

ALL-TERRAIN ELECTRIC LIFTER ET-1000

USER'S MANUAL



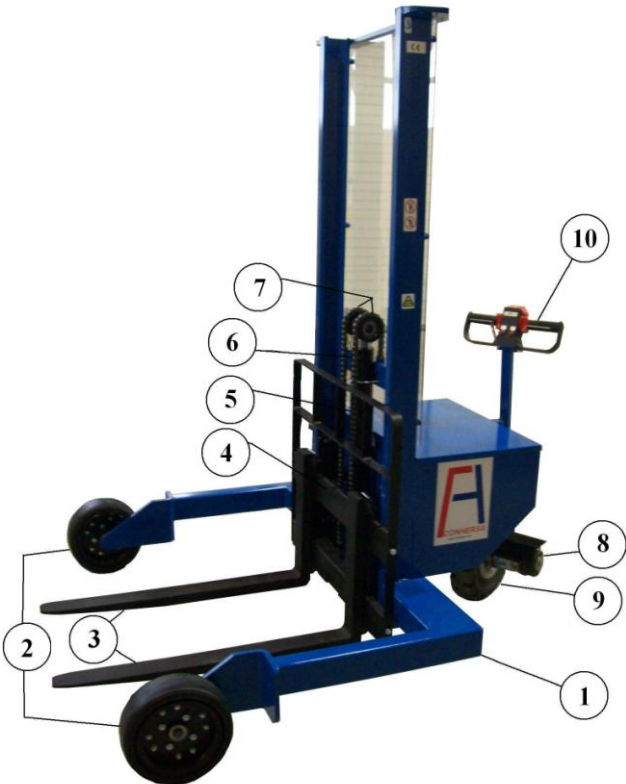
Edition: December 2009

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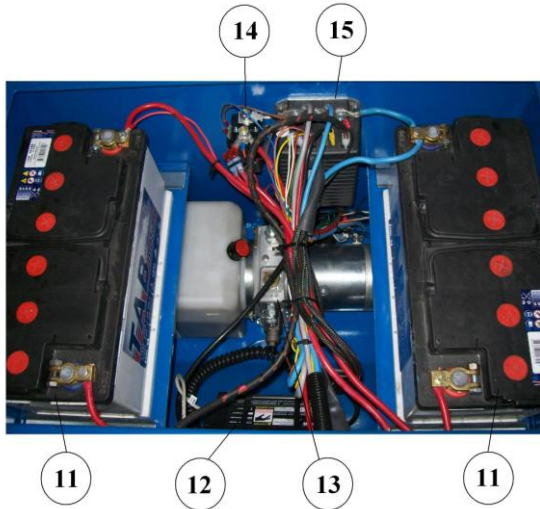
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1. MAIN COMPONENTS



- 1. Chassis
- 2. Front wheels
- 3. Fork Grouping
- 4. Fence
- 5. Hydraulic Cylinder
- 6. Chains
- 7. Pulley
- 8. Electric braking
- 9. Motor drive wheel
- 10. Handle



- 11. Batteries
- 12. Batteries charger
- 13. Hydraulic pump
- 14. Main contactor
- 15. Electronic controller
- 16. Load indicator
- 17. Plug
- 18. Emergency stop



2. SAFETY INSTRUCTIONS

Etiquettes	2.2
All-terrain lifter: safety	2.4
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ETIQUETTES





WARNING

Do not stand on nor under the forks.



WARNING

Keep hands, feet and body away from masts and forks. Danger of trapping between fix and mobile parts.

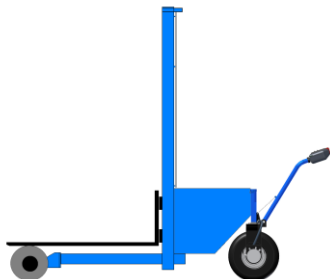
CAUTIONS WHILE CHARGING BATTERIES

1. Charge batteries at an open-air area, away from flames, fumes and sparks. Batteries' gasses may be explosives
2. Do not smoke around the charging area.
3. Do not disconnect the connector during the process of charging. Danger of sparks.

