

OWNER'S MANUAL HVBS-56M Horizontal/Vertical Bandsaw



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 MECHANTABILITY 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.

JET Equipment & Tools • P.O. Box 1349, Auburn, WA 98071-1349 • (253) 351-6000

Read and understand the entire instruction manual before operating machine.

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.

- 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 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.
- Failure to comply with all of these warnings may cause serious injury.
- 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, and
 - arsenic and chromium from chemically-treated lumber.
- Your risk from those 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

Specifications: HVBS-56M Throat Depth.....6" Vertical Work Table Size......9-5/8" x 9-1/2" **Table of Contents** Page Unpacking & Clean-Up5 Tools Required for Assembly5 Adjusting Blade Guides......9 Adjusting Blade Tension9

The specifications in this manual are given as general information and are not binding. JET Equipment & Tools reserves the right to effect, at any time and without prior notice, changes or alterations to parts, fittings, and accessory equipment deemed necessary for any reason whatsoever.

Unpacking and Clean-Up

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

- Remove all contents form the shipping carton.
- 2. Inspect contents for shipping damage and report any damage to your distributor.
- Wipe bed and vise assembly with clean cloth to remove excess oil used to prevent rust.
- 4. Do not discard any packing material until saw has been assembled and is running properly.

Tools Supplied for Assembly

1. Wrench 12/14mm

Tools Required for Assembly

- #2 Cross Point Screwdriver
- 6-8" Adjustable Wrench or Wrench Set
- Pliers Regular or Needle Nose
- 4mm Angle Hex Wrench
- Ratchet and Sockets will Speed Assembly

Assembly

- With the help of another person turn the saw over so that it rests on the motor and saw bow, Figure 1. Place it on a piece of cardboard, or a surface that will not damage the saw.
- Attach a cross brace (A, Fig. 1) to the motor side of the bed using three 5/16"x1" hex cap bolts, six 5/16" flat washers, and secure with three 5/16" hex nuts. Hint: Tighten the nut (B, Fig. 1) on the end of the bed first followed by the nuts on the sides.
- Attach a leg to the cross brace using four 5/16"x3/4" carriage bolts, four 5/16" flat washers and four 5/16" hex nuts. Use a 12mm wrench to tighten. Repeat for other leg.
- 4. Remove the brace (C, Fig. 1) on the opposite end of the bed and bow using a 10mm wrench.



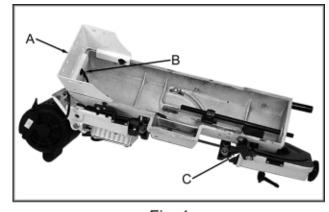
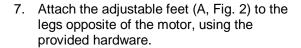
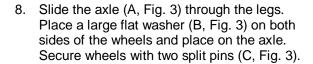


Fig. 1

5. Attach a cross brace to the opposite end of the bed using three 5/16"x1" hex cap bolts, six 5/16" flat washers, and secure with three 5/16" hex nuts. Tighten the nut on the end of the bed first followed by the nuts on the sides.

6. Attach a leg to the cross brace using four 5/16"x3/4" carriage bolts, four 5/16" flat washers and four 5/16" hex nuts. Use a 12mm wrench to tighten. Repeat for other leg





9. Carefully turn the saw onto its stand and adjust the feet so the bed is level.

10. Put the handle (A, Fig. 4) through holes in the stand legs opposite of the wheel assembly and secure with split pins.

