

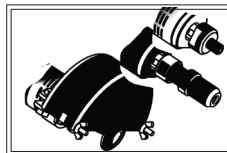
HENRY TOOLS

Industrial Airtools at Work

MODELS
47 GL
47 GLS
47 GLSK



General Safety and Maintenance Manual



MULTIPLE ACCESSORIES



CAPACITY

- 2 Inch (50mm), 3 Inch (75mm) or 4 Inch (100mm) Type 1 wheels .
- NOTE: GUARD IS REQUIRED if you have a grinding wheel application.
- Burrs/Mounted Stones of shank size 1/4 Inch, 3/8 Inch.
- Any Type 16, 17, 17R or 18R Cone Wheel with 3/8-24 mounting

Model Number	Exhaust Direction	Spindle Type	Throttle Type	Speed	Power Output	Case Material	Weight		Length	Body Diameter	Air Consumption
							Aluminum	Steel			
47GL	Front or Side (Side is Standard)	3/8-24 X 1.0 Inch	(L) Lever or (K) Safety Lever	9000-15000 R.P.M. (18000PM is standard)	0.9 H.P .675 W	(S) Steel or Aluminum	1.6 Lb. (0.7 Kg)	2.1 Lb. (0.9 Kg)	13.1 Inch (334 mm)	1.8 inches (46 mm)	25 cfm (11.8 L/S)
47GLS		3/8-24 X 25 mm									

THE HENRY TOOL CO., MANUFACTURED BY HENRY TOOLS

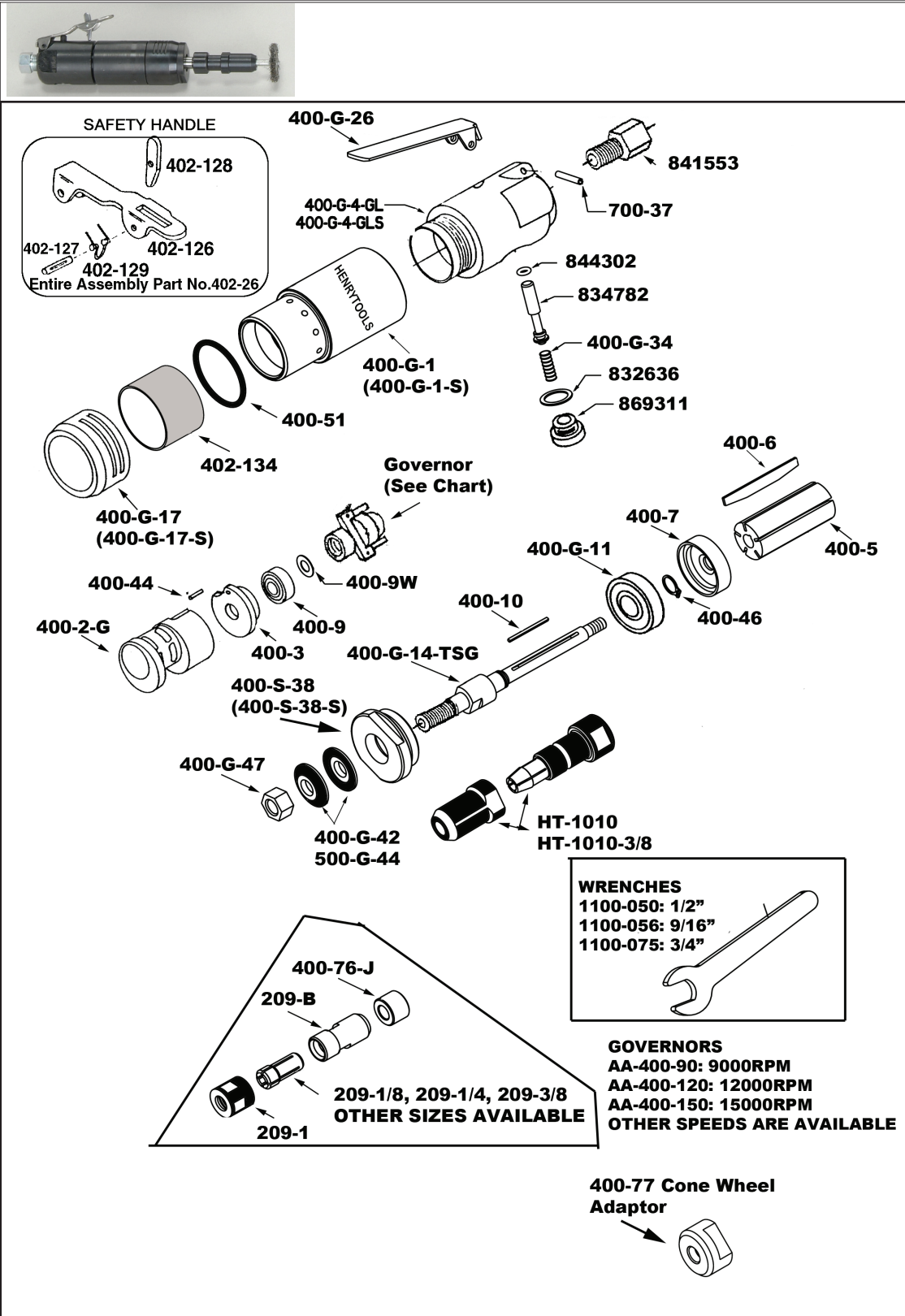
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PART NUMBER	DESCRIPTION
400-G-4-GL	ALUM. GOV. BACKHEAD
400-G-4-GLS	STEEL GOV. BACKHEAD
400-G-11	FRONT BEARING
400-G-14-TSG	GOVERNED SPINDLE
400-G-17	ALUM SIDE EXHAUST SLEEVE
400-G-17-S	STEEL SIDE EXHAUST SLEEVE
400-G-26	THROTTLE LEVER
400-G-34	SPRING
400-G-42	FLANGE FOR 2"-3" WHEELS
400-G-47	3/8-24 NUT
400-2G	CYLINDER
400-3	REAR ENDPLATE
400-5	ROTOR
400-6	BLADE (5 REQ)
400-7	FRONT ENDPLATE
400-9	REAR BEARING
400-9W	WASHER
400-10	KEY
400-44	ROLL PIN
400-46	SNAP RING
400-51	O-RING
402-126	SAFETY LEVER
402-127	SAFETY LEVER PIN
402-128	LOCKOUT LEVER
402-129	SAFETY LEVER SPRING
402-134	MUFFLER
400-G-1	ALUMINUM CASE
400-G-1-S	STEEL CASE
400-S-38	ALUMINUM MOTOR RE-TAINER
400-S-38-S	STEEL MOTOR RETAINER
500-G-44	FLANGE FOR 3"-4" WHEELS
700-37	THROTTLE LEVER PIN
832636	GASKET
834782	THROTTLE VALVE-INCLUDES 844302
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
490-3	PIN SPANNER
1100-050	1/2" WRENCH
1100-056	9/16" WRENCH

