

A Permanent Repair for Drum and Cymbal Stands

R. Chris Berry 2024-12



Ludwig stand with stainless insert, locking nut, and lockwasher.



Yamaha stand with steel insert, shims, and 6-32 locking bolt.

A stripped out drum stand can be fixed using a threaded insert as detailed below. The repair is permanent, inexpensive, and involves removing very little metal. The two cymbal stands below were adapted for use with the NSD NXT5 bass.

Materials needed:

Brass 0.040" for new clamping plates.

Bolts m5-0.8 x 18 round head phillips.

Washers m5

Nylon insert nuts (lock nuts) m5-0.8 x 18

Threaded inserts: m8-1.25 ID, m10-1.5 OD stainless or brass if you can find them.

Locknuts m10-1.5 thin (5mm height)

Lockwasher m10

Bolt 6-32 x .25 round head phillips.

Lockwashers #6

Furniture T nuts: m12 OD, m8-1.25 thread.

Bolt m8-1.25 x 2", 2 nuts, and one lockwasher for the mandrel.

Tools needed:

3/32" punch

1/8" punch

Tap m10-1.5

Drill m8.5

Tap 6-32

Drill #36

Drill letter R

Shim stock (I used copper shielding tape 0.0025")

Dial Caliper

General metalworking tools including a drill motor with a 1/2" chuck.

Stand No.1: Ludwig (?) Stand Base.

The hole for the wing bolt that holds the legs in position was stripped out. The bolt is m8-1.25 thread.



Step 1.1: Disassemble the stand legs. This will prevent marring the stand while drilling and tapping.



Step 1.2: Drill out the rivets, 5mm in this case. Tap the remainder of the rivet out with a punch. Disassembly may involve removing a spring pin which holds the bottom on. Use an appropriate punch. Save all the parts in milk carton bottoms or similar. I also use plastic pencil boxes or small trays for this purpose.



Step 2: Drill out the stripped hole. The tap drill for m10-1.5 is m8.5. Tap the hole m10-1.5. Note: Use oil for lubrication or the tap will wear very quickly or possibly break. Tap a half turn, then break the chip by withdrawing a quarter turn. Patience is required for this to work right.



Step 3.1: Make a mandrel for the inserts. This is an m8-1.25 bolt with two nuts and a lockwasher. The short end is just shy of the length of the insert.



Step 3.2: Make chamfer on both ends of the insert. This insert is stainless and worked best with a medium to fine cut mill file. The mandrel will also be used to install the insert. Check the fit of the m10-1.5 locknut. If the nut will not thread on to the insert it may be due to the inside diameter of the thread. This one was a few thousandths larger than the tap drill. The solution is to measure with a caliper. I drilled the locknut (letter R) to solve this.



Step 4.1: Repair the bearing plate if necessary. This one is made of 0.040" brass.



Step 4.2: Bending the new bearing plate in the vice. Bend from the middle to the end.



Step 5.1: Install the insert using an m10 locknut (thin) and an m10 lockwasher. Having the plastic insert and plate in place helps ensure that the insert does not go in too far.



Step 5.2 Tools used for insert installation.



Step 6: Reinstall the bottom fitting using the spring pin, punch, and a soft hammer.



Step 7.1: Bolt the legs back together.



Step 7.2: M5 parts for stand reassembly.



Step 8.1: Stand no. 1 needed some packing tape in two places to adapt it to the repaired stand base.



Step 8.2: Outdoor foam tape on the bottom tube.



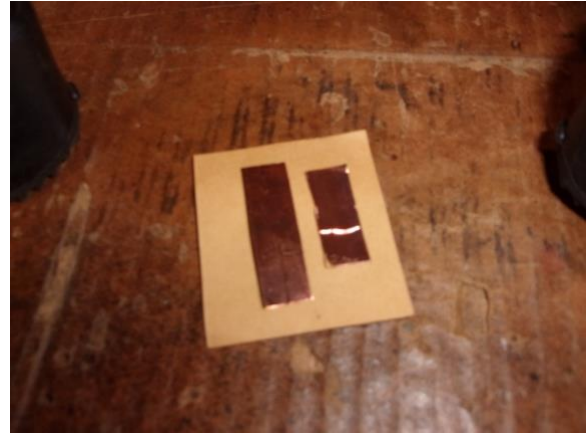
Step 8.3: The completed stand is ready for the NXT5 bass at standing height.

Stand No. 2: Yamaha Stand Base.

The second stand will be used for holding the NXT bass at sitting height. The Yamaha stand has an m12 hole where the (lost) threaded insert once was.



1. Yamaha stand with new insert.



3. The insert was 0.005" undersize. Electronic shielding tape was used to fill this gap.



2. Making the insert. A furniture T nut was just right for this repair. The internal thread is m8-1.25 and the outer diameter is m12. The flange was cut off with a metal cutting blade (32 tpi) in a coping saw frame.



4. The insert was secured with a 6-32 brass bolt about 1/4" long. The tap hole (#36 drill) was threaded through the casting and one side of the insert. Note that I tried 3/32" pins (a rod and also a tube) and neither worked well. A spring pin would be too hard for this application. If it fouled the threads the problem could not be corrected with a tap.



5. Threading tools. The hobby knife handle has been drilled to fit the countersink.



7. The completed stand with the NSD hardware.



6. A new bearing plate was made and installed.



8. Incidentally, the threads on the top bolt for mounting the bass had to be chased in order to work properly.

Hopefully this procedure will save many a stand from the recycling bin. I am forever grateful to my Dad for teaching me how to solve problems in the shop. His unbounded curiosity is the soul of engineering.