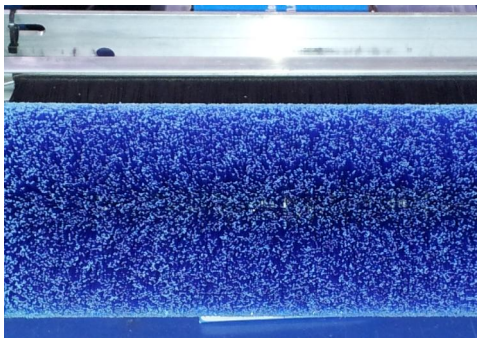
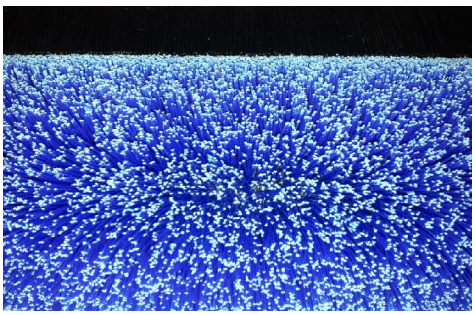
Lane Conditions ‘101' Part 3.
Buff Brushes.

There are three critical components in your lane machine that come into contact with almost the whole surface of the lane. They are the buff brush, the cushion roller and the squeegee blades. Here we will take a close look (literally) at the buff brush and it’s effect on oil distribution.

These two photos are of a new buff brush.



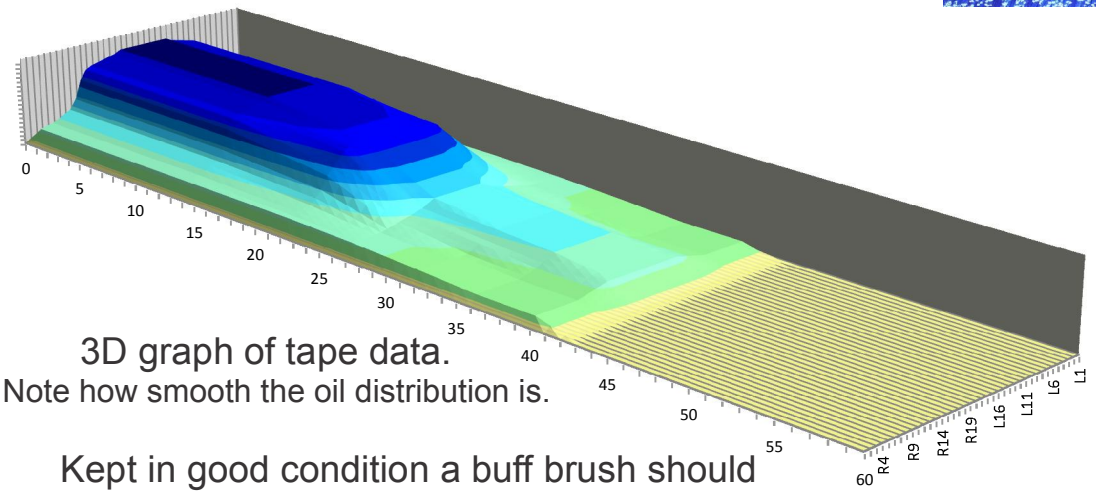


It looks like it has been dusted with icing sugar because the ends of the bristles are clean & sharp.

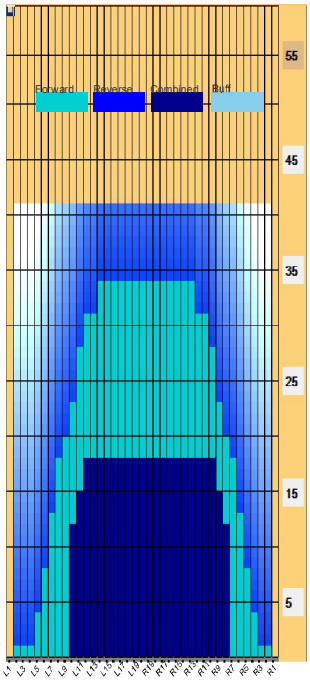
A closer look shows that all the bristles are straight and are separated from each other.

Adjusted to the correct ‘crush’ (1/8" - 3/16") the brush will lay a consistent pattern that will closely match the overhead view created by KOSI (bottom right).

Using the data generated by lane tapes we can build a 3D picture of the oil distribution. This is an invaluable tool in helping to analyse oil pattern problems. The picture below is indicative of a new brush or a brush in very good condition and a well adjusted lane machine.



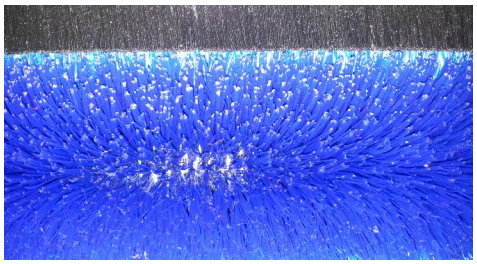
3D graph of tape data.
Note how smooth the oil distribution is.



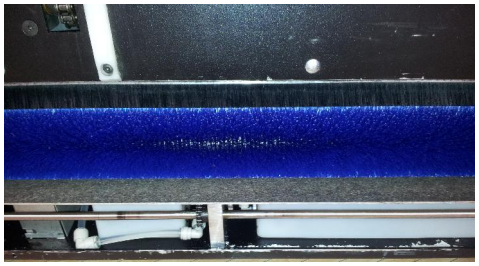
KOSI
Overhead view.

