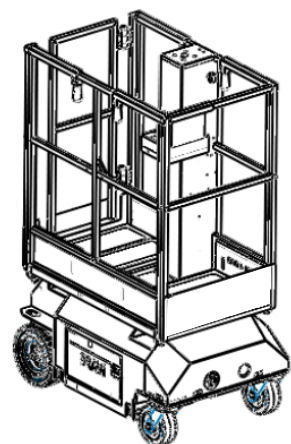
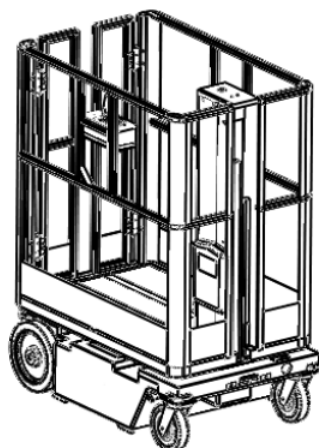
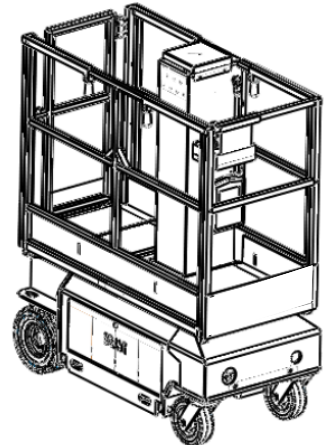
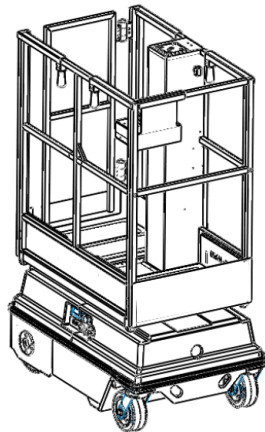




USER AND MAINTENANCE MANUAL

Original instructions

LUI MINI S.I.
LUI MINI S.I.W./S.I.E.
LUI S.I.460
LUI MINI 220
LUI MINI HD
LUI MINI HD S.I.W./S.I.E.



SOME NOTES ON THIS USER MANUAL

Remember that the USER MANUAL is not an accessory of the platform but it is an integral part of it and a SAFETY MEASURE (EN 12100-1).

It has been designed in this form to let you easily find what you are looking for.

This is the reason why you have to keep it in good condition close to the platform itself.

In this way it can be obtained from the PLATFORM all the information about the reason it has been manufactured and use it in a maximum security.

Remember that any update must be inserted in the manual itself as it will be indicated by Braviisol Divisione Meccanica srl.

The manual must not be damaged, it should remain intact (do not tear the sheets), kept away from moisture and heat during the consultation should be avoided to get oil on it or deteriorate its readability.

To make the consultation easier, the manual has been divided into parts, so that, each step is well articulated.

For practicalness of use, each subject has been divided into numbered steps which, when the action requires it, are written on the drawings themselves.

Parts that need more attention are highlighted with symbols and well-detailed illustrations on the side of the page.

In this way, BRAVIISOL DIVISIONE MECCANICA wants to draw – unequivocally- the operator's attention to WARNINGS, CAUTIONS and HAZARDS concerning him.

This Platform has been manufactured in Italy by:

BRAVIISOL DIVISIONE MECCANICA SRL

S.S. 16 Adriatica km. 314,600

60022 Castelfidardo (AN), Italy

Tel. 0039 071 7819090 Fax 0039 071 7819355

If you have any question about use and/or working, please contact the Manufacturer.

This Platform is in compliance with EC directives, ANSI A92.6 2006, AS1418.10 (int) standards.

With reference to EN 280/2013 static and dynamic tests were verified by:

TÜV SÜD Industrie Service GmbH

Zentralbereich Fördertechnik-Sonderbauten Hebezeuge und Krane

Westendstraße 199

80686 München

Deutschland

Report Number :EG-MRL 049(LUI S.I. 460)

Date : 20/04/2010

Report Number :EG-MRL 050(LUI MINI S.I.W./S.I.E.)

Date : 20/04/2010

Report Number :EG-MRL 051(LUI MINI S.I.)

Date : 20/04/2010

Report Number :EG-MRL 148(LUI MINI HD)

Date : 16/09/2011

Report Number :KP 140(LUI MINI 220)

Date : 16/09/2011

Report Number :EG-MRL 148/1(LUI MINI HD S.I.W./S.I.E.)

Date : 08/01/2012

Report Number 1395588

Date : 28 Sept. 2009

Document: 91008_TB1395588_BRAVI

TUV REFERENCE TUV IS-FSSMUC/sel

Report Number: 883628

Date:04 October 2006

Document: 61004_TB883628_gb

TUV REFERENCE TUV IS-FSSMUC/di-he

Report Number 399823

Date: 10 January 2004

Document: 40318_TB399823 Brav.doc

Tuv reference: BB-FTH-MUC/di-sc

EC CONFORMITY DECLARATION WE

TRADE NAME **BRAVISOL DIVISIONE MECCANICA SRL**
ADDRESS AND HEAD OFFICE S.S. ADRIATICA 16 KM 314,600 – 60022 CASTELFIDARDO (AN)
ITALY
FISCAL CODE AND VAT NUMBER **01234570420**
TELEPHONE – TELEFAX **Tel. +39.071.7819090 Fax +39.071.7819355**
INTERNET SITE www.bravi-platforms.com
MAIL info@bravi-platforms.com

DECLARE UNDER OUR OWN RESPONSIBILITY THAT THE PLATFORM:
HYDRAULIC MOBILE WORK PLATFORM

Model: _____

Serial Number: _____

Year of manufacture: _____

AS DESCRIBED IN THE ATTACHED DOCUMENTATION AND IN OUR ARCHIVES IS IN COMPLIANCE WITH THE EU DIRECTIVES:

-2006/42 Machines – 2004/108 Electromagnetic Compatibility – 2006/95 Low Voltage

STANDARDS AND SPECIFICATIONS:

UNI EN ISO 12100-1 – UNI EN ISO 12100-2 – EN60204/1 – UNI EN ISO 13857 – EN 55011 – EN 50081/2 – EN 50082/2 – EN 280.

NAME AND SURNAME **BRAVI PIERINO**

POSITION **MANAGING DIRECTOR**

DATE _____

NOTIFIED BODY: TUV SUDDEUTSCHLAND BAU UND BETRIEB GmbH

RESIDUAL RISKS

Even if Braviisol Divisione Meccanica srl has done everything possible to manufacture the Platform with the greatest knowledge in its possession on security and consulting all the directives, laws and regulations at its disposal, still exist, even if reduced, some residual risks during the phases of:

Transport and Handling
Maintenance

Therefore, who works in these areas or is responsible for these phases must be a trained person acquainted with the fact that are “dangerous” and as regards the Platform protections category, has not been possible to eliminate them entirely.

The staff in charge with these operations must be always have at disposal and consult the USER AND MAINTENANCE MANUAL.

The user and maintenance manual shows step by step all the necessary indications beginning from the 1.7.4 paragraph (use instructions) of the Annex 1 of the Machinery Directive, and it is specifically required to follow it step by step, in order to avoid clumsy actions which, even if minimal, can cause harm to someone.

EC type-examination certificate

Certificate no.: EG-MRL 049

Notified body: TÜV SÜD Industrie Service GmbH
Westendstr. 199
80686 München – Germany

**Applicant/
Certificate holder:** BRAVISOL DM SRL
S.S. Adriatica, 16 – km. 314,600
60022 Castelfidardo (An) – Italy

Date of application: 2010-01-20

Manufacturer: BRAVISOL DM SRL
S.S. Adriatica, 16 – km. 314,600
60022 Castelfidardo (An) – Italy

Product: Mobile hydraulic elevating work platform

Type: LUI 460
Serial-no. L20101001

Test laboratory: TÜV SÜD Industrie Service GmbH
Prüflaboratorium für Produkte der Fördertechnik
Prüfbereich Maschinen der Fördertechnik
Westendstr. 199
80686 München – Germany

Date and number of the test report: 2010-02-23
EG-MRL 049

EC-Directive: 2006 / 42 / EC

Validity: This certificate is valid until 2015-04-11

Result: The equipment fulfills the safety requirements of the EC-Directive for the respective scope of application stated on page 1 of the annex to this EC type-examination certificate.

Date of issue: 2010-04-12

Certification body for lifts and cranes
Identification number: 0036

C. Rühmeyer
p. p. Christian Rühmeyer



TUV®

EC type-examination certificate

Certificate no.: EG-MRL 050

Notified body: TÜV SÜD Industrie Service GmbH
Westendstr. 199
80686 München – Germany

**Applicant/
Certificate holder:** BRAVISOL DM SRL
S.S. Adriatica, 16 – km. 314,600
60022 Castelfidardo (An) – Italy

Date of application: 2010-03-25

Manufacturer: BRAVISOL DM SRL
S.S. Adriatica, 16 – km. 314,600
60022 Castelfidardo (An) – Italy

Product: Mobile hydraulic elevating work platform

Type: Leonardo – LUI MINI S.I.W./S.I.E.

Test laboratory: TÜV SÜD Industrie Service GmbH
Prüflaboratorium für Produkte der Fördertechnik
Prüfbereich Maschinen der Fördertechnik
Westendstr. 199
80686 München – Germany

Date and number of the test report: 2010-04-20
EG-MRL 050

EC-Directive: 2006 / 42 / EC

Validity: This certificate is valid until 2015-04-19

Result: The equipment fulfills the safety requirements of the EC-Directive for the respective scope of application stated on page 1 of the annex to this EC type-examination certificate.

Date of issue: 2010-04-20

Certification body for lifts and cranes
Identification number: 0036

C. Rühmeyer
p. p. Christian Rühmeyer



EC type-examination certificate

Certificate no.: EG-MRL 051

Notified body: TÜV SÜD Industrie Service GmbH
Westendstr. 199
80686 München – Germany

**Applicant/
Certificate holder:** BRAVISOL DM SRL
S.S. Adriatica, 16 – km. 314,600
60022 Castelfidardo (An) – Italy

Date of application: 2010-03-25

Manufacturer: BRAVISOL DM SRL
S.S. Adriatica, 16 – km. 314,600
60022 Castelfidardo (An) – Italy

Product: Mobile hydraulic elevating work platform

Type: Leonardo – LUI MINI S.I.

Test laboratory: TÜV SÜD Industrie Service GmbH
Prüflaboratorium für Produkte der Fördertechnik
Prüfbereich Maschinen der Fördertechnik
Westendstr. 199
80686 München – Germany

Date and number of the test report: 2010-04-20
EG-MRL 051

EC-Directive: 2006 / 42 / EC

Validity: This certificate is valid until 2015-04-19

Result: The equipment fulfills the safety requirements of the EC-Directive for the respective scope of application stated on page 1 of the annex to this EC type-examination certificate.

Date of issue: 2010-04-20

Certification body for lifts and cranes
Identification number: 0036

C. Rühmeyer
p. p. Christian Rühmeyer



TUV®

Certificate concerning the examination of conformity

Certificate no.: KP 140

Certification body: TÜV SÜD Industrie Service GmbH
Westendstr. 199
80686 München – Germany

**Applicant/
Certificate holder:** BRAVISOL DM SRL
S.S. Adriatica, 16 – km. 314,600
60022 Castelfidardo (An) – Italy

Date of application: 2011-06-10

Manufacturer: BRAVISOL DM SRL
S.S. Adriatica, 16 – km. 314,600
60022 Castelfidardo (An) – Italy

Product: Mobile elevating work platform

Type: LUI MINI 220

Test laboratory: TÜV SÜD Industrie Service GmbH
Prüflaboratorium für Produkte der Fördertechnik
Prüfbereich Maschinen der Fördertechnik
Westendstr. 199
80686 München – Germany

Date and number of the test report: 2011-09-16
KP 140

Test specifications: 2006 / 42 / EC, Annex I
DIN EN 280:2010-02

Validity: This certificate is valid until 2016-09-22

Result: The equipment fulfills the requirements of the test specifications for the respective scope of application stated in the annex, page 1, of this certificate, keeping the mentioned conditions.

Date of issue: 2011-09-23

Certification body for lifts and cranes

I. A. Siegfried Melzer
I. A. Siegfried Melzer



TUV®

EC type-examination certificate

Certificate no.: EG-MRL 148

Notified body: TÜV SÜD Industrie Service GmbH
Westendstr. 199
80686 München – Germany

**Applicant/
Certificate holder:** BRAVISOL DM SRL
S.S. Adriatica, 16 – km. 314,600
60022 Castelfidardo (An) – Italy

Date of application: 2011-06-10

Manufacturer: BRAVISOL DM SRL
S.S. Adriatica, 16 – km. 314,600
60022 Castelfidardo (An) – Italy

Product: Mobile elevating work platform

Type: LUI MINI HD

Test laboratory: TÜV SÜD Industrie Service GmbH
Prüflaboratorium für Produkte der Fördertechnik
Prüfbereich Maschinen der Fördertechnik
Westendstr. 199
80686 München – Germany

Date and number of the test report: 2011-09-16
EG-MRL 148

EC-Directive: 2006 / 42 / EC

Validity: This certificate is valid until 2016-09-22

Result: The equipment fulfills the safety requirements of the EC-Directive for the respective scope of application stated on page 1 of the annex to this EC type-examination certificate.

Date of issue: 2011-09-23

Certification body for lifts and cranes
Identification number: 0036

C. Rühmeyer
Christian Rühmeyer



TUV®

EC type-examination certificate

Certificate no.: EG-MRL 148/1

Notified body: TÜV SÜD Industrie Service GmbH
Westendstr. 199
80686 München – Germany

**Applicant/
Certificate holder:** BRAVISOL DM SRL
S.S. Adriatica, 16 – km. 314,600
60022 Castelfidardo (An) – Italy

Date of application: 2012-07-23

Manufacturer: BRAVISOL DM SRL
S.S. Adriatica, 16 – km. 314,600
60022 Castelfidardo (An) – Italy

Product: Mobile elevating work platform

Type: LUI MINI HD S.I.W. / S.I.E.

Test laboratory: TÜV SÜD Industrie Service GmbH
Prüflaboratorium für Produkte der Fördertechnik
Prüfbereich Maschinen der Fördertechnik
Westendstr. 199
80686 München – Germany

Date and number of the test report: 2012-08-01
EG-MRL 148/1

EC-Directive: 2006 / 42 / EC

Validity: This certificate is valid until 2018-01-27

Result: The equipment fulfills the safety requirements of the EC-Directive for the respective scope of application stated on page 1 of the annex to this EC type-examination certificate.

Date of issue: 2013-01-28

Certification body for lifts and cranes
Identification number: 0036

C. Rühmeyer
Christian Rühmeyer



TUV®

MAINTENANCE SUMMARIZATION TAB

In order to assure the right working of the mobile Platform it is necessary to follow the instructions here below:

MAINTENANCE TYPE	TIME	PAGE
9.1 - Ordinary Maintenance Introduction	always	9.67
9.2 - Safety positioning, lifted basket	maintenance	9.69
9.2a - The basket cannot be electrically lifted - For the LUI MINI S.I. – LUI MINI S.I.W./S.I.E. – LUI MINI HD – LUI MINI HD S.I.W./S.I.E. – LUI S.I. 460. Models	maintenance	9.70
9.2b - The basket cannot be electrically lifted – For the Lui Mini 220 model.	maintenance	9.70
9.3 - Caster Wheel Greasing	6 months	9.71
9.4 - Oil Check and Refill	3 months/150h	9.71
9.5 - Battery Terminals Check	2 months	9.72
9.6 - Battery water Level Check	32 h	9.73
9.7 - Battery Charge Procedure	8 h	9.74
9.8 - Nuts, Bolts and Pins tightening Procedure	1 month	9.75
9.9 - Wiring Check	2 months	9.75
9.10 - Inspections		9.76
9.10a Frequent Inspection “Frequent Inspection Check List ”	3 months	9.76
9.10b Annual Inspection “Annual Inspection Check List ”	1 year	9.77
INDEX		

Content	Page
Part 1 Introductory Informations	1.2
Part 2 Safety Prescriptions	2.13
Part 3 Machine Specifications	3.30
Part 4 Transport and Handling	4.38
Part 5 Control panel	5.48
Part 6 Operations	6.54
Part 7 Shutdown Phase	7.62
Part 8 Cleaning	8.65
Part 9 Ordinary Maintenance	9.67
Part 10 Troubleshooting and Error Codes	10.79
Part 11 Technical Informations	11.86
Part 12 Annex	12.96

1.1 DELIVERY NOTE

The operator must not accept any responsibility of exercise without first having understood his responsibilities shown in this manual and in the ANSI Manual of Responsibilities supplied together with the Platform.

The Platform can be operated only by authorized staff. **It is forbidden to make changes to the Platform without the written consent of the manufacturer.**

The Platform has been manufactured in compliance with the directives:

CEE 2006/42, CEE 2006/95, CEE 2004/108 and has been designed in compliance with the other interested rules and according to the ANSI Standards A92.6 and AS1418.10 (int).

Therefore, it does not present any danger to the operator:

- If used according to the instructions shown in this manual;
- On condition that the technicians, who are charged by the manufacturer, have attended a training course,
- And on condition that the safety devices are kept in constant efficiency.

This sheet is intended to certify that on receipt of the Platform:

- Safety devices are efficient,
- That together with the Platform has been supplied the present manual
- And that the operator takes the responsibility of following it step by step.

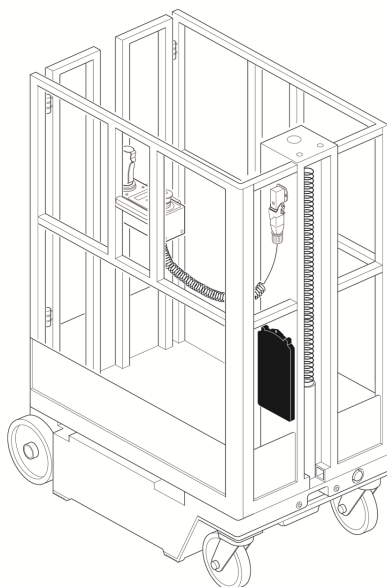
Braviisol Divisione Meccanica srl informs that any modification or tampering of the Platform and/or operations carried out not in compliance with what is written in this manual, especially the non-observance of safety requirements, will invalidate the warranty and the EC declaration of original conformity become null and void.

Remember that:

- All technical values refer to the Platform (see Part 3),
- The drawings and any other document supplied together with the Platform is property of Braviisol Divisione Meccanica srl that reserves all rights and cannot be put at disposal of third parties without its written consent.

The manufacturer hopes that you can take advantage of the multiple functions of the Platform.

It is strictly forbidden any reproduction, even partial, of the text and illustrations. The original copy has been given to the owner together with all of the documents relating to the Platform.



Macchina/Machine

Modello/Modell

Tipo/Type

Matricola/Serial number

Timbro/Stamp

Data/Date

Firma/Signature

1.2 PLATFORM IDENTIFICATION AND SERIAL NUMBER

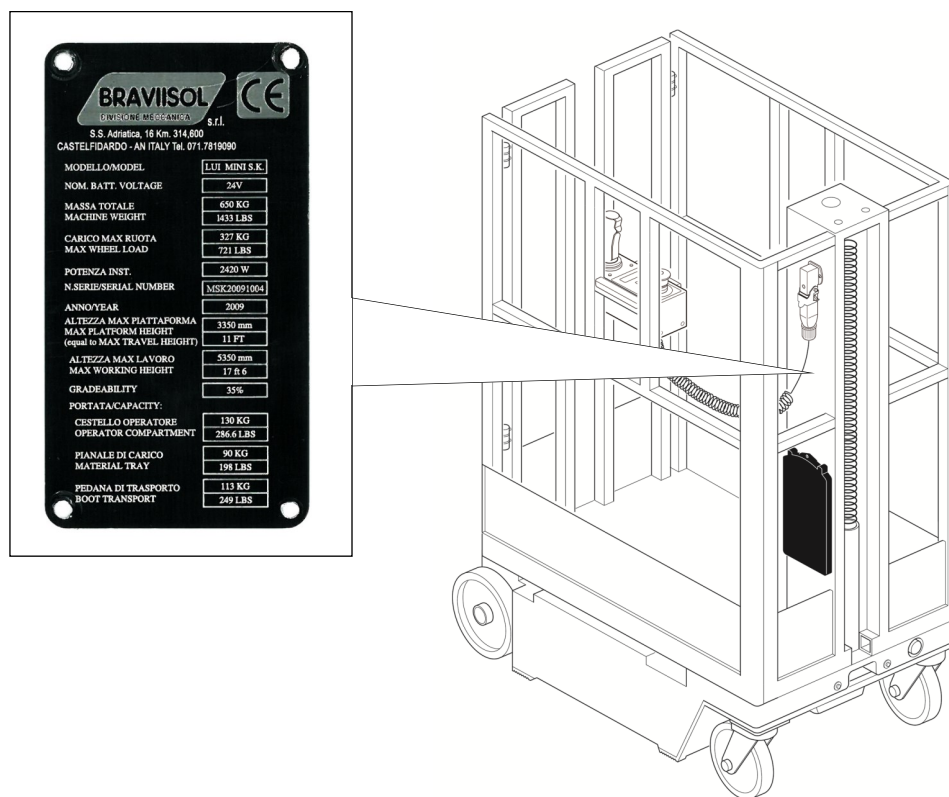
1.2.1

The number of this manual is written at the bottom of each page.

Each Platform has its own number, with the consequent CE marking.

1.2.2

To contact Braviisol Divisione Meccanica srl or its centres of assistance concerning the Platform, please always refer the model and serial number legibly affixed to the identification plate placed on the basket of the Platform.



1.3 GENERAL DELIVERY NOTES

Platforms and their components and/or accessories can be shipped in containers, or on a pallet wrapped in a protective film, or packed in boxes (optional).

Always verify that upon receipt:

- 1 - The packaging is intact
- 2 - The supply corresponds to the order specifications (see bill of lading or packing-list)
- 3 - There is no damage to the Platform or accessories.
- 4 - The safety devices, at the time of delivery, are in perfect efficiency.
- 5 - The present manual has been delivered together with the Platform.
- 6 - The operator accepts the responsibility, point by point, of the following

In case of damages or missing parts, please immediately contact the Manufacturer, his local representatives, the dispatcher or the insurance company, providing detailed information and/or photos.

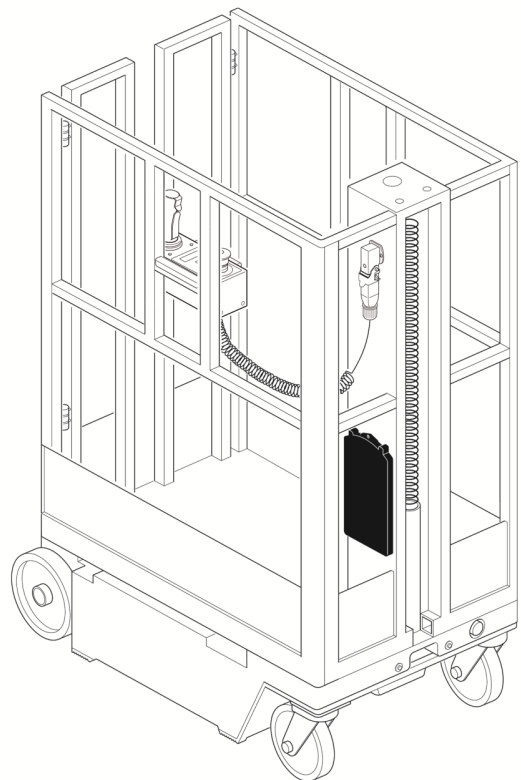
Spare parts and accessories can sometimes be shipped in separate containers.

Descrizione

- 1 Complete Platform
- 2 Loading/unloading device
(optional, only for LUI MINI S.I./S.I.W. , LUI MINI 220).
- 3 User's manual
- 4 Platform original documents:
 - Warranty
 - Delivery note
 - Test sheet
 - TÜV certificate
 - EC declaration
- 5 Optional for LUI MINI S.I.E.– LUI MINI HD S.I.E.
Platform

The raised platform is formed by four pieces:

- N. 01 Side rail (single)
- N. 01 Side rail + N. 02 Front rails
- N. 01 Walking surface basement
- N. 01 Ladder



1.4 LIMITED WARRANTY—Warranty Statement

IF THE WARRANTY IS NOT INCLUDED IN THE SALES CONTRACT, THE FOLLOWING GUIDELINES APPLY TO THE MACHINE WARRANTY.

The Manufacturer BRAVIISOL SRL warrants that all new units of equipment manufactured and sold by it conform to the Company latest specifications. Moreover, Mast and hydraulic cylinder carry a Special Warranty of 10 years. The manufacturer warrants its equipment to the original purchaser against defect in material and/or workmanship under normal use and service for 3 years from date of registered sale or date the unit left the factory if not registered. Excluded from such warranty is the battery(s) which carries 1 year warranty from described purchase date. Warranty claims within such warranty period shall be limited to repair or replacement of the defective part in question. The manufacturer will send, free of charge, any component recognized as having faulty design or defective construction. The labor to perform the necessary repair or replacement and the travel expenses involved carry a warranty of 1 Year from described purchase date, based on the Manufacturer's then current flat rate.

Warranty claims are valid ONLY providing the defective part in question is shipped prepaid to the Manufacturer and is found upon inspection by the Manufacturer to be defective in material and/or workmanship. Furthermore, warranty claims can be accepted ONLY when all information specifically required by the Manufacturer (such as Serial Number) are provided.

The manufacturer reserves the right to replace, repair, exchange, or to provide a new, used or rebuilt component, assembly, sub-assembly, or weldment based on its unquestionable judgment.

THIS WARRANTY POLICY DOES NOT COVER DAMAGES CAUSED BY:

1. Shipment
2. Misuse of unit, including operation beyond Factory established limits, loads and/or specifications.
3. Natural disasters (such as flood, fire, wind and lightning)
4. Failure to properly service and maintain the unit in accordance with the Company manuals or Factory Service Bulletins.

BRAVIISOL DOES NOT ACCEPT ANY RESPONSIBILITY FOR:

1. Any part requested for work that was tampered with.
2. Unauthorized alterations or modifications to the unit carried out without being agreed upon in writing in advance with the manufacturer.
3. Labor on consumable items, such as tire, batteries
4. Any indirect incidental, consequential or special damage (including without limitation to loss and profits, loss of revenue, cost of capital, cost of substitute equipment, downtime, examination fees, claims of third parties, and injury to person or property) based upon any claim of breach of warranty, breach of contract, negligence, strict liability in tort, or any legal theory.

ELECTRICAL COMPONENTS ARE COVERED BY THE WARRANTY UNDER THE FOLLOWING CONDITIONS

The battery is properly connected for re-charge, according to the specifications of this manual and/or electrical drawing provided by the Manufacturer.

PROCEDURE OF THE WORKS COVERED BY THE WARRANTY:

- The manufacturer must be notified of all claims covered by the warranty within 48 hours of the anomaly, in writing or by fax (not only verbally) and as detailed as possible.

Warranty claims should be forwarded to your nearest local distributor or directly to the Manufacturer:

BRAVIISOL Divisione Meccanica S.r.l.

S.S. 16 Adriatica km. 314,600

60022 Castelfidardo (AN), Italy

Tel. +39.071.7819090 Fax +39.071.7819355 info@bravi-platforms.com

- The manufacturer will confirm, in writing or by fax, eventual acceptance of the covered intervention carried out by the customer or will provide guidance of his own technicians.
- Any defective material replaced by the customer (authorized by the manufacturer) must either be held 120 days so that the manufacturer can question or verify defective material. If needed defective parts will be sent back to the Manufacturer.
- If required, please, take photographs of the defective part and of the area where the machine has been operated. This is both to prevent unpleasant controversies and to improve the quality, warranty, and safety of our machines.

THIS WARRANTY STATEMENT IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. ALL SUCH OTHER WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXCLUDED. No employee, dealer, Sales Representative, or other person purporting to act on behalf of BRAVIISOL DM SRL is authorized to alter the terms of this warranty, or in any manner assume on behalf of the Manufacturer any liability or obligation which exceeds BRAVIISOL DM SRL obligations under this warranty.

1.5 PLATFORM DESCRIPTION

1.5.1 Platform description

With "Platform" we intend the set of Platforms

- LUI MINI S.I.
- LUI MINI S.I.W./S.I.E.
- LUI S.I. 460
- LUI MINI 220
- LUI MINI HD
- LUI MINI HD S.I.W./S.I.E.

1.5.2 Purpose and product description

The machine is an aerial work platform with compact dimension designed for an easily working and for the operator safety. The purpose of the Platform is to bring the necessary personnel their tools and materials on the work position. It has been manufactured to solve different users' difficulties as: painters, electricians, hydraulics, false ceilings installers, manufacture industrials as they must work at very high heights (see Part 3 "Specifications").

Safety is our priority.

The Platform eliminates the necessity of scaffolds, scissor lifts. Nor stairs or stands. It is possible to easily work on safety, in a speed and efficient way.

Its unique design allows to use very narrow areas. Little lifts, narrow entrances, passages, mezzanines and restricted work areas, these are only some of the different places where the Platform can work.

The transport represents another key factor.

Light, compact and easily loadable on vans, tracks or pickups, the Platform can be operated or dandled only by a person.

The Manufacturer has made possible to lengthen the work surface (see Part 3 "Specifications"), so the operator has a bigger work area, nevertheless it stands firm.

The Platform is provided with a battery charger which allows to recharge batteries through the connection of a simple cable, avoiding loss of time and a more safe work.

A characteristic of the lifting column is that it does not need particular maintenance.

1.5.3 Improper use

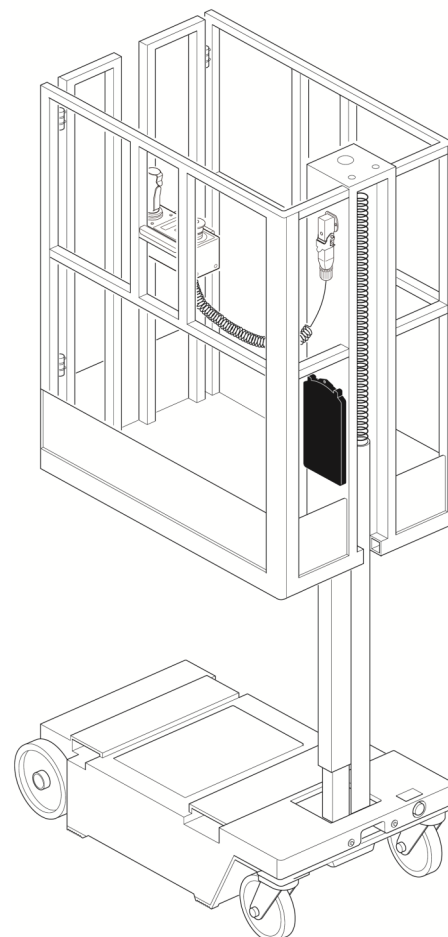
Any other use different from the provided use is to be considered improper.

1.5.4 Reasonably expected improper use

It can happen that some users use the Platform as a crane, please note that the Platform has been designed only to be used as provided and any other use is to be considered improper.

1.5.5 Area of use

The Platform can be used in closed areas, except the LUI MINI S.I.W. and LUI MINI HD S.I.W. that can work outside.



2.1

INTRODUCTION TO THE SAFETY PRESCRIPTIONS

The BRAVIISOL DIVISIONE MECCANICA SRL has designed the Platform to be safe and reliable. It is designed to place the personnel together with the equipment and materials on aerial work positions.

The owner/user/operator of the Platform does not accept any responsibility when using the Platform without an adequate training period.

The ANSI 92.6-2006 standards identify all the requirements of all parties who can be involved in the use of the self-moving working Platform. The Responsibilities Manual A92.6-2006 is considered integral part of this Platform and it is inserted in the proper seat of the Platform.

To ensure a safe use it is necessary to carry out frequently and yearly inspections of pre-starting, as specified in Section 6.1 of the ANSI A92.6-2006 Standard, at fixed intervals as prescribed by the same Standard, in accordance with the recommendations of Braviisol Divisione Meccanica srl expressed in the attachment of the User and the Assistance Manual.

2.2

CONVENTIONAL SYMBOLS AND THEIR MEANING

During the consultation of this user and maintenance manual, and on the Platform itself, you will find some symbols, color coding and signaling words, which have a particular meaning.

SAFETY ALERT SYMBOL

This symbol is used to alert personnel to potential personal injury hazards. Strictly obey all safety messages that follows this symbol to avoid possible serious injury or death.

DANGER— White font on a red Background

It indicates the presence of an imminent hazardous situation which, if not avoided, *will* result in death or serious injury.

WARNING—Black letters on a orange background

It indicates the presence of a potentially hazardous situation which, if not avoided, *could* result in death or serious injury.

CAUTION—Black Letters on a yellow background

It indicates the presence of a potentially hazardous situation which, if not avoided, may cause minor or moderate injury or damage to the equipment.

NOTICE—White letters on a green or background

It indicates maintenance or operation information



CAUTION! DANGER OF ELECTROCUTION

Warns the staff in charge that by not carrying out the operation described according to the safety precautions that apply they run the risk of an electric shock.

WARNING— GENERIC RISK

Warns the staff in charge of any potential physical damage incurred if the operation described is not carried out according to the safety precautions that apply.

NOTE

Draws the attention of the staff in charge to some relevant or important information.

WARNING

Draws the attention of the staff in charge to some procedures that could cause light personal injuries or damage to the machine if not respected.

OPERATOR OR MACHINE DRIVER

Refers to qualified staff, i.e. staff having specific skills, inasmuch as the operations are entirely manual and will therefore require all of the driver's attention to ensure the best quality results.

It is therefore strictly forbidden to the operator to carry out any operation that would otherwise be the responsibility of the maintenance technician.

MAINTENANCE TECHNICIAN

Qualified technician who can operate the machine under normal conditions of use and carry out all adjustment, maintenance and repair interventions needed on mechanical parts.

However this person is not qualified to carry out interventions on live electrical plants.

ELECTRICAL TECHNICIAN OR SKILLED PERSON

(See EN 60204 paragraph 3.55)

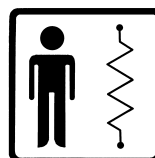
Qualified technician who can drive the machine under normal conditions of use and carry out all electrical adjustment, maintenance and repair interventions. This person can work on live electrical cabinets and boxes.

PERSONAL PROTECTION

When one of the symbols appearing next to the description is found, the operator must absolutely be equipped with safety wear because of the implicit hazard.

EXTRAORDINARY MAINTENANCE OPERATIONS

Any maintenance intervention highlighted by this symbol must to be required to the authorized dealer Braviisol Divisione Meccanica srl.

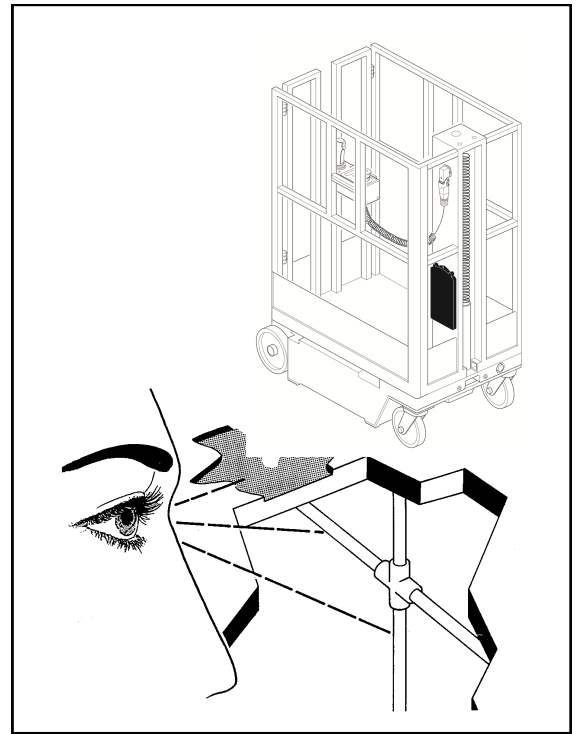


2.3

Before using the Platform, the operator must make sure that:

- The floor, where it will be used, is sufficiently leveled (leveled and without holes)
- Can support the weight (see Chapter 3 Specifications)
- The environment is closed and well lit

The machine model LUI MINI S.I.W. and LUI MINI HD S.I.W. can be operated outdoor, with good lighting conditions, on flat, uniform floors, when the wind speed does not exceed 12,5 m/second.



