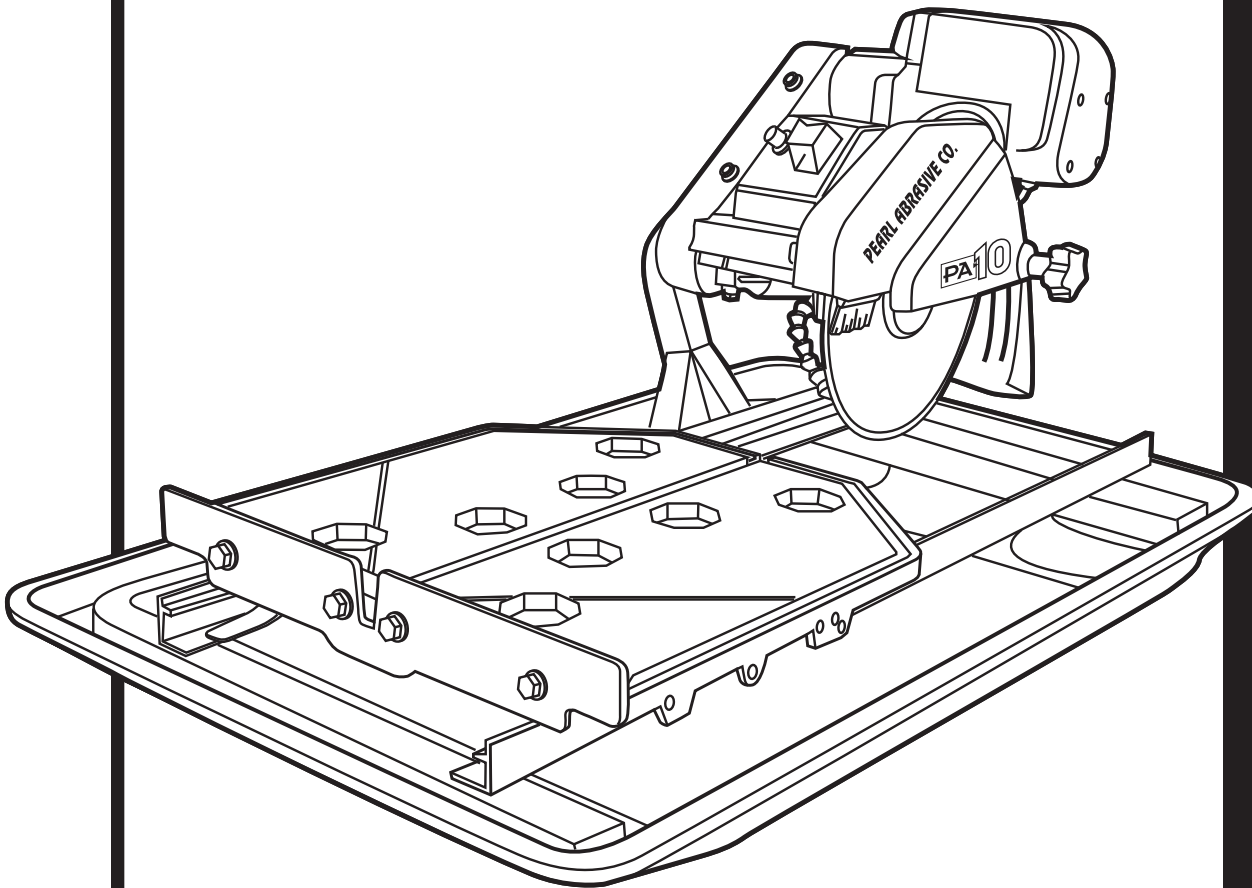


PEARL®

PA10™

MODEL PA-10™ TILE SAW OWNER'S/OPERATOR'S MANUAL



SERIAL NUMBER - _____

*You should record the Serial Number of your Tile Saw on this Owner's/Operator's Manual and on the Warranty Card. **The Warranty Card must be sent back with all the required pertinent information for the warranty to take effect.***

Caution! *Read Safety and General Instructions carefully before using saw for the first time.*

REV. 3

Covered by one or more of the following US Patents:
7302947, 7394031 and 6752139

PEARL ABRASIVE CO. **PA10™** TILE SAW

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i. GENERAL SAFETY RULES FOR ALL POWER TOOLS



WARNING! *Read all instructions. As with all machinery there are certain hazards involved with operation and use of the machine. The following basic safety precautions should be followed at all times to reduce the risk of fire, electric shock and serious personal injury to you or others. Keep these important operating instructions with this product.*



1. Know your power tool - read owner's/operator's manual carefully. Learn its applications and limitations as well as the specific potential hazards unique to this tool.



2. Keep guards in place - and in working order.

3. Ground all tools - if tools are equipped with three prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter lug must be attached to a known ground. Never remove the third prong.



4. Remove wrenches - Form a habit of checking to see that adjusting wrenches are removed from tool before turning it "on".



5. Keep work area clean. Cluttered areas and benches invite accidents.

6. Do not use in dangerous environment. Do not use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted. Do not use tool in the presence of flammable liquids or gasses.



7. Keep children and visitors away. All children and visitors should be kept at a safe distance from work area.

8. Make workshop childproof with padlocks, master switches or by removing starter keys.

9. Do not force tool. It will do the job better and be safer at the rate for which it was designed.

10. Use right tool. Do not force tool or attachment to do a job for which it was not designed.



11. Wear proper apparel. Do not wear loose clothing, gloves, neckties, rings, bracelets or other jewelry that may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.



12. **Always use safety glasses.** Wear safety glasses (must comply with ANSI Z87.1) at all times. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses. Use face or dust mask if cutting operation is dusty, and ear protectors (plugs or muffs) during extended periods of operation.



13. Do not overreach. Keep proper footing and balance at all times.



14. Maintain tools in top condition. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have repaired by authorized service facility.



15. Disconnect tools. When not in use, before servicing, and when changing accessories, such as blades, bits, cutters.



16. Avoid accidental starting. Make sure switch is in "off" position before plugging in power cord.

17. Use recommended accessories only. Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.



18. Never stand on tool. Serious **injury** could occur if the tool is tipped or if the cutting tool is accidentally contacted.



19. Check Damaged Parts. Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or part that is damaged should be properly repaired or replaced.

























20. Never leave tool running unattended. Turn power "off". Do not leave tool until it comes to a complete stop.

21. Extension cords. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Extension cord tables (*refer to page 21*) show the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage numbers the heavier the cord.
22. Do not abuse cord. Never carry tool by cord or pull it to disconnect from receptacle, Keep cord from heat, oil, and sharp edges.
23. Guard against electric shock. Prevent body contact with grounded surfaces. For example, pipes, radiators, ranges and refrigerator enclosures.
24. Outdoor use extension cords. When tool is used outdoors, use only extension cords intended for use outdoors and so marked.
25. Stay alert. Watch what you are doing. Use common sense. Do not operate tool when you are tired.
26. Drugs, alcohol, medication. Do not operate tool while under the influence of drugs, alcohol or any medication.
27. Store idle tool. When not in use, tool should be stored in a dry and locked place, out of reach of children.



! WARNING! CALIFORNIA PROPOSITION 65: 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 saw or drilled in accordance with OSHA (29 CFR Part 1910.1). Diamond blades improperly used are dangerous. Comply with ANSI Safety Code B7.1 and OSHA covering speed, safety guards, flanges, mounting procedures, general operating rules, handling, storage and general machine condition.

ii. SYMBOLS

	KEEP GUARD IN PLACE		REPAIRS TO BE DONE		WEAR HEARING PROTECTION
	DIAMOND BLADE		MACHINE HAZARD		WEAR EYE PROTECTION
	BLADE CUTTING DEPTH		FLAMMABLE		WEAR BREATHING PROTECTION
	ELECTRIC SWITCH OFF		READ INSTRUCTIONS CAREFULLY		WEAR HARD HAT
	ELECTRIC SWITCH ON		WARNING		WEAR PROTECTIVE CLOTHING
	ELECTRICAL HAZARD		FRAGILE		WEAR SAFETY SHOES
	REMOVE TOOLS		KEEP DRY		WELL VENTILATED
	PAY EXTREME ATTENTION		DO NOT STEP ON		NO NON-WORKING PERSONNEL

iii. FEATURES

CARBON BRUSH MOTOR

Generates more torque and is physically smaller and lighter than similarly rated induction motors.

THERMAL OVERLOAD PROTECTION

Prevents the motor from overheating and protects the saw from power surges.

CUTTING TABLE

Features an injection mold rubber mat that provides a firm, durable work surface while the ball bearing wheels and rollers ensure smooth effortless movement.

STAINLESS STEEL WATER TRAY

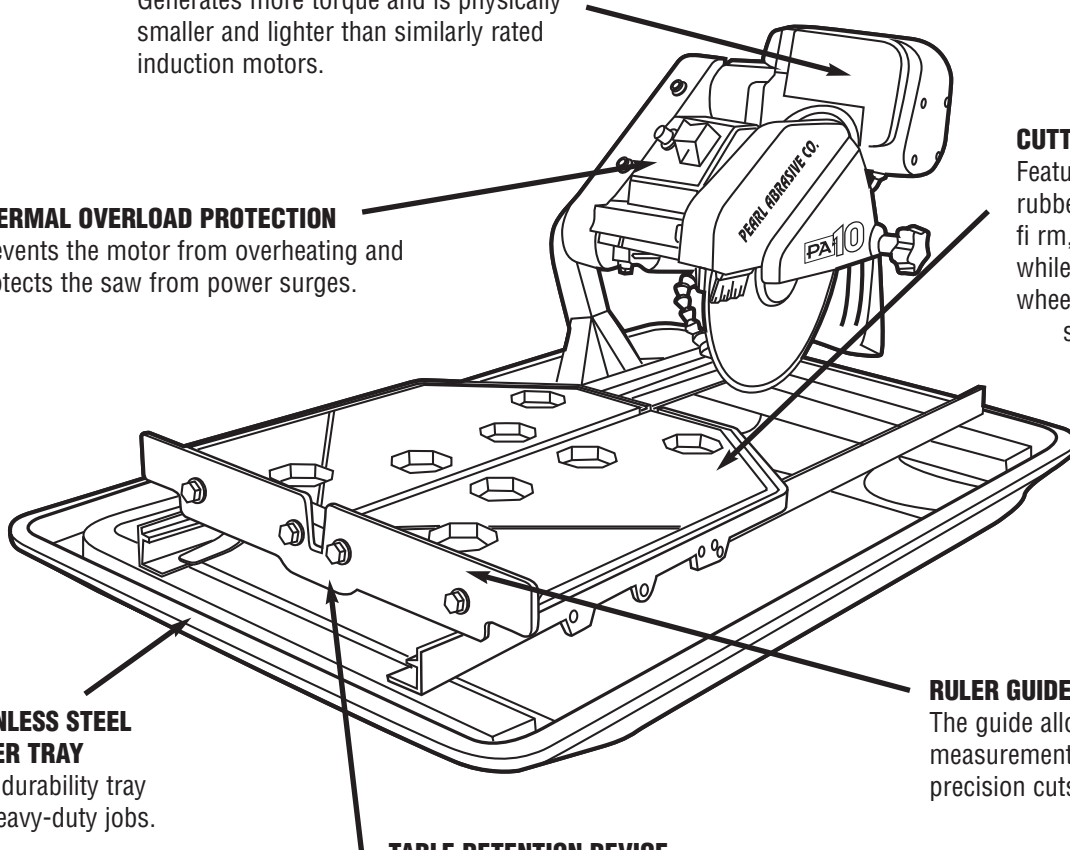
High durability tray for heavy-duty jobs.

