



Ski Service Guide 2016/2017



INTRODUCTION



Bringing ski service to MMSC

The Ski Service Center at MMSC will allow us to effectively support our athletes' equipment needs as they pursue their passion for skiing. Equipment preparation and maintenance has a tremendous impact on how a ski performs. Grind patterns affect how snow and water move from under the ski and impact speed. Edge angles dramatically affect how a ski responds to athletes' movements. These variables among others highlight the important role that ski service plays.

Whether you are a U10 developing fundamental skills or a U19 fine tuning technique, a well-tuned ski significantly improves the on-hill experience. For younger athletes, a sharp edge set at precisely the right angle makes a dramatic difference in learning to effectively carve a turn. For experienced athletes, high quality ski preparation is an essential component of navigating fast, firm courses with optimal speed.

MMSC invested in leading grinding technology and a skilled team so that the organization can provide high quality ski service to its athletes and families. The [Montana Challenge](#) and [Race Edge](#) allow for a level of precision and quality of output that is not possible with older, more common machines. MMSC is thrilled to be able to offer this new service to our athletes and families, and we hope you will take advantage of it throughout the season.

What to expect in this guide

The purpose of this guide is to provide basic information about ski service and its role in enabling athletes' performance. For athletes and parents new to alpine ski racing, we hope this offers you an informative introduction. For those with more experience, we hope this refreshes your knowledge and highlights key areas for focus in the upcoming season. This document is intended to serve as a starting point for conversations and learning throughout the year, and we are excited about the role that the Ski Service Center will play in elevating our athlete's exposure to and knowledge of equipment maintenance.

Acknowledgements

We are fortunate to have a strong relationship with Graham and Mila Lonetto, who owned and operated the iconic Edgewise Elite Ski Service in Stowe, Vermont for more than a decade. Much of the content included in this guide reflects the Edgewise approach to ski service, Graham's experience as a World Cup Technician, and his perspective having provided ski service of the highest quality for many years.

SKI SERVICE & MAINTENANCE



Getting ready for the season

The beginning of each season provides a opportunity to evaluate your existing equipment and determine any new equipment needs. Coaches can provide equipment recommendations based on their knowledge of the athlete and his/her ability. If you plan to attend the Colorado Camp in November, note that skis must arrive at the Service Center by October 1 to guarantee their completion in time for the trip.

New equipment

If you are purchasing new equipment for the upcoming season, we also recommend scheduling these skis for service, binding mounting and lifting. Many are surprised to learn that new skis from the factory require service, and we encourage you to read the FAQs included in this document for additional information.

Used equipment

If you plan to use equipment that has spent time on the hill, we recommend bringing your skis to the Service Center to be evaluated. Typically, skis need to be ground (bases flattened, structure applied, base bevel set) twice a season – or more frequently if the athlete attends camps throughout the year or if snow conditions are particularly aggressive. It's also beneficial to have bindings checked and adjusted this time of year to make sure they are functioning properly.

Questions

If you have questions about service, please do not hesitate to contact the Ski Service Center. We strive to provide our athletes and families with information to support the decisions you make about ski service.

During the season

Ski maintenance

Ski maintenance between grinds focuses on side edge sharpening and waxing. This can be performed by hand, with a handheld side edge grinder, or with an industrial machine like the [Montana Race Edge](#) in our Ski Service Center. We believe that understanding how to maintain skis is an important component of our athletes' education, and the MMSC Ski Service Center will not replace this skill set. We encourage athletes and families to choose the level of service right for you. For example, parents new to ski service with younger athletes may opt to rely more heavily on our Ski Service Center. Older athletes with demanding academic schedules may choose to supplement their maintenance with support from the Ski Service Center.

Regrinding skis

Skis most often need to be reground during the season regardless of an athletes age or ability. Frequency is dependent upon a number of factors, including how often the skis are used and the type of snow. To determine if a ski requires grinding, an experienced technician must evaluate the condition and flatness of the base as well as the angle of the base bevel. If you are uncertain whether your skis need to be reground, we encourage you to visit the Ski Service Center during open hours for this evaluation.



Why do new skis require service?

