

**Thank you** for choosing 22 Designs' Axl telemark bindings. Your new bindings will bring your skiing and touring to a new level, enjoy! If you have any questions or need service please contact us: [info@twentytwodesigns.com](mailto:info@twentytwodesigns.com) (208) 538-0084 or (866) 733-0553 toll free. See [www.twentytwodesigns.com/tech](http://www.twentytwodesigns.com/tech) for more information.

**WARRANTY**  
The Axl telemark bindings, made by TwentyTwo Designs LLC, are guaranteed to be free from manufacturing defects for two years from the date of purchase. If a part fails during this period, contact us for a replacement at no charge. If a part fails after this period, contact us for a replacement at a reasonable charge. Normal wear and tear is not covered under warranty.

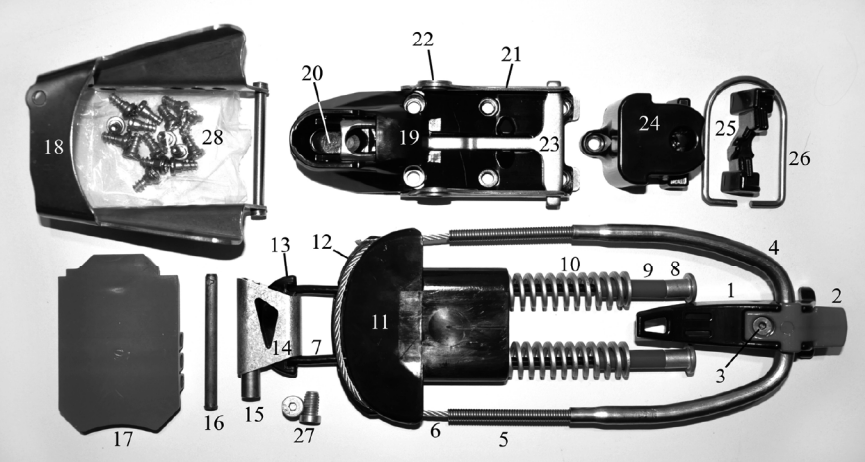
**-Never apply anything that sprays from a can or contains solvents to your bindings; it could severely damage the plastic pieces of the binding. Never use Loctite® when mounting.**

**WARNING**  
Skiing is an inherently hazardous and dangerous sport. The user of TwentyTwo Designs LLC products is personally and solely responsible for learning proper skiing techniques and exercising good judgment. Use of TwentyTwo Designs LLC products is at your own risk. Axl telemark bindings are not releasable. Injury and even death can occur while skiing from any number of causes, i.e. avalanches, snow conditions, unseen obstacles, equipment failures, weather, etc. If you ski long enough, you will eventually get hurt. Always ski in control to help protect yourself and others.

**Our bindings are designed and built in Driggs, Idaho, USA**

Licensed under U.S. Pat. Nos. 6,877,759; 7,216,888; 7,306,255; 7,306,256; 7,318,597; 7,396,037 and 7,401,802.

## BINDING ANATOMY

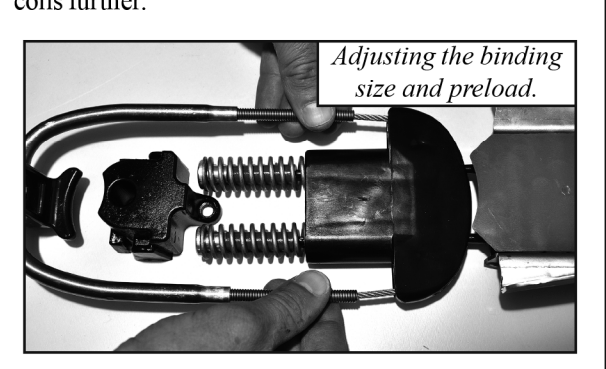


- |                     |                      |                     |
|---------------------|----------------------|---------------------|
| 1- Tail Throw       | 11- Spring Cartridge | 21- Steel Base      |
| 2- Beaver Tail      | 12- Cartridge Insert | 22- Bushings        |
| 3- Tail Screw       | 13- Clip Loop        | 23- Latch           |
| 4- Heel Tube        | 14- Extruded Clip    | 24- Heel Plate      |
| 5- Adjustment Coils | 15- Cross Tube       | 25- Heel Key        |
| 6- Rear Cable       | 16- Slic Pin         | 26- Climbing Bail   |
| 7- Front Cable      | 17- Flex Plate       | 27- Pivot Screws    |
| 8- Top Hats         | 18- Toeplate (right) | 28- Mounting Screws |
| 9- Spacers          | 19- Plastic Base     |                     |
| 10- Springs         | 20- Base Insert      |                     |

## SIZING

Axl bindings come in two sizes. The small size is for boots mondo 25.5 and less. The binding size is marked on the bar code at the end of the box. You can also find the size of your bindings by measuring the length of spring protruding from the spring cartridge. Large bindings have about 2-1/2" exposed, smalls have 1-1/2".

