counter clockwise (CCW) rotation. Move the platform rotation selector (38) to the left for a clockwise (CW) rotation.
Platform leveling		Push the platform levelling switch (40) forwards to lift the platform. Push the platform levelling switch (40) backwards to lower the platform.
Arm telescope extension/ retraction		Push the boom or arm position selector (36) downwards. Push the arm telescoping joystick (28) forwards to extend the telescope. Push the arm telescoping joystick (28) backwards to retract the telescope.
Boom telescope extend/retract		Push the boom or arm position selector (36) upwards. Push the boom telescope joystick (28) forwards to extend the telescope. Push the boom telescope joystick (28) backwards to retract the telescope

3.4 - ADDITIONAL CONTROLS

- Horn : Push the horn selector (43) to the right to sound the horn. The horn stops when the selector switch is released.
- Differential lock : Press the differential blocking touch pads (35).

4 - Axle extension control box

4.1 - PREPARE THE MACHINE

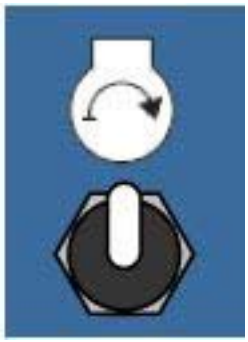
Prepare the machine before any axle extension or retraction operation.

1. Locate the 3 control boxes on the machine as illustrated below :

	Platform control box	
	Ground control box	
	Axle extension control box (Back of the machine)	

Check that the emergency stop button on each has been deactivated.	

2. Go to the ground control box and start the machine.



3. Raise the jib approximately 1m (3 ft 3 in).

4. Set the control box energizer selector switch (229) to the center position to activate the axle control box.

N.B.-:-THE PLATFORM AND GROUND BOXES CONTROLS ARE DE-ACTIVATED IN THIS POSITION.

5. Go to the back of the machine to access axle extension control box.

D - Operation instructions

4.2 - AXLE EXTENSION OPERATION

4.2.1 - For rear axle extension

Use E1 and E2 levers (Refer to figure a).

• If the two outrigger cylinders are extended, the axle extension controls are de-activated.

• Always extend the axles before using the machine.

1. Lower lever (E1).

- The outrigger cylinder is lowered (extended).
- The chassis is lifted.
- The wheels no longer touch the ground.

2. Keeping lever (E1) lowered and lowering lever (E2) will extend the rear axle.

While the axle is being extended, the buzzer sounds and driving is deactivated. The buzzer stops when the axle is totally extended and the outrigger cylinder is completely raised (retracted).

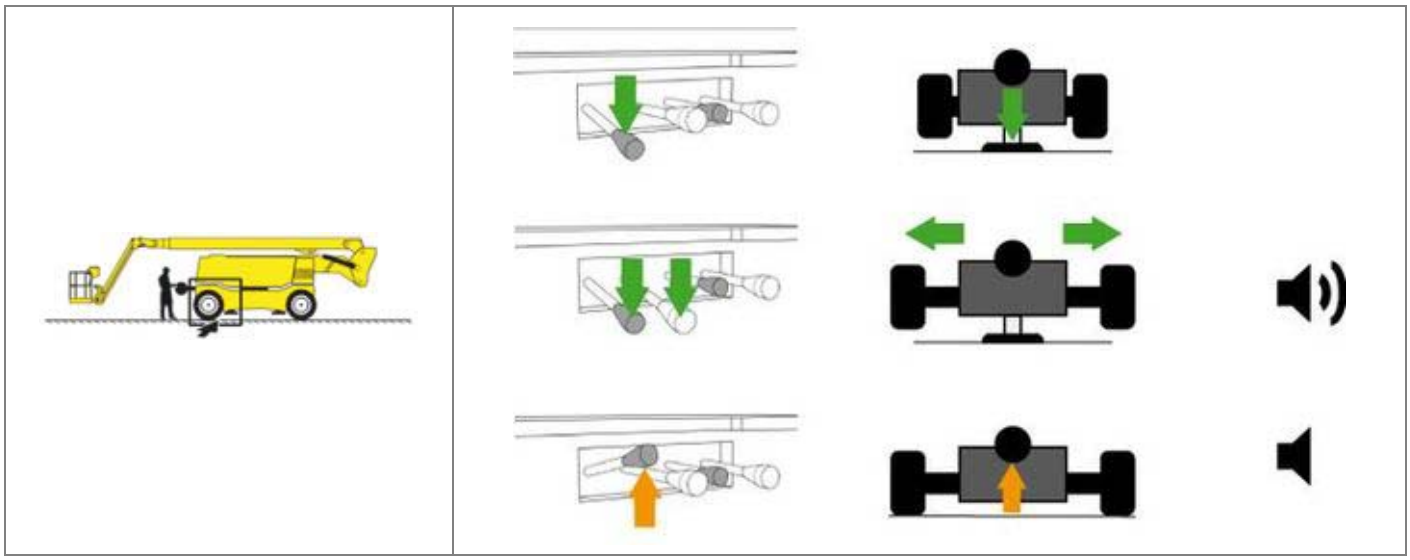
Once the rear axle is fully extended :

3. 1 to 2 s after the buzzer stops, release lever (E2).
4. Lift lever (E1).

- The outrigger cylinder is raised (retracted).
- The chassis is lowered.
- The wheels touch the ground.

If the buzzer sounds during the movement, the axles are either not fully extended or not fully retracted.

Figure a



4.2.2 - For front axle extension

Use E3 and E4 levers (Refer to figure b).

• If the two outrigger cylinders are extended, the axle extension controls are de-activated.

• Always extend the axles before using the machine.

1. Lower lever (E3).

- The outrigger cylinder is lowered (extended).
- The chassis is lifted.
- The wheels no longer touch the ground.

2. Keeping lever (E3) lowered and lowering lever (E4) will extend the rear axle.

While the axle is being extended, the buzzer sounds and driving is deactivated. The buzzer stops when the axle is totally extended and the outrigger cylinder is completely raised (retracted).

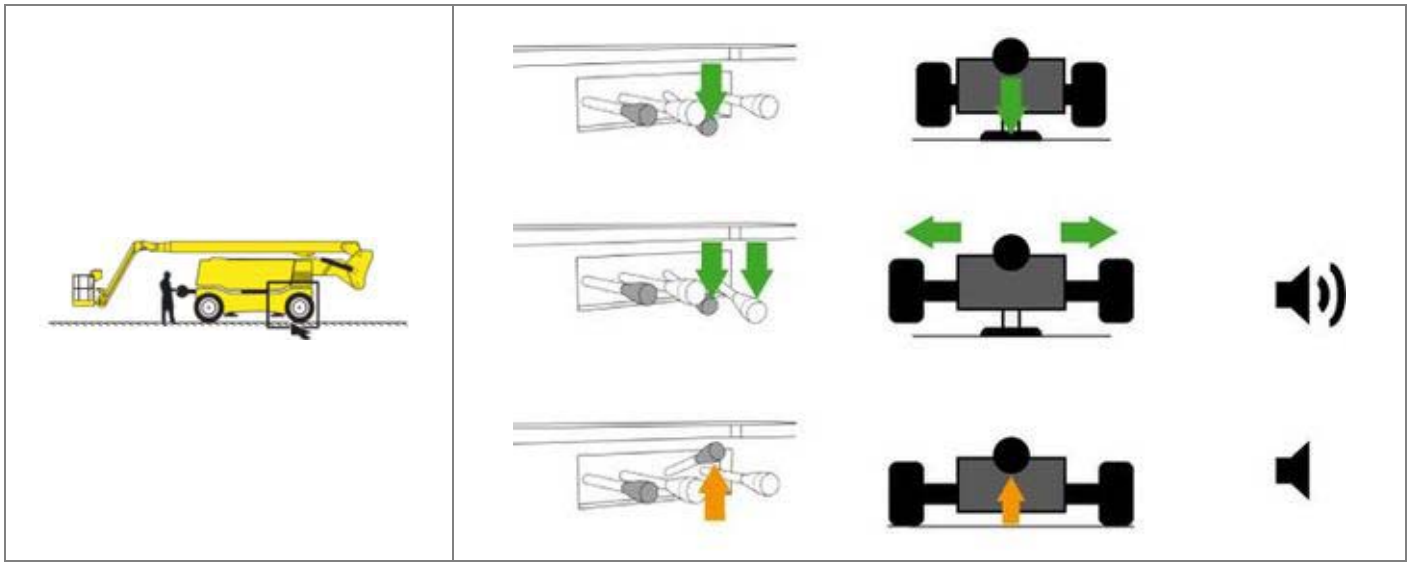
Once the rear axle is fully extended :

3. 1 to 2 s after the buzzer stops, release lever (E4).
4. Lift lever (E3).

- The outrigger cylinder is raised (retracted).
- The chassis is lowered.
- The wheels touch the ground.

If the buzzer sounds during the movement, the axles are either not fully extended or not fully retracted.

Figure b



D - Operation instructions

4.3 - AXLE RETRACTION OPERATION

4.3.1 - For front axle retraction

Use E3 and E4 levers (Refer to figure c).

If the two outrigger cylinders are extended, the axle retraction controls are de-activated.

1. Lower lever (E3).

- The outrigger cylinder is lowered (extended).
- The chassis is lifted.
- The wheels no longer touch the ground.

2. Keep lever (E3) lowered and lift lever (E4) to retract the front axle.

While the axle is being retracted, the buzzer sounds and driving is deactivated. The buzzer stops when the axle is totally retracted and the outrigger cylinder is completely lowered (extended).

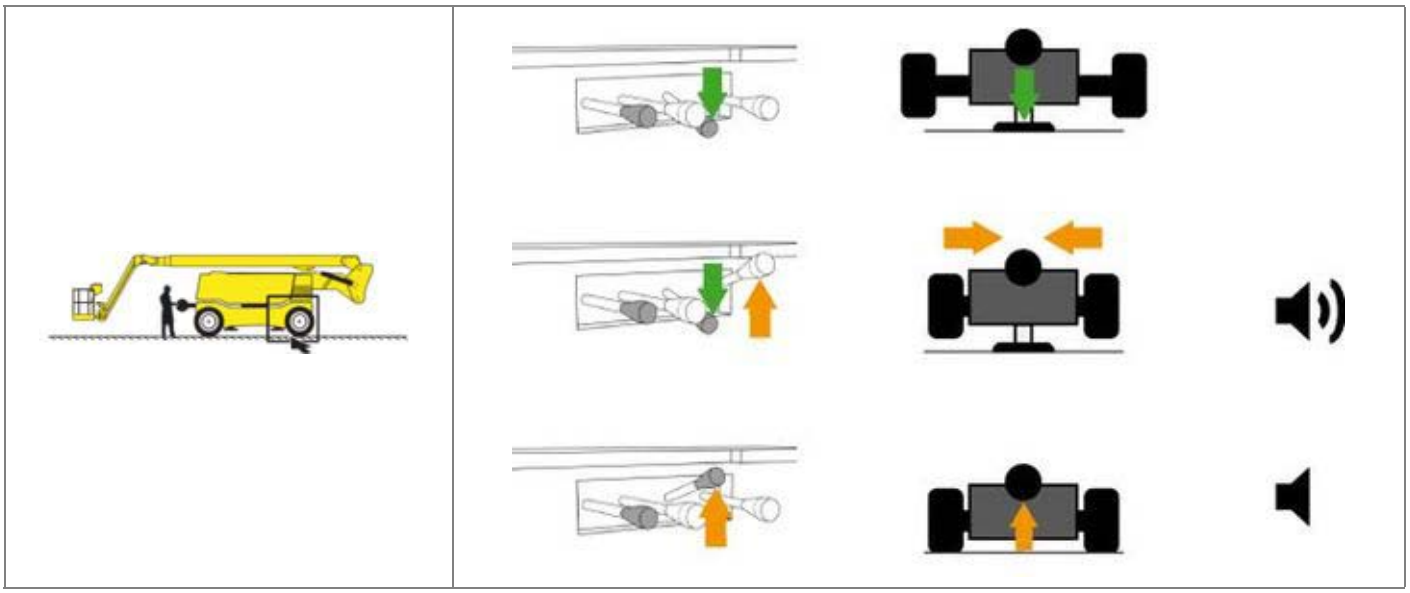
Once the front axle is totally retracted :

3. 1 to 2 s after the buzzer stops, release lever (E4).
4. Lift lever (E3).

- The cylinder is raised (retracted).
- The chassis is lowered.
- The wheels touch the ground.

If the buzzer sounds during the movement, the axles are either not fully extended or not fully retracted.

Figure c



D - Operation instructions

4.3.2 - For rear axle retraction

Use E1 and E2 levers (Refer to figure d).