Though many new skis come to the consumer with a nice looking finish grind on the base, the preparation is the result of mass production and lacks the attention to detail needed to make each individual ski perform at its best. Just as cars off of an assembly line are fine tuned at the dealership before they are put on the road, skis should get individual attention from a ski technician before they hit the slopes. It is nearly impossible to detect how much base bevel a ski has without the use of a true-bar because the angles are measured in fractions of degrees. These small tolerances can, and do, make a big difference in how a ski performs. Even the most incredible grind is useless if the skis have too much base bevel. New skis should be flattened on a stonegrinder before they have the proper base bevel set. Then an appropriate grind can be applied.

What is a stone grind? And why is it important?

Stone grinding is the process of flattening the base material of a ski in relation to its base edges. A truly flat ski is even from one base edge to the other. This is accomplished by running the base material of the ski over a ceramic composite stone within a stone grinding machine. A series of different patterns are used to flatten and smooth the base material until the base is even and flat. Once the skis are flattened, then a specific base grind pattern is selected for racing. The base pattern controls the movement of water under the skis. Different patterns are selected for discipline, snow type, snow temp, and humidity.

What is base bevel?

Base bevel, the angle of the metal edge that is flush with the base, is the single most important aspect in ski tuning because it controls the reactivity of the ski and it is easy to get wrong. Very slight tolerances translate into large differences in performance on firm snow. For example, a difference of 0.5 degree at the base bevel can equate to rolling your knee 1 inch further to initiate a turn before the base edges into the snow. Typically, we advise 0.5 base bevel for technical skis and 0.75 for speed skis, though this varies by athlete and terrain.

When do skis need to be reground?

Today's skis are under much more stress than they were just a few years ago. New side-cuts, plates, and lifters produce great forces that push and pull on the core material that makes up the ski. These forces act slowly, and as they develop over time, you may not notice that there is a problem with the performance of your skis. A pair of skis will rarely make it through a whole season without developing some curvature of the base, which in turn, causes change in base bevel angles. As mentioned before, without a true-bar, the angles can't be detected, so take old skis to a reputable shop at the beginning of the season to have them looked at. If your skis are concave or convex (most problems are usually under foot) it will be necessary to get the base of the skis flattened and ground on a stonegrinder.

Why use wax with fluorocarbons?

Generally, a higher level of fluorocarbons means a faster wax. Additionally, fluoros bind to fluoros much better than they bind to hydrocarbon waxes. If the pores in your bases are filled with hydrocarbon wax, your race waxes lose durability. Filling those pores with a high fluoro (HF) wax gives a strong base of fluoros for your race wax and improves durability.

MMSC SKI SERVICE CENTER



Available services

The MMSC Ski Service Center will provide a full range of ski service, and detailed information can be found online at <http://bit.ly/mmscservice>. Discounted packages will be available for purchase until November 15. Age specific recommendations for service bundles are available in this document. Feel free to reach out to the Ski Service Center to discuss the options in more detail.

The addition of the Ski Service Center at MMSC will provide tremendous convenience for athletes and families. To make your experience as seamless as possible, we've established a set of guidelines. This will help our Ski Service team to provide the best possible service as efficiently as possible.

Role of coaches

MMSC Coaches will serve as advisors, providing input based on observations on the hill and making recommendations on equipment setup and maintenance in coordination with Ski Service Center Manager, Bill Chilton. Coaches will not schedule or coordinate ski service for athletes. Athletes and/or their parents are responsible for scheduling service, payment, drop off and pickup.

Scheduling service

Service can be scheduled by contacting the Ski Service Center. If you'd like to do so in person, we ask that you visit the Ski Service Center during open hours. Alternately, you can schedule service via phone (802-585-1410) or email (service@teammmsc.org) at your convenience. We encourage you to schedule service in advance, particularly during busy times.

Payment for service

Payment will be accepted only online. This will enable our staff to focus on providing service and minimize administrative requirements. The online store is easily accessible from all of your electronic devices and also can be accessed using the kiosk on the main level of the Clubhouse. In addition to pre-season bundles, sharpen & wax service and race day service can be purchased in packs of 10 throughout the season for your convenience. Work will not be started unless payment has been received, and we will be diligent in enforcing this policy as we want our staff to focus on servicing your skis not tracking down payment.

Drop off and pickup

Drop off and pickup for service is on the ground level of the clubhouse. Racks are labeled to reflect the type of service you would like the skis to receive (e.g., grind, sharpen and wax, other). Please use the provided stickers to identify your skis and request timing for pickup. Your service request will be detailed in the payment process. The Ski Service Center will confirm these details prior to beginning work on your skis and will contact you if necessary to clarify information. Bill Chilton will be available for advising on ski service at set hours each week. Please recognize that there also will be times where he will be focused on servicing skis and will not be able to step away for a conversation.

