



TURN THE HEAT ON

BY DANVERS CHILD, CJF

Thirty+ years ago, when I started in this trade, you couldn't buy a ready-made or keg shoe that was comparable to one that a reasonably skilled farrier could make. The biggest problem with the keg shoes on the market at that time was that they were all really narrow webbed, but there were any number of other problems you could point to. The heels were pretty sad, with most of them being designed to be cropped on a hardy. The nail patterns were shallow, and nail pitch was pretty much non-existent; the fullering didn't match with any nail heads, and the heel nails were really at the heels.

The better farriers responded to the inadequacies of the marketplace by honing traditional skills, carrying a forge and a supply of bar stock, and building their own shoes. Part and parcel of building shoes on site was fitting them to the hoof, with the farrier taking the completed or almost completed shoe to the hoof, checking shape and fit and seating the shoe hot.

As the marketplace responded to the demands of the industry, the quality and variety of ready-made shoes changed dramatically, and many of the commercially available shoes on today's market are extremely well made. In fact, it's now quite rare that a farrier encounters a situation where s/he can't purchase a shoe that's adequately made for the situation.

So, with ready-made front and hind patterned shoes, some even designed for rights and lefts and virtually all available with clips, doing an adequate job of cold shoeing is easier than it used to be. Subsequently, some farriers don't see the need to fire their forges; some don't even see the need to carry a forge.

Personally, I'm not about to retire my forge. Even with the high quality shoes on the market, I'll still make the specialty shoe rather than carrying it in inventory, and I'll still make my modifications as the situation dictates. But building shoes isn't my concern here. Instead, I want to focus on that "part and parcel" I referred to earlier—taking the hot shoe to the hoof.

Specifically, I want to establish and clarify the difference between hot fitting and hot seating, and I want to elaborate on the benefits—to both the farrier and the horse—of hot fitting and seating shoes.

Hot Fitting vs. Hot Seating

For most horse owners and many horse-shoers, there's simply cold shoeing and hot shoeing. They're not attuned to the intricacies and finesse involved in proper hot shoeing, and they see the practice merely as a smoke show (picture 1a). More often than not, these people perceive hot shoeing as a means for leveling the hoof and as a farrier's way of compensating for inadequate trimming. For them, hot shoeing involves nothing more than taking a hot shoe (usually too hot) to the hoof and smearing it until the hoof is flat (picture 1b).

We further their misconceptions when we use our terminology loosely and talk about hot shoeing, hot fitting, and hot seating as if they were interchangeable, synonymous terms. The first step toward clarifying the intricacies of the practice, then, is to break away from the tendency to discuss hot seating and hot fitting as if they were the same thing.

The terms describe quite different

processes—processes that actually have a sequence. The first step is to hot fit the shoe. Fitting can be done at a mild or black heat, but as a farrier's skills develop, s/he can do this at a more intense heat, which will eliminate the need to reheat the shoe before seating it. The idea here is that the farrier is not seating the shoe and burning it evenly onto the hoof. Instead, s/he is fine tuning the fit and ensuring that s/he has

- centered the shoe on the hoof,
- established a proper shape,
- addressed expansion/support in terms of both length and width, and
- determined an appropriate position and angle for clips (if applicable).

Hot seating, on the other hand, is the second step in the sequence and is done once the fine tuning is complete and the farrier has established the final placement of the shoe. At this stage, s/he is

controlled heat application or through quenching) utilizes a more intense heat on the clip(s). By having the clip and the clip base hotter than the rest of the shoe, the farrier can properly seat the clip into the wall before seating the ground surface, thus avoiding a run-forward shoe and an ill-fitting clip. As a farrier's skill increases, the clipping heat is generally incorporated into either the fitting stage, or—more often—the seating stage.

A number of factors go into determining both the proper heat and the proper time period for holding the burn, but the main factors are depth of sole and capsular moisture levels. Depth of sole is obviously a factor that must be assessed to determine that you don't "light up" the hoof and make the horse sensitive. Likewise, moisture content must be factored; a wet hoof may burn in well—popping, crackling, and roiling off a big smoke at 600-800 degrees



1a



1b



2a



2b

applying an even pressure and working with enough heat to

- sear the horn tubules shut,
- level out miniscule imperfections, and
- seat clips into the wall.

Occasionally, when using clips, it's necessary to distinguish yet another step between these two and talk about a "clipping heat," where the farrier (through

picture 2a)—while a dry hoof may require a heat of 800-1100 degrees to burn in, producing very little smoke and sizzle in the process (picture 2b).

