

BLASTRAC

**BMG-2500
MULTI FUNCTION GRINDING TOOL
January 2005
OPERATIONS AND MAINTENANCE MANUAL**



KEEP THIS MANUAL WITH MACHINE AT ALL TIMES FOR USE BY OPERATORS AND MAINTENANCE PERSONNEL!

	<p>⚠ WARNING</p> <p>Read and understand operator's manual before using this machine. Failure to follow operating instructions could result in injury or damage to equipment.</p>
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Operating Instructions Manual

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BMG-2500 MULTI GRINDER

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? For answers to your questions about this product, contact your local Distribution Representative or call:

Blastrac
1-800-256-3440 or 1-405-478-3440
7 am – 6 pm, Mon-Fri (CST)
Blastrac • 6215 Aluma Valley Dr. • Oklahoma City, OK 73121 USA

1.0 How to use this manual

Read through this entire operations and maintenance manual before using your new machine. Pay close attention to the General Safety Guidelines, Dangers, Warnings and Cautions.



Figure 1 – Warning label – read and understand manual

2.0 Specifications

BMG-2500

Motor:	5 HP, single phase
Power Source:	230 VAC, single phase, 60 Hz
Current:	23 amps
Motor RPM:	1750 rpm
Power Cord Length:	25 feet
Vacuum hose port:	2 inch diameter
Weight:	570 pounds with weights
Tool RPM:	400 rpm max.
Pressure on Tools:	Rear wheels = 370 LBS / Front wheels = 200 LBS Pocket weights may be distributed on machine to vary the working pressure on floor (4 X47.5 lbs each)
Tools Available:	Various diamond and optional slicer kit using tungsten carbide cutters (contact your local Blastrac sales office for more information)
Dimensions:	48"L x 25"W x 40"H (auxiliary handle in stowed position)
Cleaning path:	22 in width
Recommended vacuum:	Blastrac Model 1-13DC or Model 4-54DC single phase

3.0 Applications

Typical applications include removing thick, horizontal elastomeric floor coatings and adhesives such as tile mastics or carpet glue. The BMG-2500 uses two counter-rotating heads that hold either tungsten carbide cutters or diamond plugs. The tungsten carbide cutters are used to slice coatings and adhesives apart and the diamond plugs can be used to clean off any remaining material or to remove hard, brittle coatings and paints or prepare concrete surfaces for coating. The water tank is used to introduce water into the pathway of the cutters or plugs, helping eliminate buildup of materials on the cutters or plugs. Water introduced on the floor in certain applications will help cool the diamond plugs and reduce dust. If water is not needed, clean-up time will be reduced and a cleaner surface will be achieved. In dry grinding/slicing applications, this machine is designed to be used with a Blastrac Model 1-13DC or 4-54 dust collection system and appropriate respiratory protection.

4.0 General Safety Guidelines

The purpose of safety symbols and explanations is to attract your attention to possible hazards and explain how to avoid them. The safety symbols and explanations do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.



DANGER: Indicates an imminently hazardous situation that if not avoided, will result in death or serious injury. This warning is limited to the most extreme situations.



WARNING: Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.



CAUTION: Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert you to potentially unsafe practices.

- 4.1 DO KNOW YOUR MACHINE.** Read and understand the operations and maintenance manual. Read any additional manuals attached from other manufacturers. Learn the applications and limitations as well as the specific potential hazards related to this machine.
- 4.2 DO DRESS PROPERLY.** Do not wear loose clothing or jewelry that can be caught in moving parts. Wear protective hair covering to contain long hair. The use of appropriate gloves and non-skid footwear are recommended when working with this machine.
- 4.3 DO PROTECT YOUR FEET.** Observe all applicable local, state and federal safety regulations. Wear OSHA approved foot protection when operating this machine.



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- 4.4 **DO PROTECT YOUR EYES.** Observe all applicable local, state and federal safety regulations. Wear OSHA-approved safety glasses when operating this machine.
- 4.5 **DO NOT OPERATE OR MAINTAIN WITHOUT PROPER RESPIRATORY PROTECTION.** Follow OSHA approved respiratory protection standards when operating this machine in a dry operation with a dust collector to avoid possible airborne contaminants. Grinding and cutting concrete produces dust that may generate airborne respirable crystalline silica which if can lead to silicosis and death. Observe all applicable local, state and Federal safety regulations that pertain to the equipment, the products being operated and the substances being removed from the surface.
- 4.6 **DO NOT DO NOT USE IN DRY OPERATION WITHOUT AN APPROVED DUST COLLECTOR SYSTEM.** This machine is designed and ntended for use with an approved dust collection system as recommended on page 3 in this manual. The dust collector system is intended to reduce or eliminate the escape of potentially hazardous or nuisance dust into the environment.
- 4.7 **DO PROTECT YOUR HEARING.** Observe all applicable local, state and federal safety regulations. Wear OSHA-approved hearing protection when operating this machine.
- 4.8 **DO AVOID A DANGEROUS ENVIRONMENT.** Before starting the machine, survey the work area for hidden obstructions and/or uneven cracks or joints. Do not expose machine to rain. Do not use machine in standing water conditions. Keep work area well lit. Do not allow machine to cross over the edge of the concrete slab or work surface.
- 4.9 **DO KEEP WORK AREA CLEAN.** Cluttered work areas and debris buildup on floors creates an unsafe work environment.
- 4.10 **DO AVOID FLAMMABLE LIQUIDS OR GASES.** Power tools produce sparks during operation and when starting or stopping electric motors. Never use machinery in dangerous sites containing materials that are combustible or explosive.
- 4.11 **DO GUARD AGAINST ELECTRIC SHOCK.** Before starting machine, insure that an assured ground circuit is made with the green ground wire in the power cord connected to the ground circuit at the power source.
- 4.12 **DO KEEP CHILDREN AND VISITORS AWAY.** Do not let children or visitors contact machine or extension cord. Keep children and visitors away from the work area at all times.
- 4.13 **DO STORE IDLE MACHINE.** When not in use, machine should be stored in a dry and secure location. Keep machine out of the reach of children or unqualified operators.
- 4.14 **DO NOT FORCE MACHINE.** The machine will do a better and safer job when operated at the rate for which it was designed.
- 4.15 **DO USE CORRECT MACHINE.** Do not force the machine or attachments to do the job of a larger machine. Do not use the machine for a purpose not intended.
- 4.16 **DO OBTAIN MATERIAL SAFETY DATA SHEET (MSDS) FOR ALL MATERIALS.** Refer to the MSDS of all substances in and around the machine and follow the appropriate safety guidelines associated with the use/exposure of the substance.
- 4.17 **DO NOT ABUSE POWER CORD.** Never pull machine by power cord, run over cord with machine or forklift, or pull on cord by extending machine distance from power source too far.



Connect power cord to power source and power cable extensions with approved plugs and with machine power switch turned off. If cord is damaged, disconnect power and repair immediately.

- 4.18 **DO NOT OVERREACH.** Keep proper footing and balance at all times.
- 4.19 **DO MAINTAIN MACHINE WITH CARE.** Keep machine clean and use sharp cutters or diamond plugs that are in good condition. Keep handles dry, clean and free from oil and grease. Follow instructions for lubricating and changing accessories or tools.
- 4.20 **DO DISCONNECT MACHINE FROM POWER SOURCE.** When not in use, before servicing and when changing cutters or plugs, always disconnect power cord from power source.
- 4.21 **DO AVOID UNINTENTIONAL STARTING.** Do not carry or transport machine with finger or hand on the power switch while power cord is connected to power source.
- 4.22 **DO NOT LEAVE MACHINE RUNNING UNATTENDED. TURN POWER OFF.** Always have full control of the machine until all machine components have come to a complete stop.
- 4.23 **DO REMOVE ADJUSTING WRENCHES AND TOOLS.** Check to see that wrenches and tools, or any other loose objects are removed from machine before turning it on.
- 4.24 **DO STAY ALERT.** Watch what you are doing. Use common sense. Do not operate machine when you are not fully alert.
- 4.25 **DO NOT USE DRUGS, ALCOHOL, MEDICATION.** Do not operate machine while under the influence of drugs, alcohol, or any medication.
- 4.26 **DO CHECK FOR DAMAGED PARTS.** Before any use of the machine, check for damaged parts that should be replaced. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting of cutter or diamond tools and any other condition that may affect machine operation. A guard, power switch or other part that is missing or damaged should be properly repaired or replaced by an authorized service center. Do not operate machine if power switch does not turn machine on and off.
- 4.27 **DO CHECK VOLTAGE.** Before connecting machine to a power source, be sure the voltage supplied is the same as that specified on the nameplate of the machine or motor. A power source with voltage greater than that specified for the machine can result in serious injury to the user and damage to the machine. If in doubt, do not plug in machine. Using a power source with voltage less than the nameplate rating is also harmful to the motor.
- 4.28 **DO UNDERSTAND ELECTRICAL REQUIREMENTS FOR USING EXTENSION CORDS. Length of extension cord should be limited to electric supply limitations and should never exceed 100ft in length.** Use only (3) three conductor cords on the single-phase machines. Make sure that any extension cord used is in good condition. Disconnect power source and replace or repair damaged cords and plugs before starting the machine. When using an extension cord, be sure to use one heavy enough to carry the current the machine will draw. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. Table 1 shows the correct size and type of conductor to use, depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. As the gauge number decreases, the cord thickness increases.



Branch Circuit Requirements				
Machine	Total Amperage Draw	Customer Provided Circuit Protection	Cord Provided With Machine	Extension Cord Requirements
BMG-2500 (5 HP)	23	30 Amp	50FT	8/3 Type W
Blastrac 4-54 DC	14.2		55FT	8/3 Type W
Both Units Together	35.2	50 Amp		8/3 Type W

***Machine is supplied with 50 ft of power cord with no electric plugs. Be sure to use electrical connections that meet the amperage and voltage requirements of the machine and follows the guidelines referred to in 4.28**

Table 1 – Minimum gauge for extension cords

- 4.28 DO USE EXTENSION CORDS FITTED WITH PROPER PLUGS.** When machine is used with any extension cord, be sure to use plugs and receptacles rated for proper voltage and amperage as prescribed by the National Electric Code. Make sure that all extension cords are wired the same, matching wire colors and that the ground wire (green) is secured in its proper position.
- 4.29 KEEP ALL GUARDS AND COVERS IN PLACE.** Do not remove guards or covers that have been factory mounted. They perform important safety roles. Keep them in the proper positions.
- 4.30 SECURELY MOUNT ACCESSORIES AND TOOLS TO THEIR HOLDERS.** Extra care must be taken to ensure that tools are correctly mounted on the correct holders and that tool holders and mounting brackets are secured in their proper position. Damage to the tools, holders and floor surface and/or injury can occur if not properly tightened and secured.
- 4.31 ALWAYS KEEP THE MOTOR COOLING FAN GUARD UNCOVERED.** Do not block vent openings of guard over motor cooling fan. Vent openings are necessary for adequate motor cooling. Do not operate motor with fan guard removed.
- 4.32 NEVER TOUCH THE MOVING PARTS.** Never touch moving parts such as tool holders, cutters, diamond plugs, or motor cooling fan, etc.
- 4.33 STOP OPERATION IMMEDIATELY IF ANY ABNORMALITY IS DETECTED.** Stop using machine immediately if any abnormalities are observed during operation. Some examples of abnormalities include unusual noise and vibration.
- 4.34 DO NOT CLEAN PLASTIC PARTS OR MACHINE WITH SOLVENT.** Solvents such as gasoline, thinner, benzene, carbon tetrachloride and alcohol may damage and crack plastic parts, handle grips, electric cords, as well as damage painted surfaces of the machine. Do not clean them with such solvents. Clean plastic parts, electric cords and handle grips with a soft cloth lightly dampened with soapy water. Refer to the MSDS of all substances in and around the machine and follow the appropriate safety guidelines associated with the use/exposure of the substance.
- 4.35 WHEN REPLACING A COMPONENT PART, USE THE SAME TYPE.** When replacing a component part with a new one, use only parts with equal or better operating specifications. Never attempt to repair machine unless you are completely familiar with proper procedures and techniques required.



