HTL 3010 - HTL 3210 - HTL 3510 - HTL 7732 - HTL 4010

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

Operator's manual

HTL 3010 - HTL 3210 - HTL 3510 - HTL 7732 - HTL 4010

4001091330 E 08.20 USA / GB

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INTERVENTION REGISTER

A- Foreword

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

The Telehandler fitted with a telescopic boom is a mechanical device primarily designed and manufactured with the intent to lift, move and place materials in workplaces. All other uses or alterations/modifications to the telescopic boom handler must be approved by HAULOTTE®.

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

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

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

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

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

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

Original language and version :

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

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

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

Stay Safe and keep working with HAULOTTE® !

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

A- Foreword

1 - User responsibility

1.1 - OWNER'S RESPONSIBILITY

The owner (or hirer) has the obligation to :

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

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

1.2 - EMPLOYER'S RESPONSIBILITY

The employer has the obligation :

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

Forbid anyone from operating the machine if :

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

1.3 - TRAINER'S RESPONSIBILITY

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

1.4 - OPERATOR'S RESPONSIBILITY

The operator has the obligation to :

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

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

Only authorized and qualified operators may operate HAULOTTE® machines.

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

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

2 - Safety

2.1 - SAFETY INSTRUCTIONS

2.1.1 - Misuse Hazards

- Do not use the telescopic handler to lift people if it is not fitted with the platform attachment.
- Do not use a faulty or poorly maintained machine. Remove defective/damaged machine from service.
- Do not place the machine against a structure to hold that structure in place.
- Do not make contact with a fixed or mobile obstacle. The contact can cause premature deterioration of the structure and lead to the corruption of certain safety elements.
- Do not climb onto the machine covers.
- Do not replace items critical to machine stability with items of different weight or specification.
- Do not replace factory-installed tires with tires of different specifications or ply rating.
- Do not alter or disable machine components that in any way affect safety and stability.
- Do not disable the safety devices.
- Do not operate the machine controls suddenly.
- Do not direct the water jet directly on the exhaust outlet.

2.1.2 - Falling Hazards

To enter or exit from the cabin and from the platform (if equipped) :

- The machine must be completely stowed.
- Face the machine to open the cabin door to enter.
- Enter the cabin using the proper hand rails and the steps provided.
- Keep 3 points of contact (hands and a foot) on the steps and the hand rails to enter /exit the cabin or the lift platform (if fitted).

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

A- Foreword

Before commencing operation :

- Ensure that cabin door is closed and secured.

When in the cabin :

- Occupants must wear a seat belt in accordance with local regulations.
- Do not stand in the cabin.
- Do not leave the cabin if the handler is not completely folded and the engine is switched off.

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.

2.1.2.1 - Load falling Hazards

Never suspend loads from the forks or from any other parts of the fork carriage(Unless fitted with fork carriage equipped with sling attachment accessory).

Do not drill holes in the fork(s).

Do not heat or weld the forks.

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

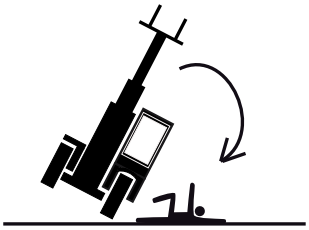
- Do not use the forks of machine to lift personnel.

2.1.3 - Overturning / Tip-over Hazards

Before positioning and operating the machine :

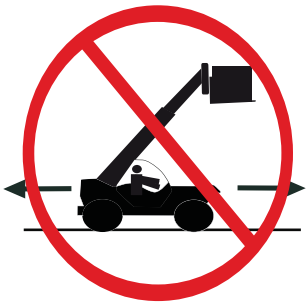
- Ensure that the surface is capable of supporting the machine weight including the rated capacity.
- Do not exceed the maximum rated capacity.
- Do not use the machine in winds exceeding the permissible limit.
- Do not raise the boom or drive with boom elevated on an incline exceeding the rated slope for the machine.
- Do not drive the machine on slopes or grades exceeding the specified limits.
- Do not replace components critical to stability with components of different weight or specification.
- Do not use the machine to tow other machines or to drag materials.

Never use an attachment without having checked the HAULOTTE® applicable load capacity chart supplied with the telehandler.

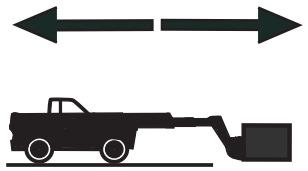


- Do not exceed the rated lifting capacity.
- Check that the ground can support the machine.

Do not drive at high speed with the boom raised.

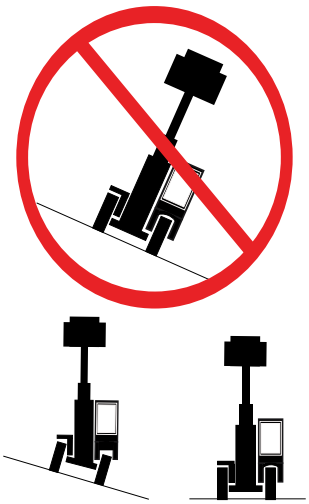


When driving at high speed, use only front-wheel steering (if the steering mode can be selected).



A- Foreword

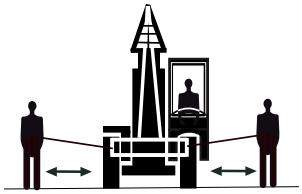
Do not raise the boom unless the chassis is level (0 °).



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

- 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 the load 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 with tag lines).

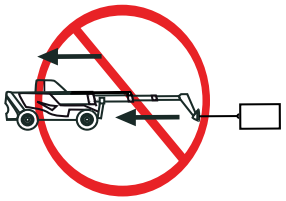


Do not try to use the telehandler's dumping function to return the load to horizontal position.

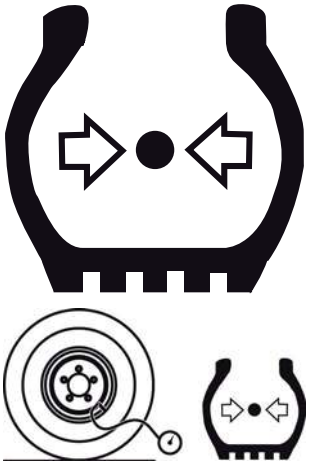
Never use the leveling function and/or the stabilizers to tilt the machine to the side. The purpose of these functions is to reset the level of the machine to 0°.

A- Foreword

- 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.
- Refer to the decal of the machine.



Do not ballast the tires/tyres.

- 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 cabin or the work platform (if equipped).

If the telehandler starts to tip over :

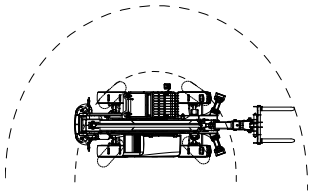
- Stay in the machine cabin.
- Keep your seat belt fastened.
- Hold on tightly.
- Lean away from the point of impact.

Any attempt to exit the cabin of a machine at the tipping point could lead to serious injuries or death.

Abrupt activation of commands (manipulator, stabilizer switches, leveling switch and travel) can lead to rapid movement and shifting of the load. Such movements can cause the load to drift or fall and the machine may tip over. Failure to comply with these instructions may result in serious injuries or death.

2.1.4 - 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. Always obtain assistance from a guide on the ground when maneuvering.

- Before moving the machine, ensure that there is adequate 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.

- Do not change the steering mode while travelling; only do that when the telescopic handling machine has completely stopped or is stationary.
- Visually check that the wheels are properly aligned every time the steering mode has changed.
- When driving at high speed, use only front-wheel steering (if the steering mode can be selected).

Look out for obstacles with a height less than 0,75 m (2 ft 6 in) which may be located near the wheels or behind the boom.

2.1.4.1 - Using a machine on a slope

Gradeability :

- Driving or a slope in stowed position.

Sideslope :

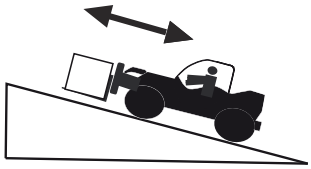
- Driving in stowed position across a slope.

Rated slope :

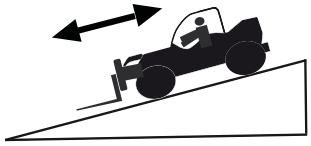
- Operating with boom elevated.

Driving hazards on slopes :

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



- To climb up a slope, move the Telehandler forward whether the machine is loaded or unloaded.
- To climb down a slope :
  - 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.
- While driving on a slope :
  - Always orientate the machine in the direction of the slope.
  - Place the machine in a completely stowed position.
  - Do not travel down slopes in high speed.
  - Do not drive fast in narrow or cluttered areas. Keep speed under control while making turns or sharp bends.

Do not shift to neutral to avoid coasting downhill.

- Avoid excessively steep slopes or unstable surfaces. Do not drive across excessively steep slopes under any circumstances.
- Avoid turning on a slope.
- Never put the machine in NEUTRAL while driving down a slope.

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

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

A- Foreword

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

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

Beaufort scale

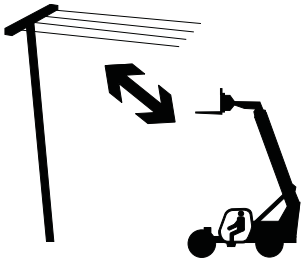
Force	Meteorological description	Observed effects	m/s	km/h	mph
0	Calm	Smoke rises vertically.	0 - 0,2	0 - 1	0 - 0,62
1	Very light breeze	Smoke indicates the wind direction.	0,3 - 1,5	1 - 5	0,62 - 3,11
2	Light breeze	Wind felt on the face. Leaves rustle. Weather vanes turn.	1,6 - 3,3	6 - 11	3,72 - 6,84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

2.1.5 - Electric Shock Hazards

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

Never operate the telehandler 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.
- Maintain a minimum safe distance with regard to power lines and electrical devices.
- Respect the local rules and the minimum safety distance from power lines.



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

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

Minimum safe approach distances

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

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

2.1.6 - Explosion / Fire Hazards

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

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

- Do not work on or operate a machine in an explosive or flammable atmosphere / environment.
- Do not touch hot components.
- Do not bridge the battery terminals with metallic objects.
- Do not service the battery in proximity of spark, open flame, lit cigarettes.
- Do not expose the batteries or electrical components to water (pressure cleaner, rain).

2.1.7 - Chemical Hazards

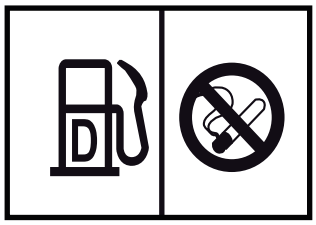
Exhaust Fumes :

Do not leave the engine running anywhere where it could cause a build-up of toxic gases.

Do not use the machine in hazardous areas without specific authorization from HAULOTTE® or the site owner. Sparks produced by the electrical system or the engine exhaust can cause an explosion.

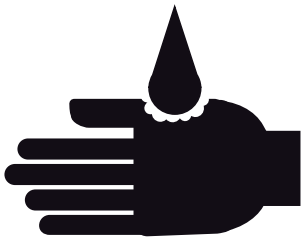
Flammable Fuel :

Do not fill the fuel tank when the engine is running, or carry out any work on the fuel system close to a naked flame, sparks or hot zones. Engine fuel is flammable and can cause a fire and/or an explosion.



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.

Areas with explosive atmospheres :

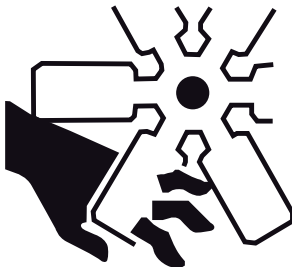
Before entering an explosive atmosphere (e.g. silo, etc.) and to avoid any risk of explosion, particulate filter regeneration must be manually disabled (Section B 3.2.9 - Left-hand control box).

2.1.8 - Crushing / Collision Hazards

- Check the work area for overhead clearance, for any obstacles besides and below the boom when raising/lowering the boom and or before driving.
- During movement, keep all the parts of the body inside the cabin and platform (if equipped).
- Mark out the zone around the telescopic handler to keep personnel and moving equipment away from the telehandler while in use.
- Warn personnel not to work, stand, or walk under a raised boom.
- Do not drive in reverse direction (opposite the field of vision).
- Check the driving direction.
- Always ensure that the chassis is never driven any closer than 1 m (3 ft 3 in) to holes, bumps, slopes, obstructions, debris and ground coverings that may hide holes and other dangers.
- Keep non-operating personnel at least 5 m (16 ft 5 in) away from the machine when driving.
- When changing the driving direction (Forward, Reverse) the joysticks or switches must return to the neutral position before reversing the drive direction and for movement to occur.
- When driving, position the boom so as to provide the best possible visibility and to avoid any blind spots.
- Occupants in the cabin must wear a seat belt in accordance with local regulations.
- Avoid contact with fixed or mobile obstacles (other machines).
- Other machines (crane, aerial work platform, etc.) operating in the work area increase the risk of crushing or collision. Restrict the operation of machines moving within the telehandler work area.
- Take into consideration the stopping distance, reduced visibility and blind spots of the machine.
- Limit travel speed to suit the ground surface condition, slope (incline), and people in the vicinity.

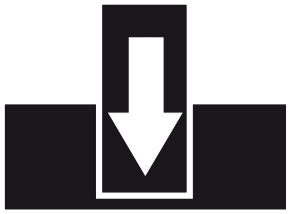
2.1.8.1 - Pinching and crushing Hazards

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

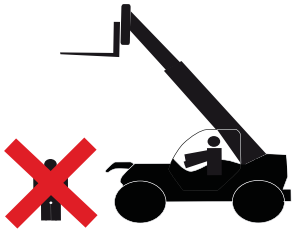


Do not approach moving parts while the engine is running.

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



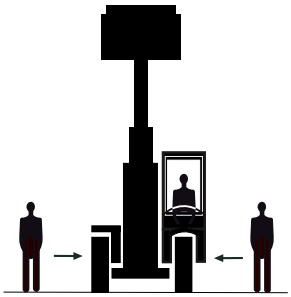
Keep clear of the boom.



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.



2.1.9 - Uncontrolled movement Hazards

Never use a damaged or malfunctioning machine.

Always respect the following rules :

- Maintain clearance from high voltage lines.
- Maintain clearance from generators, radar, electromagnetic fields.

A- Foreword

3 - Safety inquiries

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

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

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

4 - Incident notification

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

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

Connect to our website : *www.haulotte.com*

5 - Compliance

5.1 - PRODUCT MODIFICATION

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

All modifications must be submitted in writing (form) and approved by the manufacturer.

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

5.1.1 - Implementing manufacturer safety campaigns

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

Connect to our website : *www.haulotte.com*

Never place a machine on the market without having applied the Safety Bulletins.

5.2 - PRODUCT SPECIFICATIONS

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

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

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

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

5.3 - CHANGE OF OWNERSHIP NOTIFICATION

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

Connect to our website. : *www.haulotte.com*

1 - General safety

1.1 - INTENDED USE

The Telehandler fitted with a telescopic boom is a mechanical device primarily designed and manufactured with the intent to lift, move and place materials in workplaces. All other uses or alterations/modifications to the telescopic boom handler must be approved by HAULOTTE®.

To ensure the safe use of a Telehandler, support personnel must always be available on the ground. If necessary, support personnel will be required to operate the emergency functions of the machine and in rescuing the operator (If handler fitted with the platform attachment).

Do not operate the product in the following situations :

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

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

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

1.2 - DECAL CONTENT

Decals are provided to alert the user of hazards inherent with the Telehandler.
Decals provide the following information :

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

Familiarize yourself with the decals and the hazard severity levels.
Decals must be kept in good legible condition.
Familiarize yourself with the decals and their respective color codes.
Additional decals can be ordered from HAULOTTE Services®.

B- Familiarization

CE standard

AS standard

ANSI standard

CSA standard

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

B- Familiarization

1.3 - SYMBOLS AND COLORS

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

The following safety advisories are used throughout this manual to indicate specific hazards when operating or maintaining the Telehandler.

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

1.4 - LEVEL OF SEVERITY

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

B- Familiarization

Notes

1.5 - SYMBOLS LEGEND AND DEFINITIONS

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

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

Hazard Pictorial Descriptions

B- Familiarization

Hazard Pictorial Descriptions

Marking	Description
1	Electric Shock Hazards
2	Maintain required clearance
3	Falling object hazard
4	No people under load
5	Fall hazard
6	No riders
7	Stabiliser extending onto foot
8	Keep clear of moving outriggers
9	Bodily injury hazard
10	Always wear the seat belt
11	Pressurized oil hazard
12	Use cardboard to search for leaks
13	Overturning hazard
14	Read the operator's manual
15	Keep away from moving parts
16	Crushing of the hand
17	Keep clear of moving parts
18	Load on the wheel
19	Being run over
20	Lower forks. Set the parking brake
21	Burn Hazard
22	Allow system to cool
23	Overturning hazard
24	Sway operation
25	Explosion hazard Burn Hazard
26	No smoking No open flame
27	Burn Hazard
28	Allow surfaces to cool
29	Being squashed by a falling load
30	Support boom when performing maintenance
31	Being squashed by a horizontal moving object
32	Keep away from moving parts
33	Keep load low
34	Operate from operator's station
35	Maximum effort on the stabilizers
36	Do not place your foot on the hood
37	Do not smoke close to the diesel tank
38	Do not use this area for welding mass
39	Do not use high pressure washer near the battery
40	Tire Pressure

2 - Models description

Regulations	Models
AS standard	HTL 3010
CE and AS standards	HTL 3210 HTL 3510 HTL 4010
ANSI and CSA standards	HTL 7732

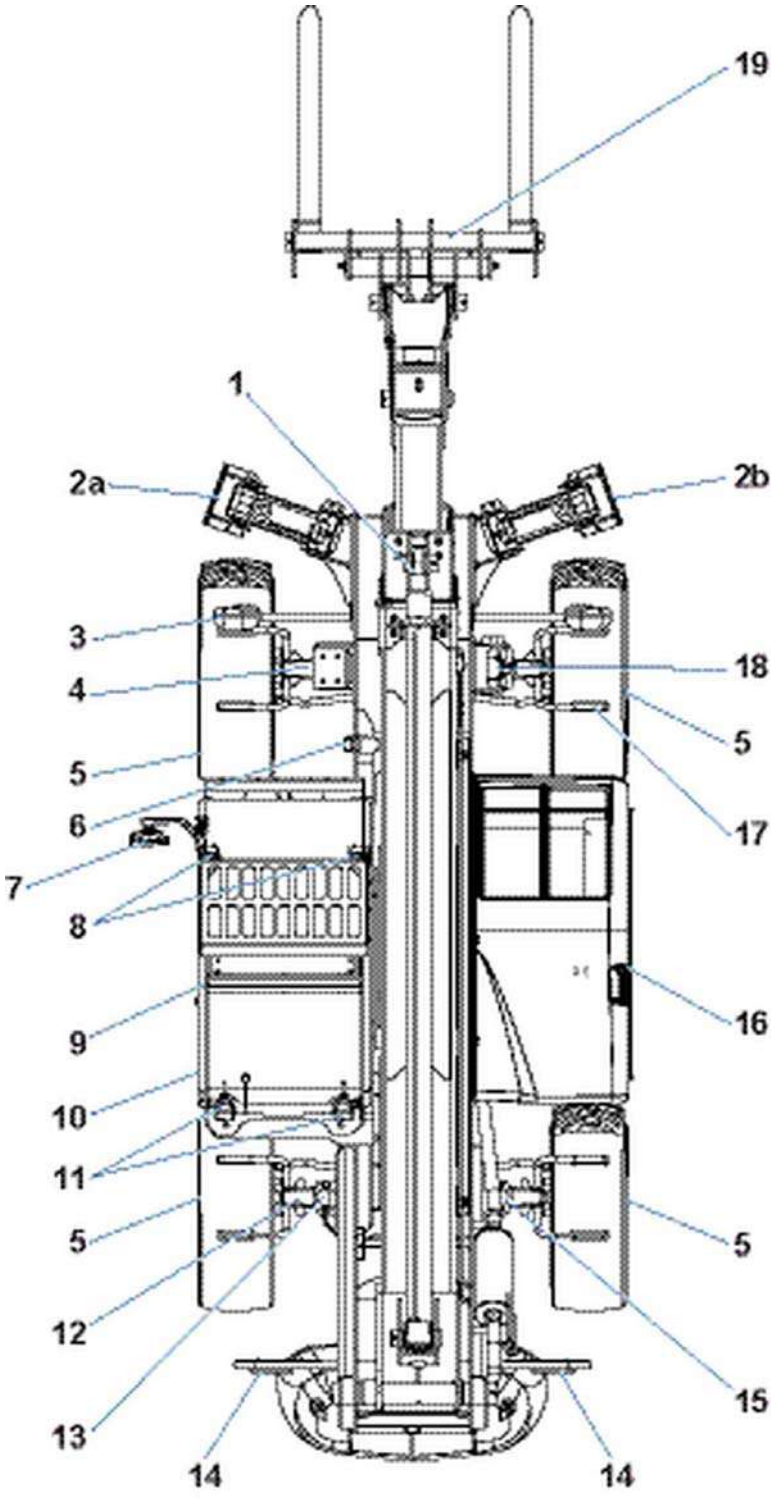
B- Familiarization

Notes

3 - Primary machine components

3.1 - Major Component Location Diagram HTL

All telescopic handlers except HTL 3207 - HTL 3510 (HTL 7732)

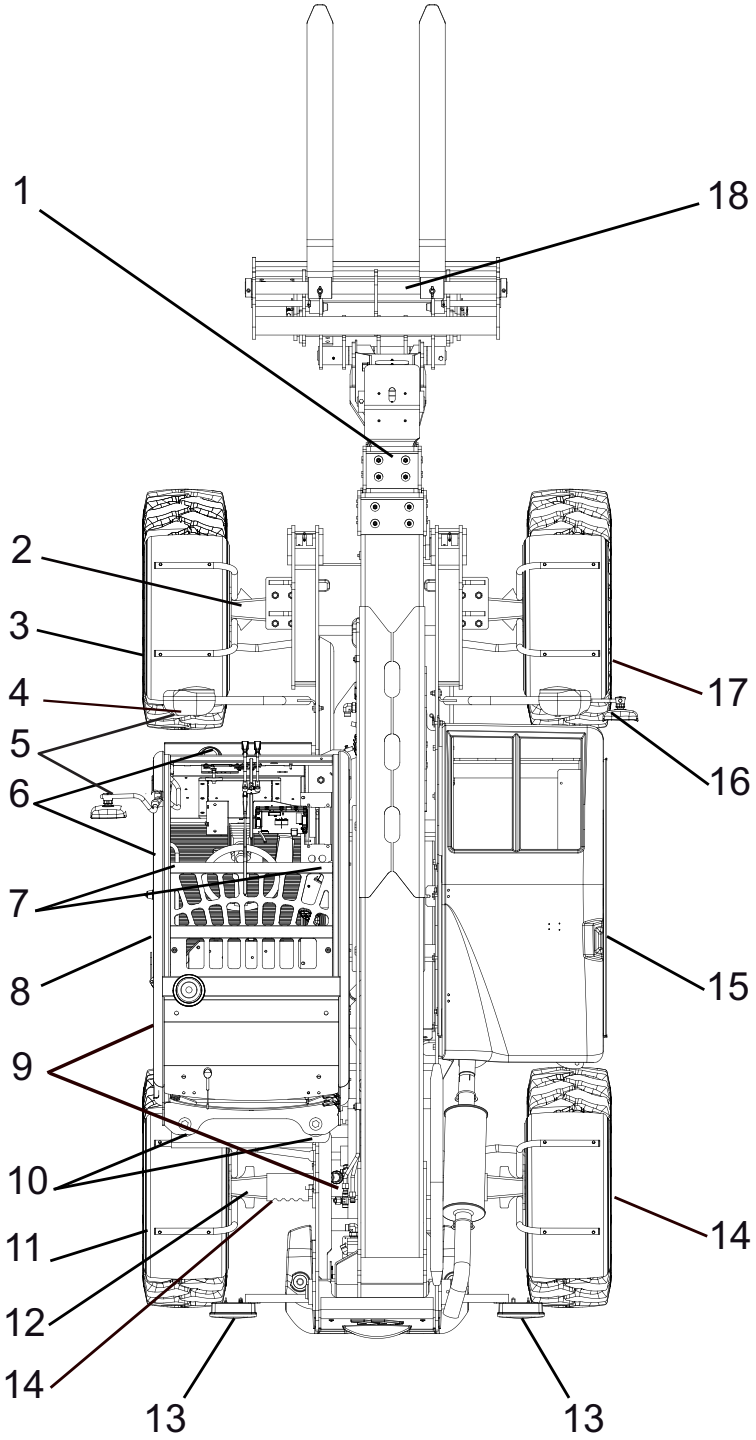


B- Familiarization

Marking	Description	Marking	Description
1	Cylinders - lifting, telescoping, output and input compensation cases	10	Fuel tank
2a	Left-hand stabiliser and stabilizer foot plate	11	Rear work lights (optional)
2b	Right-hand stabiliser and stabilizer foot plate	12	Rear axle : Steering cylinders
3	Headlights	13	Left axle locking cylinder
4	Front axle : Steering cylinders	14	Rear lights
5	Wheel/Tire assembly	15	Right axle locking cylinder
6	Hydraulic oil tank	16	Engine compartment
7	Left exterior rearview mirror	17	Right exterior rearview mirror
8	Front work lights (optional)	18	Tilt correction cylinder
9	Cabin	19	Attachment

B- Familiarization

Only for telescopic handlers HTL 3510 (HTL 7732)



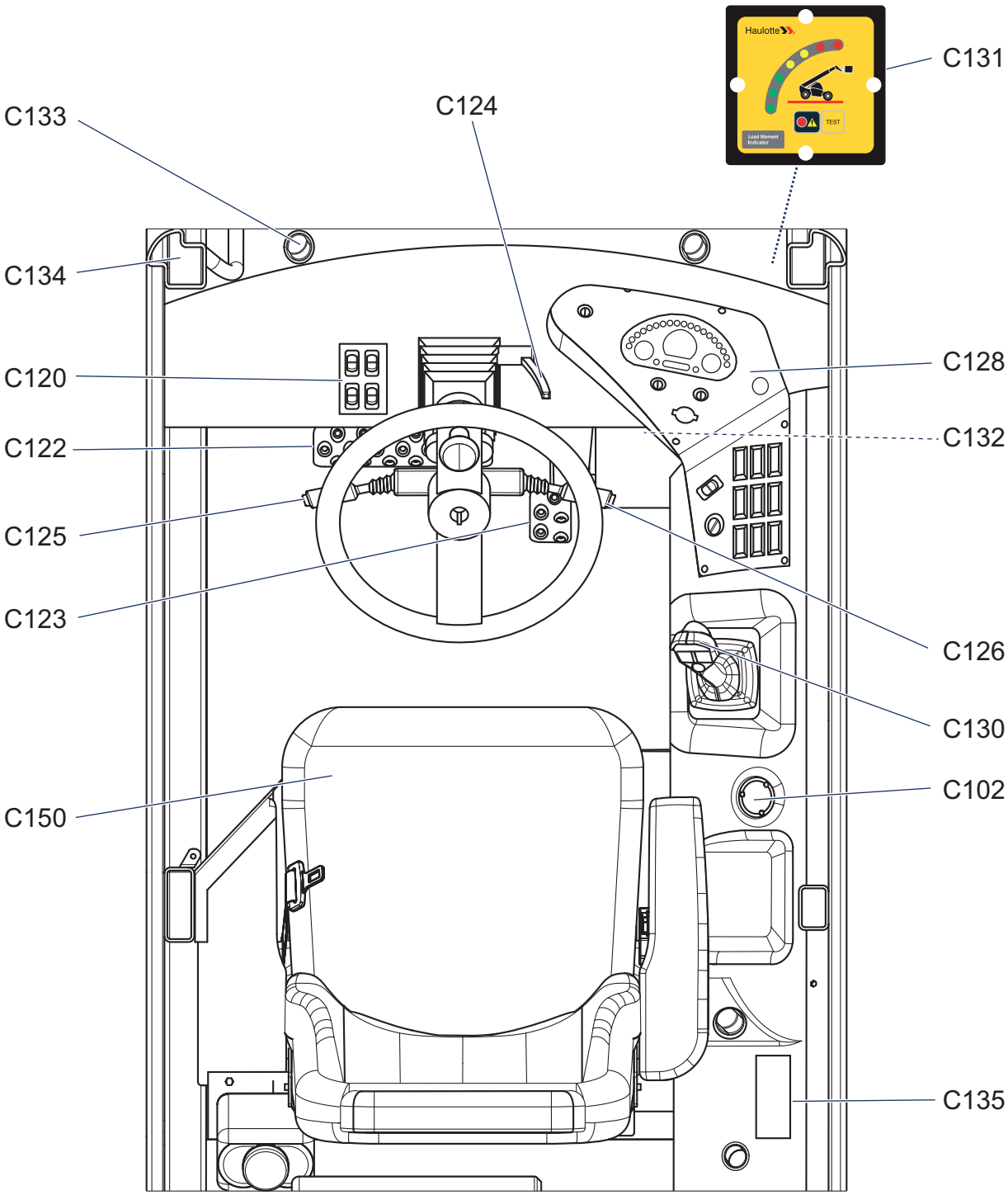
B- Familiarization

Marking	Description	Marking	Description
1	Cylinders - lifting, telescoping, output and input compensation cases	10	Rear work lights (optional)
2	Front axle : Steering cylinders	11	Wheel/Tire assembly
3	Wheel/Tire assembly	12	Rear axle : Steering cylinders
4	Headlights	13	Stop and reverse lights
5	Left exterior rearview mirror	14	Wheel/Tire assembly
6	Fuel tank	15	Engine compartment
7	Front work lights (optional)	16	Right exterior rearview mirror
8	Cabin	17	Wheel/Tire assembly
9	Hydraulic oil tank	18	Attachment

3.2 - OPERATOR'S CABIN HTL

3.2.1 - Cabin controls HTL

General view



B- Familiarization

Description of the components

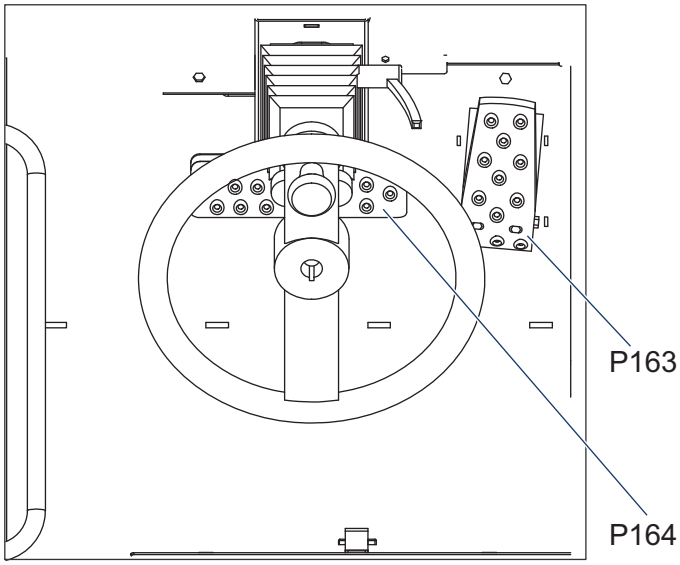
Marking	Description
C102	Spirit level
C120	Left-hand control box
C122	Brake pedal / Inching
C123	Accelerator pedal
C124	Steering column adjuster
C125	Transmission control lever
C126	Right-hand control lever : Headlight, indicator and buzzer control
C128	Right-hand control box with display : Controls and indicates certain machine functions.
C130	Joystick
C131	Load moment indicator display; or the optional Load Management System (EQSS) for the AS Telehandlers
C132	Universal plug (Below the right-hand control box)
C133	Adjustable air vents: Individual controllable
C134	Air louvers
C135	Car radio (Option)
C150	Operator's seat

Universal plug

N.B.-:-THE FUNCTIONS ARE DESCRIBED FOR THE ENTIRE RANGE. REFER TO THE MACHINE MODEL TO IDENTIFY THE CONTROLS AND FUNCTIONS INDICATORS.

3.2.2 - Cabin pedals HTL

General view



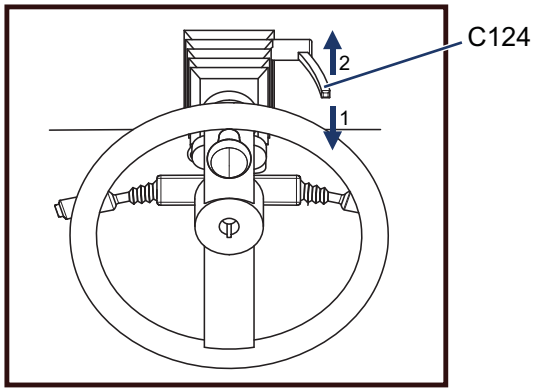
Pedals

Marking	Description	Function
P163	Accelerator pedal	Press on the pedal to increase the engine speed and the hydraulic fluid flow
P164	Brake pedal	Press on the pedal to start braking
		Inching : Press the pedal to obtain a slow travel speed (very precise movement) whilst maintaining a high engine speed

3.2.3 - Cabin steering column HTL

3.2.3.1 - Steering column and adjustment

General view

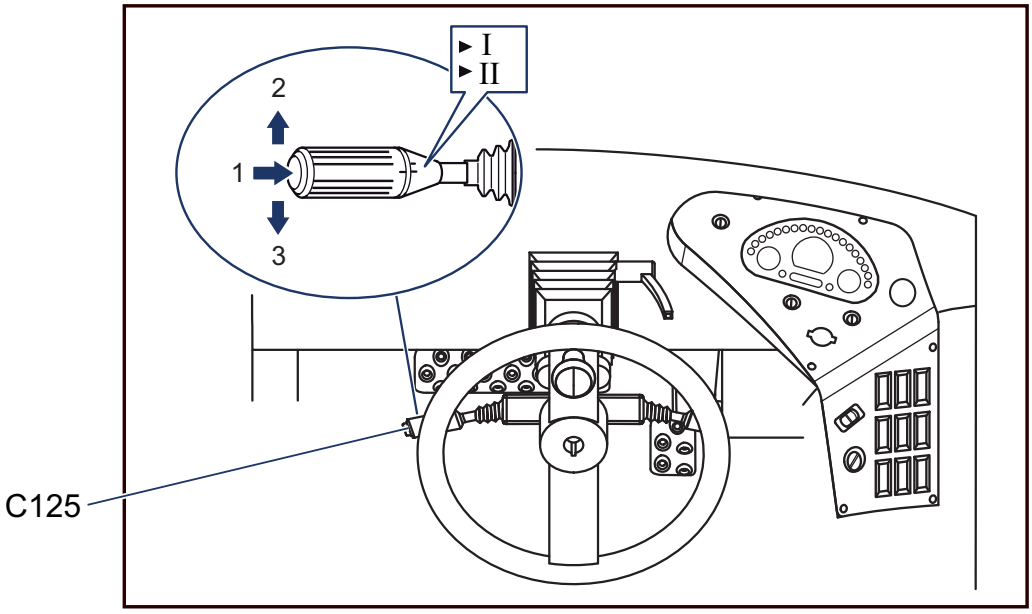


Steering column adjustment

Marking	Description	Function
C124	Steering column adjustment lever	Push the lever (C124) downwards ↓ (1) to release the steering column.
		Move the steering wheel to the desired position.
		Lock the steering column by pushing the lever upwards ↑ (2).

3.2.3.2 - Cabin transmission control lever HTL

General view

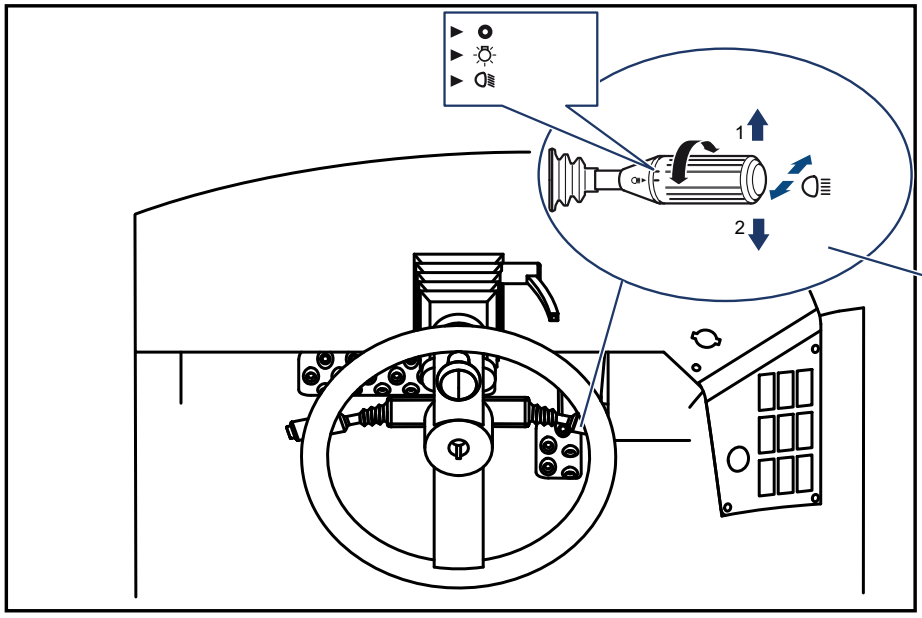


Left-hand control lever

Marking	Description	Function
Lever used for gear shifting and travel direction control.		
C125	Transmission control lever	Speed selection : • Slow speed : The selector by default is in this position (I). • Fast speed : Turn the knob counter clockwise (CCW) to position II.
		Travel direction selection : • Forwards drive : Pull the lever up towards the steering wheel and move forwards in direction (2) to drive in forward direction. Refer to diagram on the dashboard. • Neutral (1) – default in the horizontal position. • Reverse drive : Pull the lever up towards the steering wheel and move downwards in direction (3) to drive in reverse. Refer to diagram on the dashboard.

3.2.3.3 - Cabin lever indicator HTL

General view



Right-hand control lever

Marking	Description	Function
Two positions lever for turn signals and different lights selection.		
C126	**First position-Neutral**	
	Right hand and left hand turn signals	Pull lever downwards (2) for Right Turn Signal. Indicators flash both in the front and back of the machine. Green light on the dashboard flashes.
		Move lever upwards (1) for Left Turn Signal. Indicators flash both in the front and back of the machine. Green light on the dashboard flashes.
	Head lights and Tail lights ► ► ►	Rotate knob on lever counter clockwise (CCW) once to select headlight. Head lights and tail lights turn ON and steady green light is on the dashboard.
	High beam ► ► ►	Rotate knob on lever counter clockwise (CCW) a second time to activate high beam. High beam head lights and tail lights turn ON and steady green and blue lights are on the dashboard.
	Second position-Shift lever upwards towards steering wheel. No automatic high beam is available.	
	High beam on demand	Shift lever and hold in the most up position to manually activate high beam on demand. Releasing will deactivate high beam.
	Horn	Push in the button on the end of the lever to activate the horn.

3.2.4 - Cabin user seat HTL

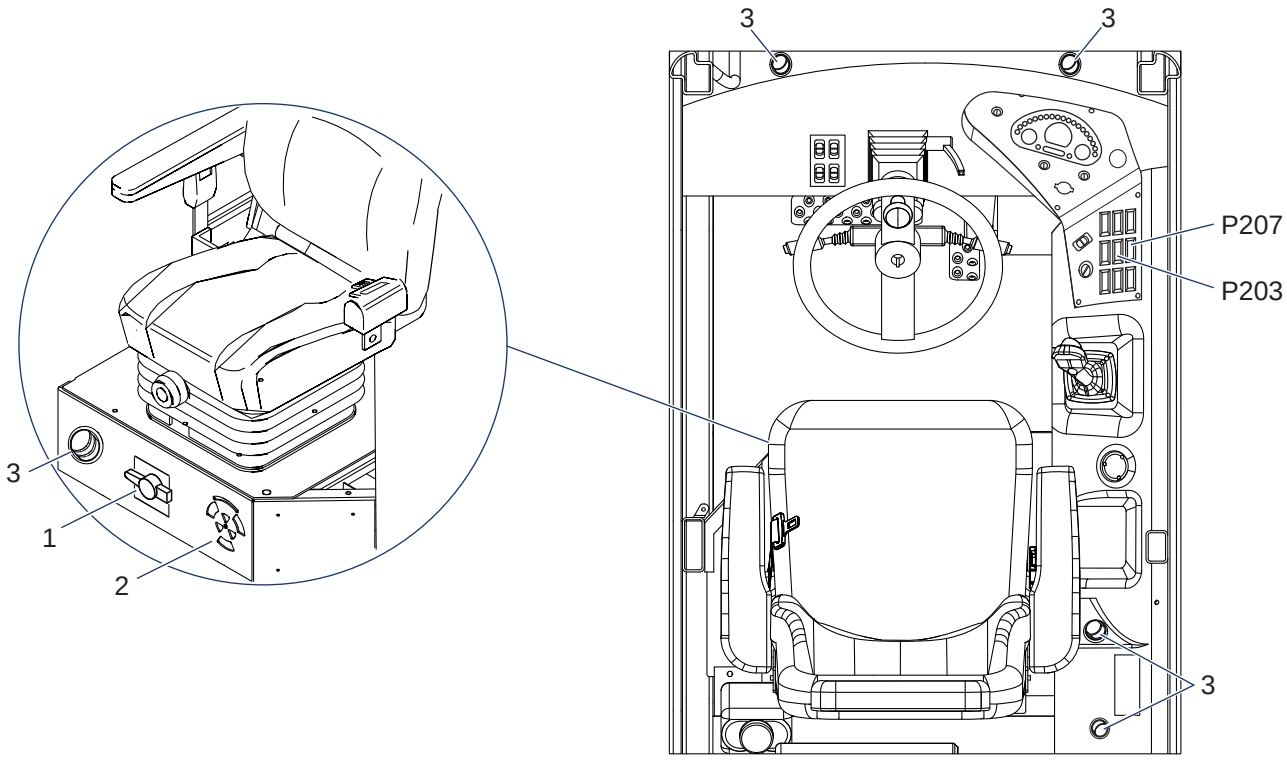
General view

Marking	Description	Function
Levers used for adjusting the seat in an appropriate and comfortable position.		
P170	Seat adjustment – Handle	Pull up and hold the handle (P170) to move seat forwards or backwards.
P171	Seat height – Tap handle	Turn (P171) clockwise or counter clockwise as necessary to adjust desired seat height.
P172	Suspension – Lever	Use the lever (P172) to adjust the suspension according to the driver's weight. Selection range 50 kg (110 lb) to 120 kg (265 lb). The driver can adjust to get desired comfort.
P174	Backrest – Lever	Lift up the lever (P174) and hold while pushing the backrest to the desired angle.
P175	Seat belt	Always fasten the seat belt (P175) when operating the machine.

N.B.-:-A SEAT IS AN ESSENTIAL MEANS TO REDUCE THE VIBRATIONS TRANSMITTED BY THE OPERATOR. IF THE SEAT IS TO BE REPLACED, CONSULT THE MANUFACTURER.

3.2.5 - Heating and ventilation; cabin air conditioning (option) HTL

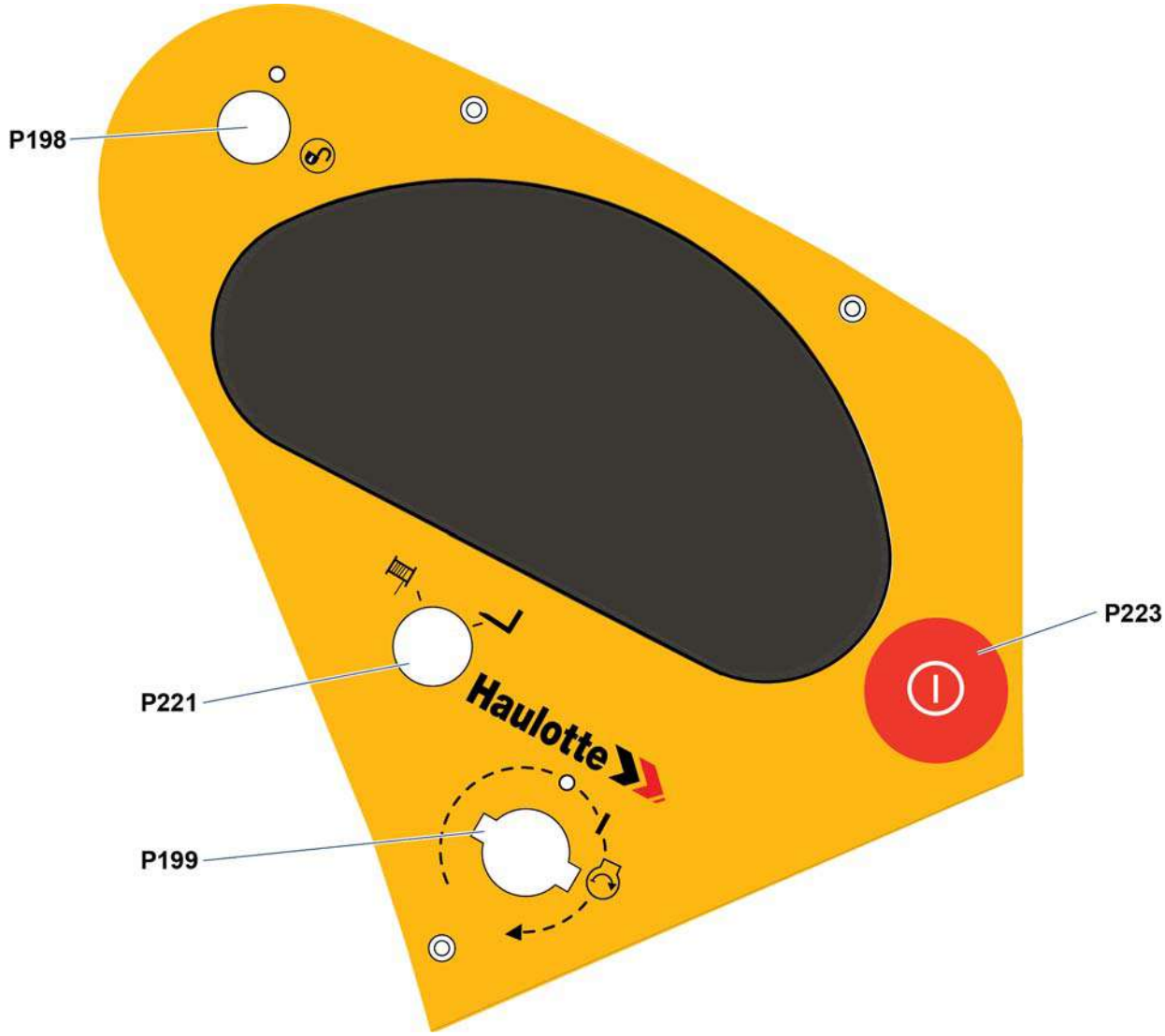
General view



Marking	Description	Function
Switches used to adjust the temperature and ventilation in the cabin.		
P203	Heating and ventilation switch	The air is circulated via a two-speed fan. To activate the fan, press the heating fan switch (P203) on the right hand control box : • Adjust the heating temperature using the T-handle (1) below the driver's seat. • Adjust the air flow using the air locks (2) and round vents (3) provided to adjust air flow direction.
P207	Air-conditioning switch (Optional)	To activate the air conditioning, press the switch (P207) located on the right hand control box.

3.2.6 - Cabin right-hand control box HTL

Upper section



B- Familiarization

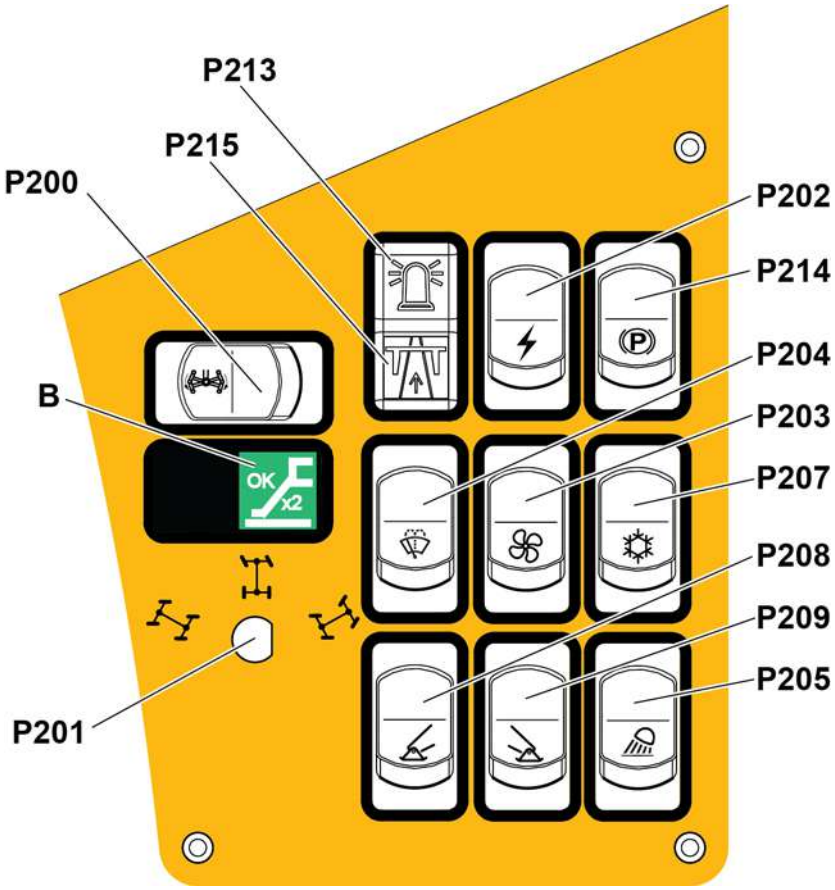
Upper section

Marking	Description	Function
P198	Exclusion key in fork/winch mode[1].	Folds the machine in case of anti-tipping alarm
P199	Ignition key 	Top-Position 1 : Machine shutdown
		Middle-Position 2 : Ignition
		Bottom-Position 3 : Starter
P221	Accessory selector (Option)	Left position - Turn left to select Winch mode
		Right position - Fork mode selected
P223	E-stop button	Pulled out : Energizes control system
		Pushed in (activated) : De-energizes control system

1. An exclusion key (P198) allows the operator to disregard a movement deactivation to avoid being blocked in certain configurations

B- Familiarization

Lower section



Lower section

Marking	Description	Function
P200	Chassis leveling switch (For HTL 3010 and HTL 3510)	Move to the left : chassis tilts to the left
		Move to the right : chassis tilts to the right
P201	Rear axle Steering mode selection [1]	Synchronized steering
		Front wheels steering
		Crab steering
P202	12 V socket switch (Option)	To activate the socket on the chassis and receive a 12V power, press the switch.
	Fork spreader switch (Option) [2]	Press the button to switch from side-shift mode to fork spreader mode.
P203	Heating/Ventilation switch	Ventilation — 3 positions button : • Deactivated : Press top of switch • Activated — low speed position : Press switch to middle/center position • Activated — high speed position : Press bottom of switch completely

B- Familiarization

Marking	Description	Function
P204	Windshield wiper switch	Deactivated : Press top of switch
		Activated : Press switch to middle/center position
		Windscreen washer : Press bottom of switch downward fully
P205	Work light switch (Option)	On : Press bottom of the switch
		Off : Press top of the switch
P207	Air-conditioning switch (Option)	Deactivated : Press top of switch
		Activated : Press bottom of switch
P208	Left stabiliser switch (For HTL 3210 and HTL 4010)	To lower left stabiliser : Press top of the switch
		To raise the left stabiliser : Press bottom of the switch
P209	Right stabiliser switch (For HTL 3210 and HTL 4010)	Right stabiliser lowering : Press top of the switch
		Right stabiliser lifting : Press bottom of the switch
P213	Beacon switch	Activated : Press top of the switch
		Deactivated : Place the button in the middle position
P214	Parking brake switch [3]	Activated : Press bottom of the switch
		Deactivated : Press top of the switch
P215	Road mode selection switch	Activated : Press bottom of the switch
		Deactivated : Place the button in the middle position
B	Stabilisers on ground warning light (if fitted) (For HTL 3210 and HTL 4010)	On : The stabilisers are resting on the ground, the telehandler is in fixed position

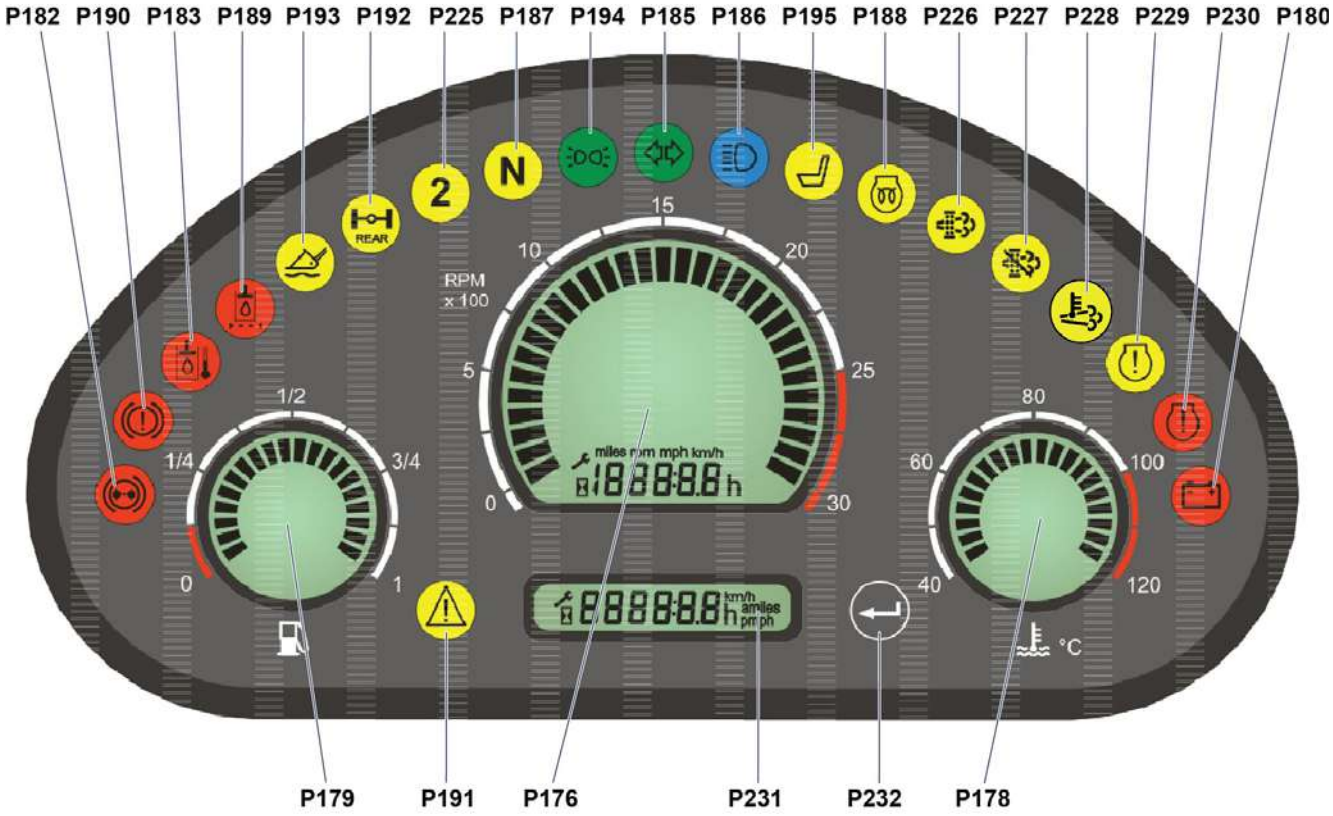
[1] Consult section D, chapter : Right-hand control box with display.

[2] The two options are not compatible. For more details on the fork spreader attachment, see the Accessories - Forks manual.

[3] Consult section D, chapter : Cabin display HTL.

3.2.7 - Cabin display HTL

Display



Display

Marking	Description	Function
P176	Service meter	When power is switched ON, displays number of hours for next service.
	Engine tachometer	Displays revolutions per minute that the engine is running at - displayed in graduations of 0 - 3100 turns/min and revs/min. Displays also the speed of the vehicle (Km/h).
P178	Engine temperature indicator	Flashes indicating high coolant temperature.
P179	Fuel level gauge	Flashes indicating a low fuel level.
P180	Battery Charge Indicator	LED turns ON when charge is required.
P182	Parking brake	LED turns ON indicating brake fault.
P183	Hydraulic oil temperature indicator	LED turns ON indicating high oil temperature.
P185	Steering indicator	The arrow towards left flashes to indicate a left-hand steering activation. The arrow towards right flashes to indicate a right-hand steering activation.
P186	Headlight indicator	LED turns ON indicating headlights are switched on.
P187	Neutral indicator	LED turns ON indicating drive is in neutral position.
P188	Engine pre-heating indicator	LED turns ON when the engine is in pre-heating mode.
P189	Hydraulic oil filter indicator	LED turns ON indicating hydraulic oil filter is clogged.
P190	Service brake indicator	LED turns ON indicating a service brake fault or that parking brake is engaged.

B- Familiarization

Marking	Description	Function
P191	Machine fault indicator	Flashes to indicate one or more internal malfunctions OR machine maintenance to be performed.
P192	Rear axle alignment indicator	LED turns ON when rear wheels are aligned.
P193	Floating lift indicator (Option) [1]	LED turns ON when floating lift is activated.
		Flashes to indicate floating lift is selected but not validated.
P194	Side markers	LED turns ON indicating lights are switched on.
P195	Seat occupied	LED turns ON indicating seat is NOT occupied.
P225	Drive speed indicator	LED turns ON indicating speed 2 is engaged.
		LED flashes indicating High speed selected but not validated (because of extended boom or active float option or service brake pressure fault).
P226	Regeneration of particle filter indicator (DPF : Diesel Particulate Filter) [2]	LED (226) flashes indicating a manual regeneration of the particulate filter is required. LED turns ON when the particulate filter regeneration is in progress.
		LED (229) turns ON and (226) flashes indicating a manual regeneration of the particulate filter is required. A loss of engine power causes a drop in performance.
		LEDs (P229) and (P230) turn ON and (P226) flashes indicating the particulate filter needs to be changed. Contact HAULOTTE Services® to replace it. A loss of engine power causes a drop in performance.
P227	Indicator for inhibition of regeneration of particle filter [3]	LED turns ON when the automatic particulate filter regeneration is inhibited.
P228	High exhaust gas temperature indicator (HEST)(HEST : High Exhaust System Temperature) [4]	The temperature of the exhaust system is high.
P229	Engine warning	LED turns ON indicating an engine fault OR maintenance is required. When 5 flashes are on, it indicates machine maintenance is required in the next 20 h.
P230	Engine shutdown	LED turns ON indicating severe engine fault.
P231	Fault codes	Multiple faults detected-Consult the fault codes in the following chapter : Troubleshooting, in Section F of the User manual.
	Machine counters	Displays total machine run hours OR number of hours for next servicing.
P232	Navigation button	When machine fault is indicated, press the button each time to scroll through the fault codes-Consult the fault codes in the following chapter : Troubleshooting, in Section F of the User manual. If machine fault is not indicated, press the button each time to navigate between hour counter and service counter.

[1] Floating lifting is an option that allows the bucket to follow the deformation of the ground during excavation operations. This mode is activated by pressing the button (3) on the front of the joystick.

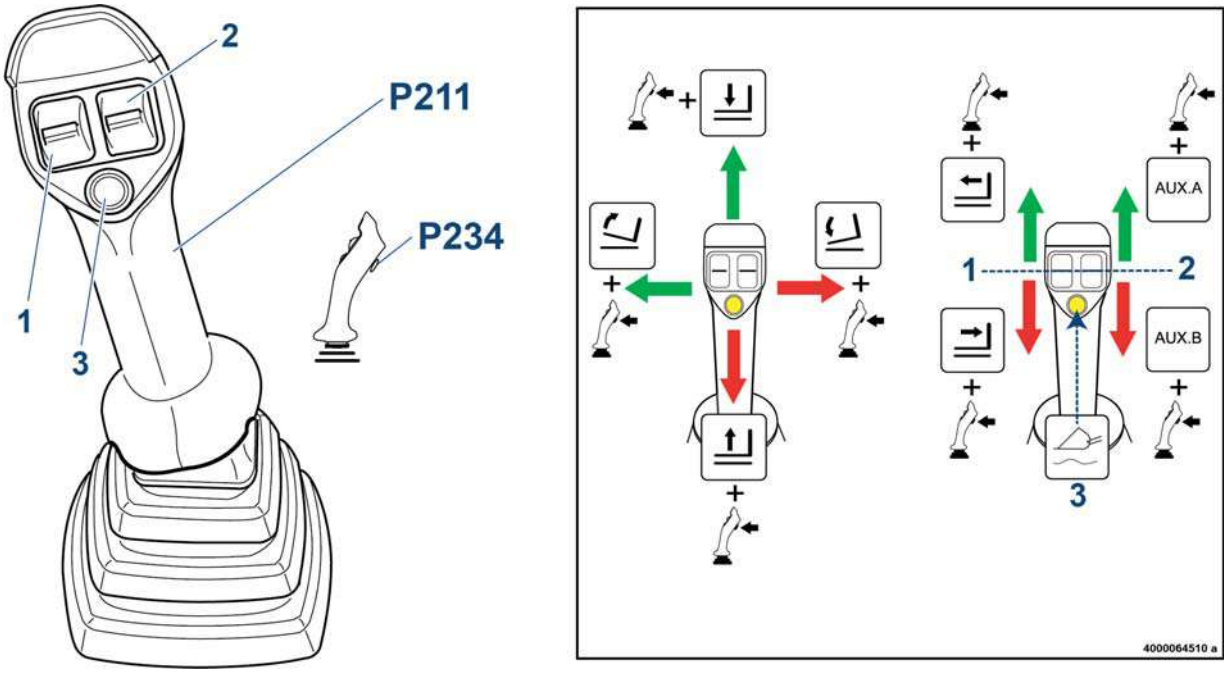
[2] If engine equipped with Particulate Filter Regeneration

[3] If engine equipped with Particulate Filter Regeneration

[4] If engine equipped with Particulate Filter Regeneration

3.2.8 - Cabin joystick HTL

General view - CE and AS standards



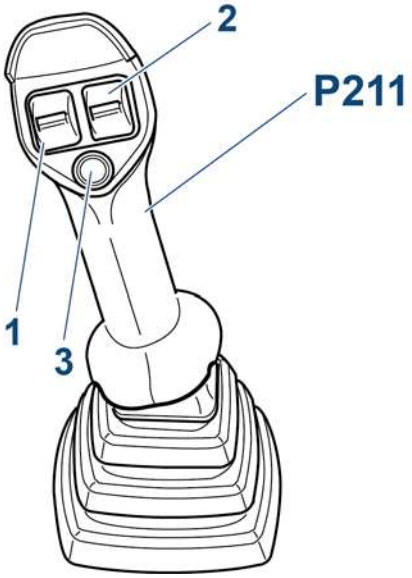
Joystick - CE and AS standards

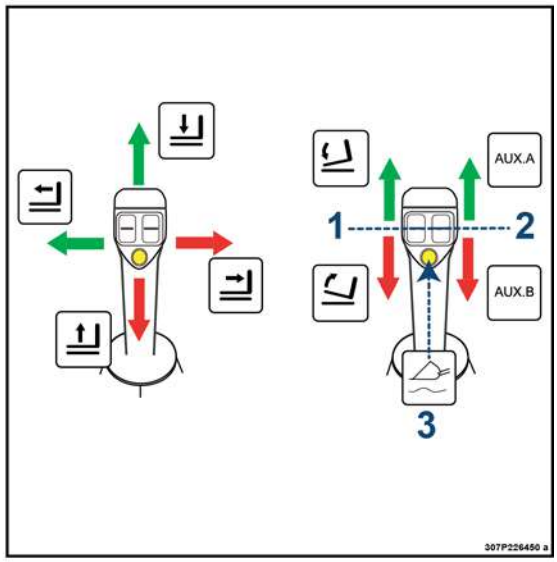
Marking	Description	Function
P211	Joystick	Pull the joystick to raise the telescopic boom.
		Push the joystick backwards to lower the telescopic boom.
		Push the joystick to the right for discharging.
		Push the joystick to the left for crowding.
		Push the left rocker switch (1) upwards to extend the boom out.
		Push the left rocker switch (1) downwards to retract the boom in.
		Push the right rocker switch (2) upwards to operate the attachment in the direction indicated by AUX.A, through the auxiliary hydraulic hose. [1]
		Push the right rocker switch (2) downwards to operate the attachment in the direction indicated by AUX.B, through the auxiliary hydraulic hose. [2]
		Operate the floating forks option by pushing the button (3) on the joystick. [3]
P234	Enable Switch(If equipped)	Press in and hold to enable movement.

