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Operator's manual

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INTERVENTION REGISTER

You have just purchased a HAULOTTE® product

and we would like to thank you for your business.

1 - Operator's manual

As stated on the delivery slip, this manual is one of the documents in the on-board document holder provided upon delivery of your HAULOTTE® machine.

The operator manual is a translation of the original instructions.

Safe operation of this product can only be assured if you follow the operating instructions contained in this manual are followed.

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

- Compliance with safety instruction (machine, use, environment)
- Use of the equipment within the performance limits.

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

2 - After Sales Service

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

- When contacting our After Sales Service, ensure that you provide the machine model and serial number.
- When ordering any consumables or spare parts, please use this manual and the Haulotte Essential catalogue to receive your genuine HAULOTTE spare parts, your only guarantee of parts interchangeability and correct machine operation..
- If there is an equipment malfunction involving a HAULOTTE® product, then contact HAULOTTE Services® immediately even if the malfunction does not involve material and/or bodily damage..
- HAULOTTE® must be informed in the event of an incident that either involves one of these products or has caused bodily injury or significant deterioration of property (personal property or the product); contact HAULOTTE Services® immediately (See : HAULOTTE Services® contact details)

3 - Compliance

We would like to remind you that HAULOTTE® complies with the provisions of any applicable directives applicable to this type of machine.

HAULOTTE advises you that NO modifications carried out without the written permission of HAULOTTE® will void the HAULOTTE warranty..

HAULOTTE® cannot be held liable for any changes to the technical specifications contained in this manual.

HAULOTTE® reserves the right to alter technical specifications and to make improvements or modifications to the machine without modifying this manual.

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

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

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

4 - HAULOTTE Services® contact details

HAULOTTE Services® contact details

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1 - Recommendations

1.1 - OPERATOR'S MANUAL

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

The operator manual does not replace the basic training required for all worksite equipment operators.

HAULOTTE® has compiled this manual to assist in safe and efficient operation of the products covered by the manual.

This manual must be kept on the machine (or in the cab in its storage case. The manual must be available to all operators and must be kept in good condition. Additional copies can be ordered from HAULOTTE Services®.

1.2 - SYMBOLS USED

Symbols are used to alert the operator to safety precautions or to highlight practical information.

Legend

Symbol	Description
	Danger : Risk of injury or death
	Caution : Risk of material damage
	Prohibition relating to work safety and quality
	Reminder : No identified risk, but a reminder of the need for common sense, good practice or pre-action prerequisites
	Cross-reference to another part of the manual (see section or sheet)
	Cross-reference to another manual (see manual)
	Cross-reference to repairs (contact HAULOTTE Services®)
N.B. :	Additional technical information

1.3 - LABEL COLORS

The potential dangers and any specific regulations are indicated around the product by labels and identification plates.

The labels must be kept in good condition. Additional decals can be ordered from HAULOTTE Services®.

Familiarize yourself with the labels and their respective color codes.

Label color code

Labels	Color	Description
	Red	Potentially fatal danger
	Orange	Risk of serious injury
	Yellow	Risk of material damage and/or minor injury
	Other	Additional technical information
	Green	Maintenance operation or information

Label color code-For Russia and the Ukraine only

Labels	Color	Description
	Red	Prohibitions - Danger
	Yellow	Warning : Risk of material damage and/or minor injury
	Blue	Precaution
	Blue	Information
	Other	Additional technical information

2 - Pre-operation instructions

2.1 - GENERAL INSTRUCTIONS

- **The employer has the obligation to issue a driving permit to the operator.**
- **The employer is obliged to inform the operator of the local regulations.**

Do not operate the product in the following situations :

- On soft, unstable or cluttered ground.
- With wind blowing faster than the permissible limit. Check the maximum allowable value in the technical characteristics / specifications (Section G 1-Main characteristics). Consult the Beaufort scale (Section A 3.2.4-Risk of uncontrolled movement and overturning).
- Close to power lines. Respect the safety distance (Section A 3.2.3-Risk of electrocution).
- At ambient temperatures higher than 45 °C(113 °F) and lower than -15 °C(5 °F) . Consult HAULOTTE® if it is necessary to work outside this range.
- In an explosive atmosphere.
- During storms (risk of lightning).
- In the presence of strong electromagnetic fields.

***N.B.**-:-You are advised to 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.**-:-Whilst the machine is not in use, care must be taken to ensure that if the machine is not locked in a secure location, that the unit key switch is removed to prevent unauthorised use of the machine.*

2.2 - SPECIFIC INSTRUCTIONS

Do not operate the product in the following situations :

- If the load in the platform exceeds the maximum load authorized. Check the maximum allowable value in the technical characteristics / specifications (Section G 1-Main characteristics).
- If the ground slope is greater than the permissible limit. Check the maximum allowable value in the technical characteristics / specifications (Section G 1-Main characteristics).
- At night unless the machine is equipped with the optional light.
- If the number of persons exceeds the permissible limit. Check the maximum allowable value in the technical characteristics / specifications (Section G 1-Main characteristics)
- If the side force is greater than the permissible force. Check the maximum allowable value in the technical characteristics / specifications (Section G 1-Main characteristics)

3 - Operation instructions

It is preferable to operate the machine on flat, consolidated ground (tarmac, concrete, etc.).

3.1 - PROHIBITIONS

- Never use a faulty machine (hydraulic leaks, worn tires/tyres, malfunction).
- Never operate the machine controls suddenly.
- Never place the machine against a structure to hold that structure in place.
- Never use the machine to tow other machines or to drag materials.
- Never expose the batteries or electrical components to water (pressure cleaner, rain).
- Never disable the safety devices.
- Do not make contact with a fixed or mobile obstacle. The contact can cause premature deterioration of the structure and lead to the corruption of certain safety elements.
- Do not climb onto the covers.
- Never use the machine with only an operator in the platform. A second person competent in the operation of emergency retrieval, should be present on the ground in case of an emergency.
- Never use the machine when the platform is cluttered.
- Never increase the surface area of the platform by using floor extensions or accessories not authorized by HAULOTTE®.
- Never leave the hydraulic cylinders fully extended or retracted before switching off the machine, or when stationary for an extended period of time.

- Never use the machine with material or objects hanging from the guardrail or the boom.
- Never use the machine with elements that can increase the wind force (panels).
- Never increase the working height by using attachments (ladder).
- Never use the guardrail as a means of access for climbing in or out of the platform. The basket can be easily accessed in its low position. For machines fitted with : Steps have been provided for this purpose where required.
- Never climb on the guardrail.
- Never use the machine without fully lowering the sliding midrail or without closing the platform entry gate.
- Never use the machine as a crane, material lift or elevator.
- Never use the machine for any other purpose than to transport people, their tools and material to the desired place.
- Never drive fast in narrow or cluttered areas. Keep speed under control in bends.
- Never tow the machine over extended distances (it must be transported on a trailer). In case of a machine failure, it is possible to tow it to load it onto a trailer (Section F 3Towing).

3.2 - POTENTIAL RISKS

3.2.1 - Risk of command system disturbance

Risk of disrupted movement. Maintain clearance from high voltage lines or magnetic fields.

3.2.2 - Risk of falling

When in the platform, respect the following instructions :

- Carry individual protection equipment adapted to the work conditions and local rules.
- Avoid contact with fixed or mobile obstacles (other machines).
- Ensure that the adjustable midrail is closed (low position and against the guardrails).
- Ensure that the gate is closed and locked (For machines fitted with).
- Hold on securely to the guardrails during elevation and driving.
- Do not sit, stand, or climb on the platform guard rails.
- Ensure that guard rails are correctly installed and locked.
- Always keep your feet firmly on the floor of the platform.
- Remove any trace of oil or grease from the steps, floor, handrail and the guardrails.
- Keep the floor of the platform free of debris.
- Do not leave the platform until it is fully in its stowed position.
- Do not climb on to the platform if the machine is not in the stowed position.

To climb up or climb down from the platform :

- The machine must be completely stowed.
- Face the machine to access the entry opening to the platform
- Keep 3 support points between the steps and the guardrail

3.2.3 - Risk of electrocution

The machine is not electrically insulated and does not offer any insulation protection.

The risks of electrocution are high in the following situations :

- Close to live power lines, consider the movement of the machine and the sway of the electric power lines particularly in windy conditions.
- In the event that you were to make accidental contact with a high voltage line, wait for the power to the line to be switched off before operating the machine.
- During storms.

Never use the machine as a welding earth.

Maintain a minimum safe distance with regard to power lines and electrical devices.

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

Minimum safe approach distances

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

***N.B.**-:-This table is applicable, except when the local regulations are more strict.*

3.2.4 - Risk of uncontrolled movement and overturning

When in the platform, respect the following instructions :

- Before operating the machine on any indoor or outdoor surface (premises, bridge, truck, etc.), check that the surface is capable of supporting the combined machine weight and platform capacity. Check the maximum allowable value in the technical characteristics / specifications (Section G 1-Main characteristics).
- Remain vigilant of driving direction reversal at the platform. Check the driving direction with the help of the red or green arrow on the chassis relative to the red and green arrows on the platform control box.
- Always ensure that the chassis is never driven any closer than 1 m(3 ft3 in) to holes, bumps, slopes, obstructions, debris and ground coverings that may hide holes and other dangers.
- During motion direction reversal from the platform or ground control box, the joysticks or switches must be in neutral position before reversing the direction of motion.
- Taking note of the overall load dimensions and weight, place the loads in the centre of the platform or distribute them it a uniform manner.
- If the tilt alarm sounds when the platform is raised, lower platform completely, then reposition machine onto level ground before raising platform.

A - Safety precautions

- **Do not drive the machine on slopes or tilts beyond the design limits. Check the maximum allowable value in the technical characteristics / specifications(Section G 1-Main characteristics).**
- **Do not travel down slopes in high speed.**
- **Do not use the machine (elevation and travel) on an incline greater than that permitted by the slope sensor.**
- **Do not drive in reverse (direction opposite the field of vision).**
- **Never use the machine in winds exceeding the permissible limit.**
- **Do not increase the surface area exposed to wind. The greater the surface area exposed, the more unstable the machine becomes.**

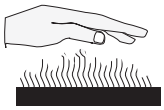
- **While driving, always place the arrow above the rear axle, in the direction of movement.**
- **While driving on a slope, always orient the machine in the direction of the slope.**
- **Do not pull or push objects with the boom.**

N.B.-:-*The Beaufort scale measures the wind force with a graduation system. A wind speed range at 10 m(32 ft9 in) above flat, clear land is associated with each degree.*

Beaufort scale

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

3.2.5 - Risk of burns and explosion



For any intervention on the power sources, wear glasses and protective clothes (acid spray).

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

- **Do not work in an explosive or flammable atmosphere (spark, flame, etc.).**
- **Do not touch the hot parts of the hydraulic power source (engine, filters, etc.).**
- **Do not bridge the battery terminals with metallic objects.**
- **Do not service the battery in proximity of spark, open flame, glowing/burning cigarette.**

3.2.6 - Risk of crushing and collision

When in the platform, respect the following instructions :

- During operation, keep all the parts of the body inside the platform.
- To position the machine close to obstacles, use the raise controls (arm, boom, etc.) instead of the drive controls.
- Ensure there are no obstacles (structure) in the work area.
- When driving, position the platform so as to provide the best visibility possible.
- Always obtain assistance from a guide on the ground when manoeuvring.
- All the personnel in the platform or on the within the vicinity of the machine must wear Personal Protection Equipment (safety helmet, etc.).
- When lifting or lowering the basket and during driving, the operator must check that the area above, below and to each side of the machine are clear.
- When moving the machine, ensure that the machine operating areas is free of persons and obstacles.

Do not operate other machines (crane, aerial work platform, etc.) in the work area.

Take account of the distance, reduced visibility and blind spots during use of the machine.

B - Intervenor's responsibility

1 - Owner's (or hirer's) responsibility

The owner (or hirer) has the obligation to inform operators of the instructions contained in the Operator Manual.

The owner (or hirer) has the obligation to renew all manuals or labels that are either missing or in bad condition. Additional copies can be ordered from HAULOTTE Services®.

The owner (or hirer) is responsible for applying the local regulations regarding operation of the machine.

2 - Employer's responsibility

The employer has the obligation to issue a driving permit to the operator.

N.B.-:-*In accordance with the regulation of the country where the machine is operating, the user must be authorized by the doctor of Labour Ministry to operate the machine.*

Forbid anyone from operating the machine who is :

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

3 - Trainer's responsibility

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

4 - Operator's responsibility

The operator must read and understand the contents of this manual and the labels affixed on the machine.

The operator must inform the owner (or hirer) if the manual or any labels are missing or in poor condition, and of any malfunction of the machine.

The operator may only operate the machine for the purpose intended by the manufacturer.

Only authorized and qualified operators may operate HAULOTTE® machines.

All operators must become familiar with and fully understand the emergency controls and how to operate the machine in an emergency as a component of their formal operator training.

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

5 - Inspection and maintenance

The inspection and maintenance table below, identifies the role and the responsibilities of each party in periodical machine maintenance..

If the machine is operated in a hostile environment or intensively, increase the frequency of maintenance.

Inspections and maintenance

Type of intervention	Frequency	Person-in-charge	Intervenor	Reference document
Pre-delivery inspection	Before each delivery of sold, hired or resold equipment	Owner (or hirer)	Qualified HAULOTTE Services® technician	Operator's manual
Pre-operation inspection	Before operation or when the operator changes	Operator	Operator	Operator's manual
Periodical preventive maintenance	At the specified intervals (250 hours or 1 year)	Owner (or hirer)	On-site technician or qualified HAULOTTE Services® technician	Maintenance book
Periodical visit	2 times a year or at the latest 6 months after the last periodic visit, and according to the local regulations	Owner (or hirer)	Organization or technician approved by the employer or by the intermediary of HAULOTTE Services® in accordance with the HAULOTTE Services® contract	Maintenance book

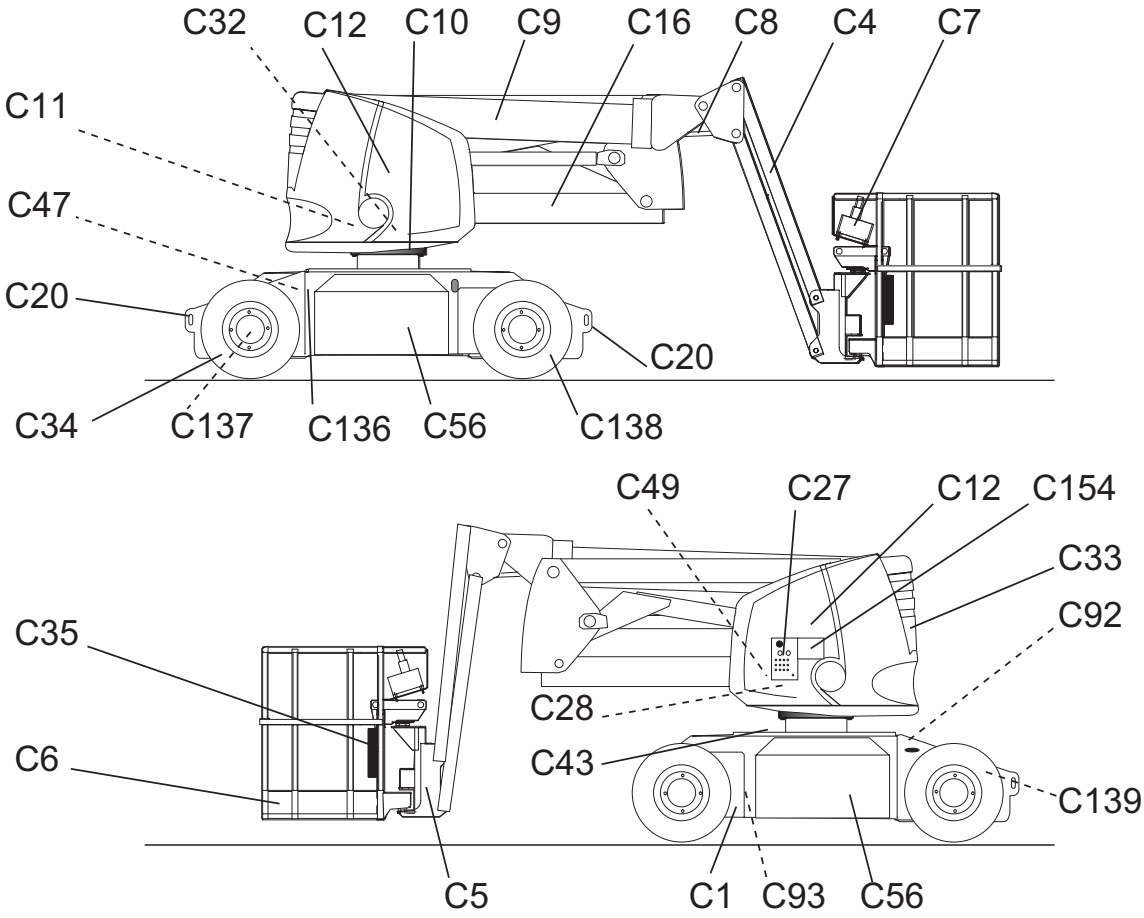
1 - Identification

The manufacturers identification plate fixed on the chassis bears all pertinent information to identify the machine (Please see machine configuration).

For any request for information, intervention or spare parts, specify the type and serial number of the machine.

2 - Main components

HA12IP - HA33JE - Major Component Location Diagram



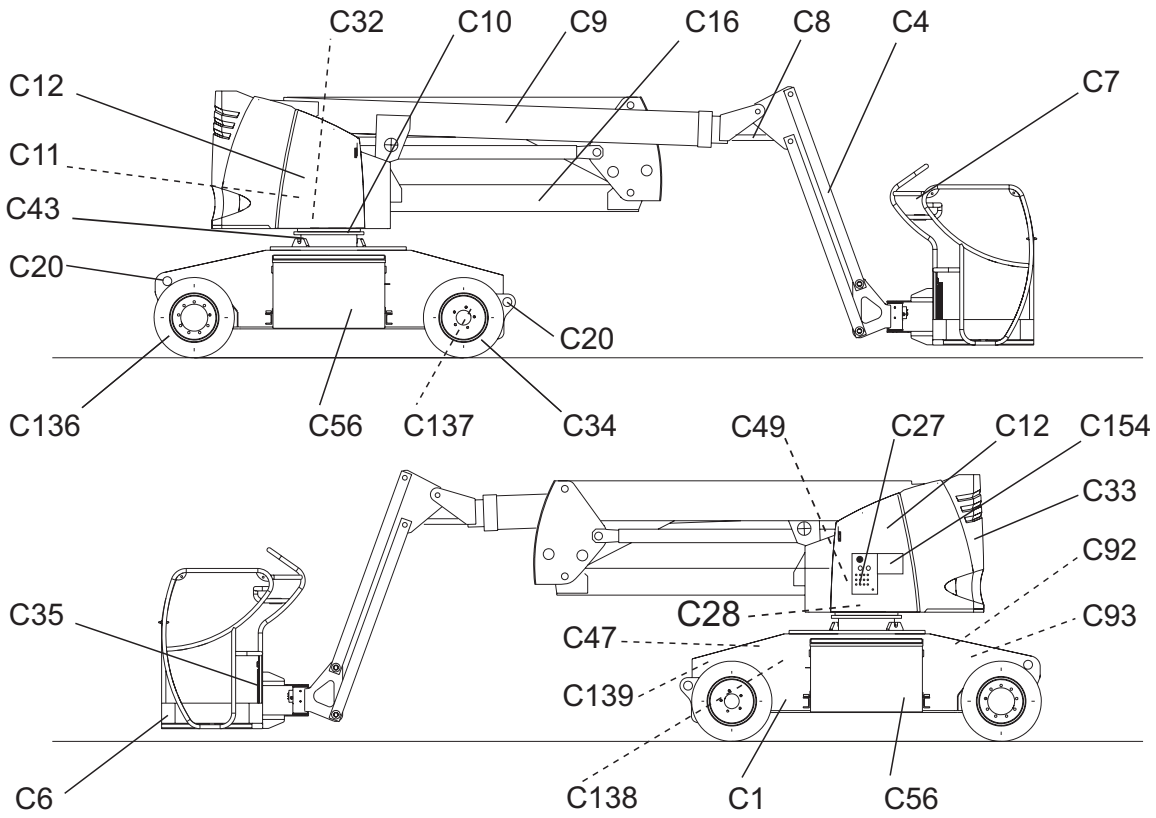
C - Machine layout

HA12IP - HA33JE - Description of the components

Marking	Description
C1	Chassis
C4	Jib
C5	Platform support incorporating load limiter
C6	Platform
C7	Platform control box
C8	Jib compensation cylinder
C9	Upper boom (boom tube)
C10	Slew ring
C11	Turntable assembly
C12	Side cover
C16	Lower arm
C20	Tie-down (and/or lifting) points
C27	Ground control box
C28	Tilt / Slope sensor
C32	Turntable rotation gearbox
C33	Counterweight
C34	Drive wheels
C35	Document holder
C43	Turntable rotation lock pin
C47	Battery isolation switch
C49	Buzzer
C56	Battery box
C92	Hydraulic filter
C93	Electric pump unit
C136	Steer wheels
C137	Electric drive motor
C138	Battery charger
C139	Electronic variable speed drive
C153	Hydraulic oil tank
C154	For Russia and the Ukraine only : Temperature probe relays

C - Machine layout

HA15IP - HA43JE - Major Component Location Diagram



C - Machine layout

HA15IP - HA43JE - Description of the components

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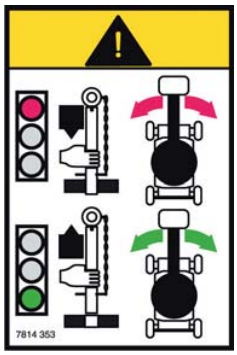
C27	Ground control box
C28	Tilt / Slope sensor
C32	Turntable rotation gearbox
C33	Counterweight
C34	Drive wheels
C35	Document holder
C43	Turntable rotation lock pin
C47	Battery isolation switch
C49	Buzzer
C56	Battery box
C92	Hydraulic filter
C93	Electric pump unit
C136	Steer wheels
C137	Electric drive motor
C138	Battery charger
C139	Electronic variable speed drive
C153	Hydraulic oil tank
C154	For Russia and the Ukraine only : Temperature probe relays

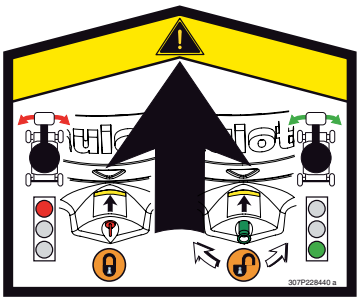
3 - Safety devices

3.1 - TURNTABLE ROTATION PIN

The turntable rotation pin allows turntable locking during machine transportation

After each transportation, remove the turntable rotation locking pin.





