

## General Safety and Maintenance Manual



### REAR EXHAUST RIGHT ANGLE GRINDER



**MODEL 49 RA grinder featuring a rear exhaust.**



Model Number	Exhaust Direction	Throttle Type	Speed	Power Output	Case Material	Weight		Length	Diameter	Air Consumption	Spindle Thread
						Aluminum					
49 RA	REAR	(L) Lever or (K) Safety Lever	12000 to 14000 R.P.M (13500rpm is standard)	0.9 H.P. (675 W)	Alumi- num	2 1/2 lbs 1.1kg	8 9/16"- 211mm	1 3/4" 4.4cm	25 CFM (11.8 L/S)	3/8-24 x 0.98 Inch	
49 RAZ										5/8-11 x 0.98 Inch (25mm)	
49 RAC										1/4 Inch Burrs/ Mounted Points	

**THE HENRY TOOL CO., MANUFACTURED BY HENRY TOOLS**

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**MODELS**

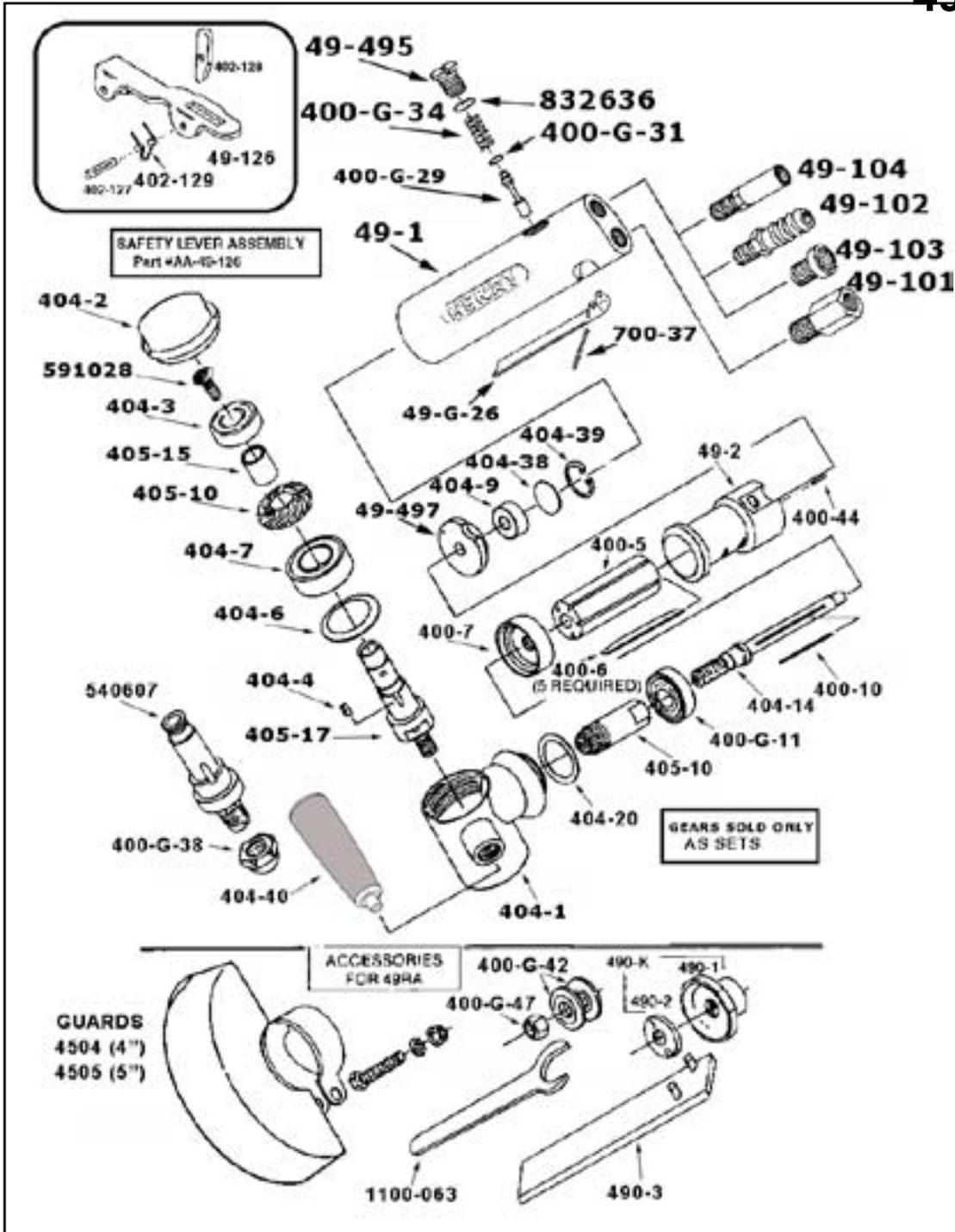
49 RA

49 RAZ

49 RAC



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# MODELS

## 49 RA

## 49 RAZ

## 49 RAC

PART NO.	DESCRIPTION
4504	4" GUARD
4505	5" GUARD
540607	COLLET SPINDLE 1/4"
591028	SCREW
832636	GASKET
400-10	KEY
400-44	PIN
400-5	ROTOR
400-6	ROTOR BLADES (5 are Req'd)
400-7	FRONT THRUST PLATE
400-G-11	BEARING
400-G-29	THROTTLE VALVE
400-G-31	O-RING
400-G-34	SPRING
400-G-38	COLLET NUT
400-G-42	WHEEL WASHER
400-G-47	NUT 3/8-24 Thd
402-127	PIN
402-128	SAFETY LATCH
402-129	SPRING
404-1	HEAD (HOUSING)
404-14	MOTOR SPINDLE
404-2	BEARING CAP
404-20	SPACER
404-3	BEARING
404-38	BEARING COVER
404-39	SNAP RING
404-4	KEY
404-40	DEAD HANDLE
404-6	WAVY WASHER
