



Model 812

- Safety
- Installation
- Operation
- Parts Catalog

Part No. PL/OM812
January 1999



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SECTION 1 - INTRODUCTION

MANUAL DESCRIPTION

This manual describes the installation, operation and maintenance of the Spartan Series 812 Horizontal Band Saw. The purpose of the manual is to familiarize the skilled operator with the procedures of operation which will be helpful in taking full advantage of the machine's capability. Operating controls and procedures are presented so the apprentice operator can learn to operate the saw with little outside help. This reduces downtime on the machine and non-productive operator time.

The maintenance instructions include periodic care of the machine to ensure long life and accurate operation of the equipment. In addition, it contains a chart of problems which may come up, their probable cause, and corrective action.

Read this manual and the technical information provided for a thorough understanding of the equipment.

A separate section of this manual contains exploded views of the equipment, which helps to locate and identify mechanical parts. Electrical components are identified on the electrical diagram. When ordering parts, be sure to specify:

1. Machine serial number.
2. Quantity of parts desired.
3. Part number.
4. Part description.

EQUIPMENT DESCRIPTION

The Spartan Series 812 Horizontal Band Saw is capable of performing cutting operations on a variety of round, rectangular, structural and tubular stock.

The basic saw is divided into two sections: the machine base and the blade frame. The machine base supports the blade frame and the saw vise. It contains the coolant tank, coolant pump, electrical control enclosure, feed cylinder and the length gauge. The blade frame contains the bandwheels, band blade, blade gauge drive gear box and motor, adjustable blade guide arms, blade guides, chip brush, blade tensioning system and operator's control station.

SPECIFICATIONS:

Capacity, vertical - 8" (203 mm)

Capacity, horizontal - 12" (305 mm)

Capacity, round - 8" (203 mm)

Blade speeds - 59, 96, 155, 260 fpm; (18, 29, 47, 79 m/min)

Blade size - 1" x .035"x 8'-11"; (25.4 x .89 x 2718 mm)

Blade drive motor - 1 hp (.75 kW), 1800 rpm, 115/230 v., 1 phase

Band wheel - 11" (280 mm) diameter

Vise - 4" (102 mm) high x 10" (254 mm) long

Gauging length - 16" (406 mm)

Coolant tank - 1/2 gallon (1.9 liters)

Coolant pump motor - 31 Watts, 115 v., 1 phase

Table height - 25" (635 mm)

Floor space, length x width - 61" (1550 mm) x 43" (1092 mm)

Height, frame clearance - 60" (1524 mm)

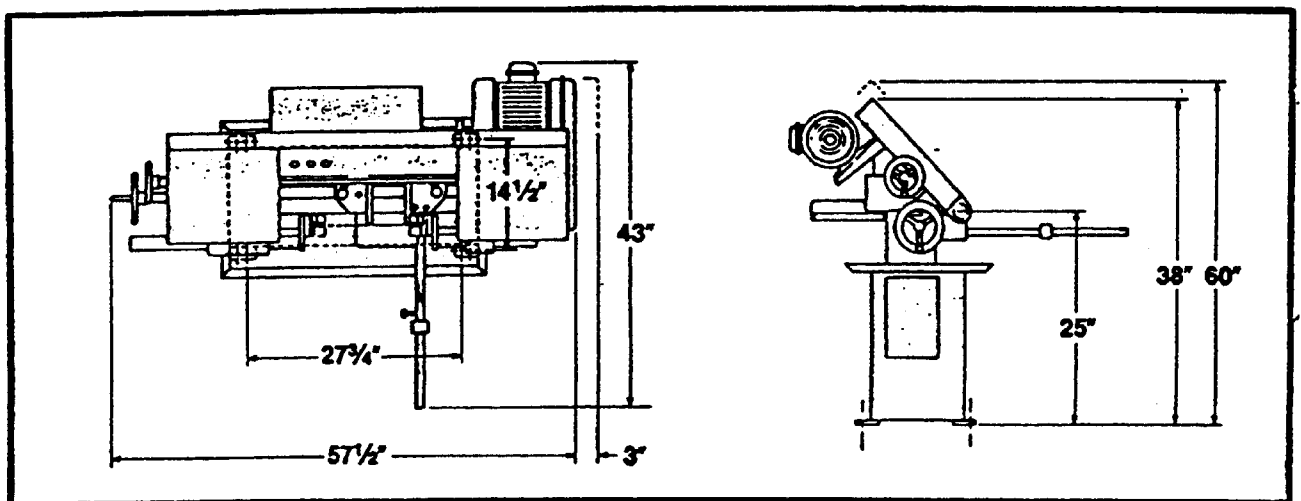


Fig. 1

NOMENCLATURE

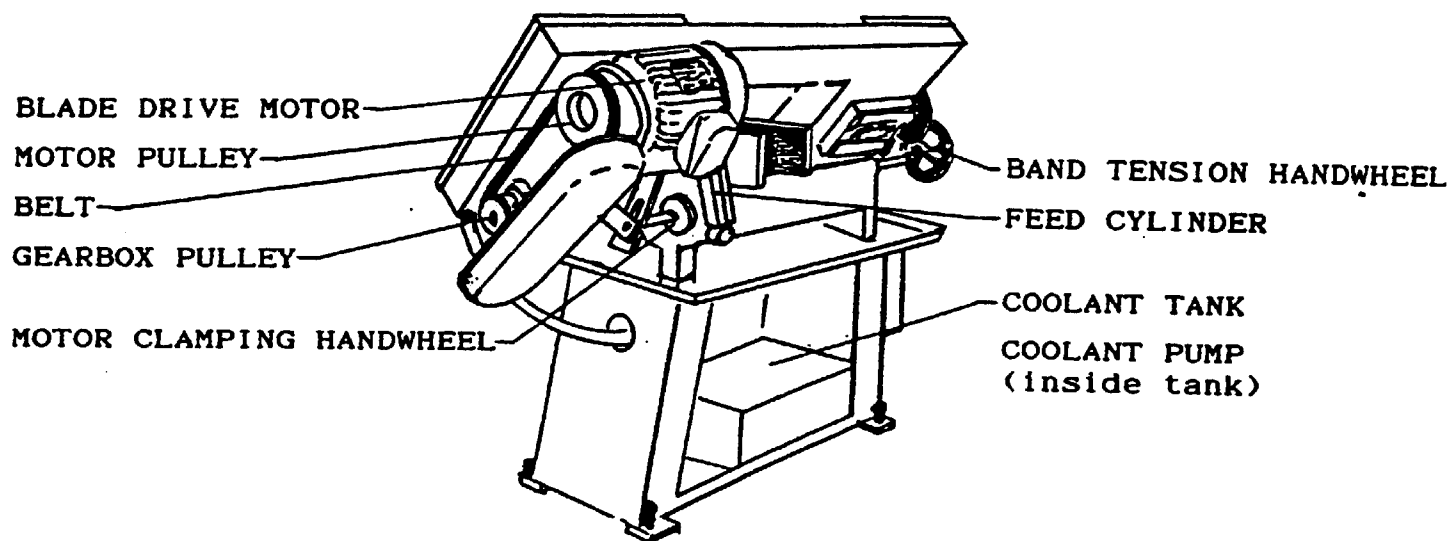
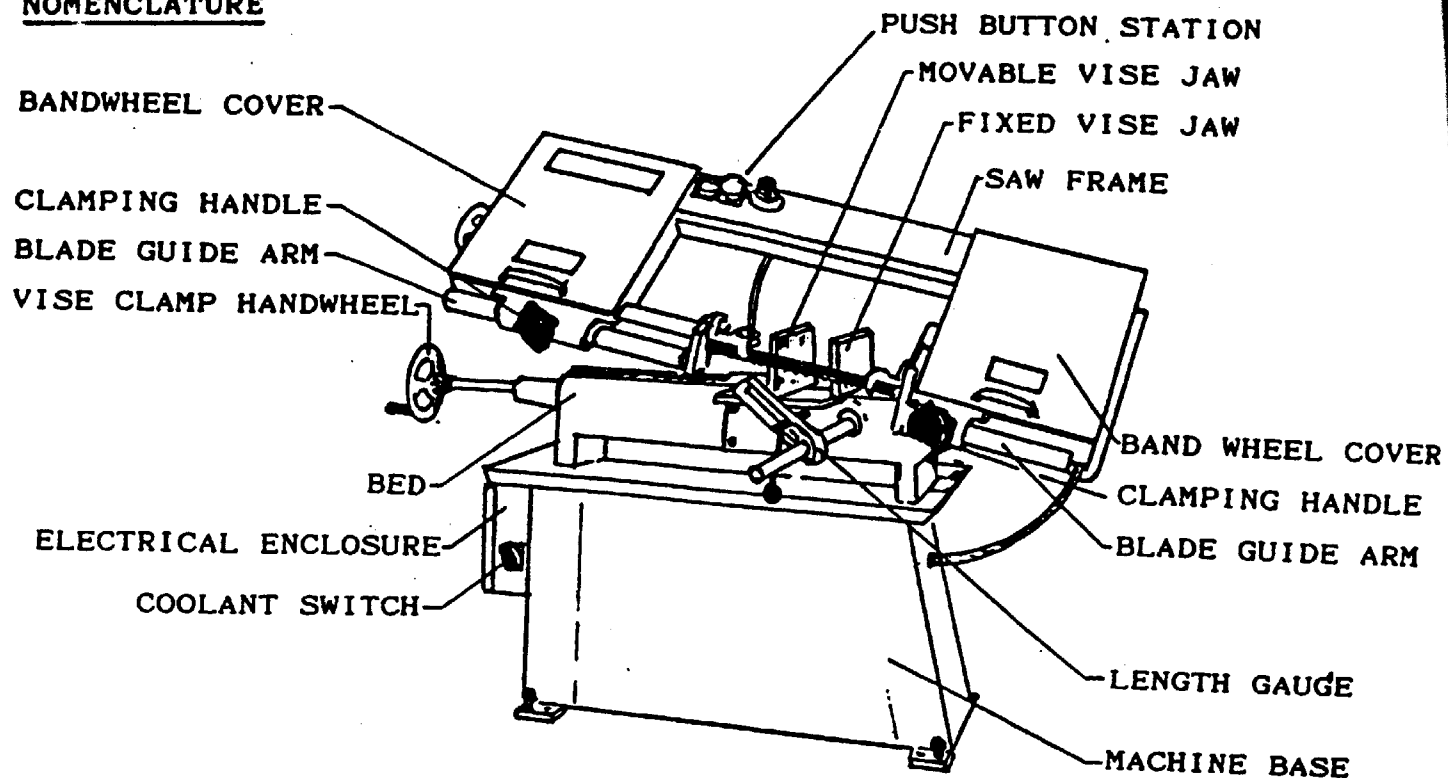


