

GB

**EDGE**



# LEOPARD

INSTRUCTION MANUAL

WARNING: READ THE INSTRUCTIONS CAREFULLY BEFORE USE  
INDUSTRIAL COLD WATER PRESSURE WASHER





## IMPORTANT SAFETY INSTRUCTIONS

*This book has important information for the use and safe operation of this machine. Read and understand all warnings before you start working.*

### **WARNING - WHEN USING THIS MACHINE, BASIC PRECAUTIONS SHOULD BE FOLLOWED.**

1. *Read all the instructions before using the machine.*
2. *To reduce risk of injury, close supervision is necessary when the machine is used near children.*
3. *Know how to stop the machine and bleed pressure quickly. Be quite familiar with the controls.*
4. *Stay alert! Watch what you are doing.*
5. *Do not operate the machine when fatigued or under the influence of alcohol or drugs.*
6. *Keep operating area clear of all persons.*
7. *Do not overreach or stand on unstable support. Keep good footing and balance at all times.*
8. *Follow the maintenance instructions specified in the manual.*
9. *Read carefully instructions concerning grounding and extension cords on next page.*
10. *To prevent fire hazard, do not use with or near inflammable materials such as: gasoline, grain dust, solvents and thinners.*
11. *Some models may be provided with a ground fault circuit interrupter built into the power cord plug. If replacement of the plug or cord is needed, use only identical replacement parts that include GFCI protection. This applies only for UL version.*

### **WARNING - RISK OF INJECTION OR INJURY - DO NOT DIRECT DISCHARGE STREAM AT PERSONS.**

#### **GROUNDING INSTRUCTIONS**

*This product must be grounded. If it should malfunction or breakdown, the ground wire provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local regulations.*

**DANGER** - Improper connection of the equipment-grounding conductor can result in a risk of electrocution. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the product - If it will not fit the outlet, have a proper outlet installed by a qualified electrician.

#### **GROUND-FAULT CIRCUIT - INTERRUPTER PROTECTION (ONLY FOR U.S.A.)**

*Some models may be provided with a ground-fault circuit-interrupter (GFCI) built into the plug of the power supply cord. This device provides additional protection from the risk of electric shock. Should replacement of the plug or cord become necessary, use only identical replacement parts that include GFCI protection.*

#### **EXTENSION CORDS**

**WARNING** - Extension cords are not recommended unless they are plugged into a ground-fault circuit-interrupter inside circuit boxes or protected receptacles.

*Use only extension cords of the same type as used on the machine, provided with a ground conductor.*

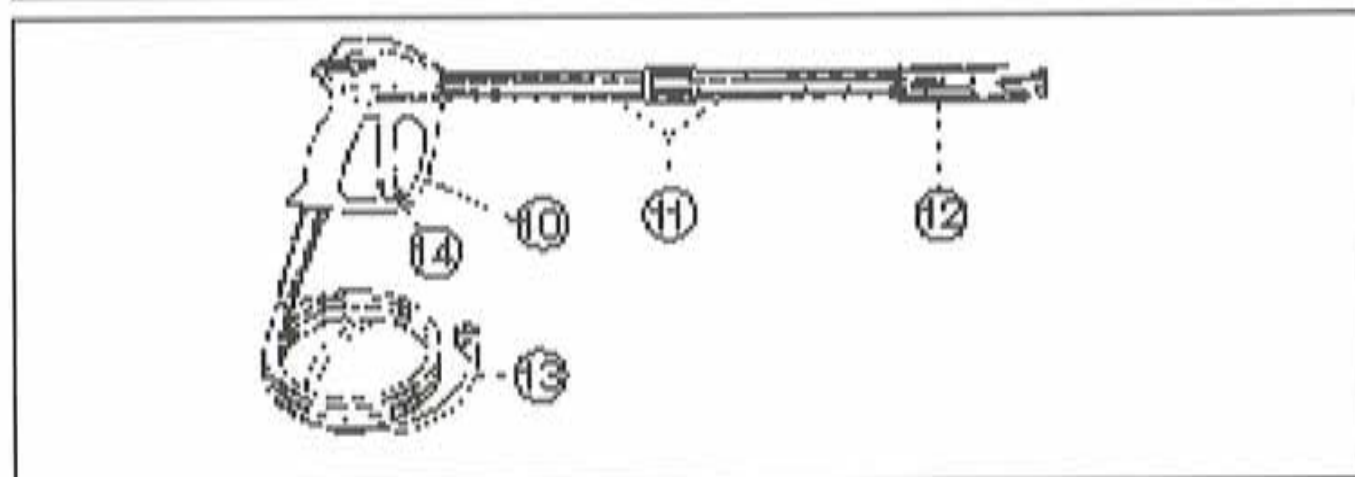
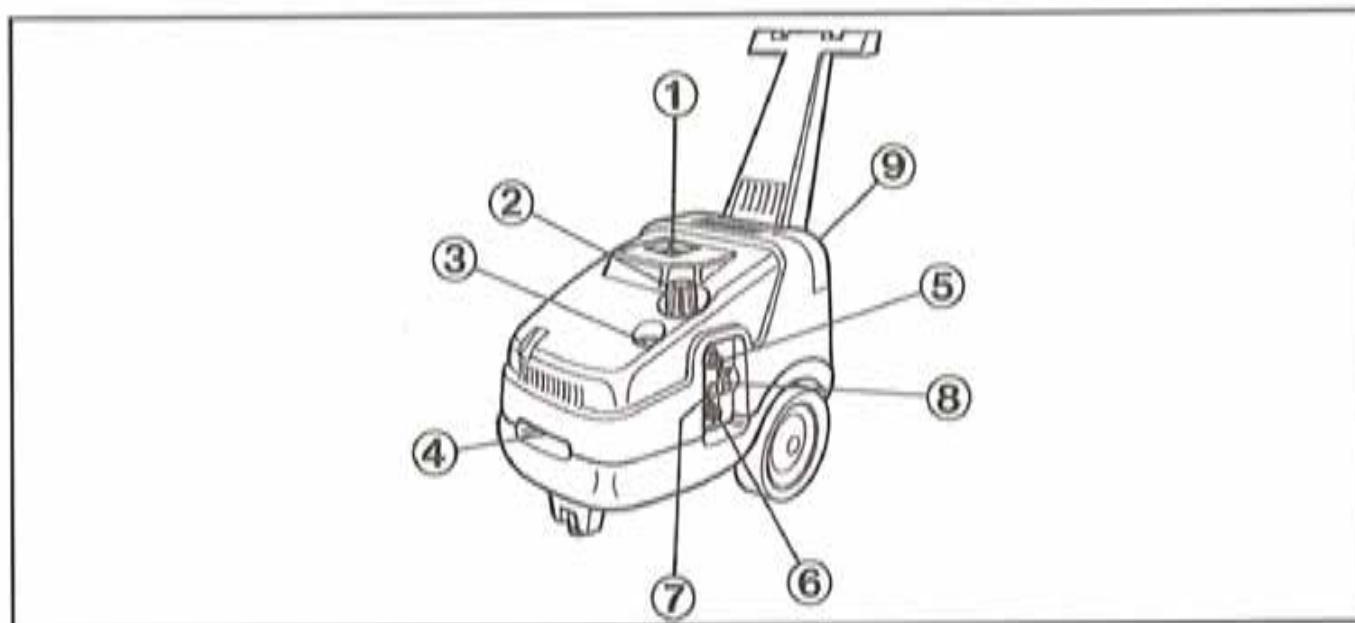
*Use only extension cords that are intended for outdoor use. These extension cords are identified by a marking "Acceptable for use with outdoor appliances; store indoors while not in use". Use only extension cords having an electrical rating higher than the rating of the machine.*

