ARO®

OPERATOR'S MANUAL

SECTION M10
MANUAL 112

INCLUDING: OPERATION, INSTALLATION & MAINTENANCE

Released: 10–23–63
Revised: 09–01–00
Form: 550–2

MODELS 8444–( )
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.

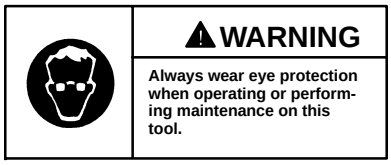
ARO Tool Products
Ingersoll–Rand Company
1725 U.S. No. 1 North ● P.O. Box 8000 ● Southern Pines, NC 28388–8000

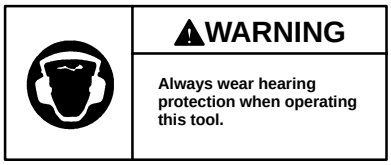
IR ARO®

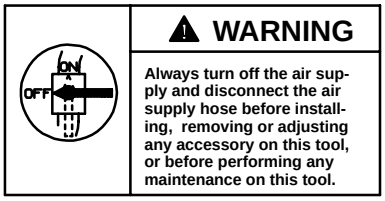
WARNING LABEL IDENTIFICATION

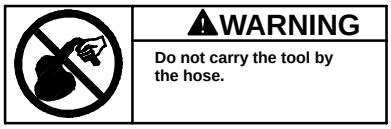
⚠ WARNING

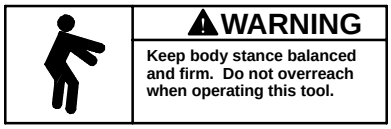
FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

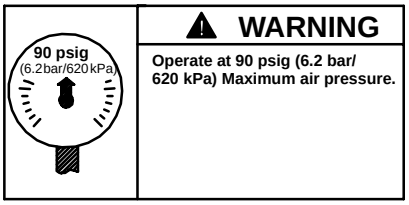


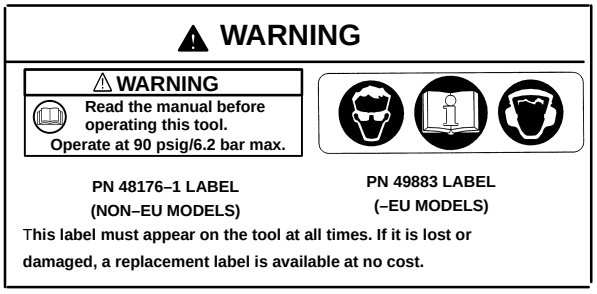












SANDER SPECIFIC WARNINGS

- **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.**

LUBRICATION

Where Used	ARO Part #	Description
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:

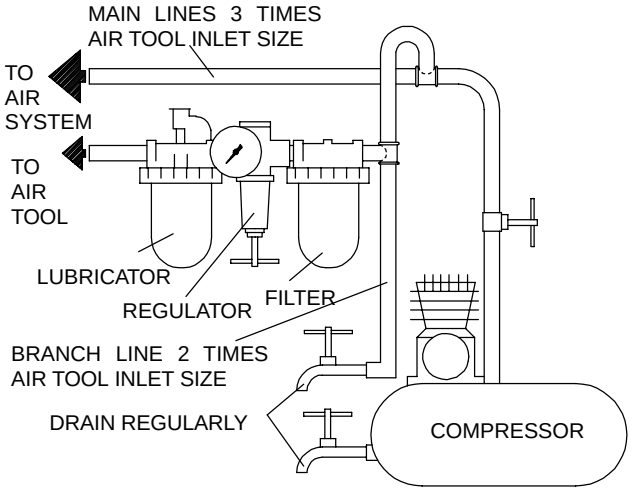
ARO Model C28231–810

After each 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 40 hours of tool operation, Flush tool with a solution of three (3) parts cleaning solvent to one (1) part spindle oil. After flushing, apply a small amount of spindle oil in air inlet and run free for one minute to insure proper lubrication.

CAUTION

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



(Dwg. TPD905–1)

MODEL IDENTIFICATION

MODEL NUMBER	FREE SPEED	LEVER	NAMEPLATE	PAD NUMBER	PAD DESCRIPTION
8444	8000 C.P.M.	39790	32882	39800	5/16" FELT PAD
8444–EU		39790–1	49970	39800	5/16" FELT PAD
8444–1		39790	32882	39801	5/16" SPONGE RUBBER
8444–2		39790	32882	39802	1/2" SPONGE RUBBER
8444–5		39790	32882	41980	1/2" MOLDED RUBBER
8444–5–EU		39790–1	49970	41980	1/2" MOLDED RUBBER

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.

