



# OPERATOR'S MANUAL

INCLUDING: OPERATION, INSTALLATION & MAINTENANCE

Released: 2-27-92

Revised: 08-07-01

Form: 4009-2

## 50 SERIES SCREWDRIVER

Model 7672-A18-( )



### **WARNING**

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

### **FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.**

Pneumatic tools should always be installed and used in accordance with A.N.S.I. B186.1 "Safety Code For Portable Air Tools."

#### **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 bit, socket or device attached to tool or performing 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.
- 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.

**NOTE: MODEL 7672-A18-EU IS "EC" COMPLIANT.**

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**

#### **Ingersoll-Rand Company**

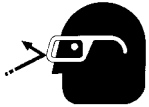
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**FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.**

**⚠ WARNING**



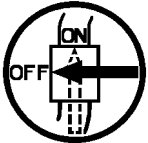
Wear eye protection when operating or performing maintenance on this tool.

**⚠ 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**



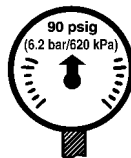
Do not use damaged, frayed or deteriorated air hoses and fittings.

**⚠ 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**

**⚠ WARNING**



Read the manual before operating this tool.  
Operate at 90 psig/6.2 bar max.



PN 48176-1 LABEL  
(NON-EU MODELS)

PN 49883 LABEL  
(-EU MODELS)

This label must appear on the tool at all times. If it is lost or damaged, a replacement label is available at no cost.

**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 160 HOURS OF TOOL OPERATION** - Lubricate clutch parts with molybdenum grease (40036-1). Lubricate gearing. Pack bearings, coat shafts and lubricate gears with NLGI #1 "EP" grease (33153). Gearing should contain approximately 1/16 oz. (1.8 g) of grease.

## 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:



<u>Where Used</u>	<u>ARO Part #</u>	<u>Description</u>
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
Clutches	40036-1	1 lb. "EP" Molybdenum Disulfide

## 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.

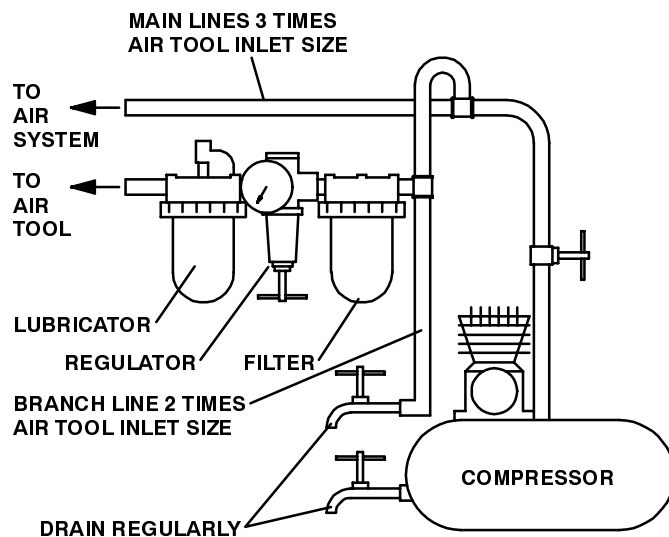
Tool maintenance and repair shall be performed by authorized, trained, competent personnel. Tools, hose and fittings shall be replaced if unsuitable for safe operation and responsibility should be assigned to be sure that all tools requiring guards or other safety devices shall be kept in legible condition. 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.

