Repairing a Conn 650 Plastic Adapter 71923-213

By Keith Tomazi

The pedal keys of a Conn 650 have plastic adapters to which metal brackets are attached. Pressing a pedal key causes the metal bracket to press aluminum switches at the base of the console, which completes a circuit and enables the sound to be produced.

The plastic adapter part on the pedal keys is part number 71920-213. The plastic parts lose strength over time, and the mechanical stresses at the tip of the plastic part opposite the set screw eventually causes the plastic to break, resulting in an inability to play the pedal.

It is difficult to repair the plastic parts, as the tip of the plastic parts can break off entirely and become lost. In addition, none of the common adhesives, such as Super Glue, Gorilla Glue, or even two – part epoxy bond to the plastic (unless prepared. See below.) Even if an adhesive will adhere to the plastic, the stresses at the sharp corner of the plastic parts will remain, so this type of repair is likely to be temporary.

As a result, the tip of the plastic parts needs to be reinforced, or the entire plastic part needs to be replaced.

One way to reinforce the plastic part is to glue or attach a thin strip of metal around the broken tip, so even if the bit of plastic is lost, the plastic adapter can still be used.

It turns out that if the surface of the plastic adapter is lightly sanded, two – part epoxy does form a strong bond with the plastic.

An example of a broken adapter is shown in Figure 1.

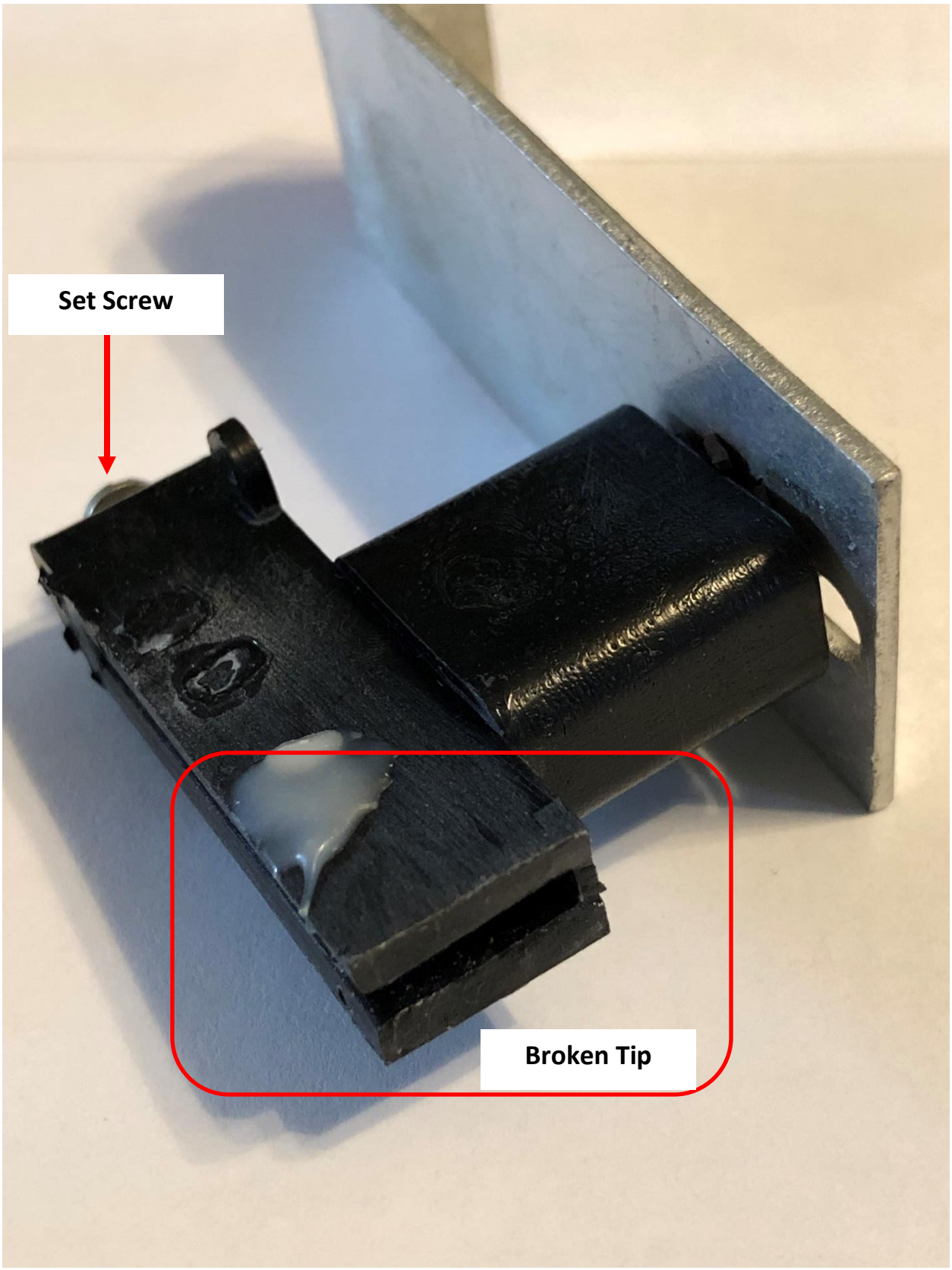

Figure 1 Broken Conn plastic adapter, 61920-213

Here are instructions on repairing the plastic adapters:

Parts needed:

Brass strip, 1/4" x 0.032" cut to length (I used K&S Part No. 8240. Other metals such as aluminum or steel should work, but brass is easy to work with to bend into shape without cracking.)

Fine sandpaper

Needle - nose pliers to bend metal into shape.

2-part epoxy, such as PC Super Epoxy.

The brass strip, epoxy, and sandpaper are available at Handyman Hardware.

Step 1: The plastic adapter should be detached from the pedal key. Back the set screw out a turn or two in order to loosen it.

Step 2: Lightly sand the plastic part number 71920-213 on all surfaces to which the epoxy is to be applied. The epoxy won't adhere to the plastic if it isn't sanded.

Step 3: Thoroughly clean the surfaces of the plastic part and brass strip. Make sure that all parts are dry before applying the epoxy.

Step 4: Bend the brass strip so that the broken end is held in place and the brass strip fits snugly against the plastic part. The brass strip should fit **flat** against the broken end.

Step 5: Cut the brass strip so that it extends about halfway along the plastic part on both sides.

Step 6: Mix and apply a two - part epoxy glue to the plastic part and place the brass strip on the plastic part so that it fits against the broken surface of the plastic.

Step 7: Check the fit against the pedal, adjust as needed.

Step 8: Remove the repaired plastic part from the pedal and allow epoxy to cure per instructions.

Most epoxy formulations have a short working time, so an efficient way to do the repairs is to have all the plastic parts prepared, and all of the brass strips cut to length and bent to the correct size and shape before mixing the epoxy.

An example of a repaired adapter is shown in Figure 2 and in Figure 3.

Figure 2 Showing parts and tools required and a repaired adapter

Figure 3 Close up view of repaired adapter and the part number of the brass strip