RULER GUIDE

The guide allows convenient measurements and promotes precision cuts.

TABLE RETENTION DEVICE

The device secures the cutting table when transporting the saw.



iv. SPECIFICATIONS

PA-10 TILE SAW					
MOTOR	MAX. BLADE CAPACITY	CUTTING LENGTH	CUTTING DEPTH	WEIGHT	DIMENSION
2 HP 115 v, 60 Hz, 3,000 rpm	7" to 10" blade with 5/8" arbor	24" rip cut, 18" diagonal cut	3-1/2"	73 lbs.	37" L 23" W 20" H

v. UNPACKING

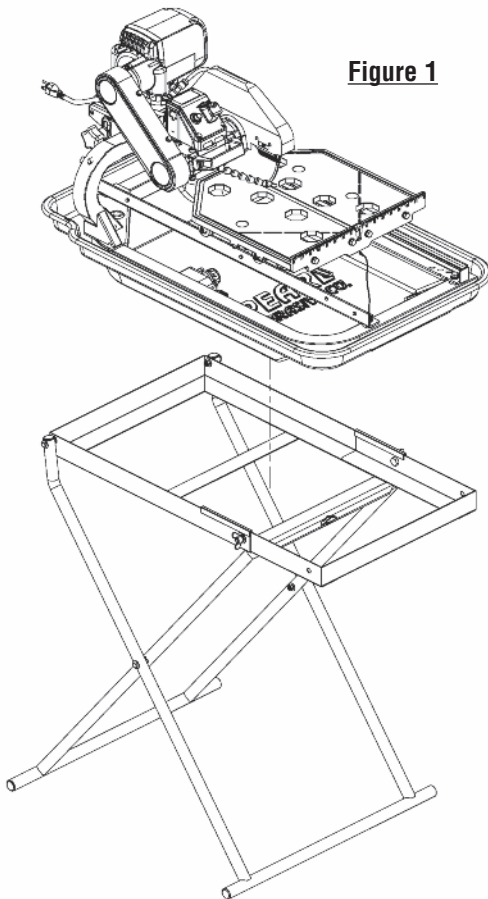
Open the container and carefully lift the saw by the foam packaging and place it on a flat, level working area. Be sure that you have the following items before you discard the container:

- Saw
- 10" saw blade
- Universal wrench
- Owner's manual
- Stainless steel water tray
- 45°/90° rip guide
- Water pump
- Drain plug

vi. INSTALLATION AND OPERATION

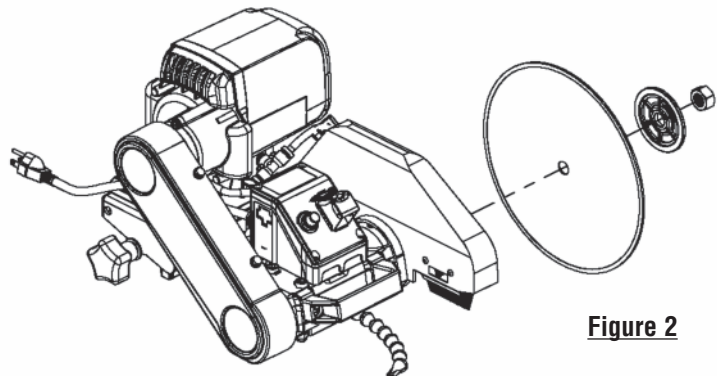
SAW STAND SETUP

1. Remove the folding stand from its box.
2. While holding the stand upright, spread both sets of legs apart and swing the workbench over and on top of the legs.
3. Seat the saw securely onto the stand. *See Figure 1*



BLADE INSTALLATION

1. Loosen blade guard adjustment knob located at the rear of the blade guard. Raise the blade guard to the highest position and retighten the knob.
2. Remove the blade shaft nut and outer flange. *See Figure 2*. If a blade has been mounted, hold the blade with one hand and use the other hand to loosen the nut with the universal wrench. Remove existing blade.
3. Mount new blade, but make certain the arrow on the blade coincides with the rotation direction of the shaft.
4. Attach outer flange and blade shaft nut. Hold the blade with one hand and use the other hand to tighten the nut with the universal wrench. Make certain the flanges are pressed flush against the blade and that the nut is firmly tightened, but do not over tighten.
5. Loosen blade guard adjustment knob, lower the blade guard and retighten the knob.



WATER PUMP INSTALLATION

1. Remove the water pump from the box and check that it is not damaged.
2. Slide the pump onto the U-shaped bracket located at the bottom of the frame. The pump should be oriented such that the water outlet is horizontal. See Figure 3
3. Connect the water hose from the blade guard to the pump and plug the pump's power cord into the female plug that is attached to the post.
4. Fill the water tray so that the water intake is fully immersed. Proper water level must be maintained at all times during saw operation.



WARNING: Disconnect the pump before attempting to handle the pump. Never operate pump without water in the tray.

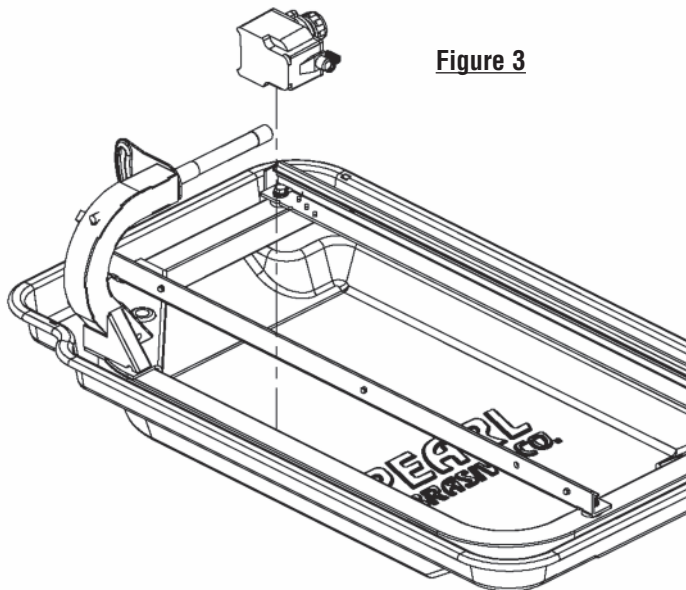


Figure 3

USING THE CUTTING TABLE

1. The ruler guide has inches marked along the top to allow convenient measurements and to promote precision cuts. See Figure 4
2. The table the table spans an area of 16" x 16". With the optional side extension table equipped, the cast aluminum cutting table spans an area of 25" x 16", which allows it to provide greater support for handling larger materials.
3. A rip guide should be used together with the cutting table to ensure precision while making cuts.

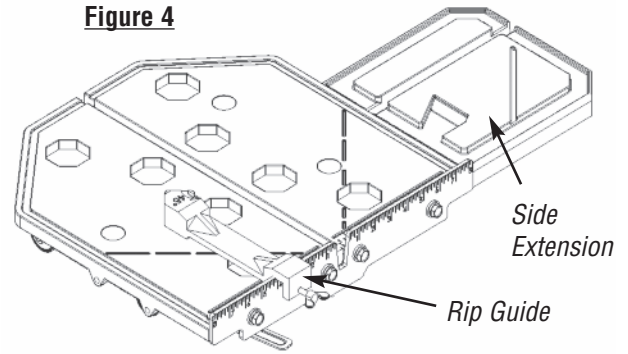


Figure 4

USING THE RIP GUIDE

1. Set the rip guide at the desired location on the ruler guide and tighten the threaded knob. Make sure that the rip guide is firmly tightened to avoid slippage. The rip guide can be used for 45° and 90° cuts.
2. After the rip guide is positioned for the desired cut, place material flat against the rip guide and the ruler guide.
3. Now you are ready to make your cut.

PERFORMING DIAGONAL CUTS

1. Remove threaded knob from the end of the rip guide with the horizontal groove and insert it into the other end with the diagonal groove.
2. Set the rip guide onto the ruler guide, such that the top edge of the rip guide is aligned with the diagonal groove to the left of the vertical channel in the cutting table. Tighten threaded knob once in place.
3. Place one corner of the material being cut in the vertical slot of the ruler guide and rest the adjoining edge flat against the rip guide.
4. Now you are ready to make your cut.

PERFORMING MITER CUTS

To make miter cuts, an optional miter block must be purchased.

1. Place the lip of the miter block on the ruler guide with the threaded knob facing you.
2. Position the miter block such that a tile laying flat against the block may rest its left-most edge within the vertical channel of the cutting table. Tighten the threaded knob to secure the miter block in place.
3. Place material onto miter block and you are ready to cut.