*Do not use damaged extension cords. Examine extension cord before using and replace if damaged. Do not use extension cord and do not pull on any cord to disconnect. Keep cord away from heat and sharp edges. Always unplug the machine before disconnecting any extension cord. When using an extension cord, follow the specifications below:*

<i>Cable length</i>	<i>Wire Gauge</i>
<i>Up to 50 ft.</i>	<i>2,5 mm<sup>2</sup> / 14AWG</i>
<i>50 to 100 ft.</i>	<i>4 mm<sup>2</sup> / 12AWG</i>

**WARNING** - To Reduce the risk of electrocution, keep all connections dry and off the ground. Do not touch plug with wet hands.

**SAVE THESE INSTRUCTIONS**



• CONTROL DEVICES

Before connecting the machine to the water and electrical supplies, it is necessary to know the function of the controls on the machine. This must be done in accordance with the descriptions in the Instruction Manual, taking reference to the relevant instructions and illustrations.

• DISPOSITIFS DE CONTRÔLE

Avant de brancher l'appareil sur les réseaux d'alimentation d'eau et d'électricité, il est nécessaire de bien connaître le fonctionnement de ses dispositifs de contrôle. Effectuer cette opération en vous référant aux instructions données dans ce manuel et aux indications et illustrations y relatives.

• BEDIENUNGS - UND KONTROLLVORRICHTUNGEN

Bevor Sie das Gerät mit Wasser - und Stromanschlüssen verbinden ist es notwendig, daß Sie die Bedienungs- und Kontrollvorrichtungen des Gerätes verstehen. Dies muß anhand der Beschreibungen und Illustrationen in der Bedienungsanleitung erfolgen.

• DISPOSITIVOS DE PUESTA EN MARCHA Y CONTROL

Antes de conectar el equipo a las redes de alimentación de agua y electricidad, es necesario conocer sus dispositivos de puesta en marcha y control. Efectuar estas operaciones siguiendo las indicaciones que figuran en el manual de instrucciones así como de sus ilustraciones graficas correspondientes.

• DISPOSITIVO DE COMANDO E CONTROLLO

Antes da ligação às redes de alimentação hídrica e eléctrica, é necessário saber qual a função dos dispositivos de comando e controlo da máquina. Efectuar esta operação conforme descrito no Manual de Instruções.

• DISPOSITIVI DI COMANDO E CONTROLLO

Prima dell'allacciamento alla rete di alimentazione idrica ed elettrica è necessario conoscere la funzione dei dispositivi di comando e controllo della macchina. Effettuare questa operazione seguendo quanto descritto nel Manuale Istruzioni facendo riferimento alle indicazioni e illustrazioni relative.

**STANDARD EQUIPMENT**

- 1 ON/OFF switch
- 2 Pressure adjusting knob
- 3 Pressure indicator
- 4 Oil level indicator
- 5 High pressure hose connection (OUTLET)
- 6 Inlet hose connection with water filter (INLET)
- 7 Outer chemical port
- 8 Chemical regulator (CHEM)
- 9 Built in tank cap
- 10 Automatic gun
- 11 "LANCE"
- 12 Rototek or Multireg 99
- 13 High pressure hose
- 14 Safety lock

**EQUIPEMENT STANDARD**

- 1 Interrupteur Marche/Arrêt
- 2 Bouton de régulation de la pression
- 3 Indicateur de pression
- 4 Indicateur de niveau d'huile
- 5 Raccord de tuyau haute pression (OUTLET)
- 6 Raccord d'alimentation eau et filtre (INLET)
- 7 Prise du réservoir extérieur détergent
- 8 Molette de dosage du détergent (CHEM)
- 9 Bouchon réservoir incorporé
- 10 Pistolet automatique
- 11 Lance a raccordement rapide "LANCE"
- 12 Rototek ou Multireg 99
- 13 Tuyau haute pression
- 14 Cran de sûreté

**STANDARD AUSRÜSTUNG**

- 1 EIN/AUS Schalter
- 2 Druckregel-Griff
- 3 Druckanzeiger
- 4 Ölschauglas
- 5 Hochdruck-Ausgang (OUTLET)
- 6 Wasser-Anschluß mit Filter (INLET)
- 7 Externe Chemiesaugdose
- 8 Chemiedosierung (CHEM)
- 9 Verschluß des eingebauten Chemietanks
- 10 Spritzpistole
- 11 Wechsel-Lanze "LANCE"
- 12 Rototek oder Multireg 99
- 13 Hochdruckschlauch
- 14 Sicherheitssperre

**EQUIPO STANDARD**

- 1 Interruptor
- 2 Mando de regulación de la presión
- 3 Manómetro
- 4 Mirilla nivel de aceite
- 5 Salida presión (OUTLET)
- 6 Entrada + Filtro agua (INLET)
- 7 Entrada aspiración depósito externo
- 8 Mando de regulación detergente (CHEM)
- 9 Tapón depósito interno
- 10 Pistola
- 11 Lanza
- 12 Rototek o Multireg 99
- 13 Tubo de alta presión
- 14 Seguro