Fig. 2

SECTION 2 - INSTALLATION

HANDLING

The series 812 machine is shipped in a container. It is suggested that the equipment remains on skid until it is in the installation area.

UNPACKING AND CLEANING

After the container has been removed, the machined parts should be thoroughly cleaned. All machined surfaces have been coated with a rust inhibitor prior to shipment. Remove the rust inhibitor with a suitable solvent such as kerosene.

PLACEMENT

A special machine foundation is not required. A concrete floor in good condition is adequate.

For reason of safety and efficiency it is suggested that sufficient illumination be provided so that operator controls and the work area are well lighted.

The work area around the machine should be uncluttered for easy access to all machine components.

ERECTION, LEVELING AND ANCHORING

The basic saw is equipped with four leveling screws and provision is made for four anchors (not included). The anchors should be installed in a concrete floor before proceeding.

1. Locate the saw in position and install anchor screws. Do not tighten.
2. Place a machinist's level on the saw vise and level the saw at right angles; front-to-back and side-to-side.
3. Tighten anchor screws.
4. Check to ensure that the level was not disturbed. Re-level if necessary.

The length gauge has been disassembled and is shipped loose. After rust inhibitor has been thoroughly removed with a suitable solvent such as kerosene, insert the gauge bar into the hole in bed, directly below the fixed vise jaw (see figure 5 on page 10), and tighten the set screw. Slide gauge arm onto the bar and tighten screw 3. Assemble the gauge stop to the gauge arm with enclosed nuts and washers.

ELECTRICAL CONNECTIONS

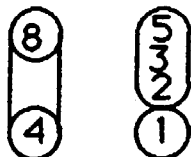
MAIN POWER CONNECTION

Refer to nomenclature (page 3) and electrical diagram (page 18). Provide an entrance hole in the electrical enclosure, and install necessary conduit connector. Bring one phase power line into the enclosure and connect the wires to incoming power terminals, as shown on the connection diagram.

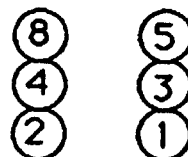
The machine is shipped wired for operation on 220 volt one phase. To change the saw for operation on 110 volt power supply, perform the following steps:

1. Remove the motor connection box cover on the blade drive motor only. Connect the wires as shown below:

220 volts



110 volts

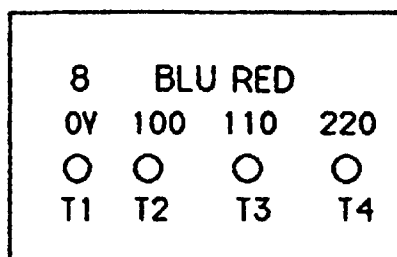
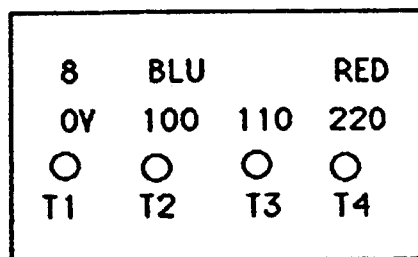


Coolant pump motor operates on 110 volt on both models.

2. Change wires on transformer to proper voltage.

Remove wire from 220 volt terminal and connect it to 110 volt terminal.

3. The overload relay on the Blade drive motor starter MS1 must be adjusted to proper setting. Adjustment dial is set to 10 amperes on 220 volt model. To operate on 110 volt power supply, the dial must be set to 15 ampere setting..



TRANSFORMER CONNECTIONS

Fig. 3

Bulletin No. 812-1
Voltage Conversion
220V to 110V

Machine Model: **Spartan 812**
Bulletin No.: **Bulletin 812-1**
Bulletin Date: **4/98A**

Subject(s) **220 to 110 Voltage Conversion**

The Spartan 812 is shipped wired for operation on 220 volt single phase power. The saw can be converted to operate on 110 volt power by following these directions.

Important: To convert to 110 volts you will need Armstrong-Blum part no. PEH-BSC15, overload relay.

Note: The coolant pump operates on 110 volts regardless of the supply voltage.

DISCONNECT the SAW'S POWER

DANGER

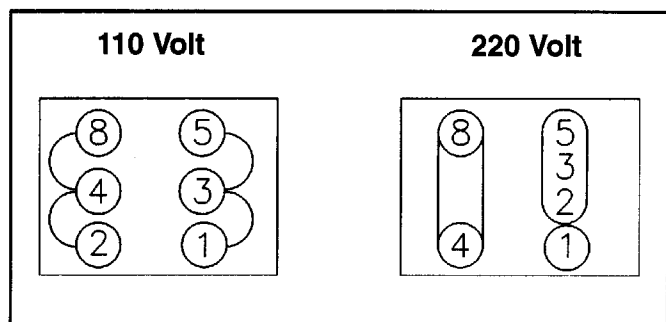


Hazardous Voltage.
Will cause serious injury or death.
Turn off the saw's supply electricity at your facility's circuit breaker before performing this voltage conversion.

