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Manuale Cod. 150163

SAMOA®

LEADING THROUGH INNOVATION

EN

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VIKING

Elettric

diaphragm pump

INSTRUCTION MANUALL

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This manual is to be considered as an English language translation of the original manual in Italian. The manufacturer shall bear no responsibility for any damages or inconveniences that may arise due to the incorrect translation of the instructions contained within the original manual in Italian.

Due to a constant product improvement programme, the factory reserves the right to modify technical details mentioned in this manual without prior notice.

VIKING

Electric diaphragm pump

INDEX

WE ADVISE THE USE OF THIS EQUIPMENT ONLY BY PROFESSIONAL OPERATORS.
ONLY USE THIS MACHINE FOR USAGE SPECIFICALLY MENTIONED IN THIS MANUAL.

Thank you for choosing a **SAMOA** product.
As well as the product purchased, you will receive a range of support services enabling you to achieve the results desired, quickly and professionally.

A WARNINGS

The table below provides the meaning of the symbols used in this manual in relation to using, earthing, operating, maintaining, and repairing of this equipment.

- Read this operator's manual carefully before using the equipment.
- An improper use of this machine can cause injuries to people or things.
- Do not use this machine when under the influence of drugs or alcohol.
- Do not modify the equipment under any circumstances.
- Use products and solvents that are compatible with the various parts of the equipment, and read the manufacturer's warnings carefully.
- See the Technical Details for the equipment given in the Manual.
- Check the equipment for worn parts once a day. If any worn parts are found, replace them using ONLY original spare parts.
- Keep children and animals away from work area.
- Comply with all safety standards.

- It indicates an accident risk or serious damage to equipment if this warning is not followed.

FIRE AND EXPLOSION HAZARD
- Solvent and paint fumes in work area can ignite or explode.
- **To help prevent fire and explosion:**
  - Use equipment ONLY in well ventilated area.
  - Eliminate all ignition sources, such as pilot lights, cigarettes and plastic drop cloths (potential static arc).
  - Ground equipment and conductive objects.
  - Use only grounded hoses.
  - Do not use trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminium equipment. Such use can cause serious chemical reaction and equipment rupture, and result in death, serious injury, and property damage.
  - Do not form connections or switch light switches on or off if the air contains inflammable fumes.
- If electrical shocks or discharges are encountered the operation being carried out using the equipment **must be stopped immediately**.
- Keep a fire extinguisher at hand in the immediate vicinity of the work area.

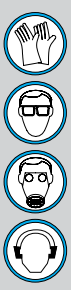
- It indicates wound and finger squashing risk due to movable parts in the equipment.
- Tenersi lontano dalle parti in movimento.
- Do not use the equipment without the proper protection.
- Before any inspection or maintenance of the equipment, carry out the decompression procedure explained in this manual, and prevent any risk of the equipment starting unexpectedly.

- Report any risk of chemical reaction or explosion if this warning has not been given.
- (IF PROVIDED) There is a risk of injury or serious lesion related to contact with the jet from the spray gun. If this should occur, IMMEDIATELY contact a doctor, indicating the type of product injected.
- (IF PROVIDED) Do not spray before the guard has been placed over the nozzle and the trigger on the spray gun.
- (IF PROVIDED) Do not put your fingers in the spray gun nozzle.
- Once work has been completed, before carrying out any maintenance, complete the decompression procedure.

- It indicates important recommendations about disposal and recycling process of products in accordance with the environmental regulations.

- Mark any clamps attached to earth cables.
- Use ONLY 3-wire extension cords and grounded electrical outlets.
- Before starting work make sure that the electrical system is grounded and that it complies with safety standards.
- High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin.
- **To help prevent injection, always:**
  - (IF PROVIDED) Engage trigger lock when not spraying.
  - (IF PROVIDED) Do not put your hand over the spray tip. Do not stop or deflect leaks with your hand, body or other.
  - (IF PROVIDED) Do not point gun at anyone or at any part of the body.
  - (IF PROVIDED) Never spray without tip guard.
  - Do pressure relief if you stop spraying or being servicing sprayer and before any maintenance operations.
  - Do not use components rated less than sprayer Maximum Working Pressure.
  - Never allow children to use this unit
  - (IF PROVIDED) Brace yourself; gun may recoil when triggered.

If high pressure fluid pierces your skin, the injury might look like "just a cut", but it is a serious wound!
Get immediate medical attention.



- It is obligatory to wear suitable clothing as gloves, goggles and face shield.
- Wear clothing that complies with the safety standards in force in the country in which the equipment is used.
- Do not wear bracelets, earrings, rings, chains, or anything else that may hinder the operator's work.
- Do not wear clothing with wide sleeves, scarves, ties, or any other piece of clothing that could get tangled up in moving parts of the equipment during the work, inspection, or maintenance cycles.

B WORKING PRINCIPLE

The ***VIKING*** unit is defined as an *"electric diaphragm pump"*. An electric diaphragm pump is used for high pressure paint spraying without air *(known as "airless")*.
The pump is powered by an electric *(internal combustion)* motor coupled with a cam shaft. The shaft acts on the hydraulic piston as it pumps oil from the hydraulic case and sends the suction diaphragm into fibrillation. When the diaphragm moves, it creates a vacuum. The product is sucked up, pushed towards the pump outlet and sent to the guns through the flexible hose. A hydraulic valve on the hydraulic case head allows setting and checking the pressure of the paint product at the pump outlet. A second hydraulic safety valve to avoid over-pressure, ensures total equipment reliability.

C TECHNICAL DATA

VIKING	
Supply (single-phase, three-phase internal combustion supply, petrol-diesel)*	220V 50Hz / 110V 60Hz/ 380V 50Hz
Motor power mono-threephase	
Internal combustion	4,5 kW
Max. Working pressure	210 bar
Max. Delivery	3+3 L/min
Material outlet	M16 x 1,5 (M)
Weight	50 Kg
Level of the sound pressure	≤ 75dB(A)
Length	(A) 1000 mm
Width	(B) 600 mm
Height	(C) 850 mm

PARTS OF THE PUMP IN CONTACT WITH THE MATERIAL:
Stainless Steel AISI 420B, PTFE, Aluminium.

**Available on request with special voltages*

Fig. 1C

D DESCRIPTION OF THE EQUIPMENT

Fig. 1D

Pos.	Description
1	Carriage
2	Electric motor
3	High pressure manometer
4	Setting valve
5	Hydraulic oil filling cap
6	Hydraulic body

Pos.	Description
7	Complete colour body
8	Suction and recirculation tube
9	High pressure feed tube
10	LARIUS AT 300 gun
11	Fast clean
12	Tools box

E TRANSPORT AND UNPACKING

- The packed parts should be handled as indicated in the symbols and markings on the outside of the packing.
- Before installing the equipment, ensure that the area to be used is large enough for such purposes, is properly lit and has a clean, smooth floor surface.
- The user is responsible for the operations of unloading and handling and should use the maximum care so as not to damage the individual parts or injure anyone.

  To perform the unloading operation, use only qualified and trained personnel (truck and crane operators, etc.) and also suitable hoisting equipment for the weight of the installation or its parts.

  Follow carefully all the safety rules.

  The personnel must be equipped with the necessary safety clothing.
- The manufacturer will not be responsible for the unloading operations and transport to the workplace of the machine.
- Check the packing is undamaged on receipt of the equipment. Unpack the machine and verify if there has been any damage due to transportation.

  In case of damage, call immediately the manufacturer and the Shipping Agent. All the notices about possible damage or anomalies must arrive timely within 8 days at least from the date of receipt of the plant through Registered Letter to the Shipping Agent and to the manufacturer.

The disposal of packaging materials is a customer's competence and must be performed in accordance with the regulations in force in the country where the plant is installed and used.It is nevertheless sound practice to recycle packaging materials in an environment-friendly manner as much as possible.

F CONDITIONS OF GUARANTEE

The conditions of guarantee do not apply in the following situations:
- improper washing and cleaning of components causing malfunction, wear or damage to the equipment or any of its parts;
- improper use of the equipment;
- use that does not conform with applicable national legislation;
- incorrect or faulty installation;
- modifications, interventions and maintenance that have not been authorised by the manufacturer;
- use of non-original spare parts or parts that do not correspond to the specific model;
- total or partial non-compliance with the instructions provided.

