



# Model 5290/5296

## 7" Vertical Sander/Polisher

Form # Z535  
Date 3-99/A



### IMPORTANT

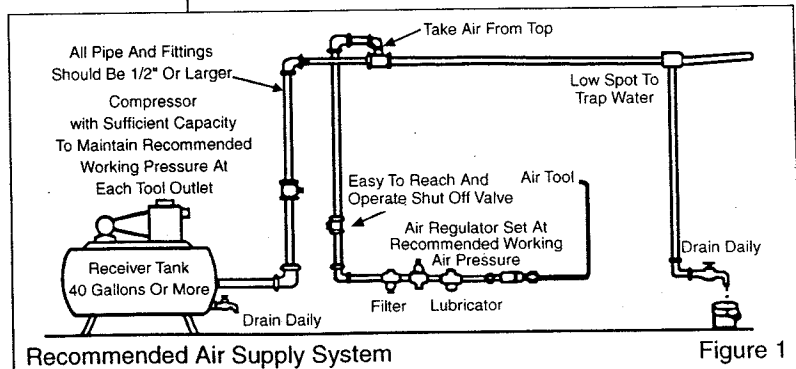
Read these instructions carefully before installing, operating, servicing or repairing this tool. Keep these instructions in a safe accessible place.

SAFETY MESSAGES		WARNING		Operator Instructions	
Personal Safety Equipment					
Use – Safety Glasses	YES		Always Read Instructions Before Using Power Tools	Includes: Safety Rules Foreseen Use Work Stations Putting Into Service Operating Dismantling and Assembly.	
Use – Safety Gloves	YES		Always Wear Safety Goggles		
Use – Safety Boots			Wear Hearing Protection		
Use – Breathing Masks	YES		Avoid Prolonged Exposure To Vibration		
Use – Ear Protectors					

### Safety rules when using a 5290 Sander and 5296 Polisher

- Always wear safety goggles.
- Do not use the tool as a grinder.
- Do not use polystyrene pads.
- For Sander, use accessories rated at least 5,000 RPM.
- For Polisher, use accessories rated at least 2,500 RPM.
- Prolonged exposure to vibration may cause injury.
- Read all instructions before using this tool. All operators must be fully trained in its use and aware of these safety rules.
- Do not exceed the maximum working air pressure.
- Use personal protection equipment as recommended.
- Use compressed air only at the recommended conditions.
- If the tool appears to malfunction, remove from use immediately and arrange for service and repair. If it is not practical to remove tool from service, then shut off the air supply to the tool and write or have written a warning note and attach it to the tool.
- If tool is to be used with a balancer or other suspension device, ensure that the tool is firmly attached to the suspension/support device.
- When operating the tool, always keep the body and particularly the hands away from the working attachment fixed to the tool.
- The tool is not electrically insulated. Never use the tool if there is any chance of coming into contact with live electricity.
- Always when using the tool, adopt a firm footing and/or position and grip the tool sufficiently only to overcome any reaction forces that may result from the tool doing work. Do not overgrip.
- Use only correct spare parts for maintenance and repair. Do not improvise or make temporary repairs. Major servicing and repairs should only be carried out by persons trained to do so.
- Do not lock, tape, wire, etc. the 'On/Off' valve in 'On' position. The throttle trigger/lever, etc. must always be free to return to the 'Off' position when released.
- Always shut off the air supply to the tool and press the 'On/Off' valve to exhaust the air from the feed hose before fitting, removing or adjusting the working attachment fitted to the tool.
- Before using the tool, make sure that a shut off device has been fitted to the supply line and the position is known and easily accessible so that the air supply to the tool can be shut off in an emergency.
- Check hose and fittings regularly for wear.
- Take care against entanglement of the moving parts of the tool with clothing, hair, ties, cleaning rags, rings, jewelry, watches, bracelets, etc. This could cause the body or parts of the body to be drawn towards and in contact with the moving parts of the tool and could be very dangerous.

