

13-1227A-3

360° Angle Drill Owners Manual & Parts List



Safety Instructions:

1. Review **this entire manual before operating your air tool.**
2. Before **mounting accessories** and before placing tool in service, check the free spindle running speed with 90 PSI at the tool inlet. Periodically check the tool's free speed.
3. Always wear **approved eye protection.** Use a dust mask if the operation creates dust.
4. **Protect yourself from noise.** Noise levels vary with work surface. If noise level is high, wear ear protectors.
5. Wear **gloves and protective clothing** to avoid injuries caused by chips or pieces, malfunctioning attachments, or improperly clamped work.
6. Prolonged exposure to vibration may cause injury.
7. **Never use this air tool at pressure above 90 PSI at tool inlet. This is an ungoverned tool and its free speed will increase in proportion to any increase in air pressure above 90 PSI.** Control air pressure with a reliable automatic air regulator. Periodically monitor air pressure at tool's air inlet while tool is running at free speed.
8. Use **only accessories with RPM (speed) rating at or above the actual free speed of the air tool.**
The rated free running speed of this tool is 2,500 RPM.
9. **Disconnect tool from air supply before changing or inspecting accessories.**
Do not perform service work on tool while connected to an air supply.
10. If a **sudden change** occurs in the feel (vibration level) or sound (pitch) of the unit, the tool should be **immediately turned off** and the work head inspected for damage. Do not use cracked or chipped accessories.
11. **Handle the tool safely.** Do not carry the tool with a finger on or near the throttle while the tool is connected to an air supply. Do not carry the angle drill by the hose. Protect the hose from heat and sharp objects.
12. **When not in use, disconnect the tool from air supply** to prevent accidental or unauthorized use in the absence of the operator.
13. Before placing the tool into service, refer to and become familiar with the following:
 - a. General Industry and Health Safety Regulations, Title 29 Code of Federal Regulation, Part 1910, available from superintendent of documents, Government Printing Office, Washington DC, 20402.
 - b. Safety Code for Portable Air Tools, ANSI B186.1 available from:
American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018.

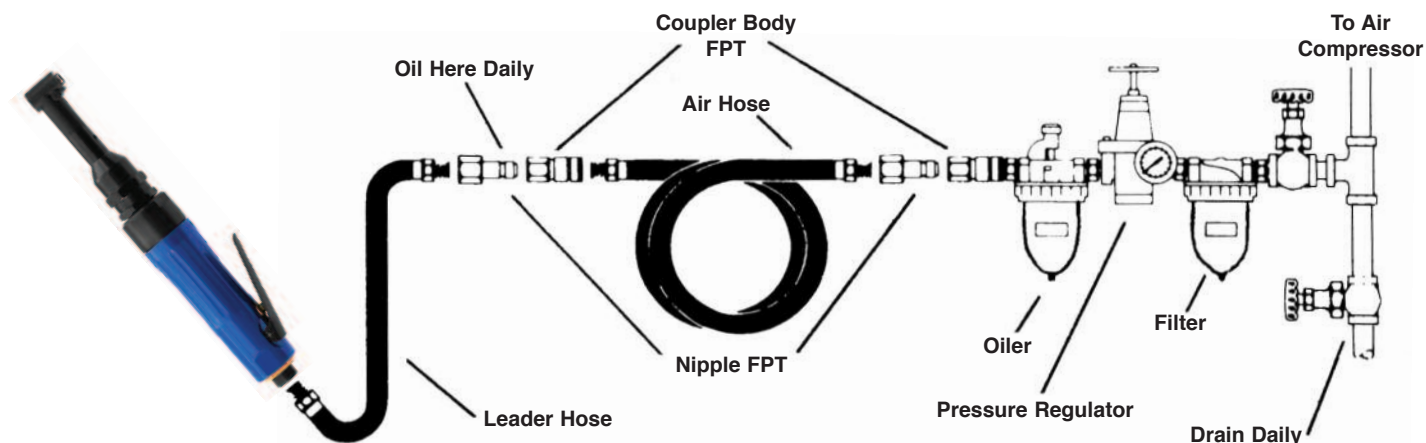
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Air Supply & Connections:

The angle drill is designed to operate at 90 PSI maximum air pressure at the tool when the tool is running. Less pressure prevents the tool from delivering its rated power. Air pressure over 90 PSI at the tool will cause tool to over speed and may result in tool exceeding the accessory strength. The air supply must be water-free; therefore as drop line or water trap should be used to remove condensation. In addition, an air line lubricator is strongly recommended to insure proper operation and long life of motor parts.



Shown above is the recommended order of filter, regulator, lubricator, line couplers and hose whip.

The minimum pipe size to be used is 1/4" and no fitting should be used that has an orifice of less than 7/32" diameter. If quick disconnect coupler is used, it should not be attached directly to the at the handle of the angle drill, but spaced off with a hose whip, in order to prevent breakage of fittings.

Operation:

1. Review Safety Instructions.
2. The tool is started by depressing first the safety toggle lever and then the throttle which is spring loaded. The tool, returns to the off position when released.
3. Always wear safety goggles and protective clothing when operating the tool.

General Maintenance:

A parts breakdown is shown on the Parts List page of this owners manual and details all the parts included in the tool. Refer to this sheet when cleaning, inspecting or when ordering parts becomes necessary.

