



BARRANCA DIAMOND

# BR-6 Rotary Rock Tumbler

## OWNER'S MANUAL & PARTS LIST



Revision 105	04.2019
Manual Part# 168148	

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

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## INTRODUCTION

Congratulations on your purchase of a Barranca Diamond BR-6 Rotary Rock Tumbler. We are certain that you will be pleased with your purchase.

The following are safety and general guidelines for polishing rocks. Rock tumbling is not an exact science. After a few batches you will discover your own techniques and make modification to suit your specific needs. When selecting rocks to tumble, remember the finished product is determined by the quality of rocks with which you start.

Read and follow all safety and operating instructions. If you have any questions concerning your Barranca Diamond BR-6 Rotary Rock Tumbler, please feel free to call customer service at (800) 630-7682.

Regards,

Barranca Diamond

**NOTE THIS INFORMATION FOR FUTURE USE:**

<b>MODEL NUMBER:</b>	
<b>SERIAL NUMBER:</b>	
<b>PURCHASE PLACE:</b>	
<b>PURCHASE DATE:</b>	

**WARRANTY:** For your (1) one year warranty to be effective, complete the online Product Registration as soon as possible. Visit [www.mkdiamond.com/registration/](http://www.mkdiamond.com/registration/)

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**GENERAL SAFETY**

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- **DO NOT** operate or service this equipment before reading this entire manual.
- This equipment should not be operated by persons under 18 years of age.
- **NEVER** operate this equipment when not feeling well due to fatigue, illness or taking medicine.
- **NEVER** operate this equipment under the influence of drugs or alcohol.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult to read.
- **ALWAYS** store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children.



- **NEVER** leave the machine unattended. Turn off electric motor when unattended.



**CAUTION** Caution must be observed while servicing the machine. Rotating parts can cause injury if contacted.



- **NEVER** operate the machine in an explosive atmosphere.

## **SILICA DUST WARNING**

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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).

Visit *<http://www.osha.gov>* for more information.

## **CALIFORNIA PROPOSITION 65 MESSAGE**

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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 and 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>*

*<http://www.P65warnings.ca.gov>*

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.

## 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!

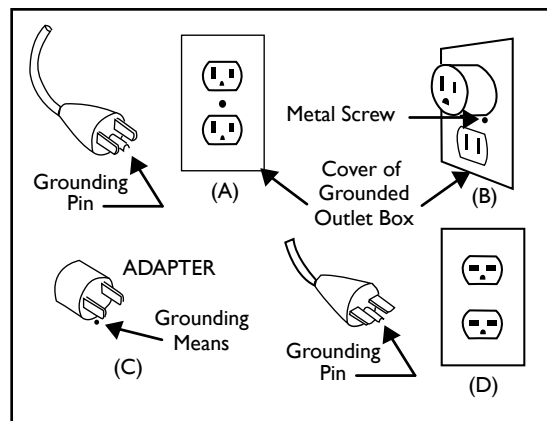


### WARNING

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

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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

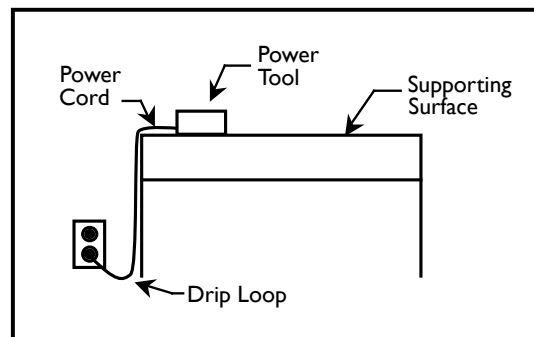
The water pump requires a GFCI. To reduce risk of electrical shock when operating the machine with the pump plugged into the 3-pole receptacle on the motor, connect the machine to a GFCI outlet. See the pump manual and informational tags enclosed separately for all pump information.

