



Tool Products

OPERATOR'S MANUAL

INCLUDING: OPERATION, INSTALLATION & MAINTENANCE

SECTION M10
MANUAL 43

Released: 5/79

Revised: 10-20-95

Form: 1565-2

"22" SERIES SHORT GRINDERS

Models: 7149-C, 7153-C,
7235-C and 7236-C



⚠ WARNING

**READ THIS MANUAL CAREFULLY BEFORE INSTALLING,
OPERATING OR SERVICING THIS EQUIPMENT.**

FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

To aid the operator's understanding of proper and safe use of grinders, the publications, "Use, Care and Protection of Abrasive Wheels", A.N.S.I. B7.1, and "Safety Code for Portable Air Tools", A.N.S.I. B186.1, can be purchased from:

American National Standards Institute, Inc.
1430 Broadway
New York, New York 10018

⚠ WARNING

- Operate this tool at 90 p.s.i.g. (6.2 bar) maximum air pressure at the air inlet of the tool.
- Disconnect air supply from tool before removing/installing wire brush or rotary file or performing other maintenance procedures.
- Keep hands, clothing and long hair away from rotating end of tool.
- Anticipate and be alert for sudden changes in motion during start up and operation of any power tool.
- Never exceed rated r.p.m. of tool.
- Wear suitable eye and hearing protection while operating tool.
- Tool shaft can continue to rotate briefly after throttle is released.
- Do not lubricate tools with flammable or volatile liquids such as kerosene, diesel or jet fuel.
- Use tool only for purposes for which it was intended.

- Do not use excessive work pressure.
- Do not remove any labels. Replace any damaged label.
- Use only accessories recommended by ARO.

⚠ 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.

NOTICE

- The use of other than genuine ARO replacement parts may result in safety hazards, decreased tool performance and increased maintenance and may invalidate all warranties.
- ARO is not responsible for customer modification of tools for applications on which ARO was not consulted.
- Tool maintenance and repair should be performed by authorized, trained, competent personnel. Consult your nearest ARO authorized servicer.
- It is the responsibility of the employer to place the information in this manual into the hands of the operator.

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) 672-0801.

ARO Tool Products

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FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

⚠ WARNING



Wear eye protection when operating or performing maintenance on this tool.

⚠ WARNING



Wear hearing protection when operating this tool.

⚠ WARNING



Turn off air supply and disconnect air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.

⚠ WARNING




Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.

⚠ WARNING




Do not carry the tool by the hose.

⚠ WARNING




Do not use damaged, frayed or deteriorated air hoses and fittings.

⚠ WARNING



Do not overreach when operating this tool. Keep body stance balanced and firm.

⚠ WARNING



Operate at 90 p.s.i.g. (6.2 bar/620 kPa) maximum air pressure.

NOTICE

<p>⚠ WARNING</p> <p>Read the manual before operating this tool. Operate at 90 psig/6.2 bar max.</p>	<p>This label must appear on the tool at all times. If it is lost or damaged, a replacement label is available at no cost.</p>
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PN 48176-1 LABEL

WARNING = Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.

CAUTION = Hazards or unsafe practices which could result in minor personal injury or product or property damage.

NOTICE = Important installation, operation or maintenance information.

ROUTINE LUBRICATION REQUIREMENTS

Lack of or an excessive amount of lubrication will affect the performance and life of this tool. Use only recommended lubricants at below time intervals:

EVERY 8 HOURS OF TOOL OPERATION – Fill lubricator reservoir of recommended F.R.L. with spindle oil (29665). If an in line or air line lubricator is not used, apply several drops of spindle oil (29665) in air inlet.

EVERY 40 HOURS OF TOOL OPERATION – Flush tool with a solution of three (3) parts cleaning solvent to one (1) part spindle oil. After flushing, apply a small amount of spindle oil in air inlet and run tool for one minute to insure proper lubrication.

AIR SUPPLY REQUIREMENTS

For maximum operating efficiency, the following air supply specifications should be maintained to this air tool:

- AIR PRESSURE – 90 p.s.i.g. (6.2 bar)
- AIR FILTRATION – 50 micron
- LUBRICATED AIR SUPPLY
- HOSE SIZE – 5/16" (8 mm) I.D.

An ARO® model C28231–810 air line FILTER/REGULATOR/LUBRICATOR (F.R.L.) is recommended to maintain the above air supply specifications.

RECOMMENDED LUBRICANTS

After disassembly is complete, all parts, except sealed or shielded bearings, should be washed with solvent. To relubricate parts, or for routine lubrication, use the following recommended lubricants:



Where Used	ARO Part #	Description
Air Motor	29665	1 qt Spindle Oil
"O" Rings & Lip Seals	36460	4 oz. Stringy Lubricant
Gears and Bearings	33153	5 lb. "EP" – NLGI #1 Grease

INSPECTION, MAINTENANCE AND INSTALLATION

Disconnect air supply from the tool or shut off air supply and exhaust (drain) line of compressed air before performing maintenance or service to the tool.

It is important that the tools be serviced and inspected at regular intervals for maintaining safe, trouble-free operation of the tool.

Be sure the tool is receiving adequate lubrication, as failure to lubricate can create hazardous operating conditions resulting from excessive wear.

Be sure that the air supply lines and connectors are of proper size to provide a sufficient quantity of air to the tool.

Safety guards shall be in good functional condition. Damaged, bent or severely worn guards shall be replaced. A guard which has been subjected to a wheel failure is likely to be internally weakened and shall not be reused.

