

## LL SHIM DESIGN

These flat, but compliant Leg Length (LL) Shims are designed to allow cyclists to compensate for functional or measurable differences in leg length. A Leg Length Shim 'stack' can be attained by using a LL Shim(s) [and/or alternating stacked Cleat Wedges].

### Some examples:

4mm shim 'stack' is (1)  
3mm LL Shim  
& (2) Cleat Wedges

5mm shim 'stack' is (1)  
3mm LL Shim  
& (2) sets of Cleat Wedges & so on, in 1mm increments.

Your structural health care professional, bike fitter or even your own experience will help to determine the size of the shim stack best suited to your needs. These simple suggestions and hints listed below will help you get the most from your Leg Length Shim purchase.

### Best Practices

Add Cleat Wedges to address for foot tilt and improve alignment

With **2 Cleat Wedges** on top of LL shim for 2 degrees of tilt

With **1 Cleat Wedge** on top of LL shim for 1 degree of tilt

More precision for your Stack Height increase  
Add **2 Cleat Wedges** (thick to thin, alternated) on top of LL shim for an additional 1mm



**BIKEFIT**  
**Universal 3-Hole Leg Length Shim**  
Part# 3330103

Form# 0310104



05105 63995 6

## Fitting Instructions & Helpful Hints

Thank you for your purchase and interest in using our products. We hope this Leg Length Shim will exceed your expectations and help you with your cycling activities.

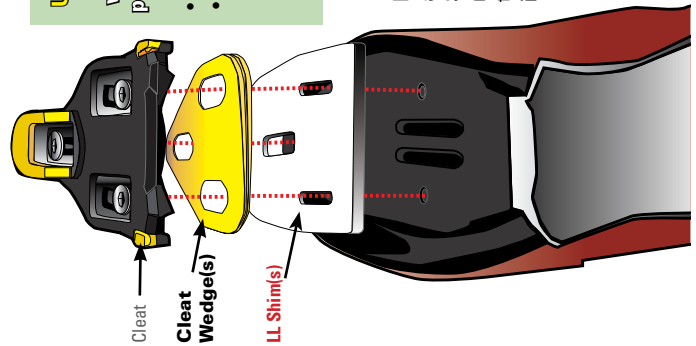
As an esteemed customer of ours, we would be glad to hear from you. Please provide any feedback at our website [www.BikeFit.com](http://www.BikeFit.com).

### 3-hole type - Universal

**Universal 3-hole LL Shim** works for these pedals & cleats:

- Look Keo & Delta (road)
- Shimano SPD-SL (road)
- Campagnolo
- Time (road)

Look Delta, Keo and Shimano SL cleats represented throughout these instructions.



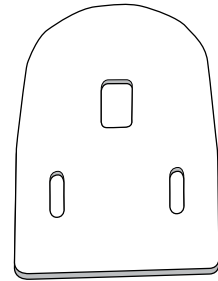
### Your kit includes:

#### Universal (3-hole style)

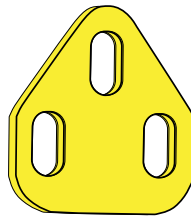
3 x 14 mm M5

3 x 16 mm M5

3 x 18 mm M5



**Leg Length Shim**  
3mm stack height



2 x Cleat Wedges

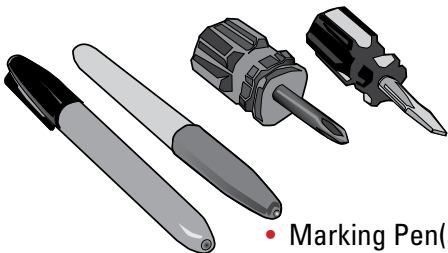
**1° tilt per Cleat Wedge**

Compatible with:

- Look Keo & Delta
- Shimano SPD-SL (road)
- Campagnolo
- Time (road)

not intended for use with Speedplay type cleats

### Tools Required:

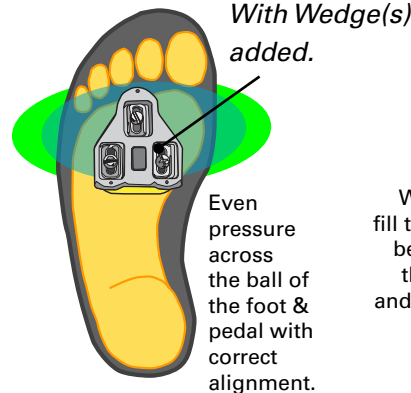


- Marking Pen(s)
- Screwdriver (regular and/or Philips)