- 4.36 DO NOT MODIFY MACHINE.** Do not modify machine from its original design without written permission of the manufacturer. Non-authorized modifications can lead to serious injury or death.
- 4.37 SAVE THESE INSTRUCTIONS.** Refer to this operations and maintenance manual frequently and use it to instruct others who may operate the machine.
- 4.38 MAKE SURE OPERATOR CONTROLS ARE WORKING CORRECTLY.** Do not operate the machine if the operator controls are not working correctly. Test the stop, start and emergency stop controls each time you start the machine. If your machine is equipped with a variable speed drive, make sure the speed is set at its lowest speed setting before starting the machine.

5.0 Pre-operation checklist



Figure 2 – Warning label – read and understand manual

- 5.1** Read entire operations and maintenance manual. Be familiar with machine and its parts. See figures 1 through 16.

Figure 3 – Machine components

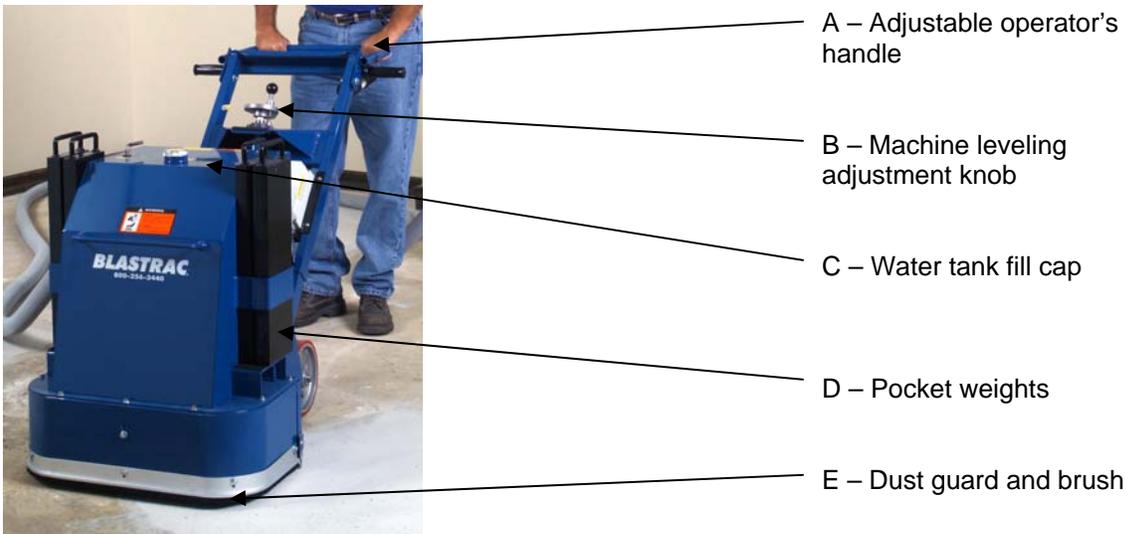
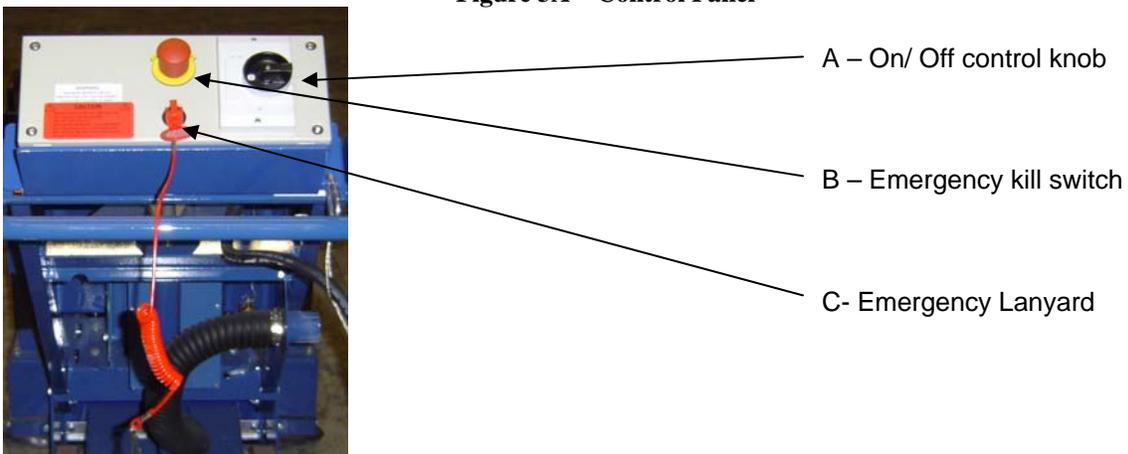


Figure 3A – Control Panel



- 5.2** **Contact with foreign objects could cause machine to rotate violently.** Before operating the machine on any surface it is strongly recommended that you walk the floor, looking for obstructions on the surface. These obstructions could include metal studs, anchor bolts, conduit stubs, electrical outlet boxes, nails, holes and uneven floors caused by cracking and settling. Serious injury to the operator and to the machine could occur if not avoided. Mark these areas clearly so it will be easy for the operator to avoid while running the machine.



- 5.3** **Observe condition of work environment.** Make sure the work environment meets all working conditions discussed in section 4.0, General Safety Guidelines.
- 5.4** **Obtain MATERIAL SAFETY DATA SHEET (MSDS) for all work surface materials.** Refer to the MSDS of all substances in and around the machine and follow the appropriate safety guidelines associated with the use/exposure of the substance. Do not attempt to operate this machine without MSDS information.
- 5.5** **Make sure that the tools are seated and fastened securely in their proper tool holders.** Follow instructions in sections 10.6 and 10.7 for installation and inspection of both diamond plugs and tungsten carbide cutters. Tungsten carbide cutters must be used only with the tungsten carbide holders and diamond plugs must be used only with the diamond plug holders. The tungsten carbide holders that are provided with your machine consist of one (1) left hand holder and one (1) right hand holder to facilitate the counter-rotating operation of the machine. See figure 4. The diamond plug holders are not direction sensitive.



Figure 4 – Warning label – rotating cutter head

- 5.6** **Check to make sure that the electrical connection is correct and secured by a properly rated plug on the machine's electrical cable, which is then plugged into the power source. Maintain an assured ground circuit on all electrical connections, utilizing the machine's green wire in the electrical cable and the grounding circuit at the power source. Follow all applicable codes, such as the National Electric Code.**





- 5.7** **Inspect the machine's electrical cable and plugs daily for cuts or nicks in the outer shield or damage to the plug.** Disconnect power source and replace or repair damaged cords and plugs. When using any electrical extension cord, check to make sure that it is rated for the proper voltage and amperage capacity. Use extension cord of sufficient gauge thickness. See section 4.27 and table 1.
- 5.8** **Check to see that the machine power switch is in the off position, turned completely in the left hand direction, before plugging cord into the power source and the kill switch is in the off (down) position .** Make sure the power plug and receptacle are of the same manufacturer and that they fit securely. Do not operate machine if the receptacle connection is loose.
- 5.9** **Check for missing or loose bolts, nuts and screws.** Tighten loose bolts, nuts and screws and replace those missing. Check for loose or missing parts and tighten or replace them.
- 5.10** **Adjust the machine to a level operating position.** These settings vary based on the tooling being utilized on the grinding heads as well as the weight transfer position that is determined on the use of the front or rear set of wheels. With the machine in the off position. Raise adjustment knob from recess and crank handle to lower the front or rear set of wheels. The machines wheels are installed on a cantilever system. Turning the adjustment handle will result in either set of wheels moving up or down. The operator must turn the handle several turns to determine the direction of the wheel set required. The wheels furthest to the rear of the machine (operator position) is designed for heavy grinding applications. The small set of wheels located toward the front of the machine is designed to lighten the overall weight applied to the grinding heads. The light position is ideal for light grinding, polishing, and some slicing applications. Once wheels touch the ground use reference level located on the right side handle upright to find a level position. If machine is operated in a "non-level position" uneven wear and unneeded stress will occur on moving parts. In some extreme cases of improper adjustment the machine will be difficult to control over work surface. See figure 5.

