Fitting a Collar

by Jenifer Morrissey

“Collars were in abundance in all the West Coast barns. Must have been a hundred in my dad’s barn.” — Dale Wagner

“It would be nice if you had a neighbor or friend who had a couple of collars you could try on.” — Mooney Ranch

“Even if you have to haul your animal a considerable distance to a shop that has collars, you will end up spending less money.” — Vince Mautino

So you have a horse you want to work in harness. You may even have a harness. But you need a collar. Where do you start? Hands down the best answer is to find someone who has a collection of collars and a comparable collection of experience with working horses successfully in harness. This person may be a neighbor who’s a teamster, or, if you are so fortunate to live close to one, a harness maker or a proprietor of a collar shop. Then, take your horse to the collar collection and knowledgeable horseman (or woman) and have them find a collar that fits your horse. (While you’re with them, learn as much as you can; it will serve you well, as you’ll see below.)

Lynn Miller, in Work Horse Handbook emphasizes, “[There] are so many variables involved in the size and shape of a horse’s neck that the only accurate and easy way to size the neck is to use several collars and put them on one at a time until fitting is found.” Doc Hammill admits that he and his partner Cathy have more than fifty useable collars in their barn, accumulated over many years of fitting their horses and mules comfortably.

So let’s say your friend picked out a collar that is just right for your horse. But the collar isn’t for sale. What do you do next? Or what if you don’t have access to a collection of collars and a knowledgeable neighbor? What do you do next? In either case you need to understand the different styles of collars, what their critical dimensions are, and why all of this is important.

Collar Styles

If you’ve decided to work equines in harness, then you’ve probably seen discussions of collar style. In Work Horse

Collar styles, from left: Full face, half sweeney and full sweeney. The difference is in the amount of stuffing in the area between the red lines.

Photos courtesy Doc Hammill
Handbook, Lynn Miller aptly describes why different styles of collars are needed:

"[Horses] and mules have different shaped necks with mules commonly being more flat-sided. Stallions have thick necks with big crests and require larger-wider collars in order that they set back against the shoulder in the required manner."5

The vast majority of collars are of one of three styles: full face/regular cut, half-sweeney, and full sweeney. In the photo on the opposite page, the three styles are shown. If you've found a collar that fits your horse, you need to look at its face to determine its style. The "face" of a collar is the surface that touches your horse's neck. What differs in the three styles of collars is the amount of stuffing in the collar above the draft of the collar. For thin-necked animals, more stuffing is needed in this area and is provided in a full face collar. For very thick-necked animals, less stuffing is needed in this area, which is addressed by a full sweeney collar (with less stuffing, there is more flexibility to shape to a bulkier neck). Most of today's horses and ponies of draft type need a moderate amount of stuffing in this area, which is why most collars today are the half-sweeney style. Bernie Samson sums up the importance of collar style this way: "A collar needs to be thick where a horse is thin and thin where a horse is thick."

The red lines in the photo on the previous page bound an area where we can compare the amount of stuffing in the three types of collars. All the collars are 21 inches long. The thickness of the padding in the full face collar between the red lines is 2½ inches; the thickness of the padding of the half sweeney collar is 2 inches; and the thickness of the padding of the full sweeney collar is 1½ inches.

The late Steve Bowers, in A Teamster's View, shares this anecdote about the different styles:

"Regular cut or full face collars are made for narrow-necked animals. Many mules, mares and geldings which are being worked hard, and younger animals, wear regular cut collars. Half sweeney collars are made to fit horses with a bit more width and roundness to their necks. Fatter, underworked mares and geldings, and older animals, often use half sweeney collars. Collar manufacturers tell me that before the invention of the tractor, most of the collars in use were regular cut collars. Now, most of the collars being made are half sweeney collars. I bet the same sort of thing has happened to the pants size of the farmers since the invention of the tractor!"6

Doc Hammill explains, "An important reason for having full face, half sweeney, and full sweeney collars is the need to have a collar that will seat well on the shoulders of a specific equine. We need a well-seated collar that not only fits the neck and shoulders in a way that distributes the load properly over the collar bed, but we also need the collar to position itself, and therefore the hames, at an angle that will create the correct angle of draft. For example, on some thick horses with a certain type of wide upper neck, a half sweeney collar might be held too far forward at the top (at too vertical an angle), even though the collar fits in terms of length and width measurements and does not put pressure on the windpipe or pinch on the sides of the neck. A full sweeney collar of appropriate size because of its design may seat farther back on the upper part of the neck and thereby be carried at a more laid back angle and improve the angle of draft.