2.4

The personnel in charge of using and moving the Platform must always wear work gloves, safety shoes, helmet and belt.

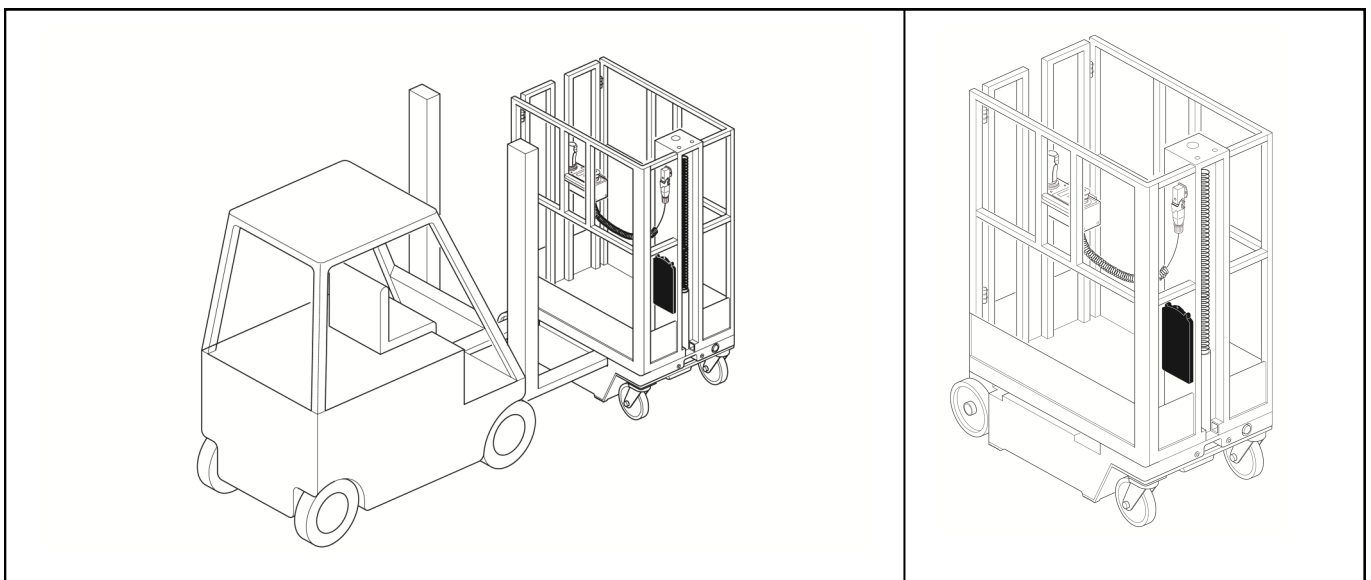


2.5

As regards all the moving operations of the packaged Platform please see Part 4.

In any case, you have to:

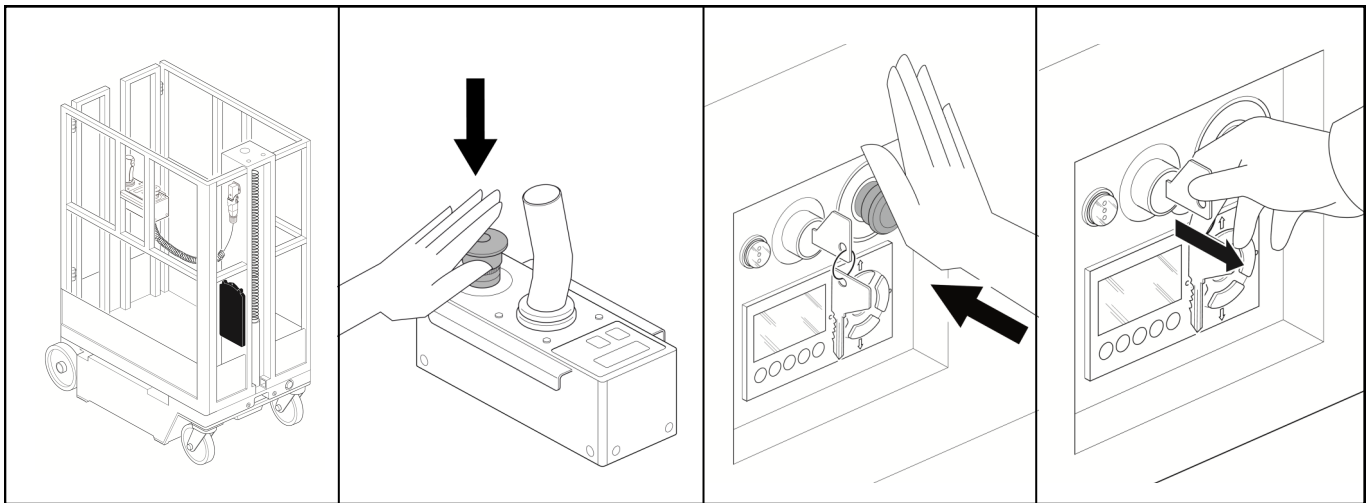
- **Lift it with the basket completely lowered.**
It is absolutely forbidden to lift it up, even if a little, with the column to operate.
- Lift it up at no more than 30 cm from ground (unless obstacles)
- Move it very slowly.
- The operator must look out that there are no people, animals or things on the way of the transport and that there are no holes in the floor.



2.6 “ZERO”POWER CONDITION: DISCONNECTION FROM POWER SOURCE

Before performing any cleaning, maintenance and lubricating operation, it is necessary to bring the Platform to the Zero Power Condition, that is:

- Platform completely lowered (see PART 5)
or, in case of maintenance, with the basket locking device on.
- The emergency buttons pressed .
- The **Q2** Key switch must be removed from the Ground module and handed over to the Production Manager.



2.7 CAUTION! DANGER OF ELECTROCUTION

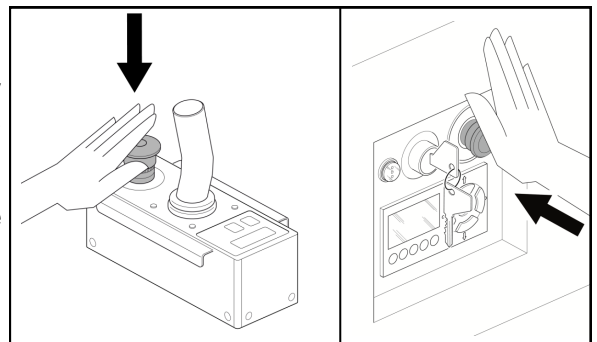
Only a licensed electrician can intervene on the electrical system and carry out the necessary maintenance, but always only bringing the Platform to the Zero Power Condition. It is absolutely forbidden to tamper with the electrical system.



2.8

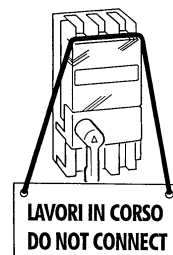
If any mishap arises when using of the Platform please immediately press the STOP/EMERGENCY button. Please remember that the STOP/EMERGENCY button stops immediately all the moving parts, so you have to pay the maximum attention especially when the Platform is lifted up.

Moreover, please read in the Part 4 “Shut down” all the ways to have the Platform stopped.



2.9

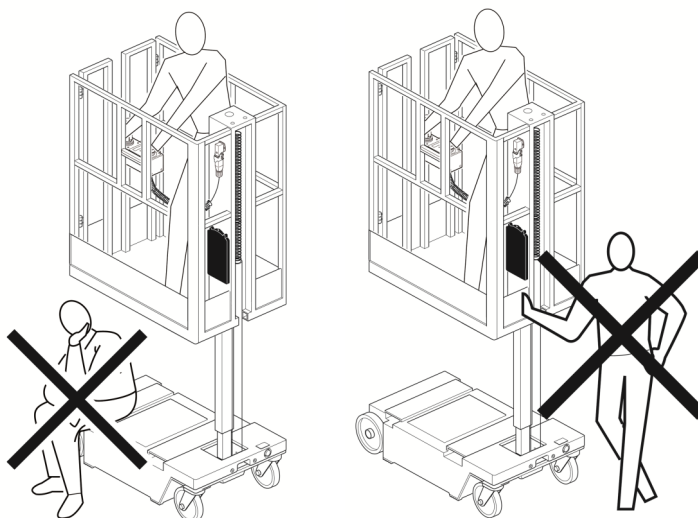
If, in case of extraordinary interventions, it would not be possible to bring totally the Platform to the Zero PowerCondition, please signal work in progress by placing the sign on the Platform.



2.10

Never lean or sit for any reason on any part of the Platform, whether it is in the phase of the productive cycle, or in the emergency state or in the Zero Power Condition.

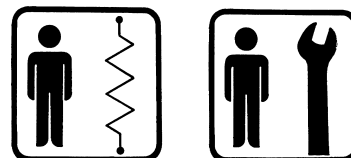
The operator must be careful, physically fit, and does not be under the influence of alcohol or drugs which can distort sight, hearing, attention and reactions.



2.11

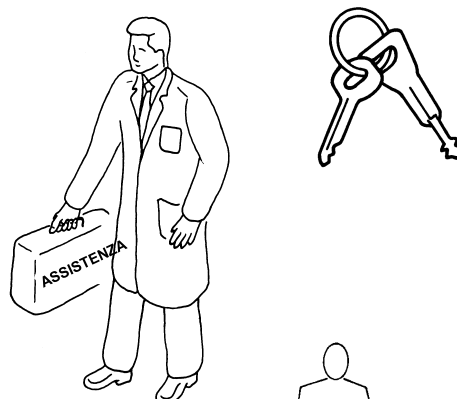
Only highly qualified and trained personnel, who has attained a practical course at the Manufacturer or its authorized Distribution centres, enabling him to use the Platform, can use it.

Besides, he must have read and understood all the safety prescriptions and content of this Manual.



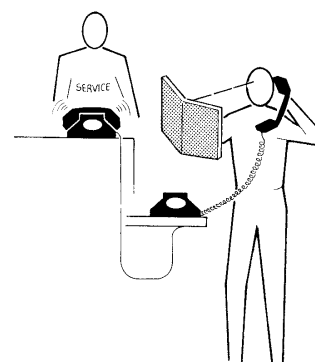
2.12

The maintenance of the Platform should be carried out only by the trained Electric Maintenance or Maintenance Technician, who has attained a practical course at the Manufacturer or its authorized Distribution Centers, enabling him to use the Platform. Besides, he must have read and understood all the safety prescriptions and content of this Manual.



2.13

The keys to drive the Platform shall be always handed over the Production Manager when the Platform is not used.



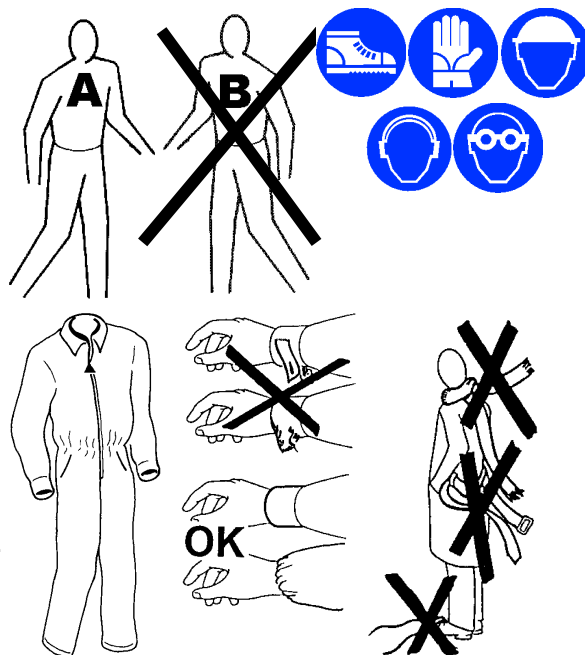
2.14

The use, cleaning and maintenance must be strictly performed, unless otherwise indicated, by a single operator and never by MORE PEOPLE.

The operator must always wear all work safety protections. Moreover he has to:

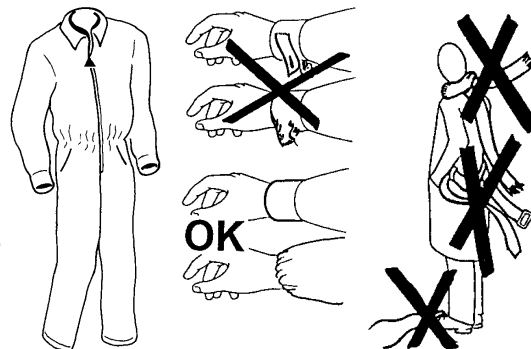
- Wear a work overall closed at the wrists.
- In case of long hair he has to tie them.

He never has to wear objects and/or fluttering and/or tore clothes (as for example: necklaces, watches, rings, bracelets, scarves, ties, etc.).



2.15

Never temper with or restrain or disconnect the micro-switches or other safety devices, for no reason, nor create by-pass or use them for purposes different from those established and for those they have been installed.



2.16

Caution Risk of Falling

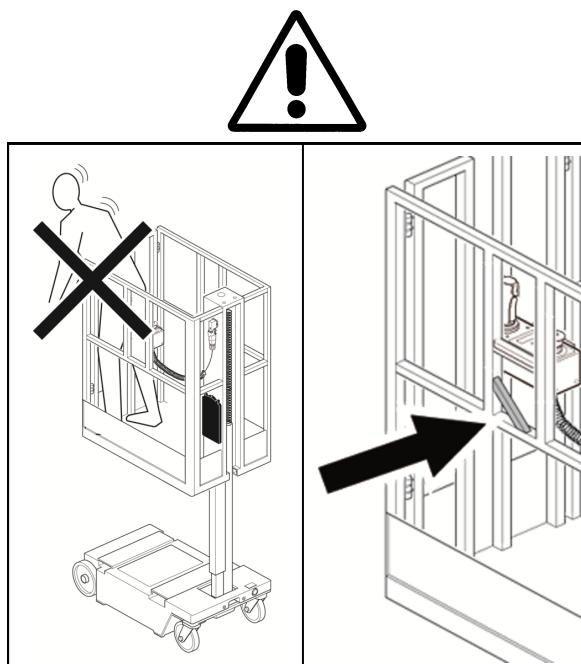
The guardrail system around the perimeter of the platform is the fall protection system for self propelled elevating platforms, as per the American National Standards Institute ANSI/SIA A92.6

Standard. It is prohibited to use this machine with any portion or all of the guardrails removed.

Lanyard anchorage points on this type of equipment are not required to conform to the applicable ANSI/SIA Standard.

THE IMPROPER USE OF FALL ARREST SYSTEMS MAY CAUSE MACHINE TO TIP RESULTING IN SERIOUS INJURY OR DEATH.

However, if anchorage points for lanyard attachments are required by site authorities or other regulations, the anchorage points on this machine are recommended to be used for working positioning restraint of personnel only. Lanyard lengths are to be determined by operator/owner to restrict the operator to the confines within the guardrail System.



2.17

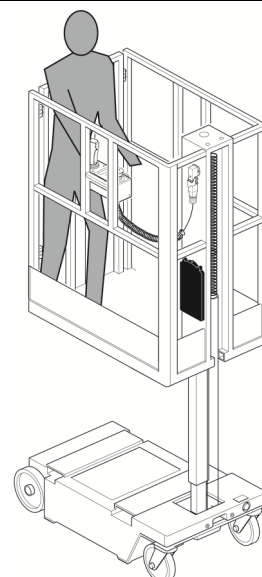
When using the Platform the correct position, in which the operator must stand, is in front of the push-button panel.

From that point the operator can observe the operating space of the Platform and, in case, turn away people who are exposed.

It is strictly forbidden to lean out of the parapet of the Platform.

2.18

Please remember, that after each cleaning, lubricating, adjustment and maintenance intervention all safety devices must be reinstated and all the safety carters reassembled and/or closed.



2.19

At the end of the maintenance or repair, before having the Platform moving, verify that there are no tools, rags or other materials left in the spaces containing the parts in motion.

2.20

The first installation must be done by the Manufacturer and it is strictly forbidden to carry out any kind of unauthorized intervention.

2.21

Before using the machine the operator must check all the operations describe in the Part 6 "Operations".

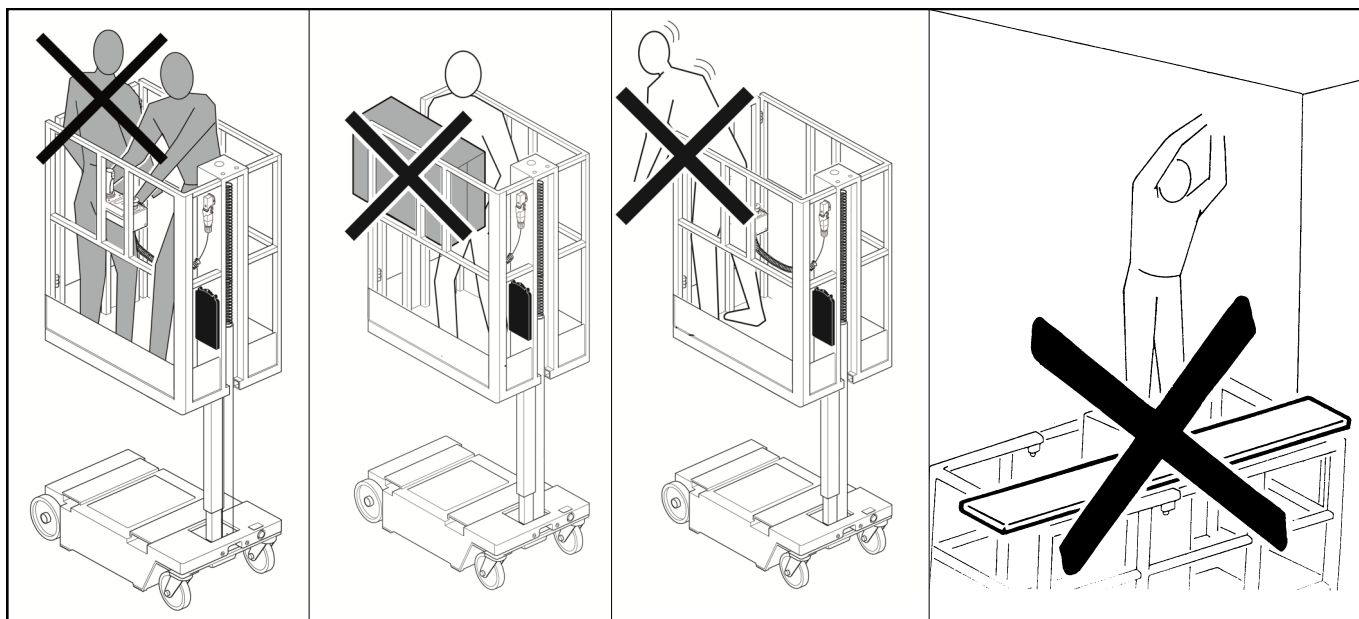
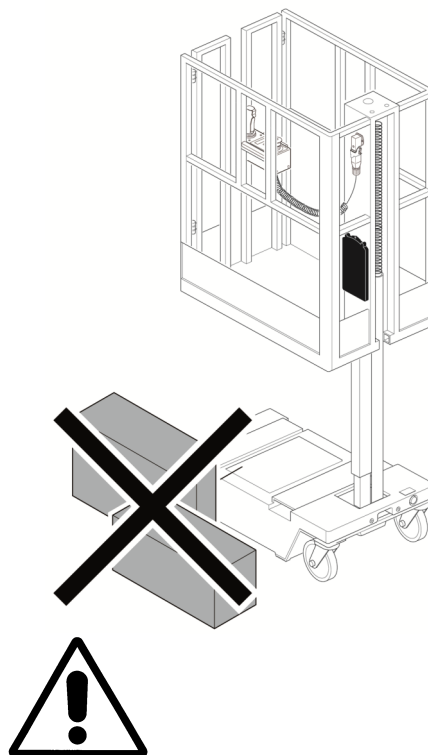
2.22

Caution– Risk of fall

It's forbidden:

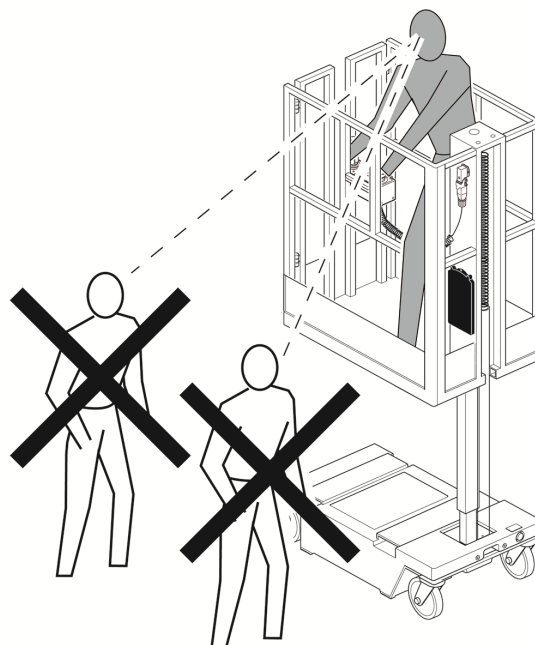
- To let go on the Platform more than a person, (except for models LUI MINI SI ANSI and LUI S.I. 460 where can go on two persons).
- exceed the limits for which the platform is certified and / or pre-set (see Part 3).
- Use stands, staircases, bridges or any other means to lift again the trampling floor.
- Loading and unloading operations when the Platform is raised

It's absolutely forbidden to load goods on the basket from an upper position



2.23

It is to be considered dangerous the zone within two meters from the Platform. The operator must be sure that there are no standing or passing people, animals, things exposed in this area and that there are no obstacles both in the lower part of the Platform (in the ground), and in the higher (as tie-rods, columns, rods or other air barriers).



2.24

The operator must constantly carry out the maintenance operations (Part 9)

2.25

Be careful never hook yourself to an adjacent structure while you are on the Platform.

2.26

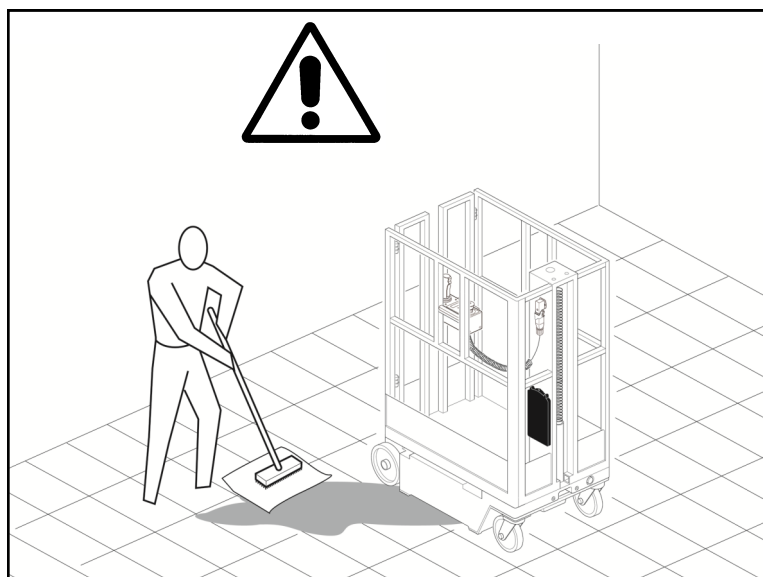
Caution – Risk of fall

Make sure before using it, that the entrance to Platform is well closed.

2.27

Caution – Risk of Overturning

During the movements ahead or back, the operator must constantly make sure that there are no exposed persons, besides must also be sure that the floor is clean, without holes, dips, inclinations or objects.



2.28

The additional load of the Platform **MUST NOT**:

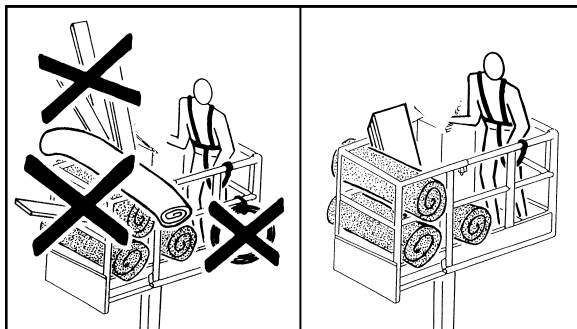
- Exceed the working load limit (See Part 3, Specifications)
- Stick out from the basket, but must be well balanced.

2.29

It is strictly forbidden to use the Platform as a crane

2.30

The operator must monthly check the state of tightening of **ALL** the screws and if necessary replace them (Section 9.8 Maintenance).



2.31

Caution Risk of Electrocution.

It is forbidden use the Platform near no protected voltage power lines.

The Platform and the fence are not electrically isolated.

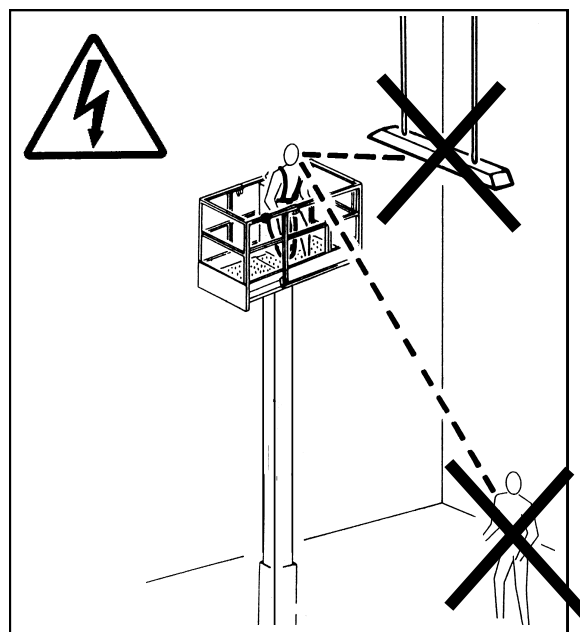
Keep a distance of at least 3 m (10 ft) between the parties of the machine and the occupants, with their relative tools and equipments, and a power line or equipment provided with a electric charge up to 50.000 volts.

It is possible to reduce the minimum safe operating distance in presence of insulating barriers installed to prevent contacts and if these barriers are set to the voltage of the power line to be protected.

The barriers should not be a part of the machine or be connected to it.

The minimum safe operating distance should be reduced within the provided operating dimensions of the insulating barrier.

This distance should be determined by a qualified person in accordance with the company, local and government regulations regarding the conduct of the work near equipments under voltage.



VOLTAGE RANGE (FROM PHASE TO PHASE)	MINIMUM OPERATIONAL SAFETY DISTANCES m (ft)
From 0 to 50 kV	3 (10)
From over 50 kV to 200 kV	5 (15)
From over 200 kV to 350 kV	6 (20)
From over 350 kV to 500 kV	8 (25)
From over 500 kV to 750 kV	11 (35)
From over 750 kV to 1000 kV	14 (45)
NOTE: These minimum operational safety distances are to be applied except in cases in which company, local or governmental regulations are more stringent.	

2.32

DO NOT REPLACE CRITICAL ITEMS FOR THE STABILITY OF THE PLATFORM WITH ARTICLES WITH DIFFERENT WEIGHTS AND SPECIFICS.

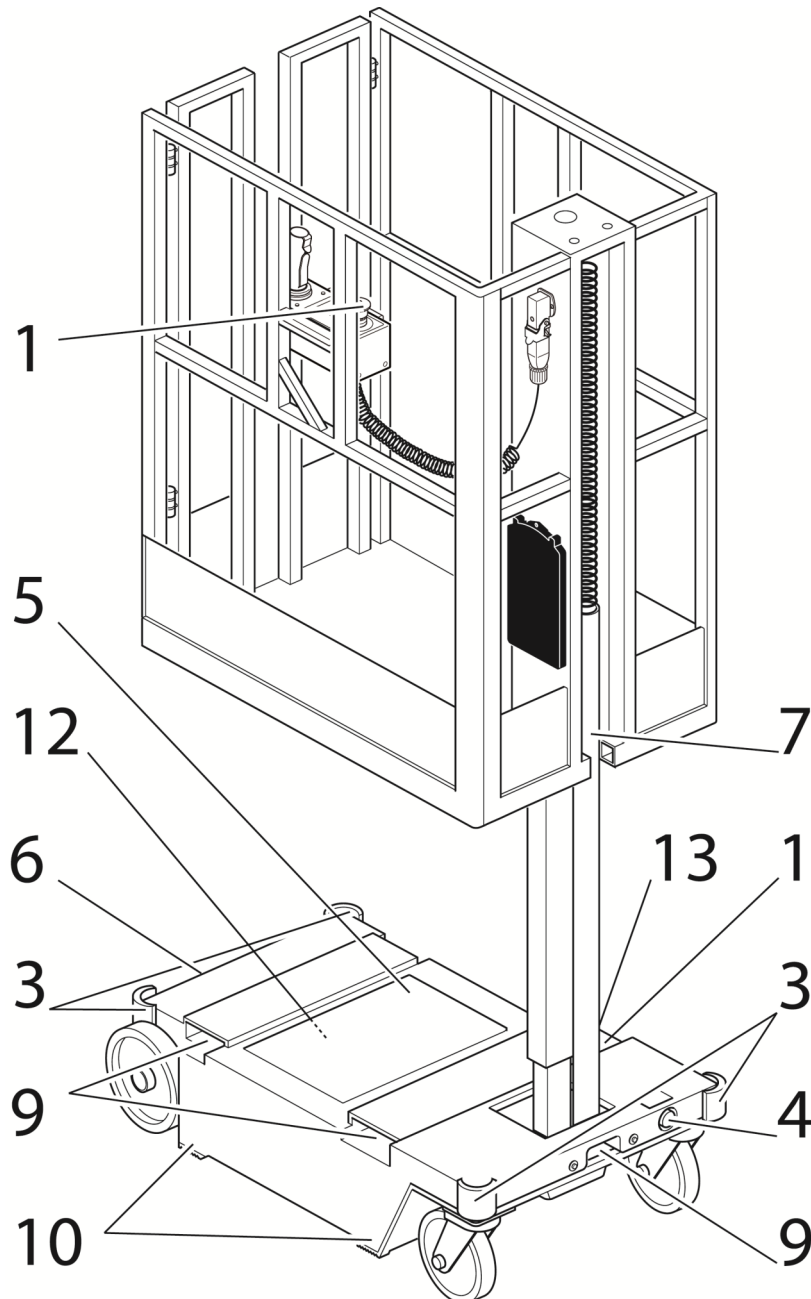
Battery total weight: 42 kg (LUI MINI each battery 21 Kg); 120 Kg (LUI 460 each battery 30 Kg).

To replace all broken or worn parts, use only original spare parts.

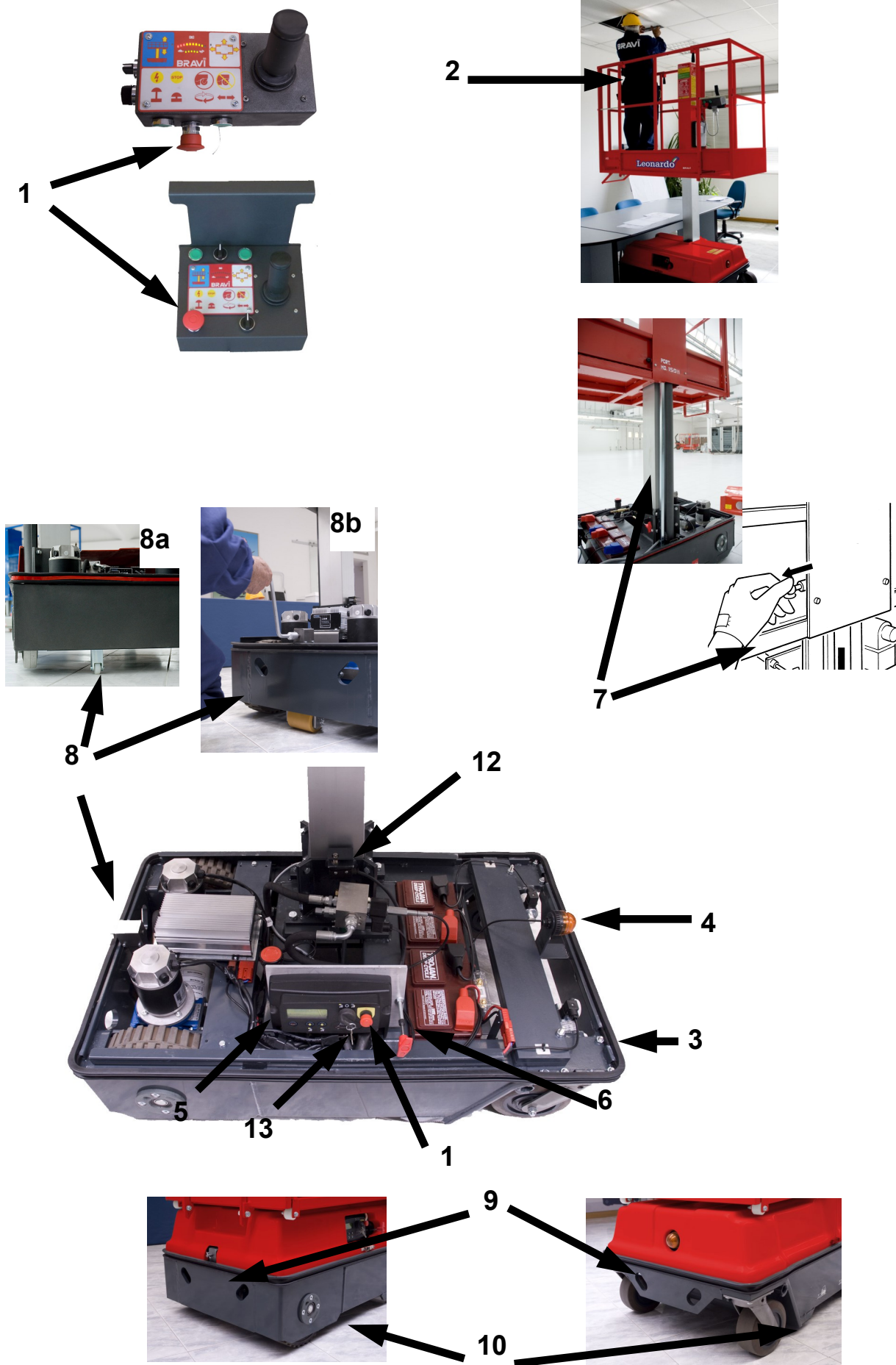
2.33 Safety features:

- | | |
|-----------------------------|---|
| 1 Emergency stop button | 8 Lifting device for emergency manual handling(8a standard;8b optional) |
| 2 Basket slide stop devices | 9 Tie down and lifting points |
| 3 Rubber bumper | 10 Pothole protection system |
| 4 Flashing /acoustic device | 11 Overload system |
| 5 Tilt sensor device | 12 Limit switch |
| 6 Manual emergency descend | 13 Key switch |
| 7 Basket blocking bar | |

LUI MINI 220



LUI MINI S.I. - LUI MINI S.I.W. / S.I.E.



