



HORIZONTAL AND VERTICAL METAL CUTTING BAND SAW OWNER'S MANUAL



 **WARNING**

Read carefully and understand **RULES FOR SAFE OPERATION** and instructions before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

ITEM#155790

Thank you very much for choosing a NORTHERN TOOL + EQUIPMENT CO., INC. Product! For future reference, please complete the owner's record below:

Model: _____ Purchase Date: _____

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This machine is designed for certain applications only. Northern Tool + Equipment cannot be responsible for issues arising from modification. We strongly recommend this machine is not modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted Northern Tool + Equipment to determine if it can or should be performed on the product.


For technical questions please call **1-800-222-5381**.

TECHNICAL SPECIFICATIONS

1. Capacity: 4 1/2" (115mm) round
4" x 6" (100mm x 150mm) rectangular
2. Speed: 80, 120, 200 FPM 60HZ (65-95-165 FPM 50HZ)
3. Motor: 1/3 HP or 1/2 HP 1700 RPM 60HZ (1400RPM 50HZ)
4. Blades: 1/2" x 1/40" x 64 1/2" (12.5mm x 0.64mm x 1638mm)
5. Blade wheels: 7 3/8" (187mm) High strength flanged cast iron

GENERAL SAFETY RULES

 **WARNING: Read and understand all instructions.** Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.


 **WARNING: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur.** It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

SAVE THESE INSTRUCTIONS

WORK AREA

- **Keep work area clean**, free of clutter and well lit. Cluttered and dark work areas can cause accidents.
- **Do not use your tool where there is a risk of causing a fire or an explosion;** e.g. in the presence of flammable liquids, gasses, or dust. Band saws create sparks, which may ignite the dust or fumes.
- **Keep children and bystanders** away while operating a band saw. Distractions can cause you to lose control, so visitors should remain at a safe distance from the work area.
- **Be aware of all power lines, electrical circuits,** water pipes and other mechanical hazards in your work area, particularly those hazards below the work surface hidden from the operator's view that may be unintentionally contacted and may cause personal harm or property damage.
- **Be alert of your surroundings.** Using band saws in confined work areas may put you dangerously close to cutting band saws and rotating parts.

ELECTRICAL SAFETY

 **WARNING!** Always check to ensure the power supply corresponds to the voltage on the rating plate.

- **Do not abuse the cord.** Never yank band saw or extension cords from the receptacle. Keep power and extension cords away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords may cause a fire and increase the risk of electric shock.
- **Band saws** must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.
- **Double insulated band saws** are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still doesn't fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.
- **Avoid body contact** with grounded surfaces such as pipes, radiators, ranges, and refrigerators. There is an increase risk of electric shock if your body is grounded.
- **When operating a band saw outside,** use an outdoor extension cord marked "W-A" or "W." These Cords are rated for outdoor use and reduce the risk of electric shock.
- **Extension Cord Use.**
 - A. Use only 'Listed' extension cords. If used outdoors, they must be marked "For Outdoor Use." Those cords having 3-prong grounding type plugs and mating receptacles are to be used with grounded band saws.
 - B. Replace damaged or worn cords immediately.
 - C. Check the name plate rating of your band saw. Use of improper size or gauge of extension cord may cause unsafe or inefficient operation of your band saw. Be sure your extension cord is rated to allow Sufficient current flow to the motor. For the proper wire gauge for your band saw, see chart.

CHART FOR MINIMUM WIRE SIZE OF EXTENSION CORD:

Nameplate AMPS	Cord Length			
	25'	50'	100'	150'
0-6	18 AWG	16 AWG	16 AWG	14 AWG
6-10	18 AWG	16 AWG	14 AWG	12 AWG
10-12	16 AWG	16 AWG	14 AWG	12 AWG
12-16	14 AWG	12 AWG	(NOT RECOMMENDED)	

If in doubt, use larger cord.

Be sure to check voltage requirements of the band saw to your incoming power source.

