



901[®] QC & 901[®] Airtact Handpiece

INSTRUCTIONS • #004-901, #004-910, #004-901-AT, #004-901-ATSS, #004-953, & #004-953SS

#004-901 & #004-910: Compatible GRS[®] systems include the GraverMach[®] AT, GraverMax[®] G8, GraverMach[®], GraverMax[®] SC, GraverSmith[®], and Classic GraverMax[®] / GraverMate[®] machines.

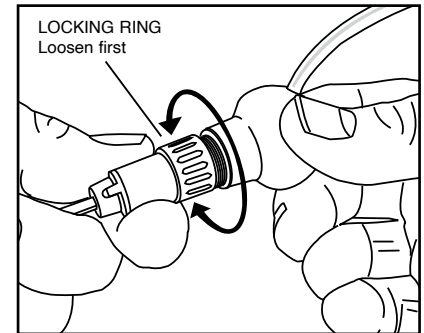
#004-901-AT, #004-901-ATSS, #004-953, & #004-953SS: Compatible GRS[®] systems include GraverMach[®] AT, or an Airtact Control System (#004-935) connected to a GraverMax[®] G8, GraverMach[®], GraverMax[®] SC, GraverSmith[®], or Classic GraverMax[®] / GraverMate[®] (with Airtact Filter Hook Up Kit) machines.

	Standard Spring	Fine Spring
Normal Operating Range	18-22 psi (1.2-1.5 bar) / 1400 - 3400 spm	12-15 psi (0.8-1.0 bar) / 1600 - 3600 spm
Recommended Initial Setting	19 psi (1.3 bar) / 2700 spm	13 psi (0.9 bar) / 3000 spm
PSI: Pounds per Square Inch • Bar: Unit of Measurement • SPM: Strokes Per Minute		

Adjusting The Handpiece To Fit You

With the locking ring slightly loose, you are able to turn the handpiece body and knob independently. Position the Quick Change holder with the graver “point” down. Rotate the knob until the hose position is comfortable, then tighten the locking ring.

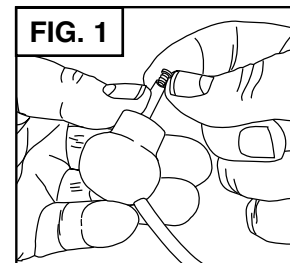
You can also extend the length of the handpiece a little by unscrewing the knob and body even more. NOTE: By extending the length you may notice a loss of power depending on the type of work you are doing.



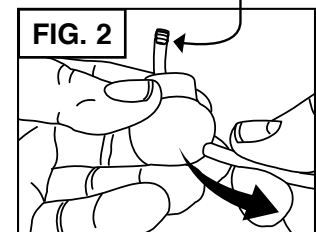
How To Attach A New Hose

Loosen the locking ring. Remove the knob from the handpiece. Remove the hose by cutting it off close to the knob. With a small punch, push the hose / brass fitting back into the knob body. Remove the brass fitting (#004-409) from the hose. Feed the new air hose through the hole in the knob (**Fig. 1**). Insert the brass fitting into the end of the new hose, making sure it is fully seated.

If needed, lubricate the fitting first to help it slip into the hose easier. Then apply a small amount of water or oil around the outside end of the hose next to the brass fitting and pull the hose back (**Fig. 2**) into the knob until you see the tip of the brass fitting protrude through the side of the knob. This must be an air tight fit, so you will have to pull somewhat hard (a few pounds of pressure, at least).

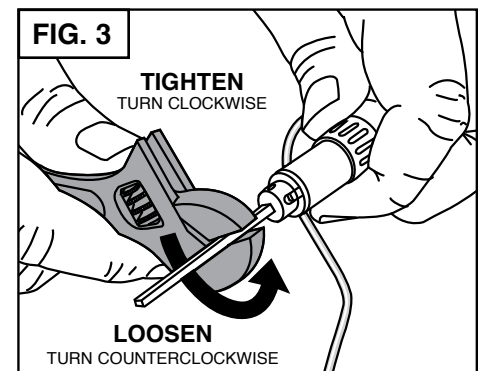


Lubricate end slightly with water or a small amount of oil.