If the two outrigger cylinders are extended, the axle retraction controls are de-activated.

1. Lower lever (E1).

- The outrigger cylinder is lowered (extended).
- The chassis is lifted.
- The wheels no longer touch the ground.

2. Keep lever (E1) lowered and lift lever (E2) to retract the front axle.

While the axle is being retracted, the buzzer sounds and driving is deactivated. The buzzer stops when the axle is totally retracted and the outrigger cylinder is completely lowered (extended).

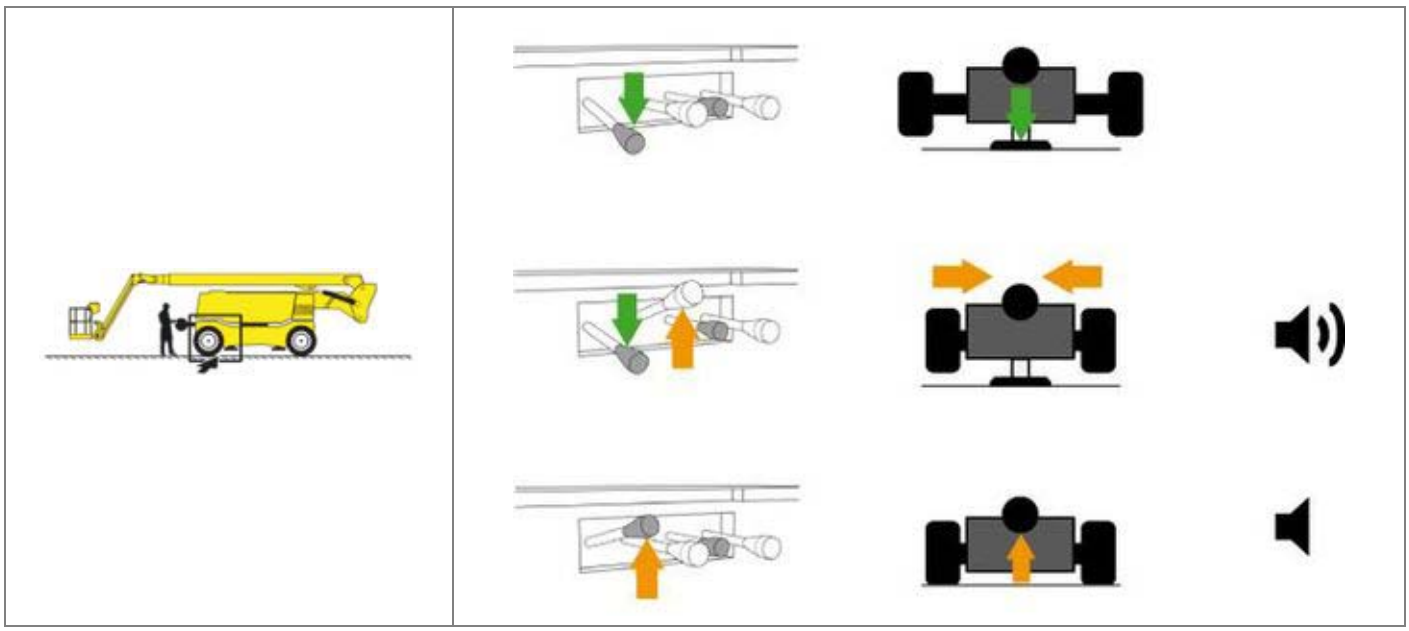
Once the front axle is totally retracted :

3. 1 to 2 s after the buzzer stops, release lever (E2).
4. Lift lever (E1).

- The cylinder is raised (retracted).
- The chassis is lowered.
- The wheels touch the ground.

If the buzzer sounds during the movement, the axles are either not fully extended or not fully retracted.

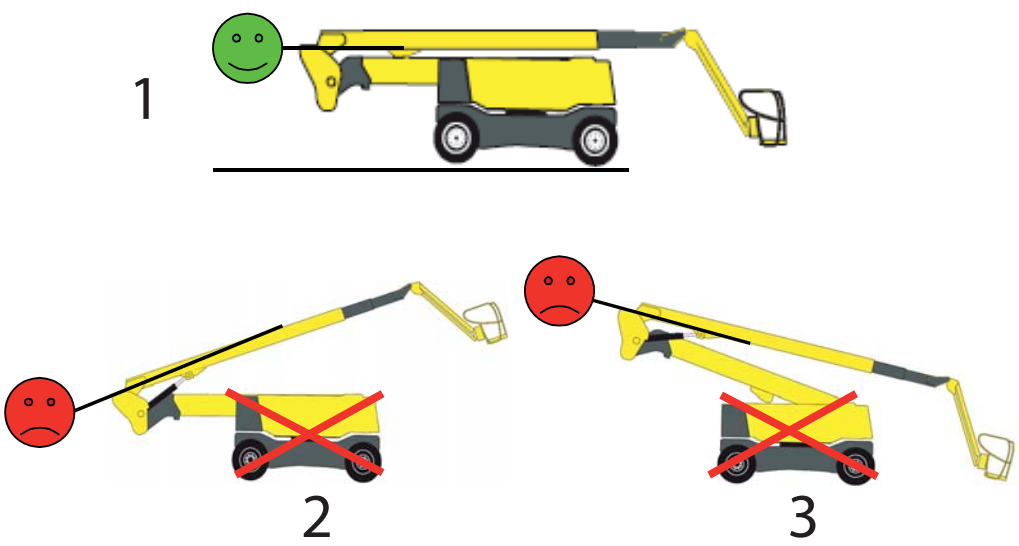
Figure d



5 - Link piece position check

Ensure that nothing is in the way before starting any manoeuvres.

Link piece position check



Marking	Description
1	If the link piece is not in the correct position, the machine must not be used until this has been corrected
2	Link piece to the front
3	Link piece to the rear

The link piece position reset is automatic when the arm reaches the end of its descent.

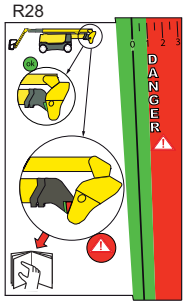
After each work shift, ensure that the arm is fully lowered and rests on the turntable.

To check that the link piece is positioned correctly, the arm must be at the lowest stop point and the machine on level ground. The upper edge of the link piece must then be horizontal.

The decal (R38) placed on the link piece is a second source used in checks.

If it is impossible to reposition the link piece, DO NOT use the machine and call the HAULOTTE Services® After Sales Service

R28



6 - Radius limitation

For HA41RTJ PRO - HA130RTJ PRO only

6.1 - PRINCIPLE

When the machine is at the radius limit before driving is disabled, the (LED 113) indicator comes on. The telescope must be retracted to re-activate driving. If the rear radius limit is reached, the boom must be lowered slightly to re-activate driving.

6.2 - PROCEDURE

6.2.1 - Front radius limitation

Boom extension is limited in zone A1 as long as the second arm telescope has not started to extend(boom length is limited to 14,2 m(46 ft7 in) maximum, i.e. 2,40 m(7 ft10 in) of the telescope). Boom movement is automatically stopped(the radius limit indicator is fixed).

As soon as the second telescope is partially extended, boom telescope extension is limited in zone(boom length is limited to 16,1 m(52 ft10 in) maximum, i.e. 3,37 m(11 ft1 in) of the telescope). Boom movement is automatically stopped(the radius limit indicator is fixed).

When the arm telescope is fully extended, the boom telescope extension is limited in zone(Section G 3-Working area / Range of motion). Boom movement is automatically stopped(the radius limit indicator is fixed). In zone A3, when a boom lowering movement control is activated, the system automatically retracts the boom telescope to keep the user within the stable zone.

When an arm lowering control is activated from the platform control box, the boom telescope is automatically retracted to keep the user within the stable zone(the radius limit indicator flashes). The operator must retract the boom telescope to re-activate the arm lowering function.

6.2.2 - Rear radius limit

Boom raised : Lifting is automatically stopped when the radius limit is reached(the radius limit indicator is fixed).

7 - Emergency procedure

7.1 - In case of power loss

In case of loss of the main power source, the secondary (back-up) power unit, powered by the starting battery, allows movements to be controlled from both the ground and platform control boxes.

As the electric pump has limited power, it is advisable to reach the ground in the most direct manner possible.

The use of the electric pump is exclusively reserved for lowering the boom in emergency situations only. It is recommended to first retract the boom before lowering the boom. Performing other operations can lead to the deterioration of the electric pump.

N.B.-:-Test the operation of emergency system atleast once a month. Refer to the Maintenance manual

Depending on the control box in use, push and hold the back-up/auxiliary power switch (228) at ground box or switch (41) at platform box. Retract the boom and lower it by using switches (9) and (10) at ground box or switch (28) and joystick (49) at platform box.

In an emergency, if the operator has to exit the platform while it is elevated, the transfer of the operator must respect the following recommendations. :

- Exit onto a sturdy and safe structure.
- Allowance must be made for the possibility of boom deflection when egressing from the platform.
- The occupant(s) must ensure that 2 lanyards are used for security/safety. One must be attached to the designated anchorage point on platform the occupant(s) is in and the other attached to the structure intended to get on.
- Do not leave platform without taking into account the allowance for possibility of boom deflection when exiting platform.
- Occupant(s) must exit the current platform through the normal access.

N.B.-:-Do not detach the lanyard from the current platform if the transfer to the new structure poses any danger or until the transfer is safely completed. Do Not attempt to climb down the boom. Instead wait for assistance for a safe exit.

7.2 - TO RESCUE OPERATOR IN PLATFORM

In a situation where an operator located in the platform needs to be rescued (for example in case of illness, injury or trapped against a structure making the control box inaccessible), the rescue personel at ground level needs to obtain rapid and direct access to operating functions.

HAULOTTE® provides a ground control emergency system that should be used to safely bring the operator into such a position that appropriate medical attention could be provided.

Unlike the ground control box used in lowering the boom, the overriding system allows trapped occupant(s) be lowered to the ground level, even if an E-Stop is engaged or if an overload is detected.

In this situation, supervisor(s) at ground level must turn the control box selector (229) to the "right" on the ground control box to take control. To safely activate movements from the ground control box, the enable switch (228) must be held activated/depressed.

Procedure :

- Turn the control box selector (229) to the "right" to energize the ground control box.
- The platform box controls are now de-energized.
- Check that the E-Stop button (15) at ground is not pressed in.
- To lower the platform, hold enable switch (228) downwards and simultaneously push the desired function switch.
- If the E-stop button (15) or a safety device do not allow normal movement from the ground control box, the overriding system is operated as follows :
  - Operate the "overriding system" switch (245) on the ground control box.
  - Simultaneously, push upwards and maintain overriding switch (245) in addition to desired movements actuator to obtain movement of the extending structure.

N.B.-:-OPERATION OF THE "OVERRIDING SYSTEM" SWITCH MUST BE AN EXCEPTION AND NOT A NORMAL EMERGENCY OPERATION.

ONLY in these conditions, activate the "overriding system" switch (245) located under the cover and simultaneously press the platform lowering button until the safety mechanisms are deactivated (alarms stop) and therefore normal movements are possible again, or until the operator can be rescued.

"Overriding system" switch under cover

Once rescue operations are complete, write an incident report.

7.3 - NO POWER AVAILABLE

In case of loss of the main power and the secondary power unit not functioning, do not attempt to activate any function movement using hydraulic manifold unless trained and authorized by HAULOTTE Services®. All safety functions are no longer active and several hazards may occur. Improper use of the equipment will result in death or serious injuries.

If the operator cannot be lowered by any of the above mentioned methods, contact HAULOTTE Services® immediately.

8 - Transportation

8.1 - PUTTING IN TRANSPORT POSITION

During loading, ensure that :

- The loading ramp can support the machine weight.
- The loading ramp is correctly attached to transport vehicle.
- The loading ramp has sufficient grip surface.
- The transport vehicle must be parked on a level surface and must be secured to prevent rolling away while machine is being loaded or unloaded.

To climb the slope, select low driving speed.

If the slope is too steep, use a winch in addition to the low speed drive.

Do not place yourself below or too close to the machine during loading.

A wrong move can lead to machine tipping over and may cause serious injuries and material damage.

The machine must be completely in the stowed configuration :

- Check the platform is completely empty.
- Lower the boom and drive onto the truck bed.
- Ensure that the jib is raised as necessary to give ground clearance when driving the machine onto the loading ramp.

The machine must be loaded with the platform facing the truck cab.

- Secure the machine to the tie down points provided (Section D-Machine layout).
- Lock the turntable with the rotation stop pin located under the turntable before transporting (Section D-Machine layout).
- The platform/basket must be chocked and the boom strapped to prevent bouncing up and down, thus preventing possible material damage during transporting.
- Do not use excessive downward force when securing boom section.

