

**MODELS 8448-A1()-() and 8448-A3()-()
ORBITAL SANDERS**

NOTICE

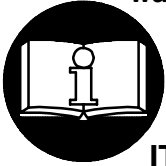
ARO is not responsible for customer modification of tools for applications on which ARO was not consulted.

⚠ 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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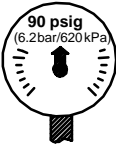
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	<p style="text-align: center;">⚠ WARNING</p> <p>Do not carry the tool by the hose.</p>
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PN 48176-1 LABEL (NON-EU MODELS)	PN 49883 LABEL (-EU MODELS)		
<p>This label must appear on the tool at all times. If it is lost or damaged, a replacement label is available at no cost.</p>			

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>
Air Motor	29665	1 qt. Spindle Oil
"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:

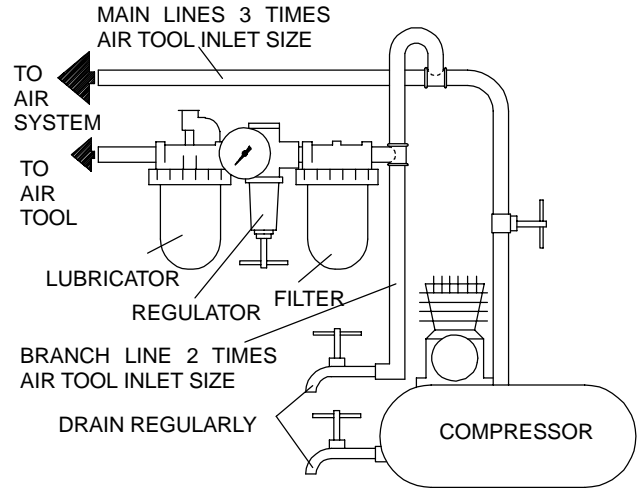
ARO Model C28231–810

Every 8 hours of tool operation – Fill lubricator reservoir of recommended F.R.L. with spindle oil (29665). If an in line or air line lubricator is not used, apply several drops of spindle oil (29665) in air inlet.

After each 160 hours of tool operation, Flush tool with a solution of three (3) parts cleaning solvent to one (1) part spindle oil.

