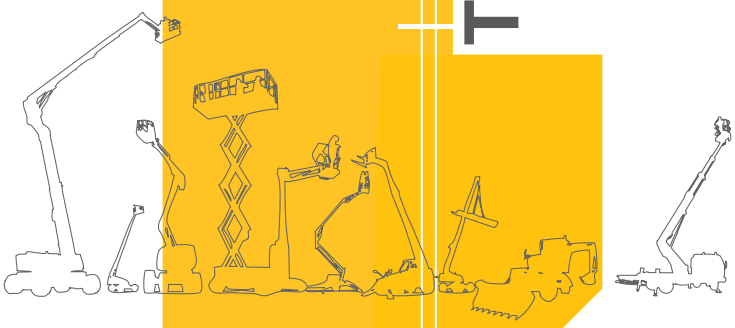
TELESCOPIC HANDLERS



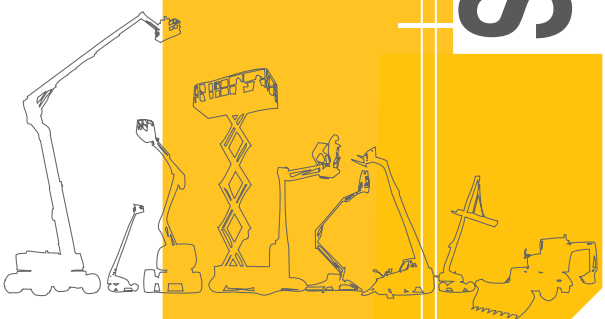
OPERATOR MANUAL

TELESCOPIC HANDLERS

HTL4014 - HTL4017

2420331560 E 04 07 GB

SUMMARY



You have just bought a

HAULOTTE® telescopic handler

we would like to thank you for your business!

1 - Operator Manual

IAs indicated on the delivery slip, this manual is one of the documents in the carry-on case supplied upon delivery of your telescopic handler.

In order to guarantee you full satisfaction, you must scrupulously follow the operating instructions contained in this manual.

We would like to draw your attention in particular to 2 essential points.

- Compliance with the safety precautions (machine, operation, environment)
- Use within the equipment performance limits.

2 - After-Sales Service

Our HAULOTTE Services® after-sales service is at your disposal, both during and beyond the warranty period, to provide you with the service you require.

- Contact our After-Sales service, indicating the exact machine type and its serial number.
- When ordering any consumables or spare parts, please use this manual and the Haulotte Essential catalogue to receive original spare parts, the only guarantee of interchangeability and perfect operation.
- In the event of malfunctions or incidents involving a HAULOTTE® machine, contact HAULOTTE® immediately even if no material or bodily damage is observed and we will intervene as soon as possible.

3 - Compliance

We remind you that HAULOTTE® machines comply with the provisions of thedirectives currently applicable to this type of machine.

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

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

A - GENERAL SAFETY

1 - General Precautions

The operator manual is intended for HAULOTTE® machine operators. .

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

This manual contains the operator instructions provided by HAULOTTE® for using the machines efficiently and safely.

The operator manual must be kept in the cab in its storage case. This manual must be made available to each operator and kept in good condition. Additional copies can be ordered from HAULOTTE Services®.

2 - Hazard Classification

2.1 - SYMBOLS USED

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

Symbol meanings

Symbol	Meaning
	Risk of injury or death (work safety)
	Risk of material damage (work quality)
	Prohibition relating to work safety and quality
	No identified risk but a reminder of 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

2.2 - LABEL COLORS

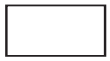
The potential dangers and specific regulations are indicated on the machine by labels and identification plates.

.

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

Familiarize yourself with the labels and their respective color codes.

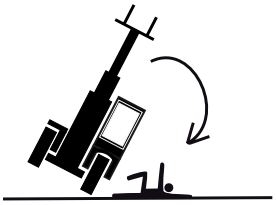
Label color code

Label	Color	Meaning
	Red	Potentially fatal danger
	Orange	Risk of serious injury
	Yellow	Risk of material damage and/or minor injury
	Others	Additional technical information

3 - Operation Safety

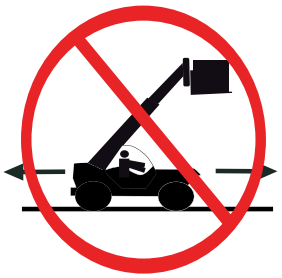
3.1 - TIP-OVER HAZARDS

Never use an accessory without having checked the HAULOTTE® accessory load capacity chart installed on the telehandler.

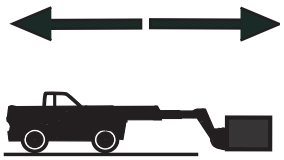


- Do not exceed the rated lifting capacity.
- Check that the ground can support the machine..

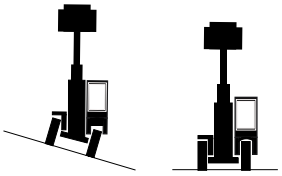
Do not drive at high speed with the boom raised.



When driving at high speed, use only front-wheel steering (if the steering mode can be selected).



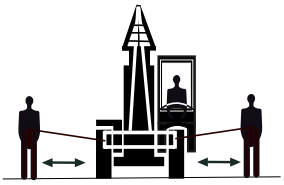
Do not raise the boom unless the chassis is level (0 degrees).



Do not level the machine with the boom or the accessory above 30°.

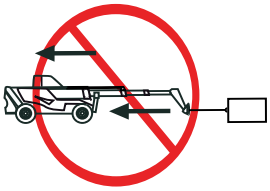
A - GENERAL SAFETY

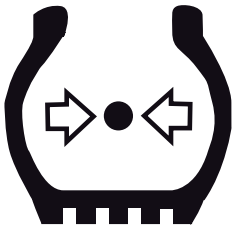
- Transport the load as low as possible. Attach the suspended loads to restrict movement.
- Comply with the capacity charts displayed in the cab.
- The weight of all riggings (slings, etc…) must be included as part of theload weight.
- Start, travel, turn and stop slowly to prevent the load from tipping over.
- Beware of the wind. The wind can cause a suspended load to tip over and generate destabilising side forces (even withtag lines).



Do not try to use the telehandler's dumping function to return the load to horizontal position.

- Keep the heaviest part of the load closest to the attachment.
- Never drag the load. Lift it vertically.
- Maintain proper tire pressure at all times. Otherwise, the machine could tip over.





Do not ballast the tires.

- Always wear the seat belt.

Do not hang your head, your arms, your hands, your legs or any other parts of your body out of the cab.

If the telehandler starts to tip over:

- Stay in the machine.
- Keep your seat belt fastened.
- Hold on tightly.
- Lean away from the point of impact.

Trying to escape from a tipping machine could result in death or serious injury.

3.2 - ELECTRICAL HAZARDS

- This machine is not insulated and does not offer any protection in the event of proximity to or contact with electrical current.

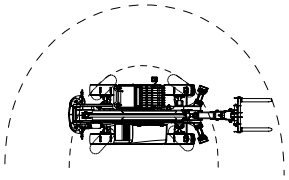
Never operate the handler in an area where overhead power lines, overhead or underground cables or other power sources may exist without ensuring that the appropriate utility company has de-energized the lines.

- Always check for power lines before raising the boom.

A - GENERAL SAFETY

3.3 - TRAVEL HAZARDS

- The turning radii change according to the steering mode selected (2 or 4 steer wheels).
- Ensure that adequate clearance is provided for pivoting the rear tail and the front fork.



The rear offset is larger in "4 steer wheels" mode.

Look out for and avoid other personnel, machinery and vehicles in the area. Use a spotter in the event of bad visibility.

- Before moving the machine, ensure that the path is clear and sound the horn.
- When driving, retract the boom and keep the boom and the attachment as low as possible.
- Maintain visibility of the mirrors and optimal visibility of the path of travel.
- Always look in the direction of travel.
- Always check boom clearances carefully before driving underneath overhead obstacles. Position the attachment or the load so as to clear the obstacles.

3.4 - LOAD FALLING HAZARDS

Never suspend loads from the forks or from any other parts of the fork carriage.

Do not drill holes in the fork(s).

Do not heat or solder the forks.

The forks must be centred under the load and on the fork carriage and spaced apart as far as possible.

3.5 - MECHANICAL ATTACHMENT LOCKING DEVICES

- Ensure that the person-lifting platform is securely fastened to the accessory locking device. Follow the installation procedure set out in Section E.
- Ensure that the machine is placed on a firm and level surface.
- Activate the parking brake. Blocking the wheels is also recommended.
- Level the handler both sideways (chassis swaying) and lengthways (accessory tilt).
- Ensure that there is no-one under the accessory.
- Do not lift or transport anyone in the bucket or on the forks..

Never tilt the platform forward, rearward or sway the machine when the platform is occupied. Serious injury or death could result.

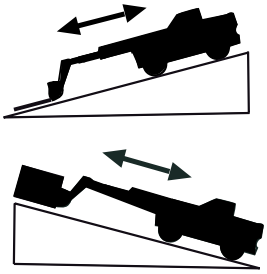
Always ensure that the fork carriage or the attachment is correctly positioned on the boom and is secured by a lock pin and a retainer pin. Incorrect installation could result in the fork carriage / attachment / load disengaging, causing death or serious injury.

A - GENERAL SAFETY

3.6 - DRIVING HAZARDS ON SLOPES

To maintain sufficient traction and braking capabilities, travel on slopes as follows:

- When the machine is unloaded, the rear of the machine is the "heavy end". Drive with the forks pointed downhill.
- When it is loaded, the front of the machine is the "heavy end". Drive with the forks pointed uphill.
- To avoid the machine racing on slopes, downshift to a lower gear and use the service brake as necessary to maintain a slow speed.



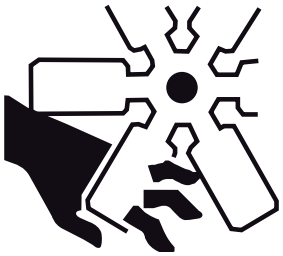
Do not shift to neutral to avoid coasting downhill.

- Avoid excessively steep slopes or unstable surfaces. To avoid tipping over, do not drive across excessively steep slopes under any circumstances.
- Avoid turning on a slope. Never engage "inching" or shift to "Neutral" when going downhill.

Do not park on a slope without having blocked the machine wheels.

3.7 - PINCHING AND CRUSHING HAZARDS

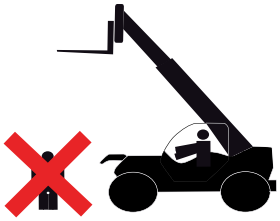
Stay clear of pinch points and rotating parts on the handler.



Stay clear of moving parts when the engine is running.

Keep clear of the tires and the chassis or other steering parts when manoeuvring the telehandler.

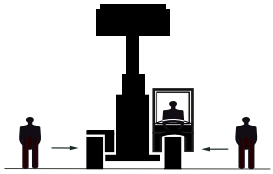
Keep clear of the boom.



Keep arms and hands clear of the attachment tilt cylinder.

Keep hands and fingers clear of the fork carriage and the forks.

Keep others away during operation.



A - GENERAL SAFETY

3.8 - FALL HAZARDS

Enter the cab using the proper hand rails and the steps provided.

Always keep 3 anchor points when entering or leaving the machine.

Never grab the control levers or the steering wheel when mounting or dismounting the machine.

Never leave the machine until the complete shutdown procedure has been performed.

Do not carry any passengers. Falling from the machine may cause death or serious injury.

3.9 - CHEMICAL HAZARDS

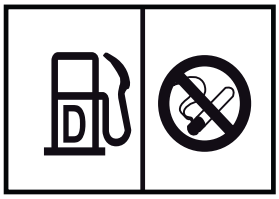
3.9.1 - Exhaust Fumes

Do not operate the machine in an enclosed area without proper ventilation.

Do not operate the machine in hazardous environments unless specifically approved by Haulotte or the site owner. Sparks produced by the electrical system or the engine exhaust can cause an explosion.

3.9.2 - Flammable Fuel

Do not fill the fuel tank or service the fuel system near a naked flame, sparks or smoking material. Engine fuel is flammable and can cause a fire and/or an explosion.



3.9.3 - Hydraulic Fluid

Do not attempt to repair or tighten any hydraulic hoses or fittings while the engine is running or when the hydraulic system is under pressure.

Do not use your hand to check for leaks; the pressurized hydraulic fluid can penetrate the skin.

Use a piece of cardboard or paper instead. Wear gloves and goggles to protect yourself from fluid splashes.

B - THE RESPONSIBILITIES OF THE PARTIES

1 - The owner's (or hirer's) responsibility

The owner (or hirer) has the obligation to inform operators of the operator manual instructions.

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.

2 - The employer's responsibility

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

The employer has the obligation to inform the operator of the local regulations. .

Forbid machine operation to anyone:

- under the influence of drugs, alcohol, ...
- subject to crises, loss of motricity, dizziness, …

3 - The trainer's responsibility

The trainer must be qualified to provide training to operators in an obstacle-free area until the trainee is able to drive and operate the machine safely.

4 - The operator's responsibility

The operator must read and understand 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 bad condition.

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 be familiar with the emergency controls and how to operate the machine in an emergency.

It must be operated by pairs of operators so that one of the operators can intervene rapidly if necessary.

- Take over the controls in the event of an accident or failure.
- Monitor and regulate the movement of machines or personnel in the work area.
- Guide the driver if necessary.

The operator has the obligation to stop using the machine in the event of malfunctions or safety problems on the machine or in the work area.

B - THE RESPONSIBILITIES OF THE PARTIES

5 - Inspection and maintenance

The inspection and maintenance table 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 manual
Pre-operation inspection	Before operation or when the operator changes	Operator	Operator	Operator manual (Section C)
Periodical preventive maintenance	At the specified intervals (250 hrs or 1 year)	Owner (or hirer)	On-site technician or qualified HAULOTTE Services® technician	Operator manual (Section H)
Periodical visit	Twice a year or, at the latest, 6 months after the last periodical visit in accordance with 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	Operator manual (Section H)

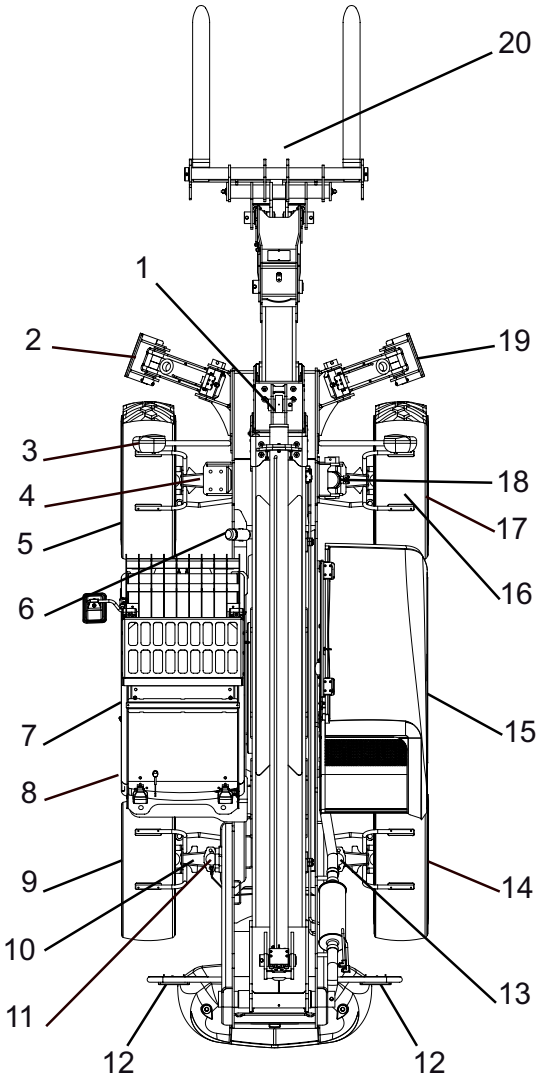
C - PRE-OPERATION AND CONTROLS

1 - Pre-operation checks and inspection

N.B.: Perform all required maintenance work before operating the unit.

Use extreme caution when checking parts that are difficult to reach. Use an approved ladder. Failure to comply with these instructions could result in death or serious injury.

- A walk-around inspection must be performed at the beginning of each work shift or at each change of operator.
- Ensure that all safety labels are legible and in place. Clean or replace as required. See "Labels" section.
- Before removing the filler plugs, wipe all dirt or grease away from the ports. If dirt enters these ports, this can severely reduce component life.
- When adding fluids, refer to Section H to determine the correct type and frequency.



C - PRE-OPERATION AND CONTROLS

Begin the walk-around inspection at item 1, as indicated below.

Continue to the right (anticlockwise, when viewed from above), checking each part in sequence.

N.B.: For each component, ensure that there are no loose or missing parts, that the components are securely fastened and that there are no visible leaks or excessive wear in addition to any other criteria mentioned. Inspect all structural elements including the attachment for detecting cracks, excessive corrosion and other damage.

1 Jib cylinders (lifting and telescopic action cylinders, compensation output, compensation input crowding) and cases :

- Pins secure, hydraulic hoses in good condition, no leaks.
- Check the tension of the extension and retraction cables and the a justment shims.
- Check the state of pads.

2 Left stabiliser and contactors: Pins secure, hydraulic hoses and cylinders in good condition, no leaks.

3 Front headlamps: Clean, in good condition and working properly.

4 Front axle: Steering cylinders in good condition, no leaks, pivot pins secure, hydraulic hoses in good condition, no leaks.

5 Wheel/Tire assembly: No loose or missing wheel nuts, inflated correctly. Check the state of the tires and their level of wear.

6 Hydraulic reservoir: Recommended fluid level on the level gauge (the lubricant must be cold); filler/breather cap securely in place and in working order.

7 Cab and Electrical system

- General appearance, no visible damage, proper capacity charts and Operator & Safety manual located in the manual holder.
- Window glass in good condition and clean.
- Gauges, switches, joystick, parking brake pedals and horn all operational.
- Check the seat belt for damage, replace it if it is frayed or the webbing is cut, the buckles are damaged or the mounting hardware is loose.
- Open the inspection flap under the cab and check that the battery cables are well secured and that there is no visible damage or corrosion.
- Check for the presence of the load labels and capacity charts.

8 Fuel tank: Check the fuel level, refill as required, the filler cap is securely fastened.

9 Wheel/Tire assembly: No loose or missing wheel nuts, inflated correctly. Check the state of the tires and their level of wear.

10 Rear axle: Steering cylinders in good condition, no leaks, hydraulic hoses in good condition, no leaks.

11 Left axle locking cylinder: Cylinders in good condition, no leaks and securely-fastened.

12 Stop and reversing lights: Clean, in good condition and working properly.

13 Right axle locking cylinder: Cylinders in good condition, no leaks and securely-fastened.

14 Wheel/Tire assembly: No loose or missing wheel nuts, inflated correctly. Check the state of the tires and their level of wear.

15 Engine compartment :

- Engine crankcase and radiator: check the levels and refill as required. Check that the radiator is clean.
- Drive belts: check their condition and replace as required.
- Air filter blockage indicator: check if it is clogged. Replace the part as required.
- Battery cables well secured, no visible damage or corrosion.
- Engine cover properly secured and locked.

16 Mirrors: Clean, in good condition and working properly.

17 Wheel/Tire assembly: No loose or missing wheel nuts, inflated correctly.

18 Dumping cylinder: Pins secure, hydraulic hoses in good condition, no leaks.

19 Right stabilizer and contactors: Pins secure, hydraulic hoses and cylinders in good condition, no leaks.

20 Attachment: correctly installed (See Section E: Attachments).

2 - Safety Stickers

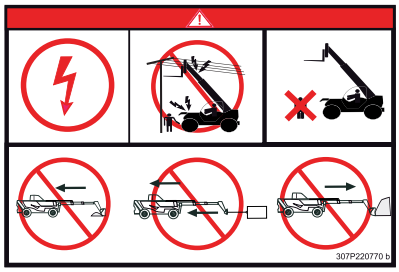
Ensure that all stickers and appropriate capacity charts are legible and in place. Clean or replace as required.

2.1 - RED LABELS

The red labels indicate a potentially fatal danger.

Common labels

R27



R28

R13

R29

Specific labels

R9

R10

C - PRE-OPERATION AND CONTROLS

2.2 - YELLOW LABELS

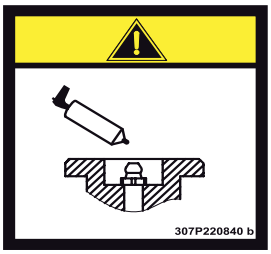
The yellow labels indicate a risk of material damage and/or minor injury.

