



647753 EN (29/04/2019)

MLT-X 737 130 PS D ST3A S1

OPERATOR'S MANUAL
(ORIGINAL INSTRUCTIONS)

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- Directive 2002/44/EC requires company managers to not expose their employees to excessive vibration doses. There is no recognised code of measurement for comparing the machines of different manufacturers. The actual doses received cannot therefore be measured under actual operating conditions at the user's premises.
- The following are some tips for minimizing these vibration doses:
 - Select the most suitable lift truck and attachment for the intended use.
 - Adapt the seat adjustment to the operator's weight (**according to lift truck model**) and maintain it in good condition, as well as the cab suspensions. Inflate the tyres in accordance with recommendations.
 - The seat is an essential way of reducing the vibrations transmitted to the operator. In the event of seat replacement, please contact MANITOU.
 - Ensure that the operators adapt their operating speed to suit the conditions on site.
 - As far as possible, arrange the site in such a way as to provide a flat running surface and remove obstacles and harmful potholes.

C - MODIFICATION OF THE LIFT TRUCK

- For your safety and that of others, you must not change the structure and settings of the various components used in your lift truck (hydraulic pressure, calibrating limiters, engine speed, addition of extra equipment, addition of counterweight, unapproved attachments, alarm systems, etc.) yourself. In this event, the manufacturer cannot be held responsible.

D - FRENCH ROAD TRAFFIC RULES

(or see current legislation in other countries)

- Only one EC declaration of conformity is issued. It must be kept in a safe place.
- The road traffic rules of lift trucks are subject to the provisions of the highway code, according to the following categories:
 - Construction-type trucks (MT range): public works vehicle not predominantly for use on roads (point 6.9 of Article R311-1 of the French Highway Code). The truck must have a 25 disc displayed on the rear of the vehicle and an operating licence plate.
 - Agricultural-type trucks (MLT range) that are non-EC type approved tractors: (point 6.2 of Article R311/1 of the French Highway Code). The truck must be fitted with an operating licence plate.
 - Agricultural-type trucks (MLT range) that are EC type approved tractors: agricultural tractor type T1a (point 5.1.1 of Article R311/1 of the French Highway Code). The truck must be registered.

SPECIAL INSTRUCTION APPLYING TO "EC TRACTOR" TYPE-APPROVED LIFT TRUCKS

- All EC tractor type-approved lift trucks are supplied with an "EC tractor" certificate complying with directive 2003/37/EC, to be retained by the owner, and a page of administrative details together with a CNIT number (national type approval code) for registration at the prefecture.
- The lift truck owner is responsible for carrying out the necessary procedures for obtaining the vehicle registration document within the time limit defined by the regulations.
- The operator must hold a category B driver's licence, unless granted an exemption.
- The lift truck must be driven on the public highway in accordance with the instructions given in the manual supplied with the lift truck (Gross weight, Gross combination weight, towing load, axle loads, maximum speeds, etc. according to type/version). The operator must be in possession of the lift truck's registration document.

⚠ IMPORTANT ⚠

*When towing a trailer or agricultural equipment, the travelling speed of the lift truck is limited to 25 km/h.
In this case, a "25" disc must be affixed to the rear of the convoy.*

E - LIFT TRUCK CAB PROTECTION

- All lift trucks comply with the requirements of ISO 3471 (wheel loader code) regarding cab rollover protection (ROPS) and ISO 3449 (Level II) regarding the protection of the cab against falling objects (FOPS).
- "EC TRACTOR" type-approved lift trucks comply, in addition, with Directive 79/622/EC (OECD Code 4) regarding cab rollover protection (ROPS).

⚠ IMPORTANT ⚠

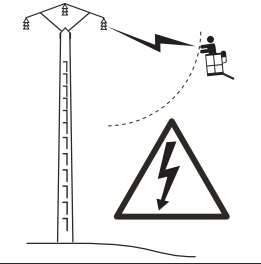
*Structural damage or overturning, a modification, changes or a poorly executed repair can reduce the protective efficiency of the cab, cancelling its compliance.
Do not perform welding or drilling on the cab structure.
Consult your dealer to determine the limits of this structure without cancelling its compliance.*

E - ENVIRONMENT



It is forbidden to use the platform close to electricity cables. Maintain the specified safe distances.

