

**#004-921 & #004-926:** Compatible GRS<sup>®</sup> systems include the GraverMach<sup>®</sup> AT, GraverMax<sup>®</sup> G8, GraverMach<sup>®</sup>, GraverMax<sup>®</sup> SC, GraverSmith<sup>®</sup>, and Classic GraverMax<sup>®</sup> / GraverMate<sup>®</sup> machines.

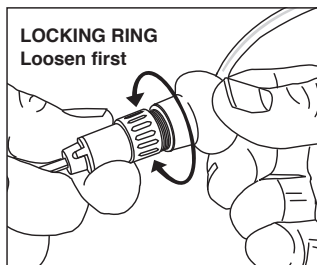
**#004-921-ATSS & #004-952SS:** Compatible GRS<sup>®</sup> systems include GraverMach<sup>®</sup> AT, or an Airtact Control System (#004-935) connected to a GraverMax<sup>®</sup> G8, GraverMach<sup>®</sup>, GraverMax<sup>®</sup> SC, GraverSmith<sup>®</sup>, or Classic GraverMax<sup>®</sup> / GraverMate<sup>®</sup> (with Airtact Filter Hook Up Kit) machines.

<p><b>NORMAL OPERATING RANGE</b></p> <p>11-14 psi (0.7-0.9 bar) / 2400 - 4000 strokes per min.</p>
<p><b>RECOMMENDED INITIAL SETTING</b></p> <p>12 psi (0.8 bar) / 3600 strokes per min.</p>

**Adjusting The Handpiece**

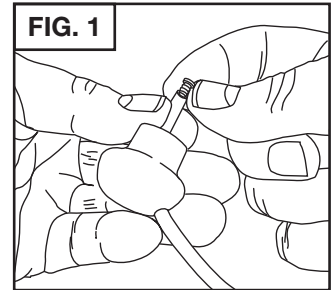
The handpiece knob and the body (barrel) are threaded together, allowing the hose to be rotated to the position the user prefers. The length of the handpiece can be extended by unscrewing the knob and body even more. NOTE: Extending the length may cause a slight loss of power depending on the type of work being done.

With the locking ring slightly loose, the handpiece body and knob can be turned independently. Position the Quick Change holder with the graver “point” down and rotate the knob until the hose position is the most comfortable. Once the hose and graver are both positioned comfortably, tighten the locking ring.

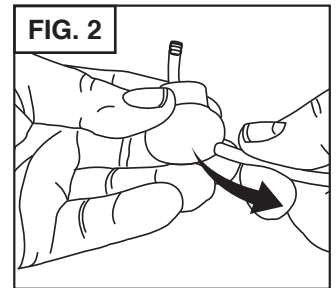


**How To Attach New Hose**

Loosen the locking ring and remove the knob from the handpiece. Remove the old hose simply 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 (#004-422 Air Hose Retainer) from the old hose. Feed the new air hose through the hole in the knob

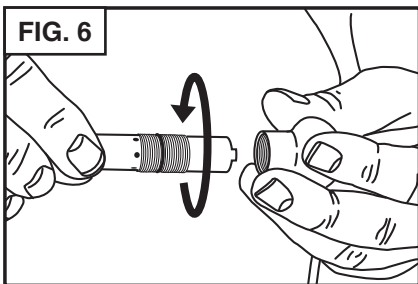
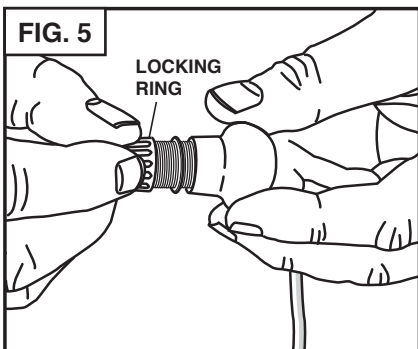
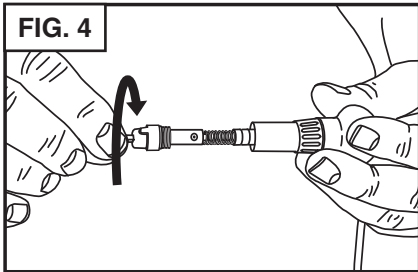
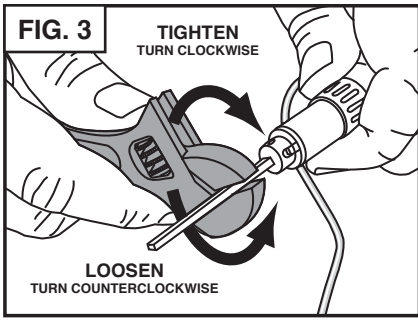


