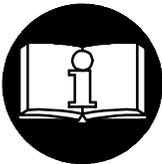


MODELS: 7939-E-(), 7944-E-(), 7945-E-() and 7945-EW-() "2200" SERIES RIGHT-ANGLE SANDER/POLISHER

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

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WARNING LABEL IDENTIFICATION

⚠ WARNING

FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

	<p>⚠ WARNING</p> <p>Always wear eye protection when operating or performing maintenance on this tool.</p>
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	<p>⚠ WARNING</p> <p>Always wear hearing protection when operating this tool.</p>
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	<p>⚠ WARNING</p> <p>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.</p>
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	<p>⚠ WARNING</p> <p>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.</p>
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	<p>⚠ WARNING</p> <p>Do not carry the tool by the hose.</p>
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	<p>⚠ WARNING</p> <p>Do not use damaged, frayed or deteriorated air hoses and fittings.</p>
--	---

	<p>⚠ WARNING</p> <p>Keep body stance balanced and firm. Do not overreach when operating this tool.</p>
---	---

	<p>⚠ WARNING</p> <p>Operate at 90 psig (6.2 bar/ 620 kPa) Maximum air pressure.</p>
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⚠ WARNING	
<p>⚠ WARNING</p> <p>Read the manual before operating this tool. Operate at 90 psig/6.2 bar max.</p>	  
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.
- Whenever the Angle Head is installed or repositioned, the Throttle Lever must be positioned so that reaction torque will not tend to retain the throttle in the “ON” position.
- 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



<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

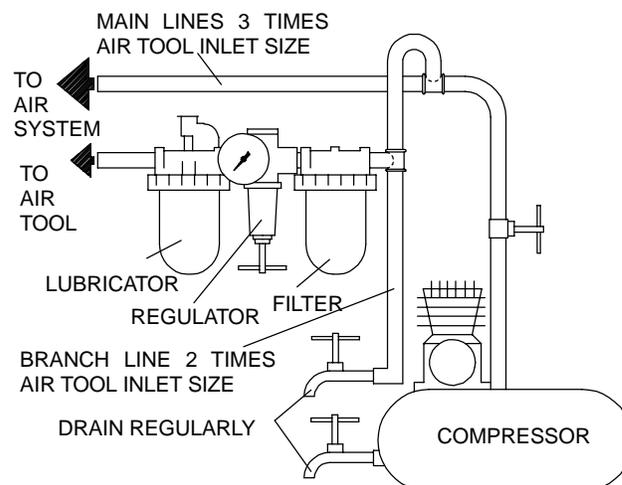
After each 8 hours of operation, – Fill lubricator reservoir of recommended F.R.L. with spindle oil (29665). If an in line or air line lubricator is not used, apply several drops of spindle oil (29665) in air inlet.

After each 40 hours of operation, Flush tool with a solution of three (3) parts cleaning solvent to one (1) part spindle oil.

After each 160 hours of operation, Pack bearings with NLGI #1 "EP" grease (33153). Lubricate gearing of tool thru grease fitting with ARO 33153 grease or equivalent. Gearing should contain approximately 1/4 oz. (7 g) of grease per reduction. Right-angle attachment should contain approximately 1/8 oz. (3.5 g) of grease.

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	R.P.M.	TOOL TYPE	THROTTLE TYPE	RIGHT-ANGLE ASSEMBLY NO.	GEARING AUXILIARY DRIVE		MOTOR ASSEMBLY
7939-E-()	6000	SANDER	LEVER	37481-1		37484	43139
7944-E-()	3500	SANDER	LEVER	37481-1		37485	43139
7945-E-()	1500	SANDER	LEVER	37481-2		37485	43139
7945-EW-()	1500	WET SANDER	LEVER	37482-2		37485	43139
7958-E	750	SANDER	LEVER	37481-1	40826	37484	43139
7958-EW	750	WET SANDER	LEVER	37482-1	40826	37484	43139

 CANCELLED MODELS

MODELS WITH -EU ARE "EC" COMPLIANT MODELS

DISASSEMBLY AND ASSEMBLY OF TOOLS

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.

