

# **PX-3 PAVER EXTREME**

## **DRY PAVER SAW**

### **OPERATION & PARTS MANUAL**



Revision 101	03.29.2009
<b>Manual Part No. 160445</b>	

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



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Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the Safety Precaution and Operating Instructions could result in injury to yourself and others.

This Operation and Part Manual has been developed to provide complete instructions for the safe and efficient operation of the MK 1080 Paver Saw.

**Before using this saw, ensure that the person operating the equipment has read and understands all instructions in this manual.**

### **SAFETY MESSAGE / ALERT SYMBOLS**

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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.

Each message tells you what the hazard is, what can happen, and what you can do to avoid or reduce injury. Other important messages are preceded by the word **NOTICE**.



#### **NOTICE**

You can cause **PROPERTY DAMAGE** to your machine if you don't follow directions.

The safety labels should be periodically inspected and cleaned by the user to maintain good legibility at a safe viewing distance. If the label is worn, damaged or illegible, it should be replaced. Contact MK Diamond or your dealer for replacement.

**SAFETY WARNINGS**

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**SILICA DUST WARNING:**

Grinding/cutting/drilling of masonry, concrete, metal and other materials with silica in their composition may give off dust or mists containing crystalline silica. Silica is a basic component of sand, quartz, brick clay, granite and numerous other minerals and rocks. Repeated and/or substantial inhalation of airborne crystalline silica can cause serious or fatal respiratory diseases, including silicosis. In addition, California and some other authorities have listed respirable crystalline silica as a substance known to cause cancer. When cutting such materials, always follow respiratory precautions.

**CALIFORNIA PROPOSITION 65 MESSAGE:**

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.oehha.org/prop65/out\\_of\\_date/6022kLstA.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.

Potential hazards associated with the MK 1080 Paver Saw will be referenced with Hazard Symbols which appear throughout this manual, and will be referenced in conjunction with Safety Message Alert Symbols.

## HAZARD SYMBOLS

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



**ALWAYS** avoid inhalation of and skin contact with silica dust and/or mist.



**ALWAYS** place the power ON/OFF switch in the **OFF** position when the MK 1080 Paver Saw is not in use.



**ALWAYS** wear approved eye protection.



**ALWAYS** wear approved respiratory protection.



**NEVER** operate equipment with covers, or guards removed.



**ALWAYS** use caution around gears. Keep fingers, hands, hair and clothing away from all moving parts to prevent injury.



**DO NOT** touch hot engine components while the machine is running or immediately after operating.



**NEVER** touch the power cord with wet hands or while standing in water when it is connected to a power source.



**NEVER** operate the machine in an explosive atmosphere or near combustible materials.

## RULES FOR SAFE OPERATION



### DANGER

Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only.

The following safety guidelines should always be used when operating the PX-3 Paver Saw.

## GENERAL SAFETY



- **DO NOT** operate or service this equipment before reading this entire manual.

- This equipment should not be operated by persons under 18 years of age.
- **NEVER** operate this equipment when not feeling well due to fatigue, illness or taking medicine.
- **NEVER** operate this equipment under the influence of drugs or alcohol.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult to read.



- **ALWAYS** wear proper respiratory, hearing and shatterproof eye protection.
- **NEVER** operate this equipment without protective clothing and steel toed boots.

- **ALWAYS** store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children.



- **NEVER** leave the machine unattended. Turn off electric motor when unattended.

- **CAUTION** must be observed while servicing the machine. Rotating parts can cause injury if contacted.
- Ensure that any electrical extension cord is protected against damage. **ALWAYS** ensure that the electrical extension cord is not trapped underneath the machine.
- **DO NOT** allow extension cord to come into contact with water or fluids. **DO NOT** spray water onto electric motor.



- **NEVER** operate the machine in an explosive atmosphere.

- Before starting the machine, **ALWAYS** check that all guards are in position and correctly fitted. Check the machine for loose bolts before starting.
- Keep area around the machine clear of obstructions which could cause persons to fall onto moving parts.
- **ALWAYS** ensure that the machine is on level ground before using.
- Become familiar with the controls of the machine before operating.

- **ALWAYS** disconnect AC power plug from power source before moving or servicing the machine.
- Make sure the OFF/ON power switch on the electric motor is always in the **OFF** position before inserting the machine's power plug into an AC receptacle.
- Operate electric motor only at the specified voltage indicated on the nameplate.
- **NEVER** disconnect any "emergency or safety devices". These devices are intended for operator safety. Disconnection of these devices can cause severe injury, bodily harm or even death! Disconnection of any of these devices will void all warranties.
- Unauthorized equipment modifications will void all warranties. Manufacturer does not assume responsibility for any accident due to equipment modifications.
- **NEVER** use accessories or attachments, which are not recommended by MK Diamond for this equipment. Damage to the equipment and/or injury to user may result.
- The PX-3 Paver Saw is designed to be used only with approved diamond cutters.

**WARNING**

**DO NOT** use woodcutting, or carbide blades on this machine! Use **ONLY** Diamond blades on machine. Use machine only to cut tile and masonry products. **DO NOT** use machine to cut wood or wood products.

**MAINTENANCE SAFETY**

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- **NEVER** lubricate components or attempt service on a running machine.
- Keep the machinery in proper running condition.
- Fix damage to the machine immediately and always replace broken parts, or missing decals.



**ELECTRIC MOTOR SAFETY**

For maintenance care and operation of the electric motor, refer to your electric motor instruction booklet furnished with the electric motor.

Protect the electric motor from dust as much as possible and keep ventilating openings clean.

**CAUTION**

- **DO NOT** spray water on the electric motor. Do not touch the plug with wet hands. To reduce the risk of electrocution, keep all connections dry and off the ground.



- **DO NOT** operate electric motor in an explosive environment.

**WARNING**

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. Always disconnect the extension cord from the receptacle before disconnecting the product from the extension cord.

**Electric Motor Connection**

**ALWAYS** make certain that the power source required for the electric motor is correct and always use the correct NEMA configuration plug. Motors can burn out when the line voltage falls 10% below the voltage rating of the motor. Failure to use proper voltage will cause the motor to overheat. Make certain that the correct size grounded (3-wires) extension cord is used. See the table below.

To choose the proper extension cord:

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

**NOTICE**

Most Motor Problems are caused by improper voltage and extension cords. Cord should be one-piece and short as possible. Cord selection should match the following table.

1-2 H.P.			
115v	230v		
25'	100'	Max. Cord Length	No. 12 Wire
50'	150'	Max. Cord Length	No. 10 Wire
75'	250'	Max. Cord Length	No. 8 Wire

**Fig. 1 Extension Cord Table**

**WARNING**

Use of undersize 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.

