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## Consistently Unconsistent Y Axis Belt on Factory Assembled Printer

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RSS

**● pinklemonade**

(@pinklemonade)



Active Member



### Consistently Unconsistent Y Axis Belt on Factory Assembled Printer

Printer is MK3S Prusa Assembled. Long story short - print failed, some filament got jammed in the hotend, cleaned up, reassembled, then after a few weeks layer shifting happened. We had a few power fluctuations so thought nothing of it due to storms, and it just never got better once we left the stormy weather.

This printer is in the Prusa enclosure, which, in my personal opinion, is the biggest pain factor when needing to do ANY repairs to this thing. Do not recommend unless you enjoy constantly taking out everything to see the back or underside of the printer. Anyway...

I have redone the calibration I don't know how many times and everything is perpendicular. I loosened the y-belt a smidge per assembly instructions, and that doesn't seem to do much at all and the belt is still below 260. I managed to get it to 264, it printed a decent benchy, then a second benchy test it shifted layers again. It is now unable to go past 220 and I see nothing in its way on the rods or undercarriage. If I'm lucky it changes back down to 211. :) (sarcasm). Firmware was updated to the latest, as well, just in case.

I cleaned the rods and added a bit of lubricant in case it needed some, as this particular printer will often go for days on a single print and it's been rather dry and hot here. Made no difference.

I'm honestly at a loss about what else to try. My original mk3 printer that I assembled has been through hell and back with me and thus far continues to print, but the Prusa assembled one just has no forgiveness. Any other suggestions would be super helpful 😞

Attached are images of the very sad Benchy:



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Posted : 21/10/2024 9:28 pm

### RE: Consistently Unconsistent Y Axis Belt on Factory Assembled Printer

**JoanTabb**

(@joantabb)



Veteran Member

Moderator



one grub screw should be firmly tightened against the flat on the motor spindle, the other, should be firmly tightened against the curve of the motor shaft

regards Joan

I try to make safe suggestions, You should understand the context and ensure you are happy that they are safe before attempting to apply my suggestions, what you do, is YOUR responsibility. Location Halifax UK

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Posted : 22/10/2024 10:09 am

**pinklemonade**

(@pinklemonade)



Active Member



Topic starter answered:

### RE: Consistently Unconsistent Y Axis Belt on Factory Assembled Printer

That's what I thought might be the issue, but everything was already pretty tight. I'm at a loss as to what happened.

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Posted : 22/10/2024 5:43 pm

**JoanTabb**

(@joantabb)



Veteran Member

Moderator



### RE: Consistently Unconsistent Y Axis Belt on Factory Assembled Printer

are you getting error messages?  
collisions?

regards Joan

I try to make safe suggestions, You should understand the context and ensure you are happy that they are safe before attempting to apply my suggestions, what you do, is YOUR responsibility. Location Halifax UK

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Posted : 22/10/2024 6:31 pm



Topic starter answered:

### RE: Consistently Unconsistent Y Axis Belt on Factory Assembled Printer

(@pinklemonade)



Active Member



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Posted : 22/10/2024 6:43 pm

● **JoanTabb**

(@joantabb)



Veteran Member

Moderator



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Posted : 22/10/2024 6:47 pm

● **pinklemonade**

(@pinklemonade)



Active Member



Topic starter answered:

**RE: Consistently Unconsistent Y Axis Belt on Factory Assembled Printer**

I sure hope so 😞 This is the first time I have been completely stumped myself.

I went back to see comments on the assembly for the y-axis, used the 'business card' test to make sure the y axis pulley had the right gap by the motor as per step 32, and that is perfect.

