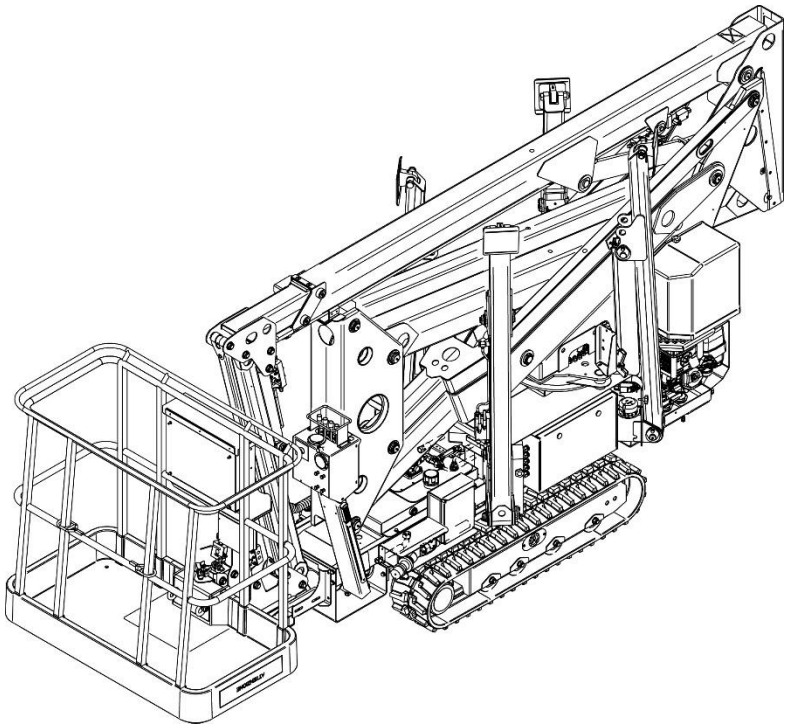
CTE WORK BECOMES EASY

Use and Maintenance Manual



ELEVATING WORK PLATFORM

TRACCESS 170

SERIAL N° ……..

CE

REV. 00 ED. 08/24 **COD UM0344_GB**

INDEX

1 INTRODUCTION

1.1 Use and Maintenance Manual

IMPORTANT!

Before using the machine, carefully read the manual and be sure you understand all the safety standards and operating instructions. Contact the manufacturer if in doubt.

Preservation of the manual

The manual is an integral part of the machine and should be stored in the traction panel protection casing so that it is always available for use. The manual must always be kept with the machine, even in the event of sale and until the machine is placed out of order or is demolished. Make a note of the fabrication number on the cover in order to easily identify the manual.
If the manual is lost or has deteriorated, request a new copy from the manufacturer, quoting the code on the cover or the machine's factory number.

1.2 Scope and limitations of the manual

ATTENTION!

The scope of the manual is to describe the machine and use thereof as intended by the manufacturer, its specifications, operator instructions on proper use, routine maintenance and how to complete the check register. **This manual is not intended to train inexpert operators or teach use of the machine. All descriptions presuppose handling only by operators trained expressly for managing this type of machine. This manual cannot in any way substitute adequate operator training. The operator is directly responsible for the machine and its use.**

1.3 Required operator training

The employer shall ensure that:

- the operator fulfils all vocational requirements for managing the machine
- the operator is adequately qualified and trained for using this type of machine
- The operator has read and understood the manual.

!	**NOTE:** **CTE Spa provides courses specifically for operators.**

1.4 Amendments and additions

This manual conforms to standards and regulations in force at the time of marketing the machine and should not therefore be considered inadequate or lacking in the event of amendments or additions due to new legal provisions, updated standards or new acquired experience. The manufacturer reserves the right to inform the owner of any amendments or additions deemed necessary for previously marketed products. In the interests of the above, inform the manufacturer if the machine changes ownership.

1.5 Applied regulations and laws

The machine is designed and constructed in compliance with EC directives on safety and rapprochement to legislations of member states; specifically, to directives 2006/42/EC-2004/108/EC-2006/95/EC-2000/14/EC, insofar as they are applicable.
The mobile elevating work platform was built mainly referring to the standards and technical specifications shown below:
UNI EN 280:2022 – UNI EN ISO 13857:2020 - UNI EN ISO 13854:2020 –
UNI EN ISO 4413:2012 - IEC EN 60204-1:2016 - UNI EN ISO 13850:2015 –
ISO 13849-1:2016 - ISO 13849-2:2013

1.6 Classification

This machine has been designed to lift and move people and equipment not exceeding the platform's permitted load, (AWP) and is limited to places within the work area. The platform should only be accessed on the ground via the gate. The limitations on use are described in the manual. Any methods or conditions of use not within the limitations of use specified in the manual, and not declared by the manufacturer, are strictly forbidden. The machine has been designed for an expected 100,000 work cycles and a heavy work regime (e.g. 10 years, 50 weeks a year, 40 hours a week, 5 cycles an hour). The machine should be fully serviced and inspected by the manufacturer within the set number of work cycles. In the event of particularly heavy use, the machine should be serviced sooner. The machine should be inspected every 1,000 hours and serviced every 5,000 hours.

1.7 After-Sales services and spare parts

Contact your nearest authorised service centre for any extraordinary maintenance, repairs or spare parts. It will have qualified personnel and suitable equipment available for carrying out any work that may be required. Please contact After-Sales Services for any information you may require.

☎ To contact the After-sale & Spare-parts Service: Tel. +39 0464 48 50 50

	**ATTENTION:** **to ensure correct operations and avoid damage to the machine, repairs and replacement of non-original spare parts is strictly prohibited.**

☎ To contact the After-sale & Spare-parts Service: Tel. +39 0464 48 50 50

Always indicate the machine model and serial no. when ordering spare parts.

1.8 Warranty

The machine is covered by warranty starting from the date it is delivered to the customer. For the warranty terms and conditions, please refer to the warranty certificate delivered with the machine. The manufacturer reserves the right to repair or replace any parts considered to be defective within the period of the warranty. The warranty expires whenever the requirements and instructions of use indicated in this manual are not observed. Work carried out under warranty is carried out during normal working hours at the authorised workshops or at the manufacturer's premises. Technicians' travel costs are debited for work carried out at the customer's premises. The customer is billed for transport costs for work carried out at the manufacturer's premises. During the replacement of defective parts, the manufacturer company cannot be held responsible for any expenses sustained by the commercial agent and customer, any supposed present or future damage, loss of earnings, forfeits, etc. The warranty does not cover the replacement and/or repairs of parts that are worn out or damaged during ordinary use of the machine.

1.9 Responsibility

The manufacturer is exempt from all responsibility and obligations for any events caused by the following:

- failure to comply with the manufacturer's instructions on machine use and maintenance;
- improper machine use;
- failure to comply with provisions of the law on safety and traffic regulations;
- mistakes during use and maintenance of the machine;
- lack of maintenance;
- use of other than factory authorized spare parts not appropriate for the model;
- modifications made to the machine without prior authorization by the producer;
- exceptional environmental events and events outside of ordinary and proper use of the machine.

It is up to the user to prove if a machine defect is the main and direct cause of an accident.

1.10 Terms and definitions

Elevating work platform, abbreviated as EWP – a machine to lift people to a height so that they can carry out operations from inside the work platform.
Work platform – a platform with guardrails and control panel for use by authorised operators.
Operator – a person qualified and trained in the use of the elevating work platform.
Service engineer – a qualified technician trained for carrying out the routine maintenance specified in this manual.
Authorised machine shop – company organisation comprising one or more qualified technicians authorised by the manufacturer to carry out extraordinary maintenance and repairs.
Hazardous area – any area within the context of machine operation exposing persons to potential risk of lesions which could be fatal or be hazardous to health.

1.11 Symbols used in the manual

	**DANGER:** (to describe procedures or instructions that, if not carried out properly, could cause death or serious injuries).
	**ATTENTION:** (to describe procedures or instructions that, if not carried out properly, could cause injuries or damage to the machine).
!	**NOTE:** (to specify important information)
	**PROHIBITED!** specifies prohibited and hazardous actions or procedures.
	**MANDATORY:** For actions or procedures that must be carried out.
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1.12 Test result (document supplied and completed on delivery of the machine)

TEST RESULT
(Ref. UNI EN 280:2022 – Point 6.3)

Test type	Result		Notes
Functional check	□ Positive	□ Negative	
Safety devices test: proper operation check	□ Positive	□ Negative	
Operation tests (110% of rated load at nominal speeds in the various machine configurations envisaged)	□ Positive	□ Negative	
Static overload test	□ Positive	□ Negative	
Machine nameplates and documentation check	□ Positive	□ Negative	

On the basis of the measurements made and the result of the tests carried out, the MEWP identified above:

..... did not give rise to any findings

..... gave rise to the following findings:

.....
.....
.....
.....

Remarks:
.....
.....
.....
.....

Check carried out at	date	...../...../.....
By the technician		
		Seal and signature

2 MACHINE DESCRIPTION

2.1 Identification and marking data

Machine: Mobile elevating work platform (MEWP)

Model: TRACCESS

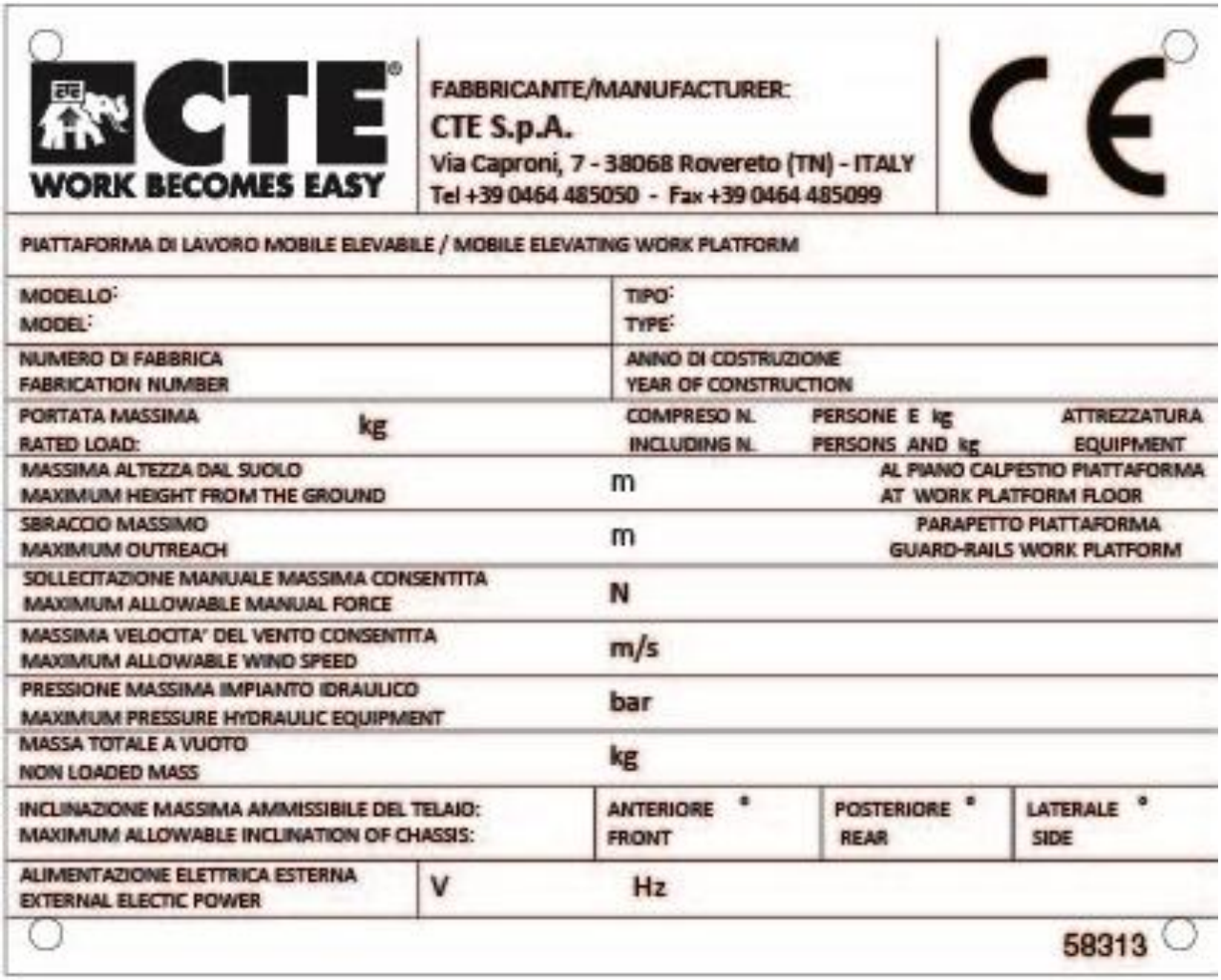
Type: 170

Year of construction: Indicated on the machine identification plate

Manufacturer: CTE S.p.a.
Via Caproni 7, Z.I.
38068 ROVERETO (TN) - Italy

Serial plate: The serial plate illustrated below is riveted to the machine's turret

Punched markings: The manufacturing number indicated on the serial plate is also punched onto the turret



CTE WORK BECOMES EASY

FABBRICANTE/MANUFACTURER:
CTE S.p.A.
Via Caproni, 7 - 38068 Rovereto (TN) - ITALY
Tel +39 0464 485050 - Fax +39 0464 485099

CE

PIATTAFORMA DI LAVORO MOBILE ELEVABILE / MOBILE ELEVATING WORK PLATFORM

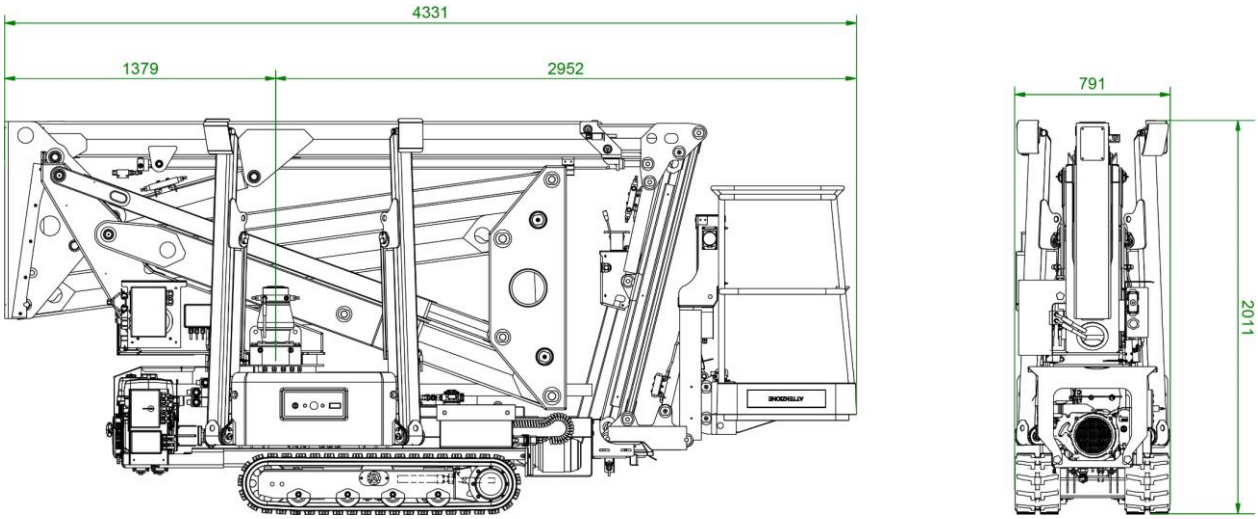
MODELLO: / MODEL:		TIPO: / TYPE:	
NUMERO DI FABBRICA / FABRICATION NUMBER		ANNO DI COSTRUZIONE / YEAR OF CONSTRUCTION	
PORTATA MASSIMA / RATED LOAD: kg		COMPRESO N. / INCLUDING N. PERSONE E kg / PERSONS AND kg	ATTREZZATURA / EQUIPMENT
MASSIMA ALTEZZA DAL SUOLO / MAXIMUM HEIGHT FROM THE GROUND	m	AL PIANO CALPESTIO PIATTAFORMA / AT WORK PLATFORM FLOOR	
SBRACCIO MASSIMO / MAXIMUM OUTREACH	m	PARAPETTO PIATTAFORMA / GUARD-RAILS WORK PLATFORM	
SOLLECITAZIONE MANUALE MASSIMA CONSENTITA / MAXIMUM ALLOWABLE MANUAL FORCE	N		
MASSIMA VELOCITA' DEL VENTO CONSENTITA / MAXIMUM ALLOWABLE WIND SPEED	m/s		
PRESSIONE MASSIMA IMPIANTO IDRAULICO / MAXIMUM PRESSURE HYDRAULIC EQUIPMENT	bar		
MASSA TOTALE A VUOTO / NON LOADED MASS	kg		
INCLINAZIONE MASSIMA AMMISSIBILE DEL TELAIO: / MAXIMUM ALLOWABLE INCLINATION OF CHASSIS:	ANTERIORE / FRONT °	POSTERIORE / REAR °	LATERALE / SIDE °
ALIMENTAZIONE ELETTRICA ESTERNA / EXTERNAL ELECTIC POWER	V	Hz	

58313

2.2 General description of the machine

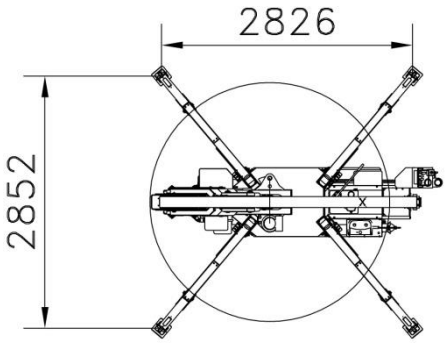
The TRACCESS 170 elevating work platform consists of a frame fixed with bolts to the crawler carriage. Four hydraulically powered stabilisers are anchored to the frame for machine stability. The stabilisers are moved using a manually operated hydraulic distributor. The rotating turret is mounted above the chassis on a slewing ring bearing and is driven by a hydraulic engine. The turret rotates by 330°. The boom group is fixed to the turret and is composed of two articulated booms operated by a hydraulic cylinder at the centre of which is fixed a telescopic boom consisting of 2 elements (one fixed and one removable element). The hydraulic cylinder also allows the articulated booms to move simultaneously by means of connecting rods. The telescopic boom is moved by a hydraulic cylinder. An articulated boom (jib) operated by a hydraulic cylinder is attached to the telescopic element. The work platform is anchored to the telescopic boom (jib). A hydraulic parallelogram levelling device keeps the work platform horizontal. The machine is moved by electrohydraulic controls. The control workstation is installed on the work platform. Attached to the base turret is another control station that can be used in case of an emergency. The energy source for the handling of the hydraulic devices is provided by the thermal engine via a hydraulic pump. The electrical power for the controls is provided by the battery. Steering is performed is by means of rubberised tracks moved by gearboxes driven by hydraulic engines complete with negative brake, which engages automatically and stops (brakes) the crawler carriage when the hydraulic engines are not powered. Steering is controlled by adjusting the flow of oil to the travel motors using the mobile control panel equipped with proportional levers. By powering the hydraulic engine in one direction and then in the other, the minimum possible turning radius is obtained. The controls, operation mode and the machine's devices are described below.

2.3 Overall dimensions



2.3.1 Dimensions of the stabilised vehicle (data refers to the vehicle illustrated)

Length	**4331**	mm
Width of stabilised vehicle (minimum)	**2852**	mm
Width of stabilised vehicle (maximum)	**2826**	mm

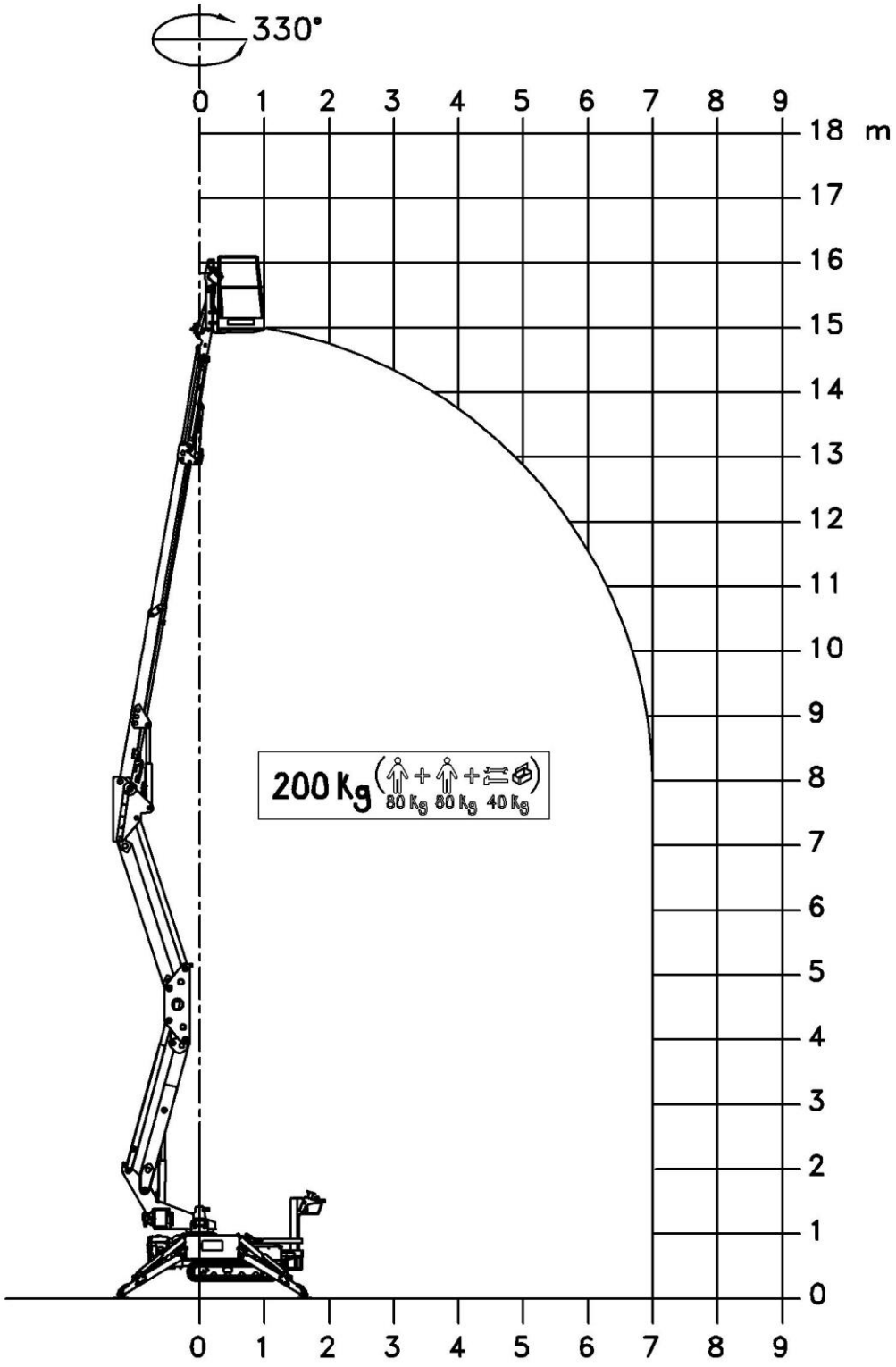


2.4 Technical specifications

Maximum load on platform	200 kg. (2 people and 40 Kg of equipment)
Maximum platform height	15.00 m
Maximum working height	17.00 m
Maximum straddle (from centre bearing to platform)	7.00 m
Maximum working outreach	7.50 m
Maximum permitted inclination of the ground	3°
Maximum permitted inclination of chassis	0°
Maximum tolerated wind speed	12.5 m/sec
Turret rotation	330°
Levelling the work platform	Hydraulic parallelogram
Dimensions of work platform	1300 x 700 x 1100 mm
Maximum permitted lateral manual force	40 daN
Electrical system voltage	12 V
Controls	Electro-hydraulic
Hydraulic oil reservoir capacity	32 l
Maximum working pressure	190 bar
Overall weight	2.15 t
Maximum pressure of stabiliser on ground	1700 daN
Centre distance between stabiliser plate pins (min)	2826 mm
Centre distance between stabiliser plate pins (max)	2852 mm
Centre distance of stabilizers	2826 mm

!	**NOTE:** **other statistics are available in the "EWP and check logbook technical specifications delivered with the machine.**

2.5 Working envelope



2.6 Noise level

Machine airborne noise is produced by the heat engine. Sound detection carried out on the platform 1.60 m above the platform during ascent, descent, rotation and extension, detected sound pressure levels no greater than 97 dBA.

2.7 Vibrations

The machine does not produce vibrations that could be considered hazardous for the operator. Measurements carried out under the most unfavourable conditions of use have ascertained that:

- the total value of vibrations to which the hand-arm system is exposed is less than 2.5 m/sec²
- the average squared value calculated in terms of speed to which the main body is exposed is less than 0.5 m/sec².

2.8 Gas emissions

The machine's combustion engine emits exhaust gases. The vehicle's battery emits hydrogen when recharging.

