

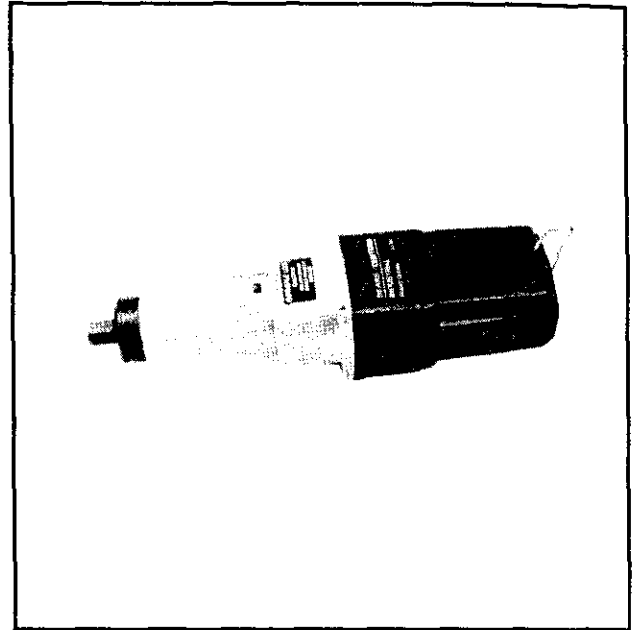
SEARS

OWNERS
MANUAL

MODEL NO.
315.27441

CAUTION:
Read Rules for
Safe Operation
and Instructions
Carefully

SAVE THIS
MANUAL FOR
FUTURE REFERENCE



CRAFTSMAN®
INDUSTRIAL DIE
GRINDER
DOUBLE INSULATED

Warranty
Introduction
Operation
Repair Parts

612547-871
10-00

Designed exclusively for and sold only by
SEARS, ROEBUCK AND CO., Hoffman Estates, IL 60179



PRINTED IN U.S.A.

FULL ONE YEAR WARRANTY ON CRAFTSMAN INDUSTRIAL DIE GRINDER

If this Craftsman Industrial Die Grinder fails due to a defect in material or workmanship within one year from the date of purchase, Sears will repair it, free of charge.

WARRANTY SERVICE IS AVAILABLE BY SIMPLY RETURNING THE TOOL TO THE NEAREST SEARS STORE IN THE UNITED STATES.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Sears, Roebuck and Co., DEPT. 817 WA, Hoffman Estates, IL 60179

INTRODUCTION

DOUBLE INSULATION is a concept in safety, in electric power tools, which eliminates the need for the usual three wire grounded power cord and grounded supply system. Wherever there is electric current in the tool there are two complete sets of insulation to protect the user. All exposed metal parts are isolated from the internal metal motor components with protecting insulation.

Your Grinder is a compact, powerful tool packed with a wealth of usefulness for professional tool and die makers and home "handymen." There is a wide variety of cutters, grinding wheels, mounted wheels and points, carbide cutters, burrs, etc., available at your Sears Catalog or Retail Stores. With these accessories you can carve, rout, sharpen, grind, mill, file, rasp, and deburr.

IMPORTANT — Servicing of a tool with double insulation requires extreme care and knowledge of the system and should be performed only by a qualified service technician. For service we suggest you return the tool to your nearest Sears Store for repair. Always use original factory replacement parts when servicing.

RULES FOR SAFE OPERATION

WARNING: DO NOT ATTEMPT TO OPERATE THIS TOOL UNTIL YOU HAVE READ THOROUGHLY AND UNDERSTAND COMPLETELY ALL INSTRUCTIONS, SAFETY RULES, ETC. CONTAINED IN THIS MANUAL. FAILURE TO COMPLY CAN RESULT IN ACCIDENTS INVOLVING FIRE, ELECTRIC SHOCK, OR SERIOUS PERSONAL INJURY. SAVE OWNERS MANUAL AND REVIEW FREQUENTLY FOR CONTINUING SAFE OPERATION, AND INSTRUCTING OTHERS WHO MAY USE THIS TOOL.