## 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.

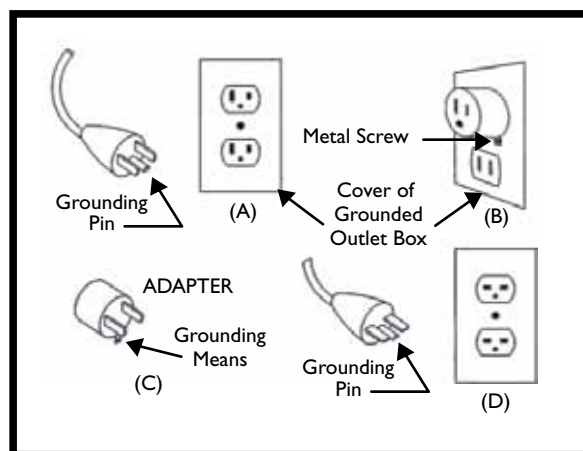
- Do not modify the plug provided – if it will not fit the outlet; have the proper outlet installed by a qualified electrician.
- Improper connections of the equipment-grounding conductor can result in a risk of electric shock. The equipment-grounding conductor is the insulated conductor that has an 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 of Figure 2. The tool has a grounding plug that looks like the plug illustrated in Sketch A of Figure 2. 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. 2 Circuit and Adapter Information**

**WARNING**

To reduce the risk of electrocution, keep all connections dry and off the ground.

A Ground Fault Circuit Interrupter (GFCI) should be provided on the circuit(s) or outlet(s) to be used for this machine. Receptacles are available having built-in GFCI protections and may be used for this measure of safety.

When using an extension cord, the GFCI should be installed closest to the power source, followed by the extension cord and lastly, the machine.

**WARNING**

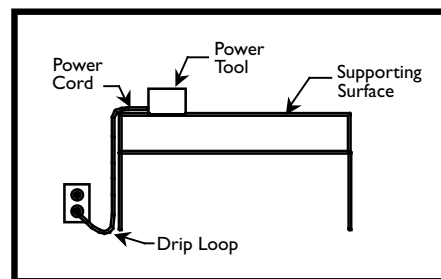
The pump requires a GFCI. To reduce risk of electric shock when operating the machine with the pump plugged into the 3-pole receptacle on the motor, connect the saw to a GFCI outlet. See the pump manual and informational tags enclosed separately for all pump information.

**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 Figure 3, 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.

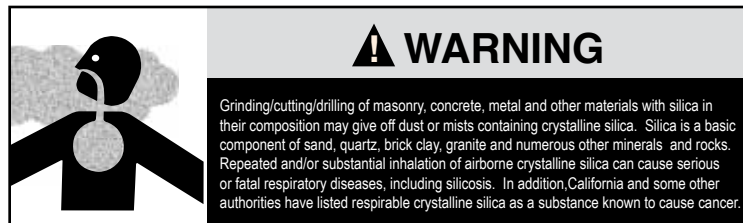
If the plug or receptacle gets wet, DO NOT unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the tool. Then unplug and examine for presence of water in the receptacle.



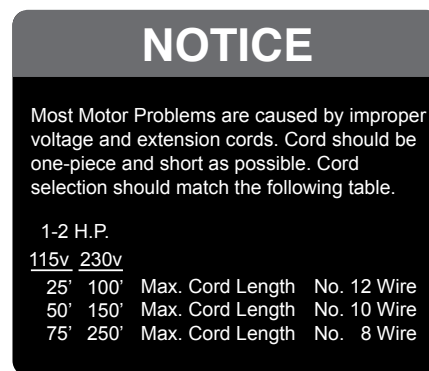
**Fig. 3 Drip Loop Information**

## OPERATION & SAFETY DECALS

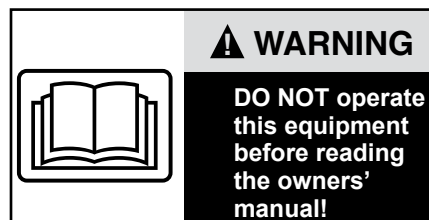
The PX-3 Paver Saw is equipped with a number of safety decals. These decals are provided for operator safety and maintenance information. The illustration below also shows the location of these decals. Should any of these operation or safety decals become unreadable, replacements can be obtained by calling **(800) 262-1575**.



**Decal A**



**Decal B**

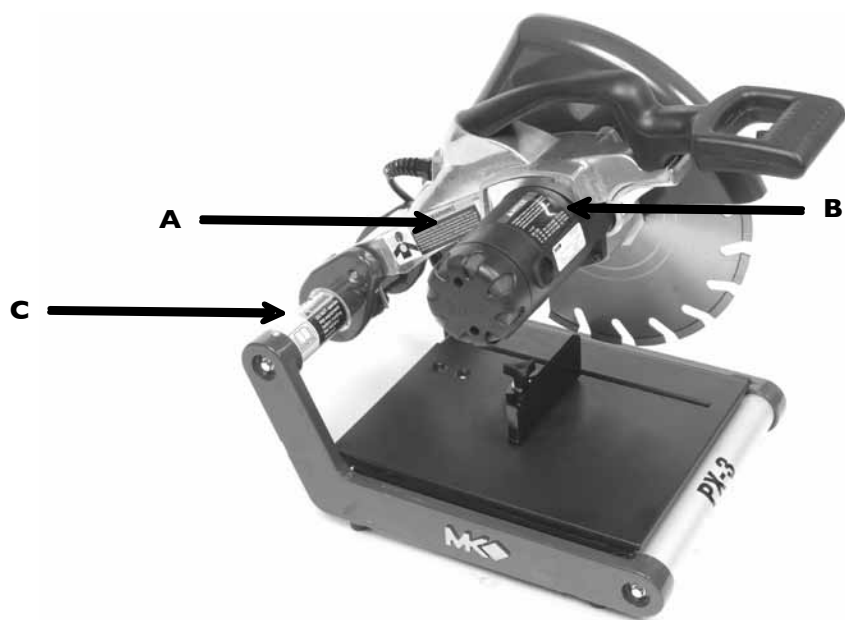


**Decal C**

**Figure 5. PX-3 Masonry Saw Safety Decal Sheet, Part No. 166011**

**SAFETY DECAL LOCATIONS**

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**Fig. 6 PX-3 Paver Saw Safety Decal Locations**

<b>Decal</b>	<b>Location</b>	<b>Description</b>
A	Cutting Head, Side	Silica Dust Warning
B	Motor, Top	Extension Cord Notice
C	Assembly Frame	Read Owner's Manual Warning