**EQUIPAMENTO STANDARD**

- 1 Interruptor lig/des (ON/OFF)
- 2 Manipulo de ajuste de pressão
- 3 Indicador de pressão
- 4 Indicador de nivel de óleo
- 5 Conector de saída de alta pressão (OUTLET)
- 6 Entrada de água com filtro (INLET)
- 7 Entrada de aspiração de detergente
- 8 Regulador de detergente (CHEM)
- 9 Tampa do depósito interno
- 10 Pistola automática
- 11 Lança
- 12 Bico (ROTOTEK ou MULTIREG 99)
- 13 Lanço de tubo de alta pressão
- 14 Travão

**EQUIPAGGIAMENTO STANDARD**

- 1 Interruttore
- 2 Comando di regolazione della pressione
- 3 Manometro
- 4 Spia livello olio
- 5 Uscita (OUTLET)
- 6 Entrata + Filtro acqua
- 7 Ingresso aspirazione serbatoio esterno
- 8 Regolazione detersivo (CHEM)
- 9 Tappo del serbatoio interno
- 10 Pistola
- 11 Lancia
- 12 Rototek o Multireg 99
- 13 Tubo alta pressione
- 14 Sicura

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# 1 - HYDRO PRESSURE CLEANER TECHNICAL CHARACTERISTICS SERIES ELT



<b>MODEL</b>		1910 1810 M	1630 1530 M	2030 T	1850 T	2840 T	2360 T	2070 T	1530 M	1350 M	2030 T	1265 M	2260 T	
<b>Flow rate</b>	<i>l/min.</i>	9,5	12	12	14	13	15	17	11,5	13,6	13	15,9	15	
	<i>G.P.M. USA</i>	2,5	3,17	3,17	3,69	3,43	3,96	4,5	3,04	3,6	3,43	4,2	3,96	
<b>Equivalent washing impact with rotating nozzle jet</b>		<i>E.W. bar: specific jet pressure in Kg/cm<sup>2</sup> or P.S.I.</i>												
		<i>bar</i>	230	170	245	210	310	260	230	170	160	250	145	260
		<i>P.S.I.</i>	3200	2450	3450	2950	4400	3700	3200	2450	2300	3550	2100	3700
<b>Working pressure</b>	<i>P.S.I.</i>	1900	1600	2000	1740	2800	2300	2000	1500	1300	2000	1100	2175	
	<i>bar</i>	130	110	140	120	190	160	140	100	90	140	76	150	
<b>Over pressure peak limit</b>	<i>P.S.I.</i>	2320	1885	2465	2175	3045	2610	2320	1929	1740	2538	1537	2610	
	<i>bar</i>	160	130	170	150	210	180	160	133	120	175	106	180	
<b>Recoil thrust of jet</b>	<i>N</i>	29	32	40	41	47	49	51	31	35	41	37	49	
<b>Absorbed mot. power</b>	<i>kW</i>	3,2	3,2	3,8	3,8	5	5	5	3,2	3,2	4,6	3,2	5	
<b>Frequenza</b>	<i>HZ</i>	50	50	50	50	50	50	50	60	60	60	60	60	
<b>Voltage</b>	<i>V A</i>	230-1- 14,7	230-1- 14,7	230-3- 12,5	230-3- 12,5	230-3- 15,8	230-3- 15,8	230-3- 15,8	220-1- 15,5	220-1- 15,5	220-3- 16,5	220-1- 15,5	220-3- 15,8	
	<i>V A</i>	240-1- 13	240-1- 13	400-3- 7,2	400-3- 7,2	400-3- 9,2	400-3- 9,2	400-3- 9,2					380-3- 9,2	
<b>Amps</b>	<i>V A</i>					240-3- 14,5	240-3- 14,5	240-3- 14,5						
	<i>V A</i>					415-3- 6,5	415-3- 6,5	415-3- 6,5						
<b>Capacitor</b>		2x40µF	2x40µF	-	-	-	-	-	2x40µF	2x40µF	-	2x40µF	-	
<b>Motor protection</b>		Thermal												
<b>Isolating class insulation</b>		F	F	F	F	F	F	F	B	B	F	B	F	
<b>Motor protection grade</b>		IPX5												
<b>Noise level</b>	<i>dB A</i>	72-77												
<b>Max. water inlet temp</b>	<i>°C</i>	60												
	<i>°F</i>	140												
<b>Max inlet pressure</b>	<i>bar</i>	10												
	<i>P.S.I.</i>	145												
<b>Max suction depth</b>	<i>m</i>	3	3	3	3	1	1	1	1	1	3	1	1	
	<i>ft</i>	9,8	9,8	9,8	9,8	3,3	3,3	3,3	3,3	3,3	9,8	3,3	3,3	
<b>High pressure hose</b>	8 m 26 ft	Steel reinforced rubber Internal diameter 5/16" Working pressure 200 bar max												
<b>Weight</b>	<i>Kg</i>	40 - 43												
	<i>lbs</i>	88,1 - 94,7												
<b>Dimensions</b>	<i>mm</i>	860x400x875 (h)												
	<i>inches</i>	33,8x15,7x34,4 (h)												

**WE CONGRATULATE YOU** on your choice that shows your level of technical knowledge and love of beautiful objects.

In fact, you have purchased a highly technological machine produced by the world's largest manufacturer of high pressure cleaner pumps.

*This machine is so useful and versatile that you will use it for many years.*

**THIS BOOKLET IS AN INTEGRAL PART OF YOUR MACHINE AND SHOULD BE CAREFULLY READ BEFORE PROCEEDING WITH INSTALLATION, START-UP AND USE.**

*This booklet contains important safety information and instructions for use and maintenance of the high pressure cleaners series ELT and should be kept in a safe place.*

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## 2. PRODUCT USE

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### 2.1 DESIGNATED USE

*The machine is exclusively designed for washing, by way of a pressurized water jet, of objects, things or any surface suitable for cleaning by a pressurized water jet with the possibility adding liquid detergent.*

*ATTENTION: this appliance was designed for use of detergents recommended by the manufacturer. The use of other chemical products may jeopardize the safety of the appliance itself.*

*Liquid detergents should be chosen in view of the chemical compatibility with the surface to be treated; they must be biodegradable and have a pH between 7 and 12. In any case they must be in conformity with the regulations applicable in the country where they are used.*

THE DESTINATION OF USE OF THIS MACHINE MUST BE STRICTLY ADHERED TO. ANY OTHER USE MUST BE CONSIDERED AS INCORRECT.

THE MANUFACTURER CANNOT BE HELD RESPONSIBLE FOR DAMAGES CAUSED BY INCORRECT USE OF THE MACHINE.

