

POWERMATIC®

**OPERATING INSTRUCTIONS
AND
PARTS LIST**

•
Model 30A Belt and Disc Sander

For Serial Numbers From 930A001 up

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POWERMATIC  **HOUDAILLE**
McMinnville, Tennessee 37110

FOREWORD

This manual has been prepared as a guide to the owner and operators of the Powermatic Sander.

In order to obtain maximum life and efficiency from your Powermatic Sander, we suggest reading this manual thoroughly and following all instructions carefully.

The specifications herein were in effect at the time this book was approved for printing. Powermatic/Houdaille whose policy is one of continuous improvement, reserves the right to change specifications at any time without notice and without incurring obligations.

RECEIVING & SET UP

1. RECEIVING

Uncrate and check for shipping damage. Clean all coated and greased surfaces. Read instructions thoroughly. Locate all lubrication points, adjustments, methods of drive.

2. MOUNTING

Mount machine securely to solid foundation; concrete base mounting preferred. Locate in clean, dry and well ventilated building if possible. Motor and electrical connections should be protected when not in operation or if exposed to weather elements.

3. INSPECTION

The above machine requires a minimum amount of attention in service. Periodic or regular inspections are recommended to insure machine is in proper adjustment and with positive electrical connections; also, to correct worn or loose "V" belts and loose or heating bearings.

4. BEFORE OPERATING

Check motor nameplate data or wiring diagram of motor and switch for proper voltage connection before wiring into line. Run motor without load to check the connections and direction of rotation. Always refer to motor nameplate for rotation connections.

SAFETY AND OPERATING SUGGESTIONS

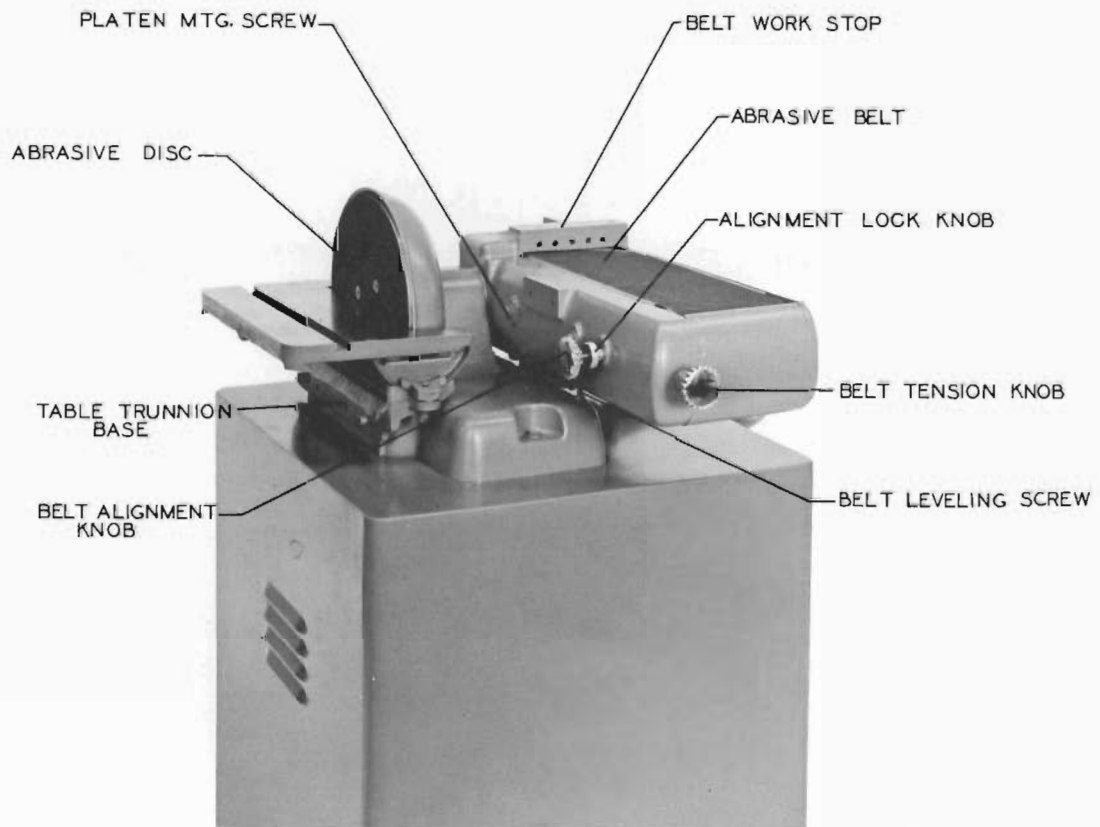
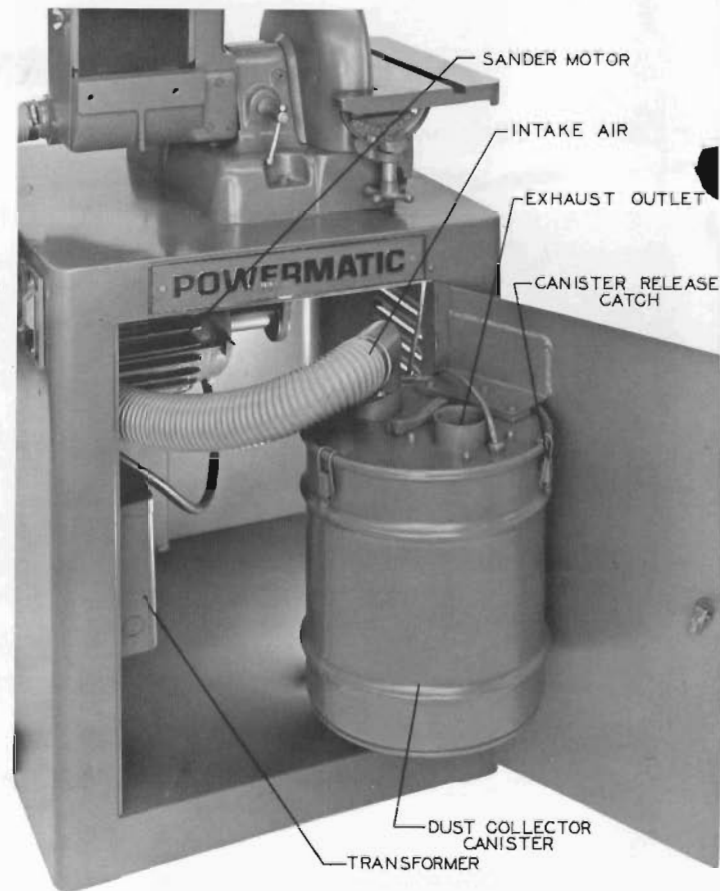
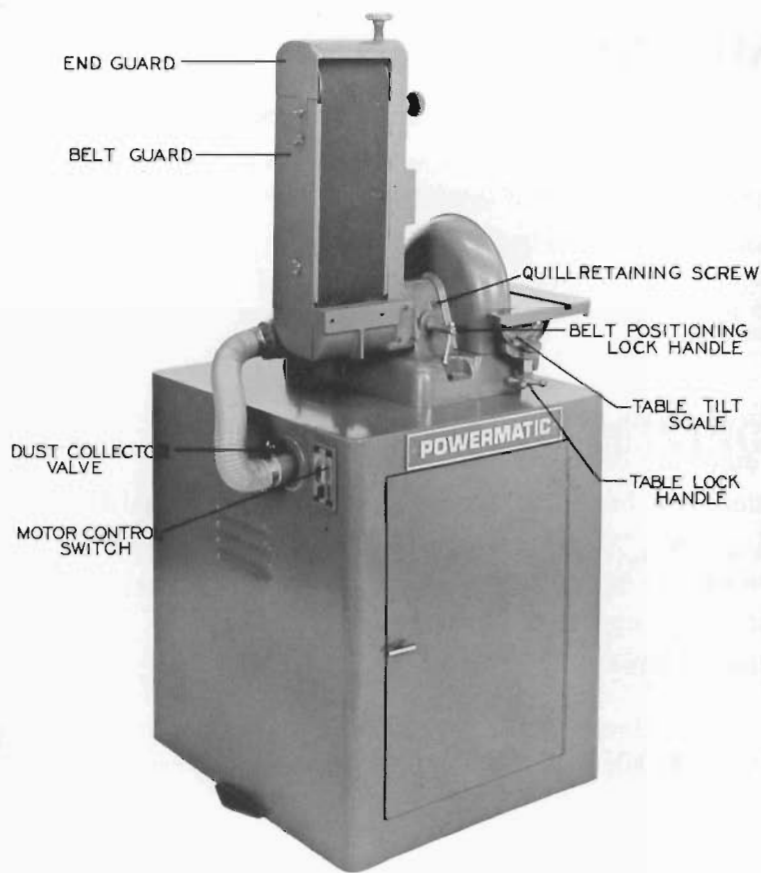
1. The base of the machine should be grounded to a water pipe or general grounding system.
2. Wear goggles when sanding, ESPECIALLY when finishing metal.
3. CARE should be taken to keep hands out of contact with disc and sanding belt.
4. Use a push stick or sanding jig when sanding small or thin material.
5. Use the proper abrasives. Discard torn or overloaded belts and discs.
6. Maintain proper motor belt and sanding belt tension.
7. Use only light pressure.
8. Whenever possible, sand parallel with the grain to obtain best finish.
9. When belt sanding, keep the material moving smoothly back and forth across the belt.
10. When disc sanding, keep the material moving smoothly back and forth across the DOWNWARD half of the disc.
11. A better finish can be obtained on dry wood than green or wet wood.
12. Use the table, fence, miter gauge, work stop, or jig to support the work whenever possible.
13. Always disconnect power source before servicing machine.

