



BARRANCA DIAMOND

BD7CW Trim Saw

Owner's Manual and Operating Instructions



Revision 100	01.2014
Manual Part No. 170833-OM	

Caution: Read all safety and operating instructions before using this equipment. This manual **MUST** accompany the equipment at all times.

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We at Barranca Diamond Products want to thank you for selecting the Barranca Diamond BD7CW Trim Saw (part # 168765). We are certain that you will be pleased with your purchase. Barranca Diamond takes pride in producing top quality and dependable products for both hobbyists and commercial lapidary users throughout the world.

Operated correctly, your BD7CW Trim Saw should provide you with years of quality service. In order to help you, we have included this owner's manual. This owner's manual contains information necessary to operate and maintain your BD7CW Trim Slab Saw safely and correctly. Please take the time to familiarize yourself with the BD7CW Saw by reading and understanding this manual.

If you should have questions concerning your BD7CW Saw, please feel free to call Barranca Diamond at (310) 523-5867 or toll free (800) 630-7682.

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SAFETY PRECAUTIONS

Read and follow all safety, operating and maintenance instructions. Failure to read and follow these instructions could result in injury or death to you or others. Failure to read and follow these instructions could also result in damage and/or reduced equipment life. In order to prevent injury, the following safety precautions should be followed at all times!

READ OWNER'S MANUAL BEFORE USE

Before using this equipment, ensure that the person operating this machine has read and understands all of the instructions in the manual. Precaution is the best insurance against accidents. Read and understand all safety precautions, messages, warnings and hazard symbols. You are responsible for your own safety.

ALWAYS USE SAFETY GLASSES

Safety glasses should always be worn when working around power tools. In addition, a face, dust mask or respirator should be worn if a cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses and may not prevent eye injury - they are **NOT** safety glasses.

USE PROPER APPAREL

Do not wear loose clothing, gloves, neckties, rings, bracelets or other jewelry that may be caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair. Hand protection (plastic gloves) and a shop bib are recommended during sawing to prevent stains to clothing. Avoid prolonged exposure of skin to the sawing lubricant and wash skin immediately after contact. Do not touch the work material until the motor is off and the machine has come to a complete stop.

ALWAYS USE HEARING PROTECTION

To reduce the possibility of hearing loss, always use hearing protection when operating power equipment.

KEEP GUARDS IN PLACE

In order to prevent injury, never operate the saw without the guards in place!

REMOVE ADJUSTING KEYS AND WRENCHES

Form a habit of checking to see that keys and adjusting wrenches are removed from the power tool before it is turned on.

ELECTRICAL SHOCK

Never touch electrical wires or motor components while the motor is running. Exposed, frayed or worn electrical wiring and plugs can be sources of electrical shock that could cause severe injury or burns.

DISCONNECT TOOLS

Power tools should always be disconnected before servicing or when changing accessories, such as blades, bits, cutters and the like.

REDUCE THE RISK OF UNINTENTIONAL STARTS

Make sure the ON/OFF switch is in the OFF position before plugging in a power tool.

ROTATING OR MOVING PARTS

Keep hands, feet, hair, and clothing away from all moving parts to prevent injury. Never operate the motor with covers, shrouds or guards removed.

MAINTAIN TOOLS WITH CARE

Keep tools clean for the best and safest performance. Always follow maintenance instructions for lubricating and when changing accessories.

KEEP WORK AREA CLEAN

Cluttered work areas and benches invite accidents.

DO NOT USE IN DANGEROUS OR HAZARDOUS ENVIRONMENTS

Do not operate equipment in dangerous or hazardous environments. Do not use power tools in damp or wet locations nor expose them to rain. Always keep the work area well lighted. Always work in a well ventilated area.

KEEP CHILDREN AWAY

All visitors and children should be kept a safe distance from the work area. Keep power cords disconnected when tool is not in use.

MAKE THE WORKSHOP KID-PROOF

Make the workshops kid-proof by using padlocks, master switches and by disconnecting all power cords.

USE THE RIGHT TOOL

Do not force a tool or an attachment to do a job that it was not designed to do.

SECURE WORK

Clamps or a vise should be used to hold work whenever practical. Keeping your hands free to operate a power tool is safer.

DO NOT FORCE THE TOOL

A power tool will do a better job and operate more safely at the feed rate for which it was designed.

USE THE RIGHT TOOL TO SERVICE THE SAW

Do not force a tool or an attachment when servicing or operating this power tool. Use the correct tools for service or adjustments.

DO NOT OVERREACH

Keep proper footing and balance at all times by not overreaching.

DO NOT OPERATE A TOOL WHEN TIRED

When tired, take a break and relax.

DIRECTION OF FEED

All blades, grinding wheels or polishing belts should always be installed such that rotation is in the direction of the arrow imprinted on the blade, wheel or belt.

ONLY OPERATE AT THE PROPER SPEED

Severe personal injury and damage to the motor or equipment can result if operated at speeds above maximum.

NEVER LEAVE A TOOL RUNNING UNATTENDED – TURN POWER OFF

Do not leave a tool until it comes to a complete stop. Always turn the tool off, and disconnect the power cord to its source, when leaving the work area or when work is finished. Do not leave extension cords attached to the power cord or power receptacle (wall outlet) when leaving the work area.

CHECK FOR DAMAGED OR WORN PARTS

Before using a power tool, check for damaged parts. A guard or any other part that is damaged should be carefully checked to determine if it would operate properly and perform its intended function. Always check moving parts for proper alignment or binding. Check for broken parts and mountings and all other conditions that may affect the operation of the power tool. A guard, or any damaged part, should be properly repaired or replaced.

