Haulotte

For online reference and to download the manuals for your machines HAULOTTE®, go to :
https://www.e-technical-information.com
or, scan the QR Code below :

STAR 10 - STAR 26J

Operator's manual

STAR 10 - STAR 26J

4001178810 E 10.22 USA / GB

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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 device for lifting people designed and manufactured with the intent to enable users to access overhead elevated temporary workplaces with the necessary tools and equipment. 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 the safe and appropriate use of this equipment, only trained personnel are authorised to use and carry out maintenance on the aerial work platform.

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

- Comply with safety instructions.
- use this equipment within the performance limits specified by this user manual.

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 user manual does not replace the necessary training that is required for all of this machine's 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® !

For online reference and to download the manuals for your machines HAULOTTE®, go to :
https://www.e-technical-information.com
or, scan the QR Code below :

A- Foreword

1 - User responsibility

1.1 - OWNER'S RESPONSIBILITY

The owner (or hirer) has the obligation to :

- To inform operators of the instructions contained in the Operator's Manual.
- Follow local regulations regarding operation of the machine.
- Replace all manuals or labels that are missing or in poor condition. 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 (or plant superintendent) is required :

- To train and check the training of users.
- To authorise the trained user(s) 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, convulsions, 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 include all of the instructions in this manual.
- 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/herself with the decals affixed on the machine.
- To inspect the machine before use according to HAULOTTE®'s recommendations..
- Inform the owner (or hirer) if the manual or any decals are missing or are not legible.
- Inform the owner (or hirer) of any machine malfunction.

Operators must ensure that the inspections have been carried out by the owner and that they can use the machine for the purpose intended by the manufacturer.

All users (driver, passenger, maintainer, transporter, etc.) must familiarise themselves with the emergency controls and machine operation in case of 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 - Incorrect use

- Do not use the machine outside of the conditions specified in this manual.
- Do not use the machine as a crane, material lift or elevator.

- Do not use the work platform as a hoisting machine (crane) by suspending a load outside of 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 the wheels installed in the factory with wheels with different characteristics
- Do not alter or disable machine components that in any way affect safety and stability.
- Do not disable the safety devices.
- Do not use the machine if a label is missing or illegible.
- Do not damage, modify or hide machine labels or inscriptions.

2.1.2 - Falling Hazards

N.B.-:-THE GUARDRAIL IS THE MAIN PROTECTION SYSTEM AGAINST FALLS FROM THE MOBILE LIFTING PLATFORM (PEMP).

Before commencing operation :

- Ensure that guard rails are correctly installed and secured.
- Ensure that gate or sliding bar is in its securely locked position.
- If using a machine that has a swing gate, check that the entry gate closes by itself and gate latches and locks.

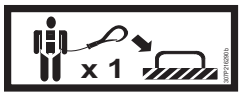
- Remove oil or grease from the steps, floor, handrail and the guardrails.
- Clean the floor of the platform (no debris).

A- Foreword

To enter or exit from the platform :

- The machine must be completely stowed (Access configuration).
- Face the machine to access the opening to the platform.
- Keep 3 points of contact (both hands and a foot) on the steps and the guardrail.
- Keep fingers away from moving parts near entry gate.

When in the platform :



- Where personal fall protection equipment (FPE) is required by the employer, a competent authority or local regulations, we recommend using a full harness with a safety line.
- Personal fall protection equipment must only be fastened to approved fall protection anchoring points on the platform provided for this purpose.
- Refer to this decal located on the platform.
- Safety lines must never be attached to an object or structure outside of the work 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.
- Do not lean on the gate or sliding bar.
- Do not lean over the guard rails or climb over them. Only work in the platform area within the guard rails.
- 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.
- 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.
- 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.
- Position loads uniformly in the centre of the work platform.

- Do not use the machine at wind speeds that are above the permissible threshold. Refer to the display on the work platform to view the permissible wind speed.
- Do not increase the surface area of the platform exposed to wind. This includes adding panels, mesh, banners. Failure to follow this instruction may lead to a loss of stability and as a result, the machine could tip over.

- Do not raise the platform or move the machine with the platform raised on a slope with a gradient greater than the machine's permissible limit.

- Do not drive the machine on slopes or grades exceeding the specified limits.

- 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.

Using the machine on a slope

Do not drive the machine on slopes with gradients exceeding the authorised transversal and lateral limits for the machine. Section B 4.1 - Technical specifications.

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

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	Gale	Some branches break. Generally we cannot walk against the wind.	17,2 - 20,7	62 - 74	38,53 - 45,98
9	Strong gale	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 - Risk of electric shock (electrocution)

Risk of death or serious injuries.

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

Always position all parts of the aerial work platform, the occupants, accessories and tools at a reasonable distance from power lines to ensure that no part of the work platform accidentally comes into contact with a power line.

Apply local regulations pertaining to safety distances. If this is not possible, follow the distances in the table below at a minimum :

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

- 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 platform 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.

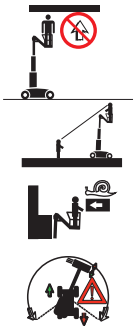
Do not work on or operate a machine in an explosive or flammable atmosphere / environment.

- 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.
- ALWAYS avoid contact with battery acid. Battery acid causes serious burns and should be kept away from skin or eyes. If contact occurs, flush with water and consult a physician immediately.

2.1.6 - Crushing / Collision Hazards

Before using the machine, mark out the machine's work and circulation area using a marking system appropriate to the task at hand and the work environment.

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 and take care to avoid trapping of hands/fingers while holding on to the guardrails.
- To position machine close to a building/structure, use the jib movement control function to position, instead of driving machine closer to structure.
- Warn personnel not to work, stand, or walk under a raised boom/platform.
- Always ensure that the chassis is never kept 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 white arrows on the chassis and 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.
- Personal Protection Equipment (EPI) :
  - The occupants of the aerial work platform must wear personal protection equipment and comply with local regulations in force.
  - Operators must comply with the safety standards of the job site and the employer, as well as the applicable state regulations relating to the use of personal protective equipment.
  - All personal fall protection equipment (PFPE) must comply with current regulations, must be inspected and used in accordance with the manufacturer's instructions.
- 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 - Risk of involuntary movements

Never use a damaged or malfunctioning machine.

Always respect the following rules :

- 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).

A- Foreword

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	HAULOTTE Group - Australia, India and Asia Product Safety Department	HAULOTTE Group - North & South America Product Safety Department
Address : Rue Emile Zola - 42420 Lorette - France	Address : No.26 Changi North Way - Singapore 498812 - Singapore	Address : 3409 Chandler Creek Rd. - Virginia Beach, VA 23453 - United States
Tel : +33 (0)4 77 29 24 24	Tel : +65 6546 0123	Tel : +1 757 689 2146
Email : productsafety.europe@haulotte.com	Email : productysafety.apac@haulotte.com	Email : productsafety.americas@haulotte.com

Connect to our website : www.haulotte.com

5 - Compliance

5.1 - PRODUCT MODIFICATION

It is strictly forbidden to modify a HAULOTTE® product. Any modification may violate Haulotte design parameters, local regulations and industry standards.

Any requests for modification must be formulated in writing (form) and be approved by the manufacturer.

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 - Implementing manufacturer safety campaigns

It is essential to implement the safety campaigns issued by the manufacturer. All of these campaigns are accessible on our website.

Connect to our website : www.haulotte.com

Never market (or sell) a machine without first having carried out all of the safety campaigns.

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 products technical characteristics / specifications without notice.

5.3 - 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.

Connect to our website : www.haulotte.com

5.4 - DECLARATION OF CONFORMITY

The CE declarations of conformity only apply to machines that have been approved and commissioned within the European Community (EC).

Declaration of conformity - Electric platforms

Haulotte

DECLARATION CE DE CONFORMITE
(EC DECLARATION OF CONFORMITY)

CE

Fabricant et personne autorisée à constituer le dossier technique :
(Manufacturer and the person authorised to compile the technical file:)

Compliance & Regulation Director
HAULOTTE GROUP S.A.
RUE EMILE ZOLA

HAULOTTE GROUP

42420 LORETTE
FRANCE

Adresse du site de production
(Address of the Division)

Nacelle élévatrice de personnel
(Mobile Elevating Work Platform)

en conformité avec le modèle type
(In compliance with the Model Type)

Modèle type de la machine concernée
(Type model of the concerned machine)

Nom commercial
(Commercial name)

Nom commercial de la machine conc
(Commercial name of the concerned m

Numéro de série
(Serial number)

Numéro de série de la machi
(Serial number of the machin

Organisme notifié
(Notified body)

Nom et adresse de l'organisme n
(Name and address notified b

Numéro de certificat
(Certificate number)

Numéro certificat du t de machine
(Certific e num he e of machine)

Charge maximale d'utilisation
(Rated capacity)

Charge maximale d'ut ation de la machine concernée
(Rated capacity of th concerned machine)

Nous déclarons que cette machine est conforme aux dispositions des Directives suivantes
(We hereby declare that this machine conforms with all the elevant provisions of the Directives listed below)

Directive CE Machine
(EC Machinery Directive)

2006/42/CE

Se conforme aux principales exigences de la norme harm sé
(This machine also fulfils the principles of the harmo d stan d)

EN280:2013 + A1:2015

Directive CE concernant la compatibili électr agn
(EC Directive on electromagnetic compati v)

2014/30/EU

Directive CE RED con rnan s équipem ts radioélectriques(si machine équipée)
(RED EC Direc on rad electrical equipment (if machine equipped)

2014/53/UE

Cet déclar ion porte exclusivement sur la machine dans l état où elle a été placée sur le marché
(This d ation relates exclusively to the machinery in the state in which it was placed on the market)

ute m dification de la machine décrite ci-dessus a pour effet d invalider cette déclaration
(Any m dification to the above described machine violates the validity of this declaration)

Nom et signature du Directeur du site de production
(Name and signature of the Division Director)

Lieu *(Place)*

Date *(Date)*

SPECIMEN - SAMPLE

haulotte.com

UKCA Declarations of Conformity only apply to machines that are certified for England, Wales and Scotland.

Declaration of conformity - Electric platforms

Haulotte

UKCA DECLARATION OF CONFORMITY

UK CA

Manufacturer and the person authorised to compile the technical file:

HAULOTTE GROUP	Nathalie Reynolds General Manager UK and Ireland Haulotte UK ltd
France	Unit 1 Gravelly Way, Four Ashes
	Wolverhampton, West Midlands WV10 7GW
	ENGLAND

Mobile Elevating Work Platform

In compliance with the Model Type	*Model Type of the concerned machine*
Commercial name	*Commercial name of the concerned machine*
Serial number	*Serial number of the machine*
Approved body	
Certificate number	
Rated Capacity	*Rated capacity of the concerned machine*

We hereby declare that this machine conforms with all the relevant provisions of the Regulations listed below

Supply of Machinery (safety)	2008
This machine also fulfils the principles of the designed standards	BS EN280 : 2013 + A1 : 2015
Electromagnetic compatibility	2016
Radio equipment (if machinery equipped)	2017

This declaration relates exclusively to the machinery in the state in which it was placed on the market

Any modification to the above described machine violates the validity of this declaration

Name and signature division director **Date and place**

haulotte.com

1 - General safety

1.1 - INTENDED USE

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.
- If the machine is stored at a temperature out of 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

The purpose of the labels on the machine is to alert the user to the conditions of use and risks related to 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).

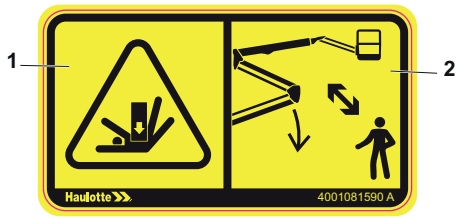
Familiarize yourself with the decals and the hazard severity levels.

The labels must be kept in good condition, otherwise they must be replaced.

Familiarize yourself with the decals and their respective color codes.

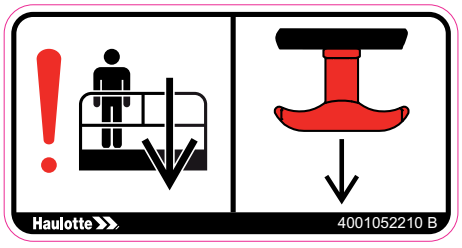
Additional decals can be ordered from HAULOTTE Services®.

CE, UKCA, AS and EAC standards -
Label warning risk



Marking	Description
1	Risk identification symbol
2	Avoidance symbol pictorial

CE, UKCA, AS and EAC standards -
Label informing about an important function of the machine



B- Familiarization

ANSI and CSA standards

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

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.

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
	Risk of crushing or pinning		Foot crushing hazard		High pressure fluid ejection hazard
			Hand crushing hazard		Crushing hazard
			Health/safety hazards related to chemicals		Burn hazard
	Risk of electrocution		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
	Fall hazard		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
	Use of high-pressure cleaners prohibited		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		

2 - Models description

Models	Regulations						
	CE	UKCA	ANSI	CSA	EAC	AS	JIS
STAR 10	✓	✓	✗	✗	✓	✓	✓
STAR 26J	✗	✗	✓	✓	✗	✗	✗

