Slugger® USA5

Slugger® Portable Magnetic Drilling Machine

OPERATOR'S MANUAL

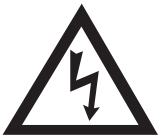
⚠ WARNING!

BEFORE USE, BE SURE EVERYONE USING THIS MACHINE READS AND UNDERSTANDS ALL SAFETY AND OPERATING INSTRUCTIONS IN THIS MANUAL.

EYE PROTECTION REQUIRED

HEARING PROTECTION REQUIRED

NEVER PLACE FINGERS NEAR CUTTING AREA OR MACHINE ARBOR



LINE VOLTAGE PRESENT

BEWARE OF ROTATING MACHINE PARTS

United States Patent #5,415,503 other patents pending.

MODEL #18066 (120V) OR #18080 (220V)

Serial # _____ Date of Purchase _____

Slugger® Portable Magnetic Drilling Machine

Congratulations on your purchase of a Slugger® portable magnetic drilling machine. Slugger® drilling machines are designed to deliver fast, efficient hole drilling performance in portable applications. Please take a moment to complete and mail your product warranty registration card. Doing so will validate your machine's warranty period and ensure prompt service if needed. Thank you for selecting a Slugger® product from Jancy Engineering Inc.™

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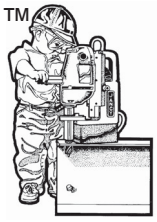
LIMITED WARRANTY

Jancy Engineering Inc.™ will, within one (1) year from the original date of purchase, repair or replace any goods found to be defective in materials or workmanship, provided the product warranty registration card has been returned to Jancy Engineering Inc.™ within thirty (30) days of purchase date. This warranty is void if the item has been damaged by accident, neglect, improper service or other causes not arising out of defects in materials or workmanship. This warranty does not apply to machines and/or components which have been altered, changed, or modified in any way, or subjected to use beyond recommended capacities and specifications. Electrical components are subject to respective manufacturers' warranties. All goods returned defective shall be returned prepaid freight to Jancy, which shall be the buyer's sole and exclusive remedy for defective goods. In no event shall Jancy Engineering be liable for loss or damage resulting directly or indirectly from the use of merchandise or from any other cause. Jancy Engineering is not liable for any costs incurred on such goods or consequential damages. No officer, employee or agent of Jancy is authorized to make oral representations of fitness or to waive any of the foregoing terms of sale and none shall be binding on Jancy.

JANCY ENGINEERING RESERVES THE RIGHT TO MAKE
IMPROVEMENTS AND MODIFICATIONS TO DESIGN WITHOUT PRIOR NOTICE.



IMPORTANT SAFETY INSTRUCTIONS

⚠ WARNING!

WARNING Read all safety warnings and all instructions. *Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.*

Save all warnings and instructions for future reference.
The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1. Work Area Safety

a) Keep work area clean and well lit. *Cluttered or dark areas invite accidents.*

b) Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. *Power tools create sparks which may ignite the dust or fumes.*

c) Keep children and bystanders away while operating a power tool. *Distractions can cause you to lose control.*

d) Secure work. Use clamps or a vise to hold work. *It's safer than using your hand and it frees both hands to operate tool.*

2. Electrical safety

a) Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. *Unmodified plugs and matching outlets will reduce risk of electric shock.*

b) Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. *There is an increased risk of electric shock if your body is earthed or grounded.*

c) Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

d) Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. *Damaged or entangled cords increase the risk of electric shock.*

e) When operating a power tool outdoors, use an extension cord suitable for outdoor use. *Use of a cord suitable for outdoor use reduces the risk of electric shock.*

f) If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) or residual current device (RCD) protected supply. *Use of a GFCI or RCD reduces the risk of electric shock.*

3. Personal safety

a) Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. *A moment of inattention while operating power tools may result in serious personal injury.*

b) Use personal protective equipment. Always wear eye protection. *Protective equipment such as dust masks, non-skid safety shoes, hard hats or hearing protection used for appropriate conditions will reduce personal injuries.*

c) Prevent unintentional starting. Ensure the switch is in the "OFF" position before connecting to power source and/or battery pack, picking up or carrying the tool. *Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.*

d) Remove any adjusting key or wrench before turning the power tool on. *A wrench or key left attached to a rotating part of the power tool may result in personal injury.*

e) Do not overreach. Keep proper footing and balance at all times. *This enables better control of the power tool in unexpected situations.*

f) Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. *Loose clothes, jewelry or long hair can be caught in moving parts.*

g) If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. *Use of dust collection can reduce dust-related hazards.*

4. Power tool use and care

a) Do not force the power tool. Use the correct power tool for your application. *The correct power tool will do the job better and safer at the rate for which it was designed.*

b) Do not use the power tool if the switch does not turn it on and off. *Any power tool that cannot be controlled with the switch is dangerous and must be repaired.*

c) Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories or storing power tools. *Such preventative safety measures reduce the risk of starting the power tool accidentally.*

d) Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate power tool. *Power tools are dangerous in the hands of untrained users.*

e) Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. *Many accidents are caused by poorly maintained power tools.*

f) Keep cutting tools sharp and clean. *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*

g) Use the power tool, accessories and tools etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. *Use of the power tool for operations different from those intended could result in a hazardous situation.*

h) Check for damaged parts. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check alignment of moving parts, binding of parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center.

