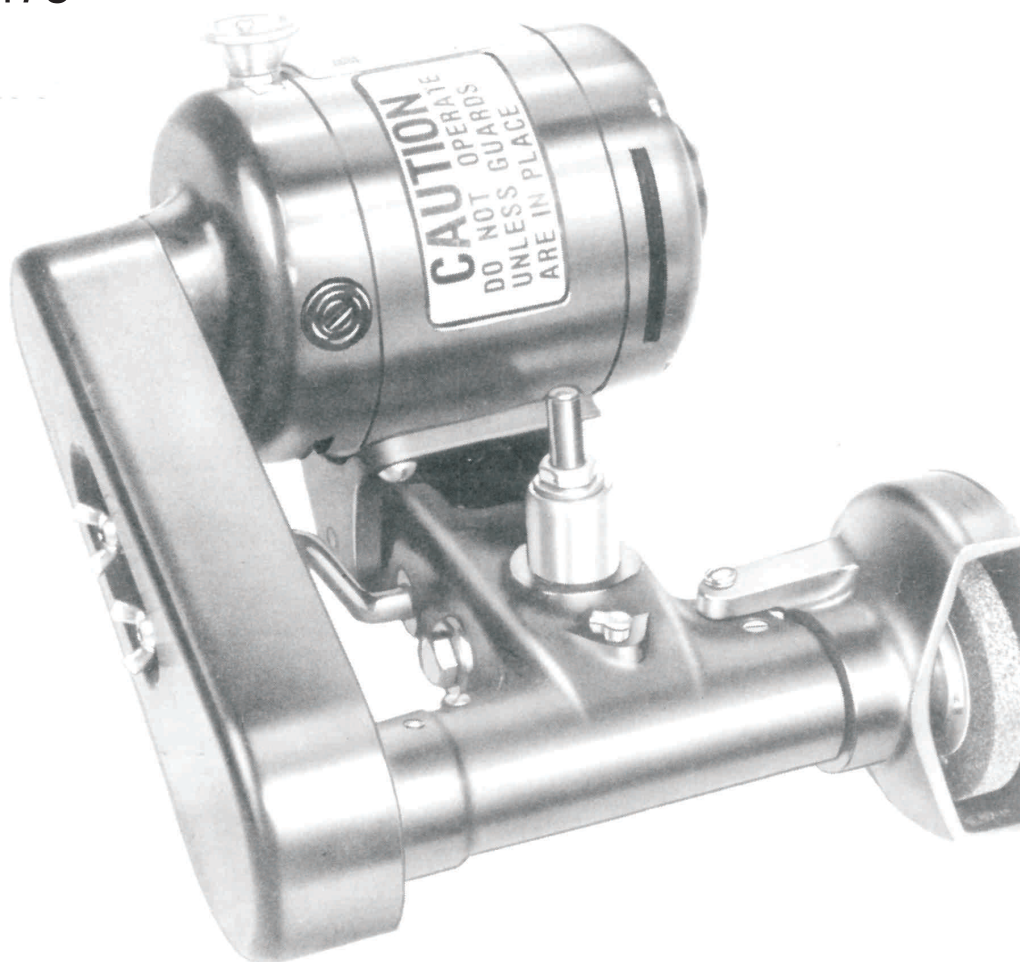


SERIES 44

PARTS LIST AND OPERATING INSTRUCTIONS

TOOL POST GRINDER

MODEL 8473



D DUMORE CORPORATION
Quality is our legacy

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INTRODUCTION

For internal and external grinding capability, versatile grinder is suitable for 8-14” swing lathes. Features include high quality motor with long life prelubricated bearings, T-bolt mounting, built-in spindle and 2” adapter arbor for deep internal grinds with 1/4” bore grinding wheels.

POLICY STATEMENT

Dumore Corporation is committed to providing products that meet the ever expanding needs of our customers. It is our goal to be the continuing leader in product quality, safety, and reliability.

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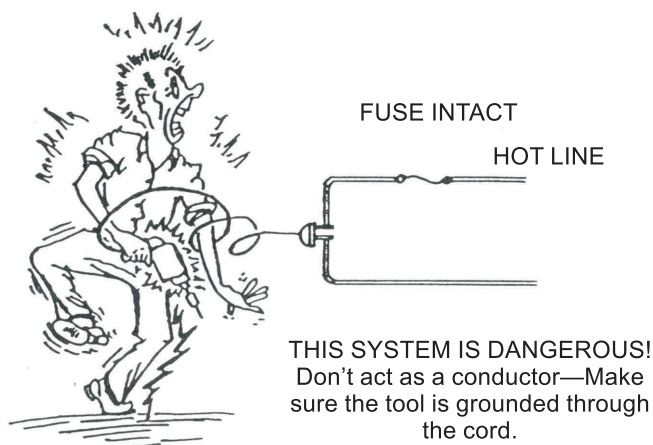
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▲ GROUNDING INSTRUCTIONS

THE NEED FOR GROUNDING

In the event of a malfunction or breakdown, grounding provides a path of least resistance for the electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.



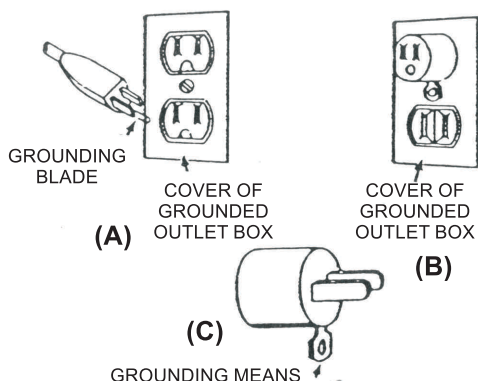
Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green, with or without yellow stripes, is the equipment - grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Repair or replace damaged or worn cord immediately.

Periodically check the ground circuit of the cord for continuity.

The use of ground-fault protected receptacles is recommended.



▲ SAFETY INSTRUCTIONS

▲ WARNING: THIS TOOL SHOULD ONLY BE USED WHERE POINT OF OPERATION GUARDING DEVICES HAVE BEEN PROPERLY INSTALLED SO THAT IT IS IMPOSSIBLE FOR THE OPERATOR'S HANDS OR FINGERS TO REMAIN WITHIN THE POINT OF OPERATION DURING THE ACTUAL MACHINE CYCLE.

