

Sears

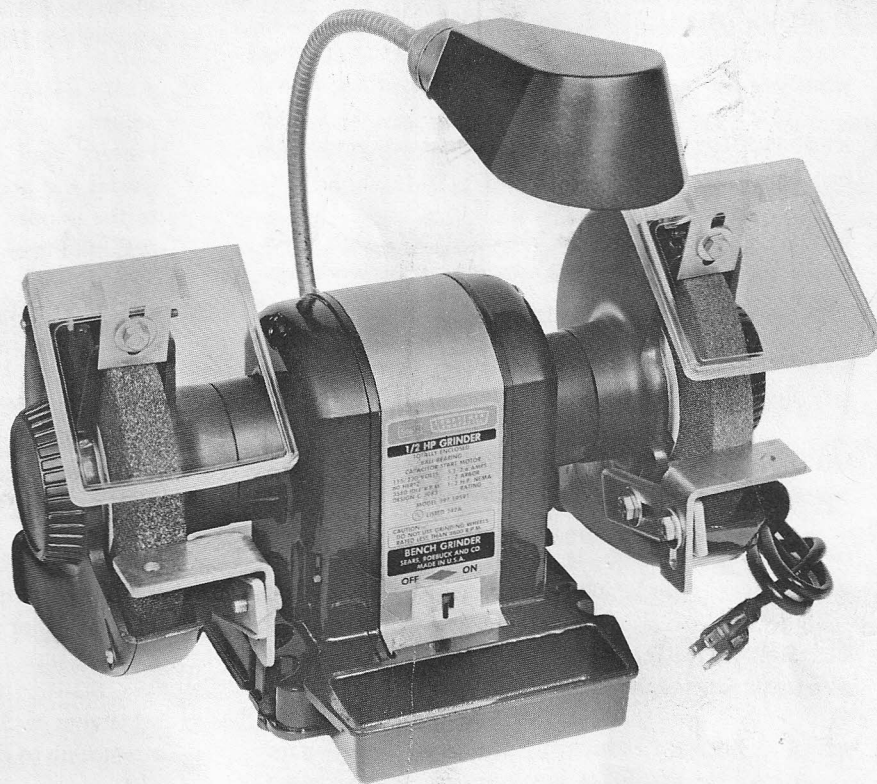
owners manual

MODEL NO.
397.19591

1/2 H.P.

- Assembly
- Installation
- Operation
- Repair Parts

CAUTION:
Read Rules for
Safe Operation
and Instructions
Carefully



CRAFTSMAN GRINDER



THIS SAFETY SEAL OF THE POWER TOOL INSTITUTE ASSURES YOU:

1. That the manufacturer's power tools, including the particular tool associated with the Seal, are produced in accordance with applicable Standards for Safety of Underwriters' Laboratories.
2. That compliance with applicable safety standards is assured by independent inspection and testing conducted by Underwriters' Laboratories (UL).
3. That every motorized tool is inspected under power.
4. That every tool has with it adequate instructions and a list of safety rules for the protection of the user.
5. That the tool manufacturer is a member of the Power Tool Institute and is a sponsor of the Institute's Consumer Safety Education Program.

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Sears, Roebuck and Co., Chicago, Ill. 60607 U.S.A.
and Simpsons Sears Limited, Toronto

RULES FOR SAFE OPERATION.

Read instructions carefully before using.