RIGHT-ANGLE SECTION

Remove pad nut (30214), pad and washer (33003). Remove cap screw (Y99-54) and pull right-angle assembly from gearing. For complete disassembly, see page 5.

GEARING SECTION

Remove right-angle section. If tool has both drive gearing and auxiliary gearing; remove drive gearing using wrenches on flats of gear housings (ring gear). If tool has only drive gearing; hold motor housing with a strap type wrench, or other suitable holding fixture, and remove gearing using a wrench on flats of gear housing. For complete disassembly, see page 7.

MOTOR SECTION

Remove gearing section. Grasp end of rotor and pull motor assembly from housing. For complete disassembly, see page 8.

HEAD SECTION

Valve components in head can be serviced without removing head from tool. To remove head from tool; place flats of head in a suitable holding device and, using a strap type wrench, unthread and remove motor housing from head. For removal of valve components, see page 9.

RIGHT-ANGLE SECTION

M12
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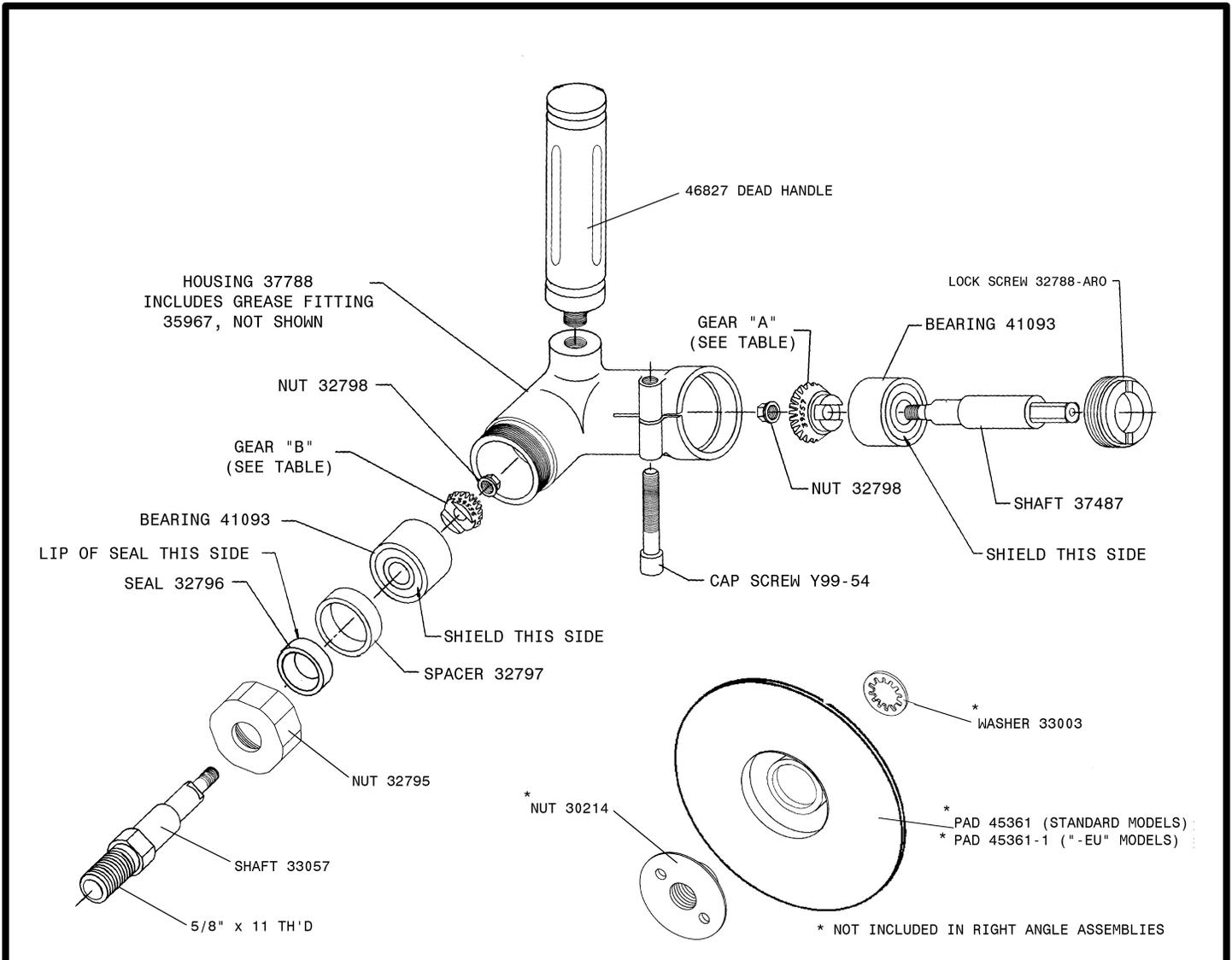
DISASSEMBLY