1. Disconnect the saw's power supply by turning off the circuit breaker to which the saw is connected.

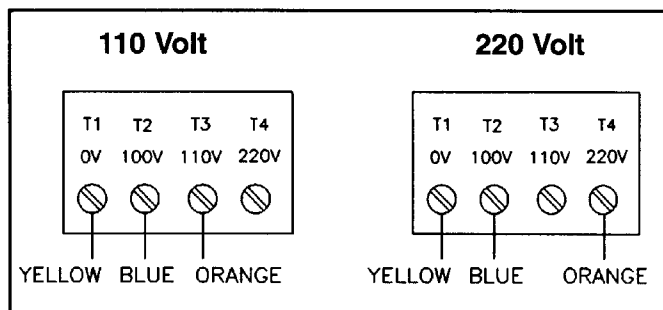
BLADE DRIVE MOTOR

The wires in the blade drive motor junction box must be connected for the desired voltage as shown in the drawings below.



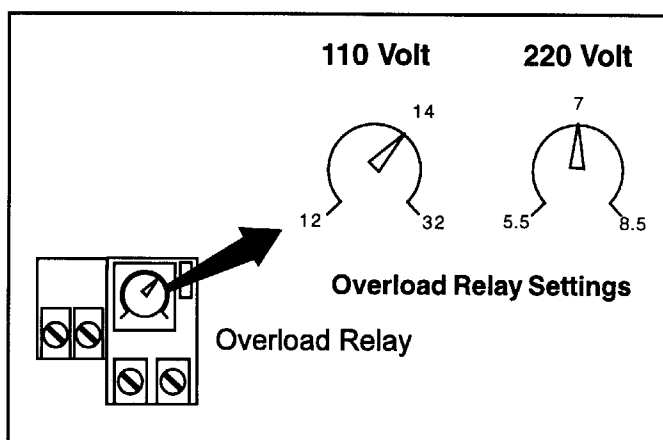
TRANSFORMER

Connect the wires of the transformer, located in the electrical control cabinet, for the desired voltage as shown in the drawing below.



BLADE MOTOR STARTER OVERLOAD

1. Install the 110 volt overload relay (Armstrong-Blum part no. PEH-BSC15).
2. Adjust the setting of the overload relay for the operational voltage of the saw:
110 Volts - Set the overload on 14.
220 Volts - Set the overload on 7.



SECTION 3 - LUBRICATION

Proper lubricants have been applied prior to shipment of the machine. It is a good practice, however, to check for presence of lubricants prior to operation.

LUBRICATION CHART

Location description	Interval	Lubricant
Blade guide arms Clean & apply oil	Monthly	General purpose oil
Frame pivot shaft	Monthly	Lithium base (EP) grease
Blade tension plate and screw Clean & apply grease	Monthly	Lithium base (EP) grease
Gear box	Annually	Mobil 629G or equiv.
Electric motors	As required per manufacturer's recommendations	
Misc. Pivot points, Hinges, Vise slide, rack Clean & apply oil	Quarterly	General purpose oil
Coolant reservoir Drain, clean, refill	Quarterly	

SECTION 4 - CONTROLS DESCRIPTION

- A. Start pushbutton. Depressing this button starts the blade run and coolant pump motors.
- B. Emergency stop pushbutton. Pressing this button stops the entire machine immediately.
- C. Feed pressure control. Turning this control counterclockwise, the feed force of the saw blade increases; clockwise - the feed force decreases.
- D. Coolant ON-OFF switch (located on main electrical enclosure).

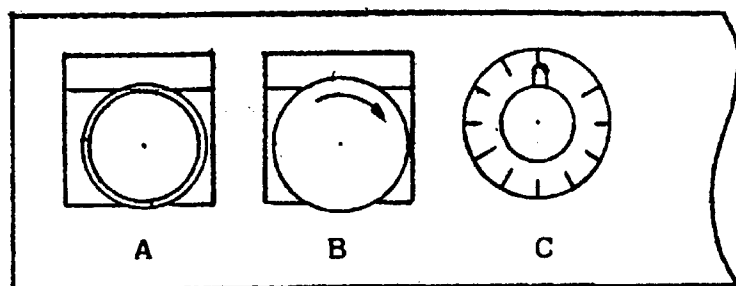
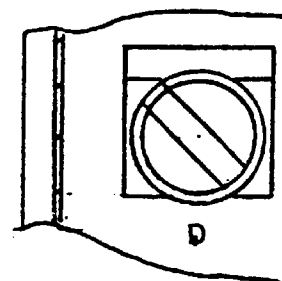


Fig. 4



SECTION 5 - PRE-OPERATIONAL CHECK

ELECTRICAL CHECK

NOTE: Before performing electrical check, be certain that all "initial lubrication" procedures have been performed.

1. If the saw will be operating on 230 volt single phase system, turn on any disconnect device that may have been installed ahead of the electrical enclosure. Jog the start pushbutton, while observing the fan on the blade drive motor. If it is turning, proceed with blade installation.
2. If the saw will operate on 115 volts, turn OFF any disconnect device that may have been installed ahead of the electrical enclosure. Open the enclosure door and check the transformer connections. Make sure, that the incoming 115 volt line is connected to terminals marked 0 and 115 volt. If it is, proceed with blade installation. If it is not, refer to paragraph "Electrical connections".

BLADE INSTALLATION

CAUTION: GLOVES MUST BE WORN WHEN HANDLING BLADE.

Raise the saw frame a few inches. Open both band wheel doors and swing the blade guard at the left guide arm up and out of the way. Disconnect the coolant hose at the left blade guide holder. Release the blade tension by turning the blade tension wheel counterclockwise. Position both blade guides close together.

Unpack and uncoil the blade supplied with the saw. Holding blade in front of the saw, the teeth should be pointing toward the saw, while teeth on the lower strand should be pointing toward the driver wheel. If they do not, turn the blade inside - out.

Lower the blade over the bandwheels, bringing it up against the flanges of the bandwheels.

One guide arm at a time, grasp the blade firmly on each side of the guide, twist the teeth down and bring the back edge of the blade up into the guides with the back edge of the blade against the backup roller. Check again to be certain that the teeth are pointing down-ward and to your right (toward the driver wheel).

With the blade inserted into the guide arms and pushed up against the flanges of the bandwheels, tighten the blade tension handwheel hand tight. Re-connect the coolant tube to the left blade guide arm, and place both blade guide arms in normal cutting position.

Close the wheel covers and start the machine to check that the blade is properly mounted and tensioned.

If the blade is not tracking properly, such as running too far away from the flanges, see the paragraph on "Adjustments" in the Maintenance section.

SECTION 6 - OPERATION

START-UP

NOTE: Before operating the saw, be certain that all "initial lubrication" procedures have been performed.

The outlined procedure should be followed by the operator until he becomes thoroughly acquainted with the operation of the saw.

1. Raise saw frame and turn the blade feed control clockwise, to lock saw frame in up position.
2. Unclamp the vise by turning vise screw handwheel counter-clockwise. Place material into the vise and clamp securely by turning vise handwheel clockwise.
3. For repetitive cuts the gauge stop may be set.
4. Turn the blade feed control counterclockwise, to start blade frame moving downward.

FEED ADJUSTMENT

The blade feed control and feed tension spring are adjusted to

obtain correct saw blade feed. Proper rate of feed is important. Excessive feed can break the blade or stall the saw. Insufficient feed dulls the blade rapidly. The blade feed control regulates the rate at which the blade is lowered into the material being cut. Adjusting the blade feed control provides an infinitely variable feed rate.

When cutting thin wall tubing or structural steel up to 1/16" wall thickness, adjust the blade feed control in the range between 1 and 2, when cutting materials up to 1/8" of wall thickness, set the feed control approximately between 3 and 4 on the dial.

CAUTION: Do not force the saw frame manually while making adjustment or while cutting.

When a new blade is installed, the feed force should be reduced during first few cuts, to "break-in" the blade properly. After this "break-in" period the feed force should be increased to normal. As the blade dulls, the feed force should be increased gradually.

BLADE SPEED SELECTION

Proper blade speed in combination with proper feed force will result in efficient cutting rate and long blade life. In general, blade speed is increased as the machinability of the material increases. The table below will give a rough idea of the relationship between material and blade speed.

For more information, please refer to "MARVEL BLADE SELECTION GUIDE". To obtain the guide, contact MARVEL and your request will receive prompt attention.

