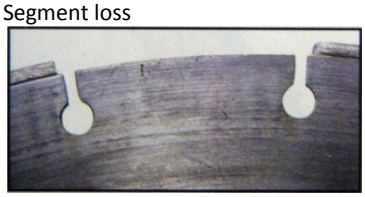
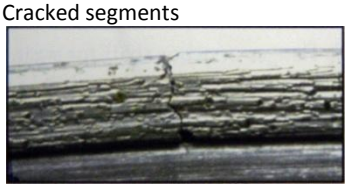
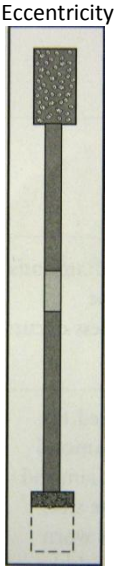
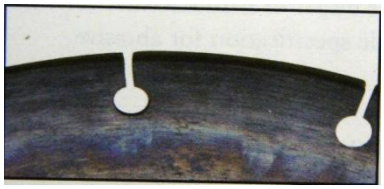
Diamond Blade Trouble Shooting

Few Husqvarna diamond blade problems are caused by warranty failures – less than 1/10% (.001). Most problems result from

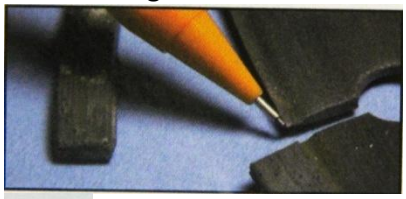
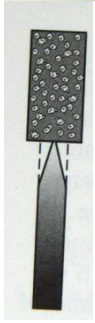
- Using the wrong blade for the job
- Using the blade improperly
- Equipment problems

This trouble shooting guide will help you identify, diagnose and correct diamond blade problems. The following are samples of some of the problems you may encounter in the field, with a cause and remedy guide to diagnose and correct these of some of the problems you may encounter in the field, with a cause and remedy guide to diagnose and correct these problems.

Symptom	Cause	Remedy
Loss of tension	Blade being used on misaligned saw.	Check for proper saw alignment.
	Blade is excessively hard for the material being cut, creating stress on the steel center.	Make certain blade is correct for material being cut.
	Material slippage causing blade to twist and become kinked or bent.	Maintain tight grip on material while sawing.
	Utilizing blade flanges that are under size or not the same diameter, creating uneven pressure on the center.	Make certain blade flanges are proper size and identical diameter, minimum 3-7/8”, 4-1/2” on concrete saws, 6” minimum on diamond blades that are 30” diameter and larger.
	Blade being used at improper RPM.	Make certain blade shaft is turning at the proper RPM by using a tachometer. This is especially important with concrete saws.
	Blade improperly mounted on arbor shoulder becomes bent when flanges are tightened.	Hold blade securely on arbor shoulder until outside flange and nut are firmly tightened.
Segment loss 	The material slips during cutting which twists or jams the segments loose.	Hold the material securely while cutting.
	Blade is too hard for the material it is cutting, creating excessive dullness which makes the segment pound off, or fatigue.	Use a softer blade specification.
	Worn blade flanges fail to provide proper support and cause the blade to deflect.	Replace both blade flanges.
	Out-of-round blade rotation resulting in pounding, caused by worn arbor or bad bearings in the shaft.	Replace worn arbor and/or bearings.
	Overheating can usually be detected by blue color on steel center and generally confined to the area where the segment was lost.	Check the water system for blocked water passages. Test pump to see if it is functioning. For dry cutting, it may be necessary to make shallower cuts and allow the blade to run freely every few minutes in order to let the air cool it.

Symptom	Cause	Remedy
Repair Note: It is possible to replace two or three missing diamond segments, providing the steel center is not cracked or undercut badly. If many segments are missing, or if there is less than 50% of blade life remaining, repairing the diamond blade may not be economical. **Be certain to eliminate mechanical or operational problems before installing replacement blades.**		
Cracked segments 	Blade is too hard for material being cut.	Use correct blade with softer bond.
Eccentricity 	The bond is too hard for the material being cut. The hard bond retains the diamonds, and they begin to round off, causing the blade to become dull. Instead of cutting, the blade begins to "pound," causing the blade to wear out-of-round.	Change to a softer bond, which will wear away more readily allowing the dull diamonds to be released and sharp, new cutting edges to become exposed.
	The saw blade shaft may have a groove scored in it, caused by a blade spinning between the flanges. A new blade, installed on the arbor shaft, will seat into the groove, and immediately run eccentrically when the saw starts.	Replace worn shaft.
	If the blade shaft bearings are worn, the shaft and mandrel will run eccentrically, causing the blade to wear out-of-round. This happens most often with concrete saws when proper lubrication of the bearings is neglected.	Install new blade shaft bearings. In some cases it might also be necessary to replace the blade shaft if it is worn or out of alignment.
Overheated blade 	Adequate coolant was not provided.	Check the water supply for adequate volume and for obstructions in the water system. Use dry blades ONLY for shallow cutting (1-2" deep) or step cutting. Allow blade to run freely every 10 to 15 seconds in order to increase cooling air flow.

