

OPERATING AND MAINTENANCE INSTRUCTIONS

For 14" Wood-Cutting and Metal-Cutting Band Saws

GENERAL

A band saw requires a reasonable amount of care and attention in order to insure perfect performance and accurate work. No matter how good a machine a manufacturer may make, it will not do its best work unless the user takes the trouble to familiarize himself with the proper method of using the machine and setting the adjustments, and to learn what is necessary for best results. It takes but a few minutes to read these instructions, and it may save hours of trouble or delay later.

SETTING UP

The band saw is ready for operation as received, except that the table has been tilted for easier packing. Remove the side boards carefully from the crate, unbolt the base of the machine from the crate bottom, remove the weatherproof covering and the machine is ready for installation on stand or bench.

The table insert and the tapered pin for the table-alignment hole at the end of the table slot, together with the Allen wrench for the guides, will be found in the envelope attached to the saw. The table pin should be tapped into place with a hammer, striking lightly until the miter-gage bar will slide easily in the table groove. **Do not drive the pin in any further than necessary for this, or the table may be broken.** The pin is very easily removed when changing blades simply by turning it backwards with a wrench on the hexagon head in the same manner as when removing a screw.

POWER REQUIRED

For most work around the small shop or home work-shop a good $\frac{1}{3}$ -H. P. motor will be found to furnish ample power for this machine. It is recommended that the No. 62-110 Capacitor Motor, or a motor of equivalent power, be used. For steady production work, using wide blades, or whenever the Raising Block Attachment is used for cutting thick and heavy stock, a good $\frac{1}{2}$ -H.P. Repulsion-Induction Motor, like the no. 84-510, should be used. Only a constant-speed motor should be selected.

SPEED

On standard motors running at 1725 R.P.M. a $2\frac{3}{4}$ -inch V-pulley should be used, and this will give the band saw the correct speed of 600 R.P.M. This speed will be found ample for all requirements, and nothing is gained by increasing it; in fact, blade life will be considerably shortened if this speed is greatly increased except for wide blades.

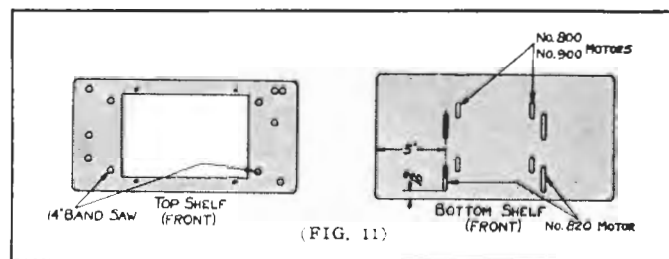
Be sure the motor turns in the right direction. The wheels of the band saw should rotate in a clockwise direction when viewed from the guard side of the machine, the teeth of the blade moving downward toward the table. If the motor turns the wrong way, turn it around if it is a double shaft motor, or reverse it in accordance with the maker's instructions.

STAND

There are two stands available with these Band Saws—No. 886 Cast Iron Stand, and No. 891 Steel Stand.

The No. 886 Cast Iron Stand is completely enclosed, accommodating motors up to $\frac{3}{4}$ H.P. for all types of Band Saw work. When assembling—bolt the machine to the top of the stand with the SP-516 bolts provided, so that the belt guard is facing the rear. Screws are provided to fasten the motor to the stand and a No. 132 switch is required.

The No. 891 Steel Stand for the band saw is slotted for both $\frac{1}{3}$ and $\frac{1}{2}$ H.P. motors with standard bases.



See Fig. 11 for the proper holes and slots to use when setting up the band saw. When the switch rod (No. 1334) is used, the clamp with the rubber bushings, through which the switch passes, is attached to the right hand side of the steel stand, near the rear of the top shelf.

TILTING TABLE ADJUSTMENTS

The table of these band saws may be tilted 45 degrees to the right and 10 degrees to the left. To tilt, loosen star wheel NCS-32, under each trunnion seat, and retighten after table has been tilted to the desired angle. To tilt the table to the left, first tilt is slightly to the right, remove the sleeve LBS-4 from stop screw SP-105, when the table may be tilted 10 degrees to the left. Stop screw SP-105 is set at the factory to bring the table square with the blade, but this should be checked before the machine is used to insure that the setting has not been disturbed in shipping. Screwing the screw up or down enables the table to be set square; when set, it is locked with the lock nut. Always set the table square with the sleeve in place on the screw. When the table is set, adjust the movable pointer SBS-46 to the zero mark on the graduated segment on the front trunnion, and it will then indicate the correct tilt in degrees.

