



6950 - 6970



Read carefully the present use and maintenance manual in every part before proceeding to use. The following machine has been examined according to the Directive Machines 2006/42, 2004/108, 2006/95 and following changes and integrations.



Manufactured and distributed by : Annovi Reverberi S.p.A.
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41122 Modena (Italy)
www.annovireverberi.it

**Hot water High
pressure washer
Original instructions**

Code XXXXX - XX

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1. GENERAL INSTRUCTIONS

Congratulation for your choice on the purchase of your new cleaner; it means that you have keep technical knowledge and good taste for the nice design. Technological innovation, high performances and strenght are the main features of the machine **6950/6970**.

This manual is an integral part of the washer and it must be found easily by the personnel responsible about the maintenance and by the user. The users, the qualified individuals must know the contents of this manual. In case of troubles, doubts as to understand this manual, please contact the Company **ANNOVI REVERBERI** - Via Aldo Moro, 40/42 - 41030 Bomperto (MO) Italy, support@annovireverberi.it.

Descriptions and images contained in this manual are not binding, therefore, the Company, reserves the right to make changes at any time and without prior notice.



IMPORTANT !

For a proper and safe operation of the machine, read this manual carefully before connecting the machine o the power supply and bifore setting it a work.

The machine has been designed to clean or wash, with hot or cold water, objects or surfaces which can stand the mechanical treatment of the water jet under high pressure and by the action of the chemicals products (detergents). Before starting, be sure that it is supplied with the relevant identification rating plate; otherwise you must contact your dealer immediately and don't use the machine (see fig. 1). Never leave an operating cleaner unattended in the work place. After a working day we suggest to place the machine in a dry place and protected from the bad weather conditions.

The machine must be used only for the purposes for which it has been designed.

Never use the machine if the safety conditions are uncertain. In case of demolition, please follow the law in force in your Country.

2. MACHINE IDENTIFICATION

Fig. 1 below indicates where the identification plate is fixed.

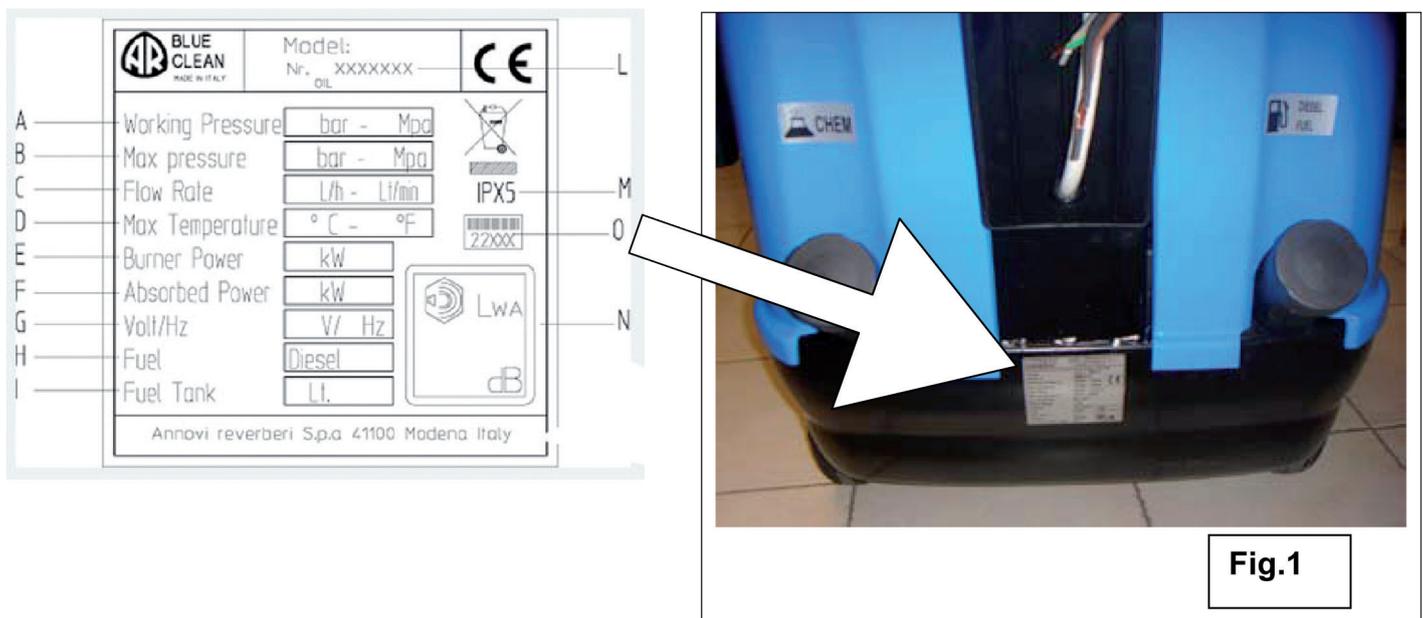


Fig.1

- A = WORKING PRESSURE
- B = MAX PRESSURE
- C = FLOW RATE
- D = WATER MAX TEMPERATURE - INPUT
- E = BURNER POWER
- F = ABSORBED POWER
- G = VOLT/HZ
- H = FUEL TYPE
- I = FUEL TANK CAPACITY
- L = SERIAL NUMBER
- M = PROTECTION DEGREE
- N = NOISE VALUE
- O = PRODUCT CODE

The data on the plate must not be erased for any reason.