2.9 Main parts

1. Front stabiliser
2. Rear stabiliser
3. Support plate
4. Rotary turret
5. Articulated pantograph boom
6. Telescopic boom base
7. Telescopic extension
8. Mobile steering control panel
9. Work platform
10. Hydraulic oil tank
11. Turret rotation engine
12. Main control panel
13. Emergency ground controls
14. Stabiliser controls
15. Platform control panel
16. Combustion engine panel
17. Combustion engine
18. Pantograph lifting cylinder
19. Telescopic boom lifting cylinder
20. Telescopic boom extension cylinder
21. Enclosure levelling cylinder
22. Aerial lifting cylinder (jib)
23. Aerial support
24. Electro-hydraulic traction unit
25. Aerial (jib)
26. Battery disconnect panel
27. Ground panel
28. Crawler carriage

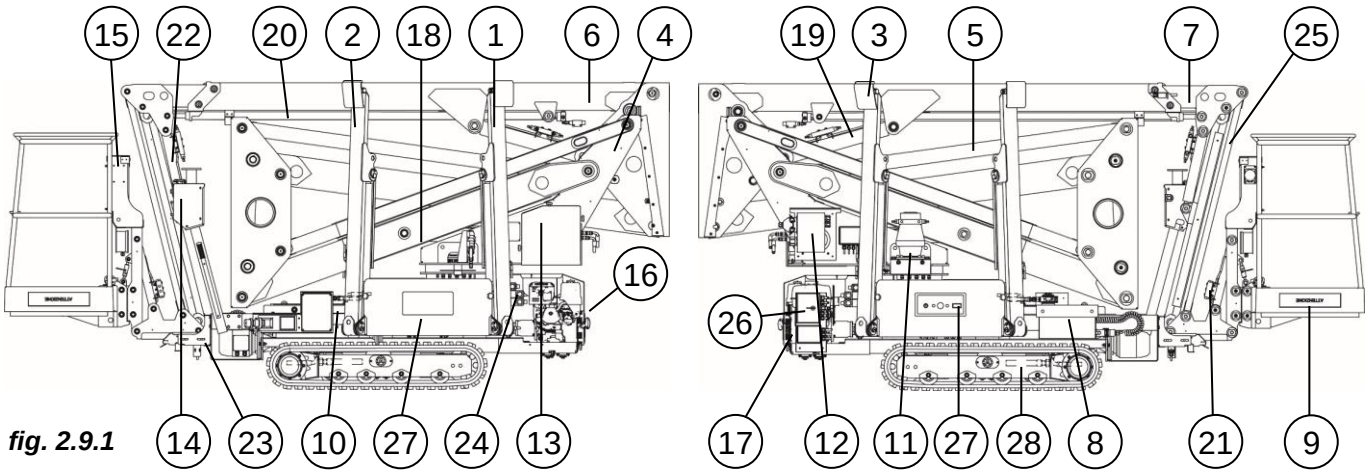


fig. 2.9.1

2.10 Safety devices

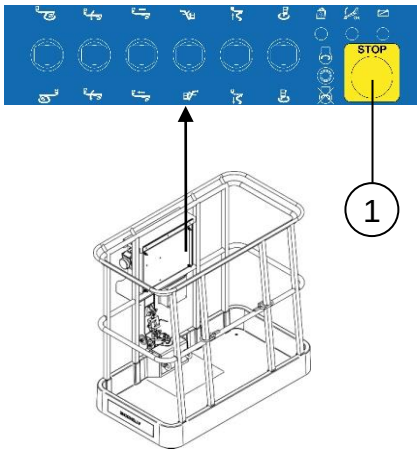


fig. 2.10.1

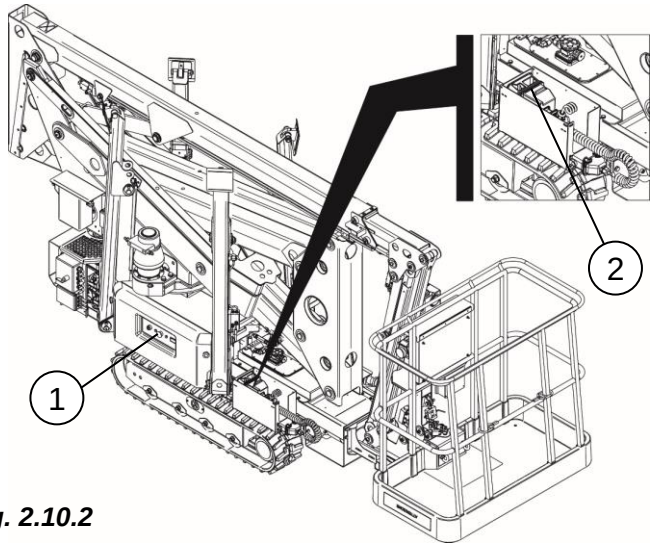


fig. 2.10.2

2.10.1 Emergency stop buttons

Red emergency button with yellow background positioned one (***pos. 1 fig. 2.10.1***) on the platform control panel, one (***pos. 1 fig. 2.10.2***) on the ground control board and one (***pos. 2 fig. 2.10.2***) on the push button traction panel. By pressing one of the two buttons all manoeuvres of the elevating work platform are deactivated and the vehicle engine switches off. To re-activate machine functionality, turn the button in a clockwise direction.

2.10.2 Maximum pressure valve

Positioned (***pos. 1 fig. 2.10.3***) on the base of the main solenoid valve. Prevents the maximum envisaged working pressure from being exceeded.

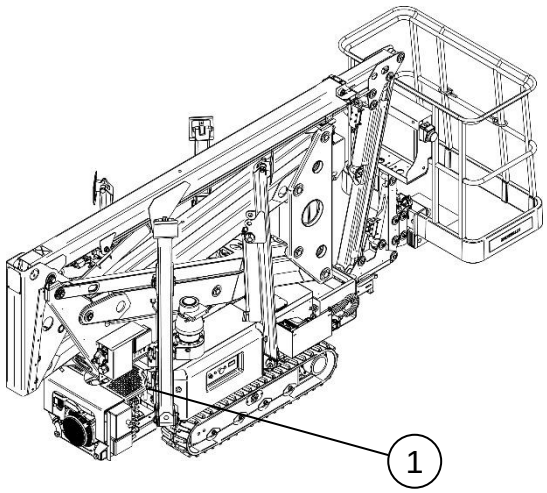


fig. 2.10.3

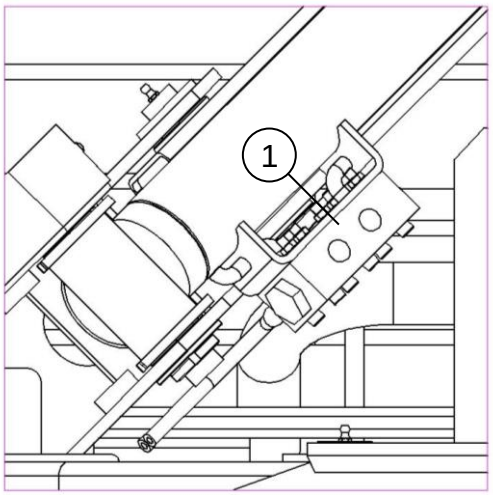


fig. 2.10.4

2.10.3 Blocking valves on cylinders

Place one on each stabilising cylinder (***pos. 1 fig. 2.10.4***), one on the telescopic boom lifting cylinder, one on the telescopic boom extension cylinder (***pos. 20 fig. 2.9.1***), one mounted on the pantograph lifting cylinder (***pos. 18 fig. 2.9.1***), one on the work platform levelling cylinder (***pos. 21 fig. 2.9.1***), and one on the aerial lifting cylinder (***pos. 22 fig. 2.9.1***). The blocking valves are hydro-powered; they prevent uncontrolled cylinder movement in the absence of pressure (e.g. due to breakage of a delivery pipe).

2.10.4 Negative lamellar brake

Located in the rotation gearmotor (***pos. 11 fig. 2.9.1***) triggered in the absence of hydraulic system pressure, blocking the rotation of the turret.

2.10.5 Shock absorber valve

Mounted on the turret rotation hydraulic engine (***pos. 11 fig. 2.9.1***) it is designed to prevent excessive force from being applied to the fifth wheel.

2.10.6 Stabilisation control device

Device consisting of a micro-switch on each stabiliser that verifies the correct positioning of each stabiliser, indicating the stabiliser's minimum stroke and that it is resting on the ground.

2.10.7 Spirit level

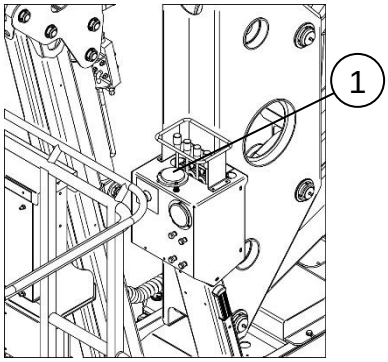


fig. 2.10.5

Situated near the stabiliser control levers (***pos. 1 fig. 2.10.5***) indicates the horizontal levelling of the machine.

2.10.8 Interlock for the stabilisers/boom

An electronic sensor on the boom stand-by bracket (***pos. 23 fig. 2.9.1***). It only allows the stabilisation controls to be activated when the superstructure is fully closed, the boom is resting on the stand-by bracket, the key selector switch is in the "stabilisers" position. The stabiliser controls are automatically disabled when the boom is moved from its stowed position.

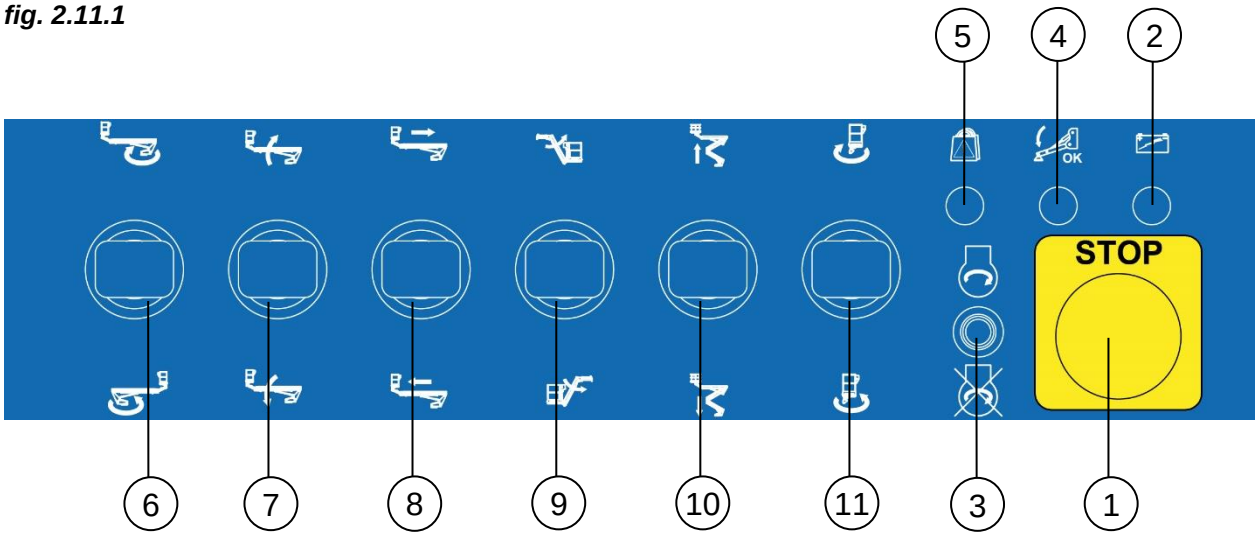
2.10.9 Work platform overload control device

Device that detects the load on the work platform. If the maximum capacity is exceeded, it blocks the movement of all manoeuvres, switches on the platform overload indicator and activates an audible alarm. It switches off automatically once the overload has been removed.

2.11 Description of controls

2.11.1 Control panel in the work platform

fig. 2.11.1



1. Emergency Stop – by pressing the emergency stop all machine controls are deactivated and the engine switches off.
2. Voltage indicator light – switches on when voltage is being supplied.
3. Engine start lever – operating the lever starts or stops the engine.
4. Stabiliser indicator - switches on when the plate has reached its minimum extension and is in contact with the ground.
5. Overload indicator light – switches on if the work platform exceeds the nominal range (at the same time an audible alarm is activated).
6. Proportional lever for turret rotation control – by activating the lever, the turret turns in the direction indicated by the arrow.
7. Proportional lever for telescopic boom elevation – up: the boom moves upwards; down: the boom moves downwards.
8. Proportional lever for telescopic boom control – up: the telescopic boom retracts; down: it extends.
9. Proportional control lever for aerial lifting (jib) – upwards the aerial moves upwards, downwards the aerial moves downwards.
10. Proportional lever for articulated boom elevation control – up: the articulated boom moves upwards; down: it moves downwards.
11. Proportional lever for enclosure rotation control – by activating the lever, the enclosure turns in the direction indicated by the arrow.

2.11.2 Emergency solenoid valve unit controls

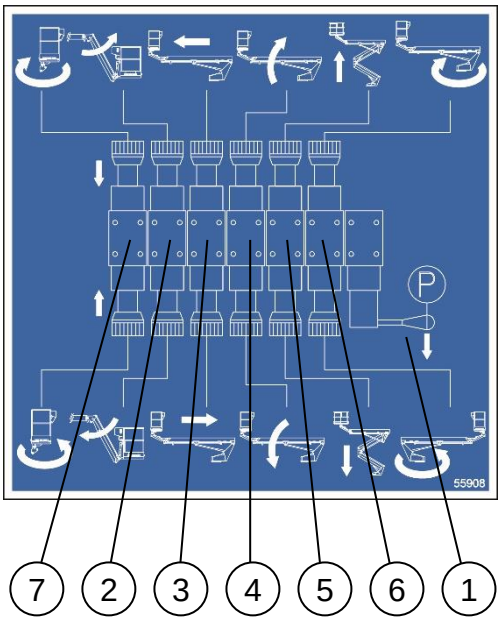


fig. 2.11.2

1. Movement speed control lever – operating the lever after pressing the required knob (***2,3,4,5,6 and 7 [optional]***) carries out the movement proportionally.
2. Aerial lifting control valve (JIB) – by pressing the knob at the top the jib moves upwards, at the bottom the jib moves downwards.
3. Telescopic boom extension control valve – by pressing the knob at the top the telescopic boom extends, at the bottom the telescopic boom retracts.
4. Telescopic boom lifting control valve – by pressing the knob at the top the telescopic boom rises, at the bottom the telescopic boom lowers.
5. Articulated boom lifting control valve – by pressing the knob at the top the articulated boom moves upwards, at the bottom the articulated boom moves downwards.
6. Turret rotation control valve - by pressing the knob at the top, the platform rotates to the left, at the bottom, the platform rotates to the right.
7. Work platform rotation control valve – by pressing the knob at the top, the work platform rotates to the left, at the bottom, the work platform rotates to the right [**OPTIONAL**].

!	**NOTE:** **these controls can only be used in the event of an emergency and are positioned inside the turret casing.**

2.11.3 Mobile traction control panel

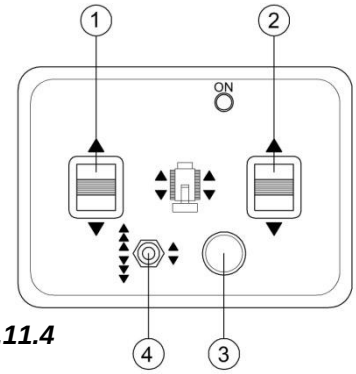


fig. 2.11.4

1. Left traction control lever – upwards the track moves forward, downwards it moves backwards.
2. Right traction control lever – upwards the track moves forward, downwards it moves backwards.
3. Emergency Stop – by pressing the emergency stop all machine controls are deactivated and the vehicle engine switches off.
4. Selector – to the right the machine moves at low speed, to the left the machine moves at high speed. ***[OPTIONAL]***

2.11.4 Combustion engine control panel 15 HP

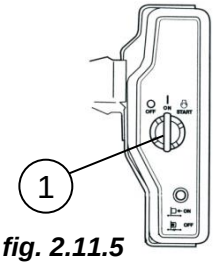


fig. 2.11.5

Start and stop the combustion engine: turning the switch to the right the engine starts and to the left the engine stops (***pos.1 fig. 2.11.5***).

2.11.5 Ground panel

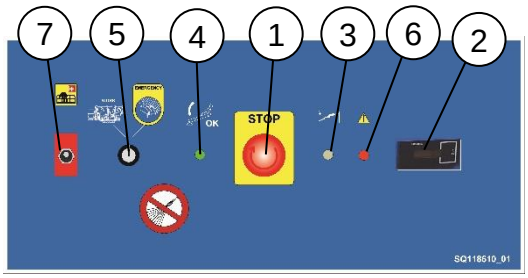


fig. 2.11.6

1. Emergency Stop – by pressing the emergency stop all machine controls are deactivated and the engine switches off.
2. Hour counter.
3. Voltage indicator light.
4. Stabiliser light.
5. Control selector: turning to the left activates the platform controls (normal operation mode), turning to the right activates the emergency manoeuvres.
6. Error indicator light
7. Emergency stop button/load limiter by-pass selector

2.11.6 Stabiliser controls and spirit level

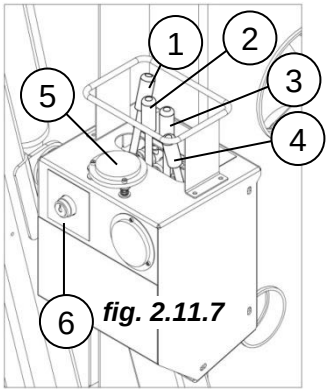


fig. 2.11.7

1. Control lever for back left stabiliser – lower the lever to lower the stabiliser, lift the lever to raise the stabiliser.
2. Control lever for front left stabiliser – lower the lever to lower the stabiliser, lift the lever to raise the stabiliser.
3. Control lever for front right stabiliser – lower the lever to lower the stabiliser, lift the lever to raise the stabiliser.
4. Control lever for back right stabiliser – lower the lever to extend the stabiliser, lift the lever to retract the stabiliser.
5. Spirit level.
6. Three-position key selector switch:
   - to the left: controls the stabilisers-drive chains / central position is neutral
   - to the right: controls on the work platform

!	**NOTE:** if the machine has the Automatic stabilisation accessory, refer to section 10.9.1 “Stabiliser control panel version with automatic stabilisation”

2.11.7 Battery disconnection panel

Switch (***pos. 26 fig. 2.9.1***) that interrupts the electrical circuit preventing platform operations. Turning it to the left interrupts the electric circuit, turning it to the right activates the circuit (***pos. 1 fig 2.11.9***).

2.11.8 Traction stabiliser control panel on work platform

Three-position key selector switch (***pos. 6 fig. 2.11.7***):

- rotating it to the left controls the traction-stabilisers (***pos. 1 fig. 2.11.10***)
- the central position is neutral
- rotating it to the right controls the work platform (***pos. 2 fig. 2.11.10***)

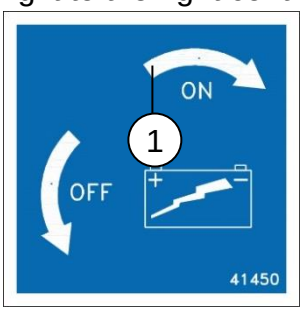


fig. 2.11.9

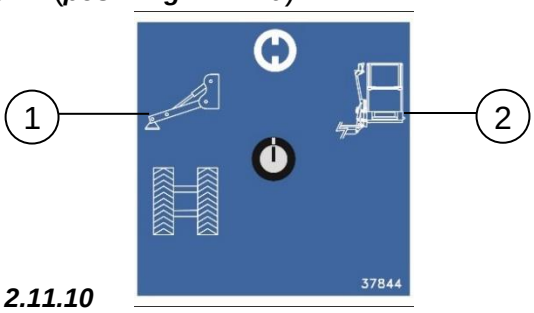


fig. 2.11.10

3 DEVICES

3.1 Intended conditions of use

The elevating work platform can be used for working at height whilst remaining inside the platform, including:

- painting and any routine or supplementary maintenance of buildings
- maintenance of industrial plants and factories
- maintenance of electrical lines and the installation of electrical systems
- pruning

The limitations on use are described in the manual. Any mode or condition of use not within the limitations on use described in the manual and not intended by the manufacturer is forbidden.

3.2 Environmental limitations

The machine can be used in the following environmental conditions:

- ambient temperature between -10° C and + 40° C
- 80% humidity at 40° C
- wind speed less than 12.5 m/s (45 km/h) - 6° on the Beaufort wind scale.

It is prohibited to use the machine in the following environmental conditions:

- unfavourable atmospheric conditions and poor visibility (rain, snow, fog, etc.)
- in explosive atmospheres
- insufficiently ventilated interior areas
- poor or insufficient lighting (lighting must be sufficient to cover the entire work area and for reading of the labels on the machine and recognizing all the controls and emergency devices).

3.3 Lifting

The machine is equipped with four lifting anchorage points at the ends of the stabilisers (***fig.3.3***).

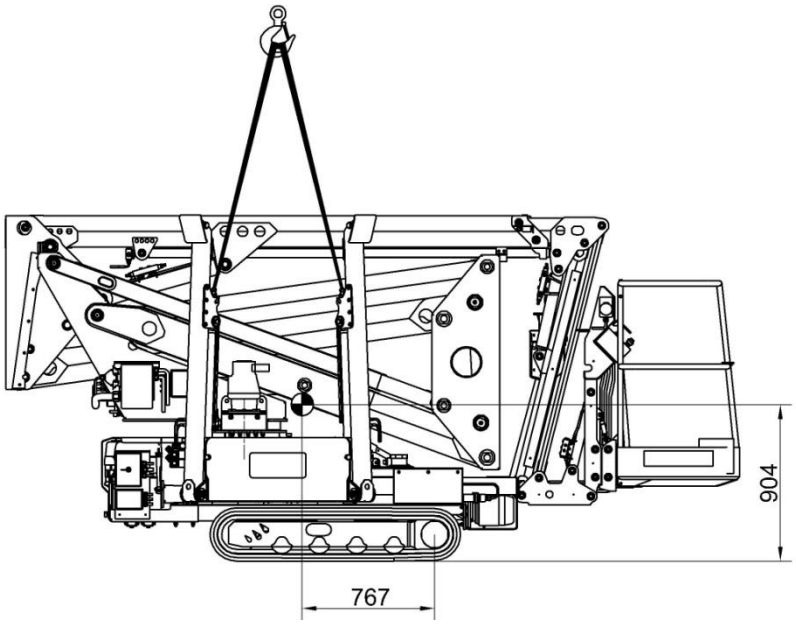


fig. 3.3

	**MANDATORY:** **it is mandatory to use lifting equipment to load the platform on the transport vehicle (*fig. 3.3*).**
	**DANGER:** **use lifting equipment of adequate capacity for the load to be lifted and handled.**
	**ATTENTION:** **before lifting, check the weight in the "technical data" chapter.**

3.4 Safety regulations – obligations and prohibitions

	**DANGER:** **Failure to comply with safety standards could cause serious or fatal injuries.**
	**MANDATORY:** **Current domestic standards, safety standards set down by the employer and those relating to the work area should all be observed.**
	**ATTENTION:** **read and understand the safety standards before reading the following chapter.**

3.5 Electrocution hazard

- This machine is **not** electrically insulated and does **not** provide protection from contact with or when in proximity to electric power lines.
- It is mandatory to comply with the minimum safety distance from the equipment and live overhead lines as indicated in Legislative **Decree no. 81 dated 09 April 2008 ATTACHMENT IX**. Failure to comply with the minimum safety distances can cause death or serious injury.
- **Table 1 Attachment IX observe safety distances from unprotected or insufficiently protected power lines and electrical system live parts, when performing non-electrical works, relating to the dimensions deriving from the type of work, the equipment used and the materials handled, as well as swaying of the conductors due to wind and drops in height due to temperature conditions**.

Nominal Voltage (kV)	Distance (m)
≤ 1	3
1 < Nominal Voltage ≤ 30	3.5
30 < Nominal Voltage ≤ 132	5
> 132	7

- Clearance should be maintained, bearing in mind maximum extension of the machine's boom.
- Do not use the machine as a ground for welding.
- Never use the machine during storms or when there is lightning

3.6 Tipping hazard

- Use of the mobile traction panel on the work platform is prohibited.
- Never move the work platform.
- Before using the machine, make sure that the ground is able to support the weight of the machine and withstand the pressure exerted by the stabilisers. Maximum load is specified on the labels attached to the stabilisers and in the manual's technical specifications.
- Position the machine only on a level and stable surface. It is forbidden to stabilise the machine on soft, muddy, frozen or slippery ground or in the immediate vicinity of holes, ditches or manholes.
- Never lean the platform on other machines or structures.
- Never exceed the maximum inclination of the boom assembly specified in the technical specifications and on the machine's serial plate. Do not operate on ground if the slope or inclination is greater than 3°.
- Never exceed the maximum load on the work platform and the maximum number of people allowed (table of load quantities in the technical specifications and on the machine)
- Never overload the raised work platform. If parts have to be dismantled at height, check their weight to avoid exceeding the load.
- Never use the machine with winds exceeding 12.5 m/s (45 km/h) or when it is gusty.
- Never increase the surface or load of the platform. Increased surface exposed to the wind decreases machine stability.
- Never use the machine in unfavourable weather conditions, such as storms, snow and mist.
- Never push or pull any object outside the platform. Maximum manual stress allowed: 40 daN.
- Never modify, replace or disengage any components that affect the safety and stability of the machine.
- Never modify or adjust the work platform. Fittings for holding down equipment or other material on the platform or guard rail increase the weight and exposed surface area of the platform and load.
- Never attach metal wires, cables or similar objects to the platform. These could become trapped or hook onto a fixed external object.
- Never modify, remove or replace any components that could reduce the overall weight or stability of the machine base, such as ballasts, batteries, etc.
- Never position or attach loads that jut out from any side of the machine. Never apply loads that jut out from the platform and use the machine to lift suspended loads; it should not be used as a crane.
- Never use the machine to lift loads on the platform; it should never be used as a hoist.
- Never use the machine to transfer people from one level to another; it should never be used as a lift.
- Never use the controls on the platform to free the platform blocked, obstructed or impeded in any other way by an adjacent structure preventing normal movement. Request the assistance of qualified personnel.