ALL-TERRAIN LIFTER: SAFETY

USE UNDER INSTRUCTIONS

The All-terrain Lifter may only be used under instructions included in this manual.



WARNING

This Lifter may only be used to transport and placement of charges and palletised materials, as per the instructions of this Manual.

WARNING

Should you wish to use it for different purposes, you may ask for CONHERSA'S agreement and, if necessary, your local authorities in order to avoid risks.



WARNING

In case of malfunction, switch off and contact our technical service.

DAILY INSPECTIONS

Before using, following inspections shall be followed:

- 1.Brake: When releasing handle, make sure that the machine is restrained and you can not move it.
- 2.Forks: Visual inspection. Verify correct lift and descent. No damage in forks.
- 3.Hydraulic circuit: Verify possible looses (leaks) in pipe and cylinder.
- 4.Wheels: Verify tyres state. Tighten bolts. Verify wheels pressure.
- 5.Control instruments: Switch on key. Verify batteries' light indicators lights on.

- 6.Battery: Correct battery charge level: >20%.
- 7.Horn: check..
- 8.Lifting: With forks unloaded, verify correct lifting and descent.
- 9.Travel: Pressing the death-man, verify correct movement forward and reverse.
10. Visual inspection of chains and pulleys. Verify unloaded that the stress is equal in both chains.

WARNING

In case of malfunction, switch off, inform to whom it may concerní, and contact the technical service.

BRAKE

When releasing handle, verify that speed controller returns to neutral position and brake is immediately actioned. A clicking sound will be noticed.

Push the Lifter to make sure that it is well braked and you can not move it.

FORKS AND CHAINS

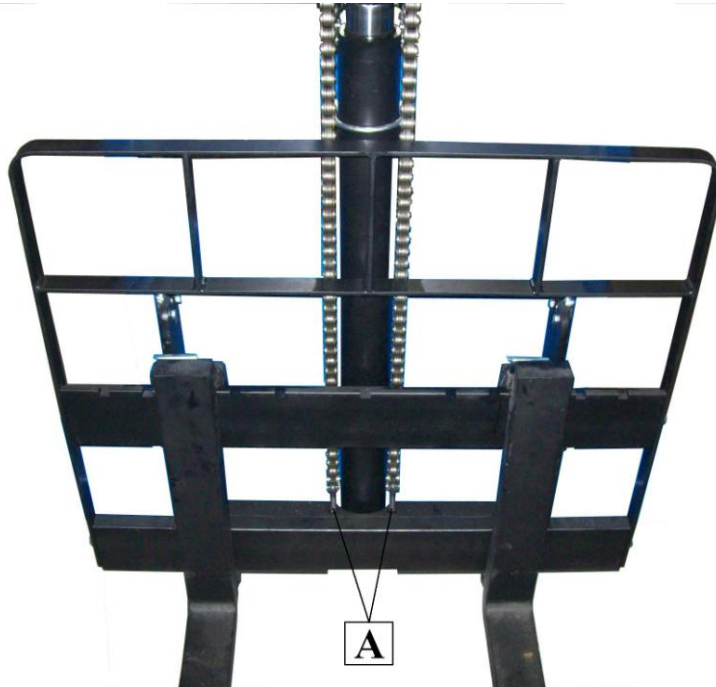
Lift the security bolt by hand. Put it down back again, and verify that it stays well placed over the security fence and can not be moved unintentionally.

Forks must be placed in symmetry as per the axle.

To tighten the chains, adjust the screw placed at the end of the chains (A) with its bolts.

WARNING

In case of adjusting the chains, verify that bolts are well tighten (A)



HYDRAULIC CIRCUIT

Verify oil level in the deposit.