SETTING THE CUTTING DEPTH

The recommended cutting depth is 1/4" below the cutting table surface. To adjust the cutting depth, loosen the cutting depth control knob and set the cutting head such that the lowest point of the blade is 1/4" below the table surface.

Blade Diameter	Cutting Depth
7"	1-3/4 inch
10"	3-1/4 inch

⚠ WARNING! *Setting the blade too low may damage the cutting table and if set too high, the blade may grab the material being cut, possibly causing injury to the operator and the saw.*

CLEANING THE WATER TRAY

1. Lift the saw up from inside the water tray.
2. Remove the drain plug and drain any water left inside the water tray.
3. Flush water into the tray while holding it upright to remove any sludge buildup. set in the water tray for better handling.
4. Replace the saw back into the water tray. *Figure 5*

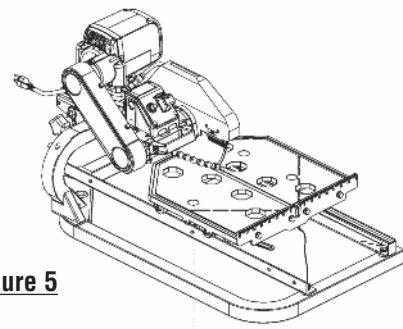
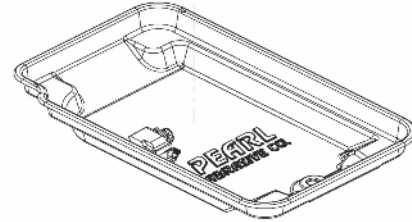


Figure 5



TRANSPORTING THE SAW

1. Ensure that the water tray is empty and dry.
2. Unplug the power cord and store it in the water tray.
3. Secure the cutting table to the front of the saw using the table retention device.
4. Tighten the cutting depth control knob.
5. Optionally the rear drip tray may be removed and set in the water tray for better handling.

vii. PROPER BLADE USE

WET CUT BLADES

DO'S

- Inspect blades daily for cracks or uneven wear.
- Always use appropriate blade for material being cut.
- Inspect arbor shaft for uneven wear before mounting blade.
- Always use blades with the correct arbor shaft size.
- Ensure that blade is mounted in the correct direction.
- Use proper safety equipment when operating the saw.
- Always have a continuous flow of water on both sides of blade.
- Secure the blade to the arbor with a wrench.

DONT'S

- Do not operate the saw without safety guards in position.
- Do not operate the saw with blades larger than 10".
- Do not cut dry with blades marked "Use Wet".
- Do not exceed manufacturer's recommended maximum RPM.
- Do not force blade into material. Let blade cut at its own speed.

DRY CUT BLADES

DO'S

- In addition to the following, always follow wet recommendations.
- Use appropriate blade for material being cut.
- Inspect segment blades for segment cracking or loss.
- Do not use damaged blades.
- Use proper safety equipment when operating the saw.

DONT'S

- In addition to the following, always follow wet recommendations.
- Do not make long cuts with dry blades. Allow them to air cool.
- Do not use the edge or side of blade to cut or grind.
- Do not attempt to cut a radius or curve.
- Do not cut too deep or too fast into the material.
- Do not cut any material not recommended by blade manufacturer.

viii. SAFE OPERATING PRACTICES FOR TILE SAW



WARNING! For your own safety and the safety of others do not attempt to operate this saw until you have read and understand the general safety rules for all power tools and the following additional safety precaution unique to this saw.

1. Use safety equipment - wear safety approved hearing, eye, head and respirator protection.



WARNING! The dust generated by cutting of tile, marble, stone, bricks etc. can be injurious to your health. Always operate machinery in well ventilated areas and provide proper dust removal. Always wear a dust mask approved for respiratory protection against these types of dusts and mists.



2. Read and understand the symbol definitions contained in this manual.
3. Read and understand all warnings and instructions on the machine.
4. Read all safety materials and instructions that accompany any blade or accessory used with this machine.
5. Establish a training program for all operations of this machine.
6. Always provide a copy of this manual to the equipment user. If you need extra copies call our Customer Service Department at **1-800-969-5561**.
7. Always select a diamond blade according to the manufacturers recommendation suitable for the material to be cut. Never use a blade having a maximum operating speed lower than the "No load R.P.M." marked on the tool nameplate. Do not operate any saw without safety guards in place or with a blade diameter larger than the maximum saw blade capacity.
8. Before mounting a blade on the saw clean and inspect the arbor shaft, blade flanges and the diamond blade for uneven wear or damage. If it appears to be damaged, **Do not operate the tool.** Have it serviced by a qualified service technician.



9. Before each use of the saw, inspect the diamond blade for hairline fatigue cracks. If such a crack or flaw is evident, discard the blade. **Using a damaged blade may cause injury to the operator or others.**

10. Be sure that the blade arbor hole matches the blade adapter flange supplied with the saw. Use only blade adapter flanges that came on your saw. Never use damaged or worn blade adapter flanges.



11. ***Installing the blade***, install the blade with the arrow pointing the same direction as the rotation of the arbor shaft or the arrow on the blade guard. Be sure to tighten the blade shaft arbor nut with the wrench provided. ***Be careful not to over tighten.***



WARNING! Not dressing the blade frequently or setting the blade too high will cause it to grab the tile possibly causing injury to the operator and the saw. Setting the blade depth too low will cause it to cut into the main table that may result in injury.

12. Check that the blade tracks near the center of the channel in the main table, and that the table moves freely from front to back.
13. Sometimes the material being cut is not abrasive enough to expose new diamonds on the blade. If the blade is not sharpened, it will rub against the surface resulting in heat build up in the core. To prevent this, it is necessary to dress the blade. To dress the blade simply cut something that is very abrasive such as a piece of cement block. Indications that the blade needs dressing includes:
 - The diamond in the matrix appear shiny because they are worn flat.
 - The blade stops cutting or noticeably slows down.

Blade dressing stones are available from your local Pearl Warehouse.

14. Before using the saw fill the water tub enough to submerge the water pump with clean water only. Replenish as necessary and clean the water tub frequently. Do not operate a wet cutting blade without adequate water flow to both sides of the blade. Never run the pump dry.
15. When cutting, always hold the material firmly lying flat, supported by the main table with one edge resting against the main table backstop.



- Do not attempt to cut pieces too small to safely hold down on the main table.
- Never use the side of the blade to cut or grind with, only cut in a straight line.
- Keep all parts of your body away from the blade and all other moving parts.
- Never touch or try to stop a moving blade with your hand.

16. When cutting dry - always unplug the water pump first. ***Never run the pump dry.***

- Do not use a wet cutting blade for dry cutting. Select the proper dry cutting blade for your application.
- Never make long continuous cuts with dry cutting blades. To avoid heat build up, allow the blade to cool, remove the tile and allow the blade to run freely for a few minutes.

IMPORTANT - If there is any tendency for the saw to tip or move during certain operations, such as when cutting large heavy tile; the saw must be securely fastened to a supporting table.

17. Make certain all adjusting knobs or locks are tight and engaged in their detents and that movable parts not intended to move during operation are securely locked before making a cut. ***Be careful not to over tighten.***

18. Before connecting the machine to a power source check to see that the “On/Off” switch is in the “off” position.

- Make sure the blade is not contacting anything before connecting to a power source and starting the motor.
- Know how to stop the machine quickly in case of an emergency.

19. Grounding Instructions

- In the event 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 connection of the equipment-grounding conductor can result in a risk of electric shock.
- 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 damaged or worn cord immediately.

This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in *Figure 6*. The tool has a grounding plug that looks like the plug illustrated in *Figure 6(A)*. A temporary adapter, which looks like the adapter illustrated in *Figure 6(B)* and *6(C)*, may be used to connect this plug to a 2 pole receptacle as shown in *Figure 6(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.

Additionally, water pump requires the use of a Ground Fault Circuit Interrupter. Therefore, when using the water pump receptacle, this tool must be plugged into a properly installed Ground Fault Circuit Interrupter outlet. See *Figure 6(D)*. If a Ground Fault Circuit Interrupter outlet is not available, Pearl Abrasive Co. has it available as an accessory item. A plug-in Ground Fault Circuit Interrupter may be plugged into a properly installed and grounded 3-pole outlet. Refer to *Figure 6(E)*.

20. Position of the Tile Saw

- To avoid the possibility of the appliance plug or receptacle getting wet, position tile saw to one side of a wall mounted



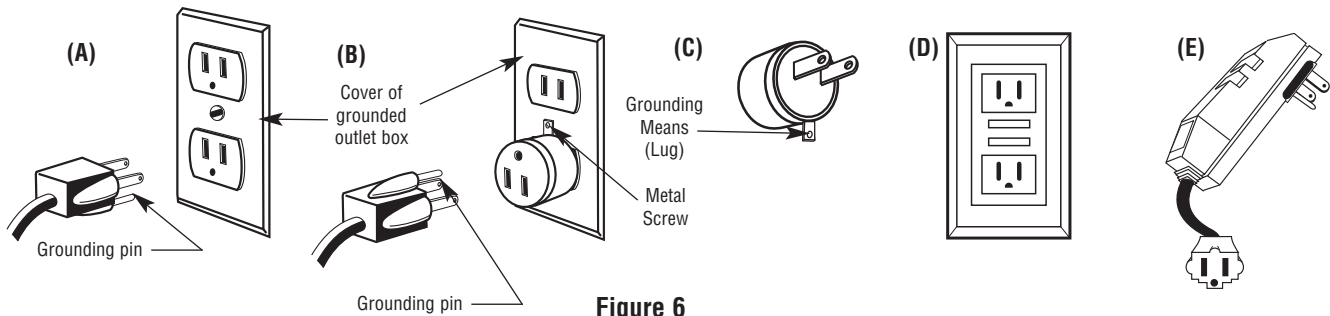


Figure 6
Grounding Methods

receptacle to prevent water from dripping onto the receptacle or plug. The user should arrange a “drip loop” in the cord connecting the saw to a receptacle. The “drip loop” is that part of the cord below the level of the receptacle, or the connector if an extension cord is used, to prevent water traveling along the cord and coming in contact with the receptacle.



See Figure 7.

- If the plug or receptacle does get 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.