USE RECOMMENDED ACCESSORIES AND PARTS

Consult the owner's manual for recommended accessories and parts. Using improper parts and accessories may increase the risk of personal and/or bystander injury.

USE THE PROPER EXTENSION CORD

If using an extension cord, make sure it is in good condition first. 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 that will result in a loss of power and overheating. The table on page 8, shows the correct AWG (American Wire Gauge) 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.

USE THE PROPER POWER SOURCE

This tool is only to be used with a 120 volt 60 HZ power source. Ensure power source is at least 15 amps and 110 to 120 volts. Low voltage current can adversely effect electric motor performance and overall life.

USE THE RECOMMENDED COOLING AND LUBRICATING FLUIDS

Never operate a tool dry that requires coolant or lubricant. This can lead to shortened tool life, tool damage and personal injury.

MAINTAIN TOOLS

Keep the diamond blade sharp, the sawing lubricant clean and reservoir filled to the correct level for the best and safest performance. Always follow the maintenance instructions for sharpening the blade, lubricating and servicing the saw.

SILICA DUST WARNING

Grinding/cutting/drilling of masonry, concrete, metal and other materials with silica in their composition may give off dust or mists containing crystalline silica. Silica is a basic component of sand, quartz, brick clay, granite and numerous other minerals and rocks. Repeated and/or substantial inhalation of airborne crystalline silica can cause serious or fatal respiratory diseases, including silicosis. In addition, California and some other authorities have listed respirable crystalline silica as a substance known to cause cancer. When cutting such materials, always follow respiratory precautions.

Use appropriate NIOSH-approved respiratory protection where dust hazard may occur. Paper masks or surgical masks without a NIOSH approval number are not recommended because they do little to protect the worker. For more information about respirator programs, including what respirators have received NIOSH approval as safe and effective, please visit the NIOSH website at:
<http://www.cdc.gov/niosh/topics/respirators>

Observe OSHA regulations for respirator use (29 C.F.R. §1910.134 and §1503.1). Visit <http://www.osha.gov> for more information.

CALIFORNIA PROPOSITION 65 MESSAGE

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contain 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, cement and other masonry products
- Arsenic and chromium, from chemically treated lumber

For further information, consult the following sources:

<http://www.osha.gov/dsg/topics/silicacrystalline/index.html>

<http://www.cdc.gov/niosh/docs/96-112/>

<http://oehha.ca.gov/prop65/law/P65law72003.html>

<http://www.dir.ca.gov/Title8/sub4.html>

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 dust masks that are specially designed to filter out microscopic particles. Where use of a dust extraction device is possible, it should be used. To achieve a high level of dust collection, use an industrial HEPA vacuum cleaner. Observe OSHA 29 CFR part 1926.57 and 1926.103.

**WARNING**

Sawing, grinding and drilling generate dust. Excessive airborne particles may cause irritation to eyes, skin and respiratory tract. To avoid breathing impairment, always employ dust controls and protection suitable to the material being sawed or drilled; See OSHA (29 CFR Part 1910.1200).

ELECTRICAL REQUIREMENTS AND GROUNDING INSTRUCTIONS

In order to prevent electrical shock and injury, the following electrical safety precautions and symbols should be followed at all times!

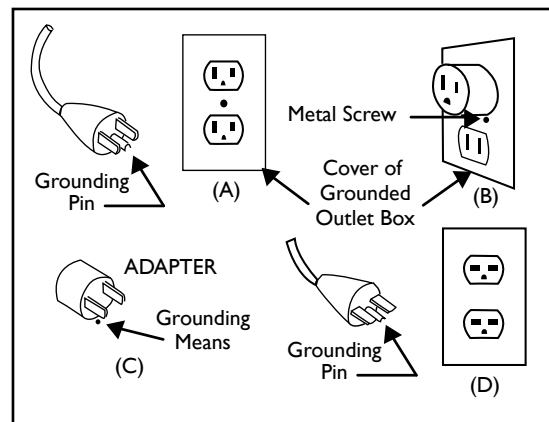


WARNING

In case of a malfunction or breakdown, grounding provides a path of least resistance for electrical current to reduce the risk of electric shock. This tool is equipped with an electric cord which has 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 connections of the equipment-grounding conductor can result in a risk of electric shock. The equipment-grounding conductor is the insulated conductor that has an outer surface that is green, with or without yellow stripes. If repair or replacement of the electric cord or plug is necessary, **DO NOT** connect the equipment-grounding conductor to a live terminal.
- 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.
- 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 a damaged or worn cord immediately.

This tool is intended for use on a circuit that has an outlet that looks like the one shown in Sketch A. The tool has a grounding plug that looks like the plug illustrated in Sketch A. A temporary adapter, which looks like the adapter illustrated in sketches B and C, may be used to connect this plug to a 2-pole receptacle as shown in Sketch B, if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, plug, and the like, extending from the adapter, must be connected to a permanent ground, such as a properly grounded outlet box.



Circuit and Adapter Information

NOTE: Use of a temporary adapter is not permitted in Canada.

NOTE: If permanently connected this tool should be connected to a grounded metal permanent wiring system; or to a system having an equipment - grounding conductor.

ELECTRIC MOTOR SAFETY

For maintenance care and operation of the electric motor, refer to your electric motor instruction booklet furnished with the electric motor. Protect the electric motor from dust as much as possible and keep ventilating openings clean. Before plugging in the machine, make sure that the outlet voltage is within the voltage marked on the machines's data plate.



CAUTION



DO NOT spray water on the electric motor. **DO NOT** touch the plug with wet hands. To reduce the risk of electrocution, keep all connections dry and off the ground.



DO NOT operate electric motor in an explosive environment.



