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Random Orbital Sander

Models R025A-()-() and R026A-()--()

Installation and Maintenance Information



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 **Ingersoll Rand**

Product Safety Information

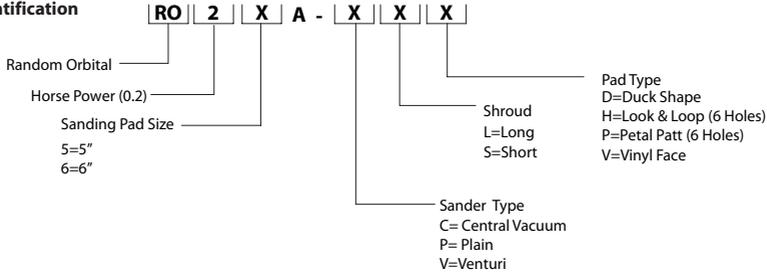
Intended Use:

A Rotary Air Sander, Polisher or Buffer is a compressed air powered, hand-held, rotary power tool equipped with a flexible pad or drum that is driven in a rotary or rotary/orbital motion. A Sander has a fiber disc or abrasive paper attached to the pad or a band attached to the drum and is used for material removal. A Buffer will have softer material such as a buffing wheel or polishing bonnet attached. A Polisher is a buffer that is used with a polishing compound. A guard is not supplied for these tools.

For additional information refer to Safety Information Manual Form 04580387.

Manuals can be downloaded from www.irtools.com.

Model Identification



Product Specification

Model Number	Lever (Item 3)	Shroud (Item 4)	Pad (Item 29)	Pad Description
RO25A-CLH	356-273	IR48876	IR49849	5" Hook & Loop
RO25A-CLP	356-273	IR48876	IR49849	5" Petal Patt
RO25A-CLV	356-273	IR48876	IR49096-1	5" Vinyl Face
RO25A-CLV-EU	356-273-1	IR48876	IR49096-1	5" Vinyl Face
RO25A-CSV	356-273	IR48876-1	IR49096-1	5" Vinyl Face
RO25A-CSV-EU	356-273-1	IR48876-1	IR49096-1	5" Vinyl Face
RO25A-PSD	356-273	IR48876-1	IR49877-1	5" Duck Face
RO25A-PSD-EU	356-273-1	IR48876-1	IR49877-1	5" Duck Face
RO25A-PSP	356-273	IR48876-1	IR49848	5" Petal Patt
RO25A-PSV	356-273	IR48876-1	IR49878-1	5" Vinyl Face
RO25A-PSV-EU	356-273-1	IR48876-1	IR49878-1	5" Vinyl Face
RO25A-VLH	356-273	IR48876	IR49849	5" Hook & Loop
RO25A-VLP	356-273	IR48876	IR49848	5" Petal Patt
RO25A-VLV	356-273	IR48876	IR49096-1	5" Vinyl Face
RO25A-VLV-EU	356-273-1	IR48876	IR49096-1	5" Vinyl Face
RO26A-CLV	356-273	356-931	354-825-6A	6" Vinyl Face
RO26A-CLV-EU	356-273-1	356-931	354-825-6A	6" Vinyl Face
RO26A-CSV	356-273	IR48266-1	354-825-6A	6" Vinyl Face
RO26A-CSV-EU	356-273-1	IR48266-1	354-825-6A	6" Vinyl Face
RO26A-PSD	356-273	IR48266-1	IR49880-1	6" Duck Face
RO26A-PSD-EU	356-273-1	IR48266-1	IR49880-1	6" Duck Face
RO26A-PSV	356-273	IR48266-1	IR49879-1	6" Vinyl Face
RO26A-PSV-EU	356-273-1	IR48266-1	IR49879-1	6" Vinyl Face
RO26A-VLV	356-273	356-931	354-825-6A	6" Vinyl Face
RO26A-VLV-EU	356-273-1	356-931	354-825-6A	6" Vinyl Face

Models With -EU Suffix Are "EC" Compliant Models.

Routine Lubrication Requirements

Air line debris, moisture and carry-over oil from the compressor can restrict the muffler and leave contaminants in the motor. Every 160 hours of tool operation, or sooner if motor speeds drop below accepted speed, flush the tool with a solution of equal parts of cleaning solvent and spindle oil. Flush the muffler with cleaning solvent and blow out any trapped debris.