3.7 Risk of falling

- Always wear suitable fall prevention devices conforming to current standards. The safety harness cable should be attached to the anchorage on the work platform.
- Personnel should never work outside of the raised work platform and be anchored to the connection with the safety cable on the same.
- Never sit or climb onto the edge of the platform.
- Never use ladders, scaffolding or similar items to extend your reach on the work platform.
- Never lean ladders against the machine structure.
- Never dismount from the raised platform. Never climb down the boom.
- Always keep the platform clear of debris.
- Always check that the platform entry is properly closed before using it. Never jam open the access gate.

3.8 Collision hazard

- Always check the work area for overhead obstacles or other potential risks.
- During boom movement, constantly check the area to prevent collisions between the boom or work platform with any obstacles.
- Always take all precautions when holding the guard rail to prevent any risk of crushing.
- It is recommended that operators wear a helmet when operating the machine;
- Never lower the boom if the area below is not completely free of personnel and obstructions.

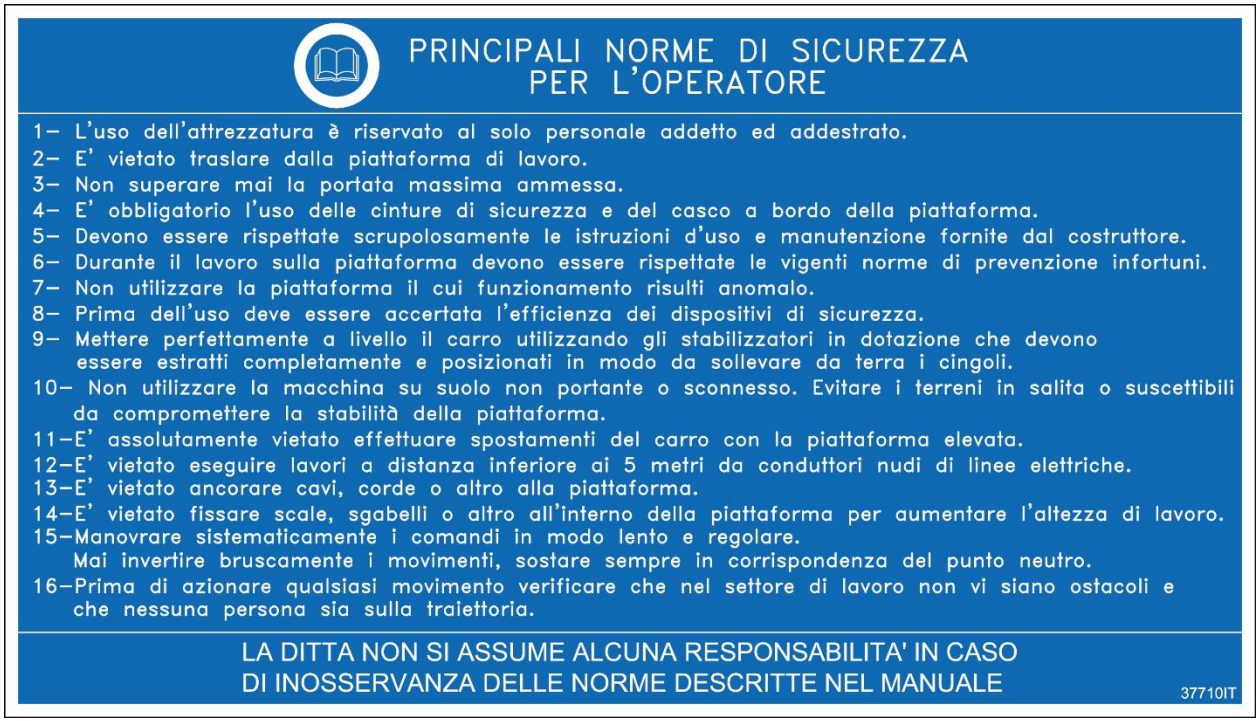
3.9 Work atmosphere hazards

- Never use the machine at ambient temperatures less than – 10° C or above 40° C. Contact the manufacturer before working outside of this range.
- Always use the machine in a suitably ventilated area to avoid the risk of carbon monoxide poisoning.
- Never use the machine in hazardous atmospheres or in the presence of inflammable or explosive gas and materials or in explosive atmospheres.
- Never start up the engine if there is an odour or trace of gas, petrol, diesel fuel or other explosive substances.
- Never use the machine in areas where lighting does not provide sufficient visibility for carrying out work or safe operations.
- Never use the machine for leisure activities.

3.10 Machine hazards

- Carry out a thorough pre-start check and test all the functions before each work session.
- Tag and immediately remove from service any malfunctioning controls or broken safety devices. Never use a damaged or broken machine.
- Never use the machine if there is leakage of hydraulic oil or air. Leakage of hydraulic fluid or air could cause skin damage and burns.
- Ensure that all maintenance checks have been carried out, as specified in this manual.
- Ensure that all the labels are in place and that they are legible.
- Ensure that the manual is intact, legible and kept in the special container in the cabin.

3.11 Summary of operator regulations



3.12 Operator work position

- When the machine is being moved, the operator must be at least 3m away from the platform.
- During use, the operator should only control the work platform using the control panel on the platform itself.
- During the stabilisation phase of the machine, the operator's position is on the work platform.

3.13 Hazardous area

- The operating area of the boom when fully stretched out horizontally is hazardous.
- Never stand in this area.
- Cordon off this area with barriers, construction site tape, chains, etc.
- Use appropriate signals for operations on roadworks sites.

3.14 Residual risks

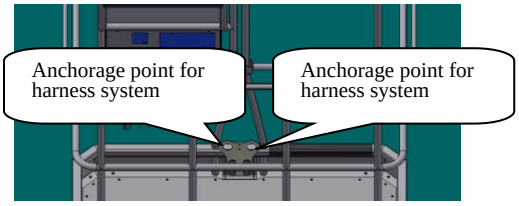
Mechanical risks:

- Risk of crushing feet when stabilising the machine.
- Risk of crushing of limbs by boom joints during the closing process.
- Risk areas are indicated with labels.

3.15 Personal protective equipment

3.15.1 Fall arrest device

	**MANDATORY: All the persons occupying the work platform must wear an appropriate harness system linked to the dedicated anchorage point.**



The work platform is fitted with two anchorage points to connect a harness system.

Each anchorage point is sized for a static stress of 6 kN.

All the people occupying the work platform must wear an appropriate fall protection system comprised of a full body harness complying with Standard EN 361, fitted with chest and/or back connection and restraint or positioning adjustable lanyard (EN 354/EN358) and 2 connectors (EN 362) of shape and size suitable for linkage to the lanyard ends.

Note: *the pictures above are for illustrative purposes only.*

The lanyard must be adjusted as short as possible so as to hold the body inside the work platform.

This assembly should not be regarded as a fall arrester, however, it prevents falls.

The use of fall prevention systems foresees a mandatory training.

Please refer to the instructions for use provided by the manufacturer of the harness system components for the check, use and adjustment of the system.

	**MANDATORY:** **Use only devices that are well kept and in good working order. Moreover, the devices must be approved and bear the conformity CE-mark. Please refer to the manual provided by the manufacturer for further instructions for use.**

3.15.1.1Inspection and maintenance of anchorage points

DANGER:
It is MANDATORY that operators authorised to use the work platform check that the anchor points are correctly secured before each use.

Proceed as follows:
1. Set the machine to transport mode;
2. Manually check that the anchorage points are secure
3. Secure the anchorage points with suitable equipment if necessary

3.15.2 Additional personal protective equipment

In addition to the harness system, the use of the aerial work platform foresees the use of a safety helmet for overhead works with chinstrap (EN 397) and footwear for professional use (EN 346).

Other equipment may be required depending on the type of job or environment, such as: gloves, goggles, earmuffs etc. The requirement for and type of PPE must be evaluated by the employer or site manager.

4 OPERATING INSTRUCTIONS

4.1 Foreword

ATTENTION:
Read and understand the previous chapters before reading this one.

The chapter on operating instructions provides instructions on how to operate the machine. The operator is responsible for following the instructions and complying with safety standards and provisions of the law. The machine shall only be used by an authorised and qualified operator trained in the use of this type of machine. If the machine is to be used by more than one operator at different times during the same work session, the operators should all be qualified and trained, follow the instructions and comply with safety standards and provisions of the law.
This means that **each** operator shall:

- avoid hazardous situations
- always carry out pre-start checks
- always test the functions before using the machine
- check the control of the operating area
- **Only use the machine for its intended functions.**

MANDATORY:
Current domestic standards, safety standards set down by the employer and those relating to the work area should all be observed.

4.2 Transfers

This elevating work platform is mounted on a tracked vehicle that is not approved for use on roads.

4.2.1 Checks and tests before transfers

- Check the lubricating oil level.
- Check that the platform and booms are fully retracted.
- Check that the stabilisers are fully retracted.
- When transferring the machine, always keep to the speed limits, ensure that the speed is suitable for road/traffic conditions, and make sure that the route is not too bumpy and uneven.
- Always consider the machine's dimensions when transferring it by road (refer to the technical specifications).

4.2.2 Extendible carriage - Instructions for use

The elevating work platform is equipped with an extendible carriage.
A hydraulic device allows the extension of the carriage.
The extended carriage allows greater machine stability to be achieved during movements; its use is recommended every time the machine has to be moved in external areas.

Extension of the carriage.

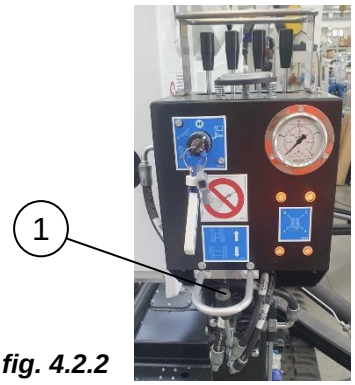
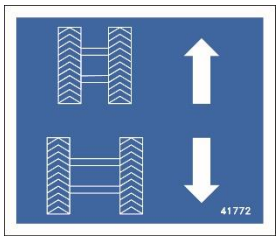


fig. 4.2.2

To extend the carriage, lift it by lowering the stabilisers until the tracks are fully lifted from the ground.
Use the stabilisers' control levers placed on the stabilisers' control panel, until the carriage is lifted from the ground.
Extend the carriage by moving the carriage extension lever ***(pos.1 fig. 4.2.2)*** downwards until full expansion.
Close the stabilisers.

Reclosure of the carriage
To re-close the carriage, even in this case, lift it by lowering the stabilisers until the tracks are fully lifted from the ground.
Close the carriage by moving the carriage extension lever ***(pos.1 fig. 4.2.2)*** upwards until full closure.
Close the stabilisers.



Width of the closed carriage: 780 mm

Width of the extended carriage: 1280 mm

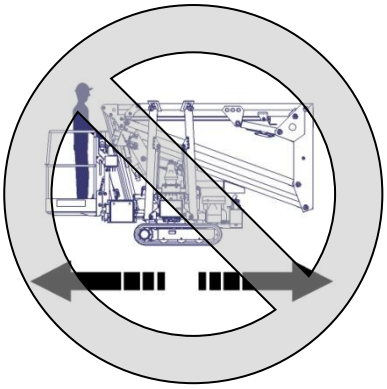
IMPORTANT: Extending and closing the carriage on machines with automatic stabilisation

If the machine comes with the “Automatic stabilisation” accessory (see section 10.9 of Chapter 10 ACCESSORIES), it is necessary to press and hold the “STAB” button on the automatic stabilisation control panel while moving the carriage’s extension/closure control lever.

ATTENTION:
when the machine is stabilised to use the work platform, the carriage should be put in minimum width position before completing the stabilisation, in order to avoid interference of the tracks with the stabilisers.

4.2.3 Platform travel

	DANGER: **The presence of persons on board the platform during travel is forbidden.**



	DANGER: **Always use access ramps of adequate size and capacity.**
	DANGER: **During travel the operator must be at least 3m away from the platform.**
	DANGER: **always use ramps with a length sufficient to create a maximum slope of 15°.**
	MANDATORY: **move up and down with the work platform downstream.**
	ATTENTION: **check that there is sufficient fuel in the combustion engine tank.**

- Never exceed the maximum permissible slope of the terrain.
- Do not transit on slopes where the traction of the tracks is not safe (slippery, icy, snowed under roads).
- Do not travel along sections with surface irregularities such as to compromise the continuity of grip or traction of the tracks, in particular in the presence of steep level changes.
- Do not manoeuvre on hard, stony and uneven surfaces (river rock and gravel), or abrasive surfaces (sand, stones, minerals, etc.).
- Avoid to the extent possible steering manoeuvres on asphalt and concrete to avoid premature wear of the track sliding blocks.
- Avoid manoeuvring on asphalted roads when their temperature exceeds 60°C so as not to cause premature wear of the tracks.
- Do not manoeuvre with a loose track.
- Do not manoeuvre on surfaces soiled with oil or fuel; if this happens, clean the track immediately.
- Avoid using the rubber track in coastal marine areas, as saline air or saline in general corrodes the adhesion between the rubber and the inner metal core.

4.2.4 How to use the platform

1. Turn the knob on the battery isolator panel to the “ON” position (***pos. 1 fig. 2.11.9***), to electrically power the engine.
2. Start the combustion engine by turning the key (***pos.1 fig. 2.11.5***) or using the selector switch (***pos.3 fig. 2.11.1***) on the work platform.
    - The selector (***pos.5 fig. 2.11.5)*** must be turned to the left in work platform controls.
3. Remove the mobile traction control panel from the protection compartment (***pos.8 fig. 2.9.1***) and wear it over the shoulder.
4. Check that the controls are in the traction position (***pos. 1 fig. 2.11.10***).
5. Proceed with the movement using levers 1 and 2 of the traction control panel (***fig. 2.11.4***), maintaining a minimum distance of 3 m from the platform, checking that there are no obstacles along the route.
6. When you reach the work area, reposition the traction panel in the appropriate compartment.
7. Proceed by using the lifting unit platform as described in ***chap. 4.3.***

4.3 Use of the elevating work platform

	**ATTENTION:** **Observe current road standards when operating in an area open to traffic, using indicator lights, sound and visual signals and appropriate ground signals.**
	**MANDATORY:** **Operating areas must be cordoned off.**

4.3.1 Checks and tests before use

	**ATTENTION:** **you must have read and understood the use and maintenance manual before using the machine.**
	**ATTENTION:** **only use the elevating work platform (EWP) for the uses intended by the manufacturer and specified in this manual.**

Before each use of the machine, you must:

- check that the ground is compact and able to support the weight of the machine (weight on each stabiliser is specified in the technical specifications and on the stabiliser itself)
- check that the ground is level or on a slope not exceeding 3°
- check the work area (***chap. 2.5***)
- Check for the presence of any obstacles and overhead lines in the work area that could obstruct or limit use
- check that the use and maintenance manual is present and that it is complete and legible
- check that all adhesive labels are present and legible (***Chap 5.10***)
- check the level of hydraulic oil and top up if necessary (***chap. 5.6***)
- inspect the aerial work platform (EWP), checking the following components and areas for any damage, missing or improperly installed parts or oil leaks:
    - electrical components, cables and electrical wires
    - hydraulic tubes, pipes, cylinders and valves
    - fifth wheel rotation engine
    - nuts, bolts and other fastening components
    - structural or welding cracks and damage to the machine

- work platform and access gate
- limit switch and safety devices
- check for any damage to the personal protective equipment (PPE) before use
- put on the harness and any other PPE before getting on board
- attach the snap hook of the harness to one of the anchorage points on the work platform
- check that the padlock installed on the levelling is closed.

	**ATTENTION:** **If the ground is not firm enough to withstand the weight, use planks that are suitable for the purpose and that have been checked before use.**
	**MANDATORY:** **Before using the work platform, you must make sure that the machine is properly stabilised: carriage lifted and level, all four stabilisers resting on suitably firm ground.**
	**MANDATORY:** **put on the helmet before boarding the work platform.**
	**MANDATORY:** **put on the harness before boarding the work platform.**
	**ATTENTION:** **check the correct operation of all controls on the work platform before lifting it to the desired height.**

4.3.2 Stabilising the elevating work platform (EWP)

!	**NOTE:** If the machine comes with the “Automatic stabilisation” accessory, refer to section 10.9 of Chapter 10 “ACCESSORIES” to stabilise the elevating work platform.

Stabilise the platform as follows:

1. climb on board the work platform
2. check that the access gate is properly closed
3. check that the controls are in the stabiliser/traction position (***pos. 1 fig. 4.3.2***).

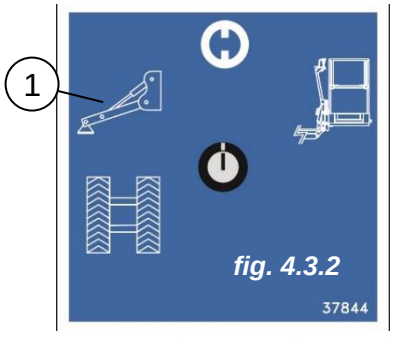


fig. 4.3.2

fig. 4.3.3

4. move to the panel found in the centre of the work platform and check that the power indicator light is on (***pos. 2 fig. 4.3.3***)
5. check that the stabiliser indicator light is not on: This would mean there is a fault with the stabiliser limit switches (***pos. 4 fig. 4.3.3***).

Stabilise the machine properly, as follows:

1. lower the stabilisers by operating the levers in turn (***pos. 1-2-3-4 fig 4.3.4***)
2. move the levers downwards to extend the stabilisers, and upwards to retract them
3. fully extend the stabilisers in order to lift the tracks

4. check the spirit level (***pos. 5 fig. 4.3.4***) found on the stabiliser control panel and level the platform correctly, using the stabiliser levers as necessary: the machine is perfectly level when the air bubble in the spirit level is at the centre (0°)
5. check that the indicator light (***pos. 4 fig. 4.3.3***), which indicates that it is possible to raise the boom, is On.

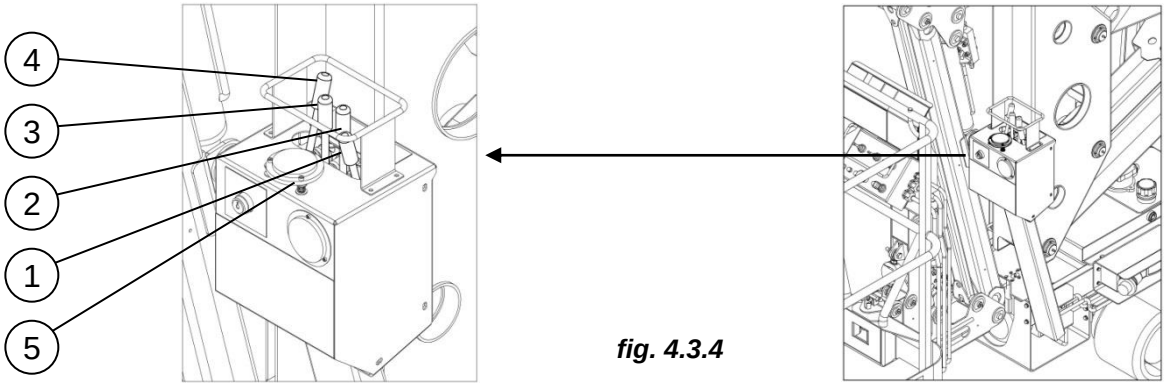


fig. 4.3.4

	ATTENTION: **the switching on of the light does not indicate correct stabilisation of the carriage. This is indicated instead by the spirit level.**
	MANDATORY: **Before lifting the platform to a height, ensure that the machine is properly stabilised by checking that the four blocking valves on the stabilisers are closed. If necessary, call the Assistance Centre.**

4.3.3 Operating the work platform

Commission the work platform as follows:

1. Turn the selector switch key (***pos. 2 fig. 4.3.5***) to the “Work Platform” position
2. Remove the key and take it with you
3. Lift the articulated boom so that it can be moved without being obstructed by the stabiliser controls
4. Move the boom by first moving the desired control lever and then move the proportional lever gradually (***pos. 2 fig. 4.3.6***)
5. At least one person that is qualified or trained to use the machine should be present on the ground whilst it is being used.
6. When the equipment is raised, ensure that the boom does not collide with fixed or mobile parts on the work platform. Keep a safe distance from electrical lines. Rotate, lift and lower the boom with caution. Do not lean out from or hold onto the outside of the work platform.

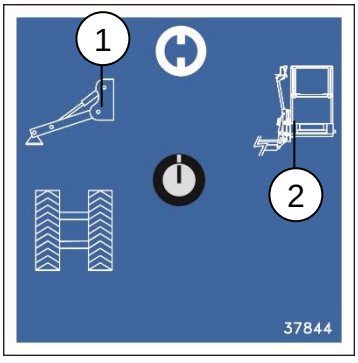


fig. 4.3.5

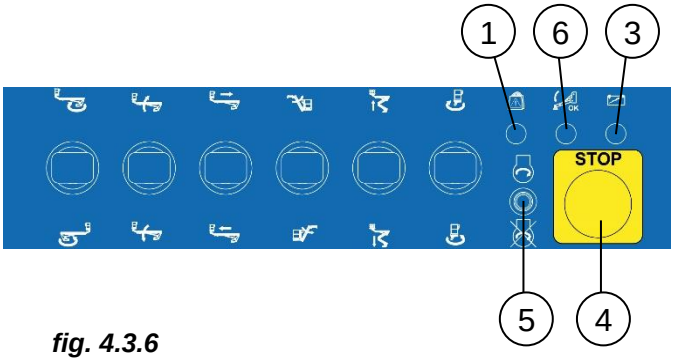


fig. 4.3.6

⚠	**ATTENTION:** **the power on indicator light (*pos. 3 Fig. 4.3.6*) on the work platform control panel must be lit.**
⚠	**ATTENTION:** **the machine has a platform load check device. If the load exceeds the permissible load capacity, the "overload" indicator (*pos. 1 fig. 4.3.6*) lights up, a buzzer sounds and all controls are deactivated. When the excess weight is discharged from the work platform, the controls automatically reactivate and the alarms switch off.**
!	**NOTE:** **if you wish to switch off the engine once you have reached the work position, press the emergency stop button (*pos. 4 fig. 4.3.6*). The engine switches off. To restart the engine, rotate the emergency stop button and then press the start button (*pos. 5 fig. 4.3.6*).**

4.3.4 Placing the elevating work platform in rest position

1. Return the extension, rotate the enclosure to the rest stand-by position (90° in relation to the boom) [**OPTIONAL**], close the jib, position the turret in the centre making the yellow signals coincide, lower the telescopic boom, and lower the articulated boom until the desired position is reached.
2. Check that the boom is positioned on the rest support.
3. Insert the key in the selector switch on the stabilisers/platform control panel and rotate it to the “stabilisers” position (***pos. 1 fig. 4.3.5***).
4. Close the stabilisers using the levers (***pos. 1-2-3-4 fig. 4.3.4***).
5. Check that the green light on the stabilisers switches ***off (pos. 6 fig. 4.3.6***).
6. Rotate the key to the “neutral” position and remove it from the selector.
7. Dismount from the work platform carefully.

4.3.5 Switching the engine OFF

1. Approach the combustion engine and turn it off using the key (***pos. 1 fig. 2.11.5***) or the selector switch (***pos.3 fig. 2.11.1***) on the work platform.
2. Turn the battery isolator panel switch to the OFF position to disconnect the voltage supply to the engine (***fig. 2.11.9***).

4.3.6 Parking

1. Park the machine in a suitable area out of the way of traffic
- The ground must be level and firm
2. Check that the control panels, casings and any equipment containers are closed.

4.4 Emergency manoeuvres

4.4.1 Work platform emergency stop

The platform is fitted with a device for stopping all functions immediately; this can be activated by pressing the red emergency button, its position is indicated in ***chap. 2.10.1***. Once the cause of the emergency has been resolved, reactivate the controls by rotating the button by a quarter of a turn.

4.4.2 Lowering the work platform from the ground

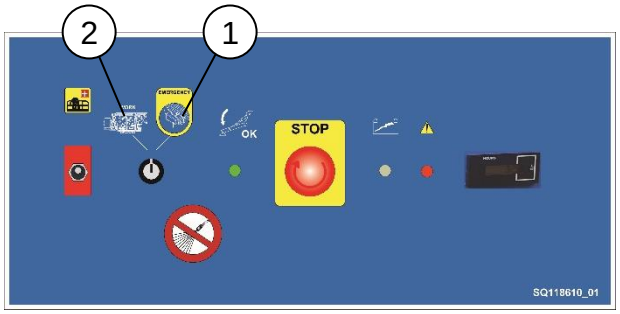


fig. 4.4.1

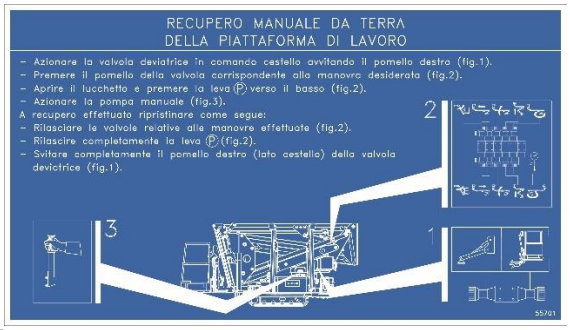


fig. 4.4.2

If necessary, the emergency controls can be activated as follows:

1. remove the electro valve casing on the turret (***pos. 2 fig. 4.4.2***)
2. rotate the selector switch to the “Emergency controls” position (***pos. 1 fig. 4.4.1***)
    - the combustion engine starts;
3. press the valve knob that controls the desired movement and simultaneously use the speed control lever (P) returning the enclosure to the stand-by position
4. after performing the recovery operations, turn the selector switch to the "Work Platform Controls" position (***pos. 2 fig. 4.4.1***).

