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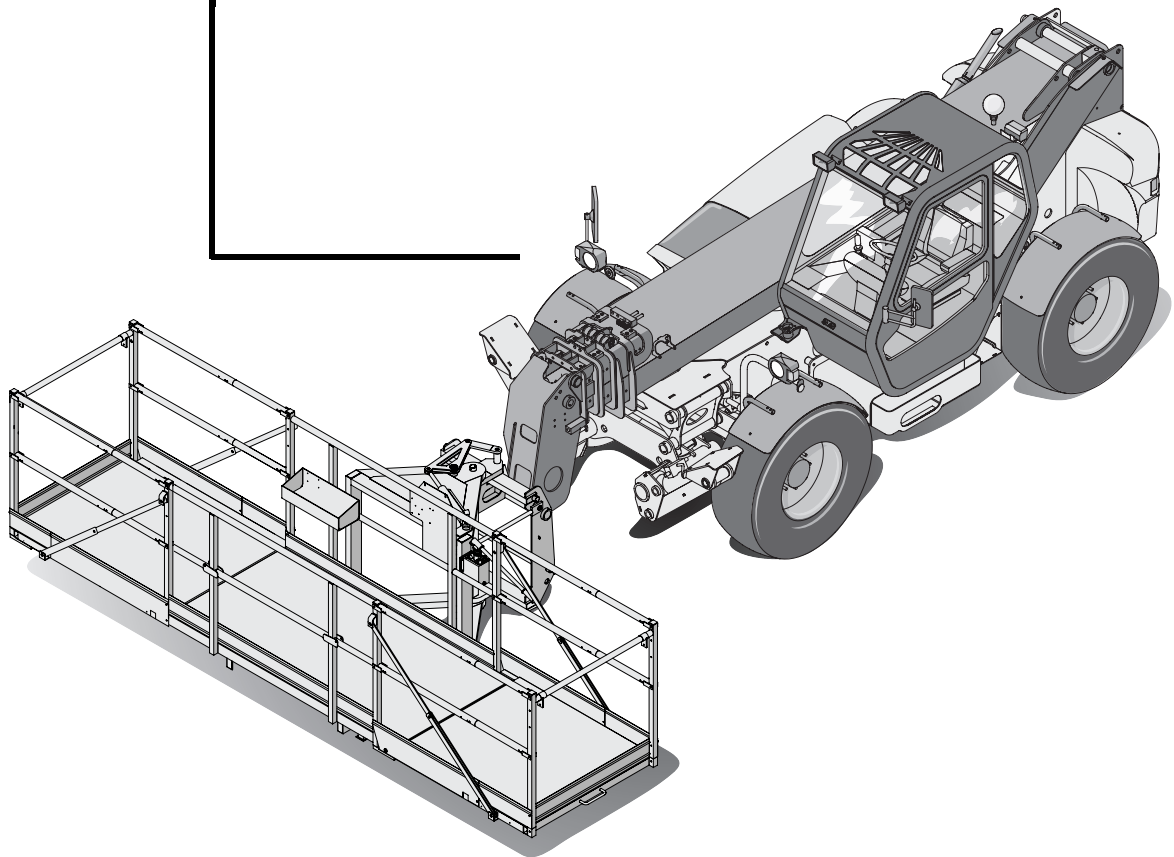


Bobcat®

T40140

With Man Platform

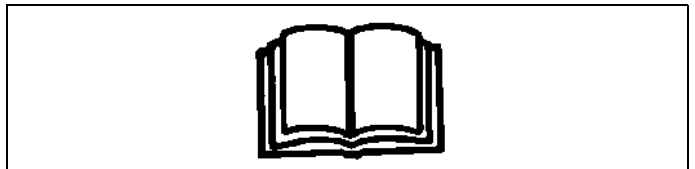
**Operation
and
Maintenance
Manual**



Safety instructions

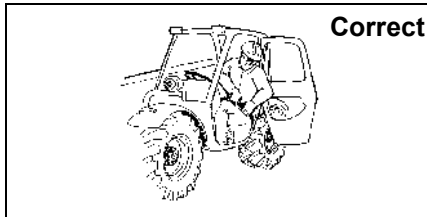
WARNING

Operator must have read the instructions in this manual before operating the machine. Untrained operators can cause injury or death.



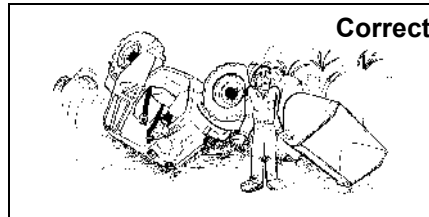
Never use the telescopic handler without instructions. See the machine signs (decals), Operation & Maintenance Manual, and data sheets located in the cab.

Safety Alert Symbol: This symbol with a warning statement means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.



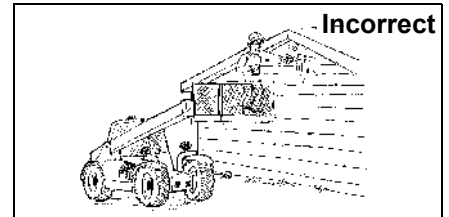
Correct

Always fasten seat belt securely. Do not have any part of your body outside the cab



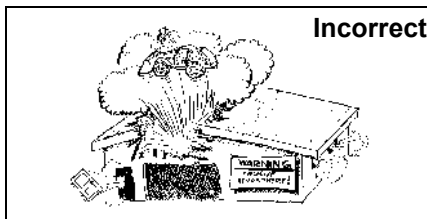
Correct

Never use the telescopic handler without operator cab (ROPS & FOPS).



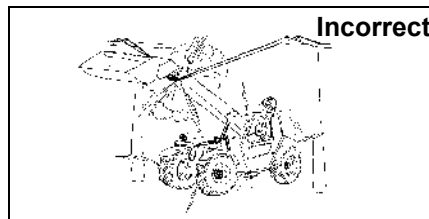
Incorrect

Never use the machine as a working platform or an elevator unless it is equipped with a Bobcat-approved man platform.



Incorrect

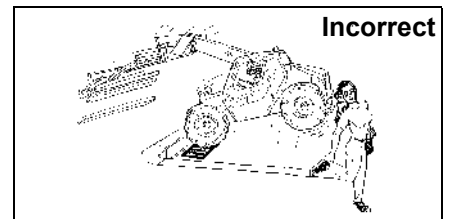
Do not use the machine where exhaust can contact flammable material, explosive dust or gases.



Incorrect

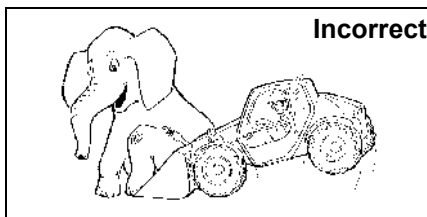
Check for underground or overhead lines in the area before operating the machine.

Keep a minimum distance of 8 m between the nearest line and the machine arm, attachment, or load.



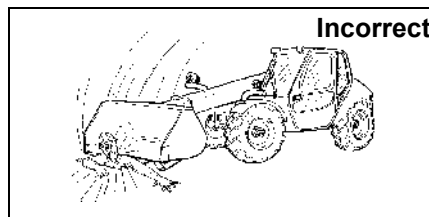
Incorrect

Never transport a load when raised. Do not travel or turn with the lift arms up. Load, unload and turn on flat level ground.



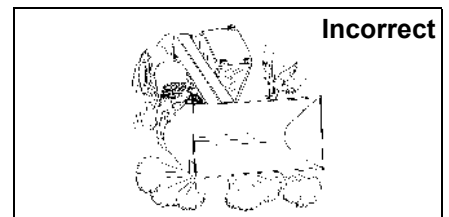
Incorrect

Never exceed rated operating capacity. Keep to the limits of the machine's load chart and/or the attachment's nominal capacity.



Incorrect

Never leave telescopic handler with engine running or with lift arms up. To park, engage parking brake and put attachment flat on the ground.



Incorrect

Never modify equipment. Only use attachments that are approved by Bobcat for this type of telescopic handler.

SAFETY EQUIPMENT

The Bobcat telescopic handler must be equipped with safety systems necessary for each job. Ask your dealer for information on the safe use of attachments and accessories.

- **SEAT BELT:** Check belt fasteners and check for damaged strap or buckle.
- **OPERATOR CAB (ROPS & FOPS):** It must be on the machine with all fasteners tight. Never use the machine without the right side window.
- **OPERATOR'S HANDBOOK:** Must be in cab.
- **MACHINE SIGNS (Decals):** Replace if damaged
- **SAFETY TREADS:** Replace if damaged
- **GRAB HANDLES:** Replace if damaged
- **PARKING BRAKE**
- **WINDOWS AND MIRRORS:** Clean and check for broken window or mirror. Replace if damaged.

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REFERENCE INFORMATION

Write the correct information for your Bobcat telescopic handler in the spaces below. Always use these numbers when referring to your machine.

Telescopic Handler Serial Number _____

Engine Serial Number _____

Notes:

Your Bobcat dealer:

Address:

Telephone:



Bobcat Europe
J. Huysmanslaan 59
B-1651 LOT
Belgium



FOREWORD

IMPORTANT

This manual was written to give the owner/operator instructions on the safe operation of the man platform. **READ AND UNDERSTAND THIS MANUAL AND THE HANDLER MANUAL BEFORE OPERATING YOUR MACHINE.** If you have any questions, see your Bobcat dealer.

For descriptions, instructions, manoeuvres, operations, indications or maintenance as well as controls, indicator lights, indicators and other equipment specific to the handler, refer to the corresponding telescopic handler operation and maintenance manual.

IMPORTANT

This machine is a radio controlled man platform (PEMP) made up of the following elements:

1. a variable range motorized handler.
2. a work platform with specific components.

The following shall be hereafter referred to as:

- **PEMP or machine:** the associated telescopic handler (1) and man platform (2)
- **Telescopic handler:** the handler itself (1)

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Bobcat France Is ISO 9001 Certified



ISO 9001 is a set of international standards that control the processes and procedures which we use to design, develop, manufacture, distribute, and service Bobcat products.

British Standards Institute (BSI) is the Certified Registrar, which Bobcat France chose to assess the Company's compliance with the ISO 9001 set of standards. The BSI registration certifies that the manufacturing plant in Pontchâteau (France) is in compliance with ISO 9001 standards. Only certified assessors, like BSI, can grant registrations.

ISO 9001 means that as a company we say what we do and do what we say. In other words, we have established procedures and policies, and we provide evidence that the procedures and policies are followed.

Lubricants, Fuel and Fluids

The lubricants and fuels described below are those used in the factory. They apply to operating conditions in European temperate climate areas. Please consult us for requirements under other weather conditions.

Designation	Manufacturer	Code
Hydraulic fluid - Platform rotation hydraulic circuit	TOTAL	EQUIVIS ZS 46
Grease - platform hinges	TOTAL	MULTIS EP

Serial Number of the Work Platform

Always use the type, model and serial number of the machine when requesting service information or when ordering parts.

Earlier or later models (identified by the serial number) may use different parts or require a specific maintenance procedure.

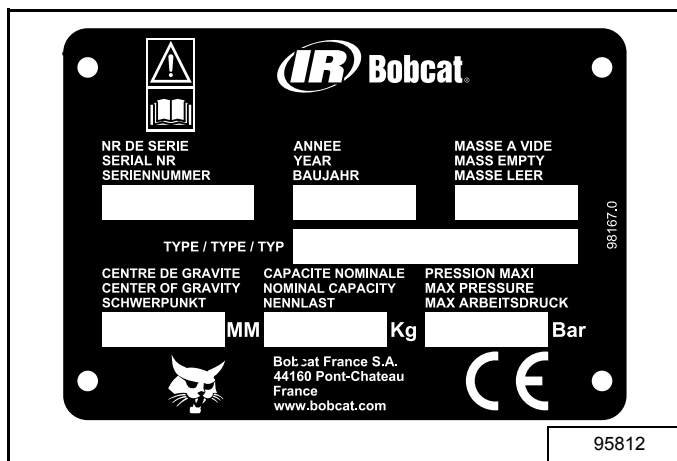
Name Plate Location

On work platforms cast in one piece, the name plate is riveted on the right, on the installation side on the tool carrier.

There are two name plates on platforms composed of several elements:

- one for the installation system, rivetted onto it on the right, on the installation side on the tool carrier.
- one for the people carrier, rivetted on to the right-hand rearside of it.

Figure 1



Types of Work Platforms

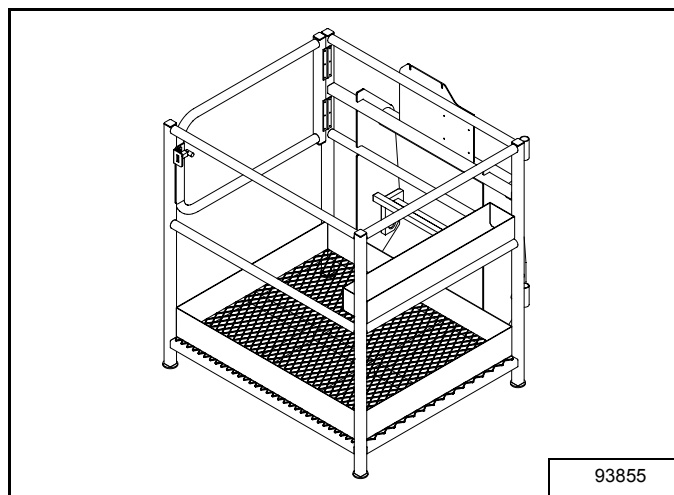
Two types of work platform are available:

- Fixed work platform.
- Rotating, extendible work platform.

Fixed work platform

This platform is a people carrier designed to be directly attached to the tool carrier of the machine.

Figure 2



This people carrier is formed by a plateau:

- with an invariable exterior surface.
- with a non-slip floor which allows water to be evacuated.
- surrounded by a barrier comprised of an upper handrail, an intermediate handrail and a lower plinth.
- with a gate opening inwards.
- with a pocket for storing the driving and maintenance manual.
- with a storage box for tools.

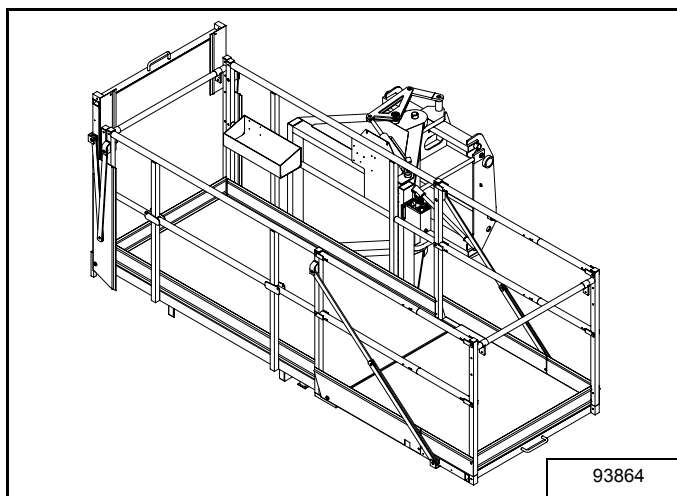
There is only one model of fixed work platform.

Rotating extendible work platform

This platform is comprised of the following elements:

- an attachment system.
- an extendible people carrier.

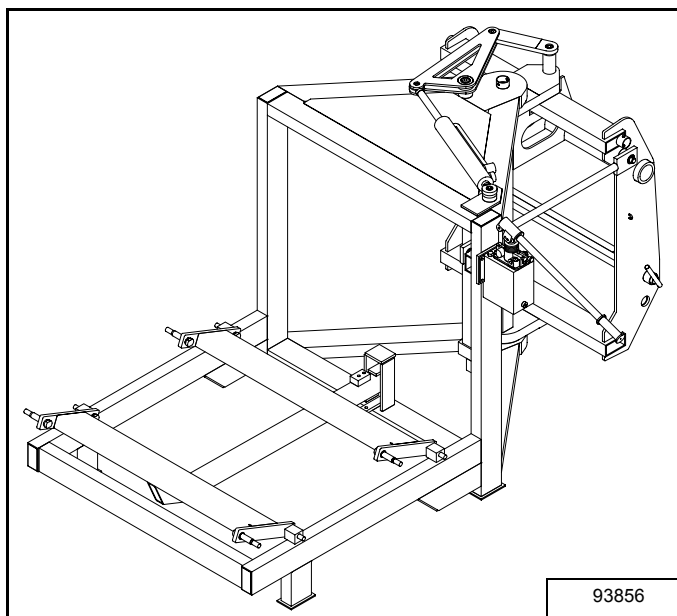
Figure 3



Two models of rotating extendible work platform are available, based on their telescopic length.

Attachment system

Figure 4



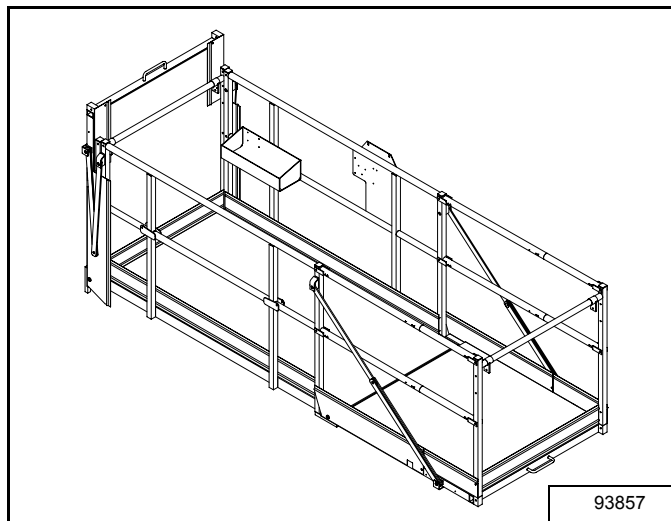
This system performs three functions:

- on the boom side of the machine: installation of platform onto the tool carrier.
- people carrier side: people carrier is fixed on with weight control of its contents.
- in the central part: rotation of the platform, controlled by a cylinder activated by a hand pump.

There is only one attachment system model.

People carrier

Figure 5



This people carrier is extendible and is formed by a plateau:

- surrounded by a barrier comprised of an upper handrail, an intermediate handrail and a lower plinth.
- with access by means of lifting one of the intermediate handrails.
- with a non-slip floor which allows water to be evacuated.
- with a pocket for storing the driving and maintenance manual.
- with a storage box for tools.

The people carrier is extended by deploying the lateral sides. The two models of people carrier characterised by extensions of differing lengths are:

- people carrier 2.34m in width and extendible to 4.1m.
- people carrier 2.34m in width and extendible to 5m.

SAFETY

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Safety Instructions for Bobcat Telescopic Handlers and Attachments

Safety is the operator's responsibility

Carefully follow the operating and maintenance instructions in this manual.

All Bobcat telescopic handlers and attachments are designed to ensure maximum safety to the operator. However, in spite of very careful design, this machine can be dangerous if not used and serviced according to the instructions in this manual.

A certificate of compliance is issued on delivery of the machine. This must be kept and shown at each periodic inspection of the machine and handed over to the purchaser if the machine is resold.

The Bobcat telescopic handler is highly maneuverable and compact. It is rugged and useful under a wide variety of conditions. The operator should still face hazards associated with various types of applications.

Subject to compliance with operating and maintenance instructions, and use of the specially designed original equipment, this machine:

- can be used for lifting operations with variable-length load suspension components, which allow the load to swing freely in all directions.
- can be used to lift personnel with a work platform.
- can be remote controlled, for some of its functions, from outside the normal driving position inside the cab.