<b>PX-3 Paver Saw Specifications</b>	
<b>Model</b>	I60256
<b>Motor</b>	120V/60 Hz
<b>Amps</b>	13 AMP
<b>Horsepower</b>	1-3/4 HP
<b>Blade RPM</b>	3,500 RPM
<b>Blade Capacity</b>	14" (356 mm)
<b>Arbor Size</b>	1"
<b>Depth of Cut</b>	5-1/2" (14" Blade)
<b>Maximum Depth of Cut</b>	10-3/4" for materials up to 3" thick
<b>Weight</b>	37 lbs.
<b>Saw Dimensions (LxWxH) - inches/mm</b>	21" x 16" x 18" 527 x 406 x 457 mm

- The PX-3 is a versatile lightweight, dry, masonry saw
- Engineered as a 14" dry saw, consisting of a powerful 120V motor in a hard plastic case and a PX-10 cutting blade with a 5-1/2" cutting depth
- Specially designed 14" diameter segmented dry MK Diamond blade with a .110 inch cutting width
- The PX-3 can cut a variety of masonry types including slump stone block, wall brick, paver brick, roofing tile, marble, granite, decorative rock, or almost any other non-ferrous material
- The PX-3 is designed with a lockable trigger-operated switch in the handle to allow for ease of operation
- Includes a Dust Collector nozzle that can be used to remove dust from the Lower Case, using your shop vacuum's 2-1/2 inch diameter hose
- Designed with an easy clean motor air filter to extend the life of the motor
- Replaceable motor brushes to extend operating life
- Pivoting backstop cuts material at any angle
- Motor has built-in thermal overload protection and dynamic brake

## UNPACKING

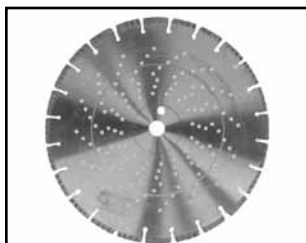
Your PX-3 Paver Saw has been shipped from the factory thoroughly inspected. Only minimal assembly is required. If not already done, remove the PX-3 from the carton and place it on a flat surface. Remove strapping. Remove the accessories box from the main carton and place along side the PX-3. Note that the Operation and Parts Manual is in the accessories box.

## CONTENTS

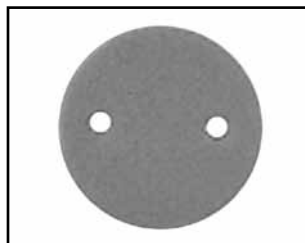
In the PX-3 packaging containers you will find:



**1**



**2**



**3**



**4**



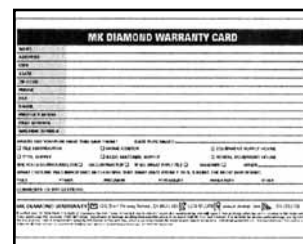
**5**



**6**



**7**



**8**

ITEM NO.	DESCRIPTION	QUANTITY
<b>1</b>	PX-3 PAVER SAW	1
<b>2</b>	SEGMENTED DRY DIAMOND BLADE	1
<b>3</b>	REPLACEMENT MOTOR AIR FILTER	1
<b>4</b>	DUST NOZZLE	1
<b>5</b>	BLADE WRENCH	1
<b>6</b>	SHAFT WRENCH	1
<b>7</b>	OPERATION & PARTS MANUAL	1
<b>8</b>	WARRANTY CARD	1

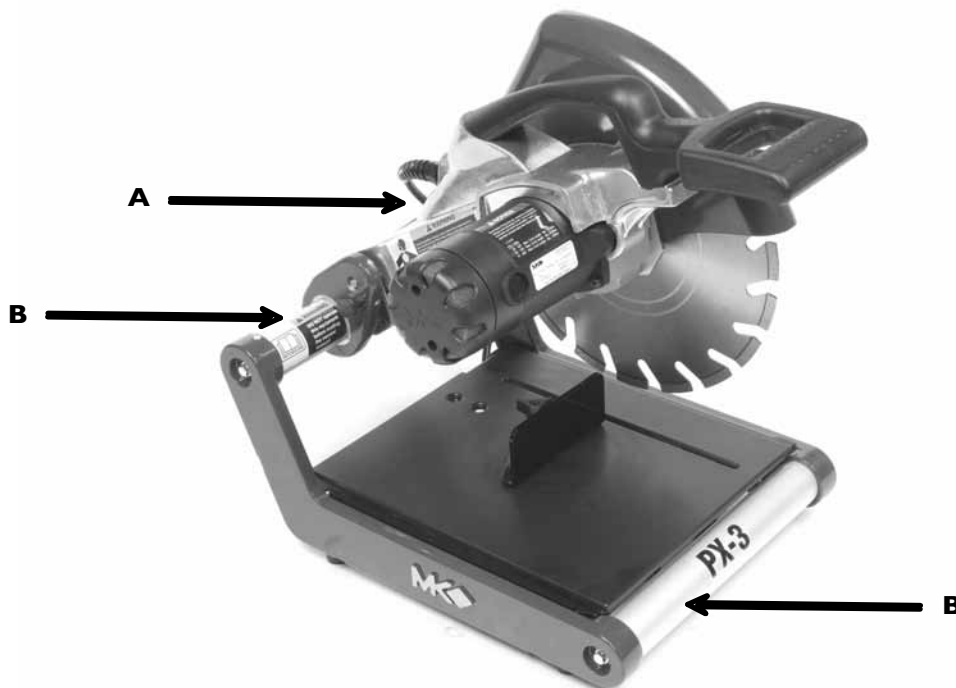
**TRANSPORT****CAUTION**

- The PX-3 weighs approximately thirty five (35) pounds, making transport easy.
- **ALWAYS** observe safe lifting practices when lifting the PX-3.

**NOTICE**

Lock the Cutting Head in the DOWN position using the Locking Pin when transporting the PX-3.

Due to its lightweight construction, the PX-3 is designed to be carried by the durable aluminum frame. Simply lock the spring assisted Cutting Head (A) in the DOWN position, grasp the frame by the lower front and upper back cross members (B), then lift and transport the PX-3 to the desired work location.



**Fig. 7 Transporting the PX-3**



**ASSEMBLY**

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

**DIAMOND BLADE INSTALLATION****! NOTICE**

When installing the Retaining Screw, do not “cross-thread” and **DO NOT** overtighten the screw.

1. Identify Blade Retaining Screw and Outer Flange (Figure 8).
2. Remove Blade Retaining Screw and Outer Flange (Figure 9).
3. Install and seat Blade. Verify Rotation (Figure 10).
4. Install Blade Retaining Screw and Outer Flange then tighten (Figure 11).

