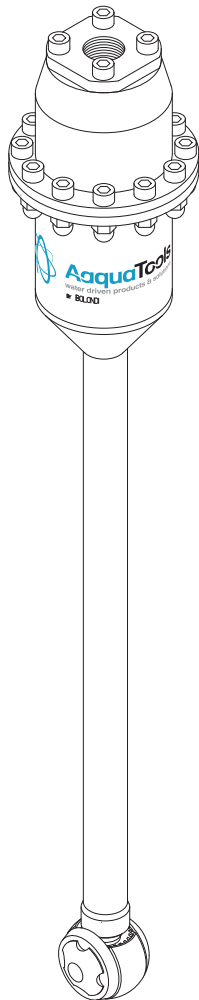


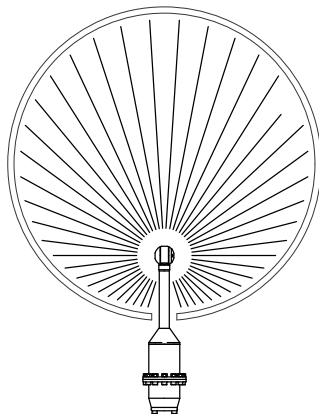
AquaTools

water driven products & solutions

by BOLONDI



CE



INSTRUCTION MANUAL HEADS MOD. XB031-AAD_BQ.03

SERIAL N°: XXXXXXXX



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

Translation of the original instructions

*XB031-AAD_BQ.03-MANUAL Rev.02
Last update 11.02.2020*

INTRODUCTION

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1) MAINTENANCE

WARNING:

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

(N.B. For all the numbers and references included, see the chapter Exploded Drawing)
(N.B. For all tightening jobs using a torque wrench, please consult table "D")

Lubricant recommended for maintenance: KLUBER PARALIQ ® GTE 703

1.1) Cleaning the inlet filter pos. 63.

Disassembly

1.1.01) Loosen and remove the screws pos. 57, disassemble the filter holder flange pos. 62, and remove the cartridge pos. 63 (Fig.1.00).

1.1.02) Clean the cartridge pos. 63 thoroughly, make sure there is no breakage, and fit back in place (pay attention as shown in fig.1.01)

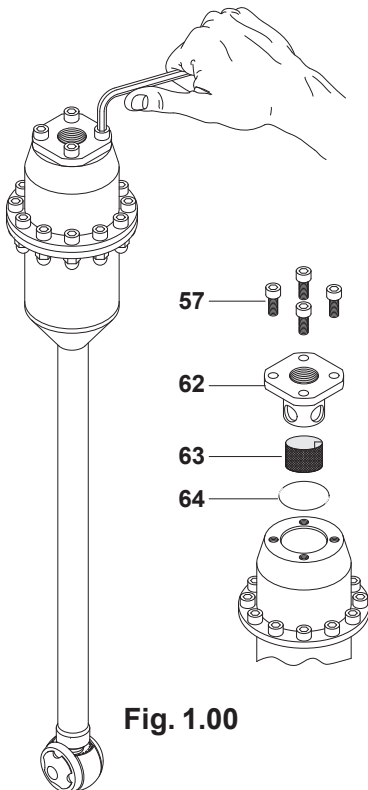


Fig. 1.00

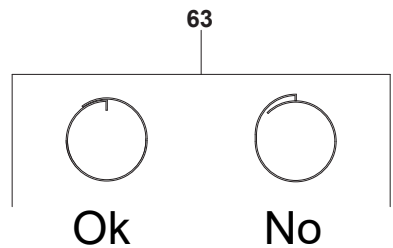


Fig. 1.01

Assembly

- 1.1.03) Grease the filter holder flange pos. 62 by the O-ring pos. 64.
- 1.1.04) Put the filter holder flange pos. 62 back in its seat.
- 1.1.05) Tighten the screws pos. 57 using a torque wrench.

1.2) Replacing the diffuser pos.33.

Disassembly

- 1.2.01) Remove the inlet filter as explained in section 1.1.01.
- 1.2.02) Use a 5-mm allen wrench and 10-mm ring spanner to loosen the twelve screws and the twelve nuts pos. 57 and pos. 58, see fig. 1.02.
- 1.2.03) Remove the top casing pos. 1 and push out the diffuser kit pos. 33 (Fig.1.03), then replace it after having selected the desired diffuser as per table "A" chapter 8.