- Remove right-angle from tool as outlined on page 4.
- To remove shaft (37487), remove lock screw (32788-ARO). Bearing and gear are secured to shaft with nut (32798).
- To remove shaft (33057), remove nut (32795) and pull shaft from housing. Bearing and gear are secured to shaft with nut (32798). To remove seal from shaft, remove nut (32798), gear, bearing (41093) and spacer (32797).

- nut (32798). NOTE: Assemble seal and bearing to shaft positioned as shown. Pack bearing before assembling to shaft. Lubricate gear liberally with ARO 33153 grease and assemble to housing. Secure to housing with nut (32795).
- Pack bearing and assemble to shaft (37487) – shielded side first. Assemble gear to shaft and secure with nut (32798). Lubricate gear liberally with ARO 33153 grease and assemble shaft to housing. Be sure splines of gears are properly aligned and secure shaft with lock screw (32788-ARO). NOTE: Right-angle assembly should contain approximately 1/8 oz. (3.5 g) of grease.

ASSEMBLY

- Assemble nut (32795), seal (32796), spacer (32797), bearing (41093) and gear (see table) to shaft (33057) and secure with



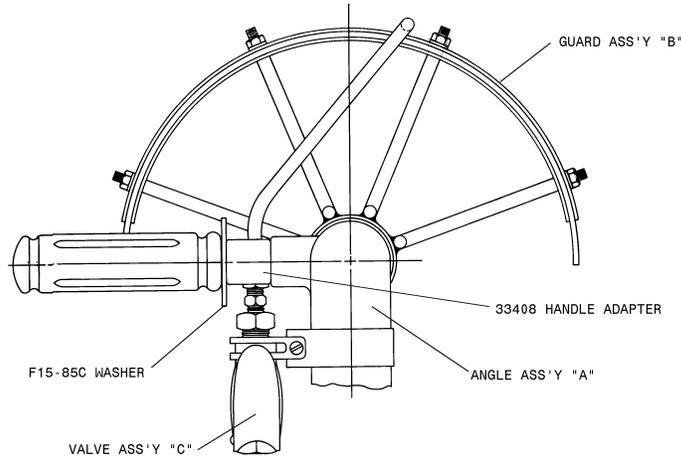
RIGHT-ANGLE ASSEMBLY 37481-1 AND 37481-2

ASSEMBLY NUMBER	"A" GEAR	"B" GEAR	SPEED	REDUCTION
37481-1	39557	39556	HIGH	0.64:1
37481-2	39556	39557	LOW	1.57:1

(ATP-7)

WET SANDER ATTACHMENT

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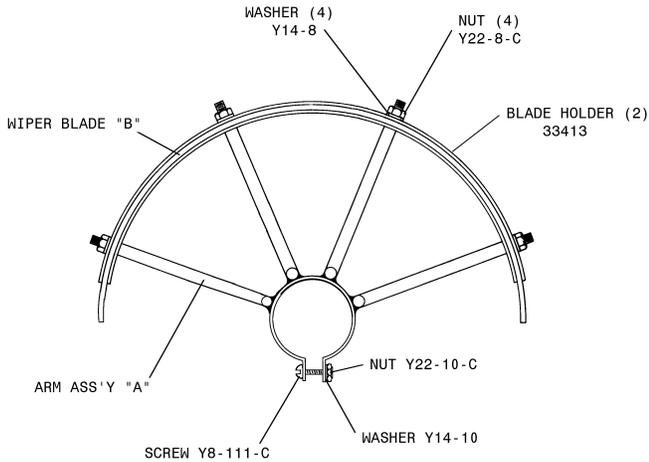


