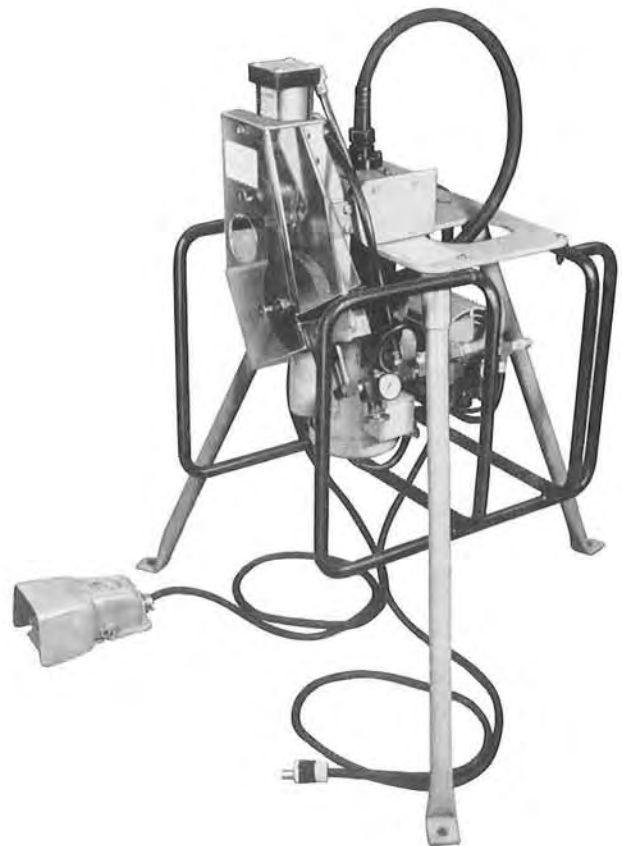




PCT II  
OPERATING MANUAL AND  
MAINTENANCE INSTRUCTIONS

## OPERATING MANUAL AND MAINTENANCE INSTRUCTIONS

### PIPE CLEANING TOOL PCT II



### **CAUTION**

For Your Own Safety Before Assembling and Operating This Unit, Read This Operator's Manual Carefully and Completely. Learn The Operation, Applications and Potential Hazards Peculiar To This Unit.

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## OPERATOR SAFETY INSTRUCTIONS

**This tool is designed only for cleaning plain end steel pipe to receive Victaulic FIT products. To accomplish this function requires some dexterity and mechanical skills, as well as sound safety habits.**

**Although this tool is manufactured for safe dependable operation, it is impossible to anticipate those combination of circumstances which could result in an accident. The following instructions are recommended for safe operation of the tool.**

**The operator is cautioned to always practice "Safety First" during each phase of use, including setup and maintenance of this unit.**

1. *Read and understand the tool Operating Instructions Manual* before operating or performing maintenance on this tool. Become familiar with the tool applications and limitations. Be particularly aware of its specific hazards. Store the operator's manual in a clean and readily available location.
2. *Inspect the equipment.* Before starting the tool check the movable parts for any obstructions. Be certain that guards and tool parts are properly installed and secured.
3. For safety, this machine is equipped with a power cord having a three prong plug for use on internally grounded electrical systems. If electrical system is not grounded, *ground machine in accordance with Article 250 of the National Electrical Code.*
4. A safety foot switch is supplied with the machine and must be used to apply power to start and stop the machine. *The foot switch must be used to assure safe tool operation. Do not operate in areas where switch is apt to stand in water.*
5. *Secure work, machine and accessories.* Make sure machine is stable.

### INTRODUCTION

The Victaulic Pipe Cleaning Tool PCT II is designed for cleaning 1" through 2" Schedule 10-Schedule 40, steel pipe, at temperatures from +32°F through +104°F. (For other requirements, consult Victaulic.)

The PCT II is a motorized, fully automatic electropneumatic tool designed to clean, deburr and mark 1" through 2", Schedule 10 to Schedule 40 steel pipe. Included are deburring pipe inside and outside edges, removing pipe outside coating where the FIT gasket will seat, and marking the pipe O.D. 1½" from the end.

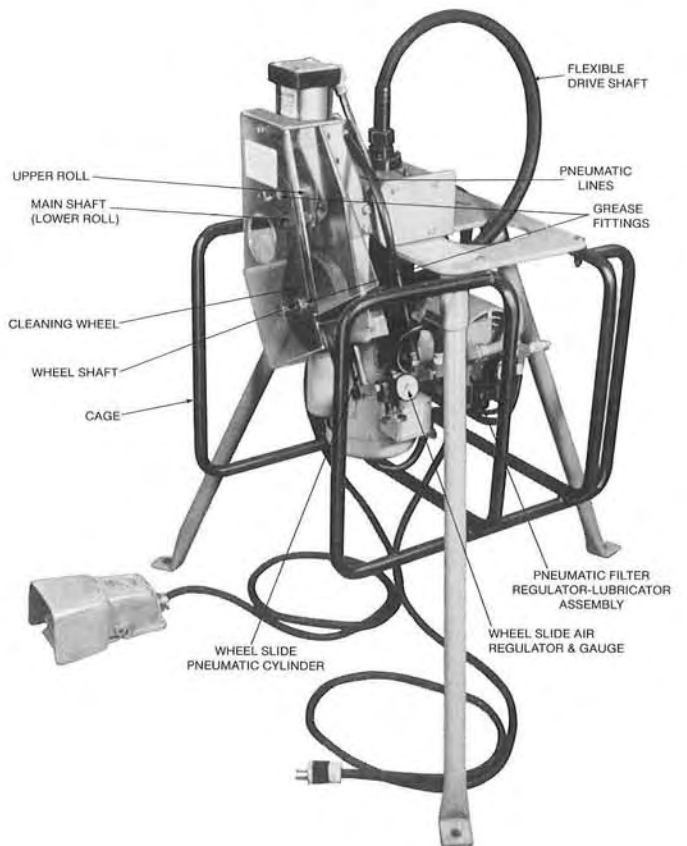
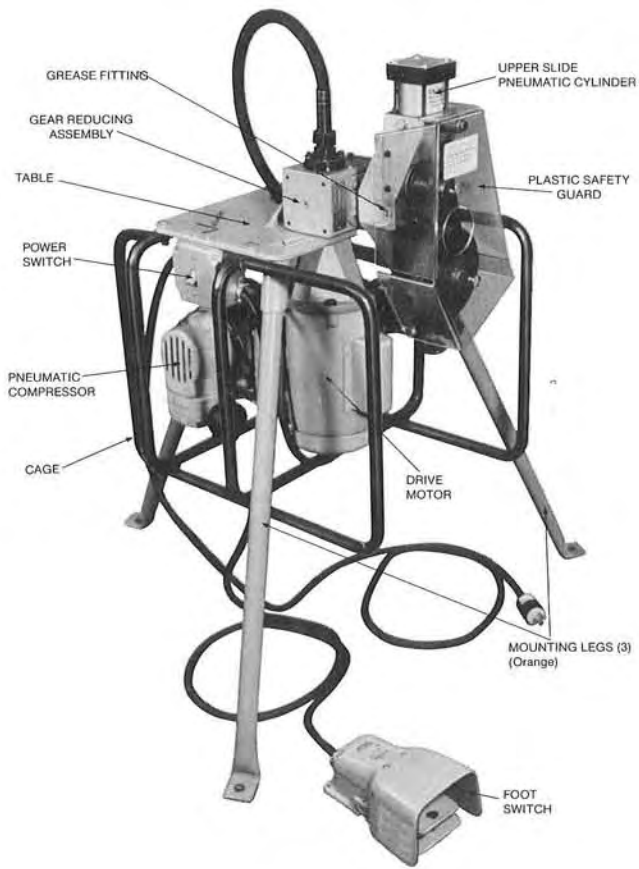
6. Support long pipe with a secure pipe support.
7. *Do not misuse tool.* Perform only the functions for which the tool is designed. Do not overload the tool.
8. *Disconnect power cord prior to servicing.* Repairs should only be performed by authorized personnel.
9. *Use recommended accessories.* Consult the operator's manual. Use of improper accessories may be hazardous.
10. *Maintain machine in top condition.* Keep machine clean for best and safest performance. Follow lubricating instructions.
11. *Keep guards in place* and in working order.
12. *Don't force machine.* It will do the job better and be safer at the rate for which it was designed.
13. *Wear proper apparel.* No loose clothing (unbuttoned jackets or loose sleeve cuffs) or jewelry which may get caught in moving parts.
14. *Don't over-reach.* Keep your proper footing and balance at all times. Be sure you can reach foot switch safely at all times. Do not reach across machine or pipe. Keep hands and loose tools away from moving elements.
15. *Use approved type safety glasses, footwear and particle mask.*
16. *Avoid dangerous environment.* Don't use the machine in damp or wet locations. Keep work area well illuminated. Allow sufficient space to operate machine and accessories properly.
17. *Keep work area clean.*
18. *Wear ear protection if exposed to long periods of very noisy shop operations.*
19. *All visitors should be kept a safe distance from work area.*