▲ WARNING: Read all instructions. When using electric tools, basic safety precautions should always be used to reduce the risk of fire, electric shock, and personal injury, including the following:

- 1. ALWAYS USE SAFETY GLASSES**
(ANSI Z87.1 with side shields or an equivalent). Polycarbonate lenses have been found to provide better impact resistance than glass lenses
- 2. WEAR PROPER APPAREL**
No loose clothing, gloves, neckties, rings, bracelets, or other jewelry to get caught in moving parts. Non slip footwear is recommended. Wear protective hair covering to contain long hair.
- 3. DON'T USE IN DANGEROUS ENVIRONMENT**
Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted. Do not use tool in presence of flammable liquids or gases.
- 4. KEEP WORK AREA CLEAN**
Cluttered areas and benches invite accidents.
- 5. DON'T OVER-REACH**
Keep proper footing and balance at all times.
- 6. REDUCE THE RISK OF UNINTENTIONAL STARTING**
Make sure switch is in off position before plugging.
- 7. CHECK DAMAGED PARTS**
Check for alignment of moving parts, breakage of parts, mounting, and any other conditions that affect its operation. A part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instructional manual. **DO NOT USE TOOL IF SWITCH DOES NOT TURN IT ON AND OFF. HAVE DEFECTIVE SWITCHES REPLACED BY AUTHORIZED SERVICE CENTER.**
- 8. DISCONNECT TOOLS**
When not in use, before servicing and when changing accessories, such as grinding wheels, etc.
- 9. REMOVE KEYS AND WRENCHES**
Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
- 10. MAINTAIN TOOLS WITH CARE**
Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories. Inspect tool cords daily and if damaged, have repaired by authorized service facility. Inspect extension cords before use and replace if damaged. Keep handles dry, clean, and free of oil and grease.

11. SECURE WORK

Use clamps, a vise or fixture to hold work. It's safer than using your hand and it frees both hands to operate tool.

12. USE RIGHT TOOL

Don't force tool or attachment to do a job it was not designed for.

13. DON'T FORCE TOOL

It will do the job better and safer at the rate for which it was designed.

14. NEVER LEAVE TOOL RUNNING UNATTENDED, TURN POWER OFF

Don't leave tool until it comes a complete stop.

15. KEEP CHILDREN AWAY

All visitors should be kept safe distance from work area. Do not let visitors contact tool or extension cord.

16. STORE IDLE TOOLS

When not in use, tools, should be in dry, high, or locked-up place out of reach of children.

17. STAY ALERT

Watch what you are doing. Use common sense. Do not operate tool when you are tired, under medication, or under the influence of drugs or alcohol.

18. KEEP COVERS IN PLACE AND IN WORKING ORDER

19. DON'T ABUSE CORD

Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil and sharp edges.

20. USE RECOMMENDED ACCESSORIES

Consult this manual or any Authorized Dumore Distributor for recommended accessories. The use of improper accessories may cause risk of injury to persons.

21. SET-UP

Do initial set-up and adjustment at an empty station. Keep hands and clothing out of path of tool.

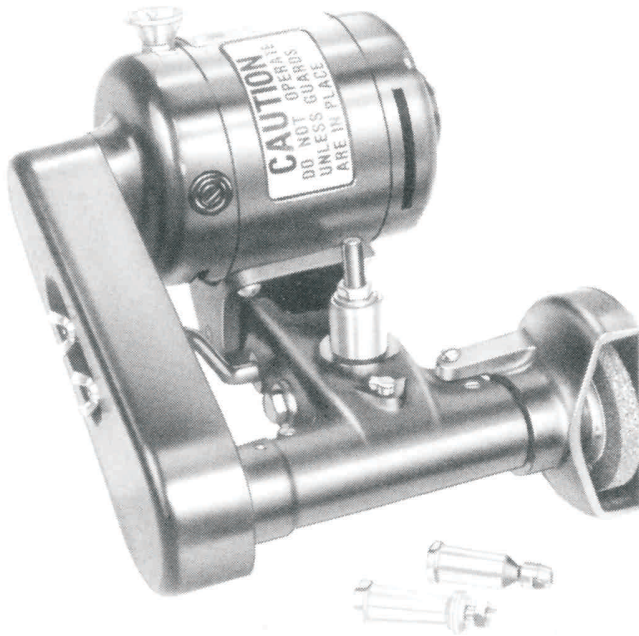
22. LOCKOUT/ TAGOUT

Whenever maintenance work is being done on electrical equipment, the Lockout/Tagout Procedure as required by OSHA standard 1910.147 should be followed.

23. SAVE THESE INSTRUCTIONS

▲ **THIS SYMBOL IS USED THROUGHOUT THE MANUAL TO HIGHLIGHT POTENTIAL DANGERS**

SERIES 57 TOOL POST GRINDER



SPECIFICATIONS

Motor: 1/4 HP (full load) Series Universal

Spindle Speed Range: 6,600 to 38,500 RPM

Grinding Wheel Capacity: 1/8" to 3" Diameter

Internal Grinding Capacity: 3/4" Diameter to 3" Deep
1/8" Diameter to 1" Deep

Mounting: T-Bolt

Dimensions:

Center line of spindle to base - 25/32"

Center line of spindle to center line of mounting post - 1-3/16"

Automatic Belt Adjustment

Approximate Weight: 35 lbs.

ELECTRICAL

Power Supply

The Series 44 Tool Post Grinder is equipped with a high speed universal type motor which operates on 115VAC current.

MOUNTING

The Series 44 Tool Post Grinder is designed for use on lathes with an 8" to 14" swing. All Tool Post Grinding is done with the grinding spindle center adjusted to the exact height of the work center. Therefore, the distance from the top of the compound to the center line of the lathe chuck "X" (see Figure 2) must always be equal to or greater than the distance from the base of the grinder frame to center line of the grinder spindle (commonly referred to as the minimum mounting distance). If this condition does not exist, the grinder will not fit the lathe because the grinding spindle cannot be set at the work center. If the grinder is being used on one lathe specifically, a good time-saving idea is to make a metal spacer to fit between the mounting post base and the base of the grinder frame so the tool automatically lines up with the work center.

