



AERIAL PLATFORM

- ELEVAH 65 ES MOVE***
- ELEVAH 80 ES MOVE***

USE AND MAINTENANCE INSTRUCTIONS

Translation of the original instructions



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ENGLISH

PREMISE

The purpose of this use and maintenance manual is to provide the users with the essential information to carry out the steps intended for safe and correct machine operation, in accordance with the purposes for which it has been manufactured.

All information in this manual must be read and understood before making any attempt to operate the machine.

THIS MANUAL IS VERY IMPORTANT DOCUMENTATION; ALWAYS KEEP IT NEAR THE MACHINE.

Due to continuous improvements to the products, Faraone Industrie Spa reserves the right to amend the technical data without any prior notice. For updated information, contact Faraone Industrie Spa.



ATTENTION

REMEMBER NO EQUIPMENT IS SAFE IF THE OPERATOR DOES NOT COMPLY WITH THE SAFETY PRECAUTIONS

SYMBOLS AND TERMS



ATTENTION

The danger symbol draws attention to potential dangers that might cause injuries. To avoid possible injuries or fatal accidents, comply with all safety instructions that follow the symbol.



Arrows are used in the pictures of the machine to indicate the specific points described in the text of the manual.

Elevating Platform: A machine intended to move persons to their work position, where they carry out their tasks from the work platform.

Work platform: A platform or basket that is moved to the required work position loaded and from which the operator is able to carry out construction, repairs, inspections, or other similar operations.

Outriggers: Devices used to stabilise the mobile work lift platform, supporting and levelling it in its entirety.

Extending structure: A structure connected to the frame that supports the work platform and moves the work platform to the required position.

Frame: Machine Base. It may be pushed-around or self-propelled.

TECHNICAL SUPPORT - WARRANTY

The Client must make sure to have the serial number of the machine and an accurate description of the problem or of the information to be provided before contacting the Manufacturer.

The warranty period is 12 months from the date of the purchase invoice.

Said warranty covers faulty components and the labour required for servicing, if this is carried out at the Manufacturer's premises (the transport of the machine is borne by the purchaser).

The warranty is valid provided all rules laid down for correct use of the machine are complied with.

The machine is designed and built to last years, as long as it is always used for the purposes it is intended for and that the inspections and maintenance described herein are carried out.

Faraone Industrie Spa deems it necessary to conduct an extensive analysis of all of the structural components every 10 (ten) years, to confirm their integrity.

NOTICES

For machines sold in Italy:

According to art. 71, paragraph 11 of the (Italian) Legislative Decree 81/2008, the employer/owner of the machine is obliged to report commissioning of the same to the local department of INAIL (National Institute for the Prevention of Accidents at Work).

They must also arrange for the machine to undergo ANNUAL inspection of its actual condition and working order.

For machines sold in other countries:

The owner of the machine must ascertain whether installation of the machine needs to be reported and/or any need for periodic inspections by specific competent agencies.

SECTION 1. SAFETY PRECAUTIONS

GENERAL INFORMATION

This section illustrates the necessary precautions for the correct and safe use and for machine maintenance. To guarantee correct use of the machine, it is essential to establish a daily routine procedure based on the instructions provided in the manual. Also, to guarantee safe operation of the machine, it is necessary for a qualified person to establish a maintenance programme based on the information provided in this manual; such programme must be scrupulously followed.

The owner/user/operator/company granting in leasing/person receiving in leasing the machine, must not accept responsibility of its operation before having carefully read the manual and completed the training and the functioning procedures, guided by an experienced and qualified operator.

For further information relating to safety, training, inspection, maintenance, application and operation, contact Faraone Industrie Spa.



ATTENTION

THE NON COMPLIANCE WITH THE SAFETY PRECAUTIONS LISTED IN THE MANUAL MAY CAUSE DAMAGES TO THE MACHINE AND TO THE PROPERTY AND INJURIES OR FATAL ACCIDENTS.

PRELIMINARY PROCEDURES

Operator training and knowledge

- Carefully read the manual before using the machine;



- Use the machine only after complete training by authorised personnel.
- The use of the machine is allowed exclusively to authorised and qualified personnel.
- Read carefully and follow all the WARNING statements and the operational instructions reported on the machine and in the manual.
- Use the machine for the applications falling within those envisioned by Faraone Industrie Spa.
- All operational personnel must familiarize with the emergency operations and controls of the machine, as specified in the manual.
- Carefully read and comply with all company, local and government Standards in force, relating to machine operation.

Inspection of the work place

- Before using the machine, the operator must take the necessary precautions to avoid any hazard in the work place.
- Do not operate the machine on lorries, trailers, railway carriages, floating vessels, scaffolding or similar;
- The machine can be switched on at temperatures between -15°C and 40°C. Contact Faraone Industrie for machine operation at temperatures not within the indicated range;
- The machine cannot be switched on in environments stated as ATEX, unless specifically indicated in the EC certificate of conformity delivered with the machine.

Machine inspection

- Use the machine only after having carried out the inspections and functional checks. For further instructions, refer to *Section 2* of this manual.
- Operate the machine only after having carried out all assistance and maintenance set out in the requirements specified in this manual.
- Make sure all safety devices work properly. Any changes to such devices constitute a breach of the safety regulations.
- Do not operate the machine if its signs or decals indicating the safety regulations or instructions are illegible or missing.
- Avoid building up debris on the floor of the machine. Prevent mud, oil, grease and other slippery substances from coming into contact with shoes and with the floor of the machine.



ATTENTION

ANY AMENDMENTS OR ALTERATIONS TO THE MACHINE MAY ONLY BE APPLIED EXCLUSIVELY WITH PRIOR WRITTEN AUTHORISATION FROM THE PRODUCER.

OPERATION

General information

- Only use the machine to lift personnel and their tools and equipment.
- Do not operate a faulty machine. Should a fault occur, switch off the machine.
- Do not move the control switches abruptly or levers from one position to the opposite one, going through the neutral position; always move the switch to the neutral position before moving it in the position of the next function. Operate the controls by exerting slow and even pressure.
- If persons are present in the basket, allow personnel to activate the machine from the ground, exclusively in the event of an emergency;
- Completely lower the extending structure and disconnect the power supply before leaving the machine unattended.
- When welding is carried out with the machine, take precautions to protect all machine components from contact with sprays generated from welding or with the melted metal.
- Ensure that the electric tools are put back correctly, avoiding leaving them hanging on the cables in the work area of the platform.
- *(In case of a battery powered machine)* Charge batteries in a well-ventilated area.

Risk of falls



- Before using the machine, ensure all fixed and movable rails are secured in the correct position;
- Keep both feet firmly on the floor of the basket. Do not place ladders, boxes, steps, planks or similar items in the basket to increase the range of action;

- Do not use the extending structure to climb into the basket or climb down;
- Pay utmost attention when entering or exiting the basket. Make sure the extending structure is lowered completely. Face the machine when entering or exiting the basket. Always maintain "three contact points" with the machine, while making sure that both hands and one foot or one hand and both feet are continuously in contact with the machine when entering and exiting.

Electrocution hazard



Maintain a distance of at least 3 m between the machine parts and the occupants with its tools and equipment, and an electric line or equipment provided with an electric charge of up to 50,000 Volt. It is necessary to add 0.3 m for every increment that is equal to or less than 30,000 Volt.

It is possible to reduce the minimum safety operational distance in presence of insulating barriers installed for preventing contacts and if such barriers are regulated on the voltage of the electric line to be protected. The barriers must not be part of the machine nor be connected to it. The minimum safety operational distance must be reduced within the operational dimensions envisioned by the insulating barrier. This distance must be determined by a qualified person in accordance with the company, local and government Standards relating to work carried out near powered equipment.

Danger of overturning



- Before driving the machine, the user must verify the work area surface. While driving, do not exceed the allowed transversal and longitudinal slopes;
- Do not lift the basket or drive the machine with the basket raised (*on a self-propelled machine*) on a slope or uneven or soft surface;
- Before driving the machine on floors, bridges, lorries and other surfaces, check their maximum capacity;
- Do not exceed the maximum capacity of the machine. Evenly distribute the loads on the loading platform as best as possible;
- Keep the machine chassis (*including stabilisers if present*) at a minimum distance of 0.5 m from holes, unevenness, descents, obstacles, debris, hidden holes and other potential dangers found at ground level;
- Do not attempt using the machine as a crane. Do not tie the machine to any adjacent structure;
- Do not increase the dimension of the basket or the loading platform with unauthorised extensions;
- If the extending structure or the basket get stuck so that one or more wheels are lifted from the ground, the operator must be made to get off the basket before attempting to release the machine. Use a crane, forklift or other adequate equipment to stabilise the machine and have personnel climb down from the basket;
- (*For machine not self-propelled*) Do not move the machine with the stabilisers engaged (*if any*) or with the extending structure raised. Before moving the machine, completely lower the extending structure.

Danger of crushing and impact



- When using the machine or lifting or lowering the basket, check the distances above, at the sides and below the basket.
- Do not lean over the rails of the basket when the machine is running.
- Always pay the utmost attention to prevent the operational controls and people in the basket from being hit or hindered by any obstacles.
- Ensure the operators of other machines at a height or at ground level are informed of the presence of the machine.
- Warn personnel not to work, stand or walk underneath the lifted basket. Mark off the floor area with appropriate barriers, as required.
- *(For machine with self-propeller)* When driving in areas where visibility is limited by obstacles, always have a person precede the vehicle to signal any dangers;
- *(For machine with self-propeller)* While driving, always keep non-operational personnel at a minimum distance of 2 m from the machine.
- *(For machine with self-propeller)* Adjust the driving speed according to the following conditions: ground surface, traffic, visibility, slope, location of personnel and other factors that can pose a risk of collision or injuries to personnel;
- *(For self-propelled machine)* Take into account the braking distances regardless of the speed of the machine;
- *(For self-propelled machine)* Do not drive at high speed in reserved or tight areas or when reversing.

Towing, lifting and carrying

- Do not allow personnel to stand on the basket while towing, lifting and transporting;
- Only tow the machine in case of emergency, faults, a power-cut or to load/unload it;
- Before towing, lifting and transporting, make sure the basket is completely retracted and emptied;
- Do not pull or push a blocked or disabled machine.
- While lifting the machine by means of a forklift, place the forks exclusively in the appropriate areas of the machine. Lift by means of lifting equipment of adequate capacity.

For information regarding lifting, refer to the relevant section in the manual.