This machine is not designed for:

- use under weather conditions with a risk of lightning, storm or winds faster than 12.5 m/s (force 6 on the Beaufort scale)
- use in explosive atmosphere.
- carrying out work on live power lines.
- carrying out underground work.

The dealer explains the capabilities and restrictions of the Bobcat telescopic handler for each application. The dealer demonstrates safe operation according to Bobcat instructions, which are made available to operators.

The dealer can also identify unsafe modifications or use of non-approved attachments.

The attachments and buckets are designed for nominal capacities and secure fastening to the Bobcat telescopic handler.

The user should check with the dealer, or refer to Bobcat documentation, to determine safe loads of materials of specified densities for the Telescopic Handler/Attachment combination.

The user must adhere to the loads charts relative to each mounting of tyres.

Use only the tyres listed in the manual pertaining to the telescopic handler, and make sure the machine is equipped with 4 identical tyres.

The following publications and training materials provide information on the safe use and maintenance of the telescopic handler and attachments:


- The Delivery Report ensures that complete instructions have been given to the new owner and that the Bobcat Telescopic Handler and equipment are in safe operating condition.
- The Operation & Maintenance Manual delivered with the Bobcat telescopic handler or attachment provides operating information as well as routine maintenance and service procedures. It is a part of the telescopic handler and must be stored in the container provided inside the operator cab. Replacement Operation & Maintenance Manuals are available from your Bobcat dealer.
- Machine signs (decals) instruct on the safe operation and maintenance of your Bobcat telescopic handler or attachment. The signs and their locations are shown in the Operation & Maintenance Manual. Replacement signs are available from your Bobcat dealer.


On delivery, the dealer checks the recommended applications of the product with the owner / operator. If the machine is to be used for other applications, the owner/operator should check the relevant recommendations with the dealer.

Safety Symbols

	WARNING
This symbol with a warning statement, means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.	

IMPORTANT
This sign identifies procedures which must be followed to avoid damaging the machine.

	WARNING
The operator must read the instructions before running the machine. Untrained operators can cause injury or death.	

	WARNING
Warnings signs on the machine and in the manuals are for your safety. Failure to obey warnings can cause injury or death.	

The Bobcat telescopic handler and attachment must be in good operating condition before use.

Safe operation requires a qualified operator

A qualified operator must understand the written instructions, rules and regulations.

- Written instructions from Bobcat include the Delivery Report, Operation & Maintenance Manual, Operator's Handbook and machine signs (decals).
- Check the rules and regulations at your location. The rules may include an employer's work safety requirements. Regulations may apply to local driving requirements or use of a Slow Moving Vehicle (SMV) emblem.

A qualified operator must have training with actual operation.

- Operator training should consist of a demonstration and verbal instruction. This training is given by your Bobcat dealer before the product is delivered.
- The new operator must start in an area without bystanders and use all the controls until he can operate the machine and attachment safely under all conditions of the work area. Always fasten seat belt before starting the machine.

A qualified operator must know the work conditions.

- The operator must know the weight of the materials being handled. Avoid exceeding the Rated Operating Capacity and comply with the load chart of the machine and attachment. Very dense material is heavier than the same volume of less dense material. Reduce the size of load if handling dense material.
- The operator must know any prohibited uses or work areas; in particular, he needs to know about excessive slopes.
- The operator must enquire about the location of any underground lines.
- Where overhead power lines are present in the operating area, ensure sufficient clearance between the nearest of these lines and any part of the machine.

Voltage	Minimum distance
up to 1 KV	1 m
from 1 KV to 110 KV	3 m
from 110 KV to 220 KV	4 m
from 220 KV to 380 KV	5 m
unknown	5 m

- Wear tight fitting clothing. Always wear safety glasses when performing maintenance or service work. Safety glasses or hearing protection are required for some work.

IMPORTANT
A qualified operator must not use drugs or alcoholic drinks which impair his alertness or coordination while working. An operator who is taking prescription drugs must get medical advice to determine if he can safely operate a machine.

Fire Prevention

The machines and some attachments have components that are at high temperatures under normal operating conditions. The primary source of high temperatures is the engine and exhaust system. The electrical system, if damaged or incorrectly maintained, can be a source of arcs or sparks.

- Stop the engine and let it cool before adding fuel. **NO SMOKING!**
- Use the procedure in the Operation & Maintenance Manual for connecting the battery and for jump starting.
- Know where fire extinguishers and first aid kits are located and how to use them. Replacement fire extinguishers are available from your Bobcat dealer.

Maintenance Instructions

- Read the maintenance instructions carefully.
- Machine maintenance and compliance are obligatory.
- For any intervention other than normal maintenance, consult your BOBCAT dealer.
- Clean the machine or at least the relevant area before any intervention. Protect against water, steam or cleaning agents any components likely to be damaged (particularly electric components) during this operation.
- Only wear suitable clothing, avoid loose clothing. Tie back and protect your hair, if necessary.
- Turn off the engine before any intervention. If any intervention requires the engine to be running, take all the necessary safety measures and precautions. There may be moving parts, high temperatures, hydraulic circuits under pressure, electric circuits under voltage. Such operations must be carried out only by trained, qualified personnel.
- Make sure that the area is adequately ventilated before starting the engine.
- Clean up all traces of fuel, oil, grease or dirt.
- Make any necessary repairs immediately even if they do not seem important.
- Immediately repair any leaks, even if they do not seem important.
- Do not run the engine without complete fuel and exhaust systems, without oil or coolant, or in case of fuel leaks.
- Do not operate the machine without hydraulic fluid in the hydraulic system.
- Use only recommended lubricants. Do not use polluted lubricants or lubricants whose filtration state is not precisely known.
- Wait until the engine coolant has dropped below 20°C before opening the surge tank plug or carrying out work on the engine cooling system.
- Do not take apart, tighten or loosen any connections, hoses or hydraulic components when the system is under pressure. Such operations must be carried out only by trained, qualified personnel.
- Do not smoke or approach the machine with a bare flame if the fuel tank is open or when filling it. Fill the tank in a suitable place. Do not fill the tank while the engine is running.

Warning of Residual Risks

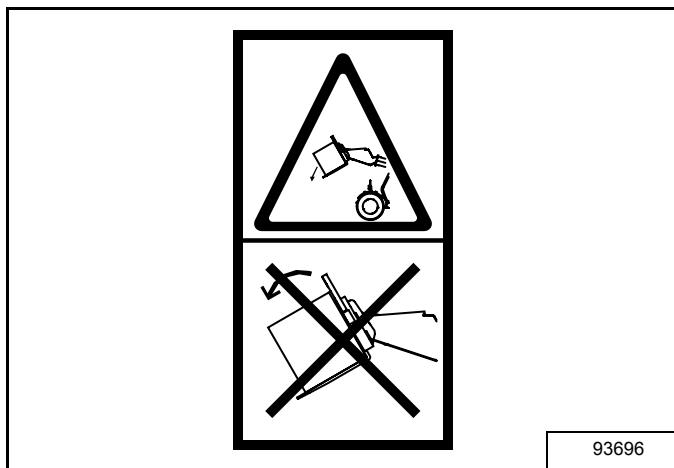
Warnings signs are provided on the machine to prevent residual risks.

These warnings are mentioned on stickers located on the machine, close to where the risks are. These stickers are outlined in red with black inscriptions on a yellow background.

Risk of load falling when the forks or attachment tilt forwards

One sticker on each side of the boom head.

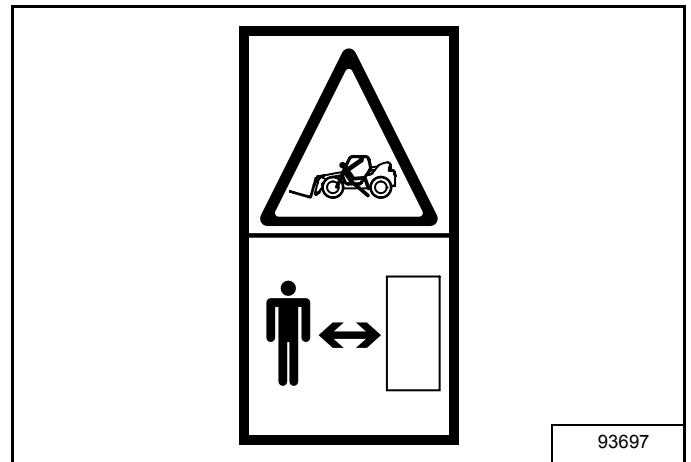
Figure 1



Risk of being caught up in a wheel when the machine is in motion

One sticker on the chassis opposite each wheel.

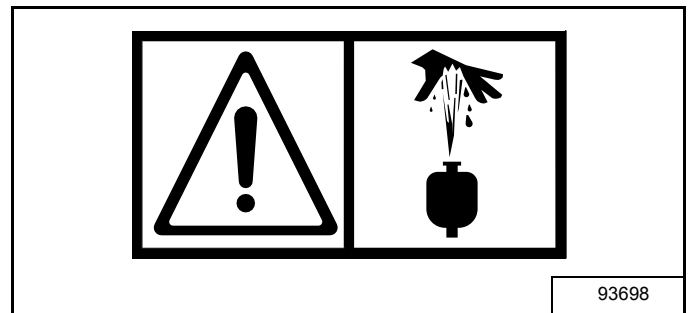
Figure 2



Risk of residual pressure in a hydraulic accumulator and its circuit

Near the access to the accumulator and its circuit.

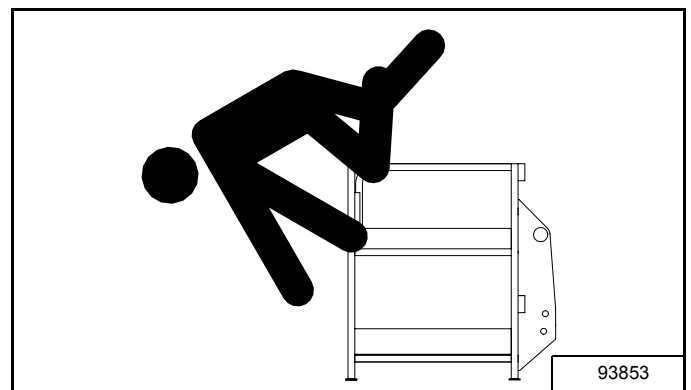
Figure 3



Risk of falling

On the work platform, near the radio control.

Figure 4



Specific Instructions for the PEMP

Application

This machine is designed to:

- lift people only when placed on its stabilisers, with a risk of falling more than 3 metres.
- be controlled from the work platform in the normal mode to lift people.
- be moved by the handler and its controls.
- be used on ground with a cant:
 - less than 3% longitudinal.
 - less than 7% transversal.

This machine is **not** designed for:

- transporting people.
- handling loads.
- use under weather conditions with a risk of lightning, storm or winds faster than 12.5 m/s (force 6 on the Beaufort scale).
- use in explosive atmosphere.
- carrying out work on live power lines.
- carrying out underground work.

Instructions for people lifting manoeuvres

- Make sure that the work platform is properly fixed and locked to the tool carrier.
- Make sure that the work platform and its components are in good condition.
- Make sure that all the connections between the work platform and the telescopic handler are properly connected.
- Do not lean out of the work platform and take the necessary precautions to avoid people falling from the work platform.
- The work platform is the usual driving post for the PEMP during people lifting manoeuvres.
- It is forbidden to perform people lifting manoeuvres from anywhere other than the usual driving post.
- Comply with the limits of the PEMP load charts. The operational limits for the PEMP are determined by the lowest limit between that of the work platform and that of the telescopic handler.
- Whichever method is used, it is forbidden to carry out people lifting manoeuvres which exceed the capacity of the PEMP.
- Do not allow anybody within the machine's turning area or to pass beneath the extendible structure.
- Do not allow anybody to ride in or on any part of the machine.
- Before any manoeuvre, make sure that the ground can support the weight of the machine and the load in the work platform.
- During people lifting manoeuvres, carry out all movements of the boom gently and at a speed that does not jeopardise the stability of the machine.
- During people lifting manoeuvres, always use the minimum telescoping length required.

OPERATING INSTRUCTIONS

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Controls and Indicators



WARNING

When using the remote control the contact of the transmitter must always remain in position "1".



WARNING

Please make sure that all other energy consumers (steering mode, headlights, cabin ventilation, etc.) remain switched off when using the remote control.

IMPORTANT

This paragraph presents the controls, indicators and equipment which the machine is equipped with when used as a PEMP.

Controls, indicators and equipment for use as a telescopic handler with PEMP are the same as for the regular telescopic handler without specific PEMP equipment; read the applicable paragraphs in the telescopic handler operator's instructions.

Radio control transmitter

This transmitter is comprised of a box which is fixed onto the people carrier which is the usual driving post when the machine is used as a PEMP.

In this paragraph, the controls are described considering the operator to be normally positioned in the driving post, i.e.:

- in the people carrier.
- opposite the transmitter, i.e. by the barrier on the handler side.

Front side

There are two adjusting screws on this side to fasten the transmitter onto the people carrier.

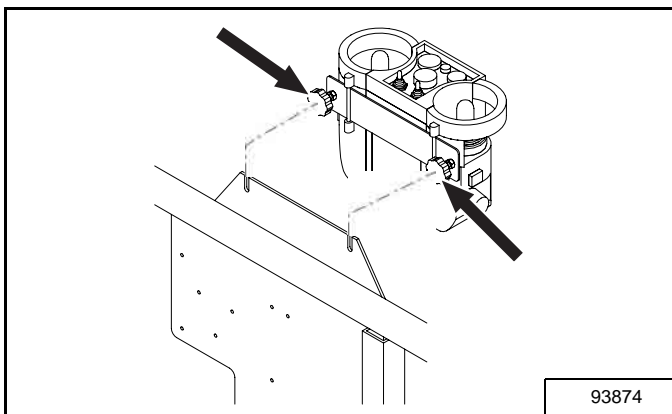
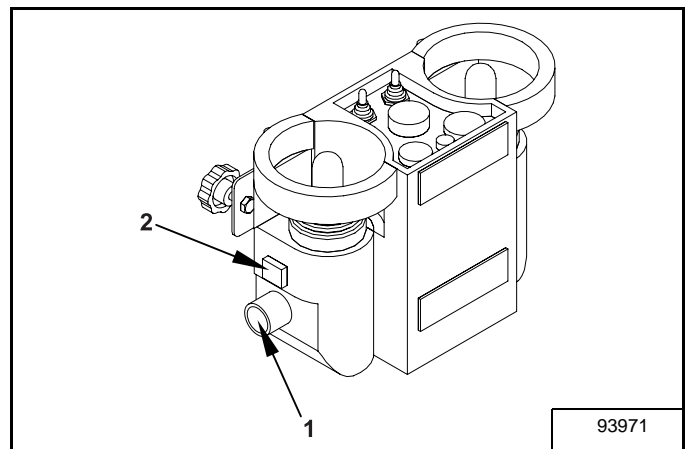



Figure 10

Right side

Figure 11



Reference	Description	Function
1	Power plug	<p>This plug (7-pin) connects the transmitter to the platform via the cable located on the platform.</p> <ul style="list-style-type: none"> • If this plug is not connected to the platform, the radio control will not function. • Do not attempt to activate the machine by any other means if this plug is not connected.

Reference	Description	Function
2	Control of alarm	<ul style="list-style-type: none"> With symbol:  Switch continually depressed: activates the handler's road alarm. Release switch to stop the alarm.

Lower side

This side includes the accumulator for the transmitter.

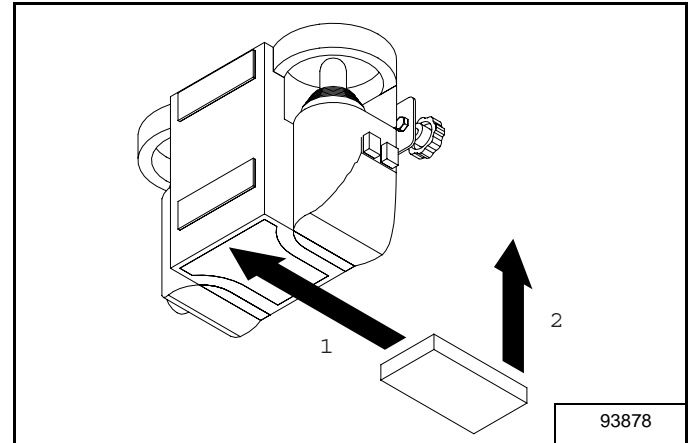
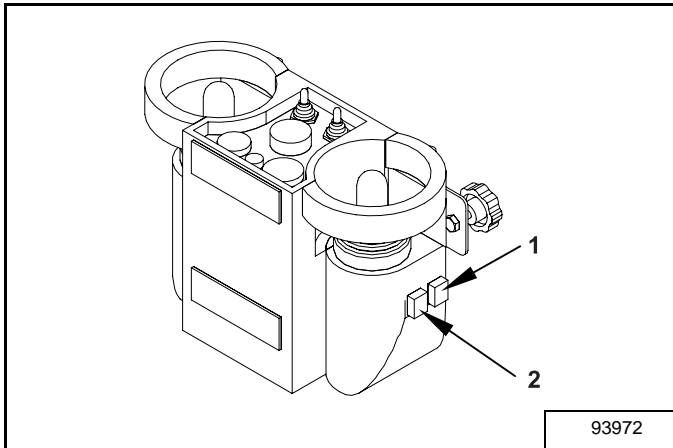
The machine is delivered with two accumulators: one should be charged up in the charger whilst the other one is being used in the transmitter.

For installing or removing the accumulator, see [Figure 13].

Figure 13

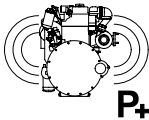
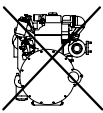
Left side

Figure 12



WARNING

- Only use guaranteed genuine accumulators.
- Do not modify the connection of the accumulators.

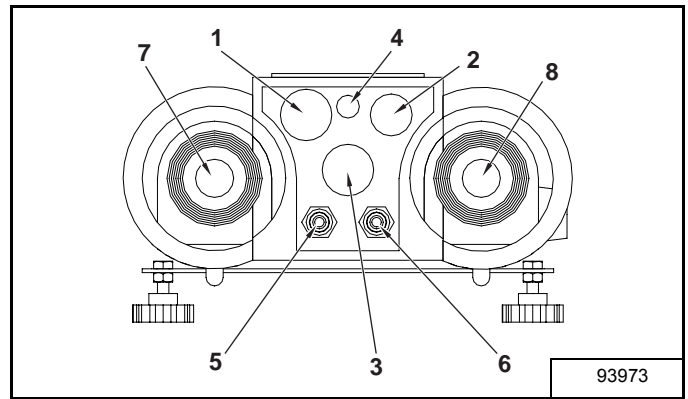
Reference	Description	Function
1	Control for start-up of diesel engine	<ul style="list-style-type: none"> With symbol:  Press on the switch to start up the engine. Release the switch when the engine is running autonomously.
2	Control to turn off the diesel engine	<ul style="list-style-type: none"> With symbol:  Press on the switch to turn off the engine.

