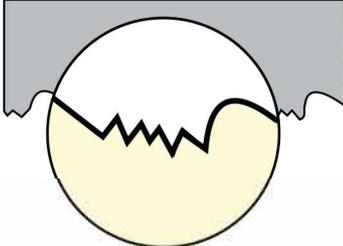
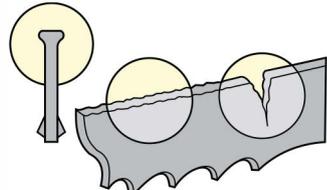
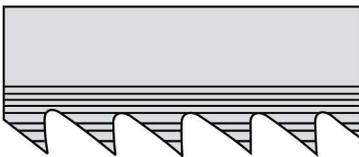
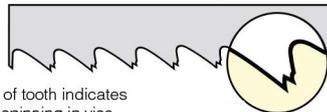
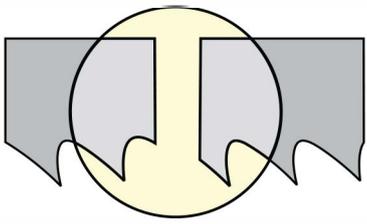
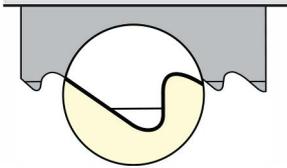
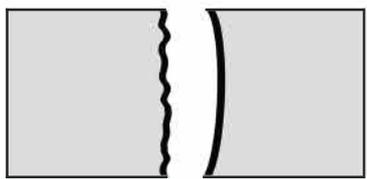
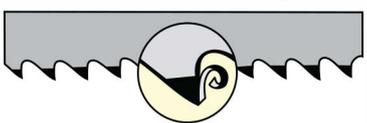
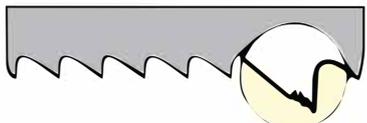
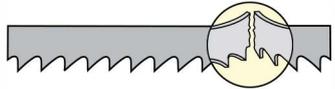


## TROUBLESHOOTING

Blade Effect	Probable Cause	Solution
<p><b>Teeth Stripping</b></p> 	<p>Improper blade break-in procedure</p> <p>Speed too slow</p> <p>Feed pressure too high</p> <p>Tooth jammed in cut</p> <p>Poor cutting fluid application or ratio</p> <p>Hard material or heavy scale</p> <p>Wrong blade pitch</p> <p>Work spinning or loose nested bundles</p> <p>Blade on backwards</p>	<p>Follow proper break-in procedure</p> <p>Refer to cutting recommendations</p> <p>Reduce feed pressure</p> <p>Do not enter new blade in that cut</p> <p>Adjust coolant flow and ratio</p> <p>Check material or surface hardness</p> <p>Use proper tooth selection</p> <p>Tighten vises or use nesting clamps</p> <p>Install blade correctly</p>
<p><b>Wear on Back of Blade</b></p> 	<p>Excessive back-up guide preload</p> <p>Low blade tension</p> <p>Incorrect blade (carbon steel type)</p> <p>Excessive feed rate or pressure</p> <p>Damaged or worn pressure block</p> <p>Guide arms spaced too far apart</p> <p>Blade rubbing band wheel flanges</p>	<p>Adjust pressure blocks</p> <p>Refer to operator's manual</p> <p>Switch to a bi-metal blade</p> <p>Reduce feed rate or pressure</p> <p>Replace pressure block</p> <p>Adjust guide arms closer to work</p> <p>Adjust wheel alignment</p>
<p><b>Rough Cut</b></p> 	<p>Dull or damaged blade</p> <p>Incorrect feed or speed</p> <p>Blade not supported properly</p> <p>Low blade tension</p> <p>Incorrect tooth pitch</p> <p>Guide arms too far apart</p>	<p>Install new blade</p> <p>Refer to cutting recommendations</p> <p>Adjust or tighten guide arms</p> <p>Refer to operator's manual</p> <p>Use proper tooth selection</p> <p>Adjust guide arms closer to material</p>
<p><b>Wear Lines - Loss of Set</b></p> 	<p>Saw side guides too tight</p> <p>Blade riding too high in guide</p> <p>Blade teeth riding on band wheel surface</p> <p>Wrong blade width for machine</p> <p>Chips being carried back into cut</p> <p>Worn or damaged pressure block</p> <p>Insufficient coolant flow</p>	<p>Adjust guides properly</p> <p>Adjust rollers or pressure blocks</p> <p>Adjust tracking or replace wheel</p> <p>Refer to operator's manual</p> <p>Replace or adjust chip brush</p> <p>Replace pressure block</p> <p>Adjust coolant flow</p>
<p><b>Twisted Blade</b></p>  <p>Contour sawing.</p>	<p>Blade binding in cut</p> <p>Side guides are too tight</p> <p>Work loose in vise</p> <p>Feed too heavy</p> <p>Guide arms too far apart</p>	<p>Adjust feed or use heavy set blades</p> <p>Adjust guides</p> <p>Adjust vise</p> <p>Reduce feed pressure</p> <p>Adjust guide arms closer to material</p>
<p><b>Blade Wear</b></p>  <p>Teeth blued.</p>	<p>Incorrect blade</p> <p>Heavy feed or too fast speed</p> <p>Lack of cutting fluid</p> <p>Blade installed backwards</p>	<p>Use proper tooth selection</p> <p>Refer to cutting recommendations</p> <p>Adjust coolant flow or ratio</p> <p>Install blade correctly</p>
<p><b>Teeth Fracturing - Front</b></p>  <p>Front of tooth indicates work spinning in vise.</p>	<p>Material loose in vise</p> <p>Incorrect tooth pitch</p> <p>Feed too fast</p> <p>Speed too fast</p>	<p>Adjust vise</p> <p>Use proper tooth selection</p> <p>Reduce feed rate</p> <p>Refer to cutting recommendations</p>