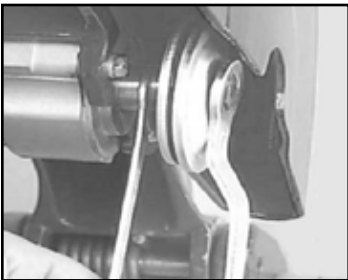


Fig. 8 Identify Blade parts

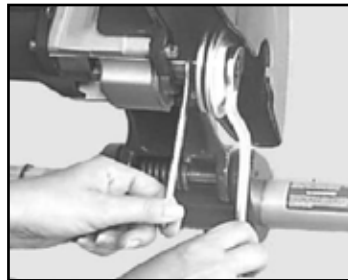


Fig. 9 Remove parts



Fig. 10 Install Blade

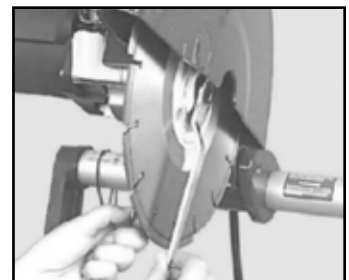


Fig. 11 Install parts

**DUST NOZZLE**

The PX-3 Dust Nozzle (Figure 12) assists on the removal of dust and debris from the cutting area. Its shape is designed so it directs the flow of these particles to the shop vac hose (not included). The hose required is a 2-1/2" in diameter. Connect the hose from your shop vac (not included) to the Dust Collector Outlet located at the rear of the PX-3 Cutting Area (Figure 13).



Fig. 12 Dust Nozzle location

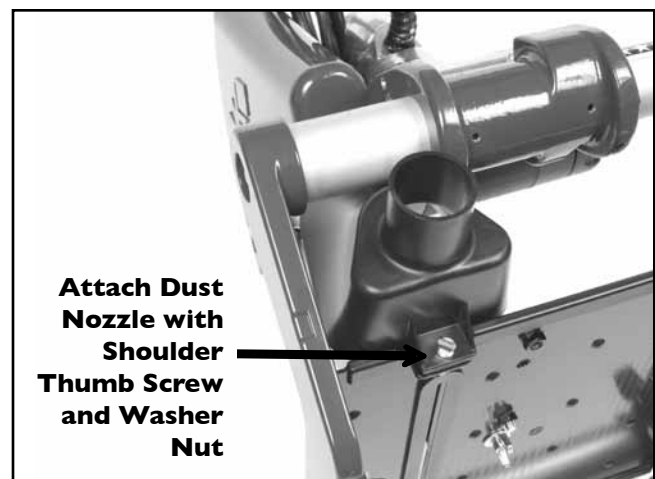


Fig. 13 Dust Collector Outlet location

**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 PX-3 to a power supply, be sure the voltage, cycle and phase of the job site power source meet the following requirements:

<b>VOLTAGE</b>	120V
<b>CYCLE</b>	60 Hz
<b>PHASE</b>	1-PHASE

- If using an extension power cord, make sure the length and wire gauge corresponds to the requirements listed in the table on page 9. 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.
- DO NOT cover the motor vents. This could lead to motor overheating.

**PORTABLE GENERATOR**

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

8kW	120V/240	66.7/33.3 AMPS	SINGLE PHASE
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**PRE-START INSPECTION**

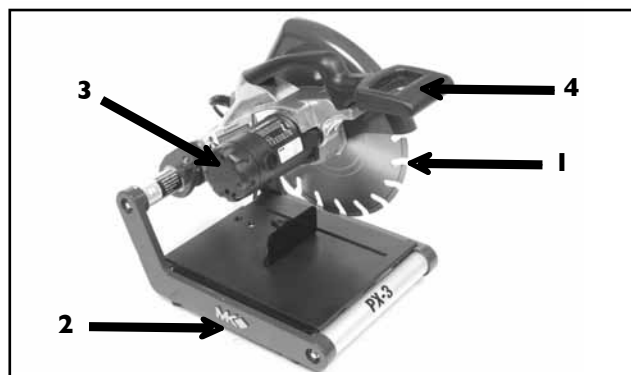
The pre-start inspection should be performed before beginning any job.

**CAUTION**

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

If the Diamond Blade shows signs of fatigue cracking, replace the Blade before starting work. See the Diamond Blade Change Out section on Page 24.

1. Inspect the Blade for damage. Verify the Blade is correct for the material being cut (Figure 14).
2. Inspect the PX-3 for damage.
3. Inspect the Motor Air Filter for cleanliness.
4. Verify the Trigger Switch is unlocked.



**Fig. 14 Pre-start Inspection Locations**

**CHOP CUTTING**

A chop cut is performed by cutting completely through an object in one pass. The following section describes the correct procedure for performing a chop cut.

1. Position the Back Stop for a cross cut or rip cut.
2. Position the work against the Back Stop.
3. Depress the Trigger Switch to start. Lower the Cutting Head to begin cutting.
4. Continue lowering the Cutting Head until the cut is complete.
5. When cutting is complete, raise the Cutting Head and release the Trigger Switch. **ALWAYS** allow the Blade to stop moving before removing work.
6. Remove work from the cutting area.

**CROSS CUTTING**

1. Ensure that the Back Stop is in the Forward position for Cross Cutting (Figure 15).
2. Position the work against the Back Stop and perform the Cut (Figure 16).



**Fig. 15 Back Stop in the Forward position**



**Fig. 16 Position work and perform cut**

## RIP CUTTING

1. Loosen the knob and remove. (Figure 17)
2. Remove the Back Stop Pivot Bolt with an Allen Wrench (Figure 18).
3. Loosen the wingnut located underneath the Table (Figure 19).
4. Position the Back Stop in a backward location and tighten both the knob and wingnut (Figure 20).
5. Position the work against Back Stop as shown and perform the cut (Figure 21).



Fig. 17 Loosen knob



Fig. 18 Remove Pivot Bolt

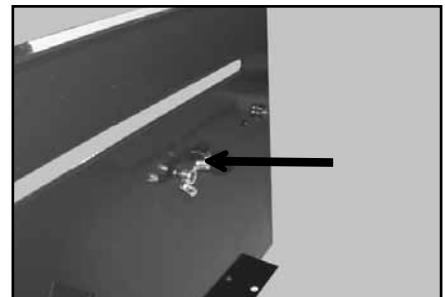


Fig. 19 Loosen Wingnut

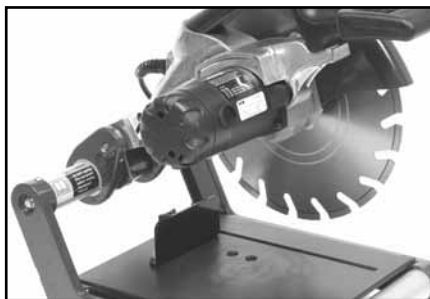


Fig. 20 Position Back Stop

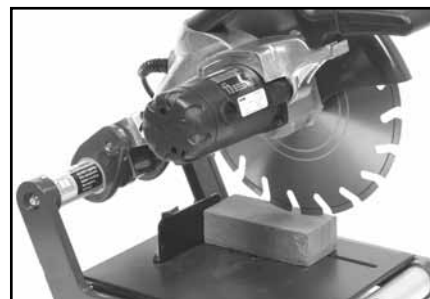


Fig. 21 Position work and perform cut

## ANGLE CUTTING

Angle cuts are performed using the chop cut method. For angle cuts, the Adjustable Back Stop is removed and repositioned. The following section describes the correct procedure for performing an angle cut.

