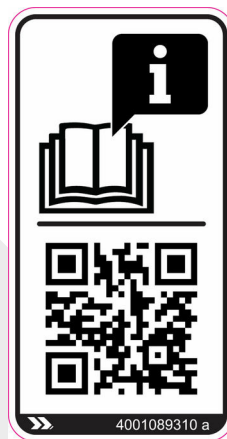


For online reference and to download the manuals for your machines , go to:-

<https://www.e-technical-information.com>

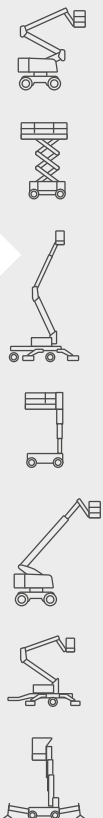
or, scan the QR Code below



OPERATOR'S MANUAL

HA20 RTJ - HA20 RTJ PRO - HA61 RTJ - HA61 RTJ PRO

Color screen display



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Notes

1 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.

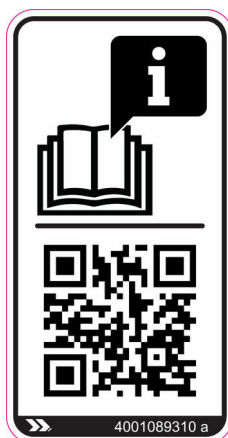
The manual must be available to all operators and must be kept in a legible condition. Additional copies can be ordered from HAULOTTE Services®.

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:



2 User responsibility

2.1 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.

2.2 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.

2.3 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.

2.4 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.

3 Safety

3.1 Safety instructions

3.1.1 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.

3.1.2 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).

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.



A - Foreword

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.



3.1.3 Overturning / Tip-over Hazards

Before positioning and operating the machine:

- Ensure that the surface is capable of supporting the machine weight including the rated capacity. Check the load bearing capacity of the supporting ground.
- Remain vigilant of driving direction reversal at the platform. Check the driving direction with the help of the red or white arrows on the chassis and the platform control box.
- Do not exceed the maximum rated capacity that includes the weight of both material and allowed number of occupants. Do not exceed the allowable number of occupants.
- 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.



A - Foreword

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



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



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

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  B 3.1 - 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

A - Foreword

Force	Meteorological description	Observed effects	m/s	km/h	mph
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

A - Foreword

3.1.4 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 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.



A - Foreword

3.1.5 Explosion / Fire Hazards

- Always wear protective clothing, glasses or a face protection shield and gloves when working on batteries or energy sources.

N.B.: Acid is neutralized with sodium bicarbonate and water.



- Do not start the engine if you smell or detect liquid propane gas (LPG), gasoline, diesel fuel or other explosive substances.
- Do not work on or operate a machine in an explosive or flammable atmosphere / environment.
- Do not touch hot components.
- Do not bridge the battery terminals with metallic objects.



- Do not service the battery in proximity of spark, open flame, lit cigarettes.
- Do not fill up the fuel tank, when the engine is running and/or near a flame.



3.1.6 Crushing / Collision Hazards



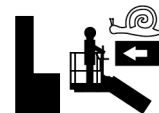
Before using the machine, mark out the machine's work and circulation area using a marking system appropriate to the task at hand and the work environment.

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.

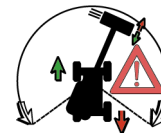


- During movement, keep all the parts of the body inside the platform. Hold onto the guardrails on the opposite side to any surrounding structures. Take care to avoid trapping hands whilst holding the guardrails.
- To position machine close to a building/structure, it is recommended using the upper boom and or arms movement control functions to position, rather than driving machine closer to structure.
- Warn personnel not to work, stand, or walk under a raised boom/platform.
- Be aware of the boom position and tail swing when rotating the turret (turntable).
- 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.



A - Foreword

- 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.



3.1.7 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).

4 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.

5 Incident notification

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

HAULOTTE Group - EUROPE Product Safety Department

Address: Rue Emile Zola - 42420 Lorette - France

Tel: +33 (0)4 77 29 24 24

Email: productsafety.europe@haulotte.com

HAULOTTE Group - Australia, India and Asia Product Safety Department

Address: No.26 Changi North Way - Singapore 498812 - Singapore

Tel: +65 6546 0123

Email: productysafety.apac@haulotte.com

HAULOTTE Group - North & South America Product Safety Department

Address: 3409 Chandler Creek Rd. - Virginia Beach, VA 23453 - United States

Tel: +1 757 689 2146

Email: productsafety.americas@haulotte.com

Connect to our website: www.haulotte.com



6 Compliance

6.1 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.

6.1.1 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.

6.2 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.

6.3 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



6.4 Declaration of conformity



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

6.4.1 Declaration of conformity - All machines



The UKCA declarations of conformity only apply to machines that have been approved and commissioned within the United Kingdom (UK).

Declaration of conformity - UKCA and CE standards



UKCA / EC DECLARATION OF CONFORMITY

HAULOTTE Factory



Declares under our own responsibility that the machine described below :

Mobile Elevating Work Platform

Commercial name
Type
Serial number

Commercial name of the concerned machine
Model type of concerned machine
Serial number of the machine

Conforms with provisions of the Regulations listed below :

CE

EC Machinery Directive 2006/42/CE
EC Directive electromagnetic compatibility 2014/30/EU
EU RED Directive on radio equipment (if machine equipped) 2014/53/UE

UKCA

Supply of Machinery (safety) 2008 SI2008/1597 amended SI2011/1043/2157 2019/696
Electromagnetic compatibility 2016 SI 2016/1091 amended SI 2017/1206, 2019/696
Radio equipment (if machinery equipped) 2017

This machine has been type examined by :

Name of the Authorized body :

Name of the Approved body :

Certificate number :

Certificate number :

Harmonized standard(s) used as reference(s) :
EN280:2013 + A1:2015

Designed standard(s) used as reference(s) :
BS EN280 : 2013 + A1 : 2015

Person authorised to compile the technical file :

HAULOTTE GROUP
Compliance Manager
RUE EMILE ZOLA
CS 30045 42420 LORETTE FRANCE

HAULOTTE UK Ltd
General Manager UK and Ireland
Unit 1 Gravelly Way, Four Ashes
Wolverhampton, West Midlands WV10 7GW
ENGLAND

Name and Signature
Division Director

Date and place

haulotte.com

6.4.2 Declaration of conformity - Thermal platforms

Declaration of conformity - CE standard

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 concernée
(Commercial name of the concerned machine)

Número de série
(Serial number)

Número de série de la machine
(Serial number of the machine)

Organisme notifié
(Notified body)

Nom et adresse de l'organisme notifié
(Name and address of the notified body)

Número de certificat
(Certificate number)

Número de certificat du type de machine
(Certificate number of the type of machine)

Charge maximale d'utilisation
(Rated capacity)

Charge maximale d'utilisation de la machine concernée
(Rated capacity of the concerned machine)

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

Directive CE Machine
(EC Machinery Directive)

2006/42/CE

Se conforme aux principales exigences de la norme harmonisée
(This machine also fulfils the principles of the harmonised standard)

EN290:2013 + A1:2015

Directive CE concernant la compatibilité électromagnétique
(EC Directive on electromagnetic compatibility)

2014/30/EU

Directive CE RED concernant les équipements radioélectriques (si la machine est équipée)
(RED EC Directive on radio-electrical equipment (if the machine is equipped))

Directive CE d'émission de bruit
(EC Outdoor Noise Directive)

2000/14/EC

Méthode de mesure
(Measurement method)

Annex III-B

Niveau de puissance acoustique garanti
(LWA, Guaranteed sound level)

101 dB

Niveau de puissance acoustique mesuré max
(LWA, Maximum sound level)

99 dB

Cette déclaration porte exclusivement sur la machine dans l'état où elle a été placée sur le marché
(This declaration relates exclusively to the machinery in the state in which it was placed on the market)

Aucune modification de la machine décrite ci-dessus a pour effet d'invalider cette déclaration
(Any modification 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)

haulotte.com

Notes

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Notes

B - Familiarization

1 General safety

1.1 Intended use

The HAULOTTE® (PEMP) lifting platforms are machines designed to move people, tools and equipment to work stations located at height.

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.-: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 SOLVENT-BASED OIL TO THE ENTIRE MACHINE.

N.B.-:ENSURE THAT THE MACHINE IS LOCKED IN A SAFE PLACE AND THAT THE STARTER KEY HAS BEEN REMOVED TO PREVENT ANY UNAUTHORIZED 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®.

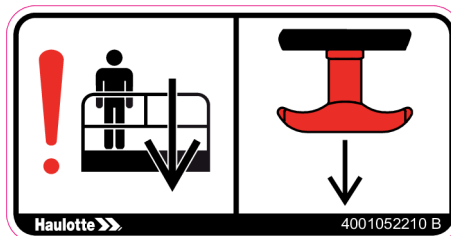
B - Familiarization

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



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 Level of severity

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

B - Familiarization

1.4 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		

B - Familiarization

Symbol	Description	Symbol	Description	Symbol	Description
	Flames prohibited		Maintain safe clearance from high voltage electrically charged conductors as described in manual - Do not use in thunderstorms		Overload
	Refer to operator manual		Safety belt		Use appropriate lanyard attached to dedicated anchor point.
	Wheel pressure		Enable switch		Use safety prop before attempting any maintenance work
	Tow point		Tie down point		Lift point
	Keep away from hot surfaces		Wear protective equipment		

B - Familiarization

1.5 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.

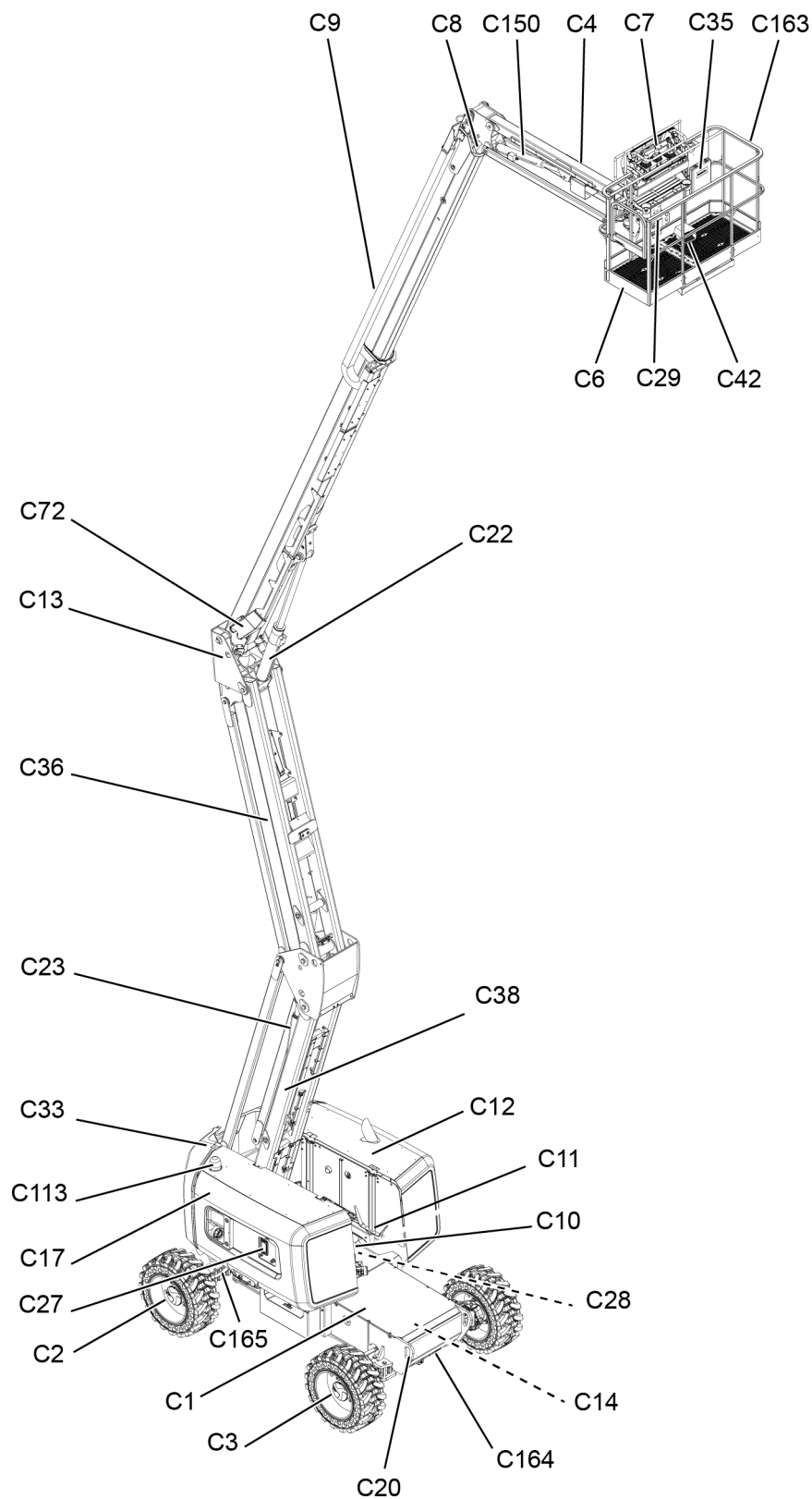
Symbol	Description
	Danger: Risk of injury or death
	Caution: Risk of material damage
	Prohibited action
	Reminder to use good practice or follow pre-operation checks
	Cross-reference to another part of the manual
	Cross-reference to another manual
	Cross-reference to repair (contact HAULOTTE Services®)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

B - Familiarization

2 Primary machine components

2.1 Layout

HA20 RTJ - HA20 RTJ PRO - HA61 RTJ - HA61 RTJ PRO



B - Familiarization

Marking	Description	Marking	Description
C1	Chassis	C23	Arm lifting cylinder
C2	Front driven steering axle	C27	Ground control box+Universal plug
C3	Rear drive wheel (and steer wheel if 4WS)	C28	Tilt sensor
C4	Jib	C29	Platform rotation cylinder
C6	Platform	C33	Counterweight
C7	Platform control box	C35	Document holder
C8	Input jib leveling cylinder	C36	Top arm
C9	Upper boom	C38	Bottom arm
C10	Slew ring	C42	Foot Switch
C11	Turntable assembly	C72	Output jib compensation cylinder
C12	Right side compartment (engine, pump and starter battery)	C113	Beacon light
C13	Arm/Boom link piece	C150	Jib lifting cylinder
C14	Hydraulic drive motor and reducer	C163	Hand (grab) rail
C17	Left side compartment (hydraulic oil tank and fuel tank)	C164	Non-steering fixed axle (If 2WS) Steering fixed axle (If 4WS)
C20	Tie-down (and/or lifting) points	C165	Non-oscillating steering axle (If 2WS) Oscillating steering axle (If 4WS)
C22	Boom lift cylinder		

Universal plug

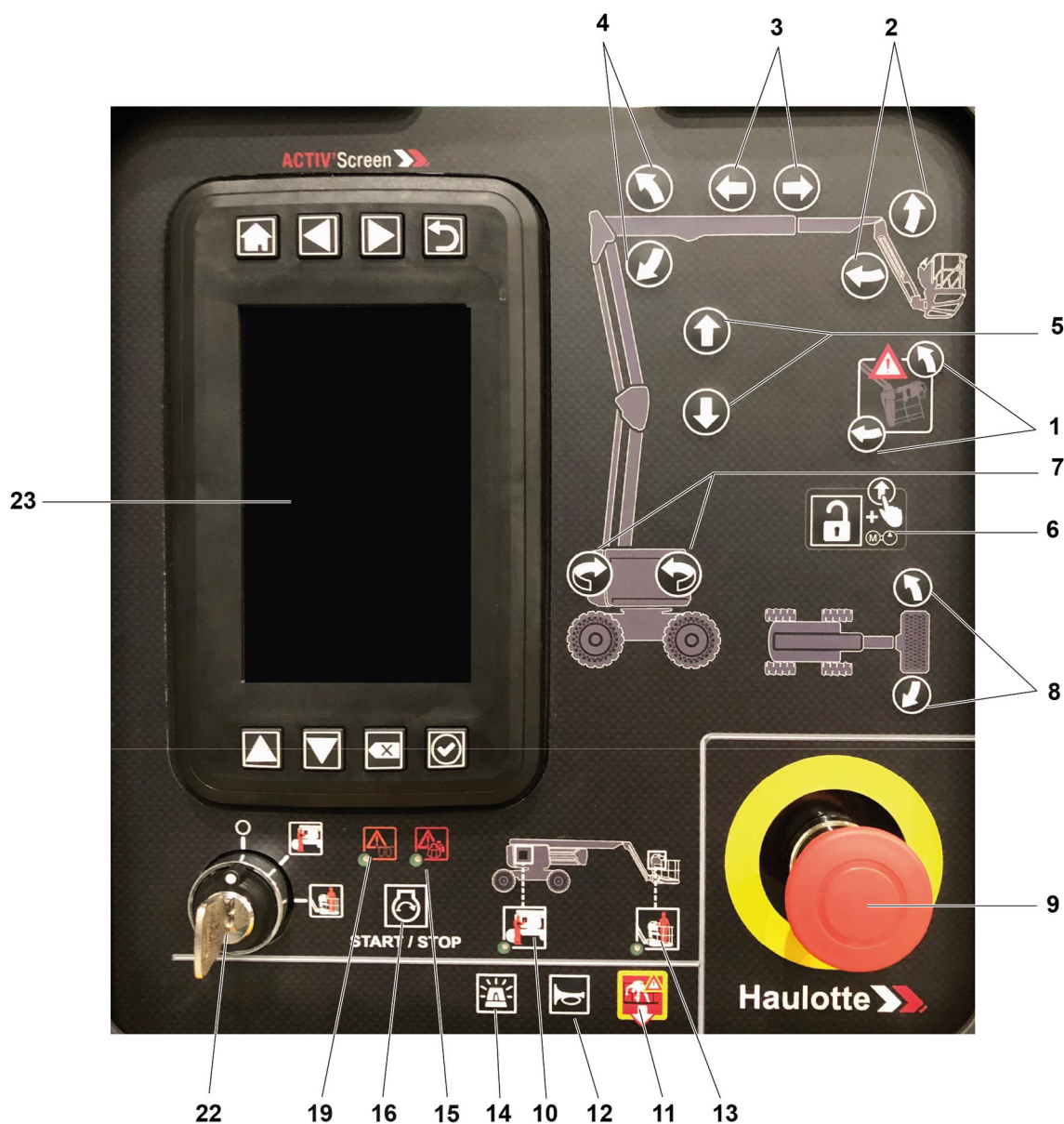


B - Familiarization

2.2 Ground control box

2.2.1 Layout-Color screen display

General view



B - Familiarization

Controls and indicators

Marking	Name	Description	Function
1	SA720U	Platform tilt control	By pressing on  : Tilt the platform towards the front of the machine
	SA720D		By pressing on  : Tilt the platform towards the back of the machine
2	SA620U	Jib raising / lowering control	By pressing on  : Jib raising
	SA620D		By pressing on  : Jib lowering
3	SA530O	Boom telescoping switch	By pressing on  : Boom extending
	SA530I		By pressing on  : Boom retracting
4	SA520U	Boom raising / lowering control	By pressing on  : Boom raising
	SA520D		By pressing on  : Boom lowering
5	SA420U	Arm raising / lowering control	By pressing on  : Arm raising
	SA420D		By pressing on  : Arm lowering
6	SB800	Enable Switch/Back-up unit selector	By pressing on  - Validation of controls when engine started - Automatic activation of the emergency unit if movement is required when the engine is off
7	SA250L	Turntable rotation switch	By pressing on  : Counter clockwise (CCW) rotation
	SA250R		By pressing on  : Clockwise (CW) rotation

B - Familiarization

Marking	Name	Description	Function
8	SA750L	Platform rotation switch	By pressing on  : Counter clockwise (CCW) rotation
	SA750R		By pressing on  : Clockwise (CW) rotation
9	SB801	E-stop button	Pulled out: Ground control box energized
			Pushed in (activated): De-energizes control system
10	HL905	Indicator, ground control box selected	indicator on: Turret control box selection
11	SA801	Overriding system control	By pressing on  : Authorize movements from the ground control box in case of overload (Use ONLY in case of emergency)
12	SB807	Horn button	By pressing on  : Horn activation
13	HL906	Indicator of the platform control box selection	indicator on: Platform control box selection
14	SA903	Beacon light on/off	By pressing on  : Beacon light ON / OFF
15	HL909	Overload indicator	 Alarm icon - The icon lights up for 1 s when switched on - The icon (19) flashes at the same time - Is blinking if overriding is active: • If there is a fault, an error code will be displayed on the Activ' Screen • Or Hydraulic oil temperature icon is active on the Activ' Screen • Or the engine oil pressure icon is displayed on the Activ' Screen • Or Engine stop icon is active on the Activ' Screen • Or the machine overload icon remains lit on the Activ' Screen
16	SA303	Engine start-up selector	By pressing on  : Engine start / stop

B - Familiarization

Marking	Name	Description	Function
19	HL908	Engine warning indicator/Engine pre-heating	 Alarm icon - The icon lights up for 1 s when switched on - The icon (15) flashes at the same time - Is blinking if overriding is active Warning icon is ON if: • Engine warning icon will be displayed on the Activ' Screen • Or Tilt machine status will be displayed on the Activ' Screen • Or illuminates when the engine is pre-heating
22	SA900	Control box activation key switch	 : De-energizes control system
			 : Platform control box energized
			 : Ground control box energized
23		Activ'Screen 2	

B - Familiarization

2.2.2 HAULOTTE Activ'Screen 2

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.

