

## **Larch Hills Junior Race Team – Some Information on Ski Waxing**

This is intended to be a bit of helpful information for those new to the ski team and new to waxing cross-country skis.

### **Glide Wax and Grip Wax - Introduction**

Glide wax is used to make our skis glide as fast as possible by reducing friction and capillary drag between the ski base and the snow. There are many different waxes specifically designed for various temperatures and snow conditions. Skate skis are all about the glide and require the entire length of the ski to be glide waxed, while classic skis are only glide waxed in the glide zones (the tip and tail sections outside of the grip zone).

Grip wax is used to give the skier grip on classic skis. Layers of grip wax are applied to the grip zone and corked smooth. This is the middle section of the classic ski and typically extends from the heel to some distance in front of the toe. With proper ski camber and stiffness, based on the skier's weight, the grip wax is not in full contact with the snow while gliding. But when the skier presses the ski down and kicks, it causes the wax to bite into the snow crystals and provide grip to propel the skier along the track or up the hill.

### **Waxing Demos and Resources**

We will be holding at least one wax demo in November and one at the Silver Star camp in December for those who need to learn the basics of both glide and grip waxing. Please respond to the e-mails that will be sent out to sign up for these demos. These demos will be followed by hands-on practice. There is a lot of good information online at Swix School (<http://www.swixschool.com>). Ross McKinnon also has some good beginner information available on the Telemark website (<http://telemarkracers.org/new-to-racing/wax/>). Coach AJ has also added some information to our website (<http://www.larchhillsskiteam.com/ski-waxing-tips/>).

### **Wax Box Recommendations**

There are many different types of wax for both grip and glide. We recommend starting with one brand. Please refer to the grip and glide wax recommendations attached below as prepared by Brian May.

### **Marking and Labeling of Skis**

With 100 skiers on the team it is important to clearly mark all of your equipment with a name. You can use a felt pen on the ski or on masking tape, or a label maker. Mark the name clearly between the binding and the tip of both skis. For classic skis the grip zone must be marked clearly with a single set of marks using a felt pen on the sidewall of the ski. If you need help identifying the grip zone, take your skis to a local ski shop and they can help you mark it. You need your child to be there to test the camber. See Figures 1 and 2 on the next page.

### **Glide Waxing for Practice**

It is important to maintain the ski bases and make sure that they are glide waxed on a regular basis, even for practice. A rule of thumb would be every 2-3 practices, or when the snow condition or temperature changes significantly. If the ski bases are starting to show white patches, then it's definitely time to glide wax them again.

### **Grip Wax for Practice**

The kids will typically have a classic practice on Saturday mornings. Prepare to be at the hill early enough (at least 20 minutes early) to apply the appropriate grip wax before the start of practice. Help your younger kids with this but get them involved. The sooner they learn to apply and cork, the easier it is on you. Coaches can help you with a wax recommendation, or just ask around to see what's working.

### **Waxing for a Skate Race**

Typically, a wax recommendation will be e-mailed out by your coach on Thursday or Friday before a weekend race. This will be based on the weather forecast and ideally some testing of different waxes if possible. You will be responsible for bringing your child's skis to the race waxed, scraped and brushed. You should plan on arriving to the race at least one hour before the start of a skate race. As soon as you arrive, you will typically leave your skate skis at the wax tent for rilling (adding a temporary moisture shedding structure to the glide zone) and a polish.

### **Waxing for a Classic Race**

In the case of a classic race, the grip zone must be cleaned well, leaving no sticky wax. You will be responsible for glide waxing the skis prior to the race based on the wax recommendation. You should plan on arriving at the race at least 90 minutes before the start of a classic race. It is really important to arrive early enough to get the skis rilled and grip waxed. With potentially 100 pairs of skis to do.... well let's just leave it at that .... As soon as you arrive, you must leave your classic race skis at the wax tent for rilling and grip wax application. If your child has a set of warm up skis, you or they will grip wax those. It is important that the kids test their grip wax on the race skis with enough time prior to the start to make adjustments. For large race turnouts, we will require that you get your skis to the waxers the night before the race so that we can get a head start on them. This will be communicated by your coaches.



Figure 1. Label the skis with a name



Figure 2. Clearly mark the classic ski grip zone (note the arrows)

## Larch Hills Jr Ski Team – Recommended Wax List – By Brian May

### Grip Waxing:

Get to know a single line of waxes rather than buying random waxes from multiple companies. For colder temperatures (up to 0 deg C), the cheaper, non-fluoro versions work well. For warmer temperatures (around 0 deg C and warmer), the more expensive fluoro versions become worth the extra expense. Waxes with aluminum (Silver) in them are particularly good in warm, wet snow. Pick Swix (Skookum) or Rode (John's Ski Shack or Stussi's).

#### 1. **Basic grip waxes for cold conditions** ... Pick one of the following options ...

- Rode waxes:
  - P36-Blue Multigrade, P32-Blue Super, P46-Viola Multigrade, P40-Viola
  - These are my favourite waxes of all time.
- Swix VR waxes:
  - VR40, VR45, VR50
  - More expensive than the V series waxes, but give better glide.
- Swix V waxes:
  - V30-Blue, V40-Blue Extra, V45-Violet Special, V50-Violet
  - These are comparable to the Rode waxes. Extra blue is a classic, I haven't used the others much.

#### 2. **Grip waxes for warm conditions** ...

- Swix VR waxes:
  - VR55, VR 60 or V60, VR 65
  - Add VR70 if your budget allows.

#### 3. **For really warm, wet snow**, or for transformed, granular, wet snow and slush, nothing beats klister. You'll need a Universal klister for granular snow around 0 C and a Red klister for when it gets really warm and wet.

- Swix klisters:
  - K21N and KR 70 ... OR ... KR50 and KR 70

#### 4. **A "binder" is needed** to hold the wax onto the ski, particularly in abrasive snow.

- Toko Green base wax, OR Swix VG35

#### 5. **Tools for grip waxing** ...

- Synthetic cork
- Putty knife for removing wax (1 to 1.5 inch wide, metal blade, @hardware store)
- Wax remover (liquid solvent) or low-odour Varsol
- Fiberlene (or paper towel)
- 100 grit sandpaper (to rough up kick zone before putting on wax)
- Heat gun (to heat in base wax and klisters)

## **Glide Waxing:**

For glide waxing, you'll need a few basic glide waxes to cover a range of temperatures. More expensive "fluoro" glide waxes can be added (especially for warm weather) as the athlete becomes older and more competitive. Toko and Swix are the main wax lines that we recommend (available at Skookum and John's Ski Shack).

### **1. Glide waxes for training.** Pick one of the following options ...

- Swix CH gliders
  - CH4, CH6, CH8
  - Add CH7 or mix CH6/CH8 when necessary.
- Toko gliders
  - Blue, Yellow, Red

### **2. For racing,** improved performance can be obtained with low-fluoro and high-fluoro waxes, particularly at warmer temperatures. Team policy is to use LF waxes for Midget and below; Team HF waxes are used only for Juveniles and up.

- Swix LF and HF gliders
  - LF4, LF6, LF7 or HF7, LF8 or HF8
- Toko
  - LF Blue, LF or HF Red, LF or HF Yellow

Note that Toko LF and HF wax is typically cheaper than Swix.

### **3. Tools for glide waxing ...**

- Waxing iron (e.g., Toko T8). Pick one with a heavy base (holds heat better).
- Plastic scrapers (flat one for base, curved one for groove)
- Brush (a fine bronze or steel brush is nice for taking wax out of the structure; horsehair is Ok)