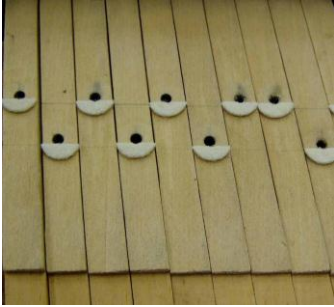


Cut Punching Technique for Touch Weight Modification



Many times we come across piano actions that have a heavy touch weight, even with friction at an acceptable 10-12 grams (downweight minus upweight divided by 2). This can be caused by installing new hammers that weigh more than the original, without leading the keyboard.

If there are very few leads in the keys, you can modify the touch weight by leading the keyboard. If there are already four or five $\frac{1}{2}$ " leads in the bass for example, you could lower the overall ratio or lighten the hammers.

One of the easiest ways to reduce touch weight, though, is a technique invented by David Stanwood and used for years by technicians with incredible results. By modifying the balance rail felt punching, a reduction of five or more grams is attainable.

PROCEDURE

1. Remove a comfortable handful of keys from the frame.
2. With the punchings still on the frame, put glue on the top of the existing punchings on the portion you wish to glue to the underside of the key. (You can use the existing punching. You do not need to change the thickness.)
3. Return the handful of keys to the frame on top of the glued punchings.
4. Remove the next handful of keys from the frame and repeat. By the time you get to note #88, the glue should be dry on the first handful.
5. Remove the keys again in handfuls starting at note #1.
6. Turn the handfuls upside down, cut away the unglued portion of the punchings, and return the keys to the frame. Be sure to use a sharp razor blade and make the cut parallel to the front of the key. The more of the center hole in the punching you remove, the more the ratio will change. If you cut away the entire hole and glue on the remaining third of the punching, you will change the ratio by roughly half a ratio (.5) in either direction depending on which side of the balance pin you attach the cut punching.

This operation should take about 30 minutes. It typically will not change the key level since the original punchings have been retained. Generally you will have to clean up the key level only as much as it needed when you came to the action in the first place.