



Tool & Hoist Products

# OPERATOR'S MANUAL

INCLUDING: OPERATION, INSTALLATION & MAINTENANCE

## 2200 SERIES POWER MOTOR

Model 7808-1BF

Released:

Revised: 8-2-93

Form: 796-2

**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.
- SHUT OFF and DISCONNECT AIR SUPPLY from tool BEFORE performing maintenance, service or disassembly of tool.

### 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 and one (1) part light oil. After flushing, apply a small amount of spindle oil in air inlet and run free for one minute to insure proper lubrication.

**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 set of planetary gearing.

### 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

Ingersoll-Rand Company

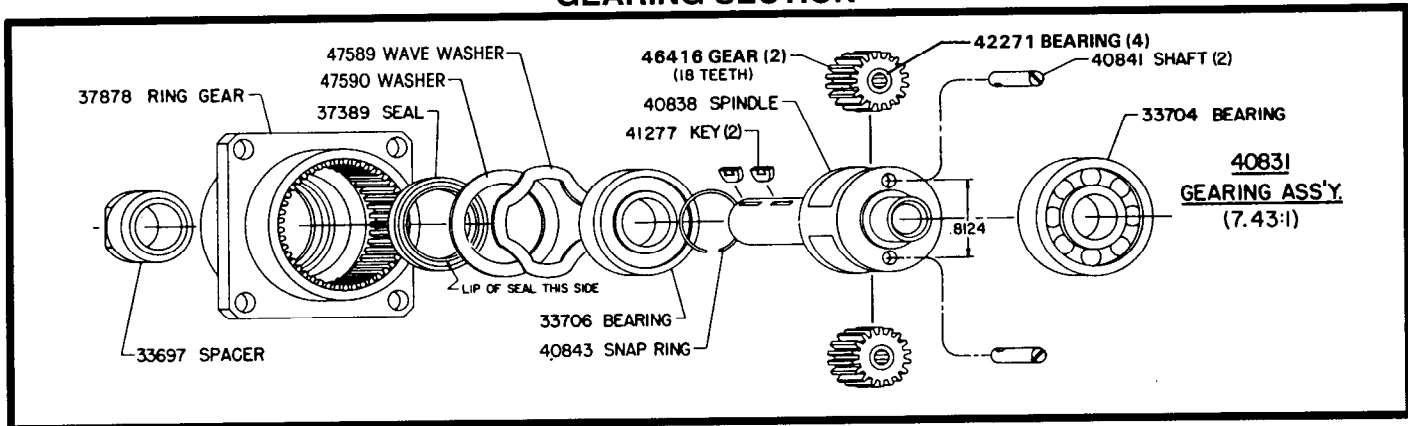
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**PROFESSIONAL TOOLS**

# DISASSEMBLY AND ASSEMBLY OF TOOLS

## GEARING SECTION



### DISASSEMBLY

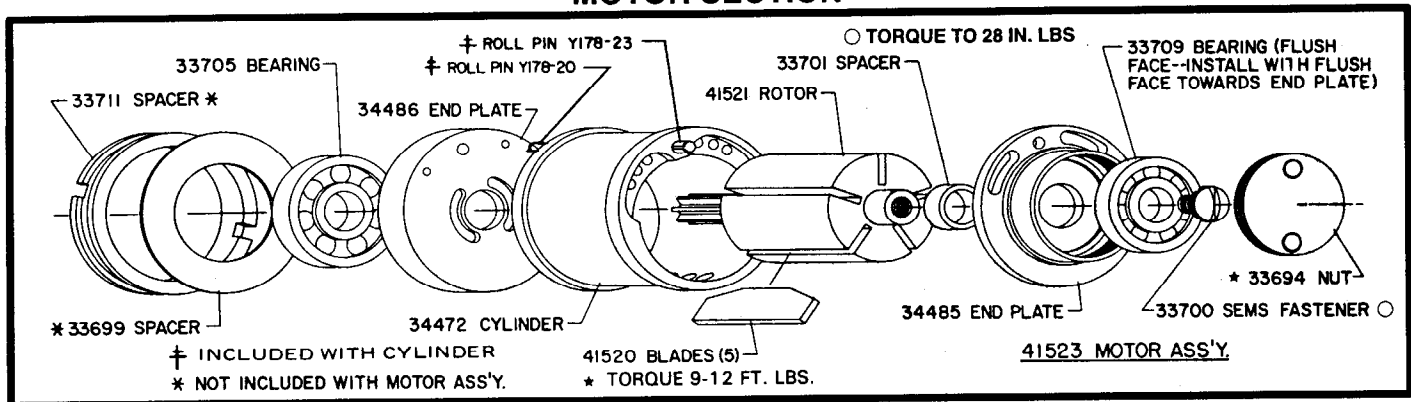
- Remove accessory and keys from spindle.
- Remove four (4) cap screws (Y154-52) and washers (Y14-10) and remove gearing assembly from tool.
- Remove four (4) cap screws (Y154-51), retainer (43171) and spacer (33697).
- Grasp ring gear in one hand and tap end of spindle with a soft face hammer; spindle and components will loosen from ring gear.
- Gearing should not be disassembled further unless it is necessary to replace a part, as Brinelling of the bearing races may occur, making replacement of the bearing necessary.
- To disassemble completely, remove bearing (33706). Rotate snap ring (40843) so the open portion of ring will allow the removal of one shaft (40841). Remove shaft, releasing one gear (46416). Repeat for removal of opposite shaft and gear.

