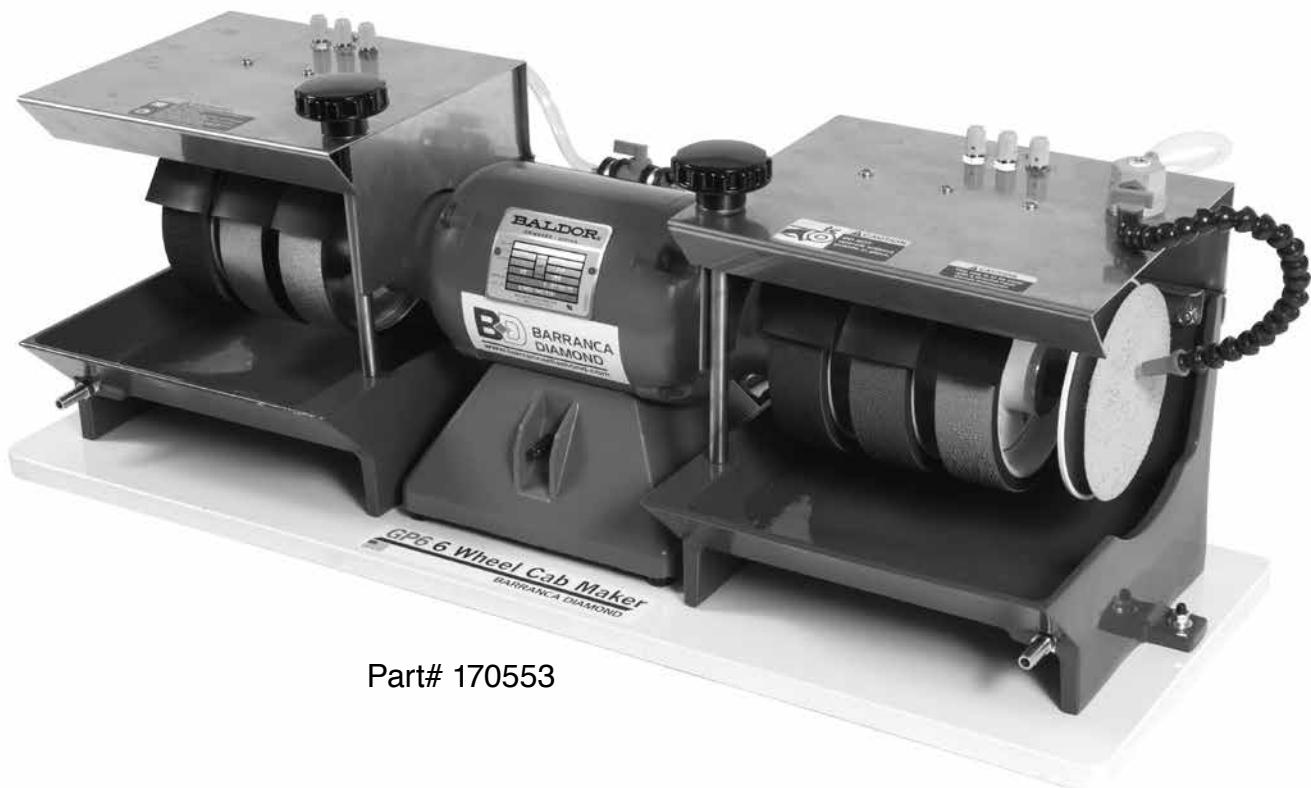




BARRANCA DIAMOND

# GP6-6 Wheel Cab Maker

## OWNER'S MANUAL & PARTS LIST



Part# 170553

Revision 104	01.2022
Manual Part No. 170553-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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Thank you for selecting the Barranca Diamond GP6-6 Wheel Cab Maker. We are certain that you will be pleased with your purchase. Barranca Diamond takes pride in producing top quality products for hobbyists and commercial lapidary users throughout the world. This product is manufactured in the United States.

This owner's manual contains information necessary to operate and maintain your GP6-6 Wheel Cab Maker safely and correctly. Operated correctly, it should provide you with years of service. Please take the time to familiarize yourself with the GP6-6 Wheel Cab Maker by reading and reviewing this manual.

If you should have questions concerning your machine, please 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 reads 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 use to prevent stains to clothing. 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.

### 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. Use a GFCI (Ground Fault Circuit Interrupter) attached to the main motor power cord plug and keep plugged into the power receptacle outlet source.

### 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 engine 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.

**REMOVE ADJUSTING KEYS AND WRENCHES**

Form a habit of checking to see that keys, tools, rock material and adjusting wrenches are removed from the Cab Combo Workshop before plugging in the power cord and operating the unit.

**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 OVERREACH**

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

**MAINTAIN TOOLS WITH CARE**

Keep the diamond tools in good condition by replacing coolant water and cleaning the reservoir frequently for the best and safest performance. Always follow the maintenance instructions for servicing the unit.

**SHUTDOWN OF THE UNIT**

The machine should always be shutdown (ON/OFF switch placed in the OFF position) and the power cord disconnected to the power source before servicing or when changing accessories.

**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 from its source. 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. 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. 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. TABLE 1, 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 A GROUND FAULT CIRCUIT INTERRUPTER**

Use of a Ground Fault Circuit Interrupter (GFCI) between the end of power cord and wall outlet is required at all times.

**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 WITH CARE**

Always follow the maintenance instructions for servicing the GP6-6 Wheel Cab Maker.

**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 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 potential electrical shock and injury, the following electrical safety precautions and symbols should be followed at all times!

In case of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having 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 wire that has a green outer surface, 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.

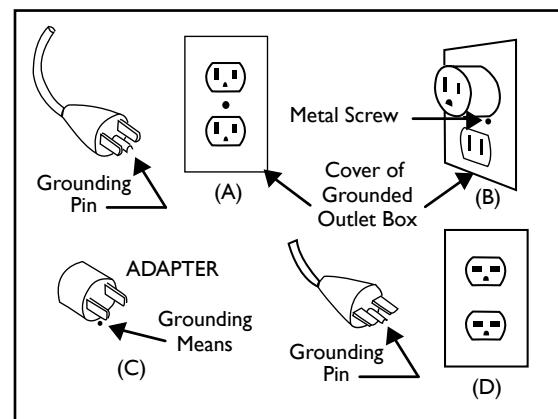
This tool is intended for use on a circuit that has an outlet that looks like the one shown in Sketch A. The tool has a grounding plug that looks like the plug illustrated in Sketch A. A temporary adapter, which looks like the adapter illustrated in sketches B and C, may be used to connect this plug 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.

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

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 power tool. Receptacles are available, having built-in GFCI protection, and may be used for this measure of safety.

When using an extension cord, the GFCI should be installed closest to the power source, followed by the extension cord, and lastly, the tool.