Tool maintenance and repair shall be performed by authorized,

trained, competent personnel. Tools, hose and fittings shall be replaced if unsuitable for safe operation and responsibility should be assigned to be sure that all tools requiring guards or other safety devices shall be kept in legible condition. Maintenance and repair records should be maintained on all tools. Frequency of repair and the nature of the repairs can reveal unsafe application. Scheduled maintenance by competent authorized personnel should detect any mistreatment or abuse of the tool and worn parts. Corrective action should be taken before returning the tool for use.

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 re-lubricating the bearing is available. Open bearings may be washed but should not be allowed to spin while being blown dry.

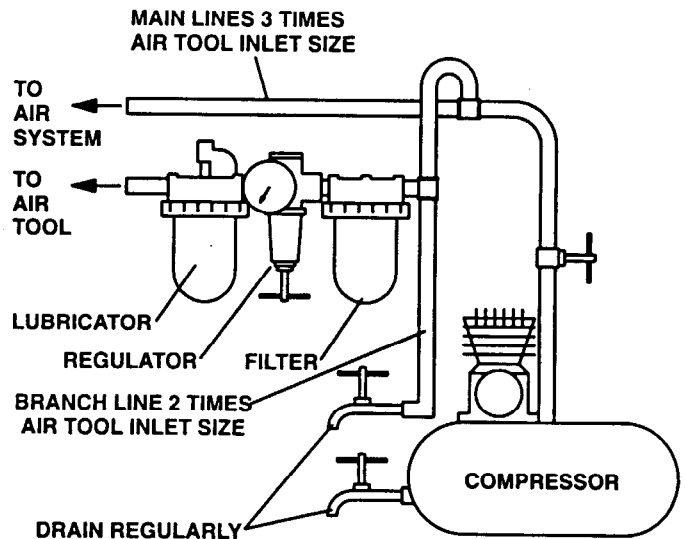
Upon reassembling, lubricate parts where required. Use 33153 grease, or equivalent, in bearings. Use 36460 lubricant for "O" ring assembly. When assembling "O" rings or parts adjacent "O" rings, care must be exercised to prevent damage to the rubber sealing surfaces. A small amount of grease will usually hold steel balls and other small parts in place while assembling.

Before mounting a wheel, after all tool repairs and whenever a grinder is issued for use, the speed of the grinder shall be checked with a tachometer to make certain that its actual speed does not exceed its rated speed.

REPLACE GUARD.

When replacement parts are necessary, consult drawing containing the part for identification.

Always use clean, dry air. Dust, corrosive fumes and/or excessive moisture can damage the motor of an air tool. An air line filter can greatly increase the life of an air tool. The filter removes rust, scale, moisture and other debris from the air lines. Low air pressure (less than 90 p.s.i.g.) reduces the speed of the air tool. High air pressure (more than 90 p.s.i.g.) raises performance beyond the rated capacity of the tool and could cause injury. Shown below is a typical piping arrangement.



MODEL IDENTIFICATION

MODEL NUMBER	R.P.M.	THROTTLE TYPE	HEAD ASSEMBLY	MOTOR ASSEMBLY
7149-C	18,000	BUTTON	30545	37510-1
7153-C	18,000	LEVER	30547	37510-1
7235-C	14,500	BUTTON	30545	41389-3
7236-C	14,500	LEVER	30547	41389-3

 CANCELLED MODELS

The grinder models listed in the model identification table above are furnished with collet assembly 41753-3 (1/4" capacity) as standard equipment and are intended for use with mounted wheels and shall not be used with other type grinding wheels unless a proper wheel guard, recommended by the grinder manufacturer, is attached to the grinder. See "Grinding Wheel Mounting Instructions", page 5. Other size collet inserts (1/8" or 3/16") or other collet assemblies listed on page 9 can be furnished with the above listed models.

The above listed grinder models that are furnished with optional arbor assembly 36934, must also be equipped with wheel guard 44451 (2" maximum wheel diameter). Arbor assembly 36934 is for use with type 1 non-threaded grinding wheels only. See "Grinding Wheel Mounting Instructions", page 5 and "Accessories", page 9.

The above listed grinder models that are furnished with optional cone wheel adapter 37292-() are for use with types 16, 17, 18, 18R and 19 cone and plug wheels and shall not be used with other type grinding wheels unless a proper wheel guard, recommended by the grinder manufacturer, is attached to the grinder. See "Grinding Wheel Mounting Instructions", page 5 and "Accessories" section, page 9.

OPERATION

Safe and efficient operation of your ARO grinder can best be attained by observing proper operating, inspection and maintenance procedures. Allow only competent and qualified people to operate grinder and subject each grinder to a regular inspection and maintenance procedure. The qualified grinder operator must be carefully instructed in the safe operation and use of the grinder, including a study of the manufacturer's literature. The grinder operator should have a good attitude regarding safety.

Operator Safety Equipment. The grinder operator shall wear safety goggles or face shield at all times the grinder is turned on. Other protective clothing shall be worn if necessary for spark deflection. Respirators shall be used in poorly ventilated areas. Adjacent personnel shall be protected from grinding sparks and wheel fragments by protective barriers.

Starting and Stopping. Before starting a grinder, the operator shall make sure that no one is in the unguarded plane of wheel rotation. Upon mounting a new wheel, grinder shall be run at operating speed with the safety guard in place or in a protected enclosure for at least one minute before applying the wheel to the work. Check speed and balance of wheel.