**(FIG. 1).** Insert the brass fitting into the end of the hose making sure it is fully seated. Moistening the fitting first may help it slip into the hose easier.



Then apply a small amount of moisture 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, at least).



## Maintenance

The only basic maintenance for the GRS Monarch Handpiece is keeping it 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, the **FIRST THING** to check is to make sure 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. After loosening, turn the chuck retainer out with your finger tips (**FIG. 4**). As you pull out the chuck, there will be a spring and piston.

Loosen the locking ring and remove it (**FIG. 5**). Grip the knob and turn the handpiece body counter-clockwise 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.

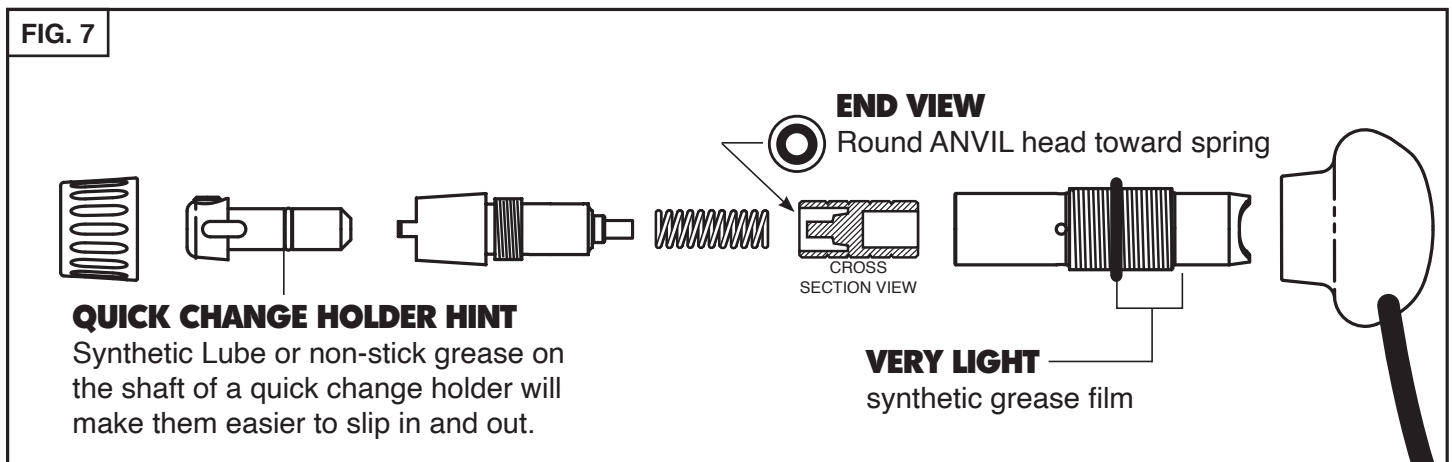
Before reassembly, make sure every thing is completely dry. **DO NOT OIL INSIDE THE HANDPIECE**. NO lubricant is required. Lubricant will actually decrease performance!

## 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 non-stick grease and create a thin film around the **OUTSIDE** of the shaft between the threads and the end (see call out in **FIG. 7**).