D - Operation instructions

Loading recommendation of a HA41RTJ PRO for transport in accordance with the regulations

D - Operation instructions

8.2 - MACHINE LAYOUT

HA32RTJ PRO - HA100RTJ PRO

Turret rotation enabled

Turret rotation disabled

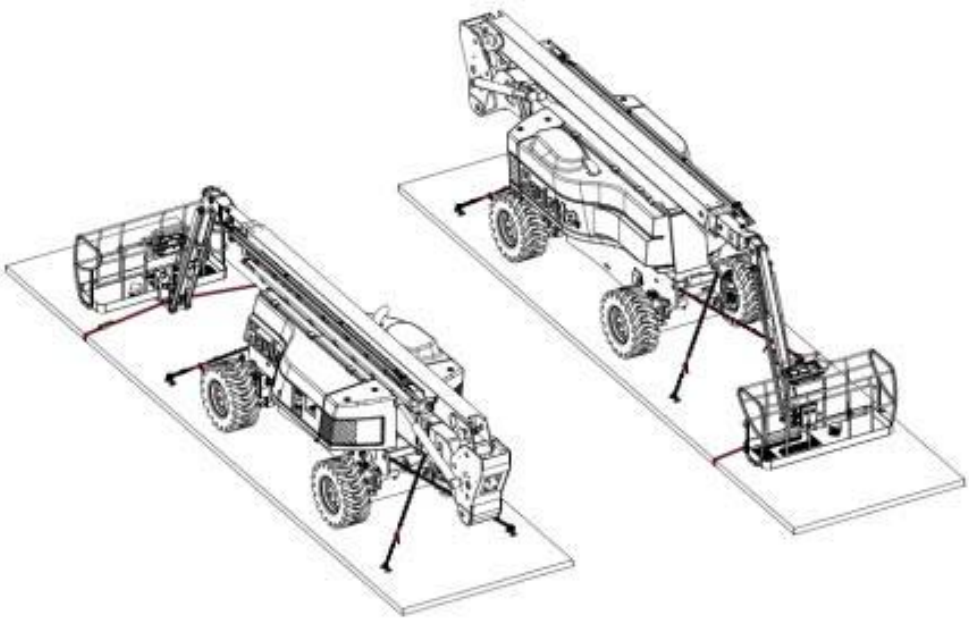
D - Operation instructions

HA41RTJ PRO - HA130RTJ PRO

Turret rotation enabled

Turret rotation disabled

Machine stowing



N.B.-:-SECURE TURNTABLE WITH THE TURNTABLE LOCKING PIN BEFORE TRAVELING LONG DISTANCES OR HAULING MACHINE ON A TRUCK.

8.3 - UNLOADING

Before unloading, check that the machine is in good condition.

- Remove the turntable rotation locking pin (Section D-Machine layout).
- Remove the tie downs.
- Select low drive speed at the platform control box.
- Start the machine from platform control box.

Warning : Upon starting a machine that has been secured and transported, the safety system may detect a false overload preventing all movement from the platform control box.

To reinstate the system, lift the jib a few centimetres (inches) using the ground control box.

D - Operation instructions

8.4 - TOWING

In the event of a machine breakdown, the machine can be towed a short distance to load it onto a transport vehicle :

- **Ensure that no one is in the platform during towing.**
- **Ensure boom is in the stowed position and the turntable is locked, prior to towing.**
- **The platform must be empty.**

To tow a broken-down machine, disconnect the wheel drive hubs.

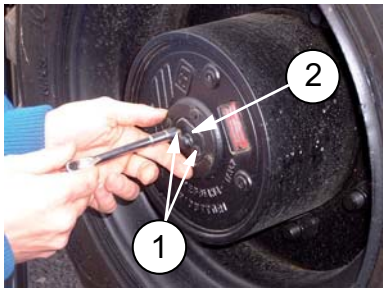
Perform this operation on flat ground with wheels chocked.

In the towing configuration, the machine braking system is inactive. Use of a drawbar is recommended :

- Do not exceed the maximum freewheel speed (Refer to Section B 4 Technical specifications).
- Do not exceed a grade of 25%.

8.4.1 - Disengaging the drive hubs

1. Loosen and remove the 2 fastening screws (1).
2. Remove the clutch stop (2).
3. Turn the clutch stop so that its domed part is towards the interior of the wheel gears.
4. Attach the clutch stop.



When drive hubs are disengaged, the machine is in free wheel mode and the brake system no longer functions.

8.4.2 - Re-engaging the drive hubs

After repairing the machine, re-engage the wheel drive hubs.

1. Loosen and remove the 2 fastening screws (1).
2. Remove the clutch stop (2).
3. Turn the clutch stop so that its domed part is towards the exterior of the wheel gears.
4. Attach the clutch stop.
5. Check the wheel gear oil level.

D - Operation instructions

8.5 - STORAGE

Machine must be parked in a protected/designated area with the boom in a stowed configuration, however the boom can be raised but must not be extended. Make sure there is no load in the platform.

It is recommended that the machine is not stored or immobilized unfolded.

Ensure all access panels, doors and side compartment covers are shut and secured.

Turn the energizing key selector switch (18) at the ground control box to the "left" to shut OFF the power.

Ensure that the turntable rotation locking pin is removed and stored properly.

Remove the ignition key to prevent unauthorized operation of the machine.

Storing of the machine with an obstacle under the boom structure is forbidden.

D - Operation instructions

8.6 - LIFTING OPERATION

Before any crane operation, it is necessary to take into account the following points :

ONLY trained and authorized personnel should attempt to lift the machine.

Do not operate machine unless you have :
- been fully trained and are qualified in proper operation.
- read and understood the information in the Operator's manual of the machine.

8.6.1 - Safety precautions

It is the responsibility of the Operator to ensure there are no personnel or obstructions to safely perform the operation. :
- Engine exhaust contain some chemicals that are harmful. Always run an engine in a well-ventilated aera.
- If machine is operated inside a closed building, ensure that exhaust is properly routed to the outside of the structure.

8.6.2 - Necessary equipment

- PPE (Personal Protective Equipment: glove, safety shoes, glasses, etc ...)
- Standard tool kit
- 2 spreaders 3 m (13 ft 1 in) 25 T
- 12 shackles 12 T
- 4 slings 4 m (13 ft 1 in) 8 T
- 4 slings or chains 4 m (13 ft 1 in) 12 T
- 2 slings or chains 6 m (19 ft 8 in) 12 T
- for HA32RTJ PRO - HA100RTJ PRO : 2 slings or chains 5,40 m (17 ft 9 in) 12 T
- for HA41RTJ PRO - HA130RTJ PRO : 2 slings or chains 5,20 m (17 ft 1 in) 12 T

Technical specifications

Machine type	Maximum weight
HA32RTJ PRO - HA100RTJ PRO	20100 kg (44321 lb)
HA41RTJ PRO - HA130RTJ PRO	23900 kg (52691 lb)

D - Operation instructions

8.6.3 - Preliminary procedures

- Inspect the surrounding area and position the machine at a safe distance from electrically charged conductors to ensure that no part of the machine is within an unsafe area. Always stay clear of overhead obstructions.
- Respect the local rules and the minimum safe distance from power lines.
- Turn off the engine.
- Remove the ignition key.
- Ensure that the main power is disconnected.
- Place a "DO NOT USE" decal near the start/stop switches to inform personnel that machine is not operational during the lifting process.
- Cordon off the area surrounding the machine to keep personnel, vehicles and moving equipment away from the machine.
- Remove all loose items from the machine.
- Ensure that vehicle capacity and loading equipment - hoists, chains, straps, etc. are of sufficient strength to withstand maximum machine weight.
- Attach the rigging ONLY to the designated lifting points on the machine.

8.6.4 - Procedure for the use of slings

The machine must be completely stowed, with the axles extended and the turntable at 90 ° in relation to the axis of the chassis. Designated lifting points are marked/labeled with the following symbol .

1. Position the spreaders line up with the chassis.
2. Fold up the 4 slings 4 m (13 ft 1 in) 4 T over the axles with protective sheathing positioned appropriately. Adjust properly to prevent any damage to the machine.

Make sure that the steering rods and associated hoses are not captured by the slings over the axle.

Pay particular attention to avoid slings over sharp edged surfaces as they may be severed/damaged.

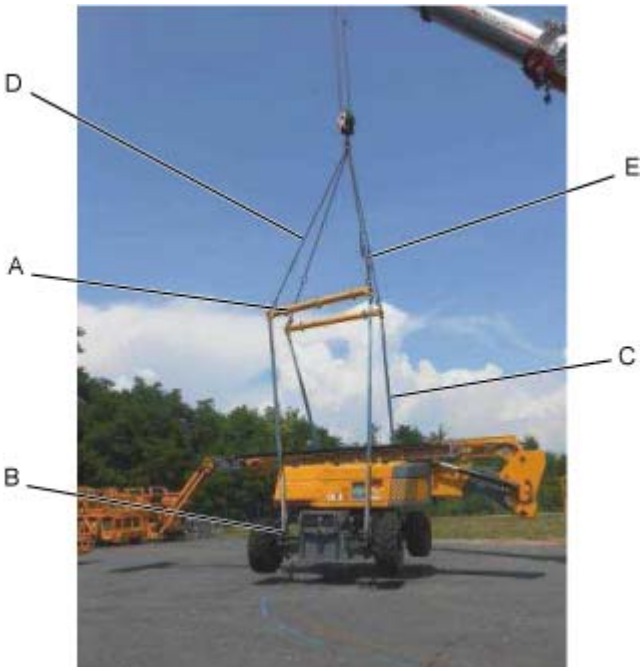
3. Attach the slings using shackles

Properly adjust rigging to keep the machine level and to minimize the risk of damage to the machine.

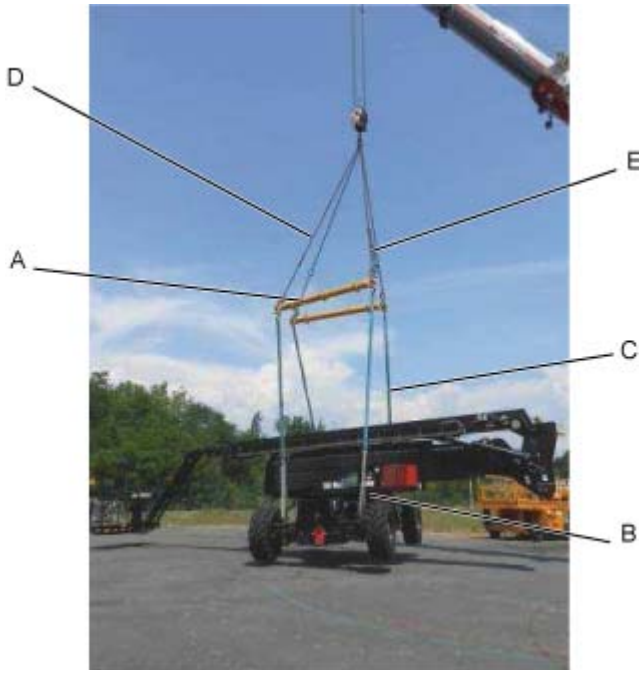
- **Lifting procedure must be handled very carefully.**
- **All movements of the machine must be performed slowly and deliberately to minimize swaying of the machine being lifted.**
- **Always keep machine as close as possible to the ground level.**

D - Operation instructions

HA32RTJ PRO - HA100RTJ PRO



HA41RTJ PRO - HA130RTJ PRO



Marking	Description
A	2 spreaders 3 m (9 ft 10 in) 25 T at 90 ° to the axis of the chassis
B	4 slings 4 m (13 ft 1 in) 8 T to attach the machine
C	4 slings 4 m (13 ft 1 in) 12 T and 8 shackles 12 T between the attachment straps and the spreaders
D	2 slings 6 m (19 ft 8 in) 12 T and 2 shackles 12 T between the attachment straps and the spreaders
E	for HA32RTJ PRO - HA100RTJ PRO : 2 slings or chains 5,40 m (17 ft 9 in) 12 Tfor HA41RTJ PRO - HA130RTJ PRO : 2 slings or chains 5,20 m (17 ft 1 in) 12 T

9 - Cold Weather Recommendations

In cold weather conditions, allow engine to run for at least 5 min to warm up ; before operating any function thereby preventing any damage to the hydraulic system.

In extreme cold conditions, machines should be equipped with optional cold start kits.

Attempting to start engine when temperature is in the negative range, may require the use of a booster battery.

If engine fails to start, do not crank for an extended time. Allow starter to "cool off" for a few minutes before attempting again. If engine fails after several attempts, refer to the engine maintenance manual.

