MK Diamond Products, Inc.

www.mkdiamond.com

BX-3 MASONRY SAW

OWNER'S MANUAL, PARTS LIST & OPERATING INSTRUCTIONS

Revision 100	09.2011
Manual Part No. 158168	

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

MK Diamond Products, Inc.

INTRODUCTION

Congratulations on your purchase of a Diamond Vantage Tile Saw. We are certain that you will be pleased with your purchase. We take pride in producing the finest construction power tools and diamond blades in the industry.

Operated correctly, your Saw should provide you with years of service. In order to help you, we have included this manual. This owners manual contains information necessary to operate and maintain your Saw safely and correctly. Please take a few minutes to familiarize yourself with the Saw by reading and reviewing this manual.

If you should have questions concerning your Saw, please feel free to call our friendly customer service department at: 866.322.4078

Regards,

Diamond Vantage

NOTE THIS INFORMATION FOR FUTURE USE:

MODEL NUMBER:	
SERIAL NUMBER:	
PURCHASE PLACE:	
PURCHASE DATE:	

NOTE: For your (1) one year warranty to be effective, complete the warranty card (including the Serial Number) and mail it in as soon as possible.

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Read and follow all safety, operating and maintenance instructions. Failure to read and follow these instructions could result in injury or death to you or others. Failure to read and follow these instructions could also result in damage and/or reduced equipment life.

SAFETY MESSAGES

A safety message alerts you to potential hazards that could hurt you or others. Each safety message is preceded by a safety alert symbol (⚠) and one of three words: **DANGER, WARNING,** or **CAUTION.**

⚠ **DANGER** You **WILL** be **KILLED** or **SERIOUSLY INJURED** if you do not follow directions.

⚠ **WARNING** You **CAN** be **KILLED** or **SERIOUSLY INJURED** if you do not follow directions.

⚠ **CAUTION** You **CAN** be **INJURED** if you do not follow directions. It may also be used to alert against unsafe practices.

DAMAGE PREVENTION AND INFORMATION MESSAGES:

A Damage Prevention Message is to inform the user of important information and/or instructions that could lead to equipment or other property damage if not followed. Information Messages convey information that pertains to the equipment being used. Each message will be preceded by the word NOTE, as in the example below.

NOTE: Equipment and/or property damage may result if these instructions are not followed.

GENERAL SAFETY PRECAUTIONS AND HAZARD SYMBOLS

In order to prevent injury, the following safety precautions and symbols should be followed at all times!

SAFETY PRECAUTIONS

ALWAYS read this Owner's Manual before operating the machine.

ALWAYS keep the Blade Guards in place.

⚠ **REMOVE ADJUSTING KEYS AND WRENCHES**
Form a habit of checking to see that keys and adjusting wrenches are removed from the power tool before it is turned on.

⚠ **KEEP WORK AREA CLEAN**
Cluttered work areas and benches invite accidents.

⚠ **DO NOT USE IN DANGEROUS PLACES**
DO NOT use power tools in damp or wet locations nor expose them to rain. Always keep the work area well lighted.

⚠ **KEEP CHILDREN AWAY**
All visitors and children should be kept a safe distance from work area.

MAKE THE WORKSHOP KID PROOF

Make the workshops kid proof by using padlocks, master switches or by removing starter keys.

DO NOT FORCE THE TOOL

A power tool will do a job better and safer operating at the rate for which it was designed.

USE THE RIGHT TOOL

DO NOT force a tool or an attachment, to do a job that it was not designed to do.

USE THE PROPER EXTENSION CORD

If using an extension cord make sure it is in good condition first. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage that will result in a loss of power and overheating. TABLE 1, Page 10 shows the correct AWG size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

USE PROPER APPAREL

DO NOT wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry that may be caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.

ALWAYS wear approved eye protection.

ALWAYS wear approved respiratory protection.

SECURE WORK

Clamps or a vise should be used to hold work whenever practical. Keeping your hands free to operate a power tool is safer.

DO NOT OVERREACH

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

MAINTAIN TOOLS WITH CARE

Keep tools clean for the best and safest performance. Always follow maintenance instructions for lubricating, and when changing accessories.

DISCONNECT TOOLS

Power tools should always be disconnected before servicing or when changing accessories, such as blades, bits, cutters, and the like.

ALWAYS place the power ON/OFF switch in the **OFF** position when the saw is not in use.

USE RECOMMENDED ACCESSORIES
Consult the owner's manual for recommended accessories. Using improper accessories may increase the risk of personal or by-stander injury.

NEVER STAND ON THE TOOL
Serious injury could occur if a power tool is tipped, or if a cutting tool is unintentionally contacted.

CHECK FOR DAMAGED PARTS
Before using a power tool, check for damaged part. A guard or any other part that is damaged should be carefully checked to determine if would operate properly and perform its intended function. Always check moving parts for proper alignment or binding. Check for broken parts and mountings and all other conditions that may affect the operation of the power tool. A guard, or any damaged part, should be properly repaired or replaced.

DIRECTION OF FEED
ALWAYS feed work into a blade or cutter against the direction of rotation. A blade or cutter should always be installed such that rotation is in the direction of the arrow imprinted on the side of the blade or cutter.

NEVER LEAVE A TOOL UNATTENDED
TURN POWER OFF - Do not leave a tool until it comes to a complete stop. Always turn a power tool OFF when leaving the work area, or, when a cut is finished.

CALIFORNIA PROPOSITION 65 MESSAGE

WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contain chemicals known (to the State of California) to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead, from lead-based paints
- Crystalline silica, from bricks and cement and other masonry products
- Arsenic and chromium, from chemically treated lumber

For further information, consult the following sources:
http://www.osha.gov/SLTC/silicacrystalline/index.html
http://www.cdc.gov/niosh/consilic.html
http://oehha.ca.gov/prop65/law/P65law72003.html
http://www.dir.ca.gov/Title8/sub4.html

Your risk from these exposures varies depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

HAZARD SYMBOLS

ELECTRICAL SHOCK

NEVER touch electrical wires or components while the engine is running. They can be sources of electrical shock which could cause severe injury or burns.

ROTATING PARTS

Keep hands, feet, hair, and clothing away from all moving parts to prevent injury. Never operate the motor with covers, shrouds, or guards removed.

OVER SPEED

NEVER tamper with the governor components or settings to increase the maximum speed. Severe personal injury and damage to the engine or equipment can result if operated at speeds above maximum.

DO NOT EXPOSE TO RAIN

DO NOT expose to rain or use in damp locations.

⚠ WARNING

Sawing and drilling generates dust. Excessive airborne particles may cause irritation to eyes, skin and respiratory tract. To avoid breathing impairment, always employ dust controls and protection suitable to the material being sawed or drilled; See OSHA (29 CFR Part 1910.1200). Diamond Blades improperly used are dangerous. Comply with American National Standards Institute Safety Code, B7.1 and, Occupational Safety and Health Act covering Speed, Safety Guards, Flanges, Mounting Procedures, General Operating Rules, Handling, Storage and General Machine Conditions

ELECTRICAL REQUIREMENTS AND GROUNDING INSTRUCTIONS

In order to prevent potential electrical shock and injury, the following electrical safety precautions and symbols should be followed at all times!

WARNING

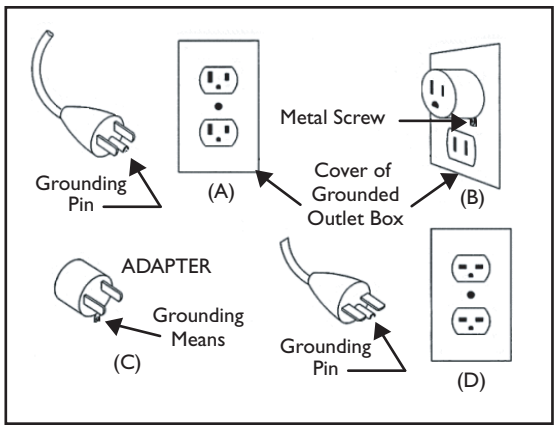
In case of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

- Do not modify the plug provided – if it will not fit the outlet; have the proper outlet installed by a qualified electrician
- Improper connections of the equipment-grounding conductor can result in a risk of electric shock. The equipment-grounding conductor is the insulated conductor that has an outer surface that is green, with or without yellow stripes. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal
- Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded
- Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug
- Repair or replace a damaged or worn cord immediately

WARNING

This tool is intended for use on a circuit that has an outlet that looks like the one shown in Sketch A. The tool has a grounding plug that looks like the plug illustrated in Sketch A. A temporary adapter, which looks like the adapter illustrated in sketches B and C, may be used to connect this plug to a 2-pole receptacle as shown in Sketch B, if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, and the like, extending from the adapter, must be connected to a permanent ground such as a properly grounded outlet box.

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



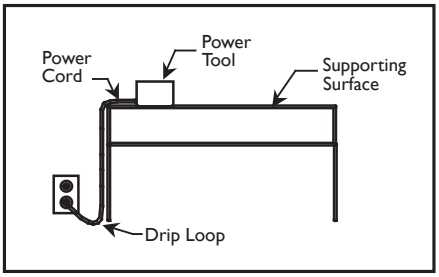
Circuit and Adapter Information

WARNING

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

The “drip loop” is that part of the cord below the level of the receptacle, or the connector, if an extension cord is used. This method of positioning the cord prevents the travel of water along the power cord and coming in contact with the receptacle.

If the plug or receptacle gets wet, **DO NOT** unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the tool. Then unplug and examine for presence of water in the receptacle.



Drip Loop Information

WARNING

Use only extension cords that are intended for outdoor use. These extension cords are identified by a marking “Acceptable for use with outdoor appliances; store indoors while not in use." Use only extension cords having an electrical rating not less than the rating of the product. Do not use damaged extension cords. Examine extension cords before using and replace if damaged. Do not abuse extension cords and do not yank on any cord to disconnect. Keep cords away from heat and sharp edges. Always disconnect the extension cord from the receptacle before disconnecting the product from the extension cord.

WARNING

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

WARNING

Use of under sized extension cords result in low voltage to the motor that can result in motor burnout and premature failure. MK Diamond warns that equipment returned to us showing signs of being run in a low voltage condition, through the use of undersized extension cords will be repaired or replaced totally at the customer's expense. There will be no warranty claim.

To choose the proper extension cord,

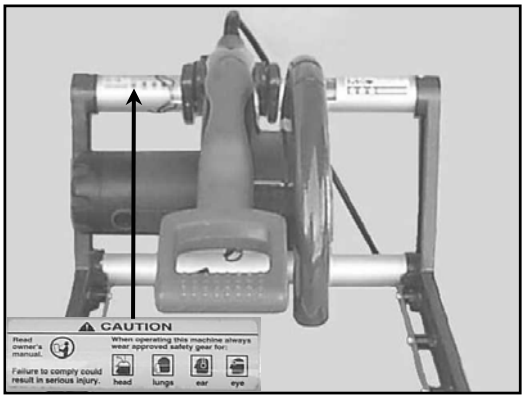
- Locate the length of extension cord needed in the table below.
- Once the proper length is found, move down the column to obtain the correct AWG size required for that length of extension cord.

