



HENRYTOOLS

Industrial Airtools

MODELS
51HL
51HLOLS
51HS
51HGS
51AH
51AGK
51AHG
Series



General Safety and Maintenance Manual



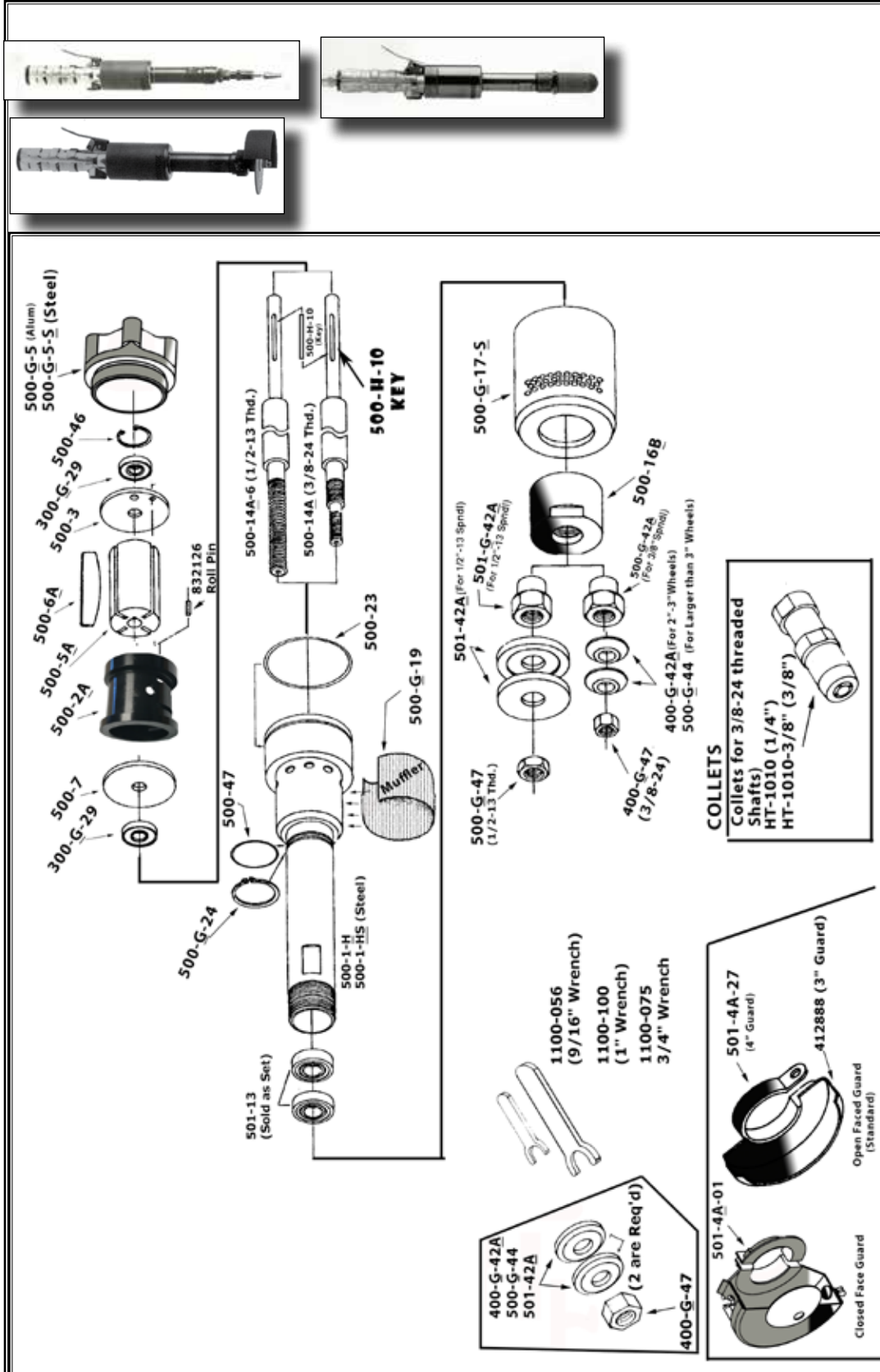
Model	Exhaust Direction	Throttle Type	Rated Speed	Power Output	Case Material	Weight		Overall Length	Body Diameter	Working Air Consumption	Spindle Length & Thread
						ALUM	STEEL				
51HL	Side Exhaust	(L) Lever or (K) Safety Lever (G) Spade Grip Handle	12000 - 18000 R.P.M. (18000RPM is standard)	1.5 H.P. .1130 W	(S) Steel or Aluminum	5.9 Lb./2.9 Kg	7.2 Lb./3.3 Kg	18.2 Inch/ 463mm	2.5 Inch (63.5 mm)	35 cfm (16.5 L/s)	3/8-24 X 1.0 Inch (3/8-24 X 25 mm) or 1/2-13 Thread
51HLS											
51HK											
51HG						6.9 Lb./3.1 Kg	8.2 Lb./3.7 Kg				