DO NOT EXPOSE TO RAIN

DO NOT expose to rain or use in damp locations.



WARNING



If operating the equipment in damp locations is unavoidable, **ALWAYS** use a Ground Fault Circuit Interrupter, **ALWAYS** wear rubber gloves and footwear in damp conditions.



DO NOT abuse the cord. Never use the cord to carry the equipment or to pull the plug from the outlet. Keep the cord away from heat, sharp edges, and moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.



WARNING

To reduce the risk of electrocution, keep all connections dry and off the ground. A Ground Fault Circuit Interrupter (GFCI) should be provided on the circuit(s) or outlet(s) to be used for this machine. Receptacles are available having built-in GFCI protections and may be used for this measure of safety. When using an extension cord, GFCI should be installed closest to the power source, followed by the extension cord and lastly, the machine.



WARNING

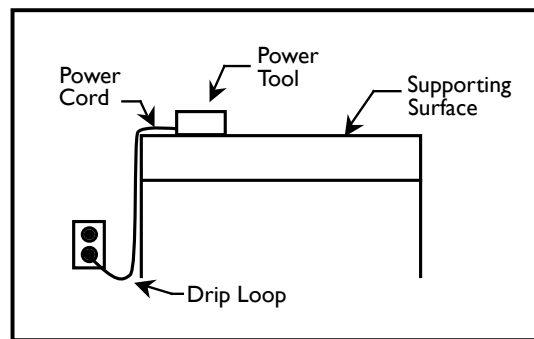
The water pump requires a GFCI. To reduce risk of electrical shock when operating the machine with the pump plugged into the 3-pole receptacle on the motor, connect the machine to a GFCI outlet. See the pump manual and informational tags enclosed separately for all pump information.

**WARNING**

To avoid the possibility of the appliance or plug receptacle getting wet, position the machine to one side of a wall mounted receptacle. This will prevent water from dripping into the receptacle or plug. A "drip loop," shown in the picture below, should be arranged by the user to properly position the power cord relative to the power source. Use the drip loop as a way to prevent GFCI and plug from getting wet.

The "drip loop" is that part of the cord below the level of the receptacle (or the connector, if an extension cord is used). This method of positioning the cord prevents the travel of water along the power cord and coming in contact with the receptacle.

If the plug or receptacle gets wet, **DO NOT** unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the tool. Then unplug and examine for presence of water in the receptacle.



Drip Loop Information

**WARNING**

Use only extension cords that are intended for outdoor use. These extension cords are identified by a marking "Acceptable for use with outdoor appliances; store indoors while not in use." Use only extension cords having an electrical rating not less than the rating of the product. **DO NOT** use damaged extension cords. Examine extension cords before using and replace if damaged. **DO NOT** abuse extension cords and **DO NOT** yank on any cord to disconnect. Keep cords away from heat and sharp edges. Always disconnect the extension cord from the receptacle before disconnecting the product from the extension cord.

ALWAYS make certain that the power source required for the electric motor is correct and always use the correct NEMA configuration plug. Motors can burn out when the line voltage falls 10% below the voltage rating of the motor. Failure to use proper voltage will cause the motor to overheat. Make certain that the correct size grounded (3-wires) extension cord is used.

**WARNING**

Use of undersized extension cords result in low voltage to the motor that can result in motor burnout and premature failure. MK Diamond warns that equipment returned to us showing signs of being run in a low voltage condition, through the use of undersized extension cords, will be repaired or replaced totally at the customer's expense. There will be no warranty claim.

To choose the proper extension cord,

- Locate the length of extension cord needed in the table below.
- Once the proper length is found, move down the column to obtain the correct AWG size required for that length of extension cord.

EXTENSION CORD LENGTH							
Nameplate Amperes	115V	25'	50'	75'	100'	150'	200'
	250V	50'	100'	150'	200'	300'	400'
0 - 5		16	16	16	14	12	12
5.1 - 8		16	16	14	12	10	•
8.1 - 12		14	14	12	10	•	•
12.1 - 15		12	12	10	10	•	•
15.1 - 20		10	10	10	•	•	•

PRODUCT SPECIFICATION

Motor	Soga MR48
Horse Power	1/3
Voltage*	115V/60Hz
Amperage	4.4
Motor RPM	3,300
Blade Arbor	1"
Blade Capacity	7"
Depth of Cut	1-3/16"
Max. Vise Opening	2-3/4"
L x W x H (in)	17" x 18" x 12"
L x W x H (mm)	432 x 457 x 305 mm
Saw Weight	28 lbs.
Part #	168765 (w/Hood & Vise)
Part #	170789 (w/o Hood & Vise)

*220Volt w/Hood & Vise Part # 169780

BD7CW

The BD7CW will manually cut specimens up to 1-3/16" (30mm) in height and has a 14" (356 mm) x 14" (356 mm) self-aligning tabletop.

Blade Lubricate

Approximately 1/3 gallon (1.3 liters) of lubricant is required to adequately cover the bottom of a 7-inch (178 mm) blade. See Figure 5 for proper lubricant level.

The use of petroleum or vegetable based mineral is highly recommended as a lubricant for use with BD7CW. However, water soluble cutting fluid additives can be used with water at a 30 to 1 ratio.

NOTICE: Water is not recommended for use with the Saw. The steel arbor shaft can rust. In addition, poor sawing performance and short blade life can result if water is used.

UNPACKING

The BD7CW Trim Saw has been carefully packaged for protection during transit from the factory to your location. The blade has been factory installed and the arbor nut securely tightened. No assembly is required.

If any components are missing or damaged, save the packing list and materials and advise Barranca Diamond and the carrier of any discrepancies.