DESCRIPTION

The Powermatic Model 30A Combination Disc and Belt Sander is ruggedly constructed for all contour, angle and flat sanding jobs. Tilting table, tilting belt assembly, tilting fence and miter gage permit rapid set-ups without the need of special tools. The sander is designed with an interchangeable table that can be used with either the sanding disc or the sanding belt. The belt is driven over pulleys that are die cast, machine crowned and balanced. The spindle is equipped with sealed for life ball bearings that do not require lubrication. A complete dust collecting system is mounted inside the stand. Dust disposal is easily accomplished with a removable drum canister. The dust collector is driven by a separate motor that is supplied with power through a 1 KVA. transformer.

SPECIFICATIONS

Disc size	12"
Disc speed	2400 RPM
Belt size	6" x 48"
Belt speed	2750 SFM
Motor, sander	1½ HP, 1800 RPM
Motor, dust collector	½ HP, 115 Volt
Belt position	Horz. to Vert.
Table size	10" x 16½"
Table tilt	0°-45° up or down
Fence size	4¼ x 14¾
Fence tilt	0°-45° in or out
Capacity, dust collector canister	4 gal.
Air flow rate, dust collector	125 CFM
Weight	370 lbs.

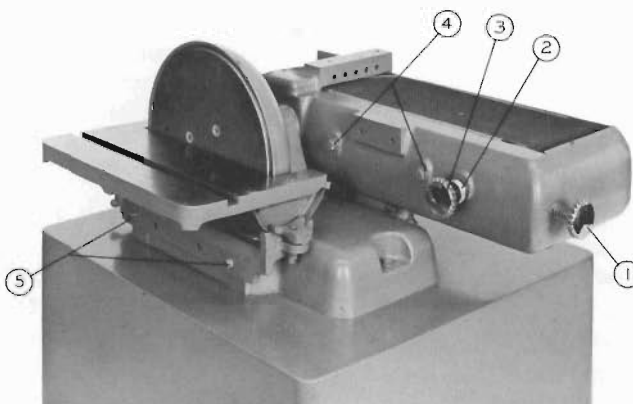


MOTOR AND WIRING

The Model 30A is equipped with a 1½ horsepower, TEFC, dual voltage motor. The dust collector is driven by a ½ horsepower, 115 volt motor. The dust collector is supplied with power through a 1 KVA transformer and it is wired to automatically turn on and off with the sander motor. Always provide an electrical ground to the base of the machine. Check the direction of motor rotation before operating machine. Overload protection and magnetic starting are optionally available. Refer to the electrical schematic for specific electrical details.

BELT INSTALLATION

To install the belt, remove the two wing nuts located on the side of the guard and slide off the guard. Loosen the belt tension and tracking screws (1) and (3). Slip sanding belt over drive and idler drums. Be sure the sanding belt is mounted with the arrow on the belt pointed in the direction of rotation. Retighten the belt tension and tracking screws.



BELT ALIGNMENT

Tighten the belt tension screw (1) to approximately 75% of its normal operating tension. Loosen the knurled lock knob (2). While rotating the belt with one hand, simultaneously adjust the alignment knob (3) until the belt is tracking near the center. Make fine adjustment by joggling the motor switch with one hand and simultaneously adjusting the alignment knob with the other hand. Tighten the knurled lock knob. Complete the belt tension to its normal value.

PLATEN ADJUSTMENT

It may be necessary to occasionally adjust the platen to maintain the proper relationship to the sanding drums. A pucker in the belt is an indication of the need for platen adjustment. To adjust the platen, remove the two winged nuts on the belt guard and slide off the guard. Loosen the two cap screws (4) and adjust the platen. Retighten the lock screws and replace the guard.