4.4.3 Lowering the work platform in the event of a power cut

If the combustion engine malfunctions, the gear pump that delivers drive power to all the equipment, the work platform can be retracted as follows:

1. remove the manual pump control lever on the frame by unscrewing the black locking knob;
2. insert the handle onto the manual pump (***pos. 3 fig. 4.4.4***)
3. activate the manual pump, while the operator in the enclosure activates the control for the required movement;
4. once recovered, re-position the manual pump control lever, fixing it on the frame using the black blocking knob.

4.4.4 Lowering the work platform manually from the ground

If there are malfunctions on the combustion engine, the gear pump that delivers drive power to all the equipment, or a lack of voltage, the enclosure can be returned to the ground in the following manner:

1. Remove the manual pump control lever on the frame by unscrewing the black locking knob
2. Insert the handle onto the manual pump (***pos. 3 fig. 4.4.4***)
3. Remove the cover guard and the turret frame guard (***pos. 2 fig. 4.4.4***)
4. Proceed with the recovery procedure following the indications on the adhesive positioned under the cover ***(fig.4.4.4***).

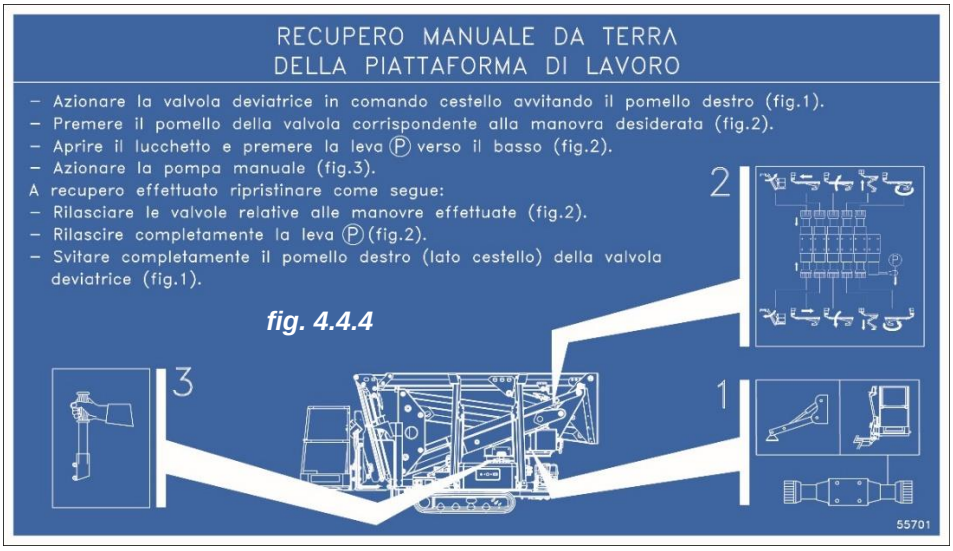


fig. 4.4.4

⚠	**ATTENTION:** **contact the service centre to repair the malfunction and install a new wire with seal to the exchange valve.**

4.4.5 Manual recovery in case of traction breakdown.

In the event of a traction breakdown, the aerial platform can be moved as follows:

1. Operate the baffle in the stabiliser controls (***pos. 1 fig. 4.4.5***)
2. Operate the two traction valves in the desired direction of travel (***pos. 2 fig. 4.4.5***)
3. Operate the manual pump to proceed when moving
4. Once the stabiliser has been retrieved, put back the valves to their original position.

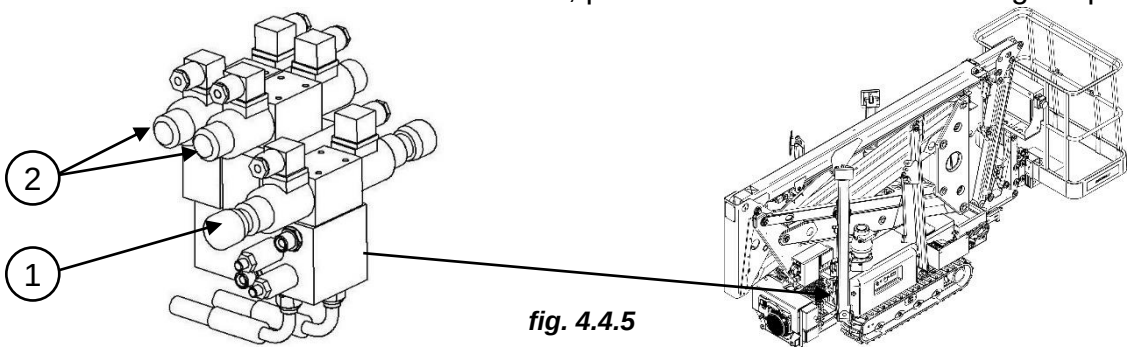


fig. 4.4.5

⚠	**ATTENTION:** **contact the service centre to repair the malfunction and install a new wire with seal to the exchange valve.**

4.4.6 Lowering the work platform or load limiter block to the ground in the event of an emergency stop.

If the work platform has been stopped by pressing the emergency button (***pos. 1 fig. 4.4.6***) or load limiter block, it is possible to by-pass the emergency condition for a set time by pressing the emergency mushroom button on the fixed push-button panel on the work platform or by exceeding the load allowed on the work platform. The recovery procedure is as follows:

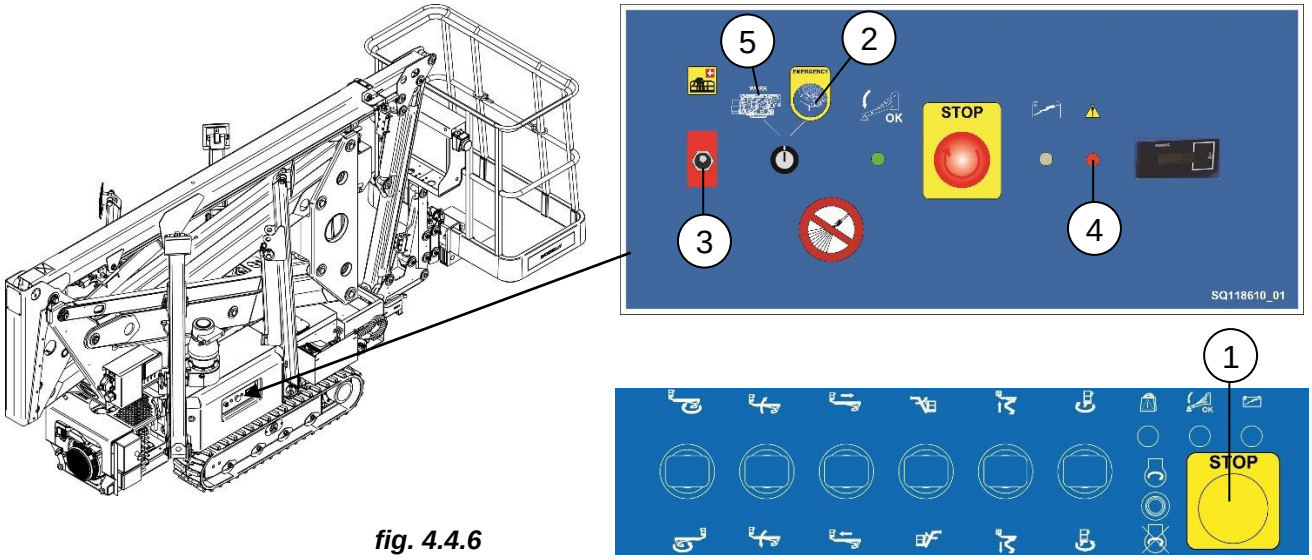


fig. 4.4.6

1. Move to the left side of the platform and position yourself in front of the emergency ground panel (***fig. 4.4.6)***
2. Remove the electro valve guard on the turret (***fig. 4.4.2***)
3. Rotate the selector switch to the “Emergency controls” position (***pos. 2 fig. 4.4.6***)
4. Press and release the bypass switch (***pos. 3 fig. 4.4.6***)
   - The combustion engine will start;
   - The emergency button on the work platform (***pos. 1 fig.4.4.6***) is disabled for a short time;
   - The led (***pos. 4 fig. 4.4.6***) flashes quickly, while the by-pass is enabled (see diagnostics)
5. Press the knob of the valve that controls the desired movement (***fig. 2.11.2***)
6. After performing the recovery operations, turn the selector switch to the "Work Platform Controls" position (***pos. 5 fig. 4.4.6***)

!	**NOTE:** **If the bypass time ends, before completing the recovery procedure (the flashing light switches off and the engine also switches off), reactivate the bypass by enabling the bypass switch again (pos. 3 fig. 4.4.6)**

!	**NOTE:** **The bypass button (pos. 3 fig. 4.4.6) must only be used when truly needed; if it is used in a status other than the emergency stop on the work platform, an overload situation, or with the selector in (pos. 5 fig. 4.4.6), an alarm is triggered.**

4.5 Loading and Transport

	**ATTENTION:** **the presence of persons on board the platform during travel or loading and unloading is forbidden.**

- If the platform is to be carried on a truck or trailer, bear in mind its exact maximum height to avoid collision with low structures, bridges or power lines.
- Make sure that all fixing devices are effective and in good working order.
- Ensure that the platform is fully retracted and locked into its rest position.
- Check that the stabilisers have been fully retracted.
- Check the load capacity of the ramp and the truck on which the machine will be placed.

4.5.1 Loading the machine onto a transportation vehicle

- Read all the lifting instructions in ***chapter 3.3*** of the use and maintenance manual before loading the machine.
- Never lift the platform by its boom when loading the machine onto the truck.
- Use the appropriate hooks on the stabilisers to lift the platform.
- Use lifting equipment of adequate capacity for the load to be lifted and handled.

4.5.2 Loading onto vehicle with ramps

	**DANGER:** **Always use access ramps of adequate size and capacity. The length of the ramps must be such as to guarantee a maximum incline of 15%.**
	**DANGER:** **during the following operations the operator must control the machine at a minimum distance of 3 m from the platform.**
	**DANGER:** **The presence of persons on the platform during loading of the vehicle with ramps is prohibited.**

Moving up:

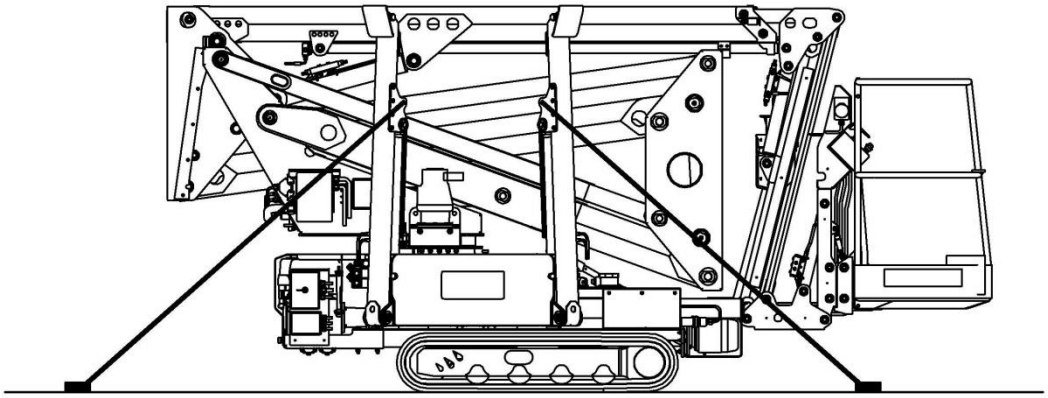
- mount the ramps and secure them with the safety pins
- control the travel of the machine and stop it as soon as the tracks are fully mounted on the ramps.

Moving down:

- repeat the operations performed for going up in reverse.

4.5.3 Blocking on truck or transport trailer

- Set the key switch to off and remove the key before commencing transport operations.
- Check the entire machine for loose or unblocked components.
- Use chains or clamping devices capable of withstanding heavy loads.
- Use at least 4 chains or 4 blocking devices;
- Adjust the locking devices to prevent damage.



4.6 Storage

4.6.1 Out of service for short periods (less than 15 days)

Give the machine a general clean, following the instructions in ***chap. 5.7***. Park the machine in a dry and sheltered area. Remove the keys of the elevating work platform (EWP) to prevent unauthorised use. If the machine is fitted with a battery isolator switch, disconnect the battery.

4.6.2 Out of service for long periods

As above, also: proceed with lubrication and greasing as indicated in ***chap. 5.8.*** Protect the machine with a suitable protective cover.

5 MAINTENANCE

5.1 Foreword

This chapter covers routine maintenance only. The operator can only carry out the routine maintenance indicated as “**O** - by operators" in the maintenance summary table. Other maintenance work, indicated as “**M** - by qualified technicians” in the maintenance summary table, must be carried out by qualified technicians, following the schedule and instructions indicated in the manual. Follow the maintenance instructions in order to keep the equipment in good working order and safe to operate. Any maintenance carried out after the first 100 hours, on a quarterly, six-monthly or annual basis, should be recorded in section 7 (periodic checks and maintenance) of the Check Register supplied with the machine. The Check Register should also be used to record replacement of parts of the hydraulic system, electrical system, structural parts or mechanisms, safety devices, and any serious failures and related repairs. The Check Register should be kept with the machine at all times until the latter is dismantled. The Check Register should be kept at the disposal of the supervisor for a period of five years from the date of the last record or until the equipment is put out of service, whichever occurs first. A document certifying the most recent check should accompany the equipment wherever it is used.

	**ATTENTION:** **Any maintenance not mentioned in this chapter should only be carried out by the After-Sales Service or by the manufacturer’s Authorised Workshops.**

The platform can work in contact with water, sand, earth, etc. and should be lubricated, important not only for machine durability but also for minimising operation costs.
Contact our after-sales service for any further information.

After Sales Service Centre

☎ 0464/485050

Before each use, ensure that all necessary maintenance has been carried out and carry out all the checks indicated in the “Pre-start checks” table.

	**ATTENTION:** **If the machine is damaged or malfunctions, place it immediately out of service.** **Repair all damage and/or faults before putting the machine back into service.**

Perform a quarterly check on any machines that have been out of service for more than three months before putting them back into service.

5.2 General Rules

- When removing and reinstalling parts, always use extractors, spanners and equipment that will not damage the components.
- Use copper headed hammers or wooden mallets to release parts that are securely fastened.
- Separate the pieces of the various units and partially screw the nuts onto their corresponding pins or stud bolts. Clean the parts using brushes or rags, then wash them using petroleum or warm water and remove all residues using compressed air.
- After scrubbing down with abrasive material, wash each part carefully or use a jet of compressed air, removing all abrasive dust.
- When reassembling parts, ensure that they are clean and adequately lubricated.
- Pay maximum attention to the condition of the snap rings and spring pins: if they bear any traces of damage, replace them immediately.

	**ATTENTION:** **The maintenance operations described in the following pages are only intended for the aerial work platform.** **For the maintenance of the combustion engine, refer to the instructions provided by the manufacturer.**

5.3 Maintenance summary table

O = by operators **M** = by qualified technicians

Description of operation	Before each use	Every 50 hours	After 100 hours	Every 6 months or 500 hours	Every year or 1000	References
Visual inspection	*O*	*O*	*O*	*O*	*O*	*4.3.1*
Check use and maintenance manual	*O*	*O*	*O*	*O*	*O*	*4.3.1*
Legibility of plates and labels	*O*	*O*	*O*	*O*	*O*	*4.3.1 and 5.10*
Check for damage and missing, loose or detached parts	*O*	*O*	*O*	*O*	*O*	*4.3.1*
Check welds, pins and joints	*O*	*O*	*O*	*O*	*O*	*4.3.1*
Check for any oil leaks	O	O	O	O	O	*4.3.1 and 5.6*
Check pressures	*O*	*O*	*O*	*O*	*O*	*5.6.4*
Hydraulic oil level check	*O*	*O*	*O*	*O*	*O*	*5.6.6 and 5.6.7*
Check hydraulic oil filter clogging indicators	*O*	*O*	*O*	*O*	*O*	*5.6.8*
Functioning tests for controls in the enclosure and on the ground	*O*	*O*	*O*	*O*	*O*	*5.9*
Check safety devices (Emergency Stop)	*O*	*O*	*O*	*O*	*O*	*5.9*
Test limit switches	*O*	*O*	*O*	*O*	*O*	*5.9.1*
Overload device test	*O*	*O*	*O*	*O*	*O*	*5.9.2*
Enclosure differential power supply test	*O*	*O*	*O*	*O*	*O*	*10.1*
Change oil in hydraulic system*					*M*	*5.6.6*
Replace hydraulic oil filters			*M*	*M*	*M*	*5.6.8*
Change oil in gearbox*			*M*		*M*	*5.8.3*
Track tension and integrity check	*O*	*O*	*O*	*O*	*O*	*5.5.2*
Lubrication and greasing		*O*	*O*	*O*	*O*	*5.8*
Check slewing ring fixing screws			*M*	*M*	*M*	*5.5.1*
Make sure that all the bolts of the turret rotation gearbox are properly tightened			*M*	*M*	*M*	*5.5.1*

ATTENTION:
In order for the warranty to remain valid, inspection and maintenance must be carried out at an authorised CTE service centre after the first 100 hours and after every 1000 hours (or every year) of operation.

ATTENTION:
*** if the machine is using the optional biodegradable oil, see *chap. 10.6*.**

5.4 Spare parts

Only use original spare parts.

When making a request, specify:

- model, serial number
- reference code and technical description of the damaged part.

5.5 Mechanics

5.5.1 Main mechanics

Mechanical parts in mutual rotation should be inspected periodically, checking the condition of nuts, bolts and screws to make sure none have been loosened. Before each use, visually inspect the fixing screws and nuts connecting the slewing ring to the chassis and turret, the gearbox, the connection between the rotating joint and the turret, the locks on the pins, all other bolts, particularly on parts subjected to vibration and movement. Before each use, also visually inspect all the structural components for cracks in welds, corrosion or signs of wear.

After the first 100 hours and then every 6 months or 500 hours, check:

- the tightness of the slewing ring fixing nuts using a torque wrench (refer to the "Tightening torques" table);
- the tightness of all the bolts of the turret rotation gearbox using a torque wrench (refer to the "Tightening torques" table).

5.5.2 Track tension and integrity check

Track tension check

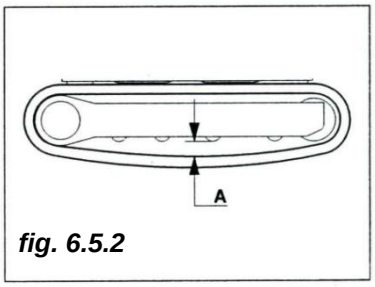


fig. 6.5.2

Stop the machine on solid, level ground and stabilise it. Measure the distance "A" at the central track roller from the bottom of the roller to the rigid inside of the rubber belt. The tension is correct if "A" is between 10 and 15 mm.

If not, contact an authorised workshop to have it adjusted.

Track integrity check

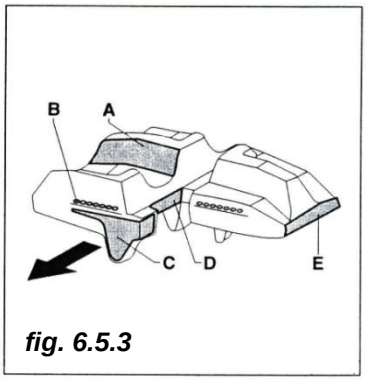


fig. 6.5.3

Track structure:

A- Tread pattern

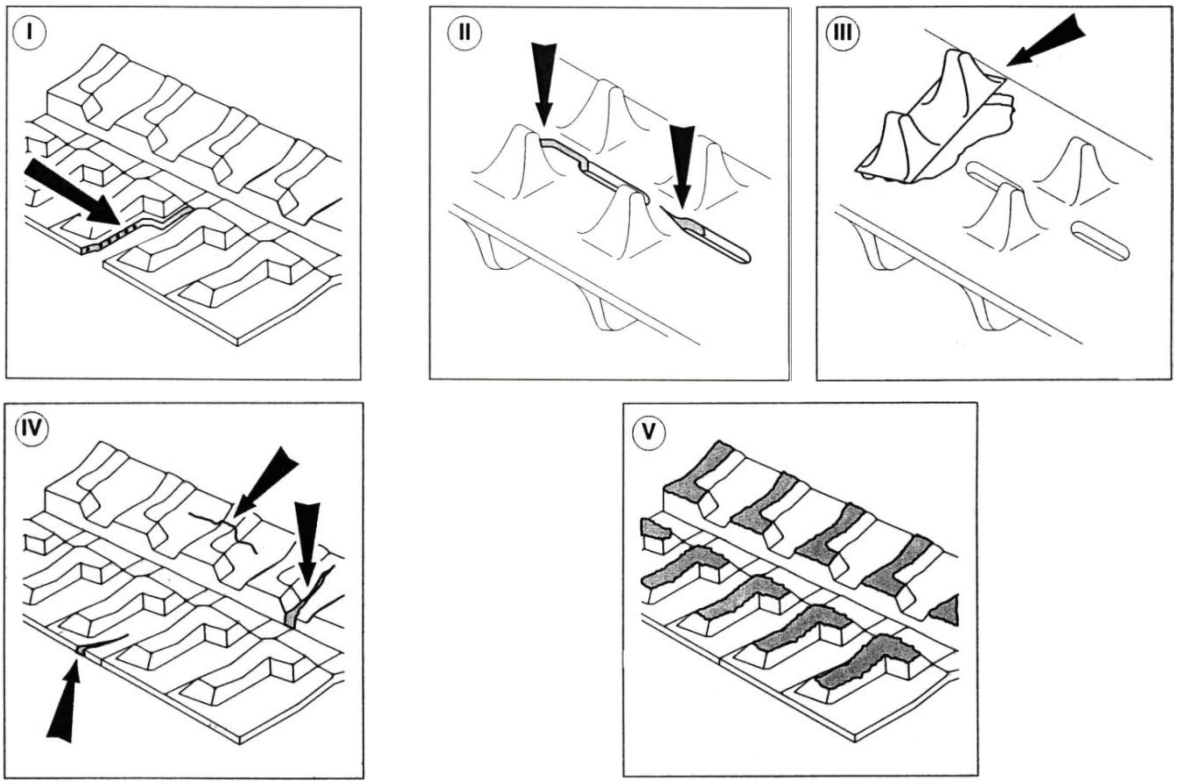
B- Steel rope

C- Steel core

D- Tooth insertion hole for towing wheel

E- Wheel side

⚠	**ATTENTION:** **If any of the following damage is found, contact an authorised workshop to replace the track.**



I) **Breakage of steel ropes**

Possible causes:

- excessive tension.

II) **Wear and breakage of metal cores**

Possible causes:

- excessive tension
- worn out towing wheel teeth
- intrusion of sand, stones, etc.

III) **Metal core separation**

Possible causes:

- excessive tension
- worn out towing wheel teeth
- Intrusion of sand, stones, etc.,

IV) **Crack formation**

If cracks are found on rubber surfaces, the track can still be used. However, it is recommended to check the extent of such cracks frequently as they may lead to exposure of the metal cores.

V) **Abrasions**

If severe abrasions are found on the tread, the track can still be used. However, care must be taken when moving on sloping or slippery surfaces as the track grip is no longer optimal.

⚠	**ATTENTION:** **in cases "II)" and "III)" the towing wheel must also be replaced.**

5.5.3 Combustion engine

For maintenance of the internal combustion engine, follow the instructions indicated in the engine manufacturer's manual.

5.6 Hydraulic plant

The hydraulic plant comprises various components that have to be maintained at different times.

5.6.1 Hydraulic cylinders

Before each use, check that there are no leaks in the following points: rod seal, fittings, valves and pipes. If there are leaks, do not use the machine and contact After-sales Services.

5.6.2 Levelling the work platform

⚠	**ATTENTION:** **whenever it is noticed that the enclosure is not horizontally level, lower the enclosure to the ground and descend from it.** Restore safety conditions (enclosure in a horizontal position), To do this, proceed as follows:
⚠	**DANGER:** **the presence of persons inside the enclosure during the operations is prohibited.**
⚠	**ATTENTION:** **this maintenance must be performed by a qualified technician (M).**

1. remove the electro valve guard on the turret
2. Rotate the selector switch to the "Emergency controls" position (***pos. 1 fig. 4.6.1***)
3. press the valve knob that controls the lifting of the telescopic boom and simultaneously operate the proportional speed control lever (P) until the enclosure is raised by about half a metre;

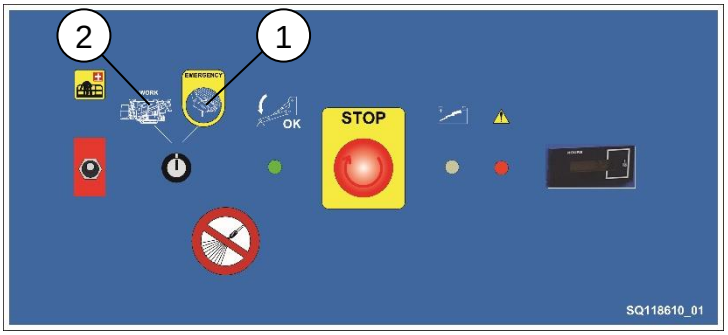


fig. 4.6.1

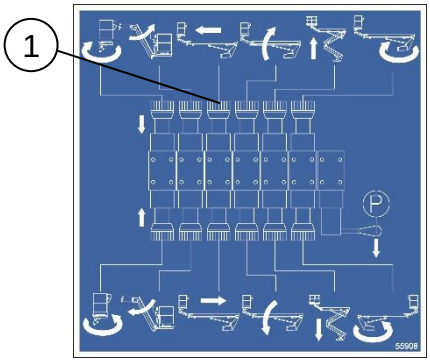
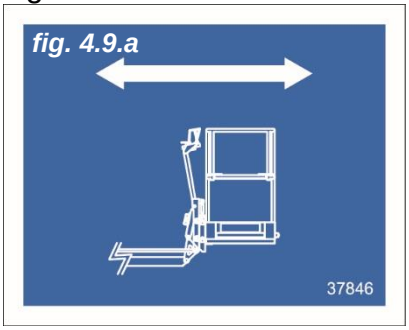
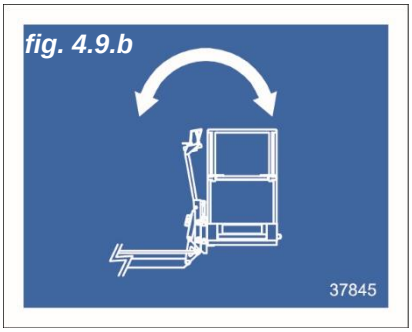


fig. 4.6.2

4. open the block padlock on the diverter using the key issued to the safety engineer, remove the "silver" lever in the turret by loosening the black lock knob and install it on the second diverter.
5. rotate by 90° to the levelling position the two-position deviators located on the rear of the telescopic cylinder (***fig.4.9.b***)
6. press the valve knob that controls the telescopic boom extension (***pos. 1 fig. 4.6.2***) and at the same time operating the adjustment lever (P) it is possible to level the enclosure (perform a complete downward and upward stroke of the enclosure before aligning it) (***fig. 4.9.b***)

7. After completing these operations, place both of the two-position deviator valves, located at the base of the extension boom, back into their original position (extension position, indicated by the label ***(fig. 4.9.a***). Remove the lever from the deviator valves, put it back it in the turret and secure it using the black locking knob).
8. mount the padlock in the lock position, close it and give the key back to the safety manager.





