

# AZL Mikado Troubleshooting

John Cubbin, Raildig

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**The AZL Mikado, like all model locomotives, requires a good break-in period to achieve its best running performance.** What do you do if your Mikado seems a little finicky right out of the box the first time? I've spoken with Rob Kluz at AZL

Distribution as well as with many Mikado owners and I'd like to share a few tips with you for getting your Mikado to run its best.

As with any locomotive however there can be a bit of flash remaining from the manufacturing process or a U-joint can pop out of place during shipping or a gear can need to seat itself. All AZL locos are test run prior to shipping but these issues can still occur. Not to worry, all of the things I've just described are easily taken care of right at your layout.

*The photos below don't correspond directly to the three procedures I've listed below, I just wanted you to get a better look at the Mikado components.*



**One very important point, ALWAYS use both hands gently when picking up your Mikado as the loco and tender are permanently connected.**

## Let's look at three procedures *you can do* to get your AZL Mikado running and happy!

- 1) Reseating the driveshaft / U-joints
- 2) Seating the gears in your loco
- 3) Synching up the gears between the loco and tender

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### 1) Reseating the driveshaft / U-joints

A motor in the tender powers the AZL Mikado, this motor is connected to the locomotive body through a driveshaft and universal joint, or U-joint. During shipping the shaft can pop out of the joint in the locomotive body, this will result in the motor working but no power getting to the loco to turn the wheels.

The fix for this is very simple, you'll want to very gently pick up the loco and tender and gently press the two units together to reseat the U-joint in the loco body. You may need to gently rotate the loco and tender to line up the U-joint properly. It really is a simple procedure but with all things Z scale, you want to do this very gently. As you do this, *please watch where your fingers are placed* so you don't do any damage the loco's side rods.

## 2) Seating the gears in your loco

If your driveshaft is in place but you're not seeing any loco movement, it's possible the gears in the locomotive body are not yet completely seated. A solution for this is to place the loco and tender on the track and very gently apply light downward pressure on the locomotive body and at the same time, gently move the locomotive forward a small amount. If there's a stray bit of flash or a gear not yet completely seated, this will often do the trick. Once your loco is properly broken-in by running, this issue will go away on its own.

## 3) Synching up the gears between the loco and tender

When new, the gearing in the loco and tender may be slightly out of synch. To resolve this, again pick up the loco and tender and very gently (we do use that work a lot in Z scale, gently) move the loco and tender in opposite directions by a fraction, really, just by a fraction! The slight "twisting" will help to get these connected gears between the loco and tender in synch.

Look at the wiring between the loco and tender and this will tell you how much you can "twist". Careful not to go too far and risk breaking one or more of these wires.

Once your Mikado is running, the best thing you can do for it is to give it a healthy break-in. The more they run, the smoother and more reliably they run!

*In the photos below I've taken the trailing truck off my Pennsylvania Mikado to give you a closer look at the driveshaft and U-joints. **You will not need to remove this trailing truck** for any of the techniques shown here.*