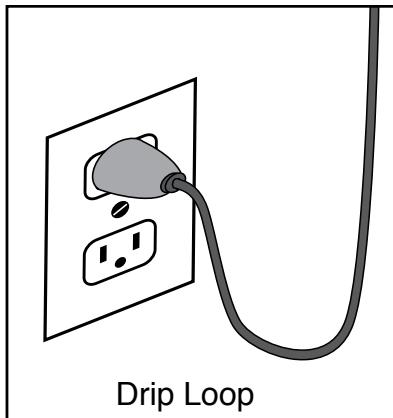


Circuit and Adapter Information

## ELECTRICAL REQUIREMENTS AND GROUNDING INSTRUCTIONS

To avoid the possibility of the appliance plug or receptacle getting wet, position the tool to one side of a wall mounted receptacle. This will prevent water from dripping onto the receptacle or plug. A "drip loop," shown in illustration below, should be arranged by the user to properly position the power cord relative to the power source.

The "drip loop" is the 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.

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.

To reduce the risk of electrocution, keep all connections dry and off the ground. Don't touch the plug with wet hands.

Use of undersized extension cords will result in low voltage to the motor that can result in motor burnout and premature failure. Barranca 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 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'
169556	115V 1 Ph	3.6	18 ga	16 ga	14 ga	10 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.



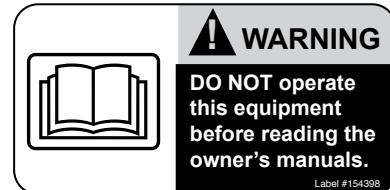
Part # 164202

**A**

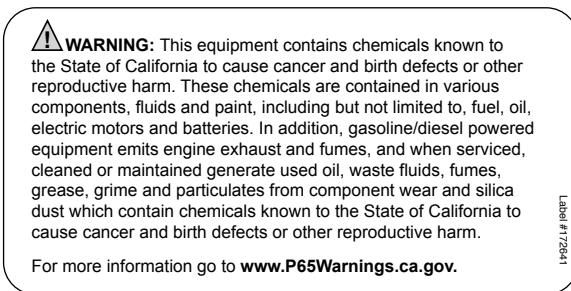
Part # 155587

**B**

Part # 171239

**C**

Part # 154398

**D**

Part # 172641

**E**

Part # 154822

**F**

Part # 155678

**G**

Decal	Location	Description
A	Hood	Warning - Dust Control
B	Hood	Caution - Guards in Place
C	Hood	QR Code for Manuals & Safety Information
D	Hood	Warning- Read Manual
E	Hood	Warning - Silica Prop 65
F	Hood	Caution - Receptacle
G	Hood	Caution - Use with GFCI only

## GP6-6 Wheel Cab Maker SPECIFICATIONS

<b>Part No:</b>	170553
<b>Weight:</b>	81 lbs (115 lbs. crated)
<b>Main Motor:</b>	Baldor Model
<b>Horsepower:</b>	1/3 HP
<b>Motor Voltage/Frequency:</b>	110 volt/60Hz
<b>Amperage:</b>	3.6 Amps
<b>Motor RPM:</b>	1,800 RPM Fixed
<b>Motor Arbor Diameter:</b>	5/8"
<b>Duty:</b>	Continuous
<b>Motor Arbor Bearings:</b>	Ball Bearings, permanently sealed
<b>Wheel Arbor Flanges:</b>	2" OD x 5/8" bore aluminum
<b>Diamond Wheel Mesh Sizes:</b>	80 and 200 mesh (170 mesh may be substituted)
<b>Diamond Resin Nova Wheels:</b>	280, 600, 1200, and 3000 mesh 6" x 1-1/2" wide wheels
<b>Shaft Type:</b>	5/8" precision machined 4144 steel
<b>Wheel and Blade Flanges:</b>	Aluminum 2" OD x 5/8" bore
<b>Wheel Spacers:</b>	7/8" OD x 5/8" ID aluminum (length varies for wheels and drum)
<b>Convex Polishing End Hub:</b>	6" aluminum hub disc with 5/8"-11" right hand thread
<b>Water Pump:</b>	MK Submersible pump (part #155987), variable flow control with 1/4" ID tubing.
<b>Water Control Valves:</b>	6 stainless steel control valves, plastic lever cock valve with barb for 1/4" ID tubing mounted on rear of the hood.
<b>Included Accessories:</b>	6" resin diamond pad set (14,000 mesh) Three 6" Polytex pads (adhesive backed) Three diamond paste syringes 8,000, 14,000, 50,000 mesh diamond paste 6" leather buffering pad 3M On-Off cement Submersible electric water pump Water pump tubing Loc-Line magnetic manifold and nozzle links/tips GFCI Switch (110 volt units only)

## CONTENTS

In the shipping crate, you will find one Barranca Diamond GP6-6 Wheel Cab Maker mounted to a 3/4" plastic baseboard with four diamond Nova wheels 6" x 1-1/2" and two brazed diamond wheels 6" x 1-1/2". The accessories for the GP6-6 Wheel Cab Maker include, submersible pump and tubing, leather pad, three diamond paste syringes, three Polytex pads, 3M On/Off cement, one Ground Fault Circuit Interrupter (GFCI), one Loc-Line manifold and one 6" leather pad.



Accessories

## UNPACKING

Your GP6-6 Wheel Cab Maker has been shipped from the factory thoroughly inspected and tested. Remove the crating material (wood and plastic) from the baseboard and around the machine carefully using a Phillips and standard screwdriver, wire cutter and box cutter knife. Any accessories should be removed from the unit and put aside.

## TRANSPORT

For safe transport, disconnect the submersible pump and power cord and remove lubricant and water from the wheel reservoirs.



## START-UP

Place the GP6-6 Wheel Cab Maker on a strong flat table or bench. A power test can now be conducted to make sure the motor is operating and all moving wheels and blades are correctly aligned and secured to the main shaft. Plug the enclosed Ground Fault Circuit Interrupter (GFCI) into a 110 to 120 volt 60 Hz minimum 15 amp circuit wall outlet (Fig 1). Make sure the power switch is in the OFF (Fig 2) position before plugging into the GFCI or extension cord.

If needed, plug an extension cord into the GFCI. If an extension cord is used, use one that is at least 14-gauge wire and no longer than 25 feet. The GP6-6 Wheel Cab Maker power cord is attached to the ON/OFF power switch on the back side of the unit.

To energize and test the GFCI, push the RESET button (Fig 3) on the switch and a red window will appear to indicate the switch is energized. If the TEST button is pushed, the switch will click off indicating the GFCI is functioning correctly. Push the reset button again to re-energize the GFCI.



Fig 1 - GFCI



Fig 2 - Power switch in the OFF position



Fig 3 - GFCI reset button



Fig 4 - Power switch in the ON position

The GP6-6 Wheel Cab Maker is now ready for a power up test to be performed. Turn the power switch to the ON position (Fig 4). Make sure no unusual sounds or vibrations occur when the motor engages.

## PUMP SET-UP

A submersible electric water pump is used to supply water to the polishing wheels as coolant and lubricant. The pump has a flow control adjustment on one side and should be adjusted for maximum water intake (Fig 5).