THE HENRY TOOL CO., MANUFACTURED BY HENRY TOOLS

498 SO. BELVOIR BLVD., SOUTH EUCLID, OH 44121 U.S.A.

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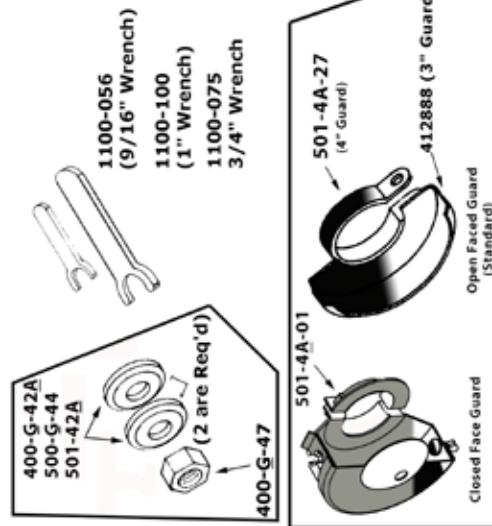


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This tool is designed to operate on 90 psig (6.2 bar) maximum air pressure with 1/4" (8mm) hose. Do not use any wheel having an operating speed lower than the actual free speed on grinder.

SAFETY

1. Check speed of tool with tachometer before every wheel & burr change. If RPM exceeds 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. Model 51H 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.
5. If your tool is purchased with a collet. At least one-half of the mandrel length (i.e.





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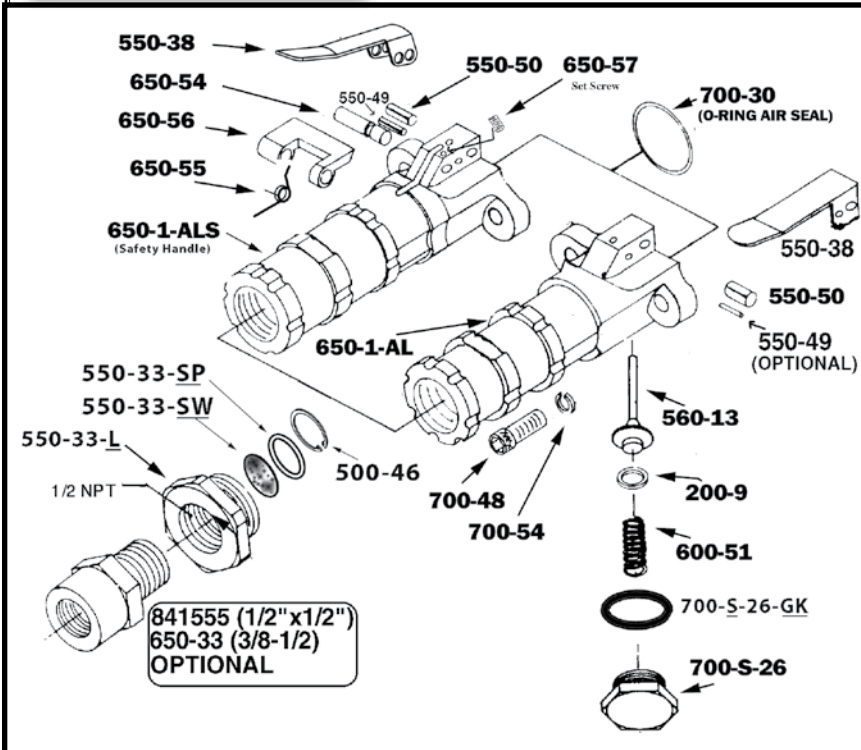
PART NUMBER	DESCRIPTION
300-G-29	BEARING (2 REQ.)
400-G-42	3/8-24 OUTER FLANGE FOR (2"-3" WHEELS)
400-G-47	3/8-24 JAM NUT
500-G-5	ALUMINUM BACKHEAD
500-G-5-S	STEEL BACKHEAD
500-G-17-S	EXHAUST DEFLECTOR
500-G-19	MUFFLER
500-G-24	LOCK RING
500-G-42A	FLANGE
500-G-44	3/8-24 FLANGE (4"-5" WHEELS)
500-G-47	1/2-13 JAM NUT
500-H-10	KEY
500-1-H	ALUMINUM CASE
500-1-HS	STEEL CASE
500-2A	CYLINDER
500-3	REAR ENDPLATE
500-5A	ROTOR
500-6A	BLADE (4 REQ.)
500-7	FRONT ENDPLATE
500-14A	3/8-24 SPINDLE
500-14-A6	1/2-13 SPINDLE
500-16B	CAP
500-23	O-RING
500-46	LOCK RING
500-47	O-RING
501-G-42A	1/2-13 INNER FLANGE
501-13	BEARING PAIR
501-42A	1/2" ID OUTER FLANGE
700-37C	ROLL PIN
832126	ROLL PIN
1100-056	9/16" WRENCH
1100-075	3/4" WRENCH
1100-100	1" WRENCH
501-4A-27	4" GUARD 27 (STANDARD GUARD)
501-4A-01	4" TYPE 01 GUARD(Closed Face)
490-3	PIN SPANNER
1100-056	9/16" WRENCH
1100-075	3/4" WRENCH
1100-100	1" WRENCH