Turntable rotation locking pin (Please see machine configuration)

Turntable rotation locking pin (Please see machine configuration)

Turntable rotation locking pin (Please see machine configuration)

Turntable rotation locking pin (Please see machine configuration)

Turntable rotation locking pin (Please see machine configuration)

Turntable rotation locking pin (Please see machine configuration)

3.2 - SLIDING (OR SWINGING) INTERMEDIATE GUARDRAIL

The illustrations in this paragraph do not necessarily correspond to the range of products designated in the manual.

The platform is comprised of guardrails and a sliding mid-rail facilitating platform access.

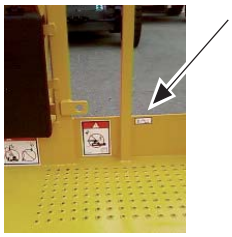
Do not restrain the sliding midrail to the guard rail.

3.3 - ANCHORAGE POINT (PLEASE SEE MACHINE CONFIGURATION)

The illustrations in this paragraph do not necessarily correspond to the range of products designated in the manual.

The machine is equipped with harness anchorage points points which accept a single harness per anchorage point. The anchorage points are identified by the presence of the Anchorage point label.

If the local regulation imposes the wearing of a harness, use the approved anchorage points.



4 - Labels

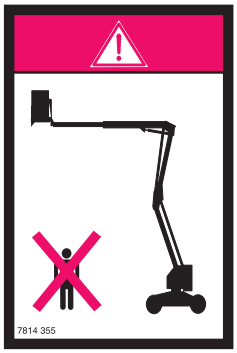
4.1 - CLASSIFICATION PLAN

4.1.1 - Red labels

The red labels indicate a potentially fatal danger.

Common decals

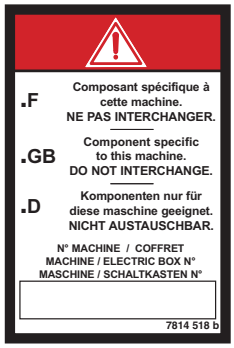
R7



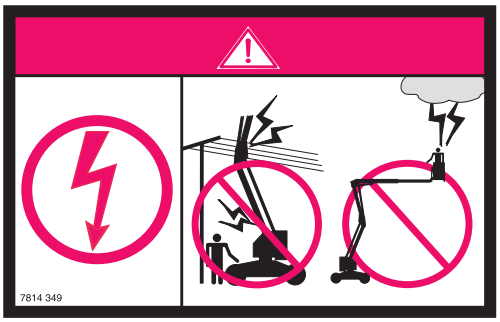
R3

R4

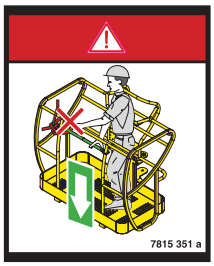
R6



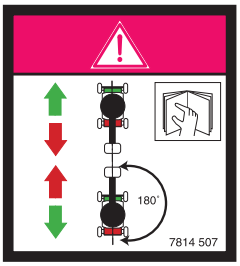
R5



R8



R2



R17

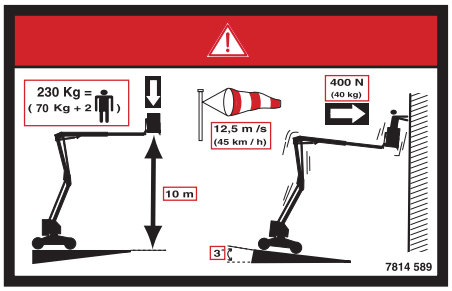
R21

R52

C - Machine layout

Specific labels HA12IP - HA33JE

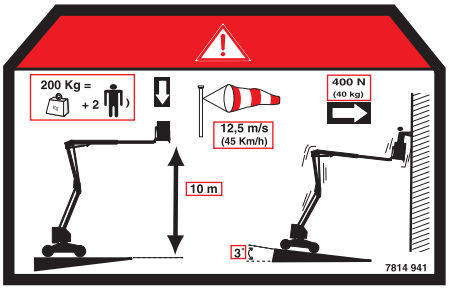
R1



R9

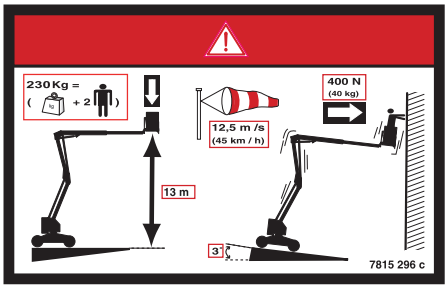
Specific labels HA12IP - HA33JE Option Wide platform

R1



Specific labels HA15IP - HA43JE

R1



R9

4.1.2 - Orange labels

The orange labels indicate a risk of serious injury.

Common decals - CE

O1

RECOMMENDATIONS FOR USE

BEFORE USING THIS MACHINE
THE OPERATOR MUST

1 - Read and understand the information in the operator's manual and the information marked on the machine, and become familiar with the controls.
2 - Receive training and practical experience in operating the machine, under the employer's supervision.
3 - Ensure that maintenance is performed according to the manufacturer's instructions.
4 - Refrain from using the machine in the event of any malfunction.
5 - Not wash the electrical components with a washer pressure.
6 - Not remove any parts which might affect the stability.
7 - Not modify the machine without the manufacturer's approval.
8 - Not use the machine as a welding earth.
9 - Not weld on the machine without first disconnecting the battery terminals.
See the instructions in the maintenance manual.

DAILY INSPECTION

1 - Check the level of diesel fuel (for diesel engine platforms).
2 - Check that there are no apparent defects (hydraulic leaks, loose bolts, loose electric connections)
3 - Check that the tilt indicator operates correctly by sounding the buzzer.

INSTRUCTIONS BEFORE USE

1 - Remove the rotation locking pin (if there is a turntable).
2 - IMPORTANT when using the AC power line to the work platform, the power plug must be connected to an electrical installation protected by a 30 mA circuit breaker (C15 100 standard).

START-UP

1 - Turn the battery isolater switch to the "on" position.
2 - Unlock the emergency stop button then press the starter button.
3 - If the machine does not start, wait 10 seconds then repeat the operation.

THE MACHINE
MUST NOT BE USED
WHILE CHARGING THE BATTERIES

7814 345

Common decals - AS

O1

RECOMMENDATIONS FOR USE

BEFORE USING THIS MACHINE
THE OPERATOR MUST

1 - Read and understand the information in the Operators Manual and the information marked on the machine, and become familiar with the controls.
2 - Receive training and practical experience in operating the machine, under the employer's supervision.
3 - Ensure that maintenance is performed in accordance with the manufacturer's instructions contained in the Operators Manual.
4 - Refrain from using the machine in the event of any malfunction.
5 - Avoid contact with electrical components when using high pressure cleaning equipment around the machine.
6 - Not remove any machine parts which might affect the stability.
7 - Not modify the machine without the manufacturer's written approval.
8 - Do not use the machine as a welding earth.
9 - Not carry out repairs on the machine involving welding without first disconnecting the battery.

DAILY INSPECTION

1 - Check the level of diesel fuel (for diesel engine platforms).
2 - Check that there are no apparent defects (hydraulic leaks, loose bolts, loose electric connections)
3 - Check that the tilt indicator operates correctly by manually tilting the switch with the power on.

INSTRUCTIONS BEFORE USE

1 - Remove the rotation locking pin (if fitted).
2 - IMPORTANT : when connecting AC power supply to the work platform, the wall power supply must be protected by 30 mA circuit breaker

START-UP

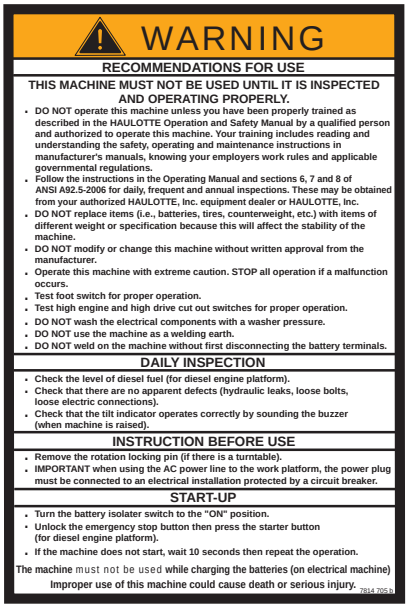
1 - Turn the battery isolator switch (if fitted) to the " on " position
2 - Unlock the emergency stop button then press the engine starter button.
3 - If the engine does not start, wait 10 seconds then repeat the operation.

THE MACHINE
MUST NOT BE USED
WHILE CHARGING THE BATTERIES

7814 456

Common decals - ANSI - CSA

O1



WARNING

RECOMMENDATIONS FOR USE

THIS MACHINE MUST NOT BE USED UNTIL IT IS INSPECTED AND OPERATING PROPERLY.

- DO NOT operate this machine unless you have been properly trained as described in the HAULOTTE Operation and Safety Manual by a qualified person and authorized to operate this machine. Your training includes reading and understanding the safety, operating and maintenance instructions in manufacturer's manuals, knowing your employers work rules and applicable governmental regulations.
- Follow the instructions in the Operating Manual and sections 6, 7 and 8 of ANSI A92.5-2006 for daily, frequent and annual inspections. These may be obtained from your authorized HAULOTTE, Inc. equipment dealer or HAULOTTE, Inc.
- DO NOT replace items (i.e., batteries, tires, counterweight, etc.) with items of different weight or specification because this will affect the stability of the machine.
- DO NOT modify or change this machine without written approval from the manufacturer.
- Operate this machine with extreme caution. STOP all operation if a malfunction occurs.
- Test foot switch for proper operation.
- Test high engine and high drive cut out switches for proper operation.
- DO NOT wash the electrical components with a washer pressure.
- DO NOT use the machine as a welding earth.
- DO NOT weld on the machine without first disconnecting the battery terminals.

DAILY INSPECTION

- Check the level of diesel fuel (for diesel engine platform).
- Check that there are no apparent defects (hydraulic leaks, loose bolts, loose electric connections).
- Check that the tilt indicator operates correctly by sounding the buzzer (when machine is raised).

INSTRUCTION BEFORE USE

- Remove the rotation locking pin (if there is a turntable).
- IMPORTANT when using the AC power line to the work platform, the power plug must be connected to an electrical installation protected by a circuit breaker.

START-UP

- Turn the battery isolater switch to the "ON" position.
- Unlock the emergency stop button then press the starter button (for diesel engine platform).
- If the machine does not start, wait 10 seconds then repeat the operation.

The machine must not be used while charging the batteries (on electrical machine)

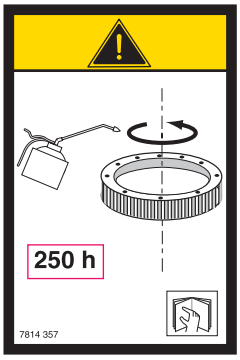
Improper use of this machine could cause death or serious injury. 7814 705 B

4.1.3 - Yellow labels

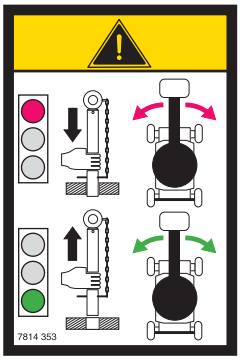
The yellow labels indicate a risk of material damage and/or minor injury.

Common decals

J1

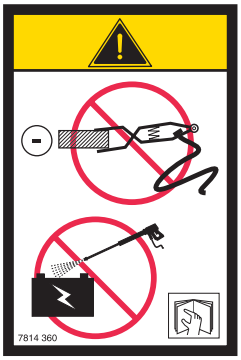


J2

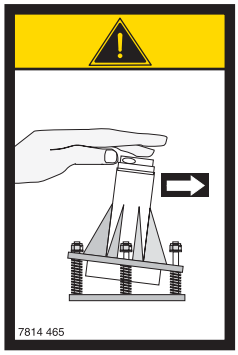


J3

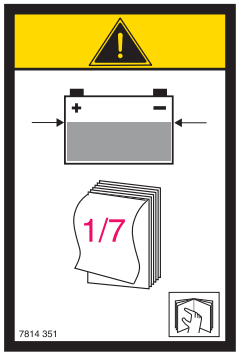
J4



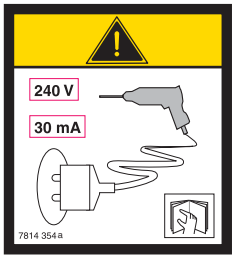
J6



J13



J10



J14

4.1.4 - Other labels

The other labels provide additional technical information.

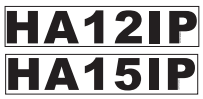
Specific labels HA12IP - HA33JE- HA15IP - HA43JE

A1

A5

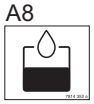
A16

A4

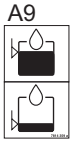


A81

A8



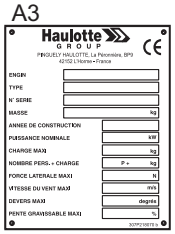
A9



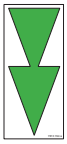
A32

A2

A3



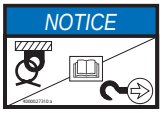
A11



A12

A90

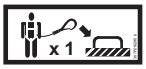
A30



A30

A7

A15



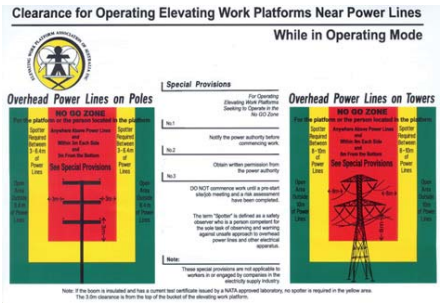
Specific labels AS

R16

R17

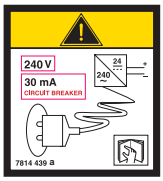
R15

A28



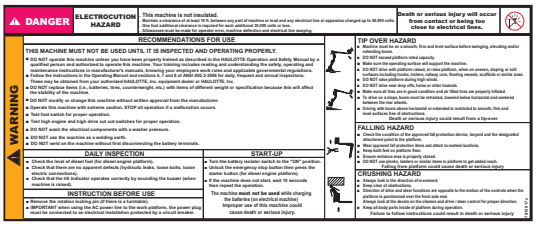
J10

J15



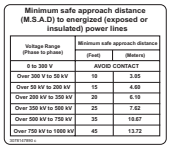
Specific labels ANSI

A29



O3

A22



Specific labels, optional

A8

4.1.5 - Green labels

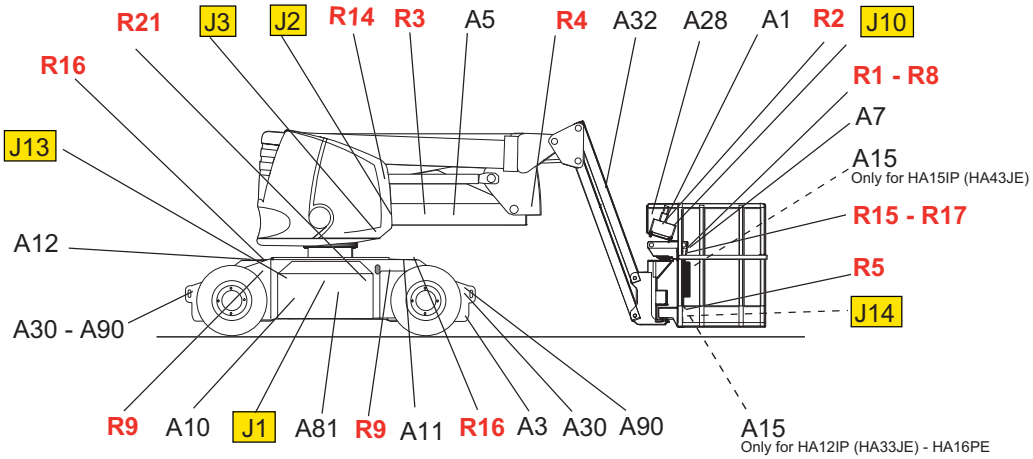
Green labels indicate maintenance, operations or information (CSA standard).