I'm just at a complete loss. If I had someone near me I'd be bringing this to them in a heartbeat to help. lol

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Posted : 22/10/2024 6:52 pm

● **pinklemonade**

(@pinklemonade)



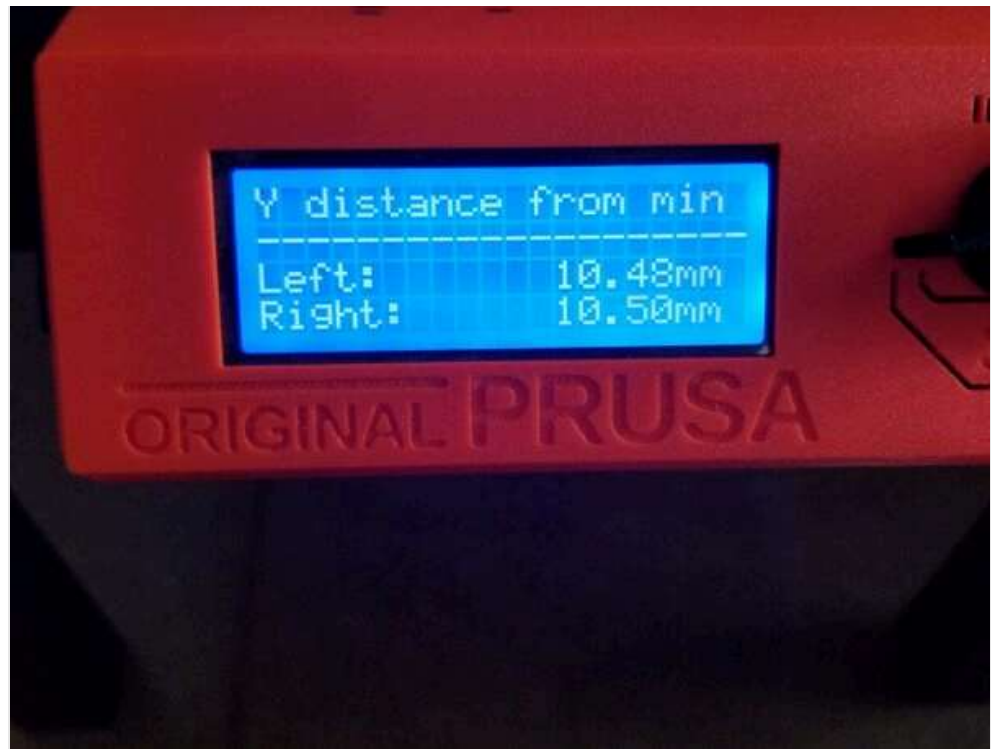
Topic starter answered:

**RE: Consistently Unconsistent Y Axis Belt on Factory Assembled Printer**

For further ref, here are my stats on the printer. I made sure y axis was tight again, ran a full calibration, and this time it passed. Benchy however, looks no different.







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Posted : 22/10/2024 8:57 pm

Your filament is damp but that's not the cause of this problem.

**Diem**

(@diem)



Illustrious Member



roughly, to belt tension.

But other things can affect mechanical resistance.

For each axis, with the power off, move the axis by hand; is it smooth?

Does the resistance stay the same over the whole range?

Check the idler pulley is not clogged, out of line, or damaged (loosen the belt and try turning it with your fingertip, is it smooth?)

With the belt loose try turning the stepper motor by hand; is it smooth? You should feel the steps but no grating.

Make your next print this:

<https://www.prusaprinters.org/prints/46639-tension-meter-for-the-gt2-belts-of-i3-mk3s-or-prus>

It MUST be printed in Prusament PETG or the spring tension will be wrong.

Cheerio,

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Posted : 23/10/2024 12:58 am

**pinklemonade**

(@pinklemonade)



Active Member



Topic starter answered:

### RE: Consistently Unconsistent Y Axis Belt on Factory Assembled Printer

Thanks for your response!

Yes, as stated in my original posts I did all the mechanical tests. There is no resistance, and it's been lubricated as well. The pulley is not clogged or out of line or damaged in any way. I checked it all against to the assembly instructions to be sure (though I don't think the Prusa team would assemble something so haphazardly and send it).

The filament is not damp. It's fresh out of the box.

I printed the frog model last night and it looks like just the first 15% was shifted in the y-axis; the rest was fine. Much improved from previous prints, so going to just minimally adjust everything now (x, y, extruder idler, etc) and see what happens.

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Posted : 23/10/2024 1:50 pm

Topic starter answered:

**● pinklemonade**

(@pinklemonade)




Active Member



Printer

Just wanted to update - we got it working again. Just retightened everything for the fifth time and now it's working like its brand new.

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Posted : 11/02/2025 2:33 am

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