



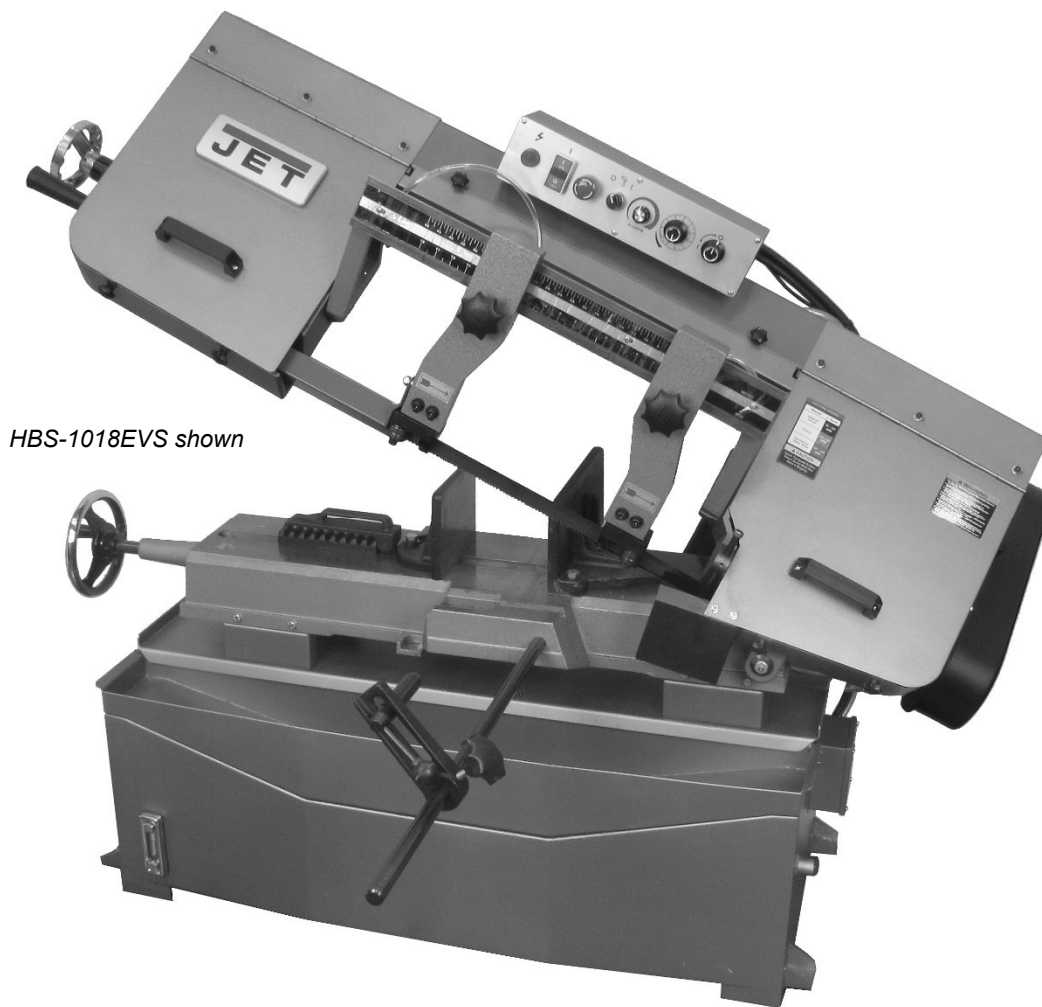
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Record purchase information:

Model No.:	Stock No.:
Serial No.:	
Purchased from:	
Date purchased:	

Operating Instructions and Parts Manual Horizontal EVS Band Saw

Models HBS-916EVS, HBS-1018EVS



HBS-1018EVS shown

JET
427 New Sanford Road
LaVergne, Tennessee 37086
Ph.: 800-274-6848
www.jettools.com

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1.0 IMPORTANT SAFETY INSTRUCTIONS

WARNING – To reduce risk of injury:

1. Read and understand the entire owner's manual before attempting assembly or operation.
2. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
3. Replace warning labels if they become obscured or removed.
4. This band saw is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a band saw, do not use until proper training and knowledge have been obtained.
5. Do not use this band saw for other than its intended use. If used for other purposes, JET disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
6. Always wear leather gloves when handling saw blades. The operator shall not wear gloves when operating the machine.
7. Machinery must be anchored to the floor.
8. Secure work. Use clamps or a vise to hold work, when practical. It is safer than using your hands and it frees both hands to operate the machine.
9. All doors shall be closed, all panels replaced, and other safety guards in place prior to the machine being started or operated.
10. Be sure that the blade is not in contact with the workpiece when the motor is started. The motor shall be started and you should allow the saw to come up to full speed before bringing the saw blade into contact with the workpiece.
11. Keep hands away from the blade area.
12. Remove any cut off piece carefully while keeping your hands free of the blade area.
13. Saw must be stopped and electrical supply must be cut off before any blade replacement or adjustment of blade support mechanism is done, or before any attempt is made to change the drive belts or before any periodic service or maintenance is performed on the saw.
14. Remove loose items and unnecessary workpieces from area before starting machine.
15. Bring adjustable saw guides and guards as close as possible to the workpiece.
16. Always wear protective eye wear when operating, servicing, or adjusting machinery. Eyewear shall be impact resistant, protective safety glasses with side shields complying with ANSI Z87.1 specifications. Use of eye wear which does not comply with ANSI Z87.1 specifications could result in severe injury from breakage of eye protection.
17. Wear proper apparel. No loose clothing or jewelry which can get caught in moving parts. Confine long hair.
18. Anti-skid floor strips, nonslip footwear and safety shoes are recommended.
19. Wear hearing protection (plugs or muffs) if sound reaches unsafe levels.
20. The workpiece, or part being sawn, must be securely clamped before the saw blade enters the workpiece.
21. Remove cut off pieces carefully, keeping hands away from saw blade.
22. Saw must be stopped and electrical supply cut off or machine unplugged before reaching into cutting area.
23. Avoid contact with coolant, especially guarding your eyes.
24. Make certain the switch is in the OFF position before connecting the machine to the power supply.
25. This saw must be grounded in accordance with the National Electrical Code and local codes and ordinances. This work should be done by a qualified electrician. The saw must be grounded to protect the user from electrical shock. **Caution:** For circuits which are far away from the electrical service box, the wire size must be increased in order to deliver ample voltage to the motor. To minimize power losses and to prevent motor overheating and burnout, the use of wire sizes for branch circuits or electrical extension cords according to *sect. 6.4, Table 2*, is recommended.
26. Disconnect electrical power before servicing. Whenever changing accessories or general maintenance is done on the machine, electrical power to the machine must be disconnected before work is done.
27. Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.

28. Keep safety 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 after completion of maintenance.
29. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
30. Maintain all machine tools with care. Follow all maintenance instructions for lubricating and the changing of accessories.
31. No attempt shall be made to modify or have makeshift repairs done to the machine. This not only voids the warranty but also renders the machine unsafe.
32. Keep work area clean. Cluttered areas invite accidents. Keep the floor around the machine clean and free of scrap material, oil and grease.
33. Keep visitors a safe distance from the work area. Keep children away.
34. Make your workshop child proof with padlocks, master switches or by removing starter keys.
35. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
36. Maintain a balanced stance at all times so that you do not fall into the blade or other moving parts. Do not overreach or use excessive force to perform any machine operation.
37. Use the right tool at the correct speed and feed rate. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and more safely.
38. Use only recommended accessories; improper accessories may be hazardous.
39. Keep saw blades sharp and clean for the best and safest performance.
40. Turn off the machine before cleaning. Use a brush or vacuum to remove chips or debris — do not use bare hands. Never brush away chips while machine is in operation.

41. Do not stand on the machine. Serious injury could occur if the machine tips over.
42. Never leave the machine running unattended. Turn the power off and do not leave the machine until it comes to a complete stop.
43. Avoid dangerous working environments. Do not use stationary machine tools in wet or damp locations. Keep work areas clean and well lit.

⚠ WARNING: This product can expose you to chemicals including titanium dioxide which is known to the State of California to cause cancer, and lead which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <http://www.p65warnings.ca.gov>.

⚠ WARNING: Some dust, fumes and gases created by power sanding, sawing, grinding, drilling, welding and other construction activities contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead based paint
- crystalline silica from bricks, cement and other masonry products
- arsenic and chromium from chemically treated lumber

Your risk of exposure 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 dust masks that are specifically designed to filter out microscopic particles. For more information go to <http://www.p65warnings.ca.gov/> and <http://www.p65warnings.ca.gov/wood>.

Familiarize yourself with the following safety notices used in this manual:

⚠ WARNING This means that if precautions are not heeded, it may result in serious, or possibly even fatal, injury.

⚠ CAUTION This means that if precautions are not heeded, it may result in minor injury and/or possible machine damage

SAVE THESE INSTRUCTIONS

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3.0 About this manual

This manual is provided by JET, covering the safe operation and maintenance procedures for a JET Model HBS-916EVS and HBS-1018EVS Horizontal Band Saw. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. Your machine has been designed and constructed to provide consistent, long-term operation if used in accordance with the instructions set forth in this document.

If there are questions or comments, please contact your local supplier or JET. JET can also be reached at our web site: www.jettools.com.

Retain this manual for future reference. If the machine transfers ownership, the manual should accompany it.

 **WARNING Read and understand the entire contents of this manual before attempting assembly or operation, Failure to comply may cause serious injury.**

Mail the provided registration card, or register your product online -

<http://www.jettools.com/us/en/service-and-support/warranty/registration/>

4.0 Specifications

Table 1

Stock number		424469	424470
Model number		HBS-916EVS	HBS-1018EVS
Motor and Electricals			
Main motor type		Totally-enclosed, fan-cooled, AC induction	
Horsepower		1-1/2 HP (1.1 kW)	2 HP (1.5 kW)
Phase		3 phase	
Voltage		230V	
Cycle		60 Hz	
Listed FLA (full load amps)		5 A	6.5 A
Starting amps/inrush current		6A	10A
Running amps, no load		2.2A	2.9A
Motor speed		1720 RPM	
Incoming power required		1 phase, 115 V	
On/off switch		magnetic, push-button, with E-stop	
Power transfer		V-belt to gear reducer	
Gearbox ratio		1:30	
Power cable and plug		(unattached) 14AWGx3C, 6 ft., with 5-15 plug	
Recommended circuit size ¹		15 A	
Sound emission ²		70dB at 3 ft. from machine	
Coolant pump		1/8HP, 115/230V, 1PH, 60Hz, prewire 115V	
Capacities			
Round	90 deg.	9 in. (228 mm)	10 in. (250 mm)
	45 deg.	6-1/8 in. (155 mm)	7-1/2 in. (190 mm)
Square (WxH)	90 deg.	9 x 9 in. (228 x 228 mm)	10 x 10 in. (250 x 250 mm)
	45 deg.	6 x 6 in. (150 x 150 mm)	7-3/8 x 7-3/8 in. (187 x 187mm)
Rectangle (WxH)	90 deg.	2 x 16 in. (50.8 x 406 mm) 9 x 12 in. (228 x 305 mm)	6 x 18 in. (152 x 457 mm) 10 x 16 in. (250 x 406 mm)
	45 deg.	9 x 6-1/8 in. (228 x 155 mm) 9 x 6 in. (228 x 150 mm)	9 x 7-3/4 in. (228 x 197 mm) 10 x 7-3/8 in. (250 x 187 mm)
Maximum jaw opening at 90°	fixed jaw in inner holes	13-1/2 in. (343 mm)	15 in. (381 mm)
	fixed jaw in outer holes	16-3/4 in. (425.5 mm)	18-1/4 in. (463.5 mm)
Blade (WxTxL)		HSS-M42; 1x0.032x119-1/2 in. (4/6T)	HSS-M42; 1x0.032x130 in. (4/6T)
Blade wheel size (Dia. x W)		13 x 1 in. (330 x 25.4 mm)	14 x 1 in. (355 x 25.4 mm)
Blade speed		variable within 82-330 SFPM	variable within 82-330 SFPM
Gearbox reservoir		1200cc	1200cc
Cutting fluid/coolant tank		22 liter	31.32 liter
Maximum vise angle		45° swivel	
Main materials			
Stand		Steel	
Bow		Cast iron and steel	
Blade wheels		Cast iron	
Bed		Cast iron	
Vise jaws		Cast iron	
General dimensions			
Height of bed from floor		23-1/2 in. (597 mm)	
Overall dimensions, assembled (LxWxH) <i>bow lowered ~ bow raised</i>		65 x 28 x 41~67 in. (1651 x 711 x 1041~1702 mm)	67-3/4 x 28 x 42-1/2~70 in. (1721 x 711 x 1079.5~1778 mm)
Shipping dimensions (LxWxH)		67 x 25 x 46-1/4 in. (1702 x 635 x 1175 mm)	71 x 25 x 47-1/2 in. (1803.4 x 635 x 1206.5 mm)
Weights			
Net weight (approx.)		726 lbs. (330kg)	805 lbs. (366kg)
Shipping weight (approx.)		818 lbs. (372kg)	906 lbs. (412kg)

¹ Subject to local/national electrical codes. Circuit must be protected by appropriately rated fuses or breaker.