LUI S.I. 460



1

13



7

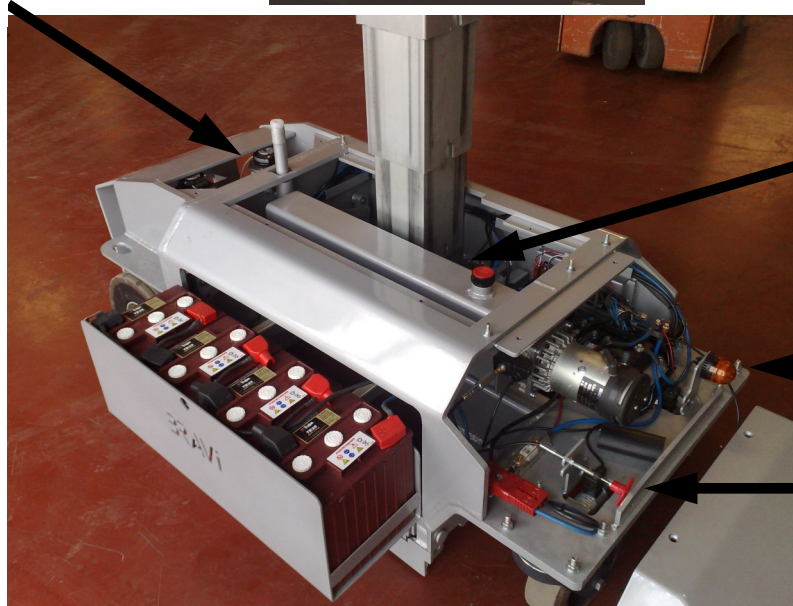
1



7

1

5



12

4

6



9



10

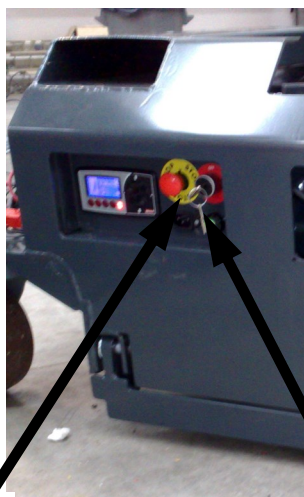


2



11

LUI MINI HD—LUI MINI HD S.I.W./S.I.E.



10

PART 2 SAFETY PRESCRIPTIONS
2.34

Do not temper with or voluntarily damage the safety screens, end strokes, nor remove or hide warning labels. In case of damage or illegibility of the labels please ask immediately for their change.

N°	ANSI/CE DESCRIPTION
001	Prescription for a safe use of the platform WARNING
001	Rated Workload, Side Load, Rated number of occupants
001	WARNING not to replace component critical to stability + total battery weight
001	WARNING – Total Batteries weight
001	ANSI Compliance - Section 4
001	WARNING: entry close before operating the platform/guardrail properly in place
001	DANGER tip-over hazard
002	DANGER – Machine not electrically insulated – Prescription of distances from power lines
002	WARNING – Check list before every use
002	Notice of the Inspections required
002	WARNING – not to replace component without written authorization of the Manufacturer
003	DANGER rated Workload, Side Load, Rated number of occupants
005	WARNING: Batteries produce explosive gas. Charge Batteries in well ventilated area. (..)
009	Emergency decal
010	Lanyard anchorage point decal
011	Forklift point
012	Manual Inside
013	Stop-Emergency

001 CE
001 ANSI
002 CE
002 ANSI

PERICOLO

Tenersi lontano più di 3 mt. da linee elettriche aeree attive.
 Ricaricare la piattaforma in ambienti ventilati, lontano da fonti di calore e/o sostanze infiammabili.

ATTENZIONE

Questa piattaforma può essere azionata solo da personale qualificato, autorizzato, che abbia letto e ben compreso tutto il Manuale di Uso e Manutenzione in dotazione.
 Il manuale deve essere sempre conservato in buono stato e a disposizione immediata dell'operatore della piattaforma.

Per un utilizzo sicuro della piattaforma rispettare sempre le seguenti prescrizioni:

- 1) Non utilizzare la piattaforma fino a quando non ne sono state verificate le buone condizioni. Prestare attenzione a ruote e dispositivi di sicurezza.
- 2) Non usare una piattaforma danneggiata o difettosa.
- 3) Far effettuare sempre ogni operazione di manutenzione o riparazione da personale qualificato e autorizzato.
- 4) Non trasportare o sollevare carichi instabili o insicuri o sporgenti dalla piattaforma.
- 5) Non sovraccaricare la piattaforma. Controllare la portata consentita sulla targhetta identificativa della piattaforma o sul Manuale di Uso e Manutenzione.
- 6) Quando la piattaforma viene lasciata inoperosa o sotto carica, fare in modo di posizionarla con il cestello totalmente abbassato e con le estensioni ritirate.
- 7) Utilizzare la piattaforma solo su superfici piane, livellate, di adeguata consistenza e adatta a sostenere il peso della piattaforma più il carico.
- 8) Essendo la piattaforma una macchina guidata da un operatore, essa dovrà essere usata esclusivamente e passivamente da coloro che siano stati autorizzati e siano in condizioni fisiche tali da non causare danni a persone o cose presenti nell'area di manovra delle operazioni.

LISTA DI CONTROLLO

Prima di ogni impiego di lavoro:

- Controllare la condizione delle ruote
- Controllare il corretto funzionamento di tutti i dispositivi di sicurezza
- Controllare la funzionalità corretta di tutti i meccanismi elettrici, meccanici ed idraulici
- Accertarsi che il Manuale di Uso e Manutenzione sia allegato alla piattaforma.

Al termine della giornata di lavoro:

- Ricaricare la batteria collegando il caricabatteria con la opportuna tensione richiesta.
- Controllare il livello dell'acqua nella batteria
- Effettuare la pulizia e le minime operazioni di manutenzione
- Lasciare la piattaforma con il cestello totalmente abbassato e con le estensioni ritirate

WARNING

PLATFORM ENTRANCE MUST BE PROPERLY CLOSED AND ALL GUARDRAILS PROPERLY IN PLACE AND SECURED BEFORE OPERATING FROM PLATFORM

FAILURE TO FOLLOW INSTRUCTIONS COULD CAUSE DEATH OR PERSONAL INJURY

ANY MODIFICATION ON THIS MACHINE WITHOUT THE EXPRESS WRITTEN CONSENT OF THE MANUFACTURER IS PROHIBITED.

DO NOT REPLACE BATTERIES OR WHEELS TO MACHINE WITHOUT THE INSTRUCTIONS OF THE MANUFACTURER OR A QUALIFIED PERSON.

Total Battery weight: 40 kg - 90 lbs (Each battery 20 kg / 45 lbs)

BEFORE EVERY USE:

- Read the User Manual and the Responsibility Manual, understand and comply with the instructions contained in them.
- Do not use the control system while the machine is in motion.
- Check the machine for any damage or unscheduled variation from factory standard condition.
- Report the potential issues.
- Check for battery fluid levels and proper fluid level - add distilled water if necessary.
- Check and test all the safety and personal protection devices.
- Check operating and emergency controls for any malfunctions.
- Check all the hydraulic, electrical and mechanical components for damage, proper function or missing parts.
- Report the use and abuse for damage, misuse and use.

AT THE END OF EVERY USE:

- Recharge the battery connecting the battery charger with the required proper location.
- Check the level of water in the battery.
- Clean the platform up and the extension mechanisms required, not built in the User Manual.
- Comply with the platform and utilization instructions.

This platform can be used only by qualified and authorized staff who has read and understood the user's and maintenance manual supplied with it. The manual must always be kept in good condition and immediately available to the operator.

Do always observe the following prescriptions in order to safety use the platform:

- 1) Do not use the platform until you have checked its good state. Pay attention to the wheels and safety devices.
- 2) Do not use a damaged or faulty platform.
- 3) Maintenance inspection shall be completed by a person trained and qualified on the maintenance of the machine.
- 4) Do not transport or lift any unstable or unsuitable or protruding loads.
- 5) Do not overload the platform. Check the capacity on the identifying label of the platform or on the user's and maintenance manual.
- 6) When the platform is set in use or it is to change, lower it completely. Fully extend the platform extension and do not use the platform while over the levelled base, strong enough to bear the weight of the platform and its loading.
- 7) Do the platform is driven by an operator, it has to be driven only and passively by those authorized, and in such physical condition as not to cause any damage to people or things already present in the area of intervention.

THIS MACHINE COMPLIES WITH ANSI STANDARD A92.6 2006

ATTENZIONE

$F_H \leq 200N$

$F_H \leq 180 \text{ kg}$

DANGER

DO NOT OPERATE MACHINE NEAR POWER LINES. THE PLATFORM AND ENCLOSURES ARE NOT ELECTRICALLY INSULATED.

You must maintain a safe distance of at least 10 feet (3 meters) from overhead power lines and apparatus carrying over 300 volts up to 5000 volts in accordance with applicable government regulations. See User Manual for details.

YOU MUST NOT OPERATE THIS MACHINE:

UNLESS YOU HAVE BEEN AUTHORIZED TO USE AND TRAINED IN THE SAFE OPERATION OF THE MACHINE.

TRAINING INCLUDES COMPLETE KNOWLEDGE OF THE SAFETY AND OPERATION INSTRUCTIONS CONTAINED IN THE MANUFACTURER'S MANUAL, AND MANUAL OF RESPONSIBILITIES. YOUR EMPLOYER'S WORK RULES AND APPLICABLE GOVERNMENTAL REGULATIONS.

AN UNAUTHORIZED AND UNTRAINED OPERATOR SUBJECTS THEMSELF AND OTHERS TO DEATH OR SERIOUS INJURY.

ELECTROCUTION HAZARD

THIS MACHINE IS NOT INSULATED.

THIS MACHINE DOES NOT PROVIDE PROTECTION FROM CONTACT WITH OR PROXIMITY TO AN ELECTRICAL SOURCE.

YOU MUST MAINTAIN A CLEARANCE OF AT LEAST TEN (10) FEET BETWEEN ANY PART OF THE MACHINE OR ITS LOAD AND ANY ELECTRICAL LINE OR APPARATUS CARRYING UP TO 50,000 VOLTS. ONE FOOT OF ADDITIONAL CLEARANCE IS REQUIRED FOR EVERY ADDITIONAL 10,000 VOLTS OF LINE.

DEATH OR SERIOUS INJURY WILL RESULT FROM CONTACT OR INADEQUATE CLEARANCE

TIP-OVER HAZARDS

DO NOT DRIVE NEAR DROP-OFFS, HILLS, OPEN ELEVATOR SHAFTS, AND LOADING DOCKS.

DO NOT ELEVATE PLATFORM ON UNLEVEL OR SOFT SURFACES.

DO NOT DRIVE ON ROOF SURFACES WHICH ELEVATED.

DO NOT FINE PLATFORM ON SLOPE, OR DRIVE OVER SLOPE WHEN ELEVATED.

DEATH OR SERIOUS INJURY WILL RESULT FROM CONTACT OR INADEQUATE CLEARANCE

DEATH OR SERIOUS INJURY WILL RESULT FROM IMPROPER USE OF THIS EQUIPMENT

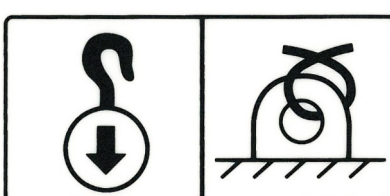
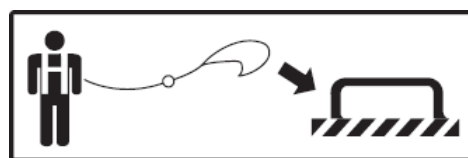
$F_H \leq 446N$

INDOOR USE ONLY

- SIDE LOAD = 445 N
- RATED WORK LOAD = 396 Lbs
- RATED NUMBER OF OCCUPANT = 2

NOTICE

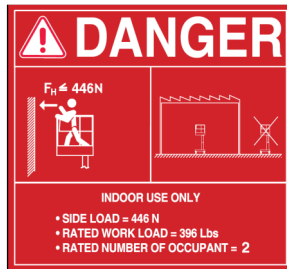
- Do always arrange for frequent inspection made by a qualified technician in case the machine has been in service for three (3) months or 150 hours - whichever comes first.
- Do always arrange for annual inspection no later than thirteen (13) months from the date of the prior annual inspection.
- The preparation, frequent and annual inspections shall be in accordance with ANSI/ISO recommendations set forth in the User Manual and in the Service Manual.

010 ANSI / CE
011 ANSI / CE
012 ANSI / CE


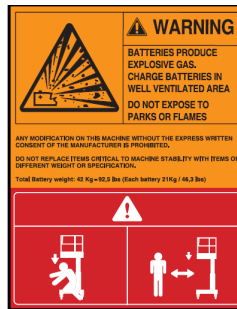
003 CE



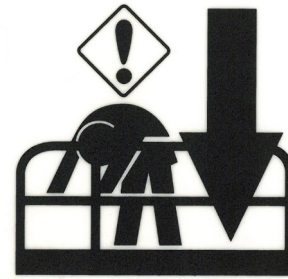
003 ANSI



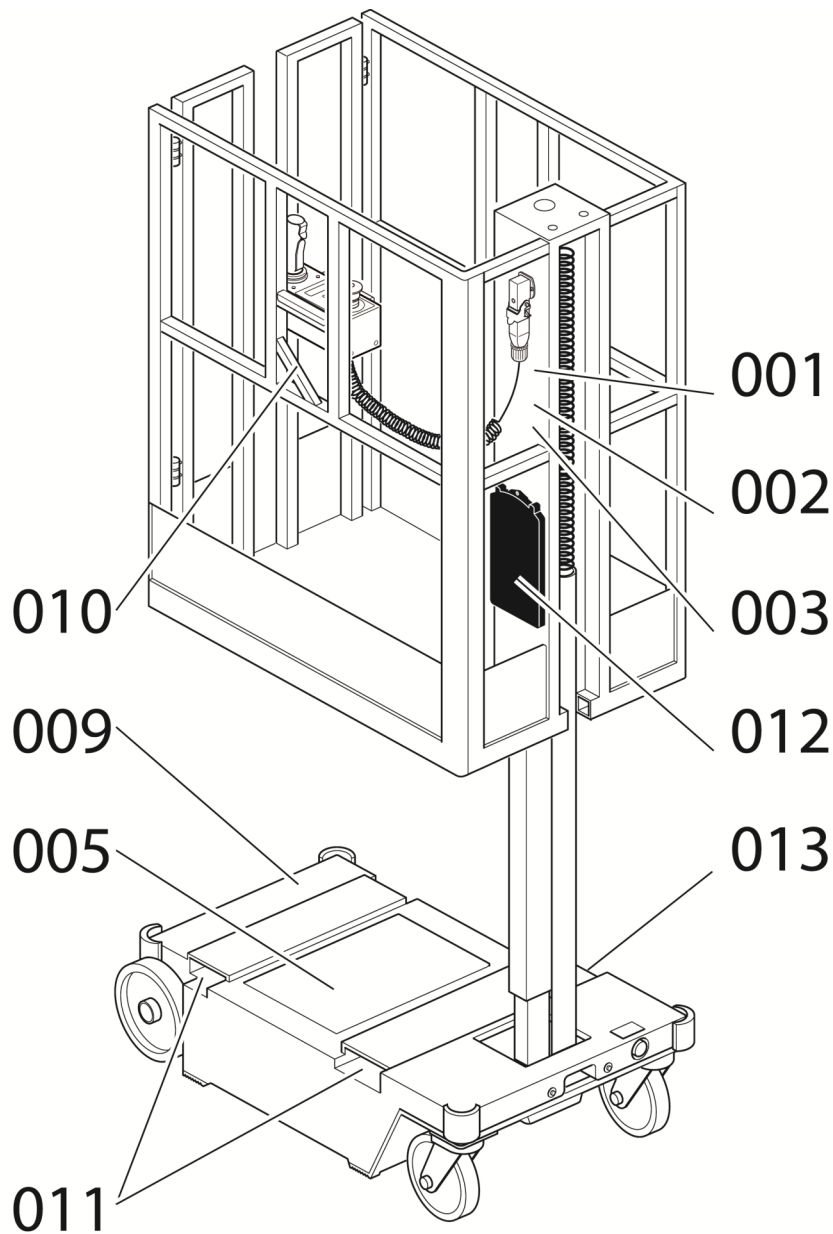
005 ANSI



009 ANSI / CE



013 CE



2.35

It is forbidden to do any makeshift repairs just to start working.

2.36

Supplemental information (only for CE machines)

The following information is provided in accordance with the requirements of the European Machinery Directive 200/42/CE and are exclusively applicable to the CE Machinery.

As regards electric powered machines, the level of the continuous sound pressure (A measurement), in correspondence with the platform, is lower than 70 dB (A).

The total value of vibrations to which the hand-arm system is subjected does not exceed $2,5 \text{ m/s}^2$. The weighted maximum medium quadratic value of the weighted acceleration in the whole body subjected does not exceed $0,5 \text{ m/s}^2$.

2.37

In case it is necessary to replace worn and/or broken parts, please use exclusively original spare parts.

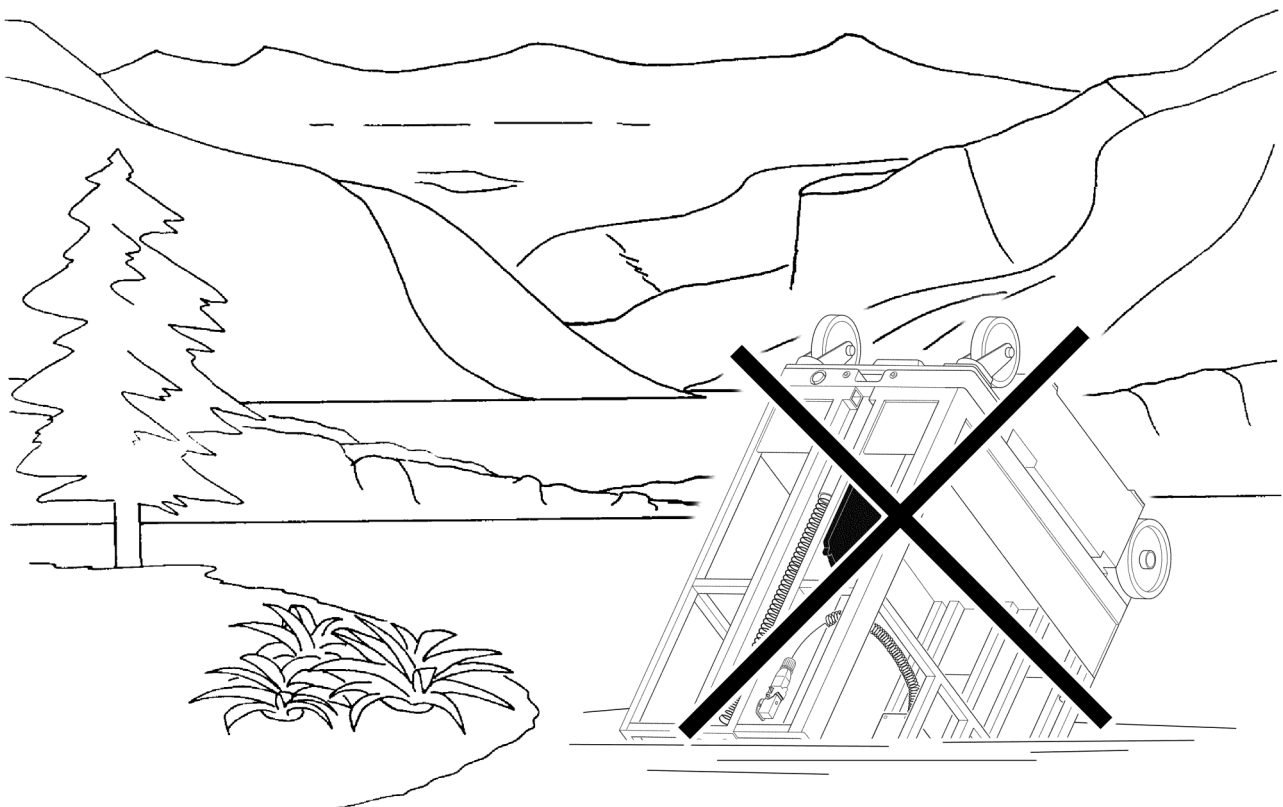
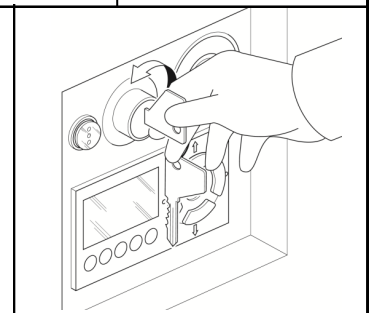
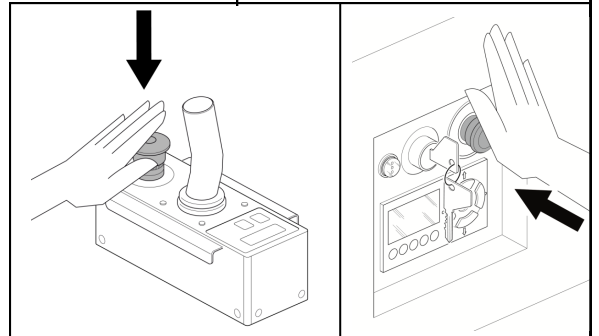
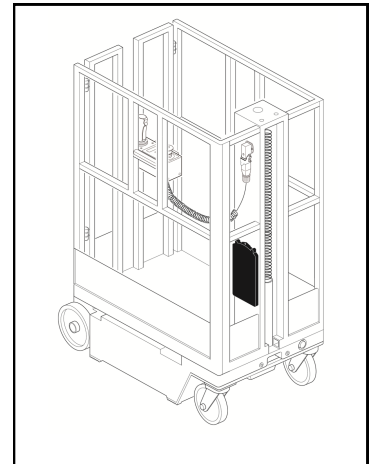
2.38

At the end of the work it is forbidden to leave the Platform in potentially dangerous areas, so bring it to the **Zero Power Condition**.

2.39

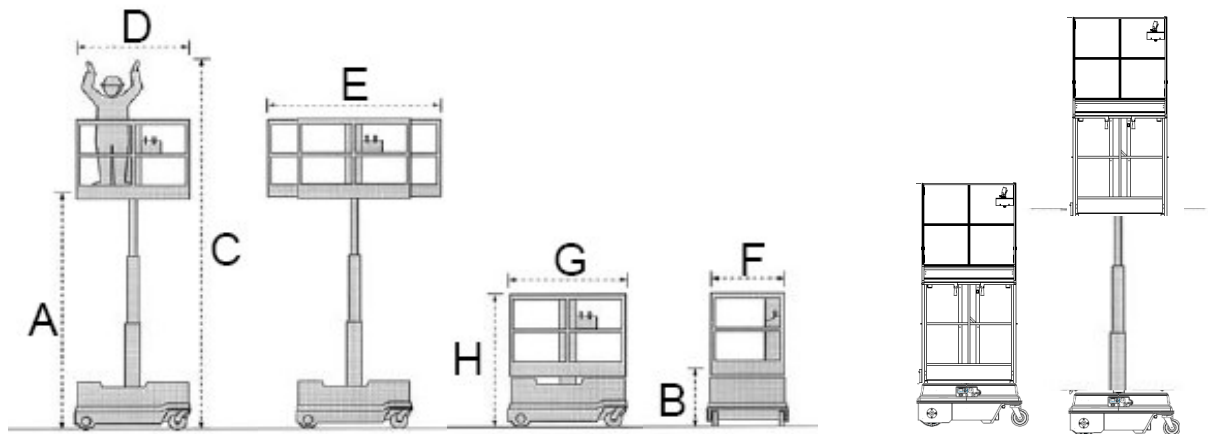
Caution – Risk of Pollution

At the end of the life of the Platform, do not throw away it in the environment, but address to authorized waste agencies or directly to the Manufacturer, who will give you written instructions about it. In any case, before throwing the Platform, remove oil (Part 11), batteries (Part 10), stop all the moving parts and move it (Part 4).



3.1 MACHINE SPECIFICATIONS

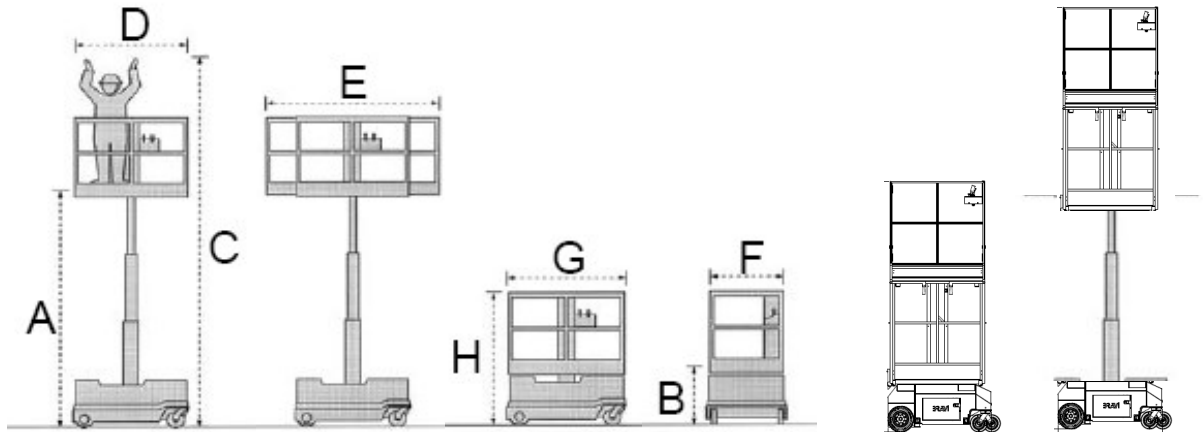
LUI MINI S.I. ANSI - LUI MINI S.I. CE - LUI MINI S.I.W.- LUI MINI S.I.E.



MODEL		LUI MINI S.I. ANSI	LUI MINI S.I. CE	LUI MINI S.I.W.	LUI MINI S.I.E.
DIMENSIONS					
Working Height	C	4900 mm - 16 ft			6040mm - 19.3ft
Platform Height	A	2900 mm- 9 ft 6 in			4040mm - 12.8ft
Height Stowed	H	1720 mm - 5 ft 7 in			2870mm - 9.4ft
Length Stowed Length with decks ext	G E	1200mm - 3 ft 11 in /1700mm -5 ft 6 in			1200mm - 3ft 11 in
Width	F	760 mm - 2 ft 5 in			
Ground clearance		35 mm - 1.4 in			
Ground Clearance with Loading Device		70 mm - 3 in			
Platform Capacity with decks ext		180 Kg - 397 lbs			140 Kg - 308 lbs
Platform lenght	D	1036 mm - 3 ft 5 in			
Max Wind Speed		Zero-indoor use only	Zero-indoor use only	12,5 m/sec	Zero-indoor use only
Entry Step	B	400 mm - 1 ft 3 in			
Rated number of occupants		2	1	1	1
PERFORMANCE					
Drive Speed Stowed		3 Km/h - 1.9 mph			
Drive Speed Elevated		0.6 Km/h - 0.35 mph			
Inside Turning Radius		ZERO			
Outside Turning Radius		1050 - 3 ft 5 in			
Gradeability		35%			Not allowed
Raise/Lower Speed		16/21 sec			
Power					
Power Source		110/220 V ca, 24V cc			
Batteries		N 02, 12V 85Ah@5h			
Hydraulic System Capacity		20 lt / 5.3 gal			
Weight (without load)		555 Kg-1223 lbs	495 Kg-1091lbs	555Kg-1223lbs	595Kg-1311lbs
Standard Compliance		Ansi A92.6, CE Compliance, AS1418.10(int)			

3.1 MACHINE SPECIFICATIONS

LUI MINI HD - LUI MINI HD S.I.W.- LUI MINI HD S.I.E.



MODEL		LUI MINI HD	LUI MINI HD S.I.W	LUI MINI HD S.I.E
DIMENSIONS				
Working Height	C	4900 mm - 16 ft		6040mm - 19.3ft
Platform Height	A	2900 mm - 9 ft 6 in		4040mm - 12.8ft
Height Stowed	H	1720 mm - 5 ft 7 in		2870mm - 9.4ft
Length Stowed	G	1200mm - 3 ft 11 in /1700mm -5 ft 6 in		1200mm - 3ft 11in
Length with decks ext	E			
Width	F	760 mm - 2 ft 5 in		
Ground clearance		60 mm - 2.3 in		
Platform Capacity with decks ext		180 Kg - 397 lbs		140 Kg - 308lbs
Platform lenght	D	1036 mm - 3 ft 5 in		
Max Wind Speed		Zero - indoor use only	12,5 m/sec	Zero - indoor use only
Entry Step	B	400 mm 1 ft 3 in		
Rated number of occupants		1	1	1
PERFORMANCE				
Drive Speed Stowed		3 Km/h - 1.9 mph		
Drive Speed Elevated		0.6 Km/h - 0.35 mph		
Inside Turning Radius		ZERO zero		
Outside Turning Radius		1050 mm - 3 ft 5 in		
Gradeability		35%		Not allowed
Raise/Lower Speed		16/21 sec		
Power				
Power Source		110/220 V ca, 24V cc		
Batteries		N 02, 12V 85Ah@20h		
Hydraulic System Capacity		4 lt / 1.05 gal		
Weight (without load)		510 Kg-1124 lbs	555 Kg-1223 lbs	595 Kg-1311 lbs
Standard Compliance		Ansi A92.6, CE Compliance, AS1418.10(int)		

LUI MINI S.I. ANSI - LUI MINI S.I. CE - LUI MINI S.I.W.

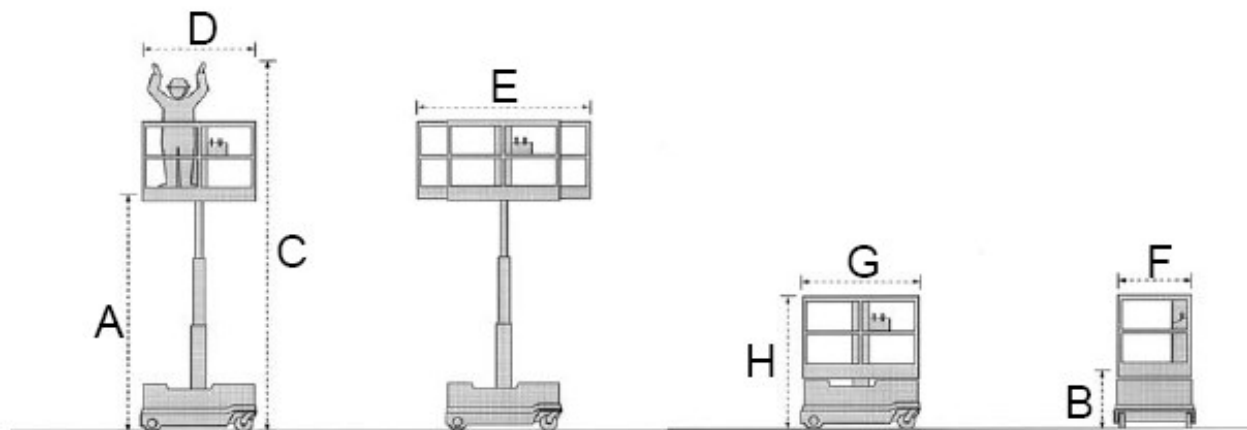
Translatory Movement Motors	Watt 500; Volt24; Nm 1,33; F.F. 1; RPM 3600; Ah26; IP 54; DUTY S2
Gearbox	MRIV 50 U03A; PW 1400 min-1: 0,27 Kw; i=70;
Pump	2000W; 24V; 105 Ah; 2100 RPM; Nm 9.09; IP 20; F.F. 1
Wheel Blocking Electromagnets	18W; 24V; IP 40
Rear Drive Wheels	mm 300x90
Controls	One hand proportional Joystick
Tires	Solid rubber no marking
Hydraulic Oil	Mineral oil ROLOIL LI22 HIV
Filter	90 µ
Oil Pressure	18-23 bar
Slow movement	<i>m/min 8,5</i>
Fast movement	<i>m/min 40</i>
Lifting	<i>m/min 5</i>
Noise	<i>Less than 70 dB(A)</i>

LUI MINI HD - LUI MINI HD S.I.W.

Translatory Movement Motors	Watt 500; Volt24; Nm 1.33; F.F. 1; RPM 3600; Ah26; IP 54; DUTY S2;brake 24V +/-10% stabilized
Gearbox	MRIV 50 U03A; PW 1400 min-1: 0,27 Kw; i=56;
Pump	2200W; 24V; 105 Ah; 2100 RPM; Nm 9.09; IP 20; F.F. 1
Wheel Blocking Electromagnets	18W; 24V; IP 40
Rear Drive Wheels	mm 300x90
Controls	One hand proportional Joystick
Tires	Solid rubber no marking
Hydraulic Oil	Mineral oil ROLOIL LI22 HIV
Filter	internal 90 µ
Oil Pressure	18-23 bar
Slow movement	<i>m/min 8,5</i>
Fast movement	<i>m/min 40</i>
Lifting	<i>m/min 5</i>
Noise	<i>Less than 70 dB(A)</i>

3.2 MACHINE SPECIFICATIONS

LUI S.I. 460 - LUI MINI 220



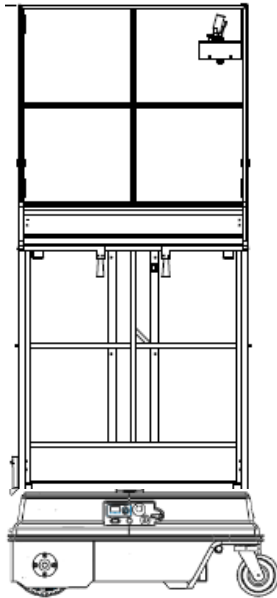
MODEL		LUI S.I. 460	LUI MINI 220
DIMENSIONS			
Working Height	C	6600mm- 21 ft 7,8 in	4200 mm - 13.7 ft
Platform Height	A	4600mm - 15 ft	2200 mm - 7.21ft
Height Stowed	H	1850mm - 6 ft	1520 mm - 4.98 ft
Length Stowed	G/	1659mm - 5 ft 5.36 in /	1229 mm - 4.03ft
Length with decks ext	E	2376mm - 7 ft 10 in	
Width	F	760mm - 2 ft 5 in	772 mm - 2.52 ft
Ground clearance		65mm - 2.56 in	30 mm - 1.18 in
Platform Capacity with decks ext		280 Kg - 617 lbs	180 Kg - 397 lbs
Platform length	D	740mm - 2 ft 2 in	1110 mm - 3.6 ft
Max Wind Speed		Zero - indoor use only	Zero - indoor use only
Entry Step	B	340mm - 1 ft 3 in	400mm - 1.3 ft
Rated number of occupants		2	1
PERFORMANCE			
Drive Speed Stowed		3,2 Km/h - 1.98 mph	3 Km/h - 1.9 mph
Drive Speed Elevated		0.6 Km/h - 0.35 mph	0.6 Km/h - 0.35 mph
Inside Turning Radius		ZERO zero	ZERO zero
Outside Turning Radius		1345mm - 4 ft 4 in	1050mm - 3 ft 5 in
Gradeability		35%	35%
Raise/Lower Speed		26/15 sec	14/18 sec
POWER			
Power Source		110/220 V ca, 24Vcc	110/220 V ca, 24V cc
Batteries		N 04, 6V 240Ah@5h	N 02, 12V 85Ah@20h
Hydraulic System Capacity		12 lt / 3.17 gal	4 lt - 1.05 gal
Weight (without load)		1250 Kg-2755lbs	398 Kg-877 lbs
Standard Compliance		Ansi A92.6, CE Compliance, AS1418.10(int)	Ansi A92.6, CE Compliance, AS1418.10(int)

LUI S.I. 460 - LUI MINI 220

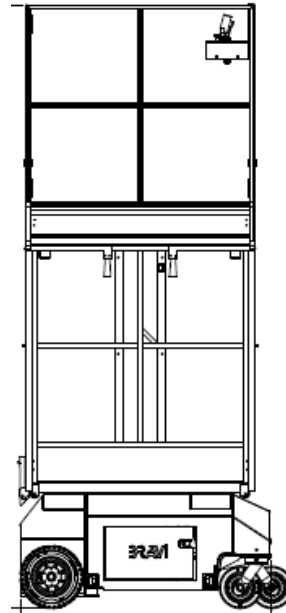
MODEL	LUI S.I. 460	LUI MINI 220
Translatory Movement Motors	Watt 1200; Volt24; Nm 3.2; F.F. 1; RPM 3600; Amp65; IP 20; DUTY S2; brake 24V +6/-10% stabilized	Watt 300; Volt24; Nm 0.96; F.F. 1; RPM 3000; Ah16,3; IP 54; DUTY S1; brake 24V +6/-10% stabilized
Gearbox	MRIV 63 U03A; PW 1400 min-1: 0,74 Kw; i=63.6;	MRIV 40 U03A; PW 1400 min-1: 0,306 Kw; i=56;
Pump	2000W; 24V; 150 Ah; 2250 RPM; Nm 8; IP 54;	2200W; 24V; 105 Ah; 2100 RPM; Nm 9.09; IP 20; F.F. 1
Wheel Blocking Electromagnets	18W; 24V; IP 40	n.a.
Rear Drive Wheels	mm 350x100	mm 300x50
Controls	One hand proportional Joystick	One hand proportional Joystick
Tires	Solid rubber no marking	Solid rubber no marking
Hydraulic Oil	Mineral oil ROLOIL LI22 HIV	Mineral oil ROLOIL LI22 HIV
Filter	Internal filter 90 µ	Internal filter 90 µ
Oil Pressure	65 bar	60 bar
Slow movement	m/min 10	m/min 8,5
Fast movement	m/min 50	m/min 40
Lifting	m/min 10	m/min 8
Noise	Less than 70 dB(A)	Less than 70 dB(A)

3.3 TECHNICAL SPECIFICATIONS

LUI MINI S.I.E. - LUI MINI HD S.I.E.