BLADE AND GUIDE ADJUSTMENTS

When it is desired to change the blade on this saw remove upper and lower wheel guards by unscrewing the knurled knobs. Lower the upper wheel by turning the ball-crank handle of the adjustment screw in a counter-clockwise direction until the blade is

loose. Remove the table alignment pin and the table insert, then slip the blade off the wheel and guide it out through the slot in the table. This can be done without removing the sliding guard with blades up to $\frac{3}{8}$ in wide. For $\frac{1}{2}$ inch and $\frac{3}{4}$ inch blades it is better to remove the sliding guard; as the screw holes are slotted for quick removal and installation of this guard, this operation takes but a second to perform.

To install a new blade merely reverse the above procedure. Before attempting to set the guides on the new blade, loosen the Allen screw (NCS-37) that hold the square guide pins, and pull the pins back entirely clear of the blade, so that they will not affect the centering of the blade on the wheel. Loosen all the thumbscrews that lock the blade-support and guide pin brackets, and run the ball-bearing blade supports and guide pins as far back as they will go, so that the blade is completely free of all interference.

TENSION

On the back of the upper-wheel slide bracket there is a series of graduations. These indicate the proper tension for various widths of blades. With the blade on the wheel, the ball-crank handle is turned so as to raise or lower the wheel until the red-fiber washer under the tension-screw nut comes to the proper graduation for the size of blade being used.

These graduations will be found correct for average work, and are not affected by re-brazing of the saw blade. It is urged that you use these graduations until you have become familiar enough with the operation of the band saw to vary the tension a trifle for varying kinds of blades or works. Over-straining is the commonest cause of blade breakage and other unsatisfactory blade performance, and it will be found that the tension gage will eliminate many of the commoner blade trouble if it is intelligently used.

CENTERING BLADE

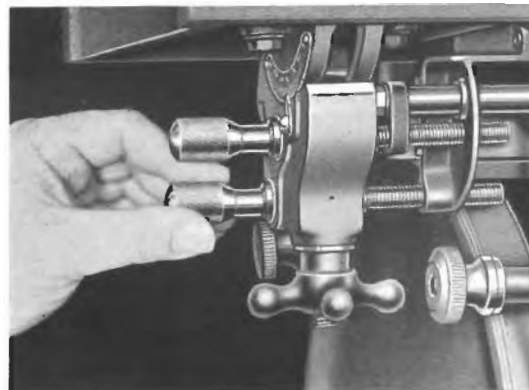
After the tension has been adjusted, revolve the wheels slowly **forward** by hand, and watch the blade to see that it travels in the center of the tires. There is a thumb-nut and wing screw on the rear of the upper-wheel bracket (LBS-106 and SL-1403), which are used to alter the tilt of the upper wheel in order to make the blade "track." If, when turning the wheels by hand, the blade begins to creep toward the front edge, loosen the wing screw and tighten the thumbscrew a little. This will tilt the top of the wheel toward the back of the machine and will draw the blade toward the center of the wheel rim. If the blade creeps toward the back of the rim, turn the thumbscrew in the opposite direction. Adjust the thumbscrew only a fraction of a turn at a time, as it does not take much to draw the blade one way or the other, and **never adjust the blade while the machine is running**. After the blade has been "tracked" in the center of the wheel rims, tighten the wing nut that locks the adjusting thumbscrew.

SETTING THE GUIDES

The brackets carrying the guide pins should now be adjusted forward by means of their knurled thumb nuts until the front edges of the guide pins will be just behind the roots of the teeth.

If the guide pins are too far forward, the teeth of the blade will be worn against the pins; if they are too far back, the blade will not be correctly supported for curve cutting. The micrometer adjustment

on your guides makes it easy for you to set your guides precisely to the bottom of the teeth. In Fig. 8 is shown how the guide bracket on the lower guide is adjusted.



(FIG. 8)

Turning the lower adjustment knob as above adjusts the guide pins to the teeth of the blade. The upper knob adjusts the blade support.

When the brackets have been properly adjusted, then set the guide pins inward until they are as close as possible to the blade, but without binding it, then tighten the setscrews that hold the pins and adjust the ball-bearing blade supports in toward the back of the blade. The supports should be adjusted so they will be about $\frac{1}{64}$ inch clear of the back of the blade whenever the blade is running free—without cutting. The blade should bear against the support **only when it is actually cutting**. If the blade is allowed to run hard against the supports at all times the back will become case-hardened, and this will cause eventual breakage of the saw. The proper adjustment of the blade and saw is very important for the correct operation of the band saw.

Be sure to readjust the guides every time you change a blade, especially if you use blades of varying widths.

BLADES

A band saw blade is a delicate piece of steel that is subjected to tremendous strain. However, you can obtain long use from a band-saw blade if you give it fair treatment. Be sure you have blades of the proper thickness and temper for 14-inch wheels. It is insurance against trouble to purchase your blades from us, for our blades are made especially for this machine.