5. Service

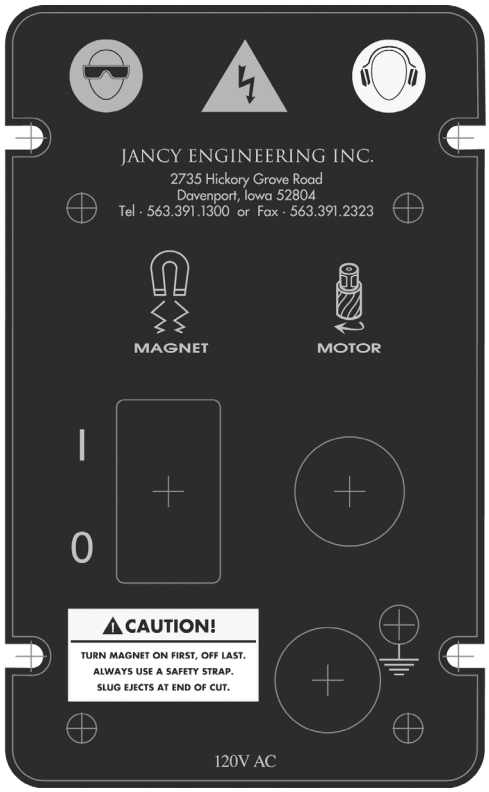
a) Have your power tool serviced by a qualified repair person using only identical replacement parts. *This will ensure that the safety of the power tool is maintained.*

SPECIAL INSTRUCTIONS

1. If you require an additional manual, please contact Jancy Engineering at (563) 391-1300 for a FREE copy.
2. Never place hands, fingers, gloves or clothing near cutting area or rotating machine parts.
3. Always disconnect machine from power source before changing cutters, clearing chips, refilling lubricant or performing adjustments.
4. Keep all safety features functioning and working properly.
5. Never wear loose clothing, gloves or jewelry when working near cutting area or rotating machine parts.
6. Always use eye and hearing protection.
7. Always use safety strap and chip guard provided with machine.
8. Always use proper tooling. Keep cutters securely fastened.
9. Do not use dull or broken cutters.
10. Do not use Slugger® drilling machines on surfaces or materials being welded. Doing so can damage the machine's electrical components.
11. Beware of slugs ejected at end of cut. They become HOT during the cut.
12. Magnet will not hold properly on thin materials or rough and dirty surfaces.
13. Keep bottom of magnet burr free and clear of chips and debris.
14. To reduce the risk of electrical shock, do not use machine in wet or damp areas.
15. Do not remove or alter electrical panels. Use only authorized service centers for repairs.
16. Motor will not start on non-ferrous materials.

⚠ WARNING!

DO NOT OPERATE MACHINE IF WARNING AND/OR INSTRUCTION LABELS ARE MISSING OR DAMAGED.
CONTACT JANCY ENGINEERING FOR REPLACEMENT LABELS.



GROUNDING INSTRUCTIONS

⚠ WARNING!

Improperly connecting the grounding wire can result in the risk of electrical shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with tool. Never remove the grounding prong from the plug. If the cord or plug is damaged, have it repaired before using. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician. The USA5 must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in Figure A.

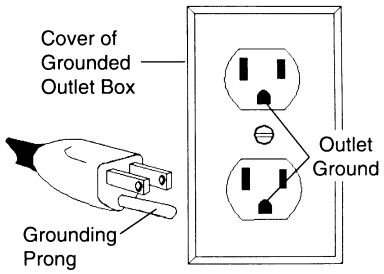


Fig. A

⚠ WARNING!

DO NOT USE SLUGGER® DRILLING MACHINES ON SURFACES OR MATERIALS BEING WELDED. DOING SO CAN RESULT IN PERSONAL INJURY AND/OR DAMAGE TO THE SLUGGER® DRILLING MACHINE.

EXTENSION CORDS

Use only 3-wire extension cords that have 3-prong grounding-type plugs and 3-pole receptacles that accept the tool's plug. Replace or repair damaged cords. Make sure your extension cord is in good condition. 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 resulting in loss of power and overheating. Jancy recommends using a minimum 12 gauge extension cord not to exceed 100 feet. The table below is supplied only as a guide to minimum gauge for extension cords, where the smaller the gauge number, the heavier the cord.

MINIMUM GAUGE FOR EXTENSION CORDS				
VOLTS	TOTAL LENGTH OF CORD IN FEET			
120V	0-25	26-50	51-100	101-150
240V	0-50	51-100	101-200	201-300
AMPERAGE				
0-6	18	16	16	14
6-10	18	16	14	12
10-12	16	16	14	12
12-16	14	12	NOT RECOMMENDED	
RECOMMENDED WIRE GAUGE				

NOTE: JANCY RECOMMENDS USING A MINIMUM 12 GAUGE EXTENSION CORD NOT TO EXCEED 100 FEET.

DRIP LOOP: To help prevent cutting fluids from traveling along power cord and contacting power source, tie a drip loop in power cord as shown in Figure B.

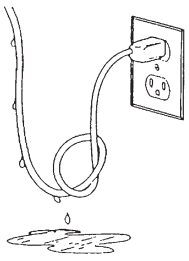


Fig. B

GUIDELINE FOR USA5 SHIFT LEVER POSITION

Cutter Diameter	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4	1 7/8	2	2 1/8	2 1/4	2 3/8
Based on A-36 Steel																
Hi (340 rpm)																
Low (180 rpm)																

CONTENTS OF PACKAGE

Remove all contents from packaging and inspect to ensure no damage was incurred during shipping. Your USA5 package should also include the following:

DESCRIPTION	PART #	QTY
OPERATOR'S MANUAL	LIT104	1
PRODUCT DVD	LIT032	1
WARRANTY CARD	0070342	1
3/16" PILOT, 1" DEPTH OF CUT	16001	1
3/16" PILOT, 2" DEPTH OF CUT	16002	1
1/4" PILOT, 1" DEPTH OF CUT	16003	1
1/4" PILOT, 2" DEPTH OF CUT	16004	1
1/4" PILOT, 3" DEPTH OF CUT	16005	1
3/8-24 X 5/16" FPSSS	UH1474	3
3/16" HEX WRENCH	UH8013	1
3/16" T-HANDLE HEX WRENCH	UH8014	1
4MM HEX WRENCH	UH8002	1
SPOKE HANDLE	0151333	3
SAFETY STRAP	U11005	1
PIPE HANDLE	0010224	1
PIPE HANDLE ADAPTER	0010225	1
MAGNET WARNING NOTICE	0107D0C	1
SHUNT (ATTACHED TO HANDLE)	UH5335	1
SHUNT INSTRUCTIONS	U14102	1

GETTING STARTED

⚠ CAUTION!

