

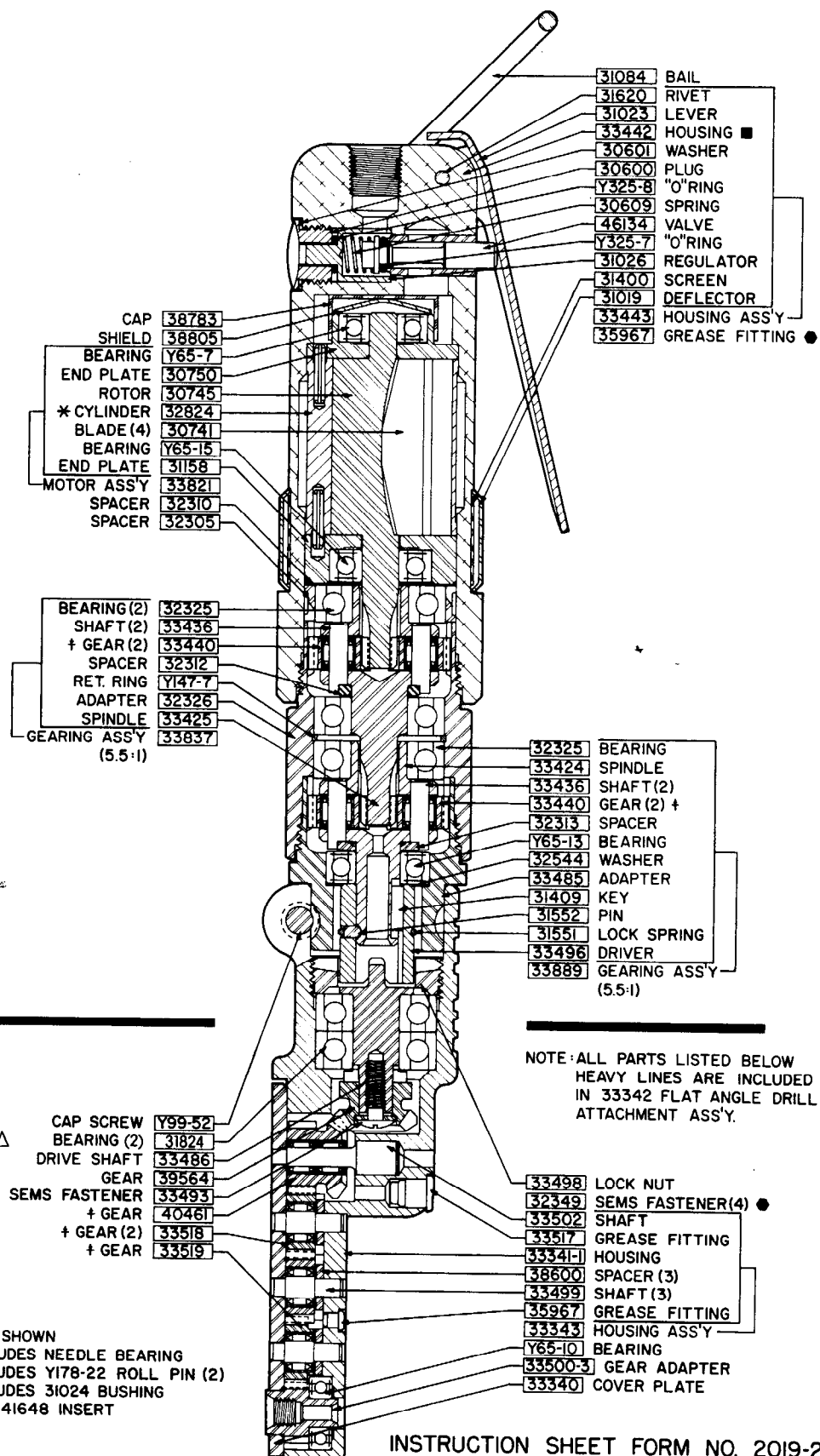
# SALES AND ENGINEERING DATA

"O" SERIES FLAT ANGLE DRILL

MODEL 7433-A

LEVER THROTTLE

500 R.P.M.



- CAP 36783
- SHIELD 38805
- BEARING Y65-7
- END PLATE 30750
- ROTOR 30745
- \* CYLINDER 32824
- BLADE (4) 30741
- BEARING Y65-15
- END PLATE 31158
- MOTOR ASS'Y 33821
- SPACER 32310
- SPACER 32305

- 31084 BAIL
- 31620 RIVET
- 31023 LEVER
- 33442 HOUSING ■
- 30601 WASHER
- 30600 PLUG
- Y325-8 "O"RING
- 30609 SPRING
- 46134 VALVE
- Y325-7 "O"RING
- 31026 REGULATOR
- 31400 SCREEN
- 31019 DEFLECTOR
- 33443 HOUSING ASS'Y
- 35967 GREASE FITTING ●