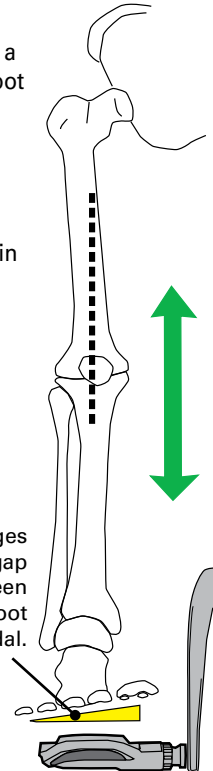
## Why a Wedge?

Recent studies show 96% of all cyclists are misaligned in their connection to the bicycle, decreasing comfort & efficiency.

BECAUSE... 87% of people with feet have a forefoot that tilts up & to the inside (Forefoot Varus) and 9% of people with feet have a forefoot that tilts up and to the outside (Forefoot Valgus). ALL conventional pedal systems require a cyclist to connect to the pedal flat-footed. Without correction, this predisposes cyclists to mechanical defects in their pedaling stroke.

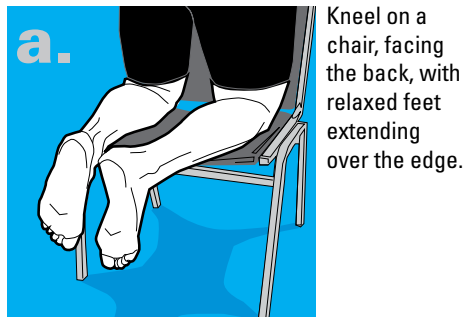


Wedges fill the gap between the foot and pedal.

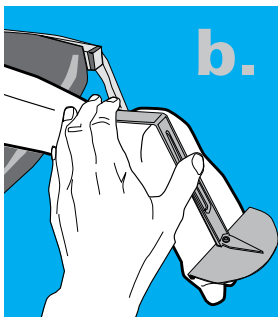


continued from other side...

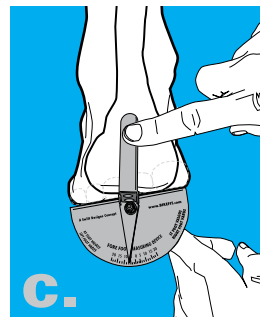
Most people can benefit from a Wedge, so remember to check forefoot tilt to see if you can improve knee alignment by using an **ITS Wedge** inside your shoe or external **Cleat Wedges**. Check each foot for tilt, as they may be different. Use the Forefoot Measuring Device (FFMD) shown below, to easily and quickly determine forefoot tilt and calculate a starting point for the number of wedges needed. **FFMD BikeFit Part# 7010101**



**a.** Kneel on a chair, facing the back, with relaxed feet extending over the edge.



**b.** Place the Forefoot Measuring Device (FFMD) on the bottom of each foot pushing the handle against the heel so the vertical portion is aligned dividing the heel in two equal halves.

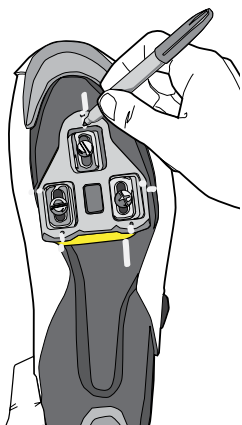


With FFMD in place, position the top flat surface of the Device (½-circle protractor) on ball of foot. Note angle indicated by the protractor. Repeat 3-times / foot to achieve a left & right forefoot tilt avg. Use this as your starting point for Cleat Wedge usage.

## FITTING INSTRUCTIONS

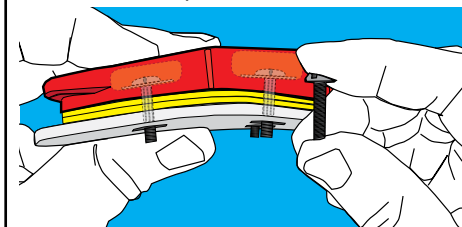
### STEP 1.

