



## Composite bike grip Cannondale D2 single lock-on

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### Summary

Multi-material 22mm Ø 130mm lenght grip fully compatible with Cannondale D2 single lock-on. STL and STEP files.

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**Additional parts needed per grip** (Only if you're printing the lock-on ring):

- M2 insert (3-3.5mm OD, 3-4mm lenght)
- M2x10mm socket head screw.

### The whats whys and hows:

My original Cannondale D2 single lock-on grips were soft and comfortable. A pure joy to grip. But, after some time, they decided to go all mermelade on me as seen in the pictures.

I cleaned all the sticky stuff uncovering the rigid plastic base (shown in the pictures) and decided to design a new rubber cover. Since the original rubber was totally gone, I reproduced the rigid plastic base upon which I

designed the new cover. Threw in a lock-on ring to round up the work and this is the result.

It's designed to fit on a 22mm diameter handle bar covering it 131mm lengthwise. It should be easily resized with any slicer to accomodate other measures however. Or you can remix the provided STEP file if you prefer so.

I've just printed the rubber cover since the other parts were salvaged from the original grip. But the whole thing should work without issues. The only part I'm not fully confident about would be the lock-on ring. I hope the printed part strength will be enough, but bear in mind the original one is made of aluminium, hence stronger and less prone to elongation.

I'm not really knowledgeable about cad, so there's probably room for improvement.

### The printing:

- All parts are presented as they should be printed.
- **Supports** should be only needed for the rigid base low part bridge.
- I'd recommend printing the parts one at a time for cleanliness.
- I do recommend **PETG** or better for the rigid base and the lock-on ring for better elements and impact resistance.
- Regarding the rubber cover, there's two knurled patterns to chose from. Maybe I'll add new patterns in the future.
- For the grip rubber cover, choose a **TPU** with a shore hardness of your liking. That's the part your hands/gloves are going to rub against.
  - Also: softer TPU = easier assembly (I think?).
  - A well tuned printer with as little oozing and stringing as possible is specially desirable for this part so the assembly will be easier later.
    - Some options can be used in your slicer to reduce the stringing. (Be aware those settings could add printing and slicing time):
      - PrusaSlicer: **Avoid crossing perimeters.**
      - Cura: **Combing mode.**

### The assembly:

- The printing orientation and the assembly orientation are the same.
- The rubber cover and rigid base are a very tight fit (they must be), don't rush it. It will slide in with some wiggling and patience. If you got noticeable stringing in the part interior, try cleaning it as much as possible. Soapy water could help too.

- The lock-on ring needs a M2 heat insert fitted through the hole marked with a triangle. Any 3-3.5 OD and 3-4mm length M2 insert should do. Also a M2x10mm socket head screw is needed to close and tighten the ring.

Ohm, also: Happy printing!

## Model files



**grip-rigid-base.stl**

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**grip-rubber-knurled-and-grooved.stl**

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**grip-rubber-knurled.stl**

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**locking-ring.stl**

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**cannondale-d2-lock-on-grip.step**

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