THE MACHINE MUST NOT BE TAMPERED WITH FOR ANY REASON. IN CASES OF TAMPERING THE MANUFACTURER DECLINES ANY RESPONSIBILITY ON THE FUNCTIONING AND SAFETY OF THE MACHINE.

IT IS FORBIDDEN TO STORE OR USE THE UNIT IN ENVIRONMENTS WITH POTENTIALLY EXPLOSIVE ATMOSPHERE.

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## 3. PRELIMINARY OPERATIONS

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### 3.1 UNPACKING

*Unpack and make sure that the machine is complete and undamaged.*

*If the machine appears damaged in any way, do not use the machine and consult our dealer.*

*For shipping reasons some parts may be included separately. In this case assemble parts as indicated in this booklet.*

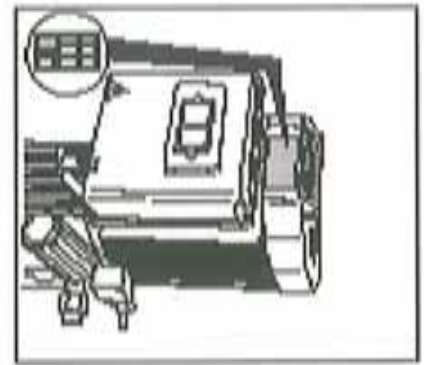
*Keep all packaging materials (bags, boxes, tape) out of reach of children.*

### 3.2 - IDENTIFICATION LABEL

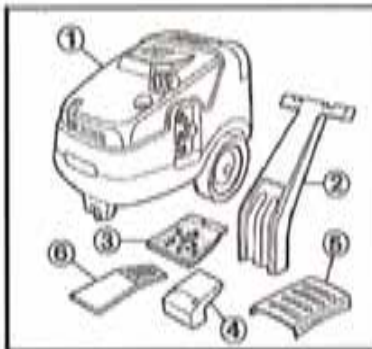
Before using the machine, make sure that it is provided with the identification Label. In case the Identification Label is missing, do not use the machine and consult your dealer immediately.

The Identification Label with the technical specifications is fixed to the motor.

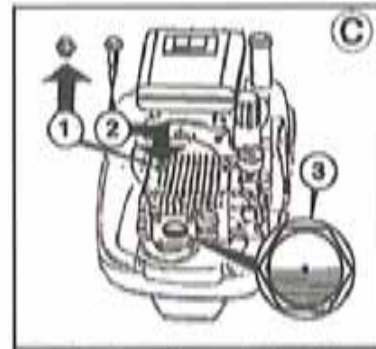
Check that the mains voltage is the same as shown on the identification label.



## 4 - INSTALLATION



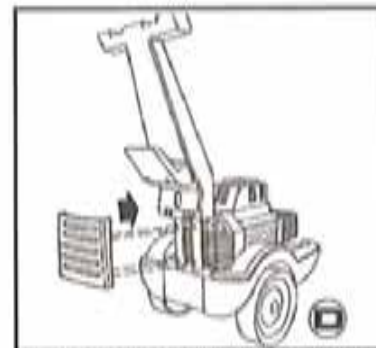
- a Body of the unit
- b Handle
- c Kit of screws + washers + nuts
- d Hose hanger
- e Fan grid
- f Cover fixing knob



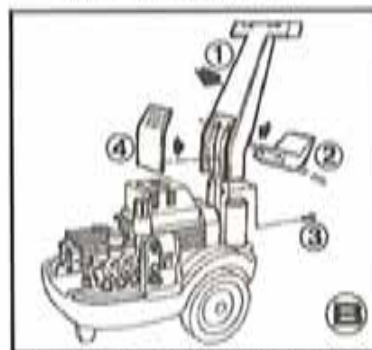
- C Replace the red plug (Fig. 1) with the black and yellow dipstick (Fig. 2) and check that the oil in the sight glass is at half-way level (Fig. 3).



- A a Remove the cap of the chemical tank
- b Unscrew cover fixing knob
- c Remove the cover



- D Insert fan grid into its holes and push firmly until it is fully locked.



- B a Insert the handle in its guides.
- b Fix the handle and hose hanger by using screws, nuts and washers supplied.
- c Fix the bottom of the handle by using screws, nuts and washers supplied.



- E a Replace the cover.
- b Reinsert the chemical tank cap.
- c Lock cover fixing knob.

#### 4.1 HIGH PRESSURE CONNECTION

1 - Connect one end of the high pressure hose to the automatic gun (A) and the other end to the OUTLET connection on the machine. Tighten firmly (B).

2 - Complete the assembly by coupling the extension to the gun/lance and tighten firmly (C).

#### 4.2 - CONNECTION TO THE WATER SUPPLY

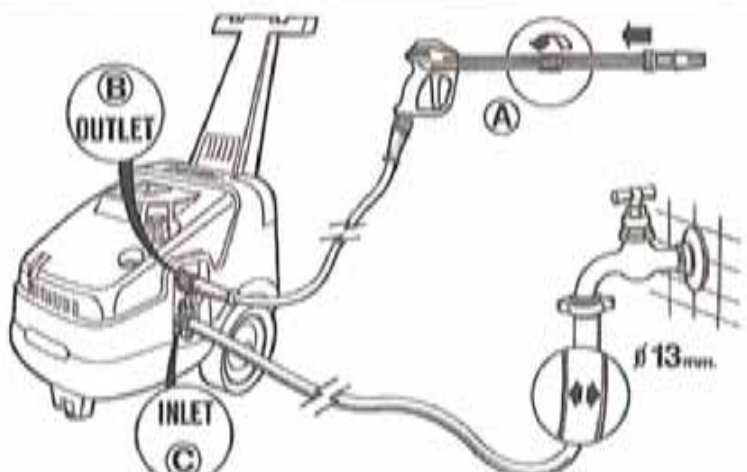
1- The maximum temperature of the inlet water must not exceed 60°C (140°F).

2- Connect the water supply to the INLET (D) port by means of a reinforced hose (min.15 bar/200 psi) with the internal diameter not less than 13mm (1/2")

3- Since the water flow decreases according to the length of the hose, make sure that the quantity of water supplied to the machine is not less than the quantities indicated in the chart below.

4- The pressure of the inlet water must not exceed 10 bar.

MODEL	FLOW RATE OF WATER SUPPLY	
	L/min.	G.P.M. USA
1530 M 1630 M 1810 M 1910 M	15	4
2840 T 2030 T	17	4.5
2070 T 2360 T	20	5.3



#### IMPORTANT

The water supplied to the machine must be clean. Running the unit without water, or with water which is dirty, contains grit or corrosive liquids, causes serious damage to the machine.

