



Tool & Hoist Products

# OPERATOR'S MANUAL

INCLUDING: OPERATION, INSTALLATION & MAINTENANCE

**2200 SERIES 600 R.P.M. REVERSE ROTATION  
POWER UNIT**

Model 7955

Released: 10-21-88

Revised: 1-17-94

Form: 3375-2

**IMPORTANT: READ THIS MANUAL CAREFULLY BEFORE INSTALLING,  
OPERATING OR SERVICING THIS EQUIPMENT.**

## OPERATING AND SAFETY PRECAUTIONS

Pneumatic tools should always be installed and used in accordance with A.N.S.I. B186.1 "Safety Code For Portable Air Tools."

### **CAUTION:**

- Keep hands and clothing away from rotating end of tool.
- Wear suitable eye protection while operating tool.
- Use tool only for purposes for which it was intended.
- Disconnect air supply from tool before performing maintenance, service or disassembly of tool.

**WARNING:** 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 tools who experience vibrations should closely monitor duration of use and their physical condition.

## ROUTINE LUBRICATION REQUIREMENTS

Lack of or an excessive amount of lubrication will affect the performance and life of this tool. Use only recommended lubricants at below time intervals:

**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.

**EVERY 40 HOURS OF TOOL OPERATION** – Fill built-in oiler reservoir with spindle oil (29665) if an in line or air line lubricator is not used.

**EVERY 160 HOURS OF TOOL OPERATION** – Lubricate gearing. Pack bearings, coat shafts and lubricate gears with NLGI #1 "EP" grease (33153). Gearing should contain approximately 1/4 oz. (7 g) of grease per reduction.

## AIR SUPPLY REQUIREMENTS

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

- AIR PRESSURE – 90 PSIG (6 bar)
- AIR FILTRATION – 50 micron
- LUBRICATED AIR SUPPLY
- HOSE SIZE – 5/16" (8 mm) I.D.

An ARO® model C28231-810 air line FILTER/REGULATOR/LUBRICATOR (F.R.L.) is recommended to maintain the above air supply specifications.

## 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:

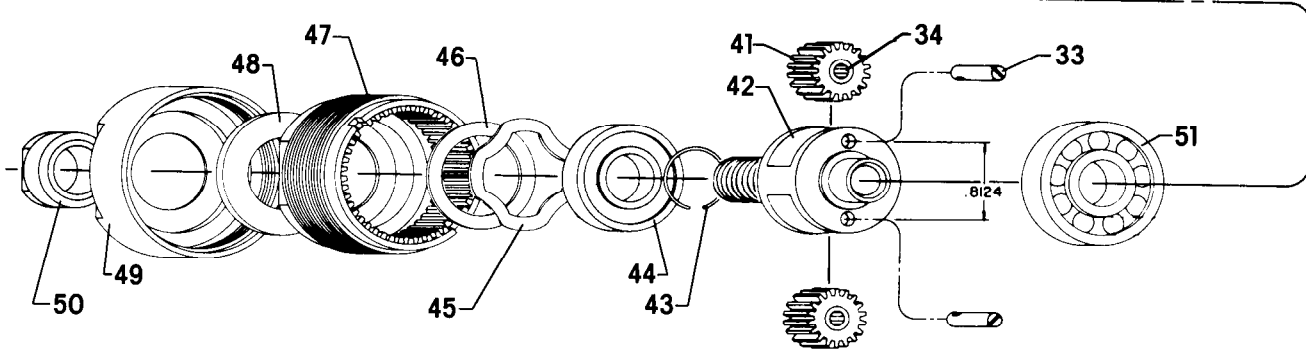
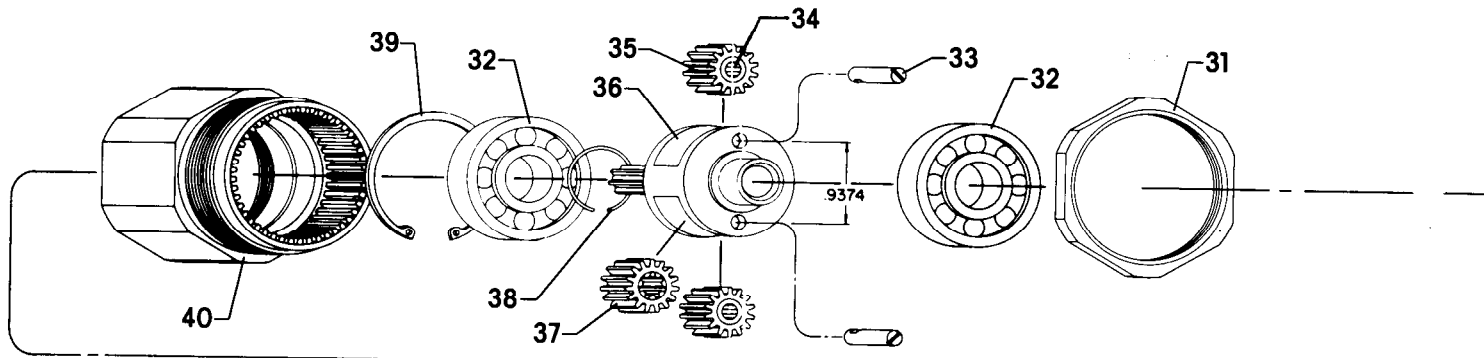
<u>Where Used</u>	<u>ARO Part #</u>	<u>Description</u>
Air Motor	29665	1 qt. Spindle Oil
"O" Rings & Lip Seals	36460	4 oz. Stringy Lubricant
Gears and Bearings	33153	5 lb. "EP" – NLGI #1 Grease