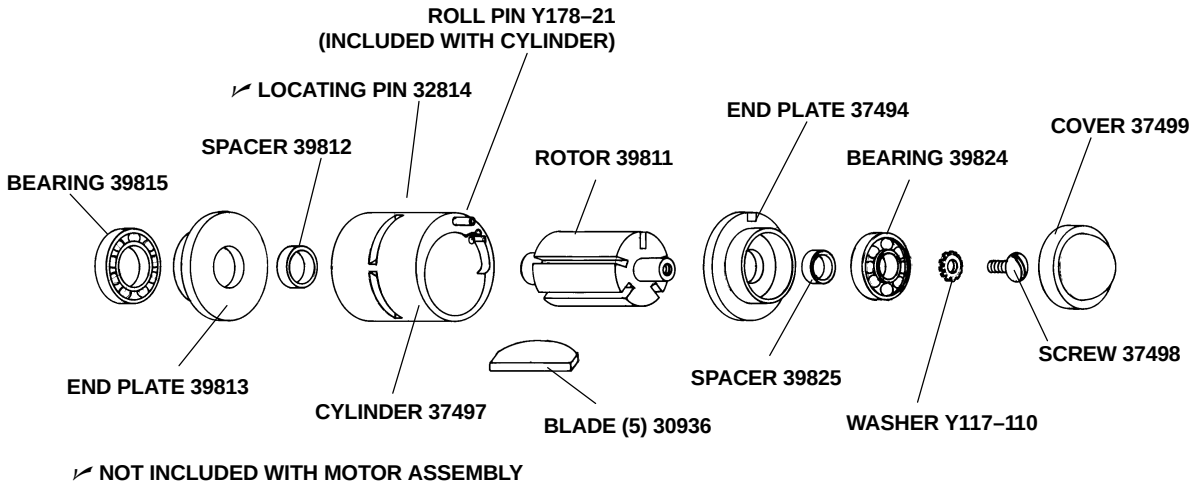
DISASSEMBLY

– Remove four (4) screws (Y8–83–C) and remove pad assembly.
– Remove nine (9) screws (Y61–84–C) and six (6) screws (Y61–465–C) from main drive plate (39810). Remove plate and paper holder assembly. Shim (39817) may now be removed.
– Remove four (4) screws (Y61–87–C) to remove retaining plates (39788), plate (41992), strap (39819) and bracket (39820). Remove screws (Y8–85–C) to disassemble plate (41992), strap (39819) and bracket (39820).
– Remove dust cover (37529) by pulling it over drive assembly (39818).
– Using spanner wrench (39816)(not furnished), remove retaining ring (39814). Pull motor assembly (39822–1), with attached drive assembly (39818), from housing. Locating pin (32814) is now free to be removed.
– Remove cover (37499) by carefully prying under the lip of the cover. Holding eccentric (39823) from rotating, remove screw (37498) and washer (Y117–110) from rear of motor. Slot in rotor (39811) can be used to turn motor assembly (39822–1) from drive assembly (39818). If drive assembly (39818) loosens before screw (37498), remove drive assembly, front end plate (39813) and cylinder (37497) with pins. Hold rotor (39811) in a soft–jawed vise to remove screw (37498) and rear end plate (37494).
– Drive assembly (39818) need not be disassembled unless it is necessary to replace one of the component parts.
– Remove plug (31402) for removal of valve components.

