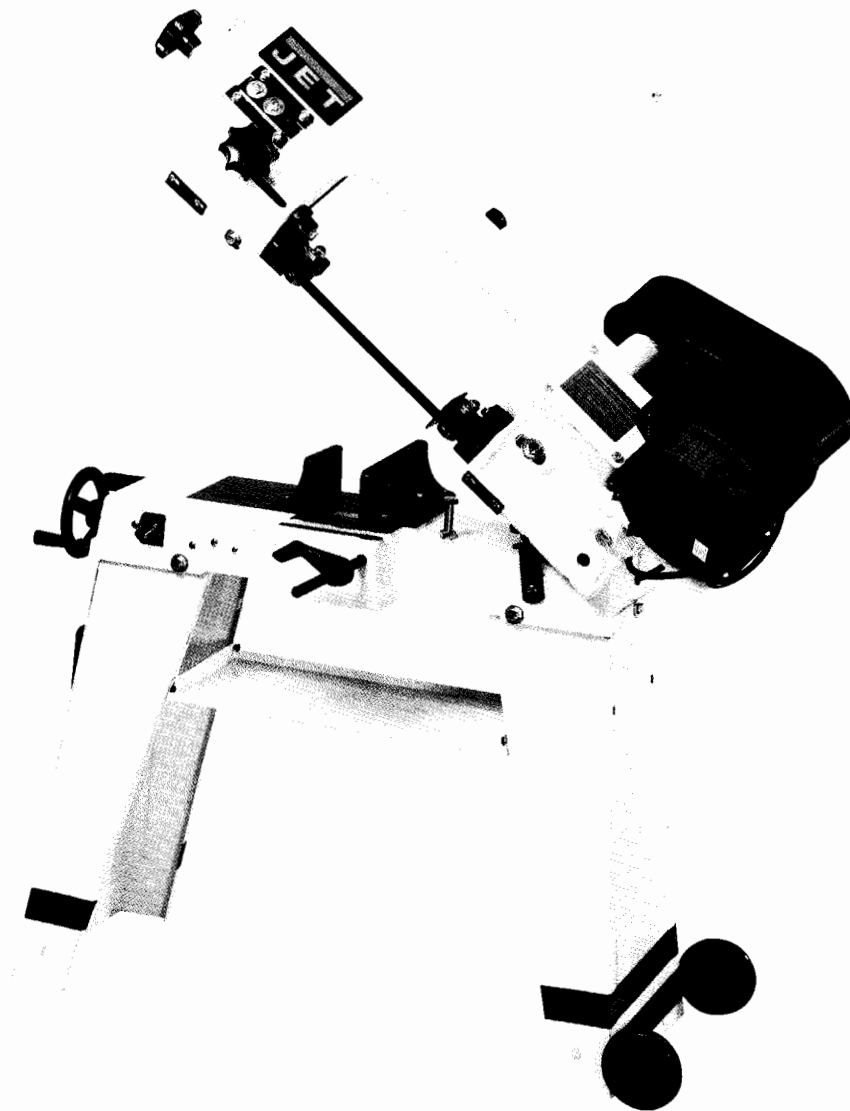


JET

EQUIPMENT & TOOLS

Operator's Manual

HVBS-463 Bandsaw



JET EQUIPMENT & TOOLS, INC.
A WMH - Walter Meier Holding Company

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253-351-6000
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No. M-414456 1/97

Important Information

**1 YEAR
LIMITED WARRANTY**

**JET offers a one year limited
warranty on this product**

REPLACEMENT PARTS

Replacement parts for this tool are available directly from JET Equipment & Tools. To place an order, call 1-800-274-6848. Please have the following information ready:

1. Visa, MasterCard, or Discover Card number
2. Expiration date
3. Part number listed within this manual
4. Shipping address other than a Post Office box.

REPLACEMENT PART WARRANTY

JET Equipment & Tools makes every effort to assure that parts meet high quality and durability standards and warrants to the original retail consumer/purchaser of our parts that each such part(s) to be free from defects in materials and workmanship for a period of thirty (30) days from the date of purchase.

PROOF OF PURCHASE

Please retain your dated sales receipt as proof of purchase to validate the warranty period.

LIMITED TOOL AND EQUIPMENT WARRANTY

JET 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 THIS JET PRODUCT. Warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities or to a lack of maintenance. JET LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD SPECIFIED ABOVE FROM THE DATE THE PRODUCT WAS PURCHASED AT RETAIL. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG THE IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. JET SHALL IN NO EVENT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY OR FOR INCIDENTAL, CONTINGENT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. To take advantage of this warranty, the product or part must be returned for examination, postage prepaid, to an authorized service station designated by our Auburn office. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection discloses a defect, JET 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 such refund. JET will return repaired product or replacement at JET's expense, but if it is determined there is no defect, or that the defect resulted from causes not within the scope of JET's warranty, then the user must bear the cost of storing and returning the product. This warranty gives you specific legal rights, and you have other rights which vary from state to state.

 **WARNING**

- Read and understand the entire instruction manual before operating machine.
- Always wear approved safety glasses/face shields while using this machine.
- Make certain the machine is properly grounded.
- Before operating the machine, remove tie, rings, watches, other jewelry, and roll up sleeves above the elbows. Remove all loose clothing and confine long hair. Do **not** wear gloves.
- Keep the floor around the machine clean and free of scrap material, oil and grease.
- Keep machine guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately.
- Do **not** over reach. Maintain a balanced stance at all times so that you do not fall or lean against blades or other moving parts.
- Make all machine adjustments or maintenance with the machine unplugged from the power source.
- Use only sharp tools. Dull tools are dangerous
- Replace warning labels if they become obscured or removed.
- Make certain the motor switch is in the OFF position before connecting the machine to the power supply.
- Give your work undivided attention. Looking around, carrying on a conversation, and "horse-play" are careless acts that can result in serious injury.
- Keep visitors a safe distance from the work area.
- Use recommended accessories; improper accessories may be hazardous.
- Make a habit of checking to see that keys and adjusting wrenches are removed before turning on the machine.
- Never attempt any operation or adjustment if the procedure is not understood.
- Keep fingers away from the blade when the machine is running.
- Never hand hold material with the saw in the horizontal position. Always use the vise and clamp it securely.
- Keep belt guard and wheel covers in place and in working order.
- Never force the cutting action.
- Do not attempt to adjust or remove tools during operation.
- Always provide adequate support for long and heavy material.
- Always use identical replacement parts when servicing.
- Read and understand all warnings posted on the machine.
- This manual is intended to familiarize you with the technical aspects of this bandsaw. It is not, nor was it intended to be, a training manual.
- This machine is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper safe use of bandsaws, do not use this machine until proper training and knowledge has been obtained.
- Failure to comply with all of these warnings may cause serious injury.

