

2.77 Seek and Geek #6: Ski binding settings

Last weekend I went skiing at Wachusett Mountain, which is barely more than an hour drive away. As a beginner doing level 1 of ski school, I was overwhelmed by the amount of equipment needed: helmet, goggles, thick gloves, boots, skis, and poles. When choosing my ski binding level, I was told that #1 is safest for beginners, as it lets the boots release from the skis at the lowest force. Naturally, I chose #1.



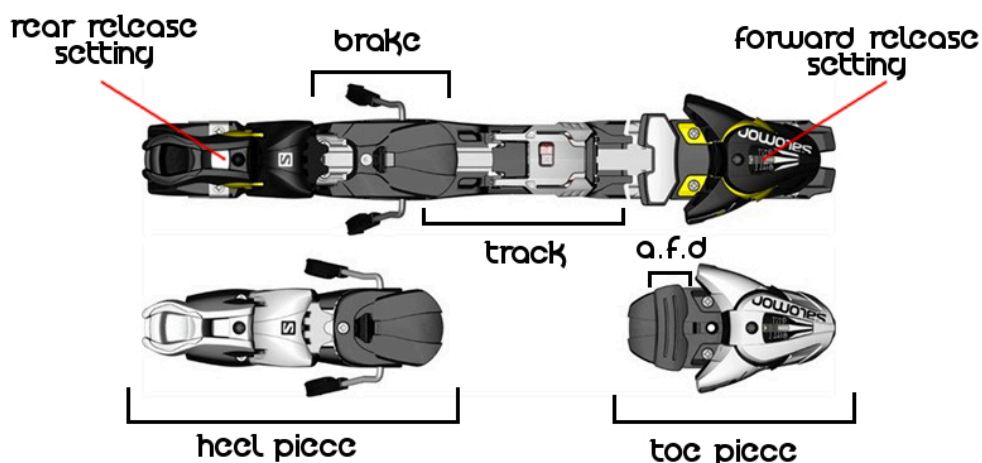
After ski school on the bunny hill, I used a couple green trails to get comfortable with turning, stopping, and controlled falling. Once I was confident enough in my ability to avoid obstacles and control my speed, I moved on to the blue slopes. The blues seemed terrifying at first, but I was willing to do them knowing that I would inevitably fall, because the binding was supposed to release. However, my skis did not come off the entire weekend! Something must have been wrong with the settings, because one time I had quite the tumble! Fortunately I was fine and able to untwist my legs and get right back up, but that situation was potentially dangerous since the skis didn't come off.

That got me to wondering, how do ski bindings and settings actually work? I found the answer online: <http://blistergearreview.com/recommended/bindings-201>. According to the article, there are three parameters that go into binding settings: elastic travel, spring weight (stiffness), and release value.

Elastic travel is the distance that the boot can separate from the ski before it pops off. A higher elastic travel allows the binding to retain the skis as the skier tries to recover, and releases the skis when it reaches the limit. This avoids a sudden, jerky and forceful release if the elastic travel is too low.

Spring weight is ski-speak for stiffness, and determines the amount of force that is required to displace the spring a certain amount. Obviously, a stiffer spring will retain

Release value is the preload on the spring, which is the force required to initially begin moving the spring.



Spring weight is a property of the spring, and cannot easily be adjusted in a binding. Elastic travel, though adjustable, is not easy to alter. Thus, the parameter that is adjusted on a per-person basis in rentals is the release value, or amount of spring preload. In my case, the spring preload should have been less to allow the skis to release when my legs twisted.