BLADE SPEED SELECTION CHART

Material	fpm	m/min
High speed alloy, stainless and heavy crosssection metals	59	18
Tool, stainless and alloy steel, bearing bronzes	96	27
Cast iron, mild steel, hard brass, bronze	155	47
Copper, soft brass, aluminum, other light metals	260	79

BLADE SPEED CHANGE

Blade speed is adjustable in four steps -- 59, 76, 55 and 260 feet per minute (18, 29, 47 and 79 meters per minute).

Blade speed is changed as follows:

1. Open the belt cover.
2. Loosen the motor clamp.
3. Position belt in proper pulley grooves.
4. Apply tension to belt and tighten motor clamp.

NOTE: Belt should deflect about 1/2" under moderate pressure.

5. Close belt cover

SPEED - PULLEY CHART

Speed fpm	Speed m/min	Motor pulley	Gearbox pulley
59	18	smallest	large
96	29	small	medium
55	47	medium	small
260	79	large	smallest

GAUGE STOP SETTING

1. Set screw
2. Depth bar
3. Fastening bolt
4. Stopper bracket
5. Stopper handle
6. Stopper
7. Front end of material

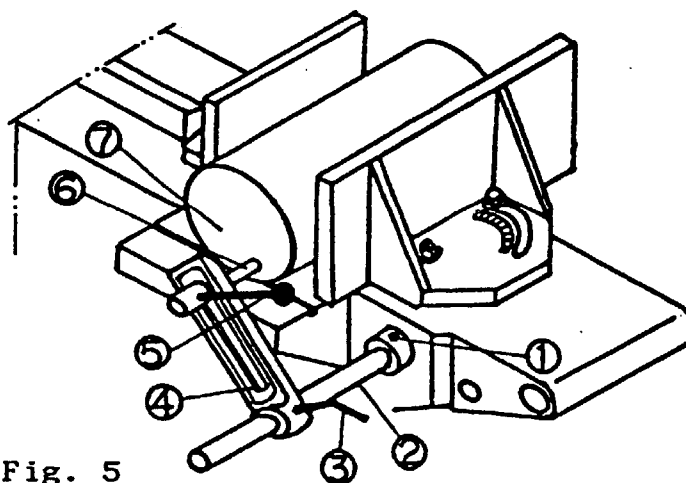


Fig. 5

When the work piece has been positioned and clamped, the gauge stop may be set if repetitive cuts of the same length are required. Loosen the fastening bolt. Slide the stopper against the work piece, tighten the fastening bolt. After each cut slide the work piece against the stopper and clamp the vise.

MITER CUTTING

1. Fixed vise jaw
2. Lock bolt
3. Lock bolt
4. Lock bolt
5. Bed
6. Movable vise jaw

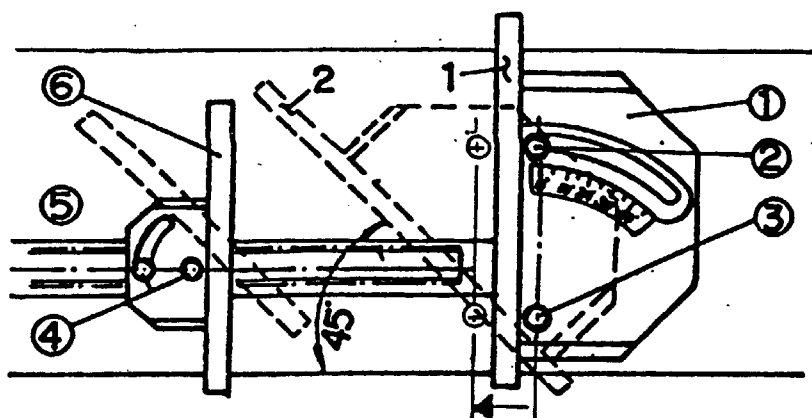


Fig. 6

Vise can be adjusted to hold workpiece at any angle between 0 and 45 degrees for miter cutting. Built-in protractor is for reference only. To set accurate angle, use a machinist's protractor to check the setting.

To position the vise for miter cutting, move the right guide arm all the way to the right. Lift the saw frame. Remove two lock bolts on the fixed vise jaw, move the fixed jaw 1" towards the movable jaw. Install lock bolts in the alternate set of holes. Set angle required, and tighten the two lock bolts. Loosen lock bolt on the movable jaw, set angle to match fixed jaw, and tighten lock bolt. It is suggested, to use this 11" capacity for all work, unless maximum (12") capacity is necessary. When repositioning the vise for 90 degree cutting, set the fixed vise jaw using machinist's square. Also reposition right guide arm as close to the vise jaw as possible. Make sure both blade guide arms clear the vise jaws before starting the cut.

SECTION 7- SUPPLEMENTARY EQUIPMENT

Dead roller conveyor (Code F0510L) 5'- 0" (1524 mm) long. First section for attachment to machine base on loading side. Has 10 rollers 1.9" (48 mm) diameter, spaced 6" (152 mm) apart. Includes mounting hardware, filler plate and two adjustable supports.

Extension dead roller conveyor (Code X0510L) 5'- 0" (1524 mm) long. Used as single or multiple extension of the first section on the loading side. Includes one stand and mounting hardware.

MAINTENANCE

CLEANING - A thorough and regular cleaning of the machine is an essential part of the maintenance. Accumulated chips should be washed or brushed away from machine by suitable means. Do not use compressed air to clean machine.

The following schedule is recommended to ensure long, troublefree service:

Daily - clean away chips from coolant trough as necessary. Clean chips from machine surfaces.

Weekly - perform a general clean up, removing chips from crevices, and removing excess coolant.

Quarterly - clean the coolant reservoir.

Annually - Change gear box oil, check blade guides for excessive wear, check alignment of bandwheels to ensure that the blade is tracking properly. Check oil level in the feed cylinder.

BLADE GUIDE ADJUSTMENT

The blade guides have been properly adjusted at the factory and require no further adjustment except to compensate for wear, or when there is evidence that the blade guides were knocked out of adjustment accidentally.

Loosen the blade guide locking screw. Adjust eccentric bushing to place saw blade 90 degrees in relationship to bed surface.

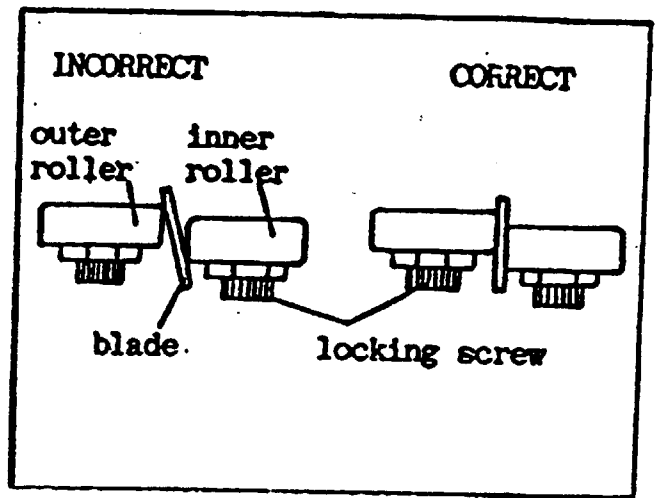
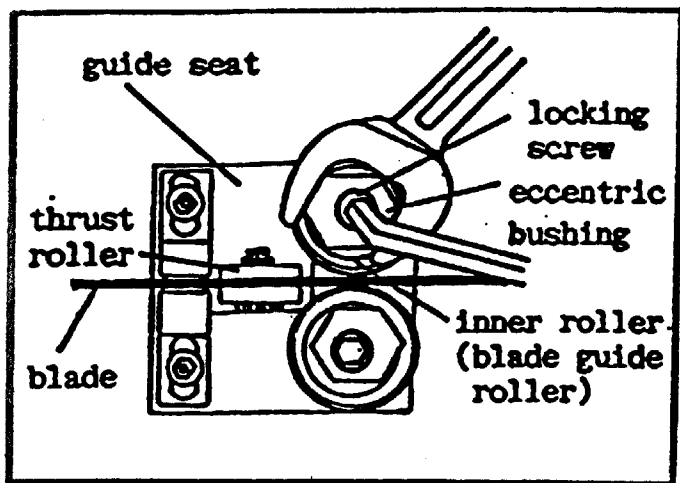
After finishing this adjustment, tighten the locking screws.

