



Tool & Hoist Products

OPERATOR'S MANUAL

INCLUDING: OPERATION, INSTALLATION & MAINTENANCE

"O" SERIES DIE GRINDER
18,000 R.P.M.

Released: 2-14-91

Revised: 8-27-93

Form: 3754-2

Model 7015-11V-A

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

OPERATING AND SAFETY PRECAUTIONS

To aid the operator's understanding of proper and safe use of grinders, the publications, "Use, Care and Protection of Abrasive Wheels", A.N.S.I. B7.1 and "Safety Code for Portable Air Tools", A.N.S.I. B186.1, can be purchased from:

American National Standards Institute, Inc.
1430 Broadway
New York, New York 10018

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 removing/installing mounted wheel or performing other maintenance procedures.
- Never exceed rated r.p.m. of tool.
- Use only mounted wheels of the A, B and W shapes.
- Use only medium and high strength mounted wheels.
- Do not use excessive work pressure.
- Allow only people who have received training in "proper grinder operation" to operate grinder.

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 – Flush tool with a solution of three (3) parts cleaning solvent to one (1) part spindle oil (or use Kerosene).

MOUNTING INSTRUCTIONS

- Be sure collet is in good condition and properly secured to grinder spindle.
- Insert shaft of mounted wheel to the full depth of gripping jaws of collet. At least one-half of shaft length shall be inserted into collet jaws.
- Be sure mounted wheel is compatible with the speed of the grinder.
- Use type 16, 17, 18, 18R and 19 cone and plug wheels only with optional cone wheel adapter 37292-().

CAPACITIES (MAXIMUM)

- Carbide Bur 3/4"
- Mounted Stone 1-1/2"

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 128231-800 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:

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

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

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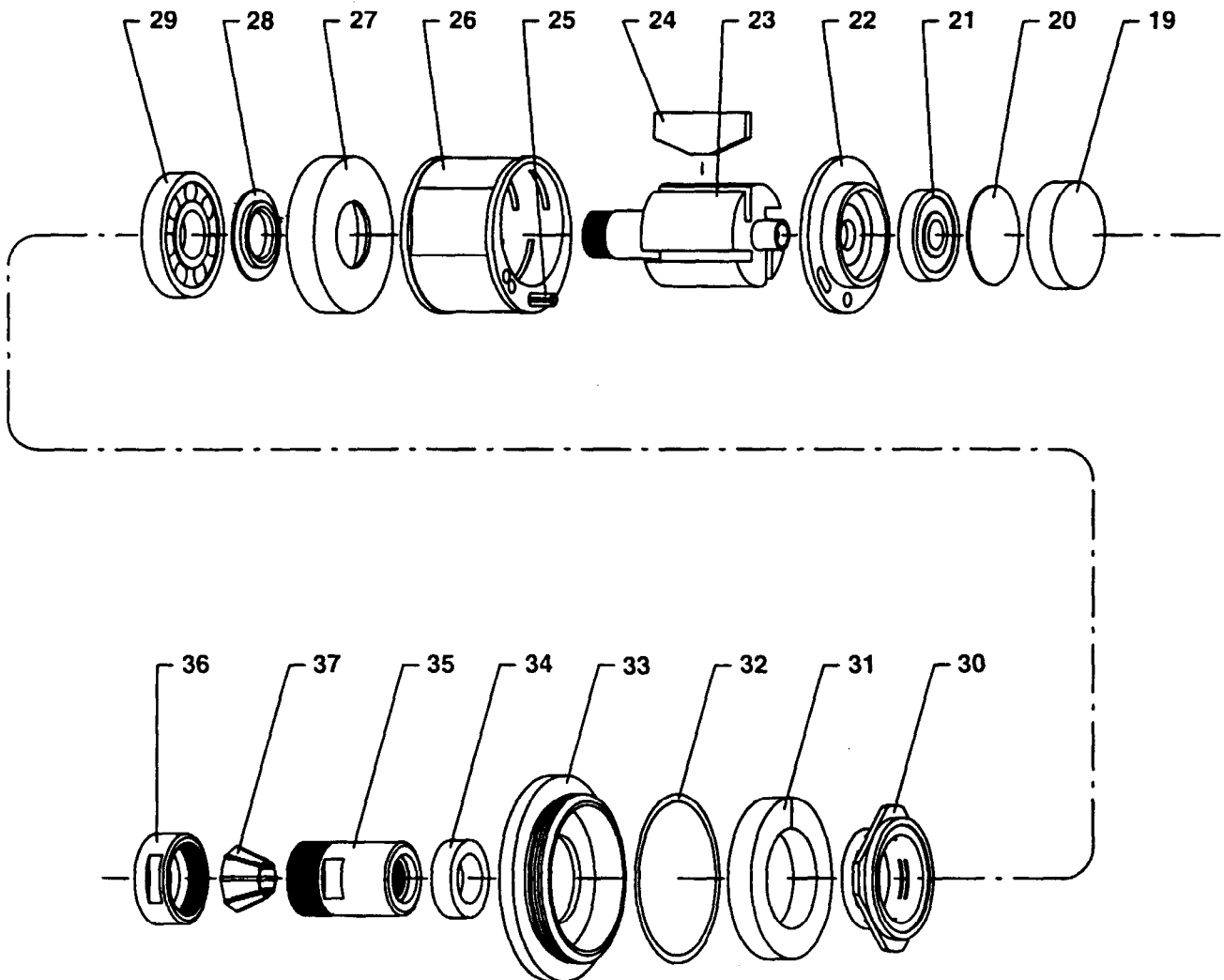
INGERSOLL-RAND®
PROFESSIONAL TOOLS