RECOMMENDED CUTTING OILS

Never run a diamond blade dry as this can immediately damage your blade. Use one of the oils/coolants recommended below. Coolant should be kept clean and below 100° F. Sludge should be removed periodically and replaced with fresh coolant so that your cuts will be clean and your blades will not be damaged.

Shell Diala Ax and Amber Neutral 100

Non-hazmat replacement oil for electrical transformer cooling. Excellent lubricating properties for blades and saw parts. Flushes sludge from rock easily, degreases easily, and sludge settles in saw tank well. In Southern California, Shell Diala Ax can be purchased from Dion and Sons, Inc (www.dionandsons.com).

Chevron Texaco Bright-Cut

A chlorine-free cutting oil with reduced sulfur and fat content. Light in color and low in odor.

Hyvolt II

Electrical transformer cooling oil. A highly refined petroleum product, available from some non-Shell oil distributors, typically only in 55 gallon drums. Same properties and performance as Shell Amber Neutral 100.

Chevron Superla #5

Food grade mineral oil. Non-hazardous lubricating oil for bakeries, breweries and food processing machinery. Good lubricating properties, degreases and settles sludge well. Can go rancid over time (1 year or less).

AVATEC 80

Food grade mineral oil, excellent for slab sawing in all our slab saws.

Texaco ALMAG

Pure petroleum based machining cutting oil. Good for slab sawing but very strong odor. Often the cheapest priced oil available but odor is tough to eliminate.

Roc Cut

Roc Cut from Diamond Pacific is a new synthetic water soluble cutting additive with rust inhibitors. Mix 30 to 1 (water to Roc Cut).

Roc-Oil

Roc-Oil from Diamond Pacific is an oil coolant for heavy duty cutting. Provides excellent blade protection and will not cause rust to your blade or saw.

Under NO circumstances should any of the following fluids be used in any of our lapidary saws:

Automotive Antifreeze Coolant

Ethylene glycol based automotive antifreeze and its vapors are considered hazardous and toxic. Propylene glycol based antifreeze is nontoxic but has practically no lubricating properties; it functions as a coolant only and its use will lead to rapid blade wear and dulling.

Automotive Transmission Fluid

Does not have adequate lubricating properties for our saws; vapors are considered hazardous and toxic.

Water

A good coolant but has no lubricating properties and causes rust and degradation of exposed iron and steel parts. Causes rapid blade dulling and premature wear. Use of water voids the warranty on all Barranca Diamond saws.

CNC Machining Fluids

Water soluble synthetic coolants (i.e. Valenite or Cimtool) are often mixed in a 20:1 blend with water. Fluid vapors are considered hazardous. These fluids do not have adequate lubricating or rust inhibiting properties for the cast iron and steel parts in our slab and trim saws.

Diesel, Heating Oil and Kerosene

Very flammable with a low flash point. At least 3 of our commercial cutting customers in Arizona and Pacific Northwest have burned down their shops using these fluids. Can be very tough to degrease the residue and aroma out of the cut slabs. These fluids are cheap, but very hazardous to use. Diesel is a benzene compound which is carcinogenic. All these fluids can cause severe skin rashes and other ailments.

Installation

Tools Needed:

- Large Standard Screwdriver, Phillips Screwdriver, Utility Knife



WARNING Equipment Damage: The 7-inch Trim Saw weighs approximately 28 lbs (13 kg). Follow safe practices to lift the unit from the shipping carton. Improper lifting can result in machine damage.

Personal Injury: Improper lifting of the 7-inch Trim Saw can result in personal injury.

The BD7CW has been shipped from the factory thoroughly inspected and tested.

Select a location for your saw that provides an adequate working space and a power source.

1. Remove the crating material from the baseboard and around the saw with screwdrivers and utility knife.

Adding Lubricant

Before operating the BD7CW, fill the reservoir so the lubricant fluid covers the bottom 1/4" (6.35 mm) of the blade. Be sure the sludge plug is pressed in.



WARNING Equipment Damage: Do not overfill the reservoir. Excess fluid will result in unnecessary spraying of fluid while sawing. Damage to the arbor and motor can occur.

1. Ensure unit is unplugged.
2. Place the 7-inch Trim Saw on a flat surface such as a bench or table.
3. Remove wing nut and lift table open. (Figure 3)
4. Fill the reservoir (Figure 4) approximately 1/3 gallon (1.3 liter) for 7" blade, 1/2 gallon (1.9 liter) for 6" blade of cutting lubricant to adequately cover the bottom of the blade. See Figure 5 for proper level.
5. Replace the table and secure with wing nut.

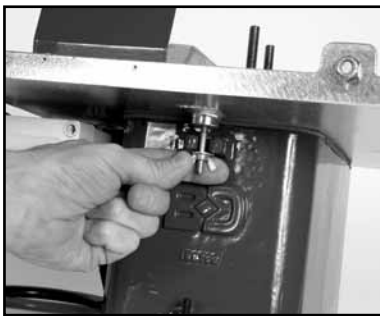


Figure 3: Lift Table



Figure 4: Oil Reservoir



Figure 5: Lubricant Level

NOTICE: Water is not recommended for use with the 7-inch Trim Saw. The steel arbor shaft can rust. In addition, poor sawing performance and short blade life can result. However, water soluble cutting fluid additives can be used with water at a 30 to 1 ratio.

Be sure to check the level of lubricant inside the reservoir after every 3 to 5 hours of use. The lubricant will be absorbed onto the material, combine with rock mud (sludge) and be lost to heat and evaporation.

