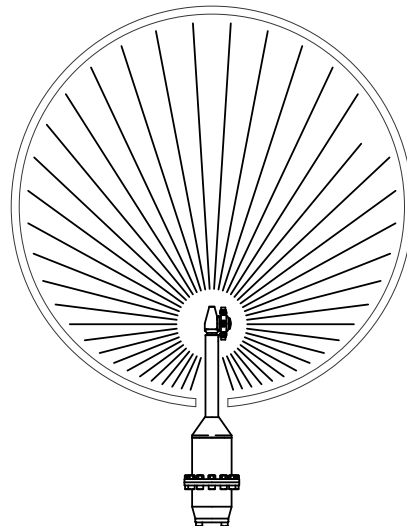
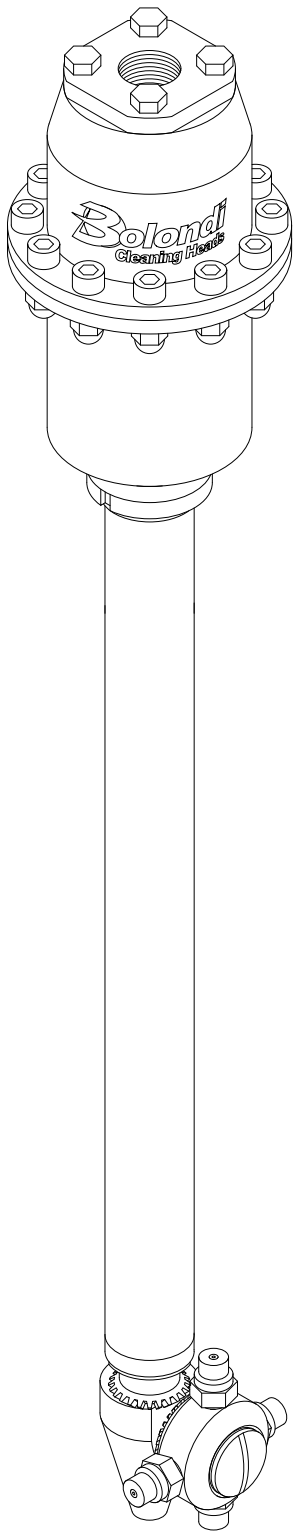


Solondi Cleaning Heads



OPERATING AND MAINTENANCE MANUAL HEADS mod. XC 061-AAM.04

SERIAL N°: 18241334



WARNING: THIS MANUAL IS AN INTEGRAL PART OF THE MACHINE AND MUST BE READ AND KEPT FOR REFERENCE.

Translation of the original instructions

XC 061-AAM.02-MANUAL Rev.03

INTRODUCTION

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DECLARATION OF INCORPORATION OF INCOMPLETE MACHINES

The undersigned Bolondi Ivano in his role of Legal Representative of Officina meccanica Bolondi Ivano and Person authorised to constitute the technical folder, DECLARES under his own responsibility that the material supplied, indicated in this manual and to which this declaration refers, consists of a washing head that complies with:

- The applicable essential safety requirements (1.1.2 – 1.1.3 – 1.1.5 – 1.3.1 – 1.3.2 – 1.3.3 – 1.3.4 – 1.3.9 – 1.5.2 – 1.5.3 – 1.5.4 – 1.5.6 – 1.5.7 – 1.5.8 – 1.5.13 – 1.6 – 1.7) of appendix I of machinery directive 2006/42/EC
- The applicable essential safety requirements of directive 97/23/EC (pressurised equipment classified in art. 3 cat. 3)

It also complies with the following harmonised European standards:

UNI EN 14121:2009 - Risk Assessment Principles

UNI EN ISO 12100:2010 - Safety of machinery - General principles for design.

The undersigned also declares that the incomplete machine cannot be started-up until the machine on which it will be incorporated and of which it will become part has been identified and declared to be compliant with the provisions of directive 2006/42/EC; in other words until the incomplete machine to which this declaration refers has become an integral part of the end machine.

The pertinent technical documents have been drawn-up in compliance with appendix VII B.

We shall forward the information concerning the incomplete machine by fax, e-mail or other means following a reasonable request from National authorities.

(00A-01CE-06-EN)

BOLONDI IVANO

The legal representative
Ivano Bolondi



Via Volta 4
42027 Montecchio (R.E.) ITALY
Tel.+39 522 864434 Fax. +39 522 865780



ROTOJET ...
MATRIC. - SERIAL N. ...
ANNO - YEAR ...
PORTATA - FLOW MAX ... lt/min
PRESSIONE - PRESSURE MAX ... bar
TEMP. MAX ... °C

REFERENCE LEGISLATION

AIRBORNE NOISE AND VIBRATIONS:

Sound intensity measurements relating to the noise produced by the machine were taken in compliance with DIR. 2006/42/EC.

The acoustic pressure was measured at the workstation, at 1 m from the machine surface and 1.6 m off the ground, in normal machine operating conditions.

Sound intensity measurements gave readings below 70 dB(A).

Measurement of vibrations was not made as these were considered clearly below risk levels.

The intensity of the sound produced by machine operation is normally below sound intensity caused by the impact of washing water against the walls to be washed.

(00D-010-01-EN)

TERMS OF WARRANTY


- 1) The Manufacturer guarantees the rotating head as free of material or construction faults and defects.
- 2) Warranty: 2 years from the date of delivery for EEC countries, 1 year from the date of delivery for non-EEC countries. During this period the Manufacturer undertakes to repair or replace parts that present acknowledged construction defects free of charge excluding transport and labour costs which are entirely at the expense of the purchaser.
- 3) The warranty does not cover: all parts that are subject to wear, parts that have been damaged due to improper use or negligence; these parts are always and entirely at the Customer's expense.
- 4) The validity of the warranty is at the exclusive and unquestionable judgement of the Manufacturer.
- 5) All spare parts replaced under warranty must be returned to the Manufacturer carriage free within 20 days maximum, failure to do so shall cause the warranty to be invalidated.
- 6) The warranty shall become invalid if the head is intentionally tampered with without the written authorisation of the Manufacturer.
- 7) Any disputes shall be assigned to the jurisdiction of the Judicial Authority of the Reggio Emilia Law Court.

(00C-01-Garanzia-EN)

1) INTRODUCTION

Read this operating and maintenance manually carefully before using the head. Only by following the instructions herein and becoming familiar with the symbols used is it possible to obtain conditions of maximum efficiency and safety. The contents of this manual are in compliance with machine directive 2006/42/EC and subsequent amendments. The Manufacturer reserves the right to make any modifications without notice and without incurring any sanctions on condition that the main technical safety features are not affected. The Manufacturer is not responsible for personal injury or material damage resulting from the non-observance of the indications that accompany the symbol.



The symbol  represents a safety warning. Failure to follow the instructions given can cause serious personal injury.

N.B.: for accident prevention purposes the equipment must be fitted with suitable devices to prevent automatic re-starting when the equipment is powered after a shut-down. The head must not be used without these devices. The Manufacturer declines all responsibility in the case of improper use of the equipment.

(01-000-01-EN)

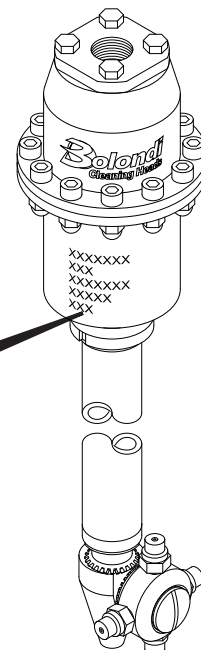
2) RECEIVING AND UNPACKING

2.1) CHECKING AND UNPACKING

- 2.1.1) Check on receipt that the goods delivered correspond to those ordered.
- 2.1.2) Make sure that goods were not damaged during transport.
- 2.1.3) Any damage found when the goods are received must be documented and the sender informed within 3 days of receipt.

2.2) MARKING AND IDENTIFICATION

Upon receiving the head, make sure the marking shown below is identical to that stamped on the machine.



Via Volta 4
42027 Montecchio (R.E.) ITALY
Tel.+39 522 864434 Fax. +39 522 865780



ROTOJET ...
MATRIC. - SERIAL N. ...
ANNO - YEAR ...
PORTATA - FLOW MAX ... lt/min
PRESSIONE - PRESSURE MAX ... bar
TEMP. MAX ... °C

2.3) DEMOLITION AND DISPOSAL

It is the purchaser's responsibility to follow the correct procedure and comply with the current laws in force in his country as regards to disposing of consumables and materials resulting from demolition.

Please remember that by waste is meant any substance or object under obligation of disposal. According to their origin and pursuant to the above mentioned Decree, waste products are classified as urban or special waste and, depending on their dangerous characteristics, as hazardous or non-hazardous waste.

Waste resulting from the demolition of the machine is classified as special waste.



WARNING! It is forbidden to mix together different categories of hazardous waste and hazardous waste with non-hazardous waste.

INSTRUCTIONS FOR THE MOST APPROPRIATE HANDLING OF WASTE.

Ferrous materials:

Ferrous materials are recyclable (secondary raw materials) and must be given to the relevant authorised collection centres.