3. TECHNICAL FEATURES

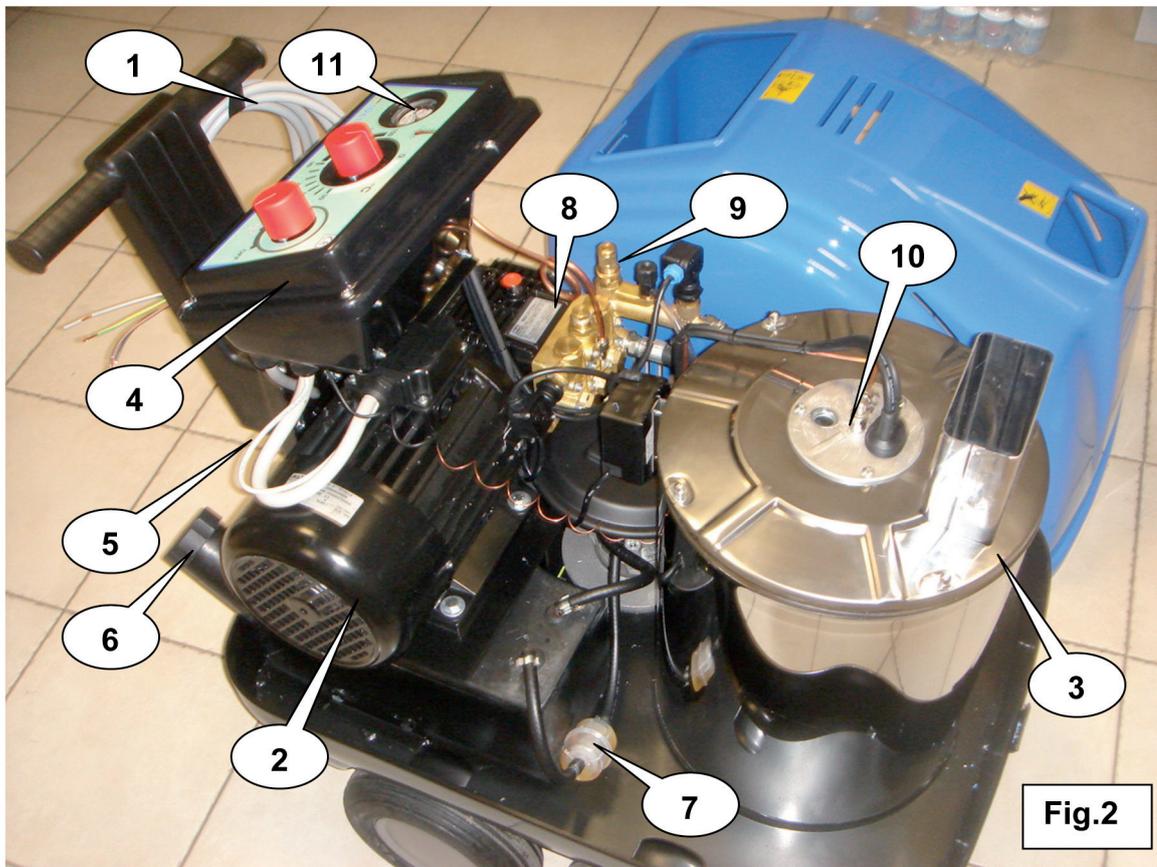
MODEL		6950	6970
Pressure	BAR	150	200
	P.S.I.	2200	2900
Power	KW (OUTPUT)	4	5,5
	KW (INPUT)	5	7,4
	RPM	1450	1450
Voltage	V/Hz	220-60Hz 3 ~	220-60Hz 3 ~
Max capacity	L/H	600	900
	Gal/h	159	238
Temperature °Δ T	°C	60	60
Fuel tank	Liters	14	14
Detergent tank	Liters	6	6
Dimensions	H	800	800
	W	590	590
	L	880	880
Lpa (EN 60704-1)	Db (A)	80,7	82
Lwa (EN 60704-1)	Db (A)	89	90
Machine vibrations	M/s ²	1,45	1,45
Weight	kg	93	97

4. MACHINE DIMENSIONS

Fig. 2



5. MAIN PARTS



1	ELECTRIC CABLE	7	FUEL FILTER
2	ELECTRIC MOTOR	8	HIGH PRESSURE PUMP
3	BOILER	9	PRESSURE VALVE
4	ELECTRIC SYSTEM	10	COMBUSTION HEAD
5	DETERGENT TANK	11	PRESSURE SWITCH
6	FUEL TANK		

6. SAFETY REGULATIONS

- Make sure that the machine is constantly supplied with water. Dry working would cause serious damages to the machine seal system.
- Electrical connections must be carried out by skilled/trained personnel only.
- Never pull the power cord to disconnect the plug nor pull the hose to move the machine.
- Don't leave the machine in a low temperature place and protect it from frost and general bad weather conditions.
- Avoid vehicles transit on the high pressure hose.
- While the machine is running do not cover it and avoid placing it where there's low air supply.
- If you are working indoors, it's compulsory to install a fan to discharge the exhaust gases outside.
- The fan terminal must not be obstructed. Don't leave the lance or any other object near the exhaust outlet.
- The nature of the gases as well as the high temperature are to be considered very dangerous, the operator must thus be adequately informed in order to avoid being scalded.
- Don't leave the machine outside when it rains or when the weather conditions are bad. The operators must wear protection clothes while using the machine.
- Do not leave the machine for more than 15 minutes working with the gun closed, the water temperature would increase rapidly causing serious damages to the seal system.
- Each time the machine has to be switched off blow off the hose residual pressure by using the gun.
- Don't put the hands in front of the lance.
- Do not use different fuels other than the ones recommended by the manufacturer.