Before a grinder is put down, the throttle shall be released and the wheel shall come to a stop. Tool rests, hangers or balancers are recommended.

Use only wheels with adequate speed ratings. The maximum operating speed

marked on the wheel, blotters or packaging, shall equal or exceed the rated speed stamped on the grinder.

At each wheel change, Aro recommends the free speed be checked by competent authorized personnel, using a good reliable tachometer, to assure that the maximum tool speed is lower than manufacturers rated speed for the wheel to be used. A speed check shall never be made with grinding wheel on the grinder.

Grinders shall not be operated at a speed exceeding its rated speed.

If a wire brush should ever be used with this tool; insure the speed rating of the brush is greater than the speed of the tool the brush is to be used with and insure the brush conforms to applicable safety standards. Be certain the brush is compatible with mounting of the tool. Always use a wheel guard.

Use recommended guard.

SAFETY GUIDE FOR PORTABLE GRINDER USE

Some of the more common causes of wheel breakage are: Improper mounting of the wheels, improper speeds, abusive operation and careless handling.

DO

and

DON'T

Do always handle and store wheels in a careful manner (handle with due regard, grinding wheels are fragile).

Grinding wheels shall be stored in protective racks or containers and protected from moisture and temperature extremes.

Do visually inspect all wheels before mounting for possible damage in transit.

Do check maximum operating speed established for the wheel against grinders speed.

Do check mounting flanges for correct size and design (see "Accessories" page 11).

Do use mounting blotters supplied with wheels where applicable.

Do be sure tool is kept in first class operating condition.

Do always use a guard covering at least 1/2 of the grinding wheel.

Do allow newly mounted wheels, with guard in place, to run at operating speed for at least one minute before grinding.

Do always wear safety glasses or goggles when grinding.

Do always observe all safety rules when operating or handling portable grinders.

Don't use a wheel that has been dropped.

Don't force a wheel onto the spindle or alter the size of the mounting. If the wheel won't fit the spindle, get one that will.

Don't use mounting flanges on which the bearing surfaces are not clean and flat.

Don't tighten the mounting nut excessively. Tighten only sufficiently to drive the wheel and prevent slippage.

Don't grind on the side of the wheel unless wheel is specifically designed for that purpose.

Don't start the grinder until the wheel guard is in place.

Don't jam the wheel into the work.

Don't stand directly in front of a grinding wheel whenever a grinder is started.

Don't grind material for which the wheel is not designed.

Grinding in grooves may be hazardous.

GRINDING WHEEL MOUNTING INSTRUCTIONS

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Disconnect air supply from grinder or shut off air supply and exhaust (drain) air line of compressed air before mounting or removing any abrasive wheel or wire brush, or otherwise performing maintenance or service to the tool.

Check grinder speed before mounting grinding wheel (or other type accessory) with a reliable tachometer to make sure that the actual speed of the grinder does not exceed its rated free speed.

Check operating speed of grinding wheel or wire brush to be used with the grinder. The maximum operating speed marked on the grinding wheel, blotters or packaging, shall equal or exceed the rated free speed of the grinder. Also, the type and size of the grinding wheel or wire brush shall be compatible with the grinder size and type.

Check abrasive wheels prior to mounting for chips or cracks. Cracked or chipped wheels shall not be used.

Care must be taken that a grinding wheel, or wire brush, of the correct speed rating is used. Rated wheel capacities for Aro grinders are maximum only. Regardless of the rated capacity and speed of any Aro grinder, abrasive wheels or wire brushes shall never be operated at a speed greater than that recommended by the wheel (or brush) manufacturer.

Dressing Abrasive Wheels. Upon mounting a grinding wheel, the tool should be operated at gradually increasing speed and checked for good balance of the wheel. If unbalance is observed, the wheel shall be dressed. If dressing fails to establish acceptable balance, the wheel shall not be used.

MOUNTING INSTRUCTIONS FOR MOUNTED WHEELS FOR USE WITH COLLET ASSEMBLIES.

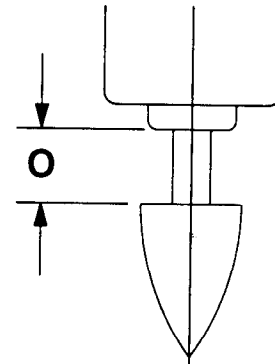
The collet shall be checked to assure it to be in good condition and properly affixed to the grinder spindle.

The mandrel shall be inserted to the full depth of the gripping jaws of the collet. At least 1/2 the mandrel length shall be inserted into the collet.

The maximum safe operating speed for mounted wheels shall be determined by the following: 1.) Shape and size of the mounted wheel, 2.) Size of mandrel and 3.) Overhang of mandrel. In no case shall the maximum safe operating speed recommended by the wheel manufacturer be exceeded.

WARNING: Work pressure, if excessive, can be the cause of trouble and a source of danger, thru bending or fracture of the mandrel. Pressure between the wheel and the work should never be so heavy that springing of the mandrel will result.

IMPORTANT NOTICE: Increasing the overhang of the mandrel will reduce the maximum wheel size that can be safely used with the speed of the tool (dimension "0", figure 1). Also, the length and diameter of mandrel combined with the size and shape of the wheel are determining factors which must be considered when selecting a mounted wheel that will be compatible with the rated free speed of the tool. It is recommended the "Tables of Maximum Operating Speeds for Mounted Wheels" of the American National Standard publication B7.1-1978 previously mentioned or other reliable source, be consulted to determine the safe operating speed of a particular size and shape of wheel combined with the size and overhang of mandrel.