### 4.3 - CONNECTION TO ELECTRICAL SYSTEM

- 1 - Check that the voltage of the electrical system (mains) is the same as indicated on the ID label of the machine.
- 2 - Check that the plug complies with local safety regulations, and that it is provided with ground connection (earth).
- 3 - Check that the power outlet has a circuit breaker which trips at less than 30mA.
- 4 - Do not connect other appliances contemporaneously to the same power outlet.
- 5 - Insert the plug only after checking that the machine switch is in the OFF position.

The ELT cleaners series are supplied without electric plug.

The assembly of the electrical plug must be done in conformity with IEC rule n. 60634 and must be effected by qualified personnel, respecting following prescriptions:

- 1- Use a plug which complies with the local safety regulations and which must necessarily be grounded.
- 2- Make sure that the cord/plug connection is perfectly sealed and water-tight.
- 3- Use plugs that conform to the indications on the ID Tag.

**WARNING: IN CASE OF POWER FAILURE DURING USE OF THIS MACHINE, TURN THE MACHINE POWER SWITCH TO THE OFF POSITION FOR SAFETY REASONS.**

### 4.4 - USE OF CORDS

*If an extension cord is used, make sure that plug and receptacle are of a water-tight type. In any case they must be raised from the ground in order to avoid possible contact with water.*

<b>WARNING</b> <b>USE OF INADEQUATE</b> <b>EXTENSION CORDS</b> <b>MAY CAUSE SAFETY</b> <b>HAZARDS</b>	<b>SELECTION TABLE</b>		
	<i>Voltage</i>	<i>Extension cord length</i>	<i>Cord section mm<sup>2</sup></i>
	230+240	Up to 20 m	2,5
	230+240	From 20 to 50 m	4
	400+415	Up to 50 m	2,5

### 4.5 - START-UP

*Before use of this machine it is IMPORTANT to ensure that the inlet filter is clean (please see maintenance chapter 9.2 suction filter).*

- 1- Open water supply
- 2- Push ON button

3 - Open the gun with nozzle end up and keep in open position to allow air to escape from the hose.

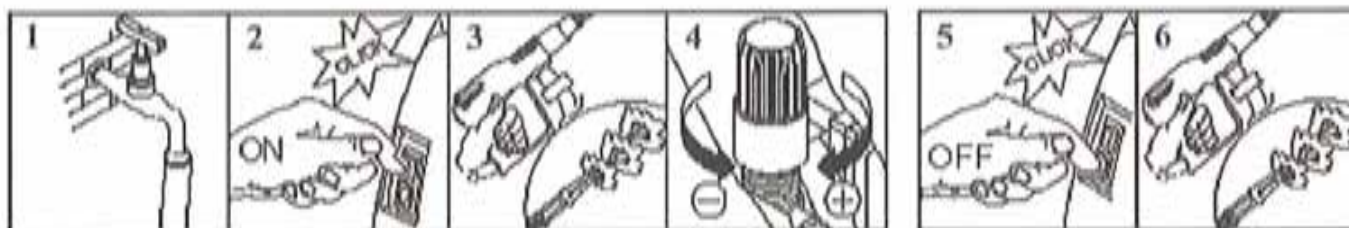
4 - Regulate water pressure by rotating the regulator knob.

**ATTENTION:** in the cleaners high pressure with "TOTAL STOP" device, the motor stops approximately 20 seconds after the gun is closed.

### You are ready to work!!!

5 - At the end of working session turn the machine switch to the OFF position.

6 - Open the gun to release remaining pressure from the hose.

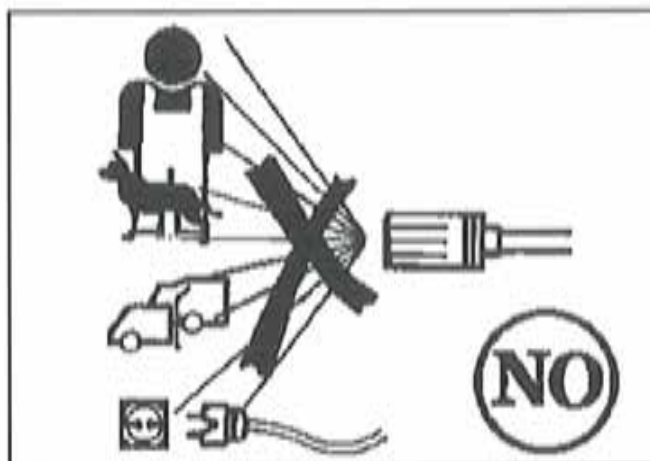


## 5 - GENERAL WARNINGS

w High pressure cleaners cannot be used by children or unauthorized persons.

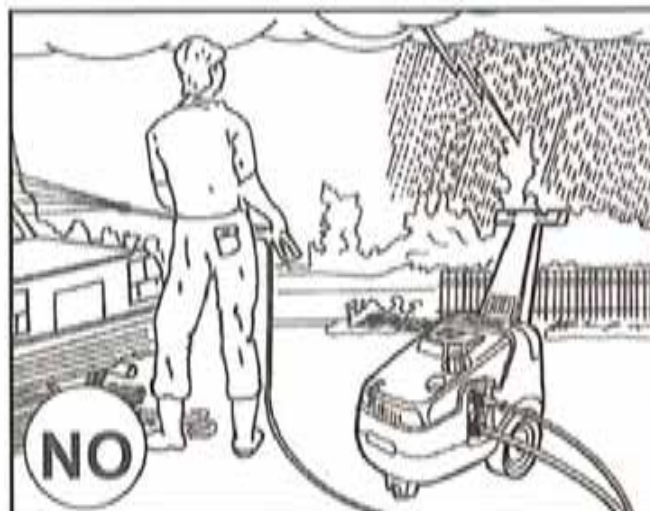
w Keep this machine out of reach of children at all times.

w The high pressure water jet may be dangerous if used incorrectly. Never direct the jet at persons and/or animals, electrical appliances or the machine itself. Do not use the machine when persons and/or animal are within the range of its high pressure jet.

