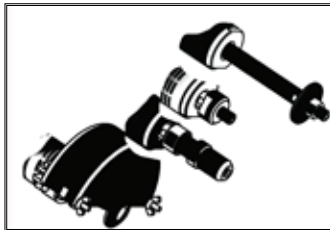


# HENRY TOOLS

Industrial Airtools at Work

MODELS  
4111-GL  
4111-GLS  
4111-GLSK  
4111-GL+6

## General Safety and Maintenance Manual



Model Number	Exhaust Direction	Throttle Type	Speed	Power Output	Case Material	Weight		Length	Diameter	Air Consumption	Wheel Capacity
						Aluminum	Steel				
4111GL	FRONT	(L) Lever	15000 to 22000 R.P.M. (18000RPM is Standard)	0.9 H.P. 675 W	Steel or Aluminum	1.5 lb/0.7 Kg	2.0 lb/0.9 Kg	6.9 inch 175 mm	1.6 inches 41 mm	1.6 inches 41 mm	2" (50mm), 3" (75mm), or 4" (100mm) COLLETS AVAILABLE
4111GLS		(K) Safety Lever				1.6 lb/0.7 Kg	2.0 lb/0.9 Kg	9.3 inch 236 mm			
4111GLS+6						1.7 lb/0.8 Kg	2.1 lb/1.0 Kg	12.3 inch 312 mm			

**Tool can be used as a wheel grinder for type 1 or 27 grinding wheels. (An appropriate guard like 4504 must be purchased to accomplish this)**

**Optional Collets can be purchased: HT-1010 (1/4" mounted points and carbide burrs can be mounted.) HT-1010-3/8" (for 3/8" mounting of carbide burrs, etc.)**

**Standard equipment includes: Two wrenches, screen bushing, wheel washers, spindle nut, 3" or 4" wheel guard. Recommended Air Hose size: 3/8" (9.5 mm)**

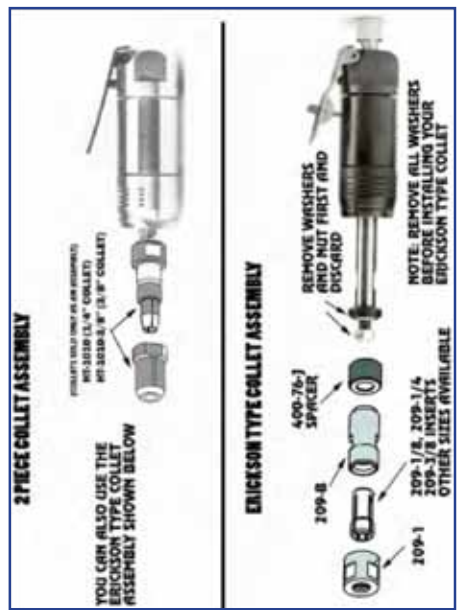
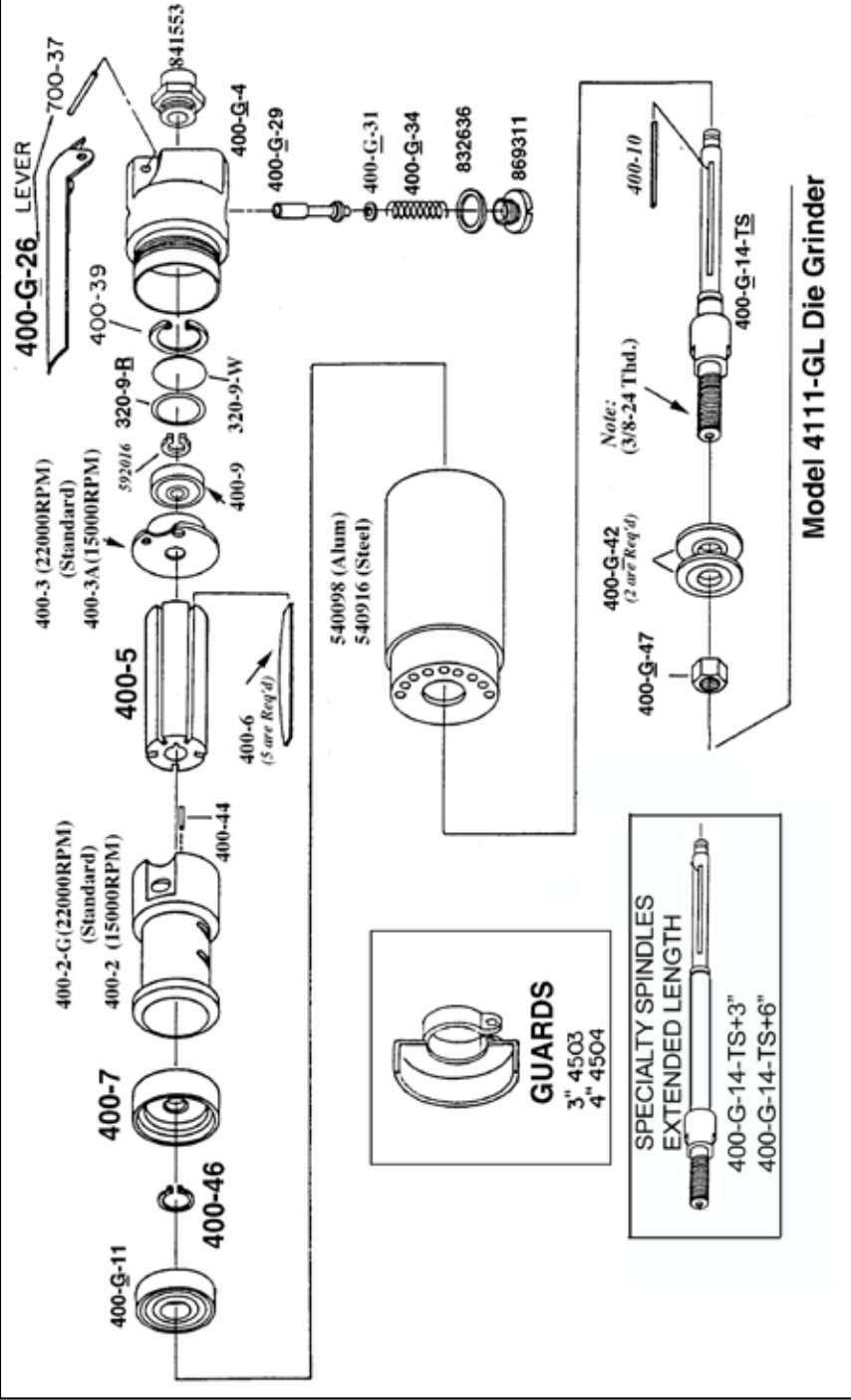
The Henry Tool Co., Manufactured by Henry Tools