[1] Consult section D, chapter : Cabin joystick HTL
[2] Consult section D, chapter : Cabin joystick HTL
[3] Consult section D, chapter : Cabin joystick HTL

B- Familiarization

General view - ANSI and CSA standards





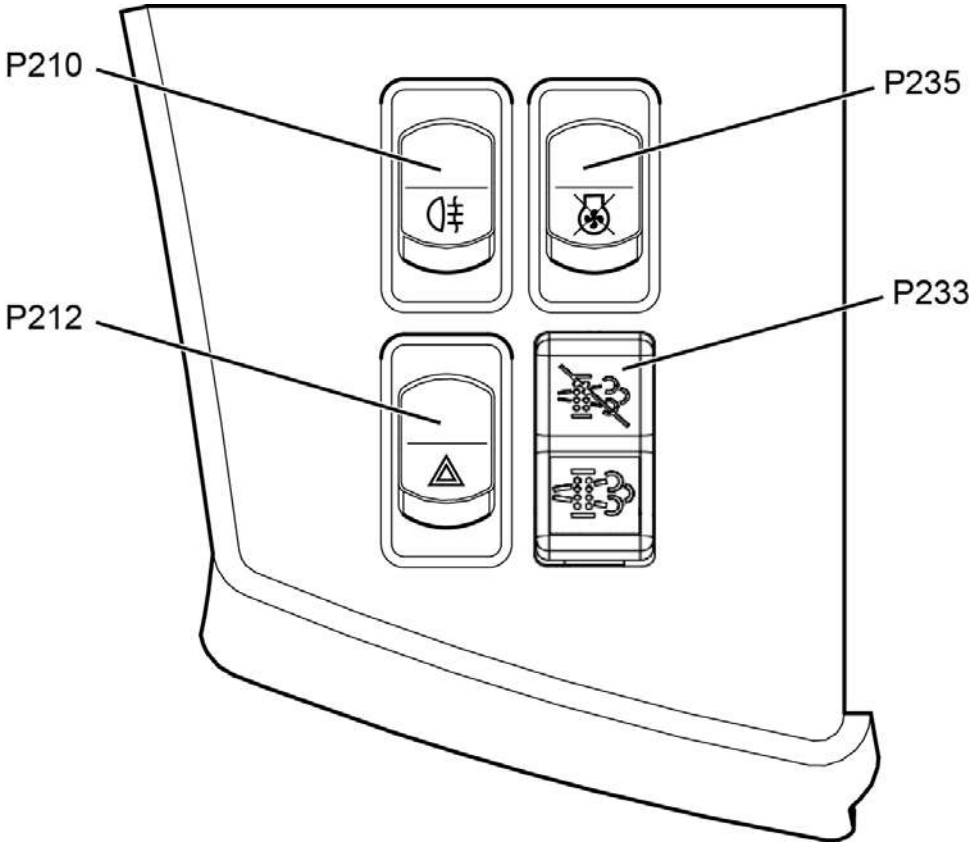
Joystick - ANSI and CSA standards

Marking	Description	Function
P211	Joystick	Pull the joystick to raise the telescopic boom.
		Push the joystick backwards to lower the telescopic boom.
		Push the joystick to the left to extend the boom out.
		Push the joystick to the right to retract the boom in.
		Push the left rocker switch (1) upwards for discharging.
		Push the left rocker switch (1) downwards for crowding.
		Push the right rocker switch (2) upwards to operate the attachment in the direction indicated by AUX.A, through the auxiliary hydraulic hose. [1]
		Push the right rocker switch (2) downwards to operate the attachment in the direction indicated by AUX.B, through the auxiliary hydraulic hose. [2]
		Operate the floating forks option by pushing the button (3) on the joystick. [3]

[1] Consult section D, chapter : Cabin joystick HTL
[2] Consult section D, chapter : Cabin joystick HTL
[3] Consult section D, chapter : Cabin joystick HTL

3.2.9 - Cabin left-hand control box HTL

General view



B- Familiarization

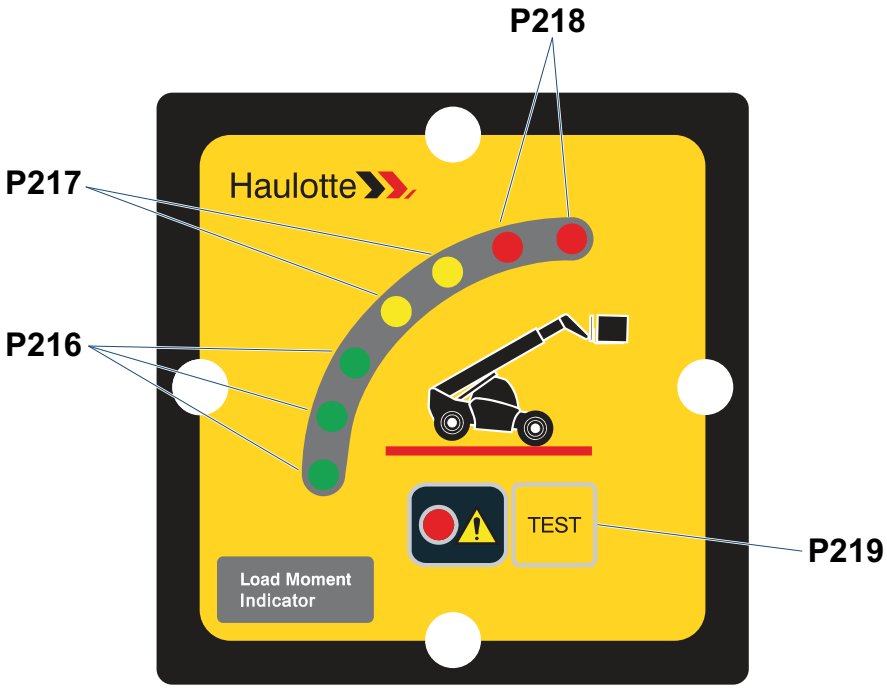
General view

Marking	Description	Function	
P210	Rear fog lights switch	To turn ON - press top of the switch.	
		To turn OFF - press bottom of the switch.	
P212	Hazard warning lights switch	To turn ON - press top of the switch.	
		To turn OFF - press bottom of the switch.	
P233	Particulate filter regeneration switch	Function : Automatic particulate filter regeneration disabled	Enable : • Shift the speed selector to neutral. • Press top of switch and hold for 5 seconds minimum. • LED (P227) on the display panel turns ON. • The regeneration is inhibited until cancellation or until the machine is restarted. Deactivation : • Shift the speed selector to neutral. • Press top of switch and hold for 5 seconds minimum. • LED (P227) on display panel turns OFF. • The normal operating mode is enabled.
		Function : Start of manual particulate filter regeneration	Enable : • LED (P226) on display panel flashes and LED (P230) is OFF. • Shift the speed selector to neutral. • Engine running for over 10 seconds and in Idle mode. • Press bottom of switch and hold for 5 seconds minimum. • LED (P190) on the display panel turns ON. • LED (P228) on display panel flashes and then it freezes. Regeneration of the particulate filter is effective. • LED (P226) on display panel turns OFF. Regeneration of the particulate filter is completed.
P235	Reverse fan option switch[1]	Move upwards :	The Reverse fan function is disabled.
		Center :	Reverse fan is in auto mode (every 10 mn, a cycle of 14 s).
		Move downwards (Pulse 3 s) :	Reverse fan is in forced mode.

[1] Consult section D, chapter : Cabin left-hand control box HTL.

3.2.10 - Load moment indicator (LMI) in the cabin HTL

Display



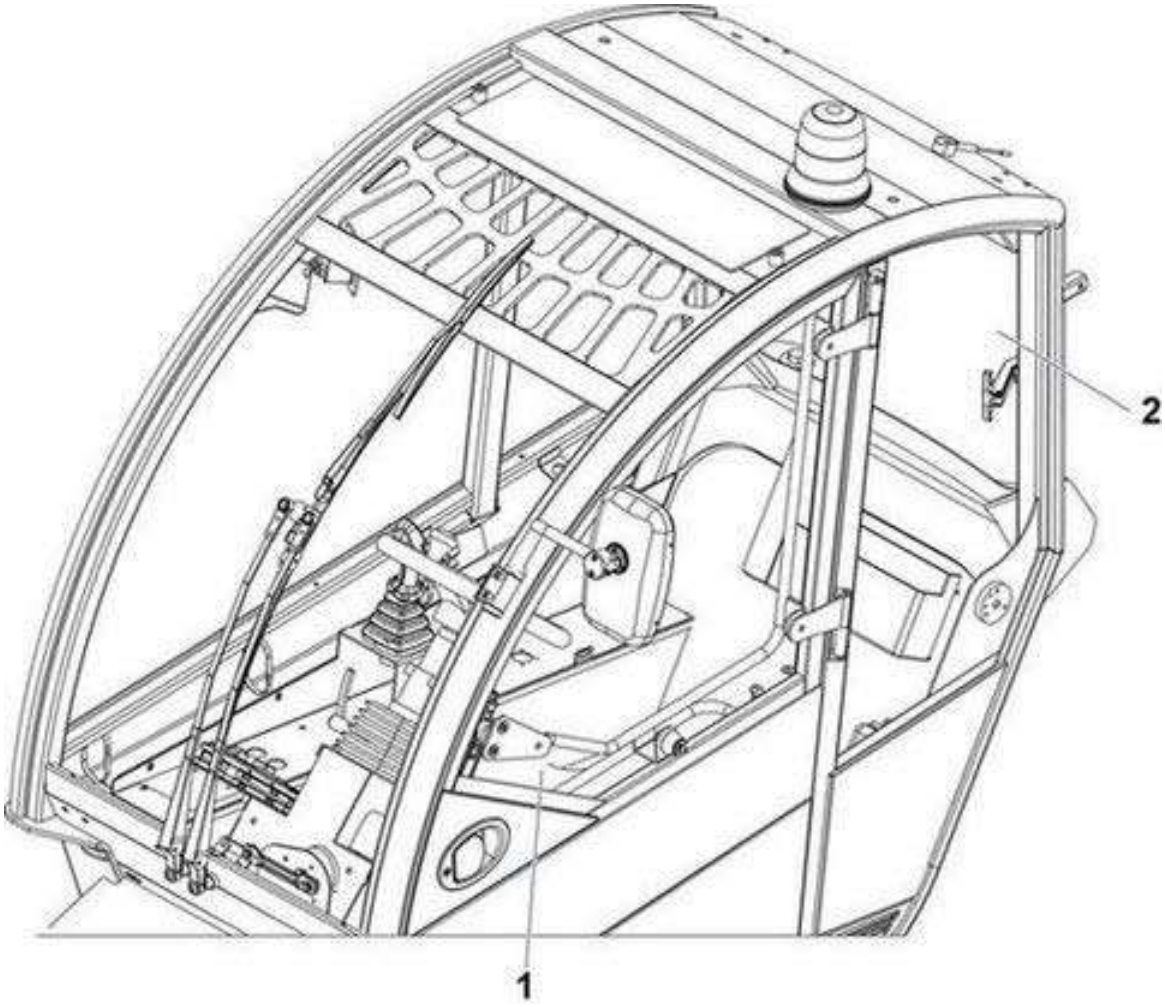
Controls and indicators

Marking	Description	Function
P216	Green LED's	Green LEDs light up depending on the loading percent. Load weight is within the authorised limits.
P217	Yellow LED	Yellow LEDs light up when the load weight is close to the upper limit. The visual pre-alarm is accompanied by an intermittent buzzer.
P218	Red LED	Red LEDs light up when the load weight exceeded the authorised limit and the machine's stability is at risk. The visual alarm is accompanied by a continuous buzzer.
P219	Test	The indicator can be tested at any time. Refer to the following chapter : Load moment indicator (LMI), in Section F of the User manual.

AS Telehandlers are fitted with an optional Load Management System (EQSS). For further details, consult the additional manual supplied with the telescopic handler and the following chapter : Load moment indicator (LMI), in Section D of the User manual.

3.2.11 - Rear-view mirrors and windows HTL

Windows

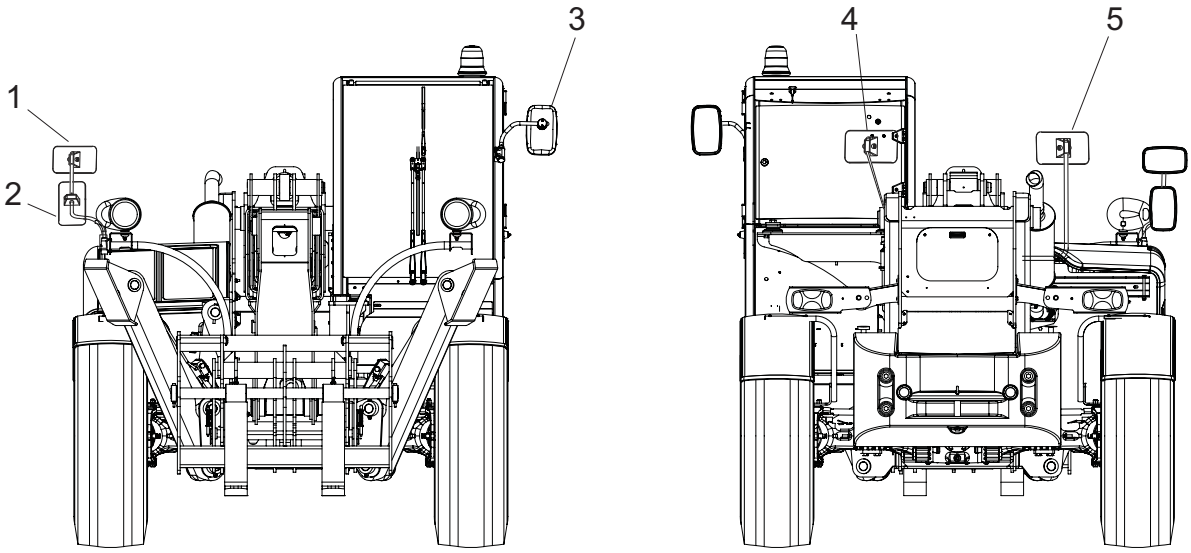


Marking	Description	Function
The cabin has 2 windows that open from the inside.		
1	Cabin door window	The window must be blocked in open or closed position during use. Refer to the following chapter : Rear-view mirrors and windows, in Section D of the User manual.
2	Rear window	In case of emergency, exit the cabin via the rear window.

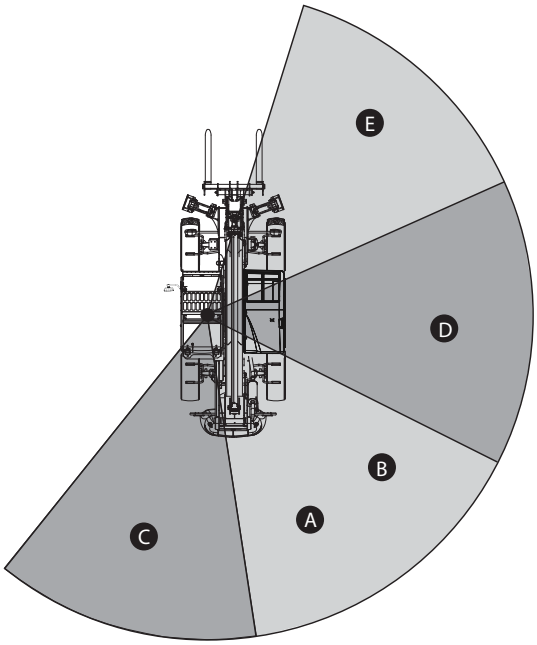
B- Familiarization

The machine is fitted with 5 mirrors :

Rear-view mirrors



Visibility zone



Description of the components

Mirrors	Visibility in zone
1	A
2	B
3	C
4	D
5	E

4 - Performance Specifications

Certain options/accessories can modify the machine's operating characteristics and its associated safety. If your telescopic handler was originally delivered with options/accessories fitted, replacing a safety component associated with these options/accessories does not require any particular precautions other than those associated with the installation itself.

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

- **Any options added must be either HAULOTTE® original options/accessories, or must be approved in writing by HAULOTTE®.**
- **Installation by authorised HAULOTTE® personnel only.**
- **Update the manufacturer's identification plate.**
- **Have stability tests carried out by a certified agency/competent person.**
- **Ensure decal compliance.**

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

4.1 - TECHNICAL SPECIFICATIONS

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

Engine			
Model	Perkins 1104D44T	Kohler KDI 2504 TCR - STAGE 5	Kohler KDI 3404 TCR - Tier4F
Type	Four-stroke, water-cooled		
Cubic capacity	4400 cm3 (268,50 cu in)	2482 cm3 (151,46 cu in)	3359 cm3 (204,97 cu in)
Intake	Turbo		
Power	70 kW (94 Hp) at 2300 rpm	55,4 kW (74,29 Hp) at 2600 rpm	55,4 kW (74,29 Hp) at 2200 rpm
Torque	392 Nm (282 ft.lb) at 1400 turns/min (rpm)	315 Nm (232 ft.lb) at 1500 turns/min (rpm)	380 Nm (280 ft.lb) at 1400 turns/min (rpm)

Hydraulic circuit	
Pump	Piston pump-Variable cubic capacity
Flow	100 l/min (26.42 gal US/min)
Pressure	260 bar(3770 psi)
Controls system	Simultaneous and proportional control of several movements via Load–sensing with flow sharing hydraulic device.
Command	Electro-hydraulic with 4-function joystick
Hydraulic outlet flow for accessories	62 l/min (16.37 gal US/min)
Hydraulic oil tank capacity	103 l(27 gal US)

B- Familiarization

Transmission	
Type	Hydrostatic with pump and variable cubic capacity engine, 4 permanent drive wheels
Command	Electro-hydraulic with 2/2 front - rear selector and a neutral position
Speed in operating mode	0 - 8 km/h (5 mph)
Speed in road mode	0 - 25 km/h (15,53 mph)
Slow approach	Inching pedal
Traction force HTL 3207 & HTL 3210	4900 daN(11011 lbf)
Traction force HTL 3510 (HTL 7732) & HTL 4010	6500 daN(14612 lbf)
Negotiable slope	45 %
Axles	Planetary gear reducers - Limited-slip differential blocking
Oscillating axle	Automatic locking in handling mode

Braking circuit	
Engine brake	Hydrostatic
Service brake	Multi-disc oil bath brake controlled by the brake pedal
Parking brake	Electrically-controlled multi-disc oil bath brake

Cab	
Interior width	940 mm (37 in)

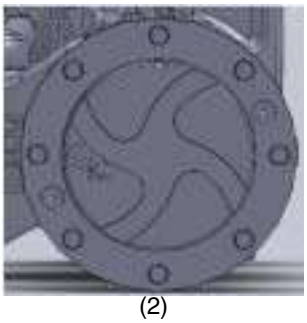
Tires (Tyres)			
Type	**Mass**	**Model**	**Tire Inflation Pressure**
Standard HTL 3510 (HTL 7732) & HTL 4010	79,5 kg (175 lb)	TL E-2/L-2 14PR – 405/70-24 (HAULOTTE® code : 2326014870)	4,5 bar (65 psi)
Standard HTL 3207	64 kg (141 lb)	TL E-2/L-2 14PR – 405/70-20 (HAULOTTE® code : 2326015080)	4,5 bar (65 psi)
Tire options HTL 3207 & HTL 3210	79,5 kg (175 lb)	TL E-2/L-2 14PR – 405/70-24 (HAULOTTE® code : 2326014870)	4,5 bar (65 psi)
Tire options-NO MARKING[1]	88 kg (194 lb)	GREY NO MARKING 20PR – 400/80-24 (HAULOTTE® code : 4000714730)	4,5 bar (65 psi)
Spare wheel option	86,1 kg (190 lb)	TM R4 20PR – 400/80-24 (HAULOTTE® code : 4000085980)	5,1 bar (74 psi)
Spare wheel option	83 kg (183 lb)	POWER CL 20PR – 400/80-24 (HAULOTTE® code : 2326016330)	5,1 bar (74 psi)

1. on HTL 3510 (HTL 7732) and HTL 4010 only

B- Familiarization

Steering system	
Inside turning radius on tire/tyre	2550 mm (100 in)
Outside turning radius on tire/tyre HTL 3207 & HTL 3210	3700 mm (145 in)
Outside turning radius on tire/tyre HTL 3510 (HTL 7732) & HTL 4010	4800 mm (189 in)

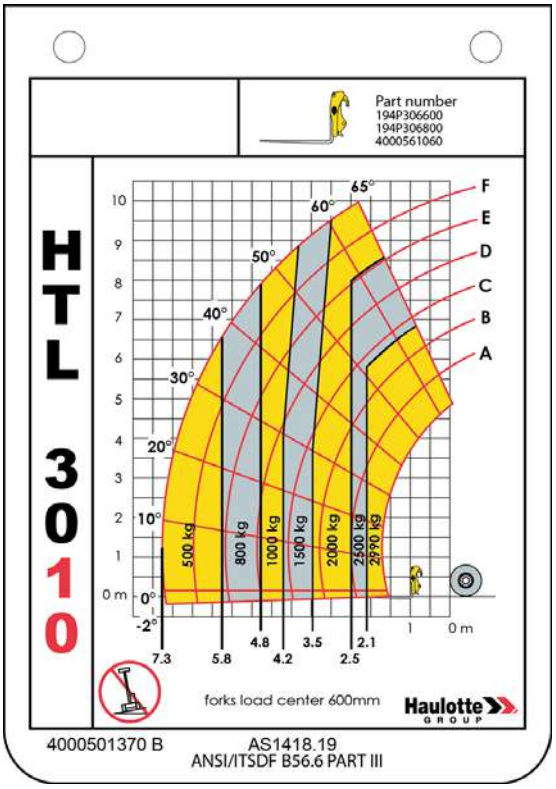
Electric circuit			
Reference - Engine Model	Perkins 1104D44T	Kohler KDI 2504 TCR	Kohler KDI 3404 TCR
Operating voltage	12 V	12 V	12 V
Battery	110 Ah	110 Ah	110 Ah
Alternator	100 A	100 A	90 A
Starter	3.2 kW (4.3 Hp)	3.2 kW (4.3 Hp)	3.2 kW (4.3 Hp)

Filling capacity		
Fuel tank		120 l(32 gal US)
Hydraulic oil tank		103 l(27 gal US)
Front axle (1)	 (2)	6,5 l(1,7 gal US)
Rear axle (1)		7,2 l(1,9 gal US)
Transfer case (1)		0,7 l(0,18 gal US)
Engine oil (For machines fitted with PERKINS 1104D44T only)		8,4 l(2 gal US)
Engine oil (For machines fitted with KOHLER KDI 2504 TCR only)		11,3 l(2,5 gal US)
Engine oil (For machines fitted with KOHLER KDI 3404 TCR only)		15,6 l(4 gal US) - Maximum 9,2 l(2 gal US) - Minimum
Coolant		18 l(5 gal US)

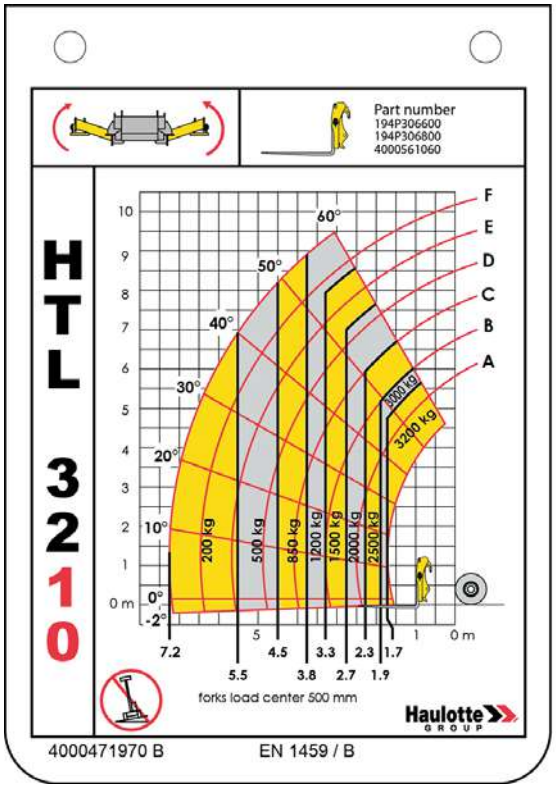
(1) Refer to Section F 10.9 - Lubricants and equivalents.
(2) Refer to the logo on wheel reducer for applicable application.

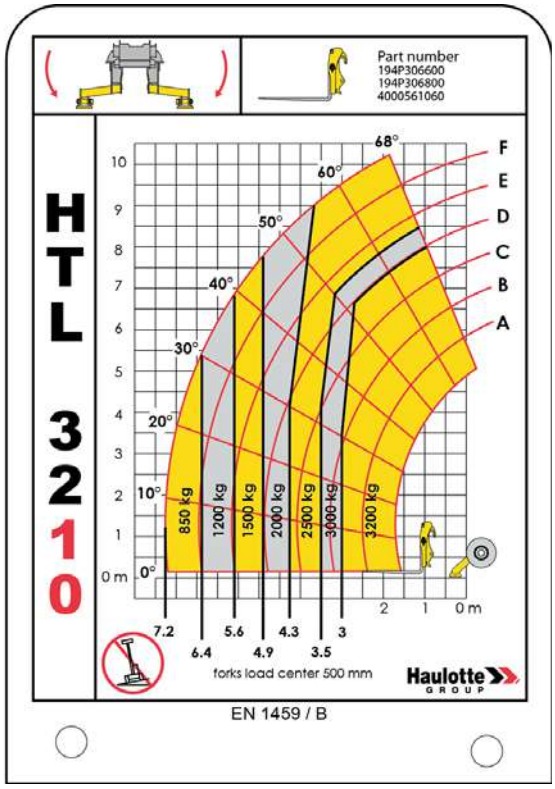
4.2 - WORKING AREA / RANGE OF MOTION

HTL 3010 with standard forks – AS standard

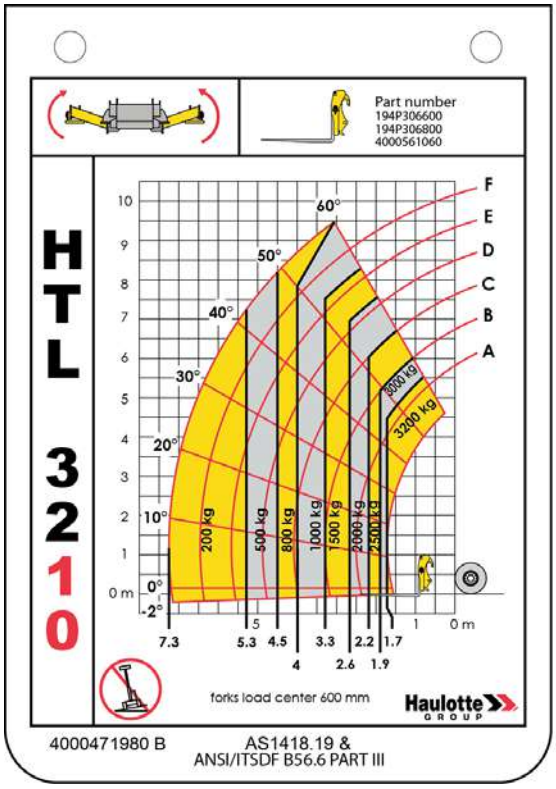


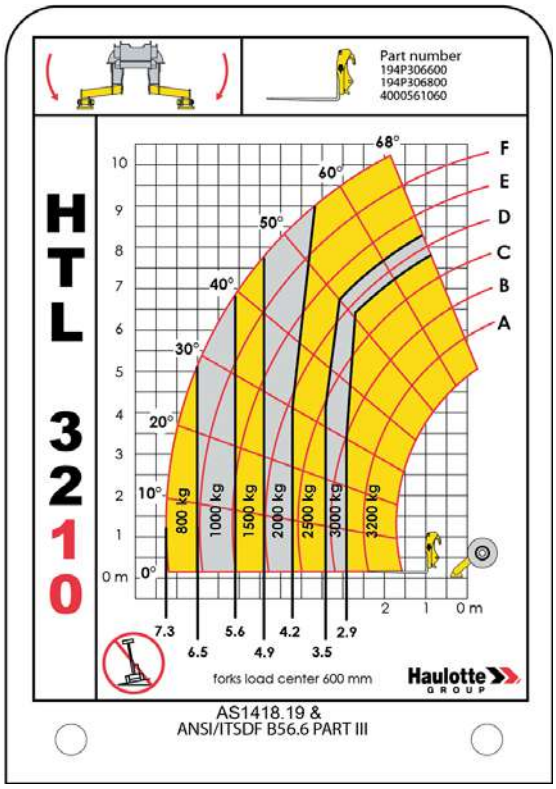
HTL 3210 with standard forks – CE standard



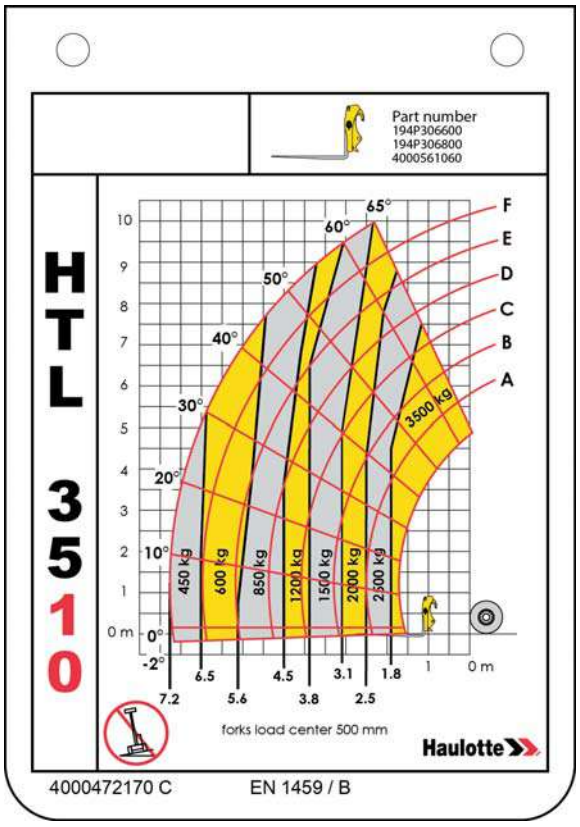


HTL 3210 with standard forks – AS standard

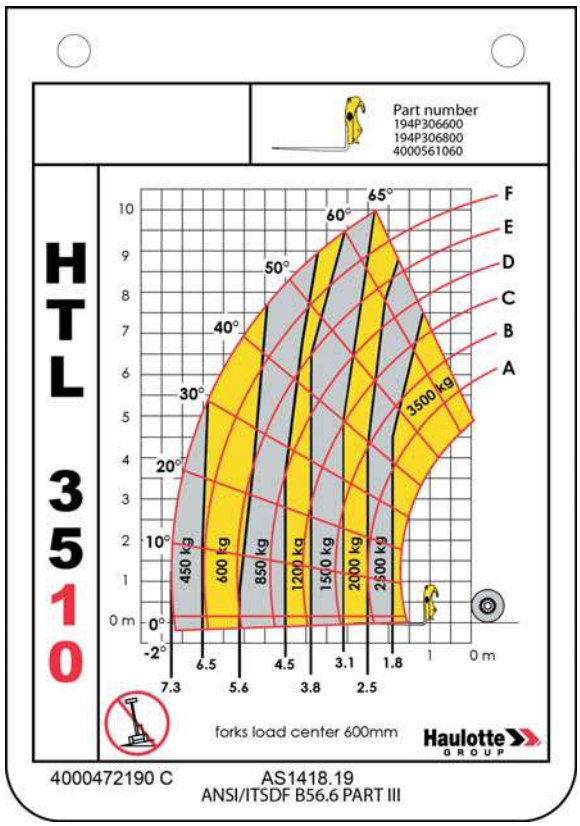




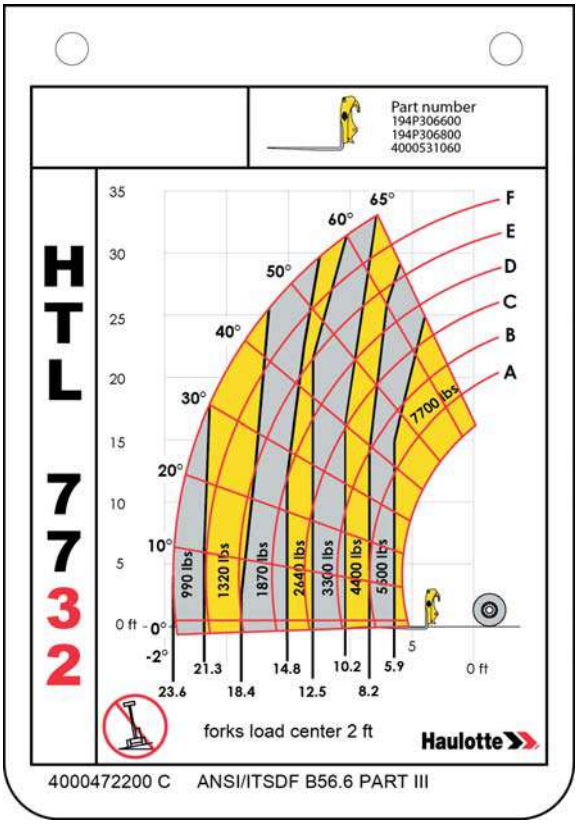
HTL 3510 with standard forks – CE standard



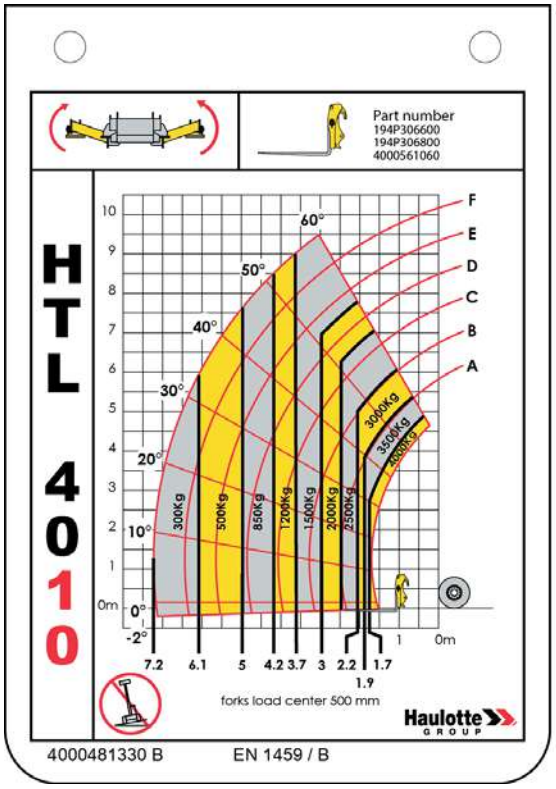
HTL 3510 with standard forks – AS standard

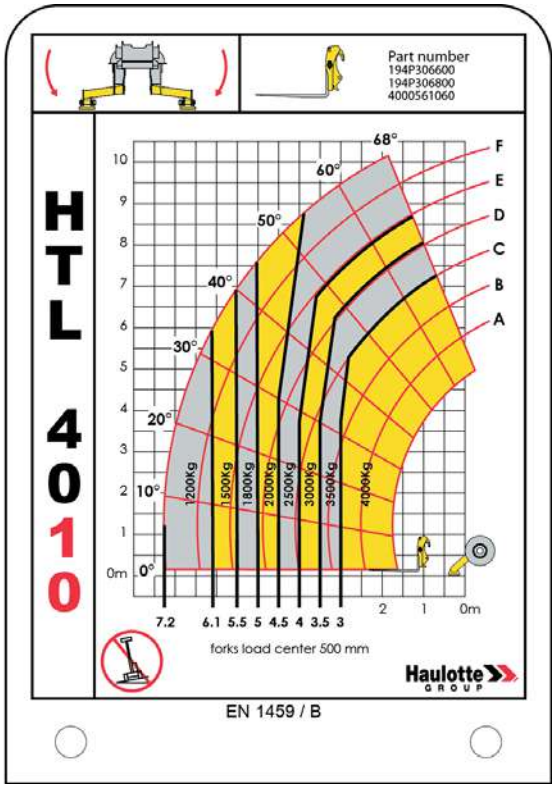


HTL 7732 with standard forks – ANSI and CSA standards

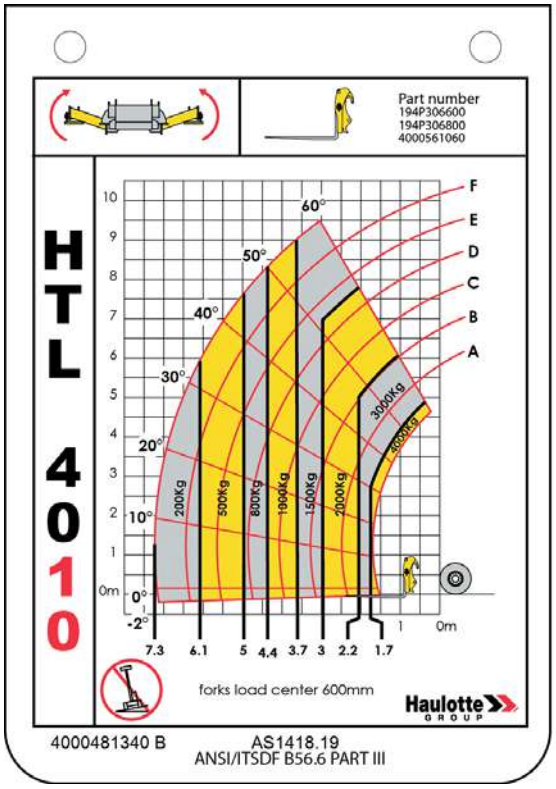


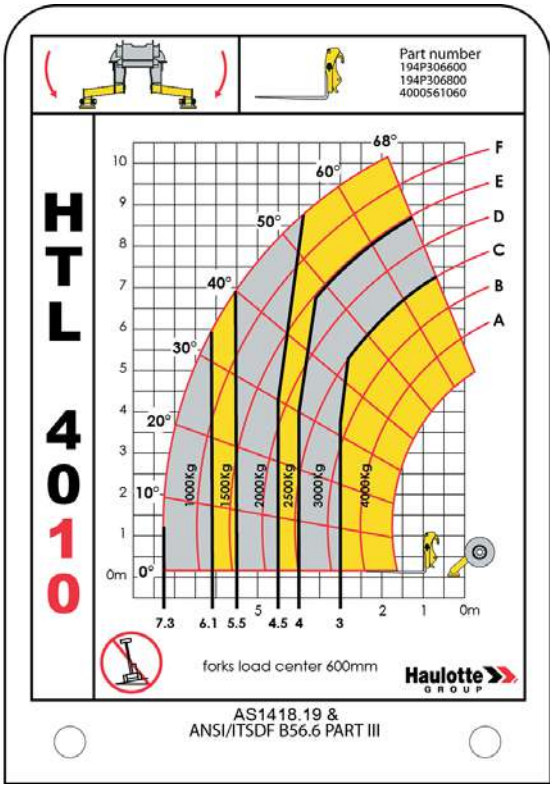
HTL 4010 with standard forks – CE standard





HTL 4010 with standard forks – AS standard





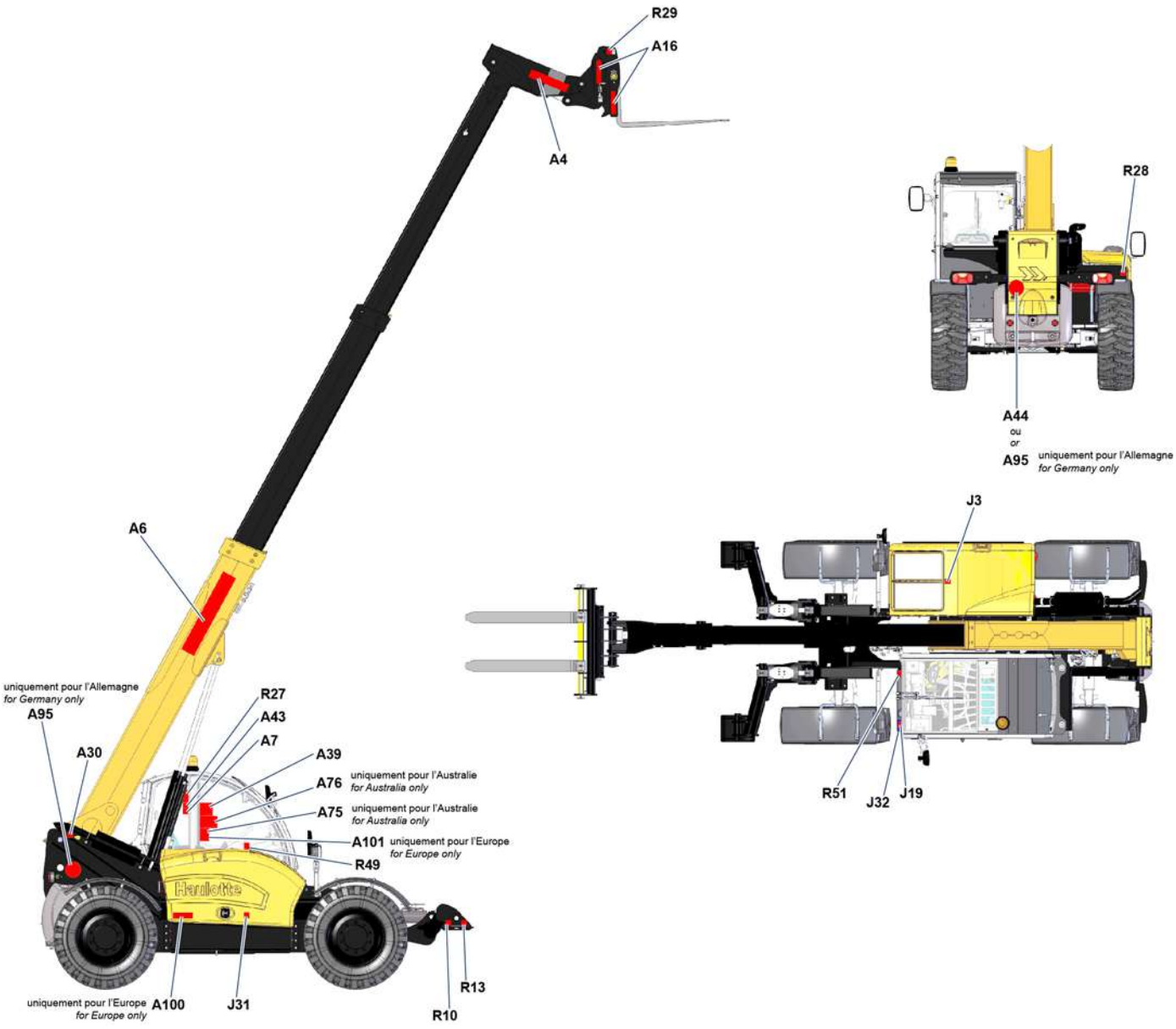
B- Familiarization

Notes

5 - Identification

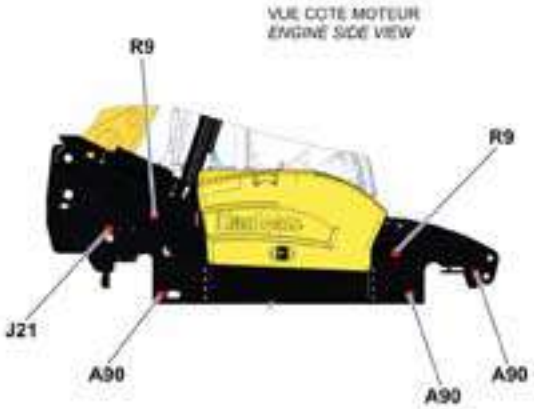
Locations - HTL 3210 - CE and AS standards

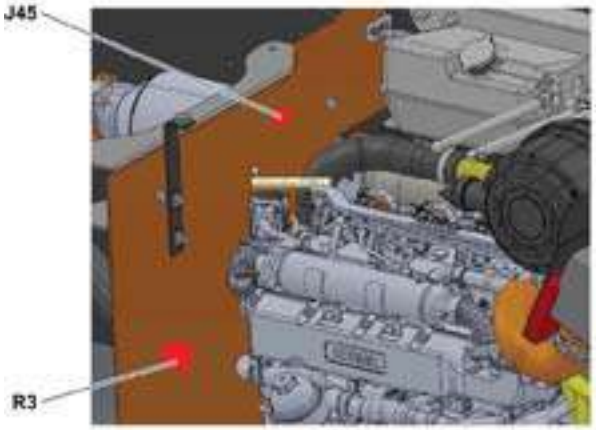
Locations - HTL 3210 - CE and AS standards

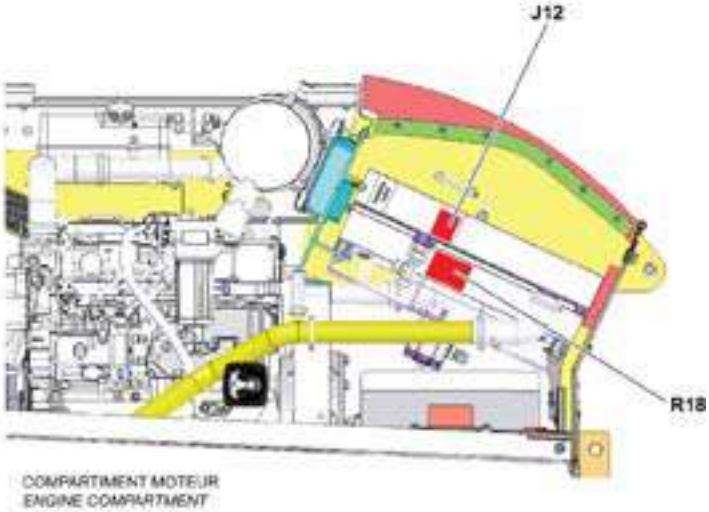


B- Familiarization

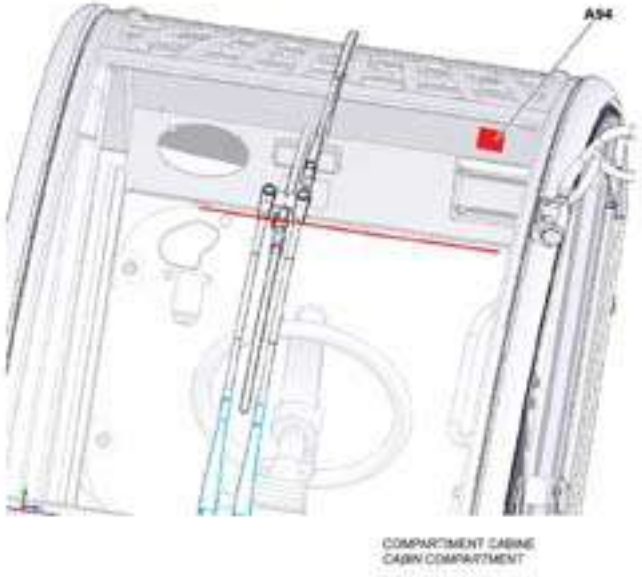
Locations - HTL 3210 - CE and AS standards

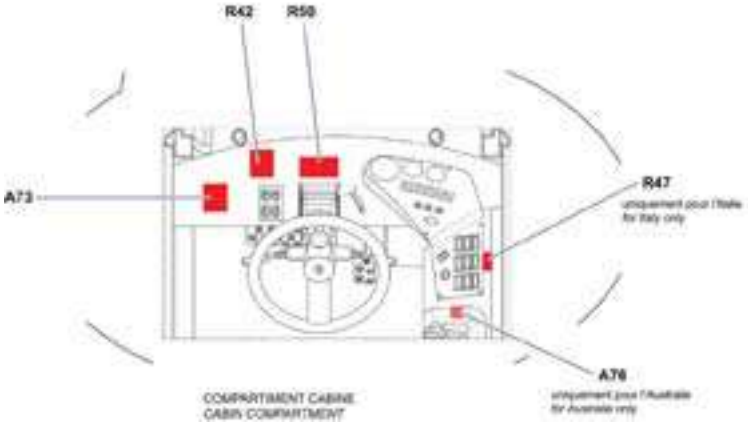




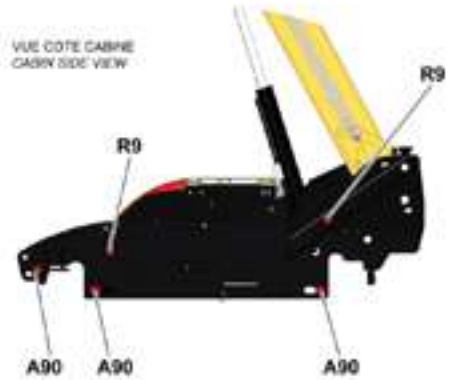


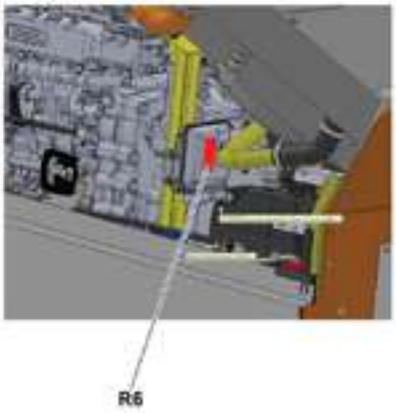
Locations - HTL 3210 - CE and AS standards





Locations - HTL 3210 - CE and AS standards





B- Familiarization

Common decals - HTL 3210 - CE and AS standards

Color	Marking	Description	Quantity	HTL3210
Other	A3	Identification plate	1	In french (CE standard) : 307P220810 In german (CE standard) : 307P222040 In spanish (CE standard) : 307P222050 In italian (CE standard) : 307P226270 In english (CE standard) : 307P222670 In polish (CE standard) : 307P222670 In Portuguese (CE standard) : 307P222670 In Russian (CE standard) : 4000568720 In english (AS standard) : 307P230120
Other	A4	Machine name logo-Dark machine	2	4000096250
Other	A4	Machine name logo-Bright machine	2	307P228750
Other	A4	Machine name logo-Red machine	2	4001095660
Other	A5	Decal HAULOTTE®	1	307P224740
Other	A6	Decal HAULOTTE®	1	307P228770
Other	A7	Read the operation manual	1	307P220740
Other	A10	Noise emission level (For machines fitted with PERKINS 1104D44T only)	1	307P223480
Other	A10	Noise emission level (For machines fitted with engine KOHLER KDI 3404 TCR or KOHLER KDI 2504 TCR only)	1	(CE standard) : 3078148700
Other	A16	Yellow and black adhesive tape	1	2421808660
Other	A30	Slings attached	2	307P220830
Other	A38	Terminal fuses	1	307P228740
Other	A39	Joystick	1	(CE standard) : 307P220800 (AS standard) : 4000064510
Other	A40	Battery / Battery isolation switch	1	307P220930
Other	A41	Indicator	1	307P221070
Other	A43	Wear the seat belt	1	307P220780
Other	A44	25 km/h	1	307P216110
Other	A45	Angle sensor	1	307P220900
Other	A46	Telescoping key A	1	307P222610
Other	A47	Telescoping key B	1	307P222620
Other	A48	Telescoping key C	1	307P222630
Other	A49	Telescoping key D	1	307P222640
Other	A50	Telescoping key E	1	307P222650
Other	A51	Telescoping key F	1	307P222660
Other	A73	Capacity chart booklet	1	(CE standard) : 107P334440 (AS standard) : 107P343900
Other	A75	Safe Use	1	(AS standard) : 307P232430
Other	A76	Electrocution	1	(AS standard) : 307P226440
Other	A90	Anchor points on the machine	6	307P216800
Other	A94	Identification plate	1	For Italy only (CE standard) : 307P222030
Other	A95	20 km/h	3	For Germany only (CE standard) : 307P226330
Other	A96	Read the operation manual	1	3078143680
Other	A98	"Made in Europe"	1	4000137690

B- Familiarization

Color	Marking	Description	Quantity	HTL3210
Other	A100	Type of power system (For machines fitted with KOHLER TIERIVF KDI 3404 TCR only)	1	(CE standard) : 4000388700
Other	A100	Type of power system-White transfer (For machines fitted with KOHLER STAGE 5 KDI2504 TCR only)	1	(CE standard) : 4001068400
Other	A100	Type of power system- Logo, Black transfer (For machines fitted with KOHLER STAGE 5 KDI2504 TCR only)	1	(CE standard) : 4001068410
Other	A101	DPF-Clear transfer (For machines fitted with KOHLER STAGE 5 KDI2504 TCR only)	1	(CE standard) : 4001075350
Yellow	J3	Do not place your foot on the cover	2	307P220820
Yellow	J4	Ground for welding	1	307P221090
Yellow	J12	Danger of Heat burns	1	307P223710
Yellow	J19	Fuel tank (For machines fitted with PERKINS 1104D44T only)	1	307P220920
Yellow	J20	Hydraulic oil	1	307P220870
Yellow	J21	Lubrication	14	307P220840
Yellow	J31	Engine cover	1	4000390370
Yellow	J32	Information - Explanation - LOW SULFUR (For machines fitted with engine KOHLER KDI 3404 TCR or KOHLER KDI 2504 TCR only)	1	(CE standard) : 307P232480
Yellow	J45	Oil CJ-4 (For machines fitted with engine KOHLER KDI 3404 TCR or KOHLER KDI 2504 TCR only)	1	(CE standard) : 4000318680
Red	R3	Risk of crushed hands (For machines fitted with engine KOHLER KDI 3404 TCR or KOHLER KDI 2504 TCR only)	1	(CE standard) : 307P218610
Red	R6	Do not interchange (For machines fitted with engine KOHLER KDI 3404 TCR or KOHLER KDI 2504 TCR only)	1	(CE standard) : 3078145180
Red	R9	Maximum effort on wheel	4	307P228720
Red	R10	Maximum effort on the stabilizers	2	307P228730
Red	R13	Risk of crushed feet	2	307P220890
Red	R18	Pressurised spraying forbidden (For machines fitted with engine KOHLER KDI 3404 TCR or KOHLER KDI 2504 TCR only)	1	(CE standard) : 3078149240
Red	R27	Danger of electrocution	1	307P220770
Red	R28	Cylinder locking	1	307P220860
Red	R29	Do not mount on the forks during elevation	2	307P221950
Red	R42	Decal book	1	307P223840
Red	R47	Caution : Actuate this switch when driving on roads	1	For Italy only (CE standard) : 307P225660

B- Familiarization

Color	Marking	Description	Quantity	HTL3210
Red	R49	Information on stabiliser movements(If equipped)	1	4000821050
Red	R50	Do not climb on the forks	1	4000865790
Red	R51	Accumulator under pressure	2	4000865780
Other	On the attachment	Attachment manufacturer's plate	1	In english (CE and AS standards) : 307P229340 In Russian (CE standard) : 4000672920

B- Familiarization

Load capacity chart - HTL 3210 - CE standard

Color	Marking	Description	Quantity	HTL 3210
Other	A73	Load capacity chart - Book	1	107P334440
Other	A73	Load capacity chart Cover book - Tire Inflation Pressure	1	4000475330
Other	A73	Load capacity chart Forks carriage	1	4000471970
Other	A73	Load capacity chart Side-shift fork carriage	1	4000472000
Other	A73	Load capacity chart Fork spreader 2,3T	1	4000532060
Other	A73	Load capacity chart Buckets	1	4000472030
Other	A73	Load capacity chart Grab buckets	1	4000612890
Other	A73	Load capacity chart 4T (8820 lb) 0 m (0 ft 0 in) jib crane	1	4000614530
Other	A73	Load capacity chart 3T (6615 lb) 1 m (3 ft 3 in) jib crane	1	4000472060
Other	A73	Load capacity chart 2T (4410 lb) 2 m (6 ft 7 in) jib crane	1	4000472080
Other	A73	Load capacity chart 1,2T (2646 lb) 2,5 m (8 ft 2 in) jib crane	1	4000472090
Other	A73	Load capacity chart 0,6T (1323 lb) 4 m (13 ft 1 in) jib crane	1	4000472100
Other	A73	Load capacity chart 2,4T (5292 lb) winch on attachment holding device	1	4000472120
Other	A73	Load capacity chart 1,2T (2646 lb) winch on attachment holding device	1	4000472130
Other	A73	Load capacity chart Bale forks 2 spears	1	4000555140
Other	A73	Load capacity chart Bale forks 6 spears	1	4000555330

B- Familiarization

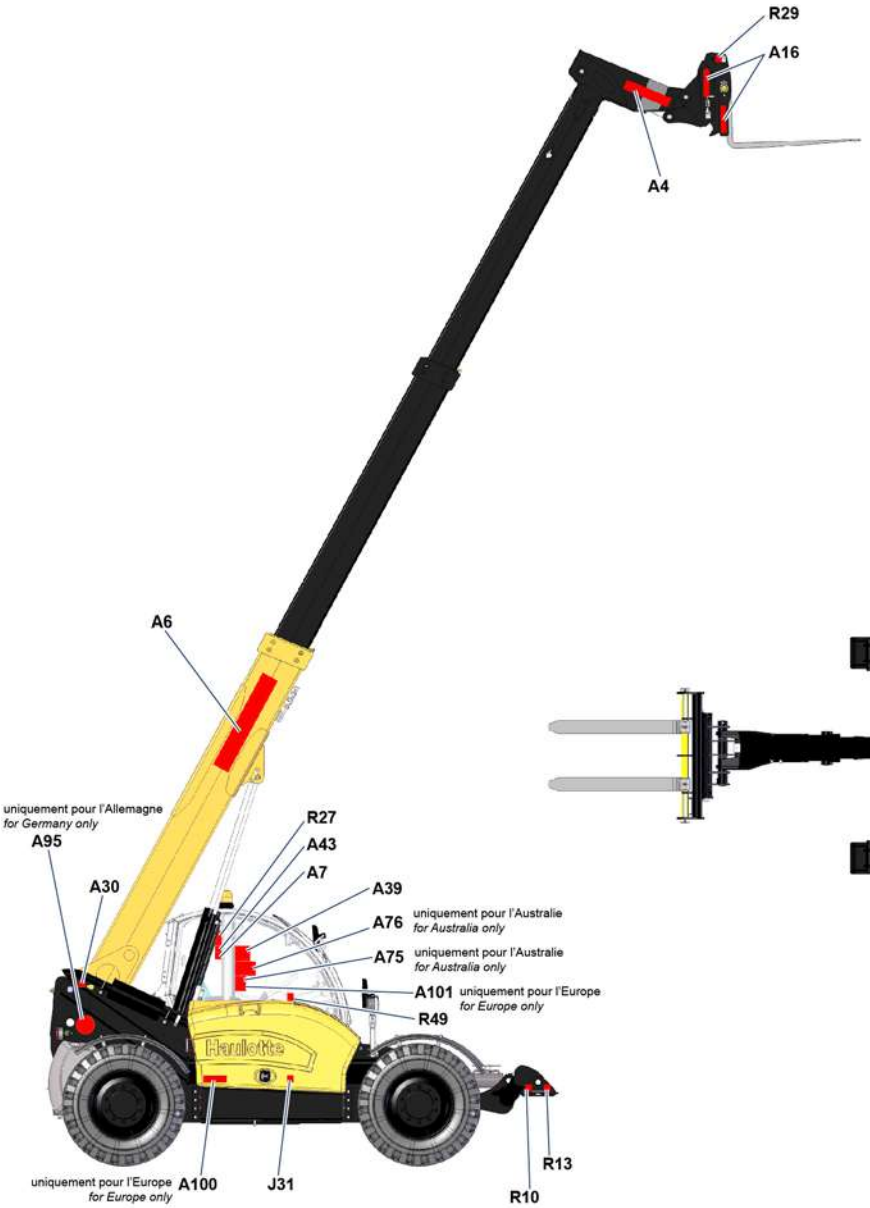
Load capacity chart - HTL 3210 - AS standard

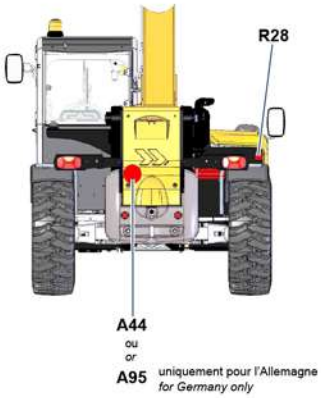
Color	Marking	Description	Quantity	HTL 3210
Other	A73	Load capacity chart - Book	1	107P343900
Other	A73	Load capacity chart Cover book - Tire Inflation Pressure	1	4000475330
Other	A73	Load capacity chart Forks carriage	1	4000471980
Other	A73	Load capacity chart Side-shift fork carriage	1	4000472010
Other	A73	Load capacity chart Fork spreader 2,3T	1	4000532070
Other	A73	Load capacity chart Buckets	1	4000472030
Other	A73	Load capacity chart Grab buckets	1	4000612890
Other	A73	Load capacity chart 4T (8820 lb) 0 m (0 ft 0 in) jib crane	1	4000614530
Other	A73	Load capacity chart 3T (6615 lb) 1 m (3 ft 3 in) jib crane	1	4000472060
Other	A73	Load capacity chart 2T (4410 lb) 2 m (6 ft 7 in) jib crane	1	4000472080
Other	A73	Load capacity chart 1,2T (2646 lb) 2,5 m (8 ft 2 in) jib crane	1	4000472090
Other	A73	Load capacity chart 0,6T (1323 lb) 4 m (13 ft 1 in) jib crane	1	4000472100
Other	A73	Load capacity chart 2,4T (5292 lb) winch on attachment holding device	1	4000472120
Other	A73	Load capacity chart 1,2T (2646 lb) winch on attachment holding device	1	4000472130
Other	A73	Load capacity chart Bale forks 2 spears	1	4000555120
Other	A73	Load capacity chart Bale forks 6 spears	1	4000555340

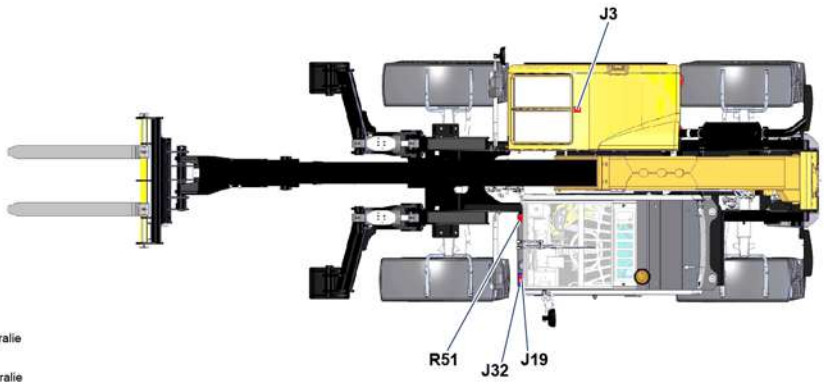
B- Familiarization

Locations - HTL 4010 - HTL 3510 - CE standard

Locations - HTL 4010 - HTL 3510 - CE standard

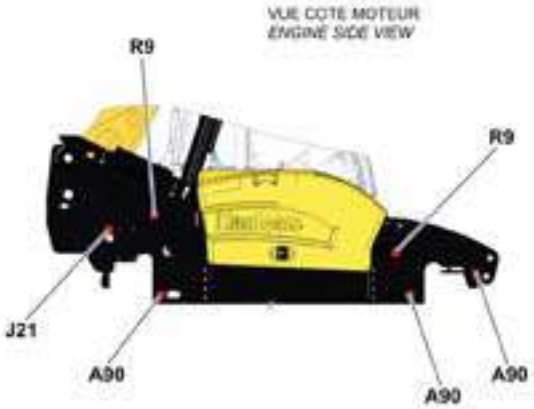


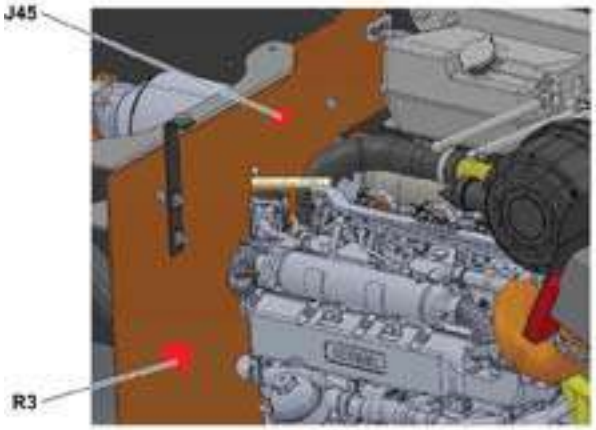


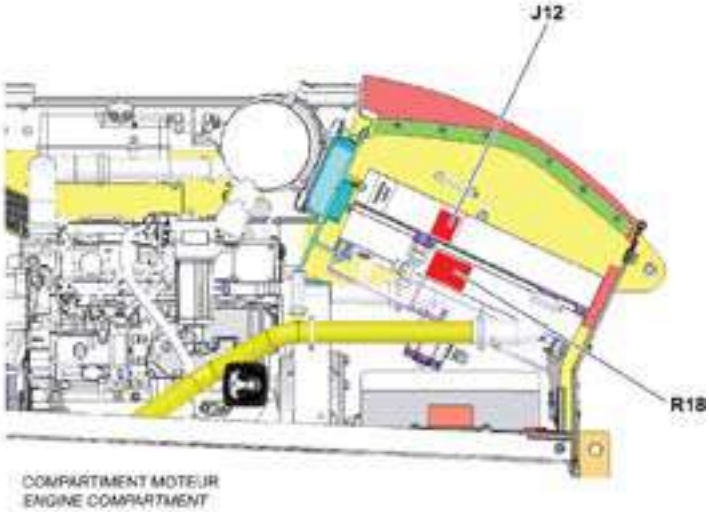


B- Familiarization

Locations - HTL 4010 - HTL 3510 - CE standard

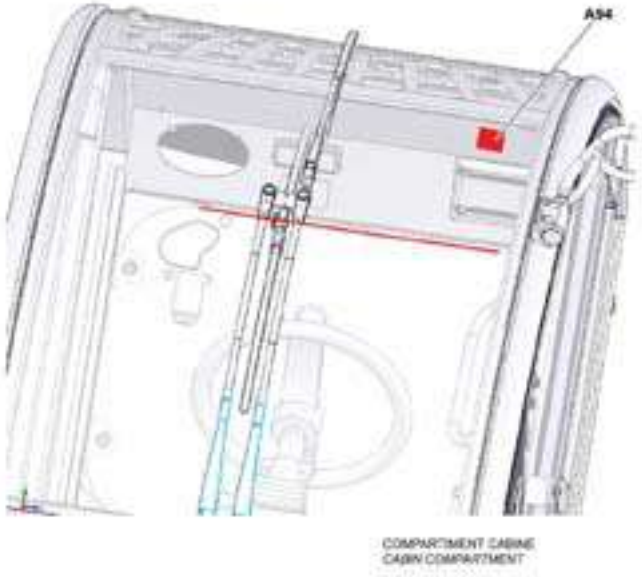


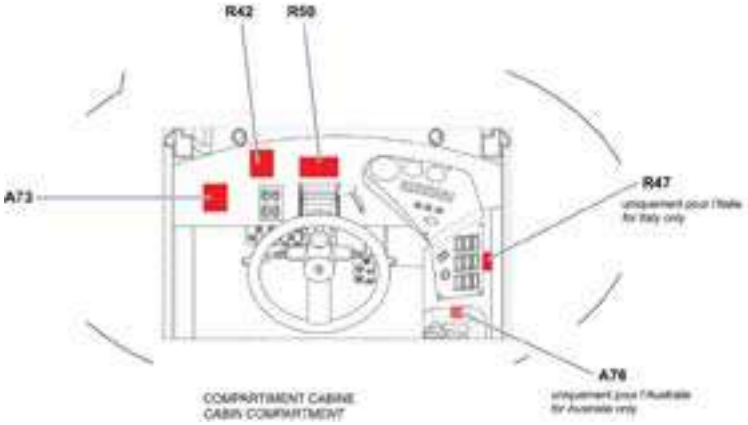




B- Familiarization

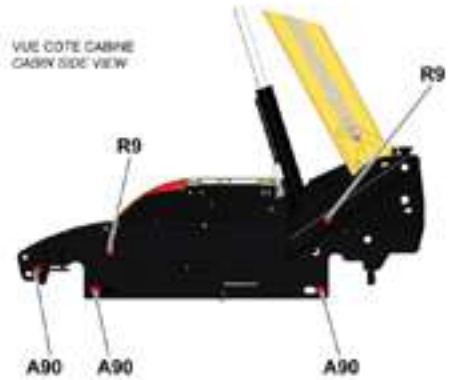
Locations - HTL 4010 - HTL 3510 - CE standard

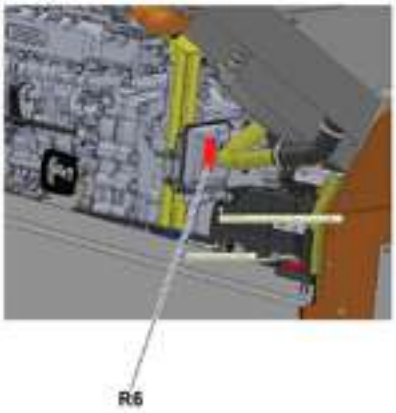




B- Familiarization

Locations - HTL 4010 - HTL 3510 - CE standard





B- Familiarization

Common decals - HTL 4010 - HTL 3510 - CE standard

Color	Marking	Description	Quantity	HTL4010	HTL3510
Other	A3	Identification plate	1	In french : 307P220810 In german : 307P222040 In spanish : 307P222050 In italian : 307P226270 In english : 307P222670 In polish : 307P222670 In Portuguese : 307P222670 In Russian : 4000568720	
Other	A4	Machine name logo-Dark machine	2	4000096280	4000085110
Other	A4	Machine name logo-Bright machine	2	307P228370	307P228760
Other	A4	Machine name logo-Red machine	2	4001095730	4001095670
Other	A5	Decal HAULOTTE®	1	307P224740	
Other	A6	Decal HAULOTTE®	1	307P228770	
Other	A7	Read the operation manual	1	307P220740	
Other	A10	Noise emission level (For machines fitted with PERKINS 1104D44T only)	1	307P223480	
Other	A10	Noise emission level (For machines fitted with engine KOHLER KDI 3404 TCR or KOHLER KDI 2504 TCR only)	1	3078148700	
Other	A16	Yellow and black adhesive tape	1	2421808660	
Other	A30	Slings attached	2	307P220830	
Other	A38	Terminal fuses	1	4000023340	
Other	A39	Joystick	1	307P220800	
Other	A40	Battery / Battery isolation switch	1	307P220930	
Other	A41	Indicator	1	307P221070	
Other	A43	Wear the seat belt	1	307P220780	
Other	A44	25 km/h	1	307P216110	
Other	A45	Angle sensor	1	307P220900	
Other	A46	Telescoping key A	1	307P222610	
Other	A47	Telescoping key B	1	307P222620	
Other	A48	Telescoping key C	1	307P222630	
Other	A49	Telescoping key D	1	307P222640	
Other	A50	Telescoping key E	1	307P222650	
Other	A51	Telescoping key F	1	307P222660	
Other	A73	Capacity chart booklet	1	107P334450	107P334460
Other	A90	Anchor points on the machine	6	307P216800	
Other	A94	Identification plate	1	For Italy only : 307P222030	
Other	A95	20 km/h	3	For Germany only : 307P226330	
Other	A96	Read the operation manual	1	3078143680	
Other	A98	"Made in Europe"	1	4000137690	
Other	A100	Type of power system (For machines fitted with KOHLER TIERIVF KDI 3404 TCR only)	1	4000388700	
Other	A100	Type of power system-White transfer (For machines fitted with KOHLER STAGE 5 KDI2504 TCR only)	1	4001068400	