ALWAYS DISCONNECT USA5 FROM POWER SOURCE BEFORE MAKING ADJUSTMENTS.

NOTE: The item numbers found below in parentheses refer to the images on page 12.
Assemble three spoke handles (item #18) to hub pinion shaft (item #17). NOTE: Feed hub assembly is mounted on right side of machine frame. If necessary, it can be reversed for lefthand operation by simply removing the fastener (item #29) and sleeve (item #30) from frame. Remove hub pinion shaft from right side of frame and insert it into left side of frame. Replace sleeve and fastener into frame and tighten securely. Thread pipe handle (item #2) into motor housing. The control panel (item #27) may also be reversed from left to right side of machine if desired. Remove screws (item #19) holding control panel and side cover plate (item #20) next. Remove side cover plate and control panel, then disconnect magnet and motor pin connections when removing control panel. Move control panel to opposite side of frame. Reconnect magnet and motor pin connectors and secure control panel assembly using four screws (item #19). Replace side cover plate, making sure warning instructions are visible.

WHAT YOU SHOULD KNOW BEFORE YOU DRILL

1. Type of material to be drilled, Brinnell or Rockwell hardness, material thickness and position should all be determined to ensure proper selection of Slugger® cutting tools, RPM, coolant and drilling time.
2. Remove any excessive mill scale or rust from surface to be drilled.
3. When drilling materials under 3/8" thick, an additional steel plate may be required to achieve proper magnet adhesion.
4. Material that has been flame cut may have become heat-treated and therefore difficult to drill. Avoid drilling near such areas whenever possible.
5. Drilling with the USA5 in horizontal positions requires a special lubrication for Slugger® cutters. Consult Jancy Engineering for details.

BEFORE THE CUT

1. Select correct pilot pin and place in cutter shank from the rear. Align flats on cutter shank with arbor body set screws. Insert cutter in arbor body.
2. Tighten set screws securely on cutter shank flats. **NOTE:** Set screws should be recessed in arbor body when tight.
3. The surface you are working on should be clean, flat and free from rust, scale, dirt and chips.
4. Determine correct cutting speed for application. Move gear box shift lever by lifting outward then repositioning to desired speed.

⚠ CAUTION!

NEVER CHANGE GEARS WITH MOTOR RUNNING. DOING SO CAN RESULT IN PERSONAL INJURY AND/OR DAMAGE TO THE MACHINE.

5. Place Slugger® machine on workpiece with pilot pin over the center of hole to be drilled.
6. Connect machine to power source.
7. Lower Slugger® cutter to surface of material to be cut. Coolant will be released down the pilot into center of Slugger® cutter. Coolant flow can be stopped by lifting pilot pin off work surface or by using coolant valve. **NOTE:** Be sure coolant valve is open. Regulate coolant flow by adjusting coolant valve on left side of mainframe.

⚠ CAUTION!

ALWAYS USE SAFETY STRAP. FAILURE TO DO SO COULD RESULT IN PERSONAL INJURY AND/OR DAMAGE TO THE SLUGGER® DRILLING MACHINE.

8. The safety strap must be securely fastened to machine and around work being drilled. Loop strap around work piece and connect strap ends by attaching to D-rings on drill. **NOTE:** Safety strap is intended only to restrain the drill to the work piece in the event of a power failure to the magnetic base.
9. Position chip guard toward work area before drilling.

READY TO MAKE THE CUT

⚠ CAUTION!

POSITION CHIP GUARD TOWARD WORK AREA BEFORE DRILLING.

1. Move magnet switch to "ON" position. Switch will illuminate to indicate power is present–magnetic base should be firmly secured to workpiece at this time. Thin materials may require an additional steel plate to achieve proper magnet adhesion.
2. Start drill motor by depressing green motor "ON" button.
3. Advance cutter into material using the feed handles until Slugger® cutter has established an external groove in the material. During the remainder of cut apply smooth constant pressure without overloading motor. **NOTE:** Slugger® cutters are designed for uninterrupted cutting. Chips are evacuated during the cut. Do not peck drill when using Slugger® cutters.

⚠ CAUTION!

IF DRILL MOTOR SHOULD STALL OR STOP BEFORE A COMPLETE CUT IS MADE, ALWAYS REMOVE CUTTER FROM HOLE BEFORE ATTEMPTING TO RESTART MOTOR. FAILURE TO DO SO COULD RESULT IN PERSONAL INJURY AND/OR DAMAGE TO THE SLUGGER® DRILLING MACHINE AND CUTTER. NOTE: THIS MACHINE'S CIRCUITRY WILL AUTOMATICALLY SHUT THE DRILL MOTOR OFF IF MAGNETIC BASE IS SEPARATED FROM ITS WORK SURFACE. IF YOUR MACHINE REQUIRES ADJUSTMENT, CONTACT JANCY'S SERVICE DEPARTMENT.

AFTER THE CUT

1. After Slugger® cutter has finished the cut, the "slug", or uncut center portion of material, will be expelled when motor is returned to the full up position.
2. Return machine into full upright position and depress red motor "OFF" button, wait until motor completely stops.
3. Move magnet switch to "OFF" position when ready to release magnetic base from work surface.

BASIC TROUBLESHOOTING

1. Magnetic base not holding securely
   - •Material is too thin to engage magnet.
   - •Surface of material being drilled must be free of chips, debris, rust and mill scale.
   - •Size of cutter exceeds machine's rated capacity.
   - •Check magnet face for unevenness, nicks and burrs.
   - •Welding equipment connected to material being drilled.