1. KEEP GUARDS IN PLACE and in working order.
2. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
3. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
4. AVOID DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations. Keep work area well lit.
5. KEEP CHILDREN AWAY. All visitors should be kept safe distance from work area.
6. MAKE WORKSHOP KID PROOF — with padlocks, master switches, or by removing starter keys.
7. DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was designed.
8. USE RIGHT TOOL. Don't force tool or attachment to do a job it was not designed for.
9. WEAR PROPER APPAREL. No loose clothing or jewelry to get caught in moving parts. Rubber-soled footwear is recommended for best footing.
10. USE SAFETY GLASSES. Also use face or dust mask if cutting operation is dusty.
11. SECURE WORK. Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
12. DON'T OVERREACH. Keep proper footing and balance at all times.
13. MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
14. DISCONNECT TOOLS before servicing; when changing accessories such as blades, bits, cutters, etc.
15. AVOID ACCIDENTAL STARTING. Make sure switch is in "Off" position before plugging in.
16. USE RECOMMENDED ACCESSORIES. Consult the owner's manual for recommended accessories. The use of improper accessories may cause hazards.
17. GROUND THE OUTLET BOX to prevent possible fatal shocks. SEE "OPERATION" PAGE 5.
18. BE SURE YOUR VOLTAGE SUPPLY AGREES with

the voltage specified on the nameplate. Use the proper fuse and extension cord to prevent fires and wiring damage.

19. EXAMINE GRINDING WHEELS FOR CRACKS or other damage before operating. Replace cracked wheel immediately. When wheels are replaced, do not overtighten retaining nut.
20. ALL GUARDS MUST BE IN PLACE and all adjustments securely tightened before starting grinder. Protect your eyes and body by wearing shatterproof glasses and attaching the eyeshields and spark arresters to the grinder. Do not stand in front of grinder during first minute of operation.
21. USE ONLY WHEEL FLANGES FURNISHED WITH GRINDER.
22. MOUNT THE GRINDER SECURELY to prevent damage. SEE "INSTALLATION" PAGE 3. Do not force work against the wheels, since thrown wheel chips may injure the operator or bystander.
23. DO NOT FORCE WORK against the grinding wheel! Excessive pressure may cause injury to the operator and damage or breakage to the grinding wheel.
24. BE SURE YOU READ ALL INSTRUCTIONS pertaining to 115 volt and 230 volt operation before attempting to change connections.

ASSEMBLY

The key numbers in the instructions refer to the adjacent assembly instructions.

INSPECT GRINDING WHEELS FOR DAMAGE BEFORE USING.

1. Attach wheel covers (4 & 24) to wheel guards (9 & 21) using eight screws (3) furnished. See figure 1.
2. Attach spark arresters (53) to top front of wheel guards (9 & 21) using flat washers (38) and bolts — 5/16-18 x 3/8 (54). Adjust spark arresters to 1/16 inch from wheel and tighten bolts. See figure 1.

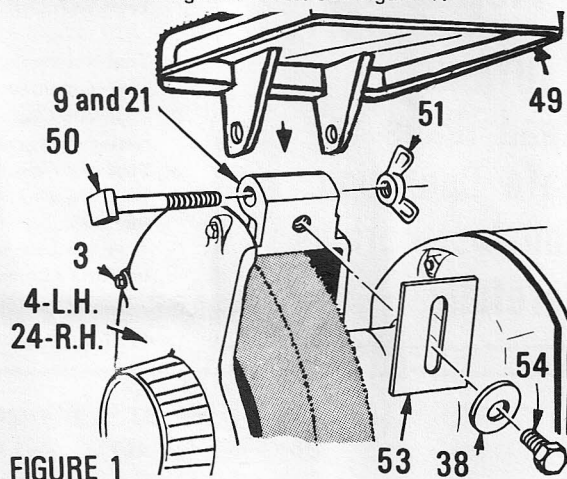


FIGURE 1

3. Fasten eyeshield (49) to top of wheel guards (9 & 21) using bolts — $\frac{1}{4}$ -20 x $2\frac{1}{4}$ (50) and wing nuts (51). See figure 1.
4. Attach tool rest arms (37) to inner side of wheel guards (9 & 21) using flat washers (38) and bolts — $\frac{5}{16}$ -18 x $\frac{3}{4}$ (39) as shown. Attach tool rests (35 & 36) to tool rest arms using bolts (39) and washers (38). Adjust as desired and tighten. See figure 2.
5. Insert 4 base bushings (33) in slots provided at each corner of base as shown in illustration. *Thick section of bushing extends below grinder base.* See figure 2.