Common labels

J3

J19

J21



J4

J20

Specific labels

J18

2.3 - OTHER LABELS

The other labels provide additional technical information

Common labels

A41

A37

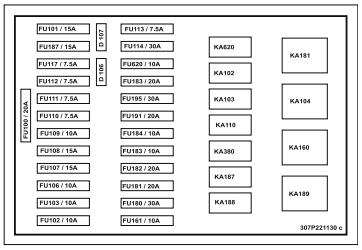
A7

A40

A46

A49

A38



A5

A27

A10

A45

A47

A50

A16

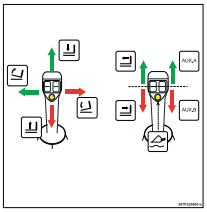
A30

A44

A48

A51

A39

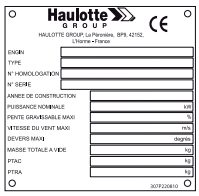


A6

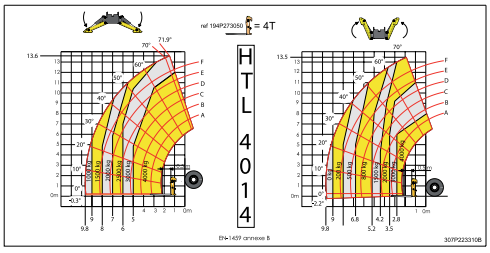
Specific labels

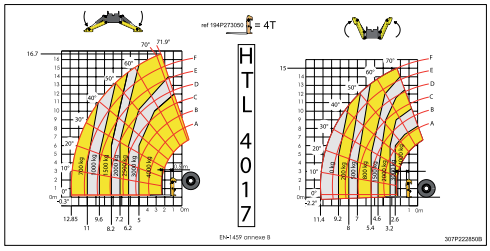
A4

A3



A42

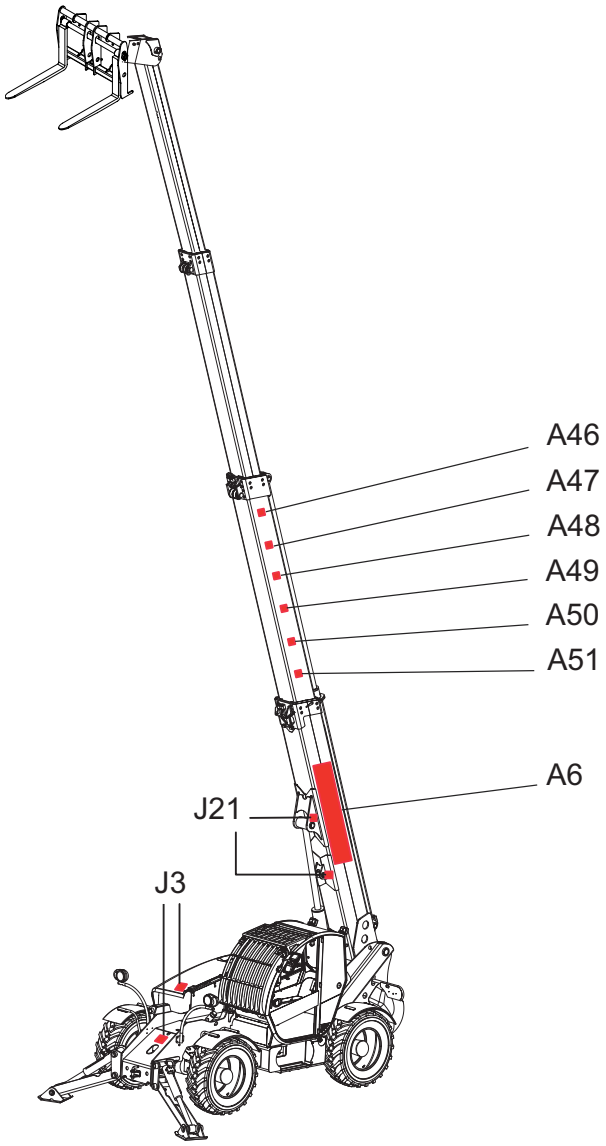




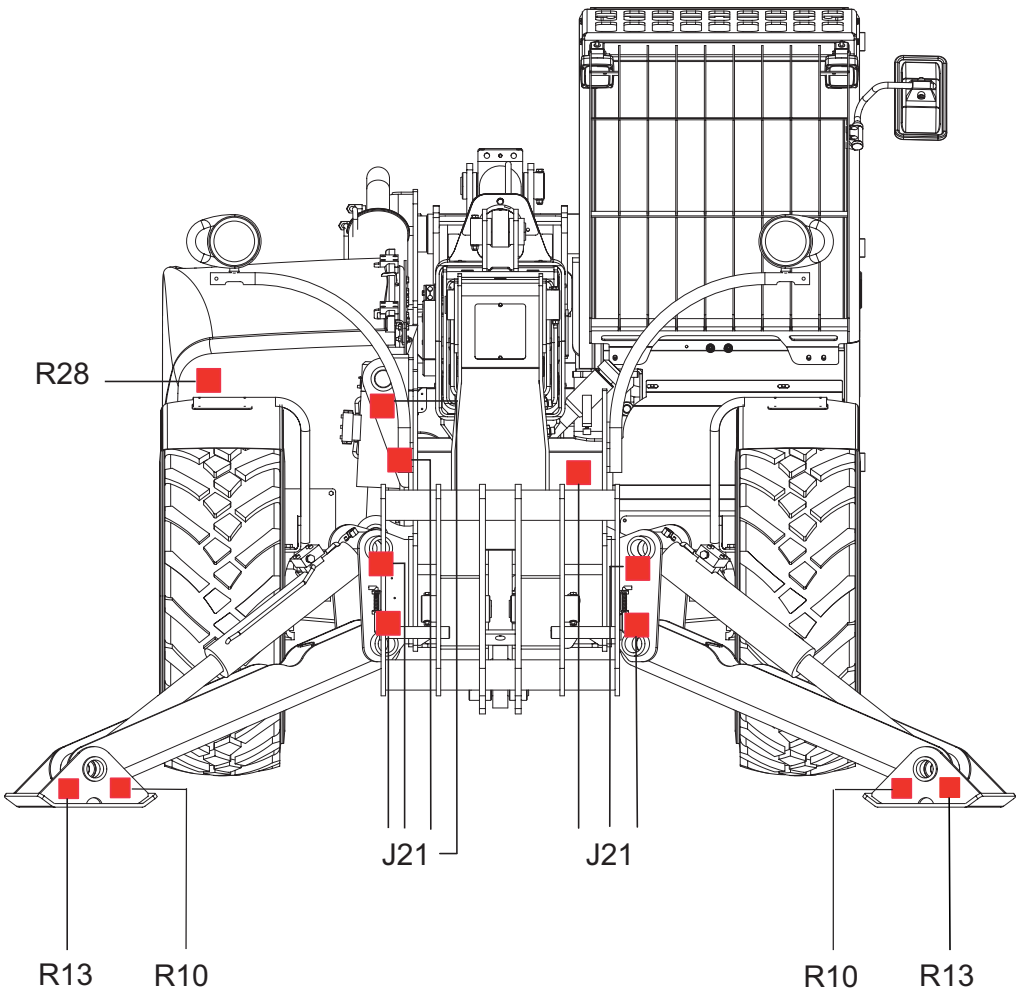
C - PRE-OPERATION AND CONTROLS

2.4 - IDENTIFICATION

Localization : isometric view

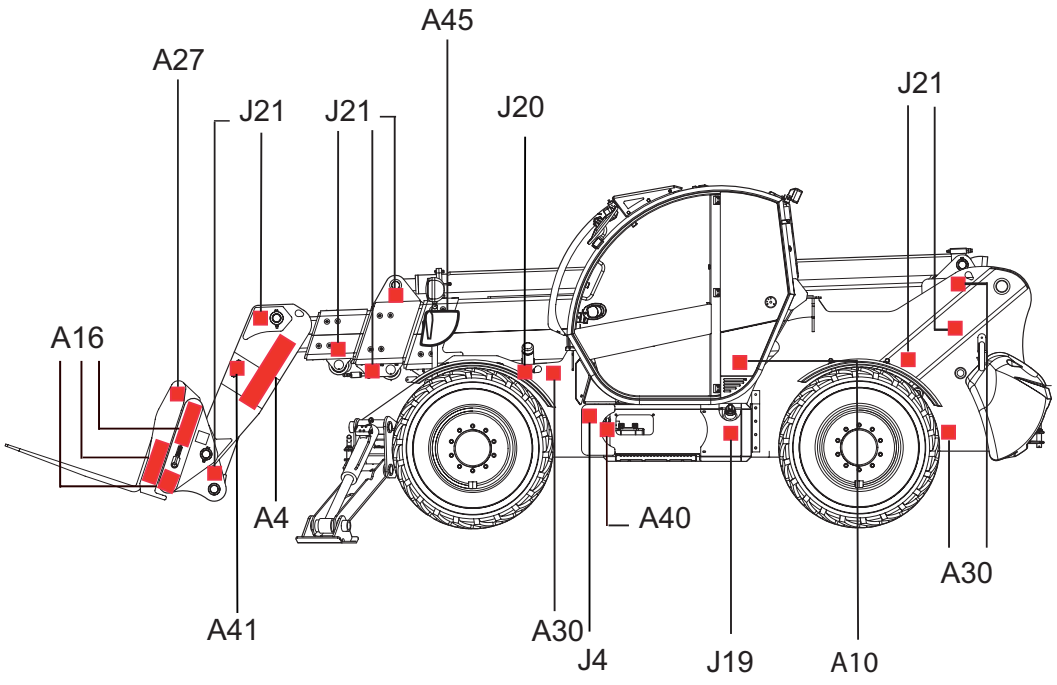


Localization : front view

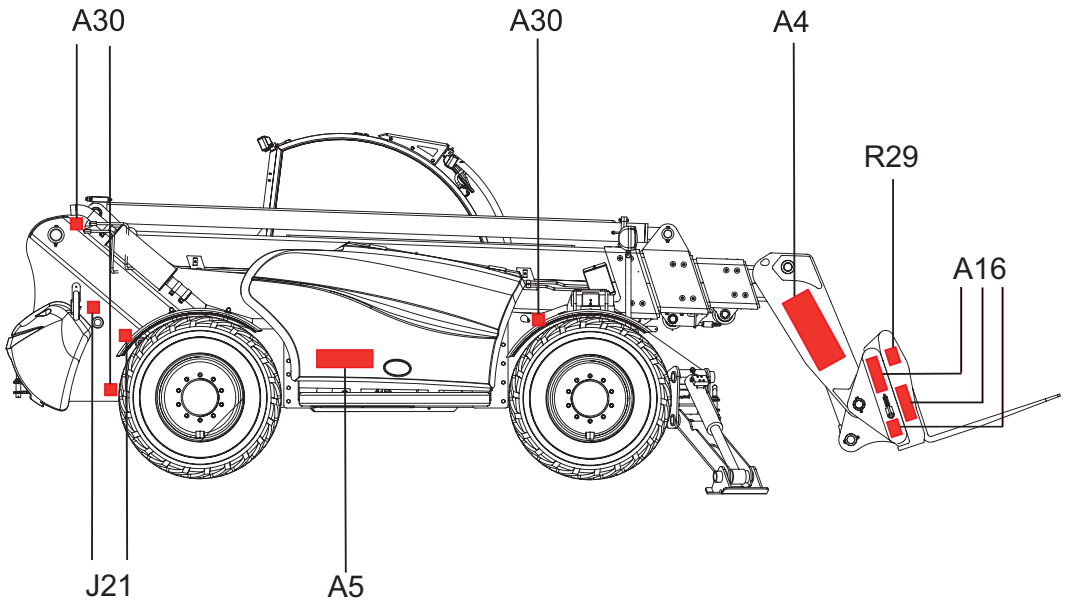


C - PRE-OPERATION AND CONTROLS

Localization : left view

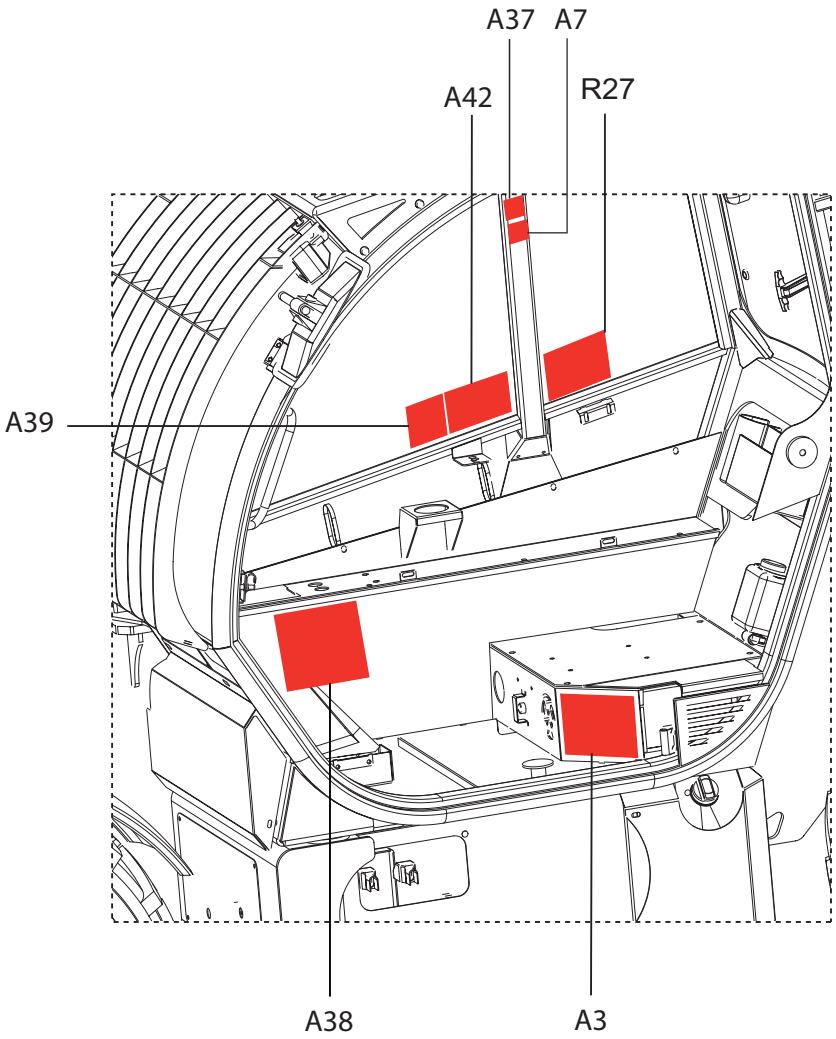


Localization : right view

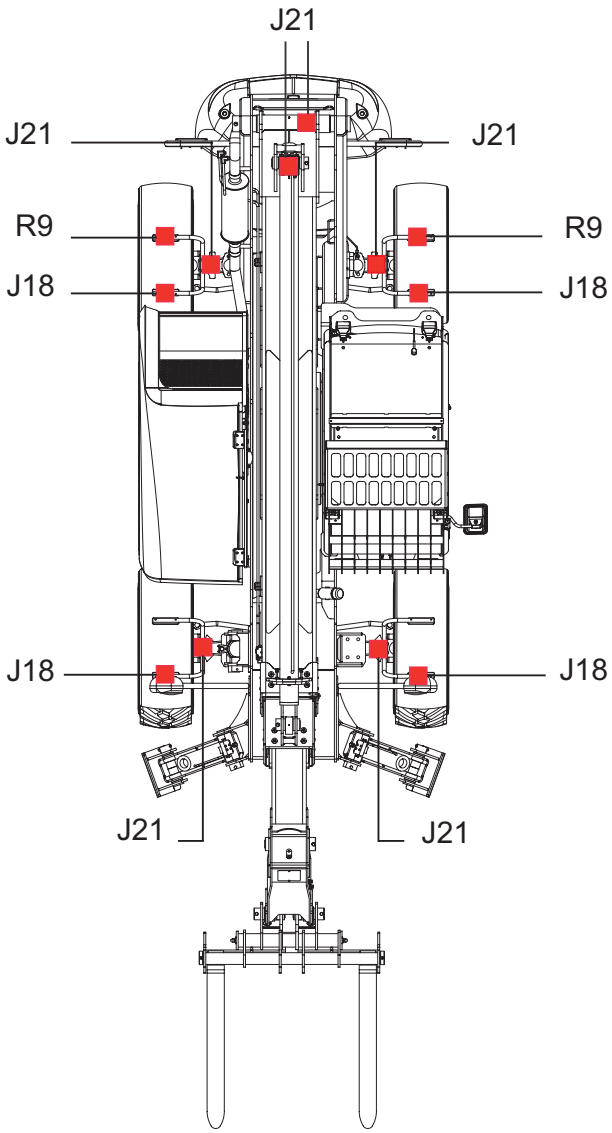


C - PRE-OPERATION AND CONTROLS

Localization : cab view

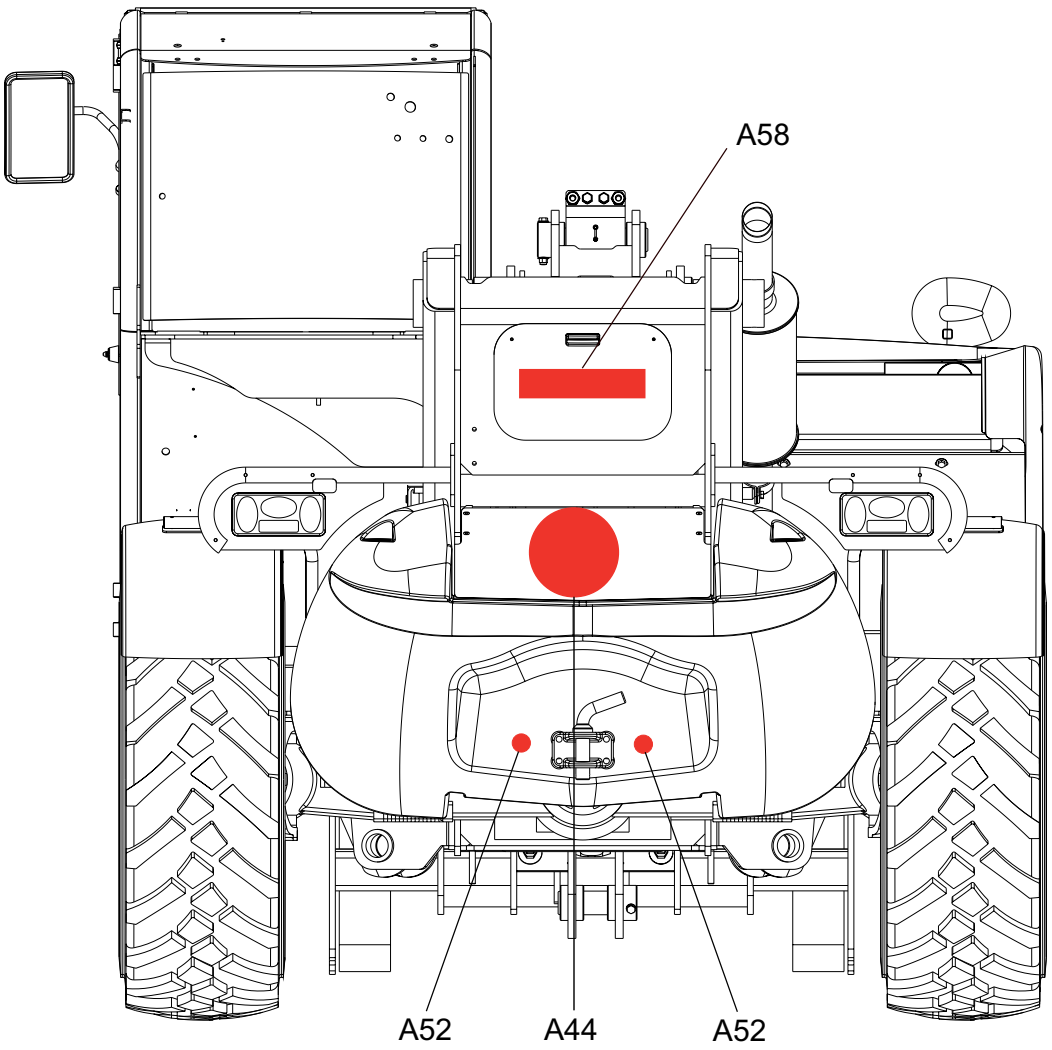


Localization : view from above



C - PRE-OPERATION AND CONTROLS

Localization : rear view



Label descriptions

Isometric view

Markings	Quantity	Description	HTL4017	HTL4014
Other	A34	Boom angle indicator	307P220900	307P220900
J3	2	Do not place your foot on the hood	307P220820	307P220820
J21	2	Lubrication point	307P220840	307P220840
A6	1	Large HAULOTTE graphic	307P217770	307P217770
A46	1	Telescoping key A	307P222610	307P222610
A47	1	Telescoping key B	307P222620	307P222620
A48	1	Telescoping key C	307P222630	307P222630
A49	1	Telescoping key D	307P222640	307P222640
A50	1	Telescoping key E	307P222650	307P222650
A51	1	Telescoping key F	307P222660	307P222660

Left view

Markings	Quantity	Description	HTL4017	HTL4014
J4	1	Do not use the machine as a solder mass	307P221090	307P221090
J19	1	Diesel tank	307P220920	307P220920
J20	1	Hydraulic oil tank	307P220870	307P220870
J21	7	Lubrication point	307P220840	307P220840
A4	1	Machine name graphic	307P221030	307P222600
A10	1	Sound power	307P220790	307P220790
A16	1	Yellow - Black adhesive tape	2421808660	2421808660
A27	1	Safe weight load	307P220910	307P220910
A30	3	Machine anchorage points	307P220830	307P220830
A40	1	Battery disconector	307P220930	307P220930
A41	1	A-B auxiliary hydraulic outputs	307P221070	307P221070
A45	1	Boom angle indicator	307P220900	307P220900

Right view

Markings	Quantity	Description	HTL4017	HTL4014
R29	1	Do not mount on the forks during elevation	307P221950	307P221950
J21	2	Lubrication point	307P220840	307P222600
A4	1	Machine name graphic	307P221030	307P222600
A5	1	Graphisme HAULOTTE petit format	307P217080	307P217080
A16	1	Yellow - Black adhesive tape	2421808660	2421808660
A30	3	Machine anchorage points	307P220830	307P220830

Front view

Markings	Quantity	Description	HTL4017	HTL4014
R10	2	Max. effort on stabilizers	307P220960	307P220960
R13	2	Foot crushing	307P220890	307P220890
R28	1	Blocking leg for lift cylinder	307P220860	307P220860
J21	7	Lubrication point	307P220840	307P220840

C - PRE-OPERATION AND CONTROLS

Cab view

Markings	Quantity	Description	HTL4017	HTL4014
R27	1	Manipulations forbidden with the machine	307P220770	307P220770
A3	1	Identification plate FRANCE	307P220810	307P220810
		Identification plate GERMANY	307P222040	307P222040
		Identification plate SPAIN	307P222050	307P222050
		Identification plate ENGLAND	307P222670	307P222670
		Identification plate ITALY	307P222030	307P222030
A7	1	Read the operator manual	307P220740	307P220740
A38	1	Fuse amperage	307P221130	307P221130
A39	1	Joystick movements	307P220800	307P220800
A42	1	Load diagram	307P222850	307P223310
A43	1	Wear the seat belt	307P220780	307P220780

Above view

Markings	Quantity	Description	HTL4017	HTL4014
R9	2	Load on the wheel	307P220950	307P220950
J18	4	Tire pressure	307P220880	307P220880
J21	6	Lubrication point	307P220840	307P220840

Rear view

Markings	Quantity	Description	HTL4017	HTL4014
A44	1	Speed limit 25 km/h	307P216110	307P216110
A52	2	Reflector	2820300980	2820300980
A58	1	Registration plate location(1)		

(1) Depending on the local and governmental regulations in force in the country of use.

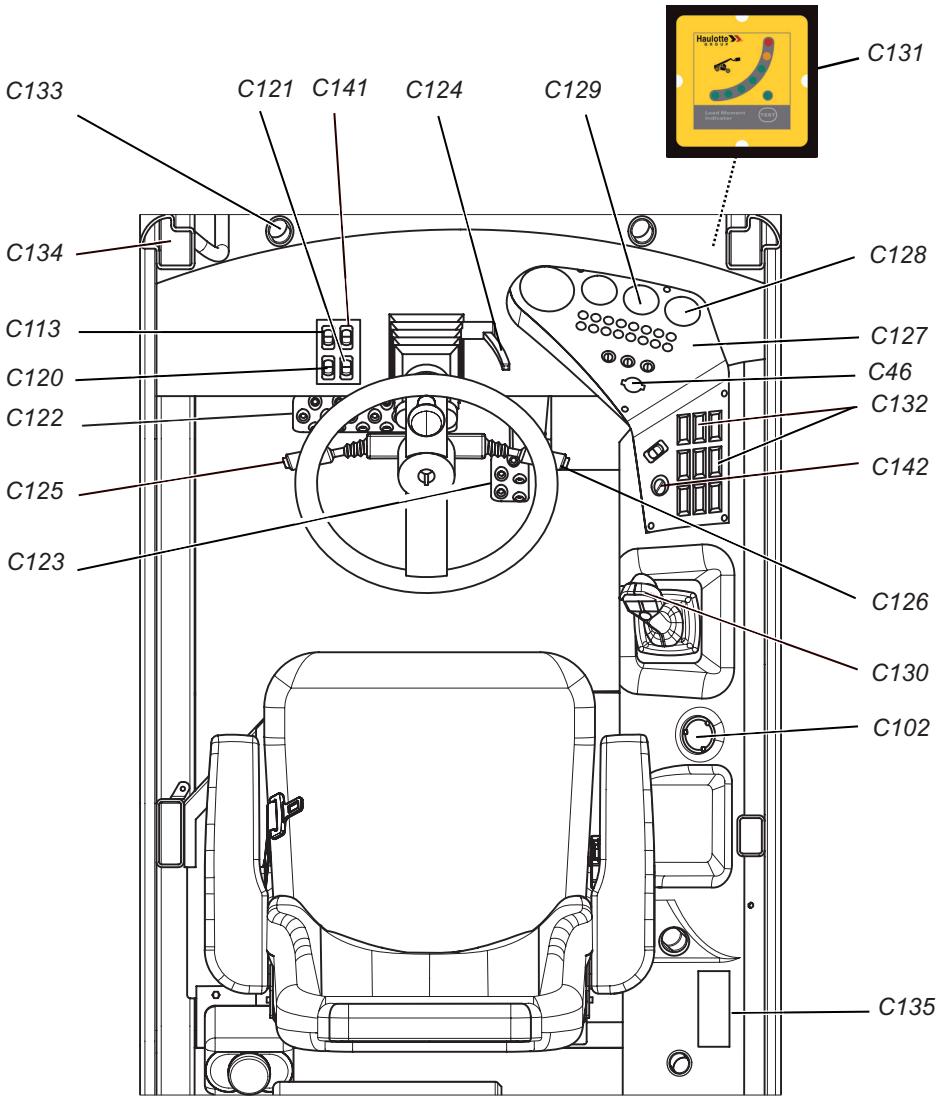
2.5 - THE OPERATOR'S CAB

The machine is equipped with an enclosed FOPS/ROPS cab.

Never operate the machine unless the overhead guards and the cab structure are in good condition. Any modifications to this machine must be approved by HAULOTTE to ensure compliance with FOPS/ROPS certification for this cab/machine configuration. The cab cannot be repaired if it is damaged. It must be replaced.

2.5.1 - Controls

General view



C - PRE-OPERATION AND CONTROLS

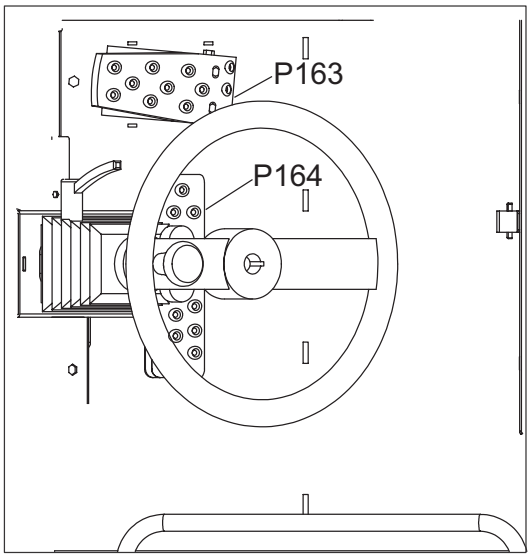
Component descriptions

Markings	Description
C120	Signal warning lights
C113	Beacon light
C121	Parking brake
C122	Brake / Inching pedal: The further the pedal is pressed, the slower the travel speed
C123	Accelerator pedal: Press on the pedal to increase the engine speed and the hydraulic fluid flow
C124	Steering column adjuster: See §1.23 for more details
C125	Transmission control lever: See §1.23 for more details
C126	Controls for wiper, lights, turn signals and horn
C127	Instrument panel: Controls and indicates certain machine functions.. Displays the machine output. See page or §1.25 for more details
C128	Fuel gauge: Orientation diesel fuel tank gauge
C129	Engine temperature gauge
C46	Ignition key
C130	Joystick: See § for more details
C131	Anti-tip system indicator: See § for more details
C132	Heating and air conditioning controls
C133	Round air vents: Individually adjustable
C134	Air louvers: Individually adjustable
C102	Dumping
C135	Car radio
C141	Road mode
C142	Rear axle steering

N.B.: The functions are described for the entire range. Refer to the machine configuration to identify the controls and function indicators.

2.5.2 - Pedals

General view

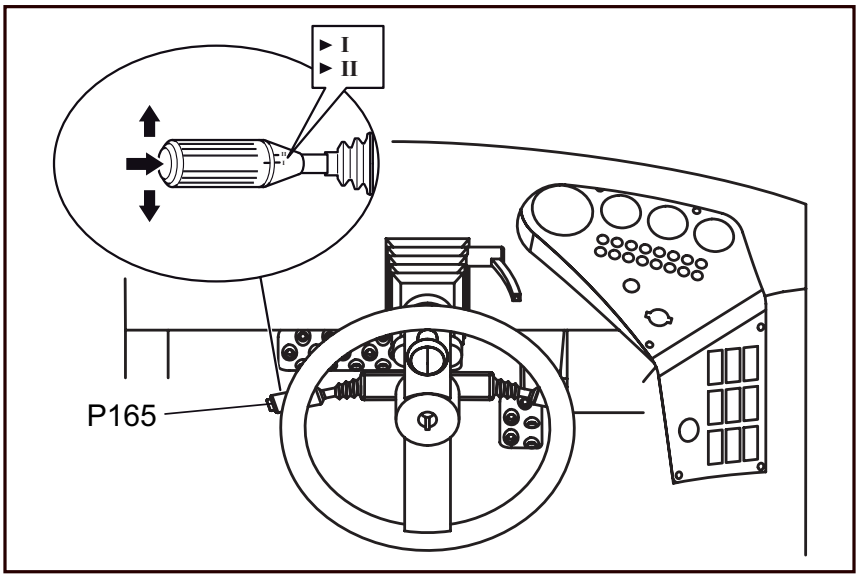


P e d a l s

Marking	Description	Function
P163	Accelerator	Pedal for increasing the engine speed
P164	Brake	Machine braking Inching: Slow approach at accelerated speed

2.5.3 - Steering column

General view



Left control lever

Marking	Description	Function
P165	Speed and travel direction controls	Speed selection : Neutral Slow speed : Selector position I Fast speed : Selector position II Travel direction selection: Forward drive : Pull the lever upwards and then push it forwards Neutral Reverse drive : Pull the lever upwards and then pull it backwards

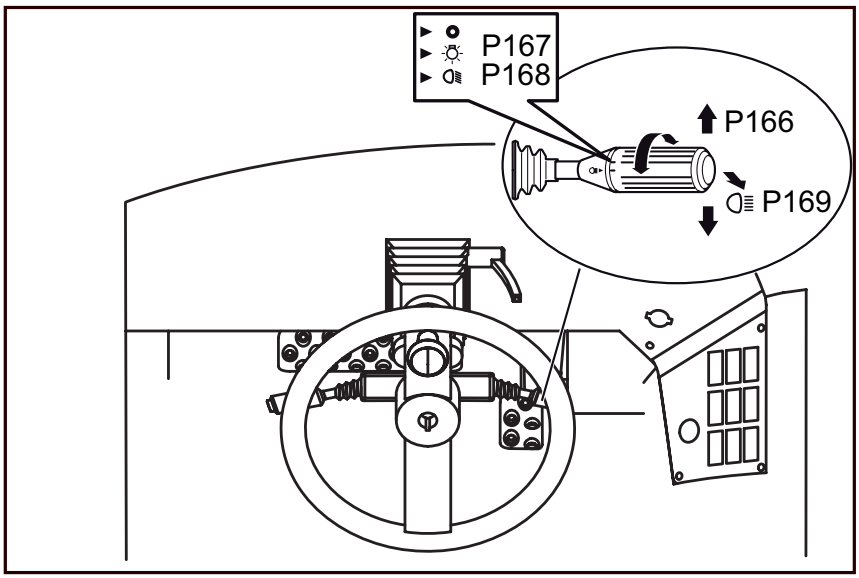
Forward or reverse drive can be selected while in any gear.

A sudden change in direction could destabilize the machine and/or cause the load to tip over or fall.

When reverse drive is activated, a sound signal indicates the presence of a danger to anyone present in the manoeuvring area.