# TROUBLESHOOTING

Blade Effect	Probable Cause	Solution
<p><b>Blade Breakage</b></p>  <p>Straight break indicates fatigue.</p>	<ul style="list-style-type: none"> <li>Incorrect blade</li> <li>Band tension too high</li> <li>Excessive feed</li> <li>Incorrect cutting fluid</li> <li>Wheel diameter too small for blade width</li> <li>Worn or chipped pressure block</li> <li>Blade rubbing on wheel flange</li> <li>Teeth in contact with work before starting saw</li> <li>Side guides too tight</li> </ul>	<ul style="list-style-type: none"> <li>Check tooth selection</li> <li>Reduce band tension, refer to operator's manual</li> <li>Reduce feed pressure</li> <li>Check coolant recommendations</li> <li>Use narrower blade</li> <li>Replace worn pressure blocks</li> <li>Adjust wheel alignment</li> <li>Allow blade clearance above work</li> <li>Refer to operator's manual</li> </ul>
<p><b>Prematurely Dull Teeth</b></p> 	<ul style="list-style-type: none"> <li>Blade on machine backwards</li> <li>Improper blade break-in procedure</li> <li>Hard material or heavy surface scale</li> <li>Material is work-hardening</li> <li>Improper cutting fluid or mix ratio</li> <li>Speed or feed too high</li> </ul>	<ul style="list-style-type: none"> <li>Install blade correctly</li> <li>Refer to recommended procedures</li> <li>Check material hardness and surface condition</li> <li>Increase feed pressure</li> <li>Follow coolant mixing procedures</li> <li>Check cutting recommendations</li> </ul>
<p><b>Inaccurate Cut</b></p> 	<ul style="list-style-type: none"> <li>Guide arms too far apart</li> <li>Blade worn out</li> <li>Over or under feeding</li> <li>Improper tooth pitch</li> <li>Cutting fluid not applied properly</li> <li>Too many teeth for material cross section</li> <li>Guides worn or loose</li> </ul>	<ul style="list-style-type: none"> <li>Adjust guide arms closer to material</li> <li>Replace blade</li> <li>Check cutting recommendations</li> <li>Use proper tooth selection</li> <li>Adjust coolant nozzles</li> <li>Use proper tooth selection</li> <li>Tighten or replace guides</li> </ul>
<p><b>Band Leading in Cut</b></p> 	<ul style="list-style-type: none"> <li>Over feeding</li> <li>Low band tension</li> <li>Tooth set damaged</li> <li>Guide arms loose or space too wide</li> </ul>	<ul style="list-style-type: none"> <li>Check cutting recommendations</li> <li>Refer to operator's manual</li> <li>Check material hardness</li> <li>Adjust guides and guide arms</li> </ul>
<p><b>Chip Welding</b></p> 	<ul style="list-style-type: none"> <li>Worn or missing chip brush</li> <li>Improper or lack of cutting fluid</li> <li>Wrong coolant ratio</li> <li>Excessive feed or speed</li> <li>Incorrect blade pitch</li> </ul>	<ul style="list-style-type: none"> <li>Replace or adjust chip brush</li> <li>Check coolant flow and fluid type</li> <li>Check coolant type and ratio</li> <li>Reduce feed or speed</li> <li>Use proper tooth selection</li> </ul>
<p><b>Teeth Fracturing - Back</b></p>  <p>Back of tooth indicates spinning in vise.</p>	<ul style="list-style-type: none"> <li>Saw guides not properly adjusted</li> <li>Incorrect feed or speed</li> <li>Incorrect blade</li> <li>Material moved in vise</li> </ul>	<ul style="list-style-type: none"> <li>Align or adjust saw guides</li> <li>Refer to cutting recommendations</li> <li>Use proper blade type and pitch</li> <li>Inspect and adjust vise</li> </ul>
<p><b>Irregular Break</b></p>  <p>Indicates material movement.</p>	<ul style="list-style-type: none"> <li>Indexing while blade in work</li> <li>Blade not high enough before index</li> <li>Saw head drifts into work while neutral</li> </ul>	<ul style="list-style-type: none"> <li>Adjust index sequence</li> <li>Adjust height selector</li> <li>Check hydraulic cylinder</li> </ul>