2. Drill motor running, arbor and spindle not turning
   - •Possible sheared spindle key.

3. Motor slows when drilling
   - •If an extension cord is being used, see page 6 for recommended wire gauges and cord lengths.
   - •Excessive downfeed pressure during drilling cycle will cause motor to slow and overheat.
   - •Cutting tool needs to be resharpened.

4. Coolant system not working
   - •Coolant system is gravity dependent. Machine must be in an upright position to operate properly.
   - •Check operation of coolant valve. Valve must turn freely.
   - •Check coolant lines for blockage.
   - •Dirt or debris in coolant tank.
   - •Consistency of coolant mixture too thick.
   - •Incorrect pilot pin being used.
   - •Vent hole in coolant tank lid blocked.

5. Slugs not ejecting from cutter
   - •Lack of coolant causing slugs to expand in cutter bore.
   - •Incorrect pilot pin being used.
   - •Possible broken internal arbor parts.

6. Breaking cutters
   - •Coolant must be supplied to interior of cutter.
   - •Excessive feed pressure being applied when cutter initially contacts work surface.
   - •Confirm material hardness.
   - •Drilling stacked materials with incorrect cutter.
   - •Dull cutters; dull or chipped cutting edges require excessive feed pressure, resulting in breakage.
   - •Excessive arbor runout–see regular maintenance on page 10.
   - •Possible bent motor spindle or worn arbor sleeve.
   - •Improperly adjusted motor slide–see page 10.

7. Oversized or rough holes
   - •Insufficient coolant.
   - •Excessive feed pressure.
   - •Dull cutter.
   - •Worn support bracket roller bearing or arbor body sleeve.
   - •Bent motor spindle.
   - •Motor slide improperly adjusted.

REGULAR MAINTENANCE

1. The motor slide may become loose and require adjustment after the machine has been in service. Refer to parts breakdown and become familiar with the USA5 parts. Locate motor slide cover plate (item #31 on page 13) and adjustment screw (item #8 on page 14). Using the 3 spoke feed handles, position motor and slide assembly in the full up position. Insert supplied 5mm hex key through slide cover plate access hole. Using the hex key turn adjustment screw (item #8) clockwise to increase slide tension or counter-clockwise to decrease slide tension. Do not over tighten adjustment screw. Excessive slide tension can damage the USA5. Properly adjusted, the motor and slide assembly should have no side to side movement and remain in position without drifting down.

2. Keep bottom of magnet clean, free of chips, burrs, nicks, oil and other contaminants. Inspect magnet face to ensure surface is flat and square. A worn magnet surface dramatically reduces magnetic holding force.

3. Periodically lubricate motor slide ways with lithium base grease.

4. Routinely grease zerk (item #23) on arbor support bracket.

5. Visually inspect arbor, sleeve and support bracket for wear.

6. Arbor runout should not exceed .0035 inches per revolution. This is most accurately measured by placing a dial indicator needle inside of arbor bore and rotating arbor while observing indicator.

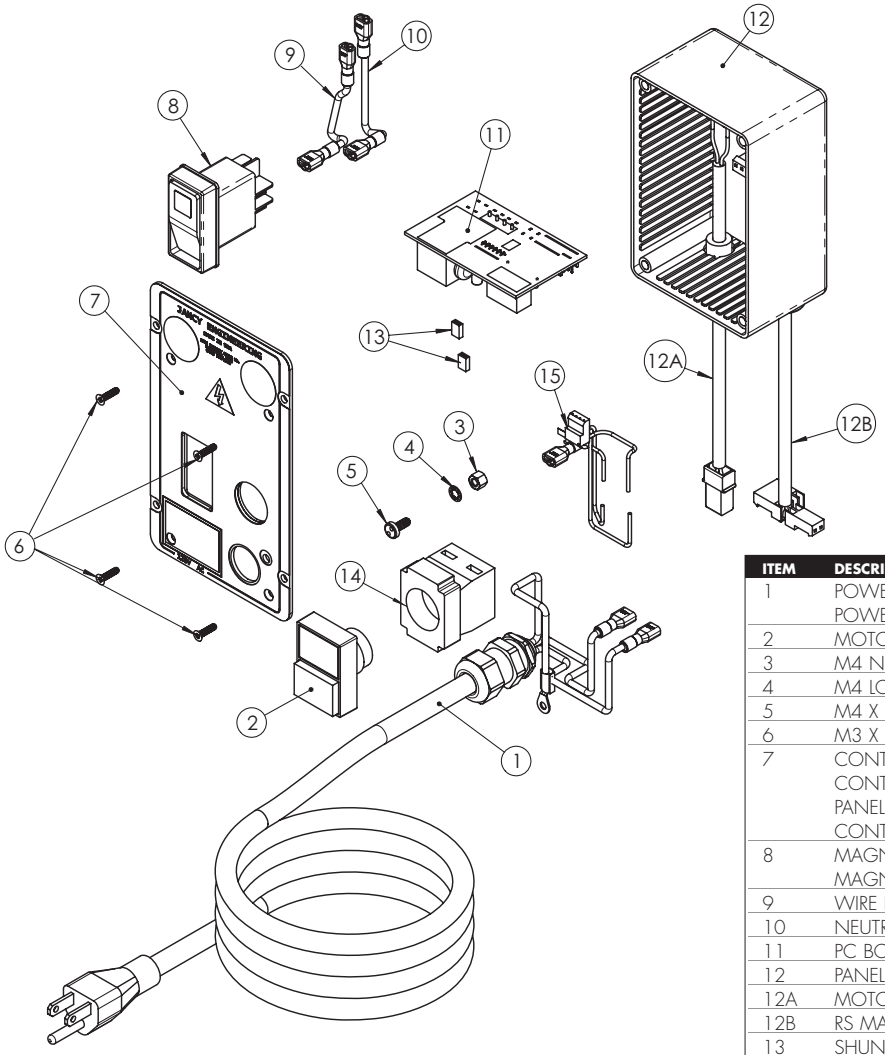
7. Inspect coolant system, reservoir, o-rings, lip seals and coolant collar for wear.

