

OPERATOR MANUAL

HD120E

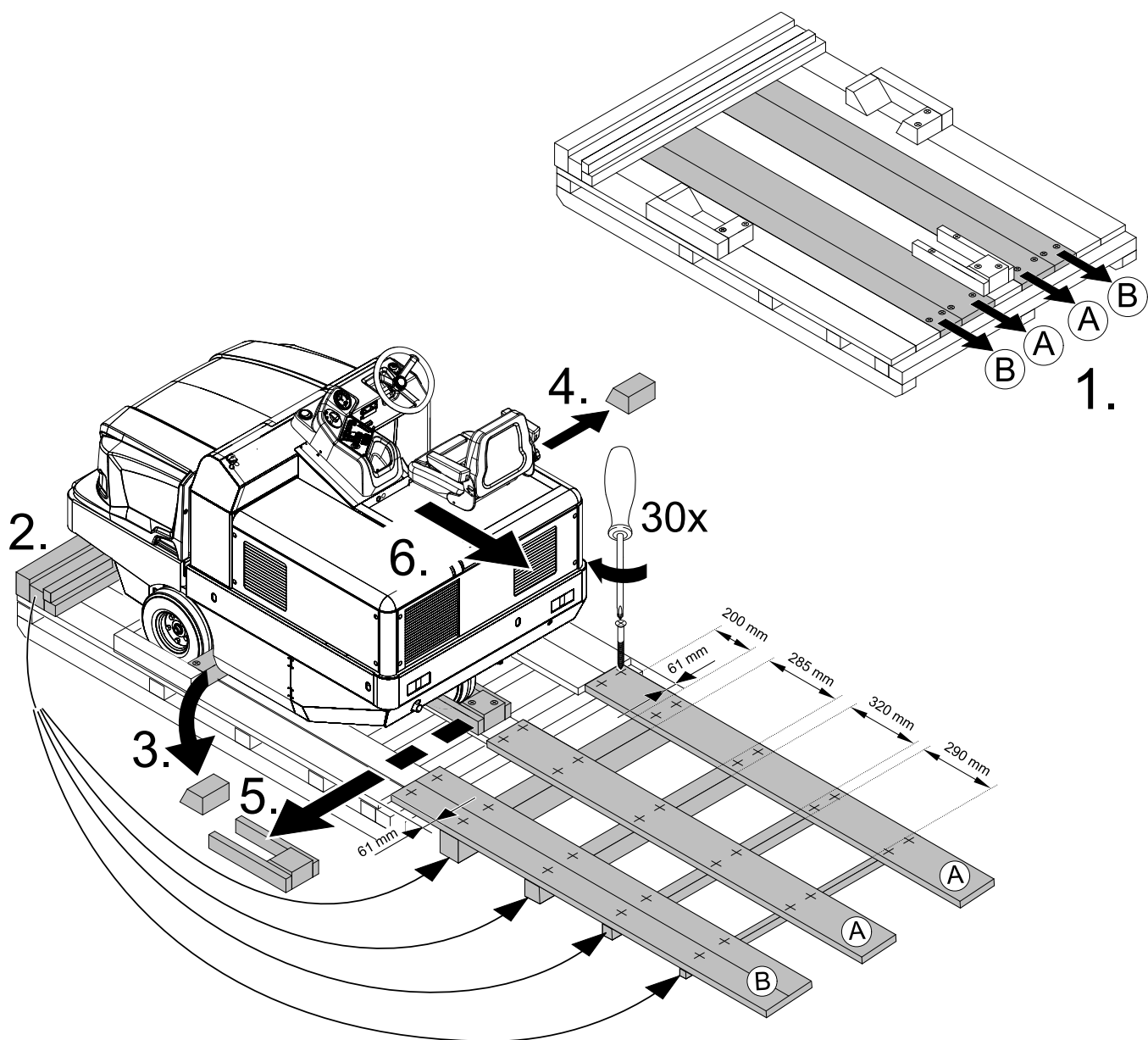
Heavy Duty Ride-on Industrial Sweeper

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With you, all the way



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  Please read and comply with these original instructions prior to the initial operation of your appliance and store them for later use or subsequent owners.

General notes

Your sales outlet should be informed about any transit damage noted when unpacking the product.

- Warning and information plates on the machine provide important directions for safe operation.
- In addition to the information contained in the operating instructions, all statutory safety and accident prevention regulations must be observed.

Environmental protection

	The packaging material can be recycled. Please do not throw the packaging material into household waste; please send it for recycling.
	Old appliances contain valuable materials that can be recycled. Please arrange for the proper recycling of old appliances. Please dispose your old appliances using appropriate collection systems.
Batteries, oil, fuels and similar substances must not be released into the environment. Please dispose of these substances via suitable collection systems.	

Notes on the content materials (REACH)

Current information on content materials can be found at:

www.isalsweepers.com

Warranty

The warranty terms published by the relevant sales company are applicable in each country. We will repair potential failures of your appliance within the warranty period free of charge, provided that such failure is caused by faulty material or defects in manufacturing. In the event of a warranty claim please contact your dealer or the nearest authorized Customer Service centre. Please submit the proof of purchase.

Accessories and Spare Parts

DANGER

To avoid risks, all repairs and replacement of spare parts may only be carried out by authorized customer service personnel.

- Only use accessories and spare parts which have been approved by the manufacturer. The exclusive use of original accessories and original spare parts ensures that the appliance can be operated safely and trouble free.

Symbols in the operating instructions

DANGER

Warns about immediate danger which can lead to severe injuries or death.

WARNING

Warns about possible danger which could lead to severe injuries or death.

CAUTION

Points out a possibly dangerous situation which can lead to light injuries or property damage.

ATTENTION

Pointer to a possibly dangerous situation, which can lead to property damage.

Symbols on the machine

	Risk of burns on account of hot surfaces! Allow the exhaust to cool down sufficiently before starting work on the machine.
	Always use appropriate gloves while working on the device.
	Risk of getting squeezed on account of getting jammed between vehicle parts.
	Risk of injury on account of moving parts. Do not reach in.
	Risk of fire. Do not vacuum up any burning or glowing objects.
	Chain pick-up / crane point
	Intake points for the jack
	Maximum decline of ground when driving with the waste container raised.
	The gradient in the direction of travel should not exceed 14 %.
	Caution! Rotating brush (watch for rotation direction).

	Beware of dangerous electrical current!
	Pay attention to the instruction.
	Steer slowly!
	Please read the operating instructions and act accordingly!
	Risk of damage! Do not rinse out the dust filter.

Proper use

The sweeper is intended for cleaning floor surfaces for commercial use and e.g. for the following fields of application:

- Car parks
- Production facilities
- Logistics areas
- Hotel
- Retail industry
- Storage areas
- Walkways
- This sweeper has been designed to sweep dirt and debris from indoor as well as outdoor surfaces.
- The machine with working equipment must be checked to ensure that it is in proper working order and is operating safely prior to use. Otherwise, the appliance must not be used.
- Use this sweeper only as directed in these operating instructions.
- The machine may not be modified.
- The machine is only suitable for use on the types of surfaces specified in the operating instructions.
- The machine may only be operated on the surfaces approved by the company or its authorised representatives.
- The following applies in general: Keep highly-flammable substances away from the appliance (danger of explosion/fire).

Foreseeable misuse

- ➔ Never vacuum up explosive liquids, combustible gases or undiluted acids and solvents. This includes petrol, paint thinner or heating oil which can generate explosive fumes or mixtures upon contact with the suction air. Acetone, undiluted acids and solvents must also be avoided as they can harm the materials on the machine.

- ➔ Never sweep/vacuum up reactive metal dusts (e.g. aluminium, magnesium, zinc), as they form explosive gases when they come in contact with highly alkaline or acidic detergents.
- ➔ Do not sweep/vacuum up any burning or glowing objects.
- ➔ The appliance is not suitable for sweeping off hazardous substances.
- ➔ The machine may not be used or stored in hazardous areas. It is not allowed to use the appliance in hazardous locations.
- ➔ It is strictly prohibited to take co-passengers.
- ➔ Pushing/pulling or transporting objects by means of this appliance is prohibited.

Suitable surfaces

- Asphalt
- Industrial floor
- Screed
- Concrete
- Paving stones

Safety instructions

Safety instructions concerning the operation

- ➔ In order to maintain clearance and creepage distances, the device may not be operated over 2000 metres above sea level.
- ➔ (Applicable for Finland only) The device may not be used at low ambient temperatures (below 0°C) if it is equipped with a PVC hose line. Contact ISAL if you should have questions regarding your device.
- ➔ The machine with working equipment must be checked to ensure that it is in proper working order and is operating safely prior to use. Otherwise, the appliance must not be used.
- ➔ If the appliance is used in hazardous areas (e.g. filling stations) the corresponding safety provisions must be observed. It is not allowed to use the appliance in hazardous locations.

⚠ DANGER

Risk of injury!

- ➔ Do not use the appliance without an overhead guard in areas where the operator might get hit by falling objects.
- ➔ The operator must use the appliance properly. The person must consider the local conditions and must pay attention to third parties, in particular children, when working with the appliance.
- ➔ It is important to follow all safety instructions, rules and regulations applicable for driving motor vehicles.
- ➔ Prior to starting work, the operator must ensure that all protective devices are properly installed and function correctly.
- ➔ The operator of the appliance is liable for accidents with other individuals or their property.

- ➔ Ensure that the operator wears tight-fitting clothes. Wear sturdy shoes and avoid wearing loose-fitting clothes.
- ➔ Check the immediate vicinity prior to starting (e.g. children). Ensure sufficient visibility!
- ➔ Never leave the machine unattended so long as the engine is running. The operator may leave the appliance only when the engine has come to a standstill, the appliance has been protected against accidental movement, and the key has been removed.
- ➔ Please remove the key, when not in use, to avoid unauthorised use of the appliance.
- ➔ The appliance may only be used by persons who have been instructed in handling the appliance or have proven qualification and expertise in operating the appliance or have been explicitly assigned the task of handling the appliance.
- ➔ This appliance is not intended for use by persons (including children) with limited physical, sensoric or mental capacities or lack of experience and/or skills, unless such persons are accompanied and supervised by a person in charge of their safety or if they received precise instructions on the use of this appliance.
- ➔ Children should be supervised to prevent them from playing with the appliance.

CAUTION

Risk of damage! Do not sweep up straps, strings or wires as these may wrap around the brush roller.

Safety information concerning the driving operation

⚠ DANGER

Risk of injury! Verify the stability of the ground prior to driving on it.

⚠ DANGER

Risk of accident, risk of injury!

Danger of tipping if gradient is too high.

- The gradient in the direction of travel should not exceed 14 %.

Danger of tipping over when taking bends at high speed (particularly left-hand bends).

- Drive slowly when cornering.

Danger of tipping on unstable ground.

- Only use the machine on sound surfaces.

Danger of tipping with excessive sideways tilt.

- The gradient perpendicular to the direction of travel should not exceed 10%.

Safety instructions for battery-operated devices

Note: Claims may only be made under guarantee if you use the batteries and chargers recommended by ISAL.

- Always follow the instructions of the battery manufacturer and the charger manufacturer. Please follow the statutory requirements for handling and disposing batteries.

- Never leave the batteries in a discharged state; recharge them as soon as possible.
- Always keep the batteries clean and dry to avoid creep currents. Protect the batteries and avoid contact with impurities such as metal dust.
- Do not place tools or similar items on the battery. Risk of short-circuit and explosion.
- Do not work with open flames, generate sparks or smoke in the vicinity of a battery or a battery charging room. Danger of explosion.
- Do not touch hot parts of the machine such as the drive motor (risk of burns).
- Be careful while handling battery acid. Follow the respective safety instructions!
- Used batteries are to be disposed according to the EC guideline 91/ 157 EWG in an environment-friendly manner.

Appliances with high emptying system

DANGER

Risk of injury!

- When working on the high emptying system, completely lift and secure the waste container.
- Perform the safeguarding only from outside the hazard zone.

Devices with overhead guard

NOTICE

The overhead guard (optional) protects the driver against larger falling objects. However, it does not provide rollover protection!

- Check the overhead guard for damage daily.
- If the overhead guard, as well as individual elements, should be damaged, replace the entire overhead guard.
- Any modification of the overhead guard and installation of elements, components and assemblies other than those approved by ISAL is not permitted and may limit the function of the overhead guard.

Safety information concerning the transport of the appliance

- Observe the net weight (transport weight) of the device during transport on trailers or vehicles.
- To transport the device, unplug the battery plug and securely fasten the device.

Safety information concerning maintenance and care

- First switch off the appliance and remove the key before performing any cleaning or maintenance tasks on the appliance, replacing parts or switching over to another function.
- When performing any service and maintenance work on devices with a traction battery, the battery must be disconnected from the electrical system of

the device via the battery isolation point (battery plug).

- Always disconnect the battery when working on the electrics.
To do this, first disconnect the negative terminal and then the positive terminal. Reconnection is performed in reverse sequence. Connect the positive terminal first, then connect the negative terminal.
- Do not clean the appliance with a water hose or high-pressure water jet (danger of short circuits or other damage).
- Maintenance work may only be carried out by approved customer service outlets or experts in this field who are familiar with the respective safety regulations.
- Please observe the local safety regulations regarding portable commercially used appliances.
- Always use appropriate gloves while working on the device.

Function

The sweeper operates using the sweep-shovel principle.

- The rotating roller brush moves the dirt directly into the waste container.
- The side brush cleans the corners and edges of the surface and moves dirt and debris into the path of the roller brush.
- The fine dust is sucked in via the dust filter through the suction blower.

Unloading tips

Danger

Risk of injury, risk of damage!

Observe the weight of the appliance when you load it!

Weight (without batteries)	750 kg*
Weight (with batteries)	1200 kg*
* If upgrade kits are installed, the weight is respectively higher.	

- **Do not use a forklift.**
- Use a suitable ramp or a crane to load the appliance!
- Observe when using a ramp:
Ground clearance 70 mm.
- If the machine is delivered on a pallet, you must create an unloading ramp using the boards provided.
You will find the instructions for this procedure on page 2 (inside of cover).
Important instruction: every board must be attached with at least 2 screws.

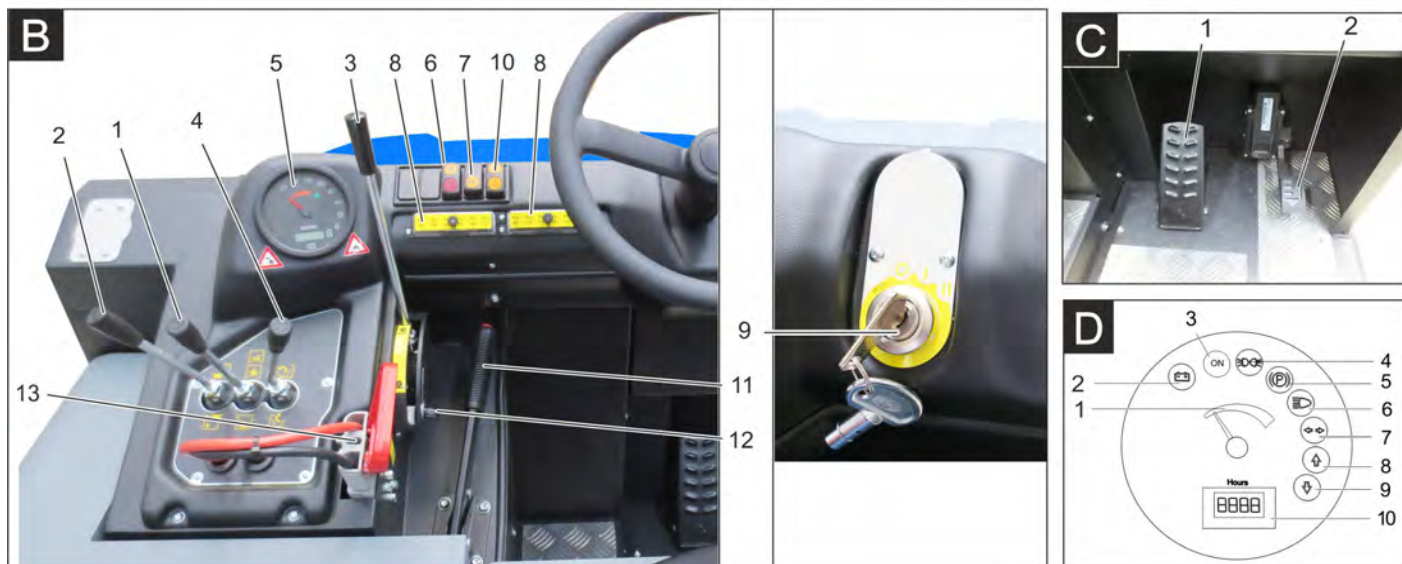
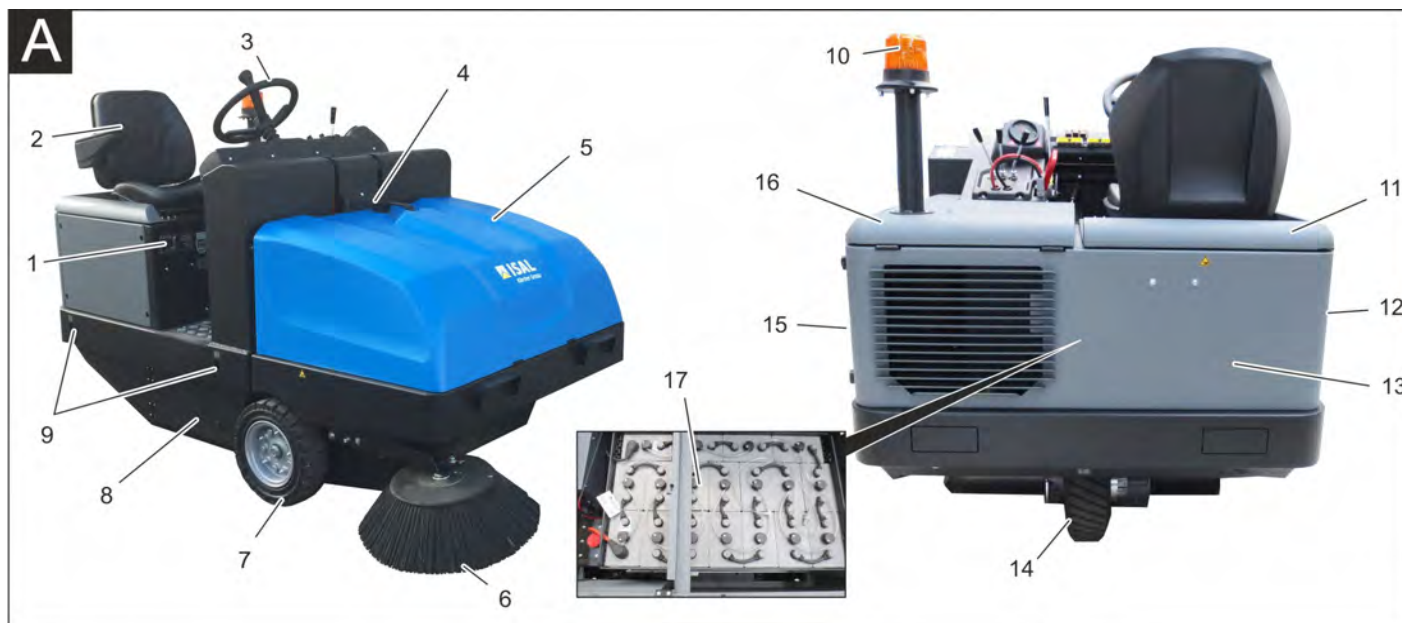


Illustration of sweeper

Operating field

Position 2: Start the engine

- 10 Selector for the direction of travel
- 11 Parking brake
- 12 Roller brush wear adjustment / sweeping area setting
- 13 Battery socket

Pedals

Illustration C

- 1 Brake pedal
- 2 Drive pedal

Indicator lamps and display

Illustration D

- 1 Battery capacity
- 2 Battery control lamp
- 3 Control lamp operating state
- 4 Indicator lamp for position lights
- 5 Indicator lamp (not connected)
- 6 Indicator lamp for dipper
- 7 Indicator lamp (not connected)
- 8 Indicator lamp - forward driving direction
- 9 Indicator lamp - reverse driving direction
- 10 Operating hour counter

Illustration A

- 1 Nameplate
- 2 Seat (with seat contact switch)
- 3 Steering wheel
- 4 Lock of appliance hood
- 5 Cover
- 6 Side brush, right
- 7 Front wheel
- 8 Roller brush access
- 9 Lashing point
- 10 Beacon lamp
- 11 Appliance cover right side
- 12 Cover, right
- 13 Tail panel
- 14 Drive wheel
- 15 Cover, left
- 16 Bonnet left side (engine bonnet)
- 17 Battery set
not included in the delivery

Illustration B

- 1 Roller brush and side brush control lever
Lever forwards: Switches the roller brush on and lowers and switches the side brushes on.
Lever backwards: Switches the roller brush on
- 2 Control lever waste container
Raise/lower waste container
- 3 Roller brush control lever
Raises and lowers the roller brush
- 4 Control lever container flap
Open/close container lid
- 5 Indicator lamps and display
- 6 Switch blower and filter cleaning
Position centred: Filter cleaning and blower off
Rear position: Blower on
Front position: Filter cleaning on
- 7 Horn switch
- 8 Fuses
- 9 Ignition lock
Position 0: Switch off engine
Position 1: Ignition on

Before Startup

Lock/ release parking brake

- Loosen parking brake; press brake pedal at the same time.
- Activate the parking brake; press brake pedal at the same time.

Start up

General notes

- Park the sweeper on an even surface.
- Remove ignition key.
- Lock parking brake.

Inspection and maintenance work

Daily before starting operations

- Check battery charging status; charge batteries if required (see Chapter "Charging the batteries").
- Check the sweeping roller and the side brush for wear and wrapped belts.
- Check the wheels for tied up belts.
- Check function of all operator control elements.
- Check appliance for damages.
- Clean the dust filter with the filter cleaning button.

Note: For description, see section on Care and maintenance.

Safety notes regarding the batteries

Please observe the following warning notes when handling batteries:

	Observe the directions on the battery, in the instructions for use and in the vehicle operating instructions!
	Wear an eye shield!
	Keep away children from acid and batteries!
	Risk of explosion!
	Fire, sparks, open light, and smoking not allowed!
	Danger of causticization!
	First aid!
	Warning note!

	Disposal!
	Do not throw the battery in the dustbin!
	Beware of dangerous electrical current!

⚠ Danger

Risk of explosion! Do not put tools or similar on the battery, i.e. on the terminal poles and cell connectors.

⚠ Danger

Risk of injury! Ensure that wounds never come into contact with lead. Always clean your hands after having worked with batteries.

⚠ Danger

Risk of fire and explosion!

- Smoking and naked flames are strictly prohibited.
- Rooms where batteries are charged must have good ventilation because highly explosive gas is emitted during charging.

⚠ Danger

Danger of causticization!

- Rinse thoroughly with lots of clear water if acid gets into the eye or comes in contact with the skin.
- Then consult a doctor immediately.
- Wash off the acid if it comes in contact with the clothes.

Charge the batteries

CAUTION

Charge the batteries before commissioning the machine.

⚠ DANGER

Risk of injury! Comply with safety regulations on the handling of batteries. Observe the directions provided by the manufacturer of the charger.

Please read and follow the included operating instructions by the battery manufacturer and follow them.

Charge the battery only with an appropriate charger.

⚠ Danger

Danger of chemical burns. Adding water to the battery in its discharged state can cause the acid to leak! Use safety glasses while handling battery acid and follow the safety instructions to avoid personal injury or damage to clothes. Should the acid spray on to the skin or clothes, rinse immediately with lots of water.