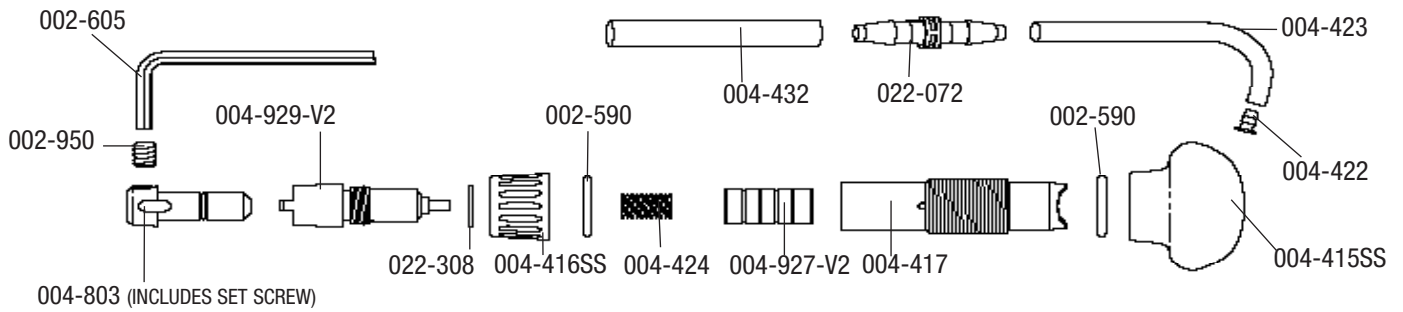
**NOTE:** Do **NOT** use petroleum based oils - **USE ONLY** Synthetic oils. Fossil oils can damage the O-rings.

See "Adjusting the Handpiece" on page 1 for adjusting graver and hose position.



# Monarch™ Airtact Handpiece

PARTS LIST • #004-921



**Part # Description**

002-950	8-32 X .13
002-605	Allen Wrench
002-590	O-Ring 1/2" ID X 1/16" Wide
004-803	Quick Change Chuck (complete with set screw)
004-415SS	Handle Knob
004-416SS	Locking Nut
004-417	Handpiece Body

**Part # Description**

004-929-V2	Chuck Receiver
004-422	Air Hose Retainer
004-423	Air Hose - 1/8" dia. X 38"
004-424	Spring
004-927-V2	Piston / Hammer
022-308	O-Ring 8 mm ID X 1 mm Wide
022-072	Tube Coupling
004-432	Urethane Tubing .170" I.D. X 10"