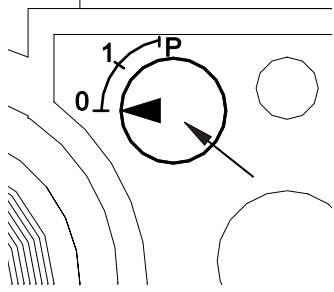
Upper side

Figure 14

This side includes the following elements:

- various switches
- control levers
- an indicator



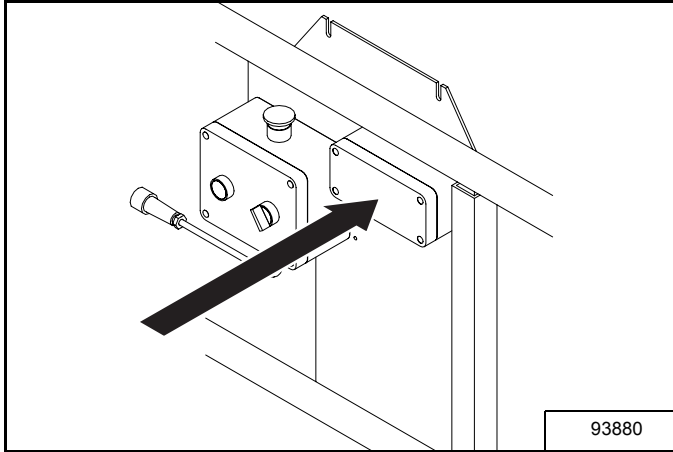
Reference	Description	Function
1	Contact switch	<p>This is a rotary key ignition switch (two black keys are delivered with the machine). The key must be introduced into the marked ignition switch to face "0".</p>  <p>There are two stable positions:</p> <ul style="list-style-type: none"> • turned counterclockwise = position "0": transmitter switched off. • turned clockwise = position "1": transmitter switched on. <p>A third position "P" is indicated but cannot be used by the operator. To insert or remove the key, the switch must be in the "0" position. Respect the orientation of the key when inserting it into the switch.</p>
2	Switch for speed of movements	<p>When using the transmitter to control the PEMP, this switch becomes inoperative. This switch has two stable positions: turned counterclockwise and turned clockwise. It should however be turned counterclockwise when the transmitter is used to control the PEMP, otherwise it will be impossible to start up the diesel engine.</p>
3	Emergency stop ignition switch	<p>This switch has two stable positions:</p> <ul style="list-style-type: none"> • pushed downwards: emergency stop is activated, i.e. the transmitter is switched off and the radio connection interrupted. • pulled upwards: normal transmitter operation. <p>If the emergency stop is activated, start the whole start-up procedure again from the beginning so that the transmitter can function normally again.</p>
4	Indicator light	<p>The green light indicates whether or not the transmitter is transmitting to the receiver:</p> <ul style="list-style-type: none"> • the light is blinking: the transmitter is transmitting. • the light is not blinking: the transmitter is not transmitting.
5	Switch for deactivating the system to stop aggravating movements (SAM)	<p>When using the transmitter to control the PEMP, this switch becomes inoperative.</p>
6	Switch for function selection	<p>When using the transmitter to control the PEMP, this switch becomes inoperative.</p>
7	Left lever	<p>This lever is bi-directional, and settles in neutral when released but the movements it controls cannot be combined:</p> <ul style="list-style-type: none"> • pushed forwards: retraction of telescoping is proportionally controlled. • pushed backwards: extension of telescoping is proportionally controlled. • pushed to the left: correction of cant towards the left is proportionally controlled. • pushed to the right: correction of cant towards the right is proportionally controlled. <p>Once this lever is pushed in one direction, the speed of the diesel engine reaches 1200 min⁻¹.</p>
8	Right lever	<p>This lever is bi-directional, and settles in neutral when released but the movements it controls cannot be combined:</p> <ul style="list-style-type: none"> • pushed forwards: lowering of the boom is proportionally controlled. • pushed backwards: raising of the boom is proportionally controlled. • pushed to the left: hydraulic function of the boom head is proportionally controlled. • pushed to the right: hydraulic function of the boom head is proportionally controlled.

Weight control box

This box (and its measuring system) is only installed on rotating extendible work platforms.

This box is located on the people carrier and indicates the state of the load in the people carrier in relation to the maximum authorised load.

Figure 15



WARNING

During people lifting manoeuvres:

- observe the indications given in the load chart for the work platform in use.
- observe the indications given by the three lights and alarm mentioned above and adopt the necessary measures.

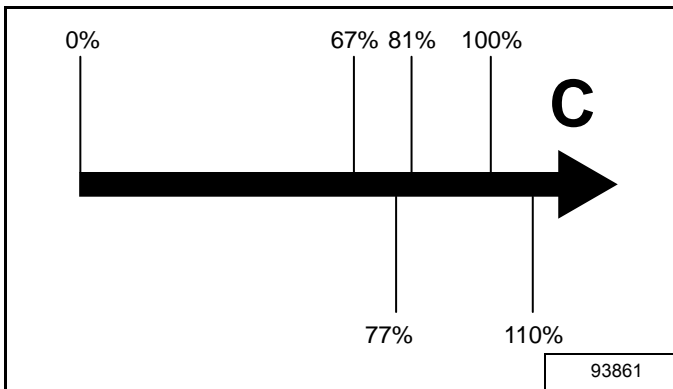
WARNING

It is strictly forbidden to use the PEMP to carry out operations for handling charges.

This is indicated by three lights and an alarm. Thus M = maximum authorised mass in the people carrier:

- Green indicator light: stays on as long as the mass within the people carrier is less than 67% of mass M. Otherwise it goes out.
- Amber indicator light: the amber light comes on when the mass within the people carrier is equal to or greater than 67% of mass M.
- Red indicator light: comes on when the mass within the people carrier is equal to or greater than 81% of mass M.
- Alarm: comes on when the mass within the people carrier is equal to or greater than 77% of mass M.
- When the mass within the people carrier reaches 110% of mass M, the system turns off the machine's diesel engine.

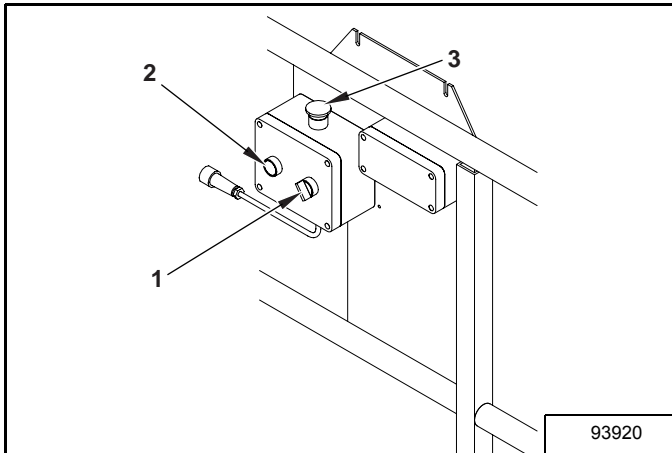
Figure 16



Emergency control box

This box is located in the people carrier and includes 3 switches.

Figure 17

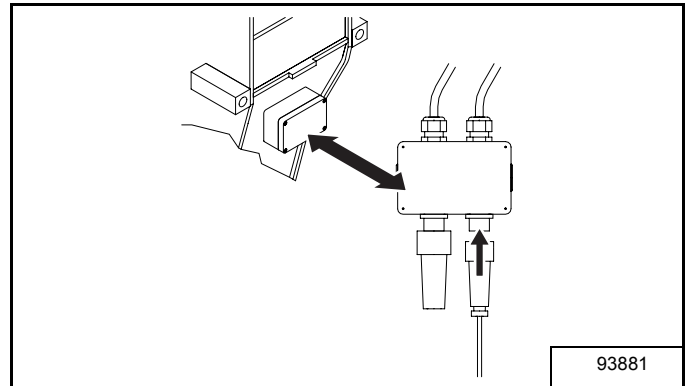


Other equipment located on the platform

Cable for Connecting Platform to Handler

This cable (equipped with a 6-pin plug) connects the platform to the handler's electrical circuit.

Figure 18



Reference	Description	Function
1	Movement selection switch	<ul style="list-style-type: none"> Rotary switch with two positions. Turned counterclockwise, stable position: retracts telescoping. Turned clockwise, unstable position: lowers the boom.
2	Manoeuvre switch	<ul style="list-style-type: none"> Switch continually depressed: execution of selected manoeuvre. Switch released: stops the selected manoeuvre. <p>Carry out the movements in the following order:</p> <ul style="list-style-type: none"> first completely retract telescoping. then lower the boom.
3	Emergency stop ignition switch	<p>This switch has two stable positions:</p> <ul style="list-style-type: none"> pushed downwards: emergency stop is activated, i.e. the emergency control is put out of order. pulled upwards: the emergency control is functioning normally.

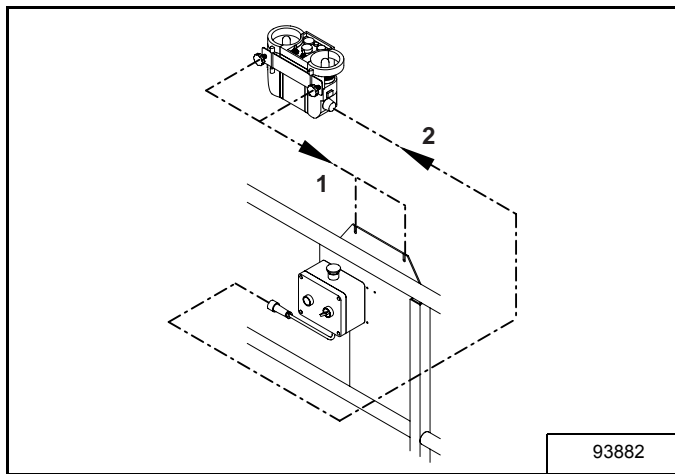
WARNING

- If the cable is not connected to the handler, the radio control will not function.
- Do not attempt to activate the machine by any other means if this cable is not connected.

Cable for Connecting Transmitter to Platform

This cable (equipped with a 7-pin plug) connects the transmitter to the platform.

Figure 19



93882

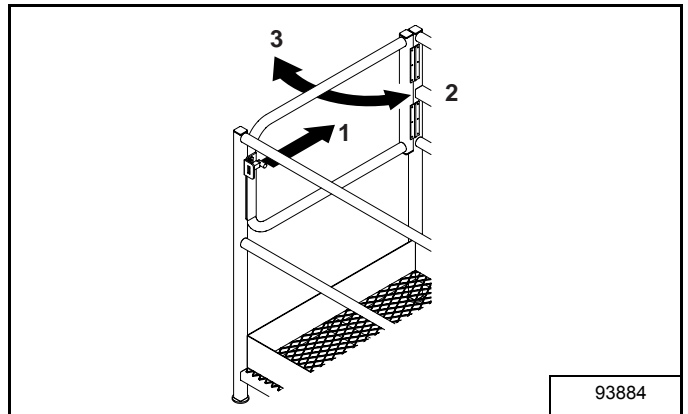
Access to the platform

Fixed platforms

The access is located on the right-hand barrier:

- Release the lock and push the gate inwards to get in or out of the people carrier.
- Close and lock the gate once inside or when leaving the people carrier.

Figure 20



93884

⚠ WARNING

- This connection must be carried out when the transmitter is fixed to the designated place on the platform.
- If the cable is not connected to the transmitter, the radio control will not function.
- Do not attempt to activate the machine by any other means if this cable is not connected.

⚠ WARNING

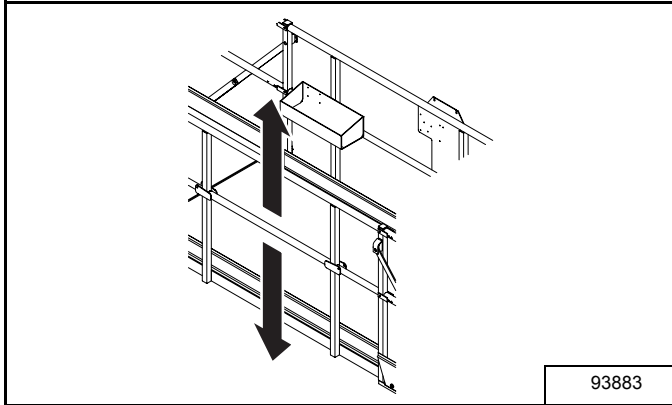
- Do not attempt to get in or out of the people carrier if it is more than 500mm above the ground.
- Do not attempt to block the gate in any sort of position or to change the direction in which it opens.

Extendible platforms with rotation

The access is located on the front barrier:

- Lift the intermediate central handrail to get in or out of the people carrier.
- Lower the handrail to its original position once inside or when leaving the people carrier.

Figure 21



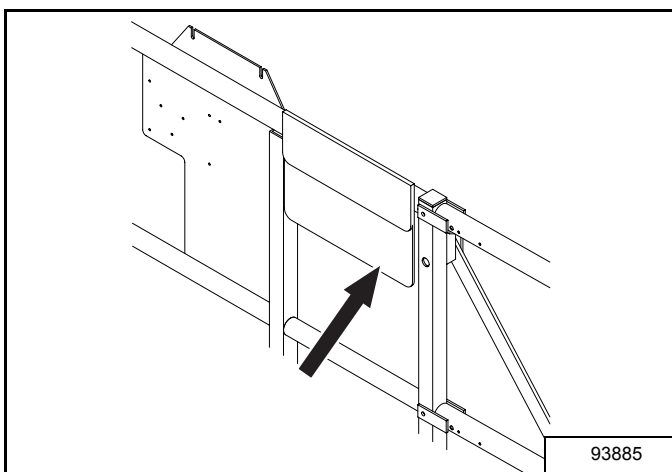
⚠ WARNING

- Do not attempt to get in or out of the people carrier if it is more than 500mm above the ground.
- Do not attempt to block the intermediate central handrail in any sort of position.

Document container

A compartment is located on the rear barrier to store documents. It should be used especially to store this manual.

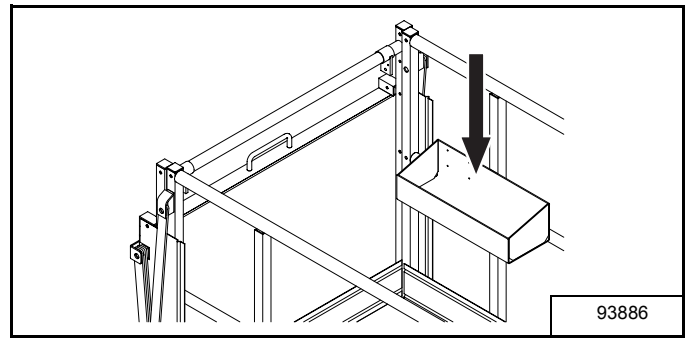
Figure 22



Tool container

A box is located on the rear barrier to store tools.

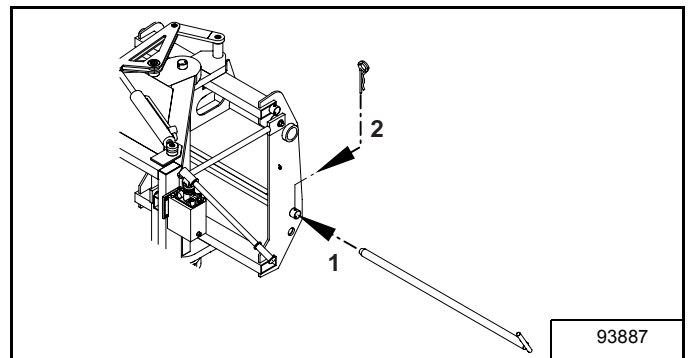
Figure 23



Tool carrier pin

A pin is provided on the tool carrier, in addition to the platform's locking device. Put this as well as the safety pin in place, once the platform is attached to the tool carrier.

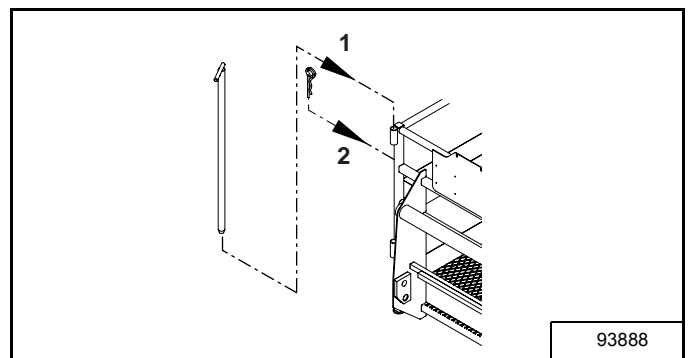
Figure 24



A storage space is provided on the platform for this pin, when the platform is not in use:

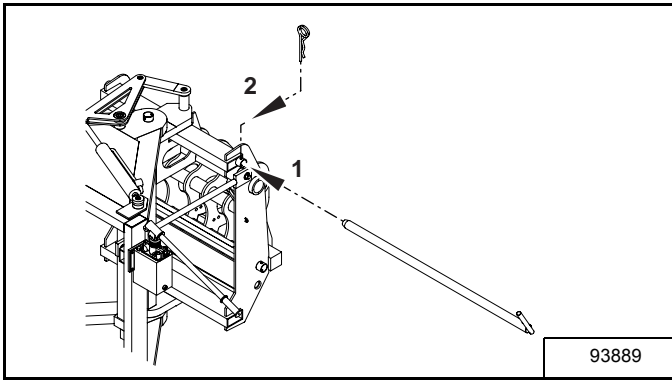
- along the rear right-hand upright on the fixed platforms.

Figure 25



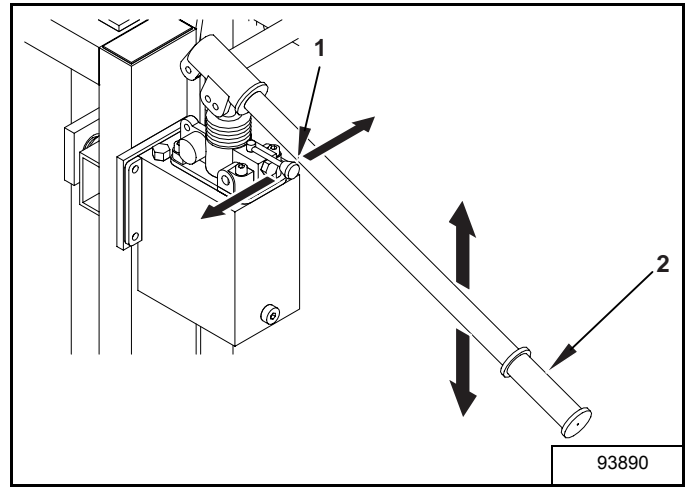
- within the structure of the attachment system on the extendible platforms.

Figure 26 Rotation control



This system exists only on extendible platforms. It is comprised of a manual hydraulic pump with two levers.

Figure 27



⚠ WARNING

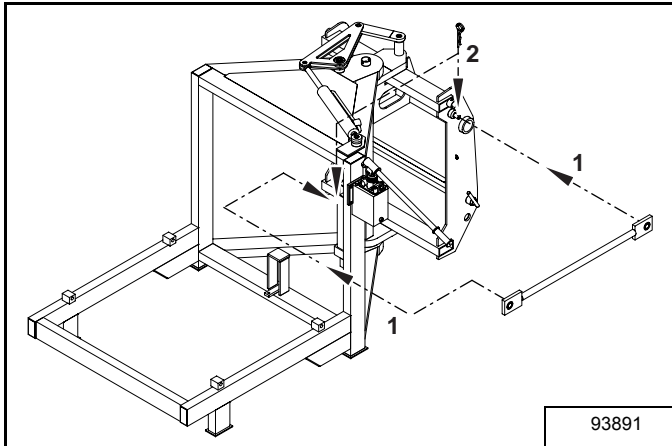
- Make sure the platform is correctly locked onto the tool carrier by the usual system before placing the additional pin.
- Do not use the machine if the additional pin is not in place and secured by its pin.