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

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

21. Extension Cords

- Use only extension cords that are intended for outdoor use. These extension cords are identified by a marking “Acceptable for use with outdoor appliances; store indoors while not in use.” Use only extension cords having an electrical rating not less than the rating of the product. Refer to chart on page 14. Do not use damaged extension cords. Examine extension cord before using and replace if damaged. Do not abuse extension cords and do not pull on any cord to disconnect. Keep cord away from heat and sharp edges. **Always disconnect the extension cord from the receptacle before disconnecting the saw from the extension cord.**

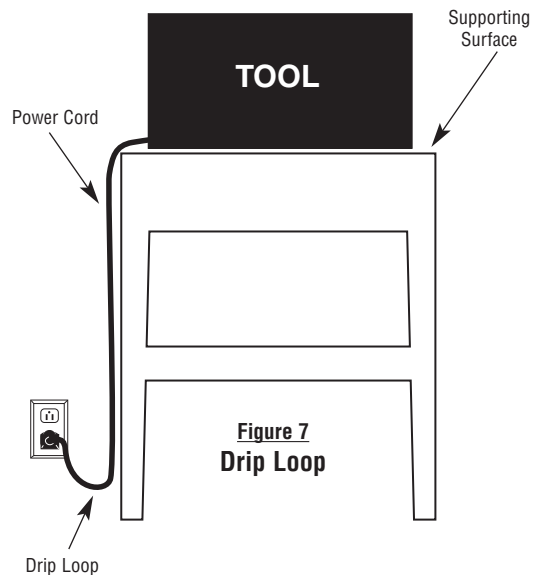


Figure 7
Drip Loop

ix. CARE AND MAINTENANCE



WARNING! For your safety before performing any maintenance on the saw turn off the power switch and unplug the power cord.

GENERAL RULES

- Always clean the machine before performing any maintenance/ repair.
- Before performing any cleaning/maintenance /repair, the machine must be switched off with the main power switch.

Steps to Follow When Cleaning:

- Please do not use aggressive cleaners (i.e. containing solvents). Do not use high-pressure water jets, aggressive detergents or solutions and liquids with a temperature exceeding 86°F! Use a fluff-free cloth only.
- Use a cloth which may be lightly moistened only for removing dust and dirt. Hard packed dirt can be removed with a soft brush.
- For the sake of safety, no water/cleaning liquid/vapor may penetrate into the electric motor, connectors/plugs, switches, etc. Therefore cover all apertures, holes in the housing, connectors or plugs, etc. or seal them with adhesive tape!
- Use a soft, low-pressure water jet and a brush to rinse dirt and incrustations away. Be particularly careful when near hazardous parts of the machine (e.g. switch, motor). Clean the motor and switches only by wiping with a moist cloth.
- Do not “rinse” the bearings of the drive elements to prevent them from running dry. The ball bearings of the machine are permanently lubricated.
- After cleaning, remove all covers and adhesive tape! All screws/nuts which you may have loosened must be tightened again!
- After wet cleaning, try the machine on a power outlet which is equipped with a power breaker (i.e. fault current circuit breaker). If the fault current circuit breaker cuts the power supply, the machine must be inspected by an authorized dealer prior to use!

CLEANING

After every use of the machine:

- Remove dirty water from container.
- Remove dirt and mud from the bottom of the container.
- Rinse the immersion pump with fresh water to

prevent the water pump from clogging with residual dirt.

After wet cleaning and before using the machine again:

- Connect the machine to an electric power outlet equipped with a “GFCI” safety power breaker. If the safety power breaker cuts off the electrical power supply, do not try to operate the machine but have it checked by an authorized dealer first.

PROLONGED PERIOD OF NON-USE

Before not using the machine for a prolonged period of time:

- Clean and lubricate all movable parts. However, do not grease the guide rails.

After not using the machine for a prolonged period of time:

- Check that the stand is safely fixed.
- Check that all screw joints and nuts are fixed.
- Check that the cutting table is seated properly on the guide rails and that it moves easily along the entire length of the rails.
- With the saw blade removed, switch on the motor for an instant and switch it off again. If the motor does not run, have the machine inspected by a qualified electrician.
- Check that the immersion pump works properly. Turn on the cooling water tap and switch the machine on. If the pump does not give any water or only a little, switch the machine off at once. Clean the pump, or replace if necessary.

EXTREME TEMPERATURE

Ambient temperature below 32° F (Winter):

- To prevent the water in the pump and cooling system from freezing, remove the water after using the machine or when there will be a long break. Make sure that the cooling system is entirely drained so that there is no water left inside the pump and water hose!

WATER PUMP MAINTENANCE

When the machine has not been used for a long period of time, hard packed dirt may begin to build up inside the pump and block the pump wheel. If the machine is activated with the immersion pump blocked, the electric motor of the pump will be damaged within a few minutes! Please follow the steps listed below to clean the pump before operating the saw:

1. Remove the immersion pump from the water container.
2. Clean the immersion pump.
3. Loosen the fixing screws of the pump lid.
4. Take the lid off the pump. Be careful not to damage or lose the gasket underneath.
5. Clean the pump lid.
6. Remove all dirt and incrustations from the pump wheel.
7. Check whether the pump wheel can be easily turned.
8. Then reassemble the immersion pump correctly and check whether it works properly.

BELT REPLACEMENT

1. Unplug the saw before proceeding any further.
2. Loosen and remove the four bolts located above and below the belt guard and then remove the belt guard. See *Figure 8*
3. Loosen the four bolts located at the base of the motor.
4. Use a hex wrench to access the socket hex bolt located at the rear of the cutting head. Turn wrench to move the motor forward, thus providing some slack in the belt.
5. Remove existing belt and replace with a new belt.
6. Perform steps 1 through 4 in reverse to tension the belt and reinstall the belt guard. Make sure the belt is at the proper tension before tightening the four bolts at the base of the motor.

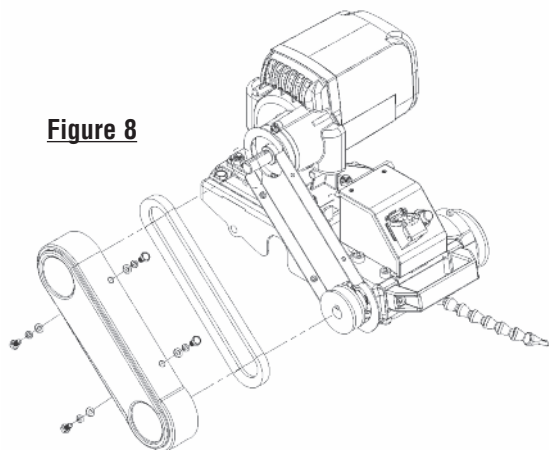


Figure 8

REALIGNMENT

Method 1:

This procedure deals with the most common source of misalignment that occurs when the guide rails are not parallel with the blade.

1. Set the cutting depth such that the blade passes through the table, not over.
2. Place a straight edge (i.e. carpenter's square) on the cutting table as shown in *Figure 9*.
3. Loosen the left and right guide rails by loosening the fasteners found at the ends of the rail. See *Figure 9*. The left rail should be slightly loose, so there is not too much play during adjustments, but the right rail should move freely.

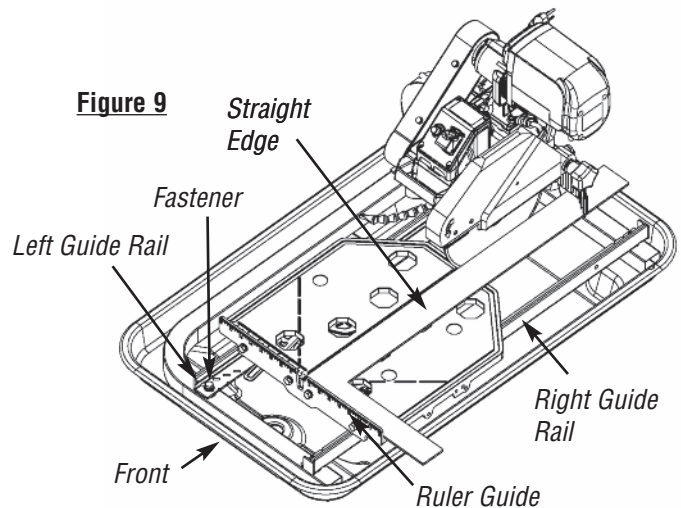


Figure 9

4. Make sure the short portion of the straight edge is placed flush against the ruler guide. Adjust the left guide rail so that the front and rear edges of the blade touch the straight edge, although a tolerance of 0.1mm between the front and rear edges is allowed. Perform this adjustment along the entire length of the straight edge.
5. Position the table as close to the user as possible. Place the straight edge flush against the ruler guide and blade. Without holding onto the straight edge, gently move the table towards the rear of the saw and then back. Observe any gaps that may appear between the straight edge and blade or between the straight edge and ruler guide. A gap exceeding the allowed tolerance means that the table is not moving parallel to the blade; hence, further adjustments as outlined in step 4 will be required. However, if scenario A or B described below occurs, other adjustments may be required instead.
 - A. If the straight edge only touches the blade when the table is positioned midway along the rail or at the ends of the rail, then the rail may be deformed (i.e. bowed). See *Figure 10*. Perform test cuts to determine if the rail should be replaced. Typically a bowing displacement of up to 0.2mm will not affect cutting accuracy.

Figure 10



B. If the straight edge touches both edges of the blade initially, but shifts apart as the table travels along the rail, proceed to method 2 below.

6. Tighten the fasteners at both ends of the left rail.
7. Adjust the right guide rail so that the horizontal rollers underneath the table engage the rail as shown in *Figure 11*. In most cases the rollers will not have to be vertically adjusted. Spacing between rails must be equidistant at all points to ensure that they are parallel. Once adjustments are made, lightly tighten the fasteners on the right rail and move the table back and forth. If the table binds against the rail at any point, adjust spacing accordingly until the table moves smoothly.