404-7	BEARING
404-9	BEARING
405-10	GEAR SET
405-15	SPACER
405-17	3/8-24 SPINDLE
405-17-5/8"	5/8"-11 SPINDLE
490-1	ADAPTOR FLANGE
490-2	WHEEL NUT
490-3	SPANNER WRENCH
490-K	WHLADAPTOR (3/8" I.D. 3/8-24)
49-101	BUSHING 1/4"x1/4"
49-102	HOSE BARB 1/4"x1/2"

PART NO.	DESCRIPTION
49-103	SCREEN
49-104	MUFFLER
49-126	LEVER (49 SERIES)
49-2	CYLINDER with PIN installed
49-495	CAP SCREW
49-497	REAR EXHAUST PLATE
49-G-26	LEVER (49 SERIES)
700-37	PIN
<b>REPAIR KITS</b>	
510076	REPAIR KIT INCLUDES ALL BEARINGS, BLADES, and SNAP RINGS <b>(WITH GEARS)</b>
510078	REPAIR KIT INCLUDES ALL BEARINGS, BLADES and SNAP RINGS <b>(WITHOUT GEARS)</b>
<b>WRENCHES</b>	
1100-056	WRENCH 9/16"
1100-063	WRENCH 5/8"



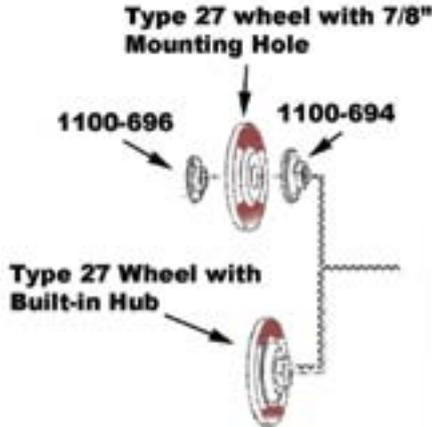
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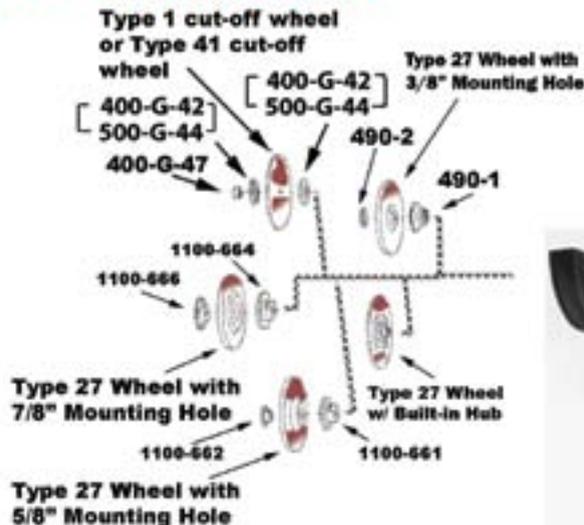
# MODELS

49 RA  
49 RAZ  
49 RAC

## Right Angle Grinders with 5/8"-11 x .980 Output Spindle



## Right Angle Grinder with 3/8-24 x .980 Output Spindle



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## REAR EXHAUST RIGHT ANGLE GRINDER

**MODELS**  
**49 RA**  
**49 RAZ**  
**49 RAC**

### SERVICE INSTRUCTIONS

This tool is designed to operate on 90 psig (6.2 bar) maximum air pressure with 1/4" (8 mm) hose. Do not use a grinder without recommended wheel guard. Do not use any wheel for which the operating speed listed is lower than the actual free speed of the Grinder.