- To remove bearing (33704), insert shafts into spindle and alternately tap shafts, loosening bearing.

### ASSEMBLY

- Lubricate gears and bearing upon assembly. Gearing assembly should contain approximately 1/4 oz. grease.
- To assemble, reverse the procedure of disassembly. NOTE: After assembling gears and shafts to spindle, rotate open portion of snap ring approximately 90° from either shaft, locking shafts in place.
- NOTE: One or more gaskets (42338) may have been used in assembly of tool to prevent binding of motor assembly when bolting motor housing to gearing. See "Head Section".
- Assemble spacer (33697) to spindle and assemble retainer (43171) to ring gear, securing with cap screws (Y154-51).

## MOTOR SECTION



### DISASSEMBLY

- The motor assembly may be removed from housing after removal of the gearing or head assembly.
- Remove motor from housing and remove nut (33694) and sems fastener (33700).
- Grasp cylinder in one hand and tap splined end of rotor with a soft face hammer; motor will come apart.

### ASSEMBLY

- Pack bearings with ARO 33153 grease, or equivalent, and assemble bearings into end plates. NOTE: Bearing (33709) is a flush face type. Assemble into end plate with flush face towards end plate (bearing identification markings to the out-

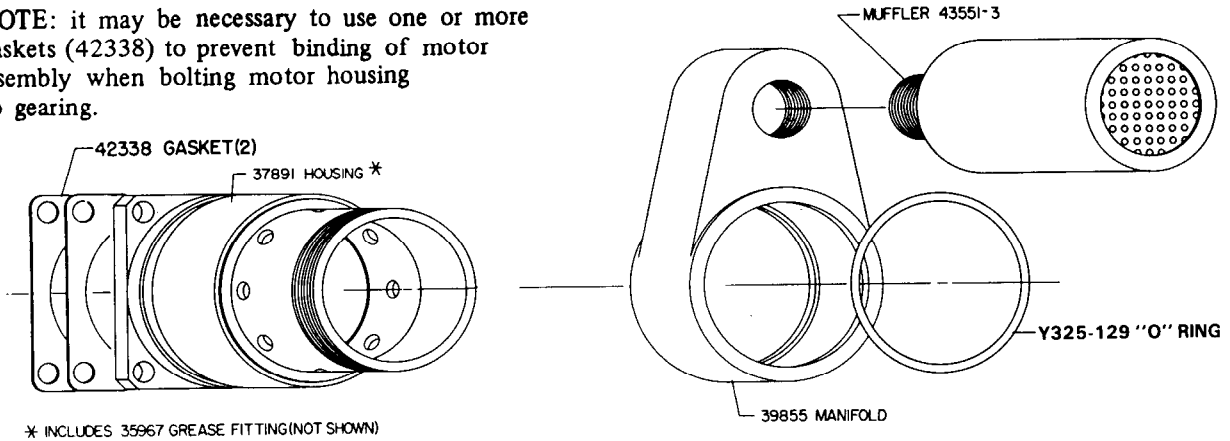
side).

- Assemble end plate (34485), with bearing and spacer (33701), to rotor and secure with sems fastener (33700). NOTE: Torque fastener to 28 in. lbs.
- Coat i.d. of cylinder with spindle oil and assemble cylinder (34472) over rotor and align roll pin (Y178-23) with hole in end plate (34485).
- Assemble blades (41520) to rotor and assemble end plate (34486), with bearing, to rotor and cylinder, aligning roll pin (Y178-20) with hole in end plate.
- Be sure motor does not bind (if motor binds, tap splined end of rotor lightly with a soft face hammer to loosen).
- To assemble motor assembly to tool, see "Head Section"

# DISASSEMBLY AND ASSEMBLY OF TOOLS

## MOTOR HOUSING AND EXHAUST MANIFOLD

**NOTE:** it may be necessary to use one or more Gaskets (42338) to prevent binding of motor assembly when bolting motor housing to gearing.



To remove manifold, remove head and "O" ring (Y325-129) and slip manifold off housing.

