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MK-370EXP TILE SAW

OWNERS MANUAL & OPERATING INSTRUCTIONS



Revision 301	04.2009
Manual Part N	Vo. 160084

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



Congratulations on your purchase of a MK-370EXP Tile Saw. We are certain that you will be pleased with your purchase. MK Diamond takes pride in producing the finest construction power tools and diamond blades in the industry.

Operated correctly, your MK-370EXP 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 MK-370EXP safely and correctly. Please take a few minutes to familiarize yourself with the MK-370EXP by reading and reviewing this manual.

If you should have questions concerning your MK-370EXP, please feel free to call our friendly customer service department at: 800 421-5830

Regards,

MK Diamond

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

NOTE THIS INFORMATION FOR FUTURE USE:

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.**

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

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

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 I, Page 9 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 parts. A guard or any other part that is damaged should be carefully checked to determine it 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 and
- Arsenic and chromium, from chemically treated lumber

For further information, consult the following sources:

http://www.osha.gov/SLTC/silicacrystalline/index.html http://www.oehha.org/prop65/out_of_date/6022kLstA.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 engine 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.

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

This tool is intended for use on a circuit that has an outlet that looks like the one shown in Sketch A of Figure I. The tool has a grounding plug that looks like the plug illustrated in Sketch A of Figure I. 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.

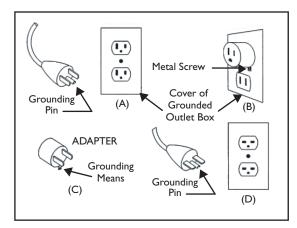


Fig. I Circuit and Adapter Information

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 Figure 2, 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.

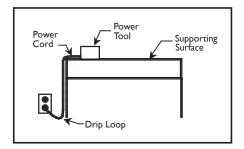


Fig. 2 Drip Loop Information





Use only extensions 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.

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



Use of under size 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 customers expense. There will be no warranty claim.

To choose the proper extension cord,

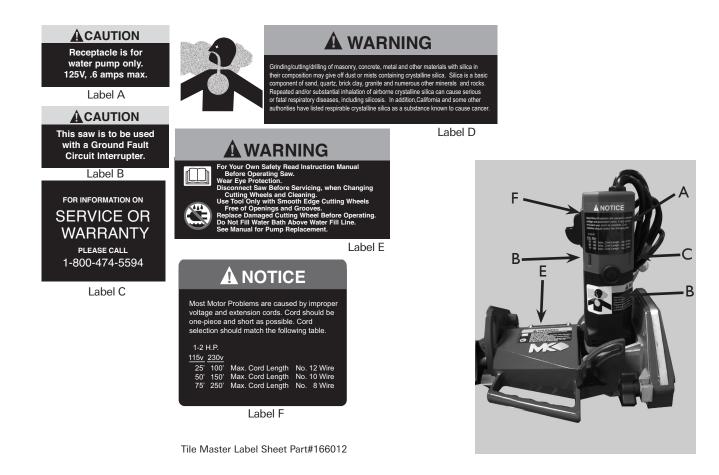
- Locate the length of extension cord needed in TABLE I below.
- Once the proper length is found, move down the column to obtain the correct AWG size required for that length of extension cord.

EXTENSION CORD MINIMUM GAGE FOR LENGTH				
VOLTS	VOLTS TOTAL LENGTH OF CORD IN FEET			
			l 50 ft. AWG	
5v	14	12	Not Recommended	Not Recommended
230v	N/A	14	12	N/A

Table I

SAFETY LABEL LOCATIONS

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



Decal/Label	Location	Description
А	Motor - Side	Caution - Receptacle is for Water Pump Only
В	Motor - Side	Caution - Use with GFCI only
С	Motor - Back	Service/ Warranty
D	Motor - Front	Warning - Silica Warning
E	Cutting Head – Top	Warning - Read Owners Manual
F	Motor - Front	Notice - Voltage/extension cords

TILE SAW SPECIFIC WARNINGS

Wear eye protection.

Use splash guard for every operation for which it can be used. Disconnect saw before servicing, when changing cutting blades, and cleaning. Replace damaged cutting blade before operating.

PRODUCT SPECIFICATIONS

The MK-370EXP is a versatile Tile Saw. Operated and used according to this manual, the MK-370EXP will provide years of dependable service.

GENERAL DESCRIPTION

The MK-370EXP Tile Saw is engineered as a tabletop or stand mounted wet tile saw. The saw includes a powerful 115V electric motor. The saw is capable of cutting tile up to twelve (12) inches in length. The saw can cut an object one and three quarters (1-3/4) inches thick in one pass.

MOTOR SPECIFICATIONS

Motor specifications for the MK-370EXP are listed in Table 2 below.

Voltage	5v
Overall Amperage	7.4 A
Frequency	50/60Hz
RPM	6000 rpm
Horse Power	I-1/4 hp

Table 2

BLADE CAPACITY

The MK-370EXP uses a seven (7) inch (178mm) diameter, wet cutting continuous rim, MK Diamond blade with a five-eighths (5/8) inch (15.875 mm) arbor.

TILE TYPES

The MK-370EXP can cut a variety of tile types including stone, masonry, and lapidary products.

NOTE: The MK-370EXP is not designed to cut plastic or metals.

- One (1) MK-370EXP cutting head

- One (I) extended rip guide
- One (I) electric water pump
- One (1) pump discharge fitting
- One (1) cooling transfer tube
- One (1) Flow adjusting clamp
- One (1) blade wrench
- One (1) shaft wrench,
- One (I) owners manual
- One (I) pump manual
- One (I) warranty card



Splash Guard Wing Nut & Washer



Flow Adjusting Clamp

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Warranty Card



Cutting Head

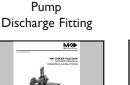


Electric Water Pump

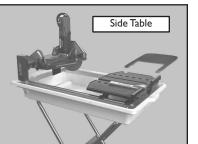
Shaft

Wrench





Owners Manual



You have the option of purchasing a Side Table (part# 160488) that can be attached to the Cutting Table. The Side Table can be an aid in cutting larger tiles.

UNPACKING

CAUTION Use proper lifting techniques when lifting the MK-370EXP Remove the MK-370EXP and accessory box from the carton.

