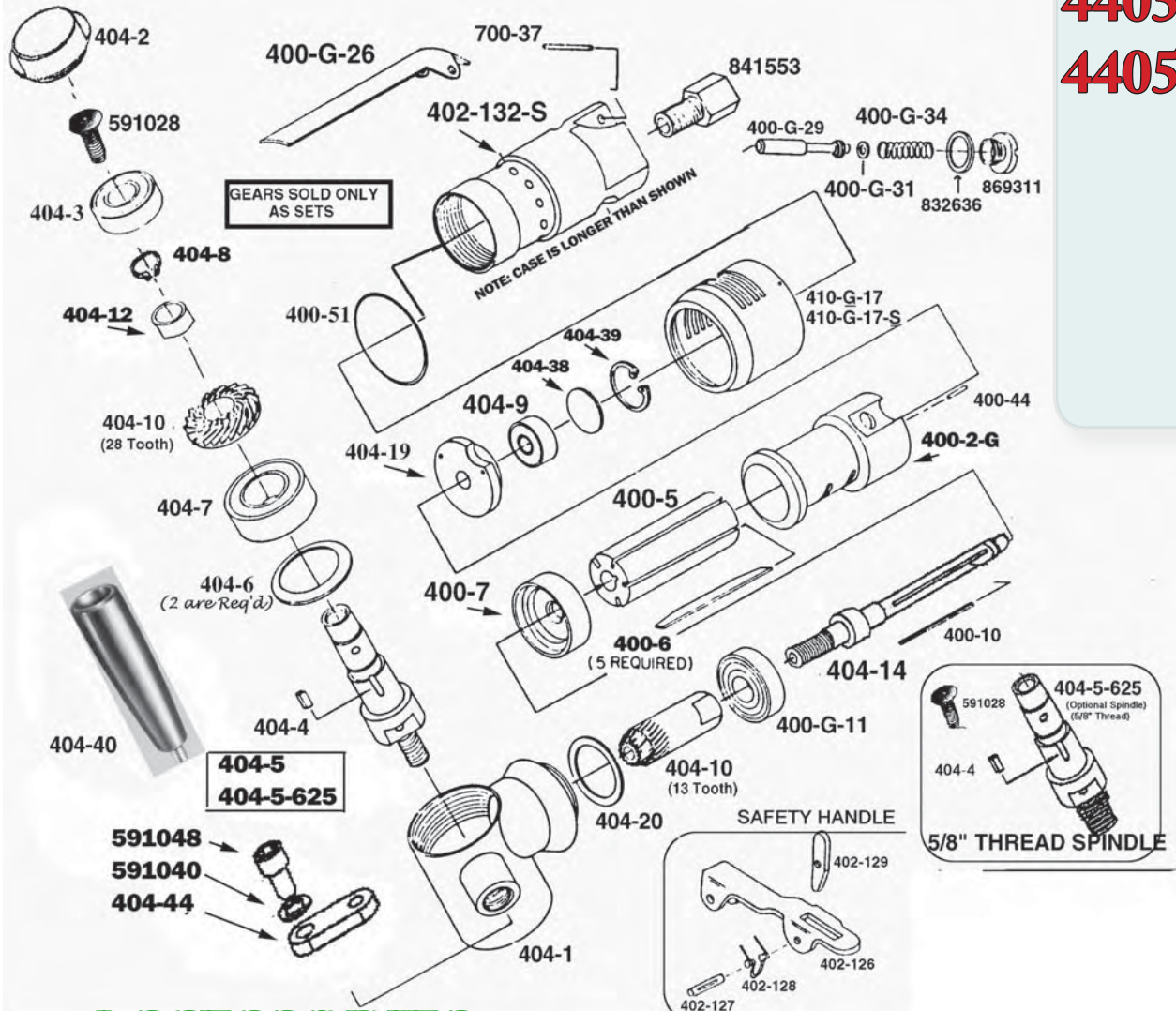
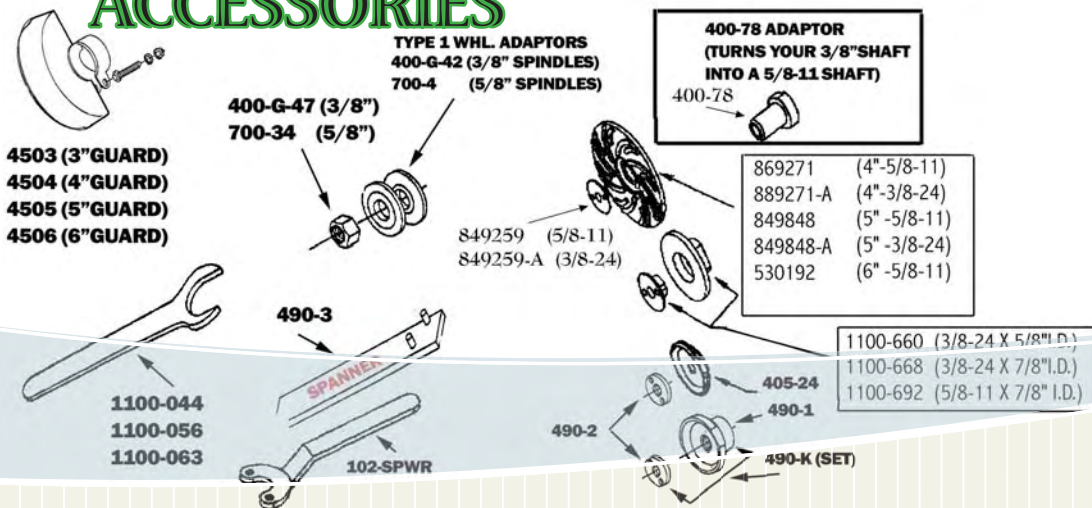