CAUTION

Risk of damage. Use only distilled or desalinated water (VDE 0510) for filling the battery. Do not add any substances (so-called performance improving agents), else warranty claims will not be entertained.

Recommended batteries, chargers

	Order number
Battery pack 36 V, 360 Ah, (in the trough, low maintenance) *	6.654-282.0
Charger 36 V, 50 A	6.654-283.0
* Appliance requires 1 battery pack	

The use of other batteries and chargers is not recommended and may only take place after consulting with ISAL customer service.

- Pull the battery plug from the machine and connect it to the plug of the charger.
- Connect the plug of the charger to a proper socket of 16 A, the charger will charge automatically.
- Always keep both motor covers open during the charging process.
- **Note:** When the batteries are charged, first remove the charger from the mains and then disconnect it from the batteries.

Check fluid level in the battery and adjust if required

CAUTION

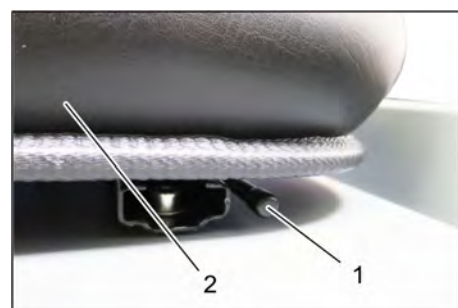
Be sure to observe the battery manufacturer's instructions and then act accordingly.

Check charging status of battery

- Display of the battery capacity in the green range:
Battery is charged.
- Display of the battery capacity in the yellow range:
Battery is halfway discharged.
- Display of the battery capacity in the red range:
Battery is almost discharged. The sweeping mode will be shortly switched off automatically.
- Indicator lamp glows red
Battery is discharged. The sweeping mode will be terminated automatically (the sweeping aggregates cannot be taken into operation until the battery is charged).
- Drive the machine directly to the charging station; avoid any steep gradients in the process.
- Charge battery.

Operation

Adjusting driver's seat



1 Lever for seat adjustment

2 Driver seat

- Pull seat adjustment lever outwards.

- Slide seat, release lever and lock in place.
- Check that the seat is properly locked in position by attempting to move it backwards and forwards.

Starting the machine

Note: The machine is equipped with a seat contact switch. If the driver's seat is vacated, the machine is switched off.

- Sit on the driver's seat.
- Bring the direction selector switch into the middle position.
- Lock parking brake.
- Insert the ignition key into the ignition switch.
- Turn the ignition key to position "I". The appliance is now ready for operation.
- Turn the ignition key to position "II". The appliance can now be driven.

Note: The display of the battery capacity will show the actual charge status after about 10 seconds.

Drive the machine

- Press brake pedal and keep it depressed.
- Release parking brake.



- 1 Forward travel direction
- 2 Direction of travel reverse

Drive forward

- Set the travel direction switch to "forward".
- Press accelerator pedal down slowly.

Reverse drive

⚠ Danger

Risk of injury! While reversing, ensure that there is nobody in the way, ask them to move if somebody is around.

CAUTION

Risk of damage! Only use the direction switch when the machine is standing still.

- Set the travel direction switch to "backwards".
- Press accelerator pedal down slowly.

Driving method

- The accelerator pedal can be used to vary the driving speed infinitely.
- Avoid pressing the pedal suddenly as this may damage the hydraulic system.

Brakes

- Release the accelerator pedal, the machine brakes automatically and stops.

Note: The braking effect can be supported by pressing the brake pedal.

Driving over obstacles

Driving over fixed obstacles which are 70 mm high or less:

- Drive forwards slowly and carefully. Driving over fixed obstacles which are more than 70 mm high:
- Only drive over these obstacles using a suitable ramp.

Sweeping mode

ATTENTION

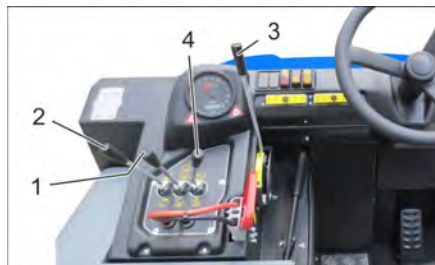
Do not sweep up packing strips, wire or similar objects as this may damage the sweeping mechanism.

Note: To achieve an optimum cleaning result, the driving speed should be adjusted to take specific situations into account.

Note: During operation, the dust filter should be shaken off and cleaned at regular intervals.

Note: When frequently working in areas with fine dust, the filter must be cleaned more often.

Control lever



- 1 Roller brush and side brush control lever
- 2 Control lever waste container
- 3 Roller brush control lever
- 4 Control lever container flap

Roller brush and side brush control lever

- Control lever (1) forwards: Switches the roller brush on and lowers and switches the side brushes on.
- Control lever (1) backwards: Switches the roller brush on.

Control lever waste container

- Control lever waste container (2) to the front: Waste container is lowered.
- Control lever waste container (2) to the back: Waste container is raised.

Control lever roller brush

- Roller brush control lever (3) forwards: Raises the roller brush.
- Roller brush control lever (3) backwards: Lowers the roller brush.

Control lever container flap

- Control lever container flap (4) to the front: The container flap of the waste container opens.
- Control lever container flap (4) to the back: The container flap of the waste container closes.

Sweeping dry floors



- Switch on the blower.
- **With surface cleaning:** Roller brush and side brush control lever (1) backwards: Switches the roller brush on. Roller brush control lever (3) backwards: Lowers the roller brush.
- Control lever container flap (4) to the front: Container flap opens.
- **With cleaning of side edges:** Roller brush and side brush control lever (1) forwards: Switches the roller brush on, switches the side brushes on and lowers them. Roller brush control lever (3) backwards: Lowers the roller brush.

Sweeping damp or wet floors

- Switch off the blower.
- **With surface cleaning:** Roller brush and side brush control lever (1) backwards: Switches the roller brush on. Roller brush control lever (3) backwards: Lowers the roller brush.
- Control lever container flap (4) to the front: Container flap opens.
- **With cleaning of side edges:** Roller brush and side brush control lever (1) forwards: Switches the roller brush on, switches the side brushes on and lowers them. Roller brush control lever (3) backwards: Lowers the roller brush.

Emptying waste container

⚠ DANGER

Risk of injury!

- During the emptying process, persons and animals must not stay within the swivelling range of the waste container.

Danger of tipping!

- Place the device on an even surface during the emptying process.

⚠ WARNING

Risk of crushing!

- Never reach into the rod assembly for the drainage mechanism. Do not stay under the raised container.

ATTENTION

Risk of personal injury or damage!

- Material of the rotating roller brush may be catapulted off during the emptying process. Keep an appropriate distance.



- Raise the roller brush and side brushes using the control levers: Control lever 1 to middle position and control lever 3 forwards.
- Close the container flap, in order to do so, move the control lever (4) to the back:
- Raise the container flap, in order to do so, move the waste container control lever (2) to the back:
- Slowly drive towards the collection container.
- Lock parking brake.
- Open the container flap, in order to do so, push the container flap operating lever (4) to the front and empty the waste container.
- Close the container flap, in order to do so, push the container flap operating lever (4) to the back until it is tipped inwards in the end position.
- Release parking brake.
- Drive away the collection container slowly.
- Lower the waste container into the end position, in order to do so, move the waste container control lever (2) to the front

Turn off the appliance

- Press brake pedal and keep it depressed.
- Lock parking brake.
- Turn ignition key to "0" and remove it.

Transport

⚠ DANGER

Transport damage!

- Observe the net weight (transport weight) of the device during transport on trailers or vehicles.
- When transporting in vehicles, secure the appliance according to the guidelines from slipping and tipping over.
- Turn ignition key to "0" and remove it.
- Lock parking brake.

- Secure the appliance at the lashing points (4x) using tension belts, ropes or chains.
- Secure the wheels of the machine with wheel chocks.
- Disconnect the battery of the sweeper during transport.

Storage/decommissioning

⚠ DANGER

Risk of injury and damage! Note the weight of the appliance in case of storage.

- Park the sweeper on a level surface in a dry, frost protected area. Protect it against dust by means of covering material.
- Raise the roller brush and the side-brushes to prevent the bristles from being damaged.
- Close the container flap.
- Turn ignition key to "0" and remove it.
- Lock parking brake.
- Lock the sweeper to ensure that it does not roll off.

Additionally observe the following points if the sweeper is not used over a longer period of time:

- Clean the inside and outside of the sweeper.
- Remove the battery plug from machine.
- Charge battery and recharge it approx. every 2 months.

Care and maintenance

General notes

ATTENTION

Risk of damage!

- Do not rinse out the dust filter.
- Maintenance work may only be carried out by approved customer service outlets or experts in this field who are familiar with the respective safety regulations.
- Mobile appliances used for commercial purposes are subject to safety inspections according to VDE 0701.
- Park the sweeper on an even surface.
- Turn ignition key to "0" and remove it.
- Lock parking brake.

Cleaning

CAUTION

Risk of damage!

- Do not clean the appliance with a water hose or high-pressure water jet (danger of short circuits or other damage).

Cleaning the inside of the machine

⚠ DANGER

Risk of injury!

- Wear dust mask and protective goggles.
- Clean machine with a cloth.
- Blow through machine with compressed air.

External cleaning of the appliance

- Clean the machine with a damp cloth which has been soaked in mild detergent.

Note: Do not use aggressive cleaning agents.

Maintenance intervals

Note: The elapsed-time counter shows the timing of the maintenance intervals.

Maintenance by the customer

Note: If maintenance is carried out by the customer, all service and maintenance work must be carried out by qualified staff. An ISAL specialist dealer can be consulted at any time if needed.

Daily maintenance:

- Check the sweeping roller and the side brush for wear and wrapped belts.
- Check function of all operator control elements.
- Check appliance for damages.

Weekly maintenance:

- Check hydraulic unit.
- Check the hydraulic oil level.
- Check brake fluid status.
- Check the pad for wear, replace if required.
- Check the container lid and lubricate it.

Maintenance following wear:

- Replace sealing strips.
- Readjust the side seals or replace them.
- Replace roller brush.
- Replace side brush.

Note: For description, see section on Maintenance work.

Maintenance by Customer Service

Maintenance to be carried out after 50 operating hours:

- Have the first inspection done according to the service manual.

Maintenance to be carried out after 250 operating hours:

- Have the inspection done according to the service manual.

Note: In order to preserve warranty claims, all servicing and maintenance work during the warranty period has to be performed by an authorised ISAL Customer Service, in accordance with the inspection check list.

Maintenance Works

Preparation:

- Park the sweeper on an even surface.
- Turn ignition key to "0" and remove it.
- Lock parking brake.

General notes on safety

⚠ DANGER

Risk of injury! Always apply the safety bar when the waste container is raised.



1 Holder of safety rod

2 Safety rod

- Fold the safety rod for the high emptying up and insert it into the holder (secured).

Replace batteries

The batteries can only be exchanged as a set. The exchange has to be performed by trained personnel.

- Due to the heavy weight (450 kg), the batteries must be exchanged using a crane.

Note: The cross strut must be unscrewed prior to replacing the battery.



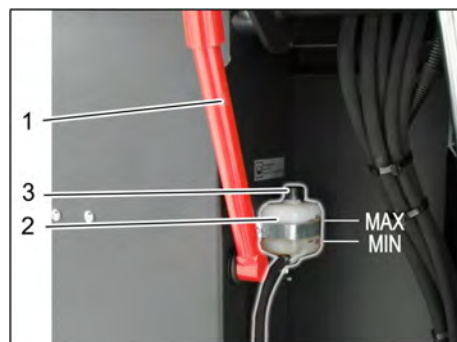
- When removing the battery, disconnect the negative terminal wire first.
- Fasten the crane chains in the four eyelets of the battery set and carefully lift out the batteries.

Checking the brake fluid level and topping up brake fluid

⚠ DANGER

Risk of injury!

- Always apply the safety rod when the waste container is raised.
- Perform the safeguarding only from outside the hazard zone.



- 1 Holder of safety rod
- 2 Brake fluid container
- 3 Closing head

- Move up the waste container and secure it by means of the safety rod, see Chapter "Emptying the waste container"

- Check if there is enough brake fluid in the brake fluid reservoir.

Note

The filling level has to be between Min. and Max.

- If necessary, refill DOT brake fluid currently commercially available.

Check hydraulic oil level and refill hydraulic oil

NOTICE

The waste container must not be raised.

- Open engine cover.



- 1 Hydraulic oil tank
 - 2 Looking glass
 - 3 Screw cap, oil fill opening
- Check hydraulic oil level in the looking glass.
 - The oil level must lie between "MIN" and "MAX" marking.
 - Add hydraulic oil if the oil level is below the "MIN" marking.
 - Loosen the closing cap of the oil filling opening.
 - Clean the filling area.
 - Refill hydraulic oil.
- Oil grade: see Technical Data**
- Replace and tighten the closing cap of the oil filling opening.

Check hydraulic unit

- Lock parking brake.
- Start the motor.

Maintenance of the hydraulic system is only to be carried out by ISAL Customer Service.

- Check all hydraulic hoses and connections and ensure that they are leak-proof.

Checking roller brush

- Sit on the driver's seat.
- Bring the direction selector switch into the middle position.
- Turn the ignition key to position "I".
- Raise the waste container up to the end-position.
- Turn ignition key to "0" and remove it.
- Lock parking brake.
- Use the safety bar for emptying from a height.
- Remove belts or cords from roller brush.
- Remove the safety bar.
- Insert the ignition key into the ignition switch.
- Turn the ignition key to position "I".
- Lower the waste container up to the end-position.
- Turn ignition key to "0" and remove it.

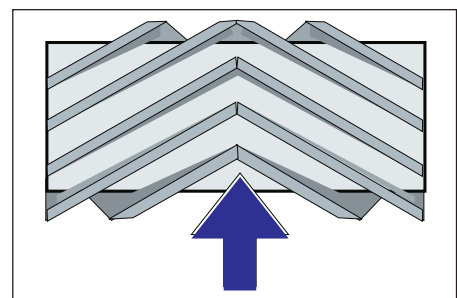
Replacing roller brush



- 1 Key
 - 2 Side panels
- Drive the waste container up and support it with the safety rod.
 - Open the side covers using a key.



- 1 Holding bow
 - 2 Wing nut
 - 3 Side seal
- Unscrew the wing nuts.
 - Remove the retaining clamp.
 - Flip the side seal out.
 - Unscrew the retaining screw of the roller brush intake, and swing the intake to the outside.
 - Pull out roller brush.



Installation position of roller brush in direction of travel (top view)

Note: When installing the new roller brush, ensure correct positioning of the bristle assembly.

- Install new roller brush. The nuts of the roller brush must be inserted on the notches of the opposite crank.

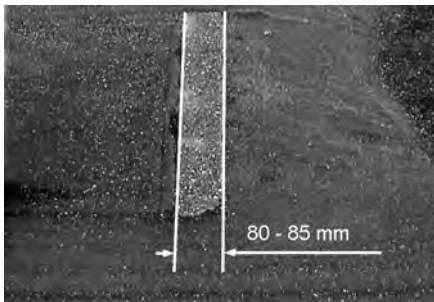
Note: Once the new roller brush has been installed, the sweeping track must readjusted.

Check and adjust roller brush sweeping track

Note: The sweeping track is factory-set to 80 mm; it is steplessly adjustable if the brush roller wears down.

- Check tyre pressure.
- Switch off suction blower.

- Drive sweeper on to a smooth, even surface covered with a visible layer of dust or chalk.
- Roller brush and side brush control lever (1) backwards: Switches the roller brush on.
Roller brush control lever (3) backwards: Lowers the roller brush.
- Allow the roller brush to run for approx. 10 seconds.
- Roller brush and side brush control lever (1) to middle position.
Roller brush control lever (3) forwards: Raises the roller brush.
- Raise waste container.
- Drive machine backwards.
- Check sweeping mirror.



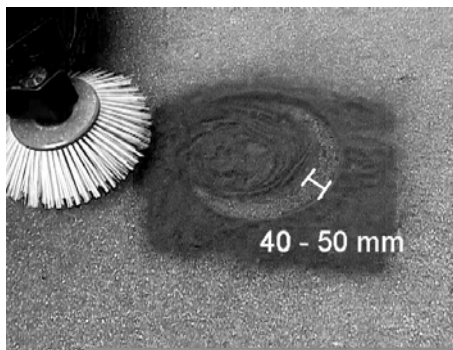
The sweeping track should have an even rectangular shape which is 80-85 mm wide.



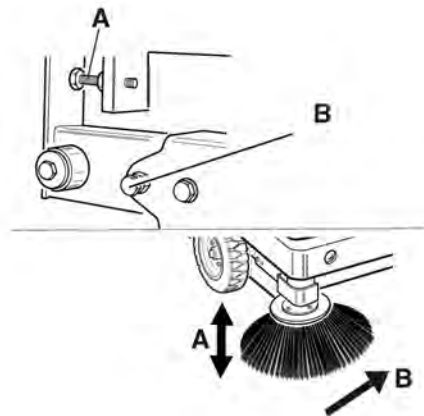
- Undo and adjust the stop screw for wear adjustment (12).
Stop screw at the top: narrow sweeping area.
Stop screw at the bottom: broad sweeping area.
- Tighten the stop screw again.
- Check the sweeping area of the roller brush again as described.

Check and adjust sweeping track of the side-brush

- The side-brushes lift up.
- Drive sweeper on to a smooth, even surface covered with a visible layer of dust or chalk.
- Lower the side brushes using the control lever and allow them to run for approx. 10 seconds.
- The side-brushes lift up.
- Drive machine backwards.
- Check sweeping mirror.



The width of the sweeping track should lie between 40-50 mm.



- Set the sweeping track using the two adjusting screws.
- Check sweeping mirror.

Adjust the side seals

⚠ DANGER

Risk of injury! Always apply the safety bar when the waste container is raised.

- Drive the waste container up and secure it with the safety rod.
- Fold the safety rod for the high emptying up and insert it into the holder (secured).



- 1 Holder of safety rod
 - 2 Safety rod
- Open the side cover as described in Chapter "Replace brush roller".
 - Release the 6 wing nuts on the side holding plate.
 - Loosen 3 nuts (SW 13) on the front holding plate.
 - Press the side seal down (elongated hole) until it is about 1 to 3 mm to the floor.
 - Screw in the holding plates.
 - Repeat the procedure on the other side of the appliance.

Manually clean the dust filter



- Switch on manual filter shake off.

Check/replace dust filter

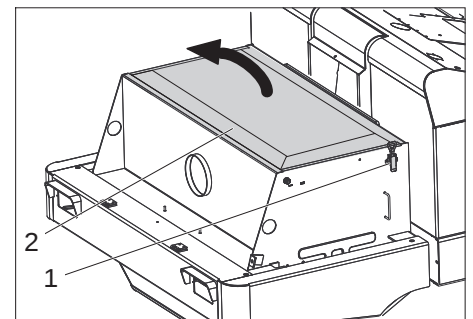
⚠ WARNING

Risk of injury!

- Wear a dust mask when working around the dust filter. Observe safety regulations on the handling of fine particles.
- Clean the dust filter with the filter cleaning button.
- Empty waste container.



- 1 Lock of appliance hood
 - 2 Cover
 - 3 Filter cover
- Open the lock, remove the star grip screw to do this.
 - Fold cover forwards.



- 1 Lock, filter cover (2x)
 - 2 Filter cover
- Open the lock.
 - Open filter cap.



- 1 Cross struts
 - 2 Dust filter
- Check the dust filter, clean or replace if necessary.

Note

Exchanging the dust filter may only be done by the ISAL Customer Service.

→ Insert and lock the filter cover.

Changing the headlight bulb (option)

→ Unscrew the head lamps.

→ Take out the head lamps and pull out the plug.

Note: Note the positions of the plugs.

→ Dismantle the head lamps.

→ Dismantle the head lamp casing and hold it horizontally because the lamp unit is not fastened.

→ Unlock the bracket and take out the bulb.

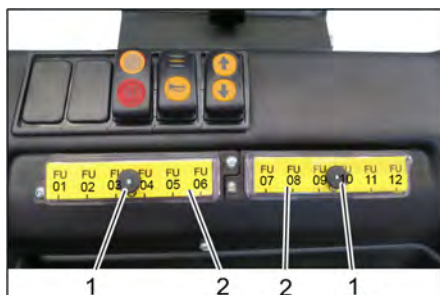
→ Insert new bulb.

→ Reinstall in reverse sequence.

Changing the blinker bulb (option)

Note: Remove the glass of the direction-indicator lamp from its casing to replace the bulb.

Replacing fuses



1 Lock nut

2 Cover fuse box

→ Unscrew the knurled nut.

→ Open the cover on the fuse box.

→ Check the fuses.

→ Replace defective fuses.

Note: Only use fuses with identical safety ratings.

FU 01	Safety relay Drive pedal	3 A
FU 02	Multifunction display	5 A
FU 03	Battery shut-off	3 A
FU 04	Driving direction switch	3 A
FU 05	Drive control	3 A
FU 06	Vibrator system	15 A
FU 07	Suction system control	3 A
FU 08	Beacon lamp	7.5 A
FU 09	Horn	7.5 A
FU 10	Lights	15 A
FU 11	Wiper	3 A
FU 12	Driver cabin (optional)	10 A
FU 13*	Drive motor	125 A
FU 14*	Electro motor	100 A
FU 15*	Suction blower	20 A

* These fuses may only be changed by Customer Service, as it is necessary to check the device for potential faults.

Troubleshooting

Fault	Remedy
Device does not drive or drives only slowly	Sit on the driver seat, the seat contact switch gets activated.
	Have the drive motor fuse, FU 13, checked by Customer Service
	Charging or replacing battery
	Release parking brake
	Check for trapped ribbons and strings.
	Contact an ISAL Customer Service department
Whistling sound in the hydraulic system	Refill hydraulic fluid
	Contact an ISAL Customer Service department
Brushes are rotating slowly or not at all	Check for trapped ribbons and strings.
	Contact an ISAL Customer Service department
Too little or no suction power in the brush area	Clean filter
	Contact an ISAL Customer Service department
Dust gathers in the machine	Adjust the side seals
	Switch on blower
	Clean dust filter
	Replace filter washers
	Contact an ISAL Customer Service department
Sweeping unit does not pick up waste	Empty waste container
	Clean dust filter
	Replacing roller brush
	Adjust sweeping track
	Replace sealing strips of the waste container
	Remove the blocking of the brush roller
	Contact an ISAL Customer Service department
Waste container does not raise or lower	Check the fuses.
	Remove the locking support from the waste container
	Contact an ISAL Customer Service department
Waste container is rotating slowly or not at all	Contact an ISAL Customer Service department
Operation problems with hydraulic movement parts	Contact an ISAL Customer Service department

Technical specifications

		120 E
Machine data		
Drive speed, forward	km/h	6
Drive speed, reverse	km/h	3
Climbing capability (max.)	--	14%
Surface cleaning performance without side brushes	m²/h	5400
Surface cleaning performance with 1 side brushes	m²/h	7200
Working width without side brushes	mm	900
Working width with 1 side brushes	mm	1200
Protection type, drip-proof	--	IPX 3
Usage duration with battery fully charged	h	--
Electrical system		
Battery capacity	V, Ah	--
Battery set	kg	--
Hydraulic system		
Oil quantity in the entire hydraulic system	l	25
Oil quantity in hydraulic tank	l	20.5
Hydraulic oil type	--	HV 46
Waste container		
Max. unloading height	mm	1400
Volume of waste container	l	250

Roller brush		
Roller brush diameter	mm	300
Roller brush width	mm	900
Speed	rpm	325
Sweeping track	mm	80
Side brushes		
Side brush diameter	mm	600
Speed (continuous)	rpm	61
Solid rubber tyres		
Size, front	--	15-4.5 x 8
Size, rear	--	15-4.5 x 8
Brake		
Front wheels	--	mechanical
Rear wheel	--	Electrical
Filter and vacuum system		
Type	--	Pocket filter
Speed	rpm	2800
Filter surface area, fine dust filter	m ²	6.0
Nominal vacuum, suction system	mbar	15.5
Nominal volume flow, suction system	m ³ /h	800
Vibrator system	--	Electric motor
Working conditions		
Temperature	°C	-5 and +40
Air humidity, non-condensing	%	0 - 90
Values determined as per EN 60335-2-72		
Noise emission		
Sound pressure level L _{PA}	dB(A)	70
Uncertainty K _{PA}	dB(A)	3
Sound power level L _{WA} + Uncertainty K _{WA}	dB(A)	90
Machine vibrations		
Hand-arm vibration value	m/s ²	0.7
Seat	m/s ²	0.5
Uncertainty K	m/s ²	0.1
Dimensions and weights		
Length x width x height	mm	2082x1250x1450
Right turning radius	mm	1350
Left turning radius	mm	1350
Unladen weight (with/ without battery)	kg	750/1200
Permissible overall weight	kg	1620
Permissible front axle load	kg	797
Permissible rear axle load	kg	823
Subject to technical modifications!		