PART NUMBER	DESCRIPTION
412888	3" Guard
ASSEMBLIES	
AA-550-H-3	SPADE HANDLE ASSY
AA-650-1-AL	LEVER HANDLE ASSY.
AA-650-1-ALS	SAFETY HANDLE ASSY
400-76J	9/16 UNTHREADED SPACER
400-77	3/8-24 THREADED 9/16 SPACER (FOR C/W)
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
ERICKSON COLLET PARTS	
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
REPAIR KITS	
510110	REPAIR KIT INCLUDES: ALL BEARINGS, ROTOR BLADES, SNAP RINGS and O-RINGS

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(Safety Continued)

mounted wheel, burr, etc.) must be inserted into the collet. Secure collet chuck tightly.
 6. Before mounting or removing a wheel or carbide burr 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.)
 7. Wear safety goggles and other protective clothing. Continuous exposure to vibration may cause injury to hands and arms.

8. Properly maintained air tools are less likely to fail or cause accidents. If tool vibrates unusually or produces an unusual noise, repair immediately.

LUBRICATION

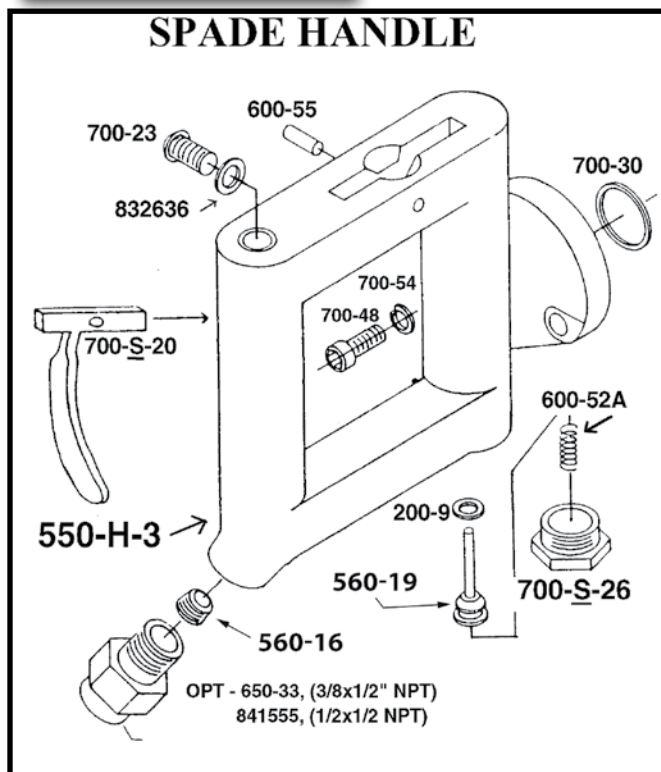
Check for wet or dirty air. Excessive moisture in the air supply tends to wash lubricant away from the working parts of the tool and rust or corrode the interior. Grit will damage the interior by scoring closely fitted parts, and impede the action of the tool. If the above are found in order, disconnect tool and pour a liberal amount of recom-

mended oil or an SAE #10 oil cut with an equal quantity of kerosene into the air inlet. Operate the tool to allow lubricant to flush accumulated gum and grit out the exhaust. If outside factors are not to blame, disassemble the tool, clean and inspect all parts and replace those worn or broken. Coat parts with airtool oil and reassemble. Pour about 1/2 oz. in air inlet and run tool to allow oil to be carried to interior.