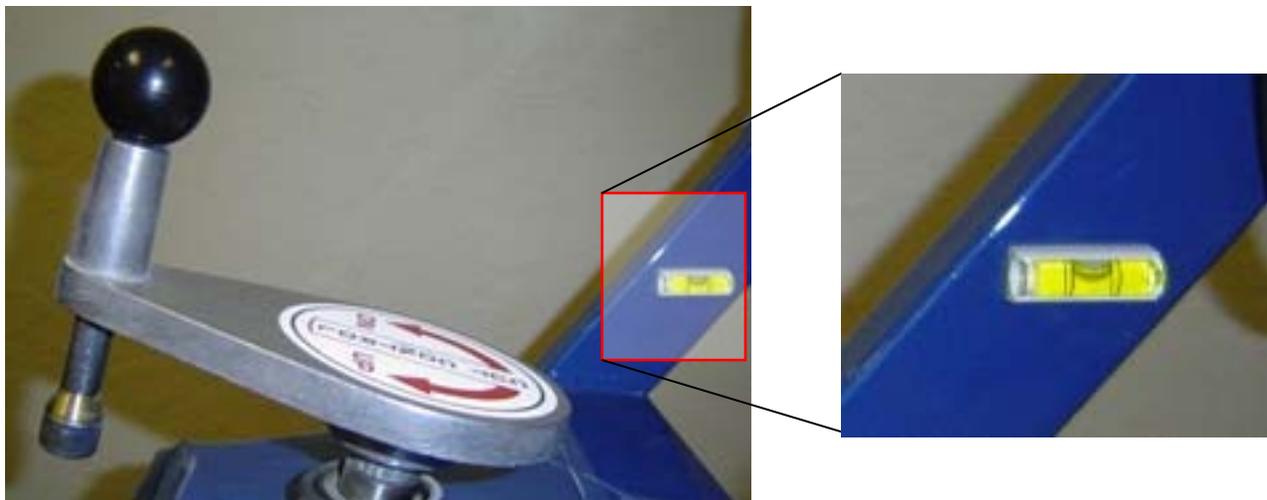


Figure 5 – Handle adjustment components

- 5.11 **Make sure that the machine and grinding equipment are fully in the down position and are contacting the floor before starting the motor.** Adjust dust guard so that it touches the floor. See section 10.2. **In dry grinding/slicing applications, connect machine to an approved dust collection system. See recommendation for dust collector/ vacuum on page 3 of this manual.**
- 5.12 **Secure the machine from moving when starting the motor by gripping handle bar firmly with one hand with safety lanyard attached (recommend left hand). The free hand can than be used to engage the start control.**
- 5.13 **Dress properly. Wear eye, ear, foot and respiratory protection. See section 4, General Safety Guidelines and see figure 6.**
- 5.14



Figure 6 – Warning – flying debris and loud noise, wear eye and ear protection

6.0 Operation

- 6.1 The Blastrac BMG-2500 has the capability to run two types of tools; either diamond /polishing plugs or tungsten carbide cutters.

Tool	Motor rpm	Tool rpm
Diamond plugs	0 – 1450	400 rpm maximum
Tungsten carbide cutters	0 - 1450	400 rpm maximum

Table 2 – Tool speed chart

The machine can be converted to work with either diamond plugs or tungsten carbide cutter tools by switching the tool holders. Follow the directions for switching tool holders and installing the tools as shown in section 10.0, Maintenance and Inspection.



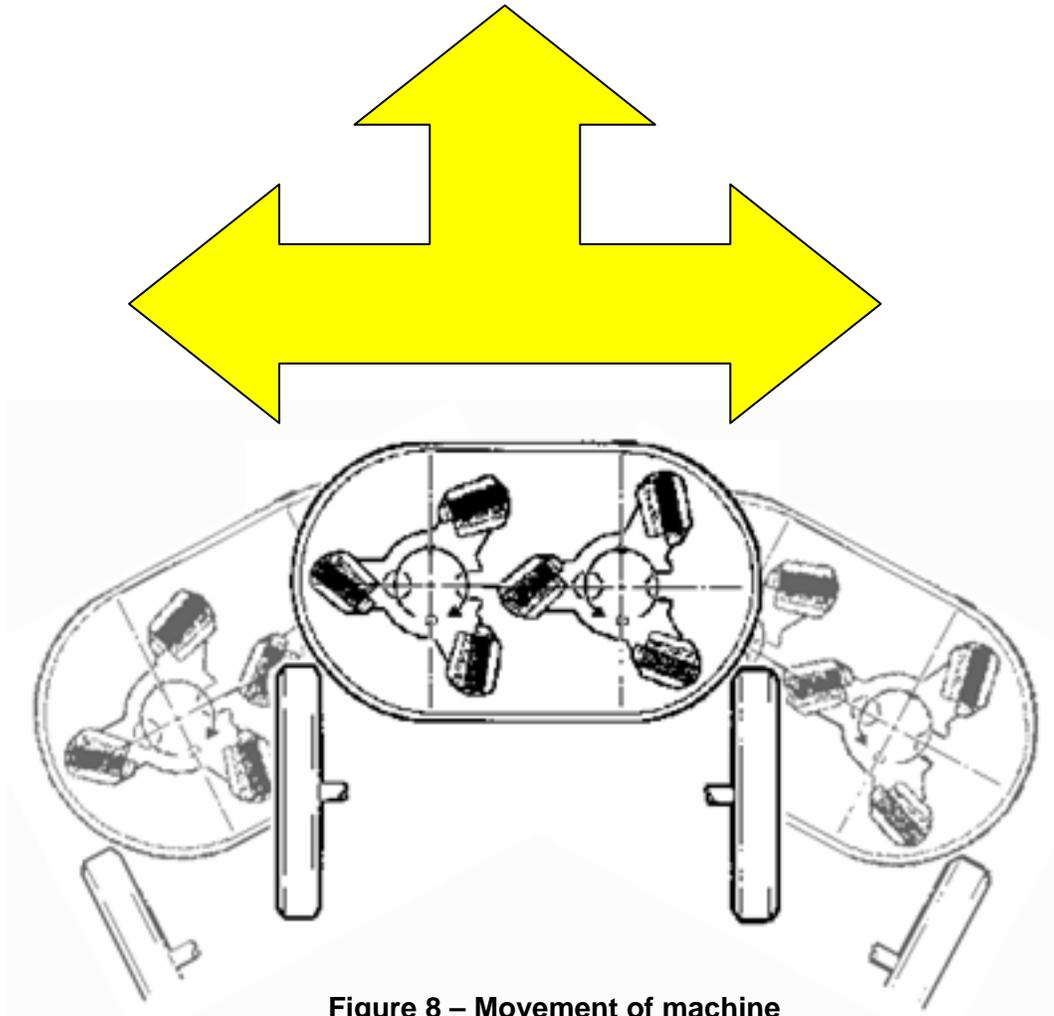
- 6.2 Make sure that you have followed all instructions in sections 4.0 and 5.0 on connecting the machine to power and inspecting the floor area you will be working on for hidden dangers. **In dry grinding/slicing applications, make sure that the machine is connected to an appropriate dust collector system and that the dust collector operation and connection instructions are followed.** See figure 7. Before dry grinding/slicing, turn on the dust collector before operating the Blastrac BMG-2500 and ensure respiratory protection is being worn.



Figure 7 – Connection to dust collector

- 6.3** Make sure the machine is fully contacting the floor and none of the tools are dislodged from their holders. In dry grinding/slicing applications, turn the dust collector on and make sure all hose connections are secure. Hold on to the handle of the machine with one hand and with the other hand, turn the motor start button. Start and stop the machine once to check that all of the tools are secure in their holders and the operator controls are working correctly. Make sure the emergency stop button is operating correctly each time the machine is started. If a tool becomes dislodged, you will hear a clunk noise and you must immediately stop the motor and re-attach the tool. A smooth sound will result from of the tools in their holders. Grasp the handle of the machine with both hands and steady your stance to control the movement of the machine.
- 6.4** The proper method of operating the machine is to swing the machine from side to side in a sweeping motion, while pushing the machine in a forward direction. With this movement, the most productive pattern can be created allowing for greater production capacity and even coverage of the work area. See figure 8. If the machine is left running on one area of the floor too long, it will create a depression in the surface. This result is usually not desired and may require corrective repairs to those areas. The Blastrac BMG-2500 has a unique floating head coupling system that follows the contours of the floor and attacks the high spots first. **It is important to recognize that in order for the machine to remove materials from the low spots on the floor, it must reduce the surrounding higher areas first.** The sweeping side-to-side motion of the machine will help even out the floor. If the floor has severe differences in elevations from high to low areas, the choice must be made to either remove the entire floor down to the low spots or to fill the low areas by other methods or techniques.