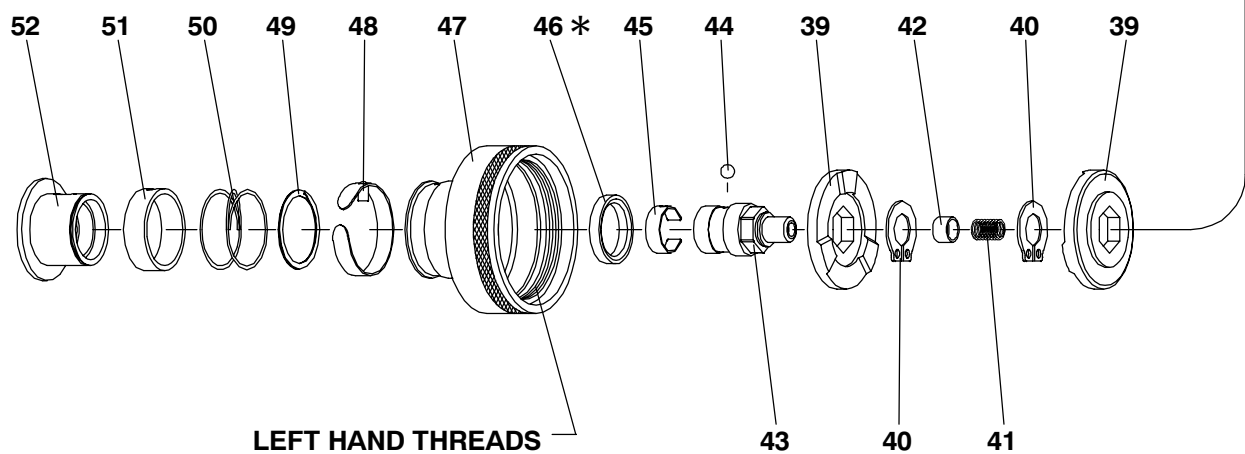
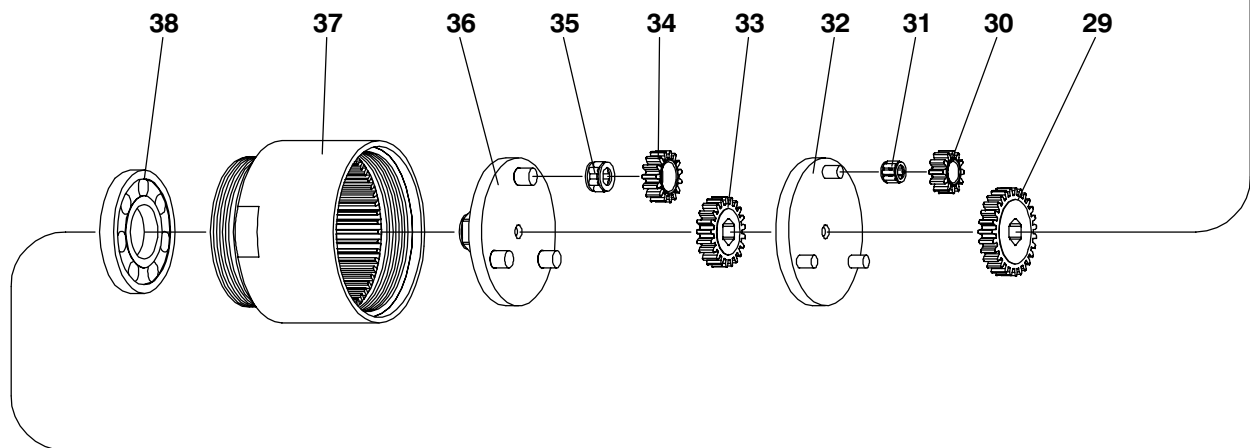
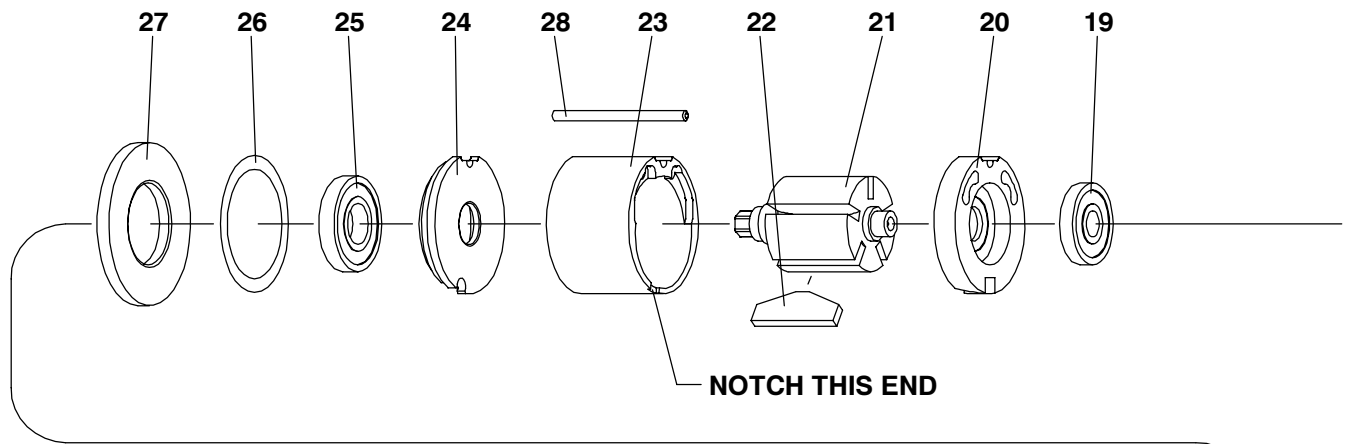
Disassembly should be done on a clean work bench with a clean cloth spread to prevent the loss of small parts. After disassembly is completed, all parts should be thoroughly washed in a clean solvent, blown dry with air and inspected for wear levels, abuse and contamination. Double sealed or shielded 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.