Cleaning the pipe too far ahead of installation may lead to rusting or may contaminate the cleaned ends and necessitate recleaning.

### POWER REQUIREMENTS

The PCT II tool is designed to operate on 115 volt, single phase 60 Hertz supply. The tool is equipped with a power cord having a three pronged plug for use on internally grounded electrical systems. This should be connected to a circuit with a minimum 15 amp and maximum 20 amp fuse. Power is applied through a safety foot pedal switch which must be used to assure safe operation. Be certain tool is properly grounded in accordance with Article 250 of the National Electrical Code. If using an extension cord, see Extension Cord Requirements.

# TOOL NOMENCLATURE



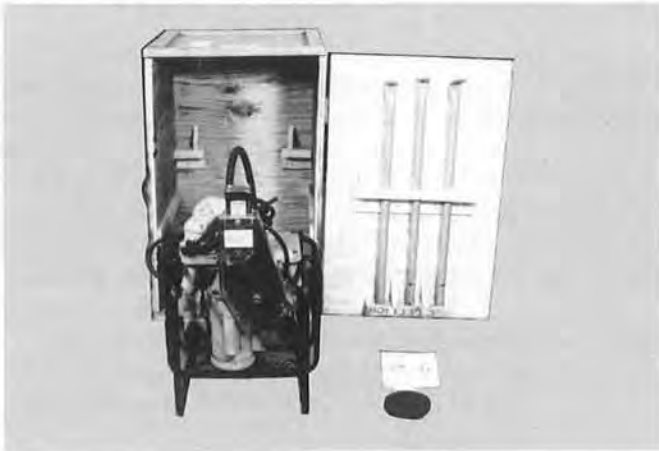
## SECTION I — RECEIVING TOOL

The PCT II tool is skid mounted and carefully crated in a wooden chest. Remove top and side walls from the crate.

Crate should contain:

1. Tool Assembly
2. 3 Mounting Legs (Orange)
3. 1 Extra Cleaning Wheel
4. 2 Operating Manuals

Upon receipt of tool, check to be certain all necessary parts are included. Should chest not contain appropriate components, notify your Victaulic representative.



## SECTION II — TOOL SETUP

**DO NOT CONNECT POWER UNTIL TOOL SETUP IS COMPLETE.**

**Step 1.** Remove all the components and check to be sure all necessary items are included. See list above.



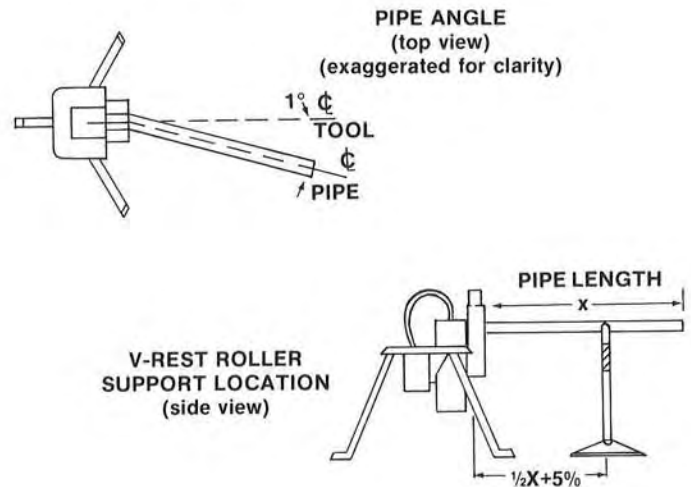
**Step 2.** Insert the three orange mounting legs into the sockets and tighten the hex bolts. Make sure the rubber pads on the feet face downward prior to securing the hex bolts.

**Step 3.** Locate the tool on a level surface and make sure the tool is stable and secure. Locate the foot switch for convenient operation.

## PIPE SUPPORT

If pipe is in excess of 3 foot long, it is recommended that a roller type pipe support be used. The pipe support should be placed at a distance slightly beyond one half the pipe length from the tool.

In order to "track" the pipe properly during tool operation, it is necessary to position the pipe support slightly to the left of the tool centerline when viewing the tool from the front. 1° is all that should be required.



The height of the stand **must** be adjusted so that the pipe will be level when the pipe end is resting on the tool's lower roll.

Position the foot switch in the vicinity of the tool's front left leg where the operator can easily and safely operate it.

Plug the tool into an electrical circuit meeting the requirements described under power requirements.

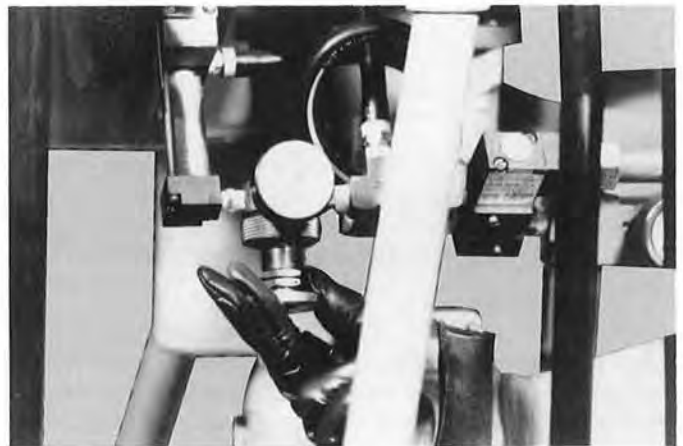
Tool setup is now complete.