B- Familiarization

Color	Marking	Description	Quantity	HTL4010	HTL3510
Other	A100	Type of power system- Logo, Black transfer (For machines fitted with KOHLER STAGE 5 KDI2504 TCR only)	1	4001068410	
Other	A101	DPF-Clear transfer (For machines fitted with KOHLER STAGE 5 KDI2504 TCR only)	1	4001075350	
Yellow	J4	Ground for welding	1	307P221090	
Yellow	J12	Danger of Heat burns	1	307P223710	
Yellow	J19	Fuel tank (For machines fitted with PERKINS 1104D44T only)	1	307P220920	
Yellow	J20	Hydraulic oil	1	307P220870	
Yellow	J21	Lubrication	For HTL 4010 : 14 For HTL 3510 : 12	307P220840	
Yellow	J31	Engine cover	1	4000390370	
Yellow	J32	Information - Explanation - LOW SULFUR (For machines fitted with engine KOHLER KDI 3404 TCR or KOHLER KDI 2504 TCR only)	1	307P232480	
Yellow	J45	Oil CJ-4 (For machines fitted with engine KOHLER KDI 3404 TCR or KOHLER KDI 2504 TCR only)	1	4000318680	
Red	R3	Risk of crushed hands (For machines fitted with engine KOHLER KDI 3404 TCR or KOHLER KDI 2504 TCR only)	1	307P218610	
Red	R6	Do not interchange (For machines fitted with engine KOHLER KDI 3404 TCR or KOHLER KDI 2504 TCR only)	1	3078145180	
Red	R9	Maximum effort on wheel	4	307P228350	307P228710
Red	R10	Maximum effort on the stabilizers	2	307P228360	—
Red	R13	Risk of crushed feet	2	307P220890	
Red	R18	Pressurised spraying forbidden (For machines fitted with engine KOHLER KDI 3404 TCR or KOHLER KDI 2504 TCR only)	1	3078149240	
Red	R27	Danger of electrocution	1	307P220770	
Red	R28	Cylinder locking	1	307P220860	
Red	R29	Do not mount on the forks during elevation	2	307P221950	
Red	R42	Decal book	1	307P223840	
Red	R47	Caution : Actuate this switch when driving on roads	1	For Italy only : 307P225660	
Red	R49	Information on stabiliser movements(If equipped)	1	4000821050	
Red	R50	Do not climb on the forks	1	4000865790	
Red	R51	Accumulator under pressure	2	4000865780	
Other	On the attachment	Attachment manufacturer's plate	1	In english : 307P229340 In Russian : 4000672920	

B- Familiarization

Load capacity chart - HTL 4010 - CE standard

Color	Marking	Description	Quantity	HTL 4010
Other	A73	Load capacity chart - Book	1	107P334450
Other	A73	Load capacity chart Cover book - Tire Inflation Pressure	1	4000475570
Other	A73	Load capacity chart Forks carriage	1	4000481330
Other	A73	Load capacity chart Side-shift fork carriage	1	4000481360
Other	A73	Load capacity chart Fork spreader 2,3T	1	4000481480
Other	A73	Load capacity chart Buckets	1	4000481380
Other	A73	Load capacity chart Grab buckets	1	4000612950
Other	A73	Load capacity chart Concrete mixer bucket	1	4001036720
Other	A73	Load capacity chart 4T (8820 lb) 0 m (0 ft 0 in) jib crane	1	4000614930
Other	A73	Load capacity chart 3T (6615 lb) 1 m (3 ft 3 in) jib crane	1	4000481390
Other	A73	Load capacity chart 2T (4410 lb) 2 m (6 ft 7 in) jib crane	1	4000481400
Other	A73	Load capacity chart 1,2T (2646 lb) 2,5 m (8 ft 2 in) jib crane	1	4000481410
Other	A73	Load capacity chart 0,6T (1323 lb) 4 m (13 ft 1 in) jib crane	1	4000481420
Other	A73	Load capacity chart 2,4T (5292 lb) winch on attachment holding device	1	4000481430
Other	A73	Load capacity chart 1,2T (2646 lb) winch on attachment holding device	1	4000481440
Other	A73	Load capacity chart Bale forks 2 spears	1	4000555160
Other	A73	Load capacity chart Bale forks 6 spears	1	4000555380

B- Familiarization

Load capacity chart - HTL 3510 - CE standard

Color	Marking	Description	Quantity	HTL 3510
Other	A73	Load capacity chart - Book	1	107P334460
Other	A73	Load capacity chart Cover book - Tire Inflation Pressure	1	4000475550
Other	A73	Load capacity chart Forks carriage	1	4000472170
Other	A73	Load capacity chart Side-shift fork carriage	1	4000473170
Other	A73	Load capacity chart Fork spreader 2,3T	1	4000532080
Other	A73	Load capacity chart Rotative forks carriage 3,2T	1	4000702250
Other	A73	Load capacity chart Buckets	1	4000473210
Other	A73	Load capacity chart Grab buckets	1	4000612920
Other	A73	Load capacity chart Concrete mixer bucket	1	4001036710
Other	A73	Load capacity chart 4T (8820 lb) 0 m (0 ft 0 in) jib crane	1	4000614870
Other	A73	Load capacity chart 3T (6615 lb) 1 m (3 ft 3 in) jib crane	1	4000473230
Other	A73	Load capacity chart 2T (4410 lb) 2 m (6 ft 7 in) jib crane	1	4000473270
Other	A73	Load capacity chart 1,2T (2646 lb) 2,5 m (8 ft 2 in) jib crane	1	4000473290
Other	A73	Load capacity chart 0,6T (1323 lb) 4 m (13 ft 1 in) jib crane	1	4000473320
Other	A73	Load capacity chart 2,4T (5292 lb) winch on attachment holding device	1	4000473340
Other	A73	Load capacity chart 1,2T (2646 lb) winch on attachment holding device	1	4000507850
Other	A73	Load capacity chart Bale forks 2 spears	1	4000555100
Other	A73	Load capacity chart Bale forks 6 spears	1	4000555360

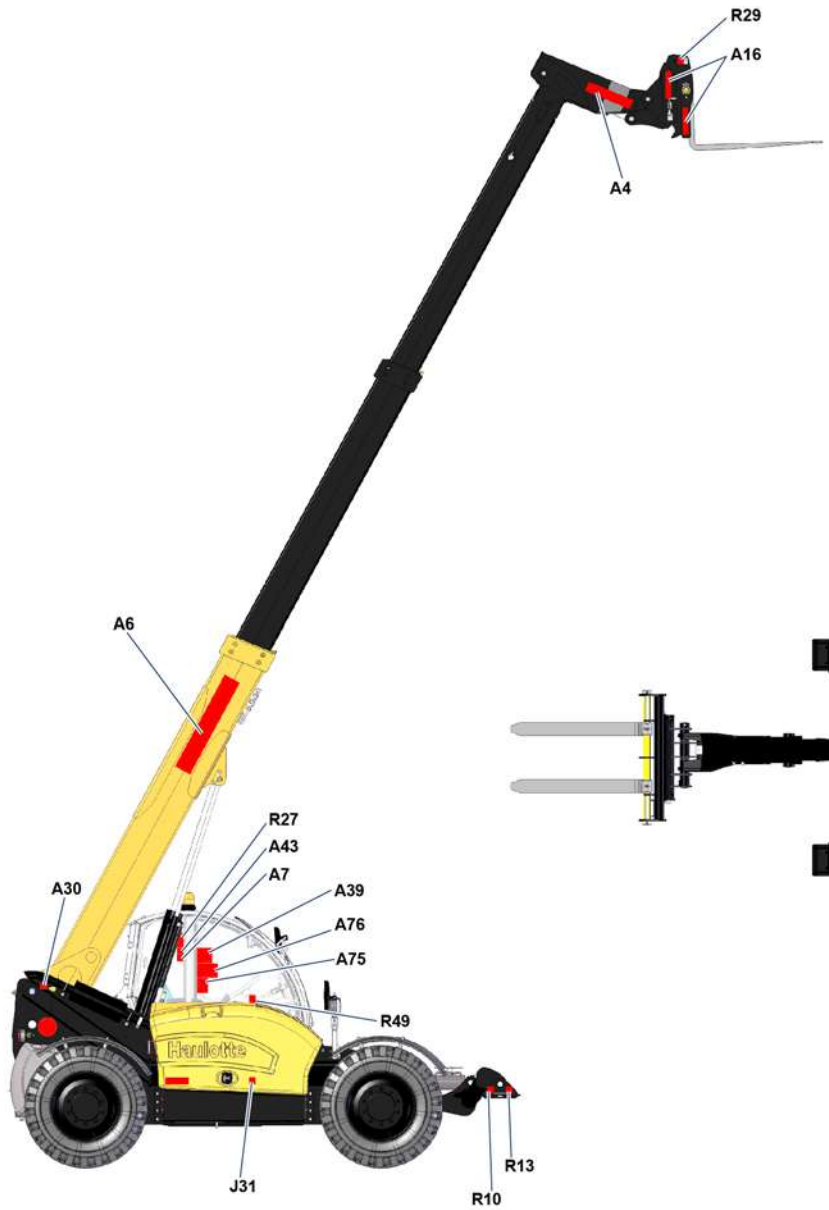
B- Familiarization

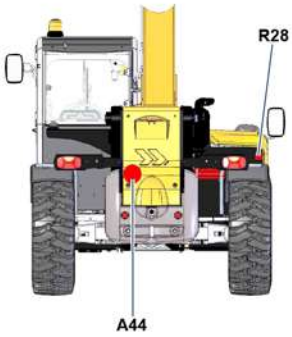
Notes

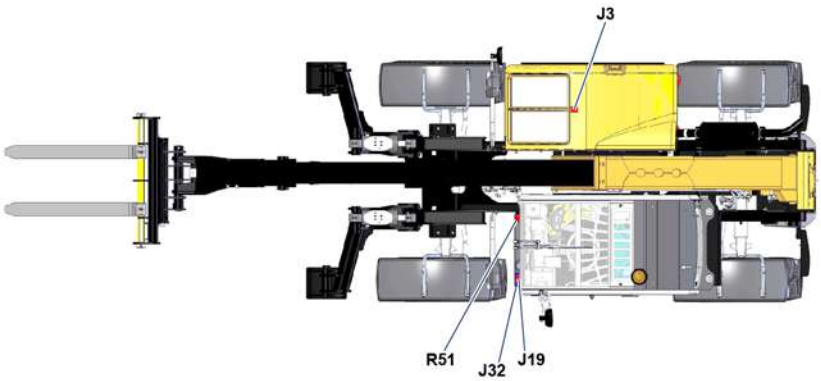
B- Familiarization

Locations - HTL 4010 - HTL 3510 - HTL 3010 - AS standard

B- Familiarization

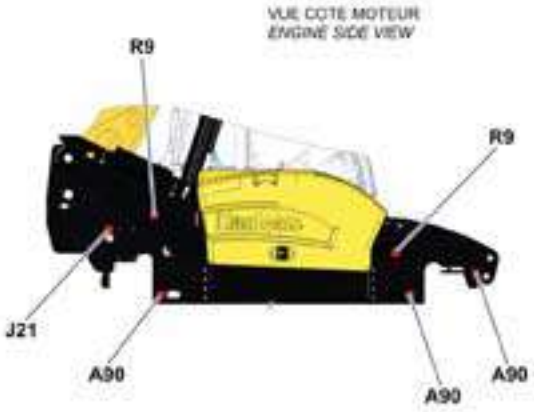


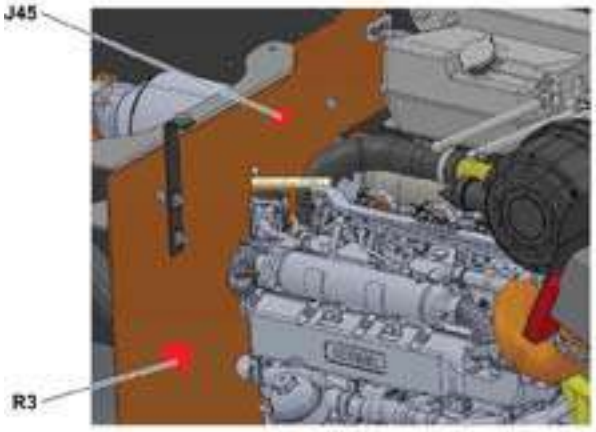


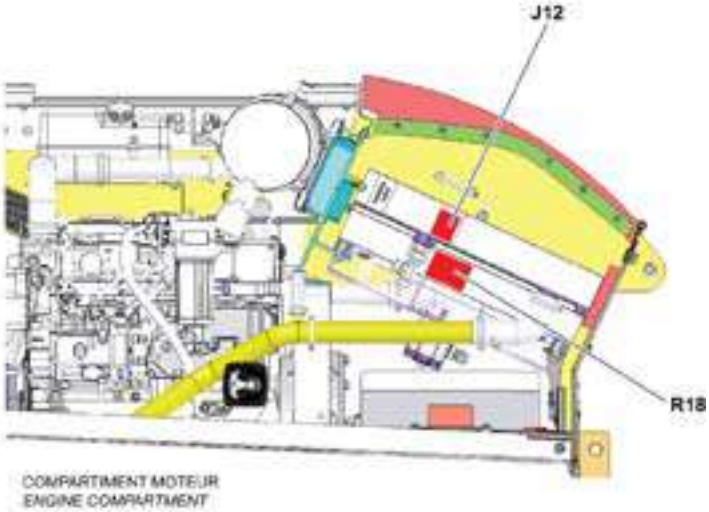


B- Familiarization

Locations - HTL 4010 - HTL 3510 - HTL 3010 - AS standard

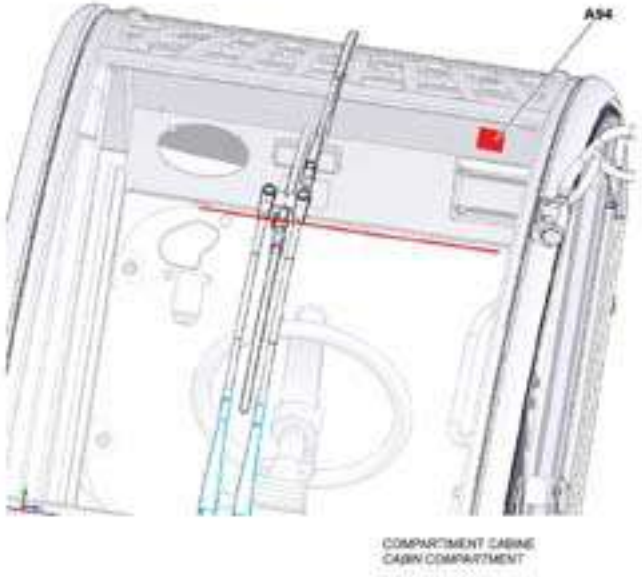


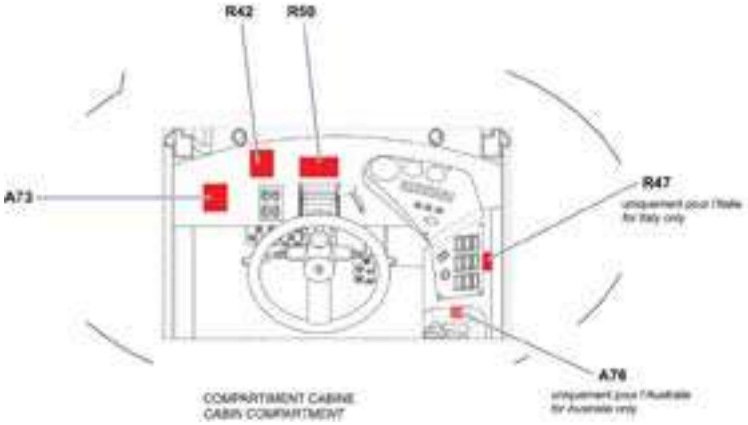




B- Familiarization

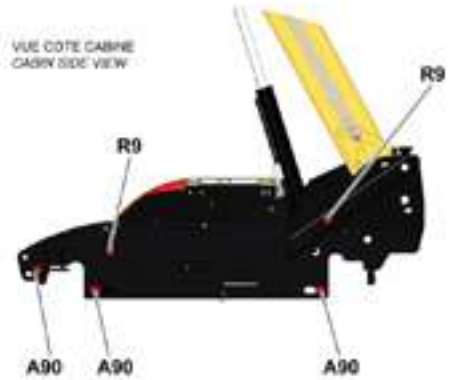
Locations - HTL 4010 - HTL 3510 - HTL 3010 - AS standard

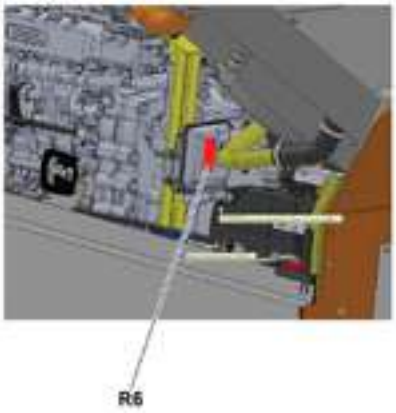




B- Familiarization

Locations - HTL 4010 - HTL 3510 - HTL 3010 - AS standard





Common decals - HTL 4010 - HTL 3510 - HTL 3010 - AS standard

Color	Marking	Description	Quantity	HTL4010	HTL3510	HTL3010
Other	A3	Identification plate	1		307P230120	
Other	A4	Machine name logo-Dark machine	2	4000096280	4000085110	4000100080
Other	A4	Machine name logo-Bright machine	2	307P228370	307P228760	4000060780
Other	A4	Machine name logo-Red machine	2	4001095730	4001095670	4001095610
Other	A5	Decal HAULOTTE®	1		307P224740	
Other	A6	Decal HAULOTTE®	1		307P228770	
Other	A7	Read the operation manual	1		307P220740	
Other	A10	Noise emission level (For machines fitted with PERKINS 1104D44T only)	1		307P223480	
Other	A16	Yellow and black adhesive tape	1		2421808660	
Other	A30	Slings attached	2		307P220830	
Other	A38	Terminal fuses	1		4000023340	
Other	A39	Joystick	1		4000064510	
Other	A40	Battery / Battery isolation switch	1		307P220930	
Other	A41	Indicator	1		307P221070	
Other	A43	Wear the seat belt	1		307P220780	
Other	A44	25 km/h	1		307P216110	
Other	A45	Angle sensor	1		307P220900	
Other	A46	Telescoping key A	1		307P222610	
Other	A47	Telescoping key B	1		307P222620	
Other	A48	Telescoping key C	1		307P222630	
Other	A49	Telescoping key D	1		307P222640	
Other	A50	Telescoping key E	1		307P222650	
Other	A51	Telescoping key F	1		307P222660	
Other	A73	Capacity chart booklet	1	107P345780	107P347640	4000059330
Other	A75	Safe Use	1		307P232430	
Other	A76	Electrocution	1		307P226440	
Other	A90	Anchor points on the machine	6		307P216800	
Other	A96	Read the operation manual	1		3078143680	
Other	A98	"Made in Europe"	1		4000137690	
Yellow	J4	Ground for welding	1		307P221090	
Yellow	J12	Danger of Heat burns	1		307P223710	
Yellow	J19	Fuel tank (For machines fitted with PERKINS 1104D44T only)	1		307P220920	
Yellow	J20	Hydraulic oil	1		307P220870	
Yellow	J21	Lubrication	For HTL 4010 and HTL 3010 : 14 For HTL 3510 : 12		307P220840	
Yellow	J31	Engine cover	1		4000390370	
Red	R9	Maximum effort on wheel	4	307P228350	307P228710	
Red	R10	Maximum effort on the stabilizers	2	307P228360	—	
Red	R13	Risk of crushed feet	2		307P220890	

B- Familiarization

Color	Marking	Description	Quantity	HTL4010	HTL3510	HTL3010
Red	R27	Danger of electrocution	1		307P220770	
Red	R28	Cylinder locking	1		307P220860	
Red	R29	Do not mount on the forks during elevation	2		307P221950	
Red	R42	Decal book	1		307P223840	
Red	R49	Information on stabiliser movements(If equipped)	1		4000821050	
Red	R50	Do not climb on the forks	1		4000865790	
Red	R51	Accumulator under pressure	2		4000865780	
Other	On the attachment	Attachment manufacturer's plate	1		307P229340	

B- Familiarization

Load capacity chart - HTL 4010 - AS standard

Color	Marking	Description	Quantity	HTL 4010
Other	A73	Load capacity chart - Book	1	107P345780
Other	A73	Load capacity chart Cover book - Tire Inflation Pressure	1	4000475570
Other	A73	Load capacity chart Forks carriage	1	4000481340
Other	A73	Load capacity chart Side-shift fork carriage	1	4000481370
Other	A73	Load capacity chart Fork spreader 2,3T	1	4000481490
Other	A73	Load capacity chart Buckets	1	4000481380
Other	A73	Load capacity chart Grab buckets	1	4000612950
Other	A73	Load capacity chart 4T (8820 lb) 0 m (0 ft 0 in) jib crane	1	4000614930
Other	A73	Load capacity chart 3T (6615 lb) 1 m (3 ft 3 in) jib crane	1	4000481390
Other	A73	Load capacity chart 2T (4410 lb) 2 m (6 ft 7 in) jib crane	1	4000481400
Other	A73	Load capacity chart 1,2T (2646 lb) 2,5 m (8 ft 2 in) jib crane	1	4000481410
Other	A73	Load capacity chart 0,6T (1323 lb) 4 m (13 ft 1 in) jib crane	1	4000481420
Other	A73	Load capacity chart 2,4T (5292 lb) winch on attachment holding device	1	4000481430
Other	A73	Load capacity chart 1,2T (2646 lb) winch on attachment holding device	1	4000481440
Other	A73	Load capacity chart Bale forks 2 spears	1	4000555170
Other	A73	Load capacity chart Bale forks 6 spears	1	4000555390

B- Familiarization

Load capacity chart - HTL 3510 - AS standard

Color	Marking	Description	Quantity	HTL 3510
Other	A73	Load capacity chart - Book	1	107P347640
Other	A73	Load capacity chart Cover book - Tire Inflation Pressure	1	4000475550
Other	A73	Load capacity chart Forks carriage	1	4000472190
Other	A73	Load capacity chart Side-shift fork carriage	1	4000473180
Other	A73	Load capacity chart Fork spreader 2,3T	1	4000532090
Other	A73	Load capacity chart Rotative forks carriage 3,2T	1	4000069830
Other	A73	Load capacity chart Buckets	1	4000473210
Other	A73	Load capacity chart Grab buckets	1	4000612920
Other	A73	Load capacity chart 4T (8820 lb) 0 m (0 ft 0 in) jib crane	1	4000614870
Other	A73	Load capacity chart 3T (6615 lb) 1 m (3 ft 3 in) jib crane	1	4000473230
Other	A73	Load capacity chart 2T (4410 lb) 2 m (6 ft 7 in) jib crane	1	4000473270
Other	A73	Load capacity chart 1,2T (2646 lb) 2,5 m (8 ft 2 in) jib crane	1	4000473290
Other	A73	Load capacity chart 0,6T (1323 lb) 4 m (13 ft 1 in) jib crane	1	4000473320
Other	A73	Load capacity chart 2,4T (5292 lb) winch on attachment holding device	1	4000473340
Other	A73	Load capacity chart 1,2T (2646 lb) winch on attachment holding device	1	4000507850
Other	A73	Load capacity chart Bale forks 2 spears	1	4000555110
Other	A73	Load capacity chart Bale forks 6 spears	1	4000555370

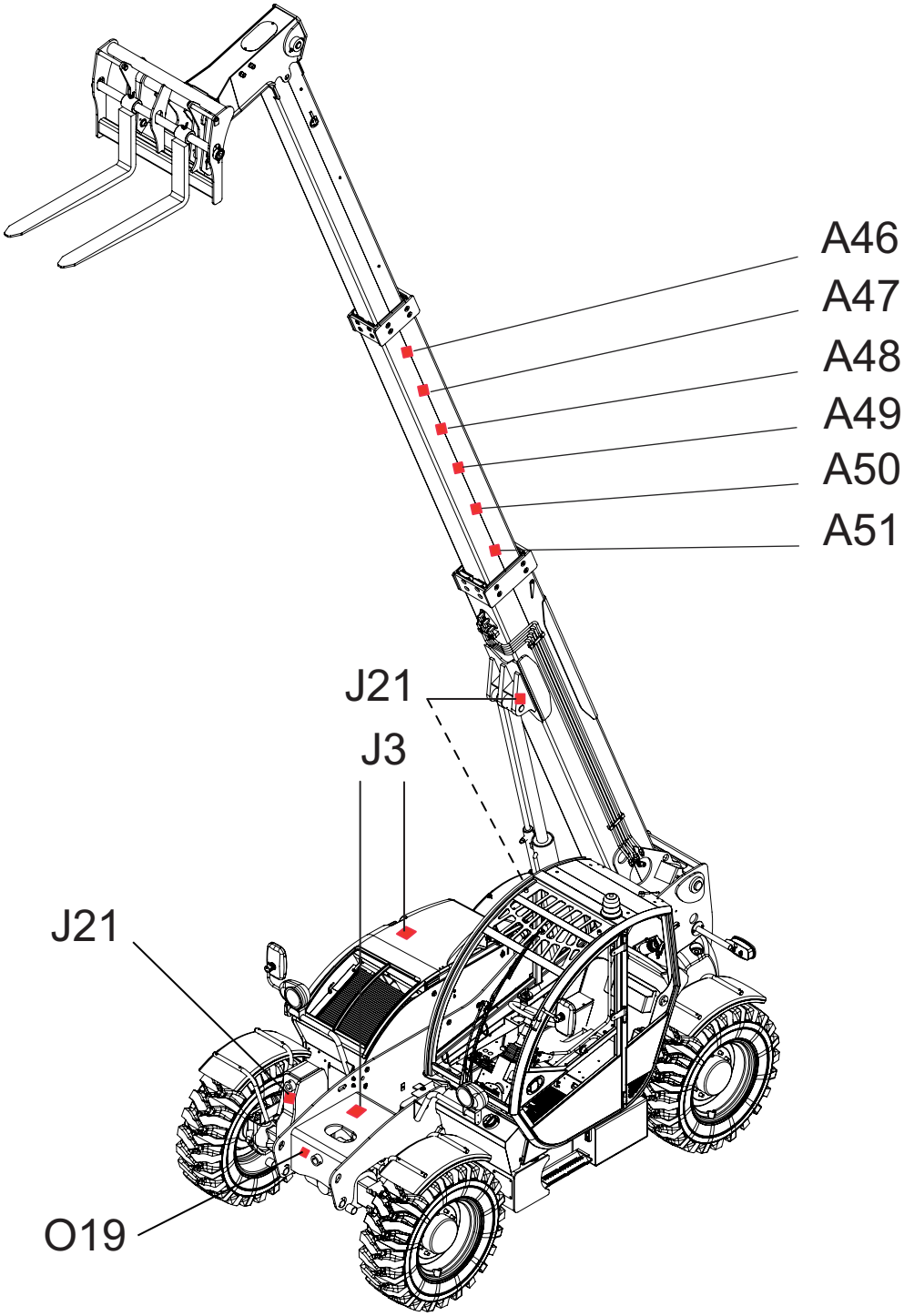
B- Familiarization

Load capacity chart - HTL 3010 - AS standard

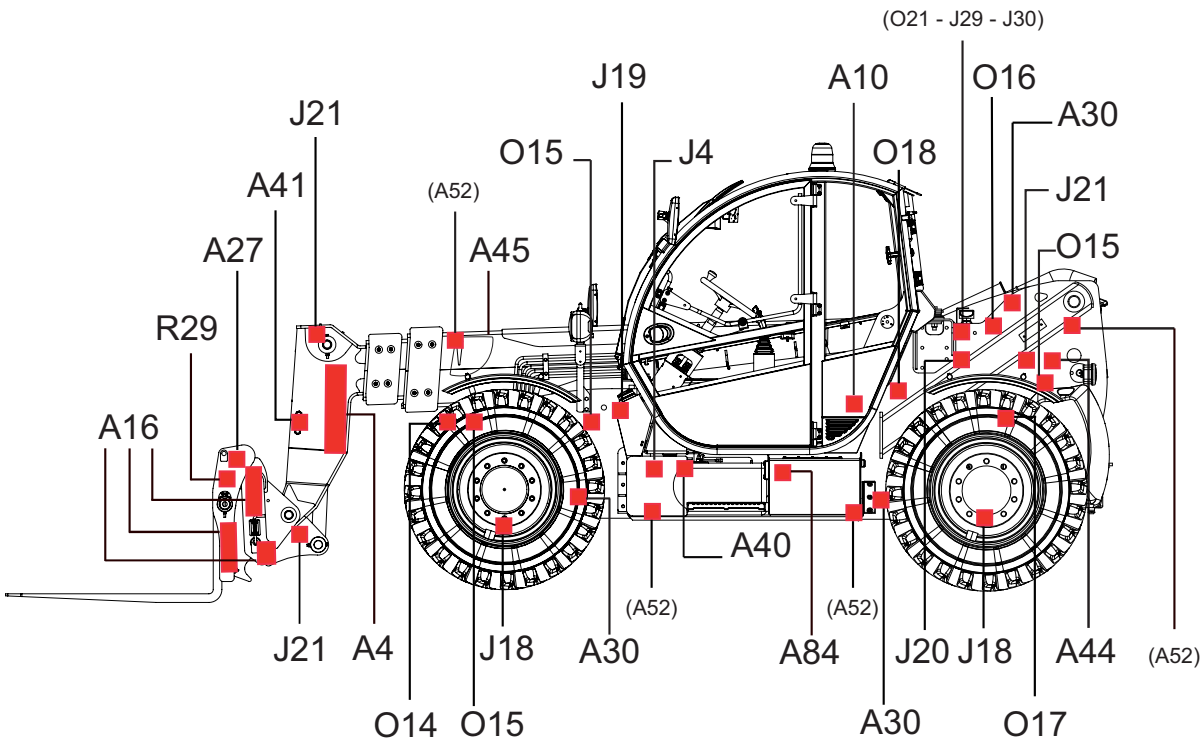
Color	Marking	Description	Quantity	HTL 3010
Other	A73	Load capacity chart - Book	1	4000059330
Other	A73	Load capacity chart Cover book - Tire Inflation Pressure	1	4000498140
Other	A73	Load capacity chart Forks carriage	1	4000501370
Other	A73	Load capacity chart Side-shift fork carriage	1	4000501720
Other	A73	Load capacity chart Fork spreader 2,3T	1	4000532050
Other	A73	Load capacity chart Buckets	1	4000501800
Other	A73	Load capacity chart Grab buckets	1	4000612870
Other	A73	Load capacity chart 4T (8820 lb) 0 m (0 ft 0 in) jib crane	1	4000614520
Other	A73	Load capacity chart 3T (6615 lb) 1 m (3 ft 3 in) jib crane	1	4000508010
Other	A73	Load capacity chart 2T (4410 lb) 2 m (6 ft 7 in) jib crane	1	4000507520
Other	A73	Load capacity chart 1,2T (2646 lb) 2,5 m (8 ft 2 in) jib crane	1	4000527470
Other	A73	Load capacity chart 0,6T (1323 lb) 4 m (13 ft 1 in) jib crane	1	4000527480
Other	A73	Load capacity chart 2,4T (5292 lb) winch on attachment holding device	1	4000527490
Other	A73	Load capacity chart 1,2T (2646 lb) winch on attachment holding device	1	4000527500
Other	A73	Load capacity chart Bale forks 2 spears	1	4000555150
Other	A73	Load capacity chart Bale forks 6 spears	1	4000555320

B- Familiarization

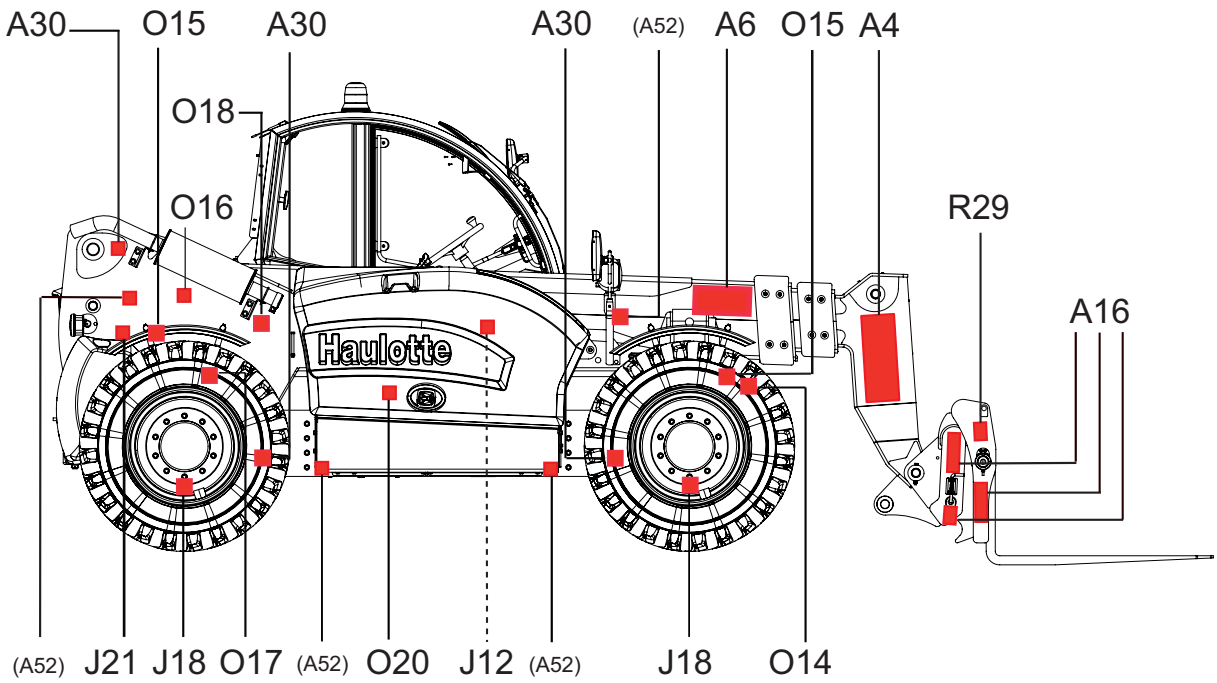
Localization: isometric view - HTL 7732 - ANSI and CSA standards



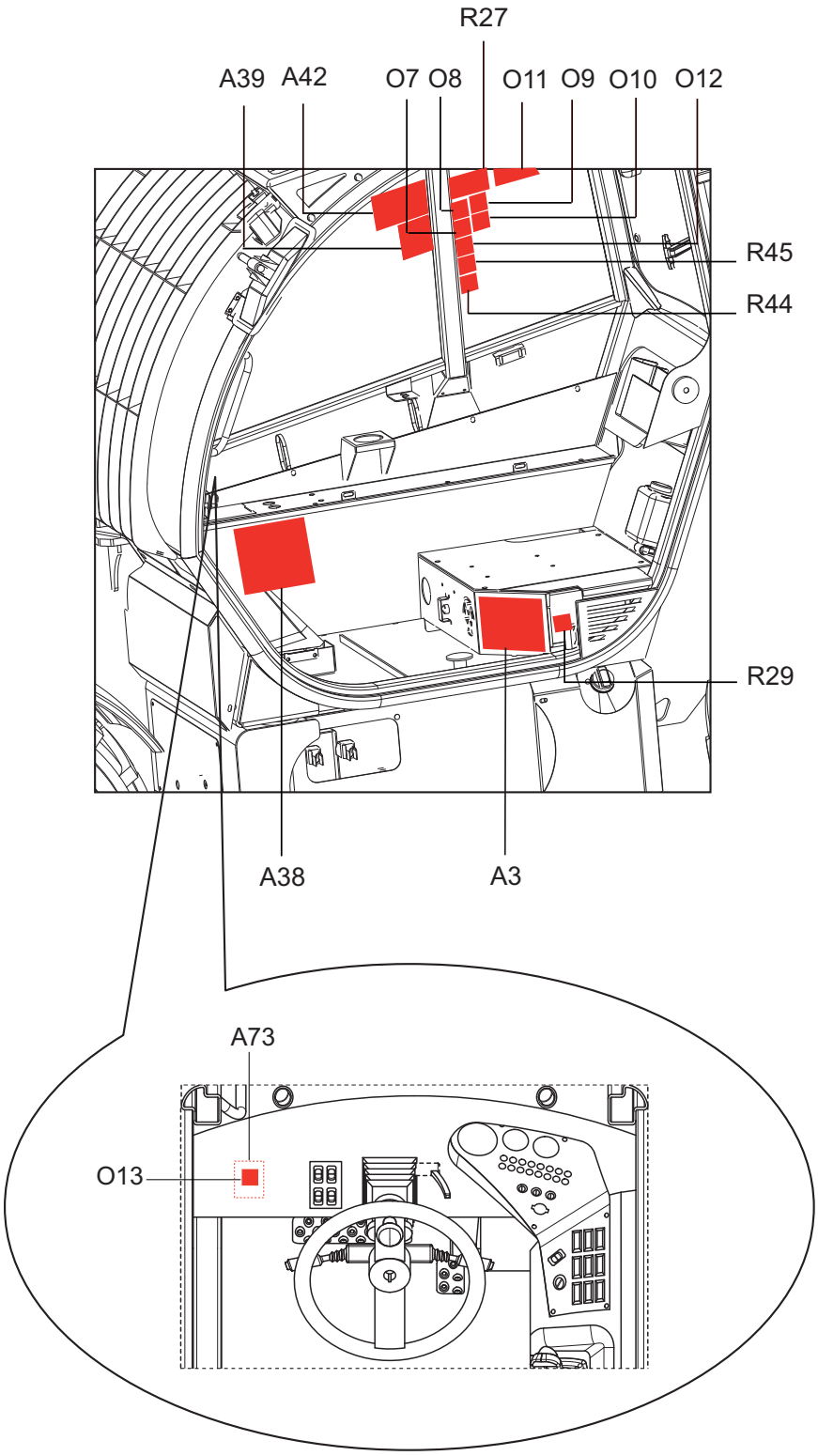
Localization: left view - HTL 7732 - ANSI and CSA standards



Localization: right view - HTL 7732 - ANSI and CSA standards

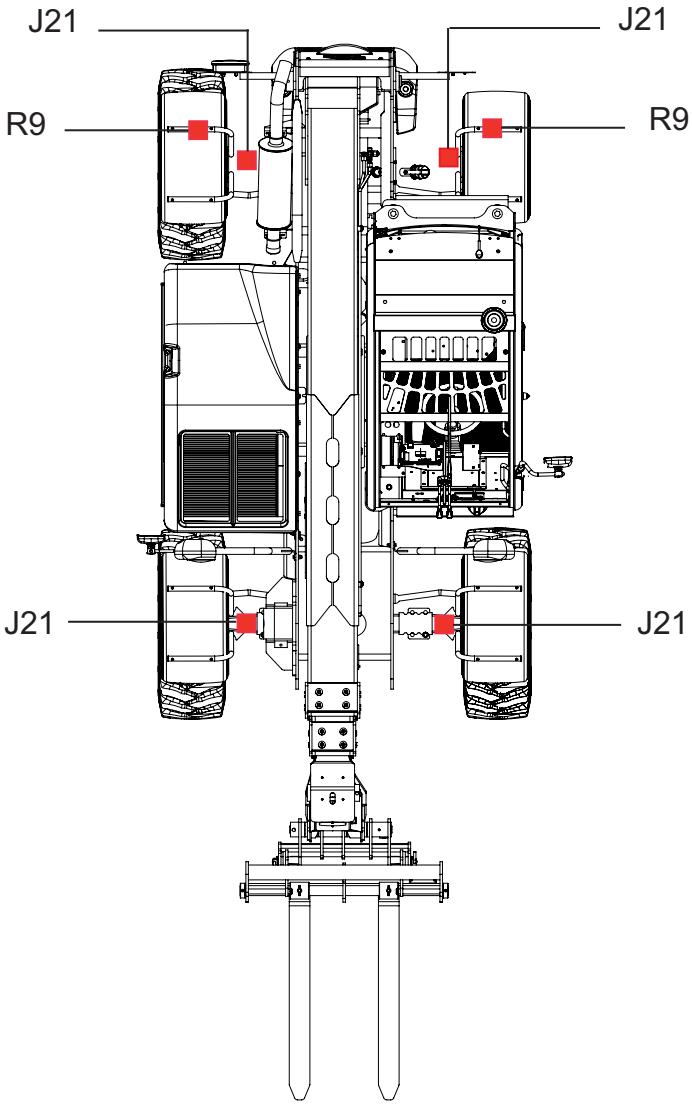


Localization: cabin view - HTL 7732 - ANSI and CSA standards



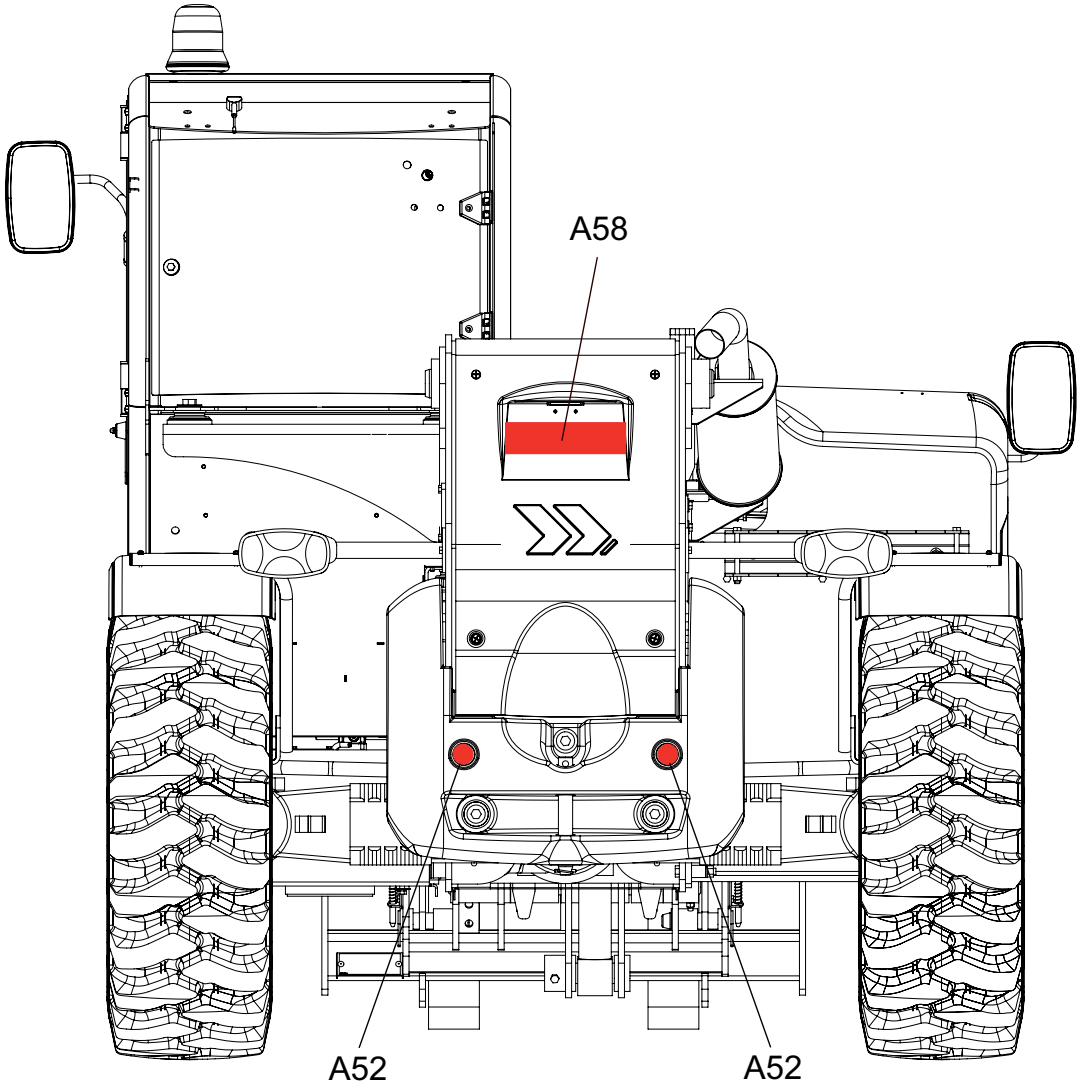
B- Familiarization

Localization: view from above - HTL 7732 - ANSI and CSA standards



B- Familiarization

Localization: rear view - HTL 7732 - ANSI and CSA standards



Common decals - HTL 7732 - ANSI and CSA standards

Color	Marking	Description	Quantity	HTL 7732
Other	A3	Identification plate	1	307P224450
Other	A4	Machine name logo-Dark machine	2	4000136580
Other	A4	Machine name logo-Bright machine	2	4000043380
Other	A4	Machine name logo-Red machine	2	4001095690
Other	A5	Decal HAULOTTE®	1	307P224740
Other	A6	Decal HAULOTTE®	1	307P228770
Other	A7	Read the operation manual	1	307P225770
Other	A10	Noise emission level	1	4000053980
Other	A16	Yellow and black adhesive tape	1	2421808660
Other	A30	Slings attached	6	307P225530
Other	A38	Terminal fuses	1	307P221130
Other	A39	Joystick	1	307P226450
Other	A40	Battery / Battery isolation switch	1	307P225540
Other	A45	Angle sensor	1	307P220900
Other	A46	Telescoping key A	1	307P222610
Other	A47	Telescoping key B	1	307P222620
Other	A48	Telescoping key C	1	307P222630
Other	A49	Telescoping key D	1	307P222640
Other	A50	Telescoping key E	1	307P222650
Other	A51	Telescoping key F	1	307P222660
Other	A52	Reflector (Option)	8	2820300980
Other	A84	Oil level maximum	1	307P228040
Yellow	J3	Do not place your foot on the cover	2	307P225480
Yellow	J4	Ground for welding	1	307P225490
Yellow	J12	Danger of Heat burns	2	307P225410
Yellow	J19	Fuel tank	1	307P225580
Yellow	J20	Hydraulic oil	1	307P225590
Yellow	J21	Lubrication	13	307P225600
Yellow	J29	Hot country oil (optional)	1	307P225760
Yellow	J30	Cold country oil (optional)	1	307P225750
Red	R9	Maximum effort on wheel	4	4000043590
Red	R27	Danger of electrocution	1	307P225340
Red	R29	Do not mount on the forks during elevation	3	307P225310
Red	R44	Risk of crushing	1	307P225320
Red	R45	Boom in low position brake engaged	1	307P225370
Red	R46	Chemical burns hazards	1	307P225460
Orange	O7	Read the operation manual	1	307P225270
Orange	O8	Stay in the machine	1	307P225280
Orange	O9	Risk of overturning	1	307P225290
Orange	O10	Load falling hazards	1	307P225300
Orange	O11	Risk of overturning	1	307P225330
Orange	O12	Risk of overturning	1	307P225350
Orange	O13	Obligatory load chart	1	307P225360
Orange	O14	Risk of crushing	1	307P225380
Orange	O15	Risk of crushing	5	307P225390

B- Familiarization

Color	Marking	Description	Quantity	HTL 7732
Orange	O16	Risk of oil injection	2	307P225420
Orange	O17	Risk of crushed hands	1	307P225430
Orange	O19	Load falling hazards	1	307P225450
Orange	O20	Mechanical risk	1	307P225470
Orange	O21	Biodegradable oil (Option)	1	307P225740
Orange	Not illustrated	California warning	1	4001026850

Load capacity chart - HTL 7732 - ANSI and CSA standards

Color	Marking	Description	Quantity	HTL 7732
Other	A73	Load capacity chart - Book	1	4000043310
Other	A73	Load capacity chart Cover book - Tire Inflation Pressure	1	4000475670
Other	A73	Load capacity chart Forks carriage	1	4000472200
Other	A73	Load capacity chart Side-shift fork carriage	1	4000473200
Other	A73	Load capacity chart Fork spreader 2,3T	1	4000532100
Other	A73	Load capacity chart Rotative forks carriage 3,2T	1	4000700990
Other	A73	Load capacity chart Buckets	1	4000473220
Other	A73	Load capacity chart Grab buckets	1	4000612940
Other	A73	Load capacity chart 4T (8820 lb) 0 m (0 ft 0 in) jib crane	1	4000618050
Other	A73	Load capacity chart 3T (6615 lb) 1 m (3 ft 3 in) jib crane	1	4000473240
Other	A73	Load capacity chart 2T (4410 lb) 2 m (6 ft 7 in) jib crane	1	4000473280
Other	A73	Load capacity chart 1,2T (2646 lb) 2,5 m (8 ft 2 in) jib crane	1	4000473300
Other	A73	Load capacity chart 0,6T (1323 lb) 4 m (13 ft 1 in) jib crane	1	4000473330
Other	A73	Load capacity chart 2,4T (5292 lb) winch on attachment holding device	1	4000473360
Other	A73	Load capacity chart 1,2T (2646 lb) winch on attachment holding device	1	4000481220
Other	A73	Load capacity chart Bale forks 2 spears	1	4000555130
Other	A73	Load capacity chart Bale forks 6 spears	1	4000555350

Notes

C- Pre-operation inspection

1 - Recommendations

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

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

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

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

Check the following points :

- The presence of the identification plate, decals and operator manual.
- Visual state of the machine.
- Absence of leaks (battery acid, hydraulic oil, etc.).
- Absence of foreign objects on all surfaces. Call the staff in charge of the maintenance if necessary.
- No missing or loose parts (bolts, nuts, connectors, cables, etc.).

2 - Working area assessment

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

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

Ensure that :

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

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

C- Pre-operation inspection

3 - Daily inspection

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

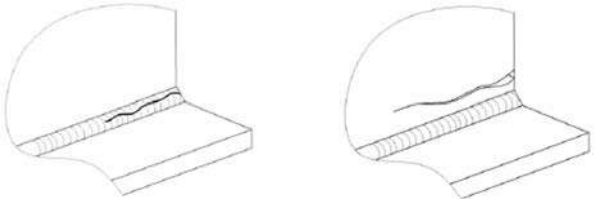
- **Never use the telehandler if a defect or malfunction is identified or suspected.**
- **If any item on the check list is marked "No" during the inspection; machine must be tagged and placed out of service.**
- **Do not operate the machine until all identified items are corrected and it has been declared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

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

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

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

Sample of broken welds



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

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

Use the detailed program below.

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

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

C- Pre-operation inspection

Haulotte	Page or associated procedure	Daily	OK	NOK	Corrected	Comments
Chassis assembly : Wheel, reducer, steering, wheel pivot						
Check state of tires/tyres and inflations						
Thermal engines						
Check engine fuel level (Top up the oil if necessary)						
Check engine oil level (Top up the oil if necessary)						
Check the cooling circuit level (Top up the oil if necessary)						
Check there are no leaks engine components (Motor ; Hoses ; Radiator)						
Check the condition of the battery						
Check that there is no condensation water into the fuel filter						
Check that the radiator grid is clean						
Clean the air filter						
Check belt tension						
Upper boom						
Grease boom pads						
Hydraulic : oils, filters and hoses						
Check the hydraulic oil level (Top up the oil if necessary ; Machine stowed)						
Check the clogging indicator on the hydraulic pressure filter (change if clogged)						
Check the hoses, blocks and pumps, fittings, cylinders and the tank for the absence of leaks, deformations and damage						
Cab						
Check windshield fluid						
Check state of anti-slip parts						

C- Pre-operation inspection

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

4 - Safety functional checks

4.1 - LOAD MOMENT INDICATOR (LMI)

The machine is fitted with an indicator for measuring the longitudinal stability limit. This indication is only valid on flat ground with the machine in a stationary position and the rear wheels aligned.

A display of the Load Moment Indicator system is affixed on the right hand side of windshield strut and it shows the remaining load percentage. This function triggers a pre-alarm, reduces movement speed and then disables boom lowering and extension movements.

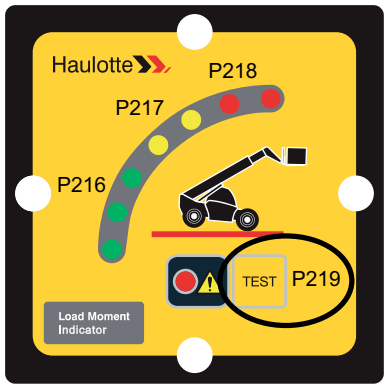
4.1.1 - Test procedure

The load moment indicator's function is to constantly monitoring the stability of the front of the machine. To check that it is functioning correctly, proceed as follows :

- Without any payload on the machine, retract the boom fully and level it.

Do not raise the boom during this test.

- Level the chassis.
- Press the TEST button on the anti-tipping system display (P219) for 1 s (Section F 10.1.1 - Load moment indicator).



- All of the LEDs should flash and a warning signal should sound. This indicates that the system is working properly.

4.2 - SEAT SENSOR SWITCH

Seat sensor switch

Step	Action
1	Turn on the battery isolator located under the cabin to the left side of the steps.
2	Make sure that all of the controls are in neutral and that all of the electrical components (lighting, heating, defrost system, etc.) are turned OFF.
3	Insert the ignition key (P199) and turn it completely to position  .
4	Wait until pre-heating light (P188)  on the instrument panel display turns OFF, before starting the engine.
5	The LED (P195) lights up if no one is sitting in the seat
6	If someone is sitting in the seat, the LED is turned off

4.3 - EMERGENCY STOP BUTTON

Emergency stop button

Step	Action
1	Pull the E-stop push-button (P223).
2	Turn on the battery isolator located under the cabin to the left side of the steps.
3	Make sure that all of the controls are in neutral and that all of the electrical components (lighting, heating, defrost system, etc.) are turned OFF.
4	Insert the ignition key (P199) and turn it completely to position  .
5	Wait until pre-heating light (P188)  on the instrument panel display turns OFF, before starting the engine.
6	The following LEDs on the right hand control box with display should light up on start-up and then turn off again : • Parking brake LED P182  - possible if deactivated for a prolonged period. • Battery LED P180  . • Service brake fault LED P190  - possible if deactivated for a prolonged period.
7	Push in the E-stop button (P223).
8	Check that the engine stops running.
9	Check no movements are functional.

4.4 - REAR WHEEL ALIGNMENT

Rear wheel alignment

Step	Action
1	Pull the E-stop push-button (P223).
2	Turn on the battery isolator located under the cabin to the left side of the steps.
3	Make sure that all of the controls are in neutral and that all of the electrical components (lighting, heating, defrost system, etc.) are turned OFF.
4	Insert the ignition key (P199) and turn it completely to position  .
5	Wait until pre-heating light (P188)  on the instrument panel display turns OFF, before starting the engine.
6	The following LEDs on the right hand control box with display should light up on start-up and then turn off again : • Parking brake LED P182  - possible if deactivated for a prolonged period. • Battery LED P180  . • Service brake fault LED P190  - possible if deactivated for a prolonged period.
7	Select the "Front steer wheels" mode(P201).
8	Rotate steering wheel slowly to bring the rear wheels to the right position.
9	The "Rear wheels aligned" indicator (P192) must be switched ON.
10	Continue to rotate steering wheel slowly until you see the front wheels aligned.
11	Select the "Synchronised axle" mode again(P201).
12	Check the realignment by carefully driving the machine a short distance.

C- Pre-operation inspection

Notes

1 - Engine

N.B.-:-THE FUELS TO BE USED ARE REGULATED BY NATIONAL LAWS. REFER TO APPLICABLE REGULATORY REQUIREMENTS TO USE APPROPRIATE FUEL. USING UNSUITABLE FUEL MAY CAUSE DIMINISHED PERFORMANCE, DIFFICULTIES IN STARTING, EXCESSIVE POLLUTION AND PREMATURE WEAR. TO ESTABLISH THE TYPE OF FUEL SUITABLE FOR THE ENGINE FITTED ON YOUR HAULOTTE® MACHINE, PLEASE REFER TO THE ENGINE MANUFACTURER'S MANUAL. THE ENGINE MAY NOT BE COVERED BY THE WARRANTY IN CASE OF DAMAGE CAUSED BY USING UNSUITABLE FUEL.

1.1 - STARTING THE ENGINE

This machine can be operated at temperatures of -20 °C (0 °F) to 40 °C (104 °F) . Consult HAULOTTE Services® for operation outside this temperature range.

- Turn on the battery isolator located under the cabin to the left side of the steps.
- Make sure that all of the controls are in neutral and that all of the electrical components (lighting, heating, defrost system, etc.) are turned OFF.
- Insert the ignition key (P199) and turn it completely to position  .
- Wait until pre-heating light (P188)  on the instrument panel display turns OFF, before starting the engine.

The following LEDs on the right hand control box with display should light up on start-up and then turn off again :

- Parking brake LED P182  - possible if deactivated for a prolonged period.
- Battery LED P180  .
- Service brake fault LED P190  - possible if deactivated for a prolonged period.

Do not actuate the starter for more than 15 s at the time.

Wait 10 s between attempts to avoid excessive drain of the battery power.

Do not attempt to start the machine by towing or by 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 to correct the fault or contact HAULOTTE Services®.

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

N.B.-:-THE ENGINE WILL NOT START IF THE TRANSMISSION GEAR CONTROL LEVER (C125) 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 will result in death or serious injury.

1.2 - COLD WEATHER START-UP

In cold weather conditions, the engine has a start-up protection.

The message "dELAY" appears on the display (P231) and the engine speed is slowed.

Heat the machine before use.

When the message disappears, the Telehandler can be used at full speed.

N.B.-:-BELOW 5 °C(41 °F) , ONLY THE DRIVING OF THE MACHINE IS POSSIBLE AT LOW SPEED.

1.3 - OPERATIONAL CHECKS

1.3.1 - During the warm-up period of the engine

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

- The heating system, the defrost system and the windshield wiper are working.
- All lighting systems are working.

1.3.2 - When the engine is running

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

- The service and parking brakes are operating.
- The forward and reverse drive is directionally correct.
- Each gear shifts smoothly.
- Each steering mode is operational in both forward and reverse travel, while engine is running in ‘idle” speed.
- The horn and the back-up alarm sound from inside the cabin, with engine running. To check the horn press the button on the indicators lever (C126). Travel in reverse to check the back-up alarm.
- All boom and attachment movements operate smoothly and correctly.
- Perform all additional checks (Section F - Lubrication and maintenance).

D- Operation

1.4 - STARTING THE ENGINE WITH A BOOSTER BATTERY

If the engine has to be started with a booster battery using jumper cables, proceed as follows :

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

Keep the engine cover closed while the engine is running.

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 will result in death or serious injury.

1.5 - NORMAL ENGINE OPERATION

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

Pay attention to unusual noises and vibrations. If a fault occurs, park the machine in a safe position and perform the shut-down procedure . If a fault is detected, correct it before use.

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

1.6 - 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 by pressing the top of parking brake switch (P214).
- Shift the speed selector to neutral.
- Lower the forks or the attachment to the ground.
- Operate the engine at idle speed for 15 s.

Do not "rev" up the engine.

- To shut the engine OFF : Turn the ignition key (P199) to the left to position "O"

- Remove the ignition key.
- Exit the cabin using the 3 point contact method.
- Chock the wheels, if necessary.
- Switch off the battery disconnect switch located under the cabin on the left of the steps.

The cabin seat is fitted with a device preventing the machine from moving if the operator is not seated.

2 - Parking brake operation

At drive speeds under 5 km/h (3,1 mph), pressing the switch (P214) will automatically activate the parking brake.

When the parking brake is activated, the indicator light (P190) on the display and the switch (P214) stay lit.

N.B.-:-EVEN IF THE MACHINE'S SPEED GOES BELOW 5 KM/H (3,1 MPH) DURING THE 2 S OF PRESSING THE SWITCH, THE PARKING BRAKE IS AUTOMATICALLY ACTIVATED.

At speeds higher than 5 km/h (3,1 mph) , pressing the switch (P214) for an extended time, triggers an audible sound and the indicator light (P182) flashes.

After pressing the switch (P214) for 2 s, the parking brake is automatically activated.

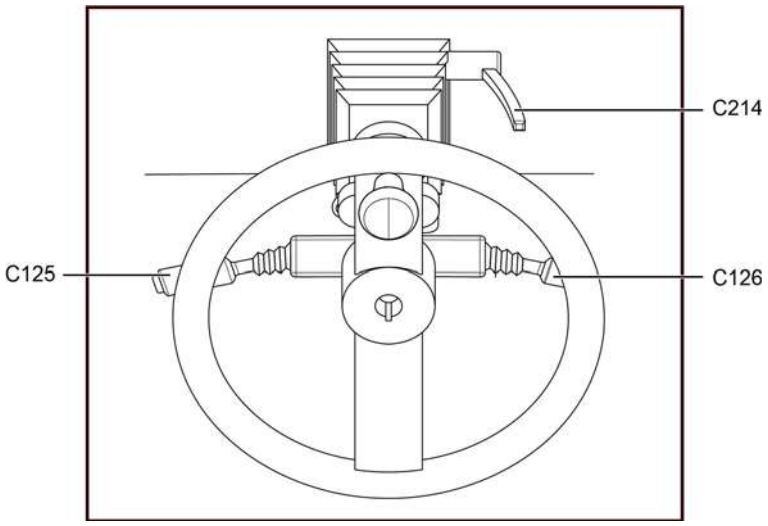
In this configuration, at speeds higher than 5 km/h (3.1 mph) , stopping the machine is damaging.

3 - Operator's cabin

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

4 - Steering column

General view



The steering column consists of column adjustment (C214), transmission controls (C125) and indicators selection (C126).

Bring the Telehandler to a complete stop and shutdown the engine before adjusting the steering column.

A sudden change of direction could destabilise 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.

Forward and reverse drive can be selected with the transmission control lever (C125) while in slow or fast speed mode.

When reverse drive is activated, an audible sound warns that the machine is in reversing mode and potential danger of anyone present in the travel path.

Reverse mode of travel should only be selected when the machine is stationary.

For steering column adjustment to desired handling position and for description of both levers functions, refer to Section B 3.2.3 - Steering column.

5 - Operator's seat

General view

N.B.-:-THE SEAT REDUCES VIBRATIONS TRANSMITTED TO THE USER. CONTACT HAULOTTE SERVICES® TO REPLACE IT

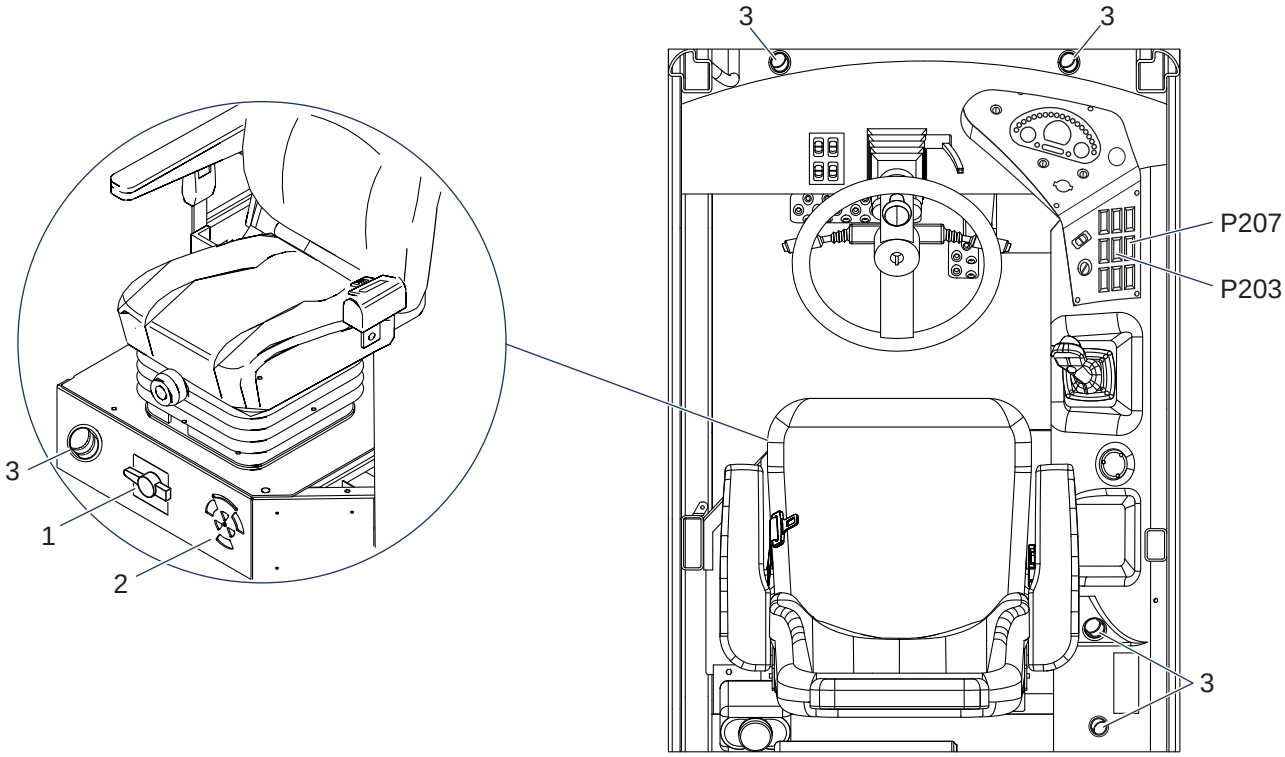
The seat has adjustments for the operator to adjust for desired comfort :

- A forwards / backwards adjustment (P170), on auto lubricated slides, with 15 positions.
- A height adjustment knob (P171) with 3 positions.
- Use the knob (P172) to adjust the suspension according to the driver's weight ranging from 50 kg (110 lb) to 120 kg (265 lb). The driver can adjust to get desired comfort.
- A manually reclinable backrest with 10 positions, handled with lever (P174).
- A ventral seat belt of 5,08 cm (2 in) (P175).
- A sensor of seat presence.

Before starting the engine, adjust the seat as instructed in Section B 3.2.4 - Operator's seat.

6 - Heating and ventilation - Air-conditioning (option)

General view



The cabin is equipped with a heater that is also used for de-misting (defogging) the windshield :

- The air is circulated via a two-speed fan. To activate the fan, press the heating fan switch (P203) on the right hand control box.
- Adjust the heating temperature using the T-handle (1) below the driver's seat.
- Adjust the air flow using the air locks (2) and round vents (3) provided to adjust air flow direction.
- To activate the air conditioning, press the switch (P207) located on the right hand control box (Optional).
- Adjust the fan speed.

Do not operate the Telehandler for an extended period without ventilating the cabin. Use the ventilation system (P203) provided.

Always ensure proper ventilation..

A lack of proper ventilation in the cabin during use can lead to driver's tiredness (oxygen depravation).

The heating system must be turned OFF before turning ON the airconditioning.