LUI MINI S.I.E



LUI MINI HD S.I.E

MODEL	LUI MINI S.I.E - LUI MINI HD S.I.E
DIMENSIONS	
Working Height	mm 6040 - 19.3ft
Platform Height	mm 4040 - 12.8ft
Height Stowed	mm 2870 - 9.4ft
Length Stowed	mm 1215 - 3.4ft
Width	mm 760 - 2.49
Platform Capacity	140 Kg - 308lbs
Platform Width	mm 685 - 2.23ft
Max Wind Speed	ZERO WHEN THE EXTENSION KIT IS MOUNTED ON THE MACHINE, THIS CAN ONLY BE USED INDOOR

4.1 INTRODUCTION TO THE TRANSPORT AND HANDLING

4.1.a

Danger of crushing, collusion and abrasion

The staff in charge of the Platform moving must have read and understood the safety requirements in lead of this manual (see Part 2).

It should wear work gloves, helmet and safety shoes.



4.1.b

Independently by the number of persons in charge of the moving of the Platform, there must be always a responsible.

4.1.c

Before transporting the Platform, make sure that the floor is leveled and without holes.

4.1.d

Before starting, please read all the Part 4 in order to be prepared in time in case of need.

4.1.e

Clean the area where the Platform will be positioned, in order to prevent slipping, tripping or falling.

4.1.f

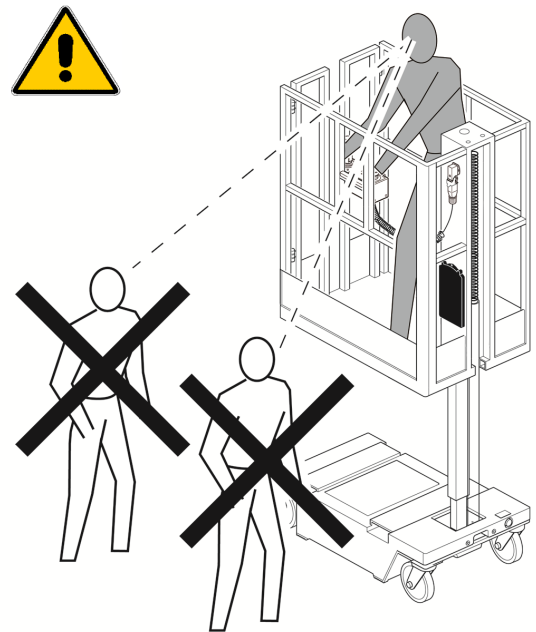
The Platform can be unloaded in 4 different ways:

1-With a forklift with a suitable lifting capacity (see Part 3 Specifications or on marking the voice "weight") see Section 4.2.

2-By using the loading/unloading device and a suitable set of ramps, see Section 4.3.

3-By using loading and unloading skids and a cargo winch, see Section 4.4.

4-By moving the Platform by a crane, see Section 4.5.



4.1.g

Danger of crushing and capsizing

Transport operations are dangerous, so the operator must carry out them very slowly, must be very careful and make sure that there are no exposed people, animals or things.

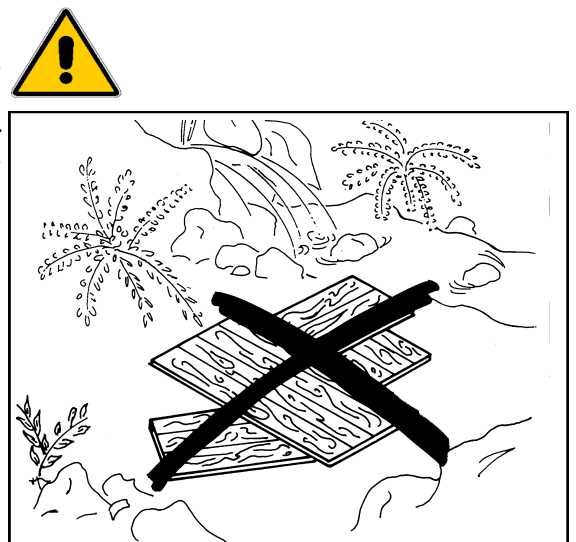
4.1.h

Danger of pollution

Do not throw away the packing in the environment, but select it depending on the type of material (cardboard, wood, steel, polyurethane, etc. ...), then it must be given for disposal (depending on the rules of the country where the Platform is used).

4.1.i

The Platform is on the truck, please make sure that there are no pipes or cables that may interfere with the forks.



4.2 UNLOADING/UPLOADING PLATFORM PROCEDURES WITH A FORKLIFT

4.2.a

The Platform can arrived:

4.2.a1- boxed with a pallet

4.2.a2 – wrapped in cellophane with a pallet

4.2.a3 – wrapped in cellophane without pallet

4.2.a1 - Boxed with a pallet

To unload the Platform in a box with a pallet using a forklift , do as follows:

- Place the forks of the forklift in the pallet.
- Lift the box very slowly for about 10 or 20 cm and ...
- Making sure that there are no people exposed, take the box out of the truck or container and place it on the ground.

- Danger of cutting

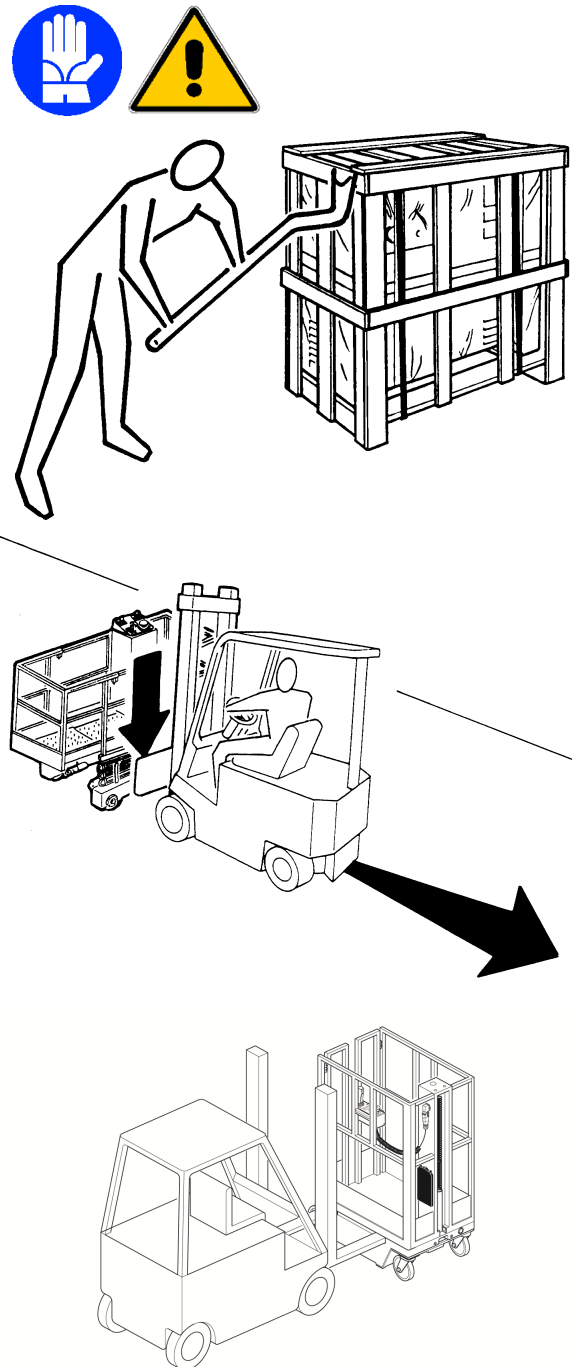
Once placed it on the ground, the operator must wear cut-resistant gloves and with a suitable tool remove the lid, therefore

- Unscrew the screws on the wall and remove the 4 walls.

- Danger of pollution

Do not throw the packing in the environment, but apply to authorized disposal agencies or keep the package for future transports.

- Remove the forks from the pallet and ...
- Insert the forks in the suitable housings of the Platform.
- Making sure that in the area there are no people exposed, lift up again very slowly the Platform for about 10 or 20 cm and bring it near the area of use.
- the unload of the Platform in the box with the pallet using the forklift is done.



4.2.a2 - Wrapped in cellophane with pallet

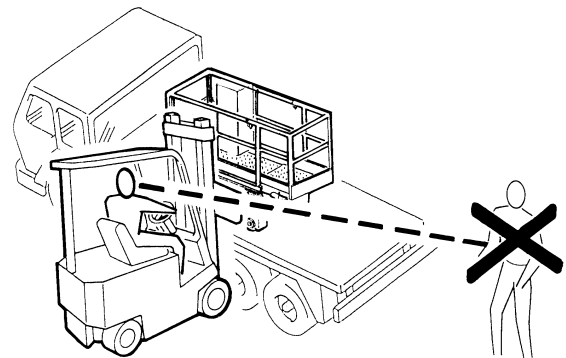
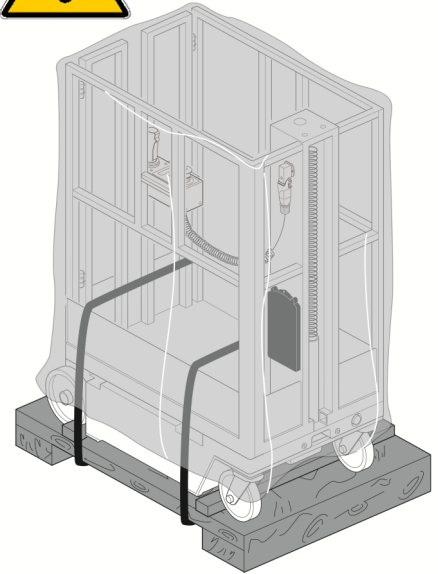
To unload the Platform with cellophane on a pallet using the forklift do as follows:

- Place the forks of the forklift in the pallet.
- Lift up the Platform very slowly for about 10 or 20 cm and ...
- Making attention that in the area there are no people exposed, take the Platform out of the truck or container and place it on the ground.

Danger of cutting

The operator must wear anti cut gloves

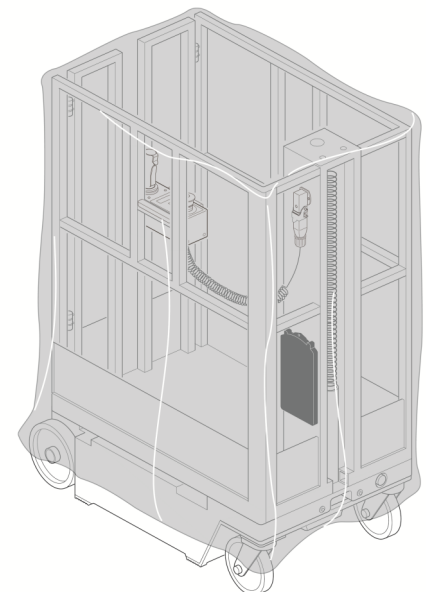
- Take the scissors and cut the small bands
- So, always making attention, lift up again the Platform very slowly for about 10 or 20 cm and take it near the area of use.
- the unload of the Platform in the box with the pallet using the forklift is done



4.2.a3 - Wrapped in cellophane without pallet

To unload the Platform with cellophane by using the fork lift do as follows:

- Place the forks in the suitable housings of the Platform.
- Lift up the Platform very slowly for about 10 or 20 cm and ...
- Making attention that there are no people exposed in the area, take the Platform out of the truck or container and take it near the area of use.
- the unload of the Platform wrapped in cellophane using the forklift is done.



4.3 LOADING/UNLOADING PLATFORM PROCEDURES WHEN THE PLATFORM IS UNLOADED WITH LOADING/UNLOADING LEVERS

Warning – this procedure cannot be carried out for the model LUI S.I. 460 - LUI MINI HD - LUI MINI HD S.I.W.

To carry out the loading/unloading Platform procedure by using the loading/unloading levers please do as follows:

4.3.a

The movements of the Platform must be made only on board, but in case you have to move the Platform from a van, it is possible to move it from the outside.

Proceed with the unloading phase as described below:

4.3.b

Danger of cutting

The operator must wear anti cut gloves

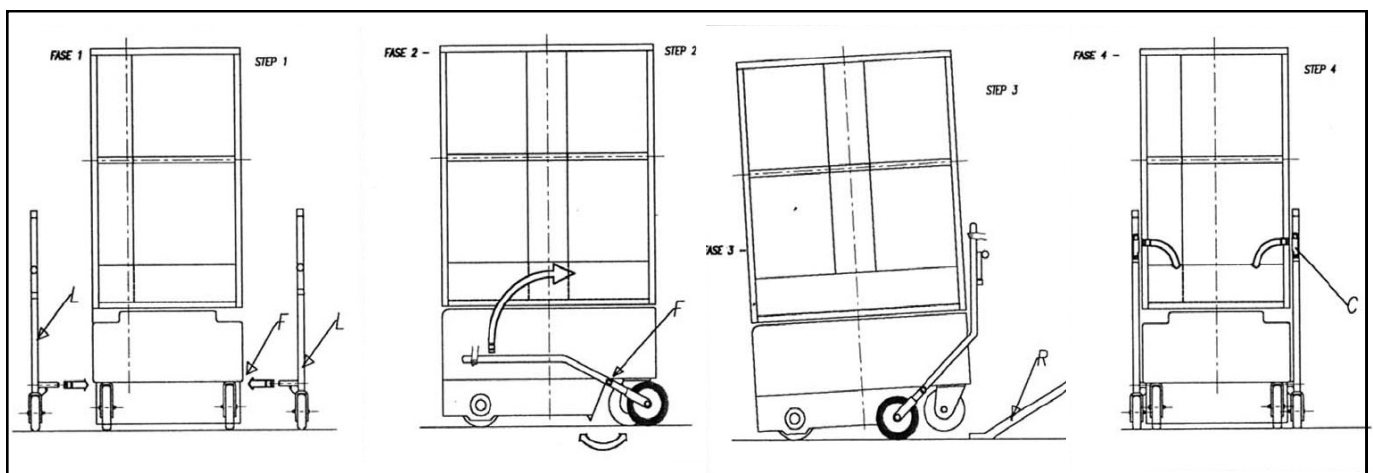


-Take the shears

-Take away the cellophane making attention not to hurt your hands and damage the Platform.

- Danger of sliding

Take away the cellophane and immediately throw it into the suitable containers for special waste materials.



4.3.c Installation of the loading/unloading device

First of all you have to install the loading/unloading device, to install it do as described here below:

-Take out and put the two “L” levers into the suitable holes, making sure that they are well coupled to the housing “F”.

-Turn up with strength towards the top the tips of the two levers until the revolving wheels of the Platform are lifted.

-Control the stability of the Platform.

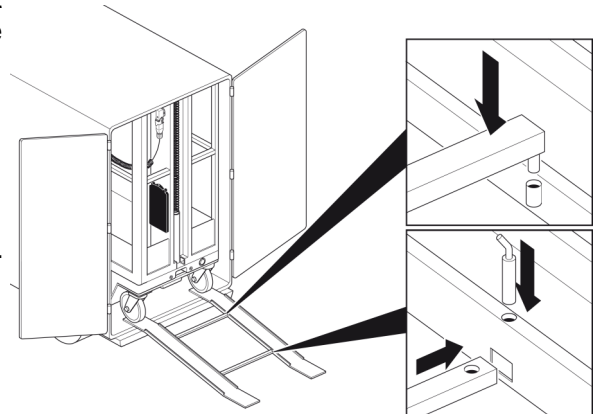
- Danger of crushing

To avoid dangerous crushing, with the suitable knob, turn towards the center of the Platform the two “C” plates.

-The load/unload device is installed.

4.3.d Positioning of the unloading ramps

-Get load/unload ramps suitable and authorized by the Manufacturer to support the weight of the Platform, others models are not authorized (see Part 3 Specifications).
 -Place the load/unload ramps and fasten them using a bolt and, when possible, between them using spacers to make the lowering more secure and stable.



- Beware general dangers

The operator must make sure that:

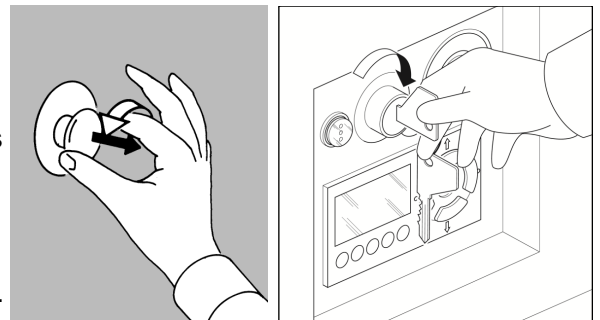
- The Platform is totally lowered
- no persons, animals or objects are located in the movement area
- The floor is flat (without holes) and well clean.

4.3.e Unload the Platform from the van

Danger of crushing

The operator operates the Platform from the outside, and must pay special attention not to make movements that bring the Platform to invest or tread on him.

- Disconnect the **Q3** or **P6** Stop/Emergency buttons
- Turn to the left the **Q2** ignition key to enable the controls of the push-button panel.
- Press the translation **P3** button, so ...
- very carefully using **P5** Joystick move the machine towards the ramps

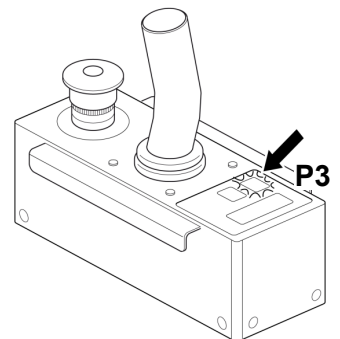


- Danger of overturning

Go on the ramps very slowly making sure that both wheels are well channeled.

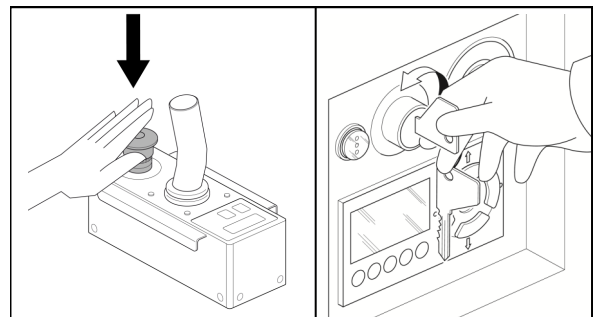
-Once carried out the moving and/or unload from the ramps, switch off the Platform by pressing the **Q3** and/or **P6** Stop/Emergency button and turn the **Q2** ignition key to the "0" position.

-Remove the load/unload ramps from the van and the load/unload device.



4.3.f

The unload of the Platform procedure is done.



4.4 LOAD/UNLOAD PLATFORM PROCEDURE BY USING RAMPS AND WINCH (FOR LUI S.I. 460; LUI MINI 220; LUI MINI HD; LUI MINI HD S.I.W.)

4.4.a

To carry out the load/unload Platform procedure by using ramps and winch do as follows:

Danger of cutting

The operator must wear anti cut gloves



- Take the shears
- Take away the cellophane making attention not to hurt the hands and damage the Platform.

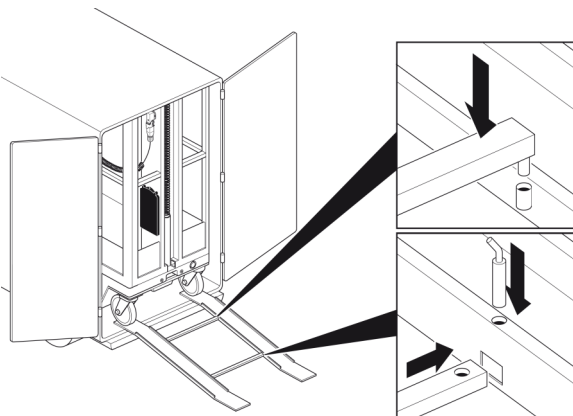
- Danger of sliding

Take away the cellophane and immediately throw it into the suitable containers for special waste materials.

4.4.b Unload ramps positioning

-Get load/unload ramps suitable and authorized by the Manufacturer to support the weight of the Platform, others models are not authorized (see Part 3 Specifications).

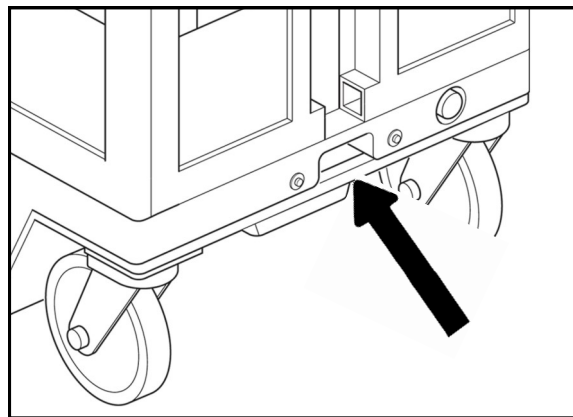
-Place the load/unload ramps and fasten them using a bolt and, when possible, between them using spacers to make the lowering more secure and stable.



- Beware general dangers

The operator must make sure that:

- The Platform is totally lowered
- no persons, animals or objects are located in the movement area
- The floor is flat (without holes) and well clean.



4.4.c

Take the hook winch and insert it (making sure that it is well secure) into the suitable housings of the Platform with the rope well-drawn.

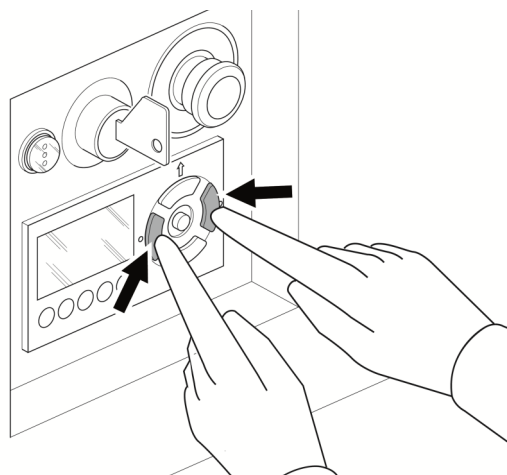
Pull the **Q3** or **P6** Stop/Emergency buttons

4.4.d

Turn to the right the **Q2** ignition key (light on with ZAPI system), to enable the controls from the bottom.

Within 30 seconds press at the same time the two buttons **Q9** and **Q10** (left and right arrow) until you will hear a "CLICK" of the electric brake release, and both the light of the basket and chassis start flashing with ZAPI system (from this moment the electric brakes are disabled).

With TRIONIC system a written will appear in the display



4.4.e**Danger of overturning**

Go on the ramps very slowly making sure that both wheels are well channeled.

**4.4.f**

Place by hand the Platform on the ramps and ...

4.4.g

... calmly operate the winch to move the Platform and/or to bring it near the load/unload ramps.

4.4.h

Once carried out the moving and/or unload from the ramps switch off the winch.

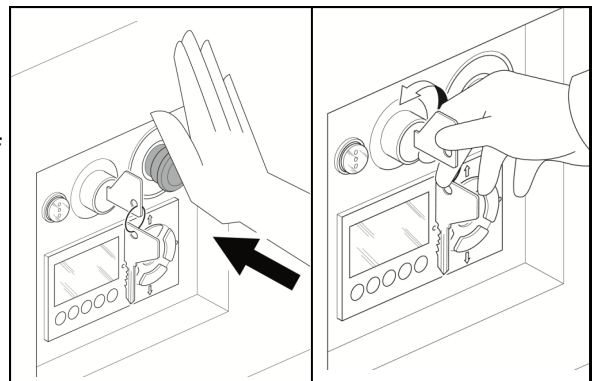
Press the **Q3** and/or **P6** Stop/Emergency button and turn the **Q2** ignition key to the "0" position.

4.4.i

Remove the load/unload ramps from the means of transport.

4.4.l

The unload/load Platform procedure using ramps and winch is done.



4.5 LOAD/UNLOAD PLATFORM PROCEDURE USING A CRANE



4.4.a

To carry out the procedure to load/unload the Platform using a crane please do as follows:

4.4.b

Danger of cutting

The operator must wear anti cut gloves

-Take the shears

-Take away the cellophane making attention not to hurt your hands and damage the Platform.

- Danger of sliding

Take away the cellophane and immediately throw it into the suitable containers for special waste materials.

4.5.a

Danger of crushing

Check the chains and belts in order to verify that there are no anomalies before using them to move the Platform.

Make sure that they are securely fixed to the hook of the crane and that the crane can support the load of the Platform (see Part 3 "Specifications").

It is strictly forbidden to stand in the dangerous zone when this last one is moved by a crane!!

The minimum safety distance must be of 3 meters.

4.5.b

Check that the **Q3** and/or **P6** Stop/Emergency buttons are pressed.

Remove the push-button panel and put it inside the basket.

4.5.c

Insert the chains or belts inside the chassis lifting points

4.5.d

Pass the tip of the chains or belts through the inside of the basket and ensure all of them to the hook of the crane.

4.5.e

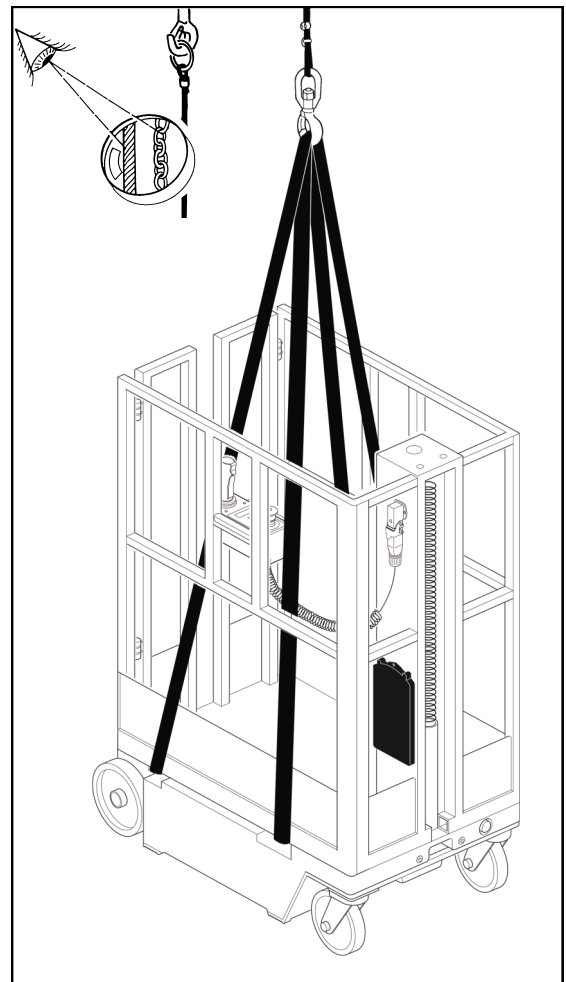
Move the Platform making sure there are no exposed people or animals, until the positioning on the ground area.

4.5.f

Repeat backwards all the operations described above.

4.5.g

The procedure of load/unload of the Platform using a crane is done.



4.6 MANUAL EMERGENCY HANDLING for LUI S.I.460; LUI MINI 220; LUI MINI HD; LUI MINI HD S.I.W./S.I.E.

4.6.a

Pull the **Q3** and/or **P6** Stop/Emergency buttons.

4.6.b

Turn to the right the **Q2** ignition key (light on), to enable the controls from the bottom.

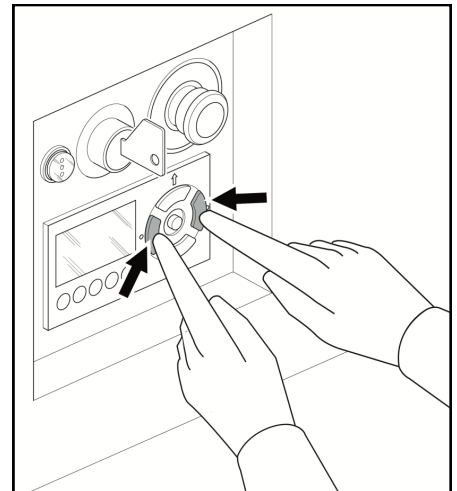
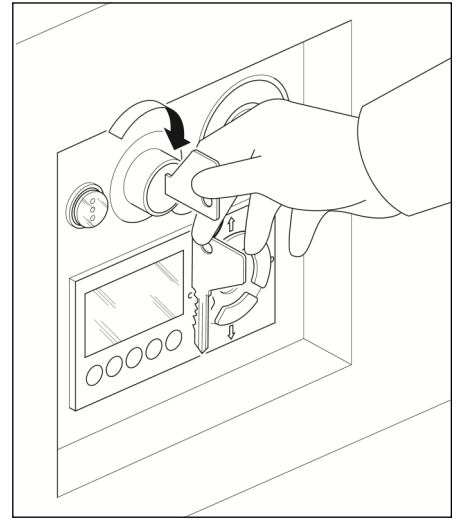
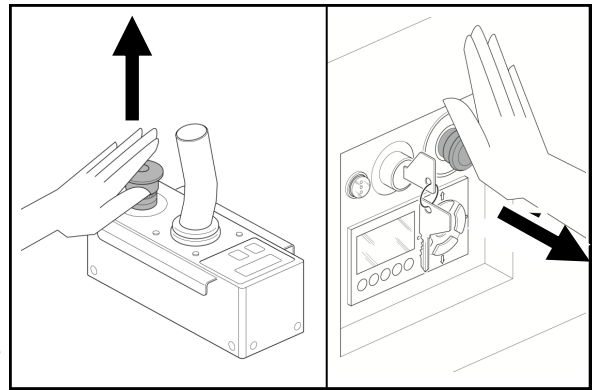
Within 30 seconds press at the same time the two buttons **Q9** and **Q10** (left and right arrow) until you will hear a "CLICK" of the electric brake release, and both the light of the basket and chassis start flashing with ZAPI system (from this moment the electric brakes are disabled).

With TRIONIC system a written will appear in the display

4.6.c

Place by hand the Platform in the prearranged repair area.

4.6d Bring the machine to the **Zero Power Condition**



4.7 MANUAL EMERGENCY HANDLING for LUI MINI S.I.- LUI MINI S.I.W./ S.I.E.

4.7.a

Danger of crushing

During the following actions, the operator must bring the Platform to the **Zero Power Condition** and make sure that in the dangerous area there are no exposed people or obstacles.

4.7.b

Lift up the step of the Platform to a flat position.

4.7.c

Lengthen the extension of the basket, as described in the point 6.6a.

4.7.d

Unhook the rear cover and remove it.

4.7.e

Close again the extension basket.

4.7.f

Use a spanner for spinning the lifting nut...

4.7.g

... Rotate it until the moving wheel comes out and lifts the two driving wheels.

4.7.h

Once lifted

-remove the spanner from the manual device

- Lengthen the extension of the basket

-reassemble the cover with the hooks

-close again the extension of the basket

4.7.h

At this point it is possible to move by hand the Platform by pushing it.

4.7.i

The procedure of the manual emergency handling is done.

4.8 REMOVALS

If there is the necessity to do removals, do as follows:

-Bring the Platform to the **Zero Power Condition**

-Package it

-Do as described in this Part 4.

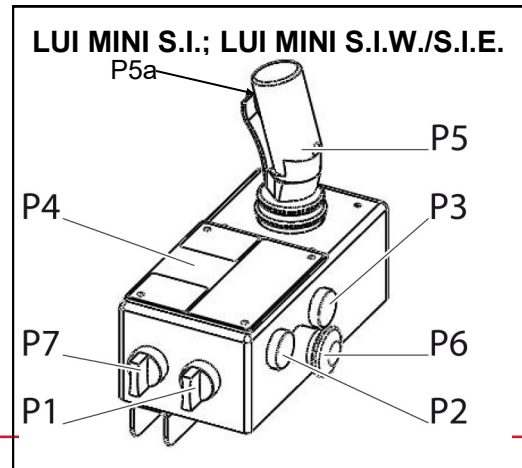
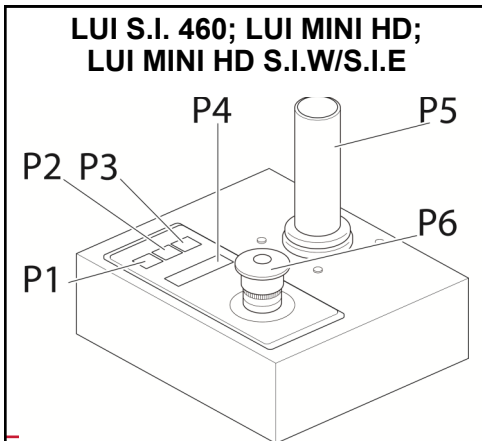
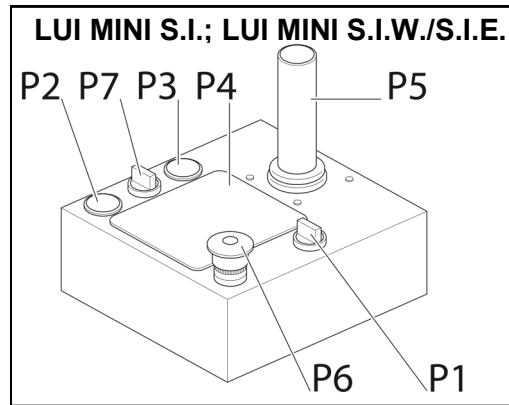
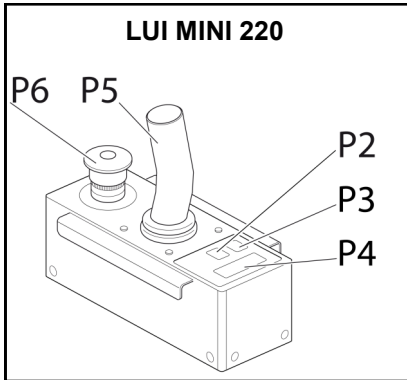


4.7f



4.7g

CONTROL PANEL



CONTROL PANEL AND ITS DESCRIPTION

The ground modules and control boxes can have different positions, personalization or composition, even divided in different panels or joined in a single block.

The disposition here represented shows the complete versions. In any case, if the command is different from the scheme represented, there is always written in it the function to which it refers.

NOTE

For further information about the scheme, please refer to the reference scheme of the installed Platform.

P - PLATFORM CONTROL BOX

P1 - Wheel blocking device:

Moving the selector to the right or pressing the corresponding button the wheel stop device is put in action, allowing to drive the vehicle only towards the straight line, both to and from.

LED ON indicates that the wheel stop device has been activated.