## SECTION III PRE-OPERATION ADJUSTMENTS

The wheel slide air regulator may require adjustment. Proceed as follows:

**Step 1.** Turn tool on.

**Step 2.** Insert pipe to be cleaned into tool as detailed under tool operation.



**Step 3.** Loosen lock nut. Reduce wheel slide regulator pressure by turning knob counter-clockwise 1½ turn.

**Step 4.** Engage foot switch **with pipe in position.**



**Step 5.** Adjust regulator pressure slowly so that the cleaning wheel moves up and contacts the pipe lightly without putting undue load on the motor. Excessive pressure will stall the motor, cause the wheel to slip on wheel shaft, create excessive wheel wear or overheat the motor. Too little pressure will cause sluggish slide movement and increase cleaning time. The normal pressure setting will be between 20 and 35 psi. If higher pressures are required, see trouble shooting, "Cleaning wheel will not contact pipe."

## SECTION IV — TOOL OPERATION

The PCT II is designed to clean and deburr pipe for FIT use. One of the functions involved is the removal of burrs and sharp edges at the pipe O.D. In order for the tool to accomplish this, the pipe end must be free of large burrs which are occasionally present on sheared, abrasive, or saw-cut pipe. These burrs must be removed prior to using the tool.

### PIPE PREPARATION

For satisfactory Tool operation the following pipe preparation tips should be carefully observed:

1. Pipe ends must be "square cut".
2. Any internal or external weld bead or seams must be ground flush with the pipe surface extending 2" back from the pipe end.

IF ROLLS ARE DAMAGED BY NEGLECT OF THIS INSTRUCTION, THE USER WILL BE RESPONSIBLE FOR REPLACEMENT OF DAMAGED PARTS.

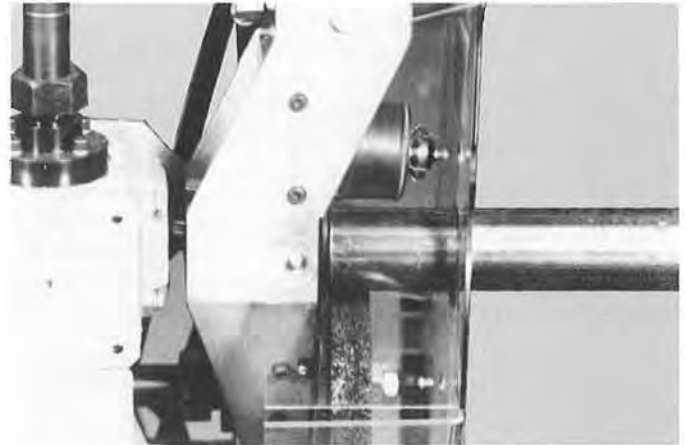
**NOTE:** Victaulic PCT II tools are designed to operate on pipe ends cut using equipment in reasonable working order. Dull wheel cutters, flame cuts, etc., will hinder proper operation and possibly damage the tool.



**Step 1.** Turn the power switch on. You will hear the tool compressor come on. The compressor will run continuously while the switch is in the ON position. Before operating the

foot switch, allow the tool to run for at least 10 seconds. This will allow ample time for the compressor to pressurize the pneumatic system.

**CAUTION:** Never operate this tool without plastic safety guard in position and safety glasses on.



**Step 2.** Insert pipe end through the large hole in the clear plastic guard and place over the lower roll until the pipe end contacts the rear flange of the lower roll. The operator should be standing on the left side of the pipe. Safety glasses should be worn while operating the tool.

**CAUTION:** Do not operate the tool without pipe in proper position over the lower roll or serious damage may result.



**Step 3.** Depress the foot switch and pull the pipe lightly to the left. This will serve to stabilize and track the pipe.





**Step 4.** Let pipe remain for about 6 seconds. While the tool is operating the upper roll should be in contact with the pipe and the cleaning wheel should be cleaning the pipe. Release the foot switch at the end of 6 seconds. Withdraw the pipe from tool and remove any loose particles remaining on the pipe end.



**Step 5.** Inspect the pipe end. Make sure the pipe is clean in accordance with instructions supplied with FIT products.

Allow at least three seconds interval before preparing another pipe end once foot switch is released.

#### PIPE CONDITION

Pipe **must** be properly cleaned to receive FIT products. Always check to be certain pipe is prepared in accordance with



instructions supplied with FIT products. If pipe is not in this condition the pipe should be re-inserted into the tool for additional cleaning.

## SECTION V CLEANING WHEEL REPLACEMENT

Once the cleaning wheel has worn to a point where it does not clean the pipe it must be replaced.

**NOTE:** If the cleaning wheel is worn down for small diameter pipe, it may still be usable for larger pipe. See Chart Below:

NOMINAL PIPE SIZE	MINIMUM WHEEL DIAMETER REQUIRED TO CLEAN PIPE	AVERAGE NUMBER OF PIPE ENDS CLEANED TO MEET MINIMUM DIA.
1	4 $\frac{5}{8}$	5,000
1 $\frac{1}{4}$	4	7,000
1 $\frac{1}{2}$	3 $\frac{1}{2}$	8,000
2	2 $\frac{5}{8}$	10,000

This cleaning wheel data is **approximate** and based on the tool being adjusted and operated correctly. Varying nature of pipe coatings and operator techniques may significantly alter cleaning wheel life.

#### PROCEDURE

**Step 1.** Turn tool off and disconnect power.



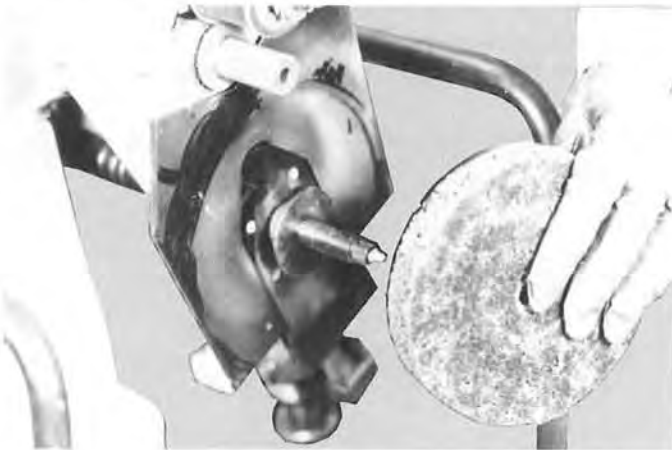
**Step 2.** Remove the four lower guard screws.



**Step 3.** Remove the upper front guard bolt and remove the guard.



**Step 4.** Remove lock nut from front of wheel by turning counter-clockwise with wrench. With gloved hand grasp wheel while loosening the nut. Remove the second nut similarly.



**Step 5.** Slide wheel forward off shaft.

**Step 6.** Install new wheel by reversing steps 2 through 5. Make sure the large washers (item 153) are in position, one on each side of cleaning wheel. Torque the first nut to 15 ft. lbs.