Symptom	Cause	Remedy
Arbor hole out-of-round 	Saw arbor badly worn due to improperly seated blades.	Be certain the blade is properly seated on arbor before tightening flange.
	Blade flanges not properly tightened permitting blade to rotate on shaft.	Always wrench tighten the arbor nut. Never hand tighten. Always use hex nuts. Never use wing nuts.
	Blade flanges or arbor shaft worn and not providing proper blade support.	Check blade flanges or arbor shaft for wear. Both flanges should be no less than that recommended by the manufacturer. Replace worn parts.
Blade won't cut 	Blade is too hard for materials being cut (examples: block or general purpose blade being used for extended period on hard brick. Asphalt blade being used to cut hard concrete).	Consult dealer or manufacturer for proper blade to cut materials on job.
	Insufficient power to permit blade to cut properly (loose V-belts, low voltage, motor lacks horsepower).	Check belts, voltage, horsepower.
	Blade has become dull because of continuous use on fairly hard or vitrified material.	Dress with abrasive material until diamonds become exposed again. This may be necessary occasionally, but if dullness occurs too hard for the material.
	Blade segments appear to still have plenty of life, but blade won't cut.	Some harder-bonded blades designed for abrasive materials require a non-diamond bearing section at the base of the diamond segment for better adherence to the steel core. A blade used to this stage has worn out in the normal manner and should be replaced.
Excessive wear	Using the wrong blade on highly abrasive material (example: glazed tile blade on concrete block).	Consult the dealer or manufacturer for the proper blade specification for abrasive material.
	Lack of sufficient coolant to the blade. Often detected by excessive wear in the center of the segment (note: in both above cases, diamonds will usually be highly exposed).	Clean up water system. Make certain water pump is functioning properly.
	Wearing out-of-round accelerates wear. Usually can be caused by bad bearings, worn shaft or using a blade too hard for the materials being cut.	Check bearings and arbor. If worn, replace with new parts before installing another blade.
	Insufficient power caused by loose V-belts, inadequate voltage, or improper RPMs.	Tighten belts (taut). Replace worn belts. Check voltage. Use proper size extension cord.

Symptom	Cause	Remedy
Cracked core 	Blade is too hard for material being cut.	Use correct blade with softer bond.
	Excessive cutting pressure, or jamming or twisting the blade in the cut can cause the blade core to band or flex. When subjected to extreme stress and metal fatigue, the blade's steel core will eventually crack.	The saw operator should use steady, even infeed pressure, and be careful not to twist or jam the blade in the cut.
	Overheating through inadequate water supply or improper use of dry cutting blades.	Use adequate water to cool wet-cutting diamond blades (for example, 2-5 gallons per minute for concrete saws). Allow adequate airflow around dry-cutting diamond blades to prevent overheating. **NEVER USE A BLADE WITH A CRACKED CORE!**
Undercutting  	Undercutting is a condition in which the steel center wears faster than the diamond segment, especially in the areas where the segment and core are joined. The condition is caused by highly abrasive material grinding against the blade during the sawing operation. Usually materials containing sand are responsible for this condition, called segment loss.	The flow of swarf (abrasive cuttings) must be distributed over a wider area, away from the critical segment area with undercut retardant segments or other types of undercut protectors specially positioned around the steel center to change the pattern of constant abrasion. Although successful in most cases, undercut protectors do not provide 100% protection.
Uneven Segment Wear 	Segments are worn on one side, reducing side, reducing side clearance. It is usually caused by misalignment of the saw or a lack of sufficient water on both sides of the blade.	Check saw alignment. Clean water system, making certain that water is properly applied to the leading edge of the blade flanges. Check to see if pump is supplying sufficient, even water.
	Blade is worn out-of-round due to bad bearings, worn arbor or excessive dulling condition. See section on excessive wear.	Replace bearings or worn arbor as required