CONTENTS:

One (1) MK-370EXP cutting surface &

water pan

- One (1) 7-inch wet cutting blade
- One (1) splash guard

MK-370EXP

Cutting Surface

Extended

Rip Guide

Blade Nut

Wrench

OPTIONAL SIDE TABLE

One (1) splash guard wing nut & washer



Diamond Blade



Splash Guard

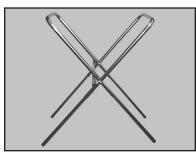
Cooling Transfer Tube

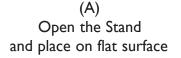


Pump Manual

OPTIONAL STAND

- I. The MK-370EXP weighs approximately thirty-three (33) pounds; use care when lifting.
- 2. Never lift the MK-370EXP with water in the Water Pan.
- If a stand was not included with your saw, you have the option of purchasing one (part# 160131-MK)







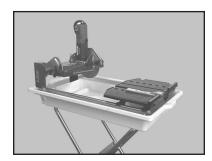
(B) Orient the Saw to the Stand



(C) Align the Stand supports to the depressions on the pan



(D) Sit the Water Pan on top of the Stand Supports

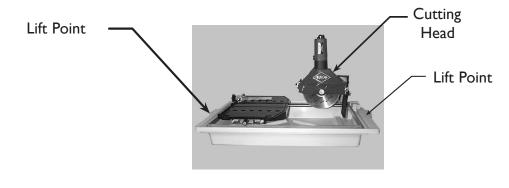


(E) Verify that the saw is stable in place

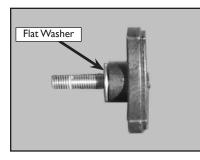
TRANSPORT

- I. The MK-370EXP weighs approximately thirty-three (33) pounds; use care when transporting.
- 2. Never transport the MK-370EXP with water in the Water Pan.

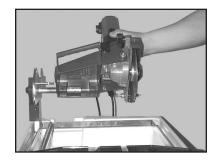
The MK-370EXP is designed with a rigid frame and removable Cutting Head making the saw easily transportable. To lift the saw, grasp the front and back of the frame at the lift points shown below.



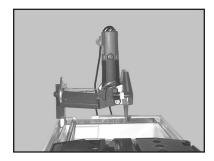
Follow the assembly instructions to prepare your MK-370EXP for operation. **CUTTING HEAD INSTALLATION**



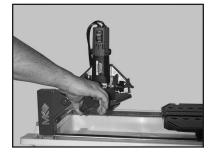
(A) Place the Flat Washer onto the Height Adjusting Knob



(B) Align Cutting Head Pivot Hole to the Post, Pivot Shaft



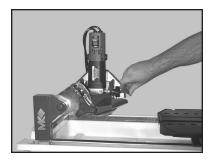
(C) Verify the Cutting Head is completely installed and seated on the Post



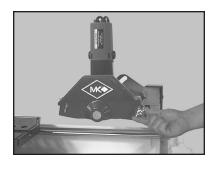
(D) Install the Height Adjusting Knob through the Post into the Cutting Head and tighten the Knob

DIAMOND BLADE INSTALLATION

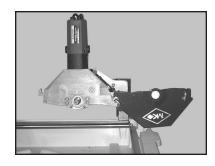
NOTE: When installing the Retaining Screw, do not "cross-thread" and DO NOT over tighten the screw.



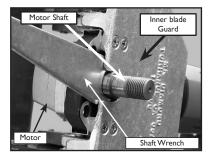
(A) Loosen and remove the Blade Guard Retaining Knob



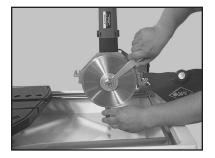
(B) Loosen the Blade Guard Retaining Wing nut



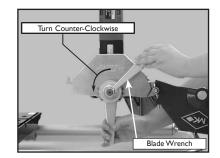
(C) Open the Blade Guard



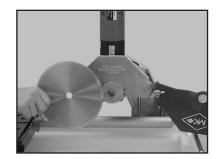
(D) Place the Shaft Wrench between the Inner Blade Guard and the Motor and onto the Motor Shaft



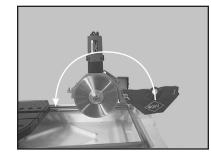
(G) Install the Retaining Nut and Outer Flange and then tighten using the Blade and Shaft Wrenches



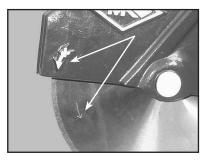
(E) Using the Blade and Shaft Wrenches, loosen and remove the Retaining Nut and Outer Flange



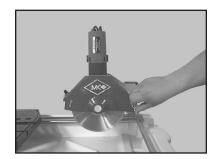
(F) Install Diamond Blade onto Blade Shaft



(H) Close the Blade Guard



(I) Verify the Blade is seated on the Blade Shaft and direction of rotation is correct



(J) Tighten the Blade Guard Retaining Wing nut



(K) Tighten the Blade Guard, Retaining Knob

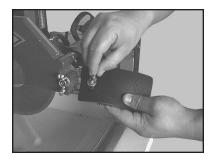
ADJUSTABLE CUTTING GUIDE INSTALLATION

NOTE: The Adjustable Cutting Guide can be used on either side of the Diamond Blade.



(A) Loosen Adjustable Cutting Guide retaining thumbscrew and place it over the Movable Cutting Table, Ruler/Stop

SPLASH GUARD INSTALLATION



(A) Install the retaining thumbscrew through the washer and Splash Guard then align to the hole found on back of the Blade Guard



(B)

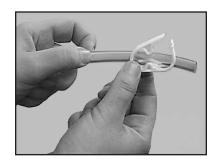
Place the Adjustable Cutting Guide

onto the Movable Cutting, Table

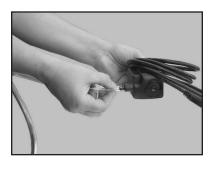
Ruler/Stop and tighten the retaining

(B) Install the Splash Guard onto the Blade Guard

WATER PUMP PREPARATION



(A) Slide Cooling Flow Adjusting Clamp onto the Cooling Transfer Tube



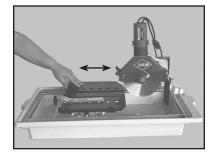
(B) Press one end of the Cooling Transfer Tube onto the Water Pump Discharge Fitting

PRE-START INSPECTION

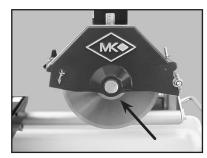
Prior to beginning work, a pre-start inspection of the saw should be performed.