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) 672-0601.

**ARO Tool & Hoist Products**

**Ingersoll-Rand Company**  
1725 U.S. No. 1 North • P.O. Box 8000 • Southern Pines, NC 28388-8000  
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**INGERSOLL-RAND®**  
**PROFESSIONAL TOOLS**



## DISASSEMBLY/ASSEMBLY INSTRUCTIONS

- 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.

### GEARING DISASSEMBLY

- Remove spacer (50), nose housing (49) and seal (48) from ring gear (47). NOTE: Nose housing has left hand threads.
- Remove gearing assembly, using wrench on flats of ring gear (47). NOTE: Ring gear (47) has left hand threads.
- Pull spindle (42) and components from ring gear (47). Do not disassemble further unless damage is evident.
- Remove bearing (44).
- Rotate snap ring (43) to allow removal of shaft (33), releasing gear (41).
- Repeat for removal of opposite shaft and gear.
- Disassembly of auxiliary gearing is similar to that of drive gearing. NOTE: Ring gear (40) and lock nut (31) have left hand threads.

### GEARING ASSEMBLY

- Pack bearings and lubricate gears and shafts with ARO 33153 grease upon assembly. Gearing assembly should contain approximately 1/4 oz. (7 g) of grease.
- Assemble snap ring (43) to spindle (42), positioned to allow assembly of one shaft (33) and gear (41).
- Repeat for assembly of opposite shaft and gear.
- Rotate snap ring, locking shafts in place.
- Assemble bearings (51 and 44) to spindle.
- Assemble washer (46), wave washer (45) and spindle into ring gear (47).
- Assemble ring gear (47) to tool. NOTE: Ring gear has left hand threads.
- Assemble seal (48), nose housing (49) and spacer (50) to tool. NOTE: Nose housing has left hand threads.
- Assembly of auxiliary gearing is similar to that of drive gearing.

### MOTOR DISASSEMBLY

- Remove gearing from tool.
- Remove motor assembly from housing.
- Remove nut (18) and sems fastener (19).

- Tap drive end of rotor (23) with a soft face hammer; motor will come apart.
- Remove bearing (20), end plate (21) and spacer (22) from rotor.