Power Switch

1. Check that the power switch is in the **OFF** position.
2. Plug-in the power cord.

Power Test

1. Move the power switch to the **ON** position to rotate the blade. (Figure 6)
2. Check that the blade is rotating. This indicates the saw is functioning properly.
3. Move the power switch to the **OFF** position.



Figure 6: **ON / OFF** Switch

CAUTION Do not operate without guards in place

NOTICE: The blade guard will reduce excessive splash and spray of cutting fluid during rock trimming. It is recommended to wear personal protective gear (safety glasses, gloves and a shop bib) during trimming.

CAUTION Machine Damage: Use diamond blades only. Check blade for signs of core or segment cracks, uneven segment wear, pounding out of round arbor hole, undercutting, segment loss, dishing or loss of tension. If the blade shows signs of any of these problems the blade must be replaced before starting work. A damaged blade will not cut correctly and could cause physical injury.

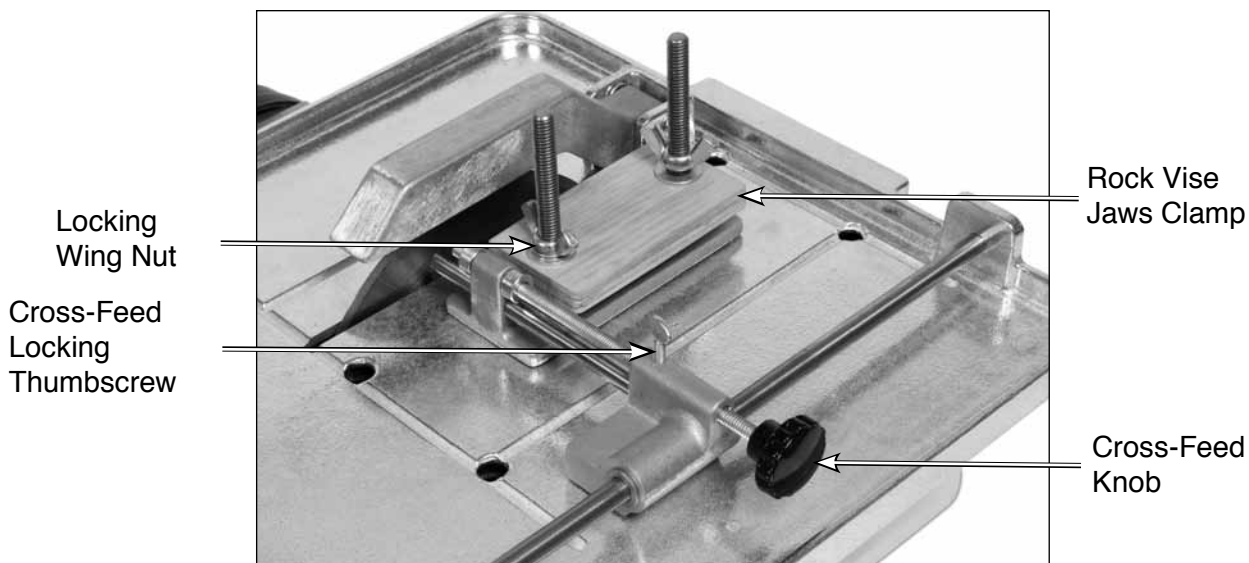


Figure 7: Rock Vise

The Rock Vise is an optional accessory (Part # 169400)

Cutting with the Trim Saw

1. Ensure the power switch is in the **OFF** position.
2. Slide the vise to the front of the saw. (Figure 8)
3. Loosen the wing nuts to open the rock vise jaws clamp to fit the material to be cut. (Figure 9)
4. The blade guard height can be adjusted by turning the knob located on the back of the blade guard. (Figure 10)
5. Place material in vise and retighten the wing nut screws to secure material. (Figure 11)
6. Adjust cross-feed knob to required thickness of cut. (Figure 12)
7. Tighten cross-feed locking thumbscrew. (Figure 13)
8. You may place the plastic hood over the table to help keep spray inside work area. (Figure 14)
9. Move the power switch to the **ON** position to engage blade.
10. Slide vise/material toward blade. Use light but firm pressure to cut the material, letting the blade do the work. Do not force the material into the blade. (Figure 15)