N.B.-:-INITIAL STARTING SHOULD ALWAYS BE PERFORMED FROM THE GROUND CONTROL BOX.

9.1 - ENGINE OIL

The correct SAE viscosity grade of oil is determined by the minimum ambient temperature during cold engine start-up, and the maximum ambient temperature during engine operation.

Generally, use the highest viscosity oil that is available to meet the requirement for the temperature at start-up.

Engine oil viscosity		
EMA LGR-1 / API CH-4 Viscosity grade	Ambient temperature	
	Minimum	Maximum
SAE 0W20	-40°C (-40°F)	10°C (50°F)
SAE 0W30	-40°C (-40°F)	30°C (86°F)
SAE 0W40	-40°C (-40°F)	40°C (104°F)
SAE 5W30	-30°C (-22°F)	30°C (86°F)
SAE 5W40	-30°C (-22°F)	40°C (104°F)
SAE 10W30	-20°C (-4°F)	40°C (104°F)
SAE 15W40	-10°C (14°F)	50°C (122°F)

N.B.-:-FOR ADDITIONAL ENGINE RECOMMENDATION, REFER TO THE ENGINE MANUAL PROVIDED WITH THE MACHINE.

D - Operation instructions

9.2 - HYDRAULIC OIL

External environmental conditions can reduce performance of the machine if the hydraulic oil temperature does not reach its optimum range.

It is recommended to use the hydraulic oil according to weather condition. Refer to the table below.

Environmental conditions	SAE Viscosity grade
Ambient temperature between - 15°C (5°F) and + 40°C (+ 104°F)	HV 46
Ambient temperature between - 35°C (- 31°F) and + 35°C (+ 95°F)	HV 32
Ambient temperature between 0°C (+ 32°F) and + 45°C (+ 113°F)	HV 68

N.B.-:-IT IS RECOMMENDED TO REPLACE LOW TEMPERATURE OIL AS THE AMBIENT TEMPERATURE REACHES + 15°C (59°F). IT IS NOT ADVISABLE TO MIX OILS OF DIFFERENT BRANDS OR TYPES.

9.3 - PREHEATING OPERATION

When power is switched on, the LED (102) at platform control display panel flashes, indicating that the engine is in automatic pre-heating mode. Upon the extinction of this light (just in seconds) at platform, starting of the machine is possible.

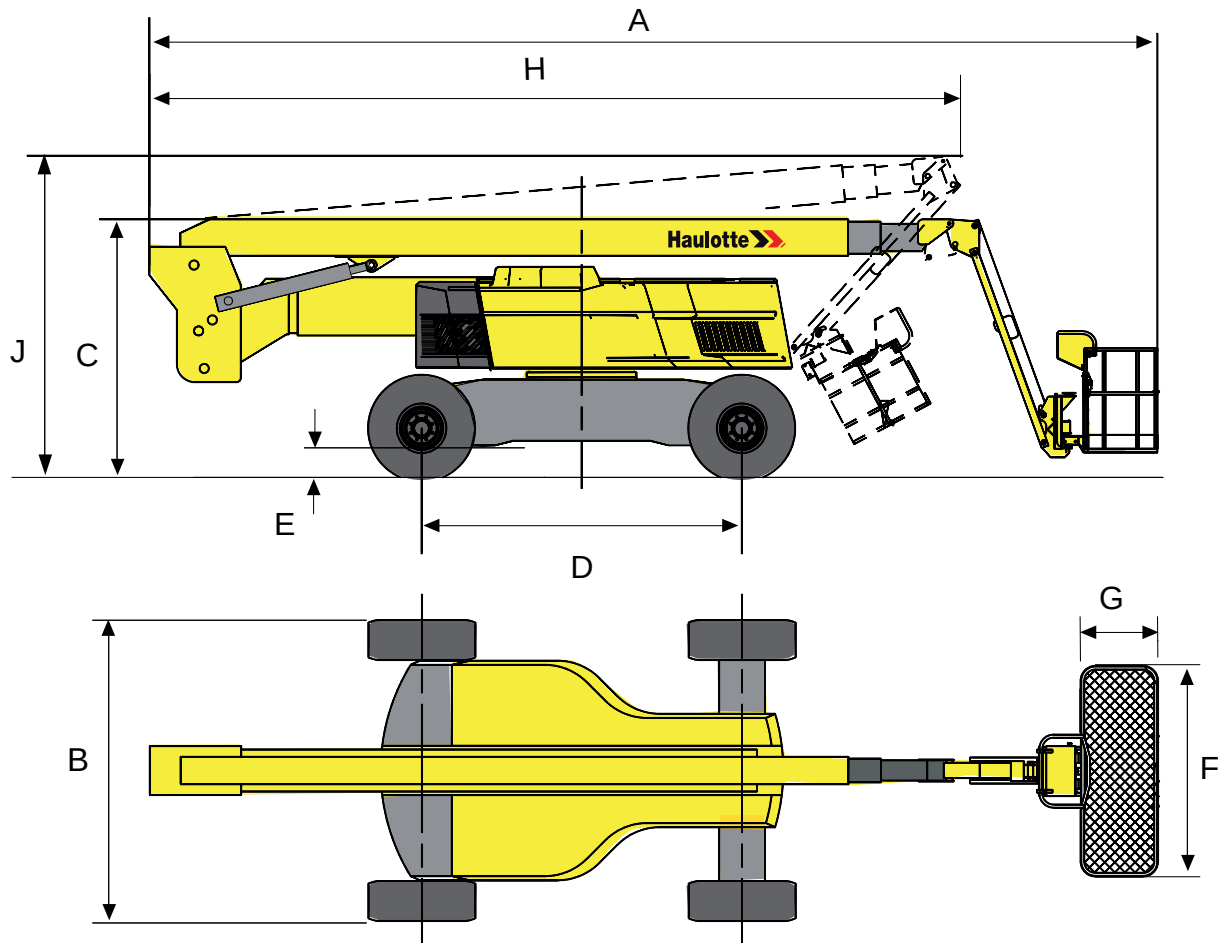
D - Operation instructions

Notes

E - General Specifications

1 - Machine dimensions

Stowed / Transport position : Configuration that takes the minimum floor space necessary for storage and / or delivery of the machine - Access position.



CE, AS and EAC standards

Machine		HA32RTJ PRO		HA41RTJ PRO	
Marking	**Specifications - Dimensions**	**SI**	**Imp.**	**SI**	**Imp.**
A	Overall length of machine	11,70 m	38 ft 5 in	13,10 m	43 ft 0 in
B	Overall width of machine	2,53 m	8 ft 3 in	2,53 m	8 ft 3 in
C	Overall height of machine	2,80 m	9 ft 2 in	2,99 m	9 ft 9 in
D	Wheel base	3,50 m	11 ft 5 in	3,50 m	11 ft 5 in
E	Ground clearance	38 cm	15 in	38 cm	15 in
F X G	Platform dimensions	2,44 x 0,915 m	8 ft 0 in x 3 ft 0 in	2,44 x 0,915 m	8 ft 0 in x 3 ft 0 in
H	Storage length	8,90 m	29 ft 2 in	11 m	36 ft 1 in
J	Storage height	3,60 m	11 ft 10 in	3,95 m	13 ft 0 in

E- General Specifications

ANSI and CSA standards

Machine		HA100RTJ PRO		HA130RTJ PRO	
Marking	**Specifications - Dimensions**	**SI**	**Imp.**	**SI**	**Imp.**
A	Overall length of machine	11,70 m	38 ft 5 in	13,10 m	43 ft 0 in
B	Overall width of machine	2,53 m	8 ft 3 in	2,53 m	8 ft 3 in
C	Overall height of machine	2,80 m	9 ft 2 in	2,99 m	9 ft 9 in
D	Wheel base	3,50 m	11 ft 5 in	3,50 m	11 ft 5 in
E	Ground clearance	38 cm	15 in	38 cm	15 in
F X G	Platform dimensions	2,44 x 0,915 m	8 ft 0 in x 3 ft 0 in	2,44 x 0,915 m	8 ft 0 in x 3 ft 0 in
H	Storage length	8,90 m	29 ft 2 in	11 m	36 ft 1 in
J	Storage height	3,60 m	11 ft 10 in	3,95 m	13 ft 0 in

E - General Specifications

2 - Major component masses

N.B.-:-MASSES MEASURED WITH EMPTY TANKS.

Component	HA32RTJ PRO - HA100RTJ PRO	HA41RTJ PRO - HA130RTJ PRO
Frame assembly mass	**7190 kg - 15851 lb**	
• Mass of each wheel	**410 kg - 904 lb**	
Turret assembly mass	**3115 kg - 6867 lb**	**3460 kg - 7628 lb**
• Counterweight mass - Turret	**2 x 1450 kg - 2 x 3197 lb**	**2 x 1850 kg - 2 x 4079 lb**
• Engine mass + engine compartment	**PERKINS engine : 554 kg + 100 kg - 1222 lb + 220 lb**	
• Battery mass	**45 kg - 99 lb**	
Arm assembly mass	**2600 kg - 5730 lb**	**4520 kg - 9960 lb**
Boom assembly mass	**2130 kg - 4695 lb**	**2585 kg - 5700 lb**
Jib assembly mass	**168 kg - 370 lb**	**170 kg - 375 lb**
Platform assembly mass	**192 kg - 423 lb (Basket with a sliding bar)** **198 kg - 437 lb (Basket with a door)**	

3 - Acoustics and vibrations

The acoustics and vibrations specifications are based upon the following conditions :

- The airborne noise emissions at workstation are determined per European Directive 2006/42/CE.
- The guaranteed sound power level LWA (displayed on the product) is determined per European Directive 2000/14/CE.
- The vibrations transmitted by the machinery to the hand/arm system and to the whole body are determined per European Directive 2006/42/CE.

Specifications	
Sound pressure level at workstation	< 74 dBA
Guaranteed sound power level	108 dBA
Vibrations hand/arm	Vibration transmitted by this MEWP to the hand-arm does not exceed 2,5 m/s²(98,4 in/s²)
Vibrations whole body	Vibration transmitted by this MEWP to the whole body does not exceed 0,5 m/s²(19,6 in/s²)

4 - Wheel/Tire assembly

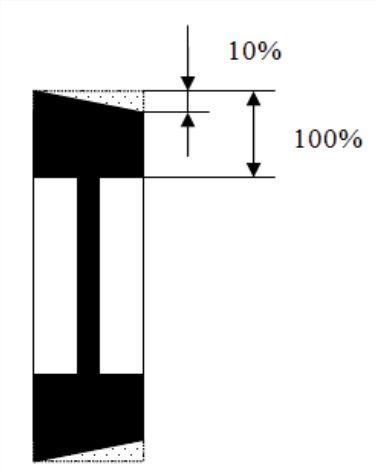
4.1 - TECHNICAL SPECIFICATIONS

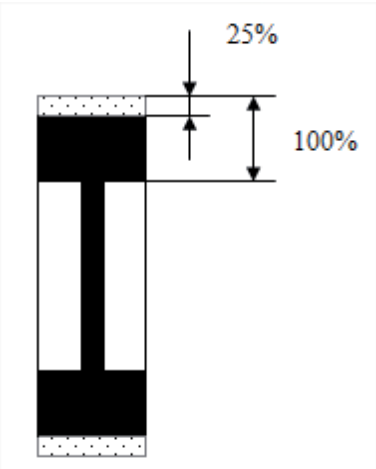
Component	Standard wheel
Reference number	OTR 445/65-22.5 18 plys
Type	Foam-filled
Wheel mass	387 kg - 0, + 37 kg (853 lb - 0, + 82 lb)
Size	Diameter : 1100 mm +/- 80 mm (44 in +/- 4 in) Width : 438 mm +/- 20 mm (18in +/- 1 in)
Torque	650 Nm (479 ft lb)

4.2 - INSPECTION AND MAINTENANCE

Replace the wheels and the tires/tyres if any of the following conditions exist :

- Presence of cracks, damage, deformation or other faults on the hub
- Damage to the tire :
- Cut or hole > 3 cm (2 in) in the rubber side wall.
- Blister or pronounced lump on the external and lateral wall.
- Damaged wheel stud.
- Damage or wear on the side wall to the extent that the reinforcing wire is visible.
- Consistent wear of the ground contact surface greater than 25%





Tires and rims are critical components for the stability of the machine. For safety reasons :

- **Use only HAULOTTE® spare parts according to the technical characteristics of the machine. Refer to the spare parts catalog.**
- **Do not replace factory-installed tires with tires of different specifications or ply rating.**
- **Never replace foam filled tire with a pneumatic (air filled) tire.**

E- General Specifications

Procedure of replacement :

- Loosen the wheel nuts on the wheel to be removed.
- Raise the machine using a jack or a hoist.
- Remove the wheel nuts.
- Remove the wheel.
- Install the new wheel.
- Lower the machine to the ground.
- Tighten the wheel nuts to the recommended torque Refer to maintenance and repair manuals.