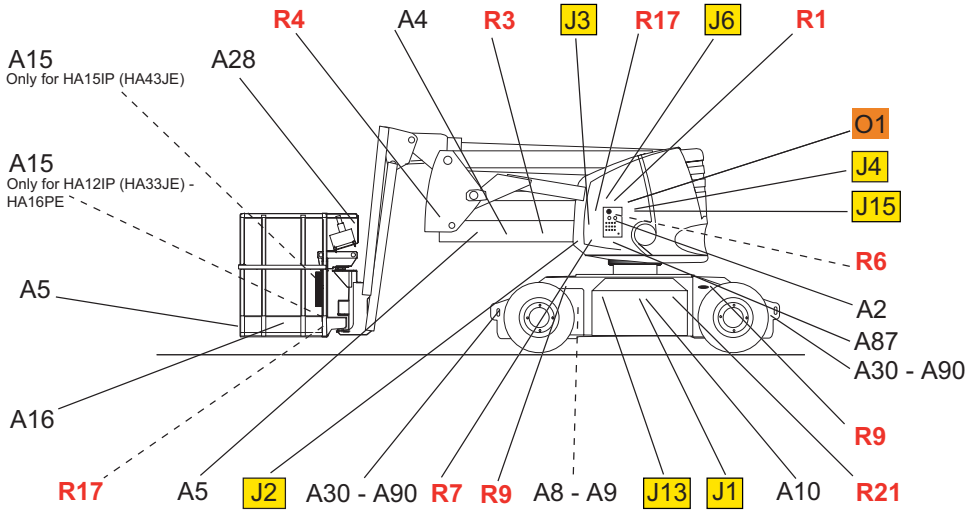
4.1.6 - Blue labels

N.B.-:-*The blue labels indicate information or a precaution to be taken in case of danger.*

4.2 - IDENTIFICATION

Location of the HA12IP - HA15IP labels - CE and AS standards





C - Machine layout

Decal descriptions HA12IP - HA15IP - CE and AS standards

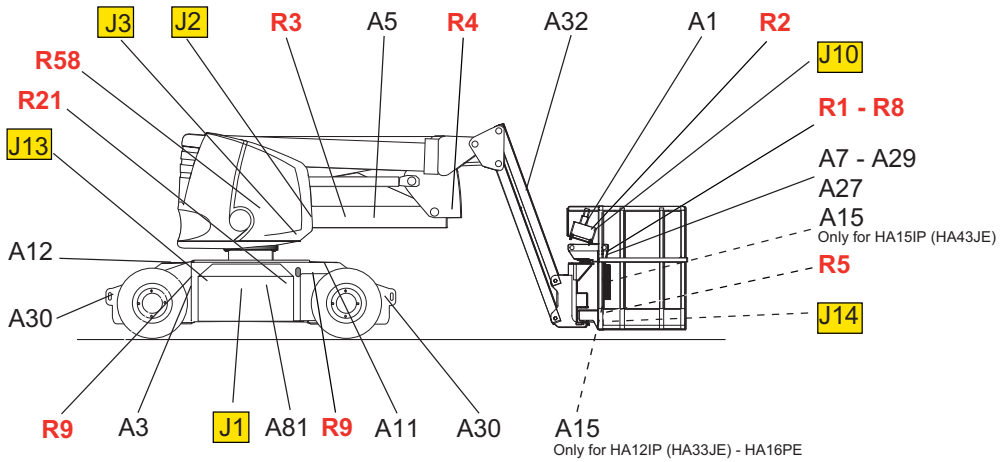
Color	Marking	Description	Quantity	HA12IP	HA15IP
Red	R1	Height of the floor and load	2	3078145890	3078152960
Red	R1	Height of the floor and load(Option)	2	3078149410	
Red	R2	Travel direction	1	3078145070	
Red	R3	Risk of crushed hands	2	3078143620	
Red	R4	Risk of crushing	2	307P228390	
Red	R5	Danger of electrocution	1	3078143490	
Red	R6	Do not interchange	1	AS standard only : 3078145180	
Red	R7	Do not park in the work area	1	3078143550	
Red	R8	Close the sliding rail	1	3078153510	
Red	R9	Wheel load	4	3078151550	3078152060
Red	R15	Wearing of a safety harness is essential	1	For AS standard only : 3078144520	
Red	R16	Load strength on each slings	4	For AS standard only : 3078144490	
Red	R17	Do not travel down slopes in high speed	1	For CE standard only : 3078144490	
Red	R21	Protective clothing required	1	3078143610	
Red	R52	Driving with the battery compartment open is strictly forbidden	1	For AS standard only : 3078148240	
Red	R53	Basket in compliance with EN 280 standard	1	For AS standard only : 3078144540	
Red	R54	Emergency operation(s)	1	For AS standard only : 307P229510	
Orange	O1	Operation instructions	1	In french (CE standard) : 3078143420 In english (CE and AS standards) : 3078144560 In german (CE standard) : 3078143440 In spanish (CE standard) : 3078143430 In italian (CE standard) : 3078143460 In dutch (CE standard) : 3078143470 In danish (CE standard) : 3078144940 In finish (CE standard) : 3078145540 In portuguese (CE standard) : 3078145830 In swidish (CE standard) : 3078145940	
Orange	O1	Operation instructions White background	1	In english (CE and AS standards) : 307P227220	
Yellow	J1	Greasing the turntable rotation gear	1	3078143570	
Yellow	J2	Remove the blocking pin before rotating	1	3078143530	
Yellow	J3	Do not place your foot on the cover	2	3078143640	
Yellow	J4	Do not use the machine as a welding earth	1	3078143600	
Yellow	J6	Verification of tilt operation	1	3078144650	
Yellow	J10	Socket	1	CE standard : 3078143540 AS standard : 3078144570	
Yellow	J13	Battery verification	1	3078143510	
Yellow	J14	Using the machine during battery charging is forbidden	1	3078143560	
Yellow	J15	Battery charger socket	1	AS standard : 3078144390	
Other	A1	Platform control box	1	307P218040	
Other	A2	Ground control box	1	307P218030	
Other	A3	Identification plate	1	307P218070	
Other	A4	Machine name logo	1	307P218260	307P218250
Other	A5	Small format HAULOTTE® logo	1	307P217080	
Other	A7	Read the operation manual	1	3078143680	
Other	A8	Hydraulic oil	1	3078143520	
Other	A8	Biodegradable oil	1	3078148890	
Other	A9	Upper and lower oil level	1	3078143590	
Other	A11	Front green drive direction arrow	1	3078137440	
Other	A12	Rear red drive direction arrow	1	3078137430	
Other	A15	Harness anchor point location	2	307P216290	

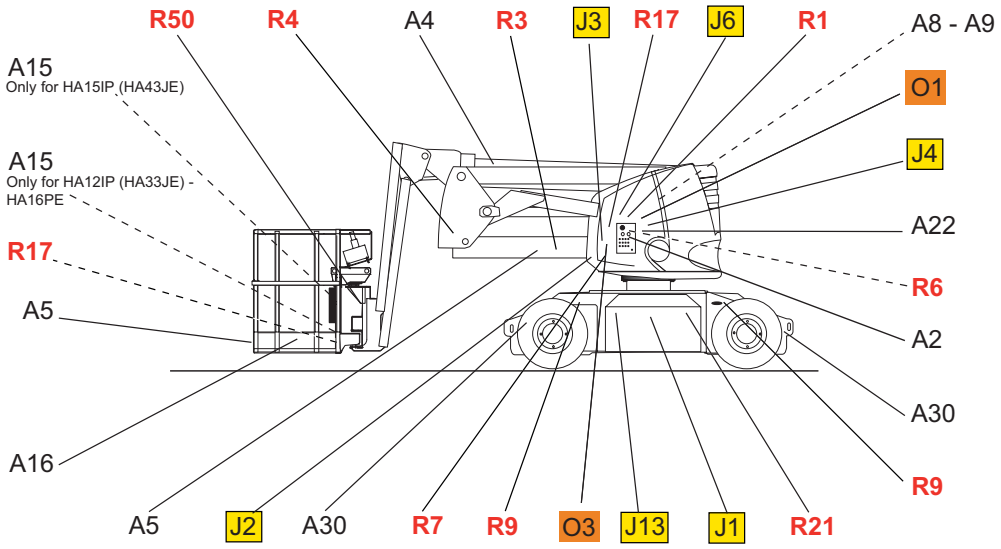
C - Machine layout

Color	Marking	Description	Quantity	HA12IP	HA15IP
Other	A16	Yellow and black adhesive tape	1	2421808660	
Other	A28	Risks of electrocution	1	For AS standard only : 307P226440	
Other	A30	Machine tie down points	4	3078147930	
Other	A32	Vertical machine name logo	1	3078148310	3078152050
Other	A81	Battery	1	307P226540	
Other	A87	Emergency control box	1	For Italy only : 307P232500	
Other	A90	Anchor points on the machine	4	307P216800	

C - Machine layout

Location of the HA33JE - HA43JE labels - ANSI standard - CSA standard





C - Machine layout

Decal descriptions HA33JE - HA43JE - ANSI and CSA standards

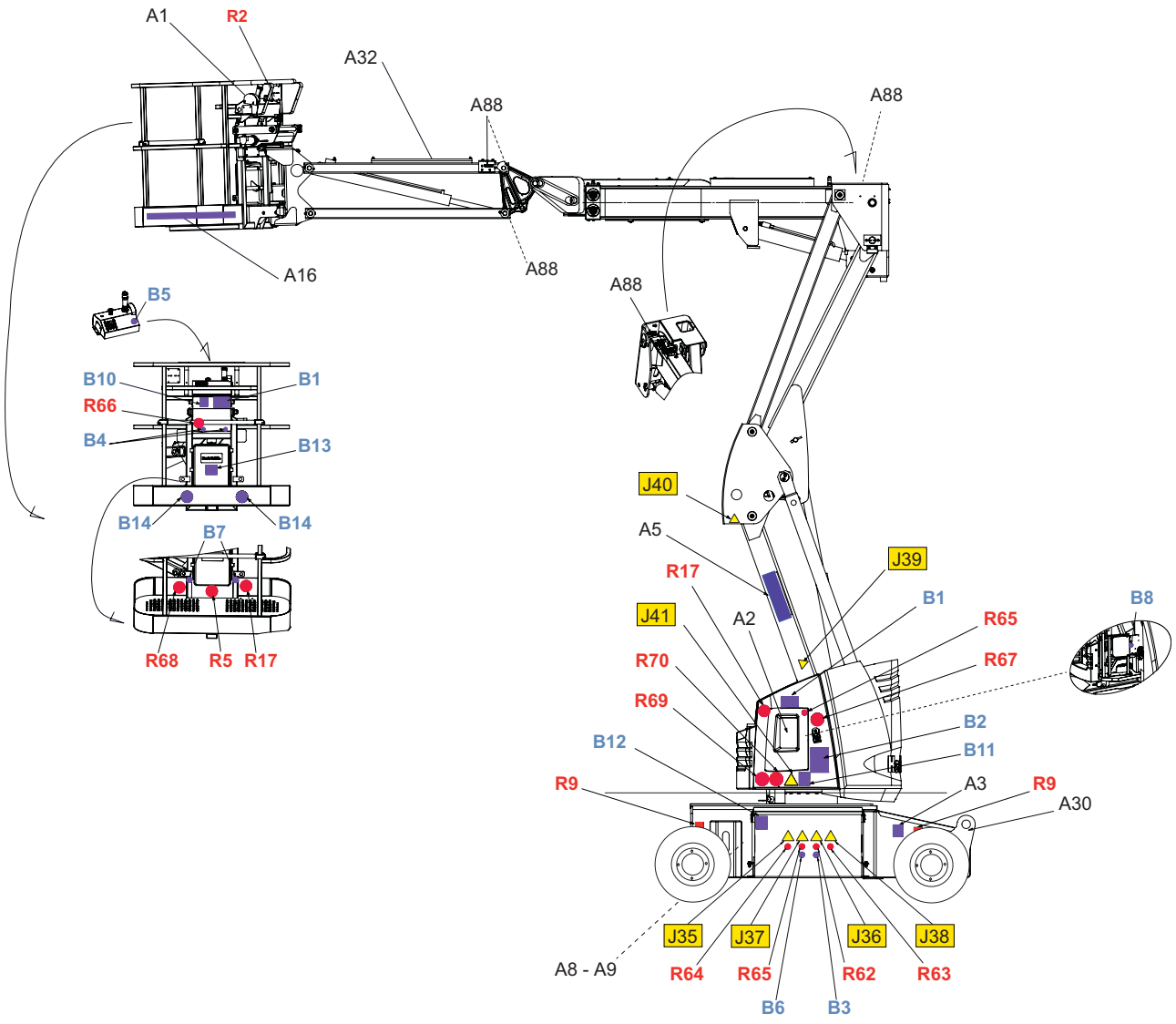
Marking	Color	Description	Quantity	HA33JE	HA43JE
1	Other	Material risk - Yellow and black adhesive tape	1	2421808660	
2	Other	Small format HAULOTTE® logo - White and red	1	307P220350	
2	Other	Small format HAULOTTE® logo - White and black	1	307P220360	
2	Other	Small format HAULOTTE® logo	1	307P217080	
3	Blue	Option -Notice 240 V	1	4000027120	
3	Blue	Option -Notice 110 V	1		4000027590
4	Red	Height of the floor and load	2	In english : 4000139000 In french : 4000138990 In spanish : 4000139010	In english : 4000138930 In french : 4000138910 In spanish : 4000138940
5	Red	Operation instructions	1	In english : 4000027580 In french : 4000083200 In spanish : 4000086650	
6	Other	Manual emergency maintenance procedure	1	307P216850	3078152080
7	Red	Risk of crushing	2	In english : 4000024640 In french : 4000067680 In spanish : 4000086460	
8	Red	Hand crushing hazard - Risk of crushed hands	2	In english : 4000024770 In french : 4000067710 In spanish : 4000086490	
9	Blue	Maximum Pressure per Tire - Floor Loading	4	4000139020	4000138960
10	Green	Greasing the turntable rotation gear	1	4000025160	
11	Other	Harness anchorage point	2	307P216290	
12	Orange	Wound foot - Do not place foot	2	In english : 4000024840 In french : 4000068180 In spanish : 4000086610	
13	Other	Vertical machine name logo - Black	1	3078148310	3078152050
13	Other	Vertical machine name logo - White	1	307P220390	307P220440
14	Other	Large format HAULOTTE® logo	1	307P218180	307P217770
14	Other	Large format HAULOTTE® logo - White and red	1	307P220410	307P220370
14	Other	Large format HAULOTTE® logo - White and black	1	307P220420	307P220380
15	Other	Machine name logo - Black	1	307P218260	307P218250
15	Other	Machine name logo - White	1	307P220400	307P220430
16	Other	Rear red drive direction arrow	1	3078137430	
17	Other	Front green drive direction arrow	1	3078137440	
18	Red	Risk of crushing - Spindle	1	In english : 4000024830 In french : 4000068080 In spanish : 4000086510	
19	Other	Upper and lower oil level	1	307P221060	
20	Blue	Hydraulic oil	1	307P221080	3078143520
20	Blue	Option - Biodegradable oil	1		3078148890
21	Yellow	Battery verification	1	3078143510	
22	Red	Protective clothing required	1	3078143610	
23	Other	Identification plate	1	307P218070	
25	Blue	Anchorage point - Traction	4	4000027310	
26	Red	Operation instructions	1	In english : 4000027570 In french : 4000068880 In spanish : 4000086640	
27	Other	Permissible load	1	307P216380	

C - Machine layout

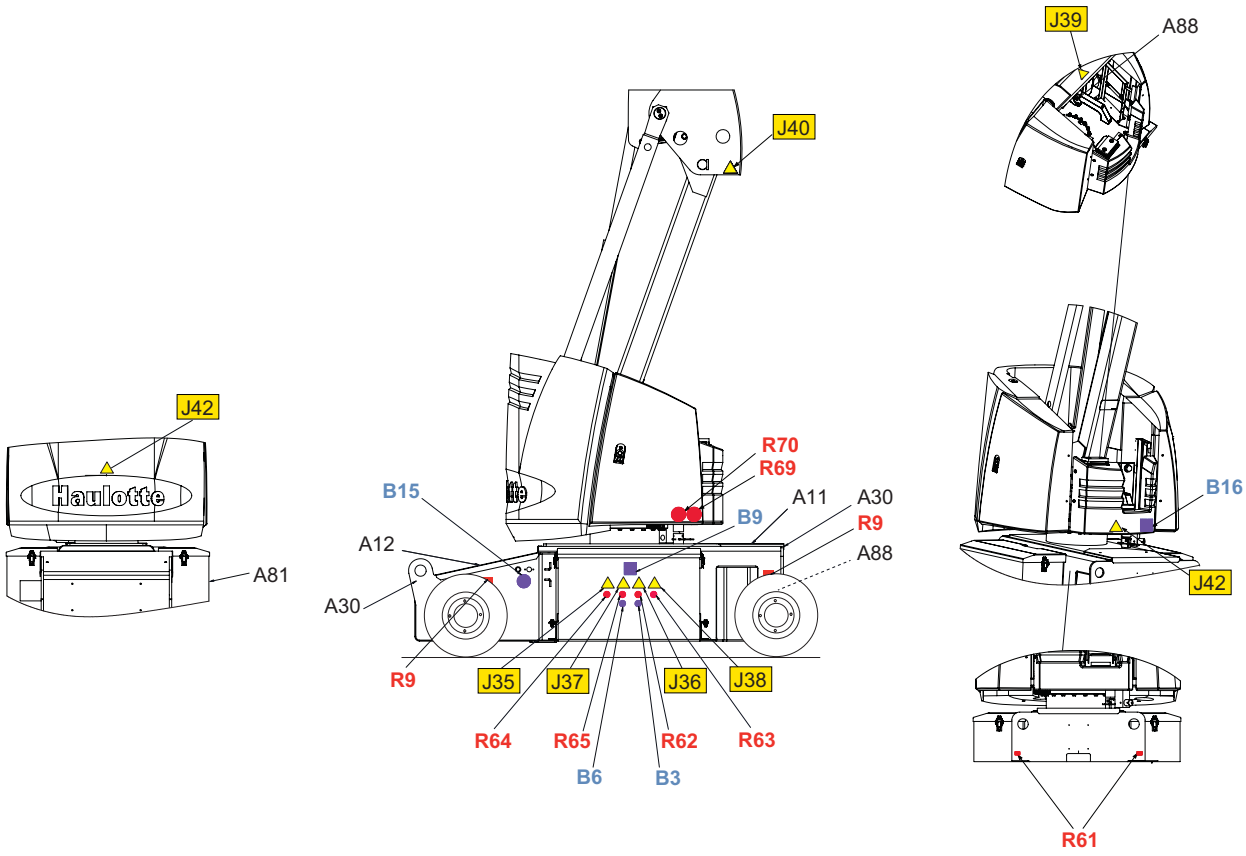
Marking	Color	Description	Quantity	HA33JE	HA43JE
28	Red	Verification of tilt operation	1	In english : 4000024860 In french : 4000068090 In spanish : 4000086520	
30	Other	Battery unit	1	307P226540	