Mark your cleat position (*make sure the marks extend well enough beyond to account for LL Shims to be installed*). This will aid you greatly when putting things back together.



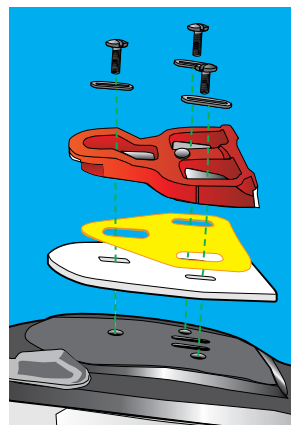
### STEP 2.

Remove cleat from shoe and measure length of the existing screws. Add the size of the LL Shim(s) you plan to use to the measurement of the length of mounting screws to determine the length of new screws that you'll need.



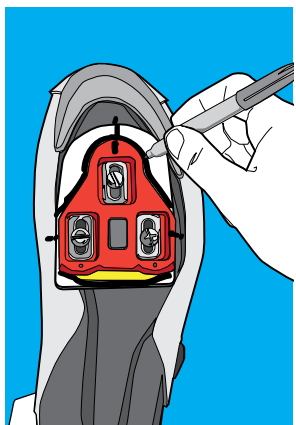
### STEP 3.

Place Shim stack on sole of shoe, place cleat on top & screw bolts into shoes but don't tighten fully. Adjust the cleat to desired position using marks on sole & then tighten bolts evenly until secure.



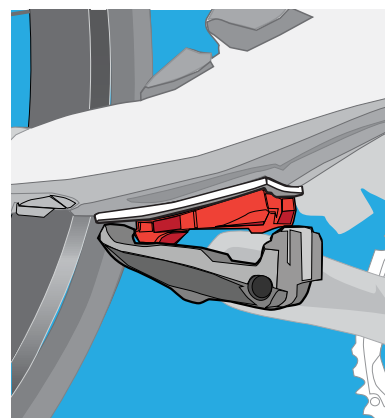
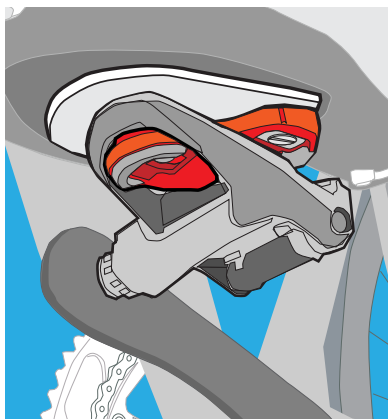
### STEP 4.

Mark a template on LL Shim to use next time you replace your cleat.



### STEP 5.

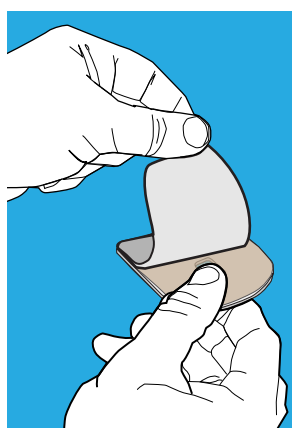
Leg Length Shims extend well beyond the front of the cleat, facilitating easy engagement by providing a solid platform. If you catch the LL shim, unweight foot and try again.



## HELPFUL HINTS:

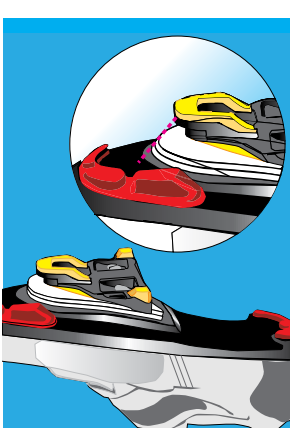
### HINT a.

If using more than one LL Shim, you may use double sided tape or a dab of glue for plastic, between each Shim in the stack. This will help them stay in place when you replace cleats in the future.



### HINT b.

For sizeable shim stacks you may want to use a file or grinder to bevel an angled ramp on the front of the stack to allow easier engagement with the pedal.



### HINT c.

Cleat Wedges should not extend in front of the cleat. Cleat Wedges can overhang in the back, but will affect engagement to the pedal if the Cleat Wedge protrudes in front.