Plastics:

Recycling Allowed where carried out.

Dispose of in dumps for waste assimilable to urban waste.

Incineration Allowed in plants equipped with post-combustion and a system to eliminate dust before being let into the atmosphere.

(02-000-00-EN)


3) CONDITIONS AND LIMITS OF USE

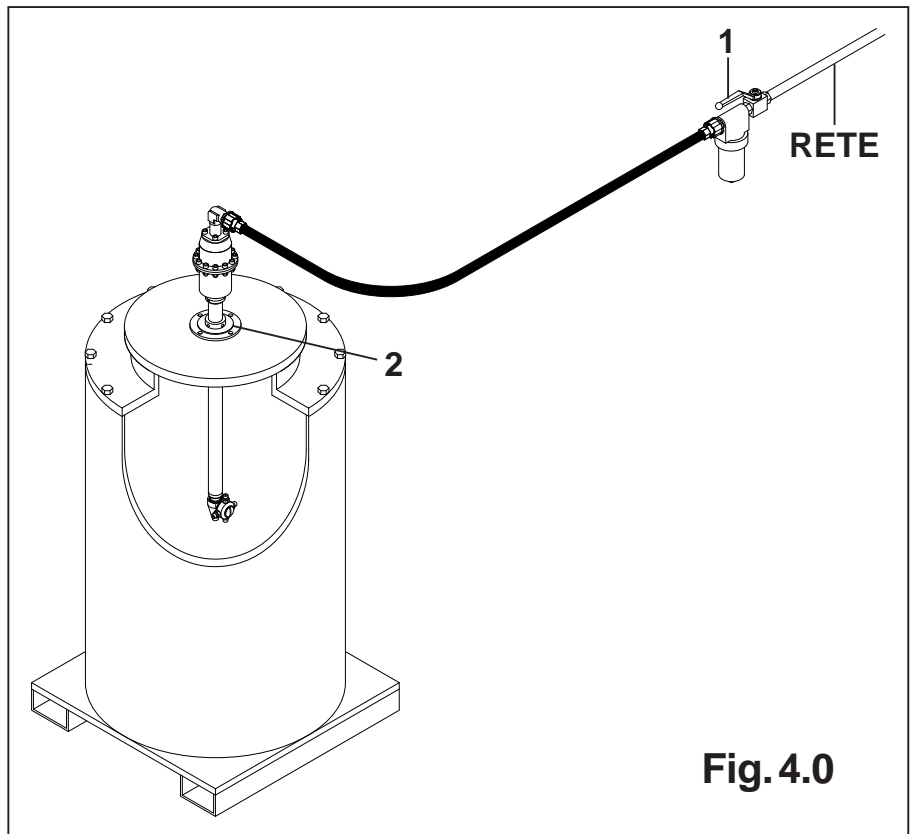
- 3.1) Never point the jet of water at people, animals or electrical parts.
- 3.2) Always check that the equipment and the safety features are in good working before using the machine. It is forbidden to use the equipment if it is not in perfect condition.
- 3.3) **Intended use: the head was designed exclusively for washing closed containers.**
- 3.4) Improper use: any other use that does not comply with the safety standards indicated in this manual is to be considered improper.
- 3.5) Declaration of the manufacturer: if the head is installed, as a component, on machines or systems, it is forbidden to use it before the latter have been declared to comply with the provisions of the Machine Directive.

(03-000-00-EN)



4) GENERAL SAFETY STANDARDS

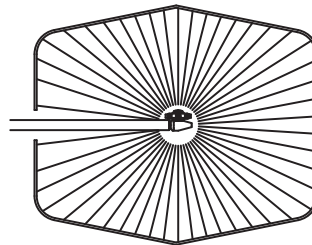
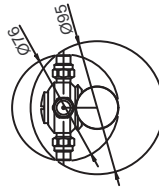
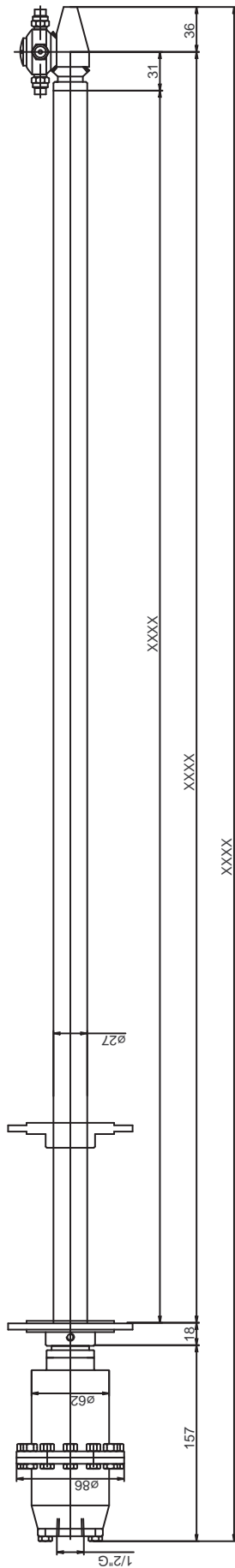
- 4.1) The equipment should be used by the persons assigned, having specific training or having shown the necessary competence, only. It is forbidden for children or adolescents to use the equipment.
- 4.2) Never leave the equipment unattended.
- 4.3) Before using, and after each operation, make sure the screws are perfectly tight. **See table B “tightening torques”.**
- 4.4) Make sure that the supply motor pump is fitted with a relief valve and that the valve setting is compatible with the head.
- 4.5) Make sure that the supply pipes and connections are suitable for the working pressures and for the type of fluids used.
- 4.6) Make sure that the quantity and diameter of the nozzles is suitable for the characteristics of the plant (pressure and flow rate of pump).
- 4.7) Install a relief cock (1) that is as near the water inlet (2) as possible when the head is in use but always remains on the outside and is easily accessed by the operator (**Fig. 4.0**).
- 4.8) The cock should be normally closed and the head should only be started inside the container to be washed and with the container properly closed.
- 4.9) The screw connections of all the flexible connecting pipes must be airtight.
- 4.10) The high pressure flexible pipe must be in perfect condition (danger of bursting). If the high pressure flexible pipe is damaged it must be replaced immediately.
- 4.11) Never inspect the container when the head is working or in the presence of considerable quantities of vapour.
- 4.12) The symbol marked on the head  draws the operator's attention to situations that could compromise human safety.
- 4.13) The general safety and accident prevention regulations laid down by law must be observed as well as the warnings given in the operating instructions.



(04-000-02-EN)

5) TECHNICAL SPECIFICATION

FLOW	10 - 60 L/min
PRESSURE	5 - 150 bar
HYDROSTATIC TEST PRESSURE	255 bar
MAX OPERATING TEMPERATURE	90 °C
WATER INLET	1/2"
FILTER	700 MICRON
NUMBER OF NOZZLES	2 - 4
NOZZLES	1/8" NPT
O.RING	NBR - EPDM - VITON
SEALS	PTFE + CARBON FIBRE
BUSHING	AISI 316
MATERIAL	AISI 316
MIN.CENTER LINE THROUGH HOLE	95 mm
MAX.MANUAL THROUGH HOLE	76 mm
EXTERNAL HOSE LENGTH	ON REQUEST XXXX mm
DIFFUSER	SEE CHART "A"
ROTATION SPEED	22 ÷ 28 RPM
FULL CYCLE	31 ROTATIONS
FULL CYCLE TIME	1.3 MIN. A 24 RPM
WEIGHT	Kg. 3.5



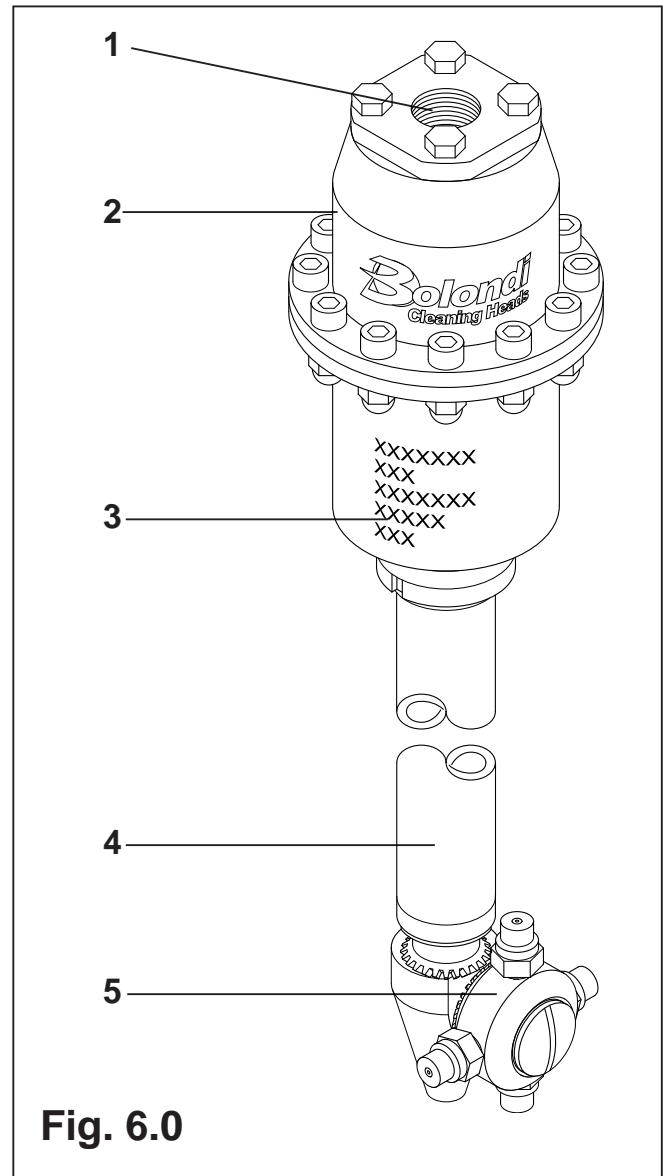
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GREZZO	DATA	XX.XX.XX				
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SGROSS.	0-6	6-30	30-120	120-400	400-1000	1000-2000
	+ 0.1	+ 0.2	+ 0.3	+ 0.5	+ 0.8	+ 1.2
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RETTIFICA	SCALA					
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	CODICE: XC 061AAM.01					

