



FG-7500

PLANETARY
FLOOR GRINDER

Operator's Manual

TABLE OF CONTENT

page	content
3	WARRANTY INFORMATION WARRANTY CARD WARRANTY AND RETURNS RETURN POLICY
5	GENERAL DESCRIPTION MACHINE CHARACTERISTICS MAIN DESIGN
6	WARNING AND SAFETY INSTRUCTION ENVIRONMENTAL CONDITIONS ELECTRICAL CONNECTION
6	INTRODUCTION WARNING SIGNS
6	SPECIFICATIONS AND FEATURES SPECS FEATURES SAFETY EQUIPMENT PREPARATION LIST
8	OPERATION OPERATOR CHECKLIST
9	SAFETY PRECAUTIONS PROHIBITIONS SAFETY MEASURES
11	MAINTENANCE MAINTENANCE SCHEDULE MAINTENANCE CHECK
12	OPERATIONS CHANGING THE DIAMONDS SETTING HEIGHT OF HANDLE DUST EXTRACTION DIAMOND GRIT NUMBER OF DIAMOND SEGMENTS USED WET AND DRY GRINDING SETS OF DIAMONDS—FULL AND HALF GRINDING GUIDE DIAMOND SELECTION FOR DIFFERENT APPLICATIONS
15	TROUBLESHOOTING DIFFICULT TO CONTROL IRREGULAR SCRATCH PATTERN ERRATIC MOVEMENT WON'T TURN ON REPAIRS

WARRANTY INFORMATION

WARRANTY CARD

A warranty card must be submitted to Diamond Vantage within 30 days of purchase in order for the foregoing warranty to apply. You can either post mail a hard copy of this information page or submit electronically to info@diamondvantage.com. See next page for more details on Diamond Vantage warranty and return policies.

Machine Information

Model _____

Serial Number _____

Purchase Date _____

Customer Information

Customer Name _____

Business Name _____

Street Address _____

Street Address _____

City _____

State _____

Phone Number _____

Email Address _____



WARRANTY AND RETURNS

WARRANTY POLICY FOR DIAMOND VANTAGE FG-7500 MACHINES

Diamond Vantage warrants, from the time of delivery and receipt by the original customer, new and unused products sold by Diamond Vantage or Diamond Vantage-appointed distributors or dealers. Goods shall be free from defects in materials and workmanship. Diamond Vantage or a Diamond Vantage-appointed repair facility shall either replace or repair any defects in the Goods resulting from faulty design, materials, or workmanship. Products repaired or replaced during the warranty period shall be covered by the foregoing warranty for the remainder of the original warranty period, or ninety (90) days from date of the repair or shipment of the replacement, whichever is longer. Spare parts for repair will be either new or equivalent to new.

Warranty period shall be 3 years from the time of delivery and receipt by the original customer, or 2500 operating hours on the machine - whichever occurs first. Diamond Vantage will cover the shipping charges for the transportation of the machine to Diamond Vantage (or an approved repair facility) and back to the customer (within the contiguous 48 United States) in the event that the damage occurs and is reported within the first 90 days or 200 operating hours - whichever occurs first. Shipping charges, if covered by Diamond Vantage, must be agreed upon in advance and approved by Diamond Vantage. Thereafter, the customer will have to cover the shipping charges to Diamond Vantage and back. Diamond Vantage will not warranty Goods after a period of 3 years from the time of delivery and receipt by the original customer, or 2500 operating hours on the machine - whichever occurs first.

Diamond Vantage shall not be liable for any defects that are caused by circumstances that occur after the Goods have been delivered and whilst the Goods are in the possession of the purchaser. Furthermore, the warranty does not include normal wear and tear or deterioration. Wear parts are not warranted. Diamond Vantage is not liable for damage to machine due to using non Diamond Vantage parts or diamond tooling.

The warranty herein is non-transferable, and only applies to the original owner or purchaser of the machine.