Specifications:**HVBS-463**

Stock Number.....	414456
Horizontal Capacity:	
Round @ 90°	4"
Round @ 45°	3"
Rectangle @ 90°	4" x 6"
Rectangle @ 45°	4" x 3"
Throat Depth	5"
Work Table Size	9-5/8" x 9-1/2"
Vise Swivels	45°
Blade Size	1/2" x 0.025" x 64-1/2"
Blade Wheel Diameter	7-3/8"
Speeds	65, 120, 200 SFPM
Height - Vertical	54"
Height - Horizontal	37"
Length	42-1/2"
Width	21-1/4"
Motor (UL listed).....	1/2 HP, 1 Ph, 115/230V, prewired 115V
Motor Frame.....	NEMA 56
Net Weight (approx.)	135 lbs.
Shipping (approx.)	146 lbs.

Unpacking and Clean-Up

Note: Read and understand the entire manual before attempting setup or operation.

1. Finish removing all contents from the shipping carton.
2. Inspect contents for shipping damage and report any damage to your distributor.
3. Wipe bed and vise assembly with clean cloth to remove excess oil used as a rust preventative.
4. Do not discard any packing material until saw has been assembled and is running properly.

Tools Supplied for Assembly

Hex Socket Wrench

Tools Required for Assembly

#2 Cross Point Screwdriver
6-8" Adjustable Wrench or Combination Wrench Set
Pliers - Regular or Needle Nose

Assembly

1. Attach shelf to stand legs using carriage bolts, lock washers, and nuts supplied. Use third set of holes from the top of the stand leg.
2. Attach wheel assembly to stand leg with two hex cap bolts, washers, and nuts.
3. Put handle through holes in stand leg opposite the wheel assembly and secure with split pins.
4. Carefully turn bed and motor assembly over on its side on a protected surface.
5. Place stand into bed bottom. Secure stand to bed with six hex cap bolts, washers, and nuts.
6. Carefully lift unit onto stand feet. Machine should appear as in Figure 1.
7. Slide pulley cover around motor shaft and worm gear shaft and fasten to body with two hex cap screws and washers (A, Fig. 2).

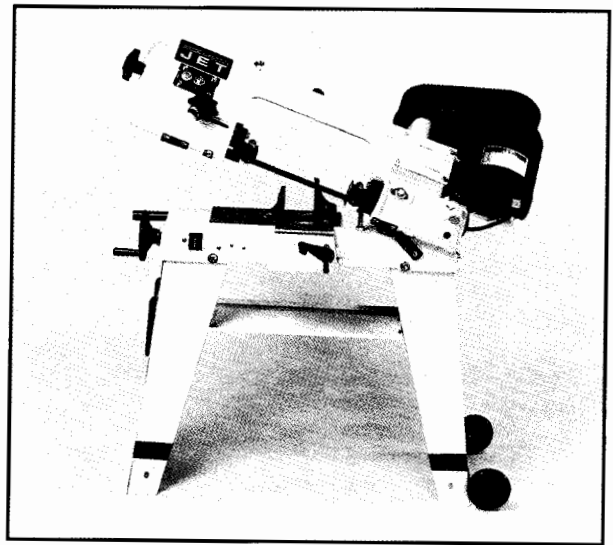


Fig. 1

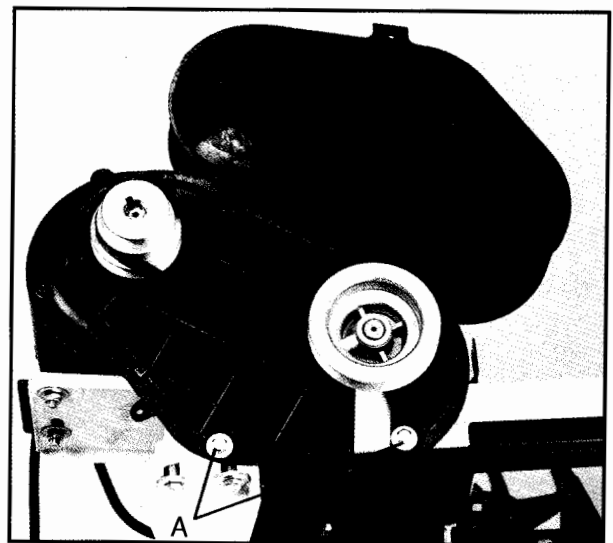


Fig. 2

8. Loosen motor plate tensioning bolt (A, Fig. 3) fully. Lift motor with one hand while the other hand places V-belt on both pulleys. Carefully let motor return to its original position.
9. Tension belt by tightening bolt (A, Fig. 3) until finger pressure on the belt between the two pulleys causes approximately 1/2" deflection. Close pulley cover.
10. Insert stop rod (A, Fig. 4) into bed and tighten set screw. Slide stock stop (B, Fig. 4) onto rod and tighten set screw to hold in place.
11. Slide handwheel onto shaft and secure by tightening set screw. Make sure set screw seats on flat portion of shaft.