MANDREL OVERHANG – DIMENSION "0"

FIGURE 1

MOUNTING INSTRUCTIONS FOR TYPE 1 GRINDING WHEELS

The driving flange shall be inspected to see that it is of the relieved type, that its diameter is at least 1/3 the diameter of the wheel and that it is free of nicks, burrs and sharp edges. A blotter, separate or attached to the wheel and at least the diameter of the driving flange, shall bear against the driving flange. The wheel shall be placed on the spindle following the first blotter. The wheel shall not fit too snugly nor too freely on the spindle. The normal diametral clearance between the wheel and the spindle is approximately .007" (.17 mm) maximum. Abrasive wheels which do not properly fit the spindle shall not be used. Separate reducing bushings, unless supplied or recommended by the abrasive wheel manufacturer, shall not be used to adapt larger hole abrasive wheels.

A second blotter, separate or attached to the wheel and at least the diameter of the outside flange, shall follow the wheel on the spindle. An outer flange, the same diameter as the driving flange, shall follow the second blotter. The outer flange

shall have a relief and contact face identical to the driving flange, placed toward the blotter.

A spindle end nut shall follow the outer flange. Hold spindle from rotating and screw spindle end nuts firmly against the outer flange, but only tight enough to insure sufficient friction on the blotter faces to drive the wheel. Excessive tightening can distort the flanges. The spindle shall project flush with or past the end of the spindle end nut. To secure wheels thinner than the unthreaded length of the spindle, a spacer shall be used between the flange and the spindle end nut. Such a spacer shall be a precision part, with parallel faces running true to the spacer's center hole.

The safety guard shall be properly positioned and the mounting checked to assure secure positioning. The guard cover shall be closed and secured.

MOUNTING INSTRUCTIONS FOR TYPES 16, 17, 18, 18R AND 19 CONE AND PLUG WHEELS FOR USE WITH 37292-() WHEEL ADAPTER

The driving flange shall be inspected to see that it is of the flat, unrelieved type, that its diameter is at least 1/3 the diameter of the wheel and that it is free of nicks, burrs and sharp edges.

The spindle and wheel threads shall be inspected to see that they are of the same pitch and diameter and a blotter, separate or attached to the wheel and at least the

diameter of the driving flange, shall bear against the driving flange.

The grinding wheel shall be tightened on the spindle by hand and shall bear firmly against the blotter and driving flange. If the wheel cannot be secured, the spindle length shall be checked. If the spindle length is correct and the cone wheel still will not fit firmly against the blotter and driving flange, the wheel shall not be used and a proper fitting wheel shall be selected.

DISASSEMBLY AND ASSEMBLY OF TOOLS

Disconnect air supply from tool or shut off air supply and exhaust (drain) line of compressed air BEFORE performing maintenance or service to tool.

Before starting to disassemble or assemble this tool (any part or completely), be sure to read "Inspection, Maintenance and Installation" section.

To minimize the possibility of parts damage and for convenience, the steps for disassembly or assembly listed on the following pages are recommended.

The basic sections and instructions for removing them from the tool are as follows:

MOTOR SECTION

Remove collet nut (41751) and collet insert (41750-). Using a

5/32" hex type wrench, insert hex wrench thru collet body and into hex end of rotor to hold rotor from turning and remove collet body (41752).

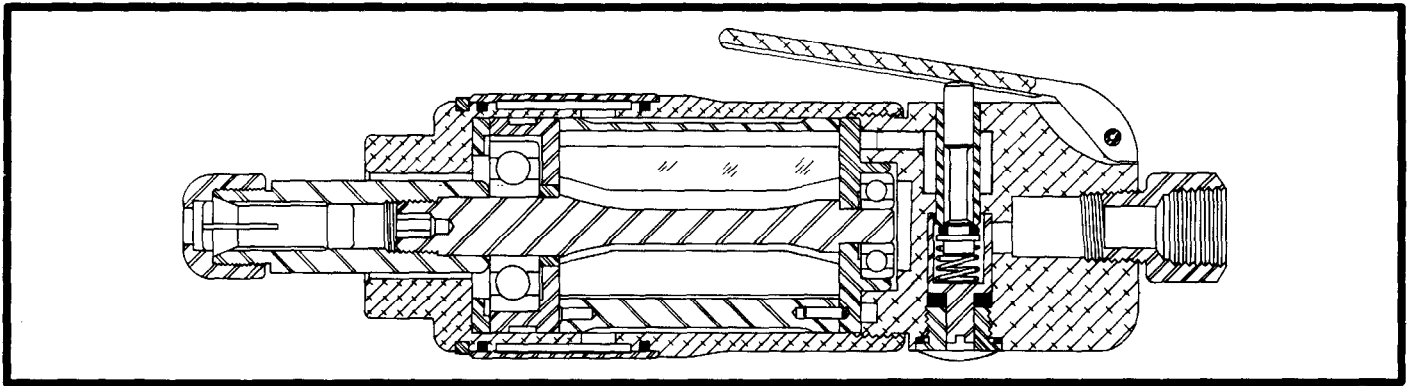
Locating on flats of head, secure head in a suitable holding device. Using a strap type wrench on motor housing, unthread and remove motor housing from head. Remove motor assembly from housing. For complete disassembly of motor, see page 7.

HEAD SECTION

Throttle components can be serviced without removing head section from tool. See page 8 for complete disassembly.