Part Number	Description
200-9	O-Ring
500-46	Snap Ring
550-33-L	Live Handle Adaptor bushing
550-33-SW	Screen Filter
550-33-SP	Spacer
550-38	Lever
550-50	Lever Pin
560-13	Throttle Valve Assembly with 200-9 O-ring installed
600-51	Plunger Spring
650-1-AL	Live Handle Body (Non-Lockout type)
650-1-ALS	Safety Lock Valve Body (Bare)
AA-650-1-AL	Handle Assembly (Complete) (Non-lockout handle)
AA-650-1-ALS	Safety Lock Handle Assembly (Complete)
650-33	Screen Bushing (1/2x3/8)

Part Number	Description
650-54	Safety Lock Pin
650-55	Safety Lock Spring
650-56	Safety Lock Lever
650-57	Set Screw
700-30	O-Ring
700-48	Cap Screw
700-54	Lock Washer
700-S-26	Plug
700-S-26-GK	Gasket
841555	Screen Bushing (1/2X1/2)

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DISASSEMBLY

1. DISCONNECT AIR and remove all wheels and accessories.
2. Secure tool in vise vertically on the live handle(650-1-AL)-(do not damage lever).
3. Using flats on housing, unscrew motor housing(right and thread) from backhead (500-G-5-S).
4. Remove snap ring(500-46).
5. Rap sharply on the rear O.D. of the motor housing(500-1-HS) with a plastic hammer. The rear end plate (500-3), cylinder(500-2A) and blades(500-6A) will dislodge and can be removed.
6. Remove rotor(500-5A) and key(500-H-10).
7. (DO THIS EXACTLY) replace key (500-H-10) and slide Rotor partially onto shaft so that rotor is barely sticking out of the end of the case. Grasp the ROTOR (500-5A) in vise. (note: the rotor is still on shaft and on key).
8. Remove front flange nut (500-G-42A/501-G-42A)(right hand thread).
9. Remove from vise. Remove rotor, key and endplate (500-7).
10. Clamp flats of bearing cap (500-16B)in center of vise. Loosen and unscrew housing (500-1H) (LEFT HAND THREAD). REMOVE FROM VISE.
11. Press spindle (500-14-A) or (500-14A-6) on threaded end through double bearing and housing. The rear spindle bearing (300-G-29) can now be pressed off spindle.
12. Remove double bearing by tapping on the O.D. of bearing through the housing with a rod or driver.
13. With snap ring pliers, Remove ring(500-G-24). Slide exhaust deflector(500-G-47) off of housing. Remove o-rings(500-47 and 500-23).
14. (OPTIONAL STEP):To check throttle valve, unscrew plug(700-S-26) and lift out valve spring(600-51) and plunger(560-13). Replace O-ring(200-9) if cracked or worn.

REASSEMBLY

1. All parts should be clean and free of any abrasives.
2. Install o-rings (500-47 and 500-23) on housing(500-1-HS). Lightly oil inside of exhaust deflector (500-G-17) and slide over case. Install snap ring (500-G-24).
3. Press double bearing set (501-13)into housing. Screw on front cap (500-16B) (LEFT HAND THREAD) and clamp in center of vise. Firmly tighten down (500-16B) onto the housing with the flats provided.
4. Press spindle through bearings (501-13). Place rear bearing (300-G-29) on spindle and press until it bottoms on shoulder inside housing.
5. Slide front end plate(500-7) over spindle and into housing.
6. (DO THIS EXACTLY) replace key (500-H-10) and

PART NUMBER	DESCRIPTION
700-23	SCREW
832636	GASKET
200-9	O-RING
550-H-3	D HANDLE
560-19	THROTTLE VALVE (INCLUDES O-RING 200-9)
600-52A	SPRING
650-55	TRIGGER PIN
700-30	GASKET
700-48	SCREW
700-54	LOCK WASHER
700-S-20	LEVER TRIGGER
700-S-26	THROTTLE VALVE CAP
841555	1/2 INCH NPT X 1/2 INCH NPT SCREEN HANDLE BUSHING
AA-550-H-3	SPADE HANDLE ASSY.(COMPLETE)