1. Remove and position the Adjustable Back Stop (Figure 22).
2. Position the Back Stop for an angle cut (Figure 23).
3. Position the work below the Cutting Head (Figure 24). Depress the Trigger Switch to start.
4. Lower the Cutting Head to begin cutting. Continue lowering the Cutting Head until the cut is complete.
5. Raise the Cutting Head and release the Trigger Switch. **ALWAYS** allow the Blade to stop moving before removing work.



Fig. 22 Position Back Stop



Fig. 23 Pivot to desired angle



Fig. 24 Position work

**CLEANUP**

Clean the Air Filter and PX-3 surfaces after each use. The following section describes the correct procedure for cleaning your PX-3.

1. Unplug the PX-3 from its power source.
2. Remove the Motor Filter Cap (Figure 25). The Filter Cap pops on and off without removing the retaining screws.
3. Clean the Filter by removing it from the Filter Cap (Figure 26) and tapping it on a hard surface, or use compressed air (Figure 27).

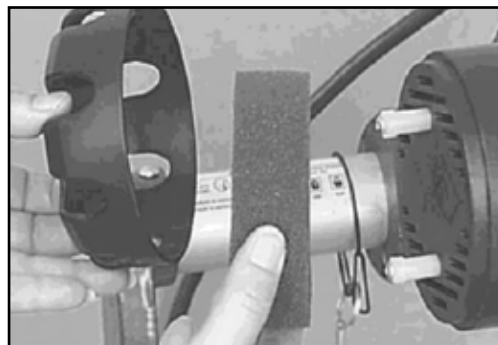
**CAUTION**

**ALWAYS** wear eye protection when using compressed air.

4. Reinstall Filter into Filter Cap and replace it on the PX-3 Motor (Figure 28).
5. Clean the remainder of the PX-3 by wiping its surface with a clean cloth.



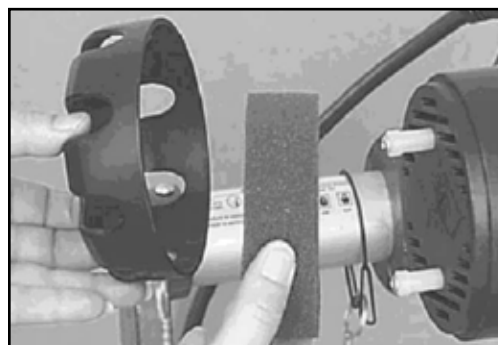
**Fig. 25 Remove Motor Filter Cap**



**Fig. 26 Remove Filter**



**Fig. 27 Clean up Filter by tapping it on a hard surface or using compressed air**

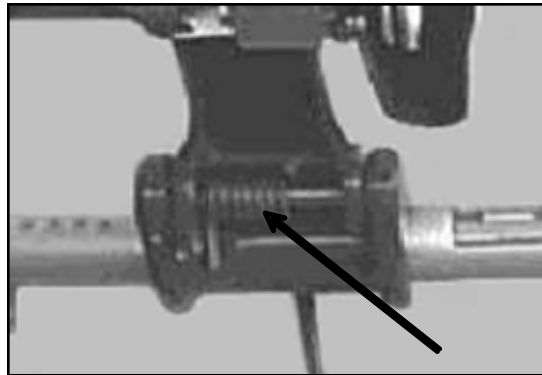


**Fig. 28 Reinstall Filter into Filter Cap and place them back onto the PX-3**

**GENERAL MAINTENANCE**

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It is important to lubricate the Cutting Head Torsion Spring after each use. Use light oil such as WD-40 or 3-in-1 when lubricating parts.

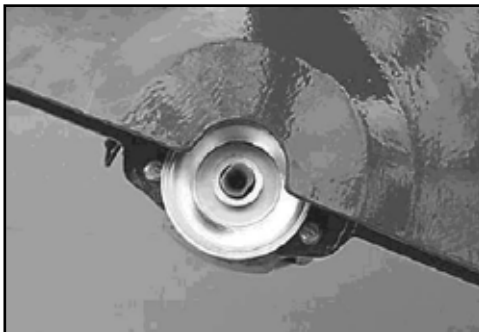


**Fig. 29 Lubricate Torsion Spring**

**MONTHLY MAINTENANCE**

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The following maintenance should be performed Monthly. Items should be inspected as described below.



**Fig. 30 Clean and inspect the Inner Flange and Motor Shaft**

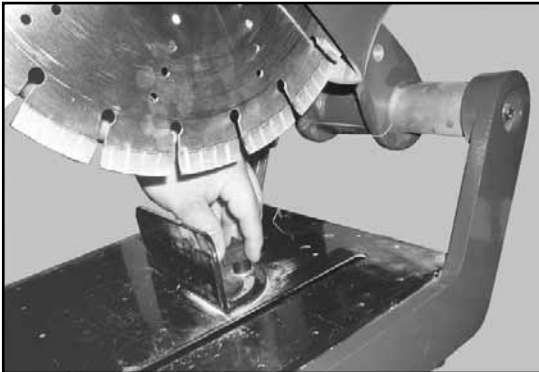


**Fig. 31 Clean the Blade Retaining Screw**

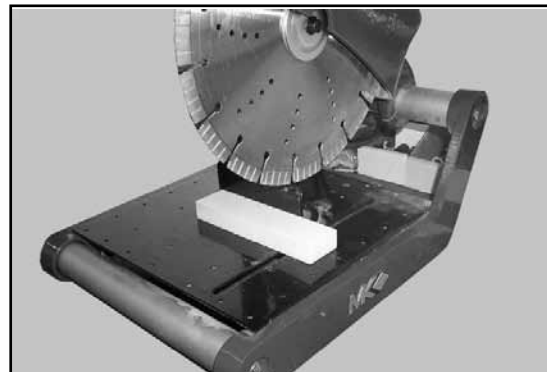
**BLADE DRESSING**

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 #152792) and by following the steps below.