Verify in case of possible oil losses (leaks)



RUEDAS

	DELANTERAS	TRASERA
Size	3.00-8"	4.00-8"
Solid	Superelastic	Superelastic



front



rear

BATTERY CHARGE LEVEL

Turn the key to ON position.

Verify charge level in the indicator. If level is under 20%, charging is needed.

Charge during approximately 10 hours (See procedure on page 5.1).



CONTROL INSTRUMENTS AND CLAXON

Turn on the key. Verify light indicator i son.



Verify correct claxon function

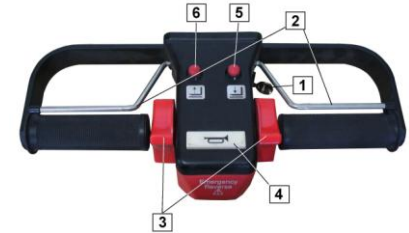
HANDLE

Unloaded, press lifting button to verify that forks go up correctly.

Press down button to verify that forks go down smoothly.

Pressing the death-man system, turn slightly the handle to verify that the blocked brake is self-released (an audible clicking sound must be heard), and that the Lifter commences to move gently.

Verify both, forward and reverse.



- ① Contact key
- ② Death-man system.
- ③ Forward-reverse.
- ④ Claxon.
- ⑤ Down-forks button.
- ⑥ Up-forks button.

LIFTER OPERATOR

USER'S KNOWLEDGE

WARNING

While using, this manual's instructions shall be observed, as well as local/national legal dispositions.



SAFETY CLOTHING

Each site's observations should also be observed while using the lifter.

For example:



HELMET



HEARING PROTECTOR



GLASSES



COVERALL



GLOVES



MASK



SAFETY FOOT WEAR

WARNING

For clothing, observation of the national rules and obligations is as must.

Clothes should be tight enough to avoid traps. If necessary in the working site, user should also wear protective glasses, helmet, gloves, and whatever required.

MOVEMENT IN RAMPS AND SPECIAL AREAS

WARNING

Using the lifter et-1000 for transporting goods in ramps is strictly forbidden.

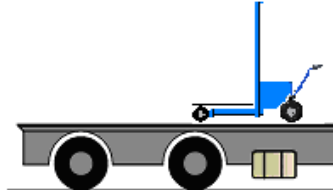
Only permitted with the lifter unloaded, if necessary.

WARNING

Do not turn in ramps. Movement in ramps is delicate: pay maximum attention and care.

WARNING

Caution when moving on the truck surface. Please make sure that the truck is stopped.



Ramp should be firmly placed on the ground in order to avoid unexpected movements.

Pay maximum attention during the loading and unloading of the lifter on the truck.

The ramp used to place the lifter onto the truck must be resistant enough to bear the lifter, taking into account the vertical movement of the lifter.

MOVEMENT

Visibility

Do not drive forward when the load does not permit complete visibility. In that case, drive backward, except when driving into a service lift, where entering backwards is forbidden.

If visibility difficulties remain, another operator should indicate the correct direction. In this case, drive slowly and handle with care.

Verify that working area is lightened enough.

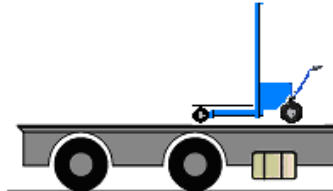


TRANSPORT OF THE LIFTER

WARNING

1. Unloaded, put forks in the upper position.
2. Confirm that in and out angles do not interfere with the ground or transport platform.
3. When using a wooden made bridge between platform and dock, make sure that the planks can bear the lifter.
4. Use only the lifting hangers to lift the lifter. (see picture)

6. Switch off and release contact key.



TESTING

After transport or a long warehousing period, functional testing is necessary.

Three tests:

1. Daily inspection test. (See page 2.5), to be made by users.
2. Dynamic tests, to be made by the technical service.

2.1. Movement test.

Confirm that the lifter moves towards the correct forward-reverse switch, and confirm that the blocking brake works properly.

With the lifter loaded, press up and down buttons to make sure of correct work.