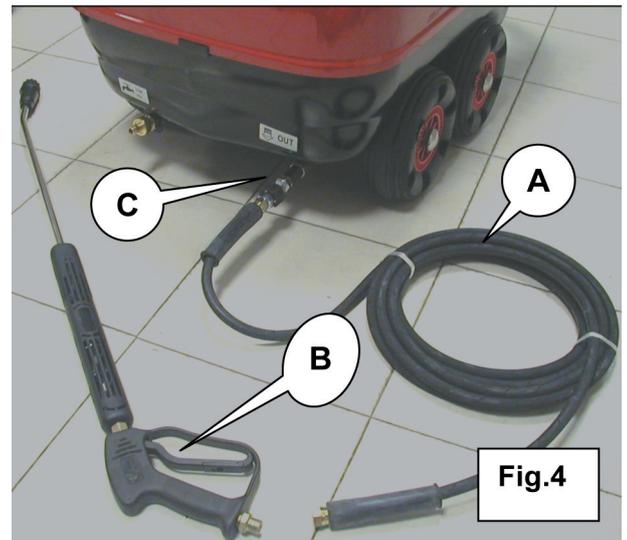
WARNING !

- Don't carry out any operation on the machine before having unplugged it.
- Don't carry out any unwary operation on the electric cable and make sure the same is not damaged.
- Never direct the high pressure water jet towards people, animals, electrical installations or the machine itself.
- Use always only clean water. Dirty water and chemical corrosive products are harmful for the machine.
- The machine is equipped with idle wheels; it is thus recommendable to avoid placing the machine on ramps or slanted floors. Do not tilt the machine by more than 20 °C (with full tank).
- It is forbidden to use plug extensions if the work environment is subject to water/humidity presence which could cut the isolating conditions of the system. Always check the isolation of the electric cable as well as the equipment's integrity.
- In case an extension is required, be sure that plugs and sockets have a protection type IP65 and that the power cord complies with the table reported here below.

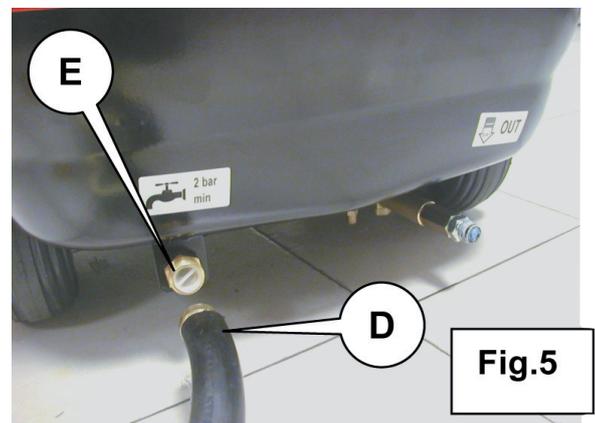
VOLTAGE V	EXTENSION LENGTH	CABLE SECTION
380 - 415	0 mt UP TO 25 mt	4x2,5 mm ²
380 - 415	25 mt UP TO 50 mt	4x4 mm ²

7. MACHINE INSTALLATION

The machine you are about to use will give you the best performances if you install it following our instructions. Before setting the machine at work, make sure that the machine lies perfectly on a horizontal surface. Connect the high pressure hose A to the gun B and with the other side of the cable to the intake fitting, fixing tightly the fastening nut C (see fig. 4). Connect the lance B1 to the gun B.

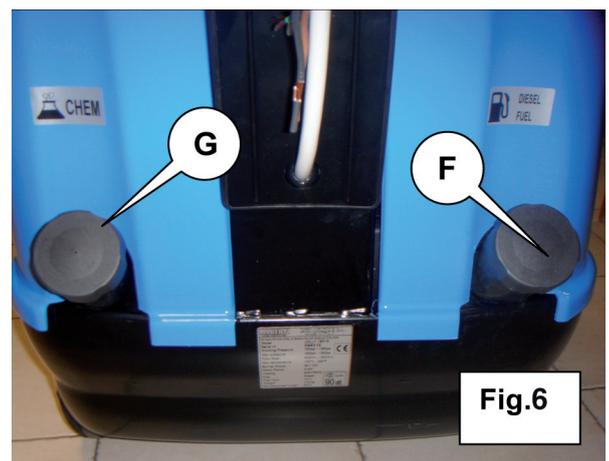


Connect the water supply hose D to the intake fitting E (see fig. 5). It is recommended to use a reinforced hose having an inner diameter of at least 10 mm. The water intake must be of at least 15 l/min and have a max inlet temperature of 60 °C.