You should only reverse the direction of travel when the machine is at a standstill.

General view



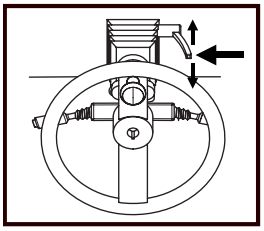
Right control lever

Marking	Description	Function
P166	Turn signals / Direction indicators	Left : Raise the lever Right : Lower the lever
P167	Sidelights	On : Turn clockwise Off : Turn anticlockwise
P168	Headlights	On : Turn clockwise Off : Turn anticlockwise
P169	Full beam headlights	On : Pull forward Off : Push backwards Flashing headlamp: Pull backwards by pulse action

Steering column adjustment

Bring the handler to a complete stop and shutdown the engine before adjusting the steering column. A sudden change in direction could destabilize the machine and/or cause the load to tip over or fall. Failure to comply with these instructions could result in death or serious injury.

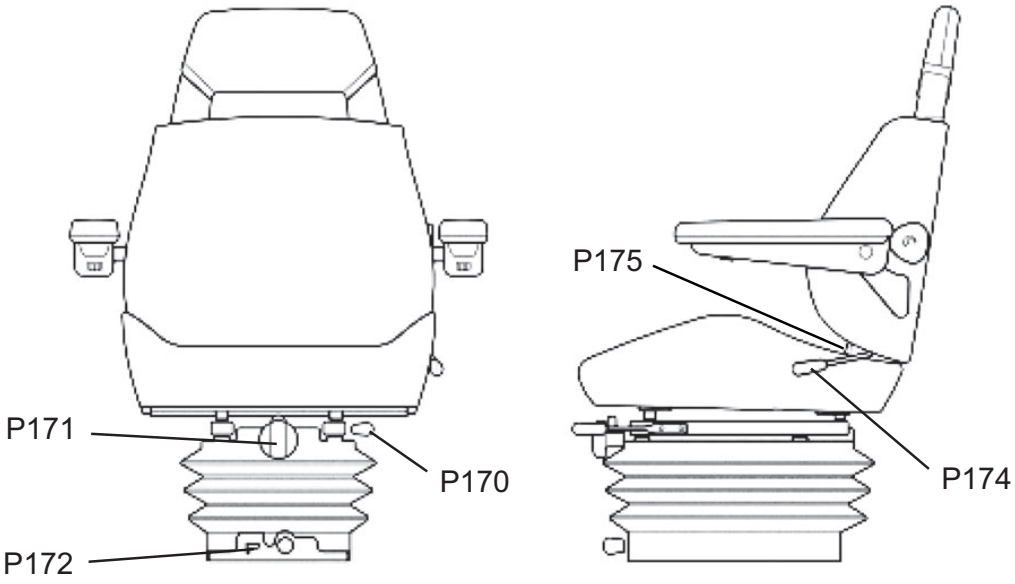
Adjust the steering column as follows :



- Push the lever down to release the steering wheel.
- Move the steering wheel to the most appropriate position.
- Block the steering wheel by pulling the lever up.

2.5.4 - The operator's seat

General view



Before starting the engine, adjust the seat as follows to place it in an appropriate and comfortable position:

Moving forward/back

Use the handle (P170) to move the seat forward or back.

Height:

Use the knob (P171) to adjust the seat height.

Suspension :

Use the knob (P172) to adjust the suspension to the appropriate weight adjustment (P173).

Backrest :

Use the button (P174) to adjust the backrest angle.

Seatbelt :

Always fasten the seatbelt (P175)) during operation.

C - PRE-OPERATION AND CONTROLS

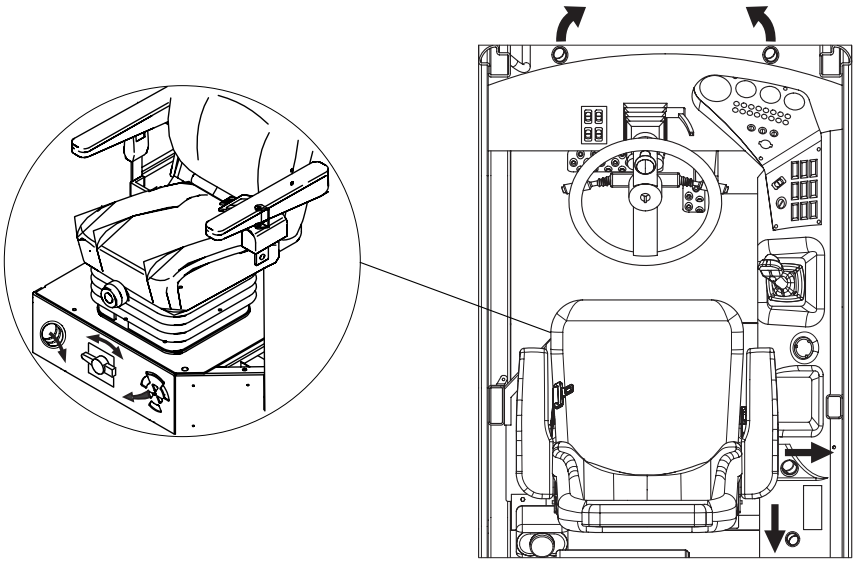
2.5.5 - Heating and aeration

The cab is equipped with a hot-air heating installation that is also used for demisting the windscreen.

The air is released by a two-speed fan. To activate the fan, actuate the heating/ventilation switch (P203) situated on the side instrument panel.

Adjust the heating temperature by actuating the handle situated under the driver's seat.

Adjust the air flow via the air louvers and the round air vents.



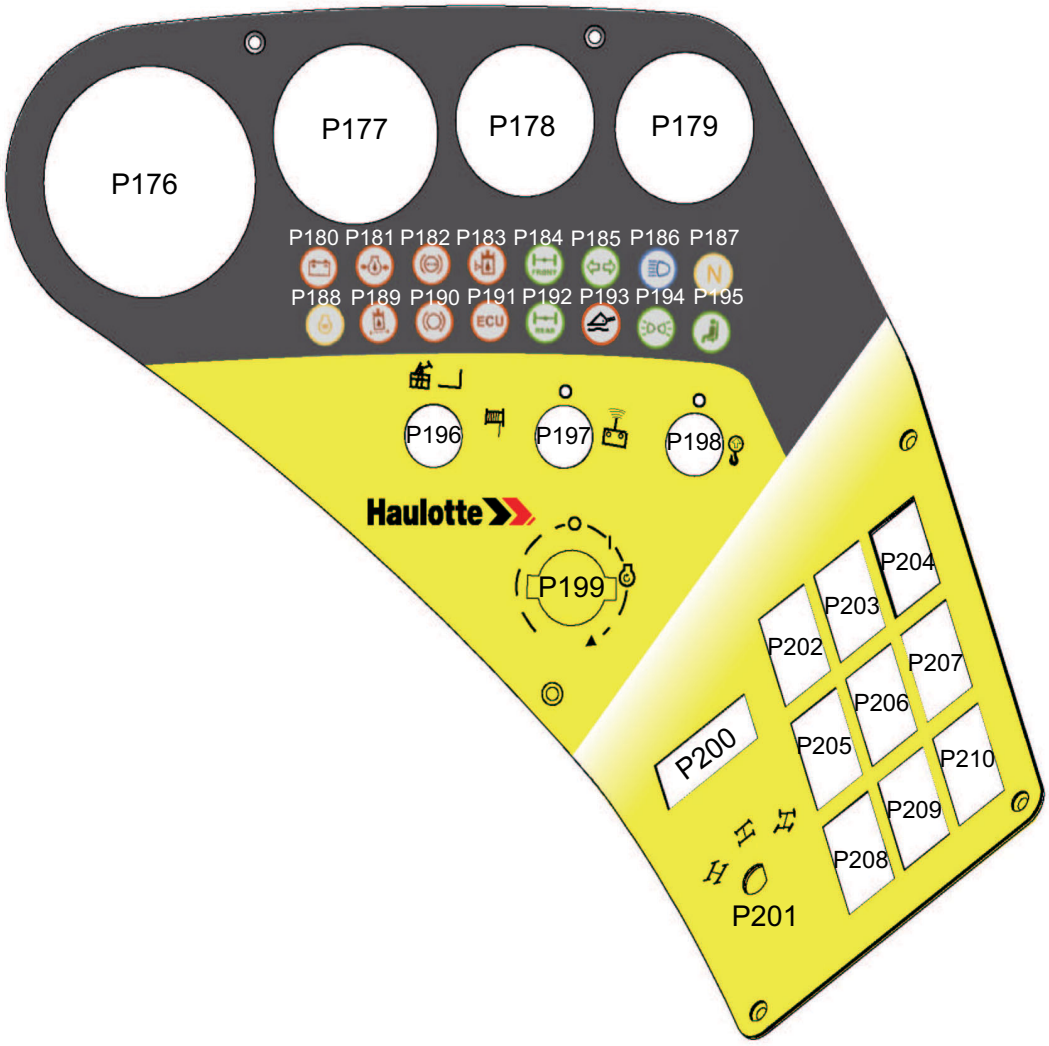
Do not operate the machine for a long period without aeration or with the cab completely closed without activating ventilation.

Ensure good aeration.

Insufficient aeration in the cab can cause driver tiredness (lack of oxygen).

2.5.6 - Cab instrument panel

General view



C - PRE-OPERATION AND CONTROLS

Side control panel

Marking	Description	Function
P176	Engine speed indicator with time meter	Engine speed indicator graduated from 0 to 3000 RPM(1)
P177	Boost pressure gauge	Supply system pressure indicator
P178	Engine temperature indicator	High coolant temperature(2)
P179	Fuel level gauge	Gauge with two colored areas (green: more than ¼ of fuel / red: less than ¼ of fuel)
P180	Battery LED	On: Wiring problem
P181	Motor oil pressure light	On: Oil pressure problem
P182	Parking brake defect LED	On: Not enough pressure in the parking brake system
P183	Hydraulic oil level light	On: Lack of oil
P184	Pinned front axle LED	On: Front wheels pinned
P185	Steering LED	Indicator: Right or left steering activated
P186	Full beam headlight LED	On: Full beam headlights on
P187	Neutral LED	On: Neutral position
P188	Engine preheating or P1 LED	On and not flashing: Engine preheating Flashing: Preheating defect
P189	Hydraulic oil filter LED	On: Hydraulic oil filter blocked
P190	Service brake defect LED	On: Not enough pressure in the service brake
P191	ECU defect LED	On: Engine computer defect(3)
P192	Pinned rear axle LED	On: Rear wheels pinned
P193	Floating LED (option)	Flashing: Floating option activated
P194	Sidelight LED	On: Sidelights on
P195	Seat presence LED	On: Operator on seat
P196	Aerial lift / Winch selector (option)	Aerial lift position: Turn right Winch position: Turn left
P197	Remote control selector (option)	Remote-controlled power supply
P198	Winch shunt	Exclusion key: Deactivates the anti-tip system
P199	3-position ignition key	Position 0: Machine shutdown Position 1: Ignition Position 2: Starter
P200	Dumping switch	Movement permitted
P201	Rear axle selection	Synchro axle Rigid steering axle Crab axle
P202	12V socket switch (option)	
P203	Heating ventilation switch	Ventilation - 2 speed
P204	Windscreen wiper switch	Activated: Press downwards Deactivated: Press upwardst Windscreen washer: Press down once
P205	Work light switch (option)	On: Press Downwards Off: Press Upwards
P206	Hydraulic socket switch (option)	
P207	Air conditioning switch (option)	Activated: Press downwards Deactivated: Press upwards
P208	Left stabilizer switch	To lower the left stabilizer: Press downwards To raise the left stabilizer: Press upwards
P209	Right stabilizer switch	To lower the right stabilizer: Press downwards To raise the right stabilizer: Press upwards

Side control panel

Marking	Description	Function
P210	Rear fog lamps	On: Press downwards Off: Press upwards

(1) Do not exceed 3000 RPM. Do not push the engine speed into the red area.

(2) Perform all required maintenance (*see Section H*)

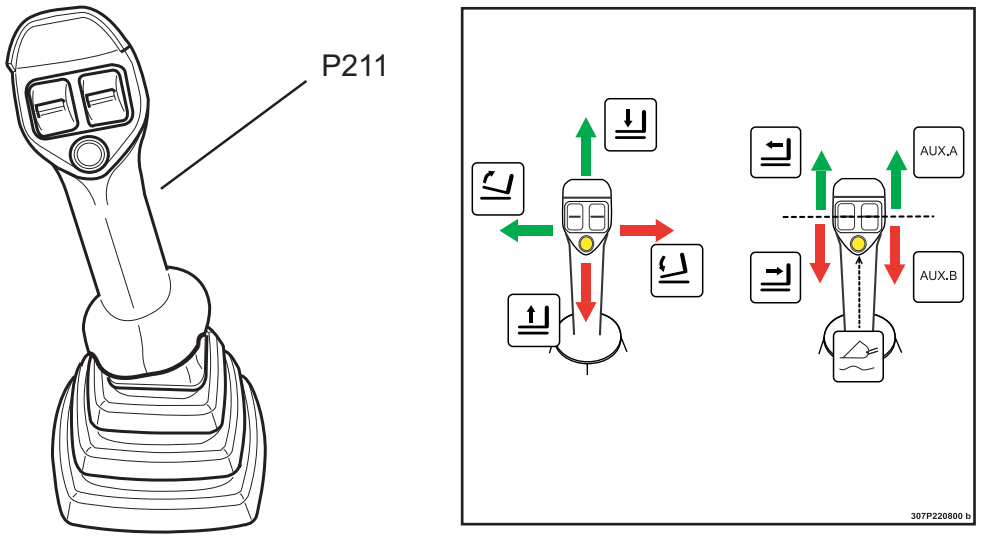
(3) The ECU LED (P191) flashes to indicate an internal malfunction.

The machine switches to downgraded mode. Certain movements can be limited or prohibited to safeguard the operator's safety. For more details, see Section H, Operating Incidents.

The stabilizers only increase stability and load capability if they are used correctly. Using stabilizers on soft surfaces can cause the machine to tip over and result in serious injury. Always ensure that the surface can support the weight of the machine and the load.

2.5.7 - Joystick

General view



J o y s t i c k

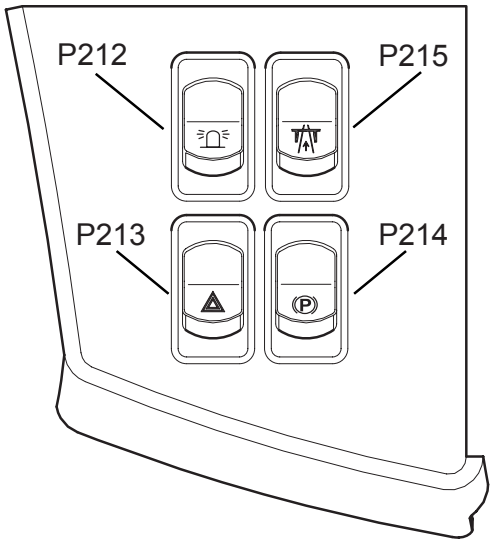
Marking	Description	Function
P211	Joystick	To raise the telescopic arm: Push the joystick
		To lower the telescopic arm: Pull the joystick
		Dumping: Move towards the right
		Crowding: Move towards the left
		Telescope out: Pull the left rocker switch upwards
		Telescope in: Pull the left rocker switch downwards
		Auxiliary, direction A: Pull the right rocker switch upwards
		Tool control, direction B: Pull the right rocker switch downwards

The speed of the joystick functions depends upon the amplitude of joystick travel in the corresponding direction. Increasing the engine speed also increases function speed.

Rapid, jerky operation of the controls causes rapid, jerky load movement. Such movements can cause the load to drift or fall and could cause the machine to tip over. Failure to comply with these instructions could result in death or serious injury.

2.5.8 - Left keypad

General view



Left keypade

Marking	Description	Function
P212	Signal warning light switch	On : Press downwards Off : Press upwards
P213	Beacon light switch (option)	On : Press downwards Off : Press upwards
P214	Parking brake switch	On: Activated: • Unlock manually • Press downwards Off: Deactivated: • Unlock manually • Press downwards
P215	Road switch	On: Press downwards Off: Press downwards

N.B.: The parking brake is activated automatically when the engine is switched off.

In road mode :

- All arm movements are forbidden (joystick deactivated).
- Using the stabilizers and dumping is forbidden.
- Steering switches to "2 steer wheels" mode, whatever the position of the steering selector (with the rear axle automatically returning to position).
- Overriding the steering with the exclusion key is deactivated.

C - PRE-OPERATION AND CONTROLS

To switch to road mode, you must :

- Have the stabilizers raised
- Have folded the machine

If these conditions are not respected and the road mode is selected, traveling is deactivated. The road mode LED (P215) flashes to indicate failure to comply with the conditions. If the stabilizers are not raised, the stabilizer LED (P208 and P209) also flashes. Once the conditions are met, the road mode is validated, the indicator light (P215) is constantly lit and traveling is authorized at slow and fast speeds.

2.5.9 - Anti-tip system indicator

General view

Controls and indicators

Marking	Description	Function
P216	Green LEDs	Loading degrees
P217	Yellow LED	Pre-alarm
P218	Red LED	Alarm
P219	Test	The indicator can be tested at any time.

The machine is equipped with an anti-tip system indicator that checks the load resting on the rear axle.

This anti-tip system checks for longitudinal stability.

A display located in the right windscreen pillar indicates the remaining load percentage, triggers a pre-alarm signal and blocks aggravating movements at the safe weight load limit.

Test the anti-tip system at the beginning of each work shift (See Section H).

.

C - PRE-OPERATION AND CONTROLS

If the load control system alarm sounds, the followingmovements are forbidden :

Movements and Modes

Movement	Fork mode	Winch mode	Aerial lift mode
Arm raising	Authorized	Forbidden	Authorized
Arm lowering	Deactivated if the alarm sounds but can be activated with the exclusion key	Forbidden	Deactivated if the alarm sounds but can be activated with the exclusion key
Crowding	Deactivated if the alarm sounds but can be activated with the exclusion key	Forbidden	Deactivated if the alarm sounds but can be activated with the exclusion key
Dumping	Deactivated if the alarm sounds but can be activated with the exclusion key	Forbidden	Deactivated if the alarm sounds but can be activated with the exclusion key
Telescope in	Authorized	Forbidden	Authorized
Telescope out	Forbidden	Forbidden	Forbidden
Attachments	Deactivated if the alarm sounds but can be activated with the exclusion key		
Traveling	Authorized		

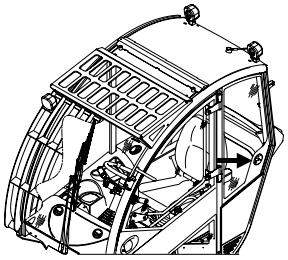
Temporary suspension of the anti-tip system

An exclusion key (P198) allows the operator to disregard this movement deactivation to avoid being blocked in certain configurations. In this case, the operator knowingly takes responsibility for the machine's stability. This function is deactivated automatically after 8 seconds of activation in the absence of movement. It must be released before it can be reactivated.

When the anti-tip system is deactivated, machine stability control is no longer guaranteed. Consequently, there is a risk of the machine tipping over. The operator therefore assumes full responsibility for the machine's movements and must be aware of the consequences of his actions. .

2.5.10 - Mirrors and Windows

Cab door window

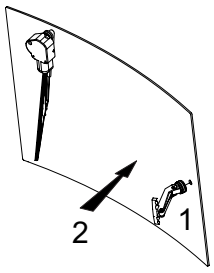


During operation, the window must either be latched open or closed.

Open the cab door window and secure it in the latch mechanism.

Press the release button located inside the cab to unlatch the window.

Rear window

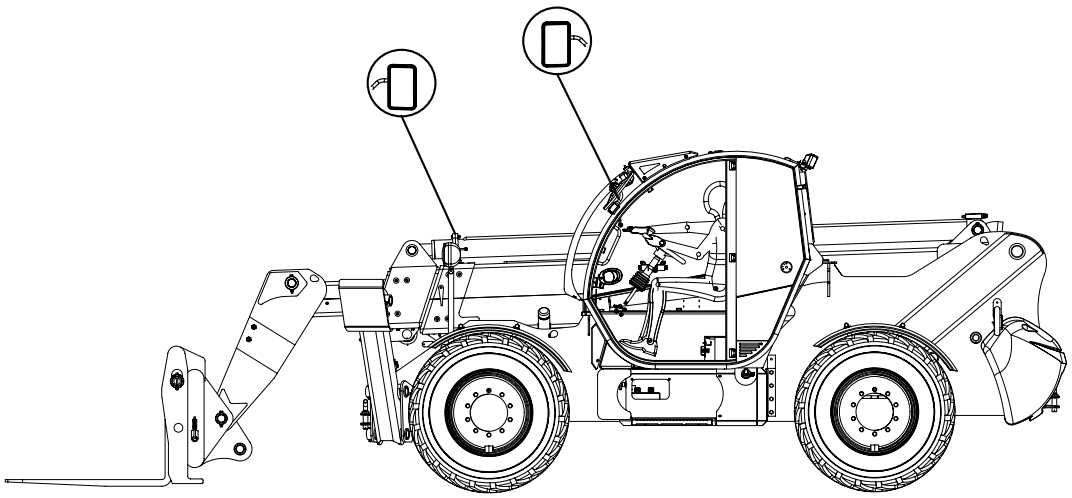


Pull the lever and push to open the rear window.

Adjusting the mirrors

Adjust the mirrors as required for optimal visibility before and during operation.

Always keep the mirrors clean and unobstructed.



1 - Engine

1.1 - Starting the engine

This machine can be operated at temperatures of -20°C to 40°C (0°F to 104°F).

Consult HAULOTTE Services® for operation outwith this temperature range.

- Turn on the battery disconnector located under the cab to the left of the steps.
- Make sure that all of the controls are in "Neutral" and that all of the electrical components (lighting, heating, defrost system, …) are turned off.
- Insert the ignition key.
- Turn the ignition key completely to Position 1.
- Wait until the pre-heating light (P188) goes off before starting the engine.

The following LEDs should light upon start-up and then go off again :

- Engine oil pressure LED (P181)
- Parking brake LED (P182) (possible if deactivated for a prolonged period)
- Battery LED (P180)
- Service brake system LED (P190) (possible if deactivated for a prolonged period)

Do not actuate the starter for more than 15 seconds.

Wait 10 seconds between 2 attempts to avoid excessively draining the battery.

Do not try to start the machine by towing or pushing it; this could cause serious damage to the hydrostatic transmission.

If a LED indicates a fault, stop the engine immediately and perform the necessary operations or contact HAULOTTE Services®.

- Warm up the engine at approximately 1/2 throttle.

N.B.: The engine will not start if the gear control lever is not in neutral

Unexpected movement hazard: Always ensure that the gear control lever is in neutral.

Engine explosion: Do not spray ether into the air intake when starting the engine in cold weather. Failure to comply with these instructions could result in death or serious injury.

1.2 - OPERATIONAL CHECKS

1.2.1 - During the warm-up period

Check at the beginning of each work shift or at each change of operator:

- The heating, the defrost system and the windscreen wiper.
- Check all lighting systems for proper operation.

Keep the engine cover closed while the engine is running. Failure to comply with these instructions could result in death or serious injury.

1.2.2 - When the engine is running

Check at the beginning of each work shift or at each change of operator:

- Boost pressure (P177).
- The transmission fluid level.
- Service brake and parking brake operation.
- Forward and reverse drive.
- Each gear.
- Steer in both directions with the engine at idling speed. Check each steering mode (forward and reverse).
- The horn and the back-up alarm. They must be audible from inside the operator's cab with the engine running.
- All of the boom and attachment functions should operate smoothly and correctly.
- Perform all additional checks (See Section H).

D - OPERATION

1.3 - STARTING THE ENGINE WITH A BOOSTER BATTERY

If the engine has to be started with a booster battery (jumper cable...), proceed as follows :

- Never allow the vehicles to come into contact with each other.
- Connect the (+) terminal of the discharged battery to the (+) terminal of the booster battery.
- Connect the (-) terminal of the booster battery to the (-) terminal of the discharged battery.
- Follow the standard starting procedures.
- Remove the cables in reverse order once the machine has been started.

Never jump-start or charge a frozen battery as it could explode. Do not produce sparks or flames or smoke near the battery. Lead acid batteries generate explosive gases when charging. Wear safety glasses. Failure to comply with these instructions could result in death or serious injury.

1.4 - NORMAL ENGINE OPERATION

Observe the gauges and the display screen frequently to ensure that all engine systems are functioning properly.

Pay attention to unusual noises and vibrations. If a fault occurs, park the machine in a safe position and perform the shut-down procedure (See Section D 1.1.6).

Report the fault to HAULOTTE AFTER-SALES.

Avoid prolonged idling. Turn the engine off when not in use.

1.5 - ENGINE SHUT-DOWN PROCEDURE

Park the machine in a safe location on a flat surface and away from any other equipment or traffic lanes.

- Actuate the parking brake switch (P214).
- Shift the speed selector to neutral.
- Lower the forks or the attachment to the ground.
- Operate the engine at idling speed for 1 minute.

Do not overrev the engine.

- Stop the engine: turn the ignition key to the left to position "0".

- Remove the ignition key.
- Exit the machine correctly.
- Block the wheels if necessary.

The cab seat is equipped with an operator presence detection system. The LED (P195) lights. If the operator leaves the seat when the machine engine is operating, after an 8-second time delay, the presence detector deactivates travel and automatically actuates the parking brake.

Remain correctly seated during movement. Otherwise, the machine may brake suddenly.

2 - Use with a load

2.1 - LOAD LIFTING SAFETY

- Know the weight and the centre of gravity of each load to be lifted.
- Use the load capacity chart associated with each equipment.

Exceeding the machine's lifting capacity may damage the equipment and/or cause tipping over, resulting in death or serious injury.

You should know the machine's rated load capacities (see Section G Technical Specifications) to determine the operating range within which you can safely lift, transport and place loads.

2.2 - BEFORE LIFTING A LOAD

- Check the ground conditions. Adapt the travel speed and reduce the load weight according to the ground.
- Avoid lifting unbalanced loads.
- Make sure that there are no obstacles near the load.
- Adjust the fork spacing so that they engage into the pallet or under the load at maximum width and remain centred on the fork carriage.
- Face the load and approach it slowly with the fork tips straight and horizontal. Never attempt to lift a load with just one fork.

Never lift any loads if a correct and legible capacity chart corresponding to the accessory usedis not displayed in the operator's cab.

- Never operate the telehandler without a proper and legible capacity chart displayed in the operator's cab for the telehandler/attachment combination in use.

2.3 - TRANSPORTING THE LOAD

Once the load is engaged on the forks and leaning against the fork carriage, tilt the load backwards to place it in the travel position. Travel as specified in Section A and Section E.

2.4 - DUMPING PROCEDURE

- Position the machine in the best location for lifting or placing the load.
- Actuate the parking/service brake and shift the gear control lever to NEUTRAL.
- Move the boom/attachment with less 30°.
- Observe the level indicator to determine whether the machine must be leveled and level the machine with the switch (P200).