READ ALL INSTRUCTIONS

1. **KNOW YOUR POWER TOOL** - Read owner's manual carefully. Learn its applications and limitations as well as the specific potential hazards related to this tool.
2. **GUARD AGAINST ELECTRICAL SHOCK BY PREVENTING BODY CONTACT WITH GROUNDED SURFACES.** For example: Pipes, radiators, ranges, refrigerator enclosures.
3. **KEEP GUARDS IN PLACE** and in working order.
4. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
5. **AVOID DANGEROUS ENVIRONMENT.** Don't use power tool in damp or wet locations or expose to rain. Keep work area well lit.
6. **KEEP CHILDREN AND VISITORS AWAY.** All visitors should wear safety glasses and be kept a safe distance from work area. Do not let visitors contact tool or extension cord.
7. **STORE IDLE TOOLS.** When not in use tools should be stored in a dry, high or locked-up place - out of the reach of children.
8. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
9. **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy duty tool. Don't use tool for purpose not intended - for example - Don't use a circular saw for cutting tree limbs or logs.
10. **WEAR PROPER APPAREL.** No loose clothing or jewelry to get caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Also, wear protective hair covering to contain long hair and keep it from being drawn into air vents.

RULES FOR SAFE OPERATION (Continued)

11. **ALWAYS WEAR SAFETY GLASSES.** Everyday eyeglasses have only impact-resistant lenses; they are **NOT** safety glasses.
12. **PROTECT YOUR LUNGS.** Wear a face or dust mask if cutting operation is dusty.
13. **PROTECT YOUR HEARING.** Wear hearing protection during extended periods of operation.
14. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil and sharp edges.
15. **SECURE WORK.** Use clamps or a vise to hold work. Both hands are needed to operate the tool.
16. **DON'T OVERREACH.** Keep proper footing and balance at all times. Do not use on a ladder or unstable support.
17. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp at all times, and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
18. **DISCONNECT TOOLS.** When not in use, before servicing, or when changing attachments, blades, bits, cutters, sandpaper, etc., all tools should be disconnected from power supply.
19. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
20. **AVOID ACCIDENTAL STARTING.** Don't carry plugged-in tools with finger on switch. Be sure switch is off when plugging in.
21. **MAKE SURE YOUR EXTENSION CORD IS IN GOOD CONDITION.** When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. A wire gage size (A.W.G.) of at least 16 is recommended for an extension cord 100 feet or less in length. A cord exceeding 100 feet is not recommended. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.
22. **OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords suitable for use outdoors. Outdoor approved cords are marked with the suffix W-A, for example - SJTW-A or SJOW-A.
23. **DO NOT OPERATE WITH GRINDING WHEEL** without using guard.
24. **ALWAYS** select grinding wheels or wire brushes that have maximum operating speeds which are not exceeded by the nameplate speed of the grinder.
25. **KEEP HANDS AWAY FROM GRINDING AREA.**
26. **NEVER USE IN AN EXPLOSIVE ATMOSPHERE.** Normal sparking of the motor could ignite fumes.
27. **INSPECT TOOL CORDS PERIODICALLY** and if damaged, have repaired at your nearest Sears Repair Center. Stay constantly aware of cord location.
28. **INSPECT EXTENSION CORDS PERIODICALLY** and replace if damaged.
29. **KEEP HANDLES DRY, CLEAN, AND FREE FROM OIL AND GREASE.** Always use a clean cloth when cleaning. Never use brake fluids, gasoline, petroleum-based products or any strong solvents to clean your tool.
30. **STAY ALERT.** Watch what you are doing and use common sense. Do not operate tool when you are tired. Do not rush.
31. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless indicated elsewhere in this instruction manual.
32. **DO NOT USE TOOL IF SWITCH DOES NOT TURN IT ON AND OFF.** Have defective switches replaced by an authorized service center.
33. Inspect for and remove all nails or foreign objects from workpiece before sanding or grinding.
34. **DRUGS, ALCOHOL, MEDICATION.** Do not operate tool while under the influence of drugs, alcohol, or any medication.
35. **WHEN SERVICING USE ONLY IDENTICAL CRAFTSMAN REPLACEMENT PARTS.**
36. **POLARIZED PLUGS.** To reduce the risk of electric shock, this tool has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.
37. **SAVE THESE INSTRUCTIONS.** Review them frequently and use them to instruct others who may use this tool. If you loan someone this tool, loan them these instructions also.