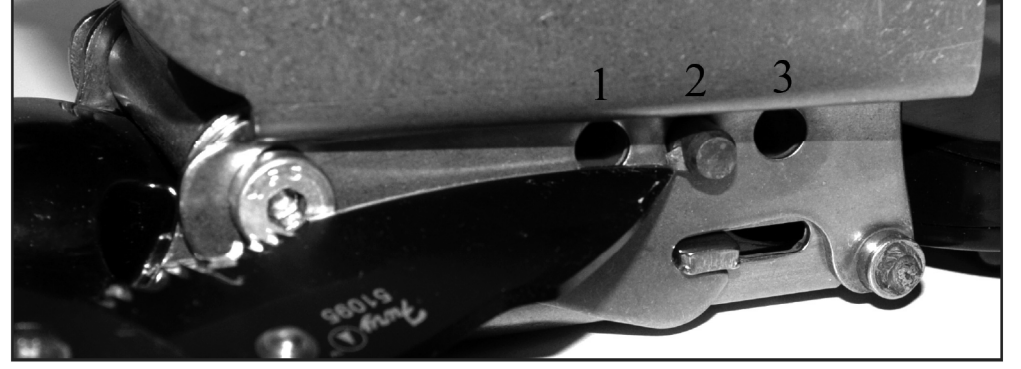
- Skiing the wrong size binding will void the warranty.
- To adjust the binding for your boot size, spin the Adjustment Coils in or out of the Heel Tube. Make sure that both coils have about the same length showing. The bindings should be tight enough that the Tail Throw snaps into place when flipped onto your boot (see Tail Throw panel). For a stiffer feel, put more pre-load on the springs by tightening the coils further.



## SLIC PIN ADJUSTMENT

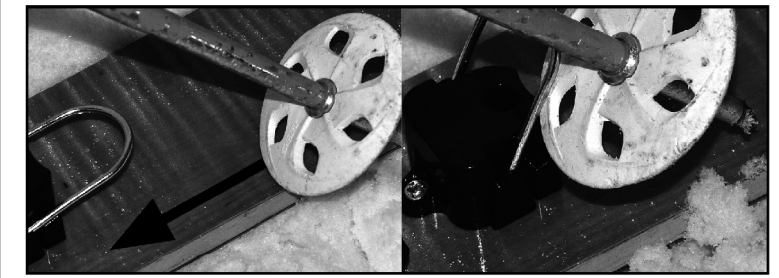
Adjustable cable routing is what makes the Axl so versatile for the downhill. You can stick the Slic Pins in any of 3 pivot holes. To remove a pin, use a small tool to press the wedge in, then push the pin into the binding. You can then pull it out the other side, rotating it if it gets stuck at all. Position numbers are shown below.

**For a more neutral flex**, move the pins forward, **for a more active flex**, move them towards the back. See below for more info.



## TAIL THROW AND CLIMBING BAIL

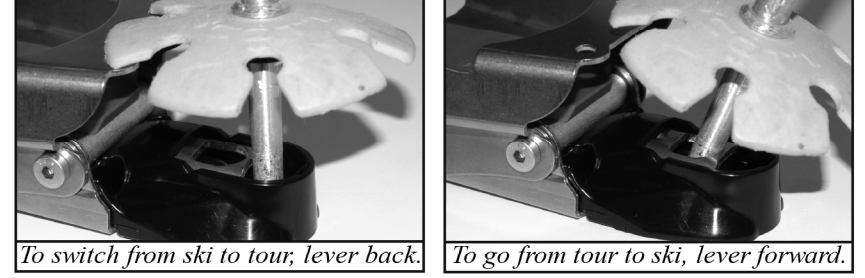
- The Tail Throw will fit all 75mm telemark boots in the cable groove. To snap into the bindings, position the red Beaver Tail under the heel of your boot, then lift up on the Tail Throw.
- For uphill travel, the spring loaded Climbing Bail on the Heel Plate can be flipped up or down with the basket of your ski pole. The quickest way to flip the bail up is to lift your heel up, then place your pole tip along the inside edge of your ski about a foot behind the Heel Plate. Then quickly pull your pole tip forward and your basket will flip the bail up. Use your basket to flip it down too.
- The bail can also be used to hold the Tail Throw down to keep it from flopping around in or on your vehicle. This prevents coil breakage.