LED OFF indicates that the device is deactivated allowing, therefore, to drive the vehicle in any direction.

P2 - Mode key Lift/Lower

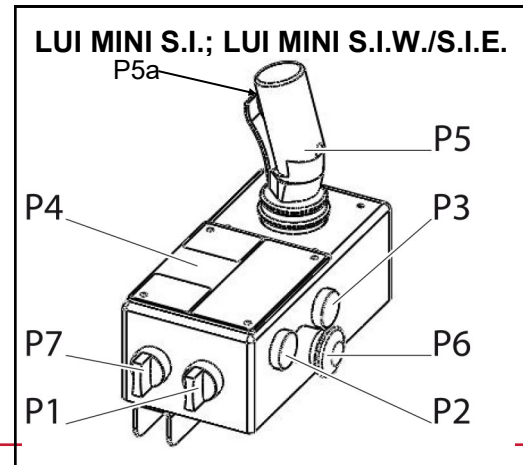
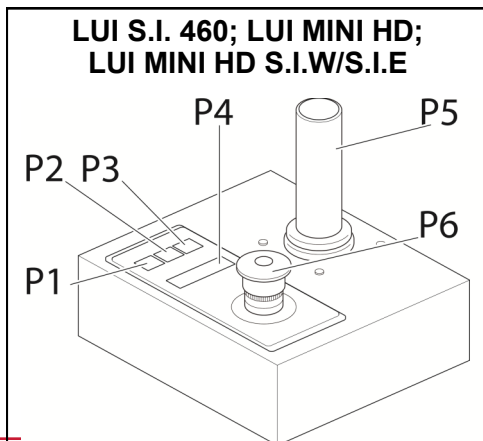
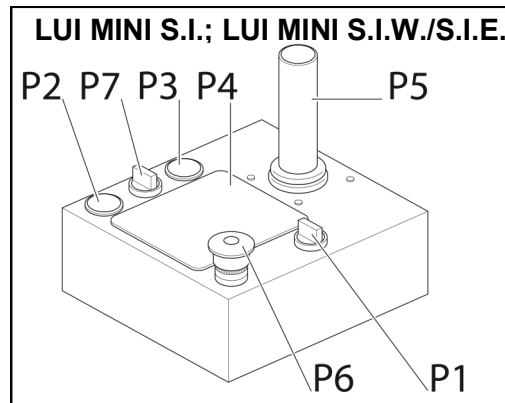
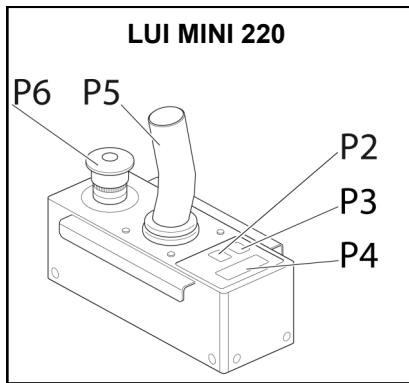
LED ON means that the lifting/lowering function has been selected.

LED OFF indicates that the lifting/lowering function has not been selected.

P3 - Mode key Traction

LED ON indicates that the drive function has been activated.

LED OFF indicates that the drive function has not been activated.



P4 - Battery Gauge

This is a 10-bars lighted display which highlighted the state of the battery charge. A lighted LED refers to the minimum level of the battery charge, while 10 LEDs indicate the fully charge.

P5 - Joystick Module

The Joystick controls the driving of the vehicle as well as the lifting and lowering of the Platform.

On the Joystick there is the enable lever (**P5a**) used to move the Platform.

It must be pressed all the time when the Joystick is moved, and once pressed a sound signal is activated.

In the lift mode, the release of the joystick stops the Platform during the lifting or lowering phase. The speed of movement is proportional and it is controlled by the Joystick movement. With the basket in the lower position, the speed can be raised even by using the Speed Selector (**P7**). Once lifted the basket, the speed will automatically pass to Safety low speed.

P6 - Emergency Stop Button

In case the Platform will work improperly or there will be an urgent need to block all the moving activities of the vehicle, press this button to cut off the power supply. If the button is deactivated, it will not start the Platform but will enable the entering of the tension.

P7 - Speed Selector

The progressive moving of the selector to the right, will increase the driving speed within the limits fixed by the Manufacturer.

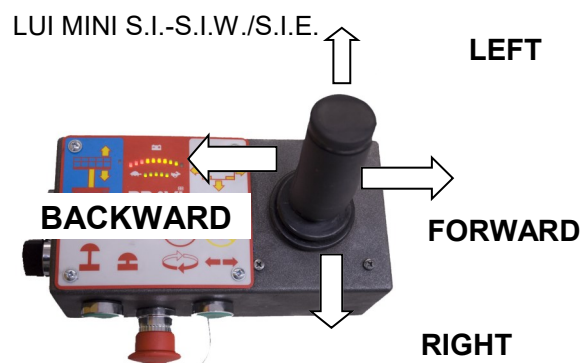
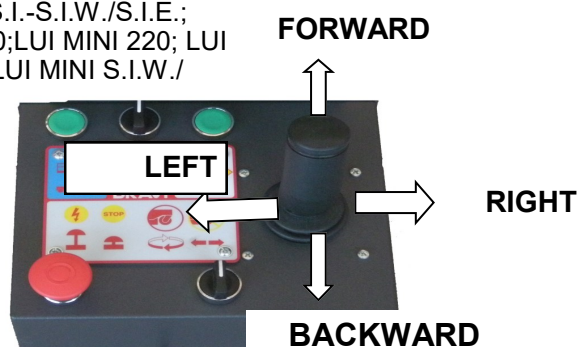
The gradual moving of the selector to the left, will gradually decrease the driving speed.

The currently selected speed is shown on the Display 5 LED (**P4**).

A lighted LED refers to the setup of the lower speed, while five lighted LED indicate that the higher speed setup has been selected.

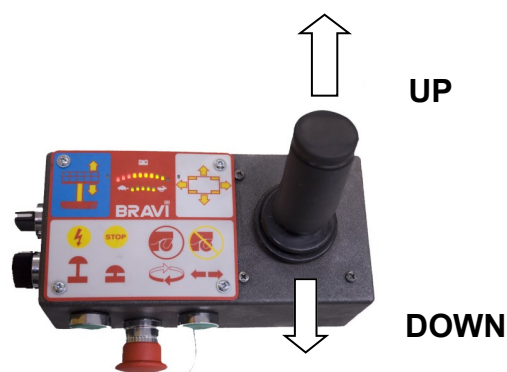
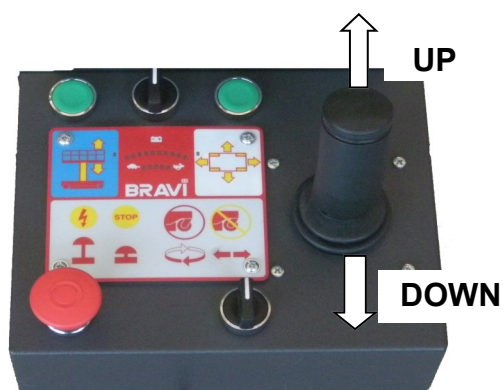
Driving Commands

LUI MINI S.I.-S.I.W./S.I.E.;
LUI S.I.460; LUI MINI 220; LUI
MINI HD; LUI MINI S.I.W./
S.I.E.

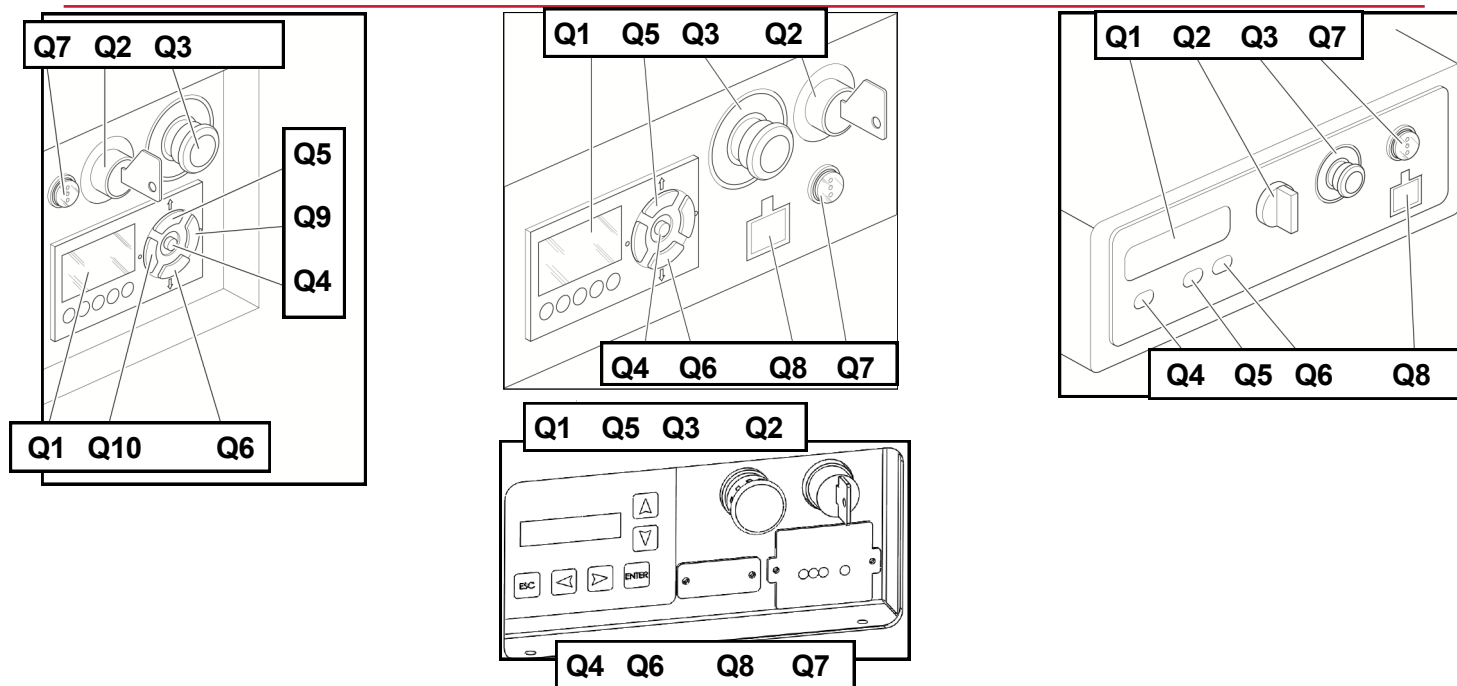


Lifting/Lowering Commands

LUI MINI S.I.-S.I.W./S.I.E.; LUI S.I.460
LUI MINI 220; LUI MINI HD; LUI MINI HD S.I.W./S.I.E.



PART 5 CONTROL PANEL



Q - GROUND MODULE

When the Ground Module is selected, the Platform Control Box is automatically excluded

Q1 - DISPLAY

This is the main display for the control system and shows useful information regarding the status of the system as well as diagnostic information, should the system detect a problem with the vehicle.

Q2 - 3 POSITION KEYSWITCH

Turned to the **left** it enables only the commands from the control box on the Platform board (for LUI S.I. 460, LUI MINI 220, LUI MINI HD AND LUI MINI HD S.I.W./S.I.E. lights up the LED **Q1l** on ZAPI)

Turned to the **right** it enables only the commands from the ground module of the chassis (for LUI S.I. 460, LUI MINI 220, LUI MINI HD AND LUI MINI HD S.I.W./S.I.E. lights up the LED **Q1m** on ZAPI)

In **central position**, switch off each contact. The operator must take the key off and give it to the responsible for Security.

Q3 - EMERGENCY STOP BUTTON

When pressed, it immediately stops all the phases of the Platform.

If lifted up **DOES NOT** restart the Platform, but allows the insertion of voltage.

Q4 - BUTTON FOR THE SOLE USE OF THE MANUFACTURER OR TRAINED AND QUALIFIED TECHNICIANS

Q5 - UP ARROW

This button works only when the key switch **Q2** is turned on the **right**.

By pressing and keeping it pressed, this button allows the raising of the basket.

Q6 - DOWN ARROW

This button works only when the key switch **Q2** is turned on the **right**.

By pressing and keeping it pressed, this button allows the lowering of the basket.

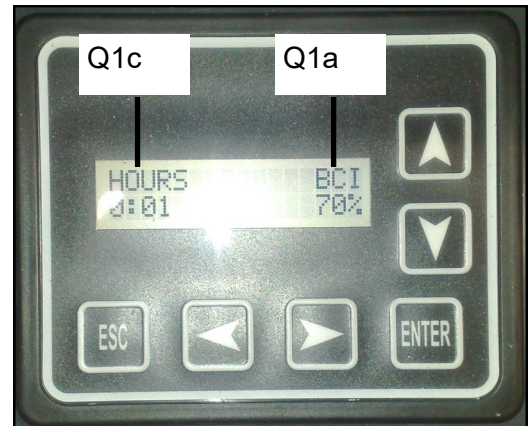
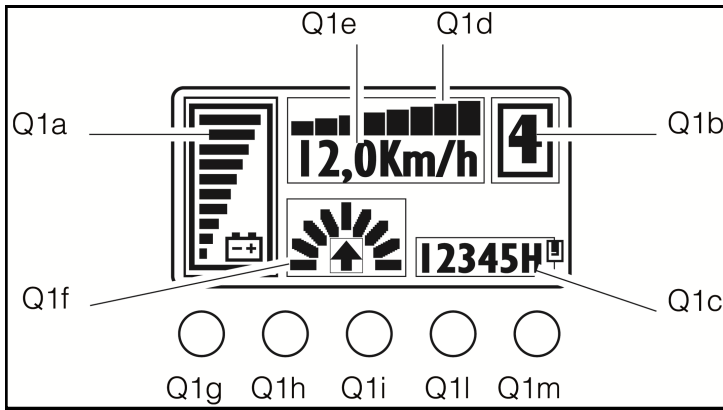
Q7 - BATTERY STATUS INDICATOR WHEN IT IS UNDER CHARGE

Yellow indicator light shows that the battery is nearly discharged.

Red indicator light shows that the battery is discharged.

Green indicator light shows that the battery is charged.

Q8 - BATTERY CHARGER SOCKET



Q1a BATTERY CHARGE STATE

The indicator of the battery charge status is represented by 10 notches: each notch represented 10% of the battery charge. When the battery become discharged the notches progressively disappear, one after the other, from the top to the bottom, in proportion to the value of the battery residual charge. When the battery charge is lower or equal to 40%, the notches displayed start to blink.

Q1b PERFORMANCE

The number shows the performances you are using:

- 4 correspond to high performances;
- 3 correspond to middle performances;
- 2 correspond to low performances;
- 1 correspond to minimum performances;

Q1c HOUR METER

The number displayed shows the hours worked

Q1d ACCELERATOR

The accelerator level indication has 8 bars.

When the acceleration level is minimum, it is shown only a notch.

When the acceleration level is maximum, are shown all the 8 notches.

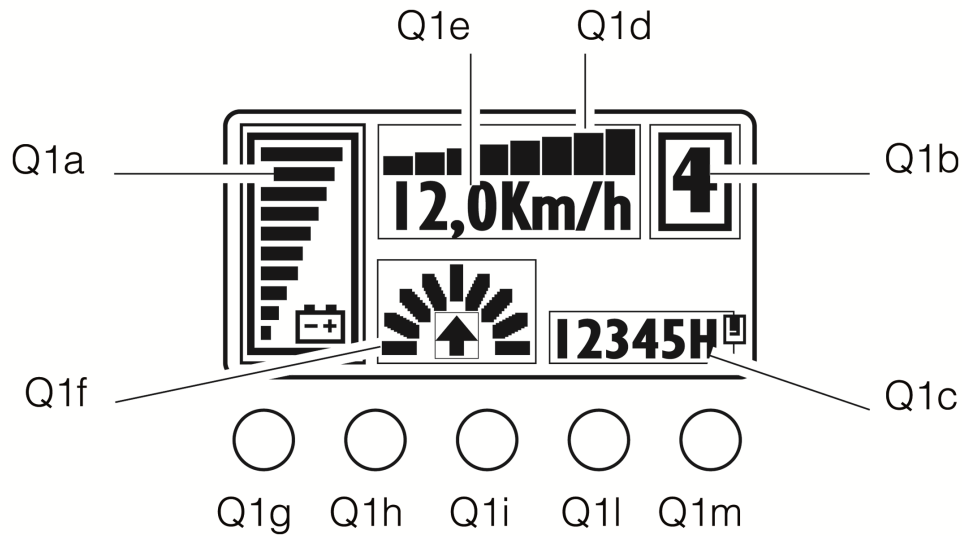
Q1e SPEED

The number shows the speed of the machine. The measure unity can be expressed in Km/h or mph depending on the setting parameters of the speed unit.

Q1f WHEEL POSITION AND RUNNING DIRECTION

The 9 notches radially positioned represent the wheel (only 1 of the 9 bars is shown) and indicate the steering angle (they correspond to the relative direction of the carriage if the carriage is moving).

The arrow shows the machine direction.



The LED under the display show:

Q1g Battery Status

The LED lights up when the battery voltage is equal or lower than 40% of the nominal voltage of the battery.

Q1h Wrench

The LED lights up when the Platform is in alarm condition.

Q1i Tilt

The LED lights up when the Platform reaches the tilt angle.

Q1l Basket

The LED lights up when the Platform is set on controls from the basket.

Q1m Chassis

The LED lights up when the Platform is set on controls from the base.

6.1 INTRODUCTION BEFORE EVERY USE

6.1.a

Danger of crushing – collision and abrasion

The operator in charge of using the Platform must be informed about the safety instructions shown in this manual (see Part 2) and must wear work gloves and safety shoes.

6.1.b

Before and after every use at the beginning of every moving the operator **must always carry out:**

The pre-start inspection (6.2) – Functioning test (6.3)

6.2 PRE-START INSPECTION

6.2.a

Make sure that all manuals are in the suitable containers on the Platform board.

6.2.b

Make sure that the marking of the Platform and all safety labels are in their place perfectly integral and readable.



6.2.c

Check the Platform to verify the absence of anomalies (example: cracks on the weldings, missing or loosing bolts, different dents, buckling, etc.), malfunction or non authorized variations (example: non authorized lifted flatcar) depending on how the Platform has been delivered by the Manufacturer.

6.2.d

Check the integrity of the basket and the right functioning of the entrance (automatic lock).

6.2.e

Check and test the functioning of all the safety devices (**Q3** and **P6** Stop/Emergency buttons, flashing, safety bar, microswitch, tilt device, pot hole devices).

6.2.f

Check the functioning of the key switch **Q2**.

6.2.g

Check and test the functioning of the safety manual lowering lever

6.2.h

Check the water level in the batteries, make sure there are no leaks. Cables must be constantly right fixed to the clamps; there must be no corrosion.

6.2.i

Check that the rubber wheel has not any damage, abrasion or deep cuts and that there are no rubbish on the wheels or around them.

6.2.l

Check the basket extension system.

6.2.m

Check that there are no leak of oil.

6.2.n

Check that the hydraulic oil is at level, in case fill to the correct level (see Part 9 Maintenance).

6.2.o

In case you will find one or more anomalies is forbidden to use the Platform, so do all the necessary before starting to use it (see Part 9 Maintenance).

6.2.p

The pre-starting inspection procedure is finished.
Proceed with the working test.

6.3 FUNCTION TEST

Do not forget that, before carrying out the Function Test, the operator must have carried out the pre-starting inspection procedure.

6.3.a

Danger – Risk of electrocution

The machine is **NOT** insulated.



6.3.b

Maintain safe clearances from electrically charged conductors (power lines) and apparatus. You must allow for machine sway (side to side movement) when elevated and electrical line movement. This machine does not provide protection from contact with, or proximity to, an electrically charged conductor.

6.3.c

Warning: electrocution hazard

Before operating the Platform make sure that the area above it is free from obstacles in order to allow the full elevation of the Platform itself.

6.3.d

Do not operate the Platform if the following controls show a defect.

6.3.E FUNCTION TEST

- A) GROUND CONTROL OPERATION AND CHECK

6.3.e1

Turn the key switch **Q2** to the right (chassis control).

6.3.e2

Press and keep pressed the lifting button **Q5** to allow the raising of the basket. If you want to stop the platform elevation release the button.

6.3.e3

Press and keep pressed the lowering button **Q6** to allow the lowering of the basket. If you want to stop the platform descend release the button.

6.3.e4

Q3 Stop/Emergency working test.

With the Platform in motion, press the **Q3** Stop/Emergency button.

The Platform must immediately stop.

6.3.e5

Emergency mechanical lowering lever test.

With the Platform with the basket lifted, pull the emergency lever to mechanically lower the basket of the Platform.

The release of the lever must stop the lowering.

6.3.e6

The "Working Test procedure – A) Ground Control Operation and Check" is finished.

Proceed with the "Function test procedure – B) Check and working of the basket control".

6.3.F FUNCTION TEST**- B) PLATFORM CONTROL OPERATION AND CHECK:****6.3.f 1**

Turn the key switch **Q2** to the left (basket control).

6.3.f 2

Enter the platform and close and secure the entry.

6.3.f 3

Press the traction modality button **P3** to select the drive function.

Press and keep pressed the enable lever **P5a** of the joystick and, moving the joystick **P5**, check the steering (left/right – ahead/back).

Releasing the joystick enable lever or returning the joystick to central position should stop driving.

6.3.f 4

Stop/Emergency function Test **P6**.

While the Platform is moving, press the Stop/Emergency button **P6**.

The Platform immediately stops.

6.3.f 5

Press the selector lifting/lowering modality **P2** to select the lifting/lowering functions

6.3.f 6

Press and keep pressed the enable lever **P5a** of the joystick and, moving ahead and back the joystick **P5**, check the lifting and lowering of the basket.

Releasing the joystick enable lever or returning the joystick to central position should stop raising/lowering the platform.

6.3.f 7

Stop/Emergency function Test **P6**.

While the Platform is lifting/lowering, press the Stop/Emergency button **P6**.

The Platform immediately stops.

6.3.f 8

In case you will find one or more anomalies is forbidden to use the Platform, so do all the necessary before starting to use it (see Part 9 Maintenance).

6.3.f 9

Bring the Platform to the **Zero Power Condition**.

6.3.f 10

Repairs must be carried out before starting the Platform, it is of primary importance to assure its working under safety conditions.

6.3.f 11

The “Working Test procedure – B) Platform Control Operation and Check” is finished. Proceed with the Operating Instructions.

6.4 OPERATING INSTRUCTION - Introduction



6.4.a

Warning – Generic risks

Operation must be only carried out by qualified Operators who have been trained on how to use the machine. Operators must also carefully read and understand the safety regulations in Part 2 and the contents of this manual before operating the machine.

6.4.b

BEFORE STARTING THE OPERATION

Warning – Generic risks

The operator must:

a) Check that the Platform is positioned on a clean floor, without holes and well leveled and is capable to support the weight of the Platform (see Part 3 Specifications).

b) Check that in the moving area there are no exposed people, animals or things and that there are no aerial obstacles in the area where you will work.

c) Do not forget that:

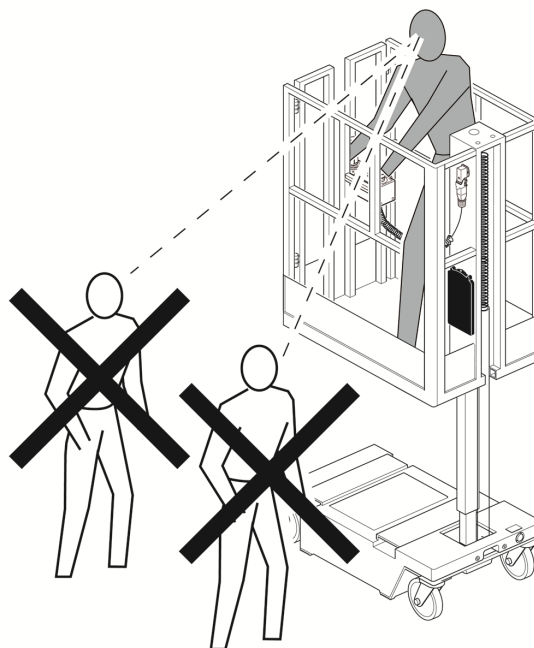
-The operator must carry out all the maneuvers through the controls settled on the push-button panel on the Platform board;

-The translation is adjustable through the joystick **P5**,

-When the basket is totally lowered the maximum speed is about 50 m/min;

-When the basket is lifted the speed is automatically limited to a maximum of 9 m/min.

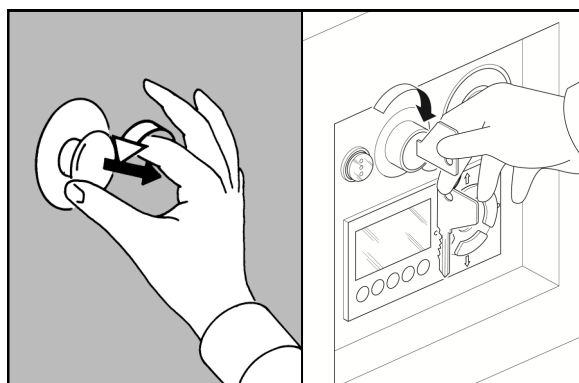
-The extensions of the basket must be withdrawn during the incoming/outgoing of the operator to/from the basket.



6.5 BEFORE GETTING IN THE PLATFORM

Check in the ground module that:

- The Keyswitch **Q2** is on the Platform Control position
- the Stop/Emergency buttons **Q3** is deactivated



6.6 GET ON THE PLATFORM

6.6.a

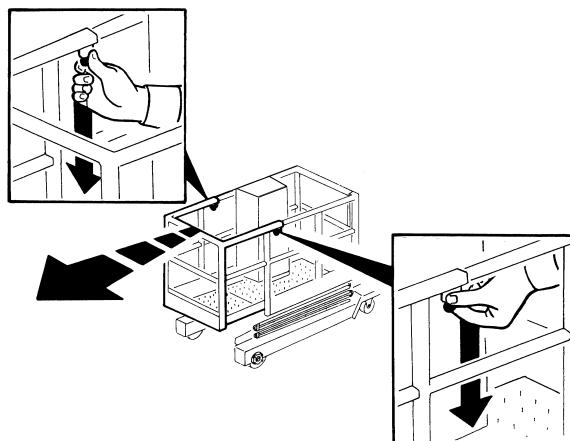
Except for the model LUI MINI 220; when you need to extend the basket do as follows:

-Pull the black knobs down (they will go out from the housing).

-Push forward on the extension of the basket until the end stroke.

-Release the knobs, you will hear a noise. The two knobs are in their safety position again.

-Repeat the procedure to extend the other side of the basket.



6.6.b

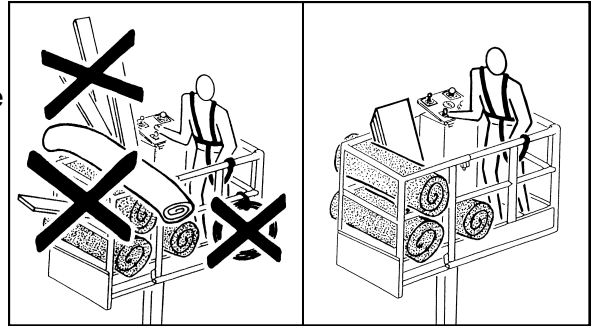
to positioning the load on the basket make sure that:

- the load is balanced,
- the maximum weight is not exceeded (including the weight of the operator).
- the load does NEVER stick out more than 20 cm from both sides of the basket

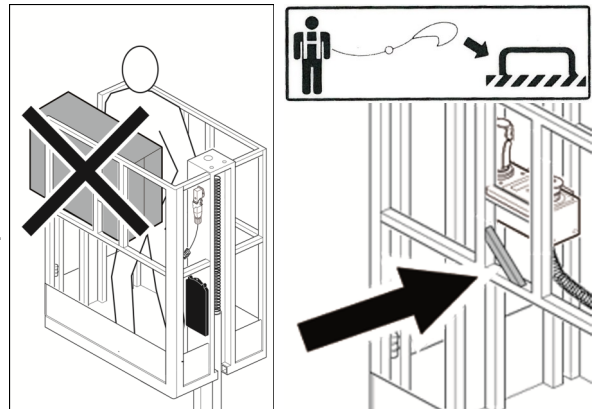
- Warning Danger of Crush

if some parts of the load are sticking out, tie them to the basket rail

- NEVER tie anything out of the basket

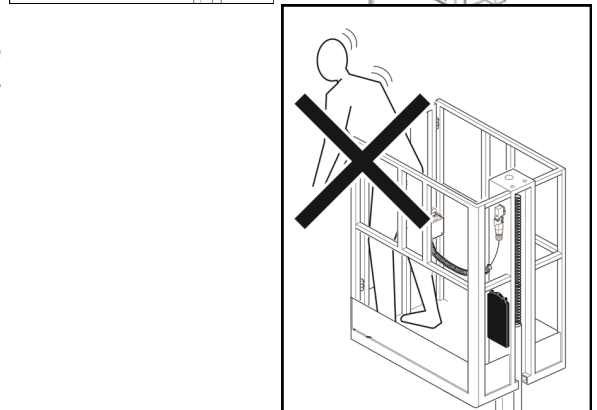
**6.6.c**

If required, wear the safety belt and hook it into the suitable housing.

**6.6.d**

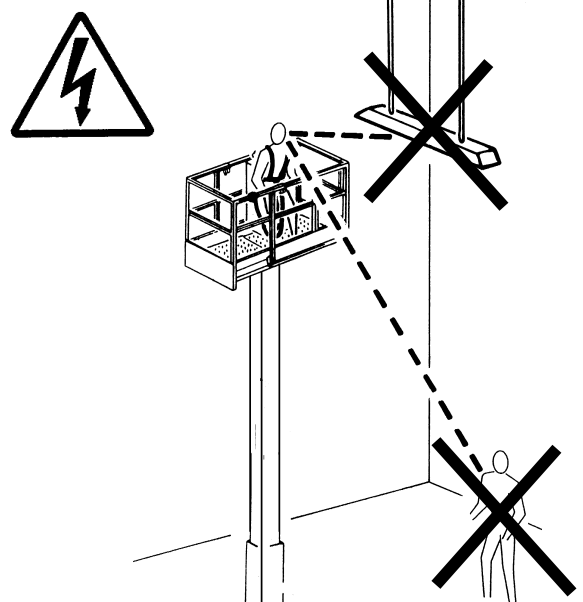
Danger: hands could be crushed or limbs severed

During moving operations, position your body inside the basket so that your limbs do not interfere with the surrounding fixed parts.

**6.6.e**

Warning Risk of collision

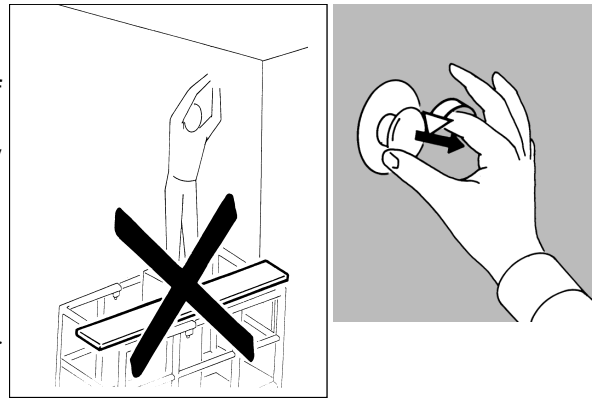
During the translation and/or lifting/lowering operation, the operator must pay attention in order that the working area on the ground and over the basket is always free from obstacles or dangers.



6.6.f

Warning-Danger of Fall

The operator does not, in any case, go on the railings of the basket, nor place on it stairs, boards or other things to reach higher working positions. Moreover, does not in any case lean out of the basket railing of the Platform.



6.6.g

Decide what function activate, whether the translation or the lifting/lowering.

6.6.h

The “Operating Instruction” procedure is finished, proceed with the other drive operations.

6.7 DRIVING OPERATIONS

6.7.a

Press once the **P3** traction modality button, the corresponding led will lighten (drive function activated).

Note: when the LED blink or is off, to restart the function press the same button again.

6.7.b

Only if available, check, that the wheel blocking device **P1** is not activated.

6.7.c

Press and keep pressed the enable lever **P5a** of the Joystick **P5** and move it depending on the necessity.

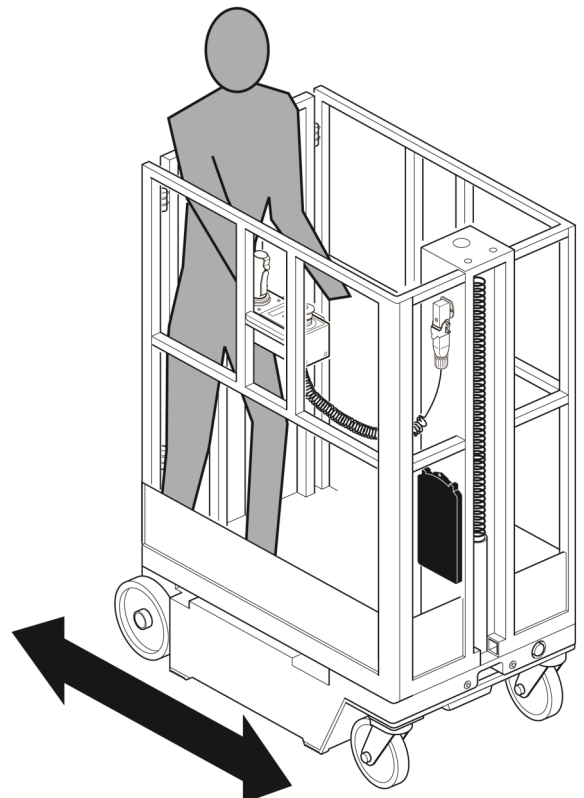
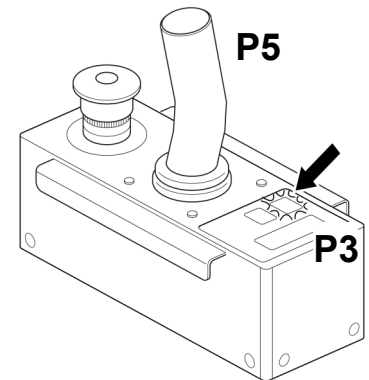
6.7.d

To stop the vehicle is sufficient to release the enable lever **P5a** of the Joystick **P5**, or the joystick **P5** itself. Brake is automatic.

6.7.e

If necessary move the Platform along a straight line (ahead/back), use the selector **P1** to activate the wheel blocking device.

The LED will lighten to indicate that the Wheel Block Device has been activated.



6.7.f Lifting/Lowering Operation

-Press once the **P2** button, the LED will lighten to indicate that the lifting/lowering function has been selected.

Note: when the LED is blinking or off, to restart the function please press the button again.

-The enable lever **P5a** of the joystick **P5** is used to enable the controls of the joystick **P5** and must be kept pressed when the joystick **P5** is used.

-Move the joystick **P5** to lift or lower the basket.

-Release the joystick to stop the vehicle during the lifting/lowering phase

6.7.g

If during the working there is the necessity to change place use the joystick **P5**, that is to say press and keep pressed the enable lever **P5a** of the joystick **P5** and move it depending on the necessity after having pressed the **P3** button

6.7.h

Once finished the work in that area or if you need to do a new load proceed as follows:

6.7.i

Warning Danger of Crushing

Make sure that under the Platform there are no people, animals or things

6.7.l

Move the joystick **P5** and completely lower the Platform and proceed with the work.

6.7.m

At the end of the work bring the Platform to the **Zero Power Condition**.

6.7.n

The "Operating Instruction" procedure is finished.