Always use the widest blade possible, using the narrow blades for sawing small, abrupt curves and for fine delicate work only. Change blades and use a wider blade whenever the work will permit its use. This policy will not only save blades but will produce better work. Band saw blades may be purchased welded, set and sharpened ready for use. For cutting wood and similar materials we can supply them in widths of $\frac{1}{8}$ inch, $\frac{3}{16}$ inch, $\frac{1}{4}$ inch, $\frac{3}{8}$ inch, $\frac{1}{2}$ inch and $\frac{3}{4}$ inch.

File and set the blades whenever you find it requires pressure to make them cut. If a blade is broken it can be brazed; however, if it has become badly case-hardened it is not economical to have it brazed because it will soon break in another place. If you are not equipped to file, set and braze or weld blades ask us for prices.

Blades for the standard 14-inch model band saw are 93½ inches long; for the saw equipped with No. 894 Height Attachment they are 105 inches long.

OPERATING THE BAND SAW

Before starting the machine, see that all adjustments are properly made and that the guards are in place. Turn the pulley by hand to make sure that everything is correct before turning on the power.

Keep the top guide down close to the work at all times. When using a band saw, do not force the material against the blade too hard. Light contact with the blade will permit easier following of the line and prevent undue friction, heating and case-hardening of the blade at its back edge.

Keep the saw sharp and you will find that very little forward pressure is required for average cutting. Move the stock against the blade steadily and no faster than will give an easy cutting movement.

Avoid twisting the blade by trying to turn sharp corners. Remember you must saw around corners; use a narrow blade if you want to saw a very small radius.

CUTTING CURVES

When cutting curves turn the stock carefully so that the blade may follow without being twisted. If a curve is so abrupt that it is necessary to repeatedly back up and cut a new kerf, either a narrow blade is needed or a blade with more set is required. The more set a blade has, the easier it will allow the stock to be turned, but the cut is usually rougher than where a medium amount of set is used.

In withdrawing the piece being cut, in order to change the cut, or for any other reason, the operator must be careful that he does not accidentally draw the blade off the wheels. In most cases it is easier and safer to turn the stock and saw out through the waste material, rather than to try to withdraw the stock from the blade.

BLADE BREAKAGE

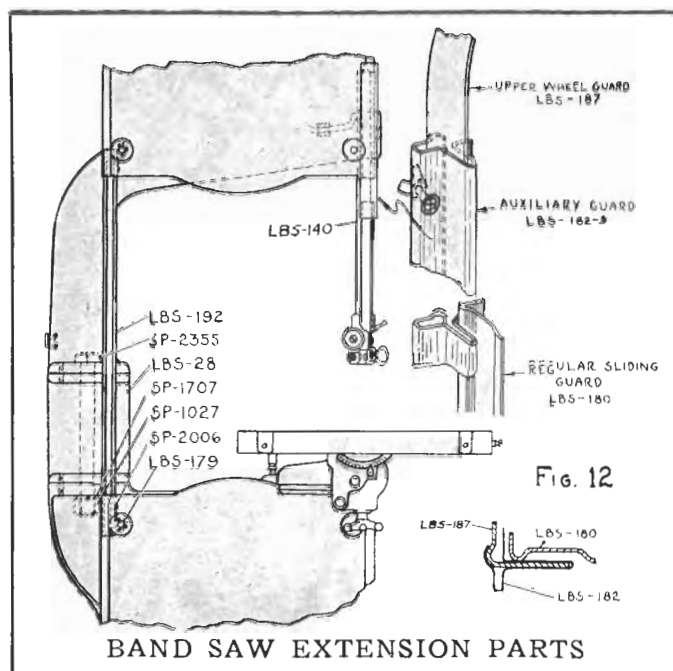
Any one of a number of conditions may cause a band saw blade to break. Blade breakage is in some cases unavoidable, being the natural result of the peculiar stresses to which such saws are subjected. It is, however, often due to avoidable causes, most often to lack of care or judgment on the part of the operator in mounting or adjusting the blade or guides. The most common causes of blade breakage are: (1) faulty alignments and adjustments of the guides, (2) forcing or twisting a wide blade around a curve of short radius, (3) feeding too fast, (4) dullness of the teeth or absence of sufficient set, (5) excessive tightening of the blade, (6) top guide set too high above the work being cut and, (7) using a blade with a lumpy or improperly finished braze or weld.

LUBRICATION

The wheels of the band saw are carried on self-sealed ball bearings, which require no lubrication for the life of the bearing; in fact, they require no attention whatever. Ball-bearing blade supports are of the same type. Oil of every kind should be kept away from the blade supports, and any traces of grease that may be apparent due to slight leakage of lubricant after running for some time should be wiped away before starting to work.