Maintenance

Keeping the 901 clean on the inside. Problems will occur if oil or moisture gets into the handpiece, especially on the piston. If you notice a loss of power or erratic performance, first check if the receiver (chuck) is tight in the handpiece body. Using a crescent wrench or pliers with a graver inserted in the QC Holder, gently tighten receiver clockwise (**Fig. 3**) If erratic performance continues, then disassemble and clean the handpiece. To disassemble the handpiece, use the crescent wrench or pliers to grip the graver (**Fig. 3**) and turn it counterclockwise to loosen the chuck retainer. Continued on page 2.



After loosening you can turn the chuck retainer out with your finger tips (**Fig. 4**). As you pull out the chuck there will be a spring and piston that follows. Loosen the locking ring and remove it (**Fig. 5**). Grip the knob and turn the handpiece body counterclockwise until it is out of the knob body (**Fig. 6**).

Now, with the handpiece disassembled, clean the parts with a NON-residue solvent like denatured alcohol. Make sure the holes in the handpiece body are clear from dirt and debris. DO NOT get moisture down the air hose. If this happens you will need to clear and dry it before reassembly.

Before reassembly, make sure every thing is completely dry. DO NOT OIL INSIDE THE HANDPIECE. NO lubricant is required. Lubricant will actually take away performance!



NOTE: Do NOT use petroleum based oils - USE ONLY Synthetic oils. Fossil oils can damage the O-Rings.

Reassembly Note

There is an O-ring inside the knob that makes getting the handpiece body to thread a little difficult when reassembling. Use a very small amount of synthetic lube or Teflon grease and create a thin film around the OUTSIDE of the handpiece body between the threads and the end (**Fig. 7**). See "Adjusting The Handpiece To Fit You" on p. 1 of this literature sheet for adjusting graver and hose position.

Quick Change Holder Hint

Synthetic Lube or Teflon Grease on the shaft of a quick change holder will make them easier to slip in and out.