2.2. Piling test.

Lift completely and descent the load at maximum speed several times.

2.3. Descending speed test.

Confirm that descending speed is not more than 0.6 m/s.

3. Hold load test.

With the machine off, fully loaded with the forks up, confirm that the forks don't move down at all, or they move down but not faster than 10mm/min.

NOISE LEVEL

NOISE LEVEL
Less than 70 dB (A)

DANGEROUS ENVIRONMENT

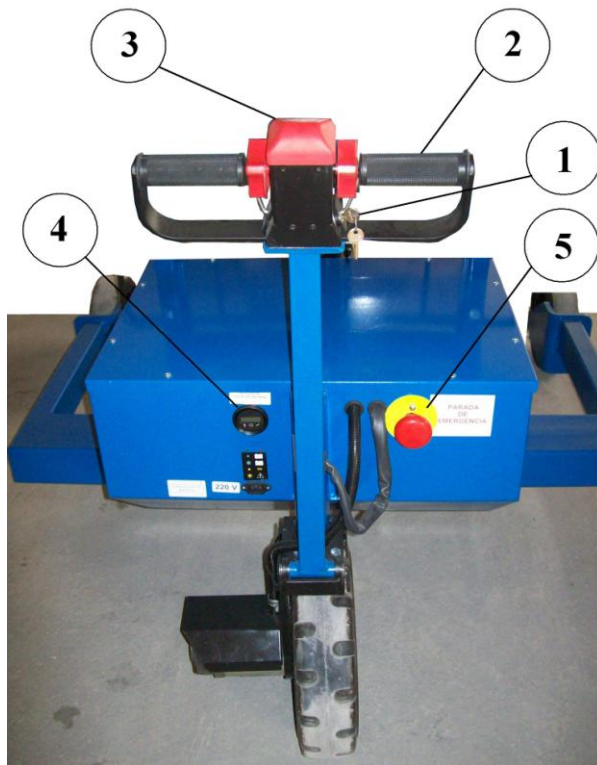
WARNING

Use of lifter in dangerous environment is strictly forbidden.

A dangerous environment may cause fire or explosions because of dust, fumes or gasses.

3. CONTROL SWITCHES AND INDICATORS

- ① Contact key
- ② Handle
- ③ Security anti-trapping button
- ④ Battery charge indicator
- ⑤ Emergency stop



HANDLE SWITCHES

Contact key

Contact key is located at the lower part of the handle.

It has two positions:

- Connected
- Disconnected

When connected, the batteries light indicator will turn on.

When disconnected, all circuits are off.

Dead-man function

Placed at both sides of the handle. Must be pressed to allow the machine moving forward-reverse.

Forward-reverse switch.

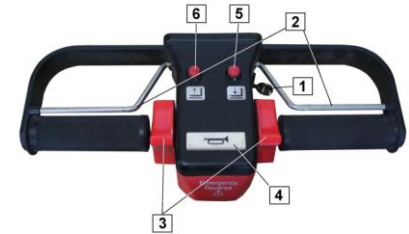
It is the red switch. It may be pressed either with the left or the right hand.

When releasing, it comes back to the neutral position.

Buttons for lifting and descending the forks.

They are located at the centre of the handle.

When pressing, the forks start to move, and they stop just when buttons are released.



- ① Contact key
- ② Dead-man function
- ③ Forward-reverse throttle
- ④ Claxon
- ⑤ Forks down button
- ⑥ Forks up button

CONTROL INDICATORS

Claxon

Claxon is located next to the up and down buttons.

Battery charge indicator

It has a display, showing the % battery level.

Two things to know:

1. When turning the key on, the display indicates the battery level.
2. Shows the error code in case of electronic fault.