(A) Ensure the ON/OFF Switch is in the OFF position



(B) Verify the Movable Cutting Table moves freely



(C) Inspect the Diamond Blade for damage – verify the blade is correct for the type of material being cut



(D) Inspect the Pump Assembly for damage – ensure the cord is free of cracks or cuts



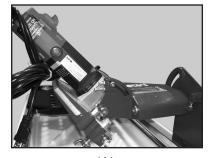
(E) Inspect the MK-370EXP for damage – ensure the cord is free of cracks or cuts

CONNECTING THE WATER PUMP

WARNING 1. To prevent the possibility of electrical shock, the MK-370EXP MUST be deenergized when connecting the Water Pump.

- 2. To prevent the possibility of electrical shock, use only MK Diamond authorized replacement parts.

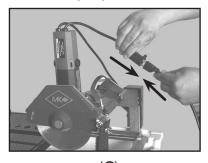
NOTE: To prevent pump damage, the Water Pump must be disconnected if cutting dry.



(A) Loosen the cutting head pivot retaining knob and tilt cutting head to 45°



(B) Connect the Cooling Transfer Tube to the inlet connection on the Blade Guard



(C) Connect the Water Pump power cord to the connection found on the back of the motor

WATER PUMP SETUP FOR OPERATION

The Water Pump can be setup for operation in two ways: External Water Source or Re-circulation.

NOTE: If cutting dry DO NOT connect the water pump.

RE-CIRCULATION

NOTE: When using the re-circulation method, the water should be changed often for longer pump life

(A) Ensure that Cooling

Ensure that Cooling Transfer Tube is connected

(B) Place the Water Pump toward the back of the Water Pan

(C) Position pump as shown and place the pump electrical cord and cooling transfer tube under the frame.

(D) Fill the Water Pan until water completely covers the Water Pump suction

EXTERNAL WATER SOURCE

This is the preferred method of cooling.

- I. Verify or remove the Drain Plug from the Water Pan.
- 2. Place the Water Pump in an external container.
- 3. Fill the external container until water completely covers the Water Pump suction inlet.
- 4. Place an external catch basin below the Water Pan drain hole.







SETUP

SETUP FOR OPERATION

CAUTION I. Before powering or starting, check for damage that could prevent this equipment from proper operation or performing it's intended function. Check for binding and alignment of moving parts. Check for damaged, broken, or missing parts.

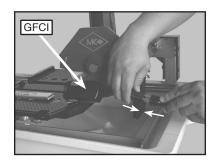
- 2. Verify the On/Off switch is in the OFF position.
- 3. Before connecting the MK-370EXP to a power supply, be sure the voltage, cycle and phase of the job site power source meet the requirements of TABLE 3
- 4. Use an approved Ground Fault Circuit Interrupter (GFCI)
- 5. Do not cover the motor vents as this could lead to motor overheating.

VOLTAGE	115v	
CYCLE	60Hz	
PHASE	I-phase	
Table 3		

- NOTE: I. In order to avoid breaker tripping, a 20 amp circuit breaker should be used.
 - 2. If using an extension power cord, make sure the length and wire gauge correspond to the requirements listed in TABLE 1 on page 10. 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.



(A) Ensure the ON/OFF Switch is in the OFF position



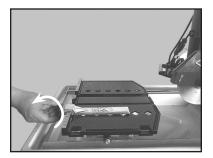
(B) Plug MK-370EXP into the GFCI



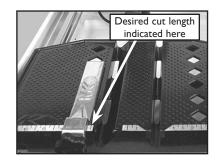
(C) Plug the GFCI into the Power source

CUTTING STRAIGHT EDGES

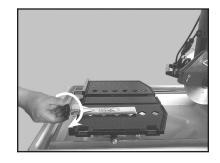
CAUTION DO NOT FORCE THE TOOL. It will do the job better and safer at the rate for which it was designed.



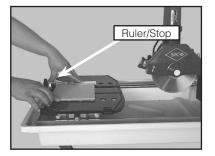
(A) Loosen the Adjustable Cutting Guide retaining thumbscrew



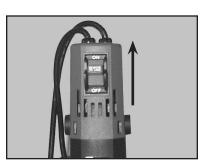
(B) Position the Adjustable Cutting Guide to desired cut length



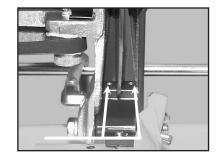
(C) Tighten the retaining thumbscrew



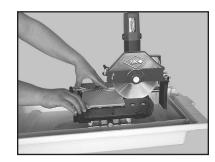
(D) Place the tile against the Ruler/Stop and Cutting Guide



(E) Turn the motor ON



(F) Verify cooling flow on both sides of the blade



(G) Perform the cut

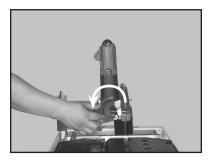


(H) Turn the motor OFF when work is complete

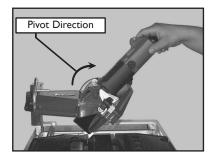
CUTTING 45° MITERS

The MK-370EXP is designed with an adjustable Cutting Head for precision 45° Miter Cuts.

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



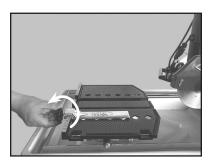
(A) Loosen the Cutting Head Pivot, Retaining Knob



(B) Pivot the Cutting Head to the 45° cutting position



(C) Tighten the Cutting Head, Pivot Retaining Knob



(D) Loosen the Adjustable Cutting Guide retaining thumbscrew



(E) Position the Adjustable Cutting Guide to desired cut length



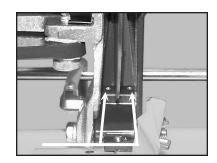
(F) Tighten the retaining thumbscrew



(G) Place the tile against the Ruler/Stop and Cutting Guide

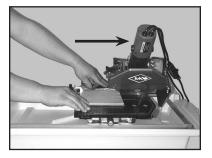


(H) Turn the motor ON



(I) Verify cooling flow on both sides of the blade

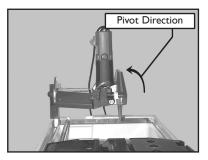
CUTTING 45° MITERS (CONT...)