9. check that the extension works correctly by pressing the knob that controls the extension output and operates the potentiometric lever
10. retract the extension boom to its stand-by position;

	DANGER: **during enclosure levelling operations, it is prohibited to use telescopic swing.**

5.6.3 Hydraulic plant pipes

Before each use, visually check the fittings, valves and pipes for leaks. Check that the rubber hoses are integral and without cracks. If there are leaks, do not use the machine and contact the After-sales Services.

5.6.4 Pressure check and valve adjustment

Check the maximum pressure valve: after correctly stabilising the platform, retract the jib boom by pressing the relevant button on the emergency control panel and check that the pressure indicated on the pressure gauge corresponds with what indicated in the technical data table (***chap. 2.4***). If the pressure is different, contact After-sales Services.

	ATTENTION: **all valve calibration should be carried out on the manufacturer's premises or at Authorised Workshops.**

5.6.5 Hydraulic pumps and engines

Before each use, visually check the fittings, flanges and pipes for leaks. Hydraulic pumps and engines do not require additional maintenance instructions. If there are any leaks, contact After-sales Services.

5.6.6 Hydraulic oil

Before each use, check the level of the hydraulic oil on the tank indicator. The level should be at the centre of the indicator. If necessary, remove the filler cap and top it up (***fig.6.6.6)***.

ATTENTION:
the following operations should be performed with the platform in its stand-by position (stabilisers and booms fully retracted).

Replace the hydraulic oil every 1000 hours, or at least one a year. At the same time, replace the hydraulic oil filters. Use a suitable container of sufficient capacity and remove the outlet plug under the tank to empty the oil. Close the drain plug and refill the tank.

Tank capacity: **32 litres**

Specifications: **AGIP OSO 32**

Viscosity at 40°C = 30 mm2/s

Viscosity at 100°C = 5.3 mm2/s

Viscosity index = 106

Flow point = -30°C

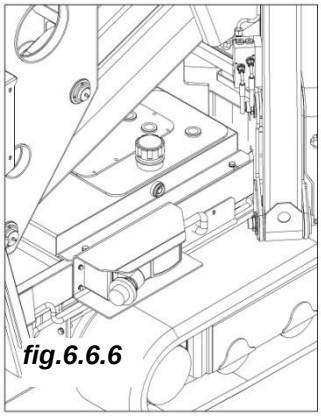


fig.6.6.6

ATTENTION:
do not disperse hydraulic oil into the environment during replacement. Dispose of the oil in accordance with current legislation.

5.6.7 Track gearbox oil level check

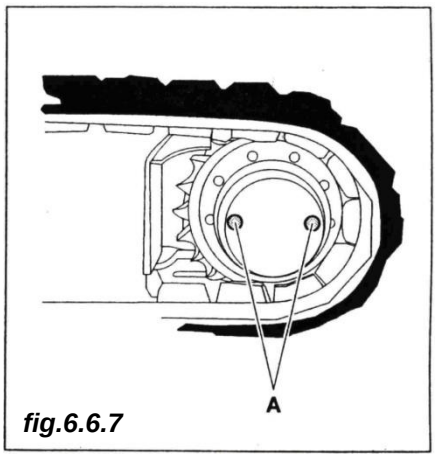


fig.6.6.7

Secure the machine with the caps aligned with the horizontal axis.
Remove the caps "A" and check that the oil level is aligned with the same.
If necessary, top up from one of the two caps using the other as a level.

5.6.8 Hydraulic oil filter

There is a filter near the tank. Check the clogging indicator each time the machine is used. This check must be carried out in the operational phase. If the indicator is in the red area, replace the filter. Replace the filter after the first 100 hours and then every three months or 500 hours. Observe the checks and recommended intervals between replacements, as clogging of the filter affects the working order of the machine and can damage hydraulic components.

ATTENTION:
If parts of the hydraulic circuit have to be replaced due to serious failures, such as jamming of the pumps, hydraulic engines or cylinders, causing considerable emission of impurities, the filter must be replaced again in accordance with the above instructions.

Replace the hydraulic oil filter as follows:

1. unscrew the filter using a wrench if required (***pos. 1 fig. 6.6.9***)
2. remove the cartridge from the inside and insert the new one, taking care to lubricate the sealing gasket with grease
3. top up the hydraulic oil reservoir, checking the level on the indicator (***pos. 1 fig.6.6.8***).

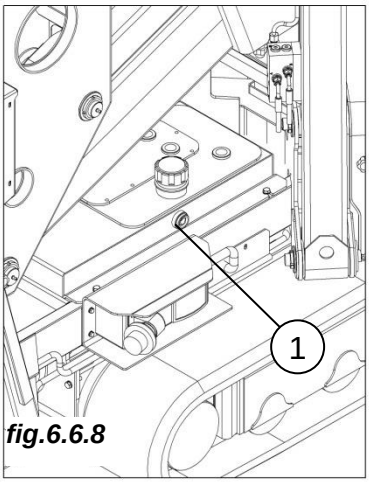


fig.6.6.8

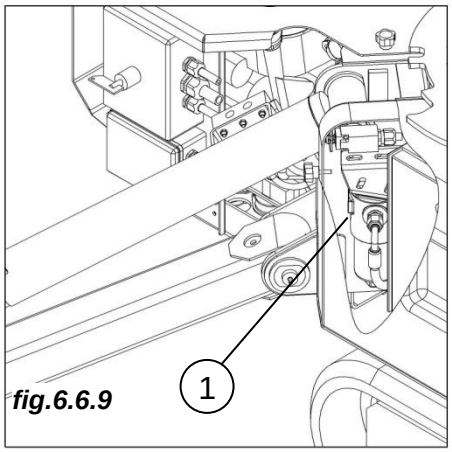


fig.6.6.9

ATTENTION:
do not disperse hydraulic oil in the environment during replacement. Dispose of the filter in accordance with the provisions of the law.

5.7 Washing

The frequency of cleaning depends upon use of the machine. The machine can be washed using a high-pressure water jetting machine, taking the following precautions:

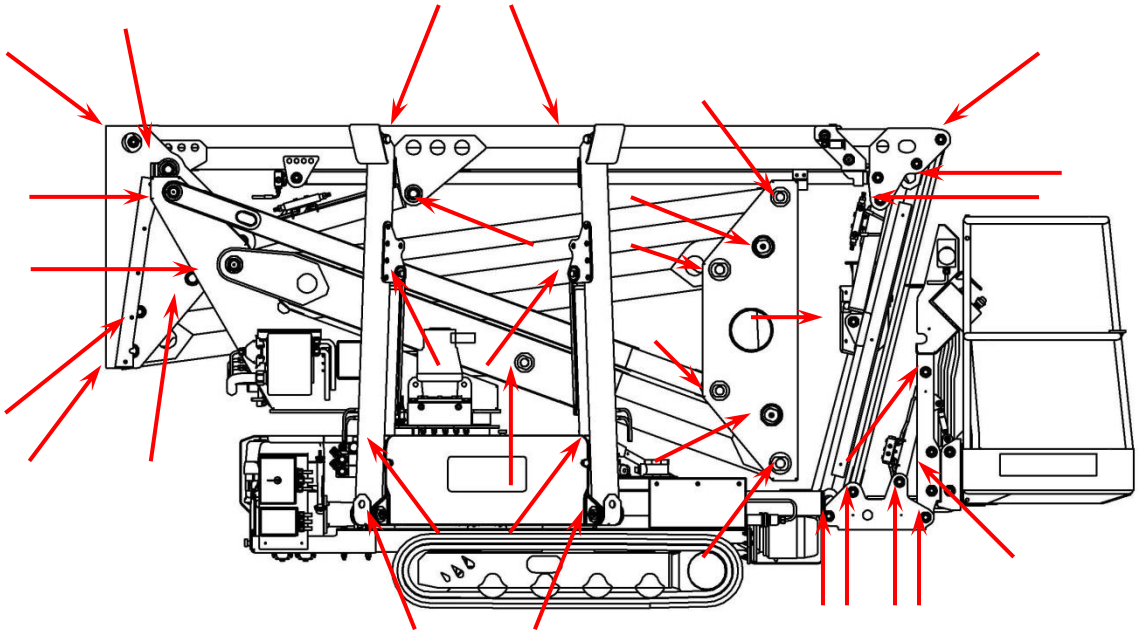
- do not exceed the temperature of 70°
- use neutral detergents
- do not use solvents or fuels
- keep at a safe distance from the jet pipe
- do not aim the jet pipe at control panels and electrical appliances
- do not clean in the vicinity of live appliances
- wear suitable personal protective equipment
- only clean the machine in areas specifically set aside for the purpose and dispose of materials in accordance with the provisions of the law.

	ATTENTION: **after each wash cycle, you must grease and lubricate all the parts indicated in the "Lubrication and greasing" paragraph.**

5.8 Lubrication and greasing

5.8.1 Greasing the pins

Every 50 hours, grease the machine's pins at the points specified in the figure by pumping a small amount of grease from a manual pump. Lubricant: **AGIP F1 GR MU2** pumpable grease or equivalent.



	ATTENTION: **do not grease the couple of greasing nipples fitted on the fifth wheel.**

5.8.2 Lubricating the telescopic boom elements

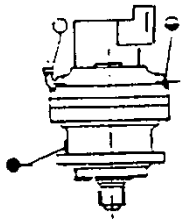
Lubricate every 50 hours of operation as follows: stabilise the machine and fully extend the telescopic boom. Check the state of lubrication of the extension component, if there are traces of dust or impurities, clean the component, remove the grease and use a brush to apply a new thin layer of Agip F1 GR MU2 grease mixed with 50% Agip OSO32 hydraulic oil.

	ATTENTION: **all lubrication and greasing operations must be carried out without any people on the work platform.**

5.8.3 Lubrication of the rotation gearbox

Every three months or every 500 hours check the oil level. If necessary, top up. If you notice that more than 10% of the lubricant volume requires topping up, it is advisable to check for oil leaks in the unit. After the first 100 hours of operation and then every 1000 hours or every year, change the oil in the rotation gearbox.

Use AGIP ROTRA MP SAE 80W/90 oil for ambient temperatures between -10° and +30° and AGIP ROTRA MP SAE 80W/140 oil for ambient temperatures between +20° and +45° (***fig. 6.5.8***).



These intervals may vary according to the actual operating conditions. During the oil change, it is recommended to wash the inside of the casing with a suitable liquid for the purpose and recommended by the lubricant manufacturer. To prevent sludge from settling, the oil must be changed when the gearbox is warm. Do not mix different types of oil together, regardless of whether they are of the same brand or not; the same applies to mineral oils with synthetic oils.

ATTENTION:
be careful not to disperse oil into the environment when changing it. Dispose of it in accordance with the provisions of the law.

5.9 Electrical system

5.9.1 Electrical circuit

The electrical circuit is made up of many components. Their working efficiency should be checked according to the operations they perform. Before each use, check the correct functioning of all the operational controls by carrying out a complete cycle. Also check that the emergency stop buttons work properly. Climb onto the work platform and repeat the test. Check the condition of the power cable of the ground control panel underneath the turret.

ATTENTION:
nobody is allowed on the work platform during the test.

5.9.2 Stabiliser limit switches and interlock switches

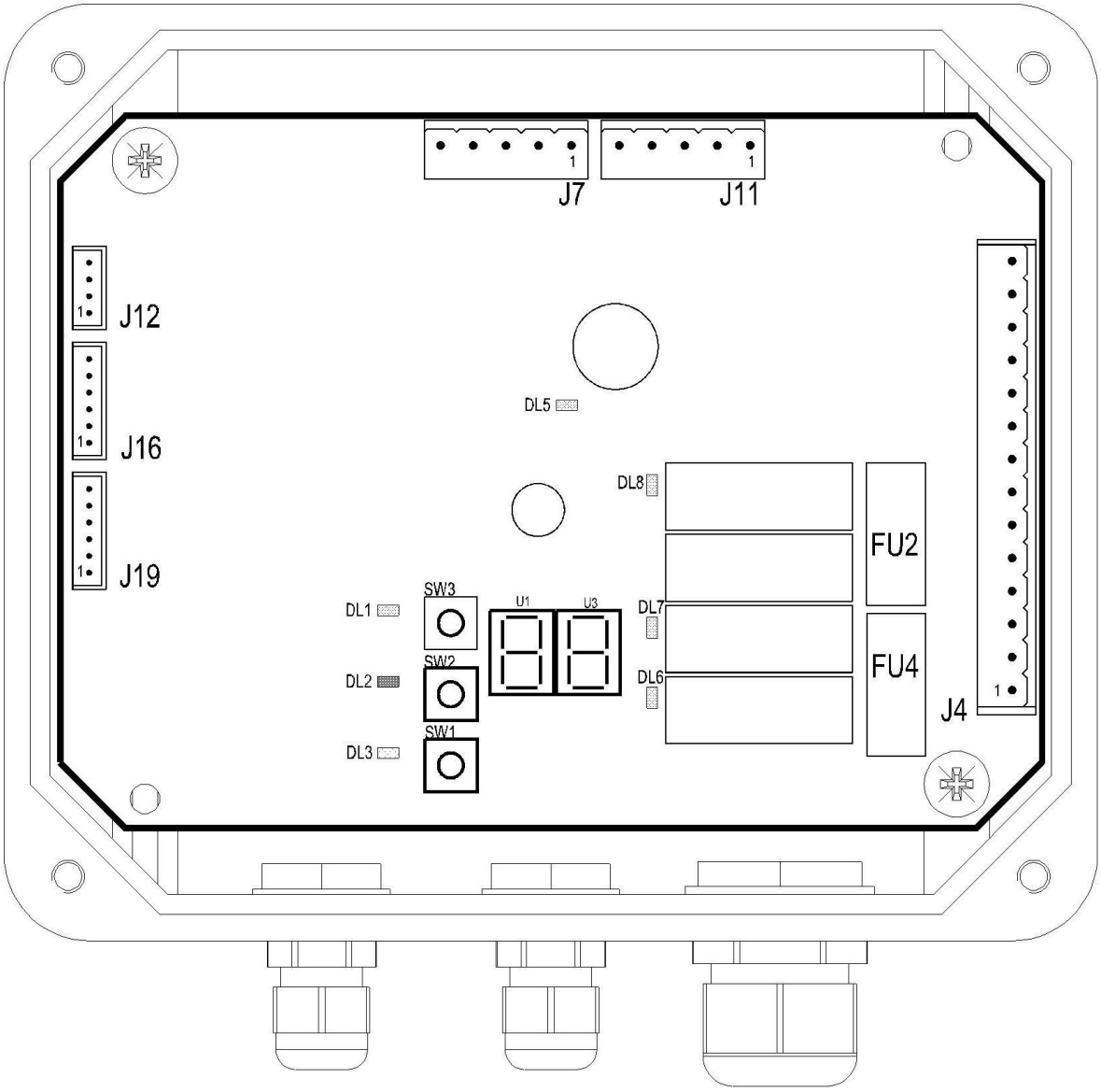
Before each use, check that all the stabiliser/boom interlock limit switches are working properly. To make sure that they are working correctly, stabilise the machine and check the operation of the boom. Lower the boom, retract the stabilisers one at a time and check that it is not possible to operate the boom.

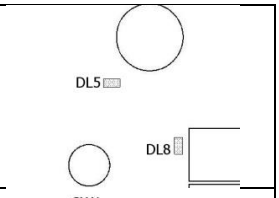
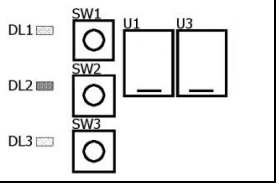
5.9.3 Work platform overload device

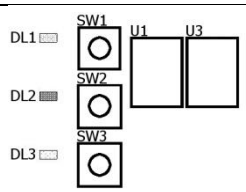
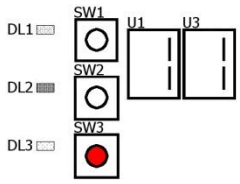
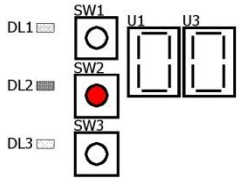
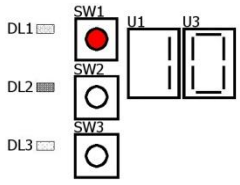
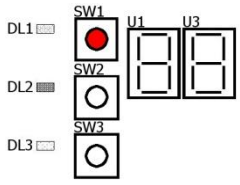
You must make sure that this device is working correctly before every use. Stabilise the vehicle before carrying out the test. Position the key selector switch to select the controls in the work platform. Add a load in order to slightly exceed the maximum carrying capacity. The alarm is triggered, the LED lights up on the control panel, an acoustic warning signal is heard, the power on LED on the control panel switches-off and the machine goes in to block mode. The machine should function correctly when the overload has been removed.

5.9.4 Load cell calibration procedure

The user calibration procedure allows an offset (tare) to be acquired in order to reset the load reading to zero. This is only possible if the current load value reading is between -10% and +10% of the maximum load around the original zero.
It is always possible to carry out this calibration procedure. Simply follow the procedure below:

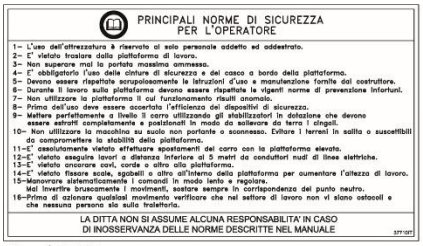


• Turn power on to the board: the green LED (DL5) will light up and the displays (U1-U3) will light up completely for a few moments.	
• Two "_" will appear on the displays (U1-U3) during the first 10 seconds after they are switched on.	

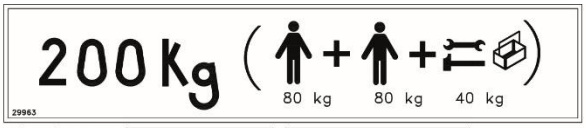
• Wait 10 seconds until the displays switch off.	
• To access the calibration procedure, keep the “SW3” button pressed for at least two seconds. Two “1” digits appear on the display.	
• Press the SW2 button within 2 seconds to enter the calibration procedure; two 0s will appear intermittently on the two displays. This message means: “waiting for the zero position to be recalibrated”	
• Place the system into the stowed position (enclosure empty) and press the button “SW1” to acquire the zero value.	
• If the load is within ±10% of the zero obtained by the initial calibration, “1” and “0” will appear intermittently on the displays, confirming that the zero has been calibrated.	
• If the load is in excess of ±10% of the zero obtained by the initial calibration, two “8” digits will appear intermittently on the displays and the **new zero calibration will be rejected**.	
• Press button DW3 to exit from the procedure. Switch off the board and make sure that the device is working correctly.	

	**ATTENTION:** **in the event of any malfunctioning of the device or of the calibration procedure, please contact the Service Centre**

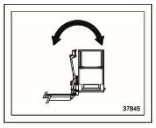
5.10 Adhesives



1) cod.37710

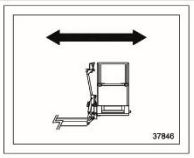


2) cod.29963



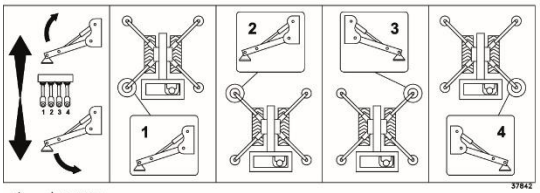
3) cod.37845

5) cod.29910

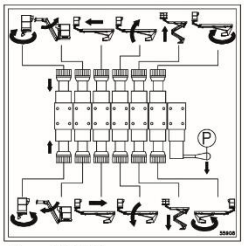


6) cod.37846

10) cod.78268



4) cod.37842



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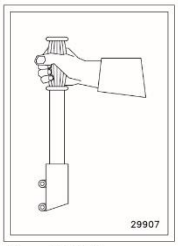
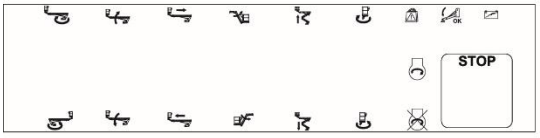


