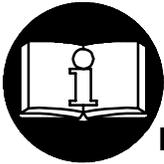


**MODELS RS2()A-() and RS2()A-()-EU
RANDOM ORBITAL SANDERS
12,000 R. P. M.**

NOTICE

ARO is not responsible for customer modification of tools for applications on which ARO was not consulted.

⚠ WARNING



**IMPORTANT SAFETY INFORMATION ENCLOSED.
READ THIS MANUAL BEFORE OPERATING TOOL.**

**IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PLACE THE INFORMATION
IN THIS MANUAL INTO THE HANDS OF THE OPERATOR.**

FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

PLACING TOOL IN SERVICE

- Always operate, inspect and maintain this tool in accordance with American National Standards Institute Safety Code for Portable Air Tools (ANSI B186.1).
- For safety, top performance, and maximum durability of parts, operate this tool at 90 psig (6.2 bar/620 kPa) maximum air pressure at the inlet with 5/16" (8 mm) inside diameter air supply hose.
- 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.
- Do not use damaged, frayed or deteriorated air hoses and fittings.
- Be sure all hoses and fittings are the correct size and are tightly secured. See Dwg. TPD905-1 for a typical piping arrangement.
- Always use clean, dry air at 90 (6.2 bar/ 620 kPa) psig maximum air pressure. Dust, corrosive fumes and/or excessive moisture can ruin the motor of an air tool.
- Do not lubricate tools with flammable or volatile liquids such as kerosene, diesel or jet fuel.
- Do not remove any labels. Replace any damaged label.

USING THE TOOL

- Always wear eye protection when operating or performing maintenance on this tool.
- Always wear hearing protection when operating this tool.
- Keep hands, loose clothing and long hair away from rotating end of tool.
- Anticipate and be alert for sudden changes in motion during start up and operation of any power tool.
- Keep body stance balanced and firm. Do not overreach when operating this tool. High reaction torques can occur at or below the recommended air pressure.
- Tool accessories may continue to rotate briefly after throttle is released.
- Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.
- Use accessories recommended by ARO.
- This tool is not designed for working in explosive atmospheres.
- This tool is not insulated against electric shock.

NOTICE

The use of other than genuine ARO replacement parts may result in safety hazards, decreased tool performance, and increased maintenance, and may invalidate all warranties.

Repairs should be made only by authorized trained personnel. Consult your nearest ARO Authorized Servicenter.

For parts and service information, contact your local ARO distributor, or the Customer Service Dept. of the Ingersoll-Rand Distribution Center, White House, TN at PH: (615) 672-0321, FAX: (615) 672-0801.

ARO Tool Products

Ingersoll-Rand Company

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WARNING LABEL IDENTIFICATION

⚠ WARNING

FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

	⚠ WARNING Always wear eye protection when operating or performing maintenance on this tool.
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	⚠ WARNING Always wear hearing protection when operating this tool.
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	⚠ WARNING 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.
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	⚠ WARNING Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.
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	⚠ WARNING Do not carry the tool by the hose.
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	⚠ WARNING Do not use damaged, frayed or deteriorated air hoses and fittings.
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	⚠ WARNING Keep body stance balanced and firm. Do not overreach when operating this tool.
---	--

	⚠ WARNING Operate at 90 psig (6.2 bar/ 620 kPa) Maximum air pressure.
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⚠ WARNING	
	⚠ WARNING Read the manual before operating this tool. Operate at 90 psig/6.2 bar max.
	
PN 48176-1 LABEL (NON-EU MODELS)	PN 49883 LABEL (-EU MODELS)
This label must appear on the tool at all times. If it is lost or damaged, a replacement label is available at no cost.	