Boloni
CLEANING HEADS
MONTECCHIO E. (RE) - ITALY

DISEGN.: CR | CONTR.: DM
DATA: 07.05.08 | MOD.
SCALA: 1:4 A4 0
CODICE: XC 061AAM.01

6) DIAGRAM OF THE ASSEMBLY

- 1) Water inlet
- 2) Main body
- 3) Identification plate
- 4) Stem
- 5) Nozzle-holder



7) INSTALLATION AND COMMISSIONING



Before you actually start the system, you are recommended to purge it to eliminate any sludge or impurities. Breakages or problems caused by soiling will not be accepted under warranty.



On the head inlet install a safety valve set at the maximum pressure shown on its mark or at page 8 of this manual.

7.1) Put the head (1) in the container to be washed.

7.2) Secure the head to the container via the flange (2). Contact the manufacturer for special flanges.

7.3) Make sure the cover of the container is closed correctly (3) to prevent liquid from spurting out in the work phase.

7.4) Connect the head to the pump using a ½” union and high pressure hose [see max. pressure punched on hose].

Install a safety cock between the head and the supply pump, as explained in chapter 04 section 4.6 4.7.

7.5) Make sure the materials of the head components are compatible with the chemical specifications of the fluids used.

7.6) Make sure the technical specifications, flow rate and pressure of the head (page 8) are compatible with the specifications of the pump installed on the system.

7.7) Only in these conditions is the head in the ideal working position, simultaneously having all the necessary safety requirements.

7.8) The head is set for the specifications indicated on page 8 of this manual. If these parameters vary, please contact the manufacturer.

Breakages or problems due to parameters that fail to comply with the specifications will not be accepted under warranty.

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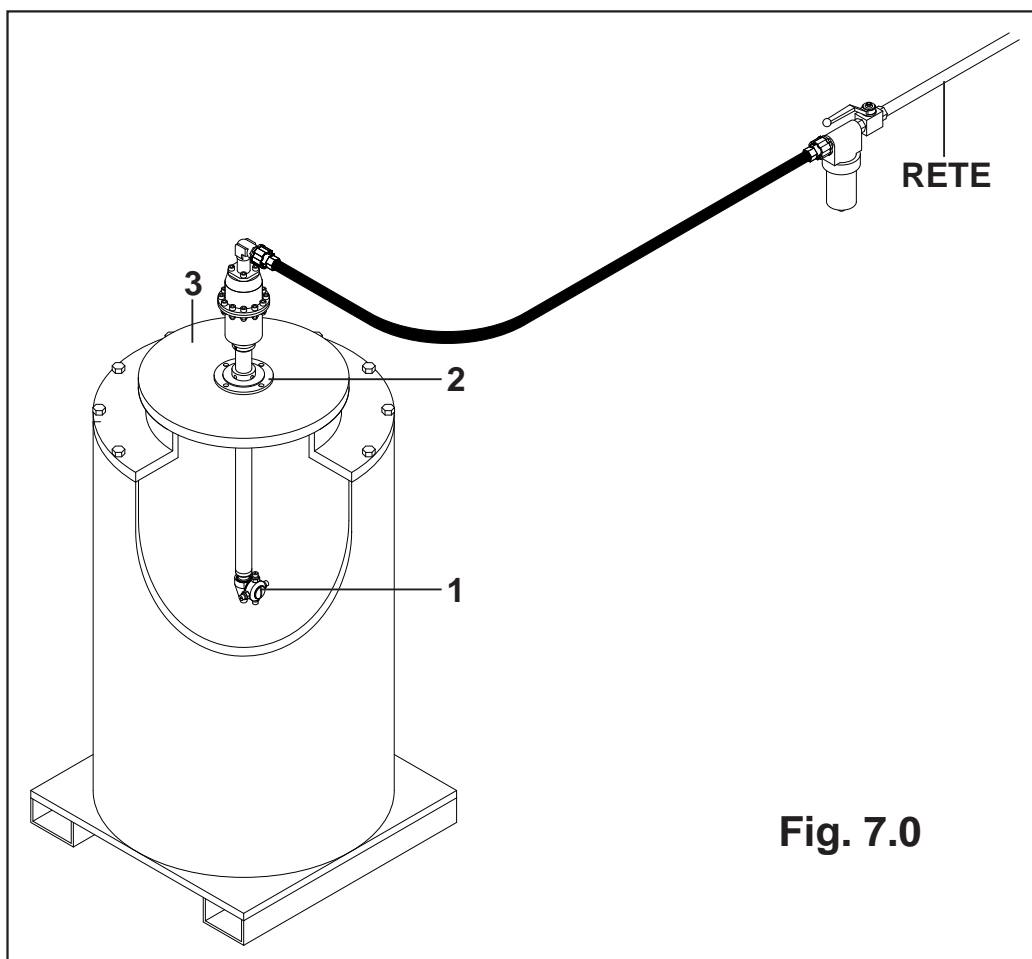


Fig. 7.0



8) INDICATIVE CHOICE OF THE DIFFUSER AND NOZZLE BASED ON THE FLOW RATE

Upon consignment, the head is built as requested in the order placed.

If the flow rate and pressure vary, replace the diffuser (**pos.33**) and the nozzle (**pos.55**) to ensure optimum operation.

From table "A", choose the most suitable diffuser **pos.33** for the new parameters.

Before you make any changes you are recommended to contact the manufacturer.

Follow the procedure given in the maintenance manual to replace the internal diffuser.
(08-RW186AA-00-EN)

TABLE "A"				
Flow l / min	Diffuser code		Flow l / min	Diffuser code
15	DF0403		40	DF0419
20	DF0403		45	DF0419
25	DF0405		50	DF0420
30	DF0406		55	DF0420
35	DF0408		60	DF0420



9) MAINTENANCE

WARNING:

Disconnect the head from the hydraulic system before starting any routine or extraordinary maintenance.

(NB. For all the numbers and references written in the chapter refer to the spare parts exploded diagram on page 26)

(NB. For all the tightening jobs with dynamometric spanner refer to the table "B" on page 22)

9.1) Cleaning the inlet filter pos.63.

Disassembly

9.1.1) Unscrew and remove the screws pos. 57, disassemble the filter holder flange pos.62 and remove the cartridge pos. 63 (Fig.9.0).

9.1.2) Clean the cartridge pos.63 thoroughly, make sure there are no breakages and fit back in place (pay attention, as in fig.9.1)