PART NUMBER FOR ORDERING

PART NUMBER FOR ORDERING

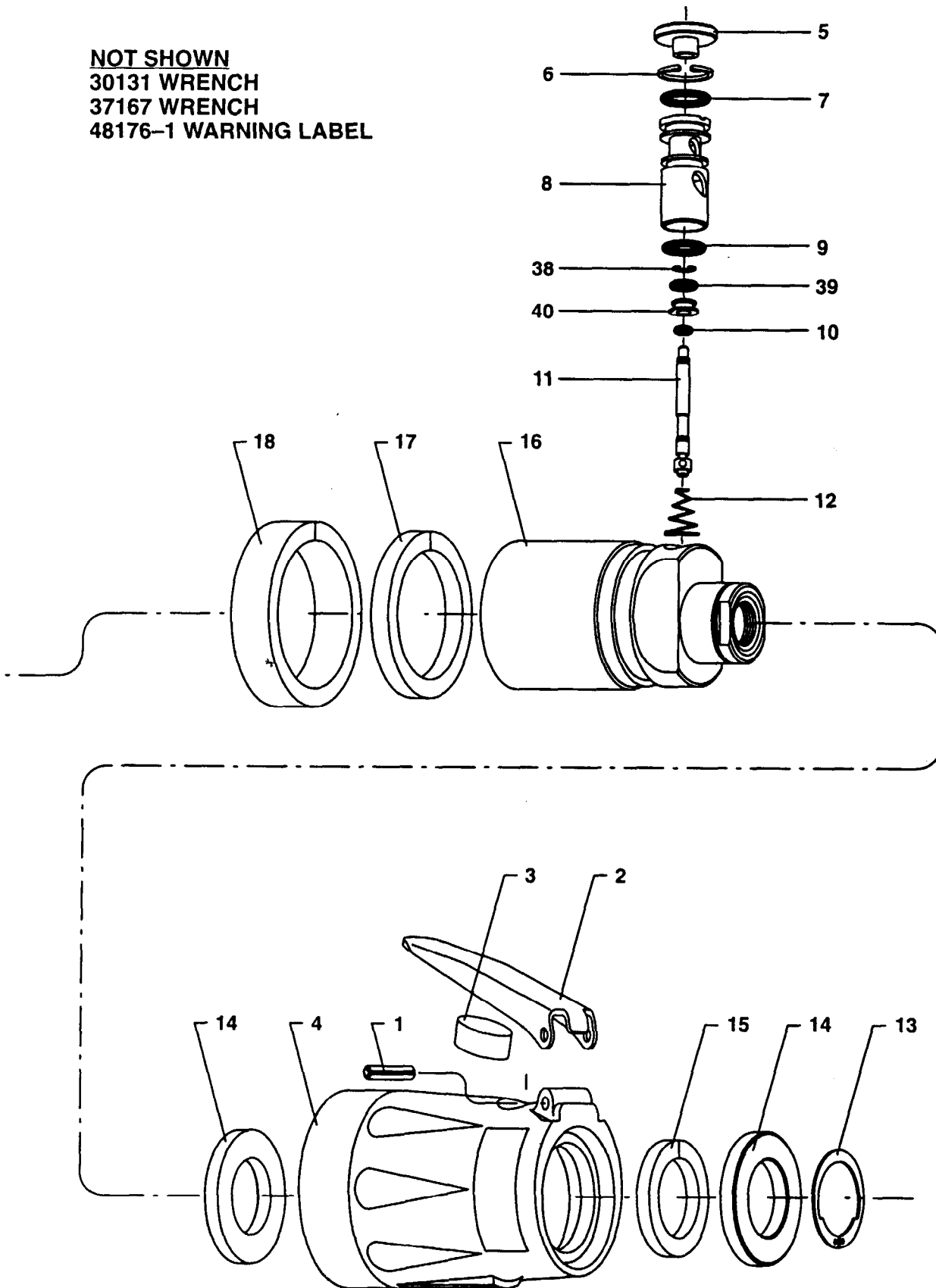
1	Roll Pin	Y178-44
2	Lever	48925
3	Pad	48923-1
4	Oversleeve	48924-1
5	Button	48917
6	Retaining Ring	Y147-50
7	"O" Ring	Y325-12
8	Bushing	48929-1
9	"O" Ring	Y325-11
10	"O" Ring	Y325-3
11	Valve Stem	48916-1
12	Spring	47691-1
13	Retaining Ring	37285
14	Pad Assembly (2 req'd)	48921
15	Pad	48928
16	Housing	48926
17	Pad	48927
18	Pad	48922
19	Cap	38783
20	Shield	38805
21	Ball Bearing	Y65-7
22	Rear End Plate	30750

