

20" DISC SANDER

Model DS20

Instruction Manual & Parts List

M-0460226



POWERMATIC[®]

(800) 274-6848

www.powermatic.com

This manual has been prepared for the owner and operators of a Powermatic Model DS20 Disc Sander. Its purpose, aside from machine operation, is to promote safety through the use of accepted correct operating and maintenance procedures. Completely read the safety and maintenance instructions before operating or servicing the machine. To obtain maximum life and efficiency from your sander, and to aid in using the machine safely, read this manual thoroughly and follow all instructions carefully.

Warranty & Service

WMH Tool Group warrants every product it sells. If one of our tools needs service or repair, one of our Authorized Repair Stations located throughout the United States can give you quick service.

In most cases, any one of these WMH Tool Group Repair Stations can authorize warranty repair, assist you in obtaining parts, or perform routine maintenance and major repair on your JET, Powermatic, Performax, or Wilton tools.

For the name of an Authorized Repair Station in your area, please call 1-800-274-6848.

More Information

WMH Tool Group is consistently adding new products to the line. For complete, up-to-date product information, check with your local WMH Tool Group distributor or visit wmhtoolgroup.com.

WMH Tool Group Warranty

WMH Tool Group makes every effort to assure that its products meet high quality and durability standards and warrants to the original retail consumer/purchaser of our products that each product be free from defects in materials and workmanship as follows: 1 YEAR LIMITED WARRANTY ON ALL PRODUCTS UNLESS SPECIFIED OTHERWISE. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, repair or alterations outside our facilities, or to a lack of maintenance.

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To take advantage of this warranty, the product or part must be returned for examination, postage prepaid, to an Authorized Repair Station designated by our office. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection discloses a defect, WMH Tool Group will either repair or replace the product, or refund the purchase price if we cannot readily and quickly provide a repair or replacement, if you are willing to accept a refund. WMH Tool Group will return repaired product or replacement at our expense, but if it is determined there is no defect, or that the defect resulted from causes not within the scope of our warranty, then the user must bear the cost of storing and returning the product. This warranty gives you specific legal rights, you may also have other rights which vary from state to state.

WMH Tool Group sells through distributors only. WMH Tool Group reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever.

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SAFETY: General Rules

As with all machines there is a certain amount of hazard involved with the operation and use of this sander. Use the machine with the respect and caution demanded where safety precautions are concerned. This will considerably lessen the possibility of personal injury. When normal safety precautions are overlooked or completely ignored, personal injury to the operator can result.

1. **KNOW YOUR TOOL.** Read the owner's manual carefully. Learn the machine's applications and limitations, as well as the specific potential hazards peculiar to it.

2. **KEEP GUARDS IN PLACE** and maintained in working order.

3. **GROUND ALL TOOLS.** If machine is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter plug must be attached to a known ground. Never remove the third prong.

4. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

5. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.

6. **AVOID DANGEROUS ENVIRONMENT.** Don't use machines in damp or wet locations, or expose them to rain. Keep work area well lighted.

7. **KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept a safe distance from work area.

8. **MAKE WORKSHOP CHILDPROOF** - with padlocks, master switches, or by removing starter keys.

9. **DON'T FORCE MACHINE.** It will do the job better and be safer at the rate for which it was designed.

10. **USE RIGHT TOOL.** Don't force tool or attachment to do a job it was not designed for.

11. **WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, or jewelry that can get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair

12. **USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty.

13. **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate machine.

14. **DON'T OVERREACH.** Keep your proper footing and balance at all times.

15. **MAINTAIN TOOLS IN TOP CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

16. **DISCONNECT MACHINE** before servicing and when changing accessories such as chisel and bit.

17. **USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause hazards.

18. **AVOID ACCIDENTAL STARTING.** Make sure switch is in "OFF" position before plugging in cord.

19. **NEVER STAND ON MACHINE.** Serious injury could occur if the machine is tipped.

20. **CHECK DAMAGED PARTS.** Before further use of the machine, a guard or other part that is damaged should be carefully checked to ensure 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.

21. **NEVER LEAVE MACHINE RUNNING UNATTENDED. TURN POWER OFF.** Don't leave sander until it comes to a complete stop.

