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YOUR DEALER

647966 EN (22/07/2021)

EP 15 Lithium Easy

OPERATOR'S MANUAL

(ORIGINAL MANUAL)



IMPORTANT

Carefully read and understand this instruction manual before using the pallet truck.

It contains all the information relating to the pallet truck's operation, handling and equipment, as well as important recommendations to be followed.

This document also contains precautions for use, as well as information on the servicing and routine maintenance required to ensure the pallet truck's continued safety of use and reliability.

WHenever you see this symbol it means:



WARNING! BE CAREFUL! YOUR SAFETY, THE SAFETY OF OTHERS OR THAT OF THE PALLET TRUCK IS AT RISK.

- This manual has been produced on the basis of the equipment list and the technical characteristics given at the time of its design.
- The level of equipment of the pallet truck depends on the options chosen and the country of sale.
- According to the pallet truck options and the date of sale, certain items of equipment/functions described herein may not be available.
- Descriptions and figures are non-binding.
- MANITOU reserves the right to change its models and their equipment without being required to update this manual.
- The MANITOU network, consisting exclusively of qualified professionals, is available to answer all your questions.
- This manual is an integral part of the pallet truck.
- It is to be kept in its storage space at all times for ease of reference.
- Hand this manual to the new owner if the pallet truck is resold.

22/07/2021	1st DATE OF ISSUE
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1 - OPERATING AND SAFETY INSTRUCTIONS

2 - DESCRIPTION

3 - MAINTENANCE

1 - OPERATING AND SAFETY INSTRUCTIONS

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INSTRUCTIONS TO THE COMPANY MANAGER

THE SITE

Proper management of the pallet truck's travel area can reduce the risk of accidents. The following basic precautions will contribute to this:

- Passageways must be kept in a good state of repair and free of obstructions,
- Ramp gradients must not be too steep,
- Pedestrian traffic must be controlled.

THE OPERATOR

Only qualified, authorized personnel can use the pallet truck. This authorization is given in writing by the appropriate person in the establishment with respect to the use of the pallet truck and must be carried permanently by the operator.

⚠ IMPORTANT ⚠

Experience has shown that there are a number of inappropriate ways in which the pallet truck might be used. Such foreseeable misuse, of which the main examples are listed below, is strictly forbidden:

- *The foreseeable abnormal behavior resulting from ordinary neglect, but that does not result from any wish to put the machinery to any improper use,*
- *The reflex reactions of a person in the event of a malfunction, incident, fault, etc. during operation of the pallet truck,*
- *Behavior resulting from application of the "principle of least action" when performing a task,*
- *For certain machines, the foreseeable behavior of such persons as: apprentices, teenagers, handicapped persons, trainees tempted to drive a pallet truck, operator tempted to operate a pallet truck to win a bet, in competition or for their own personal experience.*

The person in charge of the equipment must take these criteria into account when assessing whether or not a person will make a suitable operator.

THE PALLET TRUCK

A - THE PALLET TRUCK'S SUITABILITY FOR THE TASK

MANITOU has ensured that this pallet truck is suitable for use under the standard operating conditions defined in this operator's manual, with a STATIC test coefficient of 1.33 (as provided for by standard EN ISO 3691-1) and a DYNAMIC test coefficient of 1.

Before commissioning, the company manager must make sure that the pallet truck is appropriate for the work to be done, and perform certain tests (in accordance with current legislation).

B - ADAPTATION OF THE PALLET TRUCK TO STANDARD ENVIRONMENTAL CONDITIONS

Take into account climatic and atmospheric conditions of the site of utilization:

- Protection against frost (see: 3 - MAINTENANCE: LUBRICANTS),
- Adaptation of lubricants (ask your dealer for information),
- Do not use in a cold-storage warehouse to avoid risks and malfunctioning linked to frosting and condensation. Battery life will also be reduced.

⚠ IMPORTANT ⚠

For operation under average climatic conditions, i.e. between -15 °C and +35 °C, correct levels of lubricants in all the circuits are checked in production. - 15 °C to + 35 °C and humidity less than 90%.

For operation under more severe climatic conditions, before starting up, drain all circuits, then fill using lubricants suitable for the ambient temperatures.

Your pallet truck is designed for indoor use in suitably aerated and ventilated premises. It is prohibited to use the pallet truck in areas where there is a risk of fire or which are potentially explosive (e.g. Refineries, fuel or gas depots, stores of flammable products, etc.). For use in these areas, specific equipment is available (ask your dealer for information).

Special equipment is available for use in such areas (ask your dealer for information).

Our trucks comply with Directive 2004/108/EC concerning electromagnetic compatibility (EMC), and with the corresponding harmonized standard EN 12895. Their proper operation is no longer guaranteed if they are used within areas in which the electromagnetic fields exceed the limit specified by that standard (10 V/m).

Directive 2002/44/EC requires company managers to not expose their employees to excessive vibration doses. There is no recognized 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 pallet truck and attachment for the intended use,
- 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 - PALLET TRUCK MODIFICATION

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

INSTRUCTIONS

The instruction manual must always be kept in good condition and available to the operator.

Operator's manuals and any plates or stickers which are no longer legible or are damaged, must be replaced.

MAINTENANCE

Maintenance or repairs other than those detailed in Part: 3 - MAINTENANCE must be carried out by qualified personnel (consult your dealer) and in the necessary safety conditions to preserve the health of the operator and any third party.

INSTRUCTIONS FOR THE OPERATOR

FOREWORD

⚠ IMPORTANT ⚠

The risk of accident while using, servicing or repairing your pallet truck can be reduced if you follow the safety instructions and safety measures detailed in these instructions.

Failure to respect the safety and operating instructions or the instructions for repairing or servicing your pallet truck may lead to serious, even fatal, accidents.

Only the operations and maneuvers described in this operator's manual must be performed. The manufacturer cannot predict all possible risky situations. Consequently, the safety instructions given in the operator's manual and on the pallet truck itself are not exhaustive.

At any time as an operator, you must envisage, within reason, the possible risk to yourself, to others or to the pallet truck itself when you use it.

GENERAL INSTRUCTIONS

A - OPERATOR'S MANUAL

Read the operator's manual carefully.

The instruction manual must always be kept in good condition and available to the operator.

You must report any plates and stickers which are no longer legible or which are damaged.

B - AUTHORIZATION FOR USE

Only qualified, authorized personnel can use the pallet truck. This authorization is given in writing by the appropriate person in the establishment with respect to the use of the pallet truck and must be carried permanently by the operator.

The operator is not competent to authorize the driving of the pallet truck by another person.

C - MAINTENANCE

The operator must immediately advise his superior if his pallet truck is not in good working order or does not comply with the safety notice.

The operator is prohibited from carrying out any repairs or adjustments himself, unless he has been trained for this purpose. He must keep the pallet truck properly cleaned if this is among his responsibilities.

The operator is responsible for carrying out daily maintenance operations (see: 3 - MAINTENANCE: A - DAILY OR EVERY 10 HOURS SERVICE).

⚠ IMPORTANT ⚠

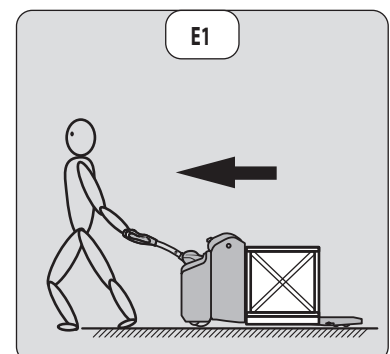
Do not use the pallet truck if the tires are damaged or excessively worn, because this could put your own safety or that of others at risk, or cause damage to the pallet truck itself.

D - MODIFICATION OF THE PALLET TRUCK

For your own safety and that of others, you must not change the structure and settings of the various components used in your pallet truck by yourself (hydraulic pressure, limiter calibration, addition of extra equipment, unapproved tools, etc.). In this event, the manufacturer cannot be held responsible.

E - DIRECTION OF TRAVEL OF THE PALLET TRUCK

The pallet truck is traveling in the forward direction when the operator is holding the tiller arm with one hand and the pallet truck is behind him (fig. E1).



A - PRIOR TO USING THE PALLET TRUCK

Prior to using the pallet truck, the operator must check that there is no one within the danger zone and keep unauthorized persons outside this zone. Above all, it is forbidden to stay close to moving parts.

If, in spite of a warning, people refuse to leave the danger zone, the operator must not continue using the pallet truck.

The operator must ensure that the machine is in perfect working order by checking the following points:

- Operation of the brake with the tiller in the vertical position and in the horizontal position pushed downward,
- The operation of the key switch preventing unauthorized use of the machine,
- The tiller correctly returns to the vertical position,
- The butterfly switches (the pallet truck's travel control switches) correctly return to the neutral position,
- The operation of the battery cut-off (emergency stop),
- The operation of the horn,
- The condition of the wheels and rollers,
- The state of the fork arms that must show no visible signs of damage (deformation, cracking or heavy wear),
- The operation of the hydraulic system (raising and lowering), and that the unladen fork lowers smoothly and without jamming,
- The cover is correctly in place,
- The state of charge of the battery and its connections,
- The charger is no longer connected to the mains supply and the lead is correctly stored,
- The safety devices are correctly installed and operational.

The operator must inform his line manager and stop using the pallet truck if he notes that it is not in good working order or does not comply with the safety notice.

B - DRIVER'S OPERATING INSTRUCTIONS

Whatever his experience, the operator is advised to familiarize himself with the position and operation of the control instruments before operating the pallet truck.

Wear clothes suited for driving the pallet truck and avoid loose clothes.

Make sure you have the appropriate protective equipment for the task to be performed.

Always pay attention when using the pallet truck; Do not listen to the radio or music using headphones or earphones.

It is forbidden to sit on the pallet truck.

It is forbidden to carry passengers on the pallet truck (fig. B1).

It is forbidden to push or tow a load with the pallet truck.

It is forbidden to brake suddenly and to make a turn at full speed.



C - ENVIRONMENT

This pallet truck is not designed to be used out of doors or to travel on the public highway.

The operator must comply with site safety regulations.

Pallet trucks are only to travel along the aisles authorized by the company manager.

All aisles must be clearly marked. They must contain no tight bends or gradients, nor passages that are too narrow or too low.

The floor of the circulation aisles must be sufficiently strong, essentially flat and horizontal, clean, non-slip and smooth.

The width of the circulation aisles must be at least 400 mm wider than the overall width of the pallet truck or of the load, if the load is wider than the pallet truck.

Advance warning of obstacles or danger areas must be given by suitable markings.

Loads placed on the storage structures must not protrude and encroach on the circulation aisles.

Only authorized persons may access the circulation aisles.

During handling operations, make sure that no one is obstructing the pallet truck and its load.

Do not allow anybody to come near the working area of the pallet truck.

Take into account the pallet truck's dimensions and its load before trying to negotiate a narrow or low passageway.

Never move onto a load bridge without having first checked:

- That it is suitably positioned and made fast,
- That the unit to which it is connected (wagon, lorry, etc.) will not shift,
- That this platform is able to support the total weight of the (possibly laden) pallet truck,
- That the platform is suitable for the size of the pallet truck.