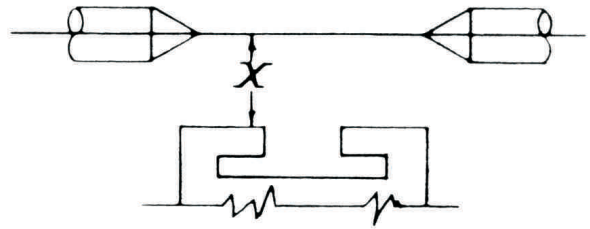


Figure 2

▲ RULES FOR SAFE GRINDING

- 1. Always wear Suitable Safety Glasses**
(ANSI Type Z87.1 with side shields or an equivalent) Also wear a face or dust mask if grinding operation is dusty.
- 2. Always "Ring-Test" Straight Wheels Before Use**
Sound wheels produce a definite ring when struck lightly with a non-metallic object - screwdriver handle, etc. Cracked wheels produce a dull or dead sound. Suspend the wheel from a hole using a small pin or finger and test spots about 45 degrees apart around the wheel. Never use wheels that do not ring satisfactorily. Damaged wheels should be replaced immediately. The wheel hole should be suitably oversize to assure safety clearance under normal operating heat and pressure.
- 3. Always Use Proper Wheel Balance**
Never exceed the speed on the blotter of a grinding wheel. Never mount a wheel on a grinder without checking pulley combinations to make sure the speed is safe for the wheel diameter and type. Blotters should be large enough to cushion flange pressure for the entire bearing surface of the flange.
- 4. Use Only Flanges Furnished With The Grinder**
Flanges must match on straight wheels. If flanges are not the same diameter, the wheel is under a bending stress that is likely to cause fracture. If they are not properly relieved, pressure is concentrated on the sides of the wheel at the hole, a condition which sets up tremendous stresses and which may cause the wheel to break.
 - Both flanges, between which a wheel is mounted, should be the same diameter and properly relieved. The minimum size of flanges for straight wheels should be at least one-third of the diameter of the new wheel.

- b. Straight wheels must have an outer flange. Both flanges serve a useful purpose, and neither should be omitted. Flanges should be checked for distortion or abrasion.

▲ The outer flanges must not be reversed. The raised bearing surface (relieved side) must be against the wheel. Otherwise, unequal bearing surfaces produce the same effect as unmatched flanges.

- c. A flat washer, a steel punching, or any other type of filler material must not be used in place of a properly relieved flange as the bending stress imposed upon the wheel may cause it to fracture.

5. Always Use A Wheel Cover on External Grinding Jobs

The wheel cover will minimize the possibility of accidental contact with the wheel by the operator and will help confine grinding dust and grit. It will also aid in protecting, but does not provide total protection, for the operator should the wheel explode.

▲ Damaged wheel guards should be replaced immediately.

6. Do Not Overtighten Wheel Nut.

▲ Overtightening Of The Wheel Nut May Spring The Flange.

A sprung flange can cause stress concentrations which may break the wheel. Undertightening of the spindle end nut can permit wheel slippage which may result in breakage.

- a. Torque wrenches are not applicable to tightening single end nuts because normal thread wear causes a continual change in the relationship between torque applied to the nut and flange pressure on the wheel.

- b. The direction of the thread shall be in such relation to the direction of rotation that the nut will tend to tighten as the spindle revolves. The following rule will assist in determining the proper relationship: "To remove the nut it must be turned in the direction that the spindle revolves when the wheel is in operation". All threads of the wheel nut should engage when tight.

7. Stand At One Side

When starting and during the first minute of run time. Run at full operating speed with wheel cover in place for at least one minute before applying work.

8. ▲ ALWAYS REMOVE PULLEYS, WHEEL AND ADJUSTING WRENCHES FROM THE GRINDER WHEN NOT IN USE.

This compels every operator to make the speed selection for the wheel diameter he/she is using.

10. Always Store Wheels Safely

Store them where they are protected from jarring, falling, or blows from other objects. Do not store wheel in the grinding case. Protect wheels from humidity and freezing temperatures.

▲ WE RECOMMEND THAT DUMORE WHEELS BE USED WITH DUMORE GRINDERS.

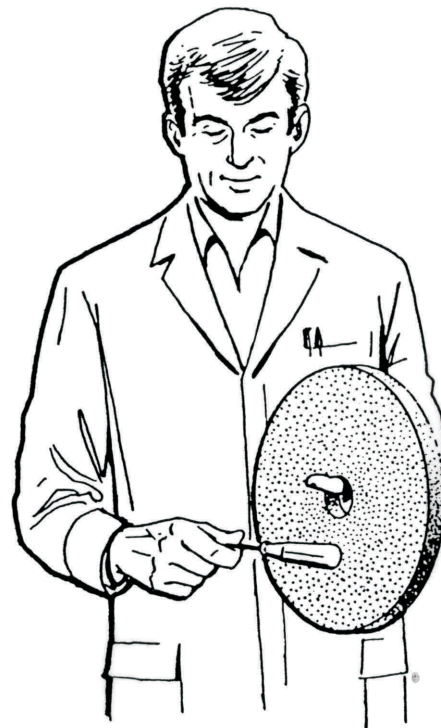
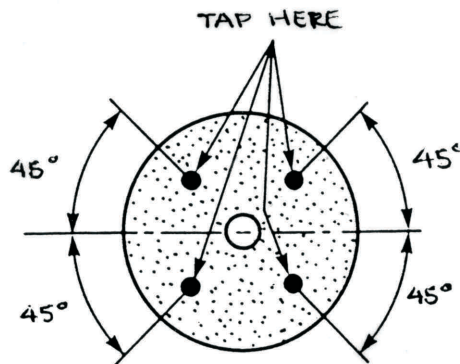




Figure 3



Figure 4

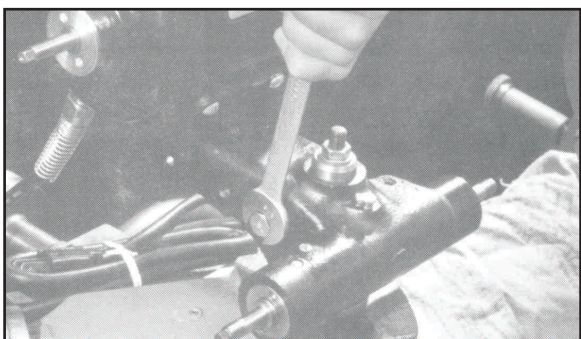


Figure 5



Figure 6

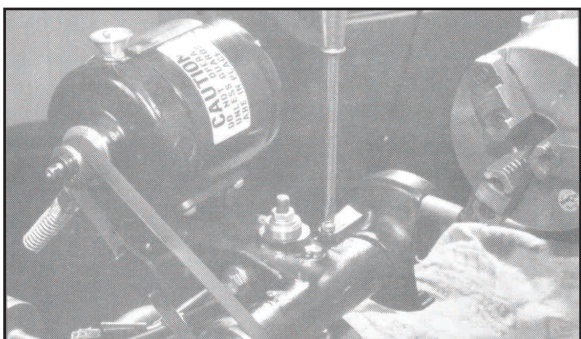


Figure 7

SETTING UP A LATHE

Before setting the grinder up on lathe, mount the workpiece either in a chuck, collet or between centers. The Dumore Series 44 is designed to fit in the T-slot of a lathe compound.