SECTION 2. GENERAL TECHNICAL DATA**ATTENTION**

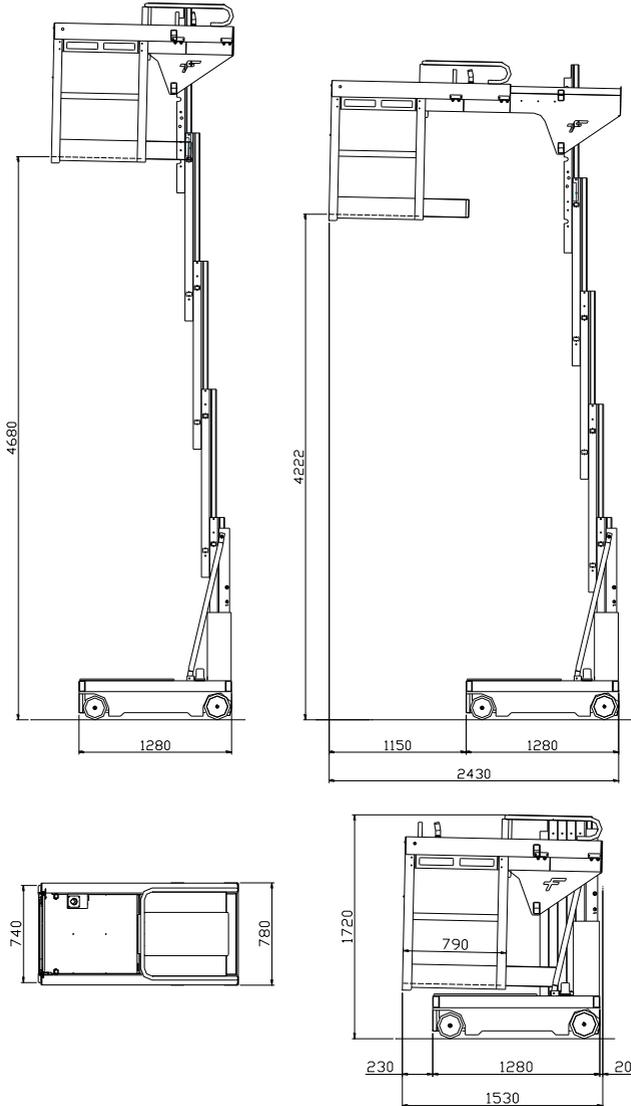
THE AERIAL PLATFORM ELEVVAH 65-80 ES MOVE IS A LIFTING MACHINE INTENDED TO MOVE PERSONS TO THEIR WORK POSITIONS FROM WHERE THEY CAN CARRY OUT THEIR TASKS FROM THE BASKET. THE AERIAL PLATFORM ELEVVAH 65-80 ES MOVE MUST BE USED ONLY FOR THE PURPOSES FOR WHICH IT WAS CONCEIVED. ANY OTHER USE SHALL BE CONSIDERED INAPPROPRIATE.

**ATTENTION**

THE USER MUST OBTAIN APPROVAL AND GUIDELINES FROM THE MANUFACTURER ON SPECIAL OPERATING METHODS OR CONDITIONS NOT COVERED IN THOSE SPECIFIED BY THE MANUFACTURER.

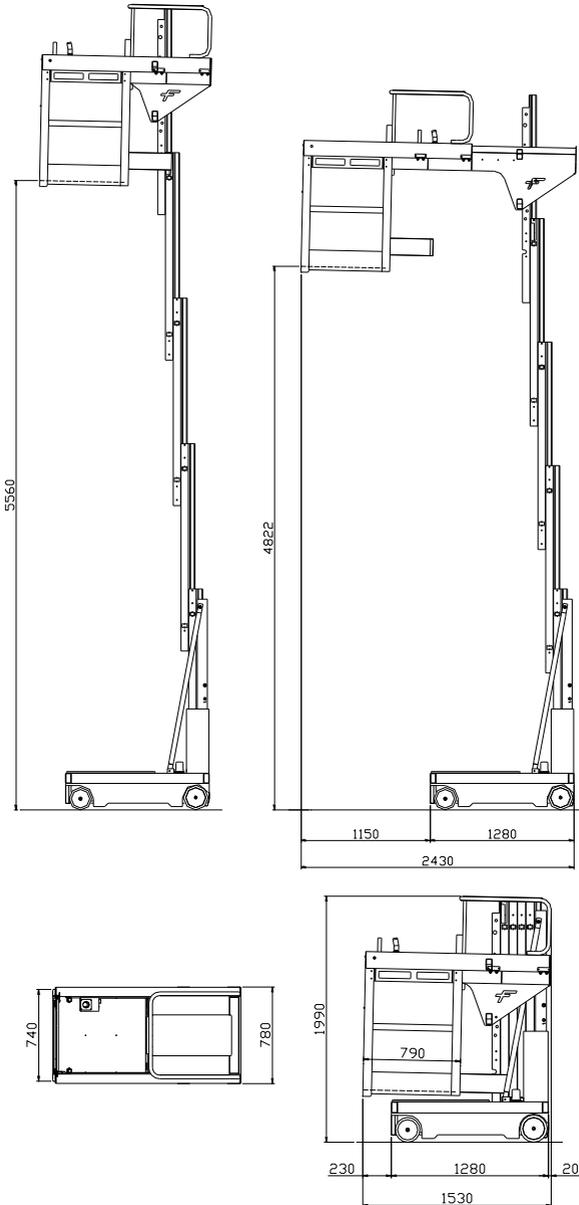
OVERALL DIMENSIONS

ELEVAH 65 ES MOVE



Measurements expressed in mm

ELEVAH 80 ES MOVE



Measurements expressed in mm

ELEVAH 65 ES MOVE GENERAL TECHNICAL DATA

Weight of the machine (overall):	1000 kg
Machine height (in transport position):	172 cm
Maximum resting force on the ground (per wheel/stabiliser (*)):	417 daN
Permitted use	INTERNAL USE
Maximum hydraulic system pressure:	~ 90 bar
Required amount of oil for the hydraulic system:	~ 8 Litres
Power supply	2 Batteries Pb 12V 105 Ah
Operator in the basket:	1
Maximum capacity of the basket:	200 kg
Maximum height of basket with option of extension (from the ground to the floor of the basket):	4.2 m
Maximum height of basket on self-propelled machine (from the ground to the floor of the basket):	4.68 m
External dimensions of the basket:	~ 74 cm x 79 cm
Max shifting speed in transport position:	0.7 m/s – 2,5 km/h
Maximum self-propelled movement speed at a height:	0.25 m/s – 0,9 km/h
Maximum basket rising speed:	0.2 m/s
Maximum basket descending speed:	0.2 m/s
Maximum longitudinal / transversal tilt in the transport position:	15% - 9°
Maximum longitudinal / transversal tilt in the raised position:	1.5°
Maximum manual stress:	200 N

* Maximum force per stabiliser considering that 70% of the weight of the machine plus the maximum load inside the basket are entirely distributed on one side only of the platform (entirely asymmetrical load)

ELEVAH 80 ES MOVE GENERAL TECHNICAL DATA

Weight of the machine (overall):	1050 kg
Machine height (in transport position):	199 cm
Maximum resting force on the ground (per wheel/stabiliser (*)):	438 daN
Permitted use	INTERNAL USE
Maximum hydraulic system pressure:	~ 90 bar
Required amount of oil for the hydraulic system:	~ 8 Litres
Power supply	2 Batteries Pb 12V 105 Ah
Operator in the basket:	1
Maximum capacity of the basket:	200 kg
Maximum height of basket with option of extension (from the ground to the floor of the basket):	4.8 m
Maximum height of basket on self-propelled machine (from the ground to the floor of the basket):	5.56 m
External dimensions of the basket:	~ 74 cm x 79 cm
Max shifting speed in transport position:	0.7 m/s – 2,5 km/h
Maximum self-propelled movement speed at a height:	0.25 m/s – 0,9 km/h
Maximum basket rising speed:	0.2 m/s
Maximum basket descending speed:	0.2 m/s
Maximum longitudinal / transversal tilt in the transport position:	15% - 9°
Maximum longitudinal / transversal tilt in the raised position:	1.5°
Maximum manual stress:	200 N

* Maximum force per stabiliser considering that 70% of the weight of the machine plus the maximum load inside the basket are entirely distributed on one side only of the platform (entirely asymmetrical load)

BASIC CONSTRUCTIVE DATA

Machine frame

The frame of the machine (called base) is entirely constructed with rectangular section, galvanised iron profiles. All essential components for normal machine operation in stable conditions are installed on the frame.

Extendable structure

The extending structure consists of special extruded aluminium alloy profiles that slide along each other on runners with nylon wheels. The kinematic connection between profiles is set up using chains.

An oil hydraulic cylinder is installed between the first and second profile, powered by the hydraulic unit, to lift the structure. The chains interconnect the extending structure elements so that they lift simultaneously.

Basket

The basket is completely constructed in extruded aluminium profiles. The tread floor consists of aluminium plate lined with non-slip casing.

Exposure to vibration

The machine does not produce vibrations such as to endanger the health of the operators. The weighted acceleration to which the entire body is subjected to is less than 0.5 m/s^2 .

Acoustic emissions

The A-weighted emission sound pressure level is below 70dB.

**ATTENTION**

THE AERIAL PLATFORM ELEVAH 65-80 ES MOVE HAS BEEN TESTED BY THE MANUFACTURER THROUGH:

- **STATIC STABILITY TESTS;**
- **DYNAMIC STABILITY TESTS;**
- **OVERLOAD TEST;**
- **OPERATION TESTS.**

SECTION 3. PREPARATION AND INSPECTION

PERSONNEL TRAINING

The machine is a transport device for personnel; therefore, it must be used and submitted to maintenance exclusively by trained personnel.

The machine cannot be used by persons under the influence of alcohol or drugs or subject to epileptic attacks, dizziness or loss of physical control.

Operator training

Operator training must include the following:

1. Use and limits of the platform and emergency controls, on the ground, and of the safety systems;
2. Signs/labels for controls, instructions and warnings on the machine;
3. Regulations defined by the employer and government standards;
4. Use of the approved protective device against falls (if required);
5. Knowledge of the mechanical operation of the machine sufficient to enable recognising of a fault;
6. Safe methods for using the machine in presence of overhead obstacles, other moving equipment and obstacles, depressions, holes and descents;
7. Methods to avoid dangers due to unprotected electric conductors;
8. Requisites of a particular work or particular application of the machine.