Never raise the boom/attachment more than 1.2m above the ground unless the machine is leveled. The combination of sideways movement and the load could cause the machine to tip over.

The machine is designed to allow movement of the main chassis 10° forward and backwards.

2.5 - PLACING THE LOAD

Before placing a load :

- Ensure that the unloading point can safely support the weight of the load.
- Ensure that the unloading point is level, both lengthways and sideways.
- Use the capacity chart to determine the permitted boom extension range.
- Lower the forks to the level at which the load must be placed, and then extend the boom slowly until the load is just above the area where it must be placed.
- Lower the boom until the load rests in position and the forks can be retracted.

2.6 - DISENGAGING THE LOAD

Once the load has been safely placed at the unloading point, proceed as follows:

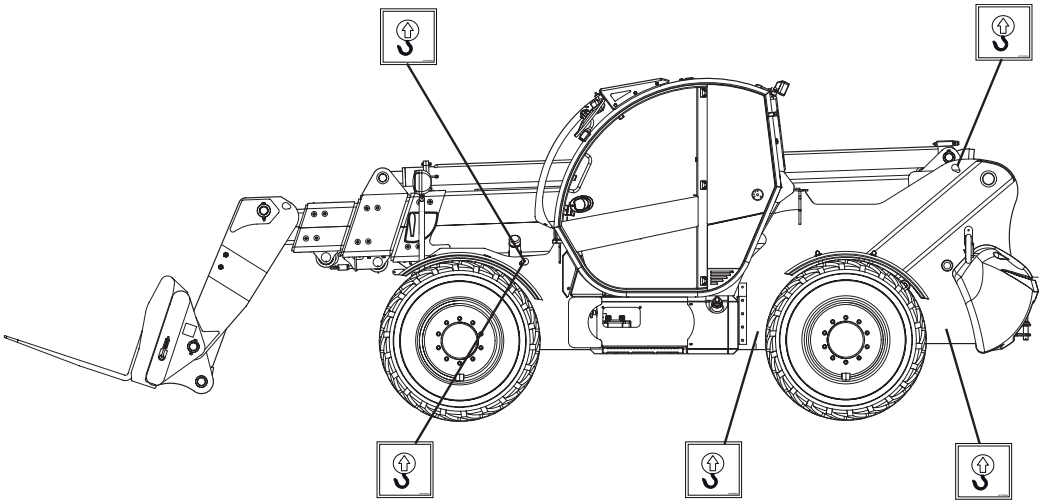
- When the load weight is no longer resting on the forks, the boom can be retracted and/or move the machine back from under the load if the surface so allows without changing the machine level.
- Lower the fork carriage.
- Drive the machine away from the landing point to continue work.

3 - Road operation

- Preparation:
  - Empty the bucket.
  - Remove any large amounts of dirt from the machine.
  - Check the lights and the mirrors, and adjust them if necessary.
  - Follow the recommendations in force in each country of use (registration plate, jacket, warning triangle, first-aid kit, chocks…).
- Lower the boom. The front edge of the attachment should be approximately 30-40cm above the ground.
- Tilt the attachment back completely.
- Place a protective cover over the front edge of the bucket; remove the carriage forks or reposition them towards the machine and secure them to the fork carriage.
- Raise the stabilisers.
- If the rear wheels are not in line with the chassis, steer them slowly back to a neutral position.
- Actuate the road switch (P215).
- The machine is now ready for road operation.

N.B.: Ensure that you follow all local, regional and national traffic regulations.

4 - Loading and securing for transport



- Level the machine before loading.
- Obtain assistance from an operator for manœuvres and loading the machine, with the boom as low as possible.
- Once loaded, apply the parking brake and lower the boom until the boom or attachment touches the floor. Switch all controls to neutral, stop the engine and remove the ignition key.
- To secure the machine to the floor, pass chains through the designated tie-downpoints as illustrated in the figure.
- Do not tie down the front of the boom.

N.B.: The user is fully responsible for choosing the proper method of transportation and the tie-down devices. Ensure that the equipment used is able to support the weight of the vehicle to be transported and that all manufacturer's instructions and warnings, regulations and safety rules and all national, regional and local laws are followed.

Before loading the machine to be transported, check that the floor, the ramps and the machine wheels are free of mud, snow and ice. Otherwise, the machine may slide, resulting in an accident causing serious injury or death.

E - ATTACHMENTS

1 - Approved attachments

To determine whether an attachment is approved for use on the machine in use, proceed as follows before installation :

- The attachment model/option number indicated on the attachment identification plate must correspond to the attachment number indicated on a capacity chart located in the operator's cab.
- The model indicated on the capacity chart must correspond to the model of the machine being used.
- The center of gravity of the load on the fork (if applicable) must correspond to the center of gravity of the load indicated on the capacity chart.
- Hydraulically-powered attachments must only be used on machines equipped with auxiliary hydraulics..

If any of the above conditions is not met, do not use the attachment. The machine may not be equipped with the relevant capacity chart or the attachment may not be approved for the machine model being used. Additional information can be obtained from HAULOTTE Services®.

2 - Unapproved attachments

Do not use unapproved attachments for the following reasons :

- **HAULOTTE® cannot establish the capacity range limits for DIY, home-made, altered or other unapproved attachments.**
- **An overextended or overloaded machine may tip over with little or no warning and cause serious injury or death to the operator and/or those working nearby.**
- **HAULOTTE® cannot guarantee the ability of an unapproved attachment to perform its intended function safely.**

Only use approved attachments. Attachments that have not been approved for use with this machine may cause material and bodily damage, or even death.

3 - Telehandler/Attachment/Fork capacities

Before installing the attachment, check that it is approved and that the telehandler is equipped with the relevant capacity chart.

To determine the maximum capacity of the telehandler and the attachment, use the smallest of the following capacities :

- Capacity indicated on the attachment identification plate.
- The maximum capacity of an individual fork is defined according to the centre of gravity indicated on the fork. The total fork capacity corresponds to the total capacity of a fork multiplied by the number of forks within the limits of the accessory's maximum capacity.
- Maximum capacity indicated on the relevant capacity chart.
- When the telehandler's load capacity differs from the capacity of the forks or the attachment, the lower value becomes the overall load capacity.

Use the relevant capacity chart to determine the maximum capacity for the various machine configurations. Lifting and placing a load may require the use of more than one capacity chart depending on the machine configuration..

The forks must be used in matched pairs.

Never use an attachment without the appropriate Haulotte® supplied capacity chart installed on the telehandler. Failure to install the relevant Haulotte® supplied capacity chart could cause an accident resulting in death or serious injury.

4 - Using the capacity chart with forks

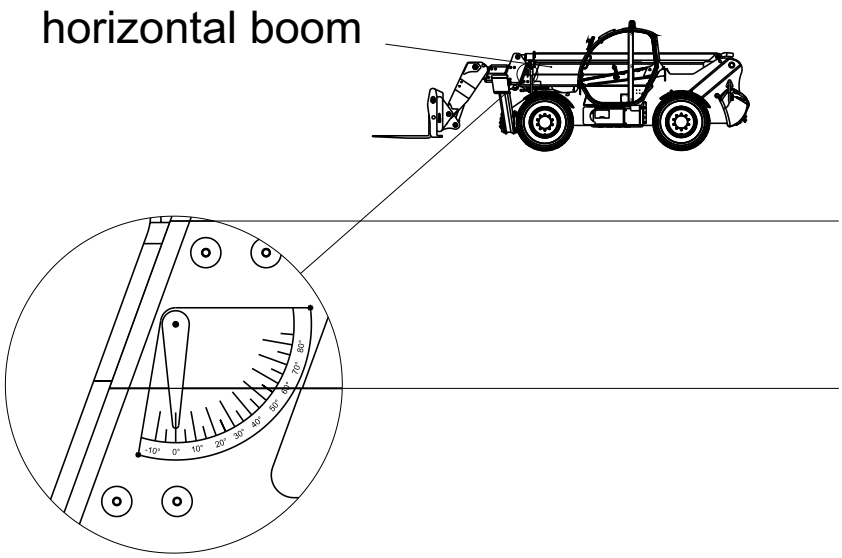
To use the capacity chart properly, the operator must first determine and/or obtain the following :

- A HAULOTTE® approved attachment.
- The relevant capacity chart.
- The weight of the load to be lifted.
- The load placement data.
  - The height at which the load must be placed .
  - The distance where the load must be placed in relation to the telehandler's front tires.
- On the capacity chart, find the line corresponding to the height and follow it over to the distance.
- An alphabetical key (A, B, C, D, E, F) indicates the boom extension and a pendulum indicates the boom angle (See Boom angle indicators).

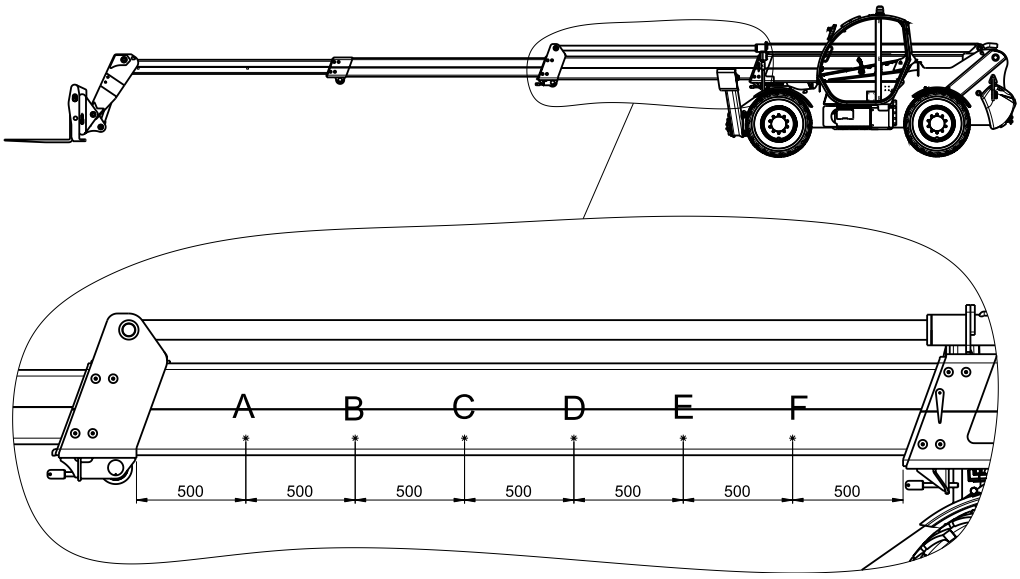
E - ATTACHMENTS

- On the capacity chart for a given load, find the area corresponding to the key and follow it to the permitted reach.
- The number that appears in the load capacity range must be equal to or greater than the weight of the load to be lifted. Determine the load capacity range limits with the capacity chart and keep within those limits.

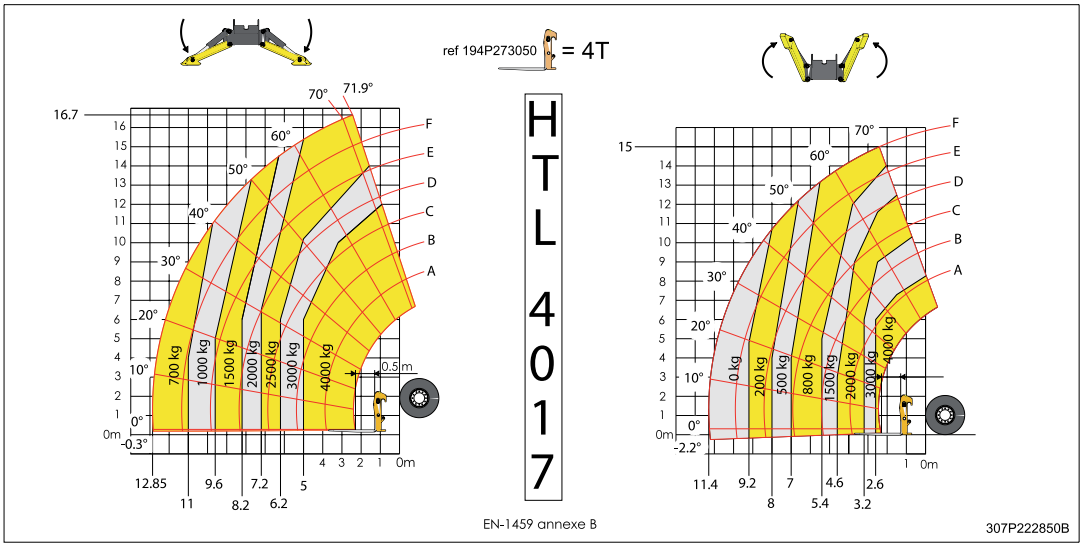
Boom angle indicator



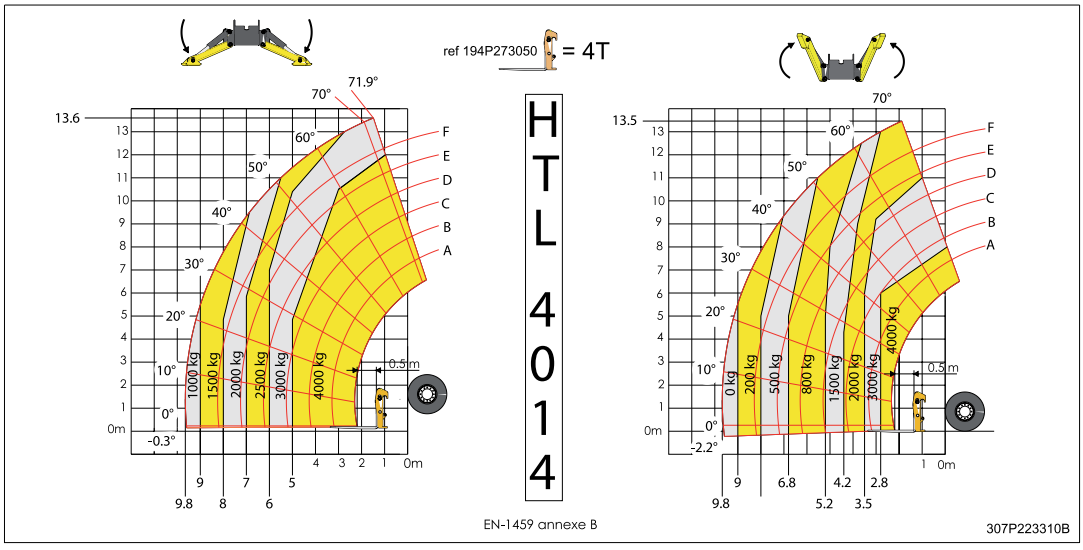
Boom extension indicators



HTL 4017 Load capacity chart



HTL 4014 Load capacity chart



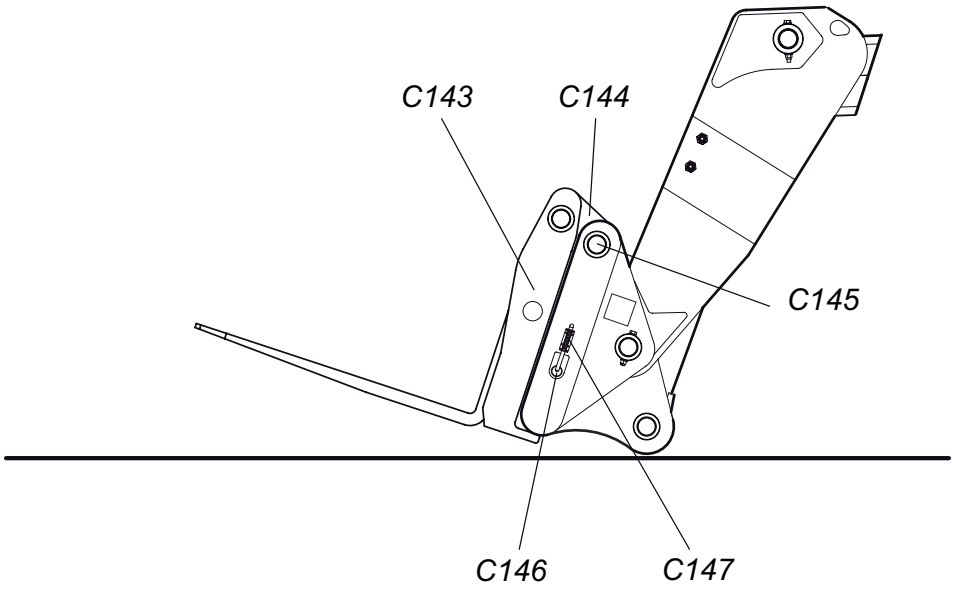
E - ATTACHMENTS

All of the loads indicated on the load capacity chart are based on the machine being on firm ground with the chassis level, the forks being positioned symmetrically on the fork carriage, the load being centred on the forks, appropriately sized tires being inflated correctly and the telehandler being in good working condition. Failure to comply with these requirements could result in death or serious injury.

To identify the relevant capacity chart, refer to the following icons that appear on the capacity chart:

- To be used when lifting a load with the stabilisers raised.
- To be used when lifting a load with the stabilisers lowered.

5 - Attachment installation



Component descriptions

Marking	Description
C143	Attachment
C144	Attachment pin recess
C145	Attachment pin
C146	Lock pin
C147	Retainer pin

Always ensure that the fork carriage or the accessory is correctly positioned on the boom, secured by 2 locking pins and held in place by 2 retaining locks.

Incorrect installation could cause fork carriage/attachment/load disengagement, resulting in serious injury or death.

E - ATTACHMENTS

5.1 - MECHANICAL ATTACHMENT LOCKING DEVICE

- Pull the locks and disengage the locking pins from the accessory.
- Align the tool apron pin with the attachment recess by lifting and crowding (P211).
- Actuate the parking brake (P214). Leave the cab, insert the locking pins and secure them with the retaining locks.
- If the attachment requires hydraulic control, connect auxiliary hydraulic hoses A and B.

5.2 - ADJUSTING/MOVING FORKS

Fork carriages may have different locations for positioning forks.

N.B.: APPLY A LIGHT COATING OF AN APPROPRIATE LUBRICANT TO FACILITATE FORK OR FORK BAR SLIDING.

To slide the forks: :

- Ensure that the fork carriage is correctly installed: see Section E.
- Lift the boom by approx. 10°, tilt the fork carriage forwards until the fork heel is no longer in contact with the fork carriage.
- Stand next to the fork carriage to slide the fork, push it or pull it nearits pin.

If the forks must be replaced:

- Place the forks on the ground.
- Remove the fork pin.
- Replace the forks and place them in position.
- Replace the fork pins and their retaining mechanisms.

.Using forks:

- The machine's capacity and range limits change according to the forks used.

.

Keep the specific instructions for the forks in the manual holder situated behind the cab seat, with the telehandler operator manual.

5.3 - BUCKET

Familiarize yourself with the information provided on the bucket identification plate.

Use this accessory's capacity chart situated in the cab.

Keep the specific instructions for the buckets in the manual holder situated behind the cab seat, with the telehandler operator manual.

The controller (P211) controls the boom movements and the bucket tilt (See Section C, 2.5.6).

Installation procedure: Cross-reference: Section E, 5.1.

Equipment damage precautions

- Load the bucket by driving gently with the boom fully retracted. Loading the bucket with the boom telescoped could damage the boom or the extension chains/cables.

Do not load the bucket unilaterally.

- Distribute the material evenly in the bucket. The bucket capacity charts are valid for evenly distributed loads.

Do not use the bucket as a lever. An excessive prying force could damage the buckets and the telehandler.

Do not use the bucket to drag loads. It could seriously damage the mechanical accessory locking device and the retraction chains.

Operation

- Raise or lower the boom to the appropriate height for loading the material from the pile.
- Load the bucket by driving gently with the boom fully retracted.
- Tilt the bucket upwards sufficiently to retain the load and move away from the pile.
- Travel as specified in Section A.
- Tilt the bucket downwards to dump the load.

F - EMERGENCY PROCEDURE

1 - Hauling a broken-down vehicle

1.1 - GENERAL PRECAUTIONS

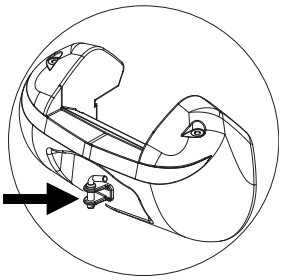
Towing can only be performed when the machine has broken down and once the operator has ensured that there is no risk of additional deterioration.

As far as possible, repair on-site.

If the machine is on a public highway, ensure that none of the machine parts encroach on the road. If it cannot be avoided, install signage in accordance with the currently applicable regulations.

Before towing the machine, comply with the following instructions :

- Check that the steering can be used.
- Release the front axle after the operation.
- To tow the machine, fix a towing bar to the towing clevis situated at the front or rear of the machine.

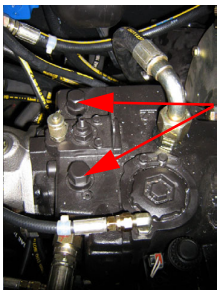


If the machine must be towed, the weight of the traction assembly and the machine must be less than or equal to 28.5T.

Towing is a delicate operation that is performed at the operator's risks.

- Ensure that the boom is sufficiently raised to avoid interferences with the ground or the towing vehicle.
- If the vehicle cannot be raised sufficiently to avoid interferences, contact HAULOTTE Services®.

Before towing the machine, you should loosen the two pressure limiters on the travel pump by three turns.



The maximum traction speed permitted for towing is 6km/h. The towing distance may not exceed 300m.

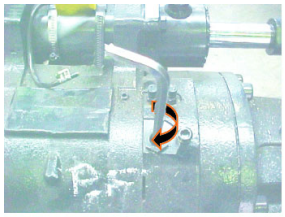
- Turn on the ignition key.
- Deactivate the parking brake.
- When the parking brake is deactivated, the machine can be towed.

If the parking brake is still engaged and the heat engine has broken down, refer to Section F 1.2 for information on deactivating the brake before towing.

1.2 - RELEASING THE AXLE BRAKE FOR TOWING

The following procedure is used to deactivate the parking brake acting on the front axle in the event of a heat engine breakdown or when the accumulator is empty.

To access brake release screws 1, 2, 3, you must loosen the six caps (three on each side) positioned around the flanges on the (rigid) front axle. (see photo opposite).



1.2.1 - Parking brake deactivation

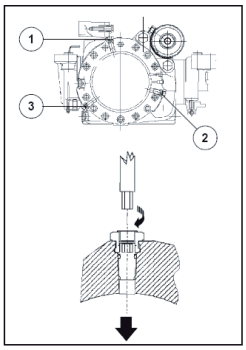
Tools required

- 8mm Allen wrench
- Reversible 3/8" ratchet and 3" extension.

Block the four wheels with chocks to prevent any machine movement when the brake is disengaged.

F - EMERGENCY PROCEDURE

- The 8mm Allen wrench will be used to disengage the parking brake correctly.
- Draw a mark so that you can count the number of revolutions made by each nut in order to make the correct adjustment upon reassembly.
- Locate the six brake release bolts (3 on each side) under the front axle.
- Tighten bolts 1, 2, 3 alternatively in ½ turns clockwise until you feel resistance (approximately 5.5 turns).
- Note the number of turns made for each screw.



Come out from under the machine and remove the chocks placed under the four wheels.

- Park the machine.
- Block the four wheels again.
- The machine can be towed in accordance with Section F 1.

1.2.2 - Parking brake reactivation

Tools required

- 8mm Allen wrench
- Reversible 3/8" ratchet and 3" extension.

Block the four wheels with chocks to prevent any machine movement when the brake is disengaged.

When the four wheels are properly blocked :

- Loosen nuts 1, 2, 3 under the axle successively anticlockwise in ½ turns.
- Continue loosening them in ½ turns until the torque suddenly decreases.
- Loosen screws 1, 2, 3 alternatively anticlockwise until the screw heads brush against the top of the special screws.
- ·Tighten nuts 1, 2, 3 clockwise by a ¼ turn.

The parking brake can then be reactivated and the front wheels blocked.

- Remove the chocks from the four wheels
- Check that the hand brake control functions properly.

2 - Emergency boom lowering

2.1 - MANUAL BOOM LOWERING (EMERGENCY MODE)

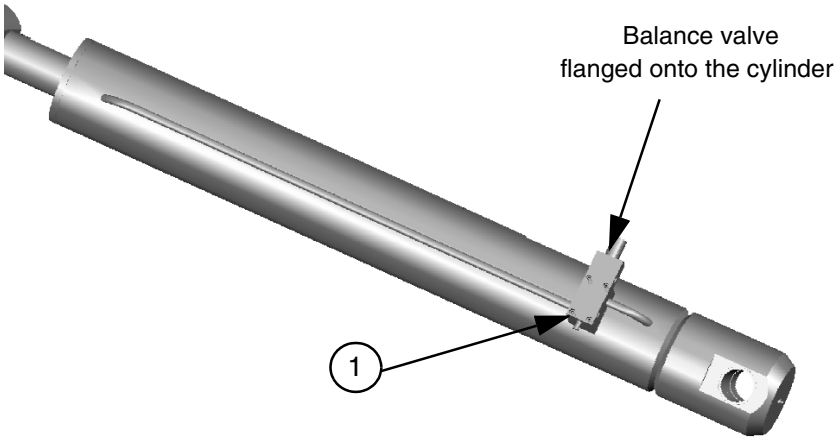
This operation should only be performed as a last resort as it presents a danger for the operator (machine and load stability).

Before any manual lowering operation :

- Retract the boom before lowering it
- Activate the parking brake and block the wheels.

If the boom cannot be retracted, check on the load capacity chart in the cab that lowering the boom in a horizontal position is compatible with telehandler stability.

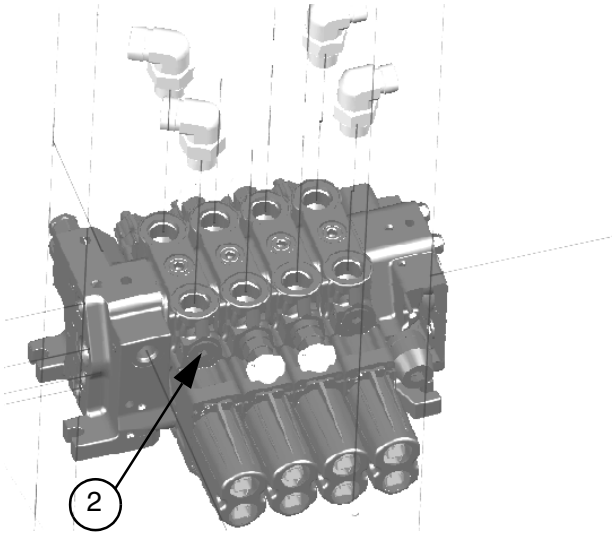
- Block the boom in position with another machine, an axle or, as a last resort, the cylinder chock.
- Unscrew completely the stop screw from the balance valve block flanged on the boom lift cylinder. Remove the locknut and rescrew the stop screw fully into its socket (1).



- Take off the cover located under the counterweight at the back of the machine to access the valve block.
- Unscrew slowly the cap situated on the boom lift plate (1st plate from the left) until you can see the

F - EMERGENCY PROCEDURE

boom lowering, then screw up once the boom in low position (2).