DISC INSTALLATION

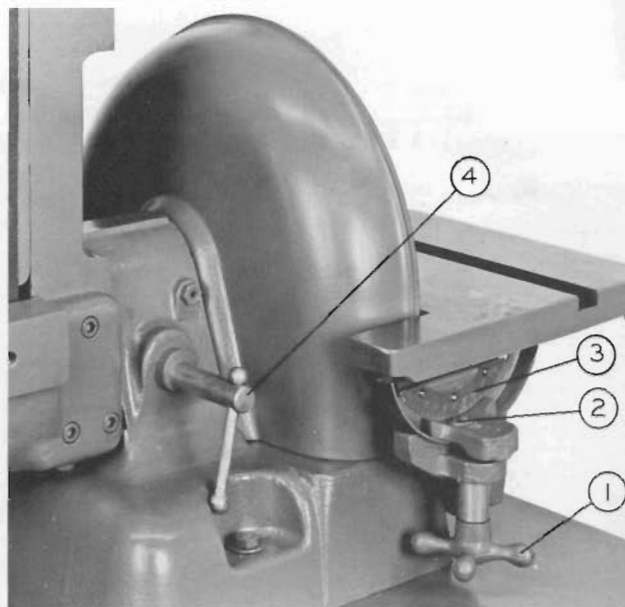
Remove the two table mounting screws (5) and take off the table. Use a putty knife to remove the abrasive from the disc. Clean and dry the disc plate. Apply glue to the abrasive disc and mount on the disc plate. Use a roller (iron pipe or wood) or a flat piece of wood and clamps to prevent wrinkles. Allow the glue to dry and reassemble the table to the machine.

TABLE ANGLE ADJUSTMENT

The table may be adjusted to any angle from 0° to 45°, either up or down. To adjust to the desired angle, loosen lock handle (1) and pivot the table until the angle is indicated by the pointer (2) and scale (3). Retighten table lock handle.

BELT POSITIONING (HORIZONTAL-VERTICAL)

The belt unit may be quickly changed from the horizontal to vertical position or vice versa. To raise sanding belt to a vertical position, loosen lockscrew (4) and raise the frame to an upright position. Lock in place with lockscrew and adjust stop.



CHANGE TABLE (DISC TO BELT)

The table may be readily moved from disc to the belt unit or vice versa by the movement of two mounting screws located on the table trunnion. Use the two inside trunnion holes for belt mounting and the two outside holes for disc mounting. The table cannot be mounted to the belt unit unless the work stop is attached.

CONTOUR SANDING

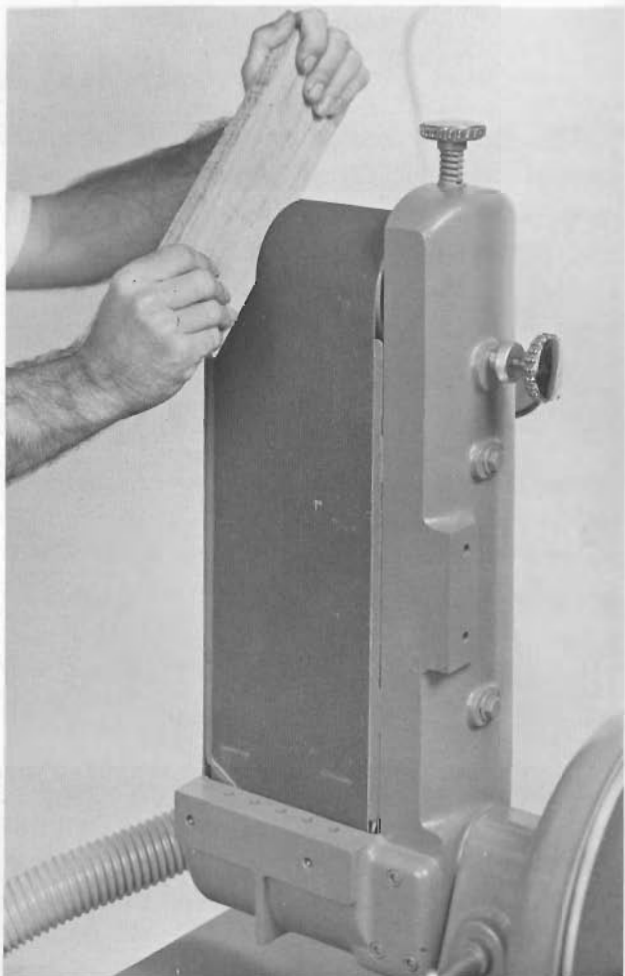
The end of the belt guard is designed to be hinged out of the way to permit contour sanding against the idler drum. To remove the end guard, loosen the winged nut and unlatch the lock. Guard will swing out of the way to expose the idler drum.

DUST COLLECTOR

The dust collector is wired to run whenever the sander motor is operated. The belt and disc units have separate hose lines and each hose has an individual butterfly valve. For maximum suction, close the valve to the unit not in operation. Always leave one valve open since the dust collector motor is cooled by air flow through the hose lines.

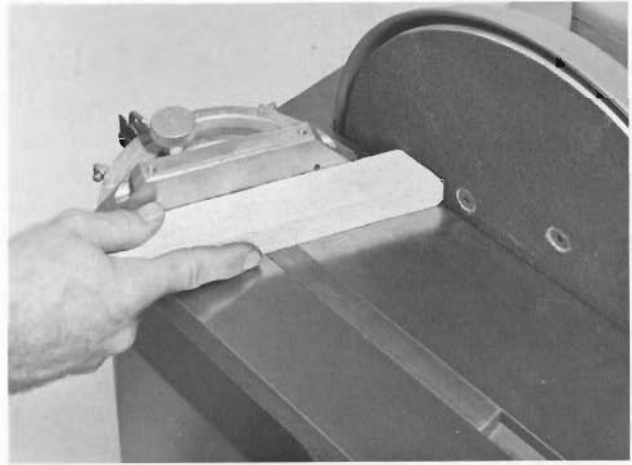
The collector canister tank must be emptied periodically, depending on the material being sanded and the frequency of use. Always empty wood dust from the tank before sanding metal parts that cause sparks. To empty the canister tank, unsnap the three catches on the tank lid and the tank will drop free.

Efficiency of the vacuum unit is completely dependent on the air filter bag. The unit is supplied with cloth filter bag. Paper bags are used over the cloth bag for quick replacement. Make such that the paper bag is not clogged and is changed regularly. Bags are replaced by slipping the elastic band over the filter cage. Refer to separate enclosed vendor literature for maintenance and replacement parts.



