



BARRANCA DIAMOND

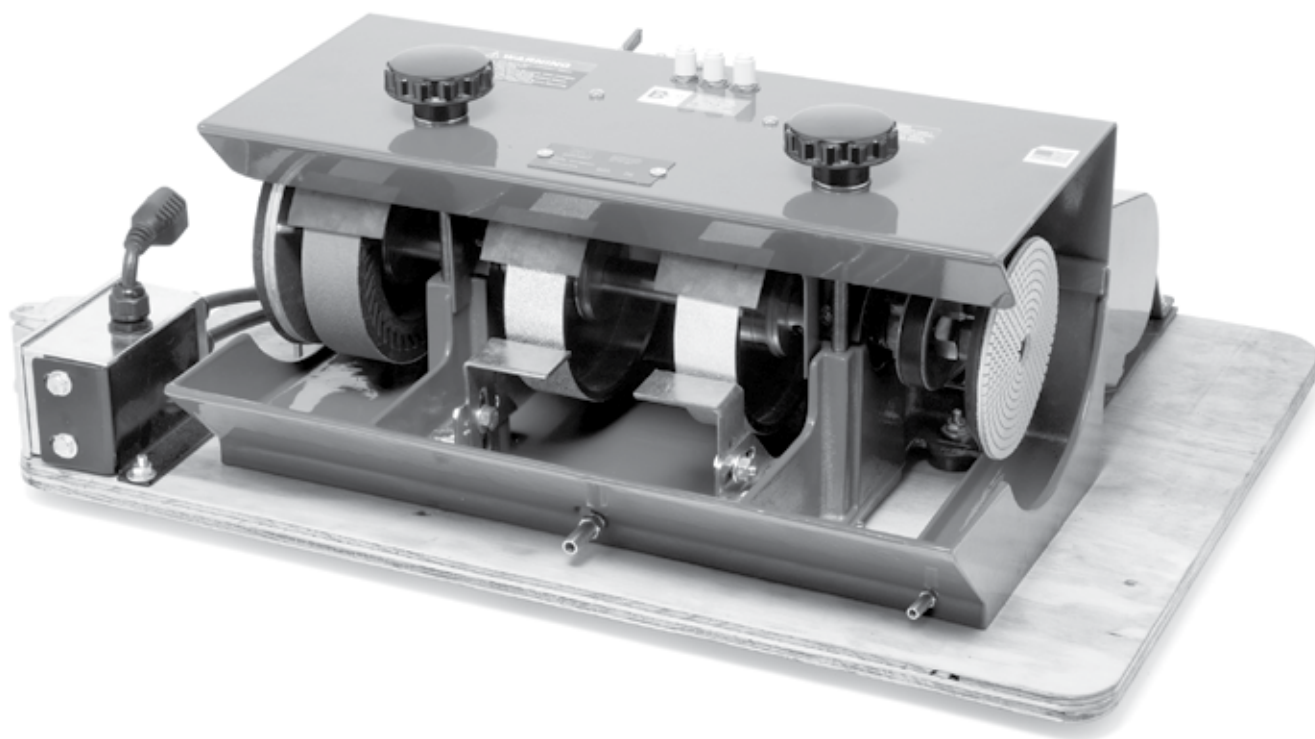
GP-6 Cabmaker

OWNER'S MANUAL & PARTS LIST

Belts Model: Part# 8300048

Diamond Pads Model: Part# 8300052

Carbide Wheel Model: Part# 8300046



| | |
|------------------------|---------|
| Revision 108 | 01.2022 |
| Manual Part No. 165967 | |

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

Barranca Diamond Products, Inc.
1315 Storm Parkway
Torrance, CA 90501
Toll-Free: (800) 630-7682
Phone: (310) 523-5867
Fax: (310) 257-3063
www.barrancadiamond.com

INTRODUCTION

Thank you for selecting the Barranca Diamond GP-6 Cabmaker. 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 GP-6 Cabmaker safely and correctly. Operated correctly, the GP-6 Cabmaker should provide you with years of service. Please take the time to familiarize yourself with the GP-6 Cabmaker by reading and reviewing this manual.

If you should have questions concerning your GP-6 Cabmaker, please call Barranca Diamond at: (310) 523-5867 or Toll Free: (800) 630-7682.

NOTE THIS INFORMATION FOR FUTURE USE:

| | |
|------------------------|--|
| MODEL NUMBER: | |
| SERIAL NUMBER: | |
| PURCHASE PLACE: | |
| PURCHASE DATE: | |

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

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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 GP-6 Cabmaker.

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.

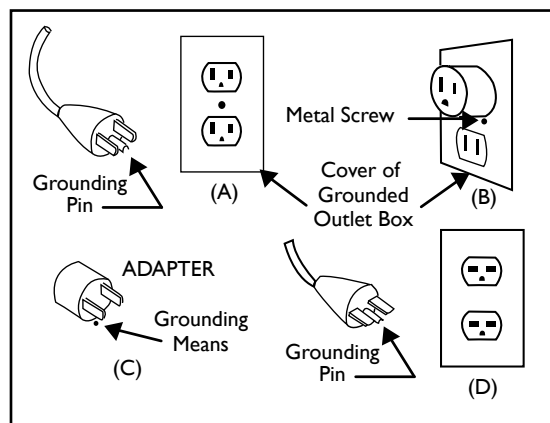
This tool is intended for use on a circuit that has an outlet that looks like the one shown in Sketch A. The tool has a grounding plug that looks like the plug illustrated in Sketch A. A temporary adapter, which looks like the adapter illustrated in sketches B and C, may be used to connect this plug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

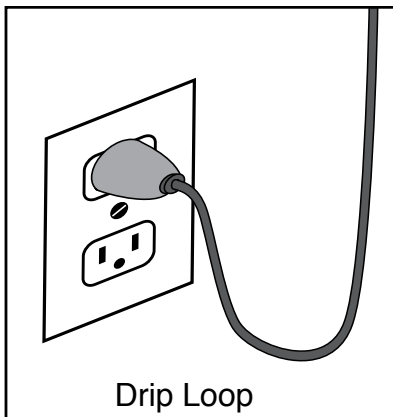


Circuit and Adapter Information

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' |
| 161672 | 115V 1 Ph | 3.3 | 18 ga | 16 ga | 14 ga | 10 ga |

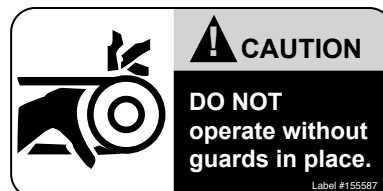
SAFETY LABEL LOCATIONS

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



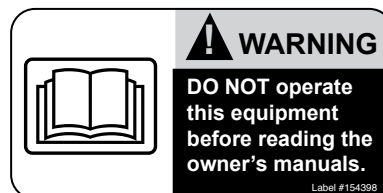
Part # 155587

B



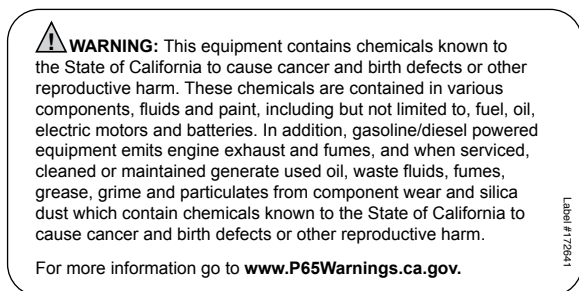
Part # 171239

C



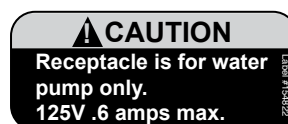
Part # 154398

D



Part # 172641

E



Part # 154822

F



Part # 155678

G

| Decal | Location | Description |
|-------|------------|--|
| A | Hood | Warning - Dust Control |
| B | Belt Guard | 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 |

GP-6 CABMAKER SPECIFICATIONS

| | |
|---------------------------|---|
| Part No: | 8300048 (Belts), 8300052 (pads) |
| Weight: | 95 lbs (115 lbs. crated) |
| Main Motor: | Baldor Model 17K017W470 |
| Horsepower: | 1/3 HP |
| Motor Voltage/Frequency: | 110 volt/60Hz |
| Amperage: | 5.8 Amps |
| Motor RPM: | 1,725 RPM Fixed |
| Motor Arbor Diameter: | 5/8" |
| Duty: | Continuous, automatic thermal protection shut off, manual restart switch |
| Motor Arbor Bearings: | Ball Bearings, permanently sealed |
| Motor and Shaft Pulley: | 2" OD x 5/8" bore (shaft) and 2" OD x 1/2" bore (motor) |
| Shaft Bearings: | Permanently sealed 5/8" OD shaft ball bearings fit into aluminum tank and upper hood housing |
| Wheel Arbor Flanges: | 2" OD x 5/8" bore aluminum |
| Diamond Wheel Mesh Sizes: | 80 and 200 mesh (170 mesh may be substituted) |
| Diamond Resin Belts: | 400, 600, 1200, and 3000 mesh 6" x 1-1/2" wide belts |
| Expandable Rubber Drum: | 6" x 1-1/2" wide x 5/8" arbor |
| Shaft Type: | 5/8" precision machined stainless steel |
| Wheel and Blade Flanges: | Aluminum 2" OD x 5/8" bore |
| Wheel Spacers: | 7/8" OD x 5/8" ID aluminum (length varies for wheels and drum) |
| Convex Polishing End Hub: | 6" aluminum hub disc with 5/8"-11" right hand thread |
| Water Pump: | MK Submersible pump (part #155987), variable flow control with 1/4" ID tubing. |
| Water Control Valves: | 3 stainless steel control valves, brass lever cock valve with barb for 1/4" ID tubing mounted on rear of the hood. |
| ON/OFF Switch Box: | Lever operated switch box and pigtail female plug receptacle for submersible pump. |
| Included Accessories: | 5" resin diamond pad set (50, 120, 220, 400, 800, 1,800, 3,500, 8,500 & 13,000 mesh) 5" rigid and 5" rubber backer pads Three 6" Polytex pads Three diamond paste syringes 8,000, 14,000, 50,000 mesh diamond paste 6" leather buffing pad 100 mesh green silicon carbide blade sharpening stick 3M On-Off cement Submersible electric water pump Water pump tubing LockLine magnetic manifold and nozzle links/tips GFCI Switch (110 volt units only) |

CONTENTS

In the shipping crate, you will find one Barranca Diamond GP-6 Cabmaker mounted to a 3/4" plywood or plastic baseboard, one package of six rubber feet and mounting screws, one Ground Fault Circuit Interrupter (GFCI) and one 1" x 1" x 6" sharpening stick.

