Hand-Held Scarifiers

Needleguns

Walk-Behind Scarifiers

Impact Tools

Sanders

Specialty Tools

Industrial Vacuums

Chipping Hammer

Pneumatic

180.045

180.046

180.042

Configurations

Part	Description
180.045	Chipping Hammer with Flat Dust Collector
180.046	Chipping Hammer with 45degree Dust Collector
180.042	Chipping Hammer without Dust Collector

Note: All models come with a 1" wide chisel bit and a whip assembly with a swivel fitting. (Not shown.)

DESCO Mfg. Co., Inc.
23031 Arroyo Vista • Rancho Santa Margarita, CA 92688
949.858.7400 • 949.858.9141 fax • 800.337.2648 toll free
www.descomfg.com • info@descomfg.com

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Chapter 1 – General Information

1.1 Introduction

This publication describes the Desco Chipping Hammer. Topics covered in this manual include operator safety, proper operation, maintenance procedures and troubleshooting. These instructions are prepared to help you obtain maximum performance and maintain the tool for maximum service life.

1.2 Purpose and Function

The machine is a portable, hand held, pneumatic powered tool designed for cleaning hard surfaces of unwanted material. The principal of operation is to strike a surface with a chisel at a high rate of speed to fracture surface material.

1.3 Capabilities and Main Applications

Chipping hammers excel at fracturing thick, hard material. As a result, the chipping hammer is principally used to remove concrete or thick scale from steel. In addition, chipping hammers are often used where needleguns failed to be effective because needleguns do not have enough power to break through the harder and thicker materal. For this reason, chipping hammer applications can be thought of as the work of an ultra heavy duty needlegun. For example:

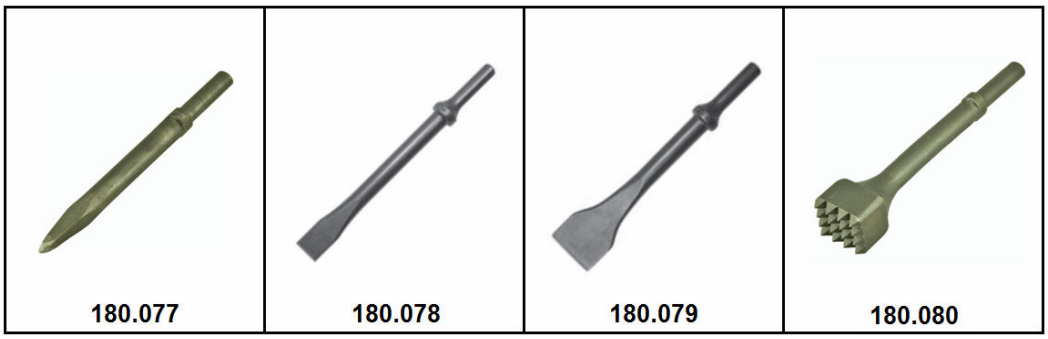
- Removing concrete
- Removing thick scale from steel
- De-slagging welds

1.4 Technical Specifications

Item	Value
Air required	90 psi @ 30 cfm
Air inlet	1/4" NPT
Air hose size	3/8" I.D. min.
Stroke length	3"
Blows per minute	2,100 BPM
Vibration level	14.7 m/s2
Noise level	109 dBA
Overall length	15-1/4"
Weight	18 lbs.

1.5 Consumables and Accessories

Part	Description
180.077	Chisel, pointed
180.078	Chisel, blade, 1" wide
180.079	Chisel, blade, 2" wide
180.080	Bush maul
180.155	Whip assy, 3', w/swivel fitting
180.043	Dust collector, flat style
180.044	Dust collector, 45 degree style



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 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 Idle Running

Idle operation will shorten the life of the tool and should be avoided.

2.7 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.

2.8 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.