"For equines with the upper half of the neck very narrow and/or with very laid back shoulders, a half
sweeney collar will sometimes be carried too far back at the top. This will cause the angle of the collar to be too laid back and cause an angle of draft problem. In such cases a full face collar of appropriate size and shape tends to hold the collar in a more vertical position that will improve the angle of draft.

“Sometimes a collar seems to be the right size and shape but does not seat well on the collar bed and neck; you can teeter-totter it forward and backward over a contact point somewhere between the top and bottom. In such cases, experimenting with the three collar styles (full face, half sweeney, and full sweeney) may provide the solution.”

While the three styles described above are the most common, there are variations available, as this post on the Rural Heritage Front Porch illustrates: “I sell a collar made for mules, half sweeney but made narrow to better fit a mule. ... A mule ain’t a horse, only half one.”

**Critical Collar Dimensions**

*The style of the collar is not as important as the size.*

— Klaus Karbaum

If you have identified a collar that fits your horse and you know its style, you need to measure it so that you have the best chance possible to find one just like it. There are two common dimensions to measure, and there are two additional measurements that can be helpful.

The two common dimensions of the collar that you need to measure are its length and its draft. The length of a collar is measured on the inside of the rim, where the equine’s neck will be, as shown in the drawing on the previous page. The draft of a collar is the circumference of the collar at its largest point. Measuring the draft of a collar is also shown in the drawing.

Doc describes the importance of the draft of a collar this way: “The larger the draft, the more surface area that the forces of the pull are distributed over. Buggy collars have a very small draft. They’re designed to pull very light loads. Farm or field collars have a larger draft. Collars for logging, pulling contests, and other exceptionally heavy work have even larger drafts for the comfort and safety of the horse.”

Grey, on the Rural Heritage Front Porch, gives this advice about choosing the draft dimension of your collar, “[The] wider the draft you can find, the more well-suited the collar will be for any type of farm work.”

Doc elaborates, “I agree in general, but it depends on the size and angle of the collar bed of the animal. In animals with narrower, less flat collar beds, a collar with a very large draft could well extend beyond the collar bed and come too close to or even contact the bony structures and sensitive areas which should not receive forces of draft.”

**Two Additional Important Measurements**

*Let’s say you have a piece of string that is 4 feet long. You can lay that piece of string onto the ground and form a circle, a rectangle or a triangle, but the perimeter of the shape will still be 4 feet long.*

Same thing with that 24-inch collar. You can make it be 24 inches long by 10 inches wide at the draft and 6 inches wide at the top of the neck. Or adjust your hame straps and the hame rachet and make the collar be 23 inches long by 11 inches wide at the draft and 6 inches wide at the top of the neck.

— Grey

The two additional measures you can take that are helpful in finding an appropriate collar are the width in two places as shown in the illustration on this page. By measuring the width of the collar a third of the way up from the bottom and a third of the way down from the top, you will be able to give the collar shop useful information for choosing a collar that’s right for your horse.

Doc explains, “New collars come to us with various lengths and drafts, but, from a given collar maker, the patterns used to produce collars result in a very consistent shape of hole in the center of the collars. Collars of different sizes with this consistent shape of hole are then purchased by a length measurement and placed on horses with an almost infinite number of shapes to their necks – most of which are unlikely to be the same as the shape of the hole in the collar as it comes to us. If we purchase a collar by length measurement only, it can easily be too wide or too narrow at some point up and down the sides of the neck. Of course, we can adjust the hames to reshape the collar to fit the
sides of the neck better, but doing so will change the length, which will then be incorrect.

“For example, look at the collars in the photo above. Specifically pay attention to the shape of the center of these collars where the horse’s neck goes. The one on the left is new from the collar shop. Inside it is 23 inches long, 7 inches wide one third down from the top and 8½ inches wide one third up from the bottom. The collar on the right started as a 25 inches with an “inside neck hole shape” like the one on the left. After being reshaped to fit by hame adjustment and years of work on a heavy-muscled horse with a wide neck (always on the 25-inch adjustment), it measures 23 inches long, 10½ inches wide one third down from top, and 12 inches wide one third up from bottom.”