HAULOTTE Activ'Screen 2

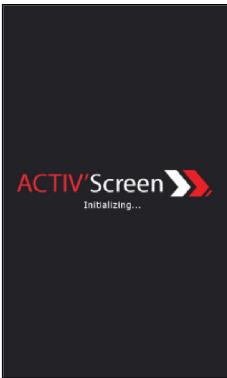
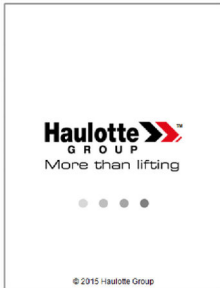
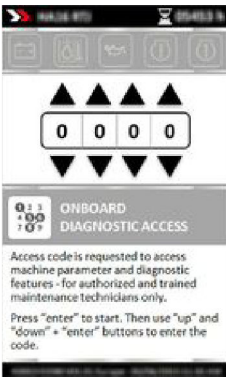
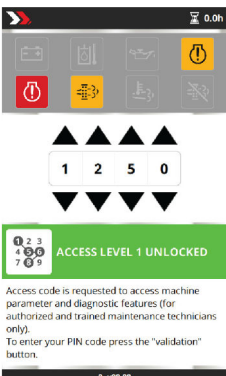
Icon	Description	Function	Icon	Description	Function
HAULOTTE Activ'Screen 2					



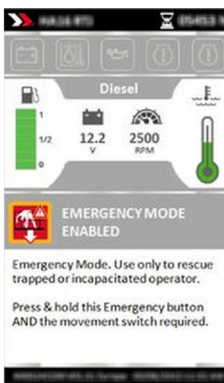
Navigation buttons - Above Activ'Screen display

	Home Button	Allows return to the home screen at any time		Up Navigation	Permits scrolling up through the screen (if present)
	Left navigation	Permits navigation to screens to the left (if present)		Down Navigation	Permits allows scrolling down through the screen and onto the following screen (if present)
	Right Navigation	Permits navigation to screens to the right of the current screen (if present)		Cancellation button	Used to refuse or cancel a selection within the menu
	Back button	Returns you to the previous screen		Validation Button	Used to confirm selection within the menus

B - Familiarization

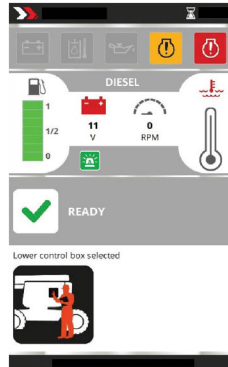
Icon		Function	
When the machine is first started up after 3 days of inactivity, or if the battery has been disconnected, the following screens are displayed in order			
		Machine power up (Start-up screen)	
			
Icon	Function	Icon	Description
	Access code (Will be visible - depending on the machine)		Access code not yet entered
			Access code entered is correct (Level 1, 2 or 3 depending on authorization of technician)
			Access code entered is incorrect
	NIV 1 diagnostic access code (Will be visible - depending on the machine)	The machine can be personalized with a user identification code. Personalization is only possible with level 1 access	
		Machine properties display :-Soft version, machine serial number, adjustment parameters	
		Possible change of parameters :-Language, fault display format, brightness setting, time, and some options availables	
			Operator PIN code not yet entered
			Operator PIN code entered is correct
			Operator PIN code entered is incorrect

B - Familiarization

Icon	Function	Icon	Description
	Operator PIN code (Will be visible - depending on the machine)		The machine can be personalized with a user identification code. Personalization is only possible with level 2 access
		 ONBOARD DIAGNOSTIC ACCESS	Operator PIN code not yet entered
		 ACCESS LEVEL 2 UNLOCKED	Operator PIN code entered is correct
		 WRONG ACCESS CODE	Operator PIN code entered is incorrect
Icon	Function	Icon	Description
	Emergency mode	 EMERGENCY MODE ENABLED	Emergency mode is activated when:- - The machine is in overload state - Ground control box is selected - The emergency overriding button is activated
		 EMERGENCY MODE NOT ACTIVE	Emergency mode is deactivated when:- - The machine is NOT in overload state - Ground control box is NOT selected/energized
		 EMERGENCY MODE NOT ACTIVE	The Emergency mode is out of service/non-functional
		 EMERGENCY EVENT HAS OCCURED	Emergency mode has been used and activation of its function saved in the memory of the machine A HAULOTTE® certified technician is required to reset the Emergency Mode system

B - Familiarization

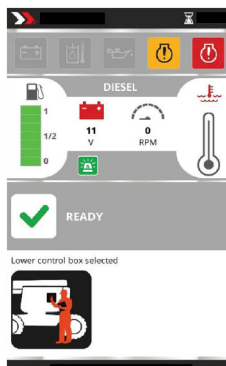
Icon	Function	Icon	Function	Description
Home screen (dashboard) - Will be visible - depending on the machine				



	Machine model zone		Machine Model	Machine model display
	Hour meter/next maintenance zone		Hour meter	The timer flashes if the engine is switched on and the hourmeter increases
		 	Maintenance use	The Maintenance Tool icon and the number of hours remaining until the next maintenance are displayed for 5 seconds when the machine is started up. Maintenance Tool icon blinks; if maintenance is due. The maintenance tool icon turns RED when the next scheduled maintenance must be carried out in under 25 hours

B - Familiarization

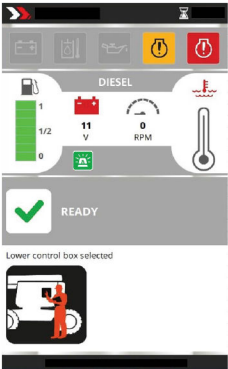
Icon	Function	Icon	Function	Description
Home screen (dashboard) - Will be visible - depending on the machine				



	Warning icons zone		Battery status	- Icon is ON if there is no charge output detected from the alternator. - Icon is flashing if a failure code for the alternator is detected (code F09.10).
			Hydraulic oil temperature	Icon is ON when the temperature in the hydraulic reservoir has exceeded the maximum required temperature. Stop using the machine and allow the oil to cool down.
			Engine oil pressure	Icon is ON if engine oil pressure is lower than required limit while engine is running. The Engine must be switched OFF immediately to avoid damaging the motor.
			Stop engine	- The icon is lit if engine failure is detected (coolant, oil pressure, alternator, etc.). - Or if the Engine shuts down after 3 seconds of running. - Or after 1 second when engine fails to start.

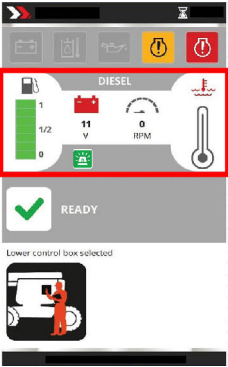
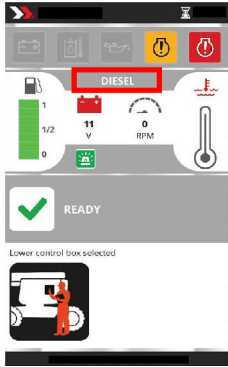
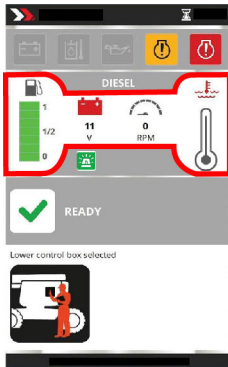
B - Familiarization

Icon	Function	Icon	Function	Description
Home screen (dashboard) - Will be visible - depending on the machine				



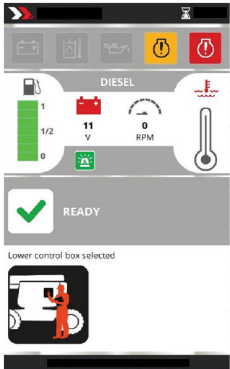
	Warning icons zone		Engine warning	Icon is ON if Engine warning is detected Or one of the engine maintenance schedules has been exceeded.
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B - Familiarization

Icon	Function	Icon	Function	Description
Home screen (dashboard) - Will be visible - depending on the machine				
	Functional information zone		Power mode used	Diesel
			Bargraph	
			Digital Gauge - Fuel reserve indicator (ON/OFF)	The indicator changes from GREEN to RED when the fuel level is low and indicator is activated

B - Familiarization

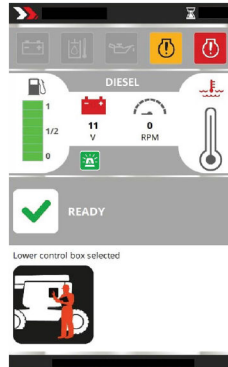
Icon	Function	Icon	Function	Description
Home screen (dashboard) - Will be visible - depending on the machine				



	Functional information zone		Battery charge	Displays the machine battery voltage. The indicator switches to RED if the voltage is low.
			Engine speed	Engine speed display
			Engine temperature	Displays Engine coolant temperature. The indicator switches from GREEN to RED when the engine overheats.

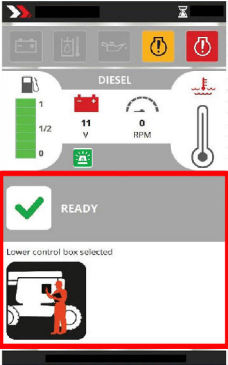
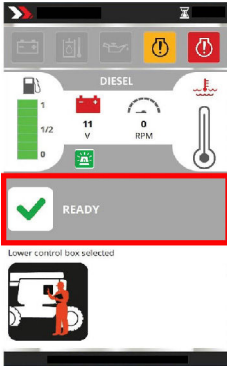
B - Familiarization

Icon	Function	Icon	Function	Description
Home screen (dashboard) - Will be visible - depending on the machine				

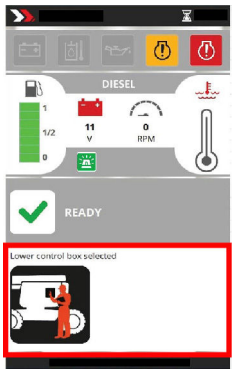


	Additional functions		Beacon light	The icon is ON when the flashing light is switched on
			Working light	The icon is ON when the work light is switched on
			Activ' System	Lighting The icon is ON when the Activ' Lighting System is switched on in auto or manual mode
			Stop System	Emission The icon is ON if the system is active on the machine

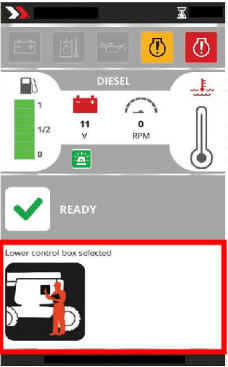
B - Familiarization

Icon	Function	Icon	Function	Description
Home screen (dashboard) - Will be visible - depending on the machine				
	Machine status zone		Pictogram and title	Displays the pictogram and machine status
			Ready	Machine ready, displayed when no failures and no other machine state icons is active
			Alarm	The alarm icon blinks in case of: - Machine failure - Failure detected - Machine in overload - Machine in tilt Another icon will be displayed to show the machine's status, the failure or the malfunction.

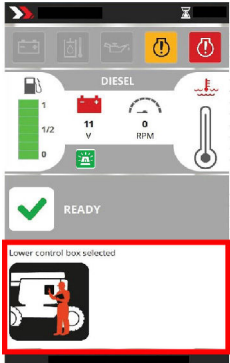
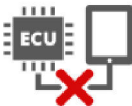
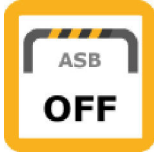
B - Familiarization

Icon	Function	Description
Home screen (dashboard) - Will be visible - depending on the machine		
	Description	
	Platform control box selected	Selector switch is in platform control box position
	Ground control selected	Selector switch is in ground control box position
	Tilt	The machine is elevated , and is on a slope greater than the permitted slope. Depending on the machine configuration, the lifting and extension functions are slowed or stopped.
	Overload	The platform is overloaded. Remove the excessive load to or below the rated capacity, to restore functions. In case of an emergency, to rescue the operator in platform, use the Overriding system.

B - Familiarization

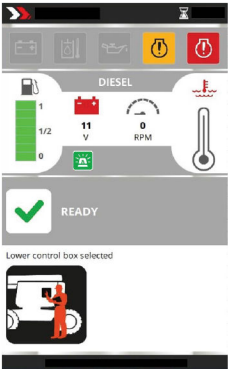
Icon	Function	Description
Home screen (dashboard) - Will be visible - depending on the machine		
	Description	
	Pre-heating	Engine's automatic preheat system is active. The time to pre-heat will vary according to engine and ambient temperature. The machine can be started as soon as the indicator goes out.
	Radius limitation	Icon is ON if the range limit is active or faulty
	Low fuel level	Fuel level is low. Refill the fuel tank to the marked level.  A lack of fuel may damage the engine and will not be covered by the warranty
	Stop Emission System	The icon is ON if the system is active on the machine

B - Familiarization

Icon	Function	Description
Home screen (dashboard) - Will be visible - depending on the machine		
	Description	
	Diagnostic in progress	The HAULOTTE Diag console is connected to the machine
	Screen software obsolete	Screen software update essential. Contact Haulotte Service®.
Icon	Function	Description
Home screen (dashboard) - Will be visible - depending on the machine		
	F12.01 Bus CAN fault	CAN network fault between the screen and the rest of the machine
	Activ' Shield Bar disable	The secondary safety system is switched off (If fitted)
	Activ' Shield Bar triggered	The secondary safety system is triggered. An operator may be trapped on the platform:- - In this situation, supervisor(s) at ground level must turn the control box key selector (22) to the ground control box  position to take control - The platform box controls are de-energized - Check that the E-Stop button (9) at ground is not pressed in - To safely activate movements from the ground control box, the Enable Switch (6)  must be pressed and held

B - Familiarization

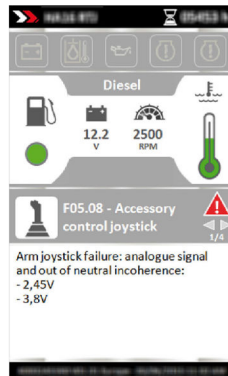
Icon	Function	Icon	Function	Description
Home screen (dashboard) - Will be visible - depending on the machine				



	General information zone		Machine software version and code	Displays the reference and version of the software installed on the machine
			Machine date and time	Displays the date and time of the machine ECU

B - Familiarization

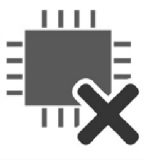
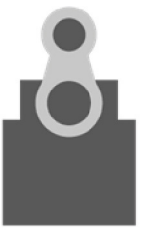
Icon	Function	Description	Icon	Function	Description
Machine fault - Will be visible - depending on the machine					



Machine fault icons (Please see machine configuration)

	Failure code F01.xx	Fault:-Variable speed calculator		Failure code F09.xx	Fault:-Internal combustion engine
	Failure code F02.xx	Fault:-Power contactor		Failure code F10.xx	Fault:-Functions
	Failure code F03.xx	Fault:-Command relay		Failure code F11.xx	Fault:-Machine safety

B - Familiarization

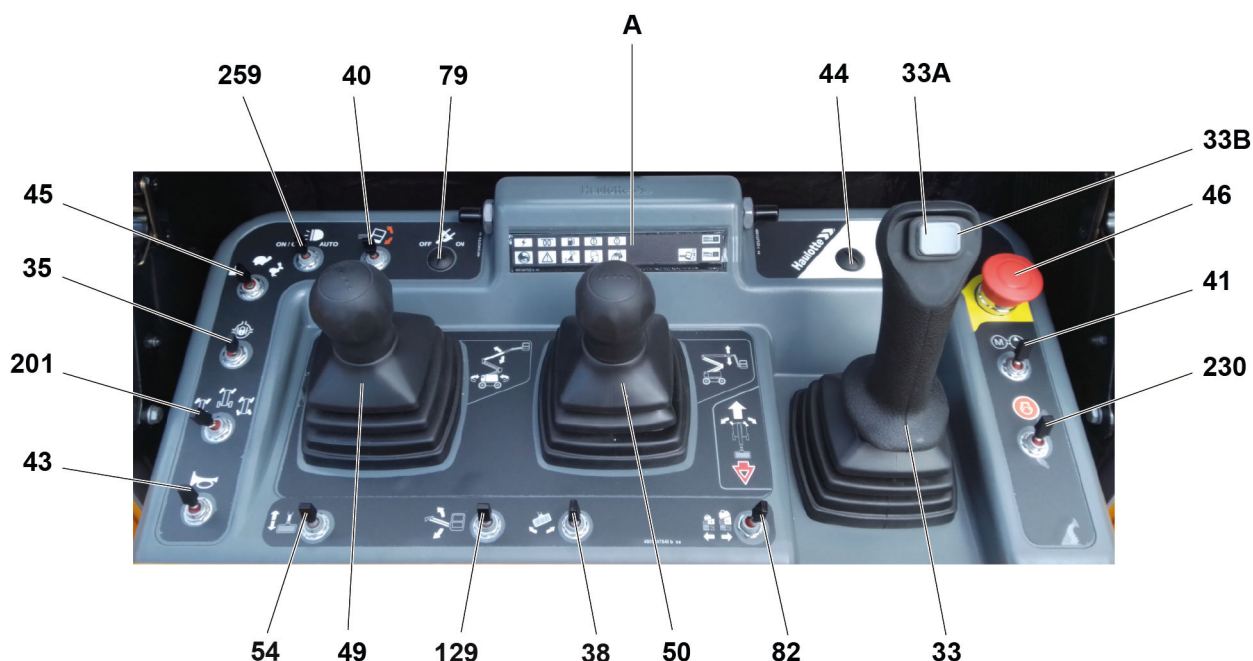
Icon	Function	Description	Icon	Function	Description
Machine fault - Will be visible - depending on the machine					
	Failure code F04.xx	Fault:-Solenoid valve		Failure code F12.xx	Fault:-ECU console
	Failure code F05.xx	Fault:-Joystick		Failure code F13.xx	Fault:-Switchs
	Failure code F06.xx	Fault:-Weighing system		Failure code F14.xx	Fault:-Driving pump
	Failure code F07.xx	Fault:-Limit switch or sensor		Failure code F15.xx	Fault:-CAN circuit
	Failure code F08.xx	Fault:-Electric circuit		Failure code F16.xx	Fault:-Electric motor

B - Familiarization

2.3 Platform control box

2.3.1 Layout

General view



Controls and indicators

Marking	Name	Description	Function
33	SM902	Drive joystick	Move forward: Push towards white arrow
			Move backwards: Push towards red arrow
33A		Steering button (Steering thumb / rocker switch)	Press left side of button: Steer left-According to selected mode (201)
33B			Press right side of button: Steer right-According to selected mode (201)
35	SA100	Differential lock selector	Toggle left and hold (Activated) : Maximum drive torque (on difficult or sloping ground)
			Release (deactivated): Standard torque
38	SA751	Platform rotation switch	Move to the right: Counter clockwise (CCW) rotation
			Move to the left: Clockwise (CW) rotation
40	SA721	Platform leveling switch	Move upwards: Raise platform
			Move downwards: Lower platform
41	SA800	Power selector/ Emergency back-up unit	Toggle and hold: Back-up unit activated
			Release: Back-up unit deactivated

B - Familiarization

Marking	Name	Description	Function
43	SA907	Horn button	Push the horn selector down to sound the horn
			The horn stops when the selector switch is released
44	SA304	Use no	Use no
45	SA110	Drive speed selector	 High-speed drive
			 Medium speed drive
			 Low-speed drive - Ramps
46	SB802	E-stop button	Pulled out: Platform control box energized
			Pressed in: De-energizes control system (Engine stopped)
49	SM900	Turntable rotation joystick	Move to the right: Counter clockwise (CCW) rotation
			Move to the left: Clockwise (CW) rotation
		Boom lift joystick	Move forward: Boom raising
			Move backwards: Lower boom
50	SM901	Arm lift joystick	Move forward: Booms raising
			Move backwards: Arm lowers
54	SA531	Boom telescoping switch	Hold upwards: Boom retracts
			Move downwards and hold: Boom extends
79	SA906	Generator selector ⁽¹⁾	Move to the left: Generator deactivated
			Move to the right: Generator activated
82	SA802	Working envelope selector ⁽²⁾	Move to the left: Working envelope selection 250 kg (550 lbs) / 4°
			Move to the right: Working envelope selection 350 kg (770 lbs) / 6°
129	SA621	Jib raising / lowering switch	Toggle upwards and hold: Jib raising
			Toggle downwards and hold: Jib lowering

(1) For machines fitted with

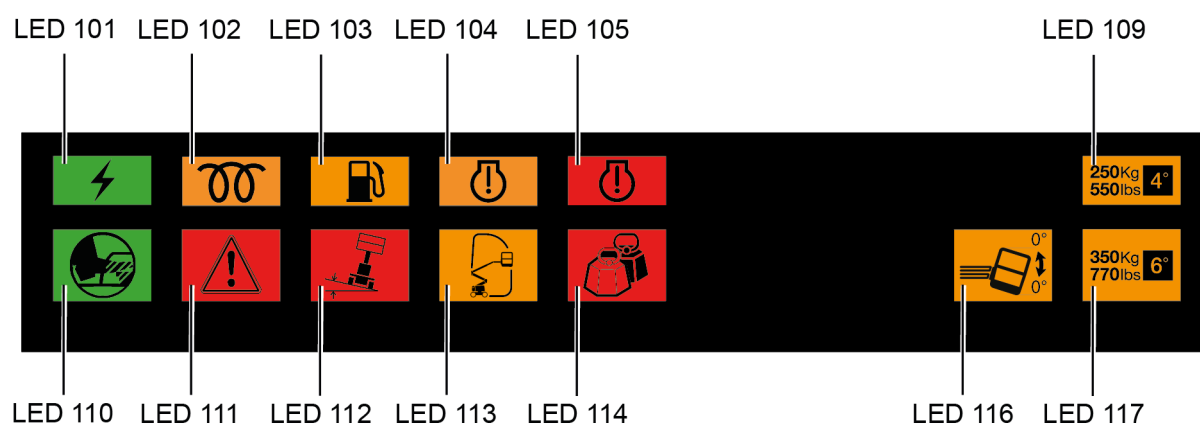
(2) If machine equipped with the option Dual Reach

B - Familiarization

Marking	Name	Description	Function
201	SA101	Steering mode selector	Right: Synchronised axle: 4 wheel steering mode
			Center: 2 front steering wheels from axle
			Left: Crab mode axle
230	SA303	Engine start-up / stop selector	Start or stop the engine (depending on the machine's operating status) by pushing the switch downwards
259	SA910	Activ' Lighting System selector	 ON / OFF
			 Automatic lighting
A		Upper control box display (LED 101 - 117)	

2.3.2 Display Panel (LED'S 101 - 117)

Upper control box display

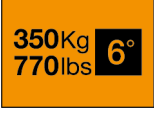


B - Familiarization

Marking	Name	Symbol	Function
LED 101	HL900		Machine switched on: - Slow flashing: Machine is ON, but platform control box is not active but the ground control box is ON - Illuminated: Machine is turned on and platform control panel is active
LED 102	HL300		Combustion engine pre-heating: - Illuminated while engine is pre-heating
LED 103	HL307		Low fuel level
LED 104	HL304		Engine warning: - Illuminated if there is an engine fault (e.g.: water in the diesel, air filter clogged, etc.) - Lighted or flashing in case of fault managed by the engine ECU
LED 105	HL305		Engine shutdown: - Lighted in case of major engine fault (e.g. engine overheating, oil pressure, alternator fault, etc.) - Lighted in case of faults managed by the engine ECU
LED 109	HL805		Working envelope 250 kg (550 lbs) / 4° ⁽¹⁾ : - Constantly on: Mode selected
LED 110	HL807		Foot Switch: - Illuminated when Foot Switch activated - Blinks after 90 s of inactivity - Blinks on start-up until the engine is operational
LED 111	HL801		Faults: - Rapid flashing: If a fault is active (current fault)

⁽¹⁾ If machine equipped with the option Dual Reach

B - Familiarization

Marking	Name	Symbol	Function
LED 112	HL800		Tilt sensor: - Illuminated when in tilt, machine stowed or unfolded
LED 113	HL804		Working envelope: - Rapid flashing: • Reach limitation system fault. • The machine is in the 250 kg (550 lbs) low load zone, the low load is validated and 350 kg (770 lbs) heavy load is selected by the selector (82) - Illuminated: Limit of working area reached / range of motion with automatic movement cut-off
LED 114	HL802		Overload: - Illuminated when overloaded - Rapid flashing: Faulty weighing / overload system
LED 116	HL720		Basket levelling+/- 10°: - Steadily lit if the angle of the basket reaches +/- 10° in relation to the horizontal and compensation movement control
LED 117	HL806		Working envelope 350 kg (770 lbs) / 6° ⁽¹⁾ : - Constantly on: Mode selected - Flashing: The platform is in the restricted work area and the envelope (350 kg (770 lbs) / 6°) is selected

⁽¹⁾ If machine equipped with the option Dual Reach

B - Familiarization

3 Performance Specifications

3.1 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.