(J) Perform the cut



(K) Turn the motor OFF when work is complete



(L) Return the Cutting Head to the upright position when complete

DIAGONAL CUTTING

NOTE: To cut diagonal, the Dual 45° Flat Angle Guide (MK Diamond Part No. 134557-MK) should be used.

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



(A) Remove the Adjustable Cutting Guide



(B) Place the Dual 45° Flat Angle Guide on the Ruler/ Stop



(C) Position the Dual 45° Flat Angle Guide and tighten the retaining knob

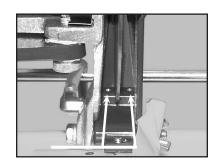
NOTE: If Cutting the tile in two equal halves, align the tile in the V-notch of the Movable Cutting Table Ruler/Stop.



(D) Position the tile against the Dual 45° Flat Angle Guide and the Ruler/Stop



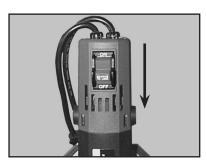
(E) Turn the motor ON



(F) Verify cooling flow on both sides of the blade



(G) Perform the cut



(H) Turn the motor OFF when work is complete

OFF-ANGLE CUTTING

NOTE: Use a Protractor (MK Part No. 134569-MK) to cut angles other than 45° angles. (not included)

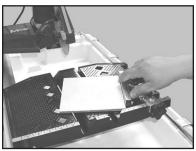
CAUTION DO NOT FORCE THE TOOL. It will do the job better and safer at the rate for which it was designed.



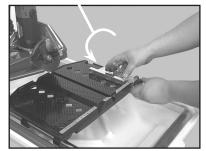
(A) Remove the Adjustable Cutting Guide



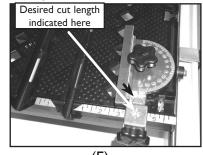
(D) Tighten the Protractor Gage retaining knob



(G) Position the tile against the Protractor and the Ruler/Stop



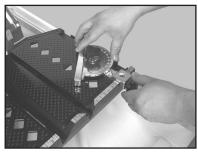
(B) Place the Protractor on the Ruler/ Stop.Turn CCW to loosen



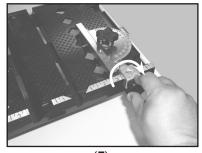
(E) Position the Protractor Cutting Guide to the desired length



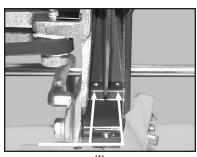
(H) Turn the motor ON



(C) Set the desired angle on the Protractor Gage



(F) Tighten the retaining knob



(I) Verify cooling flow on both sides of the blade



(G) Perform the cut



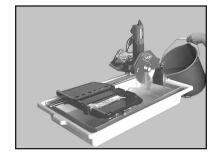
(H) Turn the motor OFF when work is complete

CLEANUP

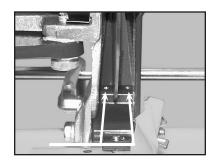
NOTE: Dispose of wastewater in accordance with applicable Federal, State and Local laws.



(A) Remove the pump Suction Screen and clean the Water Pump of all debris. (See pump manual for more detail)



(B) Fill the Water Pan with clean water



(C) Run the MK-370EXP until clear water is seen at the blade Cooling Flow Points (Approx. 1 minute)

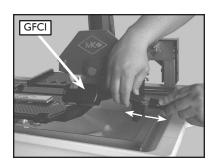
CAUTION Ensure the saw is disconnected before completing the remainder of the cleanup process.



(D) Ensure the ON/OFF Switch is in the OFF position



(E) Unplug the GFCI from the Power source



(F) Unplug MK-370EXP from the GFCI



(G) Remove the Cutting Assembly from the Water Pan

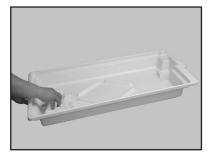


(H) Dispose the contents of the Water Pan



(I) Clean the MK-370 with soap and clean water

MAINTENANCE



(I) Clean the Water Pan

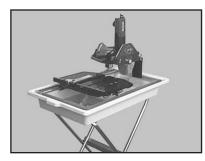


(J) Clean the Adjustable Cutting Guide and Guide Bar



(K) Clean the Roller Wheel Guide Rail





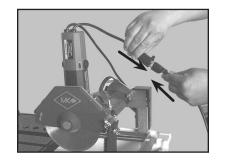
(L) Clean the remainder of the MK-370EXP

MAINTENANCE FOLLOWING USE

To extend the life of the MK-370EXP, the following procedure should be performed after each use. Lubricate all points listed below with light oils such as, 3 in 1, WD-40, etc.



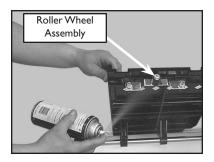
(A) Ensure the ON/OFF Switch is in the OFF position



(B) Unplug MK-370EXP



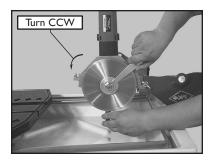
(C) Lubricate the Guide Bar



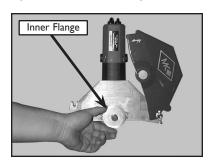
(D) Lubricate the Roller Wheel Assembly

MONTHLY MAINTENANCE

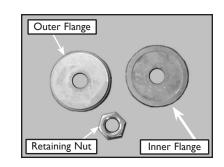
The following maintenance should be performed Monthly.