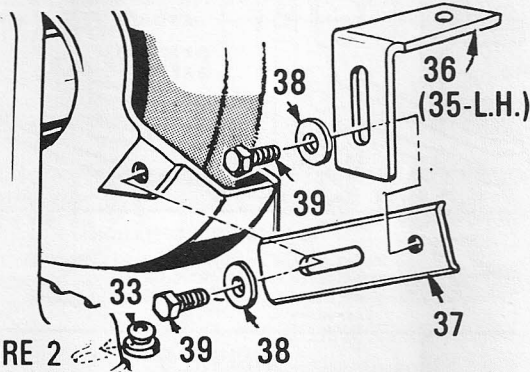


FIGURE 2

6. Assemble lamp shade cover (18) to metal lamp shade (17) with screw (19). Clamp this assembly to lamp holder. For 115 volt operation we recommend either 40 watt "regular" or 50 watt "rough service" bulb in your grinder lamp. For 230 volt operation use a 230 volt 50 watt "rough service" bulb. (G.E. 50A/RS or equivalent.) See figure 3.
7. Attach quench tray (40) to front of cover band (15) in knockout slot provided. Lip at side of tray hooks into slot. See figure 3.

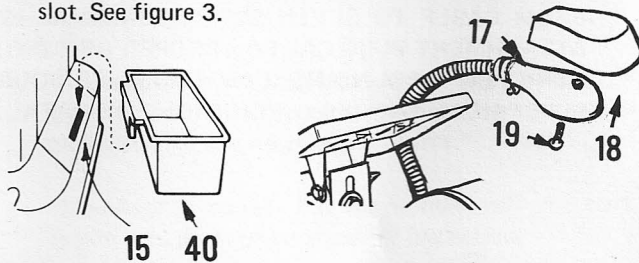


FIGURE 3

8. The illustration shows how the washer spacer (56) is assembled to your grinder when accessories are used. See figure 4.

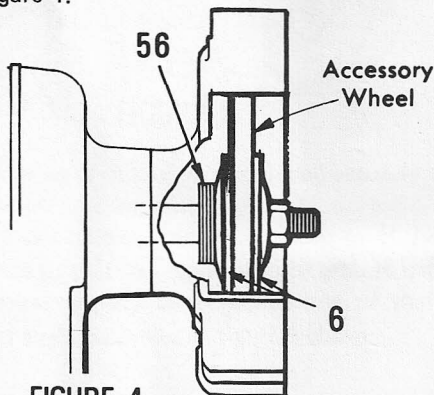


FIGURE 4

INSTALLATION

Grinder must be mounted on horizontal surface.

The Craftsman grinder pedestal available at Sears retail or catalog store is designed especially for your grinder. Use of the pedestal will permit greater accessibility to your unit for grinding, buffing and many other uses.

To mount your grinder to the pedestal, align slots in base with corresponding holes in table of the pedestal. Use two $\frac{5}{16}$ bolts 2 inches long with flat washers beneath the heads. Tighten nuts until space between grinder base and pedestal is $\frac{3}{16}$ inch. See figure 5.

Using a second nut on each bolt, jam-tighten against the first to prevent loosening by vibration.

A Craftsman workbench provides a good mounting for your grinder, when drawer space is desired as well as surface space.

To mount your grinder to the bench top use two $\frac{5}{16}$ wood screws 2 inches long with flat washers beneath the heads. Tighten screws until clearance between base and surface of bench is $\frac{3}{16}$ inch. See figure 5.