Machine	HA20 RTJ / HA61 RTJ		HA20 RTJ PRO / HA61 RTJ PRO	
	SI	Imp.	SI	Imp.
Characteristics - Dimensions				
Maximum working height	20,5 m	67 ft 3 in	20,5 m	67 ft 3 in
Maximum platform height	18,5 m	60 ft 8 in	18,5 m	60 ft 8 in
Maximum horizontal reach - 250 kg / 550 lbs	11,9 m	39 ft 1 in	11,9 m	39 ft 1 in
Maximum outreach above the ground - 250 kg / 550 lbs	11,4 m	37 ft 5 in	11,4 m	37 ft 5 in
Maximum platform height before driving speed restriction	3,82 m	12 ft 6 in	3,82 m	12 ft 6 in
Maximum height of pivot point	8,51 m	27 ft 11 in	8,51 m	27 ft 11 in
Maximum load capacity	250 kg	551 lbs	250 kg	551 lbs
Jib working range	140° (+60° / -80°)			
Basket rotation angle	180° (+90° / -90°)			
Boom rotation angle	67°			
Turntable rotation	355° non continuous		360° continuous	
Maximum number of occupants	2			
Maximum wind speed	45 km/h	28 mph	45 km/h	28 mph
Gradeability	45%			
Sideslope	25%			
Maximum rated slope allowed	4°		4°	
Maximum slope in high speed downhill	25%			
Manual force	400 N	90 lbf	400 N	90 lbf
Maximum load on wheel	5010 kg	11,047 lb	5010 kg	11,047 lb
Outside turning radius - 4WS	N/A		3,71 m	12 ft 2 in
Outside turning radius - 2WS	5,16 m	16 ft 11 in	5,16 m	16 ft 11 in
Inside turning radius - 4WS	N/A		1,48 m	4 ft 10 in
Inside turning radius - 2WS	3,08 m	10 ft 1 in	3,08 m	10 ft 1 in
Maximum ground pressure of wheel on paved ground	14,1 daN/cm²	204.5 pounds/inches²	14,1 daN/cm²	204.5 pounds/inches²
Total weight	9180 kg	20,242 lbs	9430 kg	20,793 lbs

B - Familiarization

Machine	HA20 RTJ / HA61 RTJ		HA20 RTJ PRO / HA61 RTJ PRO	
	SI	Imp.	SI	Imp.
Drive speed - Micro-speed (Machine unfolded)	0,5 km/h	0.3 mph	0,5 km/h	0.3 mph
Drive speed - Slow speed (Machine stowed)	1,4 km/h	0.87 mph	1,4 km/h	0.87 mph
Drive speed - Medium speed (Machine stowed)	3 km/h	1.86 mph	3 km/h	1.86 mph
Drive speed - High speed (Machine stowed)	5 km/h	3.11 mph	5 km/h	3.11 mph
Maximum freewheel speed during towed operation	5 km/h	3.11 mph	5 km/h	3.11 mph

Characteristics - Performance

Operating temperature	- 20° / + 50° C	- 68° / + 122° F	- 20° / + 50° C	- 68° / + 122° F
Operating temperature - For EAC only - If machine equipped with the option ARTIC	- 30° / + 50° C	- 86° / + 122° F	- 30° / + 50° C	- 86° / + 122° F
Outside of the temperature range	- 40° / + 70° C	- 104° / + 158° F	- 40° / + 70° C	- 104° / + 158° F

Energy storage

Type of battery	12 V 110 Ah 920 A			
Battery amperage	920 A			
Battery voltage	12 V			
Battery capacity	110 Ah			
Hydraulic oil tank capacity	60 L	16 gal	60 L	16 gal
Fuel tank capacity	82 L	22 gal	82 L	22 gal

B - Familiarization

Machine	HA20 RTJ DUAL REACH / HA61 RTJ DUAL REACH		HA20 RTJ PRO DUAL REACH / HA61 RTJ PRO DUAL REACH	
	SI	Imp.	SI	Imp.
Characteristics - Dimensions				
Maximum working height	20,5 m	67 ft 3 in	20,5 m	67 ft 3 in
Maximum platform height	18,5 m	60 ft 8 in	18,5 m	60 ft 8 in
Maximum horizontal reach - 250 kg / 550 lbs	11,9 m	39 ft 1 in	11,9 m	39 ft 1 in
Maximum horizontal reach - 350 kg / 770 lbs	9,9 m	32 ft 6 in	9,9 m	32 ft 6 in
Maximum outreach above the ground - 250 kg / 550 lbs	11,4 m	37 ft 5 in	11,4 m	37 ft 5 in
Maximum outreach above the ground - 350 kg / 770 lbs	9,4 m	30 ft 10 in	9,4 m	30 ft 10 in
Maximum platform height before driving speed restriction	3,82 m	12 ft 6 in	3,82 m	12 ft 6 in
Maximum height of pivot point	8,51 m	27 ft 11 in	8,51 m	27 ft 11 in
Maximum load capacity - Dual load	250 kg / 350 kg	551 lbs / 772 lbs	250 kg / 350 kg	551 lbs / 772 lbs
Jib working range	140° (+60° / -80°)			
Basket rotation angle	180° (+90° / -90°)			
Boom rotation angle	67°			
Turntable rotation	355° non continuous		360° continuous	
Maximum number of occupants	2			
Maximum wind speed	45 km/h	28 mph	45 km/h	28 mph
Gradeability	45%			
Sideslope	25%			
Maximum rated slope allowed	4° / 6°		4° / 6°	
Maximum slope in high speed downhill	25%			
Manual force	400 N	90 lbf	400 N	90 lbf
Maximum load on wheel	5010 kg	11,047 lb	5010 kg	11,047 lb
Outside turning radius - 4WS	N/A		3,71 m	12 ft 2 in
Outside turning radius - 2WS	5,16 m	16 ft 11 in	5,16 m	16 ft 11 in
Inside turning radius - 4WS	N/A		1,48 m	4 ft 10 in
Inside turning radius - 2WS	3,08 m	10 ft 1 in	3,08 m	10 ft 1 in
Maximum ground pressure of wheel on paved ground	14,1 daN/cm²	204.5 pounds/inches²	14,1 daN/cm²	204.5 pounds/inches²
Total weight	9650 kg	21,278 lbs	9900 kg	21,830 lbs

B - Familiarization

Machine	HA20 RTJ DUAL REACH / HA61 RTJ DUAL REACH		HA20 RTJ PRO DUAL REACH / HA61 RTJ PRO DUAL REACH	
	SI	Imp.	SI	Imp.
Drive speed - Micro-speed (Machine unfolded)	0,5 km/h	0.3 mph	0,5 km/h	0.3 mph
Drive speed - Slow speed (Machine stowed)	1,4 km/h	0.87 mph	1,4 km/h	0.87 mph
Drive speed - Medium speed (Machine stowed)	3 km/h	1.86 mph	3 km/h	1.86 mph
Drive speed - High speed (Machine stowed)	5 km/h	3.11 mph	5 km/h	3.11 mph
Maximum freewheel speed during towed operation	5 km/h	3.11 mph	5 km/h	3.11 mph

Characteristics - Performance

Operating temperature	- 20° / + 50° C	- 68° / + 122° F	- 20° / + 50° C	- 68° / + 122° F
Operating temperature - For EAC only - If machine equipped with the option ARTIC	- 30° / + 50° C	- 86° / + 122° F	- 30° / + 50° C	- 86° / + 122° F
Outside of the temperature range	- 40° / + 70° C	- 104° / + 158° F	- 40° / + 70° C	- 104° / + 158° F

Energy storage

Type of battery	12 V 110 Ah 920 A			
Battery amperage	920 A			
Battery voltage	12 V			
Battery capacity	110 Ah			
Hydraulic oil tank capacity	60 L	16 gal	60 L	16 gal
Fuel tank capacity	82 L	22 gal	82 L	22 gal

3.2 Engine specifications

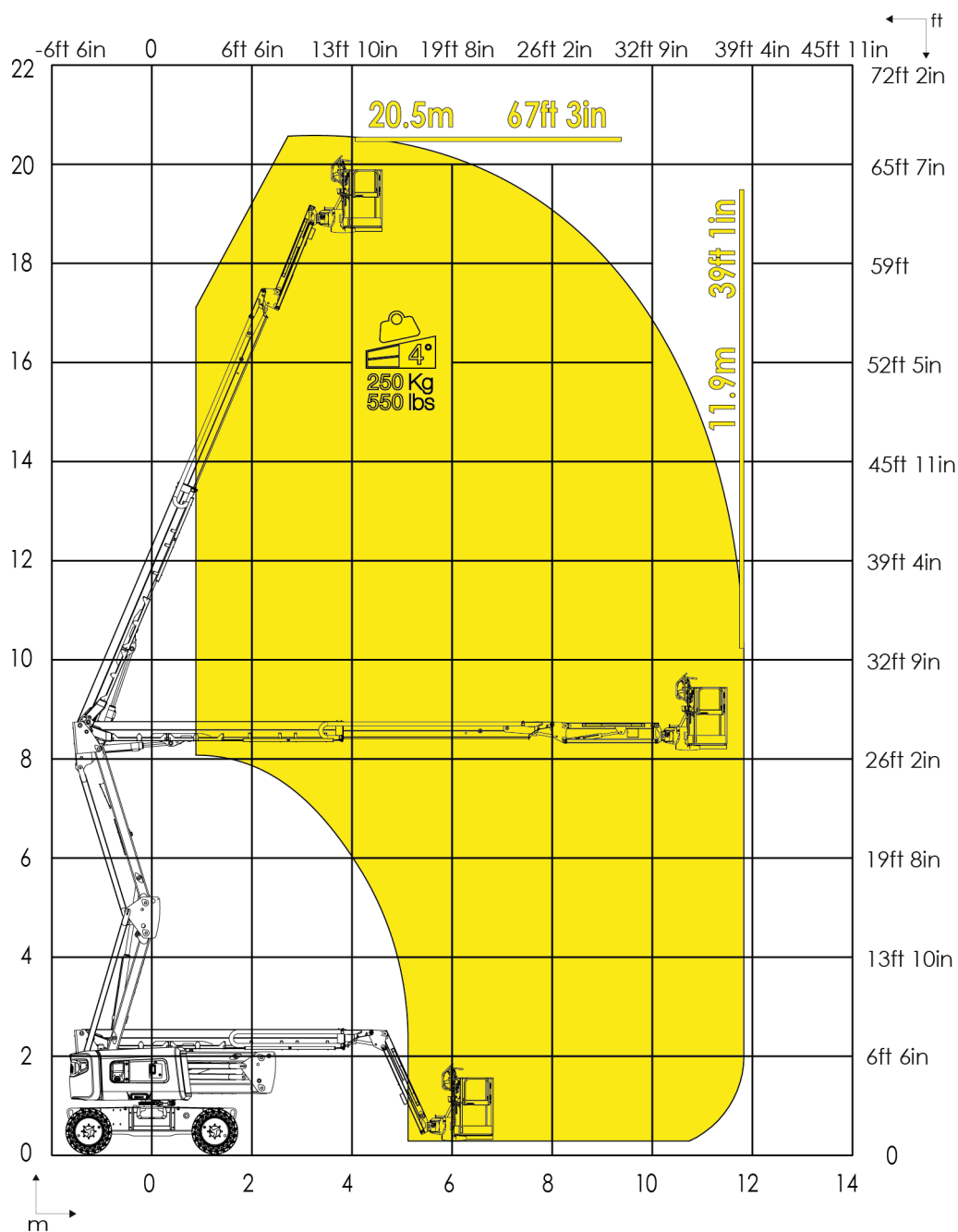
3.2.1 Kubota engines

Engine- Tier IV Final / Stage V / China IV	
Engine type	Kubota V1505
Engine power	18,5 kW - 24.8 hp
CO emission	1,4 g/kWh
HC + NO emission	5,8 g/kWh
Particles emission	0,21 g/kWh
Av fuel consumption	2,4 l/h - 0.63 gal/h
Fuel type	Diesel

B - Familiarization

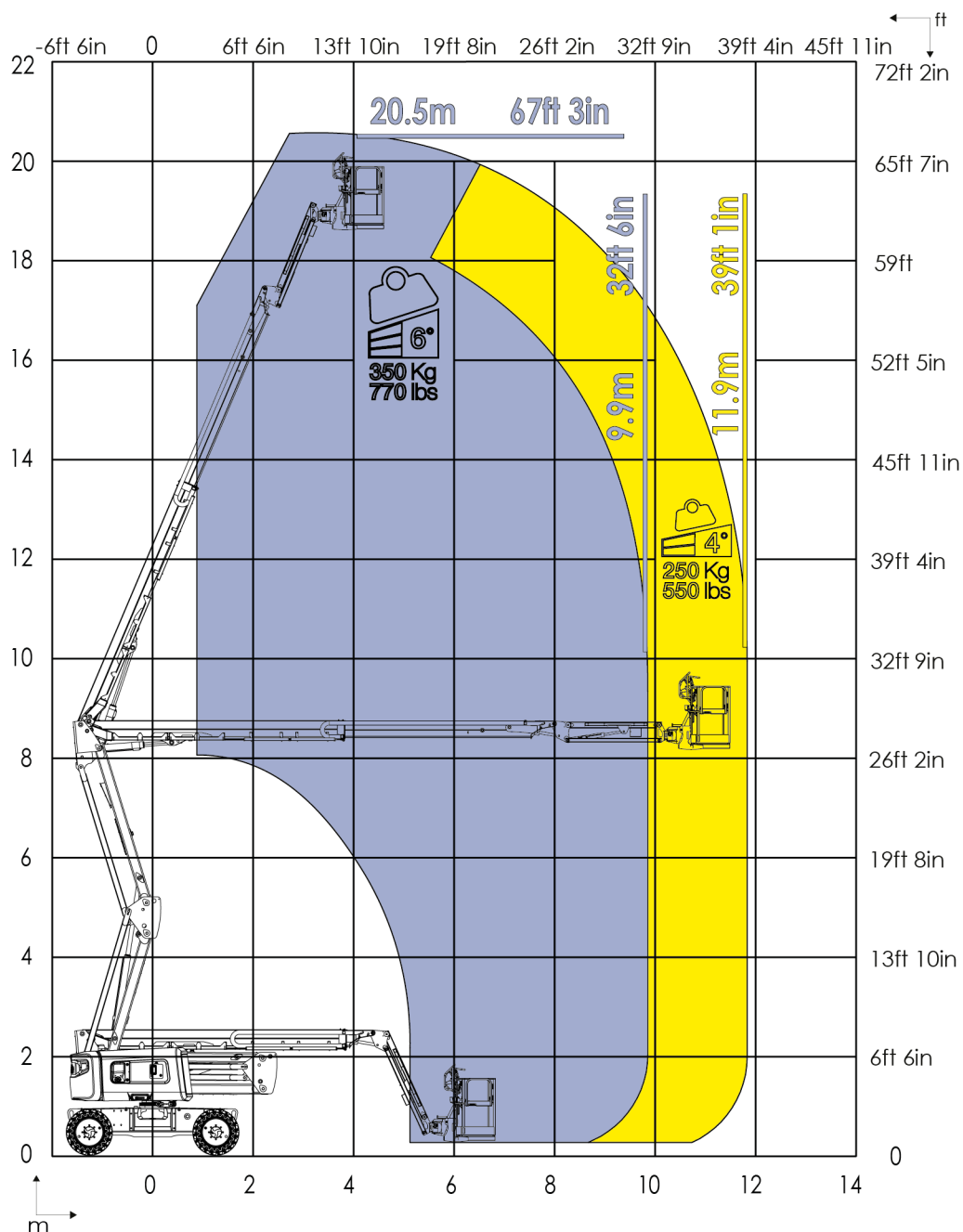
3.3 Working area / Range of motion

HA20 RTJ - HA61 RTJ - HA20 RTJ PRO - HA61 RTJ PRO



B - Familiarization

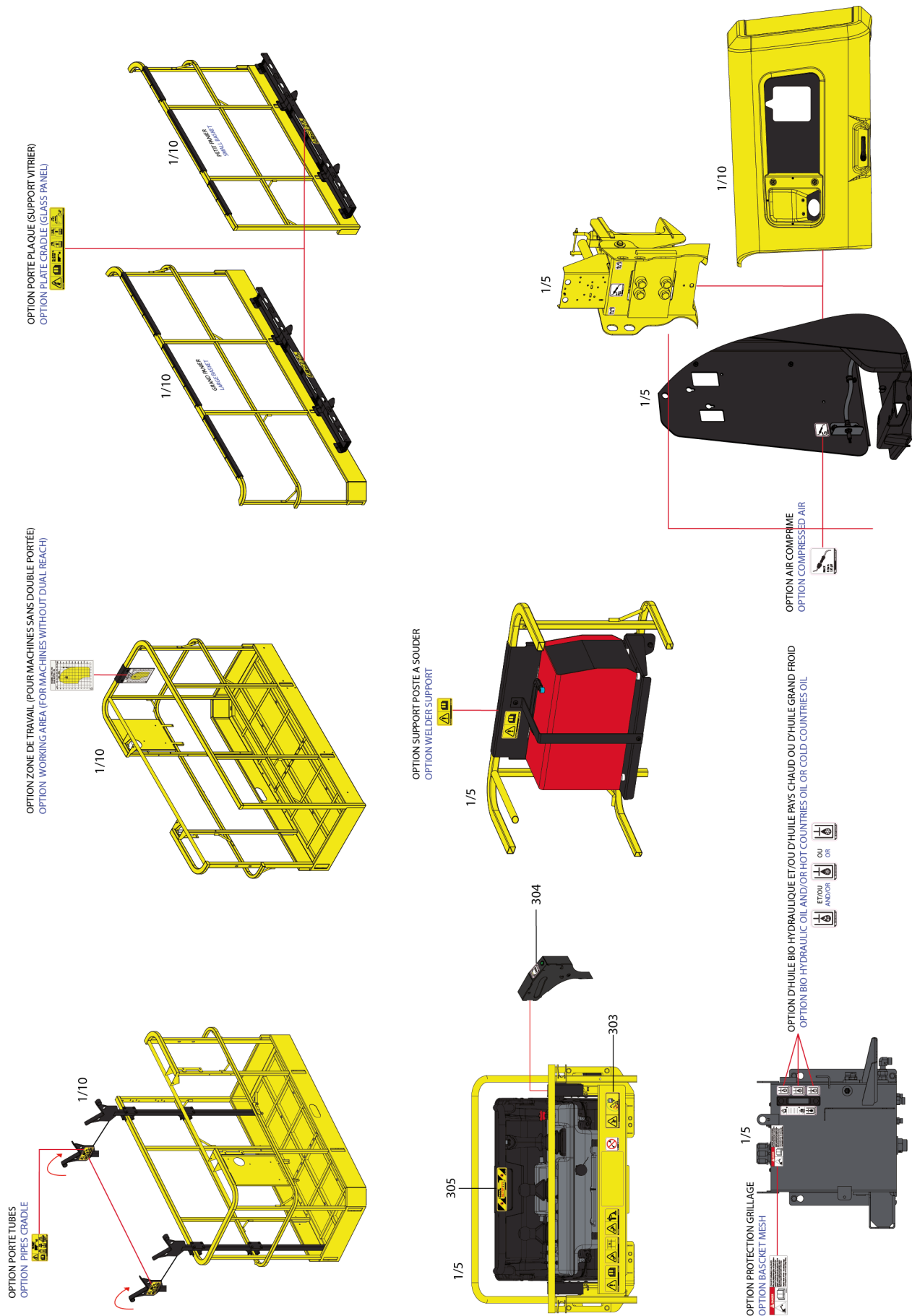
HA20 RTJ - HA61 RTJ - HA20 RTJ PRO - HA61 RTJ PRO - Dual Reach





B - Familiarization

CE, UKCA, EAC and AS standards - HA20 RTJ - HA20 RTJ PRO - Options



B - Familiarization

Marking	Description	Quantity	HA20 RTJ	
			CE / UKCA / EAC	AS
1	Load height	2	4001257260	4001257260
1	Load height - Dual load	2	4001257270	4001257270
2	Pressure - Stress on the floor	4	4001257450	4001257450
3	Commercial name - HA20RTJ 410 x 100 - Bright machine	1	4001257780	4001257780
3	Commercial name - HA20RTJ PRO 465 x 100 - Bright machine	1	N/A	N/A
3	Commercial name - HA20RTJ 410 x 100 - Dark machine	1	4001257790	4001257790
3	Commercial name - HA20RTJ PRO 465 x 100 - Dark machine	1	N/A	N/A
4a	HAULOTTE 800 x 130 - Bright machine	1	4001072190	4001072190
4a	HAULOTTE 800 x 130 - Dark machine	1	4001072200	4001072200
4b	HAULOTTE 495 x 80 - Bright machine	2	4001072210	4001072210
4b	HAULOTTE 495 x 80 - Dark machine	2	4001072220	4001072220
5	HAULOTTE 165 x 80 - Bright machine	1	4001072250	4001072250
5	HAULOTTE 165 x 80 - Dark machine	1	4001072260	4001072260
8	Noise emission level - 97 dB	1	4001267460	4001267460
9	Control of movements	3	4001083270	4001083270
10	Control of movements	3	4001083390	4001083390
11	Anchorage point	9	4001052020	4001052020
12	Material risk for basket with straight corner	3	4001083240	4001083240
12	Material risk for basket with straight corner	2	4001083250	4001083250
12	Material risk for basket only with chamfered corner	4	4001083240	4001083240
14	Collision hazard - locking pin	1	4001081530	4001081530
16	Max and min oil level	1	4001052060	4001052060
17	Risk of crushing	2	4001265480	4001265480
19	Read the operation manual	2	4001052090	4001052090
22	Wound foot	2	4001073700	4001073700
24a	Power lines	2	4001052120	N/A
24b	Power lines	2	N/A	4001052140

B - Familiarization

Marking	Description	Quantity	HA20 RTJ	
			CE / UKCA / EAC	AS
25	Closing drop rail	1	4001052150	4001052150
28	Software version	1	4000504670	4000504670
31	Brake release	2	4001073710	4001073710
32	Towing anchorage point	4	4001052180	4001052180
34	Danger of electrocution - No high-pressure washing	3	4001052200	4001052200
36	Risk of crushing	3	4001081590	4001081590
37	Explosion hazard	1	4001052270	4001052270
38	Risk of burns	1	4001075820	4001075820
40	Hand crushing hazard - Snapping up	1	4001257460	4001257460
41	Revolving cradle	1	4001074800	4001074800
49	+ battery	1	4001257470	4001257470
50	- battery	1	4001257480	4001257480
68	Transport height	1	4001268060	4001268060
78	QR Code - https://www.e-technical-information.com	2	4001281820	4001281820
79	Electrical connection	1	4001101260	4001101260
95	Dual load - Bright machine	1	4001257530	4001257530
95	Dual load - Dark machine	1	4001257540	4001257540
96	Working area / Range of motion	1	4001253060	4001253060
97	Reflective label - Left side	1	4001266050	4001266050
98	Reflective label - Right-hand side	1	4001266060	4001266060
99	Do not tie down - Do not sling	2	4001279930	4001279930
201	Wearing a harness	1	4001052300	4001052300
202	diesel fuel only	1	4001076200	4001076200
303	ActivShield Bar	1	4001081630	4001081630
304	Electrical box - ActivShield Bar	1	4001069620	4001069620
305	Do not lean on the Activ' Shield Bar bar	1	4001069640	4001069640
Not illustrated	Option - Welder's kit	1	4001052090	4001052090
Not illustrated	Pipe holder option	2	4001267650	4001267650
Not illustrated	Plate holder option	1	4001267770	4001267770
Not illustrated	Biodegradable hydraulic oil option	1	4001052380	4001052380