**CAUTION:** Make sure to re-install guard before operating tool.

## SECTION VI — TROUBLE SHOOTING

- Problem:** Cleaning wheel will not contact pipe.  
**Solution:** Check to see that wheel is not worn out. Check slide for buildup of dirt or grease. Check Pre-Operation Adjustments.
- Problem:** Pipe will not "track."  
**Solution:** Check pipe support position (see setup instructions).
- Problem:** Pipe end is "grooved" by upper roll.  
**Solution:** Adjust mainshaft per maintenance instructions.
- Problem:** Cleaning wheel slips on shaft.  
**Solution:** Check nut torque. Check to see if large washers are in position, one on each side of cleaning wheel. Check pre-operation adjustments.
- Problem:** Cleaning wheel does not turn.  
**Solution:** Check power on.  
 Check for flexible shaft breakage.  
 Check item 113 flexible shaft drive connection.

## SECTION VII — TOOL MAINTENANCE

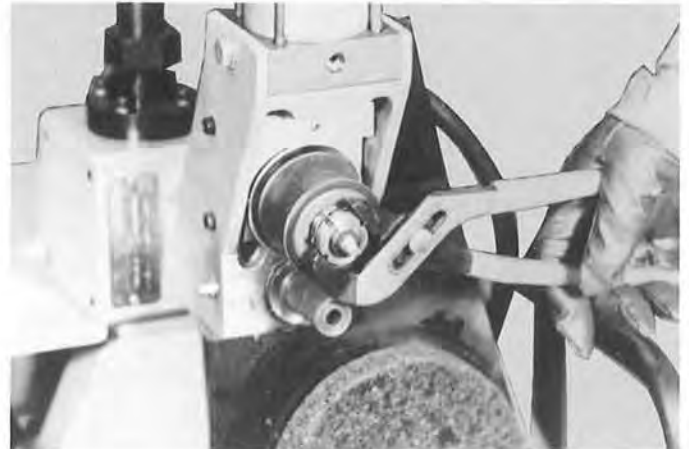
The PCT II requires the following maintenance procedures for reliable tool operation.

- Daily:** The sediment bowl adjacent to the pneumatic lubricator should be drained on a daily basis by depressing the button at the bottom of the bowl with the compressor running.
- Daily:** The wheel slide (item #103) should be cleaned with an air gun or washed with a cleaning solution which leaves no residue. The slide should be regreased afterwards.
- Weekly:** All grease fittings (item #128) should be filled weekly and all excess lubricant removed from exposed areas. Use multi-purpose bearing grease or equivalent.
- Weekly:** The pneumatic lubricator (item #207) should be inspected weekly and filled to the level indicated with automotive antifreeze.

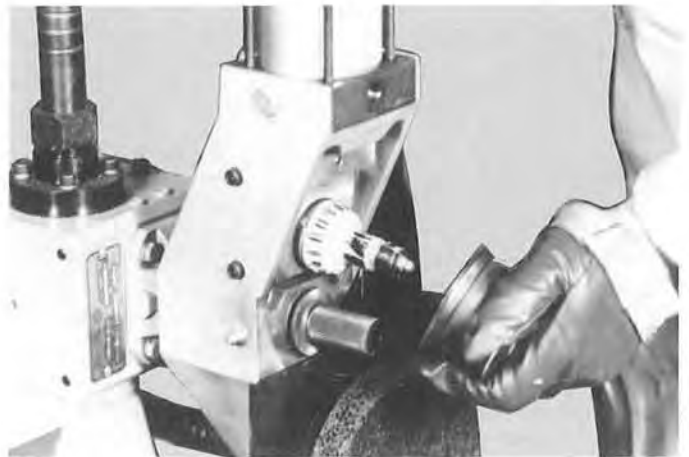
### A. Upper Roll Removal and Replacement

Turn power switch "Off" and disconnect power.

**Step 1.** Remove attaching screws from guard and remove guard (item 118).



**Step 2.** Remove locknut (item 125) and lockwasher (item 126) from upper shaft (item 104). **Note:** Bend back the lockwasher tab that is securing the locknut prior to removing nut.



**Step 3.** Slide off the upper roll assembly (item 107) making sure not to lose the upper roll grease retaining bushing (item 110) and the rear bearing (item 123).

### Installation

**Step 4.** Install new upper roll assembly, making sure the rear bearing cone and the upper roll grease retaining bushing are installed.

**Step 5.** Install bearing lockwasher and locknut. Tighten the locknut to a point where the upper roll assembly is secure but rotates relatively easily. Bend the tab of lockwasher over to secure nut.

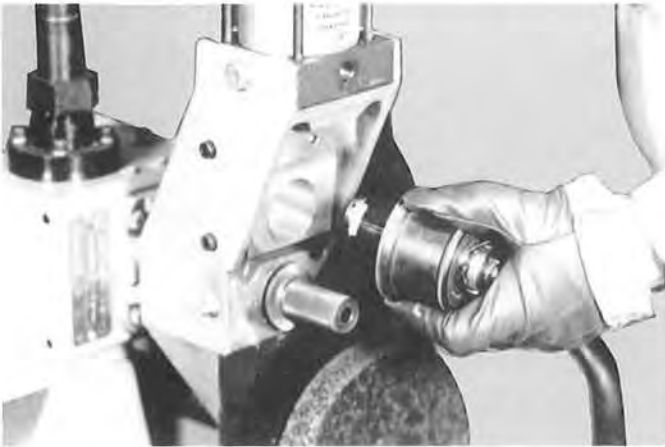
**Step 6.** Reinstall guard and all guard hardware. Lubricate all grease fittings.

### B. Main Shaft Replacement and Adjustment

#### Removal

Turn power switch "Off" and disconnect power.

**Step 1.** Remove guard (item 118) and all guard hardware.



**Step 2.** Remove upper shaft and roll assembly as a unit by removing screw (item 134) at the rear of the shaft.



**Step 3.** Remove the two set screws (item 137) at the rear of main shaft. Screws are 180° apart. Rotate shaft to expose screws by turning the cleaning wheel several revolutions to align set screws with clearance slot in tool housing.

**Step 4.** Slide main shaft (item 105) straight forward out of tool housing. **Note:** If difficulty arises removing main shaft, loosen the four bolts (item 9) that secure the tool housing to the frame. Take care not to lose main shaft key (item 155).