Leave hairline gap between rail and roller

Leave a 1/32" (1mm) gap

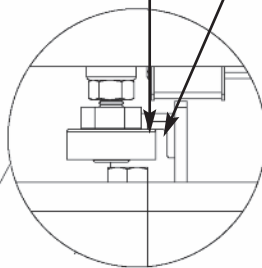
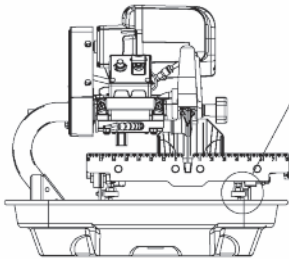


Figure 11

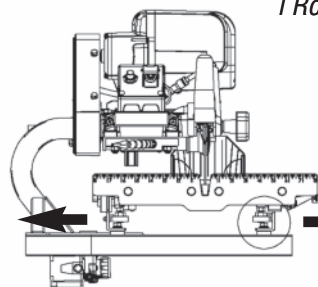
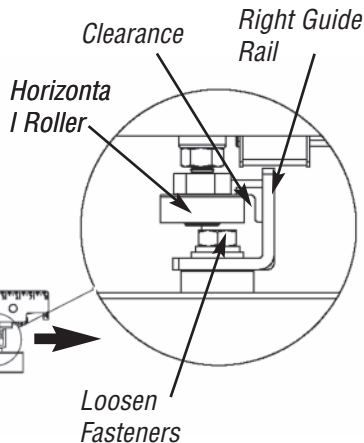


8. Tighten the fasteners at both ends of the right rail.
- If alignment has been achieved, do not proceed to method 2.

Method 2:

This procedure corrects another source of misalignment that occurs when the table's orientation is not parallel with the guide rails.

Figure 12



1. Lift the saw up from within the water tray and place it on a flat level surface. Use the universal wrench to loosen (but do not remove) the fasteners from either end of both guide rails. Move each rail away from the other, so that the horizontal rollers are clear of the right guide rail. See *Figure 12*.
2. Remove rubber cap A on the left side of the table. Loosen the exposed lock nut using a 13mm socket wrench. Use a flat screwdriver to turn the shaft of the roller clockwise to lower it by approximately 3/8". See *Figure 13*. Evenly lift up the table to disengage the guide rollers from the left guide rail. Once the guide rollers are clear, shift the table to the right to clear the left horizontal roller of the rail. Remove the table from the guide rails. See *Figure 14*.

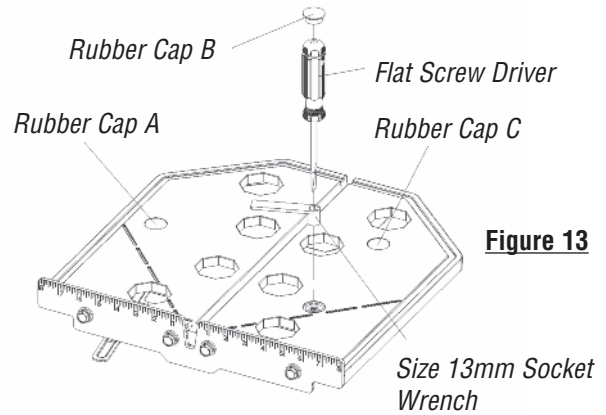
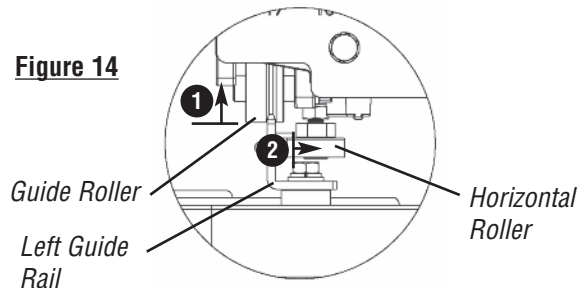


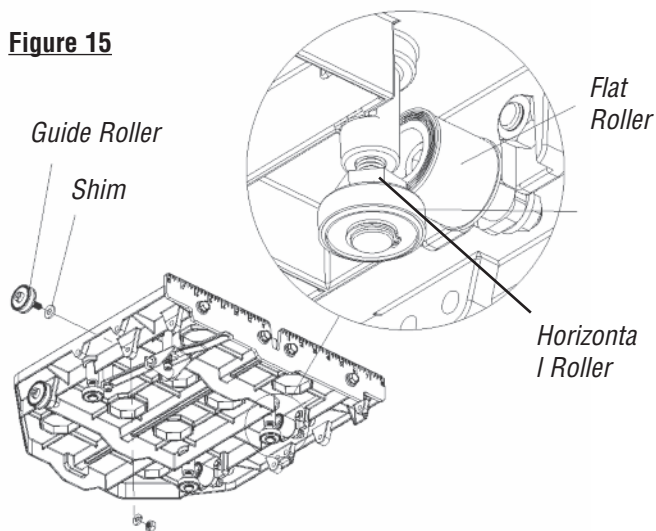
Figure 13

Figure 14



3. If the table shifts to the right as it travels away from the user, a shim needs to be added to the guide roller furthest from the ruler guide. On the other hand, if the table shifts to the left, a shim needs to be added to the guide roller closest to the ruler guide. Remove the appropriate guide roller to insert a shim between the roller and table, then reattach. See *Figure 15*. Depending on the severity of the shift, more than one shim may be required.
4. After adding shim(s), mount the table onto the guide rails by reversing the instructions in step 2. Move the rails toward each other to engage the horizontal rollers to the right guide rail as shown in *Figure 11*. Realign the table to the blade using method 1. Check to see if any shifting persists. A shift tolerance of 0.2mm is allowed. A shift in excess of that will require further adjustment—repeat step 3.

Figure 15



5. Once alignment is successful, replace saw back into the water tray.

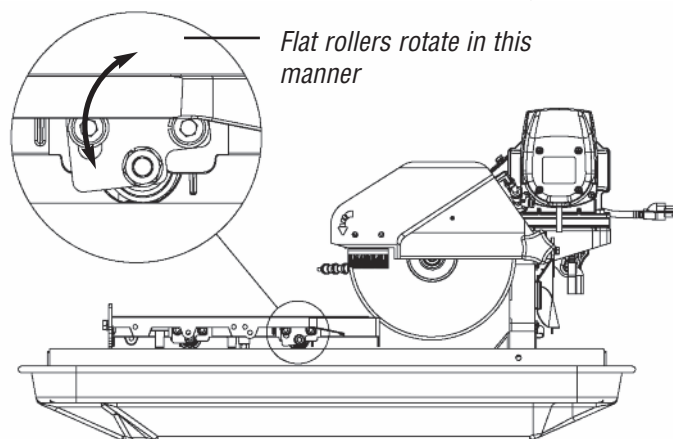
LEVELING ADJUSTMENT

This procedure levels the table so that it is perpendicular to the blade and flush against the rails.

1. Remove rubber caps B and C on the right side of the table. Loosen the exposed lock nuts using a socket wrench. Next, use a flat screwdriver to turn the shaft of the rollers clockwise. See Figure 13. This will lower the horizontal rollers to allow room for adjusting the flat rollers.

2. Loosen the socket bolts on the flat roller plate so that the roller can swing freely about one bolt. See Figure 16. Do this for both flat roller plates.
3. Hold the table against the guide rails. The flat rollers should reposition themselves to maintain contact with the guide rails. If the table is not perpendicular to the blade, lift the right side of the table instead to obtain the proper angle. A square tool will be required to confirm the angle. Tighten the socket bolts. Check the table for play. Repeat step 2 if some play is still present.
4. Restore the horizontal rollers to their original positions as shown in Figure 11 by reversing the instructions in step 1. Be sure to tighten the lock nuts and replace the rubber caps.

Figure 16



x. ELETRICAL MOTOR SPECIFICATIONS

Horse Power	2 hp
Volts	115 V/ 60hz
Amps	15 amps
Motor RPM	3,450 rpm
Cycle	60
Phase	1

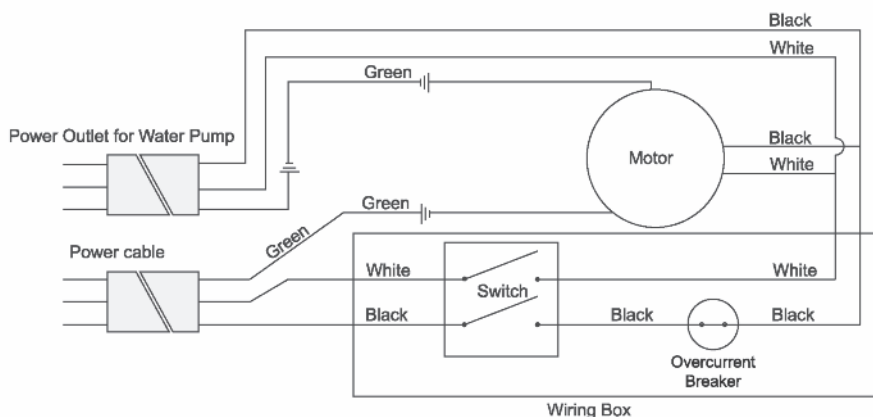
Recommendations:

- It is recommended that a **15 amp circuit** be used while operating this saw. This will prevent possible power interruption or loss.
- Always plug saw as close as possible to the power source while operating. This will allow you to receive optimum electricity.

⚠ WARNING: To avoid permanent motor damage you must use the correct extension cord. Never use more than one extension cord at a time. Follow the chart for proper size.