G SAFETY RULES

Read carefully and entirely the following instructions before using the product. Please save these instructions in a safe place.

The unauthorised tampering/replacement of one or more parts composing the machine, the use of accessories, tools, expendable materials other than those recommended by the manufacturer can be a danger of accident.
The manufacturer will be relieved from tort and criminal liability.

- THE EMPLOYER SHALL TRAIN ITS EMPLOYEES ABOUT ALL THOSE RISKS STEMMING FROM ACCIDENTS, ABOUT THE USE OF SAFETY DEVICES FOR THEIR OWN SAFETY AND ABOUT THE GENERAL RULES FOR ACCIDENT PREVENTION IN COMPLIANCE WITH INTERNATIONAL REGULATIONS AND WITH THE LAWS OF THE COUNTRY WHERE THE PLANT IS USED.
- THE BEHAVIOUR OF THE EMPLOYEES SHALL STRICTLY COMPLY WITH THE ACCIDENT PREVENTION AND ALSO ENVIRONMENTAL REGULATIONS IN FORCE IN THE COUNTRY WHERE THE PLANT IS INSTALLED AND USED.
- KEEP YOUR WORK PLACE CLEAN AND TIDY. DISORDER WHERE YOU ARE WORKING CREATES A POTENTIAL RISK OF ACCIDENTS.
- ALWAYS KEEP PROPER BALANCE AVOIDING UNUSUAL STANCE.
- BEFORE USING THE TOOL, ENSURE THERE ARE NOT DAMAGED PARTS AND THE MACHINE CAN WORK PROPERLY.
- ALWAYS FOLLOW THE INSTRUCTIONS ABOUT SAFETY AND THE REGULATIONS IN FORCE.
- KEEP THOSE WHO ARE NOT RESPONSIBLE FOR THE EQUIPMENT OUT OF THE WORK AREA.
- **NEVER** EXCEED THE MAXIMUM WORKING PRESSURE INDICATED.
- (IF PROVIDED) **NEVER** POINT THE SPRAY GUN AT YOURSELVES OR AT OTHER PEOPLE. THE CONTACT WITH THE CASTING CAN CAUSE SERIOUS INJURIES.
- IN CASE OF INJURIES CAUSED BY THE GUN CASTING, SEEK IMMEDIATE MEDICAL ADVICE SPECIFYING THE TYPE OF THE PRODUCT INJECTED. **NEVER** UNDERVALUE A WOUND CAUSED BY THE INJECTION OF A FLUID.
- ALWAYS DISCONNECT THE SUPPLY AND RELEASE THE PRESSURE IN THE CIRCUIT BEFORE PERFORMING ANY CHECK OR PART REPLACEMENT OF THE EQUIPMENT.
- NEVER MODIFY ANY PART IN THE EQUIPMENT. CHECK REGULARLY THE COMPONENTS OF THE SYSTEM.

  REPLACE THE PARTS DAMAGED OR WORN.
- (IF PROVIDED) TIGHTEN AND CHECK ALL THE FITTINGS

FOR CONNECTION BETWEEN PUMP, FLEXIBLE HOSE AND SPRAY GUN BEFORE USING THE EQUIPMENT.

- ALWAYS USE THE FLEXIBLE HOSE SUPPLIED WITH STANDARD KIT.
- THE USE OF ANY ACCESSORIES OR TOOLING OTHER THAN THOSE RECOMMENDED IN THIS MANUAL, MAY CAUSE DAMAGE OR INJURE THE OPERATOR.
- THE FLUID CONTAINED IN THE FLEXIBLE HOSE CAN BE VERY DANGEROUS. HANDLE THE FLEXIBLE HOSE CAREFULLY. DO NOT PULL THE FLEXIBLE HOSE TO MOVE THE EQUIPMENT. NEVER USE A DAMAGED OR A REPAIRED FLEXIBLE HOSE.

The high speed of travel of the product in the hose can create static electricity through discharges and sparks. It is suggested to earth the equipment.
The pump is earthed through the earth cable of the supply.
The gun is earthed through the high pressure flexible hose.
All the conductors near the work area must be earthed.

Never spray over flammable products or solvents in closed places.

Never use the tooling in presence of potentially explosive gas.

Always check that the product is compatible with the materials composing the equipment (*pump, spray gun, flexible hose and accessories*) with which it can come into contact. Never use paints or solvents containing Halogen Hydrocarbons (*as the Methylene Chloride*). If these products come into contact with aluminium parts can provoke dangerous chemical reactions with risk of corrosion and explosion.

Avoid approaching too much to the pump piston rod when the pump is working or under pressure. A sudden movement of the piston rod can cause wounds or finger squashing.

If the product to be used is toxic, avoid inhalation and contact by using protection gloves, goggles and proper face shields.

Take proper safety measures for the protection of hearing in case of work near the plant.

H SETTING-UP

CONNECTION OF THE FLEXIBLE HOSE TO THE GUN

- Connect the high pressure flexible hose push-button, to the pump and to the gun ensuring to tighten the fittings *(the use of two wrenches is suggested)*.
  Never use sealants on fittings' threads.
- It is recommended to use the hose provided with the standard kit *(ref. 35017)*.
  NEVER use a damaged or a repaired flexible hose.

CHECK ON POWER SUPPLY

- Check the plant is earthed.

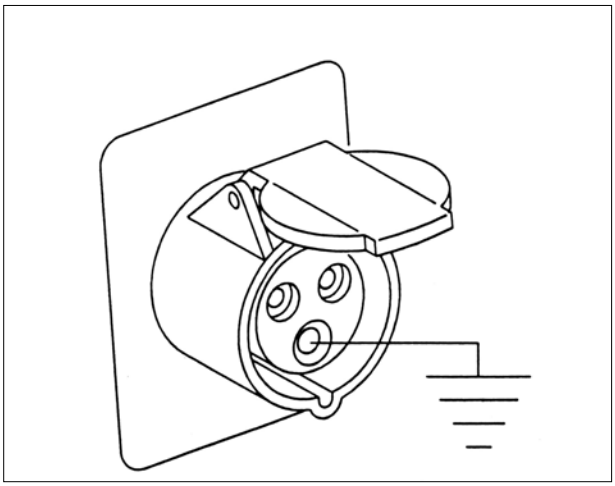


Fig. 1H

- Check the mains voltage corresponds to the equipment's rating ***(H1)***.

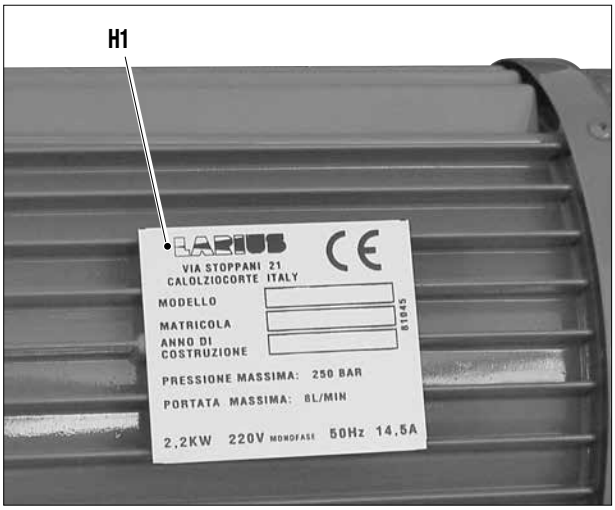


Fig. 2H

- The supply cable is provided without plug.
  Use a plug which guarantees the plant earthing.
  Only a technician or a skilled person should perform the connection of the plug to the electric cable.

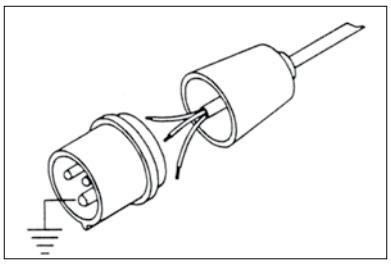


Fig. 3H

Should anyone use an extension cable between the tooling and the socket, it must have the same characteristics as the cable supplied *(minimum diameter of the wire 2.5 mm2)* with a maximum length of 50 mt. Higher lengths and lower diameters can provoke excessive voltage falls and also an anomalous working of the equipment.