## USING THE TOUR MODE

The Axl has a free-pivot tour mode to reduce effort during skinning.

- To switch from ski mode to tour mode, place your pole in front of the Latch (not in the hole), and lever back until the Toeplate is released.
- To switch from tour mode to ski mode, place your pole in the large hole on the Latch, and lever forwards until you see the small circle. Do not continue to lever past this point.
- If the latch becomes hard to move forward, and you cannot see the circle, do not force it. You could bend your pole tip. You may need to clear snow from under the flex plate, or under the cross-bar at the back of the Toeplate. Do not use a pole tip to remove snow from plastic parts.



## PARTS & ACCESSORIES

Parts and accessories for your bindings are available from your local tele shop or direct from us. Parts rarely break but all are available for a reasonable price, or for free if under warranty. Accessories:

- **Stiffy Spring Kit** - more power for large Axls.
- **Softie Spring Kit** - soften up your size small Axls.
- **Extra Tall and Short climbing bails**
- **Axl Ski Crampons**
- **Axl Remount Kit**
- **Universal Backcountry Repair Kit**
- Soft goods such as **T-shirts and Hoodies**.

## SKIING THE BINDINGS

Axls are extremely versatile bindings that can be adjusted for your skiing style and optimized for snow and terrain. They are the only free-pivot bindings with a pivot point that can be customized to your boot size. When the Slic Pins are adjusted to the furthest rearward holes (position 3), the binding will flex very actively. In a telemark turn, an active flex will force your rear boot to flex at its bellows as you bend your knee. This will hold the ball of your foot down tight to the top of the binding and bring more weight to the back ski. With an active flex you get more control of the ski and it craves easier.

- For your first run, be sure to adjust the size so that the bindings are very tight on your boot. This will allow some room for the springs and cables to set fully into the binding.
- Try skiing your bindings for a few runs in position 3 (the rear-most holes) to feel the full effect of your bindings. Then experiment with the different positions to see which ones you prefer.
- The smaller your boots are, the more active the binding will feel in each position.
- To make small changes in the feel of the bindings, tighten or loosen the Adjustment Coils to change the spring preload. Screw the coils in for more resistance when you lift your heel, and out for less.

# MOUNTING INSTRUCTIONS

## MOUNTING TOOLS



- Drill
- Hammer
- Tape Measure
- Adhesive Tape
- 9/64" or 5/32" drill bit (3.5 to 4.1mm)
- Razor blade or Knife
- #3 Pozidrive Screwdriver
- #12 AB Ski Tap
- Marker

## 22 DESIGNS DEALERS

The easiest way to get a bombproof binding mount is to have a qualified 22 Designs Dealer do it. They will have a 22D Mounting Jig, and be familiar with mounting positions, etc. See the dealer list on our website for a dealer near you. If you want to mount them yourself, read on...

## FIND MOUNTING LOCATION ON SKIS

Use the boot center line provided by the ski manufacturer, making sure the two skis match. If you can't find a line on the ski, contact the ski manufacturer. Most tele skiers now mount with their boot center on the center line. For in-depth discussion on mount locations, search the forum at [backcountrytalk.com](http://backcountrytalk.com). Please do not ask us where to mount your skis; we recommend boot center.