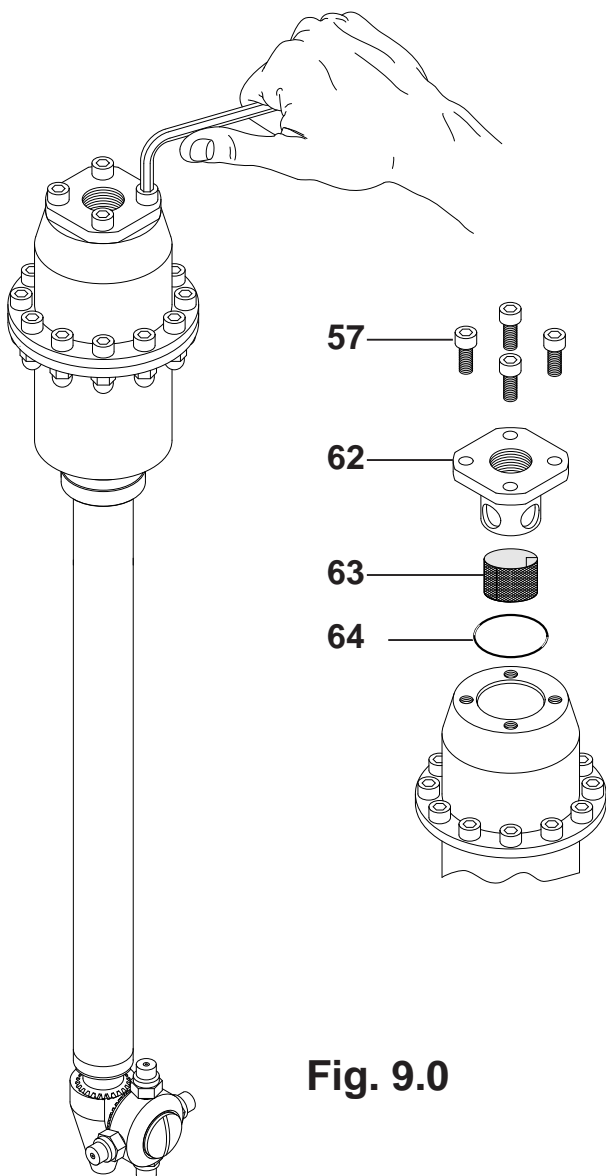


Fig. 9.0

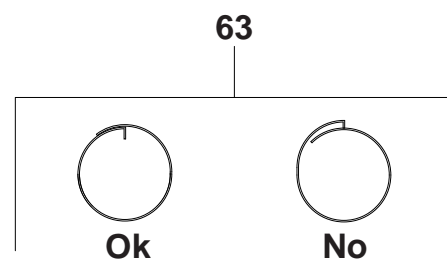


Fig. 9.1

Assembly

9.1.3) Lubricate the filter holder flange pos. 62 by the O-ring pos.64 with silicone grease type KLUBER PARALIQ® GTE 703.

9.1.4) Put the filter holder flange pos. 62 back in its seat.

9.1.5) Screw the screws pos. 57, using a dynamometric spanner.

9.2) Replacing the diffuser pos.33.

Disassembly

9.2.1) Disassemble the inlet filter, as explained in section 9.1.1.

9.2.2) Using a 5-mm hex spanner and a 10-mm ring spanner, unscrew the twelve screws and the twelve nuts, pos. 57 and pos. 58, see fig. 9.2.

9.2.3) Take the top casing pos. 1 off and push the diffuser kit pos.33 out (fig. 9.3) then replace after selecting the required diffuser, as in table "A" page 12.

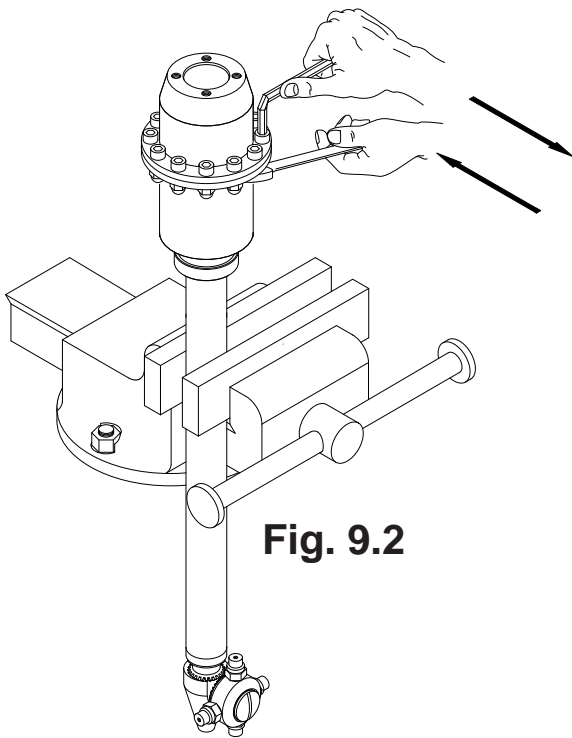


Fig. 9.2

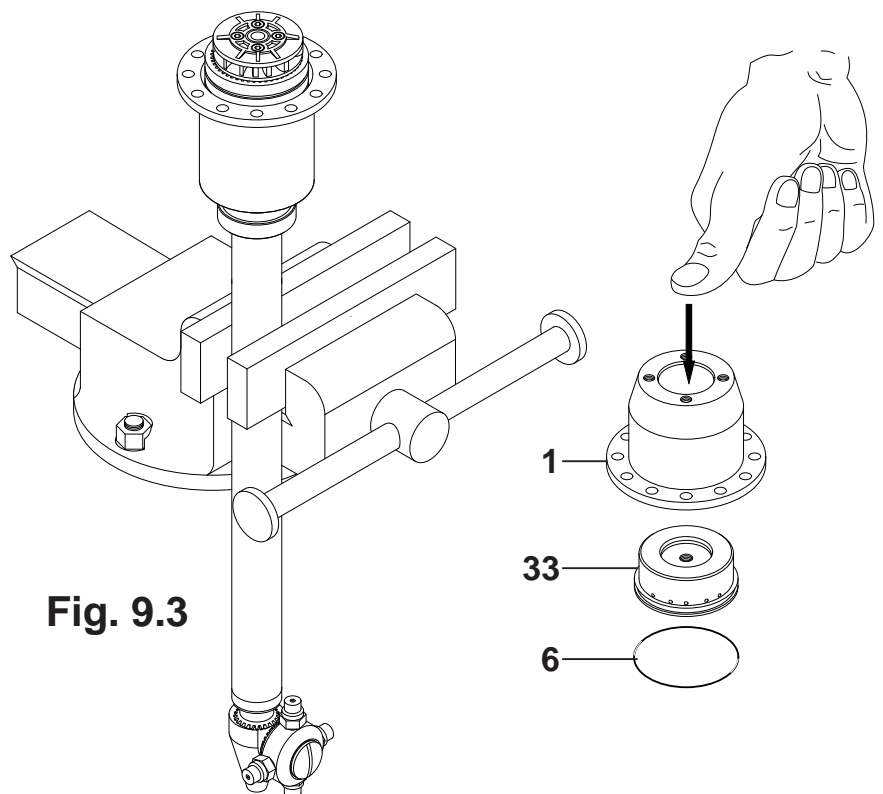


Fig. 9.3

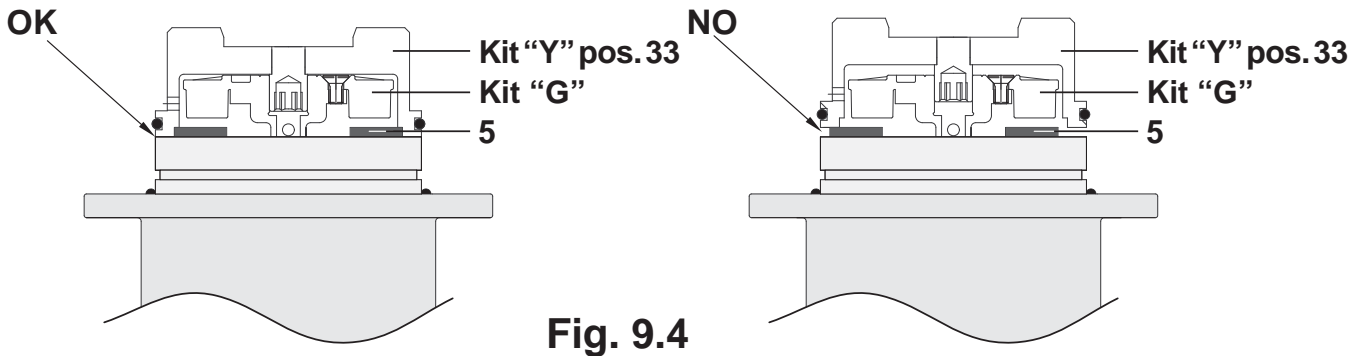
Assembly

9.2.4) Insert the O-ring, pos. 6 in the seat of the diffuser pos.33 and lubricate with silicone grease type KLUBER PARALIQ® GTE 703.

9.2.5) Fit the diffuser kit on the impeller kit "G" making sure to position the washer pos.5 correctly (see fig.9.4).

9.2.6) Position the top casing and secure it with the twelve screws pos.57 and the nuts pos.58, using a dynamometric spanner.

9.2.7) Fit the inlet filter back in place, as explained in section 9.1.3 to 9.1.5.



9.3) Replacing the seals (pos.82) on the nozzle holder crown (pos.84)

Disassembly

9.3.1) Clamp the head in a bench vice and, using a suitable screwdriver, unscrew and remove the screw pos.86 and the washer pos.85 (fig.9.5).

9.3.2) Take the crown pos.84 off the pin pos.80 (fig.9.6)

9.3.3) Using the dedicated tool, remove the seals and the o-rings pos.82 from their seats (fig.9.7).