- **Do not expose band saws to rain or wet conditions.** Water entering a band saw will increase the risk of electric shock.
- **Do not let your fingers touch the terminals of plug when installing to or removing from the outlet.**
- **Ground fault circuit interrupters.** If work area is not equipped with a permanently installed Ground Fault Circuit Interrupter outlet (GFCI), use a plug-in GFCI between band saw or extension cord and power receptacle.

PERSONAL SAFETY

- **Stay alert, watch what you are doing and use common sense when operating a band saw. Do not use a band saw while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating band saws may result in serious personal injury.
- **Dress properly. Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts. Air vents often cover moving parts and should be avoided.
- **Use safety apparel and equipment. Use safety goggles or safety glasses with side shields which comply with current national standards, or when needed, a face shield. Use a dust mask in dusty work conditions.** This applies to all persons in the work area. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate.
- **Avoid accidental starting. Ensure the switch is in the off position before plugging band saw into power outlet. In the event of a power failure, while a band saw is being used, turn the switch off to prevent surprise starting when power is restored.**
- **Do not overreach. Keep proper footing and balance at all times.**
- **Remove adjusting keys or wrenches before connecting to the power supply or turning on the band saw. A wrench or key that is left attached to a rotating part of the band saw may result in personal injury.**

BAND SAW USE AND CARE

- **Never use a band saw with a malfunctioning switch.** Any band saw that cannot be controlled with the switch is dangerous and must be repaired by an authorized service representative before using.
- **Disconnect power from the band saw and place the switch in the locked or off position before servicing, adjusting, installing accessories or attachments, or storing.** Such preventive safety measures reduce the risk of starting the band saw accidentally.
- **Secure work with clamps or a vise instead of your hand to hold work when practical. This safety precaution allows for proper band saw operation using both hands**
- **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one band saw may create a risk of injury when used on another band saw.
- **Keep guards in place and in working order.**
- **Never leave band saw running unattended.**

SPECIFIC SAFETY INSTRUCTIONS FOR YOUR BAND SAW

1. Know your band saw. Read the operator's Manual carefully. Learn the operations, applications and limitations as well as the specific potential hazards particular to this band saw.
2. Don't force the band saw. It is safe to operate at the cutting rate for which it was designed.
3. Be especially careful when using band saws in vertical position to keep fingers and hands out of the path of the blade, both above and beneath the table.
4. Never hand hold the material with saw in horizontal position. Always use the vise and clamp securely.
5. Keep belt guard and wheel covers in place and in working order.
6. Support long, heavy work from the floor.
7. Always remember to switch off the machine when the work is completed.
8. Check damaged parts. Damaged parts must be replaced or repaired.
9. Moving parts should keep in alignment. All adjustments are to be made with power disconnected.
10. Use a sharp blade and keep band saw clean for safety and optimum performance.
11. Safety is a combination of operator's common sense and alertness at all times when the saw is functioning.
12. Keeping the band saw in top condition is essential for safety.

FEATURES

1. Specially designed horizontal and vertical band saw.
2. Offers three speeds for cutting metal plastic or wood.
3. Shuts off automatically when material cut is complete.
4. Includes a scale for the mitering vise.
5. Low noise while in operation.
6. Optional casters for maneuverability.

ASSEMBLY

1. Attach the legs to the band saw base. See assembly diagram for additional instruction.
2. Assemble handle vise wheel and tighten set screw.

BLADE GUIDE BEARING ADJUSTMENT

This is the most important adjustment on your saw. It is impossible to get satisfactory work from your saw if the blade guides are not properly adjusted. The blade guide bearing for your band saw are adjusted and power tested with several test cuts before leaving the factory to insure the proper setting. The need for adjustment should rarely occur if the saw is used properly. If the guides become out of adjustment, it is extremely important to readjust immediately. If proper adjustment is not maintained, the blade will not cut straight and if the situation is not corrected, it will cause blade damage.

Because guide adjustment is a critical factor in the performance of your saw, it is always best to try a new blade to see if this will correct poor cutting before beginning to adjust the bearings. If a blade becomes dull on one side sooner than the other, for example, it will not cut straight. A simple blade change should correct this problem the more difficult guide adjustment will not.

If a new blade does not correct the problem, check the blade guides for proper spacing.