PART NUMBER	DESCRIPTION
1100-075	3/4" WRENCH
GOVERNORS	
PART DESCRIPTION	
AA-400-70	GOV.ASSY. (7000 RPM)
AA-400-80	GOV.ASSY. (8000 RPM)
AA-400-90	GOV.ASSY. (9000 RPM)
AA-400-100	GOV.ASSY. (10000 RPM)
AA-400-120	GOV.ASSY. (12000 RPM)
AA-400-150	GOV.ASSY. (15000 RPM)
AA-400-180	GOV.ASSY. (18000 RPM)
AA-400-200	GOV.ASSY. (20000 RPM)
ACCESSORIES	
PART DESCRIPTION	
400-76J	9/16 UNTHREADED SPACER
400-76J-3/8	3/8 UNTHREADED SPACER
400-77	3/8-24 THREADED 9/16 SPACER (FOR C/W) (THIS IS THE CONEWHEEL ADAPTOR)
400-77J	3/8-24 THREADED 3/8 SPACER
400-78	3/8-24 TO 5/8-11 ADAPTER
AA-209-1/8	3/8-24 ERICKSON 3 PIECE--1/8" INSERT
AA-209-3/16	3/8-24 ERICKSON 3 PIECE--3/16" INSERT
AA-209-1/4	3/8-24 ERICKSON 3 PIECE--1/4" INSERT
AA-209-5/16	3/8-24 ERICKSON 3 PIECE--5/16" INSERT
AA-209-3/8	3/8-24 ERICKSON 3 PIECE--3/8" INSERT
HT-1010	3/8-24 TO 1/4" I.D.- 2 PIECE HEAVY DUTY
HT-1010-3/8	3/8-24 TO 1/4" I.D.- 2 PIECE HEAVY DUTY
209-B	3/8-24 COLLET BODY
209-1	COLLET NUT
209-1/8	1/8" INSERT
209-1/4	1/4" INSERT
209-5/16	5/16" INSERT
209-3/8	3/8" INSERT