### Installation

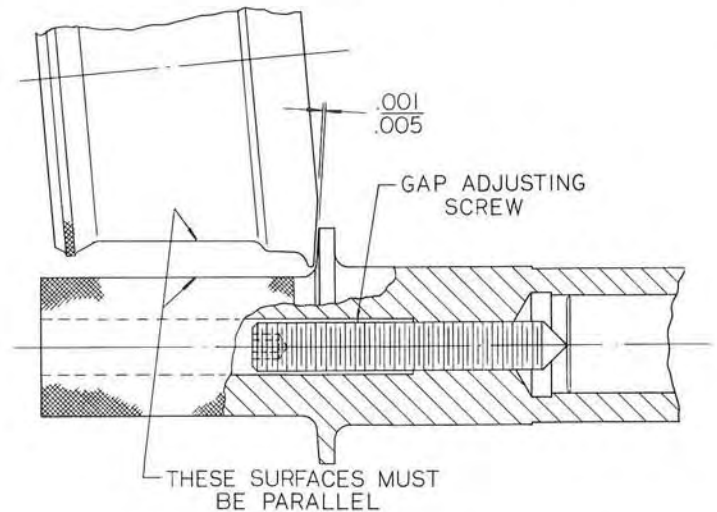
**Step 1.** Install main shaft key (item 155) on gear reducer shaft. Shaft keyway should be facing up to facilitate key installation through set screw clearance slot.



**Step 2.** Insert new main shaft through tool housing and over gear reducer shaft making sure the key seats properly. Shaft should be as far back as possible at this point of installation.

**Step 3.** Reinstall upper roll and shaft assembly unit with screw (item 134), making sure lockwasher and flatwasher (items 135 and 140) are in place.

**Step 4.** Bring upper slide to its full down position.



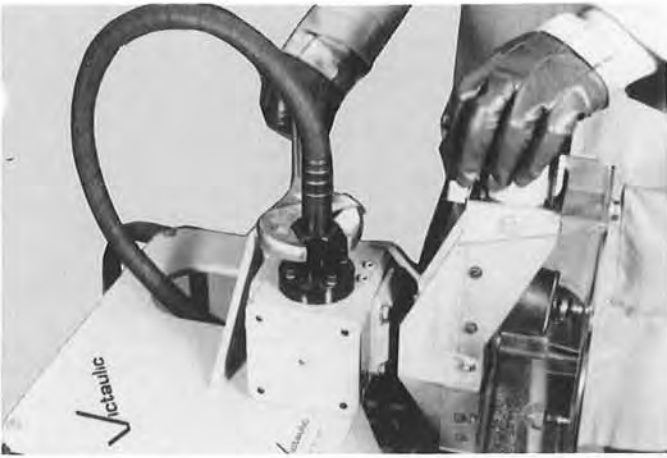
**Step 5.** Adjust main shaft forward to obtain .001 to .005 clearance as shown. Reinstall the two main shaft set screws (item 137) and tighten securely. **Note:** If bolts (item 9) were loosened, retighten evenly.

**Step 6.** Reinstall guard and all guard hardware. Lubricate all three grease fittings.

**C. Main Shaft Adjustment:** Loosen two set screws at rear of main shaft (see Step 3 under removal) adjust and reassemble as in Steps 5 and 6 above.



## D. Flexible Shaft Replacement



**Step 1.** Loosen the black hex nuts at the ends of the flex shaft (item 120).

**Step 2.** Remove the flex shaft, making sure the flexible shaft drive coupling (item 113) is not lost.

**Step 3.** Reinstall new flexible shaft assembly, making sure the flexible shaft passes through the center of the frame clearance hole.

## E. Wheel Slide Pneumatic Cylinder Replacement

### Removal and Installation

Turn power switch "Off" and disconnect power.

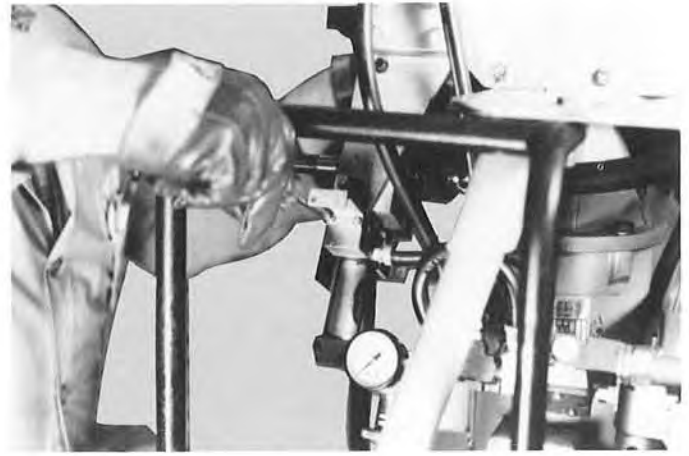
**Step 1.** Remove guard and guard hardware.