Fuses

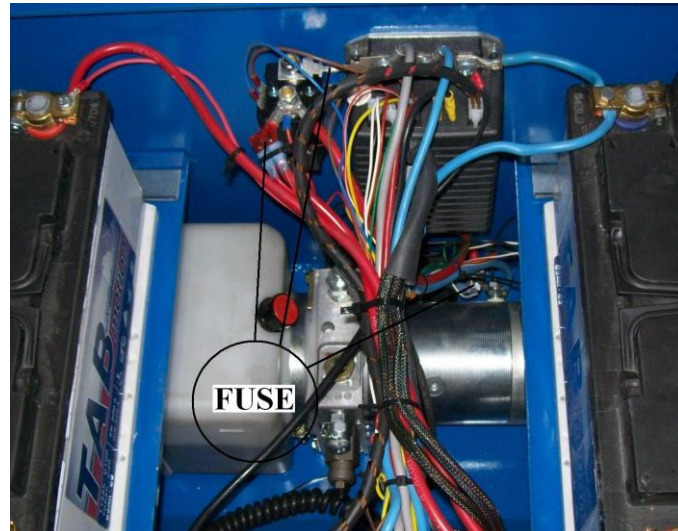
The fuses are located in the electronic controller and in the hydraulic pump.

WARNING

Fuses should only be replaced by specialized personnel.

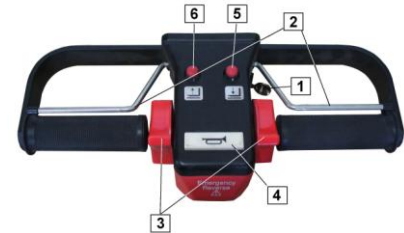
WARNING

When the lifter is not being used, make sure to turn it off.



Replace the fuses by similar ones.

4. SWITCH ON AND WORK



- ① Contact key
 - ② Dead-man function
 - ③ Forward-reverse throttle
 - ④ Claxon
 - ⑤ Forks down button
 - ⑥ Forks up button
-

SWITCH ON AND WORK

WARNING

Before using the lifter, please read carefully all the security instructions of this user's manual, pages 2.2 to 2.13 of this manual.

1. Confirm that the blocking brake is on by pushing the lifter: you should not be able to move it.
2. Disconnect the emergency stop
3. Turn on the key without pressing the throttle.

WARNING

If the blocking brake does not work, do not turn on the key.

4. Make sure that there is enough battery charge by checking the indicator.
5. Confirm that your way is clear, and press the dead-man function, and the forward-reverse throttle smoothly towards the required way.

Movement

While moving, the forks must be at their top position.

Turn

The closer you turn, the slower the speed should be, in order to avoid unexpected load movements.

Movement on slopes (ramps)

Movement on slopes with the machine loaded is strictly forbidden.

WARNING

When leaving the lifter, put down the forks and remove the contact key.

If error "CODE 23" appears, two causes:

1. Forward-reverse throttle has been pressed without using the dead-man function, or
2. the temperature thermal switch of the motor has reached and excessive heating, due to an intensive work. Turning off the machine during 20 minutes should be enough to cool the machine.

5. LOADING AND UNLOADING

LOADING

Adjust the forks in symmetry as per the lifter axle. The more separated the forks are, the more stability there is.

Face the load frontally and stop just before. Adjust forks height to enter into the pallet to be loaded correctly.

Move forward smoothly under the pallet, and when stopping, make sure that the blocking brake is

automatically activated (blocking sound should be noticed)

Lift the load. Make sure it remains stable. Press forward or reverse and move slowly.

TRANSPORT

Moving with the lifter loaded should be made with special care and attention. If the load height does not allow proper visibility, the lifter must be driven forward, except when entering into the service lifts, where it is strictly forbidden.

UNLOADING

Move towards the unloading area slowly.

Verify that, when stopping, the automatic blocking brake is on (blocking sound).

Put down the forks to unload.

Move reverse to get away from the pallet.

When restarting again, make sure that the forks are in the top position to avoid any obstacle while moving.