HEIGHT ATTACHMENT

The capacity of the band saw may be increased up to 12 inches at any time by the addition of the No. 894 height attachment, shown in Fig. 12. Bolt SP-2352 is loosened and removed, and the upper arm of the saw may then be lifted, and height block LBS-28 placed on top of the base, with the dowels fitting into the dowel holes in both arms and base.

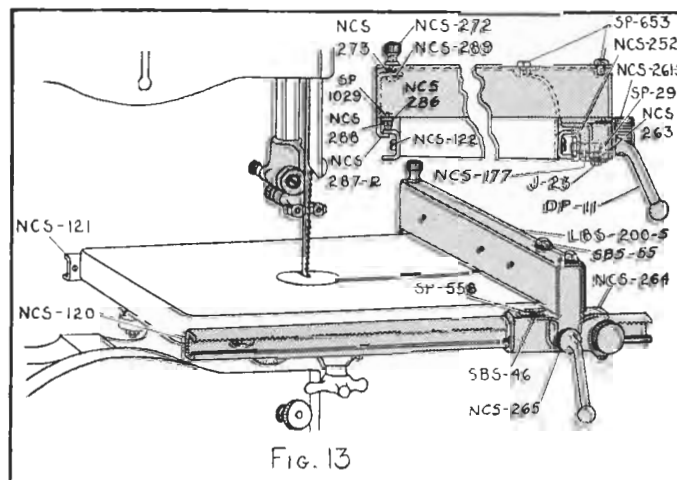


Long bolt SP-2355 is then inserted and tightened. Since the regular guard, when the guide is now lowered for small work, leaves a portion of the blade exposed, an auxiliary guard, LBS-182, is supplied to cover the exposed portion. This auxiliary guard snaps onto the upper wheel guard as shown in the detail drawing, and can be pushed up or down as desired. A longer hexagon guide support bar, LBS-140, is also furnished in place of the regular one, and a longer wood guard, LBS-190, which is attached to the same stamped brackets as the regular guard.

RIP-GAGE ATTACHMENT

Due to the short distance between guides on the saw, ripping is done very successfully with the addition of No. 893 Rip-Gage Attachment, Fig. 13. To attach this, the shoulder screws that come with the attachment are screwed into the tapped holes provided on front and rear edges of the table, the guide bars are slipped over screws and tightened in place.

The rip gage may be used on either side of the blade, as it can be slipped onto the guide bars from either end. The guide bars need never be removed from the table unless it is desired to do so. Attachment No. 893 has 18-inch guide bars, and permits ripping up to the limits of the table. Attachment No. 895 has 32-inch guide bars, for cuts up to 23 inches.