² The specified values are emission levels and are not necessarily to be seen as safe operating levels. As workplace conditions vary, this information is intended to allow the user to make a better estimation of the hazards and risks involved only.

L = length, W = width, H = height

T = thickness

Dia = diameter

SFPM = surface feet per minute

The specifications in this manual were current at time of publication, but because of our policy of continuous improvement, JET reserves the right to change specifications at any time and without prior notice, without incurring obligations.

⚠WARNING Read and understand the entire contents of this manual before attempting assembly or operation. Failure to comply may cause serious injury.

5.0 Setup and assembly

5.1 Shipping contents

NOTE: Accessories are shipped in the coolant reservoir beneath the chip tray. To access, remove two wing screws and lift off chip tray.

- 1 Band saw with control box
- 1 Motor
- 1 Pulley cover
- 1 115V power cable with plug
- 1 Locking handle*
- 4 Hex cap screws, M12x70 (for leveling)*
- 4 Hex nuts M12 (for leveling)*
- 1 Work stop knob
- 1 Work stop rod
- 1 Work stop bracket*
- 1 Work stop lock handle*
- 2 Open-end wrenches, 11/13 and 17/19*
- 4 Hex wrenches, 3,4,5,6 mm*
- 1 Flat blade screwdriver*
- 1 Cross point screwdriver*
- 1 Factory-cut test piece*
- 1 Operating Instructions and Parts Manual
- 1 Product registration card

* these items are in the provided tool box, p/n HBS916-TB

5.2 Tools required for assembly

All tools needed for assembly are provided with the machine. Additional tools may be necessary for maintenance and adjustments.

5.3 Uncrating and spotting

1. Finish uncrating the saw and inspect for damage. Should any have occurred, contact your local distributor. Do not discard packing material until saw is assembled and running satisfactorily.
2. Compare contents of shipping crate with the contents list in sect. 5.1. Report shortages, if any, to your distributor.
3. Remove four screws holding machine to shipping pallet.
4. Use lifting straps that are isolated from the band saw's finished surfaces and clear of any handles or levers; lift machine and place in desired location. The band saw should be located on a solid and level foundation for best performance. When determining location, allow room for servicing and moving large stock around the machine.

5. Install four leveling screws with hex nuts (provided) into threaded holes on base flanges (Figure 5-1). Place a level on table surface and check side-to-side and front-to-back. Adjust leveling screws until machine is level in both directions, then tighten nuts.

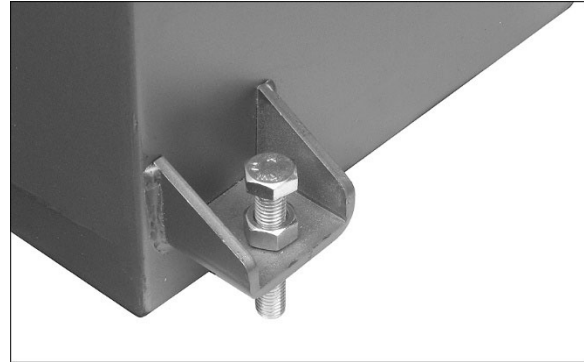


Figure 5-1: leveling screws

6. Clean all rust preventative from surfaces with kerosene or a cleaner/degreaser. Do not use gasoline, paint thinner, mineral spirits, etc., as these may damage painted surfaces. After cleaning, apply a light coat of oil to exposed metal surfaces.

5.4 Assembly

⚠WARNING Saw must be disconnected from power during assembly procedures.

5.4.1 Motor

NOTE: Motor installation requires 2 persons.

1. Unbolt motor assembly from shipping pallet.
2. Remove nut and washer from motor support shaft, and slide out support shaft (A, Figure 5-2).

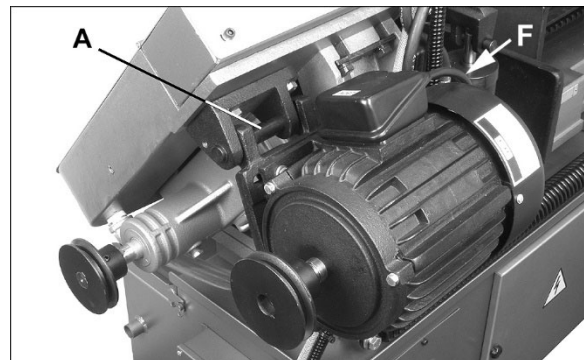


Figure 5-2: motor installation

3. Carefully lift motor and align holes in motor mounting plate and motor bracket.
4. Slide motor support shaft through motor mount bracket to secure motor in place. Use a rubber mallet if needed to tap shaft through the holes.
5. Reinstall nut and washer onto shaft.

- Attach motor tilt plate (B, Figure 5-3) to motor bracket using the provided locking handle (C, Figure 5-3) with lock washer and flat washer.

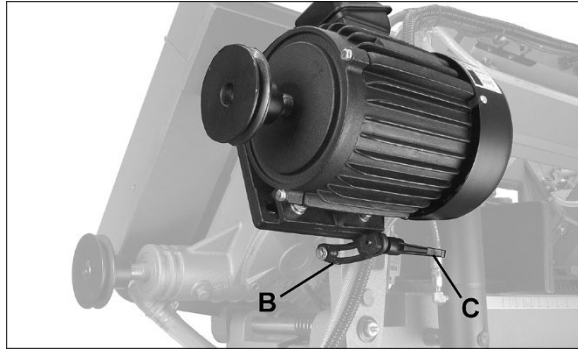


Figure 5-3: motor locking handle

Note: Locking handle (C) is adjustable. Pull out on handle and rotate it on the pin to a more convenient position, then release it. Make sure it reseats on the pin.

5.4.2 V-belt and pulley cover

- Loosen tilt locking handle (C, Figure 5-3), and allow motor to lower. Place v-belt around both pulleys.
- Push up motor and tighten tilt locking handle (C) to tension v-belt. Correct tension is achieved when finger pressure midway between the two pulleys causes approximately 1/2" deflection. See Figure 5-4.
- Remove two hex cap bolts and washers (D, Figure 5-4).
- Position belt cover (E, Figure 5-4) around pulley shafts and attach to saw with the two bolts and washers.
- Close pulley cover and fasten with knob.



Figure 5-4: installing belt and pulley cover

5.5 Control box

Mount the control box atop the bow using the screws that are preinstalled in the two holes.

5.6 Lubrication

The band saw is shipped with the appropriate level of gear oil. The operator should verify this before using the saw, by checking the sight glass. (See Figure 11-2 for location.)

Cutting fluid/coolant must be supplied by the operator. See sect. 11.0.

6.0 Electrical connections

⚠WARNING Electrical connections must be made by a qualified electrician in compliance with all relevant codes. This machine must be properly grounded while in use to protect the operator from electrical shock and possible fatal injury.

The HBS-916EVS and HBS-1018EVS are prewired for **single phase, 115 volt incoming power**. The inverter converts the incoming current to the 230 volt required by the three phase motor. Confirm that power available at the saw's location matches that for which the saw is wired.

An unattached power cable with plug is provided with the machine. The user may connect the 115V power cable, or "hardwire" the machine directly to an electrical panel. If hardwiring to a panel, a disconnect between panel and machine must be made available to the operator.

Before wiring, make sure saw is disconnected from power source or the fuses have been removed or breakers tripped in the circuit to which the saw will be connected. **Use appropriate Lock-Out/Tag-Out procedures.**

6.1 Connecting motor cable

- Loosen strain relief nut on motor junction box. Remove junction box cover.
- Insert motor cable (see F, Figure 5-2) through strain relief and connect the leads inside the box. Make sure the grounding wire is properly connected.
- Tighten strain relief nut and replace junction box cover.

6.2 Connecting power cable

- On right side of base, loosen strain relief nut on junction box. Remove junction box cover.
- Insert power cable through strain relief and connect the leads inside the box. Make sure the grounding wire is properly connected.
- Tighten strain relief nut and replace junction box cover.

6.3 GROUNDING INSTRUCTIONS

This machine must be grounded. In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly

installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

⚠ WARNING Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded. Failure to comply may cause serious or fatal injury.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.

Repair or replace damaged or worn cord immediately.

This tool is for use on a nominal 120-V circuit, and has a grounded plug that looks like the plug illustrated in A, Figure 6-1. A temporary adaptor that looks like the adaptor illustrated in B and C may be used to connect this plug to a 2-pole receptacle as shown in B if a properly grounded outlet is not available.

The temporary adaptor should be used only until a properly grounded outlet (A, Figure 6-1) can be installed by a qualified electrician. The green colored rigid ear, lug, or the like extending from the adaptor must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adaptor is used, it must be held in place by a metal screw.

In Canada, the use of a temporary adaptor is not permitted by the Canadian Electrical Code, C22.1.

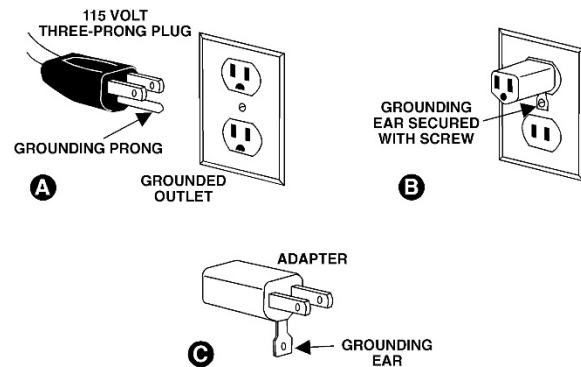


Figure 6-1: plug configuration

6.4 Extension cords

The use of extension cords is discouraged; try to position machines near the power source. If an extension cord is necessary, make sure it is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table 2 shows correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

Ampere Rating		Volts	Total length of cord in feet			
More Than	Not More Than		25	50	100	150
		120	AWG			
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not Recommended	

Extension Cord Recommendations
Table 2

7.0 Adjustments

7.1 Removing and installing blades

A general purpose blade has been installed, tensioned, and tracked on the band saw and should not require immediate attention. For future blade replacement, proceed as follows:

1. Disconnect machine from power source.
2. Raise bow enough for blade to clear table slot. Secure bow position by turning hydraulic switch to off.
3. Loosen four knobs and open both blade wheel covers.
4. Remove upper gap cover (A, Figure 7-1, two knobs) and lower blade guard (B, one screw).
5. Release blade tension by turning blade tension handle (C) counterclockwise until blade is free.

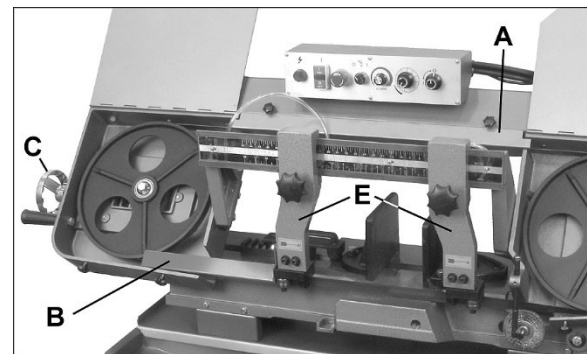


Figure 7-1: installing blade

6. Back off blade guides (see sect. 7.5), and wire brush.

7. Remove blade from both wheels and out of each blade guide.
8. Make sure teeth of new blade are pointing in proper direction of travel. Work blade all the way up into blade guide bearings and guide blocks with back of blade against rear support bearing. See *sect. 7.5* for further details.
9. Position blade through upper slot. Put light tension on blade and work it onto both wheels. **Make sure back of blade is against shoulder of both wheels.**
10. When you are sure that back of blade is against shoulder of both wheels and properly inserted into guides, finish putting tension on blade. See *sect. 7.2*.
11. Adjust guide bearings (*sect. 7.5*).
12. Connect power and jog the on/off button to be sure blade is in place and tracking properly. If blade is not tracking properly refer to *sect. 7.3*.
13. Close all covers and guards and tighten securely. Reposition wire brush.

7.2 Blade tension

Blade tension has been preset by the manufacturer; if further adjustment is required, or after installing a new blade, turn handwheel (C, Figure 7-1) clockwise to approximately 25,000 pounds, as indicated on adjacent tension scale.