C - Machine layout

Location of the HA12IP labels - Russia version

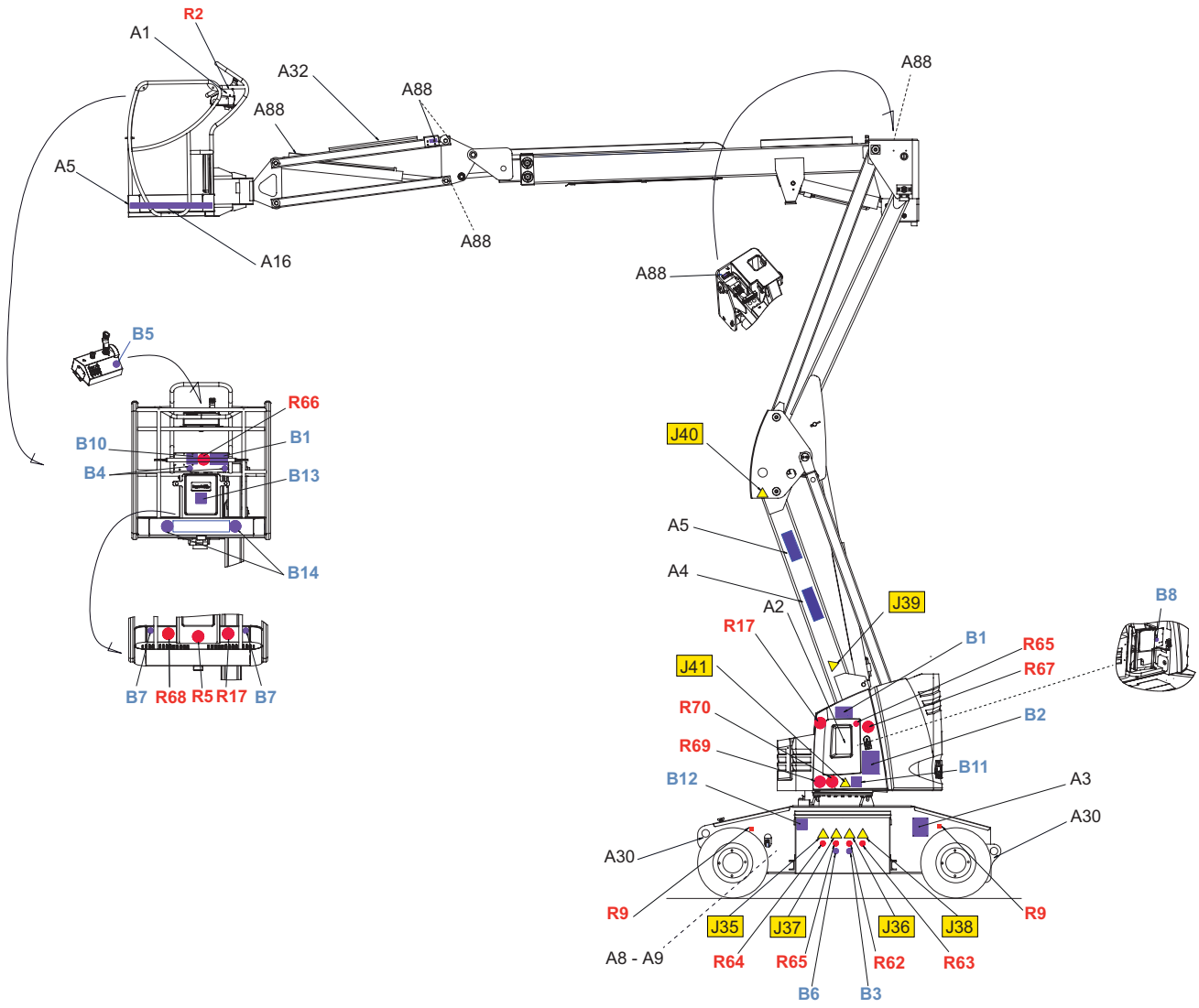


C - Machine layout

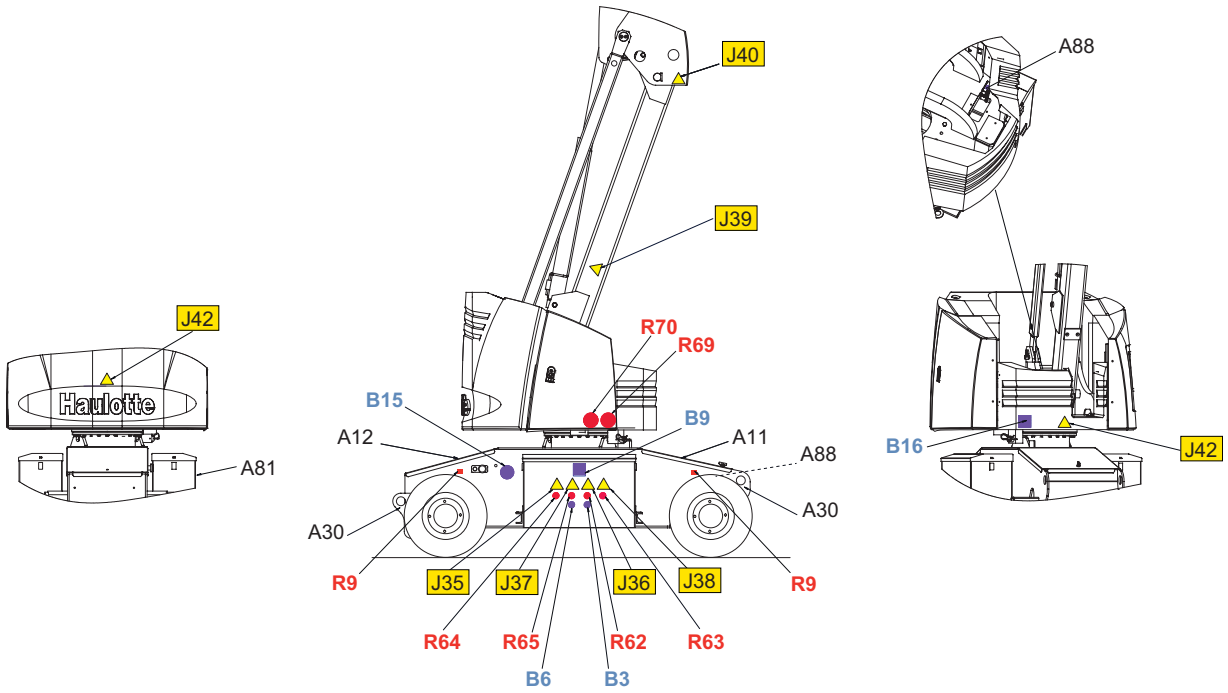


C - Machine layout

Location of the HA15IP labels - Russia version



C - Machine layout



C - Machine layout

Decal descriptions HA12IP - HA15IP - Russia version

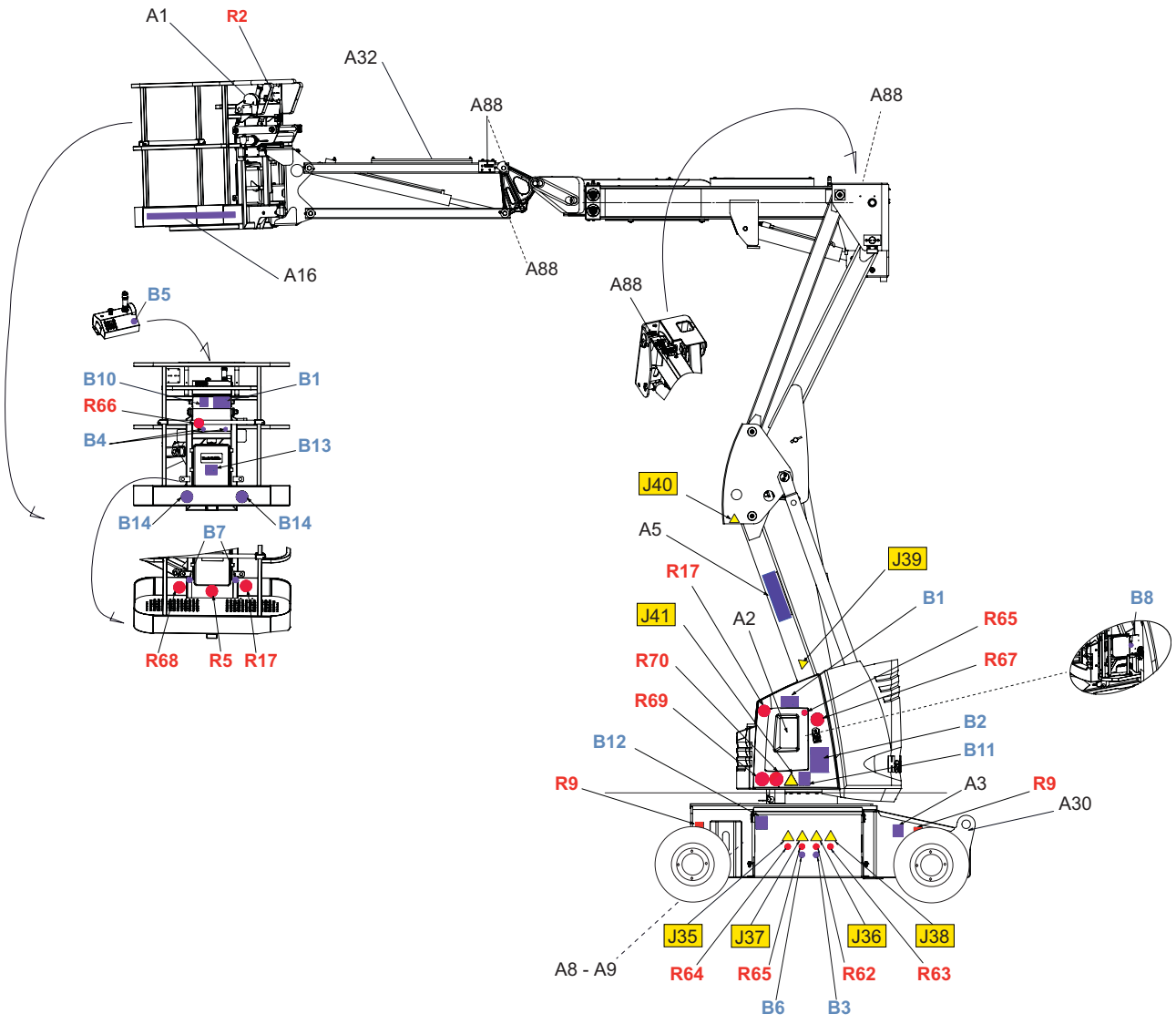
Color	Marking	Description	Quantity	HA12IP	HA15IP
Blue	B1	Height of the floor and load	2	307P227120 (Standard platform) 307P227130 (Wide platform)	307P227110
Blue	B2	Operation instructions White background	1	In Russian : 307P225160	
Blue	B3	Goggles compulsory	2	307P226670	
Blue	B4	Helmet compulsory	2	307P226680	
Blue	B5	Caution disconnect	1	307P226690	
Blue	B6	Hand protection compulsory	2	307P226700	
Blue	B7	Harness anchor point location	2	307P226710	
Blue	B8	Plug : 24 V	1	307P226740	
Blue	B9	Greasing the turntable rotation gear	1	307P227020	
Blue	B10	Plug : 240 V - 30 mA	1	307P227050	
Blue	B11	Verification of tilt operation	1	307P227060	
Blue	B12	Battery verification	2	307P227180	
Blue	B13	Read the operation manual	1	307P227190	
Blue	B14	Obligatory routing	2	307P227510	
Blue	B15	Plug : 220 V	1	307P227520	
Blue	B16	Remove the blocking pin before rotating	1	307P227810	
Red	R2	Travel direction	1	3078145070	
Red	R5	Danger of electrocution	1	307P226960	
Red	R9	Wheel load	4	3078151550	3078152060
Red	R17	Do not travel down slopes in high speed	1	307P226990	
Red	R61	Lubrication point	2	307P219370	
Red	R62	Flames prohibited	2	307P226750	
Red	R63	Smoking forbidden	2	307P226760	
Red	R64	No admittance to unauthorized persons	2	307P226770	
Red	R65	Pressurised spraying forbidden	3	307P226780	
Red	R66	Blocking of the sliding bar is forbidden	1	307P226950	
Red	R67	Do not use the machine as a welding earth	1	307P226970	
Red	R68	Using the machine during battery charging is forbidden	1	307P226980	
Red	R69	Do not park in the work area	2	307P227000	
Red	R70	Do not place your foot on the cover	2	307P227010	
Yellow	J35	Battery danger	2	307P227580	
Yellow	J36	Fire Hazard	2	307P227610	
Yellow	J37	Electrical danger	2	307P227620	
Yellow	J38	Corrosion hazard	2	307P227640	
Yellow	J39	Risk of crushed hands	2	307P227660	
Yellow	J40	Risk of crushing	2	307P227670	
Yellow	J41	Danger unstable side	1	307P227680	
Yellow	J42	Gear hazard	2	307P227690	
Other	A1	Platform control box	1	307P218040	
Other	A2	Ground control box	1	307P218030	
Other	A3	Identification plate	1	In Russian : 307P227820	
Other	A4	Machine name logo	1	307P218260	307P218250
Other	A8	Hydraulic oil	1	3078143520	
Other	A8	Winter grade hydraulic oil	1	307P223700	
Other	A8	Biodegradable oil	1	3078148890	
Other	A9	Upper and lower oil level	1	3078143590	
Other	A11	Front green drive direction arrow	1	3078137440	
Other	A12	Rear red drive direction arrow	1	3078137430	

C - Machine layout

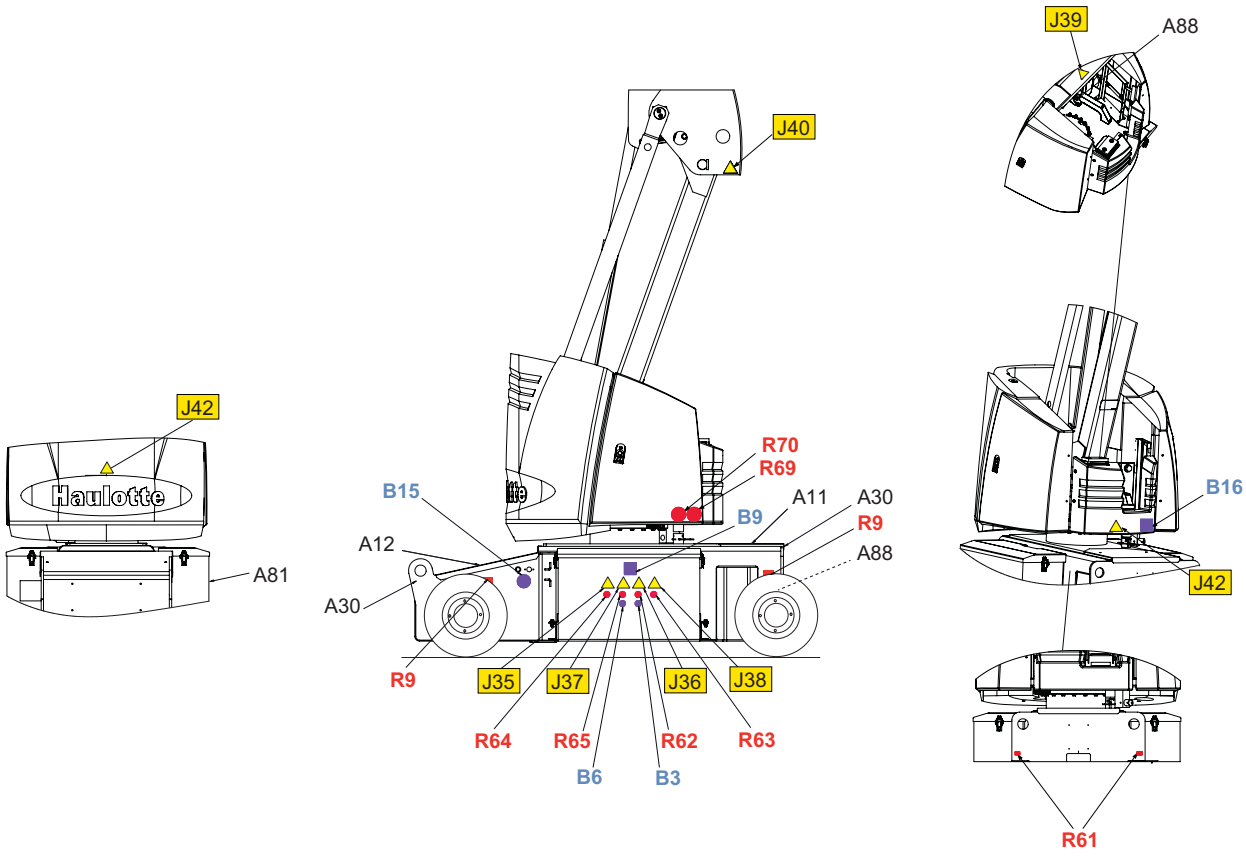
Color	Marking	Description	Quantity	HA12IP	HA15IP
Other	A16	Yellow and black adhesive tape	1	2421808660	
Other	A30	Machine tie down points	2	3078147930	4000027310
Other	A32	Vertical machine name logo	1	3078148310	3078152050
Other	A81	Battery	1	307P226540	
Other	A88	Tamper-proof label	7	307P227450	

C - Machine layout

Location of the HA12IP labels - Ukraine version

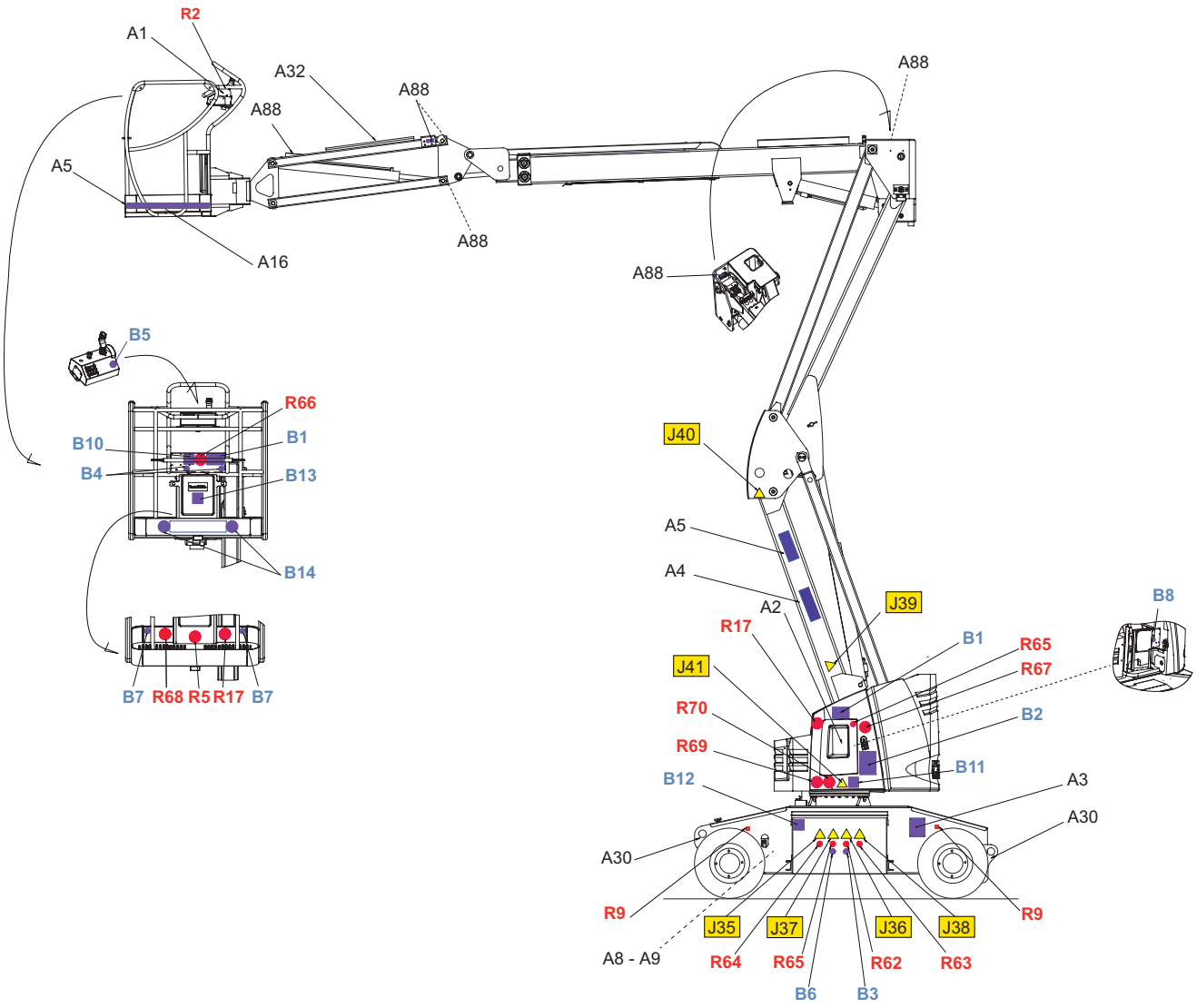


C - Machine layout

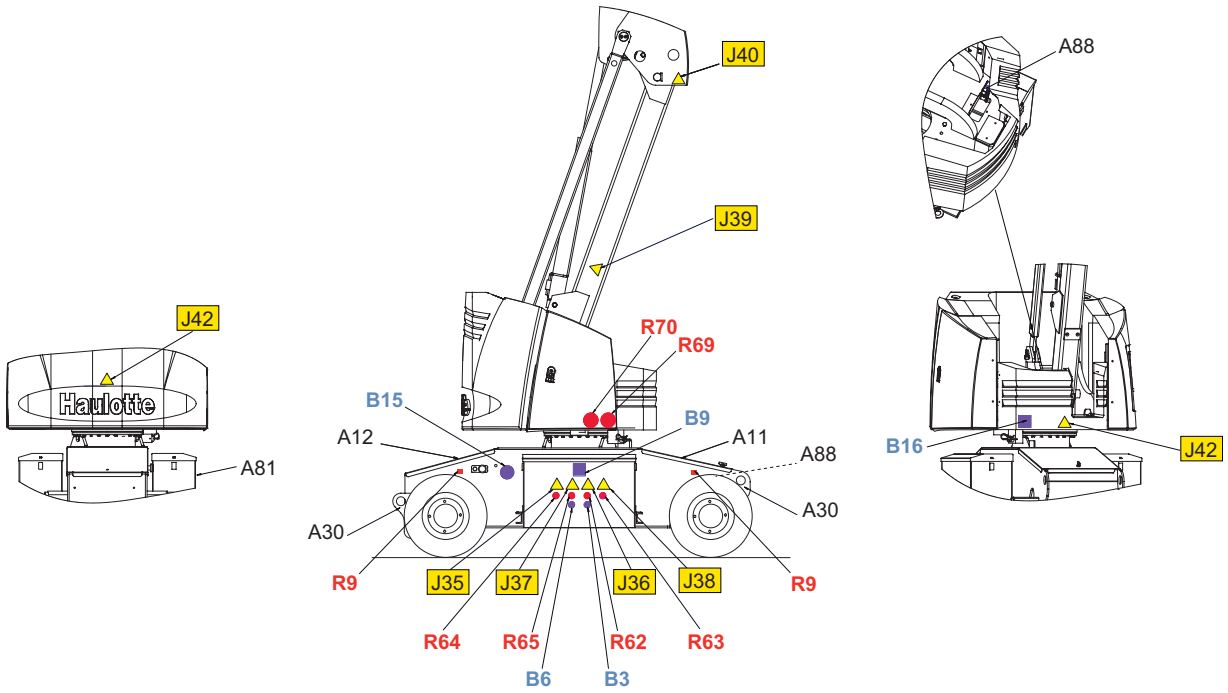


C - Machine layout

Location of the HA15IP labels - Ukraine version



C - Machine layout



C - Machine layout

Decal descriptions HA12IP - HA15IP - Ukraine version

Color	Marking	Description	Quantity	HA12IP	HA15IP
Blue	B1	Height of the floor and load	2	307P227120 (Standard platform) 307P227130 (Wide platform)	307P227110
Blue	B2	Operation instructions White background	1	Ukrainian : 307P227850	
Blue	B3	Goggles compulsory	2	307P226670	
Blue	B4	Helmet compulsory	2	307P226680	
Blue	B5	Caution disconnect	1	307P226690	
Blue	B6	Hand protection compulsory	2	307P226700	
Blue	B7	Harness anchor point location	2	307P226710	
Blue	B8	Plug : 24 V	1	307P226740	
Blue	B9	Greasing the turntable rotation gear	1	307P227020	
Blue	B10	Plug : 240 V - 30 mA	1	307P227050	
Blue	B11	Verification of tilt operation	1	307P227870	
Blue	B12	Battery verification	2	307P227860	
Blue	B13	Read the operation manual	1	307P227840	
Blue	B14	Obligatory routing	2	307P227510	
Blue	B15	Plug : 220 V	1	307P227520	
Blue	B16	Remove the blocking pin before rotating	1	307P227810	
Red	R2	Travel direction	1	3078145070	
Red	R5	Danger of electrocution	1	307P226960	
Red	R9	Wheel load	4	3078151550	3078152060
Red	R17	Do not travel down slopes in high speed	1	307P226990	
Red	R61	Lubrication point	2	307P219370	
Red	R62	Flames prohibited	2	307P226750	
Red	R63	Smoking forbidden	2	307P226760	
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Red	R68	Using the machine during battery charging is forbidden	1	307P226980	
Red	R69	Do not park in the work area	2	307P227000	
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Yellow	J36	Fire Hazard	2	307P227610	
Yellow	J37	Electrical danger	2	307P227620	
Yellow	J38	Corrosion hazard	2	307P227640	
Yellow	J39	Risk of crushed hands	2	307P227660	
Yellow	J40	Risk of crushing	2	307P227670	
Yellow	J41	Danger unstable side	1	307P227680	
Yellow	J42	Gear hazard	2	307P227690	
Other	A1	Platform control box	1	307P218040	
Other	A2	Ground control box	1	307P218030	
Other	A3	Identification plate	1	Ukrainian : 307P227830	
Other	A4	Machine name logo	1	307P218260	307P218250
Other	A8	Hydraulic oil	1	3078143520	
Other	A8	Winter grade hydraulic oil	1	307P223700	
Other	A8	Biodegradable oil	1	3078148890	
Other	A9	Upper and lower oil level	1	3078143590	
Other	A11	Front green drive direction arrow	1	3078137440	
Other	A12	Rear red drive direction arrow	1	3078137430	