RATED VOLTAGE	SAFETY DISTANCE (METRES)
50 < U < 1,000	2,30 M
1,000 < U < 30,000	2,50 M
30000 < U < 45000	2,60 M
45000 < U < 63000	2,80 M
63000 < U < 90000	3,00 M
90000 < U < 150000	3,40 M
150000 < U < 225000	4,00 M
225000 < U < 400000	5,30 M
400000 < U < 750000	7,90 M




It is strictly forbidden to use the platform when the wind speed exceeds 45 km/h.

- To visually recognise this wind speed, refer to the empirical wind evaluation scale below:

BEAUFORT scale (wind speed at a height of 10 m on a flat site)						
Force	Type of wind	Speed (knots)	Speed (km/h)	Speed (m/s)	Effects on Land	Sea conditions
0	Calm	0 - 1	0 - 1	<0.3	Smoke rises vertically.	Sea is like a mirror.
1	Light air	1 - 3	1 - 5	0.3 - 1.5	Smoke indicates direction of wind.	Ripples with appearance of scale, no foam crests.
2	Light breeze	4 - 6	6 - 11	1.6 - 3.3	Wind felt on face, leaves rustle.	Short wavelets, but pronounced.
3	Gentle breeze	7 - 10	12 - 19	3.4 - 5.4	Leaves and small twigs in constant motion.	Very small waves, crests begin to break.
4	Moderate breeze	11 - 16	20 - 28	5.5 - 7.9	Wind raises dust and loose pieces of paper; small branches are moved.	Small waves, becoming longer, numerous whitecaps.
5	Fresh breeze	17 - 21	29 - 38	8 - 10.7	Small trees in leaf begin to sway.	Wavelets form on inland waters; moderate waves, taking longer form.
6	Strong breeze	22 - 27	39 - 49	10.8 - 13.8	Large branches in motion, whistling heard in overhead wires, umbrella use becomes difficult.	Larger waves forming, whitecaps everywhere, some spray.
7	Near gale	28 - 33	50 - 61	13.9 - 17.1	Whole trees in motion, inconvenience felt when walking against the wind.	Sea heaps up; white foam from breaking waves begins to be blown in streaks along the direction of the wind.
8	Gale	34 - 40	62 - 74	17.2 - 20.7	Wind breaks twigs off trees; impedes progress.	Moderately high waves of greater length; edges of crests begin to break into spindrift.
9	Strong gale	41 - 47	75 - 88	20.8 - 24.4	Wind damages roofs (chimneys, slates, etc.).	High waves, crests of waves begin to topple, streaks of foam; reduced visibility.
10	Storm	48 - 55	89 - 102	24.5 - 28.4	Seldom experienced inland; trees uprooted; considerable structural damage occurs.	Very high waves; white streaks of foam; reduced visibility.
11	Violent storm	56 - 63	103 - 117	28.5 - 32.6	Very rare, widespread damage.	Exceptionally high waves able to hide medium sized ships from view, reduced visibility.
12	Hurricane	64 +	118 +	32.7 +	Devastating damage.	Sea completely white; air filled with foam and spray, very reduced visibility.

F - MAINTENANCE



*Your platform must be periodically inspected to ensure its continued compliance.
The inspection frequency is defined by the legislation applying in the country in which the platform is used.
In France, a general periodic inspection every 6 months (Decree of 1 March 2004).*

2 - DESCRIPTION

<i>SAFETY PLATES AND STICKERS</i>	2-4
<i>IDENTIFICATION OF THE LIFT TRUCK</i>	2-8
<i>SPECIFICATIONS</i>	2-12
<i>TYRES</i>	2-14
<i>DIMENSIONS AND LOAD CHARTS</i>	2-16
<i>VISIBILITY</i>	2-18
<i>INSTRUMENTS AND CONTROLS</i>	2-20
<i>TOWING DEVICE</i>	2-54
<i>DESCRIPTION AND USE OF THE OPTIONS</i>	2-60

HYDRAULIC CIRCUIT			
Hydraulic pump		Variable volume pistons	
- Type		1st casing	2nd casing
- Capacity	cm ³	63	22
- Max. rating capacity unladen	l/min	149	53
- Flow rate at 1600 rpm	l/min	101	36
Filtration			
- Return	µm	10	
- Suction	µm	135	135
Maximum service pressure		270	
- Telescoping circuit	bar	200 / 270	
- Lifting circuit	bar	270 / 270	
- Tilting circuit	bar	270 / 190	
- Attachment circuit	bar	270	
- Steering circuit	bar	180	