1. Set up the PX-3 for operation.
2. Position the Back Stop to accommodate the Dressing Stick (Figure 32).
3. Hold the Dressing Stick in position and depress the Trigger to start. Lock if desired.
4. Lower the Cutting Head while pushing the Dressing Stick into the Blade. **ALWAYS** allow the Blade to stop moving before removing work.
5. Repeat the cut stroke eight times (Figure 33).
6. When the Blade is dressed, release the Trigger Switch and raise the Cutting Head. Allow Blade to stop moving before removing the Dressing Stick.



**Fig. 32 Position Back Stop**



**Fig. 33 Place Dressing Stick**



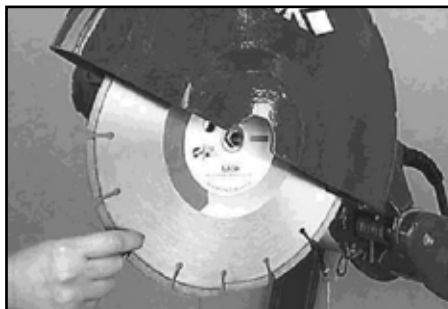
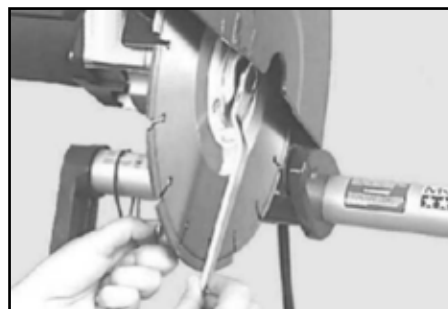
**DIAMOND BLADE CHANGE OUT**

Change the Diamond Blade when it becomes worn, cracked or damaged. The following section describes the correct procedure for changing out the Diamond Blade.

**WARNING**

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

1. Unplug the PX-3 from its power source (Figure 34).
2. Remove Retaining Nut and Outer Flange (Figure 35).
3. Install the new Diamond Blade onto Blade Shaft. Ensure that it is seated properly on the Flange (Figure 36).
4. Install the Retaining Nut and Outer Flange and then tighten using the Blade and Shaft Wrenches (Figure 37).

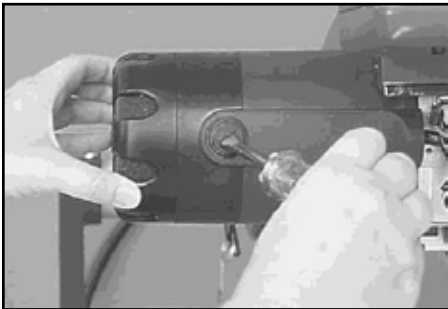
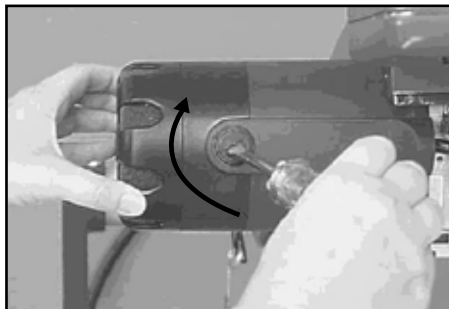
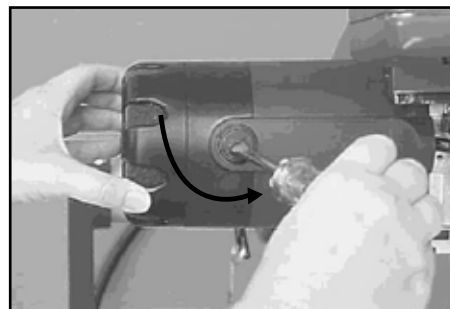
**Fig. 34 Unplug the PX-3****Fig. 35 Remove Nut and Flange****Fig. 36 Install new Diamond Blade****Fig. 37 Install Nut and Flange**



**MOTOR BRUSH CHANGE OUT****WARNING**

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

1. Unplug the PX-3 from its power source and set it up for operation (see Inspection and Setup section).
2. Locate and remove one Motor Brush Cap (Figure 38). There is one Brush on either side of the Motor.
3. Remove the Motor Brush. Clean and brush Housing (Figure 39).
4. Align and install the new Motor Brush (Figure 40).
5. Install the Motor Brush Cap (Figure 41).
6. Change the second Motor Brush by repeating the same steps listed above (Figure 42).

**Fig. 38 Remove Motor Brush Cap****Fig. 39 Clean and brush Housing****Fig. 40 Install new Motor Brush****Fig. 41 Install Motor Brush Cap****Fig. 42 Repeat for other Motor Brush****NOTICE**

When installing the Motor Brushes, care must be taken to ensure the Spring End is straight before installing the Motor Brush Cap.

**TROUBLESHOOTING****WARNING**

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

**MOTOR STOPS TURNING**

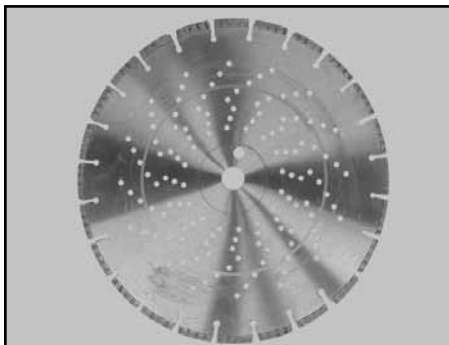
If the PX-3 Motor should stop turning, perform the following troubleshooting steps:

1. Verify all power cords and plugs are fully connected.
2. Verify the circuit breaker is 20 AMP or greater.
3. Verify the circuit breaker is not tripped. Reset if necessary.
4. Verify the source voltage is 115 Volts.
5. If the Motor is still not turning after performing these troubleshooting steps, return your PX-3 to MK Diamond for repair.

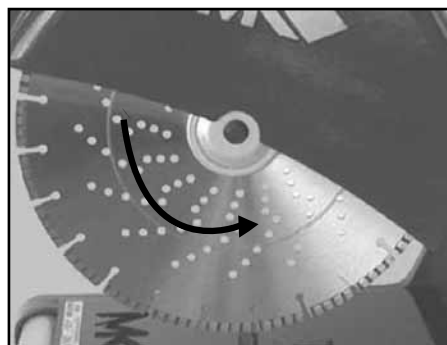
**BLADE WILL NOT CUT PROPERLY**

If the PX-3 Motor does not cut properly, perform the following troubleshooting steps:

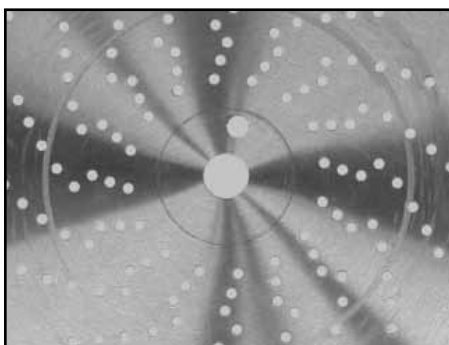
1. Check the Blade for smoothness or “glazing” (Figure 43). Dress the blade of necessary.
2. Check the Blade for proper rotation (Figure 44).
3. Ensure the Blade Core is not bent and the Arbor is not out of round (Figure 45).
4. Verify the Blade is correct for the material being used (Figure 46). Use only PX-3 Diamond Blades.



