

DIAMOND TECH
Innovations For Creativity



DL 7000

DIAMOND LASER BAND SAW

OPERATIONS MANUAL

Before You Begin

Read and follow all instructions carefully.

- Be sure the power switch is in the OFF position before plugging in this tool.
- Wear proper apparel. Never wear loose clothing, gloves, neckties or jewelry. These articles may become caught in the saw's moving parts.
- Always hold material being cut firmly against cutting table. Adjust the upper Blade Guide so it is $\frac{1}{8}$ " to $\frac{1}{4}$ " from the work material.
- Never turn on machine with tools or materials near or touching the blade.
- Keep children away from this tool and all power tools.
- Never leave saw running unattended. Turn power OFF and unplug it from the outlet when not in use.
- ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses are not safety glasses.
- Feed work material forward at a slow easy pace into the blade. Avoid sudden twisting of the blade; which may cause kinking or breaking.
- After unpacking all components, assemble band saw on a firm level surface to prevent saw from tilting and rocking.
- Always disconnect band saw from electrical outlet before setting up or servicing.
- Remove all wrenches before using band saw. Leaving wrenches attached while operating this tool may result in damage to the machine and/or operator.
- Do not operate while under the influence of medication or alcohol.
- To ensure top performance keep band saw properly maintained.

Contents

Your Diamond Laser 7000™ has been shipped partially assembled. Carefully remove saw and parts from the packaging.

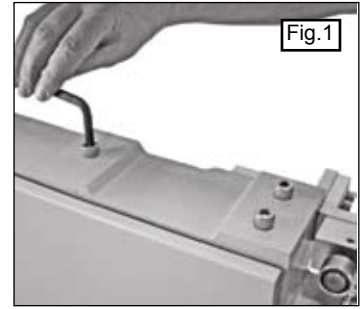
- 1-Band Saw Body
- 2-Cutting Table
- 3-Recirculating Water Pump
- 4-Detachable Water Reservoir
- 5-Hex Wrenches
- 6-Crescent Wrench
- 7-Manual
- DL7000 Blade Installed on Machine



Assembly Instructions

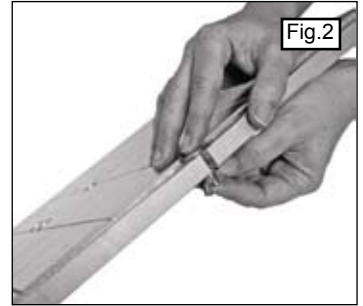
A. Table Installation

1. Remove all three table mounting set screws from the table mounting block (Fig. 1).
2. Loosen and remove the table alignment screw and wingnut located on the front of the cutting table blade slot (Fig. 2).
3. Position cutting table with the slot opening directly behind the blade. Carefully slide the table forward so the blade travels through the slot in the table.
4. Once properly positioned, secure in place with the table mounting set screws and the table alignment screw and wingnut (Fig. 3).



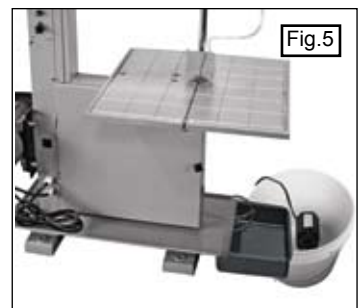
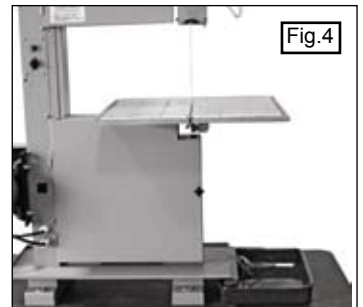
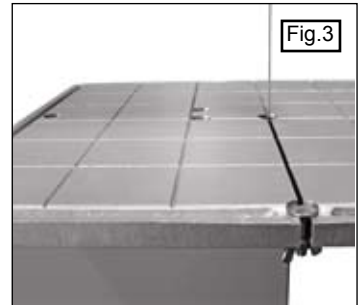
B. Starting and Stopping Saw

1. The power switch is located on the left side of the band saw. Insure the power switch is in the OFF position before plugging the DL7000 (Fig. 8) into a power source.
2. To start the saw make sure wrenches and materials to be cut are not touching the blade.
3. Press the rocker switch up into the ON position.
4. To turn the saw OFF, press the rocker switch down.