Training supervision

Training must be carried out under the supervision of a skilled person, in an open space and free from obstacles and must continue until the trainee is able to safely operate and use the machine.

Operator responsibility

The operator must be trained with regard to responsibility and authority to switch off the machine in the event of fault or other unsafe conditions, both relating to the machine and to the work area.

NOTE: *the owner shall provide skilled personnel for training both at the time of delivery of the first units and later, if required by the user or personnel.*

FUNCTIONAL TEST

At the end of the "DAILY INSPECTION" (section n°6), carry out a functional test of all plants in an area free from overhead obstacles and at ground level.



ATTENTION

IF THE MACHINE DOES NOT WORK PROPERLY, SWITCH IT OFF IMMEDIATELY. ALERT MAINTENANCE PERSONNEL TO THE PROBLEM. DO NOT USE THE MACHINE UNTIL IT IS DEEMED SAFE TO USE.

Carry out a functional test as detailed below.

1. From the ground controls

- a. Check the correct operation of the manual emergency descent valve;
- b. Lift and lower the basket checking lifting and lowering happen regularly;
- c. Make sure all machine functions are disabled when operating (pressing) the emergency stop button.

2. From the control console of the basket

- a. Lift and lower the basket checking lifting and lowering happen regularly;
- b. Activate all functions and check the correct operation of all end run switches, main and activation switches:
 - Machine brakes (*on self-propelled machine*) – Drive the machine on a slope (not exceeding the nominal operational capacity on a slope) and stop it to ensure the brakes hold it;

- Inclination alarm (for machine with self-propeller) – With the platform completely lowered, drive the machine on a surface with a slope greater than that designed in any direction (do not exceed the maximum nominal operational capacity on a slope). Any attempt to lift the basket makes the machine signal an inclination that exceeds the maximum allowed;
 - Transmission speed reduction (*for machine with self-propeller*) – When the platform is lifted, the transmission speed is reduced compared to the speed with platform lowered.
- c. Ensure all machine functions are disabled when operating (pressing) the emergency stop button;

SAFETY WARNINGS FOR OPERATORS

Do not install and use the machine in the following cases:



**OUTDOORS AND IF WINDY UNLESS THE MACHINE HAS BEEN DESIGNED FOR
OUTDOOR USE**

(DANGER OF LOSS OF STABILITY AND OVERTURNING)



CLOSE TO AERIAL OBSTACLES (power lines, protrusions, etc.)

(RISK OF ELECTROCUTION AND IMPACT)



WITH EXCESSIVE LOADS COMPARED TO LIMITS ALLOWED

(DANGER OF LOSS OF STABILITY AND OVERTURNING)



ON FLOORING WITH STRENGTH LOWER THAN THE WEIGHT OF THE MACHINE

(DANGER OF LOSS OF STABILITY AND OVERTURNING)



**IN ALL CIRCUMSTANCES NOT SPECIFICALLY INDICATED UNDER OPERATING
CONDITIONS IN THIS MANUAL**

(GENERAL DANGER)

**ATTENTION**

THE ELECTRICAL SYSTEM OF THE MACHINE IS NOT IN ANTI-EXPLOSIVE EXECUTION (NO ATEX): THEREFORE YOU SHOULD CAREFULLY AVOID ITS USE IN AREAS SUBJECT TO ATEX RISK.

When travelling:

- ✓ Cautiously move the machine avoiding sudden manoeuvres;
- ✓ DO NOT TRANSPORT PERSONS on the base frame of the machine and in any other position except for in the work position inside the basket;
- ✓ Check the structural condition and cleanliness of the surfaces on which the machine is used (verify the surface is suitable for the weight of the machine in work conditions);

During ascent and descent:

- ✓ Comply with the maximum capacity weights allowed in the basket;
- ✓ Make sure there are no overhead upright obstacles along the trajectory;
- ✓ Do not induce dangerous vibrations and/or oscillations such to entail stability loss of the machine and cause an eventual overturning;

**ATTENTION**

THE AREIAL PLATFORM IS FITTED WITH AN AUTOMATIC BASE LEVELLING CHECK SYSTEM. ABOVE THE MAXIMUM INCLINATION PROVIDED BY THE MANUFACTURER.

WITH THE BASKET IN TRANSPORT POSITION, THE MACHINE CAN STILL MOVE WHEREAS, WITH THE CAGE LIFTED, EACH MOVEMENT IS PREVENTED, BESIDES CAGE DESCENT (PAY MAXIMUM ATTENTION DURING THE DESCENT PHASE).

WHEN THE MAXIMUM AMISSIBILE INCLINATION IS EXCEEDED IT IS SIGNALLED BY A FIXED ACOUSTIC SIGNAL

Prohibition signs:

Prohibition to overload the work platform beyond the indicated limits



Prohibition to use the machine as lifting equipment (lift truck)



Prohibition to remove or tamper with the machine's stability devices (sensors, ballasts, etc.)



Prohibition to remove or tamper with the machine's safety and protection devices



Prohibition to climb on or off the work platform other than through the gate provided



Prohibition to increase working reach or height of the mobile elevating work platform using additional equipment (e.g. ladders)



Prohibition to cause oscillations on the machine so as not to destabilise it



Prohibition to fit any additional item that would increase the wind pressure on the mobile elevating work platform (e.g. warning signs)



Prohibition to come into contact with live electrical conductors



Prohibition to climb into/off the work platform when it is lifted



Prohibition to lift/lower the work platform without operator on board

When using the machine, the Manufacturer recommends using the following personal protective equipment:



Protection of lower limbs

NON-SLIP SHOES



ATTENTION

THE USE OF ANY ADDITIONAL SPECIFIC PERSONAL PROTECTIVE DEVICES MUST BE CHECKED BASED ON THE ASSESSMENT OF THE SPECIFIC RISKS, CARRIED OUT BY THE EMPLOYER



ATTENTION

ANY FENCING ENCLOSING THE MACHINE'S WORK AREA AND ANY ADDITIONAL SAFETY SIGNS TO BE USED FOR THAT AREA MUST BE VERIFIED BASED ON THE SPECIFIC RISK ASSESSMENT CARRIED OUT BY THE EMPLOYER.



ATTENTION

FOR MACHINES SOLD IN ITALY

REGARDING ITALIAN LEGISLATION, ITALIAN LEGISLATIVE DECREE 81/2008 REQUIRES THE USE OF SUITABLE SAFETY BELTS FOR ALL EXTENDING DECKS AND SIMILAR EQUIPMENT.

THIS MEASURE ALSO APPLIES TO VERTICAL EXTENDING WORK PLATFORMS.

A PRIOR SPECIFIC RISK ASSESSMENT MUST THEREFORE BE CARRIED OUT TO ESTABLISH THE NEED FOR A FALL PREVENTION SYSTEM.



SECTION 4. CONTROLS, WARNING LIGHTS AND MACHINE OPERATION

INTRODUCTION



ATTENTION

THE MANUFACTURER DOES NOT HAVE ANY DIRECT CONTROL OVER MACHINE APPLICATION AND OPERATION. THE USER AND OPERATOR ARE REQUIRED TO COMPLY WITH THE CORRECT SAFETY PROCEDURES.

The ELEVAH 65-80 ES MOVE model lifting equipment are electric machines fitted with an elevating work platform, assembled on a lifting mechanism with aluminium mast.

The lifting device is **INTENDED TO MOVE PERSONS TO THEIR WORK POSITIONS FROM WHERE THEY CAN CARRY OUT THEIR TASKS FROM THE WORK PLATFORM.**

The main control station is located in the basket. The operator can drive the mach, lift, lower the basket from the control console.

If the operator on the work platform is unable to lower it, the ground control station's controls must be used when performing machine maintenance or in the event of emergency.

Vibrations generated by machines do not constitute any danger for the operator who is inside the basket.

The level of continuous sound pressure (A measurement) on the work platform is less than 70 db (A).

MACHINE OPERATION

Preliminary operations

It is necessary for the following control conditions to be satisfied, before activating the machine from the basket controls.

- The voltage of the batteries, if included, must be sufficient to activate the machine;
- The emergency stop switch must be in the RESET position.

CHARGING THE BATTERY

The machine is fitted with a battery charger with AC voltage input/DC voltage output. The battery charger automatically stops charging when the batteries are fully charged.



ATTENTION

KEEP SPARKS, NAKED FLAMES OR CIGARETTES AWAY FROM THE BATTERIES. PROVIDE ADEQUATE VENTILATION WHILE CHARGING.

NOTE: *when the battery charger is connected to an AC socket, the transmission function of the machine is disabled.*

Battery charging procedure

1. Park the machine in a well-ventilated area, near an AC electric socket;
2. Switch the machine off and remove the control key to prevent unauthorised use.
3. Connect the battery charger to a correctly installed and earthed socket according to regulations in force.

Battery charge warning lights

The battery charge warning lights are located on the side of the machine's base.



The **RED LED**, when charging the battery, indicates the beginning of the charging cycle.

Charging stops automatically with no need for operator action, and is indicated by a **GREEN LED** on.

While using the machine, battery charge will change from fully charged (*indicated by the green LED*), to partially charged (*indicated by the orange LED*) to low battery (*indicated by the red LED*).

Carry out the following operations carefully:

- ✓ Charging must be carried out in a well-ventilated area, where it is forbidden to smoke and use naked flames;
- ✓ It is recommended to avoid using any possible source of sparks near charging batteries;
- ✓ It is recommended to use anti-static clothing;
- ✓ Do not lift or tilt the batteries;
- ✓ Do not attempt to start the machine;



ATTENTION

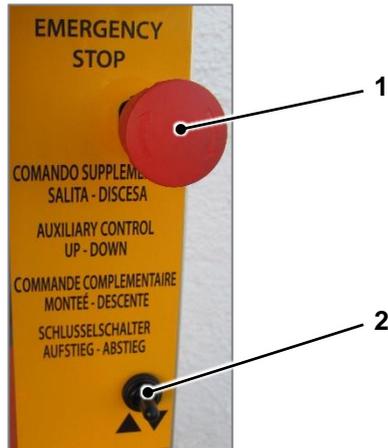
IT IS RECOMMENDED NEVER TO ALLOW BATTERIES TO GO COMPLETELY FLAT.



ATTENTION

WHEN THE MACHINE IS PUT OUT OF SERVICE FOR A LONG TIME, THE BATTERIES MUST BE COMPLETELY AND EVENLY CHARGED AT LEAST ONCE A WEEK AND STORED UNPLUGGED TO STOP THEM FROM GOING FLAT.