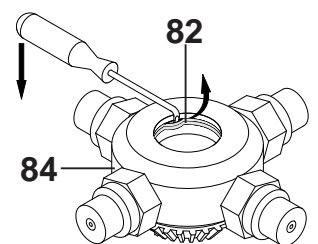
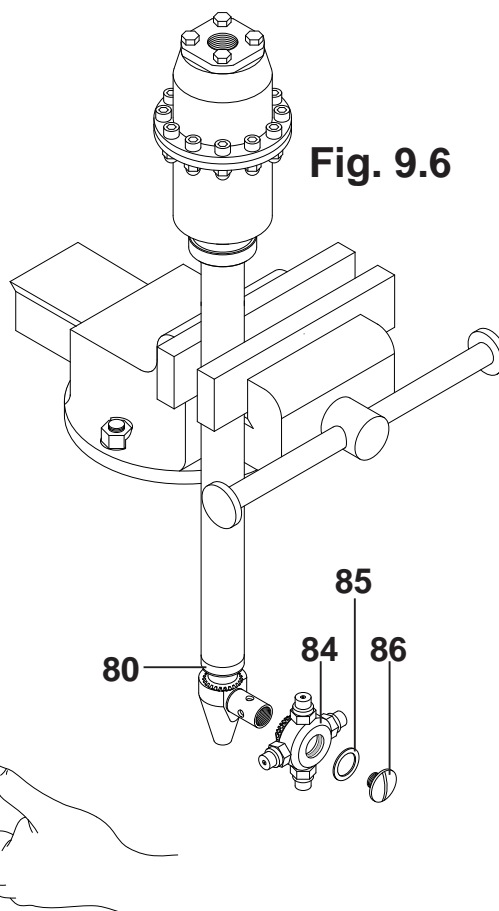
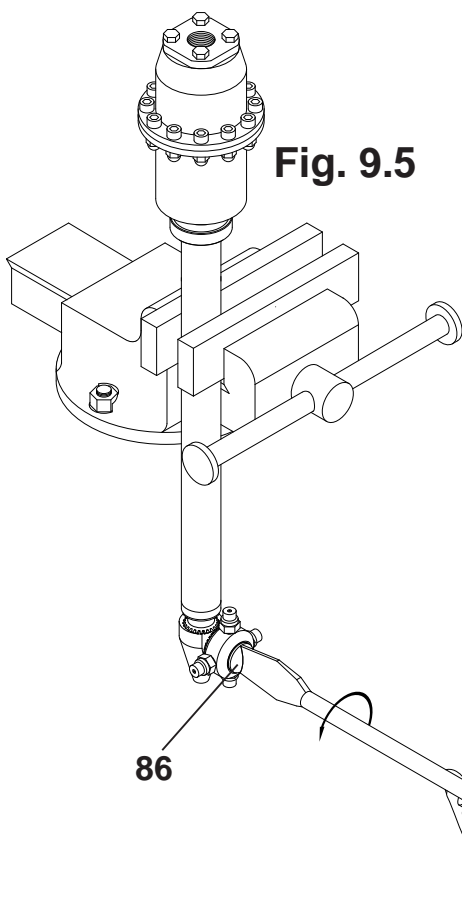


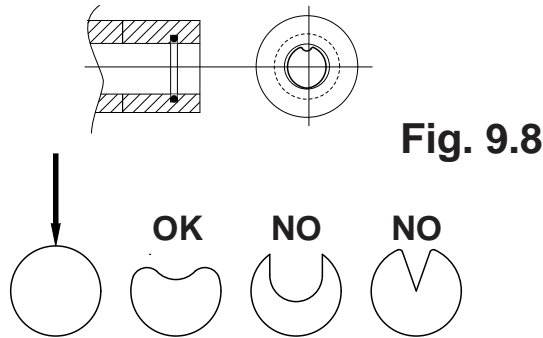
Fig. 9.7

Assembly

9.3.4) First fit the O-ring back in its seat and then the seal ring pos.82 making the O-ring adhere perfectly using a blunt tool. To make it easier to insert the ring, follow the instructions in fig. 9.8.

9.3.5) Make sure everything is fitted correctly in its seat and lubricate with silicone grease type KLUBER PARALIQ ® GTE 703.

9.3.6) Insert the following on the pin pos.80 in the given sequence: the nozzle holder crown pos.84, the washer pos.85, the tightening screw pos.86. Put some Loctite 222 on the thread of the screw (pos.86) and tighten with a suitable screwdriver.

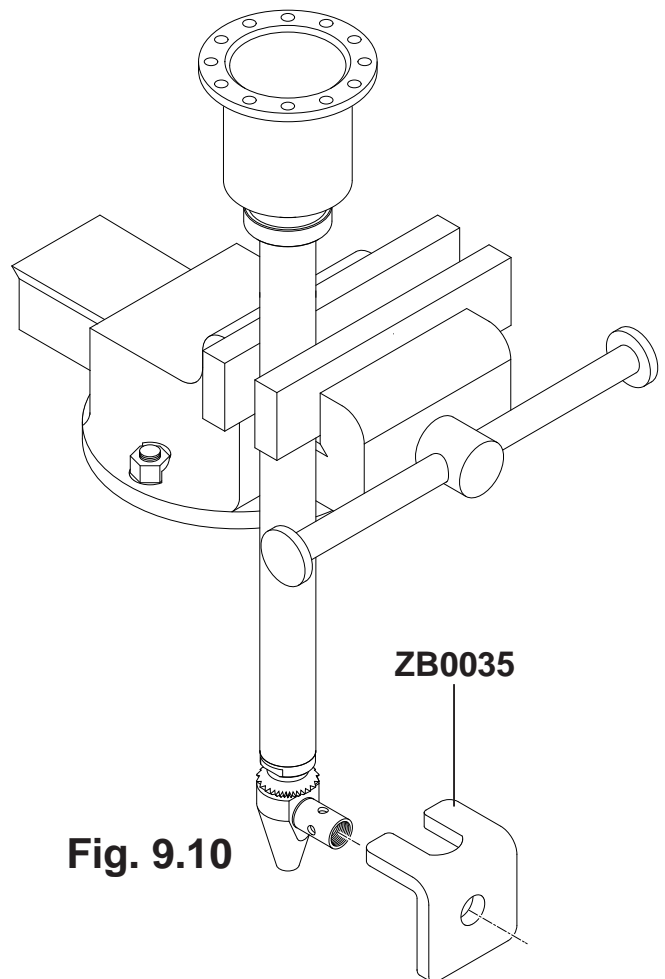
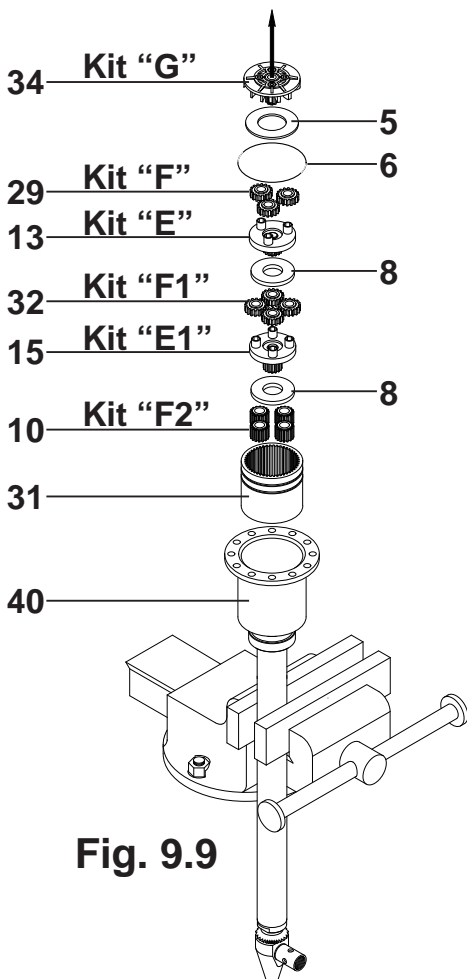


9.4) Replacing the seals pos.52 on the pinion pos.72.