Very Light synthetic grease film

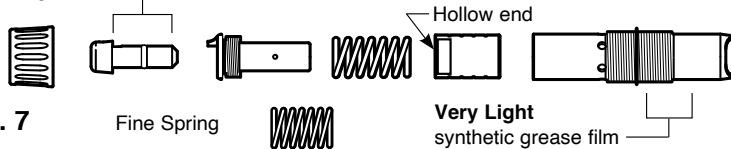


Fig. 7

Fine Spring

Very Light synthetic grease film

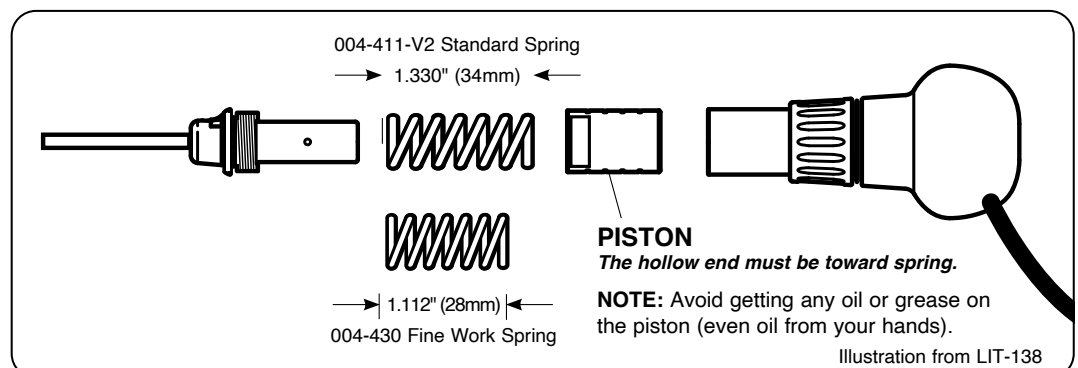
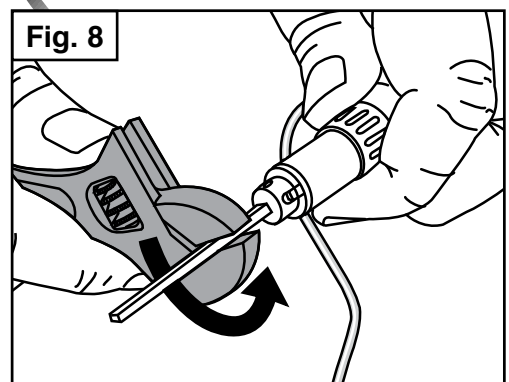
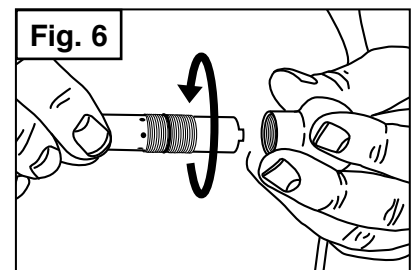
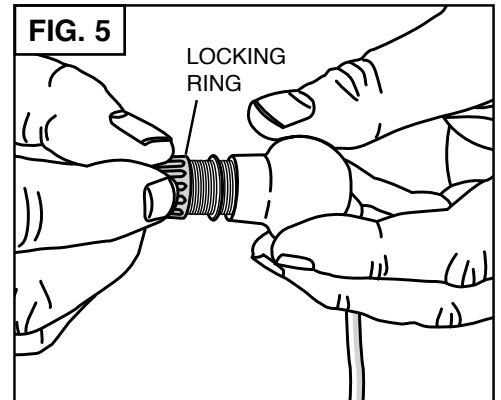
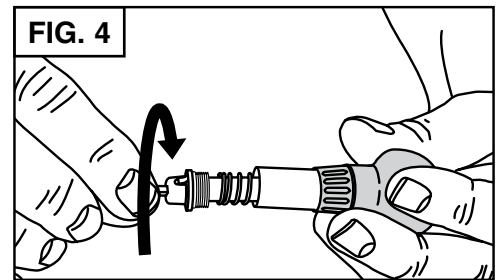
Fine Spring Option

The Fine Spring offers you the option to tune the 901's power for finer engraving work. With this spring in the handpiece, the air pressure will need to be approximately 14 psi.

To Change Springs

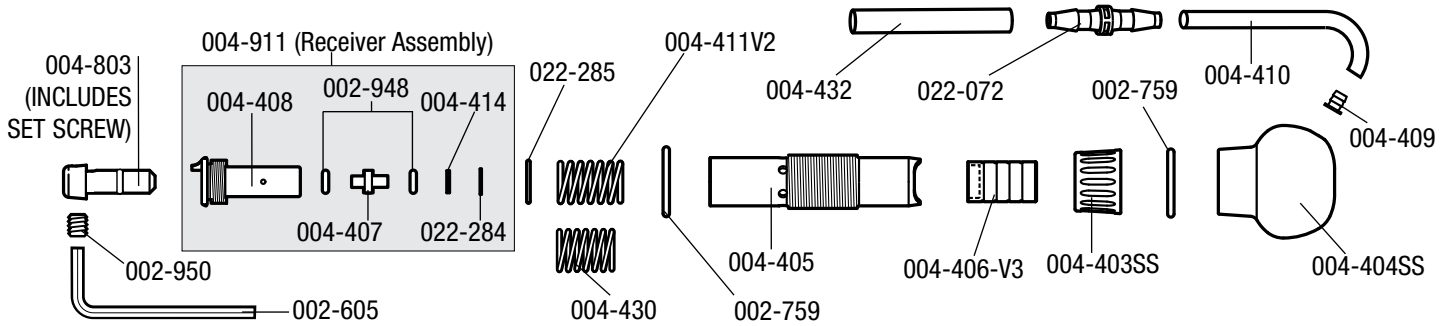
Place a Quick Change Holder with a graver in the chuck. Using a wrench or pliers grip the graver (**Fig. 8**) and turn it counterclockwise to loosen the chuck retainer. After loosening you can turn the chuck retainer out with you finger tips. As you pull out the chuck there will be a spring and piston that follows. Replace the spring with the shorter "FINE WORK" spring and reassemble.