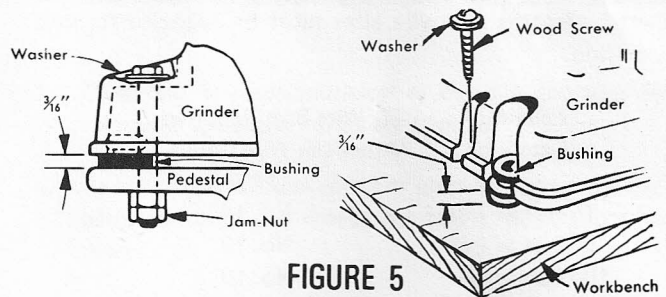


FIGURE 5

WARNING: BEFORE CHANGING WIRING CONNECTIONS, READ INSTRUCTIONS REGARDING 115 VOLT AND 230 VOLT OPERATION. WRONG CONNECTIONS CAN DAMAGE MOTOR WINDINGS.

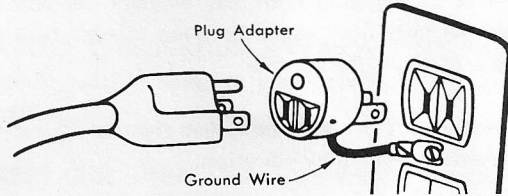
115 VOLT OPERATION

This grinder is equipped with a 3-conductor cable (for 115 volt operation only) having a fixed grounding conductor. Receptacle not having provision for the grounding pin will require a plug adapter as shown in the following illustration.

WARNING: PROTECT THE OPERATOR AGAINST ELECTRICAL SHOCKS BY ALWAYS CONNECTING THE GROUND WIRE FROM THE ADAPTER TO A PERMANENT GROUND BEFORE PLUGGING IN THE POWER CORD. OPERATION WITHOUT GROUNDING CAN CAUSE SERIOUS ELECTRICAL SHOCKS WHICH MIGHT BE FATAL.

This connection can be made to the receptacle cover screw, IF THE OUTLET BOX IS PROPERLY GROUNDED, or to another suitable ground such as a water pipe. Never connect the green wire to a line terminal.

If this grinder is not required to start under load and is not overloaded after starting, the standard 15 ampere lighting circuit fuses should be satisfactory. Otherwise, a "delayed-action" type fuse designed to meet the demands of motor protection and minimize possible nuisance of "blown" fuses from momentary overloading.



This grinder will start and operate on a 115 volt lighting circuit. Use a 15 ampere fuse.

Replace a damaged or worn cord immediately.

If necessary to use an extension, use only 3-wire cords which have 3-prong grounding type plugs and 3-pole receptacles which accept the tool's plug. The following chart of lengths and wire sizes must be followed for safe operation.

Length of Extension	Wire Size Required (American Wire Gauge No.)
15 feet or less	No. 14
50 feet or less	No. 12
100 feet or less	No. 10

230 VOLT (SINGLE PHASE) OPERATION:

Use a 230 volt, 50 watt "rough service" bulb (G.E. 50 A/RS equivalent.)

To reconnect grinder for 230 volt operation, the following steps must be taken:

1. Remove cover from bottom of grinder. Read all instructions before electrical connections are changed.
2. Study diagram (figure 6) and make changes as directed to revise internal connection for 230 volt operation.
3. Replace cover on bottom of grinder.
4. Connection can be made to a 15 amp, 230 volt branch circuit receptacle as follows:

Cut off the plug cap attached to the cable (it is for 115 volt connections only). Obtain a 2 pole 3 wire grounding type plug cap rated 15 amp, 250 volt (see figure 7 — note arrangement of blades) and connect black and white wires to blade terminals.