HYDRAULIC MOVEMENTS			
Longitudinal stability limiter and warning device		Electronic	
Lifting motions (boom retracted)			
- Unladen lifting	s - m/min	7.6 - 35.5	
- Laden lifting	s - m/min	8.9 - 30.3	
- Unladen lowering	s - m/min	5.4 - 50	
- Laden lowering	s - m/min	5.4 - 50	
Telescoping motions (boom raised)			
- Unladen extending	s - m/min	7.8 - 20.8	
- Laden extending	s - m/min	7.8 - 20.8	
- Unladen retracting	s - m/min	5.9 - 27.5	
- Laden retracting	s - m/min	5.8 - 27.9	
Tilting movements			
- Unladen digging	s - °/s	3.8 - 38.4	
- Unladen discharging	s - °/s	3 - 48.7	

SPECIFICATIONS AND WEIGHTS			
Speed of movement for lift truck in standard configuration on flat ground			
- Front unladen	1	km/h	5,6
	2	km/h	9,4
	3	km/h	12,2
	4	km/h	19,7
	5	km/h	26,7
	6	km/h	40,4
- Rear unladen	1	km/h	5,6
	2	km/h	12,2
	3	km/h	26,7
Standard attachment		PFB 45 MT 1260	
- Weight of attachment (without forks)	kg	200	
- Weight of forks (each)	kg	80	
Rated capacity with standard attachment	kg	3700	
Tipping load at maximum reach on tires	kg	1300	
Distance from the centre of gravity of the load to the base of the forks	mm	500	
Standard lifting height	mm	6850	
Lift truck weight without attachment	kg	7180	
Weight of lift truck with standard attachment			
- Unladen	kg	7540	
- At rated load	kg	11240	
Weight per axle with standard attachment (transport position)			
- Front unladen	kg	3540	
- Rear unladen	kg	4000	
- Front rated load	kg	9680	
- Rear rated load	kg	1560	
Weight per axle with standard attachment (boom extended)			
- Front rated load	kg	8140	
- Rear rated load	kg	700	
Drag strain on the coupling hook			
- Unladen (sliding)	daN	5300	
- At rated load (transmission setting)	daN	7950	
Breakout force with bucket (according to ISO 8313)	daN	5520	

DRIVER'S PNEUMATIC SEAT "PREMIUM"

DESIGNED FOR MAXIMUM COMFORT, THIS SEAT CAN BE ADJUSTED AS FOLLOWS.

WEIGHT AND SEAT HEIGHT ADJUSTMENT

WEIGHT ADJUSTMENT

Adjust the seat according to your weight while correctly seated.

- Switch on lift truck ignition.
- Push or pull lever 1 until green appears in display 2 indicating correct adjustment according to your weight.

NOTE: To avoid any health problems, it is recommended to check and adjust the weight setting before starting the lift truck.

SEAT HEIGHT ADJUSTMENT

⚠ IMPORTANT ⚠

To avoid causing any damage, do not activate the compressor for over 1 minute.

When weight adjustment has been carried out, you can then modify seat height.

- Keep the ignition on in the lift truck.
- Push or pull lever 1 until green appears and adjust the height of the seat while checking that the green in display 2 remains visible.

EXTENDING THE HEAD-REST

- The height of the head-rest 3 can be adjusted by pulling it upwards (the notches will click) up to the stop.
- The head-rest can be removed by applying sufficient pressure to pull it off the stop.

BACK-REST ANGLE ADJUSTMENT

⚠ IMPORTANT ⚠

If you do not support the back-rest when making adjustments, it swings completely forwards.

- Support the back-rest, pull the lever 4 and tilt the back-rest to the desired position.

LONGITUDINAL ADJUSTMENT

- Engage the locking lever 5 in the desired position. This then locks, preventing the seat from being moved into another position.

MAINTENANCE

⚠ IMPORTANT ⚠

A moving backrest increases the risk of an accident!

Dirt may adversely affect the correct functioning of the seat. For this reason, make sure your seat is always clean.

- To clean or change the cushions, simply remove them from the seat frame.
- Avoid wetting the cushion fabric when cleaning it. Firstly check the resistance of the fabric on a small hidden area before using any fabric or plastic cleaner.






HOURLY METER

- This screen is displayed for a few seconds when the ignition is switched on.




SPEEDOMETER

- This screen is displayed in driving mode .



HYDRAULIC FLOW RATE ADJUSTMENT

- This screen is displayed in working mode .