The accessories for the GP-6 Cabmaker (belts) includes four diamond belts 6" x 1-1/2", Tool Cool bottle, submersible pump and tubing, leather pad, three diamond paste syringes, three Polytex pads, 3M On/Off cement, sharpening stick and 6" leather pad should be removed from the unit and put aside. For the GP-6 (pads) the same accessories as the belts unit is accompanied by a Loc-Line magnetic manifold pump, nozzle links/tips and nine 5" diameter diamond resin pads (50, 120, 220, 400, 800, 1,800, 3,500, 8,500, and 13,000 mesh), 5" rigid and backer pad and 5" rubber backer pad.

UNPACKING

Your GP-6 Cabmaker 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.

INSTALLATION OF RUBBER FEET

Enclosed with the unit you'll find six rubber feet with fastening screws in a plastic bag to be installed on the underside of the baseboard to level the polisher and reduced vibration during use. Six fastening positions have been pre-drilled to allow for securely attaching the rubber feet with screws. Mount the feet by tilting the base board up on one edge and install one of the supplied screws through a rubber foot and into one of the six predrilled holes. Repeat with the other five sets of screws and rubber feet.

TRANSPORT

For safe transport, disconnect the submersible pump and power cord and remove lubricant and water from the wheel reservoirs of the GP-6 Cabmaker.

PRE-START

Your unit is assembled at the factory such that the Belt tension between the GP-6 Cabmaker and the electric motor is set to the required tension. Finger tip pressure on the belt (halfway between the motor and drive shaft pulleys) should show approximately 1/2" of belt deflection (Fig 1). If the belt requires adjustment, loosen the motor mounting bolts and move the motor slightly toward the polisher to decrease belt tension or away from the polisher to increase belt tension. Tighten the motor mount bolt and recheck the belt tension. When the belt is properly tensioned, check that all motor mount bolts are securely tightened and replace the belt guard.

Check all four motor mount bolts (Fig 2), motor arbor pulley setscrew (Fig 3), wheel shaft pulley set-screw (Fig 4), and belt guard mounting nuts to make sure they are tight.

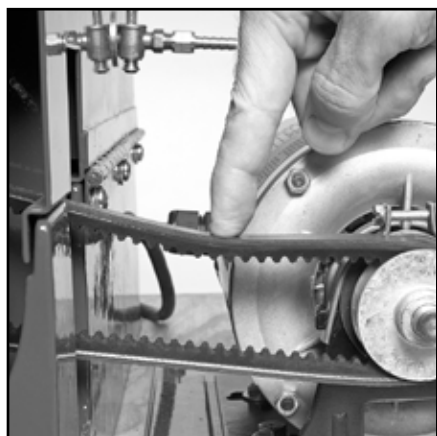


Fig 1 - Checking belt deflection

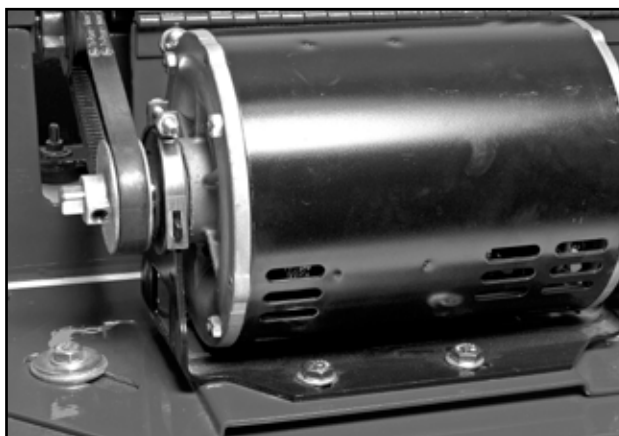


Fig 2 - Motor mount bolts (one on either side of the motor and two under the rear of the motor)



Fig 3 - Motor arbor pulley

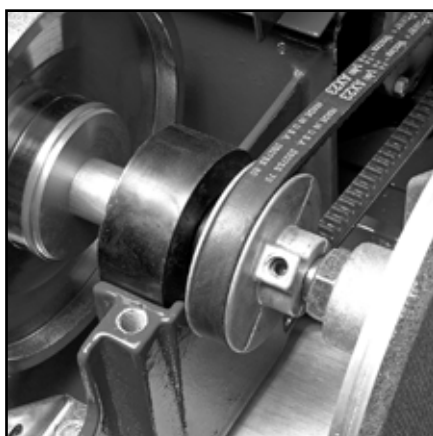


Fig 4 - Wheel shaft pulley

START-UP

Place the GP-6 Cabmaker 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 5).

If needed, plug an extension cord into the GFCI. If an extension cord is used, use one that is at least 14-guage wire and no longer than 25 feet. The GP-6 Cabmaker power cord is attached to the ON/OFF switch box on the left side of the unit. Make sure the switch box lever is in the OFF (Fig 6) position before plugging into the GFCI or extension cord.

To energize and test the GFCI, push the RESET button (Fig 7) 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 5 - GFCI*

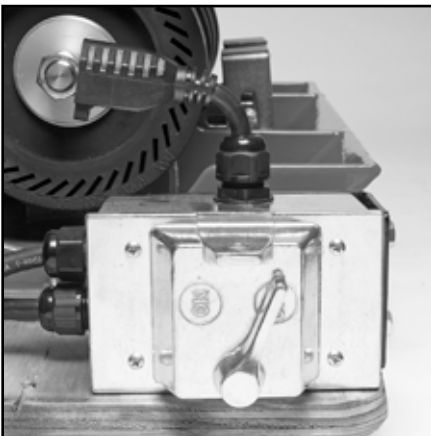


Fig 6- Power switch in the OFF position



Fig 7- GFCI reset button

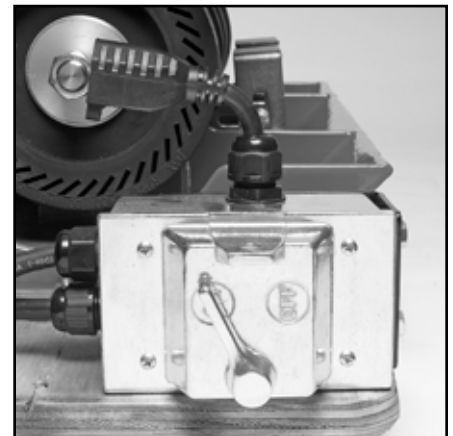


Fig 8- Power switch in the ON position

The GP-6 Cabmaker is now ready for a power up test to be performed. Turn the lever to the ON position (Fig 8) on the switch box. Make sure no unusual sounds or vibrations occur when the motor engages. If the shaft or motor pulley should loosen, they may hit the sides of the hood, motor, reservoir base or belt guard causing a rubbing noise. If this happens, shut off the unit, unplug the power cord from the switch box and adjust, align, and securely retighten the pulleys with an Allen wrench. Liquid thread locker (removable type) can be used on the setscrew threads to prevent loosening during use.

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 10). It is recommended that a 5 gallon bucket be used as a water reservoir into which the submersible pump should be placed. The level of the reservoir water should be monitored so that water the pump always remains fully submerged.



Fig 9 - Pump inlet adjustment set to minimum flow



Fig 10 - Pump inlet adjustment set to maximum flow



Fig 11 - Pump hose attached to water pump outlet

Connect the pump to the brass ON/OFF barbed lever valve at the rear of the hood with the included 1/4" ID water hose. Insert one end of the 1/4" ID water hose over the water pump outlet (Fig 11) and the other end over the barbed end of the water valve inlet (Fig 12).



Fig 12 - Water valve in the open position



Fig 13 - Electrical outlet for water pump

The pump can be plugged into the female receptacle plug accessory attached to the main switch box (Fig 13) when using the GP-6 Cabmaker. Power to run the pump will occur once the switch box lever is placed in the ON position. The pump should be operated in maximum flow setting. This will allow sufficient water to reach the valve on the rear of the hood to provide water to each of the three needle valves that control water flow to each of the three work stations.

PUMP SET-UP (continued)

Keep the water hose away from the electric motor and belt guard 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. For optimal water flow, adjust both the pump and the brass intake valve to their fully open positions. Should less water be desired, turn the brass lever on the inlet valve to restrict flow to the hood (Fig 12).

NEEDLE VALVES

The three stainless needle valves (Fig 14) are for fine control of water to each of the three 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 14 - The three stainless needle valves

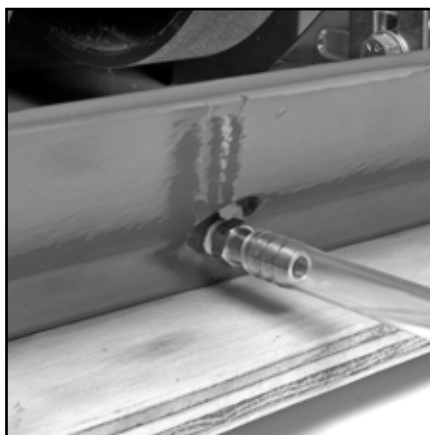


Fig 15 - Drain with hose installed

DRAIN VALVES

A length of 3/8" ID tubing is provided with the GP-6 Cabmaker for drainage of excess water from the front base of the reservoir where a drain is located at the base of the reservoir (Fig 15).