SANDER SPECIFIC WARNINGS

- Use only a sanding pad, buffing wheel or polishing bonnet with these tools. Do not use any grinding wheel, bur or metal removing accessory other than a sanding pad with these tools. Never use an accessory having a maximum operating speed less than the free speed of the Sander in which it is being used.
- These Sanders will operate at the free speed specified on the nameplate if the air supply line furnishes 90 psig (6.2 bar/620 kPa) air pressure at the tool. Operation at higher air pressure will result in excessive speed.
- Do not operate this Sander away from the work surface.
- Check for excessive speed and vibration before operating.
- Do not use this tool if actual free speed exceeds the nameplate rpm.
- Never exceed the rated rpm of tool.
- Repeated prolonged operator exposure to vibrations which may be generated in the use of certain hand-held tools may produce Raynaud's phenomenon, commonly referred to as Whitefinger disease. The phenomenon produces numbness and burning sensations in the hand and may cause circulation and nerve damage as well as tissue necrosis. Repetitive users of hand-held tool who experience vibrations should closely monitor duration of use and their physical condition.
- When using a pad having a shank, insert the shank to full depth in the collet. When using a pad on a threaded arbor, make certain the flange nut is tightened securely. Check the tightness of the collet nut or flange nut before operating a Sander to make certain it will not loosen during operation.
- Always use the recommended ARO Guard furnished with the Sander.

LUBRICATION



<u>Where Used</u>	<u>ARO Part #</u>	<u>Description</u>
"O" Rings & Lip Seals	36460	4 oz. Stringy Lubricant
Gears and Bearings	33153	5 lb. "EP" – NLGI #1 Grease

Always use an air line lubricator with these tools.

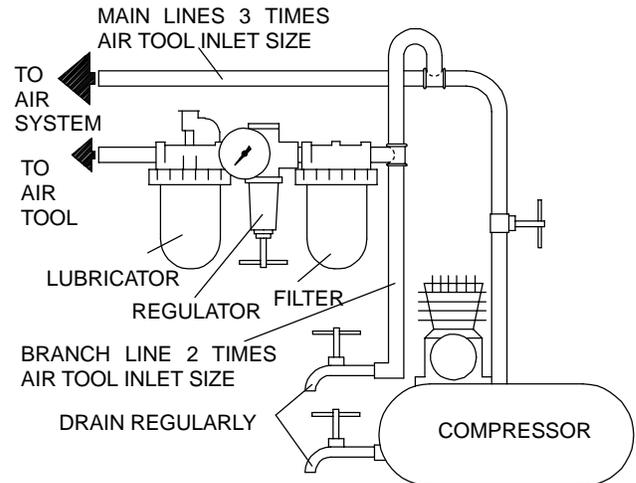
We recommend the following Filter–Lubricator–Regulator Unit:

ARO Model P29231–110 plus 100067 Gauge

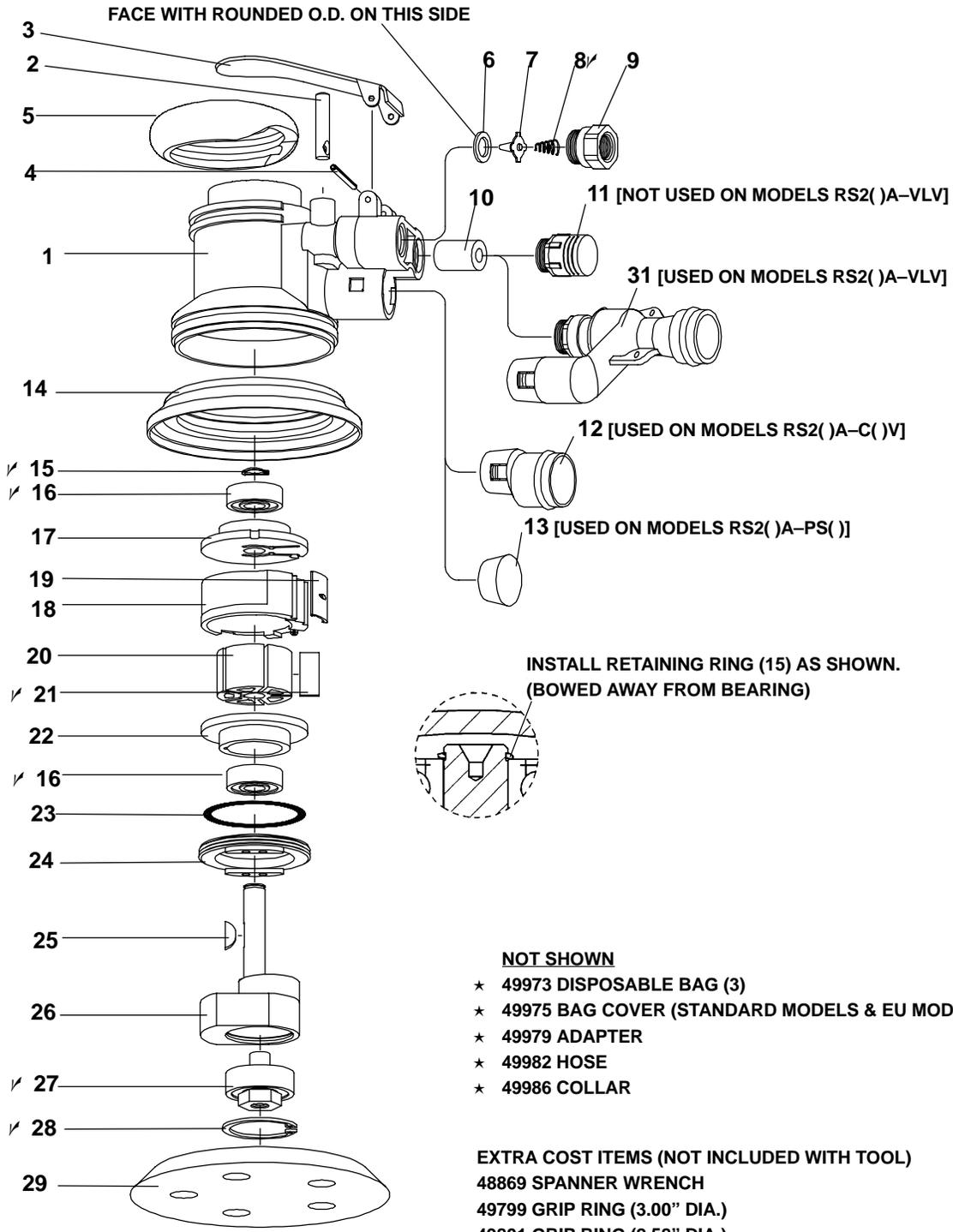
After each 160 hours of operation, inject one or two strokes of ARO Part #33153 grease through the end of the spindle (27) to lubricate the needle bearing which is in the end of the counterbalance (26). The sanding pad (29) must be removed from the spindle to allow injection of the grease.

CAUTION

Do not mark any nonmetallic surface on this tool with customer identification codes. Such actions could affect tool performance.



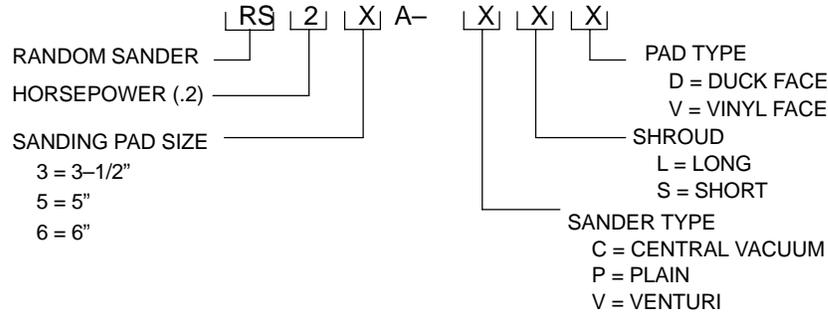
(Dwg. TPD905–1)



✓ INCLUDED IN SERVICE KIT NO. 49837.
★ INCLUDED WITH MODELS RS2()A-VLV-() ONLY.