Fig 5 - Pump inlet adjustment set to maximum flow



Fig 6 - Pump hose attached to water pump outlet

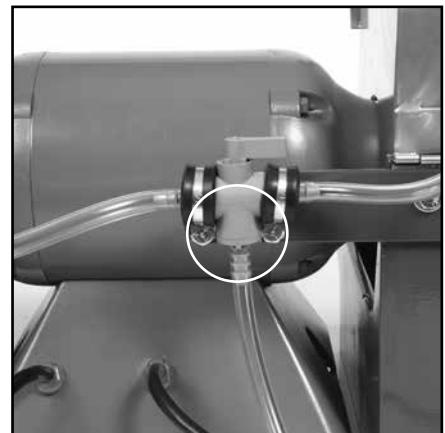


Fig 7 - Pump hose attached to valve

Insert one end of the 1/4" ID water hose over the water pump outlet (Fig 6) and the other end over the barbed end of the water valve inlet (Fig 7). It is recommended that a 5 gallon bucket be used as a water reservoir into which the submersible pump should be placed (Fig 8). The level of the reservoir water should be monitored so that water the pump always remains fully submerged.



Fig 8 - Place the Water Pump in an external container



Fig 9 - Water valve in the right hand station position



Fig 10 - Electrical outlet for water pump

The pump should be plugged into the female receptacle plug attached to the back of the motor (Fig 10). Power to run the pump will occur once the power switch lever is placed in the ON position. The pump should be operated in maximum flow setting. This will allow sufficient water to reach the three needle valves that control the water flow. Do not recirculate drained dirty water from the reservoirs back into the water inlet under any circumstances.

### PUMP SET-UP (continued)

Keep the water hose away from the electric motor to prevent damage from moving parts and electric shock hazard. The pump should always be used with clear, clean water so as to avoid grit/abrasive material, mud or rock fragments from scratching the gemstones during polishing or clogging the pump valves. The Water Valve (Fig 9) at the back of the motor, directs the water to either the right or left-hand station. Position the valve with the handle pointing toward the side you want to use, to direct the water there.

### NEEDLE VALVES

The stainless needle valves (Fig 11) are for fine control of water to each of the six grinding and polishing stations. For best results, close the valves to the stations not in use. To shut off flow to a needle valve, simply turn the grey ribbed knob clockwise until it closes to a firm stop (do not over-tighten). To open maximum flow to a needle valve, simply turn the grey ribbed knob counterclockwise until the valve stops. It may take up to 30 seconds for water flow rate to change to a specific station.

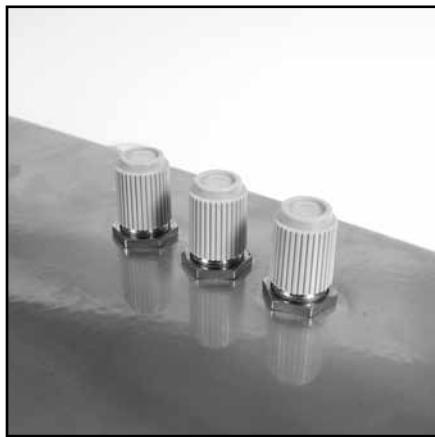


Fig 11 - Stainless needle valves

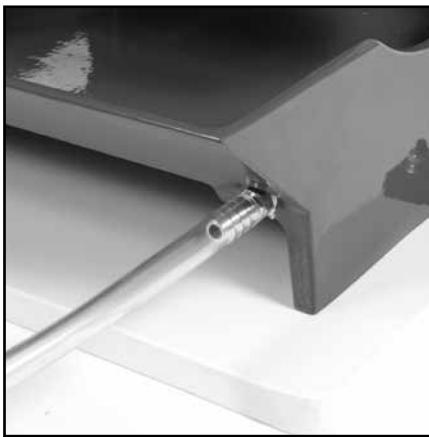


Fig 12 - Drain with hose installed

### DRAIN FITTINGS

A length of 3/8" ID tubing is provided for drainage of excess water from the front base of the reservoir where a drain is located at the base of the reservoir (Fig 12).

To drain off the excess build-up of cooling water from the diamond wheels, connect 3/8" ID clear tubing to the drain and route it into a 5 gallon collection bucket or drain for dirty water. Discard dirty water appropriately once collection bucket fills up.

Do not recycle dirty water from the collection bucket as the contaminants (rock grit, mud, slurry and abrasive particles) will likely scratch the gemstone material being worked and possibly clog the stainless steel water control valves or submersible pump.

## DIAMOND WHEELS

The GP6-6 Wheel Cab Maker comes equipped with two 6" OD x 1-1/2" brazed diamond wheels in two diamond abrasive grit sizes (80 and 170 mesh or grit). Both wheels are manufactured to a low tolerance OD circumference run-out for maximum wheel life and to prevent pounding and poor performance during grinding. The high temperature brazed diamond bond provides excellent abrasive performance when grinding the rough shape of the gemstone material. Diamond wheels must have an uninterrupted flow of water during use for proper cooling and flushing of slurry and rock fragments.

Rough shaping of the gemstone material should be performed first with the 80-grit wheel with maximum water flow. It is recommended that you only pump clean water to the GP6-6 Wheel Cab Maker water system and never recycle your drain water back to your grinding wheels.

Due to the steel alloy core construction and brazed nickel diamond bounding of both wheels, a "ringing" noise will be heard during grinding and sanding. This is normal and should be of no concern. Should coolant/flushing water flow be interrupted while grinding with the brazed diamond wheels, the diamond may "glaze over" or dull the diamond bond.

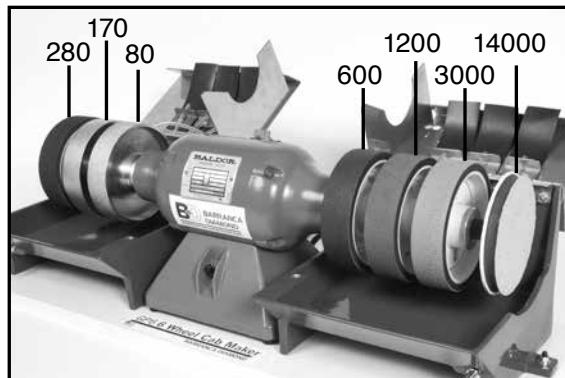
Always ensure there is a clear, constant drip of water flowing off the rotating wheels into the reservoir tank. Also, don't over force the gemstone material into the diamond wheel surface while grinding. Allow the diamond bond on the wheel to work smoothly with a constant and steady application of hand pressure. Rotate your gemstone frequently while grinding to uniformly remove material, nicks and flat spots while rounding and contouring.

Remember, satisfactory results are dependent on the user's skill and experience, as well as the gemstone and equipment being used.

## DIAMOND NOVA WHEELS

The GP6-6 Wheel Cab Maker comes with Nova Wheels (6" OD x 1-1/2" wide) in abrasive grit sizes: 280, 600, 1,200, and 3,000 (6 micron).

Under no circumstances should the Nova Wheels be used dry. Dry grinding will cause them to wear out prematurely. Therefore, keep a constant stream of water from the needle water control valve on the top of the hood ON at all times. Always pump clear and clean water to the diamond wheels. For best results always dry the gemstone material and check for scratches before proceeding to the next wheel or diamond grit size. Do not skip wheels in the four wheel sequence (280, 600, 1,200, and 3,000 grit).