Models

4405-RA
4405-RAS
4405-RASZ
4405-RASK



ACCESSORIES



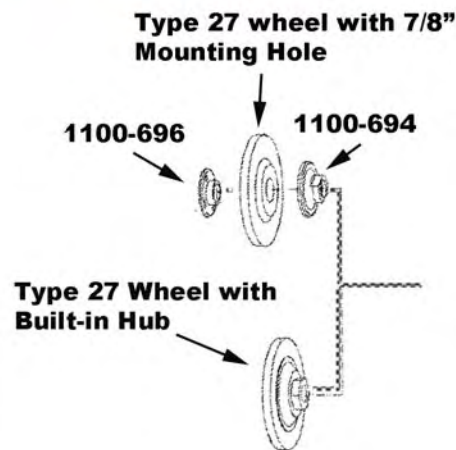
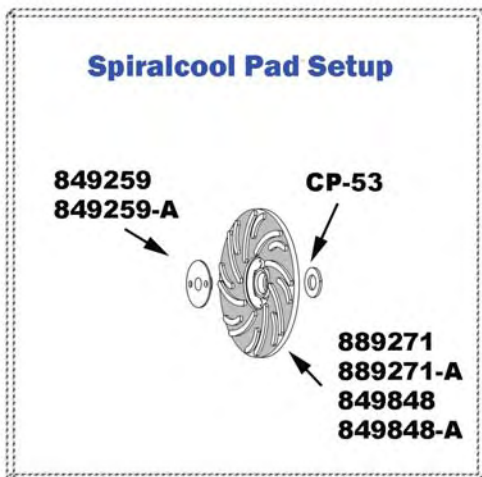
HENRY AIR TOOLS