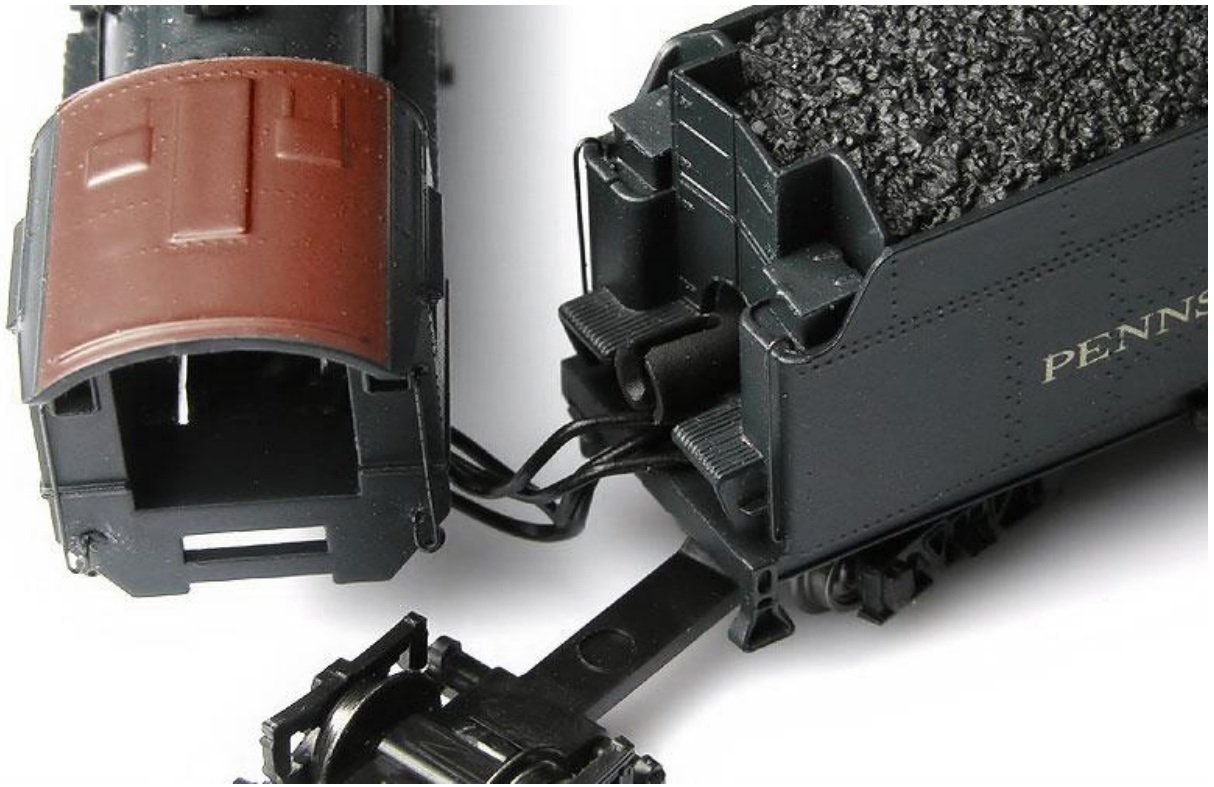
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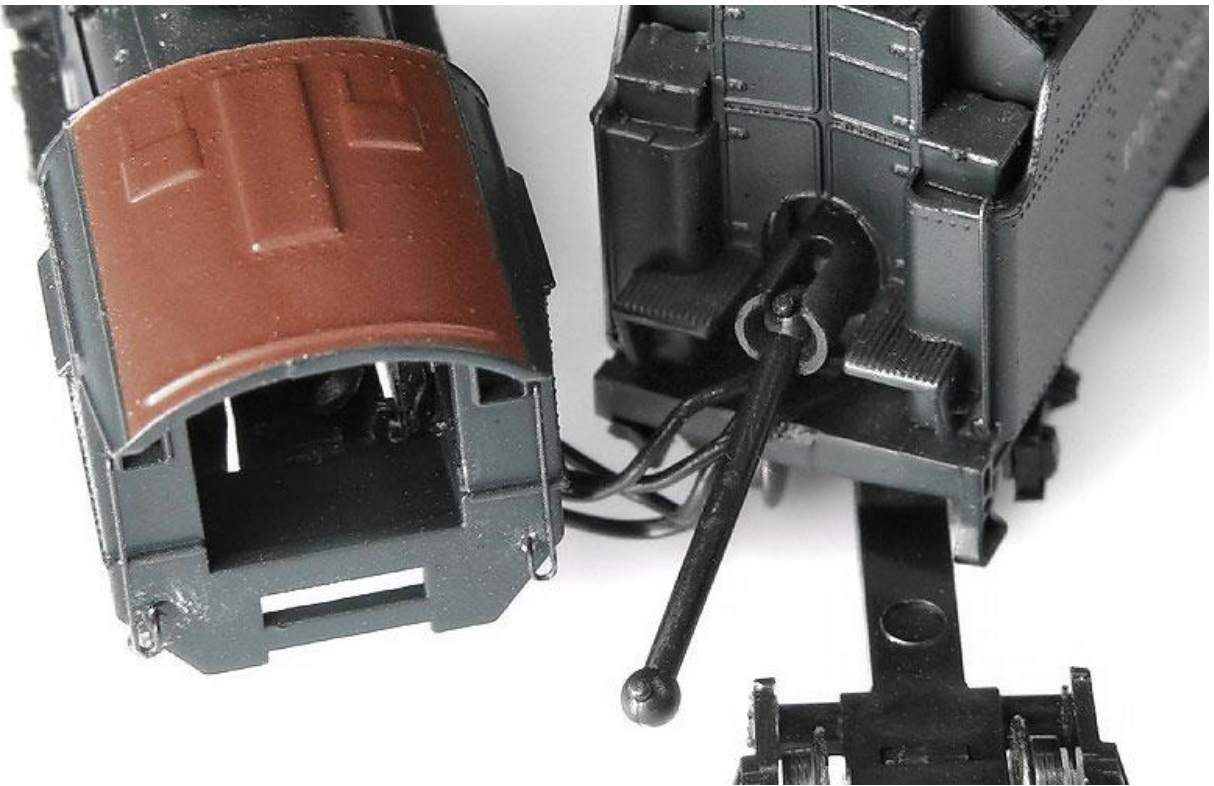
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