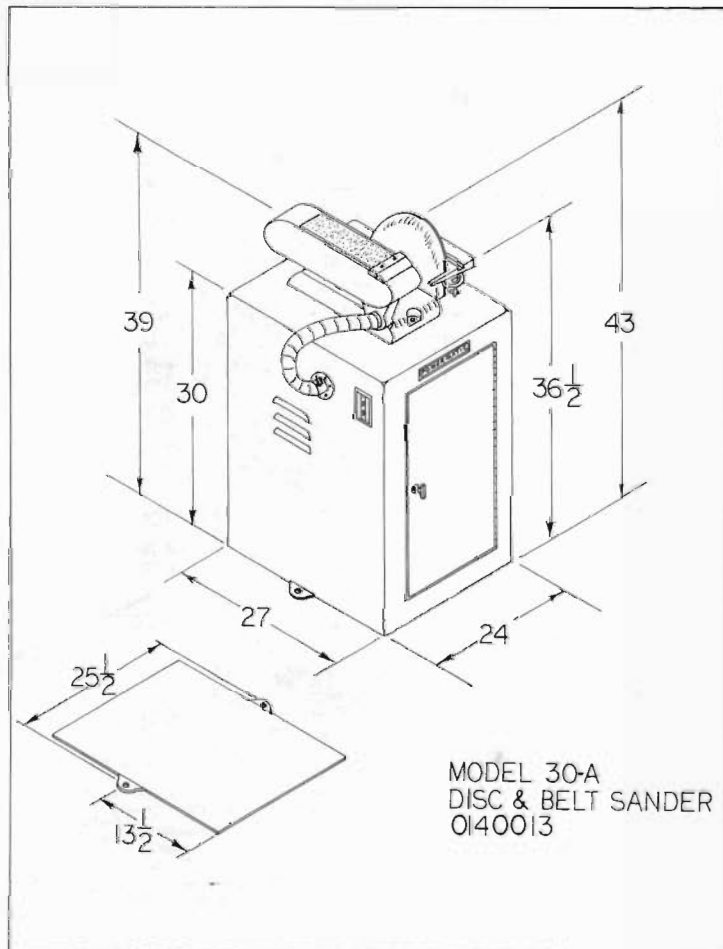
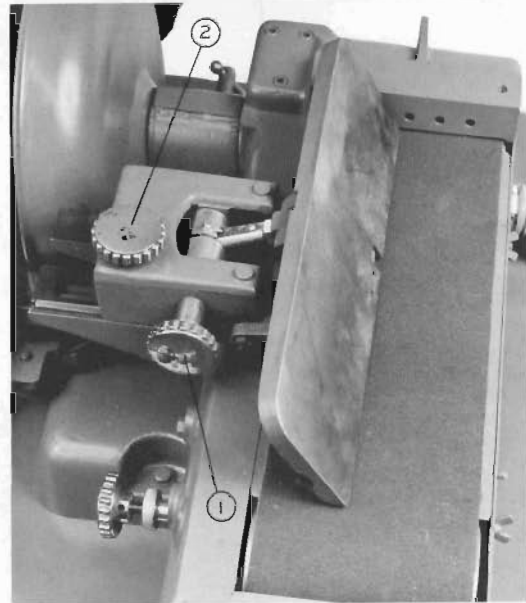
MITER GAGE

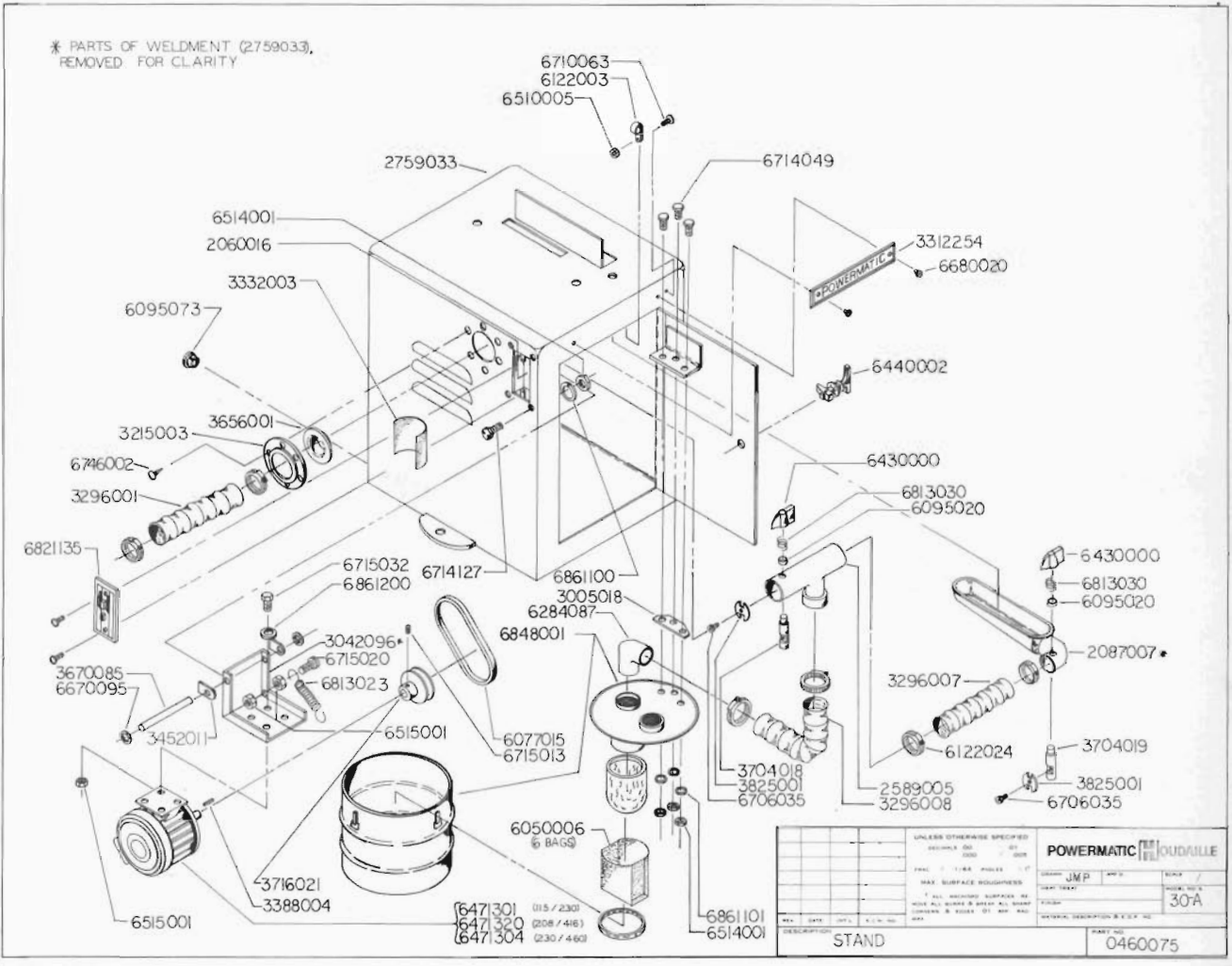
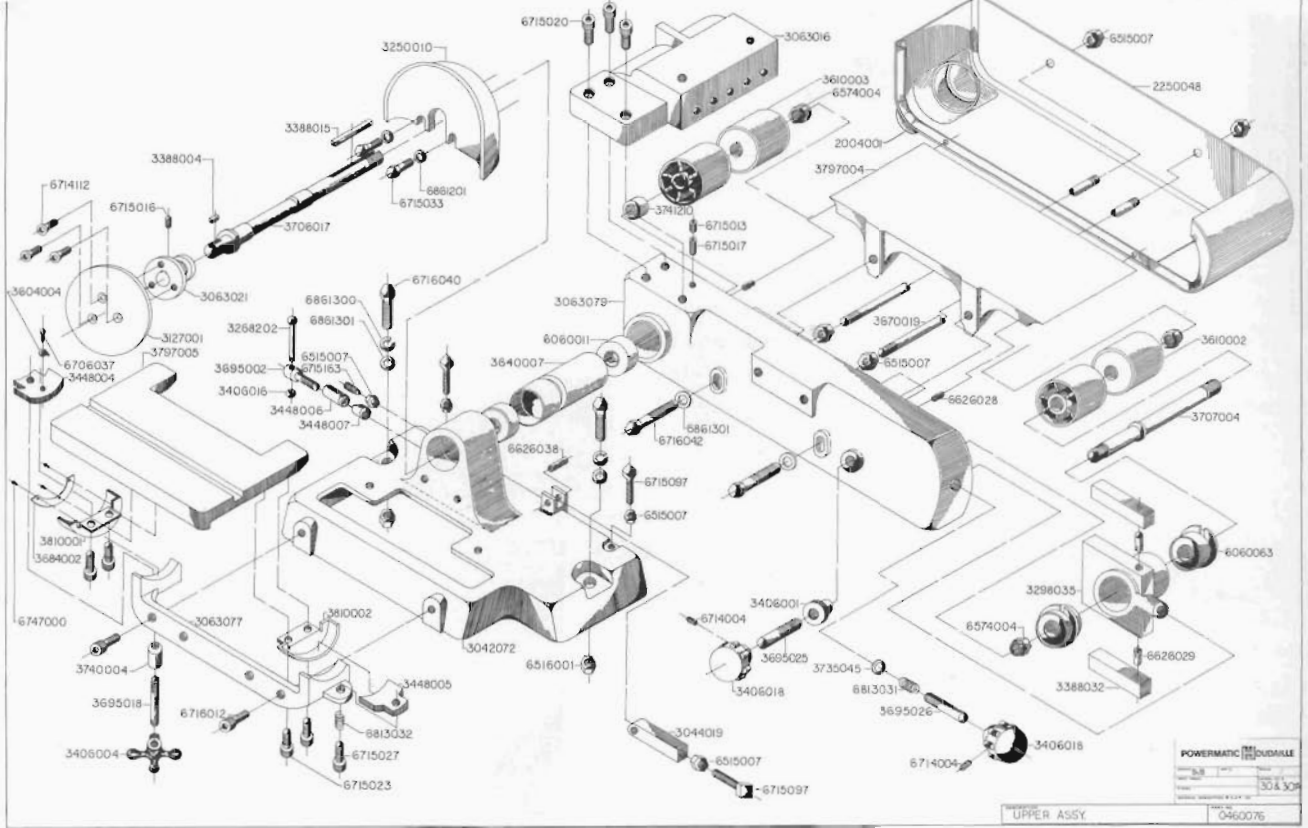
The miter gage is used to make angle cuts. It is designed to attach to the table and may be used with the belt or disc unit. The miter may be rotated 60° to the left or 60° to the right. The desired angle is set on the miter by loosening the knurled knob and rotating the miter head until the desired angle is read by the pointer.