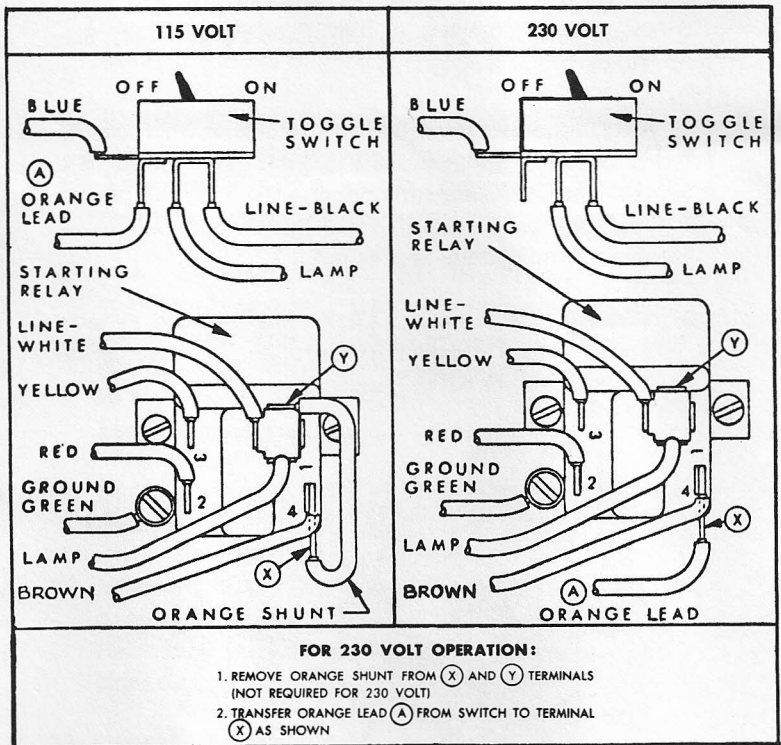


FIGURE 6

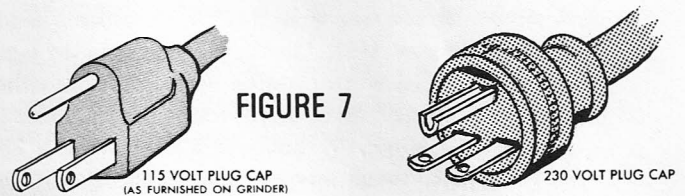


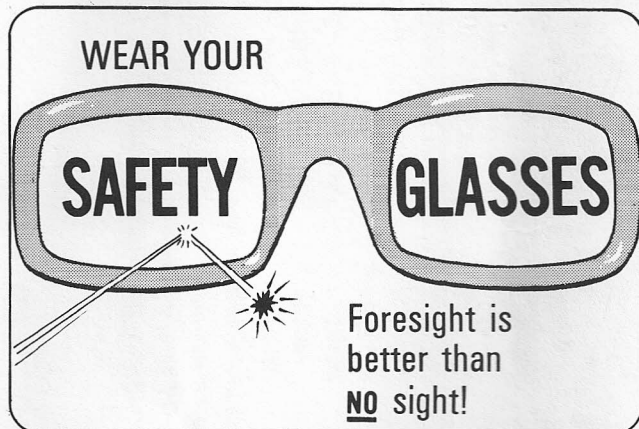
FIGURE 7

WARNING: BE SURE TO CONNECT GREEN WIRE FROM CABLE TO GREEN SCREW TERMINAL IN ATTACHMENT PLUG CAP FOR PROPER GROUND. IMPROPER GROUNDING CAN CAUSE SERIOUS ELECTRICAL SHOCKS WHICH MIGHT BE FATAL.

OPERATION

- Replace cracked wheel immediately.
- Always use guards and eye shields.
- Do not over-tighten wheel nut.
- Use only flanges furnished with this grinder.

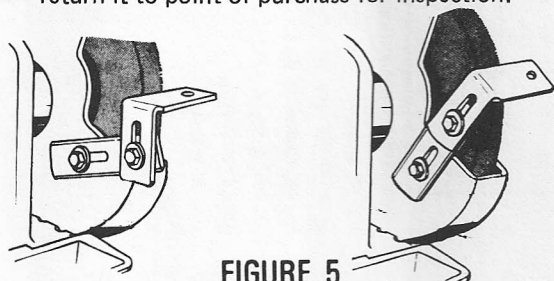
WARNING: BE SAFE! PROTECT YOUR EYES. WEAR APPROVED SAFETY GLASSES, AND ASSEMBLE EYE SHIELDS FURNISHED WITH YOUR GRINDER. STAND AWAY FROM FRONT OF GRINDER DURING FIRST MINUTE OF OPERATION.