Reference	Description	Function
1	Lever for selecting the direction of rotation	<ul style="list-style-type: none"> • Pushed backwards: 90° rotation of the platform to the right. • Pushed forwards: 90° rotation of the platform to the left. • Central position: no rotation.
2	Rotation lever	<ul style="list-style-type: none"> • Select direction of rotation with the selection lever. • Activate the rotation lever to the desired position. • Return the lever for selecting the direction of rotation to the central position.

Blocking track rod

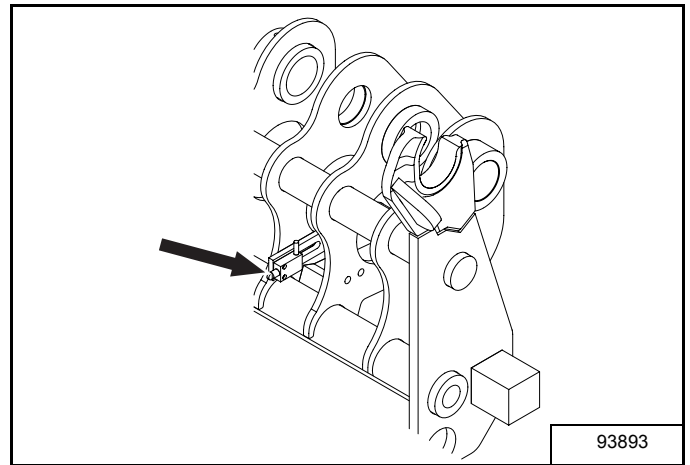
This track rod only exists on extendible platforms. It mechanically blocks the rotation system in the central position. It is systematically put into place during people lifting manoeuvres which do not require rotation and also when the machine is moved.

Figure 28

**Other controls and equipment located on the handler****Platform Detector**

The detector is activated by a switch located on the tool carrier.

Figure 29

**WARNING**

Do not attempt to remove or put back this track rod if the platform is more than 500mm above the ground.

**WARNING**

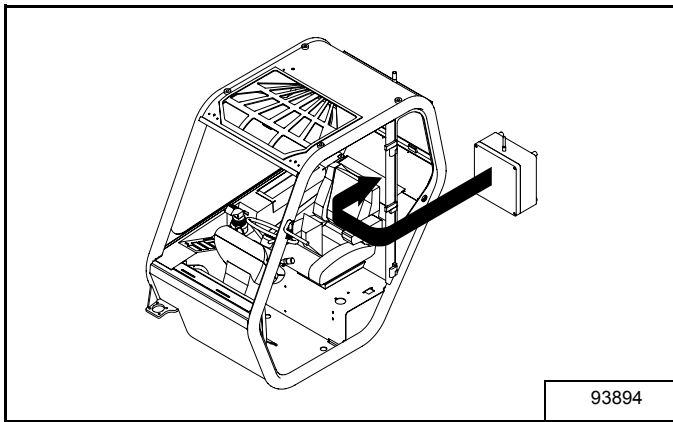
It is strictly forbidden to:

- modify the characteristics of this switch.
- modify the detection mode.
- modify the electrical connections of this switch.

Radio Control Receiver

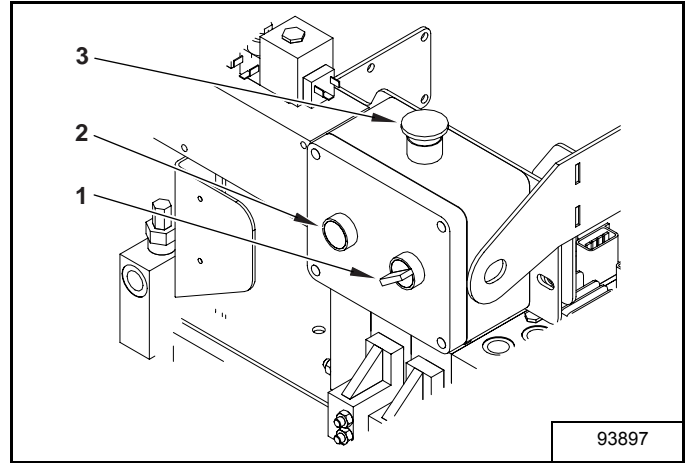
This receiver is behind the seat, on the back wall of the cab. The aerial is incorporated into the interior of the box.

Figure 30



This box comprises 3 switches.

Figure 32



Reference	Description	Function
1	Movement selection switch	<ul style="list-style-type: none"> Rotary switch with two positions. Turned counterclockwise, stable position: retracts telescoping. Turned clockwise, unstable position: lowers the boom.
2	Manoeuvre switch	<ul style="list-style-type: none"> Switch continually depressed: execution of selected manoeuvre. Switch released: stops the selected manoeuvre. <p>Carry out the movements in the following order:</p> <ul style="list-style-type: none"> first completely retract telescoping. then lower the boom.
3	Emergency stop switch	<p>This switch has two stable positions:</p> <ul style="list-style-type: none"> pushed downwards: emergency stop is activated, i.e. the emergency control is put out of order. pulled upwards: the emergency control is functioning normally.

WARNING

It is strictly forbidden to:

- modify the settings of the receiver.
- modify the electrical connections of the receiver.

WARNING

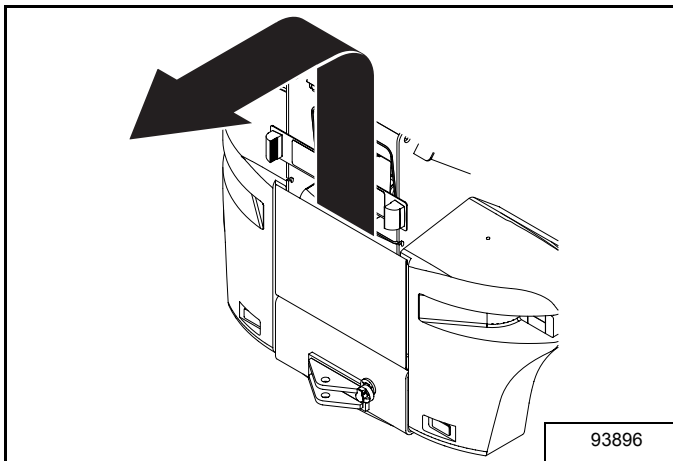
It is strictly forbidden to:

- change the position of the aerial.
- modify the electrical connections of the aerial.

Emergency control box

This box is located at the back of the handler: to access it, remove the rear bonnet.

Figure 31

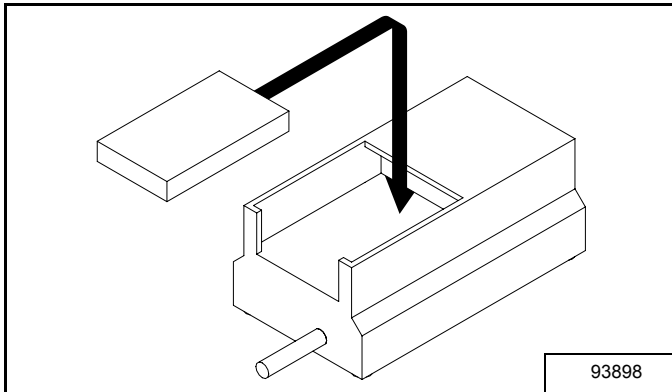


Accumulator Charger

Located in the handler cab, this charger can recharge one of the transmitter's two accumulators whilst the other one is in use.

For installing or removing the accumulator, see [Figure 33].

Figure 33



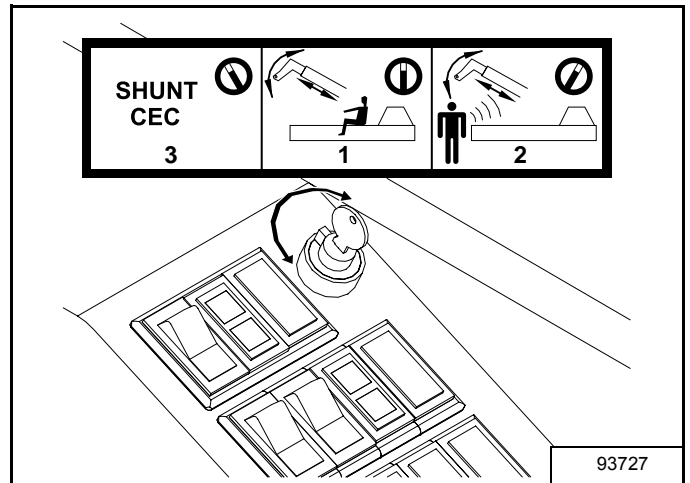
WARNING

- Only use guaranteed genuine accumulators.
- Do not modify the connection of the accumulators.

Switch for driving mode and for the deactivation of the device to stop aggravating movements (SAM)

This switch, located on the right-hand console in the cab, selects the machines driving mode, and in particular, the radio control mode when it is used as a PEMP. This switch is mounted on the telescopic handler, even if the telescopic handler is not equipped with the changes specific to its use as a PEMP, because it is being otherwise used. Refer to the relevant paragraphs in the manual of the corresponding handler.

Figure 34



Reference	Description	Function
1	Middle position (stable position)	Use of the machine with normal controls.
2	Turned clockwise (stable position)	Use of the machine with remote control.
3	Turned counterclockwise (unstable position)	Deactivation of the SAM device.

IMPORTANT

To insert or remove the key, the switch must be in a clockwise-turned position.

“Turned clockwise” is the stable position which must be selected to activate the radio control.

Operating the Machine

These manoeuvres are carried out in the telescopic handler driving mode from the telescopic handler's cab. Refer to the instructions given in the relevant paragraphs in the manual of the corresponding handler.

For matters specific to the presence of a work platform on the tool carrier, the following instructions, as well as the above-mentioned conditions must be followed:

- The handler's boom should be put into the transport position. If the platform is raised more than 2.5m above the ground, the transmission of the machine becomes inoperative.
- On platforms with a rotation device, this device will be blocked in the central position by the track rod intended for this purpose.
- The extensions of extendible platforms will ideally be retracted.
- The radio control transmitter will be switched off.
- A minimum of equipment will be taken onto the platform: 100 Kg maximum.
- Do not allow anybody to ride on any part of the machine, especially on the platform.



WARNING

The machine is not intended for:

- transporting people.
- transporting loads.

Driving on Public Roads

These manoeuvres are carried out in the telescopic handler driving mode from the telescopic handler's cab. Refer to the instructions given in the relevant paragraphs in the manual of the corresponding handler.



WARNING

It is forbidden to drive on public roads when the work platform is attached to the machine's tool carrier. It must imperatively be dismantled.

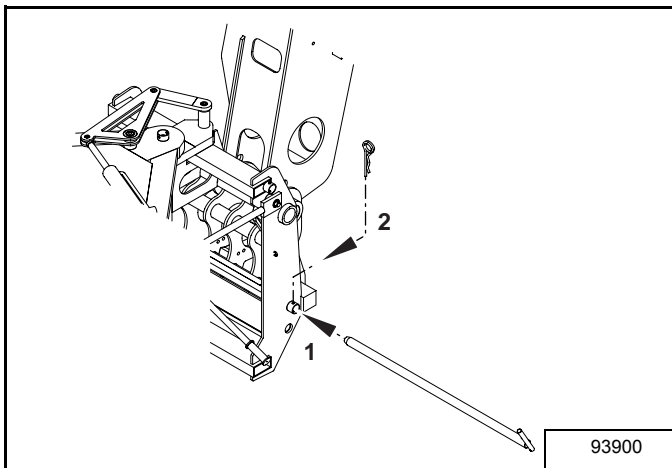
Setup prior to lifting people

This operation consists of setting up and preparing the machine prior to carrying out people lifting operations.

Installation of the platform onto the handler

1. Installing the platform onto the handler's tool carrier.
 - Refer to the relevant paragraphs of the corresponding handler manual. Depending on which option the handler is fitted with, locking is either manual or hydraulic.
2. To install the additional pin **[Figure 35]**:
 - Make sure the platform is correctly locked by the standard device.
 - Slide the additional pin into the designated bores on the platform and the tool carrier.
 - Put the safety pin in place.

Figure 35



WARNING

Do not use the machine if the additional pin is not in place and secured by its pin.


Setup of the PEMP

This operation consists of setting up the machine on the work site in the position in which the people lifting manoeuvres will be carried out.

1. Immobilise the machine in a place such that:
 - the strokes available for boom lifting and telescoping as defined in the charts allow the planned work zones to be reached and even exceeded.
 - there are no mobile or immobile obstacles in the planned turning area which would make the manoeuvres dangerous.
 - both the transversal and longitudinal cants do not exceed the fixed limits.
 - the sites where the stabilisers and wheels of the machine will stand:
 - are apt to support the pressure generated by them.
 - present no risk of sinking or collapsing.
2. Put the transmission control lever in neutral.
3. Set the cant correction to the middle stroke position.
4. Lower the two stabilisers:
 - until both stabilisers rest on the ground and support the machine.
 - so as to correct the transversal cant in order to return the boom to a vertical plane (angle $B = 0^\circ$).
5. Put on the parking brake.
6. Position the work platform horizontally and longitudinally then rest it on the ground.
7. Put one of the transmitter's two accumulators into the charger.
8. Stop the engine and remove the key from the ignition.
9. Turn the driving mode selector to the radio control position (clockwise) and remove the key.
10. Close all the windows, leave the cab, close and lock the door and remove the key from the lock.
11. Give a complete set of the following keys to the personnel remaining on the ground during people lifting manoeuvres:
 - key for the ignition switch.
 - key for the cab door lock.
 - key for the driving mode selector.
 - key for the fuel tank cap.
12. Connect the platform cable to the handler.
13. Remove the track rod lock from the platform rotation system (only rotating platforms) if rotation is to be used during planned people lifting manoeuvres. Otherwise, leave it in place.


Preparation of the PEMP

This operation consists of transferring the controls of the handler cab to the platform.

 **WARNING**

Prior to commencing people lifting manoeuvres, make sure that personnel remaining on the ground during manoeuvres:

- have a set of the above-mentioned keys and know where and what they are used for.
- have been told what to do when performing emergency manoeuvres.
- have received the necessary training to be able to safely carry out emergency manoeuvres, if necessary.

 **WARNING**

- It is strictly forbidden to carry out people lifting manoeuvres if controlling them from any place other than the normal PEMP driving post, which is the platform.
- The only exception is for emergency manoeuvres.

1. Setup of the transmitter:
 - Make sure that the accumulator supplying the power is charged and in place in the transmitter.
 - Set up and fix the transmitter in the designated place on the platform.
 - Connect the cable linking the transmitter to the platform, using the designated plug on the transmitter.
2. Establishing the radio link :
 - Put the key in the switch.
 - Turn the transmitter's "ON/OFF" switch to "I".
 - The transmitter sounds a continuous warning sound for about 1 s then stops.
 - About 1/2 s after this interruption, the alarm sounds again for a short moment and the green light starts to flash.
 - The green light continues to flash while the transmitter transmits to the receiver.
 - Press the alarm switch to check that the radio link is established between the transmitter and the receiver:
 - The handler's road alarm sounds: the radio link is established.
 - The handler's road alarm does not sound: the radio link is not established.

 **WARNING**

If the radio link is not established, seek the cause of this malfunction immediately.

3. Interruption of the radio link:
 - Turn the transmitter's "ON/OFF" switch to "0".
 - Remove the key.

Extension and retraction of the platform extendible to 4.1m

Barrier

Figure 37

WARNING

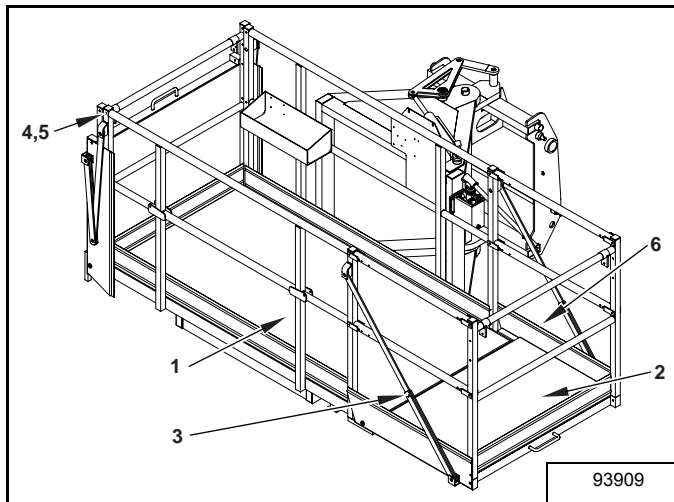
It is strictly forbidden:

- to carry out extension or retraction manoeuvres on the extendible platform when the platform is more than 500mm above the ground.
- to mount or dismantle any element of the platform when it is more than 500mm above the ground.

Applicable parts

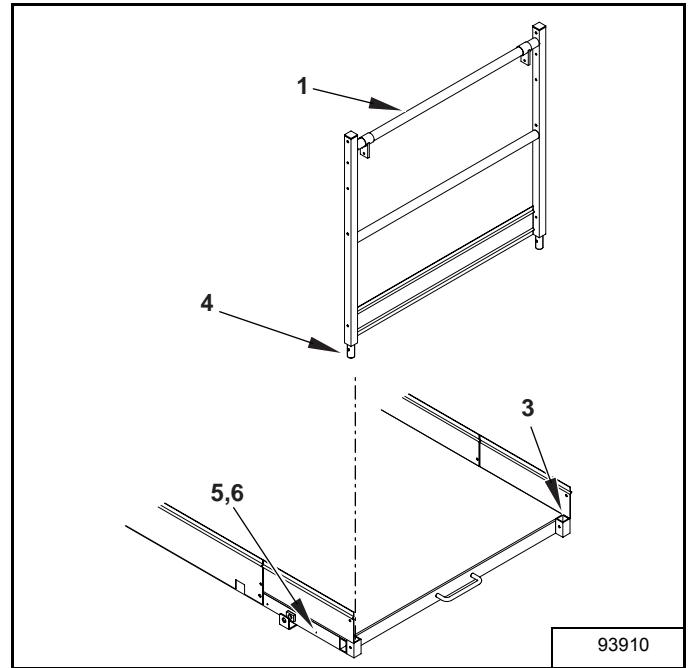
Central Part

Figure 36



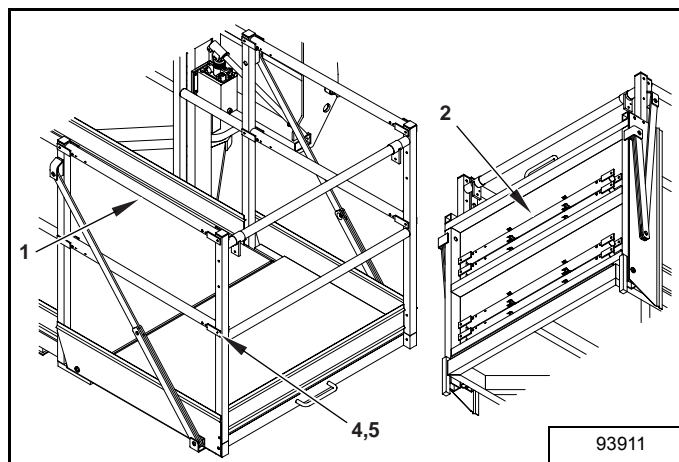
The central part (1) has an articulated floor at each of its extremities (2). Each of these floors:

- is linked to the central part by two tie-rods (3), articulated in the middle, which support the floors when extended.
- is equipped with two axles (4) made interdependent with the floor by a chain. A safety pin (5) is made interdependent with each axle by a chain.
- has two plinths (6).



Each of the identical barriers (1) is:

- designed to fit into the designated housing:
 - either at the extremities of the fixed part.
 - or at the extremity of each articulated floor (3).
- equipped with two couplers (4).
- equipped with two axles (5) each made interdependent with one of the couplers by a chain. A safety pin (6) is made interdependent with each axle by a chain.