23	Rotor	30984
24	Blade (4 req'd)	30741
25	Roll Pin (included with item 26)	Y178-26
26	Cylinder	30912
27	Front End Plate	30986
28	Spacer	30987
29	Ball Bearing	30469
	Motor Assembly (includes items 21 thru 29)	33804
30	Exhaust Spacer	43578
31	Felt Strip	43580
32	"O" Ring	Y325-26
33	Lock Nut	48918
34	Spacer	39955
35	Collet Body	45983
36	Collet Nut	37432
	Collet Body and Nut Assembly (includes items 35 and 36)	39958
37	Collet (3/16" to 1/4" capacity)	37431-3
	Collet Assembly (includes items 35, 36 and 37)	39959-3
38	Retaining Ring	Y180-12
39	"O" Ring	Y325-7
40	Valve	47683



NOTE: REPLACEMENT OF ITEMS 3, 14, 15, 17 AND 18 ARE RECOMMENDED WHEN A TORQUE OF 6 IN. LBS, APPLIED TO HOUSING (16), ROTATES VALVE STEM (5) OFF CENTER WITH HOLE IN OVERSLEEVE (4). SEE "DISASSEMBLY / ASSEMBLY INSTRUCTIONS" FOR REPLACEMENT PROCEDURE.

NOT SHOWN
30131 WRENCH
37167 WRENCH
48176-1 WARNING LABEL



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.

THROTTLE DISASSEMBLY

- Remove roll pin (1), releasing lever (2).
- To remove valve components, turn valve stem (11) to align cross hole in valve stem with tool inlet.
- Insert a 3/32" diameter dowel into cross hole in valve stem and unthread button (5).
- Remove retaining ring (6) and pull valve components from housing.
- Remove retaining ring (38), releasing valve (40) and "O" rings from valve stem (11).
- Remove retaining ring (13) and pad assembly (14) from housing (16).
- Slide housing (16) out of oversleeve (4).

THROTTLE ASSEMBLY

- Remove backing and wrap pad (18) around housing (16), with adhesive side of pad toward housing. Assemble pad flush with forward end of housing.
- Remove backing and wrap pad (17) around housing (16), assembling into groove, with adhesive side of pad toward housing.
- Assemble one pad assembly (14) to housing (16). NOTE: Assemble with metal washer toward housing.
- Slide housing (16) into oversleeve (4), aligning holes for valve.
- Assemble pad (15) to housing, securing with pad assembly (14) and retaining ring (13). NOTE: Assemble pad assembly (14) with metal washer facing out.
- Assemble spring (12) into housing, with large diameter of spring going into housing first.
- Grease and assemble "O" ring (10) to valve stem (11).
- Grease and assemble "O" ring (39) to valve (40).
- Assemble valve (40) to valve stem (11), securing with retaining ring (38). NOTE: Assemble valve with large diameter toward "O" ring (10).
- Grease "O" rings (7 and 9) and assemble to grooves in bushing (8).
- Lubricate valve stem (11) with ARO 29665 spindle oil and assemble into bushing (8).
- Assemble valve components into housing, securing with retaining ring (6). NOTE: Align hole in side of bushing (8) with air

inlet of housing.