Vertical Cutting Plate Assembly

Note: These steps are only necessary if using the bandsaw in the vertical mode.

⚠ WARNING

Disconnect the bandsaw from the power source before making any repairs or adjustments! Failure to comply may cause serious injury!

1. Disconnect the bandsaw from the power source.
2. Raise the arm to the vertical position and lock in place with lever.
3. Loosen bolt (A, Fig. 5) and insert bracket (B, Fig. 5). Tighten bolt (A, Fig. 5) just enough to hold the bracket in place.
4. Remove two screws (C, Fig. 5) and plate (D, Fig. 5).
5. Guide blade through slot in table and fasten table with two screws.
6. Fasten support bracket to underside of table using screw and nut. See Figure 6.
7. Tighten bolt (A, Fig 5).

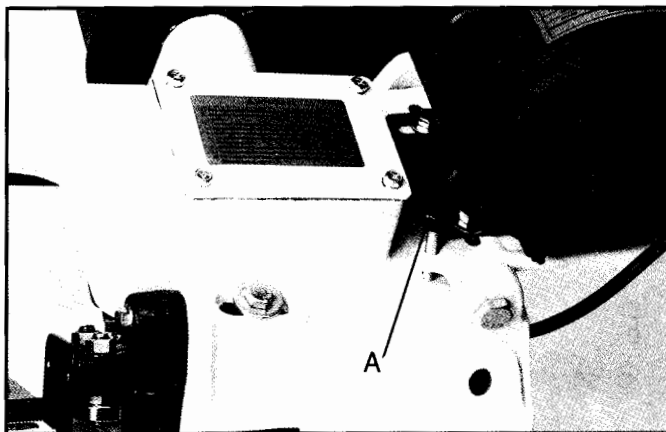


Fig. 3

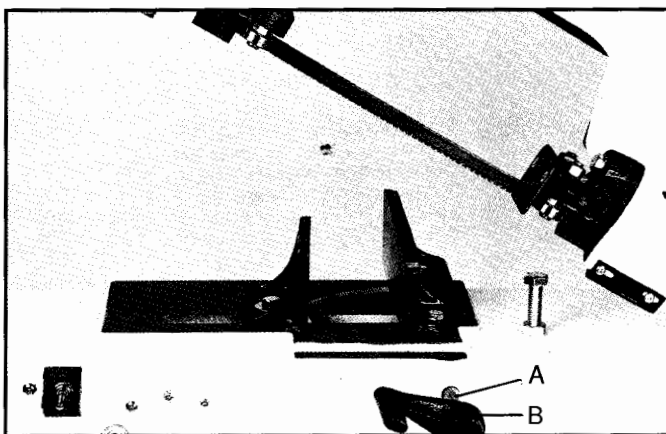


Fig. 4

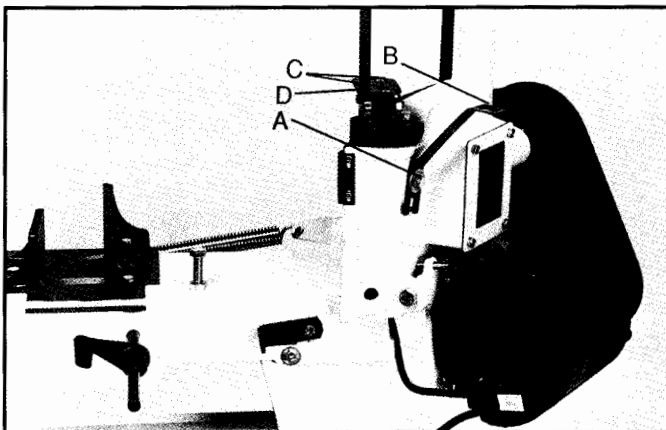


Fig. 5

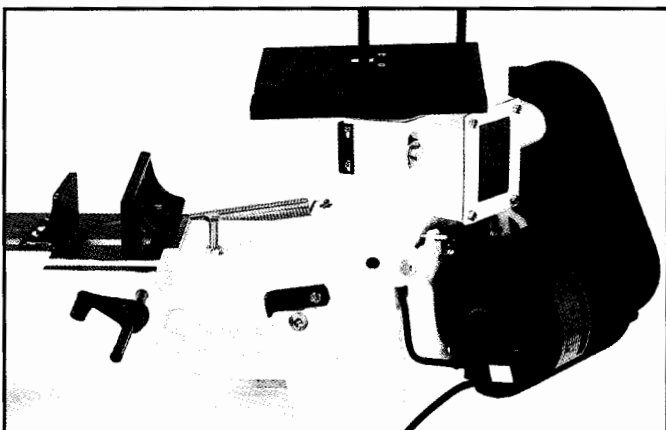


Fig. 6

Electrical Connections

⚠ WARNING

All electrical connections must be completed by a qualified electrician. Failure to comply may cause serious injury!

The HVBS-463 bandsaw is rated at 115/230V and comes from the factory prewired 115V.

To switch to 230V operation, following the wiring diagram found on the inside of the motor junction box. The plug on the end will have to be replaced with a plug that is rated at 230V.

This bandsaw is designed for use on a circuit with an outlet that looks like (A) in Figure 7. The bandsaw has a grounding prong as illustrated in (B). A temporary adapter (C) may be used to connect the plug to a two pole receptacle (D) if a properly grounded outlet is not available. The temporary adapter should only be used until a properly grounded outlet can be installed by a qualified electrician. The green colored lug must be securely fastened to the cover plate screw.

Before hooking up to the power source, be sure the switch is in the off position.

Changing Blade Speed

1. **Disconnect the machine from the power source.**
2. Place saw arm in the horizontal position.
3. Loosen motor plate tensioning bolt fully.
4. Open pulley cover. Lift motor with one hand while placing the belt on the desired pulley combination.
5. Carefully lower motor and re-tension belt by tightening motor plate tensioning bolt.
6. Close belt cover and connect to power source.