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

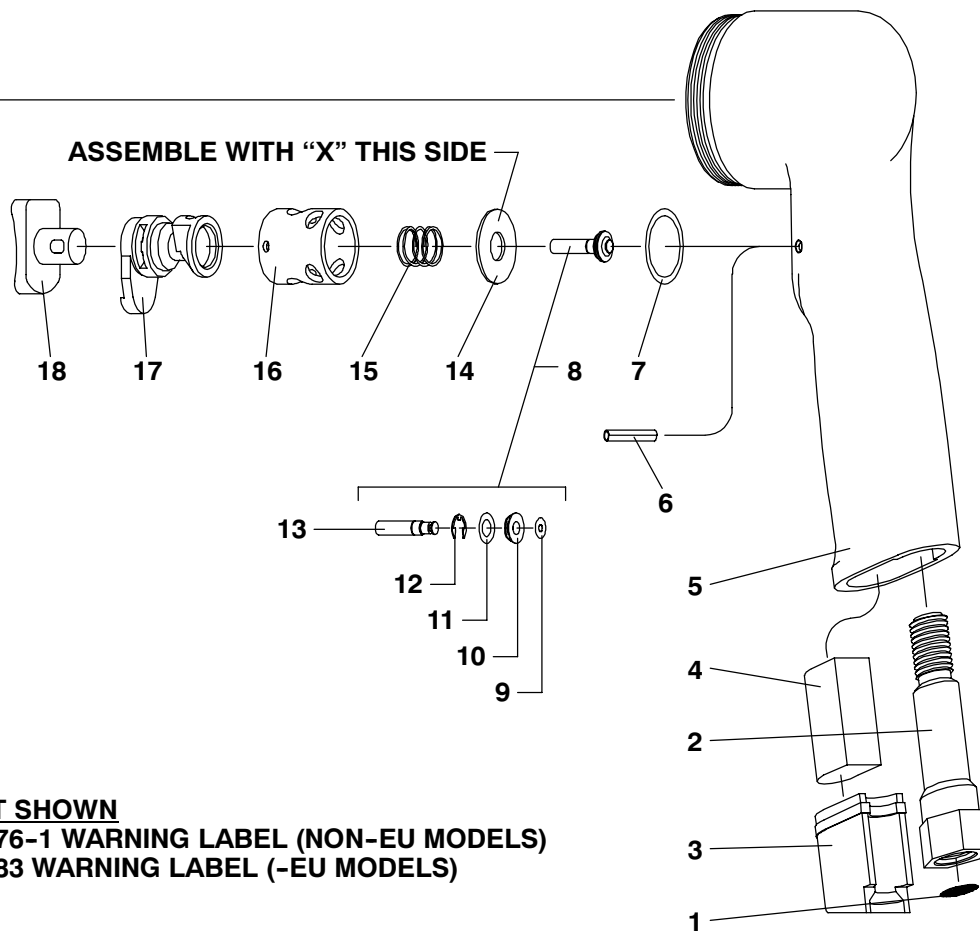
Always use clean, dry air. Dust, corrosive fumes and/or excessive moisture can damage the motor of an air tool. An air line filter can greatly increase the life of an air tool. The filter removes rust, scale, moisture and other debris from the air lines. Low air pressure (less than 90 p.s.i.g.) reduces 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.