Ensure that the gradients of the ramps do not exceed those shown in the table of technical characteristics of the machines.

A smooth transition of slope must be ensured, to avoid rubbing and damaging the pallet truck's chassis.

Never move onto a foot bridge, floor or freight lift, without being certain that they are suitable for the weight and size of the laden pallet truck and without having checked that they are in good condition.

Be careful in the area of loading bays, trenches, scaffolding, soft ground and manholes.

Make sure that the scaffolding, loading platform, pilings or ground is capable of bearing the load.

Never stack loads on uneven ground, they may tip over.

In the event of high winds, do not carry out handling work that jeopardizes the stability of the pallet truck and its load, particularly if the load catches the wind badly.

D - VISIBILITY

The safety of people within the pallet truck's working area, as well as that of the pallet truck itself and the operator, depend on the operator having good visibility of the pallet truck's immediate vicinity in all situations and at all times.

When traveling in the forward direction, the load behind the operator must not impair visibility (fig. D1).

When maneuvering in reverse, if the size of the load restricts visibility, request the assistance of a person directing the maneuver (while standing outside the pallet truck's working area) being sure to keep this person clearly in view at all times.

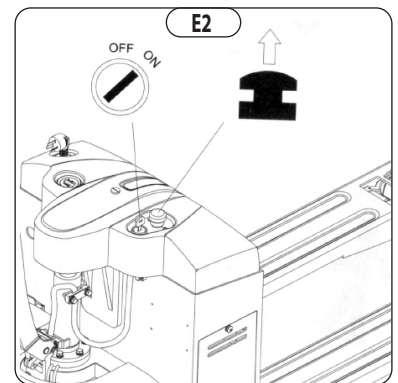
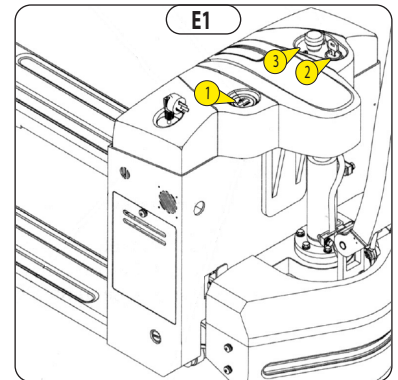
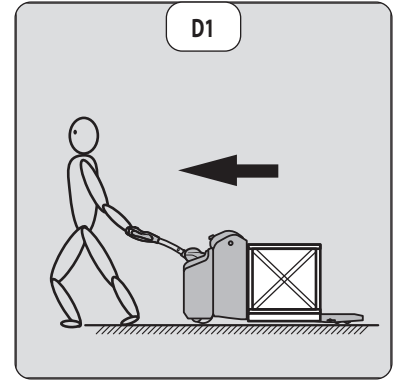
E - STARTING-UP THE PALLET TRUCK

The pallet truck is electrically propelled with an electrically controlled lifting mechanism designed for handling palletized loads.

INSTRUCTIONS

- Pull the emergency stop button (3) (fig. E1/fig.E2),
- Insert the key in the ignition and turn it to the ON position to start up the pallet truck (2) (fig. E1/fig.E2).

The charge indicator (1) (fig. E1) shows the battery charge level.



F - DRIVING THE PALLET TRUCK

SAFETY INSTRUCTIONS

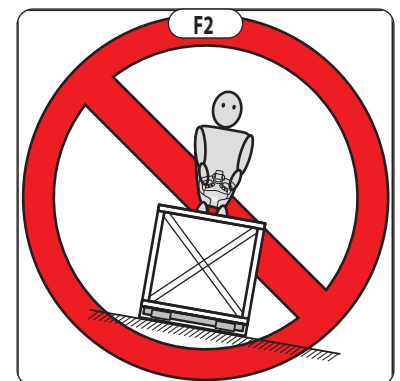
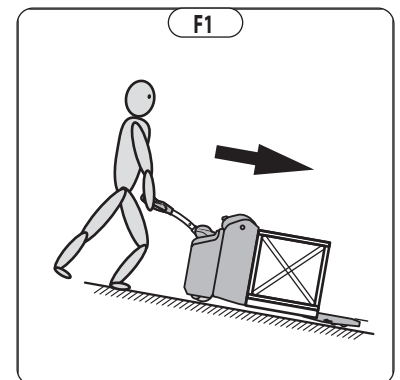
⚠ IMPORTANT ⚠

We would like to draw the operators' attention to the risks involved in using the pallet truck, in particular:

- Risk of losing control.*
- The operator must remain in control of the pallet truck.*
- It is strictly forbidden to touch the moving parts (forks, etc.).*

Follow the company's traffic rules.

- Do not carry out operations which exceed the capacities of the pallet truck,
- The loads carried must be balanced and correctly secured to avoid the risk of falling,
- Ensure that pallets, cases, etc. are in good order and suitable for the load to be lifted,
- Familiarize yourself with the pallet truck on the terrain where it will be used,
- Ensure that the service brakes are working properly,
- The speed of travel of the laden pallet truck must be adapted to the internal traffic conditions,
- Move the pallet truck smoothly at an appropriate speed for the operating conditions (ground profile, load on the pallet truck),
- Do not use the lifting or lowering controls when the pallet truck is moving,
- Approach bends, narrow passages or swing doors, as well as any sector where visibility is reduced, at reduced speed,
- In all circumstances, make sure you are in control of the pallet truck's speed,
- Brake gently, never abruptly,
- Do not leave the ignition switched on too long when not needed,
- Never leave the engine on in the absence of the operator,
- Look where you are going and always make sure you have good visibility along the route,
- Leave a margin of safety when maneuvering around obstacles,
- The operator must always remain uphill of the pallet truck on a ramp (fig.F1),
- Ramps must not be taken perpendicular to the axis of the slope,
- Never turn the pallet truck around on a ramp (fig.F2),



INSTRUCTIONS

- Place the tiller within the driving zone (F) (fig. F3) in order to unlock the electrical safety system,
- The orientation of the tiller arm determines the direction of the pallet truck,
- When moving the pallet truck, the operator must walk in front of the machine,
- Gradually push one of the butterfly control switches up or down (1) (fig. F4) depending on the chosen direction of travel.

As the pallet truck is fitted with an electronic speed controller, its speed varies progressively according to the angular position of the butterfly control switch.

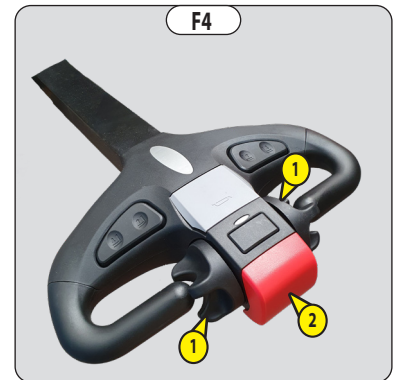
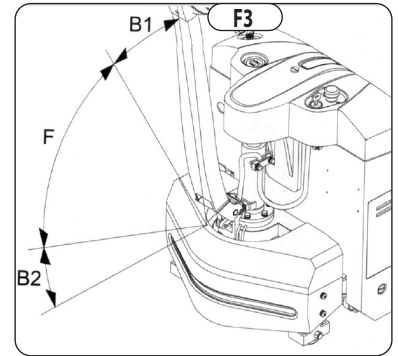
- To stop the pallet truck, release the butterfly control switch; this will return to the neutral position, gradually bringing the pallet truck to halt,
- To stop the pallet truck in an emergency, fully lower (B1) (fig. F3) or raise the tiller arm (B2) (fig. F3); this will actuate the electrically-controlled brake.

The tiller automatically returns to the vertical position as soon as it is released. The parking brake is then operated, stopping the pallet truck immediately.

The end of the tiller arm is equipped with an anti-crushing safety device (2) (fig. F4) that protects the operator by reversing the pallet truck's direction of travel as soon as it is pushed. The pallet truck will only stop when the pressure on the safety device stops or after a few seconds. This only applies when the pallet truck is in forward mode.

The button with a tortoise symbol (3) (fig.F5) moves the pallet truck at slow speed. This function is very useful when maneuvering in confined spaces. When this button is operated, the pallet truck travels at 30% of its nominal speed.

- Hold down the slow speed (tortoise) button (3) (fig.F5)
 - Push a butterfly switch up or down (1) (fig.F4) according to the chosen direction of travel.
- (see: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).



G - STOPPING THE PALLET TRUCK

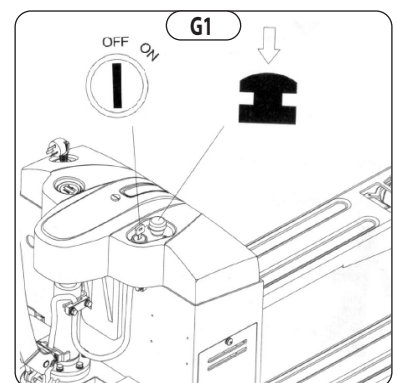
SAFETY INSTRUCTIONS

- When the pallet truck is stationary, or if the operator has to leave the operator's position (even for a moment), place the fork in the down position,
- Never leave the ignition key in the pallet truck during the operator's absence,
- Make sure that the pallet truck is not stopped in any position that will interfere with the traffic flow and at less than one meter from the rails of a railway track,
- In the event of prolonged parking on a site, protect the pallet truck from bad weather, disconnect and fully recharge the battery. If parked for a period of several months in an area at around 20 °C allow for charging the battery at least once every month.

INSTRUCTIONS

- Park the pallet truck on more-or-less level ground,
- Place the fork in the down position,
- Turn the key to the OFF position (fig. G1),
- Remove the key,
- Push the emergency stop button (fig. G1),
- Recharge the battery if necessary.

(see: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).



H - BATTERY CHARGE

Safe operation rules for battery use:

- Please charge the battery at an ambient temperature of 0 °C to 40 °C.
- Never try to open the battery.
- Please protect the battery from splashes of water or seepage of any corrosive liquid.
- Never charge the battery near a fire or in an environment with a high ambient temperature.
- Never leave the battery near an open flame, heat, or flammable and explosive objects.
- Never try to short-circuit the battery with wires or other metallic objects.
- Never pierce the battery case with any sharp objects.
- Before starting to charge the battery, check the cable and connector connections.
- Never smoke or use an open flame while charging the battery.
- When the pallet truck is not in use, it should be stored after charging the battery. It is recommended to recharge this battery at least once a week.
- For battery disposal, please contact your dealer.

⚠ IMPORTANT ⚠

- *Never charge the lithium battery below 0 °C,*
- *If the lithium battery fails, please contact your dealer. Never try to disassemble the lithium battery,*
- *The rules for lithium battery use must be strictly followed.*
- *Improper operation may cause leakage, heat and smoke on the lithium battery and may cause fire or explosion,*
- *The used battery must be disposed of in compliance with environmental regulations. Please contact your dealer,*
- *The pallet truck must use a lithium battery that complies with standard EN 62619,*
- *When replacing the lithium battery, make sure it has the same size and weight specifications.*

INSTRUCTIONS FOR HANDLING A LOAD

A - WEIGHT OF LOAD AND CENTER OF GRAVITY

Before picking up a load, you must know its weight and its center of gravity.