EU Declaration of Conformity

We hereby declare that the machine described below complies with the relevant basic safety and health requirements of the EU Directives, both in its basic design and construction as well as in the version put into circulation by us. This declaration shall cease to be valid if the machine is modified without our prior approval.

Product: Ride-on vacuum sweeper
Type: 120 E
S/N 0110138

Relevant EU Directives
2006/42/EC (+2009/127/EC)
2014/30/EU
2000/14/EC

Applied harmonized standards
EN 60335-1
EN 60335-2-72

EN 55012: 2007 + A1: 2009
EN 61000-6-2: 2005
EN 62233: 2008

Applied conformity evaluation method

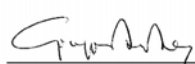
2000/14/EC: Appendix V

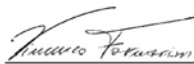
Sound power level dB(A)

Measured: 88

Guaranteed: 90

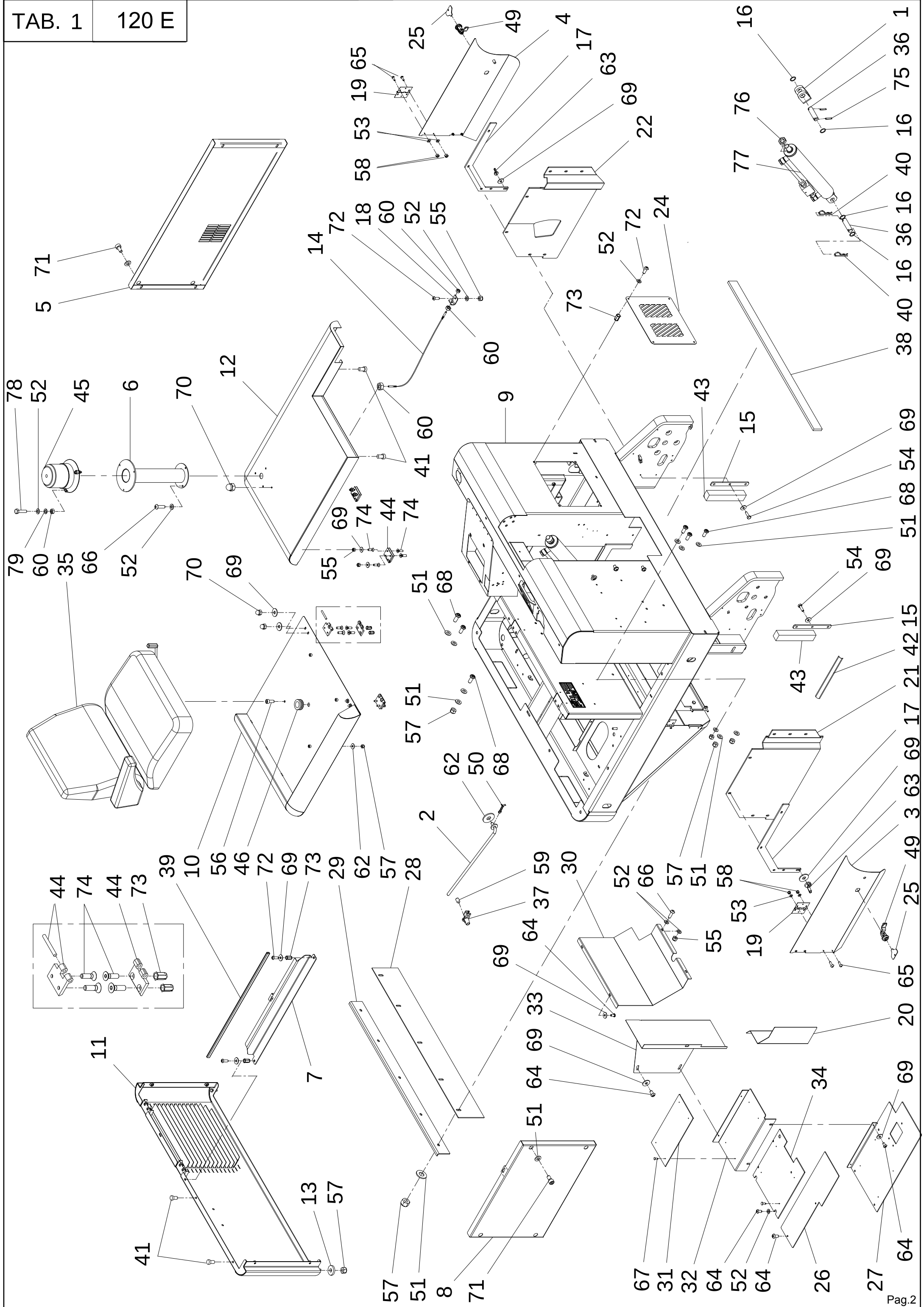
The undersigned act on behalf and under the power of attorney of the company management.


Giuseppe del Duca
Managing Director


Vincenzo Fornaciari
Manager R&D

ISAL s.r.l.
Via Modena 42/B

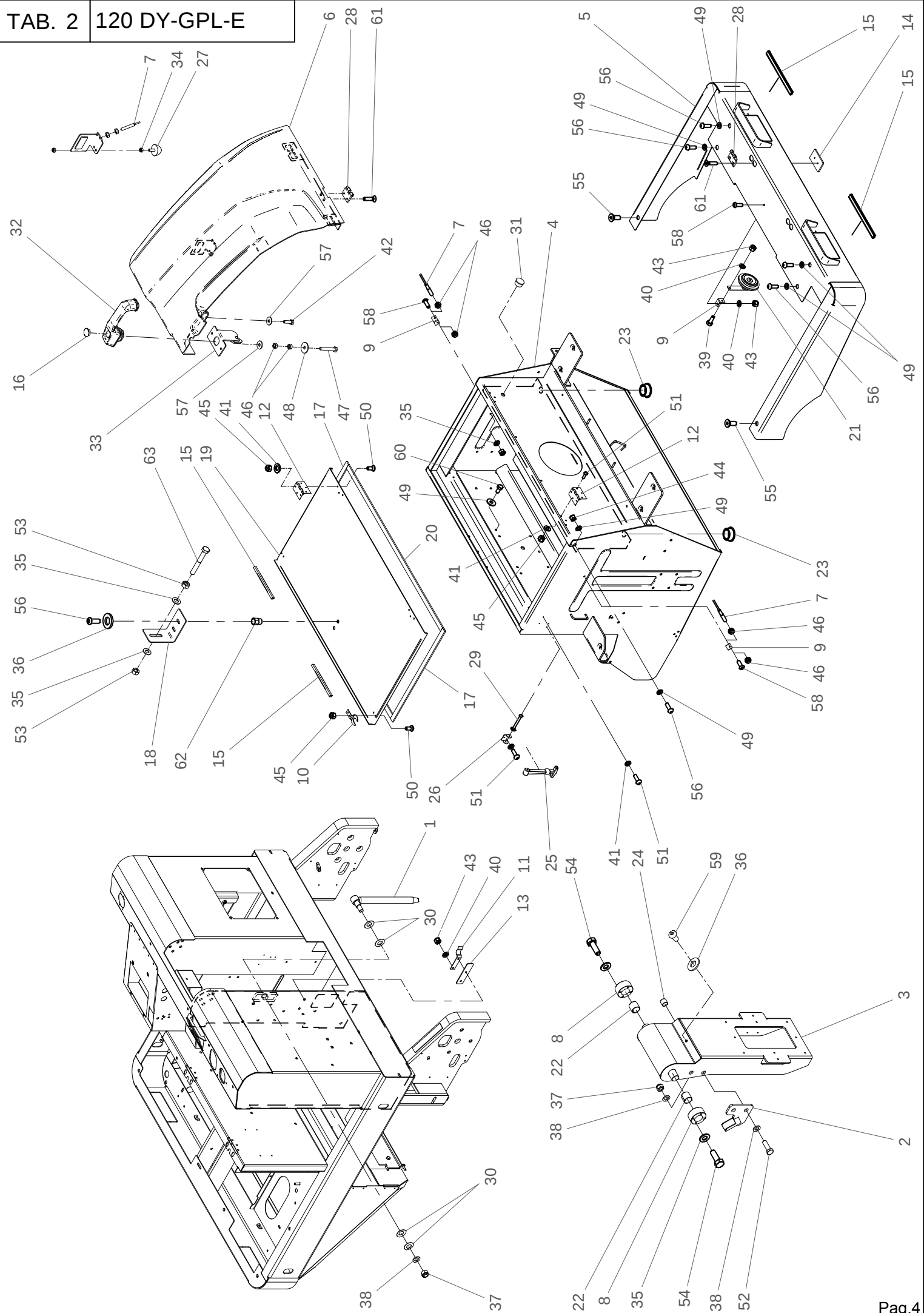
42015 CORREGGIO (RE) - ITALY
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fax. +39 0522 631191



TAB.1 Chassis 120 E

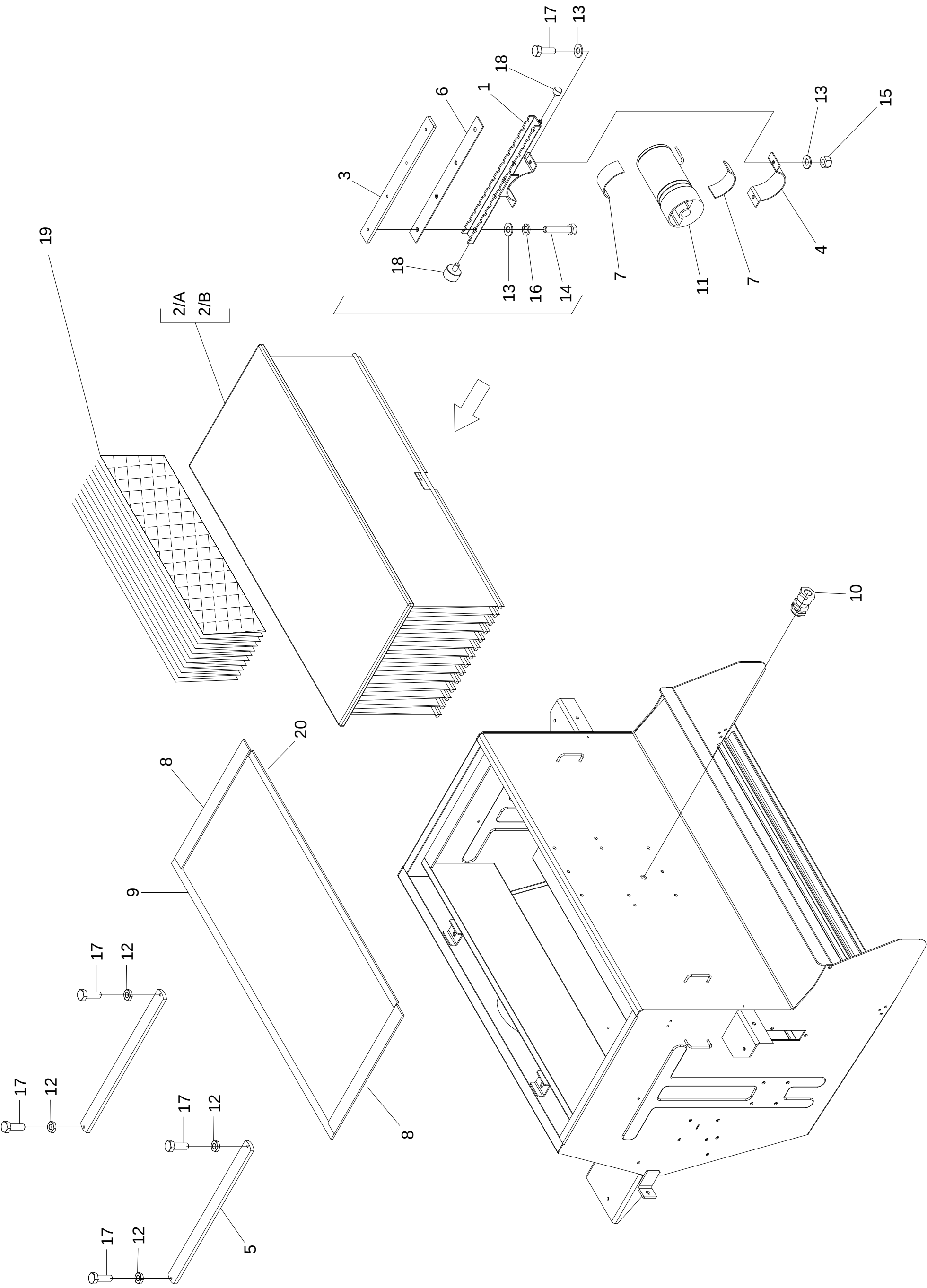
TAB.	POS.	Part Nr	DENOMINAZIONE	Q.ty	Description
1	1	2101857	Forcella cilindro sollevamento	1	Lifting cylinder fork
1	2	2103285	Asta supporto cofano	1	Seat bonnet rod
1	3	2108243	Sportello DX spazzola centrale	1	Right door main broom
1	4	2108244	Sportello SX spazz. centrale	1	Left door main broom
1	5	2103450	Carter lato motore	1	Engine side crankcase
1	6	2108252	Supporto lampeggiante	1	Rotating flash support
1	7	2110685	Corrimano "C"	1	Handrail
1	8	2110830	Carter lato sedile	1	Seat side crankcase
1	9	2112784	Telaio KM120/250	1	Chassis
1	10	2113238	Cofano sedile	1	Seat crankcase
1	11	2113236	Cofano posteriore	1	Rear crankcase
1	12	2113237	Cofano motore	1	Bonnet
1	13	3000111	Rondella D.8,5 x 23,5 x 4	2	Washer 8,5x23,5x4/Galvanized
1	14	3000294	Cavo per cofano	1	Steel cable for bonnet
1	15	3001317	Fermagomme sulle ruote	2	Rubber fastener
1	16	3001501	Rondella di spessoramento	4	Washer
1	17	3001661	Flangia mobile spazzola centrale	2	Movable flange main broom
1	18	3003785	Piatto fermo cofano motore	1	Plate stopping motor hood
1	19	3007297	Cerniera 65x65	4	Hinge 65x65
1	20	3007421	Carter copri tubi	1	Casing pipe cover
1	21	3007869	Flap laterale DX	1	Right dust flap
1	22	3007870	Flap laterale SX	1	Left dust flap
1	24	3010135	Coperchio ispezione pompa	1	Cover pump inspection
1	25	3012398	Chiave per chiusura	2	Locking key
1	26	3013012	Pedana laterale	1	Side platform
1	27	3012808	Lamiera pedana centrale	1	Side platform
1	28	3012833	Flap posteriore	1	Rear flap
1	29	3012834	Angolare sostegno gomma	1	Rubber locking angular
1	30	3012974	Lamiera di copertura	1	Cover plate
1	31	3013011	Pedana laterale	1	Side stand
1	32	3013065	Fondo copertura cruscotto	1	Cover plate
1	33	3013066	Parete di copertura	1	Wall covering
1	34	3013110	Pedana centrale	1	Central platform
1	35	4200373	Sedile con bracciolo	1	Seat
1	36	4200634	Perno D.20x71	2	Pin D.20x71
1	37	4200697	Fermo per cofano	1	Bonnet stop
1	38	3012963	Gomma lucida 45x10x923	1	Gasket 45x10x923
1	39	3008965	Gomma per cofano motore	1	Rubber bonnet
1	40	4200744	Coppiglia a molla cadmiata	2	Cotter pin
1	41	4200749	Tappo 8,5x20 con battuta	4	Cap 8,5x20
1	42	3008768	Nastro antisdrucciolo L:250mm	1	Anti-skid tape L=250 mm
1	43	3008362	Profilo musse 35x30x200	2	Gasket 30x35x200
1	44	4201358	Cerniera DIRAK foratura 30 X 55	4	Hinge
1	45	4201577	Lampeggiante flash 10-100 V	1	Rotating flash 10-100 V
1	46	4201757	Passacavo 18 x 16 x 3,5	1	Cable holder
1	49	4212570	Chiusura 1/4 di giro Maesan	2	Lock 1/4 turn
1	50	4300013	Coppiglia acc. UNI1336 D.2 X 15	1	Pin D.2x15 ISO 1234/Galvanized
1	51	4300036	Rondella D.8,4 X 17 UNI 6592 zinc.	23	Flat washer 8,4x17 ISO 7089 Galvanized
1	52	4300048	Rondella D.6,4 X 12 UNI 6592 zinc.	23	Flat washer 6,4x12 ISO 7089 Galvanized
1	53	4300049	Rondella D.4,3 X 9 UNI 6592 zinc.	16	Flat washer 4,3 x 9 ISO 7089 Galvanized
1	54	4300050	Vite TE M6 X 20 UNI 5739 - 8.8 zinc.	6	Hexagon screw M6x20 ISO 4017/Galvanized
1	55	4300051	Dado M6 autofrenante UNI 7473 zinc.	10	Hexagon self- locking nut M6 ISO 7040
1	56	4300052	Vite TCEI M8x20 UNI5931 8.8	4	Hexagon screw M8x20 ISO 7040/Galvanized
1	57	4300053	Dado M8 autofrenante UNI 7473 zinc.	18	Hexagon self- locking nut M8 ISO 7040
1	58	4300056	Dado M4 autofrenante UNI 7473 zinc.	16	Hexagon self- locking nut M4 ISO 7040
1	59	4300063	Grano M6X10	1	Screw M6x10
1	60	4300079	Dado medio M6 UNI 5588-6S zinc.	6	Hexagon nut M6 ISO 4032/Galvanized
1	62	4300126	Rondella D.8 x 24 UNI 6593 zinc.	5	Flat washer large series 8 x 24 ISO 7093 Galvanized
1	63	4300134	DADO AD ALETTE M6 ZINCATO UNI5448	8	Wing nut M6 DIN 315 Galvanized
1	64	4300148	Vite TBEI M6 X 10 UNI 7380 zinc.	16	Hexagon socket button cup screw M6x10 ISO 7380/Galvanized
1	65	4300158	Vite TBEI M4 X 12 UNI7380	16	Hexagon socket button cup screw M4x12 ISO 7380/Galvanized
1	66	4300173	VITE TBEI 6 X 20 ISO 7380 ZINC.	5	Hexagon socket button cup screw M6x20 ISO 7380/Galvanized
1	67	4300198	Rivetto in alluminio D.3,4 X 14	8	Rivet alluminium 3,4x14
1	68	4300222	Vite TBEI M8X20 UNI7380 zinc.	7	Hexagon socket button cup screw M8x20 ISO 7380/Galvanized
1	69	4300224	Rondella D.6,4 X 18 UNI 6593 zinc.	33	Flat washer large series 6,4 x 18 ISO 7093 Galvanized
1	70	4300228	DADO BOMBATO M6 UNI 5721 ZINC	5	Nut rolled M6 /Galvanized
1	71	4300246	Vite TCEI M8 X 16 UNI 5931 zinc.	8	Socket head cup screw M8x16 ISO4762 Galvanized
1	72	4300247	Vite TBEI M6 X 15 UNI 7380 zinc.	7	Hexagon socket button cup screw M6x15 ISO 7380/Galvanized
1	73	4300407	Rivetto a strappo esagonale M6	10	Hexagonal rivet M6
1	74	4300437	Vite TSPEI M6 X 20 UNI 5933 - 8.8 zinc	16	Screw M6x20
1	75	4300480	Spina elastica D.6X30 inox DIN1481	4	Sping pin D.6 x 30 ISO 8752 stainless steel
1	76	4300257	Dado basso M20 X 1,5 UNI 5589	1	Nut M20x1,5 ISO 4035/Galvanized
1	77	3002232	Cilindro sollevamento contenitore 120-155	1	Lifting cylinder for container
1	78	4300087	Vite TE M6 X 25 UNI 5739-8.8	3	Hexagon screw M6x25 ISO 4017/Galvanized
1	79	4300192	Rondella groover D. 6 UNI zinc.	1	Split washer D.6 DIN 127/ Galvanized

