

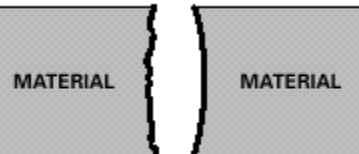
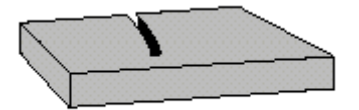


 DALHOUSIE UNIVERSITY Facilities Management Band Saws Safe Work Instructions	<i>Policy Sponsor:</i> Assistant Vice President Facilities Management	<i>Approval Date:</i> June 2010
	<i>Responsible Unit:</i> Facilities Management	<i>Revisions:</i>
Service: Trade Services	Shop: Carpentry	
Hazards Identified: Flying objects, dust, moving blade and other parts, noise, cluttered floor / work area, slippery conditions,		
Personal Protective Equipment Required: Safety footwear, safety goggles or glasses, face shield, respiratory protection, ear protection		
Training Required: Proper Operation of Band Saws PPE Training		

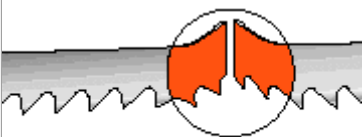

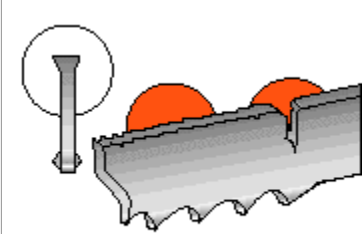
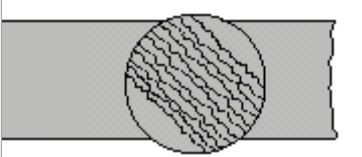
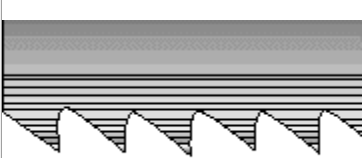
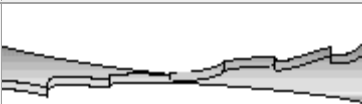

These safe work practices must be followed at all times and are to be reviewed annually.

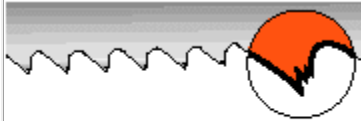
1. Only properly trained, competent, employees are allowed to operate this equipment.
2. DO NOT use this equipment for any purposes other than those intended by the manufacturer.
3. Always follow the manufacturer's instructions for use and maintenance.
4. Required PPE must be worn at all times during the operation of this equipment.
5. Do not wear gloves, loose clothing, jewelry, or, have long hair loose when operating this equipment.

6. Check stock to be used for knots, or in the case of used material for other foreign objects.
7. Ensure that the work area around the band saw neat, clean and free of debris or anything that could create a slippery floor surface.
8. Ensure that all guards are in place, secured, and working properly.
9. Ensure that the dust collection system is used while working.
10. Ensure that you have the proper blade size and type for the work to be performed.
11. Ensure the upper blade guard is adjusted to 1/8 inch above the material to be cut.
12. Ensure that blade tension tracking, blade guides and blade support bearings are properly adjusted.
13. Keep hands away from the blade. USE A PUSH STICK to clear things from around the blade.
14. Avoid awkward hand positions and / or actions.
15. Ensure that the material you are cutting is held firmly against the table.
16. Ensure that you have a firm grip on the material and feed it into the blade at a moderate pace.
17. Never start the saw with the blade against the material to be cut.
18. Always turn the saw OFF to back the blade out of a jammed or incomplete cut.
19. Make "relief" cuts in the material before you make cuts that are long curves.
20. Never reach under the table when the saw is running.
21. Never leave a running saw unattended.
22. Turn the saw off and wait for the blade to stop completely before backing the saw out of a cut, cleaning around the blade, changing the angle of the table or securing materials.
23. Ensure that all band wheels are enclosed.