⚠WARNING: SOME DUST CREATED BY POWER SANDING, SAWING, GRINDING, DRILLING, AND OTHER CONSTRUCTION ACTIVITIES CONTAINS CHEMICALS KNOWN TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM. SOME EXAMPLES OF THESE CHEMICALS ARE:

- LEAD FROM LEAD-BASED PAINTS,
- CRYSTALLINE SILICA FROM BRICKS AND CEMENT AND OTHER MASONRY PRODUCTS, AND
- ARSENIC AND CHROMIUM FROM CHEMICALLY-TREATED LUMBER.

YOUR RISK FROM THESE EXPOSURES VARIES, DEPENDING ON HOW OFTEN YOU DO THIS TYPE OF WORK. TO REDUCE YOUR EXPOSURE TO THESE CHEMICALS: WORK IN A WELL VENTILATED AREA, AND WORK WITH APPROVED SAFETY EQUIPMENT, SUCH AS THOSE DUST MASKS THAT ARE SPECIALLY DESIGNED TO FILTER OUT MICROSCOPIC PARTICLES.

OPERATION

CUSTOMER INSTRUCTIONS

1. **DO** read thoroughly INTRODUCTION and OPERATING INSTRUCTIONS before using your GRINDER.
2. **DO** disconnect power cord when cleaning or doing maintenance on tool.
3. **DO** be sure the voltage of the power supply agrees with the nameplate marking on the unit.
4. **DO** use correct size extension cord as recommended.
5. **DO** replace cord when frayed.
6. **DO** use only specified replacement parts.
7. **DO** disconnect from power source and store in a clean dry place.
8. **DO** use correct grinding wheel or burr for the job.
9. **DO** check wheel mandrel and grinder chuck for dirt or other foreign material before wheels are mounted in chuck.
10. **DO** true wheels with stone or dressing stick to eliminate vibration and maintain free cutting.
1. **DON'T** use your GRINDER before reading thoroughly INTRODUCTION and OPERATING INSTRUCTIONS.
2. **DON'T** leave Grinder unattended before disconnecting from power source.
3. **DON'T** force tool, allow Grinder to perform as it was designed.
4. **DON'T** allow children to operate Grinder.
5. **DON'T** carry unit by power cord.
6. **DON'T** use cracked or damaged grinding wheels.
7. **DON'T** use wheels not recommended for the R.P.M. of this grinder.
8. **DON'T** plug grinder cord into receptacle without turning switch to "OFF" position.
9. **DON'T** handle grinder carelessly, or drop on work bench.
10. **DON'T** use any means to tighten or loosen collet chuck except the wrench provided. Striking a chuck may cause serious damage.
11. **DON'T** plug or cover air vents to keep dust from flying. Vents must be kept open to keep motor cool.
12. **DON'T** use wheels or files rated less than 26,500 R.P.M.
13. **DON'T** use Grinder in an explosive atmosphere.

OPERATION (Continued)

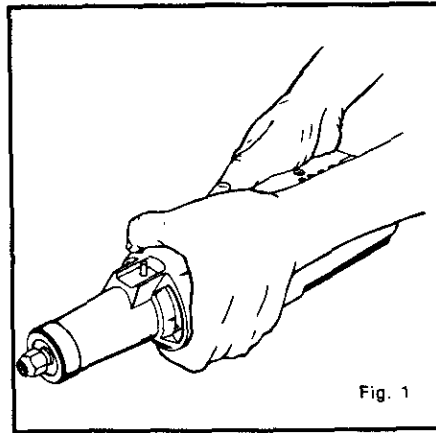


Fig. 1

⚠WARNING: KEEP HANDS AND FINGERS AWAY FROM GRINDING AREA. ANY PART OF BODY COMING IN CONTACT WITH MOVING PARTS COULD CAUSE INJURY.

For ease of operation and maintaining proper control, hold your Grinder with both hands as shown in Fig. 1.

⚠WARNING: DO NOT PLACE HANDS OVER AIR VENTS. PROPER COOLING OF MOTOR IS NECESSARY TO INSURE NORMAL LIFE OF TOOL.

Clamp or otherwise secure the work to prevent it from shifting.