There should be 0.001" clearance between the 0.025" thickness blade and guide bearing. To obtain this clearance, adjust as follows:

1. The inner guide bearing is fixed and cannot be adjusted.
2. The outer guide bearing is mounted to an eccentric bolt and can be adjusted.
3. Loosen the nut while holding the bolt with a wrench.
4. Position the eccentric by turning the bolt to the desired position of clearance.
5. Tighten the nut.
6. Adjust the second blade guide bearing in the same manner.
7. The back edge of the blade should just touch the lip of the blade guide bearing.

BLADE GUIDE ASSEMBLY ADJUSTMENT

This metal cutting band saw is equipped with two adjustable blade guide assemblies. This feature will permit you to adjust the position of the blade guide for variable width work pieces.

To get the most accurate cut and prolong the life of the blade, the blade guide assemblies should be adjusted to just clear the piece to be cut. This is done as follows:

1. Place the work piece in the vise of the band saw and clamp tightly.
2. Adjust catch blade guide assembly to the desired position by loosening the hand knobs and positioning the guides required.
3. Tighten the hand knobs

ADJUSTING BLADE TENSION

1. Make sure the motor is shut off.
2. Press the blade lightly with left hand, aligning the rear blade against the flange of blade wheel and test the Blade tension.
3. Adjust the blade tension adjustable knob with the right hand Until the blade obtains the proper tension



Figure (1) Adjusting Blade Tension

CHANGING SPEEDS ON YOUR BAND SAW

1. When using your band saw, always change the blade speed to best suit the material being cut. Cutting chart is shown in Figure 2.
2. Turn off power. Open the pulley guard cover. Loosen the lead screw (#98), you are now able to change the position of the belt to gain the desired speed. Check the belt tension as shown in the ADJUSTING BLADE TENSION section of this manual. When the tension belt is wheel adjusted, lock the motor firmly. Close the pulley guard cover.

MATERIAL CUTTING CHART	Speed SFM	Belt Groove Used	
		Motor pulley	Saw pulley
Material tool, Stainless or Alloy Steel, Bearing Bronzes Mild Steel, Hard Brass or Bronze off Brass, Aluminum. Other light materials.	60Hz		
	80 FPM	Small	Large
	100 FPM	Medium	Medium
	120 FPM	Large	Small

BLADE SELECTION

1. Special note: 1 (1/2" x 0.025" x 64 1/2min, 65 1/2 max) tooth per inch general-use blade is furnished with the metal cutting Band Saw. Additional blades in 10 and 14 tooth sizes are available.
2. The choice of blade pitch is governed by the thickness of the work to be cut; the thinner the workpiece, the more teeth recommended. A minimum of 3 teeth should be in the workpiece at all times for proper cutting.
3. If the teeth of the blade are so far apart that they straddle the work, severe damage to the workpiece and to the blade can result.

CHANGING BLADES

Ensure that power is disconnected before changing the blade. Raise the saw head to vertical position.

Loosen the blade tension adjustable knob sufficiently to allow the saw blade to slip off the wheels. Install the new blade as follows:

1. Open the blade cover #59
2. Loosen the set screw #79
3. Remove the worn blade
4. Assemble the new blade
5. Lock the set screw #79
6. Close the blade cover #59

HORIZONTAL CUTTING OPERATION

Before operating your band saw in horizontal mode, please read this instruction manual thoroughly and examine every part, including speed, blade selection, guide assembly position, etc. Operation is as follows:

WORK SET UP

1. Raise the saw head to the vertical position.
2. Open the vise to accept the piece to be cut by rotating the wheel at the end of base (counterclockwise).
3. Place the workpiece on the saw bed. If the piece is long, support the end.
4. Clamp the workpiece securely in the vise by rotating the hand wheel clockwise.

CUTTING

Close switch, letting the head down slowly onto the work, do not drop or force. Let the weight of the saw head provide the cutting force. The saw automatically shuts off at end of the cut.

Method of adjusting blade:

- A. Loosen the screw (#11, shown below).
- B. Adjust the blade adjustable seat (#64) to make the blade vertical to the bed.
- C. Place the square on the bed to check if the blade is vertical. If not, repeat the process A to C.
- D. Tighten the screw (#11).