Band Saw Trouble Chart

	Probable Cause	Solution
 <p style="text-align: center;">Blade Breakage Straight Break Indicates Fatigue</p>	<ul style="list-style-type: none"> • Incorrect blade • Band tension too high • Excessive feed • Incorrect cutting fluid • Wheel diameter too small for blade being used • Worn or chipped pressure block (back-up guide) • Blade rubbing on wheel flanges • Teeth in contact with work before starting saw • Side guides too tight 	<ul style="list-style-type: none"> • Teeth too coarse. Check your cutting chart * • Reduce band tension. See Machine Operator's Manual • Reduce feed pressure • Check your coolant * • Use thinner blade and lower speed • Check pressure block. Replace if worn • Adjust wheel alignment • Allow 1/2" clearance before starting cut • See Machine Operator's Manual
 <p style="text-align: center;">Premature Dulling of Teeth</p>	<ul style="list-style-type: none"> • Blade teeth inverted (backwards) • Improper break-in period • Hard spots in material (like scale) • Material work hardened (check for hardness and adjust feed) • Improper cutting fluid or mixture • Speed and feed too high 	<ul style="list-style-type: none"> • Install blade correctly • Reduce feeds and speeds during break-in period in accordance with manufacturers' recommendations • Check material for actual hardness - hard spots like scale or flame cut surfaces • Increase feed pressure • Check your coolant * • Check your cutting chart *
 <p style="text-align: center;">Inaccurate Cut</p>	<ul style="list-style-type: none"> • Teeth dull • Over or under feed • Improper pitch blade • Cutting fluid not applied evenly • Incorrect blade (too many teeth per inch) • Guides worn or loose 	<ul style="list-style-type: none"> • Use new blade • Check your cutting chart * • Check your cutting chart * • Adjust coolant nozzles • Check your cutting chart * • Tighten or replace guides
 <p style="text-align: center;">Band Leading in Cut</p>	<ul style="list-style-type: none"> • Over feed • Lack of band tension • Tooth set damage • Loose guide arms or set too far from work 	<ul style="list-style-type: none"> • Check your cutting chart * • Check Operator's Manual for correct tension • Check material hardness • Adjust arm as close to work as possible - tighten and align. Check guide
 <p style="text-align: center;">Chip Welding</p>	<ul style="list-style-type: none"> • Improper or lack of cutting fluid • Wrong coolant • Excessive speed or pressure • Incorrect blade (wrong pitch) 	<ul style="list-style-type: none"> • Check your coolant * • Check your coolant * • Reduce speed or pressure. Check your cutting chart * • Check your coolant *
 <p style="text-align: center;">Teeth Fracture Back of Tooth (indicates work spinning in vise)</p>	<ul style="list-style-type: none"> • Incorrect feed and/or speed • Incorrect blade (wrong pitch) • Saw guides not adjusted properly 	<ul style="list-style-type: none"> • Check your cutting chart * • Check your cutting chart * • Adjust or replace saw guides

 <p>Irregular Break (indicates material movement)</p>	<ul style="list-style-type: none"> • Indexing out of sequence • Material loose in vise 	<ul style="list-style-type: none"> • Check for correct indexing sequence (head rise) • Check hydraulic pressure
 <p>Teeth Stripping</p>	<ul style="list-style-type: none"> • Feed pressure too high • Tooth lodged in cut • No cutting fluid or incorrect coolant • Hard spots, scale, inclusions, etc. • Incorrect blade (wrong pitch) • Work spinning in vise; loose "nest" or bundles • Blade teeth running backwards 	<ul style="list-style-type: none"> • Reduce feed pressure and/or speed. See your cutting chart * • Never enter same (old blade), cut with new blade • Check your coolant * • Check hardness. Descale and/or anneal if necessary • Check your cutting chart * • Check hydraulic pressure; be sure work is firmly held • Reverse blade teeth, turn inside out
 <p>Wear on Back of Blades</p>	<ul style="list-style-type: none"> • Insufficient blade tension • Incorrect blade (back too soft) • Incorrect feed (excessive) • Back-up guide frozen in position, damaged, or worn off • Guide arms too far apart, cocked, worn or loose • Blade rubbing on wheel flanges 	<ul style="list-style-type: none"> • See Machine Operator's Manual for correct band tension • If using hard back blade, switch to a variable tooth • Reduce feed pressure. See your cutting chart * • Free pressure block and realign; if worn, replace (never regrind) • Move arms close to work as possible • Adjust wheel alignment
 <p>Rough Cut Washboard Surface Vibration and or Chatter</p>	<ul style="list-style-type: none"> • Dull or damaged blade • Incorrect feed and/or speed • Lack of band support • Insufficient band tension • Incorrect pitch blade 	<ul style="list-style-type: none"> • Replace with proper blade • Check your cutting chart *. Adjust until noise disappears • Set guide arm properly - close to work as possible • Check Operator's Manual for correct tensions • Check your cutting chart *
 <p>Wear Lines, Loss of Set</p>	<ul style="list-style-type: none"> • Saw guide inserts or roller are riding on teeth • Insufficient blade tension • Incorrect blade (width of blade incorrect) • Hard spots • Back-up guide worn 	<ul style="list-style-type: none"> • Check table and Operator's manual for correct blade width • Check for correct blade tension • Check your cutting chart * • Check material hardness • Replace back-up guide
 <p>Twisted Blade Contour Sawing</p>	<ul style="list-style-type: none"> • Band binding in cut • Side guides adjusted too tight • Work not held firmly • Incorrect (or lack of) cutting fluid 	<ul style="list-style-type: none"> • Check table and Operator's manual for correct blade width • Check for correct blade tension • Check your cutting chart * • Check your coolant *
 <p>Blade Wear / Teeth Blued</p>	<ul style="list-style-type: none"> • Incorrect blade • Incorrect feed or speed • Improper (or lack of) cutting fluid 	<ul style="list-style-type: none"> • Check your cutting chart * • Check your cutting chart * • Check your coolant *



Teeth Fracture / Front of Tooth
(indicates work spinning in vise)

- Material loose in vise
- Incorrect blade (wrong pitch)

- Check hydraulic pressure
- Check your cutting chart [*](#)