CONNECTION OF THE TOOLING TO THE POWER SUPPLY

- Check the *ON/OFF* switch ***(H2)*** is on the "*OFF*" position *(0)* before connecting the cable to the mains.

- Place the pressure control knob ***(H3)*** on the *"MIN"* position *(turn counterclockwise)*.

Fig. 4H

Fig. 5H

WASHING OF THE NEW EQUIPMENT

- The equipment has already been adjusted at our factory with light mineral oil left inside the pumping group as protection. Therefore, wash with diluent before sucking the product.

- Lift the suction pipe and dip it into the solvent tank.

- Ensure the gun ***(H4)*** is without nozzle.

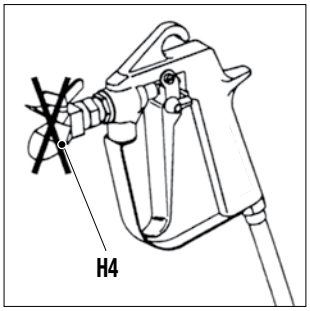


Fig. 6H

- Open the re-circulation tap ***(H5).***
  Turn the unit *ON-OFF* switch ***(H6)*** on the "*ON*" position *(I)*.

- Rotate the pressure setting knob ***(H7)*** slightly clockwise so that the machine operates at minimum power.

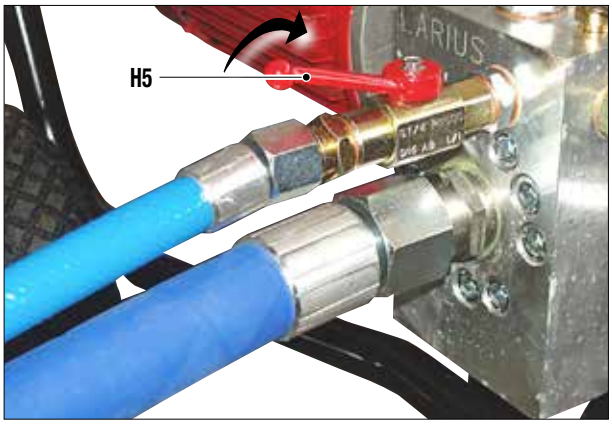


Fig. 7H

Fig. 8H

Fig. 9H

- Point the gun at a container keeping the trigger pressed *(so as to drain the oil inside)* till a clean solvent comes out. Now, release the trigger.
- Remove the suction pipe and take away the solvent tank.
- Point the gun at the solvent tank and press the trigger so as to recover the residual solvent.
- As the pump idles, press the *ON/OFF* switch ***(H6)*** su *OFF (0)* on the position "*OFF*" *(0)* to stop the tooling.

Absolutely avoid to spray solvents indoors. In addition, it is recommended to keep away from the pump in order to avoid the contact between the solvent fumes and the electric motor.

- Now the machine is ready. Should you use water paints, besides the solvent wash, a wash with soapy and then clean water is suggested.
- Insert the gun trigger lock and assemble the nozzle.

PREPARATION OF THE PAINT

- Make sure the product is suitable to be used with a spray gun.
- Mix and filter the product before using it. For filtration, use **CLOSE-MESH** *(ref.214)* and **LARGE-MESH** *(ref.215)* **LARIUS METEX** braids.

Make sure the product to be used is compatible with the materials employed for manufacturing the equipment *(stainless steel and aluminium).* Because of that, please contact the supplier of the product.

Never use products containing halogen hydrocarbons *(as methylene chloride)*. If these products come into contact with aluminium parts of the equipment, can provoke dangerous chemical reactions with risk of explosion.

I WORKING

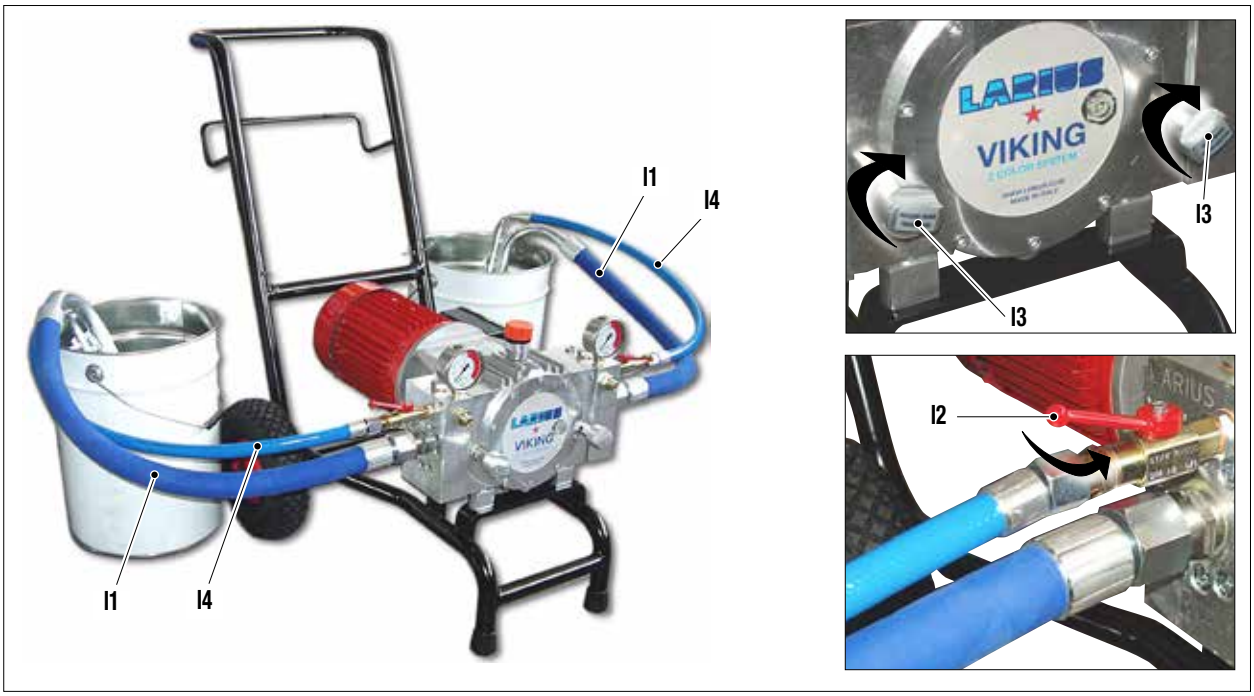


Fig. 1I

START OF THE PAINTING OPERATIONS

- Use the tooling after performing all the **SETTING UP** operations above described.
- Dip the suction pipe ***(I1)*** into the product tank.
- Open the re-circulation valve ***(I2)***.
- Press the *ON/OFF* switch of the equipment and turn a little the pressure control knob ***(I3)*** clockwise, so as the machine works at the idle speed.
- Make sure the product recycles from the return tube ***(I4)***.
- Close the re-circulation valve.
- At this point the machine will continue to suck the paint product until the delivery hose is completely full. Afterwards, the product will re-circulate automatically.

SPRAY ADJUSTMENT

- Slowly turn clockwise the pressure control knob to reach the pressure value in order to ensure a good atomization of the product.
- An irregular and marked spray on the sides indicates a low working pressure. On the contrary, a too high pressure causes a high fog *("overspray")* and waste of product.
- In order to avoid overthickness of paint, let the gun advance sideways *(right-left)* when spraying.
- Always paint with regular parallel bands coats.
- Keep a safety and constant distance between the gun and the support to be painted and also keep yourselves perpendicular to it.

Never point the spray gun at yourselves or at other people. The contact with the casting can use serious injuries. In case of injuries caused by the gun casting, seek immediate medical advice specifying the type of the product injected.

The drain valve is a safety valve too. When working at the maximum pressure available, releasing the gun trigger sudden increases of pressure can occur. In this case, the drain valve opens automatically eliminating part of the product from the recirculating tube. Then it closes so as to go back to the first working conditions.