To drain off the excess build-up of cooling water on the diamond wheels and expandable drum belts, connect length of 3/8" ID clear tubing to the drain and route it into a 5 gallon collection bucket or drain for dirty water.

Do not recycle dirty water from the drain valves into a collection bucket for pumping back up to the intake valve on the rear of the hood 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 Diamond GP-6 Cabmaker comes equipped with two 6" OD x 1-1/2" brazed diamond wheels in two diamond abrasive grit sizes (60/80 and 170/200 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.

A tool rest is attached to the reservoir base of the GP-6 Cabmaker in front of both the 60/80 and 170/200 grit diamond wheels (Fig 16). If a dop-stick is being used to hold the gemstone material, the user can use the tool rest to securely hold the dop-stick while grinding, shaping and sanding. The tool rest mount can be adjusted by loosening the positioning bolt (Fig 17), moving the tool rest to the desired height, angle and/or distance from the wheel, and then retightening the positioning bolt. The tool rest can also be completely removed (Fig 18) from the GP-6 Cabmaker base if the operator so desires.

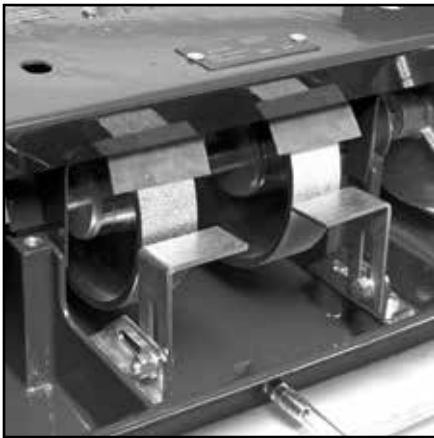


Fig 16 - Tool rests

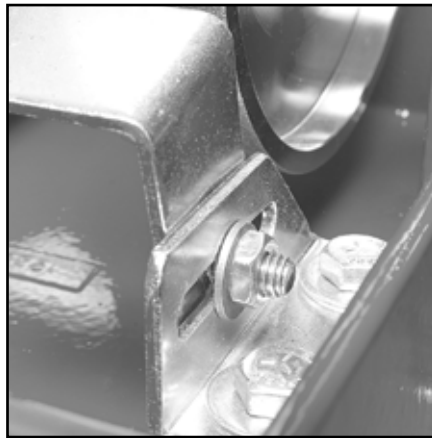


Fig 17 - Tool rest positioning bolt



Fig 18 - Grinding with tool rest removed

Rough shaping of the gemstone material should be performed first with the 60/80-grit wheel with maximum water flow from the hood mounted water control valve. It is recommended that you only pump clean water to the GP-6 Cabmaker water system and never recycle your drain water back to your grinding wheels or expandable drum.

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. The diamond bond can be "dressed open" or sharpened periodically by taking the green carbide stick and lightly touching it to the diamond grinding face of the wheel while rotating (Fig 19). Only apply a slight pressure - for no more than 2 to 3 seconds - with full flow of cooling water when "dressing open" the wheels. Do not over-sharpen as the wheel life will be shortened. Never use the brazed diamond wheels dry under any circumstances.

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.



Fig 19 - Carbide stick applied to diamond wheel

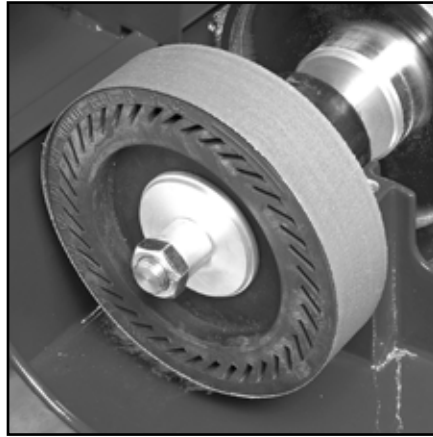


Fig 20 - Resin belt installed and centered on expandable drum



Fig 21 - Polytex pad being applied to the convex polishing disc

EXPANDABLE DRUM AND DIAMOND RESIN BELTS

The GP-6 Cabmaker comes with four diamond resin belts (6" OD x 1-1/2" wide) in abrasive grit sizes: 400, 600, 1,200, and 3,000 (6 micron). These are to be placed over the edge and outer rim of the 6" x 1-1/2" rubber expandable drum (Fig 20).

Be sure to center the diamond resin belt so that the width of the belt fits completely over the width of the rubber drum. Once the GP-6 Cabmaker is turned on, the rotation of the shaft and rubber drum will cause the drum to expand outward, which will expand the rubber drum and tension the belt on the drum. It is to be expected that the diamond resin belts will slide somewhat sideways while sanding or polishing material. To safely and correctly use the belt, shut the unit off and reposition or realign the belt over the drum and restart the unit.

Under no circumstances should the belts be used dry, as the build-up of heat from the grinding friction with the gemstone material will cause the belts to wear out prematurely and possibly tear. Therefore, keep a constant stream of water from the needle water control valve on the top of the hood (far left valve) on at all times. Do not circulate dirty water from the reservoir tank or from a collection container back into the water valves or else contaminant abrasive particles may scratch the gemstone. Always pump from a clear and clean water reservoir to the diamond wheels and belts. For best results always dry the gemstone material and check for scratches before proceeding to the next wheel or belt diamond grit size. Do not skip belts in the four belt sequence (400, 600, 1,200, and 3,000 grit).

POLISHING WITH DIAMOND PASTE

The GP-6 Cabmaker 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" OD Polytex polishing pads with adhesive backing on the foam covered convex 6" end polishing disc. Once the gemstone material has been sanded and polished with the 3,000 grit (6 micron) diamond resin belt, remove the paper backing on the Polytex pad 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 side of the GP-6 Belts model (Fig 21) or left side of the GP6 Pads model.

Lightly smear with your fingertip a small amount of diamond paste on the center of the mounted Polytex pad with the unit operating and the polishing disc rotating. The diamond paste will evenly spread over the surface of the Polytex pad once polishing of the gemstone starts. 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 foam rubber covering of the convex polishing disc by slowly pulling the Polytex pad off the foam and placing it in a zip-lock plastic bag properly labeled with the syringe paste diamond grit size for future use. No water or extender fluid is needed to effectively disperse the diamond paste from the syringe to the Polytex pads. 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 disc.

POLISHING WITH THE LEATHER BUFF PAD

For final polished gemstone results, place the 6" cowhide leather pad (rough side out) on the foam polishing end disc using the 3M On/Off adhesive cement (red box) to hold the leather pad securely while buffing the gemstone in a rocking motion (Figs 22 & 23). 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. 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. 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.

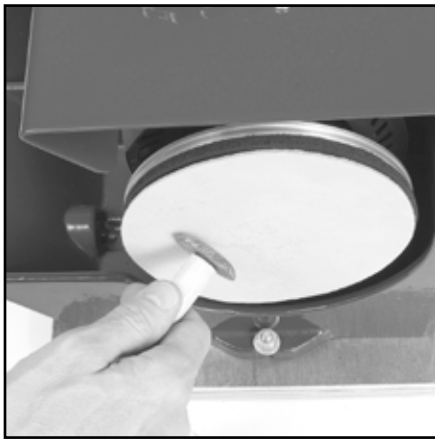


Fig 22



Fig 23

GP6 CABMAKER (PADS) MODEL

The GP6 Cabmaker (Pads) model is identical to the GP6 Cabmaker (Belts) in that both models use 4" diamond resin belts with an expandable rubber drum to sand and polish gemstone material. The GP6 Cabmaker (Pads) model however, incorporates an additional feature that includes a 5" rubber and rigid backer (and resin pad set) that mounts on to the right end of the shaft and uses a Loc-Line flexible water nozzle and magnetic manifold with submersible pump to direct cooling water to the pads (Fig 26). This feature of the Pads model enables the user to polish flat gemstone material across the face of the 5" resin diamond pads by changing pads (grit sizes) with the easy to remove hook and look material on the vertically mounted backer pad. The expandable drum is mounted on the left side of the GP6 (Pads) model as opposed to the GP6 (Belts) which is mounted on the right end of the shaft.

SET UP OF LOC LINE SYSTEM ON GP6 CABMAKER (PADS)

Remove the magnetic base manifold from its box and install (thread) the orange mounting connector to the manifold (Fig 25). The blue loc line links will need to be affixed to the manifold connector and small orange nozzle tip as well. Follow the instructions on the back of the Loc Line packaging. The blue flexible line sections will connect to the orange connectors and nozzle tip (Fig 26) by forcing the links together. If a vise is available use it to hold the orange nozzle while tapping the link segments together with a mallet. Once assembled, the Loc Line magnetic manifold will need to have the brass barb male bib threaded into its base (Fig 27) and the 1/2" OD clear tubing attached to the barb. The 3/8" OD clear tubing from the submersible pump inserted into the other end of the 1/2" OD clear tubing.

The magnetic base manifold should be positioned on the metal hood of the GP6 unit adjacent to the far right end closest to the right end of the shaft. This position will allow for the direction of water flow to the 5" resin diamond pads during use (Fig 24). A flow restrictor (white clamp) should be installed on the 3/8" diameter tubing near the junction of the water tube into the 1/2" OD tubing (Fig 28), so that the user can restrict flow to a slow, steady drip to the center of the 5" resin diamond pads. Should the customer want more precise flow control of the water to the pads, a brass T-valve can be installed in the base manifold (not included with the GP6 [Pads]).

