

# Pencil Filer

## Air Tool Manual – Safety, Operation and Maintenance

SAVE THIS DOCUMENT, EDUCATE ALL PERSONNEL

### Models:

- 10832 - 3mm Collet
- 10843 - 1/8" Collet
- 10844 - Versatility Kit



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## ! WARNING

Read and understand this tool manual before operating your air tool. Follow all safety rules for the protection of operating personnel as well as adjacent areas. Always operate, inspect and maintain this tool in accordance with the American National Safety Institute (ANSI) Safety Code for Portable Air Tools – B186.1. For additional safety information, refer to Safety Requirements for the Use, Care and Protection of Abrasive Wheels – ANSI B7.1, Code of Federal Regulation – CFR 29 Part 1910, European Committee for Standards (EN) Hand Held Non-Electric Power Tools – Safety Requirements and applicable State and Local Regulations.

## SAFETY LEGEND

	<p><b>! WARNING</b></p> <p>Read and understand tool manual before work starts to reduce risk of injury to operator, visitors, and tool.</p>	<p><b>! WARNING</b></p> <p>Practice safety requirements. Work alert, have proper attire, and do not operate tools under the influence of alcohol or drugs.</p>	
	<p><b>! WARNING</b></p> <p>Eye protection must be worn at all times, eye protection to conform to ANSI Z87.1.</p>	<p><b>! WARNING</b></p> <p>Ear protection to be worn when exposure to sound, exceeds the limits of applicable Federal, State or local statutes, ordinances and/or regulations.</p>	
	<p><b>! WARNING</b></p> <p>Respiratory protection to be used when exposed to contaminants that exceed the applicable threshold limit values required by law.</p>	<p><b>! WARNING</b></p> <p>Air line hazard, pressurized supply lines and flexible hoses can cause serious injury. Do not use damaged, frayed or deteriorated air hoses and fittings.</p>	

### ! WARNING

Some dust created by sanding, sawing, grinding, drilling, and other construction activities contain chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints
- Crystalline silica from bricks and cement and other masonry products
- Arsenic and chromium from chemically treated lumber

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

## SAFETY INSTRUCTIONS

Carefully Read all instructions before operating or servicing any Dynabrade® Abrasive Power Tool.

Products offered by Dynabrade are not to be modified, converted or otherwise altered from the original design without expressed written consent from Dynabrade, Inc.

**Tool Intent:** Pencil Filer is ideal for engraving, light deburring, deflashing, cleaning and finishing.

**Do not use tool for anything other than its intended applications.**

**Warning:** This power tool is not intended for use in potentially explosive atmospheres and is not insulated against contact with electrical power.

**Training:** Proper care, maintenance, and storage of your tool will maximize performance.

- Employer's Responsibility – Provide Pencil Filer operators with safety instructions and training for safe use of tools and accessories.

### Accessory Selection:

- Accessories should be used as intended, do not use files for chiseling.
- Before mounting an accessory, visually inspect for defects. Do not use defective accessories.

## **SAFETY INSTRUCTIONS (Continued)**

- Always match collet insert with accessory shaft size. i.e. 1/8" shaft = 1/8" collet insert
- Follow tool specifications before choosing size and type of accessory.
- **DO NOT** use worn or dull accessories.
- **DO NOT** cool off accessories in liquid(s).
- Tools and accessories may damage if they are used to pry at the work surface.
- **DO NOT** use any accessory (chisel, etc.) as a hand strike tool.
- Only use recommended fittings and air line sizes. Air supply hoses and air hose assemblies must have a minimum working pressure rating of 150 PSIG (10 Bars, g) 150 PSIG percent of the maximum pressure produced in the system, whichever is higher. (See tool Machine Specifications table.)
- **DO NOT** use quick disconnect coupling at tool, tool is supplied with a whip hose. Connect into air supply after whip hose.
- If a filer bit is broken, a careful investigation should be made by the user to determine and correct the cause.