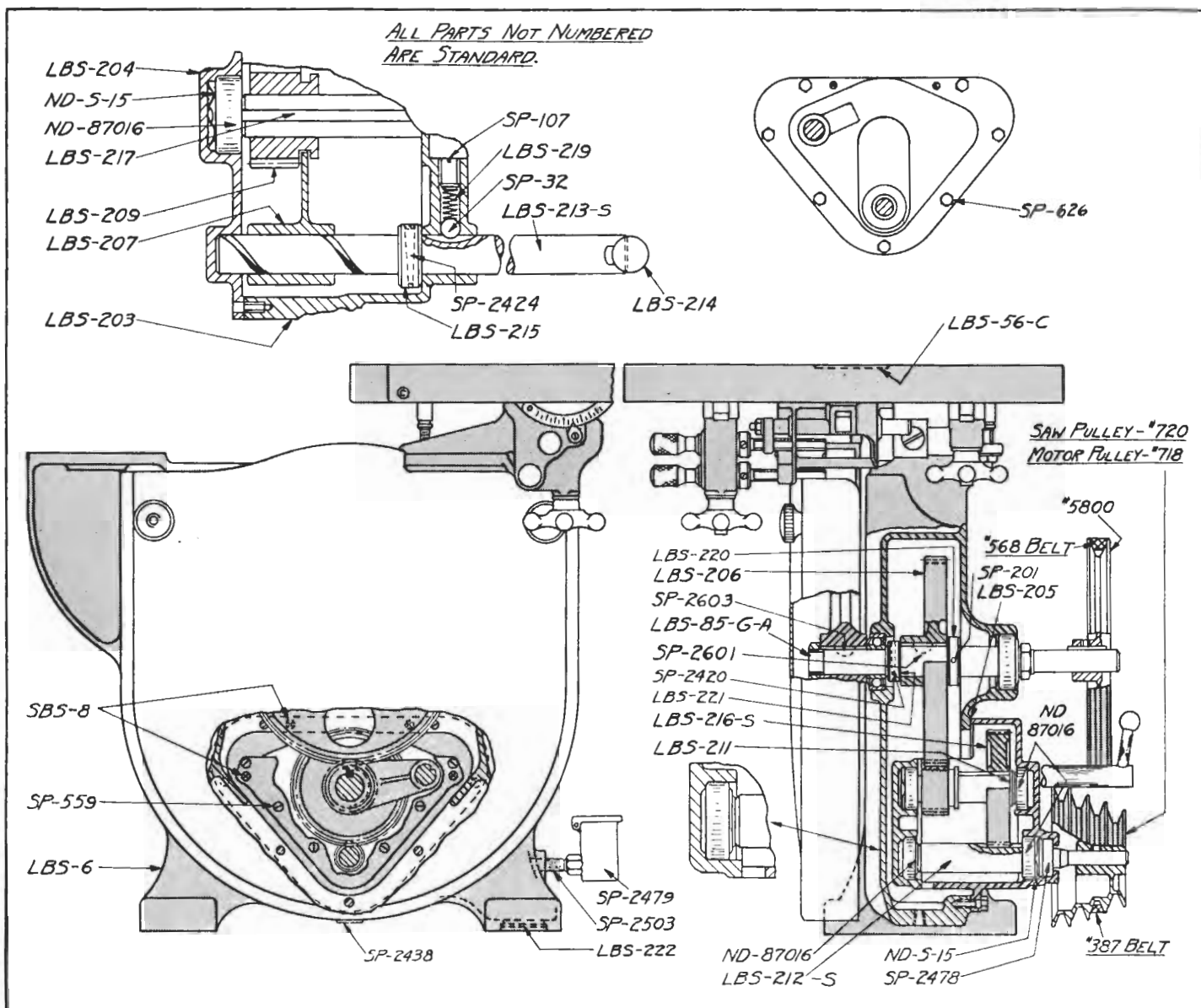
REPLACEMENT PARTS FOR 14" WOOD-CUTTING BAND SAW

IMPORTANT: To avoid possible errors, be sure to include the serial number of the machine when ordering parts for repair or replacement.