**Step 2.** Remove cleaning wheel as outlined in wheel replacement.

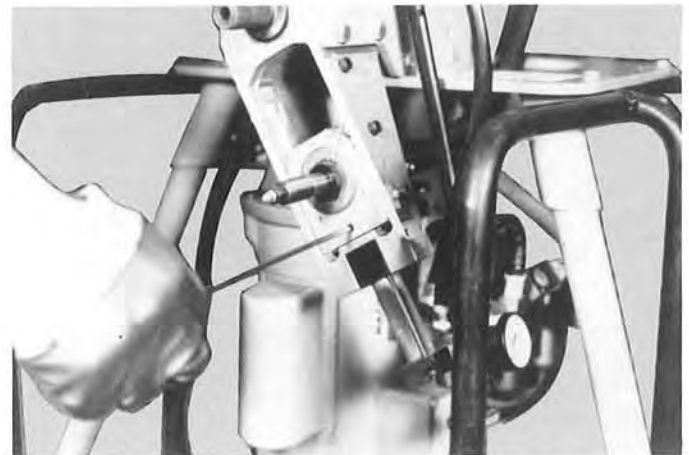


**Step 3.** Remove outer dust shield (item 117), then remove inner dust shield (item 116).

**Step 4.** Disconnect the two air lines from cylinder by loosening fittings (item 210).

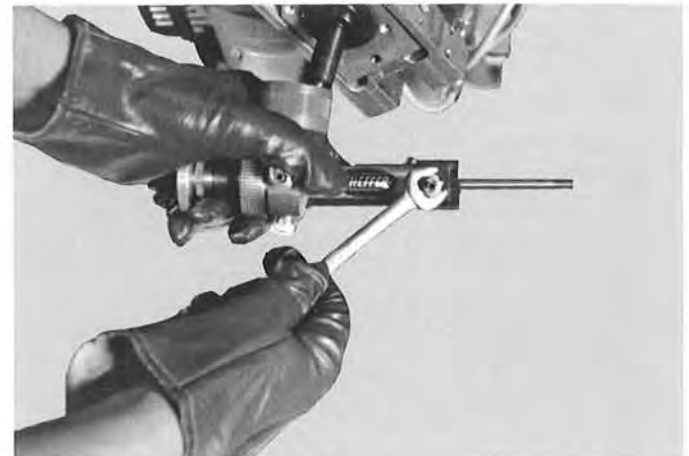


**Step 5.** Remove the two aluminum channel shaped guard brackets (item 115) and screws.



**Step 6** Pull cylinder (item 202) down and loosen set screw (item 136).

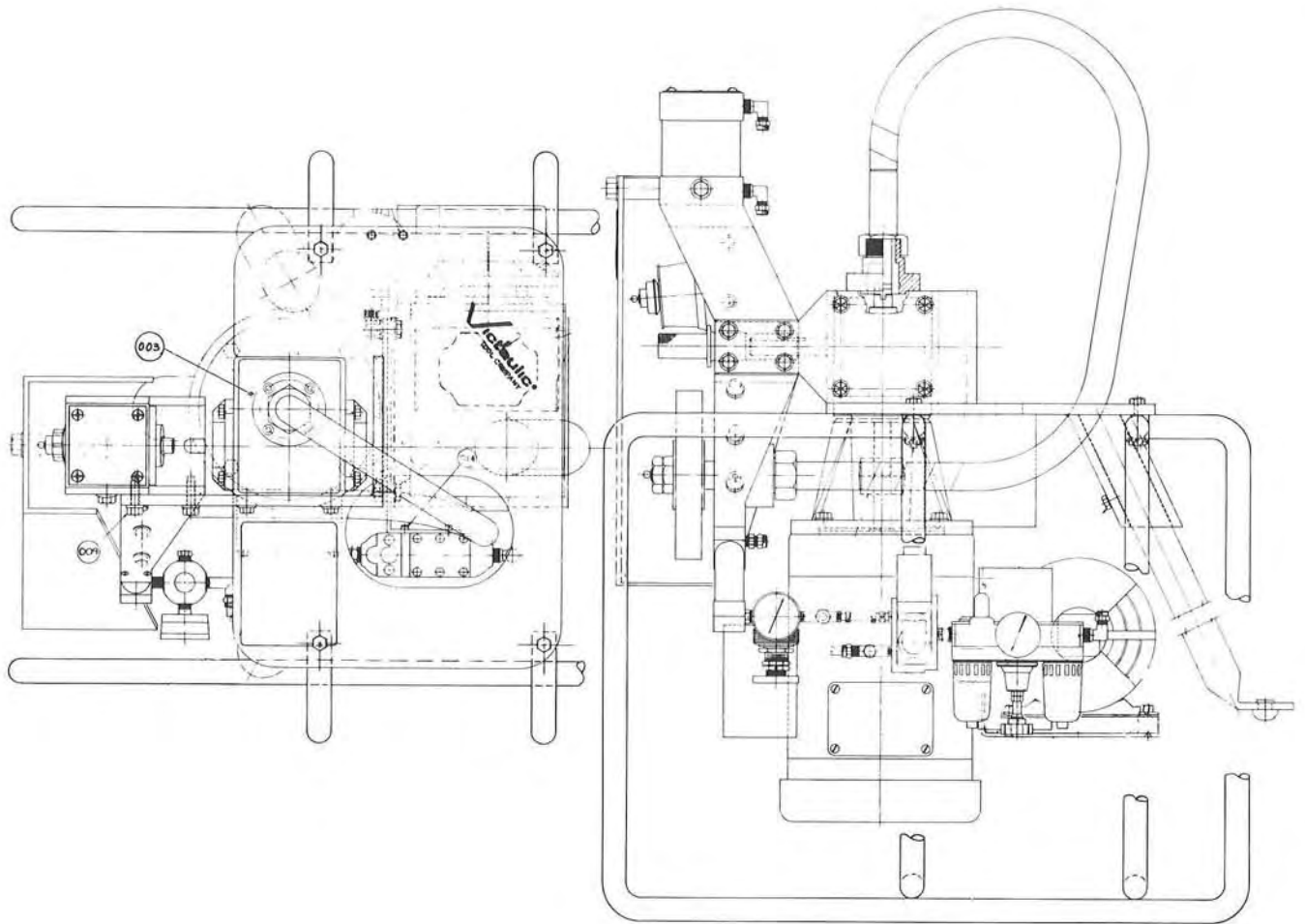
**Step 7.** Unscrew cylinder from wheel slide by turning cylinder rod.



