

HENRY TOOLS

Industrial Airtools at Work

Models
4710-GL
4710-GLS
SERIES

General Safety and Maintenance Manual

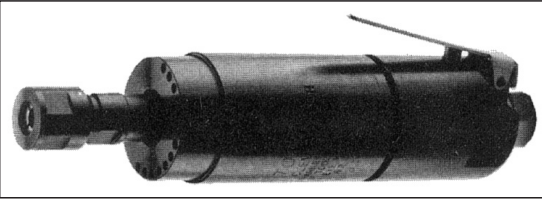


FRONT EXHAUST GOVERNED SPEED DIE GRINDER FEATURING AND ERICKSON COLLET.

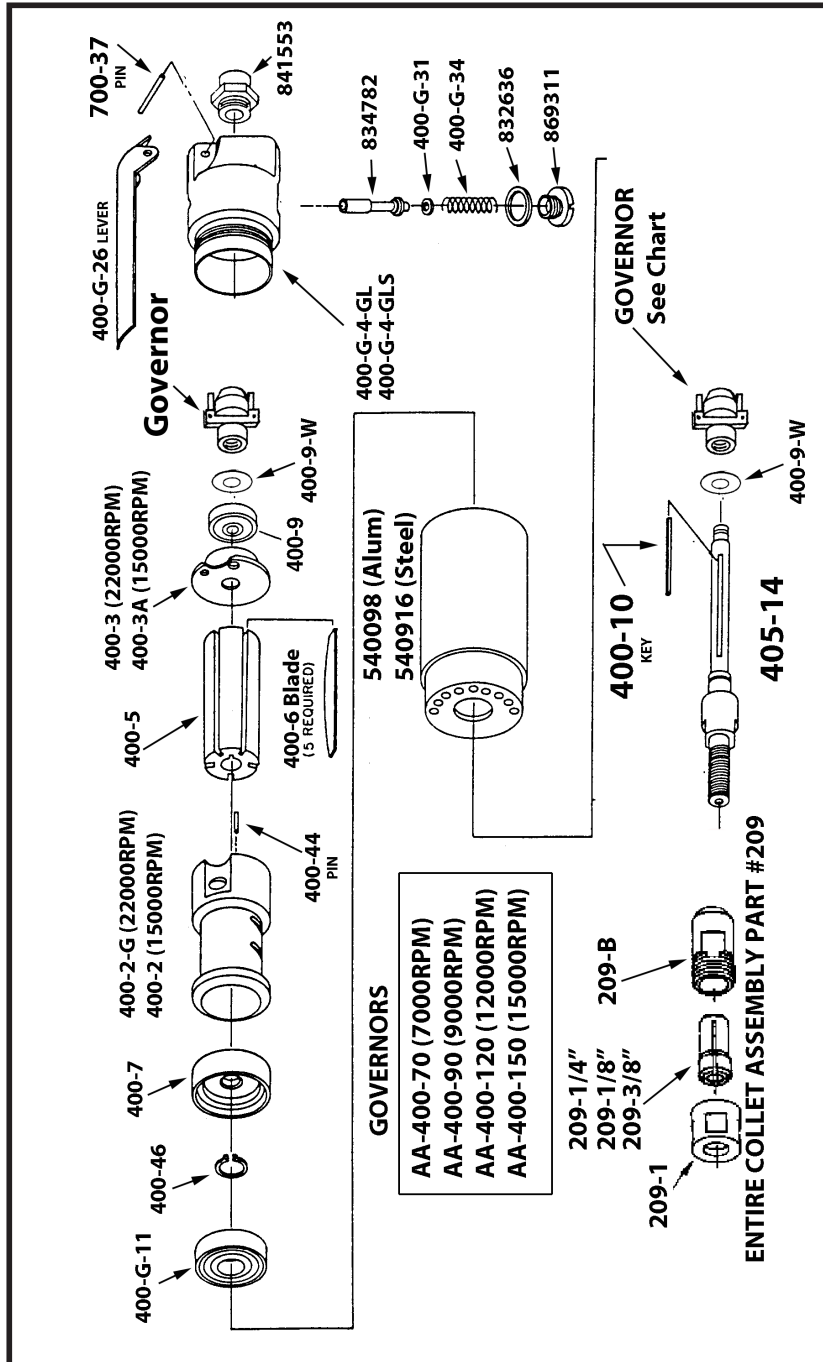
Model Number	Exhaust Direction	Throttle Type	Speed	Power Output	Case Material	Weight		Length	Diameter	Air Consumption	Collet Size
						Aluminum	Steel				
4710GL	FRONT	(L) Lever or (K) Safety Lever	7000 to 15000 R.P.M	0.9 H.P. 675 W	Steel or Aluminum	1.6 lb (0.7 Kg)	2.1 lb (0.9 Kg)	7.7 inch (196 mm)	1.6" (41mm)	25cfm 11.8 L/S	¼ 1/8" 3/4"
4710GLS											

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Model 4710GLS series die grinder featuring a FRONT exhaust and Erickson type collet.