### MOTOR ASSEMBLY

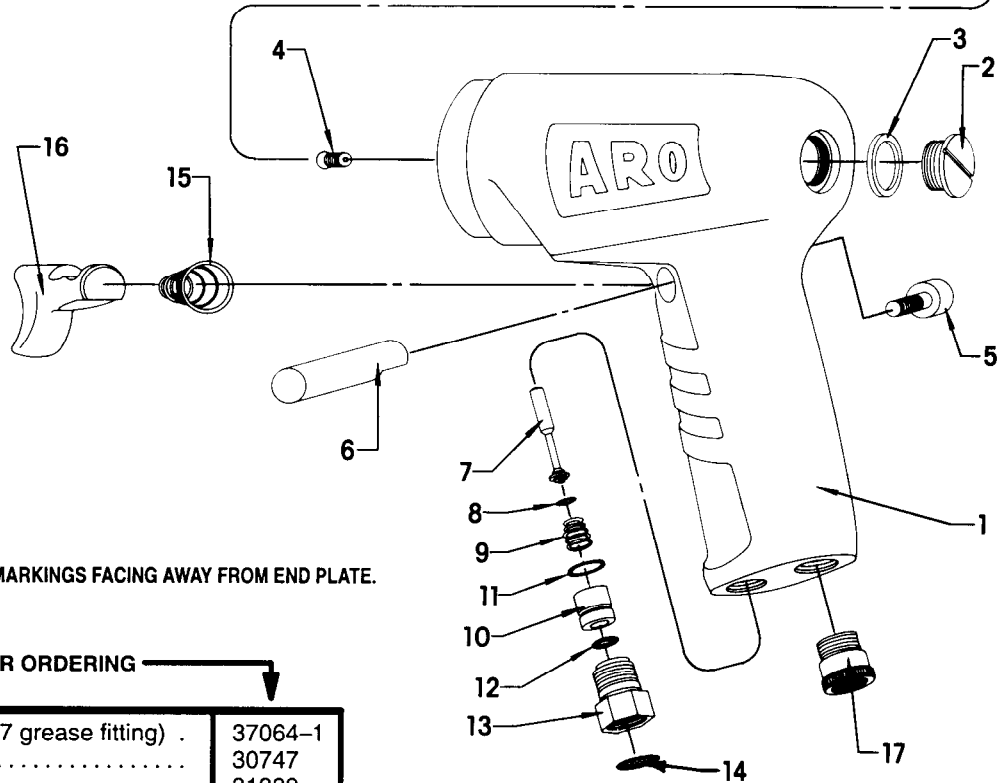
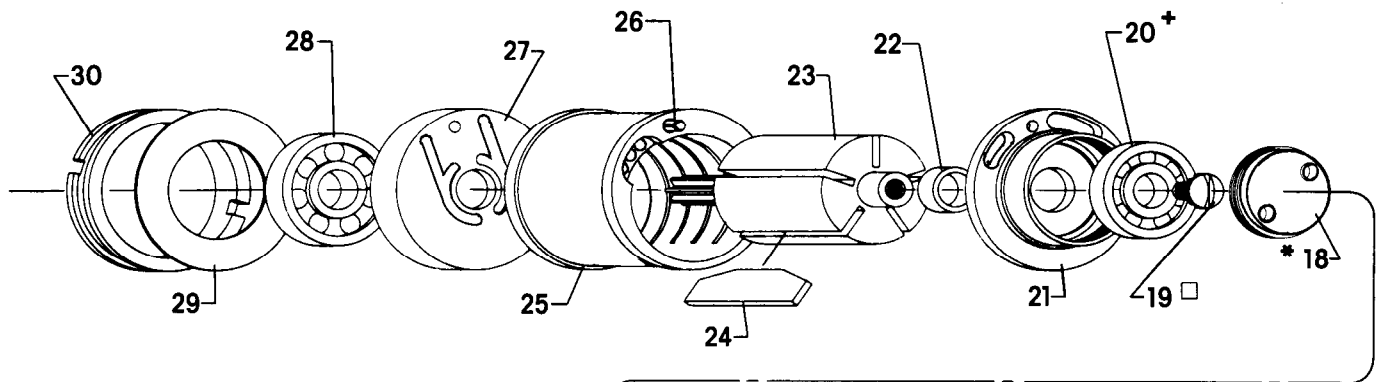
- Lubricate bearing (20) with ARO 33153 grease and press into end plate (21), pressing on outer race of bearing. NOTE: Assemble bearing into end plate with identification markings facing out.
- Assemble spacer (22) and end plate (21) to rotor, pressing on inner race of bearing.
- Secure bearing with sems fastener (19) and nut (18). NOTE: Tighten sems fastener to 28 in. lbs and nut to 9 - 12 ft lbs.
- Coat blades (24) with ARO 29665 spindle oil and assemble to rotor slots - straight side out.
- Coat i.d. of cylinder (25) with ARO 29665 spindle oil and assemble over rotor. NOTE: Roll pin in cylinder must be aligned with hole in end plate.
- Lubricate bearing (28) with ARO 33153 grease and assemble to end plate (27), pressing on outer race of bearing.
- Assemble end plate to rotor, pressing on inner race of bearing. Be sure rotor turns without binding.
- Assemble motor assembly to housing.
- Assemble spacers (29 and 30) and gearing to tool.