22. **DRUGS, ALCOHOL, MEDICATION.** Do not operate machine while under the influence of drugs, alcohol, or any medication.

23. **ADDITIONAL HEALTH HAZARDS.** 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 paint.

* Crystalline silica from bricks and cement and other masonry products.

* 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 specifically designed to filter out microscopic particles.



SAFETY: Specific Rules

1. Support workpiece. Maintain control of workpiece at all times.
2. Do not wet grind or polish. Never use a steady stream of water on the workpiece. Only quench the workpiece in water to cool it.
3. Do not grind or polish Magnesium as it may catch on fire.
4. Make sure table locking knob is always tight.
5. Remove plug from power source outlet when adjusting table, changing belts, or removing or adjusting platen.
6. After turning switch "ON", always allow the disc to come up to full speed before sanding or grinding.
7. Keep your hands clear of the disc.
8. Replace sanding discs when they become loaded and glazed or frayed.
9. Do not allow familiarity gained from frequent use of your sander/grinder to become commonplace. Always remember - a careless fraction of a second is sufficient to inflict severe injury.

SPECIFICATIONS

Motor	2 HP, 1 Ph, 230V 3 HP, 3 Ph, 230/460V
RPM	1,720
Table tilt	45 degrees forward, 30 degrees backward
Table	mitre T-slot
Height	49"
Base	22-1/2" x 22-1/2"
Switch	Forward/Reverse (3 Ph only)
Disc diameter	20"
Net weight	397 lbs.
Gross weight	529 lbs.

RECEIVING THE SANDER

Remove the DS20 Sander from the shipping container. Check for damage and ensure all parts are intact. Any damage should be reported immediately to your distributor and shipping agent. Before assembling, read the manual thoroughly, familiarizing yourself with correct assembly and maintenance procedures and proper safety precautions.

INSTALLATION

Remove the protective coating from exposed metal surfaces with kerosene or a good quality solvent. Do not use acetone, lacquer thinner, or gasoline, as these may harm the paint finish.

Remove the bolts holding the sander to the skid, and install the machine in a level, well-lighted location. Secure it to the floor with good quality anchor bolts.

ADJUSTMENTS

The working table (A) can be tilted 30 degrees toward the sanding disc, and 45 degrees away from the sanding disc, see Figure 1. Simply loosen the knob (B), and turn the handwheel (C). After table is adjusted, retighten the knob (B).

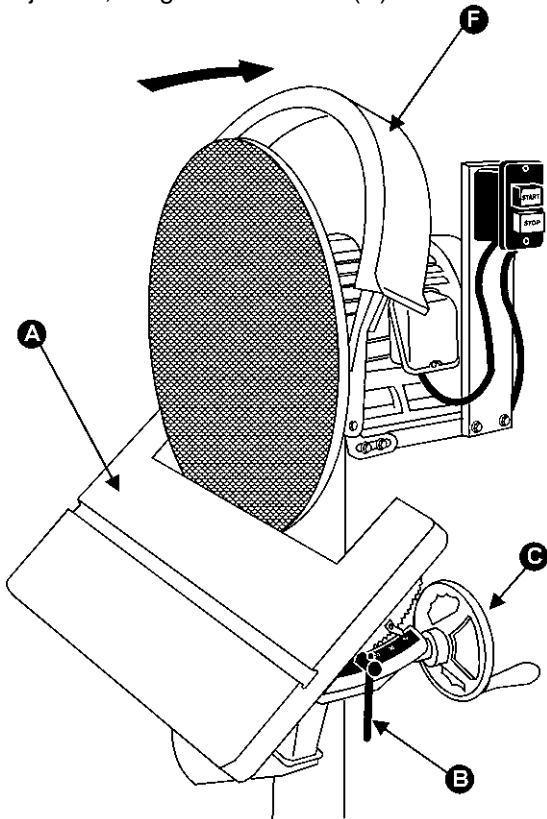


FIGURE 1

The working table can also be raised or lowered on the column, Figure 2. Loosen the knob (D) and adjust the table height with the handwheel (E). When satisfied, retighten knob (D).