(A) Remove the Diamond Blade, Outer Flange and Retaining Nut



(B) Remove the Inner Flange

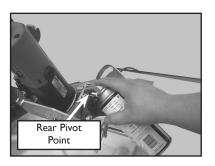


(C) Clean and Lubricate the Inner and Outer Flanges and the Retaining Nut

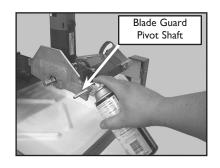
MAINTENANCE



(D) Clean around Motor Shaft



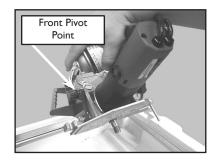
(G) Lubricate the rear Cutting Head Pivot Point



(E) Remove the Blade Guard then clean and lubricate the Blade Guard Pivot Shaft



(H) Remove the Cutting Head



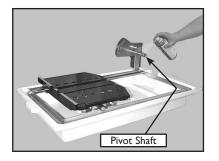
(F) Lubricate the front Cutting Head Pivot Point



(I) Clean the Cutting Head Pivot Holes



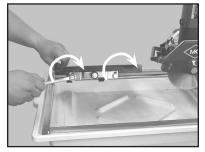
(J) Lubricate the Cutting Head Pivot Holes



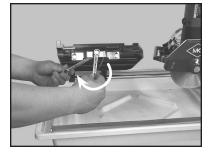
(K) Lubricate the Cutting Head Pivot Shaft



(L) Lubricate the Cutting Head Adjustment Knob



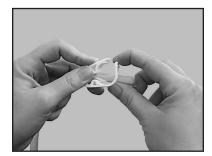
(M) Verify the Cutting Table Roller Wheel Assembly is tight



(N) Verify that the Roller Wheel is tight

FLOW ADJUSTMENT

NOTE: If flow to the diamond blade requires adjustment, perform the following actions.



(A) Increase cooling flow by releasing the Flow Adjusting Clamp



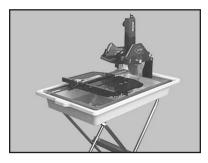
(B) Reduce cooling flow by pressing down on the Flow Adjusting Clamp

BLADE DRESSING

Like most cutting instruments, a diamond blade performs best when it is dressed. Over time and use, diamonds on the outer edge of the blade will become smoothed 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.

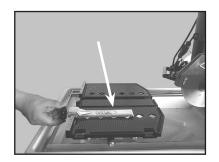
The diamond blade can be dressed using the MK Dressing Stick (part# 152792) and by following the steps below.



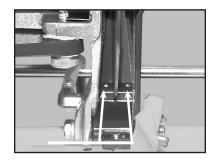
(A) Setup the MK-370EXP for operation (See Setup, Adjustment and Operation)



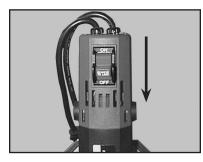
(D) Turn the motor ON



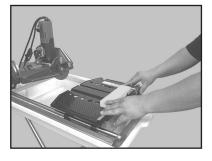
(B) Set the Adjustable Cutting Guide to cut a 1/16-strip



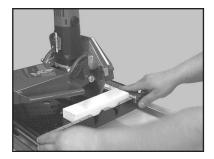
(E) Verify cooling flow on both sides of the blade



(G) Ensure the ON/OFF Switch is in the OFF position



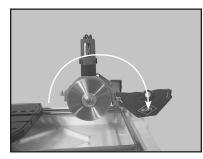
(C) Position the Dressing Stick



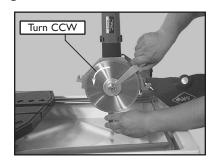
(F) Cut the Dressing Stick 7 or 8 times to dress the Blade

DIAMOND BLADE CHANGE-OUT

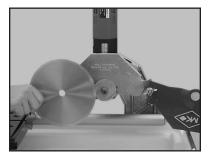
NOTE: When installing the Retaining Nut, do not "cross-thread" and DO NOT over tighten the screw.



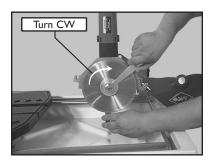
(A) Open the Outer Blade



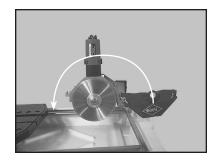
(B) Remove Retaining Nut and Outer Flange



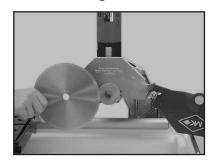
(D) Install the Diamond Blade onto Blade Shaft



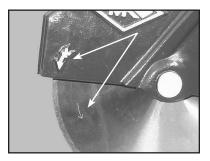
(E) Install the Retaining Nut and Outer Flange and then tighten using the Blade and Shaft Wrenches



(G) Close the Outer Blade



(C) Remove Diamond Blade from Blade Shaft



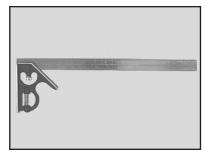
(F) Verify the Blade is seated on the Blade Shaft and direction of rotation is correct

ALIGNMENT

The Movable Cutting Table of the MK-370EXP is pre-aligned in the factory. It may become misaligned with the Cutting Head of the Tile Saw over time. Should misalignment occur, perform the following steps to realign it.

NOTE: If alignment problems are the result of a warped blade, a bent frame or bent support arm, or, if alignment is off by more than 1/8-inch, contact the MK Diamond Service Center - (800) 474-5594

TOOLS NEEDED



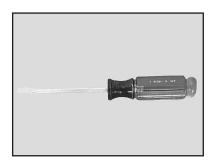
Combination Square 12-inch or Greater



I/2-inch Wrench

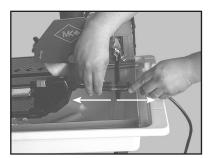


I/4-inch Wrench



Flat Head Screwdriver

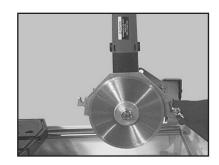
PREPARATION



(A) Remove Tile Saw from Power Source



(B) Inspect Tile Saw for damage

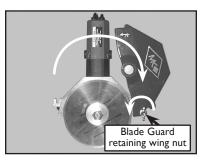


(C) Inspect Diamond Blade for damage

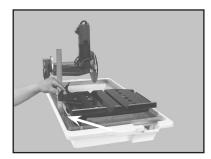
MOVABLE CUTTING TABLE ALIGNMENT VERIFICATION

This will verify the Movable Cutting Table is aligned to the frame of the saw.