⚠WARNING: NEVER POINT THE CUTTER TOWARDS YOU - IF IT SHOULD SLIP, PART OF YOUR BODY COULD COME IN CONTACT WITH MOVING PARTS CAUSING INJURY.

Always point the cutter so that if it should slip there is no danger to any part of your body. Never wear loose clothing or jewelry when operating your Grinder. They could get caught in moving parts causing injury. Always keep head away from grinding area. Hair could get caught in moving parts causing injury.

⚠WARNING: ALWAYS WEAR SAFETY GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS WHEN OPERATING GRINDER. FOREIGN OBJECTS COULD BE THROWN INTO EYES CAUSING INJURY.

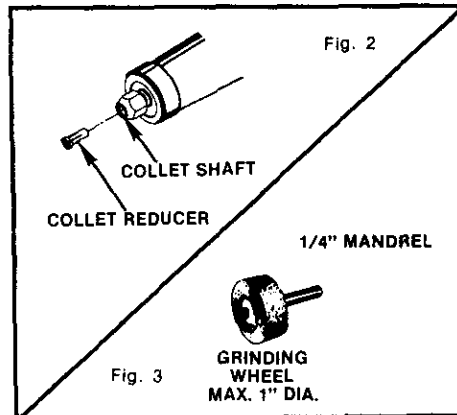


Fig. 2

Fig. 3

COLLET SHAFT

Your grinder is equipped with a collet shaft to receive 1/4" diameter mandrels. A collet reducer is supplied which, when used with this collet shaft, will receive 1/8" diameter mandrels. See Fig. 2.

GRINDING WHEELS

The maximum diameter grinding wheels recommended for use with 1/4" mandrel is 1". See Fig. 3.

Grinding wheels should be used when working with hard materials. Do not use grinding wheels when working with soft materials, such as nonferrous metals. Nonferrous metals such as aluminum, brass, copper, etc. will load up the wheel and will not allow wheel to cut as it was designed.

IMPORTANT: Never use wheels rated below 26,500 RPM. Wheels rated less than 26,500 could disintegrate while in use causing serious injury.

OPERATION (Cont.)

DO NOT EXCEED THESE GRINDING WHEEL SIZES

Plain Wheels		Shaped Wheels	
1/4" Mandrel		1/4" Mandrel	
Wheel Dia.	Wheel Thickness	Wheel Dia.	Wheel Thickness
1	3/4	1	1
3/4	1	3/4	1-1/8
5/8	1	11/16	1-1/4
1/2	1-1/2	1/2	3/4
3/8	1-1/4	1/4	1-1/16
With 1" Overhang			
1/8" Mandrel		1/8" Mandrel	
Wheel Dia.	Wheel Thickness	Wheel Dia.	Wheel Thickness
1	1/8	1/4	1/2
3/4	1/4	5/8	1/2
5/8	1/4	1/2	3/8
1/2	3/8	3/8	1/2
3/8	1/2		

For additional information consult "The safety requirements for the Use, Care and Protection of Abrasive Wheels" ANSI B7.1-1978. Write "The American National Standards Institute, Inc., 1430 Broadway, New York, New York, 10018."

SAFE AND EFFICIENT OPERATION

Always allow your Grinder to operate as it was designed. Never force tool. Excessive pressure on tool can be the cause of poor results and a source of danger.

WARNING: EXCESSIVE PRESSURE ON TOOL CAN BEND OR BREAK THE MANDREL POSSIBLY RESULTING IN SERIOUS INJURY. IF YOUR GRINDER RUNS SMOOTHLY WHEN NOT UNDER LOAD, BUT DOES NOT RUN SMOOTHLY UNDER LOAD, THEN EXCESSIVE PRESSURE IS BEING USED.

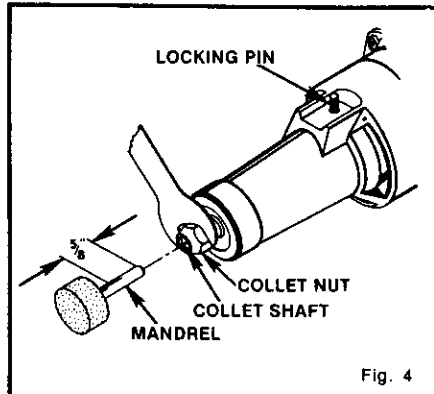


Fig. 4

WARNING: PRESSURE ON TOOL SHOULD BE REDUCED TO AVOID POSSIBLE BREAKAGE OF MANDREL OR GRINDING STONE RESULTING IN PERSONAL INJURY.