Doc summarizes, “It’s very unfortunate that, for the most part, people talk about, measure for, and purchase collars by only one measurement, that being the length.

The odds of choosing the right collar for a specific equine with just one measurement are very slim. By having the two width measurements, we have a much better chance of obtaining a collar that has the proper inside circumference measurement to allow it to be molded into the shape that will fit our horse.”

When You Can’t Try One On
What if you don’t have access to a seasoned teamster with a sizable collar collection? You need to start by measuring your horse in its draft area.

The problem with just about any method is that you can only get close with measuring. — Vince Mautino

Most times [when] I’ve measured the neck for a collar instead of trying a collar to see, I’ve been too big in the measurement. — Mooney Ranch
Depending on the shape of his neck, you might get it right the first time, but probably you will need to try several different collars. — Wally B

There are three common measuring methods:
1. Laying a measuring tape where the collar lays;
2. Using a collar measuring tool, either purchased or homemade; and
3. Measuring around your horse’s front leg.

To use a measuring tape, lay it along the draft area in a straight line, keeping in mind that the measurement you want isn’t where you have the tape laying. You need to estimate where one end is at the base of the neck where it enters the chest and the other end is in front of the withers, keeping the measuring tape straight. The number of inches is the size of the collar.

The problem with laying a measuring tape is that you need a straight-line measurement because that’s how collars are measured, but your horse’s body won’t allow you to lay the tape in the exact location needed for the measurement, so you are estimating the size from the very beginning. That’s why we’re always looking for better ways to measure.

Using a Collar-Measuring Tool

Many collar shops offer a collar measuring tool for sale. It’s also possible to improvise at home.

I haven’t had real good luck using a tape measure to measure a horse’s neck for a collar. I like to use two framing squares, laying one over the other to make a C shape. Put one end over the neck and one under the neck where the bottom of the collar should be and then look at the measurement on the side along the neck.

— Jerry Hicks

The photos on the opposite page show how to take two framing squares and make a measuring tool. While not everyone necessarily has two framing squares laying around, they can be found for less than $10 each (sometimes just a dollar or two) and are a worthwhile investment given the cost of a collar, the length of time you’ll own that collar, and the importance of proper collar fit. A ready-made collar measuring tool from a collar shop is likewise a worthwhile investment.

The Square method works [but] you need to know where to place them for the right reading. — Dave W
As with any tool, using the collar measuring tool/framing square method of measuring for a collar requires that you do it correctly. First, when you measure, your horse’s head needs to be in the position that it will be in while working. It shouldn’t be to one side or the other, looking for its friends. It shouldn’t be up high because it’s afraid of the framing squares, and it shouldn’t be low because it’s reaching for a bit of green grass.

Second, when you measure, you need to put the arms of the collar measuring tool/framing squares exactly where the extreme ends of the collar’s rim will be. Keep in mind that putting the measuring tool at the base of the neck and in front of the withers on the collar bed isn’t the right place. The reason is that collars are measured at the inside of their front rims and putting the measuring tool at the base of the neck and in front of the withers is farther back than where the rim of the collar will be and may result in a measurement that’s too big by an inch or more.

Bernie Samson suggests the following: Stand on the near side of your horse. Place your left hand on the horse’s neck with your thumb towards the point of the shoulder and your pinky finger towards the head. Now slide your hand down the neck until your index finger rests on the collar bed. Approximately between your ring and pinky finger is where you want to take a measurement with your collar measuring tool. Or, if you have a collar that you know is too big, you can still put it on your horse and use its rim to help you locate where to put your collar measuring tool. These techniques are shown in the photo below left. Bernie emphasizes, again, that using a collar measuring tool and these techniques to properly place it still only give you an estimate of proper collar size.
Depending on the size of the squares you have, you may be able to read the measurement you need right off one of the squares. More likely, you’ll need to hold them together and use a measuring tape to determine the inches between them, as shown in the photo on page 29.