EXTENSION CORD MINIMUM GAGE FOR LENGTH				
VOLTS	**TOTAL LENGTH OF CORD IN FEET**			
	25 ft. AWG	**50 ft. AWG**	**100 ft. AWG**	**150 ft. AWG**
115v	14	12	Not Recommended	Not Recommended
230v	N/A	14	12	N/A

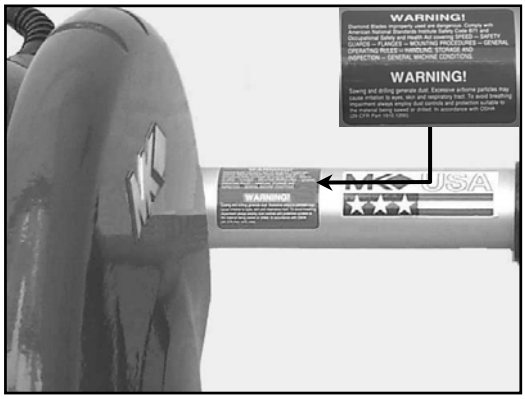
SAFETY LABEL LOCATIONS:

Safety labels are located according to Figures 1 to 4 below. The labels contain important safety information. Please read the information contained on each safety label. These labels are considered a permanent part of your saw. If a label comes off or becomes hard to read, contact MK Diamond or your dealer for a replacement

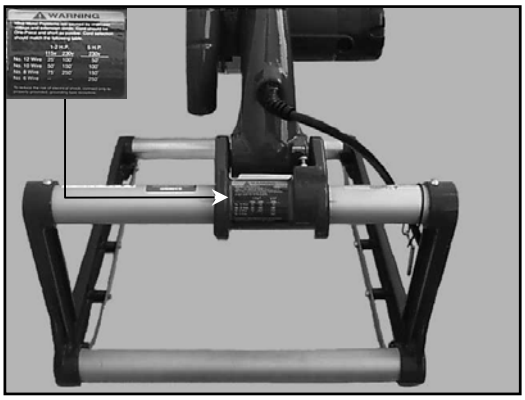
Item	Location	Description	Part No.
1.	Left Side, Upper Cross Member	Caution Safety Label	155576
2.	Right Side, Upper Cross Member	Dust Inhalation Warning Label	154337
3.	Back, Upper Cross Member	Extension Cord Warning Label	155672
4.	Blade Guard	Serial Number and Motor Specifications	158096



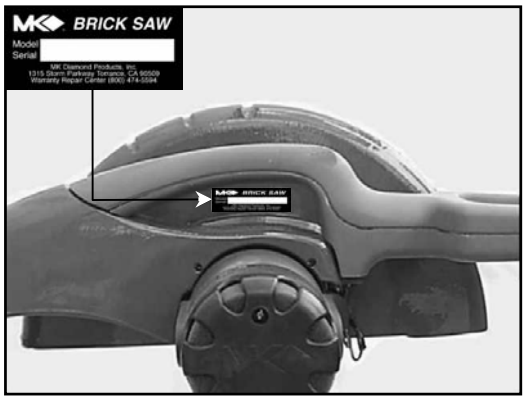
1



2



3



4

BRICK SAW SPECIFIC WARNINGS:

⚠CAUTION

- Read Owners Manual
- Wear Protective Gear for –
  - Head
  - Lungs
  - Ear
  - Eye

PRODUCT SPECIFICATIONS:

The BX-3 is a versatile lightweight, dry, masonry saw. Operated and used according to this manual, the BX-3 will provide years of dependable service.

General Description:

The BX-3, Brick Xtreme, is engineered as a 14" dry saw, consisting of a powerful 115v motor in a hard plastic case. The saw is capable of cutting brick and masonry up to 8" x 8" x 16" in size; the blade has a five (5) inch cutting depth.

Motor and Weight Specifications:

Motor and Weight specifications for the BX-3 are listed in Table 2 below.

Voltage	115 v
Amperage	15 A
Frequency	60 Hz
RPM	3,500 rpm
Weight	45 lbs.*

Table 2

Blade Capacity:

The BX-3 uses a 14-inch diameter segmented dry MK Diamond blade with a .110-inch cutting width.

Masonry Types:

The BX-3 can cut a variety of masonry types including, cinder block, slump stone block, wall brick, paver brick, concrete block and cylinders, roofing tile, marble, granite, decorative rock or almost any other non-ferrous material.

NOTE:

The BX-3 is not designed to cut plastic or ferrous (metals) material.

Spring Assisted Cutting Head:

The BX-3 is designed with a spring assisted Cutting Head to allow for easier step cutting. The Cutting Head can be locked in the down position when cutting smaller pieces.

Lockable Trigger Switch:

The BX-3 is designed with a lockable trigger-operating switch in the handle to allow for ease of operation.

Removable Motor Air Filter:

The BX-3 is designed with an easy clean motor air filter to extend the life of the motor.

Replaceable Motor Brushes:

The BX-3 is designed with replaceable motor brushes to extend operating life.

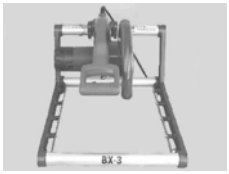
UNPACKING:

Your BX-3 has been shipped from the factory thoroughly inspected. Only minimal assembly is required.

If not already done, remove the BX-3 from the carton and place it on a flat surface. Remove Strapping. Remove the Accessories box from the main carton and place along side the BX-3 (Owners Manual is in Accessories Box).

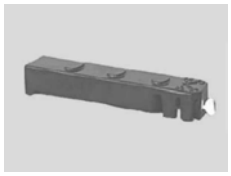
CONTENTS:

In the containers, you will find one (1) BX-3, one (1) 14 inch segmented dry diamond blade (or segmented block blade), one (1) movable cutting table, one (1) adjustable cutting guide, one replacement motor air filter, one (1) blade wrench, one (1) shaft wrench, one (1) owner's manual and one (1) warranty card.

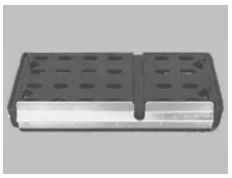


BX-3

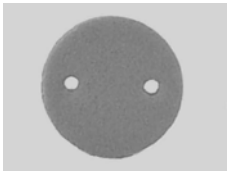
Segmented Dry Diamond Blade



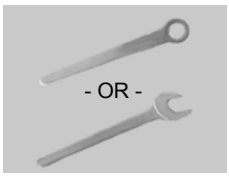
Adjustable Cutting Guide



Movable Cutting Table



Extra Motor Air Filter



Blade Wrench

Shaft Wrench

Owner's Manual

Warranty Card

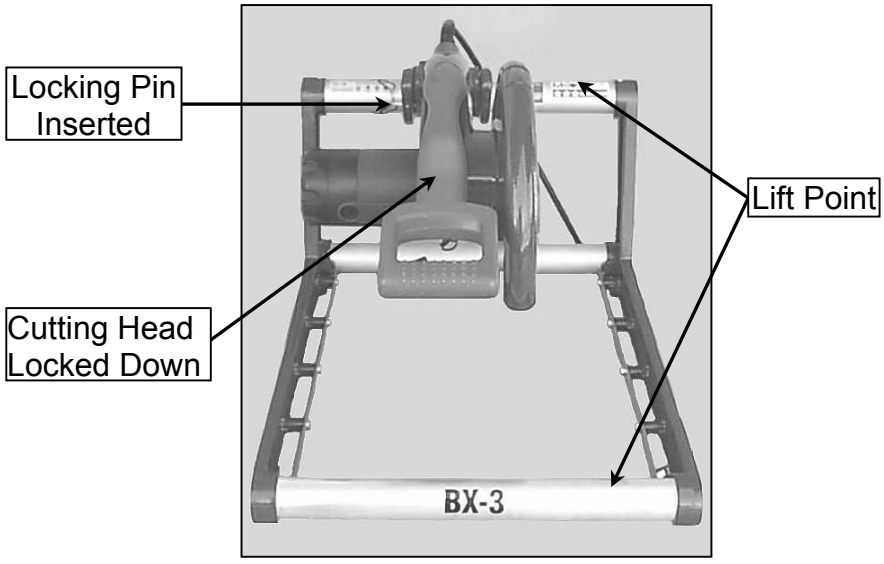
TRANSPORT:

The BX-3 weighs approximately forty (45) pounds (Without the Movable Cutting Table), making transport easy.

⚠CAUTION Always observe safe lifting practices when lifting the BX-3.

NOTE: Lock the Cutting Head in the DOWN position, and remove the Movable Cutting Table when transporting the BX-3.

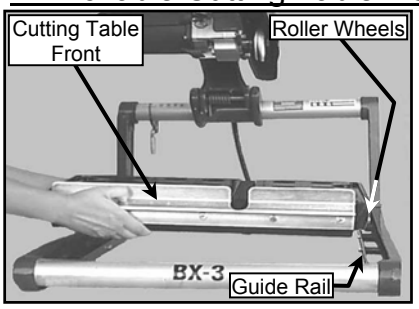
Due to its lightweight construction, the BX-3 is designed to be carried by the durable aluminum frame. Simply lock the spring assisted cutting head in the DOWN position, grasp the frame by the lower front and upper back cross members, lift and transport the BX-3 to the desired work location



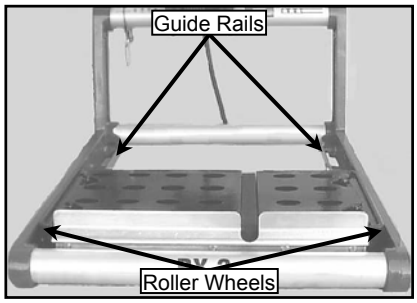
ASSEMBLY:

Follow the assembly instructions to prepare your BX-3 for operation.