# Monarch™ Airtact Handpiece

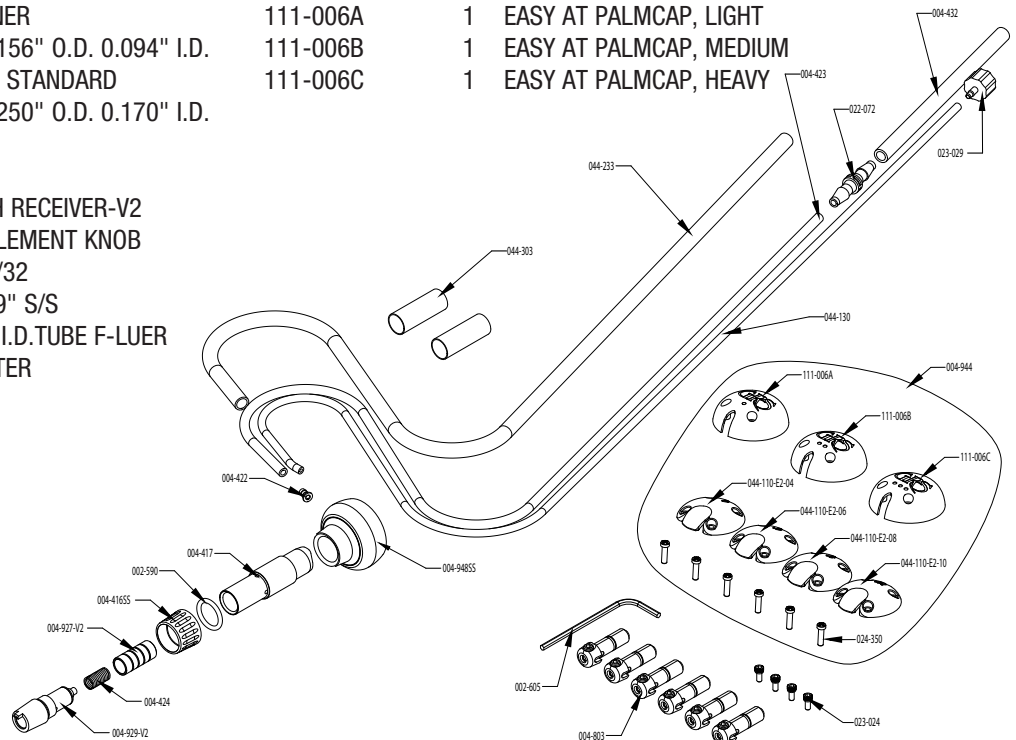
PARTS LIST • #004-921-ATSS

**PART # QTY. DESCRIPTION**

002-590	2	O-RING, 0.563" O.D. 0.438" I.D.
002-605	1	WRENCH, 5/64 ALLEN
004-416SS	1	LOCKING NUT
004-417	1	HANDPIECE BARREL
004-421	1	901 HAND PIECE RECEIVER
004-422	1	HOSE/BARB RETAINER
004-423	1	TUBING, PU CLR 0.156" O.D. 0.094" I.D.
004-424	1	SPRING, MONARCH STANDARD
004-432	1	TUBING, PU CLR 0.250" O.D. 0.170" I.D.
004-803	6	QC HOLDER
004-927-V2	1	PISTON ASSEMBLY
004-929-V2	1	WELDED MONARCH RECEIVER-V2
004-948	1	MONARCH PALM ELEMENT KNOB
022-072	1	TUBE COUPLING, 5/32
023-024	4	SHCS, #2-56 x 0.19" S/S
023-029	1	FITTING, M-0.063" I.D.TUBE F-LUER
024-350	6	2-56 x 5/16 FILLISTER
044-110-E2-04	1	PALM PAD, E2 #04
044-110-E2-06	1	PALM PAD, E2 #06

**PART # QTY. DESCRIPTION**

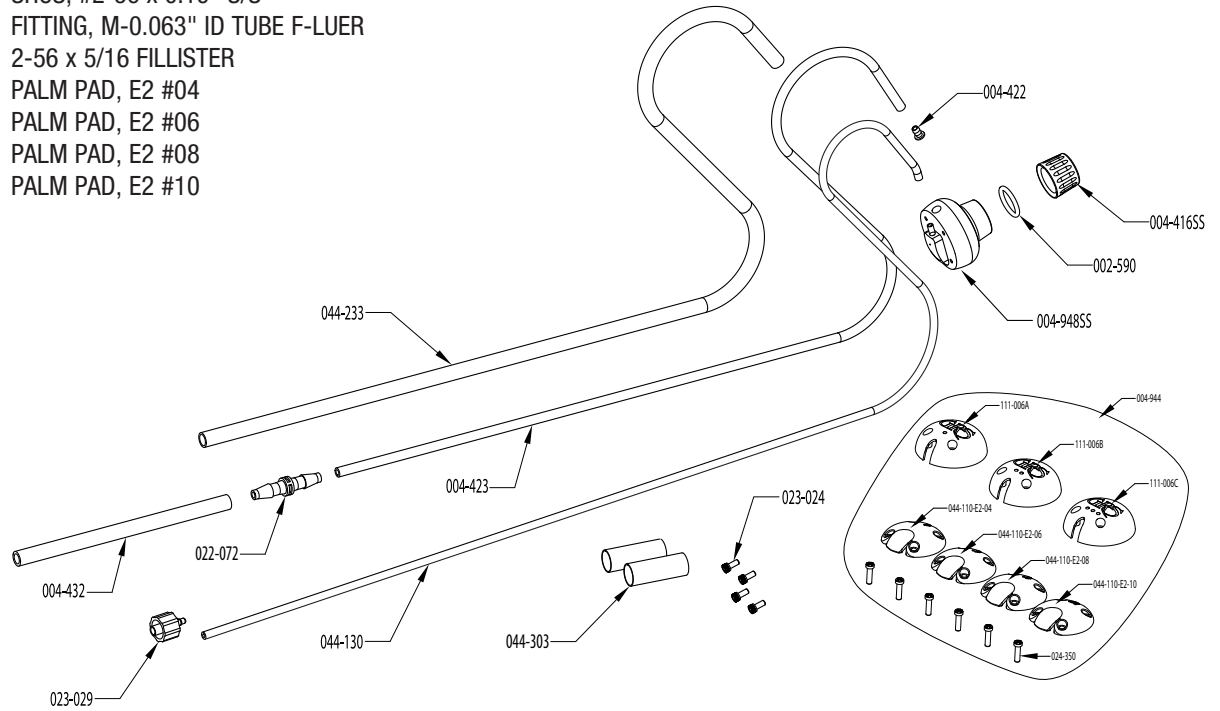
044-110-E2-08	1	PALM PAD, E2 #08
044-110-E2-10	1	PALM PAD, E2 #10
044-130	1	TUBING, PU CLR 0.125" O.D. 0.063" I.D.
044-233	1	BRAIDED SLEEVE, 0.250" O.D. NYLON
044-303	2	SHRINK WRAP, BLK 0.375" I.D.
111-006A	1	EASY AT PALMCP, LIGHT
111-006B	1	EASY AT PALMCP, MEDIUM
111-006C	1	EASY AT PALMCP, HEAVY