The warranty is void if the purchaser has not followed the maintenance plan stipulated by the machine's manual and warranty card. The warranty is void if the purchaser repairs said Goods himself, or if repairs are conducted by a repair facility that is not approved by Diamond Vantage. Diamond Vantage's liability does not cover defects which are caused by faulty maintenance, incorrect operation, faulty repair by the purchaser, or by alterations conducted without Diamond Vantage's prior written consent. The same applies to any alterations of the Goods or services performed by another party other than Diamond Vantage, a Diamond Vantage-appointed distributor, or a Diamond Vantage-approved repair facility. The warranty is not applicable on any defect that arises due to use of tools or parts that are not original Diamond Vantage parts. Replaced defective parts shall be placed at Diamond Vantage's disposal and shall become property of Diamond Vantage. If such defective parts are replaced within the warranty period, the shipping charges will be covered by Diamond Vantage. In warranty complaint cases, when no defects are found for which Diamond Vantage is liable, Diamond Vantage shall be entitled to compensation for the labor, material cost, and shipping charges, incurred by Diamond Vantage as a result of the complaint.

RETURN POLICY FOR DIAMOND VANTAGE FG-7500MACHINES

The FG-7500 machines may be returned, subject to the following terms:

In no case, a machine is to be returned to Diamond Vantage Inc. for credit or repair without prior authorization. Please contact Diamond Vantage or your local distributor for an authorization and issuance of a return authorization number. This number along with the serial number of the machine must be included on all packages and correspondence. Machines returned without prior authorization will remain property of the sender and Diamond Vantage Inc. will not be responsible for them.

No machines will be credited after 90 days from the date of invoice. All returns must be shipped freight prepaid. Returned machines may be exchanged for other equipment or parts of equal dollar value. If machines are not exchanged, they are subject to a fifteen percent (15%) restocking fee.

GENERAL DESCRIPTION

The Diamond Vantage FG-7500 machine is intended for grinding, polishing and buffing concrete, marble, granite, limestone and terrazzo surfaces with diamond tools.

The Diamond Vantage FG-7500 machine is a three head machine, which can be used dry as well as wet. For best results, use only tools manufactured or recommended by Diamond Vantage and its distributors. The Diamond Vantage FG-7500 machine is manufactured and fitted for the above-mentioned applications only! Every other use may cause risks to the persons involved.

MACHINE CHARACTERISTICS

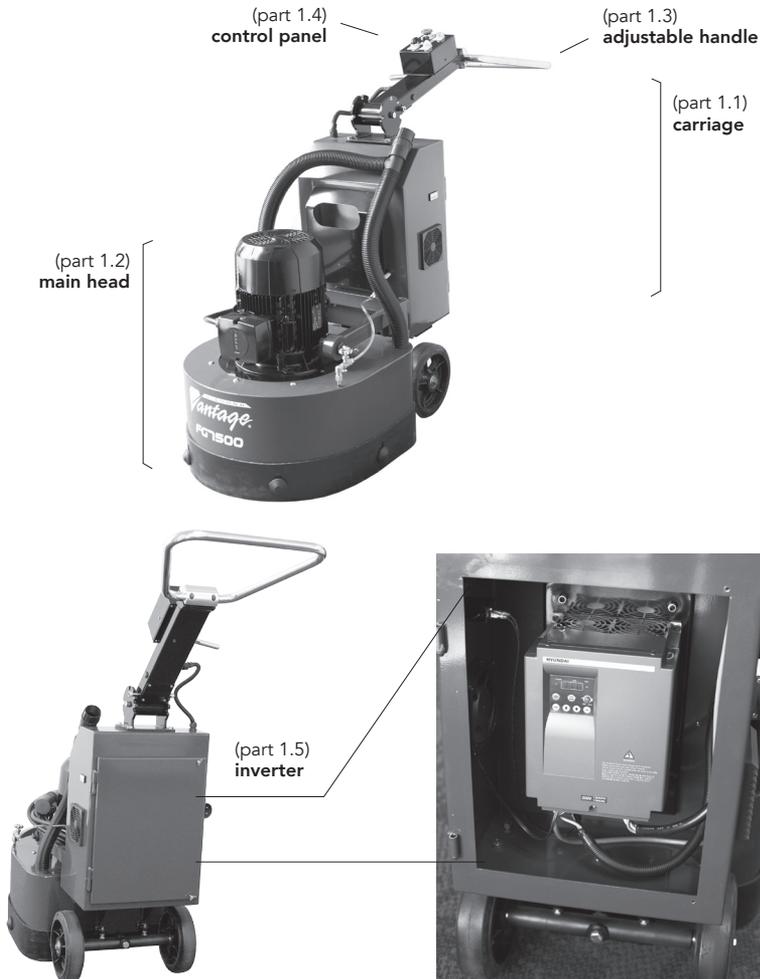
The Diamond Vantage FG-7500 machine is made of two main component sections:

MAIN DESIGN

The two main component sections are the carriage (part 1.1) and main head (part 1.2).

The handle (part 1.3) on the frame is adjustable in height and allows the operator to work in a correct and safe working posture. The control panel (part 1.4) is positioned on top of the handle.

The inverter (part 1.5) is located in the carriage. The main feeding cable is connected with a plug and socket on the right side. The motor feeding cable is plugged into the socket located on the right side of the carriage. The tank is on the front side of the frame, so that the weight of the water has no influence on the operation of the machine. The frame weight, on the other hand, is fully absorbed by the wheels. The motor is mounted on the base plate and is driving the three heads with a belt system.



WARNING AND SAFETY INSTRUCTION

ENVIRONMENTAL CONDITIONS

The temperature range for operating the Diamond Vantage FG-7500 machine outdoors is between 41°F and 86°F or 5°C and 30°C. When working outdoors, never use the Diamond Vantage FG-7500 machine in rain or snow. When working indoors, always operate the machine in well-ventilated areas.

ELECTRICAL CONNECTION

The power (Voltage) and current (Amps) are displayed on a label on the electrical control box to avoid any incorrect connection. Refer to these before connecting the power. To avoid electrical shocks, make sure the ground power supply is functioning properly.

INTRODUCTION

You have chosen one of the finest Grinders made. Proper use and maintenance are important for maximum performance, safe, effective operation and optimal life of the equipment.

To ensure safety, keep this Operator's Manual handy and refer to it when using the Grinder.

The owner/employer assumes responsibility for the operator's ability to operate the machine safely and maintain it properly according to applicable local regulations.

Warning:

Dust forms when the Grinder is in use. Depending on the surface being worked on, the dust can cause serious injury if inhaled. Always maintain adequate ventilation and wear protective equipment:

- * Dust mask
- * Goggles
- * Hearing protection
- * Steel cap boots

WARNING SIGNS

There are three categories of danger associated with improper use of the Grinder as indicated by the graphic signage below:



WARNING!

This graphic indicates a risk of serious injury or death if necessary precautions are not followed.



CAUTION

This graphic indicates a risk of serious injury or death, or damage to the surrounding area, if necessary precautions are not followed.



ELECTRIC SHOCK!

Indicates a potential danger that could result in serious injury or death if necessary precautions are not followed.

SPECIFICATIONS AND FEATURES



SPECS

- Weight: 660 lbs.
- Height: 29.6"
- Width: 24"
- Power: 7.5hp/1 Phase
- Noise Level: 84.0 dB
- Operating Width: 24"
- RPM: 0-1250

FEATURES

Quality, performance, reliability, innovation and environmental advances have been built into the FG-7500 to assure low operating and maintenance costs. It has been designed for wet and dry, rough to polished grinding of surfaces including concrete, marble, terrazzo and granite.