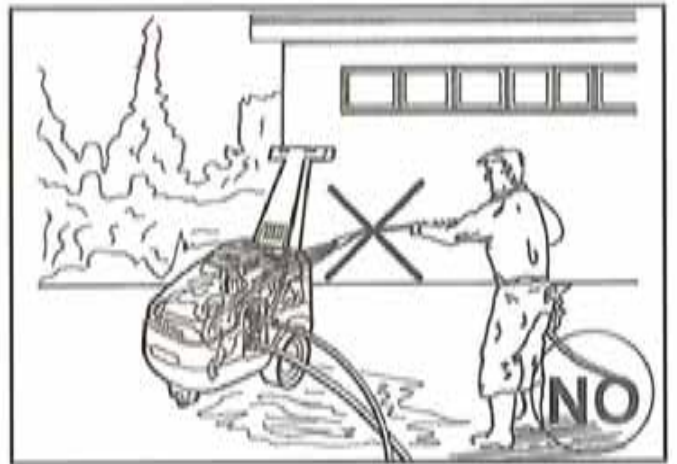


w Only operate the machine in safety conditions, avoiding any potentially dangerous situation for the user and others. The machine operator should:

- Avoid to operate the machine on unbalanced surfaces;
- Remember that the high pressure water jet causes a recoil effect on the pistol. The recoil values are indicated in the technical specifications table;
- Use protective clothing.



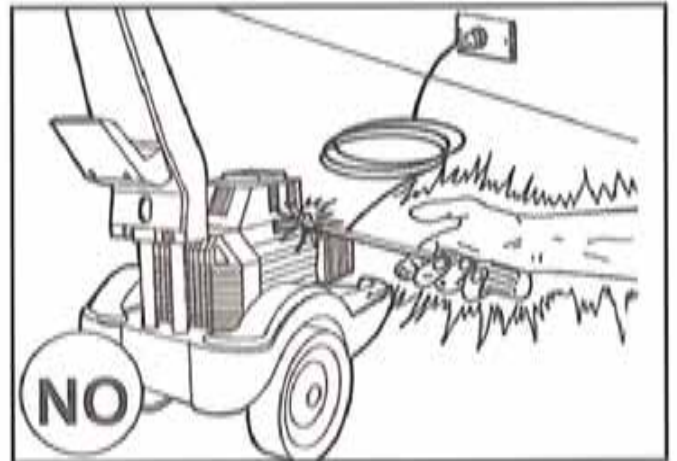
- Wear protective goggles and rubber slip-proof boots.
- Avoid dispersing substances that are polluting, toxic or harmful in any way.



w This machine has been built in conformity with current safety regulations. Use of electric appliances requires the observations of a few simple rules:

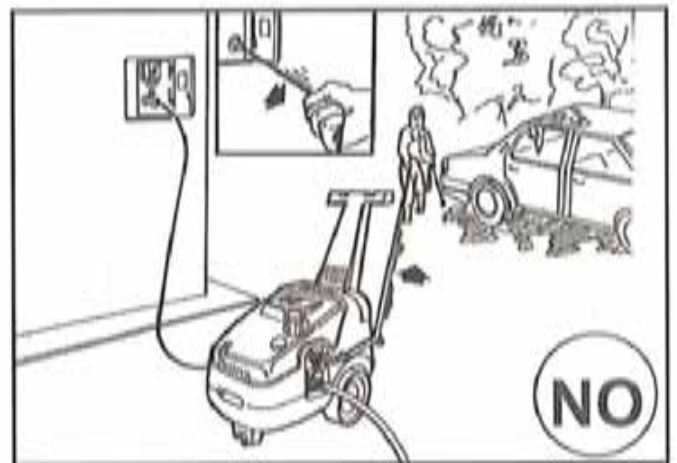
Do not touch electric parts when the machine is on.

Inspection, maintenance and repairs should be carried out by qualified personnel. In any case unplug the machine before performing any of the above operations.

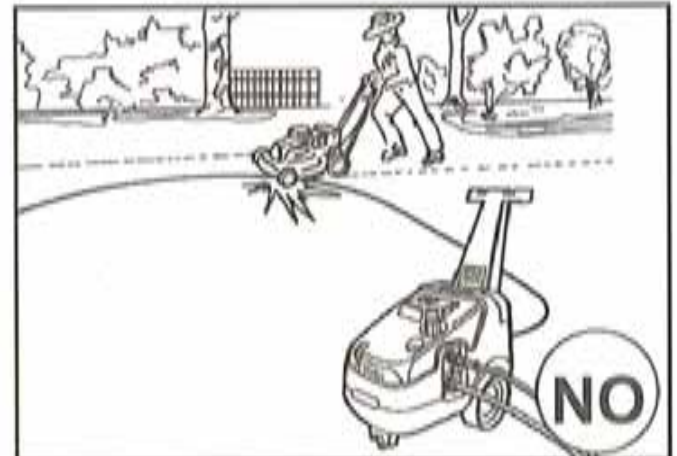


w Do not pull the cord to disconnect the power supply and do not pull on the hose to move the machine.

w **ATTENTION:** high pressure flexible hoses, high pressure connectors, safety devices, electrical connections and spray guns are important for the safety of the device.

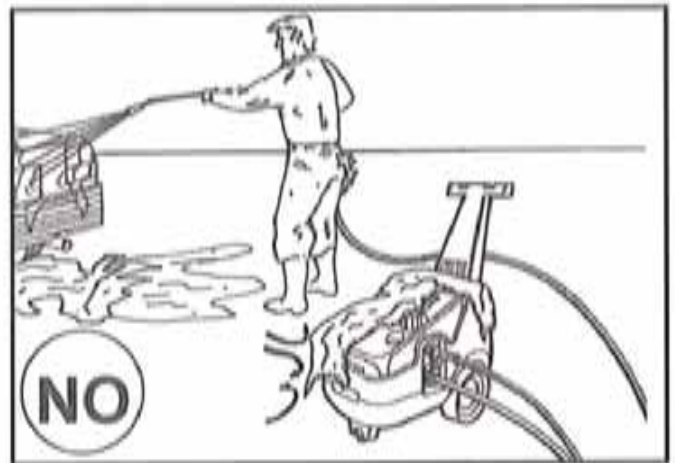


w Do not start the unit if the power cord is damaged. Apply to qualified personnel for its replacement. Replacement cords should have the same technical specifications as of the original cord. Do not carry out repairs on the electrical cord and avoid cord damage.