## **OPERATING INSTRUCTIONS**

**Warning:** Always wear personal protection equipment. Operator of tool and adjacent personnel are responsible for following: accepted impact-resistant eye protection, face, respiratory, hearing, hand and body protection. When working overhead wear a safety helmet.

- Use hearing protection when working with materials that produce high process noise levels. Permanent hearing loss can result from high sound levels.

**Caution:** Hand, wrist and arm injury may result from repetitive work, motion and overexposure to vibration. Vibration level (m/s<sup>2</sup>): 8.03. Vibration level was established using ISO 8662-12 with a 7 gram file attached. Accessories with greater mass will increase vibration levels.

**Warning:** Holding the inserted tool with the free hand can be a source of vibration exposure or injury.

**Operation:** Be sure that any loose clothing, hair and all jewelry is properly restrained. Keep hand and clothing away from working end of the air tool.

- Before connecting tool to power supply, Turn air valve to off position by holding knurled sleeve where the hose and tool meet, then rotate the tool counter clockwise.
- Check the collet to assure it is in good condition. If so mount the recommended accessory. If collet or insert is worn or damaged replace before operating tool.
- **DO NOT** operate a tool if the accessory is not properly retained within the collet.
- To change accessory shut off Pencil Filer, relieve hose of air pressure then disconnect whip hose from air line coupler and replace accessory.
- Always use/replace collet after accessory changes. To avoid risk of injury due to reciprocating collet always operate tool with collet in place.
- Make sure tool is off and then connect power source. **Do not expose air tool to inlet pressure above 90 PSIG or (6.2 Bars).**
- Make sure that work area is uncluttered, and visitors are at a safe range from the tools and debris.
- Use a vise or clamping device to hold work piece firmly in place.
- **DO NOT** apply excessive force on tool or apply "rough" treatment to it.
- Always work with a firm footing, posture and proper lighting.
- Accessories and work surface(s) while operating may become hot/sharp, avoid contact.
- Ensure that sparks and debris resulting from work do not create a hazard.
- Air tools are not intended for use in explosive atmospheres and are not insulated for contact with electric power sources.

**Warning:** Debris from working certain materials may have the tendency to create a spark/ignition hazard, understand the properties and associated risk of the materials being worked.

- Tool is front exhaust. Tools exhaust may contain grease and other materials. Direct exhaust away from operator.
- Mineral spirits are recommended when cleaning the tool and parts. Do not clean tool or parts with any solvents or oils containing acids, esters, ketones, chlorinated hydrocarbons or nitro carbons.
- **DO NOT** set the tool down until the on/off valve is OFF and the tool has stopped moving.
- If power source is interrupted ensure tool is in OFF position before setting tool down.
- Before turning tool on, make sure accessory is against the work surface.
- If tool fails to start after air valve is turned on lightly tap tool's reciprocating end on a solid surface.

**Report to your supervisor any condition of the tool, accessories, or operation you consider unsafe.**

## **MAINTENANCE INSTRUCTIONS**

**Important:** To keep tool safe a Preventative Maintenance Program is recommended for this tool. The program should include inspection of air supply lines, air line pressure and repair of tools. Refer to ANSI B186.1 for additional maintenance information.

- Use only genuine Dynabrade replacement parts to insure quality. To order replacement parts, specify **Model#**, **Serial#** and **RPM** of your air tool.
- All Dynabrade Air Tools must be used with a Filter-Regulator to maintain all warranties.

### **Routine Preventative Maintenance:**

- An Air Line Filter-Regulator must be used with this air tool to maintain all warranties. Dynabrade recommends the following: **10679** Air Line Filter-Regulator – Provides accurate air pressure regulation, two-stage filtration of water contaminants.
- Add 1 drop daily after use directly to tool. Dynabrade recommends Dynabrade Air Lube (P/N **95842** 1pt. (473ml).
- **DO NOT** clean or lubricate tools with chemicals that have a low flash point (example: WD-40®).
- Air tool markings must be kept legible at all times. User is responsible for maintaining specification information i.e.: Model #, S/N, and RPM.
- Blow air supply hose out prior to initial use.