### HOUSING DISASSEMBLY

- Remove inlet adapter (13) and "O" ring (12), releasing insert (10), spring (9) and valve (7).
- Remove locking screw (5) and guide pin (6), releasing trigger (16) and spring (15).
- Oilite casting (4) can only be removed from motor end of housing.

### HOUSING ASSEMBLY

- Assemble spring (15) and trigger (16) to housing, securing with guide pin (6) and locking screw (5).
- Grease and assemble "O" ring (8) to valve stem (7) and assemble into housing.
- Grease and assemble "O" ring (11) to insert (10) and assemble spring (9) and insert (10) to housing.
- Grease and assemble "O" ring (12) to inlet adapter (13) and assemble inlet adapter to housing, securing valve components.
- Clean and replace screen (14) in inlet adapter.
- Assemble oilite casting (4) into housing from motor end of housing.
- Fill oil cavity with ARO 29665 spindle oil and seal with washer (3) and oil screw (2).



□ TIGHTEN TO 28 IN. LBS

\* TIGHTEN TO 9 - 12 FT LBS

+ ASSEMBLE WITH IDENTIFICATION MARKINGS FACING AWAY FROM END PLATE.

PART NUMBER FOR ORDERING

1	Housing (includes 35967 grease fitting) .	37064-1
2	Oil Screw . . . . .	30747
3	Washer . . . . .	31389
4	Oilite Casting . . . . .	33190-1
5	Locking Screw . . . . .	39769
6	Guide Pin . . . . .	39768
7	Valve Stem . . . . .	39286
8	"O" Ring . . . . .	Y325-7
9	Spring . . . . .	33547
10	Insert Assembly (includes item 11) . . . . .	37981
11	"O" Ring . . . . .	Y325-112
12	"O" Ring . . . . .	Y325-13
13	Inlet Adapter . . . . .	37073
14	Screen . . . . .	33911
15	Spring . . . . .	32858
16	Trigger . . . . .	39764
17	Housing Assembly (includes items 1 thru 16) . . . . .	40177-1
18	Muffer Assembly . . . . .	40192
19	Nut . . . . .	33694
20	Sems Fastener . . . . .	33700
21	Bearing . . . . .	33709
22	End Plate . . . . .	34485
23	Spacer . . . . .	33701
24	Rotor . . . . .	41521
25	Blade (5 req'd) . . . . .	41520
26	Cylinder (includes item 26) . . . . .	35679
27	Roll Pin (2 req'd) . . . . .	Y178-20
28	End Plate . . . . .	34486
29	Bearing . . . . .	33705
30	Motor Assembly (includes items 18 thru 28) . . . . .	42039-1
	Spacer . . . . .	33699
	Spacer . . . . .	33711

PART NUMBER FOR ORDERING

31	Lock Nut . . . . .	47457-1
32	Bearing (2 req'd) . . . . .	33704
33	Shaft (2 req'd) . . . . .	40841
34	Bearing (4 req'd) . . . . .	42271
35	Gear (2 req'd) 14 teeth . . . . .	46417
36	Spindle . . . . .	40839
37	Gear (7 interior - 15 exterior teeth) . . . . .	34574
38	Snap Ring . . . . .	40842
39	Retaining Ring . . . . .	33708
40	Ring Gear (includes 35323 grease fitting) . . . . .	35270-1
41	Auxiliary Gearing (includes items 32 thru 40) . . . . .	40825-1
42	Gear (2 req'd) 18 teeth . . . . .	46416
43	Spindle . . . . .	47458-1
44	Snap Ring . . . . .	40843
45	Bearing . . . . .	33706
46	Wave Washer . . . . .	47589
47	Washer . . . . .	47590
48	Ring Gear . . . . .	47456-1
49	Seal . . . . .	37774
50	Nose Housing (includes 35967 grease fitting) . . . . .	38379-1
51	Spacer . . . . .	33697
	Bearing . . . . .	33704
	Drive Gearing (includes items 33, 34 and 41 thru 51) . . . . .	47455-1