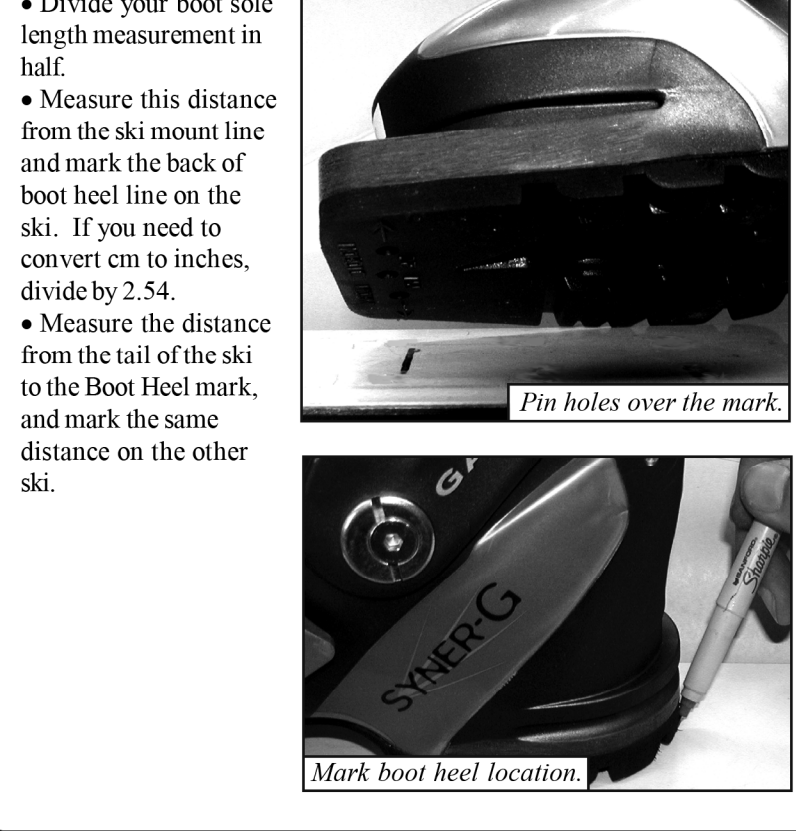
## MARK FRONT MOUNTING HOLES

- Print a mounting template from our website at [twentytwodesigns.com/tech](http://twentytwodesigns.com/tech). Measure the dots on the printout to make sure the scale is exact. They should be 1.5" apart.
- Find your ski's boot center line.
- Measure your boots from the heel to the pin hole line, in centimeters.
- Align your ski mount line with the correct template boot center mark.
- Align the template side to side on the ski by using a matched set of parallel lines. Be sure that the template is well centered and straight. Tape the template to the ski.
- Position a nail or a center punch in the center of the each of the 6 dots on the forward part of the mounting template. Tap with a hammer to mark the locations. **Do not mark the two rear dots.**
- Repeat for the second ski.



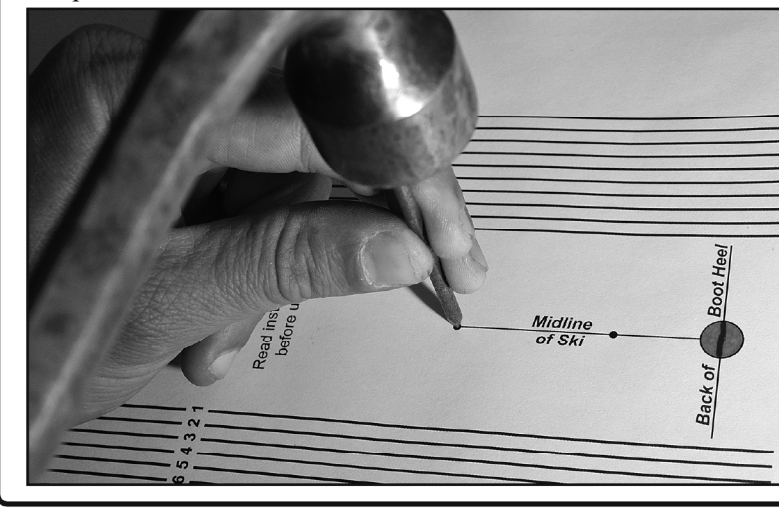
## MARK BACK OF BOOT HEEL LOCATION

- Divide your boot sole length measurement in half.
- Measure this distance from the ski mount line and mark the back of boot heel line on the ski. If you need to convert cm to inches, divide by 2.54.
- Measure the distance from the tail of the ski to the Boot Heel mark, and mark the same distance on the other ski.