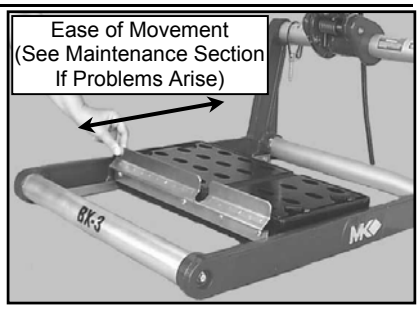
1. Movable Cutting Table Installation:



(A)
Position Movable Cutting Table

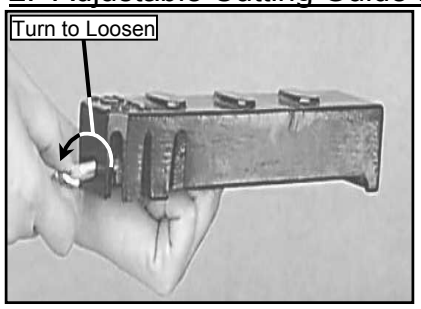


(B)
Seat Roller Wheels on Guide Rails

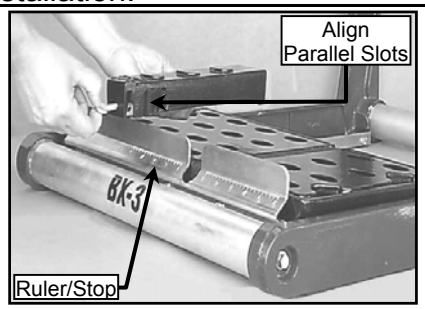


(C)
Verify Correct Seating

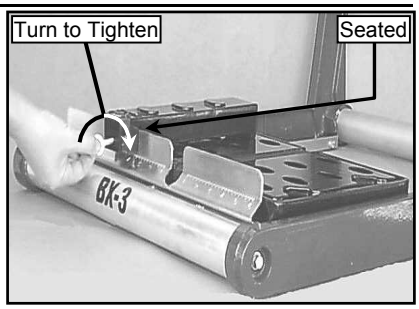
2. Adjustable Cutting Guide Installation:



(A)
Loosen Thumbscrew



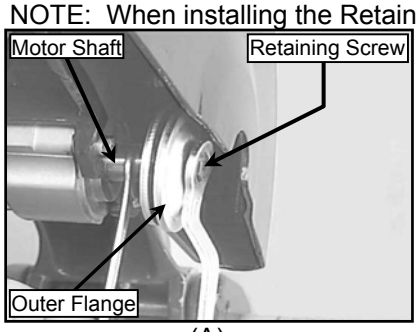
(B)
Position Adjustable Cutting Guide



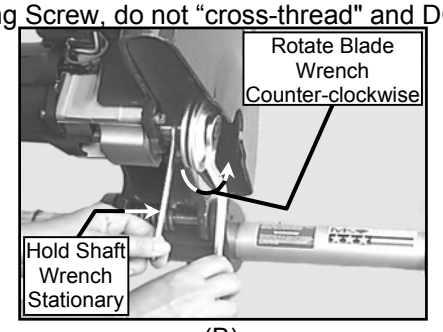
(C)
Seat and Tighten Adjustable Cutting Guide

3. Diamond Blade Installation:

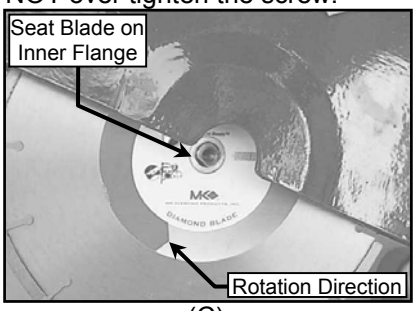
NOTE: When installing the Retaining Screw, do not “cross-thread" and DO NOT over tighten the screw.



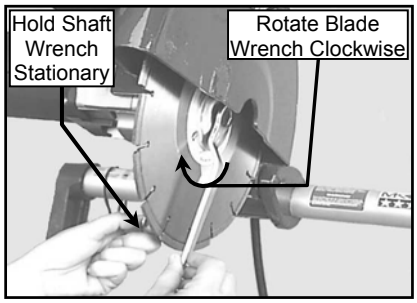
(A)
Identify Retaining Screw and Outer Flange



(B)
Remove Retaining Screw and Outer Flange



(C)
Install and Seat Blade – Verify Rotation



(D)
Install Retaining Screw and Outer Flange - Tighten

SETUP:

⚠CAUTION

- Before powering or starting, check for damage that could prevent this equipment from proper operation or performing its intended function. Check for binding and alignment of moving parts. Check for damaged, broken, or missing parts.
- Verify the trigger switch, locking button is in the "RELEASE" position.
- Before connecting the BX-3 to a power supply, be sure the voltage, cycle and phase of the job site power source meet the requirements of TABLE 3

VOLTAGE:	115v
CYCLE:	60hz
PHASE:	single phase

TABLE 3

- If using an extension power cord, make sure the length and wire gauge corresponds to the requirements listed in TABLE 1 on page 7. An extension power cord that is too small in wire gauge (diameter), or too long in length, will cause the motor to overheat and could cause premature failure.
- Use an approved Ground Fault Circuit Interrupter (GFCI)
- Do not cover the motor vents as this could lead to motor overheating.

Portable Generator:

If using a portable generator to provide power, ensure the generator meets the following minimum requirements:

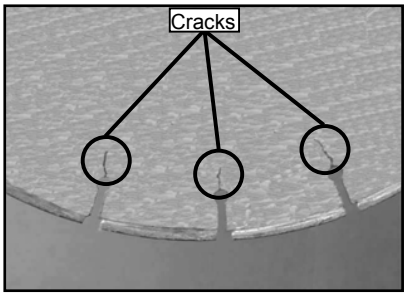
8 kW 120/240 volts 66.7/33.3 amps Single Phase

Pre-start Inspection:

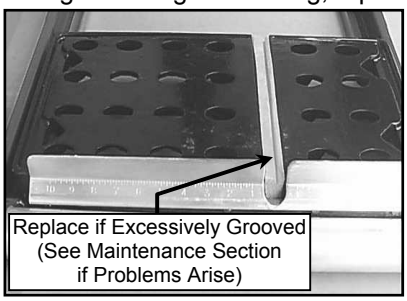
The pre-start inspection should be performed before beginning any job.

NOTE: In order to avoid breaker tripping, a 20-amp circuit breaker should be used.

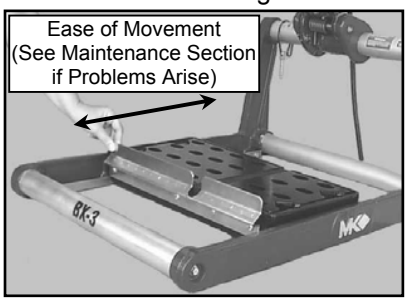
⚠CAUTION If the Diamond Blade shows signs of fatigue cracking, replace the blade before starting work.



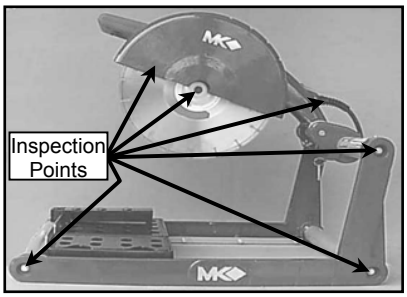
(A)
Inspect Blade for Damage – Verify Blade Correct for Material Being Cut



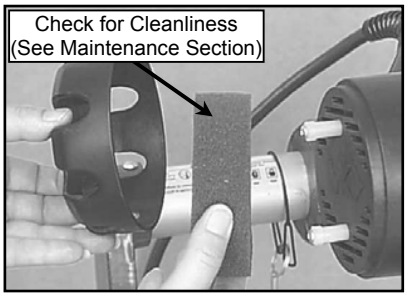
(B)
Inspect Wooden Strip for Excessive Grooves



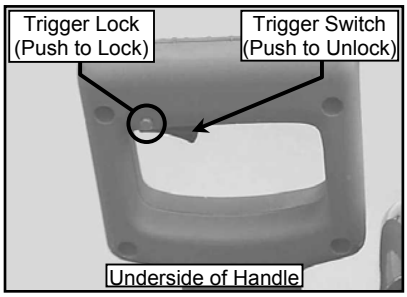
(C)
Movable Cutting Table Moves Freely



(D)
Inspect for Damage

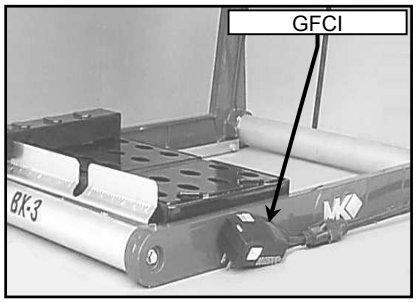


(E)
Inspect Motor Air Filter for Cleanliness

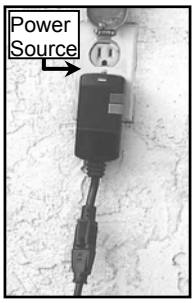


(F)
Verify Trigger Switch Unlocked

⚠CAUTION If an extension cord is used, first verify it meets the requirements of TABLE 1 (page 9). Plug the BX-3 into the extension cord; plug the extension cord into a GFCI. Finally, plug the GFCI into the power source in that order.



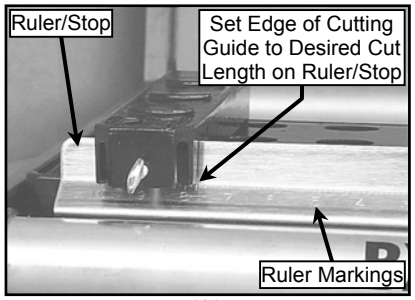
(G)
Plug GFCI into BX-3



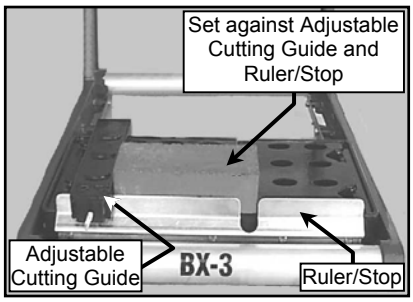
(H)
Plug GFCI into Power Source

ADJUSTMENT AND OPERATION:

1. Cutting Setup:



(A)
Set Adjustable Cutting Guide



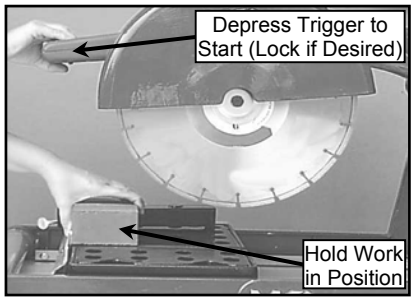
(B)
Position Masonry Piece

⚠CAUTION DO NOT FORCE the blade to cut, it will do the job better and safer at rate for which it was designed.

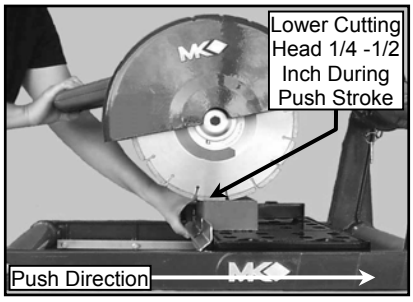
2. Step Cuts:

A Step Cut is performed when a series of small cuts of increasing depth are used to complete a single cut. Step Cuts are used for large objects or for hard objects such as Firebrick and Pavers.