SET UP INSTRUCTIONS

1. Remove the mounting post from the grinder by loosening the lock nut on the right side of the frame and pulling the post free. Insert the T-bolt of the mounting post into the T-slot of the lathe compound and tighten nut at the top as illustrated in Figure 3.
2. After the mounting post is tightened, set the lathe compound at any angle listed on the chart below. The starred 60° angle setting seems to be ideal as the feed is set at .001", and the actual cut into the work is .0005" while the reduction in the diameter of the workpiece is .0010". The graduations on a lathe compound dial are in thousands. The chart will be helpful in determining how much stock is being removed, the actual cut, and approximately what reduction is being made in the diameter of the work.
3. Slip the grinder onto the mounting post and position the tool so that the spindle is parallel to the workpiece. Set the center line of the spindle at the approximate center line of the workpiece and tighten the lock nut, see Figure 4.
4. Select the proper pulleys for the size of the grinding wheel which is to be used and install the pulleys on the motor and grinding spindle as shown in Figure 5. The proper pulley combination is shown on the grinder nameplate which is fixed on the motor. Check the motor nameplate each time for proper pulley recommendations for each wheel size.

▲ WARNING: DO NOT EXCEED WHEEL SPEED RECOMMENDATIONS.

▲ CAUTION: Do not plug grinder into the power source until the grinder is completely set up and ready to grind.

The wheel cover is assembled to the grinder by slipping it over the grinding spindle and tightening the screw as illustrated in Figure 6.

▲ WARNING: DO NOT EXCEED MAXIMUM RECOMMENDED WHEEL SPEEDS AS MARKED ON EACH GRINDING WHEEL. RING TEST EACH WHEEL FOR CRACKS PRIOR TO ASSEMBLY ON THE SPINDLE. OBSERVE CAREFUL HANDLING AND STORAGE OF GRINDING WHEELS. RUN AT FULL OPERATING SPEED WITH WHEEL COVER IN PLACE FOR AT LEAST ONE MINUTE BEFORE APPLYING WORK. DURING THIS TIME, AND PARTICULARLY WHEN STARTING, THE OPERATOR SHOULD STAND AT ONE SIDE.

Angle Setting of Lathe Compound	Feed On Compound in Inches	Actual Cut Taken Into The Work	Reduction in Work Diameter
30°	.001	.00087	.00173
45°	.001	.00070	.00141
*60°	*.001	*.00050	*.00100
70°	.001	.00034	.00068
75°	.001	.00026	.00052
80°	.001	.00017	.00034
84°	.001	.00011	.00021

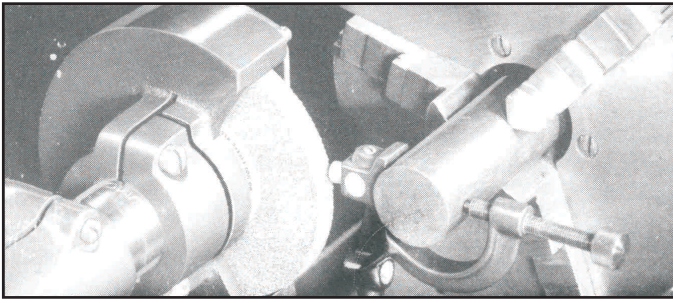


Figure 8

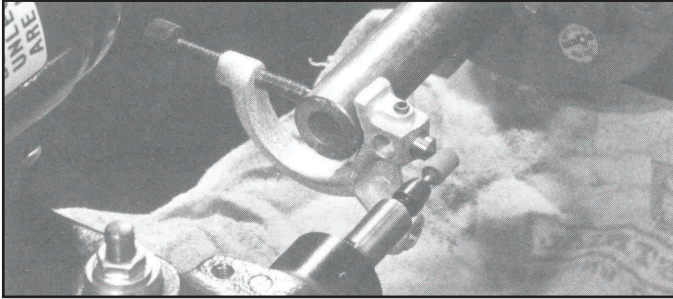


Figure 9

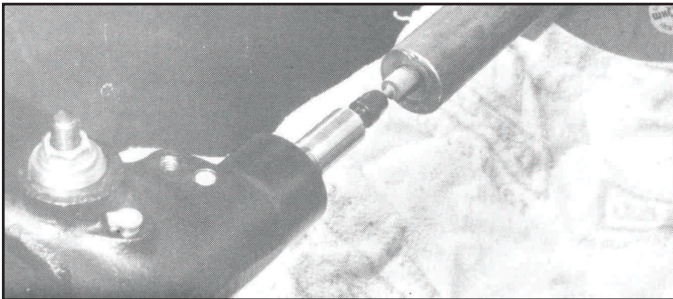


Figure 10

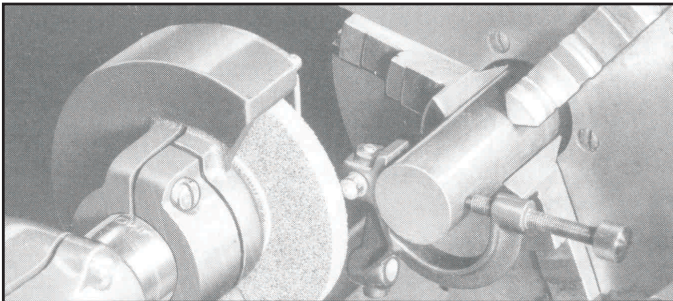


Figure 11

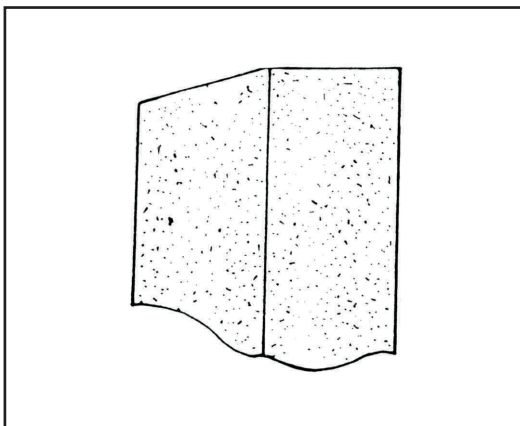


Figure 12

▲ **NOTE:** Before mounting the wheel, make certain that it is sound and free of fractures; and also that it is equipped with wheel blotters. This is done by ring testing the wheel to make certain that it has not been damaged from improper handling or improper storage. This is done by tapping the wheel gently with a light non-metallic implement such as the handle of a screwdriver or a rawhide mallet. (See Rules for Safe Grinding, No. 2). If the wheel sounds cracked or dead, it should not be used, it should be thrown away. Tap the wheel about 45° each side of the vertical centerline, and about 1" or 2" from the periphery. Rotate the wheel 45° and repeat the test. A sound and undamaged wheel will give a clear metallic tone or ring. If cracked, there will be a dead sound - not a clear ring. The wheel can be suspended from the hole by a small pin or finger. This test should be made prior to mounting a new or used wheel, or if damage is suspected.