C - Machine layout

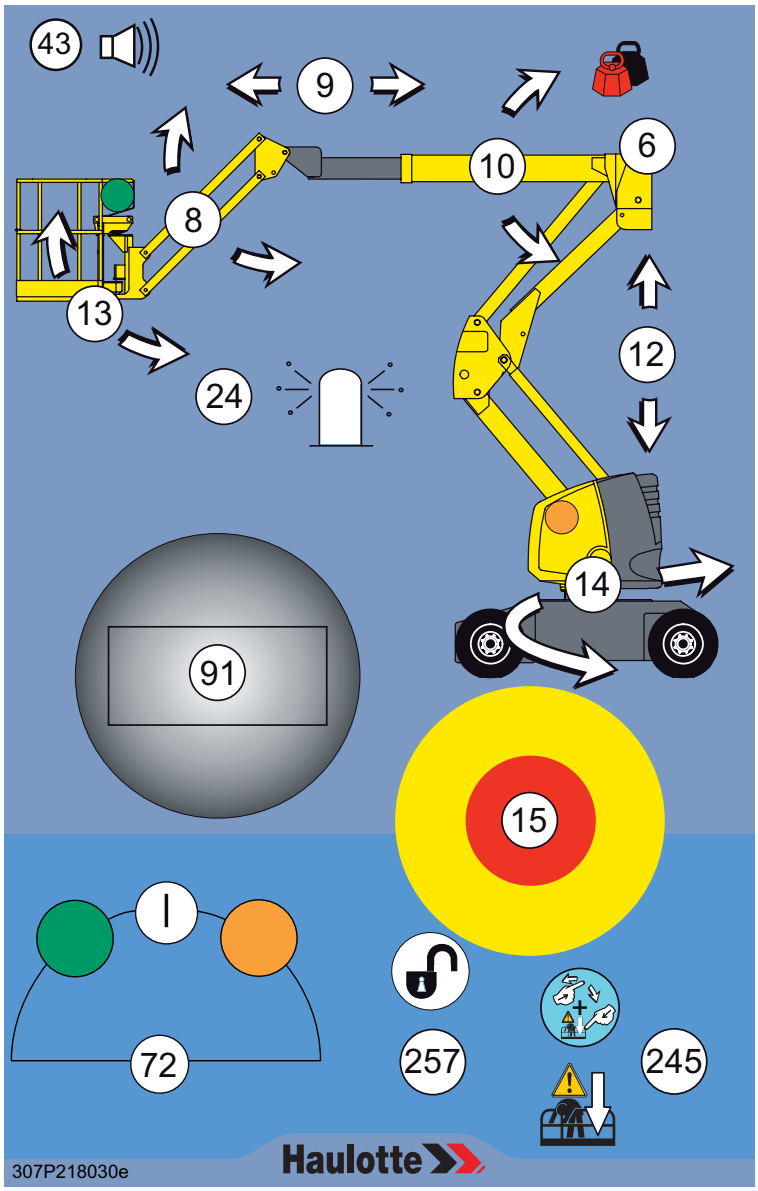
Color	Marking	Description	Quantity	HA12IP	HA15IP
Other	A16	Yellow and black adhesive tape	1	2421808660	
Other	A30	Machine tie down points	2	3078147930	4000027310
Other	A32	Vertical machine name logo	1	307P218310	3078152050
Other	A81	Battery	1	307P226540	
Other	A88	Tamper-proof label	7	307P227450	

5 - Control boxes

N.B.-:-*The functions are described for the entire range. Refer to the machine model to identify the controls and functions indicators.*

5.1 - GROUND CONTROL BOX - EMERGENCY CONTROL BOX

HA12IP - HA33JE - HA15IP - HA43JE - General view



C - Machine layout

HA12IP - HA33JE - HA15IP - HA43JE - Controls and indicators

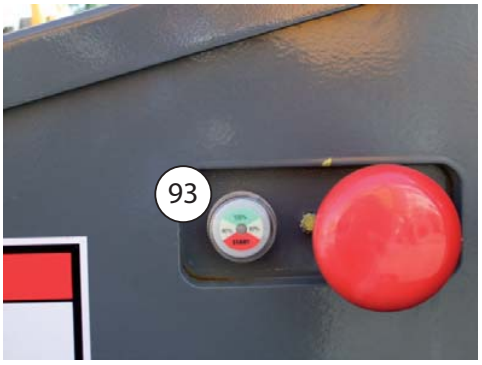
Marking	Description	Function
6	Platform overload indicator	Platform overload
8	Jib lifting / lowering switch	Move upwards : Jib lifting
		Move downwards : Jib lowering
9	Boom telescoping switch	Move to the left : To extend the boom out
		Move to the right : To retract the boom in
10	Boom raising switch	Move upwards : Boom raising
		Move downwards : Boom lowering
12	Arm lifting selector	Move upwards : Arm raises
		Move downwards : Arm lowers
13	Platform levelling	Move to the right : Platform leveling lowered or placed in transport position
		Move to the left : Platform leveling raised or placed in operating position
14	Turntable rotation switch	Move to the left : Counter clockwise (CCW) rotation
		Move to the right : Clockwise (CW) rotation
15	E-stop button	Pulled out (activated) : Ground control box energized
		Pushed in (deactivated) : De-energizes control system
24	Beacon light on/off (Option)	Move to the right : Beacon light on
		Move to the left : Beacon light off
43	Horn button(1)	Horn
72	Control box activation key selector	Left : Platform control box activation
		Center : De-energizes control system
		Right : Ground control box activation
91	Hour meter-Battery charge indicator	Total machine running hours - Battery charger status
93	Battery charging indicator	Battery charge level status during battery charging
245	"Overriding system" switch under sealed cover	Emergency lowering system enabled when seal is broken and cover is lifted. This must be used ONLY when normal operation from the ground panel is unavailable - use in emergencies ONLY
257	'Enable Switch' selector	Move upwards : Movement enabled

(1.) For machines fitted with

C - Machine layout

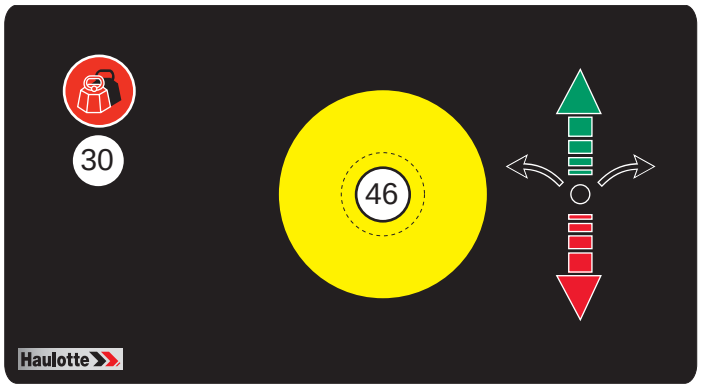
Photo HA12IP - HA33JE - HA15IP - HA43JE

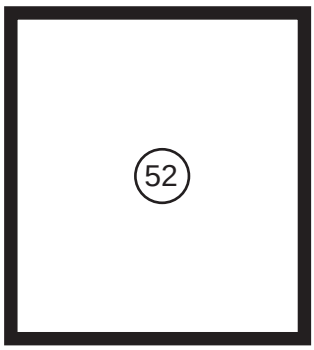
Battery charging indicator

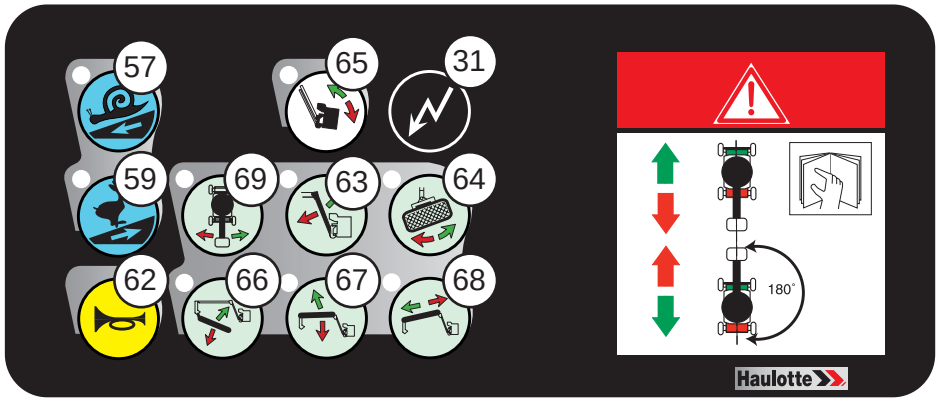


5.2 - PLATFORM CONTROL BOX

HA12IP - HA33JE - HA15IP - HA43JE - General view







C - Machine layout

HA12IP - HA33JE - HA15IP - HA43JE - Controls and indicators

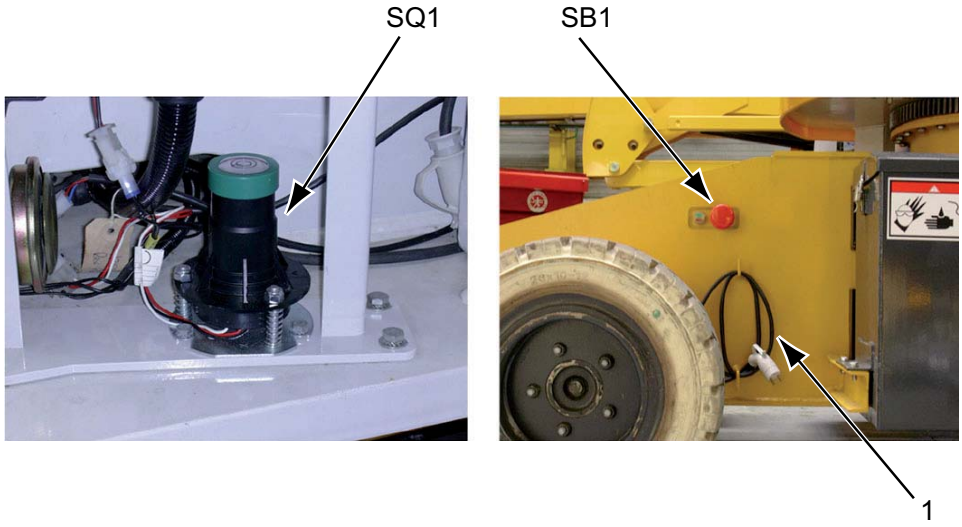
Marking	Description	Function
30	Platform overload indicator	Platform overload
31	Power ON indicator	On : Machine switched on
		Flashing : Machine on excessive slope
		Off : Machine switched off
46	E-stop button	Pulled out (activated) : Platform control box power supply energized
		Pushed in (deactivated) : De-energizes control system
52	Movement joystick	Move forward : • Forwards drive • Jib lifting • Counter clockwise (CCW) platform rotation • Platform levelling raising • Arm raises • Boom raising • Boom telescope in • Counter clockwise (CCW) turntable rotation
		Move backwards : • Reverse drive • Jib lowering • Clockwise (CW) platform rotation • Platform levelling lowering • Arm lowers • Boom lowering • Boom telescope out • Clockwise (CW) turntable rotation
	Front axle steering selector	Press right side of button : Right-hand steering
		Press left side of button : Left-hand steering
57	Low-speed drive selector switch with indicator light	Pressed down (activated and LED on) : Low-speed drive selection (for short distance and final approach)
59	High-speed drive selector switch with indicator light	Pressed down (activated and LED on) : High-speed drive selection (for long distance)
62	Horn selector switch	Pressed down (activated) : Horn
63	Jib selector switch with indicator light	Pressed down (activated and LED on) : Jib selection
64	Platform rotation selector switch with indicator light	Pressed down (activated and LED on) : Platform rotation selection
65	Platform levelling selector switch with indicator light	Pressed down (activated and LED on) : Platform compensation selection
66	Arm elevation selector switch with indicator light	Pressed down (activated and LED on) : Arm lifting selection
67	Boom lifting selector switch with indicator light	Pressed down (activated and LED on) : Boom lifting selection
68	Boom telescope selector switch with indicator light	Pressed down (activated and LED on) : Boom telescope selection
69	Turntable rotation selector switch with indicator light	Pressed down (activated and LED on) : Turntable rotation selection

C - Machine layout

Photo HA12IP - HA33JE - HA15IP - HA43JE

5.3 - VARIOUS COMPONENTS

HA12IP - HA33JE - HA15IP - HA43JE



HA12IP - HA33JE - HA15IP - HA43JE

Marking	Description	Function
1	Battery charger socket	Connection point for onboard battery charger
SQ1	Tilt sensor	Senses ground slope on which machine is operating
SB1	Battery isolation switch	Machine shutdown

1 - Description

Hydraulic energy to perform machine movements is provided by an electric motor driven hydraulic pump.The operating speed of the pump is governed by a speed regulator.

Poor knowledge of the characteristics and operation of the machine can lead the operator to think that a normal safety operation is a malfunction.

2 - Safety devices

2.1 - ACTIVATION OF CONTROLS

The controls must be validated by a 'Enable Switch' system to activate the different movements.

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

- Joystick handle.
- Pedal (foot switch).
- Enable switch.

2.2 - DRIVE SPEED

All driving speeds are authorised when the machine is stowed.

The electronic variable speed unit controls movement and driving speed.

It receives information from the control joystick concerning the movements to be performed. It also manages the safety systems status.

The variable speed unit regulates the speed.

This device has the following functions :

- Prevents increase of speed/rpm.
- Triggering of reverse braking if necessary.

2.3 - ELECTRONIC VARIABLE SPEED DRIVE

The machines are equipped with an electronic speed regulator configured for each function.

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

2.4 - ON-BOARD ELECTRONICS

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

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

2.5 - THERMOSTAT LOCATION / LIMITATION

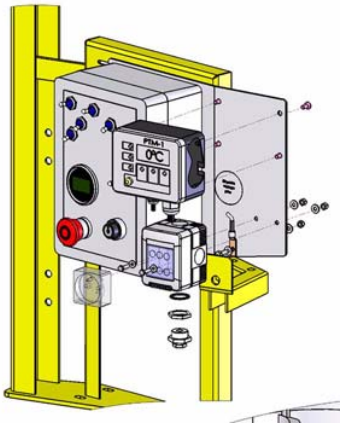
For Russia and the Ukraine only :

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

Temperature limits :

- Electric machines : from 0° to + 40°
- Fuel-powered machines : from - 20° to + 40°

Location of operating temperature thermostat



2.6 - LOAD LIMITING IN THE PLATFORM (IF FITTED)

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

The platform overload indicator and the buzzer warn the operator that the overload condition exists..

To return the machine to normal operation remove some weight from the platform.

2.7 - CHASSIS TILT

If the machine is standing on a slope exceeding the authorized slope and if the machine is not in the transport position, the fault indicator or the power-up indicator, and buzzer warn the operator.

Driving and certain movements are cut off (If the machine is unfolded).

To restore the drive function, only movements allowing the machine to be stowed are permitted :

- Boom lowering to return to a horizontal position.
- Lowering the arm.
- Lower the jib until it is below horizontal (According to the machine configuration).

***N.B.**-:-Lowering is allowed if the telescope is fully retracted.*

2.8 - BATTERY DISCHARGE INDICATOR-HOUR METER

Display by % charge(The tenth lit bar graph segment corresponds to 100 %) :

- 100 % charge : Battery correctly charged.
- 20 % charge : The batteries must be recharged. The movement ascent is stopped.

2.8.1 - Hour meter

It displays :

- P = Pump operating time.
- T = Operating time in drive.
- Length of time the machine is energized (even if not in use).

2.8.2 - Automatic reset

The automatic restart is coming up at a certain voltage level.
The automatic restart doesn't mean that the battery is fully charged.
Only the indicator of the charger gives the real state of the batteries charge.

2.9 - ON-BOARD CHARGER

The on-board charger is used to charge the semi-traction or traction batteries.

the maximum amperage is 30 A for the 100 - 110 V networks and 16 A for the 220 - 240 V networks.

Battery charging starts as soon as external power supply is connected (No movement is allowed during the charging process.).

2.9.1 - Black charger

Black charger

The (93) indicator indicates charge status :

- Green LED : Battery 100 % charged.
- Yellow LED : Battery 80 % charged.
- Red LED : Battery in initial charging phase.

If a fault occurs, the indicator flashes in different colours, depending on the type of fault (See machine maintenance book). The audible beep sounds.

2.9.2 - Metal charger

Metal charger

The (93) indicator indicates charge status :

- Green LED : Battery 100 % charged (Flashing LED in the equalization phase).
- Yellow LED : Battery 80 % charged.
- Red LED : Battery in initial charging phase.

In case of a fault, the indicator flashes red to indicate an excessive charging time, short-circuit battery components, errors in the temperature reading, or an excessive ambient temperature.

2.10 - DRIVE BUZZER

For Russia and the Ukraine only :

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

D - Operating principle

1 - Recommendations

The manager of the company responsible for the commissioning of the machine must ensure that 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 in compliance with this Operator Manual. All managers who are responsible for persons operating the machine, must be familiar with the regulations currently applicable in the country of use and ensure that they are adhered to.

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

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

2 - Checks before use

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

Any repairs required must be performed before the machine is used, its correct operation depends on it.

Find all the function indicators and controls in Section C 5 - Control boxes

2.1 - VISUAL INSPECTIONS

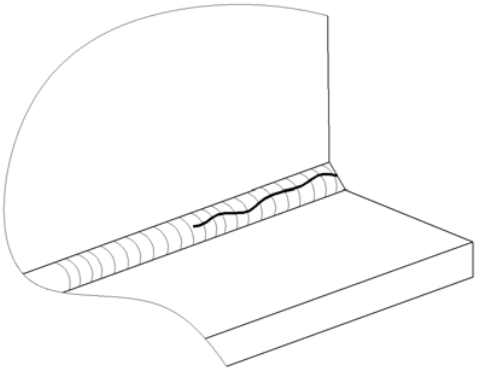
2.1.1 - General mechanical functions

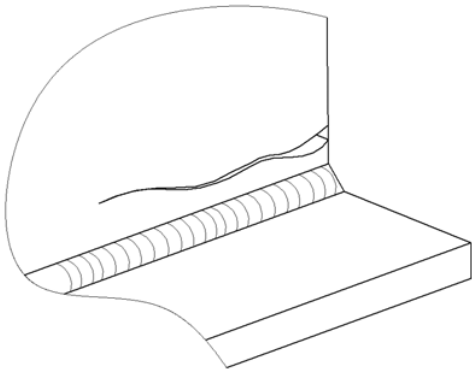
For all the following checks, ensure that the machine is switched off.

Check the following points :

- The presence of the identification plate, labels and operator manual :
  - Their state of cleanliness and visibility.
  - Clean or replace if necessary.
- Visual state of the machine :
  - No leaks (battery acid, hydraulic oil, etc.). No foreign objects on all surfaces. Call the staff in charge of the maintenance if necessary.
  - No missing or loose parts (bolts, nuts, connectors, cables, etc.). Refer to the "tightening torques" table quoted in the Maintenance Book.
  - No cracks, broken weld, paint chips. No deformations or other anomalies on the structure's parts.