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PART NUMBER	DESCRIPTION
510075	REPAIR KIT : Includes (1)400-G-11 Bearing, (1)400-9 Bearing, (5)400-6 Blades, (1)832636 Gasket.
402-26	SAFETY LEVER ASSY.
AA-400-G-4-GK	GOV. ALUM. SAFETY BACK-HEAD ASSY.
AA-400-G-4-GL	GOV. ALUM. BACKHEAD ASSY.
AA-400-G-4-GLS	GOV. STEEL BACKHEAD ASSY.
AA-400-G-4-GSK	GOV. STEEL SAFETY BACK-HEAD ASSY.
	SPECIFY SPEED FOR BACK-HEAD ASSY

Disassemble

1. Disconnect air and remove all burrs, wheels and accessories.
2. Secure tool in vise vertically with output of tool oriented toward upward direction. Clamp onto the flats toward the rear of the backhead.
3. Unscrew motor retainer (400-S-38-S) from motor housing (400-G-1{S}). Lift off exhaust deflector (400-G-17-S), exhaust screen (402-134) and o-ring (400-51) from motor housing. Remove motor from housing. Remove from vise.
4. Secure motor assembly into vise vertically with output in the downward direction. Clamp onto flats on the spindle (400-G-14-TSG).
5. Remove governor (AA-400-XX) carefully. NOTE: (Left-Hand Thread).
6. Remove washer (400-9W).
7. Install brass jaws on vise. Secure motor assembly into vise vertically with output toward downward direction. Clamp lightly the outside diameter of the cylinder (400-2G) and endplate (400-3).
8. Use a 3/16" punch to tap spindle out of rear bearing (400-9). Be careful not to drop the motor assembly when it is free. Remove from vise.
9. Use a small punch to press the rear bearing from the rear endplate.
10. Remove 5 blades (400-6) and the rotor (400-5)
11. Remove key (400-10) and front endplate (400-7) from spindle.
12. Remove retaining ring (400-46) with snap ring pliers.
13. Support spindle assembly vertically on a suitable drill block. Press bearing (400-G-11) off of spindle with an arbor press.
14. (OPTIONAL): Unscrew and remove the throttle valve cap (869311). Lift out throttle valve spring (400-G-34) and throttle valve (400-G-29). Replace o-ring (844302) if worn or torn.

Assembly

1. Clean all parts.
2. Support front bearing (400-G-11) on a suitable drill block. Press the motor spindle (400-G-14-TSG) through bearing (400-G-11) until it bottoms on the shoulder of spindle with an arbor press.
3. Place retaining ring (400-46) into groove in spindle with the use of snap ring pliers.

4. Slide front endplate (400-7) over spindle and onto front bearing (400-G-11).
5. Secure motor assembly into vise vertically with output in the downward direction. Clamp onto flats on the spindle.
6. Place key (400-10) in keyway of spindle.
7. Slide rotor (400-5) over spindle and align slot of rotor with key.
8. Place 5 blades (400-6) into rotor slots.
9. Slip cylinder (400-2G) over rotor. The small pin on face of cylinder should face upwards.
10. Install rear endplate (400-3) onto top of cylinder. Make sure cylinder pin is lined up inside smallest hole of rear endplate (400-3).
11. Place bearing (400-9) in rear endplate and tap in place with a suitable bearing driver.
12. Prior to reassemble inspect governor for gouges, nicks or dents. Oil the inside of motor. Place washer (400-9W) on spindle. Screw governor (AA-400-XX) into end of spindle and tighten. NOTE: (Left Hand Thread).
13. Secure backhead (400-G-4-GL{S}) in vise vertically with output of tool toward upward direction. Clamp onto the flats toward the rear of the backhead. Place motor housing (400-G-1{S}) onto backhead.
14. Place o-ring (400-51), exhaust screen (402-134) and exhaust deflector (400-G-17-S) onto motor housing.
15. Slide front motor assembly into motor housing. Install motor retainer (400-S-38-S). Tighten assemblies together.
16. Check the operating speed with a reliable tachometer. The speed must be at or below the stamped speed on the tool.
17. Install all required safety devices before returning tool to service.