Direction of Travel



**Figure 8 – Movement of machine
(Looking down through the Top of the machine)**

7.0 Parts diagram for Blastrac® BMG-2500

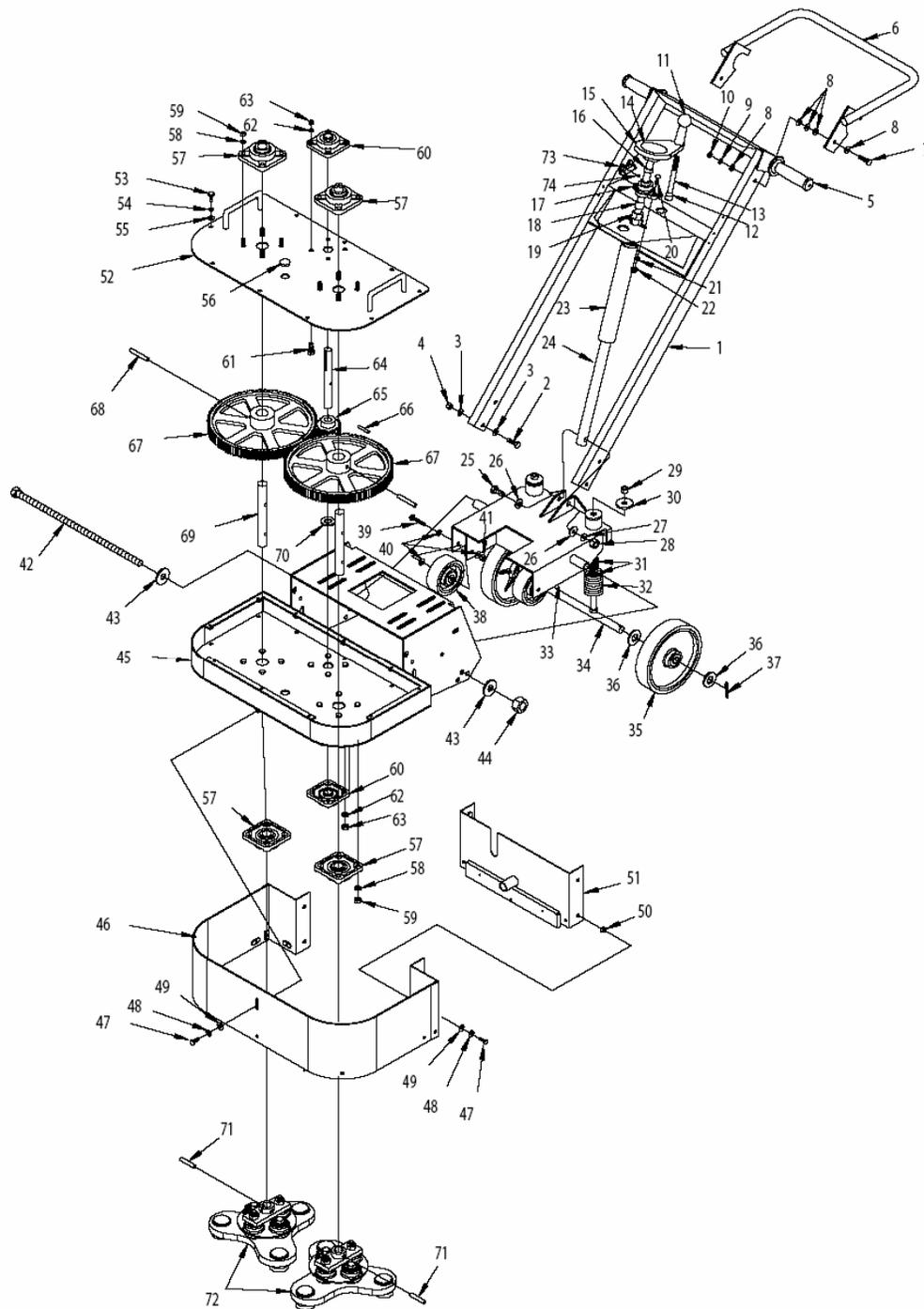


Figure 9.1 – BMG-2500 parts diagram



ITEM #	PART #	DESCRIPTION	QTY.
1	77309	HANDLE BAR	1
2	10029	SCREW, CAP 3/8-24 X 1-3/4	4
3	10025	WASHER, FLAT 3/8	8
4	10004	NUT, LOCK 3/8-24	4
5	61108	GRIP, HAND 1" MODEL SX	2
6	77325	HANDLE EXTENSION	1
7	10030	SCREW, CAP 3/8-24 X 2	2
8	10025	WASHER, FLAT 3/8	8
9	10811	WASHER, LOCK 3/8	2
10	10014	NUT 3/8-24	2
11	14023	KNOB, BALL 1-3/8 W/ 1/2-13THD, BLK.	1
12	50550	SLEEVE FOR 1/2" CAPSCREW, TAPERED	1
13	10346	SCREW, SKT. HD. 1/2-13 X 4-1/2 ZINC	1
14	61106	DECAL, CUT CONTROL - DN/UP (LARGE)	1
15	75004	HANDWHEEL, LARGE W/ 5/8-8 X 16" ROD	1
16	75012	SPACER, HANDWHEEL 5/8" ID X 3/8" L	1
17	80009	BEARING, BALL 5/8" 2-HOLE FLANGE	1
18	55010	SPACER, HANDWHEEL 5/8" ID X 3/4" L	1
19	50008	NUT 5/8-8 ACME	1
20	10412	BOLT, CARRIAGE 1/4-20 X 1 FULL THD.	2
21	10602	WASHER, FLAT 1/4	2
22	10861	NUT, KEPS 1/4-20	2
23	77310	LINKAGE, UPPER SUPPORT	1
24	75006	LINKAGE, CUT CONTROL LOWER	1
25	10343	SCREW, CAP 1/2-20 X 2-1/2	1
26	10312	WASHER, FLAT 1/2	2
27	10045	WASHER, LOCK 1/2	1
28	10072	NUT 1/2-20	1
29	10407	NUT, LOCK 1/2-13	2
30	10312	WASHER, FLAT 1/2	2
31	77329	SPRING, COMP. 7/34" OD X 1.31" FL	4
32	77328	SPRING, COMP. 1.468" OD X 2.5" FL	2
33	77326	CARRIAGE, WHEEL	1
34	77327	AXLE SHAFT	1
35	68008	WHEEL 8 X 1-5/8 X 3/4" BRG., POLY	2
36	10009	WASHER, FLAT 3/4	4
37	10306	PIN, COTTER 3/16 X 1-1/4	2
38	10932	WHEEL 4 X 1-1/2 X 3/8" BRG., POLY	2
39	10393	SCREW, CAP 3/8-24 X 2-1/2	2
40	10025	WASHER, FLAT 3/8	8
41	10004	NUT, LOCK 3/8-24	2

42	77308	BOLT, ALLTHREAD ROD 5/8-11 X 18	1
43	10073	WASHER, FLAT 5/8	2
44	10809	NUT, LOCK 5/8-11	1
45	77311	MAIN FRAME & GEAR CASE	1
46	77330	SKIRT	1
47	10806	SCREW, CAP 5/16-18 X 1	5
48	10801	WASHER, LOCK 5/16	5
49	10213	WASHER, FLAT 5/16	5
50	10113	SPACER, STEEL 9/16OD X 3/8ID X 7/32	2
51	77331	PANEL, VACUUM PORT	1
52	77007	COVER, GEAR CASE	1
53	10018	SCREW, CAP 1/4-20 X 3/4	10
54	10038	WASHER, LOCK 1/4	10
55	10602	WASHER, FLAT 1/4	10
56	10005	PLUG, HOLE 7/8" (CHROME)	1
57	77008	BEARING, BALL 1" 4-HOLE FLANGE, ND	4
58	10450	WASHER, LOCK 7/16	16
59	10481	NUT 7/16-20	16
60	77009	BEARING, BALL 3/4" 4-HOLE FLANGE	2
61	10309	SCREW, CAP 3/8-24 X 1-1/4 PLATED	4
62	10811	WASHER, LOCK 3/8	4
63	10014	NUT 3/8-24	4
64	77011	SHAFT, PINION GEAR 3/4DIA X 7-3/8"L	1
65	77053	GEAR, SPUR 25 TOOTH (PINION)	1
66	10037	PIN, ROLL 1/4 X 1-1/2	1
67	77012	GEAR, SPUR 112 TOOTH (DRIVEN)	2
68	10007	PIN, ROLL 3/8 X 2-1/2	2
69	77013	SHAFT, LARGE GEAR 1"DIA X 7-13/16"L	2
70	10009	WASHER, FLAT 3/4	1
71	10063	PIN, ROLL 3/8 X 2	2
72	77345A	DISC ASSEMBLY (SEE 9.4 FOR DETAIL)	2
73	77342	LEVEL, TUBULAR	1
74	10877	SCREW, CAP STSHW 10-24 X 1/2	2

Figure 9.1 – BMG-2500 parts list

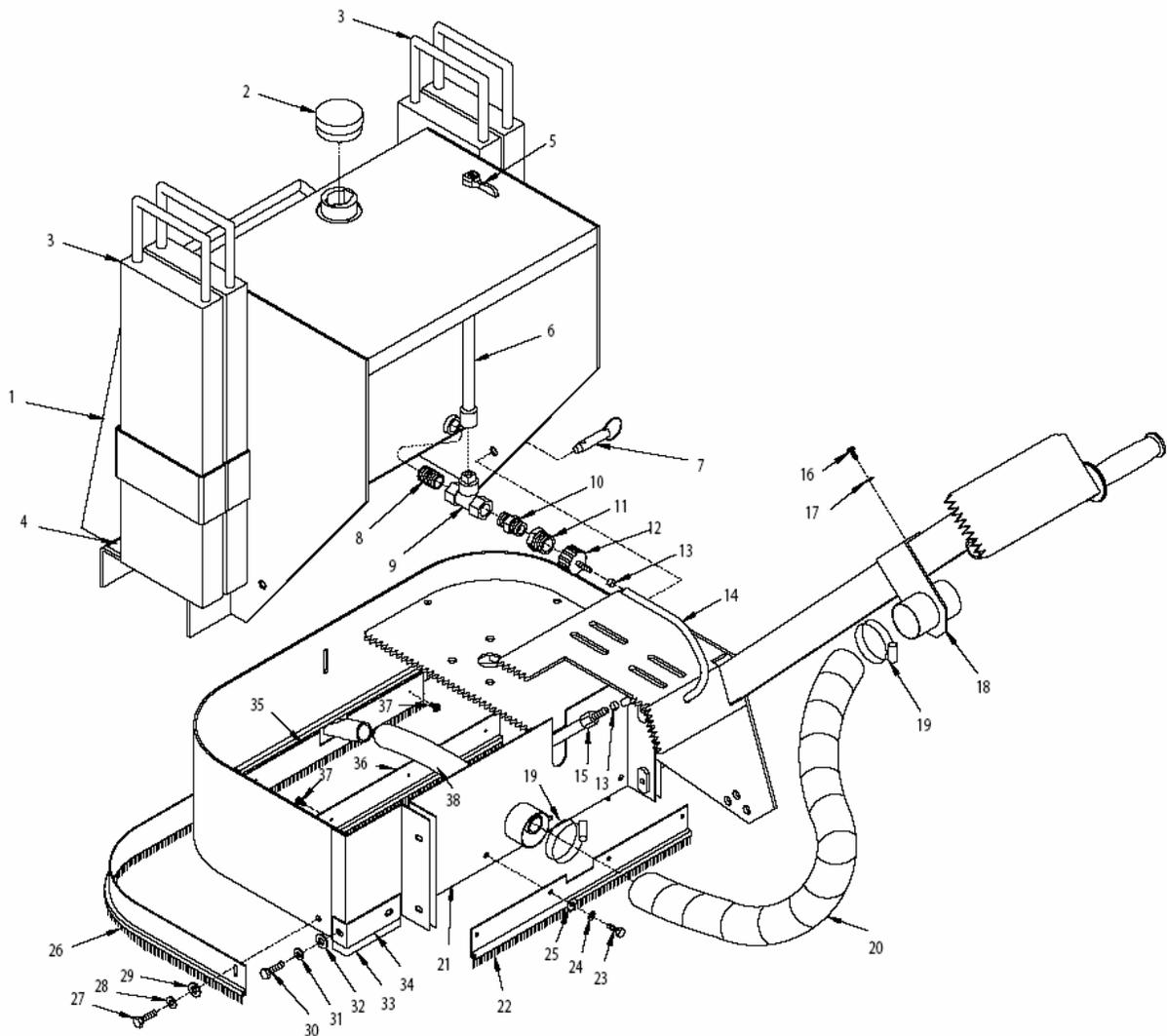


Figure 9.2 – BMG-2500 parts diagram



ITEM #	PART #	DESCRIPTION	QTY.
1	77301	TANK, WATER, 10 GAL. CAPACITY	1
2	61056	CAP, TANK	4
3	77302	WEIGHT, 50 LB.	1
4	77313	PAD, WEIGHT BLOCK	2
5	77312	LEVER, WATER VALVE	1
6	77303	ROD, WATER VALVE LEVER	1
7	10125	PIN, DETENT RING 1/2 X 1-1/2 E.L.	2
8	10728	PIPE NIPPLE, CLOSE 1/2NPT (BLACK)	1
9	77304	VALVE, GAS BALL 1/2 FPT	1
10	10679	NIPPLE, HEX 1/2NPT (BRASS)	1
11	10726	BUSHING, HEX 3/4 X 1/2 NPT (BRASS)	1
12	11570	INSERT, SWVL.FEM. 1/4HOSE X 3/4GHT	1
13	10762	CLAMP, HOSE SPRING-TYPE 3/8" GREEN	2
14	77347	HOSE, PVC 1/4"ID X 13-1/2"L	1
15	40415	BARB, 1/4HOSE X 1/4FPT	1
16	10877	SCREW, CAP STSHW 10-24 X 1/2	2
17	10831	WASHER, LOCK, INT. TOOTH #10	2
18	86307	VACUUM PORT BRKT. 2"	1
19	10766	CLAMP, HOSE, SAE #28, ADJ. TO 2-1/4	2
20	77348	HOSE, FLEX 2"ID X 38"L	1
21	77331	PANEL, VACUUM PORT	1
22	77334	BRUSH EXT., VAC PORT PANEL	1
23	10834	SCREW, CAP 1/4-20 X 1/2	8
24	10038	WASHER, LOCK 1/4	12
25	10602	WASHER, FLAT 1/4	12
26	77332	BRUSH EXT., SKIRT	1
27	10018	SCREW, CAP 1/4-20 X 3/4	4
28	10038	WASHER, LOCK 1/4	4
29	10602	WASHER, FLAT 1/4	4
30	10834	SCREW, CAP 1/4-20 X 1/2	4
31	10038	WASHER, LOCK 1/4	4
32	10602	WASHER, FLAT 1/4	4
33	77340	RUBBER STRIP, SKIRT CORNER	2
34	77339	RETAINING BRKT., SKIRT CORNER	2
35	77336	BRUSH EXT., FRONT VAC CHAMBER	1
36	77337	BRUSH EXT., REAR VAC CHAMBER	1
37	11674	SCREW, CAP STSHW 10-24 X 3/8	6
38	77349	HOSE, RED 1"ID X 1-1/2"OD X 11"L	1