TAB. 2 120 DY-GPL-E



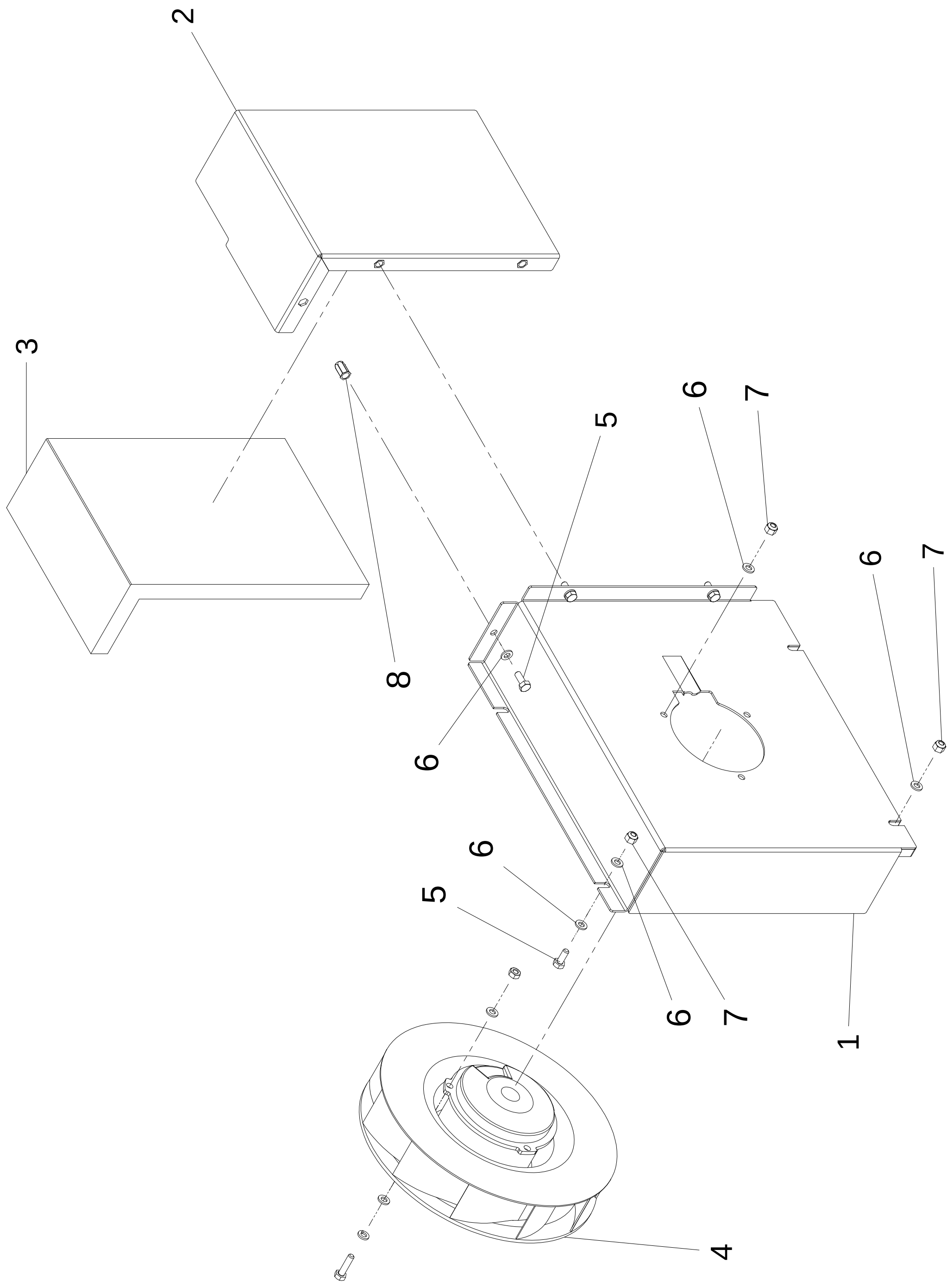
TAB.2 Hopper-bumper 120 DY-GPL-E

TAB.	POS.	Part Nr	DENOMINAZIONE	Q.ty	Description
2	1	2107783	ASTA DI SICUREZZA "C"	1	Safety rod
2	2	2107787	RISCONTRO ASTA DI SICUREZZA "C"	1	Safety rod feedback
2	3	2108259	BRACCIO CONTENITORE "C"	1	Hopper lifting arm
2	4	2113030	CONTENITORE "C"	1	Hopper
2	5	2113042	PARAURTI ANTERIORE "C"	1	Front bumper
2	6	2113305	COFANO ANTERIORE	1	Front bonnet
2	7	3000294	CAVO PER COFANO	2	Cable for bonnet KM
2	8	3001343	SUPPORTO PERNO RIBALTAMENTO	2	Pin tip support
2	9	3001748	FERMO PER COFANO	3	Stop for bonnet
2	10	3006921	PIASTRINA DI ATTACCO	2	Plate of attack
2	11	3007114	MOLLA FERMO ASTA	1	Safety rod spring
2	12	3007297	CERNIERA "STANLEY"	2	Hinge "Stanley"
2	13	3007789	SCIVOLO PER AGGANCIO ASTA	1	Safety rod housing
2	14	3008031	PIATTO FISSAGGIO COFANO	2	Fixing plate for bonnet
2	15	3008910	PARABORDI COPERCHIO CONTENITORE	4	Rubber for Hopper lifting arm
2	16	3010355	TAPPO PER MANIGLIA	1	Cap for handle
2	17	3011350	PROFILO MOUSSE 5X20 CORTO	2	Gasket 20x5x498
2	18	3011686	RISCONTRO	1	Abutment
2	19	3013041	COPERCHIO CONTENITORE	1	Hopper cover
2	20	3013292	PROFILO MOUSSE 5X20 LUNGO	2	Gasket 20x5x950
2	21	4200227	CLACSON 12V	1	Horn 12V
2	22	4200420	BOCCOLA GB 3030	2	Bush GB 3030
2	23	4200581	TAPPO	2	Cap
2	24	4200622	BUSSOLA K4 20 X 23 X 20	1	Socket K4 20x23x20
2	25	4200678	TIRANTE AGGANCIO COFANO	2	Tierod hooking bonnet
2	26	4200679	PIASTRINA DI ATTACCO E OCCHIELLO	2	Plate of attack and eyelet
2	27	4201289	TAMPONE IN GOMMA	2	Rubber buffer
2	28	4201358	CERNIERA DIRAK FORATURA 30 X 55	2	Hinge 30x55
2	29	4201699	CHIODINO ZINCATO CON RONDELLA	2	Brad galvanized with washer
2	30	4201713	MOLLA A TAZZA D40X20,4X1 DIN2093	4	Spring washer D.40x20.4x1 DIN 2093
2	31	4201756	COPRITESTA TONDO ABS NERO 18x1	1	Cap
2	32	4210313	MANIGLIA	1	Handle
2	33	4210314	CHIUSURA	1	Closure
2	34	4300029	DADO MEDIO M8 UNI 5588-6S ZINC.	2	Hexagon nut M8 ISO 4032/Galvanized
2	35	4300034	RONDELLA D.10,5 X 21 UNI 6592 ZINC.	10	Flat washer 10,5 x 21 ISO 7089 Galvanized
2	36	4300036	RONDELLA D.8,4 X 17 UNI 6592 ZINC.	3	Flat washer 8,4 x 17 ISO 7089 Galvanized
2	37	4300038	DADO AUTOFRENANTE M16 UNI7473	3	Hexagon self- locking nut M16 ISO 7040 Galvanized
2	38	4300039	RONDELLA D. 17X30 UNI 6592	5	Flat washer 17x30 ISO 7089 Galvanized
2	39	4300047	VITE TE M6X16 UNI5739 ZINC.	1	Hexagon screw M6x16 ISO 4017/Galvanized
2	40	4300048	RONDELLA D.6,4 X 12 UNI 6592 ZINC.	6	Flat washer 6,4 x 12 ISO 7089 Galvanized
2	41	4300049	RONDELLA D.4,3 X 9 UNI 6592 ZINC.	16	Flat washer 4,3 x 9 ISO 7089 Galvanized
2	42	4300050	VITE TE M6 X 20 UNI 5739 - 8.8 ZINC.	1	Hexagon screw M6x20 ISO 4017/Galvanized
2	43	4300051	DADO M6 AUTOFRENANTE UNI 7473 ZINC.	10	Hexagon self- locking nut M6 ISO 7040 Galvanized
2	44	4300053	DADO M8 AUTOFRENANTE UNI 7473 ZINC.	2	Hexagon self- locking nut M8 ISO 7040 Galvanized
2	45	4300056	DADO M4 AUTOFRENANTE UNI 7473 ZINC.	16	Hexagon self- locking nut M4 ISO 7040 Galvanized
2	46	4300079	DADO MEDIO M6 UNI 5588-6S ZINC.	10	Hexagon nut M6 ISO 4032/Galvanized
2	47	4300106	VITE TE M6 X 40 UNI 5739 - 8.8 ZINC.	1	Hexagon screw M6x40 ISO 4017/Galvanized
2	48	4300125	RONDELLA D.6,4 X 24 UNI 6593 ZINC.	1	Flat washer 6,4 x 24 ISO 7089 Galvanized
2	49	4300126	RONDELLA D.8 X 24 UNI 6593 ZINC.	18	Flat washer 8 x 24 ISO 7089 Galvanized
2	50	4300130	VITE TSPTC M4 X 16 UNI 7688-4 ZINC.	10	Screw M4x16 UNI UNI 7688-4 Galvanized
2	51	4300158	VITE TBEI M4 X 12 UNI7380	14	Hexagon socket button cup screw M4x12 ISO 7380/Galvanized
2	52	4300162	VITE TE M16X50 ZINCATA	2	Hexagon screw M16x50 ISO 4017/Galvanized
2	53	4300178	DADO MEDIO M10 UNI 5588-6S ZINC.	10	Hexagon nut M10 ISO 4032/Galvanized
2	54	4300204	VITE TE M10 X 30 UNI 5739 - 8.8 ZINC.	8	Hexagon screw M10x30 ISO 4017/Galvanized
2	55	4300210	VITE T.S.P.E.I. M8X20	2	Socket head flat countersunk M8x 20 ISO 10642/Galvanized
2	56	4300222	VITE TBEI 8 X 20 ISO 7380 ZINC.	8	Hexagon socket button cup screw M8x20 ISO 7380/Galvanized
2	57	4300224	RONDELLA D.6,4 X 18 UNI 6593 ZINC.	1	Flat washer 6,4 x 18 ISO 7089 Galvanized
2	58	4300247	VITE TBEI M6 X 15 UNI 7380 ZINC.	3	Hexagon socket button cup screw M6x15 ISO 7380/Galvanized
2	59	4300287	VITE TBEI M8 X 16 UNI 7380 ZINC.	3	Hexagon socket button cup screw M8x16 ISO 7380/Galvanized
2	60	4300346	VITE TE M8X16 UNI5739 ZINC.	10	Hexagon screw M8x16 ISO 4017/Galvanized
2	61	4300351	VITE TSPEI M6 X 25 UNI 5933 - 8.8 ZINC.	8	Socket head flat countersunk M6x25 ISO 10642/Galvanized
2	62	4300376	INSAERTO FILETTATO M8 ZINCATO SEMIESAGONALE	2	Nut M8
2	63	4300474	VITE TE M10X75 1/2 FILETTO UNI 5737 ZINCATA	1	Hexagon screw partially threaded M10x75 ISO 4014 Galvanized
		Part Nr	refers always to one single parts		



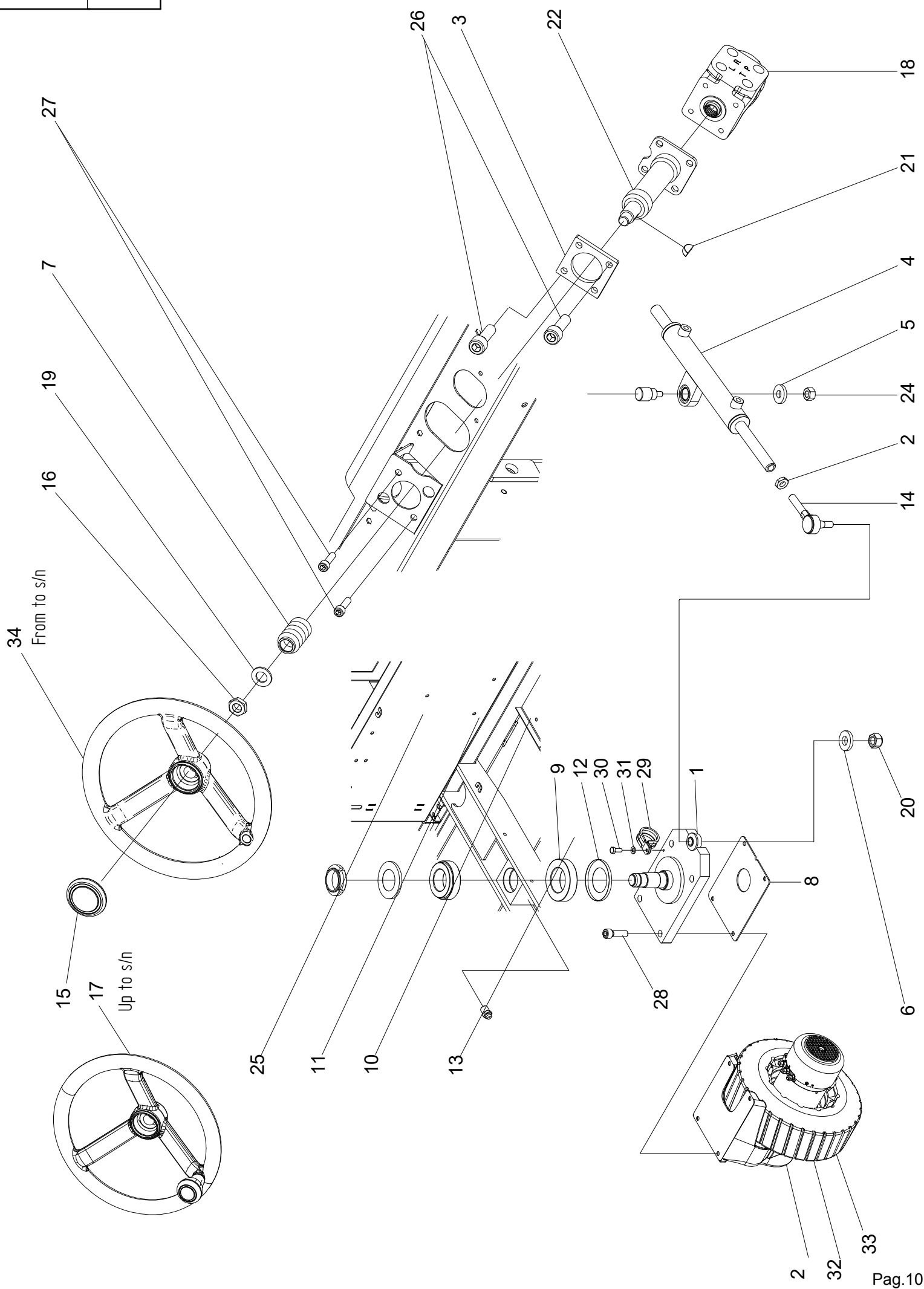
Tab.3 Filter.120 E

TAB.	POS.	Part Nr	DENOMINAZIONE	Q.ty	Description
3	1	2101731	SUPPORTO SCUOTIFILTRO	1	Filter shaker support
3	2A	2101845	GRUPPO FILTRANTE	1	Filtering group
3	2B	2103945	GRUPPO FILTRANTE VERDE	1	Green filtering group
3	3	3001675	2° ELEMENTO SCUOTIFILTRO	1	Second element
3	4	3001730	COLLARE SUPPORTO SCUOTIFILTRO	1	Collar support filter shaker
3	5	3002129	FERMO PER FILTRO A SACCHE	2	Textile filter fastner
3	6	3002207	GUARNIZIONE PER SCUOTIFILTRO	1	Filter shaker gasket
3	7	3002760	GOMMA PER MOTORE SCUOTIFILTRO	2	Rubber for filter shaker motor
3	8	3008377	PROFILO MUSSE 40X5X413	2	Gasket 40x5x413
3	9	3013292	PROFILO MUSSE 20X5X864	2	Gasket 20x5x993
3	10	4200279	PRESSACAVO PG9	1	Cable holder PG9
3	11	4200637	SCUOTIFILTRO ELETTRICO 36V	1	Elettric filter shaker 36V
3	12	4300012	DADO BASSO M8 UNI5589	4	Hexagon nut M8 ISO 4035/Galvanized
3	13	4300036	RONDELLA D.8,4 X 17 UNI 6592 ZINC.	8	Flat washer 8,4x17 ISO 7089 Galvanized
3	14	4300040	VITE TE M8 X 40 UNI 5739 - 8.8 ZINC.	4	Hexagon screw M8x40 ISO 4017/Galvanized
3	15	4300053	DADO M8 AUTOFRENANTE UNI 7473 ZINC.	2	Hexagon self-locking nut M8 ISO 7040
3	16	4300114	RONDELLA GROOVER D.8 UNI 1762 ZINC.	4	Split washer D.8 DIN 127/ Galvanized
3	17	4300293	VITE TE M8 X 25 UNI 5739 ZINC.	6	Hexagon screw M8x25 ISO 4017/Galvanized
3	18	6252624	ANTIVIBRANTE CIL. Ø20 M6	2	Anti vibration M6
3	19	2108383	KIT SEPARATORI FILTRO A SACCHE	1	Separators filter
3	20	3013355	PROFILO MUSSE 40X5X768	1	Gasket 40x5x768
		Part Nr	refers always to one single parts		



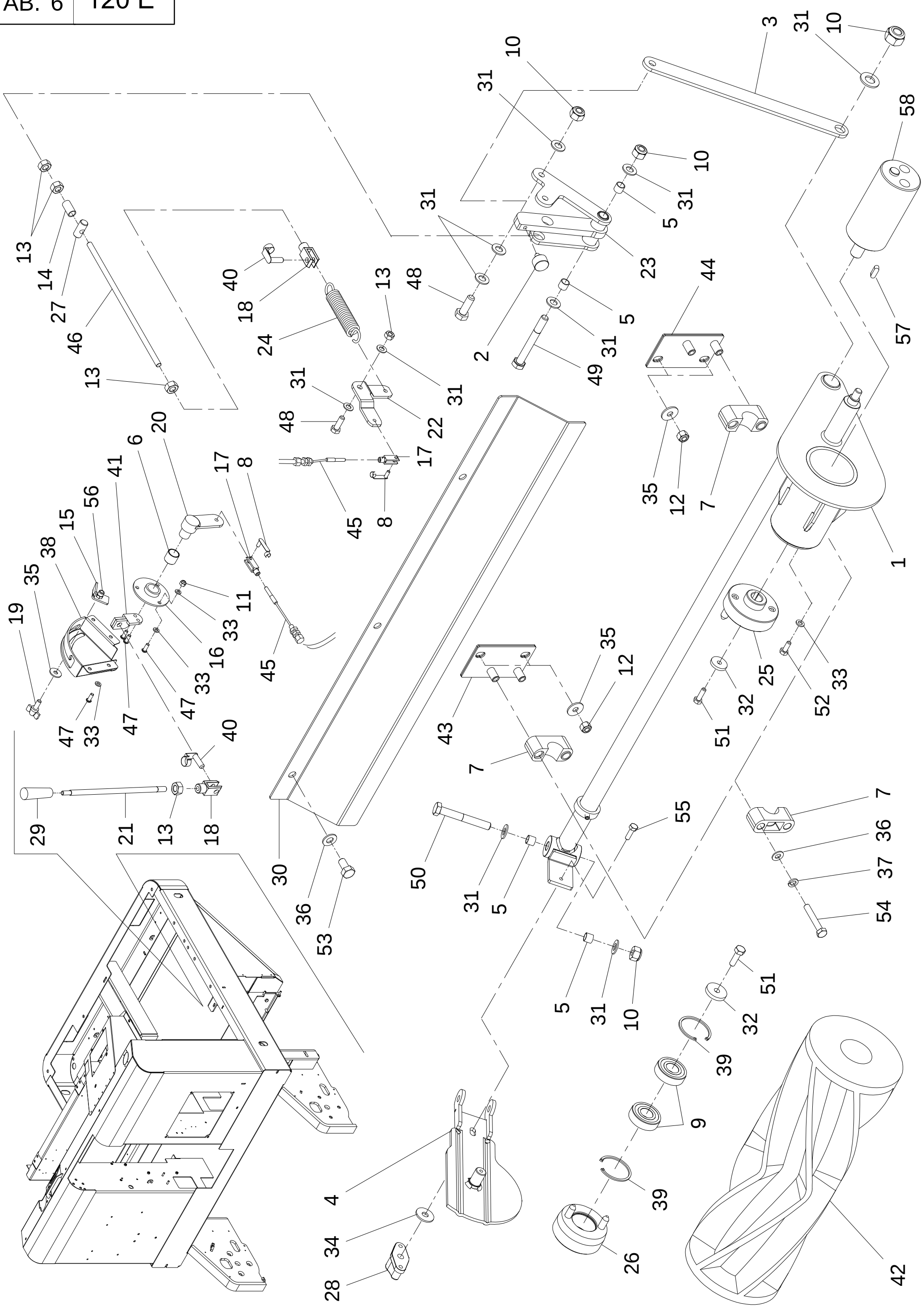
TAB.4 Fan 120 E

TAB.	POS.	Part Nr	DENOMINAZIONE	Q.ty	Description
4	1	2112232	SUPPORTO ELETTOVENTOLA	1	Electric fan support
4	2	3012233	SUPPORTO INSONORIZZANTE	1	Insonorizing support
4	3	3012234	INSONORIZZANTE PER VENTOLA ASPIRAZIONE	1	Insonorizing for aspiration fan
4	4	4201284	ELETTOVENTOLA 36V	1	Electric fan 36V
4	5	4300047	VITE TE M6X16 UNI 5739 ZINC.	6	Hexagon screw M6 x 16 ISO 4017 Galvanized
4	6	4300048	RONDELLA D.6,4 X 12 UNI 6592 / ZINC.	12	Flat washer 6,4 x 12 ISO 7089 Galvanized
4	7	4300051	DADO M6 AUTOFRENANTE UNI 7473 ZINC.	7	Hexagon self-locking nut M6 ISO 7040
4	8	4300407	Inserto filetato M6 zincato semiesagonale UNI 10448	3	Nut M6
		Part Nr	refers always to one single parts		