5. Mount the wheel between wheel collars on the grinding spindle. With one wheel collar on each side of the wheel, tighten the wheel nut. Do not tighten this spindle nut, since this may cause excessive stresses on the grinding wheel. A moderate tightness will suffice.

▲ **WARNING: FOR YOUR PROTECTION, ALWAYS USE THE WHEEL COVER ON EXTERNAL GRINDING OPERATIONS.**

6. Internal grinding utilizes the collet chuck which screws onto the threaded wheel end of the spindle after the wheel and collars have been removed. Mounted wheels with 1/8" shanks can be used by inserting shank into chuck and tightening sleeve securely. Wheel size should be from 2/3 to 3/4 the size of the hole being ground, see figure 10. Refer to the mounted wheel chart on page 11 for proper size and overhang recommendations.
7. The Series 44 Grinder has automatic belt adjustment by means of a tension spring. Since the motor pivots on a tension shaft, the belt can be installed by pushing the motor forward and slipping the belt over the pulleys. By releasing the motor, the belt automatically becomes taut. Attach belt guard hanger to frame and add belt guard as shown in Figure 7.
10. At this point the grinder has not been plugged into the power source. Make certain the switch is in the "OFF" position. Spin the wheel mounted on the grinding spindle by hand to make certain everything is free and that no obstructions exist.

▲ **Check to make sure the supply voltage is 115 Volts. A 115 Volt grinder plugged into a 230 Volt socket would substantially over-speed the motor and grinding spindle and could result in an excessive speed which would cause the wheel to break. After verifying the voltage, plug the cord (which is equipped with a three-prong plug), into a suitable grounded outlet.**

▲ **CAUTION: DO NOT EXCEED MANDREL DIAMETER, WHEEL SIZE, OR OVERHANG AS SHOWN ON THIS CHART.**

Diameter of Wheels	No Load Spindle Speed	Pulley On Spindle	Pulley On Wheel
1/8 - 1/2"	38,500	No. 1	No. 5
5/8 - 3/4"	27,700	No. 2	No. 5
7/8 - 1"	21,000	No. 2	No. 4
1-1/8 - 1-1/4"	15,900	No. 3	No. 4
1-3/8 - 2"	8,750	No. 4	No. 3
2-1/2 - 3"	6,600	No. 4	No. 2

9. Before diamond dressing the wheel, turn the unit on and stand clear (from in line with the grinding wheel) and allow the grinding wheel to run at full operating speed for at least one minute before either diamond dressing the wheel or before applying it to the work.

▲ **FOR INTERNAL GRINDING, ALWAYS POSITION THE WHEEL INSIDE THE WORKPIECE BEFORE TURNING THE GRINDER ON**

▲ **CAUTION: NEVER OPERATE THE GRINDER WITHOUT WEARING PROPER SAFETY GLASSES OR GOGGLES. (ANSI TYPE Z87-1 WITH SIDE SHIELDS OR AN EQUIVALENT).**

10. Dress the wheel to make the grinding face parallel with the workpiece. This is done by clamping the diamond dresser to the workpiece as illustrated in Figure 8. This is for external grinding. Dressing for internal grinding is described later. Turn the grinder switch on and make a very light pass over the diamond nib using the hand wheel to traverse. Make several passes back and forth over the nib without resetting depth dial. Since wheels are costly and have to be replaced as they wear down, always take a very light pass over the diamond nib. For precision grinding of all kinds, truing is necessary at intervals in order to insure accuracy of results.
11. After removing the dresser, set the work speed of the lathe for approximately **50 RPM** which is normal operating speed and ideal for most grinding conditions. Although this speed is suitable for many operations, the work RPM can be set to meet any requirements. Advance grinder slowly until the wheel barely touches surface to be ground.
12. Upon wheel contact with the workpiece, increase the feed on the lathe compound to .001" or any suitable feed selected and engage the traverse mechanism. When grinding to very close tolerance, redress the wheel as outlined above before making the final grind over the stock. Allow the wheel to spark on this final grind by taking several passes back and forth over the piece, using the hand wheel to traverse the carriage.
13. Occasionally, when grinding the full length of a piece mounted between lathe centers, the grinder must be positioned to allow pulley end to clear tail stock. To do this, loosen mounting post screw (36), and turn wheel end in toward workpiece sufficiently to clear tail stock with pulley. Lock grinder in position and dress wheel face parallel with workpiece.

FACE GRINDING

When face grinding, it is necessary to dress the wheel so that the surface contacting the workpiece is beveled, as shown in Figure 12. Clamp the diamond dresser onto the workpiece, or a piece of stock chucked in the lathe with the diamond nub facing the operator.

Set Up Instructions:

1. Remove the nib by loosening the locking set screw.
2. Insert the diamond into the right side slot so that it extends about 1/8" beyond the holder and faces the operator's right as illustrated in Figure 11.

3. Pass the wheel lightly back and forth over the nib until a suitable bevel for the particular grinding operation is obtained.

NOTE: The grinding operation will determine the amount of bevel required. A small beveled face will break down faster than a wider face and consequently will require redressing more often.

DRESSING A WHEEL - INTERNAL GRINDING

Set Up Instructions:

1. To dress a wheel for internal grinding, clamp the diamond dresser onto the workpiece or a piece of stock chucked in the lathe. The diamond will normally face away from the operator toward the back of the lathe as illustrated in Figure 9.
2. With the grinder make several light passes over the nib using the handwheel to traverse. The dressed face should contact the workpiece as shown in Figure 10.

NOTE: The side on which the wheel is dressed is always the contact face.

SELECTING THE PROPER WHEEL

Probably no other single factor is more important to achieving good grinding results than the selection of a proper wheel. An ideal wheel is one in which the bond wears away as fast as the wheel grains are dulled. If the grains dull or wear down faster than the bond, the wheel is too hard, and it will glaze. If the bond wears away before the grain, the wheel is too soft, and it will load.

These conditions can be overcome to a certain extent by the speed adjustment. If the wheel appears too hard, increase the work speed. If it appears too soft, increase the wheel speed. However, the better solution to the problem is the selection of the proper wheel for the job.