N.B.-:-IF A WHEEL HAS BEEN REPLACED, WHILE OBSERVING THE AXLE TRACK PATTERN CHECK FOR CORRECT INSTALLATION.

5 - Options

5.1 - ON-BOARD GENERATOR

5.1.1 - Principle

The on-board generator supplies voltage (220 V or 110 V depending; on the option) in the basket to connect a power tool.

Check that the maximum power of the tool doesn't exceed that of the generator.

Do not expose the on-board generator to direct contact with a water beam or a high pressure cleaner.

5.1.2 - Procedure

Put into service :

1. Start the machine. Heat the engine for 15 mn before any operation.
2. From the platform control box, move the generator selector switch ((79)) to the right to activate the generator
3. Connect the tool to the socket on the platform.
4. You can change the tool at any time.

N.B.-:-WHEN USING THE ON-BOARD GENERATOR, NO FUNCTION MOVEMENTS ARE AVAILABLE.

Power off :

5. Disconnect the tool from the socket.
6. Move the generator selector switch ((79)) to the left to switch off the generator.
7. Machine movements are once again available.

5.2 - WELDER'S KIT

5.2.1 - Description

This carrier is designed for installing a welder (model type Miller CS280) on the carrier installed on the platform. The welder unit must be correctly attached to the carrier using the supplied flanges.

5.2.2 - Characteristics

Component	Characteristics
Weight of the carrier	10 kg (22 lbs)
Maximum weight of the welding station (Carrier + welder)	30 kg (67 lbs)

5.2.3 - Safety precautions

• Please read and assimilate the instructions before using the attachment.

• Do not use this attachment for installing any other type of welder unit. This attachment is specifically designed for the welder model type Miller CS280

• Do not overload the carrier. Ensure that the carrier is secured to the platform and welder is retained with the fastening plate.

• Do not exceed the maximum allowable platform capacity. The combined weight of the attachment, the welding station, the occupants, the tools and any other equipment must not exceed the maximum allowable platform capacity.

• The carrier should always be positioned so that it is within the platform.

5.2.4 - Pre-operation inspection

• Check that the carrier has no cracks or other damage.

• Check that the carrier is correctly installed and secured to the platform.

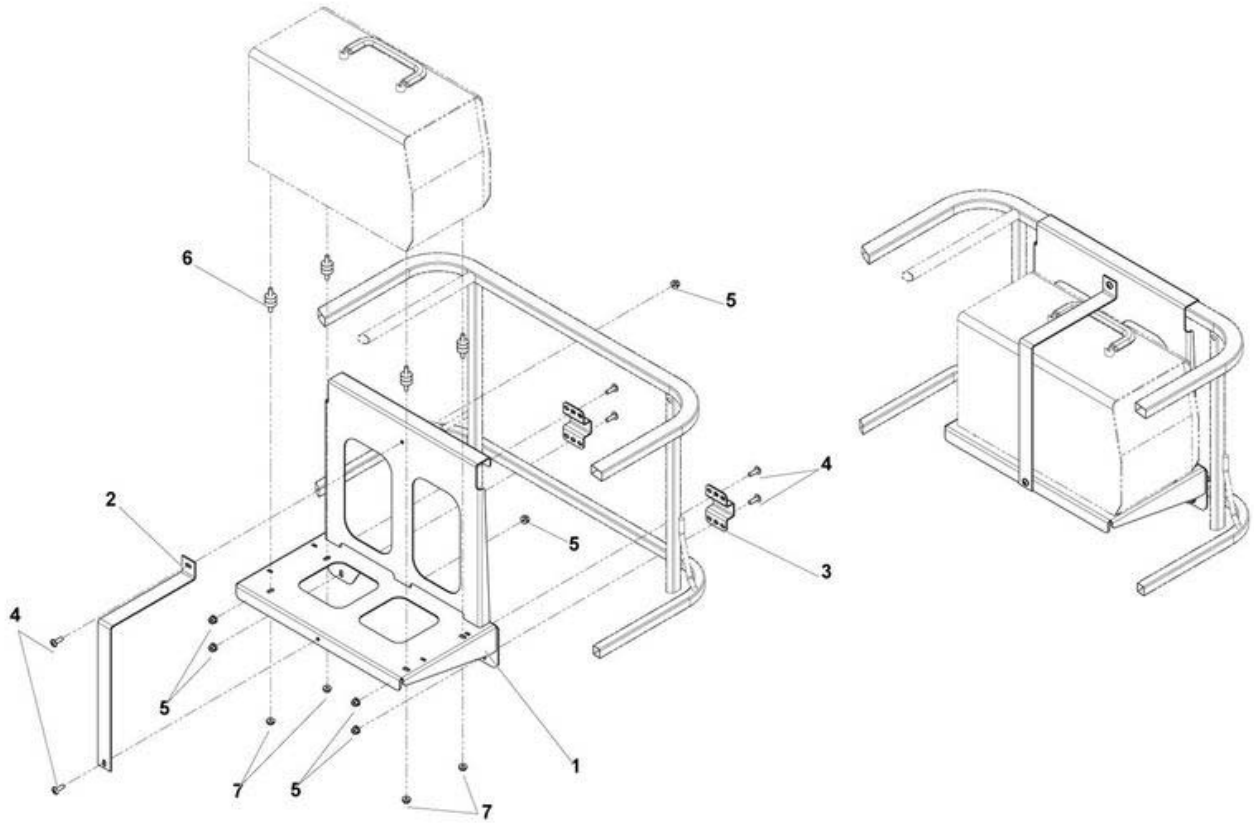
• Check that the information decal is present on the carrier and is legible.

5.2.5 - Operation

- Load the welding station onto the carrier.
- Securely attach the welding station to the carrier using the flanges supplied.

E- General Specifications

5.2.6 - Assembly - Dis-assembly



Marking	Description
1	Carrier
2	Fastening plate
3	Flange
4	Screws
5	Nuts
6	Rubber block
7	Nuts

- Place the carrier (1) flange over the top of the horizontal guardrail tube.
- Using the 2 flanges (3), 4 screws (4) and 4 locknuts (5), secure the carrier to the intermediate horizontal guardrail tube.
- Tighten the hardware to the recommended torque.

N.B.-:-TORQUE REQUIREMENTS : 22 N.M (16 LBS.FT)

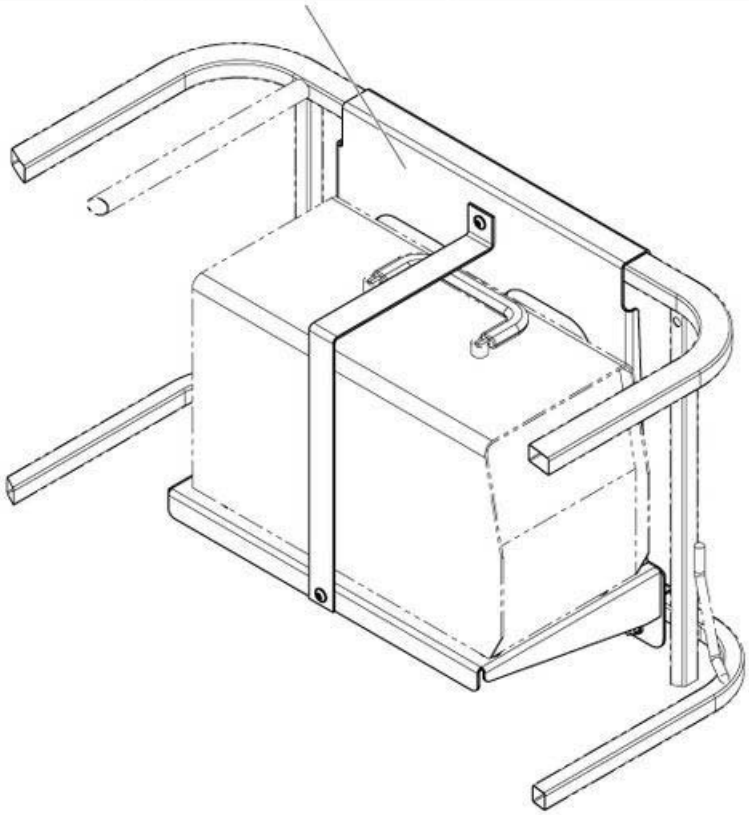
- Place the welder on the carrier (1).
- Secure the welder to the carrier using 4 rubber blocks (6), 4 nuts (7), 6 nuts (5) and fastening plate (2).
- Install the fastening plate (2) over the welder and secure it to the carrier with 2 screws (4) and 2 nuts (5).

E- General Specifications

5.2.7 - Specific decals

Location of the decals

1



Marking	Description	Quantity	Part number
1	Risk of overturning	1	4000131830

E - General Specifications

5.3 - PLUMBER'S KIT

5.3.1 - Description

This attachment is an assembly designed to transport pipes and tubes. The assembly comprises of 2 cradles securely attached to the platform. The load (material) should be placed in both the cradles and secured with a strap (not supplied).

5.3.2 - Characteristics

Component	Characteristics
Weight of the carrier	8 kg (18 lbs)
Weight of the equipment on the carrier	80 kg (176 lbs)
Maximum load surface	0,8 m² (Ø 0,32 m x 2,5 m) / 8.6 sq.ft (Ø 1 ft x 8.6 ft)
Maximum wind speed allowed	12,5 m/s - 45 km/h - 28 mph

5.3.3 - Safety precautions

- **Please read and assimilate the instructions before using the attachment.**
- **This attachment is designed for transporting pipes and tubes. Do not use this attachment for transporting other types of load. .**
- **Do not suspend loads.**
- **Do not overload the attachment and ensure that the equipment is correctly attached by means of a strap (not supplied).**
- **Do not exceed the maximum allowable platform capacity. The combined weight of the attachment, load, the occupants, the tools and any other equipment must not exceed the maximum allowable platform capacity.**
- **Do not load tubes whose surface area exceeds the maximum authorized surface area. Exposing an additional surface area to the wind reduces machine stability. Do not install any other attachments that increase the surface area exposed to the wind.**
- **Do not use the machine if the wind speed exceeds the authorized limit of the attachment.**
- **The cradles should always be positioned such that they are within the platform. Position the bottom end of the cradles such that they are resting on the platform floor.**
- **When maneuvring, ensure you maintain a safe distance between the load and the obstacles in the work environment.**

5.3.4 - Pre-operation inspection

- **Check that the cradles have no cracks or other damage.**
- **Check that the cradles are correctly installed and secured to the platform.**
- **Check that the information decal is present on the cradle and is legible.**
- **Check that the strap is not twisted or torn.**
- **Check that the position of the load and attachment is not obstructing access to the platform or the controls.**
- **Check that the position of the attachment and the load is not reducing visibility during maneuvers in the work environment.**

E- General Specifications

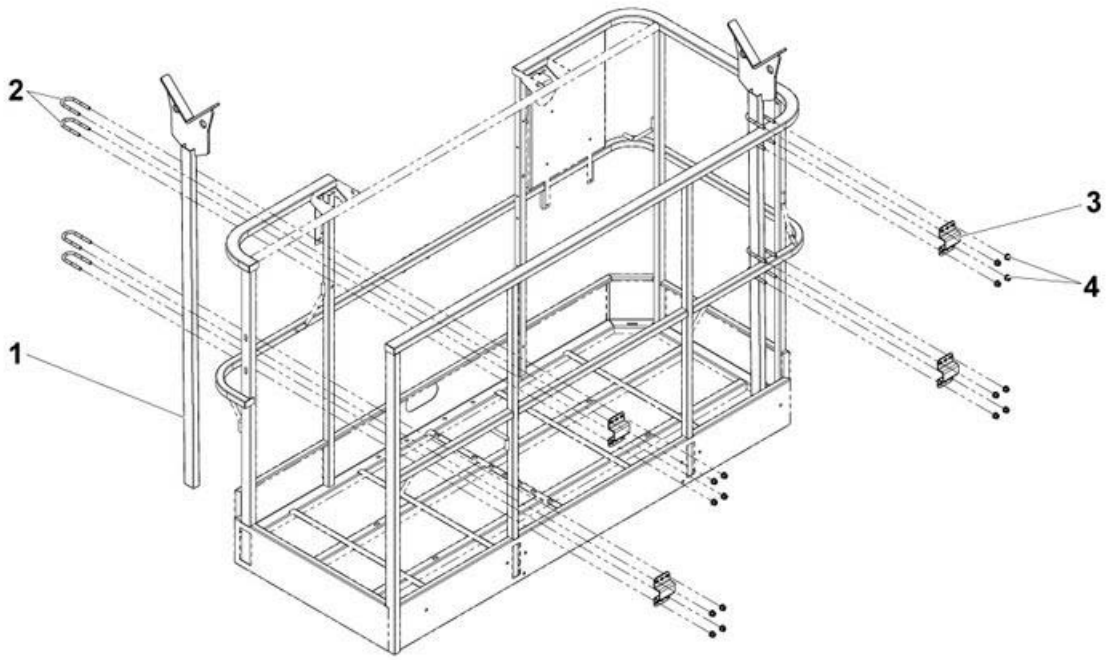
5.3.5 - Operation

- Position the load to rest on the 2 cradles.
- Center the load on the cradles.
- Securely attach the load to each cradle with strap of adequate strength and dimensions.