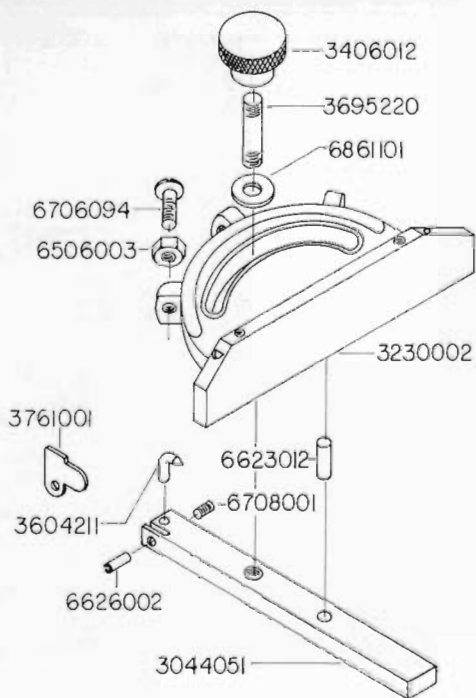


FENCE ADJUSTMENT

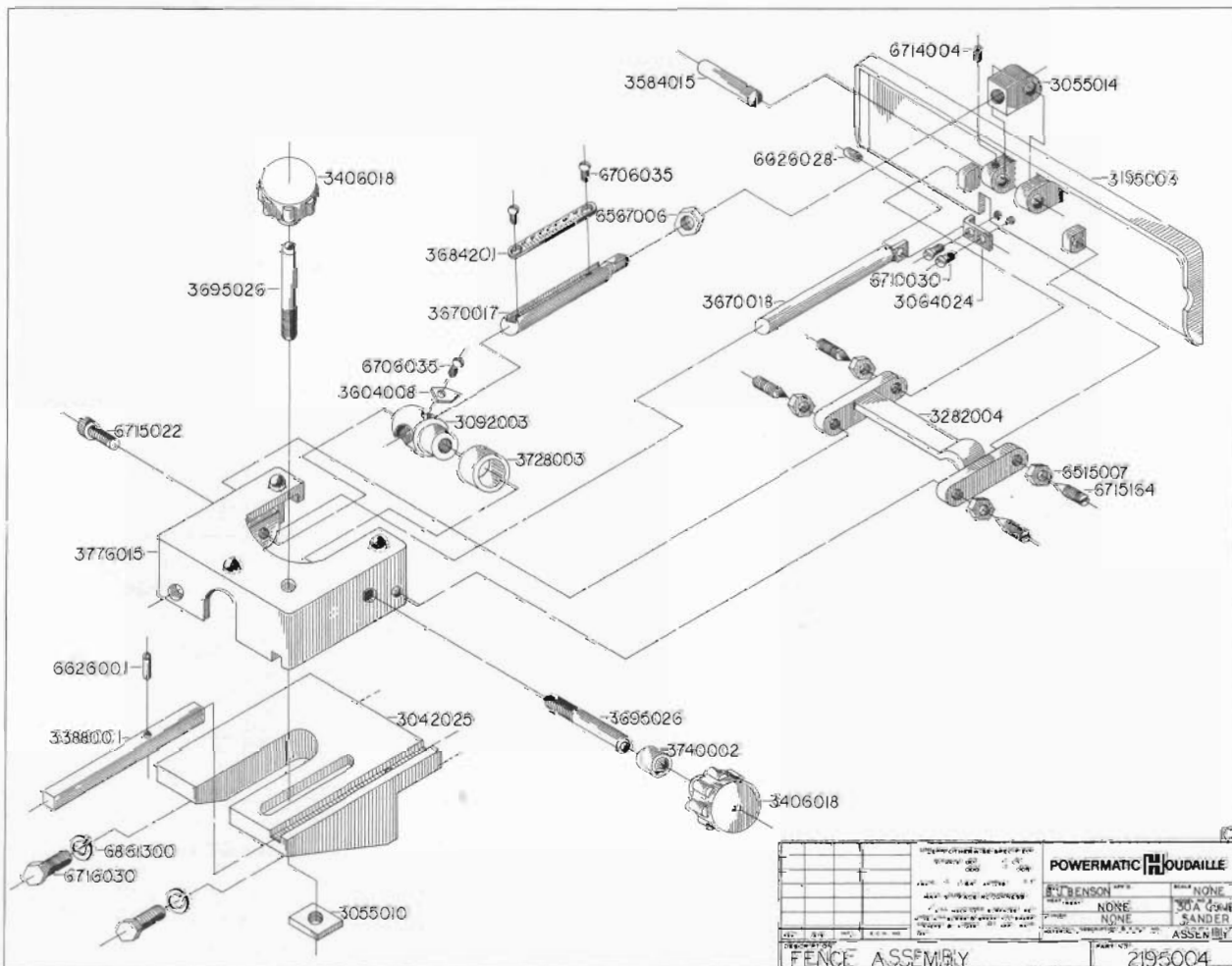
The fence is designed to make square or angular cuts along the moving axis of the sanding belt. The fence may be tilted from 0° to 45° in or out. To tilt the fence, loosen lock knob (1) and tilt fence to the desired angle. Graduated scale and pointer indicate the approximate fence angle. Retighten the locking knob. To position fence across the sanding belt, loosen lock knob (2) and slide fence assembly to the desired position. Retighten lock knob.





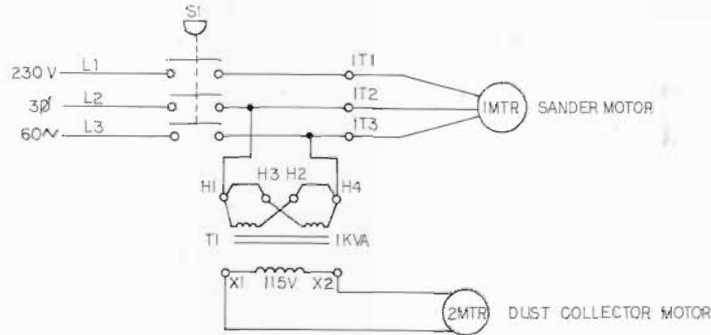


UNLESS OTHERWISE SPECIFIED				POWERMATIC HOUDAILLE	
REGULAR	00	01	02	DRAWN	JNR
000	000	000	000	APP'D	NONE /
ZINC = 1/32 ANGLE = 1°				NEW TRUCK	ASSY
MATERIAL SURFACE ROUGHNESS				MODEL NO. 8	
* ALL MACHINED SURFACES RE-				81,87,30,33	
WORK ALL SURFS & BREAK ALL SHARP				141,43,26	
CORNERS & EDGES BY APP. RAD				DATE	
REV	DATE	BY	E.C.N. NO.	GENERAL DESCRIPTION & E.O.P. NO.	
DESCRIPTION				PART NO.	
MITER GAGE ASSY				2471002	



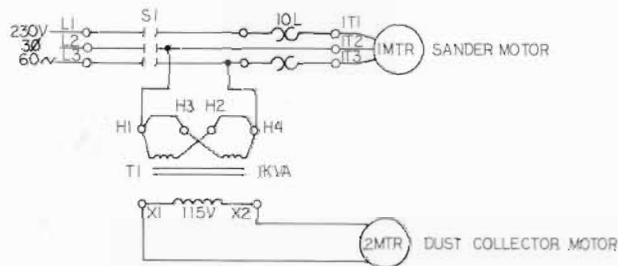
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000	000	000	000	APP'D	NONE
ZINC = 1/32 ANGLE = 1°				NEW TRUCK	NONE
MATERIAL SURFACE ROUGHNESS				MODEL NO. 8	
* ALL MACHINED SURFACES RE-				30A GEAR	
WORK ALL SURFS & BREAK ALL SHARP				SANDER	
CORNERS & EDGES BY APP. RAD				DATE	
REV	DATE	BY	E.C.N. NO.	GENERAL DESCRIPTION & E.O.P. NO.	
DESCRIPTION				PART NO.	
FENCE ASSEMBLY				2195004	

MANUAL



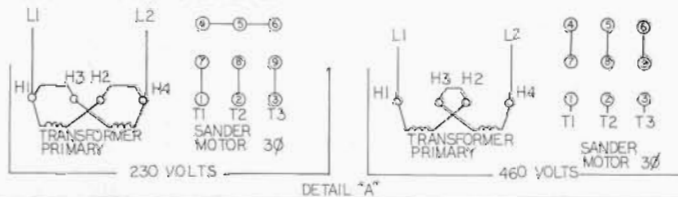
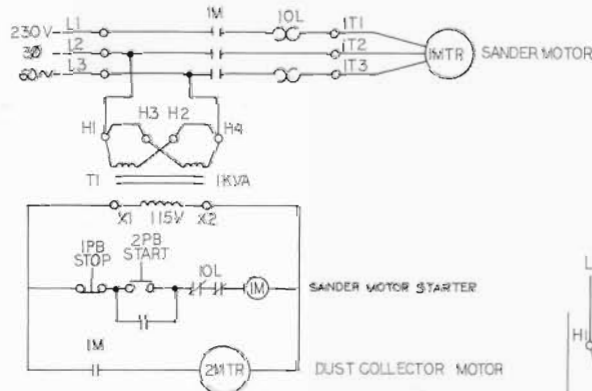
REF.	QTY.	POWERMATIC NO.	MFG. DESCRIPTION
S1	1	(3Ø) 6821135	SWITCH, FURNAS 12 BA 34P
		(1Ø) 6821134	SWITCH, FURNAS 12 BA 24P
1MTR	1	(3Ø) 6471304	MOTOR ELEC., 1/2 HR, 230/460 V, 3Ø, 145 T FRAME
		(1Ø) 6471301	MOTOR ELEC., 1/2 HR, 115/230V 1Ø, 145 T FRAME
T1	1	6831005	TRANSFORMER, WESTINGHOUSE, 1KVA, 460-230/110
2MTR	1	NONE	PART OF DAYTON VACUUM, MODEL 22205