Air Supply Requirements

This tool has been designed to operate without air line lubrication. Introduction of a lubricant with a standard filter/regulator/lubricator will not effect tool life.

For maximum operating efficiency, the following air supply specifications should be maintained to this air tool:

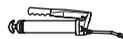
- AIR PRESSURE - 90 p.s.i.g. (6.2 bar)
- AIR FILTRATION - 50 micron
- HOSE SIZE - 5/16" (8 mm) I.D.

EVERY 160 HOURS OF TOOL OPERATION, Inject grease # 68, one or two strokes, thru threaded end of spindle (27) for lubrication of needle bearing contained in counterbalance (26). Sanding pad must be removed from spindle to allow injection of grease.

An IR model CO5-02-GOO air line FILTER / REGULATOR / LUBRICATOR is recommended to maintain the above air supply of air to the tool.

Recommended Lubricants

After disassembly is complete, all parts, except sealed or shielded bearings, should be washed with solvent. To relubricate parts, or for routine lubrication, use the following recommended lubricants:



Where Used	Ingersoll Rand Part #	Description
O-Rings & Lip Seals	36460	4 oz. Stringy Lubricant
Gears and Bearings	# 68	5 lb. "EP" - NLGI # 1 Grease

Inspection, Maintenance and Installation

Disconnect air supply from the tool or shut off air supply and exhaust (drain) line of compressed air before performing maintenance or service to the tool.

It is important that the tools be serviced and inspected at regular intervals for maintaining safe, trouble-free operation of the tool.

Be sure that the air supply lines and connectors are of proper size to provide sufficient quantity of air to the tool.

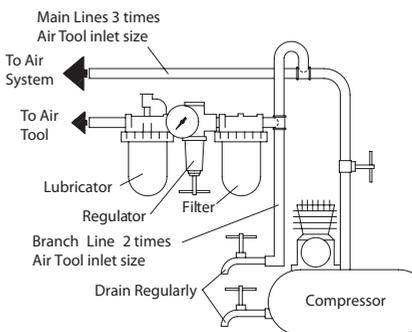
Tool maintenance and repair shall be performed by authorized, trained, competent personnel. Tools, hose and fittings shall be replaced if unsuitable for safe operation and responsibility should be assigned to be sure that all tools requiring guards or other safety devices shall be kept in legible condition. Maintenance and repair records should be maintained on all tools. Frequency of repair and the nature of the repairs can reveal unsafe application. Scheduled maintenance by competent authorized personnel should detect any mistreatment or abuse of the tool and worn parts. Corrective action should be taken before returning the tool for use.

Disassembly should be done on a clean work bench with a clean cloth spread to prevent the loss of small parts. After disassembly is completed, all parts should be thoroughly washed in a clean solvent, blown dry with air and inspected for wear levels, abuse and contamination. Double sealed or shielded bearings should never be placed in solvent unless a good method of re-lubricating the bearing is available. Open bearings may be washed but should not be allowed to spin while being blown dry.