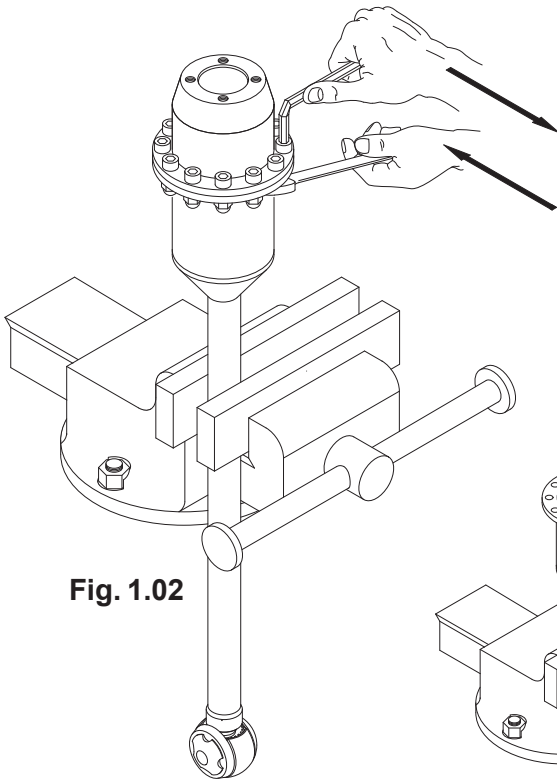


Fig. 1.02

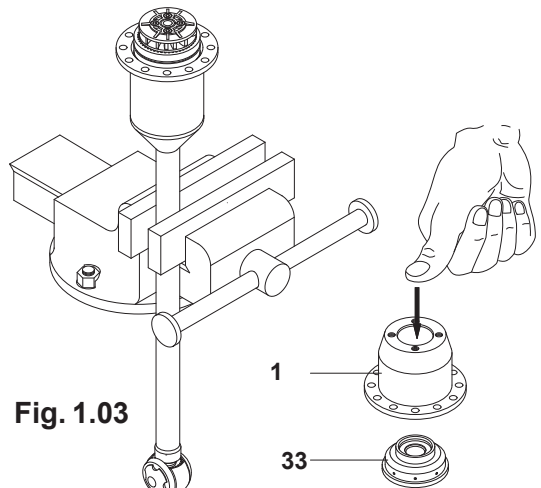


Fig. 1.03

Assembly

1.2.04) Fit the diffuser kit on the impeller kit “G”, making sure to position the washer pos. 5 correctly (see fig. 1.04).

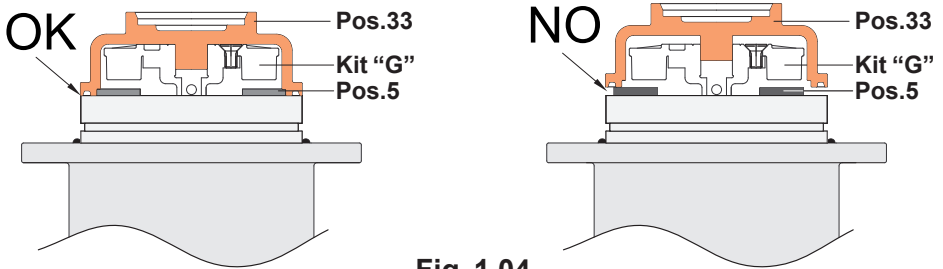


Fig. 1.04

1.2.05) Position the top casing and secure it with the twelve screws pos. 57 and the nuts pos. 58. Use a torque wrench to tighten.

1.2.06) Re-fit the inlet filter as specified in section 1.1.03 to 1.1.05.

1.3) Replacing the nozzle pos. 89

Disassembly

1.3.01) Using the dedicated spanner DZ0001, unscrew and remove the nozzle pos. 89 and the O-ring pos. 76.

Assembly

1.3.02) From table “B” or “C”, select the nozzle to be fitted.

1.3.03) Position the O-ring in its seat on the pin pos. 83

1.3.04) Fit the selected nozzle and tighten using the dedicated spanner DZ0001.

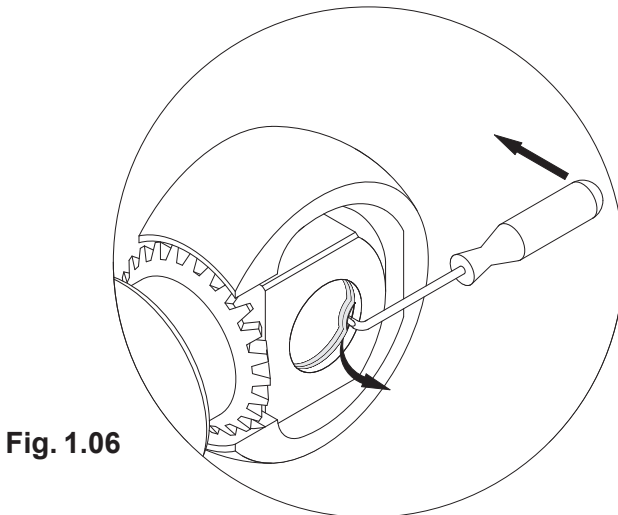
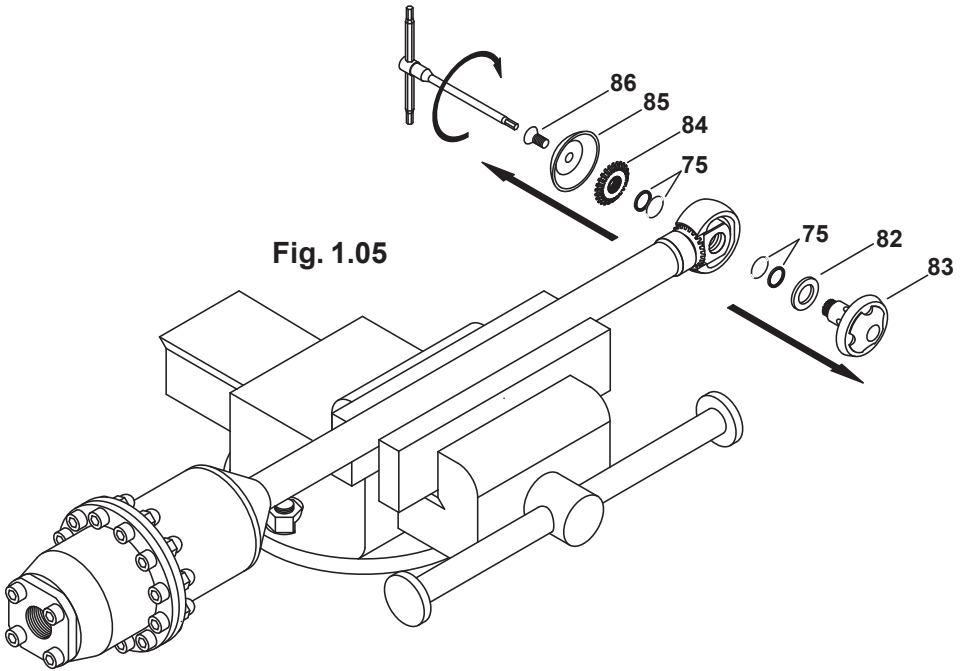
1.4) Replacing the seals in the end part of the nozzle holder pos. 75.