C. Water System

1. Place the water reservoir on a solid level work surface. Position reservoir underneath the lip of the saw located on the right side of the base (Fig. 4).
2. Attach aluminum pump fitting into the opening on the side of the recirculating water pump. Place pump into a bucket and position near saw (Fig. 5).
3. Fill the bucket with approximately 3 quarts of water to cover pump before use.
4. Plug pump's electrical connector into the outlet on the front of the saw (Fig. 6).
5. To test pump, the saw must be turned ON. Be sure the blade has been properly installed and there are no obstructions to interfere with its operation and blade movement. DO NOT attempt to touch the blade or blade wheels while the machine is turned ON.
6. Test pump and water flow by turning machine ON. Watch for bubbles in the hose. Water should begin to flow freely from the water nozzle mounted on blade shield. Insure water flow is directed at the front edge of the blade just below the guide assembly. Adjust position of water nozzle by loosening the nut on the front of the shield, using the crescent wrench (Fig. 7). Reposition the nozzle for appropriate spray, and retighten.
7. If large pockets of air appear in the hose, this may stop the flow of water to the blade. If this occurs, prime the pump by tipping it on its side and allowing the intake to draw in air through the line. Then return the intake into the water and watch for the water to fill the line. Small air bubbles may persist in the line but these will not interfere with sufficient flow to the blade.



WARNING: Never operate saw if there is insufficient water at the point of cutting, as this will cause damage to the material being cut, as well as the blade.

Band Saw Use and Maintenance

A. Blade Tension

1. The blade should be tight enough so the blade moves slightly on curved cuts, and not at all for straight cuts.

WARNING: If the diamond blade is too tight, breakage could occur.

2. During operation, the blade may begin to expand due to friction and heat. If the blade begins to vibrate or it is difficult to follow your pattern line, tighten the tension knob by turning it clockwise.

PLEASE NOTE : When saw is no longer in use, loosen the blade tension by turning the blade tension knob counter-clockwise. Tighten knob before resuming cutting.

B. Blade Alignment

The blade is properly aligned when it is centered on the top wheel (Fig. 11). Please note, when properly aligned, the blade may not be centered on the lower wheel; this is acceptable.

1. If the blade appears to ride forward on the upper wheel, loosen the locking nut (Fig. 10-A) at the rear of the saw and turn adjusting knob (Fig. 10-B) clockwise. Rotate wheels by hand, until blade is centered on upper wheel. Should you still have difficulty centering blade, loosen the blade guide block and move back (Fig. 13-B). Retighten locking nut to secure in place.
2. If the blade is riding to the rear of the upper wheel, loosen the locking nut (Fig. 10-A) and turn adjusting knob (Fig. 10-B) counter-clockwise. Rotate wheels by hand to adjust, until blade is centered on upper wheel. Retighten locking knob.

C. Upper Blade Guide Height Adjustment

1. Turn power switch to the OFF position.
2. The upper blade guide assembly (Fig. 7) should be positioned $\frac{1}{8}$ " to $\frac{1}{4}$ " above the material being cut. To adjust, loosen knob located at the back of the blade guide assembly (Fig. 10-C) and adjust to desired position. Retighten knob, lock into place.

WARNING: If the guide is set too high, pressure to the blade may cause blade breakage.

D. Upper Blade Guide Adjustment

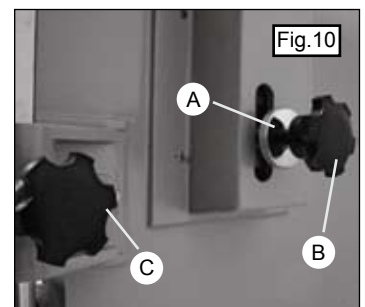
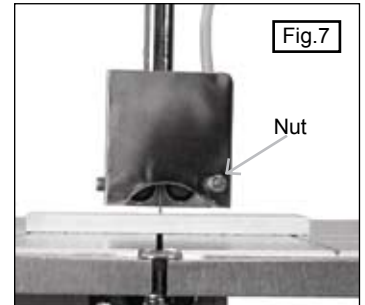
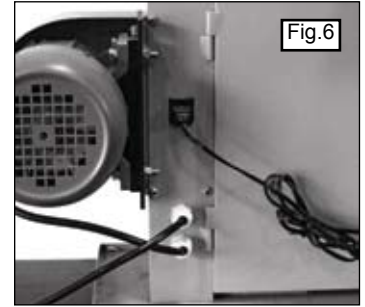
The DL7000 comes with lower and upper blade guides. Proper alignment of these guides are essential for proper cutting and extending blade life.