(continued on last page)

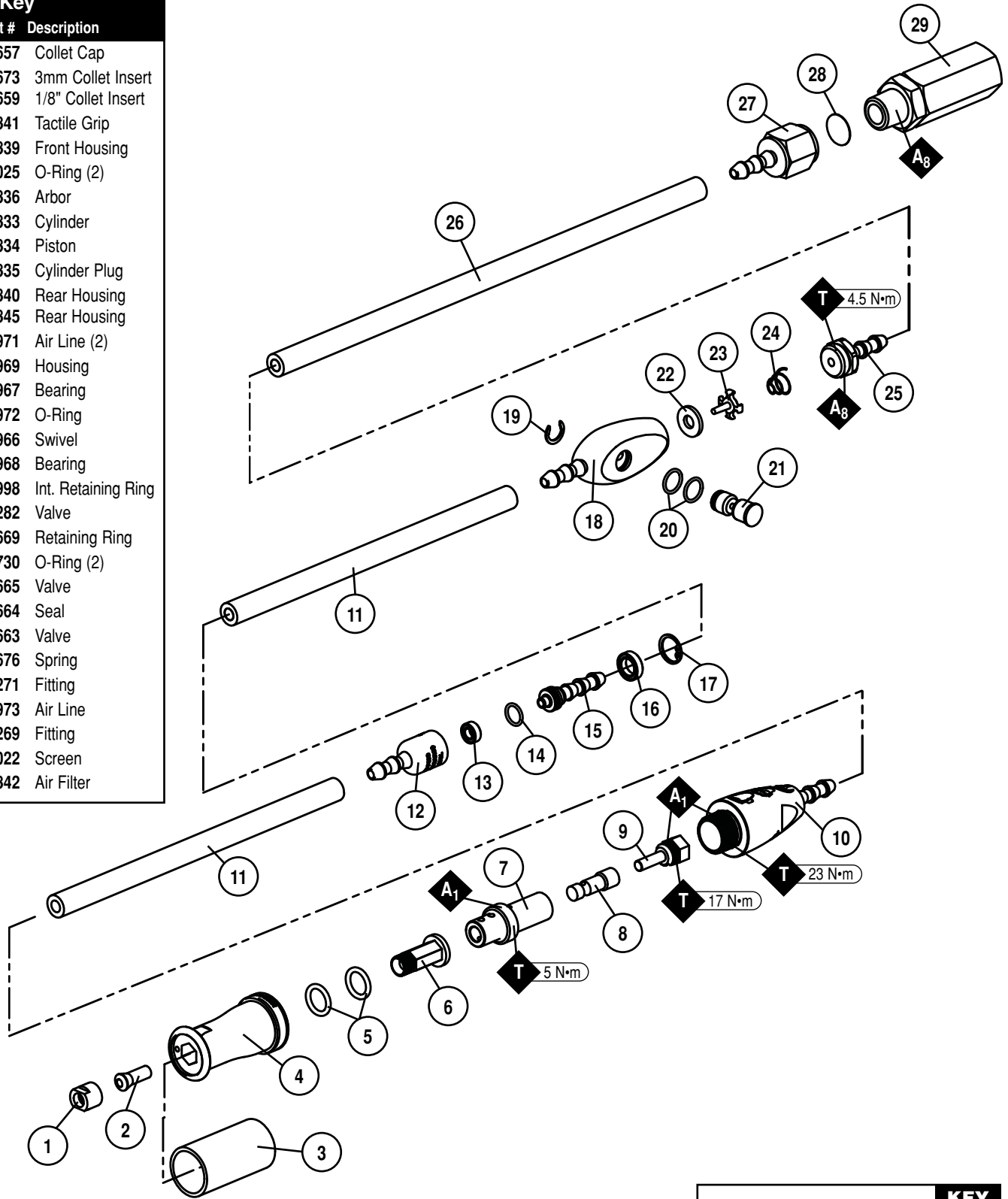
# Pencil Filer Complete Assembly

## Models:

10832, 10843, 10844

### Index Key

No.	Part #	Description
1	51657	Collet Cap
2	51673	3mm Collet Insert
	51659	1/8" Collet Insert
3	10841	Tactile Grip
4	10839	Front Housing
5	01025	O-Ring (2)
6	10836	Arbor
7	10833	Cylinder
8	10834	Piston
9	10835	Cylinder Plug
10	10840	Rear Housing
	10845	Rear Housing
11	10971	Air Line (2)
12	10969	Housing
13	10967	Bearing
14	10972	O-Ring
15	10966	Swivel
16	10968	Bearing
17	95998	Int. Retaining Ring
18	51282	Valve
19	51669	Retaining Ring
20	95730	O-Ring (2)
21	51665	Valve
22	51664	Seal
23	51663	Valve
24	51676	Spring
25	51271	Fitting
26	10973	Air Line
27	51269	Fitting
28	56022	Screen
29	10842	Air Filter



95731 8 mm Wrench

KEY	
<b>A</b>	Adhesive: A <sub>1</sub> = Loctite #242 A <sub>8</sub> = Loctite #567
<b>T</b>	Torque: N·m x 8.85 = In. - lbs.

## MAINTENANCE INSTRUCTIONS (Continued)

### Routine Preventative Maintenance:

- Visually inspect air hoses and fittings for frays, visible damage and signs of deterioration. Replace damaged or worn components.
- Refer to Dynabrade's Warning/Safety Operating Instructions Tag (Reorder No. **95903**) for safety information.

### Handling and Storage:

- Use of tool rests, hangers and/or balancers is recommended.
- Protect tool inlet from debris.
- Lubrication is not recommended during operation. Lubrication is ONLY recommended during storage. Add 1 drop of oil after operating tool then run tool for five seconds, tool is now ready for storage.
- DO NOT carry tool by air hose.
- Protect abrasive accessories from exposure to water, solvents, high humidity, freezing temperature and extreme temperature changes.
- Store accessories in protective racks or compartments to prevent damage.

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## Machine Specifications

Model Number	Tool CPM	Sound Level	Max. Air Flow SCFM (LPM)	Stroke Length	Air Pressure PSIG (Bars)	Collet Size	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