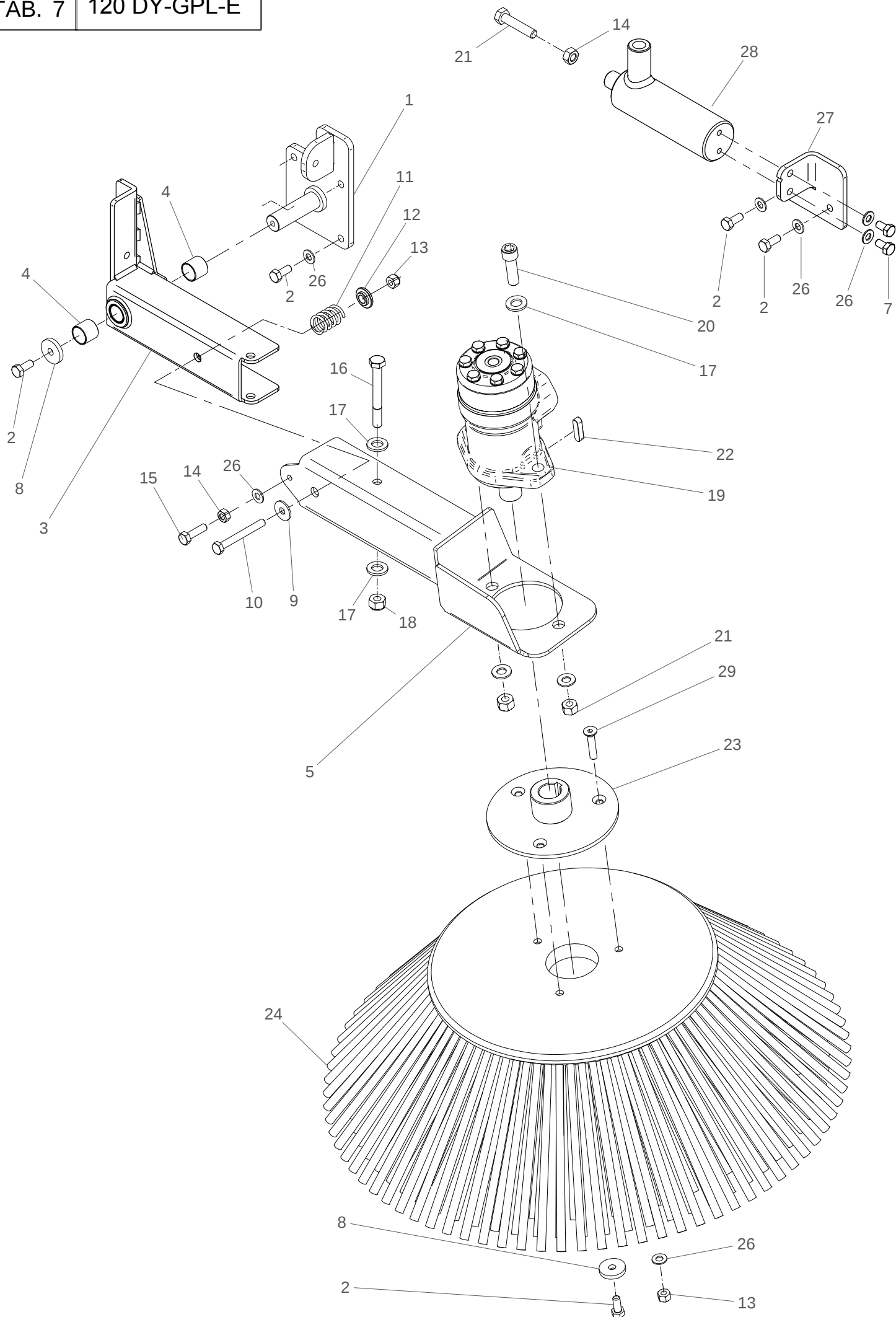
Tab.5 Rear whell 120 E

TAB.	POS.	Part Nr	DENOMINAZIONE	Q.ty	Description
5	1	2111210	SUPPORTO RUOTA POSTERIORE	1	Motor wheel hub support
5	2	3002678	CONTRODADO M16 X 1	1	Nut M16 x 1
5	3	3002686	DISTANZIALE PER IDROGUIDA	1	Spacer
5	4	3002708	CILINDRO IDROGUIDA	1	Power steering cylinder
5	5	3003639	RONDELLA D. 30 X 12,5 X 5 ZINC.	1	Washer D.30x12,5x5
5	6	3007917	RONDELLA D32X15X5	1	Washer for steering head
5	7	3008688	SOFFIETTO PER STERZO KM130/300	1	Bellows for steering
5	8	3011211	DISTANZIALE RUOTA POSTERIORE	1	Wheel spacer
5	9	4200414	CUSCINETTO A RULLI CONICI / 32008	1	Tapered roller bearing 32008
5	10	4200415	CUSCINETTO A RULLI CONICI / 32007	1	Tapered roller bearing 32007
5	11	4200417	ANELLO NILOS 32007 AV	1	Rotary shaft seal 32007 AV
5	12	4200418	ANELLO NILOS 32008 AV	1	Rotary shaft seal 32008 AV
5	13	4200687	INGRASSATORE M8X1,25	1	Greaser M8 x 1,25
5	14	4200785	TESTINA PER CILINDRO	1	Steering head
5	15	4200815	TAPPO PER VOLANTE	1	Steering wheel cup
5	16	4200817	DADO PER VOLANTE	1	Nut for steering head
5	17	4200820	VOLANTINO D.350	1	Steering Wheel D.350
5	18	4200830	IDROGUIDA OSPC 50	1	Power steering OSPC 50 cc
5	19	4200907	RONDELLA PER VOLANTE	1	Steering wheel washer
5	20	4200908	DADO PER TESTINA	1	Nut for steering head
5	21	4200943	LINGUETTA A DISCO 5 X 6.5 UNI 6606	1	Key hydraulic motor 6x6x20 ISO 773 B
5	22	4201092	COLONNETTA STERZO H=150	1	Steering stud bolt H=150
5	23	4210536	MOTORUOTA G2C 36V-2000W	1	Motorwheel G2C 36V-2000W
5	24	4300057	DADO M12 UNI 5588	1	Hexagon nut M12 ISO 4032/Galvanized
5	25	4300163	GHIERA BLOCK M35X1.5	1	Self locking ring M35x 1,5
5	26	4300248	VITE TCEI M10X30 UNI5931	2	Socket head cup screw M10x30 ISO4762 Galvanized
5	27	4300328	VITE TCEI M10X35 UNI 5931 - 8.8 ZINC.	2	Socket head cup screw M10x35 ISO4762 Galvanized
5	28	4312220	Vite TCEI M14 X 1,5 x 40 UNI 5932 - 8.8 Brunita	4	Socket head cup screw M14x1.5x40 DIN912
5	29	4201436	FASCETTA GOMMATA D.40	2	Rubber clamp D.40
5	30	4300047	VITE TE M6 X 16 UNI 5739-8.8 ZINC.	2	Hexagon screw M6x16 ISO 4017/Galvanized
5	31	4300048	RONDELLA D.6,4 X 12 UNI 6592 ZINC.	2	Flat washer large series D.6,4x 12 ISO 7093 Galvanized
5	32	4212230	Ruota D. 350 per motoruota	1	Wheel D. 350 for motorwheel
5	33	3012281	Ruota D. 350 Antitraccia per motoruota	1	No markig wheel D. 350 for motorwheel
5	34	3015352	Ruota D. 350 in WULK 3000 rosso raspato	1	Wheel D. 350 in WULK RED
		Part Nr	refers always to one single parts		



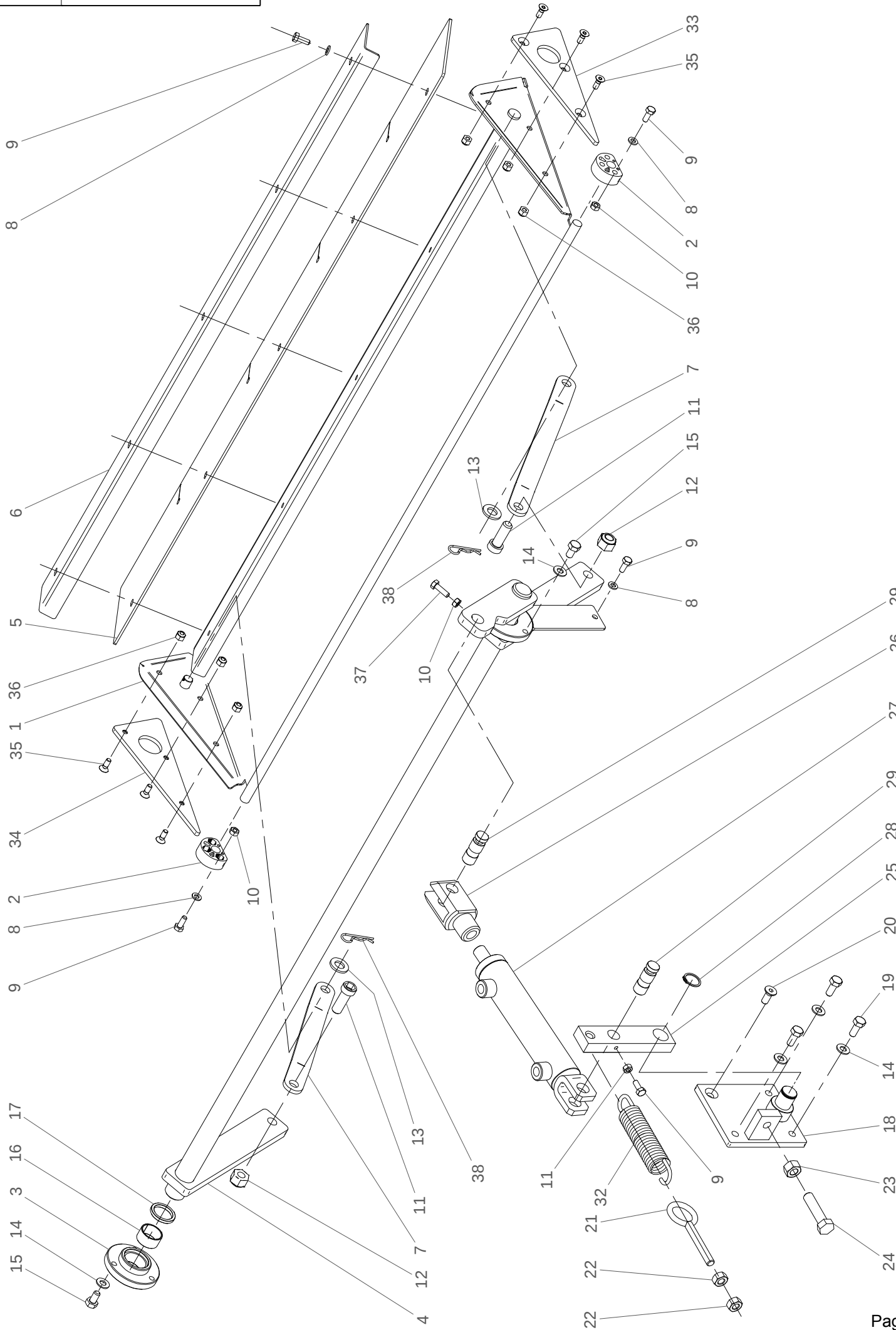
TAB. 6 Main broom 120 E

TAB.	POS.	Part Nr	DENOMINAZIONE	Qty	Description
6	1	2112939	ALBERO SUPPORTO SPAZZOLA CENTRALE	1	Boom support shaft
6	2	6252624	ANTIVIBRANTE M6	1	Anti vibration M6
6	3	3001724	ASTA SOLL.SPAZZOLA CENTRALE	1	Main broom lifting
6	4	2102221	BRACCIO MOBILE SPAZZ.CENTRALE	1	Movable arm for main broom
6	5	4200618	BUSSOLA K4 10X12X10	4	Bush K4 10x12x10
6	6	4200622	BUSSOLA K4 20X23X20	1	Bush K4 20x23x20
6	7	3004207	CAVALLOTTO D.25.5	4	Staple D.25,5
6	8	4200754	CLIP LUNGA M6	2	Clip long M6
6	9	4200005	CUSCINETTO SKF 6203 2RS D.40X17	2	Bearing SKF 6203 2RS D.40x17
6	10	4300070	DADO M10 AUTOFRENANTE UNI 7476-6S / ZINC.	4	Hexagon self- locking nut M10 ISO 7040
6	11	4300051	DADO M6 AUTOFRENANTE	3	Hexagon self- locking nut M6 ISO 7040
6	12	4300053	DADO AUTOFRENANTE M8 UNI7473 / 6S ZINC.	4	Hexagon self- locking nut M8 ISO 7040
6	13	4300178	DADO ESAG. MEDIO M10 UNI 5588 / ZINC.	5	Exagon nut M10 ISO 4032/Galvanized
6	14	3000937	DISTANZIALE	1	Spacer
6	15	3013669	FERMO LEVA SPAZZOLA CENTRALE	1	Central brush lever lever
6	16	2102870	FLANGIA MOZZO RINVIO	1	Flange hub deferment
6	17	4200755	FORCELLA LUNGA M6	2	Long fork M6
6	18	4200193	FORCELLA M10 UNI 1676 ZINC.	2	Fork M10
6	19	4213529	GALLETTO M8X20	1	Wing nut M8x20
6	20	2102876	LEVA COMANDO SPAZZOLA C.	1	Brusch control lever
6	21	3002829	LEVA COMANDO SPAZZOLA CENTRALE	1	Central brusch control lever
6	22	3002884	LEVA DI RINVIO	1	Deferment lever
6	23	2108442	LEVA DI RINVIO SPAZZOLA CENT.	1	Main broom idle lever
6	24	4200619	MOLLA A FILO D.3.5	1	Spring D.3,2
6	25	2101359	MOZZO DI TRASCINAMENTO "C"	1	Drive hub
6	26	2103312	MOZZO FOLLE	1	Idle hub
6	27	3001728	PERNO PER LEVA DI RINVIO	1	Lever pin
6	28	4201782	POMELLO M6 ROSSO	1	Red knob M6
6	29	4200978	POMELLO M8	1	Knob M8
6	30	3001858	PROTEZIONE PERNO SPAZZ.CENT.	1	Main broom shaft protection
6	31	4300034	RONDELLA D.10.5 X 21 ZINCATA UNI 6592 / ZINC.	10	Flat washer D 10,5x21 ISO 7089 Galvanized
6	32	3003221	RONDELLA D.6.5 X 23.5 X 4 ZINC.	2	Washer D.6,5x23,5x4 Galvanized
6	33	4300048	RONDELLA D.6,4X12 UNI 6592 / ZINC.	12	Flat washer D 6,4x12 ISO 7089 Galvanized
6	34	4300224	RONDELLA 6.4 X 18 UNI 6593 / ZINC.	1	Flat washer large series D.6,4x18 ISO 7093 Galvanized
6	35	4300126	RONDELLA 8X24 UNI 6592 ZINC.	5	Flat washer large series D.8x24 ISO 7093 Galvanized
6	36	4300036	RONDELLA 8.4 X 17 UNI 6592 / ZINC.	7	Flat washer D 8,4x17 ISO 7089 Galvanized
6	37	4300114	RONDELLA GROOVER D.8 UNI 1762 / ZINC.	4	Split washer D.8 DIN 127/ Galvanized
6	38	2102879	SCATOLA LEVA SOLLEVAMENTO SPAZZOLA CENTR.	1	Brake brush lift box central
6	39	4300031	SEEGER INTERNO D.40 UNI 7435	2	Seeger ring D.40 DIN 471
6	40	4200194	SERRAGGIO AUTO PER FORCELLA M10 UNI 1676	2	Fork locking M10
6	41	2102882	SNODO PER LEVA	1	Lever joint
6	42	3013225	SPAZZOLA CENTRALE PP 1.0 Bianco	1	Main broom double bristle
6	43	2103351	SUPPORTO CAVALLOTTO DX	1	Right support
6	44	2103350	SUPPORTO CAVALLOTTO SX	1	Left support
6	45	3002799	TIRANTE SOLLEVAMENTO SPAZZOLA CENTRALE	1	Central brush lifting tirane
6	46	3002131	TIRANTE SPAZZOLA CENTRALE	1	Tirane central brush
6	47	4300247	VITE TBEI M6X15 UNI 7380 ZINC.	9	Screw TBEI M10x30 ISO 4014 Galvanized
6	48	4300204	VITE TE M10X30 UNI 5739 - 8.8 ZINC.	2	Hexagon screw M10x30 ISO 4017/Galvanized
6	49	4300006	VITE TE M10X85 1/2 FIL. UNI 5737-8.8 ZINC.	1	Hexagon screw partially treaded M10x85 ISO 4014 Galvanized
6	50	4300474	VITE TE M10X75 1/2 FIL. UNI 5737 / ZINC.	1	Hexagon screw partially treaded M10x 75 ISO 4014 Galvanized
6	51	4300050	VITE TE M6X20 UNI 5739-8.8 / ZINC.	2	Hexagon screw M6x20 ISO 4017/Galvanized
6	52	4300047	VITE TE M6X16 UNI 5739-8.8 / ZINC.	3	Hexagon screw M6x16 ISO 4017/Galvanized
6	53	4300346	VITE TE M8X16 UNI 5739 8.8 / ZINC.	3	Hexagon screw M8x16 ISO 4017/Galvanized
6	54	4300213	VITE TE M8X50 UNI 5739-8.8 /ZINC.	4	Hexagon screw M8x50 ISO 4017/Galvanized
6	55	4300206	VITE TE M6X20 UNI 5739 INOX A2	1	Hexagon screw M6x20 ISO 4017 stainless steel
6	56	4300376	INSERTO FILETTATO M8 ZINCATO SEMIESAGONALE	1	Nut M8 Galvanized
6	57	4200104	LINGUETTA 5X15	1	Key 5x15
6	58	4201064	MOTORE SPAZZOLA CENTRALE OMM 40	1	Central bruch engine
		Part Nr	refers always to one single parts		



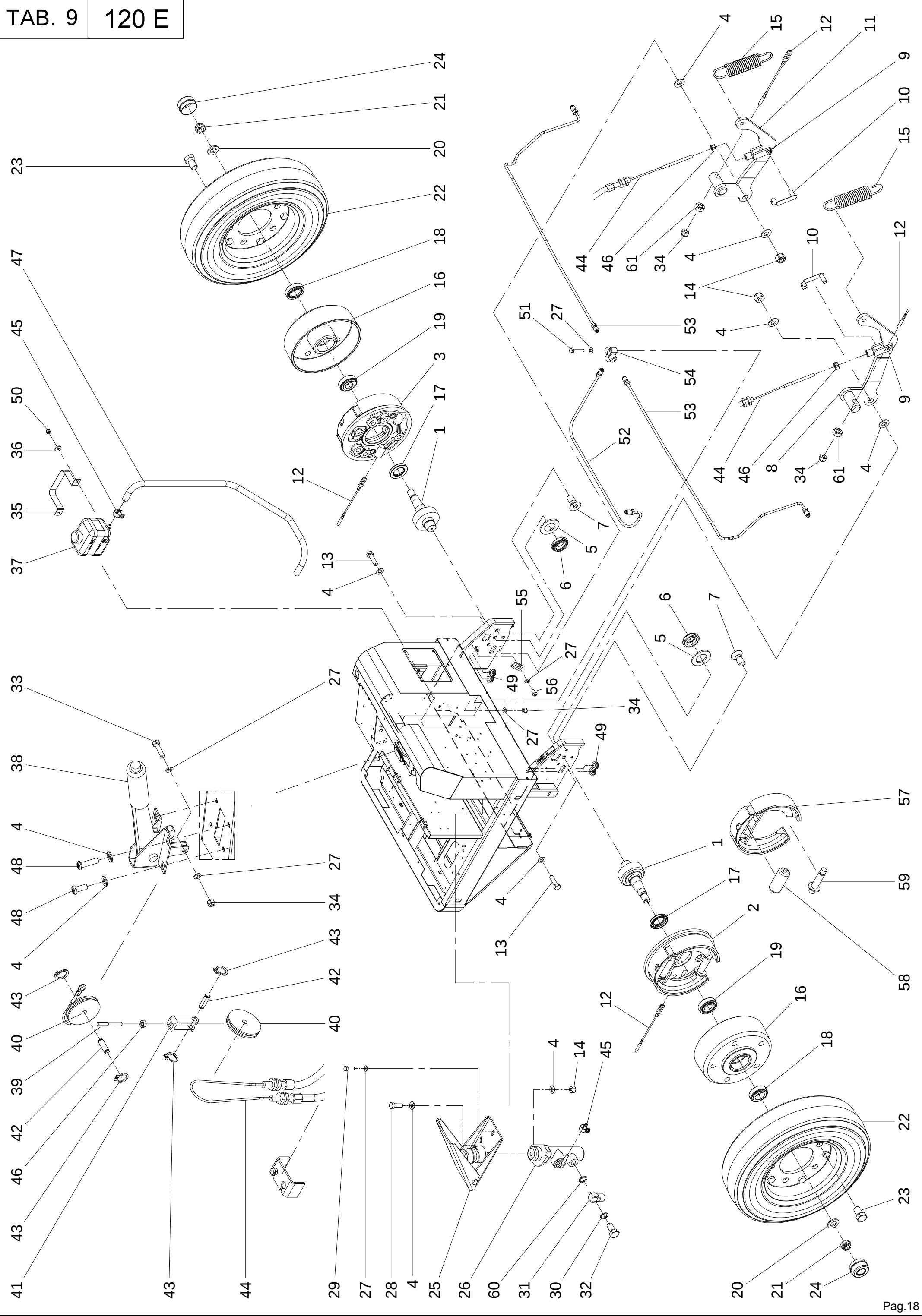
Tab.7 Side broom 120 DY-GPL-E

TAB.	Pos.	Part Nr	DENOMINAZIONE	Q.ty	Description
7	1	2101630	SUPPORTO SPAZZOLA DESTRA	1	Right broom support
7	2	4300033	VITE TE M8X20 UNI 5739-8.8 / ZINC	8	Hexagon screw M8x20 ISO 4017/Galvanized
7	3	2101498	BRACCIO SPAZZOLA LATERALE DESTRO	1	Right side broom arm
7	4	4200622	BUSSOLA K4 20 X 23X 20	2	Socket K4 20 x 23 x 20
7	5	2103314	BRACCIO SPAZZOLA DESTRO	1	Side broom arm
7	6	4300112	DADO M12 AUTOFRENANTE UNI 7473-6S ZINC.	2	Hexagon self- locking ISO 4017 Galvanized
7	7	4300346	VITE TE M8 X 16 UNI 5739 / ZINC.	2	Hexagon screw M8x16 ISO 4017/Galvanized
7	8	3000098	RONDELLA PER ALBERO DI COMANDO	2	Washer for drive shaft
7	9	4300126	RONDELLA D.8 X 24 UNI 6593/ ZINC.	3	Flat washer large series D.8x24 ISO 7093 Galvanized
7	10	4300061	VITE TE M8X70 UNI 5739-8.8 / ZINC.	1	Hexagon screw M8x70 ISO 4017/Galvanized
7	11	4200693	MOLLA RIENTRO SPAZZOLA	1	Spring
7	12	3001511	RONDELLA DI FERMO MOLLA	1	Spring stop washer
7	13	4300053	DADO M8 AUTOFRENANTE UNI 7473 ZINC	4	Hexagon self- locking nut M8 ISO 7040
7	14	4300029	DADO Medio M8 UNI 5588 ZINC.	2	Hexagon nut M8 ISO 4032 Galvanized
7	15	4300108	VITE TE M8X30 UNI 5739-8.8 / ZINC.	1	Hexagon screw M8x30 ISO 4017/Galvanized
7	16	4300006	VITE TE M10X85 UNI 5737-8.8 / ZINC	1	Hexagon screw M10x85 ISO 4017/Galvanized
7	17	4300058	RONDELLA D.13X 24 UNI 6592 / ZINC.	6	Flat washer13 x 24 ISO 7089 Galvanized
7	18	4300070	DADO AUTOBLOCCANTE M10	1	Hexagon self- locking nut M10 ISO 7040
7	19	4201065	MOTORE IDRAULICO OMP 200	1	Hydraulic motor OMP 200
7	20	4300209	VITE TCEI M12 X 40 UNI 5931-8.8 ZINC.	2	Socket head cup screw M12x40 ISO4762 Galvanized
7	21	4300213	VITE TE M8 X 50 UNI 5739-8.8 / ZINC.	1	Hexagon screw M8x50 ISO 4017/Galvanized
7	22	4200922	LINGUETTA A 8X7X32 UNI 6604	1	Tab
7	23	2101938	MOZZO SPAZZOLA LATERALE	1	Side broom hub
7	24	3007959	SPAZZOLA LATERALE DOPPIA SETOLA PP	1	Side broom PP
7	25				
7	26	4300036	RONDELLA D. 8,4 X 17 UNI 6592 /ZINC	10	Flat washer D 8,4x17 ISO 7089 Galvanized
7	27	3013055	SUPPORTO PER CILINDRO	1	Cylinder support
7	28	3003022	CILINDRO SPAZZOLE	1	Main broom cylinder
7	29	4300289	VITE TSPEI M8x40 UNI 5933 /ZINC.	3	Socket head flat countersunk M8x40 ISO10642 Galvanized
		Part Nr	refers always to one single parts		