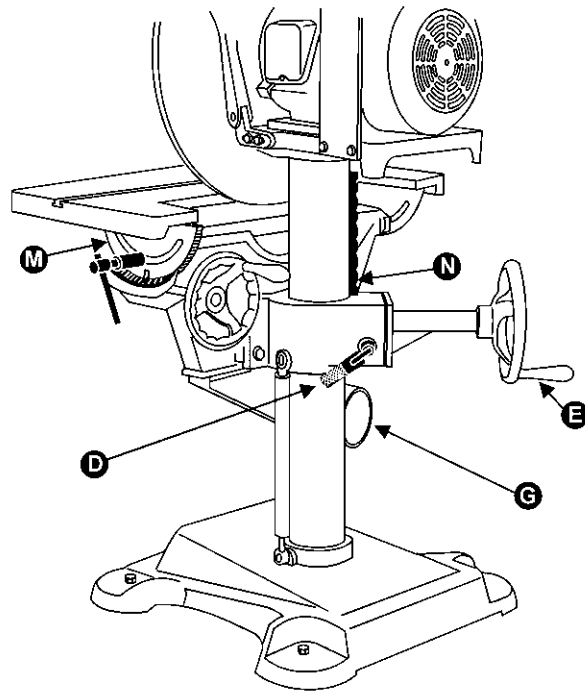


FIGURE 2

CHANGING THE DISC

Before changing the abrasive disc, lower the working table (A) and push back the guard (F), Figure 1. The sander takes standard 20" diameter cloth or paper-back discs. We recommend 60 grit for coarse or rough sanding, 80 grit for general purpose medium duty sanding, and 100 grit for fine sanding.

Use a putty knife to remove the old abrasive from the platen. Clean the platen with solvent and allow to dry. Apply disc cement to the platen and mount the new sanding disc; or use pressure-sensitive discs.

DUST COLLECTION

The DS20 comes standard with a 4" diameter dust outlet (G), Figure 2. To attach a dust collection system, simply slide the hose over the outlet and secure with a hose clamp.

MITRE GAUGE

The mitre gauge is equipped with individually adjustable index stops at 90 degrees and 45 degrees right and left. The index stops can be adjusted by tightening or loosening the three adjusting screws (H), Figure 3.

To operate the mitre gauge, loosen lock handle (J) and move the body of the mitre gauge (K) to the desired angle. The mitre gauge body is set to stop at 0 degrees and 45 degrees left or right. To move the gauge beyond these points, the stop link (L) must be flipped out of the way.

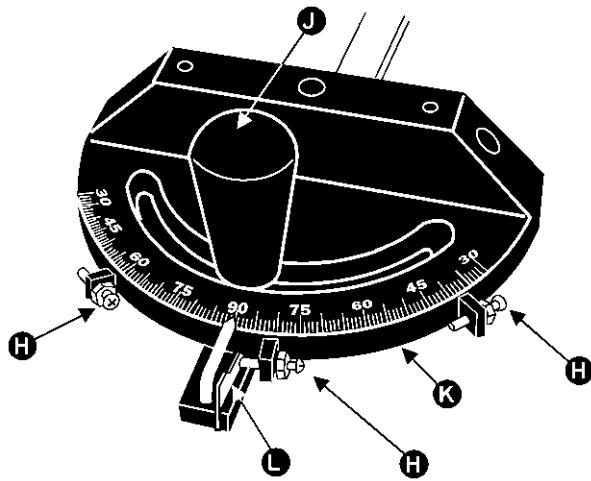


FIGURE 2

MAINTENANCE

Your DS20 Sander requires minimal maintenance. Periodically, make sure table trunnions and rack (M & N, Figure 2) are properly greased with a good grade, non-hardening grease.

The table surface should be kept clean and free of rust for best results. Although some users prefer a wax coating, white talcum powder rubbed in vigorously once a week will fill casting pores and form a moisture barrier. This method allows rust rings to be easily wiped from the surface. Important also is the fact that talcum powder will not stain wood or mar finishes as wax pickup does.