10382	14,000	82 dB(A)	1 (28)	.007"	90 (6.2)	3mm	.6 (.26)	3-1/8 (80)	15/16 (23)
10843/10844	14,000	82 dB(A)	1 (28)	.007"	90 (6.2)	1/8"	.6 (.26)	3-1/8 (80)	15/16 (23)

Additional Specifications: Air Inlet Thread 1/4" NPT • Hose Size 1/4" (6mm)

Sound Level is the pressure measurement according to the method outlined in ISO regulation ISO-15744

### Notice

All Dynabrade motors use the highest quality parts and materials available and are machined to exacting tolerances. The failure of quality pneumatic motors can most often be traced to an unclean air supply or the lack of lubrication. Air pressure easily forces dirt or water contained in the air supply into motor bearings causing early failure. It often scores the cylinder walls and the rotor blades resulting in limited efficiency and power. Our warranty obligation is contingent upon proper use of our tools and cannot apply to equipment which has been subjected to misuse such as unclean air, wet air or a lack of lubrication during the use of this tool.

### One Year Warranty

Following the reasonable assumption that any inherent defect which might prevail in a product will become apparent to the user within one year from the date of purchase, all equipment of our manufacture is warranted against defects in workmanship and materials under normal use and service. We shall repair or replace at our factory, any equipment or part thereof which shall, within one year after delivery to the original purchaser, indicate upon our examination to have been defective. Our obligation is contingent upon proper use of Dynabrade tools in accordance with factory recommendations, instructions and safety practices. It shall not apply to equipment which has been subject to misuse, negligence, accident or tampering in any way so as to affect its normal performance. Normally wearable parts such as bearings, contact wheels, rotor blades, etc., are not covered under this warranty.