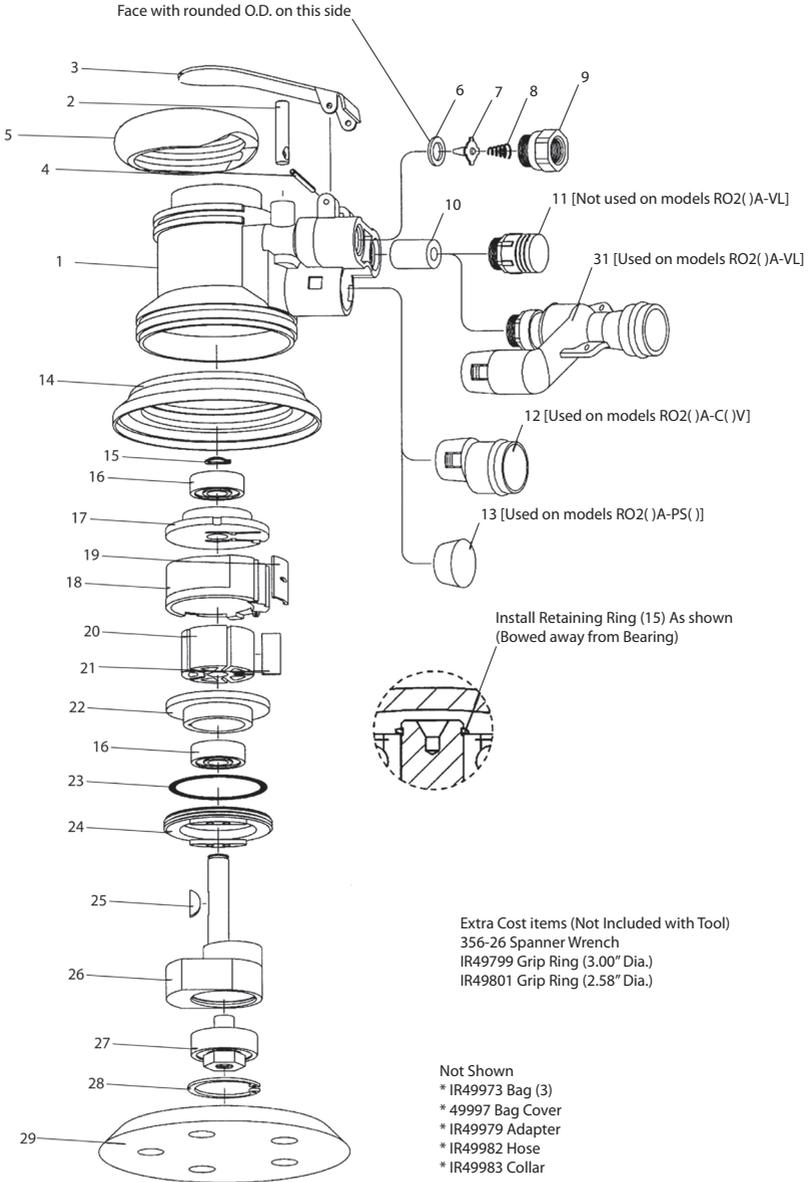
Upon reassembling, lubricate parts where required. Use #68 grease, or equivalent, in bearings. Use IR36460 lubricant for O-ring assembly. When assembling O-rings or parts adjacent O-rings, care must be exercised to prevent damage to the rubber sealing surfaces. A small amount of grease will usually hold steel balls and other small parts in place while assembling.

When replacement parts are necessary, consult drawing containing the parts identification.

Always use clean, dry air. Dust, corrosive fumes and/or excessive moisture can damage the motor of an air tool. An air line filter can greatly increase the life of an air tool. The filter removes rust, scale, moisture and other debris from the air lines. Low air pressure (less than 90 p.s.i.g.) reduces the speed of the air tool. High air pressure (more than 90 p.s.i.g.) raises performance beyond the rated capacity of the tool and could cause injury. Shown below is typical piping arrangement.



RO25A-(-)(-) and RO26A-(-)(-) Series Random Orbital Sander Exploded View



R025A-()-() and R026A-()--() Series Random Orbital Sander Parts List

Item	Part Description	Part Number	Item	Part Description	Part Number
1	Housing (includes pin)	49816-2	19	Seal	IR49819
2	Valve Stem	IR48065-2	20	Rotor	356-53
3	Lever	See Table	21	Blade (5)	IR48254-1
4	Roll Pin	356-15	22	Front End Plate	356-11
5	Grip Ring	IR49798	23	O-Ring	356-259
6	Seat	351-210	24	Lock Ring	356-218
7	Tip Valve	351-302	25	Key	351-405
8	Spring	351-51	26	Counterbalance (Includes Needle Bearing)	
9	Inlet Adapter	IR49824			
10	Muffler Tube	356-111		For 5" Pad Models	IR49808-5
11	Muffler	IR49818		For 6" Pad Models	351-236A
12	Vacuum Adapter	IR49802	27	Spindle Assembly (Includes Bearing)	351-8A
13	Tapered Plug	IR49821	28	Retaining Ring	351-28A
14	Shroud	See Table	29	Sanding Pad	See Table
15	Retaining Ring	351-119	*	Wrench	354-69
16	Bearing (2)	351-24	31	Eductor Assembly	IR49976
17	Rear End Plate	356-12	*	Service kit	IR49837
18	Cyliner (Includes Roll Pin)	IR49815			

* Not Shown

Maintenance

WARNING

Always wear eye protection when operating or performing maintenance on this tool.

Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool or before performing any maintenance on this tool.

NOTICE

- Never apply excessive pressure by a holding device which may cause distortion of a part.
- Apply pressure evenly to parts which have a press fit.
- Apply even pressure to the bearing race that will be press fitted to the mating part.
- Use correct tools and fixtures when servicing this tool.
- Don't damage O-rings when servicing this tool.
- Use only genuine **Ingersoll Rand** replacement parts for this tool. When ordering, specify part number, description, tool model number and serial number.

Disassembly

Motor Disassembly

- Remove sanding pad (24).
 - Remove retaining ring (28).
 - Remove spindle assembly (27) (includes bearing).
- NOTE:** Do not attempt to remove bearing from spindle.
- Remove lock ring (24) and pull motor and seal (19) from housing.
 - Remove retaining ring (15).
 - Using special brass blocks to fit around o.d. of cylinder, clamp around cylinder and press shaft of counterbalance thru bearing (16) and end plate (17).
 - Remove blades (21), rotor (20) and key (25).
 - Remove end plate (22) and bearing (16).

Throttle Disassembly

- Remove vacuum adapter (12)(if applicable) by pressing in on tabs and pulling vacuum adapter out.
 - Models R02()A-VLV: Remove eductor assembly (31)(if applicable).
 - To remove, unthread upper section, press in on tabs of lower section and pull assembly from housing.
 - Remove inlet adapter (9), releasing spring (8) and valve (7).
- NOTE:** Do not remove seat (6) unless damage is evident.
- Remove muffler (11), releasing muffler tube (10).
 - To remove valve stem (2), remove roll pin (4) and lever (3).

Assembly

Motor Assembly

- Grease and assemble O-Ring (23) to lock ring (24).
 - Assemble lock ring (24) over counterbalance (26).
 - Assemble bearing (16) into end plate (22), pressing on outer race of bearing.
 - Assemble end plate (22) onto shaft of counterbalance, pressing on inner race of bearing.
 - Install key (25) in key slot.
 - Assemble rotor (20) to counterbalance, aligning keyway to key (25).
 - Assemble five rotor blades (21) to rotor slots.
 - Assemble cylinder (18) over rotor, aligning roll pin in cylinder with slot in end plate.
 - Assemble bearing (16) into end plate (17), pressing on outer race of bearing.
 - Assemble end plate (17), with bearing (16), to counterbalance, pressing on inner race of bearing.
- NOTE:** Align slot in End plate with Roll Pin in cylinder.
- Install retaining ring (15) to groove in counterbalance, with bow in ring positioned as shown on parts illustration page.
 - Assemble seal (19) to grooves in cylinder.
 - Assemble motor to housing, aligning seal (19) with air inlet.
 - Tighten lock ring (24), securing motor assembly.
 - Lubricate needle bearing, contained in counterbalance, with IR #68 grease.

- Assemble spindle assembly (27) to counterbalance, securing with retaining ring (28).
- Assemble sanding pad (29) to tool and tighten securely.

Throttle Assembly

- Assemble valve stem (2) into housing with hole in valve stem in line with housing to accept valve (7).
- Assemble seat (6) into housing with rounded corners into housing first.
- Assemble valve (7) into housing, securing valve stem (2).
- Assemble spring (8) into housing.
- Assemble inlet adapter (9) to housing, securing throttle components.
- Assemble lever (3) to housing, securing with roll pin (4).
- Assemble vacuum adapter (12) or plug (13) to housing. To assemble vacuum adapter, push into housing until tabs on vacuum adapter snap into slots in housing. To assemble plug, push into housing until it is flush with port opening.
- Models R02()A-VLV: Assemble eductor assembly (31) to housing. To assemble, insert tapered section of eductor assembly into housing while aligning threaded section with housing. Using a wrench on flats, tighten threaded section with housing. Using Wrench on flats, tighten threaded section securely. Tabs will snap into the slot housing.

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