GROUND CONTROL STATION



1. Emergency stop/switch-off button
2. Basket up/down control.

General information

Before operating the machine from the ground control desk, the following conditions of the controls must be met:

- The emergency stop/switch-off button must be on RESTORE (POWER SUPPLY CONNECTED).
- Basket console - The control selector must be set at "CONTROLS AT BASE".

Emergency stop/switch-off button

NOTE: in order for the machine to operate, the emergency stop/switch off button on the machine must be in RESET position.



POWER SUPPLY DISCONNECTION

PUSH INWARDS to engage the emergency stop.



POWER SUPPLY CONNECTION

TURN CLOCKWISE AND RELEASE to reset the emergency stop.

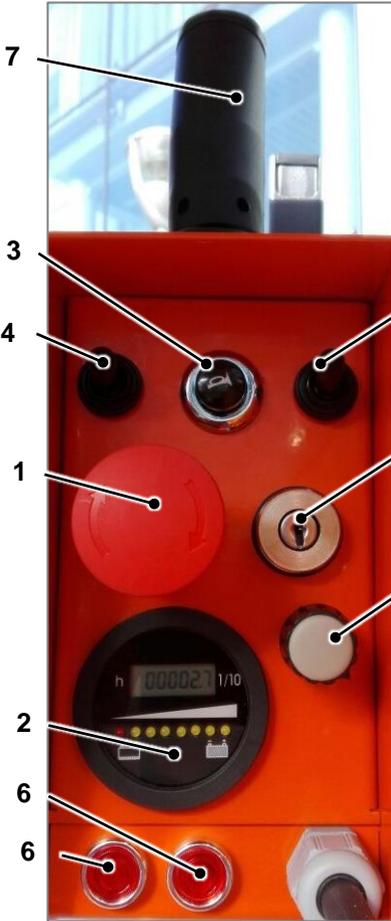
Ascent/descent control switch



MOVE the switch DOWNWARDS to LOWER the basket.

MOVE the switch UPWARDS to RAISE the basket.

PLATFORM CONTROL DESK



- 1. Emergency stop/switch-off button
- 2. Battery charge/operating hours display
- 3. Buzzer
- 4. Controls at base/controls on console selector

- 5. Basket movement/run selector
- 6. Indicator LED
- 7. Cloche control
- 8. Dead man enabling control
- 9. Main ON/OFF switch with removable key
- 10. Transport position speed regulator

General information

Before actuating the machine from the control console on the work platform, it is necessary to satisfy the following conditions of the controls:

- The emergency stop/switch-off button must be on RESTORE (POWER SUPPLY CONNECTED).
- Basket console - The control selector must be set at "CONTROLS ON CONSOLE".

Emergency stop/switch-off button

NOTE: in order for the machine to operate, the emergency stop/switch off button on the machine must be in RESET position.



POWER SUPPLY DISCONNECTION

PUSH INWARDS to engage the emergency stop.



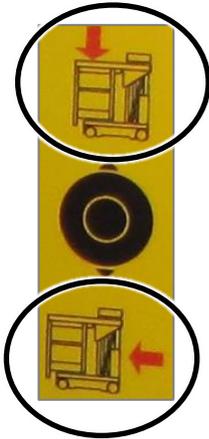
POWER SUPPLY CONNECTION

TURN CLOCKWISE AND RELEASE to reset the emergency stop.

Battery charge/operating hours display

The display shows the machine's operating hours (expressed in tenths of an hour and only calculating the time the machine takes to perform any movement) as well as battery charge level (from maximum charge when all yellow LEDs are on, to minimum charge when the red LED is on).

Controls at base/controls on console selector



CONTROLS ON CONSOLE mode

MOVE the selector UPWARDS to enable the controls on the CONSOLE.

CONTROLS AT BASE mode

MOVE the selector DOWNWARDS to enable the controls at the BASE.



ATTENTION

TO PREVENT UNAUTHORISED PERSONNEL FROM USING THE MACHINE'S GROUND CONTROL WHEN THE OPERATOR IS INSIDE THE BASKET AT HEIGHTS, THE OPERATOR MUST ALWAYS KEEP THE CONTROLS ENABLING SELECTOR SWITCHED TO "CONTROLS ON CONSOLE".

Main ON/OFF switch with removable key

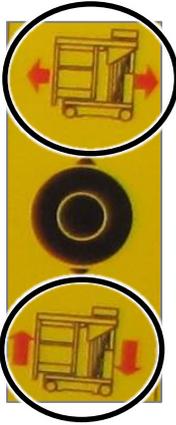
In order to prevent unauthorised personnel from using the machine, its main power supply switch is fitted with a removable key. Power the machine by setting the switch to ON and set to OFF to disconnect the main power supply.



ATTENTION

PREVENT UNAUTHORISED USE BY SWITCHING OFF THE MACHINE AND REMOVING THE KEY WHEN THE AREIAL PLATFORM IS NOT IN USE.

Basket movement/run selector



RUN mode

MOVE the selector UPWARDS to enable the machine RUN mode.

Basket MOVEMENT mode

MOVE the selector DOWNWARDS to enable the basket MOVEMENT mode (up/down).

Transmission mode

Turn selector in position to activate the transmission mode:

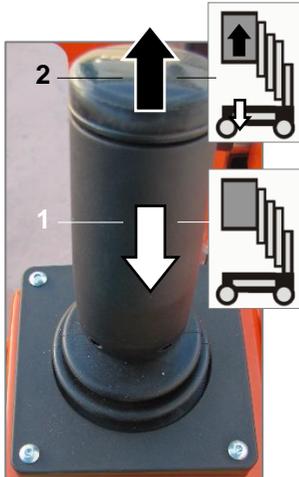


PRESS THE DEAD MAN BUTTON ON THE JOYSTICK, then move the joystick in the required direction.

NOTE: *The cloche acts proportionally on machine advancement speed. The transmission power is applied proportionally to the movement of the joystick from the centre.*

Lifting mode

Turn selector in position to activate the lifting mode:



PRESS THE DEAD MAN BUTTON ON THE JOYSTICK, then:

1. Move for LOWERING the basket
2. Move for LIFTING the basket



ATTENTION

IF THE INCLINATION ALARM IS TRIGGERED AS THE OPERATOR IS DRIVING WITH THE CAGE UP, LOWER THE CAGE ALL THE WAY DOWN AND MOVE ON TO A SOLID AND HORIZONTAL SURFACE. BEFORE LOWERING THE CAGE MAKE SURE THAT THERE IS NO PERSONNEL IN THE AREA BELOW.

Transport position speed regulator

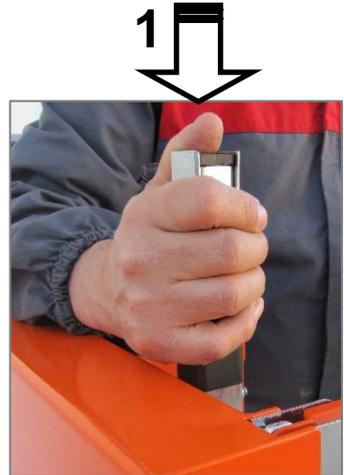


When the machine is in transport position (basket fully lowered) it is possible to regulate the transmission speed by acting on the regulator.

By turning the regulator counter-clockwise it is possible to lower the translation speed. By turning the regulator clockwise on the other hand, it is possible to increase the translation speed.

EXTENDIBLE DRUM

Extending the basket



To extend the basket outwards go into the position indicated by the image, hold both handles and:

1. press the release buttons located at the ends of the handles;
2. push with your back on the support pillow.

at this point the basket will start to move outwards. The extension stroke has predefined lock positions. Release the lock buttons at the most comfortable predefined position.

**ATTENTION**

HAVING REACHED THE PREDEFINED LOCK POSITION VERIFY THAT THE RELEASE BUTTONS RETURN TO HIGH POSITION. THIS ENSURES THAT THE POSITION REACHED IS STABLE AND FIXED.

**ATTENTION**

IT IS PROHIBITED TO LOWER THE BASKET IN AN INTERMEDIATE EXTRACTED POSITION BETWEEN TWO PREDEFINED STOP POSITIONS. IN THIS CASE, IN FACT, THE BASKET IS NOT STOPPED AND MAY MOVE DURING WORK PHASES.

Retraction of the basket

To retract the basket go into the position indicated by the image, hold both handles and:

1. press the release buttons located at the ends of the handles;
2. pull towards the machine.

At this point the basket will start to go inwards.



ATTENTION

HAVING REACHED THE PREDEFINED LOCK POSITION VERIFY THAT THE RELEASE BUTTONS RETURN TO HIGH POSITION. THIS ENSURES THAT THE POSITION REACHED IS STABLE AND FIXED.



ATTENTION

DURING THE EXTENDED POSITION OF THE BASKET ALL MACHINE FUNCTIONS ARE DISABLED (LIFTING/LOWERING OF THE BASKET AND RUN).



ATTENTION

IF DURING THE EXTENSION OF THE BASKET, THE MACHINE EXCEEDS THE MAXIMUM POSSIBLE INCLINATION LIMITS, ALL MACHINES FUNCTIONS ARE DISABLED.

IT IS NECESSARY TO PROCEED WITH THE RETRACTION OF THE BASKET. IN THIS CASE, IF THE INCLINATION OF THE MACHINE IS STILL ABOVE THE ALLOWED LIMITS, THE ONLY PERMISSABLE FUNCTION IS THE LOWERING OF THE BASKET

**ATTENTION**

MAKE SURE YOUR HANDS DO NOT GET TRAPPED WHEN CLOSING THE BASKET ENTRANCE MOVABLE RAILING.

**ATTENTION**

MAKE SURE THERE ARE NO OBSTACLES PREVENTING THE BASKET ENTRANCE MOVABLE RAILING FROM CLOSING PROPERLY

**ATTENTION**

DO NOT RAISE/LOWER THE BASKET IF THE MOBILE RAILING DOES NOT APPEAR TO CLOSE PROPERLY, AND HAVE IT REPAIRED (CONTACT THE MANUFACTURER, IF NECESSARY)

TRANSPORT AND LIFTING PROCEDURES

Positioning the machine

While positioning the machine, make sure that the basket is fully lowered and retracted, turn off the machine and remove the enabling key.

NOTE: if necessary, charge the batteries in preparation for the following work day.



ATTENTION

PREVENT UNAUTHORISED USE BY SWITCHING OFF THE MACHINE AND REMOVING THE KEY WHEN THE AREIAL PLATFORM IS NOT IN USE.