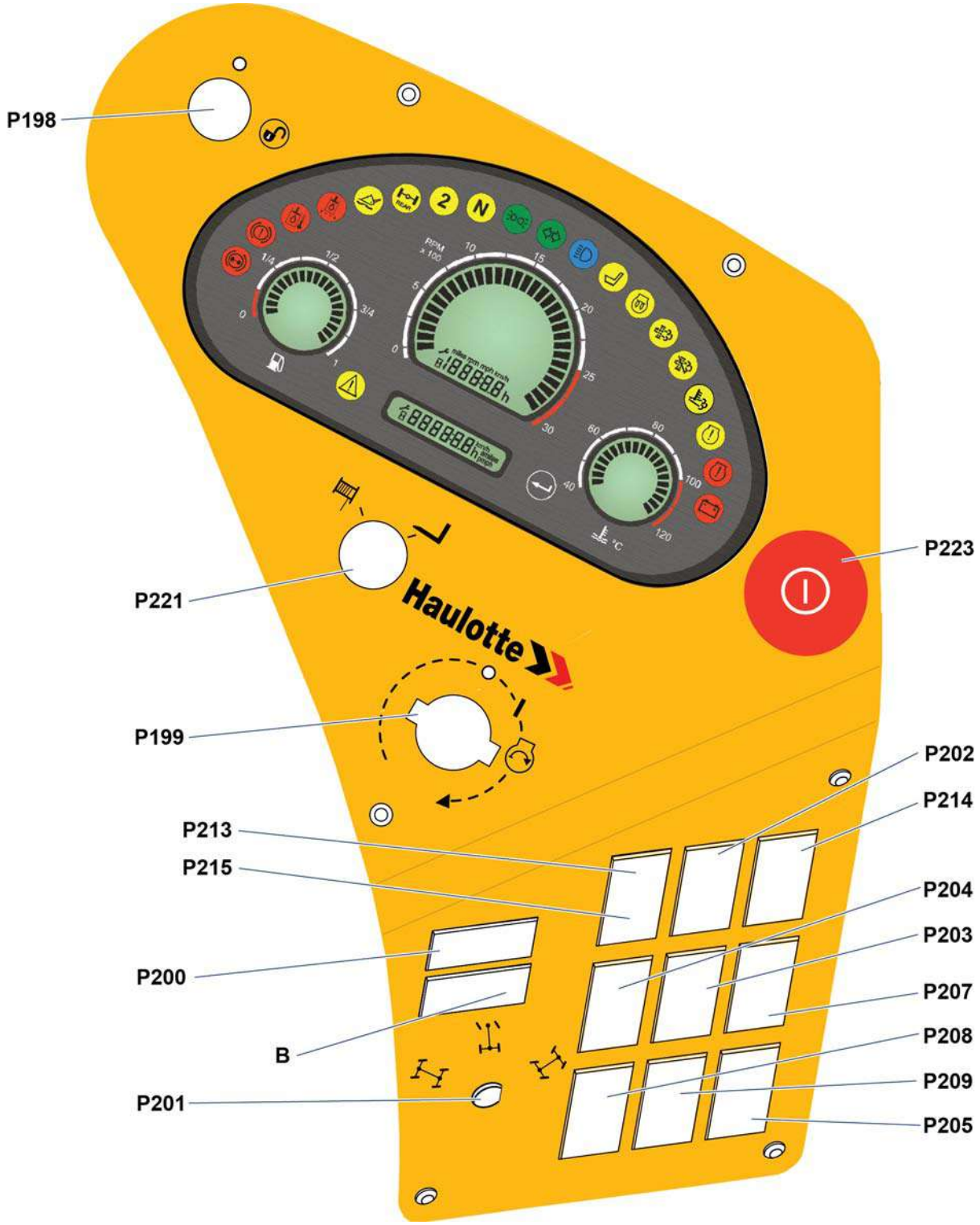
Airconditioning must not be turned ON without the engine running.

Do not start the Telehandler engine while the air conditioning is switched on.

Notes

7 - Right-hand control box with display

General view



D- Operation

Right-hand control box consists of controls and indicates certain machine functions :

- Engine speed
- Engine temperature
- Low fuel level

The stabilisers only increase stability and load capabilities if they are used correctly. Using stabilisers on soft surfaces can cause the machine to tip over which can result in serious injury. Always make sure that the surface on which the machine operates, is capable of supporting the combined weight of the machine and the load.

Stabiliser switches (P208) and (P209) are equipped with a warning light. A stabiliser can only be moved if this indicator is lighted. If this indicator is OFF, retract and lower the telescopic arm until the indicator lights up in order to move the stabiliser.

For high-speed driving and any driving on public roads :

- **Only use the "Front steer wheels" mode.**
- **Check the alignment of the rear wheels : The "Rear wheels aligned" indicator (P192) must be switched ON.**

Axles must be realigned :

- **At the start of each day.**
- **At least once a day.**
- **If a misalignment problem is observed between the front and rear axles.**

7.1 - PARKING BRAKE SWITCH (P214)

N.B.-:-THE PARKING BRAKE IS AUTOMATICALLY APPLIED WHEN THE ENGINE IS SWITCHED OFF.

- Respect the activation mode :
  - Press the bottom of the switch (P214) to lock the transmission.
  - Press bottom of the switch (P214) to unlock the gear transmission.
- Do not force the activation mode by driving the machine when the parking brake is engaged.

7.2 - IN ROAD MODE (P215)

- All boom movements are prohibited (joystick deactivated).
- Using the stabilizers and dumping is prohibited.
- Steering switches to "2 steering wheels" mode, regardless of the steering selected (with the rear axle automatically returning to road position).

To switch to road mode :

- Stabilizers must be fully raised ;
- Telescopic boom must be lowered and stowed.

If these conditions are not respected and the road mode is selected, travelling is deactivated. If the stabilizers are not raised, the stabilizer LEDs (P208) and (P209) also flash. Once the conditions are met, the translation is enabled and the beacon light is ON.

7.3 - DISPLAY – RIGHT-HAND CONTROL BOX

Supplementary description of the LEDs depicted in Right-hand control box with display

Marking	Functions and controls
Indicator (P176)	Do not exceed 3100 tr/min (3100 rpm). Do not run the engine speed into the red zone of the tachometer.
Indicator (P191)	Flashes to indicate a faul. The telescopic handler switches to downgraded mode. Certain movements can be limited or forbidden to preserve the operator's safety.
LED (P225)	Indicates that high speed is requested but not validated (Extended boom or active floating forks option or service brake pressure fault)

N.B.-:-FOR THE MACHINES EQUIPPED WITH DIESEL PARTICULATE FILTER (DPF), SEE TROUBLESHOOTING

8 - Joystick

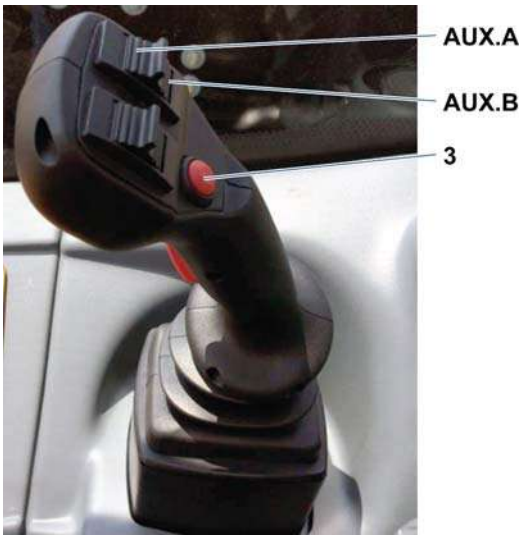
The speed of the joystick functions depends on the amplitude of the joystick travel in the corresponding direction. Increasing the engine speed also increases the function speed.

Rapid, jerky operation of the controls causes rapid and jerky machine movements.

Such movements can cause the load to drift or fall and the machine may tip over.

"Failure" to comply with these instructions could result in death or serious injury.

Joystick buttons



The buttons AUX.A and AUX.B are used to activate auxiliary operations of the hydraulic adaptation kit. The functions of buttons AUX.A and AUX.B, at the front of the joystick, vary, depending on the attachment used. For example, with a 4-in-1 bucket - Aux A and B control the closing and opening of the bucket, with a Side-shift fork carriage - they control the left and right movement of the forks, etc..

Floating lifting is an option that allows the bucket to follow the deformation of the ground during excavation operations. This mode is activated by pressing the button (3) on the front of the joystick.

9 - Left-hand control box

9.1 - REVERSE FAN OPTION

The "Reverse Fan" function defines the requirements allowing the solenoid valves to be controlled in order to activate/deactivate the direction of rotation of the fan.

There are 3 fan control modes that can be selected using a 3 position switch in the cab :

- Automatic cycle
- Start of the Reverse Fan cycle
- Forced cooling

Priority cooling : If a failure on the P235 switch or one of the YV10 /YV11 solenoid valves occurs, the forced Cooling mode must be activated.

9.1.1 - Reverse fan control operation

Position 0 - central		Reverse fan is in auto mode. When the machine starts up and then every 10 minutes, the direction of rotation of the cooling motor reverses to blow the cooler honeycomb. The cycle lasts 14s. It repeats every 10 minutes, without any action by the driver.
Position 1-Pulse 3 s		Reverse fan is in forced mode. The blower triggers at every pulse. The cycle lasts 14s. Wait 20s between each triggering in forced mode. Reverse fan is inactive.
Position 2		The Reverse fan function is disabled.

Remark	Blower
In blower mode, i.e. reversed motor, the button icon is lighted for the duration of the cycle. In cooling mode, the button icon is not lit.	 Cooling 

Protecting the combustion engine :	
If the machine is overheating, i.e. : • Temperature > 110°C • Engine overheating indicator lit • Hydraulic oil temperature overheating indicator lit Cooling mode is forced whatever the position of the button until the engine temperature is < 105°C.	

To optimize reverse fan operation :	
At the end of a shift, Run a blower cycle with the engine cover open at maximum engine speed (2200rpm), to evacuate as much pollution as possible from the cooler.	 

9.2 - PARTICULATE FILTER REGENERATION

- The DPF (Diesel Particle Filter) system is designed to remove diesel particulate matter or soot from the exhaust gas of a diesel engine.
- The filter regeneration removes the accumulation of soot from the filter before filter clogs. This is done automatically by increasing the temperature in the filter itself in order to burn the soot.
- The Particulate filter regeneration (DPF) must be disabled in areas with explosive atmosphere. Disabled mode must be deactivated rapidly, as soon as the environment allows it (outside these exposive areas).

Nevertheless, if all the conditions are not required to start automatic regeneration, then the (P226) light will flash and it will be necessary to start a manual regeneration by pressing the (P233) button.

Machine behaviour			Filter status - Soot loading level					
			Level 0		Level 1	Level 2		Level 3
DPF state			0	1	2	3	4	5
Soot loading level			0 % to 30 %	30 % to 80 %	80 % to 90 %	90 % to 100 %	100 % to 110 %	Above 110 %
Regeneration of diesel particles								
Low engine derating		• Limitation to 1800 rpm					ON	
High engine derating		• Limitation to 1800 rpm						ON
Automatic regeneration mode		Automatic regeneration available.			ON			
Manual regeneration		Manual regeneration possible from 80 % to 110 % of soot. It is best to allow automatic regeneration take place between 80 % and 90 %.			ON	ON	ON	
Indicators-Display of the right-hand control box in the cabin								
	P191	Automatic regeneration error				Flashing	Flashing	Flashing
	P229	Engine derating warning					ON	ON
	P230	Stop engine - User must call engine service						ON
	P226	DPF regeneration required				Flashing	Flashing	Flashing
	P228	High exhaust system temperature (HEST) (HEST : High Exhaust System Temperature)			ON	ON	ON	ON
	P228	Manual regeneration requested-The temperature of the exhaust system will be hot (HEST) (HEST : High Exhaust System Temperature)			Flashing	Flashing	Flashing	Flashing

	P227	DPF regeneration is inhibited	ON		ON			
Sounding alarm							ON	ON
Functions								
Movements are slowed down Idle speed set to 1800 rpm							ON	ON
Drive speed limited to slow speed Idle speed set to 1800 rpm								ON

While a manual regeneration is running, it is essential to be aware of the following points :

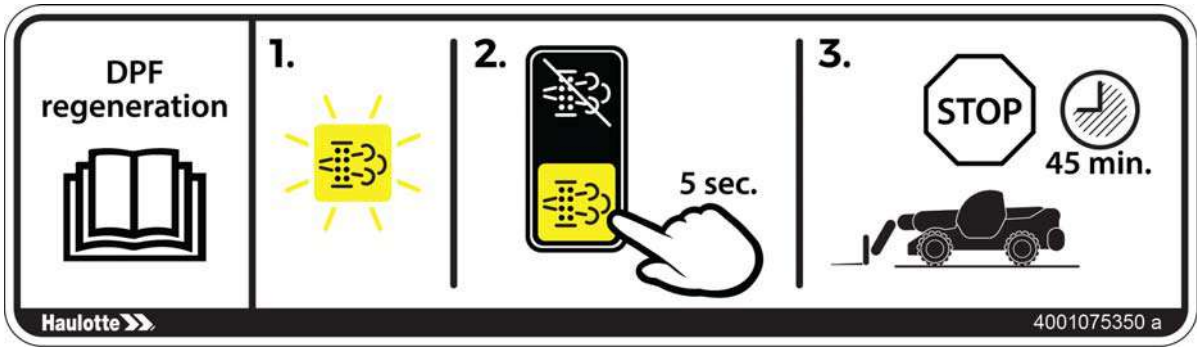
• The machine is immobilized for about 45 mn, until the indicator (P226) turns OFF.

• The engine speed increases to 1800 tr/min (rpm).

If a significant problem is detected, regeneration can be interrupted by pressing switch (P233) in the cabin for 5 s.

Shutting OFF the engine with ignition key (P199).

DPF regeneration instructions- Stage 5 engine



DANGER OF BURNS! During regeneration, the temperature of the exhaust gases is high and may reach 650 °C (1202 °F).

Always start and run the engine in a well-ventilated area. If the engine is in an enclosed space, vent the exhaust gases outside.

Do not run the engine in enclosed confines where toxic gases may build up.

10 - Load moment indicator (LMI)

The machine is fitted with an indicator for measuring the longitudinal stability limit. This indication is only valid on flat ground with the machine in a stationary position and the rear wheels aligned.

A display of the Load Moment Indicator system is affixed on the right hand side of windshield strut and it shows the remaining load percentage. This function triggers a pre-alarm, reduces movement speed and then disables boom lowering and extension movements.

Test the load moment indicator at the start of each work period (Load moment indicator (LMI)).

The load capacity flip charts provided in the cabin must be referred to for allowable load capacity ensuring that the machine will operate correctly. Even with a lit Green LED the machine may not be operational, if the allowable capacity in the load chart has been exceeded.

If a load moment indicator system alarm is triggered, the following movements are disabled :

Movements-Modes

Movement	Fork mode	Winch mode	Platform mode(If equipped)
Booms raising	Authorized	Prohibited	Authorized
Boom lowers	Deactivated in case of alarm, but it can be activated with the exclusion key (P198)	Prohibited	Deactivated in case of alarm, but it can be activated with the exclusion key (P198)
Crowding	Deactivated in case of alarm, but it can be activated with the exclusion key (P198)	Prohibited	Deactivated in case of alarm, but it can be activated with the exclusion key (P198)
Discharging	Deactivated in case of alarm, but it can be activated with the exclusion key (P198)	Prohibited	Deactivated in case of alarm, but it can be activated with the exclusion key (P198)
To retract the boom in	Authorized	Prohibited	Authorized
To extend the boom out	Prohibited	Prohibited	Prohibited
Attachments	Deactivated in case of alarm, but it can be activated with the exclusion key (P198)		
Driving	Authorized		

Temporary suspension of the Load Moment Indicator 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 should knowingly take responsibility for the machine's stability. If a selected function is not activated, the LMI system is automatically deactivated after 8 seconds. It must be released before it can be reactivated.

When the Load Moment is deactivated, the machine stability 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.

N.B.-:-WHEN THE TELESCOPE IS RETRACTED AND THE BOOM IS IN THE LOWERED POSITION, THE CUTOFF FOR THE BOOM LOWERING MOVEMENTS AND THE AUDIBLE SIGNAL INDICATING LONGITUDINAL TILTING (LMI) ARE AUTOMATICALLY DEACTIVATED. ONLY THE LED INDICATING LONGITUDINAL TILTING (LMI) REMAIN ACTIVE.

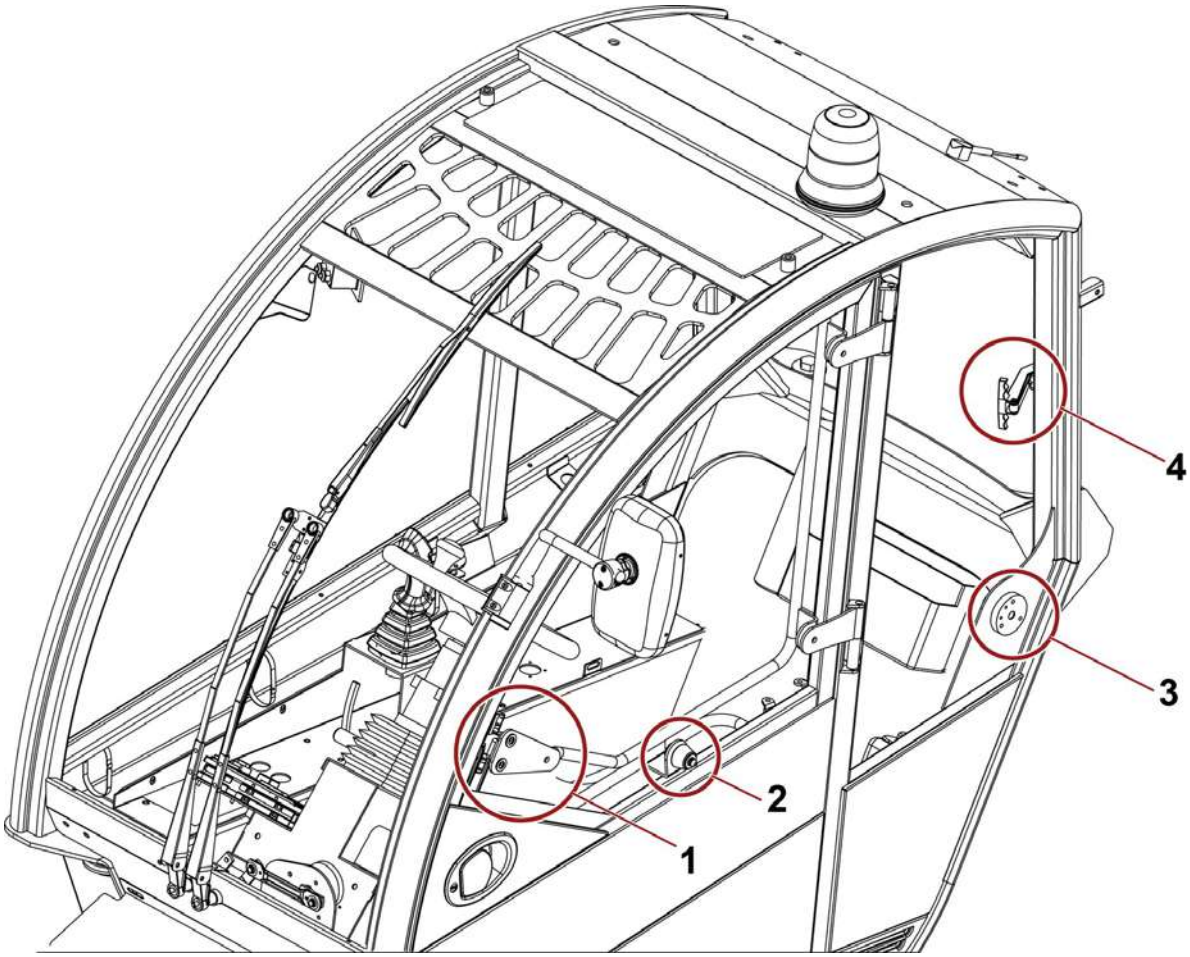
N.B.-:-WHEN PLATFORM MODE IS SELECTED (IF EQUIPPED WITH A WORK PLATFORM), THEN LMI IS COMPLETELY DISABLED.

10.1 - LOAD MANAGEMENT SYSTEM (EQSS) - AS STANDARD ONLY

AS Telehandlers are fitted with an optional Load Management System (EQSS) which monitors and manages the load in all configurations. For details refer to the supplementary manual supplied with the Telehandler.

11 - Rear-view mirrors and windows

General view-Windows



D- Operation

Cabin door window :

The window must be blocked in open or closed position during use.

Open the cabin door window from the inside (1) and block the window, by pressing the small button (2) into the locking mechanism (3).

To unlock the opened window press the unlocking button (2) from inside the cabin.

	
Window is closed.	Window is opened.

Rear window :

Pull the lever (4) and push to open the rear window.

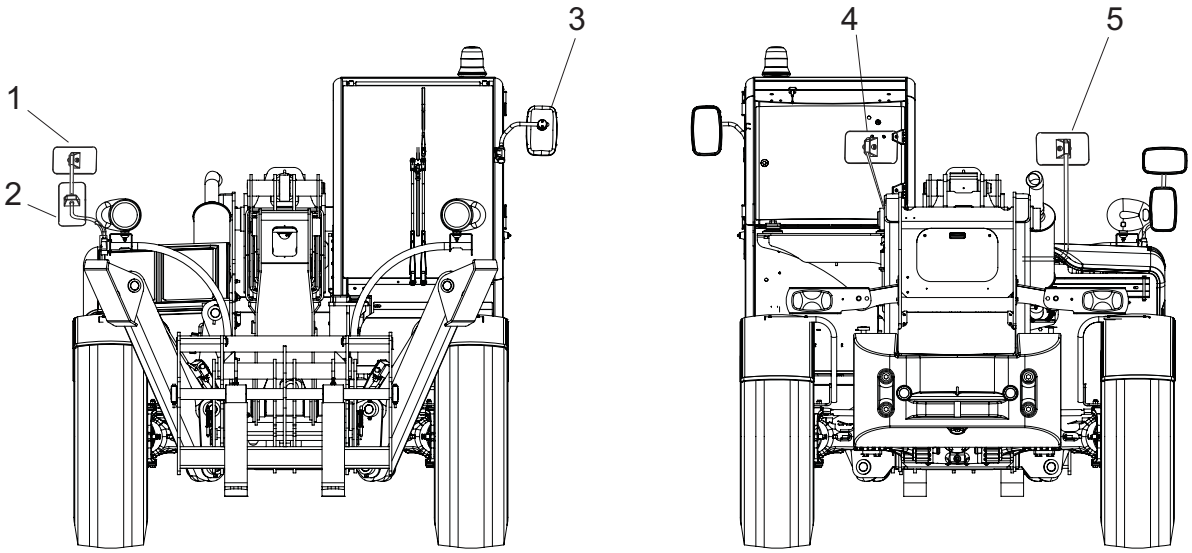
	
Window is closed.	Window is opened.

D- Operation

Rear-view mirror adjustment

The machine is fitted with 5 mirrors :

Rear-view mirrors



For details on the visibility of rear-view mirrors, refer to Section B 3.2.11 - Rear-view mirrors and windows.

Rear-view mirror adjustment :

Rotate the mirror on the axle on which it is fitted.

Adjust the rear-view mirrors as required for optimal visibility before and during use.

Ensure that rear-view mirrors are clean and clear at all times.

Before each use of the machine, ensure that the mirrors are not damaged.

Any modifications to this machine can affect the visibility in driving position.

12 - Transporting the load

12.1 - PRE-CAUTIONS IN LOAD LIFTING

- Must know the weight and the centre of gravity of load to be lifted.
- Refer to the load capacity chart associated with each attachment.

N.B.-:-TO SAFELY LIFT, TRANSPORT AND PLACE LOADS, MACHINE'S RATED LOAD CAPACITY AND CORRESPONDING OPERATING RANGE MUST BE DETERMINED. (SECTION B 4 - PERFORMANCE SPECIFICATIONS).

12.2 - 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.

12.2.1 - For operation with non-suspended load

- Adjust the fork spacing to get maximum spread to match with the pallet or if to place under the load. Make sure that the load remains balanced and it is centered on the fork carriage.
- Face the load and approach it slowly with the fork tips straight and horizontal.

12.2.2 - For operation with suspended load

- Only use approved lifting devices rated for the lifting of the load (Section E 6.1 - Approved attachments).
- Identify proper lifting points of the load, with the center of gravity and load stability.
- Always carefully tether loads to restrict movement.

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

Wheels must be aligned to lift a load.

Never lift any loads if a correct and legible capacity chart corresponding to the attachment used is not displayed in the operator's cabin.

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

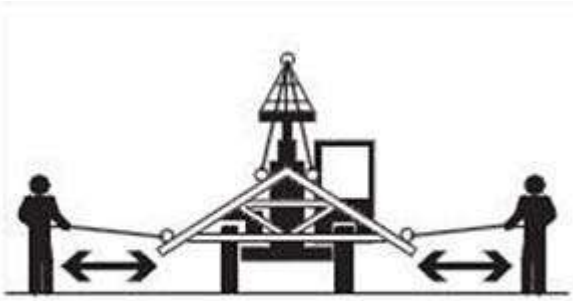
12.3 - TRANSPORTING THE LOAD

12.3.1 - For operation with non-suspended load

Once the load is placed on the forks and leaning against the fork carriage, tilt the load backwards to be in the travel position. Travel as specified Section A 2.1 - Safety precautions and Operator's manual for the accessory concerned.

12.3.2 - For operation with suspended load

Travel in accordance with safety rules specified Section A 2.1 - Safety precautions and Operator's manual for the accessory concerned.



- Ensure the boom is fully retracted.

Never raise the load more than 300 mm (12 in) above the ground or with the boom angle more than 30 °.

Never operate the machine controls suddenly.

- The combination of sideways movement and the load could cause the machine to tip over.
- The guide person must remain in constant communication (verbal and/or hand) and be in visual contact with the operator at all times.

Never place the guide persons between the suspended load and the telehandler.

- Only transport the load at walking speed 0.4 m/s (1 ft 4 in/sec) or less.

D- Operation

12.4 - DUMPING PROCEDURE

- Position the machine in the best possible location for lifting or placing the load, in a clear area where the machine can be handled safely.
- Deactivate road mode and drive at a speed suited to the type of ground and the on-board load.
- Place the boom/attachment at less than 30 ° angle.
- Check the level indicator, located in the cabin on the right side of the steering wheel, to establish the level status of the Telehandler cabin and chassis and level it by operating the switch (P200).

Tip-over Hazards : The purpose of the leveling function is to enable the machine to level out, so there is no additional tilt that could cause the machine to tip over.

Never raise the boom/attachment more than 1.2 m(3 ft11 in) 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 chassis by 10 ° forward and backwards.

12.5 - 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.
- Refer to 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 on the unloading point.

12.6 - 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 the machine can be moved 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 unloading point.

13 - Road operation

- Preparation :
  - Remove any large amounts of dirt from the machine.
  - Check the lights and the mirrors, and adjust them if necessary.
- Follow the regulations and requirements in force in the country of use (e.g. registration plate, jacket, warning triangle, first aid kit, chocks, etc.).
- Lower the boom.
- The front edge of the attachment should be approximately 0,30 m (1 ft 0 in) to 0,40 m (1 ft 4 in) above the ground.
- Tilt the attachment back completely.
- Empty the bucket (If equipped).
- Place a protective cover over the front edge of the bucket ; remove the carriage forks.
- Raise the stabilisers (If equipped).

N.B.-:-The stabiliser cylinders have a chrome rod which is visible from the driver station. Before moving the telehandler, ensure that the chrome part is fully retracted.




- If the rear wheels are not in line with the chassis, move them back slowly to a neutral position.
- Actuate the road switch (P215).

Never carry loads on the road.

- The machine is now ready to operate on road.

N.B.-:-Follow all local, regional and national traffic regulations.

14 - Emergency procedure

14.1 - MANUAL EMERGENCY BOOM LOWERING

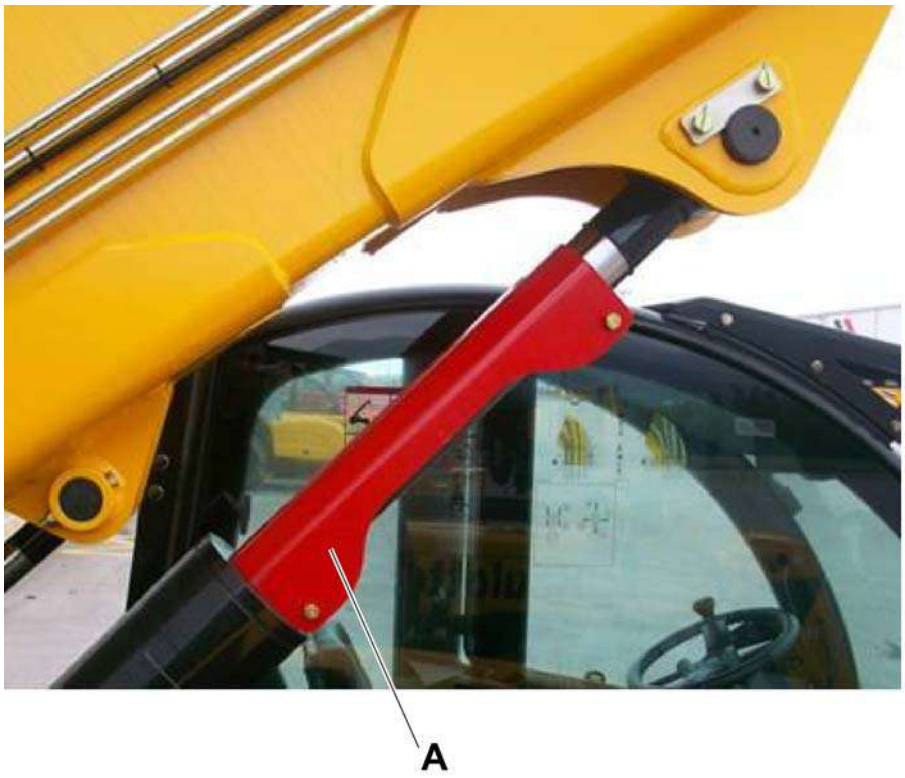
This operation should only be performed as a last resort (machine and load stability cannot be jeopordized).

Before any manual lowering operation :

- Retract the boom.
- Activate the parking brake and chock the wheels.

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

Boom lifting cylinder

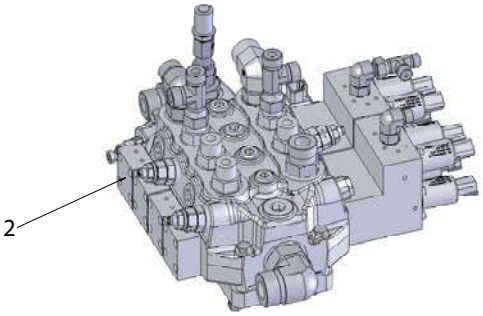


- Raise the boom lifting cylinder enough to allow the cylinder prop (A) to be securley positioned, prohibiting any accidental retraction of cylinder or boom lowering.
- Completely unscrew the stop screw from the counter-balance valve block flanged on the boom lift cylinder. Note the number of turns with the spanner. Remove the locknut and rescrew the stop screw fully into its socket (1).

D- Operation

Marking	Description
1	Stop screw

- Take off the cover located above the counterweight at the rear of the machine to access the valve block.
- Slowly unscrew the cap situated on the boom lift plate (first plate from the back) until you can see the boom lowering, then unscrew once the boom in low position (2).



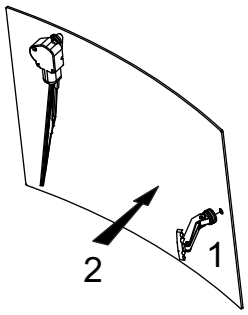
- Once the boom is lowered and the machine has been repaired, raise the boom to its high position and secure it into place using the cylinder prop.
- Unscrew the stop screw from the counter-balance valve block, replace the locknut and rescrew the assembly fully into its socket.
- Check that the counter-balance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

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

14.2 - EMERGENCY EXIT FROM CABIN

In an emergency, to exit the cabin from the rear window, perform the following steps.

- Release / raise the stop (1) upwards.
- Push the window (2) outwards.



Or :

In accordance with local regulations and laws applicable in specific countries, the "break glass hammer" provided inside the cabin can be used to help exit the cabin by breaking the rear window glass.

15 - Transportation of the machine

15.1 - PUTTING IN TRANSPORT POSITION

Prior to loading, ensure that :

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

To climb the slope, select low driving speed.

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

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

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

The machine must be completely in the stowed configuration :

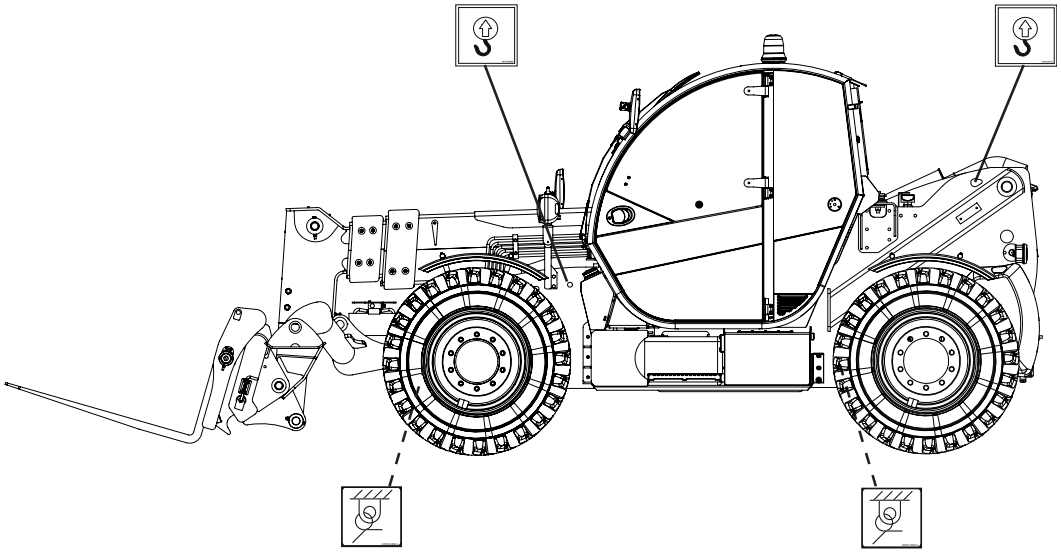
- Check the platform is completely empty (if equipped).
- Level the machine before loading.
- Obtain assistance from an operator for maneuvers and loading the machine, with the boom as low as possible.
- Lower the boom and drive onto the truck bed.
- Once loaded, apply the parking brake and lower the boom until the boom or attachment touches the deck. Switch all controls to neutral, stop the engine and remove the ignition key.
- To secure the machine to the deck, pass chains through all the 6 designated tie-down points (2 in front, 2 on each side of the machine, near the wheels and 2 in the rear). (Section D 15.2 - Machine layout)
- Do not tie down the front of the boom.
- Do not use excessive downward force when securing.

N.B.-:-THE USER IS FULLY RESPONSIBLE FOR SELECTING THE PROPER METHOD OF TRANSPORTATION AND THE TIE-DOWN DEVICES. ENSURE THAT THE TRANSPORT VEHICLE WILL SUPPORT THE WEIGHT OF THE TELEHANDLER AND THAT ALL MANUFACTURER'S INSTRUCTIONS, WARNINGS, ALL REGULATIONS, REGIONAL, LOCAL LAWS AND SAFETY RULES ARE FOLLOWED.

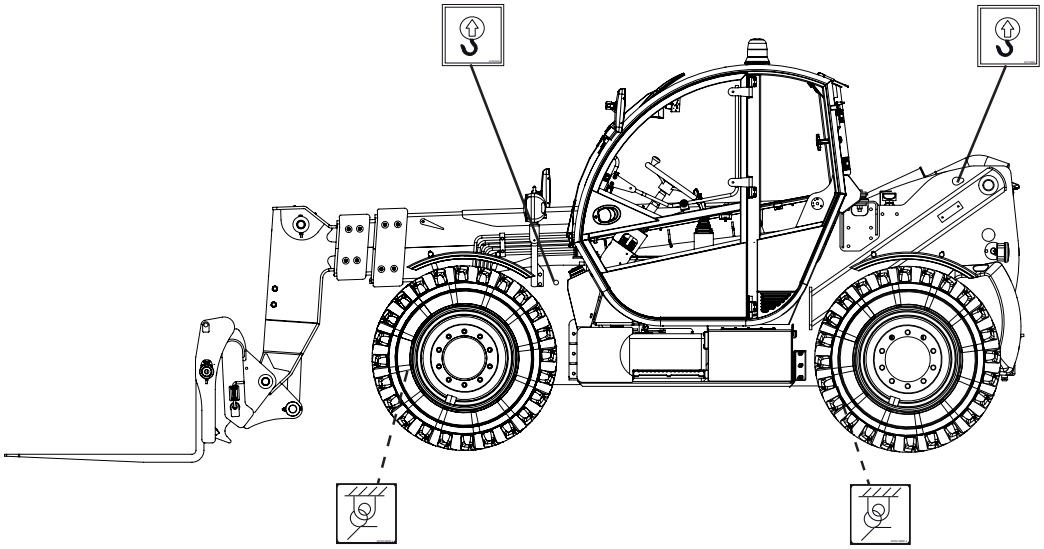
Before loading the telehandler on to the transport vehicle, check that the deck, the ramps and the machine wheels are free of mud, snow and ice. Otherwise, the telehandler may slide and will result in serious injury or death.

15.2 - MACHINE LAYOUT

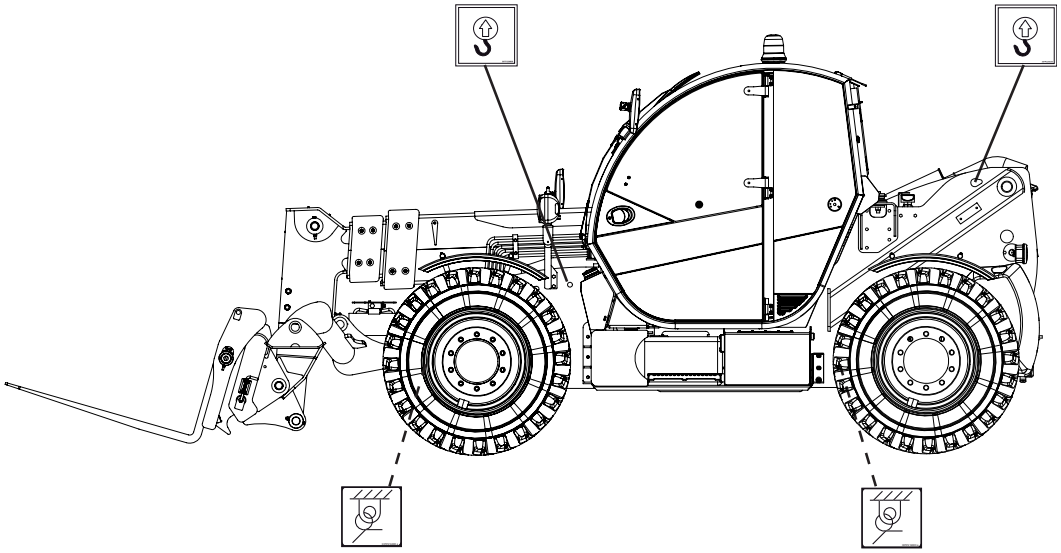
HTL 3210



HTL 3510 (HTL7732) — HTL 3010 for AS standard only



HTL 4010



15.3 - UNLOADING

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

- Remove the tie downs.
- Start the machine.
- To reinstate the system: lift the boom a few centimeters (inches).

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

15.4 - TOWING (IN CASE OF FAILURE)

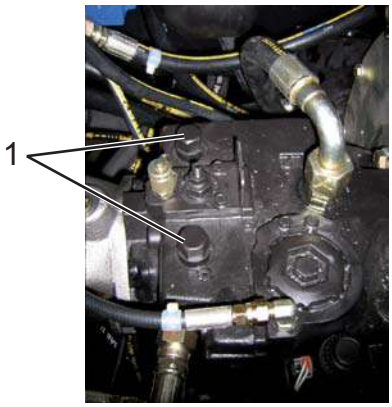
Towing can only be performed when the Telehandler has broken down and once the operator has ensured that there is no risk of additional damage.

In the event of a machine breakdown, the machine can be towed :

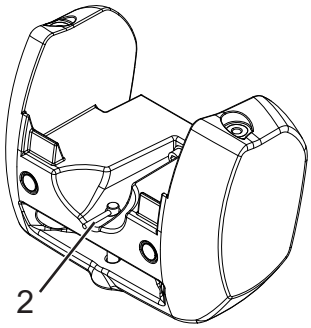
- The first option should be to perform repairs on-site.
- Ensure that no one is in the cabin or on the platform (if equipped).
- Ensure boom is in the stowed position prior to towing.
- If the Telehandler is on a public highway, ensure that no part of the Telehandler encroaches onto the road. If encroachment cannot be avoided, place warning signage on the road in accordance with the currently applicable regulations (example: warning triangle, safety vest for the operator etc.).

Before towing the Telehandler, complete the following :

- Ensure that the Telehandler boom is sufficiently raised to avoid interferences with the ground or the towing vehicle.
- If the Telehandler boom cannot be raised sufficiently to avoid interferences, contact HAULOTTE Services®.
- Unscrew the 2 pressure relief valves (1), located on the engine coupling, by turning counter clockwise (CCW) 3 turns to release the pressure of oil in the travel pump.



- Turn on ignition key (P199) and start up engine.
- Deactivate the parking brake with switch (P214).
- When the parking brake is released, the machine can be towed.
- Check that the steering can be used.
- Release the front axle according to the procedure (Section D 15.4.1 - Release brake for towing).
- To tow the telehandler, attach a tow-bar to the towing clevis (2) located at the rear of the telehandler.



The maximum travel speed permitted for towing is 6 km/h (4 mph) . The towing distance should not exceed 300 m (985 ft).

Towing is performed at the operator's risk and must be completed with extra care.

If the parking brake is still engaged and the engine has broken down, de-activate the brake before towing (Section D 15.4.1 - Release brake for towing).

15.4.1 - Release brake for towing

The following procedure is used to release the front axle parking brake in the event of an engine breakdown or when the accumulator is empty.

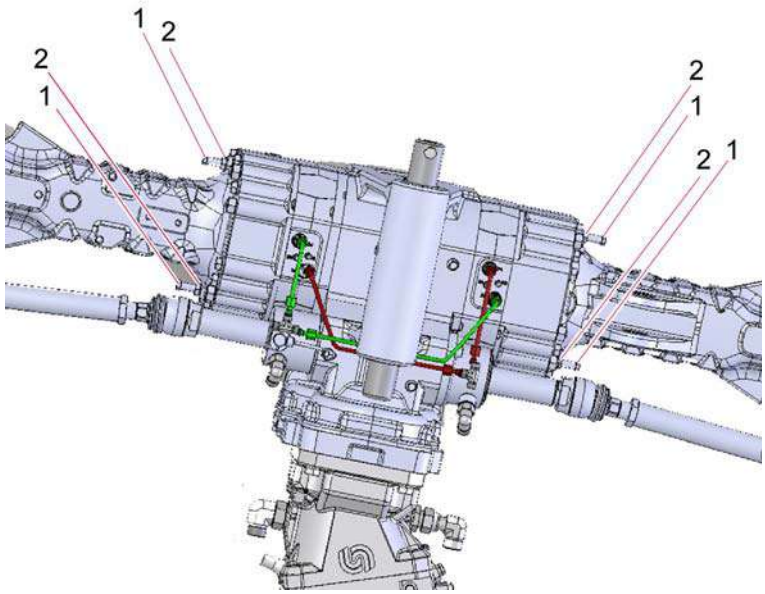
15.4.1.1 - Deactivating Parking brake

Tools required :

- Spanner 19 mm (0.74 in).

Chock the four wheels to prevent any machine movement when the brake is disengaged. Need to go underside of telehandler to disengage brake.

- Loosen the lock nuts (2) of the release screw, on the front axle.
- Fully tighten the 4 screws (1). Apply a 14,3 kgf.m. (103 lbf.ft.) torque.



Come out from under the Telehandler and remove the chocks from the four wheels.

15.4.1.2 - Parking brake reactivation

Tools required :

- Spanner 19 mm (0.74 in).

Chock the four wheels to prevent any machine movement when the brake is disengaged.

- Loosen the 4 screws (1) on the front axle, from 18 mm (0.71 in) to 21 mm (0.82 in).
- Tighten the lock nuts (2).

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.

15.5 - TELEHANDLER TOWING (PULLING ASSISTANCE)

Towing is performed at the operator's risk and must be completed with extra care.

There is no road homologation, towing is only for off road and for a short distance.

The maximum combined weight of the towed vehicle and the Telehandler must not exceed the mass of standard machine with options and fully loaded buckets. Section E 1 - General drawing / Technical characteristics.

15.6 - STORAGE

The machine can be stored in a designated area when not in use. If it has been stored for longer than 3 months without use then a periodic inspection must be conducted.

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

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

Ensure all access panels, cabin doors are shut and secured.

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

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

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

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

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

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

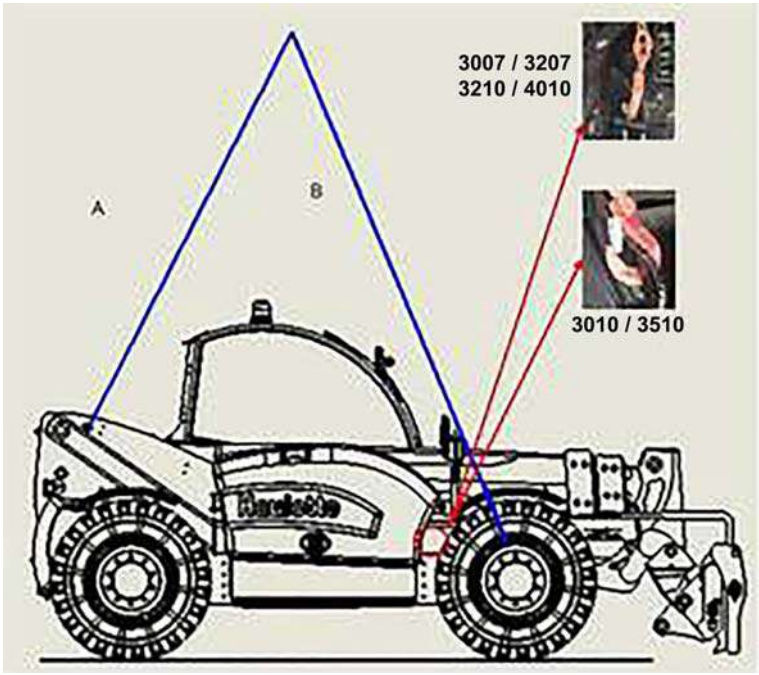
15.7 - LIFTING OPERATION

During loading / unloading operation, if it becomes necessary to lift the machine using an overhead crane, it is important to respect the following :

- Put the machine in stowed position, boom fully retracted and lowered.
- Verify absence of load.
- Verify that lifting attachments are in good operating condition and match the technical specifications. Lifting devices must be attached only to the designated lifting eyes.
- Each of the slings used for lifting the machine must be adjusted to keep the machine level and to minimize the risk of damage to the machine.
- Anchorage point for lifting are identified / labeled by the following symbol  .
- ONLY trained and authorized personnel should attempt to lift the machine.

Never lift the machine with slings attached to counterweight.

Procedure for the use of slings



	Lifting slings		
	Number of slings	Maximum load per sling	Length
A - Fixed on the turret	2	6 T (13,230 lbs)	3200 +/- 50 mm (126 in +/- 2 in)
B - Fixed on the turret	2	6 T (13,230 lbs)	4000 +/- 50 mm (156 in +/- 2 in)

• Keep different length between A and B slings.

• Caution : Lifting the machine equipped with an air-conditioned cabin requires additional care.

16 - Cold Weather Recommendations

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

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

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

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

N.B.-:-INITIAL STARTING SHOULD ALWAYS BE PERFORMED FROM THE CABIN CONTROLS.

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

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

Engine oil viscosity		
EMA LGR-1 / API CJ4 / ACEA E9 / ACEA E7 Viscosity grade	Ambient temperature	
	Minimum	Maximum
SAE 0W20	-40°C (-40°F)	10°C (50°F)
SAE 0W30	-40°C (-40°F)	30°C (86°F)
SAE 0W40	-40°C (-40°F)	40°C (104°F)
SAE 5W30	-30°C (-22°F)	30°C (86°F)
SAE 5W40	-30°C (-22°F)	40°C (104°F)
SAE 10W30	-20°C (-4°F)	40°C (104°F)
SAE 15W40	-10°C (14°F)	50°C (122°F)

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

D- Operation

16.1 - HYDRAULIC OIL

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

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

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

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

16.2 - PREHEATING OPERATION

When power is switched on, the LED (P188) on the control display panel flashes, indicating that the engine is in automatic pre-heating mode. Upon the extinction of this light (just in seconds) at the control panel display, starting of the machine is possible.

Notes

E- General Specifications

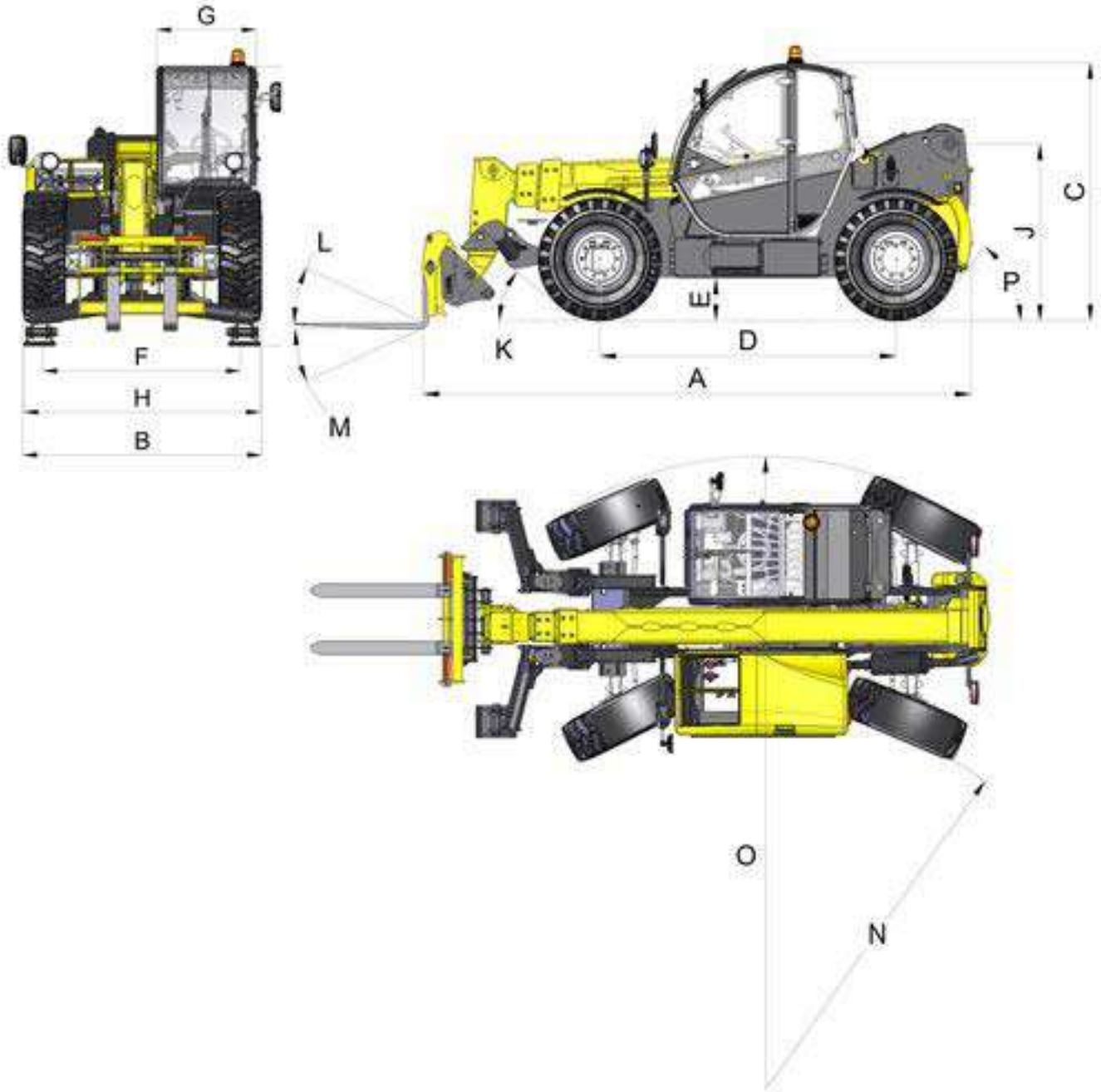
Notes

E- General Specifications

1 - General drawing / Technical characteristics

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

General diagram HTL 3210



E- General Specifications

Overall dimension specifications

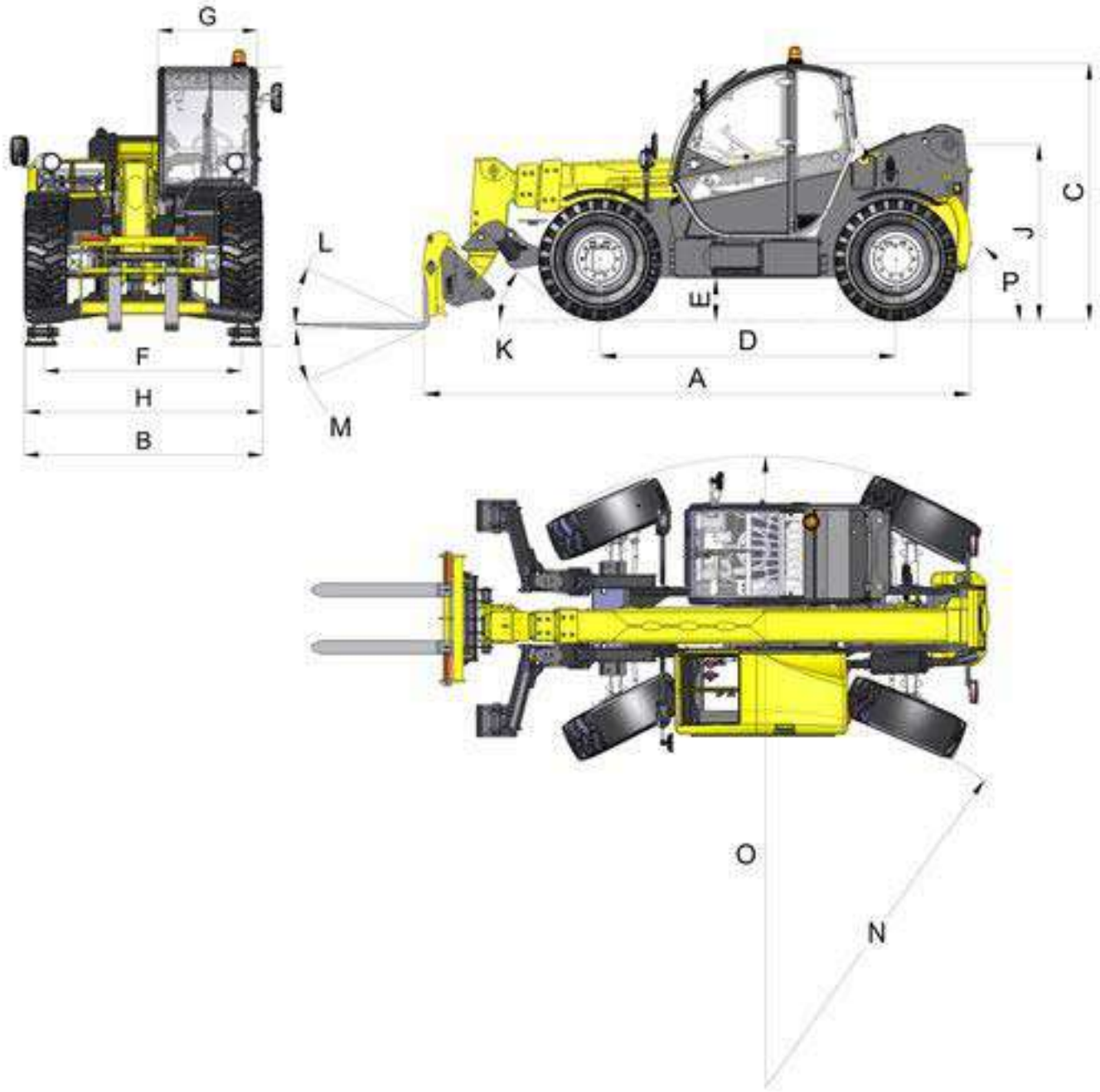
Marking	HTL 3210	
	Mètre	Feet inch
A	4,96	16 ft 3 in
B	2,26	7 ft 5 in
C	2,38	7 ft 9 in
D	2,78	9 ft 1 in
E	0,42	1 ft 4 in
F	1,88	6 ft 2 in
G	0,96	3 ft 1 in
H	2,26	7 ft 5 in
I	2,71	8 ft 10 in
J	1,60	5 ft 3 in
K	30 °	
L	18 °	
M	104 °	
N	2,55	8 ft 4 in
O	3,70	12 ft 2 in

Technical specifications

	HTL3210	
	Metric	Imperial
Minimum unladen mass (without forks)	8050 kg	17710 lbs
Maximum unladen mass (with forks and attachments)	9200 kg	20240 lbs
Maximum capacity	3200 kg	7000 lbs
Unladen mass (with forks)	8400 kg	18500 lbs
Maximum load on rear axle/front axle	6000 kg	13200 lbs
Maximum load on back axle/front axle	5000 kg	11000 lbs
Total weight allowed with load	9550 kg	21000 lbs
Total weight allowed on road	12550 kg	27600 lbs

E- General Specifications

General diagram HTL 3010 - HTL 3510 (HTL 7732) - HTL 4010



E- General Specifications

Overall dimension specifications

Marking	HTL 3010 - HTL 3510 (HTL 7732)		HTL 4010	
	Mètre	Feet inch	Mètre	Feet inch
A	5,14	16 ft 10 in	5,14	16 ft 10 in
B	2,25	7 ft 5 in	2,25	7 ft 5 in
C	2,42	7 ft 11 in	2,42	7 ft 11 in
D	2,78	9 ft 1 in	2,78	9 ft 1 in
E	0,40	1 ft 4 in	0,40	1 ft 4 in
F	1,85	6 ft 1 in	1,85	6 ft 1 in
G	0.94	3 ft 1 in	0,94	3 ft 1 in
H	2,23	11 ft	2,23	11 ft
I	2,71	7 ft 4 in	2,71	7 ft 4 in
J	1,66	5 ft 5 in	1,66	5 ft 5 in
K	39 °		39 °	
L	23 °		23 °	
M	103 °		103 °	
N	2,55	8 ft 4 in	2,55	8 ft 4 in
O	4,80	15 ft 9 in	4,80	15 ft 9 in

Technical specifications

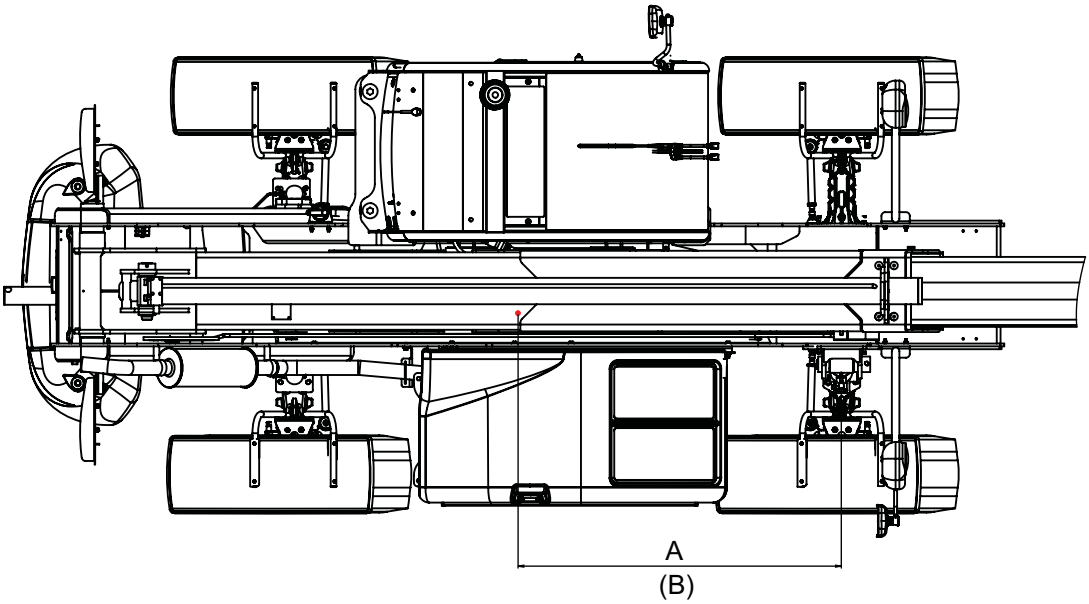
	HTL 3010 - HTL 3510 (HTL 7732)		HTL 4010	
	Metric	Imperial	Metric	Imperial
Minimum unladen mass (without forks)	8300 kg	18260 lbs	8600 kg	18920 lbs
Maximum unladen mass (with forks and attachments)	9450 kg	20790 lbs	9750 kg	21450 lbs
Maximum capacity	2990 kg - 3500 kg	6600 lbs - 7700 lbs	4000 kg	9000 lbs
Unladen mass (with forks)	8650 kg	19000 lbs	8950 kg	19700 lbs
Maximum load on rear axle/front axle	6000 kg	13200 lbs	6500 kg	14300 lbs
Maximum load on back axle/front axle	5000 kg	11000 lbs	5000 kg	11000 lbs
Total weight allowed with load	9800 kg	21500 lbs	10100 kg	22200 lbs
Total weight allowed on road	12800 kg	28100 lbs	13100 kg	28800 lbs

E- General Specifications

2 - Center of gravity

The center of gravity is showed in stowed / transport position with boom fully retracted (angle 0 °) and forks mounted on the telehandler.

General diagram HTL 3010 — HTL 3210 — HTL 3510 (HTL 7732) — HTL 4010



N.B.-:-VALUES ARE SPECIFIED IN MILLIMETERS AND (INCHES).

	HTL 4010	HTL 3010	HTL 3210	HTL 3510 (HTL 7732)
A	1400 mm	1280 mm	1280 mm	1480 mm
(B)	55 in	50 in	50 in	58 in

3 - Noise emission level

The sound power values indicated in the technical characteristics tables are obtained in the following conditions :

- **For machines equipped with internal combustion engines, the guaranteed accoustic level (LWA) (displayed on the product) is measured in accordance with the method and the conditions described in Appendix III, Part B, Point 36 of the 2000/14/CE European directive.**

The Telehandler's noise emission 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.

Technical specifications (For machines fitted with PERKINS 1104D44T only)

HTL 3010 - HTL 3210	
Noise emission level at driving station	75 dBA
Maximum noise emission level	105 dBA

Technical specifications (For machines fitted with KOHLER KDI 3404 TCR Tier4F only)

HTL 3010 - HTL 3210	
Noise emission level at driving station	75 dBA
Maximum noise emission level	104 dBA

Technical specifications (For machines fitted with KOHLER KDI 2504 TCR Stage 5 only)

HTL 3010 - HTL 3210	
Noise emission level at driving station	75 dBA
Maximum noise emission level	103 dBA

E- General Specifications

Technical specifications (For machines fitted with PERKINS 1104D44T only)

HTL 3510 - HTL 4010	
Noise emission level at driving station	75 dBA
Maximum noise emission level	105 dBA

Technical specifications (For machines fitted with KOHLER KDI 3404 TCR Tier4F only)

HTL 3510 - HTL 4010	
Noise emission level at driving station	75 dBA
Maximum noise emission level	104 dBA

Technical specifications (For machines fitted with KOHLER KDI 2504 TCR Stage 5 only)

HTL 3510 - HTL 4010	
Noise emission level at driving station	75 dBA
Maximum noise emission level	103 dBA

4 - Vibrations

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

- **The maximum quadratic mean value weighted as an acceleration frequency and the total value of the vibrations to which the hand-arm system is exposed have been measured on the products by simulating a cycle representative of normal use. The values meet the requirements of the 2006/42/CE machine directive.**

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.

Hand and body vibration are measured in accordance with method and conditions described in standard ISO5349-1 and ISO2631-1.

Technical specifications

HTL 3210 - HTL 3210 - HTL 3510 (HTL 7732) - HTL 4010	
Hand - feet vibration	< 2,5 m/s2
Body vibration	< 0,5 m/s2

5 - Wheel/Tire assembly

5.1 - TECHNICAL SPECIFICATIONS

HTL 3210

Component	Standard wheel
Type-Dimensions	Advance 405/70-20
Type	Air inflated
Maximum effort on wheel	12,7 kg/cm2 (184 psi)
Size	1076 mm / 407 mm (42 in / 16 in)
Maximum authorised effort	8240 kg (18166 lbf)
Torque	460 Nm (339 lbs ft)

HTL 3010 — HTL 3510 (HTL 7732) — HTL 4010

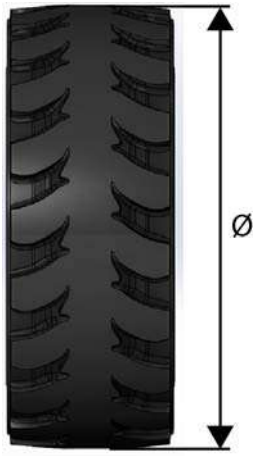
Component	Standard wheel
Type-Dimensions	Advance 405/70-24
Type	Air inflated
Maximum effort on wheel	12,7 kg/cm2 (184 psi)
Size	1178 mm / 405 mm (46 in / 15 in)
Maximum authorised effort	9040 kg (19929 lbf)
Torque	460 Nm (339 lbs ft)

5.2 - INSPECTION AND MAINTENANCE

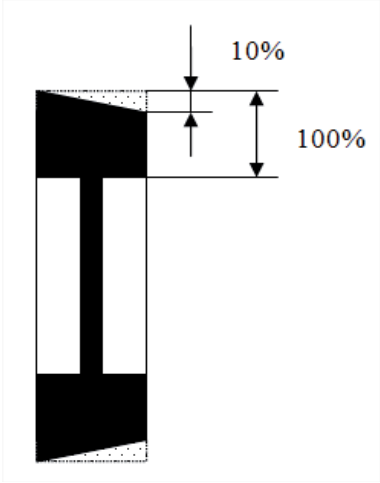
The tire and rim are bonded together, both must be replaced if either is damaged.

Wheels replacement must be made in the following cases :

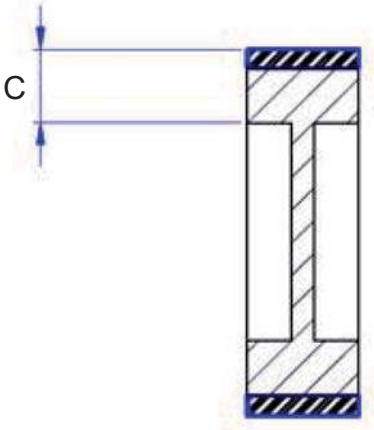
- Deformation or cracks on the rim.
- De-bonding between the interface of the steel and the rubber.
- Uniform wear to the wearing line.



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



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



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

E- General Specifications

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

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

Procedure of replacement :

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

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

6 - Attachments

6.1 - APPROVED ATTACHMENTS

Telescopic handlers are primarily designed for handling. Occasional use with buckets is authorised (Boom fully retracted to reduce stress on the boom head). Do not use the telescopic handler with bucket for intensive use in difficult applications (Quarries, waste, cereals, farming, etc.).

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

- 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 cabin (For the forks, buckets and side-shift fork carriage). For other attachments, refer to the load chart booklet of the attachment.
- 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.

N.B.-:-HYDRAULICALLY-POWERED ATTACHMENTS MUST ONLY BE USED ON MACHINES EQUIPPED WITH AUXILIARY HYDRAULICS.

