Hand-Held Scarifiers

Needleguns

Walk-Behind Scarifiers

Impact Tools

Sanders

Specialty Tools

Industrial Vacuums

DescoScabbler

Heavy Duty Descaling Hammer

Single and Triple Piston Models

Pneumatic

DescoScabber Configurations

Part	Description
180.0470	Scabbler, 1-Piston, no dust collector
180.0473	Scabbler, 3-Piston, no dust collector
180.0474	Scabbler, 3-Piston, with dust collector

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CHAPTER 1 – General Information

1.1 Introduction

This publication describes the DescoScabbler hand held heavy duty descaling hammer. Topics covered in this manual include operator safety, proper operation, maintenance procedures, and troubleshooting.

1.2 Purpose and Function

The machine is a lightweight, portable, pneumatic-powered tool designed for the removal of heavy scale, paint, and corrosion from hard surfaces.

1.3 Specifications

Specification	Model	
	1-Piston	3-Piston
Stroke length	13/16"	13/16"
Length	9"	11"
Weight	4 lb. 8 oz.	8 lb. 5 oz.
Bore	7/8"	7/8"
Inlet	3/8"	3/8"
Blows per minute	4,000	5,200
Hose size, minimum	3/8" ID	3/8" ID
Air requirement	90 psi @ 9 cfm	90 psi @ 15 cfm

1.4 Preparation for Use

This machine is ready to use when received from the manufacturer, with the exception of attaching the whip assembly to the air fitting and air hose. See Chapter 3, paragraph 3.1 for instructions on filling lubricator with oil.

1.5 Consumables and Accessories

Part	Description
Consumables	
550.0146	Piston, standard steel
550.0147	Piston, standard steel, extra long (2" longer than standard length)
550.0149	Piston, carbide tipped, chisel point
550.0150	Piston, carbide tipped, star point
550.0151	Piston, Rexalloy, star point
550.0155	Piston, Rexalloy, chisel point
Accessories	
500.008	Whip assembly (Lubricator/Filter/Evaporator)
500.062	Replacement filter (replace every 30-45 days)
500.015	Oil bottle

CHAPTER 2 – Safety Precautions

WARNING Read and understand all instructions
Failure to follow all instructions listed below may result in damage to the tool and/or serious personal injury.

2.1 Read Operating Instructions

Always become familiar with all the instructions and warnings before operating any power tool.

2.2 Always Wear Approved Eye Protection

Impact resistant eye protection should meet or exceed the standards as set forth in the United States ANSI Z87.1, Occupational and Educational Eye and Face Protection. Look for the marking Z87.1 on your eye protection to insure that it is an approved style. For further information, ANSI Z87.1, Occupational and Educational Eye and Face Protection, is available from the American National Standards Institute, Inc., 11 West 42nd Street, New York, NY 10036.

2.3 Hearing Protection is Recommended

Hearing protection should be used when the noise level exposure equals or exceeds an 8 hour time-weighted average sound level of 85dBA. Process noise, reflective surfaces, other tools being operated nearby, all add to the noise level present in your work area. If you are unable to determine your noise level exposure, we recommend the use of hearing protection.

2.4 Avoid Prolonged Exposure to Vibration

Pneumatic tools can vibrate during use. Prolonged exposure to vibration or very repetitive hand and arm movements, can cause injury. Stop using any tool if discomfort, tingling feeling or pain occurs. You should consult your physician before resuming use of the tool.

2.5 90 PSI Maximum

This tool is designed to operate at an air pressure of 90 pounds per square inch gauge pressure (90 PSI) maximum, at the tool. Use of higher air pressure can, and may cause injury. Also, the use of higher air pressure places the internal components under loads and stresses they were not designed for, causing premature tool failure. The air supply should be clean and dry, preferably lubricated. For best results, drain the moisture from your compressor daily.

2.6 Work Area

1. **Keep work area clean and well lit**. Cluttered benches and dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres**, such as in the presence of flammable liquids, gasses, or dust. Power tools create sparks which may ignite dust or fumes.
3. **Keep bystanders away** while operating a power tool.