Strapping example(s)

E- General Specifications

5.3.6 - Assembly - Dis-assembly



Marking	Description
1	Cradle
2	Fastening screw U bolt
3	Flange
4	Nuts

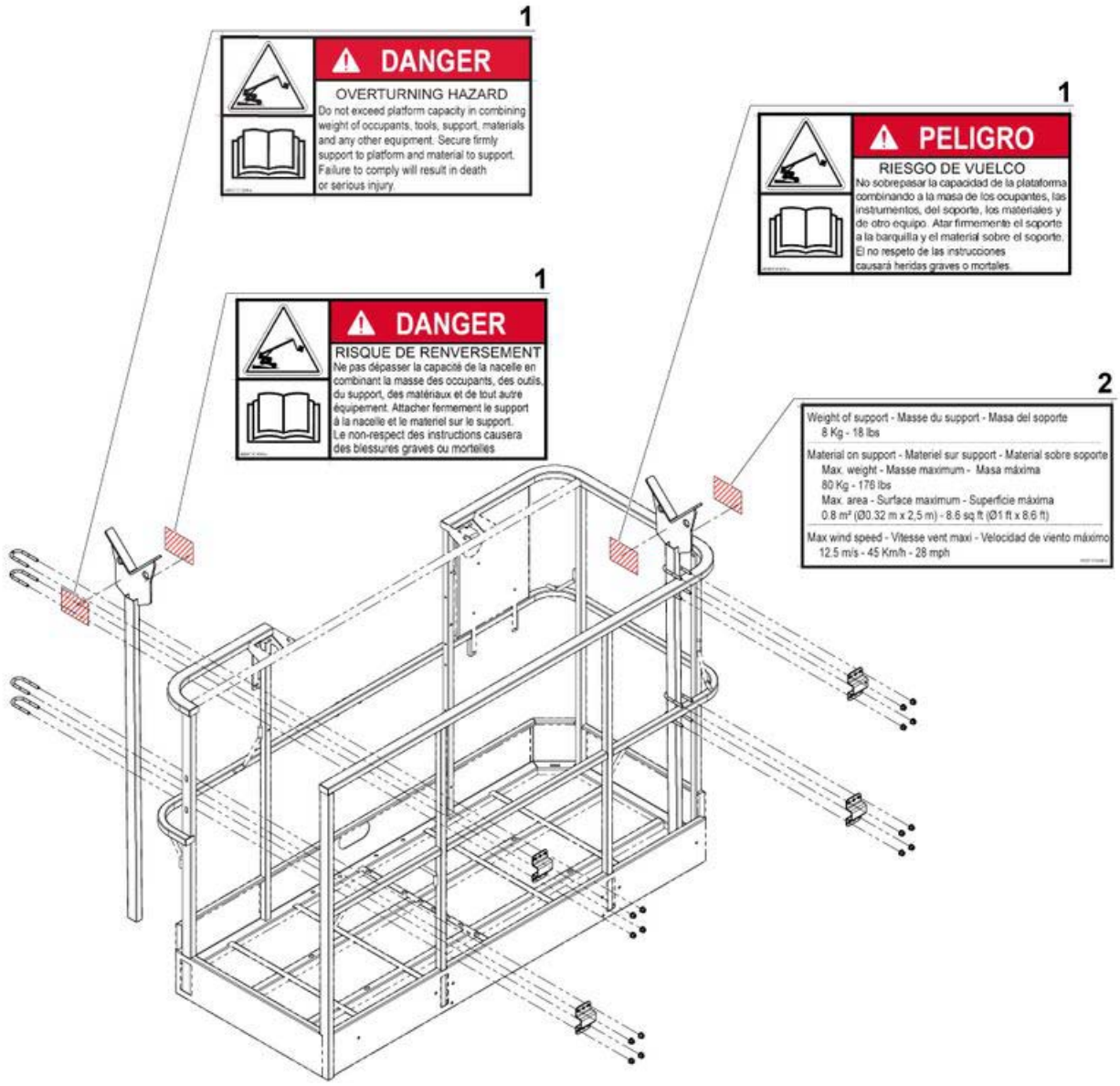
- Locate the cradles such that the load will be parallel to the length of the platform.
- Install two cradles (1) to the guardrails using 4 supplied flanges (3).
- Tighten up the flange using 2 supplied screw U bolts (2) and 4 nuts (4), wherever a cradle and the horizontal guardrail tubes intersect.

N.B.-:-TORQUE REQUIREMENTS : 22 N.M (16 LBS.FT)

- Ensure that the bottom of cradle is resting on the platform floor.
- Ensure that the distance between the 2 cradles support and center the load.
- Pre-operation test : Place and secure the load of 120 kg (265 lbs) on the cradles. Ensure that the cradles can support the load and that there is no visual structural damage.

5.3.7 - Specific decals, optional

Location of the decals



Marking	Description	Quantity	Part number
1	Risk of overturning	1	In english 4000131600 In french 4000131610 In spanish 4000131620
2	Equipment characteristics	1	4000131650

E- General Specifications

5.4 - GLAZIER'S KIT

5.4.1 - Description

This attachment is an assembly designed to transport panels. The assembly comprises of a tray that extends along the length of the floor. The panel(s) should be placed in the tray and secured to the guard rail with a strap (not supplied).

N.B.-:-THIS TRAY CAN BE USED ONLY WITH A SIDE ENTRY PLATFORM.

5.4.2 - Characteristics

Component	Characteristics
Maximum capacity	115 kg (220 lbs)
Weight of attachment	10 kg (22 lbs)
Maximum load surface	3 m² (32 sq.ft)
Maximum allowable height of the panel	1,20 m (3 ft 11 in)
Maximum allowed wind	CE / AS : 12,5 ms - 45 km/h - 28 mph ANSI / CSA: 7 ms - 25 km/h - 15 mph

5.4.3 - Safety precautions

- **Please read and assimilate the instructions before using the attachment.**
- **This attachment is designed for transporting panels. Do not use this attachment for transporting other types of load.**
- **Do not suspend loads.**
- **Do not overload the attachment and ensure that the equipment is correctly attached by means of a strap (not supplied).**
- **Do not exceed the maximum allowable platform capacity. The combined weight of the attachment, the panel(s) , the occupants, the tools and any other equipment must not exceed the maximum allowable platform capacity.**
- **Do not load panels whose surface area exceeds the maximum authorized surface area. Exposing an additional surface area to the wind reduces machine stability. Do not install any other attachments that increase the surface area exposed to the wind.**
- **Check that the position of the panel is not reducing visibility during maneuvers in the work environment. Do not transport panels whose height exceeds the authorized limit.**
- **When maneuvering, ensure that a safe distance is maintained between the panel and the obstacles in the work environment.**
- **Do not use the machine if the wind speed exceeds the allowable limit with the attachment.**

5.4.4 - Pre-operation inspection

- **Check that the tray has no cracks or other damage.**
- **Check that the cradles are correctly installed and secured to the platform.**
- **Check that the information decal is present on the cradle and is legible.**
- **Check that the strap is not twisted or torn.**

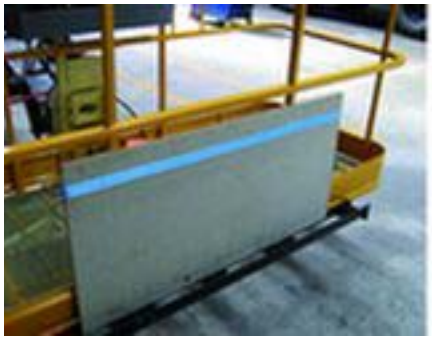
E- General Specifications

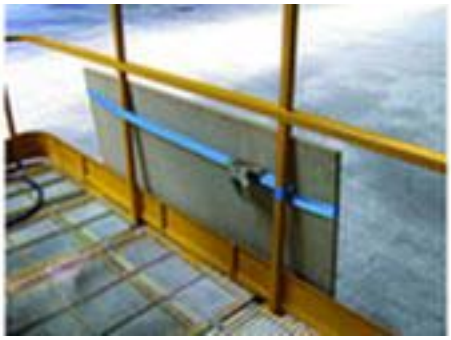
5.4.5 - Operation

- Load the panel onto the tray on platform.
- Secure the panel tray on the guardrail by means of a strap (not supplied) with the correct strength and dimensions.

Strapping example(s) - Large panel

Strapping example(s) - Small panel

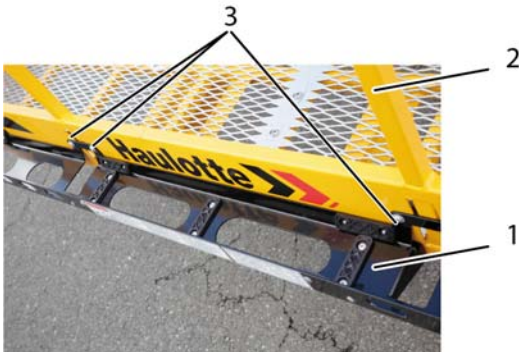




E- General Specifications

5.4.6 - Assembly / Dis-assembly

Tray



Marking	Description
1	Tray (Panel carrier)
2	Platform
3	Screws and nuts
4	Collars COLSON
5	Plastic protection

- Fix the tray (1) to the platform (2) using screws and bolts (3)
- Install plastic protection (5) on the handrail and attach it using collars (4)

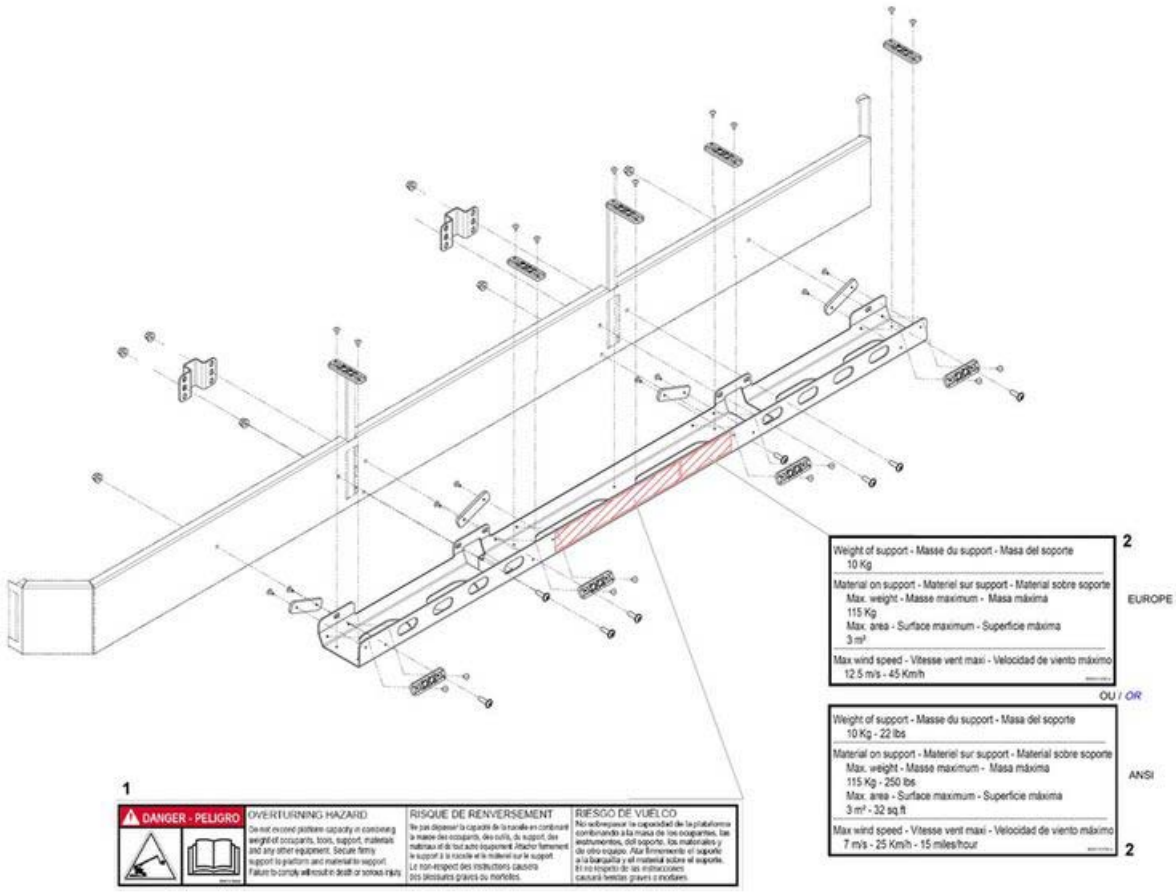
N.B.-:-TORQUE REQUIREMENTS : 22 N.M (16 LBS.FT)

- Pre-operation test : Place a load of 176 kg (388 lbs) on the carrier and carry out an inspection. Pre-operation inspection (Above).

