ARO
Tool & Hoist Products

SALES AND ENGINEERING DATA

2200 SERIES DRILL
MODEL 7956–3
325 R.P.M. BUTTON HEAD

FORM: 3439–2
DATE: 8–9–93

□ ASSEMBLE WITH BEARING MARKINGS FACING OUT.

⚹ INCLUDED WITH 36772 CYLINDER ASSEMBLY.

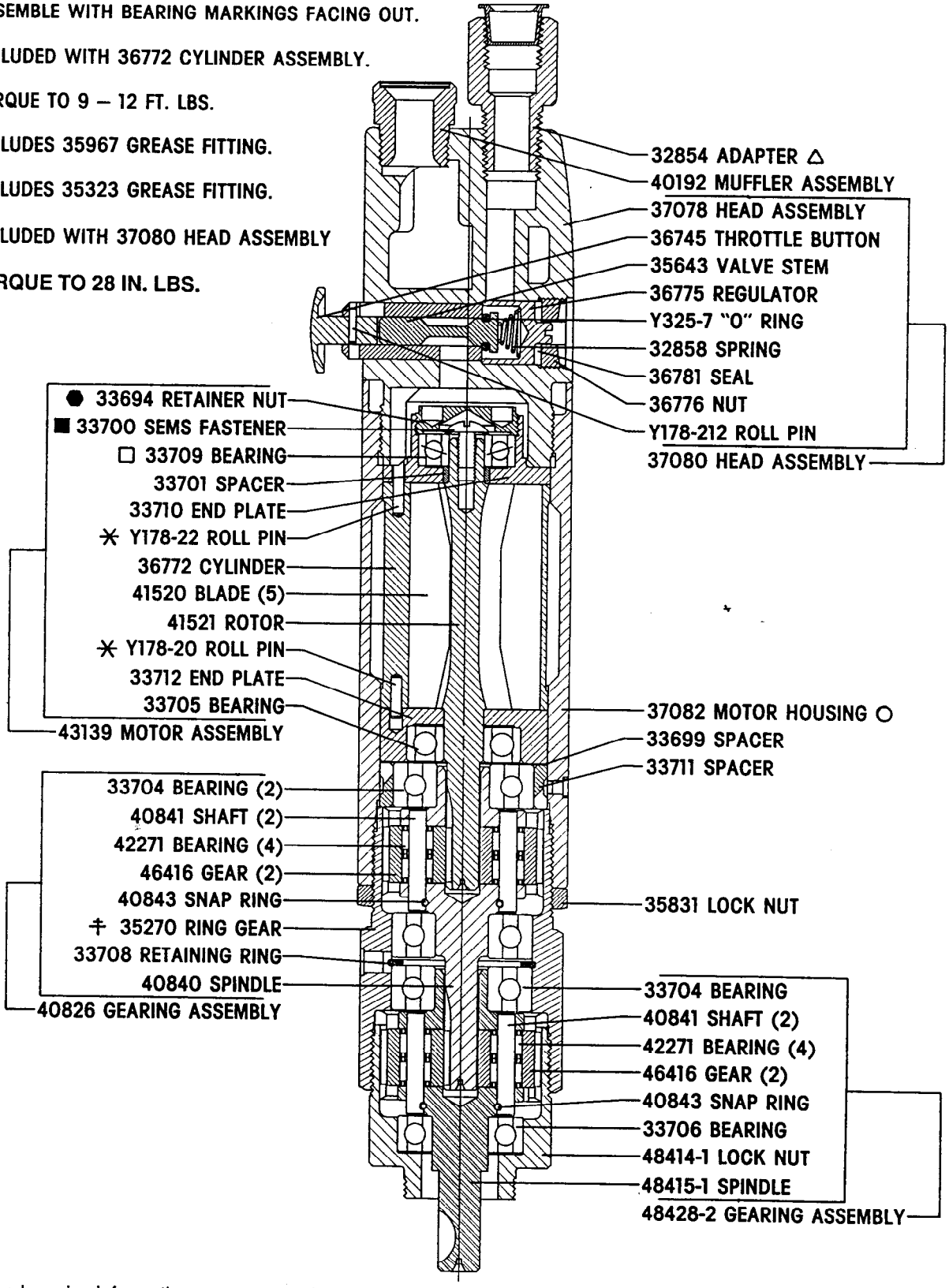
● TORQUE TO 9 – 12 FT. LBS.

○ INCLUDES 35967 GREASE FITTING.

‡ INCLUDES 35323 GREASE FITTING.

△ INCLUDED WITH 37080 HEAD ASSEMBLY

■ TORQUE TO 28 IN. LBS.



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

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 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.

Gearing should be grease lubricated a minimum of once a month. CAUTION: An excessive amount of lubricant in a tool will affect the speed and power. Each set of gearing should contain approximately 1/4 oz. (7 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 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

DRIVE GEARING – Using a wrench on flats of lock nut (48414–1), unthread and remove gearing assembly from tool. Tap drive end of spindle with a soft face hammer; spindle and components will loosen from lock nut. NOTE: Do not disassemble further unless damage is evident. To disassemble, remove bearing (33706) and rotate snap ring to allow removal of one shaft. Remove shaft (40841), releasing gear (46416). Repeat for opposite shaft and gear.

AUXILIARY GEARING – Remove drive gearing. Loosen lock nut (35831) and remove gearing assembly from tool. Disassembly of auxiliary gearing is similar to that of drive gearing.

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

HEAD – Remove nut (36776), releasing seal (36781), regulator (36775), spring (32858) and valve stem (35643). To remove throttle button (36745), remove roll pin (Y178–212).

ASSEMBLY

HEAD – Grease and assemble "O" ring (Y325–7) to valve stem (35643). Assemble valve stem, spring (32858), regulator (36775) and seal (36781) to head, securing with nut (36776).

MOTOR – Pack bearings with ARO 33153 grease when assembling. Assemble bearing (33709) to end plate (33710), pressing on outer race of bearing. NOTE: Assemble with identification markings facing out. Assemble spacer (33701) and end plate (33710) 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 (36772) with 29665 spindle oil and assemble to end plate (33710), aligning roll pin (Y178–22) with hole in end plate. Assemble bearing (33705) to end plate (33712), pressing on outer race of bearing. Assemble end plate to rotor, pressing on inner race of bearing. Assemble retainer nut (33694) to end plate (33710) and torque to 9 – 12 ft lbs. Place head in a suitable holding device, with motor end upward. Place motor assembly on head, aligning roll pin (Y178–22) with hole in head. Slip motor housing over motor and secure to head. Assemble spacers (33699 and 33711) to housing.

AUXILIARY GEARING – Pack bearings and lubricate gears liberally with ARO 33153 grease when assembling. Assemble bearings (42271) to gears (46416). Assemble gears and shafts to spindle, aligning 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 ring gear (35270). Assemble ring gear to tool and secure with lock nut (35831).

DRIVE GEARING – Assembly of drive gearing is similar to that of auxiliary gearing. Assemble spindle and components to lock nut (48414–1) and assemble lock nut to tool.