Legend

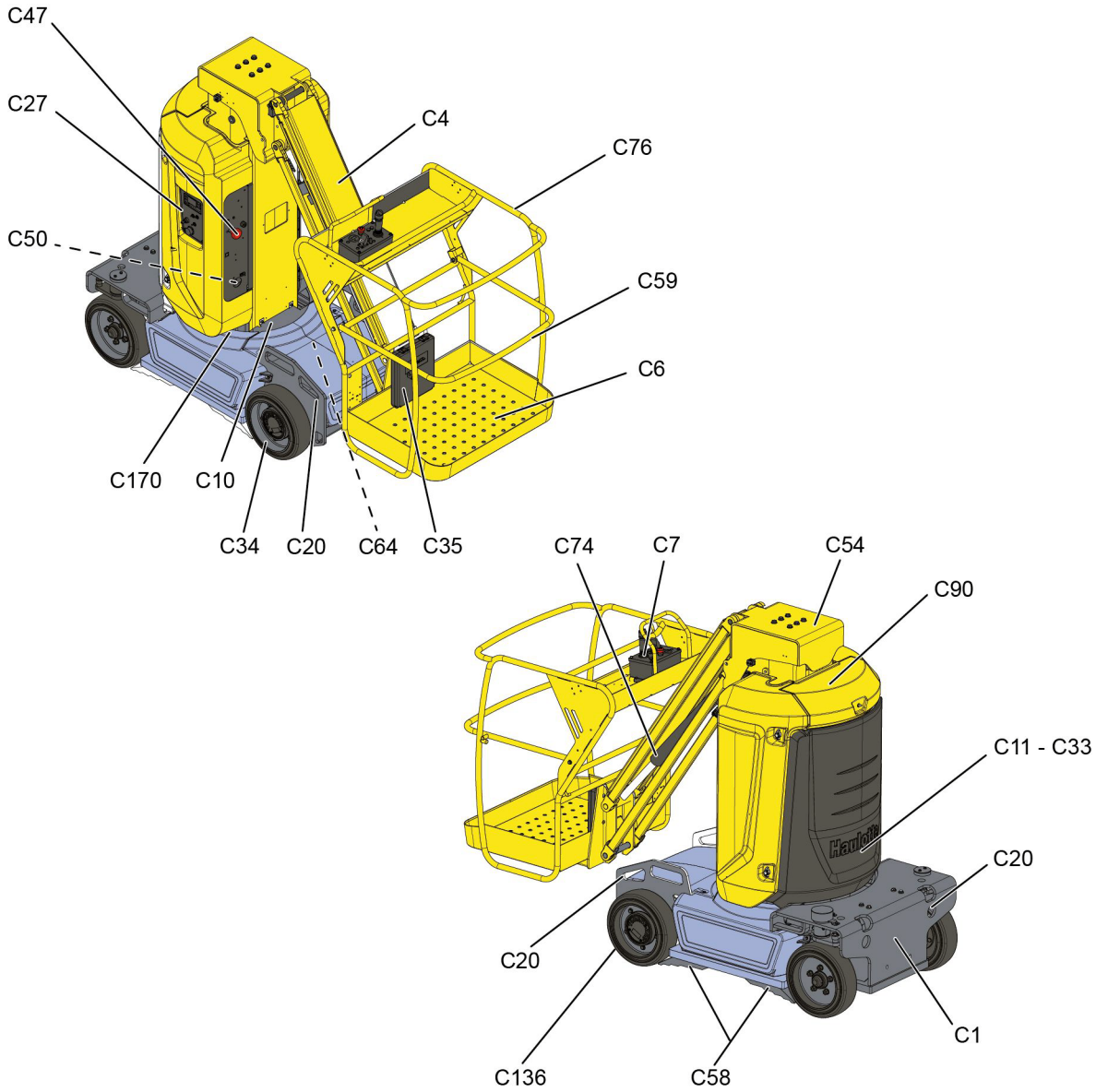
✓	Available
✗	Not available

Notes

3 - Primary machine components

3.1 - LAYOUT

STAR 10 - STAR 26J



B- Familiarization

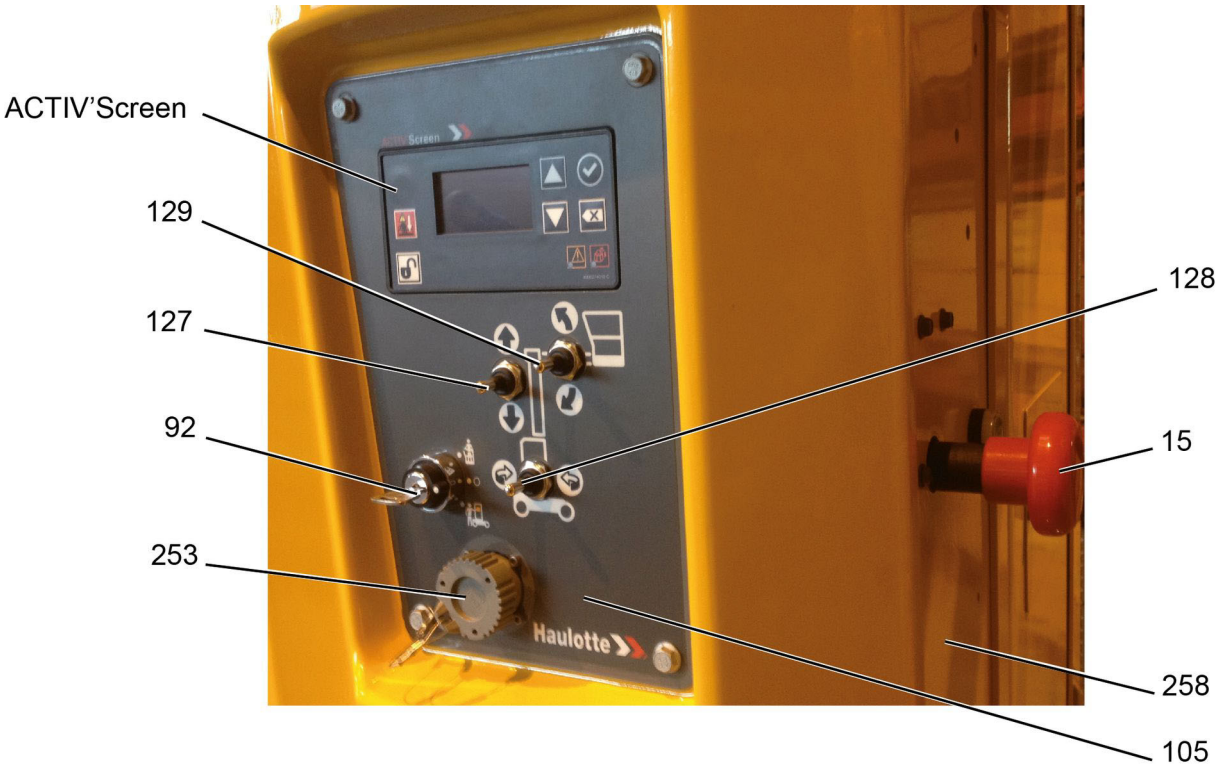
Marking	Description	Marking	Description
C1	Chassis	C47	Battery isolation switch
C4	Jib	C50	Battery charger socket
C6	Platform	C54	Telescopic mast
C7	Platform control box	C58	Pothole protection
C10	Slew ring	C59	Platform entry (hinged rail)
C11	Turntable assembly	C64	Tilt sensor
C20	Tie-down (and/or forklift loading)	C74	Jib leveling cylinder
C27	Ground control box + Universal plug	C76	Guardrail
C33	Counterweight	C90	Batteries pack
C34	Drive wheels	C136	Steer wheels
C35	Document holder	C170	Brake release switch
C42	Foot Switch (For Japan only)		

Universal plug

3.2 - GROUND CONTROL BOX

3.2.1 - Layout

General view



Controls and indicators

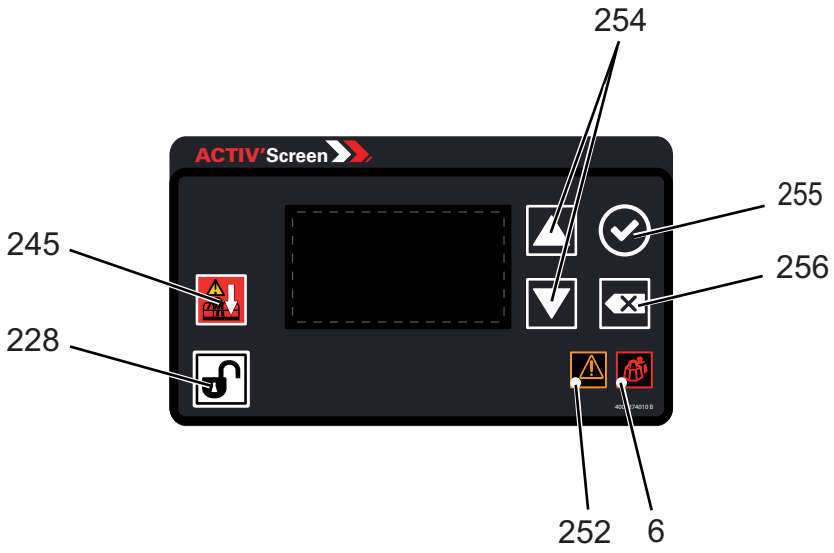
Marking	Name	Description	Function
15	SB801	E-stop button	Pulled out : E-stop activated
			Pushed in : E-stop deactivated
92	SA901	Control box activation key switch	Move upwards : Platform control box energized
			Center : De-energizes control system
			Move downwards : Ground control box energized
105		Beacon light [1]	Move to the right : Flashing light is turned on
			Move to the left : Flashing light is turned off
127	SA520	Mast telescoping selector	Move upwards : Mast lifting
			Move downwards : Mast retraction
128	SA250	Turret rotation switch	Move to the left : Clockwise (CW) rotation
			Move to the right : Counter clockwise (CCW) rotation
129	SA620	Jib raising / lowering switch	Move upwards : Jib raising
			Move downwards : Jib lowering
253	CN03	Diagnostic tool socket	
258		Brake release telecommand connection[2]	

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

3.2.2 - ACTIV'Screen

Upon starting and during operation of the machine, the LCD screen "Activ'Screen" located on the ground control box displays in real time the machine operating status.

Indicators

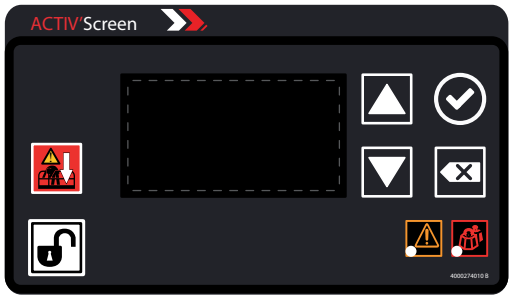


Controls and indicators

Marking	Description
6	Platform overload indicator : Intermittently lit in case of overload
228	Enable Switch : Press and hold Enable Switch
245	"Overriding system" control : Emergency lowering system in case of overload
252	Machine fault indicator : Intermittently lit in the event of an operation malfunction
254	Navigation buttons
255	Validation Button
256	Cancel Button

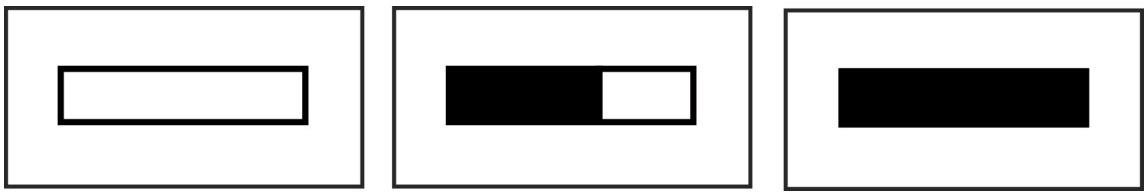
B- Familiarization

Activ'Screen

Icon	Description	Function	Icon	Description	Function
Activ'Screen					
					
Navigation buttons - Above Activ'Screen display					
	Up Navigation	Permits scrolling up through the screen (if present)		Cancel Button	Used to refuse or cancel a selection within the menu
	Down Navigation	Permits allows scrolling down through the screen and onto the following screen (if present)		Validation Button	Used to confirm selection within the menus

At startup with the ground or platform controls selected; system initiates a self check :

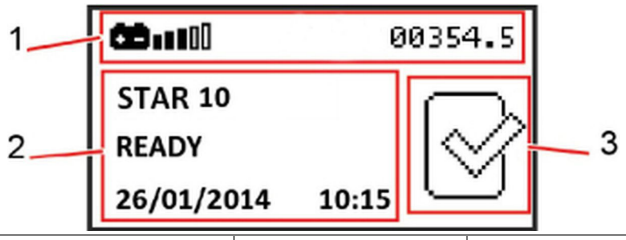
- Bar gets filled up.



- Home screen comes on with status icon of the machine - okay to proceed functioning the controls.

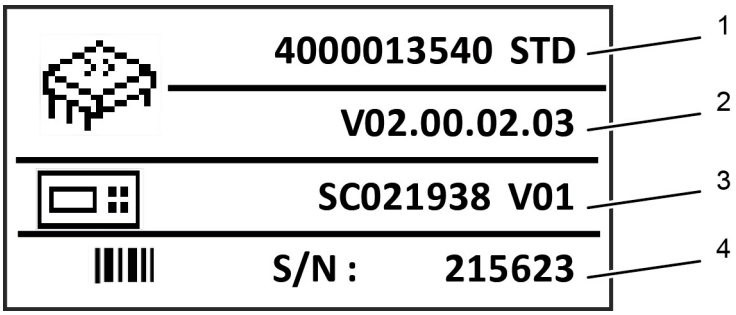
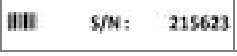
B- Familiarization

Controls and indicators

Icon	Description	Function	Icon	Description	Function
Home screen (dashboard) (Will be visible - depending on the machine)					
					
1	Functional information zone			Battery status	• Display battery charge status
				Maintenance use	• Maintenance required display
				Alarm	• Alarm detected display
			⧗00354.5	Hourmeter	• Display total machine running hours
2	Information text		STAR 10	Machine Model	• The timer flashes if the engine is switched on and the hourmeter increases.
			READY	Ready	• Machine ready, displayed when no failures and no other machine state icons is active
			26/01/2014 10:15	Machine date and time	• Display machine date and time
3	Machine status zone			Machine ready	• Machine ready, displayed when no failures and no other machine state icons is active

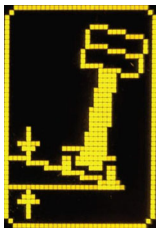
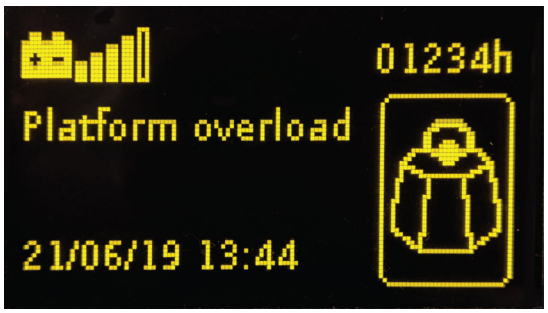
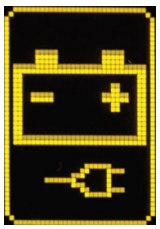
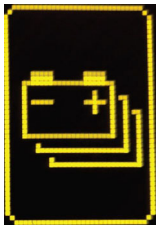
B- Familiarization

Controls and indicators

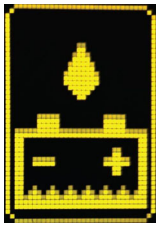
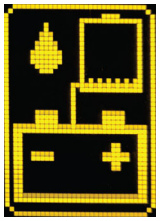
Icon	Description	Function	Icon	Description	Function
Home screen (dashboard) (Will be visible - depending on the machine)					
					
1	Information text			Software part number	• Display machine software code
2	Information text			Software version + Screen software version + Screen version	• Display software version, screen software and screen
3	Information text			Screen identification + Screen software version	• Display of screen ID and screen software version
4	Information text			Machine serial number	• Machine serial number displayed

B- Familiarization

Controls and indicators

Icon	Description	Function	Icon	Description	Function
Home screen (dashboard) **(Will be visible - depending on the machine)**					
				Access code	• Access code screen comes on - refer to maintenance manual for entering the access code - Validation by pressing on is active only if access code is known and entered - refer to maintenance manual for the procedure for the different level code useage
				Tilt	• Display software version, screen software and screen
				Overload	• Display of screen ID and screen software version
				Low battery	• Machine serial number displayed
				Recharge the batteries	• Fully recharge the batteries To perform a full recharge, the battery level must be less than 70 %.

B- Familiarization

Icon	Description	Function	Icon	Description	Function
				Low battery water level	• Check the level
				Low water tank level	• Check the level
				Present fault	• Display machine fault code

3.3 - PLATFORM CONTROL BOX

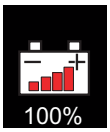
3.3.1 - Layout

General view

Controls and indicators

Marking	Name	Description	Function
27	HL800	Tilt indicator	Machine on excessive slope
30	HL802	Platform overload indicator	Platform overload
43	SA907	Horn button	Press and hold the horn button to sound the horn
			Sound stops when the horn button is released
46	SB802	E-stop button	Pulled out : Platform control box energized
			Pushed in : De-energizes control system
132	SA200	Enable Switch / Turret rotation control	Press in and hold : Validation of turret rotation selection
			Release : Cancellation of turret rotation selection

B- Familiarization

Marking	Name	Description	Function
135	HL904	Battery charging indicator	 Battery charged
			 Flashing : Batteries have 40 % charge left
			 Constantly on : Batteries have only 20 % charge left
146	HL903	Machine fault indicator	Machine operating fault
244	SM901	Press in button (250) to select either the drive or steer movement	
		Drive and steering joystick	Move forward : Forward drive
			Move backwards : Reverse drive
			Press right side of button : Right-hand steering
			Press left side of button : Left-hand steering
		Press button (251) to select Mast extend / retract movement	
		Joystick as mast movement function	Move forward : Mast lifting
			Move backwards : Mast retraction
		Press button (252) to select Jib raising or lowering movement	
		Jib movement joystick	Move forward : Jib raising
			Move backwards : Jib lowering
249	SM902	Turret rotation selector	Move to the right : Counter-clockwise turret rotation
			Move to the left : Clockwise turret rotation
250	SA102	Drive and steer control	Pressed down (activated) : Movement selection (Without activating the joystick (244), under 8 s, the movement is cancelled.)
		Drive and steering indicator mode	On : Activated mode
251	SA500	Mast extension / retraction control	Pressed down (activated) : Movement selection (Without activating the joystick (244), under 8 s, the movement is cancelled.)
		Mast movement indicator mode	On : Activated mode
252	SA600	Jib raising / lowering control	Pressed down (activated) : Movement selection (Without activating the joystick (244), under 8 s, the movement is cancelled.)
		Jib movement indicator mode	On : Activated mode

4 - Performance Specifications

4.1 - TECHNICAL CHARACTERISTICS

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

Do not replace parts that are essential to the stability of the machine, such as batteries or tyres, with parts that have a different weight or different specifications. The stability of the machine could be affected.