### Reference Contact Information

- American National Standards Institute – ANSI**  
25 West 43<sup>rd</sup> Street  
Forth Floor  
New York, NY 10036  
Tel: 1 (212) 642-4900  
Fax: 1 (212) 398-0023
- Government Printing Office – GPO**  
Superintendent of Documents  
Attn. New Orders  
P.O. Box 371954  
Pittsburgh, PA 15250-7954  
Tel: 1 (202) 512-1803
- European Committee for Standardization**  
Rue de Stassart 36  
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# **Disassembly/Assembly Instructions – Pencil Filer**

**Important: Manufacturer's warranty is void if tool is disassembled before warranty expires.** Please refer to parts breakdown for part identification. Make sure parts have been cleaned and thoroughly inspected for damage prior to assembly.

**Important: Disconnect tool from power source before tool repair.**

*(All threads are right hand)*

## **Collet Disassembly & Assembly Instructions**

### **Disassembly**

1. Use **95731** 8mm Open-End Wrench to remove **51657** Collet Cap.
2. Remove **51673** or **51659** Collet Insert.

### **Assembly**

1. Place **51673** or **51659** in end of **10836** Arbor. It should be a very clean fit that does not stick. If it sticks thoroughly inspect, clean and polish as necessary.
2. Screw on **51657** Collet Cap.

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## **Front Housing Disassembly & Assembly Instructions**

### **Disassembly**

1. Remove collet and collet insert per Collet Disassembly/Assembly Instructions above.
2. Remove **10841** Tactile Grip by sliding it over the front of the tool.
3. Secure tool in vise using padded jaws by clamping onto wrench flats of **10840** Rear Housing so that **10839** Front Housing is facing up.
4. Use a HOT AIR GUN to apply heat to mating area of **10839** and **10840**.
5. Use a 5/8" open-end wrench to remove **10839** by turning it counter-clockwise.
6. Secure **10839** in vise using padded jaws so that it is facing down.
7. Use a HOT AIR GUN to apply heat to **10833** Cylinder.
8. Use a 3/8" open-end wrench to remove **10833** by turning **10835** by turning it counter-clockwise.
9. Push **10836** Arbor from housing, and then remove the o-rings from **10839**.
10. Secure **10833** in vise using padded jaws so that **10835** is facing up.
11. Use a HOT AIR GUN to apply heat to **10835**.
12. Use a 3/8" open-ended wrench to remove **10835** by turning it counter-clockwise.
13. Push **10834** Piston from cylinder.
14. Clean all parts thoroughly.

### **Assembly**

1. Secure **10833** Cylinder into vise using padded jaws or 10.5mm collet in collet holder, so that the internal threads are facing up.
2. Lightly lubricate **10834** Piston with Dynabrade Air Lube (P/N 95842) and place into **10833**.
3. Apply a small quantity of Loctite® #242 or equivalent onto external threads of **10835**.
4. Thread **10835** into **10833** fully.
5. Using a 3/8" socket and torque wrench set at (17N•m/150in-lbs.) secure the piston and cylinder plug in place.
6. Place **01025** O-Rings onto **10836** Arbor.
7. Lubricate o-rings with Dynabrade Air Lube (P/N 95842).
8. Place **10836** with o-rings into **10839** Front Housing.
9. Align the hex faces by slightly shaking **10839** until **10836** is fully seated.
10. Secure assembly in vise using padded jaws so that **10839** is facing down.
11. Apply a small quantity of Loctite® #242 or equivalent to the external threads of **10833**.
12. Thread **10833** into **10839** fully by hand.
13. Remove from vise and invert assembly so that **10839** is facing up.
14. Secure assembly in vise using padded jaws, by clamping onto **10833**.
15. Using a 5/8" crows foot and a torque wrench set at (5 N•m/44 in-lbs.) secure the front housing and cylinder in place.
16. Slide **10841** Tactile Grip over the front of **10839** until grip bottoms out against part.
17. Assemble collet and collet insert per Collet Disassembly/Assembly Instructions above.