WIRE GAUGE	LENGTH OF CORD
No. 12	25'
No. 10	50'
No. 8	75'

Electrical Wiring Diagram



xi. TROUBLESHOOTING

<i>Problem</i>	<i>Possible Cause</i>	<i>Solution</i>
Machine does not run when switched on	Power cord not properly fixed/ plugged in	Check that the machine is properly connected to the power supply
	Power cord defective	Have the power cord checked, replace if necessary
	Main power switch defective	Have the main power switch checked and replace if necessary by a qualified electrician
	Loose electrical connection inside the electric system	Have the whole electric system of the machine checked by a qualified electrician
	Motor defective	Have the motor checked and replaced if necessary by a qualified technician
Motor stops (power cut out)	Too much pressure exerted while cutting	Exert less pressure when cutting
	Incorrect specification for saw blade	Use a saw blade which corresponds to the material being cut
	Saw has a defective electric system	Have the electric system of the saw checked by a qualified technician
Poor machine performance, little power	Power cord/extension cable too long or cable still wound up inside cable drum	Use a power cord/extension cable of the rated length, use a cable drum with cable fully extended
	Power network is insufficient	Observe the electrical ratings of the machine and connect it only to a power network which complies with these ratings
	Drive motor no longer runs at rated speed (RPM)	Have the motor checked by a qualified electrician and have it replaced if necessary
Insufficient flow of cooling water or no cooling water at all	The pump draws air	Fill the container with water
	Filter clogged	Clean the filter of the pump
	Pump wheel of the immersion pump blocked by dirt	Disassemble the immersion pump and clean
Irregular run of the saw blade	Poor tension in the blade material	Return the saw blade to the manufacturer
Saw blade wobbles when running	Saw blade is damaged or bent	Have the saw blade aligned / flattened
		Clean the receiving flange
		Solder the diamond segments of the old blade onto another saw blade or use a new blade
	Flange of the saw blade is damaged	Replace the saw blade flange
	Shaft of the motor is bent	Replace the electric motor

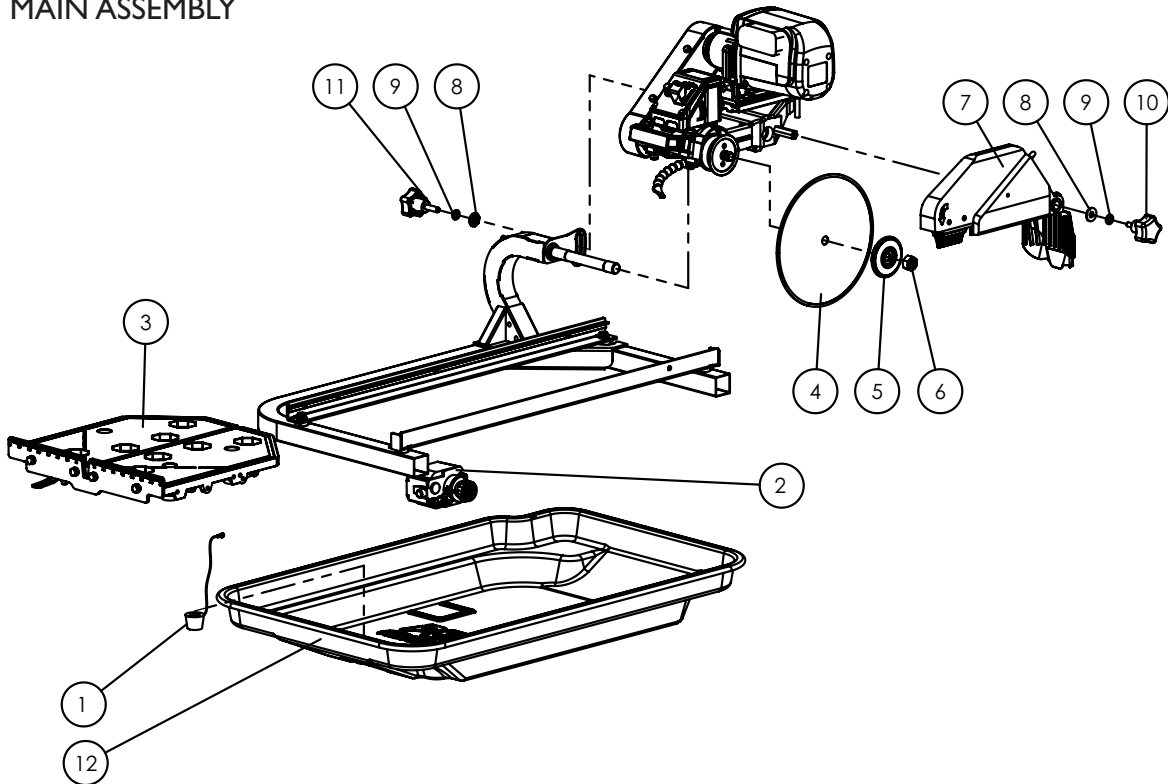


WARNING! For your safety and the safety of others, turn the power switch off and always remove the plug from power source before troubleshooting. Repairs performed by unauthorized personnel could cause serious hazard. We recommend that service to this tool be performed by a qualified service technician with original equipment replacement parts.

Problem	Possible Cause	Solution
Diamond segment becomes loose	Overheating of the saw blade; cooling water not sufficient	Have the diamond segment soldered on the blade again; ensure optimum flow of cooling water
Excessive wear	Wrong type of saw blade	Use harder saw blades
	Shaft of motor causes wobbling	Have bearings of the motor or the motor replaced
	Overheating	Ensure optimum flow of cooling water
Cracks in or near the diamond segment	Saw blade too hard	Use a softer blade
	Fixed flange is worn out	Replace the fixed flange
	Motor shaft bearing	Replace the bearing of the motor shaft
Saw blade is blunt	Saw blade type is unsuitable for the material being cut	Use appropriate type of saw blade
	Saw blade type is unsuitable for the machine performance	
	Saw blade too hard	
	Diamond segments are blunt	Sharpen the diamond saw blade
Appearance of cut is not optimal	Poor tension in the blade material	Return the saw blade to the manufacturer
	Too much load placed on the saw blade	Use a suitable saw blade
	Diamond segments are blunt	Sharpen the saw blade
The center hole in the saw blade has become wider due to wear	The saw blade has slipped on the motor shaft when running	The arbor of the saw blade must be fitted with an appropriate adaptor ring
		Check the receiving flange and have it replaced if necessary
Saw blade shows blooming colors	Saw blade overheating due to a lack of cooling water	Ensure an optimum flow of cooling water
	Lateral friction when cutting	The material feed is too high; proceed more slowly
Grinding marks on the saw blade	Material is not being fed parallel to the saw blade	Ensure that the direction of feed is absolutely parallel to the saw blade
		Adjust the roller table or have it adjusted
	Poor tension in the blade material	Have the saw blade tensioned
	Too much load on the saw blade	The material feed is too high, proceed more slowly

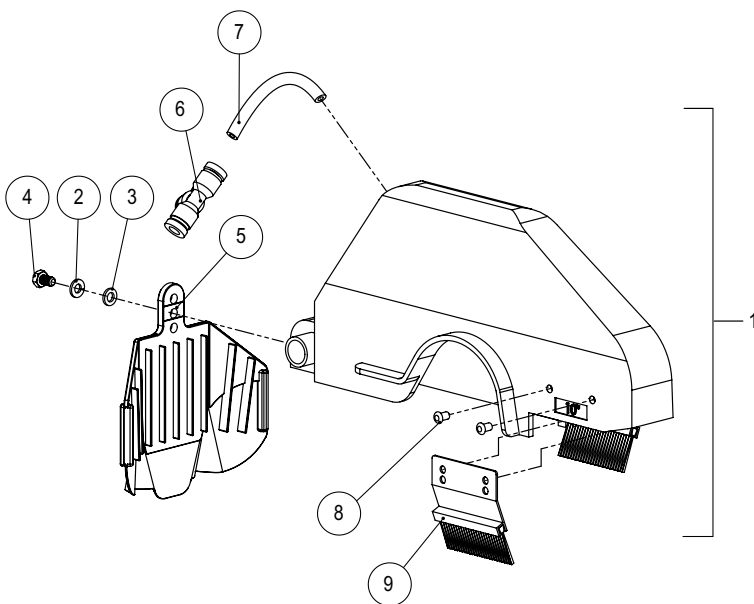
xii. REPLACEMENT PARTS LIST

PA-10 MAIN ASSEMBLY



PART NAME	PART NUMBER
1 Water plug assembly	S1000-48
2 253 gal/hr Water pump	CX38011
3 Cutting table assembly	PA100133
4 10" blade	DTL10HPXL
5 10" Outer flange	PA100136
6 5/8 - 11 UNC Nut	PSV00004

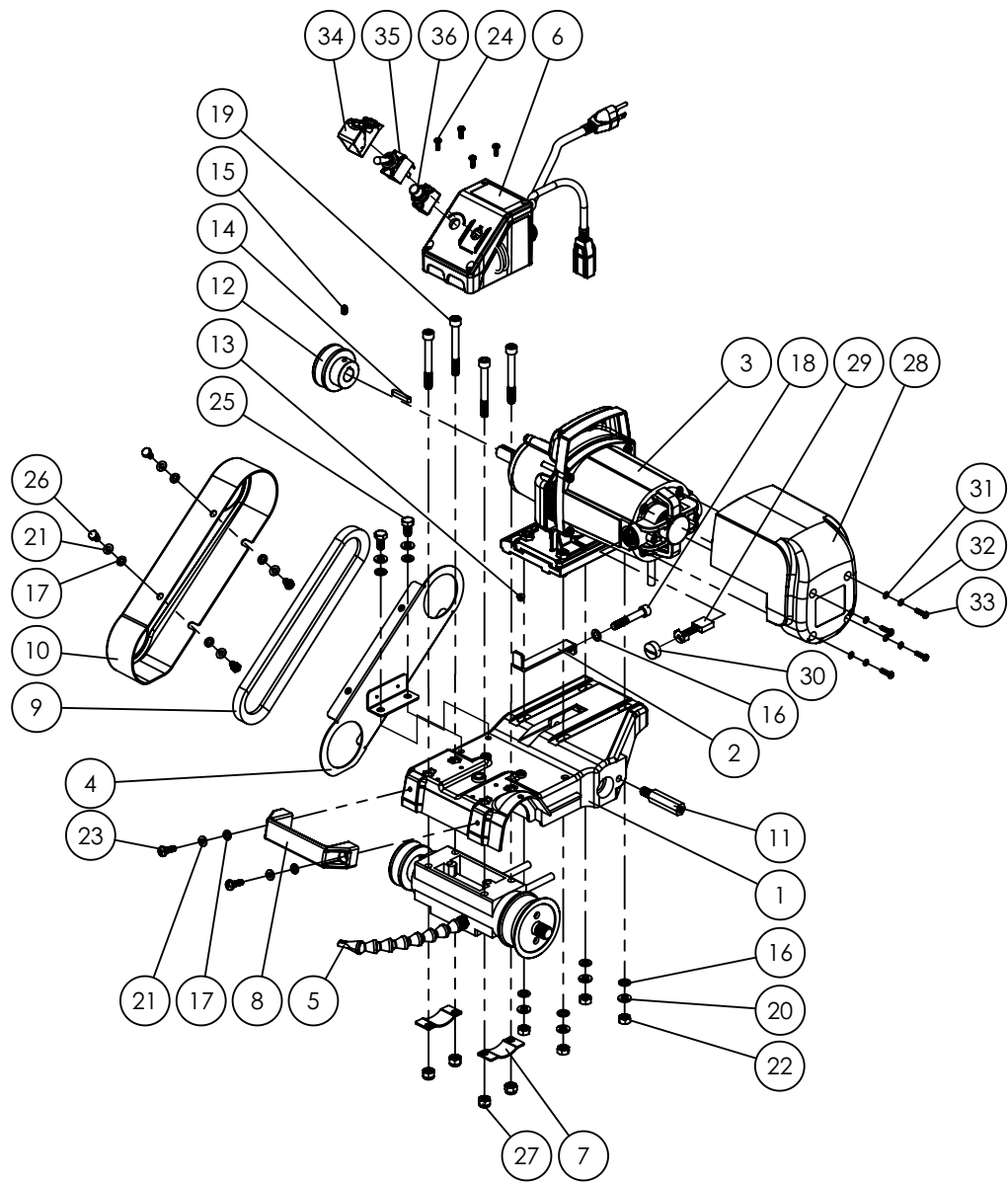
PART NAME	PART NUMBER
7 Blade guard assembly	PA100204
8 3/8 Waved lock washer (2)	PA0310
9 3/8 Narrow washer inch (2)	PA0309
10 Male 5/16 - 18 UNC x 3/4L Star type knob	PSV10022
11 Male 3/8 - 16 UNC x 32L Star type knob	PA100021
12 VX10.2XL/PA10 Water tray	V35012SSXL