Pressure between wheel and work should never be so heavy to cause bending or springing of Mandrel. This is of particular importance when using wheels with small Mandrel diameters.

TO ATTACH WHEEL OR FILE TO GRINDER IMPORTANT — BE SURE POWER CORD IS DISCONNECTED FROM POWER SUPPLY.

1. See Fig. 4. Press collet shaft locking pin and turn shaft until pin engages into hole in shaft.
2. Insert mandrel into collet shaft a minimum of 5/8" to prevent wheel or file from disengaging from grinder while in use.

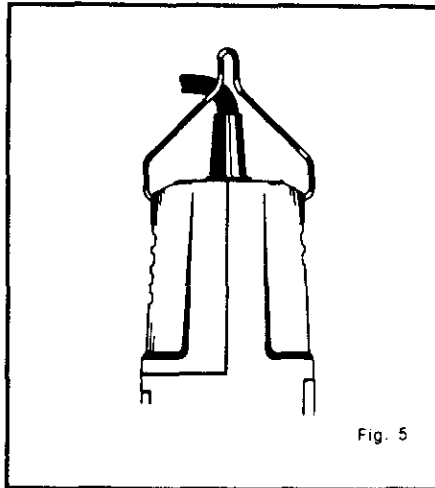
WARNING: WHEELS OR FILES DISENGAGING FROM GRINDER WHILE IN USE COULD CAUSE SERIOUS INJURY.

NOTE: Inserting mandrel a minimum of 5/8" into collet shaft provides a minimum overhang which will insure less vibration and better results.

3. Tighten collet nut securely with wrench provided.
4. Release locking pin.

NOTE: ALWAYS CHECK CUTTER FOR TIGHTNESS BEFORE EACH USE. LOOSE CUTTER CAN BE THROWN FROM TOOL WITH CONSIDERABLE FORCE CAUSING INJURY.

OPERATION (Cont.)



WIRE HANGER — (See Fig. 5). A wire hanger is provided for your convenience and ease of storage. To install, insert the ends of the hanger into the holes on each side of the grinder housing.

LUBRICATION

All the bearings in this tool are lubricated with a sufficient amount of high grade lubricant for the life of the unit under normal operating conditions, therefore, no further lubrication is required.

NOTE: When being used with Tool Post Holder, Item No. 25846, it is necessary to remove rubber boot, Key No. 3 on parts list, before attaching to Tool Post Holder. Should assembly of Die Grinder into Tool Post Holder be somewhat difficult, it might require prying open clamping slots in holder with screwdriver.

GENERAL

Only the parts shown on parts list, page eleven, are intended to be repaired or replaced by the customer. All other parts represent an important part of the double insulation system and should be serviced only by a qualified service technician.

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, carbon dust, etc.

⚠WARNING: DO NOT AT ANY TIME LET BRAKE FLUIDS, GASOLINE, PENETRATING OILS, ETC. COME IN CONTACT WITH PLASTIC PARTS. THEY CONTAIN CHEMICALS THAT CAN DAMAGE, WEAKEN, OR DESTROY PLASTICS.

When electric tools are used on fiberglass boats, sports cars, etc., it has been found that they are subject to accelerated wear and possible premature failure, as the fiberglass chips and grindings are highly abrasive to bearings, brushes, commutator, etc. Consequently it is not recommended that this tool be used for extended work on any fiberglass material. During any use on fiberglass it is extremely important that the tool is cleaned frequently by blowing with an air jet.

⚠WARNING: ALWAYS WEAR SAFETY GOGGLES OR SAFETY GLASSES WITH SIDE SHIELDS DURING POWER TOOL OPERATION OR WHEN BLOWING DUST. IF OPERATION IS DUSTY ALSO WEAR A DUST MASK.