LUBRICATION

Lubricate the following components using lubricant, L-HV32

1. Ball bearing.
2. Blade guide bearing.
3. Driven wheel bearing.
4. Vise lead screw- as needed.
5. The drive gears run in the bath and will not require a lubricant change more than once a year. When needing a change, first put down the head to a horizontal position, then loosen 4 screw (#75) of the gear box open the cover (#93). Placing a pan under the tight lower corner of the gear box, slowly raise the head until the oil flows out, then lower head. Wipe up excess oil and foreign matter with soft rags. Then add lubricant into the Box until it is full, ensuring no overflow. Close the cover, tighten 4 screws.

ADJUSTING THE BLADE TRACKING

This adjusting has been completed and power-tested at the factory. The need for adjusting should rarely occur when the saw is used properly. If the tracking goes out of adjusting is listed below:

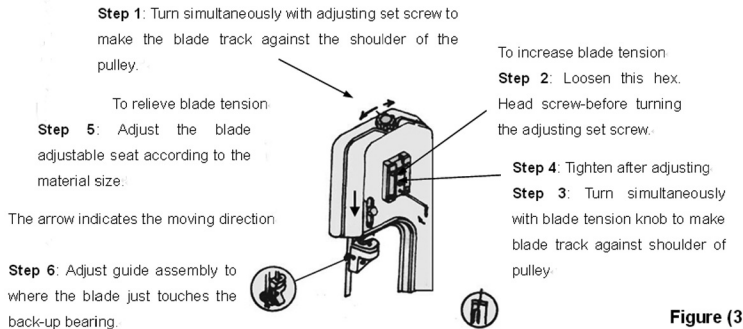


Figure (3)

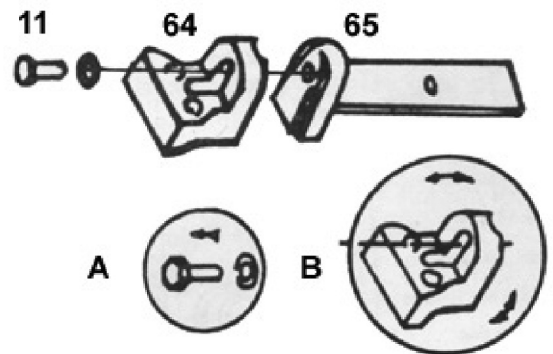


FIGURE (4) Adjusting the blade

VERTICAL CUTTING PLATE ASSEMBLY DRAWING

Steps for assembling:

1. Loosen the three screws (labeled A, B and C above) from the blade guide. Remove part D.
2. To lock the vertical cutting plate stand on the valve.
3. To put the plate on the guide and vertical cutting plate stand, then lock the A, B, C screws.
4. Operate the vertical cutting.
5. Use the miter gauge in the work table grooves to obtain any angle up 45 degrees either left or right.



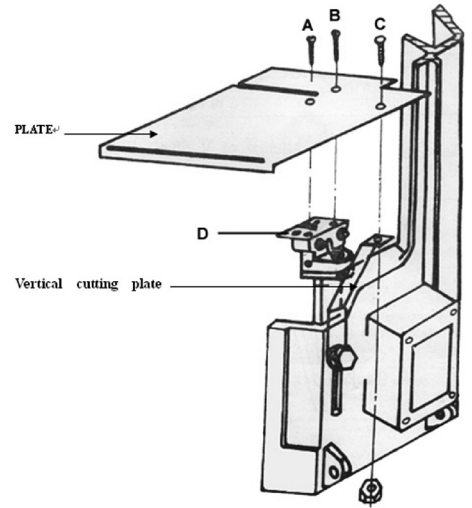
CAUTION:

The use of any other accessories may be hazardous.



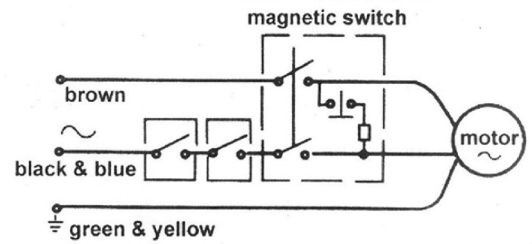
CAUTION:

Always use push sticks particularly when cutting small pieces.