The maximum lifting capacity is indicated on the name plate located under the tiller arm.

For irregularly shaped or asymmetric loads, determine the center of gravity in the transverse direction before handling and position the center of gravity within the pallet truck's longitudinal centerline (fig. A1 and fig. A2).

For loads with a moving center of gravity (such as liquids), take account of the variations in the center of gravity in order to determine the load to be handled and be vigilant and take extra care to limit these variations as far as possible.

⚠ IMPORTANT ⚠

It is forbidden to directly place a load that weighs more than the effective capacity onto the fork by external means.

It is forbidden to move a load with a weight heavier than the effective capacity indicated on the pallet truck's name plate.

B - PICKING UP A LOAD ON THE GROUND

- Approach the pallet truck perpendicular to the load, with the forks in the down position (fig. B1).
- Position the pallet truck on the centerline of the load (fig. B2), unless the volume of the load is asymmetric,
- Insert the fork under the load as far as it will go,
- Raise the load.

The load must be perfectly balanced, wedged or tied to its support to avoid any risk of slipping or overturning.

Never lift a load from which certain elements could become detached and injure the operator.

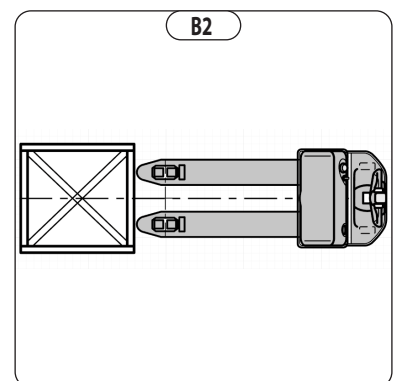
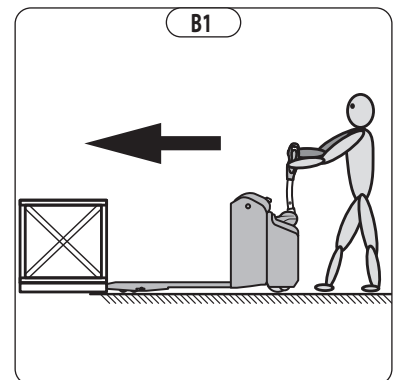
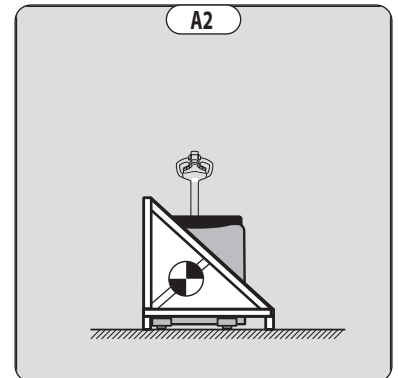
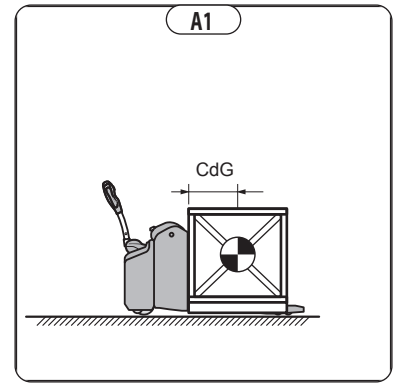
Never lift a load with a single fork arm.

Never lift a person with the pallet truck.

The operator must ensure that the arms are sufficiently widely spaced to ensure the stability of the load.

The load must not extend more than 50 mm beyond the end of the fork.

The width of the load must not exceed two times the maximum external width of the fork.



MAINTENANCE INSTRUCTIONS OF THE PALLET TRUCK

GENERAL INSTRUCTIONS

Wear clothes suitable for the maintenance of the pallet truck; avoid wearing jewelry and loose clothes.

Disconnect the battery plug before carrying out any work on the pallet truck.

Read the operator's manual carefully.

Carry out all necessary repairs at the earliest possible opportunity, even if the repairs concerned are minor.

Repair all leaks at the earliest possible opportunity, even if the leak concerned is minor.

Ensure that consumable materials and worn parts are removed and disposed of in accordance with current environmental protection decrees.

Be careful of the risk of burning and splashing of battery acid.

MAINTENANCE

Perform the periodic service (see: 3 - MAINTENANCE) to keep your pallet truck in good working condition. Failure to perform periodic maintenance may invalidate the contractual warranty.

MAINTENANCE LOGBOOK

The maintenance operations carried out in accordance with the recommendations given in Part: 3 - MAINTENANCE and the other inspection, servicing or repair operations or modifications performed on the pallet truck or its tools shall be recorded in a maintenance logbook.

The entry for each operation should include the date of the work, the names of the individuals or companies having performed them, the type of operation and its frequency, if applicable.

The part numbers of any pallet truck items replaced shall also be indicated.

LUBRICANT LEVELS

Use the recommended lubricants (never use contaminated lubricants).

HYDRAULICS

Any work on the load handling hydraulic circuit is forbidden except for the operations described in chapter: 3 - MAINTENANCE.

Do not attempt to loosen unions, hoses or any hydraulic component with the circuit under pressure.

ELECTRICITY

Do not place metal items on the battery.

Disconnect the battery before working on the electrical circuit.

⚠ IMPORTANT ⚠

Disconnect the battery plug and protect before washing.

Do not wet the electrical parts and do not use a steam or pressure washer.

The battery must be kept clean and dry at all times to avoid self-discharge and leakage currents.

Clean the pallet truck or at least the area concerned before carrying out any work.

During washing, avoid the articulations and electrical components and connections.

If necessary, protect components susceptible to damage, particularly electrical components and connections, against penetration of water, steam or cleaning agents.

Clean the pallet truck of any traces of fuel, oil or grease.

Do not cover the battery with a plastic sheet, as this would cause a build-up of static electricity and could cause an explosion.

FOR ANY INTERVENTION OTHER THAN REGULAR MAINTENANCE, CONSULT YOUR DEALER.

IF THE PALLET TRUCK IS NOT TO BE USED FOR A LONG TIME

INTRODUCTION

The following recommendations are intended to prevent the pallet truck from being damaged when it is withdrawn from service for an extended period.

IMPORTANT

When the pallet truck is not to be used for a long time, the relevant shutdown and restart procedures must be performed by your dealership.

PREPARING THE PALLET TRUCK

- Clean the pallet truck thoroughly.
- Check and repair any oil leaks.
- Replace or repair any worn or damaged parts.
- Wash the painted surfaces of the pallet truck with clear, cold water and wipe them dry.
- Touch up the paintwork if necessary.
- Shut down the pallet truck (see: DRIVING INSTRUCTIONS UNLADEN AND LADEN).
- Release the pressure in the hydraulic circuits.

PALLET TRUCK IDENTIFICATION

- Disconnect the battery and store it in a safe place away from the cold. It must be fully recharged once a month (see: 3 - MAINTENANCE: A - DAILY OR EVERY 10 HOURS OF SERVICE).

NOTE: If the pallet truck is to be stored outdoors, cover it with a waterproof tarpaulin.

RETURNING THE PALLET TRUCK TO SERVICE

- Refit and reconnect the battery.
- Perform the daily service (see: 3 - MAINTENANCE: A - DAILY OR EVERY 10 HOURS OF SERVICE).
- Lubricate the pallet truck completely (see: 3 - MAINTENANCE: MAINTENANCE SCHEDULE).
- Start up the pallet truck, following the safety instructions and regulations (see: DRIVING INSTRUCTIONS UNLADEN AND LADEN).
- Perform all hydraulic movements.

REMOVING THE PALLET TRUCK FROM SERVICE

REMOVAL FROM SERVICE

The operator must stop using the machine under the following conditions:

- Immediately an anomaly is detected in the operation of the machine,
- The moment the condition of the machine no longer allows safe working (cracks or deformations in the fork arms, wheels in poor condition, etc.),
- Safety devices are missing or not working,
- The regulatory markings on the machine are no longer legible,
- There are unauthorized persons within the danger zone,
- The moment the traffic conditions prevent safe working (slippery floor, congested circulation aisles, etc.).

The operator must then shut down the pallet truck in accordance with the instructions given in paragraph G "Shutting-down the pallet truck" in the section "INSTRUCTIONS FOR USE, LADEN AND UNLADEN" and inform the line manager of the reasons having led to the machine being taken out of service.

The machine can only be restarted once the causes for its withdrawal from service have been eliminated.

PALLET TRUCK DISPOSAL

MANITOU complies with the regulations deriving from Directive 2000/53/EC relating to pallet truck end-of-life. This pallet truck contains no substances or materials forbidden by Directive 2000/53/EC.

NOTE: Consult your dealer before disposing of your pallet truck.

RECYCLING OF MATERIALS

METALS

- Metals are 100 % recoverable and recyclable.

PLASTICS

- Plastic parts are identified with a marking in accordance with current regulations.
- A limited range of materials is used to simplify the recycling process.
- The majority of the plastic components are made of "thermoplastic" plastics, which are easily recycled by melting, granulating or grinding.

RUBBER

- Tires and seals can be ground for use in cement manufacture or to obtain reusable granules.

GLASS

- Glass items can be removed and collected for processing by glaziers.

ENVIRONMENTAL PROTECTION

By entrusting the maintenance of your pallet truck to the MANITOU network, the risk of pollution is limited and the contribution to environmental protection is made.

WORN OR DAMAGED PARTS

- Do not dump them in the countryside.
- MANITOU and its network have signed-up to a scheme of environmental protection through recycling.

USED OIL

- The MANITOU network organizes the collection and processing of used oil.
- By handing over your waste oil to MANITOU, the risk of pollution is limited.

USED BATTERIES

- Do not throw away batteries, as they contain metals that are harmful for the environment.
- Return them to the MANITOU network or any other approved collection point.

NOTE: MANITOU aims to manufacture pallet trucks that provide the best performance and limit polluting emissions.