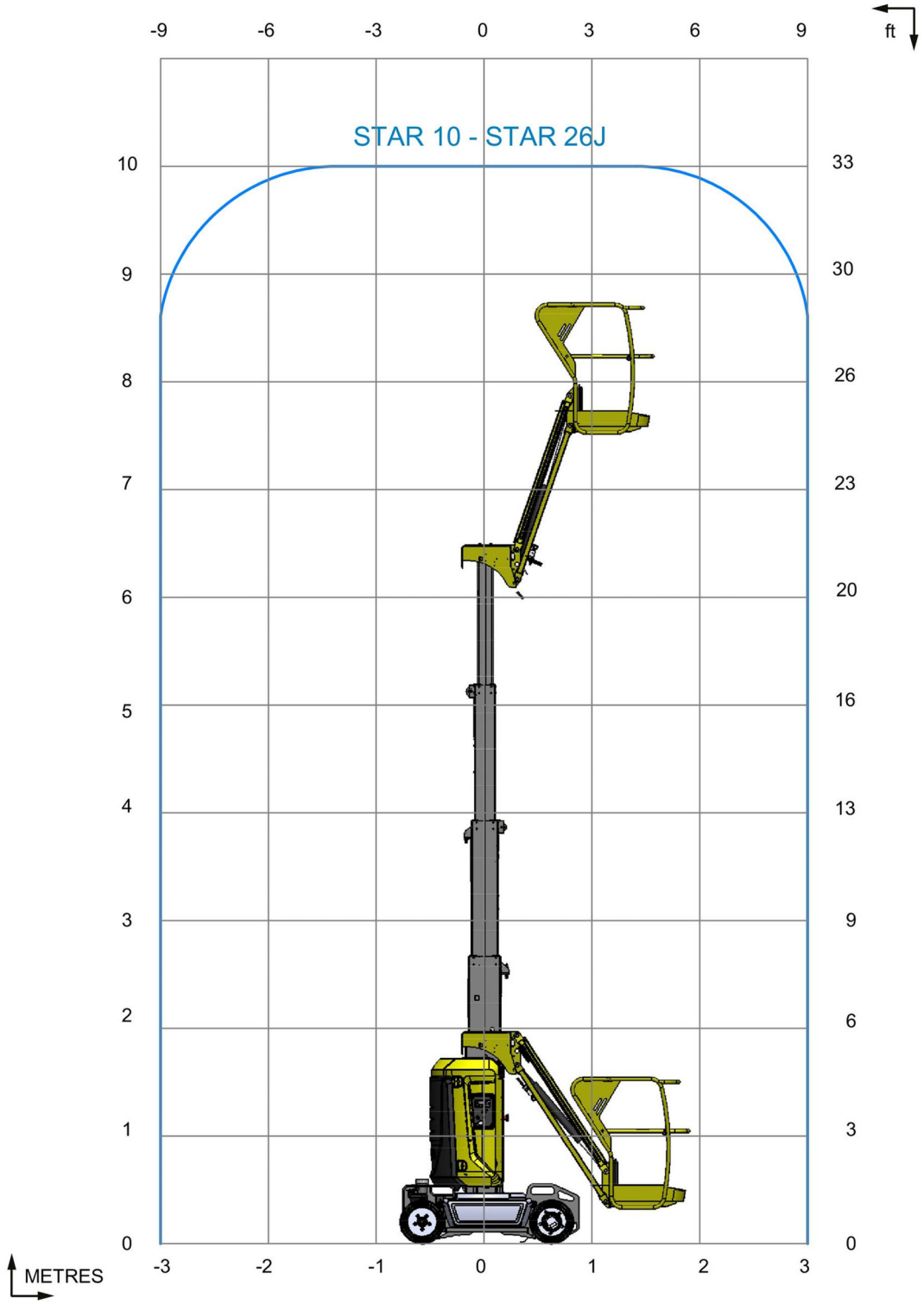
CE, UKCA, AS, EAC, CSA and ANSI A92.20 standards

Machine	STAR 10		STAR 26J	
Characteristics - Dimensions	**SI**	**Imp.**	**SI**	**Imp.**
Maximum working height	9,95 m	32 ft 8 in	9,95 m	32 ft 8 in
Maximum platform height	7,95 m	26 ft 1 in	7,95 m	26 ft 1 in
Maximum horizontal reach	3,06 m	10 ft 0 in	3,06 m	10 ft 0 in
Maximum outreach above the ground	2,58 m	8 ft 6 in	2,58 m	8 ft 6 in
Maximum jib articulation point height	6,83 m	22 ft 5 in	6,83 m	22 ft 5 in
Turret rotation	345 °			
Jib working range	130°			
Total weight	2 680 kg	5,910 lb	2 905 kg	6,400 lb
Maximum platform capacity	200 kg	440 lb	230 kg	500 lb
Maximum number of occupants	Indoor use : 2 Outdoor use : 1		Indoor use : 2 Outdoor use : 1	
Maximum wind speed	Indoor use : 0 km/h (0 m/s) Outdoor use : 45 km/h (12,5 m/s)	Indoor use : 0 mph (0 ft/s) Outdoor use : 28 mph (41 ft/s)	Indoor use : 0 km/h (0 m/s) Outdoor use : 45 km/h (12,5 m/s)	Indoor use : 0 mph (0 ft/s) Outdoor use : 28 mph (41 ft/s)
Manual force	Indoor use : 400 N (90 lbf) Outdoor use : 200 N (45 lbf)		Indoor use : 400 N (90 lbf) Outdoor use : 200 N (45 lbf)	
Gradeability - 2WD	25 %			
Maximum rated slope allowed	3°			
Maximum load on wheel	1370 kg	3020 lb	1610 kg	3550 lb
Maximum ground pressure of wheel on paved ground	16,8 daN/cm²	244 psi	16,44 daN/cm²	238 psi
Drive speed : • Folded machine maximum speed - High speed • Unfolded machine maximum speed - Micro-speed	 5 km/h 0,6 km/h	 3.1 mph 0.4 mph	 5 km/h 0,6 km/h	 3.1 mph 0.4 mph
Maximum freewheel speed during towed operation	5 km/h	3.1 mph	5 km/h	3.1 mph
Outside turning radius	1,88 m	6 ft 2 in	1,88 m	6 ft 2 in
Inside turning radius	0,45 m	1 ft 6 in	0,45 m	1 ft 6 in
Solid tires/tyres	406 mm x 100 mm (16 in / 4 in)			
Power source				
Electric motor	AC - 2,17 kW / 2.9 hp			
Specifications - Performance				
Operating temperature	- 20° C / + 40° C (- 68° F / + 104° F)			
Storage temperature	- 10° C / + 40° C (- 50° F / + 104° F)			
Energy storage				
Type of battery	Traction			

Standard	Option	Battery weight	System voltage	Battery capacity
X		15 kg(11 lb)	24 V	250 Ah
	X	15 kg(11 lb)	24 V	220 Ah
Hydraulic tank capacity	7 L	2 gal US	7 L	2 gal US