Example





- Cylinders' state :
  - No leaks. Refer to the Maintenance manual.
  - No rust and abrasions on the cylinder rod.
  - No foreign objects on all surfaces.
- Steering system's state : wheels, reducers, brakes and tires/tyres :
  - No cracks, distortions, damaged paint or other faults
  - No missing or loose bolts. Refer to the "tightening torques" table quoted in the Maintenance Book.
  - Condition of the tires / tyres (cuts, excessive wear, etc.).
- Status of the control boxes :
  - No damage.
  - Back to neutral for all joysticks, selectors, etc..
  - Presence and readablility of the control box labels.
- Movement, safety limit switches :
  - No damage.
  - No missing or loose bolts. Refer to the "tightening torques" table quoted in the Maintenance Book.
  - No foreign objects on all surfaces.
- The state and connection of the electric wires and cables :
  - No damage, wear marks or other faults.
  - No contact between connectors.
- State of the hydraulic unit and pump :
  - No leaks.
  - No missing or loose parts (bolts, nuts, connectors, cables, etc.).
  - Hydraulic oil filter. Refer to the Maintenance manual.

- State of the structure's parts : Arm, boom, jib, cage (or platform) :
  - No cracks, damaged paint.
  - No distortion in metal components or visible damage.
  - No foreign objects at the ends of the booms, between arms and link parts.
  - Presence and check the original position of the platform control box sliding bar.
- State of the rotation systems : Turntable rotation, Turntable rotation selector in platform, Jib orientation (For machines fitted with).
  - No excessive clearance : Refer to the Maintenance manual.
  - No missing or loose bolts.
  - No foreign objects on all surfaces.
  - Greasing the turntable rotation gear Turntable and Platform.
- State of the tanks :
  - No leaks.
  - No missing or loose parts (bolts, nuts, connectors, cables, etc.). Top up the oil level, if necessary (Machine in transport position).

2.1.2 - Environment

Section A -Safety precautions.

Check the following points :

- Wind speed (Section G 1-Main characteristics).
- The permissible ground pressure and loading on the machine supporting surface (Section G 1-Main characteristics).
- The maximum permissible load in the platform (Section G 1-Main characteristics).
- The maximum permissible lateral force allowed at the platform (Section G 1-Main characteristics).

2.2 - FUNCTIONAL TESTS

2.2.1 - Safety features

Features to be tested :

- Operation of the upper and lower E-stop buttons.
- Operation of the tilt sensor.
- Visual and audible alarms.
- Platform load management system (Where fitted).
- Movement, safety limit switches.

For functional test procedures refer to (Section E 3.1-Test procedure).

2.2.2 - Ground box controls (emergency station)

Refer to the corresponding operations to test the controls in the order mentioned (Section E 3.2-Operation from ground position).

For HA12IP - HA33JE - HA15IP - HA43JE

Step	Control
1	Energizes control system 72
2	Movements : • Jib lifting/lowering 8 • Boom telescope out/in 9 • Lifting / lowering of boom 10 • Lifting/lowering of arm 12 • Platform leveling 13 • Turntable rotation 14
3	Beacon light on/off 24
4	Control box activation key selector 72
5	Horn button 43(1)

(1.) For machines fitted with

2.2.3 - Platform box controls (driving station)

Refer to the corresponding operations to test the controls in the order mentioned (Section E 3.3-Operations from the platform).

For HA12IP - HA33JE - HA15IP - HA43JE

Step	Control
1	Energizes control system 72
2	Steering switch (52) and movement joystick (52)
3	Movements : • Jib elevation/lowering (63) and movement joystick 52 • Platform rotation (64) and movement joystick 52 • Platform compensation (65) and movement joystick 52 • arm lifting/lowering (66) and movement joystick 52 • Boom lifting/lowering (67) and movement joystick 52 • Boom telescope out/in (P68) and movement joystick 52 • Turntable rotation (69) and movement joystick 52
4	Drive speed selector : • Low speed selector (57) and movement joystick 52 • High speed selector (59) and movement joystick 52
5	Horn button 62

2.3 - PERIODICAL CHECKS

The machine must be inspected on a regular basis at intervals in accordance with the requirements set forth in the Country of use but no less than once per year. The purpose of the inspection is to detect any defect which could lead to an accident during routine use of the machine.

These inspections must be carried out by a competent company or person whose selection is under the responsibility of the manager (Company employee or other).

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 company safety commitee at any time.

N.B.-:- *Section H Intervention register*

2.4 - REPAIRS AND ADJUSTMENTS

Extensive repairs, interventions or adjustments on the safety systems or elements must be performed by a HAULOTTE Services® employee or a HAULOTTE Services®-approved employee with HAULOTTE Services® training, using original spare parts only.

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.

HAULOTTE Services® will not take responsibility for any consequential outcomes resulting from inferior services/repairs carried out by others.

HAULOTTE advises you that NO modifications carried out without the written permission of HAULOTTE® will void the HAULOTTE warranty..

2.5 - INSPECTION / TESTING REQUIREMENTS

Intervention to be made after :

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

Perform a fitness for function inspection, a condition inspection and static and dynamic tests (Consult the After-Sales Service HAULOTTE Services®).

3 - Operation

N.B.-:-*The functions are described for the entire range. Refer to the machine model to identify the controls and functions indicators.*

Find all the function indicators and controls in Section C 5 - Control boxes

3.1 - TEST PROCEDURE

3.1.1 - E-stop button operation

N.B.-:-*The battery main/isolation switch (SB1) must be pulled (Section C 5.3 - Control boxes).*

Ground control box E-stop button

Step	Action
1	Pull the E-stop button 15.
3	Turn and hold the key on the control box activation selector switch (72) to the right to energize the ground control box. The indicators light up.
4	Push the E-stop button (15). The indicator goes out.

Platform control box E-stop button

Step	Action
1	Pull the E-stop buttons(15, 46).
2	Turn the key on the control box activation selector switch (72) to the left to energize the platform control box. The indicators light up.
3	Push the E-stop button (46). The indicator goes out.

3.1.2 - Tilt sensor switch operation

Machine unfolded, the slope sensor gives an audible signal telling the operator that the machine should not be deployed. In this case, fully lower the platform and reposition the machine on level ground before raising the platform again.

1. Pull the E-stop push-buttons on the platform and ground control boxes (15, 46).
2. Switch on the machine from the ground control box (72). All of the ground control box indicators light up and a sound signal (beep) is emitted.
3. Lift the boom, the arm or the jib above the horizontal axis .
4. Locate the tilt sensor next to the ground control box.
5. Manually tilt and maintain the tilt sensor towards the front for a few seconds (Section C 2-Main components) :
6. The audible beep sounds.
7. For machines fitted with : The slope sensor prevents lifting and driving movements.

3.1.3 - Visual and sound alarms

1. Pull or turn the battery main/isolation switch (SB1) (Section C 5.3 - Control boxes).
2. Pull the E-stop buttons (15, 46).
3. Select the turntable control box or the platform control box (72, 30,). The indicator (31) at the platform control box lights up, and there is an audible signal (beep).

3.1.4 - Weighing system

1. Pull the E-stop buttons (15, 46).
2. Switch the machine on (72) :

- Move to the right : Ground control box
- Move to the left : Platform control box
- The platform overload indicators (6, 30) on the platform and ground control boxes and the buzzer warn the operator (If the authorized load on the platform is exceeded).

3.1.5 - Movement safety end of drive contactors

1. Raise the jib to horizontal position and activate high speed. The machine must be in micro-speed.
2. Unfold the jib completely and activate high speed. The machine must be in micro-speed.
3. Raise the boom slightly above the horizontal position and then activate high speed. The machine must be in micro-speed.
4. Unfold the boom completely and then activate high speed. The machine must be in micro-speed.
5. Raise the arm slightly and then activate high speed. The machine must be in micro-speed.
6. Unfold the arm completely. The machine must be in micro-speed.

3.2 - OPERATION FROM GROUND POSITION

The ground control box is an auxilary control box to use in emergencies only.

3.2.1 - Machine start-up

1. Pull the battery power (SB1).
2. Pull the E-stop button 15 : This will de-activate the state of E-stop button located in platform.
3. Turn and hold the key on the control box activation selector switch (72) to the right to energize the ground control box.

3.2.2 - Machine shutdown

- Turn the key of the control box activation selector (72) to the center.
- The machine is shut down. The power to the machine is switched off, all the indicators on the lower console are off.

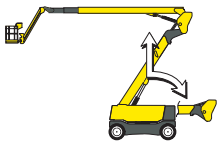
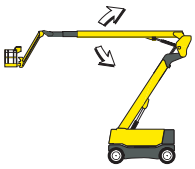
3.2.3 - Movement control

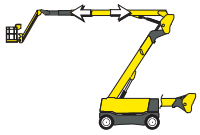
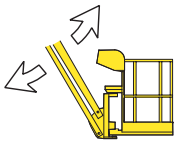
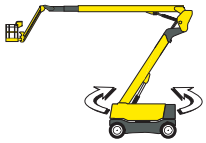
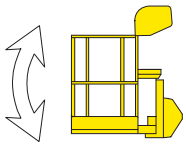
Platform levelling is possible whatever the working height. Even at low movement speeds, use the controls with caution.

Ground box controls (emergency station)

***N.B.**-:-Hold the selector (257) upwards to validate movement. The release of the selector causes all movement to stop.*

For HA12IP - HA33JE - HA15IP - HA43JE - Ground box controls (emergency station)

Control		Action
Lifting/lowering of arm		Push the arm lift/lower selector (12) upwards to raise the arm. Push the arm lift/lower selector (12) downwards to lower the arm.
Lifting / lowering of boom		Push the boom raising switch (10) upwards to lift the boom. Push the boom raising switch (10) downwards to lower the boom.

Control		Action
Boom telescope out/in		Push the boom telescoping switch (9) to the left to extend the boom. Push the boom telescoping switch (9) to the right to retract the boom.
Jib lifting/lowering		Push the jib switch (8) upwards to lift the jib. Push the jib switch (8) downwards to lower the jib.
Turntable rotation		Push the turntable rotation switch (14) to the right for a counter clockwise (CCW) rotation. Push the turntable rotation selector switch (14) to the left for a clockwise (CW) rotation.
Platform leveling		Move the platform leveling switch (13) upwards to raise the platform. Move the platform leveling switch (13) downwards to lower the platform.

N.B.-:-*The release of the selector causes all movement to stop.*

3.2.4 - Other controls

- Switching from the ground control box to the platform control box :

The battery main/isolation switch (SB1) and the E-stop push-button (15) must be pulled or turned.

• Turn the key on the control box activation selector switch (72) to the left to energize the platform control box. The ground box controls are de-energized.

- Switching from the platform control box to the ground control box :

The E-stop button (15) must be pulled out.

• Turn and hold the key on the control box activation selector switch (72) to the right to energize the ground control box. The platform box controls are de-energized.

- For the machines equipped with beacon light :
- Push the beacon light selector switch (24) to the right to switch on the beacon light.
- Push the beacon light selector switch (24) to the left to switch off the beacon light.

3.3 - OPERATIONS FROM THE PLATFORM

3.3.1 - Machine start-up

To start the machine :

At the ground control box :

- Check that the E-stop button is not pressed in.
- Turn the key on the control box activation selector switch (72) to the left to energize the platform control box. The ground box controls are de-energized.

At the platform control box :

- Pull the E-stop push-button (46). The power on indicator (31) lights up.

3.3.2 - Machine shutdown

To stop the machine :

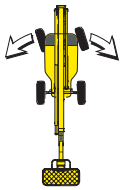
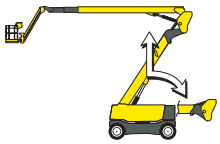
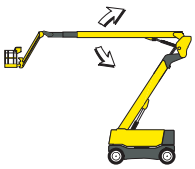
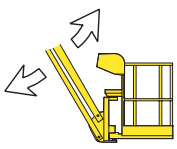
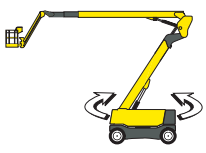
Press the E-stop button (46).

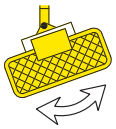
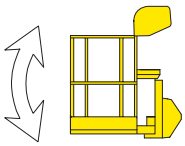
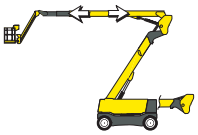
3.3.3 - Movement control

For HA12IP - HA33JE - HA15IP - HA43JE - Platform box controls (driving station)

Activate the controls and the 'Enable Switch' system simultaneously to perform the various movements.

For HA12IP - HA33JE - HA15IP - HA43JE - Platform box controls (driving station)

Control	Action
Driving 	Push the low or high speed touch pads (59) or (57). Move the drive joystick (52) forwards to drive the machine forwards.
	Push the low or high speed touch pads (59) or (57). Move the drive joystick (52) backwards to drive in reverse.
Steering 	Push the low or high speed touch pads (59) or (57). Move the drive joystick (52) forwards to drive the machine forwards. Push the front-axle steering selector switch (52) to the right to steer to the right.
	Push the low or high speed touch pads (59) or (57). Move the drive joystick (52) forwards to drive the machine forwards. Push the front-axle steering selector switch (52) to the left to steer to the left.
Lifting/lowering of arm 	Push the arm lift/lower touch pads (66).
	Push the arm lift/lower joystick (52) forwards to raise the arm.
	Push the arm lift/lower joystick (52) backwards to lower the arm.
Lifting / lowering of boom 	Push the boom lifting touch pads (67).
	Push the boom raising joystick (52) forwards to lift the boom.
	Push the boom raising joystick (52) backwards to lower the boom.
Jib lifting/lowering 	Push the jib elevation touch pads (63).
	Push the jib joystick (52) forwards to raise the jib.
	Push the jib joystick (52) backwards to lower the jib.
Turntable rotation 	Push the turntable rotation touch pads (69).
	Push the turntable rotation joystick (52) backwards for counter clockwise (CCW) rotation.
	Push the turntable rotation joystick (52) forwards for clockwise (CW) rotation.

Control		Action
Platform rotation		Push the platform rotation touch pads (64). Push the turntable rotation joystick (52) backwards for counter clockwise (CCW) rotation. Push the platform rotation joystick (52) forwards for clockwise (CW) rotation.
Platform leveling		Push the platform compensation touch pads (65). Push the platform compensation joystick (52) forwards to raise the platform. Push the platform compensation joystick (52) backwards to lower the platform.
Drive speed (minimum)		Push the driving speed selector (59) to  high speed (long distance driving, tarmac, concrete). Push the driving speed selector (57) to  for driving in low speed (short distance, final approach, descending from the lorry).
Boom telescope out/in		Push the boom telescope touch pads (68). Push the boom telescoping joystick (52) forwards to retract the boom. Push the boom telescoping joystick (52) backwards to extend the boom.

N.B.-:-*The release of the selectors and (or) joysticks causes all movement to stop.*

3.3.4 - Other controls

- Horn : Press the Horn switch (62) to sound the horn.

E - Driving

Find all the function indicators and controls in Section C 5 - Control boxes

1 - Emergency lowering

1.1 - PRINCIPLE

***N.B.**-:-During rescue and emergency maintenance manoeuvres from the ground, it is essential to ensure that there are no obstacles under the platform (wall, beam, electricity line, etc.).*

Emergency lowering is implemented if the operator using the console on the platform needs to be rescued and cannot operate the controls himself even if the machine is operating normally. This situation may arise if the operator is taken ill, is injured or if the control console is inaccessible.

A ground operator trained in using the emergency controls and in possession of the starter key can use the ground control box with the main power source to lower the platform operator.

If the machine is stuck or hooked in surrounding structures or equipment, it is essential to release the operators before intervening on the machine.

1.2 - PROCEDURE

Section A 2-Pre-operation instructions

1. Turn the selector switch (72) knob to the right to energize the ground control box. The platform box controls are de-energized.
2. Lower the platform from the ground control box.

***N.B.**-:-Activating the emergency controls listed above deactivates the controls of the console on the platform.*

1.3 - EXTRAORDINARY PROCEDURE

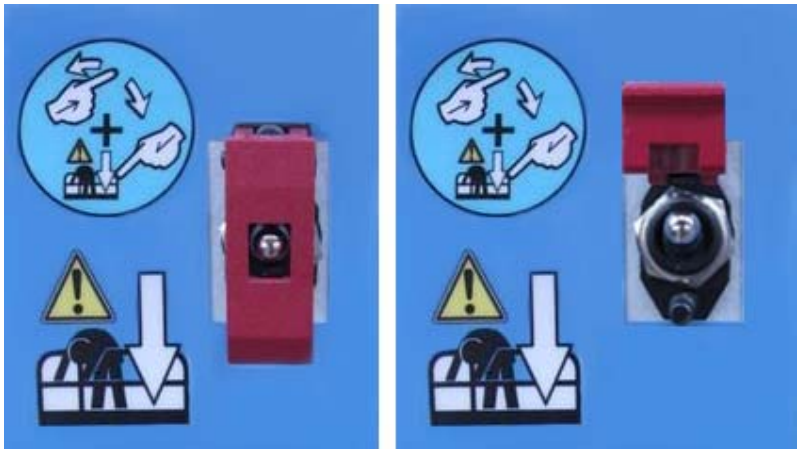
In the context of emergency lowering, it is possible that the emergency stop located on the platform is activated or that safety mechanisms such as the overload limitor are preventing the machine from operating normally.

During an exceptional procedure, for machines which are not fitted with the manual rescue control as described in the "emergency lowering" paragraph, activating the lower console deactivates the emergency pushbutton located on the platform.

***N.B.**-:-During these exceptional manoeuvres, movements are slowed down for safety reasons.*

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

"Overriding system" switch under sealed cover



Once rescue operations are complete, contact Haulotte Services to report the incident and schedule the fitting of a new seal. IMPORTANT : if the seal is missing, this is considered to be abnormal use of the machine.

2 - Lowering for repairs

2.1 - PRINCIPLE

The lowering for repairs function allows the operator to be lowered to the ground in case of failure of the main power source.

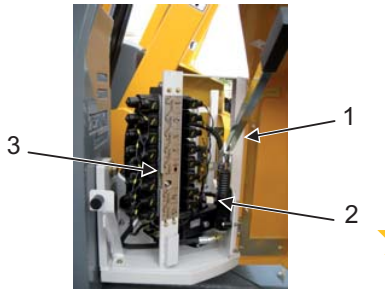
2.2 - PROCEDURE

There is a way of performing movements from the ground, when the main energy source malfunctions. It is a hand pump located next to the hydraulic distributors on the turntable.

This pump can be used in combination with a manual override multi bank electro-hydraulic valve, to perform the movement required to lower the platform :

- Arm lowers.
- Boom lowering.
- To retract the boom in
- Turntable rotation.
- Platform rotation.
- Jib lowering.

1. Insert the lever (1) in the socket of the pump.
2. Check that the pump depressurizing valve (2) is in closed position.
3. Push the lever from top to bottom several times whilst keeping the manual electro-distributor control for the requirement movement shown on the plate pressed in and held in 3



If the operator in the platform has to exit the platform when elevated, he must exit onto a sturdy, safe structure, the transfer must respect the following recommendations :

- The operator must secure himself by using 2 straps. One lanyard is attached to the platform, the other to the structure onto which he wishes to exit.
- The operator must exit the platform via the standard access point.
- The operator must not detach the lanyard connected to the platform until transfer is complete or while the transfer still presents a danger.

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

3 - Towing

In case of a machine failure, it is possible to tow it to load it onto a trailer.

3.1 - DISENGAGING THE DRIVE HUBS

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

Perform these operations on flat, horizontal ground. Failing that, block the wheels to immobilize the machine. When drive hubs are disengaged, the machine is in free wheel mode and the brake system no longer functions.

Unscrew the central nut until the nut is at the limit.

As soon as there is resistance, do not force further to avoid breaking the central nut in the reducer.

3.2 - RE-ENGAGING THE DRIVE HUBS

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

Tighten the central reducer nut (1).

N.B.-:-*In the event that resistance to gear engagement is felt, perform the machine drive function to slowly move the internal hub gear to a mesh position where both gears will engage ; then screw the central nut in fully.*

4 - Loading and unloading

N.B.-:-*When driving up an incline or ramp, during loading or unloading HAULOTTE® recommends positioning the counterweight at the rear.*

Raise the platform sufficiently to avoid contact with the ground.

To avoid any risk of tipping over, the boom must be maintained in the longitudinal axis of the chassis.

Section F 4.2Putting in transport position.

4.1 - PRINCIPLE

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

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

Since the gradient of the slope usually exceeds the authorized limit for an unfolded machine in the normal operational mode, the arm and boom must be lowered and retracted to allow travel up the ramp.

When the boom is lowered enough, the tilt buzzer will not sound and drive function is active.

Select the high driving speed **to climb the slope**

If the slope is too steep, use a winch in addition to traction.