▲ **IMPORTANT: NEVER INCREASE THE WHEEL SPEED OVER THE MAXIMUM SAFE SPEED OF THE WHEEL.**

The grain size and grit of the wheel generally determines the type of finish to be obtained. A coarse wheel is desirable for rapid stock removal. The grains deeply anchored in the bond allow greater depth of cut. Also, the greater porosity of a coarse wheel assures a cool cut. While an experienced operator can get a reasonably fine finish with a coarse wheel, a fine finish is easier with a finer grained wheel. On finishing grinds allow the wheel to cut freely with a minimum feed. Heavy feed or pressure on finish grinds may cause over heating and possibly work distortion.

▲ **IMPORTANT: ALWAYS USE DUMORE BALANCED WHEELS**

The selection of a balanced wheel is essential to precision grinding. Balanced wheels facilitate grinding to precision tolerances and in many instances prevent unnecessary service costs.

All grinding wheels are breakable; therefore care should be exercised in handling and storage to prevent damage. Handle wheels carefully to prevent dropping or bumping. Inorganic bonded wheels, such as vitrified, silicate and magnesite are more brittle than organic bonds (resinoid, shellac and rubber) and are more readily broken by handling, shock or impact.

Wheels can be damaged by high humidity and/or freezing temperatures and should be stored in areas not subject to extremes of temperature and humidity. Storage should provide protection against damage.

GRINDING WHEELS

Dumore wheels are available in five types for grinding the various types of materials encountered in the majority of grinding applications. Wheels are aluminum oxide except those with the symbol * following the catalog number which are silicon carbide. Dimensions of Dumore wheels appear after the wheel code number in the following order: wheel diameter, wheel thickness, and hole diameter.

For example "774-0008, 60 (1) 3/4 x 1/4 x .125 is a general-purpose wheel with a diameter of 3/4", thickness of 1/4" and hole diameter of .125". Where wheel is recessed, diameter of recess is given first, followed by the depth of the recess.

EXPLANATION OF THE CODE IS AS FOLLOWS:

1. General-purpose wheel, for steels of hardness up to Rockwell C-45.
2. For cast iron, brass and other non-ferrous metals.
3. For stainless steels and steels of Rockwell C-45 to C-50 and all stainless steel based plasma spray coatings.
4. For steels of Rockwell C-60 and higher.
5. For hard and soft rubber rolls.
6. For Grinding Carbide

Part No.	Description	Grit	Color
UNDER ONE INCH DIAMETER			
774-0004	(2) 1/2 x 1/2 x .250	36	Gray
774-0010	(1) 3/4 X 1/2 x .250	46	Gray
774-0012	(1) 3/4 X 3/4 x .250	46	Gray
774-0190	(3) 3/4 x 3/4 x .250	60	Off White
ONE INCH DIAMETER			
774-0019	(1) 1 x 1/4 x .250	46	Gray
774-0020	(2) 1 x 1/4 x .250	46	Blue
774-0191	(3) 1 x 1/4 x .250	60	Off White
774-0195	(4) 1 x 1/4 x .250	90	White
BETWEEN ONE AND TWO INCH DIAMETER			
774-0023	(1&3) 1-1/4 x 1/4 x .250	46	White
774-0024	(1) 1-1/4 x 1/4 x .250	46	Gray
774-0029	(1) 1-1/2 x 1/4 x .250	46	Gray
774-0196	(4) 1-1/2 X 1/4 X .250	80	White
774-0180	(1&3) 1-1/2 x 3/8 x .375	46	White

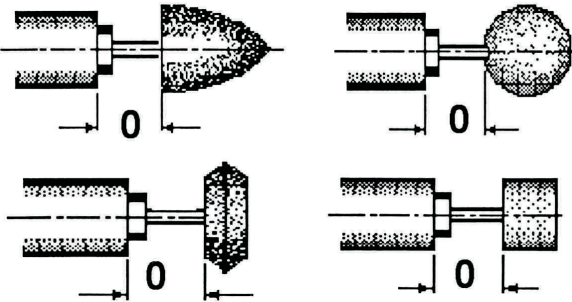
Part No.	Description	Grit	Color
TWO INCH DIAMETER			
774-0040	(1) 2 x 1/4 x .250	54	Gray
774-0041	(1) 2 x 1/4 x .250	80	Red
774-0042	(2) 2 x 1/4 x .250	46	Blue
774-0043	(3) 2 x 1/4 x .250	60	White
774-0198	(4) 2 x 1/4 x .250	80	Off White
774-0045	(1&3) 2 x 3/8 x .250	54	Gray
*774-0046	(1) 2 x 3/8 x .375	61	Black
774-0047	(1) 2 x 3/8 x .375	46	Blue
774-0048	(2) 2 x 3/8 x .375	46	Blue
774-0049	(3) 2 x 3/8 x .375	46	White
774-0050	(1) 2 x 1/2 x .375	54	Gray
774-0051	(2) 2 x 1/2 x .375	46	Blue
774-0052	(3) 2 x 1/2 x .375	46	White
TWO AND ONE-HALF INCH			
774-0061	(1) 2-1/2 x 1/4 x .250	46	Gray
774-0064	(2) 2-1/2 x 3/8 x .375	46	Off White
774-0192	(3) 2-1/2 x 3/8 x .375	60	Off White
774-0199	(4) 2-1/2 x 3/8 x .375	80	Off White
THREE INCH DIAMETER			
774-0073	(1) 3 x 3/8 x .375	46	Blue
774-0074	(2) 3 x 3/8 x .375	46	Blue

* Due to the bonding agent, these wheels cannot be ring tested and must be vibration tested only.

VIBRATION TEST

The vibration test is based on the way that loose sand or similar material is distributed on the side of a wheel when the wheel is vibrating. To perform the vibration test, an abrasive wheel is set on a test fixture in the horizontal position and coated with a thin layer of fine, dry sand. The wheel is vibrated gently. As the wheel vibrates, the sand granules respond to the vibration energy. If the wheel is cracked, the granules move away from the crack, if the wheel is sound the granules will continue to be uniformly distributed over the entire surface of the wheel.

▲ **IMPORTANT: THIS TEST SHOULD INCLUDE AN OBSERVATION ON BOTH SIDES OF THE WHEEL.**

MOUNTED WHEELS				
SERIES 44 TOOL POST GRINDER		WHEEL SIZE AND OVERHANG		
		MAXIMUM		
		Mandrel Diameter	Wheel Diameter	Overhang Dimension "O"
		1/8"	1/4"	1"
		1/8"	1/4"	3/4"
		1/8"	3/8"	1/2"
		1/8"	1/2"	1/2"
		1/8"	3/4"	1/2"
		1/8"	1"	1"
All Dimensions In Inches		▲ WARNING: DO NOT EXCEED MANDREL DIAMETER, WHEEL SIZE, OR OVERHANG AS SHOWN HERE.		