MANUAL WITH OVERLOAD



REF.	QTY.	POWERMATIC NO.	MFG. DESCRIPTION
S1	1	(3Ø) 8821010	SWITCH, AH LLO32
		(1Ø) 6821011	SWITCH, AH LLI21
1MTR	1	(3Ø) 6471304	MOTOR ELEC., 1/2 HR, 230/460, 3Ø, 145 T FRAME
		(1Ø) 6471301	MOTOR ELEC., 1/2 HR, 115/230, 1Ø, 145 T FRAME
T1	1	6831005	TRANSFORMER, WESTINGHOUSE, 1KVA, 460-230/110
2MTR	1	NONE	PART OF DAYTON VACUUM, MODEL 22205

MAGNETIC



REF.	QTY.	POWERMATIC NO.	MFG. DESCRIPTION
M1	1	(3Ø) 6816055	STARTER MAGNETIC, FURNAS, 14CA 22 BA
		(1Ø) 6816012	STARTER MAGNETIC, FURNAS, 14CA 22 BA
(PB1) (PB2)	1	6821014	SWITCH, FURNAS MOMENTARY PUSHBUTTON, B2873-1B
1MTR	1	(3Ø) 6471304	MOTOR ELEC., 1/2 HR, 230/460, 3Ø, 145 T FRAME
		(1Ø) 6471301	MOTORELEC., 1/2 HR, 115/230, 1Ø, 145 T FRAME
2MTR	1	NONE	PART OF DAYTON VACUUM MODEL 22205
T1	1	6831005	TRANSFORMER, WESTINGHOUSE, 1KVA, 460-230/110

NOTE: Δ FOR SINGLE PHASE UNITS, OMIT LINE L1.
 & 115V, 1Ø UNIT DOES NOT USE T1.

UNLESS OTHERWISE SPECIFIED			
NO.	REV.	DATE	BY
POWERMATIC/HOUDAILLE			30-A
SCHEMATIC, COMPOSITE ELEC.			0940042

MODEL 30 A COMBINATION SANDER

UPPER ASSEMBLY AREA

Part Number	Part Name	Quantity Required	Part Number	Part Name	Quantity Required
2004001	Adapter Ass'y. Dust Shute	1	6060063	Bearing, Fafnir 205PPG—Housing, Idler	2
2250048	Guard, Belt Assembly	1	6515007	Nut, Hex—Jam, 5/16—18, Steel Plain	8
3042072	Base, Combination Sander	1	6516001	Nut, Hex— $\frac{3}{8}$ —16, Steel Plain	2
3044019	Bar, Bed Support	1	6574004	Nut, Hex—Self Locking, $\frac{7}{8}$ —14 Stl. Plain	3
3063016	Bracket, Mounting Table (Model #30)	1	6626028	Pin, Spring, 3/16 x 1/2 Lg.	2
3063021	Bracket, Mounting—Sheave & Disc	1	6626029	Pin, Spring, 3/16 x 1 Lg.	2
3063077	Bracket, Mounting—Trunion	1	6626038	Pin, Spring, 1/4 x 1 Lg.	1
3063079	Bracket, Mounting, Bed	1	6706037	Screw, Rd. Head Slotted, 6—32 x 3/16 Lg.	1
3063016	Bracket, Mounting	1	6714004	Screw, Soc. Set 1/4—20 x 1/4, Knurl Cup Point	2
3127001	Disc, Sanding	1	6714112	Screw, Flat Hd. Soc. 1/4—20 x 5/8	3
3250010	Guard, Disc	1	6715013	Screw, Soc. Set 5/16—18 x 3/8 Cup Pt.	1
3268202	Handle, Lockscrew	1	6715016	Screw, Soc. Set, 5/16—18 x 5/16, Cup Pt.	1
3298035	Housing, Idler Pulley Bearing	1	6715017	Screw, Soc. Set, 5/16—18 x 1, Cup Pt.	1
3388004	Key, Square, 3/16 x 3/16 x 1 Steel	1	6715020	Screw, Soc. Hd. Cap—5/16—18 x 1—Steel Plain	3
3388015	Key, Square, 3/16 x 3/16 x 2 1/4 Lg. Steel	1	6715023	Screw, Soc. Hd. Cap—5/16—18 x 1/2 Steel Plain	4
3388032	Key, Square, 3/8 x 3/8 x 2 5/8 Lg. Steel	2	6715027	Screw, Soc. Hd. Cap—5/16—18 x 1 3/4 Steel Plain	1
3406001	Knob, Belt Adjusting Screw Lock	1	6715033	Screw, Hex Hd. Cap—5/16—18 x 1/2 Steel Plain	2
3406004	Knob, Trunion Lock	1	6715097	Screw, Sq. Hd. Set—5/16—18 x 1 1/4 (Steel)	3
3406016	Knob, Handle Lockscrew	1	6715163	Screw, Soc. Set, 5/16—18 x 1 1/4, Half Dog	1
3406018	Knob, Handle 1000—8 x 3/8	2	6716012	Screw, Soc. Head Cap, 3/8—16 x 2 1/2 Steel Plain	2
3448004	Lock, Trunion L. Hand	1	6716042	Screw, Hex Hd., 3/8—16 x 3, Steel Plain	2
3448005	Lock, Trunion R. Hand	1	6716040	Screw, Hex Hd., 3/8—16 x 2 1/2 Steel Plain	2
3448006	Lock, Quill, Plain	1	6747000	Screw, Ro. Hd., Drive #4 x 3/16 Lg. (Zinc Pl.)	3
3448007	Lock, Quill, Threaded	1	6813031	Spring, Comp., #S-4, Dodek & Bock	1
3604004	Pointer, Trunion Scale	1	6813032	Spring, Comp., #DS-936, Dudek & Bock	1
3610002	Pulley, Belt, Idler	2	6861201	Washer, Flat, 5/16, Steel, Plain	2
3610003	Pulley, Belt, Drive	2	6861300	Washer, —Lock, Spring, —Hel. 3/8 10 Reg. Str. Pl.	2
3640007	Quill, Drive Pulley	1	6861301	Washer, Flat, 3/8, Steel Plain	4
3670019	Rod, Belt Guard Mounting	2			
3684002	Scale, Trunion	1			
3695002	Screw, Lock, Quill	1			
3695018	Screw, Trunion Lock	1			
3695025	Screw, Pulley Locking	1			
3695026	Screw, Adjusting, Bearing Housing	1			
3706017	Shaft, Drive Pulley	1			
3707004	Shaft, Idler Pulley	1			
3735045	Spacer, Belt Tension	1			
3740004	Spacer, Lockscrew	1			
3741210	Spacer, Drive Pulley Shaft	1			
3797004	Table, Sander Bed	1			
3797005	Table Sander	1			
3810001	Trunion, Table Tilting L. Hand	1			
3810002	Trunion, Table Tilting R. Hand	1			
6060011	Bearing, Fafnir W205PP—Drive Quill	2			