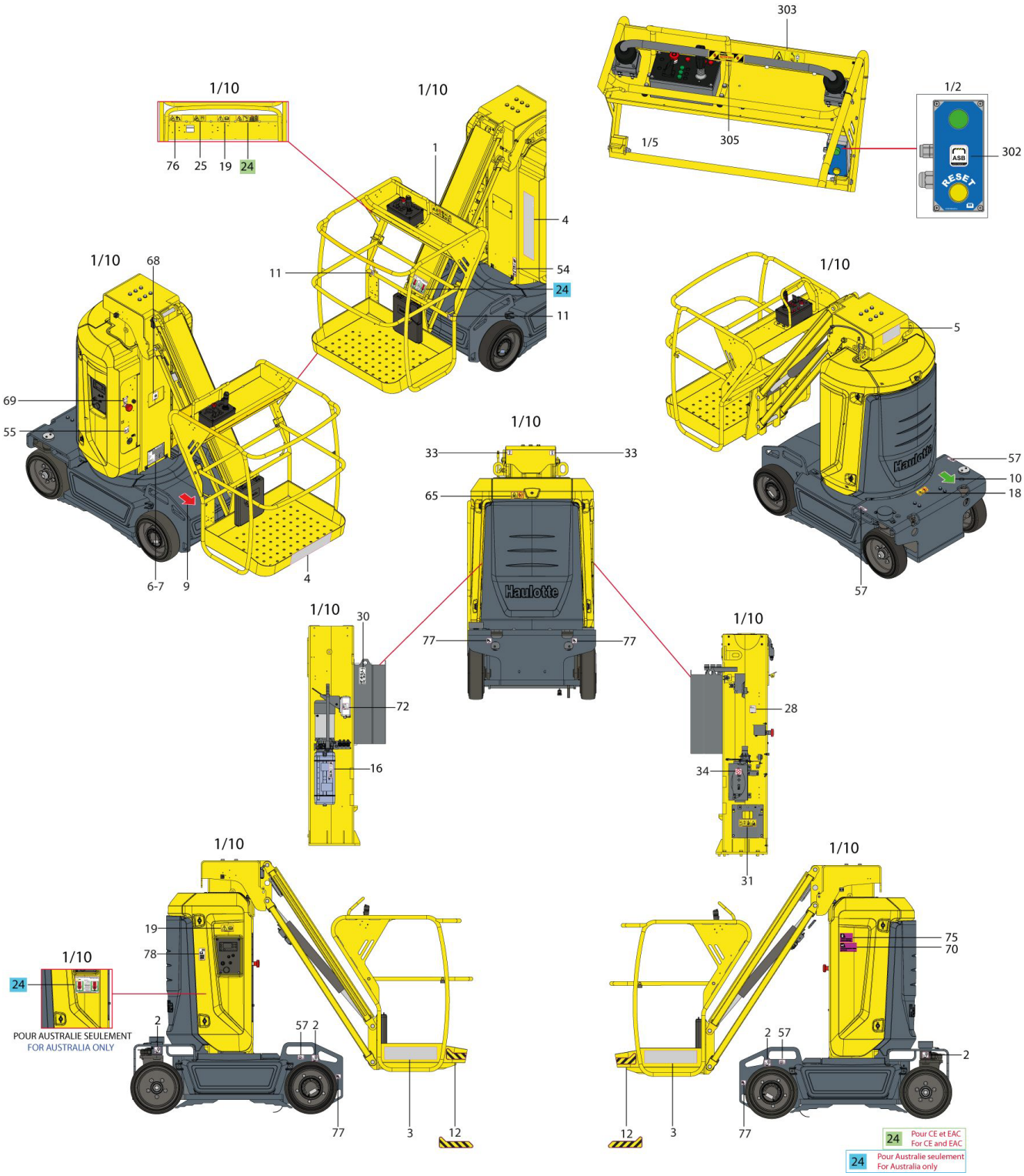
4.2 - WORKING AREA / RANGE OF MOTION

STAR 10 - STAR 26J



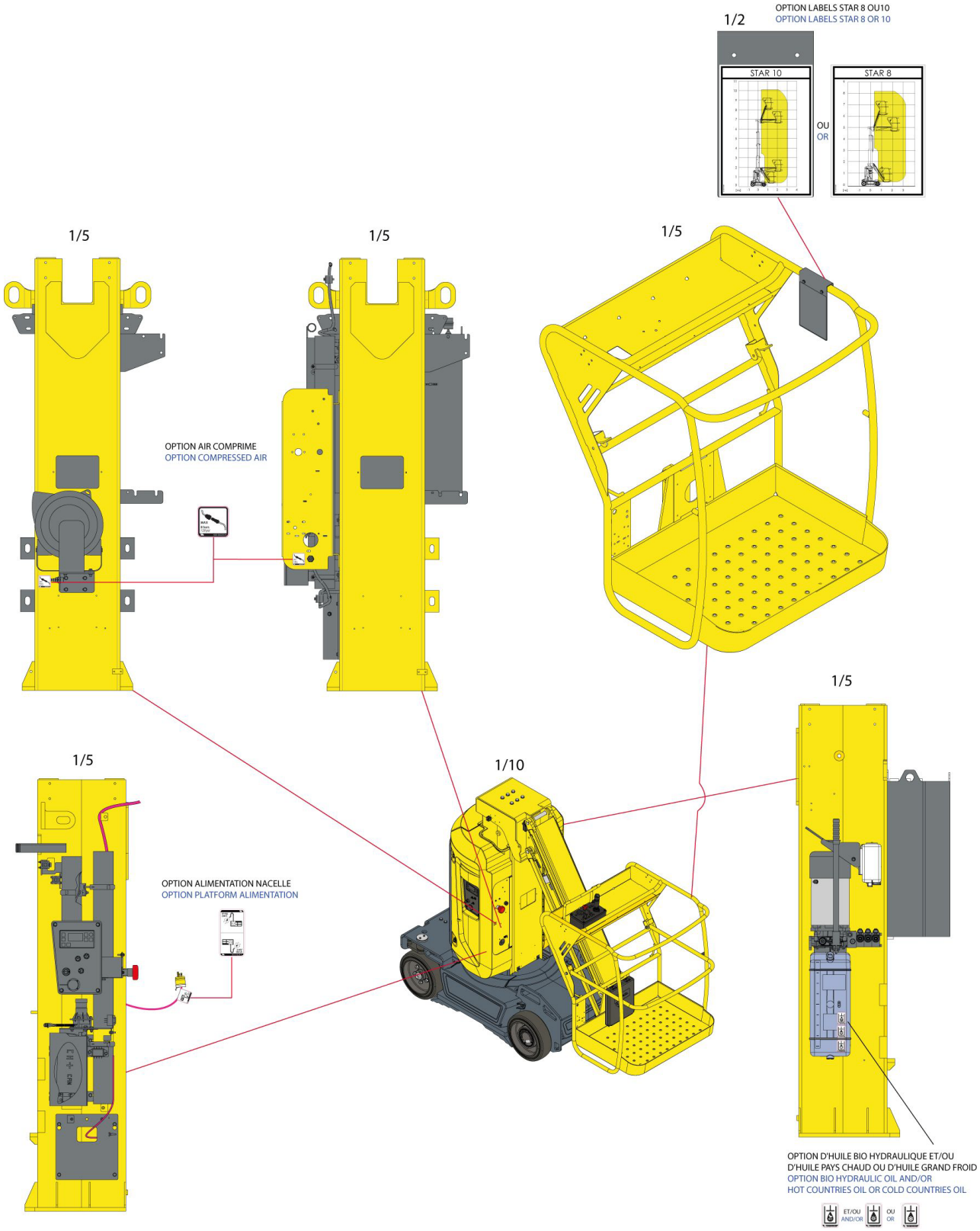
5 - Decals and markings locations

CE, UKCA, AS and EAC standards - 4000325860 N - STAR 10 - 1/2



B- Familiarization

CE, UKCA, AS and EAC standards - 4000325860 N - STAR 10 - 2/2



B- Familiarization

CE, UKCA, AS and EAC standards

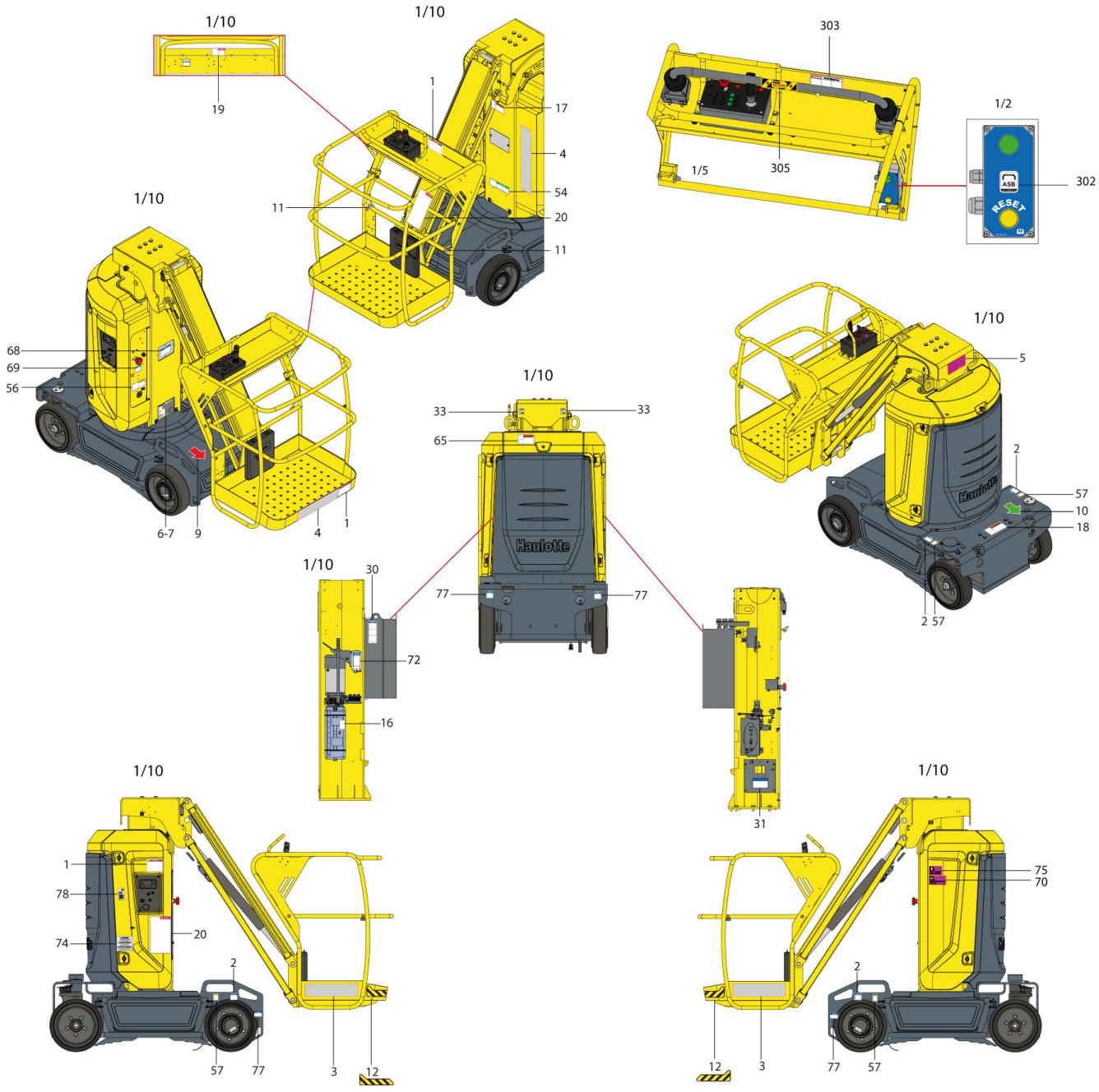
Marking	Description	Quantity	STAR 10
1	Height of the floor and load	1	4001056010
2	Maximum Pressure per Tire - Floor Loading	4	4001056030
3	Commercial name - Bright machine	2	4001183820
3	Commercial name - Dark machine	2	4001183830
4	Decal HAULOTTE® - Bright machine	2	4001072210
4	Decal HAULOTTE® - Dark machine	2	4001072220
5	Decal HAULOTTE® - Bright machine	1	4001072250
5	Decal HAULOTTE® - Dark machine	1	4001072260
6	Identification plate	1	For CE, AS and UCKA standards only : 4001243970 For Russia : 4000388680 For Ukraine : 4000054150
9	Control of movements - RED directional arrow	1	4001056040
10	Control of movements - GREEN directional arrow	1	4001056050
11	Lanyard attachment points	2	4001052020
12	Material risk - Yellow and black adhesive tape	2	4001052030
16	Max and min oil level	1	4001052060
18	Hand crushing hazard - Risk of crushed hands	1	4001052080
19	Operation instructions	2	4001052090
24	Danger of electrocution	1	For CE, UKCA and EAC standards only : 4001052120
24	Danger of electrocution	2	For AS standard only : 4001052140
25	Risk of crushing - Closing drop rail	1	4001052150
28	Software version	1	4000504670
30	Hand pump	1	4001056100
31	Brake release	1	4001052170
33	Anchorage point - Elevation	2	4001052190
34	Risk of electrocution - Water projection	1	4001052200
54	Emergency jib and mast lowering	1	4001056080
55	Risk of electrocution - Charger - 240 V	1	4001052220
57	Position of the lift truck forks	4	4001052230
65	Fire Hazard	1	4001052270
68	Transport height	1	4001056110
69	Battery isolation switch	1	4001052290
70	Information - AC MAINTENANCE-FREE MOTORS - Bright machine	2	4001053450
70	Information - AC MAINTENANCE-FREE MOTORS - Dark machine	2	4001053500
72	Demineralized Water	1	4001052340
75	Information - ACTIV' ENERGY MANAGEMENT - Bright machine	2	4001053460
75	Information - ACTIV' ENERGY MANAGEMENT - Dark machine	2	4001053510
77	Towing anchorage point	4	4001074700
78	QR Code (https://www.e-technical-information.com)	1	4001089310
201	Wearing of a safety harness is essential	1	4001052300
302	Activ' Shield Bar controls	1	4001069620
303	Activ' Shield Bar instructions	1	4001069630

B- Familiarization

Marking	Description	Quantity	STAR 10
305	Do not lean on the bar	1	4001069640
Not illustrated	Option - Biological hydraulic oil	1	4001052380
Not illustrated	Option - Winter grade hydraulic oil	1	4001052390
Not illustrated	Option - Air line	1	4001052370
Not illustrated	Option - Working area / Range of motion	1	4000361820
Not illustrated	Option - Power plug information : 127 V	1	4001052350
Not illustrated	Option - Power plug information : 240 V	1	4001052360

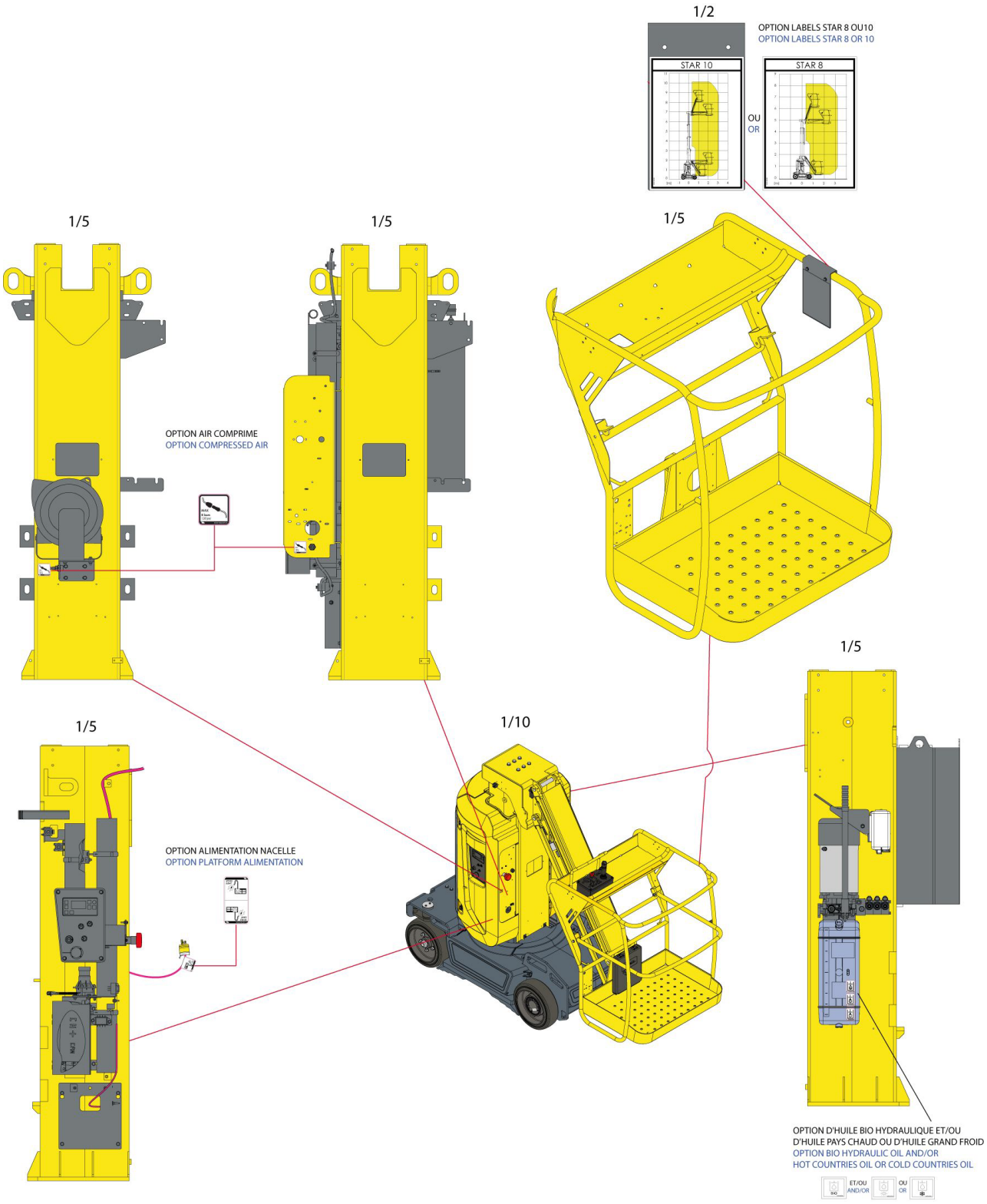
B- Familiarization

ANSI and CSA standards - 4000325910 Q - STAR 26J - 1/2



B- Familiarization

ANSI and CSA standards - 4000325910 Q - STAR 26J - 2/2



B- Familiarization

ANSI and CSA standards

Marking	Description	Quantity	STAR 26J
1	Height of the floor and load	3	4000700110
2	Maximum Pressure per Tire - Floor Loading	4	4000325410
3	Commercial name - Bright machine	2	4001183840
3	Commercial name - Dark machine	2	4001183850
4	Decal HAULOTTE® - Bright machine	2	4001072210
4	Decal HAULOTTE® - Dark machine	2	4001072220
4	Decal HAULOTTE® - Red machine	2	307P220360
5	Decal HAULOTTE® - Bright machine	1	4001072250
5	Decal HAULOTTE® - Dark machine	1	4001072260
6	Identification plate	1	4000700150
9	Control of movements - RED directional arrow	1	4001056040
10	Control of movements - GREEN directional arrow	1	4001056050
11	Lanyard attachment points	2	307P216290
12	Material risk - Yellow and black adhesive tape	2	4001052030
16	Max and min oil level	1	307P221060
17	Risk of crushing	1	In english : 4000275590 In french : 4000275600 In spanish : 4000275610
18	Hand crushing hazard - Risk of crushed hands	1	In english : 4000024770 In french : 4000067710 In spanish : 4000086490
19	Operation instructions	1	4000025140
20	Operation instructions	2	In english : 4000326910 In french : 4000326310 In spanish : 4000326900
30	Hand pump	1	307P227170
31	Brake release	1	4000361570
32	Anchorage point - Traction	4	4000027310
33	Anchorage point - Elevation	2	4000027330
54	Emergency jib and mast lowering	1	4000274030
56	Socket - 110 V	1	4000419150
57	Position of the lift truck forks	4	3078143830
65	Fire Hazard	1	In english : 4000025030 In french : 4000068120 In spanish : 4000086550
68	Transport height	1	4000417450
69	Battery isolation switch	1	4000420660
70	Information - AC MAINTENANCE-FREE MOTORS - Bright machine	1	4001053450
70	Information - AC MAINTENANCE-FREE MOTORS - Dark machine	1	4001053500
72	Demineralized Water	1	4000668080
74	California warning - P65	1	4001026850
75	Information - ACTIV' ENERGY MANAGEMENT - Bright machine	1	4001053460
75	Information - ACTIV' ENERGY MANAGEMENT - Dark machine	1	4001053510
78	QR Code (https://www.e-technical-information.com)	1	4001089310
302	Activ' Shield Bar controls	1	4001069620

B- Familiarization

Marking	Description	Quantity	STAR 26J
303	Activ' Shield Bar instructions	1	4001069630
305	Do not lean on the bar	1	4001069640
Not illustrated	Option - Biological hydraulic oil	1	3078148890
Not illustrated	Option - Winter grade hydraulic oil	1	307P223700
Not illustrated	Option - Air line	1	4001052370
Not illustrated	Option - Working area / Range of motion	1	4000361820
Not illustrated	Option - Power plug information : 127 V	1	4001052350
Not illustrated	Option - Power plug information : 240 V	1	4001052360

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.

2 - Working area assessment

Before any operation :

- Carry out a thorough inspection of the site to identify any potential risks within the work zone.
- Take the necessary precautions to avoid collisions with other machinery within the work zone.

Ensure that :

  - The weather conditions (wind, rain, etc.) allowing the machine to be used.
  - The ground withstands the weight of the machine and has not been affected by the poor weather conditions.

- Check that the authorisations to work with the machine on the site in question have been obtained (.g. chemical product factories).
- Define a rescue plan for all the risks, including the risk of falls and crushing.

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.

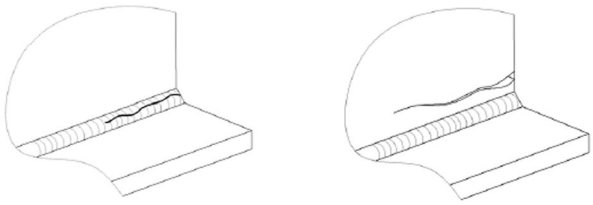
- **Never use a defective or a malfunctioning aerial work platform.**
- **If any item on the check list is marked "No" during the inspection; machine must be tagged and placed out of service.**
- **Do not operate the machine until all identified items are corrected and it has been declared safe for operation.**

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



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.

Use the detailed program below.

	Oil change		Lubrication-Lubrication		Tightening
	Levelling		Systematic replacement		Functional adjustments / Checks / Cleaning
	Visual inspection		To check by test		

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

C- Pre-operation inspection

Telescopic masts

Haulotte	Page or associated procedure	Daily	OK	NOK	Corrected	Comments
Chassis assembly : Wheel, reducer, steering, wheel pivot						
Check state of tires/tyres and inflations						
Batteries						
Check the battery level						
Check the condition of the battery						
Check the operation of the lock on the engine casing						
Hydraulic : oils, filters and hoses						
Check the hydraulic oil level (Top up the oil if necessary ; Machine stowed)						
Check the clogging indicator on the hydraulic pressure filter (change if clogged)						
Check the hoses, blocks and pumps, fittings, cylinders and the tank for the absence of leaks, deformations and damage						
Platform						
Ensure that the gate or sliding bar shall be designed to either return automatically to the closed and latched position						
Check that the harness anchor points are not cracked or damaged						

C- Pre-operation inspection

Telescopic masts

Haulotte	Page or associated procedure	Daily	OK	NOK	Corrected	Comments
General						
Check for the presence, cleanliness and readability of the manufacturer's plates, security labels, user manual and maintenance manual						
Check the cleanliness and readability of the control box						
Test the opening and closure of covers (chassis, turntable, upper control box)						
Check the condition of electrical harnesses, cables and connectors						
Check for the absence of abnormal noise and jerky movements						
Check for the absence of visible deterioration and damage						
Check for the absence of cracks, broken welds and chipped paintwork on the structure						
Check for the absence of missing or loose screws and bolts						
Check for the absence of deformation, cracking and breakage of axis stops, bushing and axes						
Check for the absence of foreign bodies in joints and sliding parts						
Safety devices						
Test the operation of the upper and lower control boxes: manipulators, switches, buttons, horn, emergency stops, screens and lights						
Check the absence of visual and audible alarms						
Test the operation of the tilt system						
Test the operation of the emergency lowering system						
Test the operation of the load control system - Calibrate if necessary						

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 system (Overriding system) is available on the ground control box in order to rescue anyone trapped on the platform.