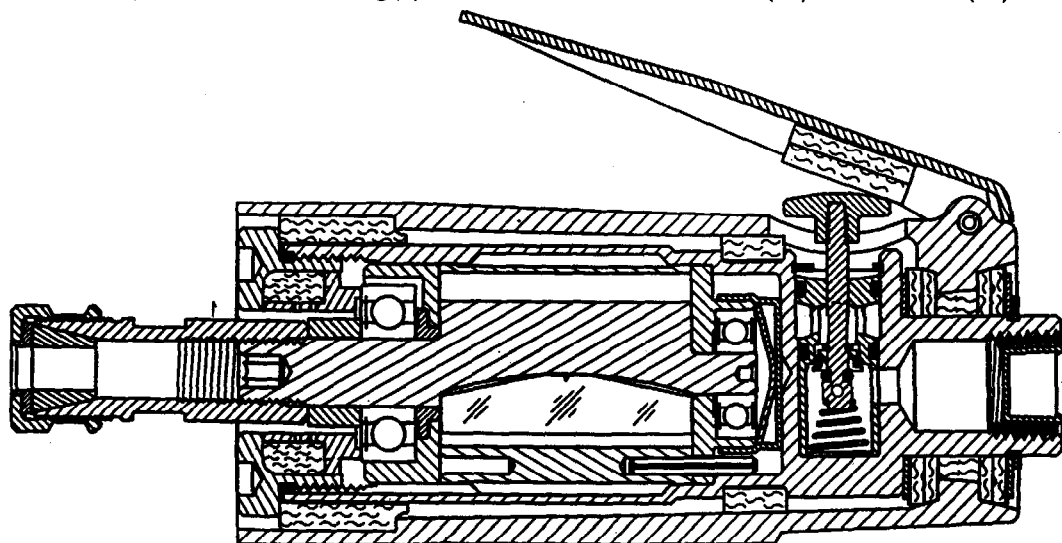
- Insert a 3/32" diameter dowel into cross hole in valve stem (11) and thread button (5) onto valve stem.
- Assemble pad (3) to underside of lever (2), centering pad over button (5).
- Assemble lever (2) to oversleeve (4), securing with roll pin (1).
- NOTE: At assembly, the orientation of housing (16) and oversleeve (4) is to be centered at the area of valve stem (11). Adjustments can be made by placing a wrench on wrench flats at inlet of the tool and turning housing in oversleeve.

MOTOR DISASSEMBLY

- Remove collet nut (36) and collet (37).
- Insert a 5/32" hex wrench thru collet body and engage hex in end of rotor shaft.
- Hold rotor shaft secure with hex wrench and remove collet body (35) using wrench on flats of collet body.
- Clamp tool in a smooth face vise, clamping on flats of air inlet.
- Using a spanner wrench, remove lock nut (33).
- Remove felt strip (31) and exhaust spacer (30).
- Remove motor assembly from housing.
- Tap threaded end of rotor (23) with a soft face hammer; motor will come apart. NOTE: Bearings are light press fit on rotor. Bearing (29) is press fit in end plate.
- Remove end plate (22) and bearing (21) from rotor.

MOTOR ASSEMBLY

- Assemble bearing (21) into end plate (22), pressing on outer race of bearing.
- Assemble end plate (22) to rotor, pressing on inner race of bearing.
- Coat four rotor blades (24) with ARO 29665 spindle oil and assemble to rotor slots – straight side out.
- Coat i.d. of cylinder (26) with ARO 29665 spindle oil and assemble over rotor. NOTE: Roll pin (25) must be aligned with .116" diameter hole in end plate (22).
- Lubricate bearing (29) with ARO 33153 grease.
- Assemble spacer (28) and bearing (29) into end plate (27), pressing on outer race of bearing. NOTE: Assemble bearing with shielded side facing out.
- Assemble end plate (27) to rotor, pressing on inner race of bearing. Be sure rotor turns without binding.
- Assemble shield (20) and cap (19) to end plate (21).
- Assemble spacer (34) and collet body (35) to rotor and tighten collet body securely.
- Assemble motor assembly into housing (16).
- Grease and assemble "O" ring (32) to lock nut (33).
- Assemble felt strip (31) and exhaust spacer (30) to lock nut (33) and assemble lock nut to housing, securing motor.
- Assemble collet (37) and collet nut (36) to collet body (35).



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