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. (6.2 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 C28231–810 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

FLAT–ANGLE ATTACHMENT – Loosen coupling nut (31198) completely and pull flat–angle attachment from gearing. Remove sems fastener (32349). Cover plate (31952) and screws (Y76–263–C) to remove components from housing.

GEARING – Unthread and remove ring gear (31999) from housing. Hold spindle and remove pinion gear (39551) and bearing (31993). Remove spindle and components from ring gear. Alternately tap ends of shafts (31596) to remove bearing (Y65–8). Remove shafts, releasing gears (31889).

MOTOR – The motor assembly may be removed after the removal of gearing or head assembly. Grasp cylinder in one hand and tap splined end of rotor with a soft face hammer; motor will come apart. To remove exhaust sleeve and components from housing, remove "O" ring (Y325–222).

HEAD ASSEMBLY – The valve components may be removed from head without removal of head from tool. Remove valve plug (30600), exposing valve components for removal.

ASSEMBLY

HEAD ASSEMBLY – Assemble "O" ring (Y325–7) to valve stem (46135). Assemble valve stem into head. Assemble spring (30609) and regulator (30603) into head, aligning hole in regulator with air inlet of head. Assemble seal (30602) to head and secure valve components with "O" ring (Y325–13) and plug (30600).

MOTOR – Assemble bearings into end plates, pressing on outer race of bearings. Assemble end plate (30129) to rotor, pressing on inner race of bearing. Assemble cylinder over rotor, aligning air inlets of cylinder and end plate and roll pin (Y178–20) with hole in end plate. Assemble blades to rotor slots – straight side out. Assemble end plate (31592) to rotor and cylinder, aligning roll pin (Y178–20) with hole in end plate. NOTE: Press on inner race of bearing. Be sure rotor does not bind. If rotor binds, tap splined end lightly with a soft face hammer to loosen.

GEARING – Lubricate gearing during assembly. Gearing should contain approximately 1/4 oz. (7 g) of grease. Assemble gears to spindle and secure with shafts (31596), aligning notch in end of shafts with step on spindle. Assemble bearing (Y65–8) to spindle and assemble to ring gear. Assemble bearing (31993) and pinion gear (39551) to spindle.

FLAT–ANGLE ATTACHMENT – Lubricate gears and bearings during assembly. Flat–angle attachment should contain approximately 1/8 oz. (3.5 g) of grease. Assemble gear (41246), bearing (32004) and shaft (31991) to housing and secure with washer (Y117–6) and screw (Y76–263–C). Assemble gear (31988) and shaft (31992) to housing and secure with washer (Y117–6) and screw (Y76–263–C). Assemble bushing (31990), retainer assembly (32474) and bushing (32002) to housing and secure with cover plate (31952) and fasteners (32349).