1. The blade should fit directly between the thrust bearings of the blade guide located on the front of the upper blade guide block.
2. Remove blade shield using hex wrench. This will expose the blade guide which is positioned behind the shield (Fig. 7).
3. To adjust upper guides, use the crescent wrench on the bearing stem, located directly behind the thrust bearings. Adjust wrench upward to move thrust bearing closer together, downward to move apart (Fig. 12). Adjust until the blade is centered.
4. Blade depth is also essential to the quality of the cut. To adjust blade depth, loosen hex bolt located on the side of the upper blade guide block (Fig. 13). Position block so the blade is $\frac{1}{4}$ " away from back thrust bearing. Retighten hex nut to lock into position (Fig. 13-A).

NOTE: Blade should not touch back thrust bearing until pressure from the material being cut is applied.

E. Lower Blade Guide Adjustment

1. For proper cutting, the blade should also be centered in the lower blade guides located under the cutting table (Fig. 14). The cutting table will need to be removed first to allow for adjustments.



- To center blade between the lower blade thrust bearings, use the crescent wrench on the bearing stems to move them either to the right or left until blade is centered between them.
- To adjust blade depth on the lower blade guides, loosen hex bolts located behind the lower blade guide block (Fig. 15-A). Move block to position blade $\frac{1}{4}$ " away from the back thrust bearings. Retighten hex bolt to lock into position.

NOTE: Blade should not touch thrust bearing until pressure is applied to material being cut.

F. Replacing Blade Guides

Replacing blade guides is necessary after considerable wear. All Diamond Tech's Replacement Guides can be purchased wherever Diamond Tech products are sold or by calling 800-937-9593.

G. Changing Blades

- Turn power to the OFF position. Disconnect the machine from the power source and open the front panels of the saw.
- Release blade tension by turning the blade tension knob counter-clockwise (Fig. 9). Remove the table alignment screw and wingnut on the front of the cutting table (Fig. 3).
- Slide used blade off upper and lower wheels.
- Install new blade with the diamond coated edge facing the front of the saw. Slide blade through the slot in the table, over the lower wheel and then up over the upper wheel.
- Retighten the blade tensioning knob (Fig. 9), making sure the blade is centered on the top wheel (Fig. 11). Manually turn wheels to ensure proper tracking before closing front panels. Refer to section B if blade alignment needs adjusting.

Note: Breaking blades is the most common problem encountered by new band saw owners. This is often caused by over tightening the blade or forcing the work material into the blade. To prevent this from occurring, slowly coax materials into the blade, maintaining a forward movement of the material at all times.