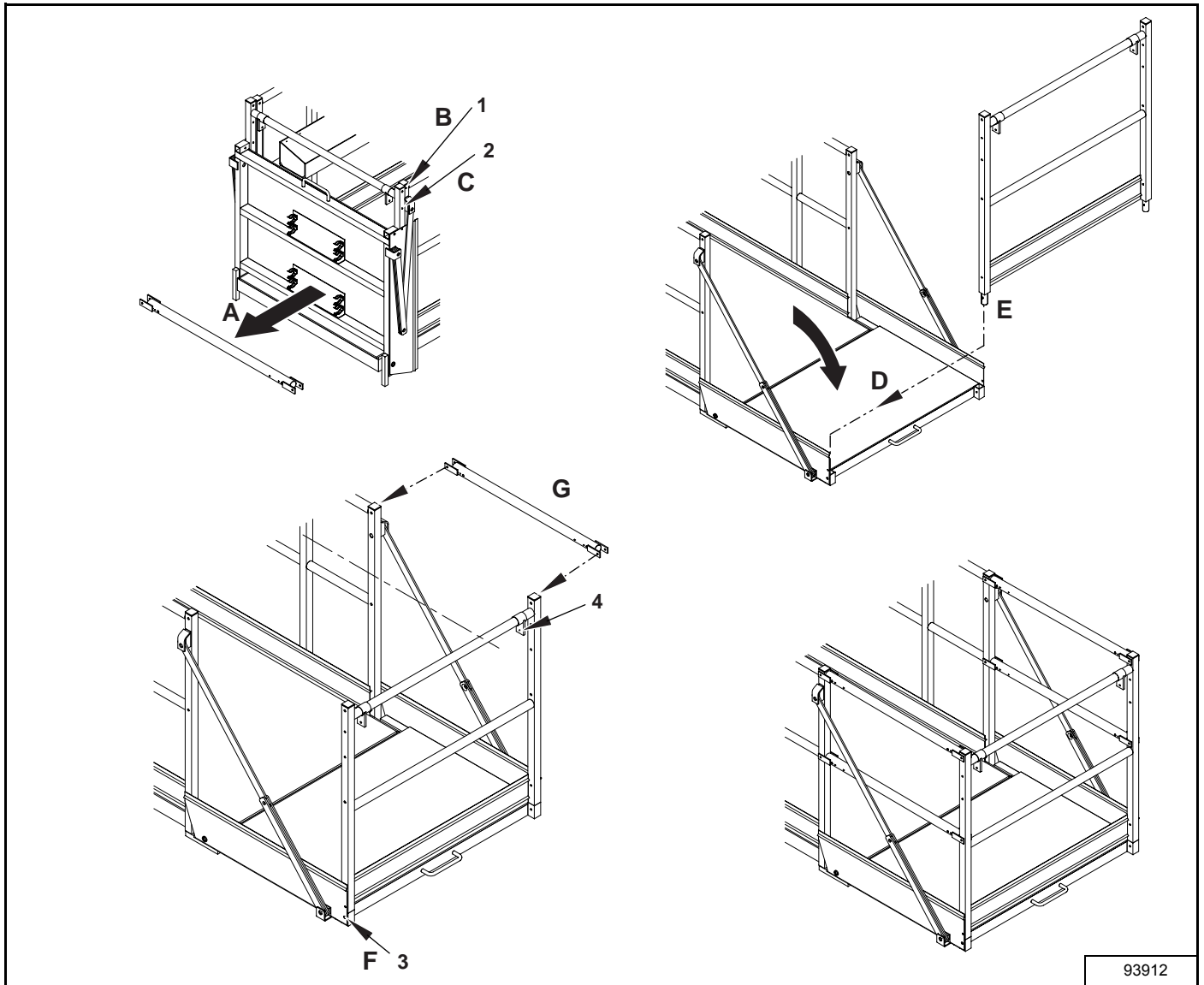
Handrails**Figure 38**

Eight identical handrails (1) are used to link the central part of the barrier (4 at each extremity) when the platform is unfolded. A space (2) is provided under each articulated floor for storing them when the platform is folded.

Each of these handrails (1) has a plate at each of its extremities. Each of these plates is connected to an axle (4) made interdependent with the handrail by a chain. A safety pin (5) is made interdependent with each axle by a chain.

Extension of the platform

Figure 39



1. Remove the handrails from their storage housing.
2. Remove the axles (1) which hold the articulated floors in a vertical position.
3. Open out the floors into a horizontal position.
4. Remove the axles (2) which keep the barriers interdependent with the central part.
5. Take the barriers out of their housing at the extremities of the central part.
6. Fit the barriers into the designated housing at the extremity of each articulated floor.
7. Put in place the axles and their pins (3) which make the barriers interdependent with the articulated floors.
8. Install the eight handrails in the extension of the top and intermediate handrails of the central part, in order to link this part to the barriers. Their axles will make them interdependent with these elements (4).

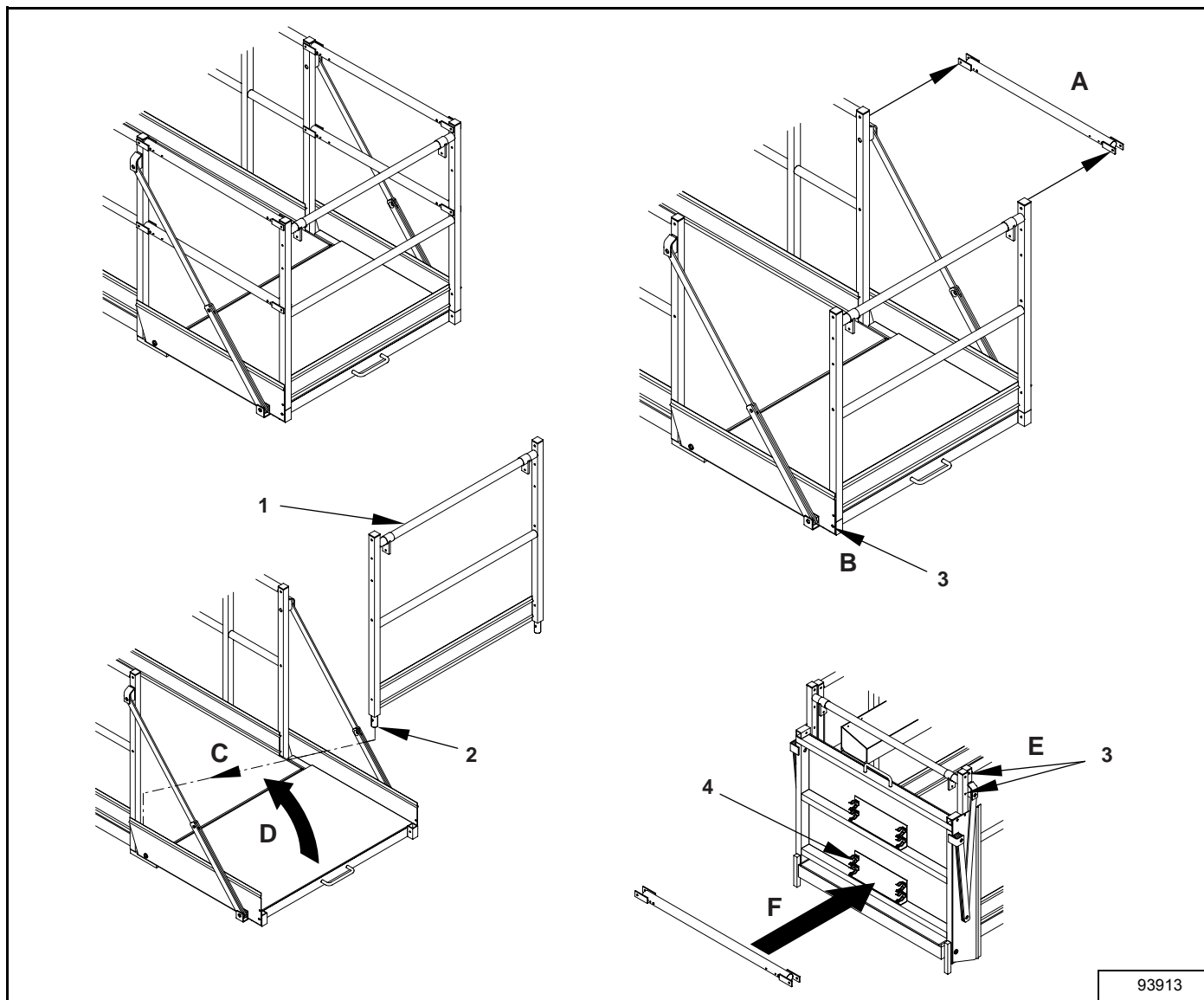
**WARNING**

To carry out this manoeuvre, hold the articulated floor by its extremity instead of its side: risk of injury from the lateral tie-rods and the articulation.

4. Remove the axles (2) which keep the barriers interdependent with the central part.
5. Take the barriers out of their housing at the extremities of the central part.

Retraction of the platform

Figure 40



93913

1. Remove their axles and dismantle the 8 handrails.
2. Remove the axles and take the barriers (1) out of their housing at the extremity of the articulated floors.
3. Fit the barriers (1) into the designated housing at the extremities of the central part.
4. Put in place the axles and their pins (2) which make the barriers interdependent with the central part.
5. Lift the articulated floors into a vertical position.
6. Put in place the axles and their pins (3) which make the barriers interdependent with the articulated floors.
7. Install the handrails in their storage space (4) under each articulated floor.



WARNING

To carry out this manoeuvre, hold the articulated floor by its extremity instead of its side: risk of injury from the lateral tie-rods and the articulation.

Extension and retraction of the platform extendible to 5m

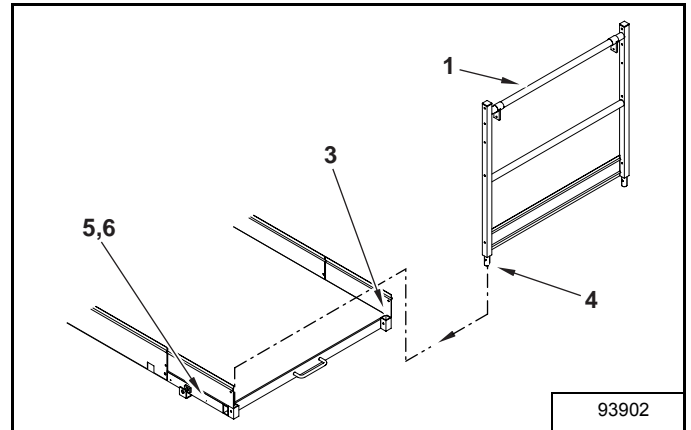
Barrier

Figure 42

WARNING

It is strictly forbidden:

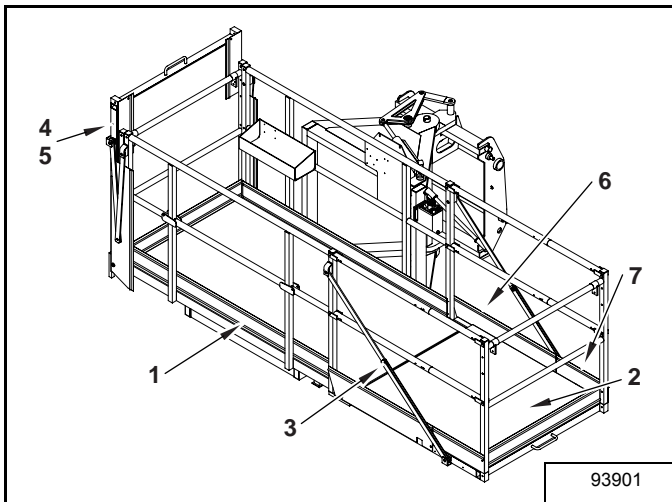
- to carry out extension or retraction manoeuvres on the extendible platform when the platform is more than 500mm above the ground.
- to mount or dismantle any element of the platform when it is more than 500mm above the ground.



Applicable parts

Central Part

Figure 41



The central part (1) has an articulated floor at each of its extremities (2). Each of these floors:

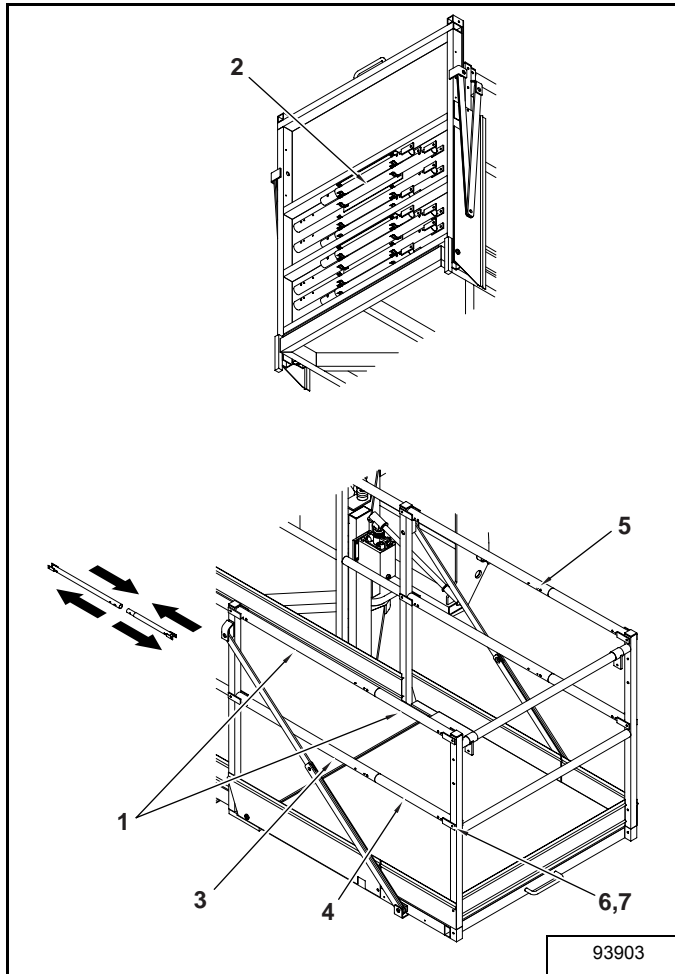
- is linked to the central part by two tie-rods (3), articulated in the middle, which support the floors when extended.
- is equipped with two axles (4) made interdependent with the floor by a chain. A safety pin (5) is made interdependent with each axle by a chain.
- has two plinths (6) with an articulated extremity (7).

Each of the identical barriers (1) is:

- designed to be fitted into the designated housing:
 - either at the extremities of the fixed part (2).
 - or at the extremity of each articulated floor (3).
- equipped with two couplers (4).
- equipped with two axles (5) each made interdependent with one of the couplers by a chain. A safety pin (6) is made interdependent with each axle by a chain.

Handrails

Figure 43



Eight identical handrails (1) are used to link the central part of the barrier (4 at each extremity) when the platform is unfolded. A space (2) is provided under each articulated floor for storing them when the platform is folded.

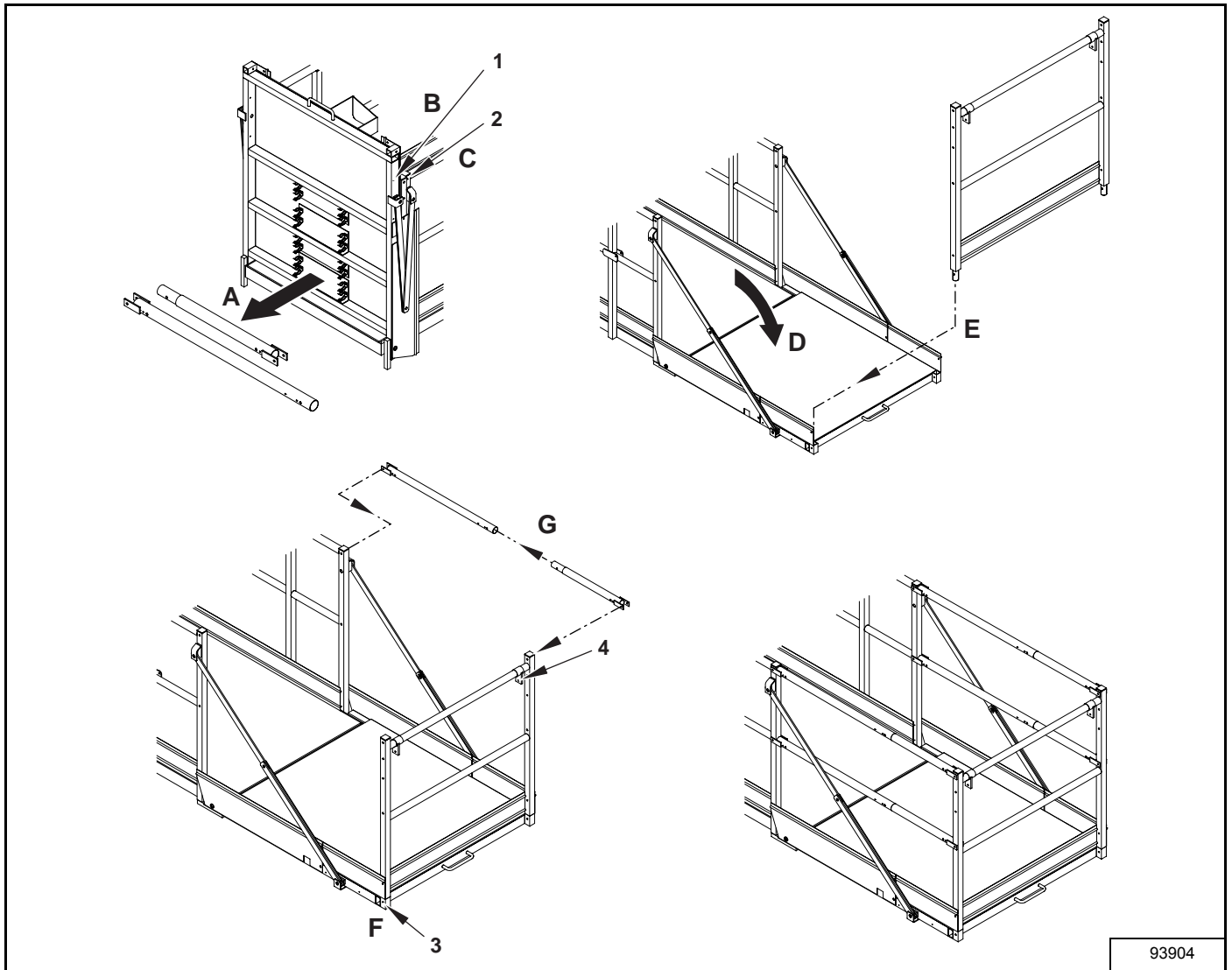
Each of these handrails is made up of two parts (3 and 4):

- which fit into each other.
- which are held together by a pin (5) and made interdependent with one of the two parts by a chain.

Every handrail has a plate at each of its extremities when assembled. Each of these plates is connected to an axle (6) made interdependent with the handrail by a chain. A safety pin (7) is made interdependent with each axle by a chain.

Extension of the platform

Figure 44



93904

1. Remove the handrails from their storage housing.
2. Remove the axles (1) which hold the articulated floors in a vertical position.
3. Open out the floors into a horizontal position and lift up the articulated parts of the plinths.
4. Remove the axles (2) which keep the barriers interdependent with the central part.
5. Take the barriers out of the housing in the extremities of the central part and fit them into the designated housing at the extremity of each articulated floor.
6. Put in place the axles and their pins (3) which make the barriers interdependent with the articulated floors.
7. Assemble each of the eight handrails and install them in the extension of the top and intermediate handrails of the central part, in order to link this part to the barriers. Their axles will make them interdependent with these elements (4).