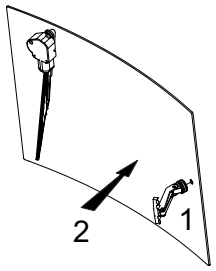
- Once the boom is lowered and the machine repaired, raise the boom to its high position and secure it into place using the hold cylinder.
- Unscrew the stop screw from the balance valve block, replace the counternut and rescrew the assembly fully into its socket.
- Check that the balance valve functions properly after the intervention (by raising/lowering the boom with a load).

Secure the boom into position before any interventions on the balance valve.

3 - Cab emergency exit

In an emergency, the rear window can be used to exit the machine.

- Release the stop upwards (1).
- Push the window outwards with your hand (2).



FOR CERTAIN COUNTRIES, IN ACCORDANCE WITH THE LOCAL AND GOVERNMENTAL REGULATIONS IN FORCE, A HAMMER SECURED TO THE INSIDE OF THE CAB CAN BE USED TO BREAK THE WINDOW OR WINDOWS TO ALLOW THE OPERATION TO LEAVE THE CAB.

G - TECHNICAL SPECIFICATIONS

1 - Main characteristics

Engine

Model	Deutz BF04M2012
Type	Four-stroke engine with water cooling
Cylinder capacity	4038 cm3
Suction	Turbo
Power	74.9 kW / 102 ch at 2300 RPM (97/68EC)
Torque	390 Nm at 1500 RPM

Hydraulic system

Pump	Piston pump, with variable cylinder capacity
Flow	150 L/min
Pressure	260 b
Regulation	Load Sensing with flow sharing device (proportional and simultaneous movements)
Control	Electro-hydraulic control with 4-function joystick
Accessory socket flow	62 L/min
Tank capacity	110 L

Transmission

Type	Hydrostatic type with pump and variable cylinder capacity engine with 4 permanent drive wheels
Control	Electro-hydraulic control with front/rear 2/2 and neutral position selector
Speed in work mode	0 - 8 km/h
Speed in road mode	0 - 30 km/h (25 km/h depending on currently applicable standard)
Slow approach	Yes, by inching pedal
Climbable slope	7100 daN
Maximum gradient	45%
Axles	Axles with differential-locking epicycloidal reducers on front axle
Swing axle	Yes, automatic locking in raising and lowering mode

Braking system

Engine brake	Hydrostatic
Operating brake	Hydraulic oil bath, multi-disk service brake controlled by the brake pedal
Parking brake	Electrically-controlled hydraulic oil bath, multi-disk parking brake

Cab

**The cab complies with the European ROPS (ISO 3471) / FOPS (ISO 3449) safety standards.
Door with two separate sections, opening rear window with windscreen wiper, heating, ventilation and joystick with 4 proportional functions..**

Inner width	940 mm

Tires

Type	18 - 22.5 profil TM R4

Steering system

Turning inner radius on tire	2400 mm
Turning outer radius on tire	4200 mm
Turning outer radius with forks	6250 mm

Electrical system

Operating voltage	12 V
Battery	155 AH
Alternator	95 A
Starter	3 kW

Filling capacity

Fuel tank	132,5 L
Hydraulic tank	110 L
Front axle	12,6 L
Rear axle	10,6 L
Transfer case	0,5 L
Motor oil	10 L
Coolant	18 L

Standard equipment

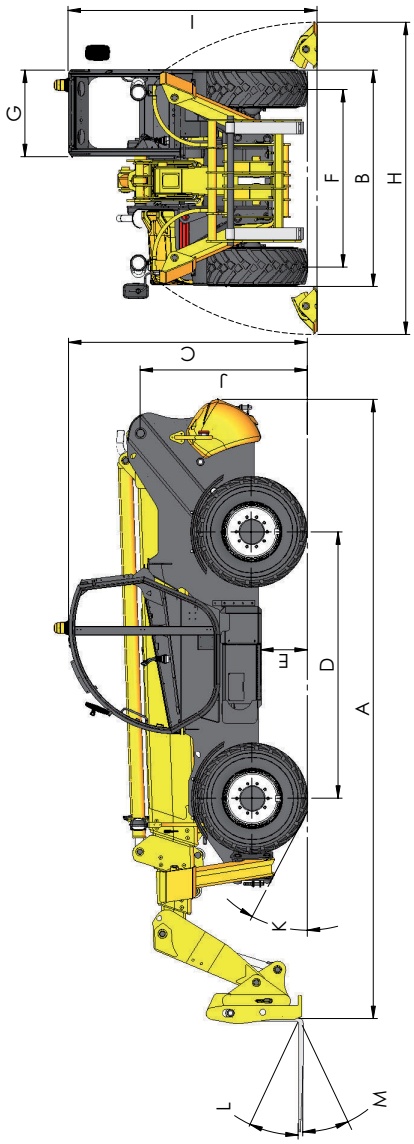
- Double-element air filter
- Fuel filter with water separator
- Transmission oil filter
- 4 drive and steer wheels
- Safety valves on hydraulic cylinders
- Auxiliary hydraulic system to the boom head
- Stabilizer and levelling blockage, with the boom raised
- Supple approach movements thanks to the "Inching" system
- Deactivation of aggravating movements in the event of overloading
- Anti-tip device with load status controller and 5 LEDs in the cab: cut-off and sound signal with automatic speed deceleration at the limit of the capacity chart
- Automatic hydraulic locking of the rear axle for safety
- Tilt correction: ±10°
- Pre-wiring for radio and loudspeakers
- Horn
- Hydraulic oil pressure indicator
- Light indicating clearance of front wheels aligned with rear wheels

G - TECHNICAL SPECIFICATIONS

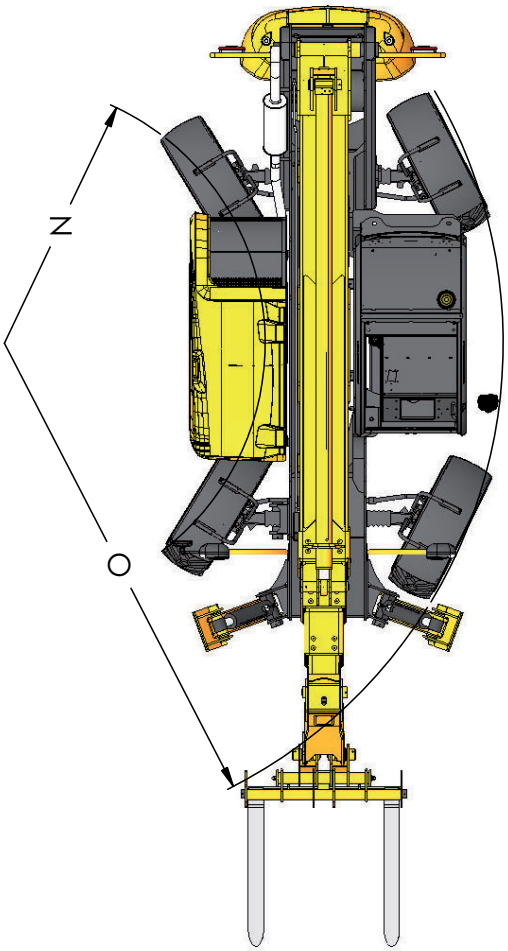
- Adjustable seat (height and armrest) with seat belt
- Adjustable control pillar
- Power steering
- Metal protection above the cab
- Tinted windows and sun visor
- Left and right outside rear-view mirrors
- Timer
- Boom angle indicator
- Mud flap
- Long stabilisers with ground contact presence contactor
- Forks
- Manual fork carriage attachment with 2 pins
- Front and rear bracket
- "Road machine configuration" button
- Beacon
- Front and rear full beam headlamps

2 - Overall dimensions

General diagram



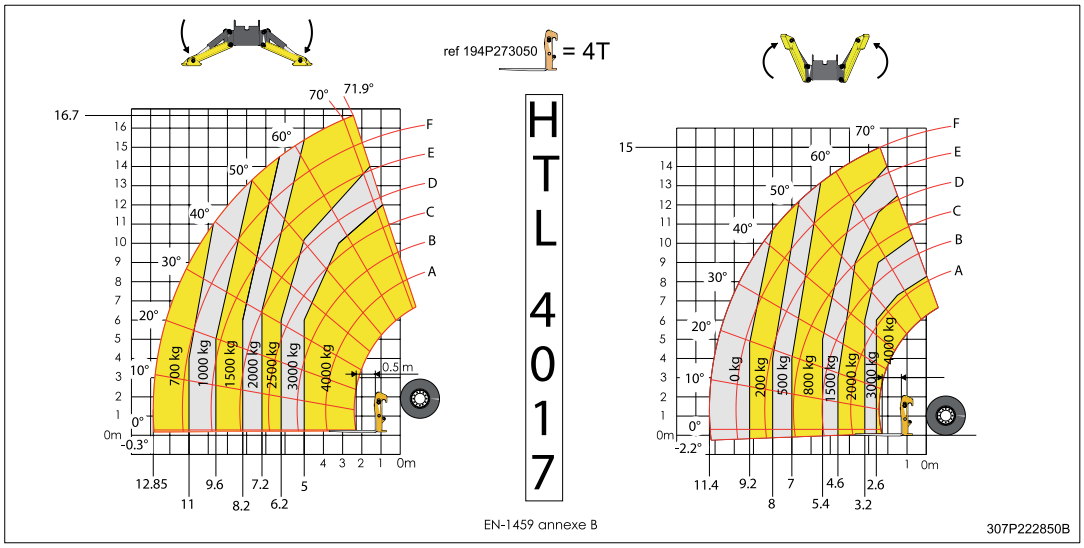
G - TECHNICAL SPECIFICATIONS



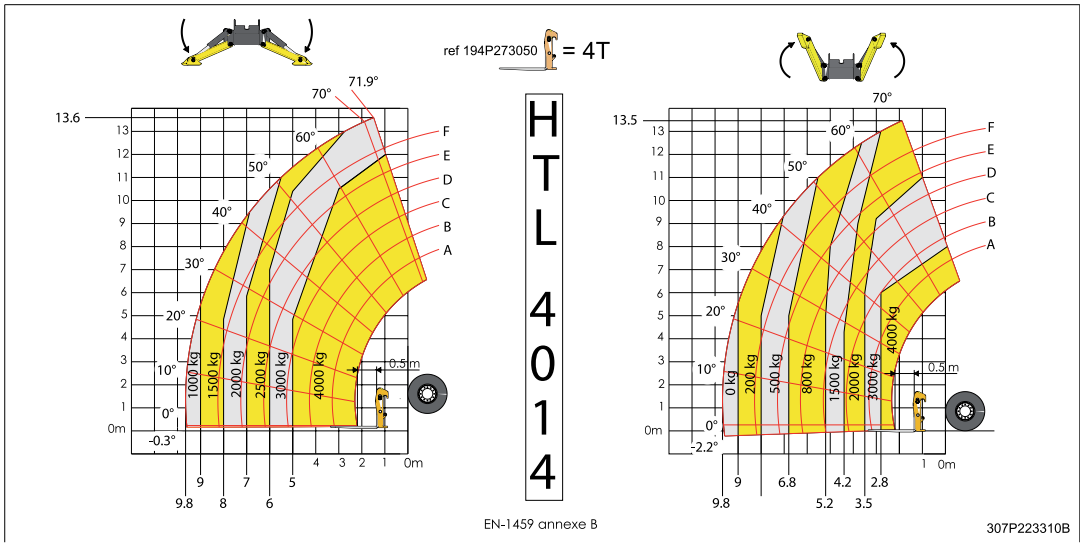
Marking	HTL 4017		HTL4014	
	Meter	Feet inch	Meter	Feet inch
A	6,73	22 ft 1 in	6,47	21 ft 3 in
B	2,44	8 ft 0 in	2,44	8 ft 0 in
C	2,60	8 ft 6 in	2,60	8 ft 6 in
D	2,89	9 ft 6 in	2,89	9 ft 6 in
E	0,50	1 ft 8 in	0,50	1 ft 8 in
F	1,93	6 ft 4 in	1,93	6 ft 4 in
G	0,94	3 ft 1 in	0,94	3 ft 1 in
H	3,34	11 ft 0 in	3,34	11 ft 0 in
I	2,71	8 ft 11 in	2,71	8 ft 11 in
J	1,82	6 ft 0 in	1,82	6 ft 0 in
K	28°		28°	
L	18°		18°	
M	104°		104°	
N	2,40	7 ft 10 in	2,40	7 ft 10 in
O	4,20	13 ft 9 in	4,20	13 ft 9 in
Weight	12220 kg	26945 lb	12040 kg	26548 lb

3 - Work area

3.1 - MACHINE HTL 4017



3.2 - MACHINE HTL 4014



4 - Noise emission level

The machine's sound levels comply with:

- The European directives mentioned on the compliance certificate supplied with the machine.
- National road regulations.
- National work regulations.

The LWA noise emission level is shown on the machine.

To avoid any increase in noise emission, all panels and other sound-absorbing materials must be replaced in their original position after maintenance and repair work.

Do not modify the machine in a way that may increase noise emissions.

5 - Telehandler vibration

The load and acceleration values for vibrations transmitted to the body are below the levels required by the various regulations. The measurements have been performed according to the currently applicable standards.

H - LUBRIFICATION AND MAINTENANCE

1 - Maintenance guidelines

Perform the maintenance in accordance with the maintenance schedule set out on the following pages.

- Adapt the frequency of maintenance according to use to obtain a maximum service life.
- Read all of the instructions in the guide before starting machine maintenance.
- Follow the machine shut-down procedure before performing any machine servicing or maintenance.
- For all checks, place the machine on flat ground, stop the engine, actuate the parking brake and lower the equipment to the ground.
- Ensure that the machine is level so that you can obtain proper fluid readings.
- Before each level, refilling or lubrication check, you must clean the filling holes, the plugs and the grease points.
- After lubricating the machine, actuate all functions several times to distribute the lubricants.
- Perform this maintenance procedure without any accessories.
- Check the state of the filling plug seals; do not forget to replace them.
- Maintain the machine and the equipment, especially the brakes and the steering, in good condition to ensure your safety and to comply with the legal conditions.

Do not modify or alter the machine or its equipment without the manufacturer's permission.

- Always check the pins, the elastic rings, the fastening pins, etc… daily.
- Maintenance that is not performed correctly can damage the machine.

Stop the engine before opening the cover: presence of moving parts that could cause bodily injuries.

- Check that there are no tools or other objects in the engine compartment.
- Drain the engine after operation when the oil is hot.
- Remove the keys from the starter contactor during maintenance work.

- Check the boom chain tension after the first 50 hours and every 250 hours, and adjust as required. Chain damage can occur if the chain is too taut or insufficiently taut.

Ne pas rester devant ou derrière la machine si le moteur tourne.

- Batterys, plastic objects or other components that would be toxic for the environment should not be thrown away. Ensure that they are disposed of without endangering the environment.

Accumulators are pressurized vessels. It is the user's responsibility to refer to the national regulations in force in the country of use concerning their use and disposal.

2 - Maintenance instructions

Wear all protective clothing and personal protection equipment supplied or required by the job conditions.

Do not wear loose clothes or jewellery that could get caught on controls or moving parts.

Do not perform machine servicing or maintenance with the engine running.

- If the engine is started inside a building, there must be sufficient ventilation to evacuate the exhaust gases.
- Always reassemble the protections and plates that have been dismantled before starting the machine.
- Paintwork shall be performed in well-ventilated premises and with approved protective equipment.
- The engine cooling system operates under pressure. The pressure is regulated by the radiator plug.

Never dismantle a component from the system while it is hot. Always loosen the radiator plug slowly and let the pressure escape before removing it completely.

- To prevent any risks of fire or explosion, keep any flames away from the battery. To prevent any risk of sparks that could cause an explosion, use the battery cables in accordance with the instructions given in this manual.
- Leaks of pressurized hydraulic oil or fuel can cause serious injury.

Do not use your hands to check for oil leaks. Search for leaks wit a piece of cardboard or paper.

Stop the engine and decompress the pressure in the system before intervening on the hydraulic network.

Check that all connections are tight before restarting the machine or pressurizing the system.

Do not intervene on the air-conditioning system. A refrigerant fluid leak can cause serious injury. Contact HAULOTTE Services®.

- The diesel in the injection system is under high pressure. For any operations or adjustments, please contact a qualified technician or your dealer. Failure to comply with these guidelines can cause serious injury.

Never let anyone stand or work under the boom when it is raised, unless the cylinder is locked with the bar provided for that purpose.

Never try to repair or tighten pressurized pipes

Never perform lubrication or adjustment operations when the machine is in motion or when the engine is running.

- Protective equipment must be worn when performing any interventions on the machine.

3 - Repairs and adjustments

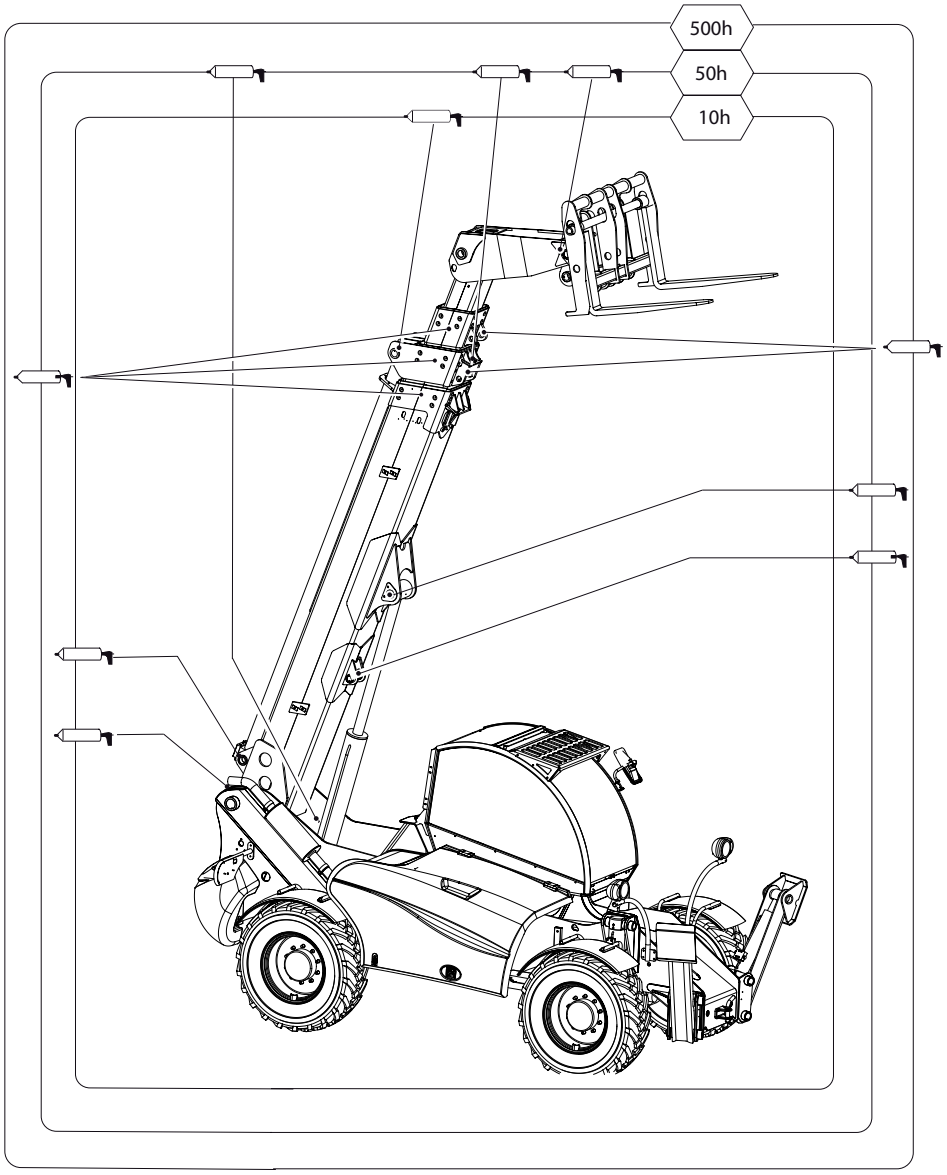
Important repairs, interventions or adjustments on the safety systems or elements (concerns mechanics, hydraulics and electricity).

They must be performed by HAULOTTE Services® staff or staff working on behalf of HAULOTTE®, who will only use original spare parts.

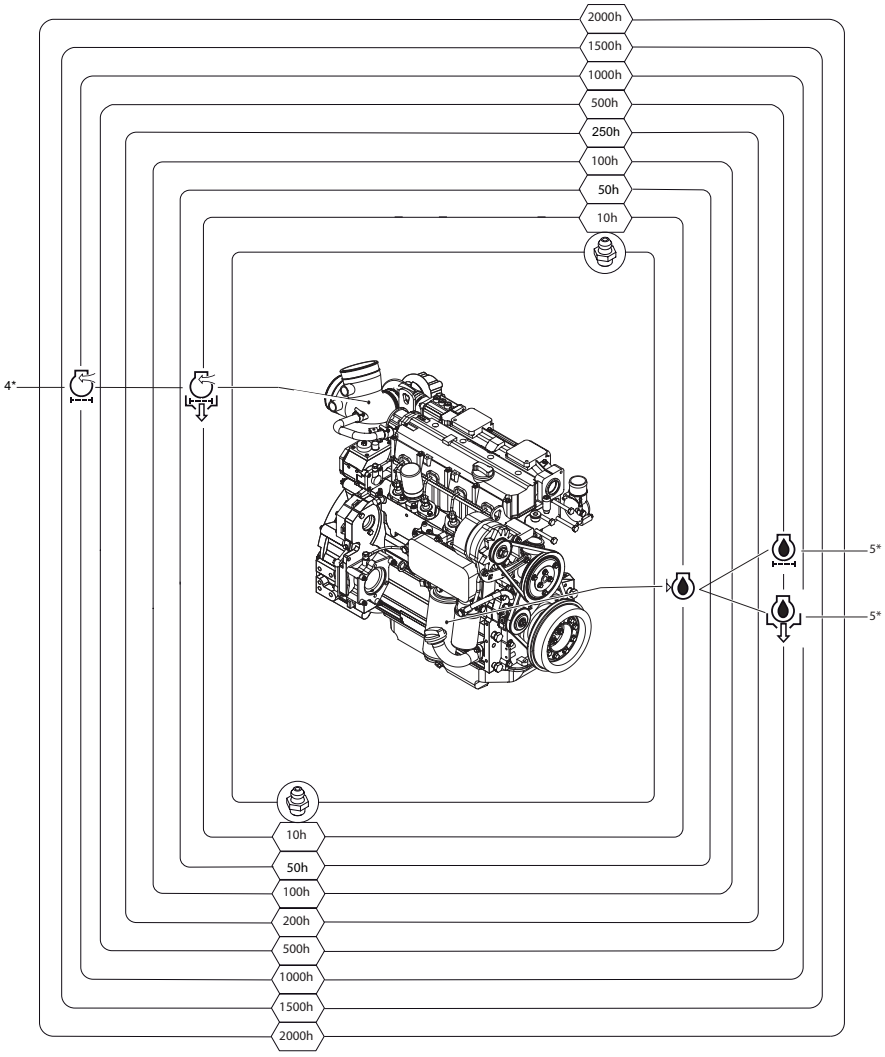
Any modifications outwith HAULOTTE®'s control are not permitted.

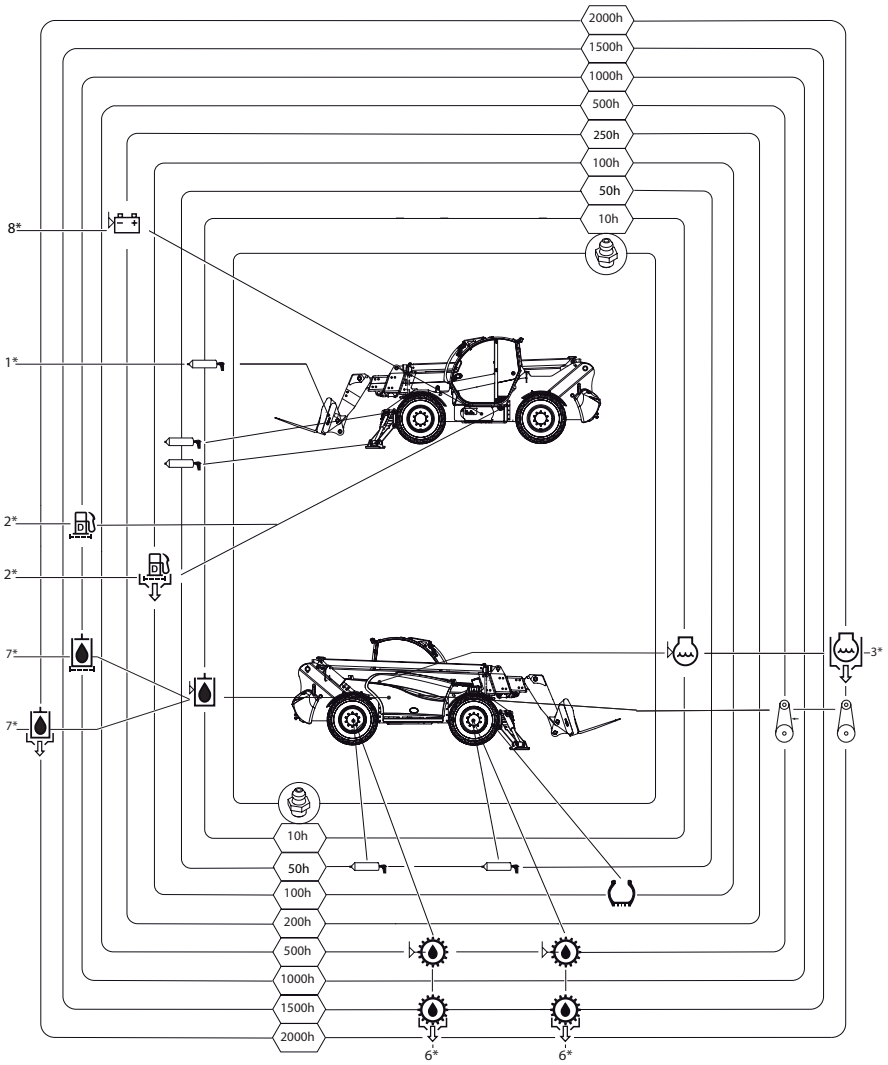
The manufacturer's liability is excluded if the work specified above is not performed by HAULOTTE®-approved staff or if the spare parts are not original spare parts.

4 - Lubrication and maintenance schedule



H - LUBRIFICATION AND MAINTENANCE





H - LUBRIFICATION AND MAINTENANCE

Description of the components

Symbol	Marking	Description
		Check the level
		Filter
		Oil change
	**1***	Lubrication
	**2***	Diesel circuit
	**3***	Cooling system
	**4***	Air system

Description of the components

Symbol	Marking	Description
	**5***	Internal combustion engine
	**6***	Travel axles
	**7***	Hydraulic circuit
	8*	Battery

H - LUBRIFICATION AND MAINTENANCE

5 - General programme

The time periods below are recommended for fuel-powered machines in normal use.

