

HENRY TOOLS

Industrial Airtools at Work

**MODELS
4405-RASZ**

General Safety and Maintenance Manual



RIGHT ANGLE SANDER SERIES



•This model can easily be adapted to a standard right angle grinder with the purchase of a wheel guard and appropriate grinding wheel adaptors.

Model Number	Exhaust Direction	Throttle Type	Speed	Power Output	Weight		Overall Length	Housing Diameter	Working Air Consumption	Spindle Thread & Length/Output	Wheel Aluminum Steel Capacity
					ALUM. CASE	STEEL CASE					
4405RASZ	Front or Side	(L) Lever or (K) Safety Lever	11000 R.P.M. (Standard)	0.9 H.P. (675 W)	2.8 lb (1.3 Kg)	3.5 Lbs (1.6 Kg)	9.2 Inches (234 mm)	1.6 Inches (41 mm)	25 cfm (11.8 L/S)	5/8-11 x 0.98 Inch (25 mm) STANDARD	4 Inch Sanding Pad 5" Inch Sanding Pad



The Henry Tool Co., Manufactured by Henry Tools

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This tool is designed to operate on 90 psig (6.2 bar) maximum air pressure with 1/4" (8 mm) hose. 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.

2. Start new spiralcool wheels under a steel bench. Run at full throttle for one minute. Defective pads usually come apart immediately. When starting a cold wheel apply to work slowly, allow wheel to warm gradually.

3. This model is not guarded for type 1 wheels. If you have a type 1 wheel application, please purchase a guard (4504, 4505, etc.)

4. Model 4405RA Grinders are equipped with a Spiral-Cool Pad from the manufacturer.

5. Safety levers are available from the manufacturer. (402-26).

6. Before mounting or removing a wheel, disconnect grinder from air supply.

7. 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.

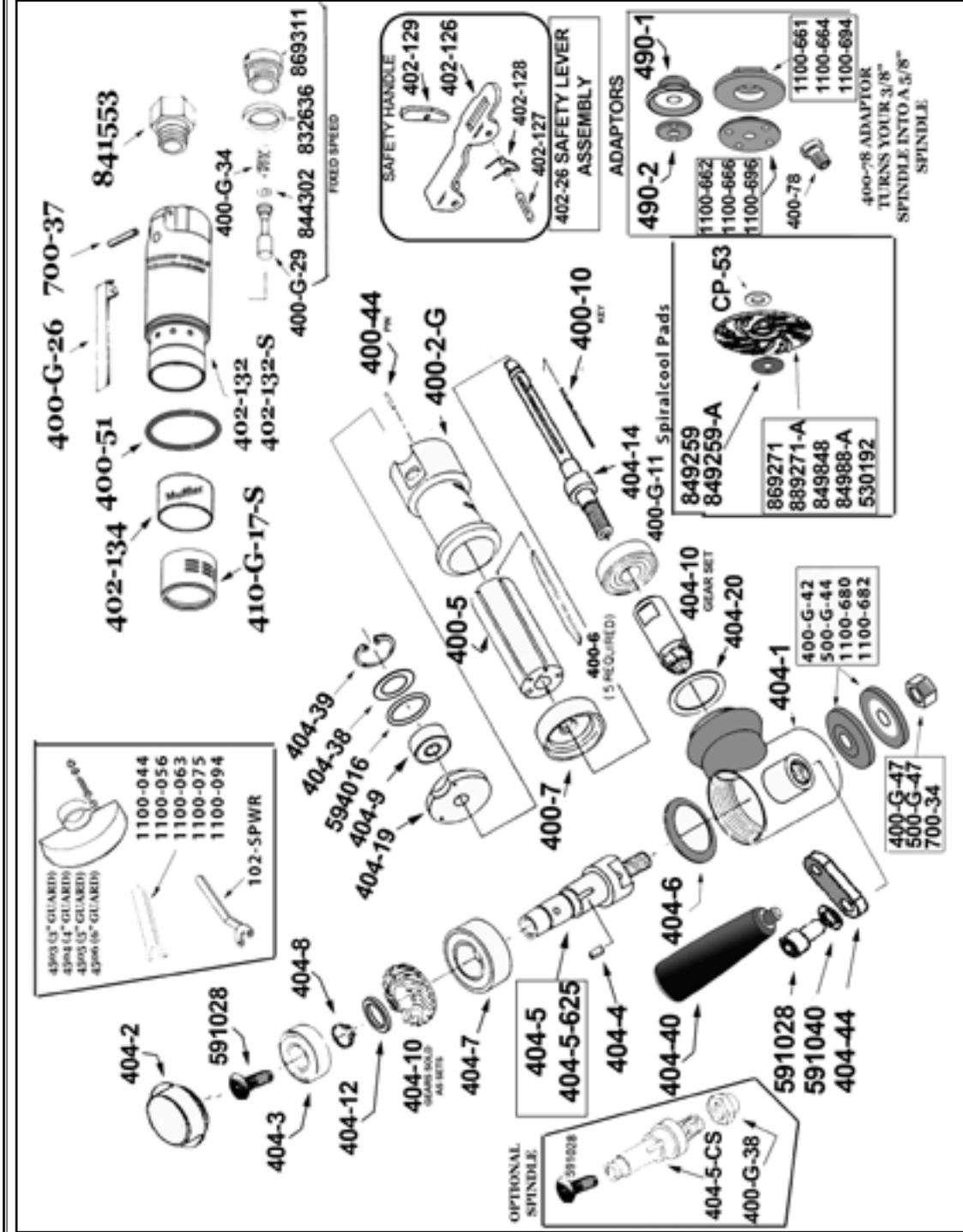
8. Wear safety goggles and other protective clothing. Continuous exposure to vibration may cause injury to your hands and arms. (See regulations.)