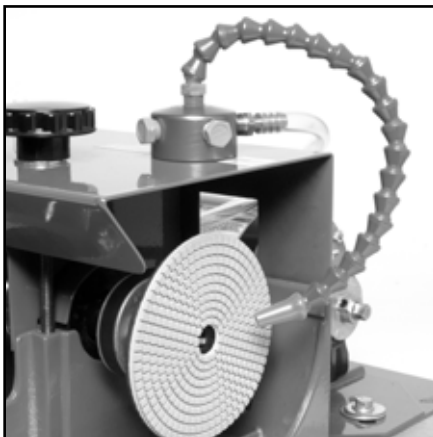
*Fig 24**Fig 25**Fig 26*



Fig 27

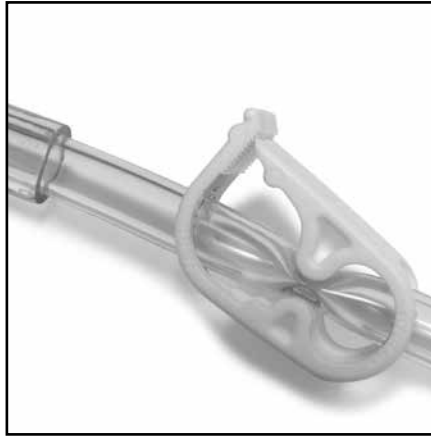


Fig 28

USE OF 5" RESIN DIAMOND PADS

Once the 5" resin diamond pad is positioned on the rubber or rigid backer pad on the right end of the shaft, adjust the Loc Line nozzle tip to the center of the resin diamond pad as close as possible to the center of the pad. 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 to 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 cooling water flow directed to the center of the resin diamond pads is required to flush the gemstone grindings and keep the resin cool during use of the GP6 (Pads) unit. Excess water flow directed to the pads is not necessary and will only make a mess of your work area. The 5" 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 perform grinding/sanding with the 80 and 170/200 mesh brazed diamond wheels without need to use the resin diamond belts as the 5" resin diamond pads will produce final polishing results as good as the resin diamond belts as the pads extend to 13,000 grit size. Final polishing buffing can be performed with the Polytex pads and leather cowhide mounted to the polishing foam disc.

DIAMOND WHEEL/CARBIDE WHEEL REPLACEMENT

When worn-out, the diamond wheels and expandable drum can be removed and replaced. For all models, first prepare the arbor shaft for removal from the body of the GP-6.

1. Remove the belt guard from motor mount (Fig 29).
2. Loosen the motor mount nuts, sliding the motor toward the polisher so that the belt can be removed from the motor pulley (Fig 30).
3. Unscrew and remove the locking knobs from the hood (Fig 31).
4. Slide the motor away from the GP-6 Cabmaker and rotate the hood back (Fig 32) to expose the shaft assembly.

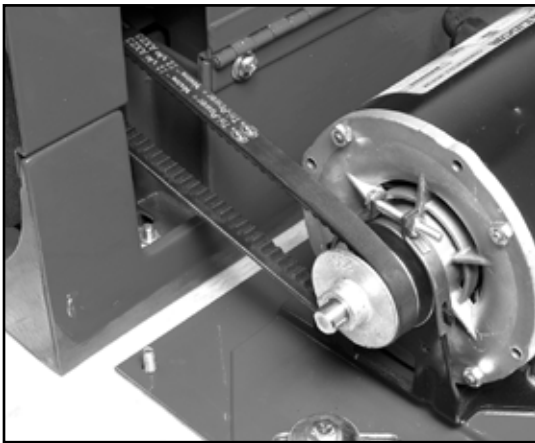


Fig 29 - Remove belt guard from motor mount

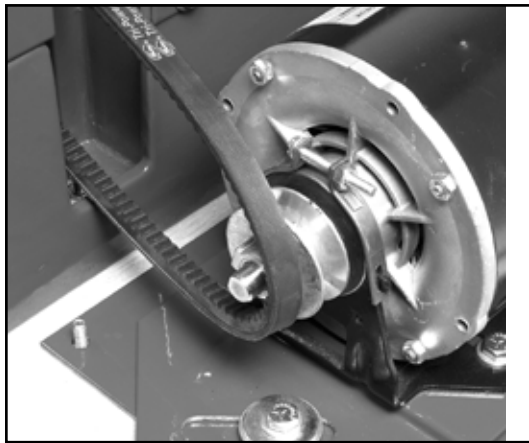


Fig 30 - Remove belt from motor pulley



Fig 31 - Remove the locking knobs

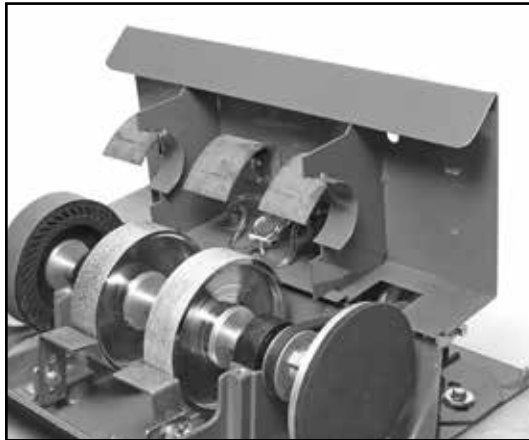


Fig 32 - GP-6 Cabmaker (belts) with hood rotated back

GP-6 (BELTS) SHAFT DISASSEMBLY

1. Use a wrench on the jam nut on the right side of the arbor shaft to keep the shaft assembly stationary and with the other hand remove the polishing hub by rotating it counter-clockwise.
2. Hold the expandable drum in one hand to keep the shaft assembly stationary and with an adjustable or box wrench, remove the jam nut on the right end of the unit by turning it counter-clockwise.
3. Lift the shaft assembly out of the bearing seats.
4. Loosen the set screw that secures the right-side bearing collar and slide the bearing off the shaft. If the set screw has scarred the shaft, it may be necessary to file the burr off the shaft with a small, fine, flat file or piece of emery paper.
5. Remove the diamond wheels and spacers from the shaft.

GP-6 (PADS) SHAFT DISASSEMBLY

1. Remove the polishing hub on the left side of the arbor shaft by turning it clockwise.
2. Lift the shaft assembly out of the bearing seats.
3. Loosen the set screw that secures the left-side bearing collar and slide the bearing off the shaft. If the set screw has scarred the shaft, it may be necessary to file the burr off the shaft with a small, fine, flat file or piece of emery paper.
4. Remove the Diamond wheels and spacers from the shaft.

GP-6 (Carbide) SHAFT DISASSEMBLY

1. With an adjustable or box wrench, remove the jam nut on the left end of the arbor shaft by turning it clockwise.
3. Lift the shaft assembly out of the bearing seats.
4. Loosen the set screw that secures the left-side bearing collar and slide the bearing off the shaft. If the set screw has scarred the shaft, it may be necessary to file the burr off the shaft with a small, fine flat file or piece of emery paper.
5. Remove the carbide wheels 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. Install diamond wheels with the inside faces facing each other (Figs 33 & 34). Be sure the diamond wheel bushings are installed.
2. The bearings have a permanently mounted bushing that extends from one side of the center bearing. This extension must face away from the diamond wheels (Fig 35 & 36) on both ends of the arbor shaft.
3. The arbor shaft collars have one recessed side and one flat side (Fig 37 & 38). The recessed side should face the bearing and mate against the extended portion of the bearing bushing.
4. There should be a flange installed on both sides of each diamond wheel and the expandable drum. Make sure the concave side of the flange (Fig 39) faces the wheels and drum.
5. When installing the shaft assembly back in the GP-6 Cabmaker, make sure the rubber mounted bearings are centered in the bearing seat (Fig 40 & 41). If the bearings are not centered in the bearing seats, make sure the aluminum spacers are in the correct order and that the bearings and arbor collars are properly installed.

6. Install the sanding drum with arrow of rotation facing direction of rotation (Fig 42).
7. Make sure grinding wheel and drum bushings are installed.
8. Install drive belt, retension belt (Fig 43) and replace belt guard.



