LARGE SAW SAFETY PRECAUTIONS AND GENERAL OPERATING INSTRUCTIONS

IMPORTANT: READ MANUAL AND SAFETY PRECAUTIONS BEFORE OPERATING MACHINES!

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GENERAL SAFETY WARNINGS AND PRECAUTIONS

PERSONAL SAFETY

- Read and understand all operating instructions before attempting to operate the saw.
- Always wear safety approved hearing, eye, head and respiratory protection.
- Always wear sturdy boots with non-slip soles to ensure proper footing. Use of steel toed safety boots is recommended.
- Due to the nature of concrete cutting, sparks may be generated therefore never wear clothing that is made of flammable material.
- Know how to stop the saw quickly in case of emergency.
- Keep all parts of your body away from the blade and all other moving parts.
- Use caution and follow all instructions when loading and unloading the saw.

BLADE SAFETY

- Examine cutting blades before each use. Blade should have no cracks, nick, or flaws. The center hole must be undamaged. Use only blades recommended for you particular model saw.
- The saw should only be used for cutting material that is specified on each cutting blade. Read the instructions provided with each blade to determine which material the blade is designed to cut.
- Use only reinforced abrasive blades or steel centered diamond blades manufactured for use on concrete saws.
- Inspect blade flanges for damage, excessive wear and cleanliness before mounting the blade. The blade must fit snuggly on the clean, undamaged blade shaft.
- Observe the specified maximum speed of the blade. Never use a blade that has a lower maximum operating speed than the blade shaft speed.
- The ignition governor is designed to limit the maximum no-load engine speed. Speeds in excess of that may cause the blade to exceed the maximum blade speed. Do not operate the unit at speeds greater than the maximum blade speed.
- Always keep guards in place and never allow the blade exposure on the guard to exceed 180 degrees. Repair or replace damaged guards immediately.
- Never expose anyone to the direct line of the blade.
- Make sure that the blade does not come in contact with the ground or any other surface when transporting the saw.

GENERAL SAW SAFETY

- The saw must never be left unattended when the engine is running.
- Keep both hands on the handles when operating the saw.
- Never operate the saw if there is a fuel leak.
- Use extreme caution and slow speed when using the self propelled drive to move the saw up or down ramps or when loading and unloading from trucks or trailers. When going down ramps, DRIVE the saw forward slowly. When going up ramps, BACK the saw in reverse slowly.

CUTTING / WORK AREA SAFETY

- Never operate the saw in any application or job in which you are not trained or supervised.
- Always ensure that the work area does not contain any buried or embedded electrical lines, gas lines or water lines. Ensure that all electricity in the ground, floor, walls or ceilings is shut off prior to cutting. Ensure that all gas and water lines that may be buried or embedded in the ground, floor, walls or ceilings are shut off prior to cutting.
- Operate the saw only in well ventilated areas. Engine exhaust contains carbon monoxide which can cause loss of consciousness and death.
- Keep bystanders and animals out of the work area.
- Observe all safety regulations for the safe handling of fuel. Store fuel in appropriate safety containers. Shut off the engine and allow it to cool prior to fueling. Wipe off any spilled fuel. Always move away from the fueling area prior to starting saw.
- Do not operate the saw in areas which contain combustible material or fumes. Sparks may occur from cutting that could cause a fire or explosion.

Concrete cutting as all construction work is inherently dangerous!

Failure to comply with the preceding warnings could result in serious bodily injury!

CONCRETE SAW OPERATING INSTRUCTIONS

ASSEMBLY

1. Handles must be turned around and attached properly. Place in position, set to desired height and securely tighten knobs. Note that the handles can be placed in a tilted position for improved leverage.
2. Remove the pre-cleaner from box and securely clamp to air cleaner.
3. Connect the negative battery cable end to the negative battery terminal. Tighten the cap screw and nut securely to assure proper electrical contacts.
4. Be certain to check engine and transmission oil levels and service before using. Refer to engine manual for detailed information.
5. On electric saw models, the proper size power cord must be provided by the purchaser, for wiring motor starter to power source. Refer to chart on inside of starter box cover for recommended wire gauge.