PA-10 BLADE GUARD ASSEMBLY

PART NAME	PART NUMBER
1 Blade guard assembly	PA100204
2 M6 Spring lock washer	V3911090
3 M6 Narrow washer	PA00082
4 M6 x 1.0 x 10L Hex bolt	PA100062
5 Splash guard	PSV10023
6 D8 Female quick disconnect T-adaptor	PSV00005
7 PU hose (per foot)	PSV00040
8 M5 Standard rivet (4)	PA100033
9 60L Water brush (2)	PSV10020

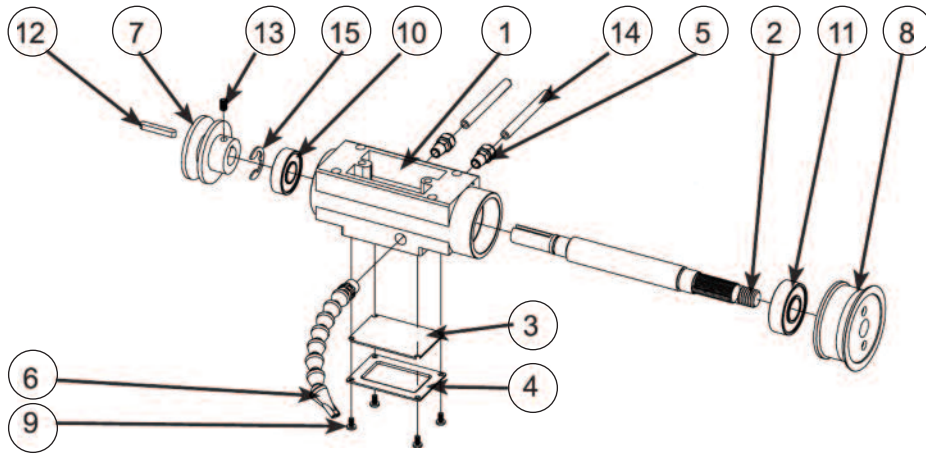
PA-10 CUTTING HEAD ASSEMBLY



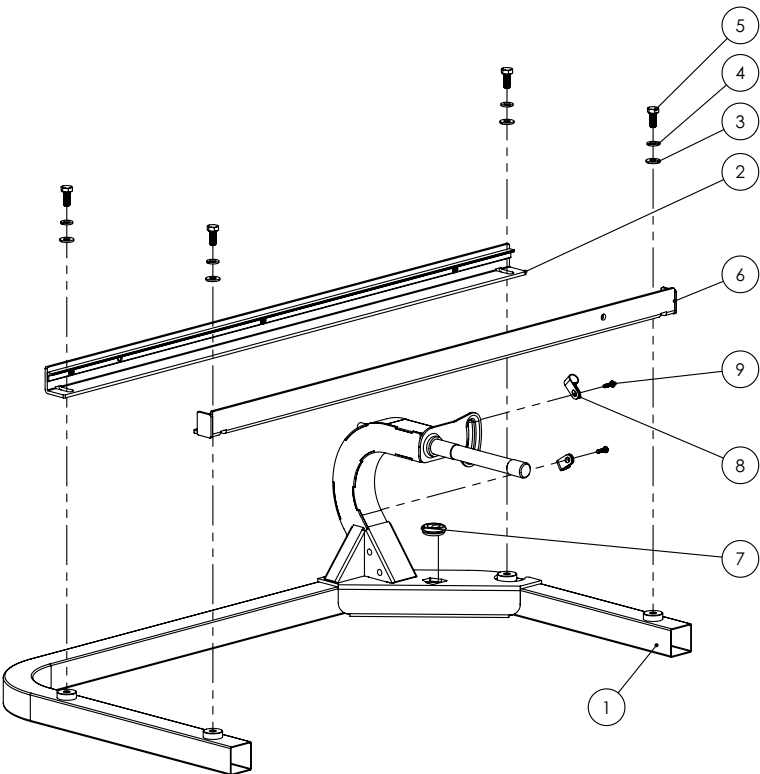
PART NAME	PART NUMBER
1 Motor Mounting Plate	PA100201
2 Motor tension bracket	PA100074
3 2HP Brush motor complete w/ fan cover	PA100066
4 Belt guard bracket	PA100069
5 10" Variant LCBH ver2 (black)	PA100202
6 Power switch assembly	PA100076
7 LCBH bracket (black) (2)	PA100203
8 26.5H X 7W X 93L Rectangle handle.	PA100073
9 Belt	PA100072
10 Belt guard	PA100067
11 Hexagonal blade guard shaft	PA100068
12 D53.98mm V-belt pulley	PA100092
13 D6 Circular rubber stop	PA100075
14 5 x 5 x 30L Square key	PA100093
15 M6 x 1.0 x 10L Flat point set screw	PA0316
16 M8 Narrow washer (7)	PA0120
17 M6 Narrow washer (6)	PA0384
18 M8 x 1.25 x 50L x 22S Socket head cap hex screw	PA150185

PART NAME	PART NUMBER
19 M8 x 1.25 x 70L x 22S Socket head cap hex screw (4)	PA0329
20 M8 Spring Lock Washer (6)	PA0121
21 M6 Spring Lock Washer (6)	PA11090
22 M8 x 1.25 Nut (4)	PA0119
23 M6 x 1.0 x 20L Cross screw (2)	PA110026
24 M4 x 0.7 x 12L Cross screw (4)	PA141113
25 M8 x 1.25 x 16L Hex bolt (2)	PA01161
26 M6 x 1.0 x 10L Hex bolt (4)	PA0322
27 M8 x 1.25 Nylon Nut (4)	PA0155
28 Fan cover	PA100150
29 Carbon brush (2)	V390051
30 Carbon brush cap (2)	V390050
31 M4 Narrow washer (4)	PA420044
32 M4 Spring washer (4)	PA15999
33 M4 x 0.7 x 16L Cross screw (4)	PA03051
34 Power switch shield	PA100003
35 20A Toggle switch	PA141027
36 20A Circuit breaker	PAS1000-04

PA-10 LIQUID BEARING HOUSING ASSEMBLY



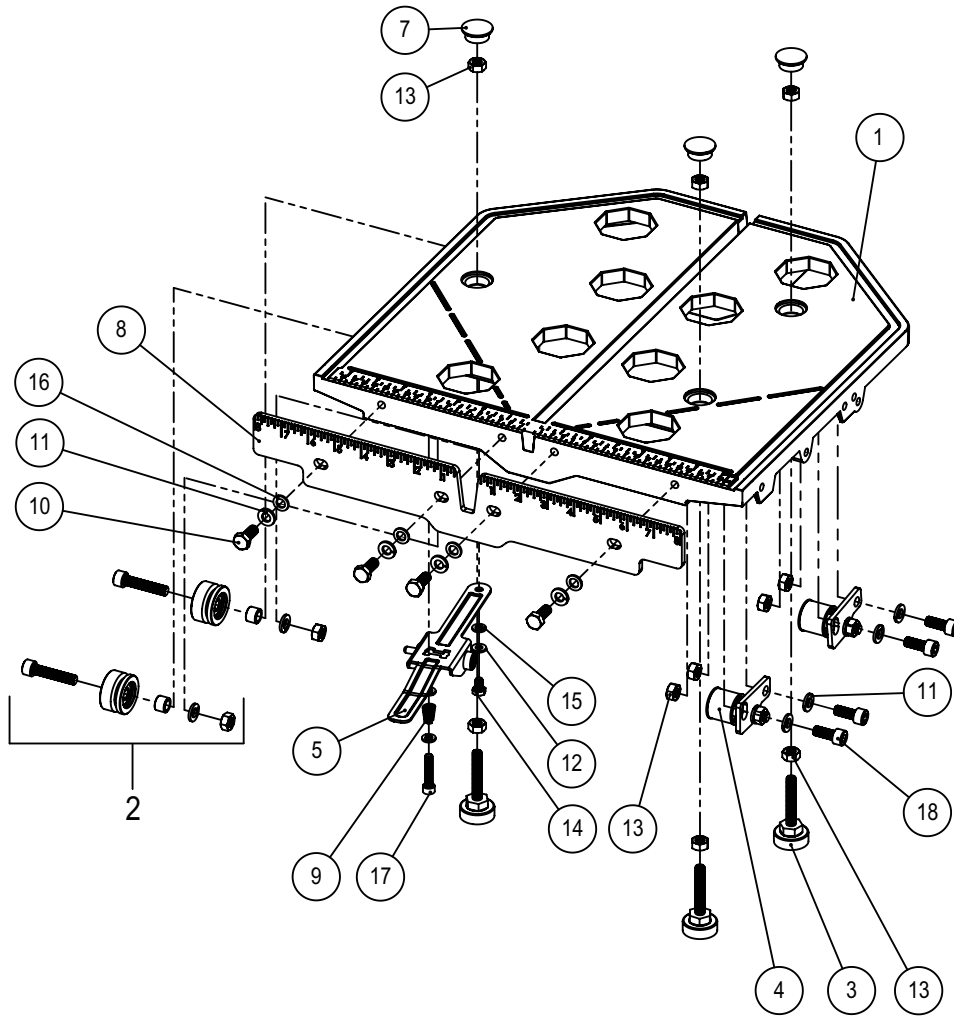
PART NAME	PART NUMBER	PART NAME	PART NUMBER
1 10' Variant LCBH ver2 (black) - Complete	PA100202	9 M4 x 0.7 x 8L Cross Screw	PA1374
2 Blade Shaft	PA100112	10 D40 d17 6203LLB Radial Bearing	PA100120
3 Rubber Gasket	PA100113	11 D47 d20 6204LLB Radial Bearing	PA100121
4 Water Channel Cover	PA100114VX	12 5 x 5 x 30L Square Key	PA100093
5 M10 Male to D7.5 Male Connector	PA100116	13 M6 x 1.0 x 10L Flat Point Set Screw	PA100094
6 7 link 6.3 ID flat nose assembly	PA100117	14 Water Hose (1 ft)	PSV00040
7 Blade Shaft Pulley	PA100118	15 M17 External E-Clip	PA100124
8 Dia 16.5 Arbor Inner Flange	PA100119		