CAUTION: The adjusting screw is set at the factory. Do not try adjusting it, unless the machine has lost the accuracy of the cut, caused by a severe blow to the guides. After finishing all adjustments, be certain to double check that the saw blade has not been twisted out of straight line joining two bandwheels.

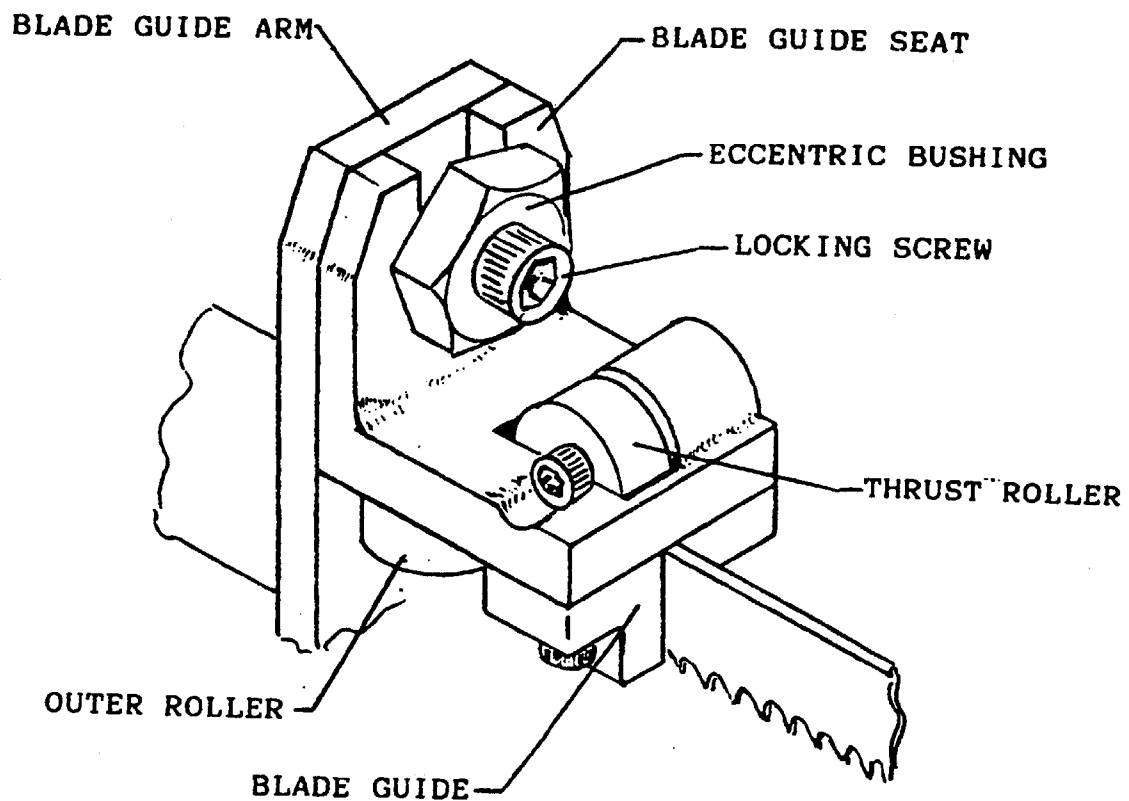
The only other adjustment, that may be necessary, is to compensate the blade guides for wear. If there is evidence that the blade is not retained solidly by the tungsten carbide blade guides, loosen the screws retaining the outer guides, push the guides against the blade and tighten the retaining screws.

BLADE TRACKING ADJUSTMENT

On occasion it may happen, that the blade will not track properly. If blade is tracking too far from the bandwheel flange (proper distance is 1/32"), it may result in blade rubbing on the frame. To remedy this, the driven bandwheel must be tilted in such way, as to cause the blade to track closer to the flange. This is done by adjusting screws located on underside of the tension plate. See Parts catalog sheet 1, part number 16 - tension plate, and part numbers 21 - adjusting screw and 23 - locking screw. If the blade is rubbing on the flange, the opposite is true.



BLADE GUIDE ADJUSTMENT



In very severe cases of misalignment the driving band wheel (together with the gear box must be tilted. There are four adjusting screws, see Parts catalog Sheet 1 - saw bow, part number 28. By means of these adjusting screws the entire gear box may be tilted up or down, as necessary, to bring the blade closer to the flange, or away from it.

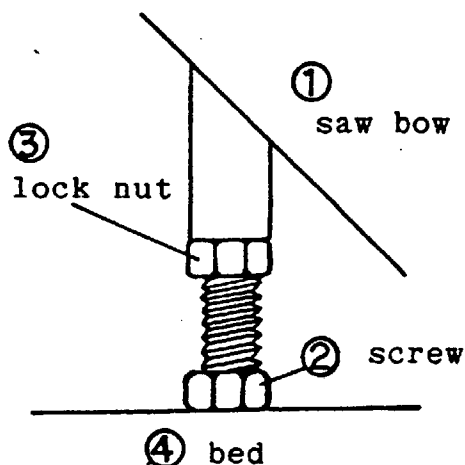
AUTOMATIC SHUT OFF ADJUSTMENT

The motor should stop immediately after the blade has cut through the material. If it does not, the 1LS limit switch and the Horizontal Stop screw must be adjusted.

Raise blade frame and start it feeding downwards slowly, and observe action of the limit switch.

Adjust limit switch so, that motor stops just after the piece is cut through.

Adjust the horizontal stop screw to rest on bed just after the motor was shut off.



TROUBLE SHOOTING CHART - GENERAL.

WARNING -DISCONNECT POWER TO MACHINE BEFORE ATTEMPTING ANY REPAIR OR INSPECTION

TROUBLE	PROBABLE CAUSE	SUGGESTED REMEDY
Motor stalls	Excessive feed pressure	Reduce feed pressure. Refer to Operating Instructions "Adjusting Feed"
	Excessive blade speed	Refer to operating instructions "Speed selection".
	Improper blade	Refer to operating instructions "Blade selection".
Cannot make square cut	Dull blade	Replace blade.
	Guide rollers not aligned properly	Refer to "Adjustments"
	Fixed vise jaw not adjusted properly	Set fixed vise jaw 90 degree to blade
		Reduce feed pressure. Refer to Operating Instructions, "Adjusting feed force"
Increased cutting time	Dull blade	Replace blade
	Insufficient feed force	Increase feed force. Refer to Operating Instructions, "Adjusting feed force".
	Reduced blade speed	Refer to "Speed selection".
Will not cut	Motor running in wrong direction	Reverse rotation of motor
	Blade teeth pointing in wrong direction.	Remove blade, turn it inside out.Reinstall blade.
	Hardened material	Use special alloy blades. (Consult your industrial distributor for recommended blade).

