



Shimano MTB Brake Lever Spacer / Shim for Loose & Rattling Levers



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Summary

These are small C spacers or shims that push onto the pivot rod for Shimano M315 (and poss. other) mtb. brake levers.

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I have Shimano disc brakes with BL-M315 brake levers. The levers were loose and rattling, metal on metal, every time I hit any bump. I designed these simple spacer shims to reduce the looseness and unwanted rattle. They fit the M315 levers by pushing them onto the brake handle pivot rod/ axle, between the lever and the shell/body. This "C" clip design expands as it is pushed against the pivot rod. They can be removed easily by pushing against the opening of the clip with a screwdriver. I have not tested them on other brake levers, but they look like they will also work on Shimano BL-365 and BL-Acera levers. If you are not sure if they will fit your levers, just print a pair and try them out - they use very little filament and print in less than 5 minutes. The model is two shims (see photo).

Dimensions:

- Max. Outside Diameter: 14.00 mm
- Min. Inside Diameter: 7.50 mm
- Thickness/Print Height: 1.50 mm

I printed and installed them on my levers about a month ago, and they worked great. The rattle was reduced significantly.

Note 1: each bike lever might wear and loosen differently. If you do install these spacers, make sure that your brake levers open and close freely. You would not want the spacer to be too tight, and cause the brake lever to not function properly. If you find that you need spacers that are more or less thick than these, which are 1.50 mm, they can be easily modified with most 3D design software. You may wish to divide the thickness of one washer and make two washers, which would be inserted between the lever and the body, on both sides of the lever, thus isolating the lever from nearly all metal-on-metal contact.

Note 2: this general “C” clip design could easily be modified to work with many different brands and models of brake levers. The tricky part is determining the inside diameter of the spacer hole, which corresponds to the outside diameter of the lever pivot/axle. Since calipers do not fit in the gap between the lever handle and the lever body, I was able to determine this measurement roughly by cutting a slot in a business card, slightly thinner than the approximate width of the pivot/axle O.D., then gradually widening the slot until it slid into the lever and cleared the width of the pivot/axle. With my levers, that was approximately 7.00 mm. So, I made the I.D of the spacer clip 7.50 mm, so that there would be a little play. For the outside diameter of the spacer, I just took a rough measurement of how big I thought that it would need to be to provide sufficient surface area, but not be too wide and protrude outside of the lever body. Then, I just needed to get a rough thickness measurement, which I arrived at by inserting combinations of feeler gauges (thin, precise metal strips with varying thicknesses). That is how I determined the thickness of 1.50 mm. If you do not have feeler gauges, but you do have calipers, you can try out different strips of materials until you find one that nicely fills the gap between the lever and the body. Then measure that thickness with your calipers. This process could be followed to create spacers for most MTB brake levers that are loose.

Model files



brake-lever-spacers.stl

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