For electric machines, or in case of reduced use, time periods should be reduced by half.

In cases of intensive use, reduce the intervals between servicing.

Symbol	Signification	Symbol	Signification
	Visual inspections		Systematic replacement Operation requiring HAULOTTE Services® authorisation
	Check -Test - See user manual or machine maintenance book		Visual inspection followed by dismantling or replacement if necessary Operation requiring HAULOTTE Services® authorisation
	Check level		Tightening (bolt, etc.)
	Lubrication		Tightening (oil clearance)
	Oil change		Static and dynamic tests

Zone	Intervals						
	Daily	Every 50 h	Every 100 h	Every 250 h	Every 500 h	Every 1000 h	Every 2000 h
General checks							
Windscreen washer fluid	✓				✓		
Oil, water, fuel leaks	✓				✓		
Boom chain tension			✓		✓		
Chain wear						✓	
Appearance of the mechanical parts and flexibles	✓				✓		
Attachment device : nuts and bolts and hydraulic fitting	✓				✓		
Operation of the work lighting controls and the light indicators	✓				✓		
Diesel engine operation	✓				✓		
State of anti-skid parts	✓				✓		
Etat et Pressure pneumatiques			✓		✓		
Wheel lug nut torque			✓		✓		
Lubrication							
Cylinder pins		✓			✓		
Boom bottom shaft		✓			✓		
Telescope pads		✓			✓		
Suspension, driver seat rails					✓		
Diesel circuit							
Condensate	✓		✓		✓		
Diesel pre-filter						✓	
Filter						✓	

H - LUBRIFICATION AND MAINTENANCE

Zone	Intervals						
	Daily	Every 50 h	Every 100 h	Every 250 h	Every 500 h	Every 1000 h	Every 2000 h
Cooling system							
Coolant							
State of the hoses and collars							
Radiator slats							
Air filter							
Remove the dust							
Primary air filter							
Secondary air filter							
Internal combustion engine (See manuacturer's guide)							
Oil							
Oil filter cartbridge							
Motor supports							
Preheating resistor							
Belt tension							
Travel axles (See manuacturer's guide)							
Front axles: Differential + Transfer case on front axle + Pivots							
Rear axles: Differential + Pivots							
Réducteur épicycloïdaux							

Zone	Intervals						
	Daily	Every 50 h	Every 100 h	Every 250 h	Every 500 h	Every 1000 h	Every 2000 h
Hydraulic circuit							
Hydraulic oil							
Equipment hydraulic oil							
Transmission hydraulic filter							
Pressures							
Battery							

H - LUBRIFICATION AND MAINTENANCE

6 - Detailed programme

Symbol	Signification	Symbol	Signification
	Visual inspections		Systematic replacement Operation requiring HAULOTTE Services® authorisation
	Check - Test - See user manual or machine maintenance book		Visual inspection followed by dismantling or replacement if necessary Operation requiring HAULOTTE Services® authorisation
	Check level		Tightening (bolt, etc.)
	Lubrification		Tightening (oil clearance)
	Oil change		Static and dynamic tests

500h or 6 months service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks				
	Boom chain tension				
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
Lubrication			Cooling system		
	Cylinder pin			Coolant	
	Boom bottom shaft			Hoses and collars	
	Telescope pads			Radiator slats	
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

500h or 6 months service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

1000 h or 12 months service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks			Pre-filter	
	Boom chain tension			Filter	
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
	Chain wear		Cooling system		
Lubrication				Coolant	
	Cylinder pin			Hoses and collars	
	Boom bottom shaft			Radiator slats	
	Telescope pads				
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

1000 h or 12 months service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
	Motor supports				
	Preheating resistor				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
	Equipment hydraulic oil				
	Transmission hydraulic filter				
Battery					
	Level				
Date : **Number of hours :** **Intervenor :** **HAULOTTE Services® contract number :** **Intervention sheet number :** **Signature :**			**Comments**		

1500h or 18 months service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks				
	Boom chain tension				
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
Lubrication			Cooling system		
	Cylinder pin			Coolant	
	Boom bottom shaft			Hoses and collars	
	Telescope pads			Radiator slats	
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

1500h or 18 months service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
Battery					
	Level				
Date : **Number of hours :** **Intervenor :** **HAULOTTE Services® contract number :** **Intervention sheet number :** **Signature :**			**Comments**		

2000h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks			Pre-filter	
	Boom chain tension			Filter	
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
	Chain wear		Cooling system		
Lubrication				Coolant	
	Cylinder pin			Hoses and collars	
	Boom bottom shaft			Radiator slats	
	Telescope pads				
	Suspension, driver seat rails				
Internal combustion engine (see manufacturer's guide)					

H - LUBRIFICATION AND MAINTENANCE

2000h service					
Zone		Type of intervention	Zone		Type of intervention
	Oil				
	Oil filter cartridge				
	Belt tension				
	Motor supports				
	Preheating resistor				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
	Equipment hydraulic oil				
	Transmission hydraulic filter				
	Pressures				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

2500h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks				
	Boom chain tension				
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
Lubrication			Cooling system		
	Cylinder pin			Coolant	
	Boom bottom shaft			Hoses and collars	
	Telescope pads			Radiator slats	
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

2500h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

3000h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks			Pre-filter	
	Boom chain tension			Filter	
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
	Chain wear		Cooling system		
Lubrication				Coolant	
	Cylinder pin			Hoses and collars	
	Boom bottom shaft			Radiator slats	
	Telescope pads				
	Suspension, driver seat rails				
Internal combustion engine (see manufacturer's guide)					

H - LUBRIFICATION AND MAINTENANCE

3000h service					
Zone		Type of intervention	Zone		Type of intervention
	Oil				
	Oil filter cartridge				
	Belt tension				
	Motor supports				
	Preheating resistor				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
	Equipment hydraulic oil				
	Transmission hydraulic filter				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

3500h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			**Diesel circuit**		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks				
	Boom chain tension				
	Appareance of the mechanical parts and flexibles		**Air filter**		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
Lubrication			**Cooling system**		
	Cylinder pin			Coolant	
	Boom bottom shaft			Hoses and collars	
	Telescope pads			Radiator slats	
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

3500h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

4000h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			**Diesel circuit**		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks			Pre-filter	
	Boom chain tension			Filter	
	Appareance of the mechanical parts and flexibles		**Air filter**		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
	Chain wear		**Cooling system**		
Lubrication				Coolant	
	Cylinder pin			Hoses and collars	
	Boom bottom shaft			Radiator slats	
	Telescope pads				
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

4000h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
	Motor supports				
	Preheating resistor				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
	Equipment hydraulic oil				
	Transmission hydraulic filter				
	Pressures				
Battery					
	Level				
Date : **Number of hours :** **Intervenor :** **Numéro de contrat HAULOTTE Services® :** **Numéro de fiche intervention :** **Signature :**			**Comments**		

4500h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks				
	Boom chain tension				
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
Lubrication			Cooling system		
	Cylinder pin			Coolant	
	Boom bottom shaft			Hoses and collars	
	Telescope pads			Radiator slats	
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

4500h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

5000h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks			Pre-filter	
	Boom chain tension			Filter	
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
	Chain wear		Cooling system		
Lubrication				Coolant	
	Cylinder pin			Hoses and collars	
	Boom bottom shaft			Radiator slats	
	Telescope pads				
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

5000h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
	Motor supports				
	Preheating resistor				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
	Equipment hydraulic oil				
	Transmission hydraulic filter				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

5500h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks				
	Boom chain tension				
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
Lubrication			Cooling system		
	Cylinder pin			Coolant	
	Boom bottom shaft			Hoses and collars	
	Telescope pads			Radiator slats	
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

5500h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

6000h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks			Pre-filter	
	Boom chain tension			Filter	
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
	Chain wear		Cooling system		
Lubrication				Coolant	
	Cylinder pin			Hoses and collars	
	Boom bottom shaft			Radiator slats	
	Telescope pads				
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

6000h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
	Motor supports				
	Preheating resistor				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
	Equipment hydraulic oil				
	Transmission hydraulic filter				
	Pressures				
Battery					
	Level				
Date : **Number of hours :** **Intervenor :** **HAULOTTE Services® contract number :** **Intervention sheet number :** **Signature :**			**Comments**		

6500h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			**Diesel circuit**		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks				
	Boom chain tension				
	Appareance of the mechanical parts and flexibles		**Air filter**		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
Lubrication			**Cooling system**		
	Cylinder pin			Coolant	
	Boom bottom shaft			Hoses and collars	
	Telescope pads			Radiator slats	
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

6500h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

7000h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks			Pre-filter	
	Boom chain tension			Filter	
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
	Chain wear		Cooling system		
Lubrication				Coolant	
	Cylinder pin			Hoses and collars	
	Boom bottom shaft			Radiator slats	
	Telescope pads				
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

7000h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
	Motor supports				
	Preheating resistor				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
	Equipment hydraulic oil				
	Transmission hydraulic filter				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

7500h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks				
	Boom chain tension				
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
Lubrication			Cooling system		
	Cylinder pin			Coolant	
	Boom bottom shaft			Hoses and collars	
	Telescope pads			Radiator slats	
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

7500h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

8000h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks			Pre-filter	
	Boom chain tension			Filter	
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
	Chain wear		Cooling system		
Lubrication				Coolant	
	Cylinder pin			Hoses and collars	
	Boom bottom shaft			Radiator slats	
	Telescope pads				
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

8000h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
	Motor supports				
	Preheating resistor				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
	Equipment hydraulic oil				
	Transmission hydraulic filter				
	Pressures				
Battery					
	Level				
Date : **Number of hours :** **Intervenor :** **HAULOTTE Services® contract number :** **Intervention sheet number :** **Signature :**			**Comments**		

8500h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks				
	Boom chain tension				
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
Lubrication			Cooling system		
	Cylinder pin			Coolant	
	Boom bottom shaft			Hoses and collars	
	Telescope pads			Radiator slats	
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

8500h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
Battery					
	Level				
Date : **Number of hours :** **Intervenor :** **HAULOTTE Services® contract number :** **Intervention sheet number :** **Signature :**			**Comments**		

9000h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks			Pre-filter	
	Boom chain tension			Filter	
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
	Chain wear		Cooling system		
Lubrication				Coolant	
	Cylinder pin			Hoses and collars	
	Boom bottom shaft			Radiator slats	
	Telescope pads				
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

9000h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
	Motor supports				
	Preheating resistor				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
	Equipment hydraulic oil				
	Transmission hydraulic filter				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

9500h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks				
	Boom chain tension				
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
Lubrication			Cooling system		
	Cylinder pin			Coolant	
	Boom bottom shaft			Hoses and collars	
	Telescope pads			Radiator slats	
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

9500h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

10000h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks			Pre-filter	
	Boom chain tension			Filter	
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
	Chain wear		Cooling system		
Lubrication				Coolant	
	Cylinder pin			Hoses and collars	
	Boom bottom shaft			Radiator slats	
	Telescope pads				
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

10000h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
	Motor supports				
	Preheating resistor				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
	Equipment hydraulic oil				
	Transmission hydraulic filter				
	Pressures				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

10500h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks				
	Boom chain tension				
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
Lubrication			Cooling system		
	Cylinder pin			Coolant	
	Boom bottom shaft			Hoses and collars	
	Telescope pads			Radiator slats	
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

10500h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

11000h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks			Pre-filter	
	Boom chain tension			Filter	
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
	Chain wear		Cooling system		
Lubrication				Coolant	
	Cylinder pin			Hoses and collars	
	Boom bottom shaft			Radiator slats	
	Telescope pads				
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

11000h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
	Motor supports				
	Preheating resistor				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
	Equipment hydraulic oil				
	Transmission hydraulic filter				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

11500h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks				
	Boom chain tension				
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
Lubrication			Cooling system		
	Cylinder pin			Coolant	
	Boom bottom shaft			Hoses and collars	
	Telescope pads			Radiator slats	
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

11500h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

12000h service					
Zone		Type of intervention	Zone		Type of intervention
General checks			Diesel circuit		
	Windscreen washer fluid			Water condensate	
	Oil, water, fuel leaks			Pre-filter	
	Boom chain tension			Filter	
	Appareance of the mechanical parts and flexibles		Air filter		
	Nuts ans bolts and hydraulic fittings			Remove the dust	
	Operation of the work lighting controls and the light indicators			Primary air filter	
	Diesel engine operation			Secondary air filter	
	State of the anti-skid parts				
	State of tires and inflation presure				
	Wheel lug nut torque				
	Chain wear		Cooling system		
Lubrication				Coolant	
	Cylinder pin			Hoses and collars	
	Boom bottom shaft			Radiator slats	
	Telescope pads				
	Suspension, driver seat rails				

H - LUBRIFICATION AND MAINTENANCE

12000h service					
Zone		Type of intervention	Zone		Type of intervention
Internal combustion engine (see manufacturer's guide)					
	Oil				
	Oil filter cartridge				
	Belt tension				
	Motor supports				
	Preheating resistor				
Travel axles (see manufacturer's guide)					
	Front axles: differential + transfer case on front axle + pivots				
	Rearaxles: differential + pivots				
	Epicycloidal reducers				
Hydraulic circuit					
	Hydraulic oil				
	Equipment hydraulic oil				
	Transmission hydraulic filter				
	Pressures				
Battery					
	Level				
Date : Number of hours : Intervenor : HAULOTTE Services® contract number : Intervention sheet number : Signature :			Comments		

7 - Every day or every 10 hours of operation

7.1 - GENERAL CHECKS

- Perform a visual check for any leaks (check the corresponding circuit level if it is the case).
- Check for the absence of scratches, tears and warping on the flexibles, accessories and work tools.
- Check the attachment devices and the hydraulic connections.
- Check the appearance of the mechanical parts.
- Check the operation of the controls, control lights and various indicators.
- Check diesel engine operation: check the colour of the exhaust fumes and locate any abnormal noises.
- Check the state of the anti-skid parts (cab access steps) and replace them if necessary.
- Check that the tires are not damaged after the first 10 hours and then after every 100h. of operation.

Check the tire inflation pressure: at least 4.5 bars.

During a pressure check or an inflation operation, always face the thread and never the side of the tires.

- Check the wheel lug nut torque (500Nm) after the first 10 hours and then after every 100h. of operation.

7.2 - ANTI-TIP DEVICE

The anti-tip device is intended for constantly monitoring the stability of the front of the machine. To check this function, proceed as follows:

- Retract the boom fully and level it, when empty.

Do not raise the boom during this test.

- Level the chassis.
- Press the test button on the anti-tip device display.
- All of the LEDs should flash and a warning signal should sound. This indicates that the system is

H - LUBRIFICATION AND MAINTENANCE

working properly.

If the test gives another result, the system is not working properly and the machine must be taken out of service and repaired before work resumes.

7.3 - DIESEL CIRCUIT

• To prevent condensate from forming, fill the reservoir every day after work.

(Capacity: 135 litres).

7.4 - COOLING SYSTEM

• Check the coolant level

- When the engine is cool, the liquid level must be situated between the min. and max. marks on the expansion bottle.
- Open the radiator and refill if necessary.
- Only refill with SHELL ANTIFREEZE -38°C coolant.

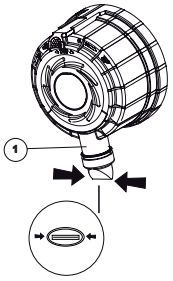
Do not remove the filling plug when the engine is hot. DANGER OF BURNS! Loosen the plug to the first notch and let it decompress, then unscrew the plug completely.

• Check the state of the hoses and that the collars are taut.

7.5 - AIR FILTER

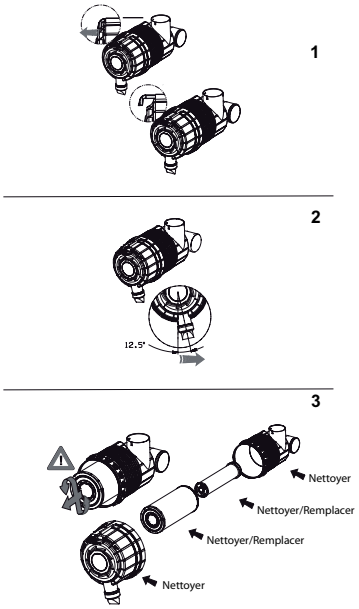
• Empty the dust filter:

- Empty the dust evacuation valve (1) by pressing the evacuation slot in the direction of the arrow.
- Clean the evacuation slot.
- Eliminate any dust residue by pressing the upper part of the valve.



Filter clogging check: It is performed constantly by a sensor situated on the filter body. Visually inspect the state of the sensor. If red marking is visible: clean or replace the filter element even if the cleaning frequency indicated above has not been reached. Clean the inside of the box.

- Clean the primary air filter's filter cartridge:
  - Open the cover:
    - Pull the trigger situated on the cover (1)
    - Locate the angular position of the cover, which should be identical upon reassembly.
    - Turn the cover to the right (2)
    - Pull the cover to remove it
    - -Turn and pull the outer cartridge.
  - Clean the filter cartridge (replace it, at the latest, after every 1000 hours of operation or once a year).
    - Blow with dry compressed air (with a maximum pressure of 5 bars) from the inside of the filter outwards or,
    - Unclog it by tapping (only in the event of an emergency). In this case, do not damage the cartridge, or
    - Wash it in accordance with the manufacturer's guidelines.
  - Check that neither the cartridge filter paper (translucent paper) nor the seal are damaged. Replace it/them if necessary.
  - Replace the filter cartridge.
  - Reassemble the cover, checking that the dust evacuation valve is directed downwards.



Check the state of the sealing ring before reassembling the cartridges. Check the state of the filter element with a light source placed inside the cartridge. Change the cartridge if a hole is detected (by a light ray).

Never clean the cartridge by hitting it against a hard surface or with a hot or inflammable liquid.

7.6 - INTERNAL COMBUSTION ENGINE

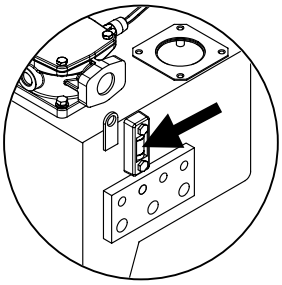
For the following operations, install the machine on a horizontal surface and stop the engine.

- Check the oil level:
  - Open the motor cover, remove the oil gauge; the level must be situated between the two min. and max. marks.
  - If necessary, complete the oil level via the filling hole.
- Check the belt tension:
  - A correct belt tension is essential to ensure that the alternator, the diesel pump and the water pump work properly and for the service life of the collars themselves.
  - A collar in bad condition must be replaced immediately.

H - LUBRIFICATION AND MAINTENANCE

7.7 - HYDRAULIC CIRCUIT

- Check the oil level:
  - Place the machine on a horizontal surface.
  - Fold the machine: with the stabilisers raised as far as possible, the fork carriage lowered as far as possible, the boom telescoped and retracted and the cylinders retracted.
  - The level must be situated between the two marks, as indicated in the photo opposite. Complete if necessary via the filling hole.



8 - After the first 50 hours of operation

8.1 - CHAIN TENSION CHECK AND ADJUSTMENT

8.1.1 - Chain tension check

After the first 50 hours and then after every 250 hours, check the telescoping chain tension in accordance with the following procedure.

- Telescope the arm fully horizontally.
- In the median vertical plane of one of the chains situated under the arm, measure the distance D1 between that chain and the case.
- Push the chain upwards in the same median vertical plan and measure the distance D2 between that chain and the case again.
- Calculate the difference D1-D2. If the value obtained is more than 25mm, you must retighten the chain following the procedure described in Section H, 7.1.2.
- Repeat the procedure described above for each of the telescoping chains situated under the arm.

8.1.2 - Arm chain tension adjustment

The arm is fully extended horizontally following the chain tension check (See Section H, 7.1.1).

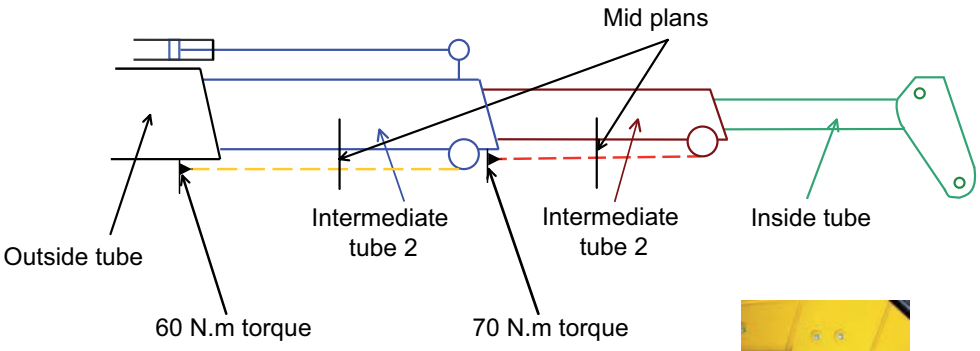
Retract the telescopic action jack by approx. 1m in order to apply tension to the retracted telescoping chains (non-accessible chains).

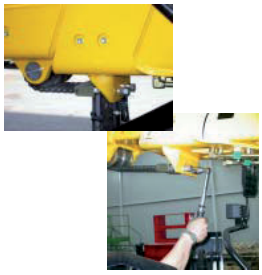
Retighten the upper extended telescoping chains with a torque wrench by applying a 70Nm torque to each of the locking nuts on the threaded rods situated at the end of each of the chain yokes. Ensure that you distribute the tension between the chains by turning one of the nuts and then the other by successive ½ turns.

Then retighten the lower extended telescoping chains (only on the 17m. arm) by applying a 60Nm torque to each of the locking nuts on the threaded rods situated at the end of each of the chain yokes. Ensure that you distribute the tension between the chains by turning one of the nuts and then the other by successive ½ turns.

Finish retracting the arm; the cases should start moving simultaneously.

H - LUBRIFICATION AND MAINTENANCE





------ Upper extension chains

------ Lower extension chains (only 17 m arm)

▶ Chain yokes

9 - Every 50 hours of operation

- Lubricate the cylinder pins equipped with grease points.
- Lubricate the boom bottom shaft.
- Lubricate the sliding area friction pads.

For lubrication operations, refer to the Lubricants and equivalents table in Section H, 14.5 for the type of grease used.

10 - Every 100 hours of operation

10.1 - TIRES

- Check that the tires are not damaged.
- Remove the valve rod cap.

Check the tire inflation pressure: at least 4.5 bars.

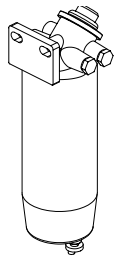
During a pressure check or an inflation operation, always face the thread and never the side of the tires.

- Add air if required.
- Replace the valve cap.
- Check the wheel lug nut torque (500Nm).

Perform the first torque check after the first 10h. of operation.

10.2 - DIESEL CIRCUIT

- Drain any condensate and clean the diesel pre-filter:
  - To access the diesel pre-filter situated next to the filling plug, remove the plate fixed by 3 HM10 screws.
  - Drain the water and dirt by removing the screw situated under the pre-filter (1).
  - Retighten the purge screw.
  - Reassemble the plate



1

- Perform the first diesel pre-filter change after the first 100 hours of operation and then after 'every 1000 hours or once a year (See Section H, 12.2).

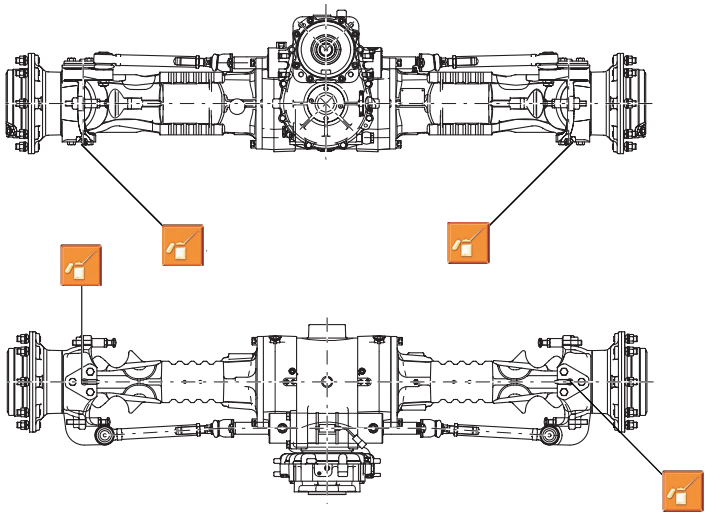
10.3 - INTERNAL COMBUSTION ENGINE

- Perform the first engine oil drainage and change the filter cartridge after the first 100 hours of operation and then every 500 hours (See Section H, 11.2).

H - LUBRIFICATION AND MAINTENANCE

10.4 - LUBRICATING THE FRONT AXLES

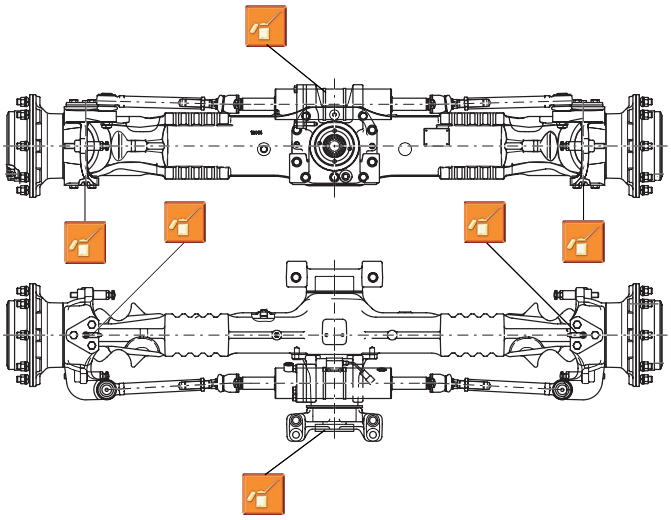
- Remove the 4 protective caps from each grease point.
- Connect the grease pump.



Replace the protective caps once you have lubricated the rear axles.

10.5 - LUBRICATING THE REAR AXLES

- Remove the 6 protective caps from each grease point.
- Connect the grease pump.



Replace the protective caps once you have lubricated the front axles.

10.6 - HYDRAULIC CIRCUIT

Perform the first filter cartridge change after the first 100 hours of operation and then after every 1000 hours or once a year (See Section H, 12.5 and 12.6).

H - LUBRIFICATION AND MAINTENANCE

11 - Every 250 hours of operation

11.1 - CHAIN TENSION CHECK AND ADJUSTMENT

- Check the telescoping chain tension and adjust if necessary, in accordance with the procedure set out in Section H, 7.1.

11.2 - COOLING SYSTEM

- Clean the radiator slats.

Do not remove the filling plug when the engine is hot. DANGER OF BURNS! Loosen the plug to the first notch and let it decompress, then unscrew the plug completely.

- Clean with a pressurized jet of water or air.

Only clean with water when the engine has cooled down.

11.3 - TRAVEL AXLES

- Perform the first drainage operation on the front and rear axles and the epicycloidal reducers after the first 250 hours of operation and then every 1500 hours (See Section H, 13.1).

Level check every 500 hours (See Section H, 11.3).

