

Heat Press info:

Think of a heat press as a device that works to change the shape of a neck in the same way as a curling iron changes the shape of a woman's hair. There is some theory that alludes to it softening the glue between the fingerboard and neck and allows the board to shift along the glue line so that when the glue cools and re-solidifies, it holds the neck in place. This may be true to minor extent in some cases, but it does not account for the fact that a heat press works great for eliminating the hump at the body end of a maple neck Fender. It also does not account for the fact that a heat press works well on necks assembled with hide glue. Hide glue has been tested at relatively high temperatures with little or no breakdown. You'd almost have to heat it to burning before it will break. Moisture will break it down very easily.

An important note: All heat presses done on guitars with adjustable truss rods MUST be done with no tension on the rod. Tension on the rod could cause the fingerboard to pop off during the procedure.

In order for a heat press to work, the neck needs to be clamped in such a way that it exaggerates the amount of change that you want at the outcome. Wood has a memory, and will tend to spring back towards its pre-procedure state. My heat press iron is a solid 18" long block of 3" wide by 1.5" deep aluminum that was bored out so that a 3/8" diameter heating element could be installed. My unit has no thermostat, which is fine with me. I'm not sure how hot it actually gets, but it will probably boil water if left on long enough, and if you touch it after being on for an hour, it could burn your hand. I regulate the heat going into the neck with the cauls that I use between the iron and the fingerboard. These cauls are positioned in such a way that both space the neck from the iron and double as the fulcrum points when I apply clamping pressure used for reshaping to the back of the neck. I use padded curved cauls that roughly follow the contour of the back of the neck. I often pad them with newspaper because it is very flat and leave few indentations in the finish if the finish softens from heat. I also use a layer of wax paper between the newspaper and the finished area to further protect the finish. The heat from the iron can damage some finishes. In most cases, as long as you keep an eye on the neck so that it doesn't get too hot, the damage is superficial and can be easily buffed out. The heat from the iron can also damage celluloid inlays, so care must be taken on guitars with such inlays to space them a greater distance from the iron. In some cases, it is just as easy to remove the inlays and reinstall them after the heat press.

Heat must rise into the neck from the iron to the fingerboard. I put a big C clamp on my iron and clamp that C clamp into my bench vice. The neck I am working on is then clamped to the top of the heat press. If the neck is attached to a guitar, the entire guitar is suspended by the neck off the end of the heat press. This sometimes requires an additional set of hands if you're not good with holding things in place.

To remove too much relief from a fingerboard, cauls need to be placed between the iron and the 1st fret and between the iron and the between the iron and the fret at the body joint or physical end of the truss rod at the body end. I curve the face of these cauls so that they follow the radius of the fingerboard, and I radius the edges of any wooden caul that I use anywhere to prevent the edges from digging into the surface. It is also good to use a caul made of a wood that is softer than the wood you are clamping. That way the caul distorts before the project being clamped can be damaged.

Once the fingerboard cauls are in place, I place my radiuses caul on the back of the neck at the point where the neck is most distorted. This usually occurs at the physical center of the truss rod which occurs at somewhere between the 8th and 10th fret on most instruments. I use a large C clamp/neck caul/padding/wax paper between that and the bottom of the iron. I put enough clamping pressure on this caul so that a neck with a bow caused by string tension is forced into a back bow. How much back you put in is the big judgment call. It takes experience (or luck) to get it right the first time. If it doesn't get to where you need it on the first pressing, it can be repeated. If you go too far, I can instruct you on the procedure to take a back bow out. It pretty much involves moving the caul at the 1st fret to the spot in the center of the neck where you want the most relief and clamping at the nut to create the bow and at the neck body joint to keep the project on the iron.

Most archtops develop compound bows that must be heat pressed out. The necks bow, and the

fingerboard extensions rise due to neck angle changes. In order to get the neck to play properly, both must be addressed.

The procedure for repairing the rise in the fingerboard extension is as follows:

Using the fingerboard cauls, 1 should be placed 3-4 frets before the body joint and the other 3-4 frets after the body joint. The clamping pressure is at the body/heal joint. If the heal is not flush with the back of the guitar, a flat caul will need to be place on the heal so that the heal and back are a level surface. An additional caul is placed so that it covers an area of the back behind the heal block and the area over the heal. All cauls should be radiuses and padded with newspaper/wax paper to protect the surfaces. Clamping pressure here must be carefully controlled so as not to damage the joint between the overhang and neck or the surface of the top under the extension.

4 All heating should be done so that the temperature on the back of the neck is such that the neck is warm to the touch. Maybe that would be about 100f-115f. The time it takes to heat a neck varies greatly from neck to neck, so you need to keep an eye on the neck while heating. Typical heating times with my iron range from 20-40 minutes. The project must be kept in the clamped position until it cools to room temperature.

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