Models:

11400 - 3/8" NPT – Filter
11401 - 3/8" NPT – Regulator
11402 - 3/8" NPT – Filter-Regulator
11403 - 3/8" NPT – Lubricator
11404 - 3/8" NPT – Regulator-Lubricator
11405 - 3/8" NPT – Filter-Regulator-Lubricator
11406 - 1/2" NPT – Filter
11407 - 1/2" NPT – Regulator
11408 - 1/2" NPT – Filter-Regulator
11409 - 1/2" NPT – Lubricator
11410 - 1/2" NPT – Regulator-Lubricator
11411 - 1/2" NPT – Filter-Regulator-Lubricator

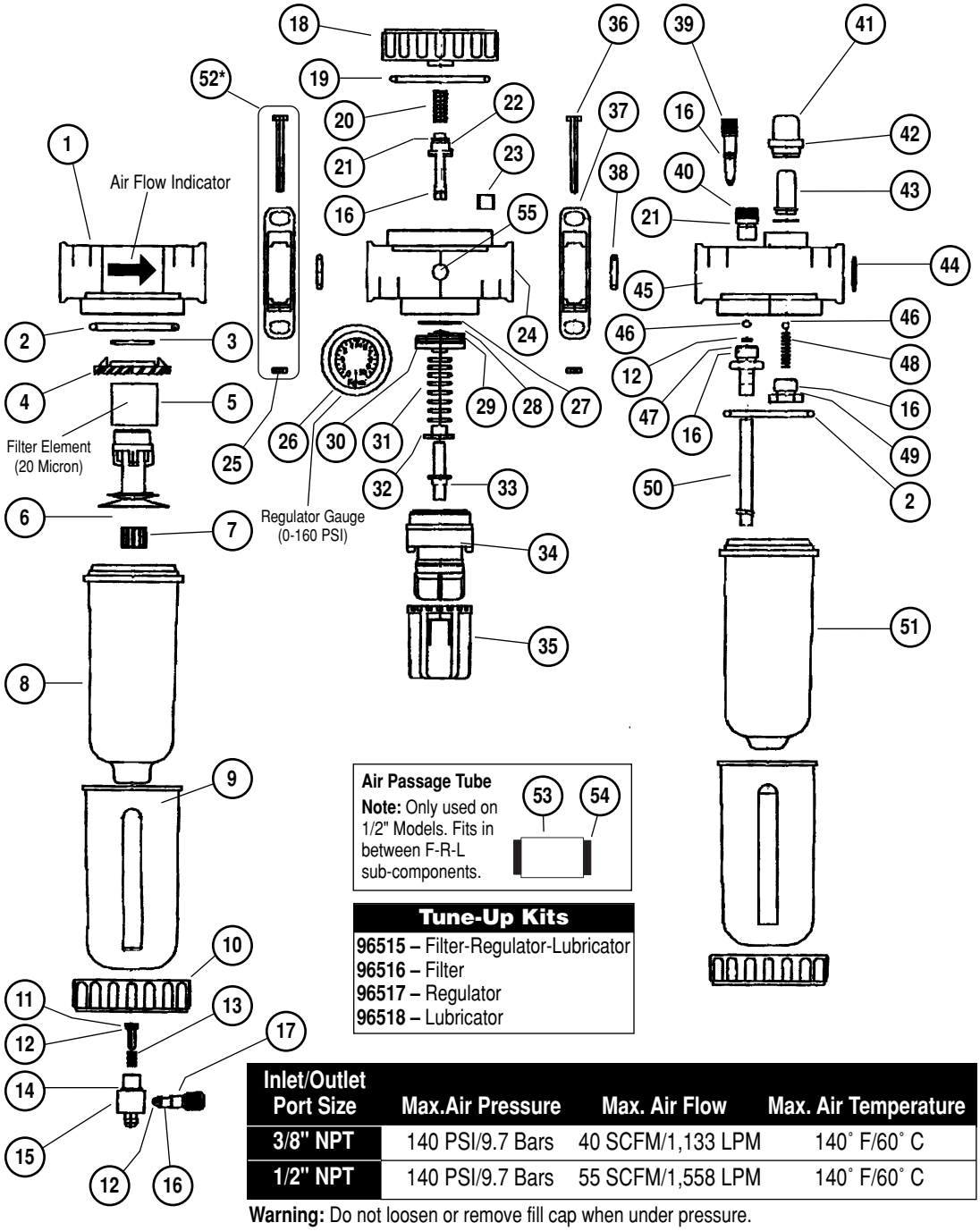
Parts Page Reorder No. PD04•09
Effective January, 2004
Supersedes PD00•72

Filter-Regulator-Lubricator

Machine Parts and Operating Instructions

⚠WARNING **Always operate, inspect and maintain this tool in accordance with the Safety Code for portable air tools (ANSI B186.1) and any other applicable safety codes and regulations. Please refer to Dynabrade's Warning/Safety Operating Instructions for more complete safety information.**

To reduce risk of injury, everyone using, installing, repairing, maintaining, changing accessories on, or working near this tool MUST read and understand these instructions before performing any such task. DO NOT DISCARD – GIVE TO USER.