(ATP-40)

MODEL NUMBER IDENTIFICATION



MODEL NUMBER	LEVER (ITEM 3)	SHROUD (ITEM 14)	PAD (ITEM 29)	PAD DESCRIPTION
RS23A-CLV	48274-1	04334025	04334009	3-1/2" VINYL FACE
RS23A-CLV-EU	49936	04334025	04334009	3-1/2" VINYL FACE
RS23A-PLV	48274-1	04334025	04334009	3-1/2" VINYL FACE
RS23A-PLV-EU	49936	04334025	04334009	3-1/2" VINYL FACE
RS23A-VLV	48274-1	04334025	04334009	3-1/2" VINYL FACE
RS23A-VLV-EU	49936	04334025	04334009	3-1/2" VINYL FACE
RS25A-CLV	48274-1	48876	49096	5" VINYL FACE
RS25A-CLV-EU	49936	48876	49096-1	5" VINYL FACE
RS25A-CSV	48274-1	48266-1	49096	5" VINYL FACE
RS25A-CSV-EU	49936	48266-1	49096-1	5" VINYL FACE
RS25A-PSD	48274-1	48266-1	49877	5" DUCK FACE
RS25A-PSV	48274-1	48266-1	49094 *	5" VINYL FACE
RS25A-PSV-EU	49936	48266-1	49094-1 *	5" VINYL FACE
RS25A-VLV	48274-1	48876	49096	5" VINYL FACE
RS25A-VLV-EU	49936	48876	49096-1	5" VINYL FACE
RS26A-CLV	48274-1	48878	49099	6" VINYL FACE
RS26A-CLV-EU	49936	48878	49099-1	6" VINYL FACE
RS26A-CSV	48274-1	48266-1	49099	6" VINYL FACE
RS26A-CSV-EU	49936	48266-1	49099-1	6" VINYL FACE
RS26A-PSD	48274-1	48266-1	49880	6" DUCK FACE
RS26A-PSV	48274-1	48266-1	49879	6" VINYL FACE
RS26A-PSV-EU	49936	48266-1	49879-1	6" VINYL FACE
RS26A-VLV	48274-1	48878	49099	6" VINYL FACE
RS26A-VLV-EU	49936	48878	49099-1	6" VINYL FACE

MODELS WITH -EU SUFFIX ARE "EC" COMPLIANT MODELS *GOLD COLOR CODED SPINDLE

PART NUMBER FOR ORDERING

PART NUMBER FOR ORDERING

1	Housing (includes pin)	49816-1	19	Seal	49819
2	Valve Stem	48065-2	20	Rotor	48253-1
3	Lever	See table	21	Blade (5 req'd)	48254-1
4	Roll Pin	Y178-134	22	Front End Plate	48871
5	Grip Ring	49798	23	O-Ring	Y325-223
6	Seat	48071	24	Lock Ring	48257-1
7	Tip Valve	48070	25	Key	39442
8	Spring	32858	26	Counterbalance (includes needle bearing) for 3-1/2" pad models	49808-3
9	Inlet Adapter	49824		for 5" pad models	49808-5
10	Muffler Tube	48263-1		for 6" pad models	49808-6
11	Muffler	49818	27	Spindle Assembly (includes bearing)	49807
12	Vacuum Adapter	49802	28	Retaining Ring	Y147-125
13	Tapered Plug	49821	29	Sanding Pad	See table
14	Shroud	See table	30	Wrench (not shown)	30131-2
15	Retaining Ring	44533	31	Eductor Assembly	49976
16	Bearing (2 req'd)	48169-1		Service Kit: includes items 8, 15, 16, 21, 27 and 28	49837
17	Rear End Plate	48872			
18	Cylinder (includes roll pin)	49815			

DISASSEMBLY/ASSEMBLY INSTRUCTIONS

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 ARO replacement parts for this tool. When ordering, specify part number, description, tool model number and serial number.

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).

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 ARO 33153 grease.
- Assemble spindle assembly (27) to counterbalance, securing with retaining ring (28).
- Assemble sanding pad (29) to tool and tighten securely.

THROTTLE DISASSEMBLY

- Remove vacuum adapter (12)(if applicable) by pressing in on tabs and pulling vacuum adapter out.
- Models RS2()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).

THROTTLE ASSEMBLY

- Coat valve stem (2) with ARO 29665 spindle oil and assemble 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.
- Coat valve (7) with ARO 29665 spindle oil and assemble 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 RS2()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 securely. Tabs will snap into slots in housing.