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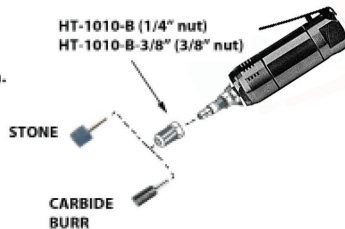
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SAMPLE : MOUNTING OF CONE WHEELS ON HORIZONTAL GRINDERS

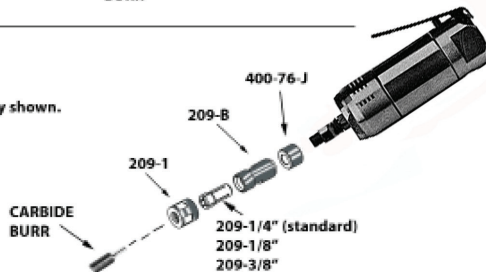


SAMPLE : MOUNTING OF CARBIDE BURRS ON HORIZONTAL GRINDERS

HT-1010 Collet Assembly shown.



Erickson Collet Assembly shown.



Sample: Horizontal Grinder with Guard for mounting Type 1 grinding wheels.



2. After mounting a wheel or other abrasive accessory, the Grinder shall be run in a protected enclosure at gradually increasing speed, for at least 60 seconds. When starting work with a cold wheel, apply it gradually to the workpiece until it becomes warm. Do not continue to use a grinder if:

- The speed rating of the accessory is less than the speed of the grinder
- If tool vibrates repair immediately.
- You sense changes in tool speed or an unusual increase in noise that would indicate tool is running at excessive speed.
- You notice excessive end play in spindle
- You hear any unusual sound from grinder

RETURN THE TOOL TO THE TOOL CRIB FOR SERVICE IMMEDIATELY.

3. Make certain no one is in front of or in line with the wheel or other abrasive accessory. Be aware that it may fail at this time if it is defective, improperly mounted or the wrong size and speed. Stop immediately if considerable vibration or other defects are detected. Shut off the air supply and determine the cause.

4. OPERATOR PROTECTIVE EQUIPMENT - Wear goggles or face shield at all times tool is in operation. Other protective clothing shall be worn, if necessary. SEE REGULATIONS.

5. Keep hands, loose clothing and long hair away from rotating end of tool.

6. Anticipate and be alert for sudden changes in motion during start up and operation of any power tool.

7. Keep body stance balanced and firm. Do not overreach when operating this tool. High reaction torques can occur at or below the recommended air pressure.

8. Tool accessories may continue to rotate briefly after throttle is released.

9. 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.

10. This tool is not designed for working in explosive atmospheres. Do not use this tool on materials whose dust or fumes can cause a potentially explosive environment.

11. This tool is not insulated against electric shock.

12. Product Safety information - When Placing the Tool in Service

- NEVER MODIFY ANY PART OF THIS TOOL!!!!

Always install, operate, inspect and maintain this product in accordance with all applicable standards and regulations (local, state, country, federal, etc.).

- Always use clean, dry air at 90 psig (6.2 bar/620 kPa) maximum air pressure at the inlet. Higher pressure may result in hazardous situations including excessive speed, rupture, or incorrect output torque •
- DO NOT MODIFY THE TOOL, SAFETY DEVICES, OR ACCESSORIES.

PNEUMATIC DIE GRINDER SAFETY

The 47GL die grinders are intended for use with 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 wheel guard or another tool if that tool won't accommodate a guard.

GRINDER SAFETY

ALWAYS COMPLY WITH:

1. General Industry Safety & Health Regulations, Part 1910, OSHA 2206, available from: Sup't of Documents; Government Printing Office; Washington DC 20402
2. Safety Code for Portable Air Tools, ANSI B186.1 available from: American National Standards Institute, Inc.; 1430 Broadway; New York, NY 10018
3. State and Local regulations.
4. Portions of the above codes and regulations are listed below for quick reference.

THESE EXCERPTS ARE NOT INTENDED TO BE ALL INCLUSIVE - STUDY AND COMPLY WITH ALL REGULATIONS!

1. Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.