11.4 - BATTERY

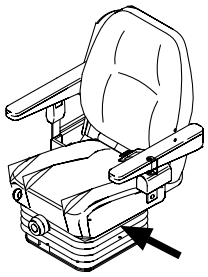
Battery check

- Perform the machine shut-down procedure.
- Open the battery access cover (under the cab).
- Wear safety goggles and visually inspect the battery. Check that the terminals are not corroded. Replace the battery if its case is cracked, melted or damaged.
- Close and secure the battery access cover (under the cab).

12 - Every 500 hours of operation

12.1 - . LUBRICATING THE SUSPENSION AND THE DRIVER SEAT RAILS

For lubrication operations, refer to the Lubricants and equivalents table in Section H, 14.5 for the type of grease used.



Dirt may impair correct seat operation. The seat must always be clean.

12.2 - INTERNAL COMBUSTION ENGINE

Pour les opérations suivantes, installer la machine sur un sol horizontal et arrêter le moteur.

- Drain the motor oil.

Capacity: 10 litres with filters

- Drainage is performed when hot.
- Loosen the drainage plug and let the oil flow completely. Open the oil filling hole.
- Clean the drainage plug and replace it, taking care to change the seal.
- Fill until the oil reaches the MAX. gauge mark.
- Replace the filling plug and let the engine run at idling speed for a few minutes.
- Stop the engine and check the level. Complete if necessary.

- Change the oil filter cartridge.
  - Loosen and remove the filter cartridge.
  - Oil the seal on the new cartridge, insert it into place on the engine carter. Screw the cartridge manually until the seal is in place.
  - Tighten the cartridge by screwing it by an additional half-turn.
  - Start the engine and check for sealing.
  - Stop the engine and check the oil level. Complete if necessary.

Perform the first drainage and the first oil filter cartridge change after the first 100 hours of operation.

12.3 - TRAVEL AXLES

The level check operations must be performed periodically, respecting the maintenance schedule provided.

It is recommended that you intervene immediately in the event of leaks or other faults resulting in a drop in oil levels to avoid any possible damage to the mechanical components.

Once you have removed the filling and drainage plugs, they should be closed again by tightening using a torque wrench with the torque intended by the manufacturer.

12.3.1 - Checking the level of the front axle

Capacity:

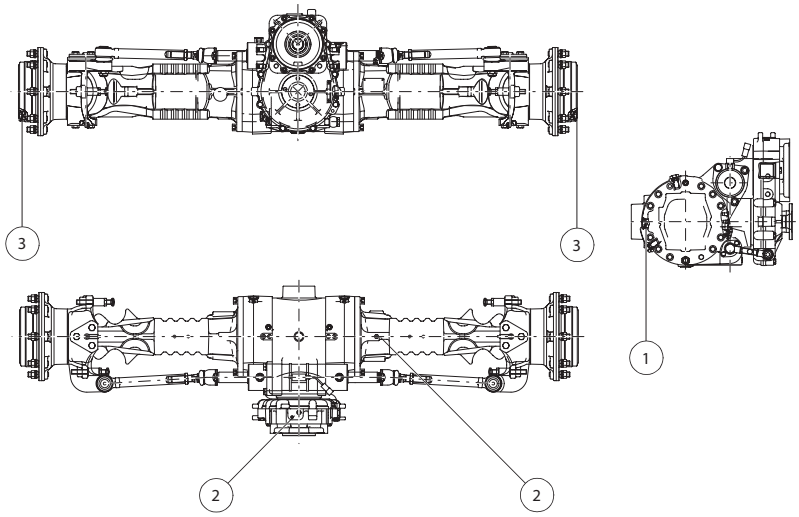
- Transfer case: 0.5 litres
- Differential: 8 litres

Before performing the oil level check operations, first remove the drain plugs (2) to eliminate any pressure from inside them.

- Loosen the control plug (1).
- The lubricant level in the axle must arrive at the control plug (1); otherwise, refill to the correct level via the same hole.
- Reassemble the control plugs (1) and the drain plugs (2).

Refer to the Lubricants and equivalents table in Section H, 14.5 for the type of oil used.

- Take advantage of this operation to clean the drain plugs (2).



H - LUBRIFICATION AND MAINTENANCE

12.3.2 - Checking the level of the rear axle

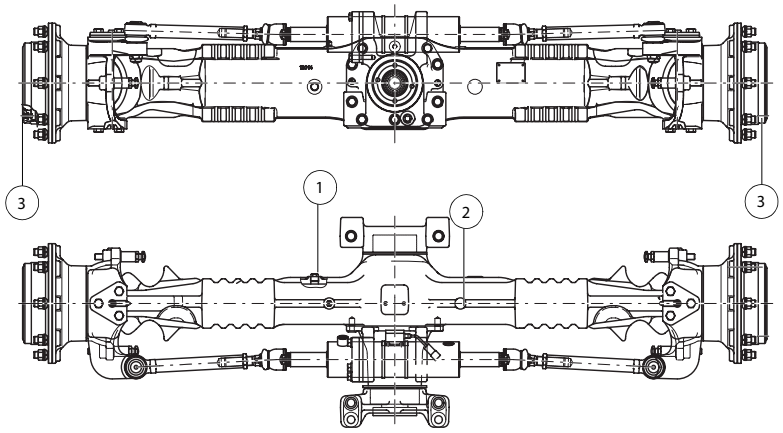
Differential capacity:

- 10 litres

- Before performing the oil level check operations, first remove the drain plug (2) to eliminate any pressure from inside it.
- Loosen the control plug (1).
- The lubricant level in the axle must arrive at the control plug (1); otherwise, refill to the correct level via the same hole.
- Reassemble the control plugs (1) and the drain plugs (2).

Refer to the Lubricants and equivalents table for the type of oil used.

- Take advantage of this operation to clean the control plugs (1) and the drain plugs (2).



12.3.3 - Checking the level of the epicycloidal reducers

To check the reducer oil level, you must move the machine to position the closure plug in the required positions. Due to the presence of the differential on each of the axles, you will have to repeat this operation individually for each of the machine wheels.

Capacity: 4 x 1.3 litres

- Loosen the plug (3) by a few turns; when it is in its high position, remove any internal pressure and then close it again.
- Move the machine slowly to bring the plug to horizontal position.
- Loosen the plug completely: The oil level must arrive at the plug; otherwise, refill to the correct level via the same hole.
- Reassemble the plug (3).

Refer to the Lubricants and equivalents table for the type of oil used.

13 - Every 1000 hours of operation (or once a year)

13.1 - CHAIN WEAR

Get the chain wear checked by a HAULOTTE Services® technician.

13.2 - DIESEL CIRCUIT

13.2.1 - Changing the diesel filter

- Open the motor cover to access the diesel filter.
- Loosen the filter cartridge.
- Replace the used cartridge with a new one.
- Close the motor cover again.

13.2.2 - Changing the diesel pre-filter

- To access the diesel pre-filter situated next to the filling plug, remove the plate fixed by 3 HM10 screws.
- Loosen the transparent lower cover.
- Replace the filter.
- Carefully clean the cover.
- Retighten it manually (1/4 turn after contact with the seal).
- Reassemble the plate.
- Reinitiate the diesel circuit with the hand pump.

Perform the first pre-filter change after the first 100h of operation.

H - LUBRIFICATION AND MAINTENANCE

13.3 - PRIMARY AIR FILTER

Never clean the cartridge by hitting it against a hard surface or with a hot or inflammable liquid.

- Change the filter cartridge:
  - Open the cover:
    - Pull the trigger situated on the cover (See Section H, 6.5 (1))
    - Locate the angular position of the cover, which should be identical upon reassembly.
    - Turn the cover to the right (See Section H, 6.5 (2))
    - Pull the cover to remove it
    - Turn and pull the outer cartridge. (See Section H, 6.5 (3)).
  - Change the outer filter cartridge.
  - Reassemble the cover, checking that the dust evacuation valve is directed downwards.

13.4 - INTERNAL COMBUSTION ENGINE

For the following operations, install the machine on a horizontal surface and stop the engine.

- Check that the motor supports and the elastic mount attachments are in good condition.

For all engine maintenance operations: consult the guide provided by the engine manufacturer or HAULOTTE Services®.

13.5 - HYDRAULIC CIRCUIT

13.5.1 - Equipment hydraulic circuit

- Change the hydraulic filter cartridge:
  - Lift the boom and stop the engine. Insert the safety U-lock.
  - Remove the strainer (filling plug).
  - Clean the strainer carefully and reassemble it.
  - Remove the filter cartridge and replace it with a new one. (oil the seal before assembly)
  - Switch on the engine.
  - Remove the safety U-lock.
  - Perform boom lifting movements.
  - Check the oil level and complete if necessary.
  - Close the filling plug again.

Perform the first filter change after the first 100 hours of operation.

13.5.2 - Transmission hydraulic circuit

- Change the hydraulic filter cartridge:
  - Place the machine in work position and stop the engine.
  - Open the engine compartment.
  - Loosen the tank from the transmission hydraulic filter.
  - Change the filter cartridge.
  - Switch on the engine and perform travel movements.
  - Check the oil level and complete if necessary.
  - Close the tank again.

Perform the first filter change after the first 100 hours of operation.

H - LUBRIFICATION AND MAINTENANCE

14 - Every 1500 hours of operation

14.1 - TRAVEL AXLES

The oil replacement operations must be performed periodically, respecting the maintenance schedule provided.

It is recommended that you intervene immediately in the event of leaks or other faults resulting in a drop in oil levels to avoid any possible damage to the mechanical components.

Once you have removed the filling and drainage plugs, they should be closed again by tightening using a torque wrench with the torque intended by the manufacturer.

Perform the first drainage after the first 250 hours of operation.

14.1.1 - Draining the front axle

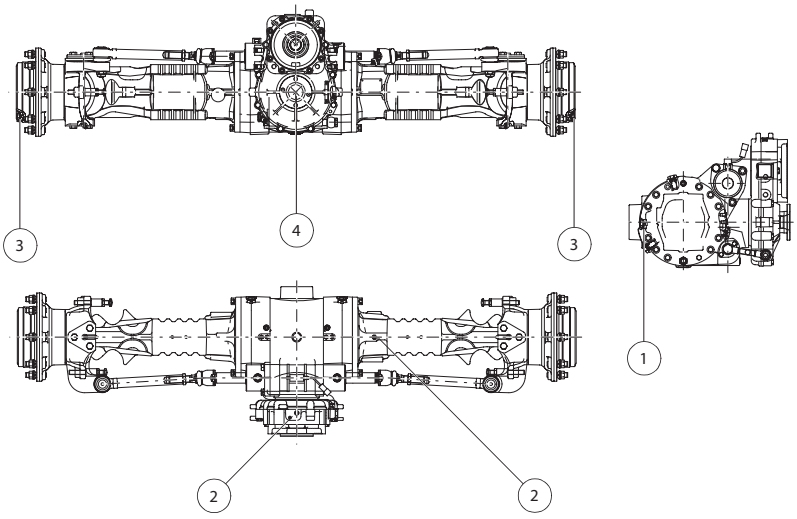
Capacity:

- Transfer case: 0.5 litres
- Differential: 8 litres

- Before performing the oil replacement operations, first remove the drain plugs (2) to eliminate any pressure from inside them.
- Loosen the drainage plug (4) and let the oil flow.
- Reassemble the drainage plug (4).
- Loosen the level 1 control plug.
- Fill the axle; the lubricant level in the axle must arrive at the control plug (1).
- Reassemble the control plugs (1) and the drain plugs (2).

Refer to the Lubricants and equivalents table in Section H, 14.5 for the type of oil used.

- Take advantage of this operation to clean the drain plugs (2).



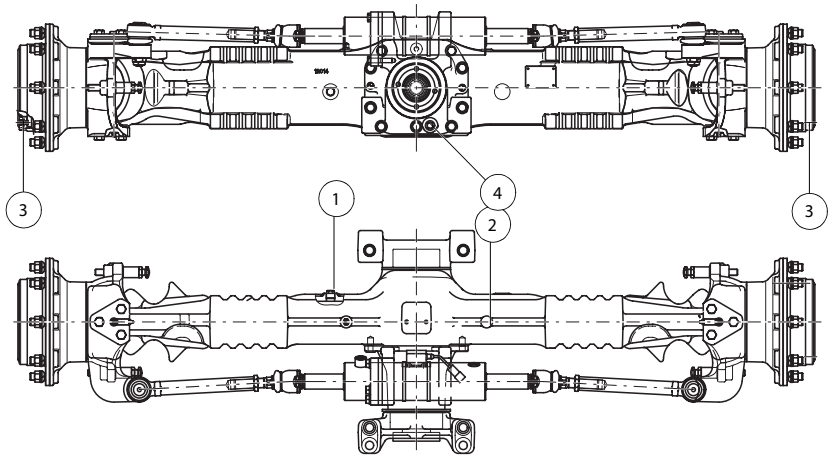
14.1.2 - Draining the rear axle

Differential capacity:

- 10 litres

- Before performing the oil replacement operations, first remove the drain plug (2) to eliminate any pressure from inside it.
- Loosen the drainage plug (4) and let the oil flow.
- Reassemble the drainage plug (4).
- Loosen the level 1 control plug.
- Fill the axle; the lubricant level in the axle must arrive at the control plug (1).
- Reassemble the control plugs (1) and the drain plugs (2).

Refer to the Lubricants and equivalents table in Section H, 14.5 for the type of oil used.



14.1.3 - Draining the epicycloidal reducers

To replace the reducer oil, you must move the machine to position the closure plug in the required positions. Due to the presence of the differential on each of the axles, you will have to repeat this operation individually for each of the machine wheels.

Capacity: 4 x 1.3 litres

- Loosen the plug (3) by a few turns when it is in its high position to remove any internal pressure and then close it again.
- Move the machine slowly to bring the plug to its low position.
- Loosen the plug completely and let the oil flow.
- Move the machine slowly to bring the plug to horizontal position.
- Fill the reducer; the oil level must arrive at the plug.
- Reassemble the plug (3).

Refer to the Lubricants and equivalents table in Section H, 14.5 for the type of oil used.

15 - Every 2000 hours of operation (or every 2 years)

15.1 - COOLING SYSTEM

Before performing any interventions, let the engine cool down.

- Change the coolant

Capacity: approx. 18L.

OPEN THE HEATING VALVE, SITUATED IN THE CAB WHEN DRAINING THE COOLING SYSTEM AND THE TWO VALVES SITUATED IN THE INTERNAL COMBUSTION ENGINE COMPARTMENT.

- Remove the plug from the expansion bottle.
- Loosen the drainage plug and let the coolant flow.
- Empty the expansion bottle.
- Clean the system thoroughly with water (or, if necessary, with a cleaning product). In this case, retighten the plugs and let the engine run at ½ throttle for 10 minutes, stop the engine and drain the system.
- Replace the drainage plug.

H - LUBRIFICATION AND MAINTENANCE

- Filling the cooling system
  - Open the expansion bottle plug.
  - Fill the radiator GRADUALLY until the coolant has reached the correct level.
  - Close the expansion bottle plug again.
  - Switch the acceleration control lever to IDLING.
  - Start the engine.
  - Let the engine run AT IDLING SPEED for approx. 2 minutes.
  - Stop the engine.
  - Open the expansion bottle and refill if necessary.

15.2 - AIR FILTER

Never clean the cartridge by hitting it against a hard surface or with a hot or inflammable liquid.

- Change the filter cartridges:
  - Open the cover:
    - Pull the trigger situated on the cover (See Section H, 6.5 (1))
    - Locate the angular position of the cover, which should be identical upon reassembly.
    - Turn the cover to the right (See Section H, 6.5 (2))
    - Pull the cover to remove it
    - Turn and pull the (primary) outer cartridge. Then pull the (secondary) inner cartridge (See Section H, 6.5 (3)).
    - Insert a new secondary cartridge, by pushing it to the bottom of the socket provided in the case.
    - Place the new primary cartridge above the secondary cartridge, insert it in place with a rotation movement near the stop
  - Reassemble the cover, checking that the dust evacuation valve is directed downwards.

Never clean the secondary filter.

Check the state of the sealing ring before reassembling the cartridges.

Perform the secondary cartridge change every 2 years or after every 5 maintenance operations.

15.3 - INTERNAL COMBUSTION ENGINE

- Change the engine belts.

For all engine maintenance operations: consult the guide provided by the engine manufacturer or HAULOTTE Services®.

15.4 - HYDRAULIC CIRCUIT

- Get the hydraulic pressures checked.

This operation must be performed by a HAULOTTE Services® technician.

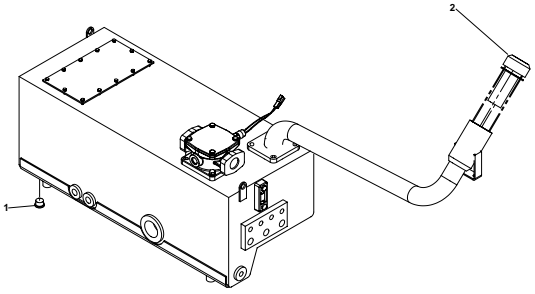
- Change the oil:

Tank capacity: 110 litres.

Drainage must be performed when the oil is hot.

.

- Place the machine in its folded position.
- Stop the engine.
- Go underneath the machine.
- Remove the filling plug, (2) on the photo opposite.
- Remove the drainage plug, (1) on the photo opposite. Let the oil flow.



H - LUBRIFICATION AND MAINTENANCE

When the tank is empty:

- Reassemble the drainage plug.
- Fill the tank with the recommended oil until the gauge indicates the max. level.
- Reassemble the filling plug, (2) on the photo opposite.
- Switch on the engine.
- Actuate the equipment controls in both directions for approx. five minutes (without placing the cylinders at the stops).
- Place the machine in road position.
- The level must be as indicated in the photo opposite. Complete if necessary via the filling hole..

Refer to the Lubricants and equivalents table in Section H, 14.5 for the type of oil used.

15.5 - LUBRICANTS AND EQUIVALENTS

		Standard references		Manufacturer references					
Uses	**Capacities**	**ISO**	**MIL API**	**BP**	**ELF**	**ESSO**	**MOBIL**	**AGIP**	**SHELL**
GREASES									
Pins and hinges	-	6743/0 catégorie X			EPEXEL F 2				
Boom		Grade 2 ou 3			Multi-move 2				
Driver seat rails						Multi-Purpose Grease (Moly)			
OILS									
Front axle and differential**	10 litres	SAE 80W90*						ROTRA MULTI THC/C 80W90	SPIRAX LS 80W90
Rear axle and differential**	8 litres	SAE 80W90*						ROTRA MULTI THC/C 80W90	SPIRAX LS 80W90
Wheel reducer	1.3 litre	SAE 80W90	MIL-L2105 API GL5	ENER-GEAR 90 80W90	TRAN-SELF TYPE 80W90	ESSO GEAR GX SAE 80W90		ROTRA MULTI THC/C 80W90	SPIRAX LS 80W90
Transfer case	0.5 litre	SAE 80W90	MIL-L2105 API GL5	ENER-GEAR 90 80W90	TRAN-SELF TYPE 80W90	ESSO GEAR GX SAE 80W90		ROTRA MULTI THC/C 80W90	SPIRAX LS 80W90
Hydraulic circuit	175 litres	HV 46		ENER-GOL SHF-HV 46	HYDREL F DS46	INVA-ROL EP46	DTE 15M SERIE		HYDRAULIC PW 46
Internal combustion engine	10 litres	SAE 15W40	MIL-2140E	VANEL-LUS C5 DIESEL5 3 15W40	ELF PER-FOR-MANCE SUPER D 15W40	ESSO TUBE XT301 SAE 15W40	DELVAC M 15W40		RIMU-LAX 15W40

*: Uses an additive for axles equipped with a limited slip differential.

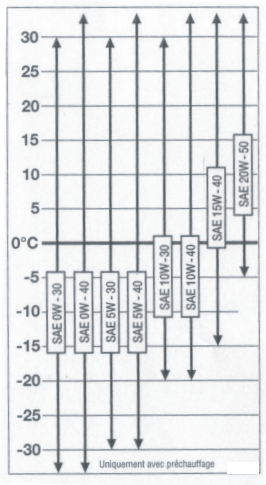
**: The axle manufacturer recommends using SHELL or AGIP products.

*** Use TELLUS ARTIC OIL 32 (SHELL) below -15° (for use with ambient temperatures of between -35° and +40°)

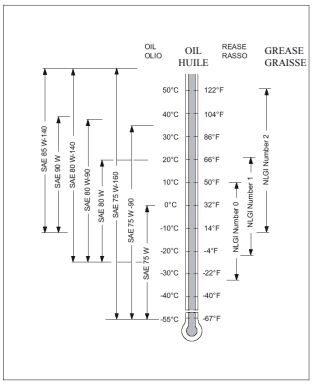
The oils indicated above are valid for use at ambient temperatures of between -15°C and 40°C. Outwith this temperature range, refer to the oil viscosity tables below.

H - LUBRIFICATION AND MAINTENANCE

Axle oil viscosity according to the ambient temperature



Engine oil viscosity according to the ambient temperature



16 - Electric circuit

16.1 - DIAGRAM (194P264340D)

See at the end of manual

16.2 - FUSES AND RELAYS

Fuses and relays

Code	Description
FU100/20A	General fuse for electrical equipment
FU101/15A	Fuse for warning lights
FU187/15A	Fuse for radio control
FU117/7.5A	Fuse for rear fog lamps
FU112/7.5A	Fuse for rear side lights + registration plate
FU111/7.5A	Fuse for front right side lights
FU110/7.5A	Fuse for front left side lights
FU109/10A	Fuse for stop lights
FU108/15A	Fuse for headlamps
FU107/15A	Fuse for full beam headlamps
FU106/10A	Fuse for direction indicators
FU103/10A	Fuse for beacon + horn
FU102/10A	Fuse for calculator supply
FU113/7.5A	Fuse for sensor supply + controls
FU114/30A	Fuse for electrovalve supply
FU620/10A	Fuse for reverse warning signal
FU183/20A	Fuse for front windscreen wiper / windscreen washer
FU195/30A	Fuse for 12V socket
FU191/20A	Fuse for work headlight
FU184/10A	Fuse for rear windscreen wiper
FU183/10A	Fuse for front windscreen wiper / windscreen washer
FU182/20A	Fuse for cab accessories
FU180/30A	Fuse for cab heating
FU161/10A	Fuse for engine preheating control
KA620	Relay for reverse warning signal
KA102	Relay for headlamps
KA103	Relay for full beam headlamps
KA110	Relay for validating side lights
KA380	Relay for floating control
KA187	Relay for radio-control drive
KA188	Relay for radio-control ignition
KA181	Relay for air-conditioning control
KA104	Relay for turn signal unit
KA160	Auxiliary relay for starter control
KA189	Relay for air-conditioning heat sink ventilation

H - LUBRIFICATION AND MAINTENANCE

17 - Hydraulic circuit

17.1 - DIAGRAM 194P261380

See at the end of manual

18 - Operating incidents

Stop the machine and contact HAULOTTE AFTER-SALES® if the following LEDs flash or remain lit :

- Engine pre-heating LED (P188): Pre-heating defect indicator
- Parking brake defect LED (P182): Not enough pressure in the parking brake system
- Motor oil pressure LED (P181): Not enough pressure
- Service brake defect LED (P182): Not enough pressure
- Battery LED (P180): Wiring problem
- ECU LED (P191)

The machine is equipped with an internal defect detection system.

The number of times the ECU LED flashes indicates the type of fault to the operator.

The machine switches to downgraded mode, depending on the type of fault; certain movements can be limited or forbidden by the system to safeguard the operator's safety.

Diagnosis

Incident	Probable cause	Solution
1 flash	Electrovalve defect:	Check the faulty electrovalve's connections Check the faulty electrovalve
2 flashes	Joystick operation defect	Check the SJ120 joystick connections Change the SJ120 joystick
	Handle failure	Check the SJ120 handle connections Change the SJ120 handle
	Remote control failure	Check the remote control connections Change the remote control
3 flashes	Inconsistent SA187 selector	Check the SA187 selector connections Change the SA187 selector
	Inconsistent SA681 selector	Check the SA681 selector connections Change the SA681 selector
	Travel direction failure	Check the left stalk switch connections Change the left stalk switch
	Driving racing	Normal defect in descent with Vmax Check connection between S1x and noeud B
4 flashes	Left chocking failure	Check the left chocking sensor connections Change the left chocking sensors
	Right chocking failure	Check the right chocking sensor connections Change the right chocking sensors
5 flashes	Arm length failure	Check the arm length sensor connections Change the arm length sensors
	Boom angle failure	Check the boom angle sensor connections Change the boom angle sensors
6 flashes	Contactor safety mechanism	Check the KM100 connections Check that the general relay is not stuck Change the KM100 relay
	Battery voltage	Check the alternator and/or the battery Change the alternator and/or the battery
	Voltage 5V	Check short-circuits on the voltage 5V Change the noeud B
7 flashes	EEPROM (engine computer memory) defect	Recalibrate the engine computer Change the engine computer
8 flashes	Inconsistent load control	Check the U140 connections Change the U140 load control system

H - LUBRIFICATION AND MAINTENANCE

18.1 - PROCEDURE

- Record the number of flashes emitted by the ECU LED
- Note any other LEDs that may be lit and the situation of the machine when the defect appears.
- Fold the machine
- Stop the machine

It is prohibited to use the machine until the defect is repaired.

- Service it as required.