### POLISHING WITH DIAMOND PASTE

The GP6-6 Wheel Cab Maker comes with three syringes (5 grams each) of diamond paste in abrasive grit sizes: 8,000, 14,000 and 50,000 mesh. These diamond pastes are to be used with the three 6" Polytex polishing pads. Once the gemstone material has been sanded and polished with the 3,000 grit (6 micron) diamond wheel, remove the paper backing on one of the Polytex pads to expose the adhesive surface, placing it firmly without creases on the foam rubber convex surface of the 6" end polishing disc on the right end (Fig 13).



*Fig 13 - Polytex pad being applied to the convex polishing disc*

Lightly smear with your fingertip a small amount of diamond paste on the center of the mounted Polytex pad with the polishing disc rotating. The diamond paste will evenly spread over the surface of the Polytex pad once polishing of the gemstone starts. No water or extender fluid is needed to effectively disperse the diamond paste from the syringe to the Polytex pads. Move the gemstone in a rocking and rotating motion from the center of the disc toward the outside edge to achieve a uniform polished surface.

Use only one dedicated Polytex polishing pad with each respective diamond paste syringe (i.e. keep a labeled Polytex pad for the 8,000 grit paste in a zip-lock bag labeled 8,000 grit). Do not use a single Polytex pad with two or more diamond pastes or else cross-contamination and poor polishing of the gemstone material may result.

The Polytex pad can be removed from the convex polishing disc by slowly pulling the Polytex pad off the disc. Place pad in a zip-lock plastic bag properly labeled with the syringe paste diamond grit size for future use. If the adhesive backing becomes weak with repeated use, you can apply a few drops of 3M On/Off cement to improve the adhesive connection to the foam rubber disc.

**POLISHING WITH THE LEATHER BUFF PAD**

For final polished gemstone results, place the 6" cowhide leather pad (rough side out) on the foam rubber polishing disc using the 3M On/Off adhesive cement. Only use a small amount (8 to 10 dabs) of 3M On/Off adhesive cement on the smooth cowhide surface, smearing it uniformly before placing it over the foam rubber on the polishing disc. Buff the gemstone using a rocking motion (Fig 14 & 15). It is not necessary to use any polishing media or liquid (water) when buffing the gemstone with the leather disc. Be sure to firmly grip the gemstone by hand or with a dop-stick (wood dowel or aluminum rod) cemented or epoxied to the back of the gemstone while using the leather buff pad. When the final polish finish of your gemstone has been achieved, remove the leather disc and place it in a zip-lock bag to protect it for future use.

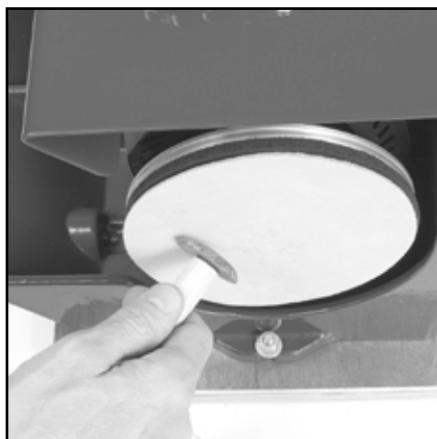


Fig 14



Fig 15

**SET UP OF LOC-LINE SYSTEM ON GP6-6 Wheel Cab Maker**

The Loc-Line magnetic manifold will need to have the 3/8" OD clear tubing from the submersible pump inserted into the other end of the 1/2" OD clear tubing (Fig 15).

The magnetic base manifold should be positioned on the metal hood of the GP6-6 Wheel Cab Maker unit at the far right end. This position will allow for the direction of water flow to the 6" resin diamond pads during use (Fig 17). Water flow can be adjusted with orange adjustment lever (Fig 18).

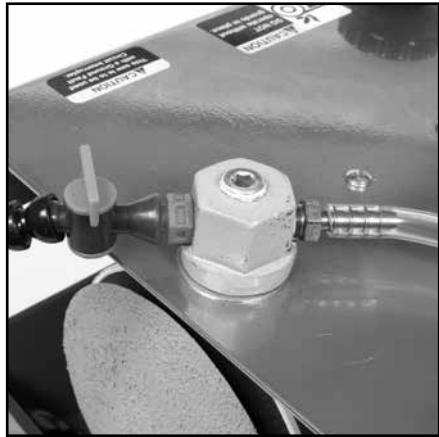


Fig 16 - Attach water tube to manifold



Fig 17 - Position water nozzle on pad

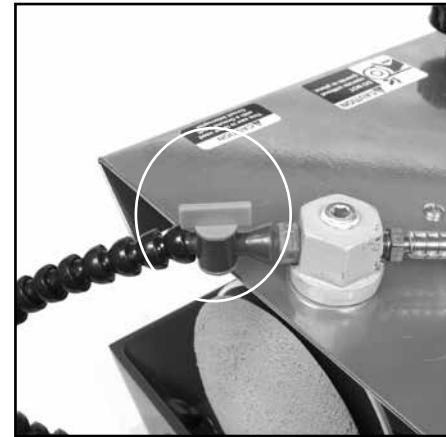


Fig 18 - Water flow adjustment valve

**USE OF 6" RESIN DIAMOND PAD**

The 6" resin 14,000 grit diamond pad is positioned on the right end of the shaft, adjust the Loc Line nozzle tip to the center of the resin diamond pad (Fig 19). This will allow the water stream/drip to flow over the pad while turning to cool and flush gemstone grindings during use.

Always pump clean, clear water through the Loc Line manifold and discard dirty water and grindings from the collection container periodically. Do not recirculate water as contaminants may scratch the gemstone material. The resin diamond pads should never be used dry or they will likely be prematurely worn out or permanently damaged. A small amount of water directed at the center of the resin diamond pads is required to flush the gemstone grindings and keep the pad cool. Excess water flow directed to the pad is not necessary and will only make a mess of your work area. The 6" resin diamond pads can be used with both flat and domed material, the user should rock and rotate the domed gemstone material during polishing, but for flat polishing the user needs to move the material flat face across the pad to fully polish the face uniformly. Gemstone material should be held firmly by the user's finger tips while rotating and or moving the material over the face of the 5" resin diamond pads. Do not hold the gemstone material too close to the bottom edge of the resin pad or the material may jam the users finger against the reservoir base. In some cases, the user may polish gemstones after grinding/sanding with the 80 and 170 mesh brazed diamond wheels and four Nova diamond wheels and 14,000 grit end disc without the use the Polytex 6" pads with diamond paste. Final polishing buffering can be performed with the Polytex pads (if desired, to 50,000 grit) and leather cowhide mounted to the polishing foam disc.



*Fig 19 Loc-Line nozzle placement -*

**DIAMOND WHEEL REPLACEMENT**

When worn-out, the diamond wheels and can be removed and replaced. For all models, first prepare the arbor shaft for removal from the body of the GP6-6 Wheel Cab Maker.

1. Unscrew and remove the locking knobs and washers from the hood (Fig 20).
2. Remove stand-offs (Fig 21).
3. Rotate the two hoods back to expose the shaft (Fig 22).



Fig 20 - Remove the locking knobs



Fig 21 - Remove rod.