2 - DESCRIPTION

CONTENTS

2 - DESCRIPTION

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1) **DÉCLARATION «CE» DE CONFORMITÉ (originale)**
«EC» DECLARATION OF CONFORMITY (original)

2) La société, *The company* : **LMH SOLUTIONS**

3) Adresse, *Address* : **1070, ZI EVRE ET LOIRE - 49600 - BEAUPREAU - FRANCE**

4) Dossier technique, *Technical file* : **LMH SOLUTIONS - 1070, ZI EVRE ET LOIRE
49600 - BEAUPREAU - FRANCE**

5) Constructeur de la machine décrite ci-après, *Manufacturer of the machine described below* :
EP15 Lithium Easy

6) Déclare que cette machine, *Declares that this machine* :

7) Est conforme aux directives suivantes et à leurs transpositions en droit national, *Complies with the following directives and their transpositions into national law* :

2006/42/CE

8) Pour les machines annexe IV, *For annex IV machines* :

9) Numéro d'attestation, *Certificate number* :

10) Organisme notifié, *Notified body* :

15) Normes harmonisées utilisées, *Harmonised standards used* :

16) Normes ou dispositions techniques utilisées, *Standards or technical provisions used* :

17) Fait à, *Done at* : **Beaupréau**

18) Date, *Date* : **22/07/2021**

19) Nom du signataire, *Name of signatory* :

20) Fonction, *Function* :

21) Signature, *Signature* :

bg : 1) удостоверение за «CE» съответствие (оригинална), 2) Фирмата, 3) Адрес, 4) Техническо досие, 5) Фабрикант на описаната по-долу машина, 6) Обявява, че тази машина, 7) Отговаря на следните директиви и на тяхното съответствие национално право, 8) За машините към допълнение IV, 9) Номер на удостоверението, 10) Наименувана фирма, 15) хармонизирани стандарти използвани, 16) стандарти или технически правила, използвани, 17) Изработено в, 18) Дата, 19) Име на разписалия се, 20) Функция, 21) Функция.

cs : 1) ES prohlášení o shodě (původní), 2) Název společnosti, 3) Adresa, 4) Technická dokumentace, 5) Výrobce níže uvedeného stroje, 6) Prohlašuje, že tento stroj, 7) Je v souladu s následujícími směrnicemi a směrnici transponovanými do vnitrostátního práva, 8) Pro stroje v příloze IV, 9) Číslo certifikátu, 10) Notifikační orgán, 15) harmonizované normy použity, 16) Norem a technických pravidel používaných, 17) Místo vydání, 18) Datum vydání, 19) Jméno podepsaného, 20) Funkce, 21) Podpis.

da : 1) EF Overensstemmelseserklæring (original), 2) Firmaet, 3) Adresse, 4) tekniske dossier, 5) Konstruktor af nedenfor beskrevne maskine, 6) Erklærer, at denne maskine, 7) Overholder nedennævnte direktiver og disses gennemførelse til national ret, 8) For maskiner under bilag IV, 9) Certifikat nummer, 10) Bemyndigede organ, 15) harmoniserede standarder, der anvendes, 16) standarder eller tekniske regler, 17) Udfærdiget i, 18) Dato, 19) Underskrivers navn, 20) Funktion, 21) Underskrift.

de : 1) EG-Konformitätserklärung (original), 2) Die Firma, 3) Adresse, 4) Technischen Unterlagen, 5) Hersteller der nachfolgend beschriebenen Maschine, 6) Erklärt, dass diese Maschine, 7) den folgenden Richtlinien und deren Umsetzung in die nationale Gesetzgebung entspricht, 8) Für die Maschinen laut Anhang IV, 9) Bescheinigungsnummer, 10) Benannte Stelle, 15) angewandten harmonisierten Normen, 16) angewandten sonstigen technischen Normen und Spezifikationen, 17) Ausgestellt in, 18) Datum, 19) Name des Unterzeichners, 20) Funktion, 21) Unterschrift.

el : 1) Δήλωση συμμόρφωσης CE (πρωτότυπο), 2) Η εταιρεία, 3) Διεύθυνση, 4) τεχνικό φάκελο, 5) Κατασκευάστρια του εξής περιγραφόμενου μηχανήματος, 6) Δηλώνει ότι αυτό το μηχανήμα, 7) Είναι σύμφωνο με τις εξής οδηγίες και τις προσαρμογές τους στο εθνικό δίκαιο, 8) Για τα μηχανήματα παραρτήματος IV, 9) Αριθμός δήλωσης, 10) Κοινοποιημένος φορέας, 15) εναρμονισμένα πρότυπα που χρησιμοποιούνται, 16) Πρότυπα ή τεχνικούς κανόνες που χρησιμοποιούνται, 17) Είναι σύμφωνα με τα εξής πρότυπα και τεχνικές διατάξεις, 18) Έν, 18) Ημερομηνία, 19) Όνομα του υπογράφοντος, 20) Θέση, 21) Υπογραφή.

es : 1) Declaración DE de conformidad (original), 2) La sociedad, 3) Dirección, 4) expediente técnico, 5) Constructor de la máquina descrita a continuación, 6) Declara que esta máquina, 7) Está conforme a las siguientes directivas y a sus transposiciones en derecho nacional, 8) Para las máquinas anexo IV, 9) Número de certificación, 10) Organismo notificado, 15) normas armonizadas utilizadas, 16) Otras normas o especificaciones técnicas utilizadas, 17) Hecho en, 18) Fecha, 19) Nombre del signatario, 20) Función, 21) Firma.

et : 1) EÜ vastavusdeklaratsioon (algupärane), 2) Äriühing, 3) Aadress, 4) Tehniline dokumentatsioon, 5) Seadme tootja, 6) Kinnitab, et see toode, 7) On vastavuses järgmistele direktiivide ja nende riigisisesesse õigusesse ülevõtmiseks vastuvõetud õigusaktidega, 8) IV lisas loetletud seadmete puhul, 9) Tunnistuse number, 10) Sertifitseerimisasutus, 15) kasutatud ühtlustatud standardite, 16) Muud standardites või spetsifikatsioonides kasutatakse, 17) Väljaandmise koht, 18) Väljaandmise aeg, 19) Allkirjastaja nimi, 20) Amet, 21) Allkiri.

fi : 1) EY-vaatimustenmukaisuusvakuutus (alkuperäiset), 2) Yritys, 3) Osoite, 4) teknisen eritelmän, 5) Jäljessä kuvaton koneen valmistaja, 6) Vakuuttaa, että tämä kone, 7) Täyttää seuraavien direktiivien sekä niitä vastaavien kansallisten säännösten vaatimukset, 8) Liitteen IV koneiden osalta, 9) Todistuksen numero, 10) Ilmoitettu laitos, 15) yhdenmukaistettuja standardeja käytetään, 16) muita standardeja tai eritelmät, 17) Paikka, 18) Aika, 19) Allekirjoittajan nimi, 20) Toimi, 21) Allekirjoitus.

ga : 1) «EC» dearbhú comhréireachta (bunaidh), 2) An comhlacht, 3) Seoladh, 4) comhad teicniúil, 5) Déantóir an innill a thuairiscítear thíos, 6) Dearbhaíonn sé go bhfuil an t-inneall, 7) Go gclóíonn sé le na treoracha seo a leanas agus a trasúimh isteach i ndlí náisiúnta, 8) Le haghaidh innill an aghuisín IV, 9) Uimhir teastais, 10) Comhlacht a chuireadh i bhfios, 15) gaighdeáin eile nó sonraíochtaí teicniúla a úsáidtear, 17) Déanta ag, 18) Dáta, 19) Ainm an tsinitheora, 20) Feidhm, 21) Síniú.

hu : 1) CE megfelelőségi nyilatkozat (eredeti), 2) A vállalat, 3) Cím, 4) műszaki dokumentáció, 5) Az alábbi gép gyártója, 6) Kijelenti, hogy a gép, 7) Megfelel az alábbi irányelveknek valamint azok honosított előírásainak, 8) A IV. melléklet gépeihez, 9) Bizonylati szám, 10) Értécsített szervezet, 15) felhasznált harmonizált szabványok, 16) egyéb felhasznált műszaki szabványok és előírások hivatkozásai, 17) Kelt (hely), 18) Dátum, 19) Aláíró neve, 20) Funkció, 21) Aláírás.

is : 1) Samræmisvottorð ESB (upprunalega), 2) Fyrirtækið, 3) Aðsetur, 4) Tæknilegar skrá, 5) Smíður tækisins sem lýst er hér á eftir, 6) Staðfestir að tækið, 7) Samræmist eftirfarandi stöðlum og staðfærslu þeirra með hljóðn af þjóðarrétti, 8) Fyrir tækin í aukakafla IV, 9) Staðfestingarnúmer, 10) Tilkynnt til, 15) samhæfða staðla sem notaðir, 16) önnur staðlar eða forskriftir notað, 17) Staður, 18) Dagsetning, 19) Nafn undirritaðs, 20) Staða, 21) Undirskrift.

it : 1) Dichiarazione CE di conformità (originale), 2) La società, 3) Indirizzo, 4) fascicolo tecnico, 5) Costruttore della macchina descritta di seguito, 6) Dichiara che questa macchina, 7) È conforme alle direttive seguenti e alle relative trasposizioni nel diritto nazionale, 8) Per le macchine Allegato IV, 9) Numero di Attestazione, 10) Organismo notificato, 15) norme armonizzate applicate, 16) altre norme e specifiche tecniche applicate, 17) Stabilità a, 18) Data, 19) Nome del firmatario, 20) Funzione, 21) Firma.

lt : 1) CE atitikties deklaracija (originalas), 2) Bendrovė, 3) Adresas, 4) Techninė byla, 5) Žemiau nurodytas įrenginio gamintojas, 6) Pareiškia, kad šis įrenginys, 7) Atitinka toliau nurodytas direktyvas ir į nacionalinius teisės aktus perkeltas jų nuostatas, 8) IV priedas dėl mašinų, 9) Sertifikuoto Nr., 10) Paskelbtosios įstaiga, 15) suderintus standartus naudojamus, 16) Kiti standartai ir techninės specifikacijos, 17) Pasirašyta, 18) Data, 19) Pasirašiusio asmens vardas ir pavardė, 20) Pareigos, 21) Parašas.

lv : 1) EK atbilstības deklarācija (oriģināls), 2) Uzņēmums, 3) Adrese, 4) tehniskās lietas, 5) Tālāk aprakstītās iekārtas ražotājs, 6) Apliecina, ka šī iekārta, 7) Ir atbilstoša tālāk norādītajām direktīvām un to transpozīcijai nacionālajā likumdošanā, 8) Iekārtām IV pielikumā, 9) Apliecības numurs, 10) Reģistrētā organizācija, 15) lietotajiem saskaņotajiem standartiem, 16) lietotajiem tehniskajiem standartiem un specifikācijām, 17) Sastādīts, 18) Datums, 19) Parakstītāja vārds, 20) Amats, 21) Paraksts.

mt : 1) Dikjarazzjoni ta' Konformità KE (originali), 2) Il-kumpanija, 3) Indirizz, 4) fajl tekniku, 5) Manifattriċi tal-magna deskritta hawn isfel, 6) Tiddikjara li din il-magna, 7) Hija konformi hija konformi mad-Direttivi segwenti u l-ligijiet li jimplimentawhom fil-ligi nazzjonali, 8) Ghall-magni fl-Anness IV, 9) Numru taċ-certifikat, 10) Entità nnotifikata, 15) l-istandards armonizzati użati, 16) standards tekniċi u specifikazzjonijiet oħra użati, 17) Magħmul f', 18) Data, 19) Isem il-firmatarju, 20) Kariga, 21) Firma.