PA-10 FRAME ASSEMBLY

PART NAME	PART NUMBER
1 Frame weldment	PA100204
2 843L L-Rail weldment	PA100131
3 M8 Wide Washer (4)	PA0120
4 M8 Spring Lock Washer (4)	PA0121
5 M8 x 1.25 x 20L Hex bolt (4)	CX38052
6 843L L-Rail weldment w/stop	PA100205
7 D22.2 d17 10t Grommet	PA100206
8 ED127 D12 Hose clamp	PA100207
9 M4 x 0.7 x 16L Cross screw (2)	PA03531

PA-10 CUTTING TABLE ASSEMBLY



PART NAME	PART NUMBER
1 Cutting table (only)	PA100095
2 Guide roller complete (2)	PA100097
3 Horizontal roller assembly (3)	PA100098
4 Flat roller assembly (2)	PAX1000-25
5 Spring lock assembly	PA100100
7 Rubber cap	PA100103
8 Ruler Guide	PA100099
9 Conical spring	PA100101
10 M8 x 1.25 x 20L Hex bolt	CX38052

PART NAME	PART NUMBER
11 M8 Spring Lock Washer	PA0121
12 M6 Spring Lock Washer	V3911090
13 M8 x 1.25 Nut	PA00015
14 M6 x 1.0 x 10L Hex bolt	V390322
15 M6 Narrow washer	PA00082
16 M8 Narrow washer	PA0120
17 M6 x 1.0 x 30L Socket head hex screw	CX38075
18 M8 x 1.25 x 20L Socket head hex screw	PA100108

xiii. ACCESSORIES & PARTS

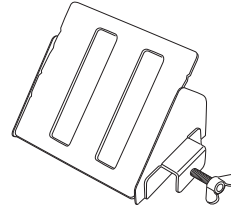
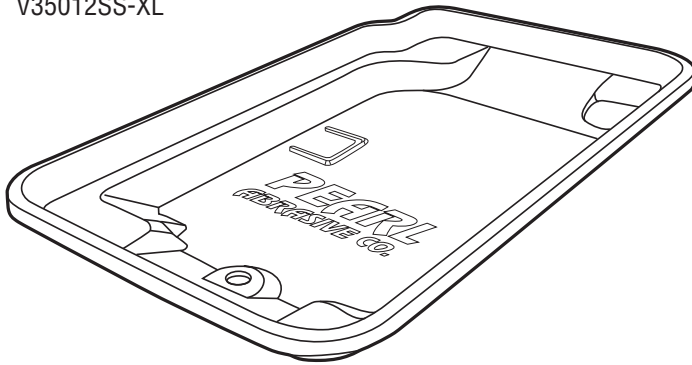
Name (Qty.)

Stainless Steel Water Tray (1)

Drain plug is not included

Part Number

V35012SS-XL



Name (Qty.)

(Optional) Complete

Miter Block with

Knob (1)

Part Number

S1000-34

Knob Only (1)

V35016

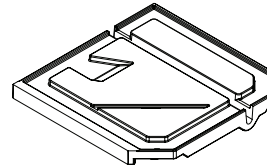
Name (Qty.)

(Optional) Side

Extension Table (1)

Part Number

V100102



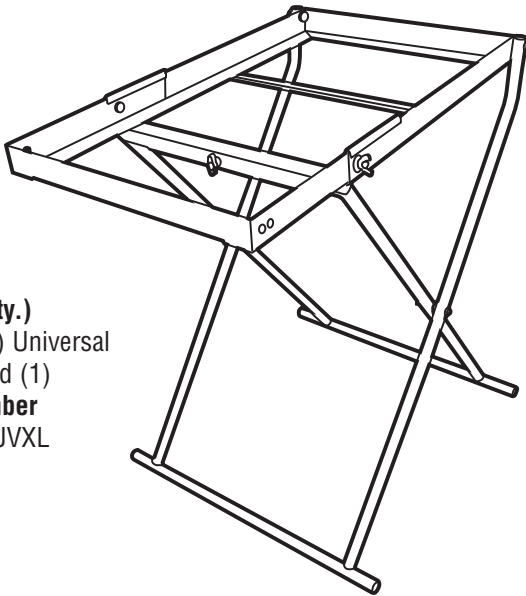
Name (Qty.)

(Optional) Universal

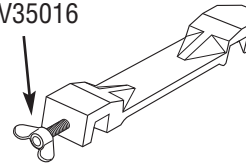
Saw Stand (1)

Part Number

V35010-UVXL



Knob Only (1)
V35016



Name (Qty.)

Complete 45°/90°

Rip Guide with

Knob (1)

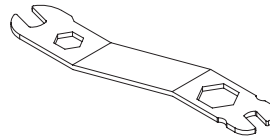
Part Number

V35000

Name (Qty.)

Universal

Wrench (1)



xiv. THE RIGHT BLADE DOES THE RIGHT JOB

For the most effective cutting and blade life always use the recommended Pearl Abrasive Co. blade.

PEARL BLADE SERIES	APPLICATION							
	CERAMIC TILE	EXTRA HARD CERAMIC	PORCELAIN	MARBLE	GRANITE	HARDSTONE	GLASS TILE	MOSAIC METAL TILES
Reactor ADM	○	○	○	○	○	○		○
HPXL Series	○	○	○	○	○	○		
HP Series		○	○		○			
Turbo Mesh		○	○		○	○		
DTLB19 Series	○							
Pro-V Series	○	○	○					
Glass Blade								○
	○			○				

xv. HOW TO ORDER PARTS

Please have the following information ready before calling:

- Serial Number of your Tile Saw
- Model Number of the Tile Saw
- When purchased and where
- Part Description

All parts listed may be ordered from your Local warehouses. If the part is not stocked locally, call our Corporate office and ask for our Customer Service Department. For Technical Support call **1-800-969-5561**. In Canada call **1-800-387-0008**. There is a \$25.00 minimum order.

Return Policy: Return goods for credit or exchange on the basis of the following terms: **(1)** They must be current products; **(2)** Items returned for replacement or refund should be in original cartons and must be accompanied by a packing slip with the following information: Returned Goods Authorization (RGA) number obtainable from Customer Service Department • List of items returned • Reason(s) for return(s) • Copy of original invoice(s); **(3)** Freight charges must be assumed by sender; **(4)** Returning goods are subject to a 15% handling charge to cover our cost of repacking and restocking. All Prices are subject to change without notice.

Disclaimer: Pearl Abrasive Co. reserves the right to make changes or improvements on its products without incurring an additional obligation including any obligation to make corresponding changes or improvements to products previously manufactured or sold. Pearl reserves the right to discontinue products at any time without notice.

All illustrations displayed in this manual are the property of Pearl Abrasive Co. and shall not be duplicated or reproduced without the express written consent of Pearl Abrasive Co.

PEARL LIMITED WARRANTY

Every PEARL ABRASIVE CO. tool is thoroughly inspected and tested before leaving the factory. It is warranted to be free of defects in materials and workmanship for a period of ONE YEAR from the date of original purchase. Pearl will repair or (at our opinion) replace a product, or part thereof, found by PEARL ABRASIVE CO. to be defective, provided the defective product is returned to PEARL ABRASIVE CO., freight pre-paid, with proof of purchase.

RGA NUMBER IS REQUIRED. Prior to the return of any product or part, a Return Goods Authorization number must be obtained from PEARL ABRASIVE CO. by fax (562) 928-3857 or calling (800) 969-5561. The owner's name, address, phone number, as well as the serial number of the product, proof of purchase, and a brief statement detailing the nature of the claimed defect, are required for authorization.

This Warranty does not apply where:

- repairs have been made or attempted by others
- repairs are required because of normal wear and tear
- the tool has been abused, misused or improperly maintained
- alterations have been made to the tool
- the product is used in a manner or with a blade not recommended by the manufacturer

In no event shall Pearl Abrasive Co. be liable for any indirect, incidental or consequential damages from the sale or use of the equipment. This disclaimer applies both during and after the term of warranty.

Pearl Abrasive Co. disclaims liability for any implied warranties, including implied warranties of "merchantability" and "fitness for a specific purpose", after the one year term of this warranty.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

All parts replaced under warranty will be considered as part of the original product and any warranty on these parts will expire coincidentally with the original product warranty.

This warranty supersedes all previous PEARL ABRASIVE product warranties. **EXCLUSION:** Water pump and motor warranty is through the original equipment manufacturer.

PEARL®

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