If band saw will remain idle for an extended period, back off blade tension to reduce unnecessary wear on wheels and components.

7.3 Blade tracking

Tools required: 17mm and 24mm wrenches

⚠WARNING Blade tracking requires wheel covers open and blade moving. Use extreme caution and keep hands away from blade and wheel areas. Failure to comply may result in serious injury.

Blade tracking has been initially set by the manufacturer. Adjustment is rarely required when blade is correctly welded and used properly. Tracking is set properly when back of blade lightly touches shoulder of wheels. Note: Over-tracking (allowing blade back to rub hard against wheel shoulder) may damage blade wheels and blade.

1. **Disconnect machine from power source.**
2. Raise bow enough to deactivate shut-off sensor.
3. Loosen four knobs and open wheel covers. Remove upper gap cover (A, Figure 7-1) and lower blade guard (B).
4. Back off left and right bearing guide assemblies.

5. NOTE: Maintain proper tension at all times using blade tensioning mechanism.
6. Loosen center locking screws (D₁, Figure 8-3) in all three hex adjustment screws (D₂,D₃).

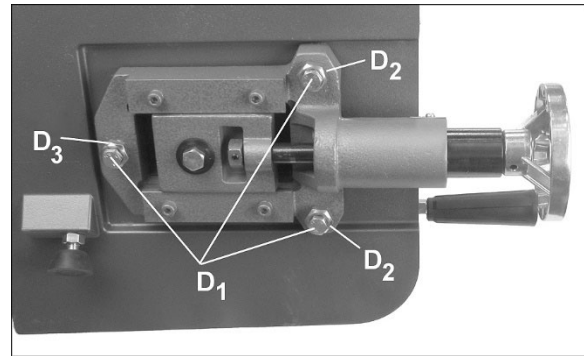


Figure 7-2

⚠CAUTION While performing the following, keep blade from rubbing excessively on wheel shoulder, which can damage wheel and/or blade.

7. Start saw blade, and slowly turn *left* hex adjustment screw (D₃, Figure 7-2) to tilt idler wheel. Do not turn either of the other two adjustment screws (D₂).

NOTE: Turning screw inward causes blade to move toward wheel shoulder. Turning screw outward causes blade to move away from shoulder.

8. Turn screw (D₃) so blade begins to move away from wheel shoulder. Then immediately turn screw in opposite direction so that blade halts its migration, then moves slowly back toward shoulder. Stop when blade makes very light contact with shoulder.
9. Turn off saw blade.
10. Hold hex adjustment screws (D₂,D₃) with a wrench and tighten center locking screws (D₁). Make sure hex adjustment screws do not move while tightening the center screws.
11. Adjust left and right bearing guide assemblies. Refer to *sect. 7.5*.
12. Install upper gap cover (A, Figure 7-1) and lower blade guard (B). Close blade wheel covers and secure with knobs.

7.4 Blade guide bracket adjustment

The bracket(s) (E, Figure 7-1) should be set as close to workpiece as possible without causing obstruction. Loosen front knobs (HBS-1018) or rear handle (HBS-916) and slide the bracket, then tighten in position.

7.5 Blade guide adjustments

*Tools required: 5mm, 6mm hex wrenches
19mm open-end wrench*

Proper adjustment of blade guide bearings is critical to efficient operation of the saw. The band saw is shipped with blade tensioned and blade guides properly set by the manufacturer, but should be confirmed by the operator. They will rarely require adjustment except after a blade change. Failure to maintain proper blade guide settings may cause inaccurate cuts and/or blade damage.

First verify that the blade is sharp and in good condition; properly adjusted guides will not compensate for an inferior blade. If performance remains poor after changing a blade, check the blade guides for proper spacing. For most efficient operation and maximum accuracy, provide only very slight clearance between blade and guide bearings. The bearings will still turn freely with this clearance. If the clearance is incorrect, the blade may track off the drive wheel.

CAUTION Check blade to make sure the welded joint has been ground to the same thickness as rest of blade. If blade is thicker at weld, the guide bearings may be damaged.

7.5.1 Rear support bearing

The rear support bearing (F, Figure 7-3) prevents deflection of blade under pressure from the workpiece. Set support bearing so that it nearly contacts back edge of blade but can still be turned by hand when blade is not running.

1. Disconnect machine from power source.
2. Loosen two hex socket cap screws (G, Figure 7-3). Note: Left guide has two hex socket cap screws; right guide has one (HBS-916EVS only). The HBS-1018EVS has two screws on each guide.
3. Move guide seat (G₁) up or down until only slight clearance between back of blade and rear support bearing is obtained.
4. Tighten two screws (G).
5. Repeat for other blade guide assembly.

7.5.2 Guide blocks and bearings

6. Loosen screws (J₁, Figure 7-3) and slide guide blocks (J₂) into contact with blade. Tighten screws.
7. Two ball bearing guide assemblies are used in each set of blade guides. The inner bearing guide is fixed; the outer bearing guide (toward front of machine) is mounted to an eccentric shaft and is adjustable.
8. On the **outer** bearing guide, hold the eccentric sleeve (K₁) with a 19mm wrench and loosen center locking screw (K₂). See Figure 7-3.

9. Position the bearing by turning the sleeve. Set the bearing in contact with blade then back it off very slightly so that it will still turn by hand.
10. Tighten center locking screw (K₂) while holding the eccentric sleeve in position.
11. Repeat for the other guide assembly.

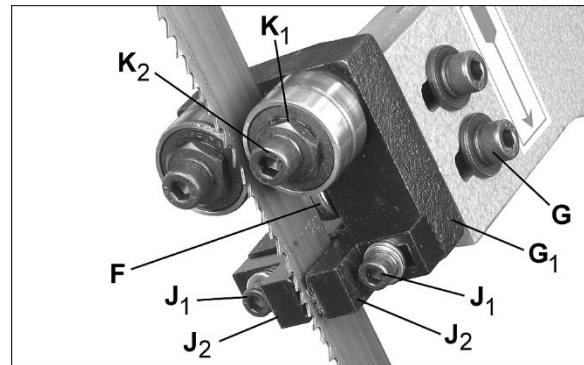


Figure 7-30: blade guide adjustments (left guide assembly shown)

7.6 Test cutting to verify adjustment

Test cuts can be used to determine whether or not you have adjusted the blade accurately. Use 2-inch round bar stock to perform these test cuts, as follows:

1. With bar stock securely clamped in the vise, make a cut through the bar stock (see Figure 7-4).
2. Mark the top of the bar stock.
3. Move the bar stock about 1/4-inch past the blade to prepare for a second cut.
4. Rotate the bar stock 180 degrees so that your mark is now at the bottom of the cut.
5. Make a cut through the bar stock.
6. Use a micrometer to measure the thickness variation of the disk which has been cut from the bar stock. Measure at top and bottom of disk.

The saw blade can be considered correctly adjusted when the variation measure is no more than 0.012 inch across the face of the disk.

If you do not have a piece of 2-inch bar stock available for a test cut, use a larger diameter test piece rather than a smaller one. The maximum thickness variation on any test piece should be no more than 0.003 inch, per side, per inch of stock diameter.

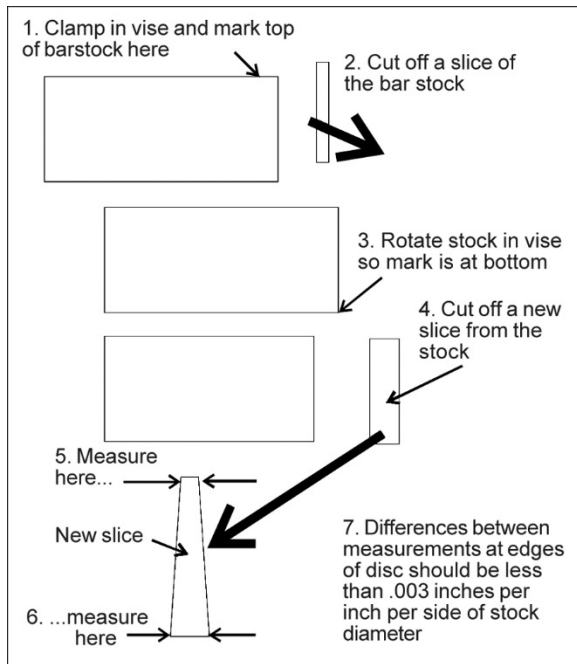


Figure 7-4: test cut

7.7 Bow weight adjustment

Bow weight has been properly set by the manufacturer and should not require attention. If future adjustment becomes necessary, due to part replacement or other contingency, proceed as follows:

1. **Disconnect machine from power source.**
2. Raise bow to allow sufficient room for the following procedure, and use hydraulic valve knob to keep it in raised position.
3. Place one end of a fish-type scale under the blade tension handle and lift the bow with the other end of the scale. The scale should indicate approximately 18-to-20 lbs. for the HBS-916EVS. For the HBS-1018EVS, it should indicate 22-to-24 lbs.
4. Adjust tension by loosening one nut on the C-bolt (L, Figure 7-6) and tightening the other. Tighten nut and retest the weight.

7.8 Vise adjustments

7.8.1 General procedure

1. Place workpiece between vise jaws with required amount to be cut-off extending past blade. (Figure 7-5 shows recommended positioning of various workpiece shapes within the vise.)

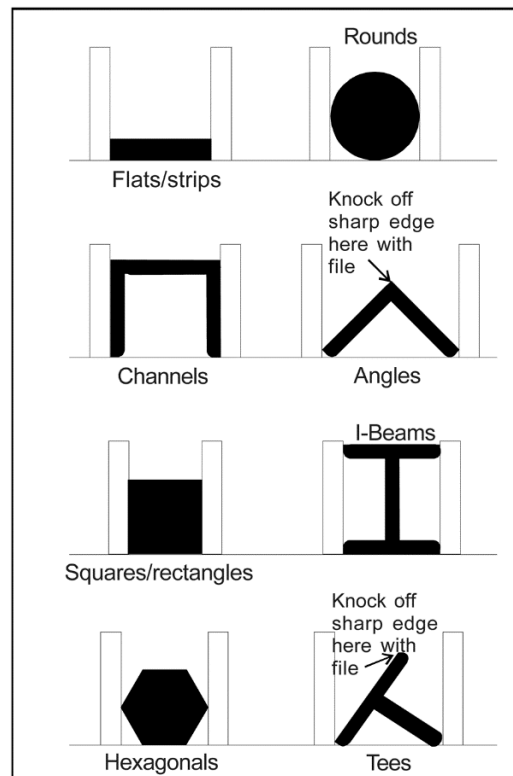


Figure 7-5: positioning in vise

2. Lift rack block (M, Figure 7-6) and manually slide floating vise jaw in general proximity to workpiece. Let block fall to re-engage rack.
3. Rotate handwheel to tighten jaw against workpiece.
4. To retract vise jaw, lift rack block and manually slide floating jaw away.

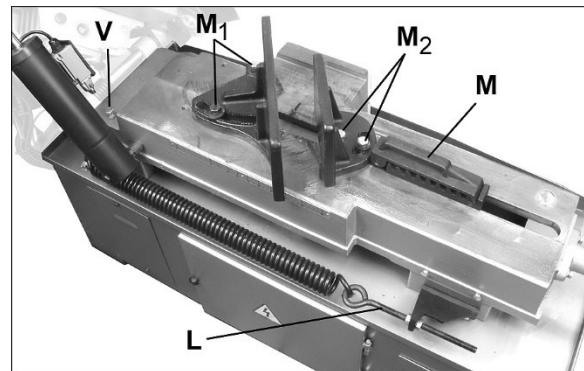


Figure 7-6: vise adjustments and limit switch

7.8.2 Angle cutting

19mm wrench required

1. Loosen both bolts on right/fixed jaw (M₁, Figure 7-6) and swing jaw to desired angle, according to scale at rear of bed. For more precise angles, use a protractor. Tighten bolts.
2. Position workpiece against right jaw.

3. Make sure bolts on left/floating vise (M_2) are loosened. Use handwheel to push vise against workpiece until it conforms to workpiece angle. Tighten bolts.
4. To expand clamping capacity, remove fixed jaw from inner holes and install it in outer holes.

7.9 Work stop adjustment

The work stop assembly (Figure 7-7) allows multiple pieces to be cut to identical length.

Screw rod (R) into hole in base, move bracket (S), and stop (T) to desired positions, and tighten all handles/levers.