Disassembly

1.4.01) Clamp the head in a bench vice and use a 3-mm allen wrench to unscrew and remove the screw pos. 86 on the part pos. 85.

1.4.02) Remove the protection pos. 85, the crown pos. 84, and slide out the nozzle holder pin pos. 83 with the washer pos. 82 (Fig. 1.05).

1.4.03) Using the dedicated tool, remove the seals and the O-rings pos. 75 from their seats (Fig. 1.06).



Assembly

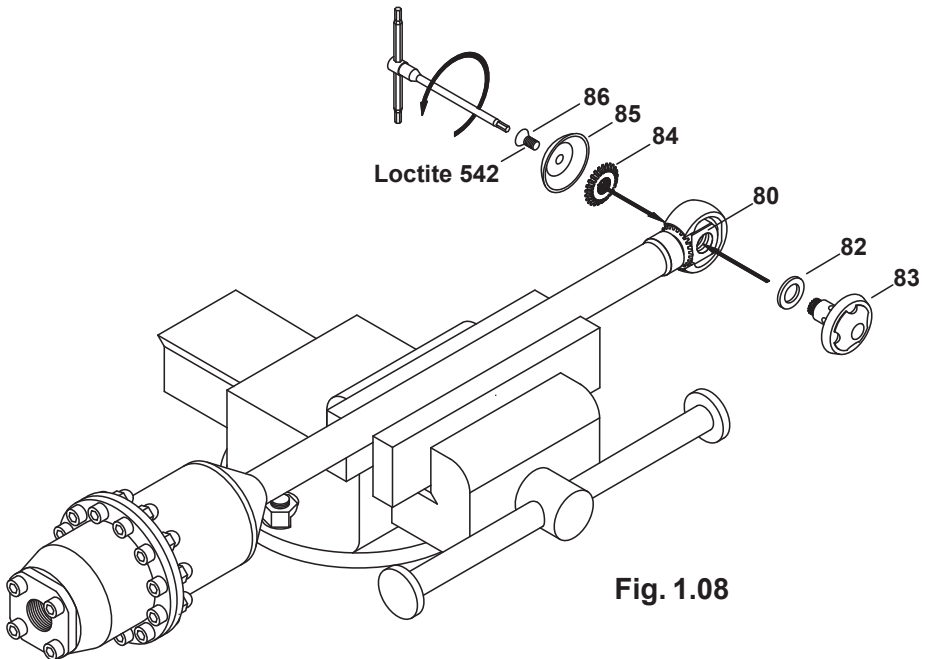
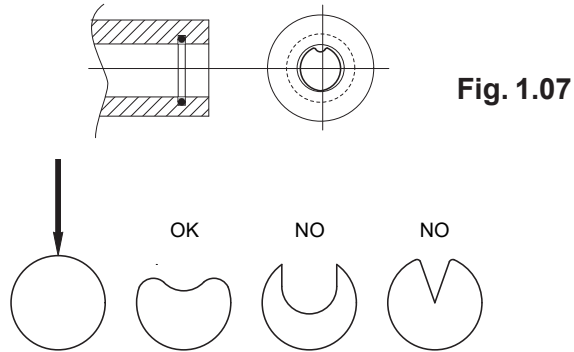
1.4.04) First put the O-ring back in its seat and then the seal ring pos. 75, making the O-ring adhere perfectly using a blunt tool. To make it easier to insert the ring, follow the instructions in fig. 1.07.

1.4.05) Make sure all components are fitted correctly in their seats and lubricate with grease.

1.4.06) Fit the washer pos. 82 on the pin pos. 83, insert the pin in the pipe pos. 80.

1.4.07) Fit the crown pos. 84 on the spline of the pin pos. 83 (check correct coupling of tothing between the pinion pos. 73 and the crown pos. 84).

1.4.08) Fit the protection pos. 85 back in place and fasten it with the screw pos. 86 (apply two drops of Loctite 542 on the screw thread) fig. 1.08.