nl : 1) EG-verklaring van overeenstemming (oorspronkelijke), 2) Het bedrijf, 3) Adres, 4) technisch dossier, 5) Constructeur van de hierna genoemde machine, 6) Verklaart dat deze machine, 7) In overeenstemming is met de volgende richtlijnen en hun omzettingen in het nationale recht, 8) Voor machines van bijlage IV, 9) Goedkeuringsnummer, 10) Aangezegde instelling, 15) gehanteerde geharmoniseerde normen, 16) andere gehanteerde technische normen en specificaties, 17) Opgemaakt te, 18) Datum, 19) Naam van ondergetekende, 20) Functie, 21) Handtekening.

no : 1) CE-samsvarserklæring (original), 2) Selskapet, 3) Adresse, 4) tekniske arkiv, 5) Fabrikant av følgende maskin, 6) Erklærer at denne maskinen, 7) Oppfyller kravene i følgende direktiver, med nasjonale gjennomføringsbestemmelser, 8) For maskinene i tillegg IV, 9) Attestnummer, 10) Notifisert organ, 15) harmoniserte standarder som brukes, 16) Andre standarder og spesifikasjoner brukt, 17) Utstedt i, 18) Dato, 19) Underskriverens navn, 20) Stilling, 21) Underskrift.

pl : 1) Deklaracja zgodności CE (oryginalne), 2) Spółka, 3) Adres, 4) dokumentacji technicznej, 5) Wykonawca maszyny opisanej poniżej, 6) Oświadczca, że ta maszyna, 7) Jest zgodna z następującymi dyrektywami i odpowiadającymi przepisami prawa krajowego, 8) Dla maszyn załącznik IV, 9) Numer certyfikatu, 10) Jednostka certyfikująca, 15) zastosowanych norm zharmonizowanych, 16) innych zastosowanych norm technicznych i specyfikacji, 17) Sporządzono w, 18) Data, 19) Nazwisko podpisującego, 20) Stanowisko, 21) Podpis.

pt : 1) Declaração de conformidade CE (original), 2) A empresa, 3) Morada, 4) processo técnico, 5) Fabricante da máquina descrita abaixo, 6) Declara que esta máquina, 7) Está em conformidade às directivas seguintes e às suas transposições para o direito nacional, 8) Para as máquinas no anexo IV, 9) Número de certificado, 10) Entidade notificada, 15) normas harmonizadas utilizadas, 16) outras normas e especificações técnicas utilizadas, 17) Elaborado em, 18) Data, 19) Nome do signatário, 20) Cargo, 21) Assinatura.

ro : 1) Declarație de conformitate CE (originală), 2) Societatea, 3) Adresa, 4) cartii tehnice, 5) Constructor al mașinii descrise mai jos, 6) Declară că prezenta mașină, 7) Este conformă cu directivele următoare și cu transpunerea lor în dreptul național, 8) Pentru mașinile din anexa IV, 9) Număr de atestare, 10) Organism notificat, 15) standardele armonizate utilizate, 16) alte standarde și specificații tehnice utilizate, 17) Intocmit la, 18) Data, 19) Numele persoanei care semnează, 20) Funcția, 21) Semnătura.

sk : 1) ES vyhlásenie o zhode (pôvodný), 2) Názov spoločnosti, 3) Adresa, 4) technickej dokumentácie, 5) Výrobca nižšie opísaného stroja, 6) Vyhlasuje, že tento stroj, 7) Je v súlade s nasledujúcimi smernicami a smernicami transponovanými do vnútroštátneho práva, 8) Pre stroje v prílohe IV, 9) Číslo certifikátu, 10) Notifikačný orgán, 15) použité harmonizované normy, 16) použité iné technické normy a predpisy, 17) Miesto vydania, 18) Dátum vydania, 19) Meno podpisujúceho, 20) Funkcia, 21) Podpis.

sl : 1) ES Izjava o ustreznosti (izvirna), 2) Družba, 3) Naslov, 4) tehnične dokumentacije, 5) Proizvajalac tukaj opisanega stroja, 6) Izjavlja, da je ta stroj, 7) Ustreza naslednjim direktivam in njihovi transpoziciji v državno pravo, 8) Za stroje priloga IV, 9) Številka potrdila, 10) Obvestilo organu, 15) uporabljene harmonizirane standarde, 16) druge uporabljene tehnične standarde in zahteve, 17) V, 18) Datum, 19) Ime podpisnika, 20) Funkcija, 21) Podpis.

sv : 1) CE-försäkran om överensstämmelse (original), 2) Företaget, 3) Adress, 4) tekniska dokumentationen, 5) Konstruktor av nedan beskrivna maskin, 6) Försäkrar att denna maskin, 7) Överensstämmer med nedanstående direktiv och införlivandet av dem i nationell rätt, 8) För maskinerna i bilaga IV, 9) Nummer för godkännande, 10) Organism som underrättats, 15) Harmoniserade standarder som använts, 16) andra tekniska standarder och specifikationer som använts, 17) Upprättat i, 18) Datum, 19) Namn på den som undertecknat, 20) Befattning, 21) Namnteckning.

SAFETY PLATES AND STICKERS

⚠ IMPORTANT ⚠

*Clean all stickers and safety plates so that they are legible.
Any safety plates and stickers which are illegible or damaged must be replaced.
Check that stickers and safety plates are present after replacing any spare parts.*

EXTERNAL PLATES AND STICKERS

ITEM	REFERENCE	DESCRIPTION
1	Consult your dealer	- Name plate
2	Consult your dealer	- Slings points
3	313914	- No sitting warning label



PALLET TRUCK IDENTIFICATION

As our policy is to promote a constant improvement of our products, our range of pallet trucks may undergo certain modifications, without obligation for us to advise our customers.

When you order parts, or when you require any technical information, always specify:

NOTE: For the owner's convenience, it is recommended that a note of these numbers is made in the spaces provided, at the time of the delivery of the pallet truck.

PALLET TRUCK NAME PLATE

- 1 - MODEL
- 2 - Rated capacity
- 3 - Registration
- 4 - Made in
- 5 - Model year
- 6 - Unladen weight

For any further technical information regarding your pallet truck refer to chapter:
2 - DESCRIPTION: SPECIFICATIONS.

1	MODELE		2
	CAP. NOMINALE		
3	MATRICULE		4
	FABRIQUE EN		
5	ANNEE MODELE		6
	MASSE A VIDE		

CE	24 V
	Maxi : kg
	Mini : kg

HYDRAULIC UNIT

- Model
- Power
- Serial No.
- Year of manufacture



DRIVE UNIT

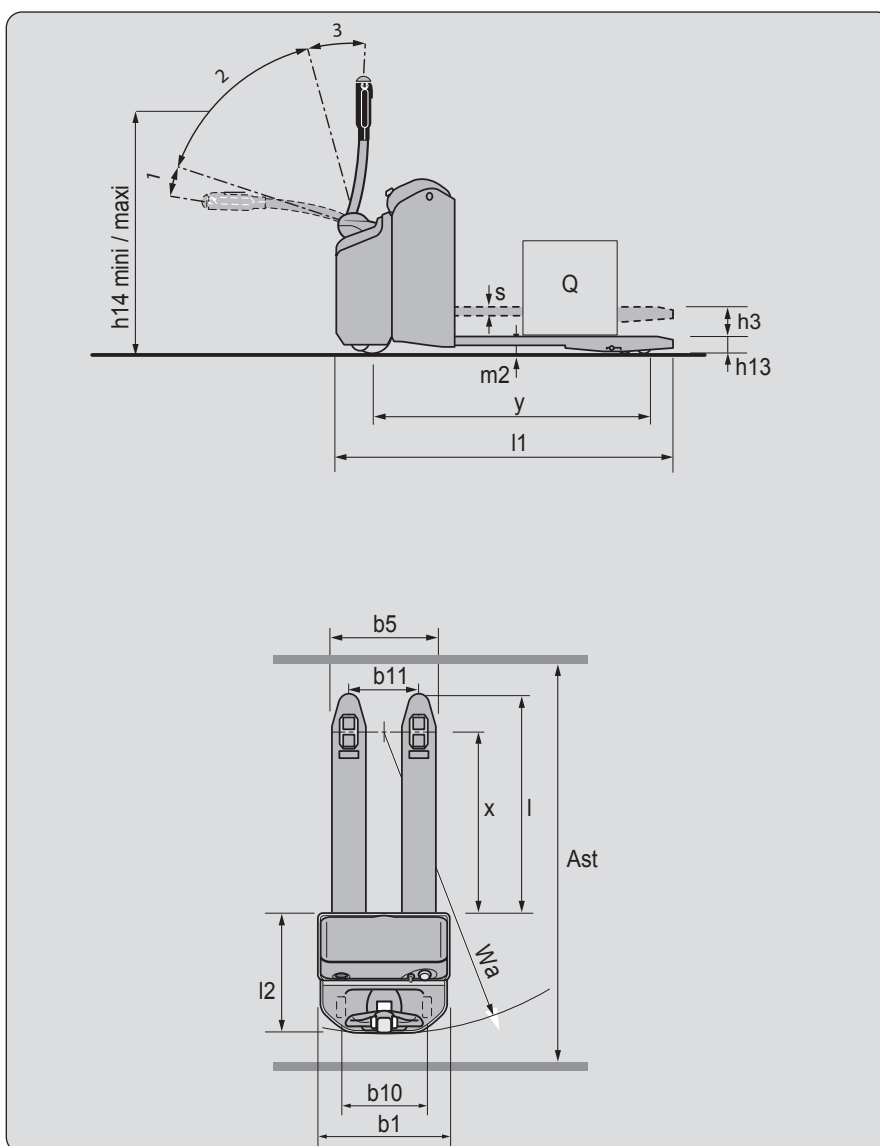
- Type
- Standard
- Power
- Year of manufacture