8. Inspect motor brushes and replace as needed.

9. Replace any worn parts and regularly tighten fasteners that have become loose during usage.

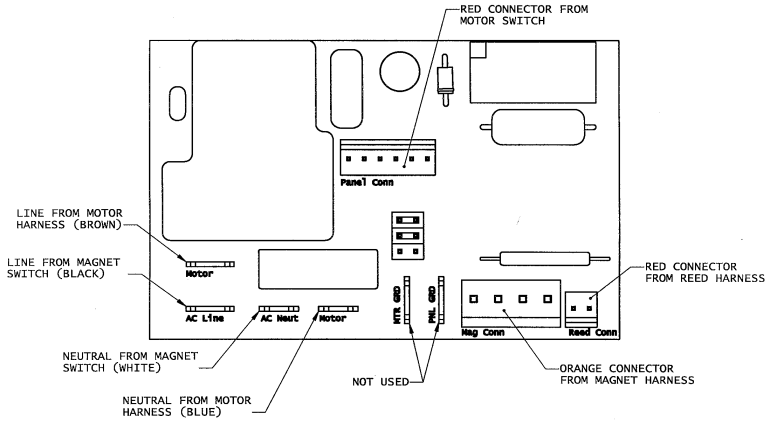
10. Regularly test machine by placing machine on non-ferrous material. Engage magnet switch. Motor should not start.

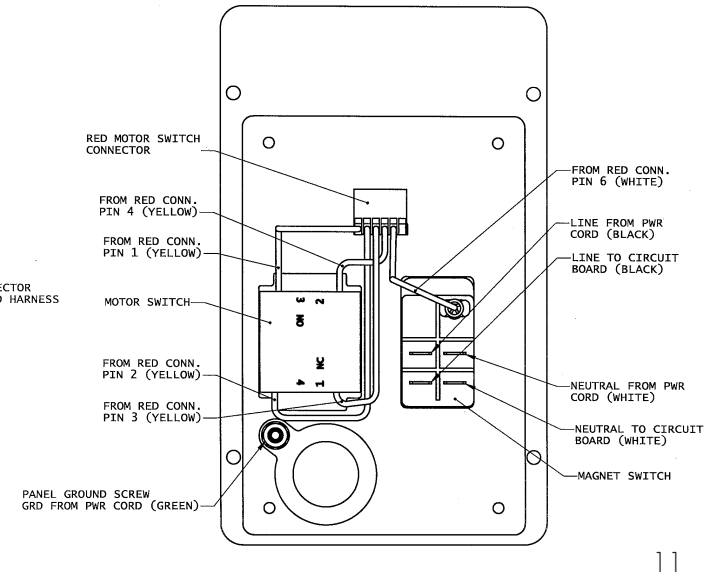
CONTROL PANEL AND PARTS LIST



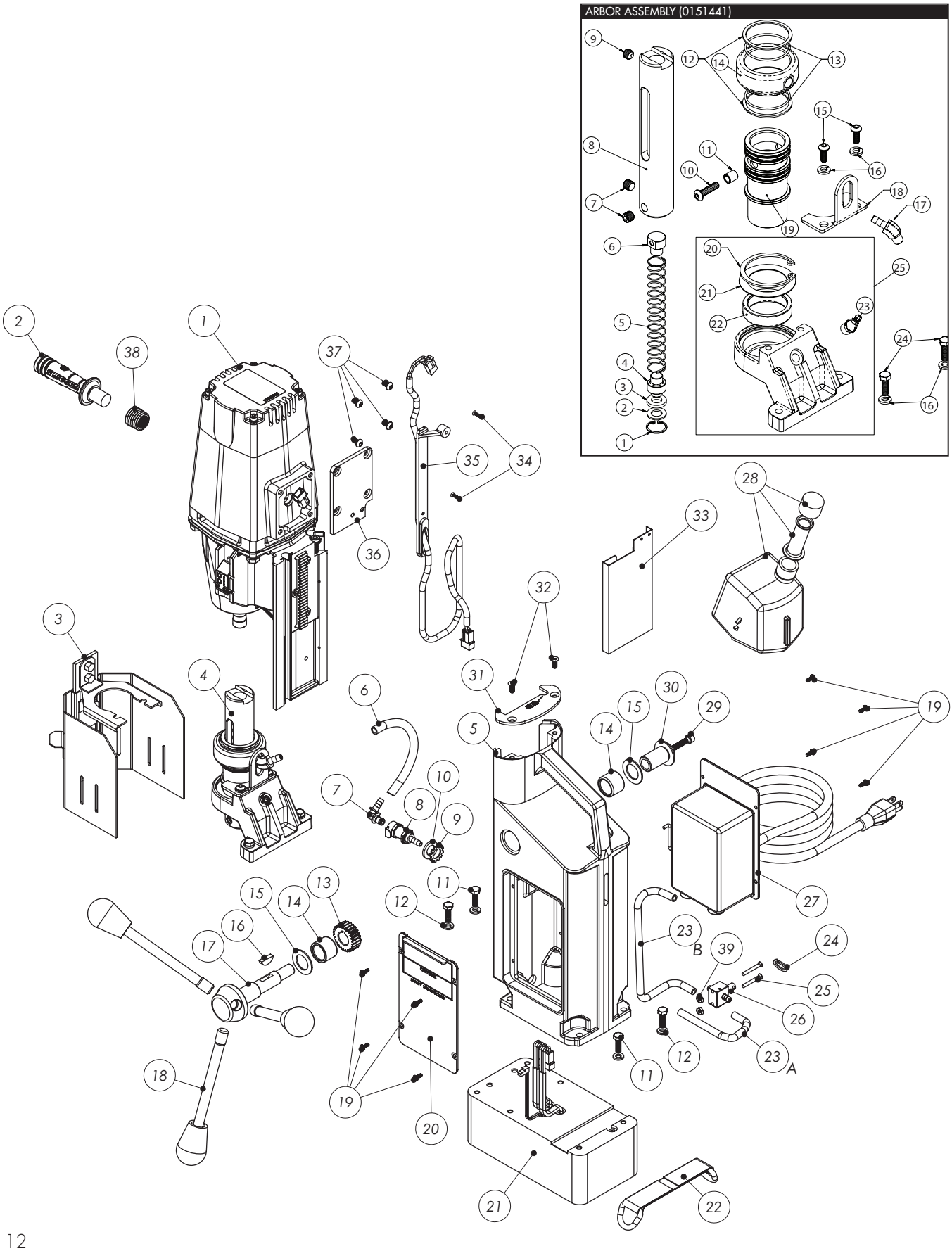
ITEM	DESCRIPTION	PART #	QTY
1	POWER CORD ASSEMBLY, 120V	0151550	1
	POWER CORD ASSEMBLY, 220V	0151551	
2	MOTOR ON/OFF SWITCH	0151035A	1
3	M4 NUT	UH4604	1
4	M4 LOCK WASHER	UH2046	1
5	M4 X 10 DSPHMS	UH0418	1
6	M3 X 12 CRFHMS	UH0316	4
7	CONTROL PANEL PLATE	0151057J	1
	CONTROL PANEL OVERLAY, 120V	0151061	1
	PANEL GASKET	0151227	1
	CONTROL PANEL OVERLAY, 220V	0151062	1
8	MAGNET SWITCH, 120V	0151045	1
	MAGNET SWITCH, 220V	0101044	
9	WIRE LINE ASSEMBLY	0151552	1
10	NEUTRAL WIRE LINE ASSEMBLY	0151054	1
11	PC BOARD, 120V, 220V	04868	1
12	PANEL ENCLOSURE ASSEMBLY	0151051	1
12A	MOTOR HARNESS	0151564	1
12B	RS MAGNET HARNESS	0151563	1
13	SHUNT	UH5335	2
14	CONTACT BLOCK SWITCH	0151033A	1
15	MOTOR SWITCH HARNESS	0151558	1