For additional information consult: The American National Standards Safety Code for THE USE, CARE AND PROTECTION OF ABRASIVE WHEELS - CODE B7.1 Purchase from AMERICAN NATIONAL STANDARDS INSTITUTE, INC., 1430 BROADWAY, NEW YORK, NEW YORK 10018

MAINTENANCE INSTRUCTIONS

The Dumore Grinder is a precision tool and should be properly cared for to assure finest grinding results and long, trouble-free service.

LUBRICATION

The motor requires no lubrication, since it is equipped with grease-sealed bearings that are lubricated for the life of the bearing. The spindle requires from 25 to 50 drops of Dumore Spindle Oil, Catalog No. 50-011 (Part No. R857-0001), every 10 hours of operation. The oil is added to the snap cap oiler located on the grinder frame in front of the tool post. Although all spindles are oiled before leaving the factory, add 25 to 50 drops of spindle oil before operating the grinder to lubricated bearings in the event most of the oil has seeped through while in storage. Also, oil as above if the grinder has been in use for some time

BRUSHES

Brush life varies according to the severity and continuity of service. Inspect brushes periodically and wipe clean before returning them to their respective brush holders. Each brush should be returned to its exact position as before removal to prevent changes in the brush seating. Brushes should be replaced when worn to 1/4 inch length.

COMMUTATOR

Occasionally inspect the commutator for excessive wear or grooving. If service is required, return grinder to an authorized Dumore Service Station or directly to Dumore Corporation, Mauston, Wisconsin. The grinder will be serviced with original parts and methods.

STORAGE

When not in use, keep tool in a clean, dry place. When storing for a long time, coat exposed metal parts with a rust-preventative grease.

REPAIR SERVICE

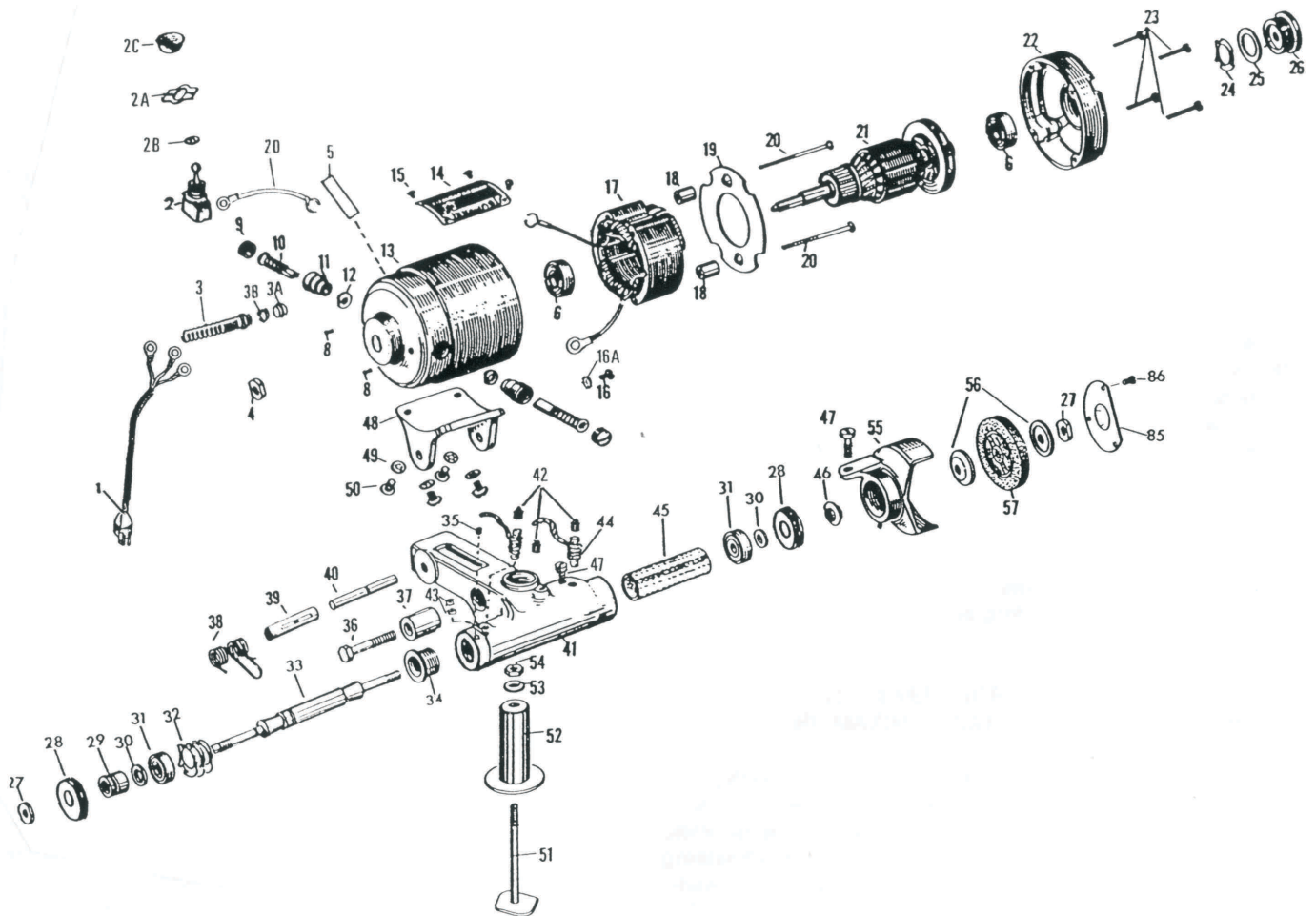
The grinder is made with the highest quality material and workmanship, and if not abused should give long and trouble-free service. If for any reason, this grinder does not operate satisfactorily after the before mentioned precautions have been taken, return it immediately to the nearest Dumore Service Station or direct to the Dumore Corporation, 1030 Veterans St., Mauston, WI 53948, to secure prompt and efficient service with original factory parts and methods. CONTACT DUMORE CORPORATION FOR YOUR NEAREST AUTHORIZED DUMORE SERVICE STATION.

WARRANTY

This warranty is extended only to Dumore's commercial and industrial customers. To protect the quality of this tool, every step in its manufacture has been carefully controlled. It is constructed of only the finest materials by skilled craftsmen who take pride in their work. The latest precision production techniques and thorough repeated inspections ensure that Dumore's rigid specifications are met.