Tab.8 Flap 120 DY-GPL-E

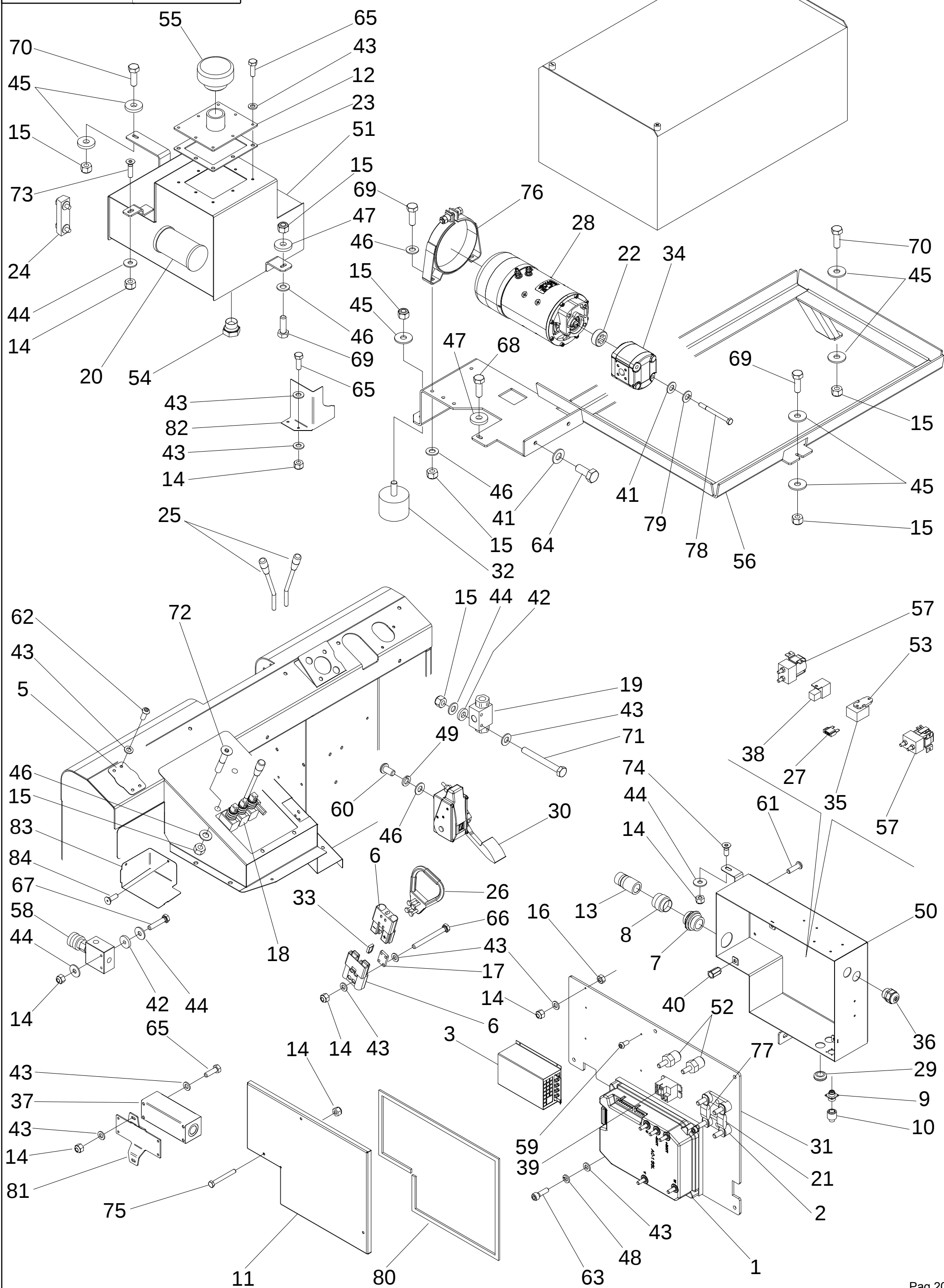
TAB.	POS.	Part Nr	DENOMINAZIONE	Qty	Description
8	1	2113048	FLAP	1	Flap
8	2	3001360	CERNIERA FLAP	2	Hinge
8	3	3001645	SUPPORTO ALBERO FLAP SX	1	Left flap shaft support
8	4	2113046	ALBERO APERTURA FLAP	1	Shaft to open flap
8	5	3013053	FLAP CONTENITORE	1	Flap hopper
8	6	3013052	FERMO GOMMA FLAP	1	Locking strip for flap
8	7	3001711	ASTA COMANDO FLAP	2	Rod to command flap
8	8	4300048	RONDELLA D.6,4 X 12 UNI 6592 / ZINC.	12	Flat washer 6,4 x 12 ISO 7089 Galvanized
8	9	4300047	VITE TE M6 X 16 UNI 5739-8.8 / ZINC.	13	Hexagon screw M6x16 ISO 4017/Galvanized
8	10	4300079	DADO ESAG. MEDIO M6 UNI 5588-6S / ZINC.	8	Exagon nut M6 ISO 4032/Galvanized
8	11	4300226	VITE TCEI M12 X 35 UNI 5931-8 / 8 ZINC.	2	Socket head cup screw M12x40 ISO4762 Galvanized
8	12	4300112	DADO M12 AUTOFRENANTE UNI / 7473-6S ZINC.	2	Hexagon self- locking nut M12 ISO 7040 Galvanized
8	13	4300058	RONDELLA D.13X 24 UNI 6592 / ZINC.	2	Flat washer13 x 24 ISO 7089 Galvanized
8	14	4300036	RONDELLA D.8,4 X 17 UNI 6592 / ZINC.	9	Flat washer D 8,4x17 ISO 7089 Galvanized
8	15	4300107	VITE TE M8 X 15 UNI 5739-8.8 / ZINC.	6	Hexagon screw M8x15 ISO 4017/Galvanized
8	16	4200421	BOCCOLA GB 2515	1	Bush BG 2515
8	17	4200419	ANELLO G25.32.4	1	Ring G25.32.4
8	18	2101722	PIASTRA CILINDRO FLAP	1	Flap cylinder plate with pin
8	19	4300033	VITE TE M8 X 20 UNI 5739-8.8 / ZINC.	3	Hexagon screw M8x20 ISO 4017/Galvanized
8	20	4300210	VITE TSPEI M8 X 20 UNI 5933-8 / 8 ZINC.	1	Socket head flat countersunk M8x 20 ISO 10642/Galvanized
8	21	4200632	OCCHIO FORGIATO M10	1	Grommet M10
8	22	4300178	DADO ESAG. MEDIO M10 UNI 5588 / ZINC.	2	Exagon nut M10 ISO 4032/Galvanized
8	23	4300057	DADO ESAG. MEDIO M12 UNI 5588-6S / ZINC.	1	Exagon nut M12 ISO 4032/Galvanized
8	24	4300207	VITE TE M12 X 50 UNI 5739 - 8 / 8 ZINC.	1	Hexagon screw M12x50 ISO 4017/Galvanized
8	25	3001355	ATTACCO PISTONE FLAP	1	Flap piston attachment
8	26	4200571	FORCELLA M16 UNI 1676	1	Fork M16
8	27	3002231	CILINDRO FLAP	1	Flap cylinder
8	28	4300103	SEEGER PER ALBERO D.20 UNI 7435	1	Seeger ring D.20 DIN 471
8	29	3001189	PERNO CILINDRO FLAP	2	Flap cylinder pin
8					
8					
8	32	4200416	MOLLA A TRAZIONE D.28	1	Spring D.28
8	33	3008120	SCIVOLO PER PARETE SX FLAP	1	Sealing for left side
8	34	3008121	SCIVOLO PER PARETE DX FLAP	1	Sealing for right side
8	35	4300444	VITE TSPEI M6X16UNI5933	6	Socket head flat countersunk M6x 16 ISO 10642/Galvanized
8	36	4300051	DADO M6 AUTOFRENANTE UNI 7473 / 6S ZINC.	6	Hexagon self- locking nut M6 ISO 7040
8	37	4300050	VITE TE M6 X 20 UNI 5739-8.8 / ZINC.	1	Hexagon screw M6x20 ISO 4017/Galvanized
8	38	4211220	Copiglia a molla d.2 L=50 DIN 11024 inox	2	Retaining Pin d.2 L=50 DIN 11024 inox
		Part Nr	refers always to one single parts		



TAB.9 Front wheel 120 E

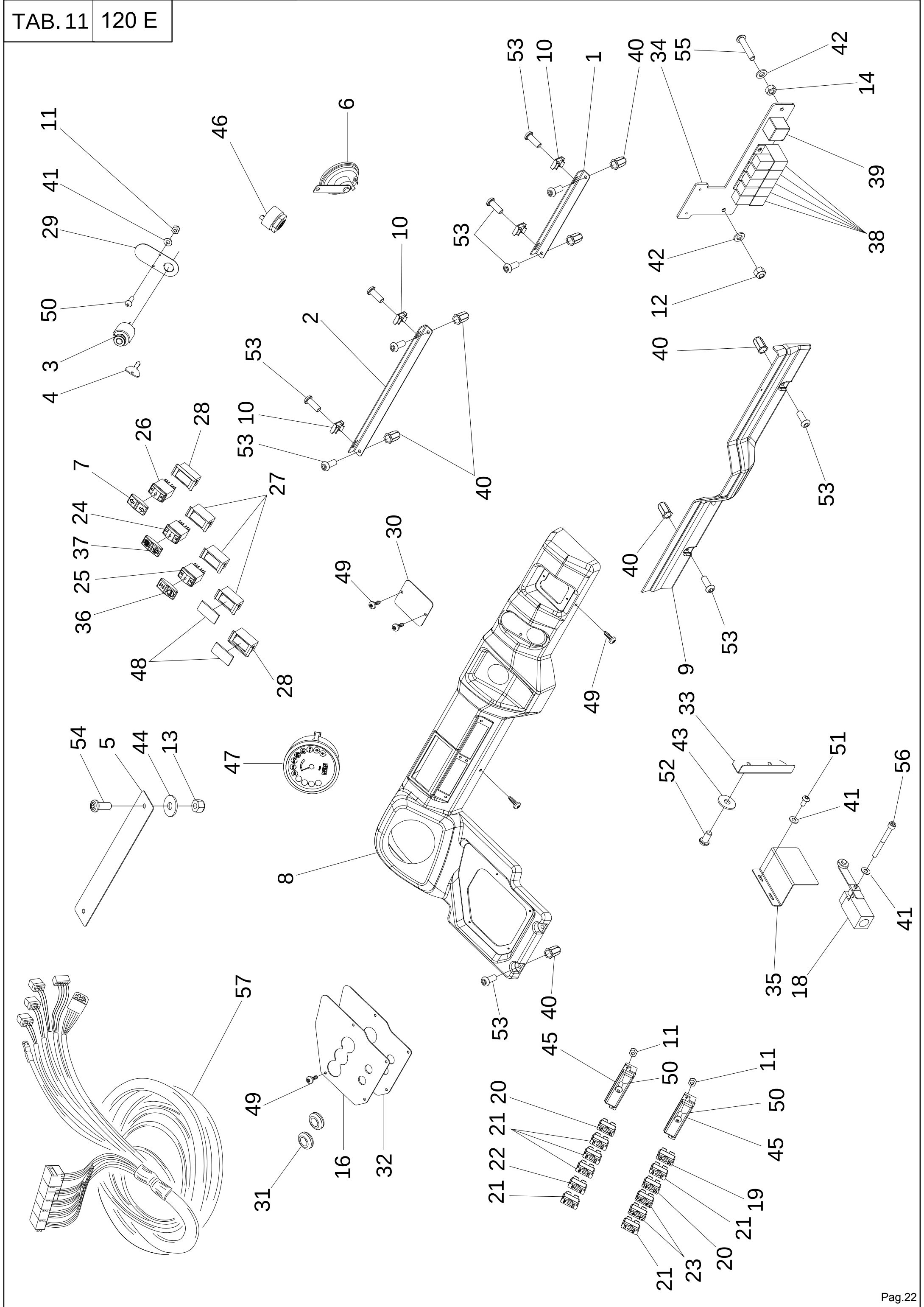
TAB.	POS.	Part Nr	DENOMINAZIONE	Q.ty	Description
9	1	3007667	PERNO SUPPORTO RUOTA ANTERIORE	2	Front wheel shaft
9	2	3007837	MASSA FRENO 180°40 DX CON LEVA	1	Right brake plate
9	3	3007838	MASSA FRENO 180°40 SX CON LEVA	1	Left brake plate
9	4	4300036	ROSETTA D.8,4 X 17 UNI 6592 / ZINC.	14	Flat washer D 8,4x17 ISO 7089 Galvanized
9	5	3007375	RONDELLA	2	Washer
9	6	4300447	GHIERA M25X1,5	2	Self locking ring M25x1,5
9	7	4300446	VITE TSPEI M14X30 UNI 5933/ ZINC	6	Socket head flat countersunk M14x30 ISO 10642/Galvanized
9	8	2108127	LEVA FRENO DX	1	Right brake lever
9	9	4200755	FORCELLA LUNGA M6	2	Fork M6
9	10	4200754	CLIP LUNGA M6	2	Fork locking M6
9	11	2108129	LEVA FRENO SX	1	Left brake lever
9	12	3007844	CAVETTO PER MASSA FRENO	2	Brake cable
9	13	4300108	VITE TE M8X30 UNI5739/ZINC.	2	Hexagon screw M8x30 ISO 4017/Galvanized
9	14	4300053	DADO AUTOFRENANTE M8 UNI 7473	4	Hexagon self- locking nut M8 ISO 7040
9	15	3008424	MOLLA TRAZIONE TR46	2	Spring TR46
9	16	3007471	MOZZO FOLLE RUOTA ANTERIORE	2	Front wheel hub
9	17	4200880	PARAOLIO 30.47.7	2	Rotary shaft seal 30.47.7 ISO 6194
9	18	4200879	CUSCINETTO CONICO 32005	2	Tapered roller bearing 32005
9	19	4200876	CUSCINETTO CONICO 30204	2	Tapered roller bearing 30204
9	20	4300039	RONDELLA D. 17X30 UNI 6592/ ZINC	2	Flat washer D.17x30 ISO 7089 Galvanized
9	21	4300244	DADO AUTOBLOCCANTE M16X1,5	2	Self locking nut M16x1,5
9	22	3002181	RUOTA SUPERELASTICA 15.4 1/2-8	2	Wheel
9	23	3013664	COLONNETTA SERRAGGIO RUOTE M16x1,5	10	Fixing screw M16x1,5
9	24	4200883	CALOTTINA COPRIMOZZO DIAM.47	2	Cover hub bowl diam.47
9	25	4200787	PEDALE FRENO	1	Brake pedal
9	26	4200788	POMPA FRENO	1	Brake pump
9	27	4300048	RONDELLA 6,4X12 UNI 6592 ZINC.	12	Flat washer D 6,4x12 ISO 7089 Galvanized
9	28	4300293	VITE TE M8 X 25 UNI 5739-8.8/ZINC.	2	Hexagon screw M6x25 ISO 4017/Galvanized
9	29	4300050	VITE TE M6 X 20 UNI 5739-8.8/ZINC.	3	Hexagon screw M8x20 ISO 4017/Galvanized
9	30	4211215	RONDELLA IN RAME D.18X14 SP.1,5	1	Copper washer D.18x14x1,5
9	31	4200790	RACCORDO AD OCCHIO M10X1,25	1	Eye shaped union M10x1,25
9	32	4200884	Raccordo forato M12x1,5	1	Union 12x1,5
9	33	4300087	VITE TE M6X25 UNI 5739 -8.8/ZINC.	1	Hexagon screw M6x25 ISO 4017/Galvanized
9	34	4300051	DADO M6 AUTOFRENANTE UNI 7473 ZINC.	7	Hexagon self- locking nut M6 ISO 7040
9	35	4200783	STAFFA PER SERBATOIO	1	Bracket for tank
9	36	4300045	RONDELLA D.5.5X15 UNI 6593/ ZINC.	2	Flat washer large series D.5,5x15 ISO 7093 Galvanized
9	37	4200784	SERBATOIO OLIO FRENO	1	Tank for oil brake
9	38	4200642	LEVA FRENO	1	Brake lever
9	39	3002555	CAVETTO FRENO A MANO	1	Handbrake cable
9	40	3007060	CARRUCOLA FRENO	2	Pulley
9	41	3001656	FORCELLA SUPPORTO CARRUCOLA	1	Fork pulley support
9	42	3002265	PERNO PER FORCELLA CARRUCOLA	2	Pulley fork pin
9	43	4300327	ANELLO PER ALBERO D. 8 UNI 7434	4	Seeger ring D.8 DIN 6799
9	44	3008381	FUNE FRENO A MANO	1	Hand brake cable
9	45	4210747	FASCETTA A COLLARINO D.11-13	2	Hose clamp D.11-13
9	46	4300079	DADO MEDIO M6 UNI 5588-6S	3	Hexagon nut M6 ISO 4032/Galvanized
9	47	3008365	TUBO OLIO IN GOMMA	1	Rubber hose
9	48	4300287	VITE TBEI M8X15 ISO 7380 ZINC	4	Screw TBEI M8 X 15 ISO 7380/Galvanized
9	49	4201757	PASSACAVO 18 X 16 X 3,5	4	Cable holder
9	50	4300041	DADO M5 AUTOFRENANTE UNI 7473	2	Hexagon self- locking nut M5 ISO 7040
9	51	4300185	VITE TE M6 X 30 UNI 5739-8.8/ZINC.	1	Hexagon screw M6x30 ISO 4017/Galvanized
9	52	3008379	TUBO IN RAME 3X5	1	Copper pipe 3x5
9	53	3008380	TUBO IN RAME 3X5	2	Copper pipe 3x5
9	54	4200789	RACCORDO A 3 VIE M10X1,25	1	Tree- way connector with connection stop
9	55	3008052	FERMO PER TUBO FRENO	2	Stop for copper pipe
9	56	4300148	VITE TBEI M6X10 ISO 7380 / ZINC	2	Screw TBEI M6 X 10 ISO 7380/Galvanized
9	57	3008396	COPPIA GANASCIE FRENO CON LEVA	2	Pair brake shoes with lever
9	58	3007836	CILINDRETTO SPECIALE D.15,87	2	Brake cylinder D.15,87
9	59	3008395	REGISTRO MASSA FRENO CON LEVA	2	Adjustment brake lever
9	60	4200718	RONDELLA IN RAME 1/4"	1	Copper washer 1/4 "
9	61	4300029	DADO ESAGONALE M8 UNI5588 ZINC.	2	Hexagon nut M8 ISO 4032/Galvanized
9	62	4201434	FASCETTA GOMMATA D.12	1	Rubber hose clamp D.20
		Part Nr	refers always to one single parts		