- It is expected that users will adopt safe working practices and observe all local, regional or country legal requirements when installing, using or maintaining the tool.
- Take care that the exhaust air does not point towards any other person or material or substance that could be contaminated by oil droplets. When first lubricating a tool or if the tool exhaust has a high oil content, do not allow the exhaust air to come near very hot surfaces or flames.
- Never lay the tool down until the working attachment has stopped moving.
- When the tool is not in use, shut off the air supply and press throttle trigger/lever to drain the supply line. If the tool is not to be used for a period of time, first lubricate, disconnect from air supply and store in a dry average room temperature environment.
- If the tool is passed from one user to a new or inexperienced user, make sure these instructions are available to be passed with the tool.
- Do not remove any manufacturer fitted safety devices where fitted, i.e., wheel guards, safety trigger, speed governors, etc.
- Wherever possible, secure workpiece with clamps, a vise, etc. to make it rigid so it does not move during the work operation. Keep good balance at all times. Do not stretch or overreach.
- Try to match the tool to the work operation. Do not use a tool that is too light or heavy for the work operation. If in doubt, seek advice.
- In general terms, this tool is not suitable for underwater use or use in explosive environments — seek advice from manufacturer.
- Try to make sure that the work area is clear to enable the work task to be performed safely. If practical and possible, try to clear unnecessary obstructions before starting work.
- Always use air hose and couplings with minimum working pressure ratings at least 1 1/2 times the maximum working pressure rating of the tool.



Recommended Air Supply System

Figure 1

## Foreseen Use Of The Tool

### *Model 5290 Sander*

This vertical sander is designed to be used with 7" diameter coated abrasive discs of various grades and grit sizes which are designed to be used at speeds of at least 5,000 rpm. The spindle thread size is 5/8-11 UNC-2A and the tool can be used with other abrasive devices that can be screwed or located securely on this spindle size and have a rated speed of at least 5,000 rpm and do not require to be used with a guard. Do not attempt to use bonded abrasive devices, i.e., grinding wheels, as those which could be fitted because of their size cannot be used without a suitable guard. A guard is not available for use with this tool. Do not fit any form of saw blade. Do not fit any other types of abrasive device before checking the suitability for use with the manufacturer or authorized distributor. Do not fit buffing bonnet to the 5290 sander and use as a polisher.

### *Model 5296 Polisher*

This tool is specifically designed to be used as a polisher fitted with buffing bonnet. It can be used as a sander with buffing bonnet removed and suitable abrasive disc as used with the 5290 sander fitted, although in general terms, the speed at 2,500 rpm is slow for efficient sanding. The speed of any device fitted to the tool should be rated at least for 2,500 rpm. Do not modify these tools for any other use, or for its use as sanders and polishers without first consulting the manufacturer or the manufacturer's authorized distributor.

## Work Stations

The tool should only be used as a handheld, hand operated tool. It is always recommended that the tool is used when standing on a solid floor. It can be used in other positions, but before any such use, the operator must be in a secure position having a firm grip and footing and be aware of the safety rules to be obeyed when using the sander/polisher.

## Putting Into Service

### *Air Supply*

Use a clean lubricated air supply that will give a measured air pressure at the tool of 90 PSIG (6.2 bar) when the tool is running with the trigger/lever fully depressed. Use recommended hose size and length. It is recommended that the tool is connected to the air supply as shown in figure 1. Do not connect the tool to the air line system without incorporating an easy to reach and operate air shut off valve. The air supply should be lubricated. It is strongly recommended that an air filter, regulator, lubricator (FRL) is used as shown in Figure 1 as this will supply clean, lubricated air at the correct pressure to the tool. Details of such equipment can be obtained from your supplier. If such equipment is not used, then the tool should be lubricated by shutting off the air supply to the tool, depressurizing the line by pressing the trigger on the tool. Disconnect the air line and pour into the hose adaptor a teaspoonful (5ml) of a suitable pneumatic motor lubricating oil preferably incorporating a rust inhibitor. Reconnect tool to air supply and run tool slowly for a few seconds to allow air to circulate the oil. If tool is used frequently, lubricate on daily basis and if tool starts to slow or lose power.

It is recommended that the air pressure at the tool while the tool is running is 90 PSI/6.2 bar.

## Operating

### *The 5290 Sander*

The 5290 Sander is a heavy duty tool designed for the automotive and industrial repair shop. It provides a smooth and professional finish to most surfaces such as sheet metal, machine steel, wood and fiberglass. Its most common use is removing paint and/or rust from metal surfaces, smoothing welded or leaded surfaces and smoothing wood or fiberglass surfaces for further finishing.

Select a suitable abrasive disc (see Section 'Foreseen Use of Tool') and make sure that it is fixed securely to the tool. Connect to suitable air supply as recommended. Make sure that the dead handle is tightened securely.

