GeckoTek Magnetic Base System Installation Guide

1. Intro

This guide is to assist you in installing your GeckoTek Magnetic Base into you MakerBot Replicator 2. This will allow you to quickly and easily attach and remove your GeckoTek Build Pate to and from your 3D Printer. The benefits of this system are numerous. Using a GeckoTek PLA build plate will help ensure that your prints stay firmly attached during printing, while also allowing easy part removal when the job is finished.

Before preforming this procedure, make sure that your 3D printer is off and unplugged. If the nossel is hot for a recent print, allow it to cool down to a room temperature. Then you can begin the installation process

2. Things you will need

Included in your box will be 3x 40mm long M3 flat head bolts, 3x M3 nuts, and 3x 3D printed standoffs.

Tools are not required for the installation of your GeckoTek Magnetic Base. You may, however, use a Philips screwdriver and a pair of pliers if you want to ensure a tight fit.

This kit re-uses some of the stock Makerbot Replicator 2 parts. Pay close attention to the instruction and take care not to lose anything during the installation.

3. Installation
    a. Step 1: Remove the Bed Leveling Thumb Screws

    Remove the thumb nuts that are used to level the build platform. You may need to raise the z-carriage up to get access to them. Take care not to lose them The will be reused to attach and level your GeckoTek Magnetic Base.

Unscrew and Remove.
You will Re-use these.
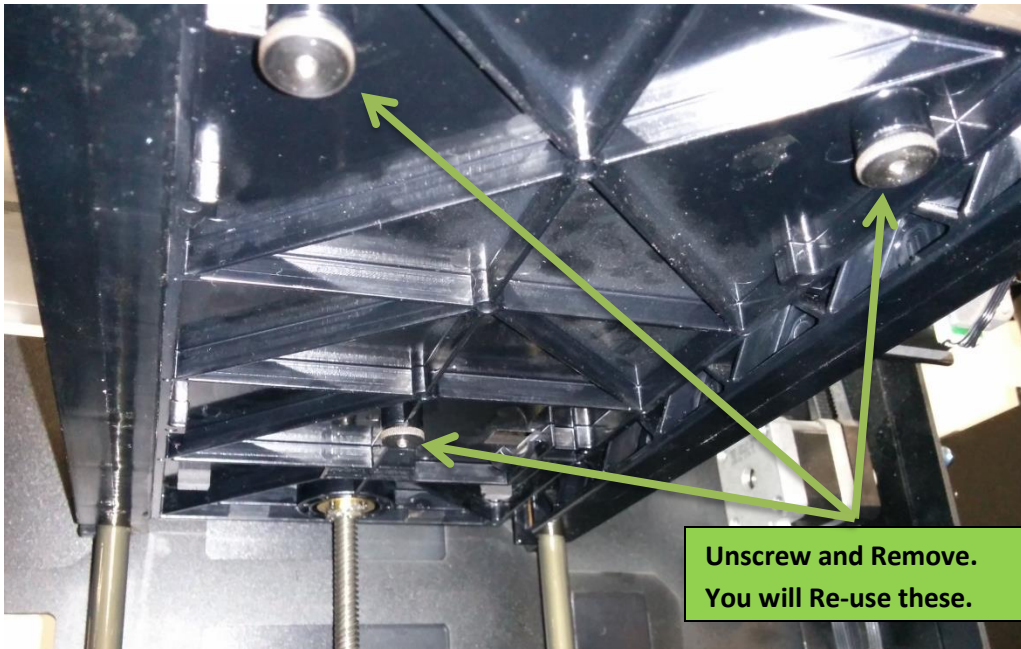
b. Step 2: Remove the stock Print surface and mounting bracket

With the thumb nuts removed, the print surface should be free to lift straight up. You may need to lower the Z-carriage to provide room to remove the assembly. Take care to save the stock bed leveling springs. Sometimes they will remain attached the print platform bracket and will need to be pulled off. Other times the will fall off during removal. They are required to installation of the GeckoTek Magnetic base so be sure not to lose them.

Stock bed leveling Springs and nuts. Will be re-used.