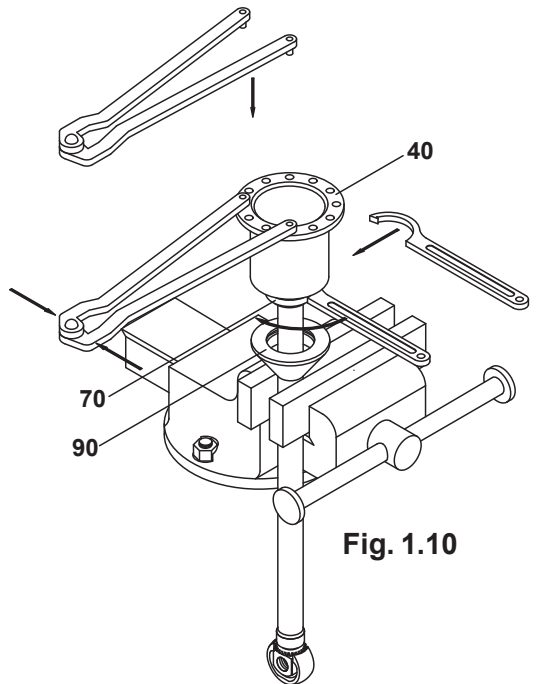
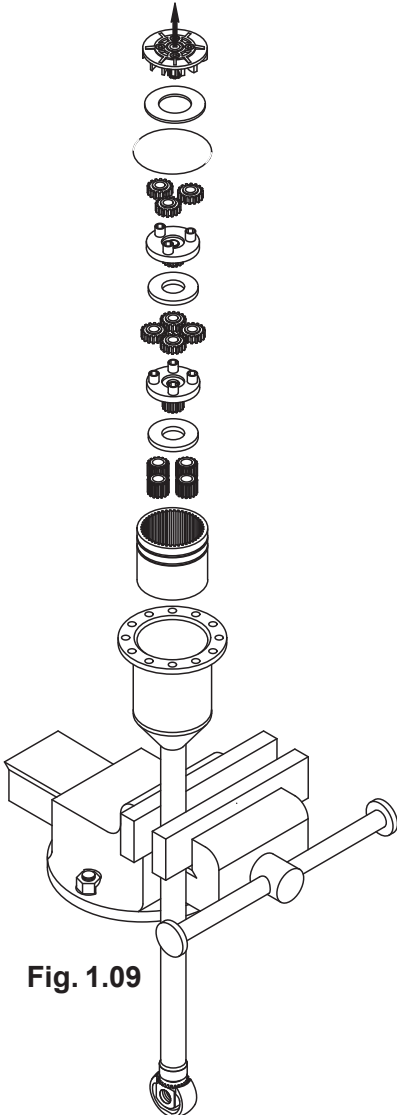


1.5) Replacing the seals pos. 72 on the pinion pos. 73.

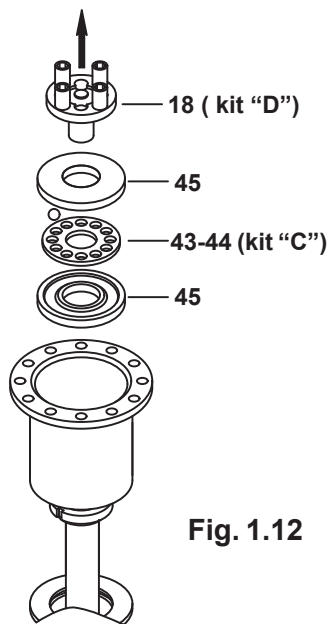
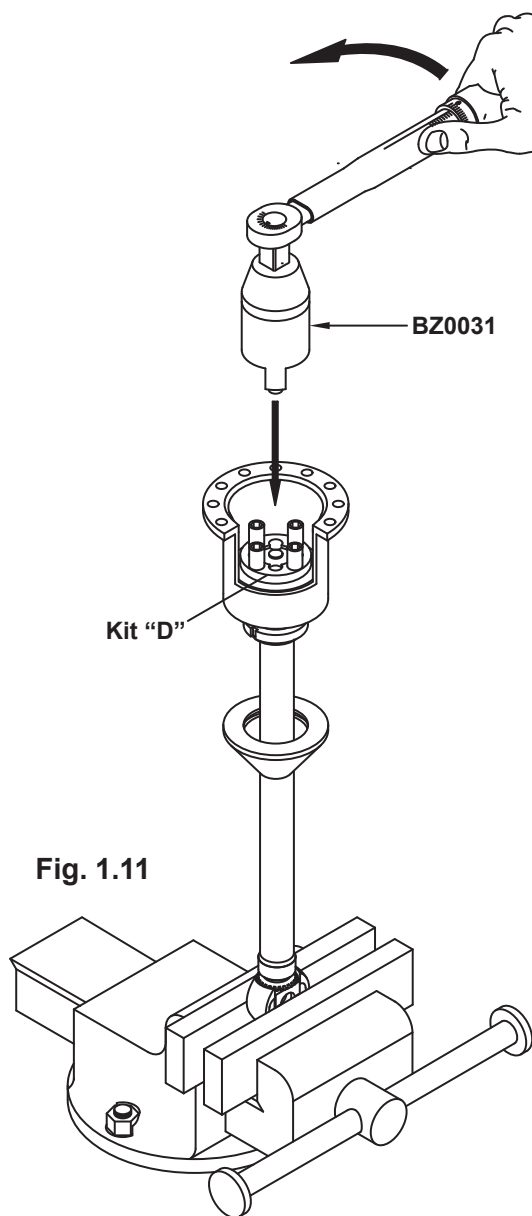
Disassembly

1.5.01) Once you have disassembled the head as explained in sections 1.2.01 to 1.2.03 and sections 1.4.01 to 1.4.02, take out all the parts as shown in fig. 1.01.

1.5.02) Lower the cone pos. 90 and use the special half-moon spanner to loosen the ring nut pos. 70 and tighten the bottom casing pos. 40 slightly (Fig. 1.10).



1.5.03) Using the supplied spanner BZ0031, unscrew and disassemble the output shaft (Kit "D") and the bearing unit pos. 43-44-45 (Fig. 1.11 – 1.12).



1.5.04) Slide out the complete internal rod "A" (Fig. 1.13).

1.5.05) Using a 19-mm fixed-jaw spanner, unscrew the pinion pos. 73 from the external tube pos. 71.

PAY ATTENTION TO THE DIRECTION OF ROTATION, AS IT IS A LEFT-HANDED THREAD (Fig. 1.14).

1.5.06) Use a suitable tool to remove the sealing ring and O-ring pos. 72 from the pinion (Fig. 1.14).