9. Properly maintained airtools are less likely to fail or cause accidents.

10. If tool produces an unusual sound or vibrations repair immediately.

11. NEVER MODIFY ANY PART OF THIS TOOL!!

Modification of this tool can cause serious injury.



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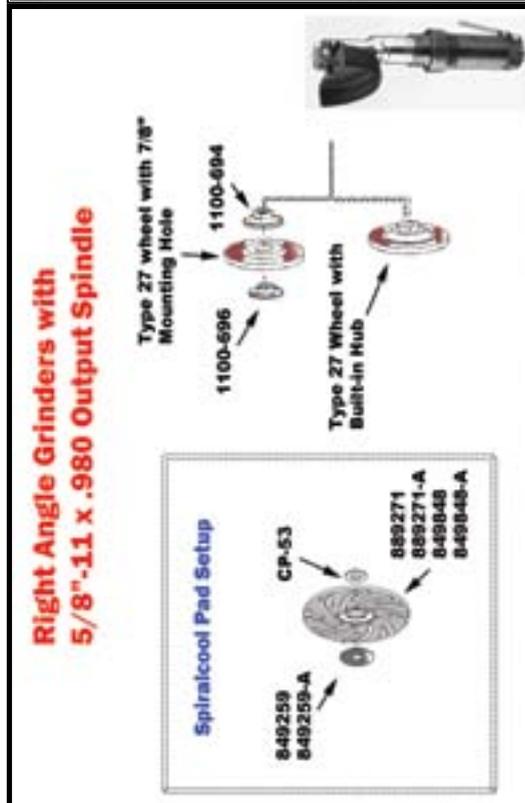
PART NO.	DESCRIPTION
400-G-11	FRONT BEARING
400-G-26	THROTTLE LEVER
400-G-34	SPRING
400-G-38	COLLET NUT
400-G-42	3/8 I.D. FLANGE (2"-3" WHEELS)
400-G-47	3/8-24 JAM NUT
400-10	KEY
400-44	ROLL PIN
400-2G	CYLINDER WITH PIN
400-5	ROTOR
400-6	BLADE (5 are REQ.)
400-7	FRONT ENDPLATE
400-51	O-RING
402-126	SAFETY LEVER
402-127	SAFETY LEVER PIN
402-128	LOCKOUT LEVER
402-129	SAFETY LEVER SPRING
402-132	Aluminum Case
402-132-S	Steel Case
402-134	MUFFLER
404-1	Case
400-G-17	Exhaust (aluminum)
400-G-17-S	Exhaust (steel)
404-1	ANGLE HEAD
404-2	BEARING CAP
404-3	UPPER OUTPUT SPINDLE BEARING
404-4	KEY
404-5	3/8-24 X .980 OUTPUT SPINDLE
404-5-CS	COLLET OUTPUT SPINDLE
404-5-625	5/8-11 X .980 OUTPUT SPINDLE (STANDARD)
404-6	Wavy Washer (Note:2 are req'd)
404-7	LOWER OUTPUT SPINDLE BEARING
404-8	SNAP RING
404-9	REAR MOTOR BEARING
404-10	GEAR SET
404-12	SPACER RING
404-14	SPINDLE
404-19	REAR ENDPLATE
404-20	MOTOR SPACER
404-38	BEARING COVER
404-39	SNAP RING