Fig 33 - Outside face of diamond wheel



Fig 34 - Inside face of diamond wheel



Fig 35 - Bearing correctly installed

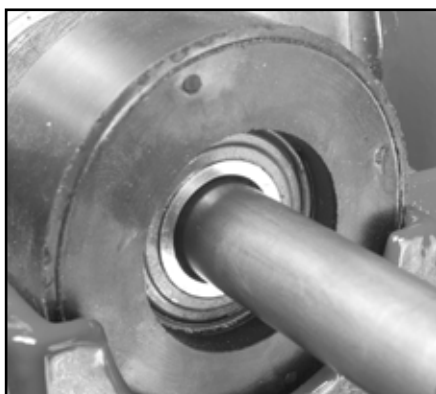


Fig 36 - Bearing incorrectly installed

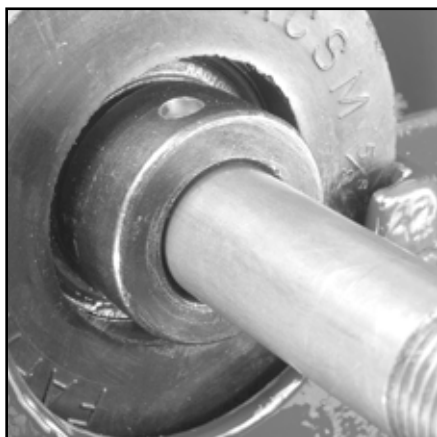


Fig 37 - Bearing collar correctly installed

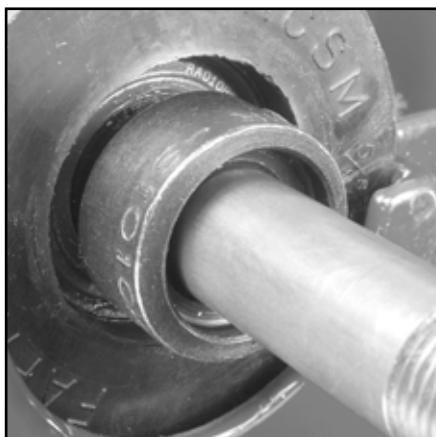


Fig 38 - Bearing collar incorrectly installed

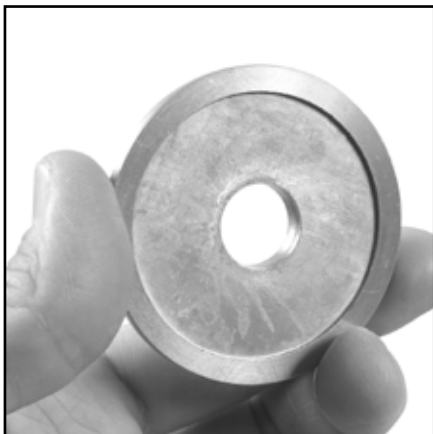


Fig 39 - Concave side of flange

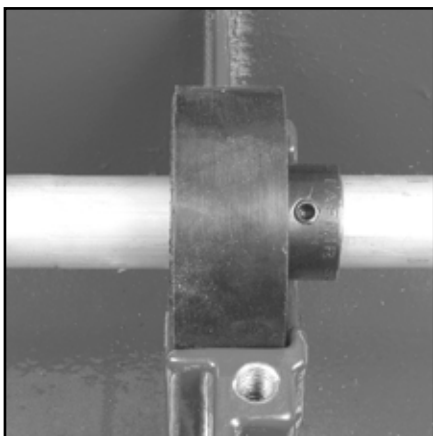


Fig 40 - Bearing correctly seated

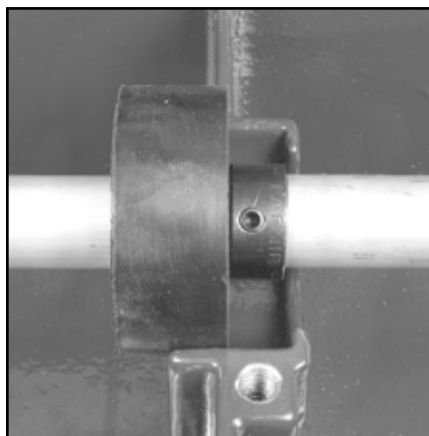


Fig 41 - Bearing incorrectly seated



Fig 42 - Arrow on drum indicates direction of rotation

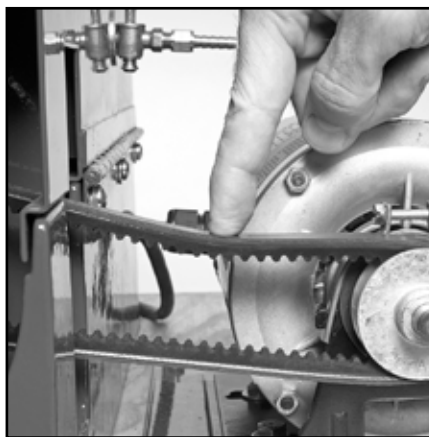
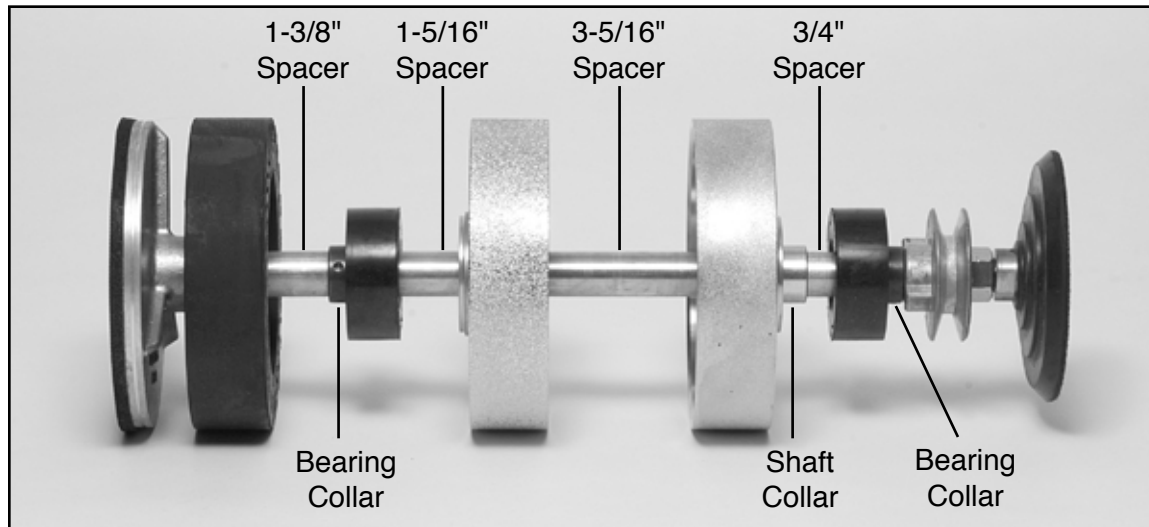
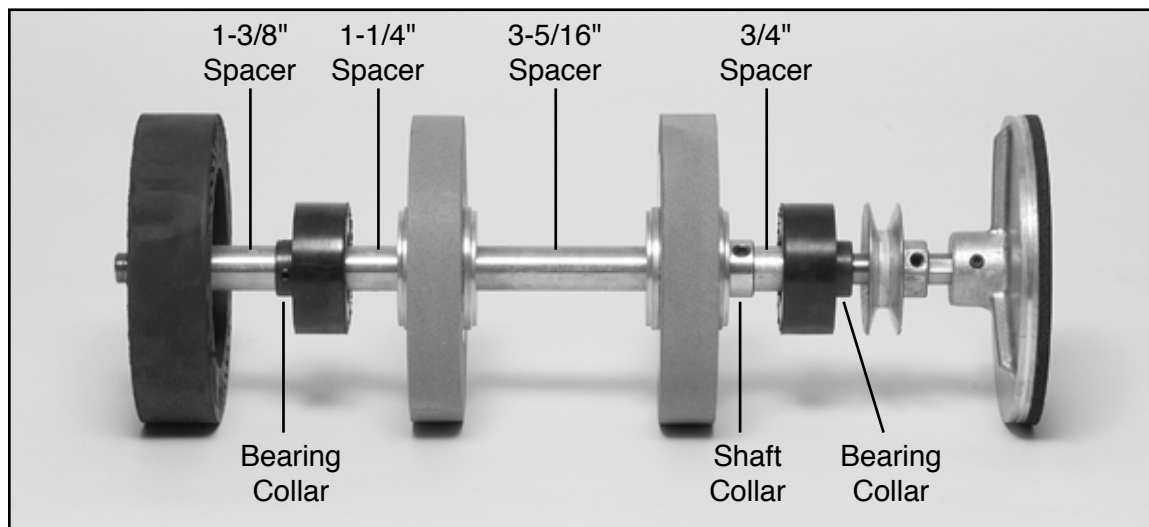


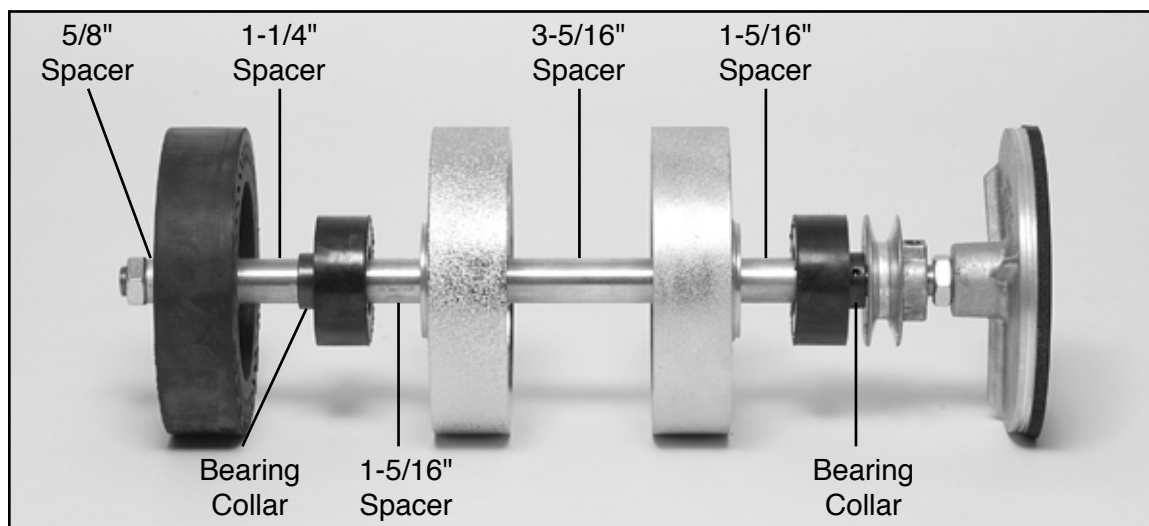
Fig 43 - Check belt deflection



GP-6 diamond wheel (pads) arbor shaft



GP-6 carbide arbor shaft



GP-6 diamond wheel (belts) arbor shaft

BELT

The GP-6 Cabmaker arbor is driven from the electric motor by a AX-24 rubber belt. The belt tension is adjusted at the factory. However, if it is necessary to service this belt, unplug the GP-6 Cabmaker from its power source and remove the fasteners that secure the belt guard housing to the motor. The belt tension should be checked periodically by removing the guard and depressing the belt in the middle between both the motor and blade arbor 2" OD pulleys. There should be 1/2" of deflection when the belt is pushed down (Fig 43). If the belt tension should become loose, poor performance or slipping will result. If the belt is too tight (i.e. no deflection) the belt, electric motor, pulleys and blade arbor bearings may wear out prematurely or the motor may overheat and shut off. Belt tension can be adjusted by loosening the two mounting bolts attached to the base of the motor mount and sliding the motor cradle base forward or backward to increase or decrease belt tension. Be sure to adequately retighten the motor mount nuts and replace and attach the belt guard to the table as well.