J CLEANING AT THE END OF THE WORK

- Reduce pressure to the minimum *(turn counterclockwise the pressure control knob **(J1)**)*.

Fig. 1J

- Press the *ON/OFF* switch ***(J2)*** placed on the box of the electric motor, to stop the equipment.

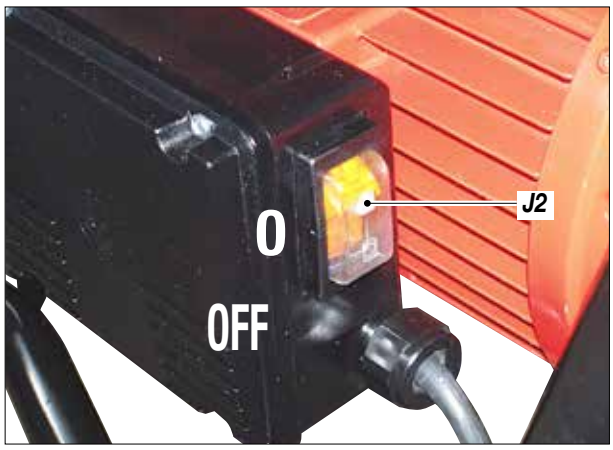


Fig. 2J

- First release the residual pressure from the gun by holding it pointed down towards the paint container, then open the re-circulation valve.
- Lift the suction pipe and replace the product tank with that of the solvent *(ensure it is compatible with the product being used).*
- Unscrew the gun nozzle *(do not forget to clean it with solvent!).*
- Turn the *ON-OFF* switch ***(J2)*** on the "*ON*" *(I)* position and rotate the pressure setting knob ***(J1)*** slightly clockwise.
- Make sure the solvent recycles the washing fluid from the return tube.
- Close the re-circulation valve ***(J3)***.

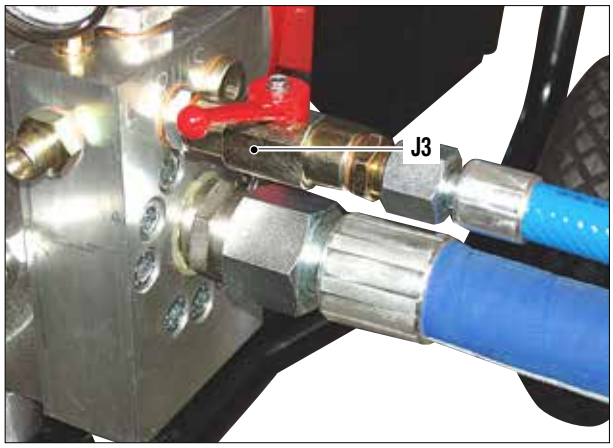


Fig. 3J

- Point the gun at the product tank and, keeping the trigger pressed, release the remaining product till a clean solvent comes out. Now, release the trigger.
- Lift again the suction pipe and remove the solvent tank.
- Now point the gun at the solvent tank and press the trigger so as to recover the residual solvent.

- As the pump starts idling, press the *ON/OFF* switch to stop the equipment.
- In case of long storage, we recommend you to suck and to leave light mineral oil inside the pumping group and the flexible hose.

Follow the washing procedure before using again the equipment.

K ROUTINE MAINTENANCE

TOP UP HYDRAULIC OIL

With each start up, check the hydraulic oil level by looking through the gauge on the side of the hydraulic body. If necessary, use to top up the level:

AGIP DICREA 150 type hidraulic oil

RELEASE THE SUCTION VALVE

If the pump malfunctions, release the suction valve fitted on the head of the pump in the following way:

- Remove the suction hose fitting and release the valve by inserting a rigid rod ***(K1)*** with a diameter of no more than 15 mm.

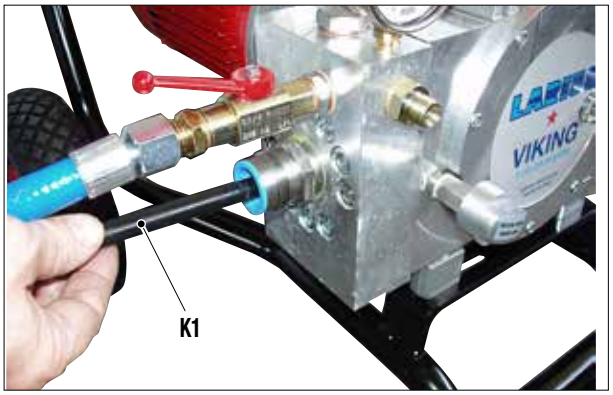


Fig. 1K

CLEANING THE COMPRESSION VALVE

When the compression valve must be removed, clean it with specific solvents depending on the type of paint used and refit all parts by inverting the removal order.

REPLACING HYDRAULIC OIL

After operating for 100 hours, replace the oil in the pump;

- Discharge the waste oil through the hydraulic filter fitted at the bottom of the pump casing.
- Clean and, if necessary, replace the worn seals.
- Replace the filter in its seat by screwing it tightly.
- Fill the pump with the recommended oil until it reaches the maximum level.

AGIP DICREA 150 type hidraulic oil

- Then, substitute the oil every 250 hours.

Fig. 2K

CLEANING THE MOTOR COOLING FAN GUARD

Clean the motor cooling fan protection guard ***(K2)*** periodically to ensure the best cooling.

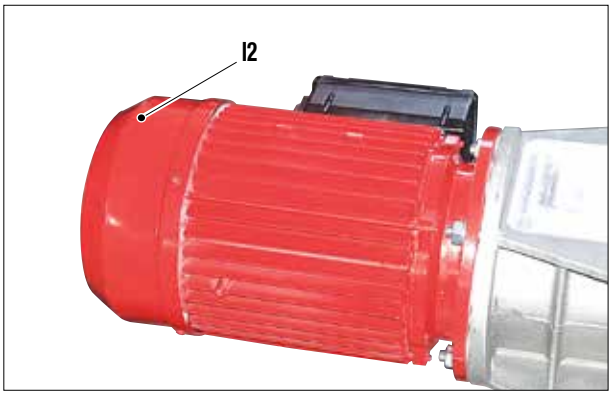


Fig. 3K

L WARNING PLATE

LARIUS®
Apparecchi per verniciatura

LARIUS®
Paint spraying units

ATTENZIONE

UTILIZZARE GRUPPI ELETTROGENI CON ALTERNATORE ASINCRONO

WARNING

USE POWER UNITS WITH ASYNCHRONOUS ALTERNATOR

http: www.larius.com

e-mail larius@larius.com

M PROBLEMS AND SOLUTIONS

Problem	Cause	Solution
The equipment does not start	Lack of voltage;	Check the correct connection to the power supply;
	Considerable drops in mains voltage;	Check the extension cable;
	ON-OFF switch disconnected;	Ensure the ON-OFF switch is on the “ON” position and turn clockwise the pressure control knob;
	Setting valve faulty pressure;	Verify and replace it, if necessary;
	Breakdown of motor electric control box;	Verify and replace it, if necessary;
	The product is solidified inside the pump;	Open the drain valve to release pressure in the circuit and stop the machine. Remove the compression valve and clean it;
The equipment does not suck the product	Suction filter clogged;	Clean or replace it;
	Suction filter too fine;	Replace it with a larger-mesh filter (with very dense products, remove the filter);
	The equipment sucks air;	Check the suction pipe;
The equipment suck but does not reach the pressure desired	Lack of product;	Add the product;
	The equipment sucks air;	Check the suction pipe;
	The drain valve is open;	Close the drain valve;
	Suction or delivery valve dirty;	Disassemble the colour body group;
When pressing the trigger, the pressure lowers considerably	Nozzle too big or worn;	Replace it with a smaller one;
	The product is too dense;	Dilute the product, if possible;
	The filter of the gun-butt is too fine;	Replace it with a larger-mesh filter;
The pressure is normal but the product is not atomized.	The nozzle is partially clogged;	Clean or replace it;
	The product is too dense;	Dilute the product, if possible;
	The filter of the gun-butt is too fine;	Replace it with a larger-mesh filter;
Leakage from the seal-tightening screw	The nozzle is worn;	Replace it;

Always close the air compressed supply and unload the plant pressure before performing any check or replacement of pump parts *(see "correct procedure of decompression").*

N CORRECT PROCEDURE OF DECOMPRESSION

- Insert the gun clamp ***(N1)***.
- Move the ***ON/OFF*** switch ***(N2)*** to the ***OFF*** position ***(0)*** to stop the equipment.