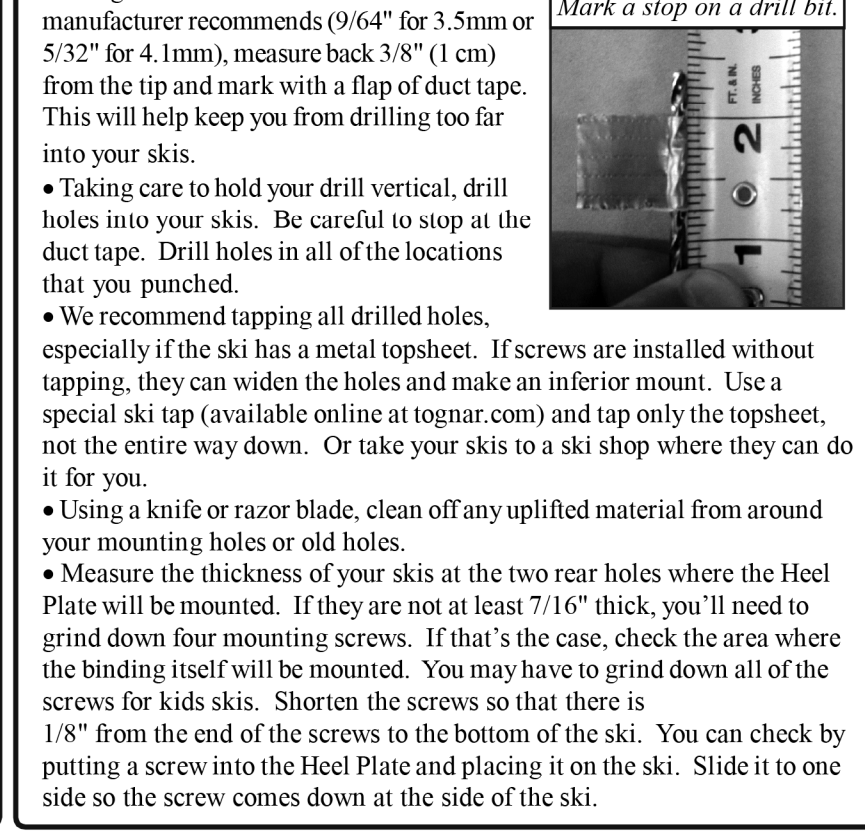
## MARK HEEL PLATE MOUNTING LOCATION

- Using the same mounting template align the "Back of Boot Heel" line over the line that you just marked on your ski.
- Be sure that the template is centered on the ski by using a matched set of parallel lines as you did earlier.
- Place a binding over the 6 holes you just punched, and a Heel Plate over the rear dots on the template. Make sure there is no interference between the springs and the Heel Plate.
- Position a nail or center punch in the center of each of the 2 dots located on the rearward part of the mounting template. Tap them with a hammer to mark the locations.
- Repeat for the second ski.