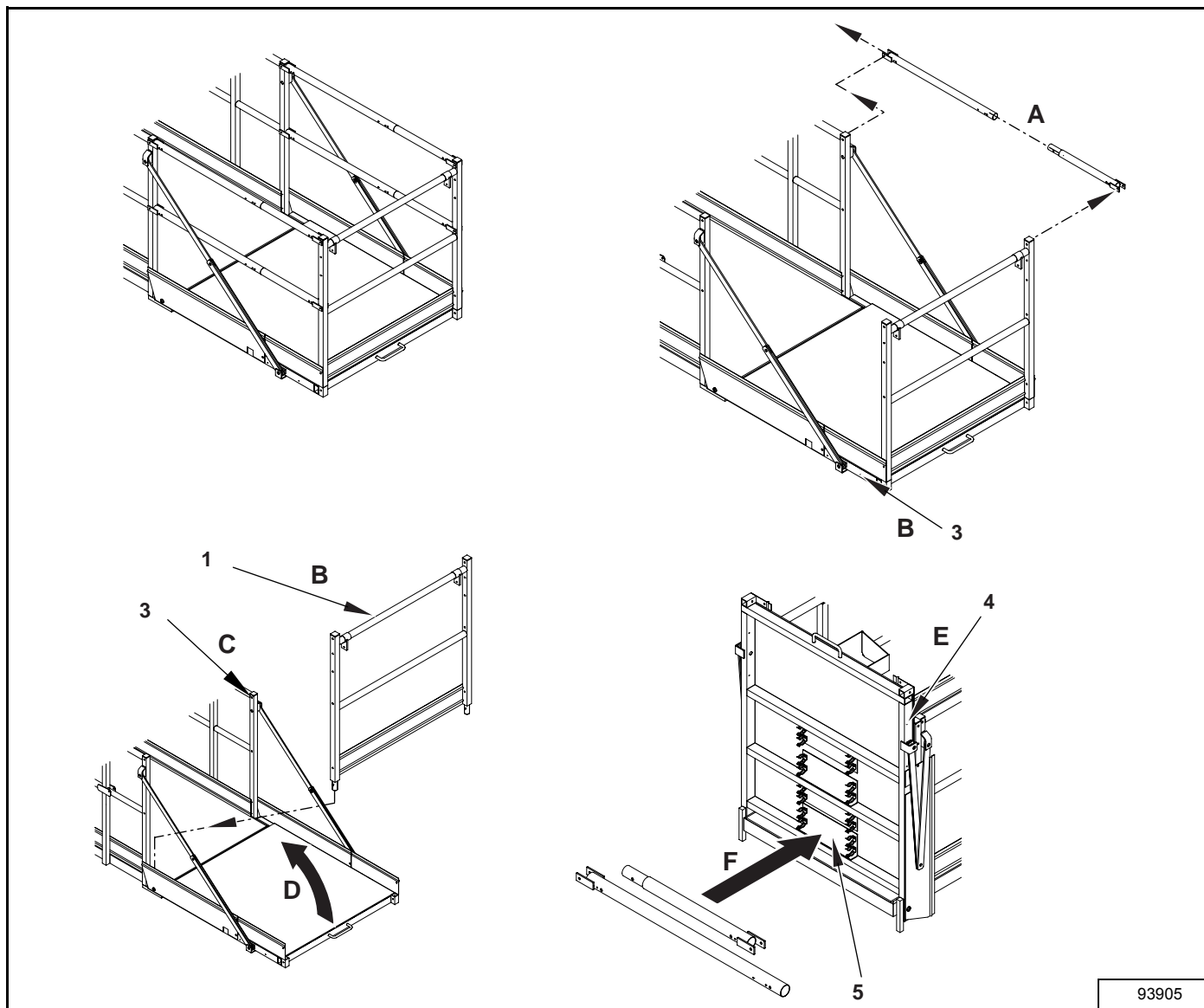
**WARNING**

To carry out this manoeuvre, hold the articulated floor by its extremity instead of its side: risk of injury from the lateral tie-rods and the articulation.

4. Remove the axles (2) which keep the barriers interdependent with the central part.
5. Take the barriers out of the housing in the extremities of the central part and fit them into the designated housing at the extremity of each articulated floor.

Retraction of the platform

Figure 45



93905

1. Remove their axles and dismantle the 8 handrails.
2. Remove the axles and take the barriers (1) out of their housing in the extremity of the articulated floors and fit them into the designated housing at the extremities of the central part.
3. Put in place the axles and their pins (3) which make the barriers interdependent with the central part.
4. Lift the articulated floors into a vertical position.
5. Put in place the axles and their pins (4) which make the barriers interdependent with the articulated floors.
6. Dismantle the handrails and install them in their storage space (5) under each articulated floor



WARNING

To carry out this manoeuvre, hold the articulated floor by its extremity instead of its side: risk of injury from the lateral tie-rods and the articulation.

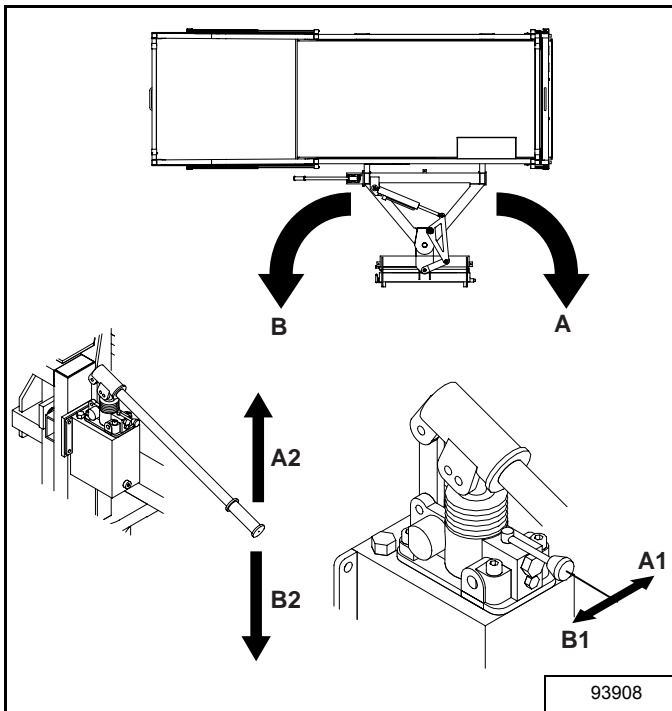
Rotation of extendible platforms

In order to carry out platform rotation manoeuvres, the locking track rod must already have been removed during the setup of the PEMP.

WARNING

Do not attempt to remove or put back this track rod if the platform is more than 500mm above the ground.

Figure 46



Rotation towards the right (A)

1. Turn the rotation direction selection lever (A1) backwards.
2. Activate the rotation lever (A2) until the platform has reached the desired position.
3. Return the lever for selecting the direction of rotation to the central position.

Rotation towards the left (B)

1. Turn the rotation direction selection lever (B1) forwards.
2. Activate the rotation lever (B2) until the platform has reached the desired position.
3. Return the lever for selecting the direction of rotation to the central position.

People lifting manoeuvres

General information

The radio control transmitter controls these manoeuvres.

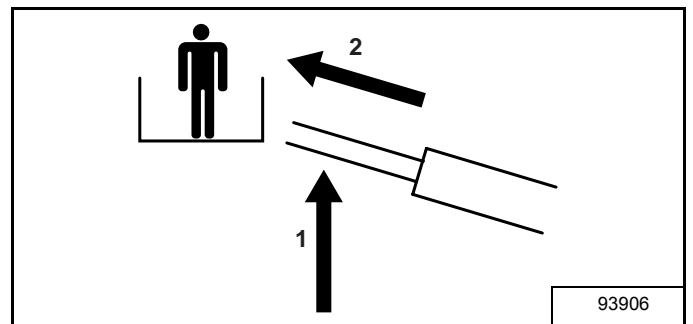
WARNING

Prior to commencing people lifting manoeuvres, make sure that the work site atmospheric conditions are compatible with those recommended. In the event of adverse atmospheric conditions, abandon all such manoeuvres.

During people lifting manoeuvres and in order to reach the desired work position, carry out [Figure 47]:

- the lifting of the boom manoeuvre first.
- then the extending of the boom telescoping manoeuvre, using as less extension as possible.

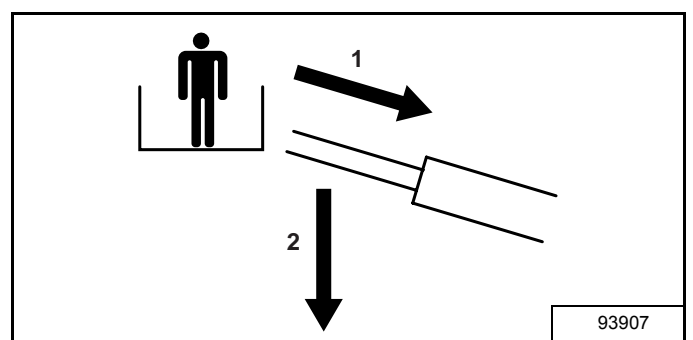
Figure 47



During manoeuvres to lower the platform and in order to reach the desired work position, carry out [Figure 48]:

- the retracting of the boom telescoping manoeuvre first.
- then the lowering of the boom manoeuvre.

Figure 48



When work is completed and in order to lower the platform to the ground, carry out the following manoeuvres:

- first completely retract telescoping.
- then lower the boom until the platform rests on the ground.

⚠ WARNING

- **Prior to commencing people lifting manoeuvres, make sure there are no fixed or mobile obstacles in the envisaged work zone which could make the manoeuvres dangerous or destabilise the machine.**
- **This machine is not designed to carry out manoeuvres for handling loads.**

⚠ WARNING

If during manoeuvres, the transmitters alarm starts to emit a continuous sound, this means that the accumulator has run out of power. You must imperatively:

- **stop work.**
- **lower the platform to the ground.**
- **recharge the accumulator and replace it with the charged one.**

Indicators and limiters

Several indicators give information to the operator. Check them regularly and carry out appropriate operations based on this information. Several limitation devices are activated to ensure that the machine functions safely.

⚠ WARNING

- **Respect the authorised capacities in the platform being used.**
- **Respect the authorised charts for the platform being used.**

Indicator of longitudinal stability (ILS)

When the alarm is activated and emits a fast intermittent sound, at least one of the following operations must be carried out to reduce the momentum of the machine tipping forwards:

- Retract the boom telescoping.
- Lift the boom.
- Reduce the load in the platform.
- Reduce the manual exertions of the operator(s).

⚠ WARNING

If the alarm is activated too frequently even though the load in the platform and the manual exertions of the operator(s) do not exceed authorised values, the PEMP is in an unsuitable position on the ground. The PEMP must be moved in order to sufficiently lessen the platform's forward slant.

Correction of cant - side offset (CCSO)

When the alarm is activated and emits a slow intermittent sound:

- The boom has reached an angle relative to the verticle of $B = 2^\circ$ on the side where the CCSO was controlled.
- The CCSO control towards this side has become inoperative.
- The CCSO control towards the other side remains operative.

People carrier load indicator (only on extendible platforms)

When the orange or red lights come on or when the alarm is activated and emits a continuous or intermittent sound, one of the operations below must be carried out in order to reduce the momentum of the machine tipping forwards:

- Reduce the load in the platform.
- Reduce the manual exertions of the operator(s).

People carrier load limiting device (only on extendible platforms)

When the load in the people carrier reaches 110% of the authorised maximum value, the system causes the machine's diesel engine to turn off.

**WARNING**

The shut-down of the diesel engine is intended as a last resort and is not a normal operation.

Do not allow this to happen. Take the necessary measures:

- **as soon as the orange light comes on and the alarm makes an intermittent sound.**
- **in any event, as soon as the orange light comes on and the alarm makes a continuous sound.**

Stopping aggravating movements (SAM)

When the combined load of the platform and its contents reaches 85% of load C, which tends to cause the machine to tilt forwards, this device renders certain boom movements inoperative whilst others remain operative. At least one of the following operations must be carried out in order to reduce the momentum of the machine tipping forwards:

- Retract the boom telescoping.
- Lift the boom.
- Reduce the load in the platform.
- Reduce the manual exertions of the operator(s).

IMPORTANT

Depending on the load in the platform, SAM can occur with various extension length: the heavier the load, the shorter the reach when SAM occurs.

**WARNING**

- **If the AMA is activated too frequently even though the load in the platform does not exceed authorised values, the PEMP is in an unsuitable position on the ground. The PEMP must be moved in order to sufficiently lessen the platform's forward slant.**
- **SAM is intended as a last resort and does not constitute normal operation. Do not allow this to happen. Take the necessary measures as soon as the alarm is activated with a rapid intermittent ILS sound.**

Limitation of the tilting angle for the people carrier

During lifting or lowering operations of the platform, the floor of the people carrier may tilt up or down by no more than 4° from the horizontal in the longitudinal direction. When this angle reaches either limit, lifting or lowering controls are made inoperative. The following instructions should be followed to bring this angle to authorised values and restore normal operation of lifting or lowering controls:

- Release the lifting/lowering control lever to resume its neutral position.
- This allows the control lever to tilt the people carrier up or down.
- To bring the people carrier floor back to a horizontal position, operate the control lever as follows:
 - push the lever forwards to tilt the floor upwards if it was tilting downwards; the angle correction will automatically stop when the angle value is between 2° upwards and 2° downwards.
 - pull the lever backwards to tilt the floor downwards if it was tilting upwards; the angle correction will automatically stop when the angle value is between 2° upwards and 2° downwards.
- release the lever to resume its neutral position.
- After this operation, the lever restores its normal function, i.e. lifting or lowering the platform.

Emergency manoeuvres

These manoeuvres are carried out by personnel remaining on the ground.

After setting up the PEMP and before commencing people lifting manoeuvres, make sure that personnel remaining on the ground:

- have a complete set of the following keys and know where and what they are used for:
 - key for the ignition switch.
 - key for the cab door lock.
 - key for the driving mode selector.
 - key for the fuel tank cap.
- have received the necessary training to be able to safely execute the emergency manoeuvres, if necessary.
- have been told what to do when performing emergency manoeuvres.
- pay attention to the people on the platform.

In the event of physical incapacity of personnel on the platform

The principle of this emergency manoeuvre is that personnel remaining on the ground take over the controls in the telescopic handler mode from the cab.

When personnel on the ground realise that the person(s) on the platform are physically incapable of carrying out PEMP manoeuvres, one person only should immediately carry out the following operations:

1. Take the set of keys.
2. Unlock the cab door, enter and sit down.
3. Put the key in the driving mode and AMA system deactivation switch.
4. Turn the switch to the central position: control the machine with the cab controls.
5. Put the key in the ignition and start the engine.
6. Sufficiently retract the telescoping in order to lower the boom so that no obstacles get in the way of this operation.
7. Lower the boom until the platform reaches the ground.
8. Stop the engine and remove the key.
9. Help the person(s) on the platform.

In the event of a power failure

The principle of this emergency manoeuvre is that personnel on the ground should activate the emergency device.

The person(s) on the platform must inform personnel remaining on the ground of the incident. One person only should carry out the following operations immediately:

1. Remove the rear bonnet.
2. Turn the movement selection switch counterclockwise and keep it in this position: retract telescoping.
3. Press on the manoeuvre switch until the telescoping is sufficiently retracted in order to lower the boom so that no obstacles get in the way of this operation.
4. Release the movement selection switch and make sure it returns (clockwise) to the position for lowering the boom.
5. Press on the manoeuvre switch to lower the boom until the platform reaches the ground.
6. Seek the cause of the failure.
7. Repair the machine.

In the event of radio control failure:

Proceed according to "In the event of a power failure" on page 34.

From the platform

In case personnel remaining on the ground cannot be informed, personnel in the platform have an emergency control box identical to the one located on the chassis of the machine. If necessary, one person only should take over the controls and proceed as indicated in "In the event of a power failure" on page 34.



WARNING

- **Do not hurry or panic! Keep calm to execute this manoeuvre.**
- **The health and safety of others depends on the attitude of the person carrying out this manoeuvre.**

PREVENTIVE MAINTENANCE

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Maintenance relative to the changes specific to the use of the machine as a PEMP	38
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Maintenance Safety

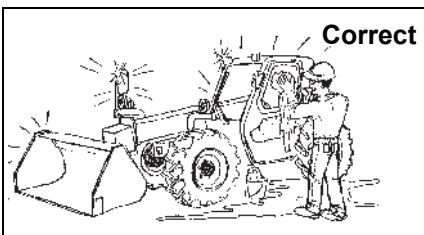


WARNING

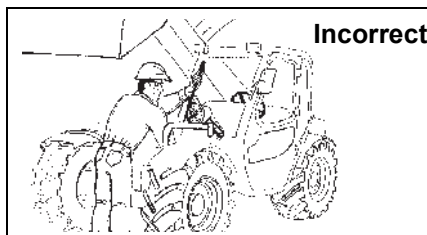
Instructions are necessary before operating or servicing the machine. Read and understand the Operation & Maintenance Manual and machine signs (decals). Follow warnings and instructions in this manual when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.



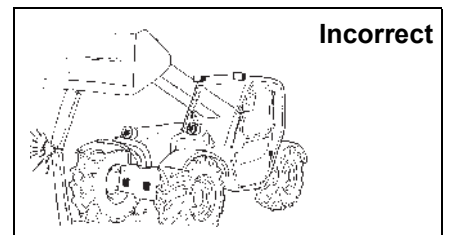
Never service the Bobcat telescopic handler without instructions.



Your telescopic handler requires daily cleaning and maintenance.



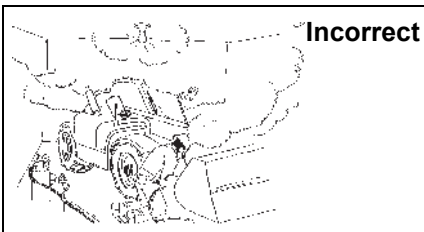
Disconnecting or loosening any hydraulic tubeline, hose, fitting, defective component or part can cause lift arms to drop. Do not go under lift arms when raised unless supported by an approved lift arm support device. Replace if Damaged.



Never work on telescopic handler with lift arms up unless lift arms are held by an approved lift arm support device. Replace if Damaged.



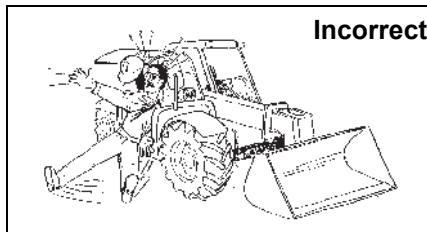
Never modify equipment or add attachments not approved by Bobcat.



Ensure proper ventilation when welding or grinding painted parts.



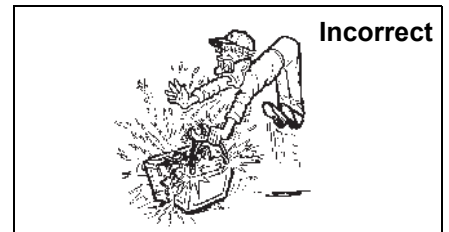
Wear eye protection to guard from battery acid, compressed springs, fluids under pressure and flying debris when engine is running or tools are used. Use eye protection approved for type of welding.



Keep body, jewelry and clothing away from moving parts, electrical contact, hot parts and exhaust.