B - Familiarization

Marking	Description	Quantity	HA20 RTJ	
			CE / UKCA / EAC	AS
Not illustrated	Option - Hydraulic oil for hot countries	1	4001052400	4001052400
Not illustrated	Option - Winter grade hydraulic oil	1	4001052390	4001052390
Not illustrated	Option - Winter grade hydraulic oil - Motor	1	4001052390	4001052390
Not illustrated	Option Grill	1	4001095980	4001095980
Not illustrated	Option - Range of Motion (Without Dual Reach)	1	4001069640	4001069640
Not illustrated	Compressed air option	2	4001052370	4001052370

B - Familiarization

Marking	Description	Quantity	HA20 RTJ PRO	
			CE / UKCA / EAC	AS
1	Load height	2	4001257260	4001257260
1	Load height - Dual load	2	4001257270	4001257270
2	Pressure - Stress on the floor	4	4001257450	4001257450
3	Commercial name - HA20RTJ 410 x 100 - Bright machine	1	N/A	N/A
3	Commercial name - HA20RTJ PRO 465 x 100 - Bright machine	1	4001257800	4001257800
3	Commercial name - HA20RTJ 410 x 100 - Dark machine	1	N/A	N/A
3	Commercial name - HA20RTJ PRO 465 x 100 - Dark machine	1	4001257810	4001257810
4a	HAULOTTE 800 x 130 - Bright machine	1	4001072190	4001072190
4a	HAULOTTE 800 x 130 - Dark machine	1	4001072200	4001072200
4b	HAULOTTE 495 x 80 - Bright machine	2	4001072210	4001072210
4b	HAULOTTE 495 x 80 - Dark machine	2	4001072220	4001072220
5	HAULOTTE 165 x 80 - Bright machine	1	4001072250	4001072250
5	HAULOTTE 165 x 80 - Dark machine	1	4001072260	4001072260
8	Noise emission level - 97 dB	1	4001267460	4001267460
9	Control of movements	3	4001083270	4001083270
10	Control of movements	3	4001083390	4001083390
11	Anchorage point	9	4001052020	4001052020
12	Material risk for basket with straight corner	3	4001083240	4001083240
12	Material risk for basket with straight corner	2	4001083250	4001083250
12	Material risk for basket only with chamfered corner	4	4001083240	4001083240
14	Collision hazard - locking pin	1	4001081530	4001081530
16	Max and min oil level	1	4001052060	4001052060
17	Risk of crushing	2	4001265480	4001265480
19	Read the operation manual	2	4001052090	4001052090
22	Wound foot	2	4001073700	4001073700
24a	Power lines	2	4001052120	N/A
24b	Power lines	2	N/A	4001052140

B - Familiarization

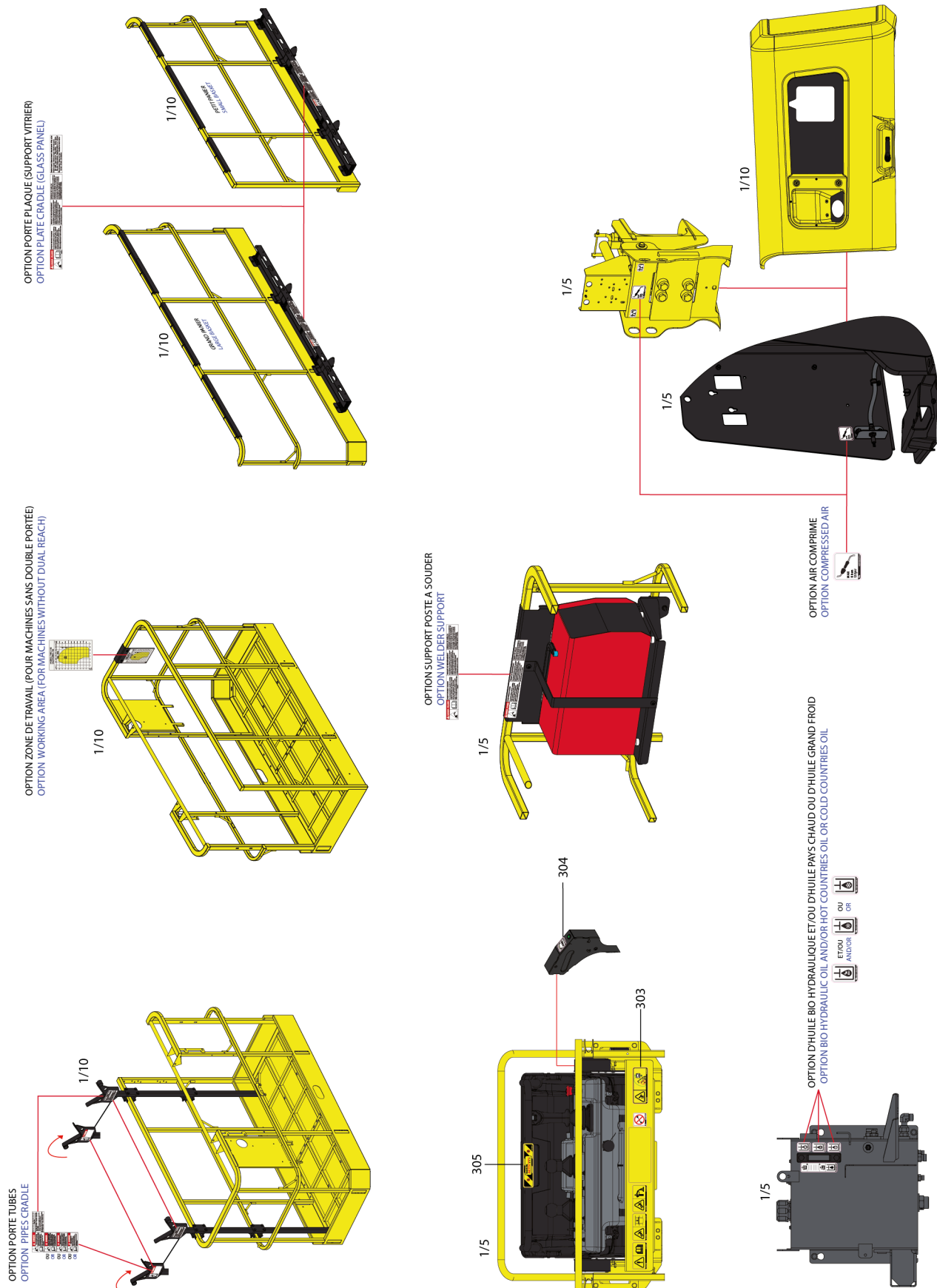
Marking	Description	Quantity	HA20 RTJ PRO	
			CE / UKCA / EAC	AS
25	Closing drop rail	1	4001052150	4001052150
28	Software version	1	4000504670	4000504670
31	Brake release	2	4001073710	4001073710
32	Towing anchorage point	4	4001052180	4001052180
34	Danger of electrocution - No high-pressure washing	3	4001052200	4001052200
36	Risk of crushing	3	4001081590	4001081590
37	Explosion hazard	1	4001052270	4001052270
38	Risk of burns	1	4001075820	4001075820
40	Hand crushing hazard - Snapping up	1	4001257460	4001257460
41	Revolving cradle	1	4001074800	4001074800
49	+ battery	1	4001257470	4001257470
50	- battery	1	4001257480	4001257480
68	Transport height	1	4001268060	4001268060
78	QR Code - https://www.e-technical-information.com	2	4001281820	4001281820
79	Electrical connection	1	4001101260	4001101260
95	Dual load - Bright machine	1	4001257530	4001257530
95	Dual load - Dark machine	1	4001257540	4001257540
96	Working area / Range of motion	1	4001253060	4001253060
97	Reflective label - Left side	1	4001266050	4001266050
98	Reflective label - Right-hand side	1	4001266060	4001266060
99	Do not tie down - Do not sling	2	4001279930	4001279930
201	Wearing a harness	1	4001052300	4001052300
202	diesel fuel only	1	4001076200	4001076200
303	ActivShield Bar	1	4001081630	4001081630
304	Electrical box - ActivShield Bar	1	4001069620	4001069620
305	Do not lean on the Activ' Shield Bar bar	1	4001069640	4001069640
Not illustrated	Option - Welder's kit	1	4001052090	4001052090
Not illustrated	Pipe holder option	2	4001267650	4001267650
Not illustrated	Plate holder option	1	4001267770	4001267770
Not illustrated	Biodegradable hydraulic oil option	1	4001052380	4001052380

B - Familiarization

Marking	Description	Quantity	HA20 RTJ PRO	
			CE / UKCA / EAC	AS
Not illustrated	Option - Hydraulic oil for hot countries	1	4001052400	4001052400
Not illustrated	Option - Winter grade hydraulic oil	1	4001052390	4001052390
Not illustrated	Option Grill	1	4001095980	4001095980
Not illustrated	Option - Range of Motion (Without Dual Reach)	1	4001069640	4001069640
Not illustrated	Compressed air option	2	4001052370	4001052370

B - Familiarization

ANSI and CSA standards - - HA61 RTJ - HA61 RTJ PRO



B - Familiarization

Marking	Description	Quantity	HA61 RTJ		
			ANSI / CSA		
			English	French	Spanish
1	Load height	2	4001257280	4001257280	4001257280
1	Load height - Dual load	2	4001257290	4001257290	4001257290
2	Pressure - Stress on the floor	4	4001257450	4001257450	4001257450
3	Commercial name - HA61RTJ 410 x 100 - Bright machine	1	4001257820	4001257820	4001257820
3	Commercial name - HA61RTJ PRO 410 x 100 - Bright machine	1	4001257830	4001257830	4001257830
4a	HAULOTTE 800 x 130 - Bright machine	1	4001072190	4001072190	4001072190
4a	HAULOTTE 800 x 130 - Dark machine	1	4001072200	4001072200	4001072200
4b	HAULOTTE 495 x 80 - Bright machine	2	4001072210	4001072210	4001072210
4b	HAULOTTE 495 x 80 - Dark machine	2	4001072220	4001072220	4001072220
5	HAULOTTE 165 x 80 - Bright machine	1	4001072250	4001072250	4001072250
5	HAULOTTE 165 x 80 - Dark machine	1	4001072260	4001072260	4001072260
8	Noise emission level - 97 dB	1	4001267460	4001267460	4001267460
9	Control of movements	3	4001083270	4001083270	4001083270
10	Control of movements	3	4001083390	4001083390	4001083390
11	Anchorage point	9	4001052020	4001052020	4001052020
12	Material risk for basket with straight corner	3	4001083240	4001083240	4001083240
12	Material risk for basket with straight corner	2	4001083250	4001083250	4001083250
12	Material risk for basket only with chamfered corner	4	4001083240	4001083240	4001083240
14	Collision hazard - locking pin	1	4000024830	4000068080	4000086510
16	Max and min oil level	1	307P221060	307P221060	307P221060
17	Risk of crushing	2	4000024640	4000067680	4000086460
19	Read the operation manual	2	4000025140	4000025140	4000025140
22	Wound foot	2	4000024840	4000024840	4000024840
28	Software version	1	4000504670	4000504670	4000504670
31	Brake release	2	4001133750	4001133750	4001133750

B - Familiarization

Marking	Description	Quantity	HA61 RTJ		
			ANSI / CSA		
			English	French	Spanish
32	Towing anchorage point	4	4000027310	4000027310	4000027310
34	Danger of electrocution - No high-pressure washing	3	4000025130	4000025130	4000025130
37	Explosion hazard	1	4000025010	4000068130	4000086560
38	Risk of burns	1	4000025040	4000068110	4000086540
40	Hand crushing hazard - Snapping up	1	4000025020	4000068100	4000086530
41	Revolving cradle	1	3078151730	3078151730	3078151730
47	Low sulfur fuel	1	307P232480	307P232480	307P232480
49	+ battery	1	4000071960	4000071960	4000071960
50	- battery	1	4000071970	4000071970	4000071970
68	Transport height	1	4001268060	4001268060	4001268060
78	QR Code - https://www.e-technical-information.com	2	4001281820	4001281820	4001281820
79	Electrical connection	1	4001101260	4001101260	4001101260
95	Dual load - Bright machine	1	4001257530	4001257530	4001257530
95	Dual load - Dark machine	1	4001257540	4001257540	4001257540
96	Working area / Range of motion	1	4001253060	4001253060	4001253060
97	Reflective label - Left side	1	4001266050	4001266050	4001266050
98	Reflective label - Right-hand side	1	4001266060	4001266060	4001266060
99	Do not tie down - Do not sling	2	4001279950	4001279950	4001279950
202	diesel fuel only	1	4000201430 / 4001126880	4000201430 / 4001126880	4000201430 / 4001126880
303	Activ'Shield Bar	1	4000609540	4000609540	4000609540
304	Electrical box - Activ'Shield Bar	1	4000596720	4000596720	4000596720
305	Do not lean on the Activ' Shield Bar bar	1	4000206690	4000206690	4000206690
Not illustrated	Option - Welder's kit	1	4001052090	4001052090	4001052090
Not illustrated	Pipe holder option	1	4000131600 / 4000131610 / 4000131620 / 4000708570	4000131600 / 4000131610 / 4000131620 / 4000708570	4000131600 / 4000131610 / 4000131620 / 4000708570
Not illustrated	Plate holder option	1	4000131830/4000131730	4000131830/4000131730	4000131830/4000131730

B - Familiarization

Marking	Description	Quantity	HA61 RTJ		
			ANSI / CSA		
			English	French	Spanish
Not illustrated	Biodegradable hydraulic oil option	1	4001052380	4001052380	4001052380
Not illustrated	Option - Hydraulic oil for hot countries	1	4001052400	4001052400	4001052400
Not illustrated	Option - Winter grade hydraulic oil	1	4001052390	4001052390	4001052390
Not illustrated	Option - Winter grade hydraulic oil - Motor	1	4001052390	4001052390	4001052390
Not illustrated	Option - Range of Motion (Without Dual Reach)	1	4001069640	4001069640	4001069640
Not illustrated	Compressed air option	2	4001052370	4001052370	4001052370

B - Familiarization

Marking	Description	Quantity	HA61 RTJ PRO		
			ANSI / CSA		
			English	French	Spanish
1	Load height	2	4001257280	4001257280	4001257280
1	Load height - Dual load	2	4001257290	4001257290	4001257290
2	Pressure - Stress on the floor	4	4001257450	4001257450	4001257450
3	Commercial name - HA61RTJ 410 x 100 - Bright machine	1	4001257840	4001257840	4001257840
3	Commercial name - HA61RTJ PRO 410 x 100 - Bright machine	1	4001257850	4001257850	4001257850
4a	HAULOTTE 800 x 130 - Bright machine	1	4001072190	4001072190	4001072190
4a	HAULOTTE 800 x 130 - Dark machine	1	4001072200	4001072200	4001072200
4b	HAULOTTE 495 x 80 - Bright machine	2	4001072210	4001072210	4001072210
4b	HAULOTTE 495 x 80 - Dark machine	2	4001072220	4001072220	4001072220
5	HAULOTTE 165 x 80 - Bright machine	1	4001072250	4001072250	4001072250
5	HAULOTTE 165 x 80 - Dark machine	1	4001072260	4001072260	4001072260
8	Noise emission level - 97 dB	1	4001267460	4001267460	4001267460
9	Control of movements	3	4001083270	4001083270	4001083270
10	Control of movements	3	4001083390	4001083390	4001083390
11	Anchorage point	9	4001052020	4001052020	4001052020
12	Material risk for basket with straight corner	3	4001083240	4001083240	4001083240
12	Material risk for basket with straight corner	2	4001083250	4001083250	4001083250
12	Material risk for basket only with chamfered corner	4	4001083240	4001083240	4001083240
14	Collision hazard - locking pin	1	4000024830	4000068080	4000086510
16	Max and min oil level	1	307P221060	307P221060	307P221060
17	Risk of crushing	2	4000024640	4000067680	4000086460
19	Read the operation manual	2	4000025140	4000025140	4000025140
22	Wound foot	2	4000024840	4000024840	4000024840
28	Software version	1	4000504670	4000504670	4000504670
31	Brake release	2	4001133750	4001133750	4001133750

B - Familiarization

Marking	Description	Quantity	HA61 RTJ PRO		
			ANSI / CSA		
			English	French	Spanish
32	Towing anchorage point	4	4000027310	4000027310	4000027310
34	Danger of electrocution - No high-pressure washing	3	4000025130	4000025130	4000025130
37	Explosion hazard	1	4000025010	4000068130	4000086560
38	Risk of burns	1	4000025040	4000068110	4000086540
40	Hand crushing hazard - Snapping up	1	4000025020	4000068100	4000086530
41	Revolving cradle	1	3078151730	3078151730	3078151730
47	Low sulfur fuel	1	307P232480	307P232480	307P232480
49	+ battery	1	4000071960	4000071960	4000071960
50	- battery	1	4000071970	4000071970	4000071970
68	Transport height	1	4001268060	4001268060	4001268060
78	QR Code - https://www.e-technical-information.com	2	4001281820	4001281820	4001281820
79	Electrical connection	1	4001101260	4001101260	4001101260
95	Dual load - Bright machine	1	4001257530	4001257530	4001257530
95	Dual load - Dark machine	1	4001257540	4001257540	4001257540
96	Working area / Range of motion	1	4001253060	4001253060	4001253060
97	Reflective label - Left side	1	4001266050	4001266050	4001266050
98	Reflective label - Right-hand side	1	4001266060	4001266060	4001266060
99	Do not tie down - Do not sling	2	4001279950	4001279950	4001279950
202	diesel fuel only	1	4000201430 / 4001126880	4000201430 / 4001126880	4000201430 / 4001126880
303	Activ'Shield Bar	1	4000609540	4000609540	4000609540
304	Electrical box - Activ'Shield Bar	1	4000596720	4000596720	4000596720
305	Do not lean on the Activ' Shield Bar bar	1	4000206690	4000206690	4000206690
Not illustrated	Option - Welder's kit	1	4001052090	4001052090	4001052090
Not illustrated	Pipe holder option	1	4000131600 / 4000131610 / 4000131620 / 4000708570	4000131600 / 4000131610 / 4000131620 / 4000708570	4000131600 / 4000131610 / 4000131620 / 4000708570
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B - Familiarization

Marking	Description	Quantity	HA61 RTJ PRO		
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Not illustrated	Biodegradable hydraulic oil option	1	4001052380	4001052380	4001052380
Not illustrated	Option - Hydraulic oil for hot countries	1	4001052400	4001052400	4001052400
Not illustrated	Option - Winter grade hydraulic oil	1	4001052390	4001052390	4001052390
Not illustrated	Option - Winter grade hydraulic oil - Motor	1	4001052390	4001052390	4001052390
Not illustrated	Option - Range of Motion (Without Dual Reach)	1	4001069640	4001069640	4001069640
Not illustrated	Compressed air option	2	4001052370	4001052370	4001052370

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C - Pre-operation inspection

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Notes

C - Pre-operation inspection

1 Recommendations

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

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

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

C - Pre-operation inspection

2 Working area assessment

Before carrying out any operations, ensure that the machine corresponds to the work to be done and the working environment:

- 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 or people within the work area.
- Mark out the work area.
- **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.

C - Pre-operation inspection

3 Inspection and Functional test

3.1 Daily inspection

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



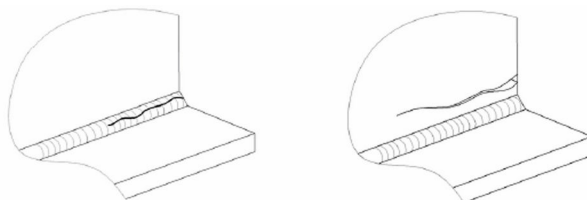
- Never use a defective or a malfunctioning aerial work platform.
- If any item on the check list is marked "No" during the inspection; machine must be tagged and placed out of service.
- Do not operate the machine until all identified items are corrected and it has been declared safe for operation.

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

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

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

Sample of broken welds



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

Articulated and telescopic fuel-powered aerial work platforms

	Page or associated procedure	Daily	OK	NOK	Corrected	Comments
Chassis assembly: Wheel, reducer, steering, wheel pivot						
Check state of tires/tyres and inflations						
Thermal engines						
Check engine fuel level (Top up the oil if necessary)						
Check engine oil level (Top up the oil if necessary)						
No leaks from engine components (engine, hoses, radiator)						
Check the condition of the battery						
Check the cooling circuit level (Top up the oil if necessary)						
Check the operation of the lock on the engine casing						
Turntable						
Test the operation of the turntable locking system						
Hydraulic : oils, filters and hoses						
Check the hydraulic oil level (Top up the oil if necessary ; Machine stowed)						

C - Pre-operation inspection

Haulotte	Page or associated procedure	Daily	OK	NOK	Corrected	Comments
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

Articulated and telescopic fuel-powered aerial work platforms

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						
Test the operation of visual and audible alarms						

C - Pre-operation inspection

Haulotte	Page or associated procedure	Daily	OK	NOK	Corrected	Comments
Test the operation of the tilt system						
Test the operation of the emergency lowering system						
Test the operation of the axle locking system						
Test the operation of the loading control system (visual alarm on the control box)						
Test the operation of the Activ Shield Bar (If equipped)						

C - Pre-operation inspection

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 2.2 and D 2 - Ground control box and B 2.3 and D 3 - Platform control box.

4.1 Lowering for repairs

Emergency pump

Step	Action
1	Pull both E-Stop buttons (9) at ground box and (46) at platform box.
2	Set the key switch (22) at ground box to the  position. The indicator lights and Activ'Screen switch on.
3	Press and hold the emergency unit activation button (6) then test all of the machine's elevation movements: - Raise the arm (5). - Extend the telescopic boom (3) to approximately 20 cm / 8 in. - Set the turntable rotation control (7) to approximately 15°. - Lift the pendulum (2) approximately 10°. - Raise the boom (4). - Enable basket rotation (8).
4	Reset the machine to its access configuration.

Overriding

Step	Action
1	Pull both E-Stop buttons (9) at ground box and (46) at platform box.
2	Set the key switch (22) at ground box to the  position. The indicator lights and Activ'Screen switch on.
3	Press and hold the OVERRIDING (11) button and check that the ACTIV'SCREEN displays the following message: Overriding mode is only to be used in an emergency, to rescue an operator who is unable to descend alone. Press and hold this button AND use the movement controls.