E- General Specifications

5.4.7 - Specific decals

Location of the decals



Marking	Description	Quantity	Part number
1	Risk of overturning	1	40000131830
2	Equipment characteristics	1	CE / AS : 4000131630 ANSI / CSA: 4000131730

5.5 - ACTIV' SHIELD BAR - SECONDARY GUARDING SYSTEM (IF FITTED)

5.5.1 - Description

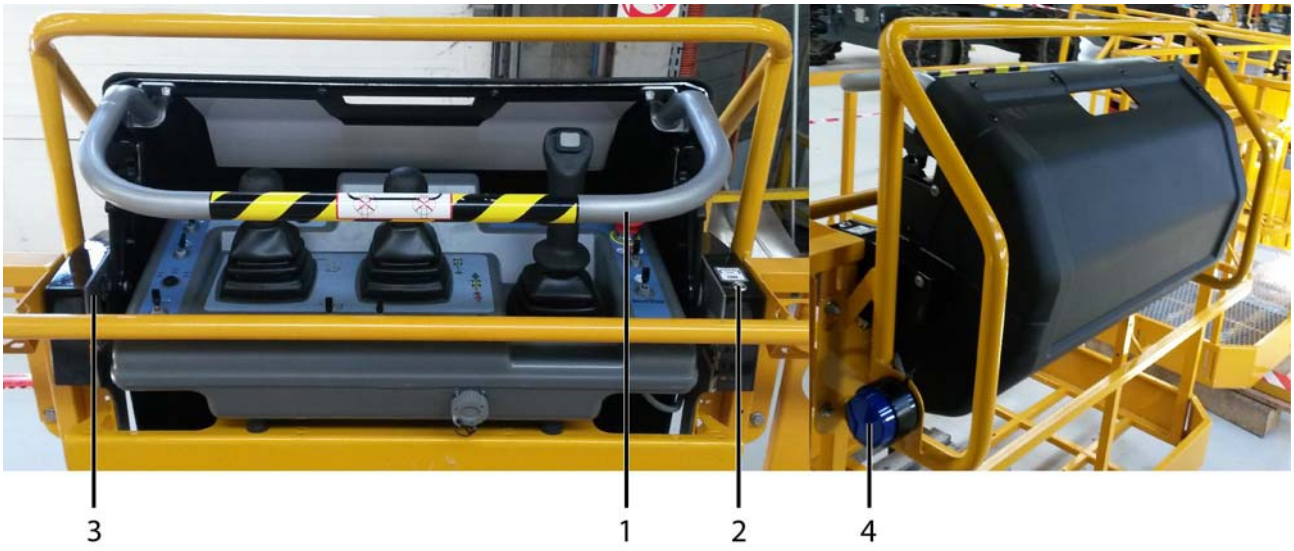
General Specification Activ' Shield Bar :

- The Activ' Shield Bar is a device designed to reduce the risk of entrapment against the control panel when the platform is in confined spaces.
- This device is complementary to the existing operator protection including the enable switch system (Trigger of joystick, 'Enable switch' foot pedal and 'Enable switch' on ground control box).
- The Activ' Shield Bar is active when the platform is elevated (boom or arm) and creep speed is automatically engaged. It is not enabled when stationary or in the transport position, when drive, turret rotation and jib raise are possible.
- The green indicator light of the Activ' Shield Bar is illuminated indicating the device is active :
- Light flashing : Machine stationary in Activ' Shield Bar zone (The platform is elevated and the Activ' Shield Bar will be active during movements).
- Light on : Activ' Shield Bar is active.

This system does not relieve the operator from the responsibilities of learning and practicing the principles of safe use and operation of the machine as provided by the manufacturer's instructions, employer's safety rules and worksite regulations

E- General Specifications

5.5.2 - Characteristics



Marking	Description
1	Activation bar
2	Green indicator light
3	Sensor
4	Blue flashing light

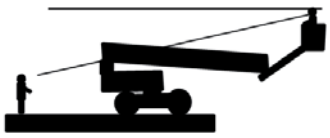
5.5.3 - Safety precautions

It is mandatory to ensure that the Activ' Shield Bar is functional at each start-up of the machine

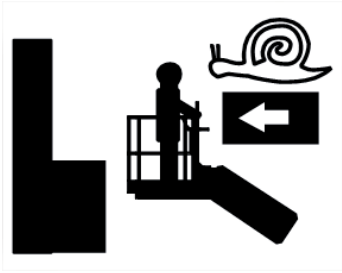
Do not use the Activ' Shield Bar as a handhold. This could result in an inadvertent triggering of the Activ' Shield Bar.

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

- When driving, position the platform so as to provide the best visibility possible and avoid any blind spots.



- Always ensure that the chassis is never driven any closer than 1 m (3 ft3 in) from holes, bumps, tilts, obstructions, debris and ground coverings that may hide dangers.
- During operation, keep all the parts of the body inside the platform.
- To position the machine close to obstacles, it is recommended to use boom movements (arm, boom, etc.) instead of the drive movements.
- Do not drive fast in narrow or cluttered areas. Keep speed under control while making turns or sharp bends.



5.5.4 - Pre-operation inspection

- **If any item on the checklist is marked NO during the inspection; machine must be tagged and locked out and placed out of service.**
- **DO NOT operate the machine until all identified items are corrected and it has been declared safe for operation.**

Description	Yes	No
Perform all specified machine functional tests		
• All machine functional tests result positive		
Start the machine from platform control box		
Switch off (pushed in) all E-Stop buttons		
• Check absence of warning signal		
• Check that the light indicator is not activated when the machine is in stowed position		
To ensure Activ' Shield Bar device is functioning correctly, perform the following :		
When stowed : • Check that the green indicator light is not illuminated		
When boom or arm is raised above 15° : • Check that the green indicator light is blinking-With platform stationary. • Check that the green indicator light is illuminated-With platform in motion.		
Simultaneously make a movement and push forward the activation bar to trigger the system : • Check that all movements stop. • Check that the horn and the blue flashing light are activated.		

N.B.-:-PRESS THE 'ENABLE SWITCH' FOOT PEDAL TO RESET THE SYSTEM

5.5.5 - Operation

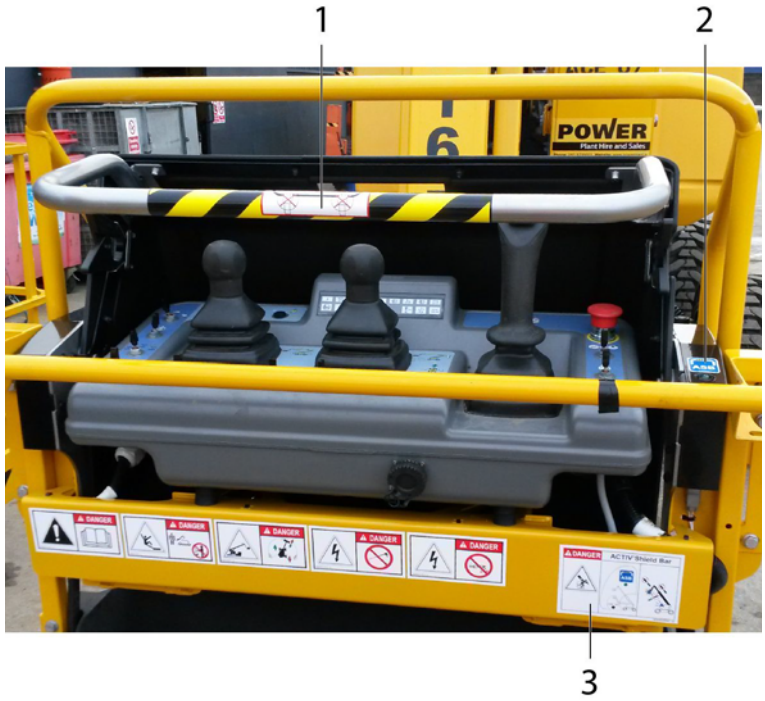
If the Activ' Shield Bar is pushed forward, all movements are stopped. The horn sounds and the warning blue light flashes. Only movements to move away from the entrapment are authorised.

To re-set the Activ' Shield Bar, release the activation bar, the 'Enable switch' foot pedal and controls. Then, re-press the 'Enable switch' foot pedal.

Care must be taken during all operations to prevent collision and entrapment against structures.

5.5.6 - Specific decals

Location of the decals



Marking	Description	Quantity	Part number
1	Do not lean on the bar	1	4000206690
2	Activ' Shield Bar active	1	4000596720
3	Activ' Shield Bar operating	1	4000609540

E - General Specifications

5.6 - SWING GATE

5.6.1 - Description

"SWING GATE" consists of a laterally mounted pivoting ½ gate with closing latch, which enables a better access to platform. Spring loaded hinges and a latching mechanism allows the gate to swing inwards only.

Swing gate

5.6.2 - Characteristics

Width of the gate : 500 mm / 19.68 in

5.6.3 - Safety precautions

- **The gate is part of the guardrail system and must be securely fastened after entering the platform.**
- **Pay attention to the toe board when entering or exiting the platform.**

5.6.4 - Pre-operation instructions

- Inspect that the latching mechanism is securely fastened.
- Check the hinges and latch operate correctly and are not deformed.
- Ensure that the gate returns automatically to the closed and fastened position after entering or exiting the platform.

F - Maintenance

1 - General

As an owner and/or operator of Haulotte equipment, your Safety is of utmost importance to HAULOTTE® , which is why HAULOTTE® places such a high priority on product safety.

INSPECTIONS are not only required by HAULOTTE®, but may also be required by industry standards and/or governmental regulations.

To ensure that your equipment continues to perform to the factory set performance levels, it is important that you regularly maintain your equipment and avoid making any modifications that are not approved by HAULOTTE®. Regular and timely inspections will reduce equipment down time as well as prevent possible injury.

N.B.-:-DO NOT OPERATE UNLESS YOU ARE FAMILIAR AND TRAINED IN THE PRINCIPLES OF SAFE MACHINE OPERATION.

Overview :

- Walk-around inspections take only a few minutes at the beginning and end of each shift – one of the best ways to prevent mechanical problems and safety hazards.

What to Do :

- Use your senses: sight, smell, hearing and touch.

Frequency :

- Check your machine periodically during your entire workday.
- Make sure to do your inspection the same way every time.
- Complete one of these inspections at the start and end of each shift.

N.B.-:-IF DAMAGE OR UNAUTHORIZED MODIFICATIONS ARE DISCOVERED, THE MACHINE MUST BE REMOVED FROM SERVICE UNTIL REPAIRS ARE MADE BY A QUALIFIED SERVICE TECHNICIAN.

It is the owner's responsibility to ensure the required maintenance as recommended by Haulotte is completed prior to the operation of the machine.

If regular maintenance is not carried out, this may :

- Void the warranty.
- Cause machine malfunction.
- Reduce machine reliability and shorten its service life.
- Jeopardize operator safety.

HAULOTTE Services® technicians are specially trained to carry out extensive repairs, interventions or adjustments on the safety systems or elements of HAULOTTE® machines. They carry genuine HAULOTTE spare parts and tools as required, and also provide fully documented reports on all work completed.

The inspection and maintenance table, identifies the role and the responsibilities of each party in periodical machine maintenance. Section C 4Inspection and Functional test.

2 - Maintenance Schedule

This section provides the necessary information needed to place the machine in safe operation. For maximum service life and safe operation, ensure that all the necessary inspections and maintenance have been completed. There are a number of factors which can affect the design life including but not limited to, severity of operating conditions/routine maintenance which should be carried out in accordance with this manual.

Severity of operating conditions may require a reduction in time between maintenance periods. Machines that have been out of service for more than 3 months must undergo a periodic inspection before the machine is put back into service.

Maintenance must be carried out by a competent company or person familiar with mechanical procedures.