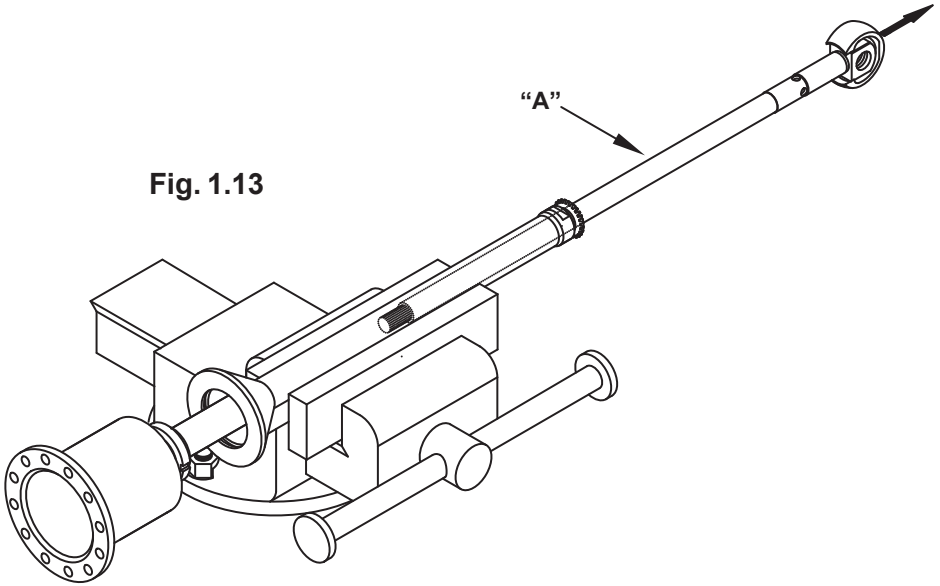


Fig. 1.13

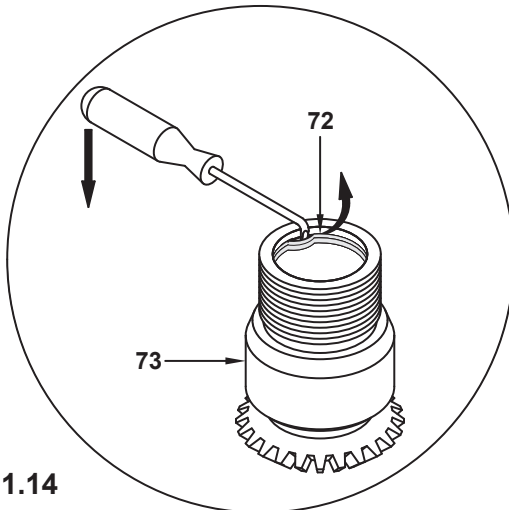


Fig. 1.14

Assembly

1.5.07) First put the O-ring back in position and then the sealing ring pos. 72, making the O-ring adhere perfectly using a blunt tool. To make it easier to insert the ring, follow the instructions in fig. 1.07.

1.5.08) Make sure all components are fitted correctly in their seats and lubricate with grease.

1.5.09) Apply some Loctite 542 on the pinion thread pos. 73, screw onto the external tube pos. 71 and tighten using a 22-mm fixed-jaw spanner.

PAY ATTENTION TO THE DIRECTION OF ROTATION, AS IT IS A LEFT-HANDED THREAD. (Fig. 1.15).

1.5.10) Fit the bearing unit pos. 43-44-45 in the bottom casing pos. 40 and screw it right up against the ring nut loosened previously in section 5.02 (Fig.1.16).