H. Drive Belt Tension Adjustment

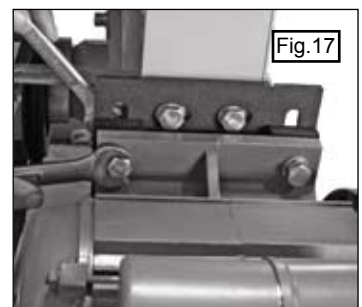
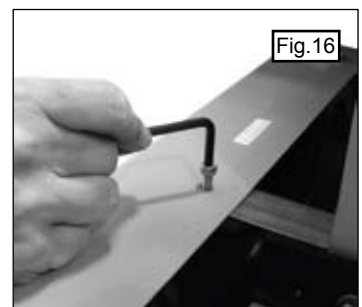
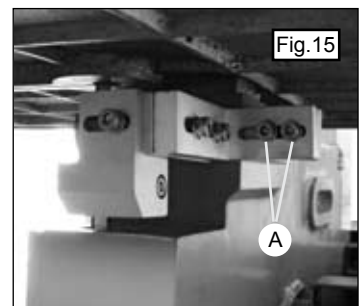
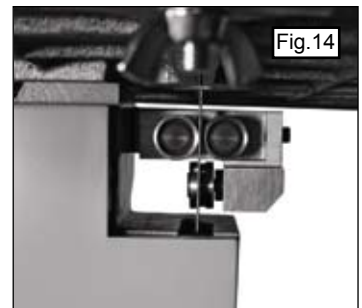
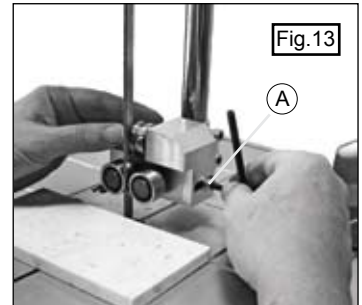
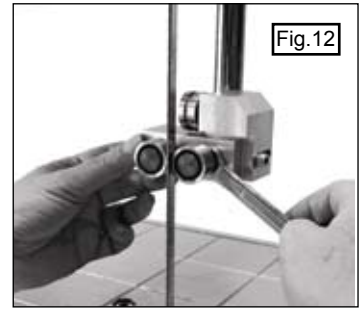
A loose drive belt may result in a noticeable loss of power to the blade wheels.

- To tighten the drive belt, turn saw OFF and unplug the saw from the electrical outlet.
- Remove all screws securing rear panel encasing the drive belt (Fig. 16).
- Loosen all four motor mount set screws using a large hex wrench (Fig. 17).
- Press the motor downward to desired belt tension and secure into position by retightening the motor mount set screws. There should be moderate give in the belt tension ($\frac{1}{4}$ " flex top and bottom).

WARNING: Do not overtighten belt. Overtightening the drive belt will slow the motor down and damage the motor. A loose belt will not turn the blade wheels properly.

I. Drive Belt Replacement

- To replace the drive belt, turn saw to OFF position and unplug from the electrical outlet.
- Remove all screws securing panel encasing the drive belt (Fig. 16).
- Pull drive belt off the motor and pulley wheel.
- Replace drive belt by first wrapping it around the motor pulley. Then holding the belt over the pulley wheel, rotate it to the right, coaxing the belt onto the pulley wheel from the bottom up.
- Replace and tighten motor mount plate screws and adjust belt tension as needed.
- Replace the rear panel encasing the motor and fasten with screws.



Trouble Shooting Guide

Problem: A small amount of surface rust has appeared on some of the steel parts.

Solution: This rust is removable with light machine oil, WD40 or naval jelly. Rust will not effect the function or life of the saw.

Problem: Water pump sounds like it's running, but no water is being pumped through the hose.

Solution: The nozzle may be clogged or the pump needs to be primed. To prime the pump, insure the water level in the bucket covers the pump. Turn pump so air enters the intake opening. Submerge the pump down into the water again and watch for water flow.

Problem: Work material becomes jammed.

Cause: Twisted blade, caused by work material being forced.

Solution: Before freeing any jammed material:

1. Turn OFF power switch immediately.
2. Open front panels of the saw.
3. Rotate top wheel assembly counter clockwise until blade is freed from work material.
4. Hold blade firmly against blade guide assembly to prevent the blade from being pulled or stretched while you are disengaging the material.
5. Continue to maneuver work material from the blade until free.

Problem: Blade twists, poor cutting accuracy.

Cause: Blade tension too loose or worn blade guides.

Solution:

1. Adjust guides on both upper and lower blade guide assemblies as close as possible to the sides of the blade, being careful not to pinch the blade.
2. Change blade guides if necessary.
3. Adjust blade tension, see page 3.

Problem: Saw runs slowly or stops while cutting.

Cause: Drive belt damage or blown fuse.

Solution: See Band Saw Use and Maintenance, Drive Belt Tension and Replacement-Section H and Section I, page 4.

To replace fuse, unscrew and remove fuse cover located on the front of the saw baody (Fig. 8).

Remove and discard old fuse, replace with a new (see additional parts list page 6). Secure in place with fuse cover.

Problem: Blade has cut excessively into back thrust bearing.