General information

It is possible to transport the machine to the work premises using one of the following methods:

- By driving the machine along the route on its base wheels, if the surface it is travelling on permits it
- By moving it with a forklift (*check the gross weight of the machine in the Operational Technical Data Table for the machine*)



ATTENTION

LOAD THE MACHINE ONTO A HEAVY DUTY VEHICLE HAVING A USEFUL LOAD CAPACITY SUITED FOR THE TOTAL WEIGHT OF THE MACHINE (CHECK THE GROSS WEIGHT OF THE MACHINE IN THE OPERATIONAL TECHNICAL DATA TABLE)

**ATTENTION**

SECURE THE MACHINE SO THAT IT DOES NOT GET DAMAGED DURING TRANSPORT.

Handling with a forklift

The machine can be lifted with a forklift truck. In this case, it must be held from the rear part of the machine in order to position it in a stable way onto the forks (see following figure).

**ATTENTION**

LIFT THE MACHINE ONLY WITH THE BASKET FULLY LOWERED AND RETRACTED.



SECTION 5. EMERGENCY PROCEDURES

This section shows the operations to be carried out in the event of an emergency during machine operation.

EMERGENCY OPERATION

Operator unable to control the machine

CONDITIONS IN WHICH THE OPERATOR IS IMMOBILISED, TRAPPED OR UNABLE TO OPERATE OR CONTROL THE MACHINE.

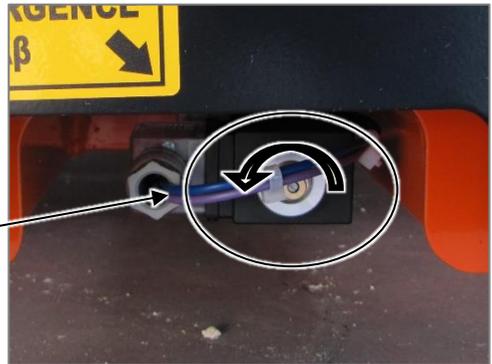
- The other personnel must operate the machine with the emergency ground controls exclusively in case of need.
- The machine controls may only be used by qualified personnel. INTERRUPT MACHINE ACTIVITY IF THE CONTROLS ARE NOT WORKING PROPERLY.
- In the event of incorrect operation of the controls or power outage, the emergency button must be used and a qualified operator must perform EMERGENCY DESCENT procedures from the ground.

Proceed as follows:

1. Press the emergency button to disconnect the power supply;
2. ATTENTION: make sure there are no persons within the working range of the machine;
3. Gradually loosen the knurled knob fitted underneath the base carriage where the hydraulic lifting cylinder is to lower the basket (1);
4. ATTENTION: constantly monitor the entire descent phase of the basket;



1



5. Once descent is completed, tighten the knob again;
6. Restore power to the machine.



ATTENTION

THE OPERATIVE STAGES OF THE EMERGENCY DESCENT PROCEDURE ARE SET OUT ON AN APPROPRIATE DECAL NEAR THE EMERGENCY DESCENT CONTROL.

Basket blocked in overhead position

If the basket blocks or jams in overhead equipment or structures, transfer the person present in the basket to a safe place before freeing the machine. Recovery equipment can be used to allow the occupier to climb down from the basket. A crane or forklift may be used to stabilise machine movement.

REPORTING THE ACCIDENT

Faraone Industrie Spa must be immediately informed of any incidents involving a Faraone product. Contact the factory by telephone and provide all the necessary details, even in case no injuries or evident damage to property are involved.



ATTENTION

AFTER AN ACCIDENT, INSPECT THE ENTIRE MACHINE AND CHECK ALL FUNCTIONS. DO NOT LIFT THE BASKET UNTIL ONE IS SURE THAT ALL DAMAGES HAVE BEEN REPAIRED, AS REQUIRED, AND THAT ALL CONTROLS WORK PROPERLY.

SECTION 6. DAILY INSPECTION

Start the full inspection from point (a), as set out in the following list. Proceed around the machine checking all listed conditions in sequence.



ATTENTION

**TO AVOID ANY INJURIES, ENSURE THAT THE MACHINE POWER SUPPLY IS SWITCHED OFF DURING THE "FULL INSPECTION".
DO NOT USE THE MACHINE BEFORE REPAIRING ALL FAULTS.
DO NOT FAIL TO CARRY OUT A VISUAL INSPECTION OF THE LOWER PART OF THE BASE FRAME. ENSURE THE AREA IS CLEAR OF OBJECTS OR DEBRIS THAT MIGHT CAUSE SERIOUS DAMAGE TO THE MACHINE.**

NOTE FOR INSPECTION: *besides complying with the above criteria, ensure for each component that all parts are present, securely fixed and not loose and that there are no visible damage, leaks or signs of excessive wear.*

a) Drive wheels/free wheels and swivel castors

Check there is no debris on the wheels or around them;

b) Base frame

Ensure there are no loose wires or cables hanging underneath the base, check for any dents, breaks or cracks on the profiles;

c) Manual descent control valve – See note pertaining to functional check;

d) Outriggers *(if present)*

Check for dents on the aluminium profiles, breaks or cracks, and check operation of the adjustable outrigger feet;

e) Motor/pump/tank unit

No conspicuous hydraulic leak, hydraulic oil filling level at the "full" line;

f) Batteries *(if present)*

If necessary, charge them;

g) Cage assembly and entrance doors

Correct blocking of the cage and entrance doors operating correctly;

h) Control console in the cage

Controls secured, legible signs, emergency stop switch in the reset position and legible control signs;

i) Ground control station (if present)

Main power supply selection switch operable, signs securely fastened and legible, emergency stop switch operable;

j) Extendable structure unit

Structure profiles, sliding inserts, chains, sequential activation cables, pulleys able to turn freely;

k) Spirit levels (if present)

Check the integrity of the spirit levels on the base frame.

**ATTENTION**

DO NOT USE THE MACHINE BEFORE REPAIRING ALL FAULTS / MALFUNCTIONS NOTED

SECTION 7. ROUTINE MAINTENANCE**ATTENTION**

MAINTENANCE CAN BE CARRIED OUT BY COMPANY PERSONNEL WITH EXPERIENCE IN MAINTENANCE WORK AND ADEQUATELY TRAINED WITH REGARD TO SAFETY STANDARDS IN FORCE.

**ATTENTION**

IT IS RECOMMENDED TO ONLY USE SPARE PARTS APPROVED BY THE MANUFACTURER.

**ATTENTION**

CONTACT THE MANUFACTURER IF IN DOUBT WITH REGARD TO THE FREQUENCY AND METHOD OF ROUTINE AND/OR EXTRAORDINARY MAINTENANCE ACTIVITIES.
DO NOT TAKE INITIATIVES IF YOU ARE UNSURE OF WHAT YOU ARE DOING.

**ATTENTION**

TO CARRY OUT MAINTENANCE AND/OR CLEANING OPERATIONS ON THE MACHINE THAT REQUIRE THE EXTENDABLE STRUCTURE TO BE IN A PARTIALLY EXTENDED POSITION, ANCHOR THE CAGE SAFELY (FOR EXAMPLE, USING A CONTRASTING STRUT ON THE GROUND) TO PREVENT IT FROM ACCIDENTALLY FALLING ONTO THE OPERATOR PERFORMING THE MAINTENANCE OPERATIONS.

**ATTENTION**

THE RECOMMENDED FREQUENCY OF LUBRICATION AND OF THE WEAR CHECKS IS BASED ON NORMAL USE. IF THE MACHINE IS USED FOR HEAVY DUTY WORK, SUCH AS A HIGH NUMBER OF CYCLES, UNFAVOURABLE POSITION, CORROSIVE/DIRTY ENVIRONMENT, ETC., THE USER MUST INCREASE THE FREQUENCY OF THE CHECKS ACCORDINGLY.

MONTHLY MAINTENANCE

- ***Torque Reducer***

Check the oil level and proper closing of the lubricant filler cap and drain plug of the Torque Reducer;

MAINTENANCE EVERY THREE MONTHS

- ***Check there is no clearance, mechanical parts not correctly secured and/or bent and no parts/components desoldered;***

- ***Check the integrity of the structural profiles;***

- ***Check correct operation of the emergency descent valve.***

Take the cage to a height and execute an “emergency descent”, as shown in the relative section of this manual.

- ***Hydraulic Oil***

Check the level of hydraulic oil and top up, if necessary.

Refer to the specifications described in the relative paragraph for information regarding hydraulic oil checks and top-up;

- ***Check the hydraulic oil piping connections and make sure there are no leaks;***

- ***Torque Reducer***

Clean the outside of the reducer carefully, to remove any filth built up over time which limits its heat dissipation capability.

- ***Checking the Battery***

Periodically check for any corrosion and tightening of the terminals and any acid top-ups required in the battery (if a lead/acid type).

- ***Check the cage and the entrance doors***

Correct blocking of the cage and entrance doors operating correctly.

- ***Check the controls present in the cage and on the ground*** (if applicable)

Controls secured, legible signs, main power supply selection switch operable, emergency stop switch in a reset position and legible control signs;

- ***Check lubrication and wear of the lifting chains***

When restoring lubrication, make sure the chains are not dirty or soiled with mud, rubble, ice or other foreign matter. Clean the chains thoroughly before lubricating them.

The lifting chains must be lubricated with the extendable structure completely closed, by gravity, from the top, directly on the return wheels (if necessary, temporarily remove the protective cover to access the chains). For information regarding the wear of chains, refer to “Checks on the lifting chains”.

- **Check the wheels for wear**

Check there is no debris on the wheels or around them. Check for wear or damage to the tread.

The wheels must be replaced if the edges are worn or the profiles are deformed. If the wheels have significant damage on tread or sides, immediately assess the severity of the damage before operating the machine again.

MAINTENANCE every 1000 h of work

- **Torque Reducer**

Check tightening of the screws.

MAINTENANCE EVERY SIX MONTHS

- **Lubrication of moving parts and sliding wheels check**

The extensions slide on runners fitted with nylon wheels. Four runners, two upper and two lower, are fitted for each pair of extensions. 3 wheels are positioned on each runner, for a total of 12 for each pair of extensions. On each runner, one of the 3 wheels turns on an adjustable axis. This allows the wheels to be adjusted when they are worn thus giving rise to possible play of the moving extendable structure parts.

Contact the Manufacturer for further information and instructions regarding the adjustment of the sliding wheels of the extendable structure, when a backlash anomaly is found.

- **Transmission motor**

Check the wear level of the brushes and the manifold.

For any intervention, refer to the appropriate paragraph.