## CARBIDE TIPPED BLADE SOLUTIONS

### KICK YOUR PRODUCTIVITY UP A NOTCH!

Carbide tipped band saw blades provide significant advantages in a wide variety of applications. Speak with your local Starrett representative to receive a personalized cost savings analysis of your processes and get applicable solutions which save money, fix bottlenecks and increase throughput.



#### ADVANZ™ MC7

The number one choice for high production and aerospace alloys.

- Extremely long lifespan and low wear due to progressive four tooth grind
- High cutting efficiency provides a great cost per cut ratio



#### ADVANZ™ MC5

Excellent for production applications, hard steels, and alloys.

- Fast cutting without sacrificing surface finish
- Longer lasting with proprietary tooth geometry, distributing chip load more effectively



#### ADVANZ™ TS

Versatile all-around blade which offers all the benefits of carbide, without limitations.

- Excellent cost per cut ratio on every material that enters your facility
- Excellent for tough materials which standard bi-metal blades cannot cut



#### ADVANZ™ CS

Designed with the hardest exteriors in mind.

- Ideal for induction hardened chrome shafts, linear bearing shafts and case hardened materials to HRc 65
- Excellent longevity due to shock and wear resistant technology



#### ADVANZ™ FS

The most effective blade for cutting gates, risers, castings, fiberglass, masonite, plastics or other abrasive materials.

- Engineered to keep teeth from stripping, even in the most demanding materials
- Exceptional shock resistance for intermittent cutting

## RECOMMENDED CUTTING SPEEDS

Material Type		Band Speed SFPM	Feed Rate SIPM
Induction/Case Hardened Steels	Use CS	295 - 325	1
Free Machining Steels	1212 / 1214	325 - 525	20 - 25
Alloy Steel	1035/1045	295 - 395	15 - 20
	4140	230 - 295	10 - 15
	4340	230 - 295	8 - 10
Ball Bearing Steels	52100	230 - 295	10 - 15
Spring Steels	6150	215 - 280	10 - 15
Unalloyed Tool Steels	W1	215 - 280	7 - 9
Cold Work Tool Steels	D3	130 - 160	4 - 6
	D2	130 - 160	4 - 6
	O1	195 - 260	8 - 10
	O2	150 - 180	7 - 9
Tool Steels (Hot Work)	H 13	195 - 260	7 - 10
	L 6	160 - 230	8 - 10
High Speed Steels	M 2	160 - 195	5 - 8
	M 42	145 - 200	7 - 9
	T 1	145 - 200	7 - 9
Stainless Steels	304	230 - 260	6 - 8
	316	200 - 250	6 - 8
	420	260 - 325	6 - 8
	17-4, 15-5	140 - 160	3 - 4
Nickel Alloys	Inconel 718, 600	80 - 100	2-2.5
	Waspalloy, Hastelloy	70 - 90	2-2.5
	Inconel 625	75 - 100	2-2.5
	Rene 88, 75	75 - 85	2-2.5
	Monel K500	80 - 110	2 - 3
	Incoloy 840	90 - 100	2
Tempered Steels	Rc. 30/35	250 - 300	10 - 15
	Rc. 35/40	200 - 250	7 - 10
	Rc. 40/45	150 - 175	4 - 6
Cast Iron	Class 30	175 - 200	4 - 5
	Ductile 65 - 45 - 12	180 - 245	4 - 5
Titanium	Titanium	140 - 170	4-7
	Ti-6Al-4V	140 - 160	4-7
Copper Alloys (Use MC5)	110	300	4 - 7
	Cu Ni (30%)	180 - 220	4 - 7
Bronze Alloys	Ampco 18	130 - 200	2 - 3
	Ampco 25	110 - 130	1 - 2
Brass (Use MC5)	260	250	4-6
	360	300	4-6
Aluminum Bronze		200	3-4
Most Aluminum (Use MC5)		3000	>8