2.7 Personal Safety

1. **Stay alert**, watch what you are doing and use common sense when operating a power tool. Do not operate tool when tired or substance impaired.
2. **Dress properly.** Do not wear loose clothing or jewelry. Contain long hair. Keep hair, clothing and hands away from moving parts.
3. **Use safety equipment**. Always wear eye protection. Other precautions may be required depending on the situation. These include: ear protection (ear plugs) vibration protection (gloves), steel toe shoes or hard hats.
4. **Avoid accidental starting**. Be sure the switch is off before attaching to power source.
5. **Do not overreach**. Keep proper footing and balance at all times.

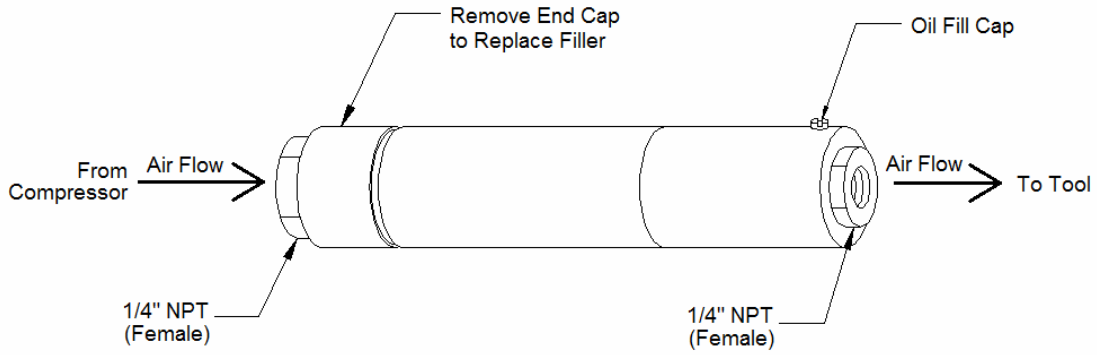
2.8 Tool Use and Care

1. **Secure the work.** Use clamps or other securing method to firmly hold work to a stable platform. Do not attempt to hold work in one hand and operate the tool with the other hand.
2. **Do not force tool.** Apply light hold down pressure and let the tool do the work. Use the correct tool for your application.
3. **Do not tape trigger closed** to fashion a trigger lock. If you drop or otherwise loose control of the tool, it will continue to run and may cause dangerous results.
4. **Disconnect from power source before making adjustments** or changing accessories. Failure to disconnect may result in injury if the tool were to accidentally start while adjusting.
5. **Store tools out of reach of untrained persons.** Tools are dangerous in the hands of untrained users.
6. **Maintain tools with care**. Keep cutting tools sharp and clean. Properly maintained tools, with sharp cutting edges are less likely to bind and are easier to control.
7. **Check for misaligned or binding of moving parts**, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.

CHAPTER 3 – Operating Instructions

3.1 Pre-Operation

- ***Air Supply*** – Setup all things needed to supply clean, dry compressed air to the tool at your job site at the required pressure (90psi) and volume (9cfm [1-piston] or 15cfm [3-pistons]). This includes: fittings, a hose and a filter/lubricator. A 50′, ½" ID hose is recommended as well as large body fittings to allow maximum air flow. Inspect hoses and fittings before each use.
- ***Vacuum*** – Optional for dust collection. When used, connect vacuum to power source and connect vacuum hose to tool.
- ***Safety*** – You have considered the job site environment and implemented safety precautions that are situation appropriate.
- ***Lubricator*** – Remove oil fill cap and place ½ oz of light machine oil (ISO VG32 or equal lubricating oil) in the lubricator. Use plastic oil bottle, hold firmly against opening and squeeze. The ball check valve prevents oil from flowing out the fill hole. Top off oil in lubricator at 8 hour intervals.
  Note: If loss of air pressure occurs, the filter in lubricator may need to be replaced. Stop machine, shut off air supply, and disconnect hose from machine. To replace filter, simply remove end cap, remove old filter, insert new filter, and replace cap as shown previously in Figure 2-1.



- **Inspection and replacement**

Part	Inspection	Replacement
Pistons	Daily	Replace when worn or broken.
Hoses & fittings	Daily	If leaks are discovered, hose should be replaced. If leaks are around fittings, hose may be repairable.