The triple head grinder allows for greater downward pressure and more stable operation over uneven surfaces. Bearings and internal parts are protected from concrete dust by deep seals, creating longer service intervals and life span of the machine. The frame and handle have been designed with the operator in mind, for ergonomic operation. The control panel is clear and easy to use.

SAFETY EQUIPMENT



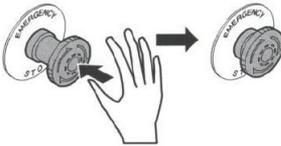
The 'ON' Button, when pressed, turns the power on when the Emergency Stop button has not been engaged. Check that the Emergency Stop button has not been engaged by turning it clockwise.

Turn the machine to "FOR" mode using the FOR/REV switch. The machine will start and accelerate smoothly to the pre-selected speed within five seconds.

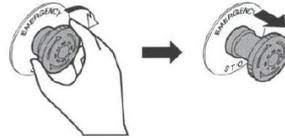
Reduce the pressure between the grinding discs and the floor by pushing the handle down without raising the unit off the floor. Stop the machine by turning the FOR/REV switch to "Stop".

Emergency Stop

The Emergency Stop button interrupts the main power supply and turns the machine off quickly. Test the Emergency Stop by pressing on it while the machine is on. Disengage the Emergency Stop button by twisting it clockwise.



Pressing Emergency Stop Switch.



Resetting Emergency Stop Switch

Reset Button



If an electrical fault occurs while operating the machine, press the orange Reset Button located in the inverter box inside the main box. This will reset the circuit breaker.

PREPARATION LIST

Check the parts diagram and list before operating the machine.

- Tools must be mounted correctly before operation.
- Check all electrical connections: power, wires and other electrical devices.
- Become familiar with all the machine's functions.
- Determine that the diamond tools and RPM are appropriate for the working site.

NOTICE: *The type and number of diamonds must be identical on all grinding heads.*

- Only qualified personnel should operate the machine.
- Never use a faulty machine. Complete all safety checks, maintenance and service recommendations described in this manual. All repairs not covered in the manual must be performed by the manufacturer or distributor.
- Do not use this machine in an area where there is a potential for fire or explosions.
- Do not start the machine when grinding heads are resting on the ground.
- Do not lift the machine by the handles, motor, chassis or other parts.
- Transport of the machine should be on a pallet/skid to which the machine is firmly secured.
- Transport the machine with a set of diamonds attached at all times to protect the diamond plate locking mechanism.
- Store the machine in a dry place when not in use.
- Use extreme caution when moving the machinery by hand on an incline. Even slight downward momentum can make the machine extremely difficult to brake manually.
- Never use a machine that has been modified in any way from its original specs.
- Be on guard for electrical shock. Avoid bodily contact with lightning conductors such as metal on floor.
- Never drag the machine by its cord and never pull the plug out of a socket by its cord.
- Keep all cords and extension cords away from sharp edges.

OPERATION

The operator must always wear gloves, dust mask, goggles, hearing protection, and steel cap boots.

A dust collector should be installed to minimize hazardous dust dispersal during dry operation.

Depending on the surface, dust particles can cause respiratory diseases that can be life-threatening.

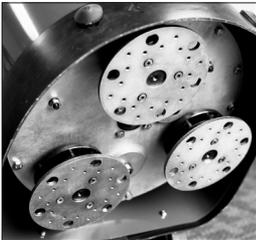
Avoid dust inhalation and contact with the skin. This applies not only to the operator, but to all bystanders. Respiratory protection is a must for all on site.

OPERATOR CHECKLIST

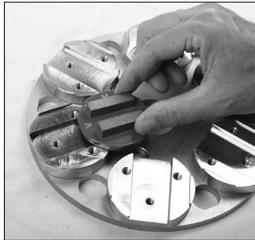
1. Check the electrical outlet's compatibility before plugging the machine into a socket. An improper connection can cause electric shock or fire.