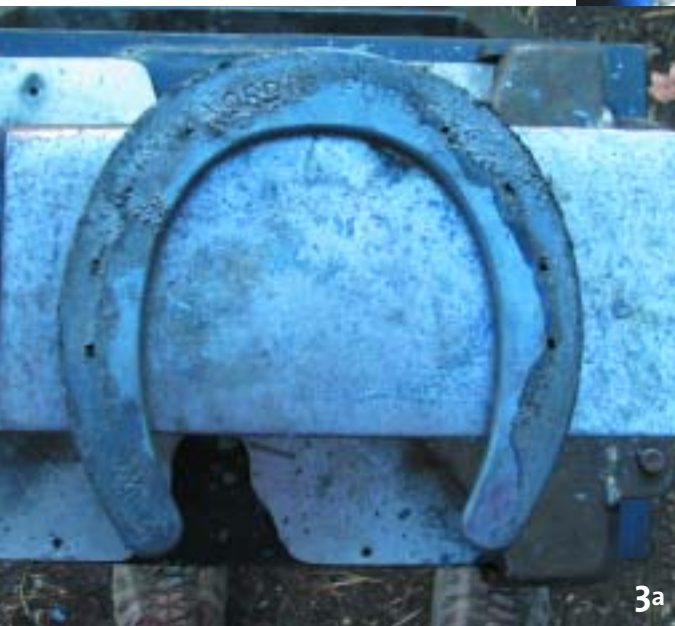
In effect, hot fitting and hot seating involve more than a dramatic smoke and flame fest; they're a sequenced process designed to fit the shoe to the hoof and seat it down, creating a union between shoe and hoof.

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Benefits of Hot Fitting/Seating

Done properly, there are tremendous benefits to hot fitting and hot seating. First and foremost, hot shoeing is simpler in that it is easier for the farrier to move and shape hot steel. At first kin, this may seem as if it's simply a farrier benefit—saving wear and tear on his/her arms. I would contend, however, that it's more than that. Because it's more difficult to shape the shoe cold, the farrier will be more likely to settle for less than perfect. Of course, when resetting shoes or when a hoof's shape is fairly consistent with a patterned shoe, that factor becomes less significant.



Even in these cases, however, farriers can find great benefit to hot fitting and seating shoes. Burning a shoe on gives the farrier an opportunity to “read” a number of things.... The obvious “read” involves level and flat and finding high/low spots in the shoe **picture 3a** or, more often, in the trimmed hoof **photo 3b**. Imperfections can be noted in the fitting stage, while the seating stage will adjust minor imperfections of this sort. More pronounced imperfections of level/flat (those that are 1/8" or greater) become more obvious at this stage, and the farrier can make the appropriate

adjustments to the shoe or the hoof before proceeding to the seating stage. Additionally, when the shoe is seated at a proper heat, a “bump” will raise on the hoof at each nail hole, providing an exact indication of where each nail will start (**picture 4a**). Likewise, there will be a char pattern on the shoe, which indicates exactly how much reveal is being left for expansion, growth, and support (**picture 5a**). The char can be used as a guideline for adjusting the shoe at the fitting stage and as a reference point for boxing the shoe at the seating stage. Finally, once the shoe is seated, the farrier can “read” both the shoe and the hoof to see if there is sole pressure to be relieved (**picture 5b**). When using clips, hot seating is virtually essential. It allows the farrier to burn the clip(s) into the wall of the hoof, creating a much better union and establishing stability which won't be achieved by

cutting the clip in or simply allow it to “float” on the surface (**pictures 6a and 6b**). Likewise, seating the clip into the wall in this manner avoids creating a “trap” where moisture and foreign material can collect between the clip and the hoof wall (as seen in right side of **picture 7**).

In addition to the immediate feedback provided by the visual “reads” during the actual fitting and seating sequence, there are other less obvious, but quite valuable, benefits to hot fitting and, especially, to hot seating. Searing the hoof seals and closes the horn tubules (epithelial cells), which have been opened during the trimming process, and aids in maintaining consistent moisture levels within the hoof capsule. In wet climates, you will seldom see “hoof hairs” on overly hydrated feet. Likewise, closing these tubules helps to establish a barrier against the intrusion of bacterial elements.

So... while it's possible to do an adequate job of cold shoeing, you'll do a better job if you turn the heat on. 🔥