The general rule for band saw blade speed is the harder the material being cut, the slower the blade speed. Reference figure 8 for a guide to blade speed for a type of material being cut.

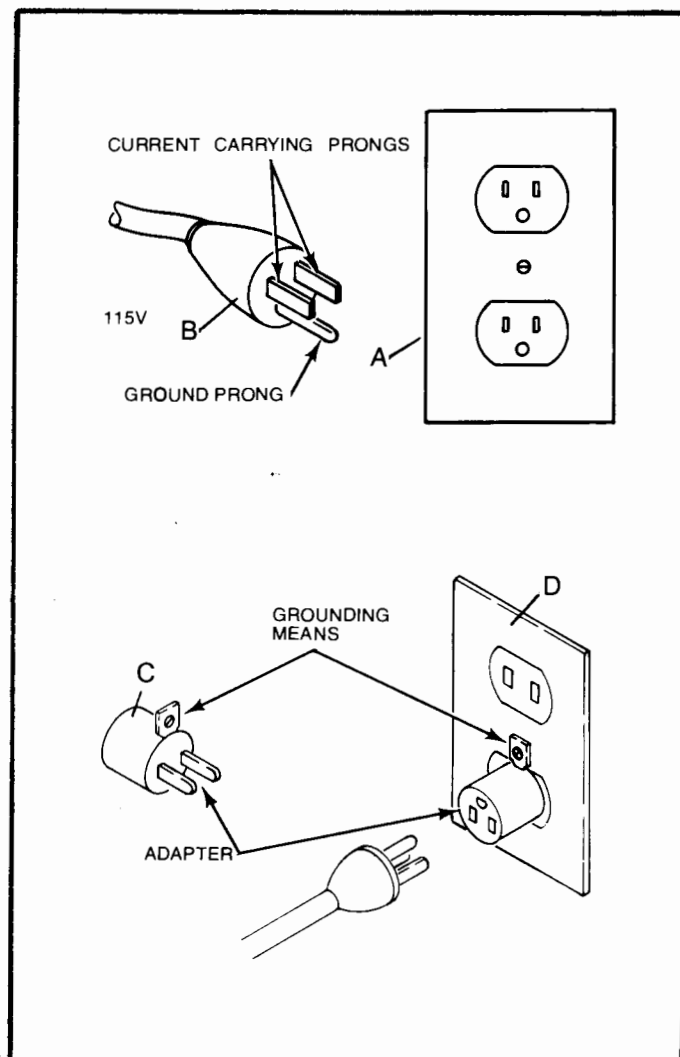


Fig. 7

Material	Speed (SFM)		
	60HZ	Motor Pulley	Saw Pulley
Tool, Stainless or Alloy Steel, Bearing Bronzes	65 FPM	Small	Large
Mild Steel, Hard Brass or Bronze	120 FPM	Medium	Medium
Soft Brass, Aluminum other light materials	200 FPM	Large	Small

Fig. 8

Adjusting Blade Guides

1. **Disconnect machine from the power source.**
2. Loosen knob (A, Fig. 9). Slide blade guide assembly as close as possible without interference to the material being cut.
3. Repeat for other blade guide assembly.
4. Tighten bolt and knob and reconnect to the power source.

Adjusting Blade Tension

1. **Disconnect machine from the power source.**
2. Open blade cover and observe the position of the blade on the wheel. If the blade is not next to the wheel flange, adjust blade tracking following the steps under "Adjusting Blade Tracking".
3. If the blade is next to the wheel flange, loosen the blade guide assembly lock knobs (A - Fig. 10) and slide the blade guide assemblies as far apart as possible. Lock in place.
4. Depress blade. Finger pressure should cause approximately .004" deflection. Turn blade tension knob (B) until the proper tension is achieved.
5. Set blade guides back to the position for the material being cut.
6. Connect saw to the power source.

Changing Blades

1. Disconnect machine from the power source.
2. Raise the saw arm to the vertical position and lock in place with lock lever.
3. Open blade cover by loosening lock knob.
4. Remove red blade guards by removing two screws. **Warning: It is essential these two guards be installed after the new blade has been fitted. Failure to comply may cause serious injury!**

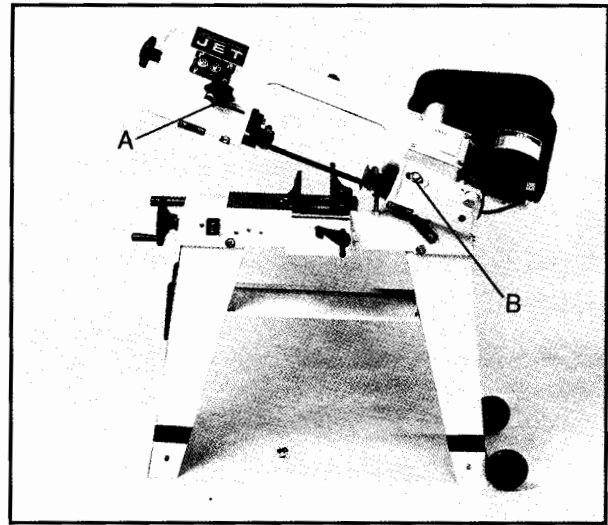


Fig. 9

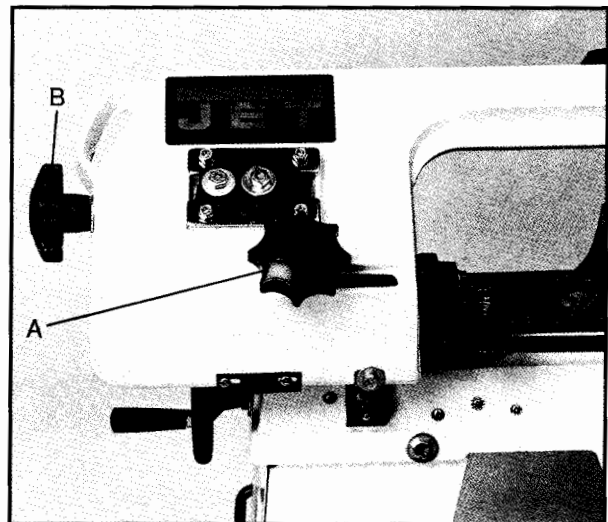


Fig. 10

5. Release tension on the blade by turning tensioning knob and remove from both wheels.
6. Place new blade between the blade guide assemblies and around each wheel. Make sure blade teeth are pointing in the proper direction. Tension enough to hold in place.
7. Install red blade guards by holding in place with screws.
8. Tension blade fully and connect saw to power source.
9. Place two to three drops of light weight oil on the blade.
10. Connect machine to the power source.
11. Run saw and make sure blade is tracking properly.