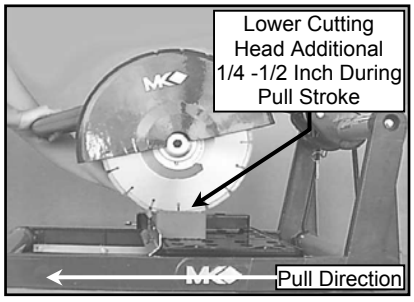
NOTE:
1. Step Cutting is the preferred cutting method for all cuts.
2. When cutting hard material Step Cutting should always be used.
3. Step Cutting will extend the life of the Diamond Blade.



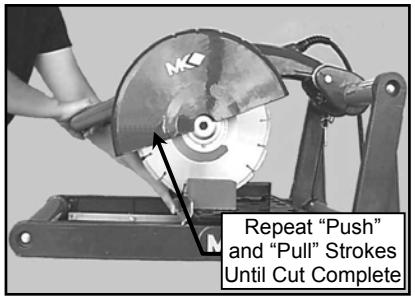
(A)
Step Cut Setup



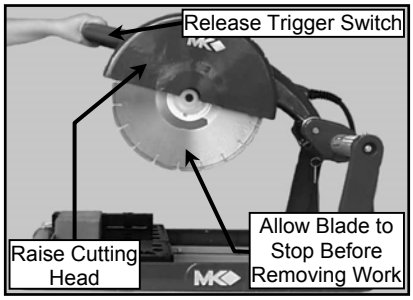
(B)
Step Cut “Push” Stroke



(C)
Step Cut “Pull” Stroke



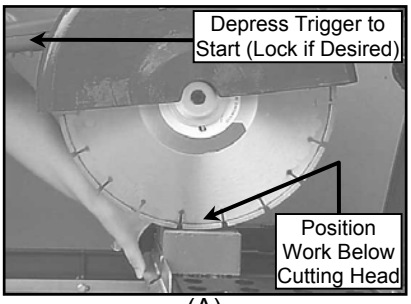
(D)
Repeat Steps B and C
Until Cut Complete



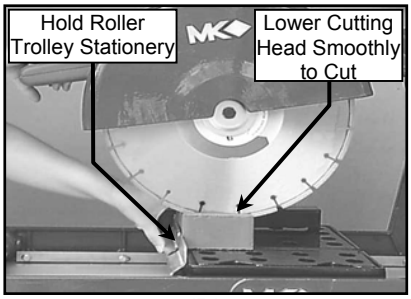
(E)
Cutting Complete

3. Chop Cutting:

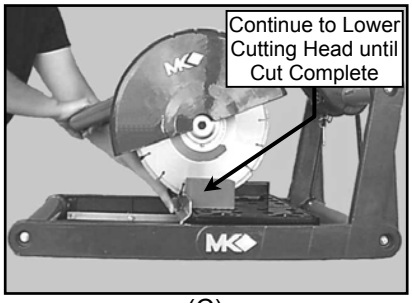
A Chop Cut is performed by cutting completely through an object in one pass.



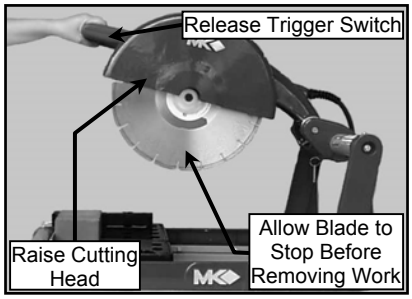
(A)
Chop Cut Setup



(B)
Lower Cutting Head to Begin Cutting



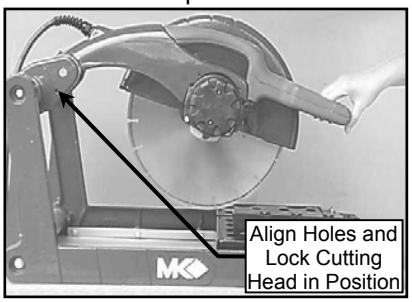
(C)
Continue Lowering Head until Cut Complete



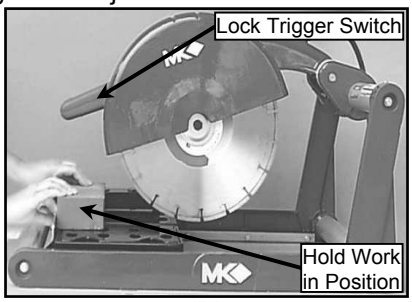
(D)
Cutting Complete

4. Cutting with the Cutting Head Locked Down:

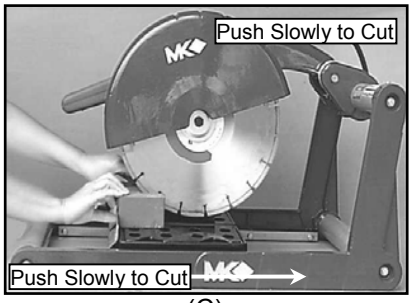
This method is preferred when cutting small objects.



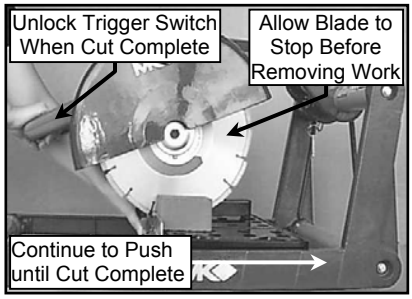
(A)
Lock Cutting Head in the Down Position



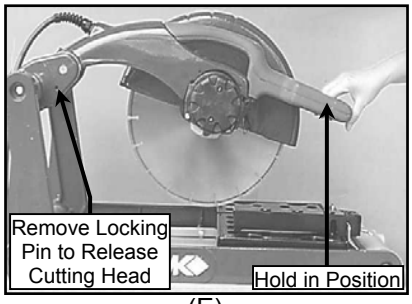
(B)
Locked Cutting Head Setup



(C)
Slowly Push Piece toward Blade to Begin the Cut



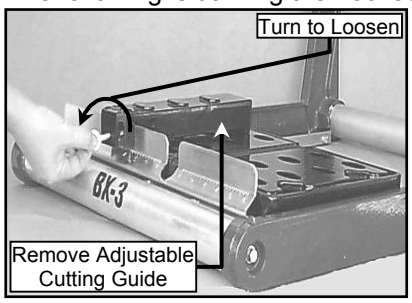
(D)
Continue Pushing Piece into Blade until Cut Complete



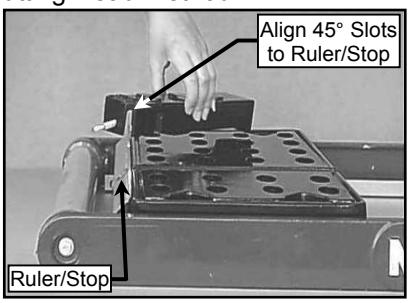
(E)
Cutting Complete

5. Angle Cuts:

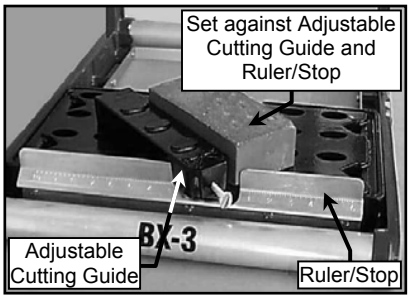
Angle Cuts may be performed using the Step Cut, Chop Cut or the Locked Cutting Head cutting methods. The following is utilizing the Locked Cutting Head method.



(A)
Remove Adjustable Cutting Guide

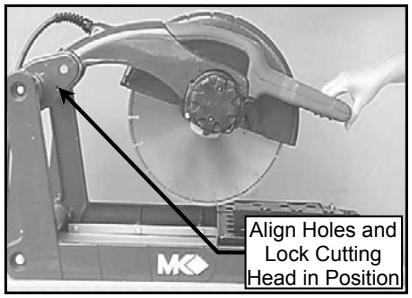


(B)
Reposition Adjustable Cutting Guide

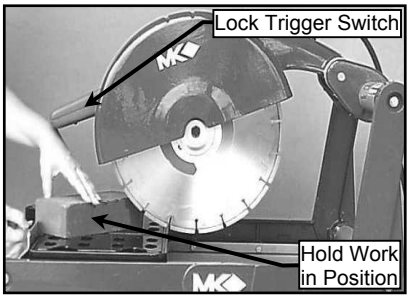


(C)
Position Adjustable Cutting Guide

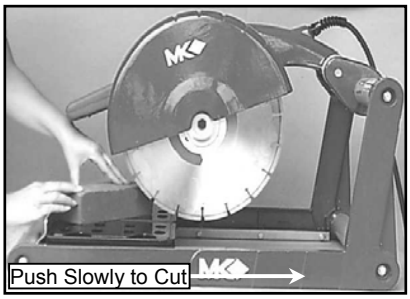
⚠CAUTION DO NOT FORCE TOOL, it will do the job better and safer at the rate for which it was designed.



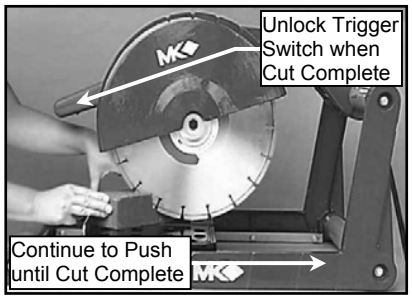
(D)
Lock Cutting Head in the Down Position



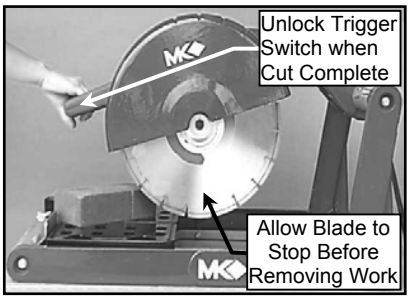
(E)
Locked Cutting Head Setup



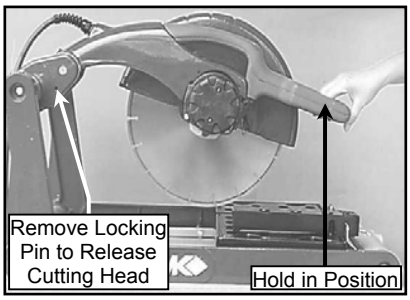
(F)
Slowly Push Piece toward Blade to Begin the Cut