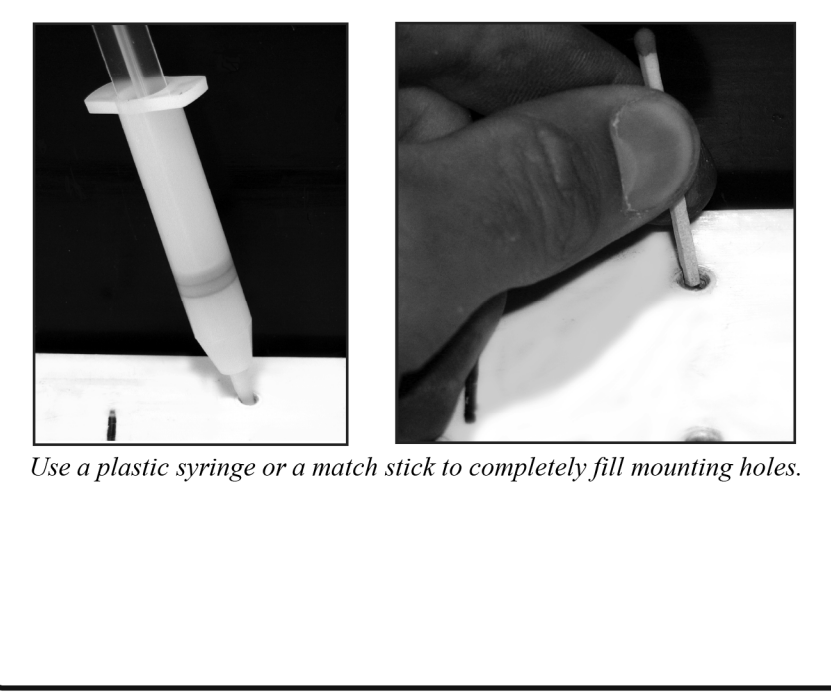
## DRILL MOUNTING HOLES

- Using the size of drill bit the ski manufacturer recommends (9/64" for 3.5mm or 5/32" for 4.1mm), measure back 3/8" (1 cm) from the tip and mark with a flap of duct tape. This will help keep you from drilling too far into your skis.
- Taking care to hold your drill vertical, drill holes into your skis. Be careful to stop at the duct tape. Drill holes in all of the locations that you punched.
- We recommend tapping all drilled holes, especially if the ski has a metal topsheet. If screws are installed without tapping, they can widen the holes and make an inferior mount. Use a special ski tap (available online at [tognar.com](http://tognar.com)) and tap only the topsheet, not the entire way down. Or take your skis to a ski shop where they can do it for you.
- Using a knife or razor blade, clean off any uplifted material from around your mounting holes or old holes.
- Measure the thickness of your skis at the two rear holes where the Heel Plate will be mounted. If they are not at least 7/16" thick, you'll need to grind down four mounting screws. If that's the case, check the area where the binding itself will be mounted. You may have to grind down all of the screws for kids skis. Shorten the screws so that there is 1/8" from the end of the screws to the bottom of the ski. You can check by putting a screw into the Heel Plate and placing it on the ski. Slide it to one side so the screw comes down at the side of the ski.



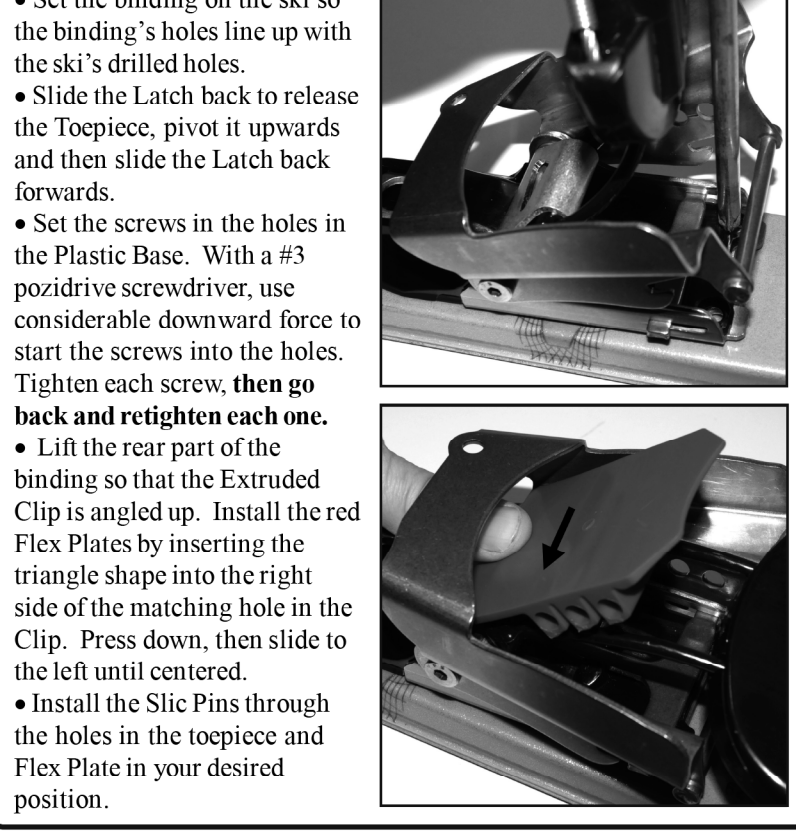
## GLUE MOUNTING HOLES

To hold your mounting screws in and to seal your ski cores from water, the holes in your skis must be filled with a waterproof adhesive before screwing down the bindings. Use an adhesive recommended by the ski manufacturer, such as slow-cure epoxy or waterproof wood glue. **Do not use Loctite®.**