STAND ASSEMBLY

Part Number	Part Name	Quantity Required	Part Number	Part Name	Quantity Required
2060016	Box Ass'y., Switch (Weld.)	1	2759033	Stand Ass'y. (Weld.)	1
2087007	Chute Ass'y. (Weld.)	1	3005018	Adapter Dust Collector Tank	1
2589005	Pipe Ass'y. (Weld.)	1	3042096	Base Motor	1

Part Number	Part Name	Quantity Required	Part Number	Part Name	Quantity Required
3215003	Flange, Fixed Mtg. Intake Hose	1	6440002	Latch Cabinet "T" Handle	1
3296001	Hose, Intake 2" Dia. x 21" Lg. Flexible	1	6510005	Nut, #10-32, Hex-Stl. Plain	1
3296007	Hose, Intake 2" Dia. x 12" Lg. Flexible	1	6514001	Nut, Hex, 1/4-20 Stl. Plain	7
3296008	Hose, Intake 2 1/2" Dia. x 25" Lg. Flexible	1	6515001	Nut, Hex, 5/16-18 Stl. Plain	6
3312254	Plate I.D., Powermatic, Large	1	6670095	Ring, Retaining 8064-50-00 Shakeproof	2
3332003	Insulator, Switch Box	1	6680020	Rivet Drive 5/32 Dia. x 1/4 Lg.	2
3388004	Key Sq. 3/16 x 3/16 x 1" Lg.	1	6706035	Screw Rd. Hd. Mach. #6-32 x 1/4" Lg.	1
3452011	Lug, Motor Base Support	2	6710063	Screw Button Hd. Soc. #10-24 x 1/2" Lg.	1
3656001	Reducer Intake Hose Adj.	1	6714049	Screw, Hex Hd., 1/4-20 x 3/4" Lg.	3
3670085	Rod, Motor Base Suspension	1	6714127	Screw, Hex Hd., 1/4-20 x 1/2" Lg.	4
3704018	Shaft Butterfly Control	1	6715013	Screw, Soc. Set, 5/16-18 x 3/8" Lg.	1
3704019	Shaft, Control Valve	1	6715020	Screw, Soc. Hd. Cap 5/16-18 x 1" Lg.	1
3716021	Sheave, Impellor Shaft	1	6715032	Screw, Hex Hd., 5/16-18 x 1" Lg.	4
3825001	Valve Butterfly Control	1	6746002	Screw, Self Tapping #8-3/8 Pan	6
6050006	Bag, Paper Vacuum (Qty. of 6)	1	6813023	Spring Tension	1
6077015	Belt 4L 410 "V"	1	6813030	Spring Compression Dudek & Bock	2
6095020	Bushing, Bronze, 3/8 I.D. x 1/2 O.D. x 3/8 Lg.	1	6821135	Switch, Pushbutton, Furnas	1
6095073	Bushing Strain Relief	1	6848001	Vacuum Cleaner, Dust Collector	1
6122003	Clamp, TA716TCRS6, T.A. Mfg. Co.	1	6861101	Washer, Flat 1/4, Stl. Plain	7
6122024	Clamp Hose Goldseal #32-#35, 1-9/16 to 2 1/2"	6	6861200	Washer Spring Lock 5/16, Stl. Plain (Motors Offered)	4
6284087	Fitting Shop Vac #1729, 2 1/2 Plastic Elbow	1	6471301:	115/230, 1 Ph., 145T Frame, 1800 R.P.M., 1 1/2 H.P.	
6430000	Knob Pointer Electra #5-246-3L Kurzkasch	2	6471304:	230/460, 3 Ph., 145T Frame, 1800 R.P.M., 1 1/2 H.P.	

FENCE ASSEMBLY

Part Number	Part Name	Quantity Required	Part Number	Part Name	Quantity Required
3042025	Base, Fence	1	3776015	Support, Fence	1
3055010	Block, Clamp	1	6515007	Nut, Hex Hd. 5/16-18	4
3055014	Block, Table, Fence, Mtg. Hinge	1	6567006	Nut, Hex Hd. Jam 7/16-20 Stl. Plain	1
3064024	Bracket, Support Rod	1	6626001	Pin, Spring 1/8 x 3/8	1
3092003	Clamp, Fence Tilting	1	6626028	Pin, Spring 3/16 x 1/2	1
3195003	Fence, Sander	1	6706035	Screw, Rd. Hd. 6-32 x 1/4	3
3282004	Hinge, Fence	1	6710030	Screw, Flat Hd. #10-24 x 3/8	2
3388001	Key, Fence Base	1	6714004	Screw, Cup Pt. Soc. Set 1/4-20 x 1/4	3
3406018	Knob, 1000-8 x 3/8 Chrome Plated	2	6715022	Screw, Soc. Hd. Cap 5/16-18 x 3/8 Lg.	1
3584015	Pin, Pivot Hinge Lock	1	6715164	Screw, Soc. Set, Cone Pt. 5/16- 18 x 1-1/4 Lg.	4
3604008	Pointer	1	6716030	Screw, Hex Hd. 3/8-16 x 3/4 Lg. Steel Plain	2
3670017	Rod, Degree Tilting	1	6861300	Washer, Lock, Spring, Hel. 3/8 I.D. Reg. Stl. Plain	2
3670018	Rod, Fence Support	1			
3684201	Scale, Degree Tilting Rod	1			
3695026	Screw, Fence Lock	2			
3728003	Sleeve, Fence Tilting	1			
3740002	Spacer, Lock Screw	1			

MITER GAGE ASSEMBLY

Part Number	Part Name	Quantity Required	Part Number	Part Name	Quantity Required
3044051	Bar, Miter Gage	1	6623012	Pin, Dowel 1/4 x 1 Lg.	1
3230002	Gage, Miter	1	6626002	Pin, Spring 1/8 x 3/8 Lg.	1
3406012	Knob, Miter Gage	1	6706094	Screw, Round Hd. Mach. #6-32 x 1/2 Lg.	3
3604211	Pointer, Miter Gage	1	6708001	Screw, Socket Set, Cup Pt. #8-32 x 3/16 Lg.	1
3695220	Screw, Lock	1	6861101	Washer, Flat 1/4	1
3761001	Stop, Miter Gage	1			
6506003	Nut, Hex #6-32, Plated	3			