ARBOR ASSEMBLY

The GP-6 Cabmaker is equipped with a 5/8" OD arbor shaft, two rubber sealed ball bearings and a 2" OD x 5/8" bore die cast zinc coated pulley. Should the bearings wear out on the arbor shaft, grinding and polishing performance and short diamond wheel/belt life may result. Additionally, premature bearing wear may result in permanent damage to the arbor shaft, bearings, belt and motor. This main stainless steel shaft arbor assembly can be purchased from Barranca Diamond as a complete unit. Periodically check the tightness of the hood attachment knobs (Fig 44) to make sure they are securely tightened to the aluminum body of the GP-6 Cabmaker. Should the 2" OD die cast pulleys on either the motor (Fig 45) or wheel arbor shaft need to be removed or replaced, loosen the setscrew on the hub of each pulley with a US standard Allen type wrench. The setscrews can be secured with liquid thread locker (removable type) to prevent loosening due to vibration.

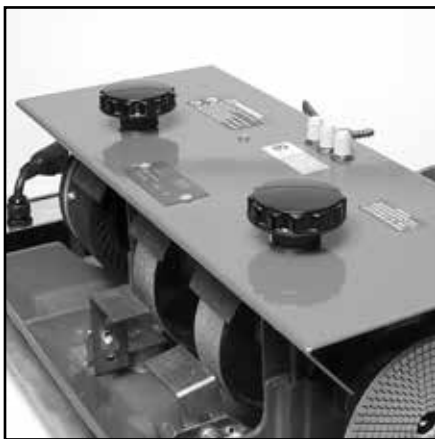


Fig 44 - Hood attachment knobs.

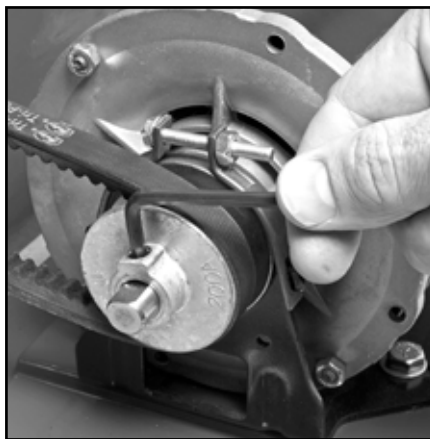


Fig 45 - Motor arbor shaft pulley.

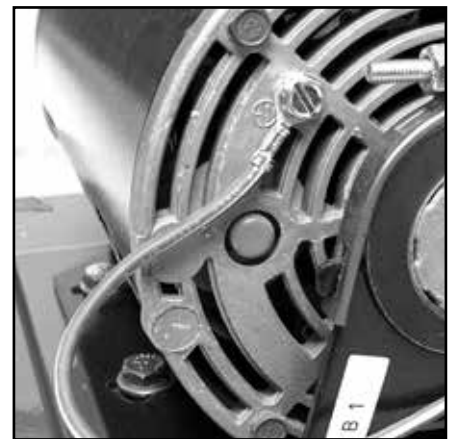


Fig 46 - Motor reset button.

ELECTRIC MOTOR

The GP-6 Cabmaker is equipped with a Baldor 1/3 HP 1725 RPM single-phase 120 volt 60 Hz 8 amp motor. The motor shaft has sealed ball bearings and requires no lubrication. The motor is protected from thermal damage (overheating) with an automatic shut-off switch. If the motor overheats it will automatically shut off and restart once its internal components cool down and the motor is restarted.

manually (red button). Be sure to shut off the main motor by placing the switch lever to the OFF position and disconnecting the power source. After allowing the motor to cool (2 to 3 hours), push the red reset button on the side of the motor (Fig 46) and restart the unit by turning the switch to ON. If the motor 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.

Please note: On GP-6 Cabmakers prior to serial number 0000750 (belts) and 001700 (pads), the motors do not have a reset switch. Therefore it is imperative that if the motor should stop during operation that the power to the main motor be shut off by placing the toggle switch in the MIDDLE/OFF position as the motor will restart automatically once cooled down.

SUBMERSIBLE PUMP

Periodically remove the plastic inlet cover on the submersible water pump (Figs 47 & 48). Remove the filter element (Fig 49) and clean any obstructions such as sludge or rock mud that may be found. Clean the filter with warm, soapy water. Replace the filter (Figs 50 & 51) and test the pump to ensure it is functioning properly.



Fig 47 - Water Pump

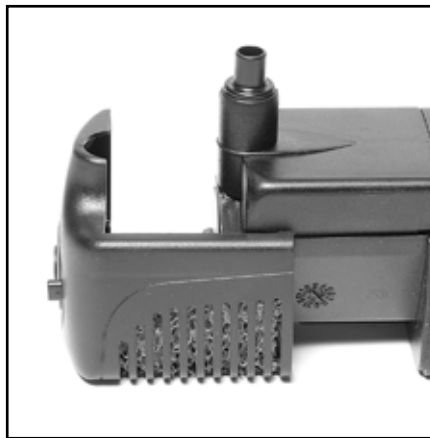


Fig 48 - Slide pump inlet cover off the pump body



Fig 49 - Slide the filter element out the back of the inlet cover

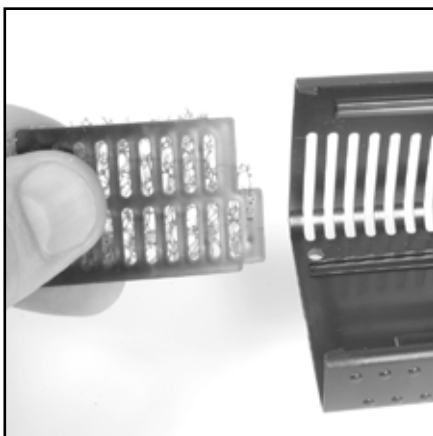


Fig 50 - Replace clean filter

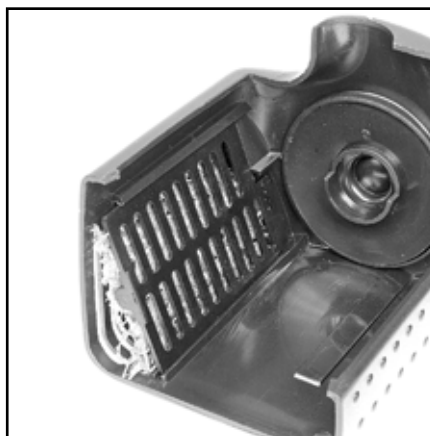


Fig 51 - Filter installed

Bill of Materials (GP-6 Cabmaker, Belts Model: part # 8300048)**Accessories**

| Part # | Description | Quantity |
|------------|---|----------|
| 161766 | Polishing Compound, 1 micron | 1 |
| 161767 | Polishing Compound, 2 micron | 1 |
| 161768 | Polishing, Compound 2-4 micron | 1 |
| 390401 | Belt, 6"x1.5", Diamond, 400 grit | 1 |
| 390601 | Belt, 6"x1.5", Diamond, 600 grit | 1 |
| 391200 | Belt, 6"x1.5", Diamond, 1200 grit | 1 |
| 393000 | Belt, 6"x1.5", Diamond, 3000 grit | 1 |
| 155987-V P | Pump, Water 115V | 1 |
| 168261 | Fitting, Plastic, 1/4" FNPT x 1/4" BARB | 1 |
| 132951 | Hose, Vinyl, 1/4" ID x 3/8" OD | 6' |
| 154394 | Clamp, Flow, 1/4"-1/2" | 1 |
| 14617 | Pad, Polishing, 6" Leather | 1 |
| 14615 | Pad, Polishing, 6" Polytex | 3 |
| 161729 | Tool Cool, 8 oz Bottle | 1 |
| 161323 | Adhesive, 3M Disc ON-OFF Cement | 1 |
| 999997 | Dressing Stick, Green 100 grit | 1 |
| 152610 | GFCI, 115V | 1 |
| 162045 | Disc, 6" Sponge Rubber 3/4" | 1 |

Assembly, Base

| | | |
|--------|---|---|
| 162221 | Reservoir, Tank GP6 | 1 |
| 161991 | Adaptor, Brass Pipe 1/8" Barbed | 1 |
| 168706 | Baseboard, Cab Combo/GP6 | 1 |
| 161432 | Bolt, Carriage 1/4"-20 x 1-1/4" Sq. neck | 3 |
| 151915 | Washer, Flat SAE 1/4" | 3 |
| 151893 | Nut, Hex 1/4"-20 | 3 |
| 161442 | Bracket, Tool Rest (LH) zinc plated | 1 |
| 166439 | Bracket, Tool Rest (RH) zinc plated | 1 |
| 153527 | Screw, Hex 3/8"-16 x 3/4" | 4 |
| 150923 | Washer, Flat 3/8" | 4 |
| 161974 | Tool Rest, Steel (zinc plated) | 2 |
| 151369 | Screw, Hex Hd 5/16"-18 x 3/4" | 2 |
| 151754 | Washer, Flat SAE 5/16" | 2 |
| 161709 | Nut, Hex Flange 5/18"-18 | 2 |
| 162496 | Bumper, Recessed 1-1/2"OD x 1/4" ID w/ washer | 6 |
| 161878 | Screw, Pan Hd Phil #10 x 7/8" | 6 |
| 166801 | Cover, Baseboard Cab Combo | 1 |