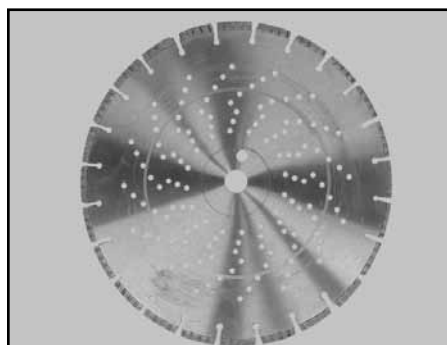
**Fig. 43 Check Blade for smoothness**



**Fig. 44 Check Blade for rotation**

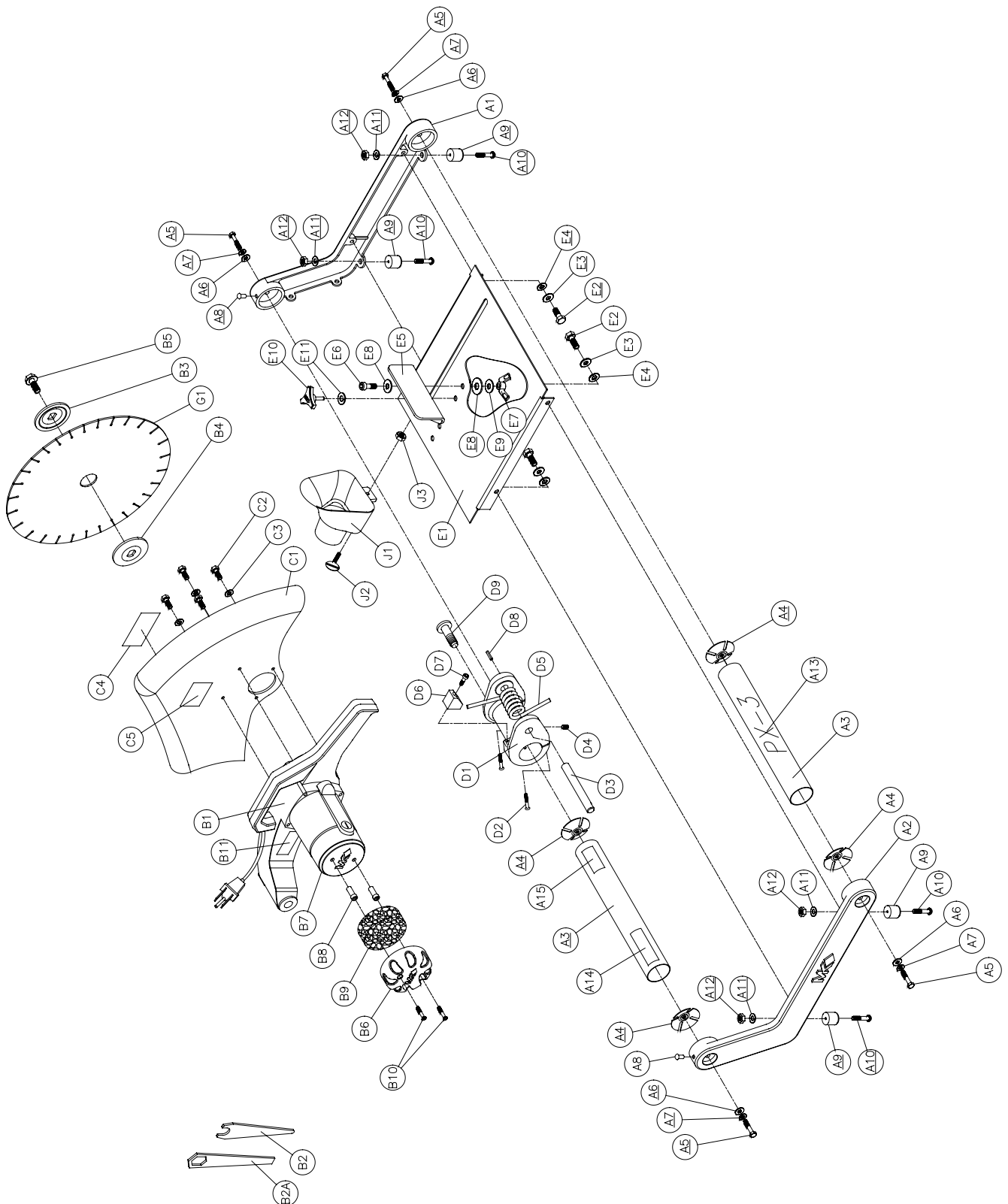


**Fig. 45 Inspect Blade and Arbor**



**Fig. 46 Verify that Blade is correct**

PAVER SAW, PX-3 ASSY FINAL



## PAVER SAW, PX-3 ASSY, FINAL

ITEM NO.	DESCRIPTION	PART OR IDENTIFYING NO.	QTY. REQ.
<b>A</b>	ASSEMBLY, FRAME	N/A	1
<b>A1</b>	CASTING, FRAME, RIGHT (COMP)	160246	1
<b>A2</b>	CASTING, FRAME, LEFT (COMP)	160248	1
<b>A3</b>	SUPPORT, HORIZONTAL FRAME	160249	2
<b>A4</b>	TUBE CONNECTOR, 1/4-20	157930	4
<b>A5</b>	SCREW, 1/4-20 X 2" HEX HEAD CAP	158282	4
<b>A6</b>	WASHER, 1/4 SAE FLAT	151915	4
<b>A7</b>	WASHER, 1/4 SPLIT LOCK	152591	4
<b>A8</b>	DRIVE STUD, ROUND HEAD GROOVED #16 (1/4) X 1/2	158071	2
<b>A9</b>	BUMPER W/WASHER, 1.0 (FOOT)	160418	4
<b>A10</b>	SCREW, #8-32 X 1 PAN HEAD PHILLIPS	160446	4
<b>A11</b>	WASHER, #8 SPLIT LOCK	160447	4
<b>A12</b>	NUT, HEX #8-32	153549	4
<b>A13</b>	LABEL, ADHESIVE "PX3"	160419	1
<b>A14</b>	LABEL, PROP 65 WARNING	158322	1
<b>A15</b>	LABEL, EXTENSION CORD WARNING	155672	1
<b>B</b>	ASSEMBLY, CUTTING HEAD	N/A	1
<b>B1</b>	ASSEMBLY, ARM W/MOTOR & HANDLE	160251	1
<b>B2</b>	WRENCH, BLADE NUT, 14 MM	158406	1
<b>B2A</b>	WRENCH, BLADE SHAFT	158110	1
<b>B3</b>	FLANGE, OUTER BLADE (STAMPED)	158105	1
<b>B4</b>	FLANGE, INNER BLADE (TURNED)	158106	1
<b>B5</b>	SCREW, M10-1.5 X 20 MM HEX FLANGE (BLADE RETAINING)	158107	1
<b>B6</b>	CAP, MOTOR	157877	1
<b>B7</b>	CAP, MOTOR FILTER	157878	1
<b>B8</b>	SPACER PIN, CAP SCREW	157879	2
<b>B9</b>	ELEMENT, FILTER	157729	1
<b>B10</b>	SCREW, #8 X 1-1/2, COMBO HEAD PAN, SELF-TAPPING	158157	2
<b>B11</b>	LABEL, SAFETY CAUTION	155576	1
<b>C</b>	ASSEMBLY, BLADE GUARD	N/A	1
<b>C1</b>	CASTING, BLADE GUARD (COMP)	160258	1
<b>C2</b>	SCREW, M6-1 X 20 MM HEX HEAD CAP	158158	4
<b>C3</b>	WASHER, M6 SPLIT LOCK	158159	4
<b>C4</b>	DECAL, ADHESIVE "PAVER EXTREME"	160420	1
<b>C5</b>	TAG, SERIAL	158096	1
<b>D</b>	ASSEMBLY, PIVOT CLAMP	N/A	1
<b>D1</b>	CASTING, PIVOT CLAMP (COMP)	160358	1
<b>D2</b>	SCREW, 1/4-20 X 1-1/2 SOCKET HEAD CAP	154683	2
<b>D3</b>	PIN, PIVOT .625 X 5.6	157645	1

## PAVER SAW, PX-3 ASSY, FINAL CONTINUED

ITEM NO.	DESCRIPTION	PART OR IDENTIFYING NO.	QTY. REQ.
D4	SCREW, SET 1/4-20 X 1/4 CUP POINT	157528	1
D5	SPRING, TORSION	160252	1
D6	STOP BLOCK	158226	1
D7	SCREW, 1/4-20 X 3/4, SOCKET HEAD CAP	152587	1
D8	PIN, GROOVED DOWEL 5/16 X 1-1/4	160458	1
D9	LOCK, CUTTING HEAD	160460	1
E	ASSEMBLY, TABLE	N/A	1
E1	TABLE (COMP) W/PLASTIC OVER MOLD	160409	1
E2	SCREW, 5/16-18 X 3/4 HEAD CAP	151369	4
E3	WASHER, 5/16 SAE FLAT	151754	4
E4	WASHER, 5/16 SPLIT LOCK	151747	4
E5	BACKSTOP, TABLE	160349	1
E6	SCREW, 3/8 X 1/2 SOCKET HEAD SHOULDER, 5/16-18 X 1.0	160459	1
E7	NUT, WING NYLOK 5/16-18	151746	1
E8	WASHER, 3/8 SAE FLAT	150923	2
E9	WASHER, 5/16 SAE FLAT	151754	1
E10	KNOB, 3 PRONG 3/8-16 X 1	156175	1