Stock Makerbot Build platform and bracket. Will not be re-used.
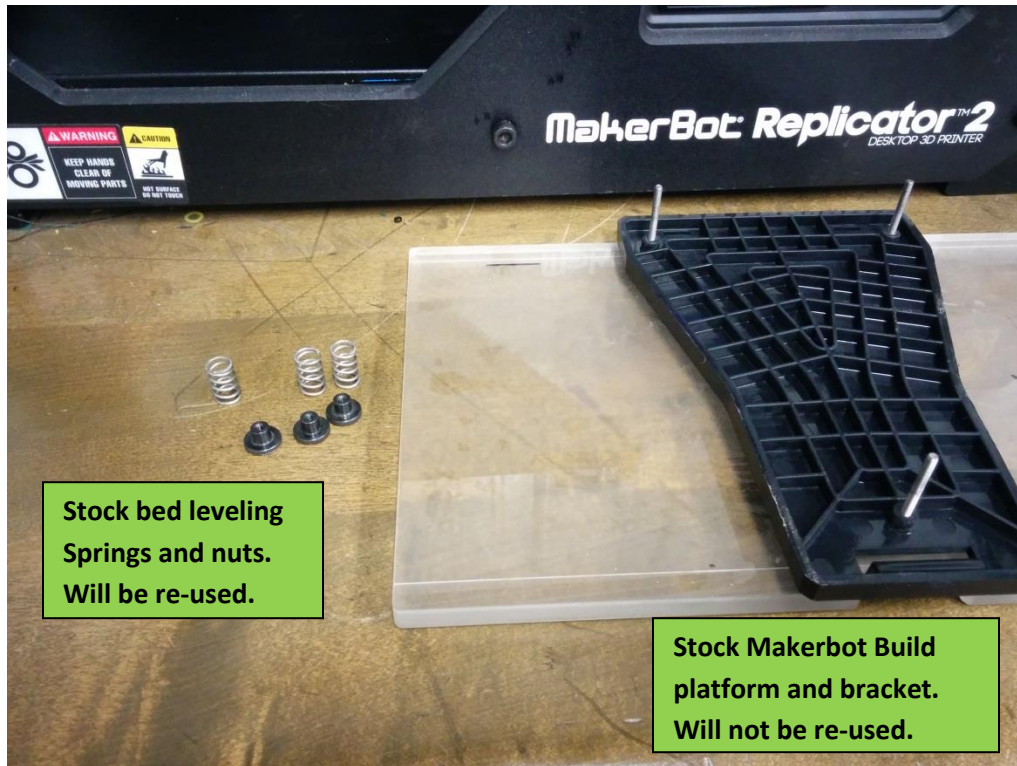
c. Step 3: Prepare the GeckoTek Magnetic Base

Your GeckoTek Magnetic Base System Consists of a 1/4" thick aluminum Base with 1" round magnets in it and 22 gauge steel Build Plate. For now we will only be working with the Magnetic Base.

Gather the M3 flat head bolts, M3 nuts and 3D printed standoffs. First put one of the bolts through one of the holes in the Magnetic Base. The holes are countersunk so the head of the screw should be below the surface of the base. If the head is sticking up then you may have the plate upside down. Thread one of the M3 nuts on to the bolt until it is snug with the bottom side of the base. Then place a 3D printed standoff on the bolt and push it down until it covers the Nut. You will need to rotate the standoff to line up with the nut.

It is generally ok to just tighten the bolt and stand-off by hand. You can us a screw driver and pliers to tighten the bolt and nut further if required.

Repeat with the remaining 2 holes until the base looks like the image below.

Base with screws
and nuts Installed

Base with standoffs
installed over nuts
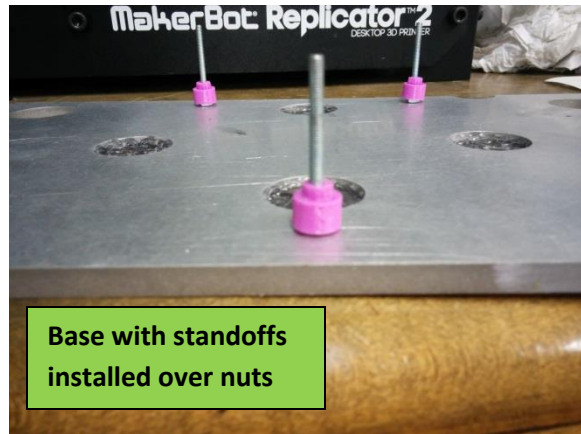
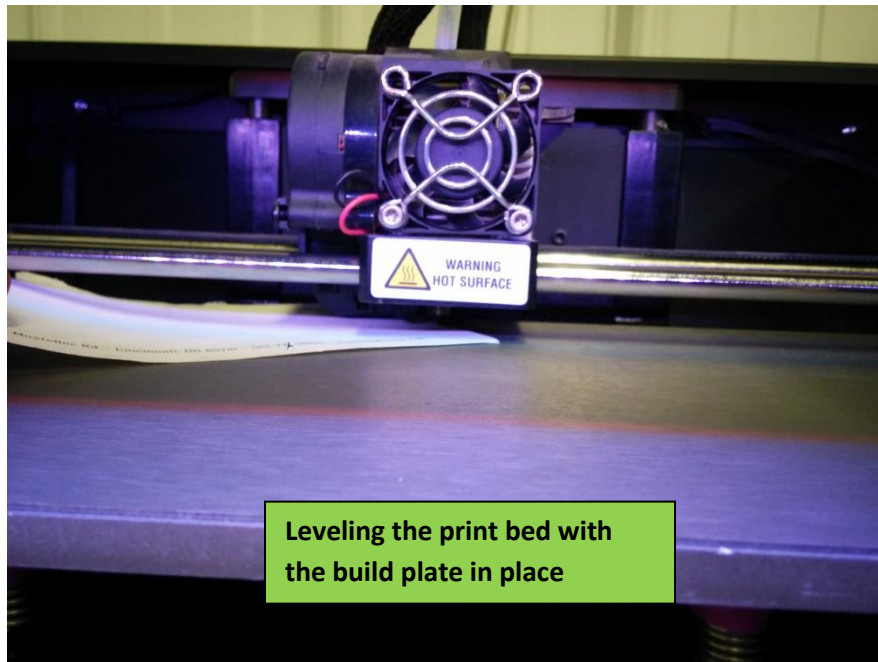d. Step 4: Install the GeckoTek Magnetic base