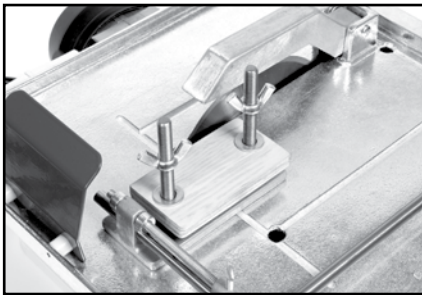


Figure 8: Slide vise forward

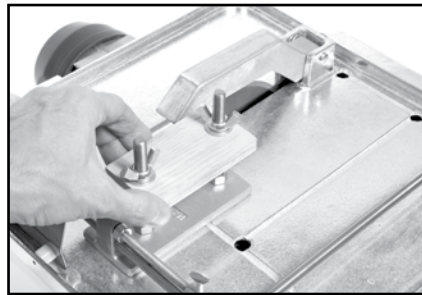


Figure 9: Adjust rock vise jaws clamp

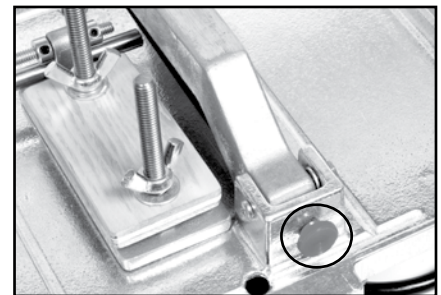


Figure 10: Adjust Blade Guard

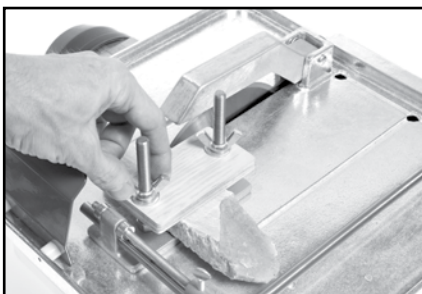


Figure 11: Secure material



Figure 12: Adjust cross-feed knob



Figure 13: Tighten cross-feed locking thumbscrew

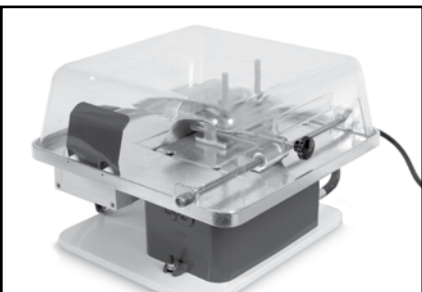


Figure 14: Hood



Figure 15: Cutting

Maintenance

The 7-inch Trim Saw will continue to perform at optimum levels with proper care, daily cleaning and general maintenance.

⚠ CAUTION Place the **ON / OFF** switch in the **OFF** position and unplug cord before servicing and when changing accessories, such as blades.

Tank



Figure 16: Drain Hose Cap

1. Holding the drain hose vertically, remove the drain hose cap. (Figure 16)
2. Place drain hose in a five-gallon bucket or collection container.
3. Let the lubricant flow into the bucket for proper disposal.
4. The sludge residue will likely not flow through the hose and will remain inside the reservoir. The sludge should be removed by removing plug and push out sludge through hole.
5. Wipe the inside of the reservoir with a disposal towel. Replace drain hose cap.
6. Refill reservoir with lubricant to cover the ¼" (6.35) of the blade (see Figure 5).
7. Dispose the used coolant and sludge properly. Conform to Federal, State and Local laws, codes and ordinances relative to environmental protection.
8. Be sure to check the level of lubricant inside the reservoir after every 3 to 5 hours of use. The lubricant will be absorbed onto the material, combine with rock mud (sludge) and be lost to heat and evaporation.
9. Spray WD40 lubricant on arbor shaft threads and jam nut to help prevent rust formation.

Rock Vise

The Rock Vise has cross feed threads attached to a knob to laterally adjust the vise so that chip thickness is accurately controlled before each chip cut. These threads should be lubricated periodically with wheel bearing or lithium grease to allow for ease of rotation of the cross feed crank.

Should the wooden jaws on the vise become worn or start delaminating, replacement jaws can be made from plywood.

Motor

The motor shaft has sealed ball bearings and requires no lubrication.

The motor should be protected from spray when cutting without plastic hood in place.

The motor is protected from thermal damage (overheating) with an automatic shut-off switch. If this should occur, shut off the main motor by placing the power switch to the OFF position and disconnecting the power source. Allow the motor to cool (2 to 3 hours) and then restart the unit by turning the switch to **ON**.



WARNING If the saw motor should stop during operation, the power to the main motor must be shut off by moving the power switch in the **OFF** position. The motor will restart automatically once cooled down.

If the motor does not restart after a cool down period, contact Barranca Diamond Service at 800.474.5594.

Diamond Blade

Periodically, the diamond blade will need to be resharpened, should slow or poor sawing performance occur. Dull or “glazed over” diamonds will either not cut thus stalling the saw and shutting off the motor, or the rock vise and rock material will ride up the blade and possibly damage the blade or “dish” the core. Once the saw begins to labor or struggle to cut gemstones, the user is advised to use a sharpening stick and resharpen the blade. Resharpening can be performed with a few slabs cut from the sharpening stick. If no sharpening stick is available, the user could use an abrasive material such as cinder block or brick to remove the glazing over the diamonds on the rim of the blade.

Eventually all blades wear out and must be replaced with a new blade. New blades should be mounted on the blade arbor so that the arrow marked on the steel core is pointing in the direction of the blade rotation while in use.

- If the arrow can't be found, use a hand lens or magnifying glass to inspect the rim and see the head and tail of any individual diamond.
- To correctly mount the blade, the head of the diamond must cut first into the rock with the tail trailing behind.
- For notched rim diamond blades it does not matter which way the blade is orientated on the arbor shaft.

Diamond Blade Installation and Removal

It will be necessary to access the blade for inspection or replacement.

1. Remove wing nut and lift table up. (Figure 17)
2. Use a 18mm adjustable wrench and allen wrench to tighten or loosen the jam nut, right hand thread. (Figure 19)