8) cod.29907

11) cod.78267



9) cod.55948

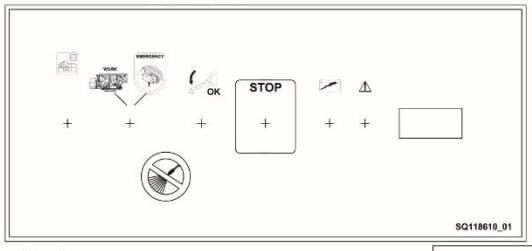
13) cod.29920

14) cod.24406

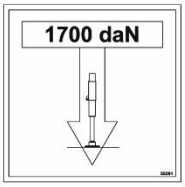
15) cod.24369

16) cod.29912

12) cod.59701



18) cod.118610

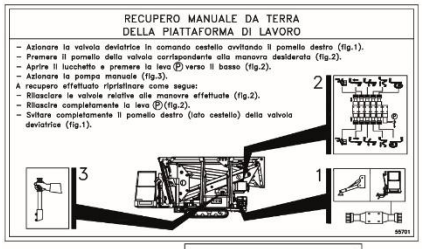


19) cod.55591

20) cod.78266

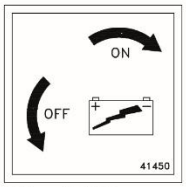
17) cod.29905

23) cod.29441



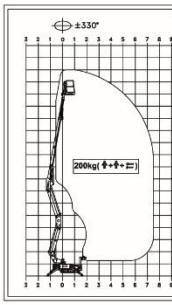
21) cod.55701

22) cod.29911

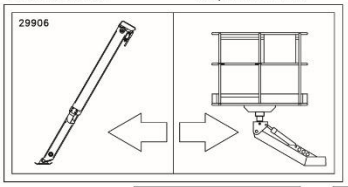


27) cod.41450

30) cod.26981



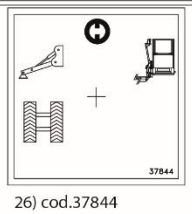
24) cod.56618



28) cod.29906

31) cod.56553

25) cod.29916

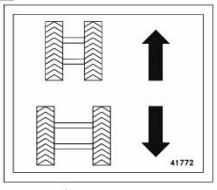


26) cod.37844

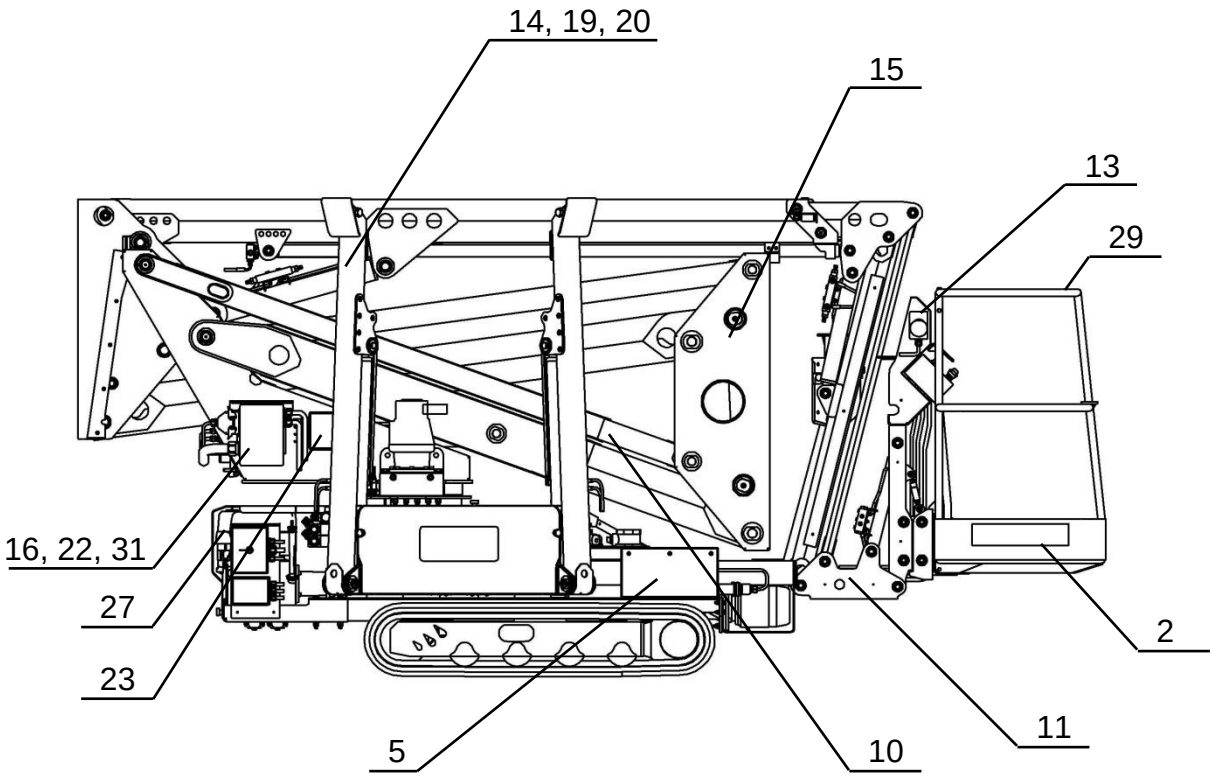
29) cod.59989

32) cod.59990

33) cod.85655



34) cod.41772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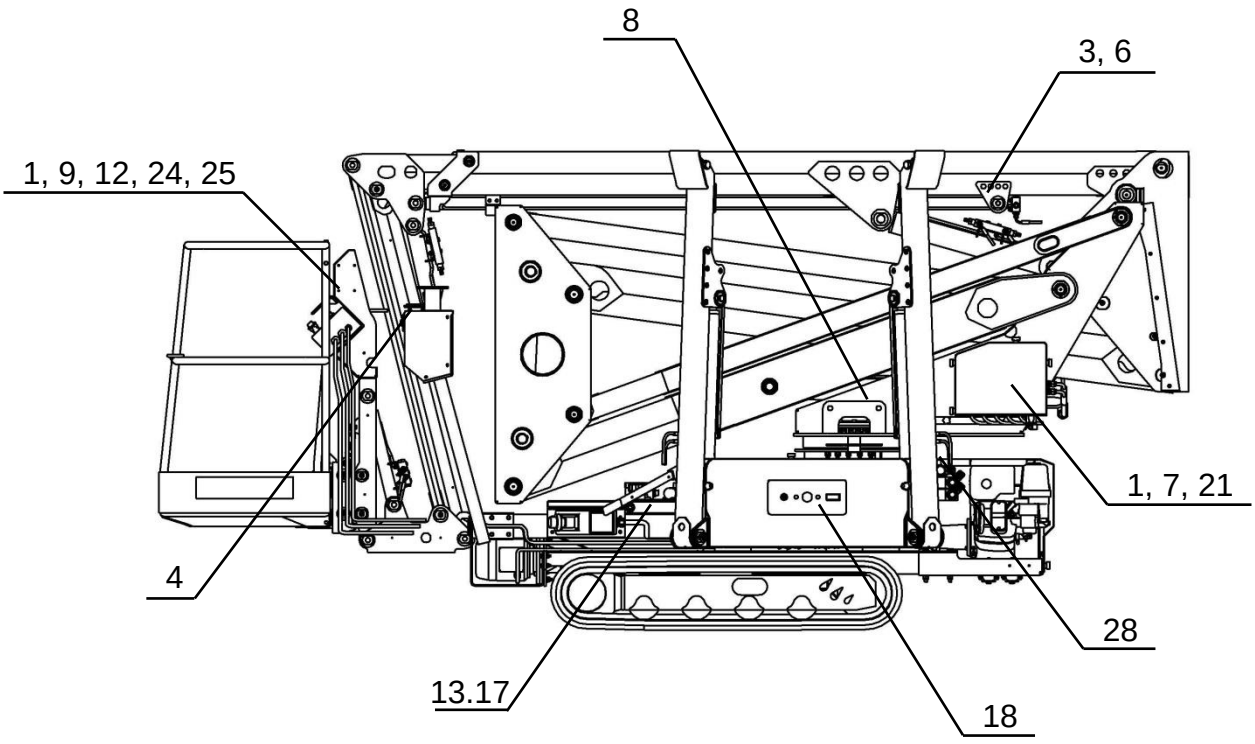

8
3, 6
1, 9, 12, 24, 25
1, 7, 21
4
28
13.17
18

5.11 Troubleshooting

DIAGNOSIS

N.B. Solutions marked with (*) should only be carried out by Authorised Workshops.

Remarks	Cause	Remedy
Noisy pump	◊ Viscosity of hydraulic oil is too high. ◊ Level of hydraulic oil in the tank is too low. ◊ Suction pipe is clogged or crushed. ◊ Air entering via the suction flange.	☞ Use the recommended hydraulic oil. ☞ Top up with the same type of hydraulic oil. ☞ (*) Check for damage to the pipe. ☞ (*) Check and replace the seals.
Some hydraulic components of the machine are working slowly.	◊ Maximum pressure valve on the distributor of the section of the circuit that is malfunctioning is incorrectly adjusted or the shutter of which is open because of dirt. ◊ Worn pump.	☞ (*) Recalibrate the valve. Remove and clean it, then reinstall with new metal seals. Replace the valve ☞ (*) Replace the pump
Irregular hydraulic cylinder operations.	◊ Oil leak between the two chambers in the cylinder and the consequent inability to support loads ◊ Loose piston/rod coupling. ◊ Maximum pressure valve on the distributor jammed or worn	☞ (*) Replace the jack seals. ☞ Check the piston/rod coupling. ☞ (*) Remove and clean the max pressure or replace it.
The traction does not work	◊ No voltage. ◊ The coil does not work. ◊ The traction gearbox does not work.	☞ (*) Check the electrical system. ☞ (*) Replace the coil. ☞ Move the platform as indicated in chap. 4.4.5
Lights do not work	◊ Burnt out bulb ◊ Broken electrical connection ◊ Burnt out fuse	☞ Replace the bulb. ☞ (*) Reset the connection ☞ Replace the fuse.
Excessive heating of the hydraulic oil.	◊ Level of hydraulic oil in the tank is too low.	☞ Top up with the same type of hydraulic oil.
Solenoid valves do not work	◊ No power ◊ Cursor does not move ◊ The coil does not work	☞ (*) Check the electrical system ☞ (*) Replacing electrovalves ☞ (*) Replacing the coil
No power	◊ Faulty fuse	☞ Replace the fuse
Solenoid valve blocked	◊ Dirt inside ◊ Defective solenoid valve	☞ Use the solenoid valve cursor to try to unblock it and contact an authorised CTE service centre ☞ Replace solenoid valve

The levers do not control any movement	◊ Worn cylinder seals ◊ Emergency stop button pressed	☞ Replace seals (*) ☞ Rotate the button until it reaches normal position
Stabiliser cylinder seal failure	◊ Dirty lock valves	☞ Clean or replace the valves (*)
Creaking of joints and bushings	◊ Lack of lubrication	☞ Grease the joints or bushings
The machine does not rotate correctly	◊ Vehicle inclined beyond the maximum permissible flatness ◊ Valves on the distributor are poorly adjusted or dirty. ◊ Malfunctioning slewing gear	☞ Stabilise the vehicle within the permissible tolerance range ☞ Calibrate or clean the valves (*) ☞ Replace the slewing gear (*)
The machine lifts but cannot support the load	◊ Worn cylinder seals ◊ Valves incorrectly adjusted ◊ Jack valves dirty or worn	☞ Replace seals (*) ☞ Calibrate the valves (*) ☞ Replace the valves (*)
The machine does not lift the work platform	◊ Damaged pump ◊ Valves incorrectly adjusted ◊ Worn cylinder seals	☞ Replace the pump (*) ☞ Calibrate the valves (*) ☞ Replace seals (*)
Vibrations during extension of telescopic elements	◊ Lack of lubrication ◊ Worn sliding blocks ◊ Incorrectly adjusted extension cylinder valve	☞ Grease the telescopic elements ☞ Replace the sliding blocks (*) ☞ Calibrate the valve (*)
Vibrations during all movements when oil is hot	◊ Lack of hydraulic oil in the tank ◊ There is air inside the hydraulic system	☞ Add hydraulic oil ☞ Repeatedly move the cylinders to the end of their stroke in both directions
Vibration of cylinders, telescopic elements, which do not move smoothly during the first manoeuvres	◊ Hydraulic oil temperature too low	☞ Operate at idle for a few minutes in order to heat up the hydraulic oil

!	**NOTE:** **for information on anything not described in this table, please contact the Service Centre.**

ALARMS LIST

The alarms are indicated by visual "indicator" signals and/or buzzer signals in:

- Work platform control panel "Indicator + Buzzer"
  - For load limiter interventions;
- Ground panel "Indicator" for the following anomalies

The alarm code corresponds to the number of flashes of the red indicator light.

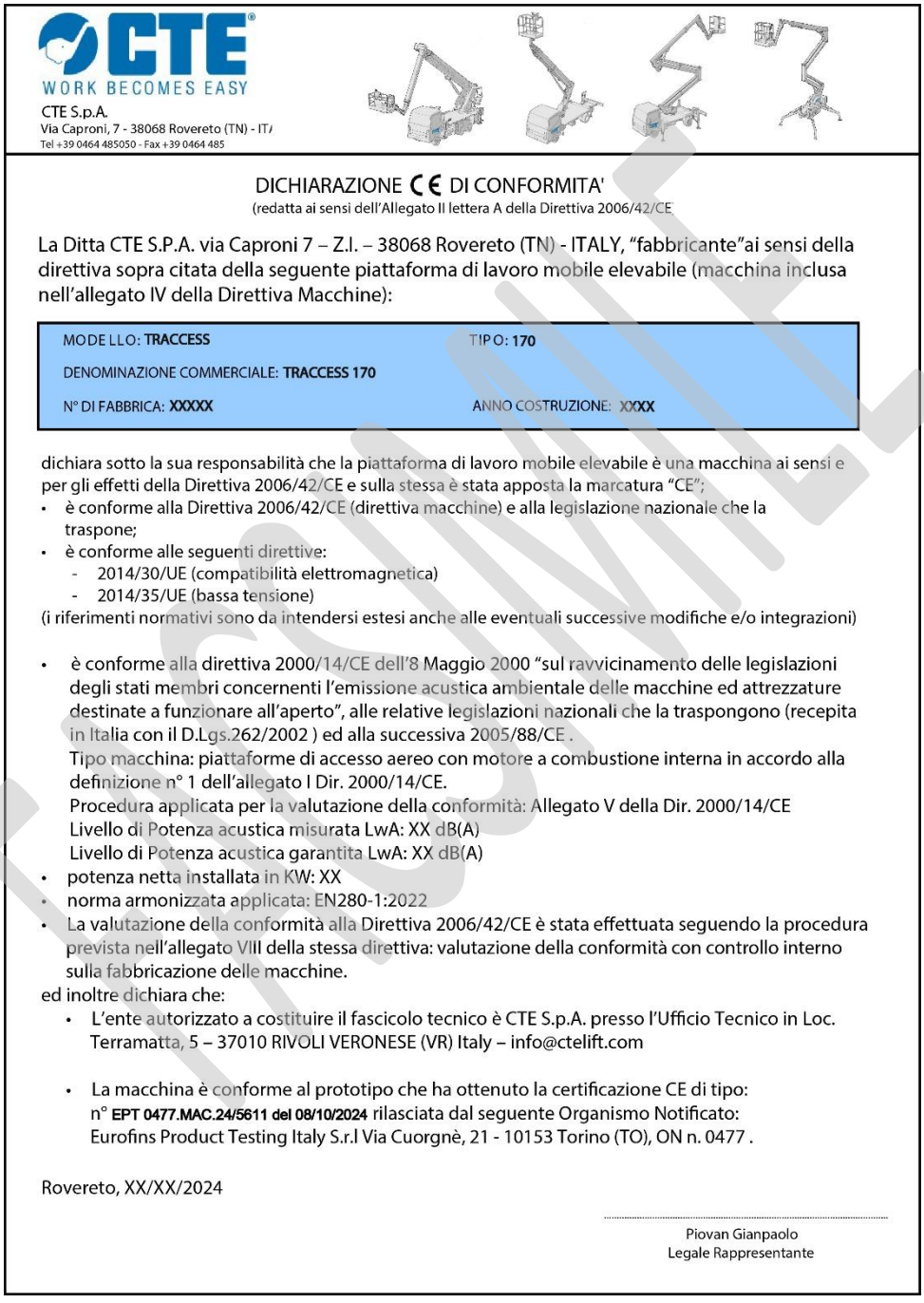
Alarm code	Alarm Description	Possible remedy
1	◊ Articulated boom blocked at the start	☞ Release the command for a few seconds, then try again
2	◊ Command already enabled at startup	
3	◊ Closed boom detection electronic device problem (MCS5)	
4	◊ Closed boom detection electronic device problem (MCS6)	
5	◊ Valve EVP29 blocked (pressure switch alarm)	☞ Check that the emergency control of the valve is not still enabled
6	◊ Bypass circuit failure	☞ Turn the control station selector to the "Platform/traction" position, press the emergency mushroom button, wait a couple of seconds and then reset the emergency mushroom button,
7	◊ Work platform overload	☞ Unload the work platform
8	◊ Work platform locking pin missing	☞ Check that the pin is present
9	◊ Work platform joystick control fault	☞ Contact CTE

!	**NOTE:** **If the remedy does not work, contact technical assistance services.**

5.12 Scrapping and disposal

The demolition and scrapping of the machine must only be carried out by specialised and qualified companies who will recover the oil, decommission and dispose of the different parts of the machine according to the disposal regulations in force in the country of interest. The manufacturer can also be contacted for scrapping and disposal issues Notify the manufacturer, and any relative bodies, if the machine is scrapped and disposed of, according to the regulations envisaged by different countries.

6 FACSIMILE OF EC DECLARATION OF CONFORMITY



CTE WORK BECOMES EASY

CTE S.p.A.
Via Caproni, 7 - 38068 Rovereto (TN) - ITA
Tel +39 0464 485050 - Fax +39 0464 485

DICHIARAZIONE CE DI CONFORMITA'
(redatta ai sensi dell'Allegato II lettera A della Direttiva 2006/42/CE

La Ditta CTE S.P.A. via Caproni 7 – Z.I. – 38068 Rovereto (TN) - ITALY, "fabbricante"ai sensi della direttiva sopra citata della seguente piattaforma di lavoro mobile elevabile (macchina inclusa nell'allegato IV della Direttiva Macchine):

MODELLO: **TRACCESS**	TIPO: **170**
DENOMINAZIONE COMMERCIALE: **TRACCESS 170**	
N° DI FABBRICA: **XXXXX**	ANNO COSTRUZIONE: **XXXX**

dichiara sotto la sua responsabilità che la piattaforma di lavoro mobile elevabile è una macchina ai sensi e per gli effetti della Direttiva 2006/42/CE e sulla stessa è stata apposta la marcatura "CE";

- è conforme alla Direttiva 2006/42/CE (direttiva macchine) e alla legislazione nazionale che la traspone;
- è conforme alle seguenti direttive:
  - 2014/30/UE (compatibilità elettromagnetica)
  - 2014/35/UE (bassa tensione)

(i riferimenti normativi sono da intendersi estesi anche alle eventuali successive modifiche e/o integrazioni)

- è conforme alla direttiva 2000/14/CE dell'8 Maggio 2000 "sul ravvicinamento delle legislazioni degli stati membri concernenti l'emissione acustica ambientale delle macchine ed attrezzature destinate a funzionare all'aperto", alle relative legislazioni nazionali che la traspongono (recepita in Italia con il D.Lgs.262/2002) ed alla successiva 2005/88/CE .
  Tipo macchina: piattaforme di accesso aereo con motore a combustione interna in accordo alla definizione n° 1 dell'allegato I Dir. 2000/14/CE.
  Procedura applicata per la valutazione della conformità: Allegato V della Dir. 2000/14/CE
  Livello di Potenza acustica misurata LwA: XX dB(A)
  Livello di Potenza acustica garantita LwA: XX dB(A)
- potenza netta installata in KW: XX
- norma armonizzata applicata: EN280-1:2022
- La valutazione della conformità alla Direttiva 2006/42/CE è stata effettuata seguendo la procedura prevista nell'allegato VIII della stessa direttiva: valutazione della conformità con controllo interno sulla fabbricazione delle macchine.

ed inoltre dichiara che:

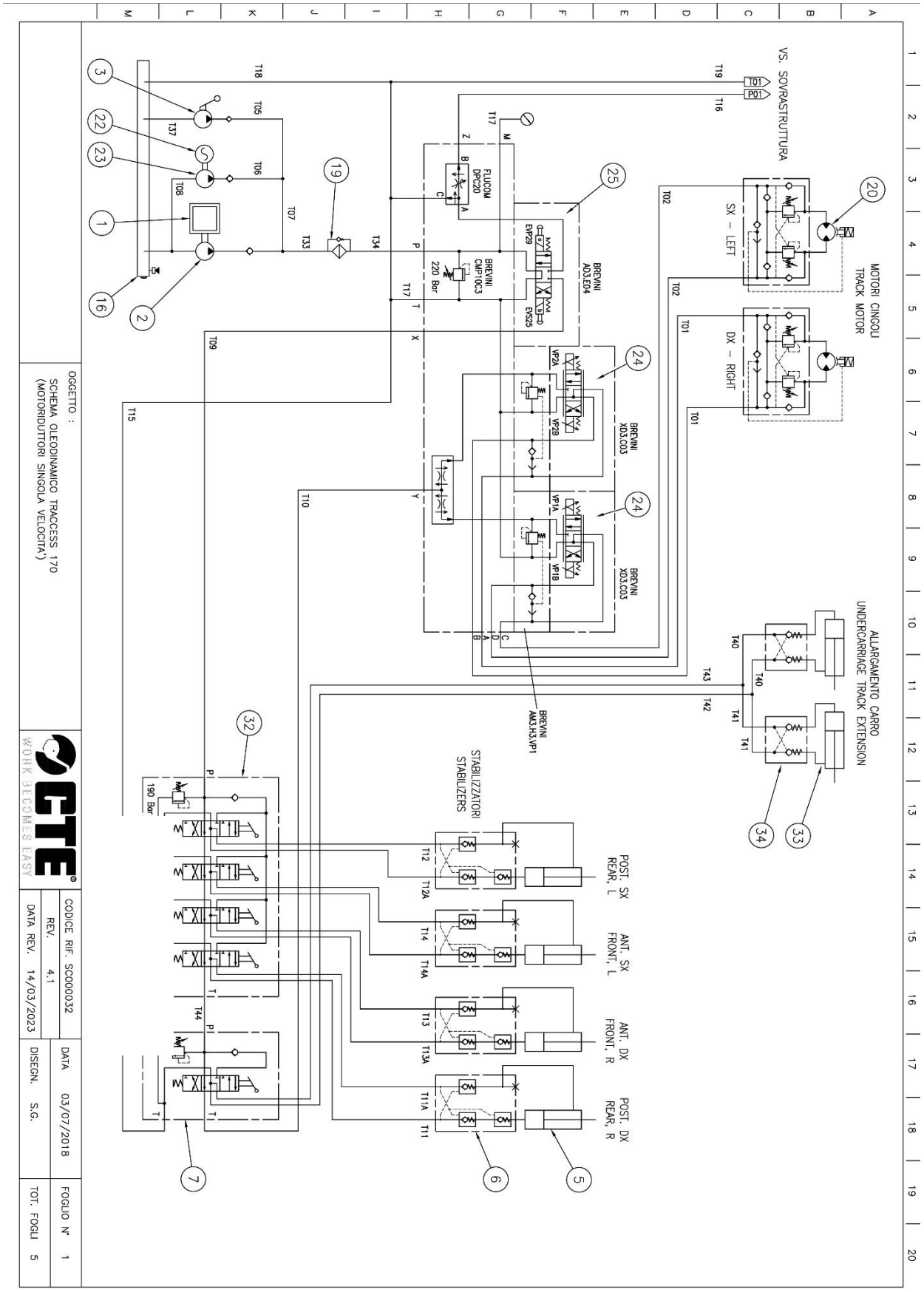
- L'ente autorizzato a costituire il fascicolo tecnico è CTE S.p.A. presso l'Ufficio Tecnico in Loc. Terramatta, 5 – 37010 RIVOLI VERONESE (VR) Italy – info@ctelift.com

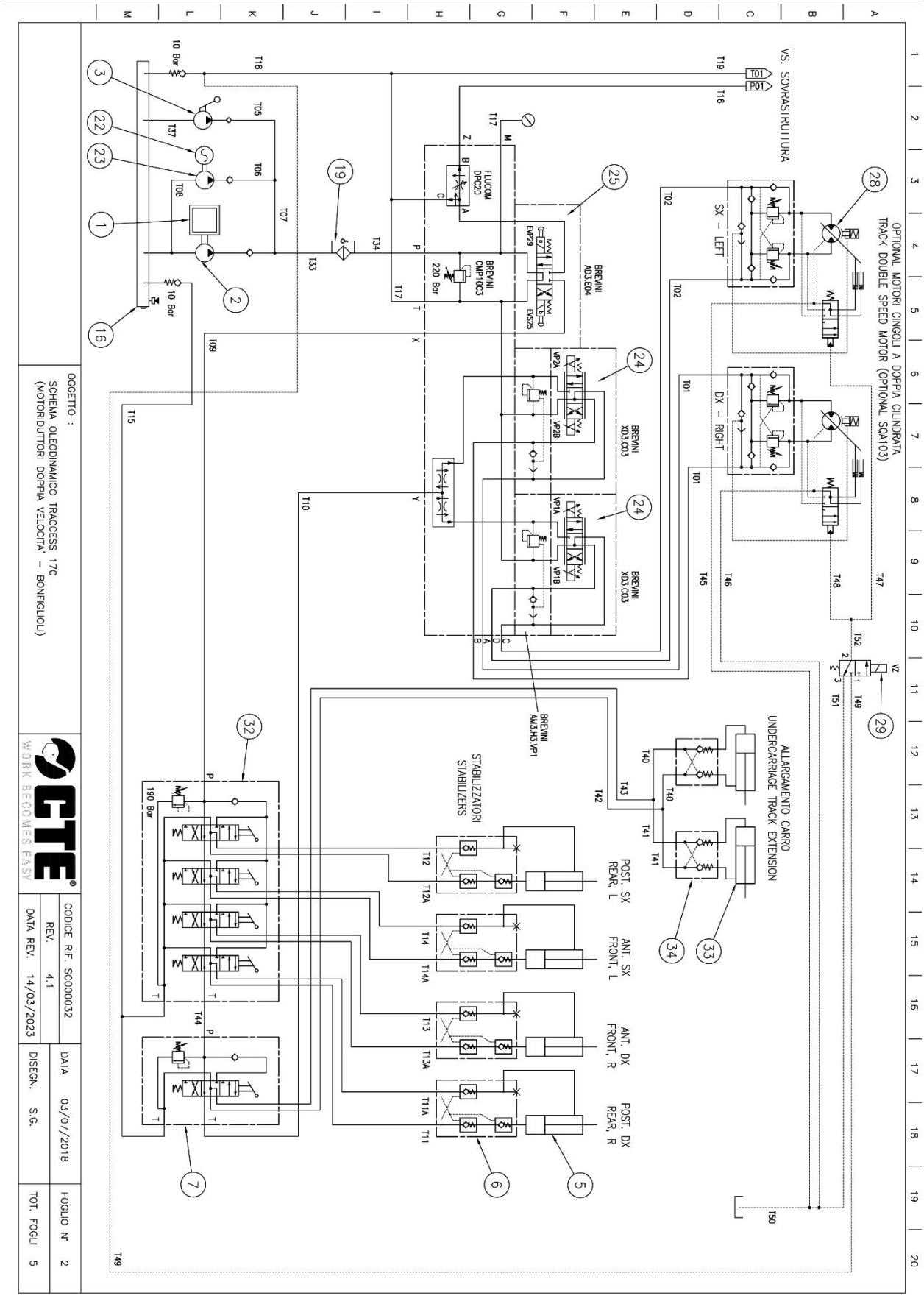
- La macchina è conforme al prototipo che ha ottenuto la certificazione CE di tipo: n° **EPT 0477.MAC.24/5611 del 08/10/2024** rilasciata dal seguente Organismo Notificato: Eurofins Product Testing Italy S.r.l Via Cuorgnè, 21 - 10153 Torino (TO), ON n. 0477 .