Models

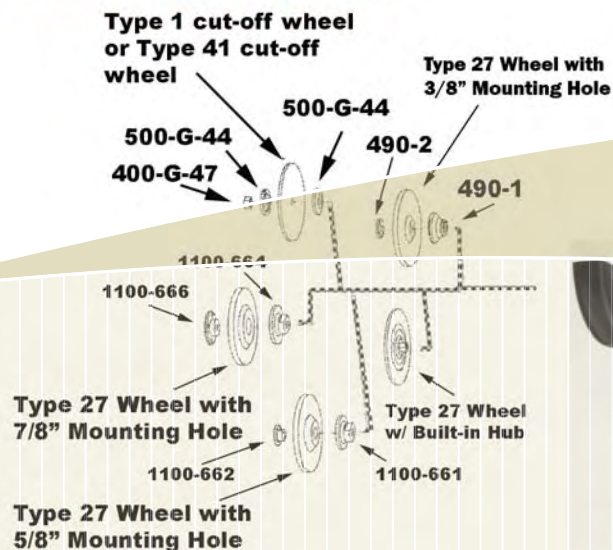
4405-RA
4405-RAS
4405-RASZ
4405-RASK



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



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



HENRY AIR TOOLS

Models

4405-RA
4405-RAS
4405-RASZ
4405-RASK



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.
2. 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.
3. 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.
4. Model 4405RA grinders equipped with 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.)
5. The Model 4405RA Grinders are equipped with a Spiral-Cool Pad 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.
6. At least one-half of the mandrel length (i.e. mounted wheel, burr, etc.) must be inserted into the collet. Secure collet chuck tightly.
7. Safety levers are available from the manufacturer. (402-26)
8. 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.)
9. Wear safety goggles and other protective clothing. Continuous exposure to vibration may cause injury to your hands and arms. (See regulations.)
10. 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.
2. Remove handle (404-40). Secure anglehead in vise 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.
3. Remove deflector (410-G-17-S).
4. Pull motor from right angle head. Be careful to note location of shims.
5. Remove snap ring (404-39), wafer (404-38), O-ring (594016), and snap ring (592016). (Some of these may not be present).
6. 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)
7. Remove cylinder, blades (400-6).
8. 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.

11. Remove screw (591028). Remove Snap ring (404-8). Remove spacer (404-120) and gear (405-10) as well as (404-4) key. Press or tap out spindle (404-5-625) from bearing (404-7).

of bearing cap until free of bearing (404-3). Note position of shims. Using a 9/64" T-Handle hex wrench unscrew (591028) screw. [(NOTE: Some older models have a snap ring (405-16) to be removed instead of a screw)]

13. Press bearing (404-3) off spindle. Remove snap ring (404-8). Support bearing (404-7) and press spindle through with 1/4" punch. This will remove gear (405-10) and bearing (404-7).
15. Remove key (404-4).

ASSEMBLY

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 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.
7. 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).
8. 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.
9. Install spring washers (404-6) into angle head (404-1).
10. 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.
13. 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.
14. 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.
15. To check throttle valve, unscrew plug (869311) and lift out spring and valve. Replace O-ring on (400-G-29) valve if worn.
16. Replace guard on tool.

17. CHECK RPM WITH TACHOMETER. TOOL MUST RUN AT OR BELOW SPEED THAT IS STAMPED ON TOOL.

Models

4405-RA
4405-RAS
4405-RASZ
4405-RASK



Part No.	Description
400-G-11	FRONT BEARING
400-G-25	MUFFLER
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
404-6	Wavy Washer (Note:2 are req'd)
404-7	LOWER OUTPUT SPINDLE BEARING

Part No.	Description
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
404-40	DEAD HANDLE
404-41	MOTOR CASE
404-44	Offset Bracket
410-G-17	Alum Side Exhaust Sleeve
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

Part No.	Description
869311	THROTTLE VALVE CAP
834782	THROTTLE VALVE-INCLUDES 844302
ASSEMBLIES	DESCRIPTION
510120	REPAIR KIT with Gear Set
510121	REPAIR KIT WITHOUT GEARS
402-26	Safety 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
405-24	BACKING PLATE FOR 490-KR
490-K	3/8-24 X TYPE 27 ADAPTER ASSY. .980
490-KR	3/8-24 X TYPE 27 ADAPTER ASSY. .580
490-1	BACKING PLATE FOR 490-K
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

Part No.	Description
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	
PART	DESCRIPTION
4503	3" TYPE 27 GUARD
4504	4" TYPE 27 GUARD
4505	5" TYPE 27 GUARD
4506	6" CLOSED FACE GUARD

HENRY AIR TOOLS

Models

4405-RA
4405-RAS
4405-RASZ
4405-RASK



Part No.	Description
TOOLS	
490-3	PIN SPANNER WRENCH
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

INSTALLATION

For most efficient operation, 90 psig (620 kPa) of clean dry air is required at the tool with the tool running, with-out extreme fluctuation. Minimum recommended hose size is 3/8" I.D. when the length of the hose is eight feet or less. An air line filter and lubricator, should be used. Hose should be blown out before attaching to the tool.

Loss of Power

A loss of power may not be related to the tool. First, check the air line pressure. It should be 90 psi at the tool while operating.

LUBRICATION

Lubricate the motor with an air line lubricator, using a light air motor oil. Adjust the lubricator to dispense one drop per cycle or three drops per minute.

CAUTION Do not use substitutes for oil and grease. This could result in damage to the tool.

MAINTENANCE

1. Proper and continuous lubrication.
2. Blow out air hose to assure a clean air supply.
3. Be sure the air filter and line lubricator are clean.
4. Fill the line lubricator before operation.
5. Place a few drops of oil into the air inlet of the tool before attaching the air line.
6. Use moisture separators to remove water from the air line.
7. **CAUTION** Do not use solvent on bearings or on any parts made of a synthetic material.
8. Do not remove bearings unless replacement is necessary; bearings are a press fit.