ALWAYS CHECK THAT STOP BUTTON WAS TURNED TO RESET BEFORE STARTING

TROUBLE SHOOTING CHART - MOTOR

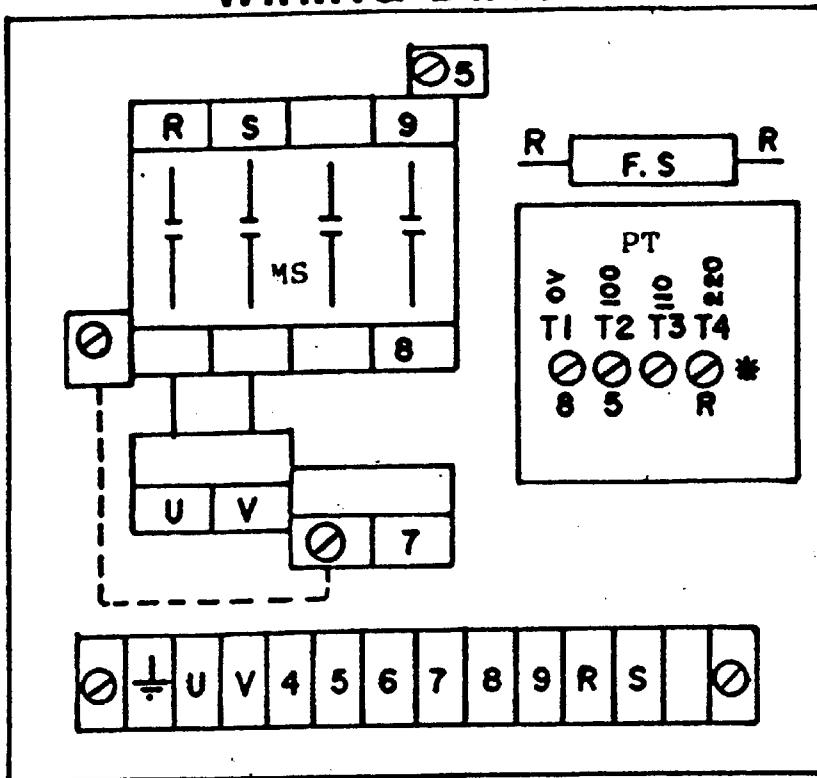
TROUBLE	PROBABLE CAUSE	SUGGESTED REMEDY
Motor will not start	Magnetic switch open, or overload open.	Reset overload by pushing reset button.
	Low voltage	Check power line for proper voltage.
	Open circuit in motor or loose connections.	Inspect all lead terminations on motor for loose or open connections.
Motor will not start blown fuse or circuit breaker	Short circuit in line, cord or plug.	Inspect line, cord and plug for damaged insulation and shorted wire.
	Short circuit in motor or loose connections.	Inspect all lead terminations on motor for shorted or loose terminals or worn insulation.
	Incorrect fuses or circuit breakers in line.	Install correct fuses or circuit breakers.
Motor stalls (blown fuses or tripped circuit breakers).	Short circuit in motor or loose connections.	Inspect terminals in motor for loose or shorted terminals or worn insulation.
	Incorrect fuses or circuit breakers.	Install correct fuses or circuit breakers.
Frequent opening of fuses or circuit breakers	Incorrect fuses or circuit breakers.	Install correct fuses or circuit breakers.

If the trouble cannot be isolated and corrected using the above chart, take the motor to qualified electrician for examination.

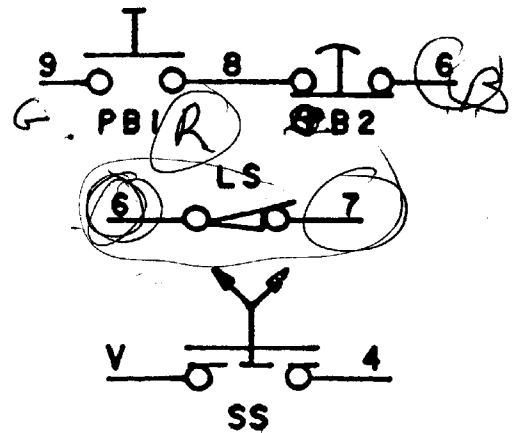
TROUBLE SHOOTING CHART - BLADE

TROUBLE	PROBABLE CAUSE	SUGGESTED REMEDY
Teeth strip- page.	Too coarse blade	Use finer tooth blade.
	Loading of gullets.	Use coarser tooth blade or other cutting lubricant.
	Excessive feed.	Decrease feed.
	Work not secured in vise	Clamp material securely.
Blade breakage	Blade too coarse	Use finer tooth blade.
	misalignment of guides	Adjust blade guides.
	Dry cutting	Use cutting lubricant.
	Excessive blade speed	Use lower speed. See "Speed selection".
	Excessive feed	Reduce feed. See "Adjusting feed force".
	Excessive tension	Reduce blade tension.
Run-out or run-in	Wheels out of line	Adjust wheels.
	Guides out of line	Realign blade guides.
	Excessive feed	Reduce feed.
	Insufficient support of blade	Move blade guides as close to work as possible.
	Material not clamped properly	Clamp material in vise level and securely.
	Improper blade tension	Adjust blade tension.
Blade twisting	Blade not in line with guide bearings	Check bearings for wear and alignment.
	Excessive feed	Decrease feed.
	Blade binding in cut	Decrease feed.
Premature tooth wear	Dry cutting	Use lubricant on all materials except cast iron.
	Blade too coarse	Use finer tooth blade.
	Not enough feed	Increase feed.
	Excessive speed	Decrease speed.

WIRING DIAGRAM

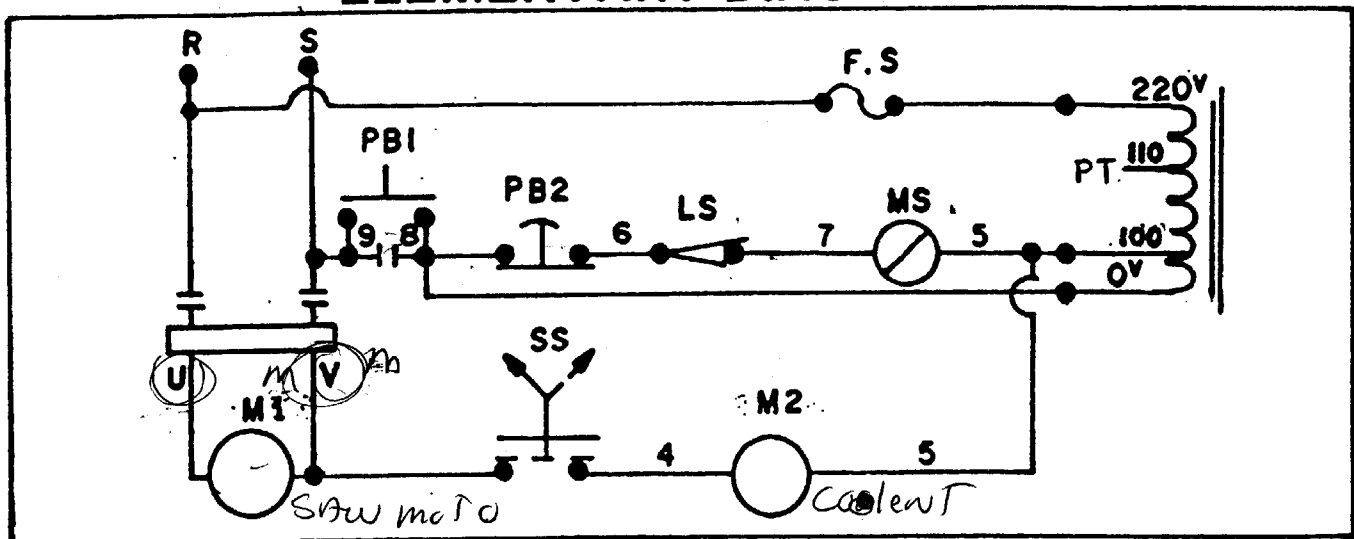


* 220-V ONLY
FOR 110 V SEE
CONVERSION SHEET



Wayne Grant
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ELEMENTARY DIAGRAM



ELECTRICAL COMPONENT LIST

Symbol	Name	Type	Maker	Q'ty	A-B Part No.
M1	Motor	0.75 kW 4P	Teco	1	37-149
M2	Motor	0.1kW 4PCK-101	C-AO	1	37-502
MS	Magnet switch	H016GA 10A-16A	Taian	1	37-503
LS	Limit Switch	D4MC 5000	Omron	1	39-423
SS	Selector switch	ST-302 1a	Shan Ho	1	39-513
PB1	Push button Start	SB-305 1a	Shan Ho	1	37-506
PB2	Push button Stop	SB-305 1b	Shan Ho	1	37-507
FS	Fuse	1 a		1	39-621
PT	Transformer	125 VA		1	37-509

PARTS CATALOG
Sheet 1. SAW BOW

This technical drawing is an exploded view of a saw bow assembly. The main components shown include two large wheels (2 and 5) with spokes, a central shaft (1) with various bearings and bushings (3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78). The diagram also shows a handle (19) and various adjustment components like a spring (27) and a pin (28). The parts are numbered from 1 to 78, with some numbers appearing multiple times for different instances of the same part.

