

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. 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. 4. 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 46RAC 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 (540875) 5. The Model 46RA 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. 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.

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DISASSEMBLY

1. Disconnect air & remove all wheels and accessories.
2. Secure tool vertical in vise. Clamp onto flats on back part of backhead(402-130(S)).
3. Unscrew lock nut (406-38). Angle head will disconnect from motor case. Remove coupling (406-12), exhaust sleeve (410-G-17S), and exhaust screen (541505).
4. Unscrew and remove motor retainer (406-39). Pull motor



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out of case.

5. Remove snap ring (592016) or (400-39). Pull motor out of case.
6. Install brass jaws in vise, firmly grasp O.D. of cylinder (400-2G) and end plate (400-3). Using a 3/16" punch tap spindle out of rear bearing (400-9).
7. Remove cylinder, end plate, rotor (400-5), blades (400-6), key (400-10) and front thrust (400-7).
8. Remove retaining ring (400-46). Press spindle (406-14) out of bearing (400-G-11) with an arbor press and drill block.
9. Secure angle head in vise. Clamp on sides of output end.
10. Remove head retainer (406-40) using flats. Remove lock nut.
11. Remove lock ring (406-2) with lock ring tool. Remove angle head assembly from vise.
12. Tap sides of angle housing to remove both spindle assemblies.
13. Remove screw (592046) from end of ring gear assembly.
14. Press bearing (400-9), (590031), spacer (406-5), ring gear (406-10), and key (406-4) off spindle (406-17).
15. With pinion spindle (406-10) in hand-GEAR UP, tap end of gear with plastic hammer until bearing (300-G-29) and spacer (406-42) become free.
16. Remove retaining ring (400-46). Press gear spindle off of rear bearing (300-G-29) with use of arbor press and a drill block.
17. To check throttle valve: unscrew plug (400-G-40) and lift

ASSEMBLY

1. Be sure all parts are clean and free from abrasives before assembly.
2. Support bearing (400-G-11) on drill block. Press spindle (406-14) through bearing until it bottoms on shoulder.
3. Place retaining ring (400-46) into groove in spindle. Slide front thrust(400-7 over spindle and onto front bearing. Place key (400-10) into keyway in spindle.
4. Slide rotor (400-5) over spindle. Place (400-6) blades in slots.
5. Slip cylinder (400-2G) over rotor. Install rear thrust (400-3) locating cylinder pin in smaller hole of the rear thrust plate.
6. Place bearing (400-9) in rear thrust & tap in place with bearing driver. Using pliers place snap ring (592016) in spindle groove.
7. Secure case(402-130) in vise vertically. Slip motor assembly into case. Install O-ring (400-51), exhaust screen (541505), and exhaust deflector (410-G-17-S).
8. Screw motor retainer (406-39) into end of case and

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tighten.

9. Press bearing (300-G-29) on gear spindle (406-10) with arbor press. Replace retaining ring (400-46) in groove of spindle.

10. Press spacer (406-42) and bearing (300-G-29) onto gear spindle with arbor press.

11. Press bearing (590031) onto spindle (406-17) or (406-13). Place key (406-4) in slot of spindle.

12. Align keyway in ring gear (406-10) with key in spindle and press together with an arbor press.

13. Place spacer (406-15) and bearing (400-9) over end of spindle. Press in place with arbor press. Thread screw (591046) in end of spindle.

14. Place angle assembly into housing (406-1). Place pinion gear assembly in housing. Tighten lock nut (406-38) over end of housing and retainer (406-40).

15. Tighten lock ring (406-2) in output end of housing with lock ring tool.

16. Place coupling (406-12) on spline on end of motor spindle. Place angle head onto end of motor housing. Align splines inside coupler. Tighten lock nut on motor case and run tool.

17. Replace guard on tool.

18. Check RPM with a reliable tachometer. Tool must run at or below speed on tool.

540382	Key (404-4)
540852	Spindle 46RA X .58
540875	4" Guard (46RA)
541034	Thin Nut (46RA)
590031	Bearing For 46RA
591032	Screw for Guard (46RA)(3 Req'd)
591046	Screw (46RA)
592016	Snap Ring
832636	Gasket
841553	Bushing
844302	"O"-Ring
869311	Thrtl Valve Cap
1100-044	Wrench (7/16")
1100-056	Wrench (9/16")
1100-063	Wrench (5/8")
1100-406	Wrench (5/8"one Side,2 prong other end)
300-G-29	Bearing
400-2G	Cylinder
400-10	Key
400-3	Rear Thrust

Part No. Description

400-44	Pin for Cylinder(46RA)
400-46	Snap Ring
400-5	Rotor
400-51	"O"-Ring (400-51)
400-6	Rotor Blade(5 Req'd)
400-7	Front End Plate
400-9	Rear Bearing
400-G-11	Bearing
400-G-26	Lever
400-G-29	Thrtl. Valve
400-G-34	Throttle Valve Spring
400-G-38	Collet Nut
400-G-47	Flange (2 Req'd)
402-130-S	Case Steel(46RA)(402-130-S)
406-1	Angle Head (541140)(46RA)
406-10	Pinion & Ring Gear (46RA)
406-12	Coupling (540850)(46RA)
406-13	Spindle (Short)(46RA)
	Splined Motor
406-14	Spindle(46RA)(540869)
406-15-CS	Collet Spindle (46RA)
406-17	Spindle (3/8")(46RA)
406-2	Lock Ring (540589)(46RA)
406-38	Lock Nut (540872)(46RA)
406-39	Motor Retainer(540873)(46RA)
406-40	Head Retainer(46RA)(540871)
406-42	Spacer(541128)(46RA)
406-61	Thin Motor Spacer (2 Req'd)(46RA)
410-G-17-S	Steel Exhaust
490-3	Spanner Wrench
700-37	Roll Pin

**WARNING**

Always wear eye protection when operating or performing maintenance on this tool.

Updated 1/30/2004**HENRY AIR TOOLS**