Part No.	Description	No. Req.	Price Each	Part No.	Description	No. Req.	Price Each
BASE PARTS				UPPER SAW GUIDE PARTS			
LBS-4	Table Stop Spacer	1	\$.10	LBS-126	Hexagon Saw Guide Post	1	\$.50
LBS-5	Base	1	7.75	LBS-127	Guide Support	1	.75
LBS-10	Trunnion Support Bracket	1	1.65	LBS-127-S	Upper Saw Guide Assembly	1	4.50
LBS-188	Wheel Guard Stud	2	.15	LBS-128	Blade Support Shaft	1	.10
SBS-8	1/4x3/4 Dowel Pin	2	.10	LBS-129	Blade Support Adjusting Screw	2	.10
SBS-46	Indicator Pointer	1	.10	LBS-130	Blade Support Adjusting Nut	2	.10
NDS-20	Pre-Load Spring	1	.10	LBS-131	Guide Pin Bracket	1	.20
ND-87504	Greaseal Bearing	2	2.00	LBS-132	Straight Guide Pin	2	.15
SP-105	1/8-18x2 Table Stop Screw	1	.10	NCS-37	Guide Pin Set Screw	2	.10
SP-552	10-32x1/8 Indicator Screw	1	.10	ND-77500	Ball Bearing Blade Support	1	1.45
SP-702	1/8-18x3/4 Fillister Head Cap Screw	2	.10	SP-201	Guide Support Set Screw	1	.10
SP-1001	1/8-18 Stop Screw Nut	1	.10	SP-509	Blade Support Screw	1	.10
SP-1027	3/4-10 Frame Bolt Nut	1	.10	SP-1502	Blade Support Thumb Screw	1	.10
SP-1707	3/4 Frame Bolt Lock Washer	1	.10	SP-1526	Guide Bracket Thumb Screw	1	.10
SP-2352	3/4-10x2" Frame Bolt	1	.10	SP-1528	1/8-18x1" Thumb Screw (iron)	1	.10
UPPER ARM PARTS				LOWER SAW GUIDE PARTS			
LBS-26	Upper Arm	1	5.25	LBS-132	Straight Guide Pin	1	.15
LBS-27	Rubber Bushing	2	.10	LBS-153	Angular Guide Pin	1	.20
LBS-188	Wheel Guard Stud	2	.15	LBS-160	Lower Guide Pin Bracket	1	.75
SP-1531	1/8-14x1 1/4 Thumb Screw	1	.10	LBS-160-S	Lower Guide Bracket Assembly	1	3.50
TABLE PARTS				LBS-161	Wedge for Lower Guide Pin Bracket	4	.10
LBS-55	Table Alignment Pin	1	.10	LBS-162	Link for Lower Saw Guide Bearing	1	.10
LBS-56	Table Insert	1	.10	LBS-163	Shaft for Lower Guide Bearing	1	.25
LBS-58	Table	1	4.75	LBS-164	Spacer for Lower Guide Bearing	1	.15
LBS-58-R	Table Assembly	1	6.65	LBS-165	Rail for Lower Guide Pin Bracket	1	.30
LBS-60	Table Trunnion	2	.40	LBS-166	Spring for Wedge	2	.10
LBS-61	Table Clamp Shoe	2	.20	LBS-167	Adjusting Screw for Lower Guide	2	.10
LBS-62	Tilting Scale for Trunnion	1	.10	LBS-168	Knob for Adjusting Screw	2	.10
LBS-63	Hollow Rivet for Band Saw Trunnion	2	.10	LBS-169	Stop Collar	2	.10
BM-45	7/8" O.D. x 1 1/2" I.D. x 1/2 Thk. Hardened Spring Washer	1	.10	LBS-170	Fibre Washer	4	.10
NCS-32	Star Wheel	2	.25	NCS-37	5/16-18x17/64 Allen Set Screw	2	.10
NCS-33	Star Wheel Spring	2	.10	ND-77500	Thrust Bearing	1	1.45
SP-612	1/4-20x5/8 Hex. Head Cap Screw	6	.10	SP-101	Set Screw for Stop Collar	2	.10
SP-625	1/8-14x2 1/4 Rear Trunnion Clamp Screw	1	.10	SP-408	1/8-18x3/4 Flat Head Machine Screw	2	.10
SP-631	1/8-14x4 Front Trunnion Clamp Screw	1	.15	SP-1029	1/4-20x1 1/2 Thick Hexagon Nut	1	.10
SP-1603	1/4" Washer	6	.10	SP-1603	1/4" Washer	1	.10
SP-1606	1/8" Steel Washer	2	.10	* HEIGHT ATTACHMENT PARTS			
DRIVE SHAFT AND WHEEL PARTS				LBS-28	Extension Raising Block	1	3.50
LBS-81	Rubber Tire	1	.75	LBS-140	Extension Hex. Saw Guide Post	1	1.00
LBS-85	Drive Shaft	1	1.10	LBS-179	Bracket for Wood Guard	1	.10
LBS-86	Drive Shaft Nut .802-28 Thread	2	.15	LBS-180	Sliding Saw Guard	1	.15
LBS-91-S	Lower Wheel Assembly, with tire, less bearings	1	3.35	LBS-182	Auxiliary Extension Guard	1	1.00
SP-2603	No. 705 Hi-Pro Key	1	.10	LBS-192	Extension Wood Guard	1	.75
SP-2650	Straight Key for Pulley	1	.10	LBS-187	Upper Wheel Front Guard	1	1.40
UPPER SHAFT AND WHEEL PARTS				SP-2006	1/2" No. 5 Round Head Wood Screw	2	.10
LBS-81	Rubber Tire	1	.75	SP-2355	3/4" Square Head Machine Bolt	1	.25
LBS-92-R	Upper Wheel Assembly, with tire, less bearings	1	3.40	* RIP GAGE ATTACHMENT PARTS			
LBS-101	Upper Wheel Hinge	1	.30	NCS-120	18" Front Guide Bar	1	1.15
LBS-102	Upper Wheel Slide	1	.90	NCS-121	18" Rear Guide Bar	1	.55
LBS-103	Hinge Pin	1	.10	NCS-122	Special Shoulder Screw	1	.10
LBS-104-S	Tension Screw with Star Wheel	1	.40	NCS-177	1/4"-28x1 1/4" Headless Set Screw	1	.10
LBS-105	Tension Spring	1	.10	NCS-252	Rip Gage Lock Plate	1	.15
LBS-106	1/8-18x2 1/4 Tilting Screw	1	.10	NCS-261-S	Knurled Micro-Set Knob and Pinion	1	.35
LBS-109	Bearing Spacer	1	.15	NCS-263	Ball Snap Spring	1	.10
LBS-110	Upper Wheel Shaft	1	.20	NCS-264	Rip Gage Front Block	1	1.25
LBS-111	3/8-16 Tension Screw Nut	1	.10	NCS-265	Clamp Adjustment Sleeve	1	.10
LBS-112	Indicator Washer (Fiber)	1	.10	NCS-272	1/4"-20 Knurled Nut	1	.10
ND-87502	Special Greaseal Bearing	2	1.50	NCS-273	Coil Spring	1	.10
SP-1227	Upper Shaft Nut	1	.10	NCS-287-R	Rear Clamp Complete	1	.35
SP-1403	Wing Lock Nut	1	.10	NCS-288	Support Button	1	.10
SAW GUARD PARTS				DP-11	Crank Clamp Handle	1	.25
LBS-177	Wheel Guard Nut	4	.15	J-23	Lock Screw	1	.10
LBS-179	Wood Guard Bracket	2	.10	LBS-200-W	Rip Gage Bar Assembly only	1	1.75
LBS-180	Sliding Saw Guard	1	.15	SBS-46	Indicator Pointer	1	.10
LBS-186	Lower Wheel Guard	1	1.50	SBS-55	11/16x25/64"x1/16" Steel Washer	1	.10
LBS-187	Upper Wheel Front Guard	1	1.40	SP-29	1/8" Steel Ball	1	.10
LBS-189	Upper Wheel Rear Guard	1	1.25	SP-558	#8-32x1/4" Round Head Mach. Screw	1	.10
LBS-191	Wood Guard	1	.35	SP-653	3/8"-24x3/8" Hex. Head Cap Screw	1	.10
LBS-191-S	Wood Guard Ass. with Brackets	1	.50	SP-1029	1/4"-20 Hex. Nut	1	.10
BM-46	25/64" Steel Washer	4	.10	MISCELLANEOUS PARTS			
SP-514	1/4-20x3/8 Round Head Mach. Screw	2	.10	#194	Plain 1/2 Allen Wrench (old SP-2)	1	
SP-2006	1/2" No. 5 Round Head Wood Screw	4	.10	#568	V-Belt	1	
				#883	Belt Guard	1	
				#886	Cast Iron Stand	1	
				#889	Special Steel Insert for Metal Sawing	1	
				#891	Steel Stand	1	
				#5275	V-Pulley (for Motor, 1/2" Bore)	1	
				#5800	V-Pulley (for Lower Wheel Shaft, 1/4" Bore)	1	