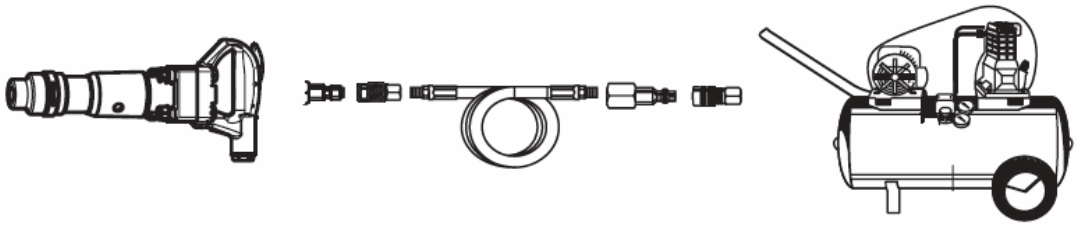
2.9 Tool Use and Care

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. Regularly check for broken or worn needles and replace as needed.
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

- ***Safety*** – You have considered the job site environment and implemented safety precautions that are situation appropriate.
- ***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 (30cfm). This includes: fittings, a hose and a filter/lubricator (optional). 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*** – When using a dust collector, connect the vacuum hose to the tool.
- ***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 (included in kit), 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 3-1.

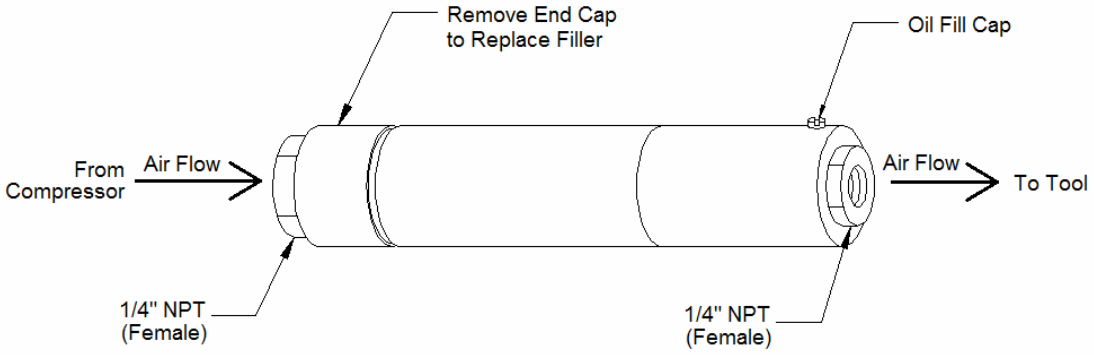


Figure 3-1 – Filter-lubricator

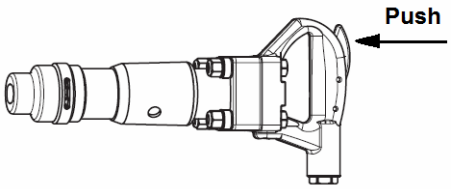
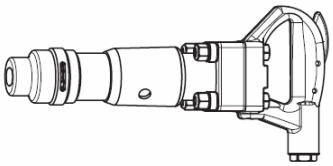
3.2 Operation

When setup steps are complete, you are ready to operate the tool. The following are step-by-step procedures for operating the chipping hammer.

3.2.1 Power On/Off

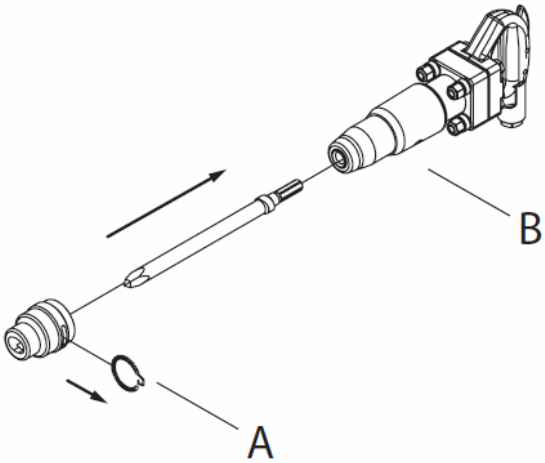
Power is controlled with a throttle leaver. To operate, push the throttle lever. To stop, release the lever.

The *power on/off sequence* is **critical** to effective dust containment.