If any of the above conditions are not met, do not use the attachment.

Familiarize yourself with the information provided on the attachment identification plate. Refer to the capacity table (load chart booklet) corresponding to the respective attachment. Keep the specific instructions for the attachment in the manual holder with the Telehandler operator's manual.

The user must enlist the services of a competent person to familiarise themselves with the test procedures for the specific attachments they have for the Telehandler. The user is responsible for carrying out any required checks of the attachment..

The user must ensure that the attachment can be used in the country in which the machine is being used.

6.1.1 - Mechanical attachment locking device

- Ensure that the machine is placed on a firm and level surface.
- Actuate the parking brake. Blocking the wheels is also recommended.
- Level the telehandler 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.

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.

6.1.2 - List of approved attachments

N.B.-:-REFER TO OPERATOR'S MANUAL FOR THE CONCERNED ACCESSORIES.

6.2 - UNAPPROVED ATTACHMENTS

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®.

The user must enlist the services of a competent person to get familiar with the test procedures for the specific attachments to be used with the Telehandler. The user is responsible for carrying out any required checks of the attachment.

The user must ensure that the attachment can be used in the country in which the machine is being used.

Do not use attachments that have not been approved in writing by Haulotte for the following reasons :

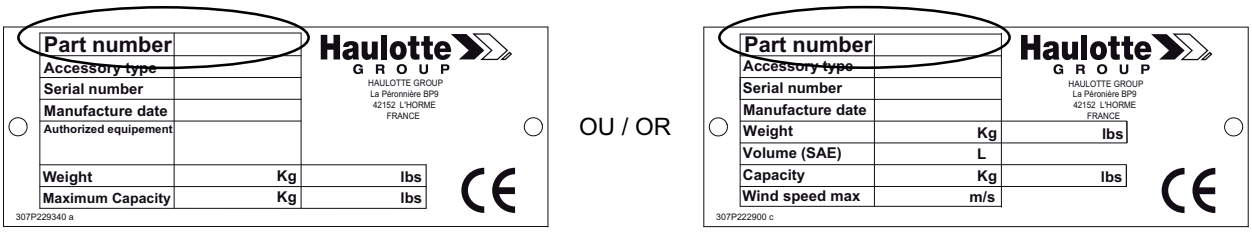
- **HAULOTTE® cannot determine the capacity range limits for tinkered, home-made, altered or other unapproved attachments.**
- **An over extended or overloaded machine may tip over with little or no warning, and will cause serious injury or death.**
- **Attachments that have not been approved by HAULOTTE for use with this machine may cause material and/or bodily damage, or even death.**
- **HAULOTTE® cannot guarantee the ability of an unapproved attachment to perform its intended function safely.**

Only use HAULOTTE approved attachments.

6.3 - LOAD CAPACITY VERIFICATION

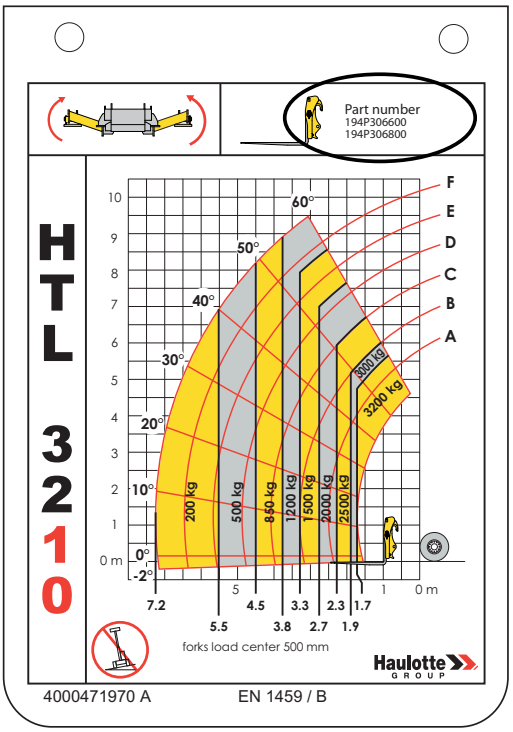
Before installing, verify that the attachment is an approved one and applicable load capacity chart is available.

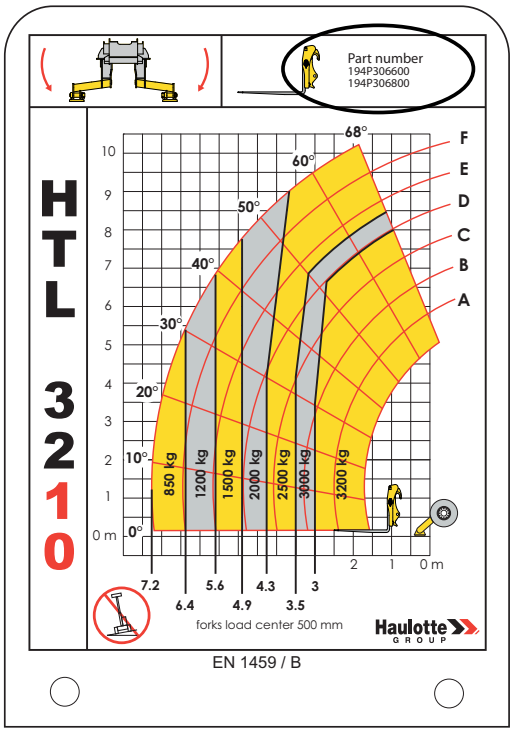
Attachment manufacturer's plate



E- General Specifications

Example of how to read the load capacity chart - HTL 3210





N.B.-:-THE ATTACHMENT NUMBER LOCATED ON THE MANUFACTURER'S PLATE MUST CORRESPOND TO THE ATTACHMENT NUMBER WHICH APPEARS ON THE LOAD CHART.

To determine the maximum load capacity of the Telehandler with the attachment, find the line for the height and follow it over to the distance. When the load of the Telehandler differs from the capacity of the forks or attachment, use the smallest value of the capacity stamped on the attachment and that from the lifting position in the load chart. Refer to the stabilizers configuration (lowered or raised) for the applicable capacity.

N.B.-:-THE FORKS MUST BE USED IN MATCHED PAIRS.

Never use an attachment without having checked the HAULOTTE® applicable load capacity chart supplied with the telehandler. Failure to follow the relevant HAULOTTE® supplied capacity chart will cause an accident resulting in death or serious injury.

6.4 - LOAD CAPACITY CHART WITH FORKS

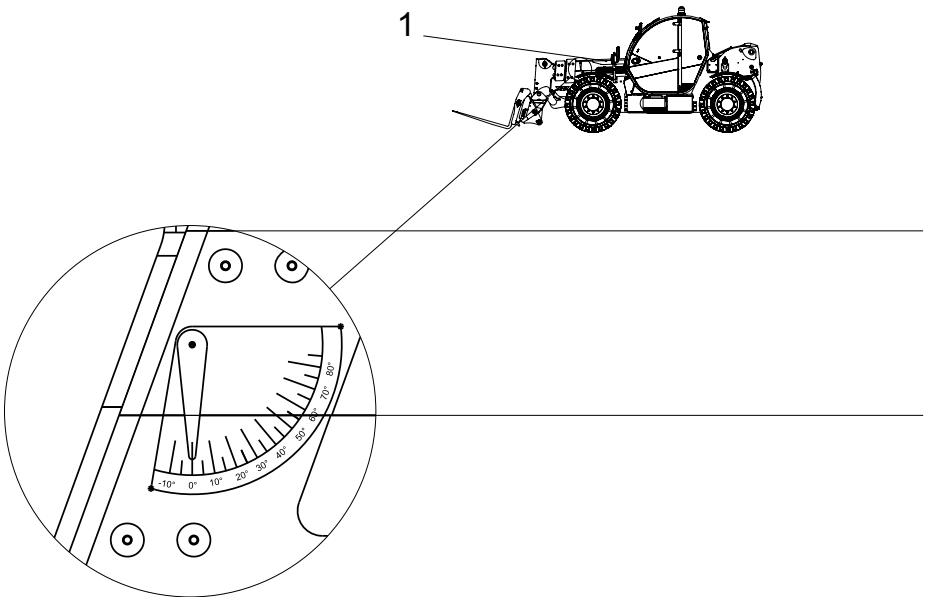
To use the capacity chart properly, the operator must first determine and/or obtain the following :

- Approved attachments HAULOTTE®.
- A load chart corresponding to the attachment.
- The weight of the load to be lifted.

The load placement with forks :

- The height at which the load must be placed.
- The distance the load must be placed forward of the front tires/tyres of the Telehandler.
- An alphabetical key (A, B, C, D, E, F) indicates the boom extension and a pendulum indicates the boom angle.
- 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.

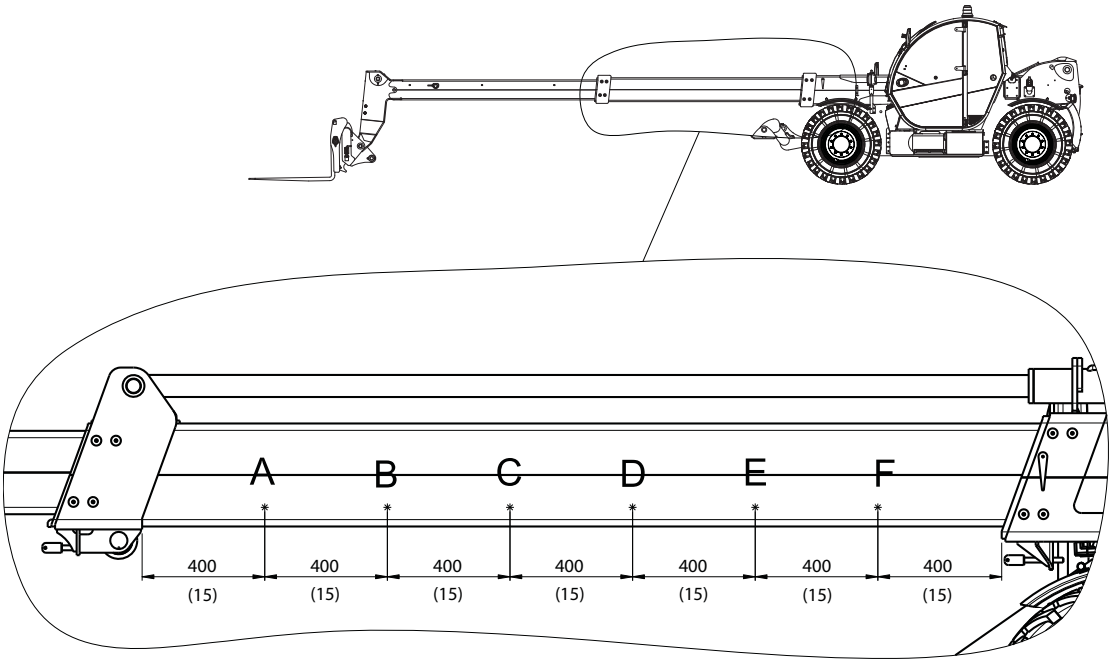
Boom angle indicator



1 : Horizontal boom

E- General Specifications

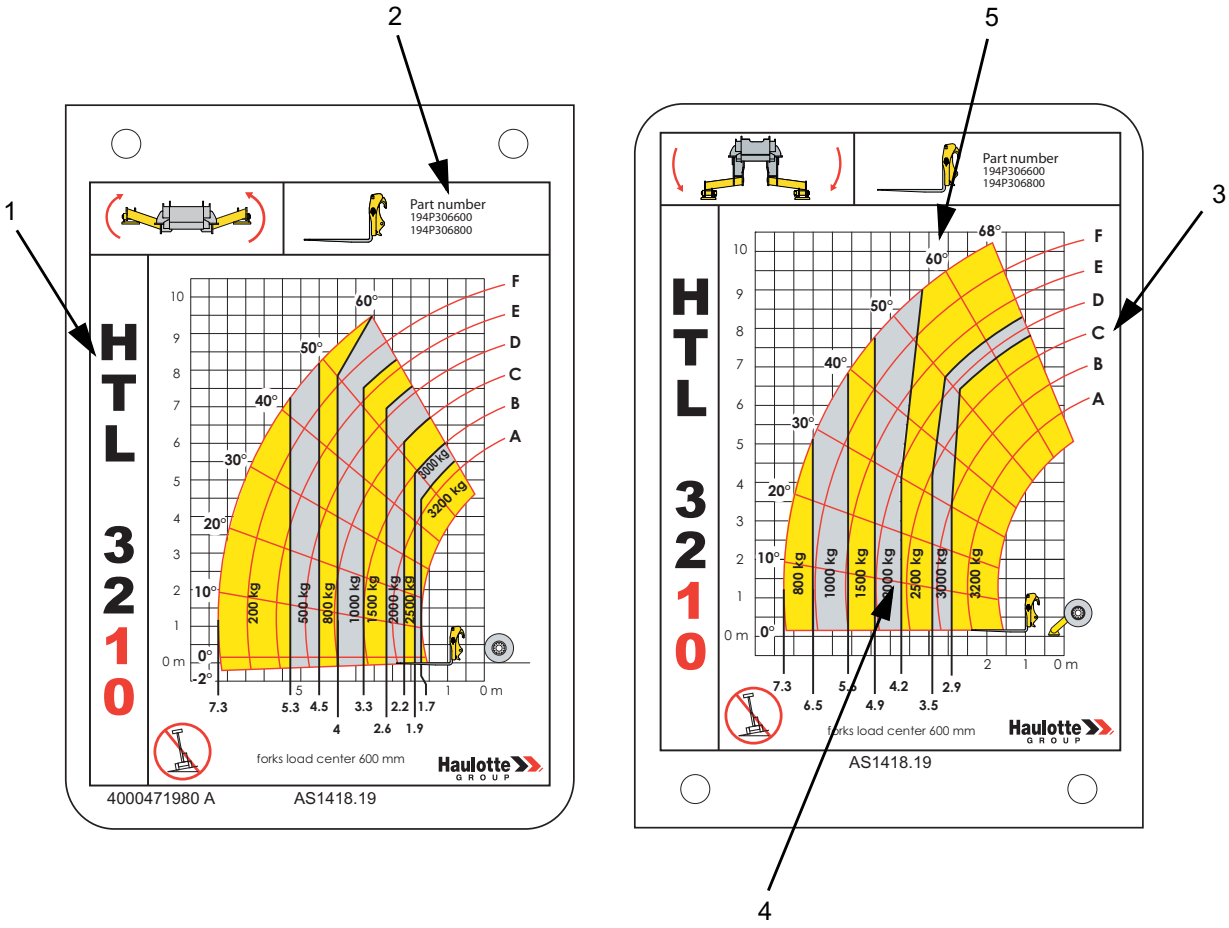
Boom extension indicators



N.B.-:-VALUES ARE SPECIFIED IN MILLIMETERS AND (INCHES).

E- General Specifications

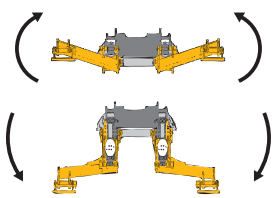
Example of a load capacity chart : HTL 3210



Marking	Description
1	HTL3210 : The load capacity chart must only be used for this machine
2	Attachment reference : The attachment reference must correspond to the number on the attachment manufacturer's plate
3	Boom extension indicators
4	Load area : The load areas indicate the maximum weight which can be lifted
5	Boom angle

For the applicable attachment to be used, refer to the load chart booklet for the specific load chart with the relevant attachment icon :

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



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/tyres being inflated correctly and the telehandler being in good working condition. "Failure" to comply with these instructions could result in death or serious injury.

E- General Specifications

Examples of how to read the load capacity chart for the HTL3210 fitted with the fork carriage

The following examples illustrate situations where the load may or may not be lifted.

Use the capacity chart corresponding to the machine.

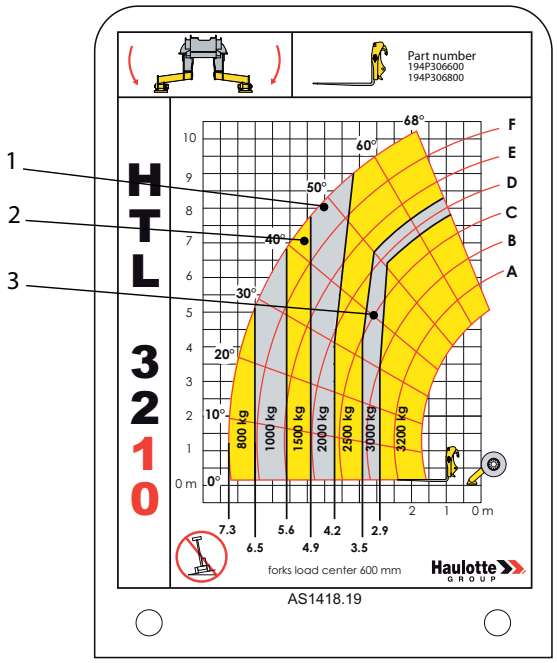
The attachment number located on the manufacturer's plate must correspond to the attachment number which appears on the load chart.

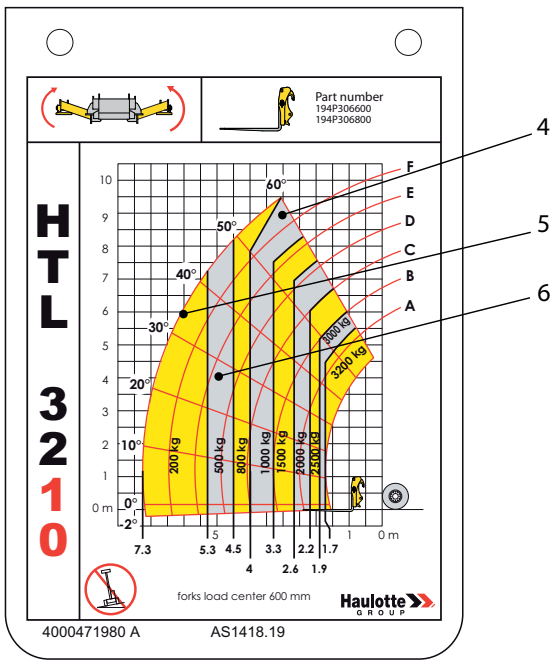
Stabilisers lowered

Example	The weight of the load to be lifted	Distance	Height	Lifting authorised
1	2000 kg(4409 lb)	4,5 m(14 ft9 in)	8 m(26 ft24 in)	Yes
2	3200 kg(7056 lb)	5 m(16 ft40 in)	7 m(22 ft96 in)	No
3	3000 kg(6615 lb)	3 m(9 ft84 in)	5 m(16 ft40 in)	Yes

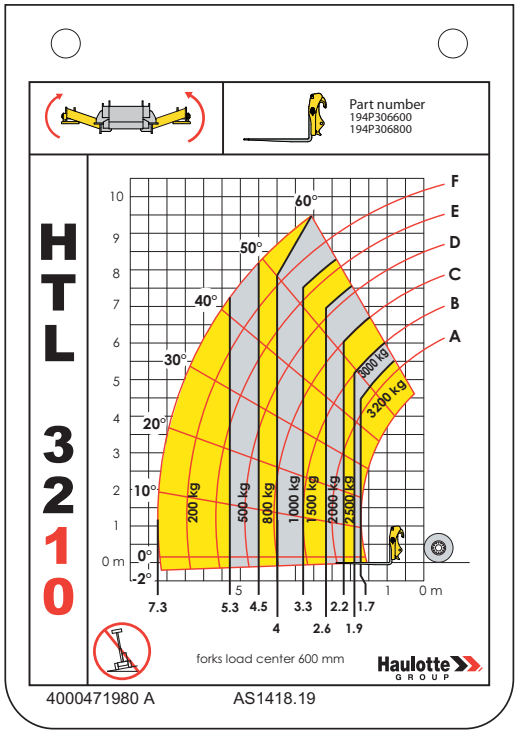
Stabilisers raised

Example	The weight of the load to be lifted	Distance	Height	Lifting authorised
4	1200 kg(2646 lb)	3 m(9 ft84 in)	9 m(29 ft52 in)	Yes
5	1000 kg(2204 lb)	6 m(19 ft68 in)	6 m(19 ft68 in)	No
6	800 kg(1764 lb)	5 m(16 ft40 in)	4 m(13 ft12 in)	No

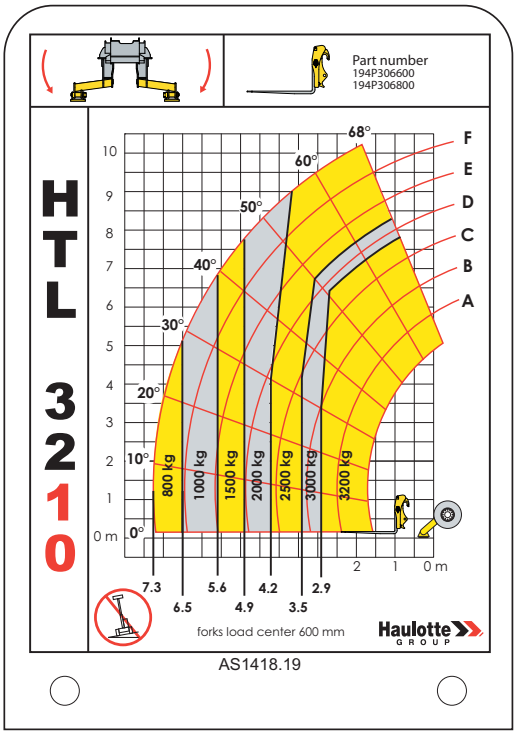




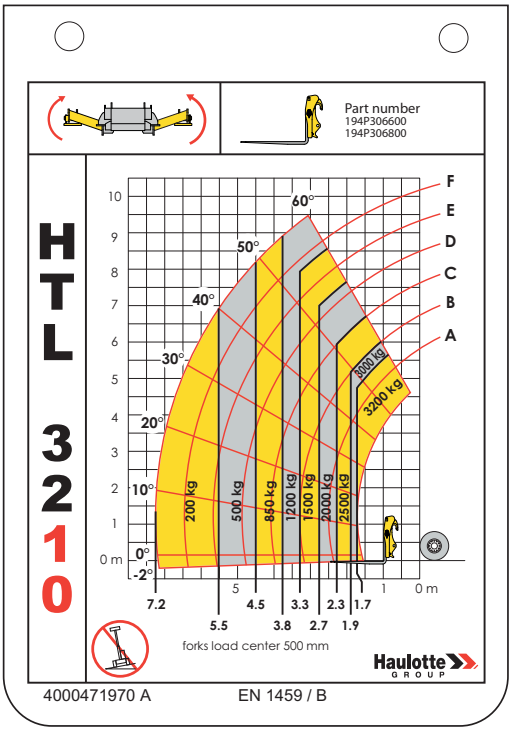
HTL3210 load capacity chart



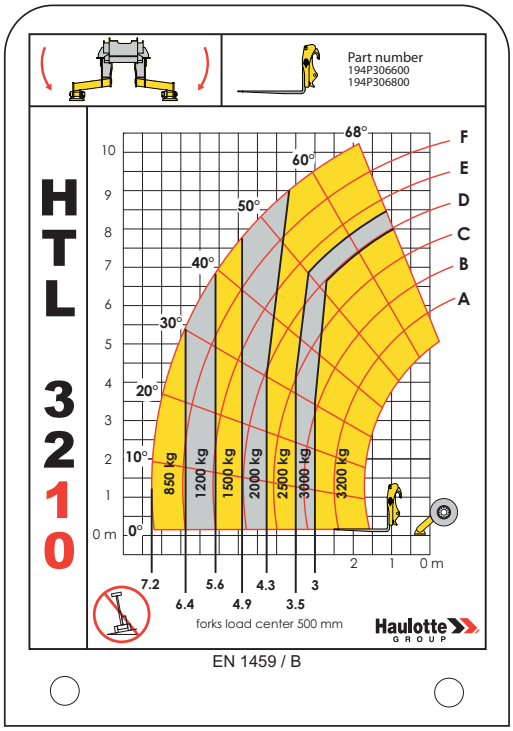
4000471980 A AS1418.19



AS1418.19



4000471970 A EN 1459 / B



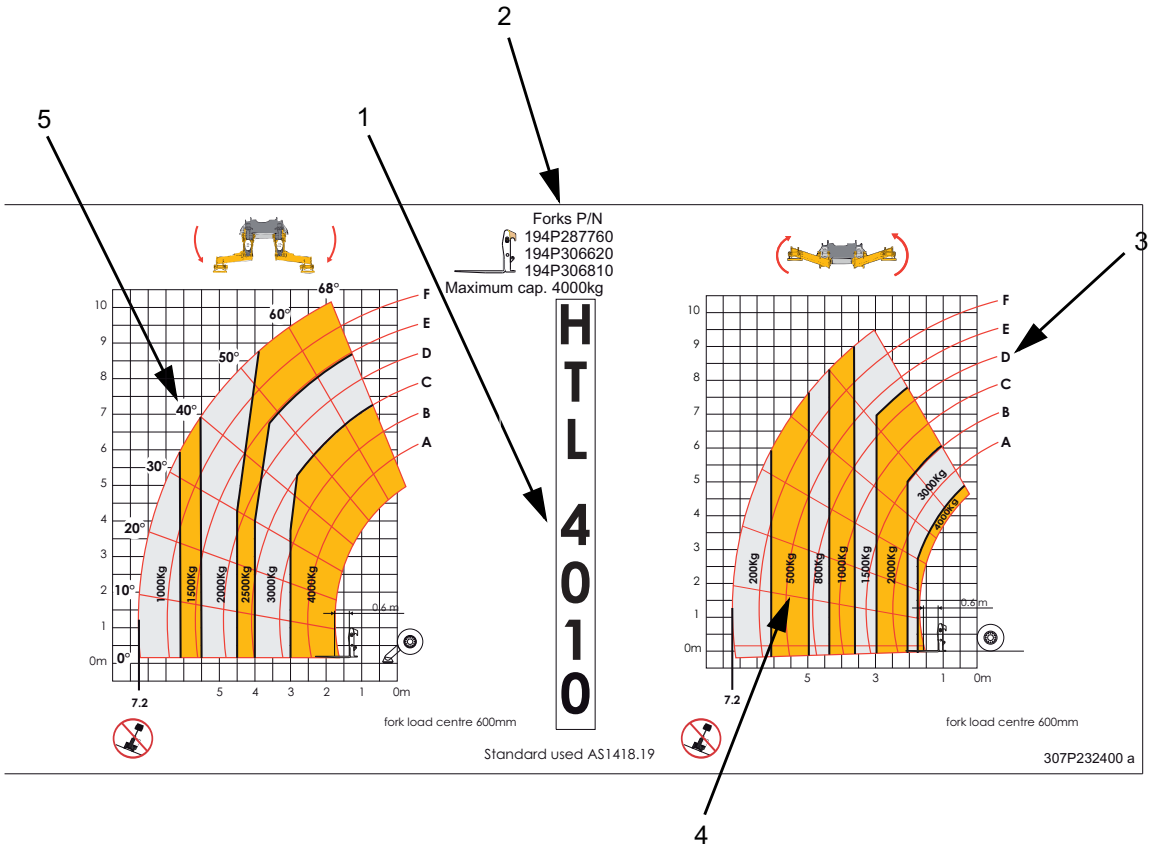
EN 1459 / B

Forks characteristics

Length	Width	Weight
1200 mm	125 mm	80 kg
1200 mm	100 mm	65 kg

E- General Specifications

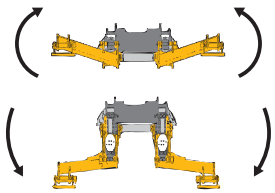
Example of a load capacity chart : HTL 4010



Marking	Description
1	HTL4010 : The load capacity chart must only be used for this machine
2	Attachment reference : The attachment reference must correspond to the number on the attachment manufacturer's plate
3	Boom extension indicators
4	Load area : The load areas indicate the maximum weight which can be lifted
5	Boom angle

For the applicable attachment to be used, refer to the load chart booklet for the specific load chart with the relevant attachment icon :

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



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/tyres being inflated correctly and the telehandler being in good working condition. "Failure" to comply with these instructions could result in death or serious injury.

E- General Specifications

Examples of how to read the load capacity chart for the HTL4010 fitted with the fork carriage

The following examples illustrate situations where the load may or may not be lifted.

Use the capacity chart corresponding to the machine.

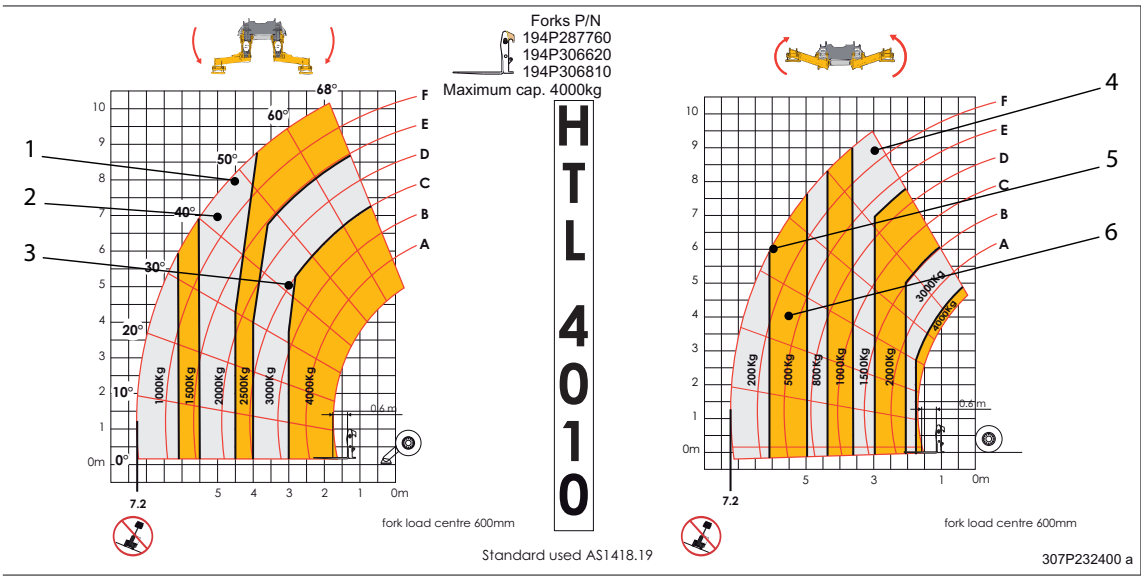
The attachment number located on the manufacturer's plate must correspond to the attachment number which appears on the load chart.

Stabilisers lowered

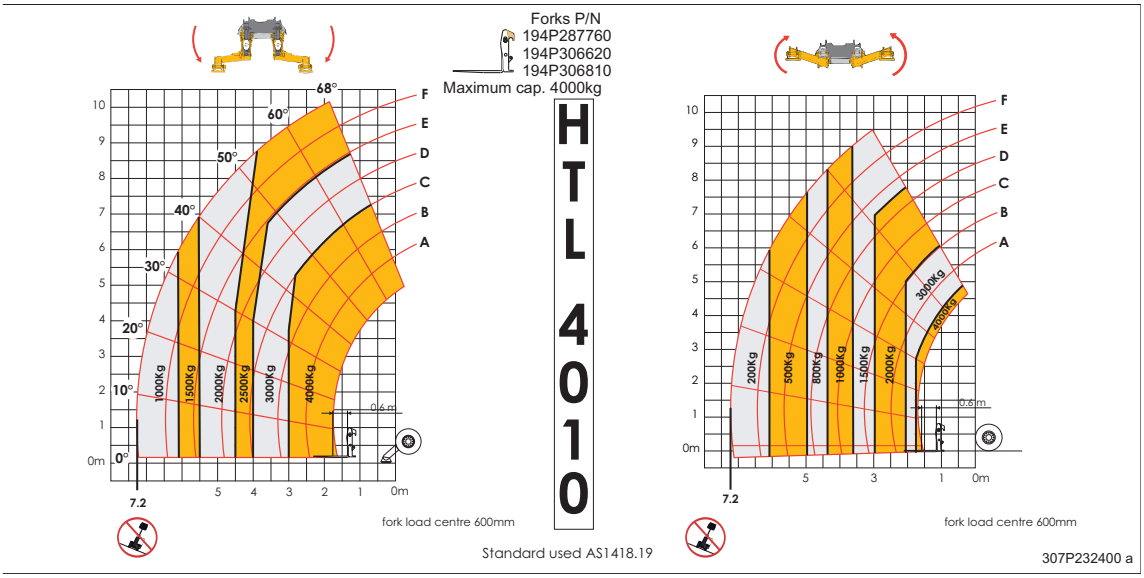
Example	The weight of the load to be lifted	Distance	Height	Lifting authorised
1	2000 kg(4409 lb)	4,5 m(14 ft9 in)	8 m(26 ft24 in)	Yes
2	3200 kg(7056 lb)	5 m(16 ft40 in)	7 m(22 ft96 in)	No
3	3000 kg(6615 lb)	3 m(9 ft84 in)	5 m(16 ft40 in)	Yes

Stabilisers raised

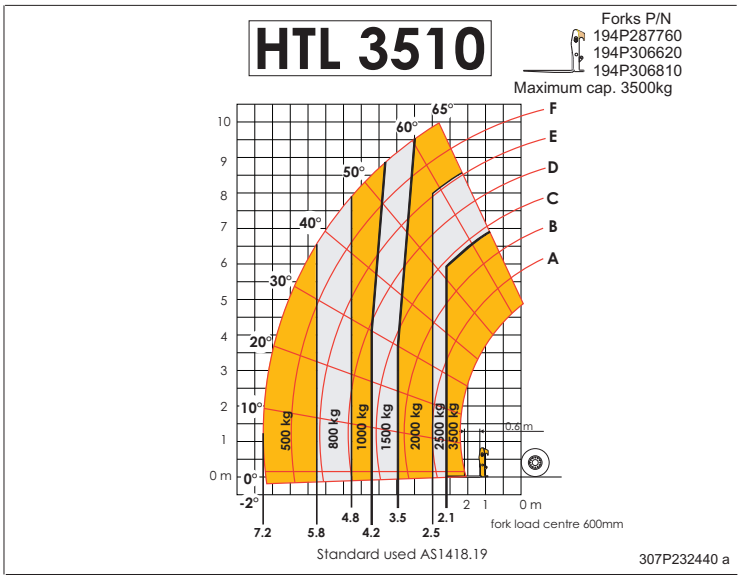
Example	The weight of the load to be lifted	Distance	Height	Lifting authorised
4	1200 kg(2646 lb)	3 m(9 ft84 in)	9 m(29 ft52 in)	Yes
5	1000 kg(2204 lb)	6 m(19 ft68 in)	6 m(19 ft68 in)	No
6	800 kg(1764 lb)	5,5 m(18 ft1 in)	4 m(13 ft12 in)	No



HTL4010 load capacity chart



HTL3510 load capacity chart



Forks characteristics

Length	Width	Weight
1200 mm	125 mm	80 kg
1200 mm	100 mm	65 kg

7 - Fields of visibility

7.1 - TEST WITH SUSPENDED LOAD-TRUCKS EQUIPPED WITH ADDITIONAL MIRRORS (EUROPE OPTION)

For all visibility tests, define a rectangle (RB) located 100 cm (39.5 in) from the machine's overall dimensions.

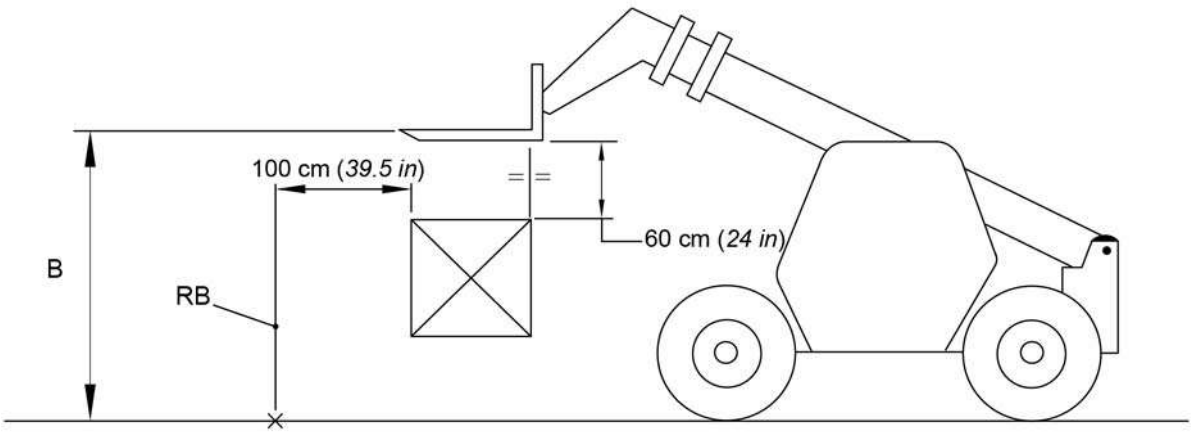
The load must be at a distance of 100 cm ± 5 cm (39.5 in ± 2 in) from the rectangle previously defined. The distance between the upper surface of the load and the upper surface of the forks must be 60 cm ± 5 cm (24 in ± 2 in).

The angle and extension value of the boom must be adjusted to satisfy the dimensions given below :

- RB = rectangle located 100 cm (39.5 in) from the machine's overall dimensions
- B = 200 cm ± 5 cm (79 in ± 2 in) for compact trucks
- B = 200 cm ± 5 cm (79 in ± 2 in) for other trucks

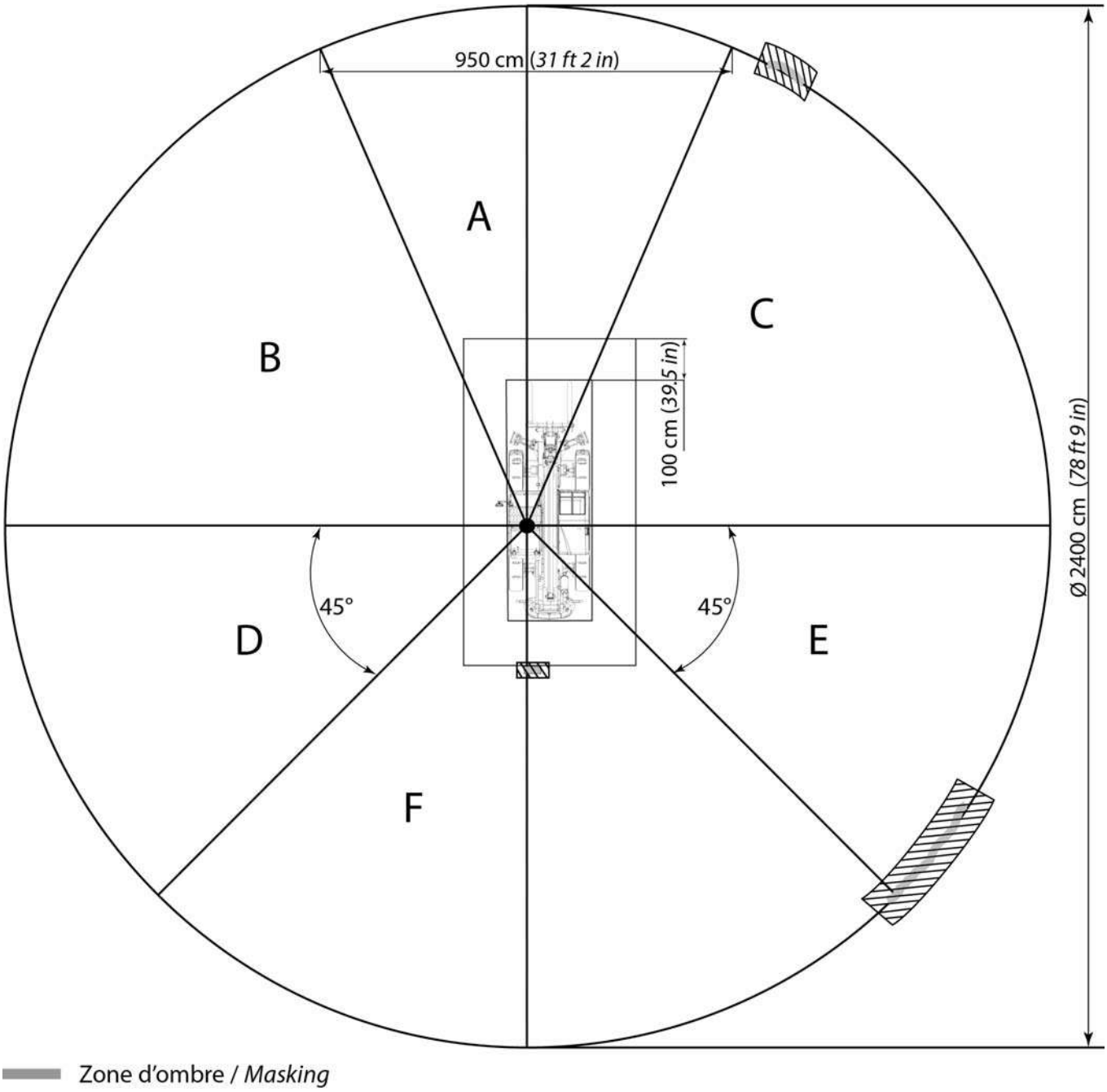
The forks must be parallel to the surfaces of the load.

A tilt greater than 5 ° is tolerated for the forks.



E- General Specifications

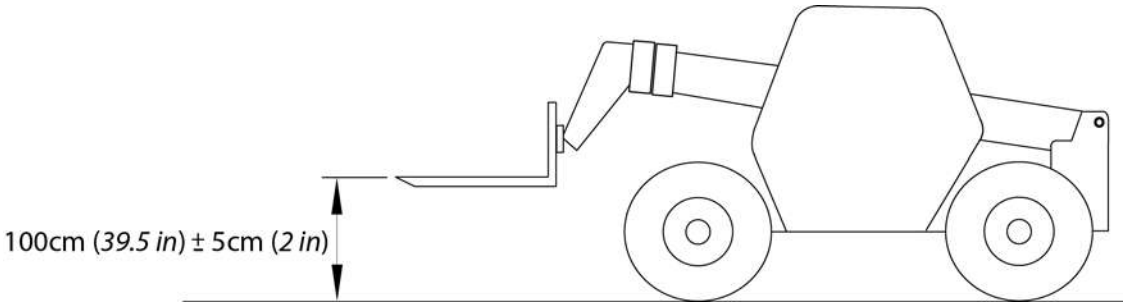
**Graph showing the test results with suspended load-
Trucks equipped with additional mirrors (Europe option)**



E- General Specifications

7.2 - LORRY TRAILER LOADING CONDITION-TRUCKS EQUIPPED WITH ADDITIONAL MIRRORS (EUROPE OPTION)

The boom must be fully retracted and the tilt adjusted in order to obtain a distance of 100 cm ± 5 cm (39,5 in ± 2 in) between the ground and the upper surface of the forks. A tilt greater than 5 ° is tolerated for the forks.



7.3 - TEST WITH SUSPENDED LOAD-TRUCKS WITHOUT ADDITIONAL MIRRORS

For all visibility tests, define a rectangle (RB) located 100 cm (39.5 in) from the machine's overall dimensions.

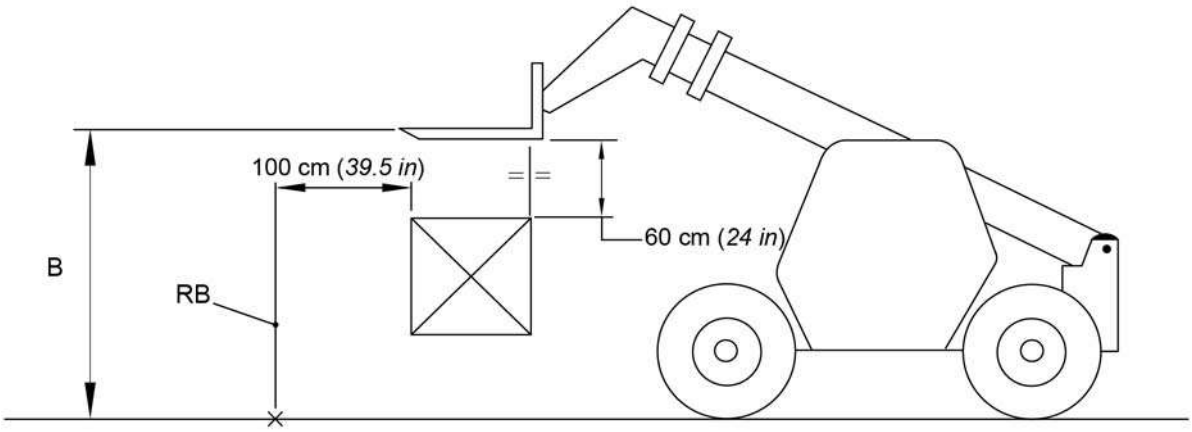
The load must be at a distance of 100 cm ± 5 cm (39,5 in ± 2 in) from the rectangle previously defined. The distance between the upper surface of the load and the upper surface of the forks must be 60 cm ± 5 cm (24 in ± 2 in).

The angle and extension value of the boom must be adjusted to satisfy the dimensions given below :

- RB = rectangle located 100 cm (39.5 in) from the machine's overall dimensions
- B = 200 cm ± 5 cm (79 in ± 2 in) for compact trucks
- B = 200 cm ± 5 cm (79 in ± 2 in) for other trucks

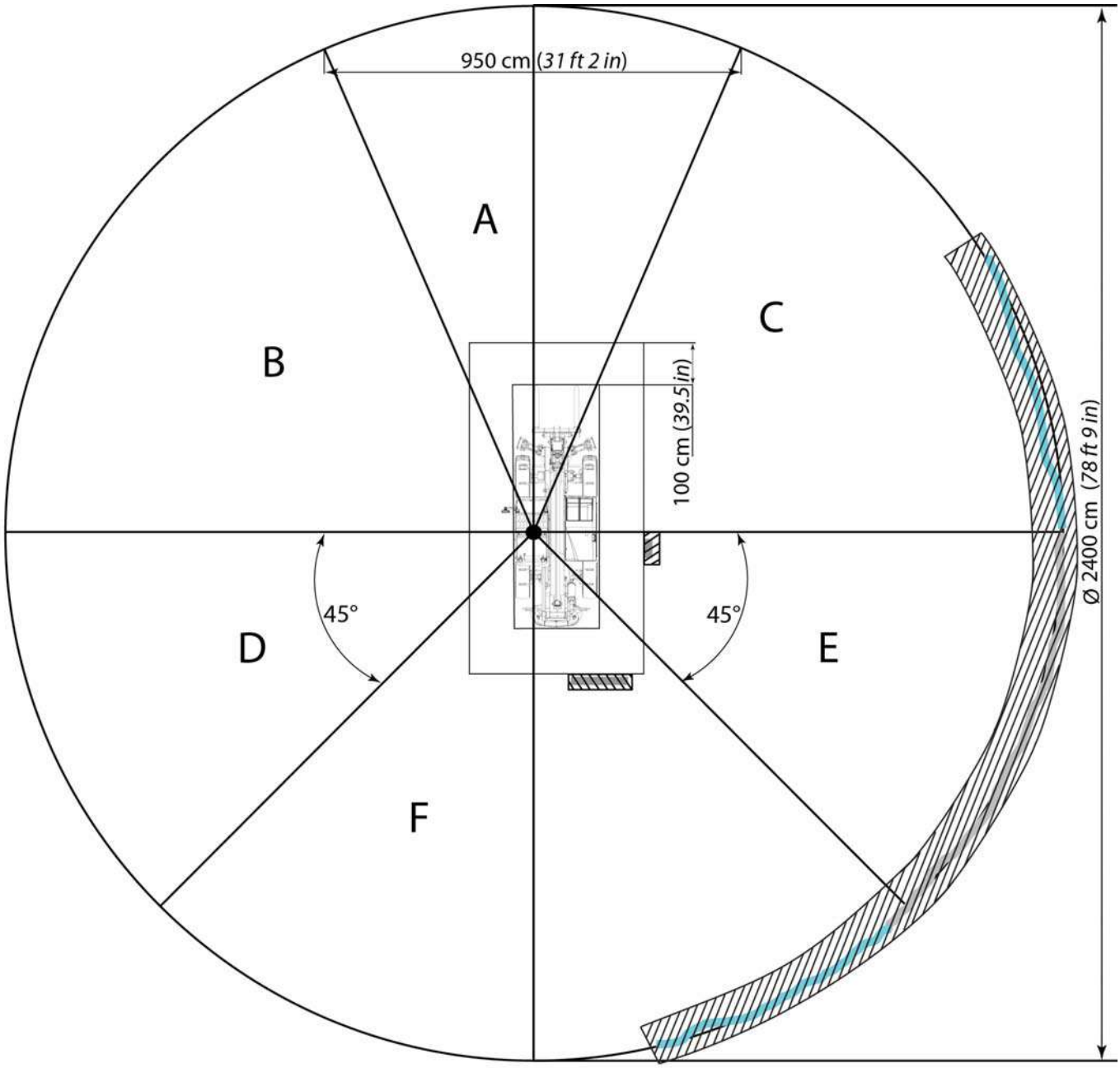
The forks must be parallel to the surfaces of the load.

A tilt greater than 5 ° is tolerated for the forks.



E- General Specifications

Graph showing the test results with suspended load-Trucks without additional mirrors

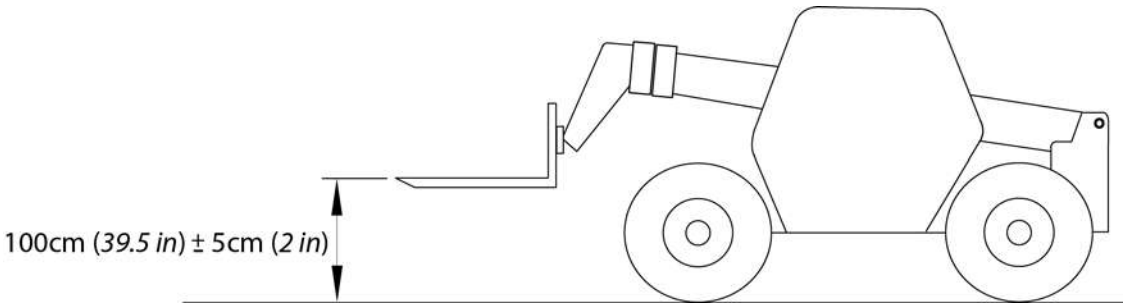


Zone d'ombre / *Masking*

Zone Visible à une hauteur de 75 cm / *Visibility at a height of 29.5 in*

7.4 - LORRY TRAILER LOADING CONDITION-TRUCKS WITHOUT ADDITIONAL MIRRORS

The boom must be fully retracted and the tilt adjusted in order to obtain a distance of 100 cm ± 5 cm (39,5 in ± 2 in) between the ground and the upper surface of the forks. A tilt greater than 5 ° is tolerated for the forks.



8 - Declaration of conformity

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

Declaration of conformity -

CE DECLARATION OF CONFORMITY

CE

Manufacturer and the person authorised to compile the technical file:

HAULOTTE GROUP
RUE DE LA LIBERATION

42152 L'HORME
FRANCE

Product Safety Manager
HAULOTTE GROUP S.A.
LA PERONNIERE BP 9

42152 L'HORME
FRANCE

Elevating Work Platform

In compliance with the Model Type	HTL4014
Commercial name	HTL 4014
Serial number	CT100679
Rated Capacity	4000 kg

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

EC Machinery Directive	2006/42/CE
This machine also fulfils the requirements of the harmonised standard	EN280
EC Directive - Electromagnetic compatibility	2014/30/CE
EC Directive - Noise Directive	2000/14/EC
Measurement method	Annexe VI 2000/14/CE
LWA, Guaranteed sound level	103
LWA, Maximum sound level	103

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

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

This certificate is no longer valid if used with an option or accessory not approved by Haulotte

C. Morano
Division Director

L'HORME
19/11/2019

E- General Specifications

Notes

F- Lubrication and maintenance

1 - Inspection program

The machine must be inspected at regular intervals in accordance with the requirements set out in the country of use and at least once a year. The purpose of the inspection is to detect any defect which could lead to an accident during routine use of the machine.

Inspections and maintenance must be carried out by a qualified company or person chosen by the owner of the machine.

The results of these visits must be recorded in a safety register created by the owner. This register as well as the list of competent repair persons must made available to the work inspector, government inspector and company safety committee at any time.

Frequency	Person-in-charge	Stakeholder	Type	Documentation
Before each hire	Owner	On-site technician	Daily inspection	Operator's manual
Before each use or each change of user	Operator	Operator	Daily inspection	Operator's manual
At intervals recommended by HAULOTTE®	Owner	On-site technician, qualified HAULOTTE Services® technician	Preventive maintenance	Maintenance Book
Before sale	Owner	On-site technician, qualified HAULOTTE Services® technician	Periodic inspection	Maintenance Book
Annually (1 year) (*)	Owner	On-site technician, qualified HAULOTTE Services® technician	Periodic inspection	Maintenance Book
After 10 years then every 5 years	Owner	Qualified technician HAULOTTE Services®	Major inspection	Maintenance Book

(*) Or according to local regulations.

2 - Preventive maintenance

Maintenance operations must be carried out by a qualified technician chosen by the owner and ensure that the machine operates correctly.

Severity of operating conditions may require a reduction in time between maintenance periods.

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

The information contained in our manual is to be complemented by the information found in the engine manufacturer's maintenance manual, which can be found on the link in the associated maintenance sheet MS0238.

Symbol meanings

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

F- Lubrication and maintenance

	Page or associated procedure	First 250H	Every 50H	Every 250H	500H	1000H	2 years or2000H	3000H	5000H	Comments
Base Assembly : Wheel, reducer, steering, wheel pivot										
Check level : rear axle differential carrier, front axle differential carrier, wheel reducers, trasfer case										
Drain : Rear axle differential casing, front axle differential casing, wheel reducers, transfer case										
Check wheel reducers clearance										
Chech brake discs wear										
Adjust Brakes										
Grease axle										
Grease cardan drive										
Grease the steering system										
Tighten the wheel nuts										
Control steering system										
Hydraulic : oils, filters and hoses										
Replace the hydraulic filter										
Check the hydraulic oil level										
Drain the hydraulic oil										
Motor										
Control radiator harness										
Drain the engine oil										
Replace the oil filter										
Replace the fuel filter										
Replace primary air filter										
Control alternator belt										
Drain the oil tank										

F- Lubrication and maintenance

Drain the cooling circuit										
Replace secondary air filter										
Check silent-blocks										
Control thermal engine spped										
Control radiator										
Control alternator functionning										
Check compressor belt tension (If air conditioning option)										
Replace compressor belt (If air conditioning option)										

F- Lubrication and maintenance

	Page or associated procedure	First 250H	Every 50H	Every 250H	500H	1000H	2 years or2000H	3000H	5000H	Comments
Motor PERKINS 1104D447 70kw										
Replace alternator belt										
Motor KOHLER KDI 2504 TCR 55,4kw and Motor KOHLER KDI 3404 TCR 55,4kw										
Replace alternator belt										
Cab										
Lubricating the suspension and the driver seat rails										
Control windshield wipers										
Control signalization working order										
Control windshield washer level										
Clean cabin filter										
Replace cabin filter										
Control seat belt										
Upper boom										
Grease the surface pads										
Control chains state and tension										
Clean and grease chains										
Check the pads - Replacement if necessary										
Control chains external wear										
Control chains internal wear										
General										
Grease the bushings and pins										
Check the bushings and pins - Replacement if necessary										
Perform previous maintenance operations if the number of hours is not reached										

3 - Periodic inspection

The Periodic inspection is a thorough inspection of the operation and safety features of the machine. This must take place prior to the sale or resale of the machine and every 1 year. Local regulations may have specific requirements on frequency, and content of inspections.

This intervention must take place after :

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

This inspection is the responsibility of the owner, and must be conducted by a qualified technician.

Under no circumstances may this inspection replace the control required by local regulations.

Use the detailed program below.

Periodic	Page or associated procedure	Periodic	OK	NOK	Corrected	Comments
Chassis assembly : Wheel, reducer, steering, wheel pivot						
Check state and inflations of tyres						
Motor						
Check there are no leaks engine components (Motor ; Hoses ; Radiator)						
Check presence and good condition of engine components						
Check the condition of the battery						
Check for visible damage and broken welds on the exhaust system						
Hydraulic : oils, filters and hoses						
Check the hoses, blocks and pumps, fittings, cylinders and the tank for the absence of leaks, deformations and damage						
General						
Check for the presence, cleanliness and readability of the manufacturer's plates, security labels, user manual and maintenance manual						
Check the cleanliness and readability of the control box						
Check chassis opening and locking of covers						
Check the condition of electrical harnesses, cables and connectors						
Check for the absence of abnormal noise and jerky movements						

F- Lubrication and maintenance

Check for the absence of visible deterioration and damage						
Check for the absence of cracks, broken welds and chipped paintwork on the structure						
Check for the absence of missing or loose screws and bolts						
Check for the absence of deformation, cracking and breakage of axis stops, bushing and axes						
Check for the absence of foreign bodies in joints and sliding parts						
Safety devices						
Test the good working of commands (manipulators, switches, buttons, horn, emergency stops, screens and lights)and working lights						
Absence of visual and audible alarms						
Test the operation of the axle locking system						
Test the operation of the load control system (Visual and sound alarms)						
Test the operation of the drive speed limiter systems						
Test the speed and behavior of movements						

4 - Major inspection

The inspection is a thorough inspection of the machine to ensure that it is fully functional. It must be carried out after 10 years then every 5 years.

This inspection is the responsibility of the owner and must be carried out by a technician HAULOTTE Services® or an authorized and qualified person.

In order to carry it out, contact the subsidiary HAULOTTE® or the authorized distributor.

5 - 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 maximum service life.
- Read all of the instructions in the guide before starting Telehandler maintenance.
- Follow the Telehandler shut-down procedure before performing any servicing or maintenance
- For all checks, park the Telehandler on flat ground, stop the engine, actuate the parking brake and lower the booms to the parked position.
- To obtain accurate fluid level readings ensure that the machine is on level ground.
- Before each check : top-up, refill or lubrication check, you must clean the filler inlets, the filler caps and the grease points.
- After lubricating the machine, actuate all functions several times to distribute the lubricants. Perform all these maintenance procedures without any accessories fitted.
- Check the state of the filling plug seals; do not forget to replace them if they are damaged or worn.
- Maintain the Telehandler and associated equipment, especially the brakes and the steering, in good condition to protect your safety and to comply with the statutory requirements.

During an intervention on the brake system accumulators :

• The telehandler must be parked on flat and level ground

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

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

- Always check the pins, the bushes, the fastening pins, etc… daily
- Incorrect or poorly performed maintenance can damage the machine.

Stop the engine before opening the canopy : Presence of moving parts that could cause bodily injuries.

F- Lubrication and maintenance

- Check that there are no tools or other objects left in the engine compartment after maintenance work has been completed.
- Drain the engine after operation when the oil is hot.

N.B.-:-MECHANICAL VIBRATIONS MAY OCCUR ON THE MACHINE DURING THE FIRST 50 HOURS OF OPERATION. THIS PHENOMENON WILL DISAPPEAR AFTER THE INTERNAL COMBUSTION ENGINE'S BREAK-IN PERIOD.

- Remove the keys from the ignition switch during maintenance work.

Do not stand close to the front or rear of the machine while the engine is running.

- Batteries, plastic objects or other components of a toxic nature that could be harmful to the environment must be disposed of in a way that does not harm. Ensure that they must be disposed of in a way that does not harm.

N.B.-:-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.

6 - Maintenance instructions

Before operate maintenance operation on hydraulic component or component localized under the boom, use safety prop as follow :

- **With machine on wheels, without load, place the boom at 24° - 25°.**
- **Put the safety prop in the boom in the same way that it is shown in the picture (it is prohibited to lift up or lift down the boom with the safety prop placed).**
- **Proceed to work under boom.**

Safety prop

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

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

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

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

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

F- Lubrication and maintenance

- To prevent any risks of fire or explosion, keep any naked 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 provided in this manual.
- Hydraulic oil leaks or fluid under pressure can cause serious injury.

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

N.B.-:-STOP THE ENGINE AND DEPRESSURIZE IN THE SYSTEM BEFORE INTERVENING ON THE HYDRAULIC SYSTEM.

N.B.-:-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 result in serious injury.

Never let anyone stand or work under the boom when it is raised unless the safety prop is installed and the cylinder is secured.

Section F 12 - Hydraulics.

Never try to repair or tighten pressurized pipes or hoses.

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 service/repair on the machine.

6.1 - CONSUMABLES (FUELS - ENGINE OIL - COOLANT LEVEL ...) - FOR MACHINES FITTED WITH ENGINE KOHLER KDI 3404 TCR TIER4F OR KOHLER KDI 2504 TCR STAGE 5 ONLY

Fuels

N.B.-:-THE FUEL TO BE USED IS REGULATED BY NATIONAL LAWS; REFER TO THESE REQUIREMENTS TO DEFINE THE APPROPRIATE FUEL. USING UNSUITABLE FUEL MAY CAUSE DIMINISHED PERFORMANCE, DIFFICULTIES IN STARTING, EXCESSIVE POLLUTION AND PREMATURE WEAR. TO ESTABLISH THE TYPE OF FUEL SUITABLE FOR THE ENGINE FITTED ON YOUR HAULOTTE® MACHINE, PLEASE REFER TO THE ENGINE MANUFACTURER'S MANUAL. THE ENGINE MAY NOT BE COVERED BY THE WARRANTY IN CASE OF DAMAGE CAUSED BY USING UNSUITABLE FUEL.

The engine fitted in your HAULOTTE® machine is designed to run only with diesel fuel containing a very low sulphur content. If the ASTM D5453, ASTM D2622 or ISO 20846 ISO 20884 test methods are used, the level of sulphur in the low sulphur content diesel fuel must be less than 15 ppm (mg/kg) or 0,0015 % by weight.

Using diesel fuel containing more than 15 ppm of sulphur in these engines may damage the anti-pollution control systems (sometimes irreversibly) or reduce the service frequency.

Table of technically permitted fuels

Engines	Fuels			
	European gas oil according to EN590	European fuel oil according to BS2869 2010 class A2 or UE equivalent	American gas oil according to ASTM D975 Grade 1D S15 American gas oil according to ASTM D975 Grade 2D S15	Japanese gas oil according to JIS K2204
KOHLER KDI 2504 TCR	✓	✗	✓	✓
KOHLER KDI 3404 TCR	✓	✗	✓	✓

Compliant

✓

Not compliant

✗

F- Lubrication and maintenance

Engine oil

Only use API CJ-4 oil or equivalent. Please refer to the table of permitted engine oils.

Not using the appropriate specification of engine oil may reduce the service life of the engine and post-treatment system.

API CJ-4 and ACEA E9 oil categories have the following chemical limits :

- 0,1 % maximum sulfated ash
- 0,12 % maximum phosphorous
- 0,4 % maximum sulfur

Table of permitted engine oils

Engines	Engine oil specification
KOHLER KDI 2504 TCR	API CJ-4 ACEA E9 ACEA E7 ACEA E6
KOHLER KDI 3404 TCR	API CJ-4 ACEA E9 ACEA E7 ACEA E6

CC, CD, CD-2, CF-4, CG-4, CH-4, CI-4 engine oils, not approved, must not be used.

Coolant

N.B.-:-THE ENGINE FITTED IN YOUR HAULOTTE® MACHINE MUST OPERATE WITH A 1:1 SOLUTION OF WATER AND GLYCOL. THIS CONCENTRATION ALLOWS THE NOX REDUCTION SYSTEM TO OPERATE CORRECTLY IN ENVIRONMENTS WHERE THE TEMPERATURES ARE HIGH.

Glycol in the coolant helps to provide protection against the following conditions :

- Boiling
- Freezing
- Cavitation of the water pump

Coolant service life

Coolant type	Service life [1], [2]
Commercial heavy-duty antifreeze that meets ASTM D6210	Every 3000 hours of operation (or every 2 years)
Water and commercial SCA inhibitor	Every 3000 hours of operation (or once a year)

1. Use the interval that occurs first
2. The cooling system must also be flushed out at this time

7 - Repairs and adjustments

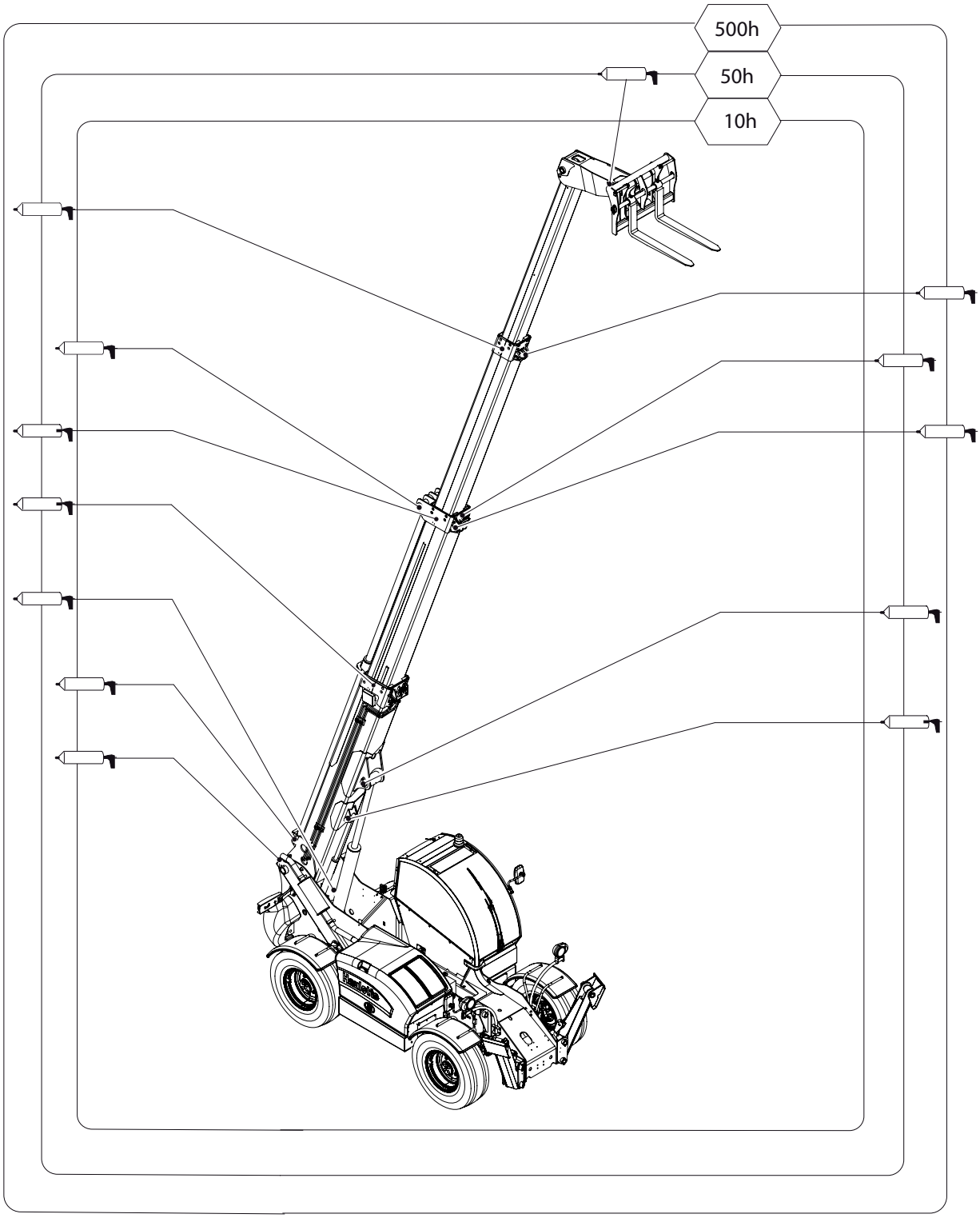
Significant repairs or adjustments on the safety systems or elements (concerns mechanics, hydraulics and electrics).