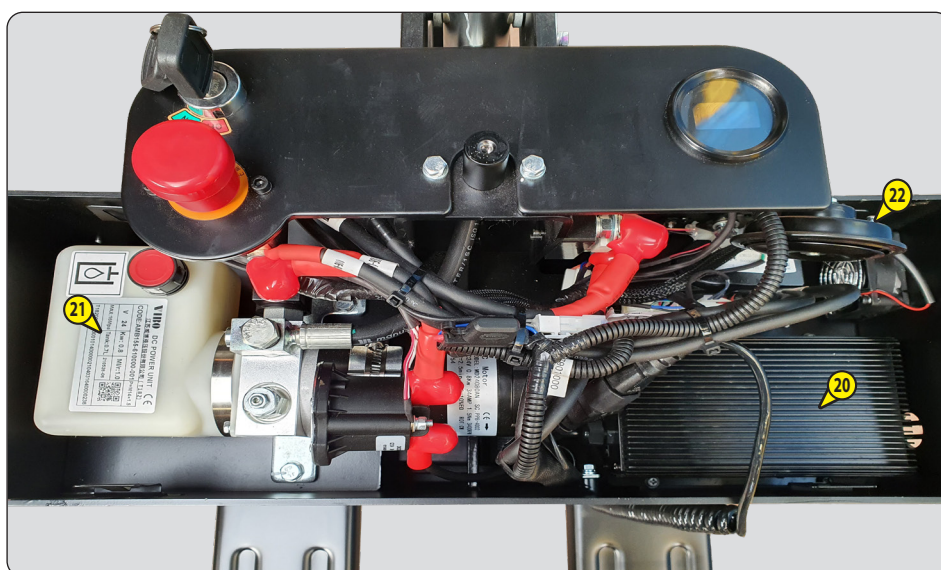
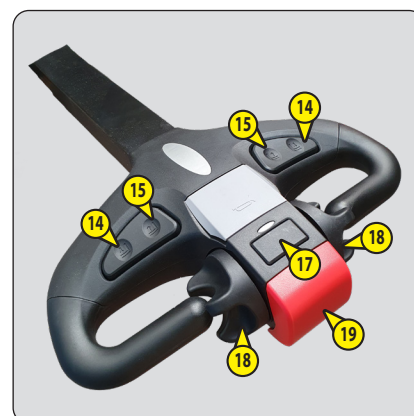
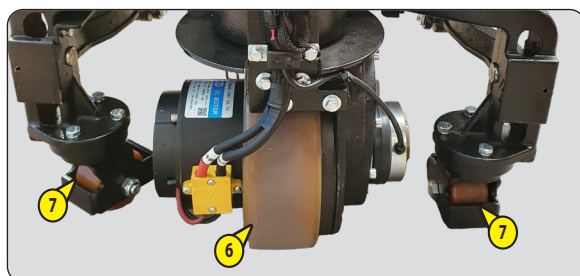
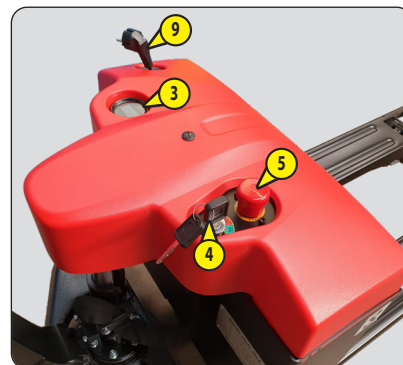
SPECIFICATIONS

DESIGNATION	1.1	Manufacturer		MANITOU	
	1.2	Model type		EP 15 560 X 1150	EP 15 680 X 1150
	1.3	Propulsion: battery, diesel, gasoline, LPG, mains		Battery	
	1.4	Operator type: hand, pedestrian, standing, seated		Pedestrian	
	1.5	Rated capacity/load on forks (basic capacity)	Q (t)	1.5	1.5
	1.6	Center of gravity of load	c (mm)	600	600
	1.8	Distance from the load bearing surface to the center of the front rollers (down/raised position)	x (mm)	960/895	960/895
	1.9	Wheelbase	y (mm)	1 285	1 285
WEIGHT	2.1	Weight of machine in working order (24V/70 Ah)	kg	220	220
RUNNING CARRIAGE	3.1	Tire equipment: treads (V), super-elastic (SE), pneumatic (L)		V	V
	3.2	Front wheel size (Diameter x Width)	" or mm	210 x 70	200 x 70
	3.3	Rear wheel size (Diameter x Width)	" or mm	80 x 64	80 x 64
	3.4	Size of stabilizer wheels (Diameter Width)	" or mm	70 x 40	70 x 40
	3.5	Number of front wheels (x = drive wheel)		1(x)+2	1(x)+2
	3.5.1	Number of rear wheels (x = drive wheel)		4	4
	3.7	Rear wheel gage (middle of wheels)	b11 (mm)	400	520
DIMENSIONS	4.4	Lift height	h3 (mm)	120	120
	4.9	Height of tiller arm in driving position (min/max)	h14 (mm)	720/1 220	720/1 220
	4.15	Height of forks in down position	h13 (mm)	80 ⁺⁵ ₀	80 ⁺⁵ ₀
	4.19	Total length	l1 (mm)	1 669	1 669
	4.20	Length to face of forks	l2 (mm)	490	490
	4.21	Total width, single wheels/double wheels (overall)	b1 (mm)	568/-	680/-
	4.22	Fork cross-section	s (mm)	50	50
	4.22.1	Width of fork arms	e (mm)	160	160
	4.22.2	Length of forks	l (mm)	1 150	1 150
	4.25	Fork spacing	b5 (mm)	560	680
	4.32	Ground clearance at center of wheelbase	m2 (mm)	30	30
	4.34	Aisle width for 800x1,200 pallet lengthways	Ast (mm)	2 250	2 250
	4.35	Turning radius	Wa (mm)	1400	1 400
PERFORMANCE DATA	5.1	Speed of travel laden	km/h	4.5	4.5
	5.1.1	Speed of travel unladen	km/h	5	5
	5.8	Maximum ramp laden	%	6	6
	5.8.1	Maximum ramp unladen	%	15	15
	5.10	Service brake		Electromagnetic + reverse-current braking on speed controller	
	5.10.1	Parking brake		Release the tiller arm	

DRIVE	6.1	Traction motor (S2 60 min)	kW	0,65	1,65
	6.2	Lifting motor (S3 15%)	kW	0.8	0.8
	6.3	Type of battery as per DIN 43 531/35/36, A,B,C		No	
	6.4	Battery voltage and capacity (5 hours)	V/Ah	24V 40Ah	24V 40Ah
	6.5	Battery weight $\pm 5\%$	kg	5	5
MISCELLANEOUS	8.1	Speed control		Curtis variable speed drive	
	8.4	Measured/guaranteed mean noise level at the ear of the operator (when traveling) as per standard EN 12053	db (A)	<70	<70



INSTRUMENTS AND CONTROLS



DESCRIPTION

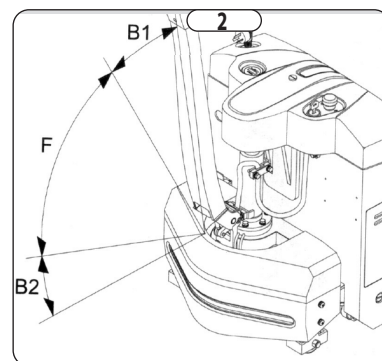
- 1 - SLINGING POINTS
- 2 - TILLER
- 3 - CHARGE INDICATOR
- 4 - IGNITION SWITCH
- 5 - EMERGENCY STOP
- 6 - DRIVE UNIT
- 7 - STABILIZER WHEEL
- 8 - BATTERY COMPARTMENTS
- 9 - BATTERY RECHARGING SOCKET
- 10 - BATTERY
- 11 - ROLLER
- 12 - FORKS
- 13 - HYDRAULIC CYLINDER
- 14 - DOWN BUTTON
- 15 - UP BUTTON
- 16 - TORTOISE BUTTON
- 17 - HORN BUTTON
- 18 - BUTTERFLY CONTROL SWITCHES
- 19 - ANTI-CRUSHING SAFETY DEVICE
- 20 - INTERNAL CHARGER
- 21 - HYDRAULIC UNIT
- 22 - HORN
- 23 - ELECTRONIC SPEED CONTROLLER
- 24 - FUSES
- 25 - TURNABLE COVER
- 26 - CHASSIS COVER

1 - SLINGING POINTS

This sling attachment points provided on the chassis are used for handling the pallet truck by (overhead) crane.

2 - TILLER

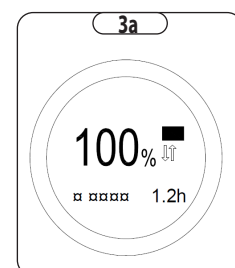
The tiller arm controls and steers the pallet truck. It has an operating zone (F). Within zones (B1) and (B2) the wheels are mechanically locked. When it is within the operating zone, the tiller is used to move the pallet truck forwards or backwards by pushing the butterfly control switches (18) up or down.



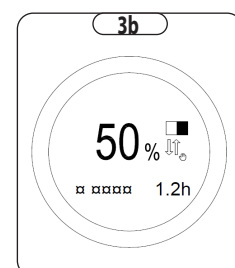
3 - CHARGE INDICATOR

After switching on the pallet truck, this display indicates the battery charge level.

This consists of a LED display with the battery charge level (%) and a battery icon on the first row, and defect codes and hour meter indicator on the second row (fig.3a).

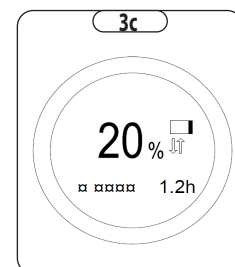


When the battery is discharging, the display indicates the charge level, with half battery icon (fig.3a).



When the battery is 80% discharged, battery icon is empty and lifting of the forks is locked (fig.3c).

The battery must be recharged.



4 - IGNITION SWITCH

To use the pallet truck, insert the key in the switch and turn clockwise (ON). Pull the emergency stop button if it has been actuated.

5 - EMERGENCY STOP

This device stops pallet truck movements in emergency situations. Pull the button to restart the pallet truck. For safety, push in the emergency stop button when the pallet truck is shut down.

6 - DRIVE UNIT

This item comprises in particular an electric motor, a brake and the drive wheel. It is connected to the tiller that steers the machine.

7 - STABILIZER WHEEL

These caster wheels serve to ensure the stability of the pallet truck and follow a similar direction to the drive unit wheel.

8 - BATTERY COMPARTMENTS

The battery compartments contain the two batteries connected in series.

9 - BATTERY RECHARGING SOCKET

10 - BATTERY

The pallet truck is delivered as standard with a 24V/40Ah lithium battery that weights approximately 5 kg.

When the temperature of the battery reaches 25-30 °C, battery life is longer. Lower temperatures reduce the battery's available capacity and higher temperatures shorten the life of the battery.

The battery capacity is at its maximum with an ambient temperature of 25 °C. A reduction of moving speed at lower temperatures is normal. Each 1 °C drop decreases the battery capacity by approximately 1%. Temperatures below -10 °C should be avoided for effective use of the pallet truck.

11 - ROLLER

12 - FORKS

13 - HYDRAULIC CYLINDER

The cylinder produces a translation movement that raises the pallet truck's forks.

14 - DOWN BUTTON

The lowering of the forks and the load is controlled by these buttons that are accessible for both left and right hand use.

15 - UP BUTTON

Raising the forks and the load is controlled by these buttons that are accessible for both left and right hand use.

16 - TORTOISE BUTTON

This button allows the pallet truck to travel at low speed. This function is very useful when performing maneuvers

17 - HORN BUTTON

18 - BUTTERFLY CONTROL SWITCHES

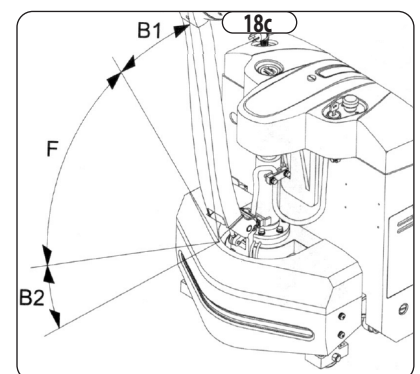
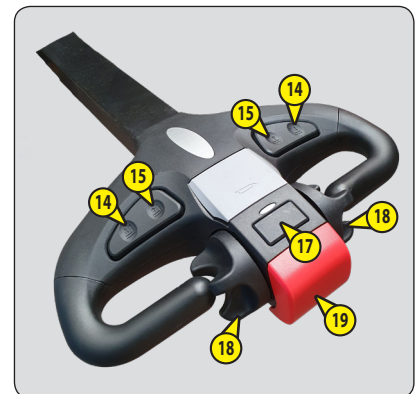
To move the pallet truck, gradually push one of the butterfly control switches up or down according to the chosen direction of travel. They only work when the tiller arm is within the driving zone (F) (fig.18).