RIGHT-ANGLE/WET SANDER ASSEMBLY NUMBER	"A" ANGLE ASSEMBLY	"B" GUARD ASSEMBLY	"C" VALVE ASSEMBLY
37482-1	37481-1	33522	33421
37482-2	37481-2	33522	33421

 CANCELLED

RIGHT-ANGLE / WET SANDER ATTACHMENT

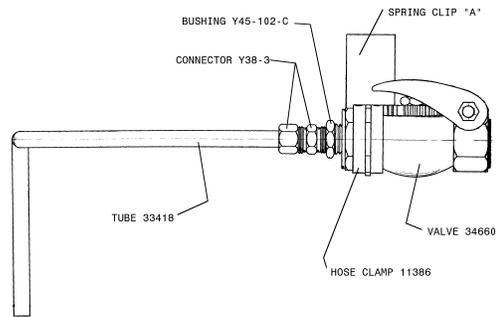
(ATP-14)



GUARD ASSEMBLY

GUARD ASSEMBLY NUMBER	"A" ARM ASSEMBLY	"B" WIPER BLADE
33522	33412	33409

(ATP-46)



VALVE ASSEMBLY

VALVE ASSEMBLY NUMBER	"A" CLIP
33421	33407

(ATP-13)

GEARING SECTION DRIVE GEARING

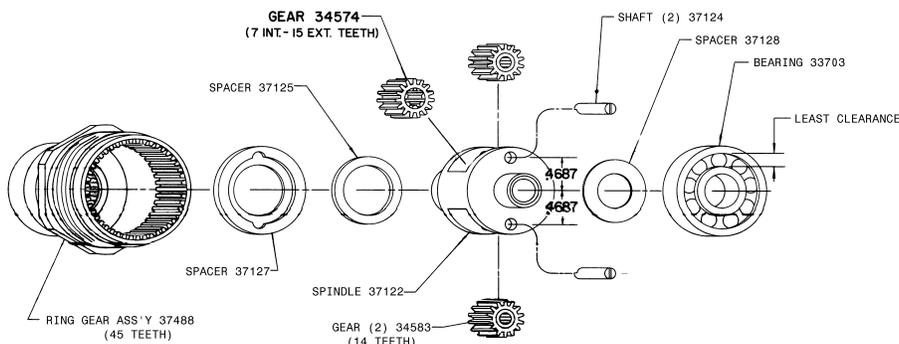
M12
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DISASSEMBLY

- Remove gearing from tool as outlined on page 4 and remove spindle from ring gear.
- Remove spacers (37127 and 37125 or 37126) from spindle and alternately tap ends of shafts to remove spacer and bearing from opposite end of spindle.
- Remove shafts, releasing gears from spindle.

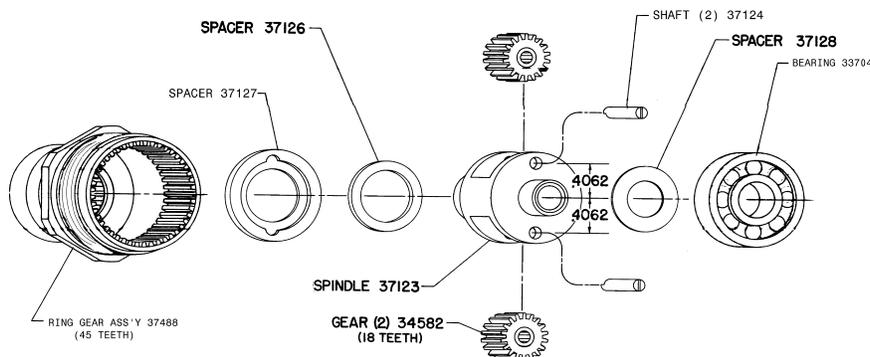
ASSEMBLY

- Pack bearing (33704), lubricate needle bearings inside gears and gear teeth with ARO 33153 grease. Gearing assembly should contain approximately 1/4 oz. (7 g) of grease. Assembly will be the reverse of the disassembly procedure.