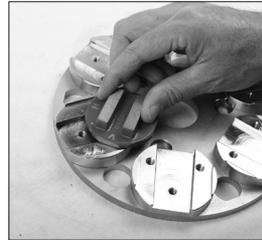
2. Check the diamond tools to ensure proper installation. Check the Default Configuration and test Start.



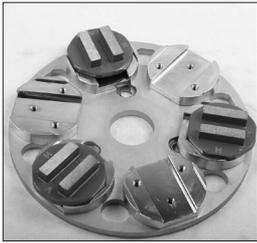
(Bottom view of grinder)
Diamond tool plates



Installing diamond tool
in vertical angle



Installing diamond tool
in slant angle



Half set diamond tool installed



Full set diamond tool installed

3. Determine the direction of rotation before starting the machine.



4. Use the Direction Control Switch to set up the direction of rotation.



5. When starting the machine, the speed setting should be moderate: 6 or below. Use the Speed Control Switch to reduce or increase speed.



6. With grinding heads on the working surface, push the "On" button to start the machine, push down on the handle just enough to release the pressure off the diamonds, but don't lift machine completely off the floor.



SAFETY

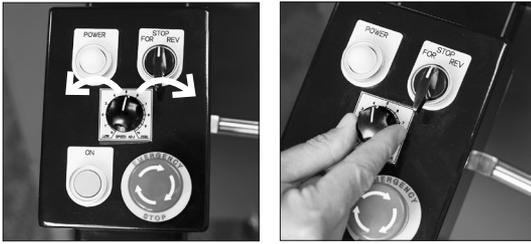
PRECAUTIONS

When turning the machine off, hold the handle securely to minimize weight-shift.



Be sure everyone on site wears a dust mask to avoid inhaling hazardous substances. Handle securely to minimize weight-shift.

RPMs can be adjusted by using the speed control switch on the control box.



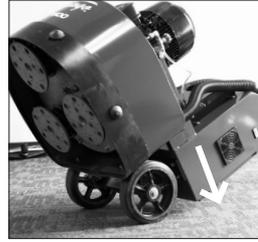
Pull the lever on the side of the control box to adjust the height of the handle and, once the height has been adjusted, release the lever.



When replacing the plates or diamond tools, the machine must be turned off and unplugged.



When the bottom of the machine is tilted up for tool replacement, it should be held firmly for the operator by an assistant to ensure stability.



Eliminate extraneous objects, including bent or pinched cables, on the floor of the working area to avoid collision and the risk of electric accidents.



Be sure to connect the ground wire to avoid the possibility of electric shock.



Unplug the machine whenever working on it.

PROHIBITIONS



Avoid resting objects or electric wires on the machine at all times.



Do not operate the machine in areas containing volatile substances or toxic gases.



Do not operate the machine with wet hands.



When the power is on, do not touch any part of the machine except handles and switches.



Make sure the machine is not on when the EMERGENCY STOP switch is returned to its initial position after an emergency stop. There is a risk of injury due to unexpected operation.

SAFETY MEASURES

The operator must read and understand all instructions before using the machine.

1. The Working Environment

- Inspect the area where the machine is to be used.
- Be familiar with the environment.
- Make sure the working area is clear.
- Do not work in an area where heavy dust, explosive fluids or gas are present.

2. Electrical Safety

- Be sure to plug the machine into the socket completely.
- Do not modify the plug without the manufacturer's approval of the modification.
- Do not use other adapters to operate the machine.
- Do not use the machine's electrical wire for other purposes.
- Do not operate the machine where hazardous materials are present, such as sharp or hot objects or oil.
- If an extension cord is required use only an appropriate, certified wire.
- Shut the machine down before unplugging.