MAINTENANCE EVERY TWO YEARS

- **Hydraulic Oil**

Change the hydraulic oil in the tank.

Refer to the specifications described in the relative paragraph for information regarding hydraulic oil change.

- **Torque Reducer**

Inspect the reducer and change the oil.

Refer to the instructions in the relative paragraph for information on changing the oil of the reducer;

SECTION 8. MAINTENANCE OPERATING INSTRUCTIONS**BATTERY MAINTENANCE**

It is necessary to periodically check for any corrosion and tightening of the terminals.

Replace the batteries as follows:

1. Put the "BASE/CAGE" controls selector in the cage control station on "BASE CONTROLS";
2. Using the ground controls, put the cage at a height of about one metre and anchor it securely (for example, with a contrasting strut on the ground);
3. Make sure the machine is not connected to an external mains supply (charging batteries);
4. Use the specific switch to disconnect the machine's power supply;
5. Open the protective cover of the battery compartment;
6. Loosen the connection terminals of the batteries (positive pole and negative pole);
7. Remove the batteries and replace them with new ones;
8. Connect the terminals of the batteries, making sure to do so correctly (red cable for the positive pole, black cable for the negative pole) and tighten them;
9. Close and lock the protective cover;
10. Remove the cage anchors, reconnect the power supply and lower the cage.

**ATTENTION**

SHOULD THE BATTERY BE DAMAGED, USE THE RELATIVE PERSONAL PROTECTIVE EQUIPMENT TO PROTECT YOUR HANDS AGAINST CHEMICAL AGGRESSION WHEN REPLACING THE BATTERY. DISPOSE OF THE BATTERIES IN ACCORDANCE WITH THE LAWS IN FORCE. REPLACE THE BATTERIES WITH THE SAME TYPES AS THOSE SUPPLIED BY THE MANUFACTURER.

CHANGING TORQUE REDUCER OIL**ATTENTION**

PAY ATTENTION BECAUSE THE SURFACES ARE HOT DURING NORMAL OPERATION

Change the exhaust oil with the reducer still hot.

Before changing the lubricant, make sure that the product has been at a standstill for about 30 minutes, a sufficient amount of time for the oil temperature to drop to levels which are not hazardous for the operator.

Before introducing new oil, flush any particles inside the casing using the same type of oil.

You must only introduce the new oil when you are sure that there are no impurities.

Follow these 5 steps to change the oil properly:

1. Place a sufficiently spacious container underneath the drain plug.
2. Remove the filler cap and drain plug, let the lubricant flow out and wait as long as necessary for it to empty completely.
3. Replace the gaskets of the filler cap and drain plug and carefully clean the magnet, if any.
4. Screw the drain plug back on and fit the reducer in its final position.
5. Fill the reducer with new oil until it reaches the level indicated in the cap or the visual level and tighten the filler cap.

HYDRAULIC OIL CHANGE

Faraone Industrie Spa recommends using hydraulic oil with viscosity index 32. Mixing oils of different makes or types is strongly ill advised, since they may not contain the necessary additives or viscosity may be different.



ATTENTION

THE HYDRAULIC OIL MUST BE TOPPED UP/CHANGED WITH THE CAGE FULLY DOWN; IF THE HYDRAULIC OIL TANK IS UNDER THE CAGE, KEEP IT AT A HEIGHT OF APPROXIMATELY ONE METRE AND TOP UP/CHANGE IT.



ATTENTION

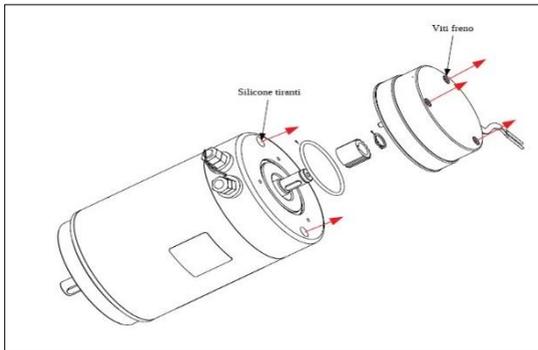
DISPOSE OF THE WASTE OIL IN ACCORDANCE WITH THE LAWS IN FORCE.

TRANSMISSION MOTOR

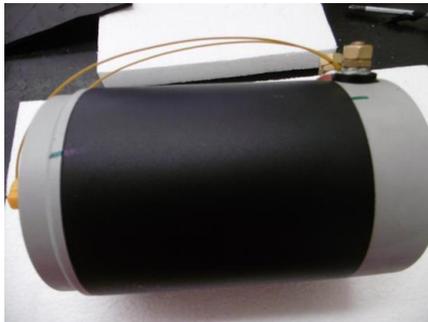
INSPECTION OF BRUSHES AND MANIFOLD

It is recommended to proceed as follows:

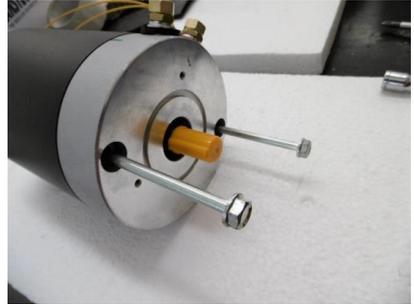
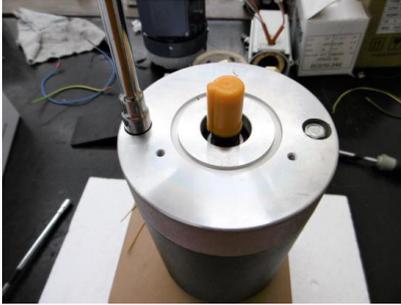
1. Disconnect the motor and physically detach it from the application;
2. Remove the brake and the silicone coating on the hex head of the tie rods;



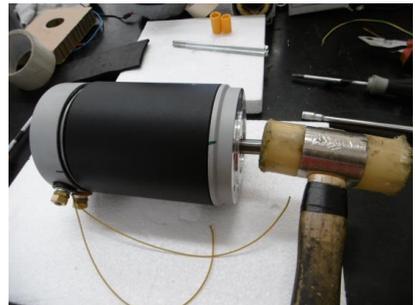
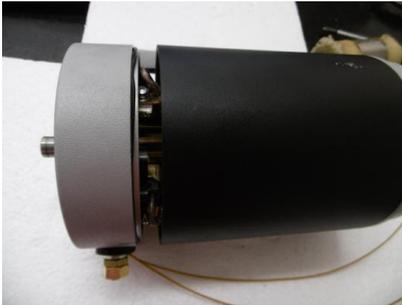
3. Mark the contact surface of the tube with the shield and the flanges to the restore proper alignment;



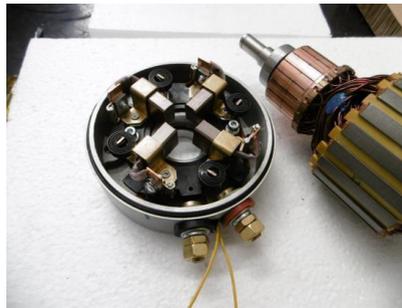
4. Unscrew the motor tie rods using a 10 [mm] socket wrench



5. Extract the rear shield with the brush holder (using a rubber mallet if necessary) paying attention not to ruin the o-rings between the tube and the shield/flanges.



6. Extract the brush holder and clean the manifold and the adjacent area with compressed air



7. Measure the groove of the manifold and the length of the brushes.



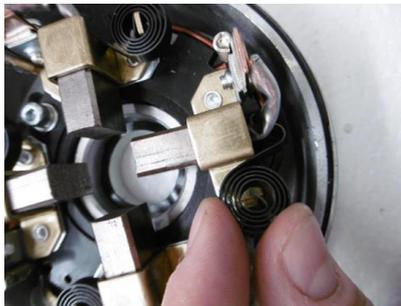
- a. The following are the length of the brushes and diameter of the manifold when new and minimum recommended as a reference.

	New	Minimum recommended
Brush length (mm)	17	8.5
Manifold diameter (mm)	44	43.6 (*)

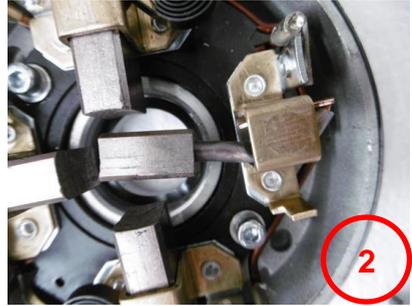
(*) If the groove exceeds a depression of 0.4 mm compared to the original diameter, it is recommended to re-machine the manifold.

8. Replacing the brush. It is recommended to proceed as follows:

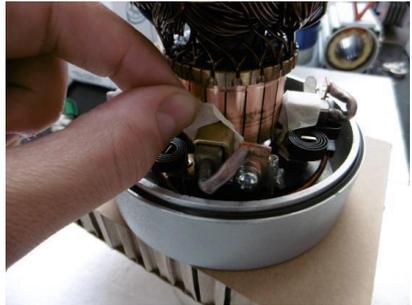
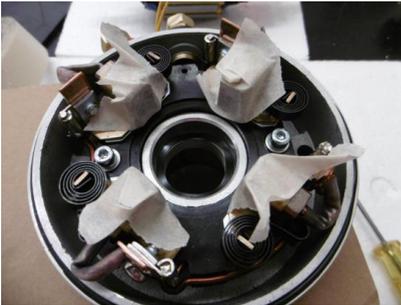
- a. Extract the compression spring of the brush;



- b. Unscrew the fixing screw (1) and extract the brushes (2);



- c. Install the new brush operating in the opposite order;
d. Insert the manifold into the brush holder.



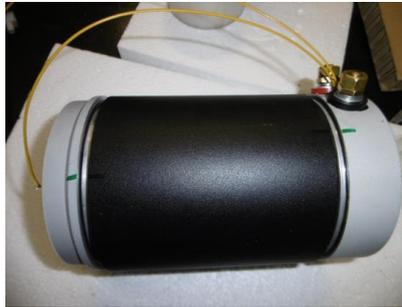
NOTE: It is recommended to use adhesive paper or an equivalent method to push all the brushes outwards to then insert the manifold and remove the supports used.

9. Close the top cap, paying the utmost attention that the o-ring gaskets are positioned properly.



**ATTENTION**

ALSO PAY ATTENTION TO THE CORRECT ALIGNMENT OF THE CAPS AS INDICATED PREVIOUSLY.



10. Put the silicone back on the hex head of the tie rods.
11. Refit the brake. Before powering the motor, check that the brake works properly (powering only the brake for a few cycles).