PANEL WIRING DIAGRAM





MACHINE AND ARBOR BREAKDOWN



MACHINE AND ARBOR PARTS LISTS

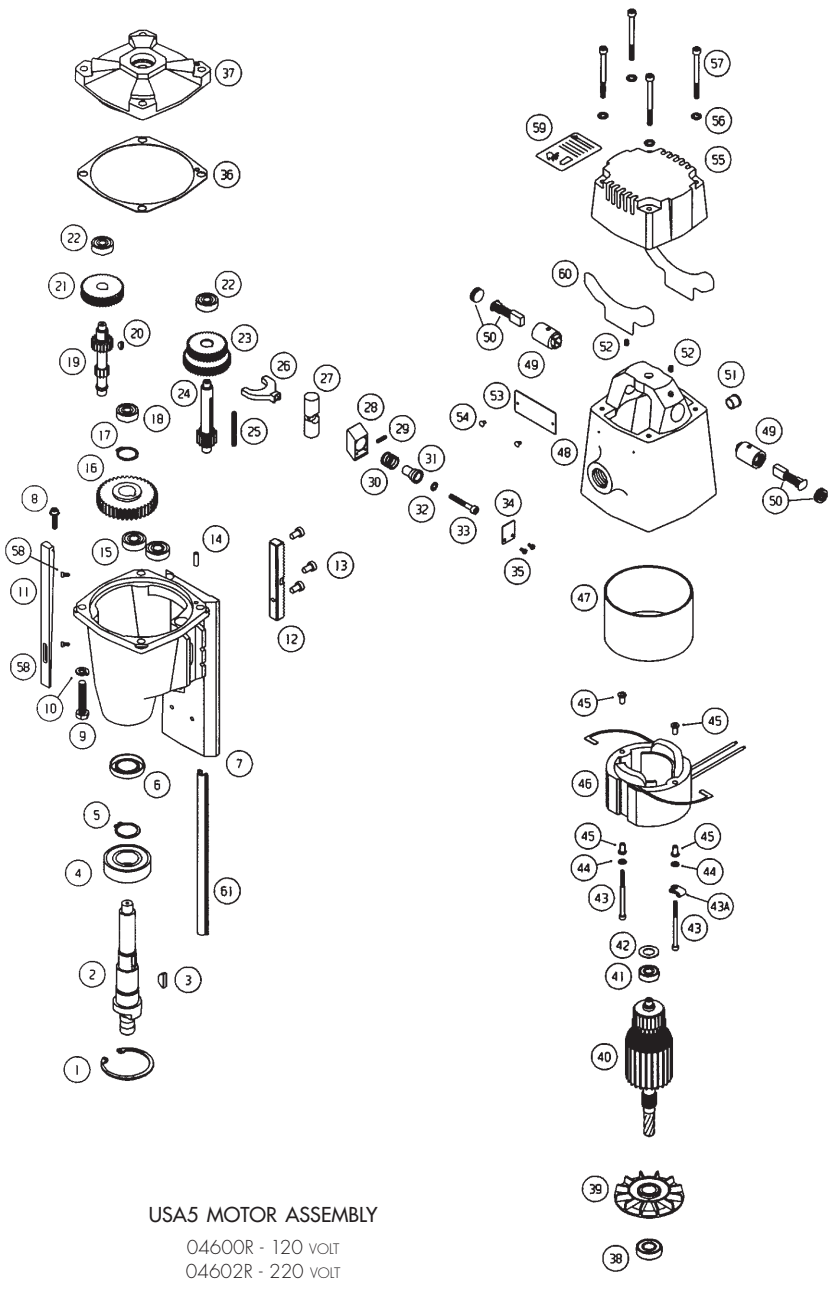
MACHINE PARTS LIST

ITEM	DESCRIPTION	PART #	QTY
1	MOTOR ASSEMBLY, 120V	04600R	1
	MOTOR ASSEMBLY, 220V	04602R	
2	PIPE HANDLE	0010224	1
3	CHIP GUARD ASSEMBLY	0151570	1
4	ARBOR ASSEMBLY	0151441	1
5	DRILL FRAME	04700R	1
6	1/4" ID X 5-1/4" TUBING	UH6005	1
7	QUICK ELBOW COUPLER	0070034-N	1
8	QUICK PANEL BARB COUPLER	0151271	1
9	1/2" LOCK WASHER	UH2530	1
10	QUICK COUPLING SPACER	0151309	1
11	M6 X 20 HHCS	UH0636	4
12	1/4" LOCK WASHER	UH2402	4
13	PINION GEAR	U18000	1
14	NEEDLE BEARING	UH3132	2
15	THRUST WASHER	0151205	2
16	WOODRUFF KEY	0010142	1
17	PINION HUB SHAFT	0151193U	1
18	SPOKE HANDLE	0151333	3
19	M3.5 X 10 CRPHMS-ETLW	UH0323	8
20	COVER PLATE ASSEMBLY	0151305	1
21	MAGNET ASSEMBLY, 120V, 220V	0151180	1
22	SAFETY STRAP LINK	U11004	1
23	3/16 " ID TUBE A=5", B=10"	UH6011	1
24	SPIRAL KEY RING	UH8022	1
25	6-32 X 1-1/8 CRFHMS	UH1035	2
26	COOLANT VALVE KIT	0151170	1
27	CONTROL PANEL ASSYEMBLY, 120V	0151036	1
	CONTROL PANEL ASSYEMBLY, 220V	0151037	
28	COOLANT BOTTLE ASSEMBLY	0151289	1
	COOLANT BOTTLE	0151163	1
	COOLANT CAP	0151165	1
	RUBBER WASHER	0151169	1
	COOLANT STRAINER	0151174	1
29	M6 X 25 SHCS	UH0648	1
30	BLACK GEAR SHAFT END CAP	0151195	1
31	SLIDE COVER PLATE	0151113	1
32	M5 X 12 CRFHMS	UH0516	2
33	CORD CASE	0151451	1
34	M3 X 12 CRFHMS	UH0316	2
35	MOTOR CORD ASSEMBLY	0151448	1
36	MOTOR COVER	0151111	1
37	M5 X 10 BHSCS	UH0506	4
38	PIPE HANDLE ADAPTER	0010225	1
39	6-32 NUT	UH4715	2

ARBOR PARTS LIST

ITEM	DESCRIPTION	PART #	QTY
1	INTERNAL RETAINING RING	UH4119	1
2	STEEL WASHER	UH2606	1
3	RUBBER WASHER	UH2604	1
4	ARBOR PISTON	0151435	1
5	SPRING	0151431	1
6	ARBOR PLUNGER	0151433	1
7	3/8-24 X 5/16" FPSSS	UH1474	2
8	ARBOR BODY	0151437	1
9	3/8-24 X 5/16" CPSSS	UH1472	1
10	1/4-20 X 1" BHSCS	UH1432	1
11	PISTON SPACER	0151512	1
12	SPIRALOC RETAINING RING	UH4044	2
13	O-RING	UH6350	2
14	COOLANT INDUCER	U22002	1
15	M6 X 16 BHSCS	UH0616	2
16	1/4" LOCK WASHER	UH2402	4
17	BRASS BARB FITTING	UH6100	1
18	RETAINER PLATE	U21002	1
19	ARBOR SLEEVE	0151439	1
20	INTERNAL RETAINING RING	UH4153	1
21	THRUST WASHER	0151207	1
22	NEEDLE BEARING	UH3208	1
23	GREASE FITTING	UH6600	1
24	M6 X 20 HHCS	UH0636	2
25	ARBOR BEARING BRKT. ASSY.	0151015	1