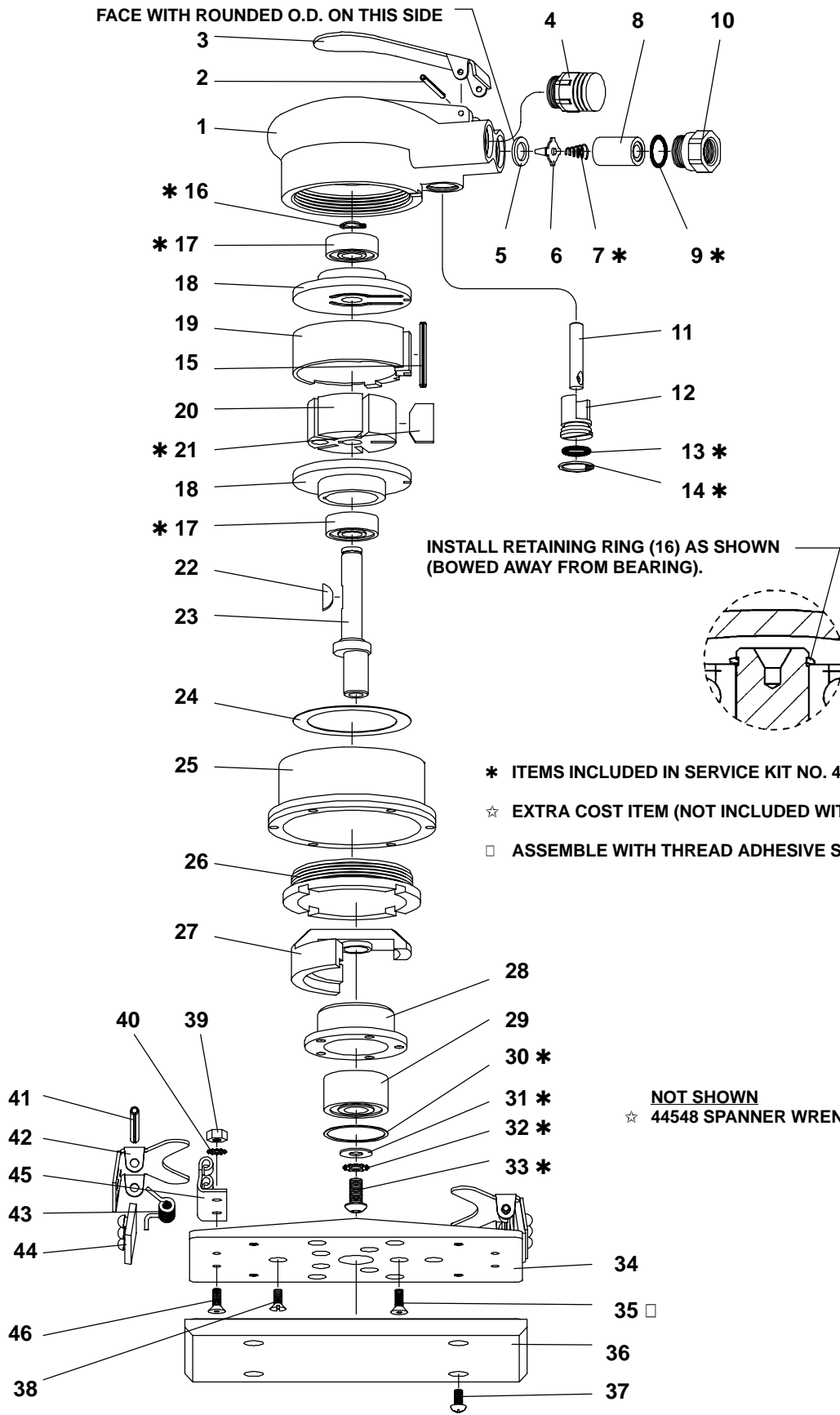
CAUTION

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



(Dwg. TPD905–1)

FACE WITH ROUNDED O.D. ON THIS SIDE



(ATP-22)

PART NUMBER FOR ORDERING

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1	Housing	See chart	26	Lock Ring	44536
2	Roll Pin	Y178-33	27	Counterbalance	44572
3	Lever	See chart	28	Bearing Housing	39809
4	Muffler	481711	29	Bearing	41093
5	Seat	48071	30	Shim	39817
6	Tip Valve	48070	31	Washer	F15-102
7	Spring	32858	32	Washer	Y117-416
8	Spacer	See chart	33	Screw	Y212-43
9	"O" Ring	Y325-14	34	Drive Plate	44562
10	Inlet Adapter	48069	35	Screw (5 req'd)	Y194-382
11	Valve Stem	48065	36	Pad	See chart
12	Regulator	48068	37	Screw (4 req'd)	Y134-84C
13	"O" Ring	Y325-13	38	Screw (6 req'd)	Y61-85-C
14	Retaining Ring	Y147-62	39	Nut (2 req'd)	72458
15	Roll Pin	Y178-47	40	Washer (2 req'd)	Y117-8
16	Retaining Ring	44533	41	Roll Pin	Y178-139
17	Bearing (2 req'd)	48169-1	42	Clamp	44563
18	End Plate (2 req'd)	44529-1	43	Spring	42704
19	Cylinder	44531	44	Pad	42705
20	Rotor	44532	45	Bracket	42703
21	Blade (5 req'd)	44538	46	Screw (2 req'd)	Y194-382
22	Key	39442		PAPER HOLDER ASSEMBLY (include	
23	Spindle	44669		items 39 thru 46)	44574
	MOTOR ASSEMBLY (includes items		47	Sleeve (not shown)	See chart
	16 thru 23)	44566		SERVICE KIT: includes items 7, 9, 13,	
24	Spacer	44878		14, 16, 17, 21, 30, 31, 32 and 33	48248-1
25	Boot	44564			

MODEL NO.	R.P.M.	HOUSING (ITEM 1)	LEVER (ITEM 3)	SPACER (ITEM 8)	PAD (ITEM 36)	PAD DESCRIPTION	SLEEVE (ITEM 47)
8448-A1C	8000	48064	48067		44570	5/16" FELT PAD	49465
8448-A1C-EU	8000	48064	48067-1		44570	5/16" FELT PAD	49465
8448-A1K	8000	48066	48067	48072	44570	5/16" FELT PAD	49466
8448-A3C	8000	48064	48067		44571	1/2" SPONGE RUBBER PAD	49465
8448-A3C-EU	8000	48064	48067-1		44571	1/2" SPONGE RUBBER PAD	49465
8448-A3K	8000	48066	48067	48072	44571	1/2" SPONGE RUBBER PAD	49466
8448-A3K-EU	8000	48066	48067-1	48072	44571	1/2" SPONGE RUBBER PAD	49466

MODELS WITH -EU SUFFIX ARE "EC" COMPLIANT MODELS.