**ATTENTION**

RESETTING THE IP DEGREE DEPENDS ON THE CORRECT POSITIONING OF THE O-RING GASKETS AND THE SILICONE COATING OF THE TIE RODS. AFTER THE MAINTENANCE TECHNICIAN HAS CLOSED THE MOTOR, HE IS FULLY RESPONSIBLE FOR THE IP DEGREE AND THE INTEGRITY OF THE MOTOR.

CHECKS ON LIFTING CHAINS

1) Chain noise

A grinding metal noise will be heard if the chains are not fully lubricated. This causes metal-metal friction between the joints of the chain, which can lead to seizing-slipping effect, causing the work platform to move unevenly.

2) Surface rust

Plates with rusty surfaces are easily recognisable by the typical brown colour. Rust can lead to chain fatigue failures.

3) Rust on joints

Corroded connection points are recognisable by their red-brown colour. This phenomenon may arise from lack of lubrication or use of grease and oil unsuitable for penetrating the joints.

4) Stiff joints

Any joint that is not in a straight position when leaving the return pulley, can no longer be used. This phenomenon may be caused by corrosion or cold micro welding.

5) Turned pins

This is the consequence of incorrect lubrication and the aforementioned phenomenon of stiffened joints. This phenomenon is easily recognised by the difference in the pin clinching positions compared to factory standard.

6) Pins coming out of their housings

A direct consequence of the stiff joints of turned pins.

7) Wear

It is important to assess whether the connection plates are very worn.

8) Broken plates

This is the result of fatigue failure caused by overloading. Corrosion phenomena may contribute to this problem.

9) Broken pins

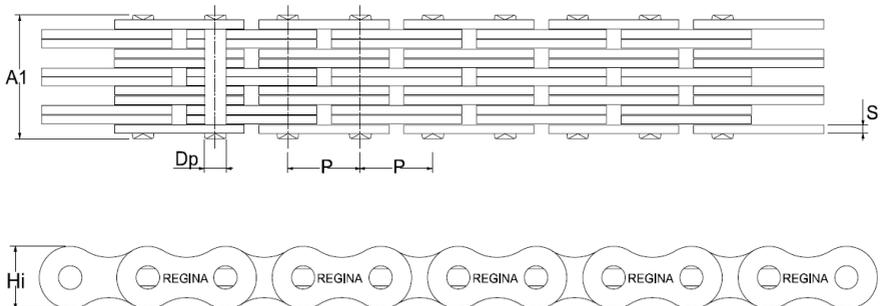
This problem usually occurs as a result of corrosion in the chain joints. Since the pins of a single chain are subject to the same load and corrosion conditions, one failure is usually followed by more. Experience has shown that this type of failure is not always easily recognised as there are no evident changes in the chain conditions, especially in the initial stage.

Checking for chain wear

(Check the cause of the malfunction before installing the new chain)

Lifting chain

Manufacturer: REGINA – Model: AL544



$A1 = 19.1 \text{ mm}$; $Dp = 5.09 \text{ mm}$; $P = 15.875 \text{ mm}$; $S = 2.04 \text{ mm}$; $Hi = 12.83 \text{ mm}$

Elongation:

Measurement of chain slightly tightened on straight sections 1/5 to 1/15 of the total length. Maximum elongation allowed: 2% along the most worn section.

Wear of plate profiles:

Where the phenomenon is most noticeable: maximum permitted height reduction of 2.5% on one side only, 4% if on two sides, in relation to the initial height.

Wear on the side of the chain:

Replace the chain if the protruding part of the pin heads is worn down by more than 25% or if the outer side is worn down by more than 20% of its thickness.

**ATTENTION**

FOR FURTHER INFORMATION REGARDING PURCHASE OF SPARE PARTS AND CONSUMABLES, PLEASE CONTACT THE MANUFACTURER.

THE MANUFACTURER DECLINES ALL LIABILITY DUE TO DAMAGE OR MALFUNCTION CAUSED BY USE OF PARTS NOT AUTHORISED BY THE SAID MANUFACTURER.

SECTION 9. ATTACHED DOCUMENTATION

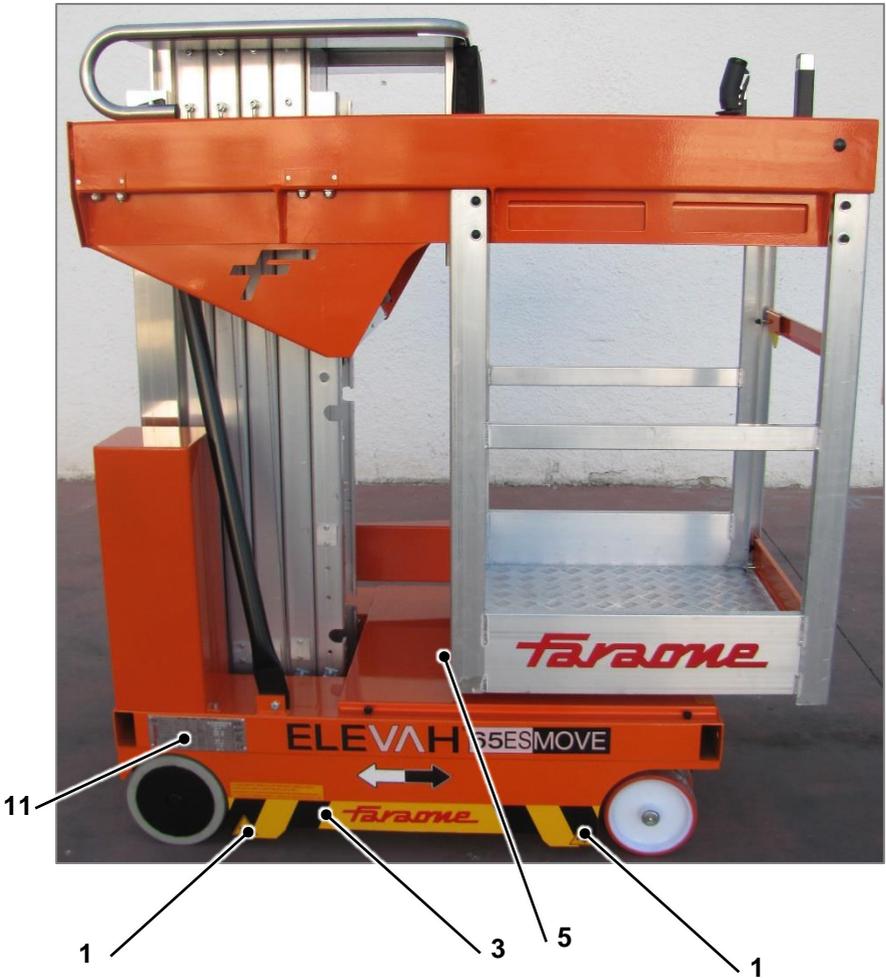
- ✓ ATTACHMENT 1 – Layout for decal application
- ✓ ATTACHMENT 2 - Hydraulic diagram
- ✓ ATTACHMENT 3 – Wiring diagram
- ✓ ATTACHMENT 4 - Successful acceptance test certificate

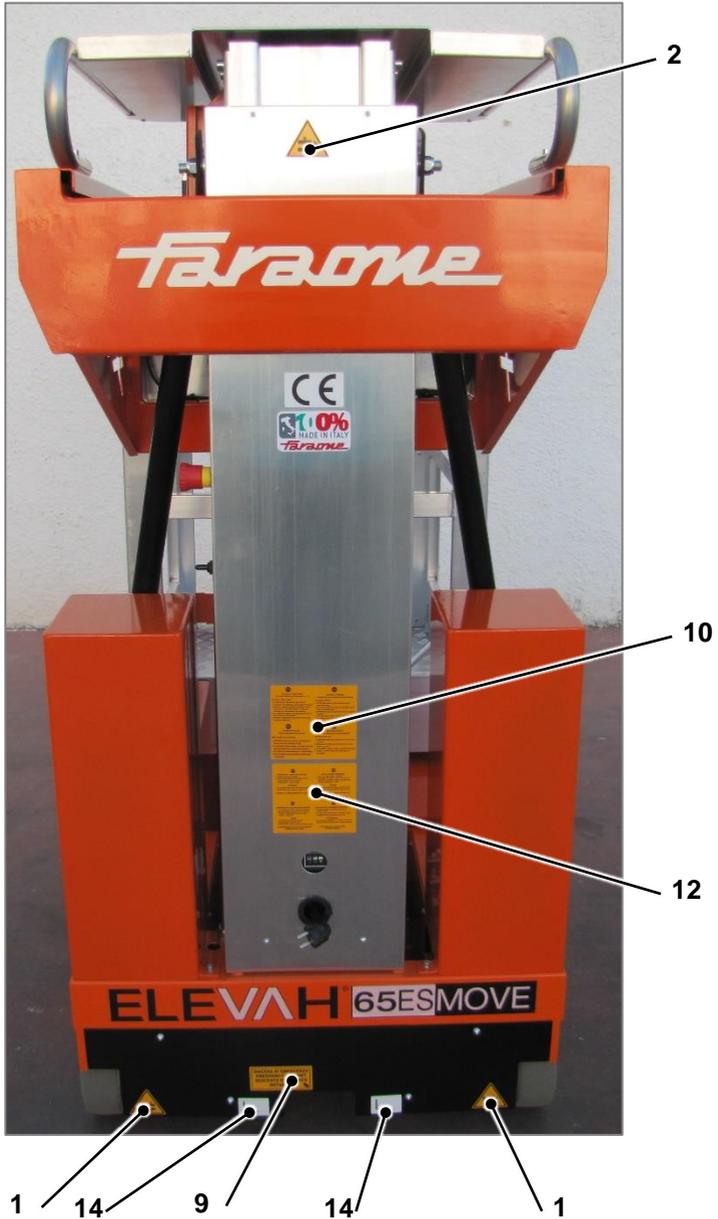
**ATTENTION**

SHOULD THE MACHINE BE TRANSFERRED TO A THIRD PARTY, ALL DOCUMENTATION MUST BE DELIVERED WITH IT.