Install the GeckoTek Magnetic Base in the original Bed leveling holes with the stock springs between the Z-carriage and the 3D printed standoffs. Install the Stock thumb nuts to tighten down the bed.

Stock bed
leveling springs
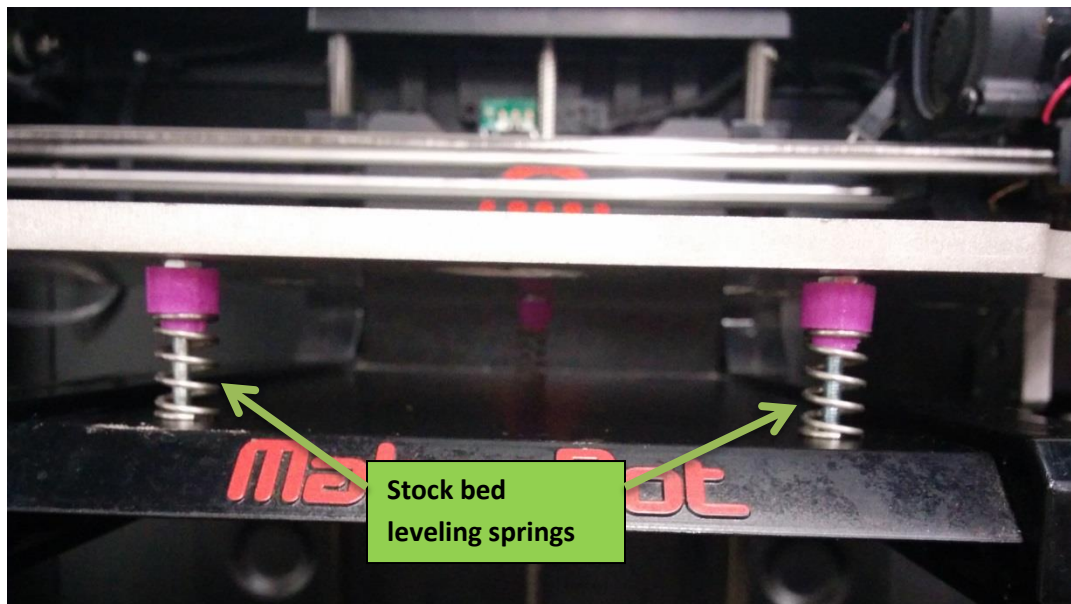
e. Step 5: Install the GeckoTek Build plate and Level the bed

Place the GeckoTek Build Plate on top of the Base. If it is not centered, gently slide the plate so that it doesn't overhang the edges of the plate. Go through the built in process of leveling the build plate. If you have questions about bed leveling, consult the Makerbot user manual.

Note: It is highly recommend to level the bed with a slightly larger gap between the nozzel and print surface than with the stock surface. You may want to fold the paper in half to make it twice as thick for leveling. The GeckoTek Build plate provides a high level of adhesion and having a 'squished' first layer can result in parts that are very difficult to remove.

Leveling the print bed with the build plate in place

Step 6: Ready to start Printing!

Your GeckoTek Magnetic Base system is now ready to use. Before printing, consult the GeckoTek User guide for recommended print settings and best practices.