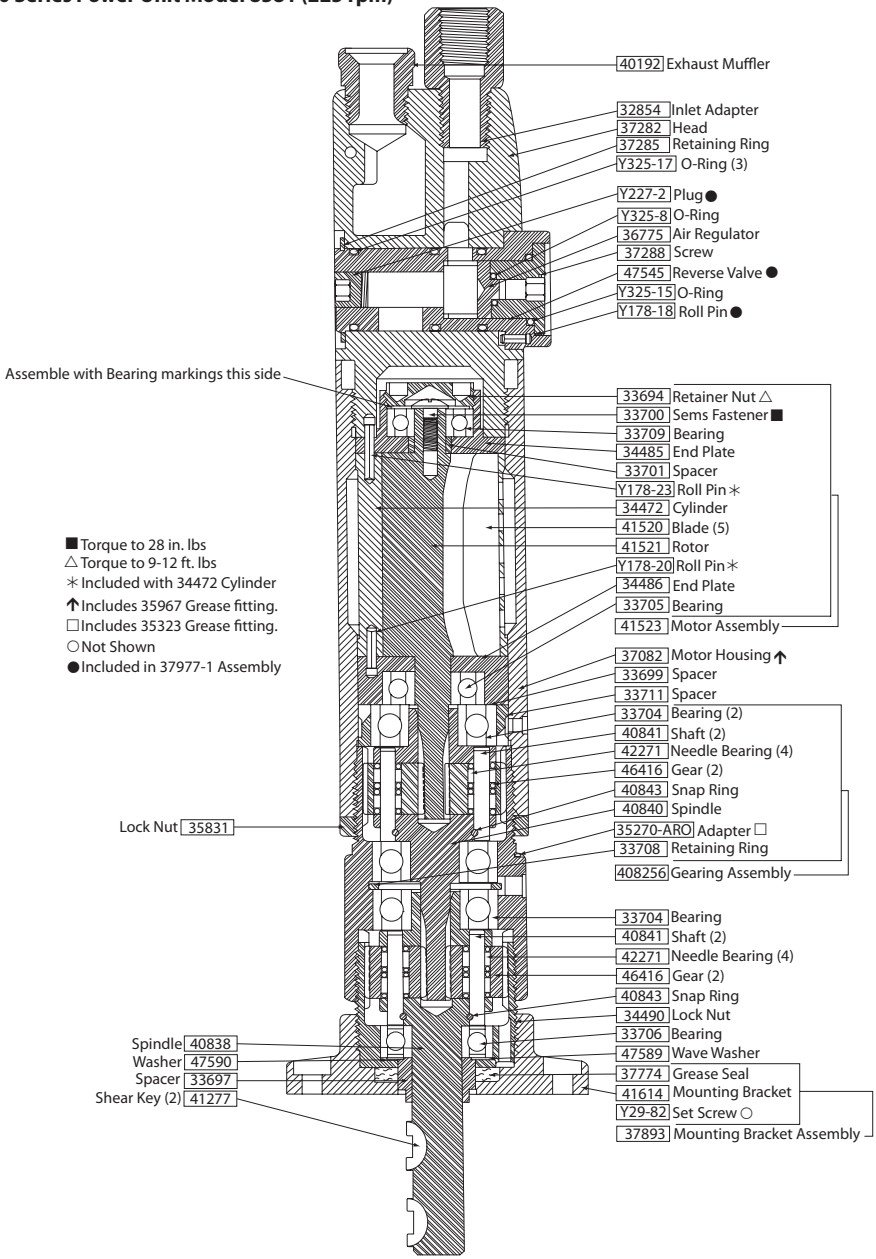
Sales and Engineering Data

2200 Series Power Unit Model 8581 (225 rpm)



For parts and service information, contact your local **Ingersoll Rand** distributor, or the Customer Service Dept. of the **Ingersoll Rand** Distribution Center, White House, TN at PH: (615) 672-0321, FAX: (615) 672-0601.

45633773
Edition 2
Part no. 49999-234
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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 28221-800 is recommended for use with this air tool. The capacity or 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. (0.9 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 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 **Ingersoll Rand** replacement parts.

Disassembly and Reassembly of Tools

Disassembly

DRIVE GEARING - Remove shear keys, spacer (33697) and mounting bracket assembly (37893) from tool. Using wrenches on flats of lock nut (34490) and adapter (35270-ARO), unthread and remove lock nut and components from tool. Tap drive end of lock nut with a soft face hammer; spindle and components will loosen from locknut. **NOTE:** Do not disassemble further unless damage Is evident. To disassemble, remove bearing (33706) and rotate snap ring, allowing removal of shafts and gears. Place shafts in spindle and alternately tap ends of shafts, loosening bearing (33704) from spindle.

AUXILIARY GEARING - Remove drive gearing. Loosen locknut (35831) and unthread and remove gearing assembly (40826) from tool. Disassembly of auxiliary gearing Is similar to that of drive gearing.

MOTOR - The motor assembly may be removed from the housing after the removal of gearing or head. Remove retainer 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.

HEAD ASSEMBLY - Remove screw (37288), releasing valve components. Remove retaining ring (37285), allowing removal of reverse valve (47545).

Assembly

HEAD ASSEMBLY - Assemble regulator (36775) into reverse valve (47545). Grease and assemble O-Ring (Y325-8) to regulator and O-Ring (Y325-15) to screw (37288). Assemble screw to reverse valve (47545), securing components. Grease and assemble O-Rings (Y325-17) to reverse valve and assemble valve to head, securing with retaining ring (37285).

MOTOR - Pack bearings with 33153 grease when assembling. Assemble bearing (33709) to end plate (34485), pressing on outer race of bearing. **NOTE:** Assemble with bearing markings facing out. Assemble spacer (33701) and end plate (34485) to rotor, pressing on inner race of bearing. Secure with sems fastener (33700), tightening to 28 in lbs. Coat blades (41520) with 29665 spindle oil and assemble to rotor slots - straight side out. Coat i.d. of cylinder with 29665 spindle oil and assemble to end plate (34485), aligning roll pin (Y178-23) with hole in end plate and air inlets of cylinder and end plate. Assemble bearing (33705) to end plate (34486), pressing on outer race of bearing. Assemble end plate to cylinder, pressing on inner race of bearing. Assemble retainer nut (33694) to end plate and tighten to 9 - 12 ft lbs. Be sure rotor does not bind and assemble to housing. Assemble spacers (33699 and 33711) to housing.

AUXILIARY GEARING - Pack bearings and lubricate gears liberally with 33153 grease when assembling. Assemble needle bearings to gears (46416). Assemble gears and shafts to spindle, aligning notch in shafts with snap ring (40843). Rotate open portion of snap ring 90° from shafts, securing shafts in place. Assemble bearings (33704) to spindle. Assemble retaining ring (33708) and spindle to adapter (35270-ARO). Assemble adapter to tool and secure with lock nut.

DRIVE GEARING - Assembly of drive gearing is similar to that of auxiliary gearing. Assemble lock nut (34490) and components to tool. Assemble mounting bracket assembly (37893) to lock nut. Assemble spacer (33697) and keys to tool.

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