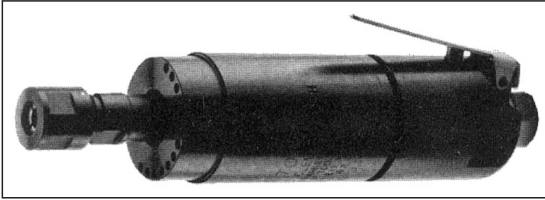
SAFETY

1. Before operation check spindle speed with a tachometer. If the RPM's exceed the rated speed stamped on tool, servicing is required.
2. The 40GL 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.
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 manufacturer. (Wheel flanges should be at least 1/3 the diameter of the grinding wheel.) Wear safety goggles and other protective clothing. (See regulations.)
10. Properly maintained air tools are less likely to fail or cause accidents. 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.

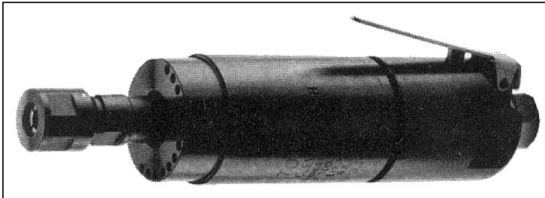
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PART NUMBER	DESCRIPTION
209	ERICKSON COLLET ASSEMBLY COMPLETE
209-1	ERICKSON NUT
209-B	ERICKSON COLLET BODY
209-1/4	1/4" Insert
209-1/8	1/8" Insert
209-3/8	3/8" Insert
540098	Case (aluminum)
540129	Cap
540916	Steel Case
832636	T.V. Cap Gasket
834782	Throttle Valve
841553	SCREENED BUSHING
869311	T. Valve Cap
320-9R	O-Ring(Optional)
320-9-W	Rear Wafer(Optional)
400-10	Key
400-2	Cylinder with pin(w/400-44)15000RPM
400-2-G	Cylinder with pin(w/400-44)
400-3	Rear End Plate
400-3A	Rear END Plate (15000RPM)
400-44	Pin
400-46	Snap Ring
400-5	Rotor
400-51	O-Ring
400-6	Blade(5 req'd)
400-7	Front Thrust
400-9	Rear Bearing
400-9-W	Spacer Ring
400-G-11	Bearing
400-G-26	Valve Lever
400-G-31	O-Ring
400-G-34	Spring
400-G-4-GL	Aluminum Backhead
400-G-4-GLS	Steel Backhead

PART NUMBER	DESCRIPTION
402-126	Lever (Bare)
402-127	Pin
402-128	Latch
402-129	Spring
402-26	Entire Safety Lever
405-14	SPINDLE (GOVERNED)
700-37	Roll Pin
AA-400-120	12000RPM GOVERNOR
AA-400-150	15000RPM GOVERNOR
AA-400-70	7000RPM Governor
AA-400-90	9000RPM GOVERNOR
	Assembly
ACCESSORIES	
1100-063	5/8 Wrench
1100-044	7/16" Wrench
510075	Repair Kit(See 5000-40G Kit below)
4503	3" Guard
4504	4" Guard
209	ERICKSON Collet Assembly Complete
REPAIR KIT	
510075	Includes
1	400-G-11 Bearing
1	400-46 Snap Ring
1	400-9 Bearing
1	400-39 Snap Ring
1	832636 Gasket
5	400-6 Rotor Blades



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REPAIR INSTRUCTIONS

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 case (594016) from (400-G-1) backhead. 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 (405-14).
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 (405-14) 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.

PNEUMATIC DIE GRINDER SAFETY

The 4710GL 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.

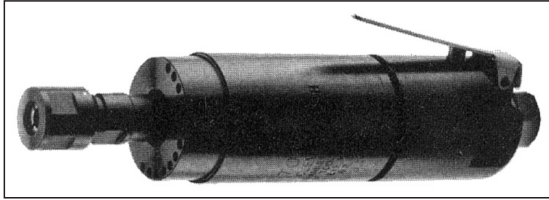
THESE EXCERPTS ARE NOT INTENDED TO BE ALL INCLUSIVE - STUDY AND COMPLY WITH ALL REGULATIONS!

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.
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

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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.