**\* OIL IMPREGNATED BRONZE BUSHING, DO NOT WASH, WIPE CLEAN ONLY.**

**ASSEMBLE WITH "X" THIS SIDE**



**NOT SHOWN**  
48176-1 WARNING LABEL (NON-EU MODELS)  
49883 WARNING LABEL (-EU MODELS)

# DISASSEMBLY/ASSEMBLY INSTRUCTIONS

- Never apply excessive pressure by a holding device which may cause distortion of a part.
- Apply pressure evenly to parts which have a press fit.
- Apply even pressure to the bearing race that will be press fitted to the mating part.
- Use correct tools and fixtures when servicing this tool.
- Don't damage "O" rings when servicing this tool.
- Use only genuine ARO replacement parts for this tool. When ordering, specify part number, description, tool model number and serial number.

## CLUTCH DISASSEMBLY

- Clamp tool in a smooth face vise, clamping on pistol grip housing (5).
- Using a strap type wrench, unthread and remove clutch housing (47) - LEFT HAND THREADS.
- Remove bit holder (43) and jaw (39) from tool.
- Remove thrust plug (42) and spring (41) from spindle (36).
- Remove retaining rings (40), releasing jaws (39).

## CLUTCH ASSEMBLY

- For clutch part lubrication, use ARO 40036-1 grease on parts as pointed out in this section.
- Assemble jaw (39) to gearing, securing with retaining ring (40).
- Coat o.d. of thrust plug (42) with ARO 29665 spindle oil.
- Assemble spring (41) into thrust plug (42) and assemble into spindle (36).
- Assemble jaw (39) to bit holder (43), securing with retaining ring (40).
- Lubricate spindle, jaw face and ball of bit holder (43) and assemble to tool.
- Assemble clutch housing (47) to tool - LEFT HAND THREAD.

## GEARING DISASSEMBLY

- Remove clutch from tool (see clutch disassembly).
- Using a wrench on flats, unthread and remove ring gear (37) from tool.
- Remove spindles and gears from ring gear. NOTE: Keep gears grouped with mating spindle when disassembling.
- Do not remove bearing (38) unless damage is evident.
- To remove bearing (38) from ring gear, press out from splined end of ring gear.
- Do not remove gear (33) from carrier assembly (32) unless damage is evident. Gear is press fit on carrier.

## GEARING ASSEMBLY

- Lubricate bearing (38) with ARO 33153 grease and assemble into ring gear (37), pressing on outer race of bearing.
- Coat shafts of spindle (36) and carrier (32) with ARO 33153 grease.
- Assemble gears to shafts of mating spindle.
- Assemble carrier assembly (32) to spindle assembly (36).
- Assemble spindles and gearing into ring gear. Rotate spindle and gears to align gear teeth with splines of ring gear.
- Thread ring gear (37) to tool and tighten using a wrench on flats.
- Assemble clutch to tool.

## MOTOR DISASSEMBLY

- Remove clutch and gearing from tool.

- Remove spacer (27) and "O" ring (26).
- Tap front edge of housing to remove motor assembly. Locating pin (28) should also come out.
- Tap drive end of rotor (21) with a soft face hammer; motor will come apart. NOTE: Bearings are press fit on rotor.
- Remove end plate (20) and bearing (19) from rotor.

## MOTOR ASSEMBLY

- Lubricate bearing (19) with ARO 33153 grease and assemble to end plate (20), pressing on outer race of bearing.
- Assemble end plate (20) to rotor, pressing on inner race of bearing.
- Coat five rotor blades (22) with ARO 29665 spindle oil and assemble to rotor slots - straight side out.
- Coat i.d. of cylinder (23) with ARO 29665 spindle oil and assemble over rotor. NOTE: End of cylinder with notch must be assembled toward end plate (20).
- Assemble bearing (25) to end plate (24), pressing on outer race of bearing.
- Assemble end plate (24) to rotor, pressing on inner race of bearing. Be sure rotor turns without binding.
- Insert locating pin (28) into .096" blind hole at bottom of motor cavity in housing.
- Align notches of end plates and cylinder and install motor into housing, aligning notches with locating pin (28).
- Grease and assemble "O" ring (26) to end plate.
- Assemble spacer (27) to motor.
- Assemble gearing and clutch to tool.