As a general rule, the thinner the material to be cut, the more teeth per inch on the blade. A minimum of three teeth should be in contact with the material at all times during the cut. If the teeth straddle the material, severe damage can result to the material and the blade.

Adjusting Blade Guide Bearings

1. **Disconnect machine from the power source.**
2. Loosen bolt (A, Fig. 11) and adjust assembly so that back roller bearing is approximately .002" - .003" from the back of the blade. Tighten bolt.
3. Loosen nut (B, Fig. 11) and turn nut (C, Fig. 11) to adjust eccentric bearing to a clearance of .001". Tighten nut (B, Fig. 11) to lock.
4. Connect machine to power source.

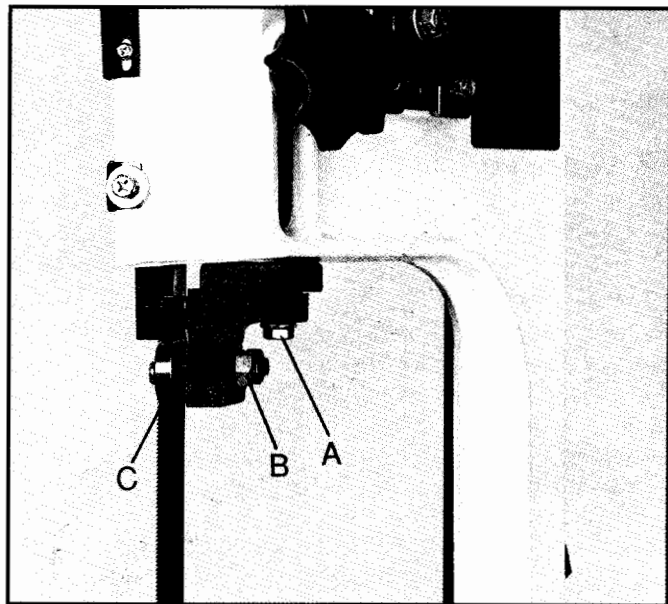


Fig. 11

Adjusting Blade Tracking

⚠ WARNING

Blade tracking adjustment requires running the saw with the back cover open! This adjustment must be completed by qualified persons only! Failure to comply may cause serious injury!

Blade tracking has been set at the factory and should not need adjustment. If blade tracking needs to be adjusted:

1. Move saw arm to the vertical position and lock in place with the lock lever.
2. Confirm that blade tension is set properly. To adjust, see section titled " Adjusting Blade Tension".
3. Open back cover by loosening lock screw.
4. Run saw and observe blade. Blade should run next to but not tightly against wheel flange.
5. Loosen bolts (A, Fig. 12).
6. Turn set screw (B, Fig. 12) while observing blade tracking on wheel. Turn set screw clockwise to track closer to wheel flange. Turn set screw counter-clockwise to track away from the wheel flange.
7. Once tracking is set, tighten bolts (A, Fig. 12).

Adjusting Feed Pressure

1. Turn handle (A, Fig. 13) clockwise to increase cutting pressure and counter-clockwise to decrease cutting pressure.

A good indication of proper feed pressure is the color and shape of the cutting chips. If the chips are thin or powdered, increase the feed pressure. If the chips are burned and heavy, decrease the feed pressure. If they are still burned and heavy, reduce the blade speed. Optimum feed pressure has been set when the chips are curled, silvery, and warm.

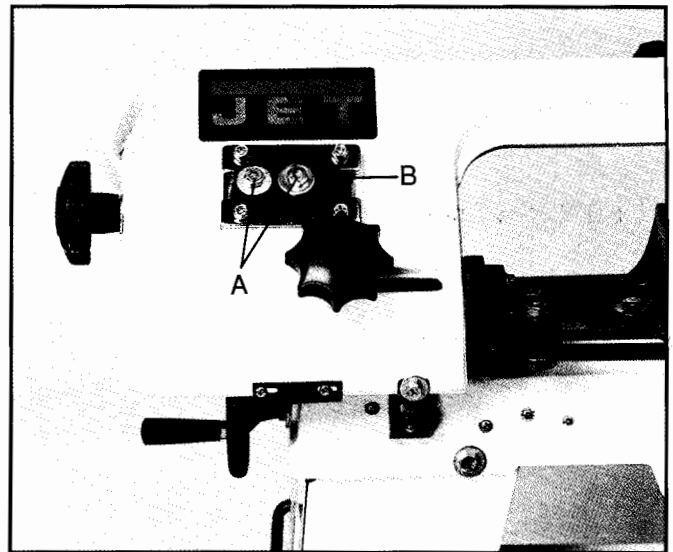


Fig. 12

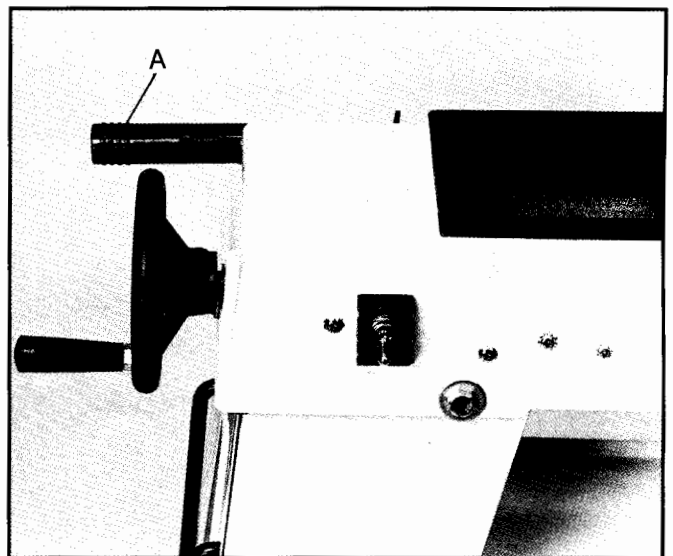


Fig. 13

Adjusting Automatic Shut-Off

The saw should stop after the cut has been completed:

- If the saw completes the cut and continues to run, adjust the stop tip (A, Fig. 14) down.
- If the saw shuts off before the cut is complete, adjust the stop tip (A, Fig. 14) up.
- If the saw stops cutting but continues to run, adjust the stop bolt (B, Fig. 14) down.

The saw is properly adjusted when the saw shuts off just after the blade has finished the cut.

Lubrication

Ball bearings on the blade guide assemblies and the blade wheels are permanently sealed and require no lubrication.

Lubricate the vise lead screw as needed with #2 tube grease.

Gear box oil will have to be changed after 90 days of operation. There after, change every six months.

To change the gear box oil:

1. **Disconnect machine from the power source.**
2. Place saw arm in the horizontal position.
3. Remove screws (A, Fig. 15) from the gear box and remove cover plate and gasket.
4. Hold a container under the lower right corner of the gear box with one hand while slowly raising the saw arm with the other. Drain completely.
5. Place arm in the horizontal position. Wipe out remaining oil with a rag.
6. Fill gear box with approximately 1/2 pint of 90 weight gear oil.
7. Replace gasket and cover. Fasten cover with bolts.

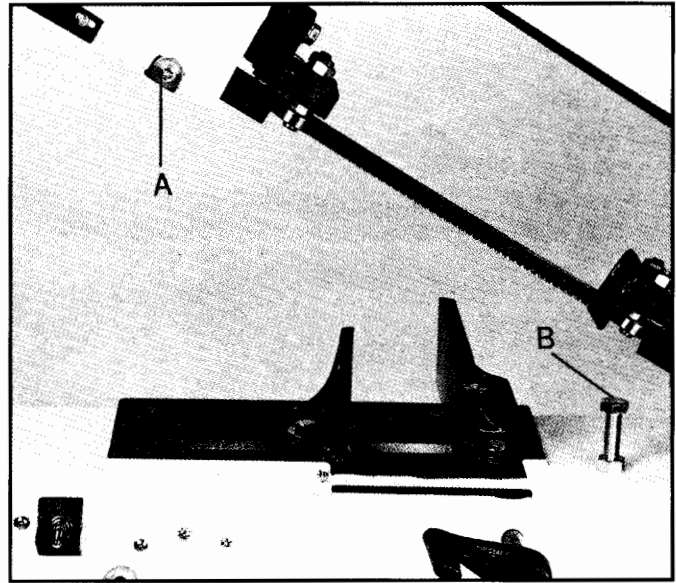


Fig. 14

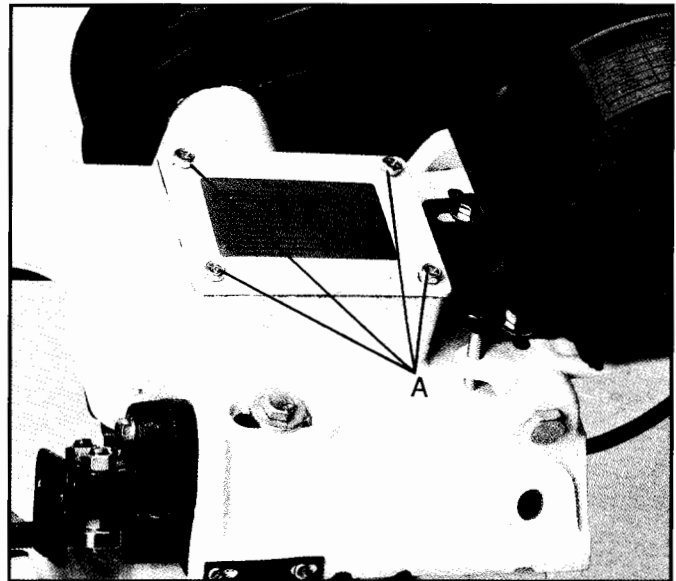
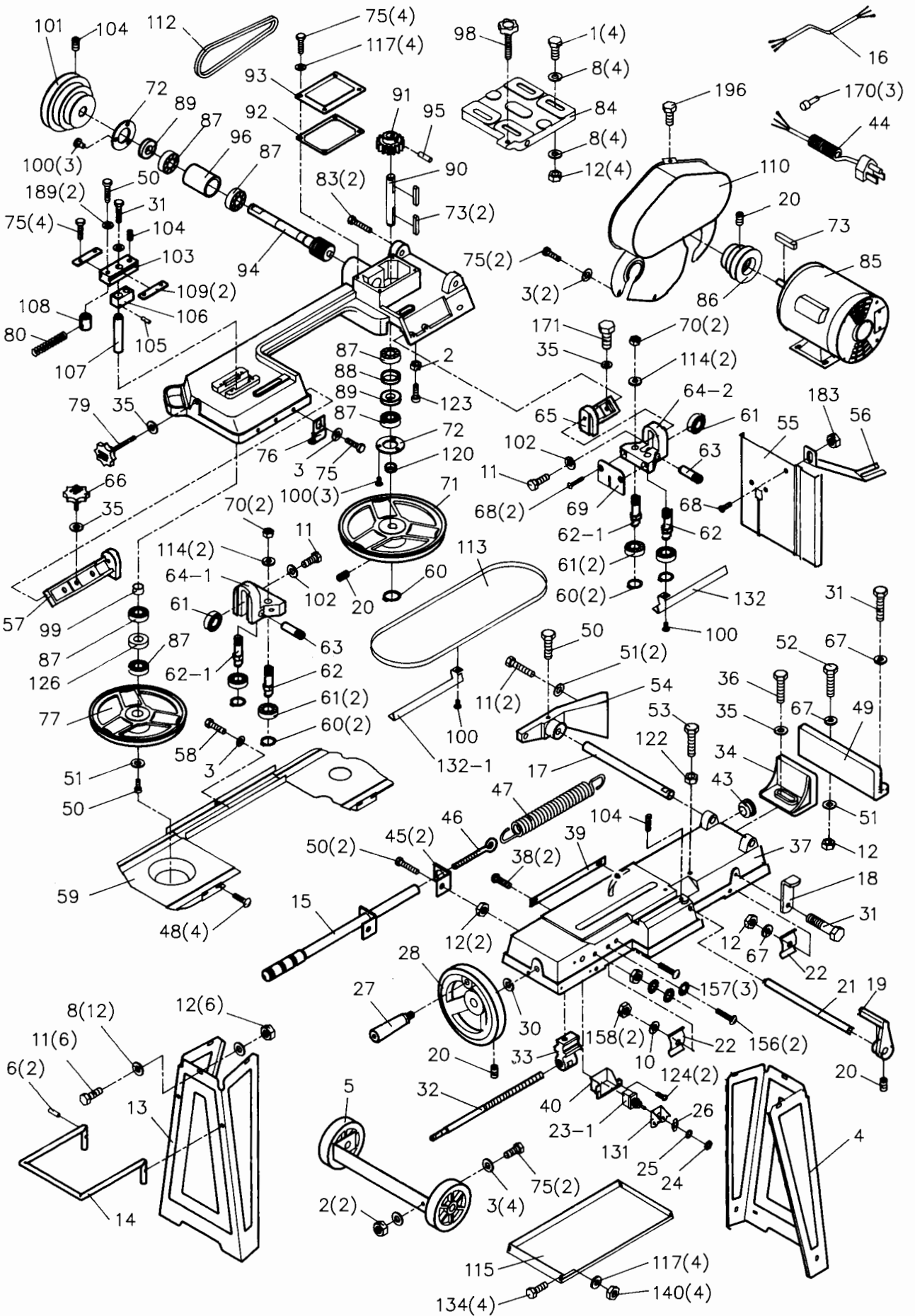