37484 DRIVE GEARING ASSEMBLY (4:1)

(ATP-17)



37485 DRIVE GEARING ASSEMBLY (7.43:1)

(ATP-16)

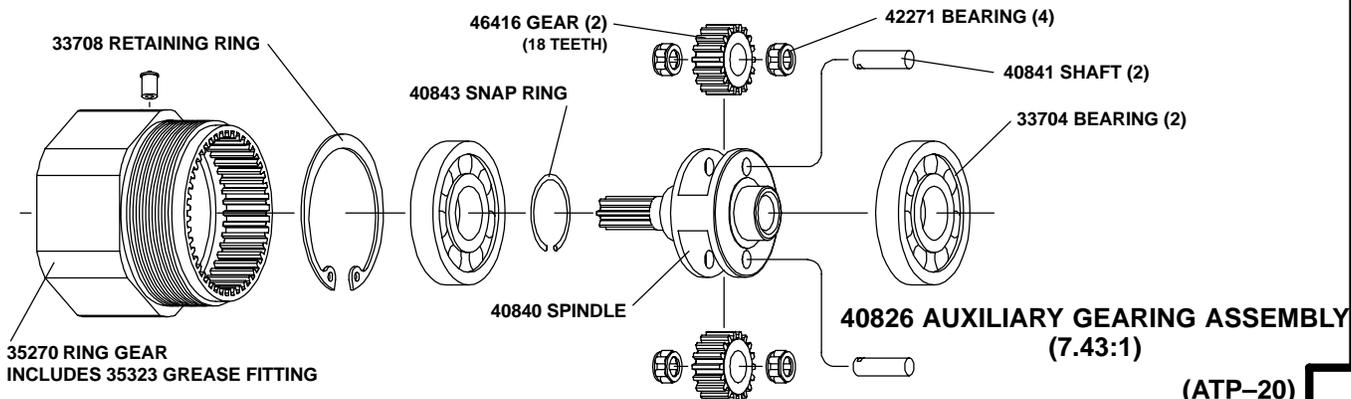
AUXILIARY GEARING

DISASSEMBLY

- Remove spindle from ring gear and remove bearing from drive end of spindle.
- Rotate open portion of snap ring, allowing the removal of one shaft and gear. Repeat for removal of opposite shaft and gear.
- Remove snap ring, insert shafts in spindle and alternately tap ends of shafts for removal of other bearing.

ASSEMBLY

- Pack bearings (33704), lubricate needle bearings inside gears and gear teeth with ARO 33153 grease. Gearing assembly should contain approximately 1/4 oz. (7 g) of grease. Assemble will be the reverse of the disassembly procedure.



40826 AUXILIARY GEARING ASSEMBLY (7.43:1)

(ATP-20)

