

Base Burn & How to Prevent It

By Dave Peszek

This is the fifth in a series of articles on ski and snowboard tuning that will appear this season in Ski Racing. Each issue, we'll tackle different topics that arise in the preparation and maintenance of alpine and nordic skis and snowboards. The author will attempt to answer any tech questions that you may have – Pez@holmenkol.us.

Wherever I go, there are two very common questions that are posed to me: “How do I prevent base burn” and “how do I get rid of base burn?” Typically, my first response involves a long, considered pause, because often times the person asking the question is looking for a quick & easy answer to a tough question!

Base burn comes in a few different forms. For most everyone (alpine, Nordic, & snowboarders) it is the white that appears on the base as a result of speed, friction, or abrasive snow qualities. For a few very elite athletes skiing at high speeds on well prepared courses, it actually becomes a thin area next to the base edge that wears away (sometimes in as little as one run) due to speed and friction.

To understand how to prevent base burn, one must understand how it first occurs. The resultant combination of speed, friction, and snow abrasion all combine to create heat in the zone of the ski that experiences the greatest pressure – next to the edge, under the foot. This first tears away at the wax (protective layers), then begins to pull & stretch the top surface of base material out of shape (forming the fuzzy white effect on the base), then even tears portions of the base material out (elite skiers on injected courses). Needless to say, this is a bad thing to happen to a good pair of skis.

To prevent base burn, I like to promote a simple concept: “Keep the gas tank full, and always have a spare ride.” If you are diligent about waxing your skis properly after every training session, you will harden the base & “fill it up” with wax, drastically reducing the chance for base burn. Most folks don’t allow their wax to harden overnight, which is a mistake; tune & wax after your training session, then scrape & brush just before you go out to train the next day. If you have more than 1 pair of the same skis (SL, GS, SG, or DH – whatever you are training), be sure to give each pair equal on snow time. This will serve two purposes – your skis will get faster, and you will take fewer runs on each ski between waxing, helping to prevent base burn. If you have ever seen professional technicians hauling multiple pairs of skis to the top of a piste on a training day, this is why. Finally, when the snow is extremely aggressive (for SL & GS events) some technicians will wax along the base edge with a harder wax to slow the effects. As always, be sure to properly scrape & brush, or else you will leave wax “hanging out” of the base, allowing it to tear off faster.

Even with the most diligent efforts, base burn is still bound to happen sometimes. When it does, be prepared to get your ride back into shape. 1st, evaluate the depth of the burn – it is simply white surface “fuzz”, or have you actually carved a trough into the base of the ski? If the answer is the latter, you will need to fill in the trough using p-tex base material or have local shop do it for you. For surface burn, the procedure involves some or all of the following methods:

1. Using 320 grit high grade alu oxide sandpaper wrapped around your true bar, lightly sand the area to remove the “hair”.

2. Using a fresh green abrasive pad (also wrapped around your true bar) continue to sand & polish the area until smooth.
3. Using an extremely sharp, straight, and burr-free scraper, scrape the area to remove any excess hair and base material.
4. Finally, brush the area out completely using a good stiff steel brush, then brass. You may want to then follow up with a less abrasive (white) buffing pad, then scrape again to be sure you have achieved success.
5. Tune & wax your skis to prepare for the next training session.

For some parts of the country, and in some seasons, base burn is an almost daily battle. While these techniques will remove the base burn, they will not replace the lost base material. Over time (from a few weeks to a few months), the base can become rounded from this wear, and can only be brought back to flat thru proper stone grinding. Be sure to check your skis with a true bar frequently to gauge the timing for potential stone grinding. Remember, stone grinding is not an effective cure for base burn, but is warranted after many instances of base burn have transformed the base from flat to less than flat.

Good luck!

Next issue, we will discuss stone grinding.

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