GP30 | GP38 | GP38-2 PCB

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Some folks are having problems with the GP30, GP38, GP38-2 circuit board (PCB) and we are experiencing our own frustration with this element of the locomotive.

So far, 99% of the problems with the GP30, GP38, GP38-2 revolve around the PCB, and how it makes contact with the locomotive frame and motor.

If you have problems with the GP30, GP38, GP38-2, here are a few things you can try:

Option 1

The PCB was made the exact width of the locomotive shell, so when you remove the shell if you apply any backward pressure it increases the probability that the PCB will get pushed back and dislodge from the frame – sometimes it gets stuck inside the shell! Naughty circuit board! No big deal, just use a small tool to gently remove it from the shell.

Option 2

There are two bronze tabs that go from the PCB to the motor. Sometimes these get a little bent out of shape. They should be at about an 85 degree angle to the PCB (not quite up and down, just ever so slightly pointing towards the rear of the locomotive). They also should be at the same angle. VERY gently apply pressure to bend these, but stabilize their solder connection to the PCB because this is a very thin circuit board and can be easily damaged.

Option 3 / 3a

There are two bronze clips on either side of the PCB. These were designed so if you want to add a DCC decoder, you can remove the clips and it will isolate the motor from the wheels from the lights. There are solder points where you can connect the wires for a DCC decoder and you're off to the races! If you are running DC (normal) power, those clips tie the power together so the locomotive runs and the lights go on. Sometimes those clips can lose contact, so if your locomotive is not running, try GENTLY touching / pinching those clips to see if that's the problem.

3a) Given that the coils on the bottom side of the PCB take up most of the room where the DCC decoder would go, we will probably eliminate the bronze side clips once the drop in decoder is made available.

Option 4

On very rare occasions, the motor itself rotates a little in the frame and it loses contact with the motor tabs. With the PCB out, look down and if the motor is out of alignment, gently rotate the

motor to center for better contact. Don't worry about the tabs shorting our on the frame, there is some clear tape on both sides of the frame with the motor connections are made that will prevent short circuits.

Option 5

If all else fails, contact your AZL dealer, they will work with you to resolve the issue. Of course, you can also contact Rob Kluz of Ztrack Distribution directly at rob@ztrack.com, but we know you have a good relationship with your dealer and they will try and take care of you.

We have found the GP30, GP38, GP38-2 needs about 30 minutes of running to break in, but after that, it is a super runner and Godzilla like puller. I measured about twice the tractive force compared to my MTL GP35. When you're breaking it in, please run it in BOTH DIRECTIONS and BOTH LEFT AND RIGHT TURNS. That will help the gears set up better.

Once the PCB makes good contact, I've had zero problems transporting it. I think UPS, FedEx and the Postal Service bang these boxes around quite a bit with all their sorting machines. I know I don't sit there and whap my locomotives across the table all day long, but I'm sure if I did, the PCB would probably come loose. I trust you guys are kinder to your Z scale trains than the U.S. Postal service.

One last note, we do provide a 90 day warranty, but that's there in case we break it. If you break it, we will do what we can to help, but we have to determine who was responsible, and then decide if we can repair it, or replace it. In other words, be GENTLE when you're making adjustments to the locomotive. They all ran perfectly well when they were shipped out of our distributor (we know because we test every single GP30!) so if something happened between here and there; it's probably a very minor adjustment that is needed. If you are getting out your 2 ton press, chances are good that you are about to make a minor problem into a major one!

Enjoy!
-Rob(A)
AZL