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

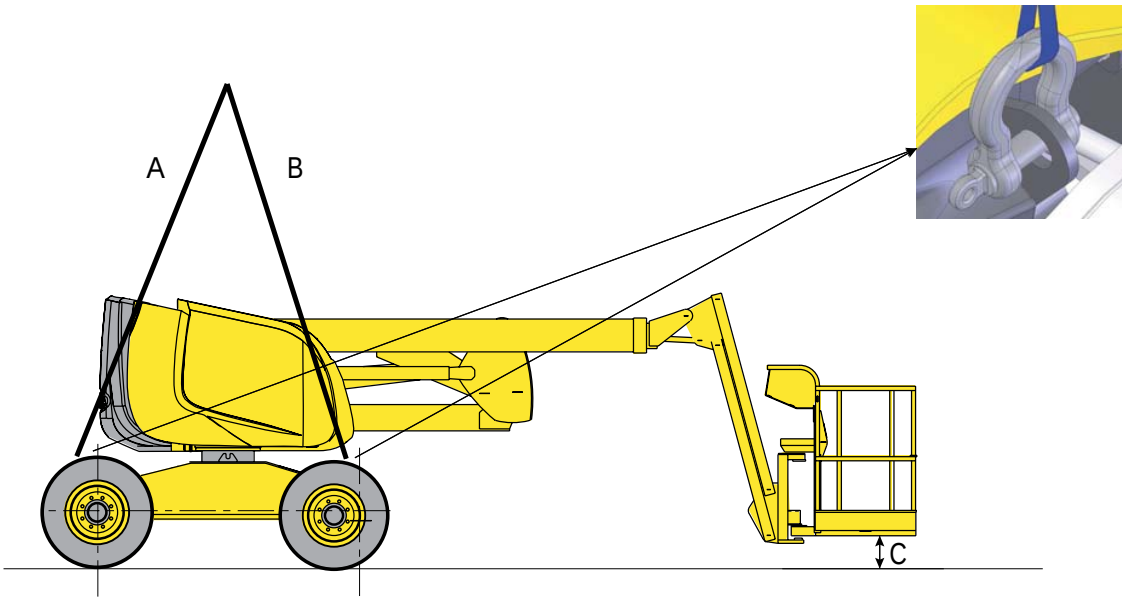
A wrong move can lead to the tipping over of the machine and cause serious bodily and material accidents.

4.1.1 - Lifting operation

Ensure that :

- The machine is completely stowed.
- The platform must be empty.
- The lifting equipment ie. slings, shackles, hooks, lifting beam etc. are in good condition and of sufficient capacity.
- The personnel performing the lift are authorised to safely perform the lift operation.

Procedure for the use of slings-HA12IP - HA15IP



Machine	Distance C	Number of slings	Length A	Length B	Maximum load per sling and shackle
HA12IP - HA15IP	20 cm (8 in)	4	5 m (16 ft 5 in)	5 m (16 ft 5 in)	5000 DaN (11241 lbf)

Before using slings, lift the jib to obtain a minimum 20 cm (8in) clearance between the ground and cage.

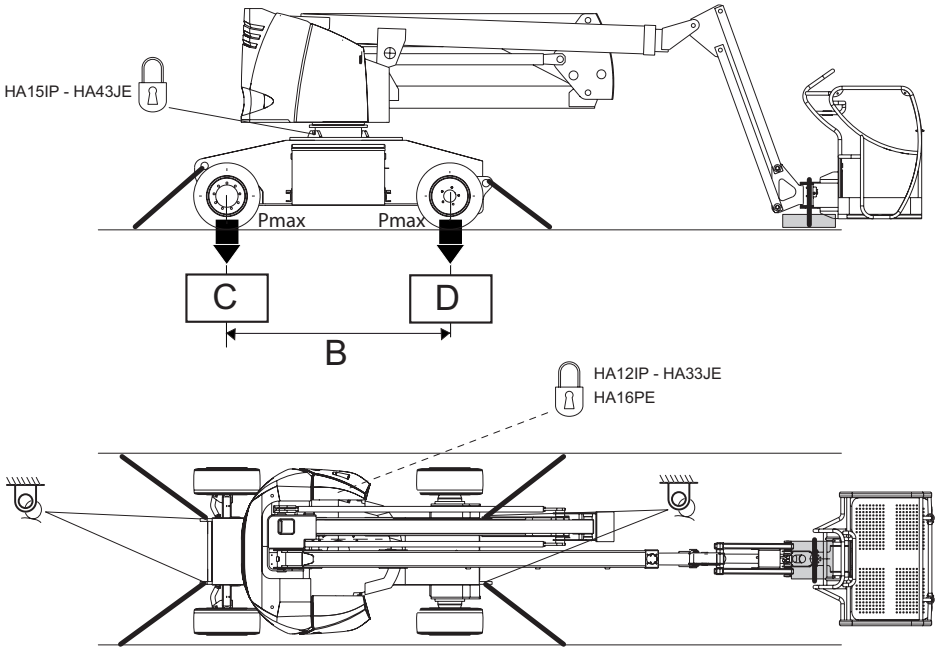
4.2 - PUTTING IN TRANSPORT POSITION

The machine must be completely stowed.

1. Check the platform is completely empty.
2. Raise the boom sufficiently.
3. Depending on the configuration of the machine, engage the transport position selector (13) to the right.
4. Lower the boom without forcing (for fear of damaging the platform).
5. Secure the machine to the tie down points provided (See Figure below).
6. Block the turntable with the rotation stop pin located under the turntable.

Do not transport the machine if the turntable is not locked.

For : HA12IP - HA33JE - HA15IP - HA43JE



Loading characteristics

Marking	Description	HA12IP - HA33JE	HA15IP - HA43JE
B	Lateral distance between the wheels(1).	1,80 m(5 ft10 in)	2,00 m(6 ft6 in)
C	Front wheel ground pressure((1.))	10,4 daN/cm² (2,13 lbf/sq.ft)	8,6 daN/cm² (1,76 lbf/sq.ft)
D	Rear wheel ground pressure((1.))	10,4 daN/cm² (2,13 lbf/sq.ft)	8,6 daN/cm² (1,76 lbf/sq.ft)
	Anchorage point		
	Turntable rotation locking		

(1.) Check the technical data in the technical characteristics

4.3 - UNLOADING

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

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

1. Unlock the turntable rotation locking pin.
2. Remove the tie downs.
3. Start the machine.

4.4 - WARNING

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

To reinstate the system, lift the jib a few centimetres from the ground control box.

If the machine was transported in the transport position :

Push the transport position selector (13) to the left to set the machine to operating position.

To unload the machine, select low driving speed .

Do not travel down the ramp at a fast speed.

4.5 - STORAGE

The machine must always be powered up when it is unfolded so that the security systems are active.

This means that the machine must be parked in stowed position.

The boom may be raised but it cannot be telescoped.

We strongly advise you not to store or immobilize the machine unfolded to avoid jeopardising the safety of people and property.

1 - Main characteristics

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

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

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

HAULOTTE® has a continuous improvement policy in place for its product range ; Given this policy, The Company reserves the right to modify their product technical characteristics without notice.

The hand and feet vibration and noise level values indicated in the technical characteristics tables are obtained in the following conditions :

- **The maximum quadratic mean value weighted as an acceleration frequency and the total value of the vibrations to which the hand-arm system is exposed have been measured on the products by simulating a cycle representative of normal use. The values meet the requirements of the 2006/42/CE machine directive.**
- **For electric machines, the sound power level is measured at the drive station under the conditions described by the 2006/42/CE machine directive.**
- **For machines equipped with internal combustion engines, the noise level guarantees (LWA displayed on the product) and is measured in accordance with the method and the conditions described in Appendix III, Part B, Method 1 and 0 of the 2000/14/CE European directive.**

G - Technical specifications

For HA12IP - HA33JE - Technical specifications

Machine	HA12IP		HA33JE	
Characteristics	Metric	Imperial	Metric	Imperial
Overall width of machine	1,35 m	(4 ft5 in)	1,35 m	(4 ft5 in)
Maximum ground clearance	0,15 m	(0 ft5 in)	0,15 m	(0 ft5 in)
Transport height	2,00 m	(6 ft6 in)	2,00 m	(6 ft6 in)
Transport length	5,45 m	(17 ft10 in)	5,45 m	(17 ft10 in)
Maximum working height	12,00 m	(39 ft4 in)	12,00 m	(39 ft4 in)
Maximum platform height	10,00 m	(32 ft9 in)	10,00 m	(32 ft9 in)
Maximum work radius	6,63 m	(21 ft9 in)	6,63 m	(21 ft9 in)
Turntable rotation	355 °			
Jib working range	+70° / - 70°			
Platform length	0,80 m	(2 ft7 in)	0,80 m	(2 ft7 in)
Platform width	1,20 m	(3 ft11 in)	1,20 m	(3 ft11 in)
Outer turning radius	2,85 m	(9 ft4 in)	2,85 m	(9 ft4 in)
Inner turning radius	2,50 m	(8 ft2 in)	2,50 m	(8 ft2 in)
Tilt CE-AS compliant machines	3 °			
Rated slope ANSI-CSA compliant machines			0 °	
Slope warning ANSI-CSA compliant machines			5 °	
Maximum wind speed allowed	45 km/h	(28 mph)	45 km/h	(28 mph)
Total weight	5900 kg	(13007 lb)	5900 kg	(13007 lb)
Maximum platform load	230 kg	(507 lb)	230 kg	(507 lb)
Maximum number of people on the platform	2			
Engine type	Electric			
Hydraulic oil tank capacity	30 l	(7.9 gal US)	30 l	(7.9 gal US)
Battery types	Standard : Semi traction Option : Traction			
Battery voltage	48 V			
Battery capacity	Standard : 345 Ah Option : 360 Ah			
Maximum climbable slope	25 %			
Tyre type and/ or size	7.00" - 12"		7.00" - 12"	
Maximum ground pressure on hard ground	10,4 daN/cm²	2,13 lbf/sq.ft	10,4 daN/cm²	2,13 lbf/sq.ft
Maximum ground pressure on soft ground	7,2 daN/cm²	1,47 lbf/sq.ft	7,2 daN/cm²	1,47 lbf/sq.ft
Micro drive speed	0,9 km/h	(0,56 mph)	0,7 km/h	(0,4 mph)
Low drive speed	2,2 km/h	(1,37 mph)	2,3 km/h	(1,4 mph)
High drive speed	4,5 km/h	(2,8 mph)	5,0 km/h	(3,1 mph)
Hand vibration	<2,5 m/s²	(98 in/s²)	<2,5 m/s²	(98 in/s²)
Feet vibration	<0,5 m/s²	(19 in/s²)	<0,5 m/s²	(19 in/s²)
Noise emission level	< 70 dB (A)			
Manual lateral force at platform	CE-AS compliant machines : 400 N - 90 lbf		ANSI-CSA compliant machines : 666 N / 150 lbf	

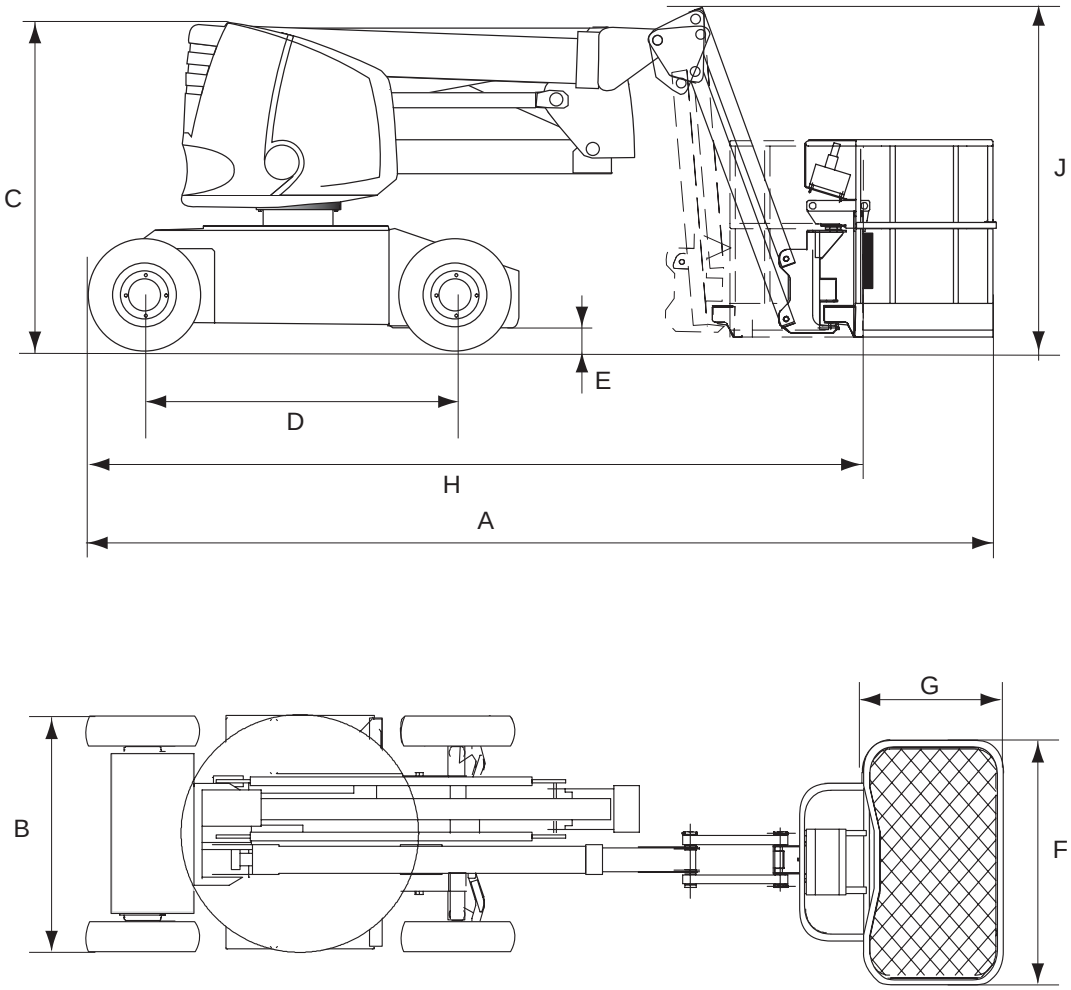
G - Technical specifications

For HA15IP - HA43JE - Technical specifications

Machine	HA15IP		HA43JE	
Characteristics	Metric	Imperial	Metric	Imperial
Overall width of machine	1,50 m	(4 ft11 in)	1,50 m	(4 ft11 in)
Maximum ground clearance	0,15 m	(0 ft5 in)	0,15 m	(0 ft5 in)
Transport height	2,10 m	(6 ft11 in)	2,00 m	(6 ft6 in)
Transport length	6,60 m	(21 ft7 in)	6,60 m	(21 ft7 in)
Maximum working height	15,00 m	(49 ft2 in)	15,00 m	(49 ft2 in)
Maximum platform height	13,00 m	(42 ft7 in)	13,00 m	(42 ft7 in)
Maximum work radius	8,45 m	(27 ft8 in)	8,45 m	(27 ft8 in)
Turntable rotation	350 °			
Jib working range	+70° / - 70°			
Platform length	0,80 m	(2 ft7 in)	0,80 m	(2 ft7 in)
Platform width	1,20 m-1,50 m	(3 ft11 in)-(4 ft11 in)	1,20 m-1,50 m	(3 ft11 in)-(4 ft11 in)
Outer turning radius (without retracted axle adjustment)	3,70 m	(12 ft1 in)	3,70 m	(12 ft1 in)
Inner turning radius (with axles retracted)	1,70 m	(5 ft6 in)	1,70 m	(5 ft6 in)
Tilt CE-AS compliant machines	3 °			
Rated slope ANSI-CSA compliant machines			0 °	
Slope warning ANSI-CSA compliant machines			5 °	
Maximum wind speed allowed	45 km/h	(28 mph)	45 km/h	(28 mph)
Total weight	7300 kg	(16094 lb)	7300 kg	(16094 lb)
Maximum platform load	230 kg	(507 lb)	230 kg	(507 lb)
Maximum number of people on the platform	2			
Engine type	Electric			
Hydraulic oil tank capacity	30 l	(7.9 gal US)	30 l	(7.9 gal US)
Battery types	Standard : Semi traction Option : Traction			
Battery voltage	48 V			
Battery capacity	Standard : 345 Ah Option : 360 Ah			
Maximum climbable slope	25 %			
Tyre type and/ or size	23.10" - 12"			
Maximum ground pressure on hard ground	8,6 daN/cm²	1,76 lbf/sq.ft	8,6 daN/cm²	1,76 lbf/sq.ft
Maximum ground pressure on soft ground	6,3 daN/cm²	1,29 lbf/sq.ft	6,3 daN/cm²	1,29 lbf/sq.ft
Low drive speed	2,3 km/h	(1,4 mph)	2,3 km/h	(1,4 mph)
High drive speed	5 km/h	(3,11 mph)	4,5 km/h	(2,8 mph)
Hand vibration	<2,5 m/s²	(98 in/s²)	<2,5 m/s²	(98 in/s²)
Feet vibration	<0,5 m/s²	(19 in/s²)	<0,5 m/s²	(19 in/s²)
Noise emission level	< 70 dB (A)			
Manual lateral force at platform	CE-AS compliant machines : 400 N - 90 lbf		ANSI-CSA compliant machines : 666 N / 150 lbf	

2 - Overall dimensions

General diagram HA12IP - HA33JE

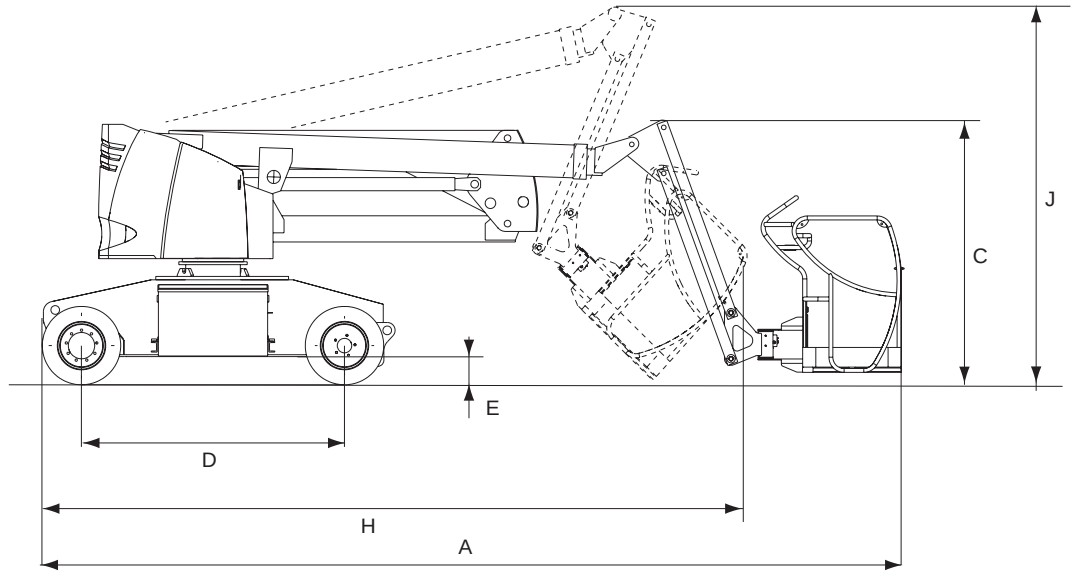


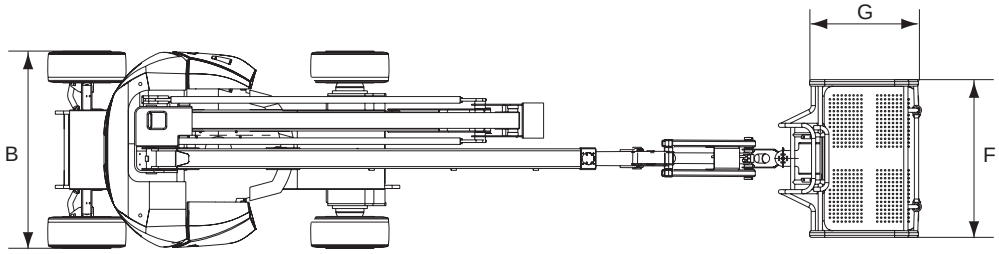
Overall dimension specifications

Marking	HA12IP - HA33JE	
	Mètre	Feet inch
A	5,45	17 ft 10 in
B	1,35	4 ft 5 in
C	2	6 ft 7 in
D	1,80	5 ft 10 in
E	0,15	0 ft 5 in
F x G	1,20 x 0,80	3 ft 11 in x 2 ft 7 in
J	2,00	6 ft 7 in