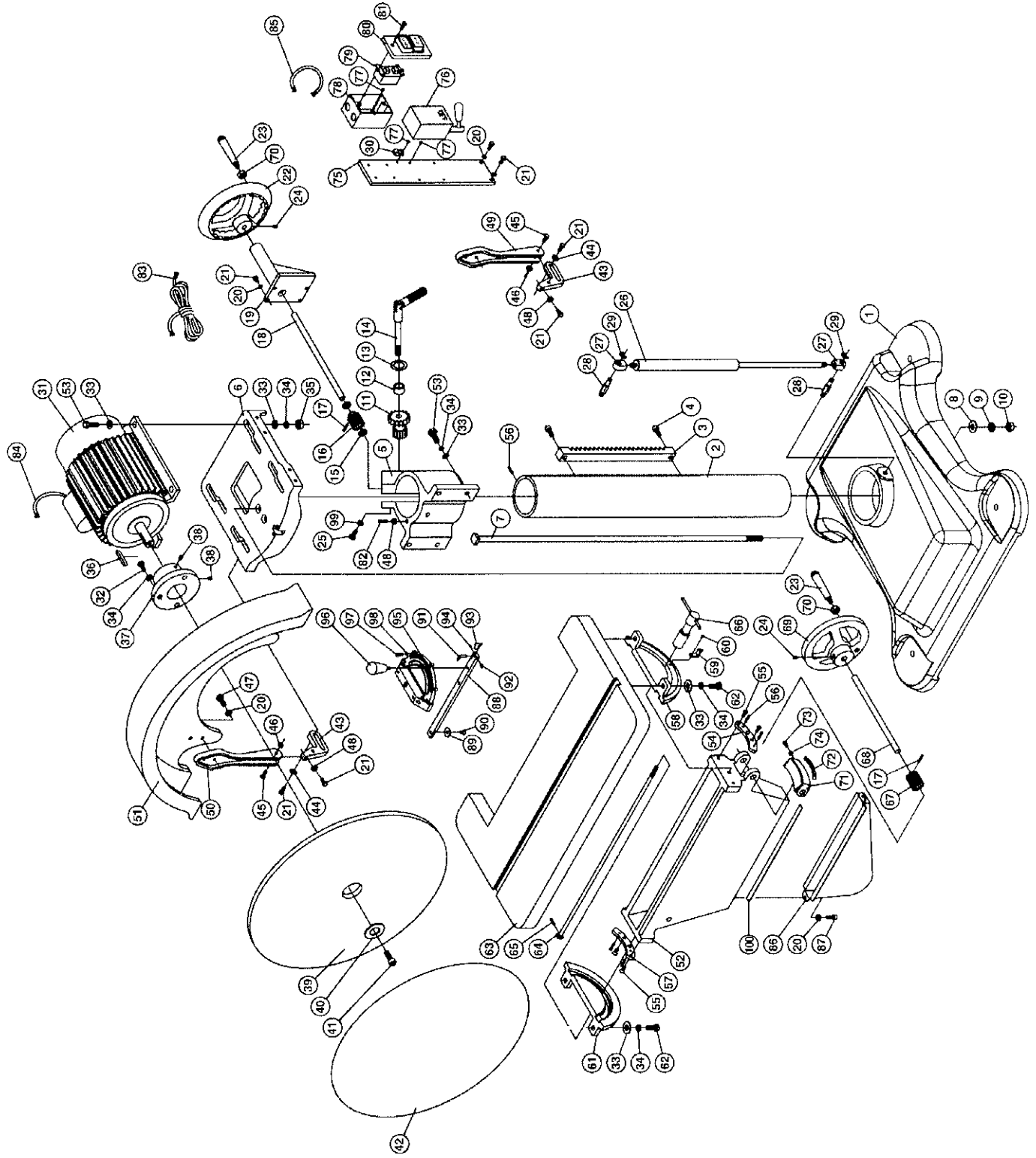
OPTIONAL ACCESSORIES (Model DS20)

- 6295599 Sanding Paper 20", 100 grit.
- 6295661 Sanding Paper 20", 80 grit.
- 6295662 Sanding Paper 20", 60 grit.