NOTE: The piston has a hollow end. The hollow end MUST be next to the spring or it will NOT work properly.



901[®] QC Handpiece

PARTS LIST • #004-901

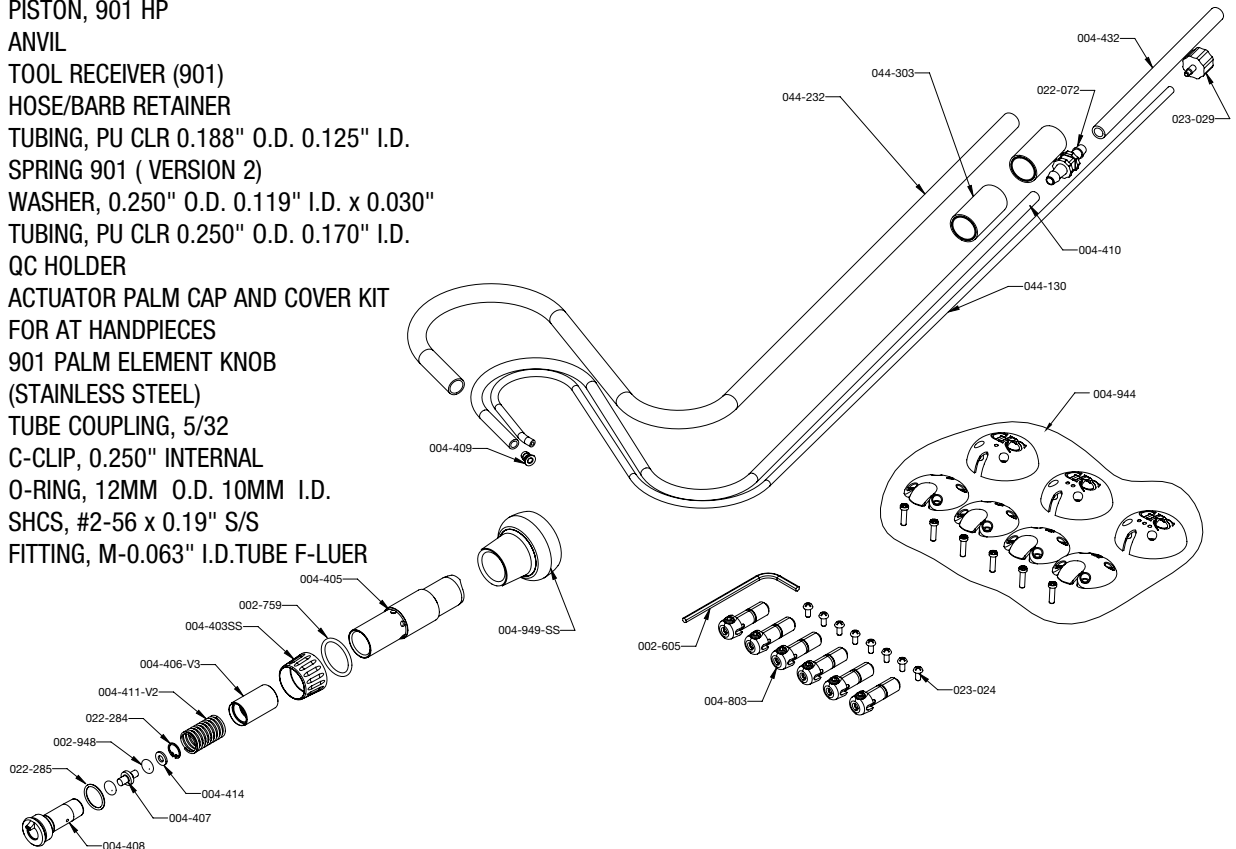


Part #	Description	Part #	Description	Part #	Description
002-950	8-32 X .13	004-406-V3	Piston / Hammer	004-432	Air Hose - 1/4" OD X.16 ID X 4"
002-605	Allen Wrench	004-407	Anvil	004-803	Quick Change Chuck (complete with set screw)
002-759	O-Ring 1/2" ID X 1/16" Wide	004-408	Chuck Receiver	022-072	Tube Coupling
002-948	O-Ring 1/8" ID X 1/16" Wide	004-409	Air Hose Retainer	004-414	Washer
004-403SS	Locking Nut	004-410	Air Hose - 1/8" ID X 40"	022-284	Internal Retaining Ring
004-404SS	Handle Knob	004-411-V2	Spring	022-285	O-Ring 10 mm ID X 1 mm Wide
004-405	Handpiece Body	004-430	Fine Work Spring		

901[®] Airtact Handpiece

PARTS LIST • #004-901-AT & #004-901-ATSS

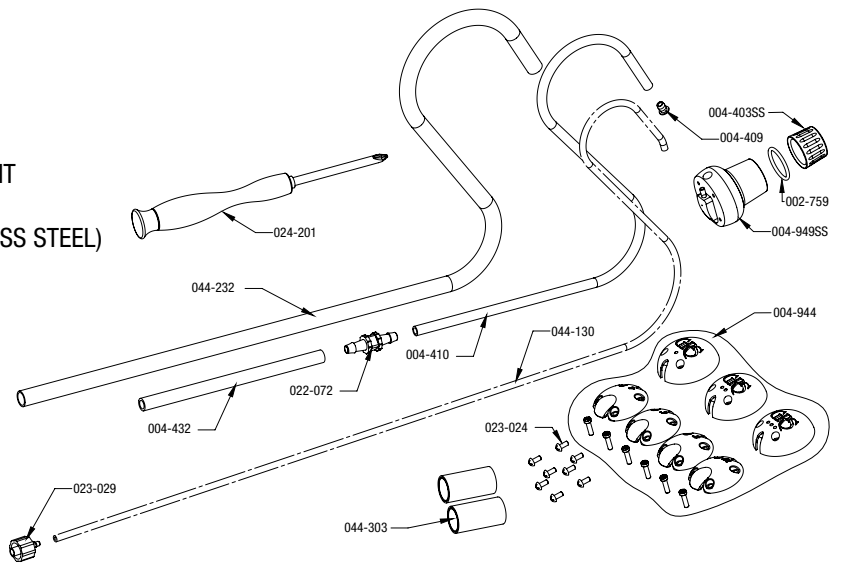
PART #	QTY.	DESCRIPTION	PART #	QTY.	DESCRIPTION