G - Technical specifications

General diagram HA15IP - HA43JE





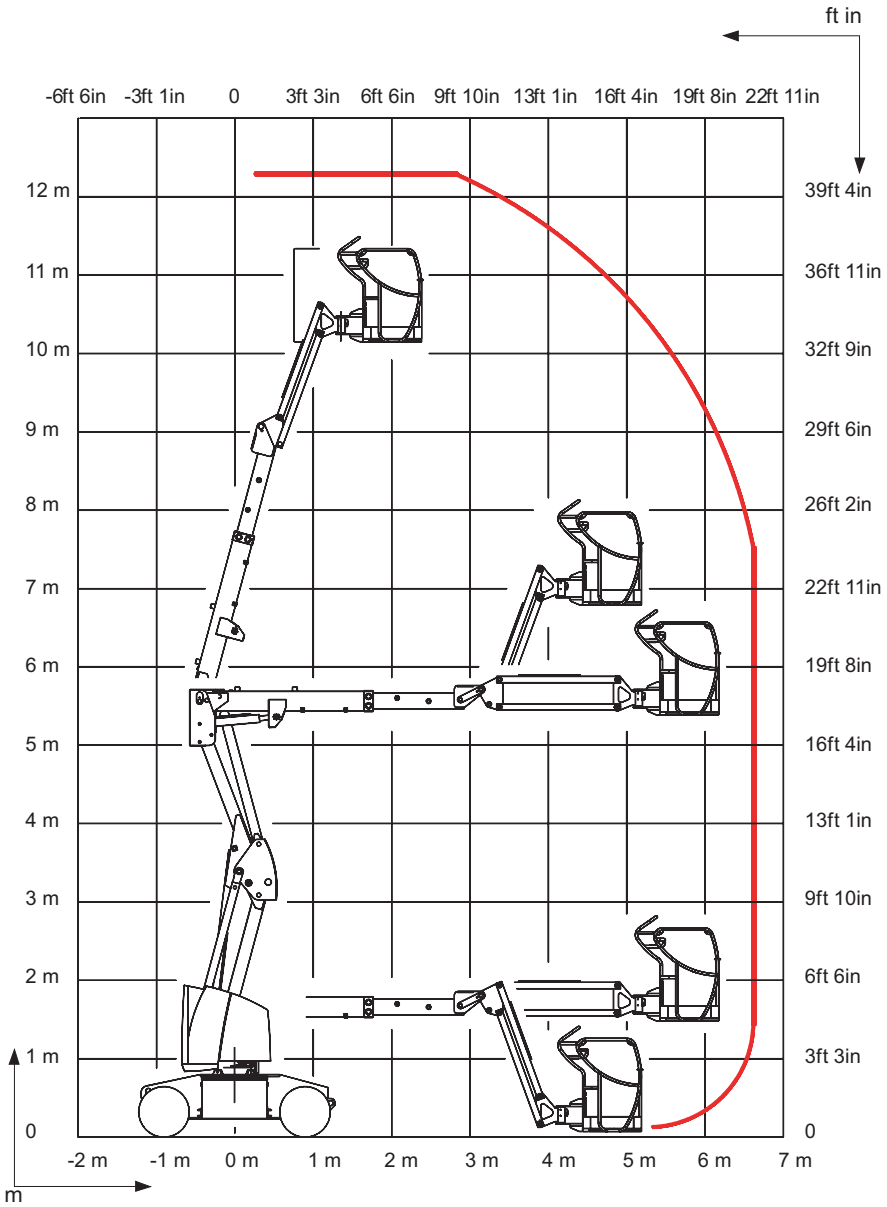
Overall dimension specifications

Marking	HA15IP - HA43JE	
	Mètre	Feet inch
A	6,60	21 ft 7 in
B	1,50	4 ft 11 in
C	2,10	6 ft 11 in
E	0,15	0 ft 5 in
F x G	1,20/1,50 x 0,80	3 ft 11 in / 4 ft 11 in x 2 ft 7 in
J	2,10	6 ft 11 in

3 - Working area / Range of motion

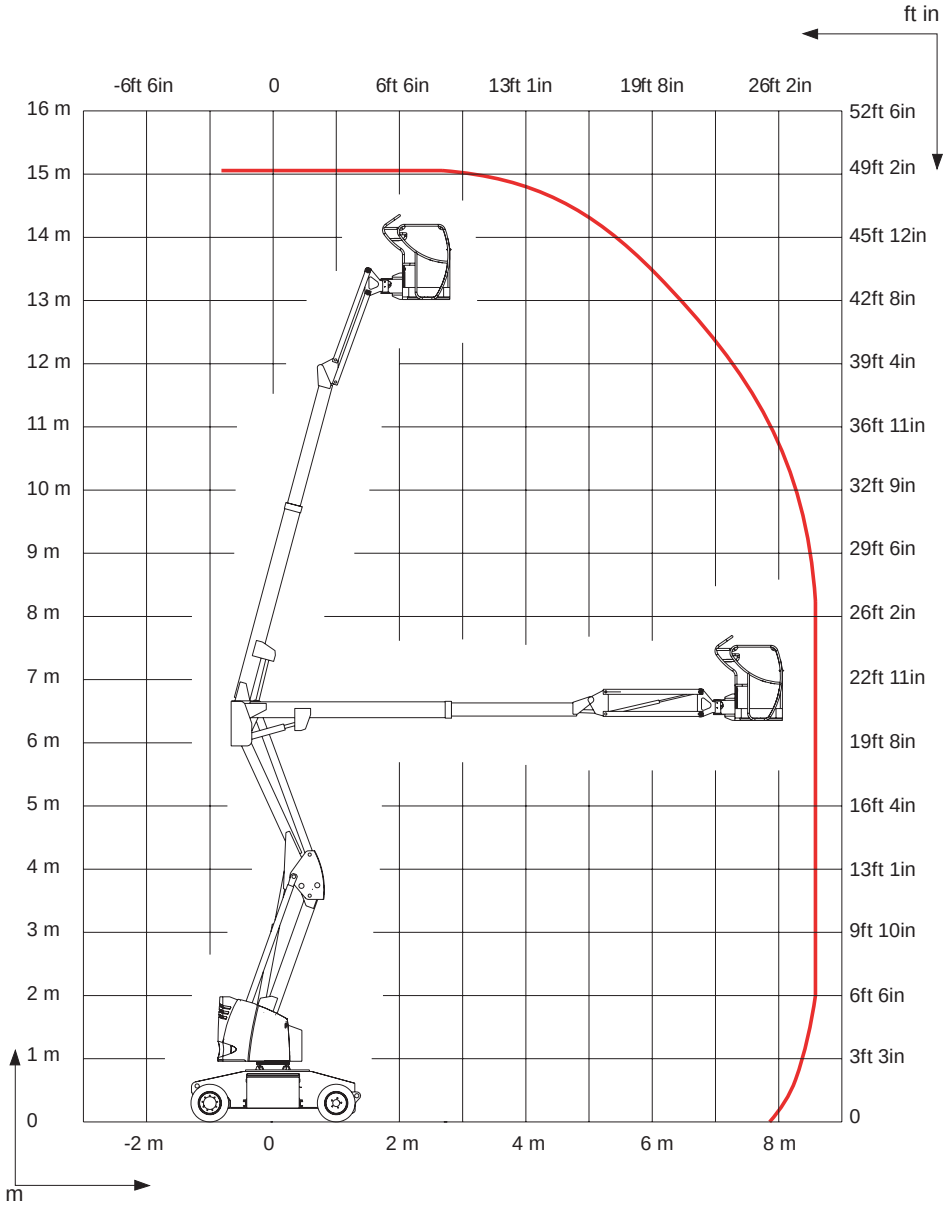
3.1 - MACHINE HA12IP - HA33JE

Working area / Range of motion



3.2 - MACHINE HA15IP - HA43JE

Working area / Range of motion



4 - AS - CE standard specificities

The following tests must be performed after :

- A major technical intervention.
- An accident due to major component failure on the machine.

• The following tests must be performed by a qualified person in secure conditions.

• The results must be fully recorded.

To avoid the machine tipping over, it must be secured during the test (by a chain or anchorage point).

4.1 - OVERLOAD TEST

The overload test is performed with 125 % of the nominal load. See paragraph 1.12.3 of the AS1418.10 standard for test details.

Load table

Machine	Test load	
	Pound (lb)	Kilogramme (kg)
HA12IP	634	287,5
HA15IP	634	287,5

The machine must not show any signs of permanent distortion.

Tests are performed by a qualified person under optimal conditions and results must be fully recorded.

4.2 - FUNCTIONAL TEST

Functional tests have confirmed the following: :

- The machine has performed all movements without jerking, while carrying the nominal load.
- All security systems are operating correctly.
- Maximum authorized operating speeds are not exceeded.

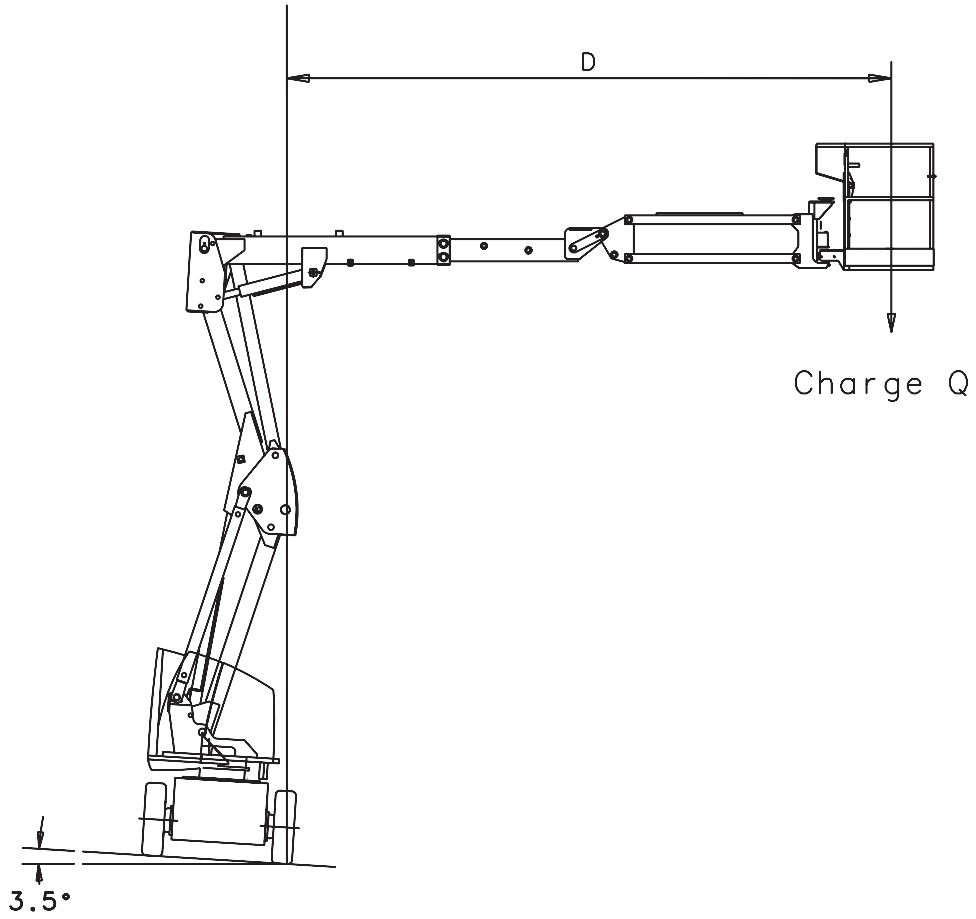
4.3 - STABILITY TEST

The stability test proves that the machine is stable in an unfavourable position. The moment when the machine tips is calculated by combining loads in the machine's most unfavourable position (load W applied over distance L).

Stability table for HA12IP

	T (°)	W		L		Moment of tipping over
		Pound (lb)	Kilogramme (kg)	Feet inch (ft in)	Mètre (m)	daNm
Horizontal (1)	3,5	761	345	18-11	5,76	1992

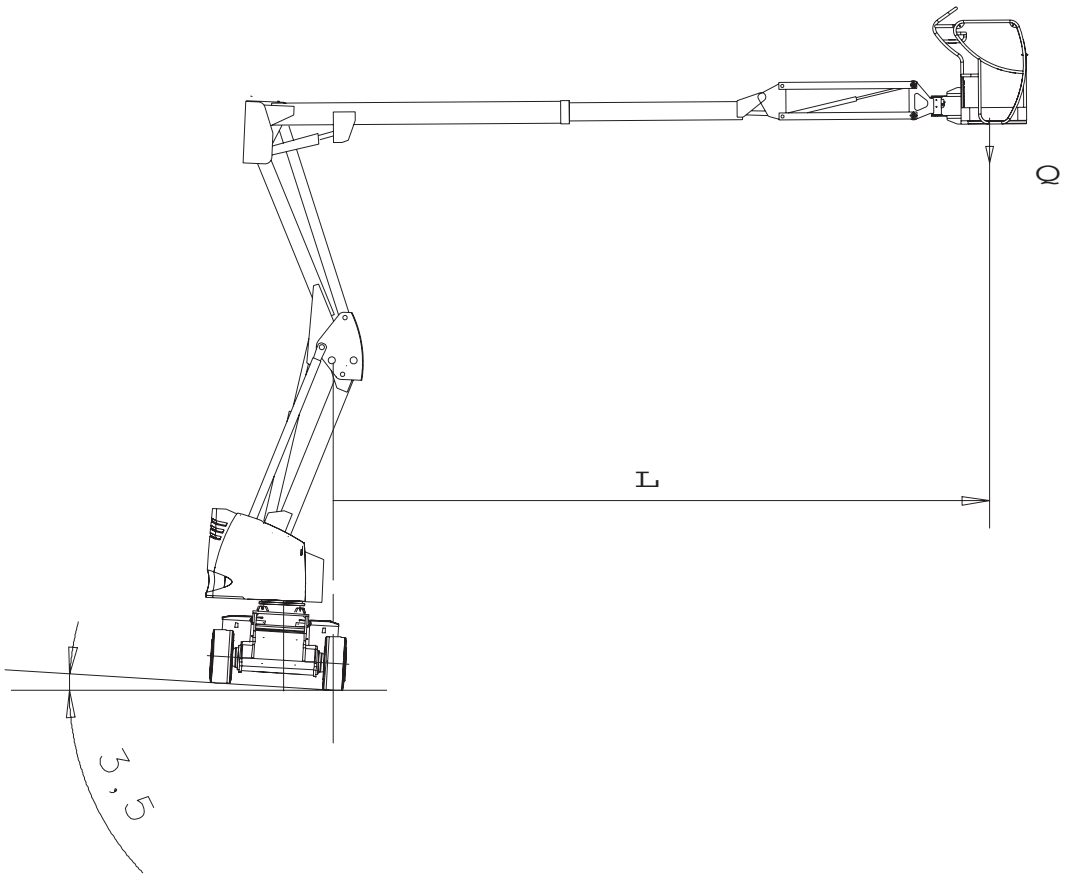
Stability for HA12IP



Stability table for HA15IP

	T (°)	W		L		Moment of tipping over
		Pound (lb)	Kilogramme (kg)	Feet inch (ft in)	Mètre (m)	daNm
Horizontal (1)	3,5	759	344	25-3	7.684	2646

Stability for HA15IP



See paragraph 1.12.2 of the AS1418.10 standard for test details.

The machine must return to a stable state without tipping over.

5 - Declaration of conformity

CE Declarations of Conformity only apply to machines that are certified for the European market.

Declaration of conformity - Electric platforms

DECLARATION DE CONFORMITE CE

(certificate of conformity with CE-directives)

Nom et adresse du constructeur ou son représentant autorisé dans la communauté :
Name and address of manufacturer or their authorised agents within the European Community

HAULOTTE Group Siège Social
La Péronnière
BP 09
42152 L'HORME Cedex
FRANCE

HAULOTTE GROUP
Usine de _____
_____
_____
_____

Déclare que la machine décrite ci-dessous :
(Declares that the technical installation described below)

Nacelle ou Plate-forme mobile élévatrice de personnes
(Elevating work Platform)

Machine au nom commercial *(Machine with the commercial name)* ____,
Conforme au type *(in compliance with the type)* ____
Numéro de série *(Serial number)*: ____

Se conforme aux dispositions de la directive machine 2006/42/CE.
(Conforms to the provisions set out in the EC Machinery Directive 2006/42/EC)

N° de certificat *(Certificate no)*: ____ ____ ___ __ __ ____

Cette machine est identique au modèle ayant fait l'objet d'un examen CE de type par l'organisme notifié :
(This machinery is identical to the model that was tested in an EC type-examination by the appointed body)

Organisme certifié (*Authorised certification body*) :

_____ **n°** ___
_____
_____

- Se conforme également aux dispositions de la directive 2004/108/CE concernant la compatibilité électromagnétique.
  (is in accordance with the provisions contained in EEC Directive no. 2004/108/CE on electromagnetic compatibility)
- Se conforme aux principales exigences des normes harmonisées suivantes : EN 280 et EN 954.
  (also fulfils the principal requirements of the following harmonised standards: EN 280 and EN 954)

Fait à L'Horme le : ……

_____
Directeur Division _____ */Managing Director,* _____ *Division*

Signature

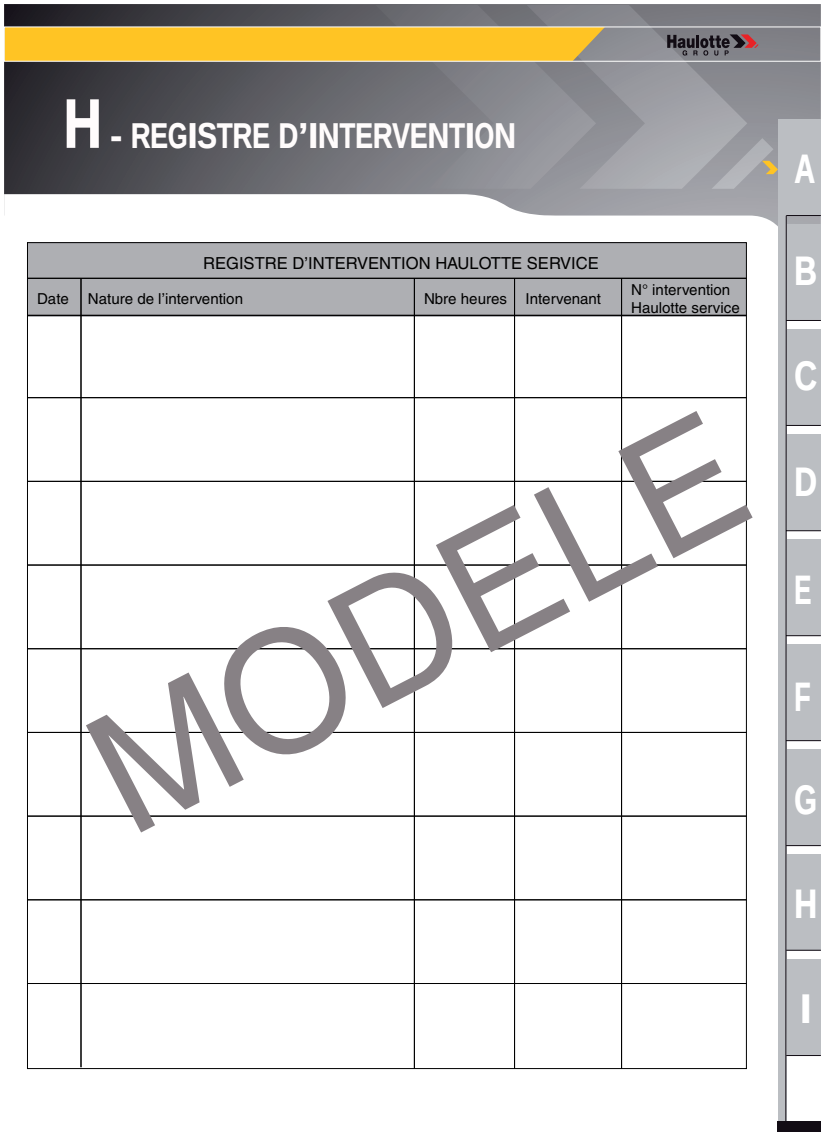
Cette déclaration est conforme aux exigences de l'annexe II-a de la directive 2006/42/CE. Toute modification de la machine décrite ci-dessus rendrait cette déclaration caduque.
This declaration conforms with the requirements of annex II-A of the directive 2006/42/EEC.Any modification to the above described machine violates the validity of this declaration.

G - Technical specifications

1 - Intervention register

In order to benefit from the HAULOTTE® guarantee, each maintenance or repair operation must be entered in the INTERVENTION REGISTER, which can be found at the end of the maintenance book delivered with your machine.

Intervention register



H - REGISTRE D'INTERVENTION

REGISTRE D'INTERVENTION HAULOTTE SERVICE				
Date	Nature de l'intervention	Nbre heures	Intervenant	N° intervention Haulotte service

H - Intervention register