As the pallet truck is fitted with an electronic speed controller, its speed varies progressively according to the angular position of the butterfly control switch.

To stop the pallet truck, release the butterfly control switch; this will return to the neutral position, gradually bringing the pallet truck to halt.

19 - ANTI-CRUSHING SAFETY DEVICE

The end of the tiller arm is equipped with an anti-crushing safety device, that protects the operator by reversing the direction of travel as soon as it is pushed. The pallet truck will stop when the pressure on the safety device stops or after some seconds.



20 - INTERNAL CHARGER

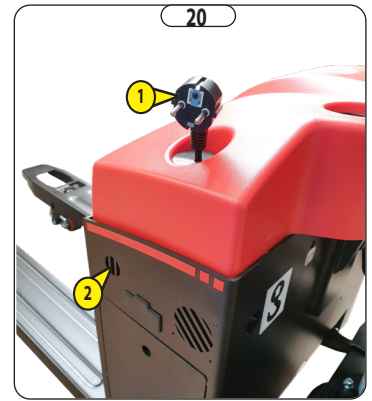
This pallet truck is fitted with an internal charger as standard (20). The charger cuts out automatically when the battery is recharged. If charging takes place overnight, check that the power outlet cannot be switched off by a general power outage at the establishment.

NORMAL LOAD:

- Place the fork in the down position,
- Turn the key counterclockwise (OFF) and press the emergency stop button,
- Connect the charger to the 220V - 50 Hz - 10 A single phase mains supply using the battery recharging socket (1).

The charger has an indicator lamp (2), the color of which indicates the different levels of battery charge.

- » The light is red during the charging phase.
- » The light is yellow in the event of a charging fault (battery fault).
- » The light flashes yellow in the event of a charging fault (charger fault).
- » The light is green when the battery is fully charged.
- The battery will be fully charged for about 2 hours.
- Remove the charger's power plug (1) and put it back in its housing on the pallet truck after charging.



⚠ IMPORTANT ⚠

Never discharge a battery beyond 80%.

If the two red LEDs on the battery status indicator are flashing, the battery needs to be recharged.

21 - HYDRAULIC UNIT

The hydraulic unit consists of an electric motor, a hydraulic pump, an electro-valve, a pressure limiter and an oil tank. This hydraulic unit operates the cylinder that raises the forks. It is controlled by the tiller arm buttons (14) and (15).

22 - HORN

23 - ELECTRONIC SPEED CONTROLLER

The electronic speed controller ensures that pallet truck speed is progressive and increases according to the angle of the butterfly control switches.

24 - FUSES

The electrical power supply to the hydraulic unit is protected by a 100 A fuse (F1)(fig.24).

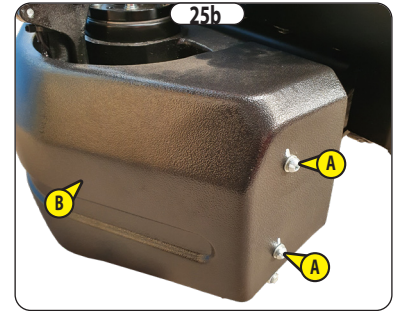
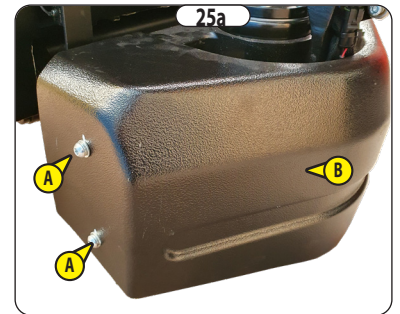


25 - UPPER TURNABLE COVER

The upper turntable cover provides access to the pallet truck's internal components for maintenance.

UPPER TURNTABLE COVER REMOVAL PROCEDURE:

- Stop the pallet truck with the carriage in the down position,
- Loosen and remove the screws (A) (fig.25a) (fig.25b),
- Remove the turntable cover (B) (fig.25a).

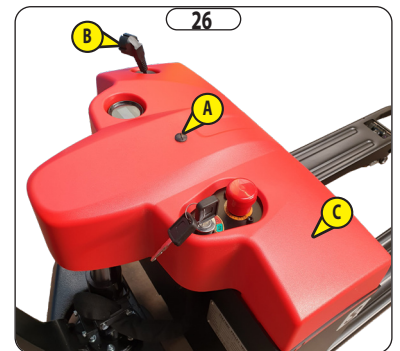


26 - CHASSIS COVER

The chassis cover provides access to the pallet truck's internal components for maintenance.

CENTER COVER REMOVAL PROCEDURE:

- Stop the pallet truck with the forks in the down position.
- Loosen and remove the central screw (A) (fig.26),
- Pull out and remove the locking stop from the battery recharging socket (B) (fig. 26),
- Remove the chassis cover by pulling it upward (C) (fig.26).



3 - MAINTENANCE

CONTENTS

3 - MAINTENANCE

<u>ORIGINAL MANITOU SPARE PARTS AND EQUIPMENT</u>	<u>3-4</u>
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ORIGINAL MANITOU SPARE PARTS AND EQUIPMENT

OUR PALLET TRUCKS MUST BE SERVICED USING ORIGINAL MANITOU PARTS.

BY ALLOWING THE USE OF NON ORIGINAL MANITOU PARTS, YOU RISK:

⚠ IMPORTANT ⚠

THE USE OF COUNTERFEIT PARTS OR COMPONENTS NOT APPROVED BY THE MANUFACTURER WILL CAUSE YOU TO LOSE THE BENEFIT OF THE CONTRACTUAL GUARANTEE.

- Legally, incurring liability in the event of an accident.
- Technically - generating operating failure or shortening the life of the pallet truck.

BY USING ORIGINAL MANITOU PARTS FOR MAINTENANCE OPERATIONS, YOU BENEFIT FROM OUR KNOW-HOW

Through its network, MANITOU provides the user with,

- Know-how and competence.
- The guarantee of high-quality work.
- Original replacement parts.
- Help with preventive maintenance.
- Efficient help with diagnosis.
- Improvements as a result of feedback.
- Operator training.
- Only the MANITOU network has detailed knowledge of the design of the pallet truck and therefore the best technical ability to provide maintenance.

⚠ IMPORTANT ⚠

**ORIGINAL REPLACEMENT PARTS ARE DISTRIBUTED EXCLUSIVELY BY MANITOU
AND ITS DEALER NETWORK.**

The dealer network list is available on the MANITOU web site: www.manitou.com

LUBRICANTS

⚠ IMPORTANT ⚠

USE THE RECOMMENDED LUBRICANTS:

- For topping up, oils may not be miscible.

- For oil changes, MANITOU oils are perfectly appropriate.

DIAGNOSTIC ANALYSIS OF OILS

If a service or maintenance contract has been set up with the dealer, a diagnostic analysis of engine, transmission and axle oils may be requested depending on the rate of use.

ACTUATION ROD

PARTS TO BE LUBRICATED	RECOMMENDATION	PACKAGING	REFERENCE
GREASING OF ACTUATION RODS	MANITOU BLACK multi-purpose grease	400 g	545996
		1 kg	161590
		50 kg	499235

HYDRAULICS

PARTS TO BE LUBRICATED	CAPACITY	RECOMMENDATION	PACKAGING	REFERENCE
HYDRAULIC OIL TANK	0.75 Liters	MANITOU oil ISO VG 46 hydraulic oil	5 l	545500
			20 l	582297

SERVICING SCHEDULE

⚠ IMPORTANT ⚠

(1): MANDATORY 500 HOUR OR 6 MONTH SERVICE. This service must be carried out after approximately the first 500 hours of operation or within the 6 months following the start-up of the machine (whichever occurs first).

(2): Every 10 hours during the first 50 hours

(3): Consult your dealer.

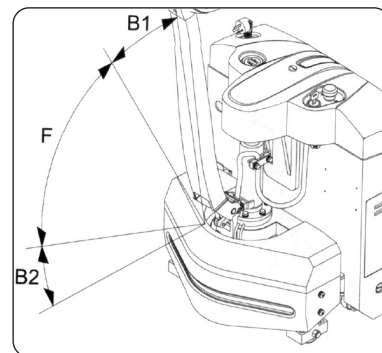
C = CHECK, G = GREASE, N = CLEAN, R = REPLACE, V = DRAIN	PAGE	(1)	DAILY OR EVERY 10 HOURS OF SERVICE	WEEKLY OR EVERY 50 HOURS OF SERVICE	EVERY 6 MONTHS OR 500 HOURS OF SERVICE	YEARLY OR EVERY 1,000 HOURS OF SERVICE	EVERY 2 YEARS OR 2,000 HOURS OF SERVICE	OCCASIONAL
WHEELS								
- Braking efficiency	3-10	C	C					
- Wheel and roller wear	3-10	C	C					
- Wheel nut tightening	3-14	C			C			
ACTUATION ROD								
- Actuation rod	3-18					C		
- Overall condition							C (3)	
- Truck guide rollers							C (3)	
- Truck bearing rollers							C (3)	
HYDRAULICS								
- Hydraulic oil level	3-14				C			
- Leaktightness of hydraulic couplings	3-15				C			
- Hydraulic system operation	3-16				C			
- Cylinder condition and seal	3-16				C			
- Speeds of hydraulic movements						C (3)		
- Pressure relief valve operation						C (3)		
- Hydraulic unit oil	3-18					V		
ELECTRICITY								
- Key switch operation	3-10		C					
- Battery charge levels and state of connections	3-10		C					
- Battery terminals	3-12			N				
- Wiring and tightness of connections	3-15				C			
- Fuses	3-15				C			
- Electric circuit operation	3-16				C			
- Condition of wiring harness and cables						C (3)		
- Main pump motor brush wear						C (3)		
- Batteries	3-20							R
FORKS								
- Condition of forks	3-10	C	C					
TILLER								
- Automatically returns to vertical position	3-10		C					
- Butterfly control switches return to neutral position	3-10		C					
- Battery cut-off	3-11		C					
- Horn	3-11		C					
- Anti-crushing safety device	3-11		C					
CHASSIS								
- Structure						C (3)		
- Bearings and articulation rings						C (3)		
ATTACHMENTS								
- Condition of attachments (load backrest)					C			
MAINTENANCE								
- Service data and fault history						C (3)		
PALLET TRUCK								
- Sling the pallet truck	3-20							XXX
- Transport the pallet truck	3-21							XXX

A - DAILY OR EVERY 10 HOURS OF SERVICE

A1 – BRAKING EFFICIENCY WITH TILLER IN VERTICAL AND HORIZONTAL POSITION

CHECK

When the tiller is in vertical or horizontal position, the electromagnetic brake must lock the drive wheel.