6. SERVICE AND CARE

Classification of maintenance works	6.2
Maintenance to be made by the technical service	6.2
Maintenance to be made by users	6.3

CLASSIFICATION OF MAINTENANCE WORKS

There are two types of maintenance works:

1. Technical service: Only to be made by the technical service.
2. User: To be made by the lifter users (qualified worker)

WARNING

User should not make any reparations nor maintenance when technical service is required.

Some operations may be dangerous and should only be made by the technical service.

MAINTENANCE TO BE MADE BY THE TECHNICAL SERVICE

The following operations should **only** be made by our technical service:

1. Batteries condition control.
2. Change batteries.
3. Change hydraulic oil.
4. Adjust motor pump.
5. Maintenance of the electronic control.
6. Change fuses.

MAINTENANCE TO BE MADE BY THE USER

As well as the daily inspections (see page 2.5), the worker must carry on with the following:

1. Change the front tyres.
2. Charge batteries.
3. Batteries electrolyte level control.
4. Lifter cleaning.
5. Emergency forks descent.

MAINTENANCE TO BE MADE BY THE USER

WARNING

Before any maintenance, turn off the key.

Confirm that the automatic blocking brake is on.



CHANGE FRONT WHEELS

Front wheels

1. Put a wooden chock under the lifter to separate it from the floor. Verify that lifter remains stable
2. Release off the security ring and take off the wheel.



3. Mounting process is the in reverse sense. Try not to damage bolt and ring when fastening.

BATTERY CHARGE

WARNING

1. Charge the batteries in a well ventilated area, away from heating points and sparks. (Gases of batteries may be explosives)
2. Do not smoke in the charging area.
3. Do not disconnect the connector during the charging process: risk of sparks.

Suggestions for the battery charge

1. For a longer battery life, it should be discharged at least 35% before charging.
2. To avoid deep discharge that could cause lifeless, when arriving to a 20% of battery charge, the machine slows its speed drastically.



Charging process

1. Move lifter close to an electric socket (220 V).
2. Turn off the key.

C



3. Connect the provided cable to the lifter and an electric socket (220 V).
4. Verify that the yellow and green lights of the left-hand-side case of the lifter are lightened.
5. Leave charging cycle to complete while the green light flickers.
6. Batteries are completely charged when the green light is permanent.
7. Disconnect the cable, wind it and keep it safe. .
8. Turn the contact key on and confirm that all the battery charge level is at 100%.

BATTERIES MAINTENANCE



WARNING

1. Batteries maintenance must be made by authorized personnel.
2. Always use gloves and protective glasses.
3. Smoking in the area is forbidden.

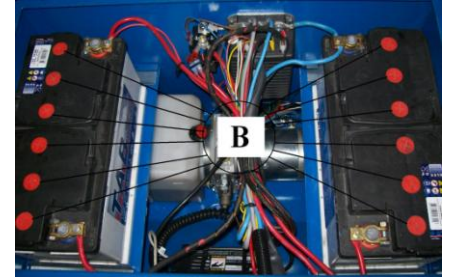
Maintenance frequency

Must be done at least twice a year (if possible, before and after summer)

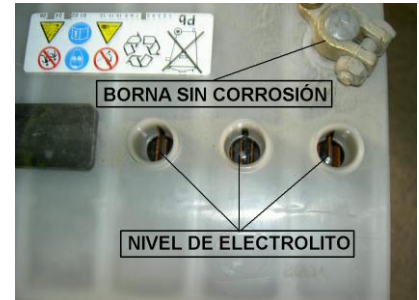
1. Unfasten with a screwdriver the 8 screws (T) and the metal cover.



2. Take out the metal cover. Batteries should now be seen.
3. Confirm that there are no electrolyte leaks and no corrosion on the tips.
4. Put aside the battery glasses carefully (B), without touching the connecting tips.



5. Verify that the electrolyte level is correct. If necessary, fill in with distilled water up to the nets.



CLEANING THE LIFTER

WARNING

Before cleaning, turn off the key.

Verify that the blocking brake is on.

Cleaning the handle.