Disassembly

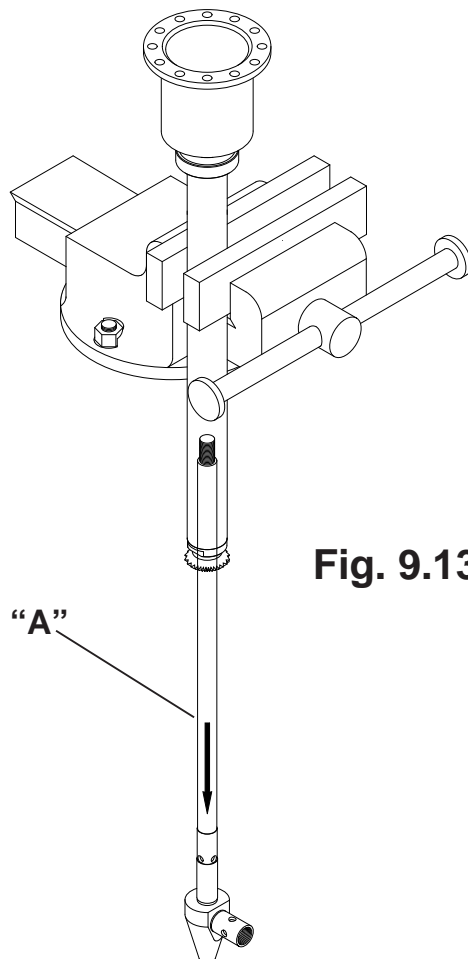
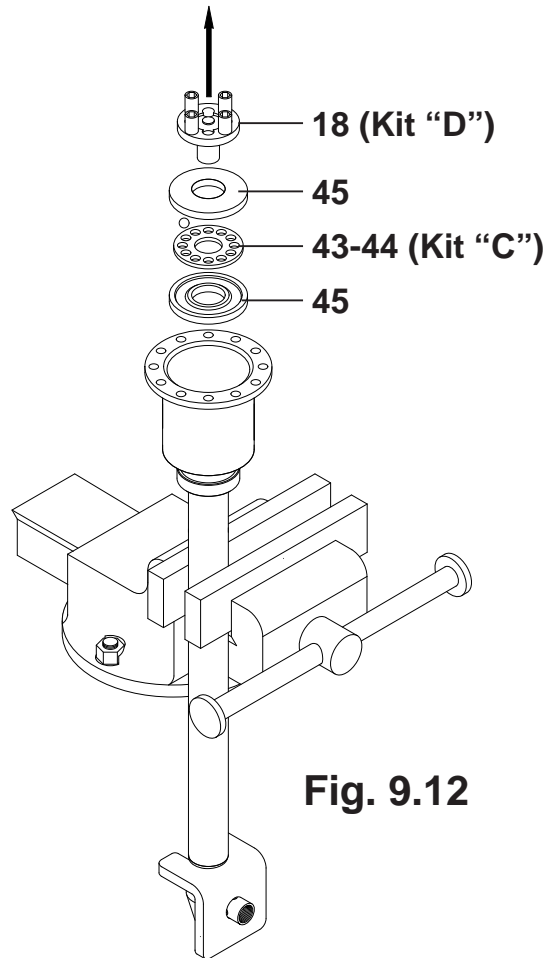
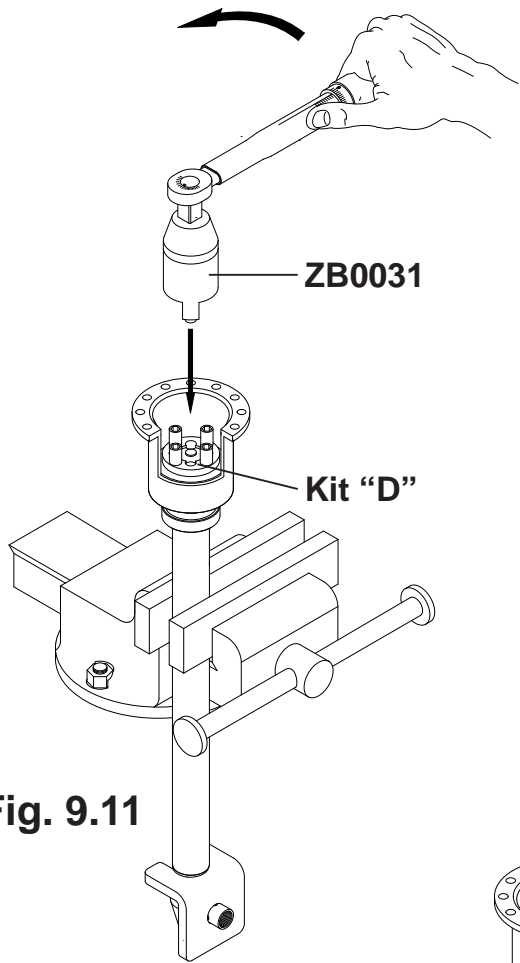
9.4.1) Once you have disassembled the head, as explained in sections 9.1.1 and 9.2.2, take all the parts out as in fig.9.9

9.4.2) Lock the end part using a dedicated tool (ZB0035) as in fig.9.10



9.4.3) Using the spanner supplied ZB0031 unscrew and disassemble the output shaft (Kit "D"), the bearing unit pos.43-44-45 (Fig.9.11 – 9.12).

9.4.4) Slide the complete internal rod out "A" (fig.9.13)



9.4.5) Using a 22-mm fixed jaw spanner, unscrew the pinion pos.72 from the external hose pos.71

ATTENTION! LEFT-HAND SCREW THREAD (fig.9.13).

9.4.6) Using the special tool, remove the ring and o-ring pos.72 from the pinion pos.73 (fig.9.14).

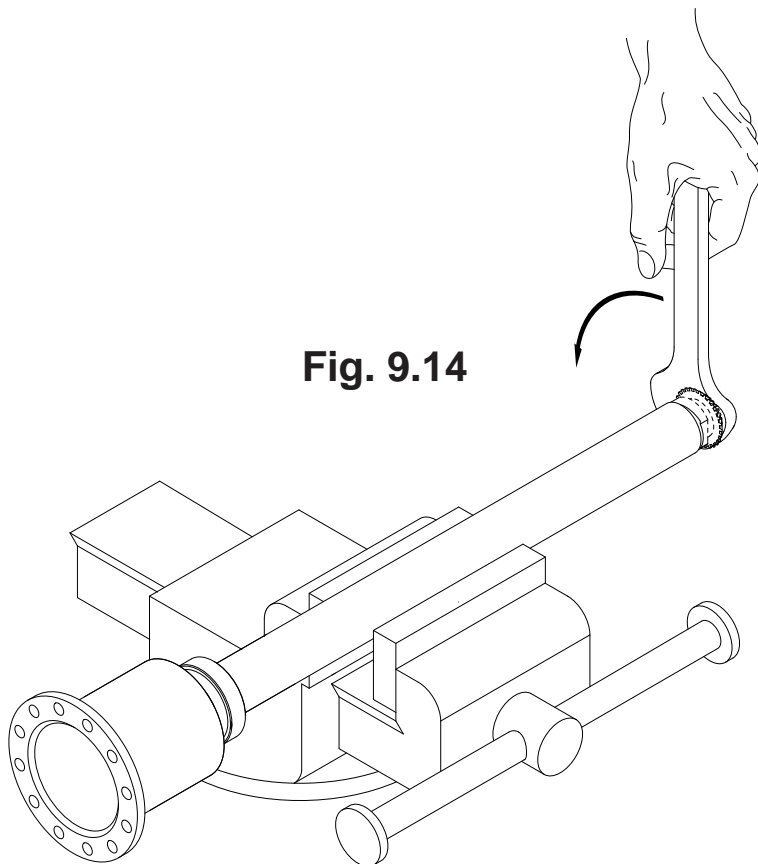


Fig. 9.14

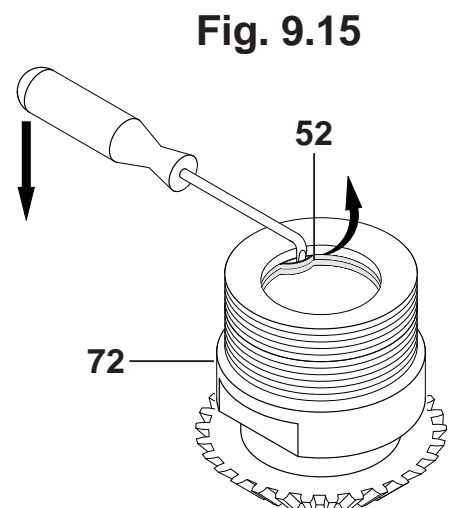


Fig. 9.15

Assembly

9.4.7) First fit the O-ring back in its seat and then the seal ring pos.52 making the O-ring adhere perfectly using a blunt

tool. To make it easier to insert the ring, follow the instructions in fig.9.8. page 16.

9.4.8) Make sure everything is fitted correctly in its seat and lubricate with silicone grease type KLUBER PARALIQ® GTE 703.

9.4.9) Put a few drops of Loctite 572 on the thread of the pinion pos.72, screw onto the external hose pos.71 and tighten with a 22-mm fixed jaw spanner

ATTENTION! LEFT-HAND SCREW THREAD (fig.9.15).

9.4.10) Fit the bearing unit pos.43-44-45 in the bottom casing pos.40

9.4.11) Insert the internal rod "A" in the pinion pos.72 fitted previously on the external hose pos.71 and lock it as in fig. 9.10.

9.4.12) Put a few drops of Loctite 222 on the thread of the output shaft pos.18 (Kit "D"), screw the same onto the internal rod and tighten with the special spanner (ZB0031) and check with dynamometer (fig.9.16).