(G)
Continue Pushing Piece into Blade until Cut Complete



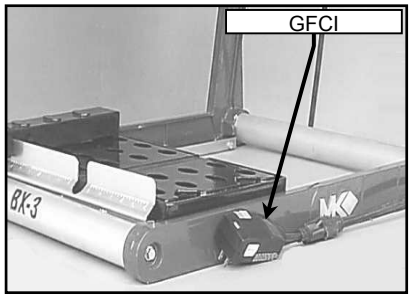
(H)
Cutting Complete



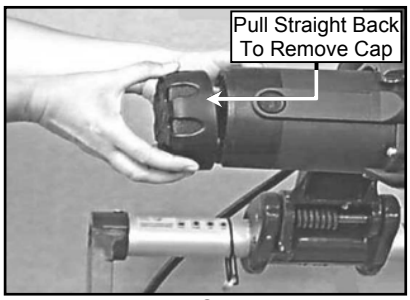
(I)
Release Cutting Head

6. Cleanup:

(A)
Unplug GFCI from Power Source

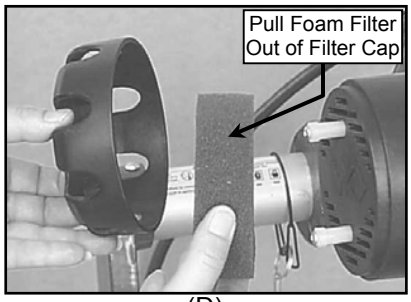


(B)
Unplug GFCI from BX-3

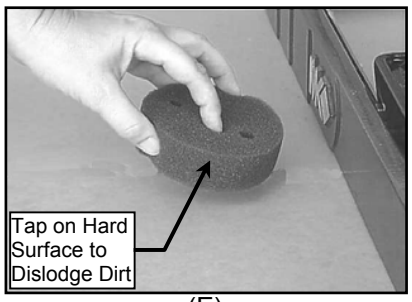


(C)
Remove Motor Filter Cap

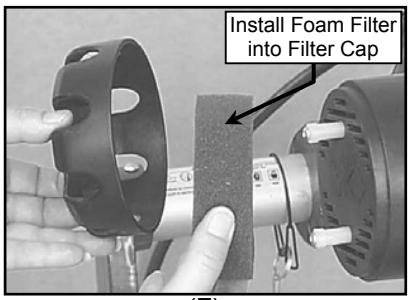
⚠WARNING Always wear eye protection when using compressed air.



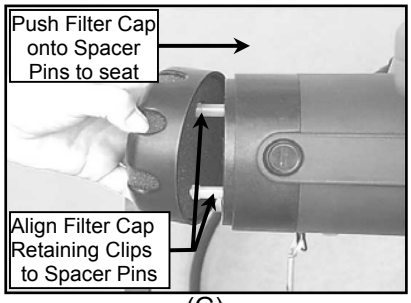
(D)
Remove Filter from Filter Cap



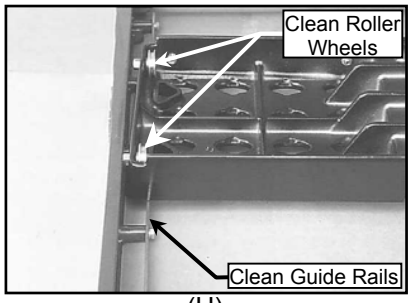
(E)
Clean Filter by Tapping on Hard Surface or using Compressed Air



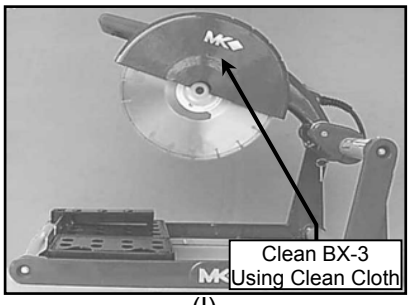
(F)
Reinstall Filter into Filter Cap



(G)
Install Motor Filter Cap onto Motor



(H)
Clean the Movable Cutting Table Roller Wheels and Guide Rails

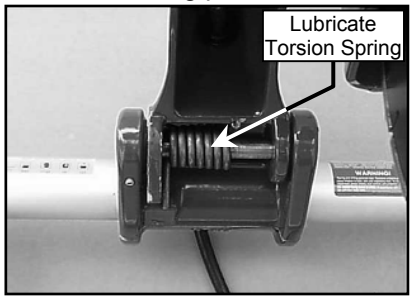


(I)
Clean Remainder of BX-3

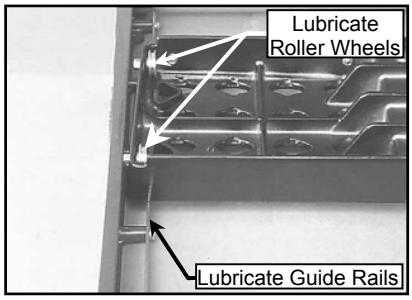
MAINTENANCE:

1. General Maintenance:

The following maintenance should be performed following each use. Use Light oil, such as WD-40 or 3 in 1 when lubricating parts.



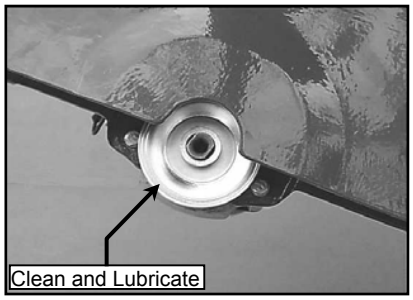
(A)
Lubricate Cutting Head
Torsion Spring



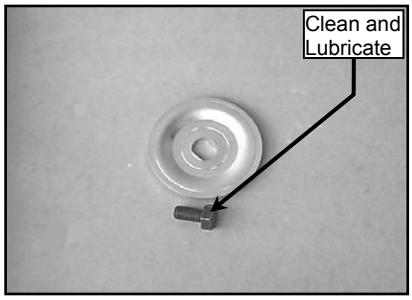
(B)
Lubricate Movable Cutting Table
Roller Wheels and Guide Rails

2. Monthly Maintenance:

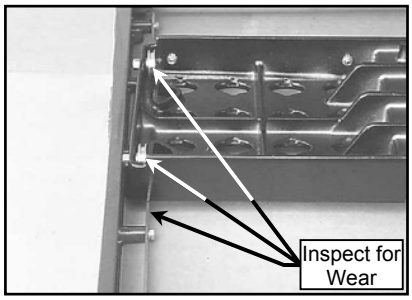
The following should be performed monthly. Items should be lubricated as directed.



(A)
Clean and Lubricate Inner Flange
and Motor Shaft



(B)
Clean and Lubricate
Blade Retaining Screw

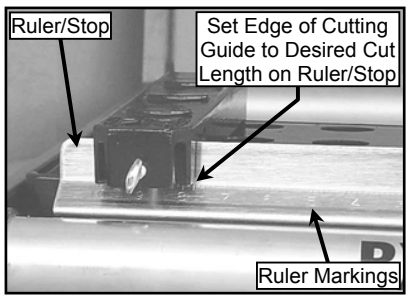


(C)
Check Roller Wheels and
Guide Rails for Wear

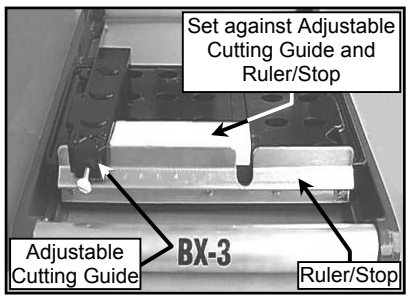
3. Blade Dressing:

Like most cutting instruments, a diamond blade performs best when it is dressed. Over time and use, diamonds on the outer edge will become smooth or "glazed" over. This will reduce grinding efficiency and may cause the blade to "wander" or bend, giving the illusion of an alignment problem. When this occurs, the blade will need to be dressed. The diamond blade can be dressed using the MK Dressing Stick (part number 152792) and by following the steps below.

(A)
Set BX-3 for Operation

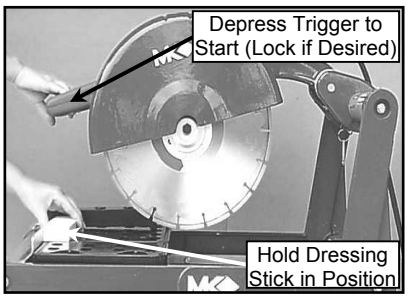


(B)
Set Adjustable Cutting Guide
to Cut 1/16-inch Strips

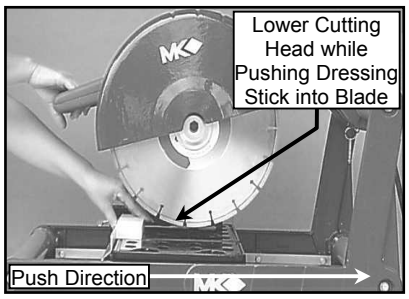


(C)
Position Dressing Stick

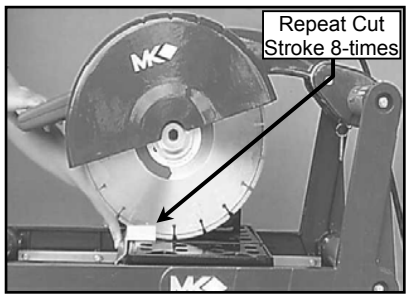
⚠CAUTION DON'T FORCE TOOL, it will do the job better and safer at the rate for which it was designed.



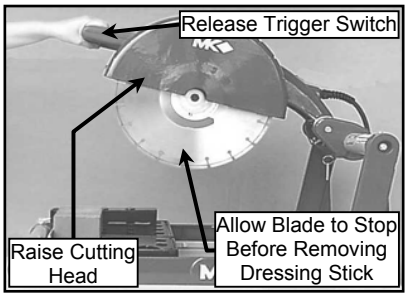
(D)
Set up for Blade Dressing



(E)
Begin Blade Dressing



(F)
Repeat Cut Stroke
to Dress Blade

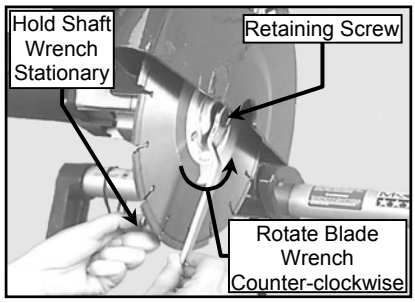


(G)
Dressing Complete

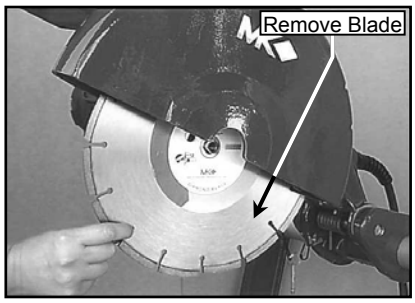
4. Diamond Blade Change-out:

⚠WARNING Disconnect the tool before servicing and when changing accessories, such as blades, bits, cutters, and the like.