6.8 AT THE END OF WORKING DAY

6.8.a

Check the water level in the battery, and if necessary fill up as described in the Section 9.6

6.8.b

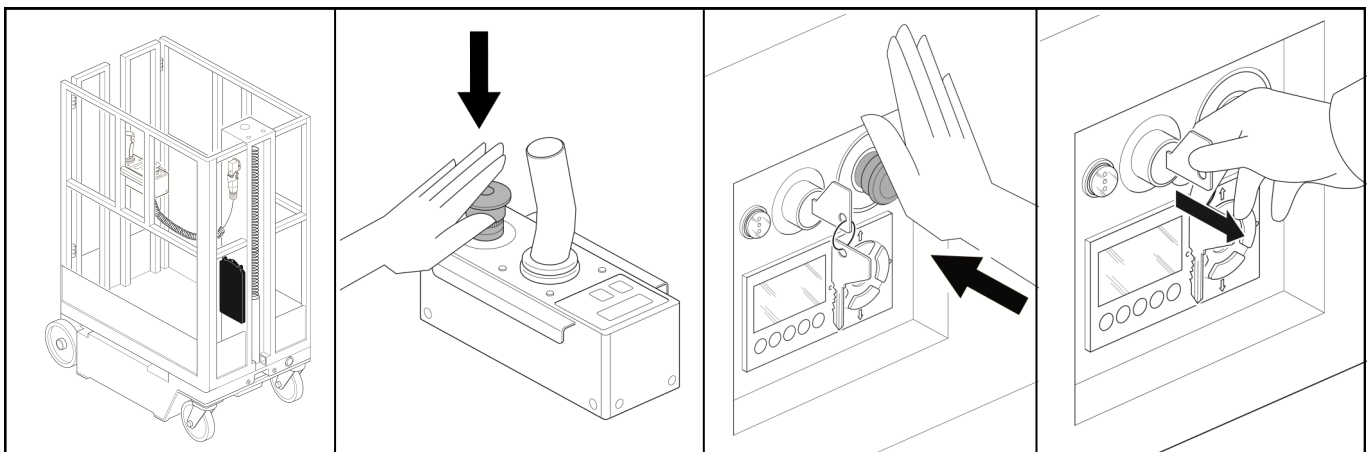
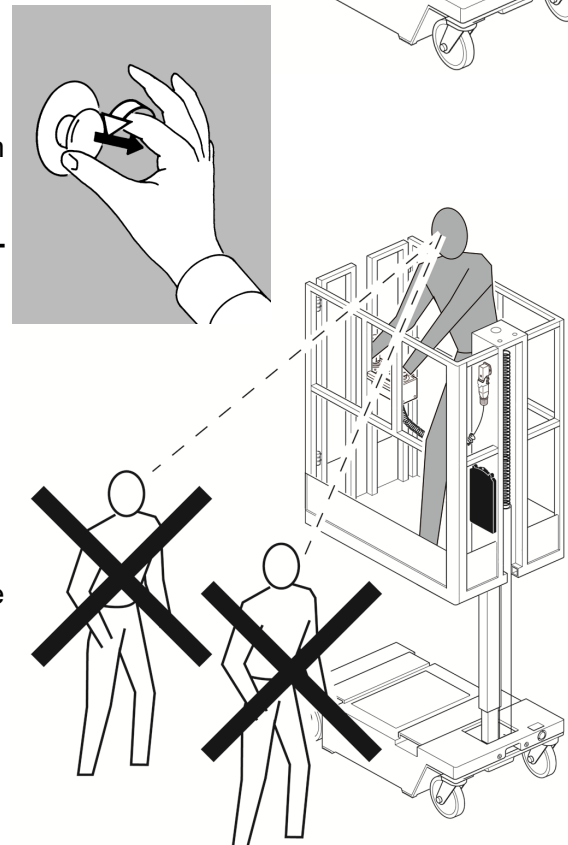
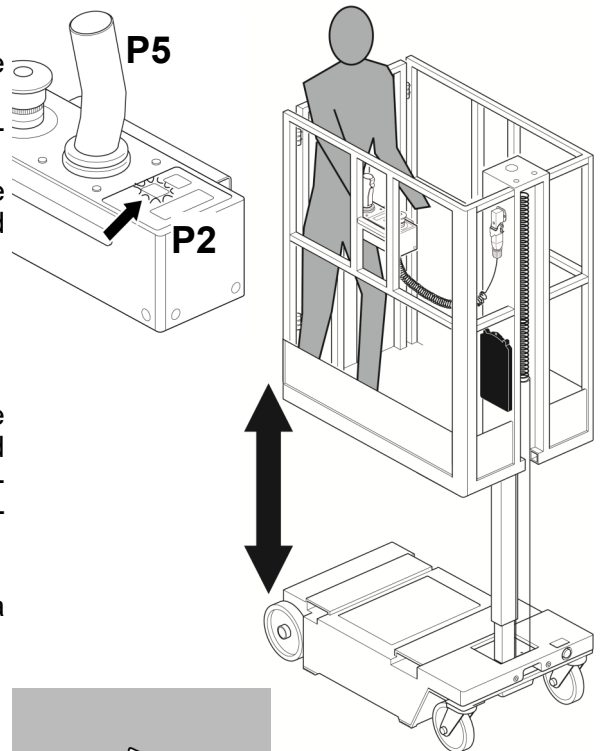
Check the battery charge state and if necessary recharge as described in the Section 9.7

6.8.c

Clean daily as described in the Part 8.

6.8.e

The "At the end of working day" procedure is finished.



6.9 OPTIONAL LUI MINI S.I.E– LUI MINI HD S.I.E : MOUNTING RAISED PLATFORM FOR LUI MINI S.I.W. OR LUI MINI HD S.I.W.

WARNING:

The Raised Platform Kit **MUST** be installed only on a platform model **LUI MINI S.I.W. or LUI MINI HD S.I.W.** and **MUST** be used only indoor areas, on level ground.

6.9.a

The raised platform is formed by four pieces:

- **A** N. 01 Side Rail
- **B** N. 01 Side Rail + N. 02 Front Rails (One single piece)
- **C** N.01 Walking Surface Basement
- **D** Ladder;

6.9.b

- Rest the frame of the walking surface on the LUI MINI S.I.W. or LUI MINI HD S.I.W. platform rails and make sure each of the four poles at the base of the basement are back in their safety position. (A “click” must be heard to indicate the poles have reached their place).

- Insert the Side rail in the respective holes on the walking surface basement and make sure each of the two poles at the base of the side rail are back in their safety position. (A “click” must be heard to indicate the poles have reached their place).

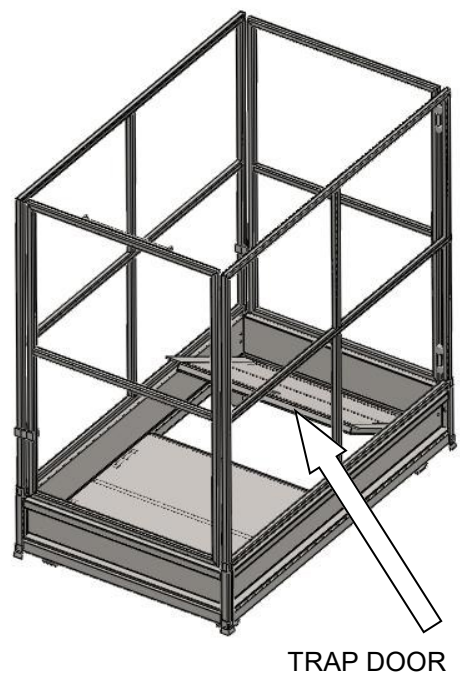
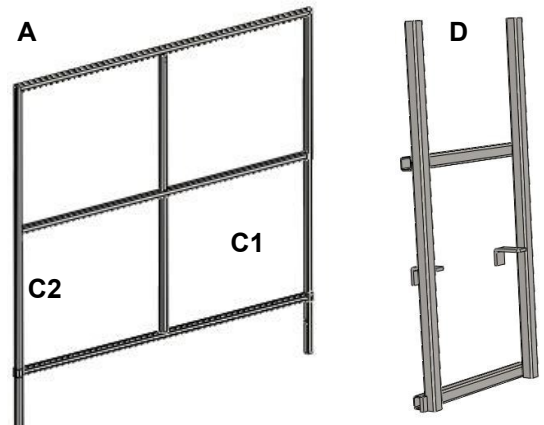
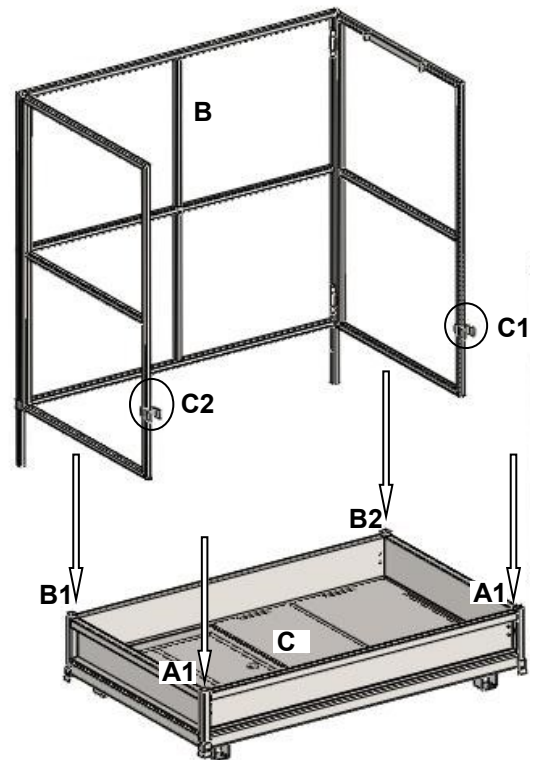
- Follow the same procedure to insert the side + front rails and make sure the fixing points C1 and C2 are hanged to the side rails to keep the two pieces together.

- To access the raised surface, hook on the ladder to the platform rail, in proximity of the trap door.

- Bring the top control box over the raised surface and hang it to one of the rails of the extension kit.

6.9.c

The assembly of the Raised Platform Kit for the LUI MINI S.I.W. or LUI MINI HD S.I.W. is finished.



TRAP DOOR

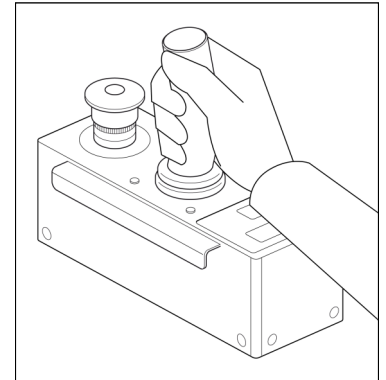
7 INTRODUCTION-SHUTDOWN PHASE

The Platform can be stopped as described hereunder:

- 7.1 - Temporary shutdown
- 7.2 - Daily shutdown
- 7.3 - Prolonged shutdown
- 7.4 - Emergency shutdown
- 7.5 - Emergency lowering
- 7.6 - Manual emergency handling

7.1 TEMPORARY SHUTDOWN

For a temporary platform stop, release the control joystick **P5** and the enable lever **P5a** and all the movement-related functions will automatically stop.



7.2 DAILY SHUTDOWN

To stop the machine at the end of the working day perform the following actions:

7.2.a

Move the platform indoor, to an area protected against any water leakage or condensate; the access to this area must only be allowed to trustworthy staff (any potential external tampering condition must be eliminated thus guaranteeing the operators safety).

7.2.b

Make sure that the machine is in “zero” power condition, that is:

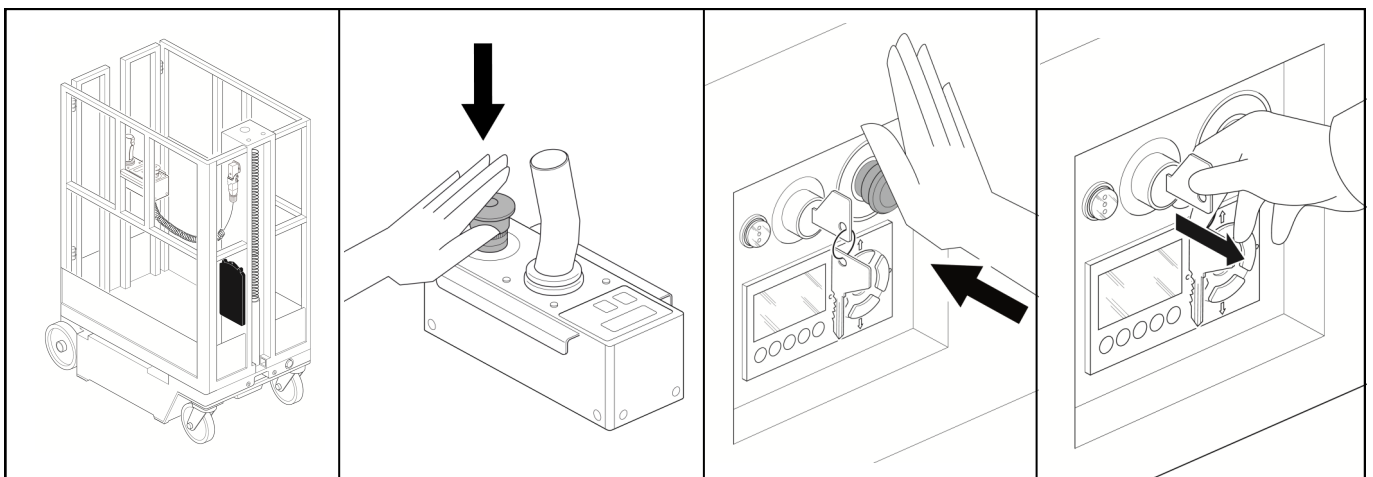
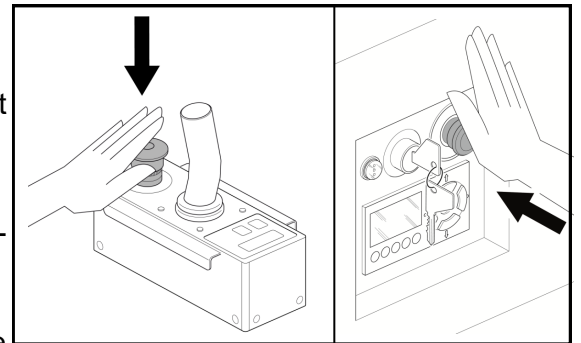
- the platform is completely lowered,
- the Stop/Emergency Button **Q3-P6** is pressed
- the Keyswitch **Q2** has been removed from the control panel and is under the responsibility of the Production Manager.

7.2.c

Check the status of the batteries and if necessary have the battery re-charged, as shown in the Section 9.7.

7.2.d

The daily shutdown procedure is finished



7.3 PROLONGED SHUTDOWN

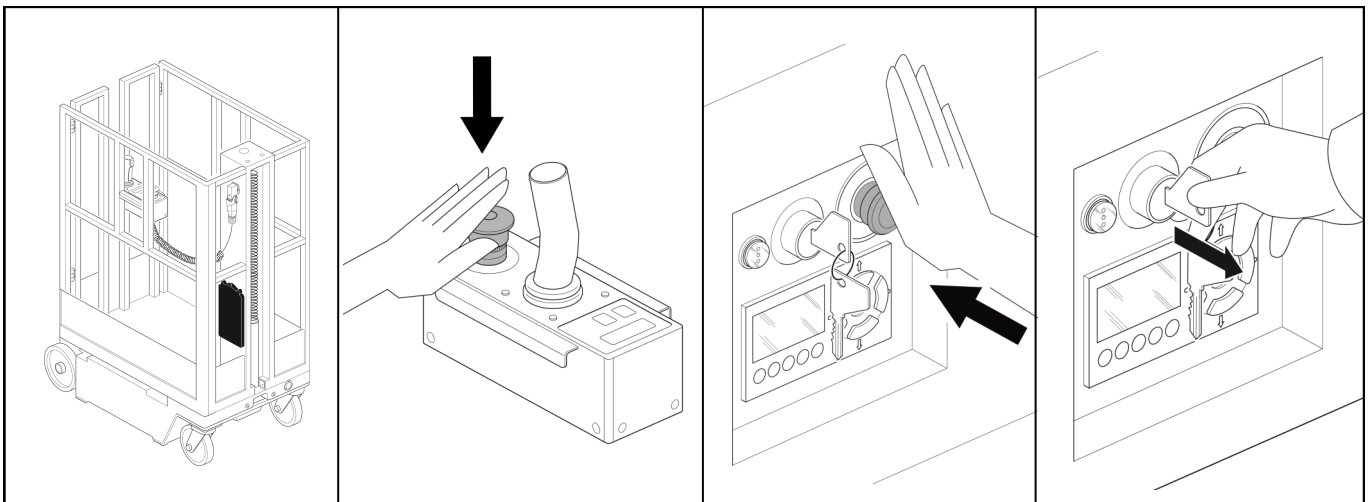
For this kind of shutdown, please do as follows:

7.3.a

Move the platform indoor, to an area protected against any water leakage or condensate; the access to this area must only be allowed to trustworthy staff (any potential external tampering condition must be eliminated thus guaranteeing the operators safety).

7.3.b

Make sure the Platform is in **Zero Power Condition**.



7.3.c

Perform the ordinary maintenance as described in Part 9

7.3.d

Clean the machine as described in Part 8.

7.3.e

Is preferable remove the Control box as described herunder:

7.3.h

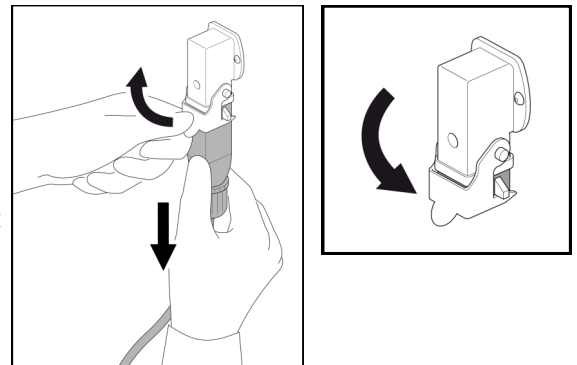
Disconnect the ILME connector and put the safety cover

7.3.i

Remove the Control Box and put it in a safe place.

7.3.l

The Prolonged shutdown procedure is finished.



7.4 EMERGENCY SHUTDOWN

7.4.a

In case the operator is compelled to push the Stop Emergency button **P6-Q3**, perform the following operation:

7.4.b

Inspect the machine to find out the cause of the emergency stop.

7.4.c

Choose:

A – whether it is necessary to bring the machine to the **Zero Power Condition**

B – whether it is necessary to contact the technical assistance

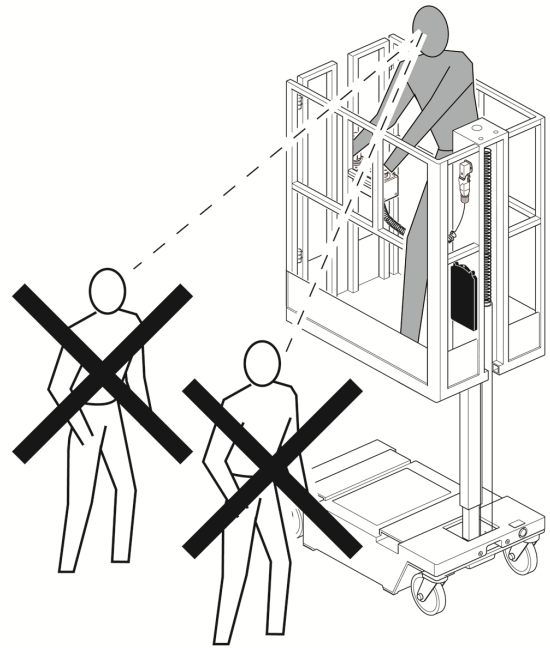
C whether it is possible to repair the damage

7.4.d

If it is possible to eliminate the cause of the emergency stop, pull the Emergency stop button **P6-Q3** and start the platform following the instruction on Part 6 of this Manual.

7.4.e

The emergency shutdown procedure is finished.



7.5 EMERGENCY LOWERING

7.5.a

WARNING: CRUSHING HAZARD

When carrying out this activity the operator must make sure that no individuals, animals or objects are located in a 2-metre area and that no impediments are present above the cover (this is the area that the basket needs during the lowering stage).

7.5.b

The emergency descent can be done in two different ways:

a - Using the emergency lever

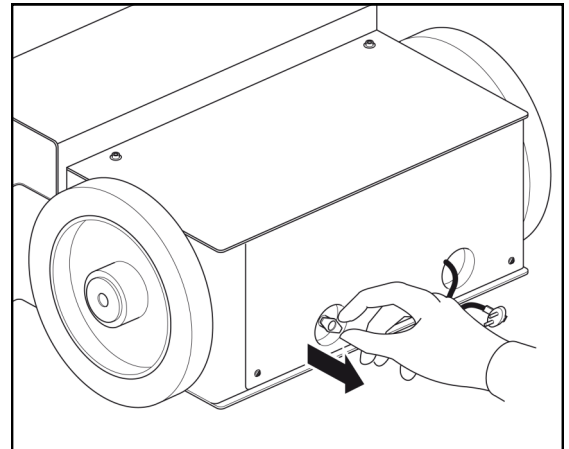
b - Using the Down Keys Q6 on the ground control panel

a - **Using the emergency lever** it is sufficient to pull the lever. In this way the basket will start to slowly lower.

-Once finished the lowering phase, leave the lever again.

b - **Using the button Q6** on the Ground Module with the key selector **Q2** turned to the right.

- Push the **Q6** button to lower the basket.

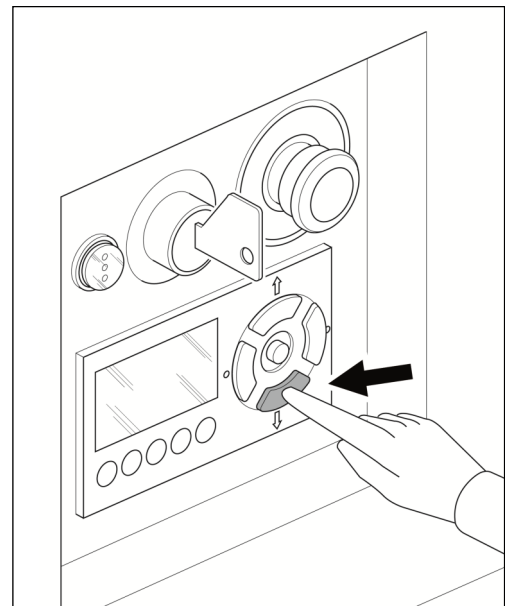


7.5.c

Follow the procedure as described in section 7.4 Emergency shutdown

7.5.d

The emergency lowering procedure is finished.



8.1 CLEANING

8.1.a

As the Platform works in presence of dusts, it must be daily or whenever it would be necessary clean it.

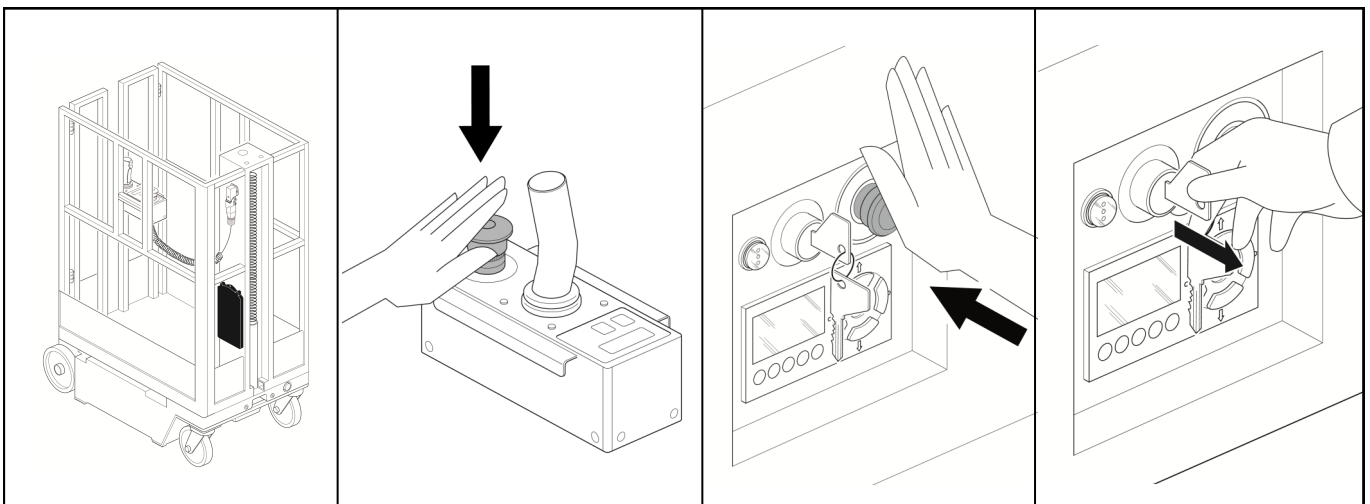
8.1.b

The person in charge with the cleaning must have read and well understood the safety prescriptions shown in this manual (Part 2)

8.1.c

Before each cleaning operation bring the Platform to the **Zero Power Condition**.

8.1.d

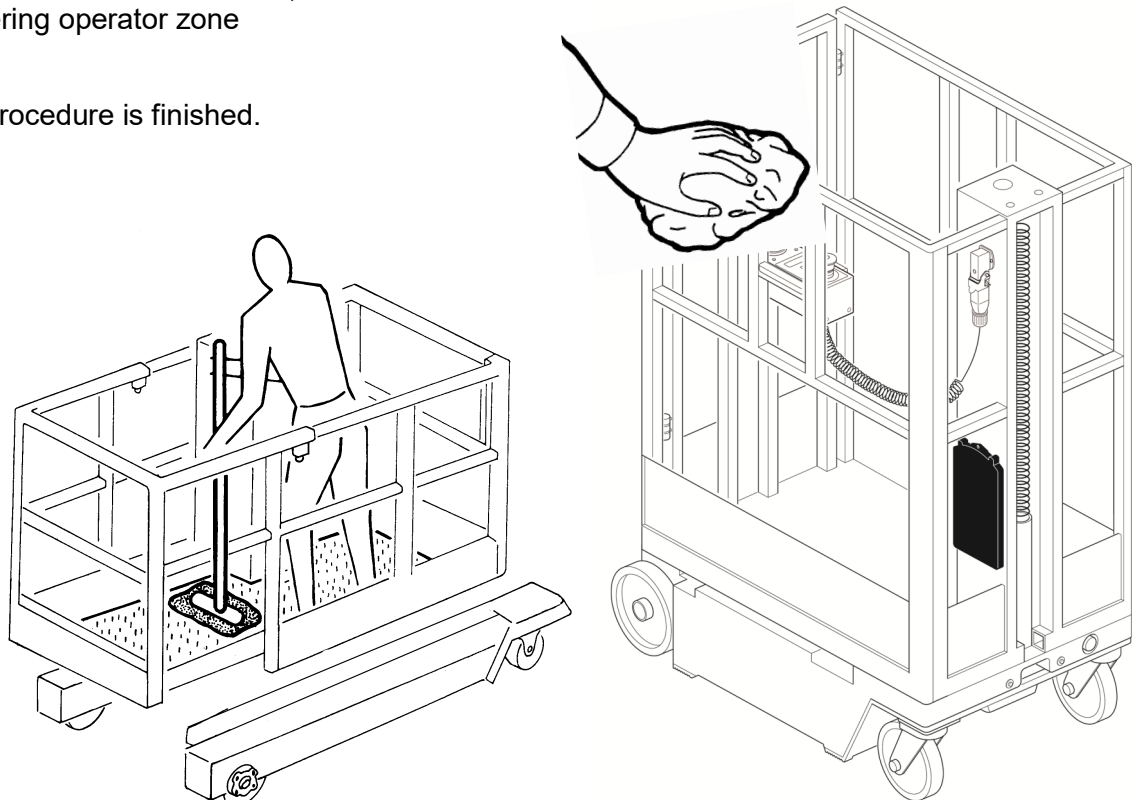


With a cloth slightly dampened with water clean:

- the switchboards,
- the trampling surface of the Platform,
- the lifting/lowering operator zone

8.1.e

The cleaning procedure is finished.



9.1 PREFACE AND GENERAL MAINTENANCE TIPS

9.1.a

Regular inspection and conscientious maintenance is the key to efficient economical operation of your machine.

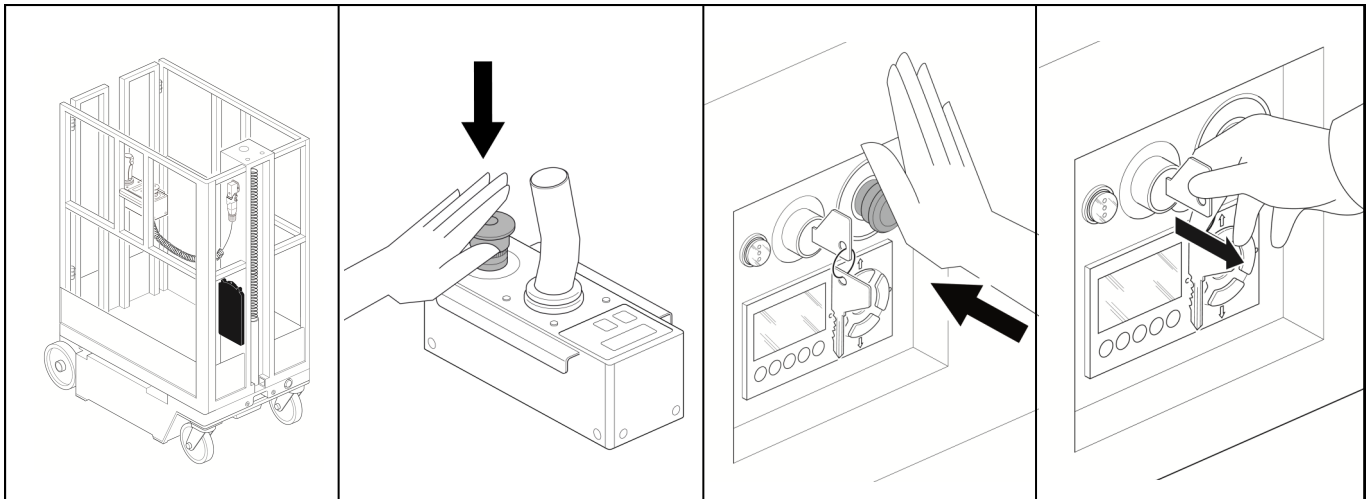
The manufacturer has worked hard to improve machine reliability and simplify ordinary maintenance operations. Your equipment will perform satisfactorily with a minimum of service and repair. Never perform any service or maintenance to the machine without having first performed the safety procedure to lock the basket in the safe service position, using the safety bar.

ADDITIONAL PRECAUTIONS:

Never leave hydraulic components or hoses open. They must be protected from every type of contamination. Never open a hydraulic system where there are contaminants in the air.

9.1.b

The person in charge with the maintenance must have read and well understood all the safety prescriptions shown in this manual as described in the Part 2 "Safety Prescriptions".



9.1.c

The maintenance must be strictly carried out with the Platform in the **Zero Power Condition** (Part2 page 2. 16).

9.1.d

The maintenance operations must be strictly carried out only by a single qualified operator, unless where specified, **NEVER BY MORE PEOPLE**.

9.1.e

Warning Generic Risks

The maintenance operations must be carried out by qualified staff:

- who has read and well understood the safety prescriptions shown in this manual (see Part 2).
- who has the individual safety devices and use them when necessary
- must have on disposal clothes, suitable equipments and must wear and use them depending on the necessities and dangers.
- and with the Platform in the **Zero Power Condition**.

9.1.f

Each intervention not specified here below is to be considered as extraordinary maintenance.

9.1.g

Repairs, modifications, extraordinary maintenance operations other than the ones indi-



cated below cannot be carried out without the prior written approval of the Manufacturer's after-sales technical service.

9.1.h

Based on the specific situation, the Manufacturer will give his written approval (together with all the necessary instructions) or recommend the intervention of his own technical staff.

9.1.i

Such a cautious measure is necessary since incorrect or improper operations may cause functional anomalies, machine damages and personal injuries. The Manufacturer accepts no responsibility for the possible consequences of the aforementioned operations.

9.1.l

Besides they void the warranty and annul the EC declaration of original conformity.

9.1.m

Before resuming operation, check the entire system as indicated in the start procedures. (see Part 6).

9.1.n

Failure to comply with these precautions may cause machine damages and personal injuries

9.1.o

Here below are shown the ordinary maintenance interventions.

9.2 - Safety positioning, lifted basket

9.2a - In case the basket cannot be electrically lifted
- LUI MINI S.I. - LUI MINI S.I.W./S.I.E. - LUI S.I. 460. -
LUI MINI HD - LUI MINI HD S.I.W./S.I.E.

9.2b - In case the basket cannot be electrically lifted
- LUI MINI 220.

9.3 - Caster wheel greasing

9.4 - Oil check and refill

9.5 - Battery terminals check

9.6 - Battery water level check

9.7 - Battery charge procedure

9.8 - Nuts, bolts and pins tightening Procedures

9.9 - Wiring check

9.10 - Inspections

9.10a Frequent Inspection "Frequent Inspection Check List "

9.10b Annual Inspection "Annual Inspection Check List "

Here below is shown what you have to do in each one of these cases.

9.2 STANDARD SAFETY POSITION WITH LIFTED BASKET

This operation must be performed only when maintenance activities are required. The operator must use the ground control according to the following procedure:

9.2.1

Disabling all the Emergency buttons

9.2.2

Select the Ground Station Mode turning the Keyswitch **Q2** to the right

9.2.3

Press the Up Key **Q5** to lift the basket up to 1,5 mt

9.2.4

Remove the base cover(only for LUI MINI S.I./S.I.W./S.I.E.)

9.2.5

Put one hand under the exit of the safety bar and at the same time pull the black pommel

9.2.6

The safety bar descend completely, accompanying it with the hand.

9.2.7

Press the Up or Down Keys **Q5 - Q6** to slowly move the basket until the edge of the safety bar touch the chassis.

9.2.8

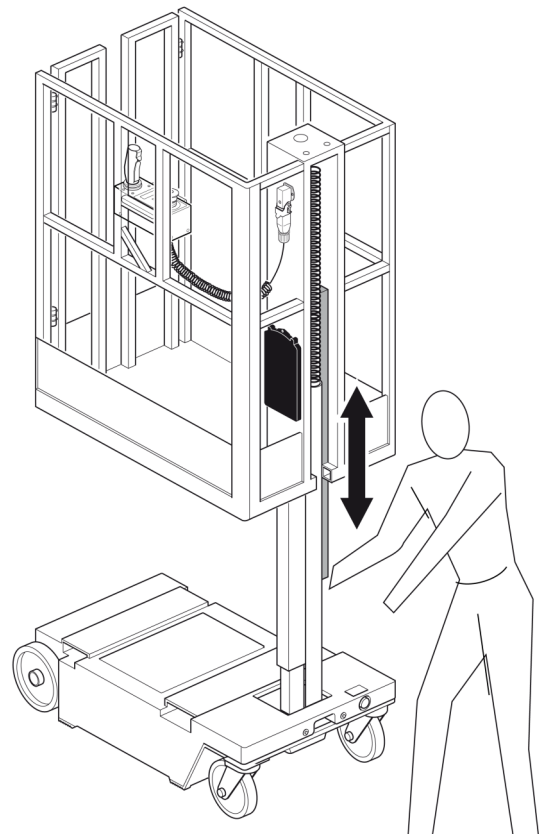
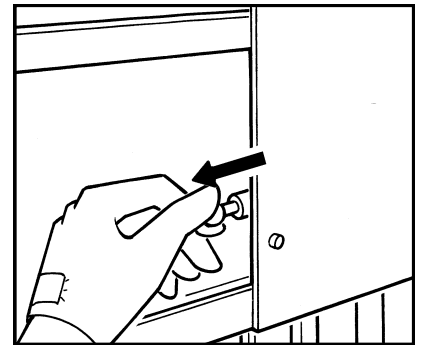
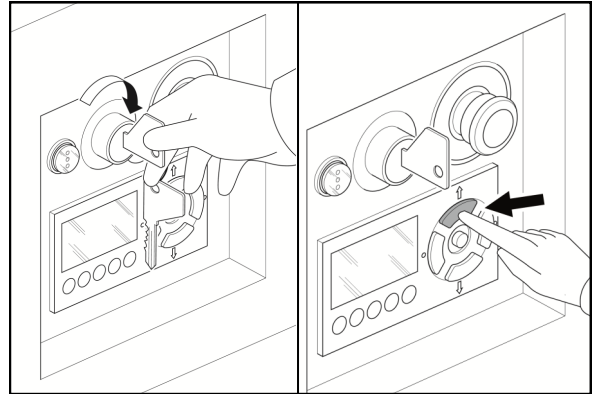
Select the OFF Mode turning the Keyswitch **Q2** to the center and remove the key.