**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.

MOTOR SPECS			EXTENSION CORD LENGTH			
Motor	Voltage	Amps	25'	50'	100'	200'
168068	120V 1 Ph	1	18 ga	18 ga	18 ga	16 ga
170047	220V 1 Ph	0.5	18 ga	18 ga	18 ga	18 ga

## SAFETY LABEL LOCATIONS

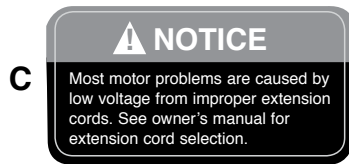
Safety labels contain important safety information. Please read the information contained on each safety label. These labels are considered a permanent part of your saw. If a label comes off or becomes hard to read, contact Barranca Diamond or your dealer for a replacement.



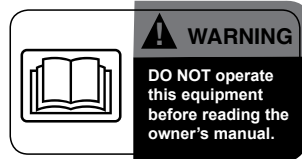
**Part # 155038**



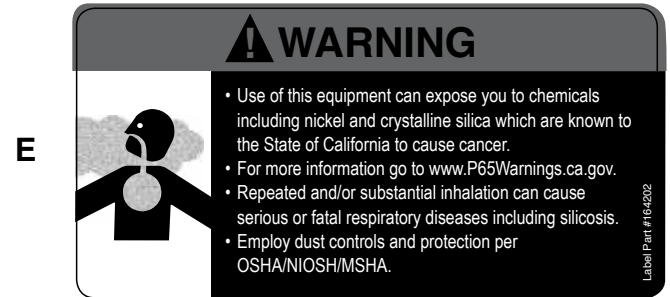
**Part # 171239**



**Part # 155672**



**Part # 154398**



**Part # 164202**

Decal	Location	Description
A	Base	Service or Warranty Information
B	Base	QR Code - Manuals
C	Base	Notice - Extension Cord
D	Base	Warning - Read Manual
E	Base	Warning - Silica

## INFORMATION

For best results, select gemstones of similar hardness and roughness to tumble together. Ideally, your drum should use about 6 lbs. of gem stones. Rocks may vary in size.

There are 4 steps in the rock tumbling process:

1. 60-90 grit silicon carbide
2. 220 grit silicon carbide
3. Pre-polish (400 or 600 grit silicon carbide)
4. Cerium oxide or aluminum oxide final polish

Seven days (162 hours) are needed to complete each of the 4 steps. More time may be needed depending on the hardness of the rock. The optimum objective for rock tumbling is to obtain a slurry that coats the stones during the tumbling process. Learn to tell by the feel of the slurry when the grit is worn out and you need to rinse the rock and drum, then add fresh grit. At the end of the 28 days, you will see your batch of beautiful, shiny, tumbled stones.

Rock Tumbling Formula:

1. 1/2 cup 60-90 grit (silicon carbide) & 6 oz. water
2. 1/2 cup 220 grit (silicon carbide) & 6 oz. water
3. 1/2 cup pre-polish (400 or 600 grit silicon carbide) and 4 oz. water
4. 1/2 cup cerium oxide or aluminum oxide & 4 oz. water