GENERAL INSTRUCTIONS

1. Be certain you have the correct diamond or abrasive blade. Contact your authorized servicing dealer for the correct specification. Getting the correct blade will make a tremendous difference in your blade costs and performance.
2. The blade shaft flange and arbor must be inspected for damage and cleaned before mounting the blade. If damaged, replace bad parts. Inspect blade for damage to arbor hole and flange area before attempting to mount blade.
3. Mount the blade solidly and firmly on the blade shaft arbor using the wrench provided. Make sure the arrow on both the blade and the blade guard are pointing in the same direction of rotation. The lock pin(s) in the outer blade flange must go completely through the blade and into the matching hole(s) in the inside blade flange. **Tighten the blade flange bolt very securely** (Approximately 77 lb.ft.). Note that the blade shaft bolt on the right hand side has left hand threads, which tightens by turning counter clockwise. The blade shaft bolt on the left hand side has right hand threads, which tightened by turning clockwise.
4. **WARNING:** Do not operate without proper blade guard in place. Do not operate with front of blade guard raised. Blade exposure cannot exceed 180 degrees when cutting.
5. The front and rear pointer must be checked for alignment with blade. It must be in line with a blade mounted shaft. Use a chalk line or a long straight edge to verify alignment.
6. Do not use conventional (wet) diamond blades without water! You must have from 2-1/2 to 5 gallons of water per minute flowing over the blade for proper cooling and to get maximum blade life. For wet sawing, are sure the spray holes in the blade guard tubes are open and that each side of the blade has an adequate supply of water. Test your water supply fro pressure and quantity (low) before starting to saw.
7. Saw in a straight line. Mark the cutting line clearly so the saw operator can follow the line without difficulty. The saw should not be twisted from side to side trying to force the blade back on line.
8. Saw only as deep as the specifications and job conditions require. This will save blade life and reduce sawing costs. Sawing excessively deep is wasteful and should be avoided.

TO START SAW

1. Fill the tank and check the engine oil level. Refer to the engine manual for details.

-**WARNING:** Always have the hydrostatic transmission speed control lever in the neutral position or disengage the transmission drive system before starting the engine.

2. Place water safety switch in the OFF position
3. Start engine. Follow procedure in engine manual.
5. Let engine warm up at half throttle.
6. All sawing is done at full throttle. Governor is factory set for correct engine speed. Do not change the governor setting unless you are changing the blade capacity, and need to adjust the blade shaft speed. (See chart in saw parts list for correct blade speeds and governor settings.)

TO MANEUVER SAW

1. Raise blade as high as possible so blade will not strike pavement when maneuvering by pressing button on left side of speed control handle. To lower blade, simply press push button on right side. Note that the engine need not be running in order to raise and lower blade. Lowering speed may be altered by adjusting flow control valve located on the side of the hydraulic pump unit.
2. Extend handles to desired location to achieve best leverage. Lift rear wheels just above pavement and maneuver saw as desired.
3. To maneuver with power, engage the transmission drive, if necessary, and move speed control lever forward or backward from neutral position. This lever permits infinitely variable ground speed (up to 200 feet per minute) in forward and reverse.

-WARNING: When engaging the transmission, be sure the speed control lever is at neutral to avoid movement of the saw. When maneuvering with power, the engine should be running at half throttle or more so the hydrostatic transmission can operate efficiently. For maximum speed forward or reverse, the engine must be running at full throttle.

TO START SAWING

1. Follow all the instructions outlined above.
2. Align blade with cut .For wet sawing open water valve **Full** open. Set water safety switch to on position. If engine stops recheck the water connection .The water switch will automatically shut engine off if proper water pressure is not supplied. Note the safety switch does not detect clogged water line because it sense pressure not flow.
3. Lower blade into cut (never deeper than required) by pressing button on right side of speed handle .releasing button will stop blade from lowering .Stop lowering blade when it contacts the pavement. At this time set blade depth indicator to zero, and then continue lowering until desired cutting depth is shown on cutting depth indicator.
4. When the blade reaches desired depth, set depth stop control by turning clockwise till residences is met. For lesser depth turn knob clockwise.
5. During cutting do not exert excessive side pressure on handles to steer. Use only enough pressure to follow previously marked line.
6. Move the speed control handle forward until desired speed is obtained allowing the blade to cut and not climb out of cut or stall.
7. If the saw should stall for any reason raise the blade completely before starting engine again.
8. When lowering the blade into a partially-made cut, use extreme care to be certain the blade is perfectly aligned within the cut before starting to cut again. Do not force blade into material by lowering blade to fast or by propelling too fast while sawing.
9. Due to various job conditions, blade sizes and aggregate hardness, saw may pull to one side. To adjust for straight line sawing, remove blade from cut and stop engine. Loosen rear axle bearing block bolts on left rear of saw .If the saw is leading off to the right turn the adjustment bolt counter-clockwise. If the saw leading off to left turn the adjustment bolt clockwise. Do not force adjustment. Re-tighten axle bearing mount bolts securely after making adjustment.

AT FINISH OF CUT

1. Move speed control lever to neutral position.
2. Bring the blade out of the cut by pressing push button on the left side of the speed control handle. When button is released, the raise will stop and hold in place. Raise blade high enough to clear the pavement when maneuvering the saw.

CONCRETE SAW OPERATING INSTRUCTIONS

3. Turn off water valve. If saw is equipped with the optional electric water pump, make sure it is turned off.
4. Close engine throttle to idle position. Let engine cool down before stopping.
5. Do not leave the saw until the blade and saw has completely stopped.