Figure 17: Lift Table



Figure 18: Blade Arbor Blade, Outer Flange, and Jam Nut



Figure 19: Changing the Blade

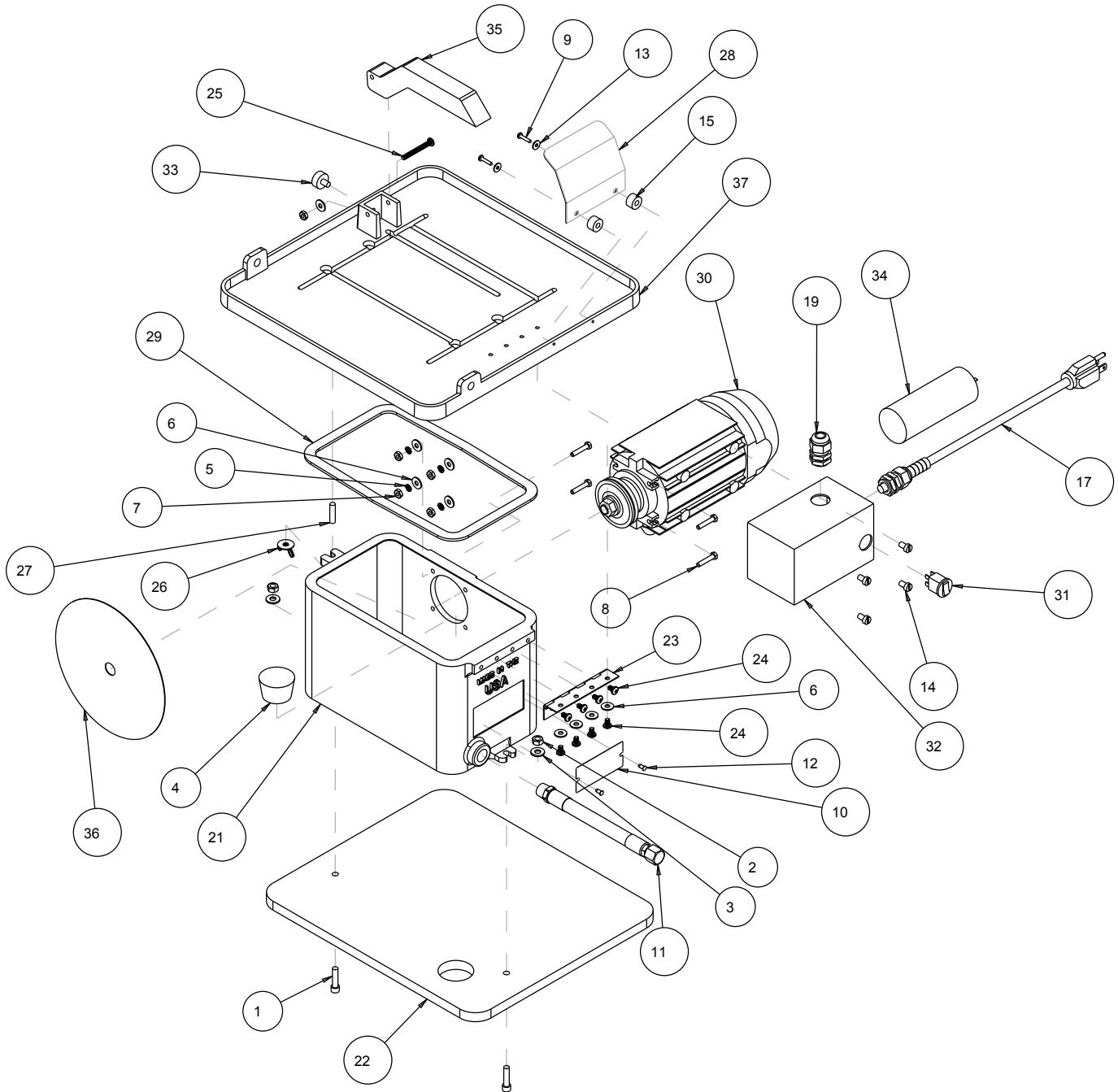
NOTICE: Do not over tighten the jam nut! Blade flanges must always be installed with their concave or recessed side facing the blade. (Figure 20)



Figure 20: Convex (recessed) Side of the Blade Flange

7-inch Trim Saw Accessories

Item	Description	Part#
Dressing Stick	6" x 1" x 1"	999997
Dressing Stick	8" x 2" x 1"	164025
Splash Hood	•	169730
Rock Vise	•	169400



ITEM	DESCRIPTION	PART #	QTY.
1	SCREW, SOC HD CAP, 1/4 - 20 X 1	151049	2
2	NUT, HEX, 1/4 - 20	151893	2
3	WASHER, 1/4 SAE FLAT	151915	2
4	PLUG, RUBBER DRAIN W/O HOLE	153439-NL	1
5	WASHER, #10 SPLIT LOCK	153684	4
6	WASHER, #10 SAE FLAT	154369	9
7	NUT, HEX 10 - 32	156269	5
8	SCREW, 10 - 32 X 1 HEX HEAD CAP	156270	4
9	SCREW, PAN HD PHIL 6 - 32 X 5/8	157393	2
10	TAG, SERIAL #, BLANK	157500-RW	1
11	HOSE, OIL DRAIN, 3/8 MNPT	157577-05	1
12	DRIVE SCREW, #7 X 5/16 ROUND HEAD	157849	2
13	WASHER, #6 SAE FLAT	158231	2
14	SCREW, PAN HEAD SLOT M6 X 10MM	160214	4
15	SPACER, NYLON 3/8 LG. X 1/2 OD	161076	2
16	CARTON, RAIL SAW CUTTING HEAD	165265	1
17	CORD, POWER 14/3 SJTW X 5-15P	167180	1
18	SHEET, WARNING LABELS SLAB SAW	167886	1
19	STRAIN RELIEF, HEYCO M4340	168265	1
20	BAG, INSTAPAK QUICK, #60RT	168512	2
21	TANK, COMP	168767	1
22	BASE, MOUNT	168770	1
23	HINGE, COMP	168771	1
24	SCREW PAN HEAD #10 - 32 X 5/16	168938	8
25	SCREW PAN HEAD #10 - 32 X 1 - 3/4"	168939	1
26	WING NUT FLANGED, 1/4 - 20	168941	1
27	ROD, THREADED COMP, TABLE	168942	1
28	GUARD, SPLASH	169380	1
29	GASKET, TANK	169445	1
30	MTR, MR48, 115V 60 HZ SOGA LH/CW	169446	1
31	SWITCH, ROCKER	169448	1
32	ENCLOSURE MOD	169731	1
33	SCREW, THUMB 1/4 20X 3/8	169740	1
34	CAPACITOR, 40MF (INCL W/MOTOR 169745)	169745	1
35	GUARD, BLADE, COMP	169749	1
36	BLADE, BD-303C, 7" X .030 X 5/8"	170559	1
37	TABLE, BD-7, CW-COMP	170832	1

NOTES

NOTES

BARRANCA DIAMOND LIMITED WARRANTY

Please complete the warranty registration card and return. Any problems encountered should be directed to Barranca Diamond Customer Service department at (800) 630-7682 M-F 8am - 5pm PST.