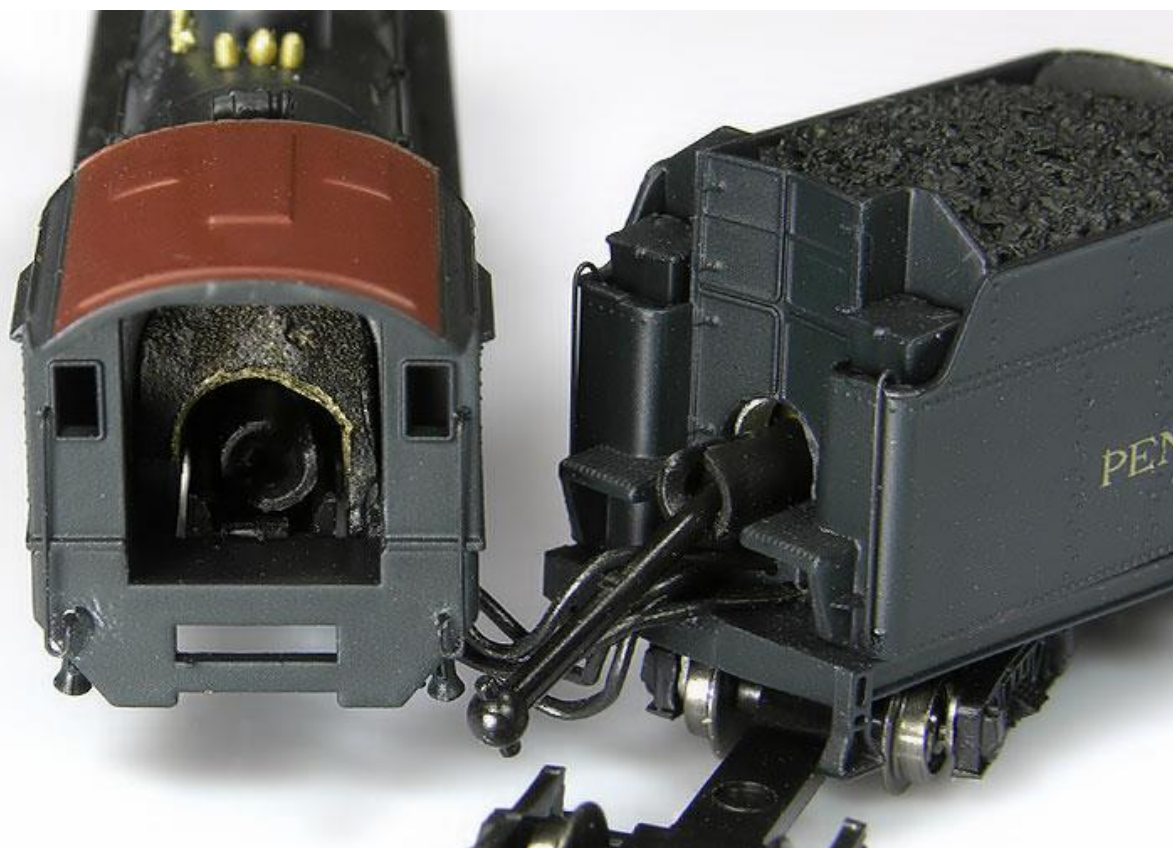
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- PHOTO 4 -



- PHOTO 5 -



- PHOTO 6 -