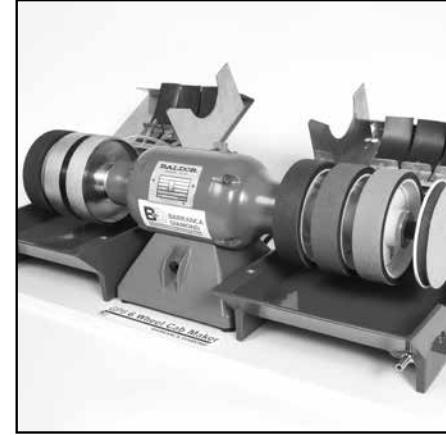


Fig 22 - Rotate hoods back

**GP6-6 SHAFT DISASSEMBLY, RIGHT HAND SIDE**

1. Remove the polishing hub on the right side of the arbor shaft by turning it clockwise (Fig 23).
2. Loosen the adapter that secures the wheel (Fig 24).
3. Remove the Diamond wheels, flanges and spacers from the shaft.



Fig 23 - Remove polishing hub



Fig 24 - Loosen the adapter

**GP6-6 SHAFT DISASSEMBLY, LEFT HAND SIDE**

1. With an adjustable or box wrench, remove the jam nut on the left end of the arbor shaft by turning it clockwise. This is left hand threaded.
2. Remove the Diamond wheels, flanges and spacers from the shaft.

## SHAFT REASSEMBLY

Reassembly of the shaft with the new diamond wheels is the reverse of the disassembly instructions. Please keep the following points in mind when reassembling:

1. Use a good quality wheel bearing grease to coat the steel shaft with a liberal amount of grease before mounting the wheels, flanges and spacers.
2. Be sure the diamond wheel bushings are installed.
3. Some brazed wheels have 2 flush faces, and some have 1 flush and 1 recessed face (Fig 25 & 26). A second spacer (.250 long) is needed behind the flange of any recessed face to insure proper wheel spacing (Fig 28). See parts explodes for illustration of proper wheel, flange and spacer setup.
4. There should be a flange installed on both sides of each diamond wheel. Make sure the concave side of the flange faces the wheels (Fig 27 & 28).
5. Install the Nova resin diamond wheels on the shaft with arrow of rotation facing direction of rotation.

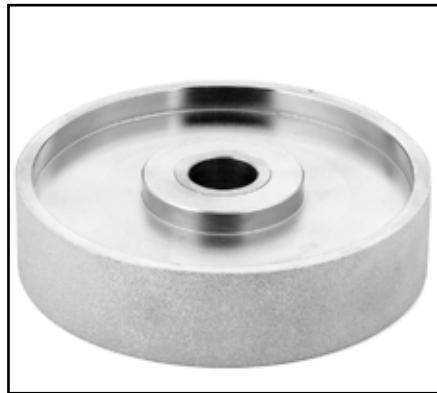


Fig 25 - Flush face of diamond wheel



Fig 26 - Recessed face of diamond wheel

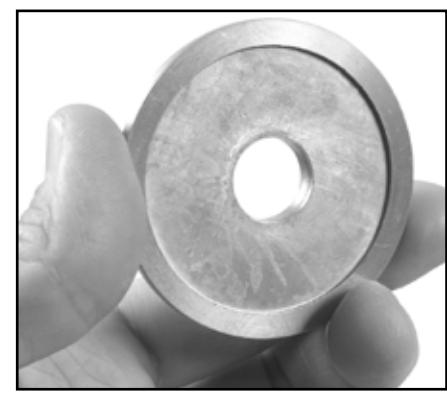


Fig 27 - Concave side of flange



Fig 28

## ARBOR ASSEMBLY

The GP6-6 Wheel Cab Maker is equipped with a 5/8" OD arbor shaft, mounted directly to the motor.



Fig 28 - Hood attachment knobs.

## ELECTRIC MOTOR

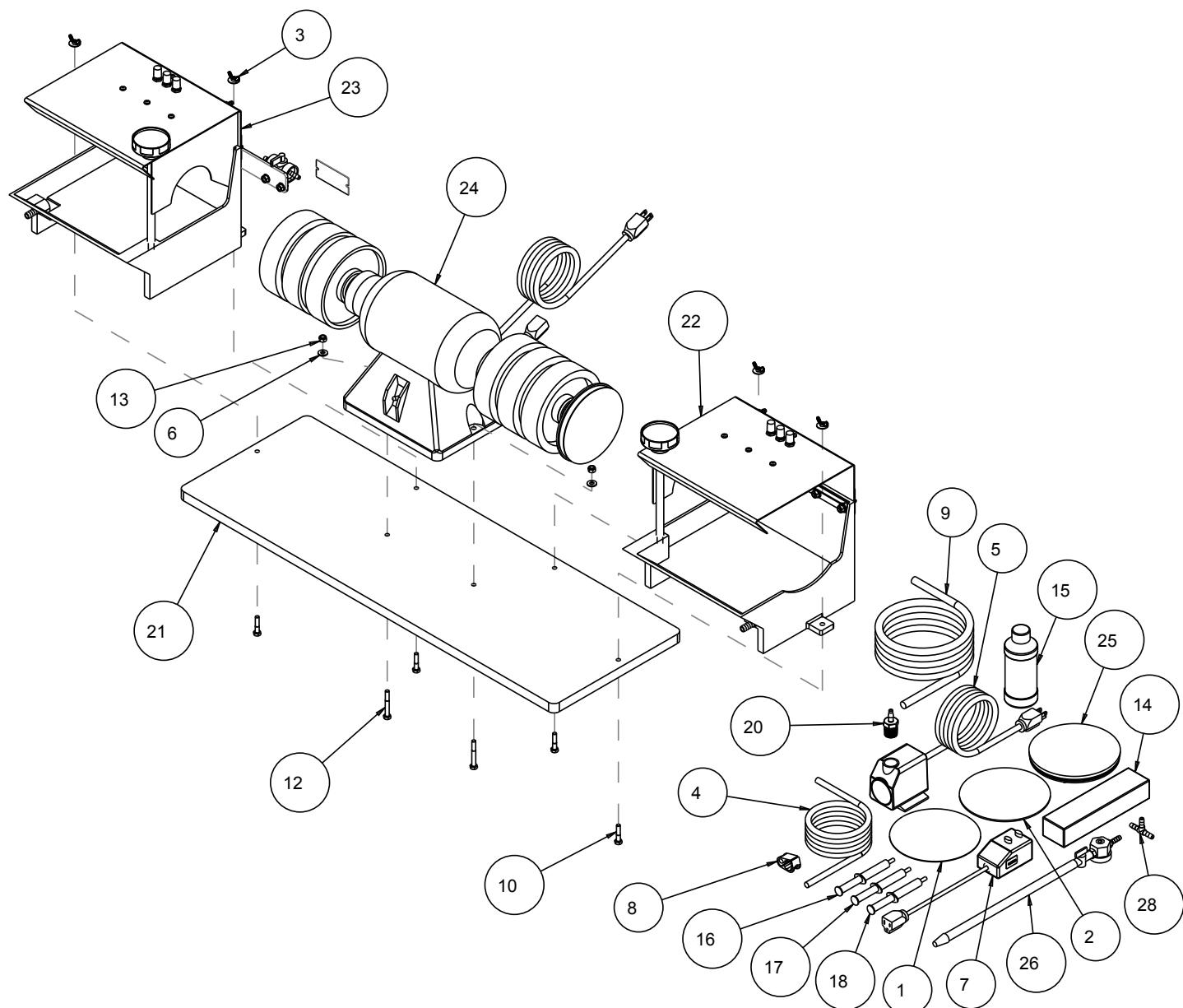
The GP6-6 Wheel Cab Maker is equipped with a Baldor 1/3 HP 1800 RPM single-phase 110 volt 60 Hz 3.6 amp motor. The motor shaft has sealed ball bearings and requires no lubrication. If the motor over heats and does not restart after a cool down period, remove the motor and have an authorized repair service center for Baldor inspect the motor. Barranca Diamond can refer you to an authorized motor repair service center in your area.