A2 – WHEEL AND ROLLER WEAR

CHECK

The drive unit wheel, the stabilizer wheels and the rear wheels must show no signs of cuts or wear.

A3 – KEY SWITCH OPERATION

CHECK

The key switch prevents unauthorized use of the pallet truck. Switch off the power with the key (the multi-function display will switch off), then remove the key. Operate the raise/lower buttons. The load must not move.

A4 – BATTERY CHARGE LEVELS AND STATE OF CONNECTIONS

CHECK

Check the battery charge level and the tightness of the battery terminals. If the two red alarm LEDs of the charge indicator are flashing, the batteries must be recharged.

A5 – CONDITION OF FORKS

CHECK

The forks must not show any visible signs of damage, such as deformation, cracking or heavy wear.

A6 – AUTOMATIC RETURN OF TILLER TO VERTICAL POSITION

CHECK

Place the tiller in the horizontal position and release it. It must automatically return to the vertical position.

A7 – BUTTERFLY CONTROL SWITCHES RETURN TO NEUTRAL POSITION

CHECK

Operate the pallet truck butterfly control switches in forward and reverse directions and then release them. They must return to the neutral position.

A8 – EMERGENCY STOP

CHECK

Operate the emergency stop button with the key switch in the ON position. The electrical power supply must cut out and the tiller arm controls must cease operating. The charge indicator light must go out.

A9 – HORN

CHECK

Check the operation of the horn by pressing the button on the tiller.

A10 – ANTI-CRUSHING SAFETY DEVICE

CHECK

The anti-crushing safety device is situated on the end of the tiller. The button is red. Start up the pallet truck and press the safety button. The direction of travel should then be reversed for a few seconds while the button remains pressed.

B - WEEKLY OR EVERY 50 HOURS OF SERVICE

Carry out the operations described previously as well as the following operations.

B1 – BATTERY TERMINALS

CLEAN

Clean the battery terminals.

C - EVERY 6 MONTHS OR EVERY 500 HOURS OF SERVICE

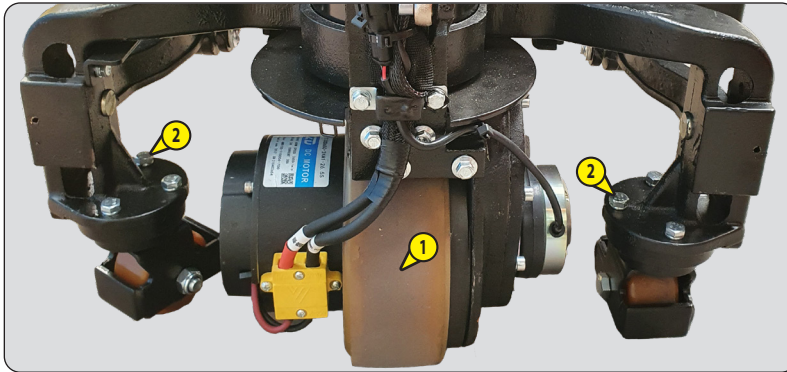
Carry out the operations described previously as well as the following operations.

C1 - WHEEL NUT TIGHTENING

CHECK

Check the tightening of the nuts and screws:

- of the drive wheel (1) with a tightening torque of 125 Nm ($\pm 15\%$),
- of the stabilizer wheel (2) with a tightening torque of 70 Nm ($\pm 20\%$),
- of the bogie spindles (3) with a tightening torque of 70 Nm ($\pm 20\%$).



C2 - HYDRAULIC OIL LEVEL

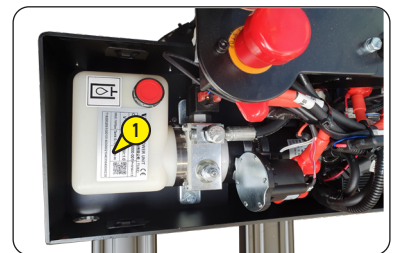
CHECK

Place the pallet truck on level ground.

⚠ IMPORTANT ⚠

If the brake fluid level is abnormal, consult your dealer.

- Put the forks in the raised position, right up to the mechanical stop.
- If the forks are able to reach the raised position, there is no need to top up the hydraulic oil.
- If the forks are unable to reach the raised position, refill the hydraulic oil:
 - Remove the chassis cover (see: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).
 - Remove the fill plug (1) by unscrewing it in a counterclockwise direction.
 - Add oil (see: 3 - MAINTENANCE: LUBRICANTS) through the filler port.
 - Replace the fill plug (1) by screwing it in a clockwise direction.
 - Visually check that there is no leakage in the tank and pipes.
 - Reverse the removal procedure to replace the cover.
- If abnormal noises can be heard during the raising of the forks, consult your dealer.



C3 – LEAKTIGHTNESS OF HYDRAULIC COUPLINGS

CHECK

Check all hydraulic couplings for leaks.

C4 – WIRING AND TIGHTNESS OF CONNECTIONS

CHECK

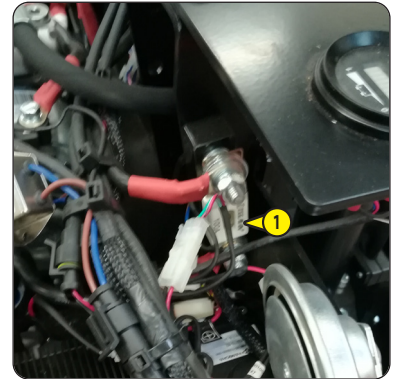
Check the condition of the wiring and the tightness of the electrical connections.

C5 – FUSES

CHECK

Check the condition and rating of the fuse. It is located close to the electronic speed controller:

- hydraulic unit fuse (1): 100A.



C6 – HYDRAULIC SYSTEM OPERATION

CHECK

Operate each raise/lower control button on the tiller. The carriage must then be raised or lowered smoothly and without jamming. Jerkiness during lowering may be due to air in the hydraulic system.

C7 – CYLINDER CONDITION AND SEAL

CHECK

Check the condition of the cylinder. It must be free of any traces of leaking oil.

C8 – ELECTRIC CIRCUIT OPERATION

CHECK

Insert the key in the switch and turn clockwise. Operate the buttons on the tiller and the butterfly switches to check the correct operation of each control.

D - YEARLY OR EVERY 1,000 HOURS OF SERVICE

Carry out the operations described previously as well as the following operations.

D1 – ACTUATION ROD

GREASE

Grease the actuation rod axles located under the fork arms: calipers, piston rods, levers.

D2 – HYDRAULIC UNIT OIL

DRAIN

Place the pallet truck on level ground with the forks in the down position.

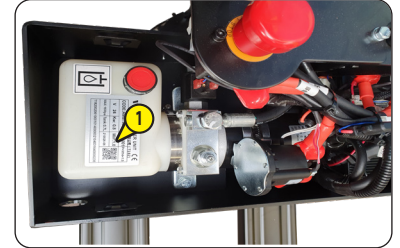
⚠ IMPORTANT ⚠

Ensure that drainage products are removed and disposed of in accordance with current environmental protection decrees.

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

Drain and replace the hydraulic unit oil.

- Remove the chassis cover (see: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).
- Remove the fill plug (1) by unscrewing it in a counterclockwise direction.
- Draw out the oil from the tank using a suction device.
- Fill up with oil (see: 3 - MAINTENANCE: LUBRICANTS) through the filler port.
- Replace the fill plug (1) by screwing it in a clockwise direction.
- Visually check that there is no leakage in the tank and pipes.
- Reverse the removal procedure to replace the chassis cover.



E - OCCASIONAL MAINTENANCE

E1 – BATTERIES

REPLACE

⚠ IMPORTANT ⚠

Handling and servicing a battery can be dangerous. Take the following precautions:

- Wear protective goggles,
 - Keep the battery horizontal,
 - Never smoke or work near a naked flame,
 - Work in a well-ventilated area.
- In the event of electrolyte being spilled onto the skin or splashed in the eyes, rinse thoroughly with cold water for 15 minutes and call a doctor.*

During the various stages of this operation, be careful not to damage the electric cables with the tools used

If the fully charged batteries do not allow the pallet truck to be used for a sufficiently long time, they need to be replaced. Only use original equipment batteries for this operation.

- Shut down the machine and open the battery compartment covers and the chassis cover.
- Disconnect the two battery terminals.
- Take out the batteries, grasping them by the handles provided.
- Clean the battery compartment.
- Put the new batteries in place.
- Reconnect the battery terminals.
- Close the battery compartment covers and the chassis cover.

E2 – PALLET TRUCK

SLING

⚠ IMPORTANT ⚠

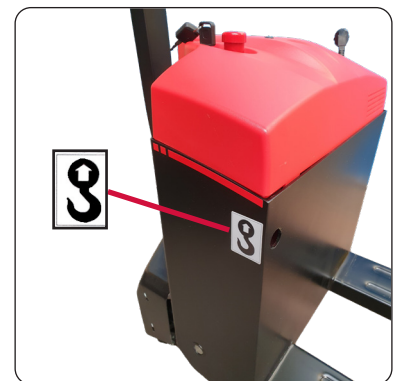
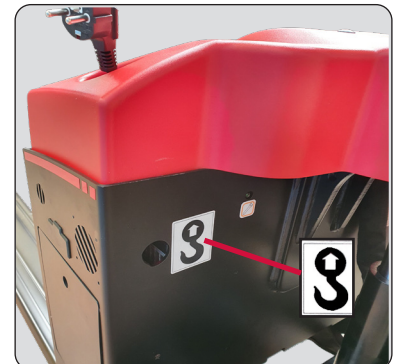
Never lay the machine on its side as the oil from the hydraulic system and the battery electrolyte would leak from the filler caps.

Sling attachment points have been provided on the machine for ease of handling by overhead crane. Check that the equipment used is of sufficient capacity and select a suitable sling.

The weight of the machine is indicated on the name plate (unladen weight).

Position the machine under the crane. The forks must be in the down position and unladen.

Stickers indicate the slinging points on the pallet truck. Only lift the pallet truck via these points. Attaching the sling to any other point may present a risk.



⚠ IMPORTANT ⚠

Never lay the machine on its side as the oil from the hydraulic system and the battery electrolyte would leak from the filler caps.

The transporter must take note of this chapter of the operator's manual. Once the pallet truck is loaded on the lorry, the following precautions are to be taken:

- Place the tiller in the vertical position.
- Place the forks in the down position.
- Wedge the pallet truck with wooden blocks to prevent it moving during transport.
- Secure the pallet truck with straps to avoid any risk of overturning.
- Cover the pallet truck with a tarpaulin if transporting it in an uncovered lorry.

The pallet truck must be loaded and unloaded in accordance with best practice. The following precautions are to be taken when using a tail-lift:

- Check that the capacity of the tail lift is compatible with the weight of the machine to be loaded.
- When raising or lowering the tail lift, the pallet truck's tiller arm must be in the vertical position to prevent any risk of falling.

Contact the carrier if transporting the machine by sea or by air.