Figure 9.2 – BMG-2500 parts list

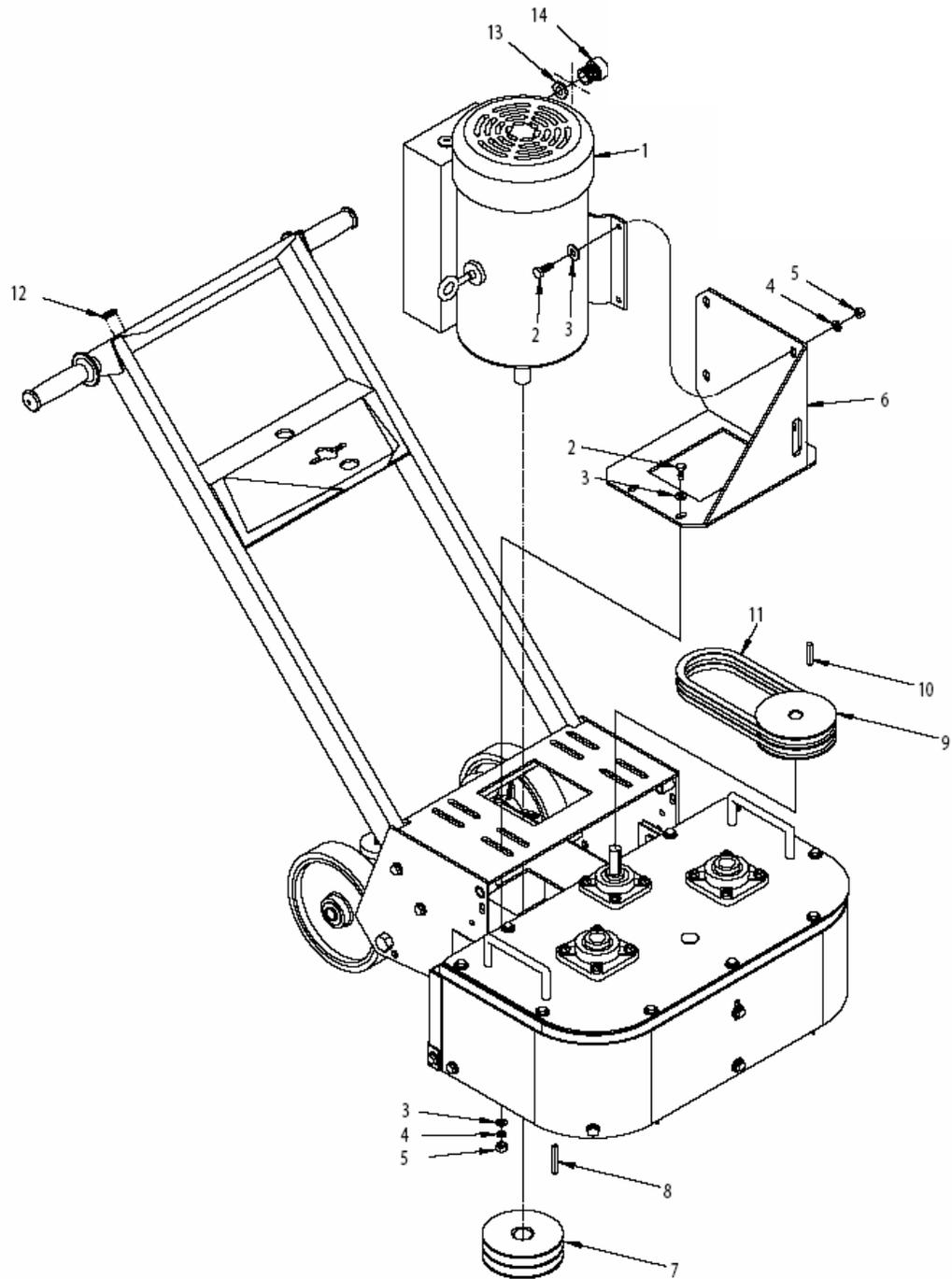


Figure 9.3 – BMG-2500 parts diagram



ITEM #	PART #	DESCRIPTION	QTY.
1	16043	MOTOR, BALDOR 5HP 1PH 60HZ 1725RPM	1
2	10021	SCREW, CAP 3/8-24 X 1	8
3	10025	WASHER, FLAT 3/8	8
4	10811	WASHER, LOCK 3/8	8
5	10014	NUT 3/8-24	8
6	77306	MOUNT, MOTOR	1
7	77341	SHEAVE 5"OD X 2GR.B X 1-1/8"BORE	1
8	10016	KEY 3/16SQ X 1-1/2	1
9	77058	SHEAVE 5"OD X 2GR.B X 3/4"BORE	1
10	10115	KEY 1/4 SQ X 2	1
11	10250	BELT 5L-310	2
12	10005	PLUG, HOLE 7/8" (CHROME)	1
13	10740	CONDUIT LOCK NUT 3/4 NPT	1
14	10605	STRAIN RELIEF 3/4NPT X .650-.750"	1

Figure 9.3 – BMG-2500 parts list

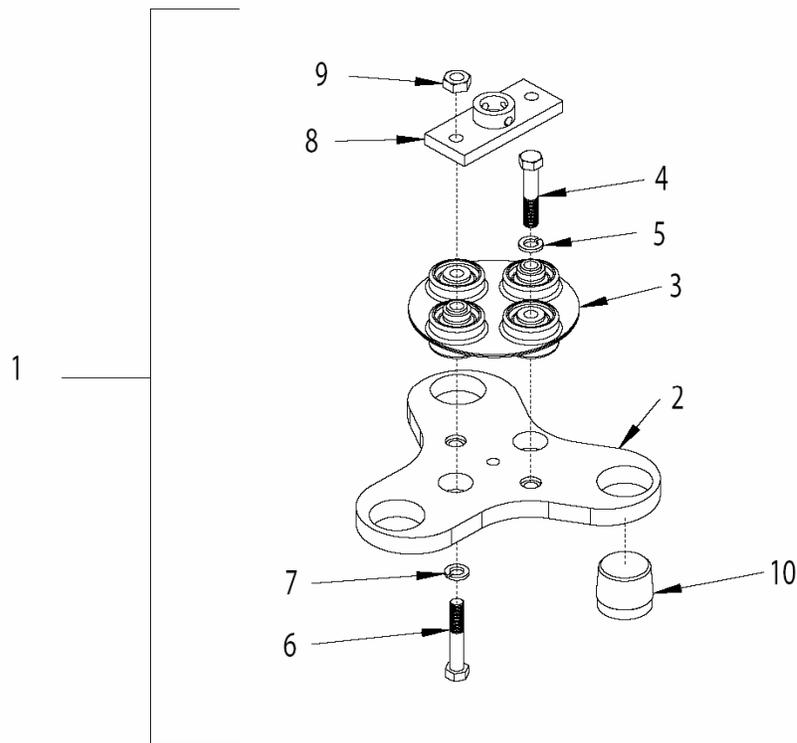


Figure 9.4 – BMG-2500 parts diagram

ITEM #	PART #	DESCRIPTION	QTY.
1	77345A	DISC ASSEMBLY, PLUG HOLDER	1
2	77345	DISC, PLUG STONE	1
3	P001428	COUPLING, MORFLEX 602	1
4	11675	SCREW, CAP 1/2-20 X 2-3/4	2
5	10045	WASHER, LOCK 1/2	2
6	10202	SCREW, CAP 1/2-20 X 3	2
7	10045	WASHER, LOCK 1/2	2
8	77343	FLANGE, DISC ASSY.	1
9	10072	NUT 1/2-20	2
10		DIAMOND PLUG (NOT INCLUDED)	3