**Step 8.** Remove air fittings and regulator (item 203) from cylinder.

**Step 9.** Reverse procedure for installation.

## SECTION VIII — PARTS

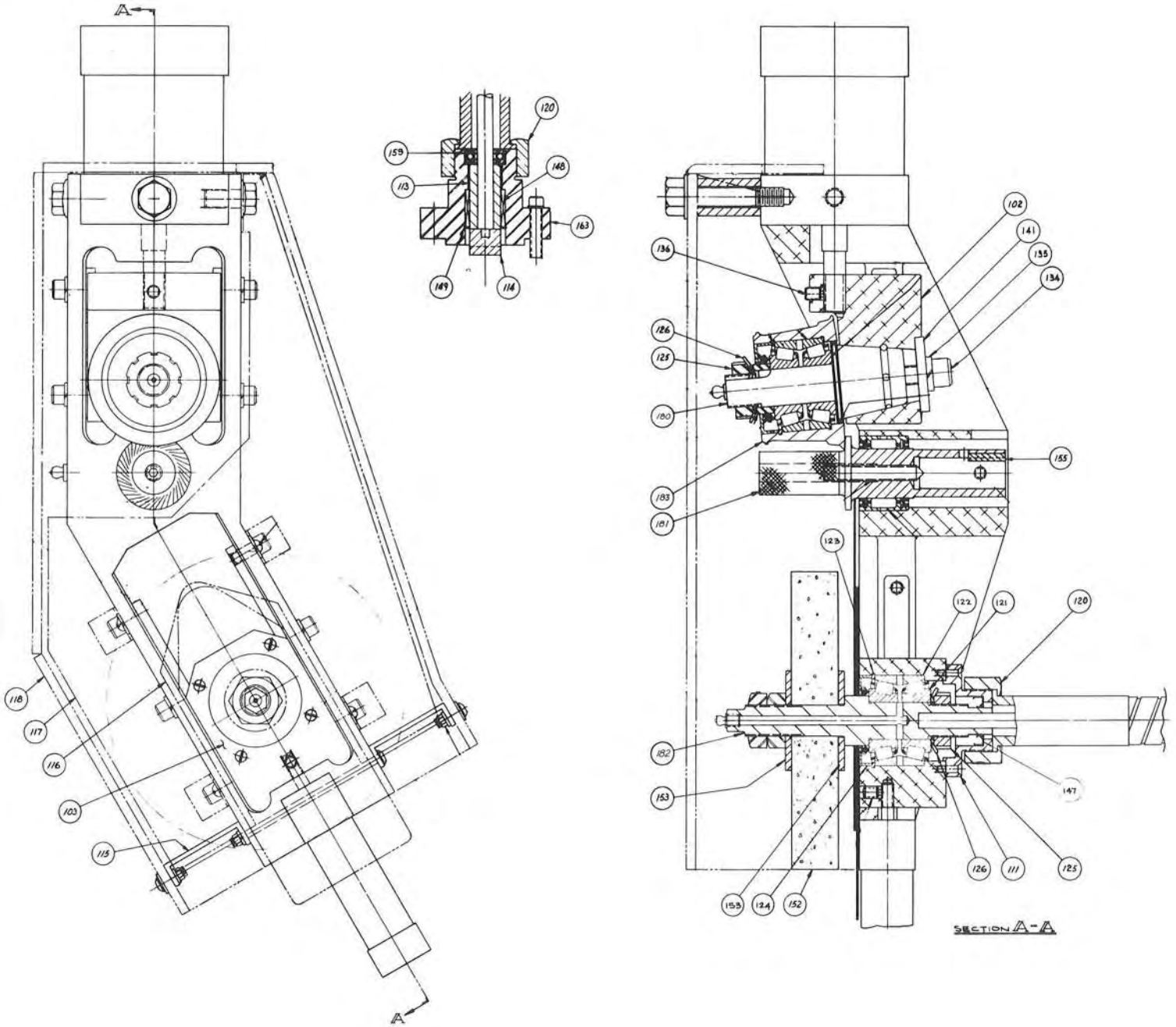


### A) PARTS LIST

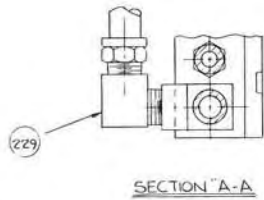
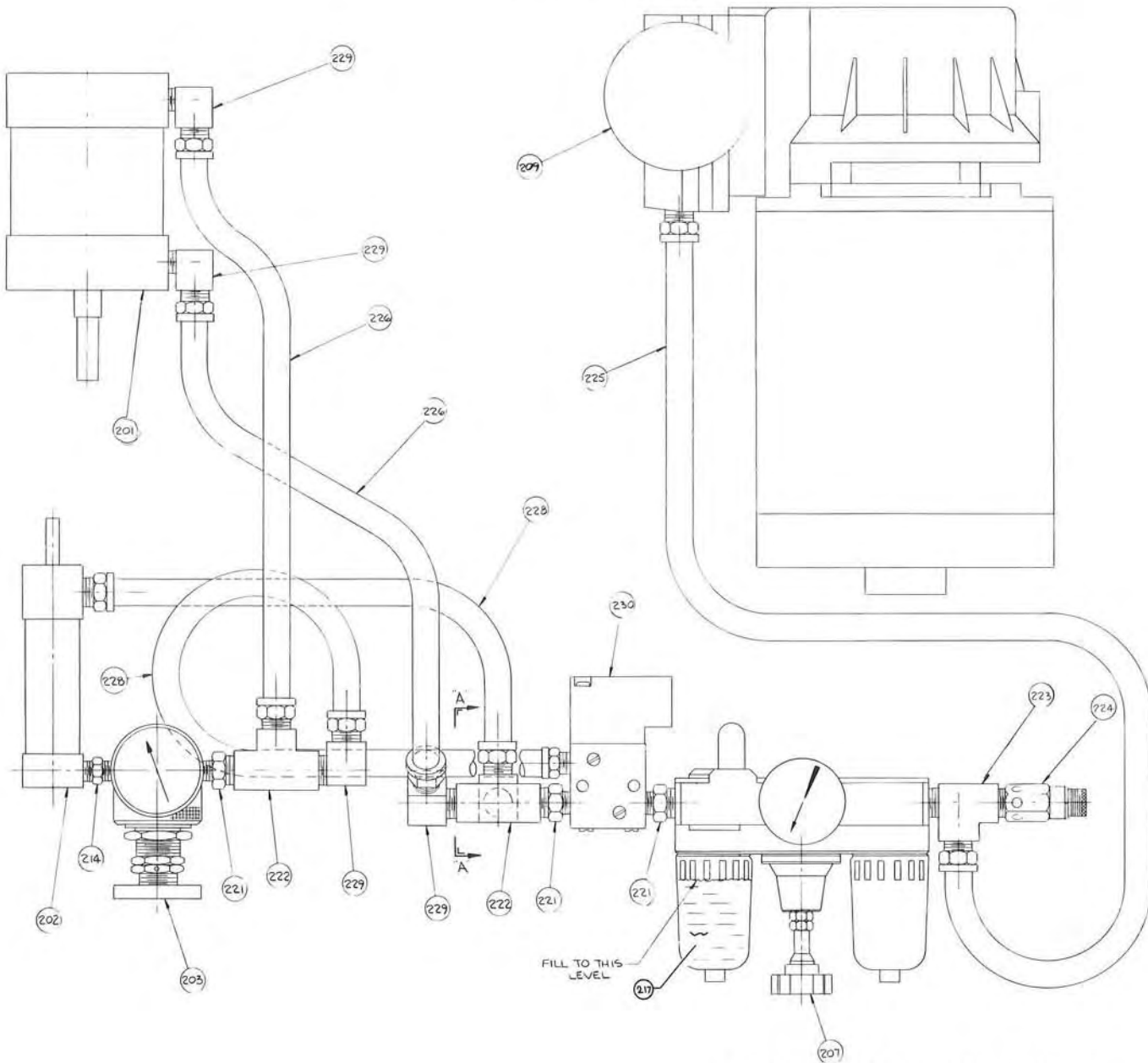
ITEM NO.	PART NO.	REQ'D.	DESCRIPTION
003	R-003-296-PCT	1	GEAR REDUCER ASSEMBLY
014	N-S27-004-010	2	4mm x 10mm LG. SOC. HD. CAP SCR.
102	R-102-296-PCT	1	UPPER SLIDE
103	R-103-296-PCT	1	WHEEL SLIDE
111	R-111-296-PCT	1	SHAFT TO WHEEL CONNECTOR
163	R-163-296-PCT	1	FLEX SHAFT BRG. HOUSING
113	R-113-296-PCT	1	FLEX SHAFT DRIVE CONNECTOR
114	R-114-296-PCT	1	FLEX SHAFT DRIVE COUPLING
115	R-115-296-PCT	2	BRACKET FOR LEXAN GUARD
116	R-116-296-PCT	1	INNER WHEEL SLIDE DUST SHIELD
117	R-117-296-PCT	1	OUTER WHEEL SLIDE DUST SHIELD
118	R-118-296-PCT	1	LEXAN GUARD
120	R-120-296-PCT	1	FLEX SHAFT
121	N-B04-075-001	2	BEARING, CONE

ITEM NO.	PART NO.	REQ'D.	DESCRIPTION
122	N-B04-075-002	1	CUP
123	N-T55-RRT-185	1	RETAINING RING
124	N-M11-000-004	1	OIL SEAL
125	N-B63-000-003	2	LOCK NUT
126	N-B61-000-103	2	LOCK WASHER
147	N-M11-000-004	1	SEAL
148	N-B02-062-001	1	BEARING
149	N-T53-000-081	1	RETAINING RING
152	N-M17-000-002	1	CLEANING WHEEL
159	N-B03-030-001	1	THRUST BEARING
180	R-180-296-PCT	1	UPPER SHAFT ASSEMBLY
181	R-181-296-PCT	1	MAIN SHAFT ASSEMBLY
182	R-182-296-PCT	1	WHEEL SHAFT ASSEMBLY
183	R-183-296-PCT	1	UPPER ROLL ASSEMBLY

