

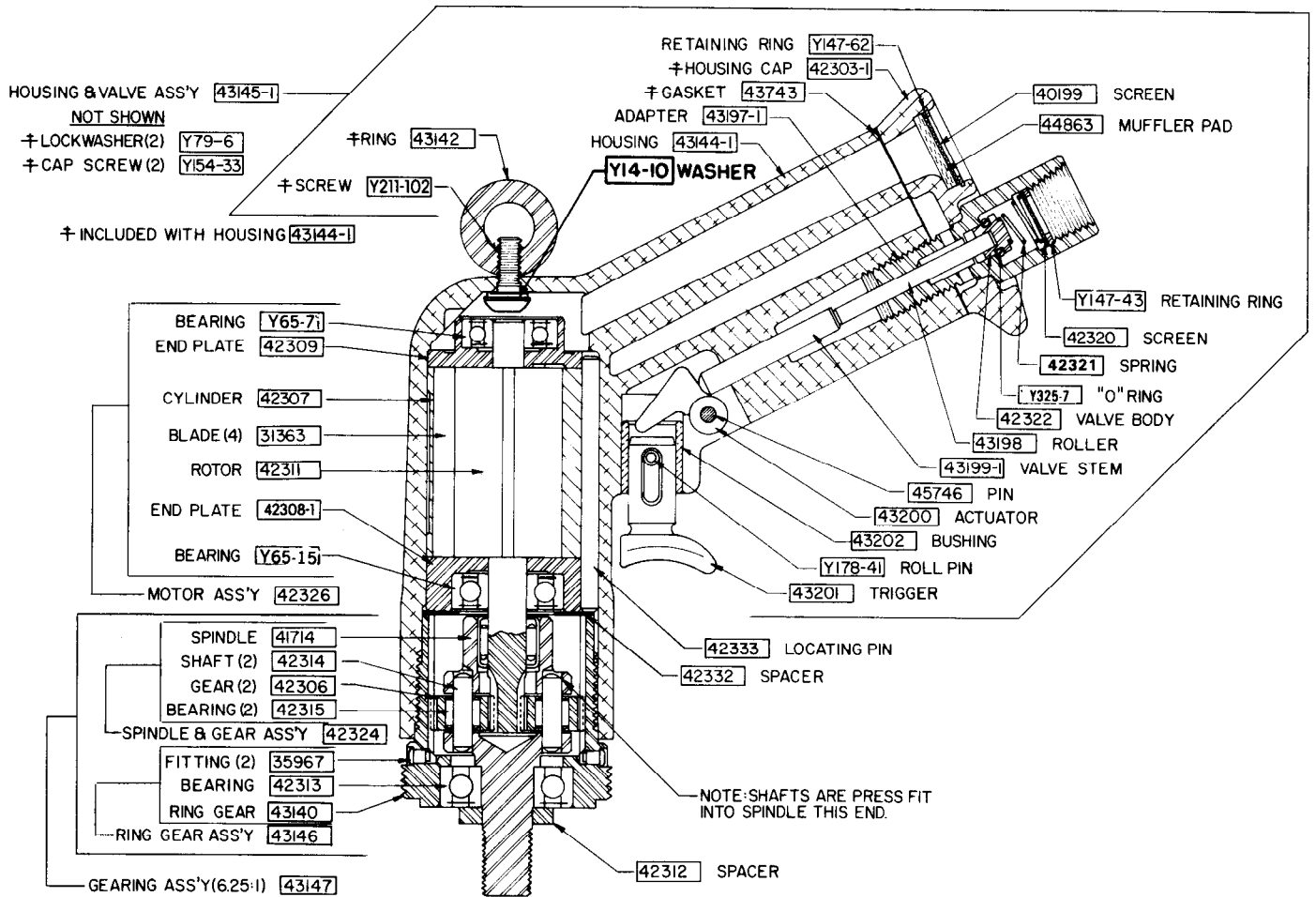
# PARTS LIST

COMPACT POWER UNIT  
MODEL 8181-A

"O" SERIES 2,500 R.P.M. PISTOL GRIP

REV. 8-24-92

FORM 1851-2



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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**INGERSOLL-RAND**  
PROFESSIONAL TOOLS

## OPERATING PRECAUTIONS

**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 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 pressure when 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.

**CAUTION:** An excessive amount of lubricant in a tool will affect the speed and power. Each set of planetary gearing should contain approximately 1/8 oz. (3.5 g) of grease.

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 the press fit to the mating part; if this is not practiced, Brinelling of the bearing races may 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 con-

tamination.

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 REASSEMBLY OF TOOLS

### DISASSEMBLY

**GEARING** — Place wrench on flats of ring gear and unscrew to remove from housing. Grasp ring gear in one hand and tap threaded end of spindle with a soft faced hammer to remove spindle assembly from ring gear. Press shafts from spindle, releasing gears and bearings.

**MOTOR** — Grasp splined end of rotor and pull motor assembly from housing. Grasp cylinder in one hand and tap splined end of rotor with a soft faced hammer; motor will come apart. NOTE: Bearings are press fit on rotor.

**HOUSING AND VALVE PARTS** — Remove retaining ring (Y147-43), releasing screen (42320), spring (42321), valve body (42322), "O" ring (Y325-7), roller (43198) and valve stem (43199-1). Remove retaining ring (Y147-62) to free screen (40199) and muffler pad (44863).

### REASSEMBLY

**GEARING** — Assemble gears and bearings to spindle and secure with shafts. Assemble spindle assembly to ring gear assembly and assemble with spacer (42332) to motor and housing. Assemble spacer (42312) and chuck to spindle. Gearing should contain approximately 1/8 oz. (3.5 g) of grease.

**MOTOR** — Assemble end plate (42309) and bearing (Y65-7) to rotor. NOTE: Bearing is press fit on rotor. Assemble cylinder over rotor to rear end plate and assemble blades to rotor. Assemble end plate (42308-1) and bearing (Y65-15) to rotor. NOTE: Bearing is press fit on rotor. Be sure motor does not bind and assemble with locating pin (42333) into housing. NOTE: If motor binds, tap rotor with a soft face hammer to loosen.

**HOUSING AND VALVE PARTS** — Assemble muffler pad (44863) and screen (40199) into exhaust hole in housing and secure with retaining ring (Y147-62). Assemble valve body with "O" ring (Y325-7) to roller (43198). Assemble valve stem (43199-1) and roller into housing. Assemble spring (42321) and screen (42320) into adapter (43197-1) and secure with retaining ring (Y147-43).