TO TRANSPORT SAW

1. When transporting the saw from location to location, be sure the transmission drive system is engaged. The speed control handle must be in the neutral position.
2. Lower the saw completely (by pressing the push button on the right side of the speed control handle) to relieve the weight on the front axle assembly and depth stop.
3. For prolonged hauling, the saw should be blocked and chained to prevent undue stress and strain on the propelling drive mechanism.

MAINTENANCE INSTRUCTIONS

1. **Lubricate the blade shaft bearings daily!** Lubricate when sawing is finished for the day. Do not lubricate while the saw is in operation. Note, when cutting dry, lubricate blade shaft bearing two or three times daily. Use only premium lithium-based grease conforming to NLGI No. 2 consistency. All other fittings should be greased after every 40 hours of operation.
2. **Check the engine oil daily.** Keep oil clean and at proper level. Since the engine often operates at an angle, check the engine oil level (with the engine horizontal) frequently to ensure that the oil level never fails below the minimum mark on the dip stick. Follow the engine manufacturer's recommendations for changing oil.
3. **Clean air filter** outer element when the restriction indicator red signal appears. Do not clean inner safety element! Replace inner element annually or if it becomes damaged. Clean pre-cleaner dust bowl when dust accumulates.
4. **Check hydrostatic transmission oil daily.** Check level in transparent oil reservoir. When adding oil use SAE 30 API classification SE, CC, CD or better. Do not use multiple viscosity oils. For Eaton transmission, DEXRON II automatic transmission fluid should be visible in clear tube. If low, add fluid to hydraulic lifting pump.
5. **Hydraulic lifting pump.** Check oil level periodically. Add DEXRON II transmission fluid to bring oil level to full. Do not overfill, or fluid will be expelled through fill cap when lowering saw. System capacity is 1.25 quarts.
6. **Blade shaft V-belts tension:** This model concrete saw is equipped with 3VX premium V-belts. These belts are properly tensioned at the factory. Severe damage or even breakage of the crankshaft might occur if the belts are tensioned too tight. Check belt tension as set on the new saw and never set belts beyond original factory tension. Not enough tension will result in poor saw performance and short belt life. Belts should never be allowed to slip. After four hours of use, re-tension belts to make up for initial stretch. To re-tension the belts, turn engine off. Loosen the four bolts on the front of engine base clockwise until the belts are tight. Re-tension the four belts on the engine base. Continue to check the belt tension on a daily basis, and re-tension as necessary. To obtain accurate V-belt setting, a V-belt tension tester should be used. Check the setting on a single belt of a matched set of V-belts. Apply load on the center of the span. Deflection should 5/16" with a 5 to 6 lb. load.
7. **Hydrostatic transmission cooling fins:** Do not allow the fan or cooling fins of the transmission to become covered, or clog with dust or dirt. This will not allow proper cooling of the transmission oil.
8. **Loose chain drive:** The chain drive will stretch during normal operation. It can be tightened by loosing the four transmission attaching bolts and moving the transmission up in the slots of the transmission platform. Do not over tighten chain, but allow a slight amount of slack. Lubricate chain with oil to reduce chain wear.
9. **Tighten fasteners regularly:** Nuts and bolts may become loose particularly after the first few hours of operation.
10. **Engine care:** See engine manual, clean dust and dirt from cooling fans daily, or as required, to provide adequate cooling.

CUTTING DEPTHS

BLADE SIZE	MAXIMUM DEPTH
14"	4-5/8"
20"	7-5/8"
26"	10-5/8"
30"	11-3/4"
36"	14-3/4"
42"	16-3/4"
48"	19-3/4"
54"	22-3/4"

Check the specific parts list and specifications for maximum blade size.

You must always use the proper pulleys and engine speeds for the diameter blade being used for maximum safety and economy. See chart in saw parts list for correct engine and blade shaft speeds.

WARRANTY

Diamond Products Warrants all equipment manufactured by it against defects in workmanship or materials for a period of one (1) year from the date of shipment to Customer.

The responsibility of Diamond Products under this warranty is limited to replacement or repair of defective parts at Diamond Products' Elyria, Ohio factory, or at a point designated by it, of such parts as shall appear to us upon inspection at such point, to have been defective in material or workmanship, with expense for transportation and labor borne by the customer.

In no event shall Diamond Products be liable for consequential or incidental damages arising out of the failure of any product to operate properly.

Integral units, such as engines, electric motors, batteries, transmissions, etc., are excluded from this Warranty and are subject to the prime manufacturer's warranty.

THIS WARRANTY IS IN LIEU OF ALL OTHER WATTANTIES, EXPRESSED OR IMPLIED, AND ALL SUCH OTHER WARRANTIES ARE HEREBY DISCLAIMED.