The Dumore Corporation warrants the tools manufactured and/or repaired by it to be free from defects in material and workmanship for a period of 1 year after purchase. Any tool or part proved to Dumore's satisfaction to be defective during that period will be repaired or replaced, at Dumore's option, if returned prepaid to the Dumore Corporation, 1030 Veterans Street, Mauston, Wisconsin 53948-9314. Dumore's sole obligation and your exclusive remedy under this warranty shall be limited to such repair or replacement. IN NO EVENT SHALL DUMORE BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES. This warranty does not apply to parts not manufactured by Dumore or failing due to ordinary wear, or to tools subjected to abuse, accidental damage, improper operations, maintenance or repair, or to other damage by circumstances beyond Dumore's control.

Series 44 Tool Post Grinder Model 8473



INSTRUCTIONS FOR ORDERING PARTS

All parts listed herein may be ordered from your Dumore Distributor or from any authorized Dumore Service Station. Only Dumore replacement parts are authorized in Dumore products. Filing this list for future reference will assure your obtaining proper parts for service. When ordering parts, always give the following information:

- The part number in this list
- The part name in this list
- The catalog and serial number

ITEM NO.	PART NUMBER	DESCRIPTION	REQ.
	*430-0318-210	Complete Motor Assembly, 115 V (Includes Items 1 thru 26)	
1	571-0222-001	Cord Assembly, 115 V	1
2	R571-0097	Switch (Includes Knurl and Hex Nut)	1
2A	R658-0073	Plate, Switch	1
2B	R769-0015	Washer, Lock	2
2C	571-0129	Guard, Switch	1
2D	627-0299	Lead Assembly	1
3	572-0051	Cord Guard Assembly	1
3A	468-0013	Cord Lock Bushing	1
3B	469-0069	Strain Relief Ring	1
4	645-0035	Pulley Nut, 3/8 - 24 Thread, L.H.	1
5	853-0074	Decal, Caution	1
6	426-0307	Ball Bearing	2
8	R822-0713	Headless Set Screw, 10 - 24 x 3/8 Long	2
9	*R456-0060	Brush Plug	2
10	*R457-0622	Carbon Brush Assembly	2
11	451-0056	Brush Holder	2
12	R766-0356	Brush Holder Assembly	2
13	589-0561	Brush End Housing	1
14	643-1035	Name Plate	1
15	R808-0007	Name Plate Screw	4
16	R821-0309	Ground Screw, 6 - 32 x 3/16	1
16A	R769-0003	Lock Washer	1
17	548-0473-270	Field Assembly, 115 Volts	1
18	R729-0029	Field Spacer	2
19	R414-0035	Baffle	1
20	R812-3913	Field Screw, 10 - 24 x 3" Long	2
21	408-0643-210	Armature Assembly, 115 Volts	1
22	599-0098	Plain End Housing	1
23	828-1911	Housing Screw, 8 - 32 x 1-1/4" Long	4
24	R734-0019	Flat Spring	1
25	766-0344-077	Shim Washer	1
26	476-0014	Bearing Cap (Plain End)	1
27	645-0036	Nut, 3/8 - 24 Thread, R.H.	2
28	476-0078	Bearing Cap	2
29	729-0035	Spacer	1
30	766-0068	Thrust Washer	2

* Replace in pairs

PARTS LIST CONTINUED

ITEM NO.	PART NUMBER	DESCRIPTION	REQ.
31	426-0318	Ball Bearing	2
32	R734-0039	Flat Spring	3
33	732-0131	Spindle	1
34	697-0011	Adjusting Screw	1
35	456-0016	Lock Plug	1
36	R815-2527	Hex, Head Screw, 3/8 - 24 x 1-3/4" Long	1
37	468-0004	Lock Bushing	1
38	R735-0035	Coil Spring	1
39	646-0038	Tension Tube	1
40	702-0028	Tension Shaft	1
41	558-0045	Frame	1
42	649-0052	Oiler	3
43	456-0033	Plug	2
44	779-0004	Oil Wick Assembly	2
45	R646-0009	Felt Oil Tube	1
46	757-0008	Dust Thrower	1
47	810-1318	Wheel Guard Screw, 1/4 - 20 x 3/4 Long	1
48	694-0006	Motor Saddle	1
49	R769-0010	Shakeproof Lock Washer	4
50	R819-0918	Screw, 1/4 - 20 x 1/2" Long	4
51	442-0011	Tee Bolt	1
52	668-0008	Mounting Post	1
53	R766-0147	Washer	1
54	645-0363	Hex, Nut 3/8 - 24 Thread	1
	572-0046	Wheel Guard Assembly (Consists of 55, 85 & 86)	1
55	571-0094	Wheel Guard	1
56	502-0002	Wheel Collar	2
57	774-0073	Grinding Wheel 3 x 3/8 x .375 Hole	1
58	774-0047	Grinding Wheel 2 x 3/8 x .375 Hole	1
59	774-0024	Grinding Wheel 1-1/4 x 1/4 x .250 Hole	1
60	777-1160	Mounted Wheel 1/4 x 1/4 x 1/8 Mandrel (W160)	1
61	777-1183	Mounted Wheel 3/4 x 1/8 x 1/8 Mandrel (W183)	1
62	777-1200	Mounted Wheel 1/2 x 1/4 x 1/8 Mandrel (W200)	1
63	671-0001	Pulley No. 1	1
64	671-0002	Pulley No. 2	1
65	671-0003	Pulley No. 3	1
66	671-0004	Pulley No. 4	1
67	671-0005	Pulley No. 5	1
68	487-0014	Chuck Assembly 1/8" Capacity	1
68A	487-0009	Chuck Assembly 1/4 " Capacity	1
69	421-0012	Wheel Arbor w/collars and lock nut	1
70	R788-0068	Wrench	1
71	R788-0070	Wrench	1
72	R788-0001	Wrench	1
73	RS479-0060	Carrying Case	1
	534-0001	Diamond Wheel Dresser Assembly (Includes Items 74 thru 77)	1
74	558-0001	Body	1
75	R699-5001	Clamp Screw	1
76	R529-0001	Mounted Diamond 1/4 Carat	1
77	R822-0718	Screw 1/4 - 20 x 3/8 Long	2
78	R429-0008	Belt, 18 x 1/2	1
79	R857-0001	Oil, 1.5 Oz.	1

PARTS LIST CONTINUED

ITEM NO.	PART NUMBER	DESCRIPTION	REQ.
80	571-0100.....	Belt Guard.....	1
81	R645-0297.....	Nut, Wing	2
82	766-0717.....	Washer	2
83	578-0020.....	Hanger Assembly	1
85	658-0169.....	Face Plate.....	1
86	R810-0713.....	Screw, Fillister Head, 10 - 24 x 3/8"	3
	884-0241.....	Parts List and Operating Instructions	1