Any modifications not approved by HAULOTTE® are not permitted.

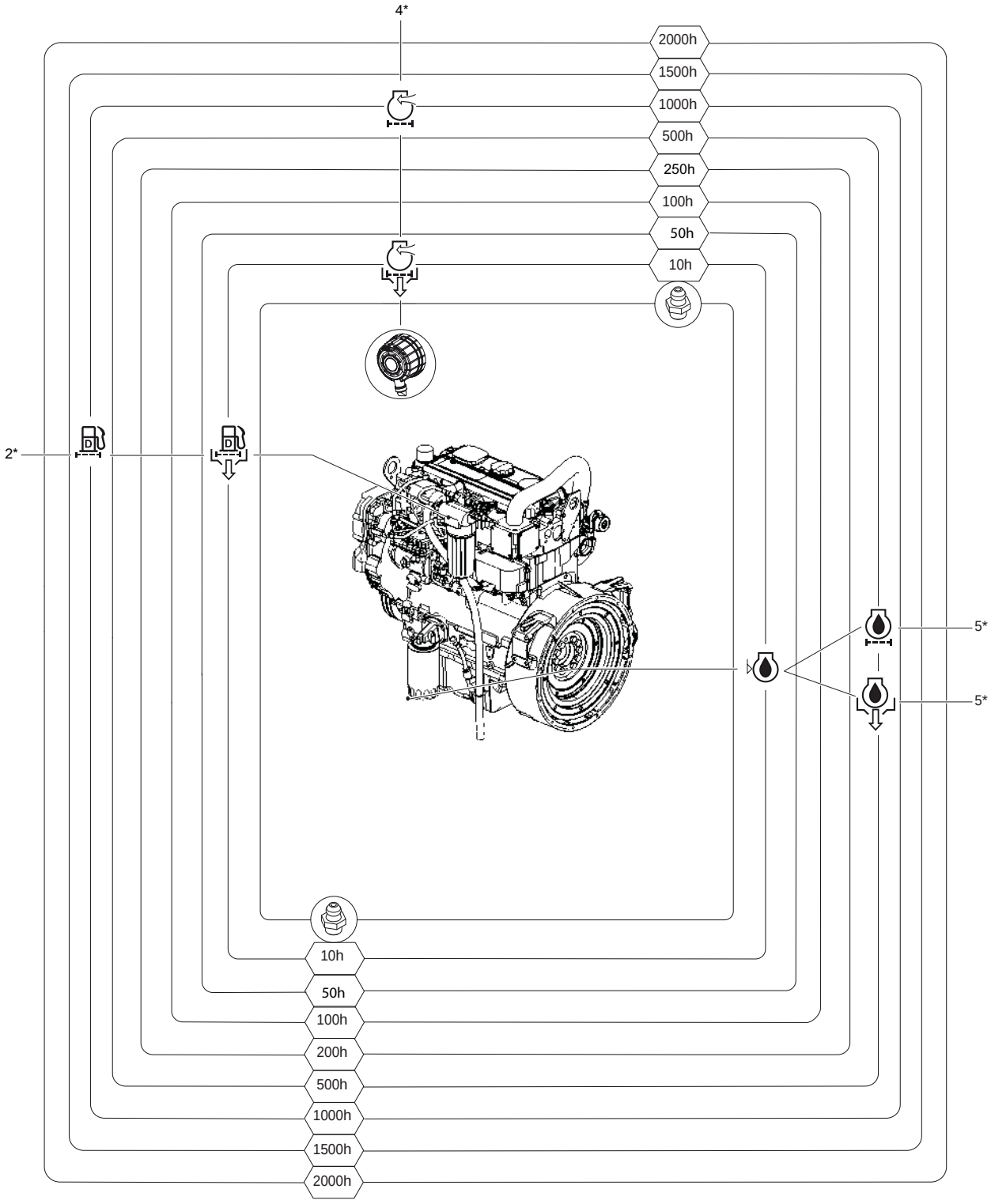
The manufacturer's product liability will be void if the work specified above is not performed by HAULOTTE® approved staff or if the spare parts are not original spare parts.

F- Lubrication and maintenance

8 - Lubrication and maintenance schedule

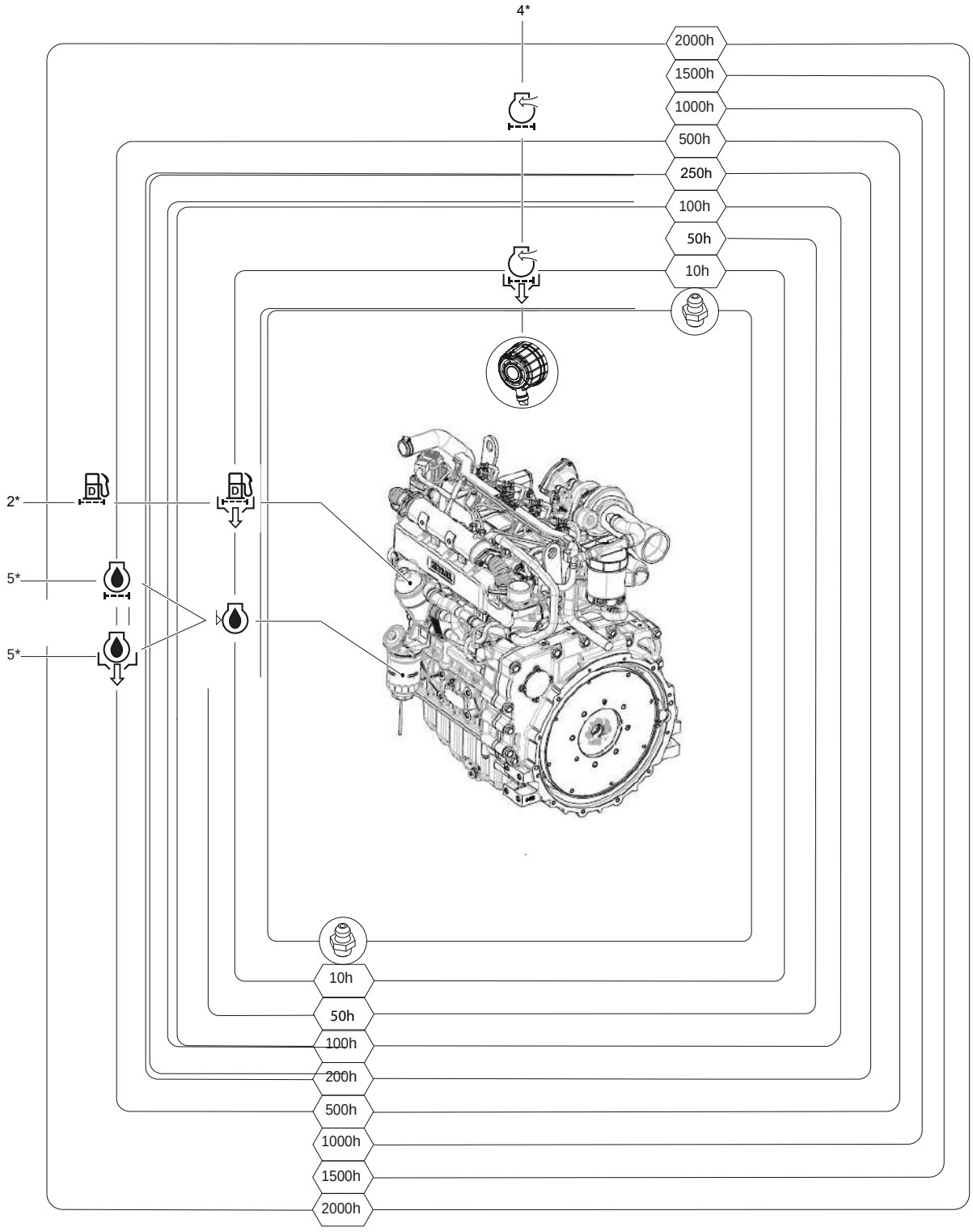


For machines fitted with : Engine PERKINS 1104D44T

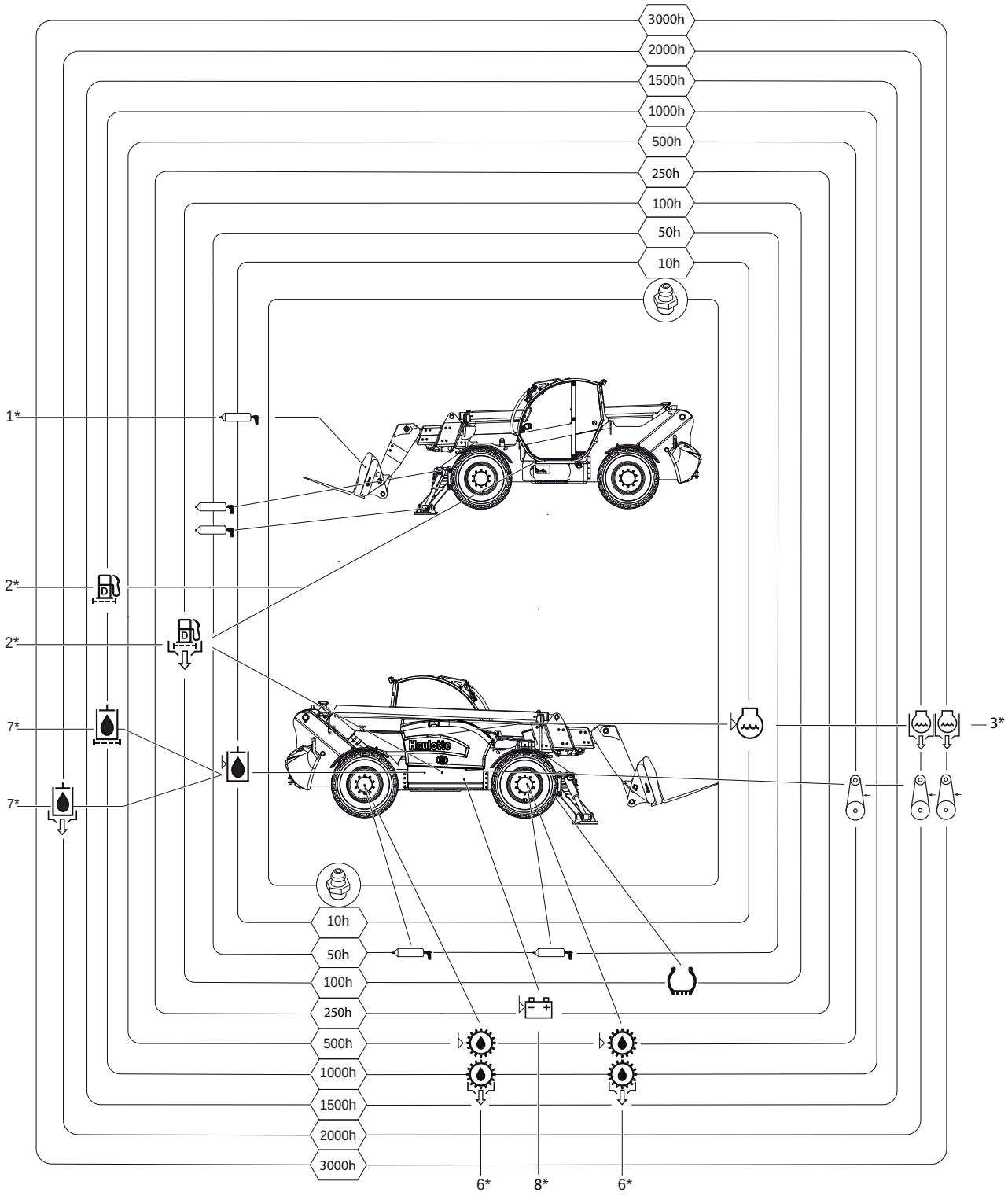


F- Lubrication and maintenance

For machines fitted with : Engine KOHLER KDI 3404 TCR TIER4F and Engine KOHLER KDI 2504 TCR STAGE 5



F- Lubrication and maintenance



F- Lubrication 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 filter (system)
	5*	Internal combustion engine
	6*	Travel axles
	7*	Hydraulic circuit
	8*	Battery

9 - General points

9.1 - MECHANICAL

9.1.1 - Bolts and Tightening torques

- Bolts that become damaged and need to be replaced, must be replaced with bolts of identical specification : Type, Length, Diameter, Class .
- Tighten to the torque indicated when reassembling.

9.1.2 - Pins and bearings

Except maintenance schedule, check pins and bearings in the following cases :

- Abnormal noise during the movements of the structure.
- Observance of excessive amounts of foreign material around the bearing extremities during the daily visual inspections.
- Poor or no maintenance.

Replace slew ring in the following cases :

- Deformations, fatigue failure of the bearings and/or the pins.
- Presence of excessive clearance between the pin and housing(> at 0,5 mm).
- Presence of deformations, cracks or breakage of the bearings and/or the pins.
- Presence of scoring on the surface of the bearing.
- If there is excessive friction.

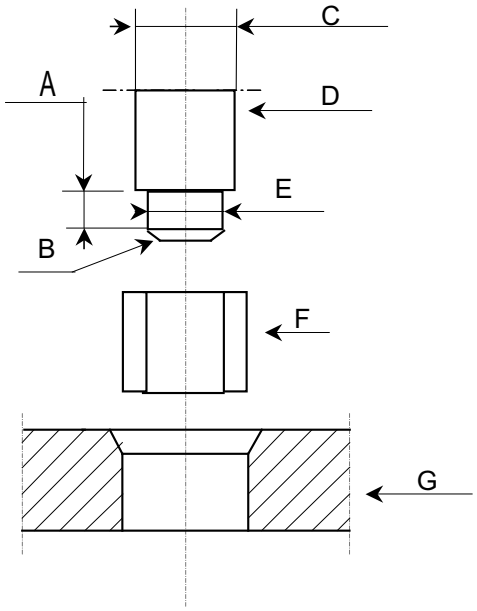
When reassembling bearings and pins ensure that :

- Lightly lubricate the housing into which the bearing is to be installed.
- Insert the bearing using a bearing drift, preferably out of mild steel.
- The bearing, the bearing drift and the bearing housing must be correctly aligned during the assembly process.

F- Lubrication and maintenance

- The recommended values for the bearing drift are given on the diagram below :

Recommended Values



Marking	Description
A	At least 0,5 times the nominal diameter
B	Make a chamfer
C	Nominal diameter of the bearing - 0,2 / - 0,3 mm
D	Bearing drift
E	Diameter of the bearing guide - 0,20 / - 0,25 mm
F	Bearing
G	Housing

- After inserting the bearing, lubricate and fit the pin.

9.1.3 - Bearings

Action on bearings needs to be taken outside the normal maintenance schedule if the following occurs :

- Abnormal noise during the movements of the structure.
- Machine not use for a period of 6 months or more.
- Environment of storage and specific uses(Strong moisture and salinity of the air).

Checking procedure :

- After disassembling the affected pivot, protect the bearing from external pollutants and potential damage.
- Clean the bearing with a suitable solvent.
- Replace the bearing in the following cases :
  - Presence of abrasions in the bearing housing and/or inside the bearing itself.
  - Presence of abrasion, wear, oxidation, deformations of the balls (or rollers) and the ring rollers.
- Reassembly of the bearing/pivot :
  - Clean the bearing housing or pin in order to remove all the foreign objects/abrasions.
  - Lightly lubricate the bearing housing and/or pin.
  - Lightly lubricate the outer ring of the bearing.
  - Fit a bearing in a boring, take support on the external ring of the bearing.
  - Fit a bearing on a pin, take support on the interior ring of the bearing.

9.2 - STRUCTURAL TEST - OVERLOAD

The following test shows that the structure of the machine is in conformity with the safety requirements.

The machine must be place on level and firm ground.

With a load corresponding to 125% of the maximum authorised load, perform all the movements from the cabin console. The forks on the telescopic handler must reach a height of approximately 1 m(3 ft4 in) above the ground. :

- Measure the distance between the ground and the telescopic handler forks.
- Leave the machine in static during 15 mn.
- Measure the distance between the ground and the telescopic handler forks.

- **If the difference between two measurements does not exceed 4 cm (1.575 in) : the test is validated**
- **If the difference between two measurements exceeds 4 cm (1.575 in), to contact HAULOTTE Services® or to carry out the additional tests described below.**

F- Lubrication and maintenance

9.3 - HYDRAULICS

9.3.1 - Replacing damaged of hoses

Replace hoses in the following circumstances :

- Tears in the outer casing.
- Cracks in the outer casing.
- Apparent shielding.
- Visible leak in the hose.
- Damage to the outer casing caused by chemical reaction from a foreign source.

To protect personal safety, observe the following conditions when disassembling or reassembling components :

- **Stow and park the machine on level cleared ground(The machine should not be tilted. The boom at horizontal position).**
- **Stow the machine completely.**
- **Place barriers around the perimeter of the work area (risk area = maximum height of the machine).**
- **Locate the faulty hose/s and their end connection points, to ensure proper machine operation after intervention.**
- **Identify and memorise the hose path of the hose to be replaced.**

Use an oil collection pan to avoid polluting the environment.

N.B.-:-SLOWLY UNDO THE HOSE END FITTING TO ALLOW THE RESIDUAL HYDRAULIC PRESSURE TO DISSIPATE.

- **After hose removal, plug the the hose ends and components the ports from which the hose was removed, to avoid polluting the hydraulic system.**
- **Check the cleanliness of the hoses and hydraulic components (no metal cutting, rubber, plastic, ...).**
- **If necessary, drain and clean the whole system (tank included).**
- **Tighten to the torque indicated when reassembling.**

Tightening torque table

Description	Torque (JIC)	Torque (ORFS)
Hose 1/4" (diameter 6mm)	1,5 daN.m(11,08 lbf.ft)	2,6 daN.m(19,22 lbf.ft)
Hose 3/8" (diameter 10mm)	3,5 daN.m(25,86 lbf.ft)	4,2 daN.m(31,04 lbf.ft)
Hose 1/2" (diameter 12mm)	5 daN.m(36,95 lbf.ft)	5,7 daN.m(42,12 lbf.ft)
Hose 5/8" (diameter 16mm)	8 daN.m(59,12 lbf.ft)	8,5 daN.m(62,82 lbf.ft)
Hose 3/4" (diameter 19)	10 daN.m(73,91 lbf.ft)	12,2 daN.m(90,17 lbf.ft)

- **Place the machine in its operating configuration.**
- **To purge the hydraulic system, operate the function/s on the machine that correspond to the hose/s that has/have been replaced, a few times.**
- **Check the oil level in the hydraulic oil tank.**
- **Check the pressure.**

9.3.2 - Evaluation of leaks on hydraulic cylinders

These measures must be taken each time an anomaly has been detected in the hydraulic cylinder during daily inspection and periodic maintenance checks.

Generic Control :

- Position the nominal load on the forks.
- Lift the loaded attachment using the cabin joystick. To activate the cylinder to be tested, proceed as follows :
  - Boom lift cylinder : Raise the boom approximately half way to its maximum angle.
  - Telescoping cylinder : Lift the boom to its maximum angle and telescope approximately 50 cm.
  - Crowding/Discharging cylinder : Place a load on the forks and put them in a horizontal position. The drift of the forks must be less than 2 ° after 15 mn.
- Measure the distance between a reference point on the attachment and the ground.
- Leave the machine in this condition for 15 mn (minutes).
- Check the distance between the reference point on the accessory and the ground again.
  - If the difference between two measurements does not exceed 4 cm : the test validates correct operation.
  - If the difference between two measurements exceeds 4 cm, contact HAULOTTE Services® or carry out the additional tests described below.

Control cylinder by cylinder :

- Position a load equal to the rated capacity on the attachment.
- Perform the movement of the concern cylinder to half of its stroke.
- Fix the cylinder with a comparator :
  - Attach the body of the comparator on the cylinder rod.
  - The needle of the comparator must be in contact with the end of the casing of the cylinder.
  - The target is to measure the creep of the cylinder rod.
- If the creep of the cylinder rod is higher than the values indicated in the table below, replace the cylinder.

Type of cylinders	Maximum drift authorised due to an internal leak of the cylinder	
Loads levelling cylinders and axle locking cylinders	After 10 mn, creep < 0,5 mm	After 60 mn, creep < 2,5 mm
Boom lifting cylinder, telescoping cylinder, compensation cylinder (crowding)	After 10 mn, creep < 1 mm	After 60 mn, creep < 6 mm

9.4 - ELECTRIC

9.4.1 - Replacing damaged cables

- Locate the faulty wire/s and its/their points of connection to ensure continuity of machine operation after the wire is replaced.
- Note the cable path to facilitate reassembly.
- Respect the order (configuration) of origin during the reassembly.

10 - procedures by periodicities

10.1 - DAILY

10.1.1 - Load moment indicator (LMI)

10.1.1.1 - Checking procedure

Perform this operation on flat ground, with the chassis level, the wheels aligned and the stabilisers lifted.

- Lift a known load with the accessory.
- Telescope until load cut-off.
- Check that the results are consistant: check that the alphabetical reference (A, B, C, D, E, F) for the boom extension and the area corresponding to the reference on the load capacity table match.

If the test gives another result, the system will not operate correctly. Reset the anti-tipping system.

10.1.1.2 - Resetting procedure

To perform this operation :

- **Raise the stabilisers.**
- **Place the machine on flat ground.**
- **Level the machine.**
- **Align the wheels.**
- **Retract the telescope section fully.**
- **Lift the boom to the maximum height.**
- **Check the temperature of the axle: the temperature of the axle must be between -20 °C (-4 °F) and 60 °C (140 °F) .**

The procedure must be carried out without any accessories or load.

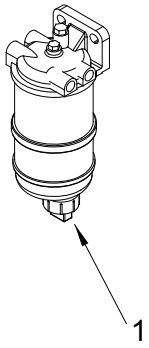
If these conditions are not satisfied, the resetting procedure may be distored and cause the weighing system to be offset.

- Press on the TEST (P219) button for 6 s until you hear the beep to start the resetting procedure.
- The procedure is executed.

If a malfunction occurs, contact HAULOTTE Services®.

10.1.2 - Diesel circuit

- To prevent condensation from forming, fill the reservoir every day after work (*Capacity* : 130 l (34 gal US)).
- Drain any condensate and clean the diesel pre-filter.
- To access the diesel pre-filter, open the engine cover. The pre-filter is located under the diesel filter
- Drain the water and dirt by removing the screw situated under the pre-filter (For machines fitted with engine PERKINS 1104D44T only).
- Refit and tighten the purge screw.



10.1.3 - Cooling circuit

- Check the coolant level :
- When the engine is cool, the liquid level must be situated between the minimum and maximum marks on the expansion bottle.
- Open the radiator and top up with fluid as necessary.
- Only refill with SHELL ANTIFREEZE -38 °C (-36,4 °F) coolant.

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

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

10.1.4 - Air filter (system)

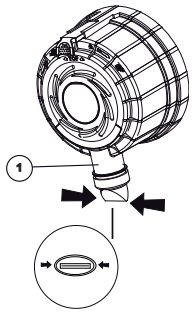
Never run the engine without an air cleaner element installed or with a damaged air cleaner element.

Do not use air cleaner elements with damaged pleats, gaskets or seals.

Dirt entering the engine causes premature wear and damage to engine components. Air cleaner elements help to prevent airborne debris from entering the air inlet.

Never service the air cleaner element with the engine running since this will allow dirt to enter the engine.

- Empty the dust filter :
  - Empty the dust evacuation valve (1) by pressing on the evacuation slot in the direction of the arrow.
  - Clean the evacuation slot.
  - Clean away any remaining dust by pressing the upper part of the valve.

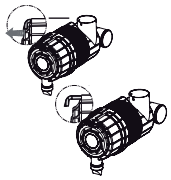


N.B.-:-If the air cleaner element becomes plugged, the air can split the material of the air cleaner element. Unfiltered air will drastically accelerate internal engine wear.

N.B.-:-Filter clogging check : Clogging is constantly being monitored via a sensor located 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.

F- Lubrication and maintenance

- Clean the primary air filter's filter cartridge :
- Remove 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 h of operation or once a year).
- Blow with dry compressed air (with a maximum pressure of 5 bar (72,5 psi)) from the inside of the filter, outwards or
- Unclog 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.
- Refit the cover, checking that the dust evacuation valve is directed downwards.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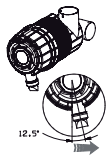

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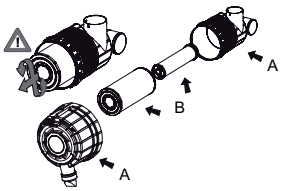

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Check the state of the sealing ring before reassembling the cartridges. Check the state of the filter element with a light source placed inside the cartridge. Change the cartridge if a hole is detected (by a light ray).

Never clean the cartridge by hitting it against a hard surface or by using hot flammable liquid.

Perform a cleaning of the primary air cleaner elements by pressurized air or vacuum cleaning.

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

N.B.-:-OPERATING IN DIRTY CONDITIONS MAY REQUIRE MORE FREQUENT SERVICE OF THE AIR CLEANER ELEMENT.

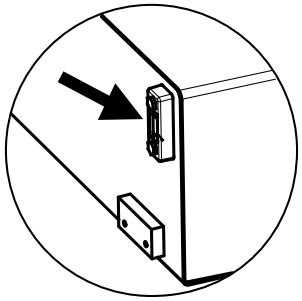
10.1.5 - Internal combustion engine

For the following operations, park the machine onto a horizontal surface and turn off the engine.

- Check the oil level :
  - Open the motor canopy, remove the oil dip stick; the level must be situated between the two minimum and maximum marks.
  - Top up as necessary via the filler.
- Check the belt tension :
  - 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 belts themselves.
  - A belt in poor condition must be replaced immediately.

10.1.6 - Hydraulic circuit

- Check the oil level :
  - Park the machine on a horizontal surface.
  - Stow the machine : With the stabilisers raised as far as possible, the fork carriage lowered as far as possible, the boom retracted, the cylinders retracted.
  - The level must be situated between the two marks, as indicated in the photo/picture opposite. Top up as necessary via the filler.



10.1.7 - Air-conditioning (Option)

Cold weather use :

- In order to guarantee the correct operation and for operational efficiency of the air conditioning system it is advisable to turn the compressor on once a week, even for a short period of time, so as to ensure that internal moving parts are lubricated.
- Warm up the engine before you turn on the compressor, this the heat produced by the engine to turn the liquid coolant accumulated in the lower part of the compressor circuit to turn into gas. Liquid coolant could damage the compressor.

10.1.8 - Tires (Tyres)

Criteria of replacement

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

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

For safety reasons, always use original HAULOTTE® spare parts that are specific to this machine. Refer to the spare parts catalog.

For safety reasons, always use original HAULOTTE® spare parts that are specific to this machine. Refer to the spare parts catalog.

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

Check the tire inflation pressure :

4,5 bar(65.26 psi) minimum (For HAULOTTE® tires/tyres, code : 2326014870 or 2326015080).

During a pressure check or an inflation operation, always face the end of the tyre; never face the side of the tyre

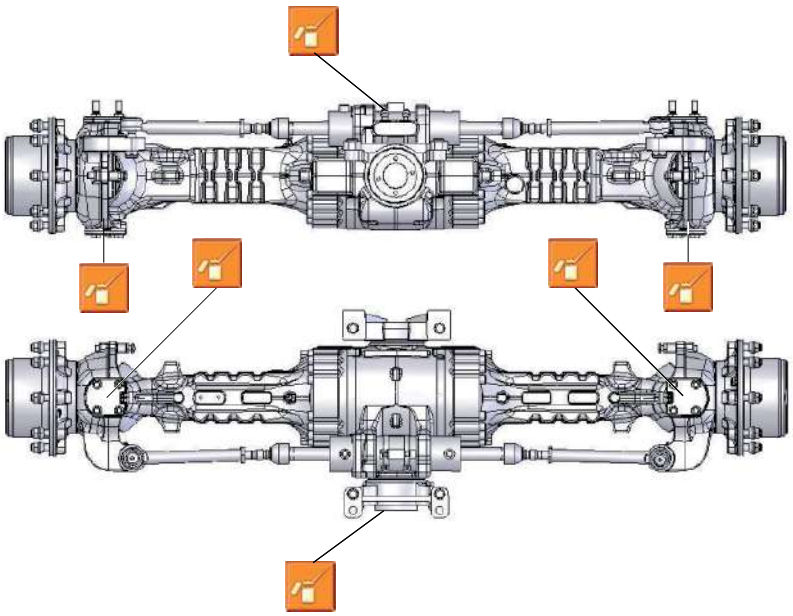
- Add air if required.
- Replace the valve cap.
- Check the wheel lug nut torque (300 Nm).

N.B.-:-PERFORM THE FIRST TORQUE CHECK AFTER THE FIRST 10 H OF OPERATION.

10.2 - EVERY 50 HOURS

10.2.1 - Front axles

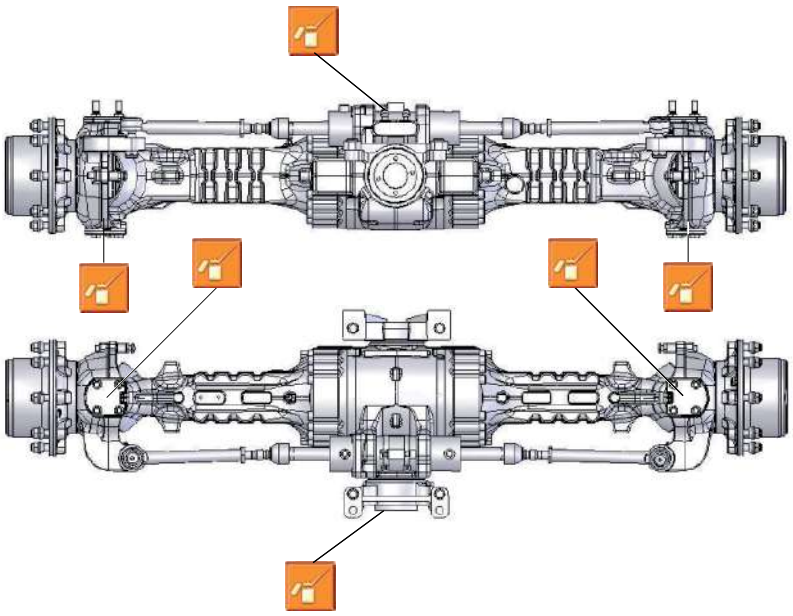
- Remove the 6 protective caps from each grease point.
- Connect the grease gun.



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

10.2.2 - Rear axles

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



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

10.3 - EVERY 250 HOURS

10.3.1 - Air-conditioning (Option)

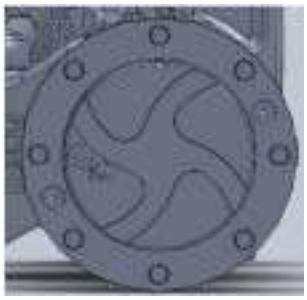
- Check the tension of the compressor driving belt : driving belt tension 50 kg (110,23 lb).

The system becomes less efficient when the circuit is being discharged. If the air conditioning unit does not work properly, have a qualified and properly equipped person examine it.

All repairs must be carried out by a qualified and authorised person.

10.3.2 - Travel axles

Refer to the machine configuration to identify the logo that appears on the wheel reducer.

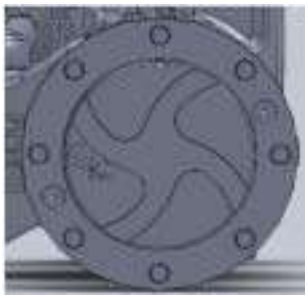


N.B.-:-THE LEVEL CHECK OPERATIONS MUST BE PERFORMED PERIODICALLY, RESPECTING THE MAINTENANCE SCHEDULE PROVIDED. IT IS RECOMMENDED THAT YOU INTERVENE IMMEDIATELY IN THE EVENT OF LEAKS OR OTHER FAULTS MAY RESULT IN A DROP IN OIL LEVELS TO AVOID ANY POSSIBLE DAMAGE TO THE MECHANICAL COMPONENTS. ONCE YOU HAVE REMOVED THE FILLING AND DRAINAGE PLUGS, THEY SHOULD BE REFITTED AGAIN AND TIGHTENED USING A TORQUE WALUE RECOMENDED BY THE MANUFACTURER.

10.3.2.1 - Checking the level of the front axle

Capacity :

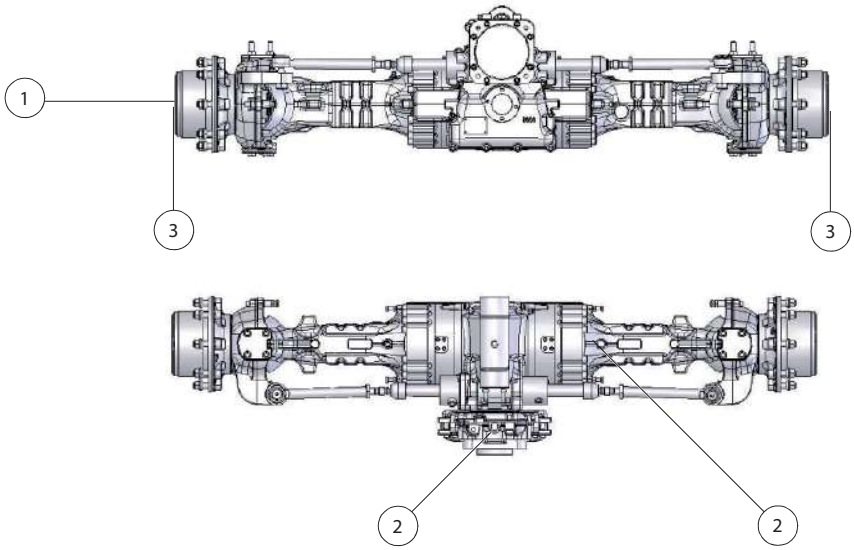
- Transfer case : 0,7 l(0,18 gal US).
- Front axle : 6,5 l(1,7 gal US).



- Before performing the oil replacement operations, firstly remove the drain plugs (2) to eliminate any pressure from inside the housing.
- Loosen the control plug (1).
- The lubricant level in the axle must be at the level of the control plug (1), otherwise top up to the correct level via the same hole.
- Refit the control plugs (1) and the drain plugs (2).

Section F 10.9 - Refer to the Lubricants and equivalents table for the type of oil used.

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



10.3.2.2 - Checking the level of the rear axle

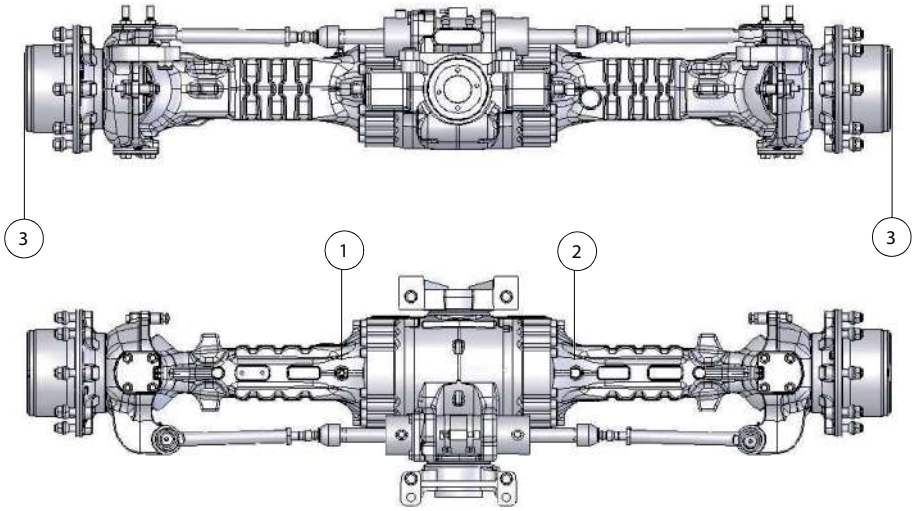
Capacity :

- Rear axle : 7,2 l(1,9 gal US).

- Before performing the oil replacement operations, firstly remove the drain plugs (2) to eliminate any pressure from inside the housing.
- Loosen the control plug (1).
- The lubricant level in the axle must be at the level of the control plug (1), otherwise top up to the correct level via the same hole.
- Refit the control plugs (1) and the drain plugs (2).

Section F 10.9 - Refer to the Lubricants and equivalents table for the type of oil used.

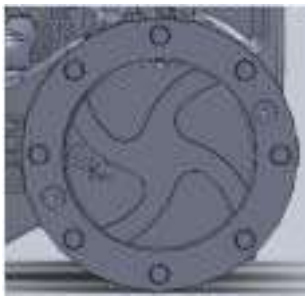
- Take advantage of this operation to clean the control plugs (1) and the drain plugs (2).



10.3.2.3 - Checking the level of the epicycloidal reducers

N.B.-:-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 0,9 l(4 x 0,23 gal US)



- When it is in the high position, loosen the plug (3) by a few turns, to release any internal pressure from the housing and then close it again.
- Drive the machine slowly to bring the plug to horizontal position.
- Loosen the plug completely : the oil level must arrive at the plug, otherwise top up to the correct level via the same hole.
- Refit the plug (3).

Section F 10.9 - Refer to the Lubricants and equivalents table for the type of oil used.

10.4 - EVERY 500 HOURS

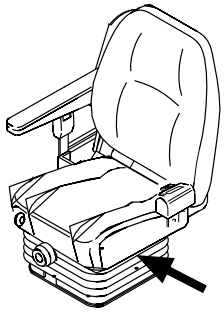
10.4.1 - Battery

Battery check :

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

10.4.2 - Suspension and driver seat rails

For lubrication operations, refer to the Lubricants and equivalents table for the type of grease to be used.



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

10.4.3 - Diesel circuit

10.4.3.1 - Changing the diesel filter

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

10.4.3.2 - Changing the diesel pre-filter

To access the diesel pre-filter, open the engine cover.

- Loosen the transparent lower cover.
- Replace the filter.
- Carefully clean the cover.
- Retighten it manually (1/4 turn after contact with the seal).
- Refit the cover.

N.B.-:-PERFORM THE FIRST PRE-FILTER CHANGE AFTER THE FIRST 500 H OF OPERATION.

10.4.4 - Internal combustion engine

For the following operations, park the machine onto a horizontal surface and turn off the engine.

Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids.

- Drain the motor oil :

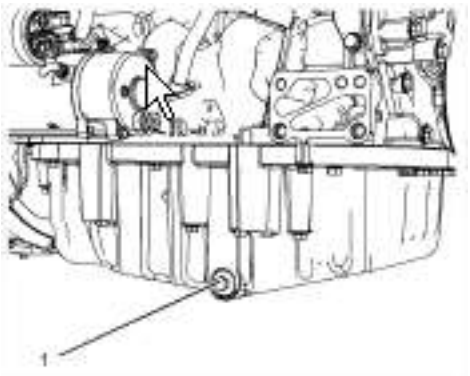
Capacity :

Engine PERKINS 1104D44T : 8,4 l(2,2 gal US) with filters.

Engine KOHLER KDI 3404 TCR - TIER4F : 9,2 l(2 gal US) - Minimum / 15,6 l(4 gal US) - Maximum with filters.

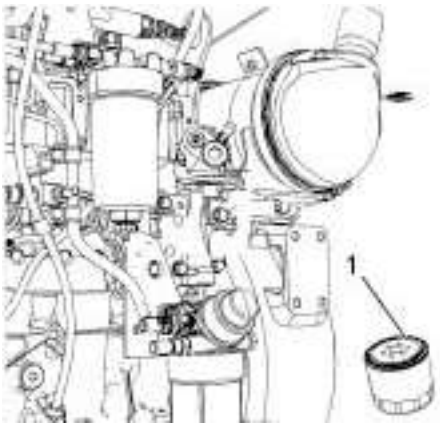
Engine KOHLER KDI 2504 TCR - STAGE 5 : 11,3 l(3 gal US) with filters.

- Drainage is performed when hot.
- Loosen the drainage plug and let the oil flow completely (1). Remove the oil filling cap.



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 carrier. Screw the cartridge manually until the seal is in place.
- Tighten the cartridge by screwing it by an additional half-turn.



- Clean the drainage plug and replace it, taking care to change the seal.
- Fill until the oil reaches the MAXI gauge mark.
- Replace the filling cap and let the engine run at idling speed for a few minutes.
- Check the seal on the oil filter cartridge.
- Stop the engine and check the oil level. Top up the oil if necessary.

N.B.-:-PERFORM THE FIRST DRAINAGE AND THE FIRST OIL FILTER CARTRIDGE CHANGE AFTER THE FIRST 500 HOURS OF OPERATION.

F- Lubrication and maintenance

10.4.5 - Engine oil service reset

After changing the engine oil and the filter, a reset must be performed to avoid engine derating.

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

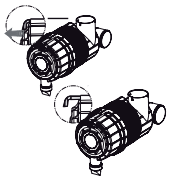
All repairs must be carried out by a qualified and authorised person.

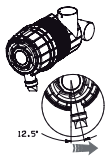
10.4.6 - Primary air filter

Never clean the cartridge by hitting it against a hard surface or by using hot flammable liquid.

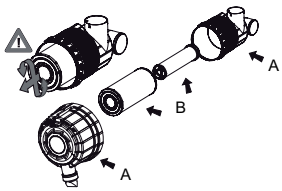
Change the filter cartridge :

- Remove 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.


1



2



3

- Change the outer filter cartridge.
- Refit 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.

10.5 - EVERY 1000 HOURS

10.5.1 - Hydraulic circuit

10.5.1.1 - Equipment hydraulic circuit

- Change the hydraulic filter cartridge :
  - Place the machine in the working position and stop the engine.
  - Open the engine compartment by removing the lower protective covers.
  - Loosen the casing from the transmission hydraulic filter.
  - Change the filter cartridge.
  - Start the engine.
  - Perform driving movements.
  - Check the oil level and top up if necessary.
  - Close the casing again.

N.B.-:-PERFORM THE FIRST FILTER CHANGE AFTER THE FIRST 500 HOURS OF OPERATION.

10.5.1.2 - Transmission hydraulic circuit

- Change the hydraulic filter cartridge :
  - Place the machine in the working position and stop the engine.
  - Open the engine compartment by removing the lower protective covers.
  - Loosen the casing from the transmission hydraulic filter.
  - Change the filter cartridge.
  - Switch on the engine and perform travel movements.
  - Check the oil level and top up if necessary.
  - Close the casing again.

N.B.-:-PERFORM THE FIRST FILTER CHANGE AFTER THE FIRST 500 HOURS OF OPERATION.

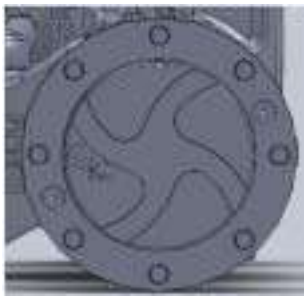
10.5.2 - Air-conditioning (Option)

- Replace the internal and external air filters as necessary.

The system becomes less efficient when the circuit is being discharged. If the air conditioning unit does not work properly, have a qualified and properly equipped person examine it.

All repairs must be carried out by a qualified and authorised person.

10.5.3 - 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 may result in a drop in oil levels to avoid any possible damage to the mechanical components.

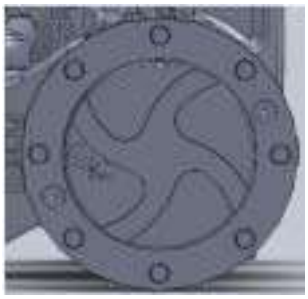
Once you have removed the filling and drainage plugs, they should be refitted again and tightened using a torque walue recomended by the manufacturer.

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

10.5.3.1 - Draining the front axle

Capacity :

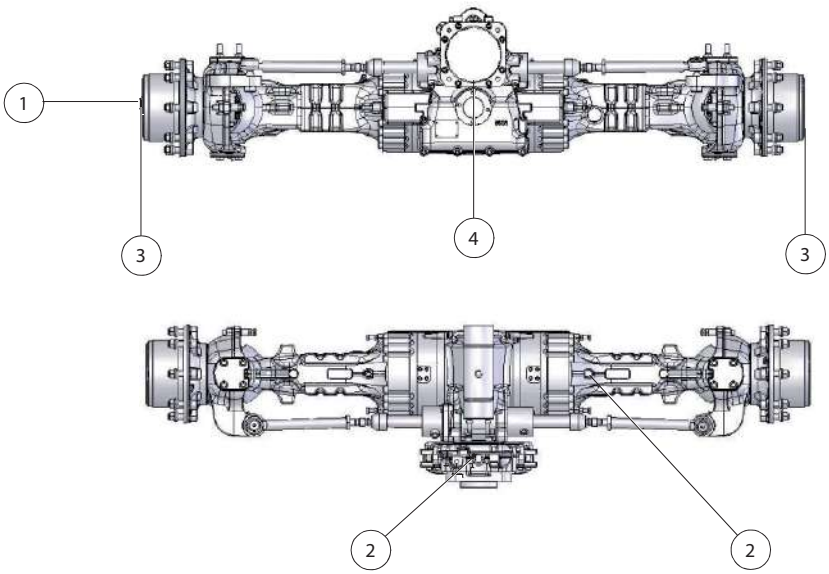
- Transfer case : 0,7 l(0,18 gal US).
- Front axle : 6,5 l(1,7 gal US).



- Before performing the oil replacement operations, firstly remove the drain plugs (2) to eliminate any pressure from inside the housing.
- Loosen the drainage plug (4) and let the oil drain out.
- Refit and tighten the drain out (4).
- Loosen the control plug (1).
- Fill the axle, the lubricant level in the axle must be level with the control plug (1).
- Refit the control plugs (1) and the drain plugs (2).

Section F 10.9 - Refer to the Lubricants and equivalents table for the type of oil used.

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



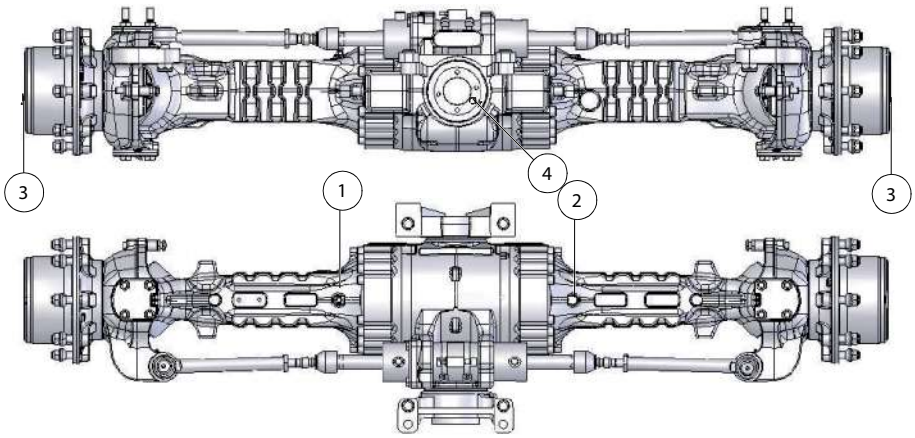
10.5.3.2 - Draining the rear axle

Capacity :

- Rear axle : 7,2 l(1,9 gal US).

- Before performing the oil replacement operations, firstly remove the drain plugs (2) to eliminate any pressure from inside the housing.
- Loosen the drainage plug (4) and let the oil drain out.
- Refit and tighten the drain out (4).
- Loosen the control plug (1).
- Fill the axle, the lubricant level in the axle must be level with the control plug (1).
- Refit the control plugs (1) and the drain plugs (2).

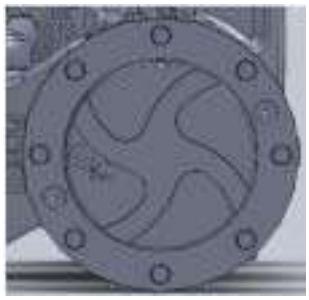
Section F 10.9 - Refer to the Lubricants and equivalents table for the type of oil used.



10.5.3.3 - Draining the epicycloidal reducers

N.B.-:-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 0,9 l(4 x 0,23 gal US)



- When it is in the high position, loosen the plug (3) by a few turns, to release any internal pressure from the housing and then close it again.
- Drive the machine slowly to bring the plug to its low position.
- Loosen the plug completely and let the oil drain out.
- Drive the machine slowly to bring the plug to horizontal position.
- Fill the reducer; the oil level must be level with the plug.
- Refit the plug (3).

Section F 10.9 - Refer to the Lubricants and equivalents table for the type of oil used.

F- Lubrication and maintenance

10.6 - EVERY 2000 HOURS

10.6.1 - Cooling system

- Checking the hydraulic pressures.

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

- Change the oil :

Tank capacity : 103 l(27 gal US)

Replace oil after each major intervention, and each time an anomaly has been detected.

- Only use oils that that match the technical characteristics that correspond to HAULOTTE® recommendations.

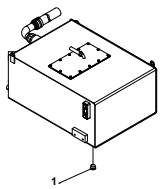
Do not mix two oils with different characteristics : If necessary, drain and clean the whole system.

- Check the cleanliness of the oil filter cartridge (no metal shavings, rubber, plastic, …) : If necessary, drain and clean the whole system.

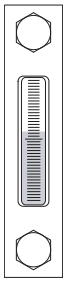
When the tank is empty :

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 cap (2).
- Loosen the drainage plug (1) and let the oil drain out.



- Fill the tank with the recommended oil until the gauge indicates the maximum level.
- Refit the filling cap (2).
- Start the engine.
- Actuate the equipment controls in both directions for approx. five minutes (without placing the cylinders at the stops 2).
- Place the machine in road position.
- The level must be as indicated in the photo/picture opposite.
  Top up as necessary via the filler.



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

F- Lubrication and maintenance

10.6.1.1 - Drain the coolant in the radiator

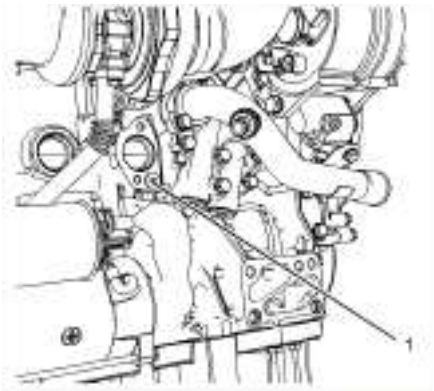
Before performing any interventions, let the engine cool down.

- Change the coolant :

Capacity : approx. 18 l(4,75 gal US).

N.B.-:-OPEN THE HEATING VALVE LOCATED IN THE CABIN WHEN DRAINING THE COOLING SYSTEM.

- Remove the filter cap from the expansion bottle filter cap.
- Loosen the drainage plug and let the coolant drain out (1).
- Empty the expansion bottle.
- Clean the system thoroughly with water (or, if necessary, with a cleaning product). In this case, retighten the plug and let the engine run at mid throttle for 10 mn, stop the engine and drain the system again.
- Refit the drain seal.



10.6.1.2 - Filling the cooling system

- Remove the filter cap from the expansion bottle filter cap.
- Fill the radiator GRADUALLY until the coolant has reached the correct level.
- Close the expansion bottle cap again.
- Switch the acceleration control lever to IDLING.
- Start the engine.
- Let the engine run AT IDLING SPEED for approx. 2 mn.
- Stop the engine.
- Open the expansion bottle and top up if necessary.

10.6.1.3 - Clean the radiator slats

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

- Clean with a pressurized jet of water or air.

Only clean with water when the engine has cooled down.

10.6.1.4 - Air-conditioning (Option)

Maintenance and repair work on the air conditioning must be carried out by a qualified and authorised person.

- Cleaning of condenser and evaporator coils.
- Cleaning of condenser water outlets.
- Recovery of coolant in order to replace the filter-drier.
- Top up with coolant and check of thermostatic regulation and pressure switches.

Any top up on the circuit must be carried out by a qualified and authorised person.

Never open the circuit as this would cause a loss of coolant. The cooling circuit contains a gas which, under given circumstances, may present some risks. This gas, i.e. the R-134a coolant, is colourless and odourless and heavier than air. It is a stable product at normal temperature.. The compressor is fitted with a gauge to check the oil level : Never unscrew this lid, as this would discharge the system. The oil level is only checked when the oil is changed.

10.7 - EVERY 5000 HOURS

10.7.1 - Internal combustion engine

- Change the engine belts (For KOHLER KDI 3404 TCR - TIER4F and KOHLER KDI 2504 TCR - STAGE 5 engines).

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

All repairs must be carried out by a qualified and authorised person.

10.8 - EVERY 10 YEARS

10.8.1 - Replacement of the brake circuit accumulators

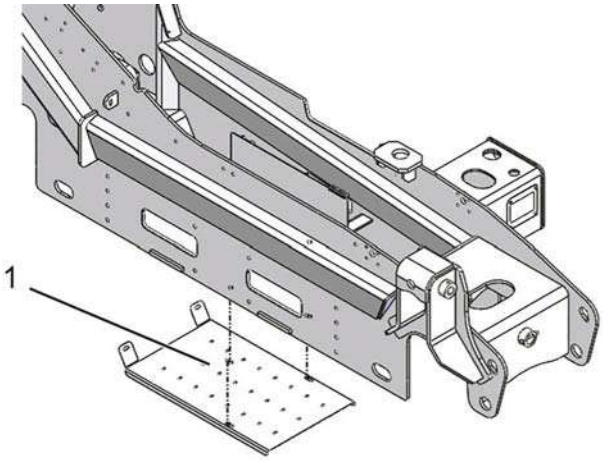
Replacement involves :

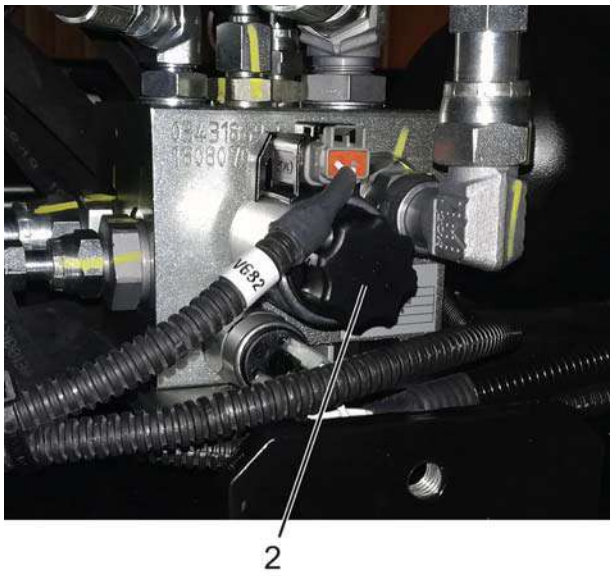
- Accumulator 1 l(0,26 gal US) : Parking brake circuit.
- Accumulator 0,75 l(0,20 gal US) : Service brake circuit.

For the following operations, park the machine onto a horizontal surface and turn off the engine.

Never undertake maintenance on the accumulators with the engine running.

10.8.1.1 - Parking brake





Draining the accumulator :

- Remove the plate (1).
- With the engine stopped, manually operate the solenoid valve (2) 50 times on the braking unit to release the accumulator pressure.

Only begin working on the accumulator 24 h minimum after the previous time the engine was started. This is the time necessary for the accumulator to fully discharge to allow it to be removed and replaced safely.

Maintenance operations on accumulators are dangerous (pressurised oil) ; the procedure must be strictly adhered to and extreme caution must be exercised when removing this part.

10.8.1.2 - Service brake

Draining the accumulator :

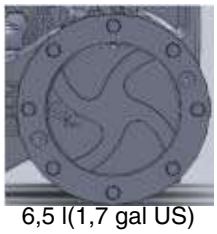
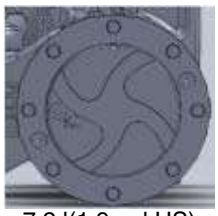
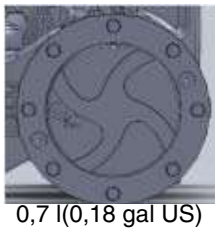
With the engine stopped, press the brake pedal in the cab down fully 50 consecutive times to release the accumulator pressure.

The accumulator can be safely removed and replaced.

Maintenance operations on accumulators are dangerous (pressurised oil) ; the procedure must be strictly adhered to and extreme caution must be exercised when removing this part.

N.B.-:-ACCUMULATOR INFLATION PRESSURE MUST BE CHECKED REGULARLY ONCE A YEAR.

10.9 - 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				
Upper boom		Grade 2 ou 3			Multimove 2				
Driver seat rails						Multi-Purpose Grease (Moly)			
Oils									
Front axle and differential**	 6,5 l(1,7 gal US)	SAE 80W90*						ROTRA MULTI THC/C 80W90	SPIRAX LS 80W90
Rear axle and differential**	 7,2 l(1,9 gal US)	SAE 80W90*						ROTRA MULTI THC/C 80W90	SPIRAX LS 80W90
Wheel reducer**	 0,9 l(0,23 gal US)	SAE 80W90*	MIL-L2105 API GL5	ENERGEAR 90 80W90	TRANSELF TYPE 80W90	ESSO GEAR GX SAE 80W90		ROTRA MULTI THC/C 80W90	SPIRAX LS 80W90
Transfer case**	 0,7 l(0,18 gal US)	SAE 80W90*	MIL-L2105 API GL5	ENERGEAR 90 80W90	TRANSELF TYPE 80W90	ESSO GEAR GX SAE 80W90		ROTRA MULTI THC/C 80W90	SPIRAX LS 80W90
Hydraulic circuit***	175 l(46,2 gal US)	HV 46		ENERGOL SHF-HV 46	HYDRELF DS46	INVAROL EP46	DTE 15M SERIE		HYDRAULIC PW 46
Internal combustion engine (PERKINS 1104D44T)	8,4 l(2,2 gal US)	SAE 15W40	MIL-2140E	VANELLUS C5 DIESEL5 3 15W40	ELF PERFORMANCE SUPER D 15W40	ESSO TUBE XT301 SAE 15W40	DELVAC M 15W40		RIMULAX 15W40

Internal combustion engine (KOHLER KDI 3404 TCR - TIER4F)	9,2 l(2 gal US) - Minimum 15,6 l(4 gal US) - Maximum	SAE 15W40							RIMULA R5 LE 10W-40
Internal combustion engine (KOHLER KDI 2504 TCR - STAGE 5)	11,3 l(3 gal US)	SAE 15W40							RIMULA R5 LE 10W-40

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

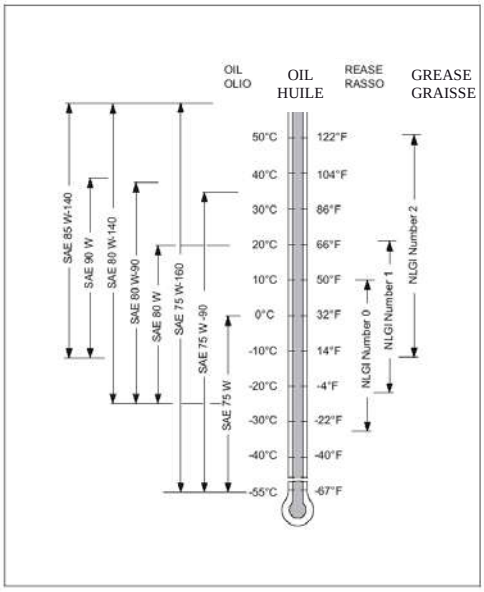
** : The axle manufacturer recommends using SHELL or AGIP products.

N.B.-:-THE OILS INDICATED ABOVE ARE VALID FOR USE AT AMBIENT TEMPERATURES OF BETWEEN -15 °C (5 °F) AND 40 °C (104 °F) . IF THE EQUIPMENT OPERATES OUTSIDE THIS TEMPERATURE RANGE, REFER TO THE OIL VISCOSITY TABLES BELOW.

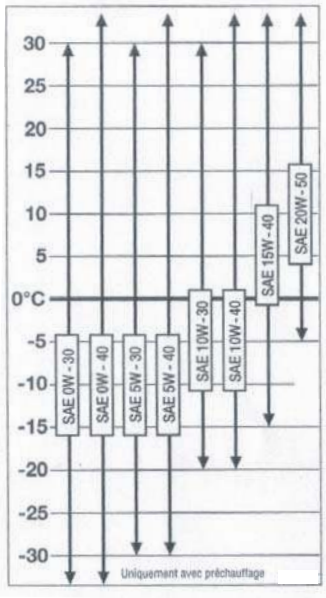
*** : Below an ambient temperature of -15 °C(5 °F) , use TELLUS ARTIC OIL 32 (SHELL). Above an ambient temperature of 45 °C(113 °F) , use TELLUS OIL T68 (SHELL). If a biodegradable oil is required, use TELLUS naturel HSE 46 (SHELL), at interval of oil change every 1000 h.