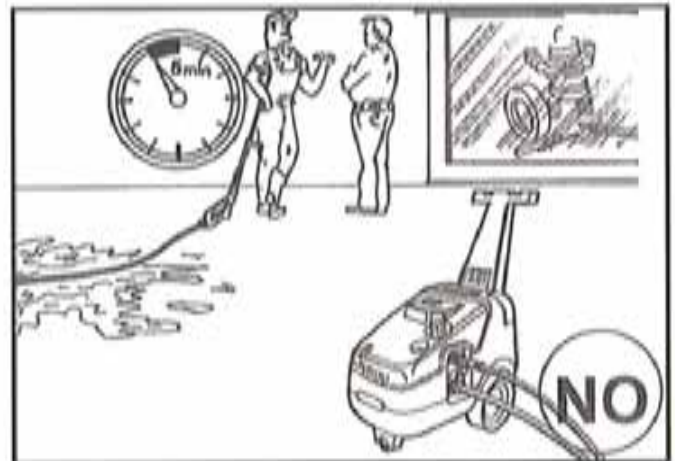


w Do not start the unit if the high pressure hose, connectors and the gun are damaged. By replacement make sure that the new components have at least the same rating as the original components. The technical specifications of the hose should be printed on the hose itself (max pressure, production date, manufacturer).

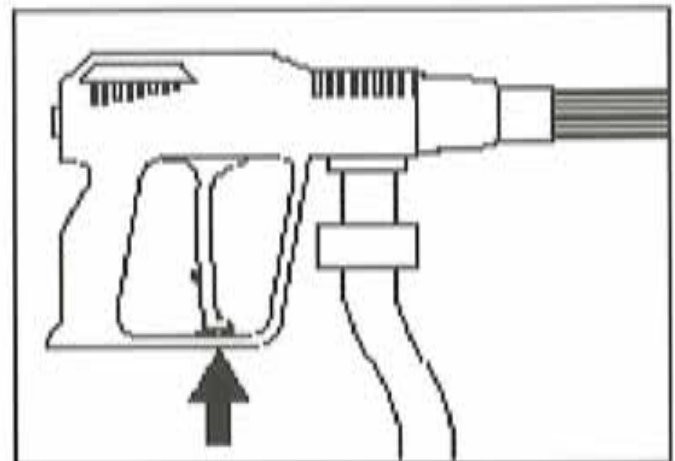
w Avoid covering the machine during use and use the machine in a well ventilated area.



w Do not leave the machine running for more than 5 minutes with the pistol closed. After this time period the water temperature within the machine increase and may cause damage to the machine.



w When the machine is off insert the safety device on the pistol to avoid accidental opening.



w For safety reasons use only original accessories and spare parts.

**THE MANUFACTURER CANNOT BE HELD RESPONSABLE FOR ANY DAMAGE CAUSED BY DISRESPECTING THE DESIGNATED USES OF THIS MACHINE, IT'S INSTRUCTIONS AND WARNINGS INDICATED IN THIS BOOKLET.**

## 6 - HOW TO USE CHEMICAL PRODUCTS

The ELT series high pressure cleaners have been constructed to permit the suction and mixing of detergents and other liquids from the internal tank.

### 6.1 - SUCTION FROM INTERNAL TANK

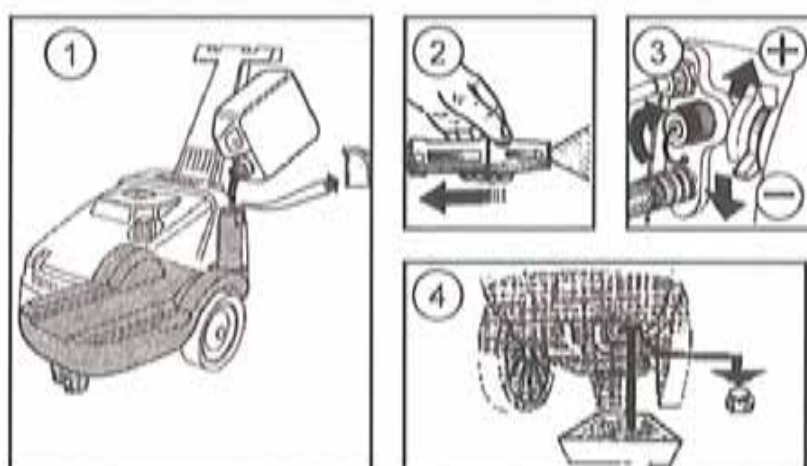
Fill the tank, as shown in Fig. 1. Select the low pressure by operating the Rototek or Multireg 99 (Fig. 2).

Make sure that the outer chemical ports is plugged (Fig. 3).

Adjust the chemical quantity by using the suitable cursor +/- (Fig. 3).

In order to empty the tank, open the plug located at the bottom of the machine (Fig. 4).

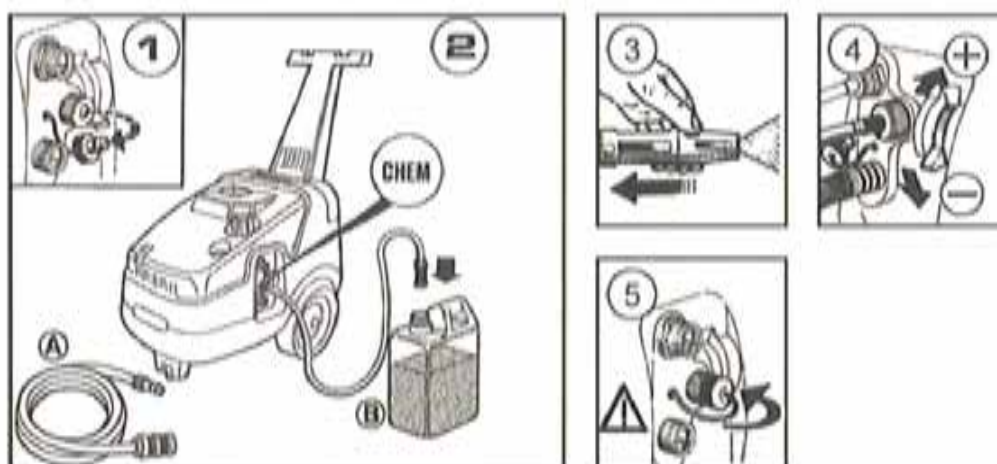
Capacity of the built-in tank: 7,5 litres.



### 6.2 - SUCTION FROM EXTERNAL TANK

Remove the plug from the chemical port (Fig. 1). Fit the connector of kit "A" into the chemical port (CHEM) and plunge the filter into the separate tank "B" (Fig. 2).

Select the low pressure by operating the Rototek or Multireg 99 (Fig. 3). Adjust the chemical quantity by using the cursor +/- (Fig. 4). When you have finished working, remove kit "A" from the chemical port and reinsert the plug (Fig. 5).