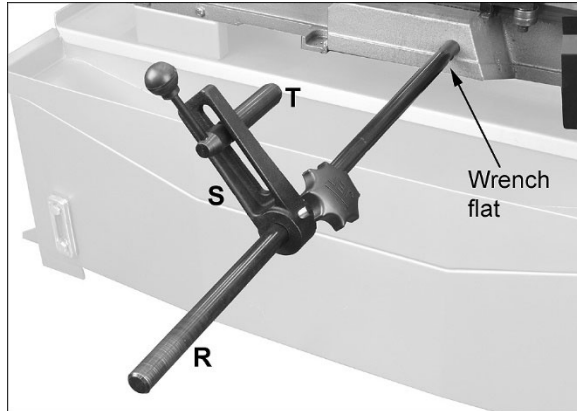


Figure 7-7: work stop

7.10 Limit switch adjustment

The limit switch has been set so that the motor shuts off immediately after blade has cut through the material and just before the head comes to rest.

Adjustment is needed if blade continues to run *after* completion of cut, or blade shuts off *before* completion of cut. Loosen jam nut and turn stop screw (V, Figure 7-6) as required. Retighten jam nut.

8.0 Operating controls

Refer to Figure 8-1.

Power indicator light (A) – Illuminates when machine is receiving electrical power.

Blade start/stop (B) – Controls motor/blade operation.

Emergency stop (C) – Press to instantly stop all electrical functions (bow will continue its descent). To restart machine, rotate E-stop button clockwise until it releases. NOTE: The E-stop is designed for quick emergency shut-down. For normal blade stopping, use the *off* button.

Coolant switch (D) – Turn knob to “I” to start coolant flow. Turn to “O” to stop coolant flow. Flow can be regulated by the two valves behind the slide.

Blade speed (E) – Turn clockwise to increase speed.

Feed rate control (F) – Sets speed of bow descent, i.e. amount of downward force that is applied to workpiece. The feed rate is proportional to the opening of the valve; turn knob counterclockwise to increase feed rate; clockwise to reduce feed rate.

Feed on/off selector (G) – Turn knob to “I” to open hydraulic cylinder and allow bow descent; turn to “O” to hold bow in raised position.

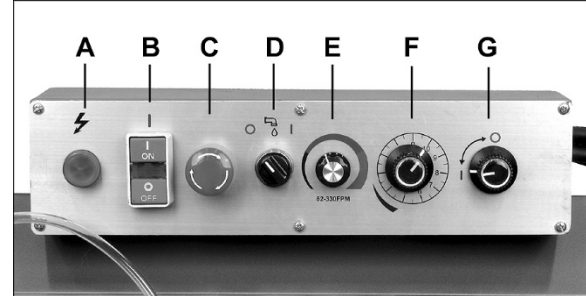


Figure 8-1

9.0 Prior to Operation

Inspect the following before operating the band saw.

1. Check that blade tooth direction matches arrow on blade guides.
2. Check to see that blade is properly seated on wheels with correct tension (approximately 25,000 lbs.).
3. Set blade guide brackets as close to work as possible without obstruction.
4. Check for slight clearance between rear support bearing and back of blade.
5. Select proper speed and feed rate for material being cut.
6. Material must be securely clamped in vise.
7. Check to see that cutting fluid/coolant level is adequate and turn on coolant pump if material requires it. Machine should be filled with proper amount of coolant mixture. Follow directions on coolant manufacturer's label and fill coolant tank by pouring through the chip tray.
8. Do not start cut on a sharp edge.
9. Keep machine lubricated. See *sect. 11.1*.

10.0 Operation

General operating procedure:

1. Turn feed knob to off.
 2. Raise bow and set desired feed rate.
 3. Position workpiece; make sure it is secure within vise. Make sure left blade guide bracket is adjusted as close as possible to left vise jaw.
 4. Press Start to begin blade movement. Activate and adjust coolant flow.
 5. Turn feed knob to on. Adjust feed rate further if needed.
 6. Blade will shut off at end of cut. (If blade does not shut off, limit switch stop bolt needs adjustment.)
1. Clamp a round section workpiece in the vise. The workpiece should be 2 inches or larger in diameter.
 2. Set the saw on low speed. Start the cut with a very light feed rate.
 3. When the saw has completed 1/3 of the cut, increase the feed rate slightly and allow the saw to complete the cut.
 4. Keep the same feed rate and begin a second cut on the same or similar workpiece.
 5. When the blade has completed about 1/3 of the cut, increase the feed rate. Observe chip formation until cutting is at its most efficient rate (see *sect. 10.3*) and allow the saw to complete the cut.
 6. The blade is now considered ready for regular service.

10.1 Blade selection

The HBS-916EVS and 1018EVS are provided with a hook-type variable-tooth blade adequate for a wide range of jobs on a variety of common materials.

Sect. 12.0 shows recommended speeds for various materials. These selections, while appropriate for many shop cutting needs, do not encompass the wide variety of blades of special configuration (tooth pitch and set) and special alloys for cutting unusual or exotic materials.

A coarse blade could be used for a solid steel bar but a finer tooth blade would be used on a thin-wall tube. In general, the blade choice is determined by the thickness of the material; the thinner the material, the finer the tooth pitch.

A minimum of three teeth should be on the workpiece at all times for proper cutting. The blade and workpiece can be damaged if the teeth are so far apart that they straddle the workpiece.

For very high production on cutting of special materials, or for hard-to-cut materials such as stainless steel, tool steel, or titanium, ask your industrial distributor for more specific blade recommendations.

Also, the supplier who provides the workpiece material should be prepared to provide very specific instructions regarding the best blade (and coolant or cutting fluid, if needed) for the material and shape supplied.

10.2 Blade break-in procedure

New blades are very sharp and, therefore, have a tooth geometry which is easily damaged if a careful break-in procedure is not followed. Consult the blade manufacturer's literature for break-in of specific blades on specific materials. However, the following procedure will be adequate for break-in of JET-supplied blades on lower alloy ferrous materials.

10.3 Evaluating cutting efficiency

The best way to determine if the blade is cutting efficiently is to observe the chips formed by the cutting.

If chip formation is powdery, then feed rate is much too light, or the blade is dull.

If chips are curled, but colored — that is, either blue or straw-colored from heat generated during the cut — then feed rate or blade speed (or both) is too high.

If chips are slightly curled, warm, and silvery (not colored by heat), the blade is sufficiently sharp and is cutting at an efficient rate.

Consult a machinist's handbook or similar source for specific speed and feed rates.

11.0 User-maintenance

⚠WARNING Always disconnect power to machine before performing maintenance, unless indicated otherwise. Failure to comply may result in serious personal injury.

Clean up accumulated saw cuttings after use. Make sure vise lead screw is kept free of saw cuttings and other material that would cause damage. Open both wheel covers and remove chips from the wheel housings.

Remove dust or debris from motor fan area with compressed air or vacuum. *Wear eye protection when using compressed air.*

If power cord is worn, cut, or damaged in any way, have it replaced immediately.

Release tension on blade if saw will sit idle for an extended period of time.

Periodically clean chip sludge from chip tray and reservoir.

11.1 Lubrication

See sect. 11.4, Table 3, for lubrication chart.

Blade guide ball bearings are permanently lubricated and sealed; they require no further lubrication.

Apply a light coat of machine oil to moving parts as needed.

Periodically apply light coat of machine oil to exposed metal surfaces, such as vise bed, to prohibit rust.

11.1.1 Gear box oil change

Drain and refill gear box according to Table 3 recommendations.

To check gear box oil level, place bow in down position and wait a few moments for oil to settle. Check level in sight glass on side of gear casing (A, Figure 11-2). Oil level must be above red dot in middle of sight glass.

To change gear box oil:

1. Raise bow to highest position.
2. Unscrew drain plug (Figure 11-1), and allow oil to drain completely. Follow local regulations for proper disposal of used oil.



Figure 11-1: gear box drain

3. Reinstall drain plug. Use pipe thread sealant on plug threads.
4. Remove fill plug (B, Figure 11-2) and insert approximately 850 mL (1/4 gal.) of Mobil® SHC Gear Oil 460, or equivalent.
5. Reinstall fill plug.
6. Lower bow. Recheck sight glass, top off if needed.

CAUTION Oil level in sight glass should not fall below the red dot. Insufficient oil will result in overheating and eventual gear damage.

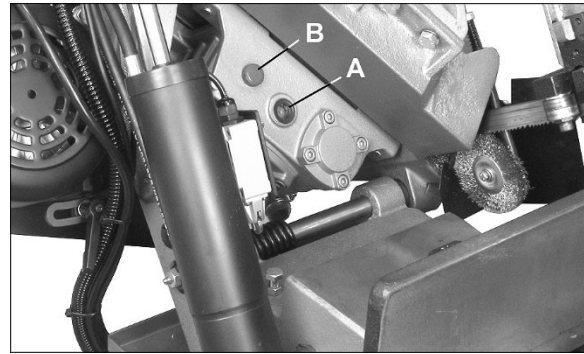


Figure 11-2: gear box fill hole and sight glass

11.1.2 Servicing cutting fluid

Pour cutting fluid or coolant mixture into chip tray so that it drains through strainer into basin. The sight glass is located on front of base, at lower left.

Many cutting fluids on the market are formulated for special applications. Consult your local distributor for details if you have a long range production task or are required to cut more exotic materials. Refer to the cutting fluid provider's instructions for mixing recommendations and fluid life span.

To drain cutting fluid, unscrew drain plug located at bottom left of stand (Figure 11-3). Use pipe thread sealant on drain plug threads when reinstalling. Follow local regulations for disposal of used machine fluids.

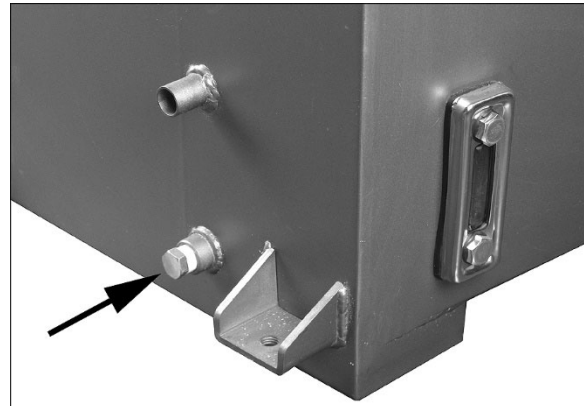


Figure 11-3: base drain plug

11.2 Sheave alignment

Periodically check alignment of sheaves. Misalignment can cause rubbing and premature wear of the belt. To adjust, loosen set screw in motor sheave and slide sheave into alignment. Retighten set screw.

11.3 Additional servicing

Any additional servicing should be performed by authorized service personnel.

11.4 Lubrication schedule

Item or location	Recommended lubricant	Frequency
Vise lead screw	Light machine oil	Monthly
Hydraulic cylinder pivot areas	Light machine oil	Every 6 months
Blade tension shaft	General purpose grease	Every 6 months
Blade brush shaft	Light machine oil	As needed
Front slide	General purpose grease	As needed
Gear box	Mobil® SHC Gear Oil 460, or equivalent. Fill qty.= 850mL (1/4 gal.)	Check periodically; top off as needed. Change after first 50 hours of operation; then at least once a year.
Cutting fluid	(May vary based upon operating needs)	Check level and fluid quality periodically. For flush and refill schedule, refer to cutting fluid/coolant supplier's instructions.
Exposed metal areas (table, vise jaw faces, bow hinge shaft, etc.)	Light machine oil (to inhibit rust)	Frequently as needed.

Table 3

12.0 Blade speed recommendations

These are general recommendations only; consult a machinery handbook for more specific information.

Speed FPM	Material
90	Tool steel, stainless steel, alloy steel, copper alloys, hard cast iron
130	Mild steel, soft cast iron, medium hard brass, medium hard bronze
170	Soft brasses and bronzes, hard aluminum
235	Plastic, soft and medium aluminum, other light materials
370	Plastic, wood, other light materials

Table 4

13.0 Troubleshooting HBS-916, HBS-1018

Table 5

* **WARNING:** Some corrections may require a qualified electrician.