THE OPERATION OF ANY POWER TOOL CAN RESULT IN FOREIGN OBJECTS BEING THROWN INTO THE EYES, WHICH CAN RESULT IN SEVERE EYE DAMAGE. ALWAYS WEAR SAFETY GLASSES OR EYE SHIELDS BEFORE COMMENCING POWER TOOL OPERATION. We recommend Wide Vision Safety Mask for use over spectacles or standard safety glasses . . . available at Sears retail or catalog stores.

1. To start, move the toggle switch to "ON" position. If grinder does not start immediately, disconnect power and check for voltage at power source.

If voltage is correct but the grinder will not start, return it to point of purchase for inspection.



2. The tool rests should be positioned securely so that a clearance of approximately 1/16 inch can be maintained between wheel and tool rests. Adjust the tool rest so that the material to be ground will contact the wheel slightly above center-line of shaft at the desired angle, as shown in figure 5 above.

WARNING: ADJUSTMENTS SHOULD BE MADE ONLY WHEN GRINDER HAS STOPPED TO PROTECT AGAINST INJURY.

3. **WARNING:**
DO NOT GRIND ON SIDE OF WHEELS!
DO NOT FORCE WORK AGAINST THE GRINDING WHEEL! EXCESSIVE PRESSURE MAY CAUSE INJURY TO THE OPERATOR AND DAMAGE OR BREAKAGE TO THE GRINDING WHEEL.