PART NO.	DESCRIPTION
404-40	DEAD HANDLE
404-44	Offset Bracket
410-G-17-S	Steel Side Exhaust Sleeve
500-G-44	3/8 I.D. FLANGE (4"-5" WHEELS)
500-G-47	1/2-13 JAM NUT
501-42A	1/2" I.D. FLANGE
700-34	5/8-11 JAM NUT
700-37	THROTTLE LEVER PIN
1100-680	5/8 I.D. FLANGE
1100-682	(6" OR SMALLER WHEELS) 3/8 I.D. FLANGE (5"-6" WHEELS)
591028	SCREW
591040	Star Washer for Bracket
591048	SCREW
591106	SET SCREW (SPECIFY SPEED)
592016	SNAP RING
594016	O-RING
832636	GASKET
841552	3/8 NPT TO 3/8 NPT BUSHING
841553	3/8 NPT TO 1/4 NPT BUSHING
844302	O-RING
869311	THROTTLE VALVE CAP
834782	THROTTLE VALVE-INCLUDES 844302
ASSEMBLIES	DESCRIPTION
510120	REPAIR KIT with Gear Set REPAIR KIT WITH GEARS. Includes all bearing and snap rings and spacers and blades.
510121	REPAIR KIT WITHOUT GEARS REPAIR KIT WITH GEARS. Includes all bearing and snap rings and spacers and blades.
402-26	Safety lock Lever Assembly
ACCESSORIES	
PART	DESCRIPTION
CP-53	WASHER
300-16	1/8" COLLET ADAPTER
300-16-3/32	1/4" TO 3/32" COLLET ADAPTER
400-78	3/8-24 TO 5/8-11 ADAPTER



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PART NO.	DESCRIPTION
490-K	3/8-24 X TYPE 27 ADAPTER ASSY. .980
490-2	NUT FOR 490-K & 490-KR
1100-660	3/8-24 TO 5/8 I.D. TYPE 27 ADAPTER ASSY.
1100-661	3/8-24 TO 5/8 I.D. BACKING PLATE
1100-662	3/8-24 TO 5/8 I.D. ADAPTER NUT
1100-664	3/8-24 TO 7/8 I.D. BACKING PLATE
1100-666	3/8-24 TO 7/8 I.D. ADAPTER NUT
1100-668	3/8-24 TO 7/8 I.D. TYPE 27 ADAPTER ASSY.
1100-680	5/8" Adaptor for Type 1 wheels
1100-692	5/8-11 TO 7/8 I.D. TYPE 27 ADAPTER ASSY.
1100-694	5/8-11 TO 7/8 I.D. BACKING PLATE
1100-696	5/8-11 TO 7/8 I.D. ADAPTER NUT
849259	5/8-11 SANDING PAD NUT
849259-A	3/8-24 SANDING PAD NUT
889271	5/8-11 4" SANDING PAD (MAX 12000 RPM)
889271-A	3/8-24 4" SANDING PAD (MAX 12000 RPM)
849848	5/8-11 5" SANDING PAD (MAX 10000 RPM)
849848-A	3/8-24 5" SANDING PAD (MAX 10000 RPM)
GUARDS	
4503	3" TYPE 27 GUARD
4504	4" TYPE 27 GUARD
4505	5" TYPE 27 GUARD
4506	6" CLOSED FACE GUARD
TOOLS	
PART	DESCRIPTION
490-3	PIN SPANNER
102-SPWR	WRENCH FOR SANDING PAD NUT
1100-044	7/16" WRENCH
1100-056	9/16" WRENCH
1100-063	5/8" WRENCH
1100-075	3/4" WRENCH
1100-094	15/16" WRENCH





