



Tool & Hoist Products

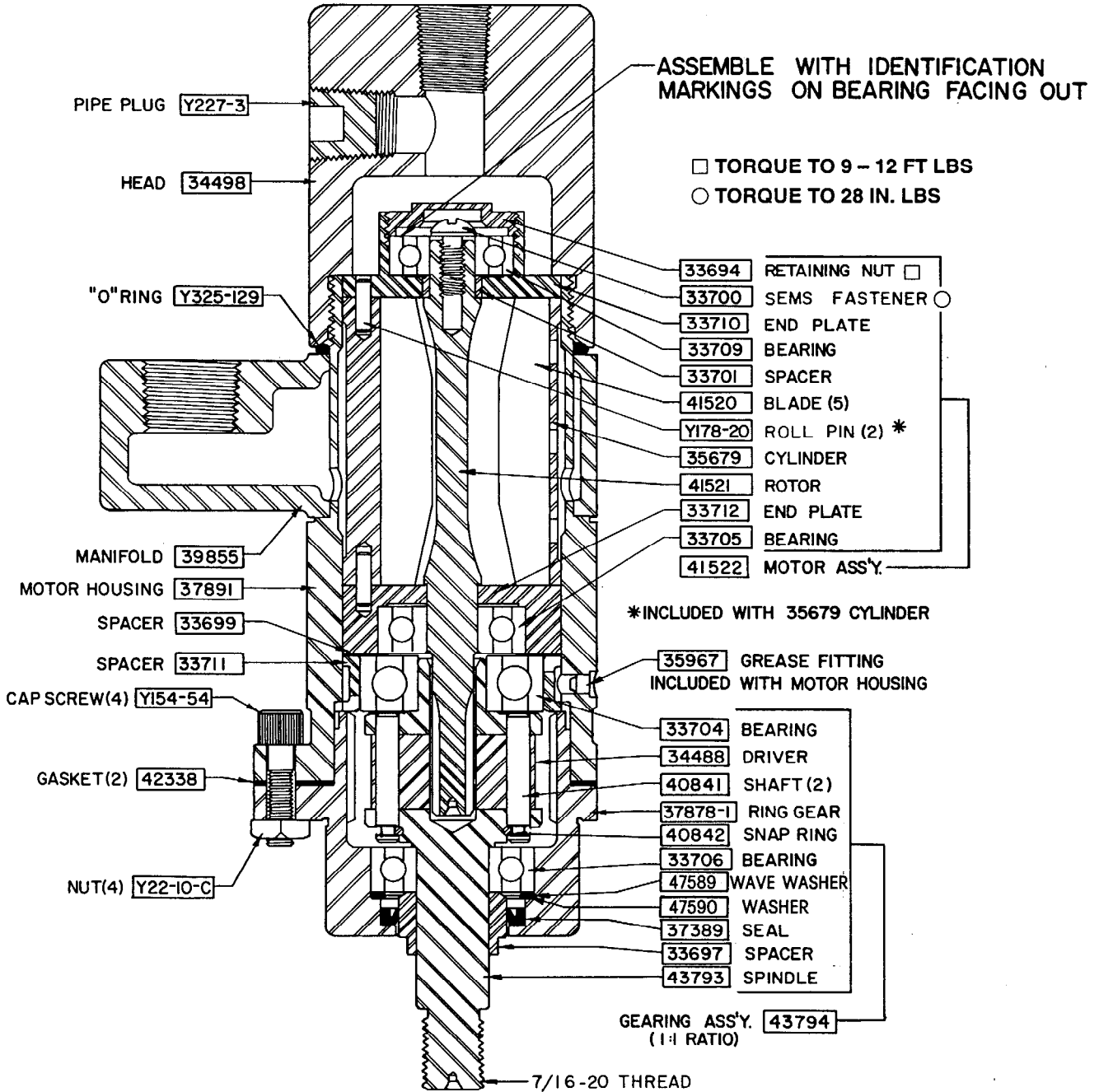
# SALES AND ENGINEERING DATA

2200 SERIES POWER MOTOR  
MODEL 8183

18,000 R.P.M. SINGLE DIRECTION

FORM: 2105-2

DATE: 8-9-93



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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**INGERSOLL-RAND®**  
**PROFESSIONAL TOOLS**

## AIR AND LUBE REQUIREMENTS

Air pressure of 90 p.s.i.g. (6 bar) at the air inlet of the tool is required for maximum motor efficiency. If necessary, an air regulator should be installed to maintain this air pressure when the tool is in operation.