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 the E-stop buttons (15, 46).
2	Turn the control box activation selector key (92) downwards to activate the ground control box.
3	The screen turns on.
4	Push the E-stop button (15). The screen turns off.

Platform control box E-stop button

Step	Action
1	Pull the E-stop buttons (15, 46).
2	Turn the control box activation selector key (92) upwards to activate the platform control box.
3	The screen turns on.
4	Push the E-stop button (46). The display panel goes blank.

4.2 - ACTIVATION OF CONTROLS

The enable switch must be actived to allow any movement.

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 (enable switch) in the platform.
- Enable switch at ground and platform boxes.

C- Pre-operation inspection

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 DOWNGRADEMODE 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 - Buzzers 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	Turn the control box activation selector key (92) downwards or upwards to activate a control box.
3	An audible signal (beep) sounds.

4.4 - 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.

4.5 - 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.

N.B.-:-THE SLOPE SENSOR IS ONLY ACTIVE WHEN THE PLATFORM IS NOT IN THE STOWED POSITION.

When machine is on a slope greater than the rated slope, with extending structure out of the stowed position :

- The DRIVE and LIFTING (RAISING) commands are deactivated.

The lowering speeds are reduced.

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

To check the tilt sensor at ground level, perform the following steps :

Daily check

Step	Action
1	Put the machine in stowed position on a slope with an angle greater than the permitted inclination (Refer to Section B 4.1 Technical specifications).
2	Check that the tilt indicator is on (27).

4.6 - TRAVEL SPEED LIMITATION

All driving speeds are allowed when the mast is retracted, whatever the jib position.

The only speed allowed when not in stowed position is microspeed (This speed is a default speed programed into the machine).

Risk of overturning

Driving at high speed with jib above horizontal position increases the risk of overturning. Perform imperatively this movement on a stable, flat and clear surface to support the weight of the lift.

4.7 - ELECTRONIC VARIABLE SPEED DRIVE

The machine is equipped with 2 electronic variable speed regulators configured for each function that manages the amount of power sent to each motor.

Do not interchange the speed controllers/regulators between machines even if they are the same model.

C- Pre-operation inspection

4.8 - MACHINE BRAKING

When electric power is cut off, the machine stops automatically.

Performance levels may be reduced in the following situations :

- Descending a bumpy ramp.
- Worn tires/tyres.
- Damp or muddy ground conditions.

Check that the brakes are applied automatically when the Drive joystick is released to the neutral position.

4.9 - POTHOLE PROTECTION SYSTEM

The chassis in constructed with stationary structural members on the sides, serving as pot hole protection (anti-tipping) device.

4.10 - ON-BOARD CHARGER

Battery charging starts as soon as an external supply is connected to the battery charger.

When the battery pack is being charged with an external power supply, the machine's electric system is automatically deactivated.

D- Operation instructions

1 - Operation

1.1 - INTRODUCTION

Aerial Work platforms are equipped with two control boxes which allow operators to safely use the machine.

An auxiliary device is available at the ground control box to assist in the rescue of people in an emergency.

Each control box is equipped with an E-Stop button, which allows operators to stop all movements, if necessary.

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 local regulations.
- Become familiar with the proper use of all controls and emergency systems.

D- Operation instructions

1.2 - OPERATION FROM A CONTROL BOX

The control box is energized and active ONLY when :

- The E-stop buttons are released.
- The control box is selected.

The enable switch (228) on the ground control box must be activated and held to authorise movements. If the enable switch is held for 8 seconds without selecting a function, then it is automatically deactivated

The release of the enable switch during operation stops all movements. If the enable switch is pressed again, the movement does not restart. The joystick/functions switch must be released to neutral before movements can re-start.

All switches and joysticks return automatically to the neutral position when released.

The status of switches, indicators and joysticks are tested automatically when the machine is switched on. A switch or joystick will be active only after it has been detected in the neutral position.

A buzzer beeps in the following configurations :

- When power is switched on.
- Overload (if fitted).
- Slope limits exceeded (if machine is out of stowed position).

• While driving, always place the jib in the direction of movement.

While driving on a slope :

• Always orientate the machine in the direction of the slope.

• Always place the mast and the jib 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.

2 - Ground control box

2.1 - TO START AND STOP THE MACHINE

- Pull the E-Stop button at the ground control box.
- Turn the control box activation selector key (92) downwards to activate the ground control box.

To shut-down the machine from the ground control box :
- Turn the control box activation selector (92) key to the center.
- Press in the E-Stop button (15) on the ground control box.

N.B.-:-THE ACTIV'SCREEN AUTOMATICALLY GOES INTO STANDBY IF IT IS NOT USED FOR AN EXTENDED PERIOD. TO SWITCH THE ACTIV'SCREEN BACK ON, TURN THE KEY SELECTOR TO POSITION OFF THEN FOLLOW THE START-UP PROCEDURE.

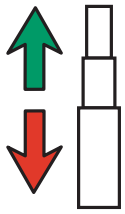
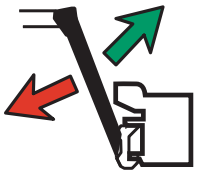
D- Operation instructions

2.2 - MOVEMENT CONTROL

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 (228) WILL STOP ALL MOVEMENTS.

Ground box controls (emergency station)

Command		Action
Mast Extend / Retract		Push the mast selector switch (127) upwards to extend the mast.
		Push the mast selector switch (127) downwards to retract the mast.
Turret rotation		Push the rotation selector switch (128) to the right to rotate the turret counterclockwise (CCW).
		Push the rotation selector switch (128) to the left to rotate the turret clockwise (CW).
Jib raising / lowering		Push the jib switch (129) upwards to raise the jib.
		Push the jib switch (129) downwards to lower the jib.

2.3 - ADDITIONAL CONTROLS

For the machines equipped with beacon light :

- Press and hold the beacon button (105) to activate. Release beacon button (105) to turn OFF.

D- Operation instructions

3 - Platform control box

3.1 - TO START AND STOP THE MACHINE

To start the machine :

At the ground control box :

- The E-stop button on the ground control box must be in ON position (pulled out / activated).
- Turn the control box activation selector key (92) upwards to activate the platform control box.

At the platform :

- Pull the E-stop button (46).

To stop the machine (Only in the event of an emergency) :

- Push in the E-stop button (46).

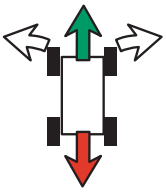
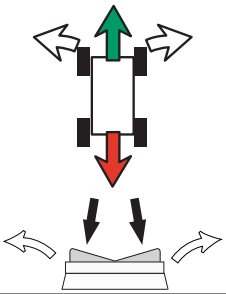
N.B.-:-THE ACTIV'SCREEN AUTOMATICALLY GOES INTO STANDBY IF IT IS NOT USED FOR AN EXTENDED PERIOD. TO SWITCH THE ACTIV'SCREEN BACK ON, PRESS THE EMERGENCY STOP BUTTON THEN FOLLOW THE START-UP PROCEDURE.

D- Operation instructions

3.2 - DRIVE AND STEER CONTROL

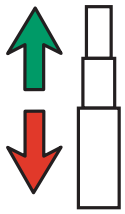
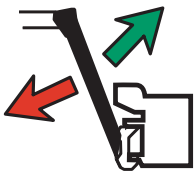
Before driving, locate the green / red orientation arrows on the chassis and platform control box. Move the drive controls in a direction matching the directional arrows.

To operate driving and steering functions, select the desired movement (250) and simultaneously operate the drive joystick (244) and the joystick trigger (Enable Switch).

Command		Action
Press in button (250) to select either the drive or steer movement		
Driving		Move the drive joystick (244) forwards with joystick trigger pressed in to drive the machine forwards.
		Move the drive joystick (244) backwards with joystick trigger pressed in to drive the machine backwards.
Steering		Push the button on top of joystick (244) to the left with joystick trigger pressed in, to steer left.
		Push the button on top of joystick (244) to the right with joystick trigger pressed in, to steer right.

D- Operation instructions

3.3 - MOVEMENT CONTROL

Command	Action
Mast Extend / Retract	Press button (251) to select Mast extend / retract movement
	 Push the joystick (244) forwards with joystick trigger pressed in to extend the mast.
	Push the joystick (244) backwards with joystick trigger pressed in to retract the mast.
Jib raising / lowering	Press button (252) to select Jib raising or lowering movement
	 Push the joystick (244) forwards with joystick trigger pressed in to raise the jib.
	Push the joystick (244) backwards with joystick trigger pressed in to lower the jib.
Turret rotation	 Press and hold the button (132) and push the turret rotation selector switch (249) to the right for counterclockwise rotation (CCW).
	Press and hold the button (132) and push the turret rotation selector switch (249) to the left for clockwise rotation (CW).

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.

4 - Rescue and emergency procedures

In case of power loss or if an operating problem prevents the platform occupant from descending, a competent operator can perform the emergency procedures from the ground level.

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.
- 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.
- Occupant(s) must exit the current platform through the normal access.

The mast must be completely retracted before lowering the jib.

4.1 - 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.

The system enables the occupant(s) to descend to ground level, even if an emergency stop button is activated.

In this situation, the operator at the ground must :

- **Turn the control box activation selector key (92) downwards to activate 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 down the Enable Switch (228) and simultaneously activate the desired control function.**

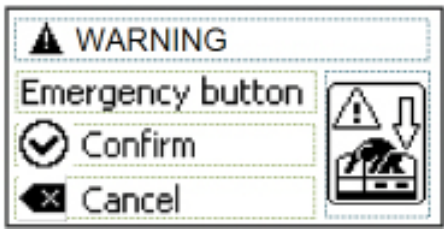
4.1.1 - Operation of overriding system from ground control box

The Overriding system must only be used in the event of an overload.

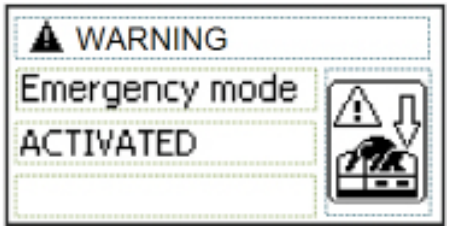
The system enables the occupant(s) to descend to ground level if an overload is detected.

Procedure :

- Turn the control box activation selector key (92) downwards to activate the ground control box.
- Push the "overriding" button (245) on the ACTIV'Screen.
- An activation confirmation appears on the screen.



- Confirm "overriding" mode by activating button (255).
- The "overriding" mode is now activated.

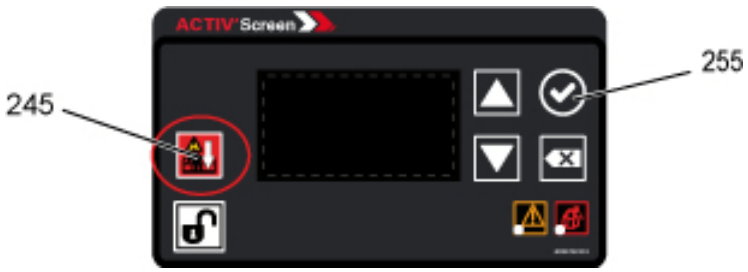


- Press and hold the "overriding" button (245).
- Simultaneously push the appropriate movement switch to bring the platform down to ground level.

Releasing the "overriding" (245) button for more than 8 s cancels the "overriding" mode.

Do not use the machine until all alarms are rectified.

"Overriding system" button

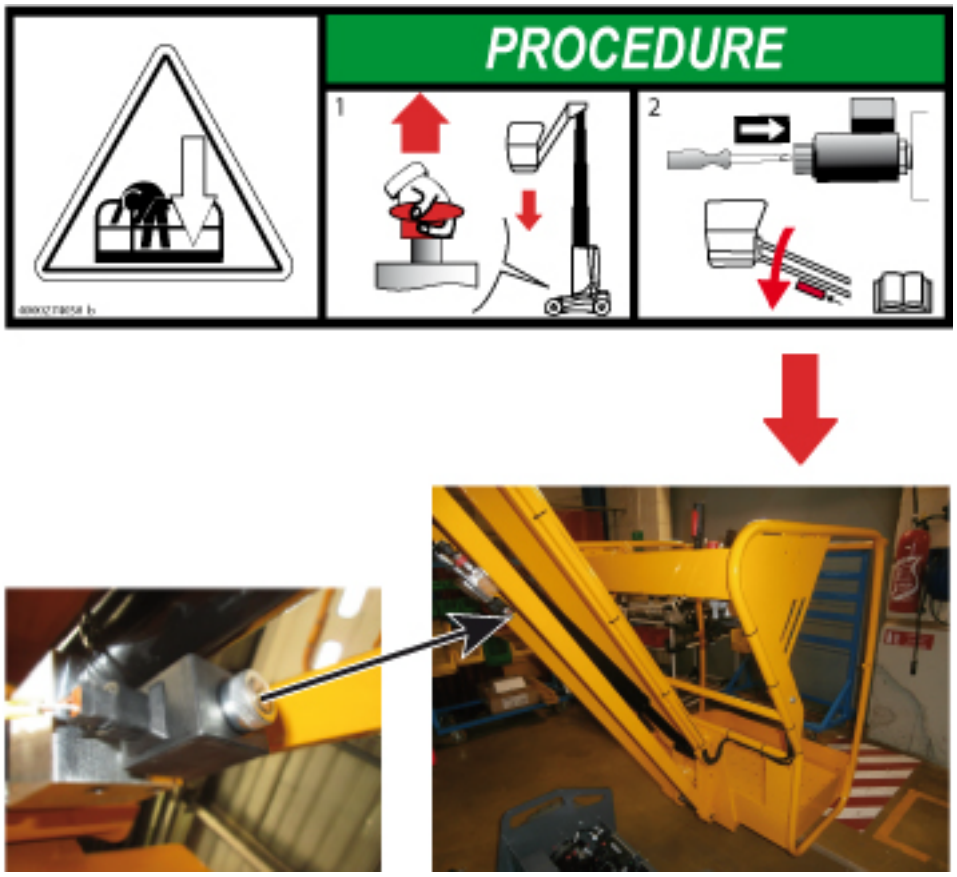


D- Operation instructions

4.2 - MANUAL EMERGENCY LOWERING PROCEDURE

4.2.1 - Jib manual lowering procedure

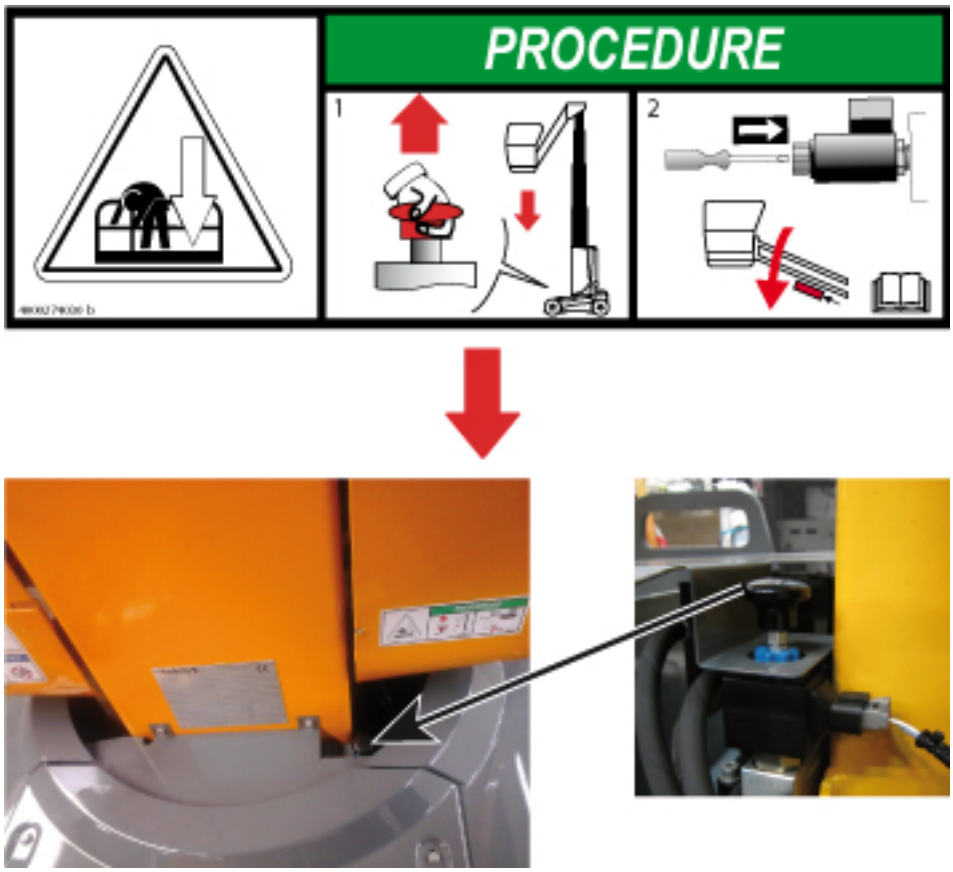
- Press the centre of the solenoid valve under the jib cylinder to lower the jib.
- Release it to halt lowering.