## B) PARTS DRAWINGS



### C) PNEUMATIC PARTS

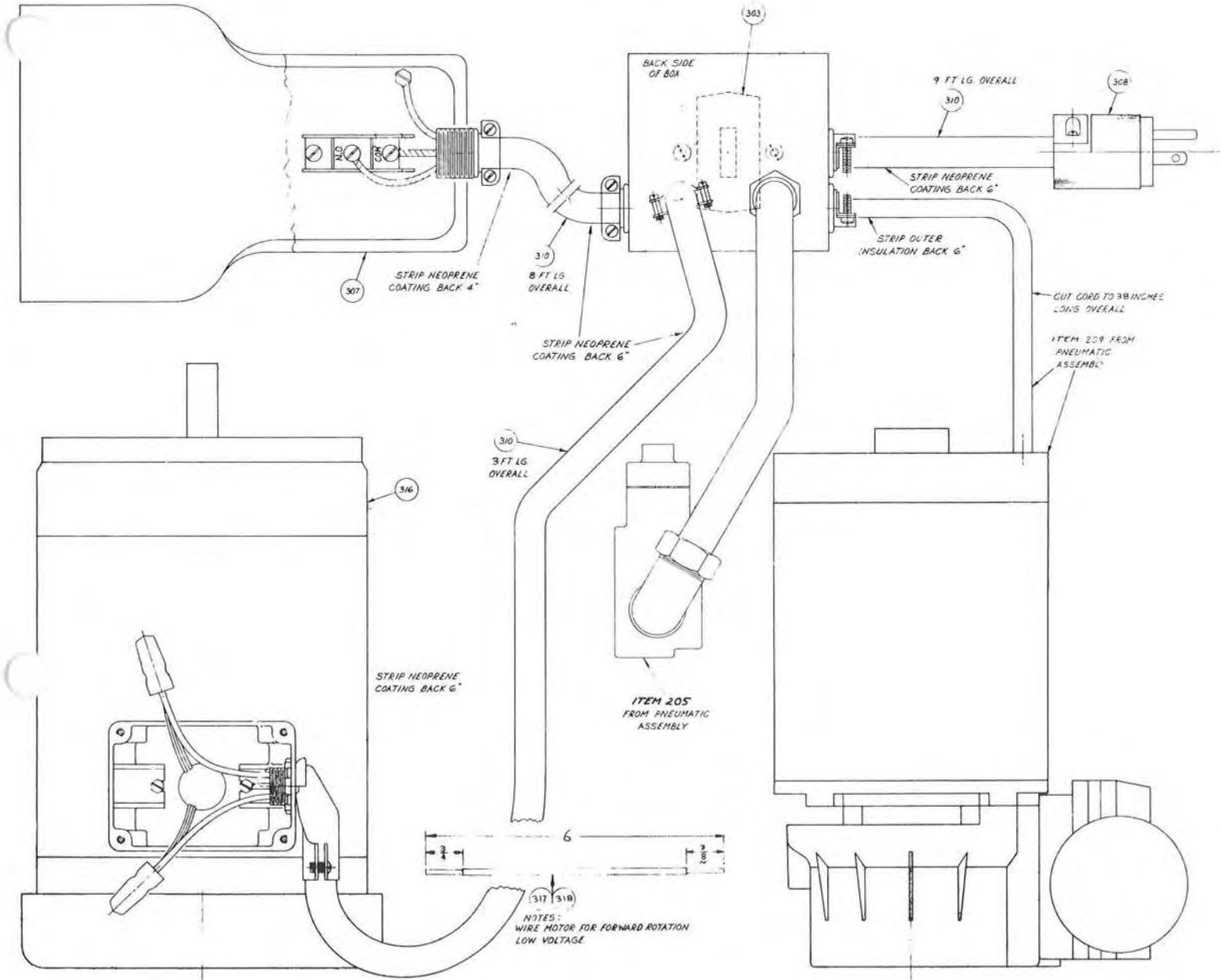


### C) PNEUMATIC PARTS LIST

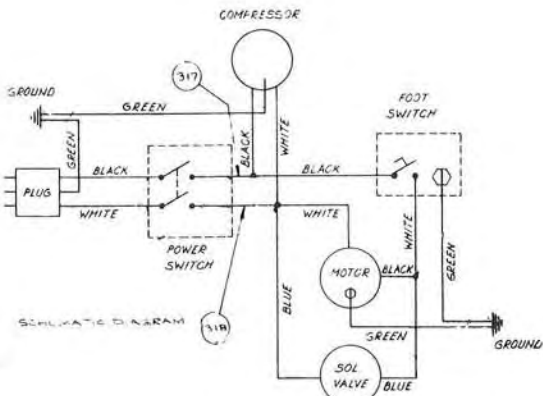
ITEM NO.	PART NO.	REQ'D.	DESCRIPTION
201	N-H30-208-001	1	CYLINDER
202	N-H30-012-002	1	CYLINDER
203	R-203-296-PCT	1	REGULATOR-GAUGE
207	N-H31-000-002	1	FILTER-REG.-LUB.-GAUGE
209	R-209-296-PCT	1	COMPRESSOR
214	N-H11-004-009	1	HEX NIPPLE
217	N-H50-000-006	1 oz.	ANTI-FREEZE
221	N-H11-004-008	3	HEX NIPPLE REDUCER
222	N-H14-004-003	2	FITTING
223	N-H14-004-004	1	FITTING
224	N-H04-000-013	1	AIR RELIEF VALVE
225	R-225-296-PCT	1	HOSE
226	R-226-296-PCT	2	HOSE
227	R-227-296-PCT	1	HOSE
228	R-228-296-PCT	1	HOSE
229	N-H12-004-003	5	FITTING
230	N-H04-000-014	1	VALVE



### D) ELECTRICAL PARTS LIST



### D) ELECTRICAL PARTS LIST



ITEM NO.	PART NO.	REQ'D.	DESCRIPTION
303	N-E02-000-009	1	SWITCH
307	N-E03-000-001	1	FOOT SWITCH
308	N-E08-000-003	1	PLUG
310	N-E04-000-009	20 Ft.	LINE CORD
316	N-E01-000-004	1	MOTOR
317	N-E04-000-003	6"	WIRE
318	N-E04-000-010	6"	WIRE

## EXTENSION CORD REQUIREMENTS

When prewired outlets are not available and an extension cord must be used, it is important to use the proper cord size (e.g., conductor size American Wire Gage). Cord size selection is based upon tool rating (amps) and cord length (ft.). Use of a cord size (gage) thinner than required will cause a significant voltage drop at the tool while the tool is operating. The voltage drop may cause damage to the tool and can result in failure of the tool to operate properly. Use of a heavier than necessary cord size (gage) is acceptable.

Listed in the chart below are recommended cord size (gage) for cord lengths up to and including 100 feet. Use of extension cords beyond 100 feet in length should be avoided.

**RECOMMENDED EXTENSION CORD CONDUCTOR SIZE (AWG) AT VARIOUS CORD LENGTHS (FT.)**

TOOL	TOOL RATING VOLT/AMPS	CORD LENGTHS		
		25 FEET	50 FEET	100 FEET
PCT-II	115/15	12	12	10

## NOTES

**VICTAULIC TOOL COMPANY**  
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FAX: 310/537-9536

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Bensenville 60106  
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FAX: 708/595-8324

**Metro Branch:**  
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4901 Kesslersville Road  
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Warrendale 15086  
166 Thorn Hill Road  
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FAX: 412/776-0730

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