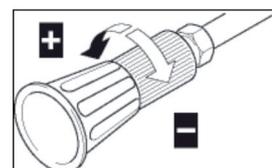


Fill the fuel tank F (see fig. 6) with gasoil (Diesel). Fill the detergent tank G (see fig. 6) with a biodegradable product.

Make sure that the electrical tension and amperage are suitable for the machine. The cleaner must be connected to a suitable feeding point equipped with an efficient contact to earth and controlled by an overload cut out switch.



The detergent is applied by opening the intake device of the lance (on the position - see figure) and then operating with the gun lever.



8. MACHINE START-UP



After having installed the machine, in order to operate it, open the water supply faucet H. The control panel has been designed to run the operations easily. The knob A has three main functions:

Pos.1	OFF indicates that the machine is turned off.	Pos.2	The second position indicates that the motor pump is on.	Pos.3	The third position ON indicates that the boiler is on.
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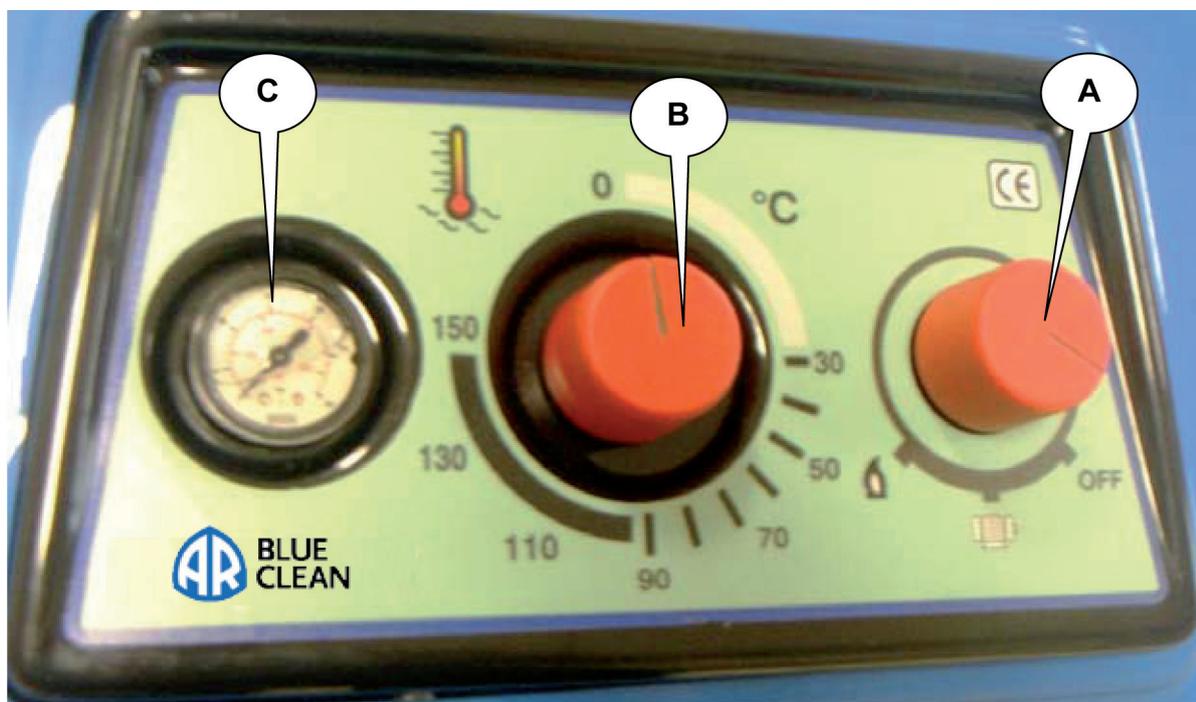
Turn the thermostat knob B. This allows to control the temperature of the 'water bringing it to the desired value, set by means of a scale of values ranging from 0 to 150 ° C.

The pressure gauge C indicates the pressure in the pump



IMPORTANT! Make sure the pressure never exceeds the pressure indicated on the pump plate.

The hydraulic system is equipped with a safety valve that works whenever the pressures is higher than the calibration.



9. REGULATION OF THE OPERATING PRESSURE

On this machine It is possible to regulate the operating pressure. Move to near the machine cover, in the valve access window, see fig. 8. Grip the valve knob, if provided, or use a wrench, if provided, in pos. 1, and rotating clockwise (fig. 9 pos. 1) the pressure increases; rotating the knob (fig. 9 pos. 2) anti-clockwise the pressure decreases.

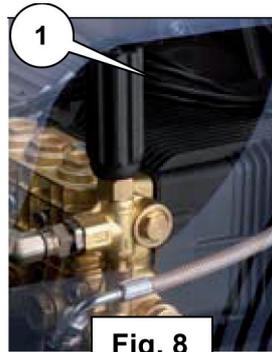


Fig. 8

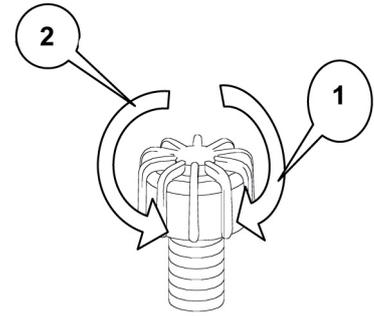


Fig. 9



IMPORTANT! Make sure that the operating pressure never exceeds the pressure indicated on the pump's plate.