Maintenance operations performed must be recorded in a register / log book of the machine.

3 - Inspection program

3.1 - GENERAL PROGRAM

The machine must be inspected on a regular basis at intervals of no less than once 1 per year. The purpose of the inspection is to detect any defect which could lead to an accident during routine use of the machine. Local standards and regulations may require more frequent inspections.

HAULOTTE® requires Reinforced and Major Inspections to be carried out on the product to extend its service life.

Inspections must be carried out by a competent company or person.

The inspection results must be recorded in the safety register or machine log book controlled and overseen by the company manager. This register or machine log book and the list of competent repair persons must be made available to the government work inspector and HAULOTTE Services®.

When	Responsible	Stakeholder	What
Before sale	Owner (or renter)	Competent technician or qualified technician HAULOTTE Services®	Periodic inspection
Before rent	Owner (or renter)	Competent technician or qualified technician HAULOTTE Services®	Daily inspection
Before use or every change of user	User	User	
Annually (1 year)	Owner (or renter)	Competent technician or qualified technician HAULOTTE Services®	Periodic inspection
5 years	Owner (or renter)	Qualified technician HAULOTTE Services®	Reinforced inspection
10 years	Owner (or renter)	Qualified technician HAULOTTE Services®	Major inspection

3.2 - DAILY INSPECTION

The Daily inspection includes a visual inspection, operational checks and testing of the safety systems. This must be conducted by the operator before using the machine.

This inspection is the responsibility of the user.

Refer to Section C for Daily inspection procedures.

3.3 - PERIODIC INSPECTION

The Periodic inspection is a thorough evaluation of the operation and safety features of the machine.

It must be conducted before the sale / resale of the machine and/or at least once 1every year.

Local regulations may have specific requirements on frequency, and content of inspections.

The severity of operating conditions may require frequent inspections.

This inspection is the responsibility of the owner, and inspections must be carried out by a competent company or person.

This inspection is in addition to the daily inspection.

This inspection should also be conducted after :

- Extensive dismantling and reassembly of major components.
- Repairs involving the machine's essential components.
- Any accident causing stress to the machine.

3.4 - REINFORCED INSPECTION

The Reinforced inspection is a thorough evaluation of the machine's structural components, to ensure proper functionality of the machine.

This evaluation must occur at a frequency of 5000 hours or every 5 years.

This inspection is the responsibility of the owner, and it must be conducted by a HAULOTTE Services® technician or by a competent company or person.

This inspection includes :

- Daily inspection
- Periodic inspection

N.B.-:-REFER TO THE MAINTENANCE MANUAL FOR DETAILS.

3.5 - MAJOR INSPECTION

The Major inspection is a thorough evaluation of the machine's integrity and proper functioning; after a standard/normal working life of 10 years.

This evaluation must take place after 10 years of operation and then repeated every 5 years thereafter.

The severity of operating conditions may require frequent inspections.

This inspection is the responsibility of the owner, and it must be conducted by a HAULOTTE Services® technician.

This inspection includes :

- Daily inspection
- Periodic inspection
- Reinforced inspection

N.B.-:-REFER TO THE MAINTENANCE MANUAL FOR DETAILS.

4 - Repairs and adjustments

Extensive repairs, interventions or adjustments on the safety systems or components must be performed by a HAULOTTE Services® technician. Use original spare parts and components only.

> ***N.B.-:-HAULOTTE SERVICES® TECHNICIANS ARE TRAINED PROFESSIONALS TO PERFORM EXTENSIVE REPAIRS, INTERVENTIONS AND ADJUSTMENTS ON THE SAFETY SYSTEMS OR COMPONENTS OF HAULOTTE® MACHINES. THE TECHNICIAN CARRIES GENUINE HAULOTTE® SPARE PARTS AND TOOLS AS REQUIRED, AND ALSO PROVIDES FULLY DOCUMENTED REPORTS ON ALL WORK COMPLETED.***

HAULOTTE Services® will not take responsibility for any outcomes resulting from inferior services or repairs performed by other unauthorised personnel.

HAULOTTE® reminds that NO modifications SHALL be carried out without the written permission of HAULOTTE®.

Any unauthorised repairs/modifications will void HAULOTTE® warranty.

With the utmost care to ensure enhanced reliability and greater safety of the HAULOTTE® products, it is pertinent that when a "Service or Safety Bulletin" is issued, action is taken immediately. Once the bulletin has been addressed, make sure that the completed form is submitted to HAULOTTE®.

> ***N.B.-:-WHEN DISPOSING OR SCRAPPING THIS MACHINE, PLEASE CONSIDER APPROPRIATE METHODS OF RECYCLING. ANY ITEMS THAT REQUIRE SPECIFIC DISPOSAL ARE LISTED WITH INSTRUCTIONS IN THE MAINTENANCE MANUAL.***

G - Other information

1 - Warranty disclosure

1.1 - After Sales Service

Our HAULOTTE Services® After Sales Service is at your disposal throughout your machine's service life to ensure the optimum use of your HAULOTTE product :

- When contacting our After Sales Service, ensure that you provide the machine model and serial number.
- When ordering any consumables or spare parts, please use this manual and the HAULOTTE® Essential catalogue to receive your genuine HAULOTTE® spare parts, your only guarantee of parts interchangeability and correct machine operation.
- If there is an equipment malfunction involving a HAULOTTE® product, then contact HAULOTTE Services® immediately even if the malfunction does not involve material and/or bodily damage.

1.2 - Manufacturer's warranty

1.2.1 - Warranty acceptance

On reception of his machine, the owner or rental company must check the machine's condition and fill out the machine reception slip provided.

1.2.2 - Warranty period

The present warranty is valid for a period of 12 months or up to a maximum of 1000 operating hours for lifting and handling equipment and 2000 operating hours for public works machinery, starting from delivery and terminating when the first limit is reached.

Spare parts are covered by a 6 month warranty.

1.2.3 - Procedure conditions

To benefit from the warranty, the owner or rental company must inform the nearest HAULOTTE® subsidiary or the subsidiary that delivered the machine (the only dealer authorised to carry out an intervention under the manufacturer's warranty agreement) of the defect in writing as quickly as possible.

The subsidiary will decide whether to repair or replace the part that proves to be faulty.

The owner or rental company must present the duly completed maintenance book supplied with the machine as proof that the maintenance operations recommended by the manufacturer have been carried out.

The owner or rental company must ensure that the defect covered by the HAULOTTE® warranty is reported to and acknowledged by the HAULOTTE® subsidiary as rapidly as possible or must report the defect in writing.

Work carried out under the HAULOTTE® warranty will be performed by the subsidiary which delivered the machine, wherever possible.

1.2.4 - Conditions of warranty

HAULOTTE® guarantees its products against defects, faults or manufacturing defects when the owner or rental company has informed HAULOTTE® of the defect.

The warranty does not cover the consequences of normal wear, nor any defects, failure or damage resulting from poor maintenance or abnormal usage, in particular overloading, impact by an external source, faulty installation or any modification made to products marketed by HAULOTTE® and performed by the owner or rental company.

In the event of operation or use which does not comply with the instructions or recommendations in the maintenance book, warranty claims will not be accepted.

The machine utilisation period must be recorded by reading the engine hour meter whenever an intervention is made. The engine hour meter must be maintained in good working order to guarantee maximum working life and to justify maintenance at the recommended time.

Warranty obligations for the time period stated above will cease immediately in situations where the defect is due to the following reasons :

- Use of spare parts that are not HAULOTTE® originals.
- If elements or products other than those recommended by the manufacturer are used.
- If the HAULOTTE® name, serial numbers or identification marks are removed or altered.
- After an unreasonably long delay before reporting a manufacturing problem.
- If the owner or rental company continues to use the machine despite problems.
- If damage is caused by modifications that do not comply with HAULOTTE® specifications.
- If lubricants, hydraulic oils or fuels that do not comply with HAULOTTE® recommendations are used.
- If the machine is incorrectly repaired or used by the customer.
- In case of an accident caused by a third party.

G- Other information

If no particular agreement has been made, any claims made after the previously established warranty period has expired will be refused.

The present warranty does not cover damage that may result directly or indirectly from any flaws or defects covered by the latter :

- Consumables : No claims will be accepted for objects or parts replaced in the context of normal machine usage.
- Settings : Adjustments of all sorts may become necessary at any time. Therefore adjustments are considered a part of normal machine usage conditions and are not covered by the warranty.
- Hydraulic and fuel circuit contamination : Every possible precaution is taken to ensure that fuel and hydraulic liquid delivered is clean. HAULOTTE® will not accept any claims concerning cleaning of the fuel circuit, filter, injection pump or any other equipment in direct contact with fuel or lubricants.
- Wearing parts (pads, bearings, tires/tyres, connections, etc.) : These parts are, by definition, subject to deterioration during the period of operation. Wearing parts will therefore not be covered by the warranty agreement.

G - Other information

2 - Subsidiary contact information

	HAULOTTE FRANCE PARC DES LUMIERES 601 RUE NICEPHORE NIEPCE 69800 SAINT-PRIEST **TECHNICAL Department:** **+33 (0)820 200 089** **SPARE PARTS : +33 (0)820 205 344** FAX : +33 (0)4 72 88 01 43 E-mail : haulottefrance@haulotte.com www.haulotte.fr		HAULOTTE ITALIA VIA LOMBARDIA 15 20098 SAN GIULIANO MILANESE (MI) **TEL: +39 02 98 97 01** FAX: +39 02 9897 01 25 E-mail : haulotteitalia@haulotte.com www.haulotte.it		HAULOTTE INDIA Unit No. 1205, 12th foor,Bhumiraj Costarica, Plot No. 1&2, Sector 18, Palm Beach Road, Sanpada, Navi Mumbai- 400 705 Maharashtra, INDIA Tel. : +91 22 66739531 to 35 E-mail : sray@haulotte.com www.haulotte.in
	HAULOTTE HUBARBEITSBÜHNEN GmbH Ehrenkirchener Strasse 2 D-79427 ESCHBACH **TEL : +49 (0) 7634 50 67 - 0** FAX : +49 (0) 7634 50 67 - 119 E.mail : haulotte@de.haulotte.com www.haulotte.de		HAULOTTE VOSTOK 61A, RYABINOVAYA STREET Bldg. 3 121471 MOSCOW RUSSIA **TEL/FAX : +7 495 221 53 02 / 03** E.mail : info@haulottevostok.ru www.haulotte-international.com		HAULOTTE DO BRASIL AV. Tucunaré, 790 CEP: 06460-020 – TAMBORE BARUERI – SAO PAULO – BRASIL **TEL : +55 11 4196 4300** FAX : +55 11 4196 4316 E.mail : haulotte@haulotte.com.br www.haulotte.com.br
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	HAULOTTE PORTUGAL ESTRADA NACIONAL NUM. 10 KM. 140 - LETRA K 2695 - 066 BOBADELA LRS **TEL : + 351 21 995 98 10** FAX : + 351 21 995 98 19 E.mail : haulotteportugal@haulotte.com www.haulotte.es		HAULOTTE SINGAPORE Pte Ltd. No.26 CHANGI NORTH WAY, SINGAPORE 498812 **Parts and service Hotline:** **+65 6546 6150** FAX : +65 6536 3969 E-mail: haulotteasia@haulotte.com www.haulotte.sg		HAULOTTE MIDDLE EAST FZE PO BOX 293881 Dubaï Airport Free Zone DUBAÏ United Arab Emirates **TEL : +971 (0)4 299 77 35** FAX : +971 (0) 4 299 60 28 E-mail : haulottemiddle- east@haulotte.com www.haulotte-international.com
	HAULOTTE SCANDINAVIA AB Taljegårdsgatan 12 431 53 Mölndal SWEDEN **TEL : +46 31 744 32 90** **FAX : +46 31 744 32 99** E-mail : info@se.haulotte.com spares@se.haulotte.com www.haulotte.se		HAULOTTE TRADING (SHANGHAI) Co. Ltd. #7 WORKSHOP No 191 HUA JIN ROAD MIN HANG DISTRICT SHANGHAI 201108 CHINA **TEL : +86 21 6442 6610** FAX : +86 21 6442 6619 E-mail : haulotteshanghai@haulotte.com www.haulotte.cn		HAULOTTE ARGENTINA Ruta Panamericana Km. 34,300 (Ramal A Escobar) 1615 Gran Bourg (Provincia de Buenos Aires) Argentina **TEL.: +54 33 27 445991** FAX. +54 33 27 452191 E-mail : haulotteargentina@haulotte.com www.haulotte-international.com
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G - Other information

For the engine powered machines destined to the US market (Standards ANSI and CSA)

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the state of California to cause cancer, birth defects, and other reproductive harm

G - Other information

Notes