POP UP

- Blue POP UP: information message.
- Grey POP UP: operating message.
- Orange POP UP: warning message.
- Red POP UP: fault warning message, consult your dealer.



ODOMETER

- Hold down and turn the navigation knob A to change the mode.

-  Total hour meter.
-  Partial hour meter.
-  Instantaneous fuel consumption.
-  Average fuel consumption.
-  Fuel autonomy.
-  Rev counter.



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16 - FUSES AND RELAYS UNDER THE ENGINE COVER

- Open the engine bonnet, remove cover 1 to gain access to the fuses and relays. Replace a used fuse with a new fuse of the same quality and capacity. Never reuse a repaired fuse.

MAXIFUSE

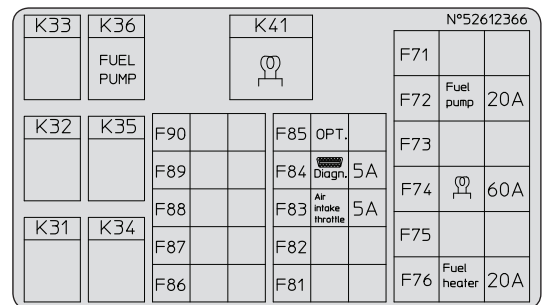
F71		Free.
F72	20A	Relay power supply (K36).
F73		Free.
F74	60A	Relay power supply (K41).
F75		Free.
F76	20A	Fuel decongealant (OPTION).

MINIFUSE

F81		Free.
F82		Free.
F83	5A	Air intake valve.
F84	5A	Engine diagnostic plug
F85		Free.
F86		Free.
F87		Free.
F88		Free.
F89		Free.
F90		Free.

RELAYS

K31	Free.
K32	Free.
K33	Free.
K34	Free.
K35	Free.
K36	Fuel pump.
K41	Preheat.



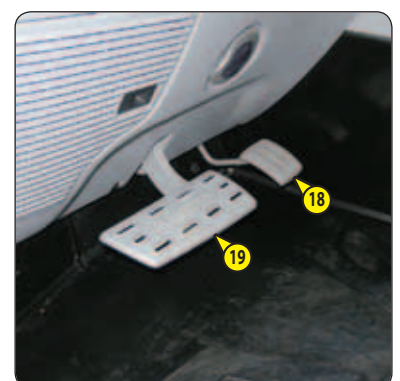
17 - DIAGNOSTIC PLUG



18 - ACCELERATOR PEDAL

19 - SERVICE BRAKE PEDAL AND TRANSMISSION CUT-OFF

The pedal acts on the front and rear wheels via a power assisted hydraulic braking system that slows the lift truck and brings it to a halt. Depending on the position of the transmission cut-off switch, it enables the transmission to be cut off during the free travel (← PUSH BUTTON PANEL).







6 - ATTACHMENT CIRCUIT CONTINUE FLOW



⚠ IMPORTANT ⚠

This OPTION must only be used with an attachment requiring continuous hydraulic movement, such as a brush, feeder bucket, mixer, spray etc. It is strictly forbidden for use in handling operations and all other applications (winch, crane jib, crane jib with winch, hook, etc.).

USING CONTINUE FLOW MEMORISATION AND LIMITATION




- Turn the navigation knob A to change the working mode  / .

- Press knob A or hold down the  button,  will appear on the information screen.

NOTE: Depending on the OPTIONS, you can have two attachment circuits  , press button B to select the second circuit.

- Turn the knob A to select the line.
- Confirm by pressing knob A.
- Turn knob A to set the desired flow rate.
- Press knob A to confirm and memorise.

ACTIVATING THE MEMORISED CONTINUE FLOW

- Press the  button to activate continue flow.
- Confirm by pressing the  button a second time or pressing knob A.
- Press the  button again to deactivate.




7 - BOOM SUSPENSION

The boom suspension dampens shaking of the lift truck on rough ground (e.g. handling straw in a field).

⚠ IMPORTANT ⚠

When you make a hydraulic downward or tilting movement, boom suspension is temporarily disabled and the button light  goes off. Boom suspension is active from 5 km/h.

- Press the  button to activate. The indicator lamp will show it is in use.
- Press the button again to deactivate.
- When the engine is off, boom suspension is automatically deactivated.

NOTE: Forced boom suspension  allows it to be used at less than 5 km/h.

3 - MAINTENANCE

REPLACE

Engine oil

REPLACE

Engine oil filter

Place the lift truck on level ground, let the engine run at idling speed for a few minutes, then stop the engine.