Contacting the Ski Service Center

Please use the dedicated Ski Service Center phone and email. All inquires made to the main office will be directed to the Ski Service Center. Advising on equipment will be available during dedicated open hours.

Ski Service Center Manager, Bill Chilton

Direct Phone: 802-585-1410 // Email: service@teammmsc.org

A LA CARTE SERVICE MENU



Grinds

Main Street Full Service \$99

A detailed, complete race prep recommended for new and used skis. Sidewall and topsheet shaping completed when necessary, elite race grind, base bevel set, side edge set with ceramic stone for a sharper more durable finish, and hydrocarbon wax applied. Option available to upgrade wax to low-fluoro (LF) \$15 or high-fluoro (HF) \$25. Option available to add a thermo bag cycle.

Hayride Grind & Bevel Service \$65

Skis are ground flat, elite race grind applied, and base bevel set to your specification. Note that no side edge or wax work is performed with this prep. This work must be completed by you before the ski is ready for the hill.

Nosedive Recreational Service \$60

Skis are ground flat, recreational base grind applied, base bevel set, side edge set with belt, and hydrocarbon wax applied. Recommended for all recreational skis. For very young athletes, this prep can serve as a more affordable alternative to the Main Street Full Service.

Sharpen & Wax

Sharpen & Wax Service \$40

Side edges are sharpened and hydrocarbon wax applied. Intended for maintenance between grinds for race and recreational skis. If fluorinated wax is preferred, choose a Race Day Service.

Race Day Service \$40-\$65

Side edges are sharpened and race wax applied for location specific snow and temperature. Choose the standard Race Day Service for low-fluoro (LF) wax, the Race Day Plus for high-fluoro (HF) wax, and the Race Day Super Plus for high-fluoro (HF) wax with the addition of an HF overlay.

Wax Only \$25-\$50

Glide wax is applied, skis scraped and brushed. Appropriate for race and recreational skis. Hydrocarbon (CH), low-fluoro (LF), and high-fluoro (HF) wax available.

Thermo Bag Cycle \$80-140

Skis are waxed and heated for an extended time at low temperature, then scraped, waxed, and brushed. This process allows wax to penetrate the base of the ski. Most commonly performed with fluorinated wax to increase the concentration of fluoros present in the base material.

Binding Service

Binding Mount \$45

Bindings are mounted and tested for proper release based on skier's height, weight, age, skier type, and boot sole length.

Binding Lift \$10-\$35

Bindings are lifted using plastic plates to a specific or maximum allowed height. This provides additional leverage for the skier. Labor is priced at \$10/pair of skis when lifters are provided by the athlete. Labor and parts are priced at \$35/pair.

Binding Test/Adjustment \$25

Already mounted bindings are adjusted if necessary and tested for proper release based on skier's height, weight, age, and skier type.

SKI SERVICE PACKAGES



The packages detailed below are designed to offer the flexibility to choose the ski service bundle right for you and your family. We recognize each athlete and family varies in the level and frequency of maintenance performed on your own or by a professional service provider. They also will offer tremendous convenience throughout the season, by simplifying the drop off and payment process when your skis need service.

Grind Packages (Available Until November 15)

Grind packages offer a way to ensure your skis are set up properly and reground appropriately throughout the season to maintain their performance. The packages include the Main Street Full Service, which entails grinding the skis flat, applying a race structure, setting side edge and base bevel, and applying wax. Prices below reflect hydrocarbon wax. Please visit the online store for additional detail and wax upgrade options: <http://bit.ly/mmscservice>.

5 Pairs: 5 Setup (5 Main St Preps, 5 Mounts, 5 Lifts) + 10 Midseason Main St Preps	\$1760 \$1584
4 Pairs: 4 Setup (4 Main St Preps, 4 Mounts, 4 Lifts) + 6 Midseason Main St Preps	\$1210 \$1089
2 Pairs: 2 Setup (2 Main St Preps, 2 mounts, 2 Lifts) + 2 Midseason Main St Preps	\$506 \$455

Sharpen & Wax Packages

These packages include side edge sharpening and waxing for maintenance between grinds.