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OPTIONAL COLLET FOR USE WITH CARBIDE BURRS, MOUNTED POINTS, ETC. (SAMPLE SETUPS SHOWN ABOVE)

# General Operators Instructions and Service Manual



MODELS  
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PART NUMBER	DESCRIPTION
209-B	3/8-24 COLLET BODY (ERICKSON TYPE)
209-1	COLLET NUT (ERICKSON TYPE)
209-1/8"	1/8" INSERT
209-1/4"	1/4" INSERT
209-5/16"	5/16" INSERT
400-G-11	FRONT BEARING
400-G-14-TS	SPINDLE
400-G 14-TS+3	3" EXTENDED SPINDLE
400-G 14-TS+6	6" EXTENDED SPINDLE
400-G-26	THROTTLE LEVER
400-G-29	THROTTLE VALVE-INCLUDES 844302
400-G-34	SPRING
400-G-42	FLANGE FOR 2"-3" WHEELS
400-G-47	3/8-24 NUT
400-2G	CYLINDER
400-5	ROTOR
400-6	BLADE (5 REQ)
400-7	FRONT ENDPLATE
400-9	REAR BEARING
400-10	KEY
400-27	BUSHING 1/4" x 1/4"
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
400-3	REAR ENDPLATE
400-39	SNAP RING
500-G-44	FLANGE FOR 4"-5" WHEELS
540098	MOTOR CASE (aluminum)
540916	STEEL MOTOR CASE
700-37	THROTTLE LEVER PIN
591106	SET SCREW (SPECIFY SPEED)
592016	SNAP 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

PART NUMBER	DESCRIPTION
<b>ASSEMBLIES</b>	
510075	REPAIR KIT
402-26	SAFETY LEVER ASSY.
<b>WRENCHES</b>	
490-3	PIN SPANNER
1100-050	1/2" WRENCH
1100-056	9/16" WRENCH
1100-075	3/4" WRENCH
<b>GUARDS</b>	
4503-27	3" TYPE 27 GUARD
4504-27	4" TYPE 27 GUARD
<b>ACCESSORIES</b>	
400-76J	9/16" UNTHREADED SPACER
400-78	3/8-24 to 5/8-11 THREADED SPACER
HT-1010	3/8-24 to 1/4" I.D. HEAVY DUTY COLLET (2 PIECE)
HT-1010-3/8"	3/8-24 to 3/8" COLLET ASSEMBLY (HEAVY DUTY) (2 PIECE)
<b>COLLET ASSEMBLIES</b>	
PART	DESCRIPTION
AA-209-1/8	3/8-24 ERICKSON 3 PIECE--1/8" INSERT
AA-209-1/4	3/8-24 ERICKSON 3 PIECE--1/4" 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
<b>ERICKSON COLLET PARTS</b>	
PART	DESCRIPTION
209-B	3/8-24 COLLET BODY
209-1	COLLET NUT
209-1/8	1/8" INSERT
209-3/16	3/16" INSERT
209-1/4	1/4" INSERT
209-5/16	5/16" INSERT
209-3/8	3/8" INSERT
<b>SPACERS</b>	
OTHER SIZE INSERTS AVAILABLE	
400-76J	9/16 UNTHREADED SPACER
400-76J-3/8	3/8 UNTHREADED SPACER
400-77	3/8-24 THREADED 9/16 SPACER (FOR CONE WHEEL)
400-77J	3/8-24 THREADED 3/8 SPACER
400-78	3/8-24 TO 5/8-11 ADAPTER