Fig. 15



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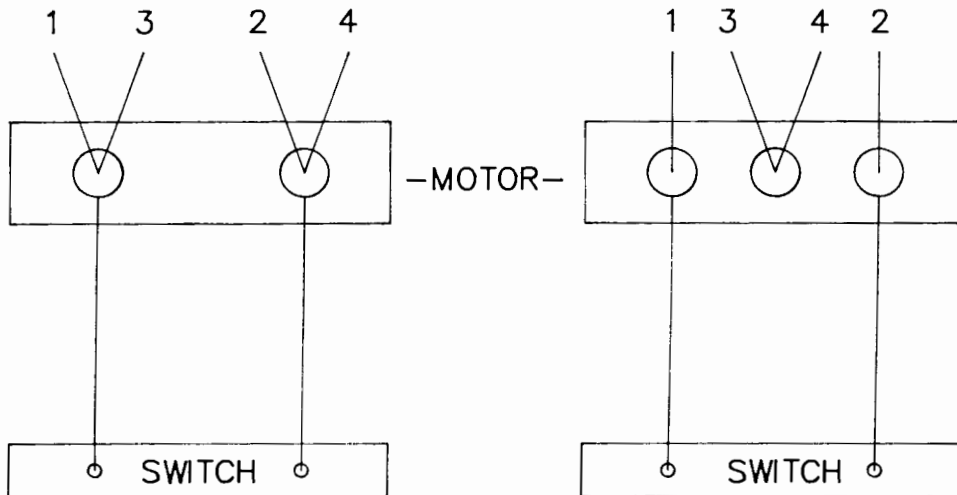
Parts List for the HVBS-463 Bandsaw

Index No.	Part No.	Description	Size	Qty.
1	TS-0051031	Hex Cap Bolt *	5/16x3/4	4
2	TS-0561011	Hex Nut *	1/4	3
3	TS-0680021	Washer *	1/4	8
4	HVBS462-004	Floor Stand (right)		1
5	HVBS462-005	Wheel Assembly		1
6	HVBS462-006	Split Pin *	1/8x1	2
8	TS-0680031	Washer *	5/16	20
10	HVBS462-010	Washer	1/4	1
11	TS-0051051	Hex Cap Bolt *	5/16 x 1-1/4	10
12	TS-0561021	Hex Nut *	5/16	14
13	HVBS462-013	Floor Stand (left)		1
14	HVBS462-014	Floor Stand Handle		1
15	HVBS462-015	Adjusting Rod		1
16	HVBS462-016	Electric Cord		1
17	HVBS462-017	Pivoting Rod		1
18	HVBS462-018	Support Plate		1
19	HVBS462-019	Stock Stop		1
20	TS-0270021	Set Screw	5/16x5/16	4
21	HVBS462-021	Stock Stop Rod		1
22	HVBS462-022	Wire Relief Retainer		2
23	HVBS462-023	Switch Assembly		1
23-1	HVBS462-23-1	Switch		1
24	HVBS462-024	Hex Nut (re: HVBS463-023)		1
25	HVBS462-025	Gear Washer: (re: HVBS463-023)		1
26	HVBS462-026	Switch Panel (re: HVBS463-023)		1
27	HVBS462-027	Wheel Handle		1
28	HVBS462-028	Hand Wheel		1
30	HVBS462-030	Thrust Washer		1
31	HVBS462-031	Screw	5/16 x 1	2
32	HVBS462-032	Lead Screw		1
33	HVBS462-033	Vise Nut		1
34	HVBS462-034	Movable Vise Plate		1
35	TS-0680041	Washer	3/8x1	1
36	TS-0090061	Hex Cap Bolt	3/8x1-1/4	4
37	HVBS462-037	Bed		1
39	HVBS462-039	Scale		1
40	HVBS462-040	Electric Cord Clip		1
43	HVBS462-043	Rubber Ring		2
44	HVBS462-044	Electric Cord		1
45	HVBS462-045	Nut Plate		2
46	HVBS462-046	Spring Adjusting Screw		1
47	HVBS462-047	Spring		1
48	HVBS462-048	Screw	3/16x3/8	4
49	HVBS462-049	Mitering Vise Plate		1
50	TS-0081031	Hex Cap Bolt	5/16x3/4	5
51	TS-0680031	Washer *	5/16x7/8	4