TROUBLE SHOOTING CHART

WIRING DIAGRAM



TROUBLE SHOOTING CHART

Symptom	Possible Cause (s)	Corrective Action
Excessive Blade Breakage	<ol style="list-style-type: none"> 1. Material loose in vise 2. Incorrect speed or feed 3. Blade teeth spacing too large 4. Material too coarse 5. Incorrect blade tension 6. Teeth in contact with material before saw is started 7. Blade rubs on wheel flange 8. Misaligned guide bearings 9. Cracking at weld 	<ol style="list-style-type: none"> 1. Clamp work securely 2. Adjust speed or feed 3. Replace with a smaller teeth spacing blade 4. Use a blade of slow speed and small teeth spacing 5. Adjust so blade does not slip on wheel 6. Place blade correctly in relation with workpiece 7. Adjust wheel alignment 8. Adjust guide bearings 9. Weld again
Premature Blade Wear	<ol style="list-style-type: none"> 1. Teeth too coarse 2. Too much speed 3. Inadequate feed pressure 4. Hard spots or scale on material 5. Work hardening of material 6. Blade twist 7. Insufficient blade 	<ol style="list-style-type: none"> 1. Replace 2. Adjust as per operator's manual 3. Tighten
Unusual Wear on Side/Back of Blade	<ol style="list-style-type: none"> 1. Blade guides worn 2. Blade guide bearings not adjusted properly 3. Blade guide bearing bracket is loose 	<ol style="list-style-type: none"> 1. Use finer tooth blade 2. Decrease pressure, increase speed 3. Clamp workpiece securely 4. Use coarse tooth blade or brush to remove chips
Teeth Ripping from Blade	<ol style="list-style-type: none"> 1. Tooth too coarse for work 2. Too heavy pressure, too slow speed 3. Vibrating workpiece 4. Gullets loading 	<ol style="list-style-type: none"> 1. Use finer tooth blade 2. Decrease pressure, increase speed 3. Clamp workpiece securely 4. Use coarse tooth blade or brush to remove chips
Motor running too hot	<ol style="list-style-type: none"> 1. Blade tension too high 2. Drive belt tension too high 3. Gears need lubrication 4. Cut is binding blade 5. Gears aligned improperly 	<ol style="list-style-type: none"> 1. Reduce pressure by increasing spring tension on side of saw 2. Adjust guide bearing; the clearance can not be greater than 0.001 in. 3. Increase blade tension by adjusting blade tension 4. Replace blade 5. Adjust speed 6. Adjust guide space 7. Tighten 8. Re-track blade according to operating instructions
Bad Cuts	<ol style="list-style-type: none"> 1. Feed pressure too great 2. Guide bearing not adjusted properly 3. Inadequate blade tension 4. Dull blade 5. Speed incorrect 6. Blade guide spaced out too much 7. Blade guide assembly loose 8. Blade truck too far away from wheel flanges 	<ol style="list-style-type: none"> 1. Decrease speed or feed 2. Replace with finer blade 3. Adjust blade tension
Bad Cuts (Rough)	<ol style="list-style-type: none"> 1. Too much speed or feed 2. Blade is too coarse 3. Blade tension loose 	<ol style="list-style-type: none"> 1. Decrease feed pressure 2. Decrease blade tension
Blade is twisting	<ol style="list-style-type: none"> 1. Cut is binding blade 2. Too much blade tension 	<ol style="list-style-type: none"> 1. Decrease feed pressure 2. Decrease blade tension