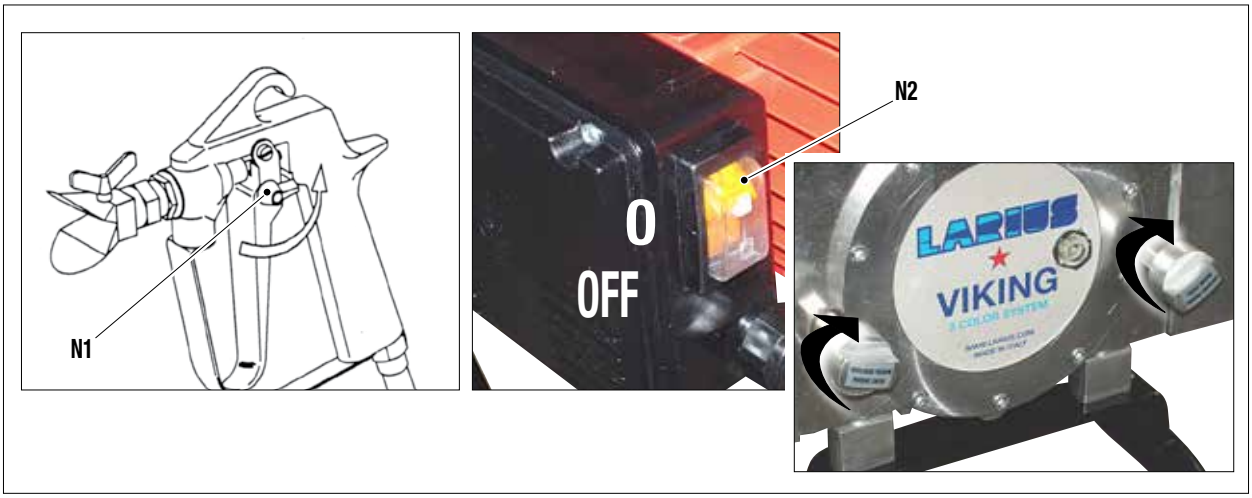


Fig. 1N

- Disconnect the power supply cable ***(N3)***.
- Release the gun clamp ***(N4)***. Point the gun at the tank of the product and press the trigger to release pressure. At the end of the operation, insert the gun clamp.
- Open the re-circulation valve ***(N5)*** to release residual pressure.

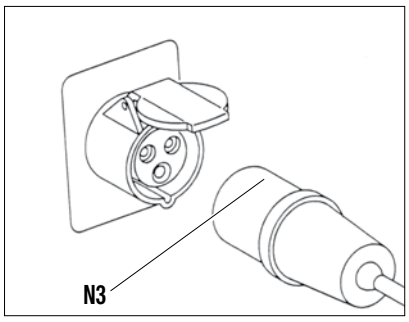


Fig. 2N

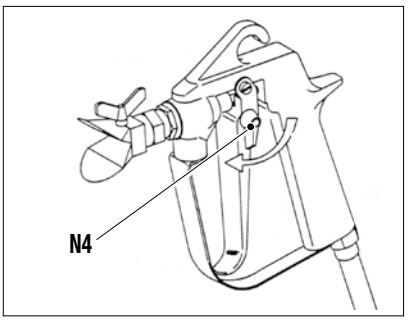


Fig. 3N

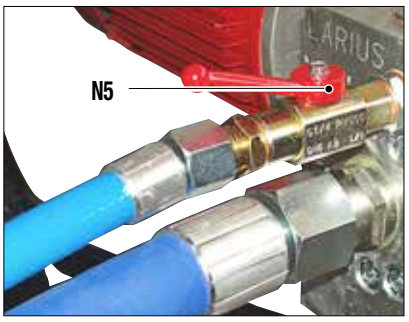
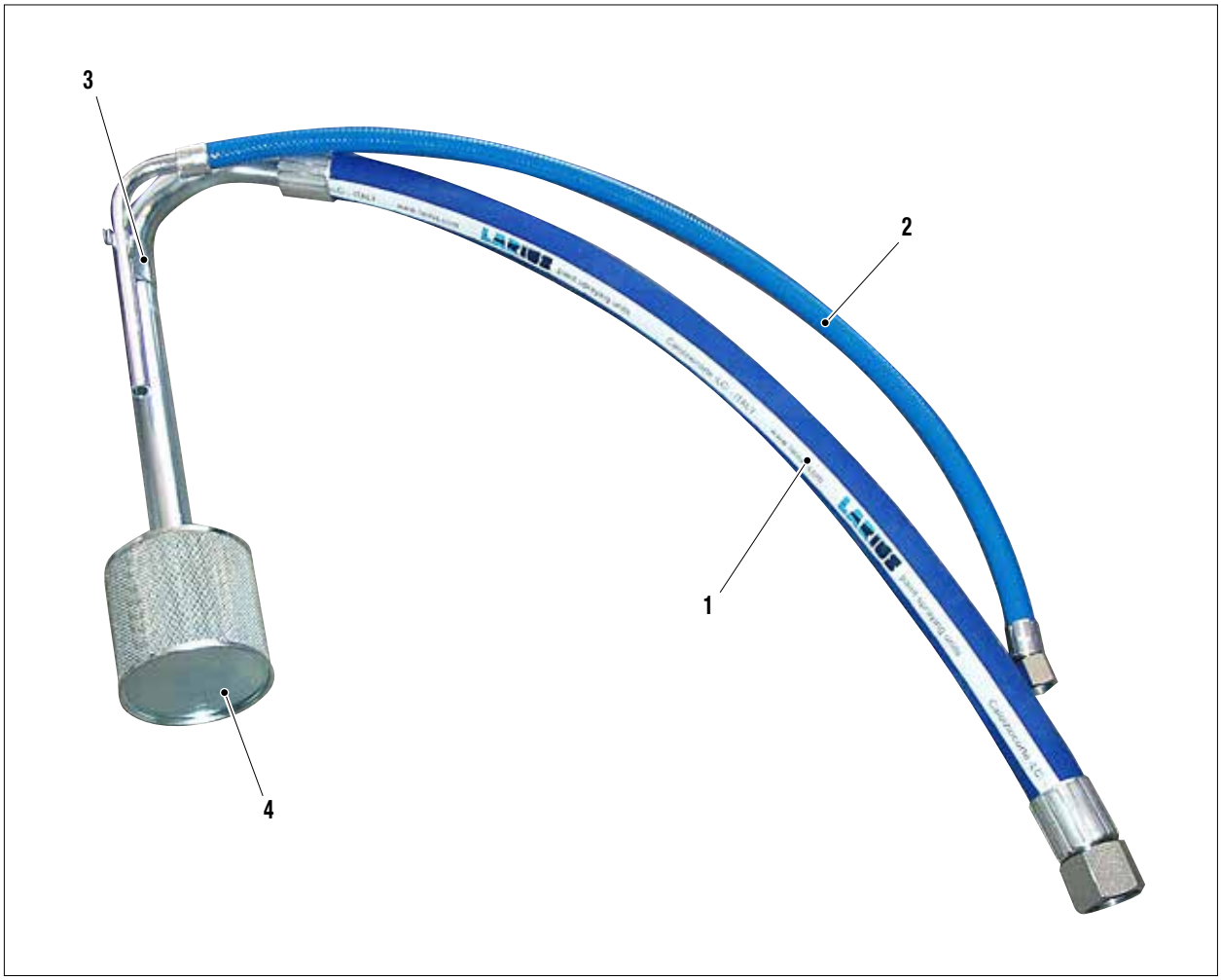


Fig. 4N

WARNING :
If the equipment is still under pressure after performing the operations above described because of the nozzle or the flexible hose clogged, proceed as follows:

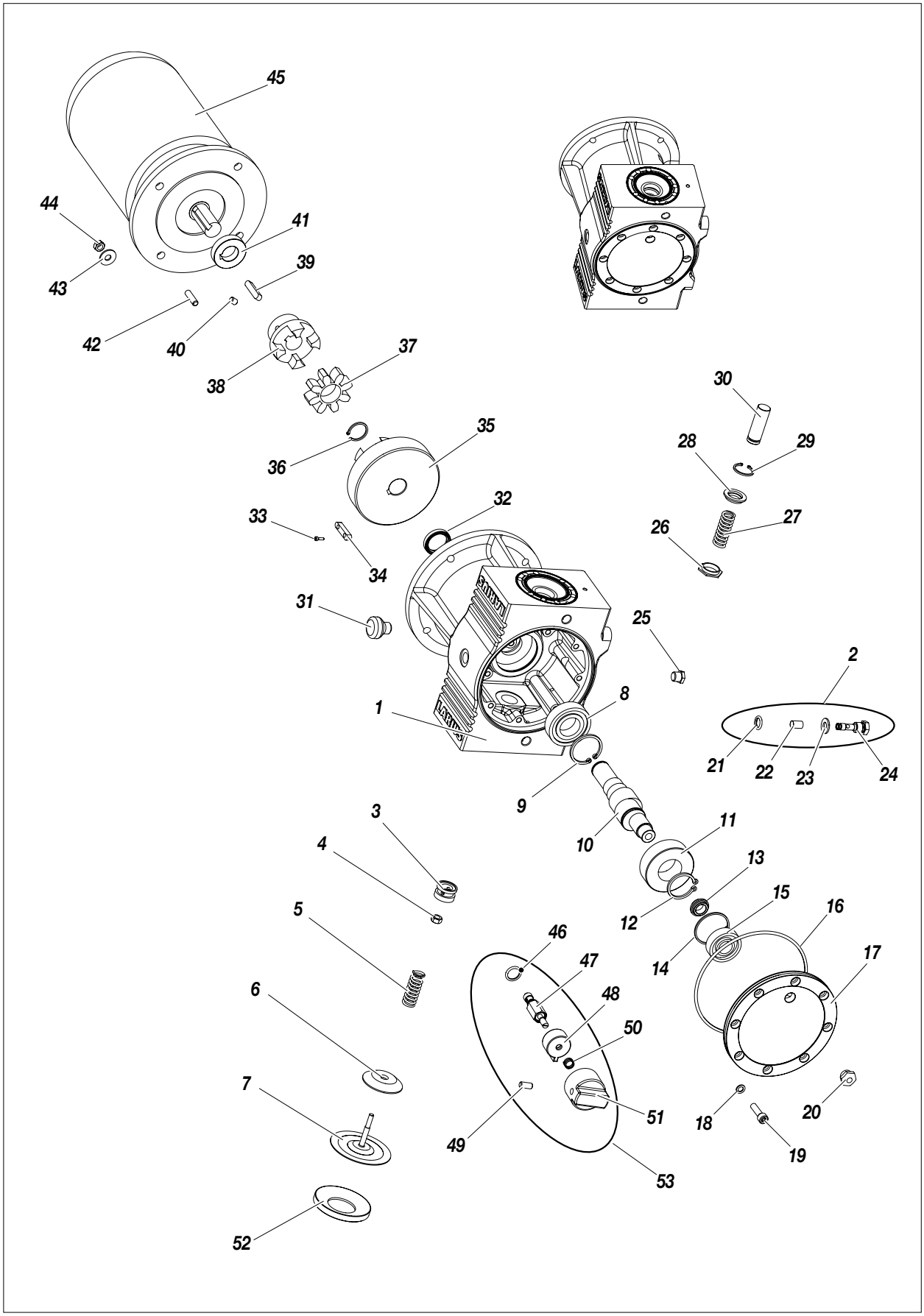
- **Loosen very slowly the gun nozzle.**
- **Release the clamp.**
- **Point the gun at the container of the product and press the trigger to release pressure.**
- **Loosen very slowly the fitting of connection from the flexible hose to the gun.**
- **Clean or replace the flexible hose and the nozzle.**

O SUCTION SYSTEMS



Pos.	Code	Description
	85009	Suction systems
1	85010	Suction tube
2	35003	Recirculation tube
3	18096	Spring
4	85012	Filter of suction

P COMPLETE HYDRAULIC BODY



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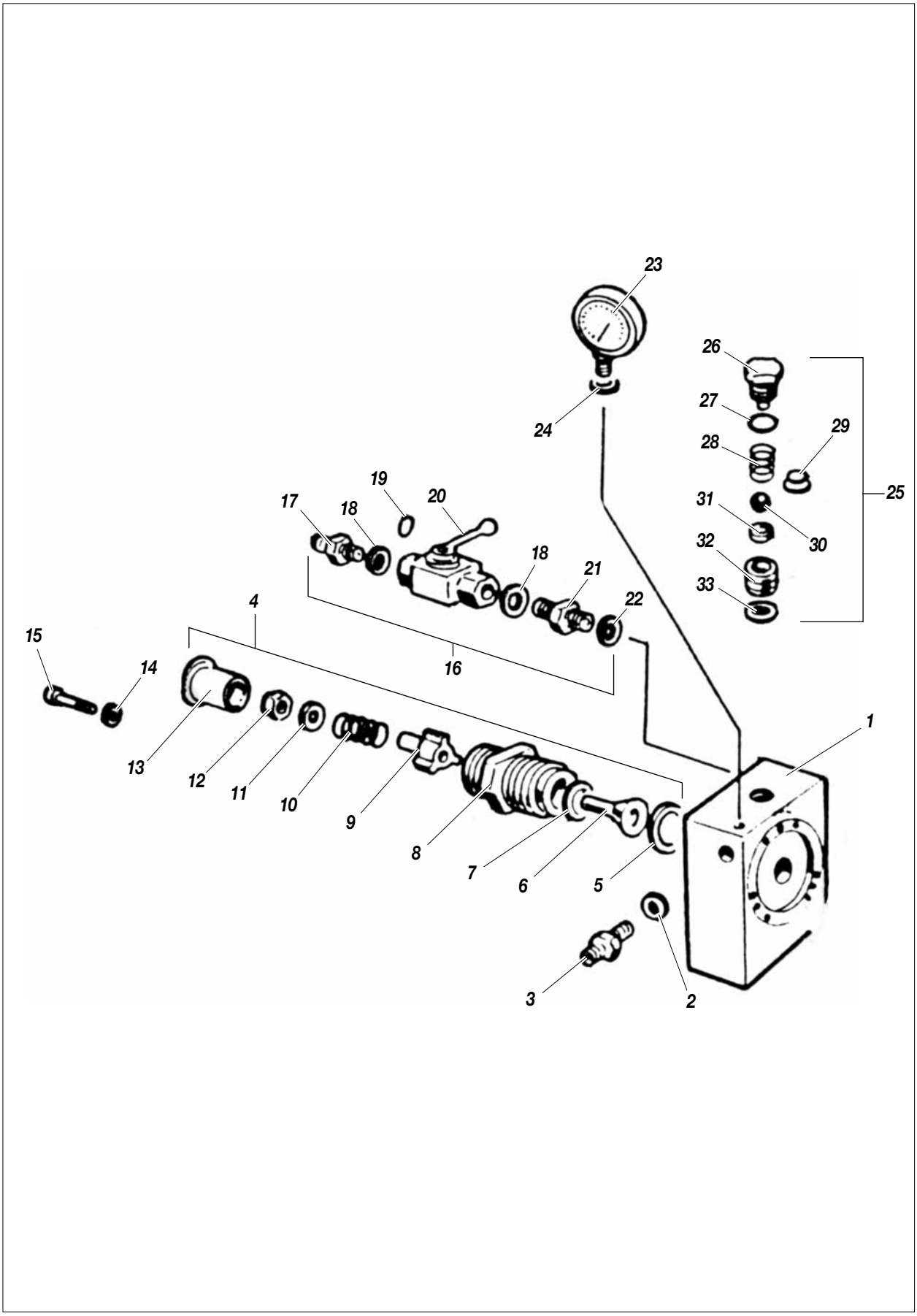
Pos.	Code	Description
1	18711/1	Hydraulic body
2	12475	Filter assembly
3	32033	Piston insert
4	33002/4	Nut
5	33002/3	Spring
6	33002/2	Oil distributor
7	33002/1	Diaphragm
8	31125	Bearing
9	81020	Elastic ring
10	18712	Eccentric shaft
11	18725	Eccentric bearing
12	12470	Elastic ring
13	18175	Spacer
14	18727	Elastic ring
15	18728	Bearing
16	18726	O-ring 4625
17	18713	Cover
18	12462	Nylon washer
19	81032	Screw M8x35
20	32007	Inspection plug
21	32012	O-ring 2021
22	258	60 MESH sieve filter
23	32010	Copper washer 18x14,5x1,5
24	12461	Oil filter body
25	32108	Oil cup 3/8"
26	32041	Sleeve nut
27	32022	Spring