NOTE THIS INFORMATION FOR FUTURE USE:

MODEL NUMBER:	
SERIAL NUMBER:	
PURCHASE PLACE:	
PURCHASE DATE:	

Barranca Diamond warrants to the original retail purchaser for a period of 1 year except as noted, from the date of purchase all products covered by this Warranty to be free of defects in materials and workmanship.

This Warranty shall not apply to any parts that have been subjected to misuse or improper service, that had been damaged in transit or handling, or that have been altered or repaired by unauthorized representatives. This Warranty does not cover defects caused by or resulting from misuse, abuse, neglect or damage caused by accident or the failure to provide reasonable maintenance. This Warranty is void if the product or any of its individual components is altered or modified by the purchaser or if the product is used in a manner or with a blade not recommended by the manufacturer.

Any claim arising under this Warranty must be submitted by the original purchaser within the warranty period specified above, and shall include proof of purchase. During said warranty period Barranca Diamond shall, at its option, either replace or repair, at no charge to the original purchaser, any parts or components that are found to be defective by Barranca Diamond. Barranca Diamond shall not be responsible for or obligated to pay for freight or other transportation related costs or expenses in connection with any defective products or components that are either returned to Barranca Diamond’s facility or any authorized repair station and/or any replacement products or components that are shipped from Barranca Diamond pursuant to this Warranty.

Parts and labor needed to maintain products and the replacement of components due to normal wear and tear are the purchaser’s responsibility and are not covered by this Warranty. All products or components replaced under warranty become the property of the manufacturer. All replacement parts will be considered to be part of the original product and any warranty on such parts will expire coincidentally with the original Warranty. Barranca Diamond will pay for parts and labor in connection with warranty repairs conducted by Barranca Diamond or its authorized repair centers. Replacement part(s) installed by anyone else will be provided without a charge for such replacement part(s), but this Warranty will not apply to labor charges in connection therewith.

IN NO EVENT SHALL ANY LIABILITY UNDER THIS WARRANTY EXCEED THE REPLACEMENT COST OF ANY DEFECTIVE PRODUCT OR COMPONENT THEREOF, AND BARRANCA DIAMOND SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR FOR ANY OTHER DAMAGE OR LOSS NOT EXPRESSLY ASSUMED AS SET FORTH HEREIN.

The foregoing constitutes an expressed warranty on the terms set forth above and is the only warranty or warranties applicable to the products it covers. All other warranties, including, without limitation, the implied warranty of merchantability and/or fitness for a particular purpose or use being denied. This limited warranty is expressly in lieu of all other warranties, whether expressed or implied.

SPECIFICS APPLICABLE TO LIMITED WARRANTY**Laser Welded Blade and Bit Warranty**

If the laser weld between the segment and the steel core or barrel fails during normal use, the blade or bit will be replaced free of charge. Blades and bits damaged due to careless or improper use are not covered under this warranty.

Brazed Blade, Bit, and Cup Wheel Warranty

If the brazed bond between the segment and the core, barrel, or cup fails within the first .050 of segment wear, the blade, bit, or cup will be replaced free of charge. Blades, bits, and cup wheels damaged due to careless or improper use are not covered under this warranty.

Continuous Rim Blade Warranty

If the bond between the rim and the core fails during normal use, the blade will be replaced free of charge. Blades and bits damaged due to careless or improper use are not covered under this warranty.

Exclusions

Barranca Diamond does not warrant the following components, which carry their own manufacturer's warranty for the indicated periods:

Electric Motors Manufacturer's Warranty

Baldor: 1 year

Ryobi: 1 Year

Soga: 1 Year

Gas Engines Manufacturer's Warranty

Honda: 2 years

Engine Power Information

Engine power ratings are calculated by the individual engine manufacturer and the rating method may vary among engine manufacturers. Barranca Diamond Products makes no claim, representation or Warranty as to the power rating of the engine on this equipment and disclaims any responsibility or liability of any kind whatsoever with respect to the accuracy or the engine power rating. Users are advised to consult the engine manufacturer's owners manual and website for specific information regarding the engine power rating.

REPLACEMENT PARTS

Replacement parts for this tool may be ordered from your Barranca Diamond distributor or directly from Barranca Diamond. Please have the following information ready before calling:

- Model and serial number of the machine
- Date of purchase
- Description of parts being ordered (see parts list)

RETURN MATERIALS PROCEDURE

To expedite the service relative to the return of a product purchased through Barranca Diamond, please have the following information available:

- Model and serial number of the machine
- Date of purchase
- Distributor's name

Then please call Barranca Diamond at (310) 523-5867 or toll free at 800-630-7682 to obtain a Return Goods Authorization number (RGA) authorizing the return.

Please Note:

- Ensure your item(s) are prepaid to the destination
- Return items must have been purchased within the previous twelve (12) months
- Follow the packaging instructions in the following section
- Be sure to include the RGA number, return address and your phone number on or within the return shipping box.

PACKAGING INSTRUCTIONS

Ship the equipment using its original shipping crate if possible. Secure inside the shipping crate. Ensure all parts are secured in the packaging to prevent movement. Do not ship the equipment partially exposed.



BARRANCA DIAMOND

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