



**Blade Problem Solving Suggestions.**

Suspected Problem	Possible Cause	Suggested Remedy
Loss of Tension	Blade blank has been overheated.	Provide proper amount of water to both sides of blade. Check to make sure water pump is producing sufficient water and that no blockages occur in water lines.
	Blade blank has been overheated as a result of blade spinning on arbor.	Tighten blade clamping disc nut and make certain that the drive pin is functioning on concrete saws.
	Blade blank has been overheated because of blade blank rubbing side of material being cut.	Properly align saw to permit square cutting. Avoid twisting the blade in cut. Maintain a firm grip on material being cut. Make certain that shaft R.P.M. is correct, so that blade operates at its tensioned speed and consequently runs perfectly straight.
	Unequal pressure at blade clamping collars.	Blade clamping collars must be identical in diameter and of the recommended size.
Blade Wobbles	Blade mounted on a defective saw.	Check for bad bearings, bent shaft or worn mounting arbor. Also check clamping discs to make sure they are clean, flat and of the manufacturer's recommended diameter.
	Blade being run at improper operating speed.	Make certain that blade shaft is turning at the recommended R.P.M. to match the tensioned speed of the blade. Use a tachometer to make certain blade shaft is turning and set at proper speed.
	Blade collar diameters are not identical (uneven pressure is created on blade blank at the center).	Use proper size blade collars.
	Blade bent as a result of dropping or twisting.	Have manufacturer remove segments and rebraze onto a new blank, if practical.
Blank Cracks	Blade flutters in cut as a result of loss of blank tension.	See "Loss of Tension" section.
	Blade specification is too hard for material being cut.	Use a softer blade specification to eliminate stresses which creates cracks.
Distorted Blade Blank	Inadequate or improper tightening of blade on saw mounting shaft, thereby causing arbor to force its way through blade blank.	Tighten clamping nut securely.
	Dropping saw head with mounted blade particularly on concrete saws. Also dropping objects on unmounted blade distorting blade blanks.	Avoid. Protect blade from abuse.
Blade Blank Undercutting	Abrading or wearing away of the steel center faster than the diamond segment. (Highly abrasive fines are being generated during cutting).	Use as much water as possible to flush out fines generated during cutting or use wear retardant cores. Note of Caution: Wear retardant cores are not always the final answer to eliminating undercutting. Care must still be taken to provide sufficient water to the blank area immediately adjacent to the segment. This is especially important when making deep cuts.



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Blade Worn Out-of-Round	Worn shaft bearings on masonry, concrete or stone saws. (Causes blade to run eccentric and wear out-of-round).	Install new blade shaft bearings or blade shaft as required.
	Engine not properly tuned on concrete saws, causing "hunting."	Tune engine.
	Blade arbor hole damaged from previous mismounting.	If all other blade parameters are in good condition, the arbor hole may be rebored and properly bushed to its original size. <b>(Do not employ on high speed saws. Do not rebush into clamping area of blade collars on any saw.)</b>
	Blade mounting arbor worn. A groove may have been scored on mounting arbor as a result of previous blade spinning on mounting arbor. When new blade is placed on such a worn arbor, it seats improperly and therefore runs eccentrically.	Replace worn shaft or mounting arbor bushing.
	Blade slipping on arbor shaft.	Tighten blade collar on masonry or stone saw. Make certain drive pin is functioning on concrete saw.
	Specification too hard for material, causing machine to "pound" at regular intervals, thereby wearing one half of the blade more than the other half.	Use proper blade specification.
Arbor Hole Out-of-Round	Blade collar is not properly tightened, permitting blade to either rotate or vibrate on shaft.	Wrench-tighten arbor nut to make certain blade is adequately secured to prevent rotation on arbor shaft.
	Worn or dirty blade collars, which do not allow proper blade clamping.	Clean blade collars, make sure they are not worn and tighten arbor nut properly.
	Blade not properly mounted.	Make certain blade is mounted on the proper diameter shaft before tightening arbor nut. On concrete saws, make certain that pinhole slides over arbor drive pin. Never depend on drive pin to actually drive the blade. A drive pin is simply a safety measure to prevent the blade from spinning on its mounting arbor, should the nut become loose. Note: Distorted blade arbor holes can be rebored, provided they are within tolerance and provided the blank has not been abused.
Blade Will Not Cut	Blade is too hard for material being cut. (Improper blade specification).	Consult manufacturer for the proper blade specification for the material being cut.
	Blade has become dull, probably as a result of being used on too hard a material.	Dress or sharpen with soft concrete block, piece of sandstone, or worn used abrasive grit grinding wheel to expose diamonds. Continual dressing indicates the blade specification is too hard for the material being cut.
	Failure to initially break-in a new blade on specific material being cut.	Allow blade to sharpen itself on the material to be cut when first placing it on the saw. This is the proper way to break in a blade.