(A)
Setup BX-3 for Operation

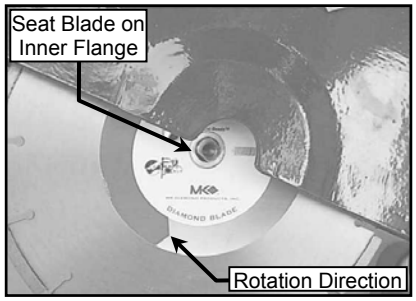


(B)
Remove Retaining Screw
and Outer Flange

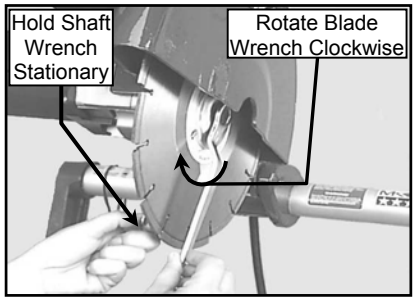


(C)
Remove Blade from
Motor Shaft

NOTE: When installing the Retaining Screw, do not “cross-thread" and DO NOT over tighten the screw.



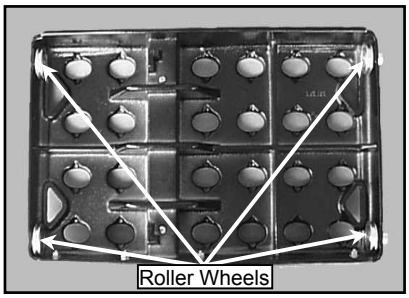
(D)
Install Blade Under Blade Guard
and Onto Motor Shaft



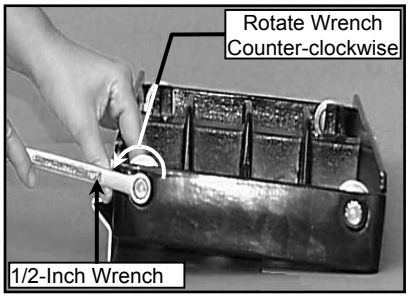
(E)
Install Outer Flange and
Retaining Screw – Tighten

5. Movable Cutting Table Wheel Change Out:

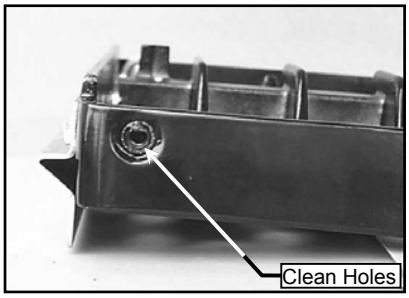
NOTE: All four (4) Movable Cutting Table, Roller Wheels should be replaced at the same time (MK Diamond Part No. – 133090).



(A)
Place Movable Cutting Table On Work Bench with Roller Wheels Up

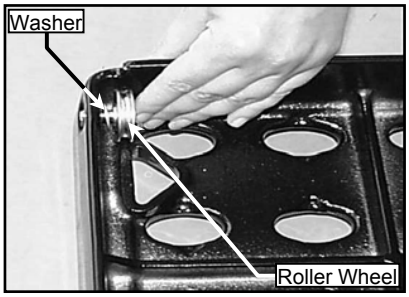


(B)
Remove Roller Wheels

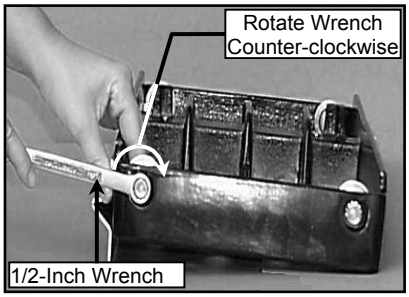


(C)
Prepare for Installation Of New Roller Wheels

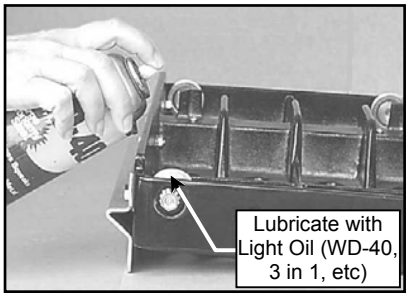
NOTE: When installing the Retaining Bolt, do not “cross-thread" and DO NOT over tighten the Nut.



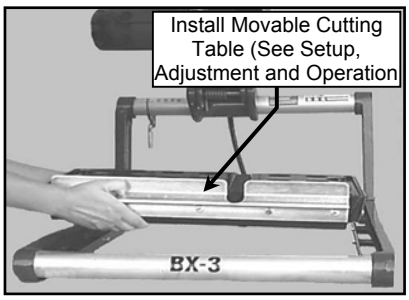
(D)
Install Wheel/Washer Assembly Into Movable Cutting Table



(E)
Install Roller Wheel Retaining Nut – Tighten



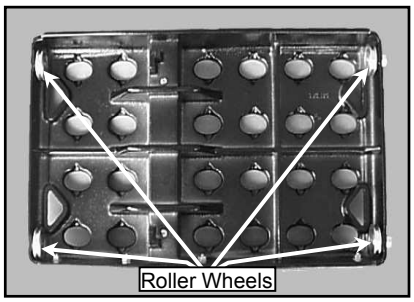
(F)
Lubricate Roller Wheels



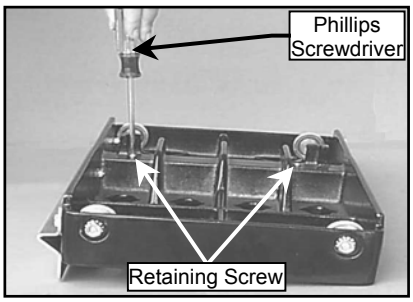
(G)
Install Movable Cutting Table

6. Protective Wooden Strip Replacement:

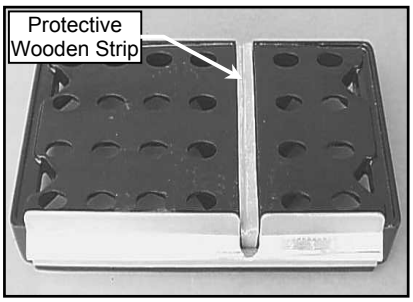
The protective wooden strip is to protect the Movable Cutting Table from damage during operation. Over time, the wooden strip will become grooved from use. A grooved wooden strip will not support masonry during cutting, causing the blade to "break through" the piece instead of performing a smooth cut (MK Diamond Part No. – 156427).



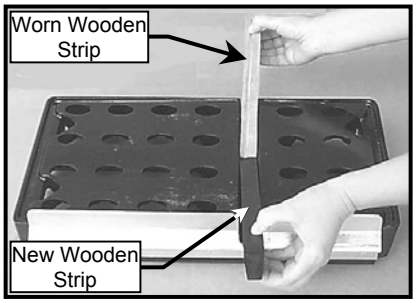
(A)
Place Movable Cutting Table on Work Bench – Wheels Up with Roller Wheels Up



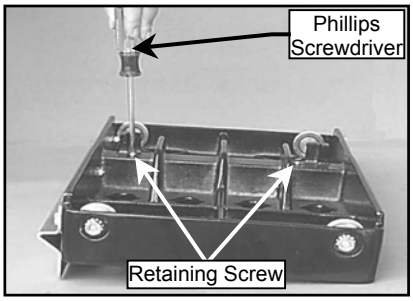
(B)
Remove the Two Protective Wooden Strip Retaining Screws



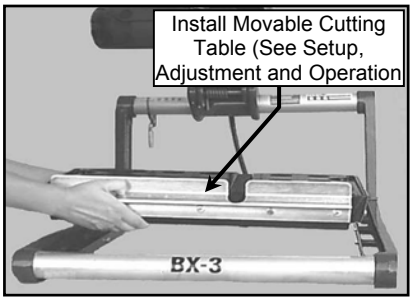
(C)
Place Movable Cutting Table on Work Bench – Wheels Down



(D)
Replace Worn Protective Wooden Strip



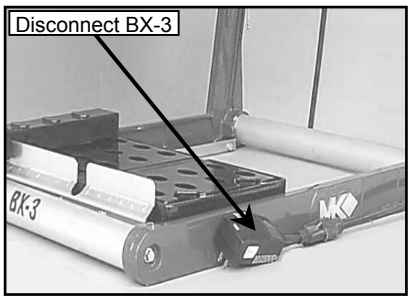
(E)
Place Movable Cutting Table on Work Bench – Wheels Up, Reinstall Retaining Screws



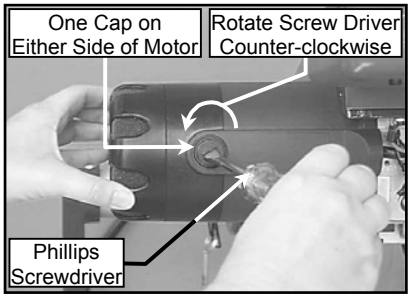
(F)
Install Movable Cutting Table

7. Motor Brush Change-out:

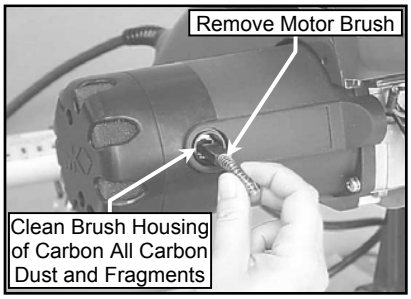
⚠WARNING Disconnect the tool before servicing and when changing accessories, such as blades, bits, cutters, and the like.



(A)
Disconnect the BX-3

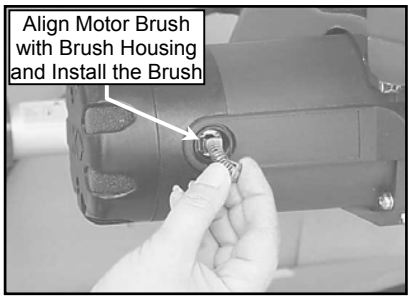


(B)
Locate and Remove One Motor Brush Cap

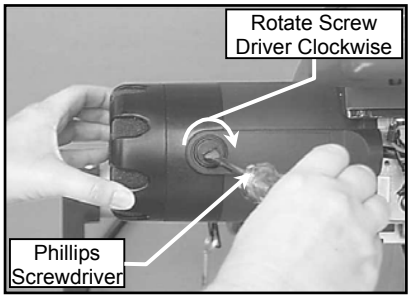


(C)
Remove Motor Brush and Clean Brush Housing

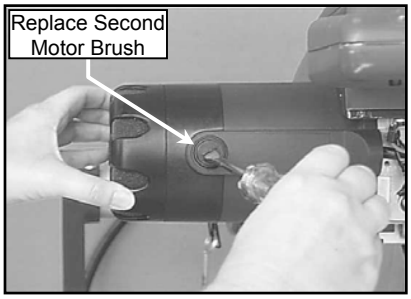
NOTE: When installing motor brushes, care must be taken to ensure the spring end is straight before installing the Motor Brush Cap.