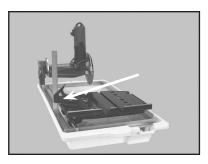
NOTE: If the blade is misaligned following alignment verification, attempt to align using Alignment Screw, 90° Verification. The Diamond Blade must be removed and reinstalled when removing the Blade Guard.



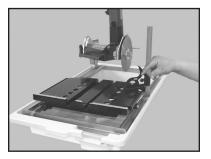
(A) Remove Blade Guard



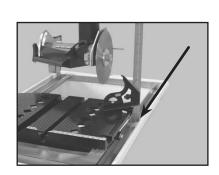
(B) Place Square on guide bar side of cutting table



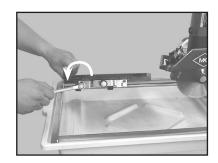
(C) Lock in position



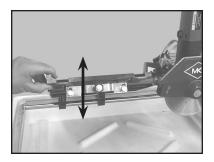
(D) Move Square to wheel assembly side of the cutting table



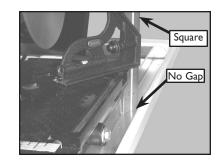
(E) Verify Wheel Assembly side of Movable Cutting Table height is same as Guide Bar side



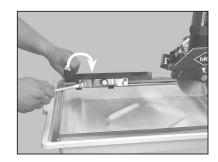
(F) If gap exists, loosen Movable Cutting Table Wheel Assembly



(G) Move Wheel Assembly up or down to Square the Movable Cutting Table



(H) Check that there is no gap between the Square and the wheel assembly side of frame

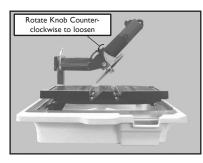


(I) Tighten Movable Cutting Table Wheel Assembly

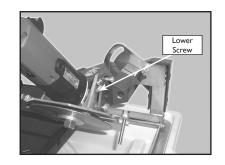
ALIGNMENT SCREW, 90° VERIFICATION

90°- alignment verification will ensure that the blade will cut the tile straight up and down and not at an angle.

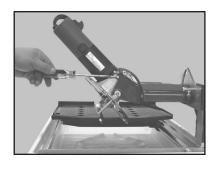
NOTES: If the blade is misaligned following this alignment procedure, return the saw to MK Diamond for repair. The Diamond Blade must be removed and reinstalled when removing the Blade Guard.



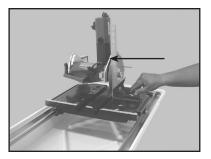
(A) Position the Cutting Head to the 45° Cutting Angle



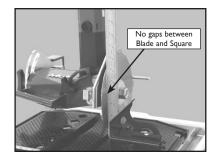
(B) Locate the 90° Adjustment Screw



(C) Rotate 90° Adjustment Screw clockwise or counter-clockwise to realign Cutting Head



(D) Position the Square on Movable Cutting Table against the Diamond Blade



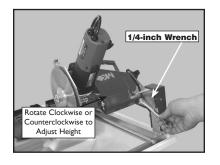
(E) Verify the Diamond Blade is Square to the Movable Cutting Table



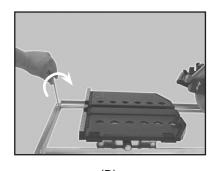
(F) Repeat Steps A to E as necessary to align the Cutting Head

HORIZONTAL ROUGH ALIGNMENT

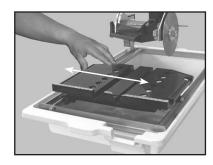
The Horizontal alignment will ensure that straight cuts (or Rip Cuts) are made.



(A) Position Cutting Head to normal Cut Depth



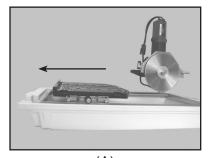
(B) Loosen front and rear Guide Bar Retaining Bolts



(C) Move Guide Rail and Table until the Blade is centered in Cutting Groove

MAINTENANCE & TROUBLESHOOTING

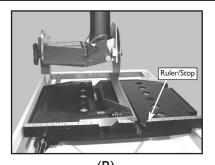
HORIZONTAL FINAL ALIGNMENT



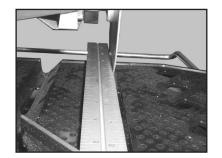
(A) Pull Movable Cutting Table to front of Tile Saw



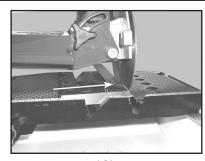
(D) Move Guide Bar and table until Square rests evenly across Blade



(B) Position Square flat on Movable Cutting Table against Ruler/ Stop



(E) Position end of Square against Blade

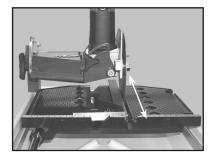


(C) Position front of Square against Blade

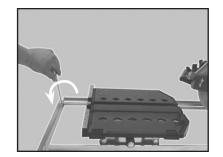


(F) Move Guide Bar and table until Square rests evenly across Blade

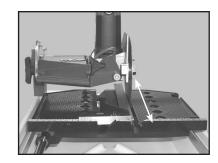
HORIZONTAL ALIGNMENT VERIFICATION



(A) Move the Cutting Table back and forth to verify Blade is even across all points of Square



(B) Tighten Guide Bar Retaining Bolts

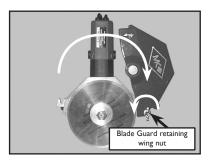


(C) Move the Cutting Table back and forth to re-verify Blade is even across all points of Square

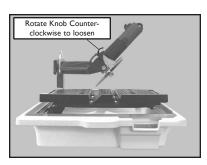
45° ALIGNMENT VERIFICATION

The 45° Alignment Verification is done to ensure the blade will cut tile at a 45° angle.

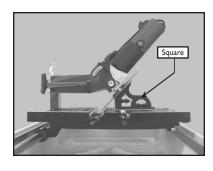
NOTE: If the blade is misaligned following this alignment procedure, return the saw to MK Diamond for repair. The Diamond Blade must be removed and reinstalled when removing the Blade Guard.