F- Lubrication and maintenance

Axle oil viscosity according to the ambient temperature



Engine oil viscosity according to the ambient temperature



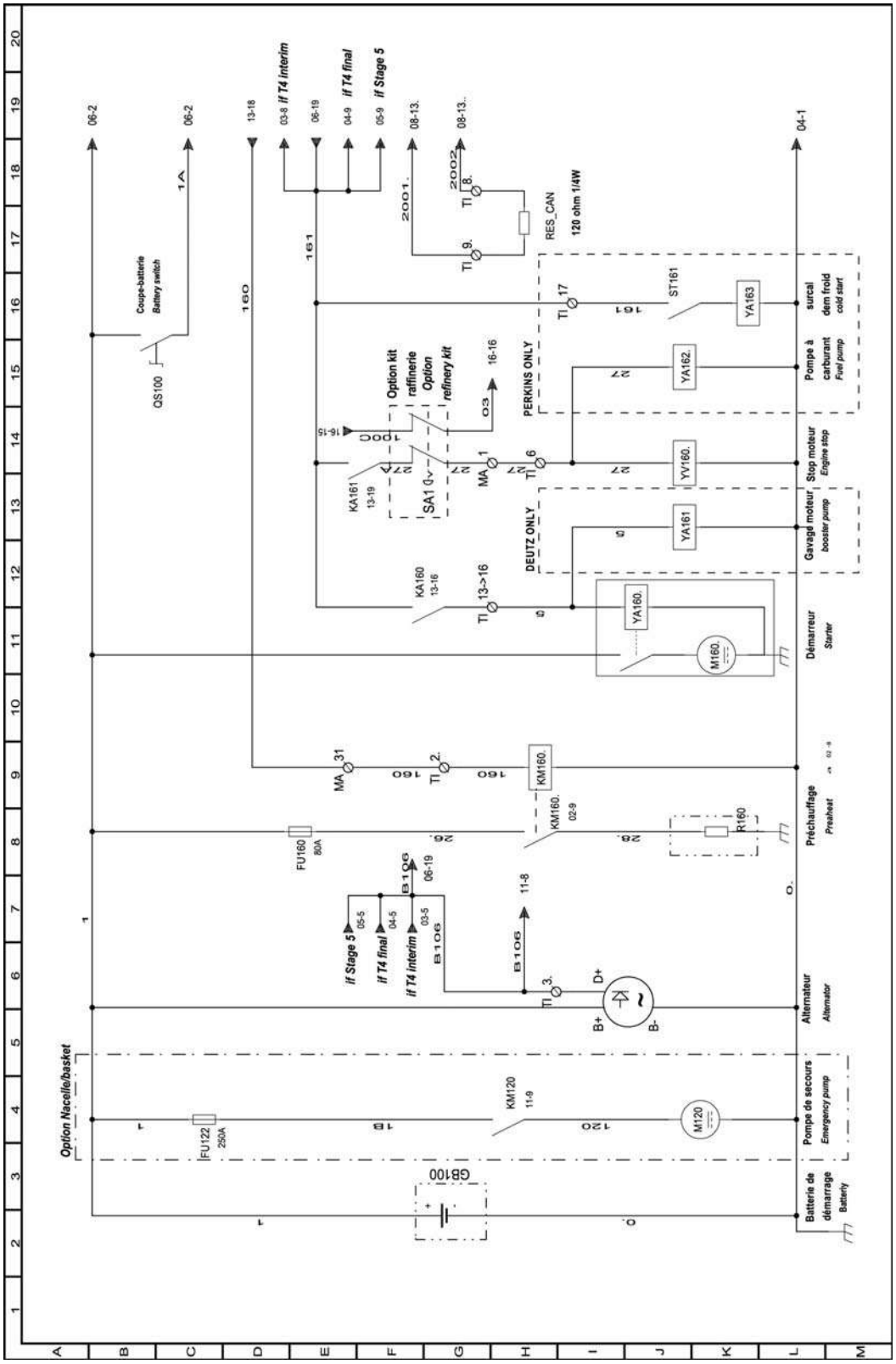
F- Lubrication and maintenance

Notes

11 - Electric circuit

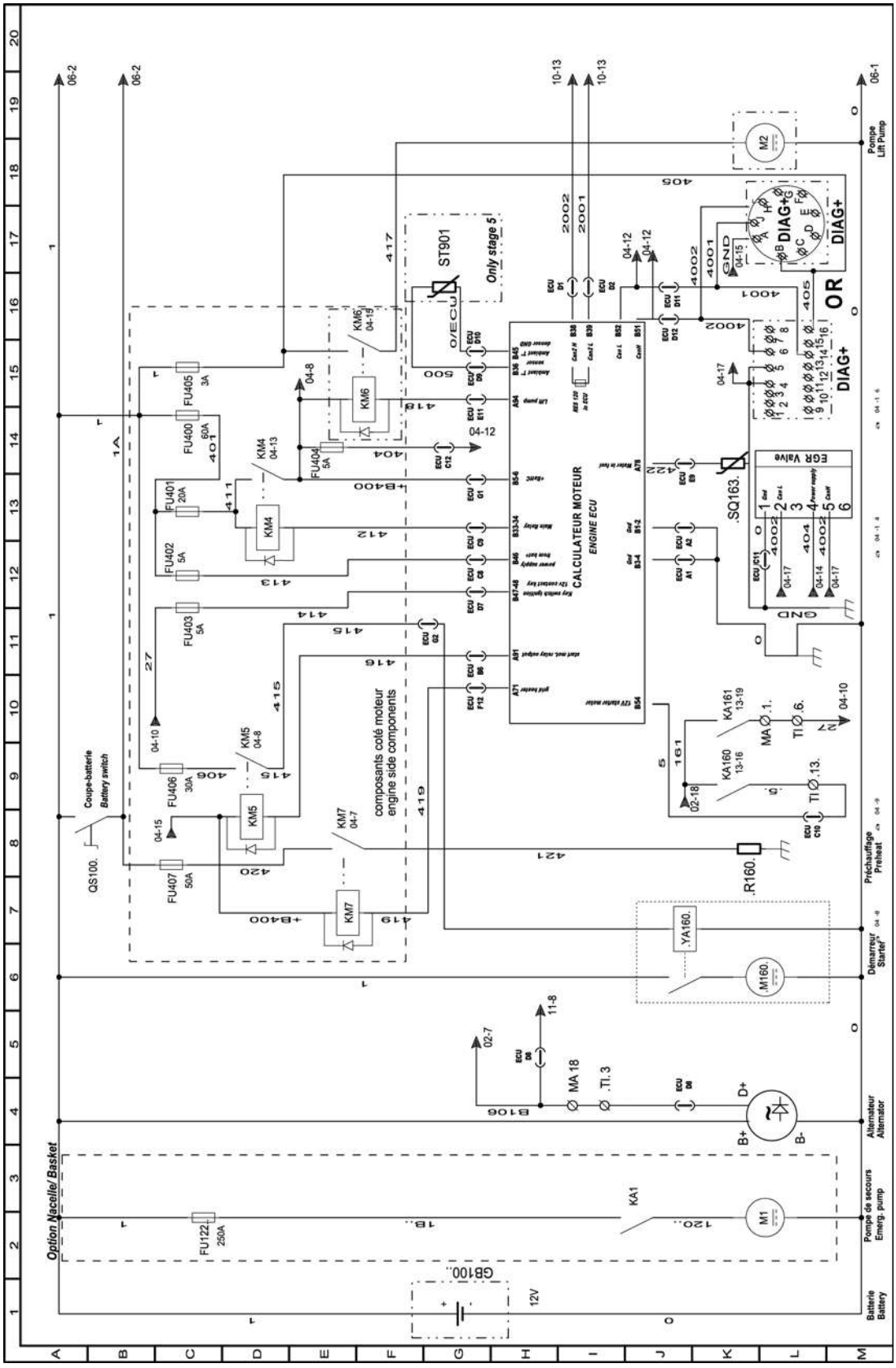
11.1 - ELECTRIC DIAGRAM

Engine part Perkins 1104D44T - TIER III - 107P348330T - folio 2

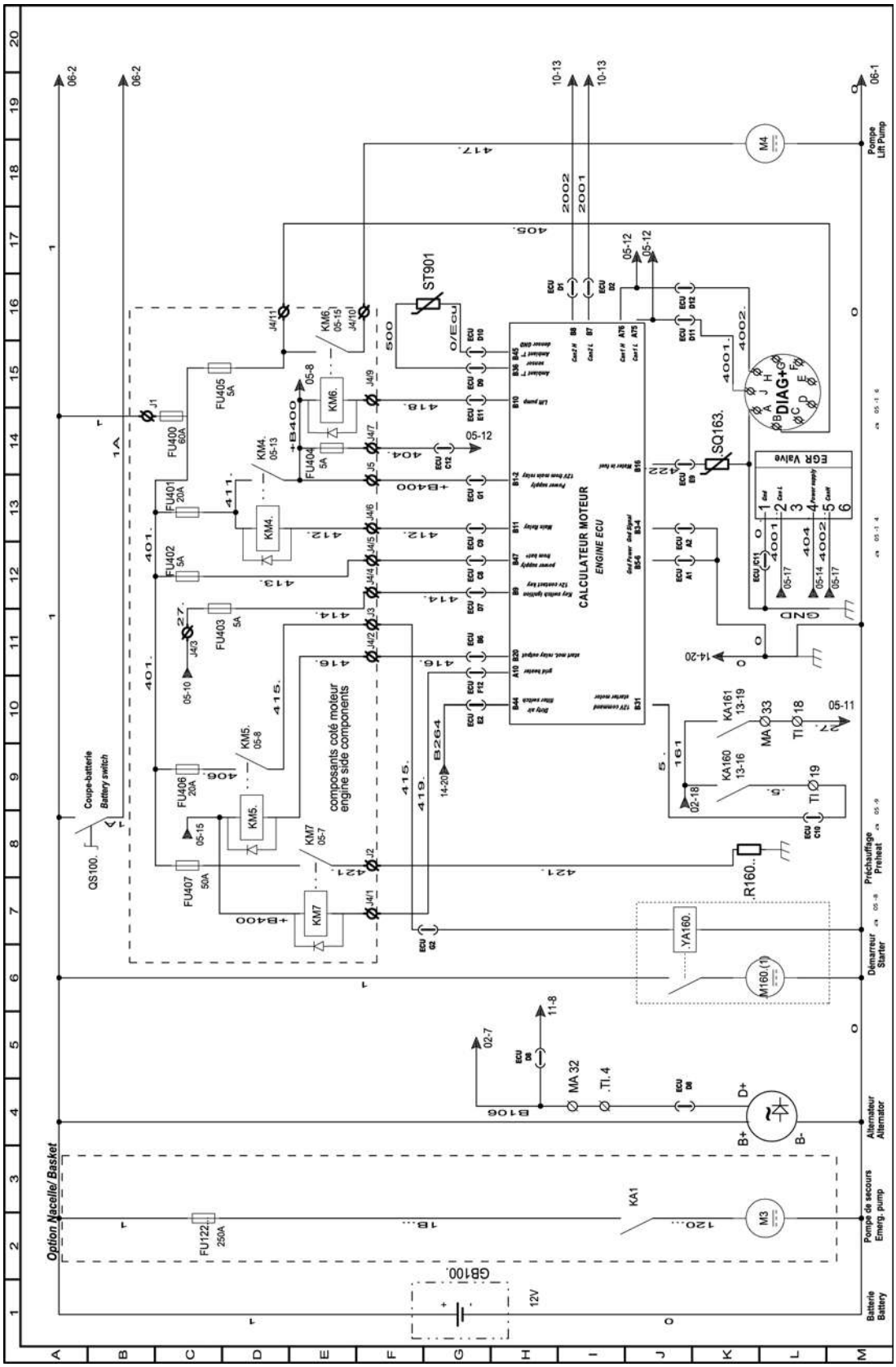


F- Lubrication and maintenance

Engine part Kohler KDI 3404 TCR - TIER IVF & Kohler KDI 3404 TCN - STAGE 5 - 107P348330T - folio 4

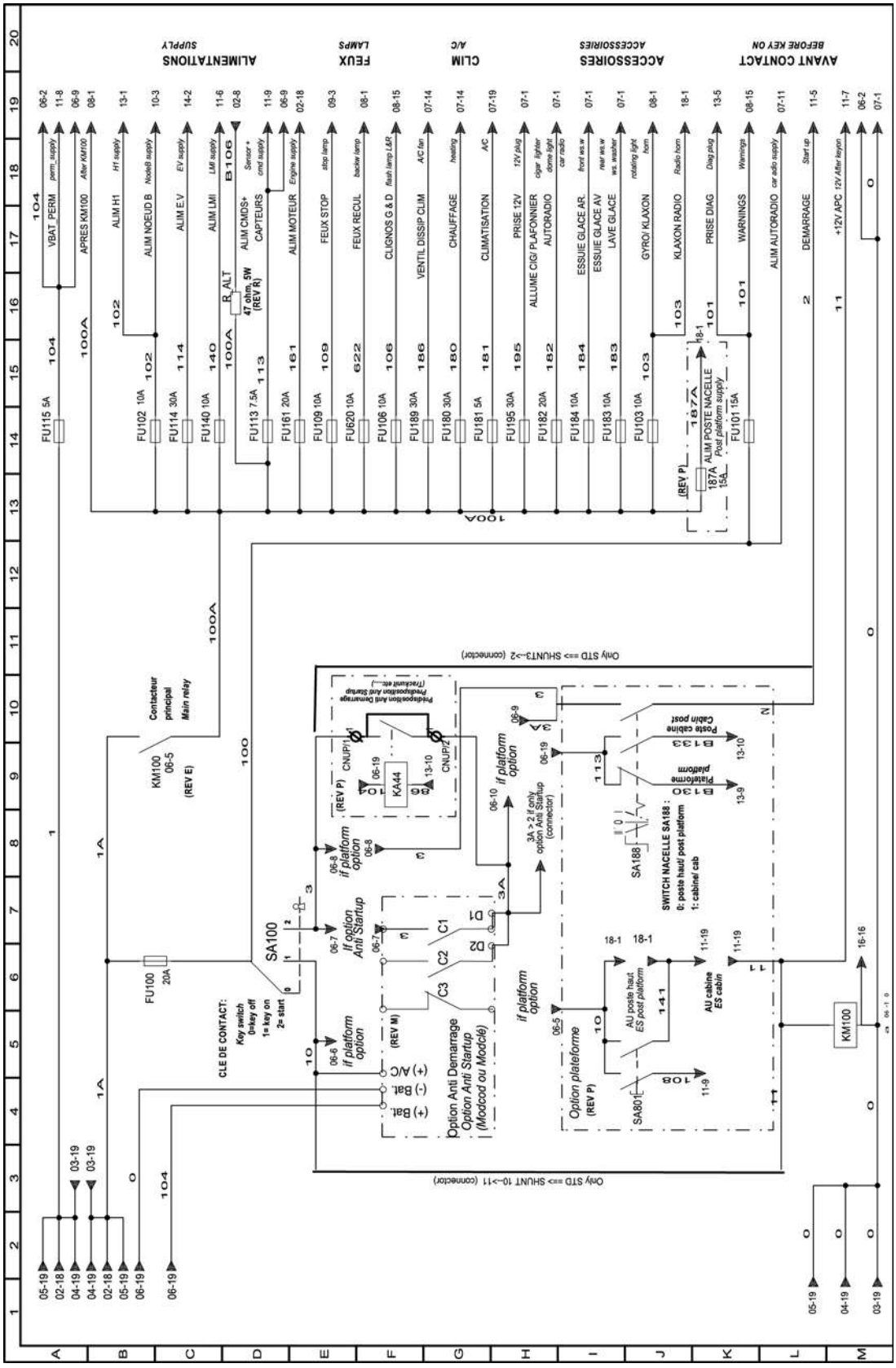


Engine part Kohler KDI 2504 TCR - STAGE 5 - 107P348330T - folio 5

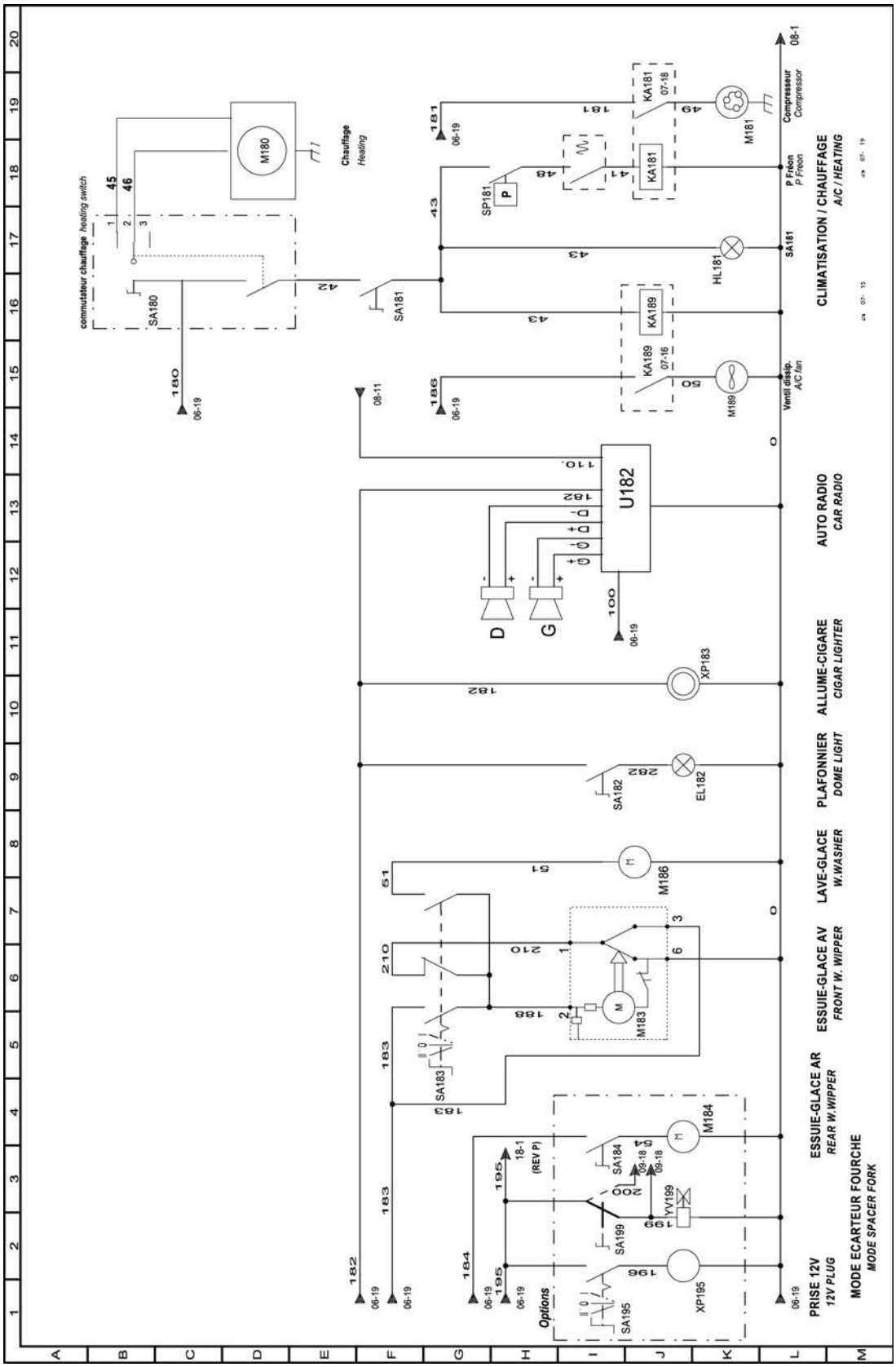


F- Lubrication and maintenance

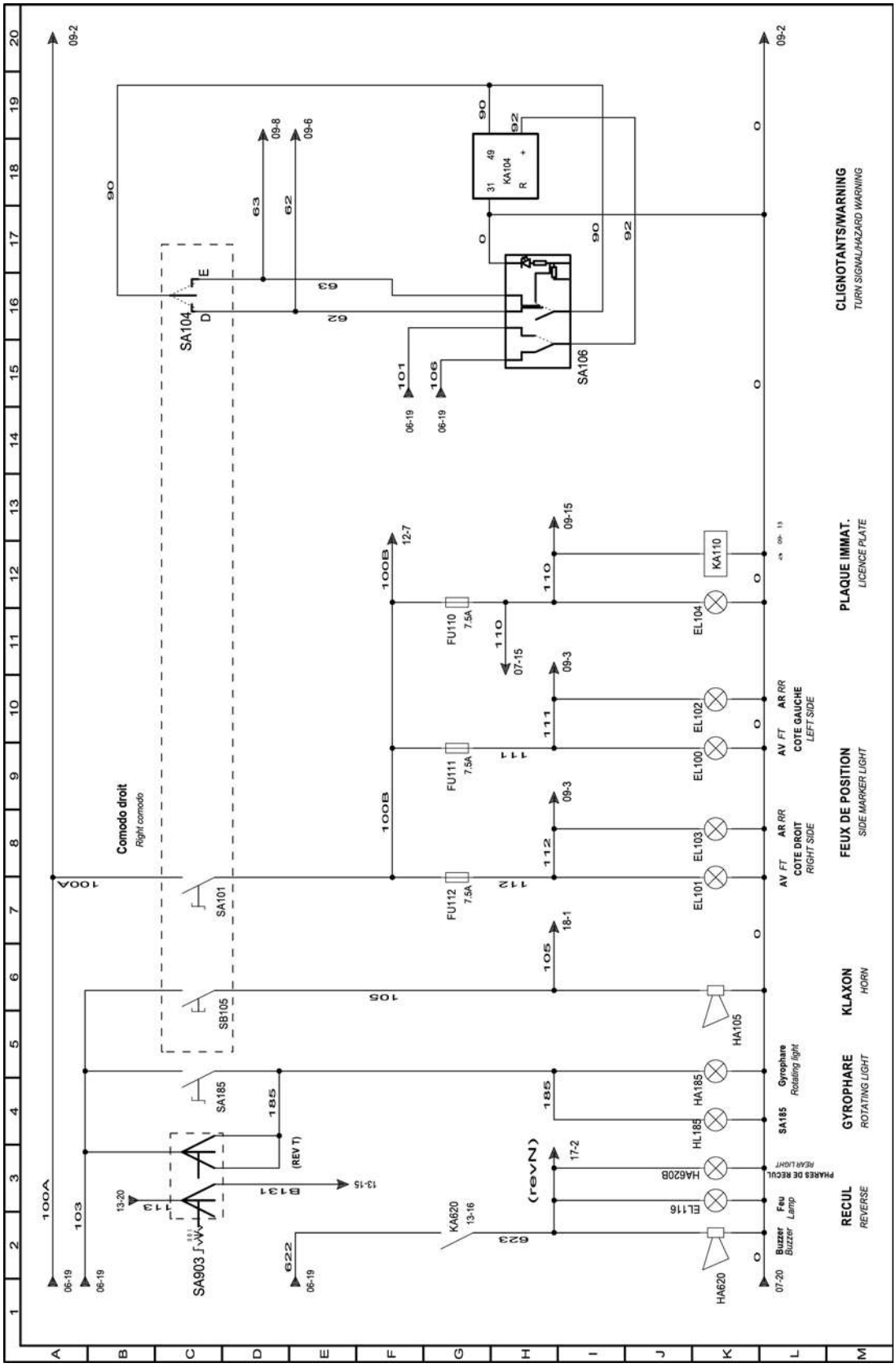
Fuses supply part - 107P348330T - folio 6



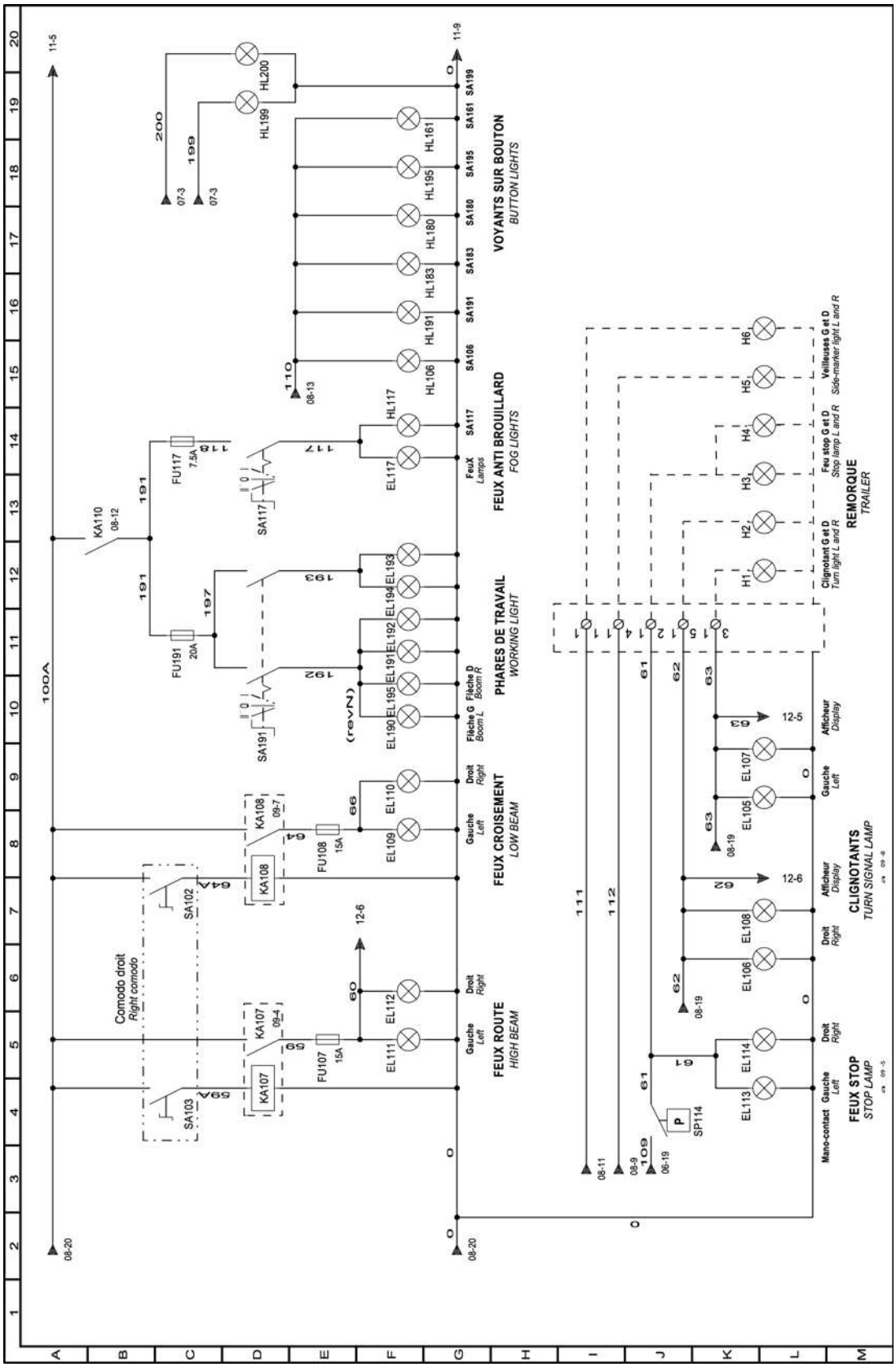
Car radio, air conditionning, cabin access part - 107P348330T - folio 7



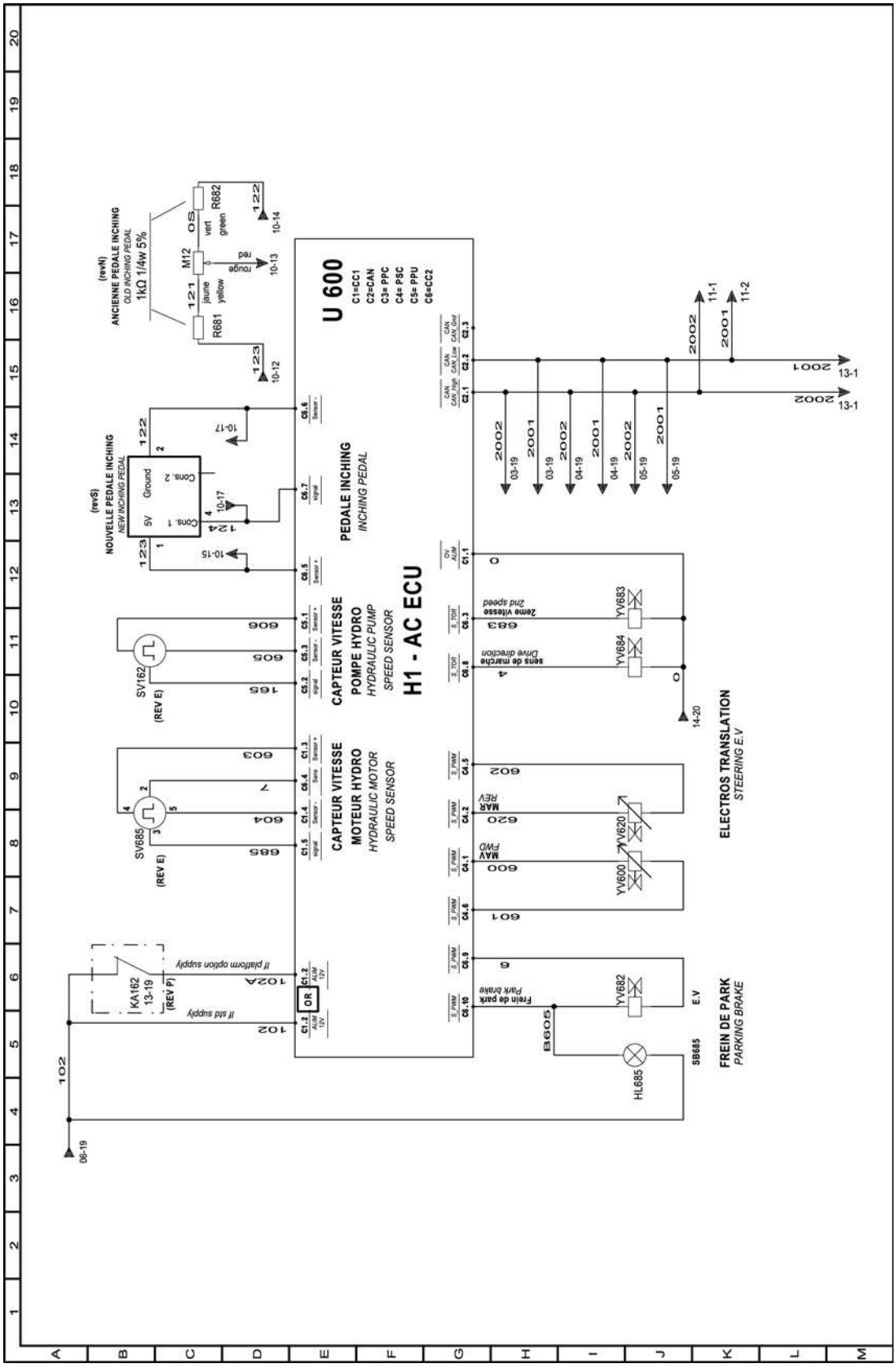
Signalling part 01 - 107P348330T - folio 8



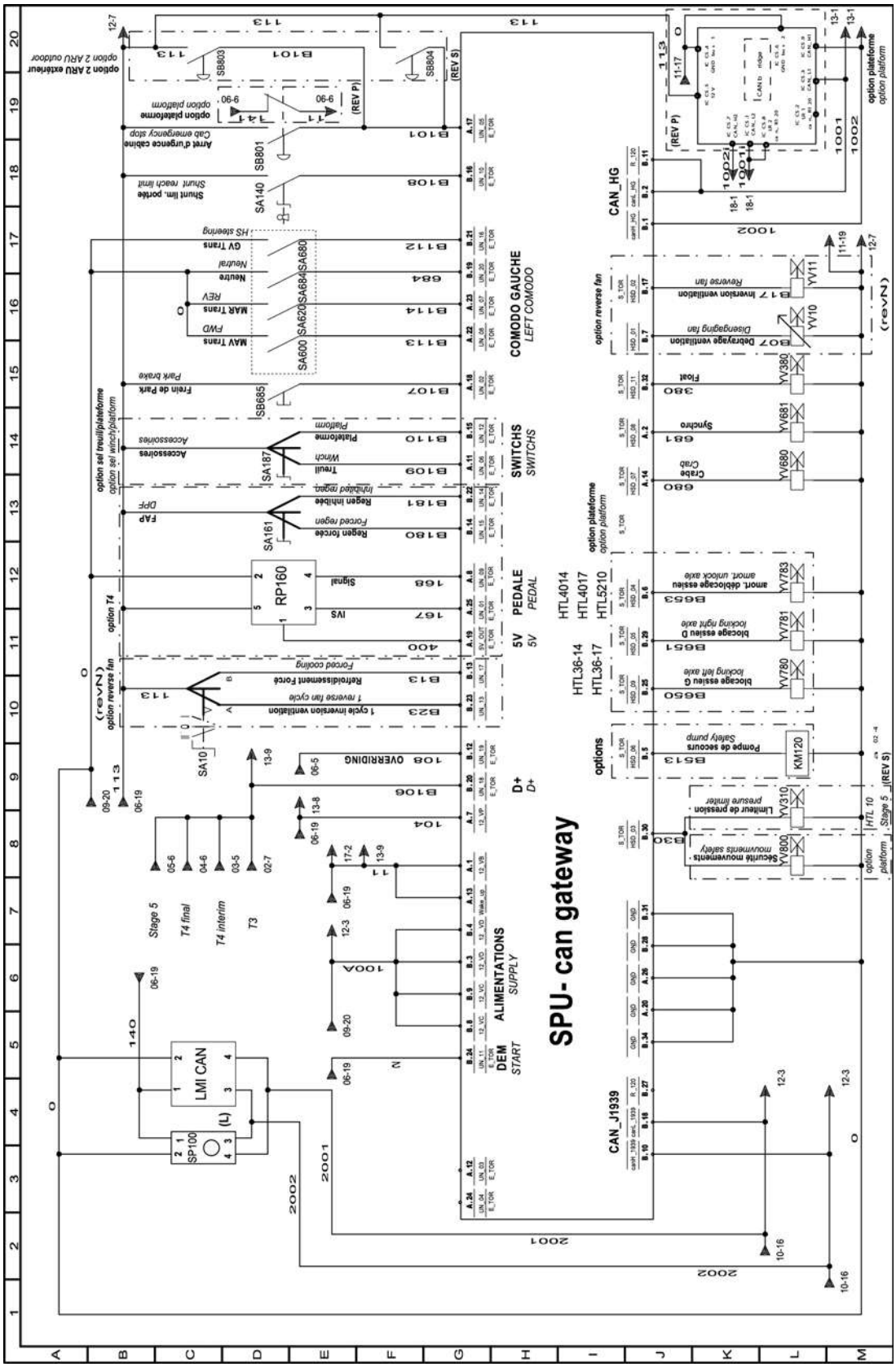
Signalling part 02 - 107P348330T - folio 9



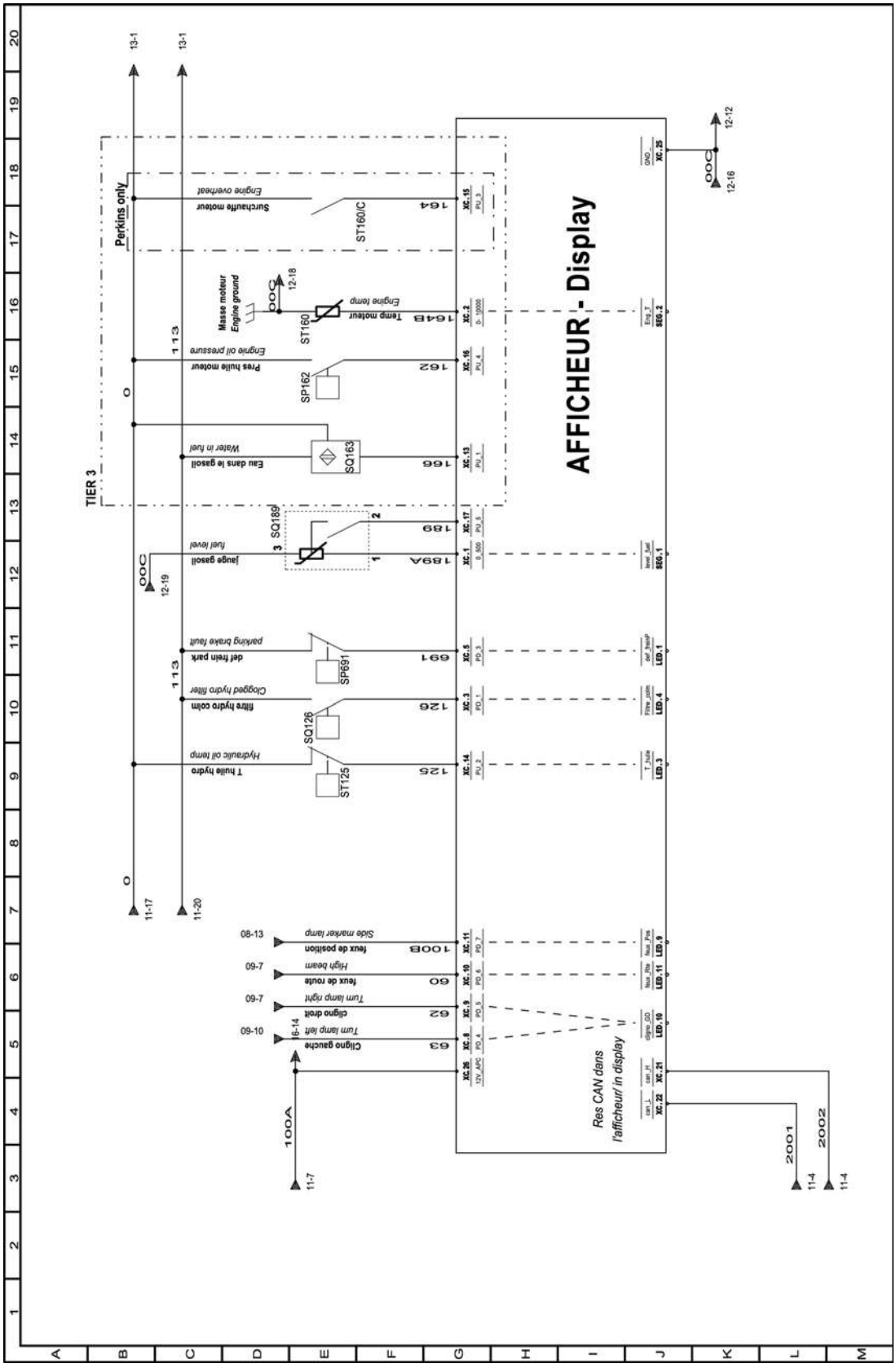
Engine control unit SAUER part - 107P348330T - folio 10



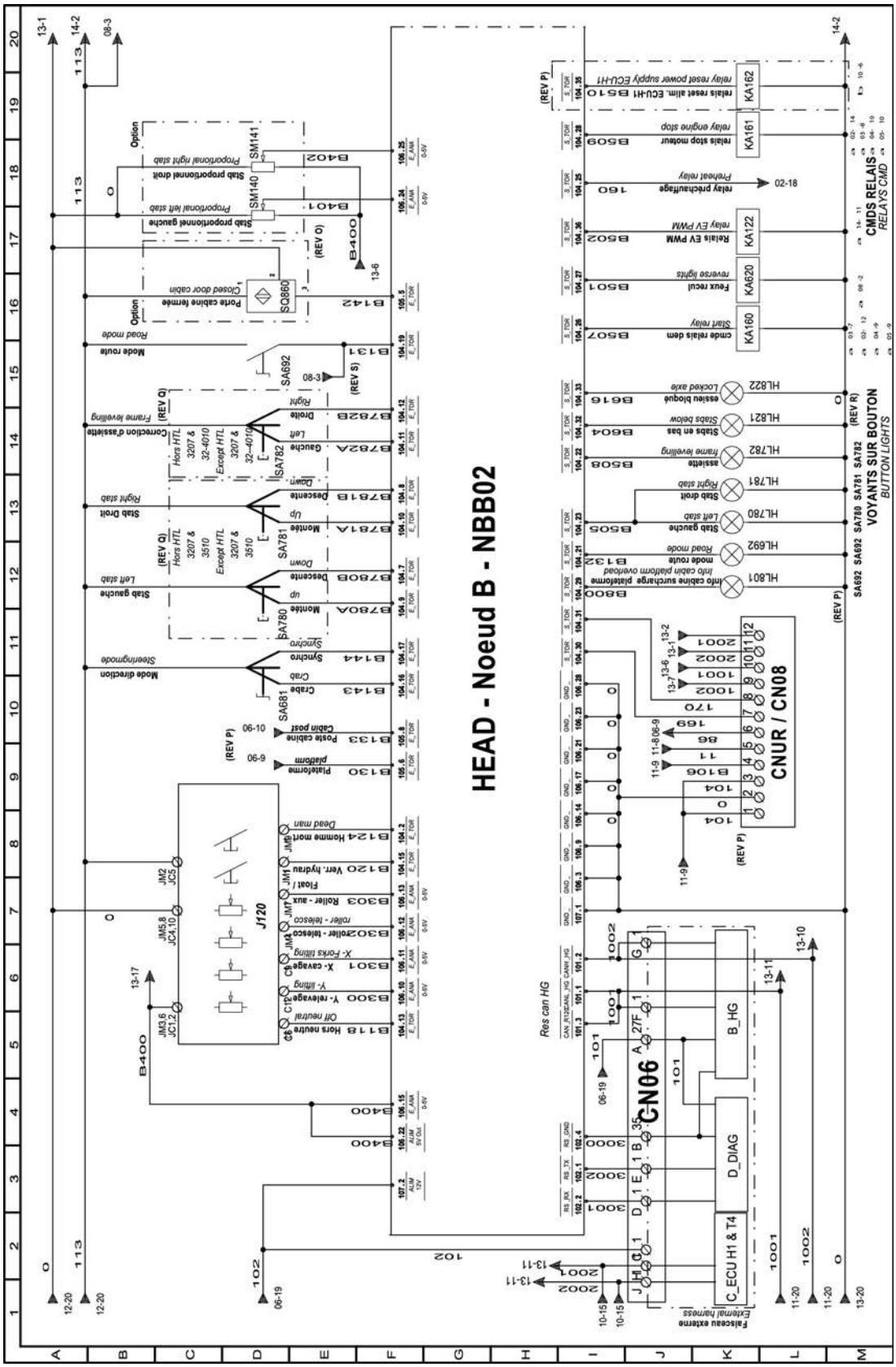
Engine control unit SPU part - 107P348330T - folio 11



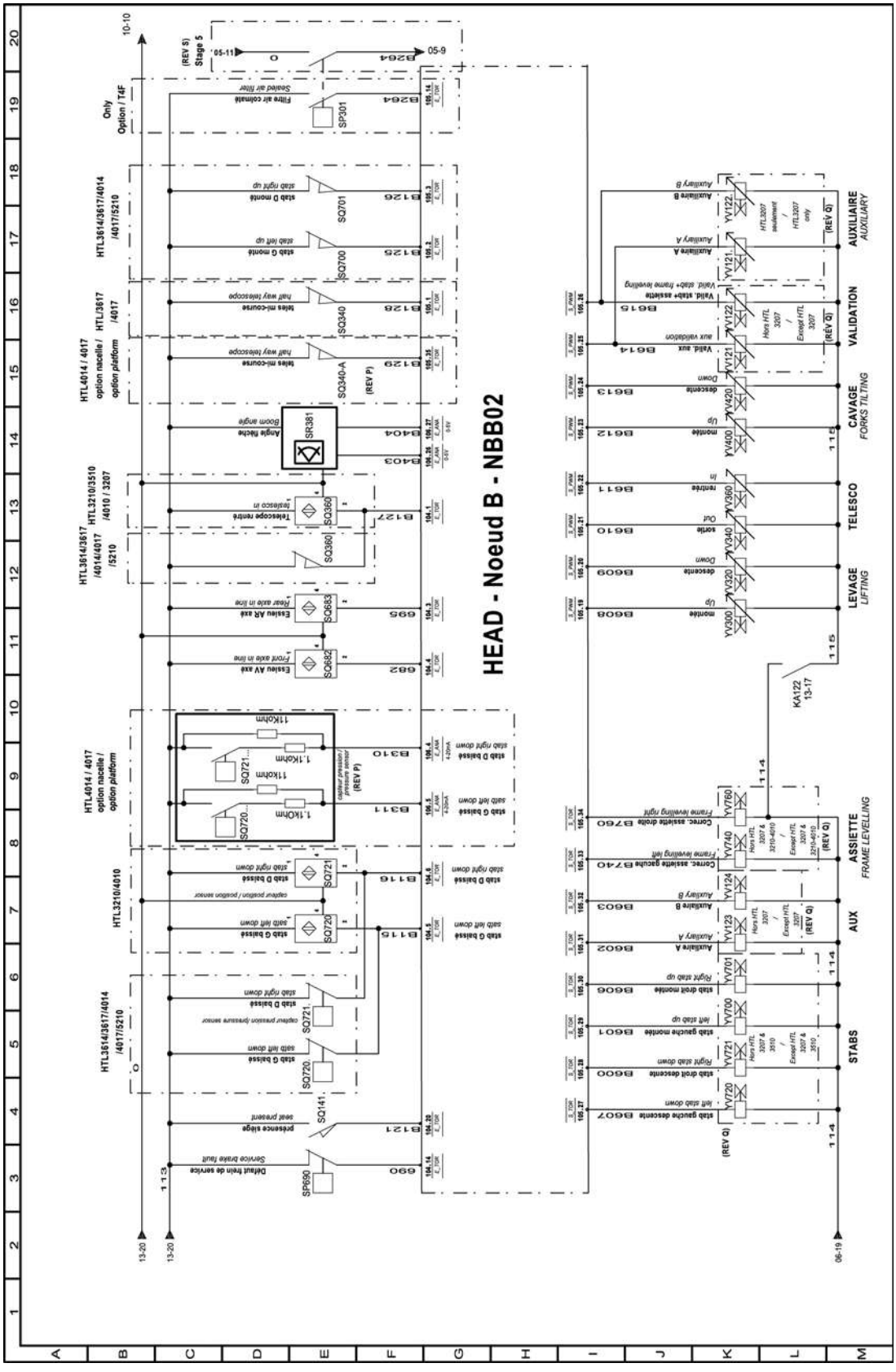
Display part - 107P348330T - folio 12



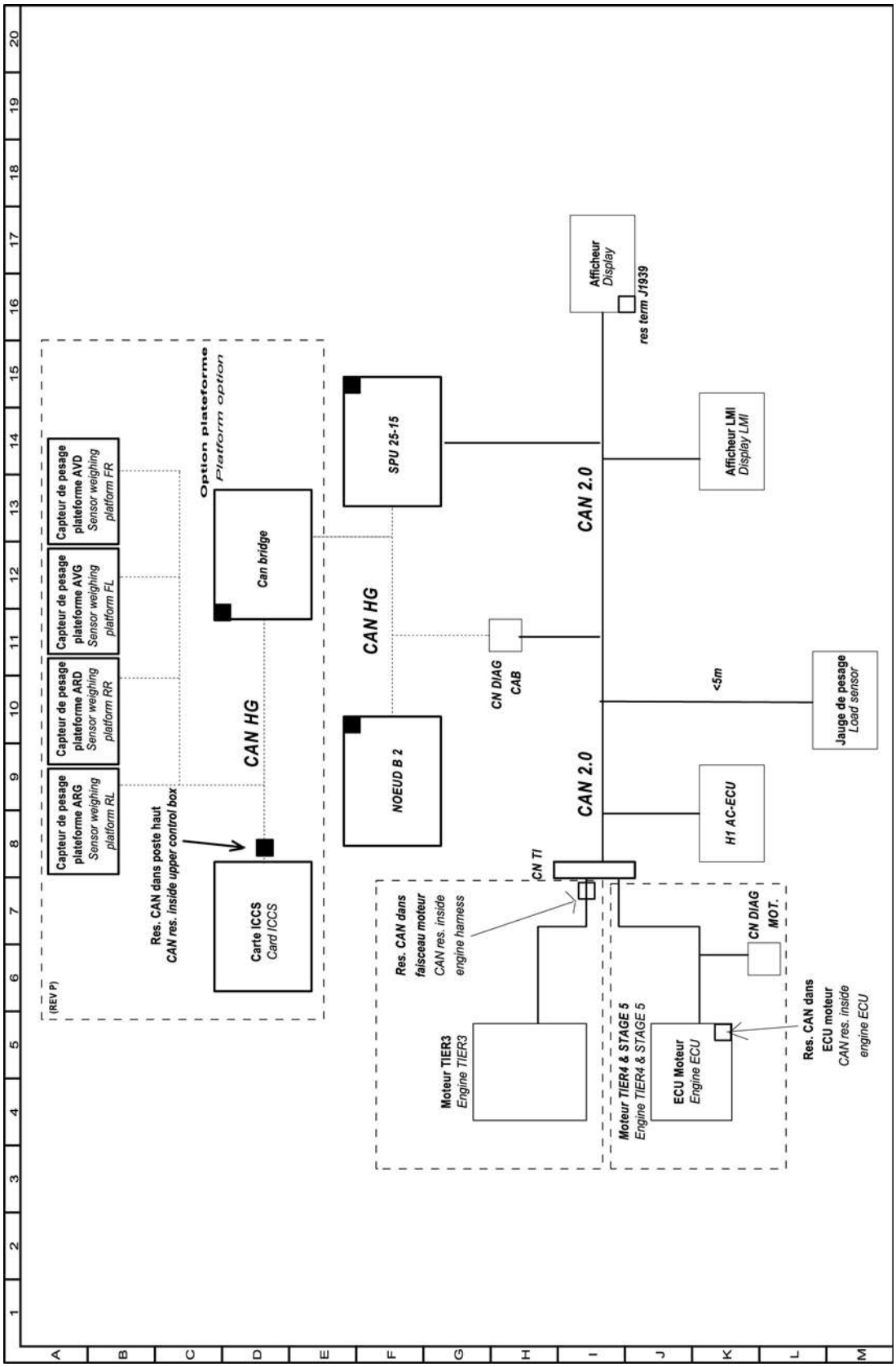
Switches, relays part - 107P348330T - folio 13



Sensors part - 107P348330T - folio 14

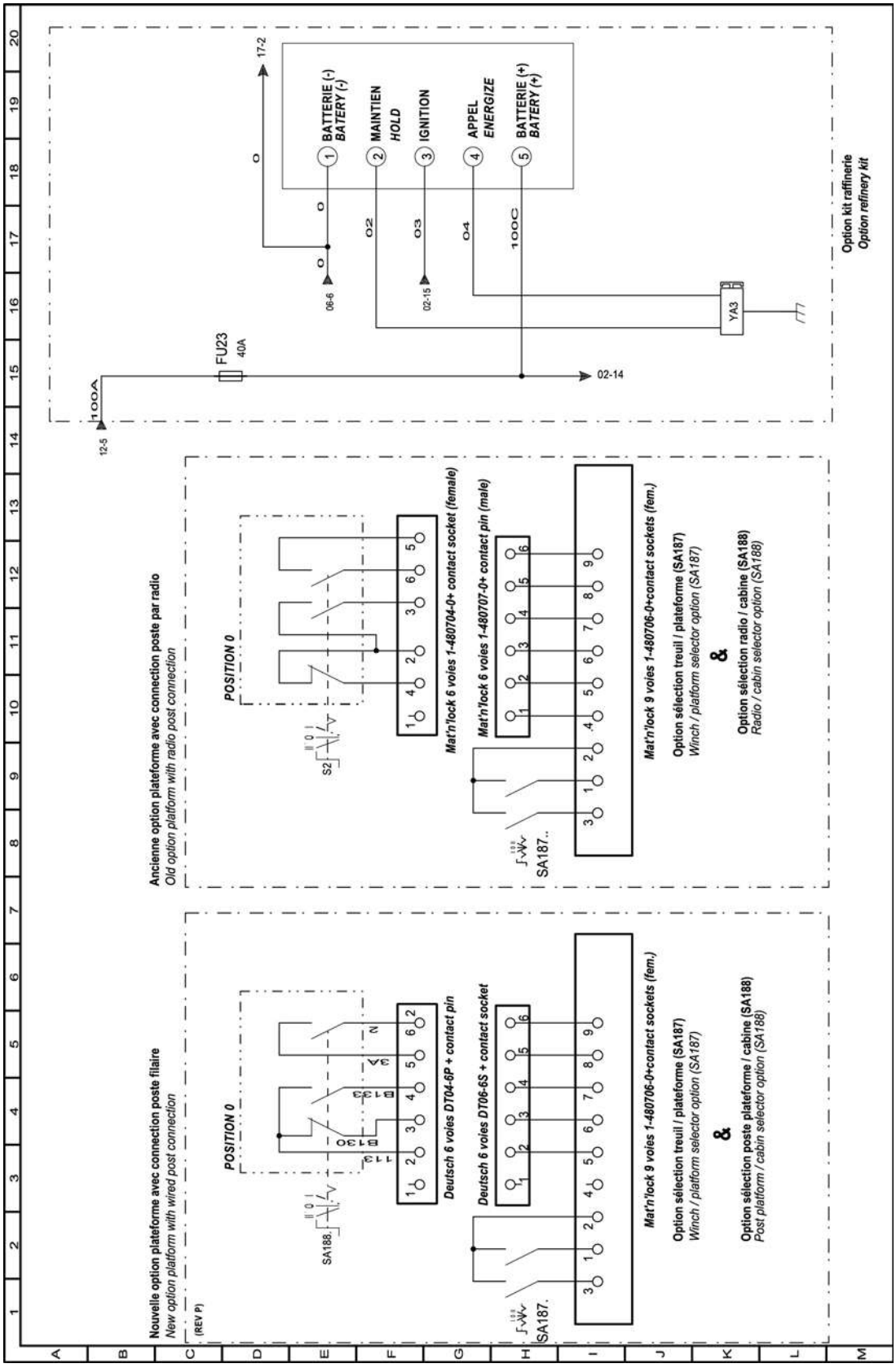


Architecture part - 107P348330T - folio 15

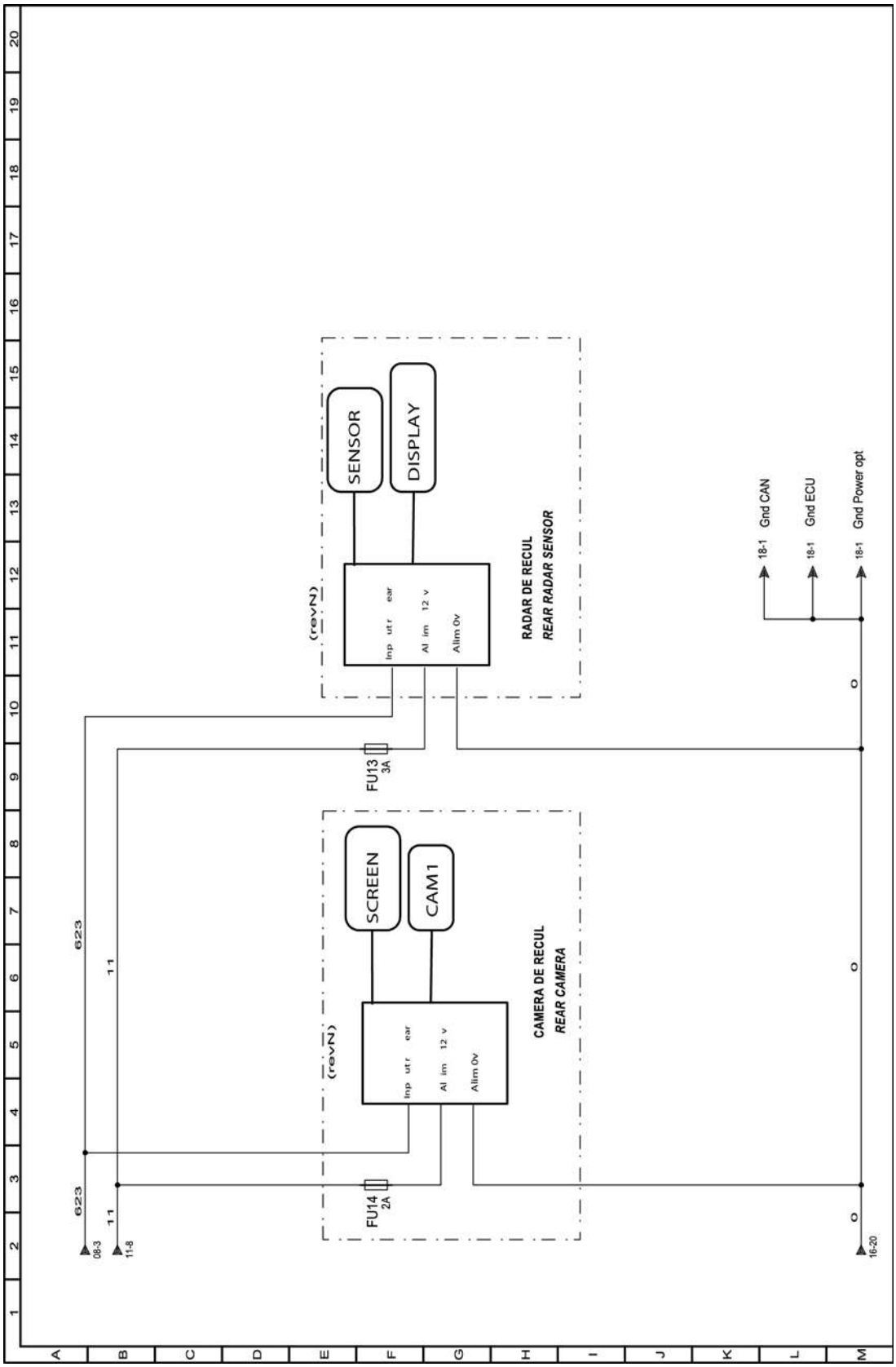


F- Lubrication and maintenance

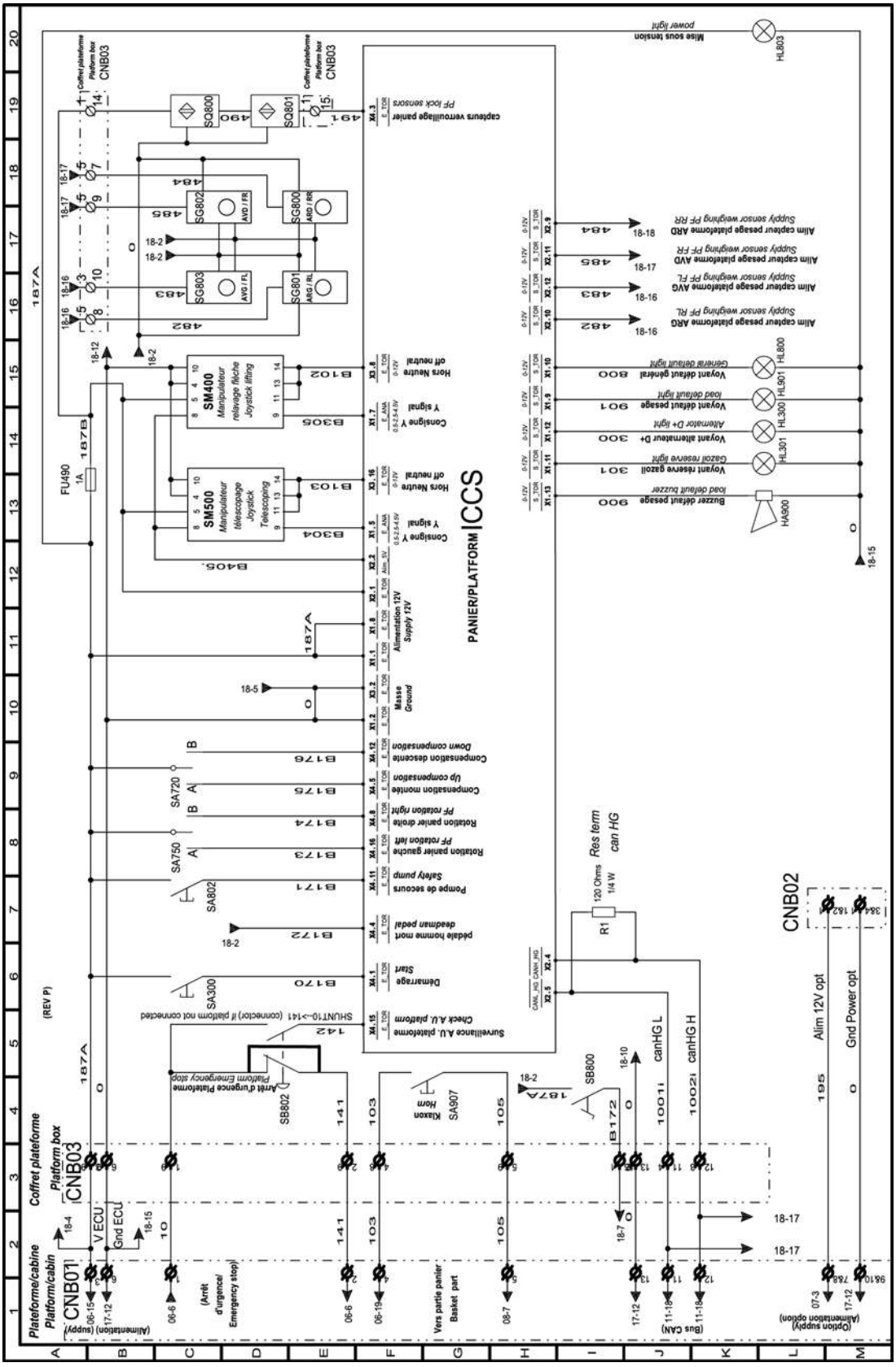
Options part 01 - 107P348330T - folio 16



Options part 02 - 107P348330T - folio 17



Cage part - 107P348330T - folio 18



F- Lubrication and maintenance

Nomenclature

Marking	Description
FU1	250 A Emergency pump for PF option
FU12	5 A ECU module supply for Perkins engine
FU15	7,5 A + Bat for Perkins engine ECU module
FU18	20 A + Bat for Perkins engine ECU module
FU19	60 A Pre-heating GCU module for Perkins engine
FU21	50 A KM3 main relay for ECU engine Perkins module
FU22	3 A BT sensor for ECU engine Perkins module
FU100	20 A General electrical equipement fuse
FU101	15 A Fuse for warning lights
FU102	10 A Fuse for calculator power supply
FU103	10 A Fuse for flashing beacon-Horn
FU106	10 A Fuse for indicator lights
FU107	15 A Fuse for high beam headlights
FU108	15 A Fuse for low beam headlights
FU109	10 A Fuse for stop light
FU110	7,5 A Fuse for front left hand sidelight
FU111	7,5 A Fuse for front right hand sidelight
FU112	7,5 A Fuse for rear side lights-Registration plate
FU113	10 A Fuse for sensor power supply-Controls
FU114	30 A Fuse for power supply to solenoid valves
FU115	5 A + Vbat
FU117	7,5 A Fuse for rear foglights
FU122	250 A Emergency pump for PF option
FU140	10 A LMI(Load moment indicator)
FU160	80 A Engine pre-heating

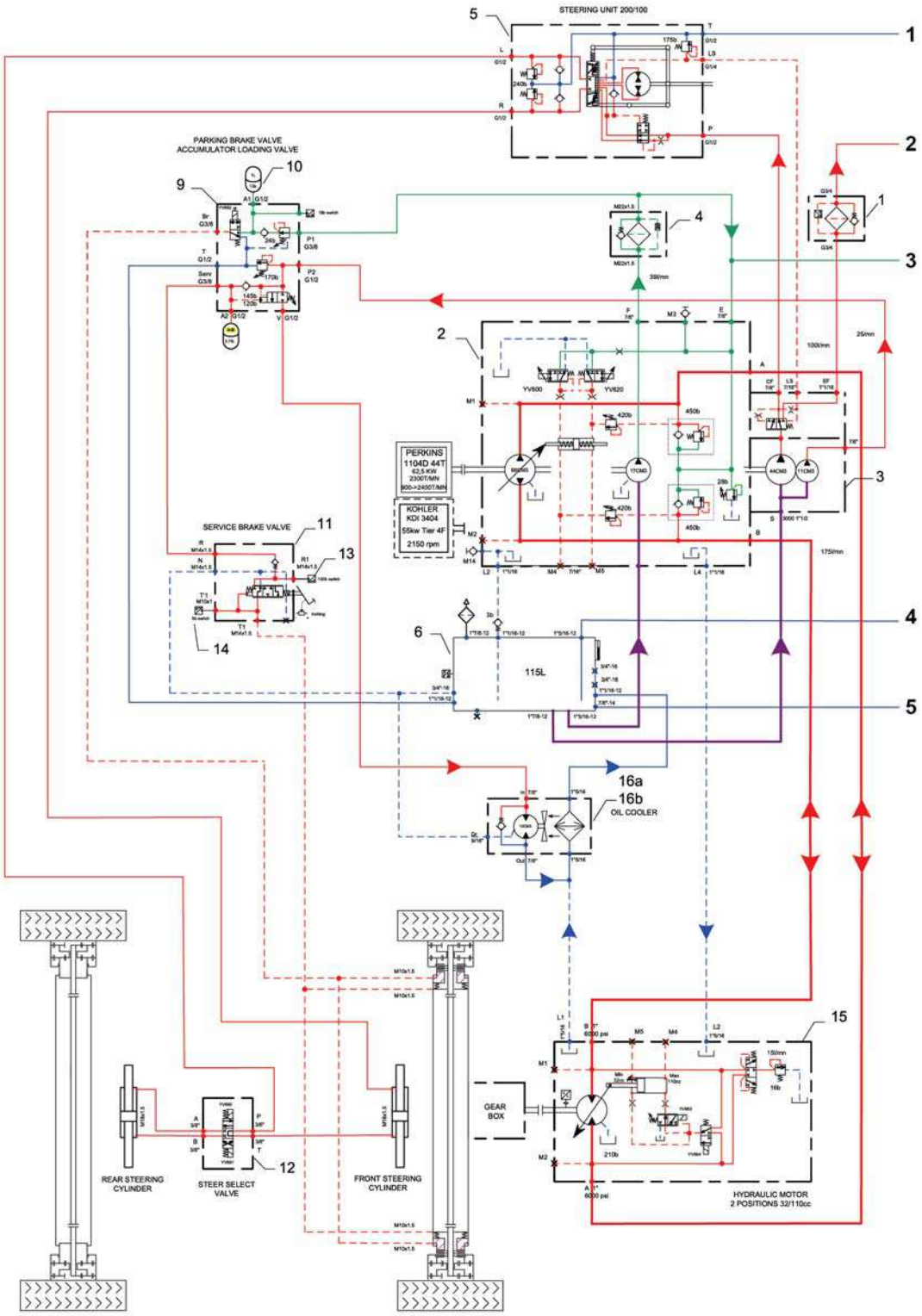
F- Lubrication and maintenance

Marking	Description
FU161	20 A Engine supply
FU180	30 A Fure for the cabin heating
FU181	5 A Air-conditioning fuse
FU182	20 A Fuse for accessory power in the cab
FU183	10 A Fuse for windshield wiper-Fuse for front windshield washer
FU184	10 A Fuse for rear windshield wiper
FU187	15 A Power supply for platform option
FU189	30 A Fuse for air conditioning fan
FU191	20 A Fuse for work light
FU195	30 A Fuse for 12 V socket
FU400	60 A +Vbat for ECU module Kohler engine
FU401	20 A Main contactor KM4 for Kohler engine
FU402	5 A Power supply for ECU module Kohler engine
FU403	5 A Key switch for ECU module Kohler engine
FU404	5 A ECU module supply for Kohler engine
FU405	3 A Contactor KM6 for pump for Kohler engine
FU406	30 A Starter for Kohler engine
FU407	50 A Preheating for Kohler engine
FU490	1 A Weighing sensor power supply fuse
FU620	10 A Fuse for reversing alarm
KA104	Relay for flasher indicator
KA110	Relay for sidelight validation
KA160	Relay for auxiliary styarter control
KA181	Relay for air conditioning
KA187	Relay for radio control
KA189	Relay for air conditioning heat sink ventilation
KA380	Relay for floating control
KA620	Relay for reversing alert
KA680	Crab steering control relay
KA681	Synchro mode steering control relay
KM101	Power supply switch

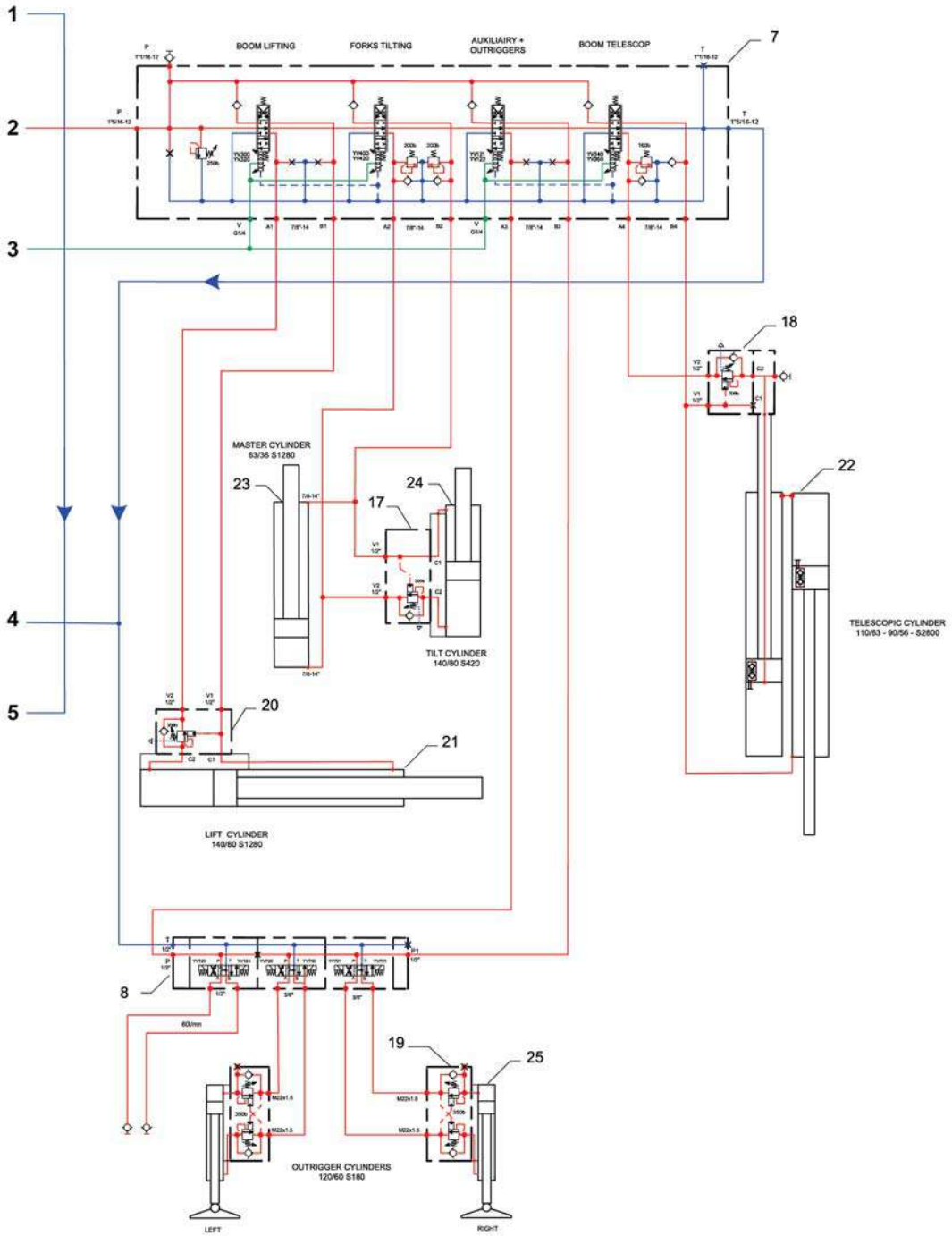
12 - Hydraulic circuit

12.1 - HYDRAULIC DIAGRAM

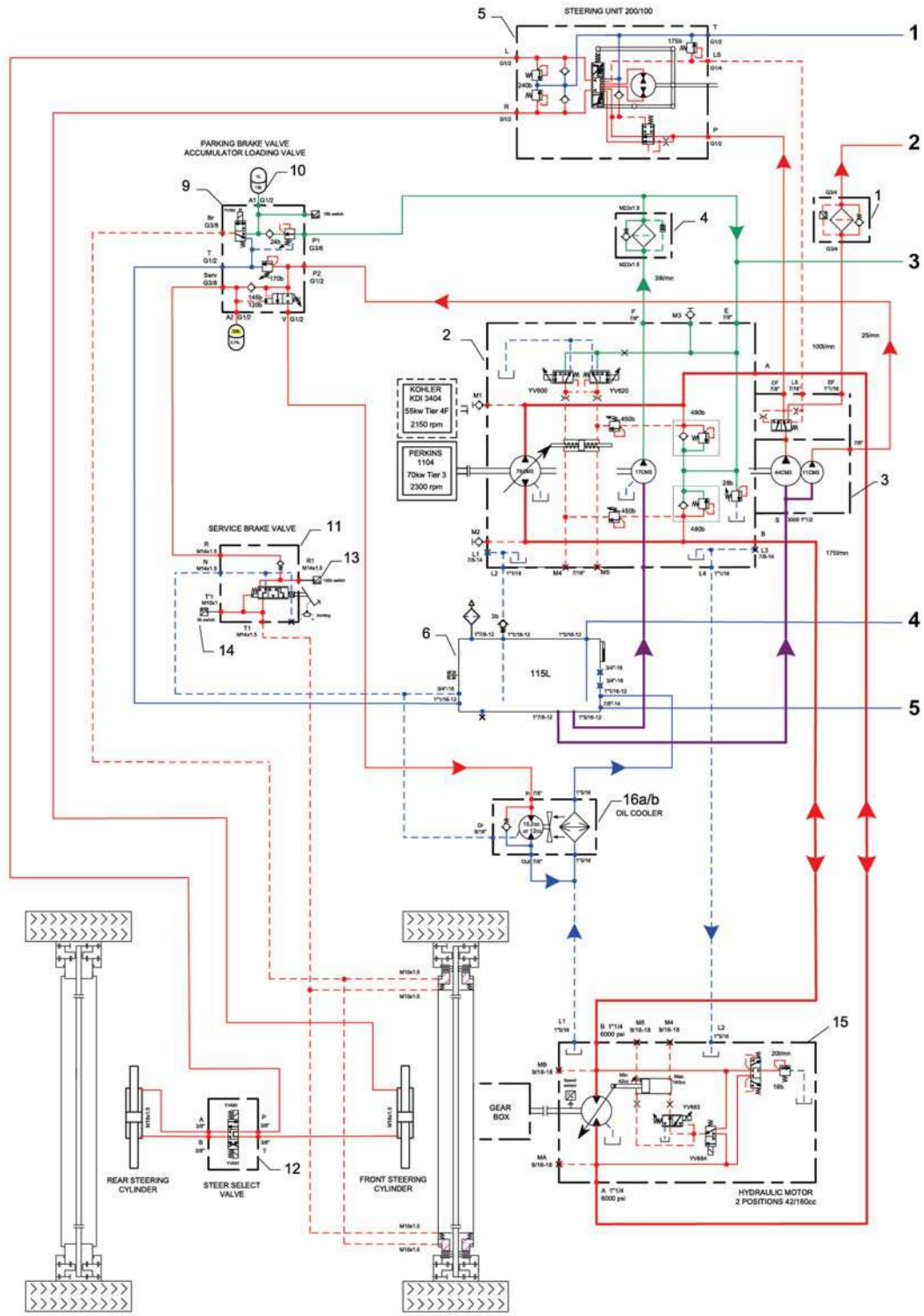
HTL 3210 - 107P324190H - 1/2 - TIER 3 / TIER 4F