To remove screen (44933) from housing, remove retainer ring (35619) and exhaust sleeve (43833-1).

TYPICAL CROSS SECTION OF TOOL



MOTOR SECTION

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DISASSEMBLY

Remove motor from housing (see page 6). Grasp cylinder in one hand and tap threaded end of rotor with a soft face hammer; motor will come apart.

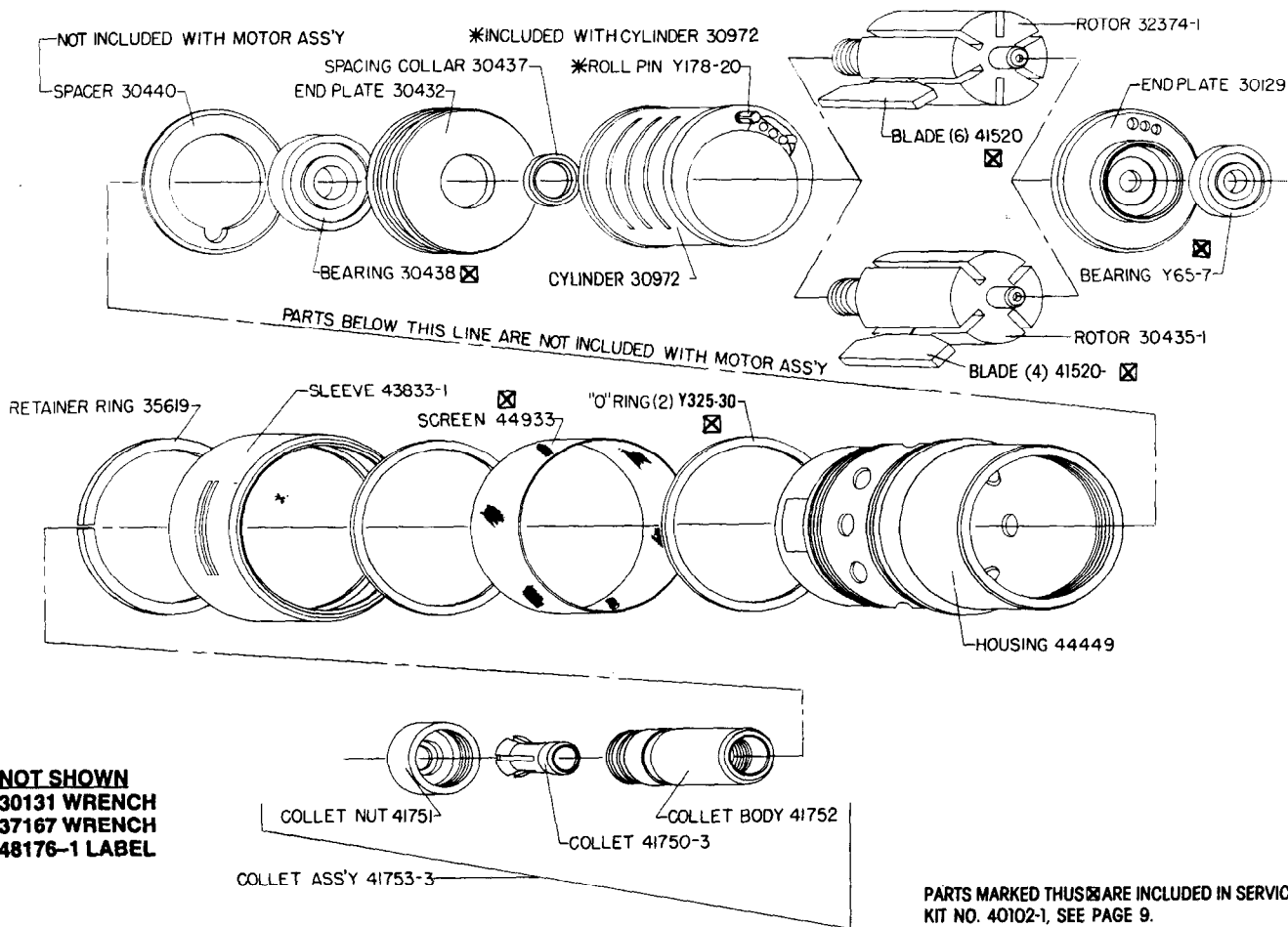
ASSEMBLY

NOTE: Pack bearings with ARO 33153 grease and coat i.d. of cylinder with ARO 29665 spindle oil upon assembly. 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 (largest hole). Assemble blades to rotor – straight side out. Assemble spacer (30437) and end plate (30432) to rotor, pressing on inner

Be sure rotor does not bind (if rotor binds, tap threaded end lightly to loosen) and assemble collet body (41752) to rotor. Assemble motor and spacer (30440) into housing and secure with head section.