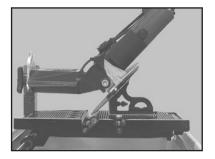
(A) Remove Blade Guard (If not done Previously)



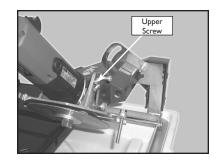
(B) Position the Cutting Head to the 45° Cutting Angle



(C) Place Square on the Movable Cutting Table and position the Square against the Blade



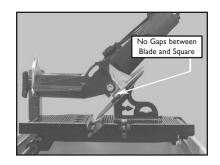
(D) Verify Blade is even across all points of Square and there are no gaps between Blade and Square



(E) To Adjust 45° Cutting Angle, locate the 45°Adjustment Screw



(F) Rotate 45° Adjustment Screw clockwise or counterclockwise to realign 45° Cutting Angle



(G) Verify Blade is now even across all points of Square



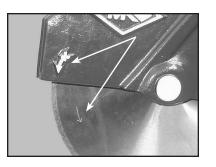
(H) Repeat steps A to G until Blade is even across all points of Square

TROUBLESHOOTING

BLADE WILL NOT CUT PROPERLY



(A) Check for Smoothness or "Glazing" (Dress blade if needed)



(B) Check for proper rotation



(D) Verify the blade is correct for the material being used

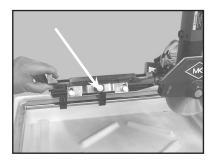


(C) Ensure the Blade Core is not bent and Arbor is not out of round

MOVABLE CUTTING TABLE DOES NOT MOVE CORRECTLY

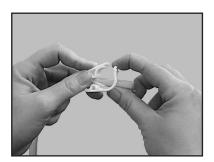


(A) Check that the Guide Bar is clean – clean if dirty



(B) Check the Movable Cutting Table Roller Wheel for wear replace if necessary

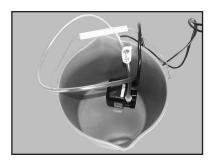
COOLING FLOW



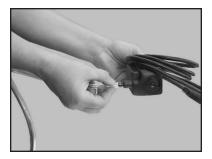
(A) Check cooling flow Adjusting Clamp open



(B) Remove the Cooling Transfer Tube from the Blade Guard inlet



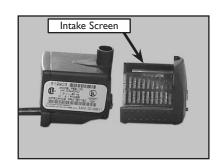
(C) Place Pump into a bucket of water and check flow



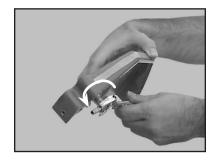
(D) Remove the Cooling Transfer Tube and check flow



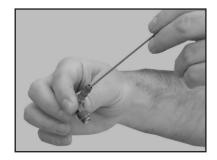
((E) Remove the Pump Discharge Fitting and check



(F) Remove the Pump Intake Screen and check for debris



(I) Remove the Blade Guard Intake Fitting



(J) Clean the Blade Guard Intake Fitting

MAINTENANCE & TROUBLESHOOTING

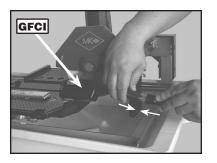
MK-370EXP

NOTE: "Rodding" cooling channels is performed by inserting a small wire rod through the cooling inlet on top of the Blade Guard and directing the rod out through each of the cooling flow tubes located on the underside of the Blade Guard. The cooling channels should be "rodded" until all ports are free of foreign debris.

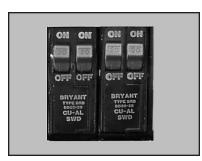


(K) Rod Cooling Channels and recheck flow

BLADE STOPS TURNING



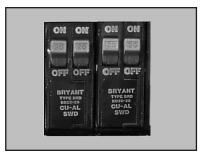
(A) Verify all plugs are fully installed