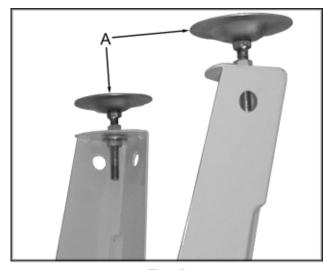


Fig. 2

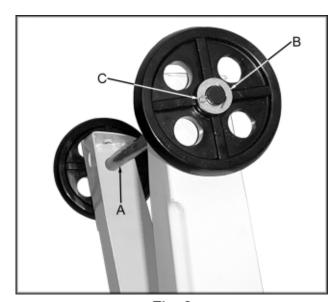


Fig. 3

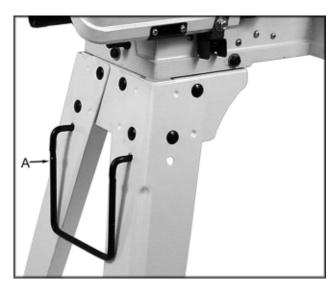


Fig. 4

- 11. Slide pulley cover (A, Fig. 5) around motor shaft and worm gear shaft. Secure with two hex cap screws and washers (B, Fig. 5).
- 12. Lift motor with one hand while the other hand places V-belt (C, Fig.5) on both pulleys.
- 13. Attach the tension bracket (D, Fig. 5) to the saw bow with one 5/16"x3/4" hex head bolt and flat washer (E, Fig. 5).
- 14. Connect the two tension brackets with one 5/16"x3/4" carriage bolt, one 5/16" flat washers and one 5/16" hex nut (F, Fig. 5). Hint: Insert the carriage bolt from the inside so the hex nut is easy to access with a wrench.
- 15. Tension belt by pressing down on the motor while tightening hex nut (F, Fig. 5) until finger pressure on the belt between the two pulleys causes approximately 1/2" deflection. Close pulley cover. Don't over tighten the belt.
- 16. Insert stop rod (A, Fig. 6) into bed and tighten set screw (B, Fig. 6). Slide stock stop (C, Fig. 6) onto rod and tighten set screw (D, Fig. 6) to hold in place.
- Slide handwheel (E, Fig. 6) onto shaft and secure by tightening set screw (F, Fig. 6).
 Make sure set screw seats on flat portion of shaft.

Vertical Cutting Plate Assembly

Note: These steps are only necessary when 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!

- Disconnect the bandsaw from the power source.
- 2. Raise the arm to the vertical position and lock in place with lever (A, Fig. 7).
- 3. Loosen bolt (B, Fig. 7) and insert bracket (C, Fig. 7). Tighten bolt just enough to hold the bracket in place.

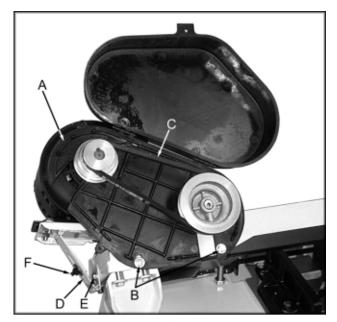


Fig. 5

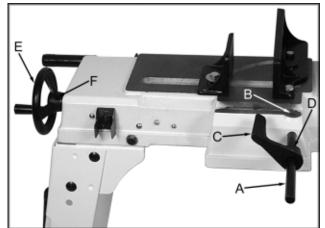


Fig. 6

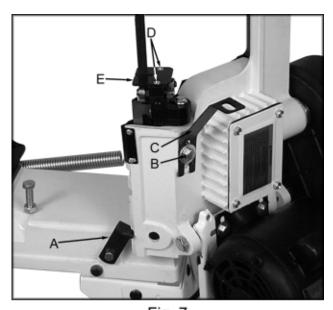


Fig. 7

- 4. Remove two screws (D, Fig. 7) and plate (E, Fig. 7).
- 5. Guide blade through slot in table (A, Fig. 8) and fasten table with two screws (B, Fig. 8).
- 6. Fasten support bracket to underside of table using screw (C, Fig. 8) and hex nut.
- 7. Tighten bolt (B, Fig 7).

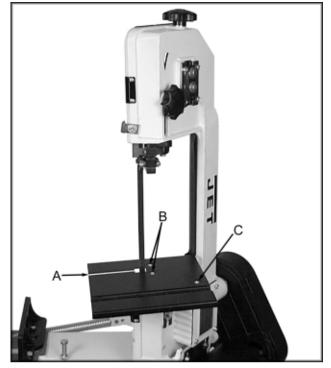


Fig. 8

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, follow 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, Fig. 9). The bandsaw has a grounding prong as illustrated in (B, Fig. 9). A temporary adapter (C, Fig. 9) may be used to connect the plug to a two pole receptacle (D, Fig. 9) 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.