Apply the sander lightly to the work and allow the abrasive disc to cut. Take great care when sanding around sharp edges and surfaces to avoid the disc snagging, i.e. the disc may be brought to an abrupt stop or considerably slowed which will cause the tool to kick in the hands. It is always recommended to use safety glasses and a breathing mask. The sanding of certain materials may create a hazardous dust which may require special breathing equipment. Check before using the tool. Even if the machine has a low noise level, the actual sanding process may cause a noise level such that ear protectors will be required. If there are sharp areas/edges on the material being sanded, safety gloves are recommended. Do not continue to use abrasive discs that are worn or clogged. This will make the sanding process inefficient and the need to apply unnecessarily high forces to the tool. Do not use undersized or oversized sanding discs. The disc should be no more than 1/4" larger in diameter than the pad and not smaller than the pad.

### *The 5296 Polisher*

The 5296 Polisher is a heavy duty tool designed for the automotive and industrial repair shop. Its most common use is compounding or polishing painted surfaces of automobiles. Ensure the disc and dead handle are fixed securely. Fix buffing bonnet securely and centrally around disc (44). Use utmost care when polishing around or over sharp objects and contours. It is important to control the amount of pressure applied to the tool. For example, light pressure should be applied when polishing over corners on auto body panels, rain gutters, etc. Clean work surface before using the polisher on it. This can help prevent damage to the surface that can be caused by abrasives. It will also help to keep the pad clean.

### *5290 Sander and 5296 Polisher*

The lever (7) is the on/off valve for the tools. The air flow and hence the speed of the tools can be controlled by adjusting the air regulator screw (17) positioned on the opposite side to lever (7). Using a screwdriver, turn the screw until the slot aligns with the handle for maximum speed/power. For minimum speed/power, turn through 90°.

An air strainer screen is incorporated in the hose adaptor (10). This should be checked periodically for blockage, particularly if the tool slows or loses power. Remove hose adaptor from housing (1) to clean. Always start the tool and then apply to work surface.

## Dismantling & Assembly Instructions

Disconnect tool from air supply.

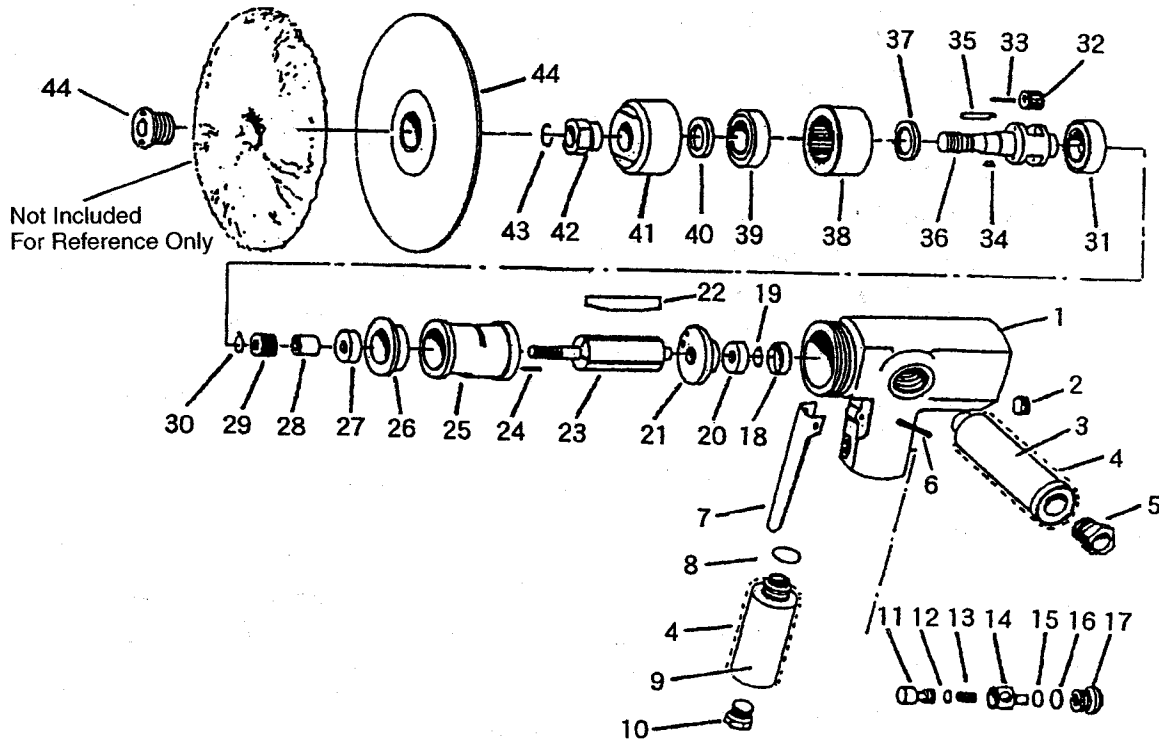
These tools are identical except for small differences in the gearbox. Grip the housing assembly (1) in a vise fitted with soft jaws and remove polishing bonnet where fitted. Locate peg spanner provided in the two holes in disc nut (44) and the open ended spanner provided on collar (42). Unscrew disc nut (44), remove any abrasive disc fitted and unscrew disc (44) still retaining grip on collar (42). If necessary, unscrew auxiliary handle (3) complete with handle grip (4). Exhaust deflector (5) may be unscrewed from handle (3). Drive out pin (6) and remove lever (7). Unscrew hose adaptor (10) and it is recommended that O-ring (8), handle (9) and handle grip (4) are not removed unless replacements are required. Plug (2) may be removed from housing assembly (1). Unscrew valve screw (17) with O-ring (16) and take out air regulator (14) with O-ring (15), spring (13) and valve stem (11) with O-ring (12). O-ring (12) may be removed from valve stem (11). Unscrew clamp nut (41) [left hand thread] from housing assembly (1) complete with gearbox assembly. Grip the clamp nut (41) and gently tap the threaded end of planet cage (36) – so as not to damage the thread – and remove the gear assembly from the clamp ring. Take off retaining ring (43) and pull off collar (42) and remove key (34) and pull off bearings (31) and (39), ring gear (38) and planet cage washer (37) from planet cage (36). Oil seal (40) may be removed from clamp nut (41).