TAB. 10 120 E



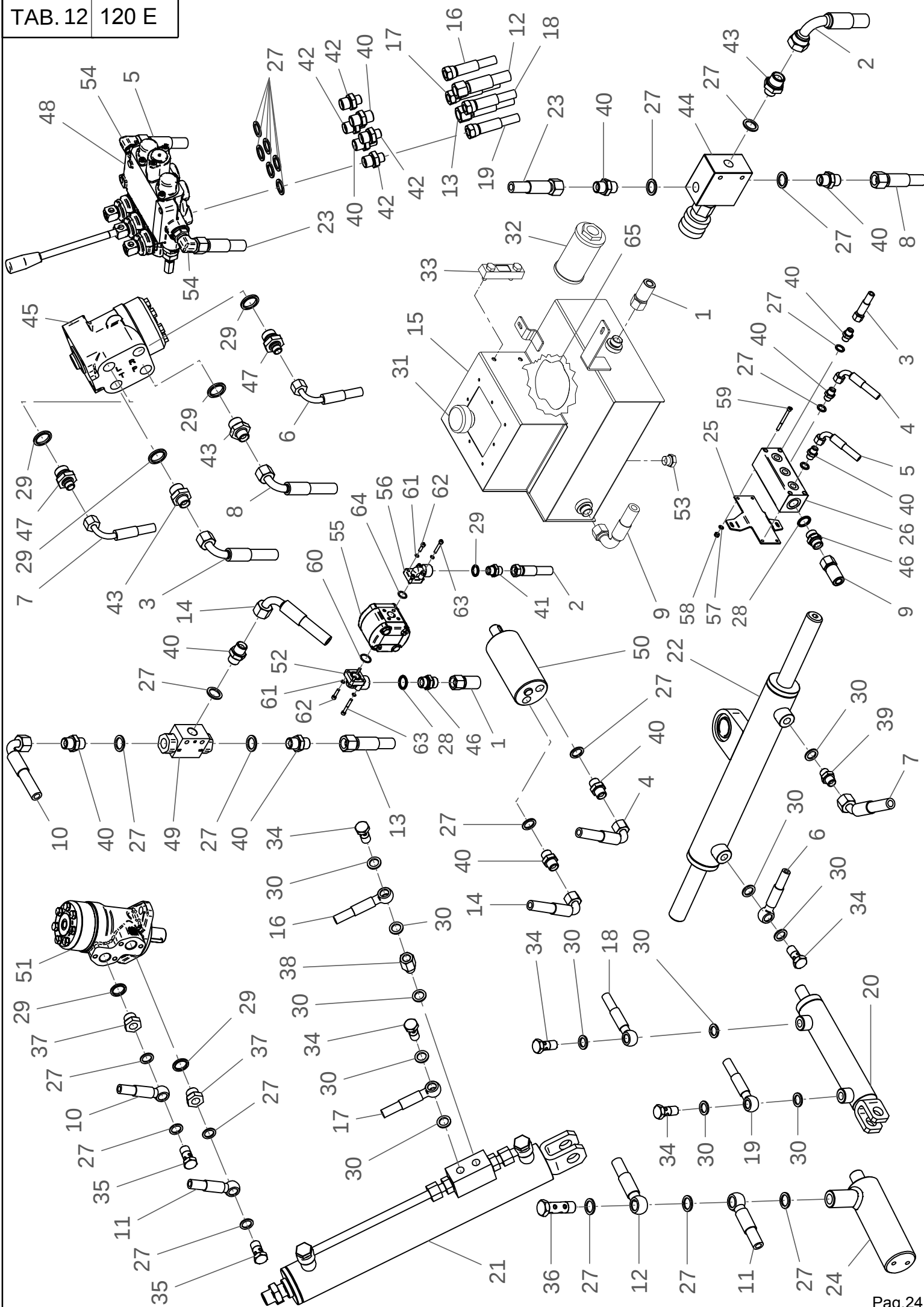
Tab. 10 Electric motor 120 E

TAB.	POS.	Part Nr	DENOMINAZIONE	Q.ty	Description
10	1	3012985	Inverter AC-1 36-48/220A SSL	1	Inverter AC-1 36-48/220A SSL
10	2	4200768	Supporto doppio per fusibile	2	Double support for fuse
10	3	4212223	Alimentatore 36/12V	1	Power supply 36/12V
10	5	3003466	Chiusura tubo aspirazione	1	Suction hose end
10	6	4200477	Connettore Anderson SBE 160 A grigio	2	Connector Anderson SBE 160 A gray
10	7	4212227	Connettore Cannon ITT 12+19 vie p.f. da pannello	1	Connector Cannon ITT 12+19 - panel
10	8	4212228	Connettore Cannon ITT 12+19 vie p.m. volante	1	Connector Cannon ITT 12+19 - steering wheel
10	9	4212225	Connettore Cannon ITT 8 vie p.f. da pannello	1	Connector Cannon ITT 8 - panel
10	10	4212226	Connettore Cannon ITT 8 vie p.m. volante	1	Connector Cannon ITT 8 - steering wheel
10	11	3011119	Coperchio scatola comp.elettrici	1	Electrical box cover
10	12	2102286	Coperchio serbatoio	1	Oil tank cover
10	13	4212229	Corazza per connettore Cannon ITT 12+19 volante	1	Armor for connector Cannon ITT 12+19 - steering wheel
10	14	4300051	Dado M6 autofrenante UNI 7473 zinc.	19	Hexagon self-locking nut M8 ISO 7040
10	15	4300053	Dado M8 autofrenante UNI 7473 zinc.	12	Hexagon self-locking nut M8 ISO 7040
10	16	4300079	Dado medio M6 UNI 5588-6S zinc.	4	Hexagon nut M6 ISO 4032 Galvanized
10	17	3009091	Distanziale per spina elettrica	1	Connector spacer
10	18	4200985	Distributore 3 leve	1	Distributor with three levers
10	19	4200986	Valvola selettiva 3/8"	1	Selector valve 3/8"
10	20	4200614	Filtro olio da 1"-25M in carta	1	Suction oil filter 1" 25 micron
10	21	4212260	Fusibile Tipo MEGA 100A	1	Fuse Type MEGA 100A
10	22	4212212	Giunto	1	Electric coupling pump - electric motor
10	23	3002657	Guarnizione coperchio	1	Gasket
10	24	4200615	Indicatore ottico di livello	1	Level indicator
10	25	3002692	Leva distributore	1	Leverage distributor
10	26	4201155	Maniglia per SBE rossa	1	Red handle
10	27	4201038	Maxi fusibile da 30 A verde	1	Maxi fuse 30A GREEN
10	28	4210537	Motore elettrico 36V-2200 W	1	Electric motor 36V-2200 W
10	29	4201805	Passacavo 18 x 25 x 3,7	5	Cable holder
10	30	4210614	Pedale 1 leva Mod.1HM Mouse	1	Pedal lever 1 Mod.1HM Mouse
10	31	3012222	Piastra supporto componenti elettrici	1	Electrical component support plate
10	32	4200673	Piedino antivibrante 40X30 M8 45 Sh	2	Silent block 40X30 M8 45 Sh
10	33	4201864	Polarizzatore per presa spina SB160	1	Polarizer for Anderson connector
10	34	4212211	Pompa ingranaggi	1	Gear pump
10	35	4201961	Porta fusibile maxi MTA	1	Maxi fuse holder MTA
10	36	4201990	Pressacavo Pg21 Nero	2	Cable holder black PG 21
10	37	3013328	Raccoglitore olio "C"	1	Oil collector
10	38	4201029	Relè 12V 70 Ah	1	Relay 12V 70 Ah
10	39	4201952	Relè 36 V 30A Tyco	1	Relay 36 V 30A Tyco
10	40	4300407	Rivetto a strappo esagonale M6	3	Rivet M6
10	41	4300034	Rondella D.10,5 X 21 UNI 6592 zinc.	4	Flat washer large series 10,5x21 ISO7093 Galvanized
10	42	3003221	RONDELLA D.23,5X6,5 ZINCATA	4	Flat washer D.23,5x6,5 Galvanized
10	43	4300048	Rondella D.6,4 X 12 UNI 6592 zinc.	36	Flat washer large series D.6,4x 12 ISO 7093 Galvanized
10	44	4300224	Rondella D.6,4 X 18 UNI 6593 zinc.	8	Flat washer large series D.6,4x18 ISO 7093 Galvanized
10	45	4300126	Rondella D.8 x 24 UNI 6593 zinc.	8	Flat washer large series D.8x24 ISO 7093 Galvanized
10	46	4300036	Rondella D.8,4 X 17 UNI 6592 zinc.	12	Flat washer D.8,4x17 ISO 7089 Galvanized
10	47	3000111	Rondella D.8,5 x 23,5 x 4	2	Flat washer D.8,5 x 23,5 x 4
10	48	4300192	RONDELLA GROOVER D.6	2	Split washer D.6 DIN 127/ Galvanized
10	49	4300114	Rondella groover D.8 UNI 1762 zinc.	3	Split washer D.8 DIN 127/ Galvanized
10	50	2111693	Scatola componenti elettrici	1	Electrical box
10	51	2113016	Serbatoio olio "c"	1	Tank oil
10	52	4200105	Supporto per fusibile M8x20	2	Fuse support M8x20
10	53	4201960	Supporto per fusibile MTA	1	Maxi fuse holder MTA
10	54	4201716	Tappo 1/2" M (BSP 60°)	1	Cap 1/2" M (BSP 60°)
10	55	4200508	Tappo serbatoio olio con sfiato 1" 1/4	1	Air hole cap 1" 1/4"
10	56	2113015	Telaio supporto batteria	1	Battery support chassis
10	57	4210615	Teleruttore generale 150 A 36 V	2	General Solenoid 150 A 36 V
10	58	4200813	VALVOLA PRIORITARIA 3/8"	1	Priority valve 3/8"
10	59	4300438	VITE TCEI M3X10	4	Socket head cap screw M3x10 ISO 4762 Galvanized
10	60	4300287	VITE TBEI M8X16 ZINCATA	3	Hexagon socket button cap screw M8x16 ISO 7380 Galvan.
10	61	4300173	VITE TBEI 6 X 20 ISO 7380 ZINC.	4	Hexagon socket button cap screw M6x20 ISO 7380 Galvan.
10	62	4300247	Vite TBEI M6 X 15 UNI 7380 zinc.	4	Hexagon socket button cap screw M6x15 ISO 7380 Galvan.
10	63	4300174	VITE TCEI M6X20	2	Socket head cap screw M6x20 ISO 4762 Galvanized
10	64	4300007	Vite TE M10 X 25 UNI 5739 - 8.8 zinc.	2	Hexagon screw M10x25 ISO 4017 Galvanized
10	65	4300050	Vite TE M6 X 20 UNI 5739 - 8.8 zinc.	12	Hexagon screw M6x20 ISO 4017 Galvanized
10	66	4300071	Vite TE M6 X 40 UNI 5739 - 8.8 zinc.	4	Hexagon screw M6x40 ISO 4017 Galvanized
10	67	4300208	VITE TE M6 X 60 UNI 5739 ZINC.	2	Hexagon screw M6x60 ISO 4017 Galvanized
10	68	4300033	Vite TE M8 X 20 UNI 5739 - 8.8 zinc.	1	Hexagon screw M8x20 ISO 4017 Galvanized
10	69	4300293	Vite TE M8 X 25 UNI 5739 zinc.	4	Hexagon screw M8x25 ISO 4017 Galvanized
10	70	4300108	Vite TE M8 X 30 UNI 5739 zinc.	2	Hexagon screw M8x30 ISO 4017 Galvanized
10	71	4300359	Vite TE M8 x 70 UNI 5739 zinc.	2	Hexagon screw M8x70 ISO 4017 Galvanized
10	72	4300366	Vite TSPEI M8 X 45 UNI 5933 1/2 fil.	2	Socket head flat countersunk M8x45 ISO 10642 Galvanized
10	73	4300351	Vite TSPEI M6 X 25 UNI 5933 - 8.8 zinc.	1	Socket head flat countersunk M6x25 ISO 10642 Galvanized
10	74	4300116	Vite TSPEI M6X16	1	Socket head flat countersunk M6x16 ISO 10642 Galvanized
10	75	4300087	Vite TE M6 X 25 UNI 5739-8.8	3	Hexagon screw M6x25 ISO 4017 Galvanized
10	76	4211010	Fascia supporto motore	1	Arm Sling electric motor
10	77	4210432	Fusibile Tipo MEGA 125A	1	Fuse Type MEGA 125A
10	78	4300111	Vite TE M10 X 110 1/2 FIL.UNI 5737-8.8 Z	2	Hexagon screw M10x110 ISO 4017/Galvanized
10	79	4300256	RONDELLA GROOVER D.10	2	Split washer D.10 DIN 127/ Galvanized
10	80	3013771	Profilo mousse 5 x 12 x 1560	1	Mousse 5 x 12 x 1560
10	81	3012736	Adattatore per raccoglitore	1	Adaptor for oil collector
10	82	3014079	Lamiera protezione motore elettrico	1	Electric motor protection
10	83	3014831	Protezione vano motore	1	Engine compartment protection
10	84	4300212	Vite TSPEI M5 X 15 UNI 5933 - 8.8 zinc.	2	Socket head flat countersunk M5x15 ISO 10642 Galvanized
		Part Nr	refers always to one single parts		



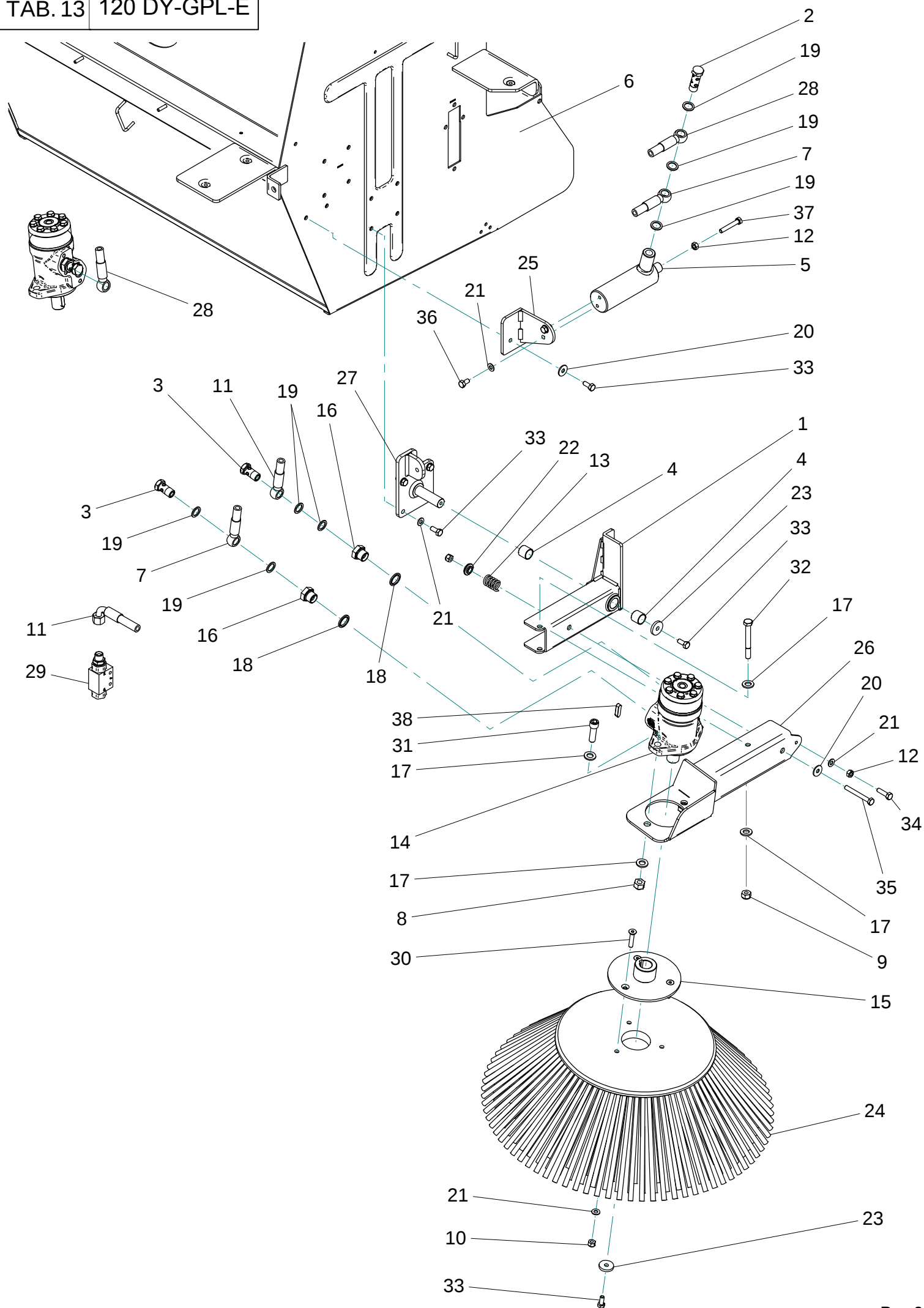
TAB. 11 Dabsboard 120 E

TAB.	POS.	PART Nr	DENOMINAZIONE	Q.ty	Description
11	1	3011253	ANGOLARE ANTERIORE CORTO	1	Dashboard holder
11	2	3011254	ANGOLARE ANTERIORE LUNGO	1	Dashboard holder
11	3	4201953	BLOCCHETTO AVVIAMENTO	1	Ignition switch
11	4	4201225	CHIAVE QUADRO AVVIAMENTO	1	Starting key
11	5	3013327	CHIUSURA FORI VOLATA	1	Closing holes
11	6	4200653	CLACSON 36V	1	Klaxon 36 V
11	7	4211081	COPRI INTERRUETTORE FRECCIA AVANTI-INDIETRO	1	Switch cover indicator forward-back
11	8	3010908	CRUSCOTTO 160	1	Dashboard
11	9	3012921	CRUSCOTTO INFERIORE	1	Bulkhead
11	10	4300155	DADO IN GABBIA M6	4	Cage nut M6
11	11	4300056	DADO M4 AUTOFRENANTE UNI 7473 ZINC.	6	Hexagon self-locking nut M4 ISO 7040
11	12	4300051	DADO M6 AUTOFRENANTE UNI 7473 ZINC.	2	Hexagon self-locking nut M6 ISO 7040
11	13	4300053	DADO M8 AUTOFRENANTE UNI 7473 ZINC.	2	Hexagon self-locking nut M8 ISO 7040
11	14	4300079	DADO MEDIO M6 UNI 5588-6S ZINC.	2	Hexagon nut M6 ISO 4032/Galvanized
11	16	3013667	ETICHETTA PIASTRA LEVE	1	Label plate levers
11	18	4201779	FINECORSIA	1	Limit switch
11	19	4200250	FUSIBILE 10 A	1	Fuse 10A
11	20	4200238	FUSIBILE 15 A	2	Fuse 15A
11	21	4201846	FUSIBILE 3 A	6	Fuse 3A
11	22	4201946	FUSIBILE 5 A	1	Fuse 5A
11	23	4200930	FUSIBILE 7.5 A	2	Fuse 7.5A
11	24	4210284	INTERRUTTORE 0-1 INSTABILE	1	Switch (horn)
11	25	4210285	INTERRUTTORE 1-0-2	1	Switch (fan & filter shaker)
11	26	4211082	INTERRUTTORE BASCULANTE 1-0-2	1	Switch
11	27	4210282	MOSTRINA CENTRALE	3	Switch box
11	28	4210283	MOSTRINA ESTERNA	2	Switch box
11	29	3008054	PANNELLINO CHIAVE AVVIAMENTO	1	Ignition key panel
11	30	3012920	CHIUSURA CRUSCOTTO	1	Dashboard closing
11	31	4201805	PASSACAPO 18 X 25 X 3,7	2	Cable holder 18x25x3,7
11	32	3013013	PIASTRA LEVE	1	Plate levers
11	33	3008958	PIATTO PER REGOLAZIONE MICRO	1	Adjusting plate for limit switch
11	34	3011256	PIATTO SUPPORTO RELÈ	1	Support plate relay
11	35	3008957	PROTEZIONE PER MICRO CONTENITORE	1	Limit switch protection
11	36	4210287	INTERRUTTORE CLACSON	1	Horn switch
11	37	4210288	PULSANTE VENTOLA E SCUOTIFILTRO	1	Switch cover (fan & filter shaker)
11	38	4201795	RELÈ 12V 10/20 A	5	Relay 12V 10/20 A
11	39	4200230	RELÈ BOSCH 12V 30/40A	1	Relay 12V 30/40 A
11	40	4300407	RIVETTO A STRAPPO ESAGONALE M6	8	Hexagonal rivet M6
11	41	4300049	RONDELLA D.4,3 X 9 UNI 6592 ZINC.	6	Flat washer D.4,3x9 ISO 7089 Galvanized
11	42	4300048	RONDELLA D.6,4 X 12 UNI 6592 ZINC.	4	Flat washer 6,4x12 ISO 7089 Galvanized
11	43	4300224	RONDELLA D.6,4 X 18 UNI 6593 ZINC.	2	Flat washer large series 6,4 x 18 ISO 7093 Galvanized
11	44	4300126	RONDELLA D.8 X 24 UNI 6592 ZINC.	2	Flat washer 8 x 24 ISO 7089 Galvanized
11	45	4201745	SCATOLA FUSIBILI 6 VIE MERIT IMEL COD. F17135	2	Fuse box 6 way merit IMEL cod. F17135
11	46	4200657	SIRENA PIE 20	1	Hooter PIE 20
11	47	4201964	STRUMENTO 12-36 V X KM130/300 R BP	1	Dual-voltage instrument 12-36V for KM 130/300 R Bp
11	48	4210352	TAPPO	2	Cup for switch
11	49	4300201	VITE AUTOFILETTANTE 3,9 X 15	8	Self-tapping screw 3,9x 15/9 nikel
11	50	4300158	VITE TBEI M4 X 12 UNI 7380 /ZINC.	6	Hexagon socket button cup screw M4x12 ISO 7380/Galvanized
11	51	4300225	VITE TBEI M4 X 8 UNI 7380	2	Hexagon socket button cup screw M4x8 ISO 7380/Galvanized
11	52	4300148	VITE TBEI M6 X 10 UNI 7380	2	Hexagon socket button cup screw M6x10 ISO 7380/Galvanized
11	53	4300247	VITE TBEI M6 X 15 UNI 7380	2	Hexagon socket button cup screw M6x15 ISO 7380/Galvanized
11	54	4300222	VITE TBEI M8 X 20 UNI 7380	2	Hexagon socket button cup screw M8x20 ISO 7380/Galvanized
11	55	4300243	VITE TBEI M6 X 30 UNI 7380	2	Hexagon socket button cup screw M6x30 ISO 7380/Galvanized
11	56	4300285	VITE TCEI M4 X 40 UNI 5931 ZINC.	2	Socket head cup screw M4x40 ISO4762 Galvanized
11	57	2110844	KIT IMPIANTO ELETTRICO	1	Electric wiring kit
		Part Nr	refers always to one single parts		



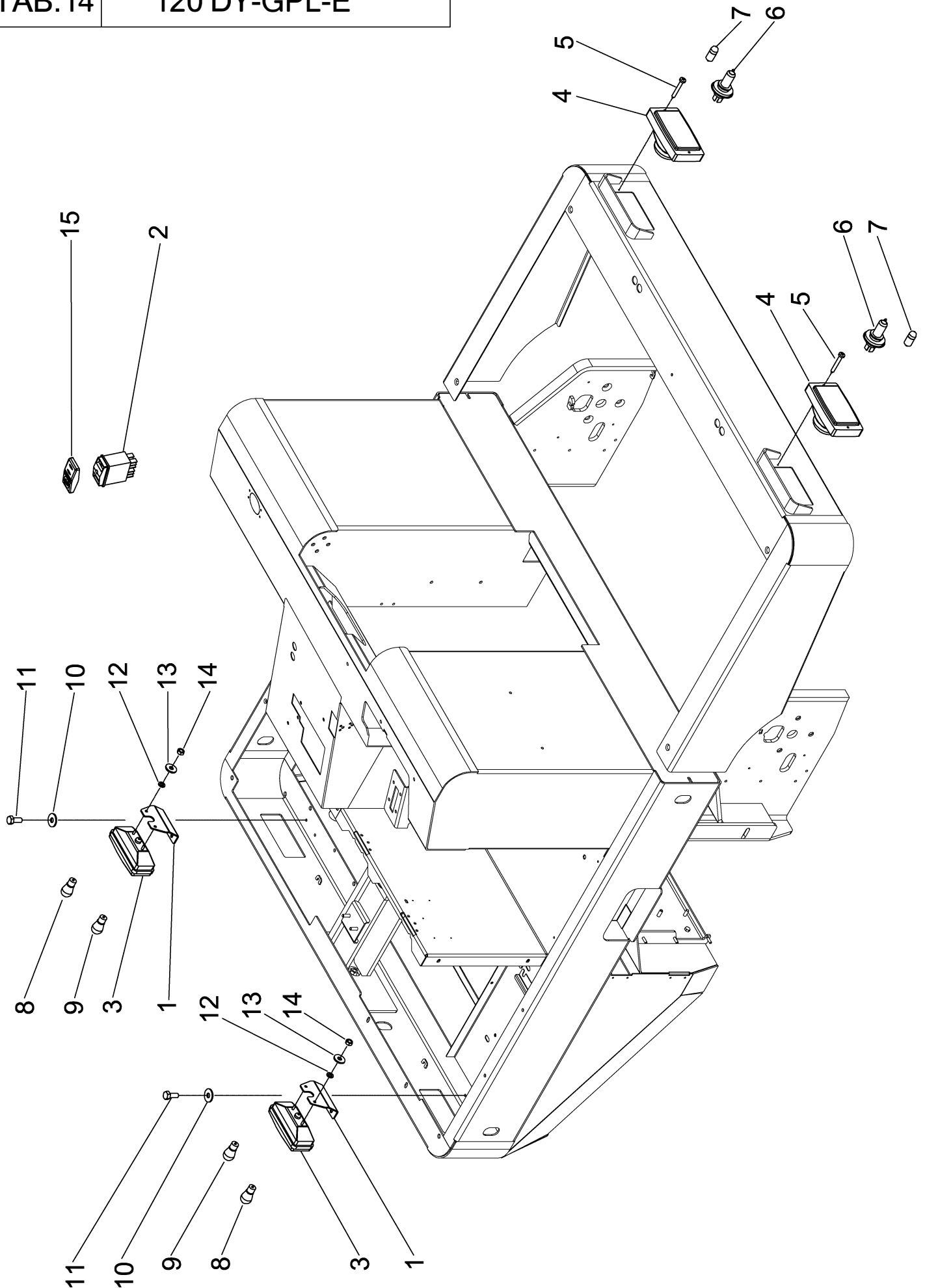
TAB 12. Hydraulic Plant 120 E

TAB.	POS.	PART Nr	DENOMINAZIONE	Q.ty	Description
12	1	3013251	Tubo da pompa ingranaggi a serbatoio olio	1	Hydraulic pipe from gear pump to oil tank
12	2	3013252	Tubo da valvola prioritaria a pompa ingranaggi	1	Hydraulic pipe from priority valve to gear pump
12	3	3013253	Tubo da idroguida a raccoglitore olio	1	Hydraulic pipe from hydraulics to oil collector
12	4	3013254	Tubo da raccoglitore olio a motore spazzola centrale	1	Hydraulic pipe from oil collector to hydraulic motor main brush
12	5	3013255	Tubo da distributore a raccoglitore olio	1	Hydraulic pipe from distributor to oil collector
12	6	3013176	Tubo da idroguida a cilindro sterzo	1	Hydraulic pipe from hydraulics to steering cylinder
12	7	3013177	Tubo da idroguida a cilindro sterzo	1	Hydraulic pipe from hydraulics to steering cylinder
12	8	3013178	Tubo da idroguida a valvola prioritaria	1	Hydraulic pipe from hydraulics to priority valve
12	9	3013256	Tubo da raccoglitore olio a serbatoio olio	1	Hydraulic pipe from oil collector to oil tank
12	10	3013180	Tubo da valvola selettiva a motore spazzola laterale	1	Hydraulic pipe from selector valve to side brush motor
12	11	3013181	Tubo da cilindro spazzola laterale a motore spazzola laterale	1	Hydraulic pipe from side brush cylinder to side brush motor
12	12	3013182	Tubo da distributore a cilindro spazzola laterale	1	Hydraulic pipe from distributor to side brush cylinder
12	13	3013183	Tubo da distributore a valvola selettiva	1	Hydraulic pipe from distributor to selector valve
12	14	3013184	Tubo da valvola selettiva a motore spazzola centrale	1	Hydraulic pipe from selector valve to central brush motor
12	15	2113016	Serbatoio olio	1	Oil tank
12	16	3013186	Tubo da distributore a cilindro sollevamento contenitore	1	Hydraulic pipe from distributor to container lift cylinder
12	17	3013187	Tubo da distributore a cilindro sollevamento contenitore	1	Hydraulic pipe from distributor to container lift cylinder
12	18	3013188	Tubo da distributore a cilindro flap	1	Hydraulic pipe from distributor to flap cylinder
12	19	3013189	Tubo da distributore a cilindro flap	1	Hydraulic pipe from distributor to flap cylinder
12	20	3002231	Cilindro flap	1	Flap cylinder
12	21	3002232	Cilindro sollevamento contenitore	1	Lifting cylinder for container
12	22	3002708	Cilindro idroguida	1	Power steering cylinder
12	23	3013192	Tubo da distributore a valvola prioritaria	1	Hydraulic pipe from distributor to priority valve
12	24	3003022	Cilindro spazzola laterale	1	Side brush cylinder
12	25	3012736	Adattatore per raccoglitore olio	1	Adaptor for oil collector
12	26	3013328	Raccoglitore olio	1	Oil collector
12	27	4200473	Rondella bonded seal autocentrante 3/8"	24	Bonded seal washer 3/8"
12	28	4200474	Rondella bonded seal autocentrante 3/4"	3	Bonded seal washer 3/4"
12	29	4200490	Rondella bonded seal autocentrante 1/2"	7	Bonded seal washer 1/2"
12	30	4200491	Rondella bonded seal autocentrante 1/4"	12	Bonded seal washer 1/4"
12	31	4200508	Tappo serbatoio olio con sfianto 1" 1/4"	1	Air hole cup 1" 1/4"
12	32	4200614	Filtro olio da 1"-25M in carta	1	Suction oil filter 1" 25 micron
12	33	4200615	Indicatore ottico di livello	1	Level indicator
12	34	4200699	Bullone forato per occhio 1/4"	5	Pipe union 1/4"
12	35	4200700	Bullone forato per occhio 3/8"	2	Pipe union 3/8"
12	36	4200702	Bullone forato 3/8" doppia	1	Double pipe 3/8"
12	37	4200704	Riduzione bassa 1/2"M- 3/8"F	2	Reduction bush 1/2"M -3/8"F
12	38	4200708	Prolunga M- F 1/4" L:21 mm	1	Male-Male extension 1/4"
12	39	4200712	Nipplo 1/4" (BSP 60°)	1	Nipple G1/4" (BSP 60°)
12	40	4200713	Nipplo G3/8" (BSP 60°)	10	Nipple 3/8" (BSP 60°)
12	41	4200714	Nipplo G1/2" (BSP 60°)	3	Nipple G1/2" (BSP 60°)
12	42	4200715	Nipples di riduzione 1/4" - 3/8"	4	Reduction nipple 1/4" - 3/8"
12	43	4200716	Nipplo 3/8" - 1/2" (BSP 60°)	4	Nipple 3/4" - 1/2"
12	44	4200813	VALVOLA PRIORITARIA 3/8"	1	Priority valve
12	45	4200830	IDROGUIDA OSPC 50	1	Power steering OSPC 50
12	46	4200899	Nipplo 3/4" (BSP 60°)	1	Nipple 3/4" (BSP 60°)
12	47	4200942	Nipplo 1/2" - 1/4" (BSP 60°)	2	Nipple 1/2" - 1/4" (BSP 60°)
12	48	4200985	Distributore 3 Leve	1	Distributor level three
12	49	4200986	Valvola selettiva 3/8"	1	Selector valve 3/8 "
12	50	4201064	Motore idraulico 40CC	1	Hydraulic motor 40CC
12	51	4201065	Motore idraulico OMP 200cc	1	Hydraulic motor OMP 200cc
12	52	4201448	Raccordo pompa a ingranaggi 90° G3/4 (fissaggio 4 fori interesse 40)	1	90° union for gear pump G 3/4
12	53	4201716	Tappo 1/2"M (BSP 60°)	1	Cap 1/2"M (BSP 60°)
12	54	4210032	GOMITO M-M ORIENTABILE 3/8" 3/8"	2	Elbow M-M orientable 3/8"-3/8"
12	55	4212211	Pompa ingranaggi 8.5 sil.	1	Gear pump 8.5 sil.
12	56	4212239	Raccordo pompa a ingranaggi 90° G1/2 (fissaggio 4 fori D.35)	1	90° union for gear pump G1/2
12	57	4300048	Rondella D6,4 x 12 UNI 6592 zinc	4	Flat washer large series 6,4 x 12 ISO 7093 Galvanized
12	58	4300051	Dado M6 autofrenante UNI 7473 zinc	4	Hexagon self- locking nut M6 ISO 7040
12	59	4300409	Vite TCEI M6 x 70 1/2 Fil. UNI 5931 zinc	4	Socket head cup screw M6x70 ISO4762 Galvanized
12	60	4201759	OR 132 NBR 2,62 X 23,8	1	OR 132 NBR 2,62 X 23,8
12	61	4300462	Rosetta DIN 7980 - 6	8	Split washer D.6 DIN 7980 Galvanized
12	62	4300316	VITE TCEI M6X25	4	Socket head cup screw M6x25 ISO4762 Galvanized
12	63	4300461	VITE TCEI UNI5931 M6 X 45	4	Socket head cup screw M6x45 ISO4762 Galvanized
12	64	4212845	OR 3075 NBR 2,62 X 18,72	1	OR 3075 NBR 2,62 X 18,72
12	65	4000649	Olio idraulico ISO VG 46 viscosità secondo ISO 3448 (DIN 51519) in litri	Lt.	Hydraulic oil ISO VG 46 second viscosity ISO 3448 (DIN 51519) liters