10. MACHINE SHELTER

Once finished working after having discharged the remaining pressure in the hose and after having inserted the safety catch on the gun picture 4 pos. 1 and 2, wind-up the electrical hose and the high pressure hose in order not to damage them. Place the high pressure cleaner in a sheltered away from the possibility of non authorized people to use it.

11. STANDARD EQUIPMENT

We suggest to check the cleaner when it is delivered. It must be complete in all the parts and be supplied with: a thermal lance, a 10 m high pressure hose and a nozzle suitable for the model you have purchased.

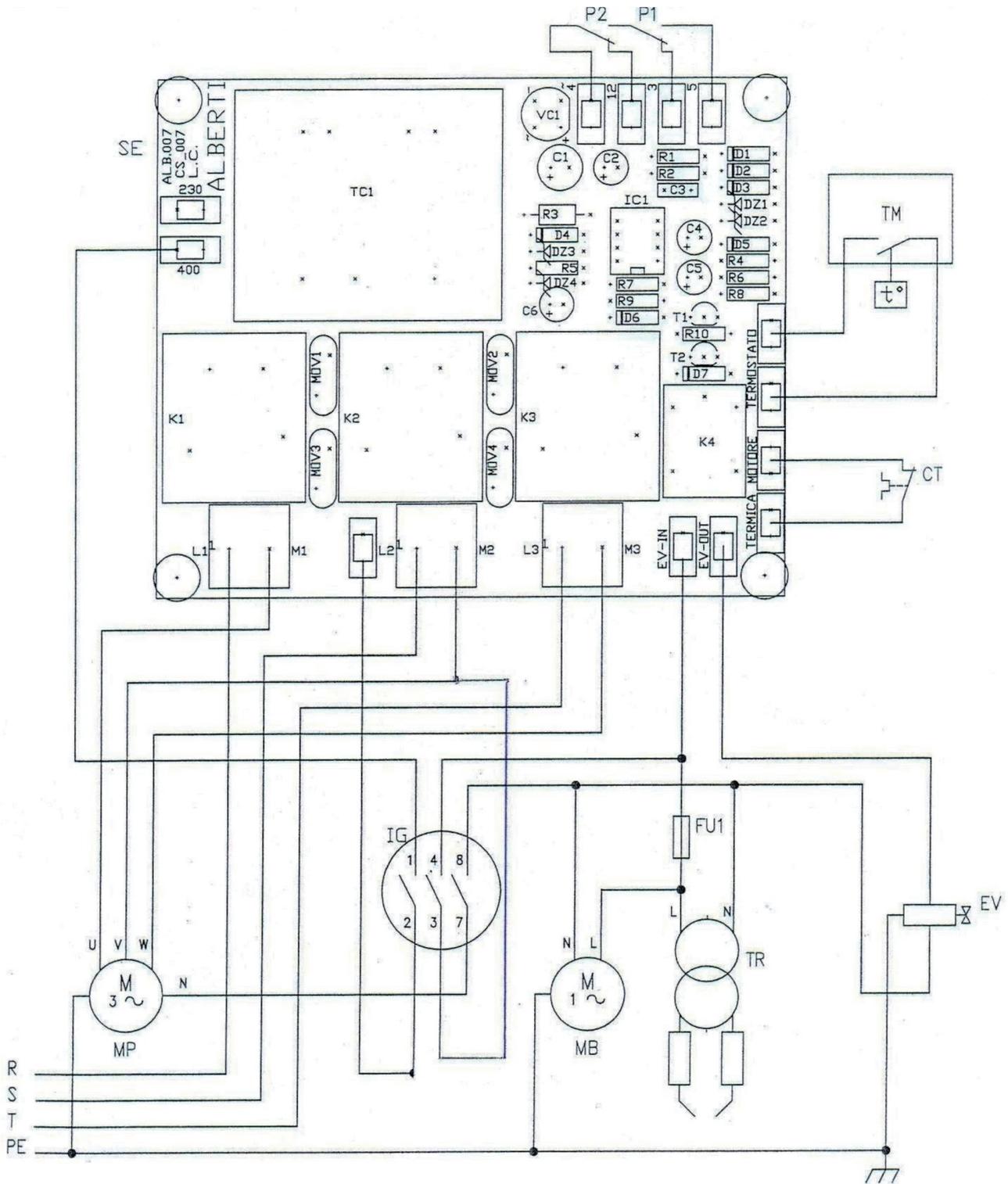
12. OPTIONALS

ANNOVI REVERBERI supplies a rotary jet nozzle on request which allows to remove the hardest dirt from any surfaces you want to clean and wash.

13. DETERGENTS

It is advisable to use detergents with liquid base and not with dusts. Use biodegradable detergents, observing the relative regulations in force.

