AluCarriage Installation Guide

The AluCarriage is designed to safely support the extruder at the higher printing temperature ranges required for materials like nylon.

Instructions

This simple procedure should be followed to ensure your AluCarriage installation is quick and easy. This guide will hopefully have you up and running in a couple of easy steps. Instructions for the AluCarriage Single and Dual are the same except where specifically noted.

Warning

Do not proceed with this installation before reading the disclaimer at the end of this document.

Components



Single:

- A.) AluCarriage Single with pre-installed Nylon shims
- B.) Timing belt clip and screw (M3x6mm allen key cap screw)
- C.) 4 x M3x4mm set screws
- D.) Cable Ties

Dual:

- A.) AluCarriage Dual with pre-installed Nylon shims
- B.) Timing belt clip and screw (M3x6mm allen key cap screw)
- C.) 4 x M3x4mm set screws
- D.) Cable Ties
- E.) Wire Management Tool

STEP 1

Single: Loosen the active cooling fan mounting screws and remove the active cooling fan attachment.



Dual: Remove the cable tie connecting the wiring harness to the carriage.



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STEP 2:

Remove the two mounting screws under the plastic carriage and keep them aside. The entire extruder mechanism can now be lifted off the carriage and placed aside safely.



STEP 3:

Release the timing belt tension. (This is the trickiest part of the installation.)

To remove the carriage from the timing belt, you need to loosen the x-axis stepper motor. Remove the two screws on the outside and loosen the two screws on the build plate side. Slide the x-axis stepper motor toward the build plate. This will loosen the tension on the timing belt.



STEP 4:

Remove the timing belt from the carriage and then pull the stock carriage up off the linear bearings – a little force will be required. Start by removing the front of the carriage and then the back of the carriage. Once complete, remove the stock carriage.







STEP 5:

Your AluCarriage is fitted with Nylon shims. The shims may have worked loose in transit - please ensure that these are firmly seated in the AluCarriage prior to installation.

Loosen the timing belt clip screw on the AluCarriage so that the timing belt can slide in. Loosely screw the four supplied set screws onto the AluCarriage.



STEP 6:

Place the AluCarriage over the linear bearings – noting the difference between the front and back of the AluCarriage. The back of the carriage is deeper. Install the timing belt and tighten the belt clip screw.



STEP 7:

Refit the x-axis stepper motor and timing belt. Ensure that it is seated correctly in its housing and that the timing belt is tensioned firmly. Tighten the two screws on the build plate side and then the two screws on the outer side.

Check that the timing belt is tensioned and moves freely.

STEP 8:

Lightly tighten the four set screws until they make contact with the linear bearings. Do not over-tighten the set screws as this will affect the linear bearing operation. The set screws are intended to prevent the AluCarriage from lifting up off the linear bearings.

A small amount of Loctite Blue is recommended if the set screws work loose during printing.

Move the AluCarriage side to side to ensure a smooth motion.







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STEP 9:

Place the extruder mechanism onto the AluCarriage. Insert and tighten the mounting screws that hold the extruder onto the AluCarriage.



STEP 10:

Single: Reinstall the active cooling fan attachment and tighten the screws. Ensure that the attachment does not touch the heater block of the extruder. You can use the supplied cable ties to hold the wires in place.

Dual: Screw in the wire management tool and cable tie the wire harness to the wire management tool on the AluCarriage.

Single & **Dual**: Run a few slow test prints (around 25mm/s) to make sure everything is running smoothly. Thereafter, you should be able to print as normal.



Thank you for purchasing an AluCarriage - I hope you have many successful prints ahead! For more information or to contact me, please visit shop.raffle.ch.

DISCLAIMER: READ BEFORE INSTALLING

I make these parts for fun, in the hope they are useful for the 3D printing community. By proceeding with the installation, you accept this disclaimer, and you proceed with this installation at your own risk.

- Installing these parts on your printer makes substantial and potentially irreversible changes. Some skill is required to complete the installation.
- I cannot guarantee that these parts will work as intended and that they will not fail at some point in the future.
- I take no responsibility for any damages of any kind during installation or afterwards.
- I make no warranties or guarantees on the suitability, fitness or usability of these parts for any purpose whatsoever, or on the correctness or accuracy of this installation guide.