I - INTERVENTION LOG

Date	Type of intervention	Number of hours	Intervening	Number of intervention HAULOTTE Services®

Date	Type of intervention	Number of hours	Intervening	Number of intervention HAULOTTE Services®

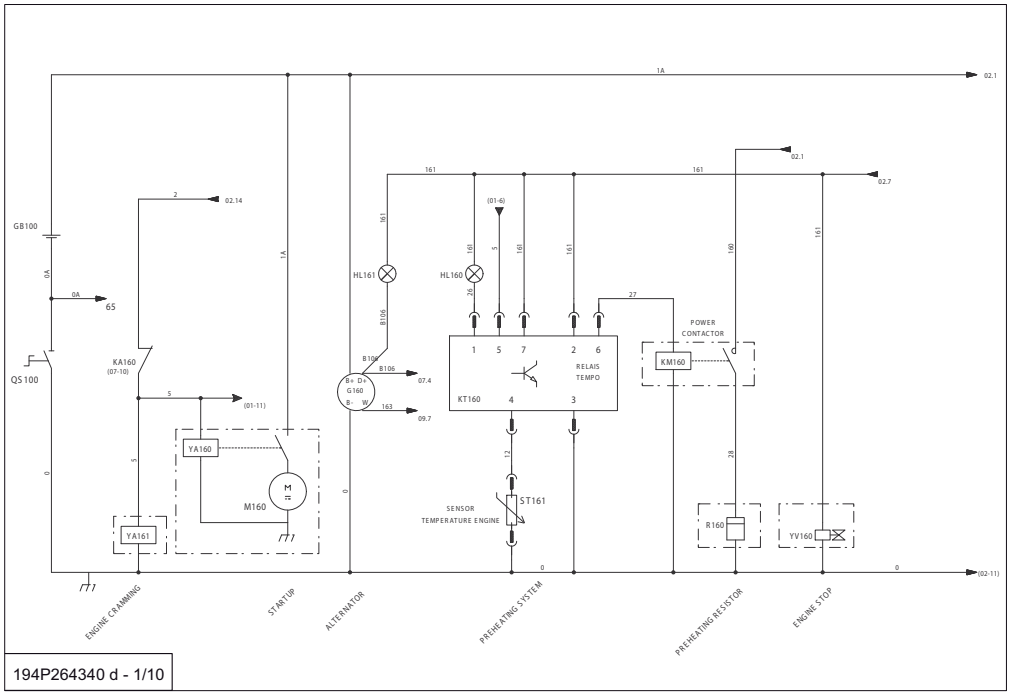
I - INTERVENTION LOG

Date	Type of intervention	Number of hours	Intervening	Number of intervention HAULOTTE Services®

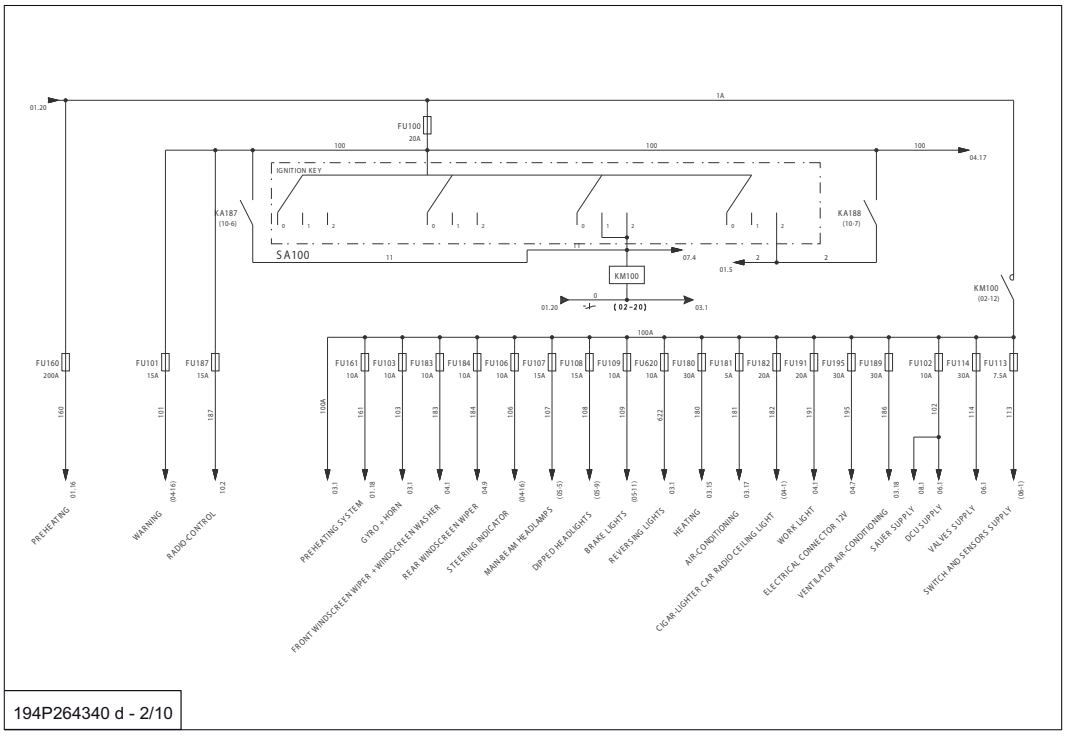
Date	Type of intervention	Number of hours	Intervening	Number of intervention HAULOTTE Services®

1 - HTL 4017/4014

1.1 - FOLIO 1/10

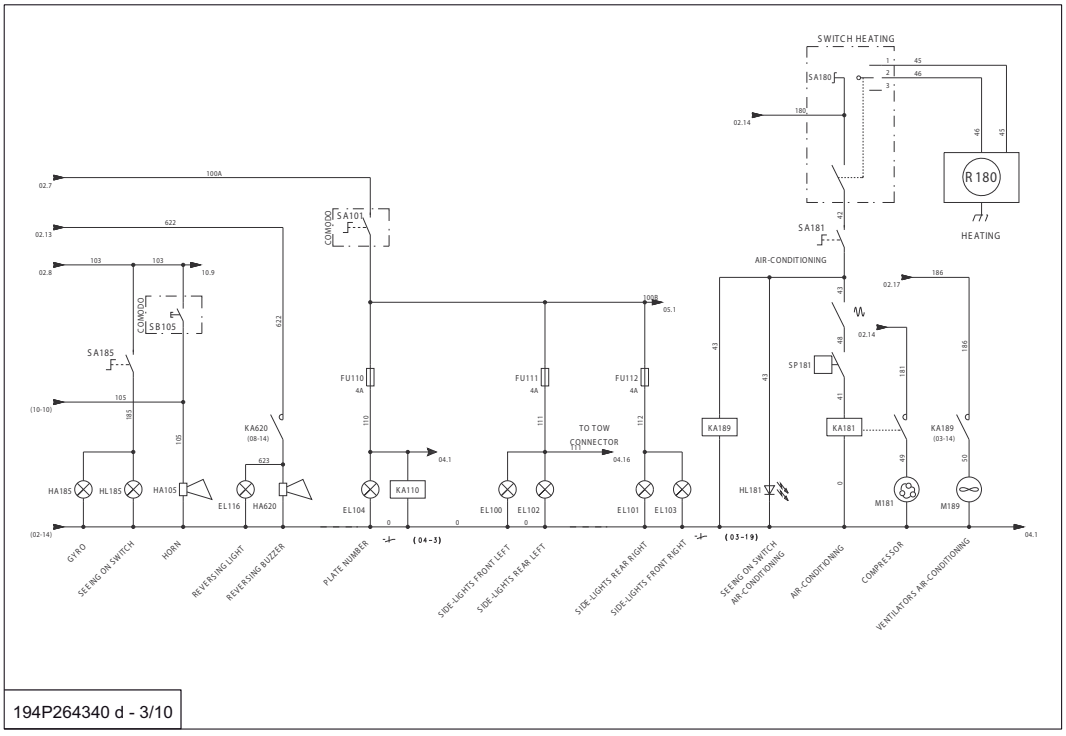


1.2 - FOLIO 2/10



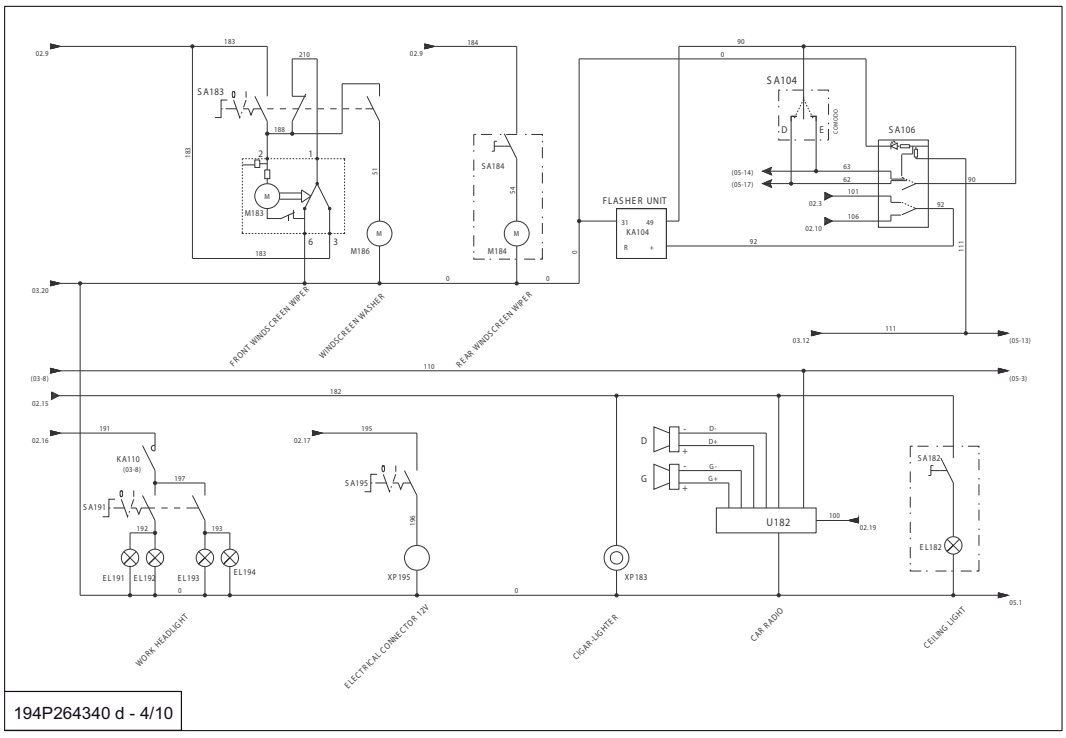
194P264340 d - 2/10

1.3 - FOLIO 3/10



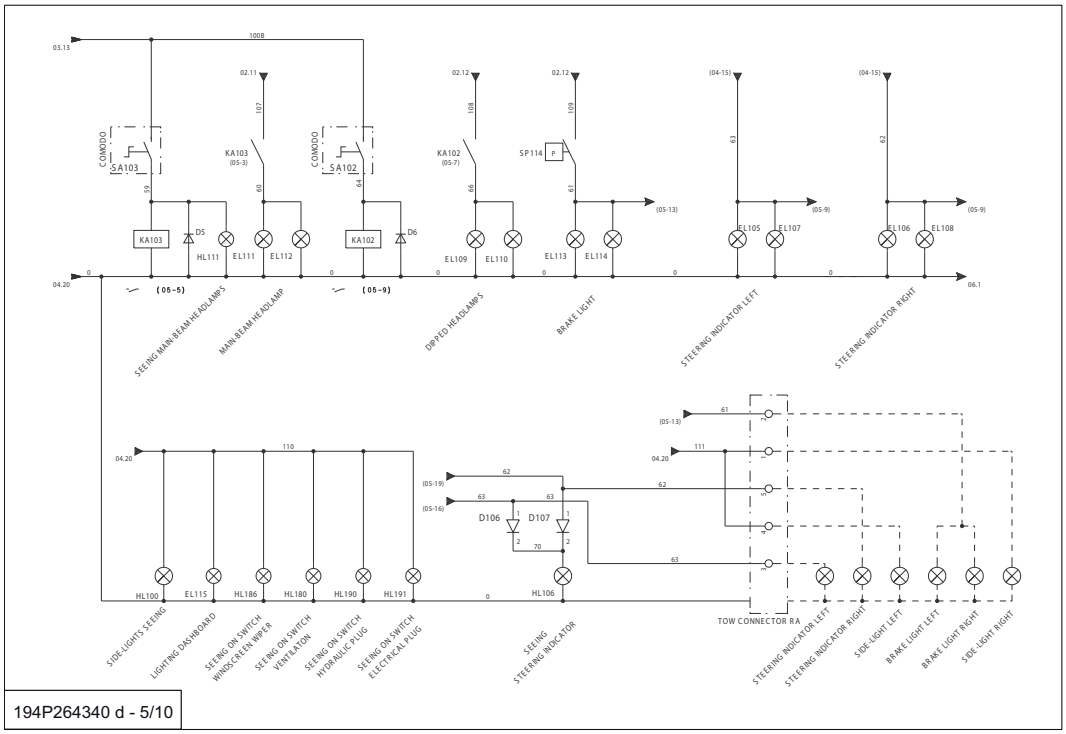
194P264340 d - 3/10

1.4 - FOLIO 4/10



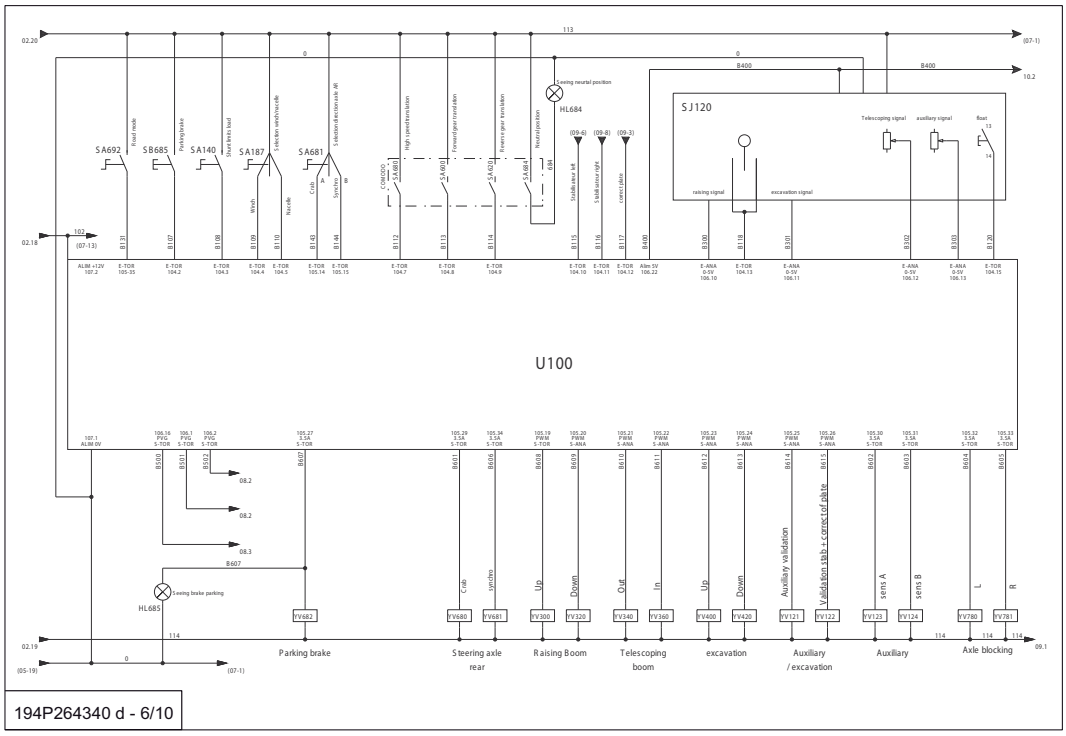
194P264340 d - 4/10

1.5 - FOLIO 5/10

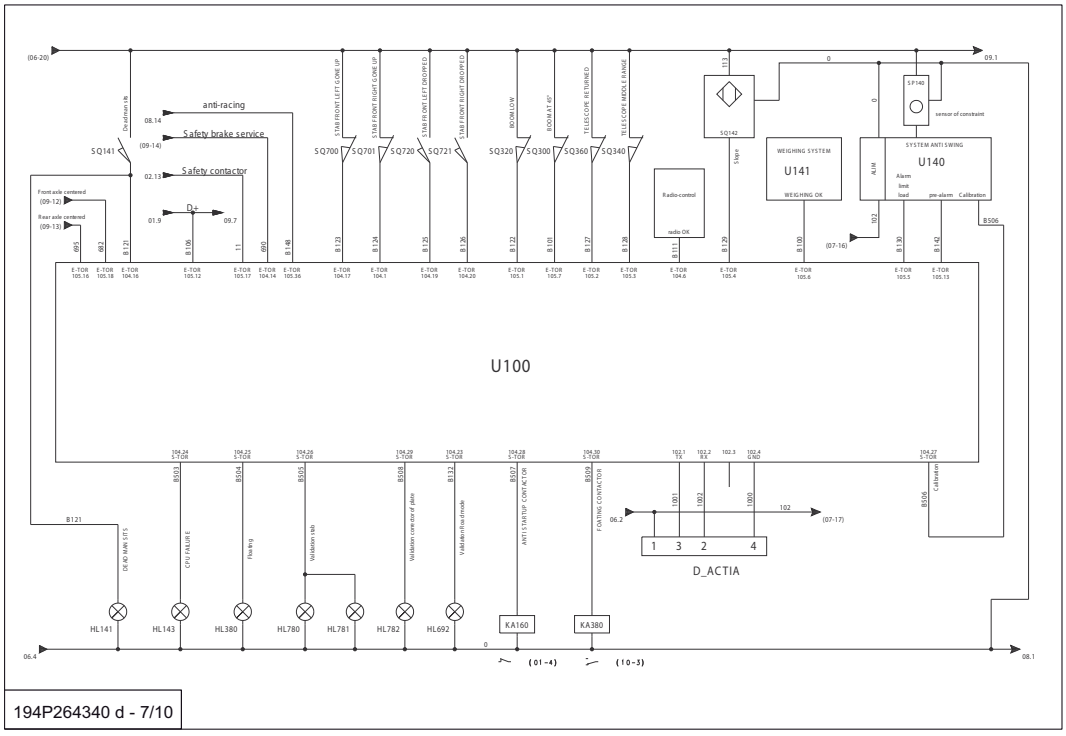


194P264340 d - 5/10

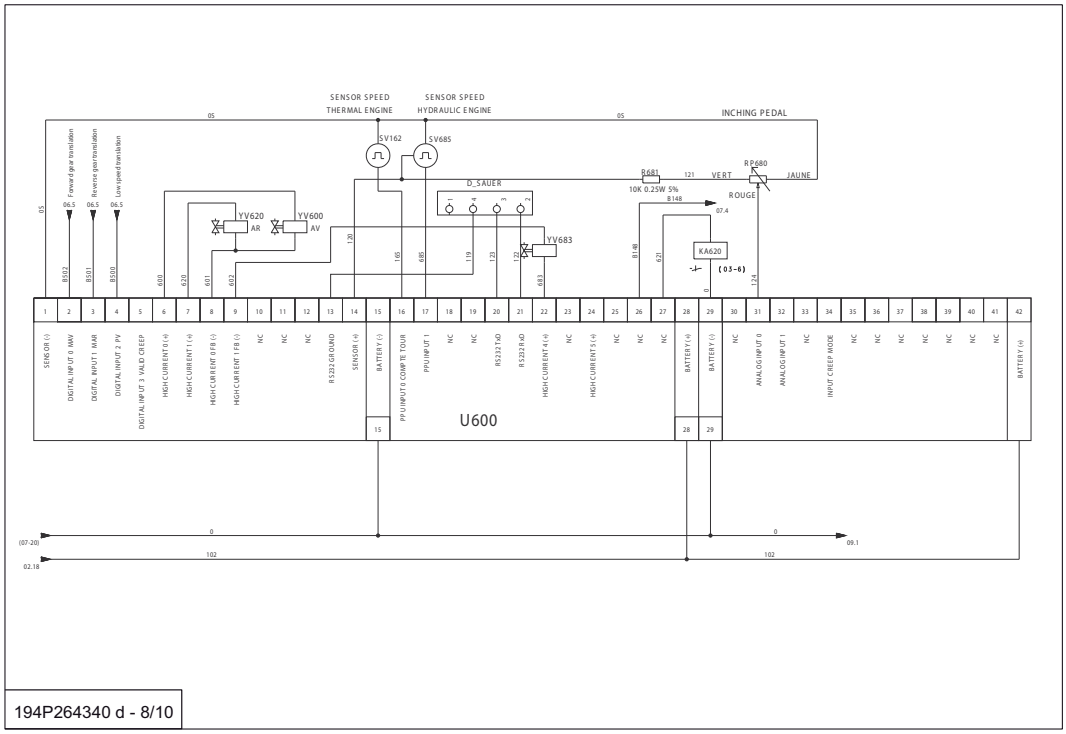
1.6 - FOLIO 6/10



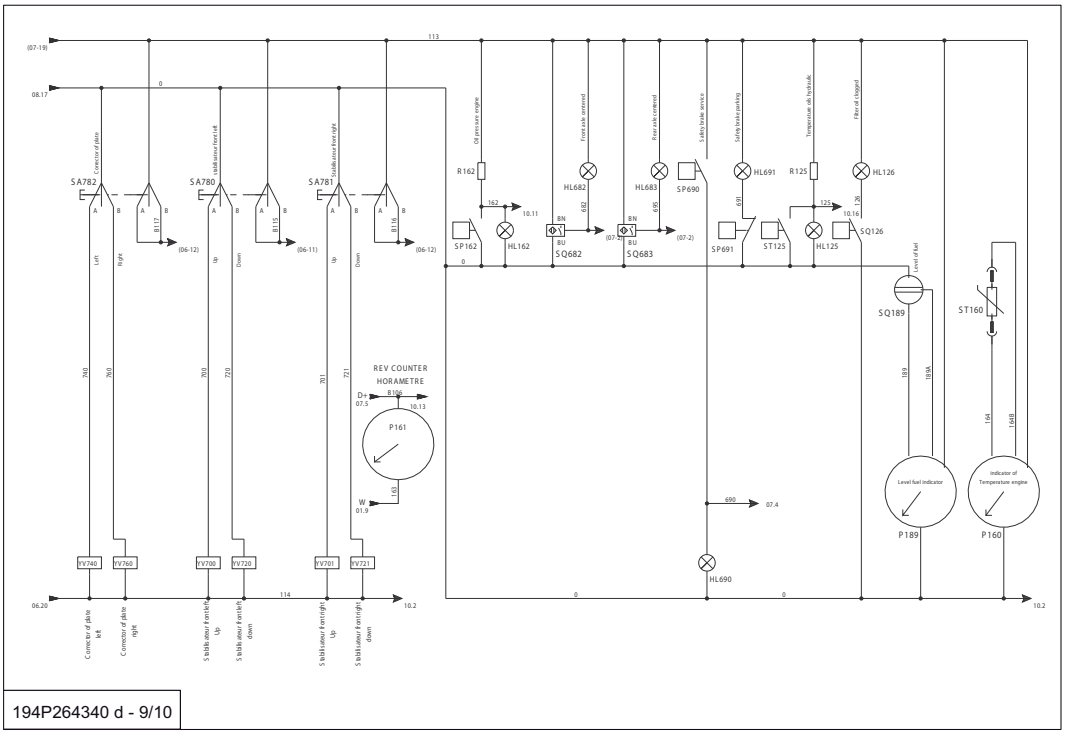
1.7 - FOLIO 7/10



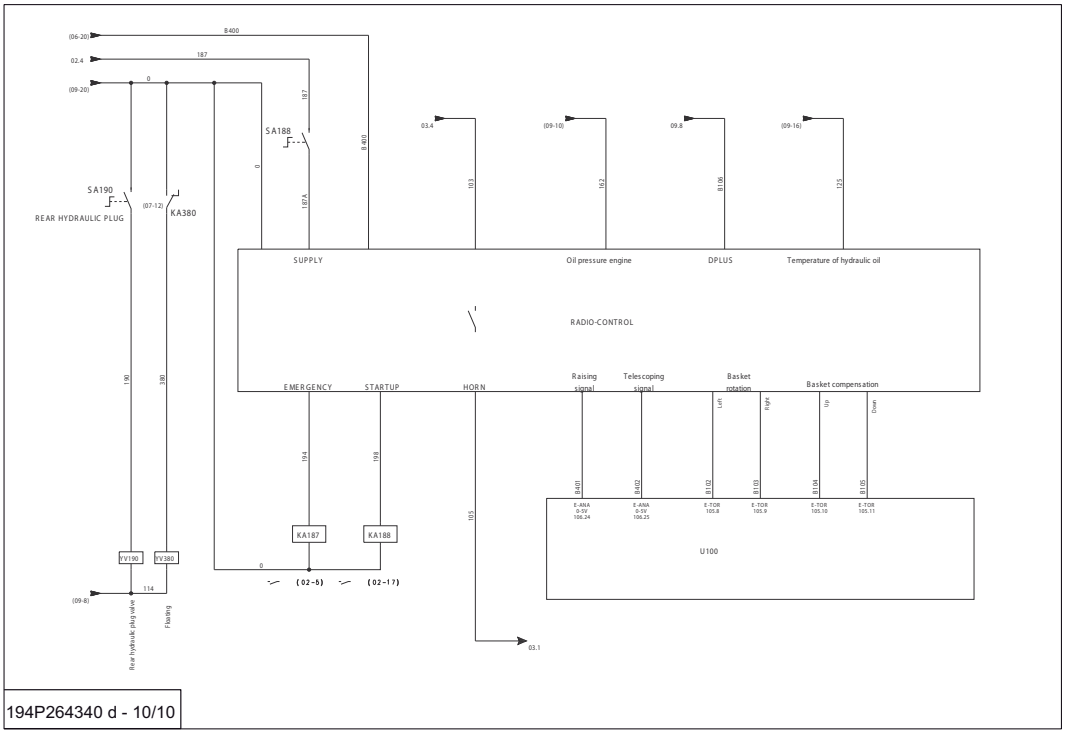
1.8 - FOLIO 8/10



1.9 - FOLIO 9/10

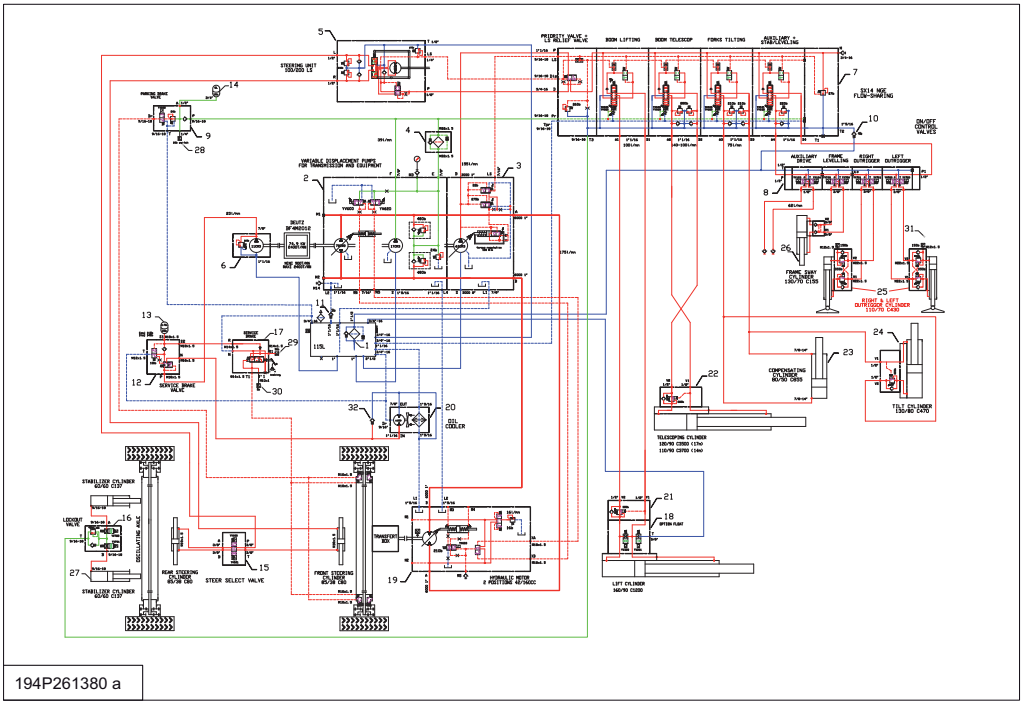


1.10 - FOLIO 10/10



1 - HTL 4017/4014

1.1 - FOLIO 1/1



194P261380 a

HYDRAULIC DIAGRAM

Telescopics handlers