002-605	1	WRENCH, 5/64 ALLEN	044-126	1	FITTING, 0.094" O.D. 0.063" I.D. x 0.35"
002-759	1	O-RING, 0.625" O.D. 0.500" I.D.	044-130	1	TUBING, PU CLR .125" O.D. 0.063" I.D.
002-948	2	O-RING, 0.250" O.D. 0.125" I.D.	044-303	2	SHRINK WRAP, BLK 0.375" I.D.
004-403SS	1	LOCKING NUT	044-232	1	BRAIDED SLEEVE, 0.313" O.D. NYLON
004-405	1	HANDPIECE BARREL	044-303	2	W/ ADHESIVE
004-406-V3	1	PISTON, 901 HP			
004-407	1	ANVIL			
004-408	1	TOOL RECEIVER (901)			
004-409	1	HOSE/BARB RETAINER			
004-410	1	TUBING, PU CLR 0.188" O.D. 0.125" I.D.			
004-411-V2	1	SPRING 901 (VERSION 2)			
004-414	1	WASHER, 0.250" O.D. 0.119" I.D. x 0.030"			
004-432	1	TUBING, PU CLR 0.250" O.D. 0.170" I.D.			
004-803	6	QC HOLDER			
004-944	1	ACTUATOR PALM CAP AND COVER KIT FOR AT HANDPIECES			
004-949-SS	1	901 PALM ELEMENT KNOB (STAINLESS STEEL)			
022-072	1	TUBE COUPLING, 5/32			
022-284	1	C-CLIP, 0.250" INTERNAL			
022-285	1	O-RING, 12MM O.D. 10MM I.D.			
023-024	4	SHCS, #2-56 x 0.19" S/S			
023-029	1	FITTING, M-0.063" I.D. TUBE F-LUER			