3. Personal Safety

- Be sure everyone near the work area knows where the machine will be operated.
- Do not operate the machine when tired or intoxicated.
- Operator must wear the necessary personal safety equipment, including dust mask, eye goggles, hearing protectors, steel-toed boots.
- Check the ON/OFF switch at the start of a job to avoid unexpected sudden starts.
- Clear the working area before operation.
- Do not use on extremely uneven or widely cracked floors.
- Wear appropriate clothing to avoid the risk of sleeves or pant legs becoming caught in the machine.
- Make sure there is someone close at hand who can help should an accident occur.

MAINTENANCE

- Always use a proper power source.
- Do not operate the machine if electrical contacts have been compromised. Service the machine before operation.
- Unplug the machine before maintenance or repair.
- Conduct a mechanical check-up before operating the machine, paying particular attention to the tightness of the fasteners.
- Clean the machine thoroughly after use to ensure long life and consistent performance.
- If the machine requires service or repair, send to the agent or to manufacturer.
- Only an Authorized Service Agent should service the Grinder and replace electrical wiring.

MAINTENANCE SCHEDULE

DAILY CLEANING

Machine Exterior

INSPECTION/WEEKLY

Planetary Drive System

EVERY 6 MONTHS CLEANING

Internal Components

INSPECTION/DAILY

General Once-Over
Power Button
Grinding Heads
Stop/Run Switch
Emergency Stop
Cover

SERVICE/ANNUAL OR BIENNIAL

Grinding Heads Drive System

MAINTENANCE CHECK

Remove and check the diamond tools by tilting the unit back.
Inspect the cover for damages that could affect operational efficiency.
Inspect belt for integrity.
Run the machine through the range of speeds to make sure no bearings are broken.
Make sure the satellite heads are running correctly. If not, disassemble.
Inspect the spring cushion and dust seals for wear.
Remove drive motor and check for dust.
If the planetary head seal has been compromised, replace.
More extensive maintenance work must be carried out by an authorized agent only.

OPERATIONS

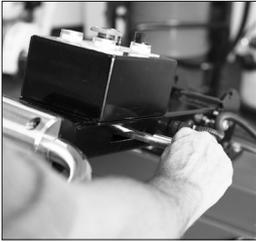
CHANGING THE DIAMONDS

When replacing the diamonds;

- a. Unplug the machine.
- b. Wear gloves.
- c. Tilt the machine backward so it rests on its wheels and handle.
- d. Remove the diamond segments with a soft hammer.
- e. Attach the replacement diamonds, taking care that all diamonds are inserted in the correct direction, tapping lightly on diamonds to seat them.

SETTING HEIGHT OF HANDLE

With the adjustment lever, set handle to the most comfortable working height—usually the height of the operator's hip. The operator will use his hip to resist the pull of the machine when in operation, rather than exercise control with his arms alone.



DUST EXTRACTION

Make sure the FOR/REV switch is set on Stop, then connect the dust collector to the machine and extract the dust that's gathered.



FOR/REV switch is set on Stop



connect the dust collector to the machine

DIAMOND GRIT

The size of the diamond grit determines the texture of the scratch pattern created by the grinding process. The smaller the grit size, the finer the pattern and the longer the diamonds will last. Increasing the hardness of the diamond binding agent has the same effect.

NUMBER OF DIAMOND SEGMENTS USED

The higher the number of diamond segments used the less pressure exerted on each individual segment.

This will also reduce the load on the machine, decrease the amount of current required, and create a smoother scratch pattern.

WET AND DRY GRINDING

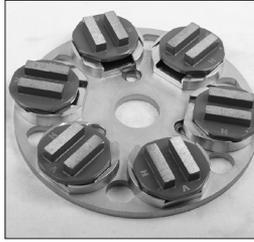
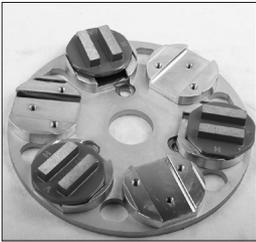
When the diamond segments have been dampened they will wear faster (increasing productivity), a harder bond can be used, the scratch pattern will be deeper, and less heat will be generated. Reversing their rotation will also extend their effectiveness.