Index Key

No.	Part #	Description
1	**98144**	Filter Body
2	**98151**	O-Ring
3	**98155**	O-Ring
4	**98154**	Interceptor
5	**98153**	Filter Element
6	**98152**	Bowl Baffle
7	**98163**	Nut
8	**98145**	Bowl
9	**98146**	Shatter Guard (2)
10	**98150**	Lock Ring (2)
11	**98162**	Piston
12	**98160**	O-Ring (3)
13	**98161**	Spring
14	**98157**	O-Ring
15	**98156**	Drain Body
16	**98159**	O-Ring
17	**98158**	Valve
18	**98178**	Cap
19	**98177**	O-Ring
20	**98176**	Spring
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28	**98168**	O-Ring
29	**98169**	V-Ring
30	**98167**	Piston
31	**98170**	Spring
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35	**98173**	Knob
36	**98193**	Screw (2)
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41	**98188**	Outside Cup
42	**98189**	O-Ring
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44	**98190**	Adjusting Ring
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46	**98183**	Ball (2)
47	**98184**	Plug
48	**98182**	Spring
49	**98181**	Nut
50	**98191**	Tube
51	**98180**	Bowl
52	**11412**	Bracket Assembly
53	**98244**	Air Passage Tube
54	**98245**	Seal (2)
55	**98197**	Nut

Air Passage Tube
Note: Only used on 1/2" Models. Fits in between F-R-L sub-components.

Tune-Up Kits

96515 – Filter-Regulator-Lubricator
96516 – Filter
96517 – Regulator
96518 – Lubricator

Inlet/Outlet Port Size	Max.Air Pressure	Max. Air Flow	Max. Air Temperature
3/8" NPT	140 PSI/9.7 Bars	40 SCFM/1,133 LPM	140˚ F/60˚ C
1/2" NPT	140 PSI/9.7 Bars	55 SCFM/1,558 LPM	140˚ F/60˚ C

Warning: Do not loosen or remove fill cap when under pressure.

***Note:** **11412** Modular Bracket Assembly includes **98194** Nut (2), **98193** Screw (2), and **98162** Joiner.

Important Operating, Maintenance and Safety Instructions

Carefully read all instructions before operating or servicing any Dynabrade® Accessories.

Installation Instructions

1. Close the air line system by turning off the air pressure in the area where the FRL unit will be installed.
2. Be sure to select a proper site for the FRL unit by locating the area of the air line system that is as close to the actual work area as possible. **Note:** This site should be free of direct sunlight, excessively high temperatures, and hazardous chemicals.
3. Using either 3/8" or 1/2" air fittings (refer to other side for proper model and air fitting sizes) mount the FRL unit in the air line system with the arrows on the unit pointed in the direction of the air flow within the air system.
4. Be sure that the filter discharge portion of the FRL has the arrow pointed in the downward position. **Note:** All water and other contaminants should be drained weekly (or when the maximum limit is reached) into a proper receptacle.
5. Fill the oil bowl with air tool oil. Please see the section below on lubrication.
6. Open the air line system and check for leaks around the FRL unit.

Standard Operating Instructions:

Filtration

1. Filtration of water and other contaminants in the air line system occurs automatically when compressed air passes through the filter portion of the FRL unit.
2. When the water level exceeds the maximum limit on the filter bowl, please drain the filter. This is done by turning the valve on the bottom of the filter to the “open” or “up” position.
3. **Note:** Be sure to close this valve after draining the FRL unit.

Regulation

1. Regulation of air pressure is controlled by the black knob found on the regulator portion of the FRL unit. The air pressure is measured by the gauge on the front.
2. Maximum operating air pressure is 140 PSI.
3. To increase the air pressure, pull the black knob out of the safety-lock and turn clockwise.
4. To decrease the air pressure, turn the black knob counterclockwise.
5. Once the proper air pressure is established, press the black knob back down into the safety-lock to keep it in place.

Lubrication

1. **Warning:** Do not loosen or remove fill cap when under pressure.
2. Lubrication is controlled by the needle valve on the top of the Lubricator portion of the FRL unit.
3. Turn the needle valve clockwise to decrease oil drop rate.
4. Turn the needle valve counterclockwise to increase oil drop rate.
5. The higher the air flow (SCFM) rate, the more the oil drop rate needs to be.
6. To add oil: Always turn off air pressure and discharge all air from the FRL unit. Lubrication is available without having to close the air line system.
7. Remove the fill plug by turning it counterclockwise.
8. Fill the bowl to the fill line with air tool oil. Use Dynabrade P/N **95842** Air Lube or equivalent air tool oil (10W/NR).
9. Replace the fill plug by turning in clockwise.

Maintenance Instructions:

1. Always turn off air pressure and discharge all air inside FRL unit before performing any maintenance procedures.
2. Remove the filter cover by loosening the lock ring in a counterclockwise motion on the filter portion of the FRL unit.
3. Remove the filter assembly. Check the amount of debris that may be collected on the filter cartridge itself. Clean the filter with soap and water. If the filter is damaged or contains heavy debris, it must be replaced. Refer to the parts breakdown for more information.
4. Clean the clear portion of the filter bowl with soap and water. **Warning:** Polycarbonate Bowl. Do not use any cleaning fluids that may be hazardous to plastic materials. Examples of incompatible chemicals are thinners, carbon tetrachloride, chloroform, kerosene, sulfuric and nitric acid.

Safety Instructions:

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

- **Important:** User of tool is responsible for following accepted safety codes such as those published by the American National Standards Institute (ANSI).
- Operate machine for one minute before application to workpiece to determine if machine is working properly and safely before work begins.
- Always disconnect power supply before changing abrasive/accessory or making machine adjustments.
- Inspect abrasives/accessories for damage or defects prior to installation on tools.
- Please refer to Dynabrade’s Warning/Safety Operating Instructions Tag (Reorder No. **95903**) for more complete safety information.
- **Warning:** Hand, wrist and arm injury may result from repetitive work, motion and overexposure to vibration.

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