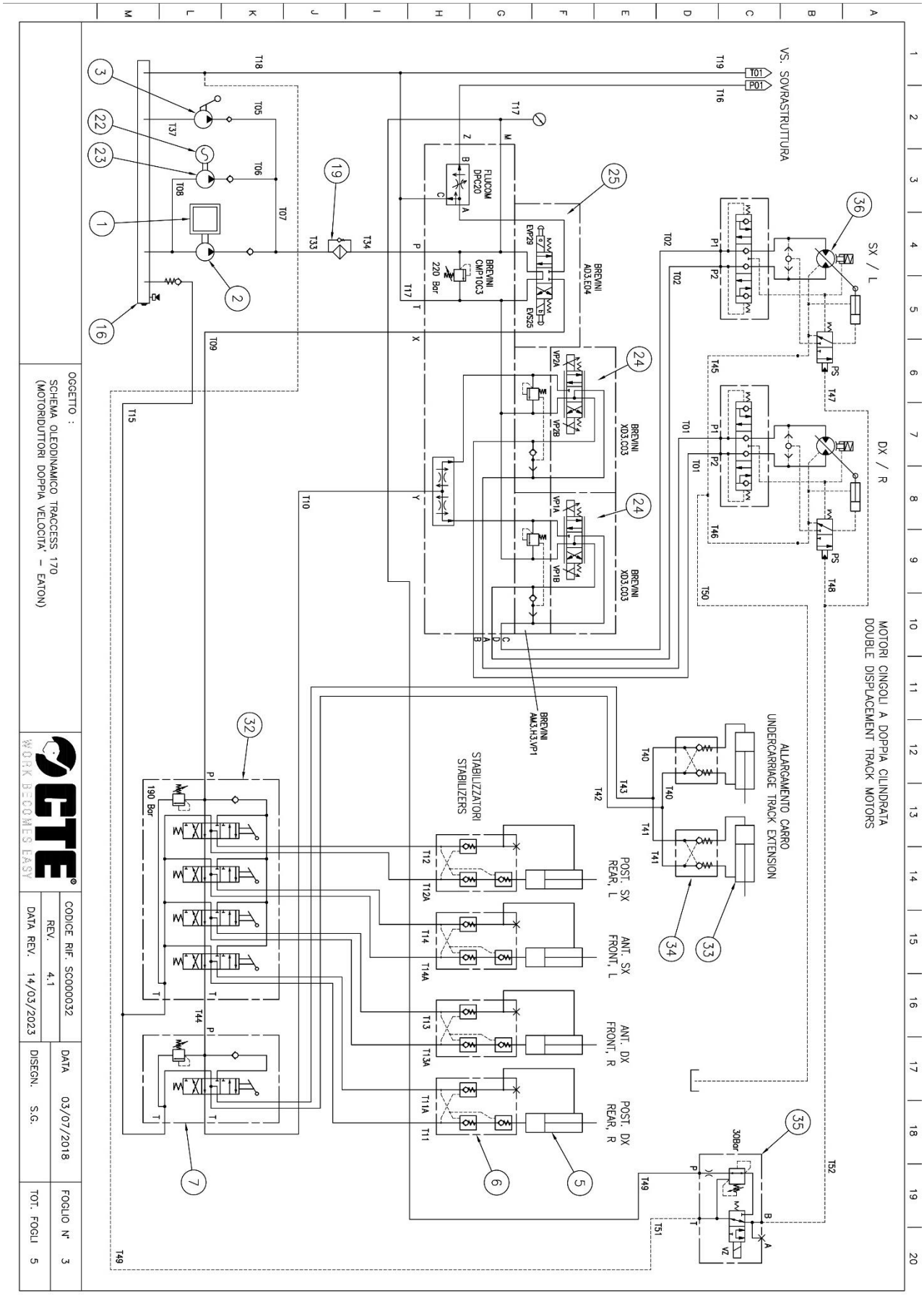
Rovereto, XX/XX/2024

Piovan Gianpaolo
Legale Rappresentante

7 HYDRAULIC SYSTEM DIAGRAM




OPTIONAL MOTORI CINGOLI A DOPPIA CILINDRATA
TRACK DOUBLE SPEED MOTOR (OPTIONAL SQA103)
VS. SOVRASTRUTTURA
SX - LEFT
DX - RIGHT
ALLARGAMENTO CARRO
UNDERCARRIAGE TRACK EXTENSION
STABILIZZATORI
STABILIZERS
POST. SX REAR, L
ANT. SX FRONT, L
ANT. DX FRONT, R
POST. DX REAR, R
FLUCOM DPC20
BREVINI CMP.10C3
BREVINI EWP29
BREVINI AD3.E04
BREVINI XD3.C03
BREVINI AM3.H3.VP1
10 Bar
220 Bar
190 Bar
OGGETTO :
SCHEMA OLEODINAMICO TRACCESS 170
(MOTORIDUTTORI DOPPIA VELOCITA' - BONFIGLIOLI)
CODICE RIF. SC0000032
REV. 4.1
DATA REV. 14/03/2023
DATA 03/07/2018
DISEGN. S.G.
FOGLIO N° 2
TOT. FOGLI 5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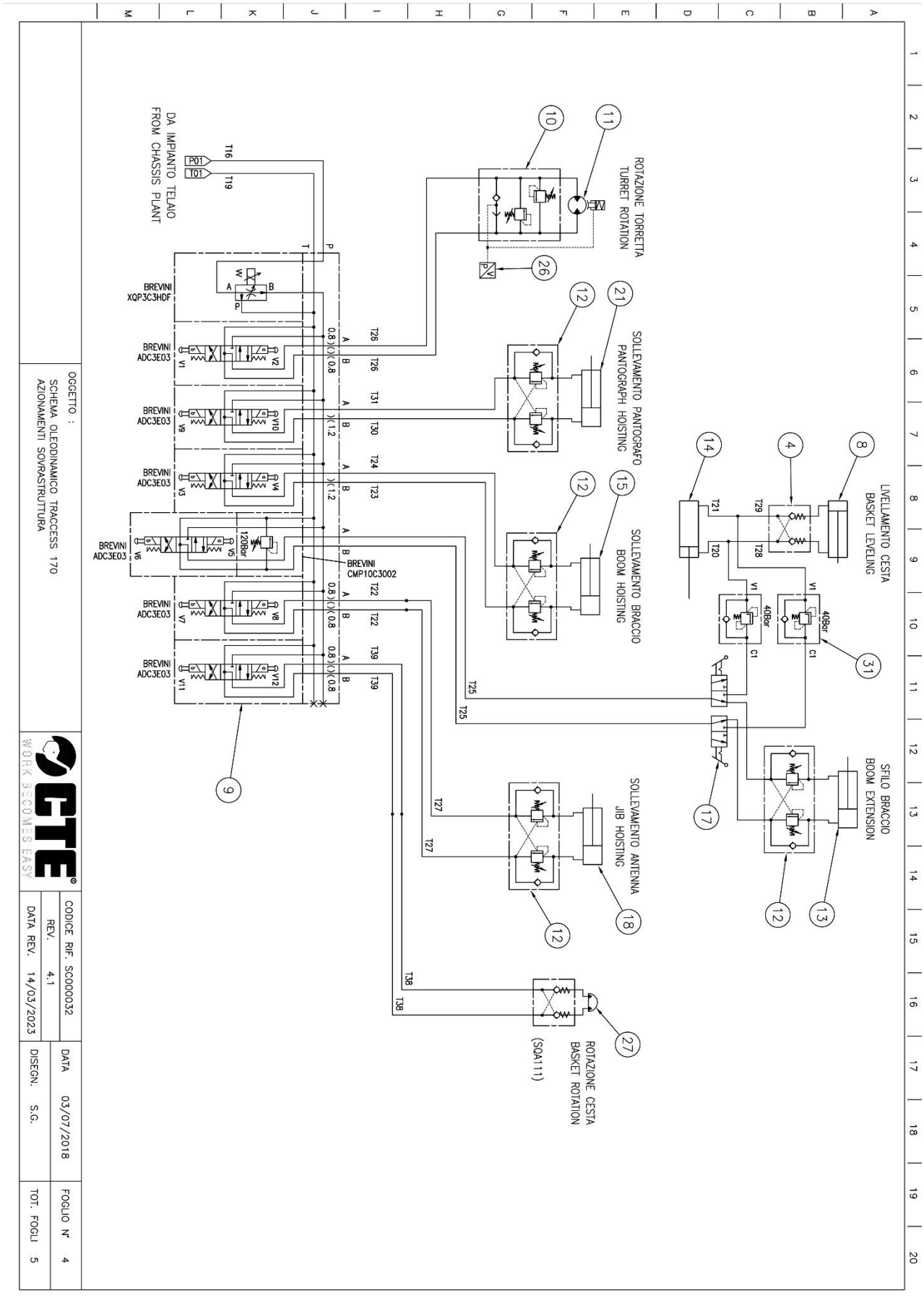
(MOTORIDUTTORI DOPPIA VELOCITA' - EATON)
CODICE RIF. SC0000032
REV. 4.1
DATA REV. 14/03/2023
DISEGN. S.G.
DATA 03/07/2018
FOGLIO N° 3
TOT. FOGLI 5
VS. SOVRASTRUTTURA
SX / L
DX / R
MOTORI CINGOLI A DOPPIA CILINDRATA
DOUBLE DISPLACEMENT TRACK MOTORS
ALLARGAMENTO CARRO
UNDERCARRIAGE TRACK EXTENSION
STABILIZZATORI
STABILIZERS
POST. SX REAR, L
ANT. SX FRONT, L
ANT. DX FRONT, R
POST. DX REAR, R
FLUCOM DPC20
BREVINI CMP10C3
220 Bar
BREVINI AD3.E04
BREVINI XD3.C03
BREVINI AM3.H3.VP1
190 Bar
38Bar


DA IMPIANTO TELAIO
FROM CHASSIS PLANT
P01
T01
T16
T19
BREVINI XQP3C3HDF
BREVINI ADC3E03
BREVINI CMP10C3002
120Bar
40Bar
ROTAZIONE TORRETTA
TURRET ROTATION
SOLLEVAMENTO PANTOGRAFO
PANTOGRAPH HOISTING
SOLLEVAMENTO BRACCIO
BOOM HOISTING
LIVELLAMENTO CESTA
BASKET LEVELING
SFILO BRACCIO
BOOM EXTENSION
SOLLEVAMENTO ANTENNA
JIB HOISTING
ROTAZIONE CESTA
BASKET ROTATION
(SQA111)
OGGETTO :
SCHEMA OLEODINAMICO TRACCESS 170
AZIONAMENTI SOVRASTRUTTURA
CODICE RIF. SC0000032
REV. 4.1
DATA REV. 14/03/2023
DISEGN. S.G.
DATA 03/07/2018
FOGLIO N° 4
TOT. FOGLI 5

POS	DESCRIPTION	CODE
36	DOUBLE SPEED GEAR MOTOR (JMV014)	SQ110404
35	3WAYS SOLENOID VALVE + PRESS.REDUCER (Z005653-CVB)	SQ110712
34	D.E. BLOCK VALVE	
33	EXTENDABLE UNDERCARRIAGE CYLINDER (ø50/30 C=130)	
32	3WAYS FLOW CONTROL VALVE (SD5/1)	SQ53641
31	SEQUENCE VALVE (40 BAR)	SQ93870
30	CHECK VALVE (10 BAR)	
29	2ND SPEED SOLENOID VALVE (OPTIONAL)	SQ26691
28	2ND SPEED GEAR MOTOR (17,6/8,8 cc) (OPTIONAL)	SQ55489
27	BASKET ROTATION ACTUATOR (OPTIONAL)	SQ43552
26	PRESSURE SENSOR	
25	MAIN SOLENOID VALVE	SQ41664
24	TRACTION SOLENOID VALVE	SQ41664
23	GEAR PUMP GR.1 / 1,3 cc (1P.D.2)	
22	ELECTRIC MOTOR 220V / 1,5 kW / 2P.	SQ41584
21	SCISSOR HOISTING CYLINDER (ø80/60 C=715)	SQ43053
20	TRACK MOTOR (100cc)	SQ55186
19	HIGH PRESSURE FILTER	SQ57680
18	JIB LIFTING CYLINDER (ø55/40 S=334)	SQ39508
17	LEVELING RESET VALVE 1/4"	SQ22611
16	OIL TANK	
15	BOOM LIFTING CYLINDER (ø80/60 S=540)	SQ43054
14	TURRET LEVELING CYLINDER (ø40/20 S=270)	SQ43056
13	TELESCOPIC BOOM CYLINDER (ø40/30 S=2100)	SQ43055
12	D.E. OVERCENTER VALVE	SQ26733
11	TURRET ROTATION MOTOR (200cc)	SQ56065
10	D.E. ANTISHOCK VALVE	
9	PROP.ELECTRIC MANIFOLD 6FUNCT. (P15111915)	SQ55335
8	BASKET LEVELING CYLINDER (D.40/20 C=270)	SQ52521
7	STABILIZERS MANIFOLD (SD5/4)	SQ55635
6	D.E. BLOCK VALVE	SQ55634
5	STABILIZER CYLINDER (ø70/60 S=485)	SQ51843/844
4	D.E. BLOCK VALVE	SQ29388
3	MANUAL PUMP	SQ55502
2	GEAR PUMP Gr.1 / 5,34 cc (PLP 10.5)	SQ93935
1	HONDA IGX440 ENGINE	SQ102028

POS	DESCRIZIONE	CODICE
36	MOTORIDUTTORE DOPPIA VELOCITA' (JMV014)	SQ110404
35	ELETTROVALVOLA 3VIE + RID.PRESSIONE (Z005653-CVB)	SQ110712
34	VALVOLA DI BLOCCO D.E.	
33	CILINDRO ALLARGAMENTO CARRO (ø50/30 C=130)	
32	DEVIATORE A LEVA ALLARGAMENTO CARRO (SD5/1)	SQ53641
31	VALVOLA DI SEQUENZA 40 BAR	SQ93870
30	VALVOLA DI NON RITORNO 10 bar	
29	ELETTROVALVOLA DOPPIA VELOCITA'(OPTIONAL)	SQ26691
28	MOTORIDUTTORE DOPPIA VELOCITA'(17,6/8,8 cc) (OPTIONAL)	SQ55489
27	ATTUATORE ROTAZIONE CESTA (OPTIONAL)	SQ43552
26	PRESSOSTATO	
25	ELETTROVALVOLA GENERALE	SQ41664
24	ELETTROVALVOLE TRAZIONE	SQ41664
23	POMPA GR.1 / 1,3 cc (Marzocchi 1P.D.2)	
22	MOTORE ELETTRICO 220V / 1,5 kW / 2P.	SQ41584
21	CILINDRO SOLLEVAM. PANTOGRAFO (ø80/60 C=715)	SQ43053
20	MOTORE CINGOLO (100cc)	SQ55186
19	FILTRO ALTA PRESSIONE	SQ57680
18	CILINDRO SOLLEVAM. ANTENNA (ø55/40 C=334)	SQ39508
17	RUBINETTI RIPRISTINO LIVELLAMENTO	SQ22611
16	SERBATOIO OLIO	
15	CILINDRO SOLLEVAMENTO BRACCIO (ø80/60 C=540)	SQ43054
14	CILINDRO DI LIVELLAMENTO SU TORRETTA (ø40/20 C=270)	SQ43056
13	CILINDRO SFILO BRACCIO TELESCOPICO (ø40/30 C=2100)	SQ43055
12	VALVOLA DI BILANCIAMENTO D.E.	SQ26733
11	MOTORE ROTAZIONE TORRETTA (200cc)	SQ56065
10	VALVOLA ANTIURTO D.E.	
9	DISTRIBUTORE COMANDI SOVRASTRUTTURA ARON	SQ55335
8	CILINDRO LIVELLAMENTO SU P.L. (D.40/20 C=270)	SQ52521
7	DISTRIBUTORE COMANDO STABILIZZATORI (Walvoil SD5/4)	SQ55635
6	VALVOLA DI BLOCCO D.E. FLANGIATA	SQ55634
5	MARTINETTO STABILIZZATORE (ø70/60 C=485)	SQ51843/844
4	VALVOLA DI BLOCCO D.E.	SQ29388
3	POMPA MANUALE	SQ55502
2	POMPA Gr.1 / 5,34 cc (Casappa PLP 10.5)	SQ93935
1	MOTORE HONDA IGX440	SQ102028

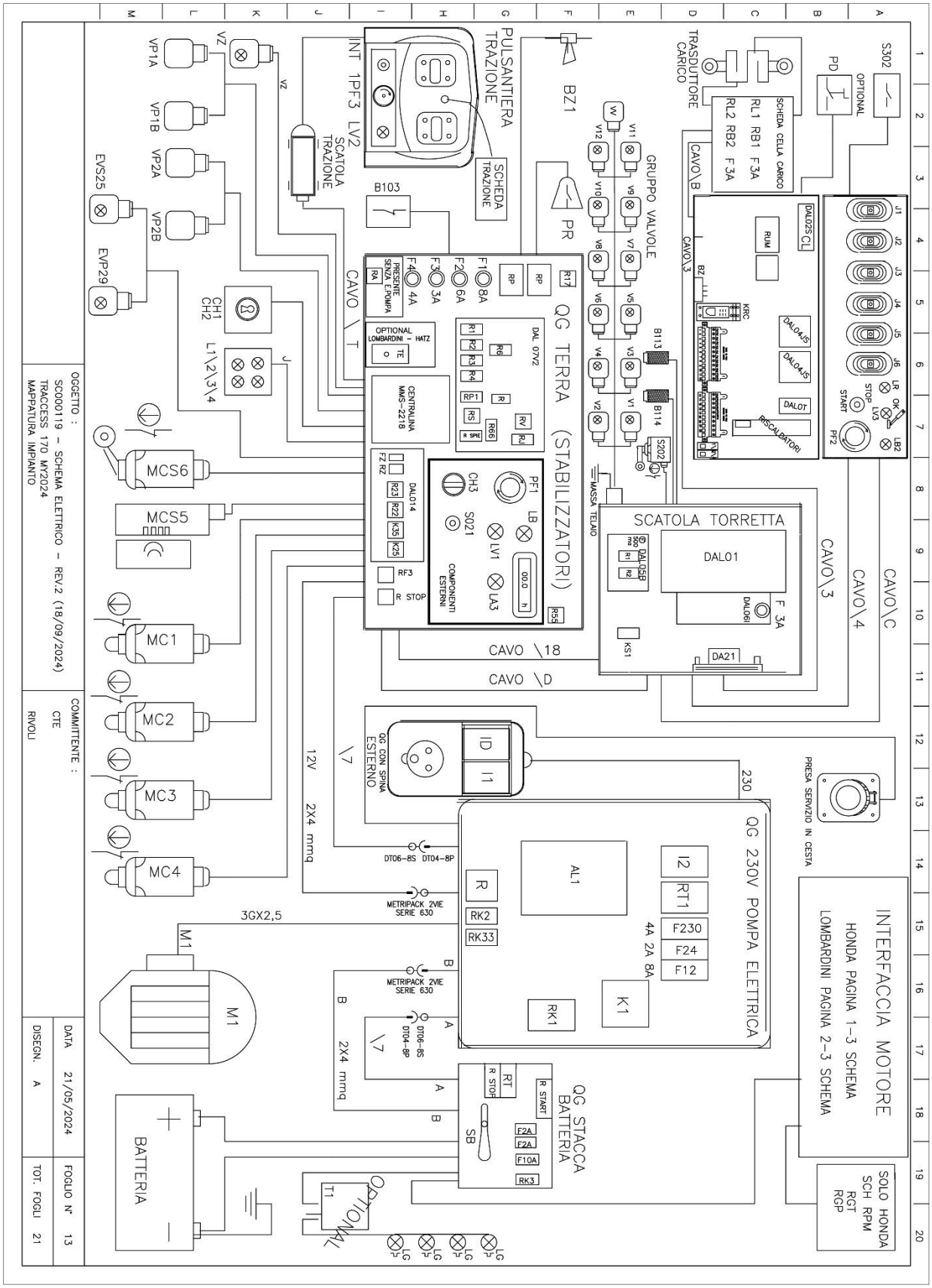
OGGETTO :
SCHEMA OLEODINAMICO TRACCESS 170

CTE WORK BECOMES EASY

CODICE RIF. SC000032	DATA 03/07/2018	FOGLIO N° 5
REV. 4.1		
DATA REV. 14/03/2023	DISEGN. S.G.	TOT. FOGLI 5

8 WIRING DIAGRAM

NOTE: The wiring diagram is attached to this manual, at the time of delivery



9 BEAUFORT WIND SCALE

Force	Name of the wind at a height of 10 m above flat, open land	Nm/h Km/h	Description of the effects on the ground	Description of the effects offshore
0	Calm	0-1 0-1	Calm, smoke rises vertically	Sea like a mirror
1	Light air	1-3 1-5	Direction of wind shown by smoke drift, but not by wind vanes.	Ripples with the appearance of scales are formed but without foam crests.
2	Light breeze	4-6 6-11	Wind felt on face, leaves rustle, ordinary vanes begin to move	Small wavelets, still short but more pronounced. Crests have a glassy appearance and do not break.
3	Gentle breeze	7-10 12-19	Leaves and small twigs in constant motion; wind extends light flag.	Small wavelets; crests begin to break; foam of glassy appearance; perhaps scattered white horses.
4	Moderate breeze	11-16 20-28	Raises dust, leaves and loose paper; small branches are moved.	Small waves, becoming longer; fairly frequent white horses.
5	Fresh breeze	17-21 29-38	Small trees in leaf begin to sway; crested wavelets form on inland waters.	Moderate waves, taking a more pronounced long form; many white horses are formed (chance of some spray).
6	Strong breeze	22-27 39-49	Large branches in motion; whistling heard in telegraph wires; umbrellas used with difficulty.	Larger waves begin to form.
7	Near gale	28-33 50-61	Whole trees in motion; effort needed to walk against the wind.	Sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of the wind.
8	gale force winds	34-40 62-74	The wind breaks the branches on trees, significant resistance felt walking against wind	Moderately high waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks along the direction of the wind.
9	strong gale			
10	storm			
11	violent storm			
12	hurricane			

10 ACCESSORIES

10.1 230V electric socket on work platform

A 230V electric socket can be fitted on the work platform of the machine. Power the electric socket by connecting a power cord with a minimum cross-section of 2.5x3 mm² and a length not exceeding 20 m to the socket in the turret.

	**ATTENTION:** **it is forbidden to connect any equipment with voltage exceeding 230V and power exceeding 1.5 kW**
	**ATTENTION:** **always check the differential before connecting any equipment; check by pressing the T test button. The differential should cut out. Reset the device by lifting the levers of the main switch. If this does not happen, do not use the electrical socket and contact a CTE service centre to carry out repairs.**

10.2 Work lamp

(Only for machines with a 230V electrical socket on the work platform)

Connect the lamp to the 230V electrical socket in the enclosure and press the on/off switch on the lamp.

!	**NOTE:** **it is a low voltage lamp and the system is fitted with a transformer.**

10.3 Air/water hose unit

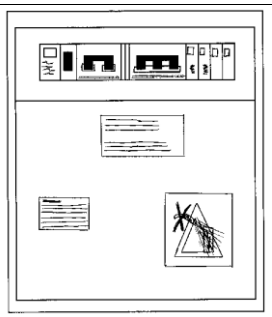
It is an automatic plastic-encased hose reel with pivoting wall bracket for use with air and water (temp. –10°C + 60°C) can be used with hoses having an internal diameter of 8 mm, an external diameter of 12 mm and maximum length of 15 m. 3/8 air inlet fittings. Maximum operating pressure 20 Bar.

10.4 230V 1,5kW single-phase auxiliary electro-pump

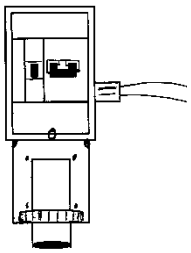
An auxiliary electro-pump (***fig. 10.4***) powered with electric current can be installed. In this way you can use the machine in work areas where the use of the combustion engine is not permitted.

	**ATTENTION:** **it is prohibited to use the electro-pump with the combustion engine running.**

To use the machine with an electro-pump, connect the power cable with a minimum cross-section of 3x2.5 mm² and a maximum length of 20 m. Beware: the cable must be connected to a socket protected by a differential switch to a system built according to current safety standards. The system is enabled by turning the battery disconnect panel to the OFF position (***fig. 10.5***). ***Proceed with the stabilisation of the machine as indicated in*** chapter 4.3.2.



Electric pump panel



230V Electric socket

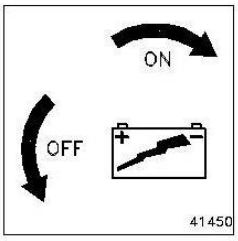


fig. 10.5

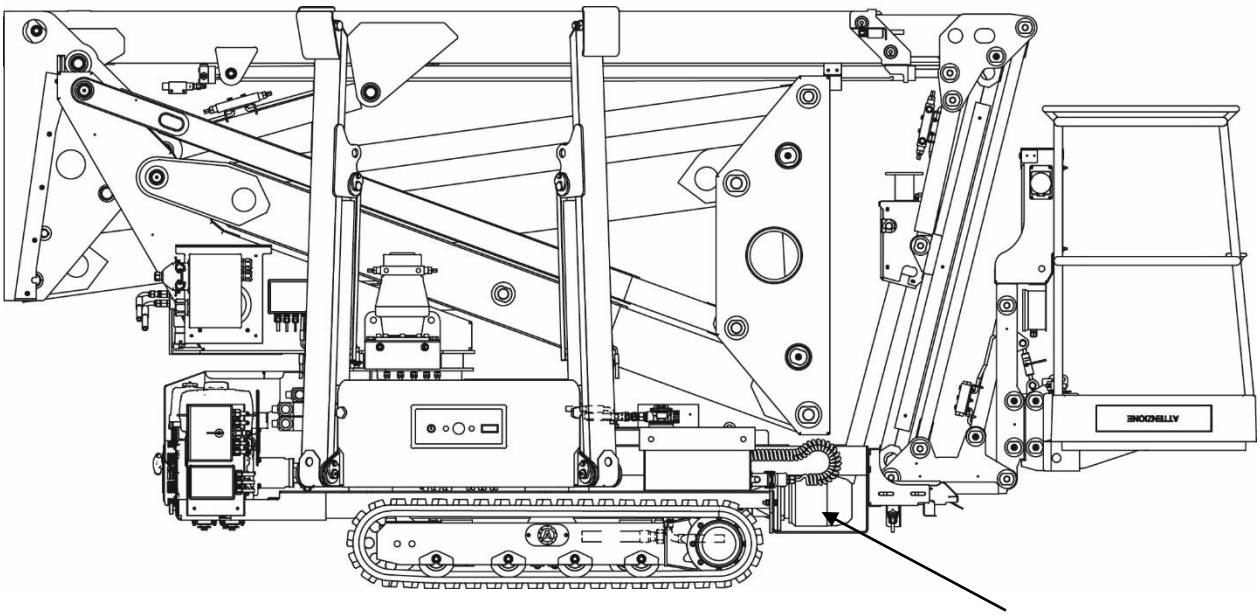


fig. 10.4

10.5 Hydraulic oil and synthetic biodegradable gearbox oil

The machine can be equipped with synthetic biodegradable oil. This type of oil is used in aerial platform components: BIOGEAR RS 80W/90 is used in gearboxes and HLP SYNTH E 32 is used as hydraulic oil. The type of oil present in the combustion engine is indicated in the manufacturer's manual. The presence of biodegradable oil is indicated by the adhesive on the tank.