Cause: Back thrust bearing is to close to blade.

Solution: Adjust back thrust bearing $\frac{1}{16}$ " to $\frac{1}{8}$ " away from the blade.

Tips on Using Your Band Saw

- Do not force material into the Blade. Allow the work to glide smoothly. Avoid twisting the blade on tight curves.
- Use a Chapstick™ to cover pattern marks on the material to prevent the lines from washing off.
- Stone, Tile and Glass cutting sludge may harden, so avoid putting sludge down plumbing drains.
- To back out of a cut, turn saw OFF and slowly ease the material away from the blade.
- Two or more pieces 1/2" in depth may be cut at the same time by "stacking" them together using "tacky wax" or double-sided tape.
- Clean thoroughly and loosen blade tension when saw is not in use.

Additional Parts

Item	Item Number
DL7000 TABLE	P768
DL7000 UPPER/LOWER FRAME COVER	P760/P758
DL7000 ON/OFF SWITCH	P778
DL7000 UPPER/LOWER WHEEL	P737/P706
DL7000 DRIVE BELT	P764
DL7000 UPPER GUIDE BLOCK	P747
DL7000 LOWER GUIDE BLOCK	P716
DL7000 STAINLESS STEEL BLADE - TILE	701
DL7000 STAINLESS STEEL BLADE - GLASS	701G
DL7000 BLADE GUIDE SET	703
DL7000 UPPER/LOWER WHEEL RUBBER	P736/P707
DL7000 110V MOTOR	P765
DL7000 FUSE HOLDER	P776
DL7000 FUSE 127V M20X5 20A	P777

Blade Repair Service

Diamond Tech offers a blade repair service should a blade break with ample diamond remaining. Return blade, indicating saw model and payment to: *Diamond Tech, Blade Repair Service, 5600 Airport Blvd. Suite C, Tampa, FL 33634*. For International and special handling, please include extra postage and shipping instructions.

Blade Repair Fees (U.S. Dollars):

Speedster, DL1000, DL3000	\$25.00
DL5000	\$45.00
DL7000	\$78.00

Diamond Tech

Diamond Laser 7000 1 Year Warranty

All **Diamond Laser 7000 Band Saw** and accessories are manufactured to high quality standards and are serviced by highly qualified technicians.

Diamond Laser 7000 Band Saw is warranted to the original purchaser for one full year from the original purchase date. During the one year period, if you feel the **Diamond Laser 7000 Band Saw** is not performing properly and needs to be serviced, contact Diamond Tech at 800-937-9593 or email info@dtcrafts.com for a Return Authorization Number. Equipment will not be accepted at Diamond Tech without a Return Authorization Number.

If returning the Band Saw for evaluation or repair, be sure to include your Name, Address, Daytime Phone Number with Area Code and a letter explaining the specific problem you are encountering. You will be contacted if any necessary parts or service are not covered under the warranty.

Date of purchase ___ / ___ / ___

Mark the Return Authorization Number clearly on every package! *Do not send this product back without such prior authorization!* Return postage and insurance are the responsibility of the consumer. Diamond Tech will return your equipment postage paid and insured if it is under warranty. Any Band Saw no longer under warranty will be returned at the owner's expense. Diamond Tech reserves the right to repair or replace faulty equipment at its discretion. The **Diamond Laser 7000 Band Saw** is warranted against defective materials or workmanship. If the **Diamond Laser 7000 Band Saw** suffers damage due to customer modifications and/or is used for any application other than that for which it was designed, this warranty is void. This warranty does not include damage due to: (A) neglect (B) accident (C) unreasonable use (D) improper maintenance (E) any other causes not attributed to defects in material or workmanship. This warranty specifically excludes the **Diamond Laser 7000 Band Saw** blades and/or guides. Any implied or otherwise explicit guarantees made through merchandiser of this product are not covered in this warranty coverage agreement and are expressly disclaimed.

IMPORTANT NOTE: This machine was designed for certain applications only. *Diamond Tech* strongly recommends that this machine NOT be modified and/or used for any application other than that for which it was designed. If you have any questions relative to its application, please contact us and we will advise as to it proper use.

Diamond Tech, USA

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