Symptom	Possible Cause	Correction*
Motor will not start.	No incoming power.	Check plug connection.
	Blown electrical panel fuses or tripped circuit breaker.	Replace fuses, or reset breaker.
	Defective motor, switch, power cable, or plug.	Qualified electrician/service personnel should inspect these items.
Motor runs too hot.	Excessive blade tension.	Reduce tension.
	Drive belt tension too high.	Reduce belt tension.
	Blade too coarse for material (especially with tubular stock).	Use blade with finer tooth pitch.
	Blade too fine for material (especially with heavier, soft material).	Use blade with coarser tooth pitch.
	Insufficient gear lubrication.	Fill gear box above red dot in sight glass.
Band Saw vibrates excessively.	Base on uneven surface.	Adjust base for even support.
	Saw blade has cracks.	Replace blade immediately.
	Too heavy a cut.	Reduce feed rate and blade speed.
	Motor not tightened down.	Tighten locking handle to secure motor.
Angled cuts not accurate.	Material not clamped properly, or vise screws not tightened.	Tighten vise screws securely. Use an adjustable square or protractor to verify angle settings.
	Blade is worn, cutting crooked.	Replace blade.
Cuts not square.	Feed rate too fast; blade is deflecting.	Decrease feed rate.
	Incorrect blade tooth style or spacing in relation to workpiece.	Check machinist's handbook for recommended blade type for work being done.
	Blade is worn, cutting crooked.	Replace blade.
	Incorrect adjustment of guide bearings.	Readjust guide assemblies.
	Guide bearings are worn.	Replace guide bearings.
	Blade guide brackets too far apart, causing blade deflection.	Adjust guide assemblies as close to workpiece as possible.
	Workpiece incorrectly positioned in vise, or vise not square to blade.	Check positioning and clamping. Check squareness of vise jaw to blade surface.
	Poor blade tension.	Check and correct if needed.
	Blade tracking too far from wheel shoulders.	Adjust blade tracking.
Finished surface of workpiece is rough, unsatisfactory.	Blade is dull.	Replace blade.
	Improper blade for cutting operation.	Check machinist's handbook for blade recommendations.
	Feed rate too fast.	Reduce feed rate.
	Blade tension too low.	Increase blade tension.
Frequent blade breakage.	Incorrect blade tension.	Adjust blade tension.
	Incorrect blade speed or feed rate.	Adjust accordingly.
	Workpiece loose in vise.	Clamp workpiece securely.

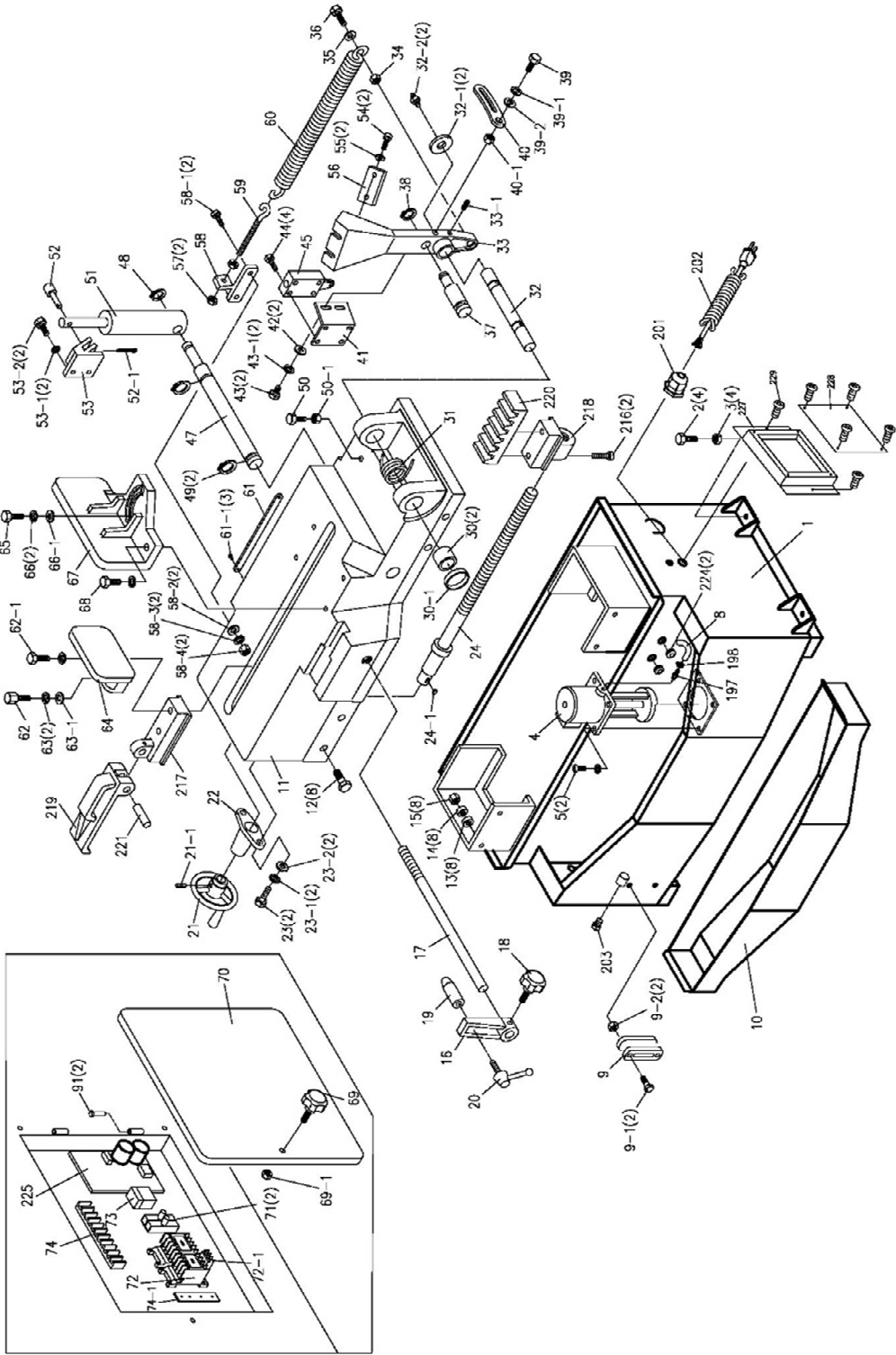
Symptom	Possible Cause	Correction*
Frequent blade breakage (cont.)	Blade rubs heavily on wheel shoulder.	Adjust blade tracking.
	Tooth pitch too coarse for material.	Use appropriate blade for material.
	Teeth in contact with workpiece before saw is started.	Start motor before blade contacts workpiece.
	Blade guides are misaligned.	Adjust blade guides as needed.
	Blade too thick for wheel diameter.	Use thinner blade.
	Cracking at weld; poor annealing of blade.	Replace blade.
Unusual wear on side/back of blade.	Blade guides worn.	Replace guides.
	Blade guide bearings improperly adjusted.	Readjust blade guide bearings.
	Blade guide bearing bracket is loose.	Tighten blade guide bearing bracket.
Premature blade dulling.	Teeth too coarse.	Use finer tooth blade.
	Blade speed too fast.	Reduce speed.
	Inadequate feed rate.	Select appropriate feed rate.
	Hard spots or scale on material.	Hard Spots: Increase feed rate. Scale: Reduce speed and increase feed rate.
	Work hardening of material (especially stainless steel).	Increase feed rate.
	Blade installed backwards.	Remove blade, twist inside-out and re-install to match arrow direction.
	Insufficient blade tension.	Adjust tension as needed.
No coolant flow.	Valves turned off.	Make sure both valves are open.
	Filter screen or hose(s) clogged.	Inspect elements and clean.
	Coolant level low.	Add coolant to reservoir.
	Pump motor burned out.	Replace pump.

14.0 Replacement Parts

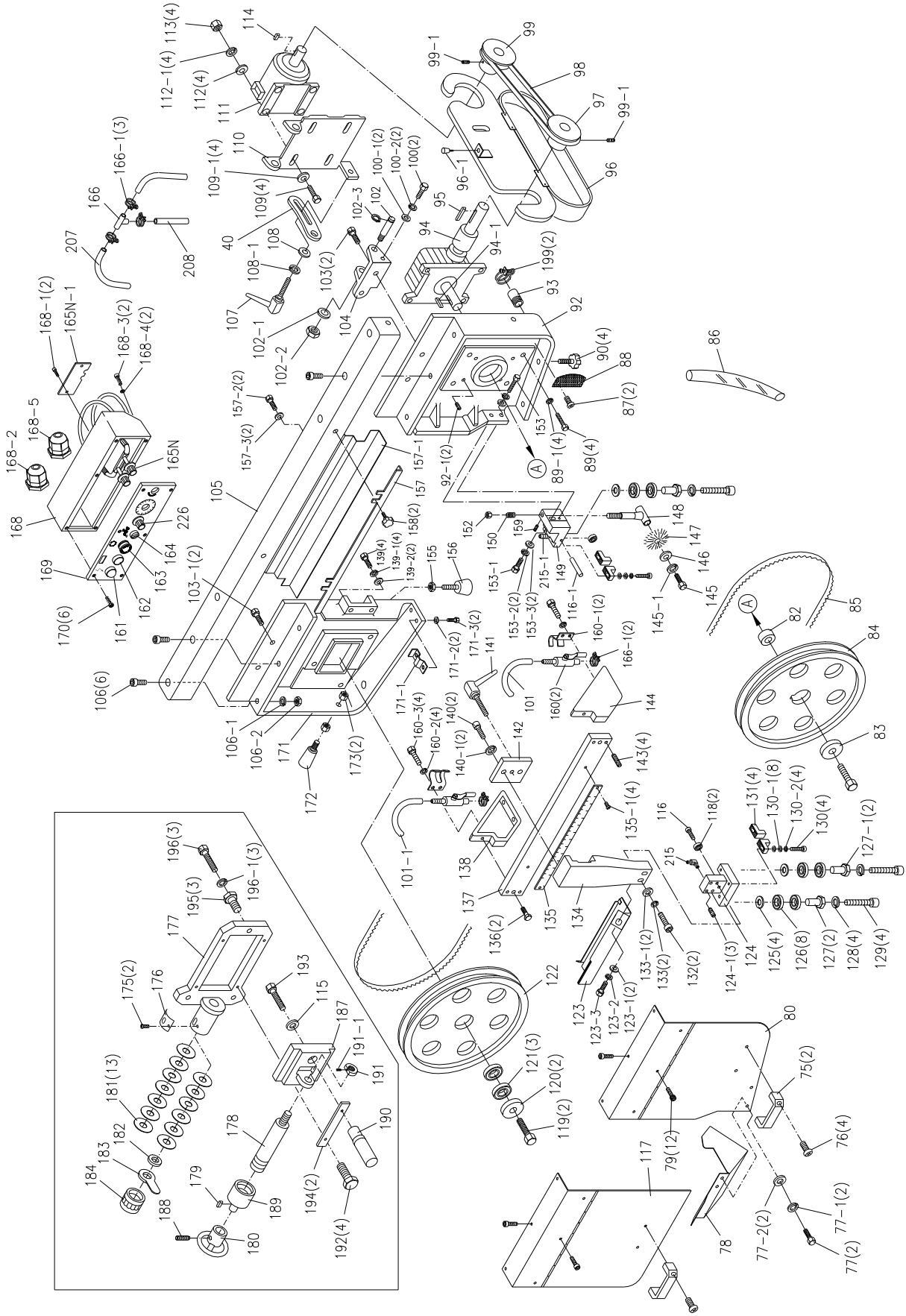
Replacement parts are listed on the following pages. To order parts or reach our service department, call 1-800-274-6848 Monday through Friday, 8:00 a.m. to 5:00 p.m. CST. Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

Non-proprietary parts, such as fasteners, can be found at local hardware stores, or may be ordered from JET. Some parts are shown for reference only, and may not be available individually.