Push out 2 pins (35) and slide out 2 planet gears (32) complete with 22 needle rollers (33), i.e., 11 rollers (33) per planet gear. Remove retaining ring (30) from rotor (23) and pinion (28) – note Model 5290 Sander has additional pinion collar (28).

Grip front plate (26) by hand and with a non-metallic or soft metal hammer [lead or aluminium hammer] so as not to damage the splines, tap the splined end of rotor (23) to drive it through the front end plate and bearing assembly. Take off cylinder (25) noting its orientation to the front and



**5290 7" Vertical Sander**  
**5296 7" Vertical Polisher**



Index No.	Part No.	Description
1	505638	Housing Assembly
2	505356	Plug
3	505640	Auxiliary Handle
4	505641	Handle Grip (2)*
5	505373	Exhaust Deflector
6	66540	Lever Pin
7	66541	Lever
8	505645	O-Ring
9	505646	Handle
10	505647	Hose Adaptor
11	67038	Valve Stem
12	67037	O-Ring
13	67039	Valve Spring
14	67040	Air Regulator
15	66600	O-Ring
16	67502	O-Ring
17	67042	Valve Screw
18	67715	Bearing Cap
19	67716	Retaining Ring
20	66511	Ball Bearing
21	67717	Rear Plate
22	67718	Rotor Blade (Set of 4)
23	505657	Rotor
24	67059	Dowel Pin
25	67722	Cylinder
26	505660	Front Plate

Index No.	Part No.	Description
27	67328	Ball Bearing
28	505662	Pinion Collar (5290 only)
29	505663	Pinion (5290 only)
30	505664	Retaining Ring
31	505665	Ball bearing
32	505666	Planet Gear (5290 only) (2)*
	505667	Planet Gear (5296 only) (2)*
33	505668	Needle Roller (22)*
34	505669	Key
35	505670	Pin (2)*
36	505671	Planet Cage (5290 only)
	505672	Planet Cage (5296 only)
37	505673	Planet Cage Washer
38	505674	Internal Gear
39	505675	Ball Bearing
40	505676	Oil Seal
41	505677	Clamp Nut
42	505678	Collar
43	505679	Retaining Ring
44	5207	Disc including Nut
(not shown)	505682	Spindle Wrench
(not shown)	67673	Spanner Wrench
(not shown)	67255	Name Plate Screw (2)*
(not shown)	505685	Name Plate (5290 only)
(not shown)	505686	Name Plate (5296 only)
(not shown)	67411	Warning Label

\* Order Quantity As Needed

rear plates for reassembly and take out 4 rotor blades (22) from rotor (23). Pry out bearing cap (18) and take off retaining ring (19) from rotor (23). Support the rear plate (21) in a piece of tub with a bore diameter just slightly larger than the maximum diameter of the rotor (23) and tap the non-splined end of rotor (23) to drive it through the rear end plate and bearing assembly. With a suitable punch, tap out bearing (20) from rear plate (21) and bearing (27) from front plate (26).