PARTS LIST: Model DS20 Disc Sander

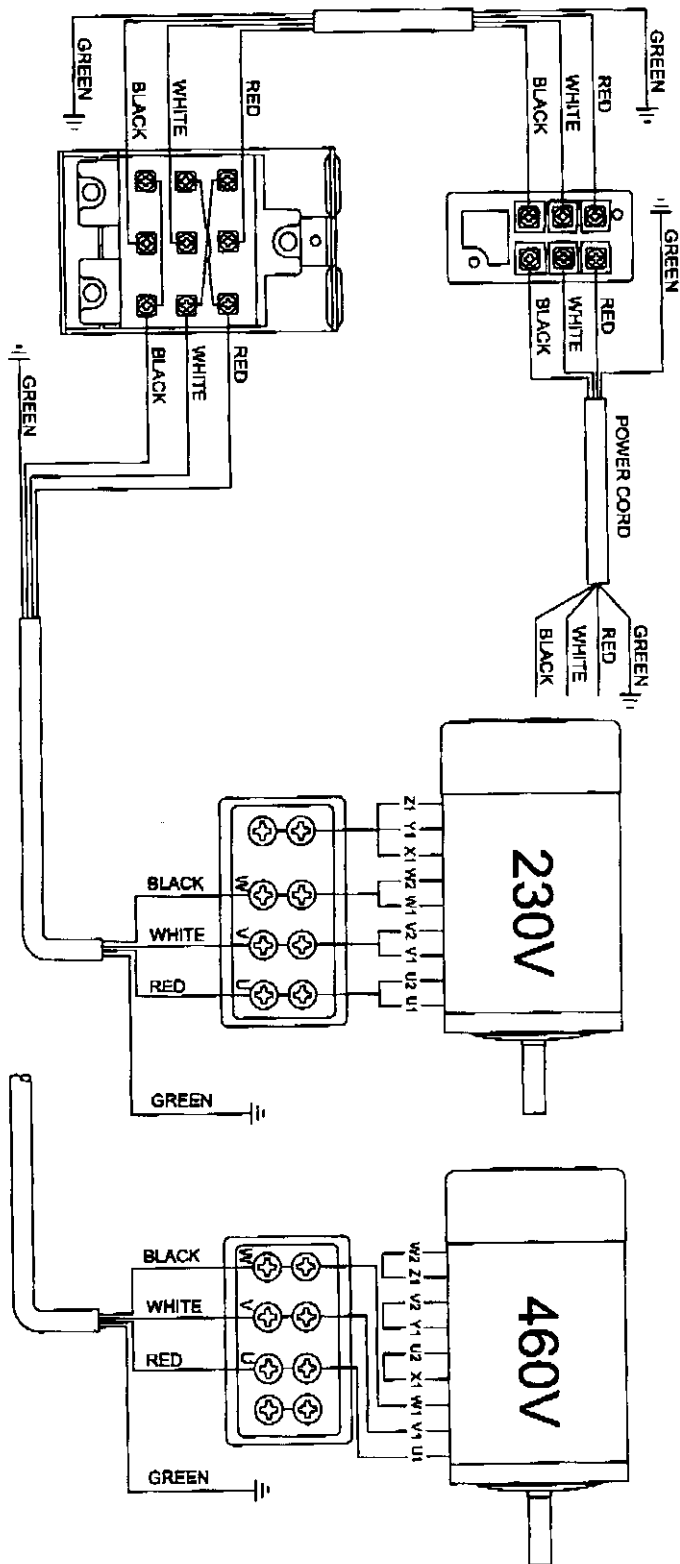
NO.	PART NO.	DESCRIPTION	NO.	PART NO.	DESCRIPTION
1.	6295560	Base	51	6295611	Guard, Disc
2	6295561	Column	52	6295612	Segment, Solid
3	6295562	Rack	53	6295613	Screw, Hex Hd. 3/8"-16 x 1-3/4"
4	6295563	Screw, Hex 5/16"-18 x 1/2"	54	6295614	Pilot, Right
5	6295564	Support, Column	55	6295615	Screw, Philip Hd 1/4"-20 x 1/2"
6	6295565	Base, Motor	56	6295616	Pin, Spring 5 x 20
7	6295566	Stud	57	6295617	Pilot, Left
8	6295567	Washer, Flat 1/2"	58	6295618	Segment, Gear
9	6295568	Washer, Spring 1/2"	59	6295619	Pointer
10	6295569	Nut, Hex 1/2"	60	6295620	Screw, Round Hd
11	6295570	Gear, Worm	61	6295621	Trunnion
12	6295571	Bushing	62	6295622	Screw, Hex Hd. 3/8"-16 x 1"
13	6295572	Washer, Flat	63	6295623	Table
14	6295573	Handle, Lock, Assy.	64	6295624	Bolt
15	6295574	Bushing	65	6295625	Pin, Roll 3 x 16
16	6295575	Worm, Table Lifting	66	6295626	Handle, Table Lock
17	6295576	Pin, Roll 3 x 20	67	6295627	Worm, Table Tilting
18	6295577	Shaft	68	6295628	Shaft
19	6295578	Bracket, Shaft Support	69	6295629	Handwheel
20	6295579	Washer, Spring 1/4"	70	6295630	Nut, Hex 3/8"
21	6295580	Screw, Hex Hd. 1/4"-20 x 1"	71	6295631	Housing, Gear
22	6295581	Handwheel	72	6295632	Scale
23	6295582	Handle	73	6295633	Screw, Hex Hd. 3/16"-24 x 3/4"
24	6295583	Screw, Set 5/16"-18 x 3/8"	74	6295634	Nut, Hex. 3/16"
25	6295584	Screw, Hex Hd. 5/16"-18 x 1-3/4"	75	6295635	Plate, Switch
26	6295585	Cylinder, Hydraulic	76	6295636	Switch, FWD/REV (3 Ph only)
