All Nation Coupler Pocket Shims

Description, Parts List & Assembly

Kadee O Scale 2 Rail Coupler Shims BLACK 3D Printed PN#10000B

Step-by-Step Beginner Build Guide

The 3D Printed shims for coupler height adjustment.

In the process of scratch building freight cars, kit bashing and improving on 2 Rail O Scale models, often the frustration is getting the couplers mounted at the right height. I created some coupler pocket shims to have on hand and 3D printed them. A good amount of time can be spent getting your model trains to operate on the layout without derailing or uncoupling. This will guide you in the use of shims to correct discrepancies coupling between cars where the pockets are not gauged to a standard height.

1. Set up your workspace

A stable, comfortable workspace makes the entire build easier.

- Use a flat, well-lit table.
- Put down a cutting mat or a piece of cardboard.

- Keep a small tray or cup for shims of various thicknesses.
- Gather your tools: hobby knife, small files, CA or J B Weld Kwik, coupler height gauge.
- Have ready a section of test track.

2. Lay out and inspect all parts for differences in thickness

Identify each major component before you begin. Parts list description for one package.

You should see:

- **1 Package with each rectangle containing 12 shims (Thicknesses from 0.5mm – 2.0mm)**
- **These may come in different colors or be ordered for a single thickness only**
- **Available for the half pocket size**

Check for:

- Straightness, flatness and that the shape is consistent with the Kadee pocket profile
- Separate each shim, clean edges of brims, threads build plate support material
- Any small nubs from printing (these will be trimmed next)
- Check hole alignments against a Kadee pocket.

3. Trim and smooth the parts

This is the “prep” stage that makes assembly clean and square.

- Use the hobby knife to **carefully trim** any small bumps or leftover print materials.
- Use small files to smooth any edges left from the brims
- Lightly sand edges that will be glued—this improves adhesion.
- Do not over-sand; you’re just smoothing, not reshaping.
- You can check thickness with a caliper and may vary slightly from targeted thickness.

4. Setup and Installation Instructions

Take a known freight car having the correct standard coupler height.

Determine which shim will give the correct height adjustment

- Take the freight car with the correct height, set it on a section of track
- Take the freight car needing a new coupler or one already mounted but is not of the correct height place it on the track in front of the car with the correct height
- Bring the 2 cars together on the track and eye ball them to get a relative idea of the discrepancy

in height between the 2 cars.

- Now you can select one of the shims of a thickness that is close to the correct adjustment

5. Match Shim and Mount on Car Body

- Replace the freight car with the correct height with a coupler height gauge on the track All Nation Line Kadee Coupler Height Gauge – New & Improved Shim Tail Guidance PN#6Ti
- Or, if you have a Kadee coupler height gauge you can use that because assurance is needed to be as precise as possible on the installation, thus the use of the gauge over another car.
- When the couplers are aligned for all your freight or passenger cars, uncoupling is less likely
- Note the shape of the shim matches that of the pocket in terms of the mounting hole positions
- If installing coupler pockets for the first time, mounting consideration must be decided.
- Rather then using adhesives, it is preferential to use a couple of 2-56 screws
- Position the shim centered on the end of the car and mark where the holes are to drill a tap hole with a #50 drill bit
- Assemble the coupler in the pocket and select a 2-56 machine screw that is the right length and mount the shim and pocket onto the car
- Check against the coupler gauge on the track for proper height alignment to complete the installation followed by the same procedure on the other end of the freight car

VISUAL PART IDENTIFICATION

Figure 1: 72 Shims 12 shims each in the following approximate thicknesses: 0.5mm, 1.0mm, 1.25mm, 1.5mm, 1.75mm, and 2.0mm

https://allnationline.com/WP/?product=kadee-o-scale-2-rail-coupler-shims-beige-pn10000b