ASSEMBLY

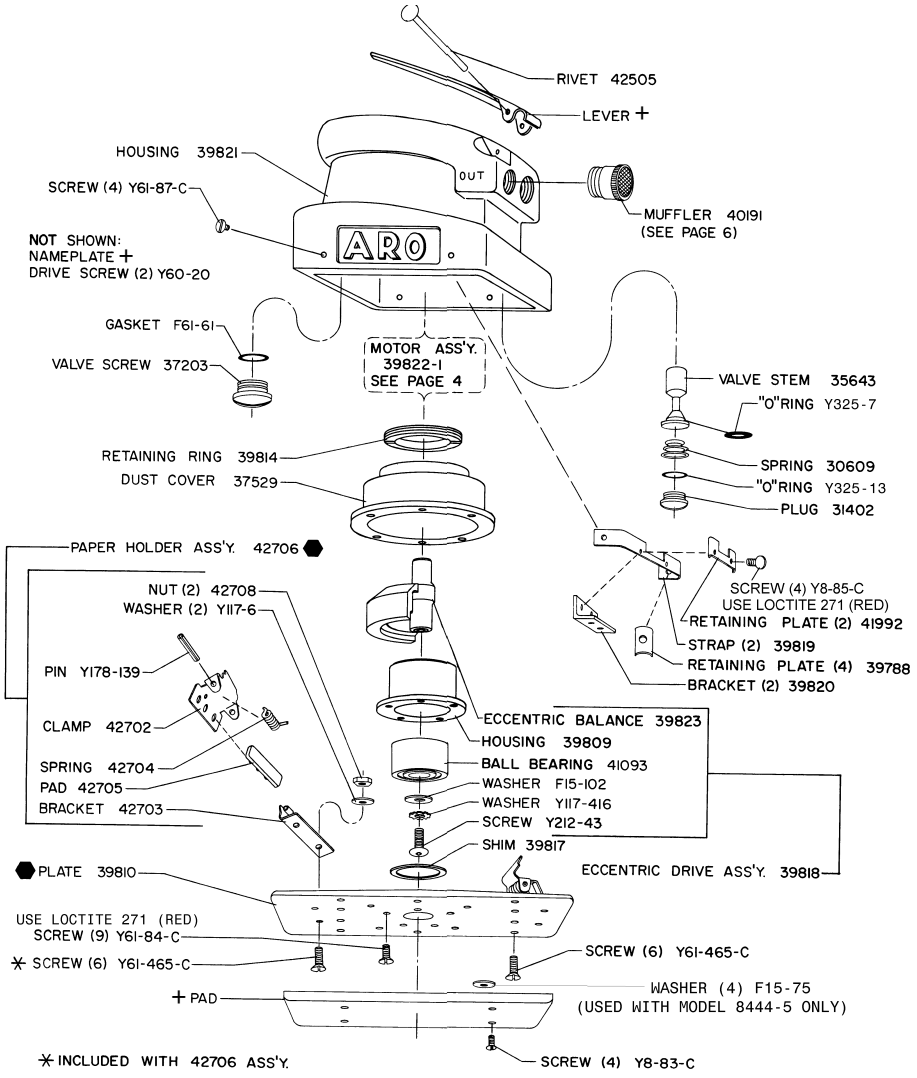
– Insert valve stem (35643), with attached "O" ring (Y325–7), and spring (30609) into valve opening and secure with plug (31402) and "O" ring (Y325–13).
– Assemble bearings into end plates. NOTE: Assemble with the face of the bearing having the least amount of clearance between the inner and outer races toward the end plate. Assemble end plate (37494), with bearing and spacer (39825), to rotor. Assemble cylinder (37497) over rotor, aligning roll pin (Y178–21) and notch in end plate (37494), and assemble blades to rotor. Assemble front end plate (39813), with bearing and spacer (39812), to rotor and cylinder.
– Place retaining ring (39814) over front end plate (39813) and assemble drive assembly (39818) to rotor. Holding drive assembly (39818) in a suitable holding device, securely tighten to rotor using a large screwdriver in slot on rear of rotor. Assemble washer (Y117–110), screw (37498) and cover (37499) to motor. Be sure rotor turns without binding.
– Insert locating pin (32814) into cylinder (37497). Slide motor assembly (39822–1), with attached drive assembly (39818), into housing, aligning locating pin (32814) with slot in housing. Tighten retaining ring (39814) with spanner wrench (39816)(not furnished).
– Stretch dust cover (37529) over drive assembly and into place on housing. NOTE: Position dust cover on housing with hole in side of cover pointing toward rear of housing.
– Assemble bracket (39820), strap (39819) and plate (41992) and secure with screws (Y8–85–C). Assemble this sub–assembly into housing with retaining plate (39788) and secure with screws (Y61–87–C).
– Place shim (39817) on bearing (41093). Locate plate and paper holder assembly on tool and secure to brackets (39820) with four (4) screws (Y61–84–C). Locate plate and paper holder assembly holes with holes in bearing housing (39809) and secure with five (5) screws (Y61–84–C). Be sure that each screw is tightened securely.
– Locate holes in plates and paper holder assembly with holes in dust cover (37529) and lightly tighten six (6) screws (Y61–465–C) to approximately 3 in. lbs. Excessive tightening will distort metal insert in dust cover.
– Secure pad assembly to plate and paper holder with four (4) screws (Y8–83–C).

MOTOR ASSEMBLY 39822–1



NOT INCLUDED WITH MOTOR ASSEMBLY

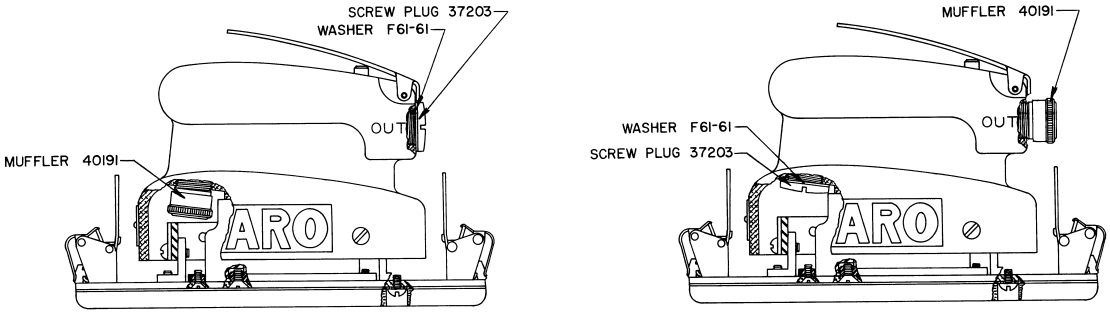
(ATP–18)



NOTE: 42706 ASS'Y IS USED FOR REPAIR OF RIVETED HOLDER ASS'Y. WHEN REPLACING ENTIRE PLATE 39810 AND PAPER HOLDER ASSEMBLIES ORDER 42707 RIVETED PLATE AND HOLDER ASS'Y.

\+ SEE MODEL IDENTIFICATION

(ATP–9)



ALTERNATE EXHAUST SYSTEMS

FOR REMOTE EXHAUST, ORDER (37699) DUAL HOSE ASSEMBLY

(ATP–8)