Pos.	Code	Description
28	32021	Washer
29	32020	Elastic ring
30	32019	Piston
31	82005	Oil cup
32	31128	High temperature 28x38x7 Corteco
33	9308	Screw M3x8 UNI 5931
34	18716	Tab
35	18714	Pulley
36	12470	Elastic ring
37	81038	Shock absorber
38	12460	Half-joint
39	81014	Tab UNI 6604
40	81009	Dowel
41	18718	Spacer
42	81012	Spline M12
43	95114	Waher type SCHNOOR ø12
44	81010	Nut M12
45	81001	Electric motor 220V/50Hz
46	32014	O-ring 9,8x1,5
47	32155	Valve body
48	32016	Polypropylene retainer
49	32017/1C	Dowel M5x12 2K
50	32017/2	Spring
51	32017	Knob
52	33003	Diaphragm insert
53	32150	Pressure valve assembly

COMPLETE DIAPHRAGM- COD. 33002

Pos.	Description
4	Dado
5	Molla
6	Distributore olio
7	Membrana

Q COMPLETE COLOUR BODY

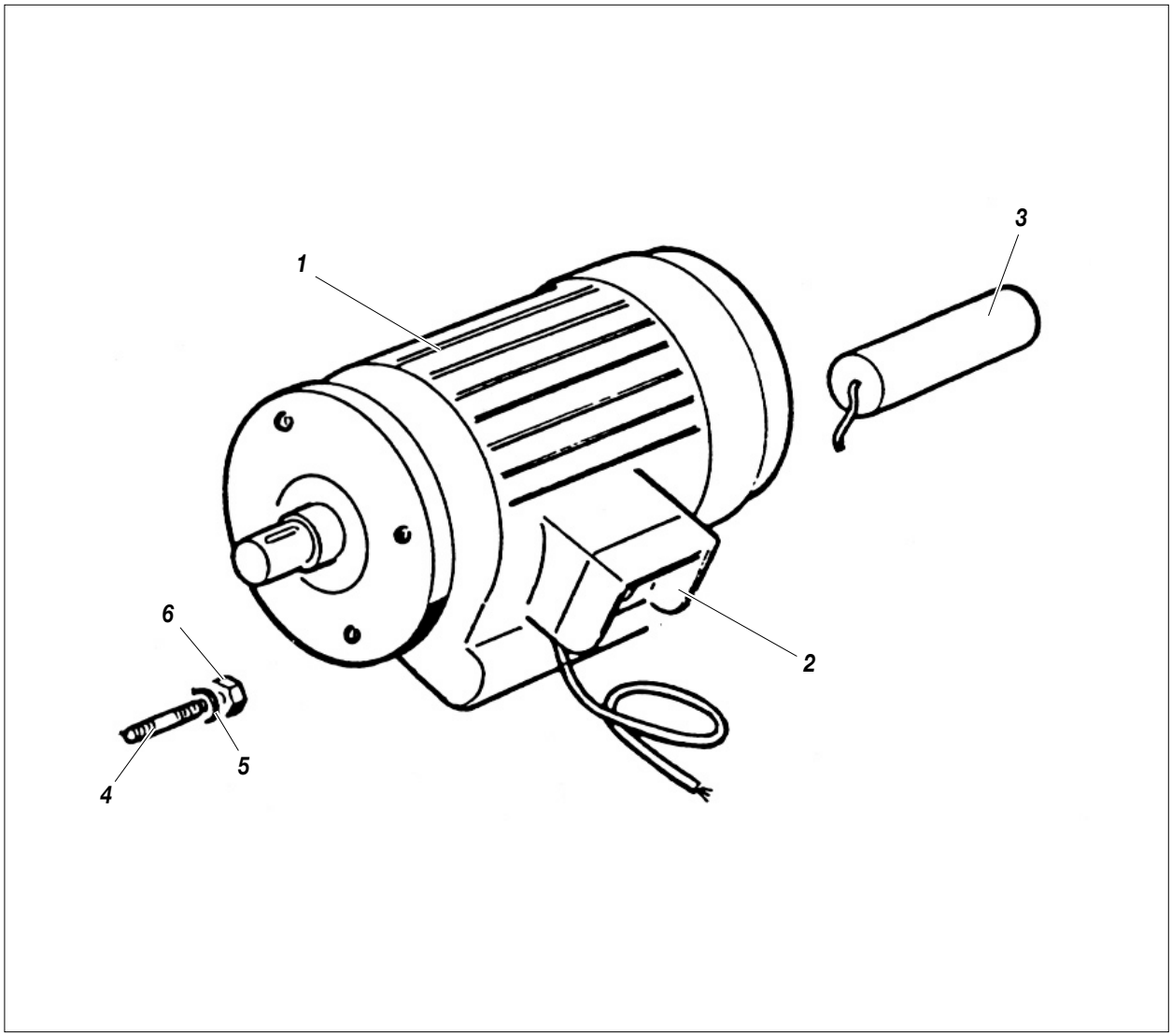


Pos.	Code	Description
	33000	Colour body
1	33001DX	Right colour body casting
1	33001SX	Left colour body casting
2	33007	Ø16 copper washer
3	33006	High pressure hose fitting
4	33017	Complete suction valve
5	33018	Seal
6	33019	Complete spear valve
7	33020/1	Spear valve seat
8	33020	Valve body
9	33021	Spear valve guide
10	33022	Spring
11	33023	Ø6,3 washer
12	33024	Selflocking nut
13	33025	Inlet liner
14	33005	Ø10 SCHNORR washer
15	33004	10x55 TCE screw
16	33016	Complete return tap

Pos.	Code	Description
17	33015	Nipple
18	33012	1/4" copper washer
19	33013/3	O ring
20	33013	Return tap
21	33011	3/8"x1/4" nipple
22	33010	3/8" copper washer
23	33008	Manometer
24	33009	Manometer seal
25	33033	Complete drain valve
26	33032	Sealing plug
27	33031	Copper seal
28	53006	Spring
29	33029	Spring seat
30	33028	Ø11 ball
31	33027/2	Ball seat
32	33027/1	Ball seat fitting
33	33026	Seal