52	TS-0081071	Hex Cap Bolt	5/16x1-1/2	1
53	TS-0091071	Hex Cap Bolt	5/16x2	1
54	HVBS462-054	Pivot		1
55	HVBS462-055	Vertical Cutting Plate		1
56	HVBS462-056	Vertical Cutting Plate Stand		1
57	HVBS462-057	Adjustable Bracket (left)		1
	HVBS462-057CP	Adjustable Bracket Assembly (left)		1
58	HVBS462-058	Lock Screw		1
59	HVBS462-059	Safety Cover		1
60	HVBS462-060	Thrust Washer		5
61	BB-6000ZZ	Bearing		6
62	HVBS462-062	Guide Pivot		2
62-1	HVBS462-62-1	Guide Pivot (centrifugal)		2
63	HVBS462-063	Bearing Shaft Pin		2
64	HVBS462-064	Blade Adjustable Seat		2
64-1	HVBS462-64-1	Blade Seat (left)		1
64-2	HVBS462-64-2	Blade Seat (right)		1
65	HVBS462-065	Adjustable Bracket (right)		1
	HVBS462-065CP	Adjustable Bracket Assembly (right)		1
66	HVBS462-066	Adjustable Lock		1
67	TS-0720081	Lock Washer	5/16x1/2	3
68	TS-0813051	Screw	1/4x3/4	3
69	HVBS462-069	Blade Guard		1
70	TS-0561031	Hex Nut	3/8	4
71	HVBS462-071	Blade Wheel (front)		1
72	HVBS462-072	Blade Wheel Bearing Cover		2
73	HVBS462-073	Key	5x5x25L	3
75	TS-0010011	Hex Cap Bolt	1/4x1/2	13
76	HVBS462-076	Switch Cut Off Tip		1
77	HVBS462-077	Blade Wheel (rear)		1
79	HVBS462-079	Blade Tension Knob		1
80	HVBS462-080	Spring		1
83	TS-0070031	Hex Cap Bolt	1/2x1-1/2	3
84	HVBS462-084	Motor Mount Plate		1
85	HVBS462-085	Motor (HVBS-462)		1
	HVBS463-085	Motor (HVBS-463)		1
	HVBS463-085-01	Capacitor Cover (not shown)		1
86	HVBS462-086	Motor Pulley		1
87	BB-6202ZZ	Ball Bearing		6
88	HVBS462-088	Bearing Bushing		1
89	OS-15357	Oil Seal		2
90	HVBS462-090	Transmission Wheel Shaft		1
91	HVBS462-091	Transmission Gear		1
92	HVBS462-092	Gear Box Gasket		1
93	HVBS462-093	Gear Box Cover		1
94	HVBS462-094	Worm Gear w/ Shaft		1
95	HVBS462-095	Spring Pin	4x25L	1
96	HVBS462-096	Bearing Bushing		1
98	HVBS462-098	Stop Bolt		1
99	HVBS462-099	Spacer		1
100	HVBS462-100	Screw	5/32x3/8	8
101	HVBS462-101	Worm Gear Pulley		1
102	TS-0720081	Lock Washer	5/16	2
103	HVBS462-103	Blade Tension Sliding Plate		1

104	TS-0270051	Set Screw	5/16x1/2	3
105	HVBS462-105	Spring Pin	4x20	1
106	HVBS462-106	Sliding Plate Draw Block		1
107	HVBS462-107	Blade Wheel Shaft		1
108	HVBS462-108	Shaft Block		1
109	HVBS462-109	Blade Tension Sliding Guide		2
110	HVBS462-110	Motor Pulley Cover Assembly		1
112	VB-A22	V-Belt		1
113	414301	Blade	14T	1
114	TS-0680041	Washer	3/8	4
115	HVBS462-115	Shelf		1
117	TS-0720071	Lock Washer	1/4	8
120	HVBS462-120	Bushing		1
121	HVBS462-121	Round Head Cross Socket Screw		2
122	TS-0561041	Hex Nut		1
123	TS-0050031	Hex Cap Bolt	1/4 x 3/4	1
124	HVBS463-124	Machine Screw	3/16 x 3/4	2
126	HVBS462-126	Bushing		1
131	HVBS462-131	Switch Protection Bracket		1
132	HVBS462-132	Blade Guard (right)		1
	HVBS462-132A	Blade Guard (left)		1
134	TS-0050011	Hex Cap Bolt	1/4x1/2	4
140	TS-0561011	Hex Nut	1/4	4
156	HVBS462-156	Round Head Screw	3/16 x 3/8	2
157	HVBS462-157	Star Washer	3/16	3
158	HVBS463-158	Nut	3/16	2
170	HVBS463-170	Wire Plug		3
171	HVBS463-171	Hex Screw		1
189	TS-0680031	Washer	5/16	2
196	HVBS463-196	Machine Screw		1
	TS-152705	Hex Wrench (not shown) *	4MM	1
	HVBS462-HK	Hardware Kit (not shown)		1

Electrical Schematic



115V

230V