HEAD SECTION

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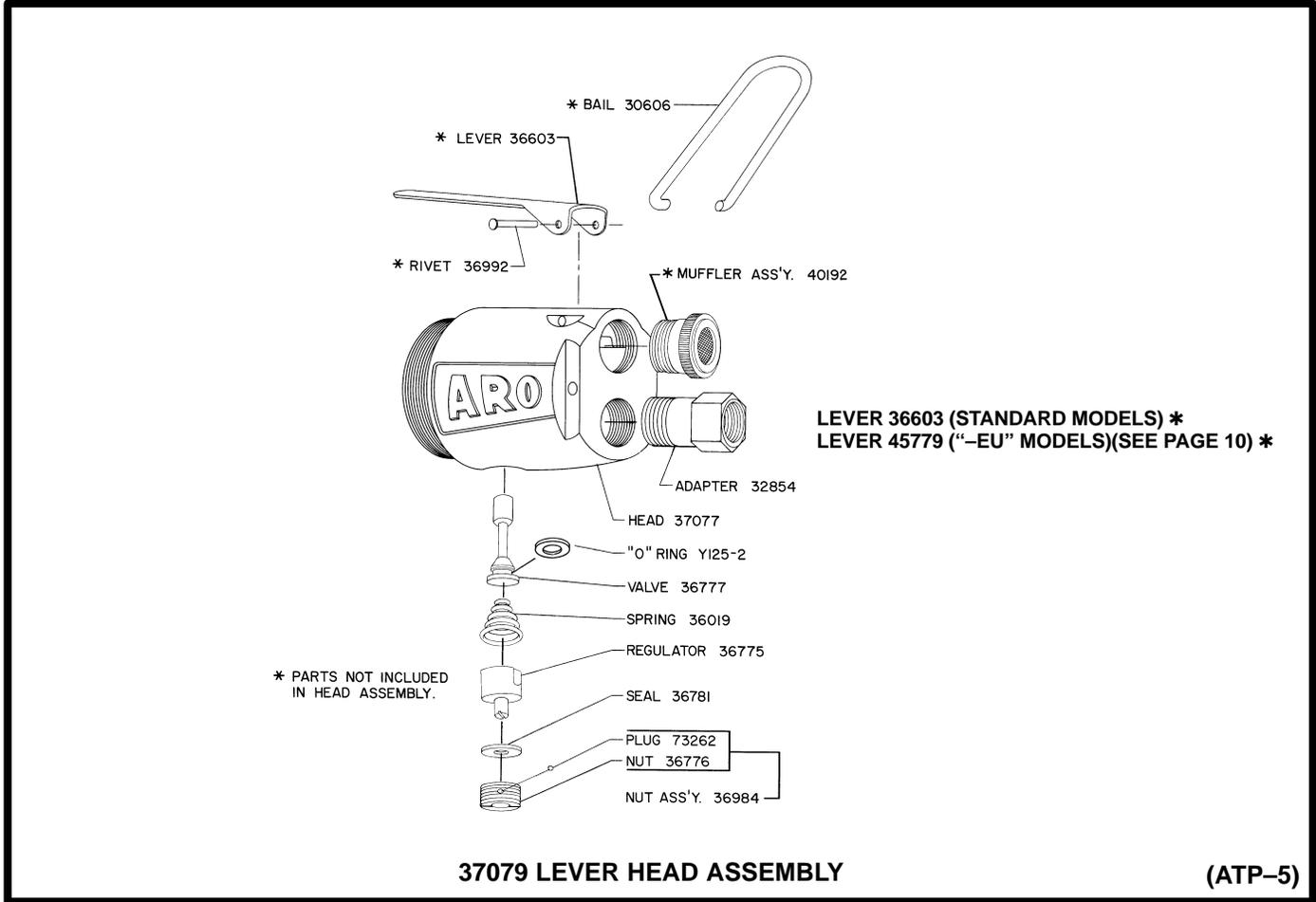
DISASSEMBLY

- a. Remove nut (36776), releasing seal (36781), regulator (36775), spring (32858) and valve stem (36777).

into valve opening. Assemble spring (32858), air regulator (36775) and seal (36781) into valve opening and secure with nut (36776). NOTE: Opening in wall of regulator must be aligned with air inlet hole in head.

ASSEMBLY

- a. Assemble "O" ring (Y325-7) to valve stem (36777) and insert b. See "Assembling Motor to Tool", page 8.



ACCESSORIES

SPIRALCOOL AND PLAIN FACE BACKING PADS

PAD NUMBERS			DIA.	FACE	ARBOR THREAD	MAX. RATED FREE SPEED
FLEXIBLE	MEDIUM	RIGID				
31859-1	31859-2	31859-3	7"	SPIRAL	5/8" - 11	7000 R.P.M.
31860-1	31860-2	31860-3	9"	SPIRAL	5/8" - 11	6000 R.P.M.
32809-1	32809-2	32809-3	7"	PLAIN	5/8" - 11	7000 R.P.M.
		32950	5"	SPIRAL	5/8" - 11	10000 R.P.M.
	45361		7"	PLAIN	5/8" - 11	6000 R.P.M.