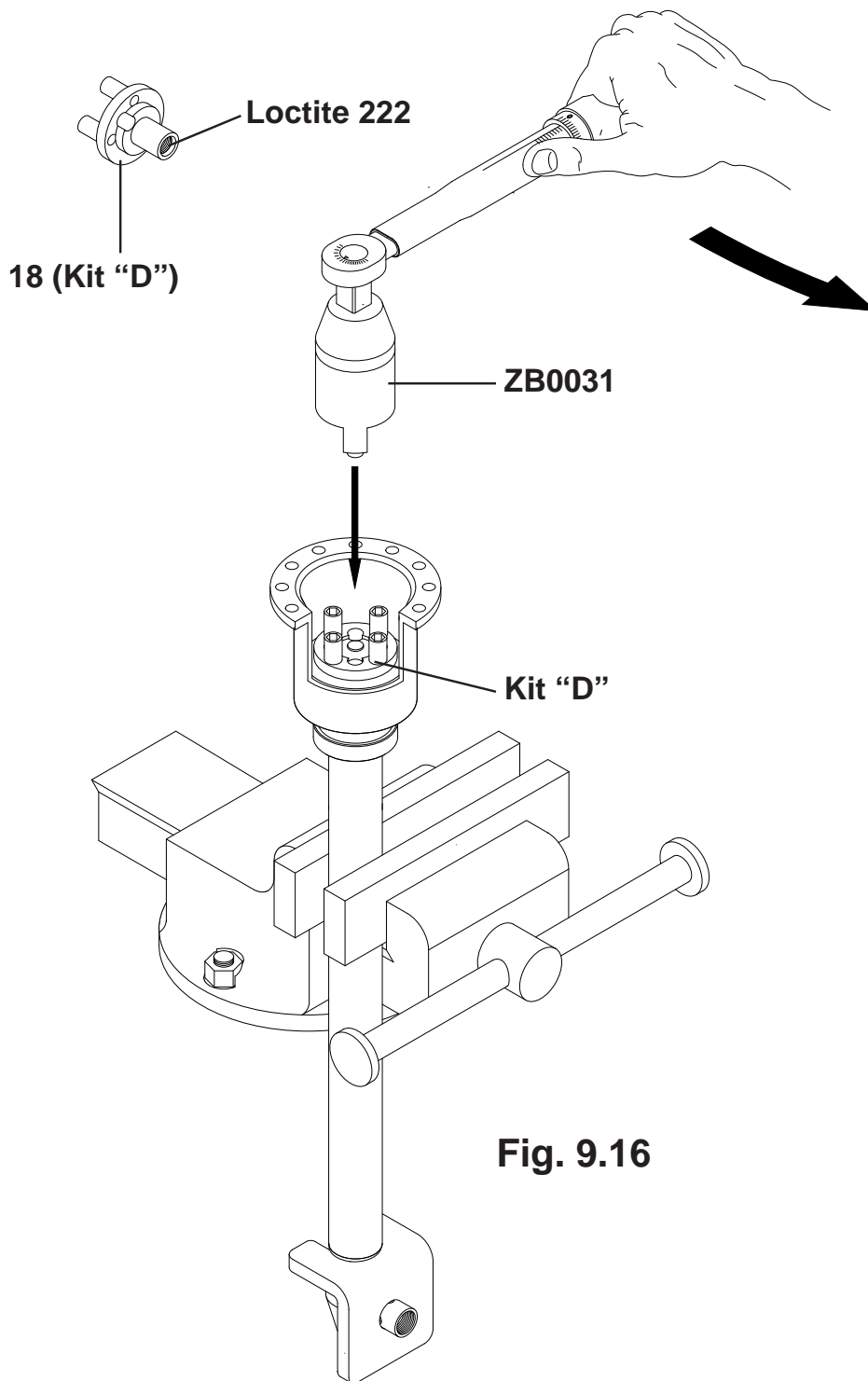


Fig. 9.16

9.4.13) Fit as explained in section 9.3.6.

9.4.14) Adjust the ring gear as follows:

- a) Using a hex spanner, unscrew and remove the screw pos.39 located on the ring nut pos.67.
- b) Loosen the screw pos.38 to release the clamp ring nut pos.67 then move this away from the casing pos.40 (Fig.9.17).
- c) Unscrew the bottom casing pos.40 until the end part and output shaft are unable to turn.
- d) Slowly screw the bottom casing pos. 40 again until there is approximately 0.1mm between the pinion pos.72 and the pin pos.80, (check with gauge) fig.9.18.

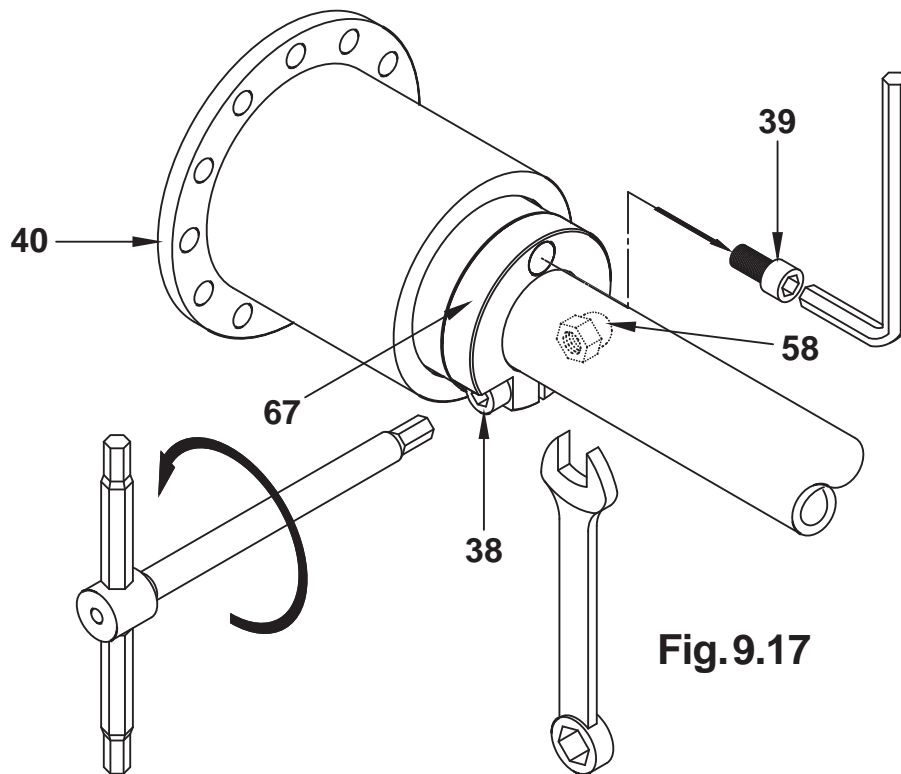


Fig.9.17

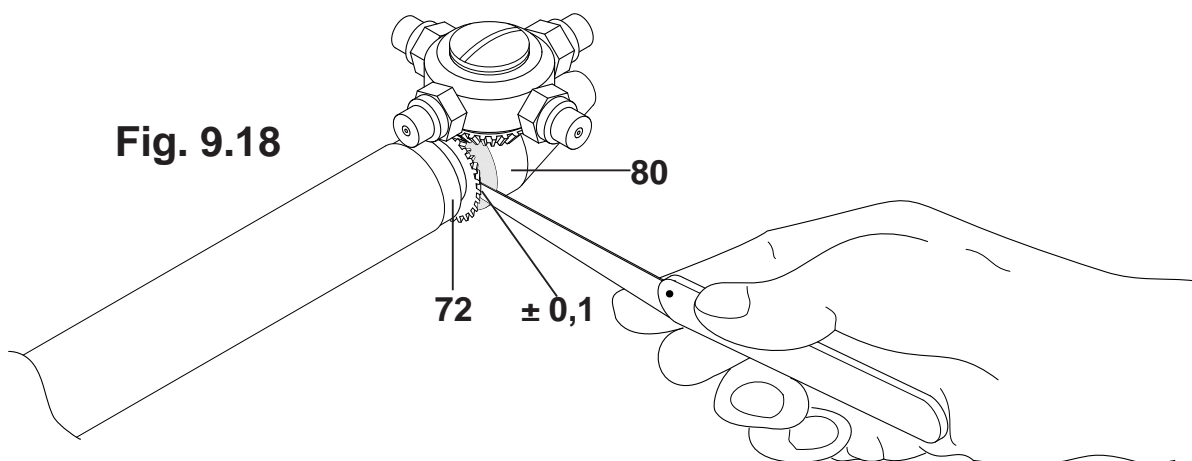


Fig. 9.18

e) Position the ring nut (pos.67) near the bottom casing pos.40, tighten the ring nut until the hole of the screw pos.39 is aligned with the first matching hole on the casing; then insert and tighten the screw pos.39. Make sure there is no friction in the coupling between the pinion and the nozzle holder crown (pos.72-84)

f) Once you are certain that the assembly is correct, tighten the three screws pos. 39 permanently.

9.4.15) Fit the crown pos. 31 in the bottom casing pos.40.

9.4.16) Fit the four gears pos.10 (kit "F2") on the output shaft pos.18 (kit "D").

9.4.17) In the following sequence, fit the washer pos. 8, the planetary holder pos. 15 (kit "E1") and the four planetary gears pos. 32 (kit "F1"); repeat the sequence for the next stage, inserting the second washer pos. 8, the planetary holder pos. 13 (kit "E") and the three planetary gears pos. 29 (kit "F").

9.4.18) Place the washer pos. 5 on the crown pos.31. Make sure everything has been assembled correctly, checking there is no friction between part pos.5 and the gears pos.29, see fig. 9.4.

9.4.19) Fit the O-ring pos.24 and the complete turning unit (kit "G"), as in fig. 9.19).

9.4.20) Complete the assembly as explained in sections 9.2.5 to 9.2.7.