(D) Verify circuit breaker not tripped. If tripped, reset once



(B) Check to see if the Ground Fault Circuit Interrupter (GFCI) is tripped

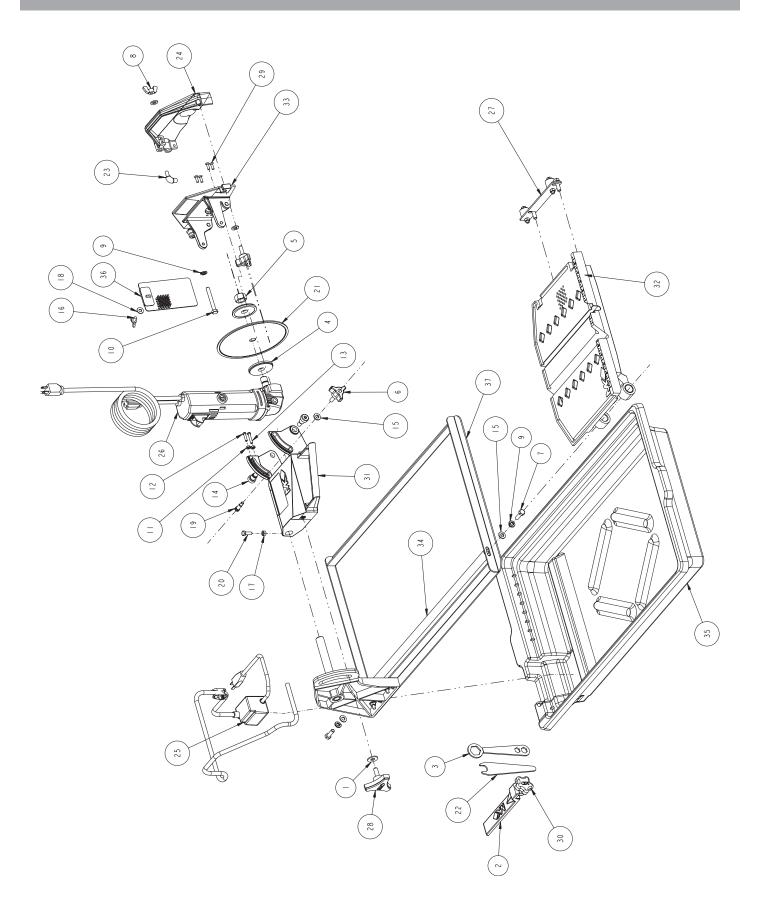


(C) Verify circuit breaker at least 20 amps – if not, move to 20 amp circuit



(E) Check power source voltage is 115v – if not 115v, move to another circuit

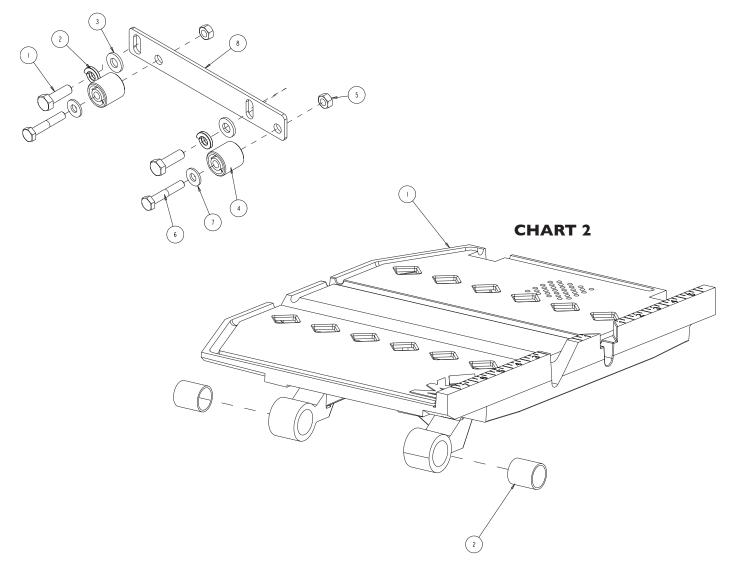
NOTES



ITEM NO.	DESCRIPTION	PART OR IDENTIFYING NO.	QTY. REQ.
	WASHER, FLAT CUT 3/8	101360	
2	RIP GUIDE (COMP)	134551	1
3	WRENCH	134684	
4	FLANGE, OUTER	135830	2
5	NUT, HEX, 5/8 - 18	I 35848	I
6	KNOB, 5/16 - 18 X 1	151681	2
7	SCREWS, 5/15 - 18 X 1 HEX HEAD MACHINE	151743	2
8	WINGNUT, NYLK, 5/16-18	151746	I
9	WASHER, LOCK, SPLIT, 5/16	151747	3
10	BOLT, HEX HD TAP, 5/16 - 18 X 2-1/2	151748	
11	NUT, 10-24 HEX	151749	2
12	SCREW, PHIL HD 10 - 24 X 3/4	151750	1
13	SCREW, PHIL HD 10 - 24 X 1"	151751	1
14	BOLT, SHOULDER 1/2 X 1/2	151753	2
15	WASHER, 5/16 SAE FLAT	151754	5
16	SCREW, WING, 1/4-20 X 1/2	151888	
17	NUT, 1/4-20 HEX	151893	1
18	WASHER, I/4 SAE FLAT	151915	1
19	SCREW, SHOULDER 5/16 - 18 X 5/8	152137	1
20	SCREW, 1/4 - 20 X 3/4 HEX HEAD MACHINE	152370	1
21	BLADE, 7"	153441	1
22	WRENCH, 11/16 OPEN END	153450	1
23	ELBOW, 1/8 MNPT X 1/4 BARB, BRASS	154652	
24	GUARD, 7 INCH BLADE (COMP)	548	
25	PUMP, WATER	I 55987-MK	
26	MOTOR, 120V 7.4A	I 56428-R	
27	ASSEMBLY, ROLLER WHEEL	156586	
28	KNOB, TRI	156770-01	1
29	SCREW, FLAT HD 10-32 X 5/8"	157554	4
30	KNOB, 1/4-20 X 3/4"	159428-1	1
31	CASTING, CUTTING HEAD (COMP)	159937	1
32	CASTING, TABLE, 370/770EXP (COMP)	159939	1
33	MOTOR MOUNT (COMP)	159941	1
34	BAR, GUIDE	159942	1
35	PAN,WATER	160041	1
36	GUARD, SPLASH	160310	1
37	ASSEMBLY, FRAME	167450	1

PARTS LIST

CHART I



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CHART I

ITEM NO.	DESCRIPTION	PART OR IDENTIFYING NO.	QTY. REQ.
Ι	SCREW, 5/16 - 18 X 1 HEX HEAD MACHINE	151743	2
2	WASHER, LOCK, SPLIT, 5/16	151747	2
3	WASHER, 5/16 SAE FLAT	151754	2
4	WHEEL, ROLLER	151799	2
5	NUT, 1/4 - 20 HEX	151893	2
6	SCREW, HEX HEAD 1/4-20 X 1-1/2"	151914	2
7	WASHER, I/4 SAE FLAT	151915	2
8	BRACKET, ROLLER WHEEL	156522	

CHART 2

ITEM NO.	DESCRIPTION	PART OR IDENTIFYING NO.	QTY. REQ.
I	TABLE (COMP)	159939	I
2	BEARING, MULTI LUBE	159948	2

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

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ACCESSORIES

ITEM	NUMBER	DESCRIPTION	
I.	158434	MK-225, 7 x 5/8 Arbor	
2.	139311	MK-215, 7 x 5/8 Arbor	
3.	153293	MK-315, 7 x 5/8 Arbor	
4.	160131	Stand	
5.	I 34577-MK	Dual 45° Flat Angle Guide	
6.	134569-MK	90° Protractor	
8.	152792	Dressing Stone	
9.	152610	Ground Fault Circuit Interrupter	and the second sec
10.	160488	Side Table	

ORDERING INFORMATION

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

NOTE: There is a \$25.00 minimum order when ordering direct from MK Diamond. All purchases must be made using VISA, MasterCard or American Express.

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

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 Blade guard and Support Angle Assembly
- Dry the saw before shipping
- When packing, include the following: MK-370EXP, 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.

MK-370EXP TILE SAW

OWNERS MANUAL & OPERATING INSTRUCTIONS DOCUMENT NO. 160084 REVISION 301 04/09



MK Diamond Products, Inc.

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Toll-Free: (800) 845-3729 Phone: (310) 539-2221 Fax: (310) 539-5158 www.mkdiamond.com