EXTENSION CORDS

The use of any Extension Cord will cause some loss of power. To keep this loss to a minimum and to prevent overheating and motor burn-out, use the following table to determine the MINIMUM wire size (A.W.G.) Extension Cord.

Extension Cord Length	Wire Size A.W.G.
25-100 Feet	16

Extension Cords suitable for use with your grinder are available at your nearest Sears Retail Stores.

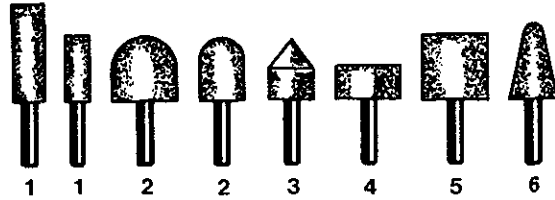
⚠WARNING: CHECK EXTENSION CORDS BEFORE EACH USE. IF DAMAGED, REPLACE IMMEDIATELY. NEVER USE TOOL WITH A DAMAGED CORD SINCE TOUCHING THE DAMAGED AREA COULD CAUSE ELECTRICAL SHOCK RESULTING IN SERIOUS INJURY.

WARNING:



The operation of any die grinder can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles or safety glasses with side shields and a full face shield when needed. We recommend Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields, available at Sears Retail Stores.

THE FOLLOWING RECOMMENDED ACCESSORIES ARE CURRENT AND WERE AVAILABLE AT THE TIME THIS MANUAL WAS PRINTED



MOUNTED GRINDING POINTS

Grinding point heads are made of aluminum oxide and are mounted on 1 Inch x 1/4 inch steel shafts. Suitable uses are finish cutting or die cutting.

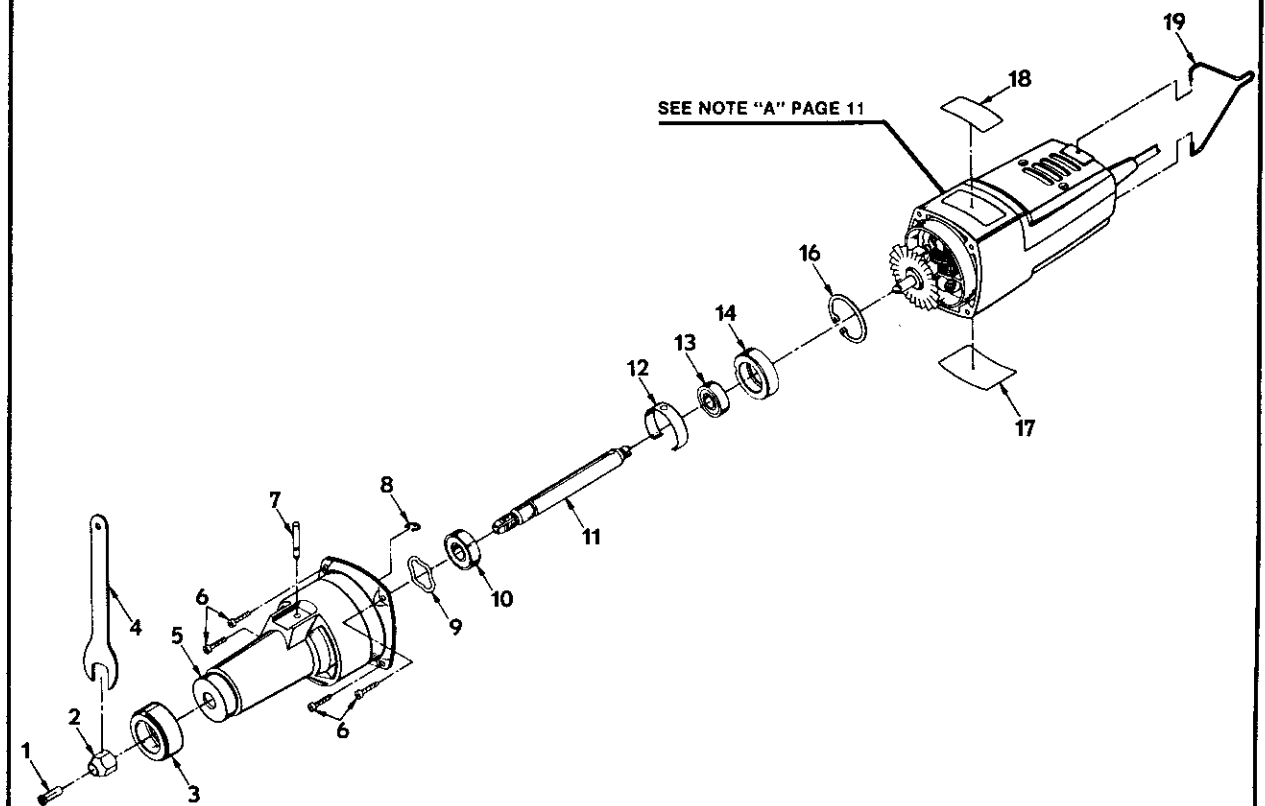
Key	Item No.	Diameter Inches	Length Inches
1	64723	3/8"	1"
1	64724	1/2"	1-1/2"
2	64725	3/4"	1"
2	64728	1"	1"
3	64721	11/16"	7/8"
4	64727	1"	1/2"
5	64729	1"	1"
6	64726	3/4"	1-1/8"