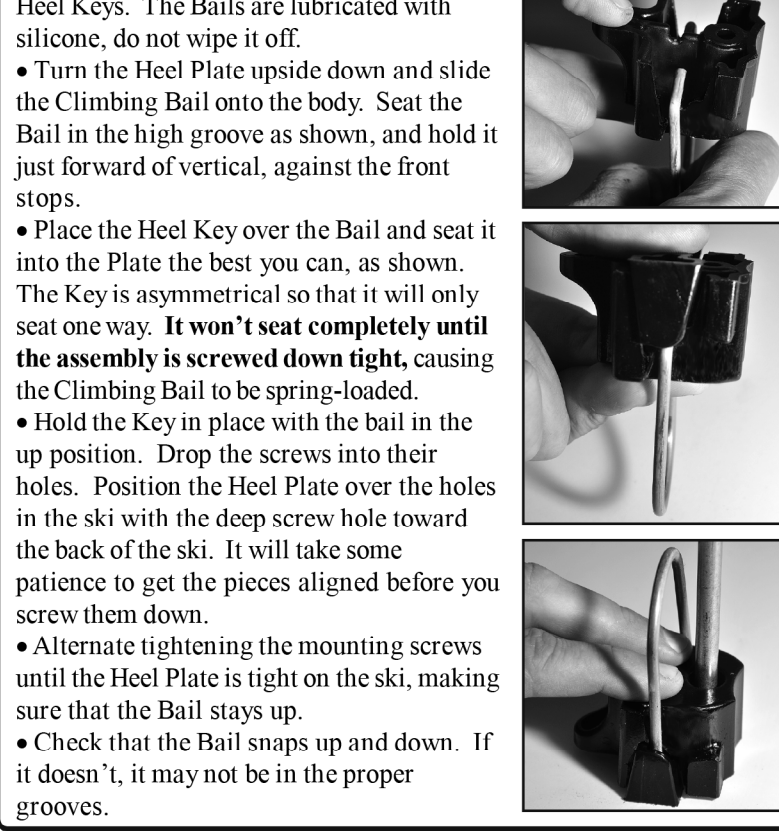
## MOUNT THE BINDING

- Set the binding on the ski so the binding's holes line up with the ski's drilled holes.
- Slide the Latch back to release the Toeplate, pivot it upwards and then slide the Latch back forwards.
- Set the screws in the holes in the Plastic Base. With a #3 pozidrive screwdriver, use considerable downward force to start the screws into the holes. Tighten each screw, **then go back and retighten each one.**
- Lift the rear part of the binding so that the Extruded Clip is angled up. Install the red Flex Plates by inserting the triangle shape into the right side of the matching hole in the Clip. Press down, then slide to the left until centered.
- Install the Slic Pins through the holes in the toeplate and Flex Plate in your desired position.



## MOUNT THE HEEL PLATE

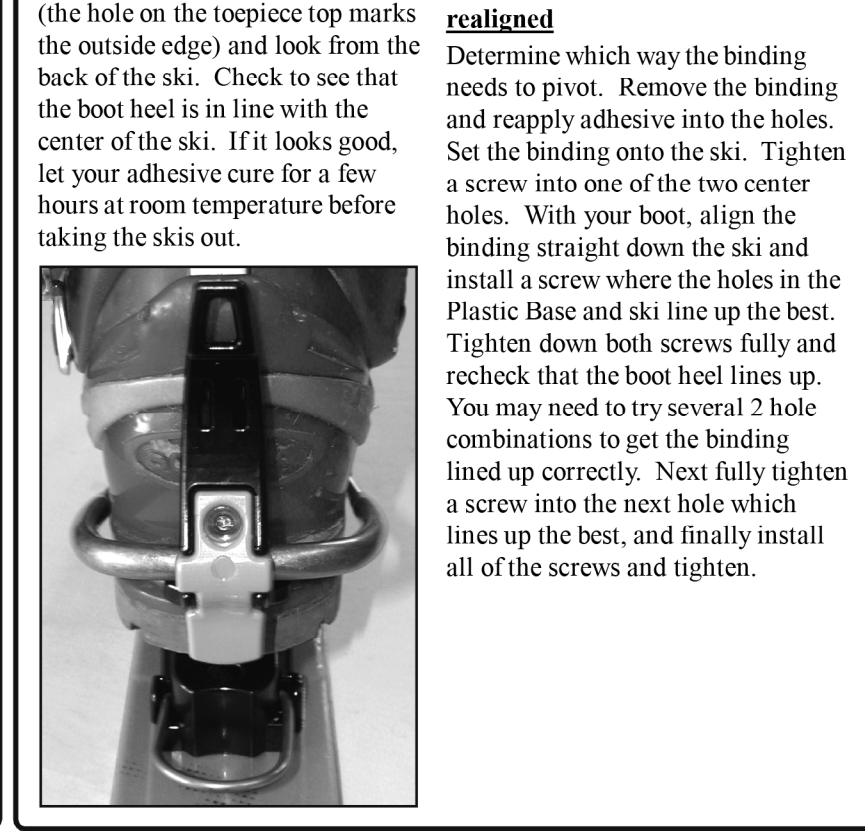
- Find the Heel Plates, Climbing Bails, and Heel Keys. The Bails are lubricated with silicone, do not wipe it off.
- Turn the Heel Plate upside down and slide the Climbing Bail onto the body. Seat the Bail in the high groove as shown, and hold it just forward of vertical, against the front stops.
- Place the Heel Key over the Bail and seat it into the Plate the best you can, as shown. The Key is asymmetrical so that it will only seat one way. **It won't seat completely until the assembly is screwed down tight**, causing the Climbing Bail to be spring-loaded.
- Hold the Key in place with the bail in the up position. Drop the screws into their holes. Position the Heel Plate over the holes in the ski with the deep screw hole toward the back of the ski. It will take some patience to get the pieces aligned before you screw them down.
- Alternate tightening the mounting screws until the Heel Plate is tight on the ski, making sure that the Bail stays up.
- Check that the Bail snaps up and down. If it doesn't, it may not be in the proper grooves.