### SAFETY

1. Before operation check spindle speed with a tachometer. If the RPM exceeds the rated speed stamped on tool, servicing is required. Inspect grinding wheels for bends, chips, nicks, cracks or severe wear. If the wheel has any of these, or has been soaked in liquids do not use. On brushes check for loose wires that may fly off in operation.
2. Start new grinding wheels under a steel bench. Run at full throttle for one minute. Defective wheels usually come apart immediately. When starting a cold wheel apply to work slowly, allow wheel to warm gradually.
3. Model 49RAC grinders equipped with built in collets are intended for mounted wheels, points and carbide burrs. They are not guarded for type 1 wheels. If you have a type 1 wheel application, please purchase a guard (4504, 4505, etc.)
4. The Model 49RA Grinders are equipped with a guard from the manufacturer. A guard is not needed for :a.) mounted wheels two inches (50 mm) or smaller; b.) grinders used for internal work, while within the work being ground. At least one-half of the mandrel length (i.e. mounted wheel, burr, etc.) must be inserted into the collet. Secure collet chuck tightly.
5. Safety levers are available from the manufacturer. Before mounting or removing a wheel, disconnect grinder from air supply. The wheel should fit properly on arbor, do not use bushings or wheel flanges to adapt a wheel to any arbor unless recommended by the manufacturer. (Wheel flanges should be at least 1/3 the diameter of the grinding wheel.)
6. Wear safety goggles and other protective clothing. Continuous exposure to vibration may cause injury to your hands and arms. (See regulations.)
7. Properly maintained air tools are less likely to fail or cause accidents. If tool produces an unusual sound or vibrations repair immediately.

### DISASSEMBLY

**PLEASE NOTE: The brass spacers that were installed by the factory are necessary for this tool to operate efficiently. When disassembling this tool examine how spacers are arranged. They must be installed exactly the same way. Failure to do this will cause improper gear spacing, which causes pre-mature tool failure.**

1. Disconnect air & remove all wheels and accessories. Remove dead handle (404-40). Softly secure anglehead (404-1) in vise on dead handle boss. Unscrew and remove case (49-1). Never squeeze anglehead (404-1) in vise. This will distort bearings and ruin gear alignment.
2. Pull motor from right angle head. Be careful to note location of shims. Remove snap ring (404-39), wafer (404-38), O-ring (594016), and snap ring (592016). (Some of these may not be present).
3. Install brass or aluminum jaws in vise. Grasp the O.D. of cylinder (49-2) and end plate (49-497). Using a 3/16" punch, tap spindle out rear bearing (404-9). Try not to drop the assembly on

the floor.

4. Remove cylinder, blades (400-6).
5. With rotor (400-5) still on spindle (404-14), grasp the rotor in vise snugly and remove pinion gear (405-10).
6. Remove rotor (400-5) Remove key and front thrust plate (400-7). 9. Press bearing (400-G-11) off of spindle.
7. Secure angle head (404-1) *SOFTLY* in vise and unscrew cap (404-2). Remove from vise and tap on spindle with a plastic hammer The spindle assembly and spring washers (404-6) will slide out.
8. Clamp flats of spindle (405-17) in vise. Using a plastic hammer, tap evenly on O.D. of bearing cap until free of bearing (404-3). Note position of shims. Using a 9/64" T-Handle hex wrench unscrew (591028) screw.
9. Press bearing (404-3) off spindle. Support bearing (404-7) and press spindle through with 1/4" punch. This will remove gear (405-10) and bearing (404-7).
10. Remove key (404-4).

### ASSEMBLY

1. Support front bearing (400-G-11) on drill block. Press spindle (404-14) through bearing until it bottoms on shoulder.
2. Slide front thrust (400-7) over the spindle and onto front bearing (400-G-11). Place key (400-10) into keyway in spindle. Slide rotor down over shaft.
3. Grasp rotor in vise snugly and replace pinion gear (405-10) and wrench firmly.
4. Support bearing and pinion gear in downward position. Place five blades (400-6) in slots. (*curved side of blade faces inward*).
5. Slip cylinder (49-2) over rotor. Place a few drops of airtool oil onto rotor (400-5). Install rear thrust (49-497) locating cylinder pin in small hole of rear thrust plate. Place bearing (404-9) in rear thrust and tap into place with a suitable bearing driver. Using pliers place snap ring (592016) in spindle groove. [(May be snap ring (404-39)]
6. Support bearing (404-7) on inner race. Press spindle (405-17) through bearing until it bottoms on shoulder.
7. Install key (404-4) and line up with keyway of ring gear (405-10). Support gear on inner diameter and press spindle through.
8. Replace gear spacer ring (405-15) on spindle.
9. Support threaded end of spindle and press on bearing (404-3). Tighten screw (591028) into end of spindle. Press spindle assembly into cap (404-2). Apply some grease to gear.
10. Install spring washer (404-6) into angle head (404-1). Install spindle assembly into angle head housing, secure in vise and tighten cap (404-2).
11. Re-Locate angle head in vise-so that the motor can be installed vertically.
12. Replace shim (404-20) exactly as it was originally installed. Jiggle greased pinion assembly into angle head (404-1) while turning spindle (405-17) so that gears mesh. Tap lightly on rear of motor to insure that is fully seated.
13. Slide case (49-1) over motor assembly and tighten. Place a few drops of oil into air inlet.
14. Replace guard on tool.
15. **CHECK RPM WITH TACHOMETER. TOOL MUST RUN AT OR BELOW SPEED THAT IS STAMPED ON TOOL.**

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