Set of 6 assorted Mounted Grinding Points. Includes 1/2 Inch up to 1 Inch diameter, 1/2 Inch up to 1-1/2 Inch long.

Item Number 64720

WARNING: The use of attachments or accessories not listed above might be hazardous.

CRAFTSMAN INDUSTRIAL DIE GRINDER — MODEL NUMBER 315.27441



SEE BACK PAGE FOR PARTS ORDERING INSTRUCTIONS

CRAFTSMAN INDUSTRIAL DIE GRINDER — MODEL NUMBER 315.27441

The Model Number will be found on a plate attached to the Motor Housing.
Always mention the Model Number in all correspondence regarding your
INDUSTRIAL DIE GRINDER or when ordering repair parts.

PARTS LIST

Key No.	Part Number	Description	Quantity
1	821248-001	1/8" Collet.....	1
2	989985-003	Collet Nut.....	1
3	611866-001	Rubber Boot.....	1
4	714281-000	Wrench.....	1
5	611833-003	Spindle Housing.....	1
6	616445-001	Screw (#8-18 x 5/8 Fil. Hd. T.C.).....	4
7	611917-003	Lock Pin.....	1
8	965889-001	Retaining Ring.....	1
9	620789-006	Loading Spring.....	1
10	990352-001	Ball Bearing (NTN #6001ZZC3/1E).....	1
11	989724-002	Output Shaft.....	1
12	611915-001	Loop Spring.....	1
13	990353-001	Ball Bearing (NTN #608ZZC3/1E).....	1
14	611864-002	Bearing Adapter.....	1
16	912171-801	Retaining Ring.....	1
17	971228-001	Data Plate.....	1
18	971227-001	Logo Plate.....	1
19	611948-001	Wire Hanger.....	1
	612547-871	Owner's Manual	

NOTE: "A" - The assembly shown represents an important part of the Double Insulated System. To avoid the possibility of alteration or damage to the System, service should be performed by your nearest Sears Repair Center. Contact your nearest Sears Retail Store.

***Standard Hardware Item — May Be Purchased Locally**

Get it fixed, at your home or ours!

For repair of major brand appliances in your own home...
no matter who made it, no matter who sold it!

1-800-4-MY-HOMESM Anytime, day or night
(1-800-469-4663)

www.sears.com

To bring in products such as vacuums, lawn equipment and electronics
for repair, call for the location of your nearest **Sears Parts & Repair Center.**

1-800-488-1222 Anytime, day or night

www.sears.com

For the replacement parts, accessories and owner's manuals
that you need to do-it-yourself, call **Sears PartsDirectSM**!

1-800-366-PART 6 a.m. – 11 p.m. CST,
(1-800-366-7278) 7 days a week

www.sears.com/partsdirect

To purchase or inquire about a Sears Service Agreement:

1-800-827-6655

7 a.m. – 5 p.m. CST, Mon. – Sat.

Para pedir servicio de reparación a domicilio,
y para ordenar piezas con entrega a domicilio:

1-888-SU-HOGARSM
(1-888-784-6427)

Au Canada pour service en français:

1-877-LE-FOYERSM
(1-877-533-6937)