## SUBMERSIBLE PUMP

Periodically the pump needs to be cleaned, refer to the pump manual on the submersible water pump.

## NOTES

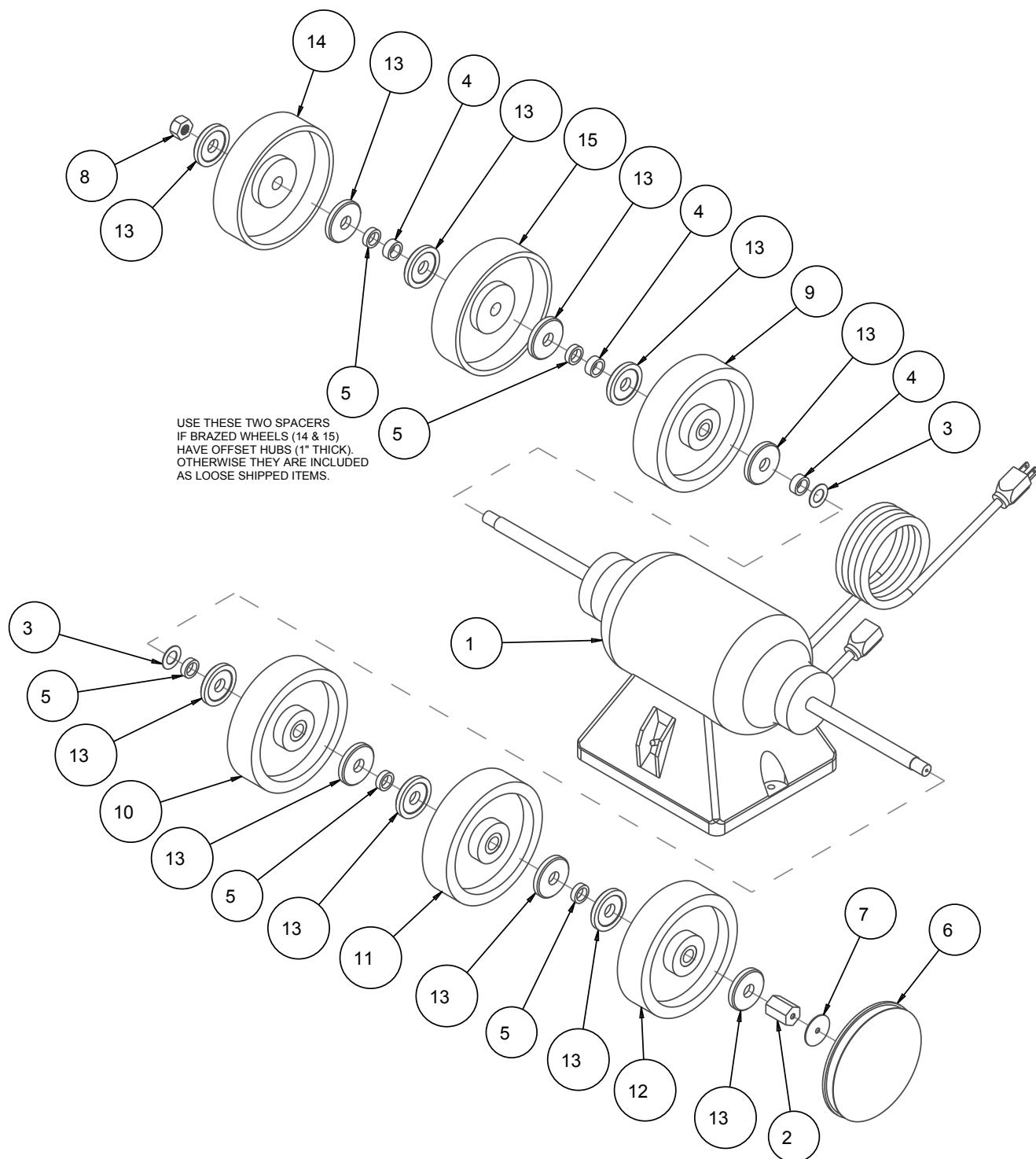
## GP6 6 Wheel Cab Maker Part# 170553



## GP6 6 Wheel Cab Maker Part# 170553

Item	Part Description	Part#	Quantity
1	PAD, POLISHING 6" POLYTEX	14615	1
2	PAD, POLISHING 6", LEATHER	14617	1
3	NUT, WING 1/4 - 20, FLANGED	104257	4
4	HOSE, VINYL, 1/4 X 3/8 (8.0')	132951	1
5	PUMP, WATER 115V/60HZ UL/CSA	151271-VP	1
6	WASHER, FLAT, SAE, 1/4	151915	2
7	CORD, GFCI, 120V 15 AMP	152610	1
8	CLAMP, HOSE, 1/4 - 1/2 FLOW	154394	1
9	HOSE, VINYL, 3/8 X 1/2 (8.0')	156039	1
10	SCREW, HEX HD 1/4 - 20 X 1 - 1/4	157145	4
11	TAG, SERIAL NUMBER, BLANK	157500-rw	1
12	SCREW, HEX HD 1/4 - 20 X 2	158282	2
13	NUT, HEX, NYLK, 1/4 - 20	159857	2
14	ADHESIVE, 3, DISC, ON - OFF	161323	1
15	OIL, 8 OZ	161729	1
16	POLISHING COMPOUND, 01 MICRON	161766	1
17	POLISHING COMPOUND, 02 MICRON	161767	1
18	POLISHING COMPOUND, 2-4 MICRON	161768	1
19	SHEET, WARNING LABELS, SLAB SAW	167886	1
20	ADAPTER, 1/2 NPT X 1/4 BARB	168261	1
21	BASE, POLYPROPYLENE, GP6-6	169578	1
22	ASSY, TANK, RIGHT, GP6-6	170484	1
23	ASSY, TANK, LEFT, GP6-6	170485	1
24	ASSY, MOTOR & WHEELS, GP6-6	170486	1
25	ASSY, POL WHEEL, 6 X 9/16 - 12	170544	1
26	ASSY, LOC-LINE MANIFOLD	170547	1
27	OWNERS MANUAL, GP6-6	170533-OM	1
28	TEE, 1/4 HOSE BARB	170562	1