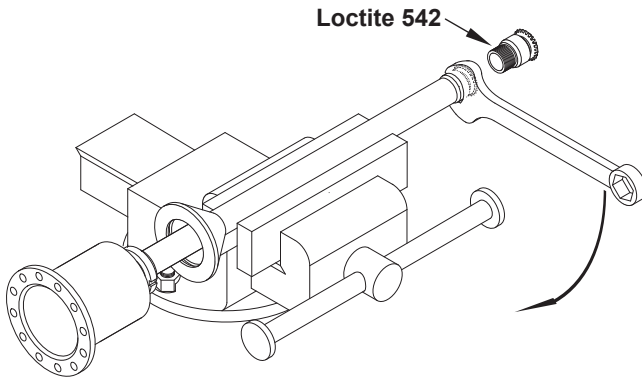


Fig. 1.15

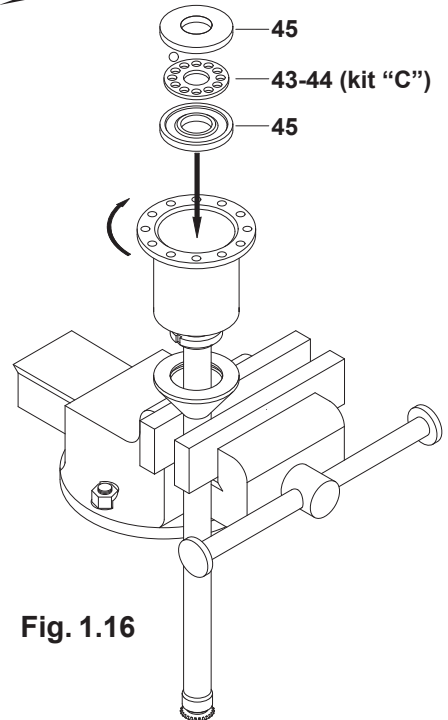
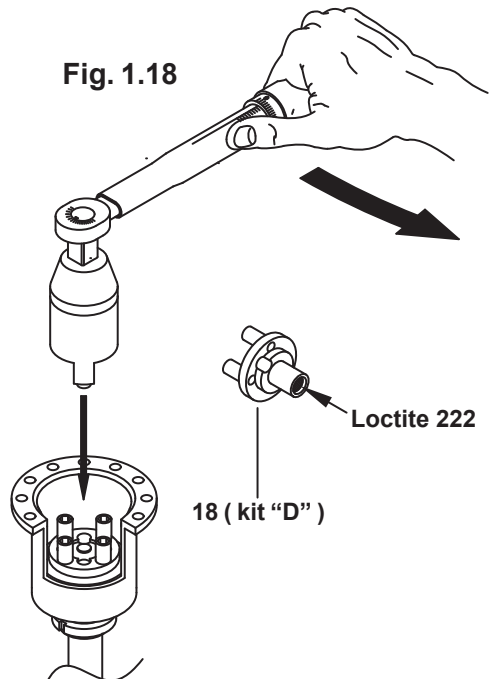
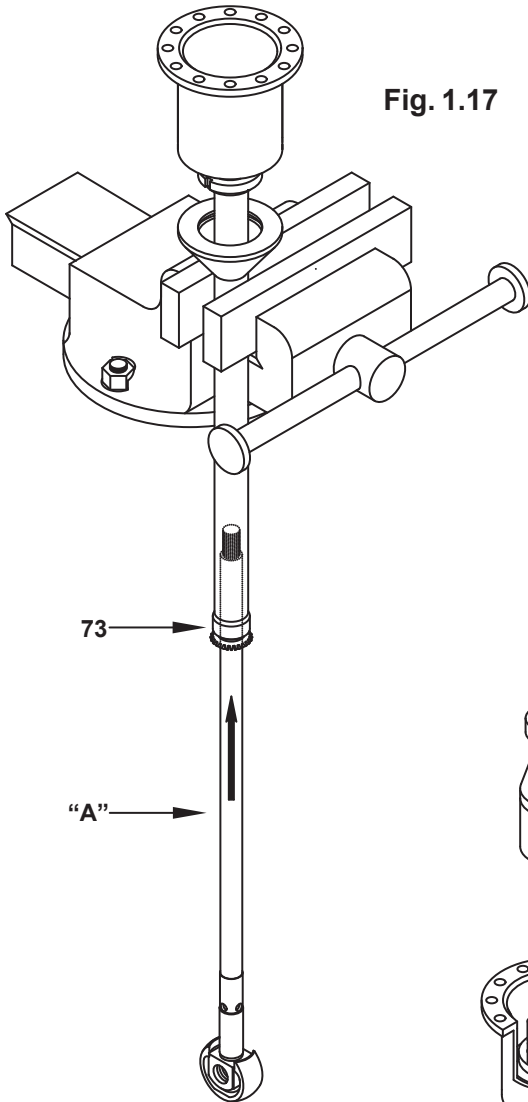


Fig. 1.16

1.5.11) Insert the internal rod "A" in the pinion pos. 73 fitted previously on the external tube pos. 71 (Fig. 1.17).

1.5.12) Apply a few drops of Loctite 222 on the thread of the output shaft pos. 18 (Kit "D"), screw it onto the internal rod and tighten with the special spanner supplied (BZ0031) and the torque wrench (Fig. 1.18).



1.5.13) Re-fit as explained in section 1.4.06 to 1.4.08.

1.5.14) Adjust the bevel gear as follows:

a) Unscrew the bottom casing pos. 40 until the semi-spherical end part and the output shaft are unable to turn.

b) Slowly tighten the casing pos. 40 so that there is play of approx. 0.1 mm between the teeth of the pinion pos. 73 and the pin pos.80 (check with gauge) fig. 1.11.

c) Block the ring nut pos. 70 slightly, make sure that the rotation of the semi-spherical end part has no points of friction.

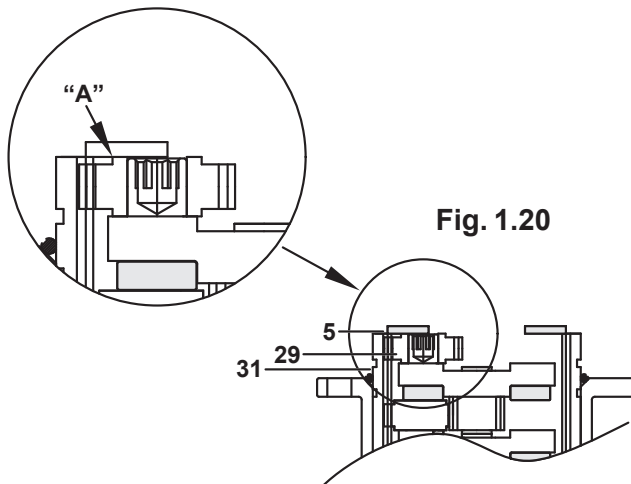
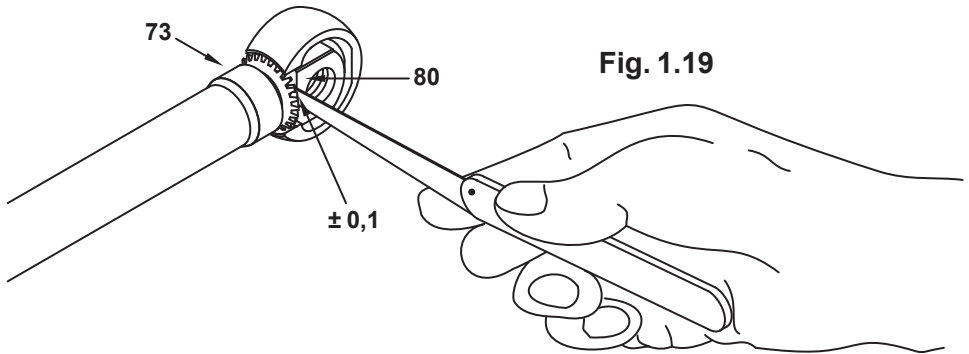
d) Once adjusted as required, screw the ring nut pos. 70 against the lower casing pos. 40.