Wear eye protection to guard from battery acid, compressed springs, fluids under pressure and flying debris when engine is running or tools are used. Use eye protection approved for type of welding.



Lead-acid batteries produce flammable and explosive gases.



Keep arcs, sparks flames and lighted tobacco away from batteries.

Batteries contain acid which burns eyes or skin on contact. Wear protective clothing. If acid contacts body, flush well with water. In case of eye contact, flush well and get immediate medical attention.

Maintenance procedures which are given in the Operation & Maintenance Manual can be performed by the owner/operator without any specific technical training. Maintenance procedures which are **not** in this manual must be performed **ONLY BY QUALIFIED BOBCAT SERVICE PERSONNEL**. Always use genuine Bobcat replacement parts.

Introduction

Maintenance of the PEMP applies in part to the handler itself and in part to the changes specific to the use of the machine as a PEMP. Use the indications on the handler's hourmeter to plan maintenance operations.

	WARNING
Only use genuine BOBCAT parts for the maintenance of the machine.	

Maintenance of the handler itself


Maintenance for the corresponding telescopic handler applies entirely to the machine when it is equipped with the changes specific to the use of the machine as a PEMP. Read and refer to the relevant paragraphs of the corresponding handler.

Maintenance relative to the changes specific to the use of the machine as a PEMP

This maintenance is described in the manual.

Maintenance Frequency

Maintenance operations should be carried out according to the intervals defined in the table below.

	WARNING
Depending on the working conditions under which you operate the machine, the recommended frequency must be reduced in order to keep the machine properly maintained and to prevent possible damage, malfunctions or accidents. These conditions are (non-exhaustive list) in particular: dusty environment, humid atmosphere, muddy environment, abrasive environment.	

Operation	Page	Hours					
		10	50	250	500	750	1000
Hydraulic System							
Level of rotation circuit tank oil control (1)	p. 39						
Draining and changing the oil of the rotation circuit (1)	p. 39						
Checking the tightness of pipes and hydraulic connections (1)	p. 39						
Structure							
Cleaning of the platform	p. 40						
Lubricating the rotation system hinges (1)	p. 40						
Checking the tightness of screws and bolts (1)	p. 40						
Checking wear on hinge pins (1)	p. 40						
Electrical System							
Checking the working order of indicator lights and controls	p. 40						
Checking the working order of the emergency control	p. 40						
Checking the electrical connections	p. 40						
Checking the state of electrical components	p. 40						

(1) For rotating platforms only

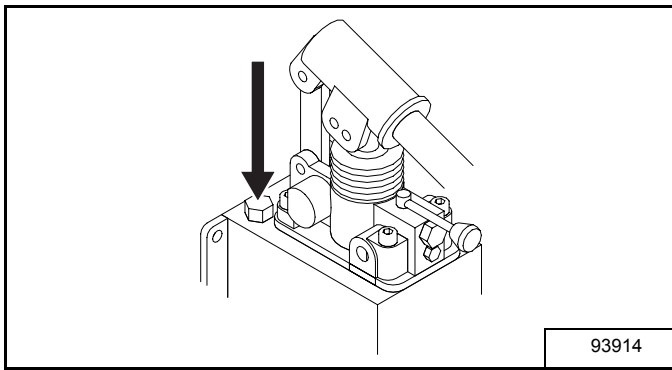
Hydraulic System

Control of rotation circuit oil tank level

For rotating platforms only

1. Carry out this operation when the platform is in a horizontal position and the rotation in the middle position.
2. Open the filler plug.

Figure 49



3. The level should be between 30 and 40 mm beneath the level of the plug's joint.
4. Fill to the correct level if necessary.
5. Screw on the plug.

WARNING

Only add oil that is:

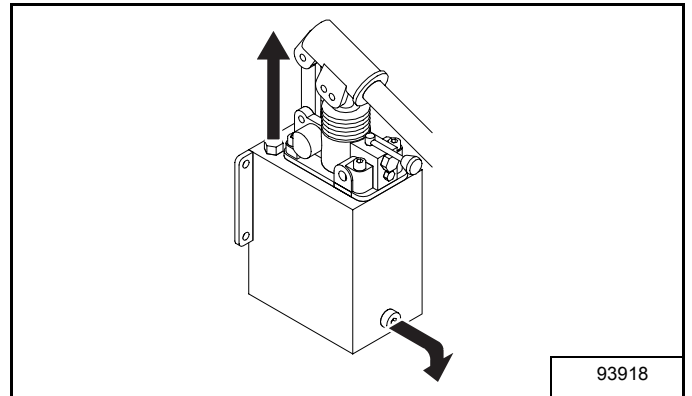
- recommended.
- clean and not polluted.

Draining and changing the oil of the rotation circuit

For rotating platforms only.

1. Carry out this operation when the platform is in a horizontal position and the rotation in the middle position.
2. Unscrew the filler plug then the drain plug and collect the oil.

Figure 50



3. Screw on the filler plug after inspecting its joint.
4. Fill up with oil and screw on the filler plug.

WARNING

Only fill up with oil that is:

- recommended.
- clean and not polluted.

Checking the tightness of pipes and hydraulic connections

For rotating platforms only

The purpose of this operation is to keep the machine properly maintained and to prevent possible damage or accidents.

WARNING

Repair any leakages (or damages) that may occur immediately even on parts which do not seem important. This applies even over and above the recommended frequency.

Structure

Cleaning of the platform

The purpose of this operation is to keep the platform properly maintained and to prevent possible damage or accidents.



WARNING

Keeping the platform clean is important for personnel safety: any kind of debris or dirt can increase the weight on the platform, thus disturbing normal operation.

Lubricating the rotation system hinges

For rotating platforms only

See "Lubricating drawing" on page 41.

Checking the tightness of screws and bolts

The purpose of this operation is to keep the platform properly maintained and to prevent possible damage or accidents.



WARNING

Repair any loose (or damaged) nuts or bolts immediately including on parts which do not seem important. This applies even over and above the recommended frequency.

Checking wear on hinge pins

For rotating platforms only.

For this operation, consult your BOBCAT dealer.

Electrical System

Checking the working order of indicator lights and controls

The purpose of this operation is to keep the machine properly maintained and to prevent possible damage or accidents.



WARNING

Replace or repair immediately any faulty component even if its function does not seem important. This applies even over and above the recommended frequency.

Checking the working order of the emergency control

The purpose of this operation is to keep the machine properly maintained and to prevent possible damage or accidents.



WARNING

Replace or repair immediately any faulty component even if its function does not seem important. This applies even over and above the recommended frequency.

Checking electrical connections

The purpose of this operation is to keep the machine properly maintained and to prevent possible damage or accidents.



WARNING

Replace or repair any faulty connection or cluster immediately even if its function does not seem important. This applies even over and above the recommended frequency.

Checking the state of electrical components

The purpose of this operation is to keep the machine properly maintained and to prevent possible damage or accidents.

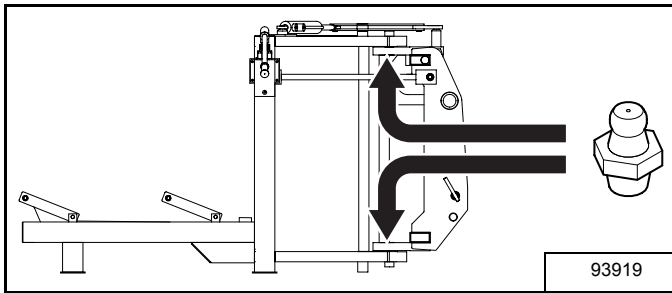


WARNING

Replace or repair immediately any faulty component even if its function does not seem important. This applies even over and above the recommended frequency.

Lubricating drawing

Figure 51





T40140 SPECIFICATIONS

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Introduction

The specifications of the PEMP are:

- for a certain number of them, identical to those of the telescopic handler.
- for a certain number of them, specifications of the telescopic handler which including changes specific to the use of the machine as a PEMP.
- for a certain number of them, specific to the use of the machine as a PEMP.

The following specifications of the telescopic handler remain valid; see the applicable paragraphs in the manual of the telescopic handler:

- general specifications
- stabilisers
- engine and transmission
- tyres
- steering
- braking system

The other specifications of the telescopic handler include changes specific to the use of the machine as a PEMP.

Dimensions and weights

Dimensions

The dimensions of the PEMP are:

- for the most part, identical to those of the telescopic handler; see the applicable paragraphs in the manual of the telescopic handler:
- for a certain number of them, specific to the mounting of the work platform.

The dimensions given hereafter are specific to the mounting of the work platform and to the machine fitted with DUNLOP 400/80 x 24 T37 153B TL tyres.

PEMP equipped with fixed platform

Figure 52

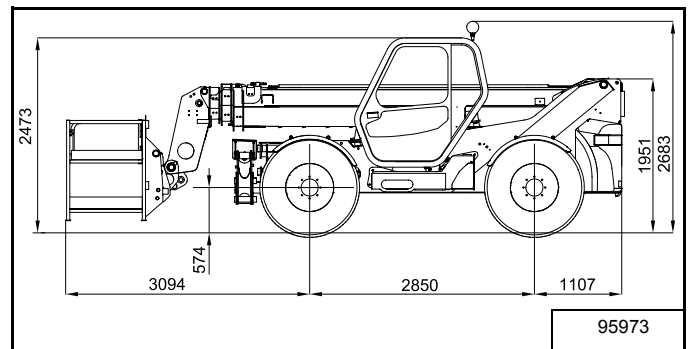
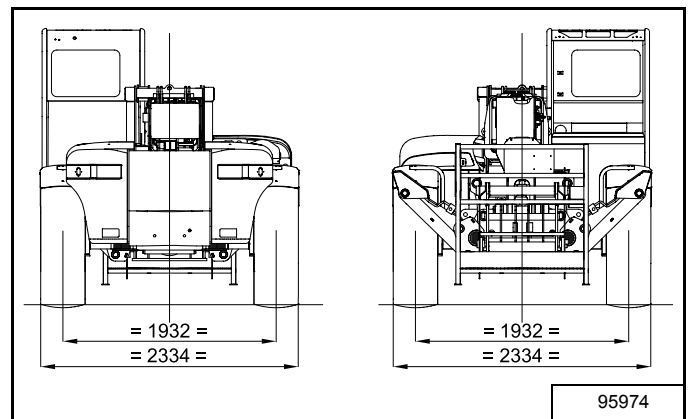


Figure 53



Reference	Value
Maximum lifting height, from the ground to the upper level of the floor	
Telescope fully retracted	6.33 m
Telescope fully extended	13.34 m
Maximum reach, between the vertical plane passing in front of the front wheels and the foremost point of the platform	
Telescope fully retracted	2.51 m
Telescope fully extended	9.81 m

PEMP equipped with the rotating platform extendible to 4.1 m

PEMP equipped with the rotating platform extendible to 5 m

Figure 54

Figure 56

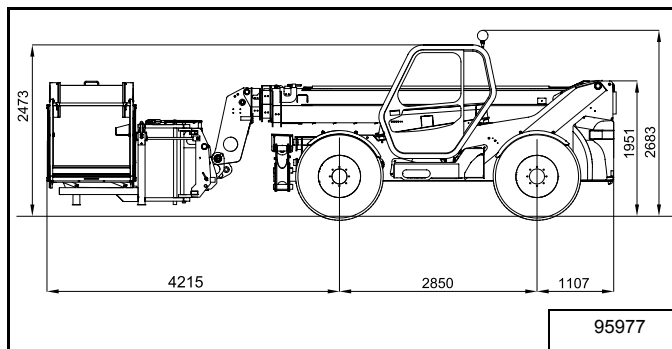
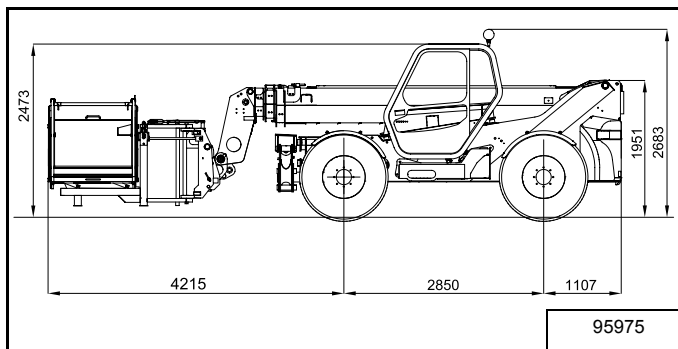
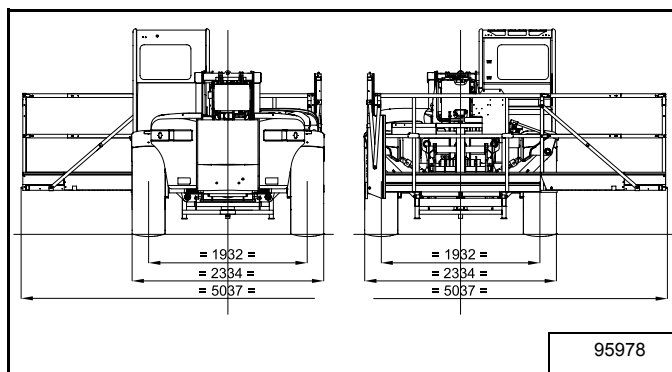
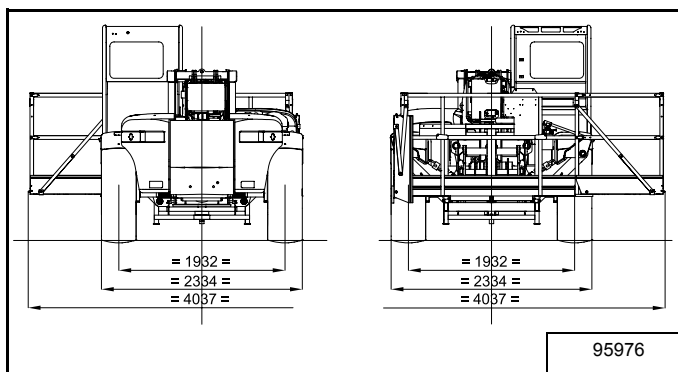


Figure 55

Figure 57

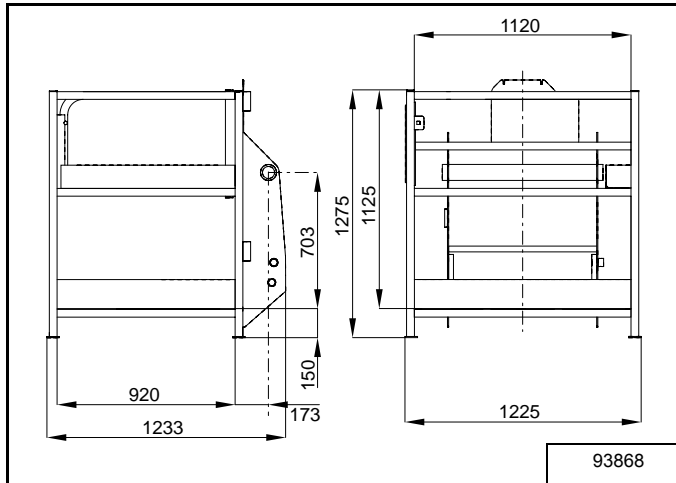


Reference	Value
Maximum lifting height, from the ground to the upper level of the floor	
Telescope fully retracted	6.69 m
Telescope fully extended	13.70 m
Maximum reach, between the vertical plane passing in front of the front wheels and the foremost point of the platform	
Telescope fully retracted	3.40 m
Telescope fully extended	10.89 m

Reference	Value
Maximum lifting height, from the ground to the upper level of the floor	
Telescope fully retracted	6.69 m
Telescope fully extended	13.70 m
Maximum reach, between the vertical plane passing in front of the front wheels and the foremost point of the platform	
Telescope fully retracted	3.40 m
Telescope fully extended	10.89 m

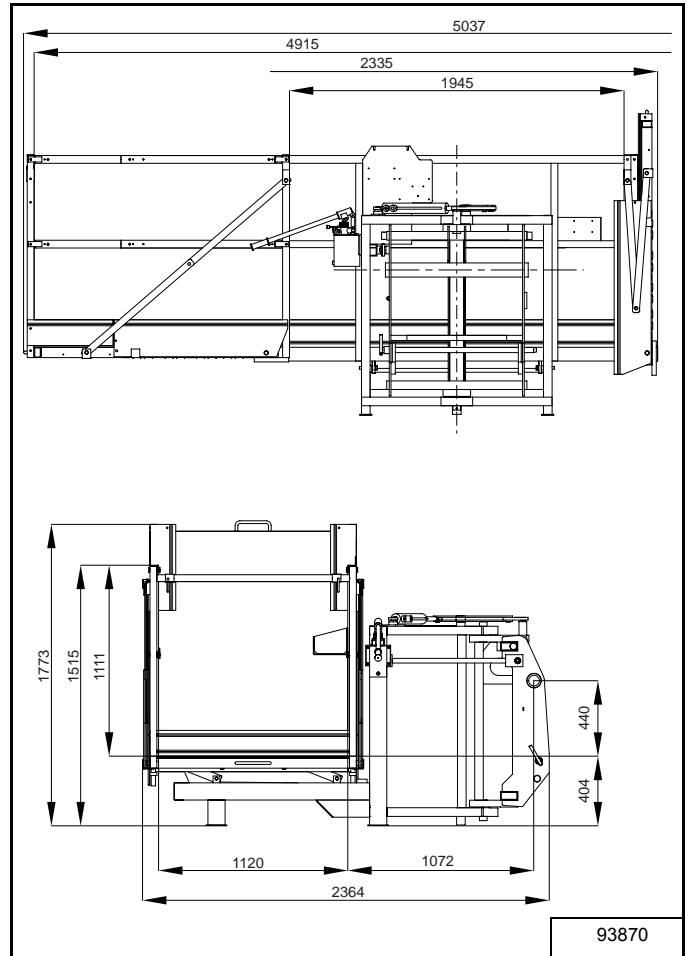
Fixed platform

Figure 58



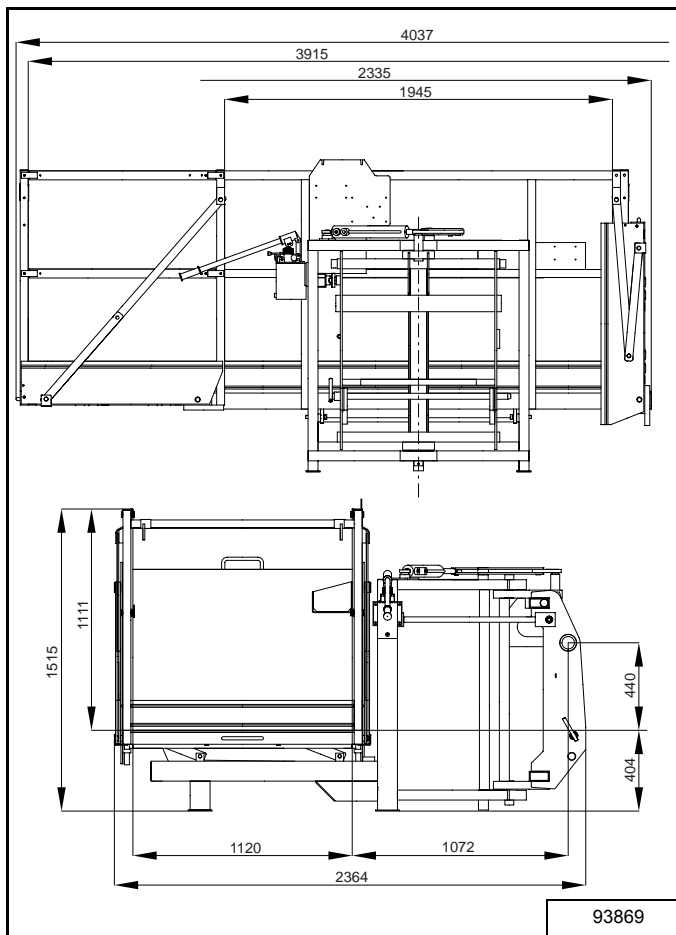
Rotating Platform Extendible to 5 m

Figure 60



Rotating Platform Extendible to 4.1 m

Figure 59



Weights

Data with boom in transport position, all tanks full, with no driver and DUNLOP 400/80 x 24 T37 153B TL tyres.

