

Dusty Strings

Replacing a Broken Lever Cam

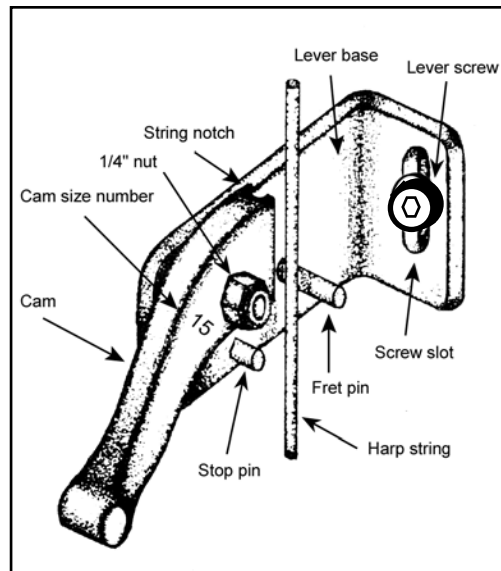
Changing a cam (the black flip-up part of a Loveland lever) is fairly easy, but there are some things to keep in mind. Using the proper tools, keeping track of the hardware pieces, and being careful to prepare for returning the lever and the cam to their proper positions will help.

To Replace a Broken Cam:

First of all, lay the harp on its side with the levers facing up. It is easier to gain access to the lever parts, and it will help keep the small hardware pieces in place. It's also a good idea to put a towel under the levers so if you do drop a part it will land where you can see it and retrieve it. You'll need a 1/4" wrench, available at most hardware stores, to loosen the nut that holds the cam on the lever stud. You may also need a 7/64" hex-head ball driver, depending on the location of the lever. These tools can be found in most hardware stores. We also sell them, if it is more convenient for you to get them through us. Give us a call if you want to place an order.

Using the 1/4" wrench, remove the nut that holds the broken cam on the lever stud. There is a plastic washer (or sometimes two of them) between the nut and the cam which should also be removed. If there is enough room to do so, slide the cam off the stud. There are several other washers – usually a brass washer, two spring washers, and another brass washer – between the cam and the lever base. These don't need to be removed, but if they do come off, be sure to keep track of them and put them back on in the same order. Slide the new cam on*, replacing the washers in the same position as before. Tighten the nut so that the notch in the cam is directly centered on the string. This is critical to the tone quality of the string when the lever is engaged.

If there is not enough room to pull the cam off because you are working in the upper ranges of the harp where the levers are positioned closer together, you will need to loosen the lever slightly and tilt it in order to gain the needed clearance.



But first you should mark the lever position on the harp by carefully laying a piece of scotch tape along the lever's bottom edge. A Post-It note will also work. Use the 7/64" hex-head ball driver to gently loosen the screw that holds the lever to the harp only as much as you need to rotate the lever counter-clockwise. Rotate the lever enough to slide the old cam off the stud, and follow the directions above for putting the replacement cam on. Then carefully reposition the lever as marked by the tape, and gently re-tighten the screw. Be careful not to over-tighten the screw or you risk stripping out the hole.

To Help Prevent Breakage:

While you're replacing this broken cam, it would be a good idea to check the tightness of all the cams on your harp and adjust them if needed. When the levers are new, the nuts are tightened so that the user feels a little bit of resistance when they flip the cam up. If the nut loosens over time and the cam becomes much easier to flip, there can be a natural tendency to use more force to get the same familiar feel of positive engagement. If that's the case, tighten the nut a very small amount while keeping the notch in the cam centered over the string. Conversely, if your cam has become overly tight and stiff, which can also happen over time with varying climatic conditions, it is easy to use too much force flipping the lever. If that is the case, loosen the nut until the action feels smooth, making sure you maintain a centered position over the string.

***Note:** If you find that a new cam will not go onto an older lever stud, you may need to slightly enlarge the hole using a 1/8" drill bit. Grip the drill bit with a vice or pliers and spin the cam onto it by hand. We don't recommend a power drill.