C - Pre-operation inspection

4.2 Emergency push buttons

4.2.1 Ground control box

Ground control box E-stop button

Step	Action
1	Pull the E-Stop button (9) at the ground control box.
2	Set the key switch (22) at ground box to the  position
3	The indicator (10) lights up on ground control box
4	Start the engine by pressing the engine start-up selector (16) .
5	Push in the E-stop button (9).
6	Check that the engine stops running.
7	Check no movements are functional.

4.2.2 Platform control box

Platform control box E-stop button

Step	Action
1	Pull the E-Stop button (9) at the ground control box.
2	Set the key switch (22) at ground box to the  position
3	Pull out the E-Stop button (46) at platform box.
4	The indicator (13) lights up on ground display panel
5	Start the engine from platform using Start/Stop switch (230).
6	Push in E-Stop button (46) at platform.
7	Check that the engine stops running.
8	Check no movements are functional.

4.3 Activation of controls

The enable foot pedal (enable switch) must be activated to allow any movement.

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

- Enable switch at ground box (6).
- Foot pedal (enable switch) in the platform (C42).

N.B.-:THE ENABLE SWITCH MUST BE ACTIVATED FIRST BEFORE ANY ACTION ON THE JOYSTICK OR SWITCHES.

C - Pre-operation inspection

4.3.1 Ground control box

Step	Action
1	Pull both E-Stop buttons; (9) at ground box and (46) at platform box
2	Set the key switch (22) at ground box to the  position. The indicator lights and Activ'Screen switch on.
3	Press and hold the activation control (6) and activate all of the machine's movements.
4	Release the controls. The movements stop.

4.3.2 Platform control box

Step	Action
1	Pull both E-Stop buttons; (9) at ground box and (46) at platform box.
2	Set the key switch (22) at ground box to the  position. The indicator lights and Activ'Screen switch on.
3	Activate the pedal (C42) then test all of the machine's movements over a short distance
4	Release the pedal; activate all of the movement controls. The machine must not move.
5	Activate the foot pedal (C42) in the basket and activate all of the machine's translational and directional movements.
6	Release the foot pedal (C42). The controls are inoperative.

4.3.3 Foot Switch

Step	Action
1	Pull both E-Stop buttons (9) at ground box and (46) at platform box.
2	Set the key switch (22) at ground box to the  position. The indicator lights and Activ'Screen switch on.
3	Press and hold the foot pedal (C42) and activate pendulum lifting (129).
4	Release the foot pedal (C42). The controls are inoperative.

4.4 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.

Depending on the type of fault, the machine switches to DOWNGRADED MODE and certain movements can be blocked or slowed down to safeguard the operator's well being

C - Pre-operation inspection

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

4.5 Buzzers test

From the ground control box

Step	Action
1	Pull both E-Stop buttons (9) at ground box and (46) at platform box.
2	Set the key switch (22) at ground box to the  position.
3	The buzzers on the ground and platform beep upon start-up.

4.6 Indicators/LED's test

From the ground control box

Step	Action
1	Pull the E-Stop button (46) at the platform control box.
2	Set the key switch (22) at ground box to the  position.
3	Check that indicators (10, 13, 15, 19) flash upon start-up and ACTIV'SCREEN is lit.

From the platform control box

Step	Action
1	Pull E-Stop button (9) at ground box.
2	Set the key switch (22) at ground box to the  position.
3	First push in the E-Stop button (46) at platform box, then pull out.
4	Check that the indicators (101 - 117) on the platform control box flash upon start-up.

4.7 Travel speed limitation

All driving speeds are authorised when the machine is folded, (machine in transport position).

The machine automatically adapts its speed when elevated.

Only micro speed is authorized in elevation.

C - Pre-operation inspection

Platform control box

Step	Action
1	Place the machine on flat and firm ground.
2	From the platform control box, ensure that the high, medium and low drive speeds are operational (45).
3	Extend the telescope by 30 cm / 12 in.
4	Ensure that only micro-speed is authorized (Selecting medium or high speed does not change the machine's speed) .

4.8 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.



Do not rotate the turret while on a slope greater than 25%. Ensure boom is positioned between the wheels.

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

To check the tilt sensor at ground level

Step	Action
1	Put the machine in stowed position.
2	Position the machine on an incline that is greater than the maximum permitted incline ( B 3.1 - Technical specifications) .
3	Check that the "tilt" LED 112 indicator is lit up.
4	Unfold the machine. Ensure the movement is stopped.
5	Buzzers at ground and platform will beep.

C - Pre-operation inspection

4.9 Machine braking

Platform control box

Step	Action
1	Pull both E-Stop buttons; (15) at ground box and (46) at platform box.
2	Set the key switch ((22)) at ground box to the  position.
3	Select low drive speed (45)  , then gently operate drive joystick (33) and joystick trigger (123).
4	Press the emergency pushbutton (46) on the platform control box. Ensure that the machine stops immediately and does not drift.  In this configuration, stopping the machine is brutal.

4.10 Working envelope selection system

The machine is equipped with a working envelope selector (230 kg (550 lbs) / 4° or 350 kg (770 lbs) / 6°). In case that the working envelope 350 kg (770 lbs) / 6° is selected, the work area is automatically limited.

Refer to  B 3.3 - Working area / Range of motion.

Daily check:



- There must be one operator in the basket to perform the procedure.
- Do not place any tools or any other load in the basket.

Step	Action
1	Place the machine on flat ground.
2	Set the working envelope selector (82) in the platform control box to 250 kg (550 lbs) / 4°.
3	Fully extend the machine (Lift the boom to its highest point) .
4	Set the working envelope selector (82) in the platform control box to 350 kg (770 lbs) / 6°.
5	Activate the boom lowering control (49) in the platform control box until movement stops.
6	Ensure that movement stops well before the boom is in the horizontal position.

C - Pre-operation inspection

Step	Action
7	When movement stops, ensure that: - The LED 109 (250 kg (550 lbs) / 4°) flashes for several seconds. - The LED 113 (Working envelope) remains lit. - The LED 117 remains lit.
8	Set the working envelope selector (82) in the platform control box to 250 kg (550 lbs) / 4°. Ensure that: - The LED 109 remains lit. - The LED 113 is switched off. - The LED 117 is switched off.
9	Ensure that the boom lowering control (49) is once again operational and lower the boom until it is in the horizontal position.
10	Set the working envelope selector (82) in the platform control box to 350 kg (770 lbs) / 6°. Check that the LED 113 flashes.
11	Retract the telescope fully then activate the telescope extension control (49). Make sure the movement stops so that the telescope's extension is less than 3 m (9ft 10in). Ensure that the LED 113 remains lit when the telescope stops.

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Notes

D - Operation instructions

1 Operation

1.1 Introduction

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

Prior to operation:

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

1.2 Major description

All the machines are equipped with:

- Platform control box (Main station) .
- Ground control box (Auxiliary station and Overriding system) .
- Stop Emission System.

1.3 Operation from the ground control box (Auxiliary station)

- Turning "ON" and "OFF" of the machine is performed with the Control box activation key switch (22).
- Activation of a desired control box is achieved by turning the Control box activation key switch (22) to



the desired position

- The ground control box is energized and is active ONLY when:
 - The E-stop buttons on both ground and platform control boxes are not pressed in (Deactivated) .
 - To switch ON the machine, turn the Control box activation key switch (22) at the ground control box



on ground control box position

- Each control box has an emergency stop button. The emergency stop button cuts all movements when it is pressed, and also cuts out the engine.

N.B.-:DO NOT TURN OFF THE POWER SUPPLY OF THE MACHINE USING THE E-STOP BUTTON (USE ONLY IN CASE OF EMERGENCY) . TURN OFF THE POWER SUPPLY OF THE MACHINE USING THE CONTROL BOX



ACTIVATION KEY SWITCH 22 TO POSITION.

- An Enable /Foot Switch (6) is present that should be activated and maintained to authorize one or more movements. If Enable Switch (6) is kept engaged without selecting a function movement for more than 8 seconds ; Enable Switch is automatically de-activated.

N.B.-:THE ENABLE SWITCH (6) MUST BE ACTIVATED FIRST BEFORE ANY ACTION ON THE JOYSTICK OR SWITCHES.

- Only movements to lift, lower and rotate the platform are possible from the ground control box.
- All controls operating a movement, return automatically to neutral when released.
- At power up, all controls must be in their neutral position (not activated).
- Enable Switch/Back-up unit selector (6):
 - With engine running, the selector (6) functions as an Enable Switch only.
 - With engine stopped, the selector (6) functions as the Enable Switch and activates the back-up unit (emergency pump).
- Overriding system: The ground control box is an auxiliary control box to use in emergencies only. Refer to  D 4.2 - To rescue operator in platform.
- The status of the controls is tested automatically when the machine is switched on.
- Pressing engine start-up selector (16) starts or stops the engine.

D - Operation instructions

- A buzzer beeps in the following conditions:
 - When power is switched on.
 - Overload.
 - Slope if machine is out of stowed position.
 - Hydraulic oil overheating.
 - Movement buzzer option.
 - Drive buzzer option.
- Indicators (10), (13), (15) and (19) are checked when the machine is powered on.

1.4 Operation from the platform control box (Main station)

- The platform control box is energized only when:
 - The E-stop buttons on both ground and platform control boxes are not pressed in.
 - To switch ON the machine, turn the Control box activation key switch (22) at the ground control box to platform control box position .
 - Overriding system not activated.
- A joystick that is faulty or activated on power-up, is not taken into account to control a movement. If this fault disappears, the movement is authorised again.
- An E-Stop button at each control box stops all movements when pressed in; including shutting off an engine (if equipped).

N.B.-DO NOT TURN OFF THE POWER SUPPLY OF THE MACHINE USING THE E-STOP BUTTON (USE ONLY IN CASE OF EMERGENCY) . TURN OFF THE POWER SUPPLY OF THE MACHINE USING THE CONTROL BOX

ACTIVATION KEY SWITCH (22) TO  POSITION.

- A Foot Switch (C42) is present and should be activated and maintained to authorize one or more movements. If Foot Switch is kept engaged without selecting a function movement for more than 8 s seconds ; Enable switch is automatically de-activated.

N.B.-THE ENABLE SWITCH (C42) MUST BE ACTIVATED FIRST BEFORE ANY ACTION ON THE JOYSTICK OR SWITCHES.

N.B.-IT IS RECOMMENDED THAT OPERATOR REMOVES THE FOOT FROM THE FOOT SWITCH WHENEVER A MOVEMENT HAS CEASED.

- The release of 'Enable switch' foot pedal while performing a movement stops that function movement and all other movements are inactive. The stop of movements is progressive. If the Foot Switch is pressed again quickly within 0,5 s the movement restarts. If the Foot Switch and / or Enable Switch is not pressed again quickly enough within + 0,5 s the movement will not restart. It could restart only when the selected function switch/joystick is released to neutral position.
- All switches and joystick operating a movement, return automatically to neutral when released.
- At power up, all switches and joysticks must be in their neutral position.
- The status of the switches is tested automatically when the machine is switched on and checked at every starting. A switch will be activated only after it has been detected in neutral position.
- Emergency pump ( D 4.1 - In case of engine power failure) .
- Indicators-All indicators (LEDs 101 - 117) are checked when the machine is powered on
- A buzzer beeps in the following conditions:
 - When power is switched on.
 - Overload.
 - Machine elevated on a slope greater than the rated slope.



While driving on a slope:

- While driving, always place the boom above the rear axle, in the direction of movement.

D - Operation instructions

- Always orientate the machine in the direction of the slope.
- Always place the boom 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 the speed under control.

D - Operation instructions

2 Ground control box

2.1 To start and stop the machine-Diesel engine

- Check that the E-stop buttons (9) at ground control box and (46) at platform control box are not pressed in.



- Turn the control box selector (22) to position  to energize the ground control box.
- Press the starter selector (16) to start the engine.
- Let the engine heat up.

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

- Press the starter selector (16) to stop the engine.



- Turn the activation selector key switch (22) to off position .
- Power supply is now switched off.

N.B.-:THIS OPERATION CUTS THE ELECTRICAL SUPPLY TO THE MACHINE AND IS NECESSARY TO PREVENT BATTERY DISCHARGE.

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.

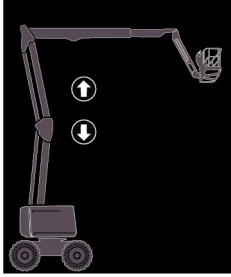
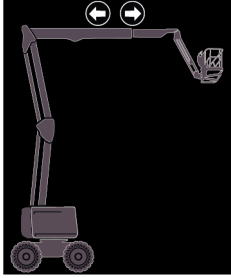
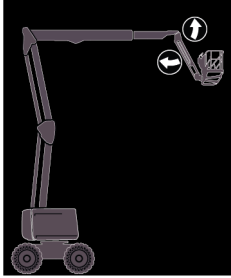
2.2 Movement control

N.B.-:THE ENABLE SWITCH (6) MUST BE ACTIVATED FIRST BEFORE ANY ACTION ON THE JOYSTICK OR SWITCHES.

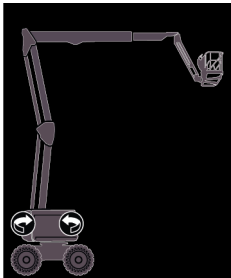
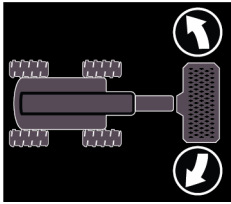
N.B.-:RELEASING THE ENABLE SWITCH (6) WILL STOP ALL MOVEMENTS.

D - Operation instructions

Ground box controls (emergency station)

Command		Action
Raising / lowering of boom		Press the boom raising control (4) to raise  the boom.
		Press the boom lowering control (4) to lower  the boom.
Lift/lower the arm		Press the arm raising control (5) upwards  to raise the arm
		Press the arm lowering control (5) downwards  to lower the arm
Boom telescoping extend / retract		Press the boom telescoping control (3) to extend  the boom.
		Press the boom retracting control (3) to retract  the boom.
Jib raising / lowering (If applicable)		Press the jib raising control (2) to raise  the jib.
		Press the jib lowering control (2) to lower  the jib.

D - Operation instructions

Command		Action
Turntable rotation		Press the turntable rotation control (7) for an counterclockwise rotation  .
		Press the turntable rotation control (7) for a clockwise rotation  .
Platform rotation		Press the platform rotation control (8) for an counterclockwise rotation  .
		Press the platform rotation control (8) for a clockwise rotation  .
Platform leveling		Press the platform levelling control (1)  to tilt the platform upwards.
		Press the platform levelling control (1)  to tilt the platform downwards.

2.3 Additional controls

- Press the beacon light control (14)  to turn ON or OFF be beacon light.
- Push the horn selector (12) to the right to sound the horn. The horn stops when the selector switch is released.

D - Operation instructions

3 Platform control box

3.1 To start and stop the machine

3.1.1 To start the machine

At the ground control box:

- Check that the E-stop button (9) is not pressed in.



- Turn the control box activation key switch (22) to platform position to energize platform control box.

At the platform control box:

- Check that the E-Stop button (46) on platform control box is not pressed in.
- Push the starter selector switch (230) upwards. During pre-heating, the indicator (102) comes ON on the display panel of the platform control box. Pre-heating begins and the engine starts.
- Allow the engine to heat up and initialize.

3.1.2 To stop the engine

- Press the engine starter selector (230) and the engine stops.

3.1.3 If engine is stopped by Stop Emission System

- The Stop Emission System automatically stops the engine after 90 s of inactivity.
- Press the foot switch (C42) to restart the engine.

N.B.:-IF THE FOOT SWITCH IS STILL ENGAGED, RELEASE AND PRESS AGAIN.



The ActivScreen automatically goes into standby if it is not used for an extended period. To switch the ActivScreen back on, press and release the emergency stop button then follow the start-up procedure.

3.2 Drive and steer control

To activate drive and steer function, press the Foot Switch and simultaneously operate the joystick (33) for the desired function.

N.B.:-THE ENABLE SWITCH (C42) MUST BE ACTIVATED FIRST BEFORE ANY ACTION ON THE JOYSTICK OR SWITCHES.

Before moving, locate the white and red directional arrows on the chassis and the platform control box.

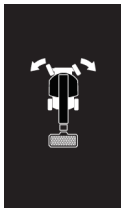
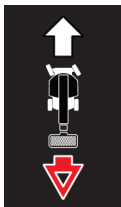
Move the drive control joystick (33) in the direction matching the directional arrows.

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



Do not use simultaneously the differential lock control (35) and the steering control. Do not activate the differential lock control (35) in the event of strong grip (dry tar, etc.).

D - Operation instructions

Command		Action
Steering		Press thumb/rocker switch on joystick (33 A) to the left to steer left.
		Press thumb/rocker switch on joystick (33 B) to the right to steer right.
Steering mode selection		Synchronized axle: 4 wheel steering mode
		2 front steering wheels from axle
		Crab mode axle
Driving		Push the joystick (33) forward to move the machine forward, in the direction of the WHITE arrow
		Pull the joystick (33) backwards to move the machine in the direction of the RED arrow
Drive speed		Set the speed selector to (35)  for low speed movements (short distance, final approach, drift and when crossing a slope).
		Position the drive speed selector switch (45) on  for medium speed driving.
		Set the speed selector to (45)  for low speed movements (short distance, final approach, drift and when crossing a slope).

N.B.-:STEERING MODE OPERATES BY OIL TRANSFER. TO REALIGN THE REAR AXLE, IT MAY BE NECESSARY TO SWITCH BACK TO 2 WHEEL DRIVE FIRST.

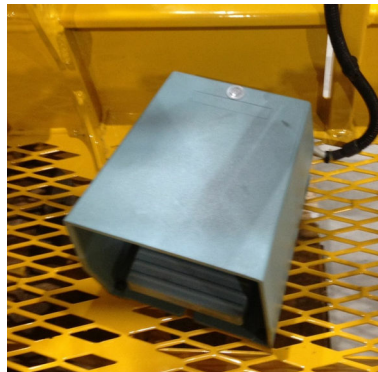
3.3 Movement control

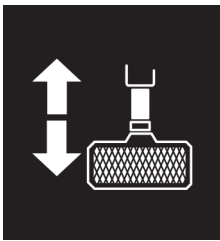
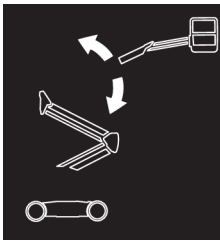
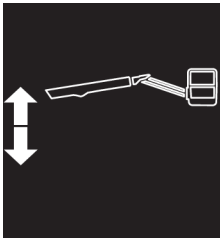
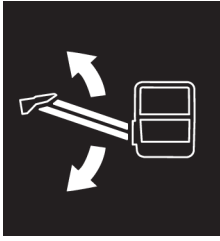
N.B.-:THE ENABLE SWITCH (C42) MUST BE ACTIVATED FIRST BEFORE ANY ACTION ON THE JOYSTICK OR SWITCHES.

N.B.-:RELEASING THE ENABLE SWITCH (C42) WILL STOP ALL MOVEMENTS.

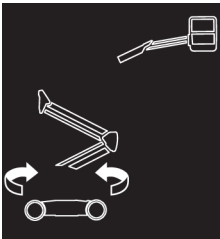
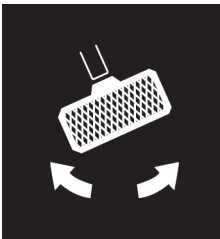
D - Operation instructions

Foot Switch (C42)



Command	Action	
Boom telescoping extend / retract		Push the switch (54) forward to retract the boom.
		Move the switch (54) backwards to extend the boom.
Boom raising / lowering		Move the boom/turntable joystick (49) forward to raise the boom.
		Move the boom/turntable joystick (49) backwards to lower the boom.
Arm raising / lowering		Push the joystick (50) forward to raise the arm.
		Pull the joystick (50) backwards to lower the arm.
Jib raising / lowering		Push the pendulum selector (129) forwards to raise the pendulum.
		Push the jib switch (129) downwards to lower the jib.

D - Operation instructions

Command		Action
Turntable rotation		Move the boom/turntable joystick (49) to the left for a clockwise (CW) rotation.
		Move the boom/turntable joystick (49) to the right for a counter clockwise (CCW) rotation.
Platform rotation		Move the platform rotation switch (38) to the left for a clockwise (CW) rotation.
		Move the platform rotation selector (38) to the right for a counter clockwise (CCW) rotation
Platform leveling		Push the platform leveling switch (40) forwards to tilt the platform to the front of the machine.
		Push the platform leveling switch (40) backwards to tilt the platform towards the rear of the machine.

3.4 Additional controls

- Horn: Push the horn selector (43) to the right to sound the horn. The horn stops when the switch is released.

3.4.1 Stop Emission System

The machine is equipped with the innovative Stop Emission System that automatically stops the engine after 90 s of inactivity. Engine can be restarted by pressing the 'enable switch' foot pedal (C42).

N.B.:-THIS SYSTEM IS ONLY AVAILABLE WHEN THE PLATFORM CONTROL BOX IS SELECTED.



If the machine is equipped with arctic option, Stop Emission System is deactivated. The Stop Emission System can be reactivated at any time by a HAULOTTE Services® technician.

3.4.2 Activ' Lighting System

Refer to  B 3.3 - Platform control box.

This option means that the operator will be able to safely load (or unload) the machine onto the truck.

Located on the turntable, boom and platform, the Activ' Lighting System system lights up the controls and surrounding areas of the machine. Users can then safely move the machine.

3.4.3 Working envelope selector (If equipped)

N.B.:-THE LOAD SELECTION (82) MUST BE DONE ONLY IN STATIC POSITION. LOAD SELECTION CAN BE DONE ONLY FROM THE PLATFORM CONTROL BOX.

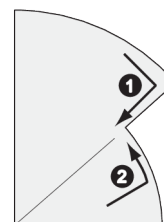
- The envelope selector 250 kg (550 lbs) / 4° enables you to use the platform's capacity chart without restriction, being limited to a maximum handling load of 250 kg (550 lbs) and a maximum drift of 4°.
- The envelope selector 350 kg (770 lbs) / 6° enables you to use the platform's capacity chart without restriction, being limited to a maximum handling load of 350 kg (770 lbs) and a maximum drift of 6° (Refer to the decal of the machine) .

D - Operation instructions

- When the machine is switched on (whatever control box is selected) the machine recognizes the load per the selector (82) position on the platform control box (350 kg (770 lbs) / 6° or 250kg (550 lbs) / 4°) .
- The 350 kg (770 lbs) envelope selector indicator light (LED 117) lights up when 350 kg (770 lbs) / 6° is selected. When the machine arrives at the limit of the work area, the movement is automatically cut off. The working envelope indicator light (LED 113) lights up.
- When 250 kg (550 lbs) / 4° is selected, there is no load chart limit. All movements are cut off. The load selection indicator (LED 109) is on.

