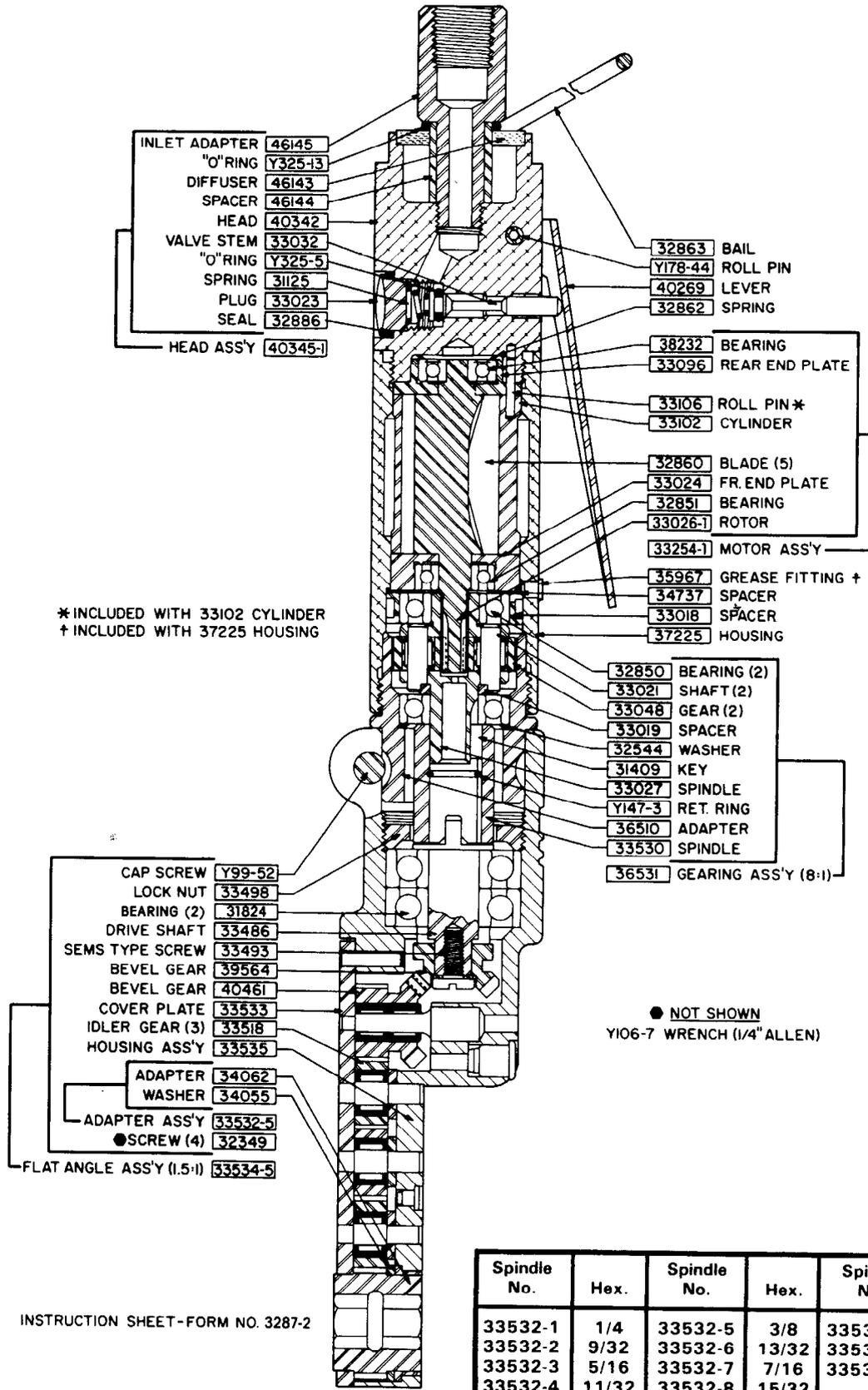


PARTS LIST

MODEL 7509-E
 "000" SERIES FLAT-ANGLE NUTSETTER
 1600 R.P.M. LEVER TYPE



* INCLUDED WITH 33102 CYLINDER
 † INCLUDED WITH 37225 HOUSING

● NOT SHOWN
 Y106-7 WRENCH (1/4" ALLEN)

INSTRUCTION SHEET-FORM NO. 3287-2

Spindle No.	Hex.	Spindle No.	Hex.	Spindle No.	Hex.
33532-1	1/4	33532-5	3/8	33532-9	1/2
33532-2	9/32	33532-6	13/32	33532-10	17/32
33532-3	5/16	33532-7	7/16	33532-11	9/16
33532-4	11/32	33532-8	15/32		



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.

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 planetary gearing should contain approximately 1/16 oz. (1.8 g) of grease.

RECOMMENDED HOSE SIZE: 5/16" (8mm) 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 maintenance or service 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 complete, 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, or parts adjacent "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

REASSEMBLY

FLAT ANGLE ATTACHMENT — Remove cap screw (Y99-52) and pull angle attachment from gearing. Remove lock nut (33498) to remove drive shaft (33486), bearings (31824) and bevel gear (39564). To remove bevel gear from shaft, remove screw (33493). Remove screws from cover plate and remove cover plate to remove gears, bearings, shafts and drive adapter from housing.

GEARING — Holding motor housing with a strap wrench or in a suitable holding device, place wrench on flats of gearing and unscrew from housing. Tap end of adapter (33530) with a non-metallic hammer; spindle (33027) with component parts will loosen from adapter (36510). Remove spindle (33530) and key (31409) from spindle (33027). Gearing should not be further disassembled unless it is necessary to replace a part as Brinelling of a bearing race may occur making replacement necessary. To further disassemble, remove bearing and shafts, releasing gear from spindle.

MOTOR — The motor assembly may be removed by removing either the head or gearing from the motor housing. Remove motor from housing and remove spring (32862). Grasp cylinder in one hand and tap splined end of rotor with a non-metallic hammer; motor will come apart.

VALVE — Remove screw plug (33023) with seal (32886). Valve parts may now be removed from head. To remove diffuser (46143), remove inlet adapter (46145).

VALVE — Assemble valve stem (33032) with "O" ring (Y325-5) and spring (31125) into head and secure with seal (32886) and screw plug (33023). Assemble spacer (46144), diffuser (46143) and "O" ring (Y325-13) to head and secure with inlet adapter (46145).

MOTOR — Assemble bearings into end plates and assemble end plate (33096) to rotor. Assemble cylinder over rotor to end plate and assemble blades to rotor. Assemble end plate (33024) with bearing (32851) to rotor and cylinder. Insure that motor does not bind and assemble to tool.

NOTE: When assembling motor to tool, remove motor housing from head. Place head of tool in a suitable holding device with the "motor end" in an upright position. Place motor with spring (32862) on head, aligning roll pin (33106) with hole provided in head. Slip motor housing over rotor and secure to head. Assemble spacer (34737) and gearing to tool.

GEARING — Assemble spacer and bearing to spindle. Assemble gears to spindle and secure with shafts. Assemble bearing to opposite end of spindle. Assemble key (31409) and spindle (33530) to gearing and assemble with washer (32544) into adapter (36510). Gearing should contain approx. 1/16 oz. grease.

FLAT ANGLE ATTACHMENT — Assemble bearings to shaft (33486). NOTE: Bearings (31824) must be assembled to shaft back to back (identification markings on bearing faces towards each other). Assemble bevel gear (39564) to shaft and secure with screw (33493). The balance of the reassembly is the reverse of the disassembly procedure. The flat angle attachment should contain approx. 1/8 oz. grease.