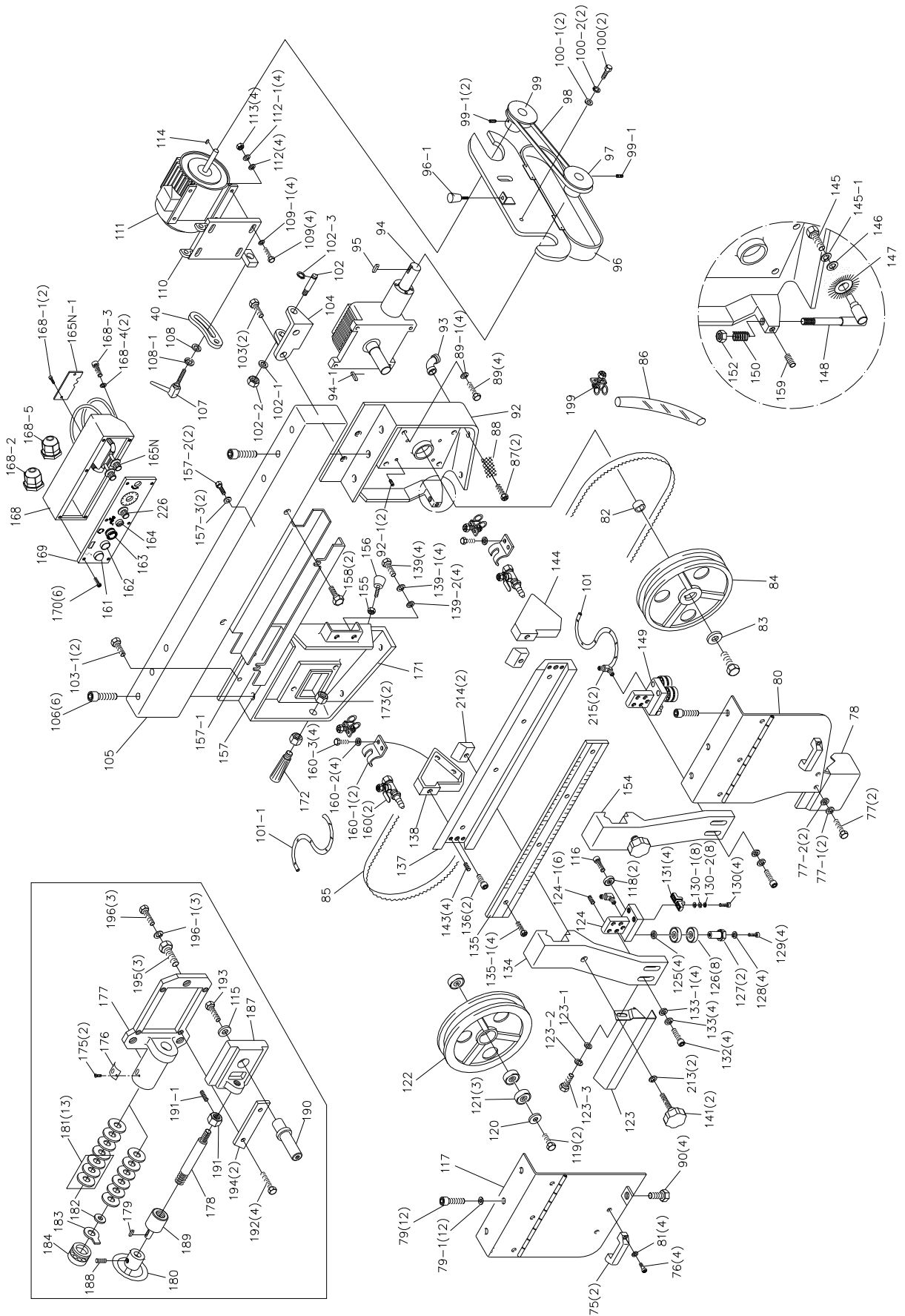
14.1.1 HBS-916EVS & 1018EVS – Bed and Base Assembly – Exploded View



14.1.2 HBS-916EVS – Bow Assembly – Exploded View



14.1.3 HBS-1018EVS – Bow Assembly – Exploded View



14.1.4 HBS-916EVS & 1018EVS – Parts List

Index No	Part No	Description	Size	Qty
1	HBS916-01	Base		1
	HBS1018-01	Base		1
2	TS-1492071	Hex Cap Bolt	M12x70	4
3	TS-1540081	Hex Nut	M12	4
4	HBS916-CP	Coolant Pump	1/8HPCSA	1
5	TS-1534052	Pan Head Screw	M6x16	2
6	TS-2361061	Lock Washer	M6	2
8	HBS916W-08	Hose		1
9	HBS916W-09	Coolant Gauge		1
9-1	TS-1491041	Hex Cap Bolt	M10X30	2
9-2	TS-1540071	Hex Nut	M10	2
10	HBS916-10	Chip Tray		1
	HBS1018-10	Chip Tray		1
11	HBS916W-11AG	Bed		1
	HBS1018W-11AG	Bed		1
12	TS-1490051	Hex Cap Screw	M8x30	8
13	TS-1550061	Flat Washer	8mm	8
14	TS-2361081	Lock Washer	8mm	8
15	TS-1540061	Hex Nut	M8	8
16	HBS916W-16	Stop Bracket		1
17	HBS916W-17	Stop Rod		1
18	HBS916W-18	Lock Handle		1
19	HBS916W-19	Work Stop		1
20	HBS916W-20	Lock Knob		1
21	HBS916-21	Hand Wheel Assembly		1
	HBS1018-21	Hand Wheel Assembly		1
21-1	HBS916W-21-1	Set Screw	5/16" x 8"	1
22	HBS916W-22G	Lead Screw Seat		1
	HBS1018W-22G	Lead Screw Seat		1
23	TS-1490051	Hex Cap Bolt	M8x30	2
23-1	TS-1551061	Lock Washer	8mm	2
23-2	TS-1550061	Flat Washer	8mm	2
24	HBS916W-24A	Lead Screw		1
	HBS1018W-24A	Lead Screw		1
24-1	HBS916W-24-1	Key	5x5x20mm	1
30	HK-2516-2RS	Needle Bearing		2
30-1	HBS916-30-1	Bushing		1
31	HBS916W-31	Torsion Spring		1
	HBS1018W-31	Torsion Spring		1
32	HBS916W-32	Pivot Shaft		1
32-1	TS-2360121	Washer	12mm	2
32-2	HBS916W-32-2	Bolt w/ Zerk Fitting		2
33	HBS916W-33G	Pivot Bracket		1
	HBS1018W-33G	Pivot Bracket		1
33-1	TS-1525021	Set Screw	M10x12	1
34	TS-1540081	Hex Nut	M12	1
35	TS-1550081	Flat Washer	12mm	1
36	TS-1492041	Hex Cap Bolt	M12x40	1
37	HBS916W-37	Torsion Spring Shaft		1
38	HBS916W-38	C-Ring	S-22	1
39	TS-1490041	Hex Cap Bolt	M8x25	1
39-1	TS-2361081	Lock Washer	8mm	1
39-2	TS-1550061	Flat Washer	8mm	1
40	HBS916W-40	Motor Tilt Plate		2
	HBS1018W-40	Motor Tilt Plate		2
40-1	TS-1540061	Hex Nut	M8	1
41	HBS916W-41	Limit Switch Plate		1
42	TS-1550061	Flat Washer	8mm	2
43	TS-1490031	Hex Cap Screw	M8x20	2

Index No.	Part No.	Description	Size	Qty
43-1	TS-1551061	Lock Washer	8mm	2
44	TS-1482021	Hex Cap Screw	M6x12	4
45	HBS916W-45	Limit Switch		1
47	HBS916W-47	Cylinder Pin		1
	HBS1018W-47A	Cylinder Pin		1
48	HBS916W-48	C-Ring	S-20	1
49	HBS916W-49	C-Ring	S-25	2
50	TS-1491041	Hex Cap Screw	M10x30	1
50-1	TS-1540071	Hex Nut	M10	1
51	HBS916W-51	Hydraulic Cylinder Assembly		1
	HBS1018W-51	Hydraulic Cylinder Assembly		1
52	HBS916W-52	Cylinder Pin		1
52-1	HBS916W-52-1	Pin		1
53	HBS916W-53	Hydraulic Mounting Plate - Top		1
	HBS1018W-53	Hydraulic Mounting Plate - Top		1
53-1	TS-1551071	Lock Washer	10mm	2
53-2	TS-1491041	Hex Cap Screw	M10x30	2
54	TS-1492051	Hex Cap Screw	M12x50	2
55	TS-1550081	Flat Washer	12mm	2
56	HBS916W-56	Plate		1
56-1	HBS916W-56-1	Pin	M5x45	1
57	TS-0561051	Hex Nut	1/2"-13	2
58	HBS916W-58	Spring Bracket		1
58-1	TS-1490051	Hex Cap Screw	M8x30	2
58-2	TS-1550051	Flat Washer	8mm	2
58-3	TS-1551061	Lock Washer	8mm	2
58-4	TS-1540061	Hex Nut	M8	2
59	HBS916W-59	Adjustable C-Bolt		1
60	HBS916W-60	Spring		1
	HBS1018W-60	Spring		1
61	HBS916W-61	Angle Scale		1
61-1	HBS916W-61-1	Rivet	M2x5	3
62	TS-1492041	Hex Cap Screw	M12x40	1
62-1	TS-1492051	Hex Cap Screw	M12x50	1
63	TS-1551081	Lock Washer	12mm	2
63-1	HBS916W-63-1	Special Washer	12mm	1
64	HBS916W-64	Vise Jaw – left		1
	HBS1018W-64	Vise Jaw - left		1
65	TS-1492051	Hex Cap Bolt	M12x50	1
66	TS-1551081	Lock Washer	12mm	1
66-1	HBS916W-63-1	Special Washer	12mm	1
67	HBS916W-67	Vise Jaw – right		1
	HBS1018W-67	Vise Jaw – right		1
68	TS-1492041	Hex Cap Bolt	M12x40	1
68-1	TS-1551081	Lock Washer	12mm	1
69	HBS916W-69A	Knob	M6x30	1
69-1	HBS916W-69-1	Nut	M6	1
70	HBS916-70	Electrical Box Cover		1
71	HBS916-71	Fuse Block	CSA	2
	HBS916-71F1A	Fuse	1A /CSA	2
72	HBS916-72	Magnetic Switch	C12D10	2
72-1	HBS1018-OL	Overload Switch	11-14A	1
73	HBS916EVS-73	Relay		1
74	HBS916EVS-74	Terminal Strip		1
74-1	HBS916-74-1	Ground Plate		1
75	HBS916W-75	Handle		2
76	TS-1534051	Pan Head Screw	M6x16	4
77	TS-1482021	Hex Cap Bolt	M6x12	2
77-1	TS-1551041	Lock Washer	M6	2
77-2	TS-1550041	Flat Washer	M6	2
78	HBS916W-78	Wire Brush Guard		1
79	TS-1503011	Hex Socket Cap Screw	M6x8	12