14. ELECTRIC WIRING DIAGRAM

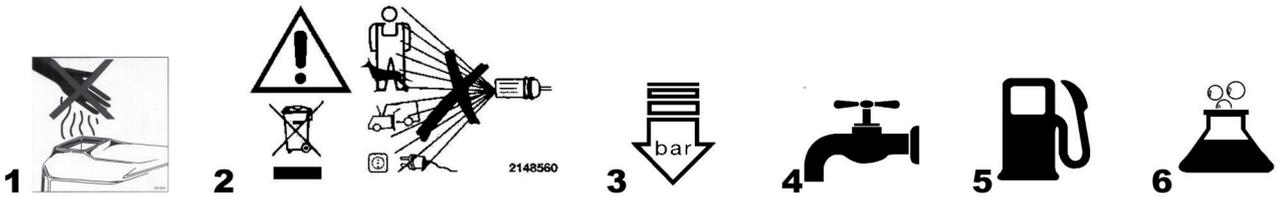
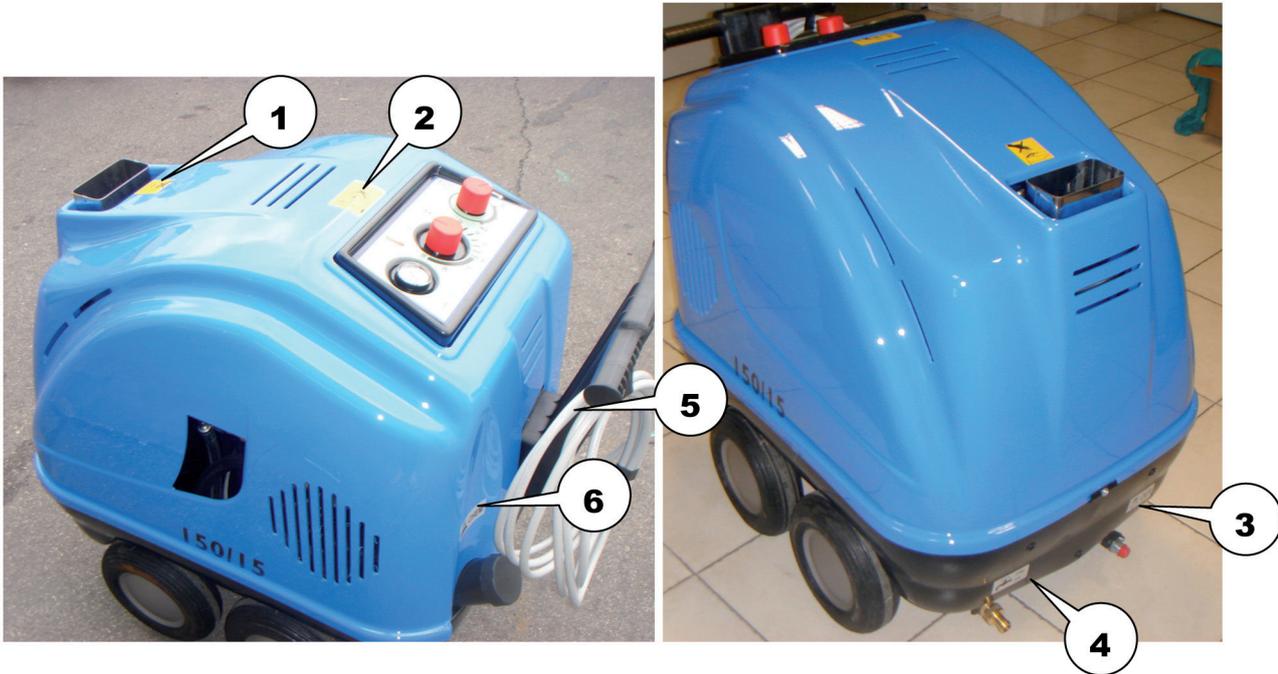


CT	THERMAL PROTECTOR	P1	PRESSURE SWITCH 40 BAR
EV	FUEL ELECTROVALVE	P2	PRESSURE SWITCH 15 BAR
FU1	FUSE PROTECTION	SE	ELECTRONIC PRINT BOARD
IG	GENERAL ON-OFF SWITCH	TM	THERMOSTAT
MB	BURNER MOTOR	TR	BURNER TRASFORMER
MP	PUMP MOTOR	MB	BURNER MOTOR

15. LABELS

The machine comes with a safety warning signs, it is also recommended to comply with all applicable safety regulations issued by the country of installation of the machine.

Below is a table shows the types of adhesives used and their meaning:



1	Warning! Gases at high temperature - outlet	5	Water feeding
2	Warning! Do not direct the high pressure jet towards people, animals or objects	6	Fuel tank
3	Lance delivery	7	Detergent tank



WARNING!

Make sure that the stickers/labels are present on the machine and that they are readable; if they are missing or erased, please attach or replace them. Ask for them from the licensed dealers.