Figure 9.4 – BMG-2500 parts list

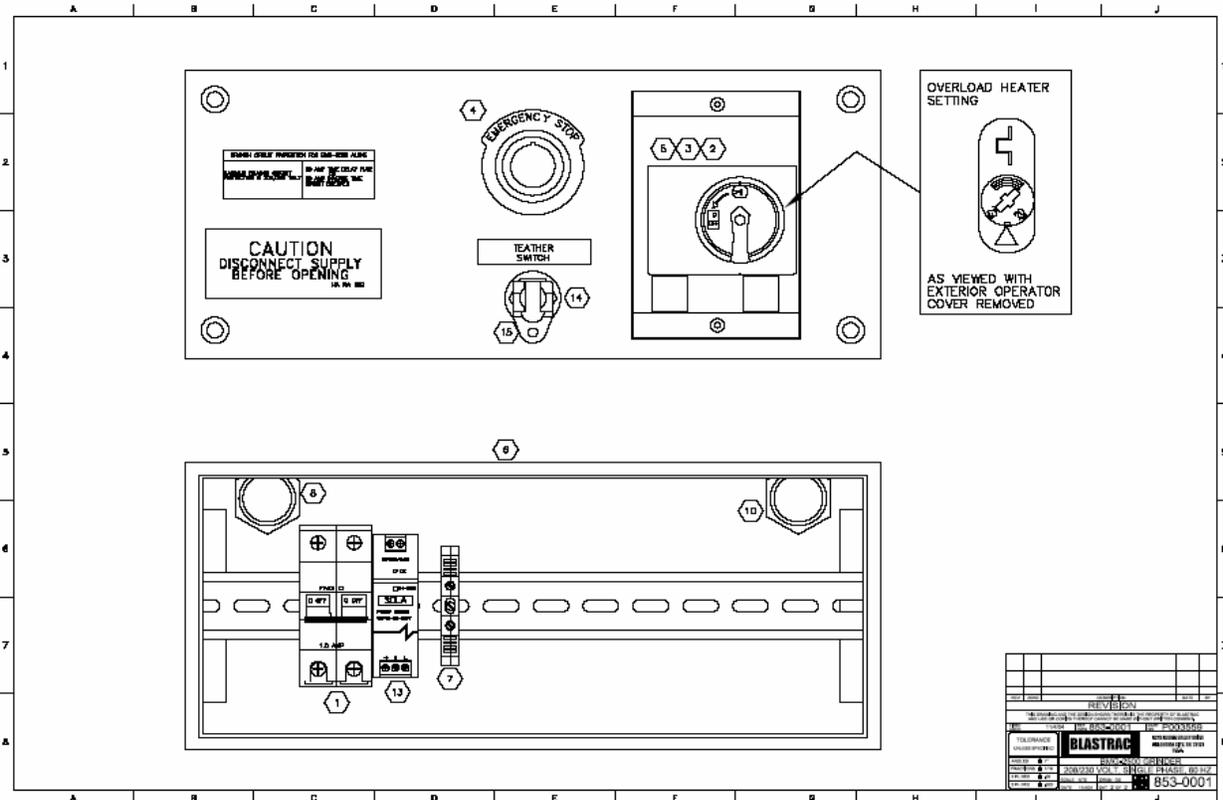


Figure 10.2 – BMG-2500 enclosure detail

ITEM #	PART #	DESCRIPTION	QTY
1	P002024	CIRCUIT BREAKER, 1.0 AMP, TWO POLE	1
2	P003560	SHUNT TRIP, 24VDC HZ, E-STOP COMPONENT	1
3	P003561	MCP/ CIRCUIT PROTECTOR, 20-25 AMP	1
4	P003562	SWITCH, ESTOP, LATCHING, PULL TO RELEASE, 1 NO	1
5	P000340	ENCLOSURE/FLUSH MOUNTING	1
6	P003563	ENCLOSURE, DUST COLLECTOR, 13.78 X 5.91 X 4.75	1
7	717050	TERMINAL/ GRD TERMINAL BLOCK	1
8	P001046	CONNECTOR, 3/4" STRAIGHT, PMA, PN BVND-N043GT	2
9*	P001041	CONDUIT FLEX, 3/4" & PG21, PMA, PN CYLT-23B.50 (PER FOOT)	5
10	P003097	CORD GRIP 3/4" W/LOCK NUT	1
11*	P000424	WIRE, 10AWG, 3 CONDUCTOR TYPE SO	50
12*	714657	STRAIN RELIEF, DOUBLE EYELET, .75 CORD DIA	1
13	P003721	POWER SUPPLY, 24 VDC, 15 W	1
14	P003564	SWITCH, TETHERED LANYARD, PULL TO OPERATE	1
15	P003565	REPLACEMENT LANYARD FOR SWITCH	1
16*	P000329	LINK, QUICK, 5/16, SPRING CLIP	1

* ITEMS NOT SHOWN

Figure 10.2 – BMG-2500 parts list



8.0 Accessories

TUNGSTEN CARBIDE CUTTERS	
6907890	CARBIDE CUTTER- SQUARE
P001026	CARBIDE CUTTER- TRIANGLE
P001429	SQ. CUTTER HOLDER BLOCK WITH HARDWARE
P001027	TRI. CUTTER HOLDER BLOCK WITH HARDWARE
DIAMOND PLUGS	
DP-1PD3040	PLUG/DIAMOND, 30/40 GRIT, SOFT MATRIX
DP-2PD3040	PLUG/DIAMOND, 30/40 GRIT, MEDIUM MATRIX
DP-2PDX1620	PLUG/DIAMOND, 16/20 GRIT, MEDIUM MATRIX, X TYPE
DP-2PD8100	PLUG/DIAMOND, 80/100 GRIT, MEDIUM MATRIX
DP-4PD3040	PLUG/DIAMOND, 30/40 GRIT, HARD MATRIX
DP-4PD8100	PLUG/DIAMOND, 80/100 GRIT, HARD MATRIX
DP-4XPD3040	PLUG/DIAMOND, 30/40 GRIT, EXTRA HARD MATRIX

9.0 Performance chart (concrete surfaces)

BMG-2500 (230V 1 ph.)
(Use with dust collector and appropriate respiratory protection)

Application	Sq. Ft. Per Hour	Tool	Tool Life *	Grit Size **
Adhesive, cut back, carpet glue	250	Tungsten carbide	1-3,000 sq.ft.	
Follow-up diamond cleaning	175	Diamond plugs	15-25,000 sq.ft.**	30/40
Epoxy slicing	100	Tungsten carbide	1-3,000 sq.ft.	
Follow-up diamond cleaning	50	Diamond plugs	15-25,000 sq.ft.**	30/40
membrane and elastomeric coating slicing	75	Tungsten carbide	1-3,000 sq.ft.	
Follow-up diamond cleaning	50	Diamond plugs	15-25,000 sq.ft.**	30/40
Rained on slabs	250	Diamond plugs	15-25,000 sq.ft.**	30/40
Carbon monoxide contaminated slabs	300	Diamond plugs	15-25,000 sq.ft.**	30/40
Thin set underlayment***	250	Diamond plugs	15-25,000 sq.ft.**	30/40

The production rates posted may vary due to job site variations. We do not guarantee these rates. They are approximate rates and should be used accordingly.

* Due to geographic differences in concrete composition, tool life will vary accordingly. Certain areas of the country has higher content of harder materials at the top of the surface.

** Variable grit sizes and matrix hardness available to suit job requirements.

*** Underlayment materials contain high amounts of sand, which will cause shorter diamond plug life.

Table 4 – Performance chart

10.0 Maintenance and inspection

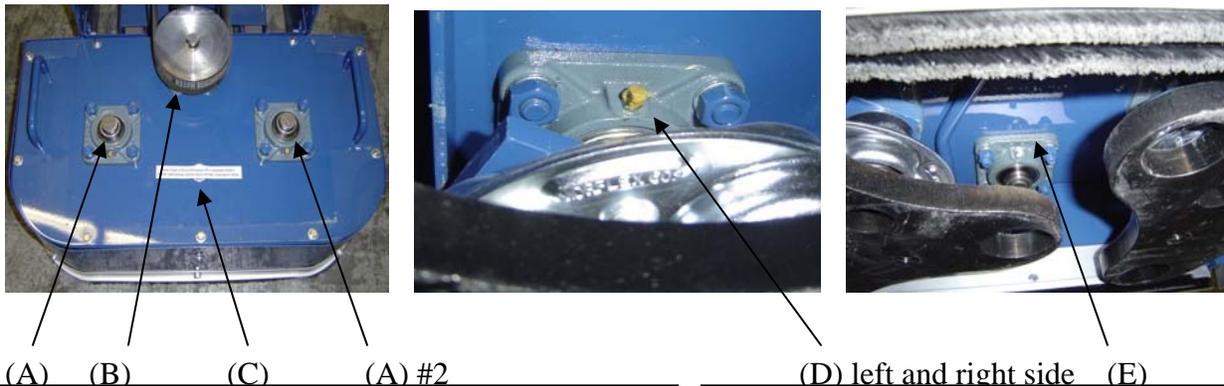


Turn machine off and disconnect power cable from the electrical power supply before performing maintenance and inspection. Never tilt machine back with power supply connected.

10.1 Lubrication

10.1.1 Top/ bottom bearings – gear case Add one (1) full pump stroke from a grease gun to the three (3) grease zerks once every 50 hours of work with Lubriplate No. 630-2, or other good bearing grease.

10.1.2 Main gear case- The gear case of your BMG-2500 has been pre-lubricated at the factory with approximately 3 pounds of Lubriplate, No. 630-2 grease. We recommend continued use of this material. Each grinder has an inspection hole in the gear case top plate to enable you to check the amount of grease in the case. Remove this cover with the end of a screwdriver; if grease is visible do not add any. If you cannot see the grease, add a small amount (1 pound is usually more than enough). Do not overfill. The grease in the gear case should last from three to five years before there is any need to refill or add.



(A) (B) (C) (A) #2

<p>MACHINE TOP GREASE 3 POINTS</p> <p>(A) OUTPUT FLANGE BEARINGS (2) (B) INPUT SUPPORT BEARING (UNDER PULLEY) (C) INSPECTION /GREASE FILL</p>
--

(D) left and right side (E)

<p>MACHINE BOTTOM GREASE 3 POINTS</p> <p>(D) OUTPUT FLANGE BEARINGS (2) (E) INPUT SUPPORT BEARING</p>

Figure 11 – Grease points and grease level

- 10.2 Dust guard adjustment - Check the adjustment of the dust guard height and the condition of the brushes. Correct placement of the dust guard is down all the way to the floor surface.
- 10.3 Gear case maintenance - If you suspect problems with the gears in the gear case, such as out of synchronization tool holder arms, **do not** attempt to repair the machine yourself. Contact Blastrac at 1-800-256-3440 to arrange for factory service to be performed.
- 10.4 Morflex® flexible couplings - Check the attachment bolts weekly for tightness. Loose bolts cause extreme vibration and premature failure of the rubber inserts in the couplings. Both Morflex couplings should be replaced once a year whether you use the machine or not.
- 10.5 **High motor temperatures**



- 10.5.1 Elevated running temperatures are normal for this style motor. Typical running temperatures can be in excess of 165°F. Do not touch motor!



Figure 12 – Warning label – hot surface

- 10.5.2 This machine is equipped with a thermally protected motor starter. This protects the motor against low voltage and overload conditions that could raise the temperature of the motor beyond safe limits.
- 10.6 Changing and inspecting the tungsten carbide cutters and diamond plugs.
- 10.6.1 Friction caused by running this machine over a floor causes heat to build up in the tools and tool holders. Allow them to cool before touching.



Figure 13 – Warning label – hot surface inside

- 10.6.2 Remove the pocket weights from the machine. Tilt machine back to raise bottom of machine off of the floor. Secure machine from moving by blocking wheels. It is recommended to have a second person assist with holding the machine from moving during maintenance.



Serious injury can occur if the machine tips back or forward suddenly! Secure machine and prevent machine from movement.

- 10.7 Installing diamond plugs and tungsten carbide cutter tools



Diamond Plugs

- **Disconnect power source**
- Tilt machine back, allowing the handle to rest on the floor. Secure the machine from moving across the floor or rotating forward to the work surface.
- Check to see that the machine is equipped with two (2) diamond plug holder arms and are secured with mounting bolts. The diamond plug holders are not direction sensitive.
- Insert six (6) diamond plugs, one (1) into each hole and secure them by slightly twisting into position. The plug will be held in place via an interference fit. **All of the diamond plugs must be new or have equal amounts of wear. Running the machine with unequal height plugs will cause damage to the floor and/or machine.**
- Gently raise the handle and lower the machine head down to the floor, being careful not to jolt the machine against the floor.
- Lower the handle to the operating position.