⚠ 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 four screws (37), releasing pad (36) from tool.
- Remove six screws (38) and five screws (35), releasing drive plate (34), with paper holder assemblies.
- Remove screw (33), washer (32), washer (31), shim (30), bearing (29), bearing housing (28) and counterbalance (27).
- Remove lock ring (26) – LEFT HAND THREADS – boot (25) and spacer (24).
- Remove motor assembly and pin (15). NOTE: It may be necessary to tap housing with a soft face hammer to loosen motor from housing.
- Remove retaining ring (16).
- Using special brass blocks to fit around o.d. of cylinder, clamp around cylinder and press spindle (23) thru bearing (17) and end plate (18).
- Remove blades (21), rotor (20) and key (22).
- Remove other bearing (17) and end plate (18).

MOTOR ASSEMBLY

- Press bearings (17) into end plates (18), pressing on outer race of bearings.
- Assemble one end plate (18) onto spindle (23).
- Install key (22) in key slot.
- Assemble rotor (20) to spindle (23), aligning keyway to key (22).
- Coat five rotor blades (21) with ARO 29665 spindle oil and assemble to rotor slots – straight side out.
- Coat i.d. of cylinder (19) with ARO 29665 spindle oil and assemble over rotor.
- Assemble end plate (18), with bearing (17), to spindle (23), pressing on inner race of bearing.

- Install retaining ring (16) to groove in spindle, with ring bowed away from motor.
- Place housing (1) in a suitable holding device, with "motor end" in an upright position.
- Place a 1/8" diameter rod (6" to 8" long) into the blind hole provided in housing for roll pin.
- Align notches in end plates and cylinder with rod and slide motor assembly down rod and into housing.
- Remove rod and insert roll pin (15).
- Assemble spacer (24) into housing (1).
- Assemble boot (25) to housing, aligning tab on boot with slot in housing.
- Assemble lock ring (26) to housing – LEFT HAND THREADS – securing motor assembly and boot.
- Pack bearing (29) with ARO 33153 grease and assemble to bearing housing (28), pressing on outer race of bearing. NOTE: Assemble with shielded side out.
- Assemble counterbalance (27) and bearing housing (28) to spindle (23), pressing on inner race of bearing.
- Assemble shim (30), washer (31) and washer (32) to tool, securing with screw (33).
- Assemble drive plate (34) to tool, securing with five screws (35) and six screws (38). NOTE: Be sure tab on boot (25) is aligned with slot in housing (1).
- Assemble pad (36) to drive plate (34), securing with four screws (37).
- NOTE: When replacing entire plate and paper holder assembly, replace with riveted holder assembly (44567). When replacing paper holder assembly only, replace with paper holder assembly (44574).
- Assemble paper holder assembly to drive plate (34), securing with screws (46), washers (40) and nuts (39).

THROTTLE DISASSEMBLY

- Remove pad (36) and drive plate (34) (see "Motor Disassembly").
- Remove inlet adapter (10) and "O" ring (9), releasing spacer (8) (where applicable), spring (7) and valve (6). NOTE: Do not remove seat (5) unless damage is evident.
- Remove retaining ring (14), releasing regulator (12), with "O" ring (13), and valve stem (11).
- To remove lever (3), remove roll pin (2).

THROTTLE ASSEMBLY

- Grease and assemble "O" ring (13) to regulator (12).
- Coat valve stem (11) with ARO 29665 spindle oil and assemble to housing, with hole in valve stem in line with housing to accept valve (6).
- Coat valve (6) with ARO 29665 spindle oil and assemble to housing, securing valve stem (11).
- Assemble spring (7) and spacer (8) (where applicable) to housing, securing with "O" ring (9) and inlet adapter (10).
- Assemble regulator (12) to housing, securing with retaining ring (14).
- Assemble drive plate (34) and pad (36) to tool (see "Motor Assembly").



PN 49999-302

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