MOTOR ASS'Y NO.	R.P.M.	ROTOR NO.	BLADE NO.	BLADE QUANTITY
37510-1	18,000	30435-1	41520	4
41389-3	14,500	32374-1	41520	6



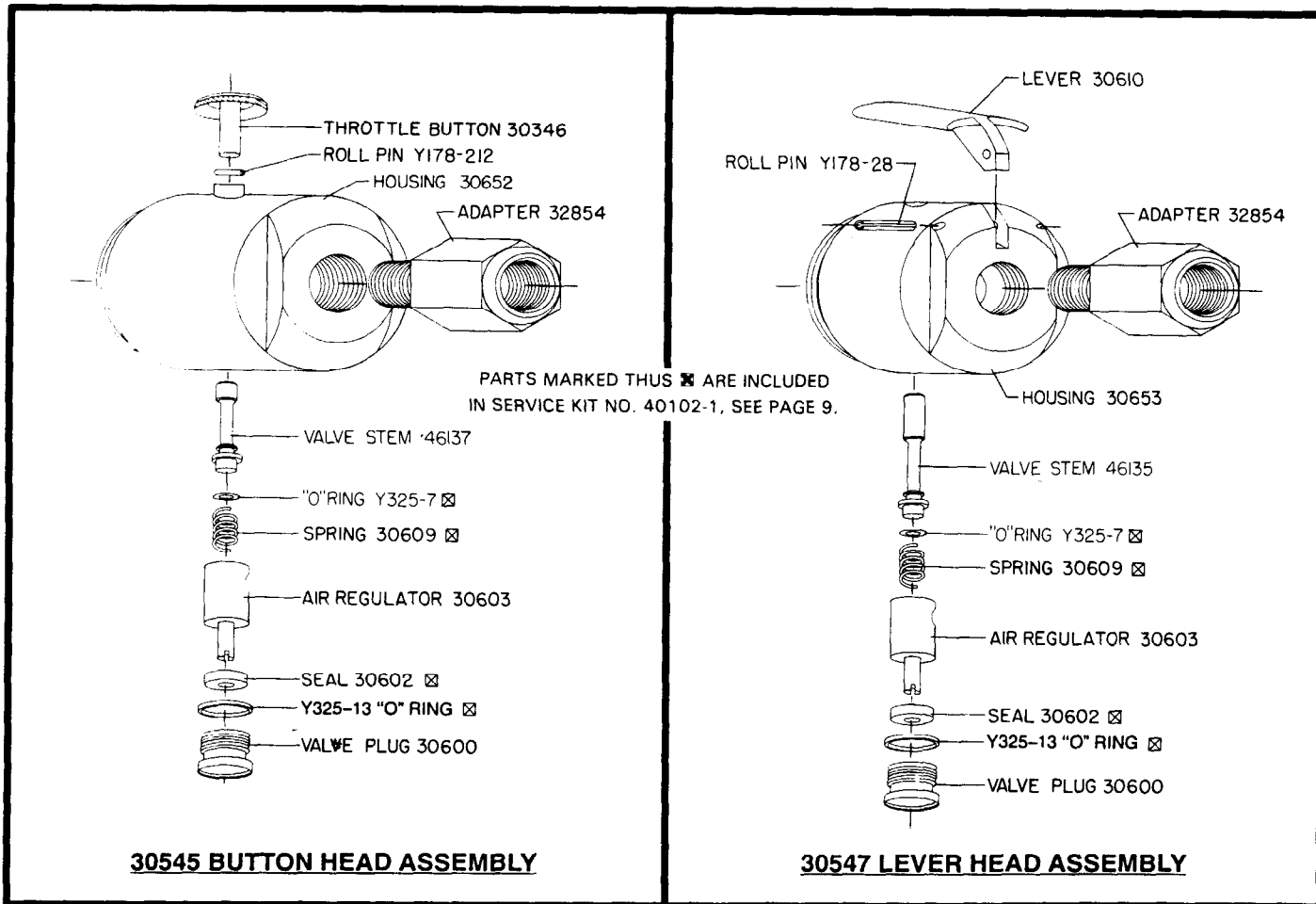
HEAD SECTION

DISASSEMBLY

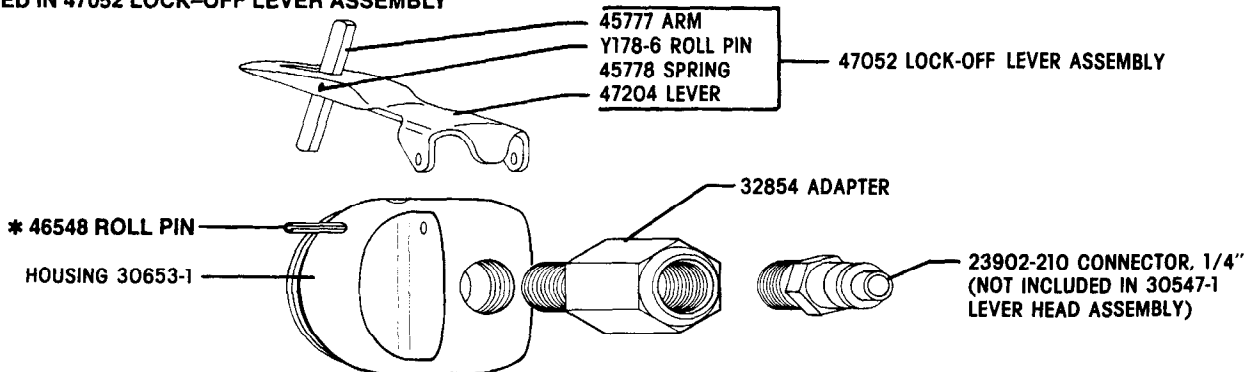
Remove valve plug (30600) and valve components can be removed from head. To remove lever throttle, remove roll pin (Y178-28). To remove button throttle, remove roll pin (Y178-212).

ASSEMBLY

Assemble "O" ring (Y325-7) to valve stem. 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 valve plug (30600).