1.5.15) Fit the crown pos. 31 in the lower casing pos. 40.

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

1.5.17) 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").

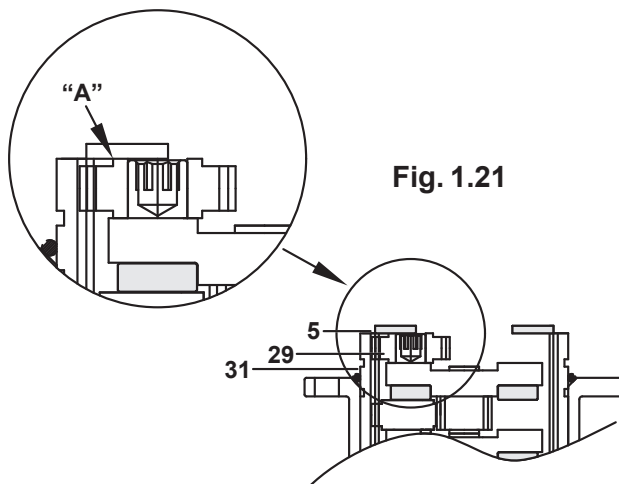
1.5.18) Place the washer pos. 5 on the crown pos. 31, and check that the assembly has been done correctly, making sure there is no friction between the part pos. 5 and the gears pos. 29, see Fig. 1.20.



1.5.19) Fit the O-ring pos. 24 and the complete impeller unit (kit "G"), as per Fig. 1.21.

1.5.20) Complete the assembly as explained in section 1.2.05 to 1.2.07.

(00M-XB031AAD-01-EN)



2) SPARE PARTS

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

AaquaTools, Inc.
3233 Fitzgerald Rd, Suite 'B'
Rancho Cordova, CA 95742
Phone: 916.635.2922
Web: aaquatools.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-EN)

TABLES

TABLE "A"				
FLOW USG/MIN	4	5	7	8
DIFFUSER CODE	DF1403	DF1403	DF1405	DF1406
PARAMETERS: 100BAR - T=20°C				

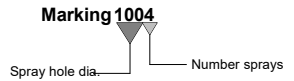
TABLE "D" TORQUE WRENCH SETTINGS		
Structural screws		
Pitch	Nm	
M5	7	All
M6	11	All
M10 x 1,00	20	All
M24 x 1,00 sx	20	All
M27 x 1,00	27	All
1/8	5	All

TABLE "B"