PARTS LIST

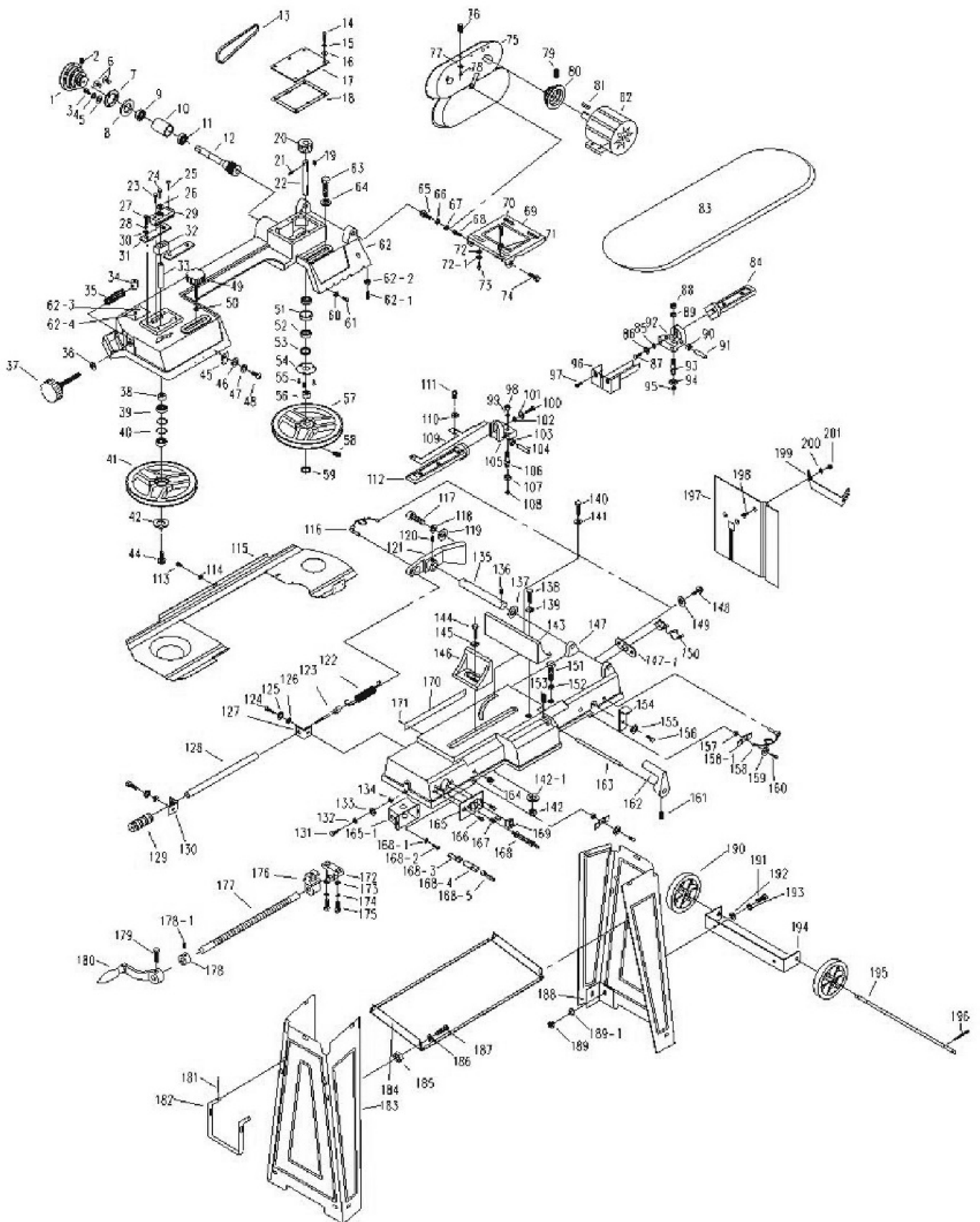
Part No.	Description	Qty.	Part No.	Description	Qty.
1	Spindle Pulley	1	105	Blade Guide Bracket (left)	1
2	8-1.25 x 8mm Hex Socket Set Screw	1	106	Idler Pulley Shaft	2
3	4-0.7 x 8mm Pan Head Screw	1	107	180029 Bearing	2
4	4mm Flat Washer	1	108	3AMI-9 Retaining Ring	2
5	5mm Flat Washer	1	109	Blade Guard	1
6	4-0.7 x 8mm Flat Head Screw	2	110	4mm Flat Washer	2
7	Seal Cover	1	111	4-0.7 x 6mm Pan Head Screw	2
8	Oil Seal	1	112	Blade Guide Bracket Seat (left)	1