⚠ IMPORTANT ⚠

Dispose of the drain oil in an ecological manner.

Tighten the oil filter by hand pressure only and lock the filter in place by a quarter turn.

DRAINING THE OIL

- Open the engine cover.
- Remove access panel 1.

NOTE: When removing cover plates and hatches, clean the surrounding area and remove any accumulations of flammable materials.

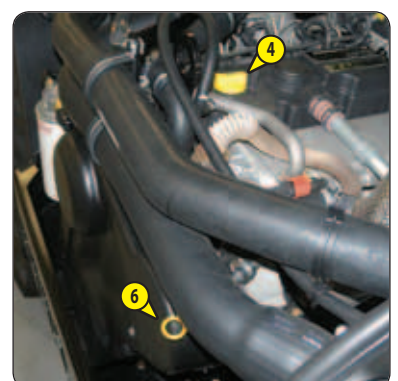
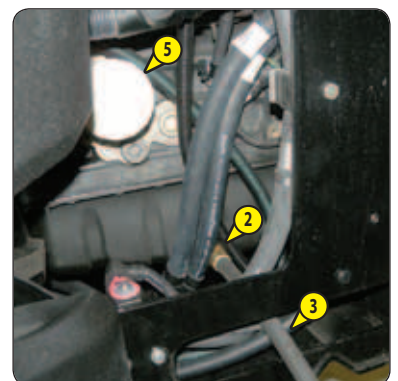
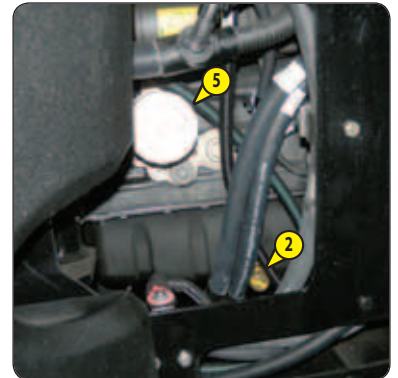
- Place a container under the drain hole and unscrew the drain plug 2.
- Take drain hose 3.
- Place the end of the drain hose in the container and screw the hose fully to the drain connector 2.
- Remove the filler plug 4 to ensure that the oil is drained properly.

REPLACEMENT OF THE FILTER

- Unscrew and discard the engine oil filter 5, together with its seal.
- Clean the filter bracket with a clean, lint-free cloth.
- Lightly oil the seal before refitting the new oil filter (⚠ FILTER CARTRIDGES AND BELTS) on its bracket (tightening torque 15-17 Nm).

FILLING WITH OIL

- Remove, clean and refit drain hose 3.
- Refit and tighten the drain plug 2.
- Fill up with oil (⚠ LUBRICANTS AND FUEL) through filler hole 4.
- Wait a few minutes to allow the oil to flow into the sump.
- Start the engine and let it run for a few minutes.
- Check for possible leaks from the drain plug and the oil filter.
- Stop the engine, wait a few minutes and check the correct level between the two level marks on the dipstick 6.
- Top up the level if necessary.
- Refit the access cover 1.



REPLACE

Hydraulic oil

CLEAN

Hydraulic oil tank suction strainer

REPLACE

Breather for the hydraulic oil tank

REPLACE

Distributor control head filter

Place the lift truck on level ground with the engine shut down, and the boom retracted and lowered as far as possible.

⚠ IMPORTANT ⚠

Before any intervention, thoroughly clean the area surrounding the filter, the drain plugs and the suction cover on the hydraulic tank.

Dispose of the drain oil in an ecological manner.

Use a very clean container and funnel and clean the underside of the oil drum before filling.

DRAINING THE OIL

- Place a container under drain plugs 1 and unscrew them.
- Remove the filler cap lock 2
- Remove the filler plug 3 to ensure that the oil is drained properly.

CLEANING THE STRAINER

- Remove hose 4.
- Remove and clean the suction strainer 5 using a compressed air jet, check its condition and replace if necessary (⇐ FILTER CARTRIDGES AND BELTS).
- Refit the strainer 5 and hose 4 making sure the seal is in the correct position.

REPLACING THE BREATHER

- Remove the protective casing 6.
- Unscrew the breather 7 and replace it with a new one (⇐ FILTER CARTRIDGES AND BELTS).
- Refit the protective casing 6.