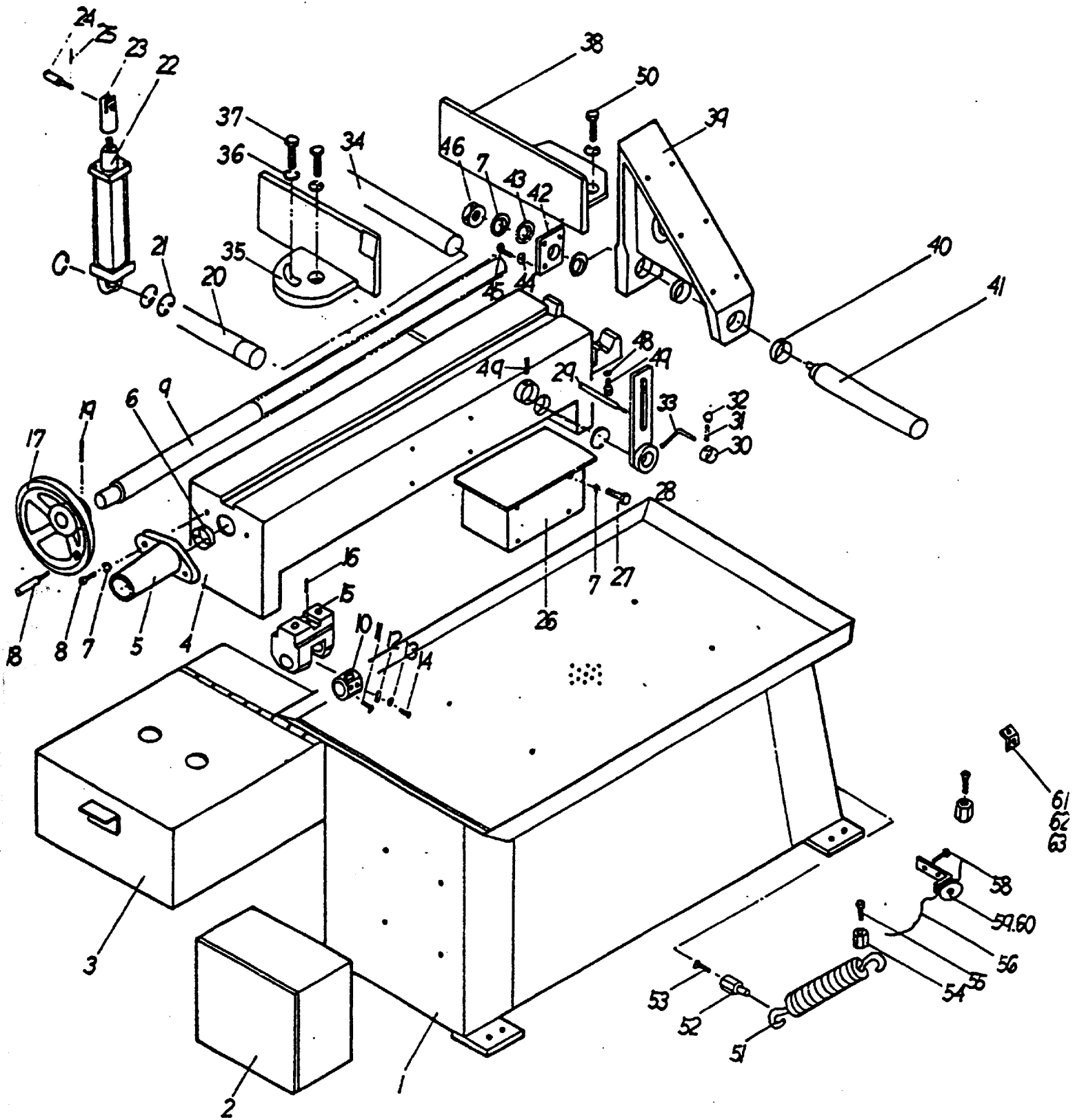
1. SAW BOW

Index No.	Part No.	Part name	Type	Q'ty
1- 1	37-11	saw bow		1
1- 2	37-12	drive wheel		1
1- 3	37-13	washer (A)		1
1- 4	37-14	screw	5/16-18UNCx1/2	1
1- 5	37-15	idle wheel		1
1- 6	37-16	washer (B)		1
1- 7	37-17	screw	1/4-20UNCx1/4	4
1- 8	37-18	bolt		1
1- 9	37-19	washer	1/2"	1
1-10	37-110	Bearing	6205 zz	2
1-11	37-111	bearing washer		1
1-12	37-112	idle wheel shaft		1
1-13	37-113	wheel cover (left)		1
1-14	37-114	spring washer	1/4"	8
1-15	37-115	screw	1/4-20UNCx1/4	8
1-16	37-116	tension plate		1
1-17	37-117	adjusting slide		1
1-18	37-118	guide plate		2
1-19	37-119	spring washer	1/4"	18
1-20	37-120	screw	1/4-20UNCx1/2	6
1-21	37-121	adjusting bolt		3
1-22	37-122	spring washer	5/16"	12
1-23	37-123	screw	5/16-18UNCx1-1/2	3
1-24	37-124	washer	1/2"	1
1-25	37-125	spring washer	1/2"	5

Index No.	Part No.	Part name	Type	Q'ty
1-26	37-126	bolt		1
1-27	37-127	blade tensioning screw		1
1-28	37-128	set screw	5/16-18UNCx3/4	5
1-29	39-164	hand wheel		1
1-30	37-130	collar		1
1-31	37-131	spring pin	03x1"	1
1-32	37-132	knob		2
1-33	37-133	upper blade guide		1
1-34	37-134	slide block		1
1-35	37-135	set screw	1/4-20UNCx1/4	8
1-36	37-136	screw	1/4-20UNCx3/4	
1-37	37-137	screw	5/16-18UNCx3/4	2
1-38	37-138	belt guard		1
1-39	37-139	belt guard bracket		1
1-40	37-140	transmission pulley		1
1-41	37-141	set screw	5/16-18UNCx1/2	2
1-42	37-142	lower blade guide		1
1-43	37-143	slide block		1
1-44	37-144	gear box		1
1-45	37-145	bolt	1/2W-12x3/4"	4
1-46	37-146	motor mount		1
1-47	37-147	lock screw		1
1-48	37-148	nut	5/16-18UNC	5
1-49	37-149	motor	1 HP	1
1-50	37-150	washer	5/16"	4
1-51	37-151	screw	5/16-18UNCx1	4

Index No.	Part No.	Part name	Type	Q'ty
1-52	37-152	screw	3/8-16UNCx1	6
1-53	37-153	spring washer	3/8"	6
1-54	37-154	adjusting plate		1
1-55	37-155	adjusting plate		1
1-56	37-156	screw	5/16-18UNCx1"	4
1-57	37-157	washer	3/8	1
1-58	37-158	shaft		1
1-59	37-159	knob		1
1-60	37-160	key	7x7x1"	1
1-61	37-161	transmission pulley		1
1-62	37-162	v-belt	A-36	1
1-63	37-163	lower blade bracket		1
1-64	37-164	washer	5/16	2
1-65	39-226	bearing	6202 ZZ	4
1-66	37-166	eccentric bushing		2
1-67	37-167	screw	5/16-18UNCx1-3/4	2
1-68	37-168	eccentric bushing		2
1-69	37-169	screw	1/4-20UNCx1	4
1-70	39-221	blade guide		4
1-71	39-225	washer		2
1-72	39-215	shaft		2
1-73	39-214	bearing	608 ZZ	2
1-74	37-174	washer	3/16	2
1-75	37-175	screw	3/16-24UNCx1/4	2
1-76	37-176	key		2
1-77	37-177	upper blade bracket		11
1-78	37-178	flow control manual		1