* Height Gage and Rip Gage not included with saw.

INSTRUCTIONS FOR 14" METAL-CUTTING BAND SAW



The general instructions for setting up, adjustments of the blade guides and supports, etc., previously given for the operation of the 14-inch Wood-Cutting Band Saw, apply also to the Metal-Cutting Saw. Read these carefully, and follow them exactly for best results.

POWER REQUIRED

For average work in the toolroom or general machine shop, a $\frac{1}{3}$ -H.P. Repulsion-Induction motor will furnish ample power. For heavier, steady production work, such as trimming gates in foundries, or for use with the height attachment in pattern shops, a $\frac{1}{2}$ -H.P. three-phase motor is recommended. Only a constant-speed motor should be used.

CHANGING SPEEDS

One of the advantages of this saw lies in the fact that it can be changed over almost instantly from a slow-speed metal-cutting band saw to a standard high-speed band saw for wood. This makes it specially adaptable for work on both wood and metal pattern work.

To use the slow speeds, place the No. 387 V-belt on the cone pulleys. Facing the rear (pulley) side of the machine, turn the gear-shift lever LBS-214 one-half turn to the right, so that the lever points **up**. This engages the back gear, and the machine will then operate at 125, 175, 250 or 340 feet per minute, depending upon which step of the cone pulleys the belt is placed. Use the higher speeds for softer metals and the lower speeds for harder ones. For still slower speeds, as for alloy steels, etc. use a 1140 r.p.m. motor.

To disengage the back gear, turn the gear-shift lever one-half turn to the left, so that it points down. Remove the No. 387 belt from the cone pulleys, and run the No. 568 belt on the single 8-inch arbor pulley and the **second largest** step on the motor cone pulley. This will provide a direct-drive speed of 2200 feet per minute for woodworking. **Be sure the back gear is disengaged before running on direct drive.**

LUBRICATION

Fill the base to the level of the oiler with a good grade of heavy oil (S.A.E. 40), then fill the sight-feed oil cup and let it snap back. Keep the oil cup full.

BLADES

Blades for metal-cutting should be selected for the particular job they are to do. Blades for cutting thin metal, for example, should be selected so that there will always be at least two teeth in contact with the edge of the work. If the teeth are allowed to straddle the work they will be torn off and the blade ruined. A good selection of blades for the

small or general shop would be 14, 18 and 24 teeth to the inch; the 18-tooth "wavy-set" blade being best for all-around work. These blades correspond to our Nos. 1060, 1062 and 1064 blades, which are carried in stock. For special work of any kind it is recommended that blades be purchased direct from the blade makers, in accordance with the general specifications shown in the accompanying table.