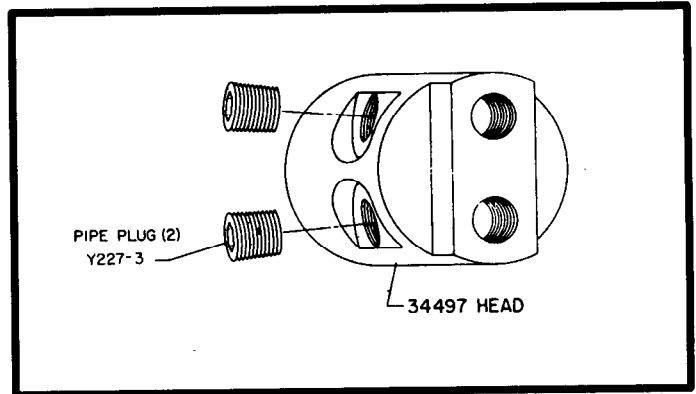
### HEAD SECTION

#### DISASSEMBLY

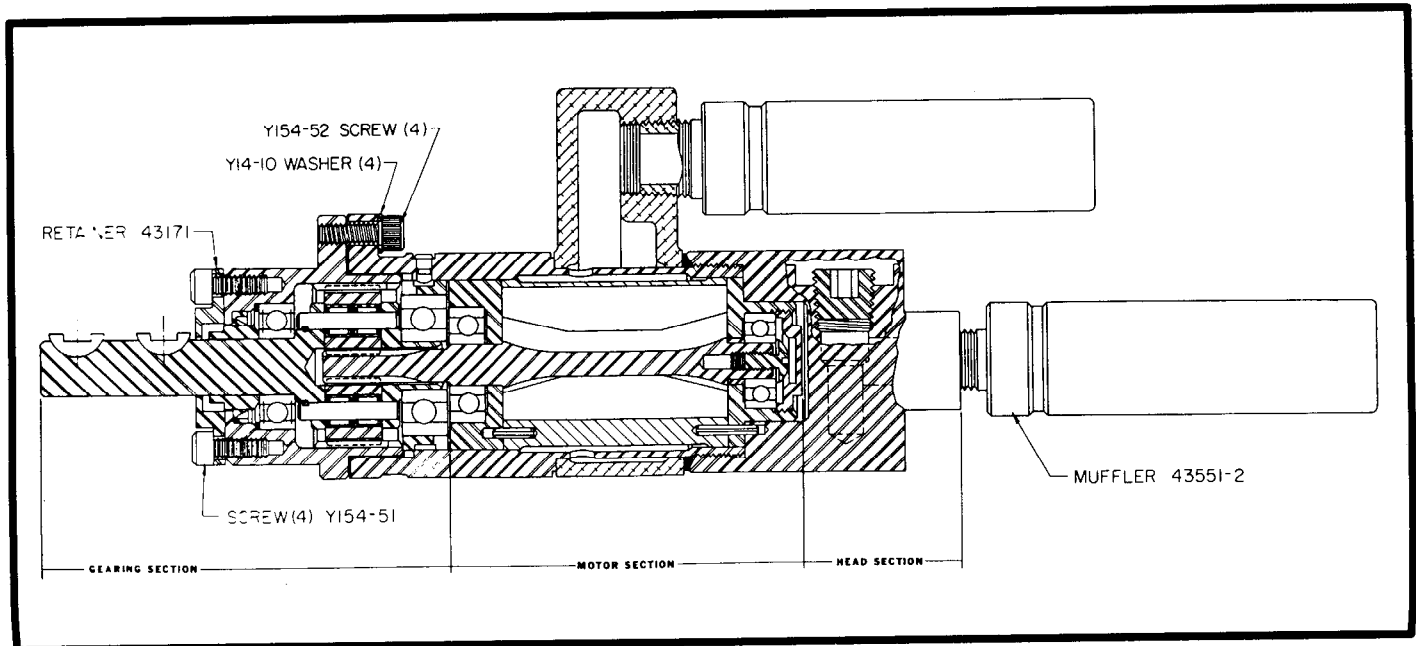
- a. Remove mufflers from tool.
- b. Place flats of head in a suitable holding device and unthread and remove motor housing from head.

#### ASSEMBLY

- a. Place flats of head in a suitable holding device, with the "motor end" in an upright position.
- b. Place motor assembly on head, aligning roll pin (Y178-23) with locating hole in head (center hole of 7 holes).
- c. Slip motor housing, with manifold and "O" ring attached, over motor assembly. Thread and secure motor housing to head.
- d. Assemble spacers (33699 and 33711) to motor and assemble gasket(s) and gearing assembly to tool.



### CROSS SECTION OF TOOL





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