MOTOR BREAKDOWN AND PARTS LIST



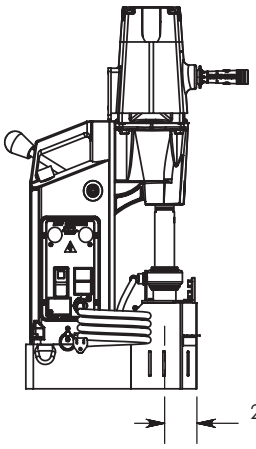
USA5 MOTOR ASSEMBLY

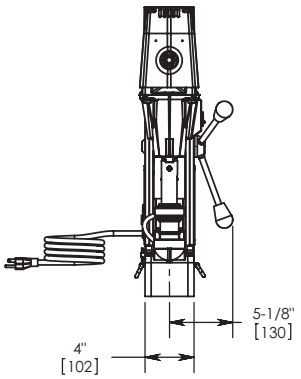
04600R - 120 VOLT
04602R - 220 VOLT

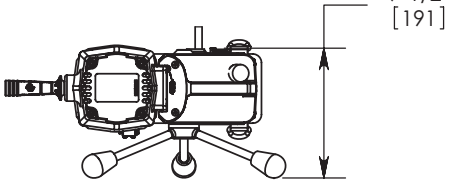
ITEM	DESCRIPTION	PART #	QTY
1	INTERNAL RETAINING RING	UH4152	1
2	MOTOR SPINDLE	04522	1
3	WOODRUFF KEY	0010142	1
4	BALL BEARING	UH3057	1
5	EXTERNAL RETAINING RING	UH4025	1
6	SPINDLE SEAL	04594	1
7	LOWER GEARBOX	04530S	1
8	M6 X 25 SHFCS	UH0652	1
9	M8 X 40 HHCS	UH0818	4
10	M8 LOCK WASHER	UH2083	4
11	SLIDE BAR WEDGE	04511N	1
12	GEAR RACK	U68002	1
13	M6 X 10 LHSCS	UH0606	3
14	3/16" X 5/8" DOWEL PIN	UH4311	1
15	BALL BEARING	UH3035	2
16	OUTPUT GEAR	04581	1
17	EXTERNAL RETAINING RING	UH4019	1
18	BALL BEARING	UH3024	1
19	PINION GEARSHAFT	04520	1
20	WOODRUFF KEY	04564	1
21	HELICAL INPUT GEAR	04582	1
22	BALL BEARING	UH3024	2
23	CLUSTER GEAR	04580	1
24	OUTPUT PINION GEAR SHAFT	04521	1
25	KEY	04565	1
26	SHIFTING FORK	04510	1
27	MAIN SPEED SELECTOR PIN	04523	1
28	SPEED SELECTOR LEVER	04534	1
29	ROLL PIN	UH4205	1
30	SPEED SELECTOR SPRING	04591	1
31	SPEED SELECTOR PIN	04524	1
32	M5 LOCK WASHER	UH2056	1
33	M5 X 35 SHCS	UH0558	1
34	SHIFT LEVER LABEL	04514	1
35	M3 X 5 CRPHMS	UH0300	2
36	GEARBOX GASKET	04593	1
37	GEARBOX COVER	04531	1
38	BALL BEARING	UH3039	1
39	ARMATURE FAN	04590	1
40	ARMATURE, 120V	04553	1
	ARMATURE, 220V	04554	
41	BALL BEARING	UH3021	1
42	UPPER ARMATURE SPRING WASHER	04560	1
43	M4 X 60 SHCS	UH0438	2
43A	CABLE CLAMP	04585	1
44	M4 LOCK WASHER	UH2046	2
45	FIELD SCREW INSULATOR	04557	4
46	FIELD, 120V	04555	1
	FIELD, 220V	04556	
47	FIELD SLEEVE INSULATOR	04558	1
48	MOTOR HOUSING	04532	1
49	BRUSH HOLDER	04551	2
50	2 MOTOR BRUSHES WITH CAPS	04550	1
51	MOTOR SNAP BUSHING	04559	1
52	M5 X 5 CPSSS	UH0500	2
53	MOTOR TAG, 120V	04512	1
	MOTOR TAG, 220V	04513	
54	DRIVE SCREW	UH1002	2
55	END CAP	04533	1
56	M5 LOCK WASHER	UH2056	4
57	M5 X 60 SHCS	UH0562	4
58	M3 X 6 SHCS	UH0302	2
59	DANGER LABEL	0080027	1
60	BRUSH LEAD INSULATOR	04578	2
61	CORD CHANNEL	0151453	1
-	14 OZ. GREASE	04587	1

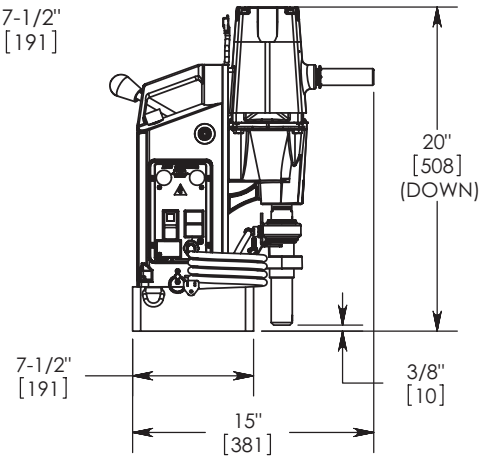
DIMENSIONS AND SPECIFICATIONS

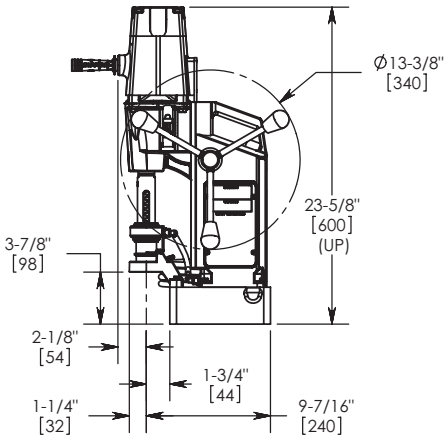
DIMENSIONS AND SPECIFICATIONS	
Max Height	23-5/8" (600mm)
Min Height	20" (508mm)
Width	7-1/2" (191mm)
Length	11-9/16" (294mm)
Weight	51 lbs. (23Kg)
Motor	1.8 HP 1400W (single phase) 120V / 11.7A ~ 220V / 5.8A 310/610 RPM (no load) - 180/340 RPM (load)
Arbor bore	3/4" (19.05mm)
Drill point breakaway	950 lbs. on (1" plate 431Kg on 25mm plate)
Magnet base dimensions	4" x 7-1/2" (102mm x 191mm)
Magnet dead lift	2320 lbs. on 1" plate (1053Kg on 25mm plate)
Slugger cutter diameter (maximum)	2-3/8" (60mm)
Slugger depth of cut (maximum)	3" (76mm)
Spindle CL to Guard Face	2-1/8" (54mm)
Spindle CL to Magnet Face	1-3/4" (44mm)
Spindle CL to Motor Face	2-1/8" (54mm)
Total travel	3-5/8" (92mm)











OTHER AVAILABLE SLUGGER® DRILLS

DESCRIPTION	MODEL #	MAX DIAMETER	DEPTH CAPACITY
USA101 120V	USA101	1-1/2"	2"
USA101 220V	USA101-2	1-1/2"	2"
USA200 120V	HOLEMAKER II	1-3/8"	2"
USA200 220V	HOLEMAKER II	1-3/8"	2"
2 X 2 120V	17980	2"	2"
2 X 2 220V	17982	2"	2"
4 X 4 120V	17985	4"	3"
4 X 4 220V	17987	4"	3"
MAGFORCE 120V	06920	1-5/8"	2"
MAGFORCE 220V	06921	1-5/8"	2"

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