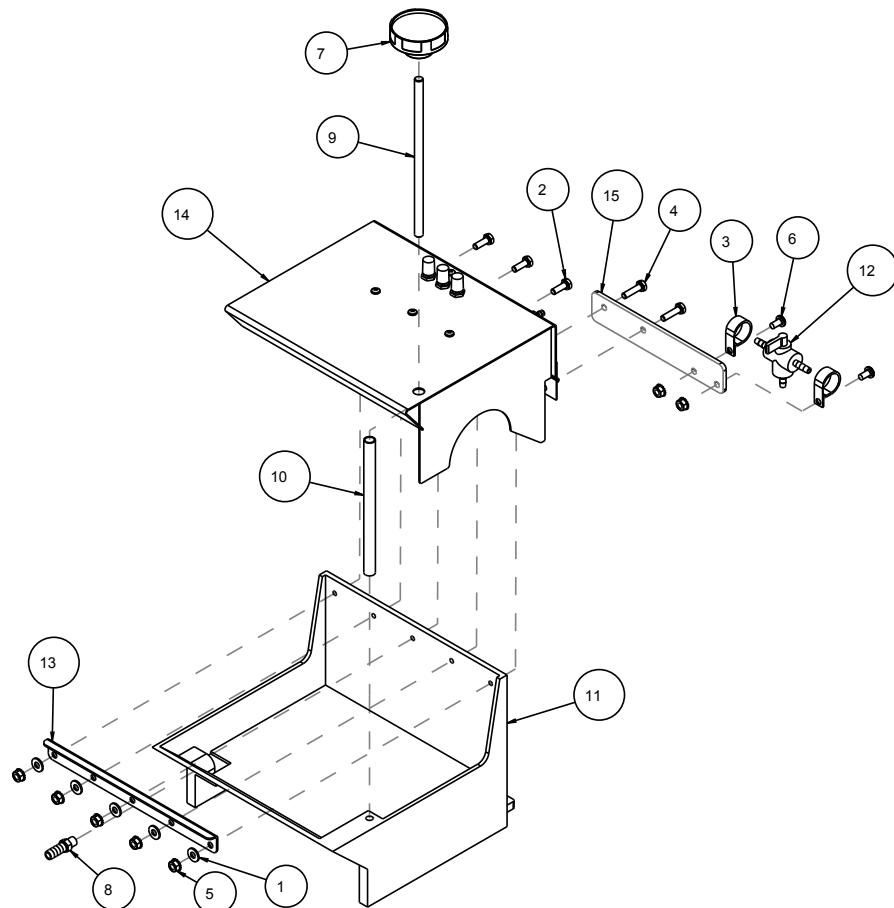
## Assembly Motor &amp; Wheels Part# 170486



## Assembly Motor &amp; Wheels Part# 170486

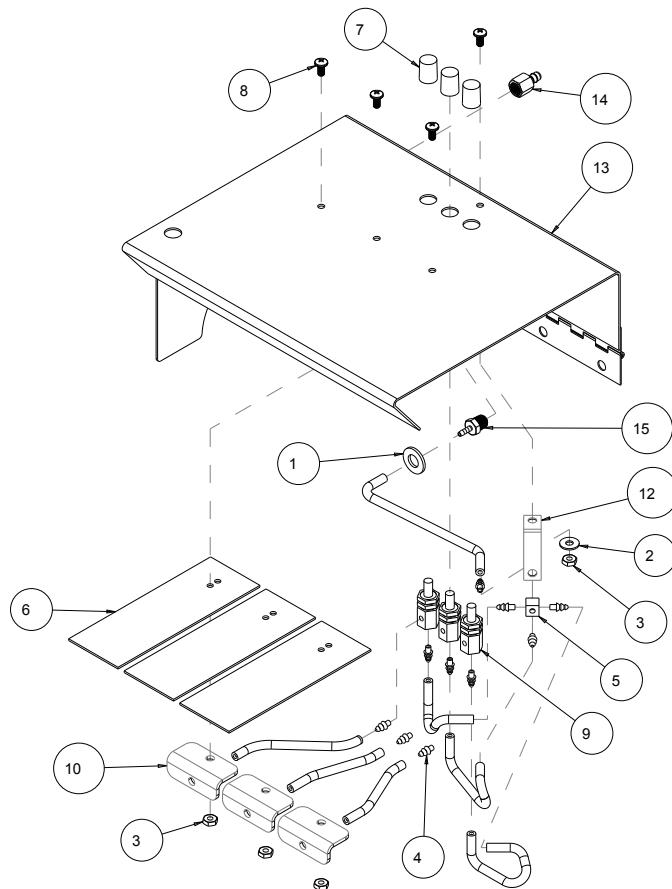
Item	Part Description	Part#	Quantity
1	MTR, 1/3HP, 60HZ, 1800RPM	169556	1
2	ADAPTER, 9/16 -12 X 1/4-20	169557	1
3	SHIM, 5/8 X 1-1/8 X .03	169579	2
4	SPACER, 5/8 X 7/8 X .350	169581	3
5	SPACER, 5/8 X 7/8 X .250	169582	5
6	POLISHING DISK, 5 -1/2" NOVA, 14000 GRIT	169606	1
7	WASHER, FENDER, 1/4 -1-1/2	170487	1
8	NUT, HEX, 9/16 - 12, LEFT HAND	170488	1
9	WHEEL, 6" NOVA, 280 GRIT	170489	1
10	WHEEL, 6" NOVA, 600 GRIT	170490	1
11	WHEEL, 6" NOVA, 1200 GRIT	170491	1
12	WHEEL, 6" NOVA, 3000 GRIT	170492	1
13	FLANGE, 2 DIA X 5/8" BORE	170662	12
14	WHEEL, 6" BRAZED, 80 GRIT	496080	1
15	WHEEL, 6" BRAZED, 170 GRIT	496200	1