D- Operation instructions

4.2.2 - Mast manual lowering procedure

- Pull the mast lowering solenoid knob located on the chassis right side to lower the mast.
- Release it to halt lowering.



4.2.3 - Hand pump

This procedure is exclusively reserved for lowering in emergency situations only.

When the main energy source malfunctions, a hand pump located next to the hydraulic valve bank on the turntable, can be used to perform a manual descent.

Open the right hand compartment to access the pump and the valve bank.

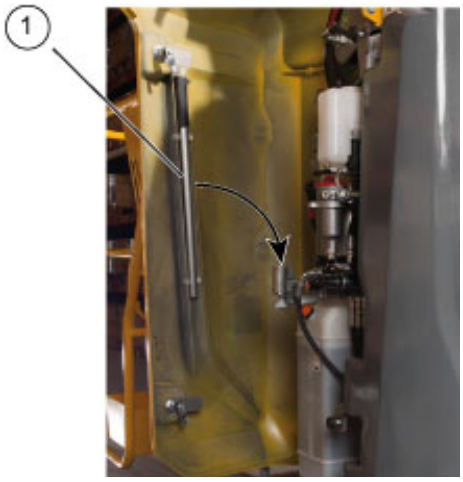
This hand pump can be used in combination with a manual override multi electro-hydraulic valve bank, to perform mast lifting, turntable orientation and steering orientation (if the machine is towed)

This manual pump doesn't allow jib movements.

Lowering the platform with these methods increases the risk of overturning.

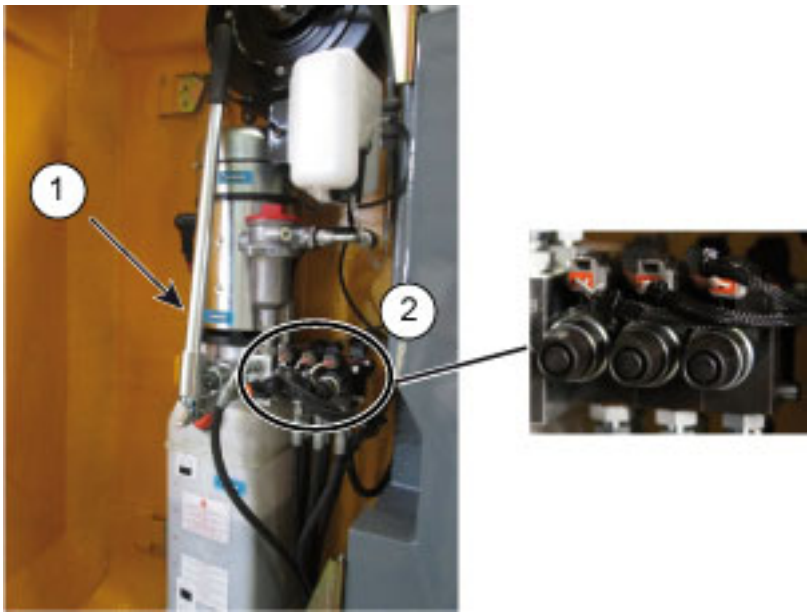
Do not attempt to perform this procedure using the multi electro-hydraulic valve bank without having already been trained by HAULOTTE Services®. All safety functions are inoperative and hazardous situations may occur. Improper use of equipment will result in death or serious injuries.

- Insert the lever (1) in the socket of the pump.

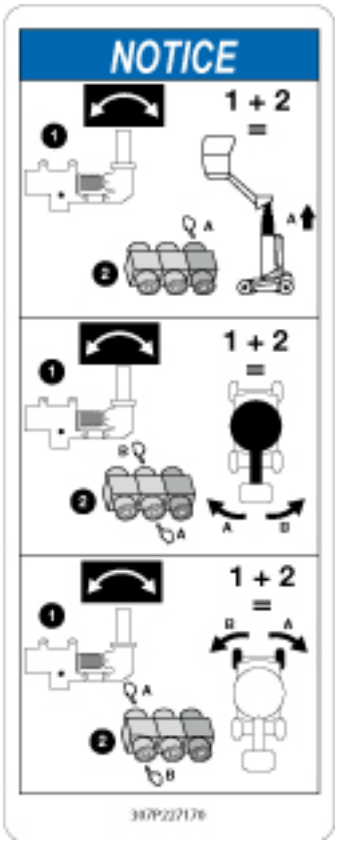


D- Operation instructions

- Push the lever (1) from top to bottom several times while manually activating the selected function valve (2) simultaneously.



- Follow the instructions on the decal near the distributor :



1 + 2 A : Mast lifting
1 + 2 A : Mast rotation (towards left)
1 + 2 B : Mast rotation (towards right)
1 + 2 A : Chassis rotation (to the right)
1 + 2 B : Chassis rotation (to the left)

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

D- Operation instructions

5 - Transportation

5.1 - TRANSPORT CONFIGURATION

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.**

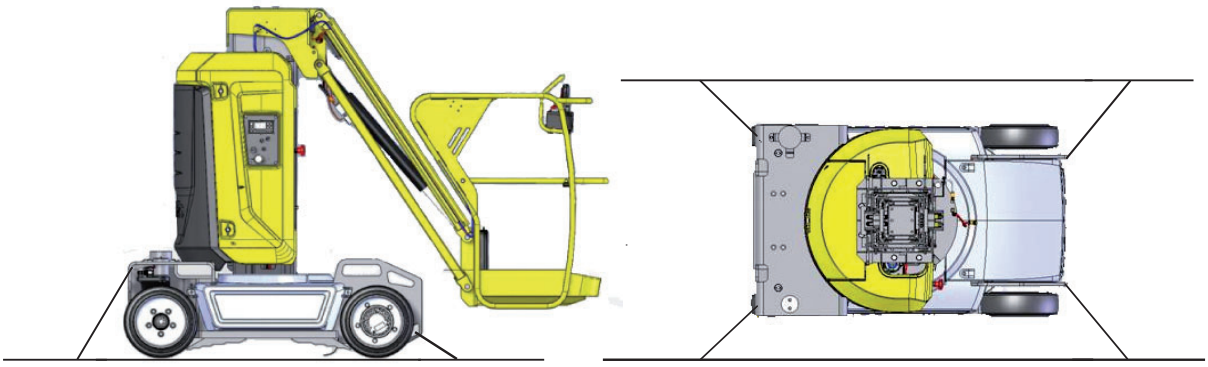
Do not place yourself below or too close to the machine during loading.

The machine must be completely in the stowed configuration :
- Check the platform is completely empty.

To climb the slope, select low driving speed.

If the slope is too steep, use a winch in addition to the low speed drive.
- Drive the machine onto the truck bed.
- Secure the machine to the tie down points provided (See picture).
- The covers must be locked.

5.2 - MACHINE STOWAGE FOR TRANSPORT - STAR 10 - STAR 26J



D- Operation instructions

5.3 - UNLOADING

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

- Remove the tie downs.
- Switch the machine on.
- Move progressively the drive joystick (244).

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.

5.4 - 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 mast is fully retracted, jib is lowered to a stowed position, prior to towing.**
- **The platform must be empty.**
- **ALWAYS keep personnel and obstructions clear of the aerial work platform when brakes are released.**

To tow a broken-down machine, release brake (Refer to Section D 5.4.1 - Brake release).

Perform this operation on flat ground with wheels chocked.

In the towing configuration, the machine braking system is inactive. Use a drawbar to avoid any risk of accident :

- Do not exceed the maximum freewheel speed (Refer to Section B 4.1 - Technical specifications).
- Do not use on a slope with a gradient greater than 25%.

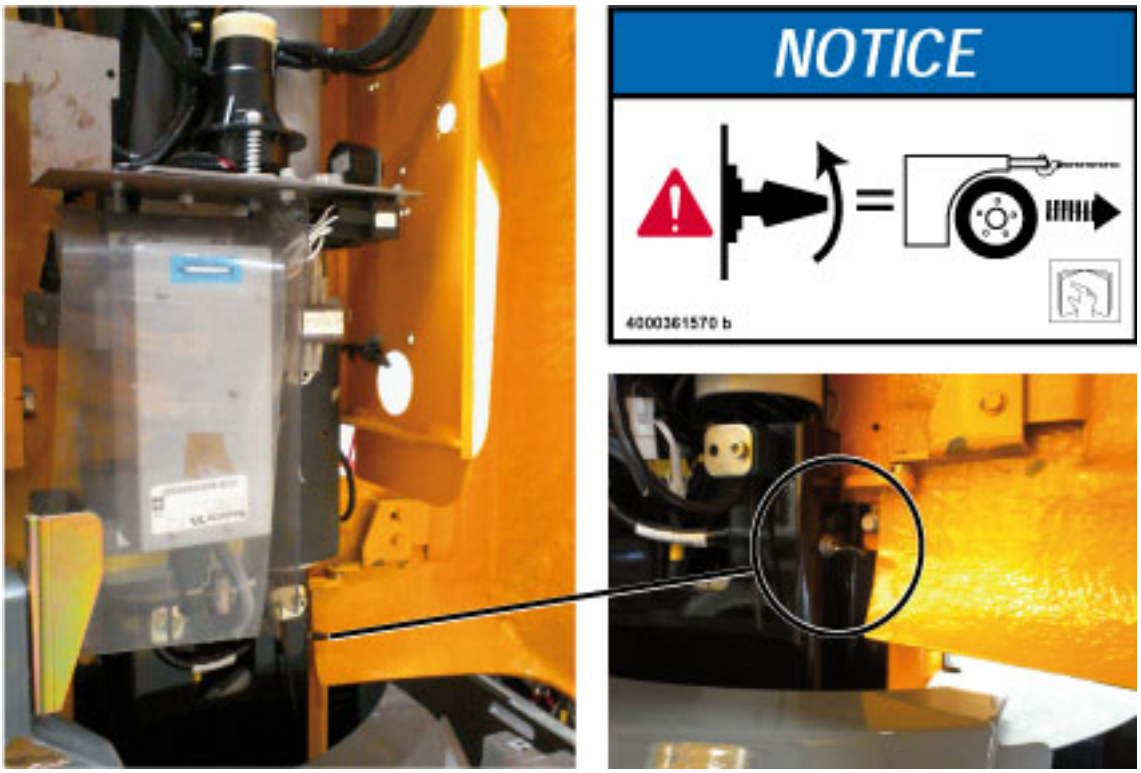
D- Operation instructions

5.4.1 - Electric brake release

To tow a broken-down machine, release brake.

Perform these operations on flat, horizontal ground. Failing that, block the wheels to immobilize the machine. During brake release operation, the machine is in free wheel mode and the brake system no longer functions.

In the event of machine traction, the drive wheels brake release is available via the switch located on the lower end of turret. It is accessible by opening the left hand compartment.



To release the machine's brakes, the following conditions must be met :

- The platform control box or the ground control box must be selected.
- The machine must be completely stowed.
- No movement selected.
- The machine must not be tilted.

Push the brake release button located on the inside bottom of the compartment for at least 3 s. An audible signal (beep) sounds.

Releasing the button disengages the brakes.

The brake release procedure stops automatically if the brake release button is pushed again, any actions are taken at the control boxes, the machine is turned off, or the control box in use is changed.

5.5 - STORAGE

The machine can be stored in a designated area when not in use. If it is stored for more than 3 months without being used, an inspection must be carried out before it is put back into service.

Keep the batteries charged Section D 7.4 -Optimise battery life.

Machine must be parked in a protected/designated area with the mast fully retracted. Make sure there is no load in the platform.

Do not store or immobilise the machine when it is unfolded.

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

Turn the energizing key selector switch (92) at the ground control box to the "center" position to shut OFF the power.

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

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

To avoid any risk of corrosion on rods of cylinders during a storage period of more than 1 month :

- **In a normal atmospheric environment : perform a complete cycle for the cylinders every 2 months while they are in storage.**
- **In harsh environments (high levels of salinity in the atmosphere: close to the sea, industrial environment with chloride emissions and/or humidity >70%), we recommend applying the following protection process :**
  - Wash and rinse the entire machine with plenty of clean water.
  - Dry all the cylinder rods using an air gun.
  - Apply a solvent-based oil leaving an oily film after evaporation of the solvent directly to all rods left exposed when the machine is in storage position.
  - Re-apply the product every month.

After washing the machine, make sure it is fully air-dry and does not contain moisture on corrosive parts (cylinders rods for example).

Do not wash any electrical components, particularly with high pressure washer. Wipe away dirt from around electrical components with a dry cloth.

D- Operation instructions

5.6 - LOADING BY RAMP

To avoid any risk of sliding during loading, ensure that :

- **The loading ramp can bear the load.**
- **The loading ramp is correctly attached.**
- **The loading ramp has sufficient grip.**

If the slope exceeds 25% grade, use a winch to assist in loading on to the ramp.

Never place yourself below or too close to the machine during loading.

A wrong move can lead to the tipping over of the machine and cause serious bodily and material accidents.

5.7 - UNLOADING BY RAMP

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

If the machine has been damaged during transportation, contact the transporter in writing.

1. Remove the tie downs.
2. Start the machine.
3. Ensure the ramp is in good condition and of sufficient capacity. Ensure the lifting equipment ie. slings, shackles, hooks, lifting beam etc. are in good condition and of sufficient capacity.

D- Operation instructions

5.8 - LIFTING OPERATION

5.8.1 - Loading and unloading

Before any lifting 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.

5.8.1.1 - Safety precautions

It is the responsibility of the Operator to ensure there are no personnel or obstructions to safely perform the operation.

5.8.1.2 - Necessary equipment

- PPE (Personal Protective Equipment: glove, safety shoes, glasses, etc ...)
- Standard tool kit
- 4 shackles 1 000 kg (2 205 lb)
- 4 slings 3 m (9 ft 10 in) 3 000 kg (6 614 lb)

Technical specifications

Machine type	Maximum weight
STAR 10	2680 kg (5910 lb)
STAR 26J	2905 kg (6400 lb)

5.8.1.3 - 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.
- Stop the machine.
- 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, slings, straps, etc. are of sufficient strength to withstand maximum machine weight.
- Attach the rigging ONLY to the designated lifting points on the machine.

D- Operation instructions

5.8.1.4 - Procedure for the use of slings

The machine must be completely stowed. Turntable line up with 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 3 m (9 ft 10 in) 3 000 kg (6 614 lb) over the tie-down points. Adjust properly to prevent any damage to the machine.