Rotor Vanes - Vane life depends on proper lubrication. Test the tool frequently for proper operation. It is suggested that the tool be inspected on at least an annual basis by an authorized repair station.

Lubrication - To ensure proper operation, lubricate motor prior to initial use. If in-line lubricator is not used, add a few drops of oil into air inlet daily. Heavy oils are not recommended.

Operational Specifications:

Free Speed	2,500 RPM
Required Air Pressure	90 PSI
Average Air Consumption.	3 CFM
Air Inlet Size	1/4" NPT
Hose Size.	3/8" I.D.

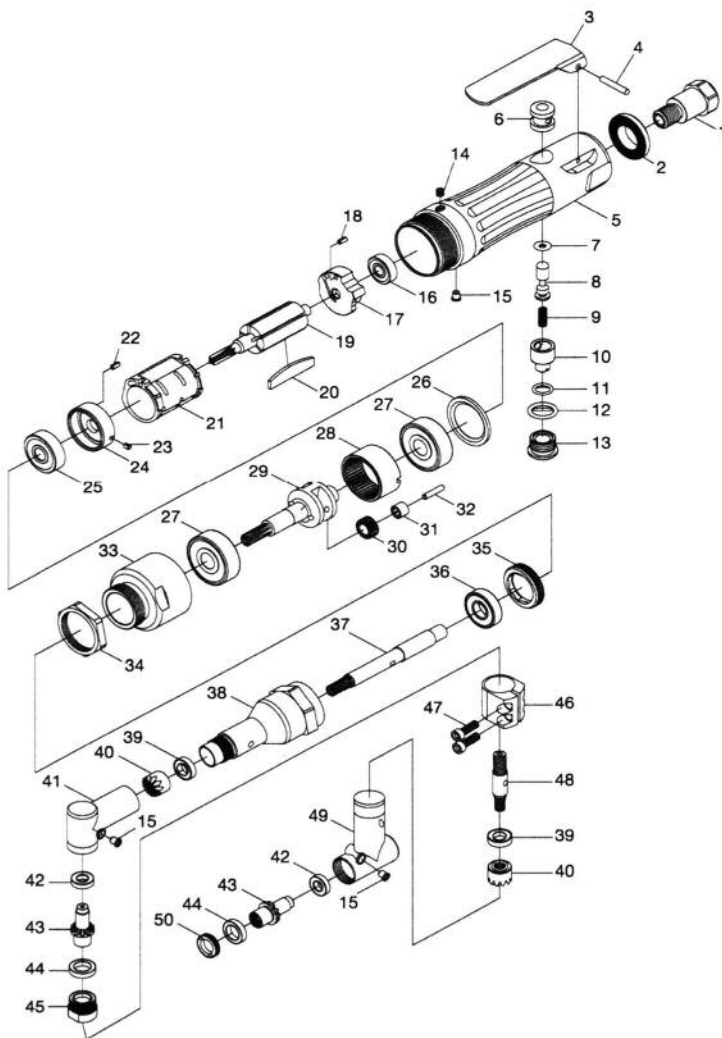
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13-1227A-3 360° Angle Drill for Threaded Drill Bits

Parts List



Index	Part No.	Description	Qty.
1	3603-01	Inlet	1
2	3603-02	Muffler	1
3	3603-03	Lever	1
4	3603-04	Pin	1
5	3603-05	Housing	1
6	3603-06	Valve Bushing	1
7	3603-07	O-Ring	1
8	3603-08	Valve Stem	1
9	3603-09	Valve Spring	1
10	3603-10	Regulator	1
11	3603-11	O-Ring	1
12	3603-12	O-Ring	1
13	3603-13	Plug	1
14	3603-14	Set Screw	1
15	3603-15	Grease Fitting	3
16	3603-16	Ball Bearing	1
17	3603-17	End Plate	1
18	3603-18	Locating Pin	1
19	3603-19	Rotor (6T, 3000 RPM)	1
20	3603-20	Vanes	5
21	3603-21	Cylinder	1
22	3603-22	Locating Pin	1
23	3603-23	Locating Pin	1
24	3603-24	Front Plate	1
25	3603-25	Ball Bearing	1
26	3603-26	Spacer	1
27	3603-27	Ball Bearing	2
28	3603-28	Ring Gear	1
29	3603-29	Carrier	1
30	3603-30	Idler Gear (18T, 3000 RPM)	2
31	3603-31	Needle Bearing	2
32	3603-32	Pin	2
33	3603-33	Adapter	1
34	3603-34	Lock Nut	1
35	3603-35	Lock Ring	1
36	3603-36	Ball Bearing	1
37	3603-37	Spindle	1
38	3603-38	Adapter Housing	1
39	3603-39	Ball Bearing	2
40	3603-40	Pinion	2
41	3603-41	Angle Housing	1
42	3603-42	Ball Bearing	2
43	3603-43	Spindle Gear (1/4"-28 internal)	2
44	3603-44	Ball Bearing	2
45	3603-45	Lock Ring	1
46	3603-46	Clamp	1
47	3603-47	Screws	2
48	3603-48	Drive Spindle	1
49	3603-48	Angle Housing	1
50	3603-50	Lock Ring	1

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