* INCLUDED IN 47052 LOCK-OFF LEVER ASSEMBLY



OPTIONAL 30547-1 LEVER HEAD ASSEMBLY - LOCK-OFF TYPE

INCLUDES PARTS SHOWN IN THIS GROUP (EXCEPT CONNECTOR), PLUS: VALVE STEM (46135), "O" RING (Y325-7), SPRING (30609), AIR REGULATOR (30603), SEAL (30602), "O" RING (Y325-13) AND VALVE PLUG (30600).

ACCESSORIES

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41753-() 3-PIECE COLLET ASSEMBLY



COLLET ASSEMBLY NO.	SIZE	COLLET INSERT NO.
41753-1	1/8"	41750-1
41753-2	3/16"	41750-2
41753-3	1/4"	41750-3
41753-11	3 mm	41750-11
41753-12	6 mm	41750-12

COLLET NUT - 41751
COLLET BODY - 41752
3/8" - 24 THREAD

COLLET NUT DIA. - 3/4"
COLLET BODY DIA. - 21/32"
OVER ALL LENGTH - 2 1/4"

33226-() 3-PIECE COLLET ASSEMBLY



COLLET ASSEMBLY NO.	SIZE	COLLET INSERT NO.
33226-4	1/8"	31812-4
33226-6	3/16"	31812-6
33226-8	1/4"	31812-8

COLLET NUT - 33220
COLLET BODY - 33218
CLIP RING - 33221
NOSE RING - 33222

COLLET NUT DIA. - 15/16"
COLLET BODY DIA. - 5/8"
OVER ALL LENGTH - 2"
3/8" - 24 THREAD

44127-() ERICKSON 3-PIECE COLLET ASSEMBLY

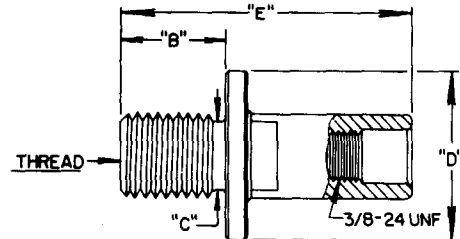


COLLET ASSEMBLY NO.	SIZE	COLLET INSERT NO.
44127-1	3/32" - 1/8"	32968-1
44127-2	1/8" - 5/32"	32968-2
44127-3	5/32" - 3/16"	32968-3
44127-4	3/16" - 7/32"	32968-4
44127-5	7/32" - 1/4"	32968-5
44127-6	1/4" - 9/32"	32968-6
44127-7	9/32" - 5/16"	32968-7
44127-8	5/16" - 11/32"	32968-8
44127-9	11/32" - 3/8"	32968-9

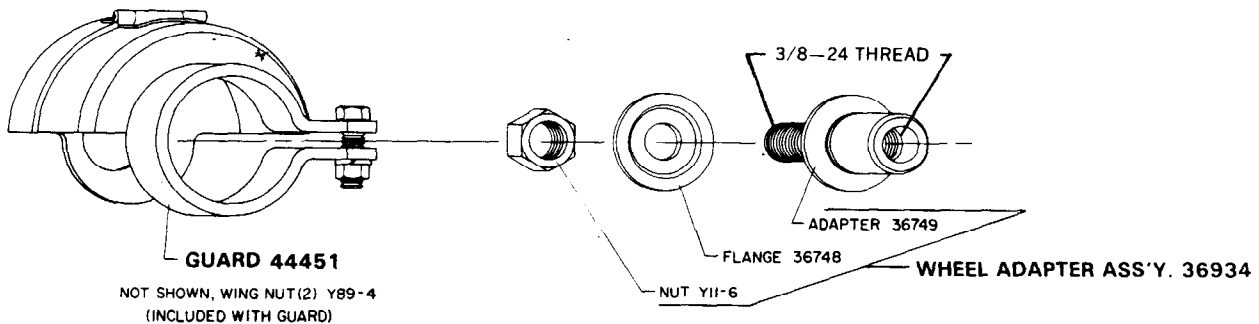
COLLET NUT - 44129
COLLET BODY - 44125
3/8" - 24 THREAD

COLLET NUT DIA. - 51/64"
COLLET BODY DIA. - 43/64"
OVER ALL LENGTH - 2 7/32"

37292-() CONE WHEEL ADAPTER



ADAPTER NUMBER	MALE THREAD SIZE	"B"	"C"	"D"	"E"
37292-1	3/8" - 16	7/16"	9/32"	15/16"	1 29/32"
37292-2	3/8" - 24	7/16"	9/32"	15/16"	1 29/32"
37292-3	1/2" - 13	9/16"	25/64"	1 1/8"	2 1/32"
37292-4	1/2" - 20	9/16"	25/64"	1 1/8"	2 1/32"
37292-5	5/8" - 11	13/16"	1/2"	1 1/4"	2 9/32"