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## DISASSEMBLY

1. Model 4111 with 3/8 threaded spindle- remove nut (400-G 47) and wheel flanges (400-G-42).
2. Clamp backhead [400-G-4(S)] in a vise. Using a strap wrench, unscrew case (540098/540916). Tap lightly on threaded end of spindle, this will allow the motor to drop out.
3. Remove snap ring(400-39) with type 01 pliers. Lift out wafer (320-9W) and o-ring (If Present)(320-9R). Remove snap ring (592016).
4. With brass or aluminum jawed vise, grasp the O.D. of the cylinder and end plate (400-3) firmly. Use a 3/16" punch and tap spindle out of rear bearing (400-9), being careful not to drop spindle assembly when it is free.
5. Remove the rotor (400-5), blades (400-6), key (400-10) and front thrust plate(400-7) .
6. Remove snap ring (400-46) with type 02 pliers. Place bearing and spindle assembly (threaded end down) on suitable drill block. Press spindle through the bearing with an arbor press.
7. To check throttle valve. unscrew plug (869311) and lift out valve spring (400-G-34) and plunger (400-G-29). Remove o-ring (400-G-31) and replace if cracked or worn.

## REASSEMBLY

1. Support front bearing (400-G-II) on suitable drill block. Press spindle [400-G-14-(TS)] through bearing until it bottoms on shoulder.
3. With type 02 pliers place the snap ring (400-46) into the groove. Slide on front thrust (400-7) over the arbor and onto the front bearing.
4. Place the key (400-10) into the slot in the spindle. Slide rotor (400-5) over spindle, aligning the keyway in the rotor with the key in spindle.
5. Place five blades (400-6) in slots of rotor. Slip cylinder [400-2(G)] over rotor. Install rear thrust[400-3(A)]. (Carefully locate cylinder in the smaller hole of the rear thrust.)
6. Place bearing in rear thrust and tap bearing in with suitable bearing driver.
7. Place snap ring (592016) on spindle groove. If desired, drop oring(320-9R) and washer (320-9W) in rear thrust. Place snap ring(400-39) into groove.
8. Slip motor assembly in case (540098/540916.) Put backhead in vise and screw on motor housing. Tighten with a strap wrench.
9. Re-attach guard on the 4111 case.

**CAUTION: CHECK TOOL FOR SPEED WITH TACHOMETER.**

**THE SPEED STAMPED ON TOOL MUST BE AT OR**

**ABOVE THE ACTUAL SPEED OF THE TOOL.**

Additional information on safety is available in the "American National Safety Code for Portable Air Tools" (ANSI B186.1). This bulletin is available from the American Standards Institute, Inc., 1430 Broadway, New York, N.Y. 10018.

## 4111GL 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 on the grinder.

## SAFETY

1. Before operation check spindle speed with a tachometer. If the RPM's exceed 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 the work slowly, allow wheel to warm up gradually.
4. The 4110 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 (4503,4504).
5. The 4111 die 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 lever throttle is 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 manufacturer. (Wheel flanges should be at least 1/3 the diameter of the grinding wheel.)
9. Wear safety goggles and other protective clothing (when necessary). (See regulations.) properly maintained air tools are less likely to fail or cause accidents. If tool vibrates or produces an unusual sound, repair immediately. Properly maintained air tools are less likely to fail or cause accidents.
10. IF TOOL VIBRATES OR PRODUCES AN UNUSUAL SOUND, REPAIR IMMEDIATELY.

## LUBRICATION

1. An air line filter-regulator-lubricator should be located as closely as possible to the tool.
2. Clean out dirt and moisture from air hoses daily. Keep screen handle bushing in tool.
3. OIL TOOLS DAILY. Exxon's Spinesstic 10, Atlantic Richfield's Duro 55, Gulf's Gulfspin 10 or an equivalent is recommended. Pour about 1 tablespoon in air inlet and run tool to allow oil to be carried to the interior.