Kept in good condition a buff brush should last approximately 10 - 15 thousand lanes. It should be cleaned using a dry cloth and/or gentle compressed air. Solvents or detergents will soften and damage the bristles. Using an air gun too close to the brush or for too long can result in broken bristles and a dry brush.

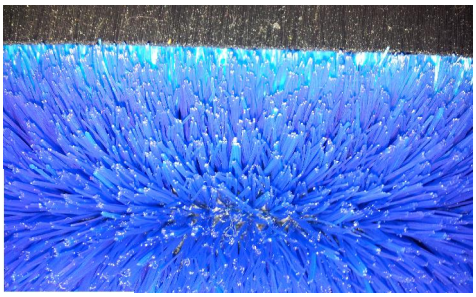
These three photos show a worn buff brush.



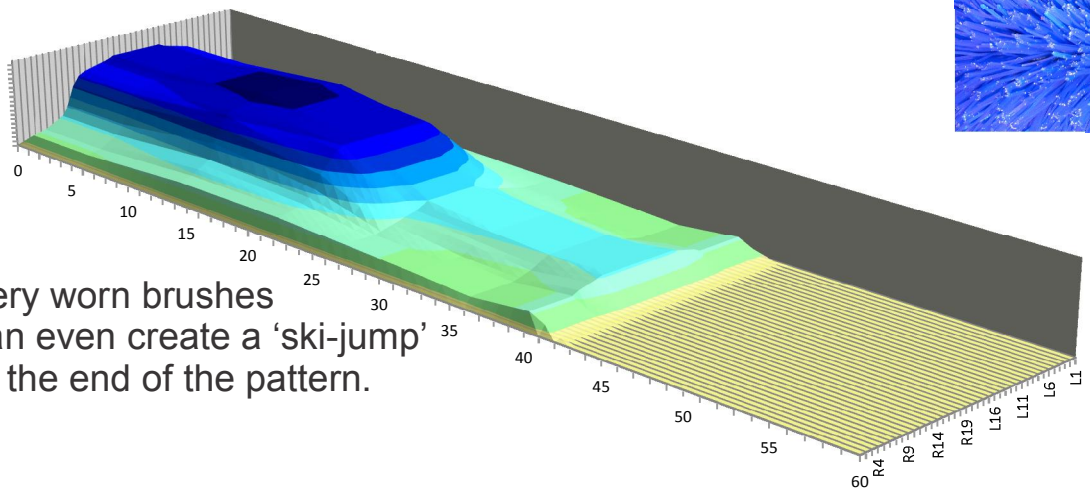
The bristles are softer and the tips are dull and the steel core of the brush can be clearly seen.



The steel core is still visible when standing several metres from the machine.

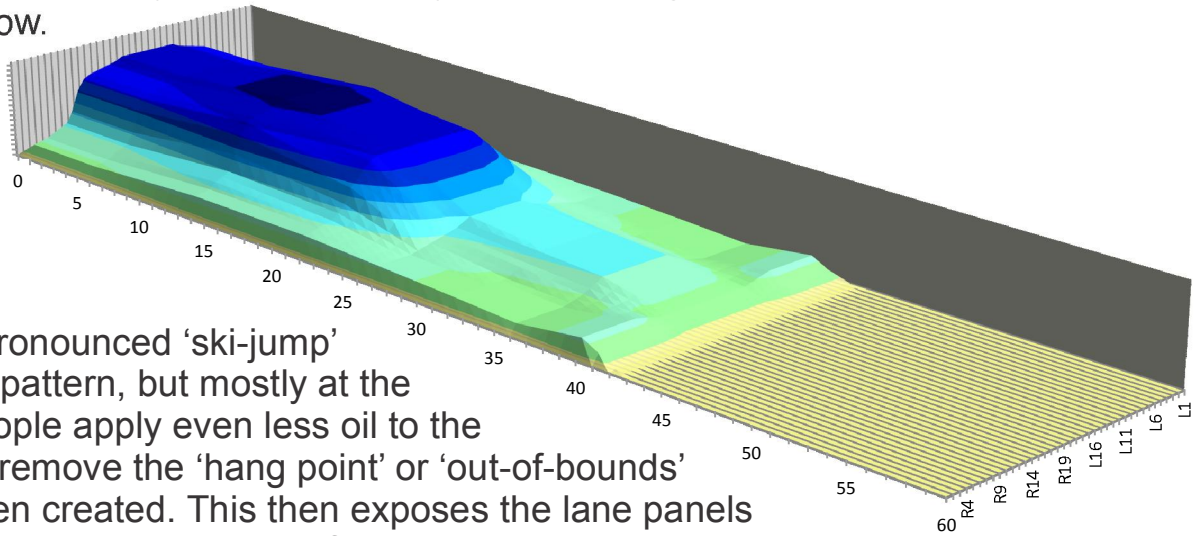


A closer look reveals that the bristles are no longer straight and they tend to ‘clump’ together.
This causes the brush to retain oil which then tends to shift the pattern down the lane.



Very worn brushes can even create a ‘ski-jump’ at the end of the pattern.

Patterns with less than 8:1 inside to outside ratio will help preserve the buff brush. Buff brushes wear due to friction. If you apply very little oil to the edges of a lane the buff brush will wear unevenly and prematurely. The resulting oil pattern then starts to look like the picture below.



There is now a pronounced ‘ski-jump’ at the end of the pattern, but mostly at the edges. Some people apply even less oil to the edges to try and remove the ‘hang point’ or ‘out-of-bounds’ area that has been created. This then exposes the lane panels to premature wear, shortening their life by up to 10 years.
It is a lot cheaper, in the long run, to replace the buff brush.