SERVICE KIT NO. 40102-1

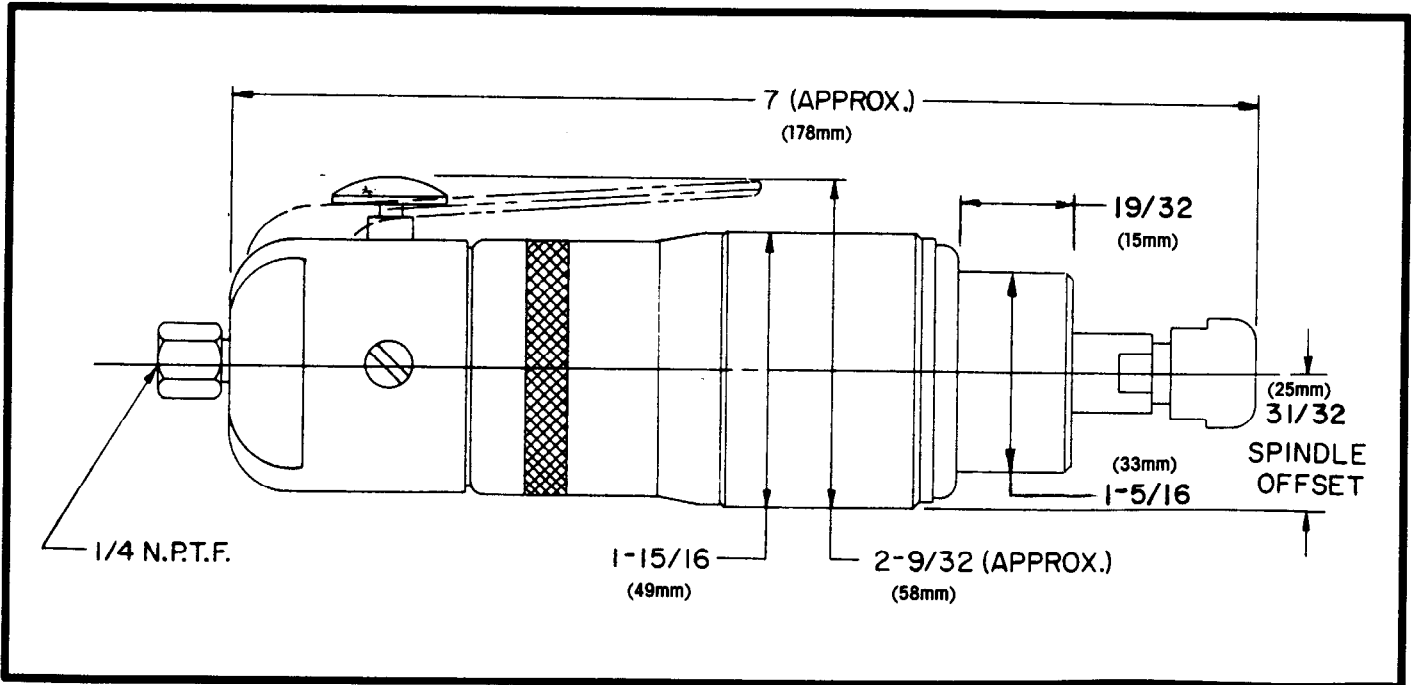
QTY	PART NUMBER	DESCRIPTION	QTY	PART NUMBER	DESCRIPTION
1	30438	Bearing	1	44933	Screen
1	30602	Seal	1	Y65-7	Bearing
1	30609	Spring	1	Y325-7	"O" Ring
6	41520	Rotor Blade	1	Y325-13	"O" Ring
1	41795	Motor Oil	2	Y325-30	"O" Ring

TROUBLE SHOOTING

LISTED BELOW ARE SOME OF THE MOST COMMON CAUSES FOR THE GRINDER TO MALFUNCTION. MALFUNCTIONS BEYOND THE SCOPE OF THIS MANUAL SHOULD BE BROUGHT TO THE ATTENTION OF YOUR ARO REPRESENTATIVE OR RETURN THE TOOL TO THE FACTORY FOR REPAIR.

CONDITION	POSSIBLE CAUSE	CORRECTIVE ACTION
LOW SPEED AND POWER OR GRINDER WILL NOT RUN.	<ol style="list-style-type: none"> 1. INADEQUATE AIR SUPPLY. 2. AIR REGULATOR (30603) IMPROPERLY ADJUSTED. 3. AIR INLET OR EXHAUST SCREEN PLUGGED. 4. OBSTRUCTION IN THROTTLE VALVE OR VALVE NOT OPENING. 5. MOTOR NOT BEING PROPERLY LUBRICATED. 6. ROTOR BLADE IS MISSING, INCORRECTLY INSTALLED, BADLY WORN OR BEARING FAILURE. 	<ol style="list-style-type: none"> 1. CHECK AIR SUPPLY FOR CORRECT REGULATOR ADJUSTMENT (90 P.S.I.G. MAX. WHEN TOOL IS OPERATING). 2. CHECK REGULATOR ADJUSTMENT TO BE SURE OF MAXIMUM AIR FLOW. 3. INSPECT, WASH CLEAN. 4. DISASSEMBLE THROTTLE, CLEAN, INSPECT FOR OBSTRUCTIONS OR DAMAGED PARTS. 5. APPLY 2 OR 4 DROPS OF SPINDLE OIL IN AIR INLET. RUN TOOL TO ALLOW OIL TO ENTER MOTOR - BE CERTAIN OILER IS FULL OF OIL. 6. DISASSEMBLE MOTOR, CLEAN AND INSPECT FOR PROPER INSTALLATION, REPLACE BLADES AND/OR BEARINGS IF NECESSARY.
THROTTLE VALVE HARD TO OPERATE.	<ol style="list-style-type: none"> 1. DAMAGED VALVE PIN OR COMPONENTS. 	<ol style="list-style-type: none"> 1. DISASSEMBLE VALVE COMPONENTS, INSPECT, REPLACE IF NECESSARY.
TOOL WILL NOT SHUT OFF.	<ol style="list-style-type: none"> 1. DAMAGED VALVE COMPONENTS. 	<ol style="list-style-type: none"> 1. DISASSEMBLE VALVE COMPONENTS, INSPECT, REPLACE PARTS IF NECESSARY.

DIMENSIONAL DATA





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