9.2.9

Press the Stop/Emergency Button **Q3**

9.2.10

Perform the required maintenance activity.



9.2A THE BASKET CANNOT BE ELECTRICALLY LIFTED – FOR LUI MINI S.I. - LUI MINI S.I.W./S.I.E. - LUI MINI HD—LUI MINI HD S.I.W./S.I.E.- LUI S.I. 460.

9.2a1

Bring the Platform to the **Zero Power Condition** (Part 2 page 2.16)

9.2a2

Take a forklift with a suitable capacity (See Chapter 3 “Specifications”)

9.2a3

Lift up with the forks the basket and take it slowly to a height of 1,5 meters.

9.2a4

Remove the covers.

9.2a5

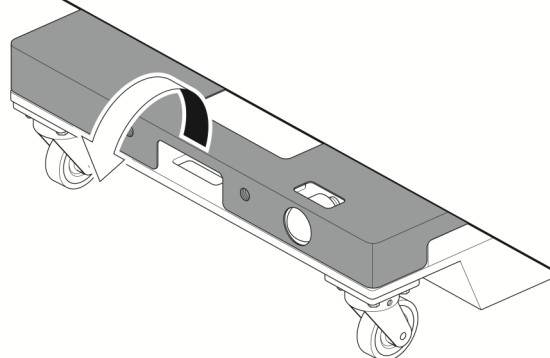
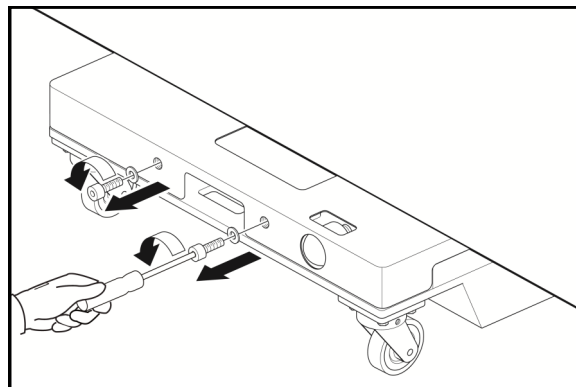
Unhook and let totally go out the safety bar, you will hear a “CLICK”.

9.2a6

With the basket held by the forks of the forklift, lower the basket until the safety bar leans on the frame.

9.2a7

At this point it is possible to carry out the necessary maintenance operations.



9.2B THE BASKET CANNOT BE ELECTRICALLY LIFTED - FOR LUI MINI 220

9.2b1

Bring the Platform to the **Zero Power Condition** (Part 2 page 2.16)

9.2b2

Remove the front cover.

9.2b3

Take the hand pump bar

9.2b4

Place the hand pump bar into the suitable housing.

9.2b5

Move the hand pump bar from left to right to lift the basket until a height of 1,0 meter.

9.2b6

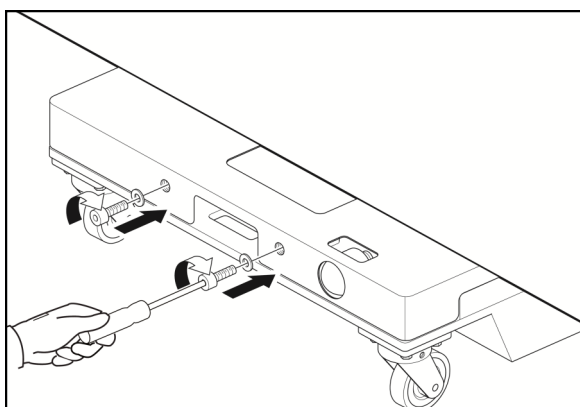
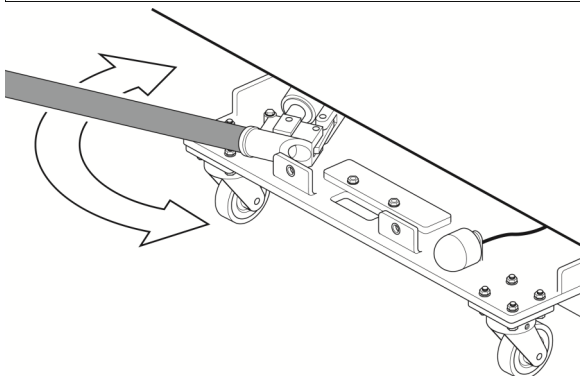
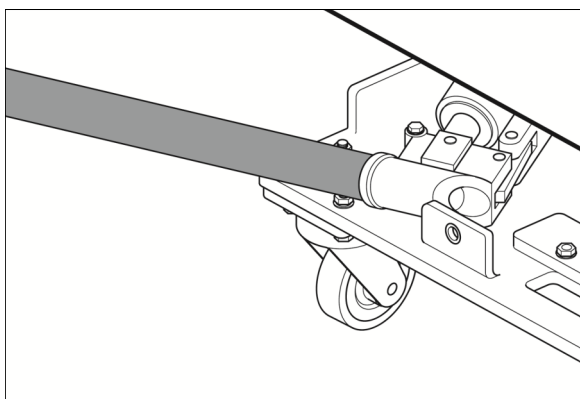
Unhook and let totally go out the safety bar, you will hear a “CLICK”.

9.2b7

With the emergency manual lever, lower the basket until the safety mechanical lever leans on the chassis.

9.2b8

At this stage it is possible to carry out the necessary maintenance operations.



9.3 CASTER WHEEL GREASING

9.3.a

Six-monthly check and if necessary grease the caster wheels articulations with small quantities of grease as: STRINGY COMMON GREASE.

9.3.b

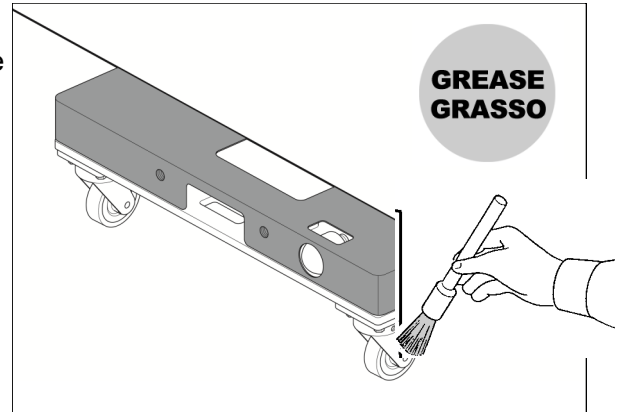
To proceed with this operation it is necessary to bring the Platform to the **Zero Power Condition** (Part 2 page 2.16).

9.3.c

With a brush, grease the caster wheels articulations.

9.3.d

The caster wheel greasing procedure is finished



9.4 OIL CHECK AND REFILL

9.4.a

Every three months check the oil level and, if necessary, fill it with mineral oil type: ROLOIL LI22 HIV.

9.4.b

To proceed with this operation it is necessary to bring the Platform to the **Zero Power Condition** (Part 2 page 2.16).

9.4.c

Remove:

- For LUI MINI S.I.- LUI MINI S.I.W./S.I.E.- LUI MINI HD-LUI MINI HD S.I.W./S.I.E. the front cover.
- For LUI S.I. 460 the central cover.
- For LUI MINI 220 the rear cover.

9.4.d

Remove the oil cap.

9.4.e

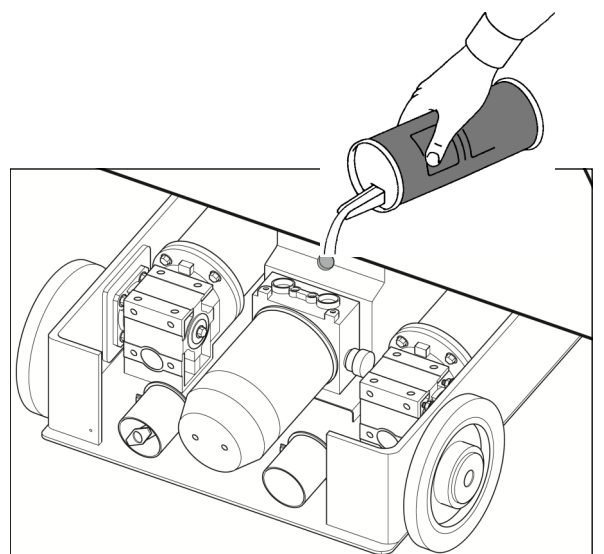
Fill the tank with the mineral oil ROLOIL LI22 HIV

9.4.f

Repeat backward the operation described

9.4.g

The oil check and refill procedure is finished



9.5 BATTERY TERMINALS CHECK

9.2a1

To proceed with this operation it is necessary to bring the Platform to the **Zero Power Condition** (Part 2 page 2.16).

9.5.a

The condition of the battery terminals must be checked every two months.

9.5.b

If the battery terminals are dirty or oxidized, perform the following actions:

9.5.c

- For LUI MINI S.I. - LUI MINI S.I.W/S.I.E. remove the front cover
- For LUI S.I. 460 - LUI MINI HD- LUI MINI HD S.I.W./S.I.E. open the hatch using the black pommel
- For LUI MINI 220 release the hook and pull the central cover

9.5.d

Use a wrench for loosening the nuts.

9.5.e

Disconnect the terminals and clean them with a wet cloth. If the oxide layer is thick, brush the surface layer away and soak them in water for at least 30 minutes.

9.5.f

Dry them thoroughly.

9.5.g

Place them back paying attention to the position of the positive and negative poles. Then tighten them.

9.5.h

Apply a protection lubricant for contacts on the terminals

9.5.i

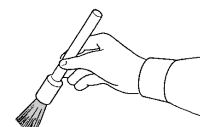
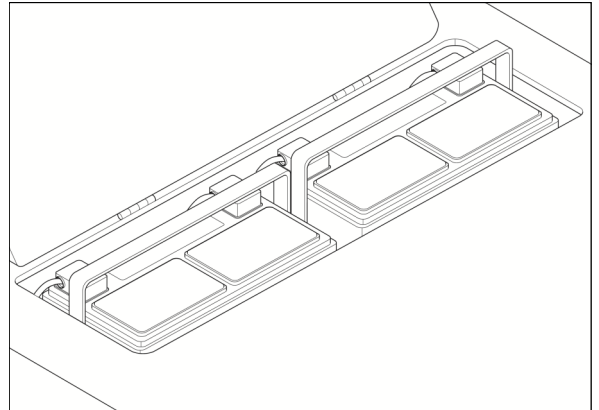
Use a wrench for tightening the nuts.

9.5.l

Place and/or close again the cover.

9.5.m

The battery terminals check procedure is finished



9.6 BATTERY WATER LEVEL CHECK

9.6.a

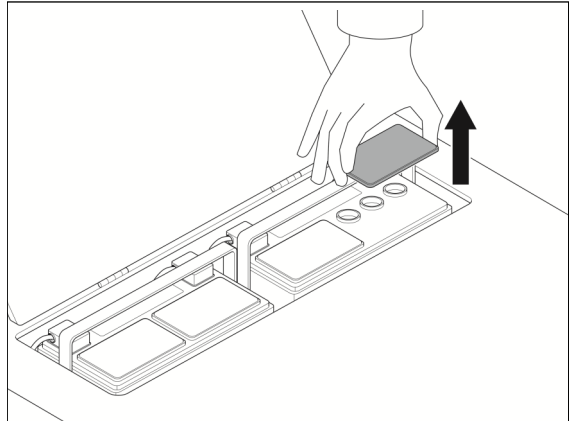
Bring the Platform to the **Zero Power Condition** (Part 2 page 2.16)

9.6.b

The battery water level must be checked every 4 working days or before recharging the battery

9.6.c

- For LUI MINI S.I. - LUI MINI S.I.W./S.I.E. remove the front cover
- For LUI S.I. 460 - LUI MINI HD-LUI MINI HD S.I.W./S.I.E. open the hatch using the black pommel
- For LUI MINI 220 release the hook and pull the central cover



9.6.d

The water level must always be at least 5 mm above the covers of the internal elements. Before starting the re-charging cycle, check the water level and add some de-mineralized water, if necessary.



9.6.e Warning

As during the charge part of the water evaporates it is necessary to check again after 30 minutes of work.

9.6.f

Perform standard operations with the machine for 30 minutes and perform this procedure another time to achieve the required water level.

9.6.g

For the right maintenance of the battery please refer to the relative user manual



9.6.h Warning

LEAD-ACID BATTERIES GENERATE EXPLOSIVE GASES. KEEP SPARKS AND FLAME AWAY FROM BATTERIES. DO NOT SMOKE WHILE CHARGING.

9.6.i

Replace the plastic cover on the batteries.

9.6.l

Place and/or close again the cover of the machine.

9.6.m

The battery water level check is finished



9.7 BATTERY CHARGE PROCEDURE

9.7.a

Bring the Platform to the **Zero Power Condition** (Part 2 page 2.16)

9.7.b

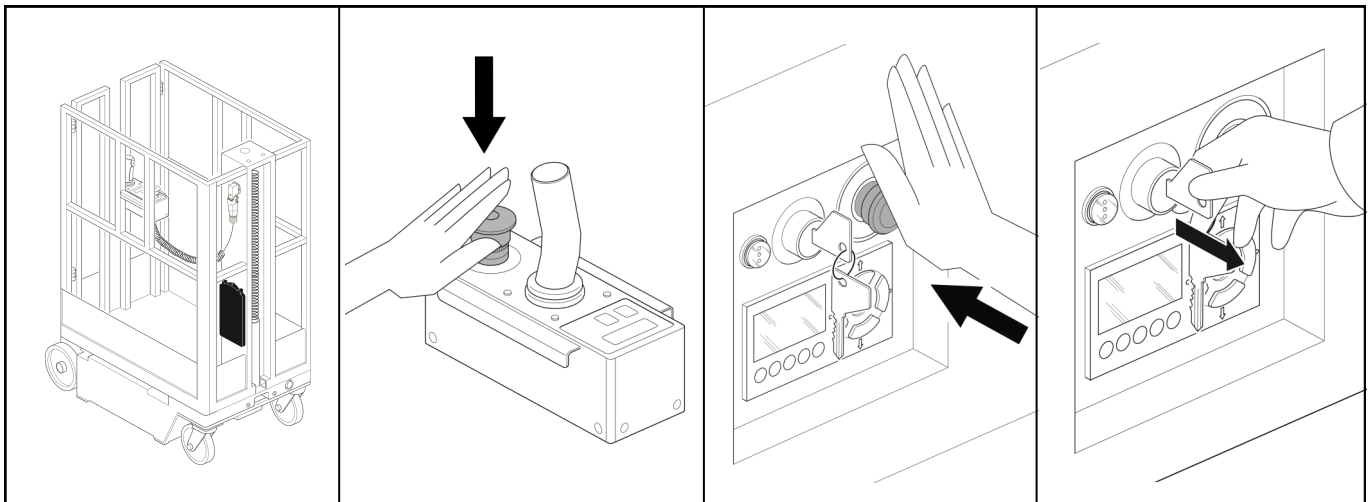
Warning – Battery check and recharge

The full charge of the batteries must be done:

- After the daily use
- After a long work stoppage of the Platform
- And at least once every 7 days.

9.7.c

To have the batteries charged do as follows:

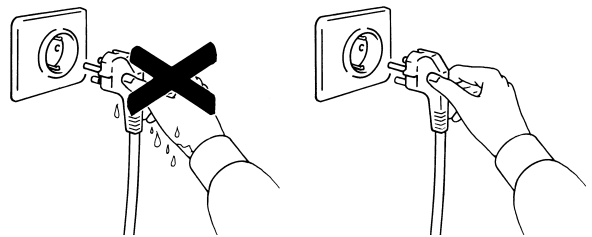


9.7.d

Bring the Platform to the **Zero Power Condition** (Part 2 page 2.16)

9.7.e

Connect the appropriate cable into the socket.



9.7.f

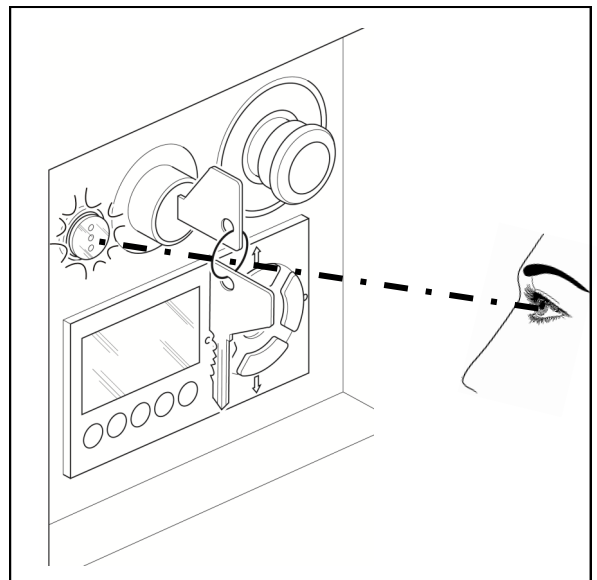
The batteries charge is finished when the Battery Charge signal **Q7** (green LED on) shows that the batteries are charged.

9.7.g

Once have the batteries charged, disconnect the cable.

9.7.h

The Battery charge procedure is finished.



9.8 NUTS, BOLTS AND PINS TIGHTENING PROCEDURE

9.8.a

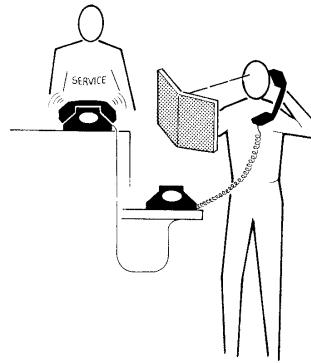
Bring the Platform to the **Zero Power Condition** (Part 2 page 2.16)

9.8.b

The operator must check once a month nuts and bolts and pins and, if it necessary, must call for the technical assistance which will carry out the necessary maintenance.

In any case, once a year he must call for the technical assistance which will check and carry out the maintenance of the nuts and bolts and pins of all the Platform.

Do not forget that all the operations must be carried out only and strictly by maintenance technicians authorized by Braviisol Divisione Meccanica srl and who have followed a training course in the authorized assistance centers.



9.9 WIRING CHECK

9.9.a

These operations must be carried out every two months. To carry out the visual check of the cables do as follows:

9.9.b

The operator must:

- wear work clothes, in particular gloves,
- have read and well understood the safety prescriptions shown in the Part 2 of this manual,
- bring the Platform to the **Zero Power Condition** (Part 2 page 2.16)

9.9.c

Remove all the covers.

9.9.d

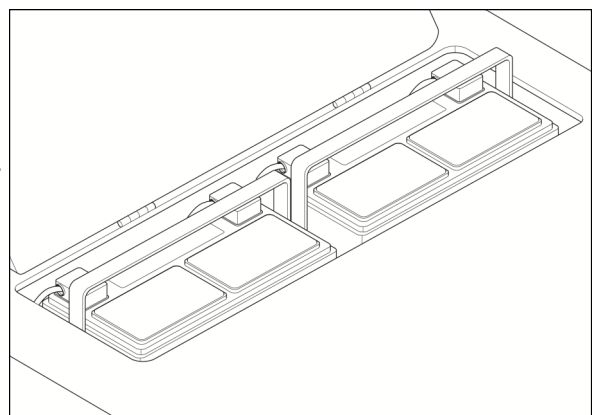
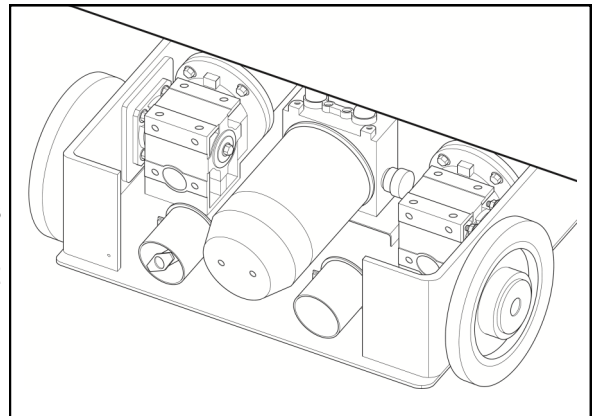
Check the wear and tear state of the cables.

9.9.e

If it is necessary to replace them, please call for the technical service which will provide with the replacement.

9.9.f

The wiring check procedure is finished.



9.10 INSPECTIONS

The user/operator should not accept operating responsibility until the Manual has been read and fully understood as well as having operated the lift under supervision of an experienced and qualified operator.

Only trained and authorized personnel shall be permitted to operate this machine.

This manual and its attachments should be considered integrant part of this machine and should remain with the machine all the time.

As the manufacturer has no direct control over utilisation and application of this machine proper safety practice are responsibility of the user and operating personnel.

It is the responsibility of the operator to perform a pre-start inspection and routine maintenance.

9.10a FREQUENT INSPECTION - FREQUENT INSPECTION CHECK LIST

WARNING

THIS INSPECTION MUST BE COMPLETED EVERY 3 MONTHS OF SERVICE OR 150 HOURS, WHICHEVER OCCURS FIRST, OR IF A MACHINE HAS BEEN OUT OF SERVICE FOR GREATER THAN 3 MONTHS. FAILURE TO DO SO COULD RESULT IN DEATH OR SERIOUS INJURY.

- Owner or user is responsible for Frequent inspections
- The inspection must be performed by a qualified technician, qualified as a mechanic, trained on the use and maintenance of this specific make and model of aerial work platform.
- Always keep inspection records up-to-date
- Record and report all discrepancies and anomalies to your supervisor.

FREQUENT INSPECTION CHECK LIST - FORM A

MODEL _____
SERIAL NUMBER _____
YEAR OF CONSTRUCTION _____

DESCRIPTION

- _____ 1. Perform all checks listed on Pre-start Inspection
- _____ 2. Check the oil level and status - be sure that the oil has a clear light colour.
- _____ 3. Check the entire machine for signs of damage, broken welds, loose bolt, improper or makeshift repairs
- _____ 4. Check that all adjustable flow valves are locked
- _____ 5. Check that the basket with a full load does not lower
- _____ 6. Inspect the motor and motor brushes
- _____ 7. Check the electrical components and wires for any damaged or oxidized part.
- _____ 8. Check the demineralised water level in the batteries

DATE _____

SIGNATURE _____

INSPECTED BY _____

9.10b ANNUAL INSPECTION - ANNUAL INSPECTION CHECK LIST

WARNING

THIS INSPECTION MUST BE COMPLETED NO LATER THAN 13 MONTHS FROM THE DATE OF THE PRIOR ANNUAL INSPECTION. FAILURE TO PERFORM THIS INSPECTION COULD RESULT IN DEATH OR SERIOUS INJURY.

- Owner or user is responsible for Frequent inspections
- The inspection must be performed by a qualified technician, qualified as a mechanic, trained on the use and maintenance of this specific make and model of aerial work platform.
- Always keep inspection records up-to-date
- Record and report all discrepancies and anomalies to your supervisor.

Date:
 Serial Number:
 Model:
 Date last inspection :
 Date placed into Service

ANNUAL INSPECTION CHECK LIST - FORM B

Customer:
 Address:
 City/State/ZIP code:
 Phone:
 Contact Name:

Dealer:
 Address:
 City/State/ZIP code:
 Phone:
 Contact Name:

DECAL	
Legibility	
Loading Capacity clearly marked	
Correct Position	
Quantity	
PLATFORM RAILS	
Entry Gate closes properly	
Weather Resistant container for Manuals on board the machine	
Manuals into the container	
Proper Weld— no signs of corrosion or damage	
PLATFORM EXTENSION	
Sliding smoothly and easy	
Teflon sliding wheels entire and not damaged	
Bolt and washers	
ELEVATING SYSTEM	
Mast structure	
Lifting movement and speed	
Noise while lifting/Lowering	
Spiral cable passing through the steel tube	
SAFETY MAINTENANCE BAR	
Functioning	
Stability	

ELECTRICAL COMPONENTS	
Ground Module Functioning	
Connectors	
Wires	
Joystick Functioning	
Spiral cable	
Batteries Integrity	
Batteries proper Functioning	
Battery Charger Functioning	
EMERGENCY STOP	
Break all circuit	
CHASSIS	
Bolts tight	
Chassis Proper Weld— no signs of corrosion or damage	
Drive Shaft Fastened	
Front Turning Wheels Secured	
Load bearings	

10.1 TROUBLESHOOTING AND ERROR CODES

MODEL LUI MINI S.I - LUI MINI S.I.W - LUI MINI S.I.E

At power-up and during operation the LCD display on the ground Control Module displays the current machine operating status. The following information is communicated:

- There is a Battery Charge Indicator (BCI), this is in the shape of a battery with 10 bars indicating a fully charged battery.
- Underneath the BCI is an hour meter display, this indicates the duration the system has been running.
- In the top right corner of the display there is a function display, this could be indicating one or more of the following; a left and right arrow with a forward slash through the middle – DRIVE Disabled, an up arrow with a forward slash underneath – LIFT UP Disabled, a down arrow with a forward slash above – LIFT DOWN Disabled, an up and down arrow with a slash through the middle – both LIFT UP and LIFT DOWN disabled, a tortoise – Drive Speed Cut-Back Mode Engaged, a battery with a flash through it – Battery Charger Plugged In.
- In the bottom right corner of the display there is a fault code indicator. This is displayed as a symbol of a spanner and a two-digit code, which will be explained in further detail. When a fault code is indicated the LCD screen will alternate between the text and symbol display modes.

The following is a description of some of the common error codes and corrective measures, please contact your local distributor or the Manufacturer if more detailed error code explanations are required:

Code 01 – Low Battery Voltage

- Battery cable ends loose or corroded at battery posts.
- Charger DC output wires from charger to batteries damaged or disconnected.

Code 02 – Left PHP Bar - UP

- Obstruction under LEFT pothole bar.
- Obstruction around the actuator assembly at the base of the mast.

Code 03 – Right PHP Bar - UP

- Wheel block engaged

Code 04 – Tilt Condition

- If machine is on a tilt of more than 1.5° in either or both the X or Y direction, this is normal operation. (DRIVE and LIFT UP are disabled when tilt is detected). Check if Ground Control Module is mounted securely to the mast support column. Check if Ground Control Module is mounted securely to the mast support column.

Code 05 – Obstruction Sensor System

- No Communication with Ground Control Module.
- Is machine equipped with an Obstruction Sensor System?
- Are the electrical harness connectors from the OSS Module through the Platform Junction Box to the Ground Control Module tight and undamaged?

Code 07 – Left Drive Motor - Disconnected

- Check left drive motor M1 connector at the Traction Control Module for secure and proper connection.

Code 08 – Right Drive Motor - Disconnected

- Check right drive motor M2 connector at the Traction Control Module for secure and proper connection.

Code 09 – Left Brake - Disconnected

- Check left drive motor M1 connector at the Traction Control Module for secure and proper connection.

Code 10 – Right Brake - Disconnected

- Check right drive motor M2 connector at the Traction Control Module for secure and proper connection.

Code 11 – Left Drive motor – Short Circuit

- Wiring harness from (M1) connector on Traction Control Module to Left Drive Motor for damage.

Code 12 – Right Motor – Short Circuit

- Wiring harness from (M2) connector on Traction Control Module to Left Drive Motor for damage.

Code 13 – Pump Motor - Disconnected

- Check the Positive (+)/Negative (-) cables from the Ground Control Module to the Pump Motor studs for loose or corroded connections.

Code 15 – Lift Down Valve - Disconnected

- Inspect wire terminals on the lift down valve at the base of the lift cylinder for tight and secure connection.

Code 16 – Lift Down Valve – Short Circuit

- Damaged wiring in the lift down valve wiring harness or a damaged lift down valve coil.

Code 17 – Ground Control Module – In Fold Back

- Has machine been operating on a continuous grade or rough terrain for a long period of time.

Code 18 – Alarm – Short Circuit

- Damaged wiring in the alarm wiring harness or a damaged alarm.

Code 19 – Alarm - Disconnected

- Damaged wiring in the alarm wiring harness or a damaged alarm.
- Activate a function to check if alarm beeps.

Code 20 – Beacon – Short Circuit

- Damaged wiring in the beacon wiring harness or a damaged beacon unit.

Code 21 – Beacon - Disconnected

- Is machine equipped with flashing amber beacon light.

Code 22 – Horn - Short Circuit

- Damaged wiring in the horn wiring harness or a damaged horn unit.

Code 23 – Horn - Disconnected

- Is machine equipped with a horn unit.

Code 24 – Auxiliary #1 Circuit – Short Circuit

- Damaged wiring in the Auxiliary #1 Component wiring harness or a damaged Component.

Code 25 – Auxiliary #1 Circuit - Disconnected

- Is machine equipped with a component on the Auxiliary #1 circuit.

Code 26 – Auxiliary #2 – Short Circuit

- Damaged wiring in the Auxiliary #2 Component wiring harness or a damaged Component.

Code 27 – Auxiliary #2 – Disconnected

- Is machine equipped with a component on the Auxiliary #2 circuit.

Code 30 – Traction Module – No Communication with Ground Control Module

- Check if the communications cable connections, P5 connector on the Ground Control Module and round plug on the Traction Control Module are seated properly in their sockets at each end.
- Check the positive (+) (RED) and Negative (-) (BLACK) power cable connections from the Ground Control Module to the Traction Control Module are tight and secure at both ends.

Code 31 – Platform Control Console – No Communication with Ground Control Module

- Check the harness connection at the P4 connector on the Ground Control Module and the harness connection at the other end on the Platform Junction Box.

Code 32 – Pump Motor – Over Current

- Platform overload condition.

- Obstruction in the mast system.
- Pump Positive (+) and Negative (-) connections are secure and undamaged.
- Crushed or kinked hydraulic lines.
- Hydraulic leaks.

Code 34 – Upper Limit Switch closed

Code 38– Joystick Calibration required

Code 39 – Battery discharged

Codes (100 – 199) - Ground Control Module – Fault Condition

- That all battery and harness connectors secure and undamaged on Ground Control Module.
- Batteries have sufficient charge.
- Confirm that the static ground strap attached under base frame is secure and undamaged.

Codes (200 - 299) – Platform Control Console – Fault Condition

- Damage to Platform Control Console wiring harness.
- Secure harness connections from Platform Control Console to Platform Junction Box to Ground Control Module.
- Confirm that the static ground strap attached under base frame is secure and undamaged.

Codes (300 – 399) - Traction Control Module – Fault Condition

- Damage to Traction Control Module wiring harness
- Confirm that the static ground strap attached under base frame is secure and undamaged.
- Confirm that the static ground strap attached under base frame is secure and undamaged.