# Monarch™ Palm Knob Kit

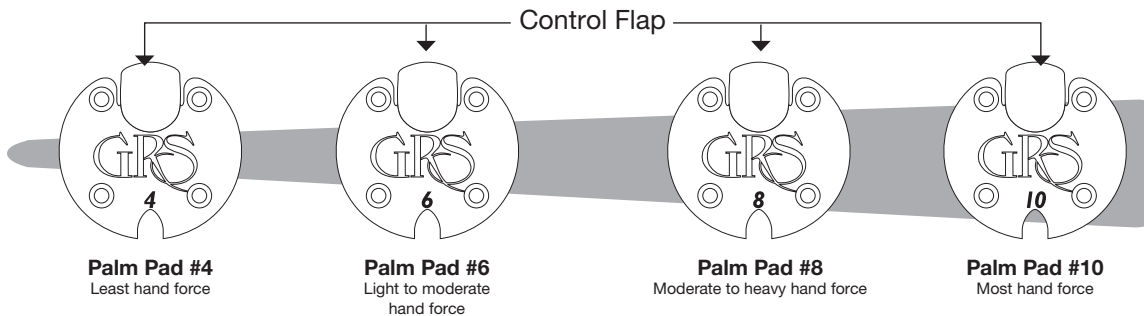
PARTS LIST • #004-952SS

PART #	QTY.	DESCRIPTION	PART #	QTY.	DESCRIPTION
002-590	1	O-RING, 0.563"OD 0.438"ID	044-130	1	TUBING, PU CLR 0.125"OD 0.063"ID
004-416SS	1	LOCKING NUT	044-233	1	BRAIDED SLEEVE, 0.250"OD NYLON
004-422	1	HOSE/BARB RETAINER	044-303	2	SHRINK WRAP, BLK 0.375"ID
004-423	1	TUBING, PU CLR 0.156"OD 0.094"ID	111-006A	1	EASY AT PALMCPAP, LIGHT
004-432	1	TUBING, PU CLR 0.250"OD 0.170"ID	111-006B	1	EASY AT PALMCPAP, MEDIUM
004-948SS	1	MONARCH PALM ELEMENT KNOB	111-006C	1	EASY AT PALMCPAP, HEAVY
022-072	1	TUBE COUPLING, 5/32			
023-024	4	SHCS, #2-56 x 0.19" S/S			
023-029	1	FITTING, M-0.063" ID TUBE F-LUER			
024-350	6	2-56 x 5/16 FILLISTER			
044-110-E2-04	1	PALM PAD, E2 #04			
044-110-E2-06	1	PALM PAD, E2 #06			
044-110-E2-08	1	PALM PAD, E2 #08			
044-110-E2-10	1	PALM PAD, E2 #10			



## Palm Pad

#004-940-ATSS & #004-957SS



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



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