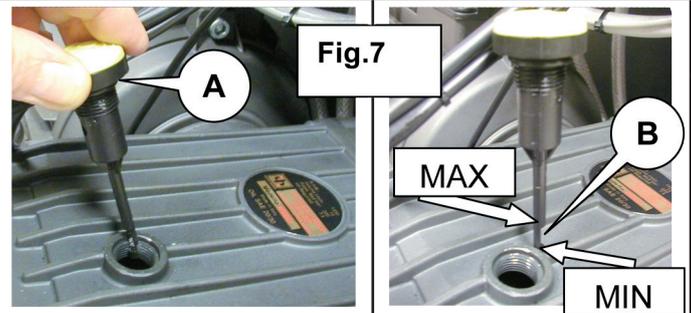
16. MAINTENANCE

**WARNING!**

- All the fixing and maintenance operations must be carried out by authorized personnel.
- All maintenance operations must be carried out keeping the machine on an even floor. The machine must be disconnected from the main power and from the water supply.
- A correct use and maintenance are necessary to guarantee the machine's reliability and it's best performances.
- In order to ensure regular and constant performances it is recommended to use original spare parts only.
- The machine you have bought has undergone a factory test which ensures correct running at standard conditions.
- Beware! In case the cleaner has been kept inoperative for a long time, run some water through the coil until it comes out before using it again. Besides preliminary controls, the cleaner needs constant checks that are to be carried out according to following time schedules:

DAILY

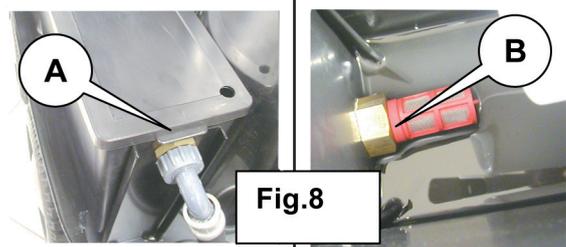
Check the oil level of the pump, after having removed the cover. Unscrew the cap fig.7 pos. A, check the level which should be between the max and the min., fig. 7 pos. B and if necessary add some. After having checked the level place back the cap and the cover. It is recommended to use oil type SAE 15W/40. The first oil top up should be carried out after one week work.



Check the working condition of the feeding hose and the extension cable.

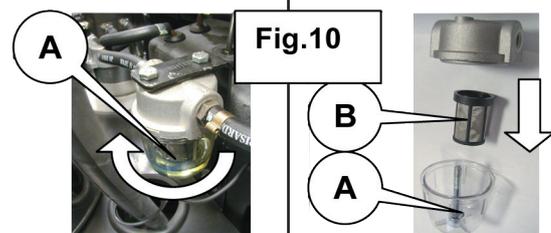
EVERY 2 WEEKS AND AFTER 50 HOURS WORKING SHIFT

Clean water filter, which is located in the tank (fig. 8). Remove the cover of the machine, remove the cover of the tank fig.8. pos. A, unscrew the plastic filter pos. B. Blow with a jet of air and then replace the lid and screw it again replace both the cover of the tank and the machine.



Clean the fuel filter (fig.10).

Remove the cover of the machine, unscrew the transparent glass, see fig.10 pos.A extract by pulling down on pos.B the plastic mesh filter, blow it with gentle stream of air and refit, make sure that the glass is tight.



EVERY MONTH OR AFTER 100 HOURS OF WORK

Clean the combustion head and check the electrodes. Remove the cover, unscrew the three screws fig. 11 pos. A, extract the combustion head group pos. B. Clean with an air jet the head and check the glow plug pos. C. The distance between the electrodes must be of 3 mm. If the distance must be adjusted, unscrew glow plug screw pos. E, remove the glow plug, adjust the distance to achieve the 3 mm distance. Reassemble the glow plug while checking it is fixed correctly. Place the combustion back in place using the three screws pos. A.

This maintenance operation must be carried out by skilled personnel.

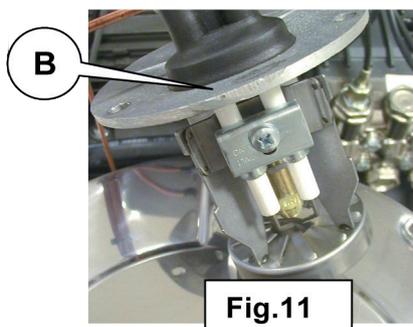
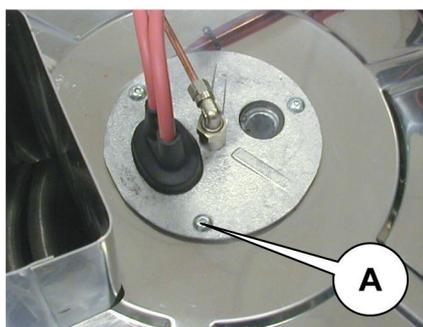
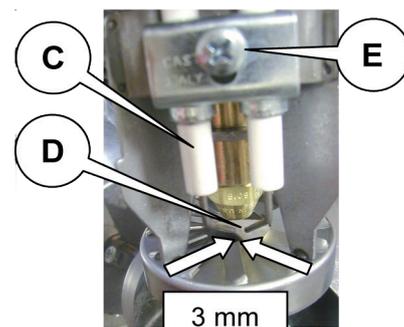


Fig.11

**EVERY MONTH OR AFTER 200 HOURS OF WORK**

Carry out the first topping up of the pump oil. Clean the combustion pump filter. Remove the cover. Near the pump picture 13 pos. A on the side of the filter symbol, extract the plastic filter using a 4 mm socket head screw. Clean the filter with a light air jet and place it back. If necessary replace it.

This maintenance operation must be carried out by skilled personnel.