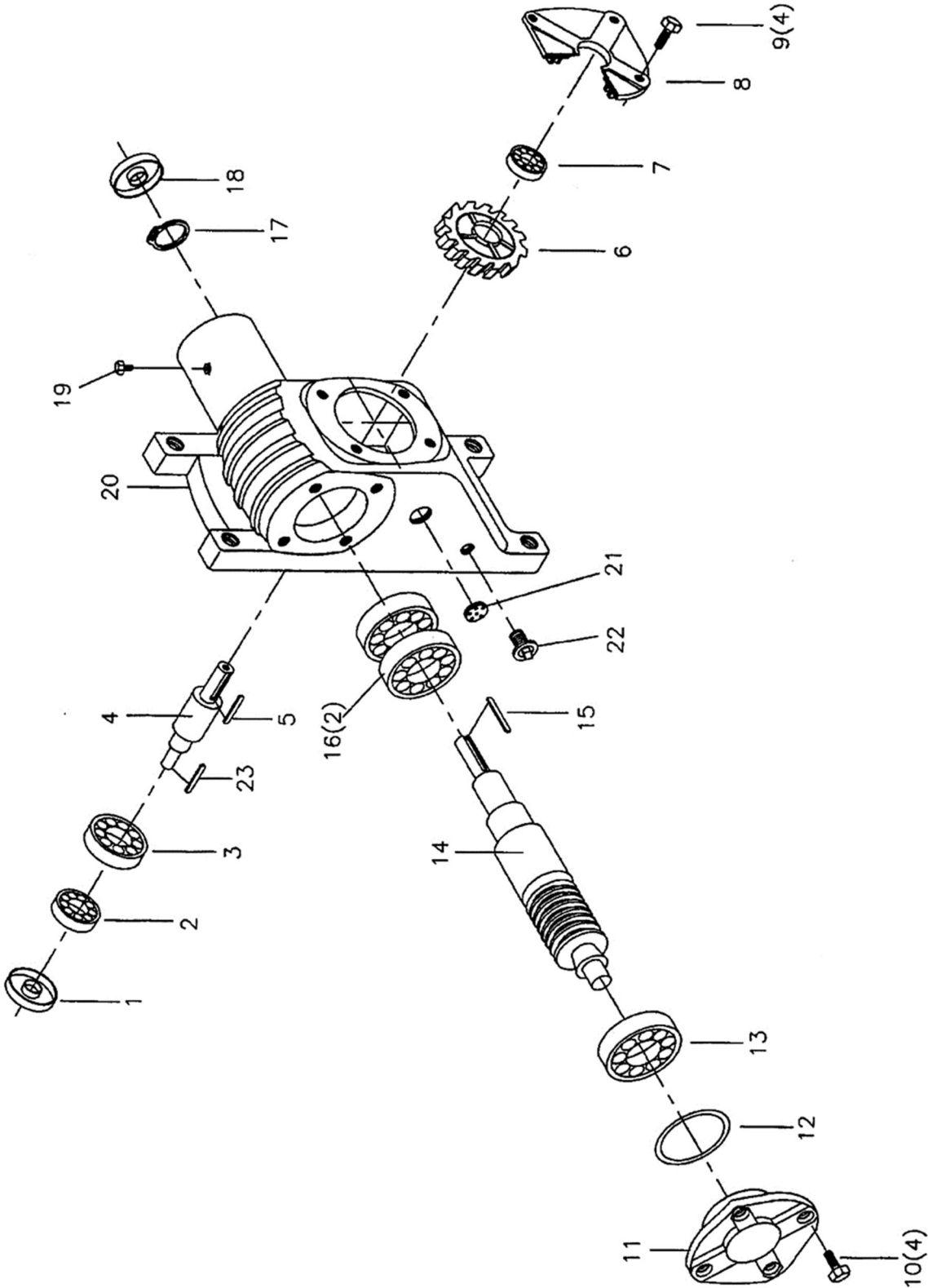
Index No.	Part No.	Description	Size	Qty
	HBS1018W-79A	Adjustable Bracket Mount - rear (HBS-1018W only; not shown)		1
79-1	TS-1550041	Flat Washer (HBS-1018 only)	M6	12
80	HBS916W-80G	Blade Wheel Cover - right		1
	HBS1018W-80AG	Blade Wheel Cover - right		1
81	TS-1550041	Flat Washer	M6	4
82	HBS916W-82	Bushing		1
83	HBS916W-83	Washer		1
84	HBS916W-84	Drive Wheel		1
	HBS1018W-84A	Drive Wheel	14"	1
85		Blade (local purchase, HBS-916W)		1
		Blade (local purchase, HBS-1018W)		1
86	HBS916W-86	Hose		1
87	TS-1533032	Pan Head Screw	M5x10	2
88	HBS916W-88	Filter Screen		1
89	TS-1492031	Hex Cap Screw	M12x35	4
89-1	TS-1551081	Lock Washer	M12	4
90	HBS916W-90	Lock Knob		4
91	HBS916W-91	Hinge Pin		2
92	HBS916W-92G	Blade Wheel Box - right		1
	HBS1018W-92G	Blade Wheel Box - right		1
92-1	TS-1525021	Set Screw	M10x12	2
93	HBS916W-93	Connector		1
	HBS1018W-93	Connector		1
94	HBS916W-94G	Gear Box Assembly (must order entire assembly)		1
94-1	HBS916W-94-1	Key, Dbl Rd Hd	7x7x45MM	1
95	HBS916W-95	Key	7MM	1
96	HBS916W-96	Pulley Cover		1
	HBS1018W-96	Pulley Cover		1
96-1	HBS916W-96-1	Lock Knob		1
97	HBS916EVS-97	Pulley		1
98	VB-A37	V-Belt	A37	1
99	HBS916EVS-97	Pulley		1
99-1	TS-1524021	Set Screw	M8x10	2
100	TS-1490021	Hex Cap Screw	M8x16	2
100-1	TS-1550061	Flat Washer	M8	2
100-2	TS-1551061	Lock Washer	M8	2
101	HBS916W-101	Hose		1
101-1	HBS916W-101-1	Hose		1
102	HBS916W-102	Support Shaft		1
102-1	TS-1550081	Washer	M12	1
102-2	TS-1540081	Hex Nut	M12	1
102-3	HBS916W-102-3	C-Ring	S-19	1
103	TS-1492021	Hex Cap Screw	M12x30	2
103-1	HBS916W-103-1	Hex Cap Bolt	M12x20	2
104	HBS916W-104	Motor Mount Bracket		1
105	HBS916W-105G	Column		1
	HBS1018W-105AG	Column		1
106	TS-1506011	Hex Socket Cap Screw	M12x20	6
106-1	TS-1551081	Lock Washer	M12	1
106-2	TS-1540081	Washer	M12	1
107	HBS916W-107	Locking Handle		1
108	TS-1550061	Flat Washer	8mm	1
108-1	TS-1551061	Lock Washer	M8	1
109	TS-1490081	Hex Cap Screw	M8x45	4
109-1	TS-1550061	Flat Washer	M8	4
110	HBS916W-110	Motor Mount Plate		1
111	HBS916EVS-111	Motor	1-1/2HP,3PH,230V	1
	HBS1018EVS-111	Motor	2HP,3PH,230V	1
112	TS-1550061	Flat Washer	M8	4
112-1	TS-1551061	Lock Washer	M8	4
113	TS-1540061	Hex Nut	M8	4

Index No.	Part No.	Description	Size	Qty
114	HBS916W-114	Key	7MM	1
115	TS-1550081	Flat Washer	M12	1
116	TS-1504041	Hex Socket Cap Screw	M8x20	1
116-1	HBS916W-116-1	Shaft (HBS-916W)		1
117	HBS916W-117G	Blade Wheel Cover - left		1
	HBS1018W-117AG	Blade Wheel Cover - left		1
118	BB-608VV	Ball Bearing	608VV	2
119	TS-1492011	Hex Cap Screw	M12x25	2
120	TS-1550081	Washer	M12	1
121	BB-6205Z	Ball Bearing	6205Z	3
122	HBS916W-122	Idler Wheel		1
	HBS1018W-122	Idler Wheel		1
123	HBS916W-123	Blade Guard		1
	HBS1018W-123A	Blade Guard		1
123-1	TS-1550061	Flat Washer	M8	2
123-2	TS-1551061	Lock Washer	M8	1
123-3	TS-1490021	Hex Cap Screw	M8x16	1
124	HBS916W-124	Guide Bracket - left		1
	HBS916W-124A	Guide Bracket Assembly - left		1
	HBS1018W-124A	Guide Bracket Assembly - left		1
124-1	TS-1504031	Hex Socket Cap Screw (HBS-916W)	M8x16	3
	TS-1504031	Hex Socket Cap Screw (HBS-1018W)	M8x16	6
125	TS-1550061	Flat Washer	M8	4
126	BB-6201VV	Ball Bearing	6201VV	8
127	HBS916W-127	Eccentric Sleeve (outside)(HBS-916W)		2
	HBS1018W-127	Eccentric Sleeve (outside)(HBS-1018W)		2
127-1	HBS916W-127-1	Concentric Sleeve (inside)(HBS-916W)		2
	HBS1018W-127-1	Concentric Sleeve (inside)(HBS-1018W)		2
128	TS-1551061	Lock Washer	M8	4
129	TS-1504091	Hex Socket Cap Screw	M8x45	4
130	TS-1503071	Hex Socket Cap Screw	M6x30	4
130-1	TS-1550041	Flat Washer	M6	8
130-2	TS-2361061	Lock Washer	M6	4
131	HBS916W-131	Blade Guide		4
132	TS-1504081	Hex Socket Cap Screw (HBS-916W)	M8x40	2
	TS-1504081	Hex Socket Cap Screw (HBS-1018W)	M8x40	4
133	TS-2361081	Lock Washer (HBS-916W)	M8	2
	TS-2361081	Lock Washer (HBS-1018W)	M8	4
133-1	TS-1550061	Flat Washer (HBS-916W)	M8	2
	TS-1550061	Flat Washer (HBS-1018W)	M8	4
134	HBS916W-134G	Adjustable Bracket		1
	HBS1018W-134AG	Adjustable Bracket		1
135	HBS916W-135	Scale (HBS-916W)		1
	HBS1018W-135	Dovetail Scale		1
135-1	HBS916W-135-1	Rivet (HBS-916W)	M2x5	4
	HBS1018W-135-1	Pan Head Screw (HBS-1018W)	M5x8	4
136	TS-1505031	Hex Socket Cap Screw	M10x25	2
137	HBS916W-137	Slide		1
	HBS1018W-137AG	Slide		1
138	HBS916W-138G	Blade Bracket - left		1
	HBS1018W-138G	Blade Bracket - left		1
139	TS-1492021	Hex Cap Bolt	M12x30	4
139-1	TS-1551081	Lock Washer	M12	4
139-2	TS-1550081	Flat Washer	M12	2
140	TS-1490041	Hex Cap Bolt (HBS-916W)	M8x25	2
140-1	TS-1551061	Lock Washer (HBS-916W)	M8	2
141	HBS916W-141	Knob		1
	HBS1018W-141	Knob		1
142	HBS916W-142	Plate		1
143	TS-1524021	Set Screw	M8x10	4
144	HBS916W-144G	Blade Bracket - right		1
	HBS1018W-144G	Blade Bracket - right		1

Index No.	Part No.	Description	Size	Qty
145	TS-1482011	Hex Cap Bolt	M6x10	1
145-1	TS-1551041	Lock Washer	M6	1
146	TS-1550041	Washer	M6	1
147	HBS916W-147	Wire Brush		1
	HBS1018W-147	Wire Brush		1
148	HBS916W-148	Wire Brush Rod		1
	HBS1018W-148	Wire Brush Rod		1
149	HBS916W-149	Guide Bracket - right		1
	HBS1018W-149	Guide Bracket - right		1
	HBS916W-149A	Guide Bracket Assembly - right		1
	HBS1018W-149A	Guide Bracket Assembly - right		1
150	HBS916W-150	Spring		1
	HBS1018W-150	Spring		1
152	TS-1540071	Hex Nut	M10	1
153	TS-1504091	Hex Socket Cap Screw (HBS-916W)	M8x45	2
153-1	TS-1504111	Hex Socket Cap Screw (HBS-916W)	M8x55	1
153-2	TS-1551061	Lock Washer (HBS-916W)	M8	1
153-3	TS-1550051	Flat Washer (HBS-1018W)	M8	1
154	HBS1018W-154AG	Adjustable Bracket - right (HBS-1018W)		1
155	TS-1540081	Hex Nut	M12	1
156	MBS1014W-156	Hex Cap Bolt with Rubber Stopper	M12x60	1
157	HBS916W-157G	Blade Guard		1
	HBS1018W-157AG	Blade Guard		1
157-1	HBS1018W-157-1G	Blade Guard - down		1
	HBS916W-157-1G	Blade Guard - down		1
157-2	TS-1482021	Hex Cap Screw	M6x12	2
157-3	TS-1550041	Flat Washer	M6	2
158	HBS916W-158	Lock Knob		2
159	TS-1523021	Set Screw (HBS-1018W)	M6x8	1
160	HBS916W-160	Adjusting Valve		2
160-1	HBS916W-160-1	Clamp		1
160-2	TS-1551041	Lock Washer	M6	4
160-3	TS-1482021	Hex Cap Screw	M6x12	4
161	HBS916-161A	Power Indicator Light Assembly	CSA	1
162	HBS916-162	Start Switch	CSA	1
163	HBS916-163	Stop Switch	CSA	1
164	HBS916-164	Pump Switch	CSA	1
165N	HBS916W-165N	Feed Control - Hydraulic On/Off Valve		1
	HBS1018W-165N	Feed Control - Hydraulic On/Off Valve		1
	HBS916W-165S-K	Knob for On/Off Valve		1
	HBS916W-165S-1	Speed Control Valve		1
	HBS1018W-165S-1	Speed Control Valve		1
	HBS916W-165S-1-K	Knob for Speed Control Valve		1
165N-1	HBS916EVS-165N-1	Plate		1
166	HBS916W-166	Connecting Tube		1
166-1	HBS916W-166-1	Hose Clamp		5
168	HBS916EVS-168	Control Box		1
168-1	HBS916W-168-1	Pan Head Screw	M5x10	2
168-2	HBS916W-168-2	Strain Relief		1
168-3	TS-1503031	Hex Socket Cap Screw	M6x12	2
168-4	TS-1550041	Flat Washer	M6	2
168-5	HBS916EVS-168-5	Strain Relief	PG9	1
169	HBS916EVS-169	Control Panel		1
170	TS-1533032	Pan Head Screw	M5x10	6
171	HBS916W-171G	Wheel Box - left		1
	HBS1018W-171G	Wheel Box - left		1
171-1	HBS916W-171-1	Block (HBS-916W)		1
171-2	TS-1551041	Lock Washer (HBS-916W)	M6	2
171-3	TS-1482031	Hex Cap Bolt (HBS-916W)	M6x16	2
172	HBS916W-172	Handle		1
173	TS-1540081	Hex Nut	M12	2
175	TS-1533032	Pan Head Screw	M5x10	2