TAB.13 Kit left broom 120 DY-GPL-E

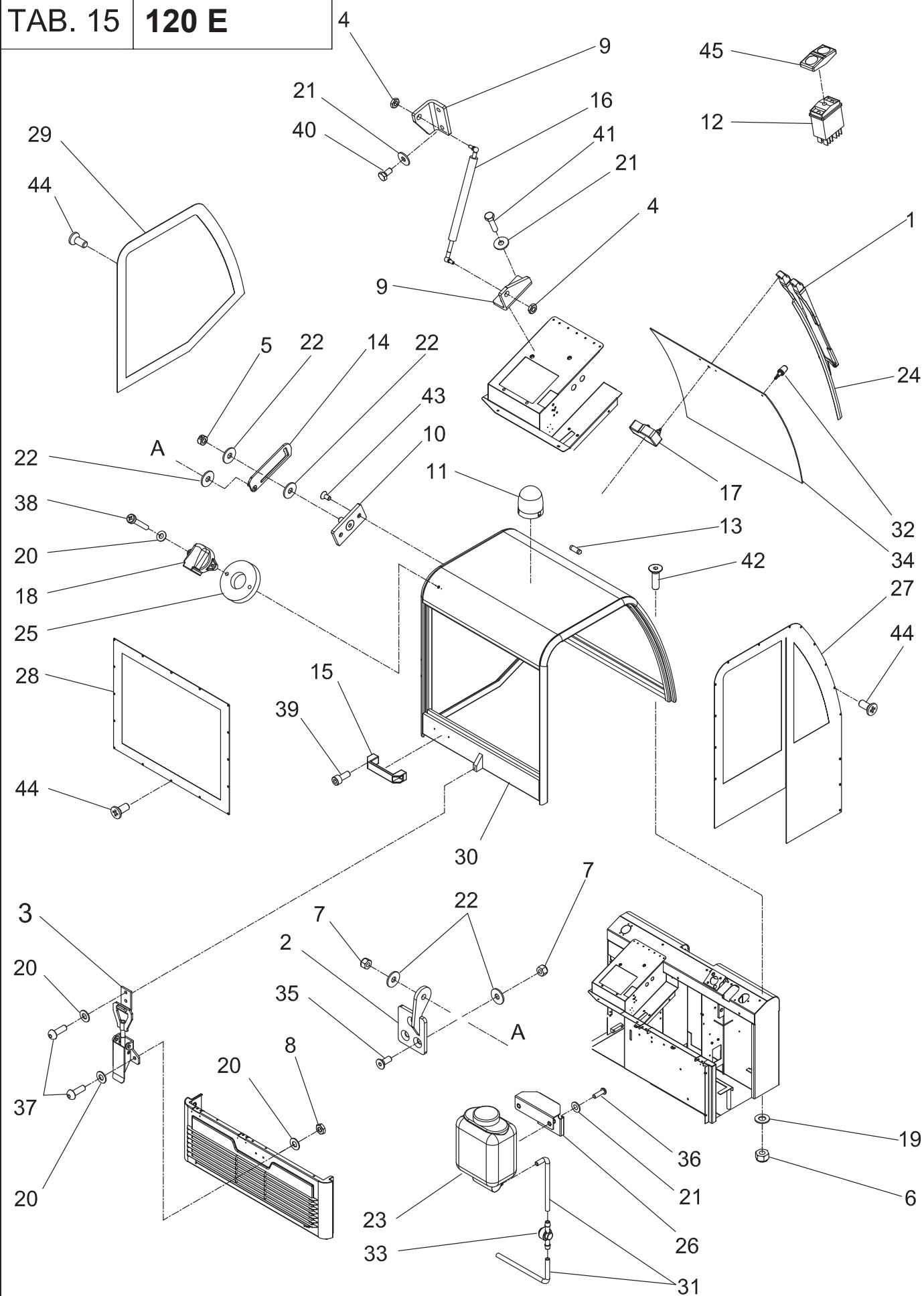
TAB.	POS.	PART Nr	DENOMINAZIONE	Q.ty	Description
13	1	2101512	BRACCIO SPAZZOLA LATERALE SX	1	Left side broom arm
13	2	4200702	Bullone forato 3/8" doppia	1	Duble Pipe union 3/8"
13	3	4200700	Bullone forato per occhio 3/8"	3	Pipe union 3/8"
13	4	4200622	Bussola K4 20 X 23 X 20	2	Socket K4 20x23x20
13	5	3003022	Cilindro spazzola laterale	1	Main broom cylinder
13	6	2113030	Contentitore "C"	1	Hopper
13	7	3013181	Da cilindro spazzola laterale a motore spazzola laterale	1	Hydraulic pipe from main broom cylinder to main broom hydraulic motor
13	8	4300112	Dado autobloccante M12	2	Hexagon self-locking nut M12 ISO 7040
13	9	4300070	Dado M10 autofrenante UNI 7473-6S zinc.	1	Hexagon self-locking nut M10 ISO 7040
13	10	4300053	Dado M8 autofrenante UNI 7473 zinc.	4	Hexagon self-locking nut M8 ISO 7040
13	11	3013180	Da valvola selettiva a motore spazzola laterale	1	Hydraulic pipe from selector valve to main broom hydraulic motor
13	12	4300029	Dado medio M8 UNI 5588-6S zinc.	2	Exagon nut M8 ISO 4032 / Galvanized
13	13	4200693	Molla rientro spazzola	1	Spring
13	14	4201065	Motore idraulico OMP 200cc	1	Hydraulic motor OMP 200 cc
13	15	2101938	Mozzo spazzola laterale	1	Side broom hub
13	16	4200704	Riduzione bassa 1/2"M- 3/8"F	2	Reduction bush 1/2"M - 3/8"F
13	17	4300058	Rondella 13 X 24 UNI6592 zinc.	6	Flat washer D.13 x 24 ISO 7089 / Galvanized
13	18	4200490	Rondella bonded seal autocentrante 1/2"	2	Bonded seal washer 1/2"
13	19	4200473	Rondella bonded seal autocentrante 3/8"	7	Bonded seal washer 3/8"
13	20	4300126	Rondella D.8 x 24 UNI 6593 zinc.	3	Flat washer large series D.8 x 24 ISO 7093 / Galvanized
13	21	4300036	Rondella D.8,4 X 17 UNI 6592 zinc.	10	Flat washer D. 8,4x17 ISO 7089 / Galvanized
13	22	3001511	Rondella di fermo molla	1	Spring stop washer
13	23	3000098	Rondella per albero di comando	2	Washer for drive shaft
13	24	3007959	SPAZZOLA LATERALE	1	Side broom PP
13	25	2113170	Supporto cilindro	1	Left cylinder support
13	26	2103489	Supporto motore spazzola SX	1	Left broom arm
13	27	2101629	SUPPORTO SPAZZOLA SX	1	Left broom support
13	28	3013846	Tubo idraulico da cilindro SX a motore DX	1	Hydraulic pipe from side motor cylinder to side motor cylinder
13	29	4200986	Valvola selettiva 3/8"	1	Sselector valve 3/8"
13	30	4300289	VITE T.S.P.E.I. M8X40	3	Socket head flat countersunk M8x40 ISO 10642 Galvanized
13	31	4300209	VITE TCEI M12 X 40 UNI 5931 zinc.	2	Socket head cup screw M12x40 ISO4762 Galvanized
13	32	4300006	Vite TE M10 x 85 1/2 fil. UNI 5737 zinc.	1	Hexagon screw M10x85 ISO 4017 / Galvanized
13	33	4300033	Vite TE M8 X 20 UNI 5739 - 8.8 zinc.	8	Hexagon screw M8x20 ISO 4017 / Galvanized
13	34	4300108	Vite TE M8 X 30 UNI 5739 zinc.	1	Hexagon screw M8x30 ISO 4017 / Galvanized
13	35	4300061	Vite TE M8 x 70 UNI 5739 zinc.	1	Hexagon screw M8x70 ISO 4017 / Galvanized
13	36	4300346	Vite TE M8x16 UNI5739 ZINC.	2	Hexagon screw M8x16 ISO 4017 / Galvanized
13	37	4300213	Vite TE M8x50 UNI 5739	1	Hexagon screw M8x50 ISO 4017 / Galvanized
13	38	4200922	Linguetta 8X7X32 UNI 6604	1	key 8x7x32 ISO 773A



TAB.14 Front and rear light kit 120 DY-GPL-E

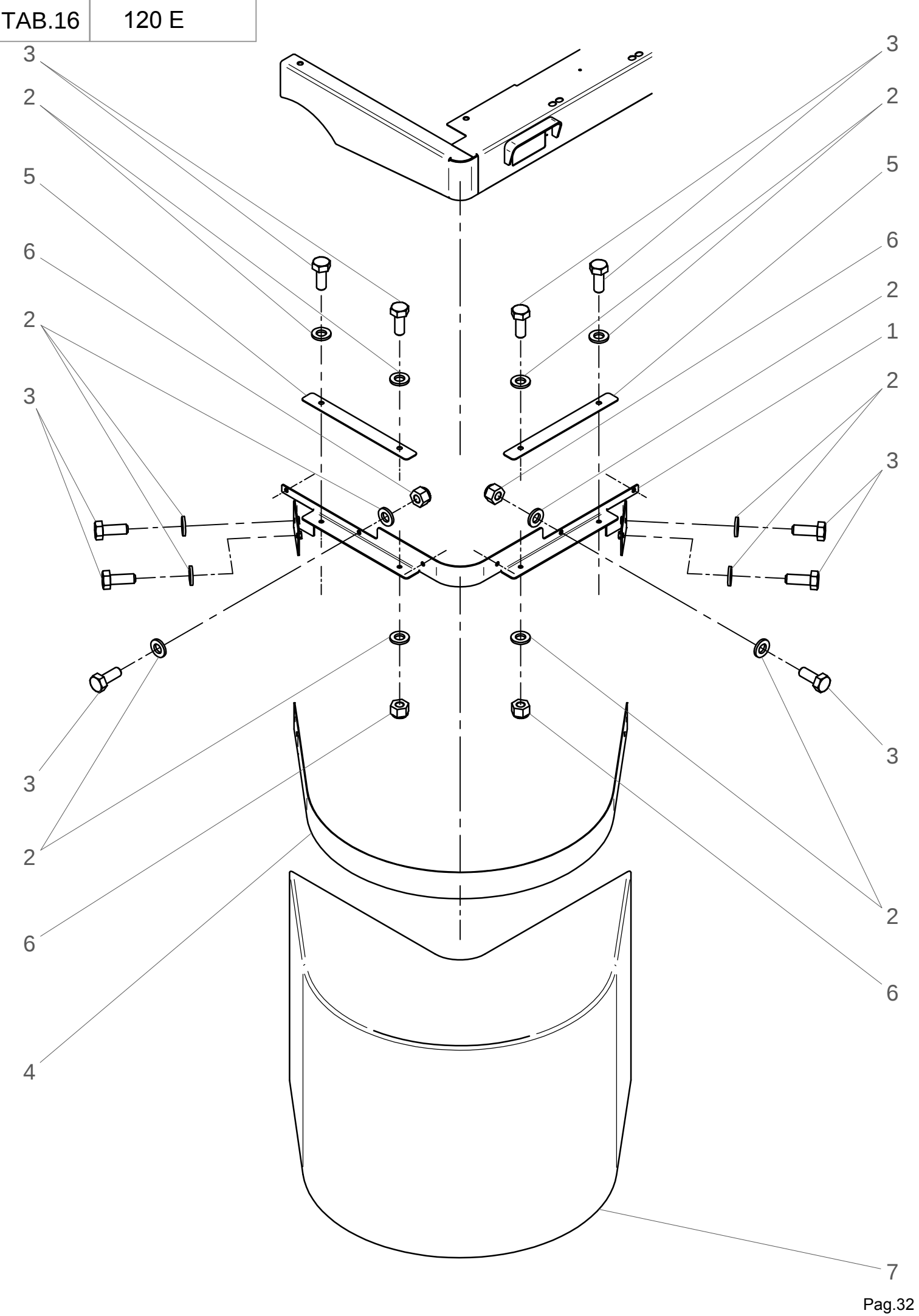
TAB.	POS.	Part.Nr	DENOMINAZIONE	Q.ty	Description
13	1	3007829	Supporto fanale posteriore	2	Rear taillight support
13	2	4210286	Interruttore stabile "On – Off"	1	2 position switch "On – Off"
13	3	4201904	Fanale posteriore rosso	2	Red taillight
13	4	4200826	Fanale anteriore a 3 luci	2	Front light
13	5	4300261	Vite autofilettante 4,2x32 DIN7981 Zincata	4	Self tapping Screw 4,2x32 ISO 7049 Galvanized
13	6	4201002	Lampada alogena 12V 60/55 W H4	2	Halogen lamp 12V - 60/55 W H4
13	7	4201001	Lampada 12V 3W BA9S	2	Lamp 12V -3W BA9S
13	8	4200999	Lampada 12V 5/21 W Attacco BAY 15D	2	Lamp 12V-5/21W BAY15D
13	9	4201000	Lampada 12V 21 W Attacco BA 15S	2	Lamp 12V-21W BAY15S
13	10	4300224	Rondella D.6,4x18 UNI 6593 Zincata	4	Flat washer large series 6,4 x 18 ISO 7093 Galvanized
13	11	4300047	Vite TE M6x16 UNI 5739 8.8 Zincata	4	Hexagon screw M6x16 ISO 4017/Galvanized
13	12	4300322	Rondella groover D.5 UNI 1751 Zincata	4	Split washer D.5 DIN 127/ Galvanized
13	13	4300045	Rondella D.5,5x15 UNI 6593 Zincata	4	Flat washer large series 5,5 x 15 ISO 7093 Galvanized
13	14	4300081	Dado medio M5 UNI 5588-6s Zincato	4	Exagon nut M5 ISO 4032/Galvanized
13	15	4210289	Pulsante luce	1	headlights button
		Part Nr	refers always to one single parts		

TAB. 15 **120 E**



TAB.15 Closed cabwith plastic curtains 120 E

TAB.	POS.	Part Nr	DENOMINAZIONE	Q.ty	Description
15	1	4201857	BRACCIO TERGIVETRO	2	Wiper arm
15	2	2108758	ATTACCO LEVA "C"	1	Coupling lever
15	3	4200212	CHIUSURA A LEVA	1	Closing with lever
15	4	4300012	DADO BASSO M8 UNI 5589 ZINC.	2	Exagon nut M8 ISO 4035/Galvanized
15	5	518537009	DADO ESAG. A FRENATURA CENTRALE M8 X 6.5 DIN980	1	Exagon nut M8 DIN 980/Galvanized
15	6	4300070	DADO AUTOFRENANTE M10 UNI 7476 ZINC.	4	Hexagon self- locking nut M10 ISO 7040
15	7	4300053	DADO AUTOFRENANTE M8 UNI7473 ZINC.	4	Hexagon self- locking nut M8 ISO 7040
15	8	4300117	DADO MEDIO M4 UNI 5588 ZINC.	2	Exagon nut M4 ISO 4032/Galvanized
15	9	3003697	FERMO PER CABINA	2	Cab stop
15	10	2108785	FERMO PER CABINA "C"	1	Cab stop "C"
15	11	4200875	GIROFARO 12V MAGNETICO	1	Rotating flash12V magnetic base
15	12	4210285	INTERRUTTORE 1-0-2	1	Switch
15	13	4200724	LAMPADA 12V-5W	1	Lamp 12V-5W
15	14	2108784	LEVA SICUREZZA CABINA "C"	1	Lever safety cab
15	15	4200014	MANIGLIA PER COFANO	1	Handle
15	16	4201204	MOLLA A GAS D.STELO	1	Gas spring
15	17	4201856	MOTORE TERGIVETRO	1	Screen wiper
15	18	4201252	PRESA FEMMINA PER GIROFARO	1	Female socket for rotating flash
15	19	4300034	RONDELLA D.10,5X 21 UNI 6592 / ZINC.	4	Flat washer 10,5x21 ISO 7089 Galvanized
15	20	4300049	RONDELLA D. 4,3 X 9 UNI 6592 ZINC.	8	Flat washer 4,3 x 9 ISO 7089 Galvanized
15	21	4300224	RONDELLA D. 6,4 X 18 UNI 6593 ZINC.	6	Flat washer large series D.6,4 x18 ISO 7093 Galvanized
15	22	4300126	RONDELLA D. 8 X 24 UNI 6592 ZINC.	7	Flat washer large series 8 x 24 ISO 7093 Galvanized
15	23	4200859	SERBATOIO ACQUA + POMPA	1	Screen wash water reservoir
15	24	4201858	SPAZZOLA TERGIVETRO	1	Wiper
15	25	3008051	SUPPORTO ATTACCO GIROFARO	1	Rotating flash female socket support
15	26	3011257	SUPPORTO VASCHETTA TERGI	1	Support for water reservoir
15	27	3008740	TELO DI PROTEZIONE DESTRO	1	Right plastic curtains
15	28	3008738	TELO DI PROTEZIONE POSTERIORE	1	Rear plastic curtains
15	29	3008739	TELO DI PROTEZIONE SINISTRO	1	Left plastic curtains
15	30	2103810	TETTuccio	1	Open cab
15	31	4200861	TUBO ALIMENTAZIONE ACQUA	1	Water hose
15	32	4200857	UGELLO ACQUA	1	Water nozzle
15	33	4200860	VALVOLA DI NON RITORNO	1	One direction valve
15	34	3003873	VETRO TETTuccio	1	Cab glass
15	35	4300210	VITE TSPEI M8 X 20 UNI 5933 - 8.8 ZINC.	3	Socket head flat countersunk M8x20 ISO 10642/Galvanized
15	36	4300172	VITE TBEI M6X20 ISO 7380 ZINC.	2	Hexagon socket button cup screw M6x20 ISO 7380/Galvanized
15	37	4300158	VITE TBEI M4 X 12 UNI 7380	4	Hexagon socket button cup screw M4x12 ISO 7380/Galvanized
15	38	4300439	VITE TBTC M4 X 25 ZINC.	2	Screw M 4 x 25 ISO 7048 Galvanized
15	39	4300052	VITE TCEI M8 X 20 UNI 5931 - 8.8 ZINC.	2	Socket head cup screw M8x20 ISO4762 Galvanized
15	40	4300352	VITE TE M6 X 12 UNI 5739 /ZINC	2	Hexagon screw M6x12 ISO 4017/Galvanized
15	41	4300050	VITE TE M6 X 20 UNI 5739 /ZINC	2	Hexagon screw M6x20 ISO 4017/Galvanized
15	42	4300245	VITE TSPEI M10X35 UNI 5933 /ZINC.	4	Socket head flat countersunk M10x35 ISO10642 Galvanized
15	43	4300254	VITE TSPEI M6 X 12 UNI 5933 ZINC.	2	Socket head flat countersunk M6x12 ISO 10642/Galvanized
15	44	4300059	VITE TSPTC M4 X 10 UNI 7688 / ZINC.	45	Socket head flat countersunk M4x10 ISO 7046 Galvanized
15	45	4211884	PULSANTE TERGI	1	Switch cover
		Part Nr	refers always to one single parts		



TAB.16 Dust control cover for side broom 120 E

TAB.	POS.	Part Nr	DENOMINAZIONE	Q.ty	Description
15	1	2102623	PROTEZIONE SPAZZOLA LATERALE	1	Side broom protection
15	2	4300048	RONDELLA D.6,4X12 UNI 6592 ZINC.	24	Flat washer 6,4x12 ISO 7089 Galvanized
15	3	4300047	VITE TE M6X16 UNI5739 ZINC.	14	Hexagon screw M6x16 ISO 4017/Galvanized
15	4	3002624	SOSTEGNO ESTERNO	1	External support
15	5	3003704	PIATTO STRINGI CUFFIA	2	Coverage fastener
15	6	4300051	DADO M6 AUTOFREMANTE UNI 7473 ZINC.	10	Hexagon self- locking nut M6 ISO 7040
15	7	4200940	SAGOMA IN TELA SPAZZOLA LATERALE	1	Plastic clothed curtain for side broom
		Part Nr	refers always to one single parts		