- BEARING (2) 32325
- SHAFT (2) 33436
- † GEAR (2) 33440
- SPACER 32312
- RET. RING Y147-7
- ADAPTER 32326
- SPINDLE 33425
- GEARING ASS'Y (5.5:1) 33837

- 32325 BEARING
- 33424 SPINDLE
- 33436 SHAFT (2)
- 33440 GEAR (2) †
- 32313 SPACER
- Y65-13 BEARING
- 32544 WASHER
- 33485 ADAPTER
- 31409 KEY
- 31552 PIN
- 31551 LOCK SPRING
- 33496 DRIVER
- 33889 GEARING ASS'Y (5.5:1)

- △ CAP SCREW Y99-52
- BEARING (2) 31824
- DRIVE SHAFT 33486
- GEAR 39564
- SEMS FASTENER 33493
- † GEAR 40461
- † GEAR (2) 33518
- † GEAR 33519

NOTE: ALL PARTS LISTED BELOW HEAVY LINES ARE INCLUDED IN 33342 FLAT ANGLE DRILL ATTACHMENT ASS'Y.

- 33498 LOCK NUT
- 32349 SEMS FASTENER (4) ●
- 33502 SHAFT
- 33517 GREASE FITTING
- 33341 HOUSING
- 38600 SPACER (3)
- 33499 SHAFT (3)
- 35967 GREASE FITTING
- 33343 HOUSING ASS'Y
- Y65-10 BEARING
- 33500-3 GEAR ADAPTER
- 33340 COVER PLATE

- NOT SHOWN
- † INCLUDES NEEDLE BEARING
- \* INCLUDES Y178-22 ROLL PIN (2)
- INCLUDES 31024 BUSHING AND 41648 INSERT

INSTRUCTION SHEET FORM NO. 2019-2



## 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 128241-800 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.

**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 contami-

nation.

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

**FLAT ANGLE:** Remove cap screw (Y99-52) releasing flat angle assembly (33342). Remove lock nut (33498), bearings (31824), shaft (33486) and bevel gear (39564) from housing. Unscrew sems fastener (33493) to release gear (39564) from shaft. Remove (4) screws in cover plate which will release bearings and drill bit adapter.

**GEARING:** Holding adapter (32326) with a wrench, unscrew adapter (33485) and remove drive gearing. Holding housing (33442) with wrench, unscrew adapter (32326) and remove auxiliary gearing. On the drive gearing assembly, remove spring (31551), pin (31552), driver (33496), and key (31409). Grasp adapter in one hand, tap end of spindle with non-metallic hammer until gearing is released from adapter. Remove rear bearing, press planet gear shafts out of spindle releasing planet gears and bearings. Remove front bearing and spacer.

**MOTOR:** Using wrench, remove motor and motor housing assembly (33442). Tap splined end of rotor (30745) with non-metallic hammer to remove motor from housing. Grasp motor cylinder (32824) in one hand and tap splined end of rotor until motor comes apart.

**VALVE:** Place tool in holding device, securing on flats of housing. Unscrew plug (30600) and valve parts may easily be removed.

### REASSEMBLY

**VALVE:** Assemble "O" ring (Y325-7) to valve stem (46134). Assem-

ble valve stem, spring (30609), regulator (31026), and "O" ring (Y325-8) into valve opening in housing. Assemble washer (30601) to plug (30600) and secure valve components with plug.

**MOTOR:** Assemble rear end plate (30750) and bearing to cylinder and pin assembly (32824). Assemble blades to rotor and assemble into cylinder and end plate. Assemble front end plate (31158) and bearing to cylinder and rotor. Assemble shield (38805) and cap (38783) to rear end plate. Be sure motor spins freely, then assemble into motor housing assembly (33442).

**GEARING:** Assemble spacer and bearing to drive end of spindle. Assemble planet gears and bearings into spindle and secure with planet gear shafts. Align planet gear shafts to spacer with a small screwdriver. Assemble bearing to rear end of spindle. This method applies to both gearing assemblies. If gearing assembly has loose needle-type bearings, apply a small amount of grease to bearings to hold them in place while assembling. Assemble key (31409), driver (33496) and pin (31552) to spindle of drive gearing and secure with spring (31551). Assemble spacer (32305) and gearing to tool.

**FLAT ANGLE:** Place bearings, gear (40461) and drill bit adapter into housing. Place cover plate in place and secure with (4) screws. Assemble gear (39564) to shaft (33486) and secure with sems fastener (33493). Assemble shaft (33486) and bearings (31824) into housing and secure with lock nut (33498). Assemble flat angle attachment to tool and secure with screw (99-52).