Assembly, Hood

| | | |
|--------|-------------------------------|---|
| 162159 | Hood, Bearing Mount, weldment | 1 |
| 161557 | Guard, Splash, Rubber | 3 |
| 162154 | Bracket, Hose Mount | 3 |
| 161875 | Screw, Pan Hd, 10-32 x 3/8" | 4 |
| 156269 | Nut, Hex 10-32" | 4 |
| 161877 | Screw, Pan Hd, 1/4"-20 x 3/8" | 4 |
| 151915 | Washer, Flat 1/4" | 4 |
| 161651 | Knob, 3/8"-16x2.5" OD | 2 |
| 161828 | Rod, SS Threaded 3/8"-16x6" | 2 |
| 162017 | Washer, Flat USS 7/16" | 2 |
| 161992 | Valve, Water Brass | 1 |

Bill of Materials (GP-6 Cabmaker, Belts Model: part # 8300048)

| Part # | Description | Quantity |
|--------|-------------------------------|----------|
| 151754 | Washer, Flat SAE 5/16" | 2 |
| 161652 | Knob, Ridged Grey | 3 |
| 161989 | Valve, NV2SV-B, 10/32F | 3 |
| 161343 | Barb, 10-32x1/8" w/washer | 6 |
| 162505 | Tubing, Clear PVC, 1/8 x 1/4 | 2' |
| 162511 | Clip, aluminum, hose retainer | 1 |
| 162506 | Tie, Nylon, 0.10" W x 4.0" L | 1 |
| 161532 | Cross, w/18 B | 1 |

Assembly, Shaft & Wheels

| | | |
|--------|---|---|
| 163819 | Shaft, 5/8" 303 SS Precision Rod, 1.5 ft. long | 1 |
| 161789 | Pulley, V-belt, 2.25" OD x 5/8" ID, set screw | 1 |
| 161704 | Nut, Hex 5/16"-18, LH | 1 |
| 135830 | Flange, Aluminum 2" OD x 5/8" bore | 6 |
| 161348 | Bearing, 5/8" Arbor RSCM | 2 |
| 162507 | Spacer I, Shaft, Tube, 5/8" ID x 7/8" OD, Alum. | 1 |
| 496080 | Wheel, Diamond, Brazed Bond 80 grit 6"x1.5" | 1 |
| 162508 | Spacer II, Shaft, Tube 5/8"IDx7/8"OD, Alum. | 1 |
| 496200 | Wheel, Diamond, Brazed Bond 200 grit, 6"x1/5" | 1 |
| 162509 | Spacer III, Shaft, Tube, 5/8"IDx7/8"OD, Alum. | 1 |
| 390006 | Drum, 6"x1-1/2" x 5/8" Rubber Expandable | 1 |
| 161711 | Nut, Hex Jam 5/8"-18 | 1 |
| 166065 | Polishing Wheel, RH Thread-Comp | 1 |
| 168121 | Adapter, Cup Wheel | 1 |

Assembly, Motor & Belt

| Part # | Description | Quantity |
|-----------|---|----------|
| 161672 | Motor, 1/3Hp, 120V, 60 Hz, 1725 RPM | 1 |
| 161788 | Pulley, Motor, 2- 1/2" x 5/8" bore, set screw | 1 |
| 152473 | Screw, Hex HD 5/16"-18 x 1/2" | 4 |
| 151754 | Washer, Flat SAE 5/16" | 4 |
| 161668-01 | Mount, Motor, Upper | 1 |
| 161669 | Mount, Motor, Lower | 1 |
| 152473 | Screw, Hex HD 5/16"-18 x 1/2" | 2 |
| 151754 | Washer, Flat SAE 5/16" | 2 |
| 162017 | Washer, Flat 7/16" | 2 |
| 150924 | Washer, Flat, SAE, 1/2 | 2 |
| 162510 | Washer, Flat 17/32"ID x 1-1/2" OD x 0.05" | 2 |
| 161694 | Nut, Pem 5/16"-18 | 2 |
| 161432 | Bolt, Carriage 1/4"-20 x 1-1/4" Sq. Neck | 4 |
| 151915 | Washer, Flat SAE 1/4" | 4 |
| 151893 | Nut, Hex 1/4"-20 | 4 |
| 162150 | Guard, Belt GP-6 | 1 |
| 162297 | Belt, AX-23 | 1 |
| 161504 | Cord, Grip 1/2" NPT x 0.24"-0.47" | 1 |
| 167860 | Guard, Inner Belt | 1 |
| 161509 | Cord, Power 14/3 SJOOW 300V | 1 |
| 172836-18 | Assy, Switch Box, 30A, GP8 | 1 |

Bill of Materials (GP-6 Cabmaker, Carbide Wheel Model: part # 8300046)**Accessories**

| Part # | Description | Quantity |
|-----------|---|----------|
| 161766 | Polishing Compound, 1 micron | 1 |
| 161767 | Polishing Compound, 2 micron | 1 |
| 161768 | Polishing, Compound 2-4 micron | 1 |
| 390401 | Belt, 6"x1.5", Diamond, 400 grit | 1 |
| 390601 | Belt, 6"x1.5", Diamond, 600 grit | 1 |
| 391200 | Belt, 6"x1.5", Diamond, 1200 grit | 1 |
| 393000 | Belt, 6"x1.5", Diamond, 3000 grit | 1 |
| 155987-VP | Pump, Water 115V | 1 |
| 168261 | Fitting, Plastic, 1/2" MNPT x 1/4" BARB | 1 |
| 132951 | Hose, Vinyl, 1/4" ID x 3/8" OD | 6' |
| 154394 | Clamp, Flow, 1/4"-1/2" | 1 |
| 14617 | Pad, Polishing, 6" Leather | 1 |
| 14615 | Pad, Polishing, 6" Polytex | 3 |
| 161729 | Tool Cool, 8 oz Bottle | 1 |
| 161323 | Adhesive, 3M Disc ON-OFF Cement | 1 |
| 999997 | Dressing Stick, Green 100 grit | 1 |
| 152610 | GFCI, 115V | 1 |

Assembly, Base

| | | |
|--------|---|---|
| 162221 | Reservoir, Tank GP6 | 1 |
| 161991 | Adaptor, Brass Pipe 1/8" Barbed | 1 |
| 168706 | Baseboard, Cab Combo/GP6 | 1 |
| 161432 | Bolt, Carriage 1/4"-20 x 1-1/4" Sq. neck | 3 |
| 151915 | Washer, Flat SAE 1/4" | 3 |
| 151893 | Nut, Hex 1/4"-20 | 3 |
| 161442 | Bracket, Tool Rest (LH) zinc plated | 1 |
| 166439 | Bracket, Tool Rest (RH) zinc plated | 1 |
| 153527 | Screw, Hex 3/8"-16 x 3/4" | 4 |
| 150923 | Washer, Flat 3/8" | 4 |
| 161974 | Tool Rest, Steel (zinc plated) | 2 |
| 151369 | Screw, Hex Hd 5/16"-18 x 3/4" | 2 |
| 151754 | Washer, Flat SAE 5/16" | 2 |
| 161709 | Nut, Hex Flange 5/18"-18 | 2 |
| 162496 | Bumper, Recessed 1-1/2"OD x 1/4" ID w/ washer | 6 |
| 161878 | Screw, Pan Hd Phil #10 x 7/8" | 6 |
| 166801 | Cover, Baseboard Cab Combo | 1 |

Assembly, Hood

| | | |
|--------|-------------------------------|---|
| 162159 | Hood, Bearing Mount, weldment | 1 |
| 161557 | Guard, Splash, Rubber | 3 |
| 162154 | Bracket, Hose Mount | 3 |
| 161875 | Screw, Pan Hd, 10-32 x 3/8" | 4 |
| 156269 | Nut, Hex 10-32" | 4 |
| 161877 | Screw, Pan Hd, 1/4"-20 x 3/8" | 4 |
| 151915 | Washer, Flat 1/4" | 4 |
| 161651 | Knob, 3/8"-16x2.5" OD | 2 |
| 161828 | Rod, SS Threaded 3/8"-16x6" | 2 |
| 162017 | Washer, Flat USS 7/16" | 2 |
| 161992 | Valve, Water Brass | 1 |

Bill of Materials (GP-6 Cabmaker, Carbide Wheel Model: part # 8300046)

| Part # | Description | Quantity |
|--------|-------------------------------|----------|
| 151754 | Washer, Flat SAE 5/16" | 2 |
| 161652 | Knob, Ridged Grey | 3 |
| 161989 | Valve, NV2SV-B, 10/32F | 3 |
| 161343 | Barb, 10-32x1/8" w/washer | 6 |
| 162505 | Tubing, Clear PVC, 1/8 x 1/4 | 2' |
| 162511 | Clip, aluminum, hose retainer | 1 |
| 162506 | Tie, Nylon, 0.10" W x 4.0" L | 1 |
| 161532 | Cross, w/18 B | 1 |

Assembly, Shaft & Wheels

| | | |
|---------|---|---|
| 163819 | Shaft, 5/8" 303 SS Precision Rod, 1.5 ft. long | 1 |
| 161789 | Pulley, V-belt, 2.25" OD x 5/8" ID, set screw | 1 |
| 161704 | Nut, Hex 5/16"-18, LH | 1 |
| 135830 | Flange, Aluminum 2" OD x 5/8" bore | 6 |
| 161348 | Bearing, 5/8" Arbor RSCM | 2 |
| 162507 | Spacer I, Shaft, Tube, 5/8" ID x 7/8" OD, Alum. | 1 |
| 8300000 | Wheel, Green Silicon Carbide 100 grit 6"x1" | 1 |
| 162508 | Spacer II, Shaft, Tube 5/8"IDx7/8"OD, Alum. | 1 |
| 8300001 | Wheel, Green Silicon Carbide 200 grit, 6"x1" | 1 |
| 162509 | Spacer III, Shaft, Tube, 5/8"IDx7/8"OD, Alum. | 1 |
| 390006 | Drum, 6"x1-1/2" x 5/8" Rubber Expandable | 1 |
| 161711 | Nut, Hex Jam 5/8"-18 | 1 |
| 167320 | Polishing Wheel w/Setscrew | 1 |