901[®] Palm Knob Kit

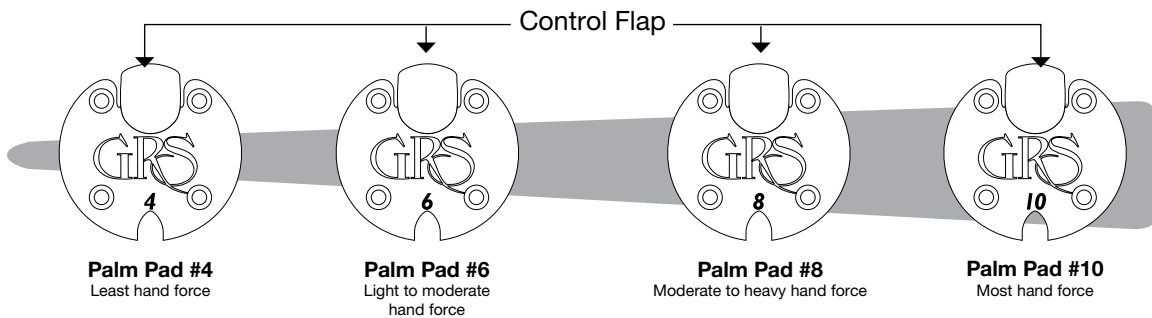
PARTS LIST • #004-953SS

PART NO.	QTY.	DESCRIPTION
002-759	1	O-RING, 0.625"OD 0.500"ID
004-403SS	1	LOCKING NUT
004-409	1	HOSE/BARB RETAINER
004-410	1	TUBING, PU CLR 0.188"OD 0.125"ID
004-432	1	TUBING, PU CLR 0.250"OD 0.170"ID
044-944	1	ACTUATOR PALM CAP AND COVER KIT FOR AT HANDPIECES
004-949SS	1	901 PALM ELEMENT KNOB (STAINLESS STEEL)
022-072	1	PLASTIC 1/4 TUBE CONNECTOR
023-024	4	SHCS, #2-56 x 0.19" S/S
023-029	1	FITTING, M-.063" IDTUBE F-LUER
024-201	1	PH1 X 50 MM SCREW DRIVER FOR AIRTACT PALM PADS
044-130	1	TUBING, PU CLR 0.125"OD 0.063"ID
044-232	1	BRAIDED SLEEVE, 0.313"OD NYLON W/ ADHESIVE



Palm Pad

#004-901-ATSS & #004-953SS



Please Note:
the Palm Pad mounting screws should only be lightly snug; over-tightening can distort or damage the pad.



900 Overlander Road • Emporia, KS 66801 USA
800-835-3519 • 620-343-1084 • Fax: 620-343-9640
hello@grs.com • www.grstools.com

Printed in USA. Products made in USA. All rights reserved. © 2021 Glendo LLC
Last Update: 2021/04/06