OPERATOR'S MANUAL

INCLUDING: OPERATION, INSTALLATION & MAINTENANCE

"O" SERIES POWER UNIT

Released: 8-20-90
Revised:
Form: 3692-2

MODEL 8050-A
500 R.P.M.
30.25:1 REDUCTION

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

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.
- Never exceed rated r.p.m. of tool.
- Use tool only for purposes for which it was intended.
- SHUT OFF and DISCONNECT AIR SUPPLY from tool BEFORE performing maintenance, service or disassembly of tool or device attached to tool and also before removing or installing bit, socket,etc.

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.

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.

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).

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
Gears and Bearings	33153	5 lb. "EP" – NLGI #1 Grease
"O" Rings & Lip Seals	36460	4 oz. Stringy Lubricant

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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 tool.
- Use only genuine ARO replacement parts for this tool. When ordering, specify part number, description, tool model number and serial number.

GEARING DISASSEMBLY

__ Unthread and remove gearing assembly (38655) from tool.
__ Grasp ring gear in one hand and tap drive end of spindle with a soft face hammer; spindle and components will loosen from ring gear.
__ Do not disassemble further unless damage is evident.
__ To disassemble, remove bearing (32325) and spacer (33693) from drive end of spindle, releasing shafts (33436) and gears (33440).
__ Insert shafts into spindle and alternately tap ends of shafts to remove other bearing (32325).
__ Disassembly of auxiliary gearing (38679) is similar to that of drive gearing.

GEARING ASSEMBLY

__ Pack bearings and lubricate gears and shafts liberally with ARO 33153 grease upon assembly. Gearing should contain approximately 1/8 oz. (3.5 g) of grease per reduction.
__ Assemble spacer (33693) and bearing (32325) to drive end of spindle (36326).
__ Assemble gears (33440) to spindle, securing with shafts (33436). Align notch in shafts with spacer (33693).
__ Assemble bearing (32325) to spindle and assemble spindle to ring gear (38654).
__ Assemble ring gear and components to tool.
__ Assembly of auxiliary gearing (38679) is similar to that of drive gearing.

MOTOR DISASSEMBLY

__ Unthread and remove gearing from tool.
__ Tap front edge of housing to remove motor assembly.
__ Remove cap (38783) and shield (38805).
__ Grasp cylinder in one hand and tap drive end of rotor with a soft face hammer; motor will come apart.
__ Remove end plate (45792) and bearing (Y65-7) from rotor.

MOTOR ASSEMBLY

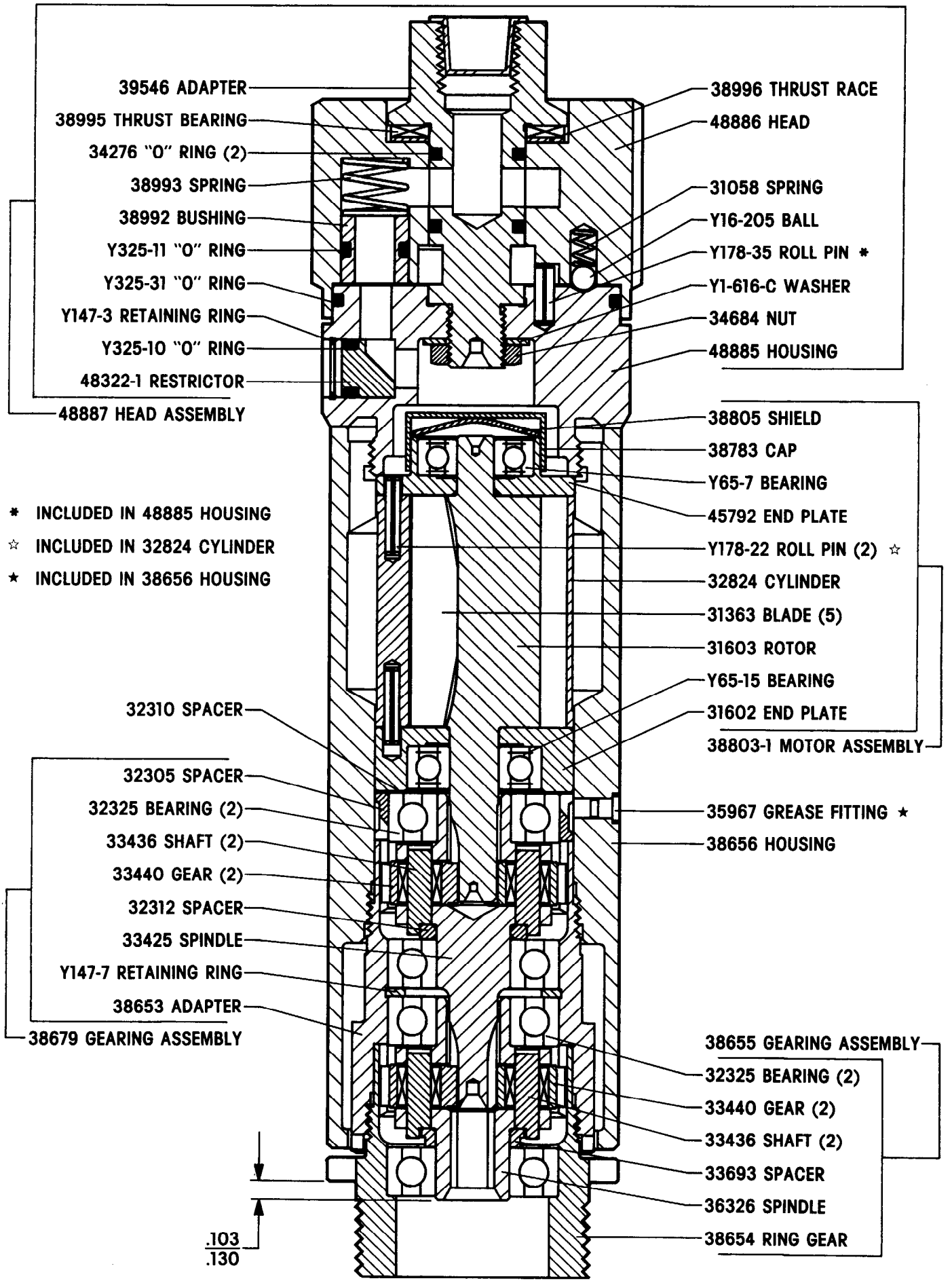
__ Assemble bearing (Y65-7) to end plate (45792), pressing on outer race of bearing.
__ Assemble end plate (45792) to rotor, pressing on inner race of bearing.
__ Coat five rotor blades (31363) with ARO 29665 spindle oil and assemble to rotor slots – straight side out.
__ Coat i.d. of cylinder (32824) with ARO 29665 spindle oil and assemble over rotor, aligning roll pin in cylinder with hole in end plate.
__ Assemble bearing (Y65-15) to end plate (31602), pressing on outer race of bearing.
__ Assemble end plate (31602) to rotor, pressing on inner race of bearing. Align roll pin in cylinder with hole in end plate when assembling. Be sure rotor turns without binding.
__ Assemble shield (38805) and cap (38783) to end plate (45792).
__ Assemble motor assembly to tool.
__ Assemble spacer (32310) to housing.