Bill of Materials (GP-6 Cabmaker, Carbide Wheel Model: part # 8300046)**Assembly, Motor & Belt**

| Part # | Description | Quantity |
|-----------|---|----------|
| 161672 | Motor, 1/3Hp, 120V, 60 Hz, 1725 RPM | 1 |
| 161788 | Pulley, Motor, 2- 1/2" x 5/8" bore, set screw | 1 |
| 152473 | Screw, Hex HD 5/16"-18 x 1/2" | 4 |
| 151754 | Washer, Flat SAE 5/16" | 4 |
| 161668-01 | Mount, Motor, Upper | 1 |
| 161669 | Mount, Motor, Lower | 1 |
| 152473 | Screw, Hex HD 5/16"-18 x 1/2" | 2 |
| 151754 | Washer, Flat SAE 5/16" | 2 |
| 162017 | Washer, Flat 7/16" | 2 |
| 150924 | Washer, Flat, SAE, 1/2 | 2 |
| 162510 | Washer, Flat 17/32"ID x 1-1/2" OD x 0.05" | 2 |
| 161694 | Nut, Pem 5/16"-18 | 2 |
| 161432 | Bolt, Carriage 1/4"-20 x 1-1/4" Sq. Neck | 4 |
| 151915 | Washer, Flat SAE 1/4" | 4 |
| 151893 | Nut, Hex 1/4"-20 | 4 |
| 162150 | Guard, Belt GP-6 | 1 |
| 162297 | Belt, AX-23 | 1 |
| 161504 | Cord, Grip 1/2" NPT x 0.24"-0.47" | 1 |
| 167860 | Guard, Inner Belt | 1 |
| 161509 | Cord, Power 14/3 SJOOW 300V | 1 |
| 172836-18 | Assy, Switch Box, 30A, GP8 | 1 |

Bill of Materials (GP-6 Cabmaker, Pads Model: part # 8300052)**Accessories**

| Part # | Description | Quantity |
|-----------|---|----------|
| 161766 | Polishing Compound, 1 micron | 1 |
| 161767 | Polishing Compound, 2 micron | 1 |
| 161768 | Polishing, Compound 2-4 micron | 1 |
| 390401 | Belt, 6"x1.5", Diamond, 400 grit | 1 |
| 390601 | Belt, 6"x1.5", Diamond, 600 grit | 1 |
| 391200 | Belt, 6"x1.5", Diamond, 1200 grit | 1 |
| 393000 | Belt, 6"x1.5", Diamond, 3000 grit | 1 |
| 155987-VP | Pump, Water 115V | 1 |
| 168261 | Fitting, Plastic, 1/2" MNPT x 1/4" BARB | 1 |
| 132951 | Hose, Vinyl, 1/4" ID x 3/8" OD | 6' |
| 154394 | Clamp, Flow, 1/4"-1/2" | 1 |
| 14617 | Pad, Polishing, 6" Leather | 1 |
| 14615 | Pad, Polishing, 6" Polytex | 3 |
| 161729 | Tool Cool, 8 oz Bottle | 1 |
| 161323 | Adhesive, 3M Disc ON-OFF Cement | 1 |
| 999997 | Dressing Stick, Green 100 grit | 1 |
| 152610 | Cord, GFCI 120V 15A | 1 |
| 370050 | Rubber Backer Pad, 5" (5/8-11 thread) | 1 |
| 370051 | Rigid Backer Pad, 5" (5/8-11 thread) | 1 |
| 375050 | Resin Diamond Pad, 5" (50 grit) | 1 |
| 375120 | Resin Diamond Pad, 5" (120 grit) | 1 |
| 375220 | Resin Diamond Pad, 5" (220 grit) | 1 |
| 375400 | Resin Diamond Pad, 5" (400 grit) | 1 |
| 375800 | Resin Diamnd Pad, 5" (800 grit) | 1 |
| 375180 | Resin Diamond Pad, 5" (1800 grit) | 1 |
| 375350 | Resin Diamond Pad, 5" (3500 grit) | 1 |
| 375850 | Resin Diamond Pad, 5" (8500 grit) | 1 |
| 375130 | Resin Diamond Pad, 5" (13,000 grit) | 1 |
| 161665 | Magnetic Mount Loc Line manifold | 1 |
| 162045 | Disc, 6" Sponge Rubber 3/4" | 1 |

Assembly, Base

| | | |
|--------|---|---|
| 162221 | Reservoir, Tank GP6 | 1 |
| 161991 | Adaptor, Brass Pipe 1/8" Barbed | 1 |
| 168706 | Baseboard, Cab Combo/GP6 | 1 |
| 161432 | Bolt, Carriage 1/4"-20 x 1-1/4" Sq. neck | 3 |
| 151915 | Washer, Flat SAE 1/4" | 3 |
| 151893 | Nut, Hex 1/4"-20 | 3 |
| 161442 | Bracket, Tool Rest (LH) zinc plated | 1 |
| 166439 | Bracket, Tool Rest (RH) zinc plated | 1 |
| 153527 | Screw, Hex 3/8"-16 x 3/4" | 4 |
| 150923 | Washer, Flat 3/8" | 4 |
| 161974 | Tool Rest, Steel (zinc plated) | 2 |
| 151369 | Screw, Hex Hd 5/16"-18 x 3/4" | 2 |
| 151754 | Washer, Flat SAE 5/16" | 2 |
| 161709 | Nut, Hex Flange 5/18"-18 | 2 |
| 162496 | Bumper, Recessed 1-1/2"OD x 1/4" ID w/ washer | 6 |
| 161878 | Screw, Pan Hd Phil #10 x 7/8" | 6 |
| 166801 | Cover, Baseboard Cab Combo | 1 |

Bill of Materials (GP-6 Cabmaker, Pads Model: part # 8300052)**Assembly, Hood**

| | | |
|--------|------------------------------|---|
| 162159 | Hood,Bearing Mount, weldment | 1 |
| 161557 | Guard, Splash, Rubber | 3 |
| 162154 | Bracket, Hose Mount | 3 |
| 161875 | Screw, Pan Hd, 10-32 x3/8" | 4 |
| 156269 | Nut, Hex 10-32" | 4 |
| 161877 | Screw, Pan Hd, 1/4"-20 x3/8" | 4 |
| 151915 | Washer, Flat 1/4" | 4 |
| 161651 | Knob, 3/8"-16x2.5" OD | 2 |
| 161828 | Rod, SS Threaded 3/8"-16x6" | 2 |
| 162017 | Washer, Flat USS 7/16" | 2 |
| 161992 | Valve, Water Brass | 1 |

Assembly, Shaft & Wheels

| | | |
|--------|---|---|
| 163818 | Shaft, 5/8" 303 SS Precision Rod, 1.5 ft. long | 1 |
| 161789 | Pulley, V-belt, 2.25" OD x 5/8" ID, set screw | 1 |
| 161704 | Nut, Hex 5/16"-18, LH | 1 |
| 135830 | Flange, Aluminum 2" OD x 5/8" bore | 6 |
| 161348 | Bearing, 5/8" Arbor RSCSM | 2 |
| 162507 | Spacer I, Shaft, Tube, 5/8" ID x 7/8" OD, Alum. | 1 |
| 496080 | Wheel, Diamond, Brazed Bond 80 grit 6"x1.5" | 1 |
| 162508 | Spacer II, Shaft, Tube 5/8"IDx7/8"OD, Alum. | 1 |
| 496200 | Wheel, Diamond, Brazed Bond 200 grit, 6"x1/5" | 1 |
| 162509 | Spacer III, Shaft, Tube, 5/8"IDx7/8"OD, Alum. | 1 |
| 390006 | Drum, 6"x1-1/2" x 5/8" Rubber Expandable | 1 |
| 161711 | Nut, Hex Jam 5/8"-18 | 1 |
| 167319 | Polishing Wheel LH Thread-Comp | 1 |

Assembly, Motor & Belt

| Part # | Description | Quantity |
|-----------|---|----------|
| 161672 | Motor, 1/3Hp, 120V, 60 Hz, 1725 RPM | 1 |
| 161788 | Pulley, Motor, 2- 1/2" x 5/8" bore, set screw | 1 |
| 152473 | Screw, Hex HD 5/16"-18 x 1/2" | 4 |
| 151754 | Washer, Flat SAE 5/16" | 4 |
| 161668-01 | Mount, Motor, Upper | 1 |
| 161669 | Mount, Motor, Lower | 1 |
| 152473 | Screw, Hex HD 5/16"-18 x 1/2" | 2 |
| 151754 | Washer, Flat SAE 5/16" | 2 |
| 162017 | Washer, Flat 7/16" | 2 |
| 150924 | Washer, Flat, SAE, 1/2 | 2 |
| 162510 | Washer, Flat 17/32"ID x 1-1/2" OD x 0.05" | 2 |
| 161694 | Nut, Pem 5/16"-18 | 2 |
| 161432 | Bolt, Carriage 1/4"-20 x 1-1/4" Sq. Neck | 4 |
| 151915 | Washer, Flat SAE 1/4" | 4 |
| 151893 | Nut, Hex 1/4"-20 | 4 |
| 162150 | Guard, Belt GP-6 | 1 |
| 162297 | Belt, AX-23 | 1 |
| 161504 | Cord, Grip 1/2" NPT x 0.24"-0.47" | 1 |
| 167860 | Guard, Inner Belt | 1 |
| 161509 | Cord, Power 14/3 SJ00W 300V | 1 |
| 172836-18 | Assy, Switch Box, 30A, GP8 | 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/

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.

GP-6 Cabmaker
OWNER'S MANUAL & PARTS LIST



BARRANCA DIAMOND

Barranca Diamond Products, Inc.
1315 Storm Parkway
Torrance, CA 90501

Toll-Free: (800) 421-5830
Phone: (310) 539-5221
Fax: (310) 539-5158
www.barrancadiamond.com