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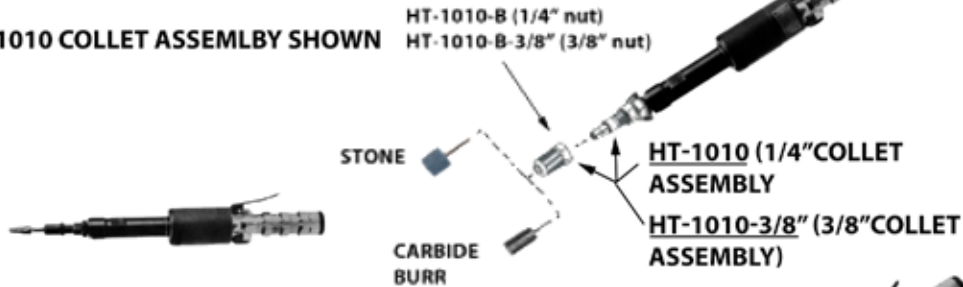


SAMPLE : MOUNTING OF CONE WHEELS ON HORIZONTAL GRINDERS

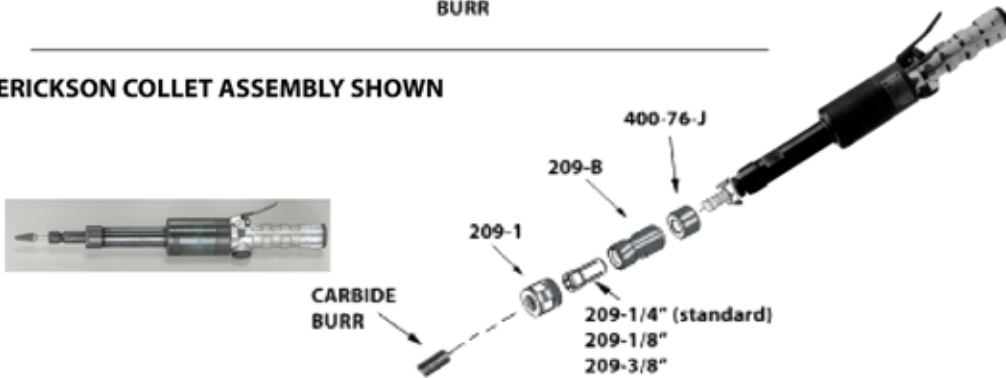


SAMPLE : MOUNTING OF CARBIDE BURRS ON HORIZONTAL GRINDERS

HT-1010 COLLET ASSEMBLY SHOWN



ERICKSON COLLET ASSEMBLY SHOWN



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




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(Reassembly continued)

- slide Rotor partially onto shaft so that rotor is barely sticking out of the end of the case. Grasp the ROTOR (500-5A) in vise. (note: the rotor is still on shaft and on key).
7. Replace flange nut (500-G-42A) or (501-G-42A). Do not over tighten. Remove from vise.
 8. Slide rotor(500-5A) over key and slide all the way down into case.
 9. Install cylinder (500-2A) with locating pin facing up.
 10. Drop in the 4 blades (500-6A) (CURVED SIDE OF BLADEFACING INWARDS).
 11. Install end plate (500-3) and align hole with cylinder pin.
 12. Secure flange in vise, Drive bearing (300-G-29) onto spindle using a suitable bearing driver.
 13. Install Snap Ring (500-46).
 14. Apply drops of oil in motor assembly and screw on backhead (500-G-5).
 15. Tighten on backhead (500-G-5-S) with a wrench using the provided flats on the housing.
 16. Place wrench on the housing flats(500-1-HS). Run tool and tighten firmly.
 17. Replace guard on tool.
 18. Check RPM with a reliable tachometer. Tool must run at or below speed stamped on tool
- This tool is designed to operate on 90 psig (6.2 bar) maximum air pressure with 1/4 (8 mm) hose.

FAULT	CAUSE	SOLUTION
Insufficient Power	Air pressure too low	Minimum air pressure <i>should</i> be 90 PSI for maximum performance
	Restriction in air hose	Remove bends or other restrictions
	Hose I.D. is too small	Use required hose I.D.
	Worn vanes and worn cylinder	Exchange vanes (500-6A) and cylinder (500-2A).
	Screen Support clogged	Clean screen support or exchange with new one
Machine does not start	No air, shut-off valve is closed.	Open shut-off valve
	Worn vanes due to lack of oil or vanes are jammed	Exchange vanes . (cylinder might also be worn out)
Grinder does not want to stop	Worn O-Ring	Replace o-ring in handle (200-9) for example.
Spindle wobbles or vibrates.	Bearings worn out  Danger!! or spindle is bent.	Disconnect tool from the air supply. <i>Immediate</i> servicing is required.

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