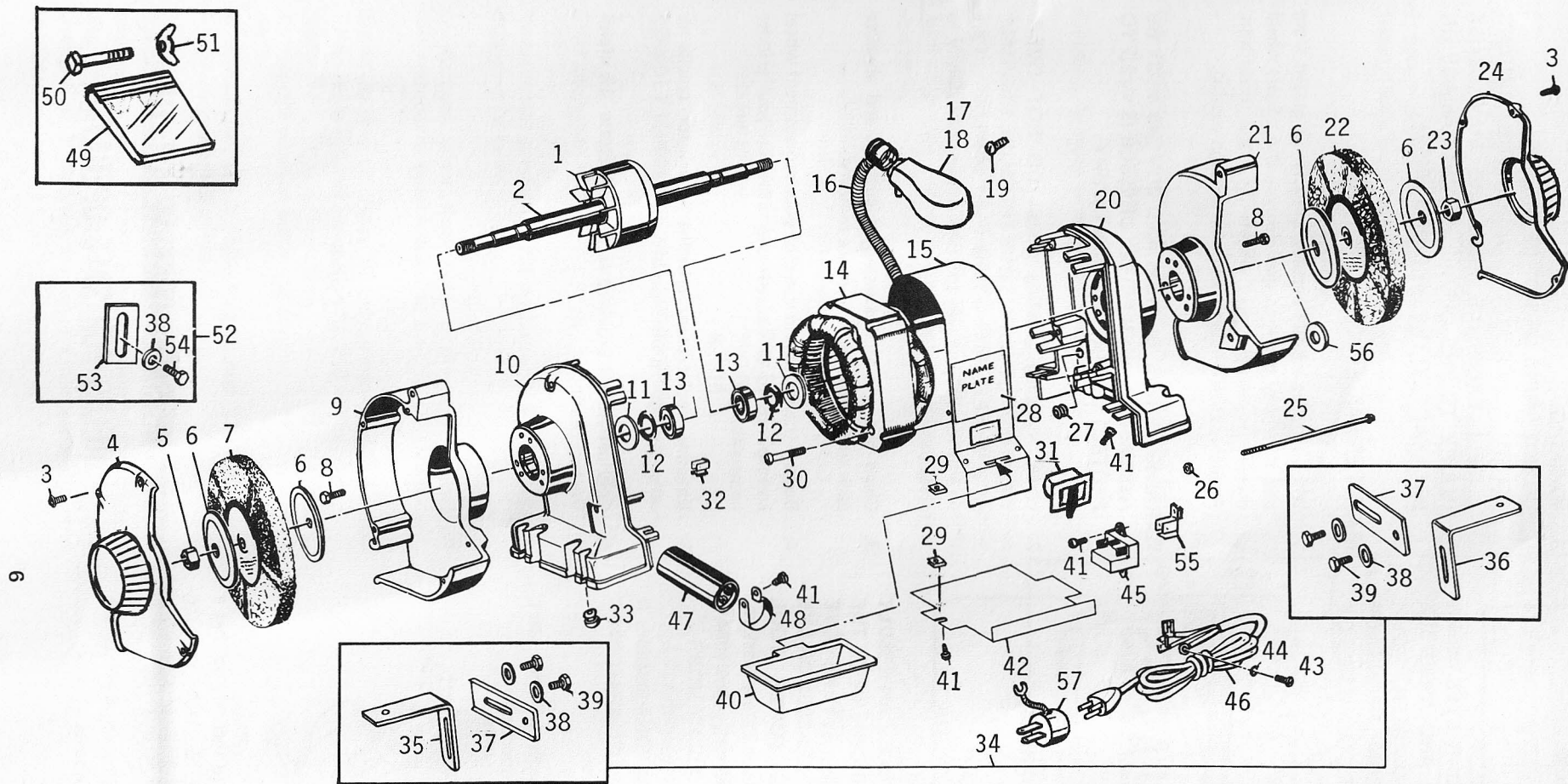
MAINTENANCE

1. When vitrified wheels become irregular or glazed from use, they may be trued and cleaned. Use a Sears wheel dresser to keep your wheels in good condition. Available at Sears retail stores or through catalog.

WARNING: WHEEL GUARDS AND COVERS MUST BE ASSEMBLED WHEN WHEEL DRESSER IS USED TO PROTECT OPERATOR FROM INJURY.

2. When replacing grinding wheels **DO NOT OVERTIGHTEN NUT.** EXCESSIVE PRESSURE CAN DAMAGE WHEEL. Be sure flanges and wheel blotters are free of foreign particles and tighten only sufficiently to drive the wheel.
3. Clean out any accumulation of cuttings and abrasive each time the wheel covers are removed.
4. Be sure the maximum speed of your replacement wheel corresponds to or exceeds the rating on your grinder nameplate.
5. Examine replacement grinding wheel for cracks or other damage before assembling to spindle.
6. Lubrication was provided at the factory for the life of the ball bearings.

**BE SAFE—OBSERVE ALL THE
RULES FOR SAFE OPERATION !**



GUARANTEE

During the first year, we will replace the Grinder free of charge, if defective in material or workmanship.

This guarantee service is available by simply returning the Grinder to any Sears store throughout the United States.

SEARS, ROEBUCK AND CO.