Figure 14 – Tapered Plug holders and location

- 1) Taper bored plug holes (6). Note: holes are tapered. If holders are removed, a visual inspection will allow proper reinstallation. The widest part of the taper should face down.
- 2) When inserting diamond plug insure taper bore is clean. Use a twisting motion to ensure plug seats cleanly. Only hand pressure is required.
- 3) Visually inspect all plugs as they are installed. The holders bored taper and plug body should be clean with no signs of damage. Dings, heavy scratches, and other damage could cause problems with the plug seating entirely in the bore. Look for uneven seating by comparing all six plugs.
- 4) Inspect diamonds during use. Do not wear plugs flush to the holder plate. During some applications plugs should be removed, randomly exchanged, and reinstalled for optimum life.
- 5) Plug removal can usually be performed by tapping the plate near the diamond with a hammer. Do not strike the diamond.

Tungsten Carbide Cutters

The Blastrac BMG-2500 can be converted with optional tool holders for use with tungsten carbide cutters. The machine can be switched from the tool holders for diamond plugs by unbolting them and replacing with the other style accessory plates. Accessory plates on the BMG-2500 are nearly identical. You must verify rotation in order for the carbide inserts to perform properly.

Installation and replacement of tools is accomplished by:

- **Disconnect power source**
- Tilt machine back allowing the handle with weights to come to rest on the floor. Secure the machine from moving across the floor or rotating forward to the work surface.
- Clean mounting surface of the tungsten carbide block holders.
- Mount the tungsten carbide block holders, verifying that they are facing in the right direction. The blocks must be mounted facing the direction of travel. Failure to do so will prevent the proper operation of the machine and will cause damage to the tungsten carbide cutters and holders. Securely tighten the mounting bolts to the block holders. Per figure 15.
- Install the tungsten carbide cutters as shown in figure 15. Using two (2) cutters per block, installed with one in the middle position and one in the outer position, will provide the best general performance. This will allow the machine to clean near to the guard, and therefore nearest to the wall or limits of the floor you are preparing.
- Make sure that the cutters are seated on the blocks properly and that the mounting bolts and nuts are hand tight. This will allow the cutters to flex with uneven floors. Remove any hand tools from the bottom area of the machine.
- Gently raise the handle and lower the machine head down to the floor, being careful not to jolt the machine against the floor.

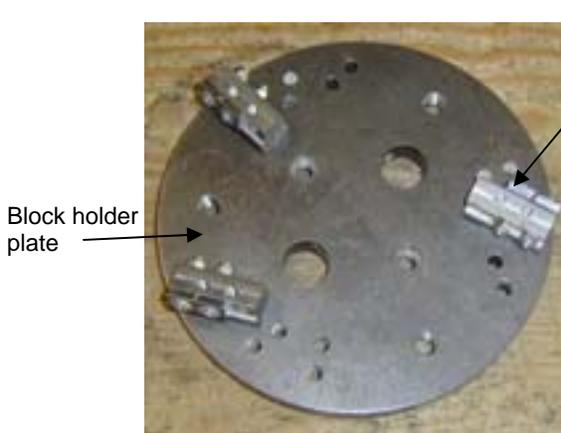


Figure 15 – Holder blocks attached to block holder plate. (Note :) Blastrac has incorporated 3 possible positions for holder block positioning. 90, 67.5, and 45 degree angles allow better functionality in various work conditions. (SEE BELOW)

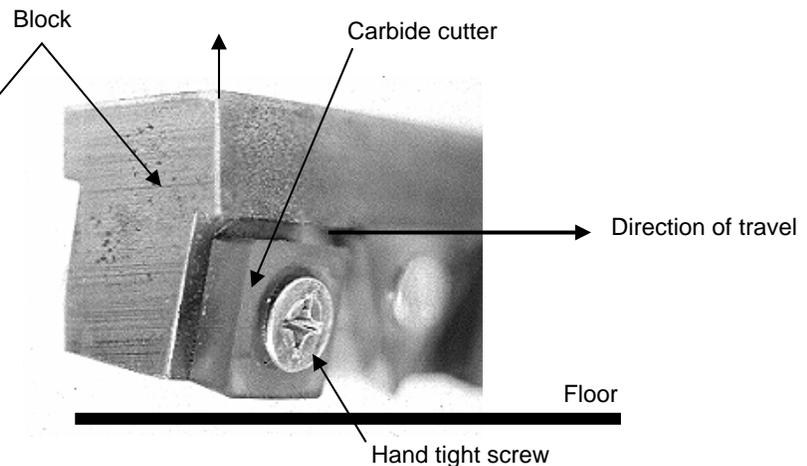


Figure 16 – Square tungsten carbide cutters mounted on holder block

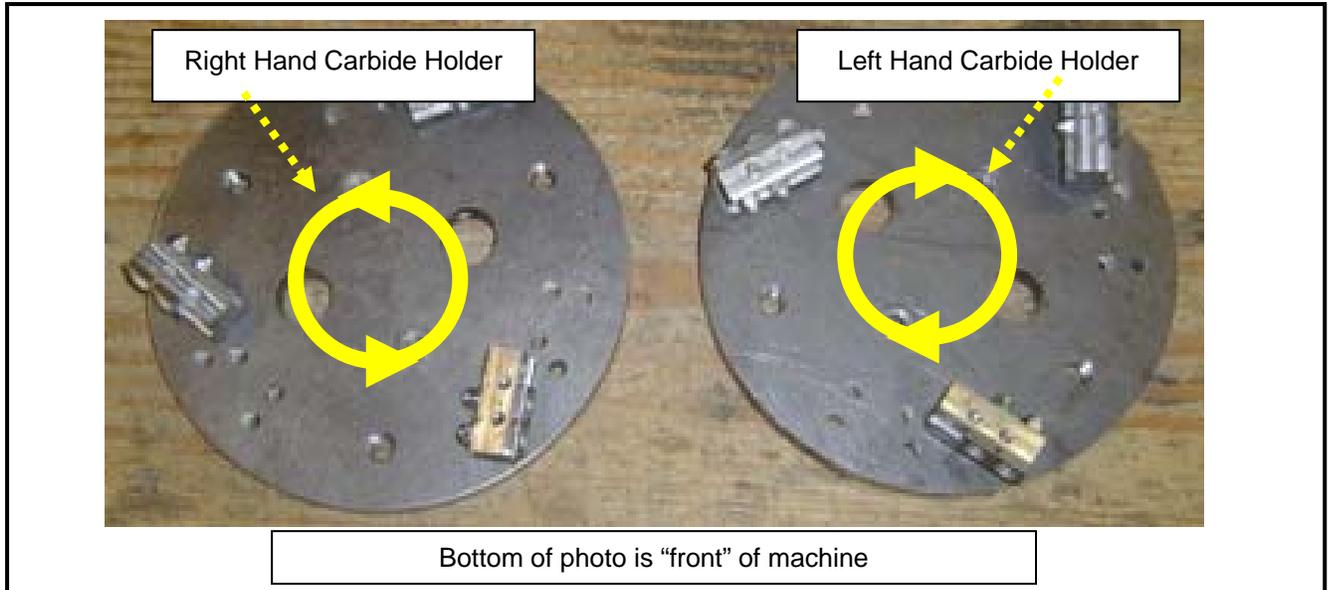
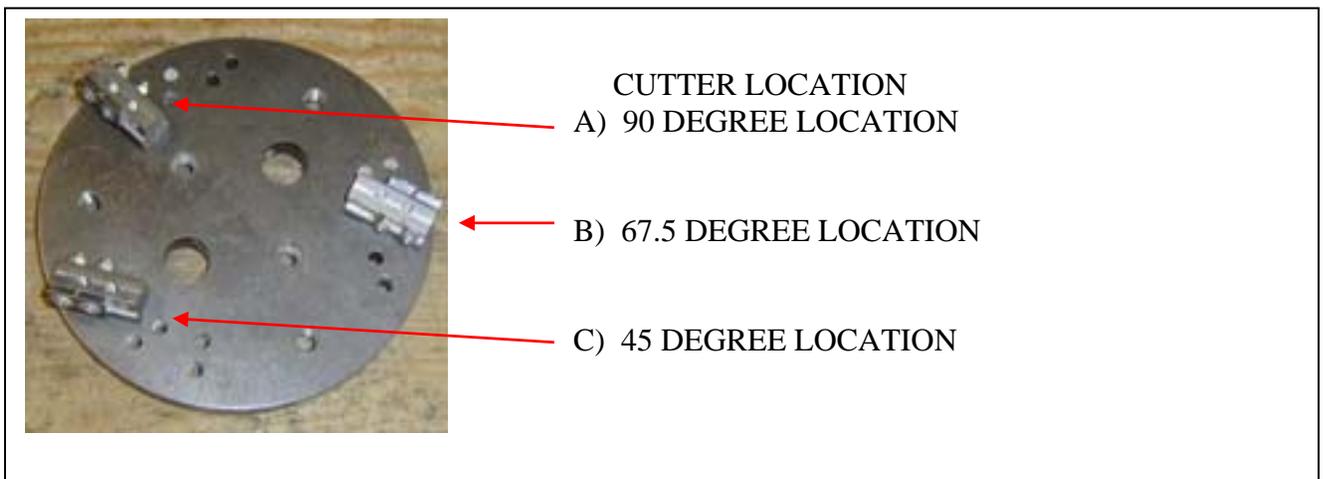


Figure 17 – Photo of bottom of BMG-2500 illustrating proper rotation, proper Carbide Holder, Carbide Holder Block and Cutter placement.

- 10.7.2 Cutter Placement and Adjustment. Carbide placement will vary from application to application. In dryer, more brittle removal applications carbides located in the 90 degree locations may be most effective. In sticker, softer removal scenarios the operator may feel relocation of the holder blocks to the 67.5 or 45 degree locations will have a peeling effect allowing better production. This will also help eject swarf away from the cutting surface.



10.8 Keeping machine clean

10.8.1 After daily use, disconnect the machine from the dust collector and the power source. Tilt the machine back by following the instructions in section 10.6.2.

Follow all safety procedures mentioned in Section 4.0 and throughout this manual when cleaning machine.

Clean the undercarriage with a vacuum and brush, or a water hose fitted with a nozzle. Do not let cement or coating dust build-up in the machine as this could create interference with the movement of the tool holders and overload the machine. Make sure that the exhaust ports and hoses used for dust collection are clean as well.