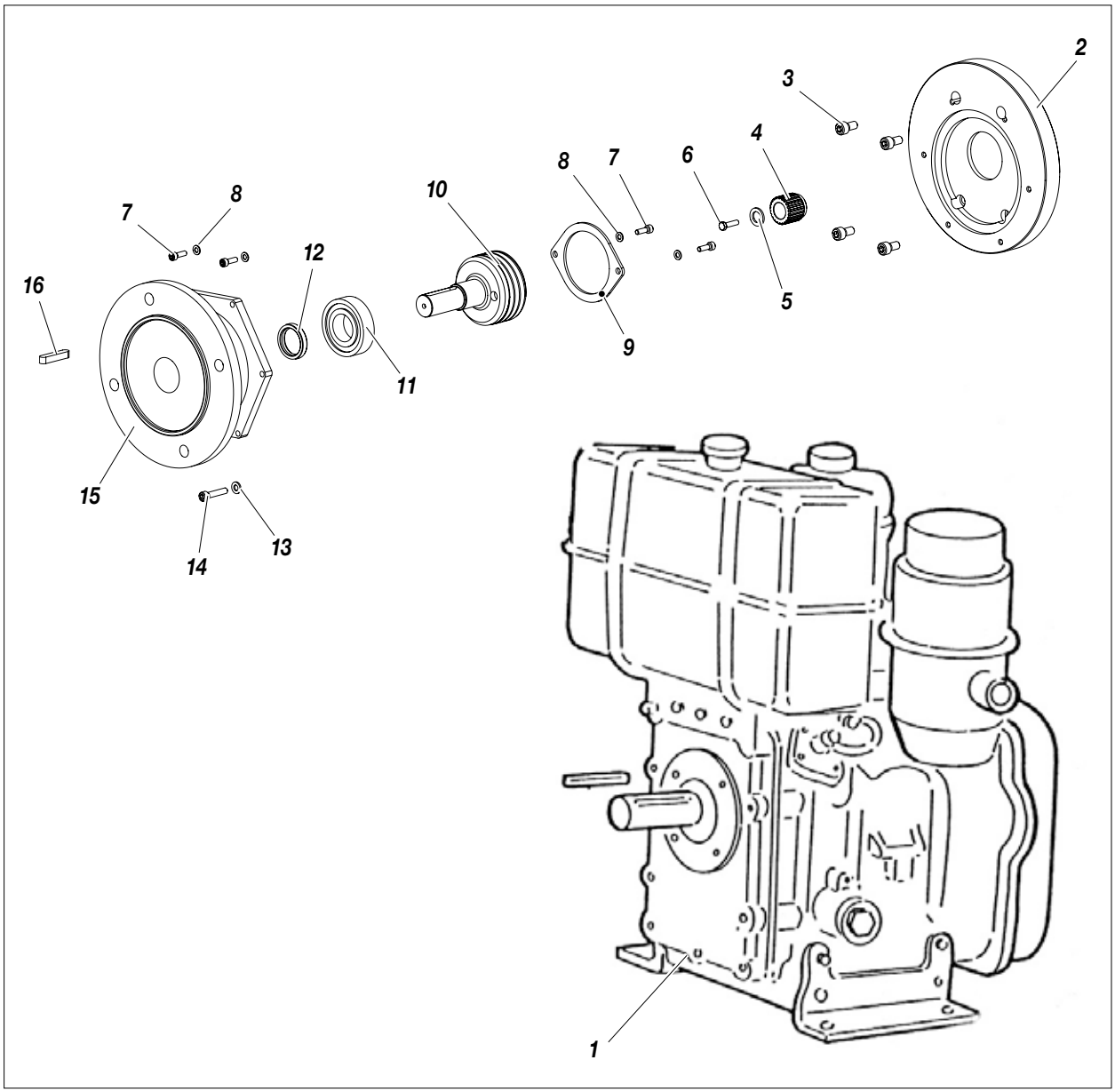
R MOTOR

ELECTRIC MOTOR



Pos.	Code	Description
1	81001	Electric motor 220V 50Hz
1	81002	Electric motor 380V 50Hz three-phase
1	81003	Electric motor 110V 60Hz
2	16071	Electic box
3	86001	Condenser
4	81012	Stud bolt
5	81033	Washer
6	95158	Nut

INTERNAL COMBUSTION SUPPLY MOTOR



Pos.	Code	Description
1	4415	Petrol motor
2	12478	Motor flange
3	32004	Screw
4	31116	Motor pinion
5	31115	Washer
6	69011	Screw
7	4019	Screw
8	32028	Washer

Pos.	Code	Description
9	31111	Plate
10	31110	Crown gear
11	31109	Bearing
12	31128	Corteco
13	54003	Washer
14	31106	Screw
15	31107	Reduction box
16		Tab

S ACCESSORIES

AT 300 GUN	
Art.	**Description**
11090	AT 300 1/4"
11000	AT 300 M16x1,5

HIGH PRESSURE GAUGE	
Art.	**Description**
1147	High pressure gauge

MANUAL LX-T GUN	
Art.	**Description**
14310	Nozzle 4 mm
14311	Nozzle 6 mm
14312	Nozzle 8 mm

FILTERS	
Art.	**Description**
270	Filter 100 MESH
271	Filter 60 MESH

FILTERS	
Art.	**Description**
85014	Filter 40 MESH
37215	Filter 40 MESH inox
85012	Filter 20 MESH
37216	Filter 20 MESH inox

PISTON GUNSTOCK FILTERS	
Art.	**Description**
11039	Green (30M)
11037	Yellow (100M)
11038	White (60M)
11019	Red (200M)

GRAVITY HOPPER	
Art.	**Description**
18241	Gravity hopper 50Lt.

Art.	Description
217550	MX 750
217560	MX 1000 E
217570	MX 1100 E

HIGH PRESSURE HOSE 3/8" - M16X1,5 MAX PRESSURE 425 BAR	
Art.	**Description**
18063	7,5 mt
18064	10 mt
18065	15 mt

ANTISTATIC HOSE 3/16" - M16X1,5 MAX PRESSURE 210 BAR	
Art.	**Description**
6164	5 mt
55050	7,5 mt
35018	10 mt

ANTIPULSATIONS 1/4" - M16X1,5 MAX PRESSURE 250 BAR	
Art.	**Description**
35013	5 mt
35014	7,5 mt
35017	10 mt
18026	15 mt

SUPER FAST-CLEAN

SUPER FAST-CLEAN NOZZLE

Nozzles code		
SFC07-20	SFC21-20	SFC31-60
SFC07-40	SFC21-40	SFC31-80
SFC09-20	SFC21-60	SFC33-40
SFC09-40	SFC23-20	SFC33-60
SFC11-20	SFC23-40	SFC33-80
SFC11-40	SFC23-60	SFC39-40
SFC13-20	SFC25-20	SFC39-60
SFC13-40	SFC25-40	SFC39-80
SFC13-60	SFC25-60	SFC43-40
SFC15-20	SFC27-20	SFC43-60
SFC15-40	SFC27-40	SFC43-80
SFC15-60	SFC27-60	SFC51-40
SFC17-20	SFC27-80	SFC51-60
SFC17-40	SFC29-20	SFC51-80
SFC17-60	SFC29-40	
SFC19-20	SFC29-60	
SFC19-40	SFC29-80	
SFC19-60	SFC31-40	

Art. 18280: GASKET

Art. 18270: SUPER FAST-CLEAN base UE 11/16x16

GUN EXTENSION	
Art.	**Description**
153	30 cm
153	40 cm
155	60 cm
158	80 cm
156	100 cm

PLA 16X1,5 + BASE SUPER FAST-CLEAN	
Art.	**Description**
K11421	130 cm
K11426	180 cm
K11431	24 cm

PLA 1/4" + BASE SUPER FAST-CLEAN	
Art.	**Description**
K11420	130 cm
K11425	180 cm
K11430	24 cm

TELESCOPIC PAINT ROLLER	
Art.	**Description**
16780	complete with:
	n. 1 Roller with extra-long fiber
	n. 1 Roller with long fiber
	n. 1 Roller with medium fiber
	Flexible hose mt. 2 3/16 " M16x1,5

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AIRLESS DIAPHRAGM PUMPS

MIRO' Rif. 21500

GIOTTO Rif. 12450

DALI' Rif. 18900

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CE DECLARATION OF CONFORMITY

Company

LARIUS srl
Via Antonio Stoppani 21 - 23801 Calolziocorte (LC) ITALY
Tel: +39 0341 621152
Fax: +39 0341 621243

E-mail: larius@larius.com

Declares under his owns resonsibility that the product:

VIKING
Electric diaphragm pump

complies with the directives:	**- EC Directive 2006/42 Machinery Directive** **- EU Directive 2014/30 Electromagnetic Compatibility (EMC)** **- EU Directive 2014/35 Low Voltage (LVD)**
furthermore to the harmonized standards:	**- UNI EN ISO 12100-1/-2** **Machinery safety, basic concepts, general principles of design. Basic terminology, methodology. Technical principles.**

This declaration relates exclusevely to the product in the state in which it was placed on the market, and excludes components or modifications which are added or carried out subsequently by end user.

Signature

Calolziocorte, 4 September 2020
Location / Date

Pierangelo Castagna
Managing Director

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