Part No.	Description	Qty.	Part No.	Description	Qty.
9	6202Z Bearing	1	113	6-1.0 x 10mm Pan Head Screw	1
10	Spacer	1	114	6mm Flat Washer	1
11	6202Z Bearing	1	115	Blade Back Safety Cover	1
12	Worm Gear	1	116	Shoulder Screw	1
13	Belt	1	117	10-1.5 x 35mm Socket Head Bolt	2
14	6-1.0 x 16mm Hex Head Bolt	6	118	10mm Lock Washer	2
15	6mm Lock Washer	6	119	Flat Washer	2
16	6mm Flat Washer	6	120	8-1.25 X 8mm Set Screw	1
17	Gear Box Cover	1	121	Pivot	1
18	Gear Box Gasket	1	122	Spring	1
19	Key	2	123	Spring Adjusting Screw	1
20	Gear	1	124	6-1.0 x 12mm Hex Head Bolt	2
21		1	125	6mm Lock Washer	2
22	Spacers Part	1	126	6mm Flat Washer	2
23	8-1.25 x 30mm Hex Head Bolt	1	127	Support	1
24	8-1.25 x 16mm Hex Head Bolt	1	128	Adjusting Rod	1
25	8-1.25 x 30mm Hex Head Bolt	1	129	Plastic Handle	1
26	Flat Washer	1	130	Support	1
27	6-1.0 x 12mm Hex Head Bolt	4	131	8-1.25 x 20mm Hex Head Bolt	6
28	6mm Lock Washer	4	132	8mm Lock Washer	6
29	Blade Tension Sliding Block	1	133	8mm Flat Washer	6
30	6mm Flat Washer	4	134	8-1.25mm Hex Nut	6
31	Blade Tension Sliding Guides	2	135	Pivot Rod	1
32	Sliding Plate Draw Block	1	136	4 x 25mm Spring Pin	1
33	Blade Wheel Shaft	1	137	16mm Flat Washer	1
34	Nut	1	138	8-1.25mm Bolt	1
35	Spring	1	140	8-1.25 x 40mm Hex Head Bolt	1
36	Flat Washer	1	141	8mm Flat Washer	1
37	Blade Tension Adjusting Knob	1	142	8-1.25mm Hex Nut	1
38	Spacer	1	142-1	Flat Washer	1
39	6202Z Bearing	2	143	Mitering Vise Plate	1
40	3BMI-35 Retaining Ring	2	144	10-1.5 x 25mm Hex Head Bolt	1
41	Blade Wheel	1	145	Flat Washer	1
42	Retaining Ring	1	146	Movable Vise Plate	1
44	5-0.8 x 15mm Pan Head Screw	1	147	Machine Bed	1
45	Switch Push-Off Tib	1	147-1	Strain Relief Plate	
46	6mm Flat Washer	1	148	5-0.8 x 10mm Pan Head Screw	2
47	6mm Lock Washer	1	149	5mm Flat Washer	2
48	6-1.0 x 14mm Pan Head Screw	1	150	Strain Relief	1
49	Adjusting Knob	1	151	12-1.75 x 70mm Hex Head Bolt	1
50	Flat Washer	1	152	12-1.75mm Hex Nut	1
51	Spacer	1	153	8-1.25 x 12mm Set Screw	1
52	6202Z Bearing	2	154	Support Plate	1
53	Oil Seal	1	155	8mm Flat Washer	1
54	Seal Cover	1	156	8-1.25 x 16mm Hex Head Bolt	1
55	4-0.7 x 8mm Flat Head Screw	3	157	5-0.8mm Hex Nut	2
56	Bearing Bushing	1	158	Shoulder Screw	1
57	Blade Wheel	1	158-1	Wire Relief Retainer	2
58	8-1.25 x 8mm Hex Socket Set Screw	1	159	5mm Flat Washer	2
59	3AMI-15 Retaining Ring	1	160	5-0.8 x 18mm Pan Head Screw	2
60	4mm Flat Washer	4	161	8-1.25 X 8mm Set Screw	1
61	4-0.7 x 6mm Pan Head Screw	4	162	Stock Stop	1
62	Body Frame	1	163	Stock Stop Shaft	1