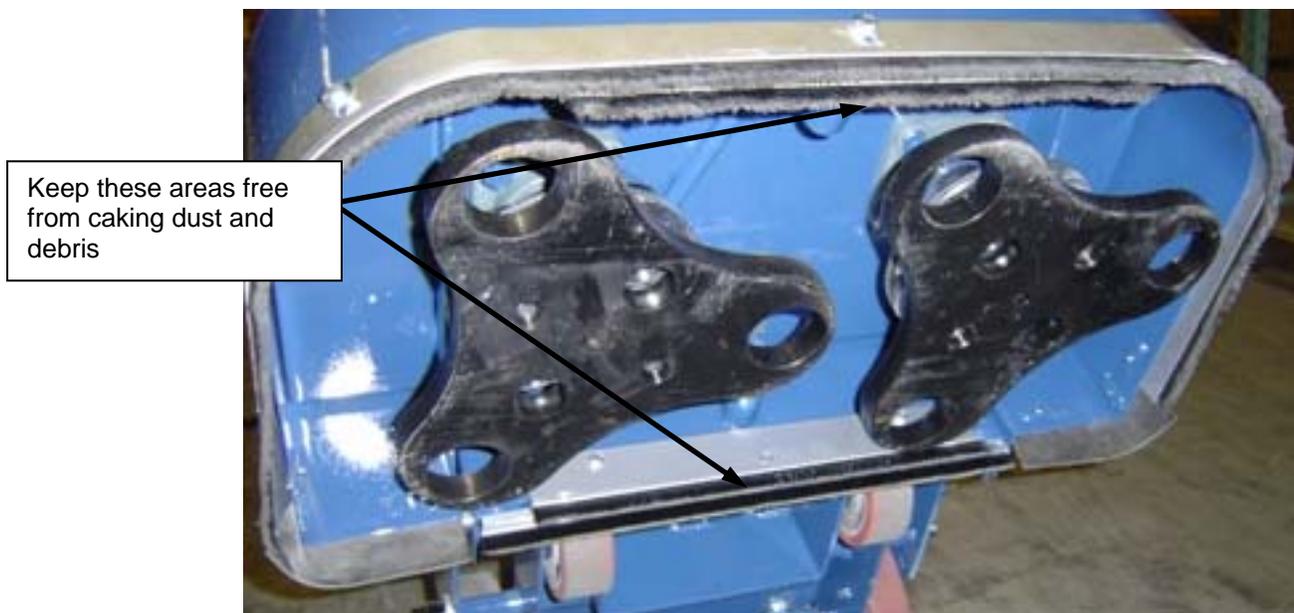


Figure 18 – Clean-out area for vacuum port

10.8.2 Clean off all grease fittings and all grease residues.

10.8.3 During the cleaning of the machine, inspect all components for wear and tear. If you find worn parts, replace them with original Blastrac® parts. Check the bolts on the Morflex® couplings and the bolts and nuts used to hold the holder blocks and cutters in place. Inspect the diamond holder arms for cracks or other damage.

10.9 Transporting Machine - Secure machine by setting the tool area on a piece of plywood or cardboard and strap down machine to a shipping pallet, trailer bed, etc. in the normal upright position. Securing the machine with straps reduces the risk of bouncing the machine and damaging the tools and tool holders.

10.10 Troubleshooting

Use caution when trouble shooting a machine. Machine should have controls set to the off position, power supply should be unplugged and/or locked out.

10.10.1 The BMG-2500 is connected to the power source but the motor will not start. Check to make sure that the voltage at the power source is correct as per the specification in section 2. Check to make sure that the ground wire is secured to an assured grounding circuit with the power source disconnected, check side of the starter box to see if the circuit breaker overload button has been tripped. When you have checked all of these conditions and found them in order, reconnect machine and try restarting while tilting back the machine handle just enough to relieve pressure on the tools. This procedure should be done with caution. Do not lower the tools too fast. Impact of the tool holders to the floor may damage the machine and/or tools.

10.10.2 The BMG-2500 makes excessive noise. Check to make sure that you have followed proper grease additions and maintenance as outlined in section 10.1. If this is not the problem, you could have gear misalignment or damage to the gears. **Do not attempt to disassemble the gearbox. Arrange for service by calling Blastrac at 1-800-256-3440.**

10.10.3 The BMG-2500 will not start up after hitting emergency stop button. The emergency stop button is designed to stay on the off position once activated. Ensure lanyard control is in place and the emergency stop switch has been pulled out to the on or operating position.

11.0 Operating tips

11.1 General tips

11.1.1 Do not attempt to lift or tilt the machine over floor obstructions while the motor is running. Serious injury to the operator and the machine could occur if not avoided.



11.1.2 The machine is supplied with a set of pocket weights that can be used in several ways. Certain types of removal applications will not require the use of these weights. It is best to try running without the weights to see if the machine will remove the floor material. If this doesn't work then add the weights to the holders. Another option would be to place the weights on the handle sidebars, which would reduce the pressure of the machine and tools on the floor. Trial and error is the best way of exploring the options necessary for the variety of removal requirements.

11.1.3 Every time the machine is connected to a different power source correct tool rotation must be confirmed this is especially true for slicing applications. This is best accomplished visually by looking at the cooling fan on top of the motor. Start the motor for a brief moment and then turn it off.

11.2 Diamond plug tools

11.2.1 When running the machine with diamond plugs the motor turning direction is not a concern. The diamond plugs are not sensitive to direction.



11.2.2 **The plugs are hot from friction build-up! Wear appropriate gloves when handling the plugs.** See section 10.6. Switch diamond plugs into different locations in the holder arms every 2 to 3 hours. Move left rotating plugs into the right rotating arms and right rotating plugs into left rotating arms. This will promote even wear on the plugs and helps to clear off any build-up of removed materials.

11.2.3 When removing adhesives, the diamond plugs will heat the surface of the floor and cause the adhesive to build-up over the diamonds. Play sand can be used to clear off this build-up. Simply throw dampened play sand, not dripping wet, on the floor and work the machine over it. Wet sand is heavier and will not be thrown away from the plugs as they work over it. The end result should be clean diamond plugs. If sand is not available, run the machine over bare concrete taking care not to cause excessive removal of the floor.

11.3 Tungsten carbide cutters.

11.3.1 Tungsten carbide cutters come in square and triangle shapes. Each shape has a special tool holder block that must be used. When attaching the square cutters to the block holders, tighten the bolts and nuts hand tight. The square cutters must be able to move slightly to lie flat with the floor.



11.3.2 **Friction causes the cutters, nuts, bolts and holder blocks to become hot. Wear appropriate gloves when handling these components.** After running the cutters over approximately 500 square feet, they will have lost their sharp edge. Loosen the nuts and bolts securing the cutters to the blocks only enough to allow them to be rotated 90 degrees. This will expose another sharp edge on the cutters and can be done four (4) times with each new cutter. Retighten the nuts and bolts hand tight. Triange cutters are only good for (3) turns and will be rotated 120 degrees.

11.3.3 Make sure that the holder blocks are attached to the arms in the proper direction to allow the tungsten carbide cutters to come in contact with the floor. See figures 14 and 15.

11.3.4 To prevent a build-up of removed material that sticks to the cutters and holder blocks, spray the surface of these items with a non-stick cooking spray.



11.3.5 **Water and dish soap create a slippery work surface. Walking on the floor covered by this mixture and the resulting residue from removed material must be avoided until mopped up.** When removing sticky materials like carpet or tile adhesives, sprinkle the surface to be cleaned with a mixture of water and dish soap. This mixture can be made in the water tank and can be metered out according to the need. Start by adding small amounts of soap first, for example ½ cup soap to 1 tank full of water. A thin wet layer should be sufficient. Do not allow puddles of standing liquid to form. The soap will cause the adhesive to lose its ability to stick to itself and the cutters.



12.0 Warranty and service

12.1 Warranty

This document is to be used as a guide in determining warranty policies and procedures for Blastrac® and its products. It is to be used in determining whether a warranty is justified and also as a procedural guide in completing a BLASTRAC warranty claim form.

12.1.1 Warranty Responsibility:

The distributor or the end user **must** prepare a Machine Warranty Information Card when the machine is delivered. Failure to comply will make any and all warranties on this equipment null and void. Credit for warranty repairs will be given only after receipt of the WARRANTY CLAIM FORM, properly completed with all the required details. Submittal details are described later in this document.

12.1.2 Warranty Policy

12.1.2.1 Blastrac warrants its products against defects in material and workmanship under normal and proper use for a period of one hundred and eighty (180) days from the date of delivery; in the case of Rental Fleet Machines, date of assignment to Rental Fleet. Such warranty is extended only to the buyer who purchases the equipment directly from Blastrac or its authorized distributor. This warranty does not include expendable parts such as, but not limited to, plugs, cutters, blades, blast wheels, wear plates, liners and seals.

12.1.2.2 The obligation under this warranty is strictly limited to the replacement or repair, at Blastrac's option, of machines and does not include the cost of transportation, loss of operating time, or normal maintenance services.

12.1.2.3 This warranty does not apply to failure occurring as a result of abuse, misuse, negligence, corrosion, erosion, normal wear and tear, alterations or modifications made to the machine without the express written consent of Blastrac.

12.1.2.4 Warranty request must be submitted in writing within thirty (30) days after failure.

12.1.2.5 Written authorization to return merchandise under warranty must first be obtained from Blastrac.

12.1.2.6 Blastrac reserves the right to inspect and make the final decision on any merchandise returned under warranty.

12.1.2.7 Blastrac offers no warranty with respect to accessories, including but not limited to, engines, motors, batteries, tires and any other parts not manufactured by us but which the original manufacturer warrants.

12.1.2.8 Blastrac reserves the right to make product changes or improvements without prior notice and without imposing any obligation upon itself to install the same on its products previously sold.

12.1.2.9 The above warranty conditions can only be altered by Blastrac. Blastrac must confirm alterations in writing for each specific transaction.



- 12.1.2.10** Blastrac reserves the right to establish specific warranty terms for used or demo machines on an individual transaction basis. Invoices covering such merchandise will clearly state the provisions of the applicable warranty for each specific transaction.
- 12.1.2.11** WE DO NOT AUTHORIZE ANY PERSON, REPRESENTATIVE OR SERVICE OR SALES ORGANIZATION TO MAKE ANY OTHER WARRANTY OR TO ASSUME FOR US ANY LIABILITY IN CONNECTION WITH THE SALE OF OUR PRODUCTS OTHER THAN THOSE CONTAINED HEREIN.
- 12.1.2.12** UNDER NO CIRCUMSTANCES SHALL BLASTRAC BE LIABLE TO CUSTOMER OR ANY OTHER PERSON FOR ANY DIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF ANY WARRANTY OR FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER, INCLUDING WITHOUT LIMITATIONS, DAMAGES FOR ANY LOSS OF GOODWILL, WORK STOPPAGE, OR ANY AND ALL OTHER COMMERCIAL DAMAGES OR LOSSES.
- 12.1.2.13** BLASTRAC MAKES NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE BLASTRAC PRODUCTS SOLD PURSUANT THERETO.

12.2 Customer Service



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Oklahoma City, Oklahoma 73121
1-800-256-3440

www.blastrac.com

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