If the platform is in the unfolded position and certain movements are cut off by range limitation, follow the steps below as indicated by the illustrations in order to return the platform to the folded position in complete safety:

1. If boom lowering is cut-off, then retract the boom to recover the lowering movement.
2. If boom telescoping is cut off, lift the boom to recover the boom telescoping movement.



N.B.-:-THE WORK ZONE CORRESPONDS TO THE POSITION OF THE 250KG (550 LBS) / 350 KG (770 LBS) LOAD SELECTOR. THE WORK ZONE REFERS TO THE LABEL LOCATED ON THE PLATFORM. IF THE PLATFORM LOAD IS BETWEEN 250 KG (550 LBS) AND 350 KG (770 LBS), THEN THE PLATFORM CANNOT BE POSITIONED IN THE RESTRICTED AREA.

N.B.-:-IF THE LOAD SELECTION INDICATOR (LED 109) FLASHES, THIS MEANS THAT THE LOAD SELECTION HAS NOT BEEN TAKEN INTO ACCOUNT. RETRACT THE TELESCOPE TO THE STOP THEN SELECT THE ENVELOPE AGAIN USING THE ENVELOPE SELECTOR (82).

D - Operation instructions

4 Rescue and emergency procedures

4.1 In case of power loss

Should the main power source fail, the secondary emergency power supply, powered by the starter battery, enables movements to be controlled both from the ground control box (on the ground) or from the platform control box (in the platform).

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

The use of the electric pump is exclusively reserved for lowering the boom in emergency situations only. You are advised to retract the telescope before lowering the boom.

N.B.-:TEST THE OPERATION OF EMERGENCY SYSTEM ATLEAST ONCE A MONTH. REFER TO THE SERVICE MANUAL.

Depending on the control box in use, push and hold the back-up/auxiliary power switch (6) at ground box or switch (41) at platform box. Retract the boom and lower it by using switches (3) and (4) at ground box or switch (54) and joystick (49) at platform box.

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

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

N.B.-:DO NOT DETACH THE LANYARD FROM THE CURRENT PLATFORM IF THE TRANSFER TO THE NEW STRUCTURE POSES ANY DANGER OR UNTIL THE TRANSFER IS SAFELY COMPLETED. DO NOT ATTEMPT TO CLIMB DOWN THE BOOM. INSTEAD WAIT FOR ASSISTANCE FOR A SAFE EXIT.

4.2 To rescue operator in platform

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

HAULOTTE® has implemented a control system for safely lowering the operator to the ground in the event of an emergency to enable him to receive the necessary treatment.



The system allows occupant(s) to be lowered to the ground level, even if an E-Stop is engaged or if an overload is detected.

Procedure:

- Turn the ground control box key control (22) to the ground control box  position.
- The platform box controls are now de-energized.
- Check that the E-Stop button (9) at ground is not pressed in.
- To lower the platform, hold down the Enable Switch (6)  and simultaneously activate the desired control function.

D - Operation instructions

4.3 Operation of overriding system from ground control box

N.B.-:IF THE SAFETY SYSTEMS DO NOT ALLOW NORMAL MOVEMENT FROM THE GROUND CONTROL BOX, OR IN THE EVENT OF OVERHEATING, USE THE OVERRIDING SYSTEM DESCRIBED BELOW.



Operation of the "overriding system" switch must be an exception and not a normal emergency operation.

Procedure:

- Press and hold the "overriding" system control (11) .
- Press simultaneously the telescoping boom control (3) to retract the boom .
- Press the boom raising control (4) to raise  or lower  the boom.
- Press the arm raising control (5) to raise  or lower  the arm.

N.B.-:ONCE RESCUE OPERATIONS ARE COMPLETE, WRITE AN INCIDENT REPORT.

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.

- Lower the boom.
- Ensure that the jib is raised as necessary to give ground clearance when driving the machine onto the loading ramp.
- Drive onto the truck bed slowly.
- Secure the machine to the tie down points provided ( Section D-Machine layout) .
- Lock the turntable with the rotation stop pin located under the turntable before transporting ( Section D-Machine layout) .
- The platform/basket must be chocked and the boom strapped to prevent bouncing up and down, thus preventing possible material damage during transporting.
- Do not use excessive downward force when securing boom section.



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



Always align the boom in the axis of the machine and climb slopes with the platform lowered and on the downhill side of the machine.



To enter or exit from the platform: Falling Hazards ( A 2.1.2) .

5.2 Machine stowage for transport - HA20RTJ - HA20RTJ PRO - HA61RTJ - HA61RTJ PRO



Secure turntable with the turntable locking pin before traveling long distances or hauling machine on a truck.

D - Operation instructions

Turntable rotation

Turntable rotation enabled	Turntable rotation disabled
	

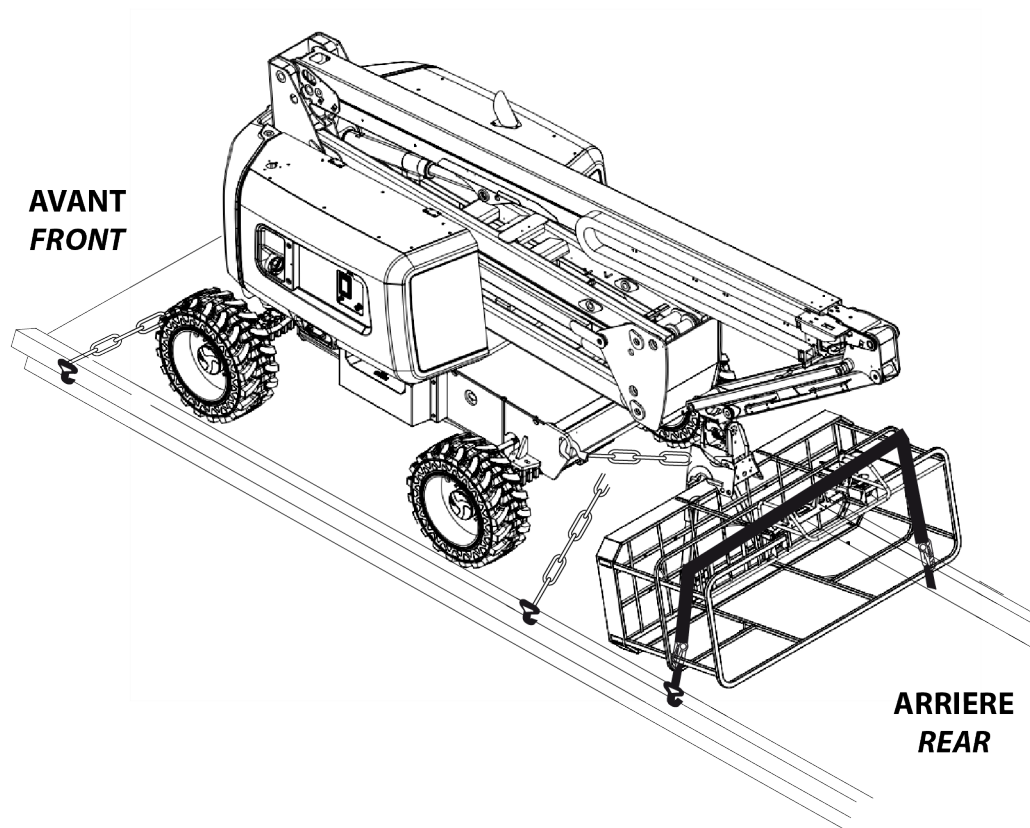
Transporting on to a truck bed



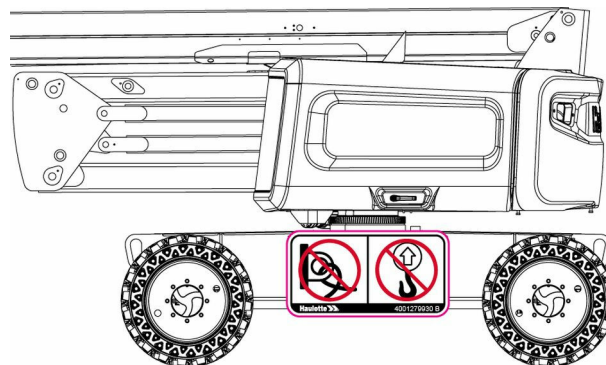
The machine must not be raised when it is positioned on a flatbed truck...

D - Operation instructions

Machine stowing



Machine stowing and slinging through the center of the chassis is prohibited. Secure and sling the machine to the anchor provided.



D - Operation instructions

Loading characteristics

Marking	Description	HA20 RTJ / HA61 RTJ	HA20 RTJ PRO / HA61 RTJ PRO
B	Lateral distance between the wheels	2,5 m (8 ft 2 in)	
C	Front wheel ground pressure	14,1 daN/cm ² (204.5 pounds/ inches ²)	
D	Rear wheel ground pressure	14,1 daN/cm ² (204.5 pounds/ inches ²)	
	Anchorage point		

5.3 Unloading

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

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



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

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

D - Operation instructions

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 boom is in the stowed position and the turntable is locked, prior to towing.
- The platform must be empty.

To tow a broken-down machine, release brake (Refer to  Manual 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 speed (machine unfolded) (Refer to  B 4.1 - Technical specifications) .



To go up or down a slope, use the appropriate winch.

5.4.1 Brake release

To tow a broken-down machine, perform manual brake release.



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.

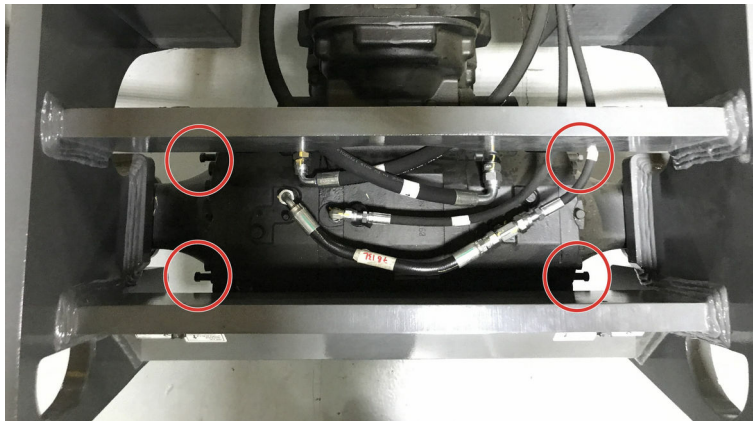
To release the machine's brakes, the following conditions must be met:

- The machine must be completely stowed.
- No movement selected.
- The machine must not be tilted.
- Remove the rear chassis cover:



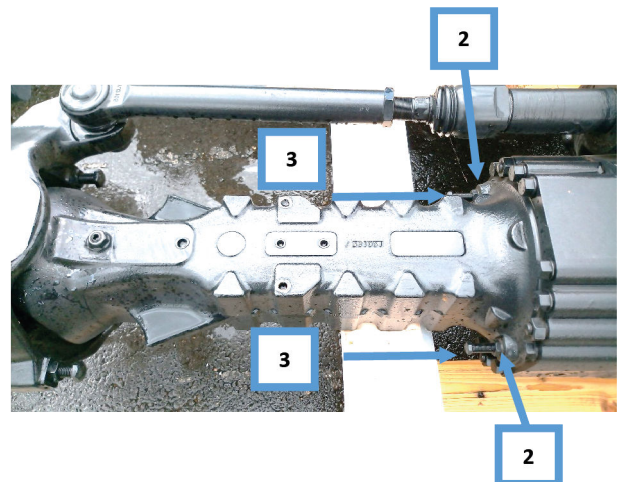
D - Operation instructions

Marking the screws



Procedure - Travel axles - DANA

- Loosen the nuts (2) of the screws (3) provided for mechanical and manual brake release.
- Completely unscrew the nuts (2) against the head of the screw.
- Tighten the screws (3) 1/4 turn in an alternating sequence until they reach the mechanical stop (Approx. 11,3 mm (1 in)) .

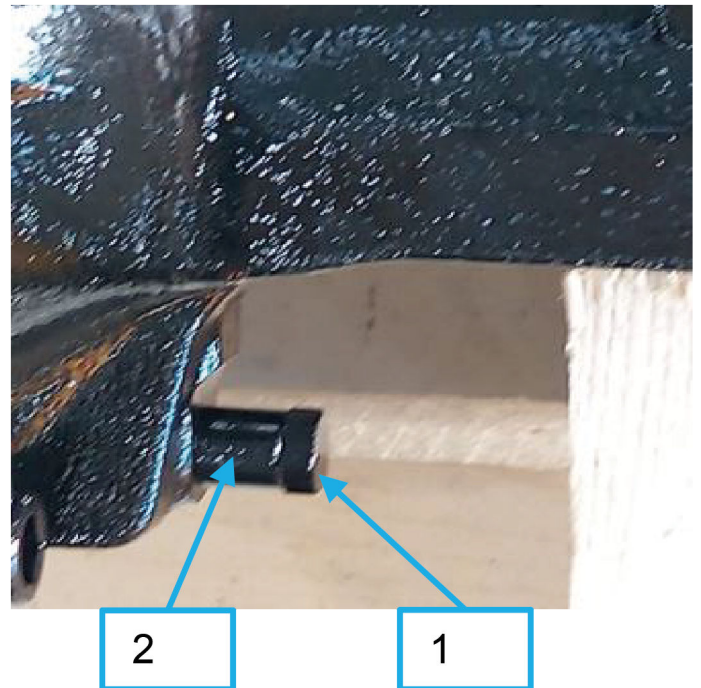


- Repeat the procedure above for the 2 sides of the rear axle (2 wheels).

D - Operation instructions

Procedure - Travel axles - COMER

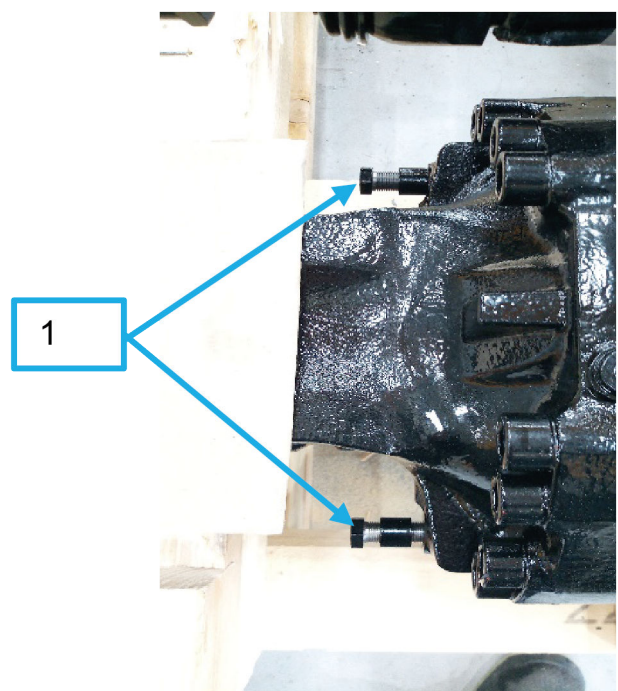
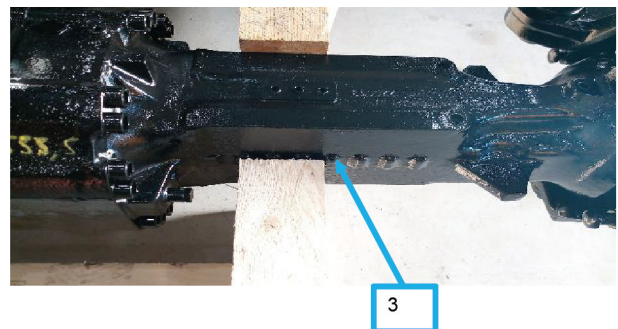
- Loosen completely the 2 screws (1) of the axle (3).
- Remove the spacer 2.



- Retighten the screw (1) on the axle 3.



Tighten the screws alternately, turning them 45° each time. Do not completely tighten the screws and move on to the next one. It is not required to completely tighten the screws. Stop applying when brake is disengaged.



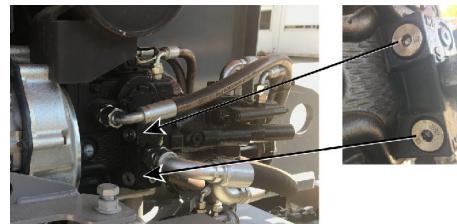
D - Operation instructions

Procedure - Pump

Locations



- Unscrew the 2 pressure relief valves with 3 turns before towing.



Do not exceed 5 km/h (3.11 mph).

5.4.2 Adjustment after manual release

Procedure - DANA

- Return the screws to their initial position (28,5 mm / 2 in) following the same sequence as for the brake release, in reverse order (on quarter turn).
- Tighten the nuts.
- The brakes are now operational again.

Procedure - COMER

- Loosen the screws alternately, turning them 45° at a time.



Do not fully loosen one then the other.

- Completely loosen the screws (2) from the beam (3).
- Refit the spacer.
- The brakes are now operational again.



Hold screws (3) into position while locking the nuts (2) ; after locking, check the distance of screws (3) once more.

- Refit the cover.
- Repeat the procedure above for the 2 sides of the rear axle (2 wheels).

D - Operation instructions

Procedure - Pump

- Re-tighten the 2 pressure limiters 3 turns.

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.



For engine storage condition follow engine supplier operator and maintenance manuals.

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

Do not store or immobilise the machine when it is unfolded (Except for the boom) .

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

Ensure that the turntable rotation locking pin is removed and correctly in place.

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

Disconnect the battery.



It is prohibited to store the machine in the folded position with an obstacle under the boom.



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 electrical components with a high pressure washer. Wipe away dirt from around electrical components with a dry cloth.

5.6 Lifting operation

During loading / unloading operation with an overhead crane, it is important to respect the following:

- Put the machine in stowed position, boom and arm fully retracted and lowered.
- Platform must be empty.
- Rotate the turret and the jib to the configuration in the photos below.
- Lock the turret with turret locking pin.
- Verify that lifting attachments are in good operating condition and match the technical specifications. Lifting devices must be attached only to the designated lifting eyes.
- Each of the slings used for lifting the machine must be adjusted to keep the machine level and to minimize the risk of damage to the machine.



- Anchorage point for lifting are identified / labeled by the following symbol

D - Operation instructions

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



Never lift the machine with slings attached to counterweight.

Righ side view



Front view



	Number of shackles	Number of slings	Length	Maximum load per sling and shackle
A	4	4	5 m (16 ft 5 in)	5000 daN (11240 lbf)

D - Operation instructions

6 Cold Weather Recommendations

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

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

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

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

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

N.B.-:WHEN THE POWER IS ON, THE LED (102) ON THE PLATFORM CONTROL DISPLAY PANEL IS ON, INDICATING THAT THE MOTOR IS IN AUTO WARM-UP MODE. UPON THE EXTINCTION OF THIS LIGHT (JUST IN SECONDS) AT PLATFORM, STARTING OF THE MACHINE IS POSSIBLE.

6.1 Engine oil

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

In general, use the oil with the lowest viscosity to meet starting temperature requirements.

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

Classification API

Fuel type	Engine oil classification
Low sulfur fuel ≤ [0.05% (500 ppm)]	APICJ-4 or CK-4
Sulfur content < 0.50% (5000 ppm)	(If fuel with a high sulfur content is used, change the engine oil more frequently (reduce the intervals between each oil change by approximately half))

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

D - Operation instructions

6.2 Hydraulic oil

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

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

Environmental conditions	SAE Viscosity grade
Ambient temperature between - 35°C (- 31°F) and + 35°C (+ 95°F)	HV 32 ARTIC
Ambient temperature between - 15°C (5°F) and + 40°C (+ 104°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.

Notes

E - General Specifications

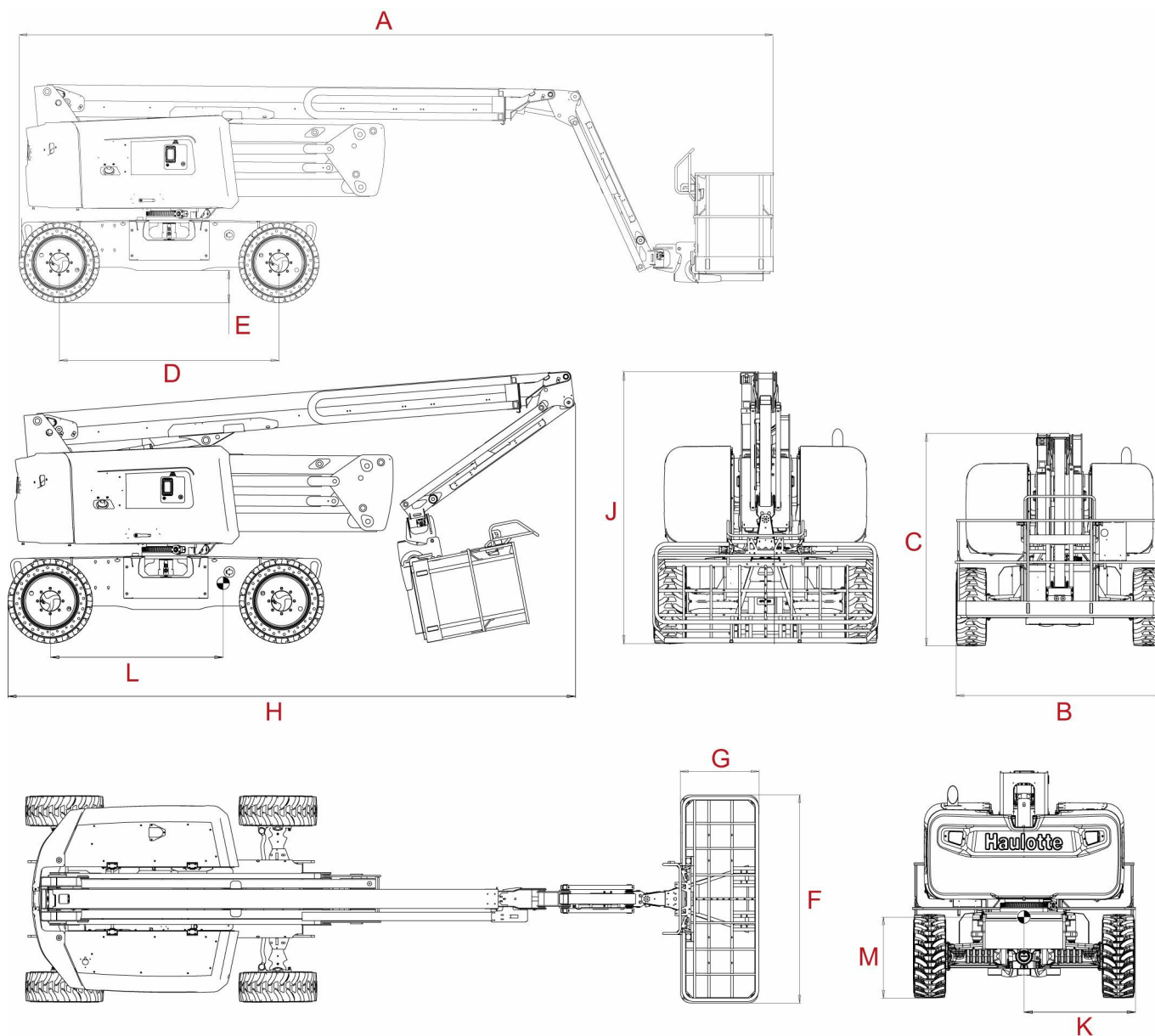
1	Machine dimensions.....	3
2	Major component masses.....	5
3	Acoustics and vibrations.....	6
4	Wheel/Tire assembly.....	7
4.1	Technical specifications.....	7
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Notes

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.