REPLACING THE DISTRIBUTOR CONTROL HEAD FILTER

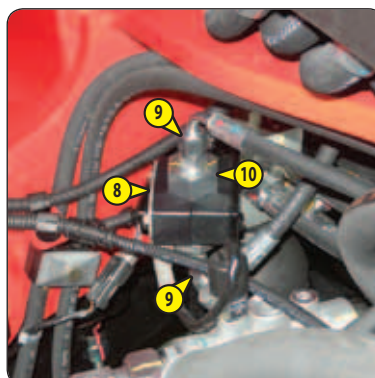
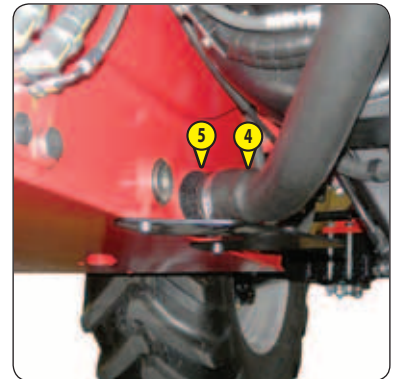
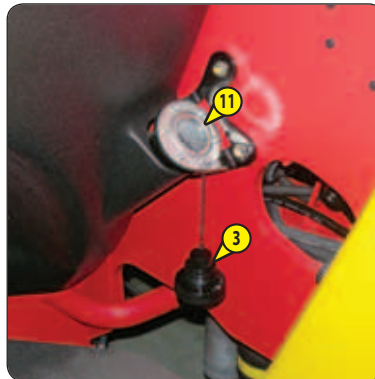
⚠ IMPORTANT ⚠

Be careful to mount the filter 10 in the same direction as the arrow.

- Remove the half clamp 8.
- Undo the two connections 9 and replace the filter 10 (⇐ FILTER CARTRIDGES AND BELTS).
- Refit half clamp 8.

FILLING WITH OIL

- Clean and refit the drain plugs 1 (tightening torque 29 to 39 N.m).
- Fill up with oil (⇐ LUBRICANTS AND FUEL) through filler port 11.
- Observe the oil level on dipstick 12, the oil level should be at the level of the red point.
- Check for any possible leaks at the drain plugs.
- Refit the filler cap 3 and its lock 2.



4 - OPTIONAL ADAPTABLE ATTACHMENTS FOR THE RANGE

<u>INTRODUCTION</u>	4-3
<u>PICKING UP THE ATTACHMENTS</u>	4-4
<u>TECHNICAL SPECIFICATIONS OF ATTACHMENTS</u>	4-6
<u>ATTACHMENT GUARDS</u>	4-19

INTRODUCTION

- Your lift truck must be used with interchangeable equipment. These items are called: ATTACHMENTS.
- A wide range of attachments is available, guaranteed by MANITOU and designed to fit your lift truck perfectly.

⚠ IMPORTANT ⚠

Only attachments approved by MANITOU can be used with their lift trucks (↪ 4 - ADAPTABLE ATTACHMENTS AS OPTIONS IN THE RANGE : TECHNICAL CHARACTERISTICS OF PLATFORMS).

The manufacturer cannot be held responsible for any modifications or adaptations to attachments without its knowledge.

- The attachments are delivered with a load chart concerning your lift truck. The operator's manual and the load chart should be kept in the places provided in the lift truck. For standard attachments, their use is governed by the instructions contained on this notice.

⚠ IMPORTANT ⚠

*Maximum loads are defined by the capacity of a lift truck taking account of the attachment's mass and centre of gravity.
Should the attachment have a lower capacity than the lift truck, never exceed this limit.*

- Some particular uses require the adaptation of the attachment which is not provided in the price-listed options. Optional solutions exist, consult your dealer.

⚠ IMPORTANT ⚠

Depending on their size, certain attachments may, when the boom is lowered and retracted, come into contact with the front tyres and cause damage to them if excavation is activated in the direction of the discharge.

TO PREVENT THIS RISK, EXTEND THE TELESCOPE TO A SUFFICIENT EXTENT FOR THE PARTICULAR LIFT TRUCK AND ATTACHMENT SO THAT THIS CONTACT IS NOT POSSIBLE.

SUSPENDED LOAD

⚠ IMPORTANT ⚠

Suspended loads MUST be handled with a lift truck designed for that purpose (↪ 1 - OPERATING AND SAFETY INSTRUCTIONS: LOAD HANDLING INSTRUCTIONS: H - PICKING UP AND PUTTING DOWN A SUSPENDED LOAD).

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