HTL 3210 - 107P324190H - 2/2 - TIER 3 / TIER 4F

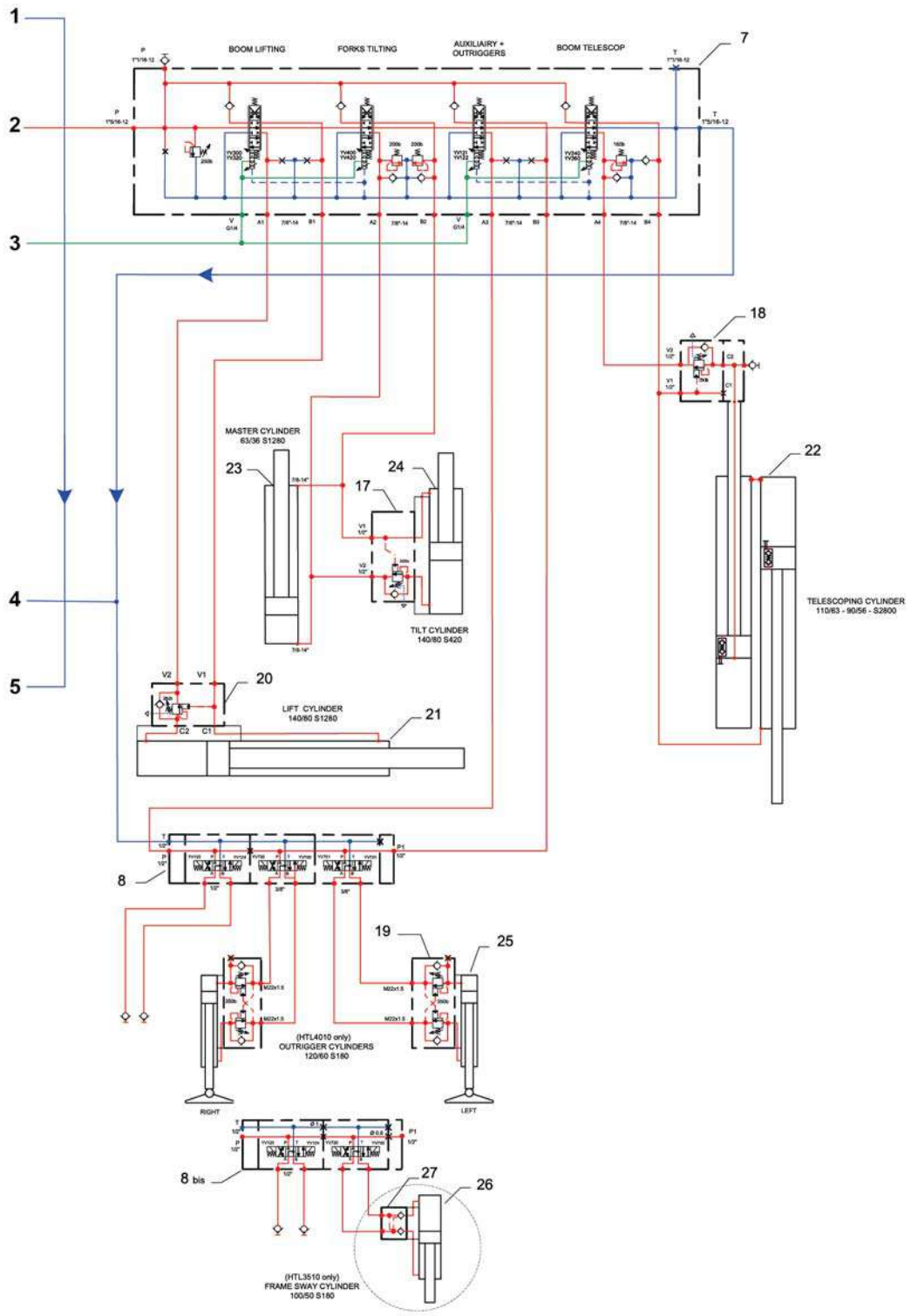


HTL 3510 - HTL 7732 - HTL 4010 - 107P315160H - 1/2 - TIER 3 / TIER 4F

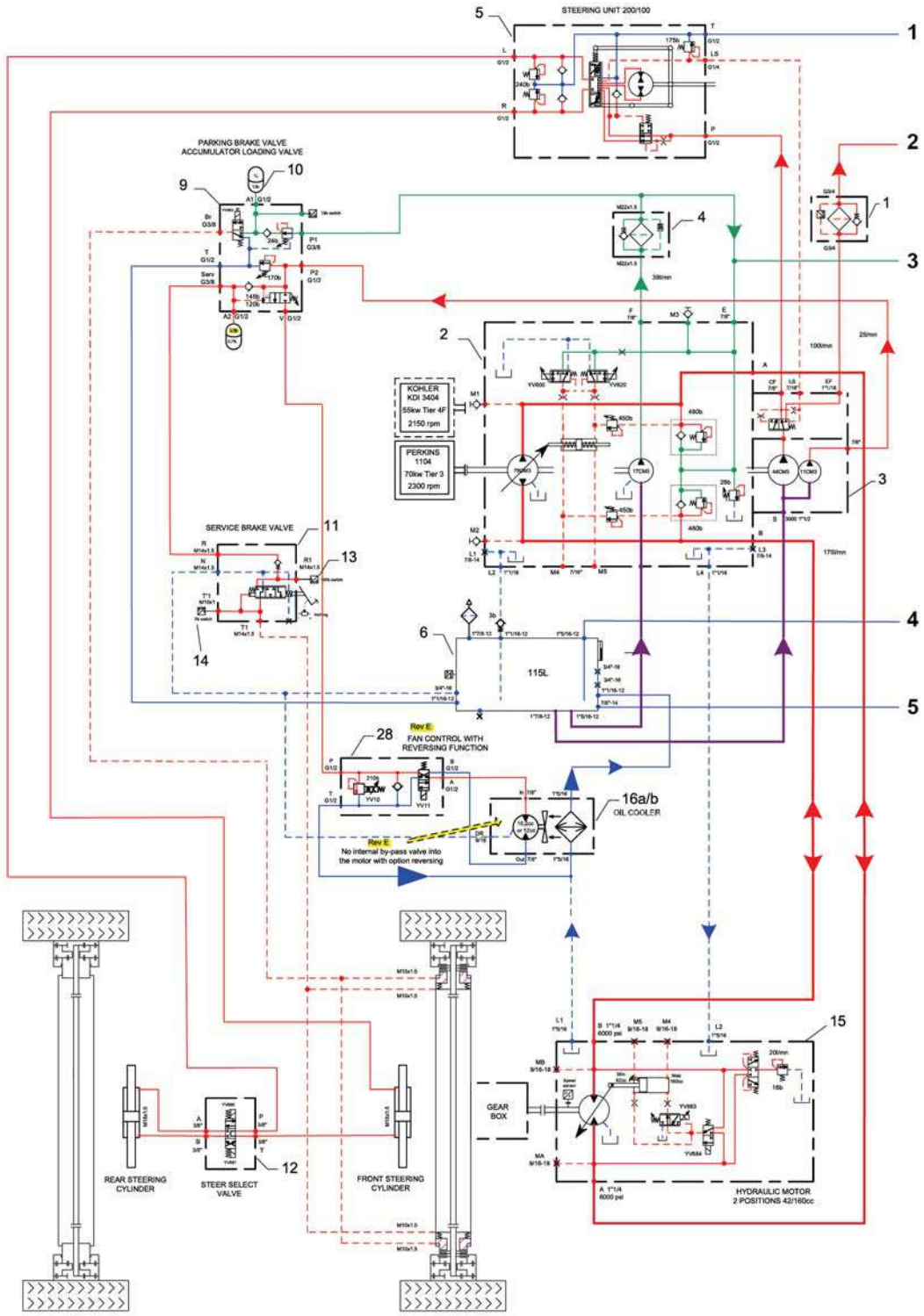


F- Lubrication and maintenance

HTL 3510 - HTL 7732 - HTL 4010 - 107P315160H - 2/2 - TIER 3 / TIER 4F

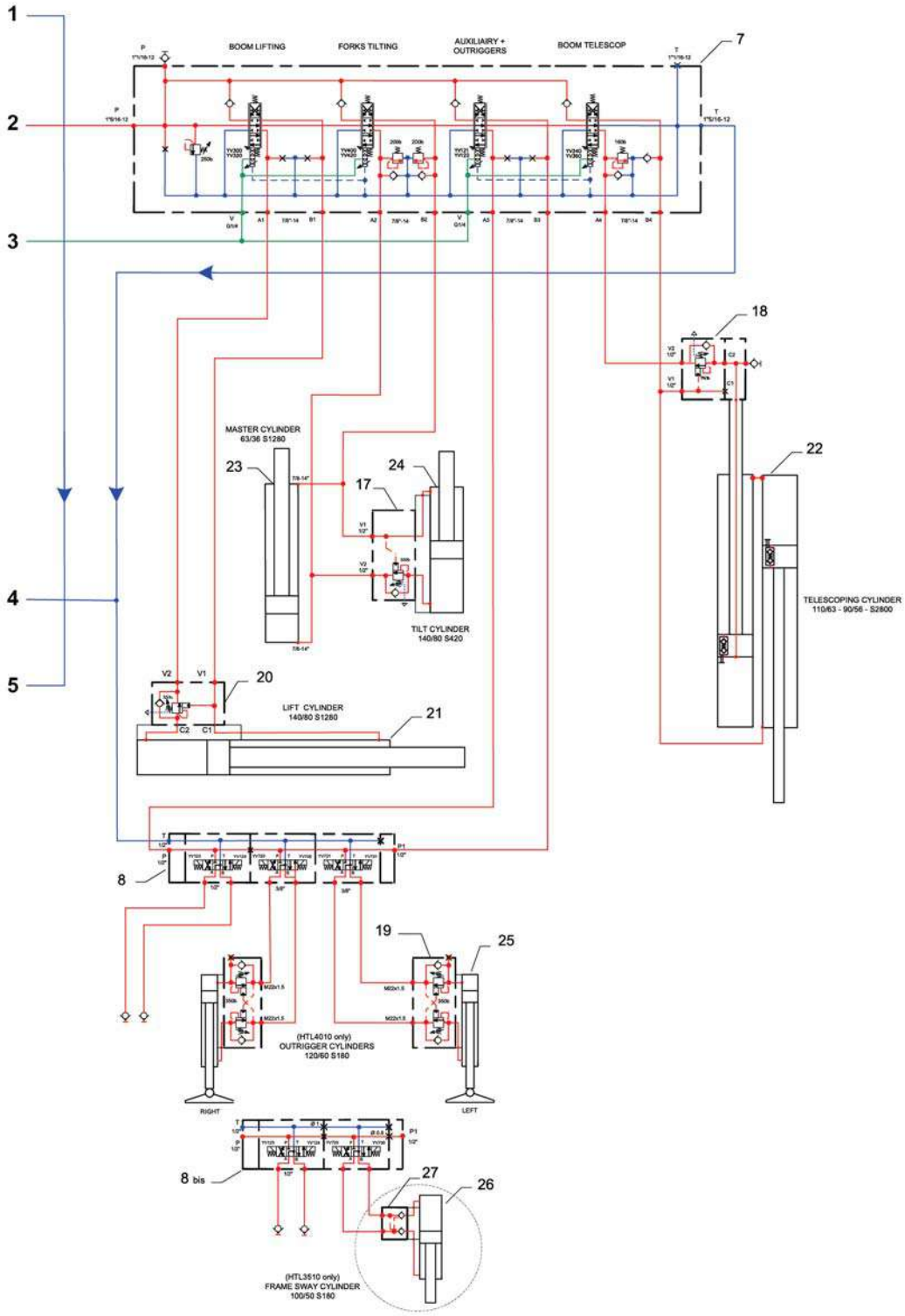


HTL 3510 - HTL 7732 - HTL 4010 - 107P315160H - 1/2 - TIER 3 / TIER 4F - Option

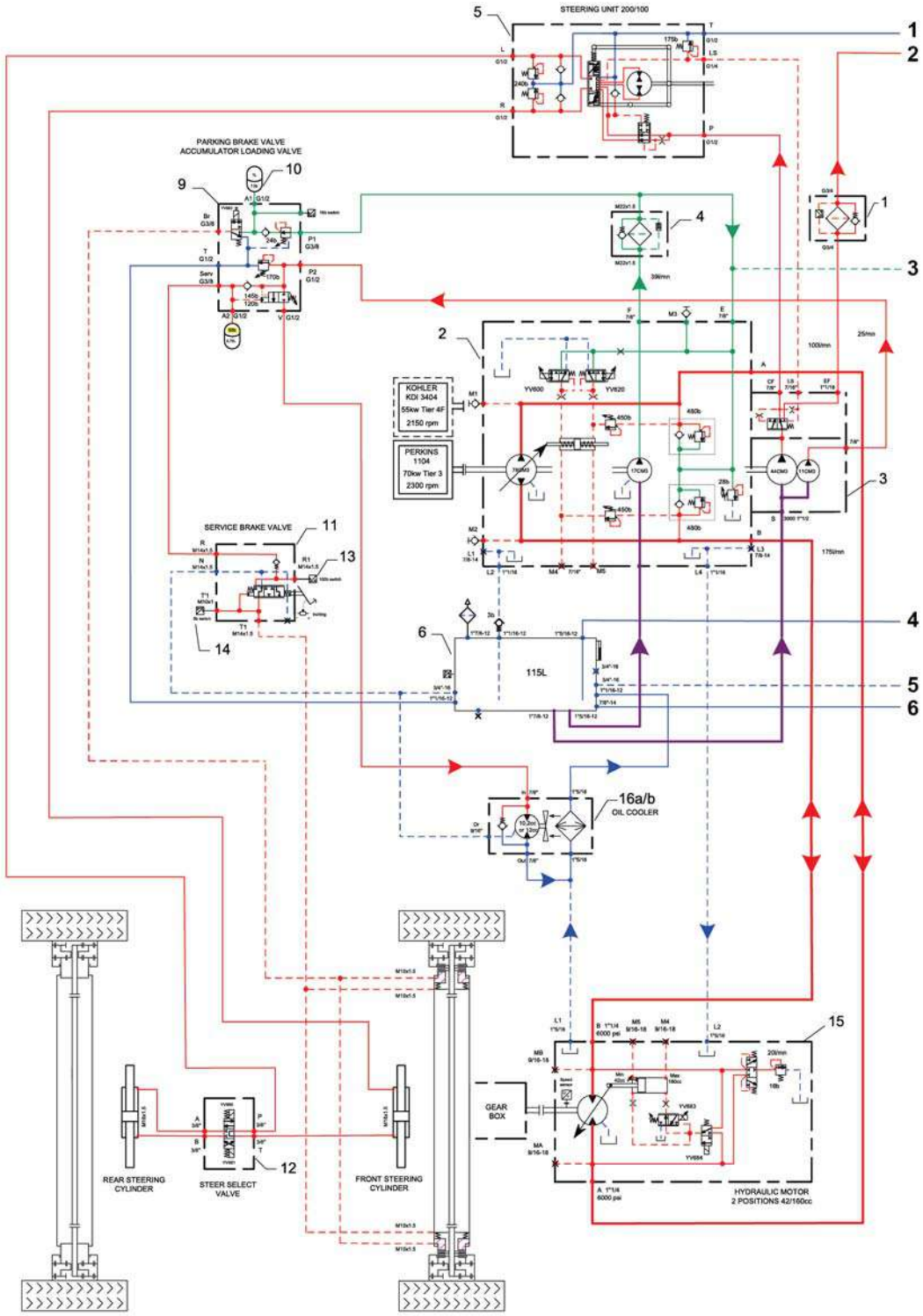


F- Lubrication and maintenance

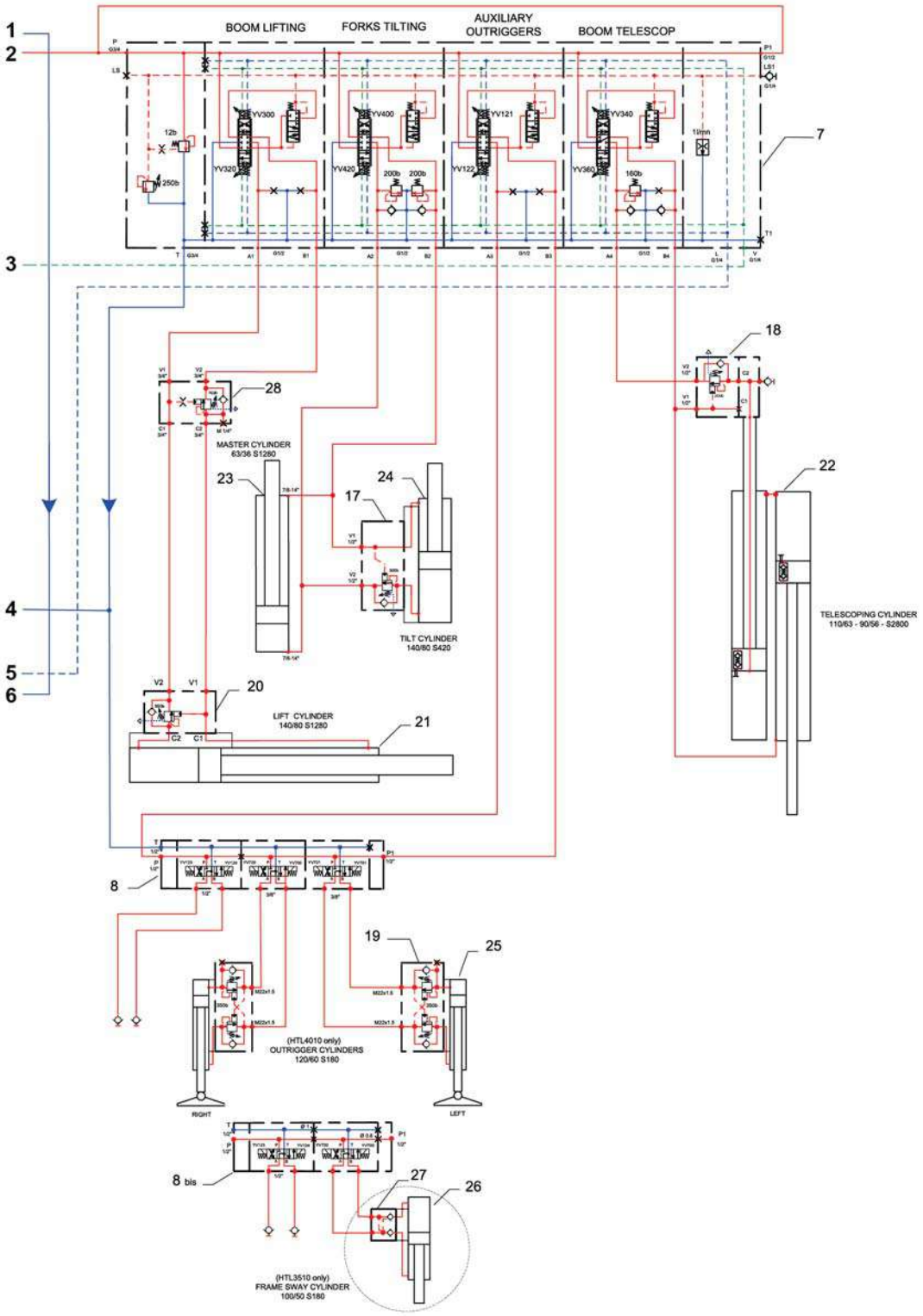
HTL 3510 - HTL 7732 - HTL 4010 - 107P315160H - 2/2 - TIER 3 / TIER 4F - Option



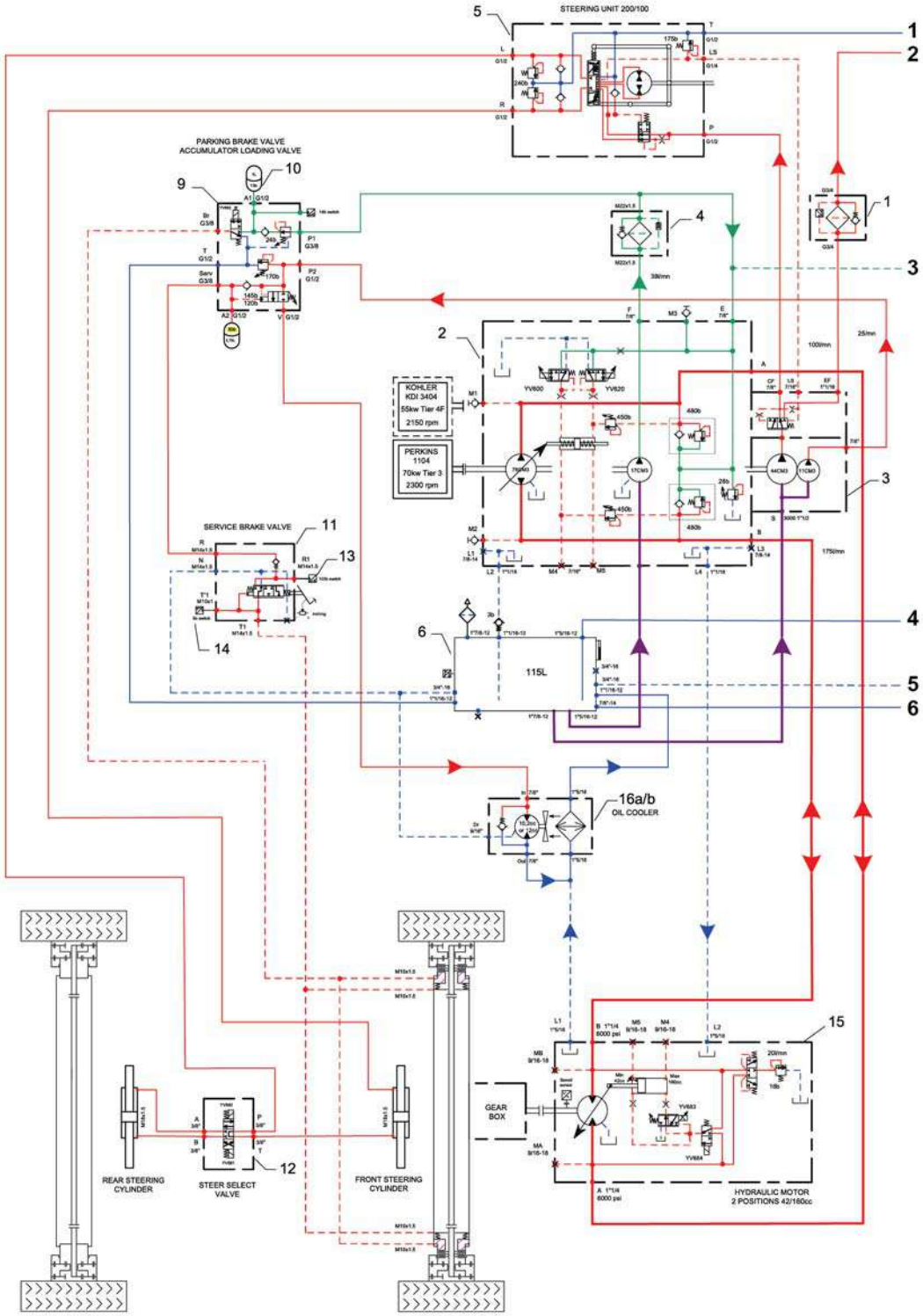
HTL 3510 - HTL 7732 - HTL 4010 - 107P332520F - 1/2 - Flow Sharing - TIER 3 / TIER 4F



HTL 3510 - HTL 7732 - HTL 4010 - 107P332520F - 2/2 - Flow Sharing - TIER 3 / TIER 4F

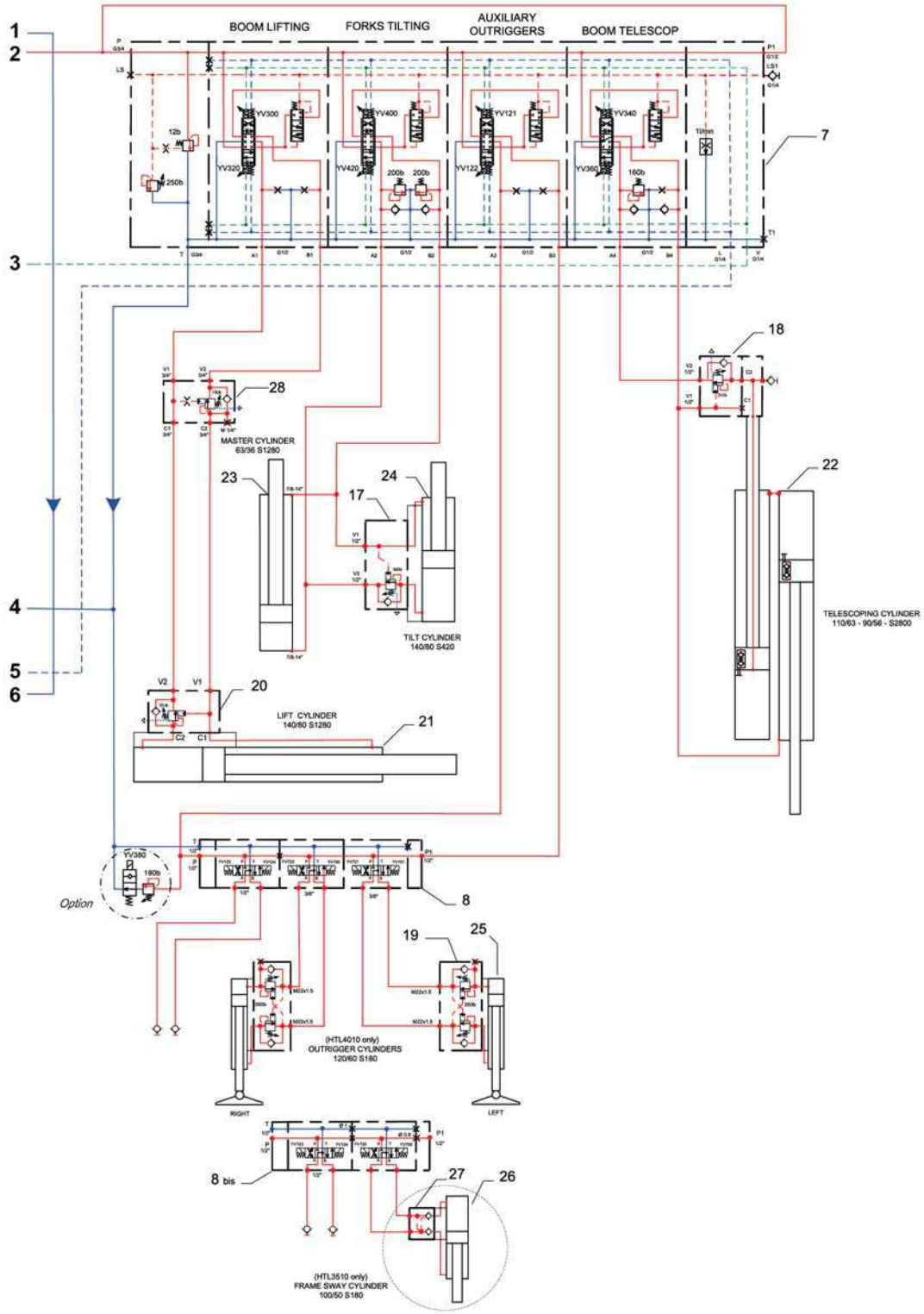


HTL 3510 - HTL 7732 - HTL 4010 - 107P332520F - 1/2 - Flow Sharing - TIER 3 / TIER 4F - Option

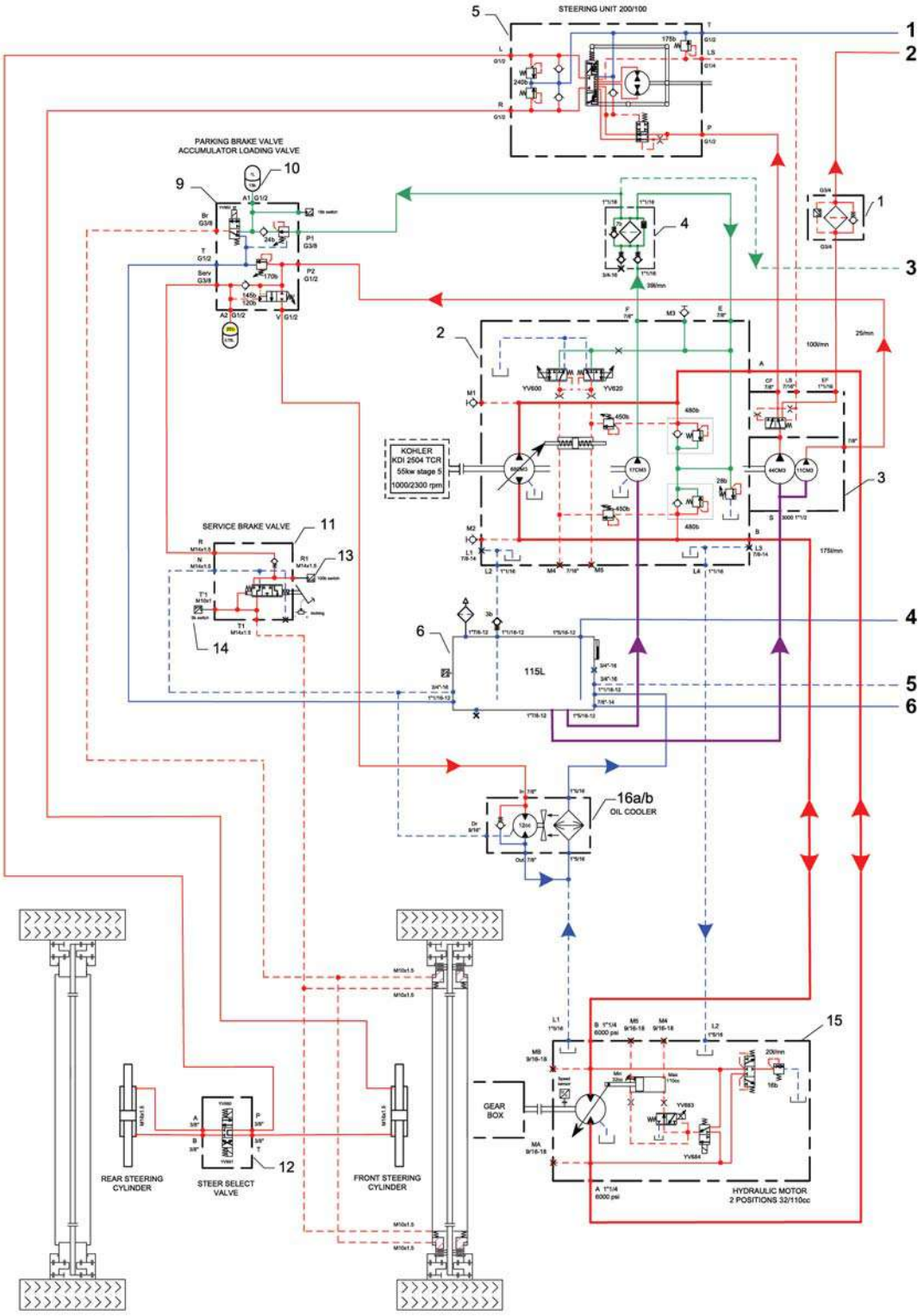


F- Lubrication and maintenance

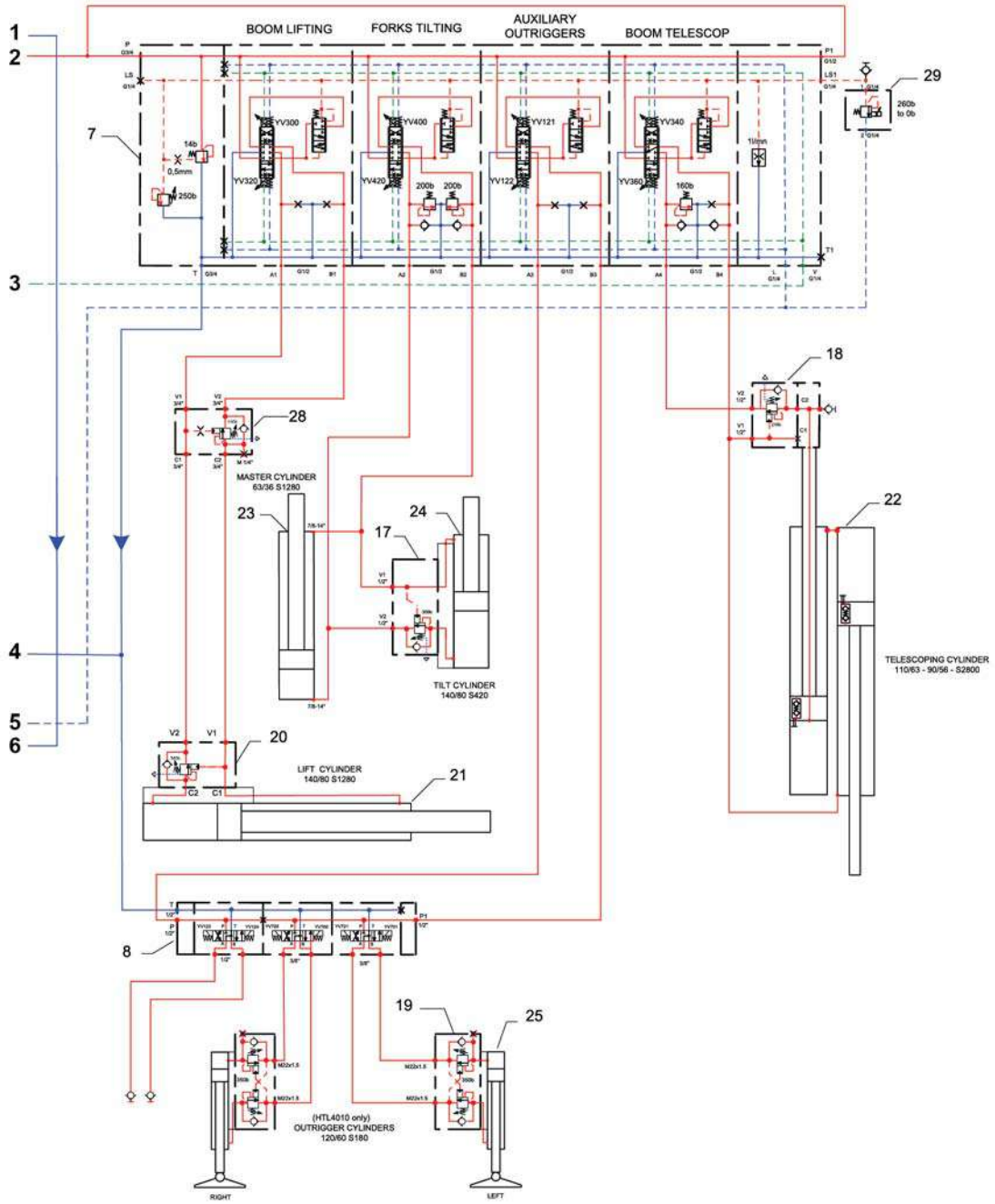
HTL 3510 - HTL 7732 - HTL 4010 - 107P332520F - 2/2 - Flow Sharing - TIER 3 / TIER 4F - Option



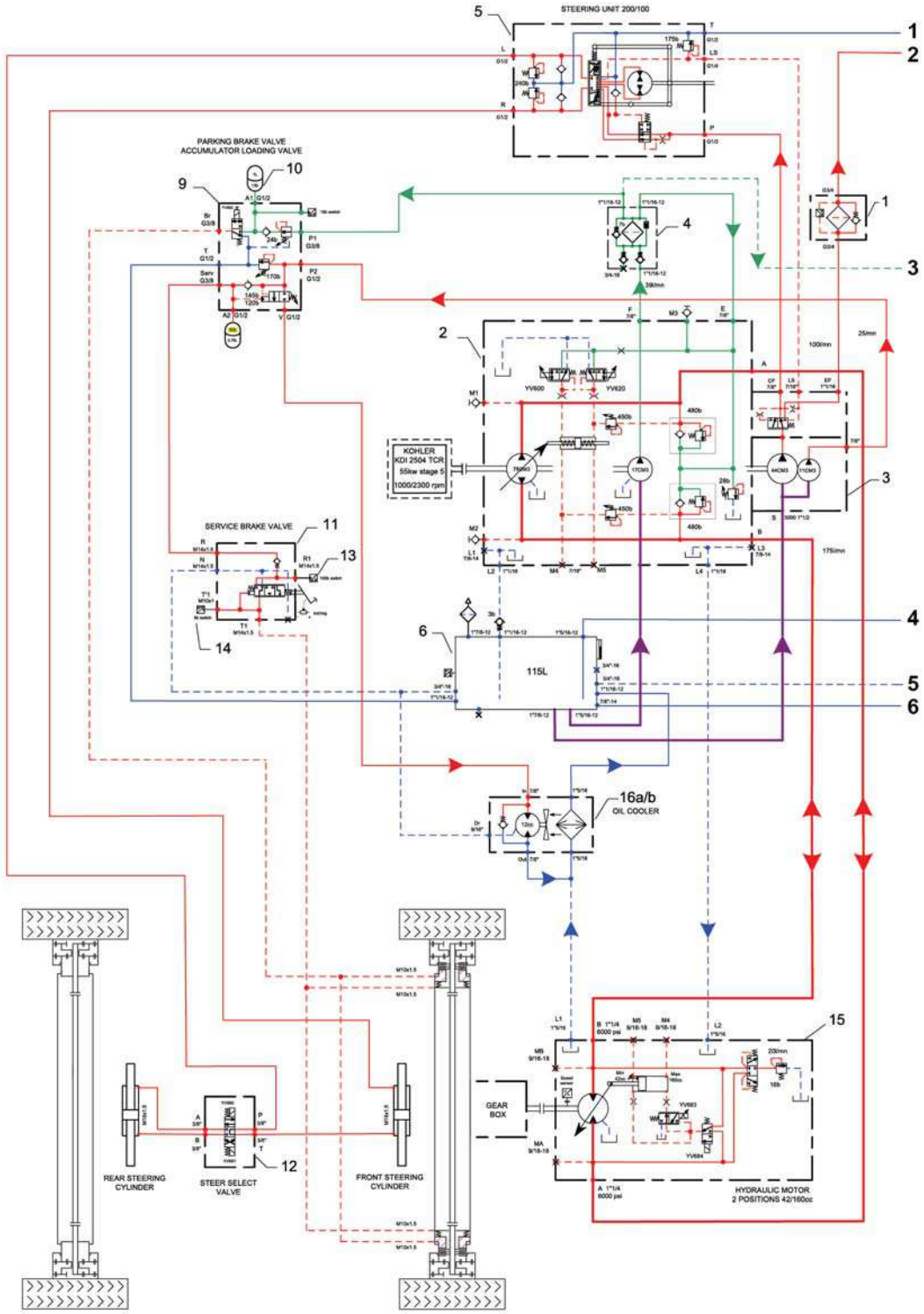
HTL 3210 - 4001057900B - 1/2 - Flow Sharing - STAGE 5



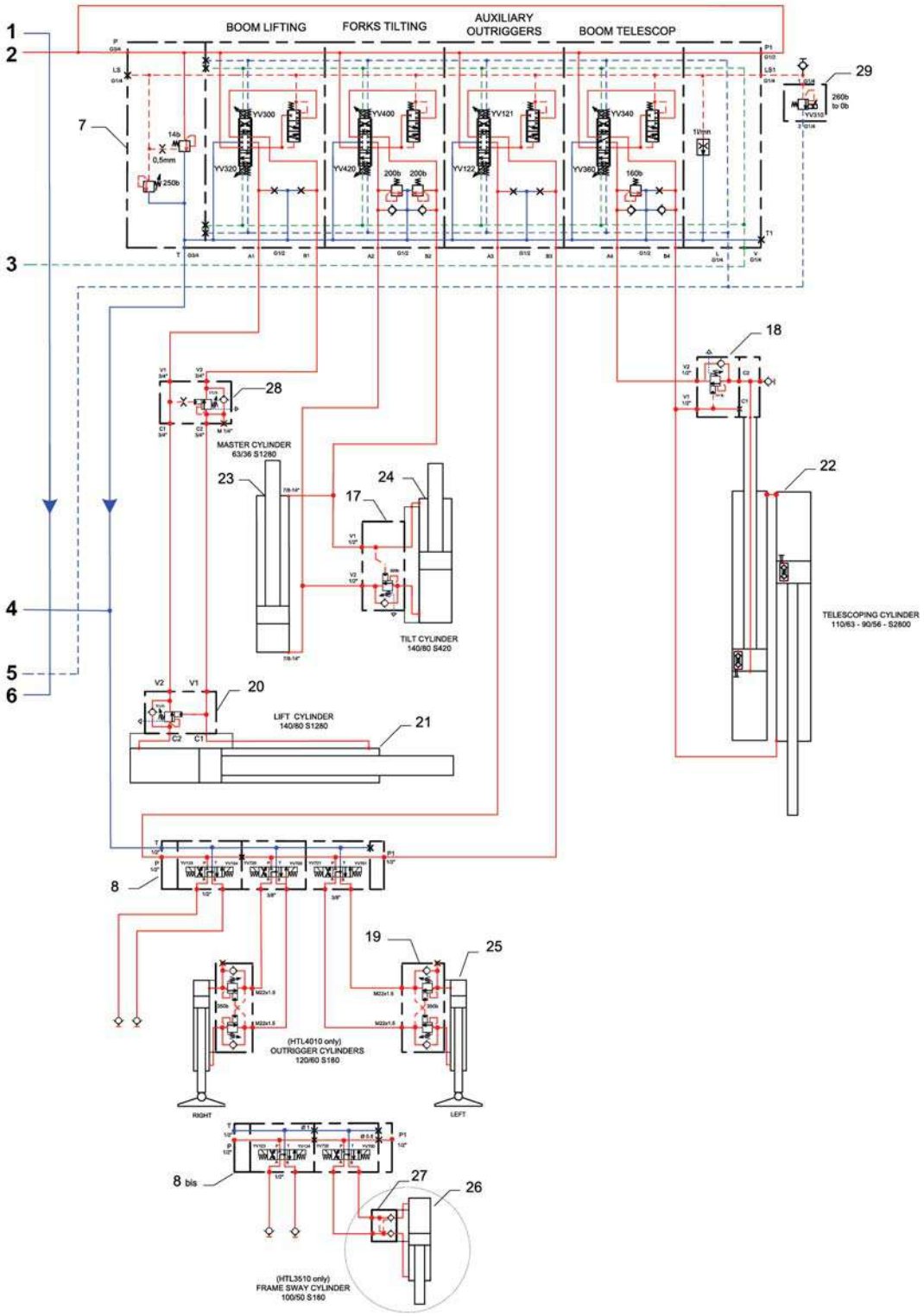
HTL 3210 - 4001057900B - 2/2 - Flow Sharing - STAGE 5



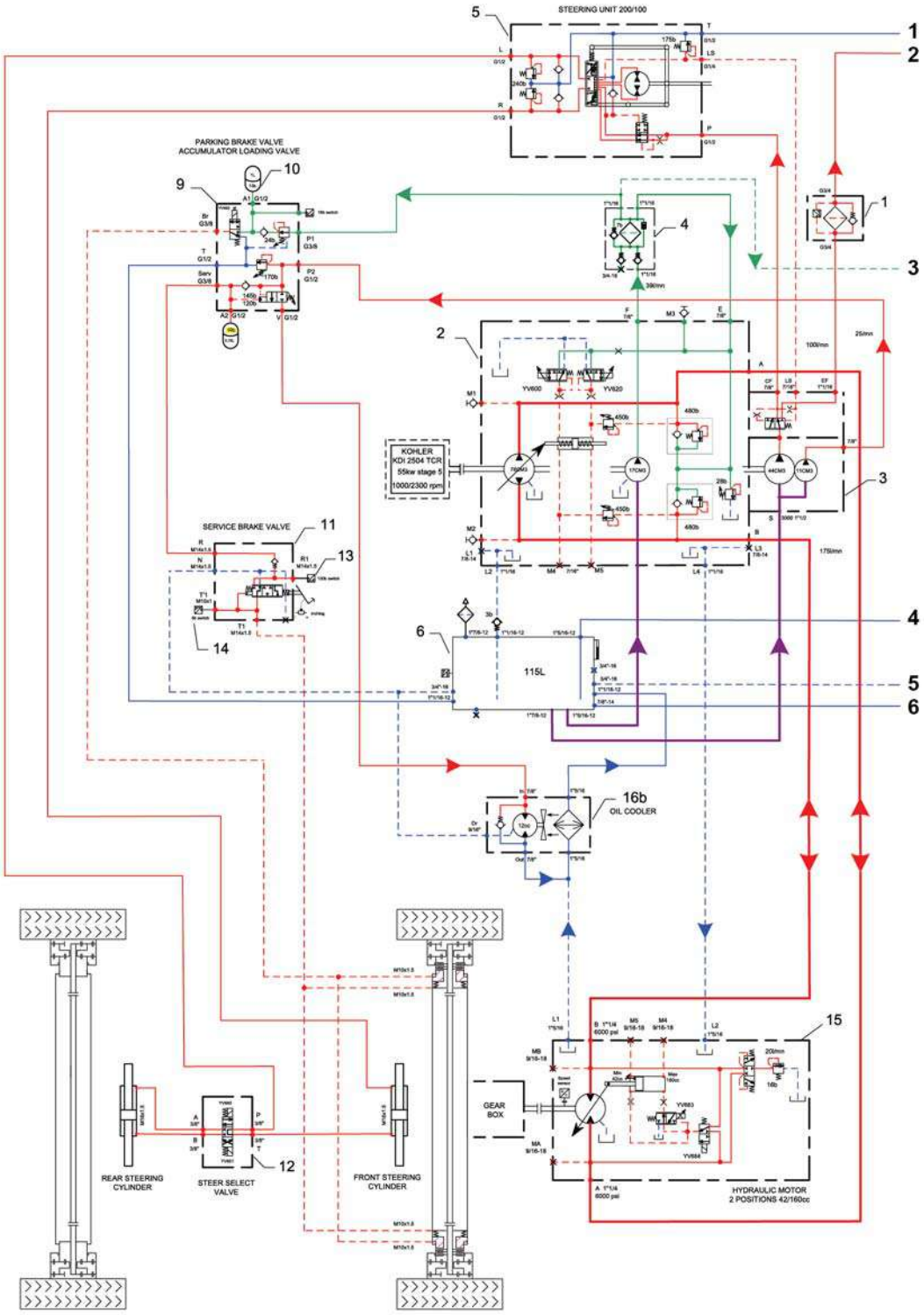
HTL 3510 - HTL 7732 - HTL 4010 - 4001057900B - 1/2 - Flow Sharing - STAGE 5



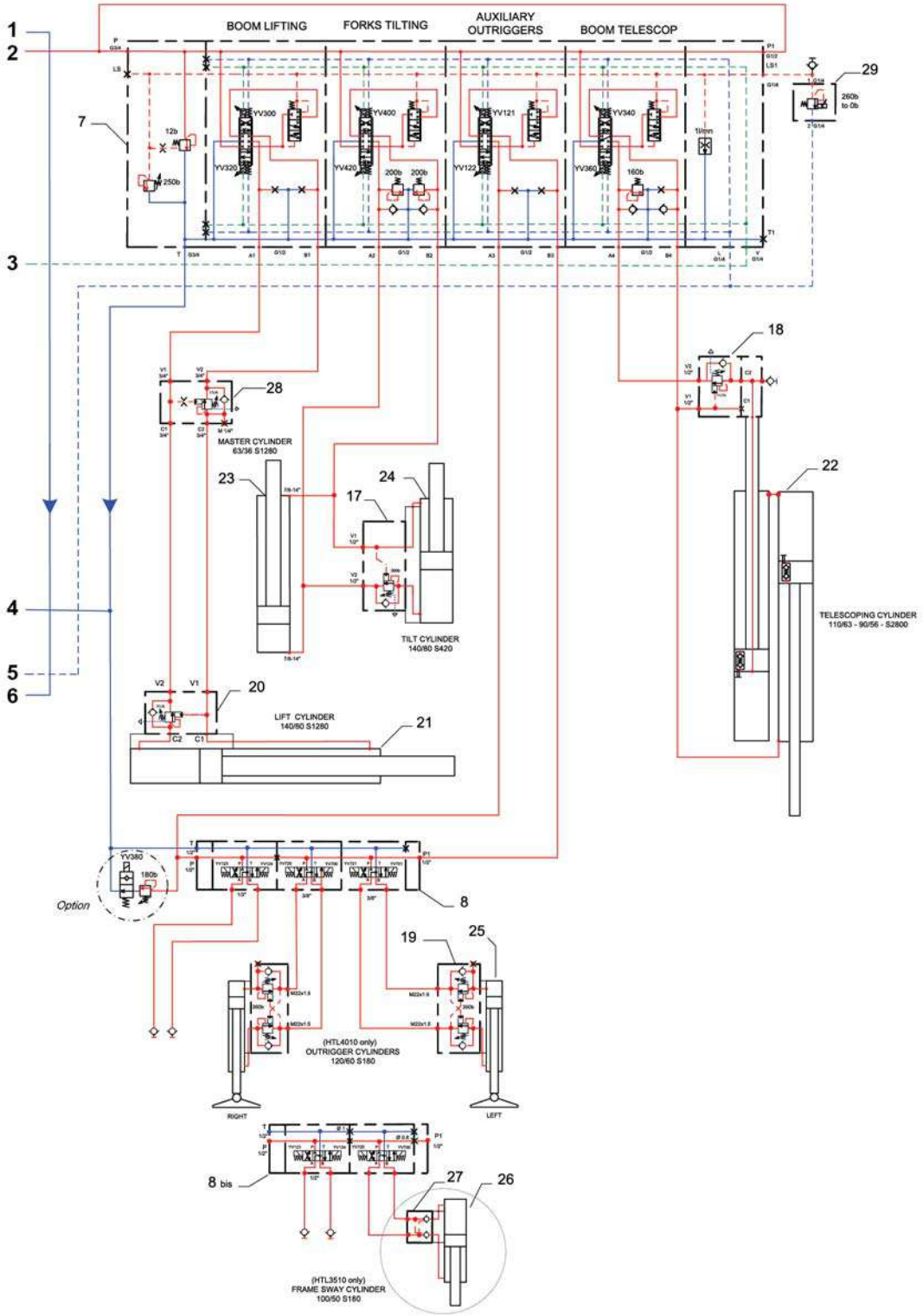
HTL 3510 - HTL 7732 - HTL 4010 - 4001057900B - 2/2 - Flow Sharing - STAGE 5



HTL 3510 - HTL 7732 - HTL 4010 - 4001057900B - 1/2 - Flow Sharing - STAGE 5 - Option



HTL 3510 - HTL 7732 - HTL 4010 - 4001057900B - 2/2 - Flow Sharing - STAGE 5 - Option



F- Lubrication and maintenance

Nomenclature HTL3010 - HTL3210 - HTL3510 - HTL4010

Marking	Description
1	Attachment hydraulic oil
2	Drive hydraulic pump
3	Double pump
4	Charge pump
5	Steering unit
6	Hydraulic oil tank assembly
7	Main proportional directional valve
8	Valve ON/OFF (3 sections) (HTL3210/4010)
8bis	Valve ON/OFF (2 sections) (HTL3010/3510)
9	Brake unit
10	Parking brake accumulator
11	Service brake valve
12	Steering selector valve
13	Pressure switch 90 b
14	Pressure switch 5 b
15	Hydraulic drive engine
16a	Hydraulic oil cooler fan motor - Hydraulic motor (PERKINS)
16b	Hydraulic oil cooler fan motor - Hydraulic motor (KOHLER)
17	Crowding valve
18	Telescoping valve
19	Outrigger valve (HTL3210/4010)
20	Lifting valve
21	Boom lift cylinder
22	Boom telescopic cylinder
23	Output jib compensation cylinder
24	Input jib leveling cylinder
25	Stabiliser cylinder (HTL3210/4010)
26	Load levelling cylinder (HTL3010/3510)
27	Load levelling valve (HTL3010/3510)
28	Fan control unit (Option Tier3/Tier4F) (HTL3010/3510/4010)
28	Balancing valve (Flow Sharing/Stage 5)
29	Proportional pressure relief valve (Stage 5)

13 - Troubleshooting

Stop the machine and contact HAULOTTE Services® if the following LEDs flash or remain lit :

- Parking brake defect LED (P182) : Not enough pressure.
- Engine oil pressure fault LED (P181) : Not enough pressure.
- Service brake fault LED (P190) : Not enough pressure.
- Battery LED (P180) : Wiring problem.
- LED (P191).

The machine is equipped with an on-board defect detection system.

Default code, reported at the display tells to the user the nature of the faulty.

The machine switches to downgraded mode, depending on the type of fault : Certain movements can be limited or forbidden to preserve the operator's safety.

(A) :The fault is only indicated on the display if it is active.

(D) : The fault is indicated on the display when it is detected after starting up the machine, whether it is still active or not.

Diagnosis

Faults	Description	Solution
	F02 : Contactor	
F02.02 (D)	Emergency pump fault relay (only platform mode)	Check KM120
F02.03(D)	Main contactor fault	Check KMG
F02.05(D)	Pre/post heating relay fault	Check KM160
	F03 : Relay	
F03.08 (D)	Start-up relay fault	Check KA160
F03.09 (D)	Engine power supply relay fault / Ignition key	Check KA161
F03.12 (D)	PWM supply relay fault	Check KA122
	F04 : Solenoid valves	
F04.02 (D)	Fork carriage compensation PWM solenoid valve fault	Check YV400 or YV420
F04.05 (D)	Boom lifting PWM solenoid valve fault	Check YV300 or YV320
F04.06 (D)	Boom telescoping PWM solenoid valve fault	Check YV340 or YV360
F04.23 (D)	Accessory control solenoid valve fault	Check YV121, YV123 and YV124
F04.24 (D)	Left-hand stabiliser solenoid valve fault	Check YV122, YV700 and YV720
F04.25 (D)	Right-hand stabiliser solenoid valve fault	Check YV122, YV701 and YV721
F04.28 (D)	Tilt correction solenoid valve fault	Check YV122, YV740 and YV760
F04.30 (D)	Floating lift TOR solenoid valve	Check YV380
F04.32 (D)	Hydraulic unlocking TOR solenoid valve fault	Check YV380
F04.33 (D)	Steering mode TOR solenoid valve fault	Check YV680 or YV681
	F05 : Joystick	
F05.03 (D)	Joystick operation defect (Boom telescoping)	Check SJ120
F05.04 (D)	Joystick operation defect (Lifting)	Check SJ120
F05.07 (D)	Joystick operation defect (Equipment carriage compensation)	Check SJ120
F05.08 (D)	Joystick operation defect (Attachments)	Check SJ120
F05.09 (D)	Operating fault on the remote control joystick (Boom telescoping)	Check B402 (Radio-control)
F05.10 (D)	Operating fault on the remote control joystick (Lifting)	Check B401 (Radio-control)
F05.11 (A)	Neutral position of the cabin joystick not detected since start-up	Check SJ120
F05.12 (A)	Neutral position of one of the joysticks on the remote control not detected since start-up	Check B401 or B402 (Radio-control)
F05.13 (A)	Neutral position of one of the rollers on the cabin joystick not detected since start-up	Check B302 or B303
	F07 : Sensors	
F07.03 (D)	Boom angle sensor incoherence	Check B403 or B404
F07.11 (D)	Telescope length incoherence	Check SQ360 or SQ340
F07.25 (D)	Inconsistency between pre-alarm and alarm LMI	Check B130 or B142
F07.28 (D)	Left outrigger sensor incoherence	Check SQ700 or SQ720
F07.29 (D)	Right outrigger sensor incoherence	Check SQ701 or SQ721
F07.30 (D)	Engine oil pressure sensor inconsistency	Check SP162
F07.31 (D)	Alternator D+ signal inconsistency	Check D+
F07.32 (D)	LMI fault - For LMI529 only	Check sensor LMI159

F- Lubrication and maintenance

Faults	Description	Solution
	F08 : Electric circuit	
F08.04 (D)	ECU power supply fault	Check the power supply
F08.05 (D)	Voltage 5 V	Check the 5 V power supply
	F09 : Engine	
F09.01 (D)	Engine overheating	
F09.02 (D)	Low engine oil pressure	
F09.03 (D)	Presence of water in diesel fuel	
F09.07 (D)	Drive motor faulty	Check Engine
F09.08 (D)	Engine shutdown	Engine shutdown
F09.10 (D)	Alternator fault	Check D+
	F10 : Functions	
F10.05 (A)	LMI529 calibration not performed or disabled - For LMI529 only	Check LMI529 Calibrate
F10.12 (A)	Communication problem with the display LMI	Check the display
	F11 : Security devices	
F11.05 (A)	LMI alarm shunted with the key	Caution
	F12 : Internal faults	
F12.01 (D)	ECU fault / CAN link	Check the connections
F12.02 (D)	ECU EEPROM fault	Change the calculator
F12.04 (D)	Machine parameter reset	Check the parameters
	F13 : Switchs	
F13.03 (D)	Inconsistency in the position of the compensation selector (Radio-control emitter)	Check B104 or B105
F13.04 (D)	Inconsistency in the position of the accessory control selector (Radio-control emitter)	Check B102 or B103
F13.05 (D)	Inconsistency in the position of the Platform/Fork/ Winch selector (Cab)	Check SA187
F13.06 (D)	Inconsistency in the position of the Steering mode selector (Cab)	Check SA681
F13.07 (D)	Inconsistency in the position of the drive selector (Cab)	Check SA600 or SA620
F13.08 (D)	Inconsistency in the position of the Left/Right stabiliser selector (Cab)	Check SA780 or SA781
F13.09 (D)	Inconsistency in the position of the tilt correction selector (Cab)	Check SA782
F13.10 (A)	Neutral position of one of the cabin selectors not detected since start-up	Check the switches in the cab
F13.11 (A)	Neutral position of one of the remote control selectors not detected since start-up	Check the remote control switches
	F14 : Driving pump	
F14.01 (D)	H1 pump fault	Check the drive pump
F14.02 (D)	Fault on the H1 pump inputs	Check the drive pump
F14.03 (D)	Fault on the H1 pump outputs	Check the drive pump
F14.04 (D)	H1 pump in safety mode	Check the drive pump
F14.05 (A)	Inching pedal not calibrated or faulty	Check the inching pedal
F14.06 (D)	Engine rotation speed sensor fault	Check sensor
F14.07 (D)	Pump overheating H1	

Faults	Description	Solution
	F15 : Protocol	
F15.06 (A)	CAN J1939 message not received	Check CAN 2

13.1 - PROCEDURE

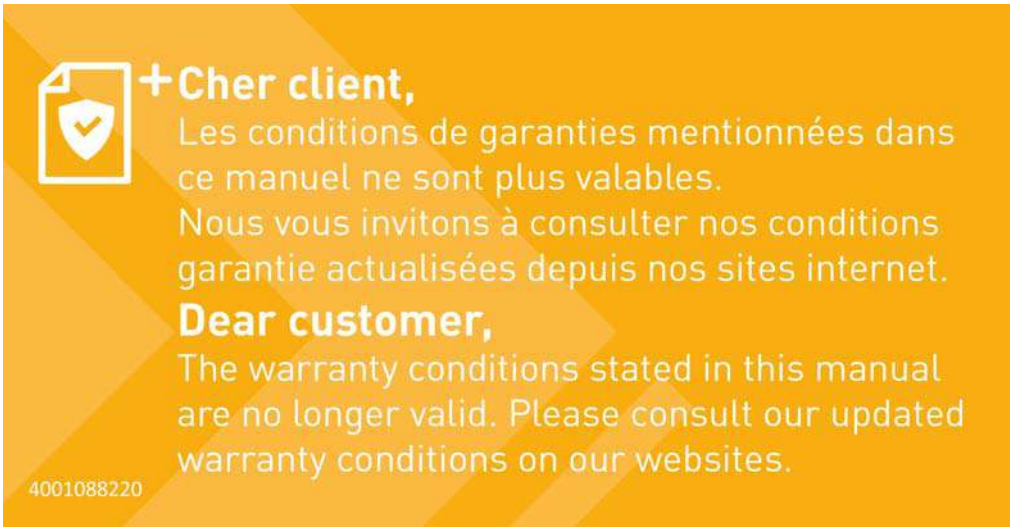
- Note the fault codes
- Note any other LED's that may be lit and the situation of the machine when the defect appears.
- Stow the Telehandler.
- Stop the Telehandler.

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

- Service the machine as set out in this manual.

G- Other information

1 - Conditions of warranty



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

2 - Subsidiary contact information

	HAULOTTE FRANCE PARC DES LUMIERES 601 RUE NICEPHORE NIEPCE 69800 SAINT-PRIEST **TECHNICAL Department:** **+33 (0)820 200 089** **SPARE PARTS : +33 (0)820 205 344** FAX : +33 (0)4 72 88 01 43 E-mail : haulottefrance@haulotte.com www.haulotte.fr		HAULOTTE ITALIA VIA LOMBARDIA 15 20098 SAN GIULIANO MILANESE (MI) **TEL: +39 02 98 97 01** FAX: +39 02 9897 01 25 E-mail : haulotteitalia@haulotte.com www.haulotte.it		HAULOTTE INDIA Unit No. 1205, 12th foor,Bhumiraj Costarica, Plot No. 1&2, Sector 18, Palm Beach Road, Sanpada, Navi Mumbai- 400 705 Maharashtra, INDIA **Tel. : +91 22 66739531 to 35** E-mail : hlgindia@haulotte.com www.haulotte.in
	HAULOTTE HUBARBEITSBÜHNEN GmbH Ehrenkirchener Strasse 2 D-79427 ESCHBACH **TEL : +49 (0) 7634 50 67 - 0** FAX : +49 (0) 7634 50 67 - 119 E-mail : adv-gmbh@haulotte.com www.haulotte.de		HAULOTTE VOSTOK 61A, bld.1, RYABINOVAYA STREET 121471 MOSCOW RUSSIA **TEL/FAX : +7 495 221 53 02 / 03** E-mail : salesrus@haulotte.com www.haulottevostok.ru		HAULOTTE DO BRASIL Av. Alameda Caiapós, 589 CEP: 06460-110 – TAMBORE BARUERI – SAO PAULO – BRASIL **TEL : +55 11 4196 4300** FAX : +55 11 4196 4316 E-mail : haulottebrasil@haulotte.com www.haulotte.com.br
	HAULOTTE IBERICA C/ARGENTINA N° 13 - P.I. LA GARENA 28806 ALCALA DE HENARES MADRID **TEL : +34 902 886 455** TEL SAT : +34 902 886 444 FAX : +34 911 341 844 E-mail : iberica@haulotte.com www.haulotte.es		HAULOTTE POLSKA Sp. Z.o.o. UL. GRANICZNA 22 05-090 RASZYN - JANKI **TEL : +48 22 720 08 80** FAX : +48 22 720 35 06 E-mail : E-mail : haulottepolska@haulotte.com www.haulotte.pl		HAULOTTE MÉXICO, S.A. de C.V. Calle 40 SUR ESQUINA 13 ESTE No. S/N Colonia CIVAC, JIUTEPEC, MORELOS CP 62578 México **TEL : +52 77 7321 7923** FAX : +52 77 7516 8234 E-mail : haulotte.mexico@haulotte.com www.haulotte.com.mx
	HAULOTTE in JAPAN SBJ ShinOsaka BLDG 3F 4-6-5 Nishinakajima Yodogawa-ku, Osaka, JAPAN, Post Code: 532-0011 **TEL : +81 6 6795 9008** FAX : +81 6 6795 9009 www.haulotte.com		HAULOTTE SINGAPORE Pte Ltd. No.26 CHANGI NORTH WAY, SINGAPORE 498812 **Parts and service Hotline:** **+65 6546 6150** FAX : +65 6536 3969 E-mail: haulotteasia@haulotte.com www.haulotte.sg		HAULOTTE MIDDLE EAST FZE PO BOX 293881 Dubaï Airport Free Zone DUBAÏ United Arab Emirates **TEL : +971 (0)4 299 77 35** FAX : +971 (0) 4 299 60 28 E-mail : haulottemiddle-east@haulotte.com www.haulotte.ae
	HAULOTTE SCANDINAVIA AB Taljegårdsgatan 12 431 53 Mölndal SWEDEN **TEL : +46 31 744 32 90** **FAX : +46 31 744 32 99** E-mail : info@se.haulotte.com spares@se.haulotte.com www.haulotte.se		HAULOTTE TRADING (SHANGHAI) Co. Ltd. #7 WORKSHOP No 191 HUA JIN ROAD MIN HANG DISTRICT SHANGHAI 201108 CHINA **TEL : +86 21 6442 6610** FAX : +86 21 6442 6619 E-mail : haulotteshanghai@haulotte.com www.haulotte.cn		HAULOTTE ARGENTINA Ruta Panamericana Km. 34,300 (Ramal A Escobar) 1615 Gran Bourg (Provincia de Buenos Aires) Argentina **TEL : +54 33 27 445991** FAX : +54 33 27 452191 E-mail : haulotteargentina@haulotte.com www.haulotte.com.ar
	HAULOTTE UK Ltd 1 Gravely Way Four Ashes Wolverhampton WV10 7GW ENGLAND **TEL : +44 (0)1216 199753** FAX : + 44 (0)1952 292758 E-mail : salesuk@haulotte.com www.haulotte.co.uk		HAULOTTE GROUP / BILJAX 125 TAYLOR PARKWAY ARCHBOLD, OH 43502 – USA **TEL : +1 419 445 8915** FAX :+1 419 445 0367 Toll free : +1 800 537 0540 E-mail : sales@us.haulotte.com www.haulotte-usa.com		HAULOTTE NORTH AMERICA 3409 Chandler Creek Rd. VIRGINIA BEACH, VA 23453 – USA **TEL : +1 757 689 2146** FAX :+1 757 689 2175 Toll free : +1 800 537 0540 E-mail : sales@us.haulotte.com www.haulotte-usa.com
	HAULOTTE NETHERLANDS BV Koopvaardijweg 26 4906 CV OOSTERHOUT - Nederland **TEL : +31 (0) 162 670 707** FAX : +31 (0) 162 670 710 E-mail info@haulotte.nl www.haulotte.nl		HAULOTTE AUSTRALIA PTY Ltd 51 Port Link Drive DANDENONG – VIC – 3175 **TEL : 1 300 207 683** FAX : +61 (0)3 9792 1011 E-mail : sales@haulotte.com.au www.haulotte.com.au		HAULOTTE CHILE Panamerica Norte Altura Km 21,5 Colina (Cruce c/Lo Pinto) Santiago (RM) **TEL : + 562 2 3727630** E-mail : haulotte-chile@haulotte.com www.haulotte-chile.com

G- Other information

2.1 - CALIFORNIA WARNING

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

CALIFORNIA

Proposition 65 Warning

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

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

CALIFORNIA

Proposition 65 Warning

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

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

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

G- Other information

Notes

H- Intervention register

1 - Intervention register

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

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

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

H- Intervention register

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