27	6295586	Head, Cylinder	77	6295637	Screw, Round Hd 3/16"-24 x 3/4"
28	6295587	Fitting, Cylinder	78	6295638	Cover, Switch
29	6295588	E-Ring	79	6295639	Switch, ON/OFF
30	6295589	Protector, Wire	80	6295640	Switch, Faceplate
31	6295590	Motor, 2 HP, 1 Ph, 230V	81	6295641	Screw, Tap
	6295591	Motor, 3 HP, 3 Ph, 230/460V	82	6295642	Screw, Set 1/4"-20 x 1"
32	6295592	Screw, Hex Hd. 3/8"-16 x 1-1/2"	83	6295643	Cord, Power
33	6295593	Washer, Flat 3/8"	84	6295644	Wire, Motor
34	6295594	Washer, Spring 3/8"	85	6295645	Wire, Switch (3 Ph only)
35	6295595	Nut, Hex 3/8"	86	6295646	Chute, Dust
36	6295596	Key, 5 x 5 x 20	87	6295647	Screw, Cap 1/4"-20 x 1/4"
37	6295597	Hub		6295663	Assy., Mitre Gauge (Items 88 thru 98)
38	6295598	Screw, Set 3/8"-16 x 3/8"	88	6295648	Bar, Guide
39	6295602	Disc	89	6295649	Disc, Guide
40	6295600	Insert, Disc	90	6295650	Screw, Philip Hd. 1/4"-20 x 1/4"
41	6295601	Screw, Cap 5/16"-18 x 1"	91	6295651	Pointer
42	6295599	Paper, Sanding 20", 100 grit	92	6295652	Screw, Set 1/4"-20 x 1/4"
	6295661	Paper, Sanding 20", 80 grit	93	6295653	Stop
	6295662	Paper, Sanding 20", 60 grit	94	6295654	Pin, Roll 3 x 6
43	6295603	Bracket, Disc Guard	95	6295655	Body, Miter Gauge
44	6295604	Washer, Flat 1/4"	96	6295656	Knob
45	6295605	Screw, Hex Hd. 1/4"-20" x 1-1/4"	97	6295657	Screw, Round Hd. M4 x .7 x 20
46	6295606	Nut, Lock 1/4"	98	6295658	Nut, Hex M4
47	6295607	Screw, Hex Hd. 1/4"-20 x 5/8"	99	6295659	Nut, Hex 5/16"
48	6295608	Nut, Hex 1/4"	100	6295660	Sponge
49	6295609	Arm, Disc Guard (R)			
50	6295610	Arm, Disc Guard (L)			