62-1	6-1.0 x 25mm Hex Bolt	1	164	Grommet	1
62-2	6-1.0mm Hex Nut	1	165	Switch Plate	1
62-3	Main Scale	1	165-1	Face Cover	1
62-4	Rivet	4	166	Thread Forming Screw	2
63	10-1.5 x 30mm Hex Head Bolt	1	167	Strain Relief	1
64	Flat Washer	1	168	Line Cord	1
65	6-1.0 x 10mm Pan Head Screw	1	168-1	5mm Serrated Washer	2
66	6mm Lock Washer	1	168-2	Ground Bolt	2
67	6mm Flat Washer	1	168-3	Ground Terminal	2
68	12-1.75 x 30mm Bolt	1	168-4	Insulation Sleeve	4
69	Motor Mount Plate	1	168-5	Terminal	4
70	8-1.25 x 55mm Hex Head Bolt	1	169	Switch	1
71	8-1.25mm Hex Nut	1	170	Angle Scale	1
72	8mm Flat Washer	4	171	Rivet	2
72-1	8mm Lock Washer	4	172	Lead Screw Support	1
73	8-1.25 x 20mm Hex Head Bolt	4	173	6mm Flat Washer	2
74	12-1.75 x 35mm Hex Head Bolt	1	174	6mm Lock Washer	2
75	Belt Guard Cover Assembly	1	175	6-1.0 x 20mm Hex Head Bolt	2
76	Cover Knob	1	176	Nut	
77	4mm Flat Washer	1	177	Lead Screw	1
78	4-0.7 x 8mm Pan Head Screw	1	178	Spacer	1
79	8-1.25 X 8mm Set Screw	1	179	6-1.0 x 12mm Hex Head Bolt	1
80	Motor Pulley	1	180	Handle	1
81	Key	1	181	Split Pin	2
82	Motor	1	182	Pull Handle	1
83	Blade	1	183	Stand Assembly	2
84	Blade Guide Bracket Seat (right)	1	184	Tool Plate	1
85	Flat Washer	1	185	6-1.0mm Nut	4
86	8mm Lock Washer	1	186	6mm Flat Washer	4
87	8-1.25 x 30mm Hex Head Bolt	1	187	6-1.0 x 12mm Pan Head Screw	4
88	8-1.25mm Hex Nut	2	188	Stand Support	4
89	8mm Lock Washer	2	189	6-1.0mm Nut	8
90	180029 Bearing	1	189-1	6mm Flat Washer	8
91	Bearing Shaft Pin	1	190	Wheel	2
92	Blade Guide Bracket (right)	1	191	6-1.0 x 12mm Hex Head Bolt	8
93	Idler Pulley Shaft	2	192	6mm Flat Washer	8
94	180029 Bearing	2	194	Wheel Bracket	1
95	3AMI-9 Retaining Ring	2	195	Wheel Shatt	1
96	Blade Guide Bracket Cover (right)	1	196	Split Pin	4
97	6-1.0 x 16mm Flat Head Screw	2	197	Working Table	1
98	8-1.25mm Hex Nut	2	198	6-1.0 x 16mm Flat Head Screw	1
99	8mm Lock Washer	2	199	Vertical Cutting Plate Stand	1
100	8-1.25 x 30mm Hex Head Bolt	1	200	Flat Washer	1
101	8mm Lock Washer	1	201	6mm Nut	1
102	Flat Washer	1	202	Spacer	1
103	180029 Bearing	1	203	8mm Nut	1
104	Bearing Shaft Pin	1			

For replacement parts and technical questions, please call **1-800-222-5381**.

DIAGRAM





WARNING

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

- Lead from lead-based paints
- Crystalline silica from bricks and cement and other masonry products, and arsenic and chromium from chemically-treated lumber.

Your risk from these 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 specially designed to filter out microscopic particles.



Northern Tool + Equipment Co.,
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