	Until Nov. 15	After Nov. 15
10 Pack Sharpen & Wax (CH)	\$360	\$400
10 Pack Race Day (LF)	\$405	\$450
10 Pack Race Day Plus (HF)	\$495	\$550
10 Pack Race Day Super Plus (HF + Overlay)	\$585	\$650
5 Pack Jr. Race Day (U8/U10 Only)	\$180	\$200

Recommended Service by Age Group

These recommendations are based on ski service best practices and are based on the choice to rely primarily on the Ski Service Center for maintenance between grinds. Adjust Sharpen & Wax and Race Day choices as appropriate to account for the maintenance you intend to perform. For athletes using exclusively fluorinated wax, consider replacing the Sharpen & Wax Pack(s) with the Race Day Pack(s). See additional detail on subsequent pages, and contact the Ski Service Center with questions.

U16/U19

- 1 x 5 Pair Grind Pack (5 setup, 10 midseason)
- 2 x Sharpen & Wax 10 Pack
- 2 x Race Day, Plus, or Super Plus 10 Pack

U14

- 1 x 4 Pair Grind Pack (4 setup, 6 midseason)
- 2 x Sharpen & Wax 10 Pack
- 1 x Race Day, Plus, or Super Plus 10 Pack

U12

- 1 x 2 Pair Grind Pack (2 setup, 2 midseason)
- 1 x Sharpen & Wax 10 Pack (weekend), or 2 x Sharpen & Wax 10 Pack (tutorial)
- 1 x Race Day 10 Pack

U8/U10

- 1 x 2 Pair Grind Pack or 1 Pair A La Carte
- 1 x Sharpen & Wax 10 Pack (weekend), or 2 x Sharpen & Wax 10 Pack (tutorial)
- 1 x Jr. Race Day 5 Pack

RECOMMENDED SERVICE BY AGE



U16/19

1 x 5 Pair Grind Pack

This package includes complete initial ski setup (Main Street Full Service, Mount, and Lift Labor) for 5 pairs of skis, which are likely to be 2 pairs of SL, 2 pairs of GS, and 1 pair of speed skis. Additionally, it includes 10 additional Main Street preps to be distributed as needed across your 5 pairs.

2 x Sharpen & Wax 10 Pack

Evaluate how frequently you plan on maintaining your skis between grinds vs. relying on the Ski Service Center to do so. Consider your academic course load as well in making this decision. The recommendation of 2 x Sharpen & Wax 10 Packs is appropriate if you rely primarily on the Ski Service Center for maintenance between grinds. If you plan to use exclusively fluorinated wax, consider substituting the Race Day Pack for the Sharpen & Wax Pack.

2 x Race Day (LF), Plus (HF), or Super Plus (HF + Overlay) 10 Pack

If you plan to use the Ski Service Center for your race preps, we recommend 2 x 10 Packs based on the expected frequency of races. Choose the Race Day, Plus, or Super Plus to reflect your preference regarding fluorinated wax. Generally, the higher the fluoro content the faster and the more expensive the wax.

U14

1 x 4 Pair Grind Pack

This package includes complete initial ski setup (Main Street Full Service, Mount, and Lift Labor) for 4 pairs of skis, which are likely to be 2 pairs of SL, 2 pairs of GS skis. Additionally, it includes 6 midseason Main Street preps to be distributed as needed across your 4 pairs.

2 x Sharpen & Wax 10 Pack

Evaluate how frequently you plan on maintaining your skis between grinds vs. relying on the Ski Service Center to do so. Consider your academic course load as well in making this decision. The recommendation of 2 x Sharpen & Wax 10 Pack is appropriate if you rely primarily on the Ski Service Center for maintenance between grinds. If you plan to use exclusively fluorinated wax, consider substituting the Race Day Pack for the Sharpen & Wax Pack.

1 x Race Day (LF), Plus (HF), or Super Plus (HF + Overlay) 10 Pack

If you plan to use the Ski Service Center for your race preps, we recommend 1 x 10 Race Day Pack based on the expected frequency of races. Choose the Race Day, Plus, or Super Plus to reflect your preference regarding fluorinated wax. Generally, the higher the fluoro content the faster and the more expensive the wax.

RECOMMENDED SERVICE BY AGE (CONT.)