SETS OF DIAMONDS—FULL AND HALF

There are two diamond configurations: Full, when diamonds are placed at the six positions on the holder disc; and Half, when they are placed at alternating positions on the holder disc.

Half Set— The machine tends to follow the surface of the floor. This should be used only when a flat floor finish is not required.

Full Set— If the floor has undulations, the machine will grind high areas and miss low areas. The full set configuration should only be used when a flat floor finish is desired.



When grinding a slab of concrete for the first time and the hardness hasn't been determined, begin with harder bond diamonds until their suitability can be determined.

GRINDING GUIDE

USE A HALF SET FOR:

- Carpet Glue Removal
- Vinyl Adhesive Removal
- Surface Polishing Of Concrete Floors
- Repolishing Floors That Have Been Ground Before

USE A FULL SET FOR:

- Ceramic Tile Adhesive Removal
- Epoxy Paint Removal
- Rain Damaged Concrete
- Smoothen Exposed Aggregate
- Lippage Removal Between Cementitious Based Tiles
- Grinding To Expose Aggregate In Concrete Polishing
- Flatten Undulations In Concrete Floors

DIAMOND SELECTION FOR DIFFERENT APPLICATIONS

APPLICATION	FULL SET	HALF SET	GRIT SIZE
Removing ceramic tile adhesive	X		PCD scrap, 16
Removing carpet glue		X	PCD scrap, 16
Removing epoxy thin paint	X		PCD scrap, 16
Removing epoxy thick paint		X	PCD, PCD scrap
Removing vinyl adhesive		X	PCD, PCD scrap
Rain damaged concrete	X		16, 30
Exposed aggregate	X		16, 30
Surface polishing (Hard concrete)		X	60 - 120
Surface polishing (Medium concrete)		X	60 - 120
Surface polishing (Soft concrete)	X		60 - 120
Exposed aggregate in concrete polishing	X		60 - 120
Flattening undulations in concrete floors	X		16, 30
Flattening concrete floors - Hard concrete	X		16, 30
Flattening concrete floors - Medium concrete	X		16, 30
Flattening concrete floors - Softconcrete	X		16, 30
Repolishing floors		X	30, 60
Lippage removal between cement-based tiles	X		16, 30

TROUBLESHOOTING

DIFFICULT TO CONTROL

- Not enough diamonds on the grinding discs—usually accompanied by high power drain. If grinding soft floors or thick glue, a full set (18) of diamonds is required. Increase the number of diamonds.
- Drive belts may be broken. Turn one of the grinding heads by hand. If the grinding heads rotate together, the belt is not broken. If broken, replace.
- Machine draws only one amp of current but will not fault. Fan turns slowly. Check power supply.
- Machine requires too much current. Slow down motor speed.

IRREGULAR SCRATCH PATTERN

- Diamonds may not be fitted properly or at different heights. Check the fit and height and make sure all segments are the same grit and bond.
- Resin tools may be mixed or may have picked up a contaminant. Make sure all resins are the same grit and bond. To clean them, run them briefly on a lightly abrasive surface.
- Grinding heads may be worn out. Check for wear or breakage.

ERRATIC MOVEMENT

- Grinding heads may be worn out. Check for wear or breakage.
- Diamonds may not be fitted properly. Check the fit and height.

WON'T TURN ON

- The power cable may not be live. Make sure power is turned on.
- The emergency stop button may be on. Twist button to release.
- The circuit breaker may be open. Close breaker to complete circuit.
- The contactor on the back of the power button may be faulty. Check wiring and make sure the contactor engages when the power button is released.

REPAIRS

- Repairs must be performed by an authorized service technician only.
- Only original MANUFACTURER parts should be used.



DIAMOND VANTAGE

FG-7500 Planetary Floor Grinder
Operator's Manual
7.5 HP

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