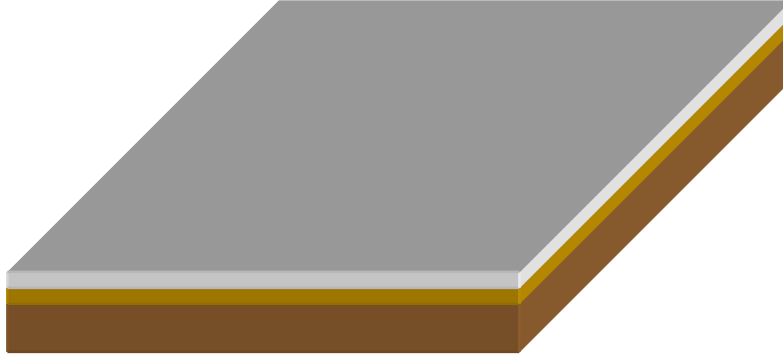


Spoil Board Preparation Applications Tips

Spoil Board – Manual load / unload



- Spoil board material – ½” 45lbs MDF
 - **Note:** With 35lbs LDF there is too much vacuum loss and 55lbs HDF there is not enough flow. **Make sure the customers understand the density of board they’re buying.**
- Seal the spoil board edge – Sealing the edge of the spoil board prevents vacuum loss, as much as 1” HG
 - **Note:** Edge banding may have a tendency not to cut when fly cutting the spoil board which in turn will keep the outside parts from holding flat.
 - **Option #1-**Seal with Paint Primer (preferred method)
 - **Option #2-**Seal with mix of 60% PVA Glue, 40% Water
- Gasketing between spoil board and table
 - Make sure not to stretch the gasket when inserting. Create a “butt” joint at the end
 - [Round gasket](#)-Depending on CNC mfg some tables are square and some are round.
 - [Adhesive \(square\) gasket](#) – Very popular because it has more surface contact and seams to create a better seal.
 - **Note:** Applying gasket properly critical in creating a seal.
- Machine spoil board – “Fly cut”, “dress”, “surface” all names given to machining the spoil board to increase the flow characteristics by removing the hard compressed surface created when the board was heated and pressed during the manufacturing process.
 - Machine both sides approximately .020 - .040” (.5 – 1mm)
 - Feed speed: Run machine to create a 0.028”~0.032” Chip load. Depending on the number of wings of the spoil board cutter, (ie 2,3,4) will determine the feed and rpm of the operation. For example: a (3) wing spoilboard cutter running at 800ipm (20m/min) and 8000rpm will produce a chipload of 0.033”. The result should create a very light fuzzed surface and the mdf fibers raised which is desirable for part holding.
[Chip Load WhitePaper-Link](#)
 - Spoil board can be machined once per day to once per month depending on specific applications. Once per week seems to be the norm.
 - **Note:** Cutting to slow will create heat and will reseal the surface.
- Through cuts in spoil board – Only program the through cutters .003 - .005” (.1mm)
 - **Note:** Cutting to deep will create channels and vacuum will be lost.

With the desire to use smaller vacuum pumps to conserve energy and the need to produce smaller components, the above application tips need to be followed.

Other things to check if parts are moving:

- Software – Is the software taking into consideration
 - Part size – Cut small parts first, apply cutting rules based on size
 - Lead in/lead out’s on sheet side to keep part’s attached as long as possible.
 - “Onion skinning” and tabbing based on part size
- Tooling
 - Is the proper feed speed being applied based on recommended chip load
 - Is the tool sharp

- Consider smaller diameter tool (3/8") to reduce side load on small parts
- Vacuum pump – remember high elevation areas effect pump performance
 - Is regular maintenance being done – filters cleaned is #1 issue
 - Is their a vacuum leak in the plumbing somewhere
 - Is the vacuum pump performing to it's specification
 - Have you created your Standard Operating White Paper for you operation regarding the vacuum performance for your machine. [Link on instructions](#)