Clean the dust with a brush.

Do not use water.

Finish with a dry cloth.

Cleaning the motor chassis



Clean the dust with a brush.

Do not use water.

Finish with a dry cloth.

Cleaning the forks grouping guides.

Clean the dust with a brush.

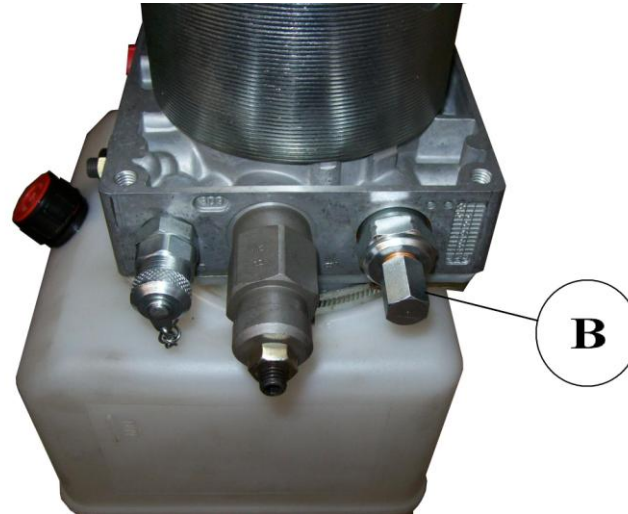
Do not use water.

Finish with a dry cloth.

EMERGENCY DESCENT OF THE FORKS

If the forks are suddenly blocked in the top position, there is a way of putting them down:

1. Turn off the key.
2. Open the box key where the motorpump is located.
3. Verify that there are no obstacles under the forks.
4. Take off the hexagonal cover (B with a n° 13 key.
5. Faten the bolt with a 4mm allen key tol et the fork go down.



7. LONG WAREHOUSING

LONG TIME WAREHOUSING

When the lifter is not going to be used for a long time, keep it in a dry and clean place, and follow the following instructions:

1. Clean the lifter as explained before.
2. Charge the batteries completely.
3. Place the lifter in a horizontal position.
4. Disassemble the batteries and put them in a dry and fresh place.

WARNING

When there is no inside area available, place the lifter in a horizontal area and cover it completely with a waterproof plastic cover.

For warehousing for a longer period, please contact technical service.

WARNING

Don not use a waterproof cover made of vinyl: it may cause static electricity and subsequently produce flames with the batteries gasses.

SERVICE DURING THE WAREHOUSING


1. Charge batteries every two months.
2. Make visual inspections to verify that there is no corrosion.
3. Clean the dirty areas and apply anticorrosion if needed.

POST-WAREHOUSING SERVICES

1. Remove the grease of the exposed areas of the hydraulic cylinders.
2. Charge the batteries completely.
3. Turn on the key to confirm batteries are completely charged
4. Go ahead with the tests of page 2.13

8. TECHNICAL SPECIFICATINOS

In this plaque, located at the right hand side, following information should be seen: Serial number, traction motor, elevation motor, tyres pressure, etc.

CONHERSA			
Poligono Ibarrea, s/n Tel. 948 - 46 79 51 Fax 948 - 46 81 45 31800 ALSASUA (NAVARRA)			
MODEL: ALL TERRAIN ELECTRIC LIFTER ET-1000			
SERIE N°	ELEVATION	VOLTAGE: 24 v	
MANUFACTURING YEAR: 2010	MOTOR:	POWER: 2500 w	
MASS: 495 Kg			
MAXIMUN LOAD: 1000 Kg	TRACTION	VOLTAGE: 24 v	
MAX ELEVATION: 1600mm	MOTOR:	POWER: 500 w	

MAIN PARAMETERS

MAXIMUM FORWARD-REVERSE SPEED	< 1,2 m/s
MAXIMUM LOAD PERMITTED	1.000 kg
MAXIMUM FORKS ELEVATION	1600 mm

WARNING

Do not try to exceed the above parameters.