U12

1 x 2 Pair Grind Pack

Most U12 athletes will have 2 pairs of skis: 1 SL and 1 GS. The 2 Pair Grind Pack includes complete initial ski setup (Main Street Full Service, Mount, Lift Labor) for 2 pairs of skis and 2 midseason Main Street preps. If your U12 athlete has 4 pairs of skis, consider the 4 Pair Grind Pack, which includes complete initial ski setup for 4 pairs of skis and 6 midseason Main Street preps to be distributed as needed across your skis.

1-2 x Sharpen & Wax 10 Pack

Evaluate how frequently you plan on maintaining your skis between grinds vs. relying on the Ski Service Center to do so. If you plan to rely primarily on the Ski Service Center, we recommend 1 x Sharpen & Wax 10 Pack for U12 Weekend athletes and 2 x Sharpen & Wax 10 Packs for Tutorial athletes. If you plan to use exclusively fluorinated wax, consider substituting the Race Day Pack for the Sharpen & Wax Pack.

1 x Race Day (LF), Plus (HF), or Super Plus (HF + Overlay) 10 Pack

If you plan to use the Ski Service Center for your race preps, we recommend 1 x 10 Packs based on the expected frequency of races. Choose the Race Day, Plus, or Super Plus to reflect your preference regarding fluorinated wax. Generally, the higher the fluoro content the faster and the more expensive the wax.

U8/U10

1 x 2 Pair Grind Pack or 1 Pair A La Carte

We recommend you have skis evaluated for service at the beginning of the season whether they are new or used. Choose either a 2 Pair Grind Pack or a la carte service depending on whether you plan to use 1 or 2 pairs of skis. The 2 Pair Grind pack includes complete initial ski setup (Main Street Full Service, Mount, Lift Labor) for 2 pairs of skis and 2 midseason Main Street preps. Generally at this level, each pair of skis will need to be ground once midseason. For U8 and U10 athletes with 1 pair of skis, consider either the Main Street Full Service or the Nosedive Service. In short, the Main Street Full Service is a detailed race prep and the Nosedive is a recreational prep but offers a more affordable option also appropriate at this age.

1-2 x Sharpen & Wax 10 Pack

Evaluate how frequently you plan to maintain your skis between grinds vs. rely on the Ski Service Center to do so. This recommendation assumes you rely primarily on the Ski Service Center. If you plan to rely primarily on the Ski Service Center, we recommend 1 x Sharpen & Wax 10 Pack for Weekend athletes and 2 x Sharpen & Wax 10 Packs for Tutorial athletes.

1 x Junior Race Day 5 Pack

We encourage you to use the Ski Service Center to prep your athlete's skis before each race. This includes sharpening the side edges of the skis and applying fluorinated wax. The Jr. Race Day Pack is designed specifically for the U8/U10 athletes to reflect the number of USSA and Club races.

POLICIES & PROCEDURES



Payment policy

Payment must be received before service is started. It is the responsibility of the athlete or parent to ensure payment is made in advance. If the technician identifies that the equipment requires or would benefit from additional service beyond what has been paid for, the technician will reach out to the athlete or parent to discuss. In this case, the athlete or parent still will be responsible for making payment before the service is performed.

Turnaround time

The Ski Service Center will always do its best to accommodate the service and timeframe requirements of athletes and parents. In general, current MMSC athletes will receive prioritization. We encourage you to schedule work in advance particularly during busy times.

For athletes attending the Colorado Camp in November, skis must arrive at the Ski Service Center for service by October 1 to guarantee that they will be complete in time for the trip. If skis arrive after this date from the athlete or the manufacturer, the Ski Service Center will do its best to complete the skis in time, but a guarantee cannot be made.

Expedited service policy

In situations where the Ski Service Center is at full capacity and employees must work beyond expected hours to complete skis, a fee may be required to accommodate immediate service needs. If this fee is required, it will be communicated before service is performed.

Refund policy

Refunds will be handled on a case by case basis. Ski service is essential to maintaining the performance of equipment. It also is important to understand the each time skis are ground or side edges are sharpened, this reduces the life of the ski. The Ski Service Center and its technicians will do their best to communicate when skis are reaching the end of their life as base material and edges become thin; however, it is not always possible to predict this with perfect accuracy in advance.

Ski service package policy

Ski service packages can be shared. Packages must be purchased in advance of service performed and cannot be applied retroactively to a la carte purchases.