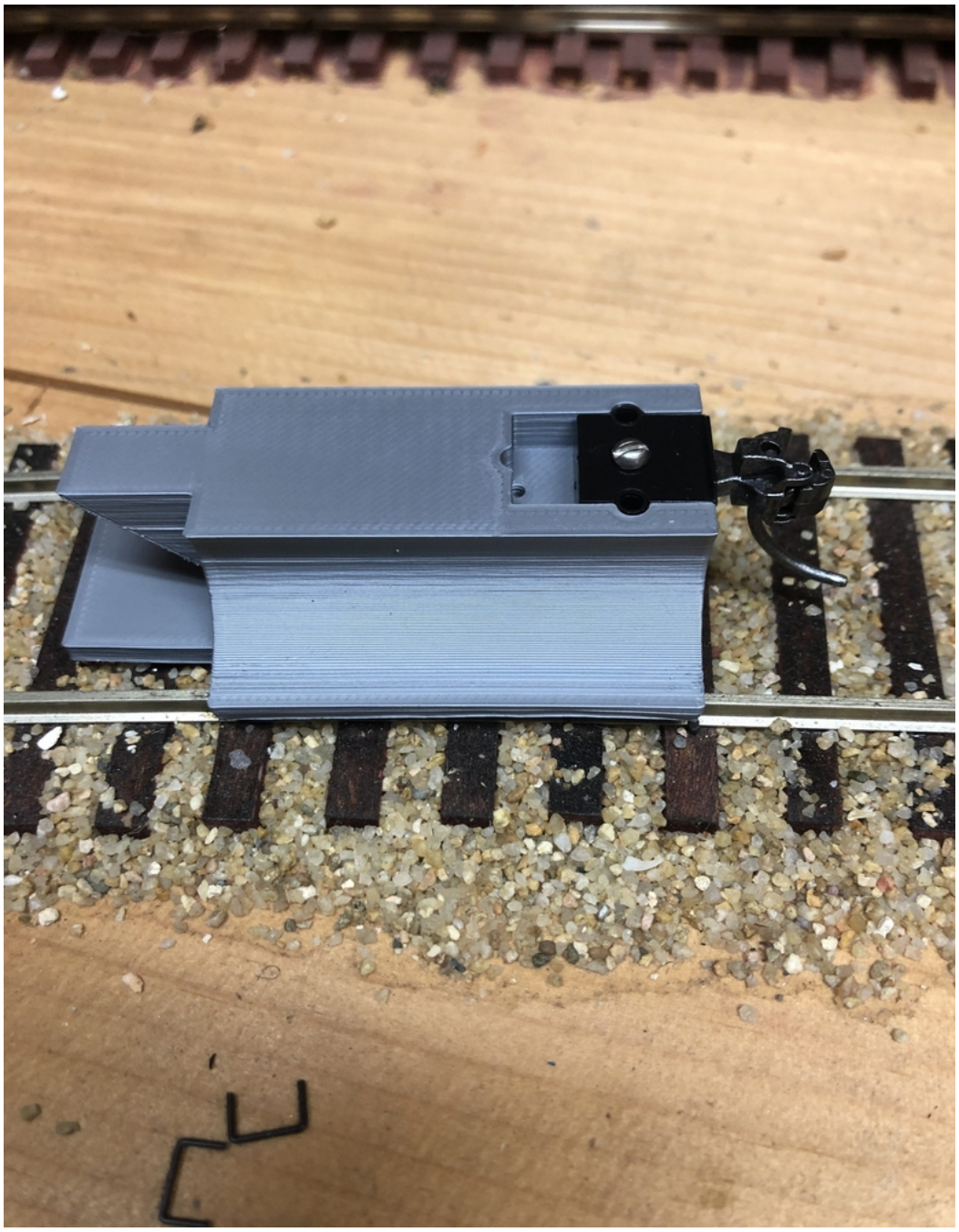

Figure 2: All Nation Line Coupler Height Gauge

https://allnationline.com/WP/?product=all-nation-line-kadee-coupler-height-gauge-new-improved-shim-tail-guidance-pn6ti