10.2 TROUBLESHOOTING AND ERROR CODES (ZAPI)**MODEL LUI S.I. 460 - LUI MINI 220 - LUI MINI HD - LUI MINI HD S.I.W./S.I.E.**

TYPE W=warning A=allarm	CODE		DESCRIPTION
W		BATTERY LOW	Low level of battery voltage
W	228	TILLER OPEN	The truck is in stby with tiller switch opened for more than 30s
W	247	DATA ACQUISITION	Maximum current adjustment procedure is in progress (NOTE: this procedure has to be done only by Braviisol test department)
W	249	CHECK UP NEEDED	Maintenance time is reached
A	8	WATCHDOG	Watchdog circuit outputs becomes high due to an HW or SW problem
A	221	FLASH CHECKSUM	The software is corrupted or the flash on the inverter is damaged.
A	231	WATCHDOG#2	Watchdog 2 circuit outputs becomes high due to an HW or SW problem
A	212	WRONG RAM	Microcontroller RAM is corrupted
A	17	LOGIC FAILURE #3	Failure in the high current HW protection circuit
A	225	CURRENT SENS. KO	The current sensor is damaged.
A	244	PHASE KO	One of the motor phases is open
A	28	PUMP VMN LOW	Pump motor output is too low with respect to pwm applied
A	29	PUMP VMN HIGH	Pump motor output is too high, with respect to pwm applied
A	31	VMN HIGH	Motor output voltage higher than expected
A	254	AUX DRIV SHRT	When the mos of EB is shorted
A	251	WRONG BATTERY	The battery voltage is too low or too high (< 0,8 Vbatt OR > 1,2 Vbatt)
A	246	AUX DRIV.OPEN	Driver of EB coil is damaged (not able to close)
A	239	EVP2 NOT OK	Evp2 driver is failed shorted (always ON) mismatch between the valve set-point and its feedback
A	240	EVP1 NOT OK	Evp driver is failed shorted (always ON) mismatch between the valve set-point and its feedback
W	241	LIFT + LOWER	Double request, LIFT + LOWER
A	214	EVP1 COIL OPEN	The Evp1 coil is not connected between Paux and NEVP1 output, and the parameter EVP TYPE in the set-option menu is set Analog or Digital
A	215	EVP2 COIL OPEN	The Evp2 coil is not connected between Paux and NEVP2 output, and the parameter EVP TYPE in the set-option menu is set Analog or Digital
W	52	PUMP I=0 EVER	Pump current is always equal to 0
A	53	STBY I HIGH	In stby condition (no current applied to the traction motor) the current feedbacks are out of permitted stby range
A	252	WRONG ZERO	The outputs of the amplifiers (used to measure the motor voltage) are cheked this alarm occurs when voltage signals >3V or <2V at the init
A	19	LOGIC FAILURE #1	Overvoltage/Undervoltage condition has been detected
A	18	LOGIC FAILURE #2	Motor voltage feedback circuits are damaged
W	217	PUMP I NO ZERO	PUMP current has unexpected value

A	197	VMN NOT OK	Voltage on tractor motor different from more 20% of imposed value
A	60	CAPACITOR CHARGE	Power capacitors voltage does not increase
W	250	THERMIC SENS. KO	The output of the controller thermal sensor is out of range.
W	62	TH. PROTECTION	The controller has reached the thermal cutback temperature 85°C
W	65	MOTOR TEMPERAT.	Battery is <= 10% when the parameter BATTERY CHECK is set >0
A	206	TRUCK DISABLED	Battery charge input open, truck is disabled
W	218	SENS MOT TEMP KO	temperature sensor for motor is KO
A	248	NO CAN MSG.	generic CAN message alarm. Traction didn't receive an expected CAN message from display or tiller card
A	222	SMARTDRIVER KO	Smart driver is open, not able to provide EB positive
W	224	WAITING FOR NODE	A Canbus network node is in alarm condition. uC is waiting for it to resolve its error condition.
A	69	CURRENT SENS.KO	Current measured in stand-by mode greater than expected
W	13	EEPROM KO	Error is detected in eeprom or in eeprom management
A	30	VMN LOW	Motor output voltage lower than expected
A	74	DRIVER SHORTED	Driver of LC coil is shorted, so it is not able to open the LC, or LC coil is disconnected
A	213	AUX BATT. SHORT.	When the positive of the AUX OUTPUT is driven by the tiller, the positive is high and the tiller is released.
A	234	DRV. SHOR. EV	EV driver is shorted
A	37	CONTACTOR DRIVER	Main contactor is closed when it should be open
A	75	CONTACTOR DRIVER	LC contact is stuck
A	232	CONT. DRV. EV	Valve contactor driver
A	220	KEY OFF SHORTED	Key-off signal is low at Key-on
A	223	COIL SHOR. MC-EB	Shortcircuit on LC or EB coil
W	235	COIL SHOR. EV.	Coil short on EV valve
A	38	CONTACTOR OPEN	The LC coil has been driven but LC does not close
A	208	TILLER ERROR	Input mismatch between hard&soft switch input and tiller input
W	78	VACC NOT OK	The accelerator value is higher than the minimum value recorded, and the direction/enable switches are opened.
W	79	INCORRECT START	TRAC Incorrect starting sequence
W	242	PUMP INC START	PUMP Incorrect starting sequence
W	80	FORW + BACK	The travel demands are active in both directions at the same time
A	230	EMERGENCY	The PAUX connector (A3) is not connected to the battery or the voltage is different.
A	229	POS. EB. SHORTED	Output of built in Smart Driver, which supplies Eb coil positive, is high (= +batt) when the tiller switch is opened.
A	233	POWER MOS SHORT	Short circuit on the power mosfets
W	245	PUMP VACC NOT OK	Vacc for pump is high without enable switch
A	236	CURRENT GAIN	The Maximum current gain parameters are the default values, which means the maximum current adjustment procedure has not been carried out yet
W	0	/* Allarme reload hm from mdi */	
W	200	KEY ON INC.ST. P	At key-on is present a pump request. Release request.
W	201	KEY ON INC.ST. T	At key-on is present a traction request. Release request.
A	237	ANALOG INPUT	Problem on the A/D conversion of uC
W	219	DEAD MAN ABSENT	With the parameter "Positive EB" at level 2 in the "HW setting" menu and "Deadman" input open the alarm appears
A	195	TILTED	Input A7 open. The tilt device is not in the safety range.
A	196	OVERLOAD	Input A31 combi or A4 on can tiller is open

10.3 TROUBLESHOOTING AND ERROR CODES (TRIONIC)

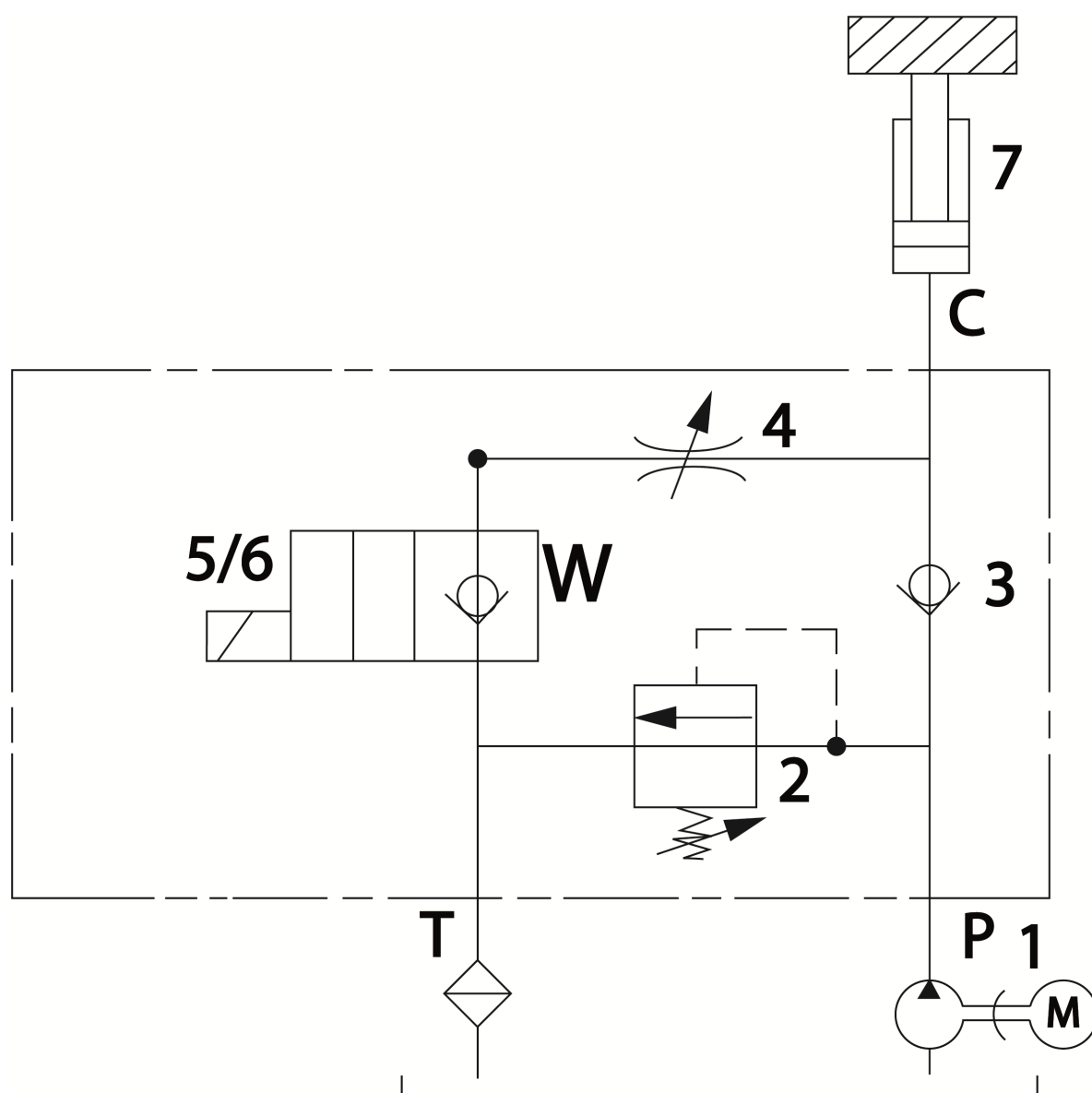
MODEL LUI MINI HD - LUI MINI HD S.I.W./S.I.E.

MOST COMMON ERRORS	ERROR CODE
LOW BATTERY	FLASH BCI when at LOW BATTERY
DEAD BATTERY	FLASH BAT on CAN DISPLAY
BATTERY CHARGING	FLASH `2-3
BRAKES Manually Released	FLASH`8-2
Trigger Fault	FLASH`2-4
Footswitch Fault	FLASH`2-5
Drive Joystick Fault	FLASH`2-6
Steer Joystick Fault	FLASH `2-7
OVERLOAD	FLASH `2-8
TILT	FLASH `2-9 when elevated
ELEVATION SWITCH	FLASH `6.3

DECEIPTION	ERROR CODE
FAULT: BAD P/N	1,1
NOT CALIBRATED	1,1
HEIGHT NOT CALIBRATED	1,1
FUNCTIONS LOCKED - NOT CALIBRATED	1,1
FUNCTIONS LOCKED - TEST MODE SELECTED	2,2
FUNCTIONS LOCKED - POTHOLE	2,2
FUNCTIONS LOCKED - ARMGUARD	2,2
FUNCTIONS LOCKED - OVERLOADED	2,2
FUNCTIONS LOCKED - UNDERLOADED	2,2
FUNCTIONS LOCKED - TOO HIGH	2,2
FUNCTIONS LOCKED - TILTED	2,2
FUNCTIONS LOCKED - EXTERNAL SHUTDOWN	2,2
DRIVE LOCKED - CANNOT STEER	2,2
CHECK GROUND INPUT SWITCHES	2,2
CHECK DRIVE/LIFT SELECT SWITCH	2,2
CHECK JOYSTICK	2,2
RELEASE TRIGGER	2,2
RELEASE GROUND SWITCHES	2,2
RELEASE ROTATE SWITCHES	2,2
RELEASE JOYSTICK SWITCHES	2,2
SHUTDOWN - CHECK EMS SWITCHES	2,1
FAULT: ENERGIZED VALVE - CHECK P9 WIRING	3,2
FAULT: BAD INTERNAL SAFETY OUTPUT	3,4
DRIVE LOCKED - BRAKING	3,4
MOTOR OVERLOAD	3,4
FAULT: CAPBANK VOLTAGE TOO HIGH - CHECK LINE CONT	3,3
FAULT: VALVE FEEDBACK HIGH - CHECK VALVE WIRING	3,2
FUNCTIONS LOCKED - BATTERY	4,4
FAULT: BAD INTERNAL 12V	4,3
FAULT: BAD 5V JOYSTICK SUPPLY - CHECK P15-12 WIRING	4,5
FAULT: BAD INTERNAL 5V	4,2
FAULT: BAD TILT SENSOR	4,2
FAULT: BAD INTERNAL SLAVE	4,2
FUNCTIONS LOCKED - TOO HOT	4,2
FAULT: BATTERY VOLTAGE TOO LOW	4,4
FAULT: BATTERY VOLTAGE TOO HIGH	4,4
FAULT: CHECK ELEVATION SWITCH	6,3
FAULT: CAN BUS	6,6
FAULT: MOTOR A SHORT TO HIGH	7,2
FAULT: MOTOR A SHORT TO LOW	7,3
	7,4
FAULT: MOTOR B SHORT TO LOW	7,6
FAULT: MOTOR CONNECTIONS SHORTED	7,5
FAULT: CAPBANK VOLTAGE TOO LOW - CHECK STUD WIRING	7,7
DRIVE LOCKED - CHECK FIELD CURRENT	7,7
SOME BIG BAD PROBLEM	9,9
BRAKES MANUALLY RELEASED	8,2

11.1 HYDRAULIC DIAGRAM

MODEL LUI MINI S.I. - LUI MINI S.I.W - LUI MINI S.I.E



1	Elettropompa	Electric pump
2	Valvola di bloccaggio	Unlock valve
3	Valvola unidirezionale	One-way valve
4	Valvola di controllo portata (strozzatore cartuccia)	Flow-rate control valve (cartridge compressor)
5	Elettrovalvola di blocco (a comando elettrico, a 2 vie, a tenuta, normalmente chiusa)	Block solenoid (sealed, 2-way, electrically-controlled, NC)
6	Valvola di emergenza	Emergency valve
7	Cilindro telescopico a semplice effetto	Single-acting telescopic cylinder

DISEGNO n° 001.2009.0930

DRAWING n° 001.2009.0930

Data 30.09.2009

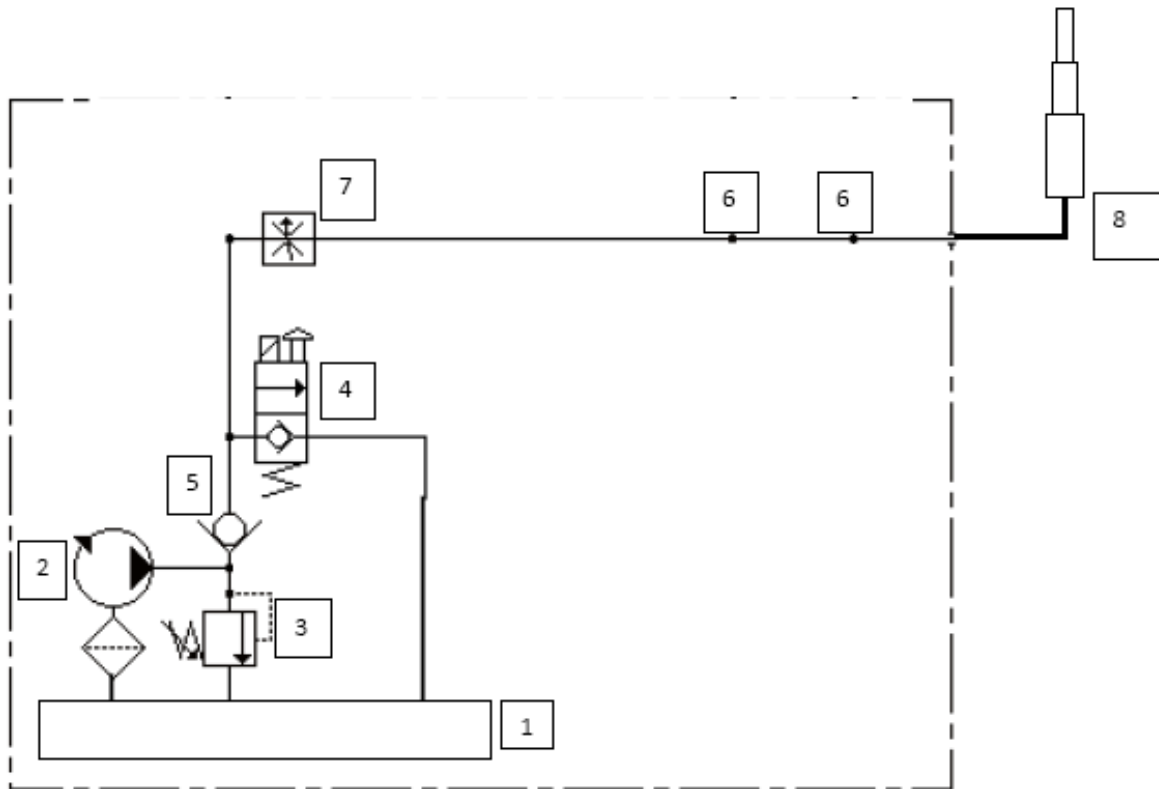
Date 30.09.2009

Rel. 10.10.2010

Rel. 10.10.2010

11.2 HYDRAULIC DIAGRAM

MODEL LUI S.I. 460



- 1 Oil tank
- 2 Electric pump
- 3 Unlock valve (loading capacity)
- 4 Block solenoid
- 5 One- way valve
- 6 plug
- 7 Flow- rate control valve
- 8 Single-acting telescopic cylinder

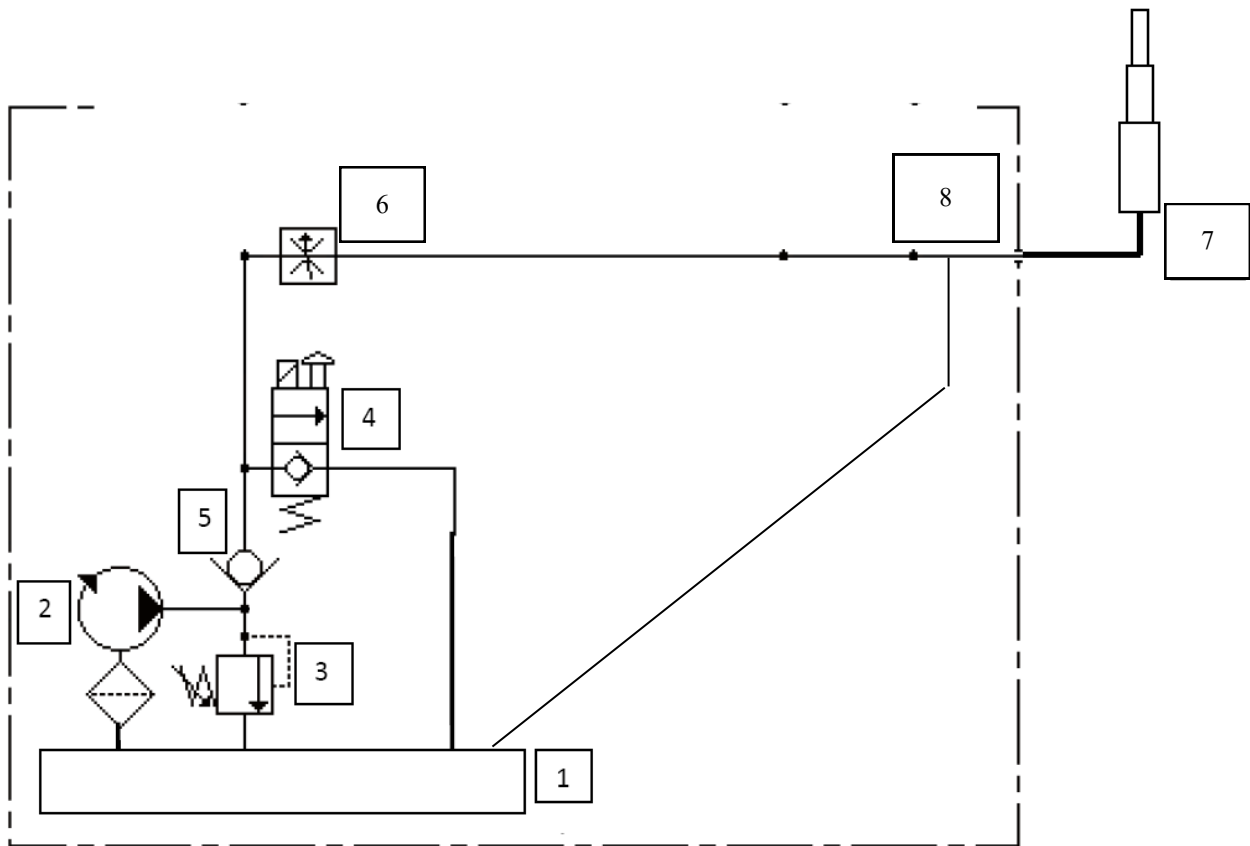
- 1 - Serbatoio
- 2 - Pompa elettrica
- 3 - Valvola di massima
- 4 - Elettrovalvola di blocco
- 5 - Valvola unidirezionale
- 6 - Tappo
- 7 - Valvola di controllo portata
- 8 - Cilindro telescopico

DISEGNO n° 001.2009.0930
Data 30.09.2009

DRAWING n° 001.2009.0930
Date 30.09.2009

11.3 HYDRAULIC DIAGRAM

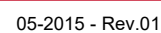
MODEL LUI MINI 220- LUI MINI HD- LUI MINI HD S.I.W./S.I.E.



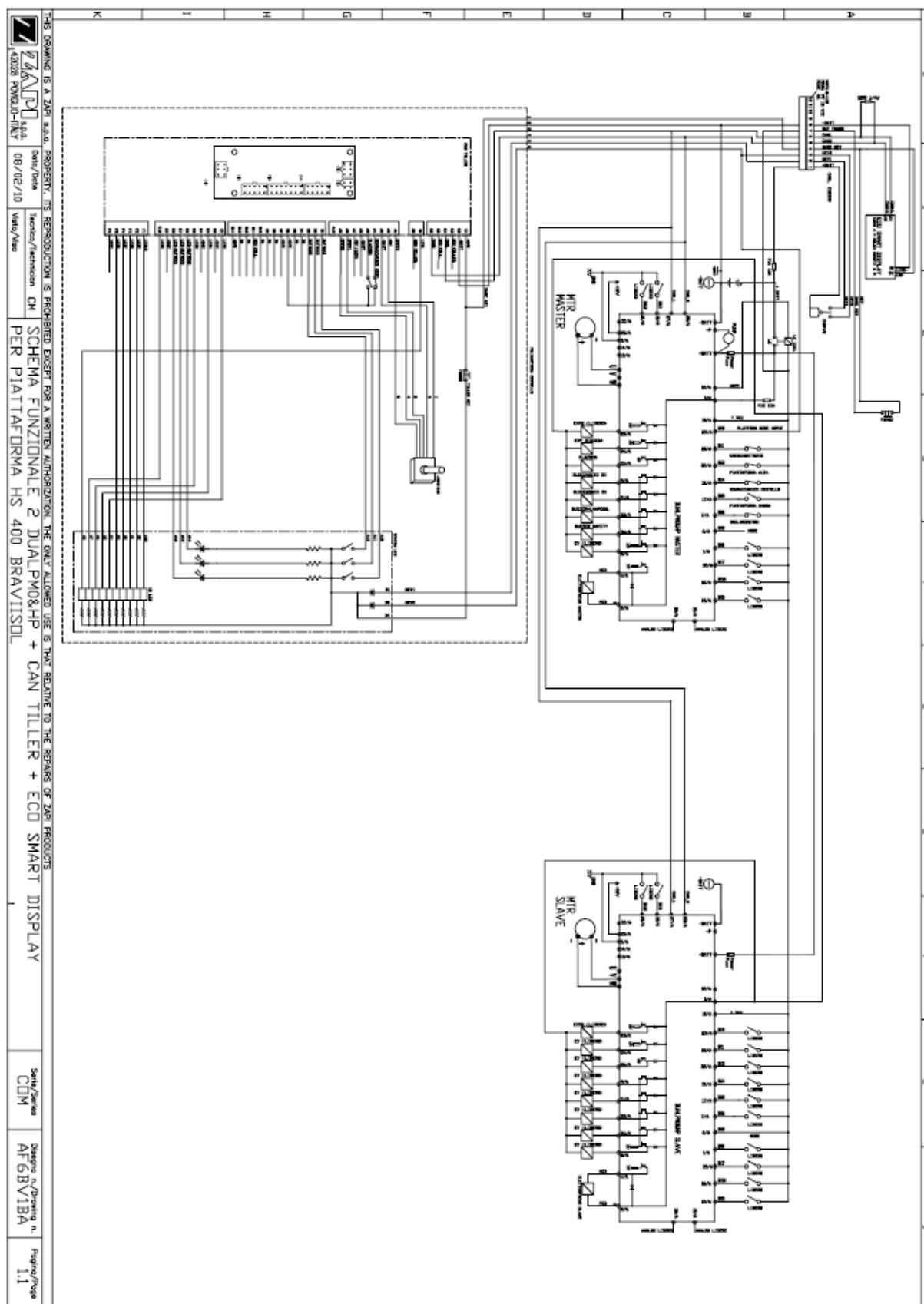
- | | |
|--------------------------------------|---------------------------------|
| 1 Serbatoio | Oil tank |
| 2 Elettropompa | Motor pump |
| 3 Valvola di massima | Unlock valve (loading capacity) |
| 4 Elettrovalvola di blocco | Block solenoid |
| 5 Valvola unidirezionale | One way valve |
| 6 Valvola di controllo portata | Flow rate control valve |
| 7 Cilindro telescopico | Telescopic cylinder |
| 8 Pompa a mano (solo su Lui Mini220) | Hand pump (only on Lui Mini220) |

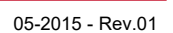
DISEGNO n° 001.2010.1010
 Data 10.10.2010

DRAWING n° 001.2010.1010
 Date 10.10.2010

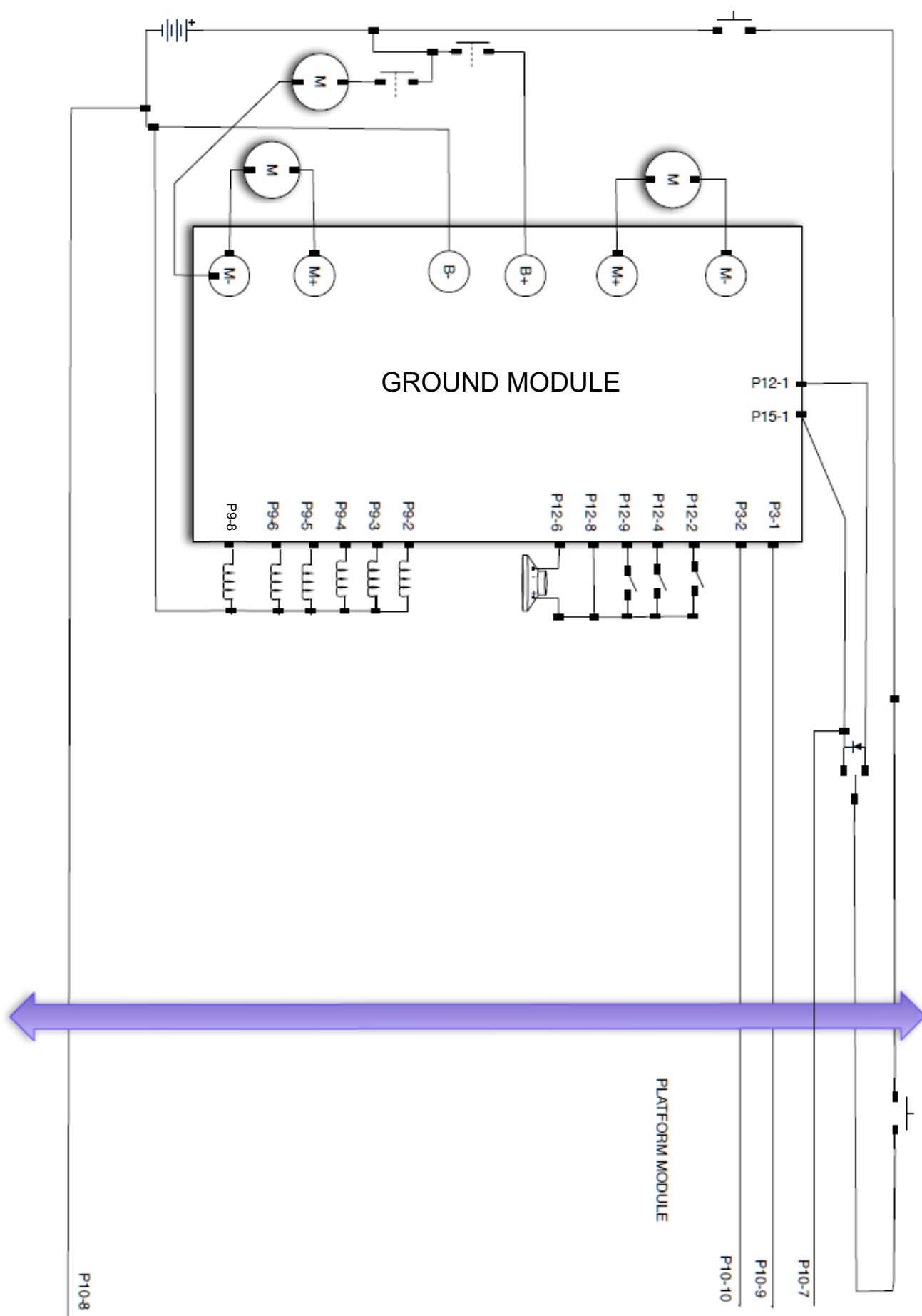


11.5 ELECTRIC DIAGRAM MODEL LUI MINI S.I. 460

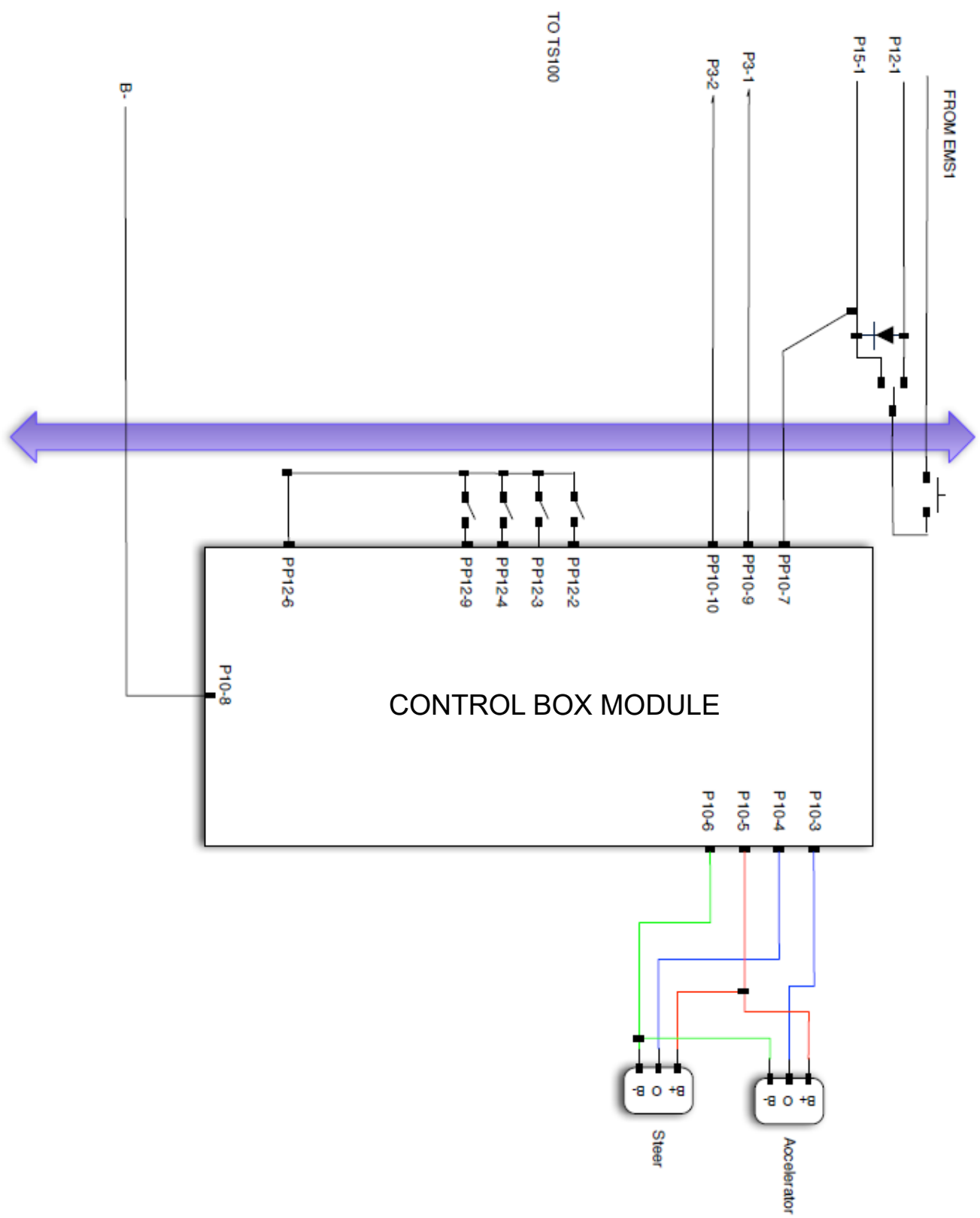




11.7 ELECTRIC DIAGRAM(TRIONIC) MODEL LUI MINI HD - LUI MINI HD S.I.W./S.I.E.



TS100 PIN	DESCRIPTION	INPUT
PCAN-1	CAN1H	TO CAN DISPLAY MODULE (Plat)
PCAN-2	CAN1L	TO CAN DISPLAY MODULE (Plat)
PCAN-3	Shield	
PRS232-1	RS232 B+ supply	
PRS232-2	RS232 Rx	to DIAGNOSTIC CENTER
PRS232-3	RS232 Tx	to DIAGNOSTIC CENTER
PRS232-4	RS232 Gnd	
P9-1	PWM High side output (B+ when active)	
P9-2	PWM High side output (B+ when active)	DOWN VALVE
P9-3	High side output (B+ when active)	Brake
P9-4	High side output (B+ when active)	Pump contactor
P9-5	High side output (B+ when active)	Drive contactor
P9-6	High side output (B+ when active)	CASTOR LOCK
P9-7	High side output (B+ when active)	
P9-8	switch input (B+=active)	POT HOLE (Optional)
P9-9	High side output (B+ when active)	
P12-1	switch input (B+=active)	GND select/supply
P12-2	switch input/Low side sw	Battery Cutout
P12-3	switch input/Low side sw	
P12-4	switch input (B+=active)	
P12-5	switch input (B+=active)	
P12-6	Low side sw. 1.7A min.	GND Alarm
P12-7	Analog Input	
P12-8	B+ feed	B+ supply for sensors/switches
P12-9	switch input (B+=active)	ELEVATION SWITCH
P12-10	Analog Input	
P12-11	Analog Input	
P12-12	Analog Input	
P15-1	switch input (B+=active)	PLATFORM MODE
P15-2	switch input (B+=active)	
P15-3	switch input (B+=active)	
P15-4	Low side sw. 1.7A min.	
P15-5	switch input (B+=active)	
P15-6	switch input (B+=active)	
P15-7	Low side sw. 1.7A min.	HORN (optional)
P15-8	switch input (B+=active)	
P15-9	switch input (B+=active)	
P15-10	Low side sw. 1.7A min.	
P15-11	switch input (B+=active)	
P15-12	5V (low current, for sensors only)	
P15-13	Analog Input	
P15-14	Analog Input	
P15-15	0V (low current, for sensors only)	



CAN TILLER	DESCRIPTION	INPUT
P10-1	out 1	TILT ALARM
P10-2	out 2	OVERLOAD ALARM
P10-3	ana 1	HALL A/B (Drive FWD/REV)
P10-4	ana 2	HALL C/D (STEER LEFT/RIGHT)
P10-5	5V for ana	5V for Joystick
P10-6	neg for ana	Neg For Joystick
P10-7	B+ supply in	FROM P15-1
P10-8	B- supply in	FROM B-
P10-9	CAN H	FROM P3-1 of TS100
P10-10	CAN L	FROM P3-2 of TS100
12 positions		
P12-1	digital input 1	
P12-2	digital input 2	Horn (Optional)
P12-3	digital input 3	Trigger Switch
P12-4	digital input 4	Overload(Optional)
P12-5	out 3	
P12-6	Sw. B+supply	
P12-7	digital input 5	
P12-8	digital input 6	
P12-9	digital input 7	Slow Speed
P12-10	digital input 8	
P12-11	digital input 9	
P12-12	digital input 10	

FREQUENT INSPECTION CHECK LIST - FORM A

MODEL _____

SERIAL NUMBER _____

YEAR OF CONSTRUCTION _____

DESCRIPTION

- _____ 1. Perform all checks listed on Pre-start Inspection
- _____ 2. Check the oil level and status - be sure that the oil has a clear light colour.
- _____ 3. Check the entire machine for signs of damage, broken welds, loose bolt, improper or makeshift repairs
- _____ 4. Check that all adjustable flow valves are locked
- _____ 5. Check that the basket with a full load does not lower
- _____ 6. Inspect the motor and motor brushes
- _____ 7. Check the electrical components and wires for any damaged or oxidized part.
- _____ 8. Check the demineralised water level in the batteries

DATE
_____SIGNATURE
_____INSPECTED BY

ANNUAL INSPECTION CHECK LIST - FORM B

Date:
 Serial Number:
 Model:
 Date last inspection :
 Date placed into Service

Customer:
 Address:
 City/State/ZIP code:
 Phone:
 Contact Name:

Dealer:
 Address:
 City/State/ZIP code:
 Phone:
 Contact Name:

DECAL	
Legibility	
Loading Capacity clearly marked	
Correct Position	
Quantity	
PLATFORM RAILS	
Entry Gate closes properly	
Weather Resistant container for Manuals on board the machine	
Manuals into the container	
Proper Weld— no signs of corrosion or damage	
PLATFORM EXTENSION	
Sliding smoothly and easy	
Teflon sliding wheels entire and not damaged	
Bolt and washers	
ELEVATING SYSTEM	
Mast structure	
Lifting movement and speed	
Noise while lifting/Lowering	
Spiral cable passing through the steel tube	
SAFETY MAINTENANCE BAR	
Functioning	
Stability	

ELECTRICAL COMPONENTS	
Ground Module Functioning	
Connectors	
Wires	
Joystick Functioning	
Spiral cable	
Batteries Integrity	
Batteries proper Functioning	
Battery Charger Functioning	
EMERGENCY STOP	
Break all circuit	
CHASSIS	
Bolts tight	
Chassis Proper Weld— no signs of corrosion or damage	
Drive Shaft Fastened	
Front Turning Wheels Secured	
Load bearings	

ANNEX 1

EXTRA EQUIPMENT

All the Aerial Platform showed in this Manual can have dedicated extra equipment that can be installed only if supplied by Braviisol D.M. srl. or its approval.

Extra equipment can be used only if the User has read and understood his responsibilities shown in this manual and in the extra equipment User Manual supplied with each device.

The intended use of any extra device need to be clearly understood before using it.

For extra equipment detailed spec. please contact Braviisol D.M. srl.

ANNEX 2

Wheel Lock Device:

The Device (**P1**) described in Part 5 - **Control Panel of this User Manual**

Wheel blocking device:

The Wheel Blocking device is activated by moving the selector to the right or pressing the corresponding button, allowing to drive the vehicle only towards a straight line, both to and from.

LED ON indicates that the Wheel Blocking device has been activated.

LED OFF indicates that the Wheel Blocking device is deactivated allowing, therefore, to drive the vehicle in any direction.

WARNING:

When Wheel Blocking device is on, fixation of the front wheels will only be actual and effective after the wheels have reached a straight-forward or straight-backward position, so that the locking pins have engaged in on both caster supports and locked them.

If the wheels are not in a straight position when the Wheel Blocking device is activated, drive forwards or backwards sufficiently, so that the front wheels reach the correct straight position. Check that the Wheel Blocking device is actually started, before proceeding to the next steps. A visual inspection and the slow movement of the joystick left or right will instantly indicate if the block is effectively activated or not.



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