3.2 Operation

When setup steps are complete, you are ready to operate the tool. The following are step-by-step procedures for operating the DescoScabbler hand-held scaler.

3.2.1 Power On/Off

Power is controlled with a throttle lever.

- To start – squeeze the lever.
- To stop – release the lever.

When dust control is employed, the *power on/off sequence* is **critical** to effective dust containment.

- To start – a) start vacuum, b) start tool.
- To stop – a) stop tool, b) stop vacuum.

3.2.2 Starting the Tool

- ***Grasp Firmly*** – with both hands.
- ***Position*** – tool on surface at the work location.
- ***Power On*** – Start the tool using the above power on sequence.

3.3.3 Working the Surface

Move tool in a system of grid patterns. Complete one grid before moving to the next. Cut a swath, move to the right and repeat. Use a stroke length that is convenient to the surface and your arm length.

3.3 Post-Operation and Stowage

Disconnect whip assembly from machine and place 5-8 drops of light machine oil (ISO VG32 or equal lubricating oil) in air inlet. Reconnect whip assembly to air inlet and run motor for 2-3 seconds (just long enough for oil to get into motor, but not pass through) to flush the system.

Wipe off all dust and dirt with a dry rag.

Remove, coil, and secure air hose with a piece of string or wire.

CHAPTER 4 – Maintenance Instructions

4.1 Cleaning and Lubrication

Clean the DescoScabbler after each use by wiping off all dust and dirt with a clean, dry cloth.

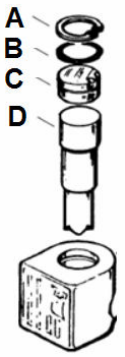
Lubrication

- An in-line lubricator such as the Desco whip assembly (pn 500.008) is the recommended lubrication method.
- If an automatic lubricator is not used, manually lubricate the DescoScabbler after every 2-3 hours of operation. Do so by placing 3-4 drops of pneumatic tool oil into the air fitting. Re-attach an air hose and run tool for a few seconds to disburse the oil.

4.2 Removal and Replacement of Pistons

WARNING – Always disconnect tool from power supply before performing any maintenance or inspection operation.