HEAD DISASSEMBLY

__ Unthread and remove head assembly (48887) from housing (38656).
__ Remove nut (34684) and washer (Y1-616-C) and unthread adapter (39546) to remove head (48886) from housing (48885). NOTE: Ball (Y16-205) and spring (31058) are loose parts and will fall out.
__ Remove bushing (38992), releasing spring (38993).
__ Remove adapter (39546), releasing thrust race (38996) and thrust bearing (38995).
__ Remove retaining ring (Y147-3), releasing restrictor (48322-1).

HEAD ASSEMBLY

__ NOTE: When a part containing "O" rings has been removed from the tool, it is recommended that the "O" rings be replaced upon assembly. Lubricate all "O" rings with 36460 grease when assembling.
__ Assemble "O" ring (Y325-31) to housing (48885).
__ Assemble "O" ring (Y325-10) to restrictor (48322-1) and assemble restrictor to housing, securing with retaining ring (Y147-3). NOTE: Align slot in restrictor with air inlet holes in housing.
__ Assemble "O" rings (34276) to adapter (39546).
__ Assemble "O" ring (Y325-11) to bushing (38992) and assemble spring (38993) and bushing to head.
__ Assemble spring (31058) and ball (Y16-205) to head and assemble head to housing, aligning roll pin (Y178-35) in housing with groove in head.
__ Assemble thrust bearing (38995) and thrust race (38996) to adapter (39546) and assemble adapter thru head and thread to housing.
__ Assemble washer (Y1-616-C) and nut (34684) to adapter.
__ Assemble head assembly (48887) to tool.


39546 ADAPTER
38995 THRUST BEARING
34276 "O" RING (2)
38993 SPRING
38992 BUSHING
Y325-11 "O" RING
Y325-31 "O" RING
Y147-3 RETAINING RING
Y325-10 "O" RING
48322-1 RESTRICTOR
48887 HEAD ASSEMBLY
* INCLUDED IN 48885 HOUSING
☆ INCLUDED IN 32824 CYLINDER
★ INCLUDED IN 38656 HOUSING
32310 SPACER
32305 SPACER
32325 BEARING (2)
33436 SHAFT (2)
33440 GEAR (2)
32312 SPACER
33425 SPINDLE
Y147-7 RETAINING RING
38653 ADAPTER
38679 GEARING ASSEMBLY
.103
.130
38996 THRUST RACE
48886 HEAD
31058 SPRING
Y16-205 BALL
Y178-35 ROLL PIN *
Y1-616-C WASHER
34684 NUT
48885 HOUSING
38805 SHIELD
38783 CAP
Y65-7 BEARING
45792 END PLATE
Y178-22 ROLL PIN (2) ☆
32824 CYLINDER
31363 BLADE (5)
31603 ROTOR
Y65-15 BEARING
31602 END PLATE
38803-1 MOTOR ASSEMBLY
35967 GREASE FITTING ★
38656 HOUSING
38655 GEARING ASSEMBLY
32325 BEARING (2)
33440 GEAR (2)
33436 SHAFT (2)
33693 SPACER
36326 SPINDLE
38654 RING GEAR

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