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.**

5.8.2 - Lifting operation with tie-down points on the mast

Before any lifting 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.

5.8.2.1 - Safety precautions

It is the responsibility of the Operator to ensure there are no personnel or obstructions to safely perform the operation.

5.8.2.2 - Necessary equipment

- PPE (Personal Protective Equipment: glove, safety shoes, glasses, etc ...)
- Standard tool kit
- 2 slings 2 m (6 ft 7 in) 2 000 kg (4 410 lb)
- 2 shackles 2 000 kg (4 410 lb)

Technical specifications

Machine type	Maximum weight
STAR 10	2680 kg (5910 lb)
STAR 26J	2905 kg (6400 lb)

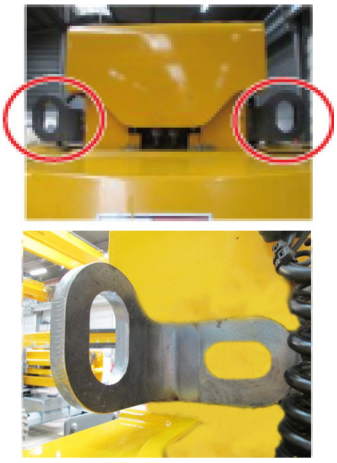
5.8.2.3 - Preliminary procedures

- 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.
- Stop the machine.
- 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, slings, straps, etc. are of sufficient strength to withstand maximum machine weight.
- Attach the rigging ONLY to the designated lifting points on the machine.

5.8.2.4 - Procedure for the use of slings

The machine must be completely stowed. Turntable line up with 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 2 slings 2 m (6 ft 7 in) 2 000 kg (4 410 lb) over the tie-down points. Adjust properly to prevent any damage to the machine.



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

5.9 - LOADING AND UNLOADING WITH FORKLIFT

- Lower the mast and jib.

The machine must be in the fully stowed transport position.

- Ensure that the machine controls are in the OFF position.
- Forklift used to load and unload must have adequate capacity (Refer to Section B 4 Technical specifications).
- Adjust the forklift forks spread to match with the machine fork pockets.
- Carefully insert the forklift forks in the designated machine fork pockets.

Never 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.

Unloading

- Carefully lift the machine and make sure that the machine weight is properly balanced.
- Slowly lower the machine and place it on the ground.

6 - Cold Weather Recommendations

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

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

6.1 - ENVIRONMENTAL CONDITIONS

6.1.1 - 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.

7 - Battery care and maintenance

7.1 - BATTERY RECHARGE

7.1.1 - On-board charger

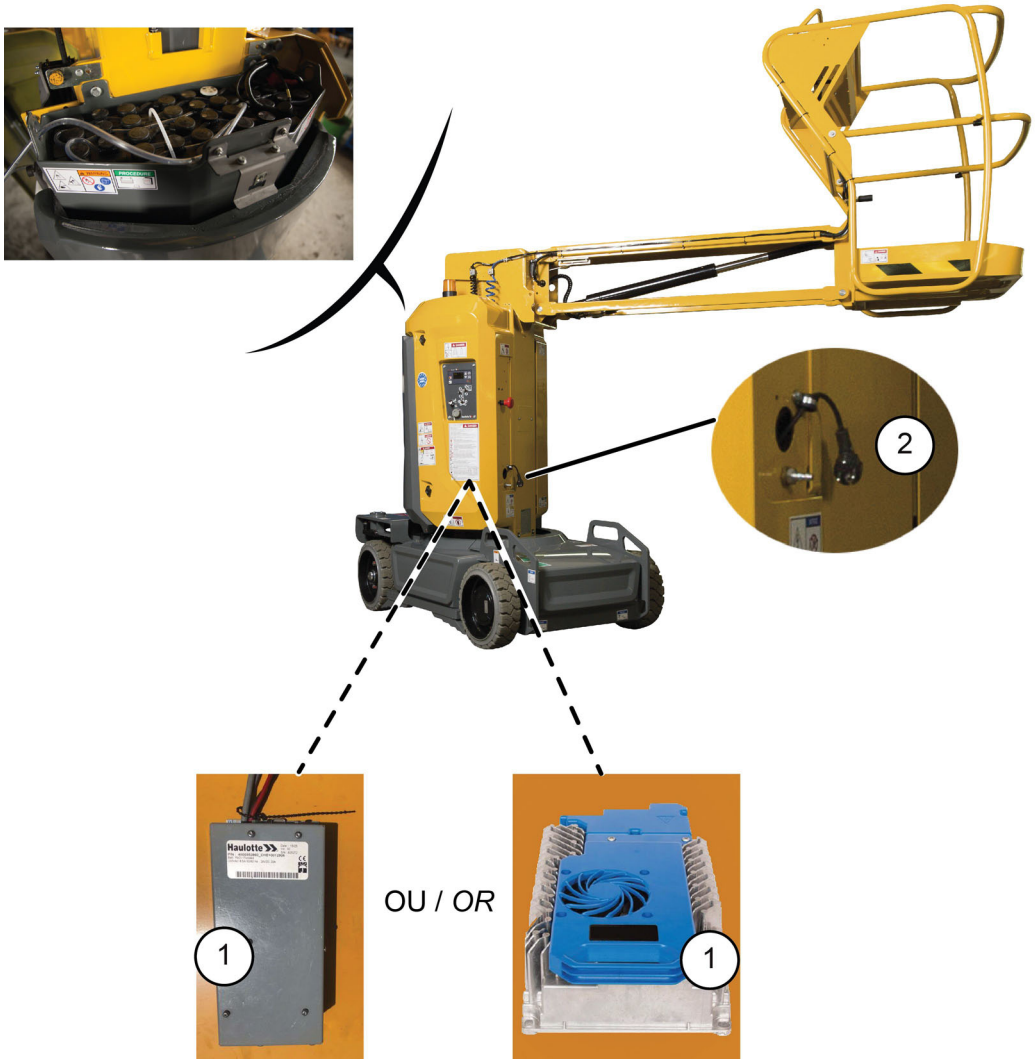
The on-board charger is used to charge the semi-drive batteries. The charger's power is 750W-1000W and the maximum intensity is 10A for 220V - 240V and 110V networks. Battery charging starts as soon as it is connected via the mains supply.

N.B.-:-NO MOVEMENTS ARE ALLOWED DURING BATTERIES CHARGING CYCLE AND WHILE CONNECTED TO AN EXTERNAL POWER OUTLET.

		
Battery charger	36V / 35A	36V / 41A
Electric power supply	190 - 265 Vac / 50Hz / 10A	85 - 265 Vac / 50-60Hz / 8A max
Battery voltage	24V	
Charging time	10h	

D- Operation instructions

Locations



Marking	Description
1	On-board charger
2	Battery charger mains cable

Never replace the charging cable without written permission from HAULOTTE®.

D- Operation instructions

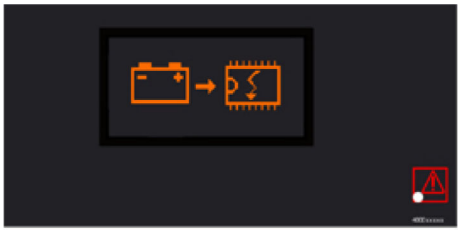
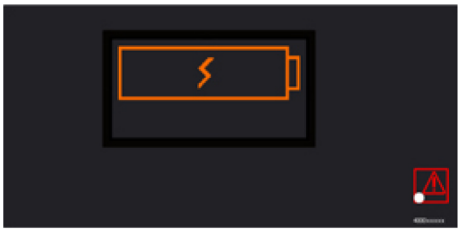
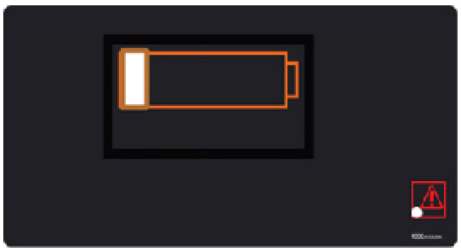
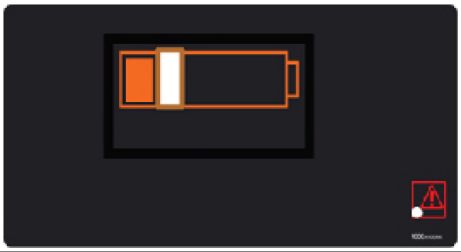
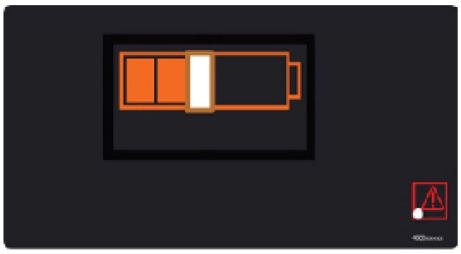
7.1.2 - Battery charging

- **Do not use an external charger or jump the batteries.**
- **Ensure the mains supply is compatible :**
- **Do not use a cable reel with the cable wound up.**
- **The socket must be able to deliver a current of 10 A.**

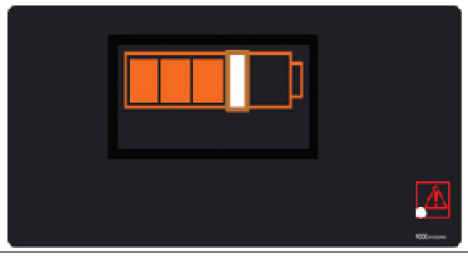
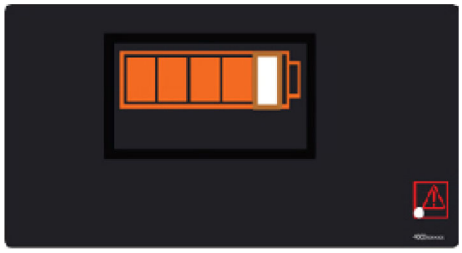
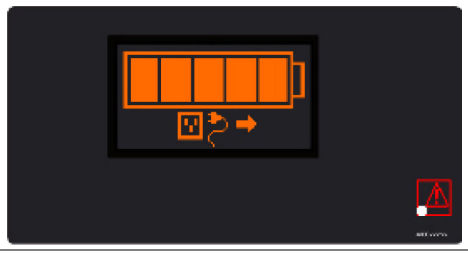
Duration of charge cycle :
- 10 hours approximately, on 220 - 240 V AC network.

The charge cycle stops automatically when charging is complete.

It can take up to 24 hours for a full charge if the battery levels are very low (Charge status less than 5 %).

Internal parameter update		
Charging is going to start		
The first segment flashes		Charge from 0 % to 20 %
The second segment flashes		Charge from 20 % to 40 %
The third segment flashes		Charge from 40 % to 60 %

D- Operation instructions

The fourth segment flashes		Charge from 60 % to 80 %
The fifth segment flashes		Charge from 80 % to 100 %
Battery equalisation		Leave the batteries on charge(3h)
Charging is complete		Unplug the charging cable from the machine

7.2 - BATTERY CARE AND MAINTENANCE

7.2.1 - Filling batteries

The procedure described below only applies to open lead acide batteries. 6 V open lead-acid battery blocks are composed of 3 2 V single cells connected together in series. The cells are immersed in an electrolyte composed of 1/3 sulfuric acid and 2/3 deionized water.

Do not refill the batteries before the first 10 charging cycles.

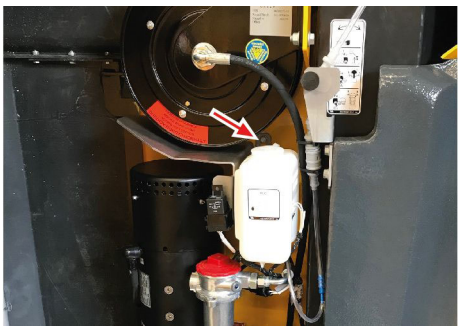
The batteries must ONLY be filled after charging them fully. Failure to comply with these instructions may lead to the electrolyte overflowing, etc...

The batteries MUST be filled when necessary or the batteries may be irreparably damaged. The lead plates oxidize in the air. They must always be covered with electrolyte.

The water level in the batteries cannot be topped up if the temperature is lower than 0° as the distilled or deionized water freezes in the centralized filling system.

7.2.1.1 - Procedure to fill the batteries automatically

1. Open the cap.
2. Fill the can with demineralized water.
3. Correctly close the plug and battery compartment.
4. Fully recharge the batteries in order to restart an automatic filling or activate the automatic filling from the Activ'Screen of the ground control box.



7.2.2 - Desulfation charge

Normal battery use leads to sulfatation of the lead plates during discharge (Formation of lead sulfate). Recharging the battery dissolves the lead sulfate. The plates are desulfated.

Moreover, sulfatation also appears if the battery self-discharges during storage in a low state-of-charge (< 70%).

As the battery ages, the lead sulfate may become harder and harder and increasingly difficult to eliminate by normal charging. This leads to a loss of autonomy. The desulfation charge is a way of regenerating the battery.

To improve the efficiency of the desulfation charge, you are advised to launch it for a battery discharged to a state-of-charge less than 30%.

Procedure :

- Go to the machine set-up menu –> 3.3 Machine config –> 3.3.1 Option setting –> Desulfation charge.

Desulfation charge

- The option is active and will be implemented during the next mains charge.
- Charging time is increased up to 72 h.
- For high efficiency in this charging mode, the batteries must be below 30%. Desulphation should only be performed if the battery is sufficiently discharged. Otherwise, you will need to perform desulphation again once the battery is sufficiently discharged

D- Operation instructions

7.3 - OPTIMISE BATTERY LIFE

To optimize battery performance and life-time, you are advised to follow the recommendations below :

- Carry out regular battery maintenance as described.
- Do no store the machine discharged (Duration greater than 72 hours).
- Carry out full charges regularly.
- Do not keep a machine in a state-of-charge less than 70% for no useful purpose.

• A full recharge of the batteries is recommended every 30 days that the machine is used.

Keep the top of the batteries clean and dry. Incorrect connection or corrosion may cause a high loss of power.

	Full charge	Filling control	Desulfation charge
In use			
As soon as possible	X		
If state-of-charge < 50% at the end of a working day	X		
Every 30 days of use	X		
Before placing in storage	X		
1 time a week	X	X	
1 time every 2 weeks		X	
1 time a month		X	
1 time every 6 months			X
In storage			
1 time a month	X		

The battery's water consumption depends on its use. You are advised to check the water level 1 time a week.