### Reassembly

Clean all parts and examine for wear. Look in particular for wear and cuts on O-rings. Coat all parts in a pneumatic tool lubricating oil, preferably one including a rust-inhibitor. Grease all gears and bearings with a lithium or molybdenum based general purpose grease and reassemble in the reverse order. See following notes.



### Motor Assembly

If fitting a new rotor, very lightly deburr the edges of the rotor slots. Make sure rotor blade slots are clean. Make sure that the faces of the front and rear end plates (26) and (21) that abut cylinder (25) are free from burrs and surface markings. If necessary, lap faces on a flat, very fine grade of abrasive paper. Press bearing (27) into end plate (26) and bearing (20) into end plate (21). Support bearing (20) in rear end plate on the inner

race and tap rotor on the gear end with a soft metal or non-metallic hammer until the rotor locates against the face of the rear end plate. Support the inner face of the rear end plate in a piece of tube with a bore diameter as close as possible to the largest diameter of the rotor and tap the non-splined end until a clearance of 0.040 mm (0.0015") to 0.065mm (0.0025") is obtained between the inner face of the rear end plate and the rotor. This clearance to be checked when pulling the rotor by hand away from the rear end plate and bearing assembly.

Spin rotor to ensure that it will spin freely in the rear end plate and bearing assembly. Fit rotor blades and cylinder ensuring that the pin in one end of the rotor cylinder locates in the round hole in the rear end plate. Push on front end plate and check that rotor still rotates freely.

Operation Specification	
Air Consumption	4.3 cfm (31 scfm)
Air Inlet Thread	1/4-18NPT
Height	7.50" (190 mm)
at 90 PSIG/6.2 bar	

<b>Manufacturer/Supplier</b> <b>Sioux Tools Inc.</b> <b>2901 Floyd Boulevard</b> <b>P.O. Box 507</b> <b>Sioux City, IA 51102</b> <b>U.S.A.</b> <b>Tel No. 712-252-0525 Fax No. 712-252-4267</b>		<b>Product Type</b> <b>7" Vertical Sander</b> <b>7" Vertical Polisher</b>		<b>RPM</b> <b>(see below)</b> <b>Cycles Per Min.</b>	
		<b>Model No/Nos</b> <b>5290 5,000 RPM</b> <b>Vertical Sander</b> <b>5296 2,500 RPM</b> <b>Vertical Polisher</b>		<b>Serial No.</b>	
<b>Product Net Weight</b> <b>5.0 lbs</b> <b>2.3 Kg</b>	<b>Recommended Use Of</b> <b>Balancer Or Support</b> <b>NO</b>	<b>Recommended Hose Bore</b> <b>Size - Minimum</b> <b>3/8 Ins 10 M/M</b>	<b>Recommended Max.</b> <b>Hose Length</b> <b>30 Ft 10 M</b>		
<b>Air Pressure</b> <b>Recommended Working</b> 6.2 bar 90 PSI <b>Maximum</b> 6.2 bar 90 PSI		<b>Noise Level: Sound Pressure Level 83.2 dB(A)</b> <b>Test Method: Tested in accordance with Pneurop test code PN8NTC1 and ISO Standard 3744</b>			
<b>SAFETY MESSAGES</b> <b>Personal Safety Equipment</b> <b>Use - Safety Glasses YES</b> <b>Use - Safety Gloves YES</b> <b>Use - Safety Boots</b> <b>Use - Breathing Masks YES</b> <b>Use - Ear Protectors</b>		<b>WARNING</b>  <b>Always Read Instructions Before Using Power Tools</b> <b>Always Wear Safety Goggles</b> <b>Wear Hearing Protection</b> <b>Avoid Prolonged Exposure To Vibration</b>		<b>Vibration Level Less than 2.5 Meters / Sec<sup>2</sup></b> <b>Test Method: Tested in accordance with ISO standards 8662 Parts 1 &amp; 8</b>	



### Declaration of Conformity

#### Sioux Tools Inc.

2901 Floyd Boulevard, P.O. Box 507, Sioux City, Iowa 51102

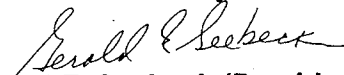
declare under our sole responsibility that the product

**Model 5290 & 5296 Vertical Sander/Polisher, Serial Number**

to which this declaration relates is in conformity with the following standard(s) or other normative document(s)

**EN792 (Draft), EN292 Parts 1 & 2, ISO 8662 Parts 1 & 8, Pneurop PN8NTC1**

following the provisions of **89/392/EEC as amended by 91/368/EEC & 93/44/EEC Directives**

  
**Gerald E. Seebeck (President)**

Name and signature or equivalent marking of authorized person