E - General Specifications

Machine		HA20 RTJ / HA61 RTJ		HA20 RTJ PRO / HA61 RTJ PRO	
Marking	Specifications - Dimensions	SI	Imp.	SI	Imp.
A	Overall length of machine	8,6 m	28 ft 3 in	8,6 m	28 ft 3 in
B	Overall width of machine	2,43 m	8 ft 0 in	2,43 m	8 ft 0 in
C	Overall height of machine	2,47 m	8 ft 1 in	2,47 m	8 ft 1 in
D	Wheel base	2,5 m	8 ft 2 in	2,5 m	8 ft 2 in
E	Minimum ground clearance	30 cm	1 ft 0 in	30 cm	1 ft 0 in
E	Maximum ground clearance	36 cm	1 ft 2 in	36 cm	1 ft 2 in
F X G	Platform dimensions	1,83 x 0,8 m / 2,4 m x 0,9 m	6 ft 0 in x 2 ft 7 in / 7 ft x 10 in x 2 ft 11 in	1,83 x 0,8 m / 2,4 m x 0,9 m	6 ft 0 in x 2 ft 7 in / 7 ft x 10 in x 2 ft 11 in
H	Storage length	6,165 m	20 ft 3 in	6,165 m	20 ft 3 in
J	Storage height	2,98 m	9 ft 9 in	2,98 m	9 ft 9 in
K	Center of gravity - X	1,208 m	4 ft 0 in	1,208 m	4 ft 0 in
L	Center of gravity - Y	1,335 m	4 ft 5 in	1,364 m	4 ft 6 in
M	Center of gravity - Z	1,272 m	4 ft 2 in	1,229 m	4 ft 0 in

Machine		HA20 RTJ / HA61 RTJ - DUAL REACH		HA20 RTJ PRO / HA61 RTJ PRO - DUAL REACH	
Marking	Specifications - Dimensions	SI	Imp.	SI	Imp.
A	Overall length of machine	8,6 m	28 ft 3 in	8,6 m	28 ft 3 in
B	Overall width of machine	2,43 m	8 ft 0 in	2,43 m	8 ft 0 in
C	Overall height of machine	2,47 m	8 ft 1 in	2,47 m	8 ft 1 in
D	Wheel base	2,5 m	8 ft 2 in	2,5 m	8 ft 2 in
E	Minimum ground clearance	30 cm	1 ft 0 in	30 cm	1 ft 0 in
E	Maximum ground clearance	36 cm	1 ft 2 in	36 cm	1 ft 2 in
F X G	Platform dimensions	1,83 x 0,8 m	6 ft 0 in x 2 ft 7 in	1,83 x 0,8 m	6 ft 0 in x 2 ft 7 in
H	Storage length	6,165 m	20 ft 3 in	6,165 m	20 ft 3 in
J	Storage height	2,98 m	9 ft 9 in	2,98 m	9 ft 9 in
K	Center of gravity - X	1,208 m	4 ft 0 in	1,208 m	4 ft 0 in
L	Center of gravity - Y	1,346 m	4 ft 5 in	1,374 m	4 ft 6 in
M	Center of gravity - Z	1,262 m	4 ft 2 in	1,22 m	4 ft 0 in

E - General Specifications

2 Major component masses

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

	HA20 RTJ / HA61 RTJ		HA20 RTJ PRO / HA61 RTJ PRO	
	SI	Imp.	SI	Imp.
Mass of one wheel	216 kg	416 lb	216 kg	416 lb
Frame assembly mass	1915 kg	4,223 lb	2062 kg	4,547 lb
Counterweight mass	1863 kg	4,108 lb	1863 kg	4,108 lb
Battery mass	24 kg	53 lb	24 kg	53 lb
Turret assembly mass	1170 kg	2,58 lb	1207 kg	2,661 lb
Engine compartment mass	341 kg	752 lb	341 kg	752 lb
Arm assembly mass	1530 kg	3,374 lb	1530 kg	3,374 lb
Boom assembly mass	747 kg	1647 lb	747 kg	1647 lb
Jib assembly mass	178 kg	392 lb	178 kg	392 lb
Basket assembly mass	155 kg	342 lb	155 kg	342 lb

	HA20 RTJ / HA61 RTJ - DUAL REACH		HA20 RTJ PRO / HA61 RTJ PRO - DUAL REACH	
	SI	Imp.	SI	Imp.
Mass of one wheel	216 kg	416 lb	216 kg	416 lb
Frame assembly mass	2377 kg	5,241 lb	2524 kg	5,565 lb
Counterweight mass	1863 kg	4,108 lb	1863 kg	4,108 lb
Battery mass	24 kg	53 lb	24 kg	53 lb
Turret assembly mass	1170 kg	2,58 lb	1207 kg	2,661 lb
Engine compartment mass	341 kg	752 lb	341 kg	752 lb
Arm assembly mass	1530 kg	3,374 lb	1530 kg	3,374 lb
Boom assembly mass	747 kg	1647 lb	747 kg	1647 lb
Jib assembly mass	178 kg	392 lb	178 kg	392 lb
Basket assembly mass	155 kg	342 lb	155 kg	342 lb

E - General Specifications

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	77,8 dBA
Guaranteed sound power level	97 dBA
Vibrations hand/arm	Vibration transmitted by this MEWP to the hand-arm does not exceed 2,5 m/s ² (98,4 in/s ²)
Vibrations whole body	Vibration transmitted by this MEWP to the whole body does not exceed 0,5 m/s ² (19,6 in/s ²)

E - General Specifications

4 Wheel/Tire assembly

4.1 Technical specifications

Component	Standard wheel
Reference number	Camso 910 x 355
Type	Solid Tyre (Curred - on)
Wheel mass	216 kg (416 lbs)
Size	910 mm x 355 mm (3 ft 0 in / 1 ft 2 in)
Torque	320 Nm (236 lbs ft)

4.2 Inspection and maintenance



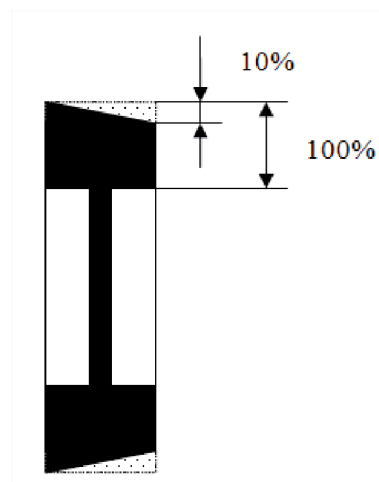
The tire and rim are bonded together, both must be replaced if either is damaged.

Wheels replacement must be made in the following cases:

- Deformation or cracks on the rim.
- De-bonding between the interface of the steel and the rubber.
- Uniform wear to the wearing line:
 - 910 x 355 wheel: Ø mm / 36 in
- Damage to the tire: Blistering

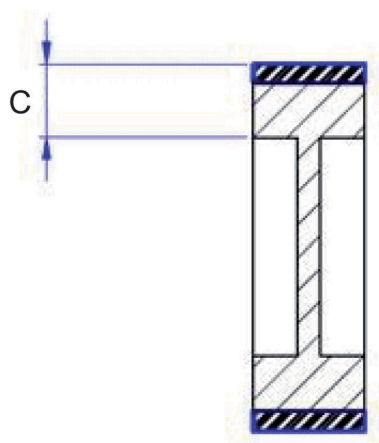


- Non-linear wearing of the tread profile (> 10%)

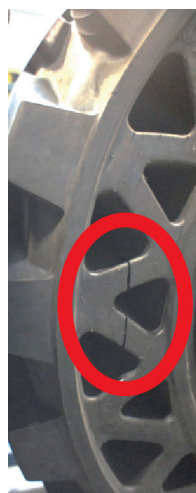


E - General Specifications

- Linear wear of the thread profile (> 25 %)



- 1 wheel stud is completely torn.
- 2 successive wheel studs are partially torn.
- 2 aperture holes are cut.



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 a solid (rigid) tire with a foam-filled or a pneumatic (air-filled) tire.

Procedure of replacement:

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

N.B.:-IF A WHEEL IS REPLACED, LOOK AT THE AXLE TRACK PATTERN (WHICH INDICATES THE FORWARD DIRECTION OF ROTATION) TO CHECK THAT THE INSTALLATION IS CORRECT.

E - General Specifications

5 Options
5.1 Platform

Technical specifications

Type		Platform entry	
Small platform	Platform width	0,8 m - 2 ft 7 in	Sliding bar
	Platform length	1,8 m - 5 ft 11 in	Swing gate
Large platform	Platform width	0,91 m - 3 ft	Sliding bar
	Platform length	2,44 m - 8 ft	Swing gate

Sliding bar



E - General Specifications

Swing gate



5.1.1 Swing gate

5.1.1.1 Description

SWING GATE consists of a laterally mounted pivoting $\frac{1}{2}$ gate with closing latch, which enables a better access to platform. Spring loaded hinges and a latching mechanism allows the gate to swing inwards only.

E - General Specifications

Swing gate



5.1.1.2 Characteristics

Width of the gate: 500 mm / 19.68 in

5.1.1.3 Safety precautions



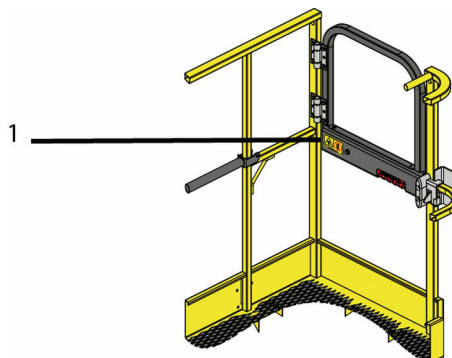
- The door forms part of the guardrail system and must be closed after entering the platform.

5.1.1.4 Pre-operation instructions

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

5.1.1.5 Specific decals, optional

Location of the decals



E - General Specifications

Marking	Description	Quantity	Part number
1	Hand crushing hazard	1	4001052080

5.2 On-board generator

5.2.1 Description

The optional socket on the platform is supplied by a hydraulically powered generator. The generator is located in the control box side. The generator is activated by a switch on the platform control box. The power output and voltage available at the socket depends on the option installed.

5.2.2 Characteristics

Nominal power output	Main output voltage	Alternating current frequency	Socket plug type	Regulation zone
3,5 kw	230 V	50 Hz	Single-phase	European community market
3,7 kw	115 V	50 Hz	Single-phase	United Kingdom market
3,7 kw	110 V	60 Hz	Single-phase	American market
6,5 kw	400 V	50 Hz	Three-phase	European conformity and Australian markets
9 kw	110 V	60 Hz	Three-phase	American market
9 kw	120 V	60 Hz	Single-phase	American market

5.2.3 Safety precautions



- Please read the instructions before using the option.
- Make sure that no one is beneath the platform.
- Check that the voltage required by the tool matches the voltage supplied by the socket.
- Do not overload the power circuit.
- Do not use electrical tools in water.
- Do not exceed the nominal output power.



Do not expose the platform socket to direct contact with a water beam or a pressure washer.

5.2.4 Pre-operation inspection



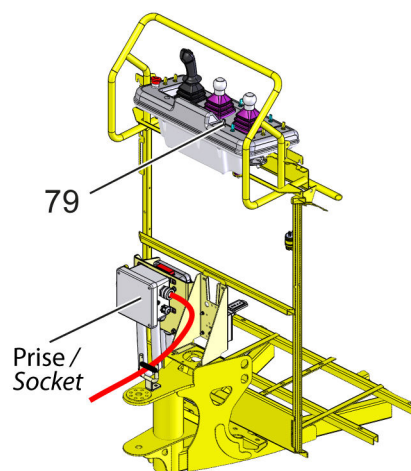
- Check that the generator is securely attached, that there are no missing or loose parts and no damage.
- Check the hoses before use to make sure there are no leaks or damage.
- Check the relay wiring.

E - General Specifications

5.2.5 Operation

Power on:

- Start the machine.
- Heat the engine for 15 min before any operation.
- From the platform control box, move the generator selector switch (79) to the right to activate the generator ( B - Platform control box) .
- Connect the tool to the socket.
- Connect or disconnect from the socket at any time.



N.B.-:MACHINE MOVEMENTS ARE PREVENTED WHEN THE GENERATOR SWITCH IS ON.

Power off:

- Disconnect the tool from the socket.
- Move the generator selector switch (79) to the left to switch off the generator ( B - Platform control box) .
- Machine movements are once again functional.

5.3 Glazier's kit

5.3.1 Description

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

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

5.3.2 Characteristics

Component	Characteristics
Maximum capacity	115 kg (220 lbs)
Weight of attachment	10 kg (22 lbs)
Maximum load surface	3 m ² (32 sq.ft)
Maximum allowable height of the panel	1,20 m (3 ft 11 in)
Maximum allowed wind	CE / UKCA / AS : 12,5 ms - 45 km/h - 28 mph ANSI / CSA: 7 ms - 25 km/h - 15 mph

5.3.3 Safety precautions



- Please read and assimilate the instructions before using the attachment.
- This attachment is designed for transporting panels. Do not use this attachment for transporting other types of load.
- Do not suspend loads.
- Do not overload the attachment and ensure that the equipment is correctly attached by means of a strap (not supplied).

E - General Specifications

- Do not exceed the maximum allowable platform capacity. The combined weight of the attachment, the panel(s), the occupants, the tools and any other equipment must not exceed the maximum allowable platform capacity.
- Do not load panels whose surface area exceeds the maximum authorized surface area. Exposing an additional surface area to the wind reduces machine stability. Do not install any other attachments that increase the surface area exposed to the wind.
- Check that the position of the panel is not reducing visibility during maneuvers in the work environment. Do not transport panels whose height exceeds the authorized limit.
- When maneuvering, ensure that a safe distance is maintained between the panel and the obstacles in the work environment.
- Do not use the machine if the wind speed exceeds the allowable limit with the attachment.

5.3.4 Pre-operation inspection



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

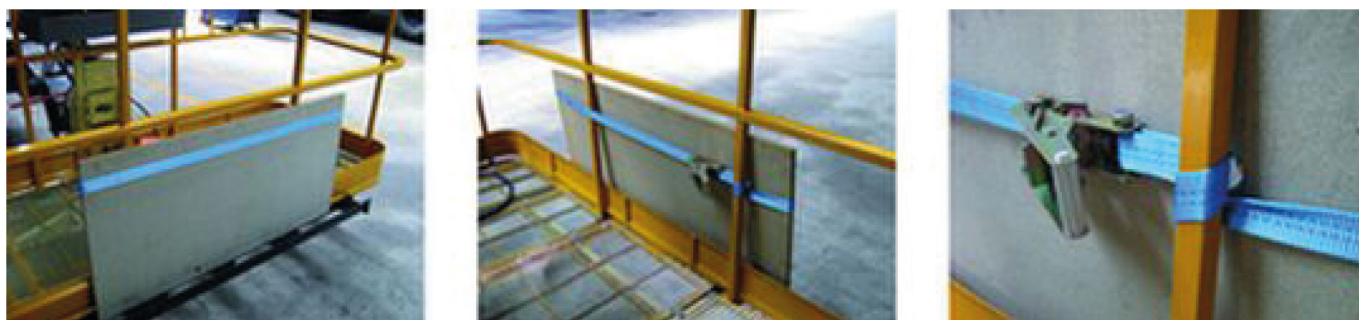
5.3.5 Operation

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

Strapping example(s)-Large panel



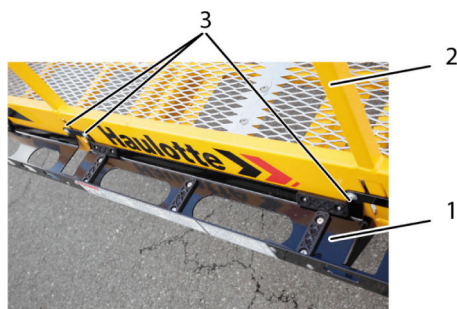
Strapping example(s)-Small panel



E - General Specifications

5.3.6 Assembly/Dis-assembly

Tray



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

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

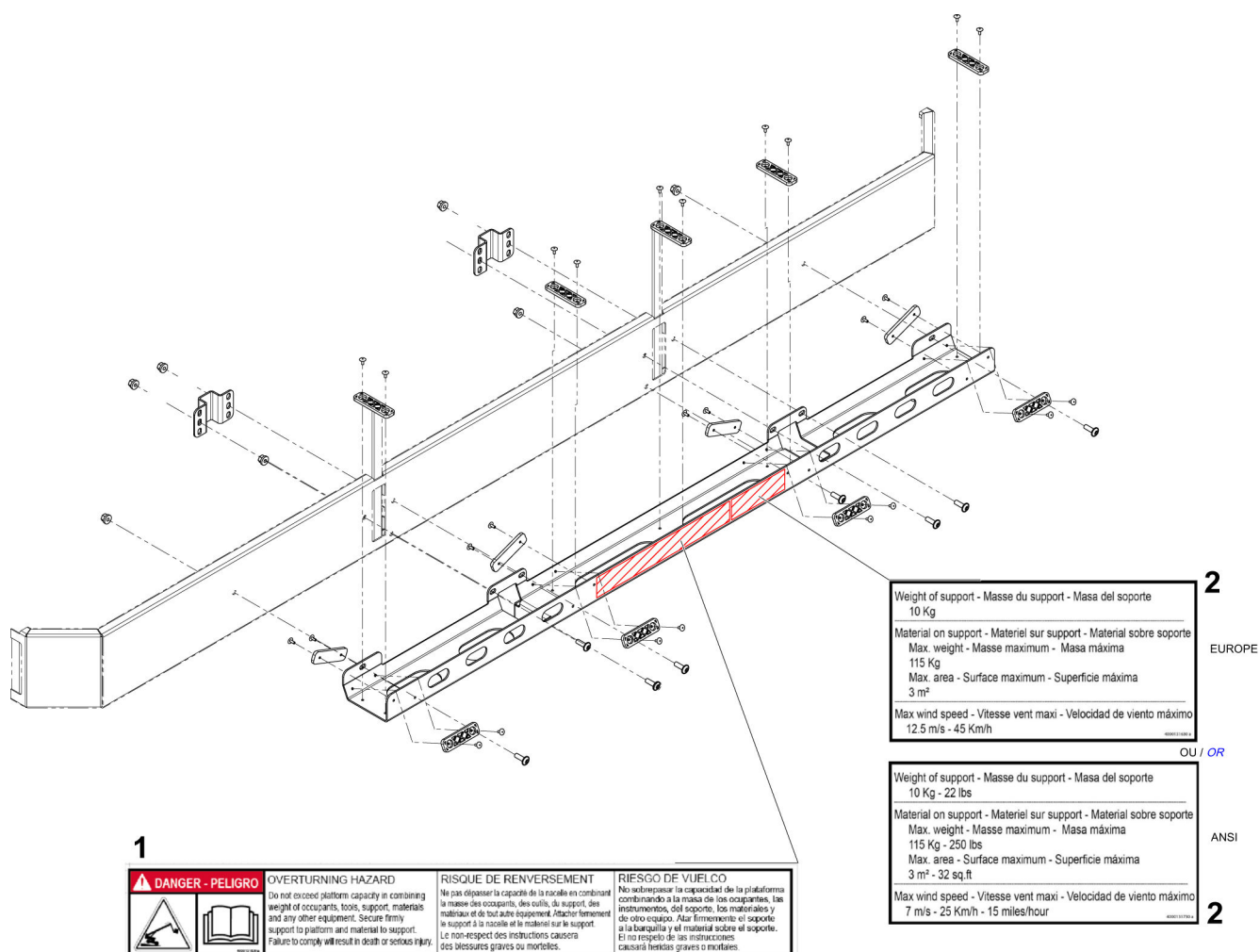
N.B.-:-TORQUE REQUIREMENTS: 16 NM

- Pre-operation test: Place a load of 176 kg (390 lbs) on the carrier and carry out an inspection. Refer to the chapter on pre-operation inspection.

E - General Specifications

5.3.7 Specific decals

Location of the decals



Marking	Description	Quantity	Part number
1	Risk of overturning	1	40000131830
2	Equipment characteristics	1	CE / UKCA / AS : 4001267770 ANSI / CSA: 4000131730

5.4 Welder's kit

5.4.1 Description

This carrier is designed for installing a welder (model type Miller CST280) on the carrier installed on the platform. The welder unit must be correctly attached to the carrier using the supplied flanges.

5.4.2 Characteristics

Component	Characteristics
Weight of the carrier	10 kg (22 lbs)
Maximum weight of the welding station (Carrier + welder)	30 kg (65 lbs)

E - General Specifications

5.4.3 Safety precautions



- Please read and assimilate the instructions before using the attachment.
- Do not use this attachment for installing any other type of welder unit. This attachment is specifically designed for the welder model type Miller CST280.
- Do not overload the carrier. Ensure that the carrier is secured to the platform and welder is retained with the fastening plate.
- Do not exceed the maximum allowable platform capacity. The combined weight of the attachment, the welding station, the occupants, the tools and any other equipment must not exceed the maximum allowable platform capacity.
- The carrier should always be positioned so that it is within the platform.

5.4.4 Pre-operation inspection

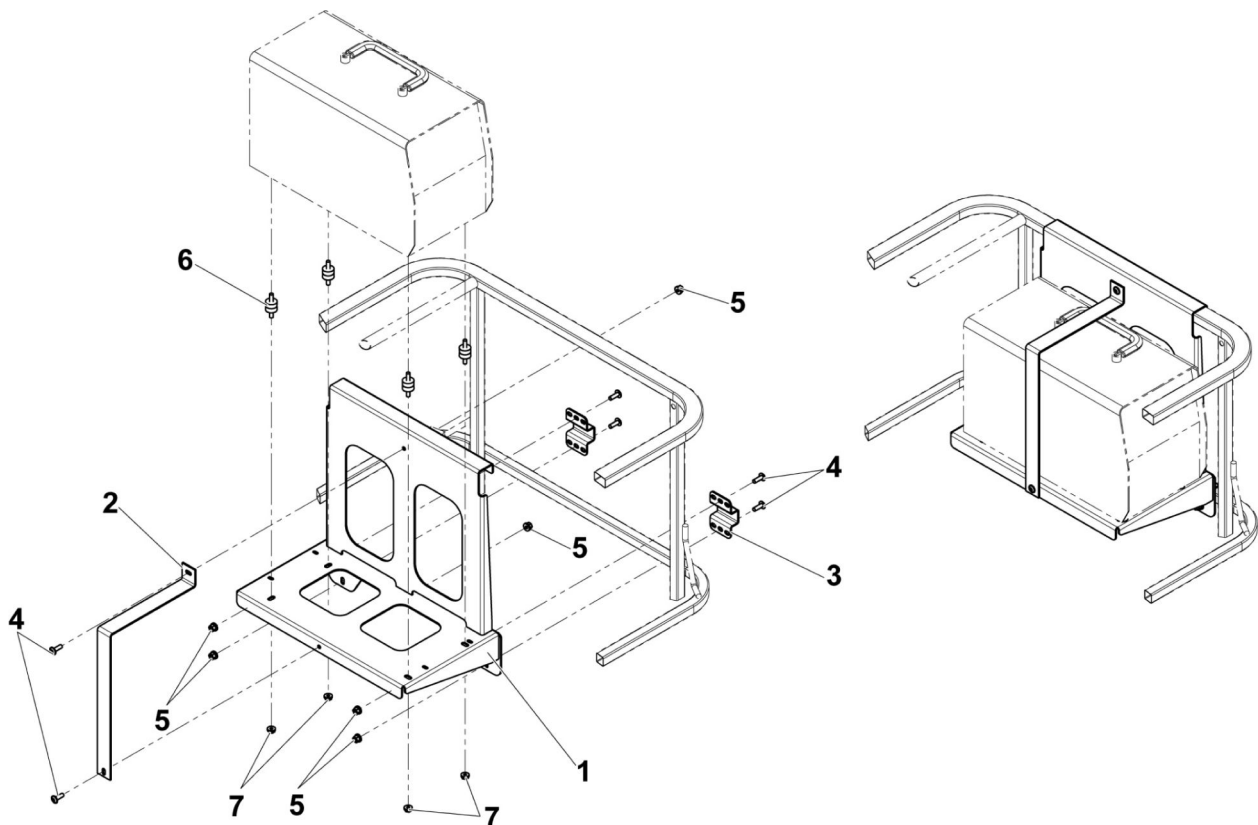


- Check that the carrier has no cracks or other damage.
- Check that the carrier is correctly installed and secured to the platform.
- Check that the information decal is present on the carrier and is legible.