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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. 2. Remove handle (404-40). Secure anglehead in vise SOFTLY on dead handle boss. Unscrew and remove case(402-132) Never squeeze anglehead(404-1) in vise. This will distort bearings and ruin gear alignment.
2. Remove deflector (410-G-17-S).
3. Pull motor from right angle head. Be careful to note location of shims.
4. Remove snap ring (404-39), wafer(404-38), O-ring(594016), and snap ring (592016). (Some of these may not be present).
5. Install brass or aluminum jaws in vise. Grasp the O.D. of cylinder(400-2-G) and end plate(404-19). Using a 3/16" punch, tap spindle out rear bearing (404-9)
6. Remove cylinder, blades(400-6).
7. With rotor (400-5) still on spindle (404-14), grasp the rotor in vise snugly and remove pinion gear(404-10).
8. Remove rotor(400-5) Remove key and front thrust plate(400-7).
9. Press bearing (400-G-11) off of spindle.
10. Secure angle head in vise and unscrew cap (404-2).
11. Remove from vise and tap on spindle with a plastic hammer. The spindle assembly and spring washers (404-6) will slide out.
12. Remove screw (591028). Remove Snap ring(404-8). Remove spacer(404-120) and gear(404-10) as well as (404-4)key. Press or tap out spindle(404-5-625) from bearing (404-7).
13. Using a 9/64" T-Handle hex wrench unscrew (591028) screw.
13. Press bearing (404-3) off spindle.
14. Remove snap ring (404-8) . Support bearing (404-7) and press spindle through with 1/4" punch. This will remove gear (404-10) and bearing(404-7). 15. 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. Place key(400-10) into keyway in spindle. Slide rotor down over shaft.
3. Grasp rotor in vise snugly and replace pinion gear(404-10) and wrench firmly.
4. Support bearing and pinion gear in downward position. Place five blades(400-6) in slots. Slip cylinder(400-2-G) over rotor. Install rear thrust(404-19) locating cylinder pin in small hole of rear thrust plate (404-19).
5. 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 (404-19)]
6. Support bearing(404-7) on inner race of (404-5-625). Press

- spindle (404-5-625) through bearing until it bottoms on shoulder. Install key (404-4) and line up with keyway of ring gear(404-10). Support gear on inner diameter and press spindle through. Replace gear spacer ring (404-12) on spindle and replace snap ring (404-8).
7. Support threaded end of spindle and press on bearing(404-3). Replace and tighten screw (591028) into end of spindle. Press spindle assembly into cap(404-2) Grease gear.
8. Install spring washer(404-6) into angle head(404-1).
9. Install spindle assembly into angle head housing, secure in vise and tighten cap (404-2).
10. Re-Locate angle head in vise-so that the motor can be installed vertically.
11. 12. Replace shim(404-20) exactly as it was originally installed.
12. Jiggle greased pinion assembly into angle head while turning spindle(404-5-625)-so that gears mesh. Tap lightly on rear of motor to insure that is fully seated.
13. Install exhaust deflector (410-G-17-S). Place O-ring(400-51) on motor case(402-132) and screw onto angle head. The deflector should be snug, but can be turned. Place a few drops of oil into motor inlet.
14. (OPTIONAL): To check throttle valve, unscrew plug(869311) and lift out spring and valve. Replace O-ring on (400-G-29) valve if worn.
15. Replace guard and other safety accessories.
16. CHECK RPM WITH A TACHOMETER. TOOL MUST RUN AT OR BELOW SPEED THAT IS STAMPED ON TOOL.