Filtered and oiled air will allow the tool to operate more efficiently and yield a longer life to operating parts and mechanisms. A line filter capable of filtering particles larger than 50 microns should be used with a line oiler.

Filter-Regulator-Lubricator (F-R-L) assembly model 128231-800 is recommended for use with this air tool. The capacity of this F-R-L is adequate to provide clean (40 micron) oiled

and regulated air for the tool.

Flush tool with a solution of three parts cleaning solvent and one part light oil after each 40 hours of operation. After flushing, apply a small amount of spindle oil in air inlet and run free for one minute to insure proper lubrication.

Recommended hose size – 5/16" (8 mm) nominal inside diameter.

Recommended lubricants: spindle oil 29665, 1 qt. (.9 liter) container for oiler and air inlet; grease 33153, 5 lb. (2.3 kg) can for gears and bearings, "O" ring lubricant 36460, 4 oz. (113 g) tube for lubrication and installation of "O" rings.

## MAINTENANCE

Disconnect air supply from tool or shut off air supply line to tool and exhaust (drain) air line to tool of compressed air before performing service or maintenance to tool.

Air tools are made of precision parts and should be handled with reasonable care when servicing. Excessive pressure exerted by a holding device may cause distortion of a part. Apply pressure evenly when disassembling (or assembling) parts which have a press fit. When removing or installing bearings, apply pressure to the bearing race that will be press fit to the mating part; if this is not practiced, Brinelling of the bearing races will occur, making replacement necessary. It is important that the correct tools and fixtures are used when servicing this air tool.

Disassembly should be done on a clean work bench with a clean cloth spread to prevent the loss of small parts. After disassembly is completed, all parts should be thoroughly washed in a clean solvent, blown dry with air and inspected for wear levels, abuse and

contamination.

Double sealed or shielded bearings should never be placed in solvent unless a good method of relubricating the bearing is available. Open bearings may be washed but should not be allowed to spin while being blown dry. When replacement parts are necessary, consult drawing containing the part for identification.

Before reassembling, lubricate parts where required. Use 33153 grease, or equivalent, in bearings. Use 36460 lubricant for "O" ring assembly. When assembling "O" rings, care must be exercised to prevent damage to the rubber sealing surfaces. A small amount of grease will usually hold steel balls and other small parts in place while assembling.

When ordering parts, be sure to list **part number, part name, model number and serial number of tool**. Use only genuine ARO® replacement parts

## DISASSEMBLY AND ASSEMBLY OF TOOLS

### DISASSEMBLY

**GEARING** – Remove accessory from spindle. Remove four (4) nuts (Y22-10-C) and cap screws (Y154-54) and pull gearing from motor housing. Remove spindle and components 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 necessary. To disassemble completely, remove bearing (33706) from threaded end of spindle. Rotate snap ring so the open portion of ring will allow removal of one shaft (40841). Rotate snap ring to allow for removal of other shaft and remove shaft and driver (34488). To remove bearing (33704), insert shafts into spindle and alternately tap ends of shafts, loosening bearing from spindle.

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

### ASSEMBLY

**MOTOR** – Pack bearings with ARO 33153 grease, or equivalent,

and coat i.d. of cylinder with ARO 29665 spindle oil. Assemble bearings into end plates. NOTE: Bearing (33709) must be assembled to end plate with bearing identification markings facing out. Assemble end plate (33710) to rotor. Assemble cylinder (35679) over rotor to end plate, aligning roll pin with hole in end plate. Assemble blades to rotor and assemble end plate (33712) to rotor and cylinder, aligning roll pin with hole in end plate. Assemble fastener (33700) and nut (33694) to motor. NOTE: Torque fastener to 28 in. lbs and nut to 9 – 12 ft lbs. Be sure rotor does not bind (if rotor binds, tap splined end of rotor lightly with a soft face hammer to loosen) and assemble to housing.

**GEARING** – Pack bearings and lubricate shafts and internal splines of driver. Assemble driver (34488) and shafts to spindle, aligning notch in shafts with snap ring. Rotate open portion of snap ring 90° from shafts, securing shafts in place. Assemble bearings to spindle and assemble, with seal (37389), washer (47590) and wave washer (47589), to ring gear. Position gasket(s) over ring gear and assemble, with spacers (33699 and 33711) to motor housing. Secure with four (4) cap screws and nuts (Y22-10-C).