CRAFTSMAN 1/2 H.P. GRINDER – MODEL NUMBER 397.19591

Key	Part No.	PART NAME	Qty.	Key	Part No.	PART NAME	Qty.
1	4971441	Rotor Assembly	1	35	5319133	Tool Rest (L.H.)	1
2	4971436	Shaft (shrink-fit)	1	36	5319132	Tool Rest (R.H.)	1
3	9433513	*Screw, 8-32 x 11/16 Fill Hd Self Tap	8	37	5219135	Tool Rest Arm	2
4	4971517	Wheel Cover (L.H.)	1	38	120387	*Washer, 5/16 Flat	6
5	9428172	Nut, ½-20 Hex (L.H. Thread)	1	39	9419787	*Bolt, 5/16-18 x 3/4 Hex Head	4
6	4971419	Wheel Flange	4	40	4971780	Quench Tray	1
7	5545338	Grinding Wheel (Fine – 60 Grit)	1	41	9434158	Screw, 8-15 x ½ Hex Hd Self Tap	7
8	5353426	*Screw, ¼-20 x 7/8 Hex Head Self Tap	6	42	4957358	Cover & Wiring Decal	1
9	4971519	Wheel Guard – Inner (L.H.)	1	43	9417077	*Screw, 8-32 x 3/8 Fill Hd Self Tap	1
10	3161172	End Frame (L.H.)	1	44	453299	*Lockwasher, No. 8 (Grounding Screw)	1
11	3167424	Felt Washer	2	45	4948852	Starting Relay	1
12	5211995	Ball Bearing Spring	2	46	5545336	Cable Assembly	1
13	3161173	Ball Bearing (77503)	2	47	5539080	Capacitor	1
14	4978221	Stator and Coil Assembly	1	48	5373379	Clamp	1
15	4984976	Band	1	49	4971778	Eyeshield	2
16	4978189	Gooseneck & Socket Assembly	1	50	5520393	*Bolt, ¼-20 x 2¼ Sq Head	2
17	4971959	Lamp Shade – Metal	1	51	3161433	*Wing Nut, ¼-20 Thread	2
18	4971958	Cover – Lamp Shade	1	52	5538409	Spark Arrester Pack	1
19	9416689	Screw, 8-32 x ¼ Pan Head Self Tap	1	53	3175504	Spark Arrester	2
20	3161439	End Frame (R.H.) Cable End	1	54	121817	*Bolt, 5/16-18 x 3/8 Hex Head	2
21	4971516	Wheel Guard – Inner (R.H.)	1	55	4955529	Terminal Adapter – Relay	1
22	5545337	Grinding Wheel (Coarse – 36 Grit)	1	56	5375637	*Spacer, (Accessory) ½ I.D.	4
23	124934	*Nut, ½-20 Hex	1	57	5220504	*Ground Plug Adapter	1
24	4971514	Wheel Cover (R.H.)	1		4971808	Instructions and Parts List (not illustrated)	
25	3168677	Thru Bolt, 10-32 Thread	3				
26	3169218	*Nut, 10-32 Thread	3				
27	3169206	Bushing	1				
28	4978158	Name Plate	1				
29	3161432	Spring Clip	5				
30	3161743	Screw, 8-32 x 2-3/32 Fill Hd Self Tap	2				
**31	4984992	Toggle Switch	1				
32	5347581	Terminal Adapter – Switch	1				
33	5537401	Base Bushing	4				
34	5545339	Tool Rest Pack	1				

*Standard Hardware Items – May be purchased locally.

**Round switches used in early production units.

For replacement, order 4982213 switch.

Sears

owners manual

MODEL NO.
397.19591

SEARS SERVICE
IS AT YOUR SERVICE
WHEREVER YOU LIVE

PART NO. 4971808 C3083
Rev. 1-73

HOW TO ORDER REPAIR PARTS

The Model Number will be found on the name plate attached to the front of the Cover Band of your Grinder. Always mention the Model Number when requesting service or repair parts for your CRAFTSMAN GRINDER.

All parts listed herein may be ordered through SEARS, ROEBUCK AND CO. When ordering parts by mail, selling prices will be furnished on request or parts will be shipped at prevailing prices and you will be billed accordingly.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST.

1. The PART NUMBER
2. The PART DESCRIPTION
3. The MODEL NUMBER
397.19591
4. The NAME of ITEM—
GRINDER

Your Sears merchandise takes on added value when you discover that Sears has over 2,000 Service Units throughout the country. Each is staffed by Sears-trained, professional technicians using Sears approved parts and methods.

CRAFTSMAN GRINDER

Sears, Roebuck and Co., Chicago, Ill. 60607 U.S.A.
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