## CHECK BOOT ALIGNMENT

Put the correct boot in each binding (the hole on the toeplate top marks the outside edge) and look from the back of the ski. Check to see that the boot heel is in line with the center of the ski. If it looks good, let your adhesive cure for a few hours at room temperature before taking the skis out.

**If the binding needs to be realigned**  
Determine which way the binding needs to pivot. Remove the binding and reapply adhesive into the holes. Set the binding onto the ski. Tighten a screw into one of the two center holes. With your boot, align the binding straight down the ski and install a screw where the holes in the Plastic Base and ski line up the best. Tighten down both screws fully and recheck that the boot heel lines up. You may need to try several 2 hole combinations to get the binding lined up correctly. Next fully tighten a screw into the next hole which lines up the best, and finally install all of the screws and tighten.



## MAINTENANCE

- Periodically check the Pivot Screws on the Toeplate pivot to make sure they are tight. Use a 5/32" or 4mm hex wrench to check. If they do become loose, let us know. We recommend reinstalling with slow-cure epoxy.
  - Also check the mounting screws once or twice a year to make sure they aren't loosening.
  - Never use anything sharp like a ski pole tip to remove ice from your bindings, you could scratch the plastic or flex plate.
  - If your boots get mud or dirt on them while hiking, try to clean them off in the snow before stepping into your bindings. You should also clean mud and dirt off of the bindings and out from underneath the flex plate after dirty spring skiing.
- REPLACING PARTS**
- All available parts can be found our website. Find instructions for replacing parts and more at [twentytwodesigns.com/tech](http://twentytwodesigns.com/tech)
- END OF LIFE**
- Axls can be repaired indefinitely, but when they reach the end of their useful life, recycle them with scrap metal, or send them to us to recycle.
- STAY IN TOUCH**
- Get updates on new products, demos, tips, discounts, and more by signing up for our email newsletter on our website or with this QR code:



## OTHER MOUNTING TIPS

- **Filling holes in previously mounted skis**  
Use slow cure epoxy to fill old mounting holes in skis. If you have large holes to fill mix fine sand with the epoxy and press it into the holes. Let the epoxy cure and you can drill new mounting holes at least 1/4" away from the old holes.
- **If the binding doesn't sit flat on the ski**  
Make sure all the screws are tight. If they are, and the binding is still not flat, remove the binding. Check to see if the areas around the mounting holes have "volcanoed" up. If they have, remove the uplifted material with a file, knife, or chisel.
- **Removing bindings mounted with epoxied screws**  
If the screws won't turn, stop before you strip the screw head (be sure to use the proper driver for the screw head). Heating the screw will liquefy the epoxy and break the bonds:  
1) Put a 7/64" drill bit in a high speed drill backwards so that the flat end is sticking out.  
2) Spin the drill at full speed and press down hard for 30 seconds to heat up the screw by friction.  
3) Try to remove the screw, if it still won't turn then use the drill to heat the screw further.