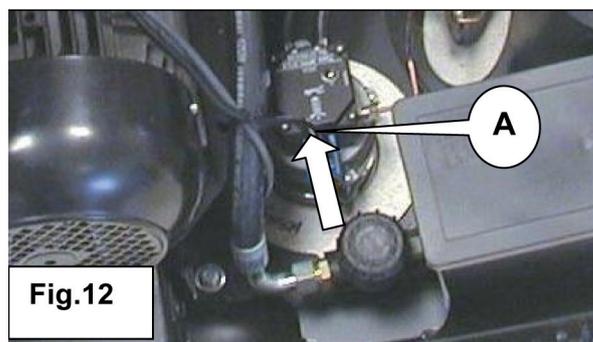


Fig.12

17. COOLING COIL INTERNAL CLEANING

Contact an Authorized Service Centre.

18. MACHINE DEMOLITION

If you want to junk your machine, please comply to the laws in force in your Country. The machine is manufactured with parts containing recyclable metals and plastics. The oil found inside the pump is highly dangerous and pollutant and must not be wasted in the environment or poured into civic drains. For further informations, please contact your local committee for exhaust oil drainage.

19. WARRANTY

The duration of the warranty is in accordance with the relevant legislation in the country where the product is sold (unless otherwise stated by the producer).

The warranty covers materials, construction and conformity defects during the warranty period, during which time the manufacturer will replace defective parts and repair or replace the product if excessively worn in normal use.

The warranty does not cover components subject to normal wear (valves, pistons, water gasket, oil gasket, springs, O-rings, accessories such as hoses, guns, brushes, wheels, etc.).

The warranty does not cover defects caused by or resulting from:

- incorrect use, abuse or neglect,
- trade, professional or hire use,
- failure to service and maintain the unit as specified in the user's manual,
- unauthorised repairs,
- use of non-original accessories/spare parts,
- damage incurred during shipping or due to foreign objects or substances and accidental damage,
- warehousing and stock keeping problems.

To register the warranty, the customer must provide proof of purchase.

20. WARRANTY CERTIFICATE



Via Aldo Moro, 40/42 – 41030 BOMPORTO (MO) - ITALY

CERTIFICATO DI GARANZIA
WARRANTY CERTIFICATE-

MATRICOLA

Serial number

DATA DI CONSEGNA

Date of delivery

NOME E INDIRIZZO

Name and address of purchaser

TIMBRO DEL RIVENDITORE

Dealer stamp



Via Aldo Moro, 40/42 – 41030 BOMPORTO (MO) - ITALY

MATRICOLA – Serial number

DATA DI CONSEGNA – Date of delivery

21. DRAWBACKS, CAUSES AND SOLUTIONS

PROBLEM	POSSIBLE CAUSES	SOLUTION
WATER DOES NOT COME OUT	Dirty water filter	Clean or replace
	Blocked infeed valves	Check
	Clogged lance nozzle	Clean
INSUFFICIENT OR IRREGULAR PRESSURE	The detergent valve is open and takes in air	Check
	Insufficient water supply	Check the capacity
	The pump intakes air	Check
	Worn out valve	Replace
	Worn out/not suitable nozzle	Replace
	Worn out gaskets	Replace
	Exceeding water temperature	Check
	Encrusted coil	Scale
THE BURNER DOES NOT TURN ON	Excessive air intake	Check
	Dirty fuel filter	Replace
	Dirty fuel pump filter	Clean or replace
	Dirty burner nozzle	Replace
	Faulty thermostat	Replace
	Broken/blocked electrovalve	Replace
	Insufficient electrodes spark	Replace
	Defected flowmeter and/or pressure switch	Replace
	Worn out motor pump joint	Replace
	Absent/insufficient voltage	Check
	NOISY MACHINE	Air intake
Worn out/dirty/blocked valves		Check the intake pumps
Exceeding water temperature		Check the intake pumps
WATER PRESENCE IN THE OIL	Worn out water/oil rings	Replace
	High percentage of humidity in the air	Check
OIL LEAKAGE FROM THE HEAD	Worn out O-rings of the seal system	Replace
MOTOR DOES NOT START WHEN PRESSING THE SWITCH	The plug is not working due to overheating	Check the plug, the cable and the ON/OFF switch
SUDDEN MOTOR STOP	The thermal protection is not working due to overheating	Make sure that the tension is suitable

22. DECLARATION OF CONFORMITY

We Annovi Reverberi S.p.A., Bomporto (Mo),Italy declare that the following AR Blue Clean Machine(s):

Designation of Machine	High Pressure Washer	
Model No / Type	6950	6970
Input power	5 kW	7,4 kW

Conforms to the following European Directives:

2006/42/EC, 2006/95/EC, 2002/95/EC, 2002/96/EC, 2004/108/EC, 2000/14/EC

And are manufactured in accordance to the following standards or standardised documents: EN 60335-1; EN 60335-2-79; EN 55014-1; EN 55014-2; EN 61000-3-2; EN 61000-3-3; EN 61000-3-11; EN 60704-1

Name and address of the person in charge to give the technical file:

Stefano Reverberi / AR Managing Director

Via M. L. King, 3 - 41122 Modena, Italy

The conformity assessment procedure required by Directive 2000/14/EC was in accordance with annex V

	6950	6970
Measured Sound		
Power Level:	88 dB (A)	89 dB (A)
Guaranteed Sound		
Power Level:	89 dB (A)	90 dB (A)

Date: 25.10.2011
MODENA (I)
Stefano Reverberi


Managing Director



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41030 BOMPORTO (MO)
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