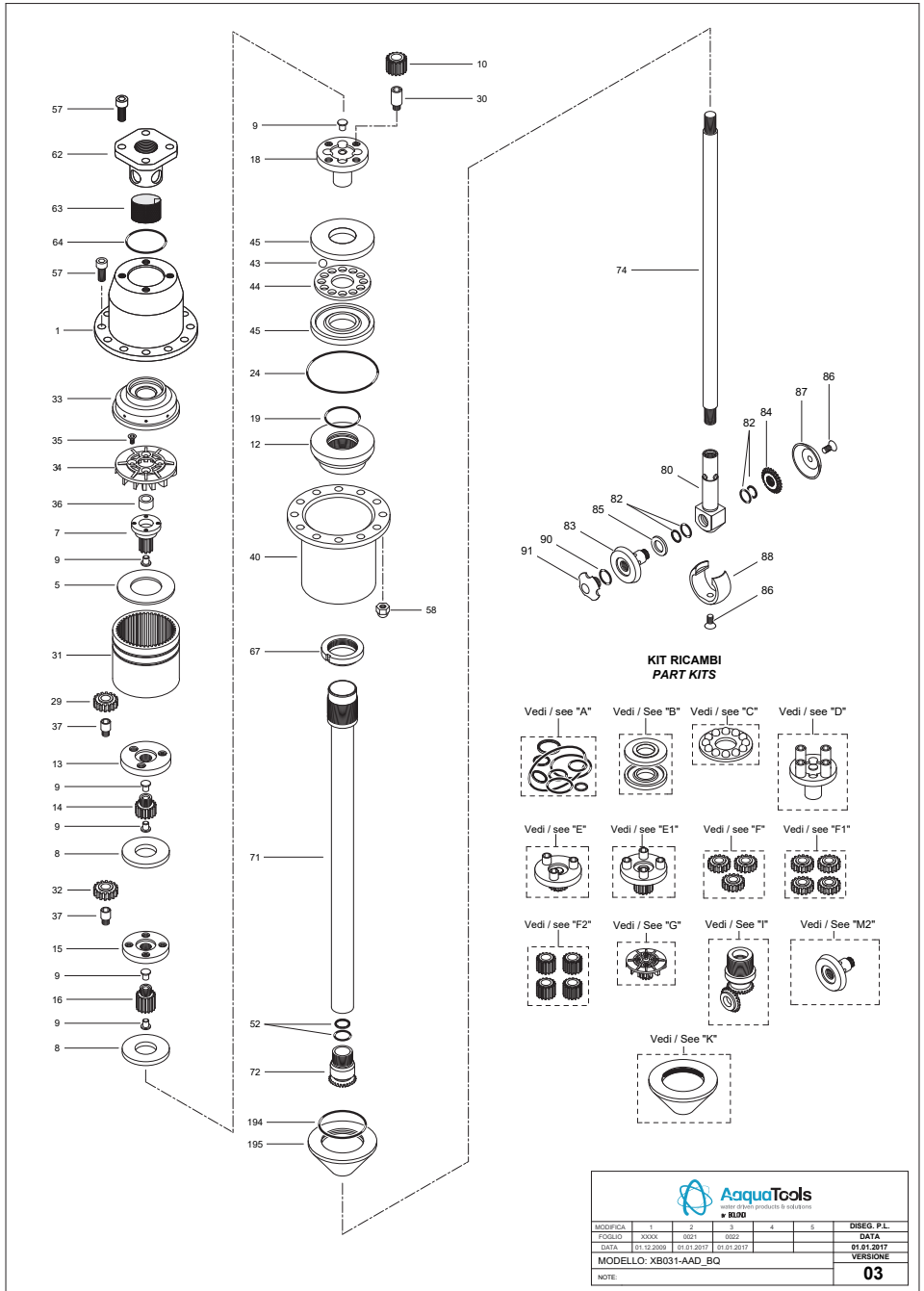
NOZZLE CHART XB031 2 sprays (usg / min)																	
	Marking	Spray hole diam. mm	PRESSURE (psi)														
			140	280	420	560	700	840	980	1120	1260	1400	1540	1680	1820	1960	2100
FLOW NOZZLE (usg / min)	0902	0,90					1.56	1.69	1.76	1.82	1.95	2.02	2.08	2.15	2.28	2.34	2.41
	1002	1,00			1.56	1.69	1.82	1.95	2.03	2.15	2.28	2.34	2.47	2.60	2.67	2.80	2.86
	1102	1,10		1.63	1.82	1.95	2.21	2.41	2.54	2.73	2.80	2.99	3.06	3.12	3.25	3.38	3.51
	1202	1,20		1.76	2.02	2.34	2.54	2.73	2.93	3.12	3.32	3.45	3.58	3.71	3.90	4.03	4.10
	1302	1,30	1.69	1.95	2.34	2.60	2.86	3.12	3.38	3.58	3.77	3.97	4.16	4.29	4.42	4.55	4.68
	1402	1,40	1.76	2.28	2.73	2.99	3.32	3.58	3.84	4.10	4.29	4.55	4.68	4.88	5.07	5.27	5.46
	1502	1,50	2.08	2.60	3.32	3.45	3.77	4.10	4.42	4.68	4.94	5.20	5.40	5.59	5.85	5.98	6.18
	1602	1,60	2.41	3.12	3.64	4.16	4.55	4.94	5.27	5.59	5.85	6.11	6.44	6.70	7.02	7.22	7.41
	1702	1,70	2.47	3.38	3.90	4.42	4.81	5.20	5.59	5.92	6.24	6.50	6.89	7.15	7.41	7.61	7.87
	1802	1,80	3.12	4.03	4.68	5.33	5.85	6.31	6.76	7.22	7.54	7.93					
	1902	1,90	3.25	4.16	4.94	5.59	6.18	6.76	7.15	7.67							
	2002	2,00	3.51	4.55	5.46	6.11	6.89	7.41	7.87								


TABLE "C"

NOZZLE CHART XB031 4 sprays (usg / min)																	
	Marking	Spray hole diam. mm	PRESSURE (psi)														
			140	280	420	560	700	840	980	1120	1260	1400	1540	1680	1820	1960	2100
FLOW NOZZLE (usg / min)	0954	0,95		1.82	2.21	2.60	2.86	3.12	3.38	3.51	3.77	3.90	4.16	4.29	4.42	4.55	4.68
	1004	1,00	1.56	2.08	2.47	2.86	3.12	3.38	3.64	3.90	4.16	4.42	4.55	4.68	4.94	5.20	5.33
	1054	1,05	1.69	2.21	2.86	3.12	3.51	3.77	4.16	4.42	4.68	4.81	5.07	5.33	5.46	5.72	5.85
	1104	1,10	1.82	2.73	3.12	3.51	4.03	4.29	4.55	4.81	5.07	5.33	5.59	5.85	6.11	6.24	6.50
	1154	1,15	1.95	2.73	3.25	3.77	4.16	4.68	4.94	5.20	5.46	5.72	5.98	6.24	6.50	6.76	7.02
	1204	1,20	2.21	3.12	3.64	4.16	4.68	4.94	5.33	5.72	5.98	6.37	6.63	7.02	7.28	7.54	7.80
	1254	1,25	2.34	3.25	3.90	4.42	4.94	5.33	5.72	6.11	6.50	6.89	7.15	7.41	7.80		
	1304	1,30	2.60	3.51	4.23	4.81	5.33	6.24	6.76	7.15	7.41	7.80					
	1354	1,35	2.86	3.64	4.55	5.20	5.85	6.37	6.89	7.41	7.80						
	1404	1,40	2.86	3.77	4.55	5.20	5.85	6.37	6.89	7.02	7.41						
	1454	1,45	2.99	3.90	4.55	5.46	6.11	6.63	7.15	7.41	7.80						



EXPLODED VIEW



 water efficient products & solutions # BUD						
MODIFICA	1	2	3	4	5	DISSEG. P.L.
FOGLIO	XXXX	0001	0002			DATA
DATA	01.12.2002	01.01.2017	03.01.2017			01.01.2017
MODELLO:	XB031-AAD_BQ					VERSIONE
NOTE:						03



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