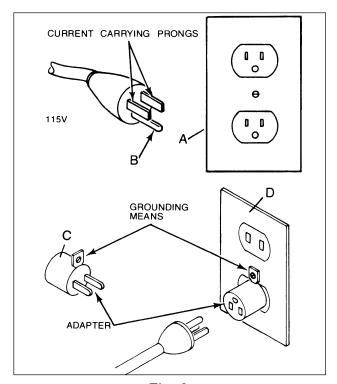


Fig. 9

Changing Blade Speed

- Disconnect the machine from the power source.
- 2. Place saw arm in the horizontal position.
- 3. Loosen tensioning plate hex nut (A, Fig.10).
- 4. Open pulley cover (B, Fig. 10). Lift motor with one hand while placing the belt (C, Fig. 10) on the desired pulley combination.
- Tension belt by pressing down on the motor while tightening hex nut (A, Fig. 10) until finger pressure on the belt between the two pulleys causes approximately 1/2" deflection. Close pulley cover. Don't over tighten the belt.
- Close pulley 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 11 for a guide to blade speed for a type of material being cut.

Adjusting Blade Guides

- Disconnect machine from the power source.
- 2. Loosen knob (A, Fig. 12) and slide blade guide assembly (B, Fig. 12), as close as, possible without interference to the material being cut. Tighten knob.
- Loosen bolt (C, Fig.12) and slide blade guide assembly (D, Fig. 12), as close as, possible without interference to the material being cut. Tighten bolt

Adjusting Blade Tension

- Disconnect machine from the power source.
- 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".
- If the blade is next to the wheel flange, loosen the blade guide assembly lock knob and hex head bolt (A & C, Fig. 12) and slide

- the blade guide assemblies as far apart as possible. Lock in place.
- Depress blade. Finger pressure should cause approximately .004" deflection. Turn blade tension knob (B, Fig. 12) until the proper tension is achieved. Re-position guides for cutting material.

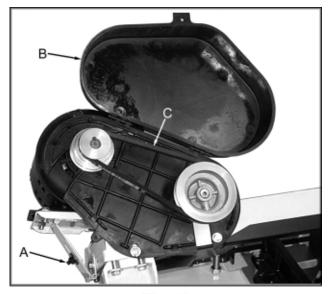


Fig. 10

	_		
Material	Speed	Motor Pulley	Saw Pulley
Tool, Stainless, or Alloy Steel, Bearing Bronzes	80 FPM	Small	Large
Mild Steel, Hard Brass, or Bronze	120 FPM	Medium	Medium
Soft Brass, Aluminum, or other light materials	200 FPM	Large	Small

Fig. 11

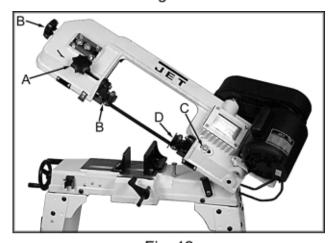


Fig. 12

Changing Blades

- 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 removing the small knob found on the topside of the bow.
- 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!

- 5. Release tension on the blade by turning tensioning knob (B, Fig. 12), and remove the blade.
- Place new blade between the blade guide assemblies and around each wheel. Make sure blade teeth are pointing in the proper direction, Figure 13. Tension enough to hold in place.
- 7. Install red blade guards with two screws.
- 8. Tension blade fully, see "Adjusting Blade Tension".
- 9. Place two to three drops of lightweight oil on the blade.
- 10. Connect machine to the power source.
- 11. Run saw and make sure blade is tracking properly, see "Adjusting Blade Tracking".

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

- Disconnect machine from the power source.
- Loosen bolt (A, Fig. 14) and adjust assembly so that back roller bearing is approximately .002" - .003" from the back of the blade. Tighten bolt.

- Loosen nut (B, Fig. 14) and turn nut (C, Fig. 14) to adjust eccentric bearing to a clearance of .001". Tighten nut (B, Fig. 14) to lock.
- 4. Connect machine to power source.

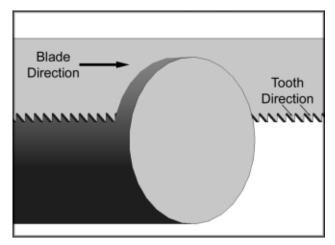


Fig. 13

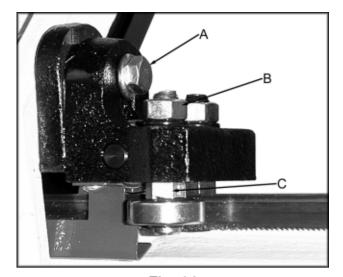


Fig. 14

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:

- Confirm that blade tension is set properly.
 To adjust, see section titled " Adjusting Blade Tension".
- 2. Make sure the saw is in its slowest speed, see "Changing Blade Speeds".
- 3. Move saw arm to the vertical position and lock in place with the lock lever.
- Confirm that blade tension is set properly.
 To adjust, see section titled " Adjusting Blade Tension".
- 5. Open blade cover by removing the knob found on the top side of the bow.
- Run saw and observe blade. Blade should run next to but not tightly against wheel flange.
- 7. Loosen bolts (A, Fig. 15).
- 8. Turn set screw (B, Fig. 15) 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. **Hint:** start with ½ turns on the set screw. The tracking is sensitive.
- 9. Once tracking is set, tighten bolts (A, Fig. 15).

Adjusting Feed Pressure

1. Turn handle (A, Fig. 16) clockwise to decrease cutting pressure and counter-clockwise to increase 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.

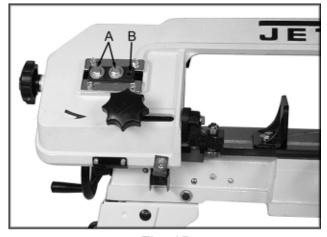


Fig. 15

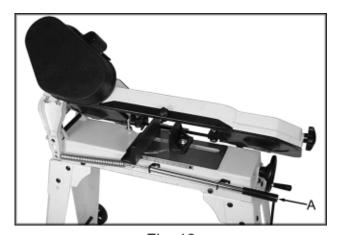


Fig. 16

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. 17) down.
- If the saw shuts off before the cut is complete, adjust the stop tip (A, Fig. 17) up.
- If the saw stops cutting but continues to run, adjust the stop bolt (B, fig. 17) down.

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

Adjusting the Vise

- 1. To open and close the vise use the handwheel (C, Fig. 17).
- 2. The vise can be adjusted for square and miter cuts. Loosen the hex cap bolts and adjust the vise for the cut.
- 3. Adjust the blade guides so they are as close as possible to the material without interfering.
- 4. There is a scale on the back side of the bed to aid in setting up the vise for 90° cuts or a particular miter. Hint: Always check the vise setup with a combination square, against the blade and vise, so that you can verify the vise setting is correct.

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:

Disconnect machine from the power source.

- 2. Place saw arm in the horizontal position.
- 3. Remove screws (A, Fig. 18) from the gear box and remove cover plate and gasket.
- 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 MOBIL SHC 634.
- 7. Replace gasket and cover. Fasten cover with bolts.

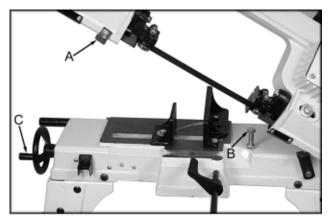
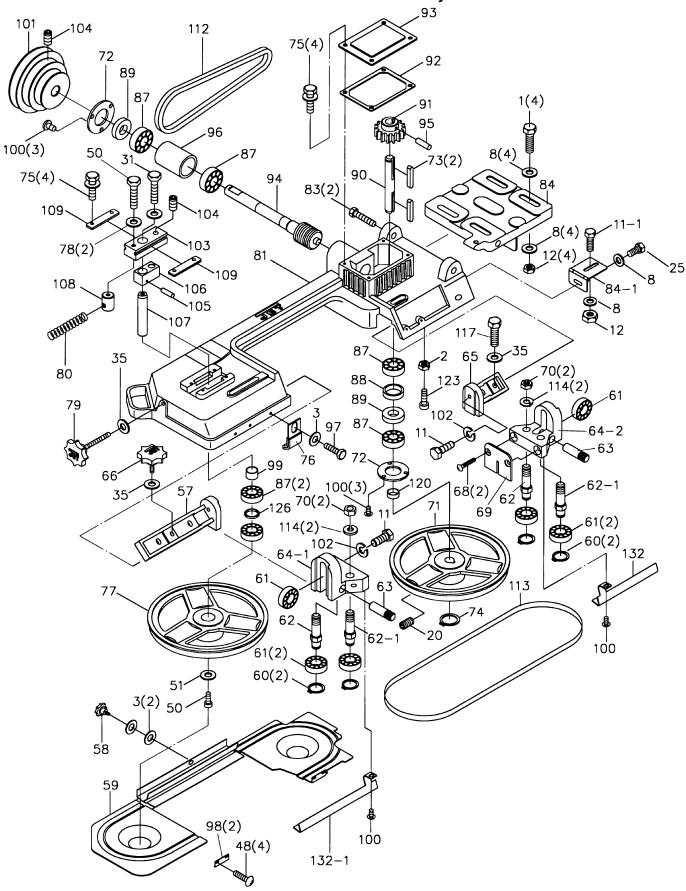