## HOUSING DISASSEMBLY

- Remove pin (6) from left side of housing.
- Remove trigger (18), reverse valve (17), valve bushing (16), spring (15), washer (14), valve assembly (8) and "O" ring (7).
- Remove "O" ring (9), valve (10), "O" ring (11) and retaining ring (12).
- Remove inlet adapter (2) and screen (1).
- Remove muffler (3) and filler (4).

## HOUSING ASSEMBLY

- Grease and install "O" ring (7).
- Assemble retaining ring (12) to valve stem (13).
- Grease and assemble "O" ring (11) to valve (10).
- Assemble valve (10) to valve stem, with smallest diameter of valve going on valve stem first.
- Grease and assemble "O" ring (9) to valve stem (13).
- Assemble washer (14) and spring (15) over valve stem (13). NOTE: Assemble washer (14) with "X" facing "O" ring (7).
- Assemble reverse valve (17) into valve bushing (16). NOTE: Position .102" diameter hole thru bushing to align with slot thru side of reverse valve (17).
- Assemble valve stem and components thru reverse valve (17) and bushing (16).
- Install valve bushing (16) with valve components and reverse valve (17) into pistol grip housing (5), aligning .102" diameter holes in housing and bushing.
- Assemble trigger (18) to reverse valve (17).
- Install spirol pin (6).
- Install filler (4), muffler (3) and inlet adapter (2).
- Clean and install screen (1) in inlet adapter (2).

## PART NUMBER FOR ORDERING

## PART NUMBER FOR ORDERING

1	Screen .....	33911	28	Locating Pin .....	47723-1
2	Inlet Adapter .....	46385	29	Sun Gear (27 teeth) .....	46464
3	Muffler Assembly .....	49251	30	Planet Gear (3 req'd)(12 teeth) .....	48494-1
4	Filler .....	46851	31	Needle Bearing (3 req'd) .....	48501-1
5	Pistol Grip Housing .....	47367-1	32	Carrier Assembly .....	49254
6	Spirol Pin .....	46849	33	Sun Gear (21 teeth) .....	46465
7	"O" Ring .....	Y325-15	34	Planet Gear (3 req'd)(15 teeth) .....	46899
8	Valve Stem Assembly .....	46848-2	35	Needle Bearing (3 req'd) .....	42315
9	"O" Ring .....	Y325-3	36	Spindle Assembly .....	49524
10	Valve .....	45473-1	37	Ring Gear .....	49260
11	"O" Ring .....	Y325-7	38	Ball Bearing .....	Y65-12
12	Retaining Ring .....	Y180-13		GEARING ASSEMBLY (includes items 29 thru 38)	49261
13	Valve Stem .....	46847-2	39	Jaw (2 req'd) .....	49255
14	Washer .....	46379-1	40	Retaining Ring (2 req'd) .....	49529
15	Spring .....	41100	41	Spring .....	46854
16	Valve Bushing .....	46381	42	Thrust Plug .....	49259
17	Reverse Valve .....	46299	43	Bit Holder .....	49256
18	Trigger .....	46298	44	Ball .....	Y16-204
19	Ball Bearing .....	47724	45	Retaining Clip .....	47695
20	Rear End Plate .....	46312-1	46	Bushing .....	46360
21	Rotor .....	46454	47	Clutch Housing (includes item 46) .....	49253
22	Blade (5 req'd) .....	46413	48	Retaining Clip and Pin .....	47782
23	Cylinder .....	46311	49	Retaining Ring .....	47779
24	Front End Plate .....	47722	50	Spring .....	47778
25	Ball Bearing .....	Y65-13	51	Bushing .....	47775
	MOTOR ASSEMBLY (includes items 19 thru 25) ..	47728	52	Sleeve .....	47702-1
26	"O" Ring .....	Y325-214		GUIDE ASSEMBLY (includes items 49 thru 52) ..	46884-1
27	Spacer .....	46412			