30216 LAMB'S WOOL BONNET

For buffing and polishing. Best quality pelt with heavy binding. 9" diameter. Use on 7" pad. Drawstring for fastening.

30855 FACE SPANNER WRENCH

FURNISHED WITH MODELS 7939-E(-), 7944-E(-), AND 7945-E(-).

Y106-7 ALLEN WRENCH

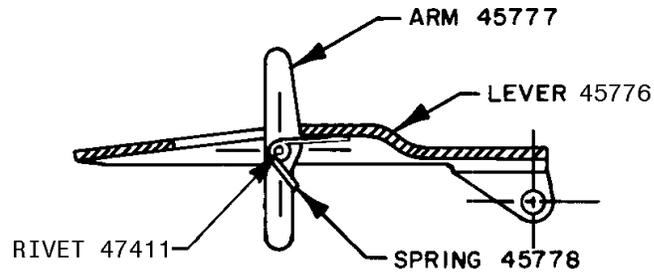
FURNISHED WITH MODELS 7939-E(-), 7944-E(-), 7945-E(-) AND 7945-EW(-).

37167 FLAT WRENCH

FURNISHED WITH ALL MODELS

ACCESSORIES

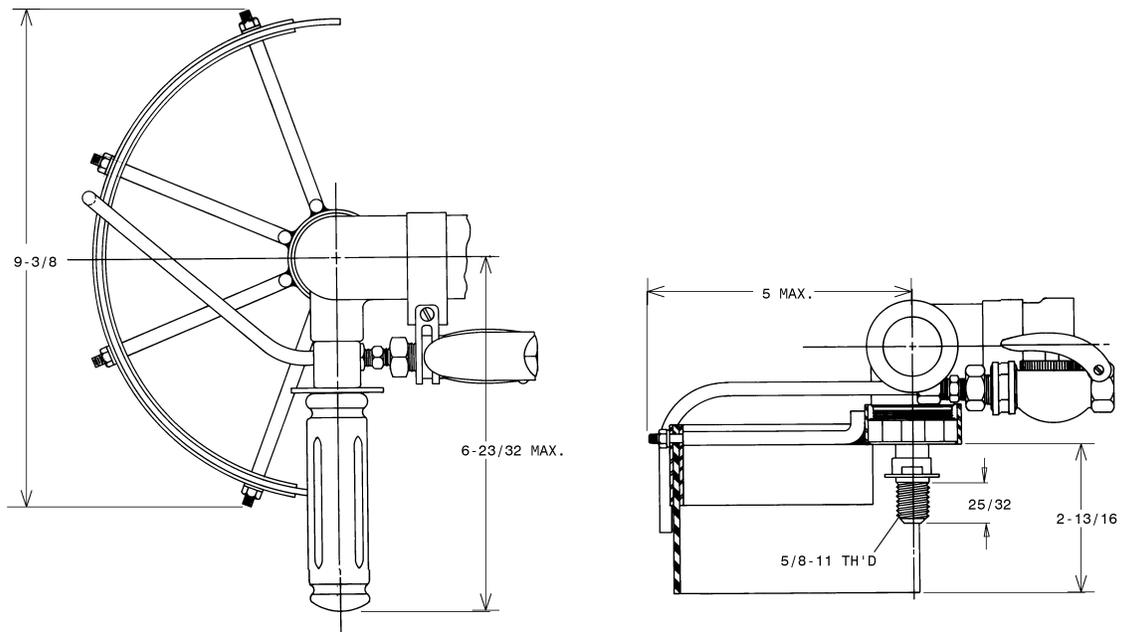
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45779 LOCK-OFF LEVER ASSEMBLY

(ATP-10)

DIMENSIONAL DATA



WET SANDER MODELS 7945-EW-()

OTHER DIMENSIONS SAME AS CORRESPONDING
MODEL NUMBERS SHOWN ABOVE.

(ATP-15)