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## **Rear Housing Disassembly & Assembly Instructions**

### **Disassembly**

1. Remove **10841** Tactile Grip by sliding it over the front of the tool
2. Secure tool in vise using padded jaws so that **10840** Rear Housing is facing up.
3. Use a HOT AIR GUN to apply heat to mating area of **10839** and **10840**.
4. Use a 5/8" Open-End Wrench to remove **10840** by turning it counter-clockwise.
5. Clean all parts thoroughly.

(Continued on Opposite Side)

# Disassembly/Assembly Instructions – Continued

## Rear Housing Disassembly & Assembly Instructions

### Assembly

1. Apply small quantity of Loctite® #242 or equivalent to external threads of **10840**.
  2. Thread **10840** Rear Housing onto **10839**, drawing the two assemblies together.
  3. Secure tool in vise using padded jaws by clamping onto wrench flats of **10840** Rear Housing so that **10839** Front Housing is facing up.
  4. Using a 5/8" crowfoot and torque wrench set at (23 N•m/200in-lb torque) secure the front and rear housing in place.
  5. Slide **10841** over the front of **10839** until grip bottoms out against part.
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## Hose Instructions:

### To repair or replace damaged hose:

1. Cut through hose approximately 1" back from end of hose using a sharp object, utility knife, razor blade, etc.
  2. Pull hose off, trim off damaged area or install replacement hose; use only Dynabrade Air Line P/N **10971** or **10973** where applicable.
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## Swivel Disassembly & Assembly Instructions

### Disassembly

1. Use **96343** Internal/External Retaining Ring pliers to remove **95998** Internal Retaining ring.
2. Remove **10966** Barb from **10969** Housing.
3. Remove **10972** O-ring from **10966**.

### Assembly

1. Slide **10972** O-ring onto o-ring groove of **10966**.
  2. Lubricate o-ring and install **10966** into **10969**.
  3. Use **96343** pliers to install **95998**.
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## Valve Disassembly & Assembly Instructions

### Disassembly

1. Unscrew **51271** Inlet Barb, remove **51676** Conical Spring, **51663** Tip Valve, and **51664** Valve Seat.
2. Remove **51669** Retaining Ring and withdraw **51665** On/Off Valve.
3. Remove **95730** O-Rings.

### Assembly

1. Install new **95730** O-Rings.
  2. Lubricate o-rings and install **51665** On/Off Valve in **51282** Valve Body.
  3. Install **51664** Valve Seat.
  4. Set **51665** Valve in the OFF position, (**51669** Retaining Ring against **51282** Valve Body) and load **51663** Tip Valve, and **51676** Conical Spring in **51282** Valve Body. The small end of the **51676** Conical Spring must engage the short boss on **51663** Tip Valve.
  5. Apply Thread Sealant to **51271** Inlet Barb and torque to 4.5 N•m (40 lb-in.).
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## Filter Disassembly & Assembly Instructions

### Disassembly

1. Cut through hose approximately 1" back from end of hose. Using a sharp object, utility knife, razor blade, etc.
2. Pull hose off.
3. Secure **10842** In-line Filter in vise with soft jaws.
4. Use a 5/8" open-end wrench to remove **51269** 1/4" NPT Push Lock by turning it counter-clockwise.
5. Push **56022** Inlet Screen from filter housing.

### Assembly

1. Place **56022** into the (internally) threaded opening of **51269**.
2. Thread **51269** onto **10842**.
3. Secure **10842** in vise with soft jaws.
4. Use 5/8" open-end wrench to tighten **51269** snugly. DO NOT OVER TIGHTEN.
5. Push **10973** Air Line firmly onto hose fitting beyond last barb or until hose bottoms out against part.

### Hose assembly complete.

Assembly of Pencil Filer is complete. Please allow 30 minutes for adhesives to cure before operating the tool. Connect the Pencil Filer to an air source and check tool for proper operation.

## Assembly/Disassembly Tools

5/8" Crowfoot Wrench • Torque Wrench • 3/8" Socket • 3/8" Open-End Wrench  
8mm Open-End Wrench P/N **95731** (Supplied with tool) • Ext./Int. Retaining Ring Pliers P/N **95731**