E11	WASHER, 3/8 SPLIT LOCK	150925	1
F	ASSEMBLY, PACKAGING CARTON	N/A	1
F1	CARTON, MK-PX3	160421	1
F2	INSERT, CARTON		
G	ASSEMBLY, ACCESSORY PACK	N/A	1
G1	BLADE, 14" PX10, SEGMENTED W/COOLING HOLES (6 MM RIM HEIGHT)	160448	1
G2	WARRANTY CARD	155037	1
G3	SELL SHEET, TILE ACCESSORY	156915	1
G4	EXTRA FILTER ELEMENT	157729	1
G5	OPERATION AND PARTS MANUAL, MK-PX3	160445	1
J	ASSEMBLY, PX3 DUST COLLECTOR	N/A	1
J1	NOZZLE, PX3 2-1/2 DUST	160408	1
J2	SCREW, 1/4-20 X 1 SHOULDER THUMB	160461	1
J3	NUT, 1/4-20 HEX W/WASHER	153941	1

## **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**

ACCESSORY		DESCRIPTION	PART NO.
	<b>MK-PX10 BLADE</b>	MK-PX10, DRY CUTTING 14" SEGMENTED BLADE	<b>157957</b>
	<b>MK-PX30 BLADE</b>	MK-PX30, DRY CUTTING 14" SEGMENTED BLOCK BLADE	<b>157944</b>
	<b>MOTOR AIR FILTER</b>	MOTOR AIR FILTER	<b>157729</b>
	<b>DUST NOZZLE</b>	PX3 2-1/2" DUST NOZZLE	<b>160408</b>

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**ACCESSORIES, ORDERING AND RETURN INFORMATION**

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**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, American Express, or MasterCard.

When ordering direct from MK Diamond, please have the following information ready before calling:

- The Model Number of the machine
- The Serial Number of the machine
- Where the machine 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** or **(310) 257-2845**.

**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 items, they must have been purchased within the previous twelve (12) months.

- Have the Model Number of the machine
- Have the Serial Number of the machine
- Have the location of where the machine was purchased and when
- Contact Customer Service for approval to return the item(s)
- 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 asking for Customer Service. For technical questions, call **(800) 474-5594** or **(310) 257-2845**.

**Packaging Instructions**

- Package the part in its original container or one of comparable size
- 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 to you. For technical questions, call **(800) 474-5594**.



**CONTACT:**

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Please contact MK Diamond Products, Inc. Customer Service Department with any questions you might have regarding distributors, parts or service.

Telephone: **(800) 845-3729**

Fax: **(310) 539-5158**

E-mail: **Customer\_Service@MKDiamond.com**

Customer Service Hours: **Monday through Friday, 6AM-5PM PST**

**MK Diamond Products, Inc.**

**1315 Storm Parkway**

**Torrance, CA 90501**

**MK DIAMOND PRODUCTS, INC. LIMITED WARRANTY**

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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 DIAMOND PX-3 PAVER EXTREME**  
OPERATION & PARTS MANUAL  
DOCUMENT NO. I60445



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