PARTS CATALOG
Sheet 2. BASE AND BED ASSEMBLY

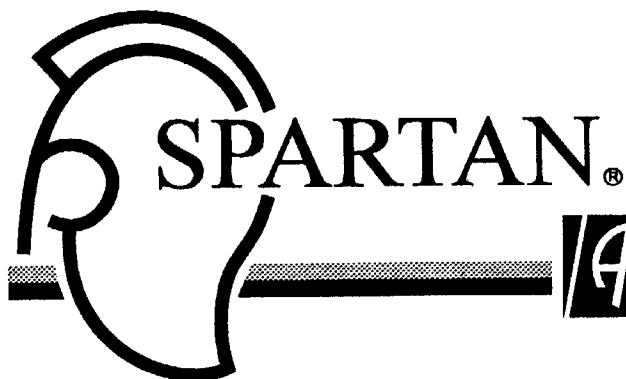


2.BASE AND BED ASSEMBLY

Index No.	Part No.	Part name	Type	Q'ty
2- 1	37-21	base		1
2- 2	37-22	electric box		
2- 3	37-23	coolant tank		1
2- 4	37-24	bed		1
2- 5	37-25	lead screw seat		1
2- 6	37-26	collar		1
2- 7	37-27	spring washer	3/8"	2
2- 8	37-28	screw	3/8-16UNCx1"	2
2- 9	37-29	vise lead screw		1
2-10	37-210	lead screw nut		1
2-11	37-211	screw nut pin		1
2-12	37-212	spring piece		1
2-13	37-213	washer	3/16	1
2-14	37-214	screw	3/16-24UNCx1/4	1
2-15	37-215	vise bracket		1
2-16	37-216	spring pin	06	1
2-17	39-412	hand wheel		1
2-18	39-413	handle		1
2-19	37-219	spring pin	06	1
2-20	37-220	cylinder pivot		1
2-21	37-221	retainer	S22	4
2-22	37-222	cylinder		1
2-23	37-223	piston head		1
2-24	37-224	hinge shaft		1
2-25	37-225	cotter pin		1

Index No.	Part No.	Part name	Type	Q'ty
2-26	37-226	work support		1
2-27	37-227	screw	3/8-16UNCx5/8	4
2-28	37-228	stopper bracket		1
2-29	37-229	stopper		1
2-30	37-230	lock nut		1
2-31	37-231	stopper handle		1
2-32	37-232	plastic ball		1
2-33	37-233	fastening bolt		1
2-34	37-234	depth bar		1
2-35	37-235	movable vise jaw		1
2-36	37-236	washer	1/2"	2
2-37	37-237	bolt	1/2W-12x1-1/2	2
2-38	37-238	fixed vise jaw		1
2-39	37-239	saw bow bracket		1
2-40	37-240	bushing	2820	2
2-41	37-241	pivot		1
2-42	37-242	pivot plate		1
2-43	37-243	T. F. washer		2
2-44	37-244	spring washer	1/4"	3
2-45	37-245	screw	1/4-20UNCx3/4	3
2-46	37-246	nut	3/8-16UNC	1
2-47	37-247	screw	5/16-18UNCx2	2
2-48	37-248	spring washer	5/16	2
2-49	37-249	set screw	5/16-18UNCx1/2	1
2-50	37-250	bolt	1/2-12x1-1/2	2
2-51	37-251	spring		1

Index No.	Part No.	Part name	Type	Q'ty
2-52	37-252	bracket		1
2-53	37-253	screw	5/16-18UNCx3/4	1
2-54	37-254	bracket		2
2-55	37-255	screw	1/4-20UNCx1/2	2
2-56	37-256	wire rope		
2-57	37-257	rope guide wheel		1
2-58	37-258	screw	5/16-18UNCx1	2
2-59	37-259	nut	5/16-18UNC	2
2-60	37-260	spring washer	5/16"	2
2-61	37-261	bracket		1
2-62	37-262	screw	5/16-18UNCx1	1
2-63	37-263	spring washer	5/16"	1



DESIGN IMPROVEMENT BULLETIN



Machine Model: **Series 812** (All machines beginning with S/N 812M-xxxxx)

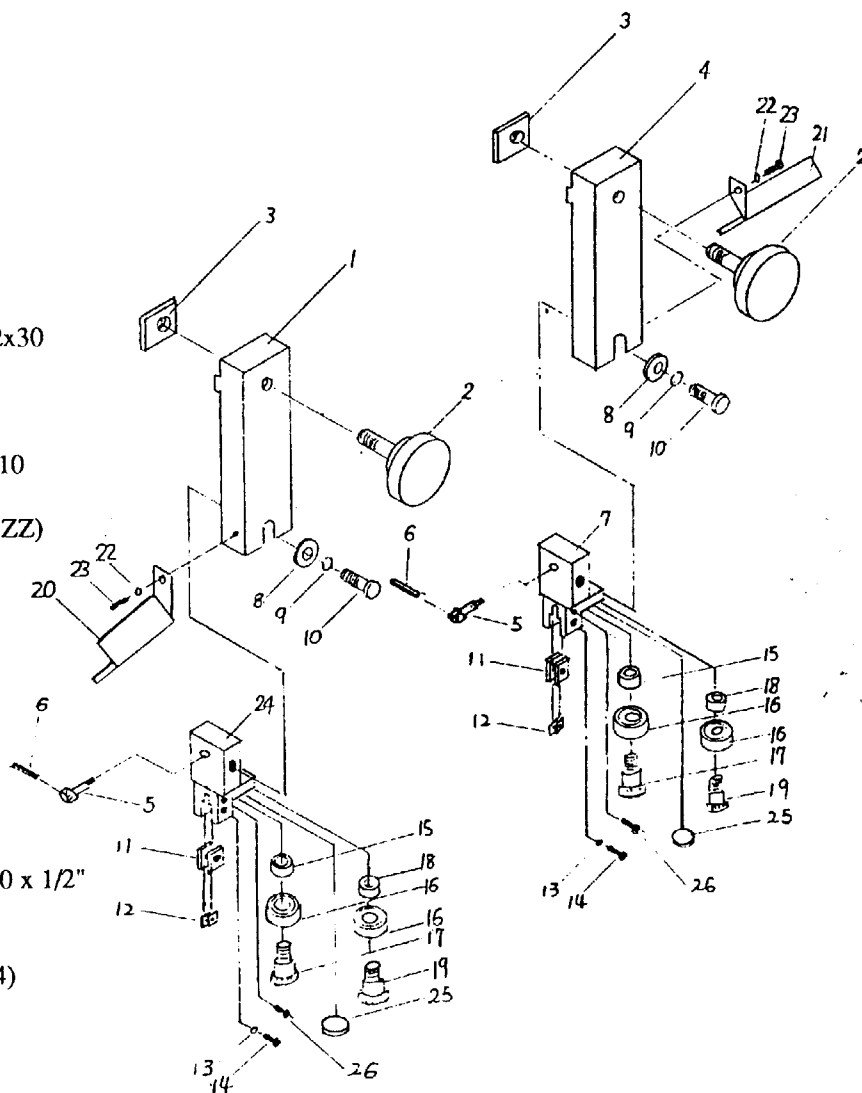
Bulletin No.: **Bulletin 812-2**

Date: **12/95A**

Subject(s) **Blade Guide and Guide Arm Parts List**

Key Part No. Qty. Description

1	37-801	1	Guide Arm (Left)
2	37-802	2	Bolt
3	37-803	2	Clamping Block
4	37-804	1	Guide Arm (Right)
5	37-805	2	Needle Valve
6	37-806	2	Spring Valve
7	37-807	1	Guide Seat (Right)
8		2	Washer M12
9		2	Lock Washer M12
10		2	Hex Head Screw M12x30
11	37-811	4	Carbide Blade Guide
12	37-812	4	Washer
13		4	Lock Washer M4
14		4	Soc.t Hd. Screw M4x10
15	37-815	2	Collar
16	39-226	4	Guide Bearing (6202 ZZ)
17	37-817	2	Roller Pin
18	37-818	2	Collar
19	37-819	2	Roller Pin
20	37-820	1	Blade Guard (Left)
21	37-821	1	Blade Guard (Right)
22		2	Washer 1/4"
23		2	Soc. Hd. Screw 1/4-20 x 1/2"
24	37-824	1	Guide Seat (Left)
25	37-825	2	Carbide Blade Guide
26		2	Screw (1/4-20 x 1-1/4)



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