(00M-XC061A_CA300-01-EN)

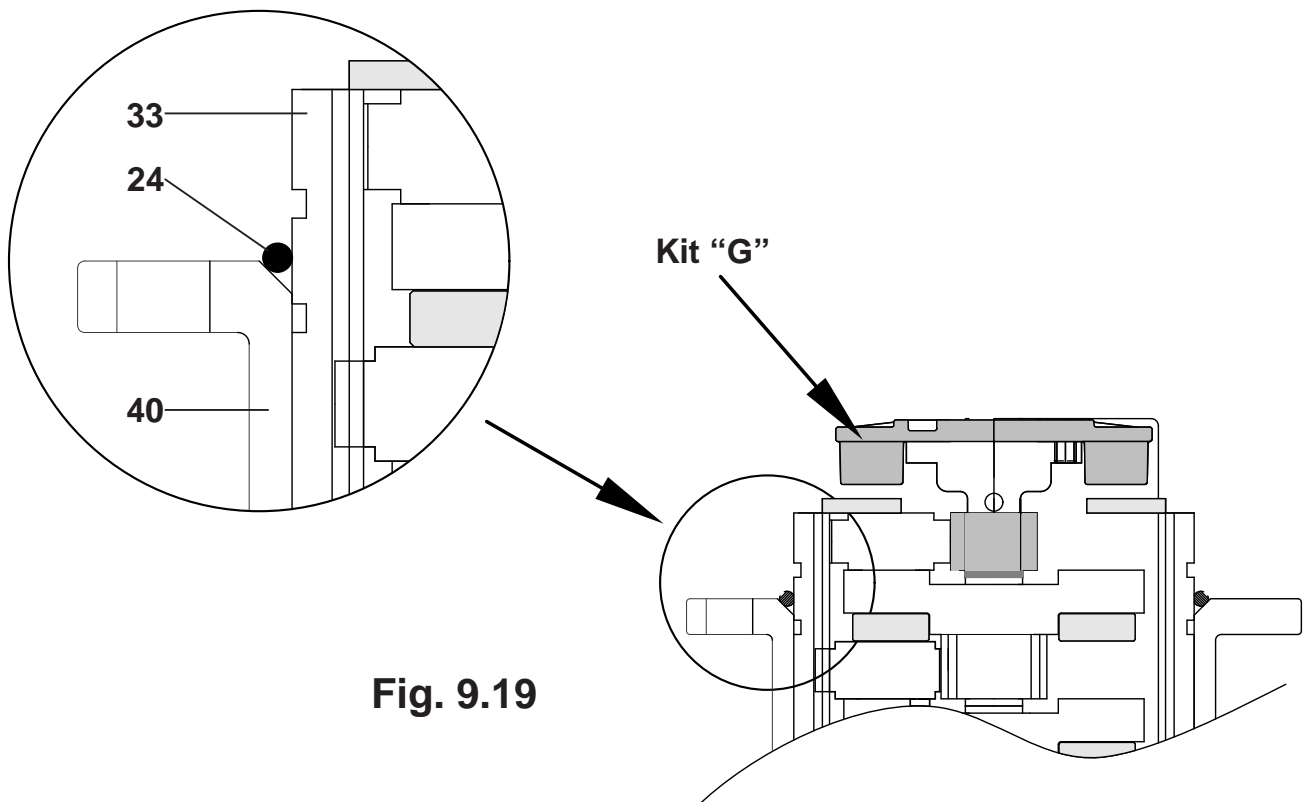


Fig. 9.19

10) SPARE PARTS

Always refer to the spare parts tables when choosing spare parts. Spare parts should be requested by fax to following address:

Bolondi
Via A. Volta, 4 - 42027 MONTECCHIO (RE) - ITALY
Tel. +39 0522 864434 Fax +39 0522 865780
e-mail: bolondi@bolondi.com

always indicate:

- the model and serial number of the head (see identification plate)
- the code and description of the part ordered (see table)
- the quantity required
- the preferred means of shipment
(11-000-00-E)

TABLE "B" TORQUE WRENCH SETTINGS

TABLE "B" TORQUE WRENCH SETTINGS		
Structural screws		
Pitch	Nm	
M5	7	All
M6	11	All
M10 x 1,00	20	All
M24 x 1,00 sx	20	All
M27 x 1,00	27	All
Nozzles		
Pitch	Nm	
1/4 G	11	All

REGISTRATION OF JOBS DONE :

Date

Description of failure

Description of the job

Result

Operator's signature
(13-000-00-E)

REGISTRATION OF JOBS DONE :

Date

Description of failure

Description of the job

Result

Operator's signature
(13-000-00-E)

NOTE

REGISTRATION OF JOBS DONE :

Date

Description of failure

Description of the job

Result

Operator's signature
(13-000-00-E)

REGISTRATION OF JOBS DONE :

Date

Description of failure

Description of the job

Result

Operator's signature
(13-000-00-E)

NOTE

REGISTRATION OF JOBS DONE :

Date

Description of failure

Description of the job

Result

Operator's signature
(13-000-00-E)

REGISTRATION OF JOBS DONE :

Date

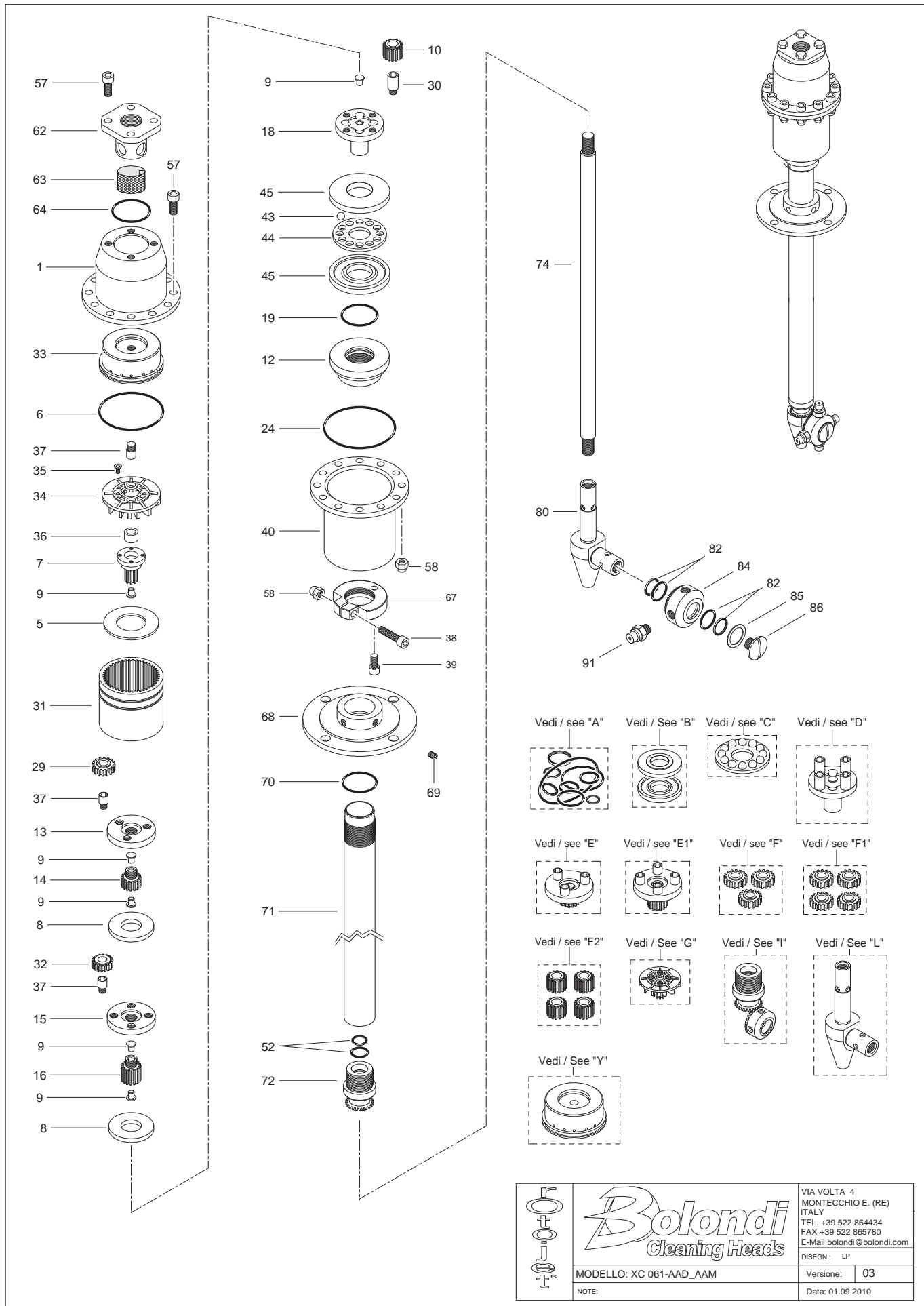
Description of failure

Description of the job

Result

Operator's signature
(13-000-00-E)

NOTE



	Bolondi Cleaning Heads		VIA VOLTA 4 MONTECCHIO E. (RE) ITALY TEL. +39 522 864434 FAX +39 522 865780 E-Mail bolondi@bolondi.com
	MODELLO: XC 061-AAD_AAM NOTE:	Versione: 03 Data: 01.09.2010	



Via A.Volta, 4
Tel. (0522) 864434 - Fax 865780
42027 MONTECCHIO E. (Reggio E.) Italy

E-mail: bolondi@bolondi.com
Web site: <http://www.bolondi.com>