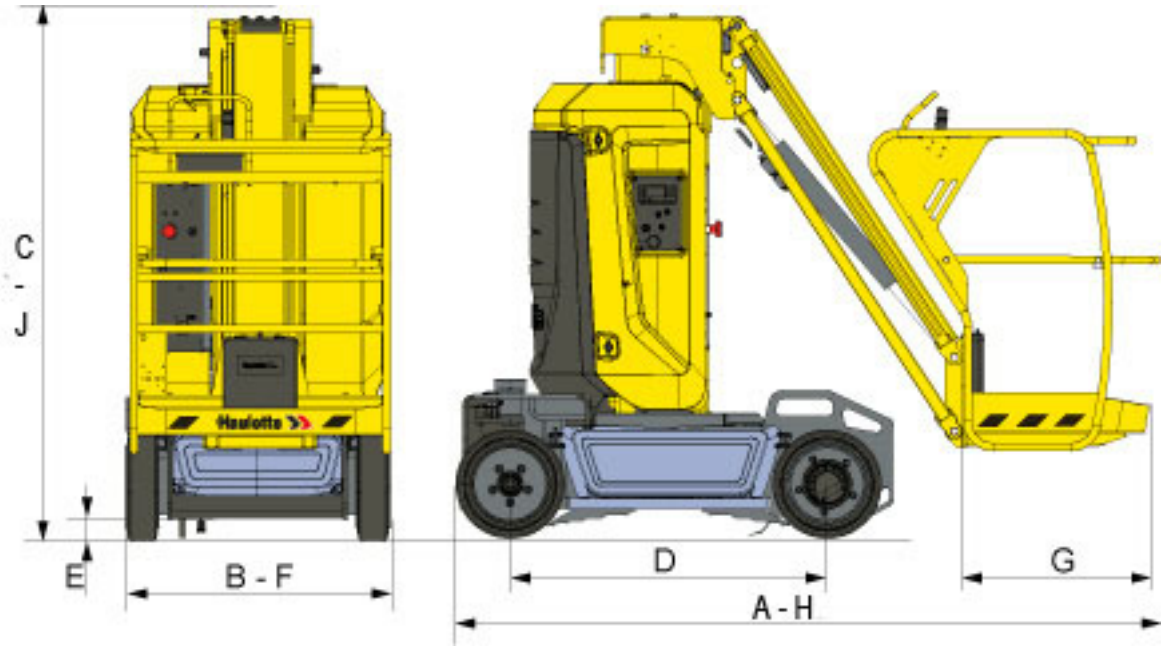
D- Operation instructions

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, UKCA, AS and EAC standards

Machine		STAR 10	
Marking	**Specifications - Dimensions**	**SI**	**Imp.**
A	Overall length of machine	2,70 m	8 ft 10 in
B	Overall width of machine	1,0 m	3 ft3 in
C	Overall height of machine	2,0 m	6 ft 7 in
D	Wheel base	1,20 m	3 ft 11 in
E	Ground clearance - Chassis	10 cm	4 in
E	Ground clearance - Potholes	3,3 cm	2 in
F X G	Platform dimensions	0,98 x 0,78 m	38 in x 30 in
H	Storage length	2,70 m	8 ft 10 in
J	Storage height	2,00 m	6 ft 7 in

ANSI and CSA standards

Machine		STAR 26J	
Marking	**Specifications - Dimensions**	**SI**	**Imp.**
A	Overall length of machine	2,70 m	8 ft 10 in
B	Overall width of machine	1,0 m	3 ft3 in
C	Overall height of machine	2,0 m	6 ft 7 in
D	Wheel base	1,20 m	3 ft 11 in
E	Ground clearance - Chassis	10 cm	4 in
E	Ground clearance - Potholes	3,3 cm	2 in
F X G	Platform dimensions	0,98 x 0,78 m	38 in x 30 in
H	Storage length	2,70 m	8 ft 10 in
J	Storage height	2,00 m	6 ft 7 in

E- General Specifications

2 - Major component masses

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

Component	STAR 10	STAR 26J
Frame assembly mass	685 kg - 1510 lb	
Drive wheel mass	18,5 kg - 40 lb	
Steer wheel mass	20,6 kg - 45 lb	
Turret assembly mass	542 kg - 1195 lb	
• Counterweight mass - Turntable	834 kg - 1840 lb	1104 kg - 2435 lb
• Battery mass	209 kg - 460 lb	
Jib assembly mass	206 kg - 455 lb	
Platform assembly mass	65 kg -145 lb	

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	72 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)

E- General Specifications

4 - Wheel/Tire assembly

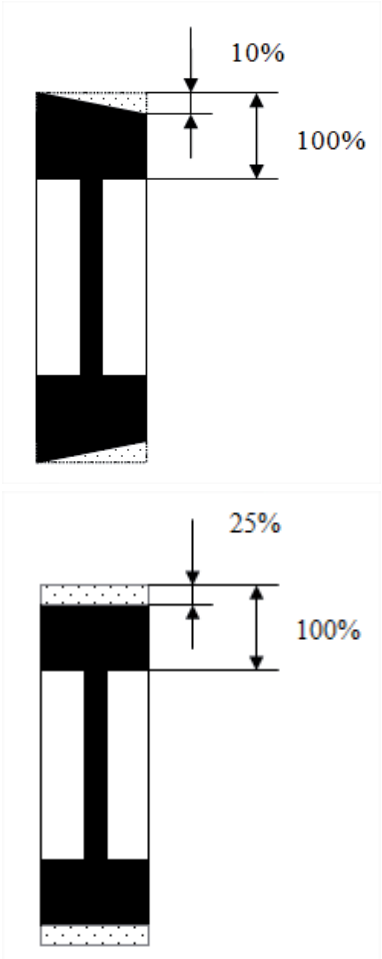
4.1 - TECHNICAL SPECIFICATIONS

Component	Standard wheel
Reference number	Solideal
Type	Solid tires/tyres
Drive wheel mass	18,5 kg - 40 lb
Steer wheel mass	20,6 kg - 45 lb
Size	406 mm / 100 mm (16 in/ 4 in)
Torque	115 Nm (84.81 ft lbs)

4.2 - INSPECTION AND MAINTENANCE

Replace the wheels and the tires 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 solid 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.

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

5 - Options

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

5.1.1 - Description

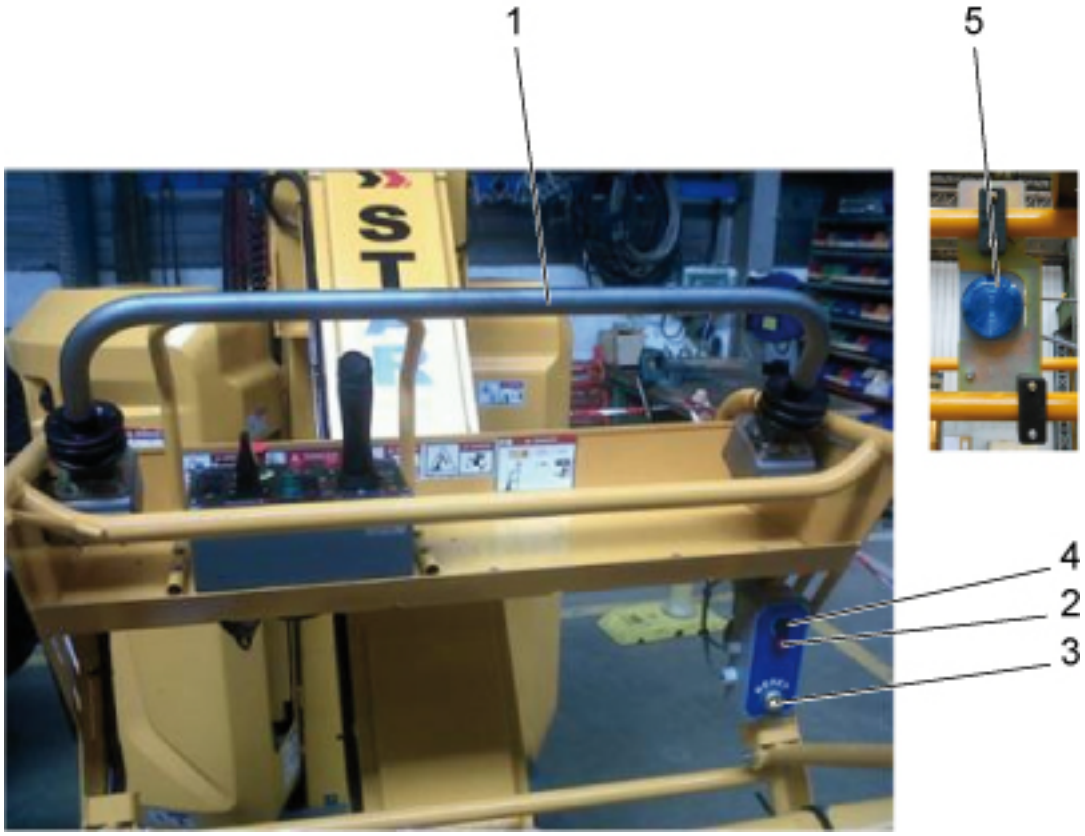
General Specification Activ' Shield Bar :

- 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, Foot Switch 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.

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

5.1.2 - Characteristics



Marking	Description
1	Activation bar
2	Electrical box
3	"RESET" button
4	Green indicator light
5	Blue flashing indicator, indicates activation bar operates

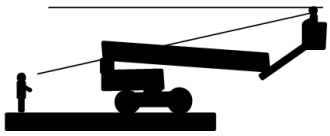
5.1.3 - Safety precautions

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

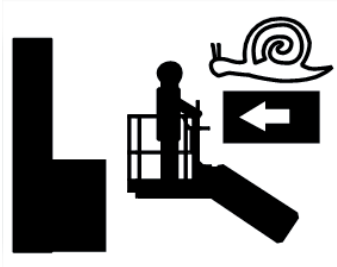
Do not use the Activ' Shield Bar as a handhold. This could result in an inadvertent triggering of the Activ' Shield Bar.

- 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.



- Do not use the Activ' Shield Bar as a handhold. To prevent unintentional activation of the system.

5.1.4 - 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 (4) is not illuminated		
Raise the extendible structure (mast, jib) out of transport configuration : • Check that the green indicator light (4) is illuminated		
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 (5) are activated		

5.1.5 - 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.

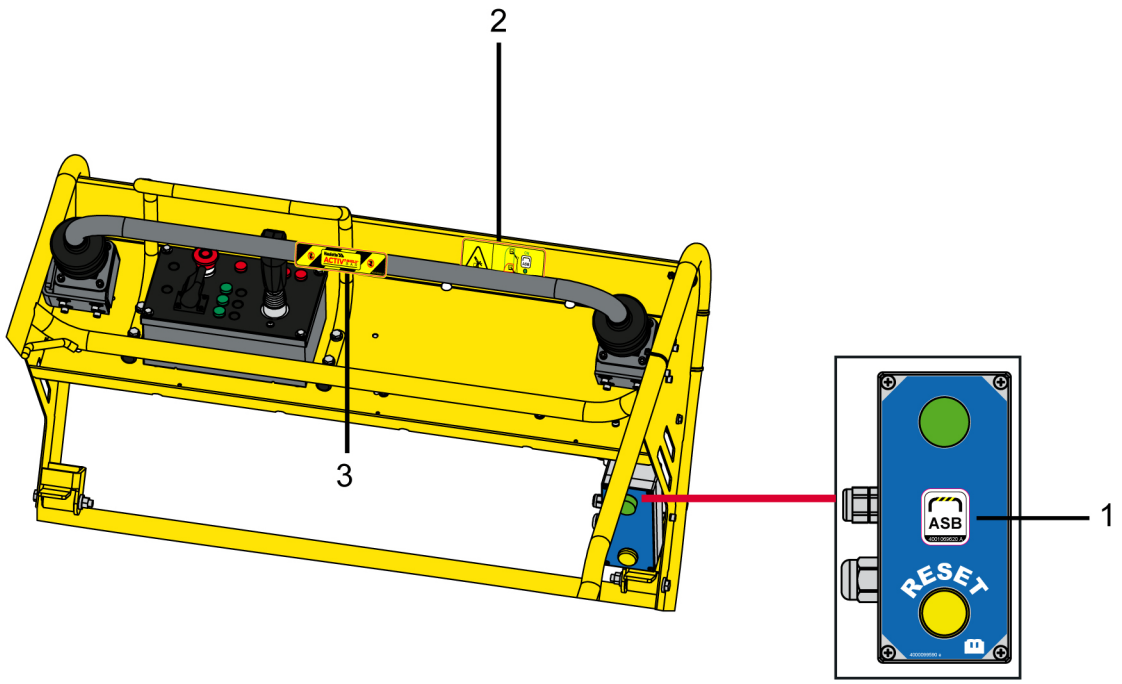
To re-set the Activ' Shield Bar, release the activation bar, the Foot Switch and controls. Then press the reset button.

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

E- General Specifications

5.1.6 - Specific decals

Location of the decals



Software version to ≥ 1.12.7.0

Marking	Description	Quantity	Part number
302	Activ' Shield Bar controls	1	4001069620
303	Activ' Shield Bar instructions	1	4001069630
305	Do not lean on the bar	1	4001069640

Notes

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 local regulations.

To ensure your equipment continues to achieve the level of performance set in the factory, it is important to maintain it regularly. We remind you that it is strictly forbidden to make any modifications. 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 3 - Inspection and Functional test.

2 - Maintenance Schedule

This section provides the necessary information needed to place the machine in safe operation. In accordance with the regulations that are currently applicable, this machine is deisgned to have a 10 year life span in normal usage conditions. The life may be extended or reduced dependent on the severity of operating conditions, the machine condition itself and by conducting effective inspections and maintenance in addition to other external factors. 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 or have not been in use 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	Daily inspection
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 3.1 - Daily inspection.

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 every 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 normal service 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 or by a competent company or person.

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.

To check for safety campaigns, consult our website : www.haulotte.com

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 - Conditions of warranty

Our warranty conditions and extension contracts are now available on the websites of our sales network : www.haulotte.com

2 - Subsidiary contact information

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G- Other information

2.1 - CALIFORNIA WARNING

For the US destined machines (ANSI and CSA standards)

CALIFORNIA

Proposition 65 Warning

Operating, servicing and maintaining a passenger vehicle or off-road vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle.

For more information go to www.P65Warnings.ca.gov/passenger-vehicle

CALIFORNIE

Avertissement de la Proposition 65

L'exploitation, l'entretien et la maintenance d'un véhicule de tourisme ou d'un véhicule tout-terrain peuvent vous exposer à des produits chimiques, y compris les gaz d'échappement, le monoxyde de carbone, les phthalates et le plomb, identifiés par l'État de Californie comme pouvant causer le cancer et des malformations congénitales ou autres effets nocifs sur la reproduction. Pour limiter toute exposition: évitez de respirer les gaz d'échappement, ne laissez pas tourner le moteur au ralenti sauf si nécessaire, faites l'entretien du véhicule dans une zone bien aérée et portez des gants ou lavez vous fréquemment les mains lors de cette opération.

Pour de plus amples informations, consulter www.P65Warnings.ca.gov/passenger-vehicle

CALIFORNIA

Advertencia de la Proposición 65

Operar, dar servicio y mantenimiento a un vehículo de pasajeros o vehículo todo terreno puede exponerle a químicos incluyendo gases del escape, monóxido de carbono, ftalatos y plomo, los cuales son conocidos por el Estado de California como causantes de cáncer y defectos de nacimiento u otros daños reproductivos. Para minimizar la exposición, evite respirar los gases del escape, no encienda el motor excepto si es necesario, dé servicio a su vehículo en un área bien ventilada y utilice guantes o lave sus manos frecuentemente cuando dé servicio a su vehículo.

Para mayor información visite www.P65Warnings.ca.gov/passenger-vehicle

G- Other information

For electric (battery operated) machines

CALIFORNIA

Proposition 65 Warning

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Batteries also contain other chemicals known to the State of California to cause cancer.
WASH HANDS AFTER HANDLING.

For more information go to www.P65Warnings.ca.gov

CALIFORNIE

Avertissement de la Proposition 65

Les batteries, les bornes et autres accessoires contiennent du plomb et des composés à base de plomb, agents chimiques identifiés par l'État de Californie comme pouvant provoquer le cancer et des effets nocifs sur la reproduction. Les batteries contiennent également d'autres agents chimiques identifiés par l'Etat de Californie comme pouvant provoquer le cancer.
SE LAVER LES MAINS APRES MANIPULATION.

Pour de plus amples informations, consulter www.P65Warnings.ca.gov

CALIFORNIA

Advertencia de la Proposición 65

Los bornes, los terminales y los accesorios de las baterías contienen plomo y compuestos de plomo, químicos conocidos por el Estado de California como causantes de cáncer y daños reproductivos. Las baterías también contienen otros químicos conocidos por el Estado de California como causantes de cáncer.
LAVESE LAS MANOS DESPUES DE MANIPULARLOS.

Para mayor información visite www.P65Warnings.ca.gov

G- Other information

Notes

H- Intervention register

1 - Intervention register

The intervention register keeps a record of maintenance and repair work carried out inside or outside the maintenance programme.

N.B.-:-In the case of a HAULOTTE Services® intervention, the qualified technician must indicate the HAULOTTE Services® intervention number.

Date	Type of intervention	Number of hours	Intervenor	HAULOTTE Services® intervention number

H- Intervention register

Date	Type of intervention	Number of hours	Intervenor	HAULOTTE Services® intervention number