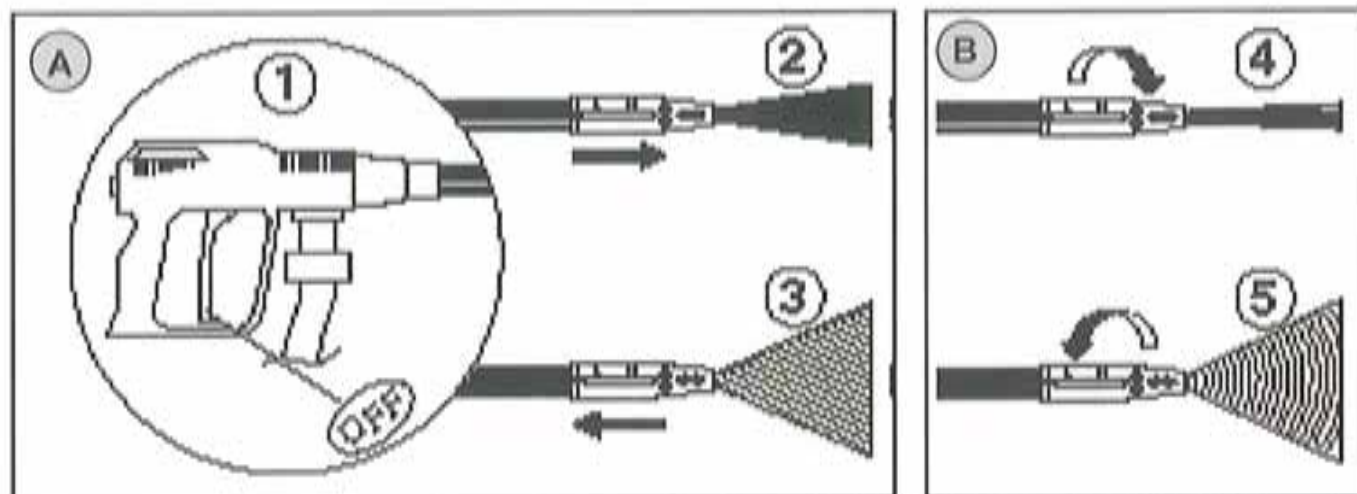
Pressure selection must be carried out with closed pistol (1)

**A - selection of the pressure**

- High pressure (2)
- Low pressure (3)

**B - selection of the jet**

- straight pin jet (4)
- fan jet (5)



8 - PRECAUTIONS AGAINST FREEZING AND INSTRUCTIONS FOR STORAGE

If the machine is stored where temperatures fall below the freezing level, it is advisable to suck antifreeze (similar to that used for automobiles) into the pump before storage. In any case keep the machine in a warm room for a couple of minutes before use.

9 - MAINTENANCE

Before any maintenance operations turn the machine off.

9.1 - OIL CHECK AND CHANGE

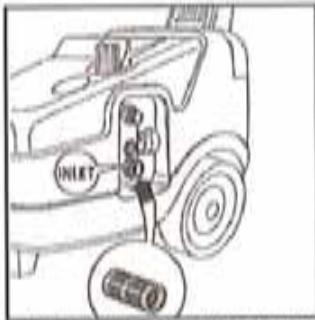
- Periodically check the oil level.
- Oil must be changed after the first 50 hours of operation of the machine. Subsequent oil changes must be carried out every 300 hours of machine operation.
- In any case it is advisable to change the oil at least once a year.
- Oil type: SAE 15W40 Mineral.
- Oil capacity. 0,4 liters.



## 9.2 - INLET FILTER

Before using the machine it is **IMPORTANT** to make sure that the filter is clean. Wash the filter under running water and/or with an air pressure gun to totally eliminate any deposits in the filter.

Remember that a clean filter guarantees the good of the machine operation.



Remove the filter from the water inlet



Clean the filter using an air pressure gun.



Clean the filter under running water.

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## 10 - DISPOSAL OF THE MACHINE

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- In case of no further use of the machine, it is advisable to disconnect the power cord making the machine inoperative.
- Keep out of reach of children.
- This machine is considered "special waste", disassemble and gather homogeneous parts for recycling.
- Do not use recycled parts as spare parts.

**11 - TROUBLE SHOOTING**  
(FOR QUALIFIED PERSONNEL)

<b>TROUBLE</b>	<b>CAUSE</b>	<b>REMEDY</b>
<i>The pump is running but maximum pressure is not obtained</i>	<i>Air suction Worn or dirty valves Unloader packings worn Nozzle worn or incorrect Piston packings worn Dirty filter</i>	<i>Check suction hose and fittings Clean or substitute Check and/or substitute Check and/or substitute Check and/or substitute Check and/or clean</i>
<i>Fluctuating pressure</i>	<i>Damaged, dirty or clogged valves Air is being sucked  Worn packings Dirty filter</i>	<i>Check, clean and/or substitute Check suction hose and fittings Check and/or substitute Check and/or clean</i>
<i>Pressure decreases</i>	<i>Worn nozzle Dirty or stuck valves Bypass packings worn Piston packing worn Dirty filter</i>	<i>Substitute nozzle Check, clean and/or substitute Check and/or substitute Check and/or substitute Check and/or clean</i>
<i>Excessive noise</i>	<i>Air suction  Damaged, dirty or stuck valves  Worn bearings Water temperature too high  Dirty filter</i>	<i>Check suction hose and fittings  Check, clean and/or substitute  Check and/or substitute Lower water temperature to under 60°C Check and/or clean</i>
<i>Worn water and oil seals</i>	<i>Seals (water and oil) damaged Excessively high ambient humidity</i>	<i>Check and/or substitute Change oil twice as frequently as advised</i>
<i>Water leakage from manifold</i>	<i>Piston-packings-worn O-rings worn</i>	<i>Replace washers Replace O.R.</i>
<i>Oil leakage</i>	<i>Oil seal worn</i>	<i>Replace oil seal</i>
<i>The motor hums but does not run when turned on</i>	<i>System voltage is lower to the minimum advised The pump is stuck or frozen Extension cord incorrect</i>	<i>Check that your power source is adequate See page 22 Consult the extension cord table on page 17</i>
<i>The motor does not start when switched on</i>	<i>The plug is not well connected No power supply</i>	<i>Check plug, cord and switch</i>
<i>The motor stops</i>	<i>The thermal protector has turned the machine off for overheating</i>	<i>Check that the voltage is correct. Turn off and let cool down for a few minutes before turning on again</i>



# LEOPARD

## INSTRUCTION MANUAL

GB



WARNING: READ THE INSTRUCTIONS CAREFULLY BEFORE USE  
INDUSTRIAL COLD WATER PRESSURE WASHER