Fig. 17

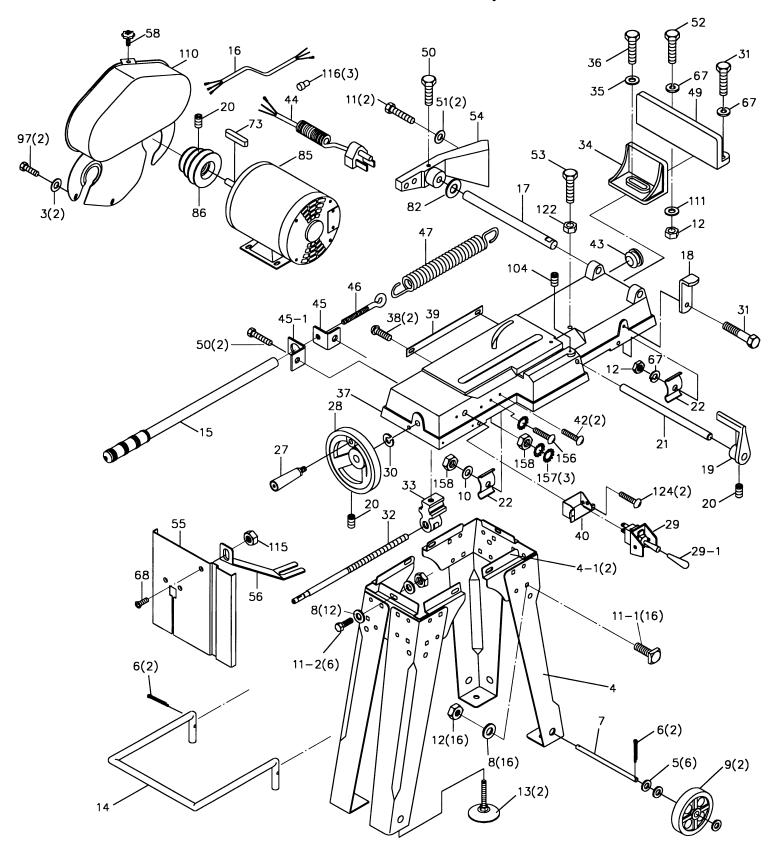


Fig. 18

Breakdown for Bow Assembly



Breakdown for Base Assembly



Parts List for the HVBS-56M Bandsaw

Index	Part			
No.	No.	Description	Size	Qty.
1	TS-0051031	Hex Cap Bolt	5/16"x3/4"	4
		Hex Nut		
3	TS-0680021	Flat Washer	1/4"	5
4	HVBS56M-04	Stand Leg		4
4-1	HVBS56M-04-1	Cross Brace		2
		Washer		
6	HVBS462-006	Cotter Pin	1/8"x1"	4
		Axle		
8	TS-0680031	Flat Washer	5/16"	36
		Wheel		
		Washer		
		Hex Cap Bolt		
		Carriage Bolt		
11-2	TS-0051051	Hex Cap Bolt	5/16"x1"	6
		Hex Nut		
13	HVBS56M-013	Adjustable Foot		2
		Floor Stand Handle		
15	HVBS462-015	Adjusting Rod		1
16	HVBS462-016	Electric Cord		1
17	HVBS462-017	Pivoting Rod		1
		Support Plate		
		Stock Stop		
20	TS-0270021	Socket Set Screw	5/16"x5/16"	4
21	HVBS462-021	Stock Stop Rod		1
		Wire Relief Retainer		
25	TS-0051031	Hex Cap Bolt	5/16"x3/4"	1
		Wheel Handle		
		Hand Wheel		
		Toggle Switch Assembly		
29-1	HVBS56M-029-1	Plastic Cover		1
		E-Ring		
31	HVBS462-031	Screw	5/16"x1"	3
32	HVBS462-032	Lead Screw		1
33	HVBS462-033	Vise Nut		1
	HVBS462-034			
		Flat Washer		
36	TS-0090061	Hex Cap Bolt	3/8"x1-1/4"	1
	HVBS462-037			1
38	HVBS462-038	Cross Round Head Screw		
39	HVBS462-039	Scale		1
		Electric Cord Clip		
42	HVBS56M-042	Screw	M4x16	2
43	HVBS462-043	Rubber Ring		1
44	HVBS462-044			
_	HVBS462-045			
	HVBS56M-045-1	1 3		
		Spring Adjusting Screw		
		Spring		
		Cross Round Head Screw		
		Mitering Vise Plate		
		Hex Cap Bolt		
51	TS-0680031	Flat Washer	5/16"	3