## Assembly Tank, Left Part# 170485



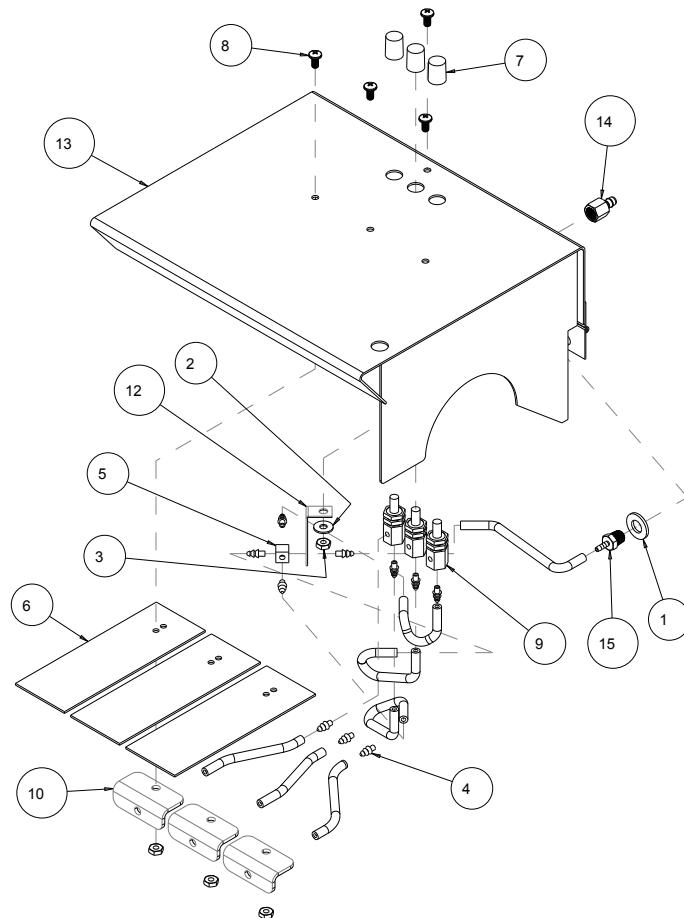
Item	Part Description	Part#	Quantity
1	WASHER, FLAT, SAE, 1/4	151915	5
2	SCREW, HEX HD, 1/4 - 20 X 3/4	152370	3
3	CLAMP, CUSHION LOOP, 7/8	152593	2
4	SCREW, HEX HD, TAP, 1/4 - 20 X 1	152676	2
5	NUT, HEX, TW, 1/4 - 20	153941	7
6	SCREW, PAN HD, CAP, 1/4 - 20 X 1/2	155452	2
7	KNOB, 2 - 1/2 DIA X 3/8 - 16	161651	1
8	FITTING, 1/8 MNPT X 3/8 BARB	161991	1
9	ROD, THREADED, 3/8 - 16 X 8 - 1/4	169559	1
10	SPACER, HOOD, 1/2 X 7	169580	1
11	CASTING, TANK, LEFT, GP6-6, COMP	169584	1
12	VALVE, DIVERTING, 3 X 1/4 BARB	169687	1
13	BAR, WATER DEFLECTOR, GP6-6	170321	1
14	ASSY, HOOD, LEFT, GP6-6	170494	1
15	BRACKET, WATER VALVE, GP6-6	170495	1

## Assembly Tank, Right Part# 170484



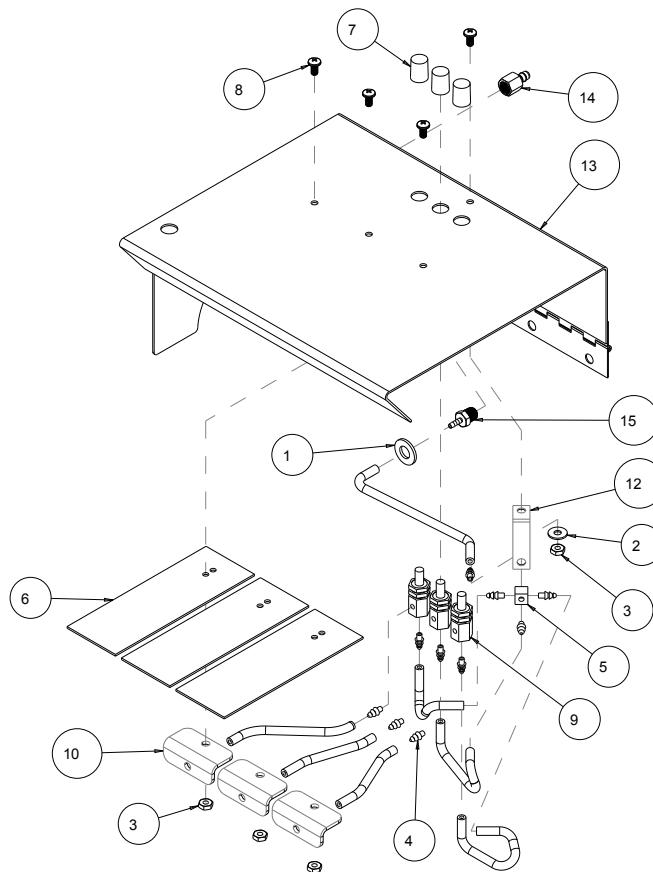
Item	Part Description	Part#	Quantity
1	WASHER, FLAT, SAE, 1/4	151915	5
2	SCREW, HEX HD, 1/4 - 20 X 3/4	152370	5
3	NUT, HEX, TW, 1/4 - 20	153941	5
4	KNOB, 2 - 1/2 DIA X 3/8 - 16	161651	1
5	FITTING, 1/8 MNPT X 3/8 BARB	161991	1
6	CASTING, TANK, RIGHT, GP6-6, COMP	169555	1
7	ROD, THREADED, 3/8 - 16 X 8 - 1/4	169559	1
8	SPACER, HOOD, 1/2 X 7	169580	1
9	BAR, WATER DEFLECTOR, GP6-6	170321	1
10	ASSY, HOOD, RIGHT, GP6-6	170493	1

## Assembly Hood, Left Part# 170494



Item	Part Description	Part#	Quantity
1	WASHER, FLAT, SAE, 3/8	150923	1
2	WASHER, FLAT, SAE, #10	154369	1
3	NUT, HEX 10 - 32	156269	4
4	BARB FITTING 1/8 NPTF	161343	10
5	CROSS, #10 - 32	161532	1
6	FLAP, WHEEL	161557	3
7	KNOB, RIDGED, GRAY	161652	3
8	SCREW, PAN HEAD PHILLIPS 10 - 32 X 3/8"	161875	4
9	VALVE, NV2SV-B, 10/32F	161989	3
10	BRACKET, HOSE MOUNT	162154	3
11	TUBING, CLEAR PVC 1/8 X 1/4 (36")	162505	1
12	CLIP, HOSE RETAINER	162511	1
13	HOOD, LEFT, GP6-6	169585	1
14	FITTING, 1/8 FNPT X 1/8 BARB	170025	1
15	FITTING, 1/8 MNPT X 1/8 BARB	170026	1

## Assembly Hood, Right Part# 170493



Item	Part Description	Part#	Quantity
1	WASHER, FLAT, SAE, 3/8	150923	1
2	WASHER, FLAT, SAE, #10	154369	1
3	NUT, HEX 10 -32	156269	4
4	BARB FITTING 1/8 NPTF	161343	10
5	CROSS, #10 - 32	161532	1
6	FLAP, WHEEL	161557	3
7	KNOB, RIDGED, GRAY	161652	3
8	SCREW, PAN HEAD PHILLIPS 10 - 32 X 3/8"	161875	4
9	VALVE, NV2SV-B, 10/32F	161989	3
10	BRACKET, HOSE MOUNT	162154	3
11	TUBING, CLEAR PVC 1/8 X 1/4 (36")	162505	1
12	CLIP, HOSE RETAINER	162511	1
13	HOOD, RIGHT, GP6-6	169558	1
14	FITTING, 1/8 FNPT X 1/8 BARB	170025	1
15	FITTING, 1/8 MNPT X 1/8 BARB	170026	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**

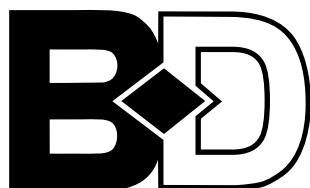
Ship the equipment using its original shipping crate if possible. Secure inside the shipping crate. Ensure all parts are secured in the packaging to prevent movement. Do not ship the equipment partially exposed.

## NOTES

## NOTES

## NOTES

**GP6-6 Wheel Cab Maker**  
**OWNER'S MANUAL & PARTS LIST**



**BARRANCA DIAMOND**

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