10.5.1 Synthetic biodegradable hydraulic oil

Before each use, check the level of the hydraulic oil on the tank indicator. The level should be at the centre of the indicator. If necessary, remove the filler cap and top it up (***fig.6.6.6)***.

	ATTENTION: **the following operations should be performed with the platform in its stand-by position (stabilisers and booms fully retracted).**

Replace the hydraulic oil every 12,000 hours. At the same time, replace the hydraulic oil filters. Use a suitable container of sufficient capacity and remove the outlet plug under the tank to empty the oil. Close the drain plug and refill the tank.

Tank capacity: **32 litres**

Specifications: **PANOLIN HLP SYNTH E 32**

Viscosity at 40°C = 30.1 mm²/s

Viscosity at 40°C = 6.1 mm²/s

Viscosity index = 153

Flow point = -50°C

Iodine number ≤ 7

Lubricant based on biodegradable and non-toxic synthetic static esters (HEES), certified under the European label "certified European Eco Label" as directive 2005/360/EC.

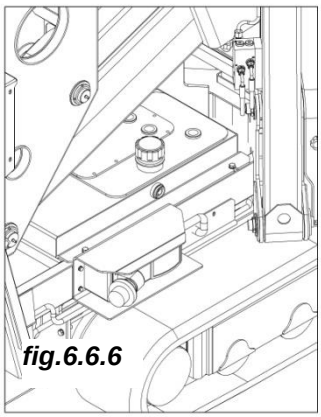


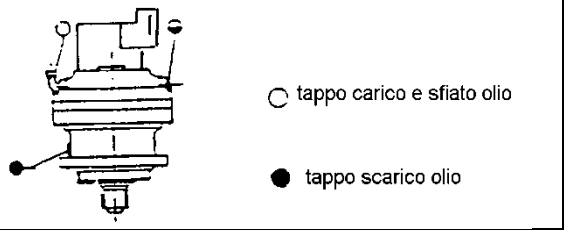
fig.6.6.6

ATTENTION:
do not disperse hydraulic oil into the environment during replacement.

10.5.2 Synthetic biodegradable rotation gearbox oil

Every three months or every 500 hours check the oil level. If necessary, top up. If you notice that more than 10% of the lubricant volume requires topping up, it is advisable to check for oil leaks in the unit. After the first 100 hours of operation and then every 6000 hours or every 3 years, change the oil in the rotation gearbox.

Use PANOLIN BIOGEAR RS 80W/90 oil for ambient temperatures between
-10° and +45°.



These intervals may vary according to the actual operating conditions. During the oil change, it is recommended to wash the inside of the casing with a suitable liquid for the purpose and recommended by the lubricant manufacturer. To prevent sludge from settling, the oil must be changed when the gearbox is warm. Do not mix different types of oil together, regardless of whether they are of the same brand or not; the same applies to mineral oils with synthetic oils.

ATTENTION:
be careful not to disperse oil into the environment when changing it.

10.5.3 Disposal of biodegradable oil

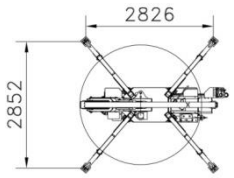
They can be incinerated, when local legislation allows it. Recycling is recommended instead of landfilling or incineration. In accordance with local and national regulations, waste code (OTRS): 1440
European waste catalogue, code (EWC code): 13 01 12 biodegradable hydraulic oil.
European waste catalogue, code (EWC code): 13 01 06 biodegradable gearbox oil.

10.6 Enclosure rotation control

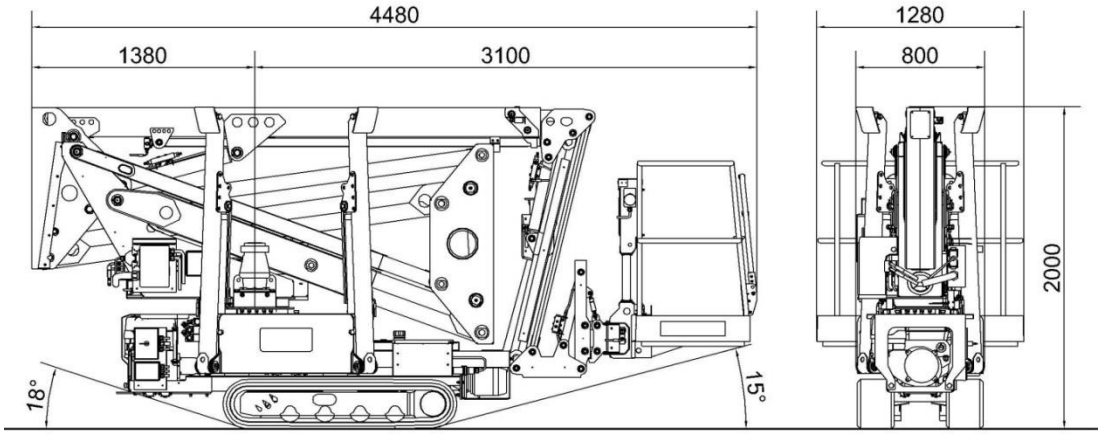
The machine can be equipped with the work platform rotation control
The technical characteristics, dimensions and performance vary compared to the standard machine.

10.6.1 Dimensions of the stabilised vehicle (data refers to the vehicle illustrated)

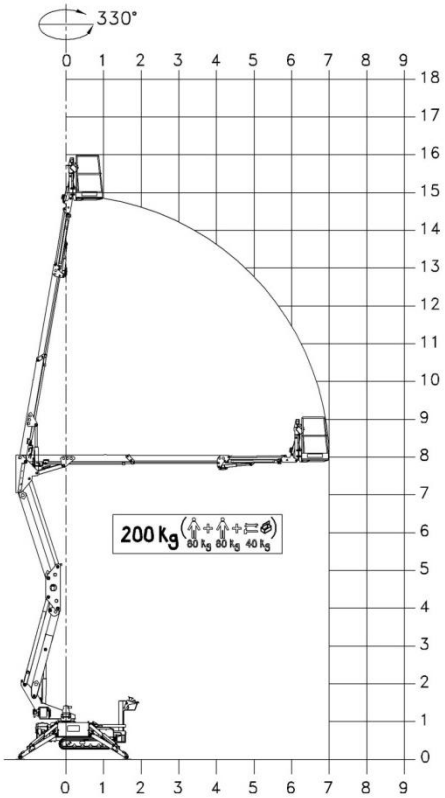
Length	**4480**	mm
Width of stabilised vehicle (minimum)	**2852**	mm
Width of stabilised vehicle (maximum)	**2826**	mm



10.6.2 Overall dimensions



10.6.3 Working envelope



10.6.4 Technical specifications

Maximum load on platform	200 kg. (2 people and 40 Kg of equipment)
Maximum platform height	14.80 m
Maximum working height	16.80 m
Maximum straddle (from centre bearing to platform)	7.00 m
Maximum working outreach	7.50 m
Maximum permitted inclination of the ground	3°
Maximum permitted inclination of chassis	0°
Maximum tolerated wind speed	12.5 m/sec
Turret rotation	330°
Levelling the work platform	Hydraulic parallelogram
Dimensions of work platform	1300 x 700 x 1100 mm
Maximum permitted lateral manual force	40 daN
Electrical system voltage	12 V
Controls	Electro-hydraulic
Hydraulic oil reservoir capacity	32 l
Maximum working pressure	190 bar
Overall weight	2.15 t
Maximum pressure of stabiliser on ground	1700 daN
Centre distance between stabiliser plate pins (min)	2826 mm
Centre distance between stabiliser plate pins (max)	2852 mm
Centre distance of stabilizers	2826 mm

!	**NOTE:** **other statistics are available in the “EWP and check logbook technical specifications delivered with the machine.**

10.7 Non-marking tracks

The wagon of the aerial work platform can be equipped with white non-marking tracks. This type of track does not leave any black traces on the operating surface. Particularly suitable for indoor use on industrial, painted or tiled flooring. These tracks have a greater ductility/flexibility than those of standard "black" tracks.

Due to their characteristics, the following precautions must be observed during transfers.

- Perform machine travel in transfer condition and with no additional loads.
- Perform machine travel at a reduced speed.
- Always perform machine travel on flat surfaces.
- Avoid contact between the tracks and the lubricant, wash immediately in case of contamination.
- Avoid counter-rotations of the machine on site and/or at high speed.
- Make sure that the track tension is correct (see chapter "Maintenance").
- Avoid prolonged exposure to the sun.
- Avoid use on surfaces such as: asphalt concrete, waste materials, pre-spaced porphyry and paving, sand, surfaces contaminated with ferrous and wood materials.
- In case of prolonged stops, position the machine with the tracks off the ground.

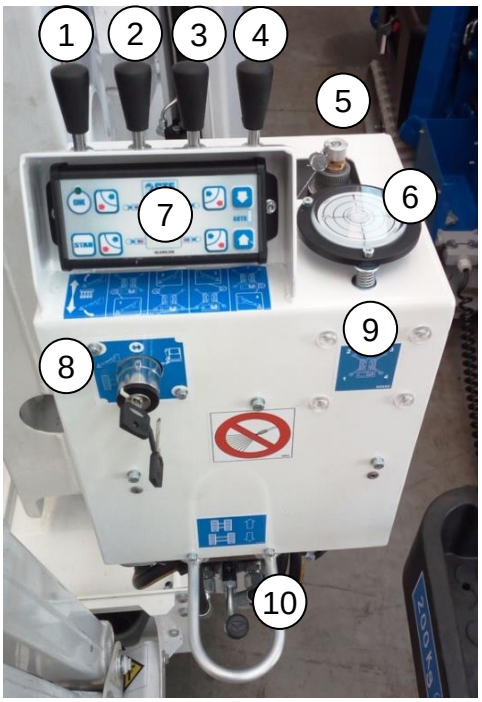
	**ATTENTION:** **failure to observe the precautions listed above can cause premature deterioration of the tracks and tread patterns that will not be covered by warranty.**

10.8 Automatic stabilisation

The machine may be equipped with a device that automatically stabilises the EWP. If the machine has that accessory, please refer to the following instructions to stabilise the machine.

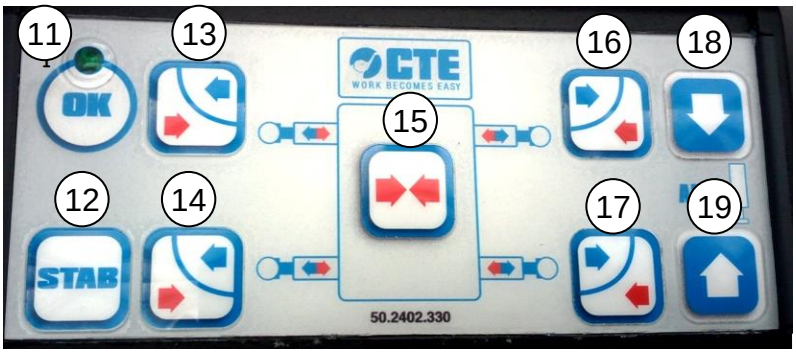
Automatic stabilisation can be used only on solid, perfectly level ground (the max ground incline allowed is 3 degrees)

10.8.1 Stabiliser control panel version with automatic stabilisation



1. Control lever for back left stabiliser – pull the lever to lower the stabiliser, push the lever to raise the stabiliser.
2. Control lever for front left stabiliser – pull the lever to lower the stabiliser, push the lever to raise the stabiliser.
3. Control lever for front right stabiliser – pull the lever to lower the stabiliser, push the lever to raise the stabiliser.
4. Control lever for back right stabiliser – pull the lever to lower the stabiliser, push the lever to raise the stabiliser.
5. Device for manual activation of the stabilisers in case of emergency.
6. Spirit level.
7. Automatic stabilisation control panel (see below)
8. Three-position key selector switch: to the left controls the stabilisers-drive chains / the central position is neutral / to the right controls on the work platform
9. LED indicators for single stabilisers
10. Carriage extension control lever

10.8.2 Automatic stabilisation control panel



11. Stabilisation indicator light
12. Stabiliser control button: pressing the button makes stabilisation possible through the manual levers and extension of the carriage
13. Front left stabiliser command button
14. Rear left stabiliser command button
15. Stabiliser return button: pressing this button retracts the stabilisers
16. Front right stabiliser command button
17. Rear right stabiliser command button
18. Automatic stabiliser extension button - Pressing this button makes it possible to extend all 4 of the stabilisers at once
19. Automatic stabiliser return button - Pressing this button makes it possible to retract all 4 of the stabilisers at once

⚠	**ATTENTION:** **Do not operate on ground with an inclination of over 3 degrees.**

⚠	**ATTENTION:** **Do not operate if the ground is not adequately levelled and unable to withstand pressure of the stabilisers.**

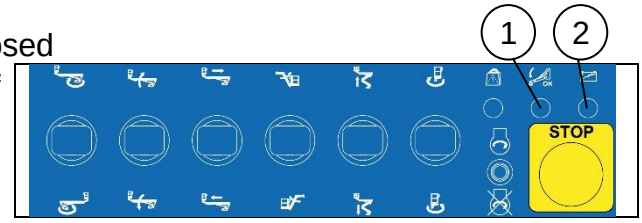
10.8.3 Operating instructions on what to do before automatic stabilisation of the platform

- If the ground is not suitable for withstanding the weight, use planks to spread the weight of the stabilisers over an area suitably large enough in relation to its physical characteristics.
- The planks should be of a material able to withstand the pressure of the stabilisers and should be checked before use.
- Always use a spirit level to check that the inclination of the ground is no greater than 3 degrees. If the inclination is greater, automatic stabilisation cannot be used.
- After having stabilised the machine, always use a spirit level to check that the max angle of the fifth wheel platform with respect to horizontal is no greater than 0 degrees.

10.8.4 Positioning the platform with automatic stabilisation (simultaneous extension of all 4 stabilisers)

Position the platform as follows:

- Turn the knob on the battery isolator panel to the “ON” position (***pos. 1 fig. 2.11.9***), to electrically power the engine.
- Start the combustion engine by turning the ignition key (***pos.1 fig. 2.11.5***).
- Turn the knob on the control panel to the “ON” position (***pos. 10 fig. 2.11.5***)
- Place the key selector switch (***pos. 8 fig. 10.09.1***) to the left on the stabilisers/carriage controls.
- Climb on board the work platform
- Check that the access gate is properly closed
- Move to the panel found in the centre of the work platform and check that the power indicator light is ON (***pos. 2 in the figure to the side***)



- check that the stabiliser indicator light is not on: this would mean there is a fault with the stabiliser limit switches (***pos. 1 in the figure***).
- Press the automatic stabiliser descent button (pos. ***18 fig. 10.9.2)*** and lower the stabilisers until the green indicator light comes ON (***pos. 11 fig. 10.9.2***) and the buzzer stops, confirming that positioning is now complete.
- When the green light with the “**OK**” symbol (***pos. 11 fig. 10.9.2***) is ON and solid, the machine is stabilised properly and enabled for working at height. The above-described symbol can also be seen on the panel found in the work platform and on the carriage’s ground control panel. The LED indicators on the individual stabilisers

(***pos. 9 fig. 10.9.1***) must all be ON. The carriage's tracks must be completely lifted off the ground.

- Check the spirit level to the side of the manual stabiliser controls to ensure that the carriage is perfectly levelled and that the maximum inclination of the fifth wheel is no greater than 0 degrees
- Place the key selector switch (***pos. 1 fig. 2.11.5***) to the controls on the platform.
- Commission the platform as described in ***chap. 4.3.3***.

	**ATTENTION:** **all other safety requirements are those for the standard use of the equipment found in this manual.**

10.8.5 Manual stabilisation of individual stabilisers via electrical operation

As an alternative to automatic stabilisation, each individual stabiliser can be operated electrically through the automatic stabilisation control panel.

- To lower individual stabilisers, press one of the relative buttons ***(pos. 13, 14, 16 o 17 fig. 10.9.2)***. The extension function is pre-set.
- When the stabiliser is in contact with the ground, the relative ***LED indicator light*** will come ON (pos. ***9 fig. 10.9.1)***
- When the green light with the "OK" symbol (***pos. 11 fig. 10.9.2***) is ON and solid, the machine is stabilised properly and enabled for working at height. The above-described symbol can also be seen on the panel found in the work platform and on the carriage's ground control panel. The LED indicators on the individual stabilisers (***pos. 9 fig. 10.9.1***) must all be ON. The carriage's tracks must be completely lifted off the ground.
- Use the spirit level to check ***(pos. 6 fig. 10.9.1)*** if the carriage is levelled properly and that the max inclination of the fifth wheel with respect to horizontal line is no higher than 0 degrees
- Place the key selector switch (***pos. 8 fig. 10.9.1***) to the controls on the platform.
- Commission the platform as described in ***chap. 4.3.3***.

	**ATTENTION:** **all other safety requirements are those for the standard use of the equipment found in this manual.**

10.8.6 Manual stabilisation through the hydraulic control valve

To position and stabilise the machine through the hydraulic control valve:

- Turn the knob on the battery isolator panel to the “ON” position (***pos. 1 fig. 2.11.9***), to electrically power the engine.
- Start the combustion engine by turning the ignition key (***pos.1 fig. 2.11.5***).
- Turn the knob on the control panel to the “ON” position (***pos. 10 fig. 2.11.5***)
- Place the key selector switch (***pos. 8 fig. 10.09.1***) to the left on the stabilisers/carriage controls.
- Climb on board the work platform
- Check that the access gate is properly closed
- Move to the panel found in the centre of the work platform and check that the power indicator light is ON (***pos. 2 in the figure to the side***)

- Check that the stabiliser indicator light is not on: this would mean there is a fault with the stabiliser limit switches (***pos. 1 in the figure***).
- To move the individual stabilisers, press and hold the “**STAB**” button (***pos. 12 fig. 10.09.2***) and, at the same time, alternate the operation of the levers found on the back of the control panel (***pos. 1, 2, 3 or 4 fig. 10.09.1***) to lower the stabilisers. Refer to the adhesives which indicate the relationship between the lever and stabiliser.
- Pushing the levers forward will extend the stabilisers to the ground, pulling them back retracts the stabilisers.
- Completely lower the stabilisers to the ground so as to lift the tracks.
- Check the spirit level (***pos. 6 fig. 10.09.1***) found on the stabiliser control panel and correctly level the platform, using the stabiliser levers as necessary: the machine is perfectly level when the air bubble in the spirit level is at the centre (0°)
- When the green light with the (**OK**) symbol is on and solid, the machine is stabilised properly and enabled for working at height. The above-described symbol can also be seen on the panel found on the work platform and on the carriage’s ground control panel. The LED indicators on the individual stabilisers (***pos. 9 fig. 10.9.1***) must all be ON. The carriage’s tracks must be completely lifted off the ground.
- Place the key selector switch (***pos. 8 fig. 10.09.1***) to the controls on the platform.
- Commission the platform as described in ***chap. 4.3.3***.

	**ATTENTION:** **all other safety requirements are those for the standard use of the equipment found in this manual.**

	**ATTENTION:** **if, for any reason, danger should arise during stabilisation, press the emergency stop button (*pos. 12 fig. 2.11.5*) on the control panel.**

10.8.7 Manual retraction of individual stabilisers via electrical operation

- To retract the stabilisers once done using the machine:
- Place the key selector switch (***pos. 8 fig. 10.09.1***) to the left on the stabilisers/carriage controls.
- To raise individual stabilisers, press the button which allows the stabilisers to be raised and the respective operation button, pushing one of the buttons ***(pos. 13, 14, 16 o 17 fig. 10.9.2)***.
- Raise each stabiliser until all 4 of them have been retracted and the buzzer turns off, confirming that they have successfully been retracted.
- Check that all four stabilisers are correctly positioned in their housing.
- Place the key selector switch (***pos. 1 fig. 2.11.5***) to the “0” position.
- Power off the engine and turn the battery isolator panel switch to the “OFF” position (***pos. 1 fig. 2.11.9***).

10.8.8 Manual retraction via the hydraulic control valve

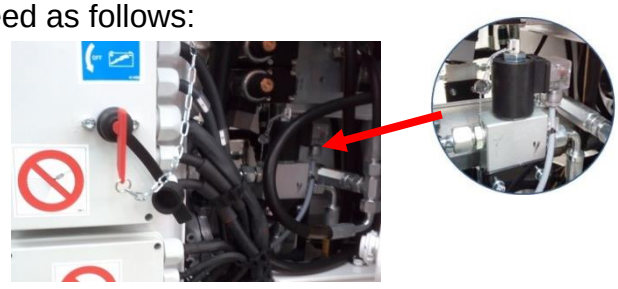
- To retract the stabilisers once done using the machine:
- Place the key selector switch (***pos. 8 fig. 10.09.1***) to the left on the stabilisers/carriage controls.
- To move the individual stabilisers, press and hold the “**STAB**” button (***pos. 12 fig. 10.09.2***) and, at the same time, alternate the operation of the levers found on the back of the control panel (***pos. 1, 2, 3 or 4 fig. 10.09.1***) to retract the stabilisers. Refer to the adhesives which indicate the relationship between the lever and stabiliser.
- Raise each stabiliser until all four are completely retracted.
- Check that all four stabilisers are correctly positioned in their housing.
- Place the key selector switch (***pos. 8 fig. 10.09.1***) to the “0” position.
- Power off the engine and turn the battery isolator panel switch to the “OFF” position

10.8.9 Emergency manoeuvre for stabilisation

If there is no power supply to the stabilisation system or if it is faulty, the stabilisers can be controlled through a manual emergency operation system.

In this case, to retract the stabilisers, proceed as follows:

- Remove the lead wire seal from the valve on the carriage (see the image at the side)
- Open the valve by turning the knob found at the top to the left as far as it can go without forcing it

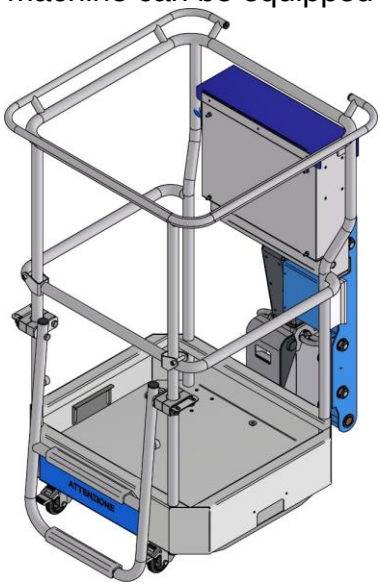


- Go to the stabiliser control panel
- Remove the lead wire seal from the device to manually operate the stabilisers in case of emergency, found on their control panel ***(pos. 5 fig. 10.9.1)***
- Close the valve by turning the knob on the top to the right, without forcing it
- Remove the manual pump control lever on the frame by unscrewing the black locking knob
- Insert the handle onto the manual pump (***pos. 3 fig. 4.4.5***)
- Alternate the operation of the control levers for the stabilisers found on the back of the control panel (***pos. 1, 2, 3 or 4, fig. 10.09.1***) to retract the stabilisers while using the hand pump at the same time

- Once recovered, re-position the manual pump control lever, fixing it on the frame using the black blocking knob.
- Proceed until the stabilisers are completely retracted.
- Remove the hand pump lever and reposition it in its housing.
- Reopen the device's valve (found on the stabiliser control panel) to manually operate the stabilisers in case of emergency, turning the knob on the top to the left without forcing it.
- Close the valve by turning the knob found at the top of the carriage to the left as far as it can go without forcing it
- Contact the customer care department to replace the lead seals.

10.9 Single-seat work platform

The machine can be equipped with a single-seat work platform

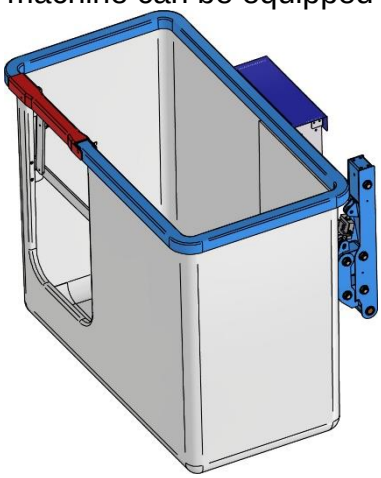


Maximum load on platform	200 kg (1 person and 120 kg of equipment)
Platform dimensions	780 x 700 x 1100 mm

For more information and technical specifications, please refer to the data presented in **chap. 2.4.**
For the work area, refer to **chap. 2.5.**

10.10 Fibreglass work platform

The machine can be equipped with a fibreglass work platform.



Maximum load on platform	200 kg (2 people and 40 kg of equipment)
Platform dimensions	1390 x 690 x 1100 mm

For more information and technical specifications, please refer to the data presented in **chap. 2.4.**
For the work area, refer to **chap. 2.5.**

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