TABLE OF SUGGESTED BLADES AND SPEEDS

Material	Speed Ft. per min.	Teeth	Set	Material	Speed Ft. per min.	Teeth	Set
Aluminum-alloy gates	125	8-10	ETS	High-speed steel	80	14	Reg.
Aluminum sheets	2200	8-10	ETS	Hose; canvas and rubber	2200	8-10	Wavy
Asbestos sheets	125	8-10	ETS	Hose; metallic	250	18-22	Wavy
Babbitt	340	10-14	Reg.	Iron bars; machine steel	175	10-14	Reg.
Bakelite	340	5-10	ETS	Iron sheets	175	18-22	Wavy
Brass; cast, soft	340	12-14	ETS	Malleable iron	175	12-14	Reg.
Brass; cast, hard	125	18	Wavy	Plymetal	175	14	ETS
Brass sheets and tubing	340	14-18	ETS	Mica	175	10-14	ETS
Bronze; manganese, etc.	125	10-14	Reg.	Monel metal	125	10-12	Reg.
Bronze mouldings	175	18-24	ETS	Nickel steel	80	12-14	Reg.
Builders board	2200	12-14	ETS	Pipe	125	18-22	Wavy
Brake lining	125	8-12	ETS	Radiator cores	340	18-22	Wavy
Carbon tool steel	80	14	Reg.	Rubber; hard	340	10-14	ETS
Cast iron	125	14	Reg.	Slate	80	10-14	ETS
Cold-rolled steel	175	14	Reg.	Steel mouldings; special shapes	125	18-24	Wavy
Copper	175	10-12	ETS	Steel tubing	125	18-24	Wavy
Drill rod	80	14	Reg.	Transite	175	14-18	Reg.
Fiber	340	8-10	ETS				

ETS—Every Tooth Set; Reg.—Regular Set; Wavy—Group Set

NOTE: The information in above table is intended as an approximate guide only, and is based on average conditions. Users operating under special conditions may find that variations from above speeds or blade specifications may increase cutting efficiency or blade life.

REPLACEMENT PARTS FOR 14" METAL-CUTTING BAND SAW

IMPORTANT—To avoid possible errors, be sure to include the serial number of the machine when ordering parts for repair or replacement.

Part No.	Description	No. Req.	Price Each	Part No.	Description	No. Req.	Price Each
LBS-6	Back Gear Base	1	\$9.50	ND-S-15	Loading Spring	2	\$.10
LBS-85-G-S	Drive Shaft with Collar and Taper Pin but without keys	1	2.35	SBS-8	Dowel Pin	4	.10
LBS-203	Back Gear Housing	1	2.75	SP-32	Ball for Shift Yoke Shaft	1	.10
LBS-204	Back Gear Housing Cover	1	.75	SP-107	3/8-16x1/2 Headless Set Screw	1	.10
LBS-205	Back Gear Housing Gasket	1	.10	SP-201	1/8-18x1/2 Allen Set Screw	1	.10
LBS-206	Drive Shaft Gear	1	1.75	SP-559	No. 10-32x1/2 Rd. Hd. Machine Screw	6	.10
LBS-207	Shift Yoke	1	.35	SP-626	1/4"-20x3/4 Hexagon Head Cap Screw	7	.10
LBS-212-S	Spiral Pinion complete with 2 Bearings	1	4.75	SP-2438	Allen Pipe Plug	1	.10
LBS-213-S	Shift Yoke Shaft complete with Collar, Taper Pin and Handle	1	1.50	SP-2478	Oil Seal	1	.30
LBS-216-S	Sliding Gear Shaft complete, including Sliding Gear, Spiral Gear, Keys, Thrust Washer, and two Bearings	1	6.00	SP-2479	Constant Level Oiler	1	.40
LBS-219	Spring for Ball	1	.10	SP-2502	Pipe Nipple	1	.15
LBS-220	Gear Retaining Collar	1		SP-2301	No. 9 Standard Woodruff Key	1	.10
J-48	Oil Deflector	1	.10	SP-2603	No. 705 Hi-Pro Key	1	.10
ND-87016	Greaseal Ball Bearing	4	2.20	#387	V-Belt for Cone Pulley Drive	1	
				#568	V-Belt for High Speed Drive	1	
				#718	Cone Pulley for Motor 1/2" Bore ..	1	
				#720	Cone Pulley for Saw 1/2" Bore	1	
				#883	Belt Guard	1	
				#886	Cast Iron Stand	1	
				#889	Special Steel Insert for Metal Sawing ..	1	
				#891	Steel Stand	1	
				#1535	Allen Wrench, 1/2 Hex. (old SP-3) ..	1	

See Parts List of Wood Cutting Band Saw for all Parts Not Listed above.

Prices subject to change without notice.

Prices in this list apply only to parts ordered for repair and replacement. They cannot be used for computing allowance values if a machine is ordered "less" certain parts.

DELTA
MILWAUKEE