Sequence	First Action	Second Action
On	Vacuum **On** 	Tool **On** 
Off	Tool **Off** 	Vacuum **Off** 

3.2.2 Installing the Chisel

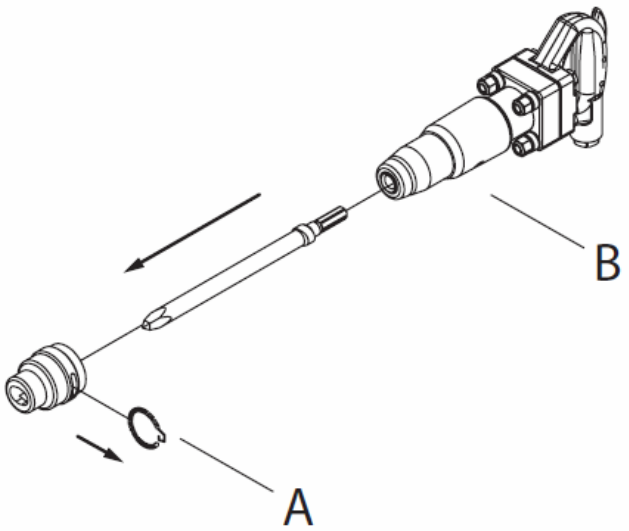
WARNING: Disconnect the tool from the air supply before servicing or changing accessories.



- To insert the chisel, press the loop on the retainer spring (A) to the side and push the chisel into the cylinder of the air hammer (B). Release the loop.
- Ensure the chisel is properly held by the retainer spring before use.

3.2.3 Removing the Chisel

WARNING: Disconnect the tool from the air supply before servicing or changing accessories.

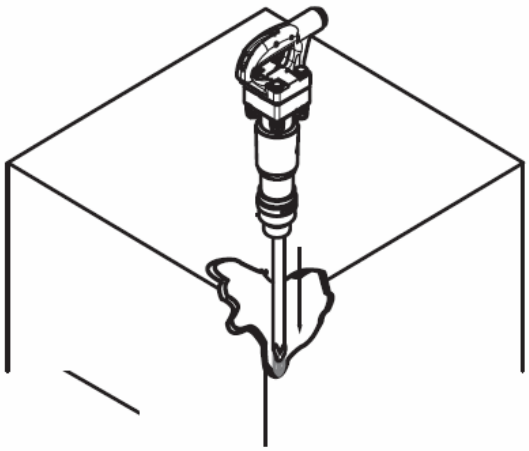


- Rotate the spring counterclockwise to remove the retainer spring (A).
- Pull the chisel out of the air hammer (B).

3.2.4 Operating the Chipping Hammer

Warning:

- Never operate the air hammer without the chisel retainer correctly fitted.
- Never operate the air hammer unless the chisel is first placed on the work area.
- Operating the air hammer without the chisel retainer fitted and/or operating the air hammer off the work area can lead to serious injury or death.



- Place the cutting edge of the chisel against the work piece and then press the trigger.

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

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

4.1 Cleaning

Clean the exterior of the chipping hammer after each use by wiping off all dust and dirt with a clean, dry cloth.