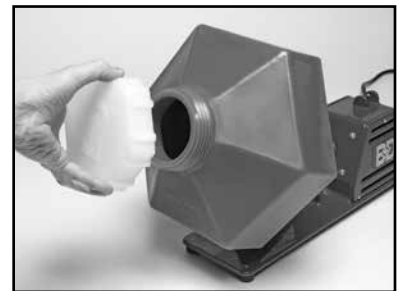
## ASSEMBLY AND SETUP



1. Place the BR-6 Rock Tumbler on a firm, smooth, level surface



2. Slide the barrel onto the shaft and tighten the thumbscrew onto the flat of the shaft. Plug in Rock Tumbler



3. Remove cap from barrel

**INSTRUCTIONS**

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5. Add 1/2 cup 60-90 grit (silicon carbide).
6. Add 6 oz. of water, a little at a time until the grit starts to cling to the rocks. Too much water will tend to rinse the grit back off the rocks.
7. Check the stones every couple days and add small amounts of water if the slurry seems too thick.
8. Before proceeding to each next step, you need to open the barrel, add 3 tablespoons of dishwashing soap and 1 additional cup of water to the barrel and run the tumbler for 5 – 10 minutes. This short pre-cleaning process de-slurries your stones before you empty the barrel and cleans your stones and barrel to prepare for the next grit.
9. Rinse the rock carefully, it should be removed from the barrel and both the rock and the barrel cleaned thoroughly.
10. Add 1/2 cup 220 grit (silicon carbide) and 6 oz. of water.
11. Repeat steps 7 through 9. Plastic pellets may be used during this step if your barrel is less than 3/4 capacity.
12. Add 1/2 cup pre-polish (400 or 600 grit silicon carbide) and 4 oz. of water.
13. Repeat steps 7 through 9. Plastic pellets may be used during this step if your barrel is less than 3/4 capacity.
14. Add 1/2 cup cerium oxide or aluminum oxide and 4 oz. of water.

**NOTE:** Be sure to rinse the rock carefully, it should be removed from the barrel and both the rock and the barrel cleaned before proceeding to the next grit.

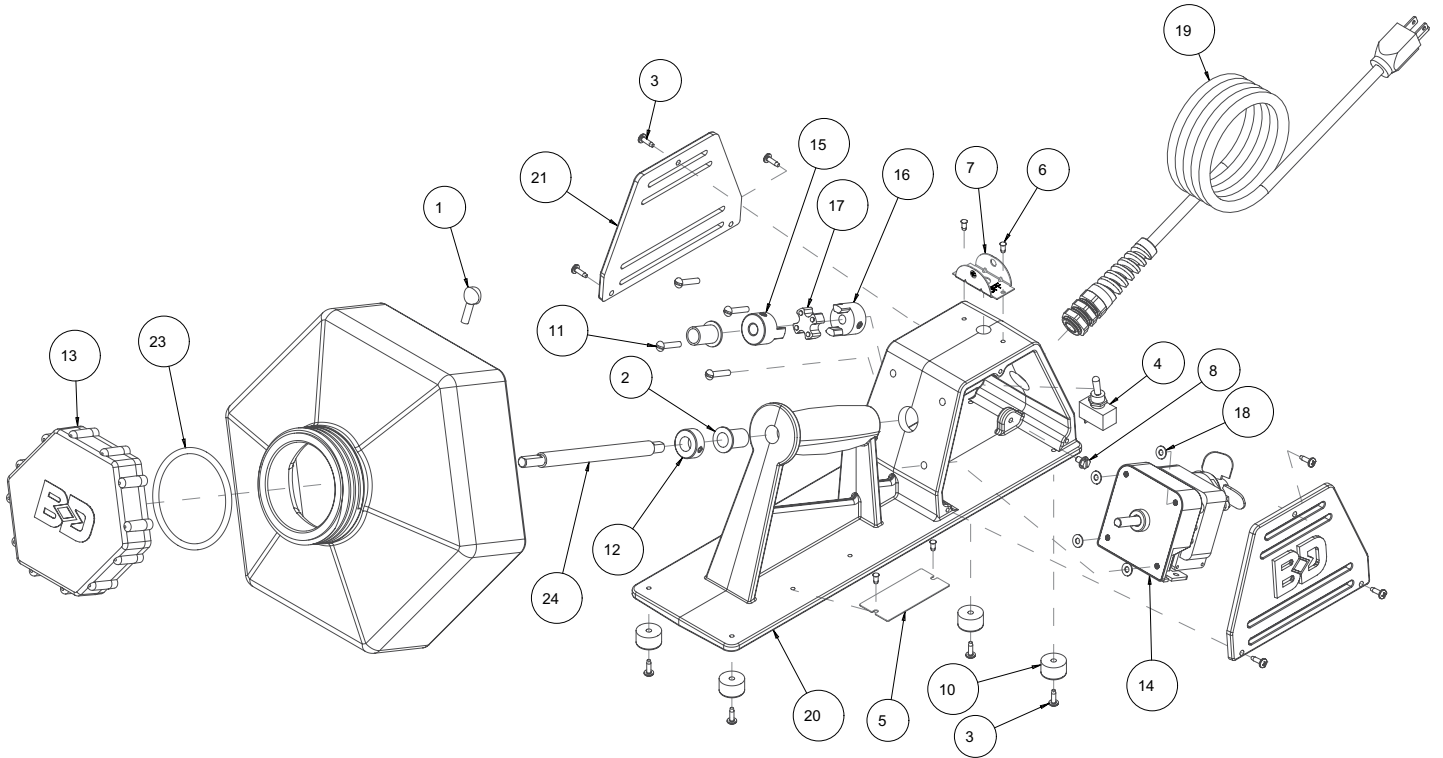
**NOTE:** Never dispose of the sludge from the tumbler down a drain as the grinding compound is very hard and will settle out and plug your drain.