Index No.	Part No.	Description	Size	Qty
176	HBS916W-176	Indicator Scale		1
177	HBS916W-177G	Slide Bracket		1
178	HBS916W-178	Tension Shaft		1
179	HBS916W-179	Key	5MM	1
180	HBS916-180	Handwheel		1
181	HBS916W-181	Lock Washer	M22	13
182	HBS916W-182	Flat Steel Washer		1
183	HBS916W-183	Tension Indicator		1
184	BB-51104	Thrust Bearing	51104	1
187	HBS916W-187G	Slide		1
188	TS-1524021	Set Screw	M8x10	1
189	HBS916W-189	Extension Bar		1
190	HBS916W-190	Wheel Shaft		1
191	HBS916W-191	Nut w/Hole For Set Screw	M14	1
191-1	TS-1523021	Set Screw	M6x8	1
192	TS-1504051	Hex Socket Cap Screw	M8x25	4
193	TS-1492011	Hex Socket Cap Screw	M12x25	1
194	HBS916W-194	Gib		2
195	HBS916W-195	Hex Cap Screw (re: HBS916W-196)		3
196	HBS916W-196	Screw Assembly		3
196-1	HBS916W-196-1	Lock Washer (re: HBS916W-196)		3
197	HBS916W-197	Hose Fitting		1
198	HBS916W-198	Hose Clamp		1
199	HBS916W-199	Hose Clamp		2
	HBS1018W-199	Hose Clamp		1
201	HBS916-201	Strain Relief Fitting	PG11	1
202	HBS916EVS-202	Power Cord (115V)	5-15P	1
203	HBS916W-203	Screw		1
204	LM000404	ID Label, HBS-916EVS (not shown)		1
	LM000405	ID Label, HBS-1018EVS (not shown)		1
205	HBS916W-205	Warning Label (not shown)		1
207	HBS916W-207	Hose		1
208	HBS916W-208	Hose		1
213	TS-1550071	Flat Washer	M10	2
214	HBS1018W-214	Clamp		2
215	HBS916W-215	Cu Connector		1
	HBS1018W-215	Cu Connector		2
215-1	HBS916W-215-1	Cu Connector (HBS-916W)		1
216	TS-1504051	Hex Socket Cap Screw	M8x25	2
217	HBS916W-217	Slide Bracket		1
218	HBS916W-218	Lead Screw Bracket		1
219	HBS916W-219	Rack Block		1
	HBS1018W-219	Rack Block		1
220	HBS916W-220	Rack		1
	HBS1018W-220	Rack		1
221	HBS916W-221	Pin		1
222	HBS916W-222G	Plate		1
	HBS1018W-222G	Plate		1
223	TS-1503011	Hex Socket Cap Screw	M6x8	2
224	HBS916W-224	Rubber Ring		2
225	HBS916EVS-225	Inverter	2HP 110V 1PH	1
226	HBS916EVS-226	Blade Speed Knob		1
	JET-203	JET Logo (not shown)	203 x 84mm	1
227	HBS916EVS-227	Terminal Box		1
228	HBS916EVS-228	Terminal Box Cover		1
229	TS-1533032	Pan Head Screw	M5x10	6

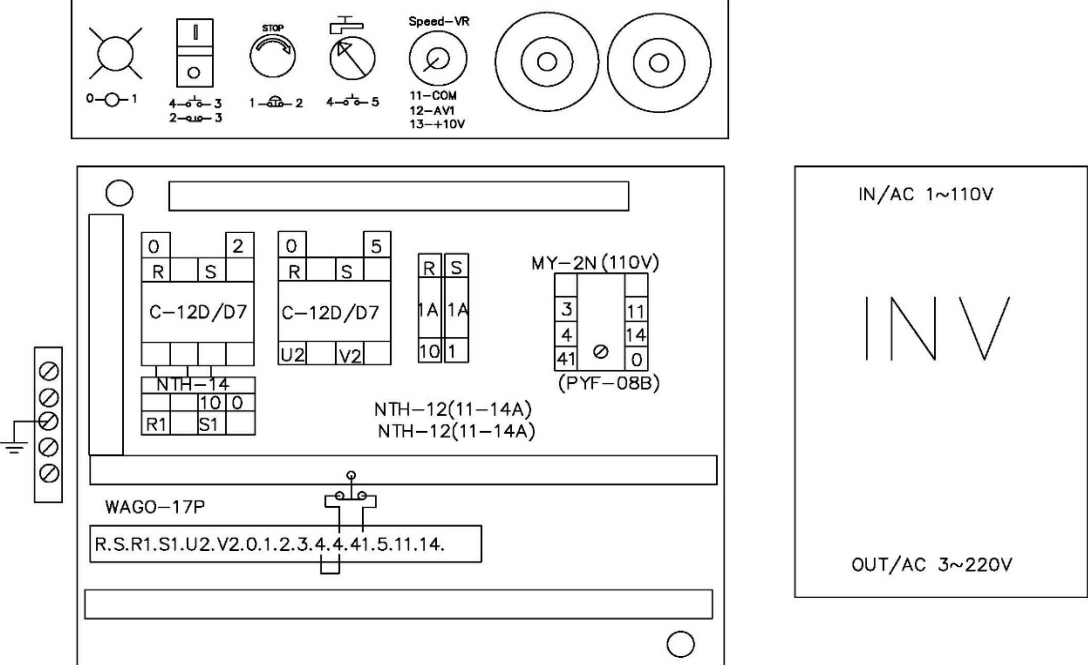
14.2.1 HBS-916EVS & 1018EVS – Gear Speed Reducing Box – Exploded View



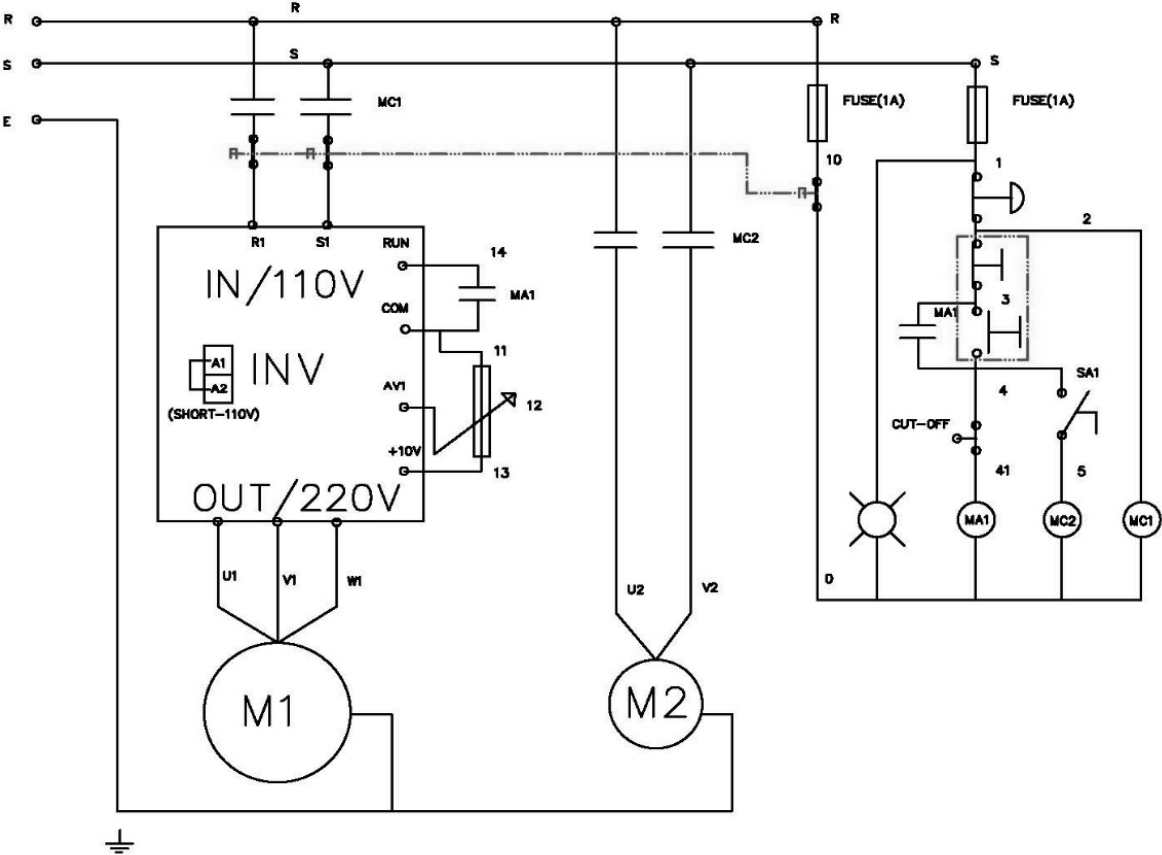
14.2.2 HBS-916EVS & 1018EVS – Gear Speed Reducing Box – Parts List

Index No.	Part No.	Description	Size	Qty
	HBS916W-94G	Gear Box Assembly (includes #1 thru 23)		1
1	HBS916W-94-01	Oil Seal	35x55x8 mm	1
2	BB-30207	Bearing	30207	1
3	BB-6207	Bearing	6207	1
4	HBS916W-94-04	Shaft		1
5	HBS916W-94-05	Key, Dbl Rd Hd	8x7x30 mm	1
6	HBS916W-94-06	Gear Wheel		1
7	BB-6206	Bearing	6206	1
8	HBS916W-94-08	Output Shaft Cover		1
9	HBS916W-94-09	Output Hex Cap Screw	M10x20	4
10	HBS916W-94-10	Input Hex Cap Screw	M8x20	4
11	HBS916W-94-11	Input Shaft Cover		1
12	HBS916W-94-12	Washer		1
13	BB-6025	Bearing	6025	1
	BB-30205	Bearing	30205	1
14	HBS916W-94-14	Input Shaft		1
15	HBS916W-94-15	Key, Dbl Rd Hd	7x7x60 mm	1
16	BB-6205	Bearing	6205	2
17	HBS916W-94-17	C-Retaining Ring, Ext	R52	1
18	HBS916W-94-18	Oil Seal	25x52x8 mm	1
19	HBS916W-94-19	Vent Bolt		1
20	HBS916W-94-20	Gear Box		1
21	HBS916W-94-21	Oil Lens		1
22	HBS916W-94-22	Draw Plug		1
23	HBS916W-94-23	Key, Dbl Rd Hd	7x7x45 mm	1

15.0 Electrical Connections – HBS-916EVS,1018EVS



AC 1~ 110/115/120V



16.0 Warranty and service

JET warrants every product it sells against manufacturers' defects. If one of our tools needs service or repair, please contact Technical Service by calling 1-800-274-6846, 8AM to 5PM CST, Monday through Friday.

Warranty Period

The general warranty lasts for the time period specified in the literature included with your product or on the official JET branded website.

- JET products carry a limited warranty which varies in duration based upon the product. (See chart below)
- Accessories carry a limited warranty of one year from the date of receipt.
- Consumable items are defined as expendable parts or accessories expected to become inoperable within a reasonable amount of use and are covered by a 90 day limited warranty against manufacturer's defects.

Who is Covered

This warranty covers only the initial purchaser of the product from the date of delivery.

What is Covered

This warranty covers any defects in workmanship or materials subject to the limitations stated below. This warranty does not cover failures due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair, alterations or lack of maintenance. JET woodworking machinery is designed to be used with Wood. Use of these machines in the processing of metal, plastics, or other materials outside recommended guidelines may void the warranty. The exceptions are acrylics and other natural items that are made specifically for wood turning.

Warranty Limitations

Woodworking products with a Five Year Warranty that are used for commercial or industrial purposes default to a Two Year Warranty. Please contact Technical Service at 1-800-274-6846 for further clarification.

How to Get Technical Support

Please contact Technical Service by calling 1-800-274-6846. **Please note that you will be asked to provide proof of initial purchase when calling.** If a product requires further inspection, the Technical Service representative will explain and assist with any additional action needed. JET has Authorized Service Centers located throughout the United States. For the name of an Authorized Service Center in your area call 1-800-274-6846 or use the Service Center Locator on the JET website.

More Information

JET is constantly adding new products. For complete, up-to-date product information, check with your local distributor or visit the JET website.

How State Law Applies

This warranty gives you specific legal rights, subject to applicable state law.

Limitations on This Warranty

JET LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN 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.

JET sells through distributors only. The specifications listed in JET printed materials and on official JET website are given as general information and are not binding. JET reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever. JET® branded products are not sold in Canada by JPW Industries, Inc.

Product Listing with Warranty Period

90 Days – Parts; Consumable items
1 Year – Motors; Machine Accessories
2 Year – Metalworking Machinery; Electric Hoists, Electric Hoist Accessories; Woodworking Machinery used for industrial or commercial purposes
5 Year – Woodworking Machinery
Limited Lifetime – JET Parallel clamps; VOLT Series Electric Hoists; Manual Hoists; Manual Hoist Accessories; Shop Tools; Warehouse & Dock products; Hand Tools; Air Tools

NOTE: JET is a division of JPW Industries, Inc. References in this document to JET also apply to JPW Industries, Inc., or any of its successors in interest to the JET brand.