With platform	Weight (kg) of the platform	Weight (Kg) of the machine		
		Total	On front axle	On rear axle
fixed	181	10.220	4.240	5.980
extendible to 4.1 m with rotation	465	10.505	4.840	5.665
extendible to 5 m with rotation	490	10.530	4.895	5.635

The maximum pressure on the ground under each stabiliser is 10 bars.

The maximum pressure on the ground under each tyre is 6 bars.

Capacities and Load Charts

The capacities and charts hereafter, are the only ones valid for the use of the machine as a PEMP. When using the machine as a handler lift, refer to the relevant paragraphs in the manual of the corresponding handler.

⚠ WARNING

When lifting people, use with care and strictly observe:

- the instructions relevant to lifting people described in this manual.
- the information given on the charts.
- the information given by the visual and audio indicator for the weight of the contents in the people carrier, for models with this equipment.

Capacity of work platforms

The machine is for use on ground with the following cants:

- less than 3% longitudinal.
- less than 7% transversal.

Fixed platform

Reference	Value
Weight when empty	181 Kg
Operational load	220 Kg maximum
Distribution of operational load	<ul style="list-style-type: none"> • two people, 80 Kg maximum each • equipment, 60 Kg maximum
Manual force	40 daN maximum as a total of the manual force exerted by the operator(s)

Rotating Platform Extendible to 4.1 m

Reference	Value
Weight when empty	465 Kg
Operational load	500 Kg maximum, i.e. 140 Kg maximum on each lateral side when the platform is deployed
Distribution of operational load	<ul style="list-style-type: none"> • three people, 80 Kg maximum each, i.e. maximum of one person on each lateral side when the platform is deployed • equipment, 260 Kg maximum, i.e. 60 Kg maximum on each lateral side when the platform is deployed
Manual force	60 daN maximum as a total of the manual force exerted by the operator(s)

Rotating Platform Extendible to 5 m

Reference	Value
Weight when empty	490 Kg
Operational load	500 Kg maximum, i.e. 140 Kg maximum on each lateral side when the platform is deployed
Distribution of operational load	<ul style="list-style-type: none"> • three people, 80 Kg maximum each, i.e. maximum of one person on each lateral side when the platform is deployed • equipment, 260 Kg maximum, i.e. 60 Kg maximum on each lateral side when the platform is deployed
Manual force	60 daN maximum as a total of the manual force exerted by the operator(s)

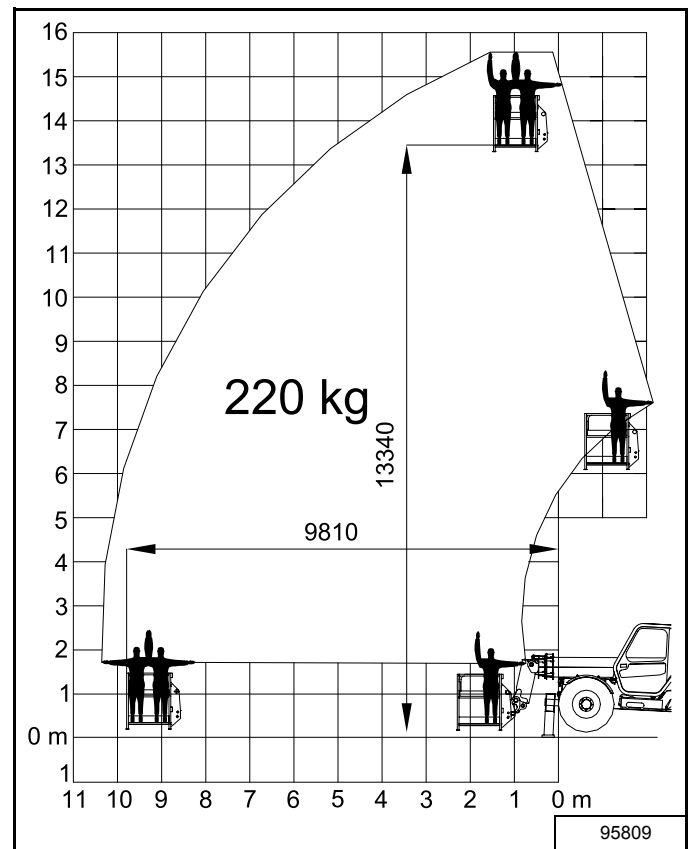
Charts

Load Chart 1

Load chart for machine equipped with:

- the fixed platform.
- 4 identical DUNLOP 400/80 x 24 T37 153B TL tyres (pressure 4.25 bars) or DUNLOP 405/70 R20 MPT SPT9 152G 168A2 TL tyres (pressure 5.5 bars).

Figure 61

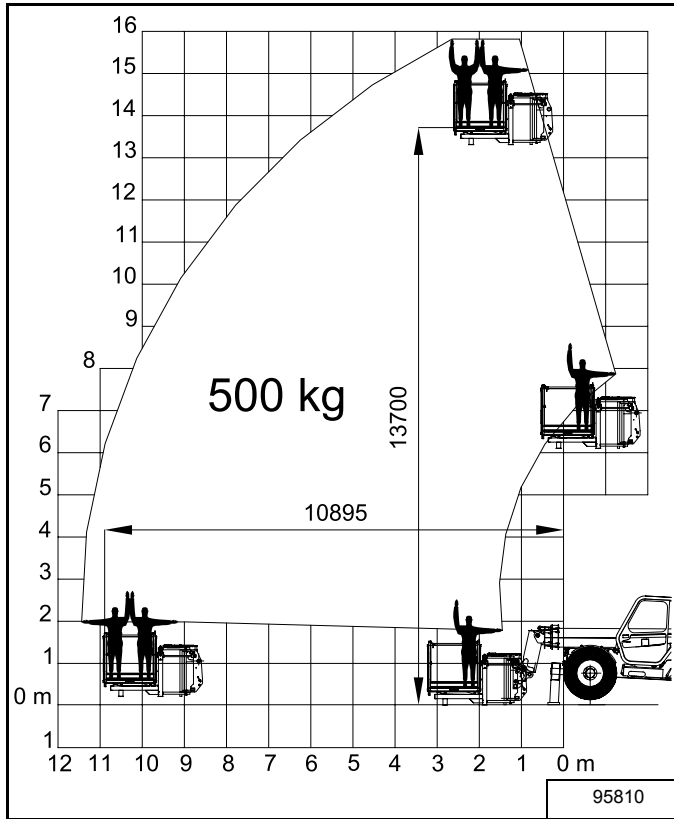


Load Chart 2

Load chart for machine equipped with:

- the rotating platform extendible to 4.1 m.
- 4 identical DUNLOP 400/80 x 24 T37 153B TL tyres (pressure 4.25 bars) or DUNLOP 405/70 R20 MPT SPT9 152G 168A2 TL tyres (pressure 5.5 bars).

Figure 62

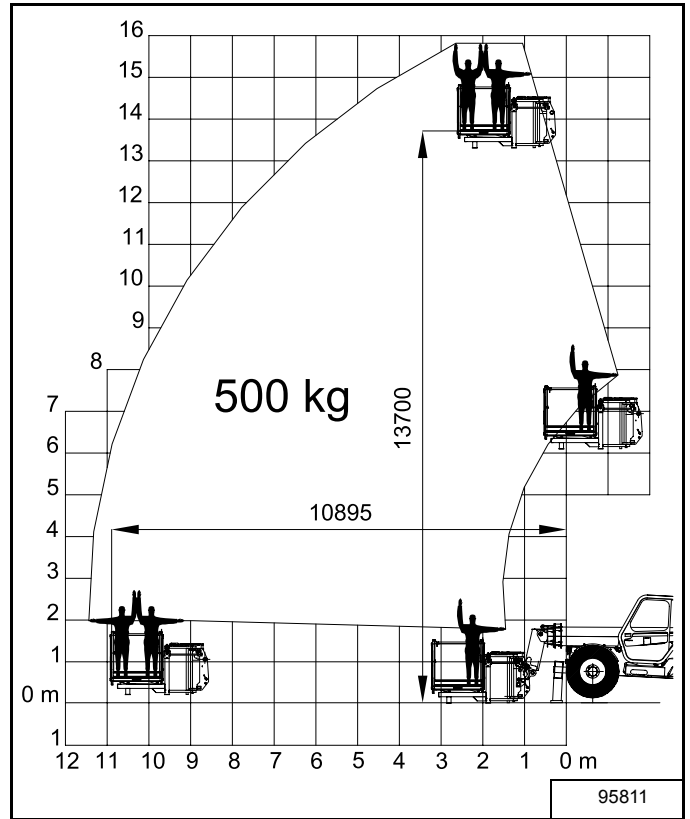


Load Chart 3

Load chart for machine equipped with:

- the rotating platform extendible to 5 m.
- 4 identical DUNLOP 400/80 x 24 T37 153B TL tyres (pressure 4.25 bars) or DUNLOP 405/70 R20 MPT SPT9 152G 168A2 TL tyres (pressure 5.5 bars).

Figure 63

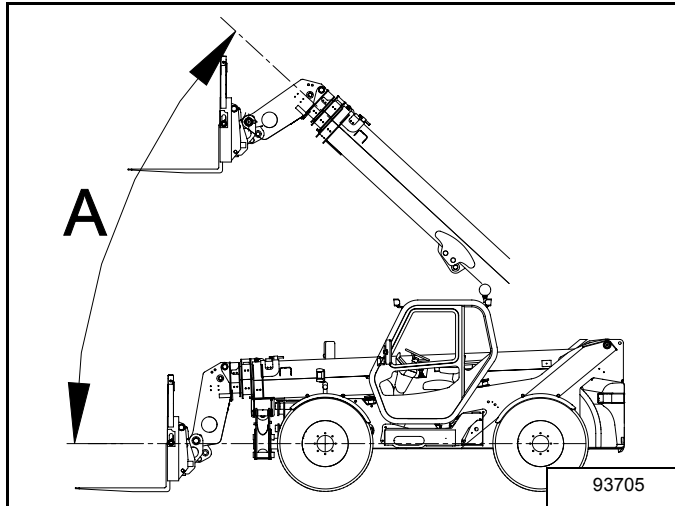


Stopping aggravating movements (SAM)

Telescopic handler

When the machine includes changes specific for use as a PEMP and it is used as a telescopic handler, this device is active whatever the value of angle A [Figure 64].

Figure 64



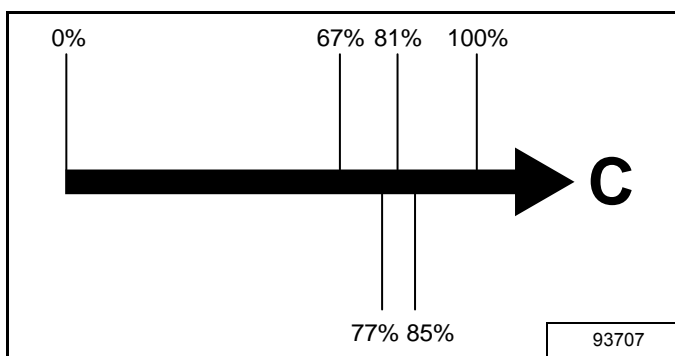
When the handled load reaches 85% of load C, which tends to cause the machine to tilt forward [Figure 65], this device renders the following movements inoperative:

- Lowering the boom.
- Extending the telescope.
- Forward or backward tilt of the forks or attachment.
- Hydraulic function: coupler located behind, on the boom head.

All other movements of the boom remain operational:

- Raising the boom.
- Retract telescoping.
- Hydraulic function: coupler located in front, on the boom head.

Figure 65



PEMP

When the machine includes changes specific for use as a PEMP and it is used as a PEMP, this device is active whatever the value of angle A [Figure 64]. When the handled load reaches 85% of load C, which tends to cause the machine to tilt forward [Figure 65], this device renders the following movements inoperative:

- Lowering the boom.
- Extending the telescope.
- Hydraulic function located on the back of the boom head.

All other movements of the boom remain operational:

- Raising the boom.
- Retract telescoping.
- Hydraulic function: coupler located in front, on the boom head.

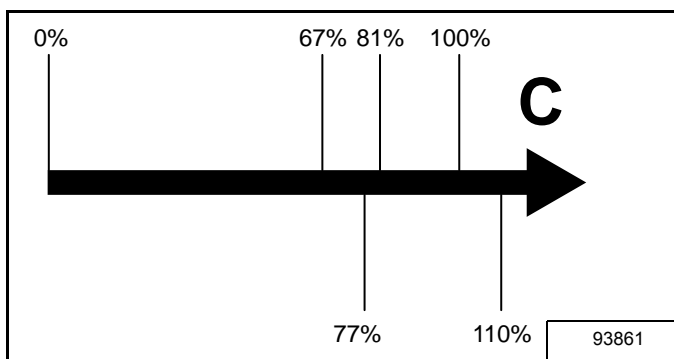
People carrier load limitation system

Only rotating extendible platforms are equipped with this system which informs the operator of the mass level within the people carrier. This information is relayed by a green light, an amber light and a red light located on the control box in the people carrier and by a warning sound. Thus M = maximum authorised mass in the people carrier:

- the green light stays on as long as the mass within the people carrier is less than 67% of mass M. Otherwise it goes out.
- the amber light comes on when the mass within the people carrier is equal to or greater than 67% of mass M.
- the red light comes on when the mass within the people carrier is equal to or greater than 81% of mass M.
- an intermittent alarm sounds when the mass within the people carrier is equal to or greater than 77% of mass M.
- a continuous alarm sounds when the mass within the people carrier is equal to or greater than 81% of mass M.

When the mass within the people carrier reaches 110% of mass M, the system turns off the machine's diesel engine.

Figure 66



Correction of cant and side offset (CCSO)

The mechanical part of this system remains the same whether or not the machine comprises the changes specific to its use as a PEMP.

When these specific changes are included, the constraints and limits of its use differ depending on whether the machine is used as a handler or a PEMP.

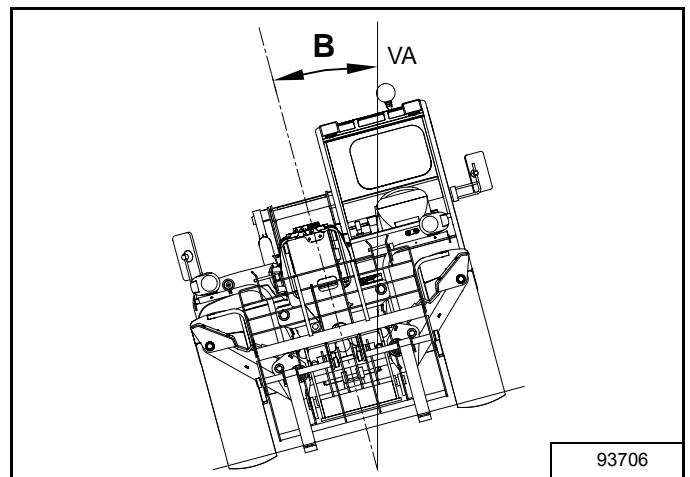
Telescopic handler

Operating constraints and limits are identical to those of the telescopic handler; see the applicable paragraphs in the handler's manual.

PEMP

CCSO manoeuvres are limited by the system so that angle B [Figure 67] between the boom and the absolute vertical (VA) is between 2° towards the right and 2° towards the left.

Figure 67



When angle B reaches 2° towards one of the sides, during CCSO manoeuvres:

- the CCSO movement towards this side becomes inoperative.
- the CCSO movement towards the other side remains operative.
- a slow intermittent warning sound is activated signalling this position.

If during setup of the machine, prior to using it as a PEMP, angle B was set at a value greater than 2° towards the right or left, the above-mentioned warning sound will be activated in order to signal this.

Indicator of longitudinal stability (ILS)

This indicator gives information on the state of the machines longitudinal stability.

When the machine includes changes specific for use as a PEMP and it is used as a handler or a PEMP.

Telescopic handler

The functioning and indications given by the ILS are identical to those of the machine when it is not equipped with the changes specific to its use as a PEMP. Refer to the relevant paragraphs of the corresponding handler manual.

PEMP

A rapid intermittent warning sound is activated when the combined load of the platform and its contents reach 77% of the load which tends to cause the machine to tilt forwards.

Hydraulic System

All the hydraulic circuit components remain when the machine includes the changes specific to its use as a PEMP.

For use as a PEMP, the machine is equipped with a safety device which allows the work platform to be returned to the ground should the normal control system or power system fail. This device includes the following components:

- a pump powered by an electric engine which is in turn powered by the machine's battery.
- electro-distributors which ensure the distribution of the flow from the above-mentioned pump for the emergency manoeuvres.

Electrical system

All the electrical circuit components of the of the telescopic handler remain when the machine includes the changes specific to its use as a PEMP.

For use as a PEMP, the machine is equipped with the following devices:

- radio control comprised of the following components:
 - transmitter.
 - transceiver.
 - two batteries for the transmitter.
 - a battery charger.
- load limiting system in the people carrier.
- emergency control system.

Standard EC examination

This machine has undergone a standard EC examination by a certified body who has issued it with a standard EC certificate. All the information relative to this examination and this certificate are included in the certificate of compliance issued on delivery of the machine.

Reference	Value
LpA	82 dB(A)
LwA	106 dB(A)

Level of acoustic pressure

In compliance with EN 12053 standard, August 2001, the level of acoustic pressure in the cab is 82 dB (A).

Level of acoustic power

In compliance with Directive 2000/14/CE, the guaranteed level of acoustic power of the machines sold since 01/01/2002 is 106 dB(A).

Capacities

For rotating platforms only.

Reference	Value
Rotation circuit hydraulic oil tank	2 litres
Total rotation circuit	2.6 litres

WARRANTY

Telescopic Handler

Bobcat Europe warrants to its authorized dealers, who in turn warrant to the owner, that each new Bobcat TELESCOPIC HANDLER will be free from proven defects in material and workmanship for twelve (12) months or 1200 hours after delivery by the authorized Bobcat dealer to the original buyer, whichever occurs first.

During the warranty period, the authorized Bobcat dealer shall repair or replace, at Bobcat Europe's option, without charge for parts, labor and travel time of mechanics, any part of the Bobcat product which fails because of defects in material or workmanship. The owner shall provide the authorized Bobcat dealer with prompt written notice of the defect and allow reasonable time for repair or replacement. Bobcat Europe may, at its option, require failed parts to be returned to the factory. Transportation of the Bobcat product to the authorized Bobcat dealer for warranty work is the responsibility of the owner. The remedies provided in this warranty are exclusive.

This warranty does not apply to diesel engine fuel injection pumps and injectors or tires (except Bobcat brand tires). The owner shall rely solely on the warranty, if any, of the respective manufacturers thereof. This warranty does not cover replacement of scheduled service items such as oil, filters, tune-up parts, and other high-wear items. This warranty does not cover damages resulting from abuse, accidents, alterations, use of the Bobcat product with any accessory or attachment not approved by Bobcat Europe, air flow obstructions, or failure to maintain or use the Bobcat product according to the instructions applicable to it.

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