**NOTE:** Do not cover unit with anything as this may block air flow and cause the motor to overheat, or possible fire hazard.

**NOTE:** Export version of the BR-6 Rotary Rock Tumble with a 220 volt, 50 Hz gear motor available (Part # 170046)



**BD-6 ROCK TUMBER P/N 168096**



**BD-6 ROCK TUMBLER P/N 168096**

ITEM	DESCRIPTION	PART #	QTY
1	SCREW, THUMB 1/4-20 X 3/4	150991	1
2	BUSHING, FLANGE, 1/2X5/8X1	156441	2
3	SCREW, PAN HD SELF TAP 8-32 X 1/2	156632	10
4	SWITCH, TOGGLE 15A/120V 1 PST	156649	1
5	TAG, SERIAL NUMBER, BLANK	157500-RW	1
6	SCREW, DRIVE, RND HD, #7X5/16	157849	4
7	PLATE, TOGGLE SWITCH LOCKOUT	158211	1
8	SCREW HEX HD FL 10-24X 5/16	159597	1
9	CARTON, 21X15X15	159822	1
10	STOP, RUBBER BUMPER	159855	4
11	SCREW, RD HEAD 10-32 X 1"	161042	4
12	COLLAR, SHAFT, 1/2	162633	1
13	COVER, TUMBLER	167931	1
14	GEARMOTOR, 20RPM	168068	1
15	HUB, 3/8" BORE	168070	1
16	HUB, 5/16" BORE	168071	1
17	COUPLING, SPIDER	168072	1
18	WASHER, #10, NYLON	168095	8
19	CORD, 14/3 SJTW X 5-15P POWER	168122	1
20	CASTING, BASE, TUMBLER-COMP	168142	1
21	CASTING, PANEL, SIDE, TUMBLER-COM	168144	2
22	OWNER'S MANUAL, BR-6 TUMBLER	168148	1
23	O-RING, CAP GASKET, #341	168197	1
24	SHAFT, DRIVE, 1/2"	170845	1
25	BARREL, TUMBLER, SLIP-ON	170846	1

**BARRANCA DIAMOND LIMITED WARRANTY**

Barranca Diamond warrants to the original retail purchaser for a period of 90 days 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.

**WARRANTY:** For your (1) one year warranty to be effective, complete the online Product Registration as soon as possible. Visit [www.mkdiamond.com/registration/](http://www.mkdiamond.com/registration/)



**Specifics Applicable to Limited Warranty of Diamond Blades and Core Bits:****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.



**BR-6**  
**Rotary Rock Tumbler**  
**OWNER'S MANUAL & PARTS LIST**



**BARRANCA DIAMOND**

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