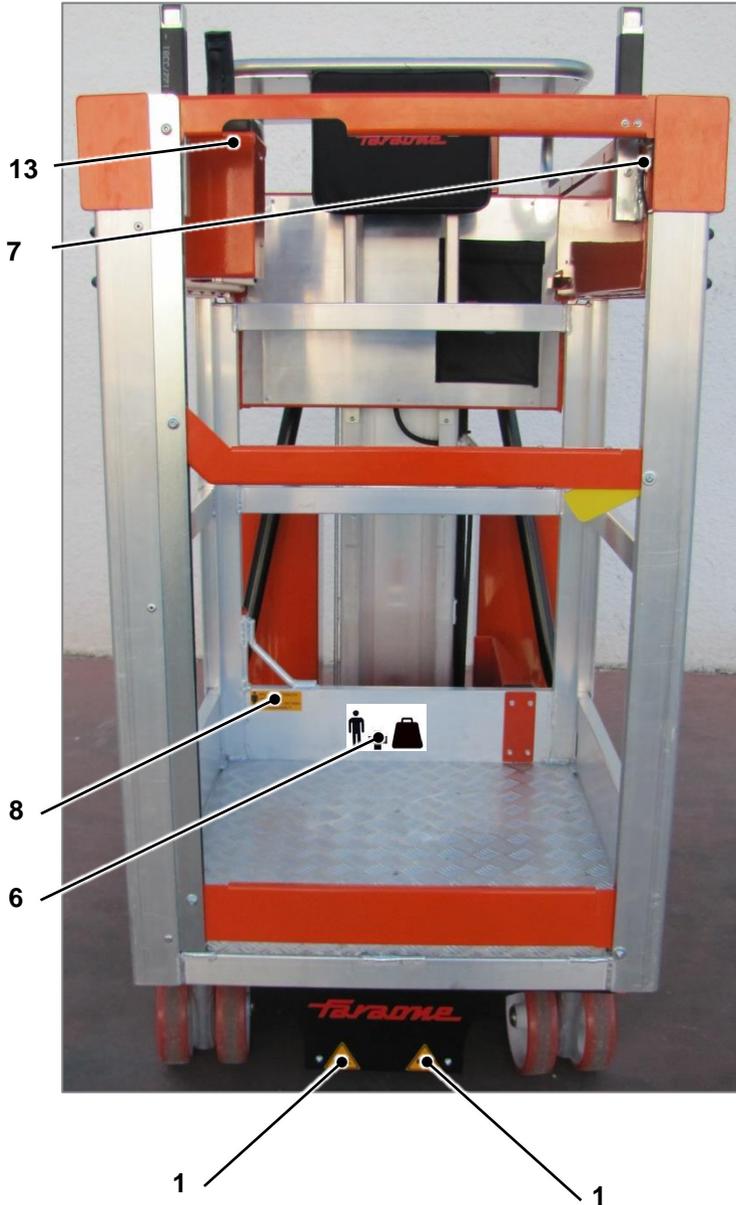
ATTACHMENT 1 – Layout for decal application

Pos.	SIMBOLO	DESCRIZIONE	Pos.	SIMBOLO	DESCRIZIONE
1		<u>DANGER SIGN</u> CRUSHING AND TRAPPING OF THE LOWER LIMBS	2		<u>DANGER SIGN</u> CRUSHING AND TRAPPING OF THE UPPER LIMBS
3		<u>DANGER SIGN</u> LIKELY IMPACT	4		<u>OBLIGATION SIGN</u> REFER TO THE OPERATING MANUAL
5		<u>PROHIBITION SIGN</u> UNAUTHORISED PERSONNEL MUST NOT USE THE MACHINERY	6		<u>INDICATION</u> MAXIMUM NUMBER OF PERSONS AND LOAD ALLOWED INSIDE THE BASKET
7		<u>PROHIBITION SIGN</u> REMOVAL OF SAFETY DEVICES AND SAFETY PROTECTIONS	8	<u>INDICATION</u>	"SAFETY BELT CONNECTION"
9	<u>INDICATION</u>	"EMERGENCY DESCENT"	10	<u>INDICATION</u>	"PROCEDURE FOR THE EMERGENCY DESCENT"
11	<u>TARGHETTA</u>	CE PLATE	12	<u>INDICATION</u>	"BATTERY CHARGING PROCEDURE"
13	<u>INDICATION</u>	INSTRUCTIONS FOR USING CONTROLS	14		"LIFTING POINTS WITH FORKS"









ATTACHMENT 2 - Hydraulic diagram

1		2		3		4		5		6		7		8		
A		B		C		D		E		F		G		H		
Nome articolo	Num. parte	TABELLA Distinta materiali														Quantità
BENEFICIAZIONE																
1	SS150504CL15	Collettore lav. KELLIS, VMS3, AID														1
2	EC05940B	Tappo espander. 08														1
3	EC142458	Anello D-Ring NBR 70Sh, 107,2x2,53 - 4437														1
4	F737025	VRF35-10 - Strozz. comp. fisso BRL														1
5	F74904	IC2-Tappo 3/4-16ANF, H19														1
6	F732005	Valvola di ritagno VUI														1
7	F730225HP	Valvola max. VMS3 X (30-150 bar), gonfi. pass														1
8	F75004196	VMS3 V2 - Valv. mes. scac. sez. ca. 0,96														1
9	F74903	IC2-Tappo 3/4 - 16ANF, H12,5														1
10	F72019 Z	Valvola ritappo VUII - 2 bar														1
11	SS24245551	40x0-Tubo espac. di 90° 1/4" Y140														1
12	EC1091315445	Pompa gr1 - 3,15cc - S - A X205														1
13	EC10203	Rometta rosc. ricetto 3/8"														1
14	SS4208M105A	Gommetta rosc. M - 3/8" F - H25														1
15	SS24245505	Tubo aspiraz. di curvo 3/8" Y177														1
16	SS5650001	Filtro aspirazione polidaghiere G/20R, 50µm														1
17	SS5320100A	Tubo di scarico Fe. M2x1,1164 184														1
18	SS3102070A	Serviziato in lommra. B200 lit. 7, SL67														1
19	EC127021650	Tappo sf + fit. IMF-A-1/2" L160														1
20	EC03003C	Tappo in acciaio con DN, 1/2" Corto														1
21	SS506520017	Garnito F02 160-220														1
22	EC106204	Motore CC 24V-2200M (AM,5259)														1
23	EC108012	Telecontrollore 24V-150A TR														1
24	Z056901030	Fascetta stringitubo H9 011P-130														1
25	ES177003	Pastiglia motore-vel. speciale in ruota														1
26	ES17800108F6	Covetto L-lisc. S1,5 D-88-Fastone6														1
27	E0554C1412	Raccorde con 1/4M - 90° - 012														1
28	EC030101	Tappo TCI1 con DR. 1/4"														1
29	B06502E100D83	Bloc. BF 6,5JC-EM-IC. 012,7 - 2,8 - 24Vdc														1

Valvola elettrica NC + valvola paraccadute

Valvola elettrica NC + valvola paraccadute

ATTACHMENT 3 – Wiring diagram

ATTACHMENT 4 - Successful acceptance test certificate**AERIAL PLATFORM**

ELEVAH 65 ES MOVE

ELEVAH 80 ES MOVE

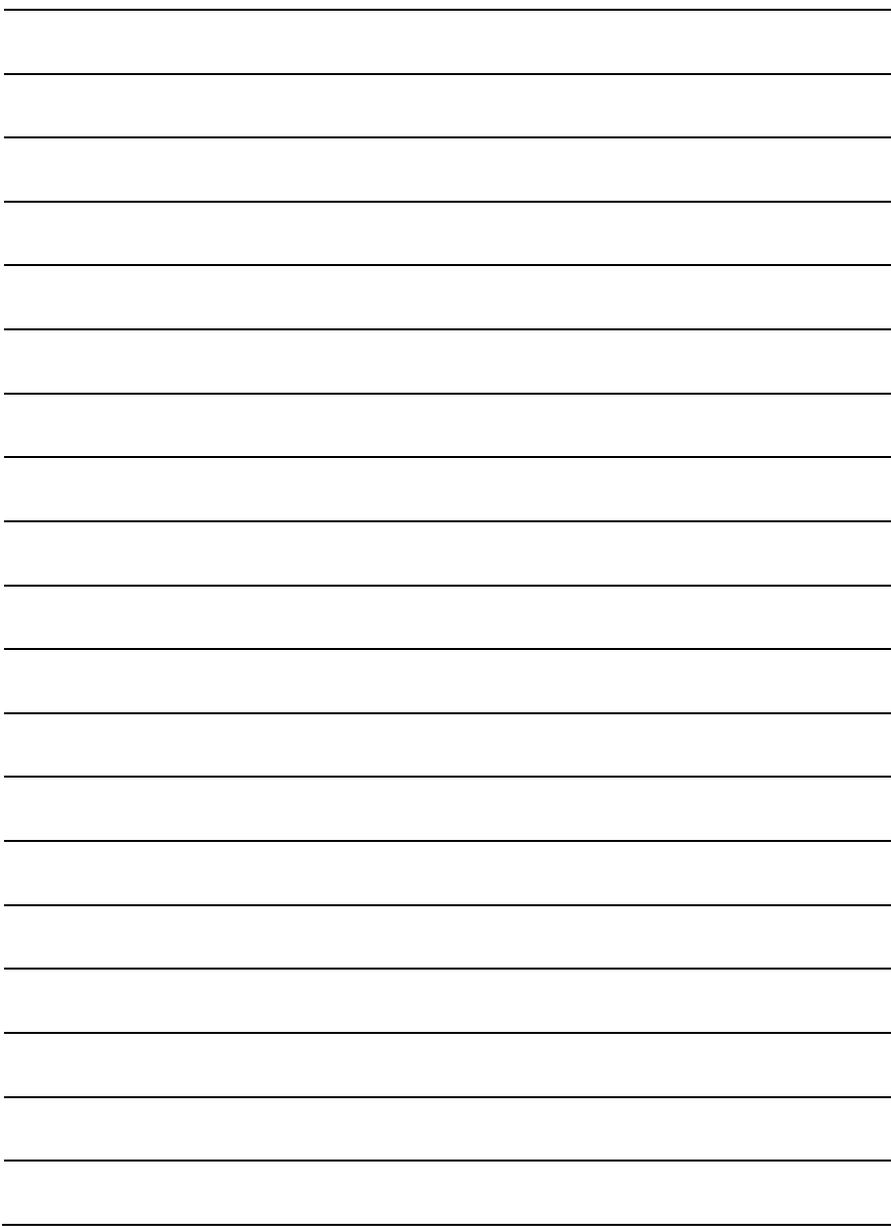
Serial number:

The machine, constructed in conformity with the type testing model, underwent the following tests:

- Brake test
- Overload test
- Operation test

With a POSITIVE outcome.

Tortoreto, on





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