EXPLODED VIEW: Model DS20 Disc Sander



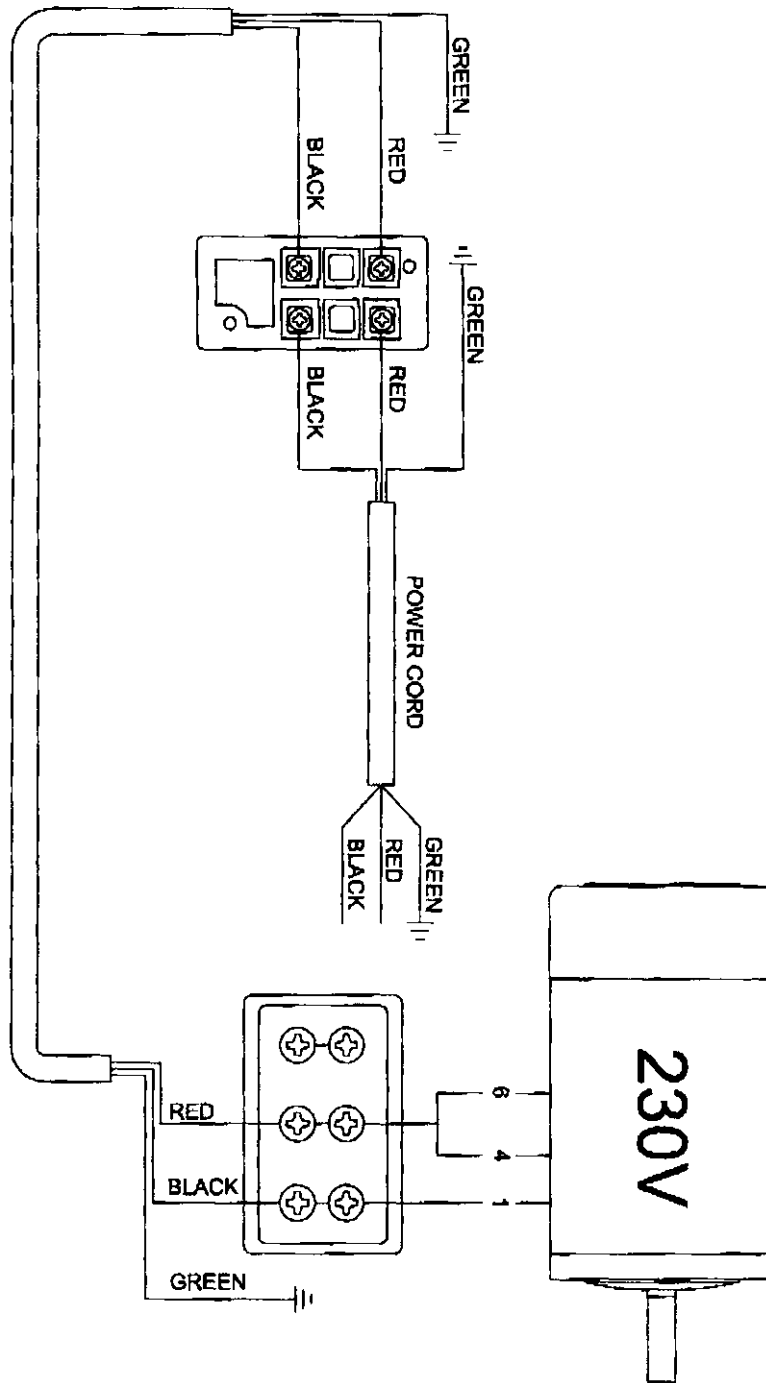
ELECTRICAL SCHEMATIC Model DS20

230/460V, 3 Ph



ELECTRICAL SCHEMATIC Model DS20

230V, 1 Phase



To order parts or reach our service department, please call our toll free number between 8:00 A.M. and 4:30 P.M. (CST), Monday through Friday. Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately. Locating the stock number of the part(s) required from your parts manual will also expedite your order.

Phone: (800) 274-6848

Fax: (800) 274-6840

If you are calling from Canada, please call 800-238-4746

E-mail: powermatic@wmhtoolgroup.com

Website: www.powermatic.com

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WMH Tool Group
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Auburn, WA 98071-1349
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