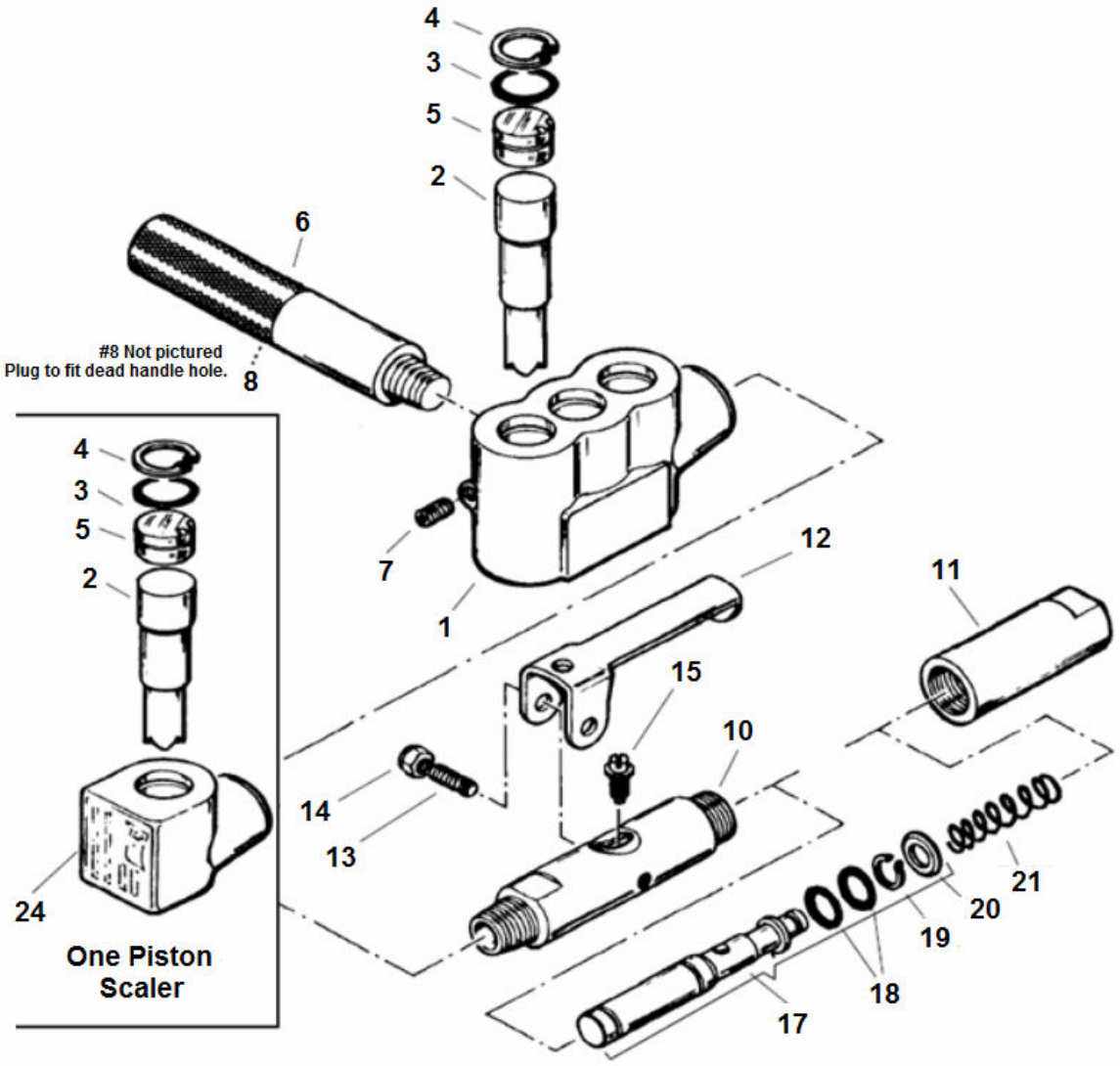
1. Remove retainer ring (A).
2. Remove ring seal (B).
3. Remove nylon plug (C).
4. Remove piston (D).
5. Reverse the procedure to re-assemble.



CHAPTER 5 – Troubleshooting

Malfunction	Probable Cause	Solution
Loss of air pressure	Filter clogged Faulty air supply	Replace filter. Check compressor, hoses and fittings for proper size.
Sluggish or erratic performance.	Pistons not lubricated Pistons dragging due to dirt or too heavy oil or too much oil	Lubricate by placing 3-4 drops of pneumatic tool oil in the air fitting. Run tool for a few seconds to disburse oil. Flush pistons by pouring 2 teaspoons of kerosene, varsol or similar solvent into air fitting. Run the tool for a few seconds to clear debris. Re-lubricate with oil before putting back into service.
Oil leaking	Ring seals worn out	Replace ring seals

CHAPTER 6 – Schematic



Ref	Part	Description
1	550.0143	Body (T3)
2	550.0146	Piston, standard steel
-	550.0147	Piston, standard steel, long (2" longer)
-	550.0149	Piston, carbide tipped, chisel point
-	550.0150	Piston, carbide tipped, star point
-	550.0151	Piston, Rexalloy, star point
-	550.0155	Piston, Rexalloy, chisel point
3	550.0152	Ring seal for plug
4	550.0153	Retainer ring for plug
5	550.0154	Nylon plug
6	550.0156	Handle, dead (T3)
7	550.0157	Pipe plug for body (T3)
8	550.0158	Pipe plug, ½", handle hole (not pictured)

Ref	Part	Description
9	550.0159	Snap handle complete (not pictured)
10	550.0160	Snap handle body
11	550.0161	Snap handle body end (S1 & T3)
12	550.0162	Throttle lever
13	550.0163	Pivot screw
14	550.0164	Pivot screw nut
15	550.0165	Operating stud
17	550.0167	Snap handle valve assembly
18	550.0168	Ring seal for valve
19	550.0169	Valve ring seal
20	550.0170	Nylon washer
21	550.0171	Valve spring
24	550.0174	Body (S1)