4.2 Lubrication

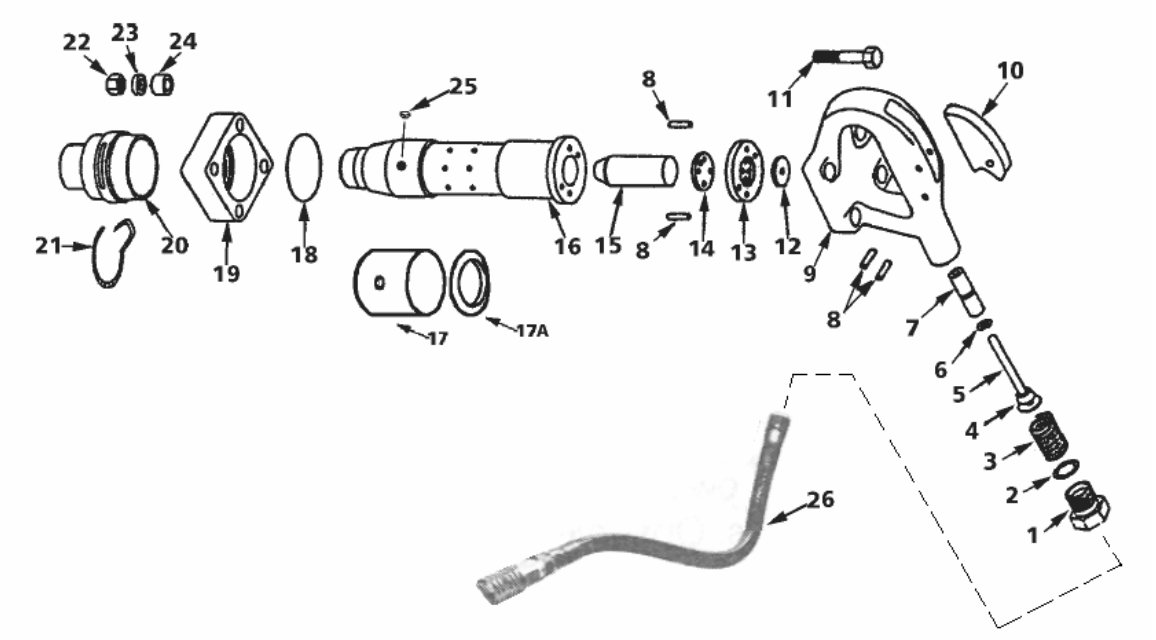
Every 8 hours of operation the following lubrication maintenance procedure should be performed.

- When using an in-line lubricator – Check the oil level. Refill as required.
- When not using an in-line lubricator – Lubricate the tool airway by placing 3-4 drops of pneumatic tool in the air fitting. Re-attach an air hose and run the tool for a few seconds to disburse the oil.

CHAPTER 5 – Troubleshooting

Symptom	Probable Cause	Solution
The tool runs slowly or will not operate.	There is grit or gum in the tool.	Flush the tool with air tool oil or gum solvent.
	The tool is out of oil.	Lubricate the tool according to the lubrication instructions in this manual.
	The air pressure is low.	• Adjust the regulator on the tool to the maximum setting. • Adjust the compressor regulator to the tool's maximum setting of 90 psi.
	The air hose leaks.	Tighten and seal the hose fittings with pipe thread tape if leaks are found.
	The air pressure drops.	• Ensure the hose is the proper size. Long hoses or tools using large volumes of air may require a hose with an I.D. of ½" or larger depending on the total length of the hose. • Do not use a multiple number of hoses connected together with a quick connect fitting. This causes additional pressure drops and reduces the tool power. Directly connect the hoses together.
	There is a worn rotor blade in the motor.	Replace the rotor blade.
	There is a worn ball bearing in the motor.	Remove and inspect the bearing for rust, dirt, and grit. Replace or clean and grease the bearing with bearing grease.
There is moisture blowing out of the tool's exhaust.	There is water in the compressor tank.	Drain the compressor tank. (See the air compressor manual for instructions.) Lubricate the tool and run it until water is not evident. Lubricate the tool again and run for 1-2 seconds.

CHAPTER 6 – Schematic



Ref	Part	Description
1	106070	Inlet bushing (3/8")
-	UTA85820	Inlet bushing (7/8"-24)
2	115180	Inlet O-ring
3	118080	Spring
4	120190	Throttle valve
5	120390	Throttle valve pin
6	115290	T/V O-ring
7	120010	Throttle bushing
8	111180	Trigger pins (2)
-	111180	Valve pins (2)
9	260020	*Handle
10	120400	Trigger
11	117260	Flange bolts (4)
12	121040	Disc valve
13	121050	Seat valve
14	121060	Valve bumper

(*) Handle includes (1) 120010 and (1) 111180

Ref	Part	Description
15	112070	3" Piston
16	101330R	3" Cylinder (Rnd. Bush.)
--	101330H	3" Cylinder (Hex Bush.)
17	108130	Exhaust deflector (UT8653)
17A	108140	Exhaust deflector ring
18	121070	Absorbing ring
19	108100	Flange
20	9729583-A	Retainer
21	9729584	Retainer spring
22	117410	Nyloc nut (4)
23	117280	Washer (4)
24	117270	Spacer (4)
25	117385	1/16" Plug
26	180.155	Whip assy, chipping hmr.
--	180.078	Chisel, 1" (not shown)