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Blade Will Not Cut con't.	Insufficient power to permit blade to cut properly.	Tighten belts in accordance with machine maintenance instructions. Use correct voltage at motor and use adequate horsepower for cutting application.
Segment Loss	On stone and masonry saws, the material was not held firmly, which caused the blade to twist or jam in the cut and loosen the segment.	Material must be held firmly.
	Overheating due to inadequate supply of water or complete loss of water. This is usually accompanied by discoloration, which appears, on the steel center in the area of the segment loss.	Provide adequate water flow to both sides of the blade. Look for line blockages. On concrete saws, temporary complete loss of water can result from equipment running over water feed hoses.
	On concrete saws steel center worn; this as a result of undercutting by abrasive fines generated during cutting. (Blank wears to a knife edge, which weakens the blank and causes a section to be separated).	Use sufficient water to flush fines out of cut. If generated fines are highly abrasive, wear retardant cores should be used.
	Defective blade collars which cause the blade to flutter in the cut or fail to adequately support the blade in perfect alignment.	Clear foreign material from blade and blade collar clamping surfaces, or replace collars if they are worn.
	Blade is too hard for material being cut causing excessive dullness and the segment separates due to impact fatigue. (This can be the cause of frictional heat which can melt the brazing solder).	Use the proper blade specification for the material being cut.
	Blade is cutting out-of-round resulting in a pounding impact.	Replace worn bearing, re-align blade shaft or replace worn blade mounting arbor.
	Improper blade tension which produces high pressure on the segments and subsequent failure of the braze or weld joint.	Make sure running speed of the equipment is specified when ordering blades. On concrete and stone saws the spindle speed should be checked with a tachometer, to ensure that each diameter blade is running at the manufacturer's recommended cutting speed and blade tensioned speed.
Uneven Segment Wear	Insufficient water, generally on one side of the blade, which reduces side clearance.	Flush water system. Make certain that water is being adequately and equally distributed to both sides of the blade.
	Equipment defect, which causes the blade to wear out-of-round.	Replace bad bearings, worn arbor shaft or misaligned spindle. On concrete saws make certain the engine runs smoothly, to prevent harmonic vibrations, which in turn cause the blade to pound on a cyclical basis.
	Saw head misaligned.	Check saw head alignment for squareness both vertically and horizontally.
Cracks	Blade bonding is too hard for material being cut.	Use blade with softer bond



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Short Life	Do not use a marble or granite blade for cutting sandstone, a tile blade for cutting block or a cured concrete blade for cutting green concrete or asphalt. There are specific blades designed for each particular material to give the most economical cutting. Also, avoid the use of general purpose specifications for cutting a single specific material. General purpose diamond blades are designed to cut a range of materials and since it is unlikely the operator will be cutting proportionately the proper amount of both hard and soft materials at all times, this is not the most economical method of cutting.	Use the proper blade specification, as recommended by the manufacturer.
	Inadequate water to the blade.	Make sure water hoses are clean and free from any blockages. Approximately 2 gallons of water per minute are required to properly cool a masonry saw blade. On concrete saws, 2 to 5 gallons per minute are required and on stone saws, up to 30 gallons per minute are required
	Bad spindle bearings, worn mounting arbor or misaligned shaft.	Replace defective parts.
	Loss of power, resulting from loose drive belts or improper voltage.	See instruction manual for proper belt tightening. Replace worn belts, make sure proper line voltage is being supplied at the motor.

### Dry-Cutting Diamond Blades

For your safety:

- 1.) Use intermittently to allow proper air cooling on low and high speed saws. Continuous friction, causing heat buildup and retention, is still a blade's worst enemy.
- 2.) Check the blade frequently for signs of over-heating, loss of tension or cracking. For maximum performance, do not force dry-cutting blades through the cut. Excessive forward or side pressure on the blade can cause reduced blade life or damage due to overloading.
- 3.) Diamond blades do wear out with use. Inspect blade frequently to detect steel center gullet cracking or segment undercutting. A separated segment can cause serious personal injury. Comply with A.N.S.I. B7.1 , B7.5 and OSHA regulations, particularly regarding the use of approved blade guards.
- 4.) Wear personal protective equipment and use respiratory devices.
- 5.) Do no use any blade that shows signs of damage.