Index	Part			
No.	No.	Description	Size	Qty.
52	TS-0081071	.Hex Cap Bolt	5/16"x1-1/2"	1
		.Hex Cap Screw		
		.Pivot Bracket		
		.Vertical Cutting Plate		
		Stand for Vertical Cutting Plate		
		. Adjustable Bracket Assembly LH		
		.Knob		
		.Blade Back Safety Cover		
60	HVBS462-060	.C-Clip	S10	4
61	BB-6000ZZ	.Ball Bearing	6000ZZ	6
62	HVBS462-062	.Guide Pivot		2
		.Center Shaft Assembly (Includes: #60-62		
62-1	HVBS462-062-1	.Centrifugal Guide Pivot		2
		.Eccentric Shaft Assembly (Includes: #60		
		.Bearing Shaft Pin		
		.Blade Seat Left		
		.Blade Seat Right		
		.Adjustable Bracket-Assembly RH		
		.Lock Knob		
		.Lock Washer		
		.Flat Head Machine Screw		
69	HVBS462-069	.Bearing Guard		1
		.Hex Nut		
		.Blade Wheel Drive		
		.Bearing Cover		
		.Key		
		.C-Clip		
75	HVBS462-075	.Hex Cap Bolt (w/Washer)	1/4"x1/2"	8
		.Switch Cut Off Trip		
		.Idle Blade Wheel		
		.Flat Washer		
		.Blade Tension Knob		
		.Spring		
		.Saw Bow		
		.Washer		
83	TS-0070031	.Cap Screw	1/2"x1-1/2"	2
		.Motor Mount Plate		
		.Tension Bracket		
		.Motor		
		.Capacitor Cover (not shown)		
		.Capacitor (not shown)		
		.Motor Pulley		
		.Ball Bearing		
		Bearing Bushing		
		Oil Seal		
		.Transmission Wheel Shaft		
		.Worm Gear		
		.Gear Box Gasket		
		.Gear Box Cover		
		.Worm Gear (w/Shaft)		
		Spring Pin		
		.Bearing Bushing		
ყნ		.Clamp		∠

Index	Part			
No.	No.	Description	Size	Qty.
99	HVBS462-099	Spacer		1
		Flat Cross Head Screw		
		Worm Gear Pulley		
		Lock Washer		
		Blade Tension Sliding Plate		
		Socket Set Screw		
		Spring Pin		
		Sliding Plate Draw Block		
		Blade Wheel Shaft		
108	HVBS462-108	Shaft Block		1
109	HVBS462-109	Blade Tension Sliding Guide		2
		Motor Pulley Cover Assembly		
111	TS-0680031	Flat Washer	. 5/16"	1
112	VB-A22	V-Belt	. A22	1
		Blade		
114	TS-0680041	Flat Washer	. 3/8"	4
115	TS-0561011	Hex Nut	. 1/4"	1
116	HVBS463-170	Wire Plug		3
117	HVBS463-171	Hex Screw	. 3/8"x1-1/4"	1
120	HVBS462-120	Bushing		1
122	TS-0561041	Hex Nut	. 7/16"	1
123	TS-0050031	Cap Screw	. 1/4"x3/4"	1
124	HVBS463-124	Machine Screw	. 3/16"x3/4"	2
126	HVBS462-126	Bushing		1
		Blade Guard-Right		
		Blade Guard-Left		
		Round Head Screw		
		Star Washer		
158	HVBS463-158	Hex Nut	. 3/16"	3
		ind Cross Head Screw		
		Blade Speed Label (not shown)		
		I.D. Label (not shown)		
		Warning Label (not shown)		
	JM-56M	Stripe Decal (not shown)		1

Wiring Diagram