(D)
Align and Install New Motor Brush



(E)
Install Motor Brush Cap

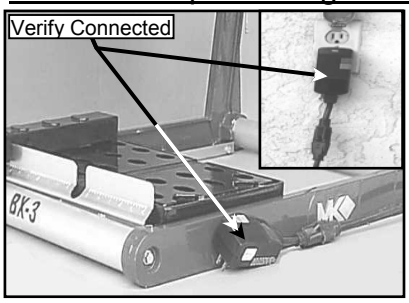


(F)
Install the Second Motor Brush (Repeat Steps B to E)

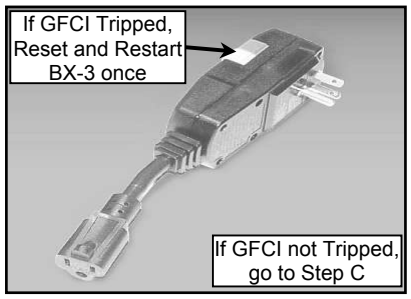
TROUBLESHOOTING:

⚠WARNING Verify the Lockable Switch is unlocked and the saw is disconnected from the power source before performing any troubleshooting procedure.

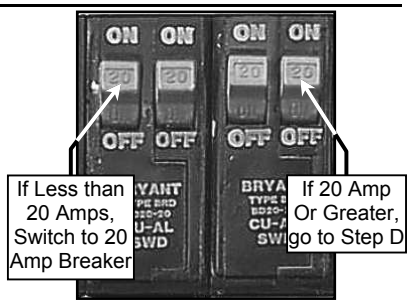
1. Motor Stops Turning:



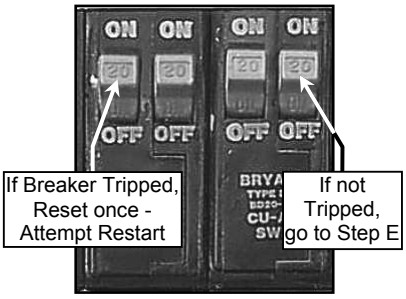
(A)
Verify all Plugs Fully Connected
If Connected, go to Step B



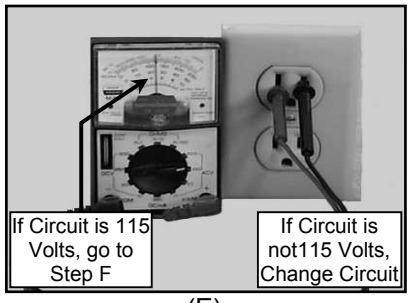
(B)
Check Ground Fault Circuit Interrupter (GFCI) Tripped



(C)
Verify Circuit Breaker is 20 Amp or Greater

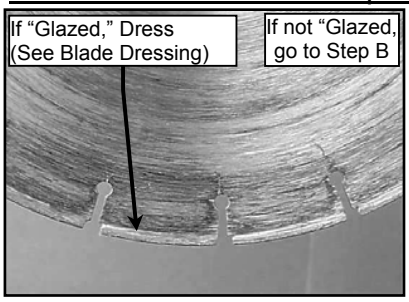


(D)
Verify Circuit Breaker Not Tripped

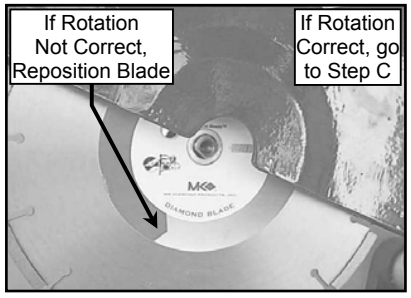


(E)
Verify Source Voltage is 115 Volts

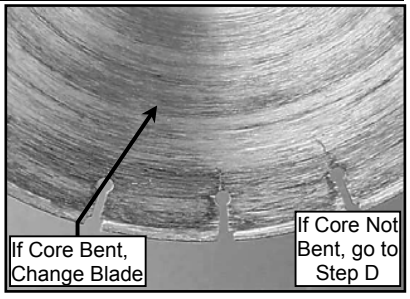
2. Blade Will Not Cut Properly:



(A)
Check for Smoothness or "Glazing"



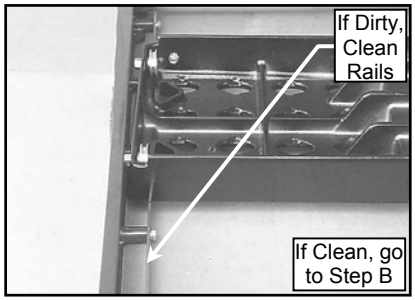
(B)
Check for Proper Rotation



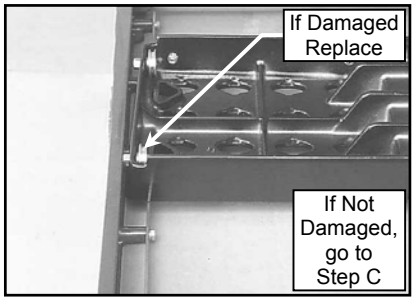
(C)
Ensure Blade Core Not Bent

(D)
Verify Blade Correct for Material Being Used

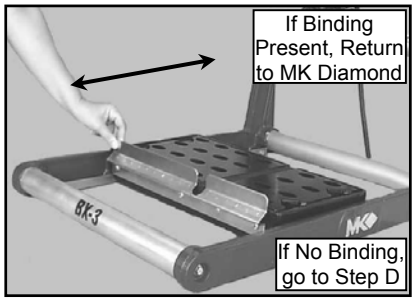
3. Movable Cutting Table Does Not Move Correctly:



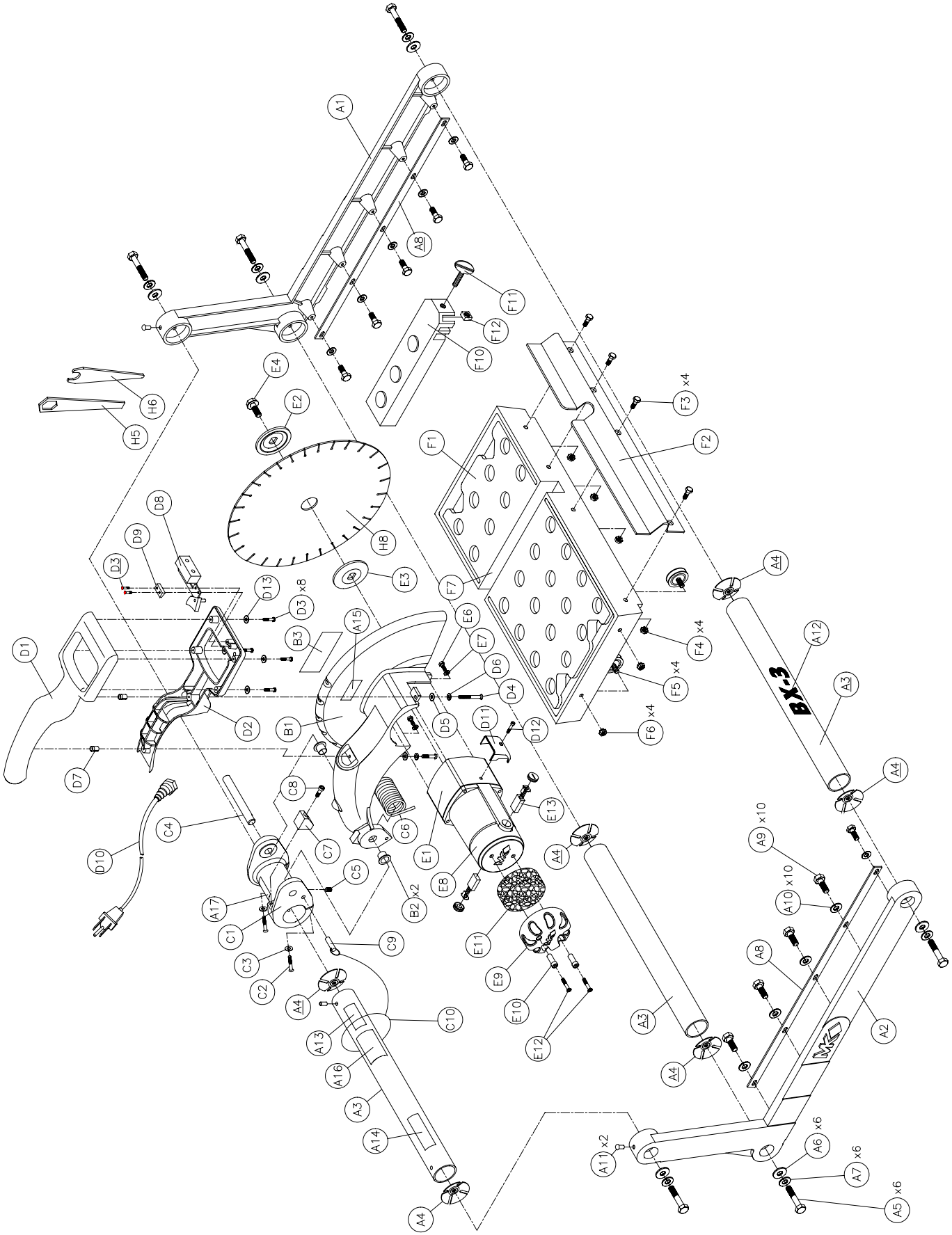
(A)
Check Guide Rails Clean



(B)
Check for Roller Wheel Damage



(C)
Verify Ease and Freedom of Movement


A1
A8
F11
F12
F10
E4
E2
H6
H5
F3 x4
F2
F1
D8
D9
D3
H8
E3
F7
A4
D13
D3 x8
A15
E6
E7
B3
D1
D6
D4
F4 x4
F5 x4
A12
A3
BX-3
D2
B1
D5
D11
D12
F6 x4
D7
C8
C4
C6
E13
A4
A9 x10
D10
C7
E1
C5
E8
A10 x10
A17
B2 x2
C1
C9
E11
C3
E9
A8
C2
A4
E10
C10
A3
A2
A13
E12
A16
A4
A3
A14
A11 x2
A6 x6
A7 x6
A4
A5 x6

PARTS LIST:

Item	Description	Qty	MK p/n
A	**Assembly, Frame, Right**	**1**	**n/a**
A1	Casting, Frame, Right	1	157367
A2	Casting, Frame, Left	1	157369
A3	Support, Horizontal Frame	3	157384
A4	Tube Connector, ¼-20	6	157930
A5	Screw, ¼-20 x 1 ½ Hex Head Cap	6	151914
A6	Washer, ¼ SAE Flat	6	151915
A7	Washer, ¼ Split Lock	6	152591
A8	Strap, Table Guide Rail	2	157383
A9	Screw, ¼-20 x ¾, Hex Head Cap	10	152370
A10	Washer, ¼ Split Lock	10	152591
A11	Drive Stud, Round Head Grooved #16 (¼) x ½	2	158071
A12	Label, Adhesive “BX3”	1	157959
A13	Label, Safety Caution	1	155576
A14	Label, MK USA	1	154334
A15	Tag, Serial, Brick Saw	1	158096
A16	Label, Prop 65	1	154337
A17	Label, Warning, Extension Cord	1	155672
B	**Assembly, Arm, Motor Mount**	**1**	**n/a**
B1	Casting, Arm, Motor Mount	1	157599
B2	Bushing, Nylon Flange	2	157932
B3	Label, Adhesive “Brick Xtreme”	1	157958
C	**Assembly, Pivot Clamp**	**1**	**n/a**
C1	Casting, Pivot Clamp	1	157593
C2	Screw, ¼-20 x 1 ¼ Socket Hd. Cap	2	154683
C3	Washer, ¼ Split Lock	2	152591
C4	Pin, Pivot .625 x 5.6	1	157645
C5	Screw, Set ¼-20 x ¼ Cup Point	1	157528
C6	Spring, Torsion	1	157702
C7	Stop Block	1	158226
C8	Screw, ¼-20 x 5/8, Socket Hd Cap	1	152587
C9	Pin, Detent w/ Pull Ring	1	157933
C10	Lanyard	1	158072
D	**Assembly, Handle & Switch**	**1**	**n/a**
D1	Handle, Upper	1	157874
D2	Handle, Lower	1	157875
D3	Screw, M3.5 x 12mm	8	158156
D4	Screw, ¼-20 x ¾, Socket Hd. Cap	2	152587
D5	Washer, ¼ SAE, Flat	2	151915
D6	Washer, ¼ Split Lock	2	152591
D7	Insert, Expansion, ¼-20 Standard	2	158147
D8	Switch, Trigger	1	157934
D9	Plate, Screw, Switch Mounting	1	157876
D10	Cord, AC Power 120V	1	157935
D11	Cover, Wire	1	157880
D12	Screw, # 6-32 x 1 ¼, Socket Flat Head	1	158160
D13	Washer, #6 Flat SAE	5	158231
E	**Assembly, Motor**	**1**	**n/a**
E1	Motor, AC 115 Volt / 15 Amp, 3500 RPM	1	157801-R
E2	Flange, Outer	1	158105

Item	Description	Qty	MK p/n
E3	Flange, Inner	1	158106
E4	Screw, M10 – 1.5 x 20mm Hex Flange	1	158107
E6	Screw, M6-1 x 20mm Hex Head Cap	4	158158
E7	Washer, M6 Split Lock	4	158159
E8	Cap, Motor	1	157877
E9	Cap, Motor Filter	1	157878
E10	Spacer Pin, Cap Screw	2	157879
E11	Filter Element	1	157729
E12	Screw, #6 x 1 ½, Combo Head Pan, Tapping	2	158157
F	**Assembly, Table**	**1**	133082
F1	Casting, Table	1	158144
F2	Stop, Rule	1	134387
F3	Screw, ¼-20 x ¾ Hex Head Cap	4	152370
F4	Nut, ¼-20, Hex w/ External Tooth Washer	4	153941
F5	Wheel, Roller	4	133090
F6	Nut, 5/16-18, Hex w/ External Tooth Washer	4	151051
F7	Wood Strip, Table Insert	1	156427
F8	Screw, #8 x 1 Pan Head Phil.	2	151047
F10	Casting, Squaring Arm	1	231276
F11	Screw, 5/16-18 x 1 ½, Thumb	1	151155
F12	Nut, 5/16-18 Square	1	151156
H	**Assembly, Accessory Pack**	**1**	**n/a**
H5	Wrench, Blade Nut	1	158109
H6	Wrench, Shaft	1	158110
H7	Extra Filter Element	1	157729
H8	Blade, MK-BX10, Dry Cutting 14”, Segmented	1	157957
H8-A	Blade, MK-BX30, Dry Cutting 14”, Segmented Block	1	157944
	Owner's Manual	1	158168

THEORY OF DIAMOND BLADES:

Diamond blades do not really cut; they grind the material through friction. Diamond crystals, often visible at the leading edge and sides of the rim/segment, remove material by scratching out particles of hard, dense materials, or by knocking out larger particles of loosely bonded abrasive material. This process eventually cracks or fractures the diamond particle, breaking it down into smaller pieces. As a result, a diamond blade for cutting soft, abrasive material must have a hard metal matrix composition to resist this erosion long enough for the exposed diamonds to be properly utilized. Conversely, a blade for cutting a hard, non-abrasive material must have a soft bond to ensure that it will erode and expose the diamonds embedded in the matrix. These simple principles are the foundation of “controlled bond erosion”.

Types of Cutting:

There are two basic types of cutting-Dry or Wet. The choice of which type of blade to use depends on:

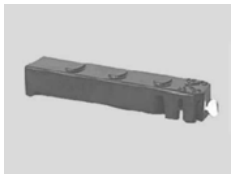
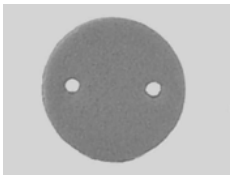
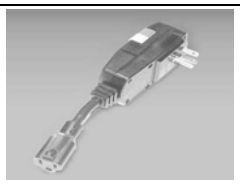
- The requirements of the job
- The machine/tool utilizing the diamond blade
- The preference of the operator

In the case of DRY cutting, the overwhelming popularity and quantity of hand-held saws and the flexible nature of MK Diamond blades to professionally handle most ceramic, masonry, stone and concrete materials, make the DRY cutting blade a very attractive tool. When using a DRY blade, the user must be aware of distinct operating practices to ensure optimum performance. DRY cutting blades require sufficient airflow about the blade to prevent overheating of the steel core. This is best accomplished by shallow, intermittent cuts of the material with periods of “free-spinning” (for several seconds) between each cut, to maximize the cooling process.

For WET cutting applications, MK has the exact blade to compliment both the material to be cut and the wet cutting machine to be used. During cutting operations, liberal amounts of water act as a coolant to support the cutting effectiveness and longevity of the WET blade. Additionally, using water adds to the overall safety of cutting operations by keeping the dust signature down.

Know All You Can About the Material You Wish to Cut

ACCESSORIES AND REPLACEMENT PARTS:

ITEM	NUMBER	DESCRIPTION	
1.	157957	MK-BX10, Dry Cutting 14" Segmented Blade	
2.	157944	MK-BX30, Dry Cutting 14" Segmented Block Blade	
3.	231276	Adjustable Cutting Guide*	
4.	133090	Roller Wheel*	
5.	156427	Protective Wooden Strip*	
6.	157729	Motor Air Filter*	
7.	152610	Ground Fault Circuit Interrupter	
8.	157981	BX-3 Stand (Stand contains Owners Manual)	

**Included at time of shipping*

ORDERING INFORMATION

You may order MK Diamond products through your local MK Diamond distributor or, you may order direct from MK Diamond.

When ordering direct from MK Diamond, please have the following information ready before calling:
- The Model Number of the saw
- The Serial Number of the saw
- Where the saw was purchased and when
- The Part Number for the part(s) being ordered
- The Part Description for the part(s) being ordered

NOTE: There is a $25.00 minimum order when ordering direct from MK Diamond. A $5.00 charge will be added to orders having a net billing value under $50.00. All purchases must be made using VISA, MasterCard or American Express.

All parts may be ordered by calling toll free to – 800 421-5830 or 310 539-5221 and asking for Customer Service. For technical questions, call – 800 474-5594.

RETURN MATERIALS POLICY

To expedite the service relative to the return of a product purchased through MK Diamond, please observe the following:

NOTE: When returning all items, they must have been purchased within the previous twelve (12) months.
- Have the Model Number of the saw
- Have the Serial Number of the saw
- Have the location of where the saw was purchased
- Have the date when the saw was purchased
- Contact Customer Service for approval to return the item(s)
- Obtain a Returned Goods Number (RGA) authorizing the return
- Follow the packaging instructions in the following section
- Ensure your item(s) are prepaid to the destination

For returned items, call toll free to – 800 421-5830 or 310 539-5221 and ask for Customer Service. For technical questions, call – 800 474-5594 or 310 257-2845.

PACKAGING INSTRUCTIONS

- Remove the Cutting Head and Support Angle Assembly
- Dry the saw before shipping
- When packing, include the following: Saw, Diamond Blade, Blade Guard and Support Angle Assembly and Adjustable Cutting Guide (Other Accessories are not required)
- Package the unit in its original container or one of comparable size (do not ship the unit partially exposed)
- Ensure all parts are secured in the packaging to prevent moving

AUTHORIZED SERVICE CENTERS

For quicker repair time, you may contact MK Diamond Customer Service, toll free, at 800 421-5830 or 310 539-5221 for the Authorized Service Center closest too you or visit our web site at www.mkdiamond.com. For technical questions, call – 800 474-5594.

CONTACT:

Please contact MK Diamond Products, Inc. Customer Service Department with any questions you might have regarding distributors, parts or service.
Telephone: **(800) 421-5830**
Fax: **(310) 539-5158**
E-mail: **Customer_Service@MKDiamond.com**
Customer Service Hours: **Monday through Friday, 6AM-4PM PST**

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

MK DIAMOND PRODUCTS, INC. LIMITED WARRANTY

MK DIAMOND PRODUCTS, INC. will guarantee every machine they build, to be free from defects in material and workmanship for (1) one year from date of purchase. The obligation of MK DIAMOND PRODUCTS, INC. under this warranty is limited to the repair or replacement of any parts which, under normal use, prove to be defective in material or workmanship. The parts involved or the unit in question should be returned to MK DIAMOND PRODUCTS, INC. or to a point designated by us, transportation prepaid.

This warranty does not obligate us to bear the cost of labor or transportation charges in connection with replacement or repair of defective parts. Likewise, it shall NOT apply to any unit which has been subjected to misuse, neglect or accident. This warranty does NOT apply to any machine which has been repaired or altered outside our factory.

This warranty does NOT obligate MK DIAMOND PRODUCTS, INC., with respect to items not of our manufacture, such as engines, motors, hydraulics, etc., which are subject to their own guarantees and warranties.

We shall in no event be liable for consequential damages or contingent liabilities arising out of failure of any equipment or parts to operate properly.

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MK Diamond may have patents, patent applications, trade marks, copyrights of other intellectual property right covering this product in this document.

This manual MUST accompany the equipment at all times. This manual is considered a permanent part of the equipment and should remain with the unit if resold.

The information and specifications included in this publication were in effect at the time of approval for printing.

MK-101 Pro 24 Tile Saw
OWNERS MANUAL & OPERATING INSTRUCTION
DOCUMENT NO. 158808

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