5.4.5 Operation

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

5.4.6 Assembly-Dis-assembly



E - General Specifications

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

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

N.B.:-TORQUE REQUIREMENTS: 16 NM

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

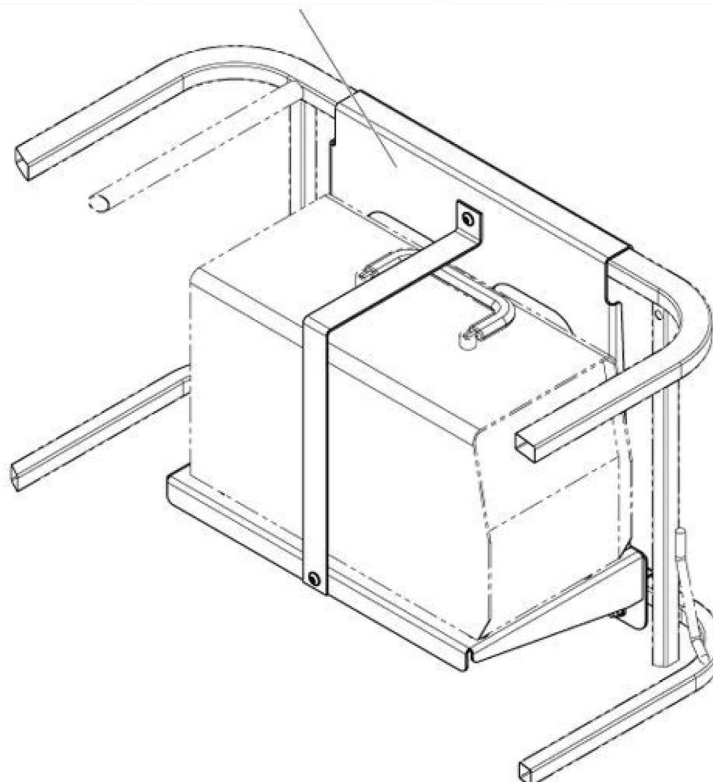
E - General Specifications

5.4.7 Specific decals

Location of the decals



1



Marking	Description	Quantity	Part number
1	Risk of overturning	1	4000131830

5.5 Plumber's kit

5.5.1 Description

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

5.5.2 Characteristics

Component	Characteristics
Weight of the carrier	8 kg (20 lbs)
Weight of the equipment on the carrier	80 kg (175 lbs)
Maximum load surface	0,8 m ² (Ø 0,32 m x 2,5 m) / 8.6 sq.ft (Ø 1 ft x 8.6 ft)
Maximum wind speed allowed	12,5 m/s - 45 km/h - 28 mph

E - General Specifications

5.5.3 Safety precautions



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

5.5.4 Pre-operation inspection



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

5.5.5 Operation

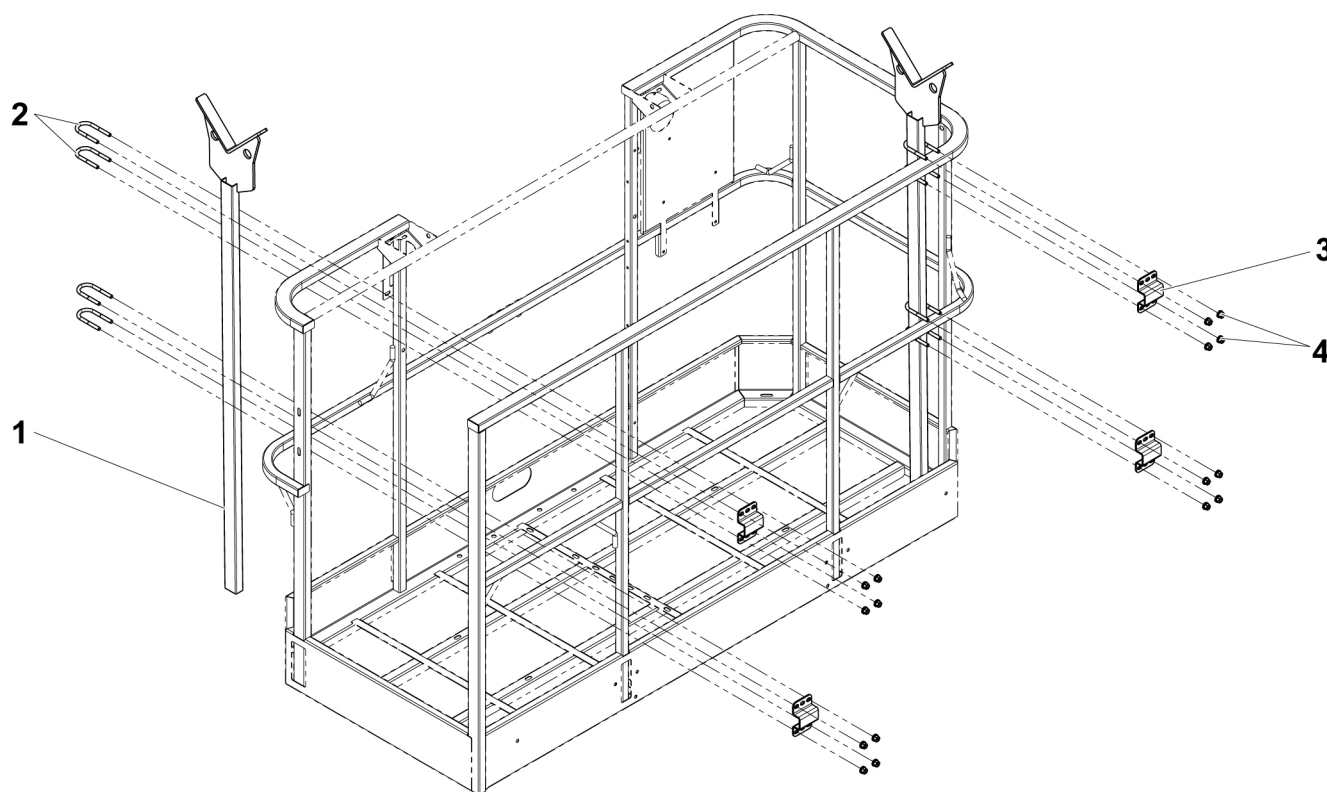
- Position the load to rest on the 2 cradles.
- Center the load on the cradles.
- Securely attach the load to each cradle with strap of adequate strength and dimensions.

Strapping example(s)



E - General Specifications

5.5.6 Assembly-Dis-assembly



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

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

N.B.-:-TORQUE REQUIREMENTS: 16 NM

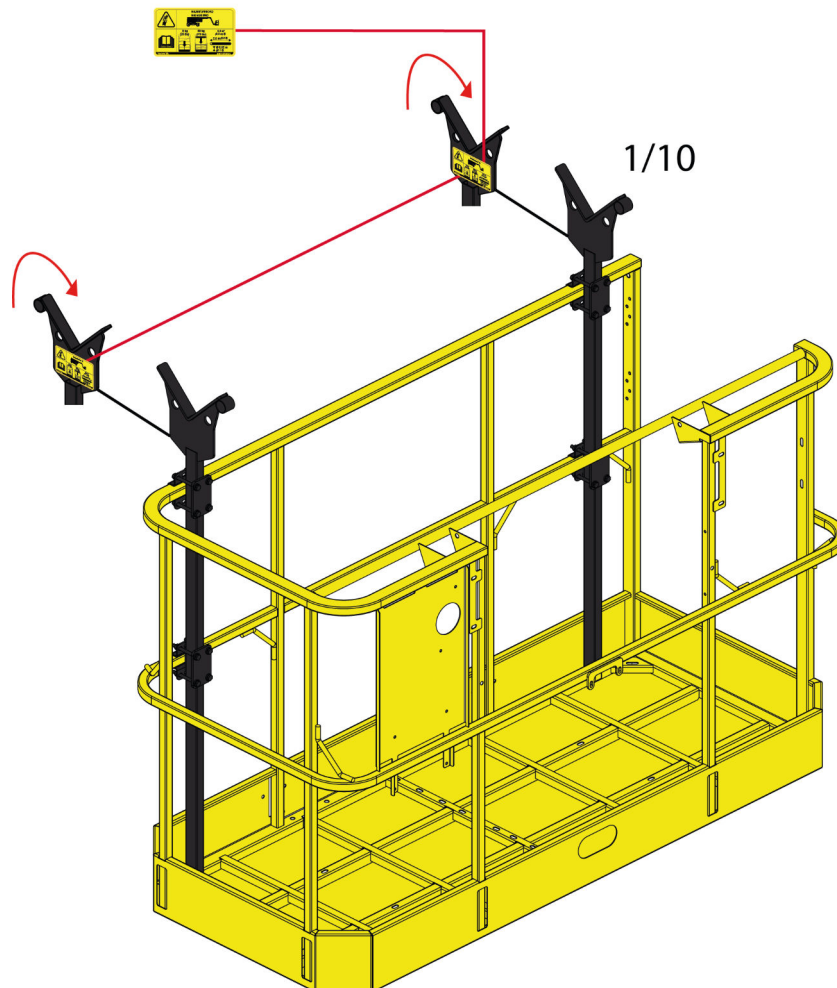
- Ensure that the bottom of cradle is resting on the platform floor.
- Ensure that the distance between the 2 cradles support and center the load.
- Pre-operation test: Place and secure the load of 120 kg (265 lbs) on the cradles. Ensure that the cradles can support the load and that there is no visual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

E - General Specifications

5.5.7 Specific decals, optional

Location of the decals

OPTION PORTE TUBES
OPTION PIPES CRADLE



Marking	Description	Quantity	Part number
1	Risk of overturning	1	CE / UKCA / AS / EAC : 4001267650 In german: 4000708570 ANSI / CSA : - In english: 4000131600 - In french: 4000131610 - In spanish: 4000131620

5.6 Activ' Shield Bar - Secondary guarding system (If fitted)

5.6.1 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.

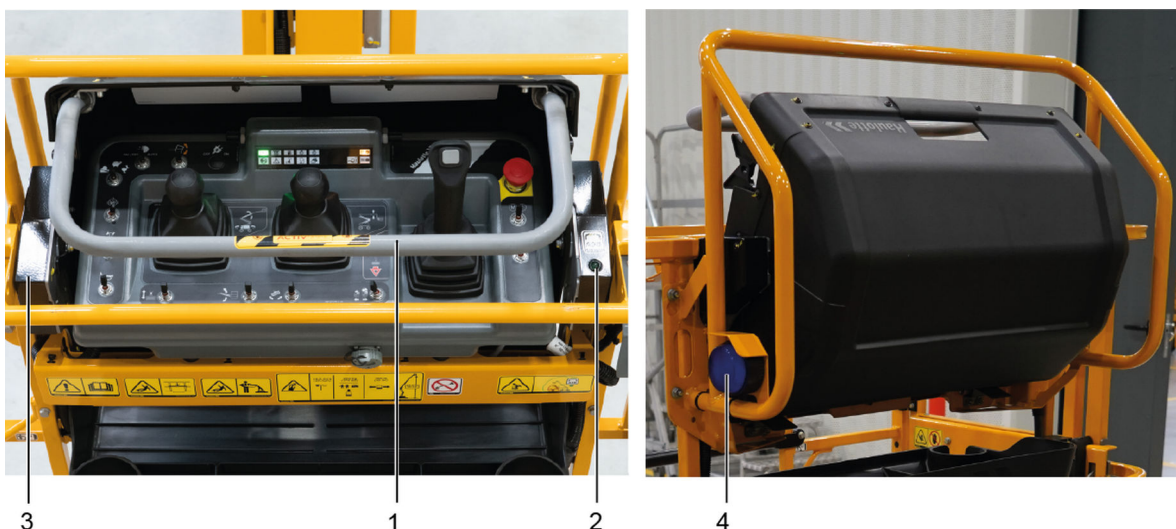
E - General Specifications

- This device completes the existing means of protecting the user, including the activation commands on the platform 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 active when the machine is in a stationary position (machine folded) when rotating the turret or raising the pendulum.
- The green indicator light of the Activ' Shield Bar is illuminated indicating the device is active:
 - Flashing green indicator: Machine stationary in Activ' Shield Bar zone (The platform is elevated and the Activ' Shield Bar will be active during movements) .
 - Green indicator light off: The Activ' Shield Bar system is inactive.



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

5.6.2 Characteristics



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

5.6.3 Safety precautions



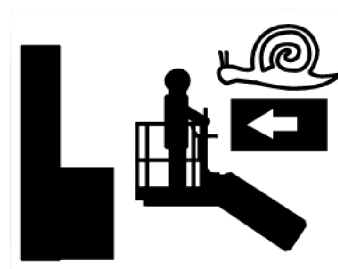
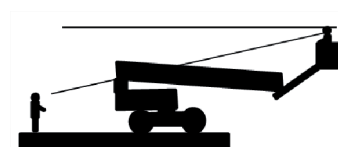
It is mandatory to ensure that the Activ' Shield Bar is functional at each start-up of the machine



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

E - General Specifications

- 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, you are advised to use the movements of the boom (arm, boom, etc.) instead of the drive movements.
- Do not drive fast in narrow or cluttered areas. Keep speed under control while making turns or sharp bends.



5.6.4 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 (push in) all the emergency stop buttons		
- Check absence of warning signal		

E - General Specifications

Description	Yes	No
- Check that the blue indicator (4) 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 (2) is not illuminated		
When the boom, arm or telescope is unfolded and the machine is in micro-speed mode:		
- Check that the green indicator light (2) is blinking-With platform stationary.		
- Check that the green indicator light (2) is illuminated-With platform in motion.		
Simultaneously make a movement and push forward the activation bar to trigger the system:		
- Check that all movements stop.		
- Check that the horn and the blue flashing light (4) are activated.		

N.B.-:-PRESS THE FOOT SWITCH TO RESET THE SYSTEM (ONCE THE BAR IS RELEASED)

5.6.5 Operation

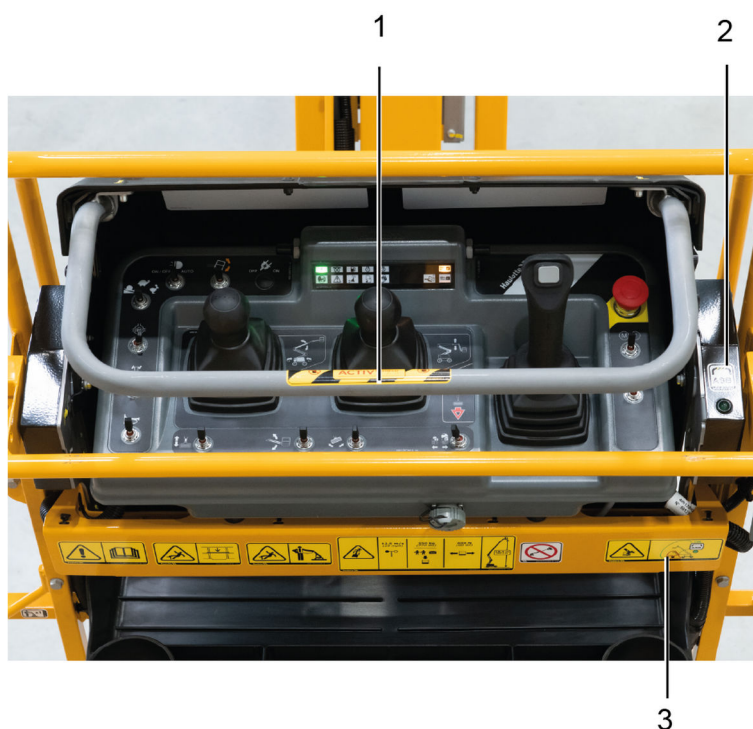
If the Activ' Shield Bar is pushed forward, all movements are stopped. The horn sounds and the warning blue light flashes. Only movements to move away from the entrapment are authorised.

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

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

5.6.6 Specific decals

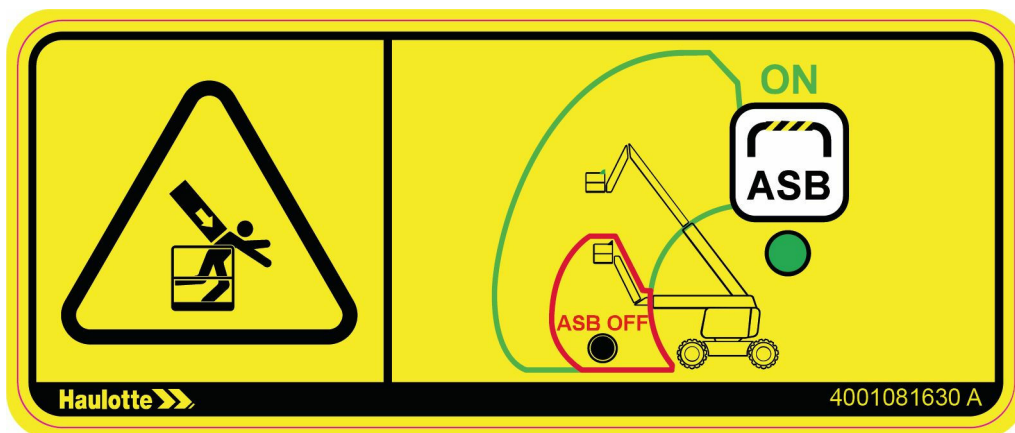
Location of the decals



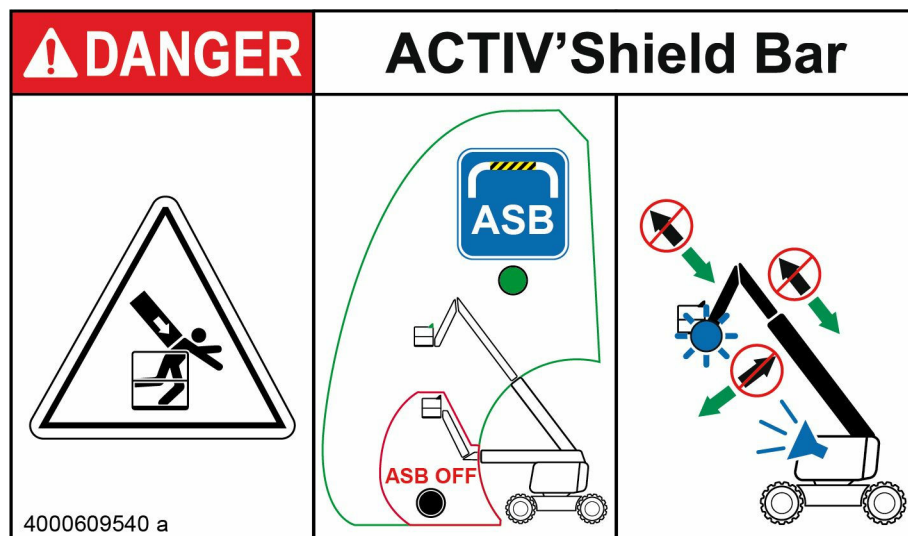
E - General Specifications

Marking	Description	Quantity	Part number - CE, UKCA, AS and EAC standards	Part number - ANSI and CSA standards
1	Do not lean on the bar	1	4001069640	4000206690
2	Activ' Shield Bar controls	1	4001069620	4000596720
3	Activ' Shield Bar instructions	1	4001081630	4000609540

Activ' Shield Bar instructions - CE, UKCA, AS and EAC standards



Activ' Shield Bar instructions - ANSI and CSA standards



F - Maintenance

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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.  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 designed 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.

F - Maintenance

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	Person-in-charge	Stakeholder	What
Before sale	Owner (or renter)	Competent technician or qualified technician HAULOTTE Service®	Periodic inspection
Before rent	Owner (or renter)	Competent technician or qualified technician HAULOTTE Service®	Daily inspection
Before use or every change of user	Operator	Operator	Daily inspection
Annually (1 year)	Owner (or renter)	Competent technician or qualified technician HAULOTTE Service®	Periodic inspection
5 years	Owner (or renter)	Competent technician or qualified technician HAULOTTE Service®	Reinforced inspection
10 years	Owner (or renter)	Competent technician or qualified technician HAULOTTE Service®	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  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.

F - Maintenance

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.

Notes

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Notes

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**

G - Other information

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

CALIFORNIA



Proposition 65 Warning

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

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

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

CALIFORNIE



Avertissement de la Proposition 65

Respirer les gaz d'échappement de moteurs diesel peut vous exposer à des agents chimiques identifiés par l'État de Californie comme pouvant causer le cancer et des malformations congénitales ou autres effets nocifs sur la reproduction.

- ✓ Toujours démarrer et faire tourner le moteur dans une zone bien aérée.
- ✓ Si la zone est mal ventilée, évacuer les gaz d'échappement à l'extérieur.
- ✓ Ne pas modifier ou altérer le système d'échappement.
- ✓ Ne laisser le moteur tourner au ralenti que si cela est nécessaire.

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

CALIFORNIA



Advertencia de la Proposición 65

Respirar los gases del escape de motores a diésel le expone a químicos conocidos por el Estado de California como causantes de cáncer y defectos de nacimiento u otros daños reproductivos.

- ✓ Siempre encienda y opere el motor en un área bien ventilada.
- ✓ Si es en un área cerrada, ventile el orificio del escape hacia el exterior.
- ✓ Ne pas modifier ou altérer le système d'échappement.
- ✓ No modifique ni altere el sistema de escape.

Para mayor información visite  www.P65Warnings.ca.gov/diesel

H - Records

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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	intervention number

H - Records

Date	Type of intervention	Number of hours	Intervenor	intervention number