**Taking Width Measurements on Your Horse**

You can also use the collar-measuring tool to take two additional measurements that are helpful in getting the right collar to fit your horse. Doc Hammill credits his friend and fellow teamster John Erskine for showing him this technique. These two measurements are taken at the thickest point of the two most thickly muscled areas of the neck – one up high just below the crest, and a thicker area down lower, closer to the base of the neck, as shown in the photo above. Giving a collar shop these two dimensions, in addition to length, style, and draft, will increase the likelihood the collar you purchase will fit your horse appropriately.

Doc explains, “For example, assume you accurately measure your horse and get a length of 23 inches so you order a new 23-inch collar like the one on the left [in the photo on page 27]. When it arrives, you try it on your

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horse and find that the length is okay but it is much too tight on the sides of the neck. You call a friend and learn about taking the two width measurements as well as the length. It turns out your horse has a width of 7½ inches one third of the way down from the top of the neck, and 9½ inches one third of the way up from the bottom. You measure your new 23-inch collar and find that it measures only 7 inches wide one third of the way down from the top and only 8½ inches one third of the way up from the bottom. The collar can be reshaped by adjusting the hames to force the collar out to the 7½-inch width and 9 ½-inch width that you need but not without making the length shorter (it would likely end up being only about 22 inches long). So it would be necessary to purchase a 24-inch collar in order to get the 23-inch length, 7½-inch top width, and 9½-inch bottom width that you need.

“Another example is a collar that is the right length and the width on the upper part of the neck works, yet it is too wide one third of the way up from the bottom. Making it fit for width one third of the way up by bringing the lower part of the hames together will result in making the collar too long.

“I recommend that folks ask the harness or collar shop to send a collar of the style and draft they want that can be forced into a shape that produces the three measurements that are needed. It may take a little explaining and convincing, but it will be well worth the extra effort and might save the cost and time of shipping an incorrectly sized collar back and getting a different one.”

The Importance of Headset When Measuring

Doc emphasizes that the proper location of your horse’s head when measuring is crucial. “If we measure for or fit a collar with the equine’s head too low compared to where it is when he normally works, the collar will be too small. For instance, if you measure for or fit a collar with the head lower than when the horse is checked up and then check the horse up to drive or work, the collar may end up being too tight and choking. If, on the other hand, the head is too high when measuring or fitting, the measure will be too large, and the collar is likely to be too loose and ill-fitting when the head is lower at work.”

Doc continues, “I can’t emphasize enough the potential for error if we’re not extremely careful in measuring. It’s very easy to measure at points too far forward or too far back on both the top and the bottom of the neck. We must also be aware that there needs to be room at the throat of the collar for the windpipe, so we need to estimate and add a little extra length so the throat of the collar does not make contact over the windpipe.

“Even with all three measurements – length then width in two places – measuring using a collar measuring tool is only an estimate because there can be so much variation in the curved lines between the measuring points on various horses’ necks due to different conformation.”

When we measure with a collar measuring tool, the position of the horse’s head MUST be in the position in which it will be worked for a measurement to be close.
Measuring Technique #3

...if you measure around the thickest part of a front leg (right near the top), it will be within about an inch of collar size. I was skeptical of this fact, so I have measured all 10 drafts on my place and several others ... lo and behold it is always within 2 inches. If I rule out the horses with freakish features (2,100-pound horse, 23-inch collar), I found that it is probably within about a half inch!

— Jason Mac

Jason Mac isn’t the only one that has found this technique reasonably accurate. Bernie Samson, who, as a harness maker, regularly coaches people on buying the right size collar, says, “It’s amazing how close this measurement comes to estimating the correct size for a collar. It works for ponies all the way to drafts. Anyone can do it. The only time I’ve seen people run into issues is with, for instance, some quarter horses that have a bulge in their leg that throws off the measurement.”

Will Beattie, on the Rural Heritage Front Porch, wisely suggested that this method can be used to double-check the other measuring methods; if they give wildly different answers, you’ll want to make sure you are doing the measuring correctly. Doc concurs: “I measured the horses in my herd, and the leg measurement did typically come within an inch of the collar length measurement. But, and this is important, for the horses in my herd, the length measurement would never be adequate on its own for estimating correct collar size. The variations in the width of the horses’ necks will cause changes in the needed length measurement that this technique just can’t predict. You saw exactly what I mean in the photo [on page 27].”

In the Internet Age

If you are one of those horsemen (or women) who don’t have access to a seasoned teamster with a sizeable collar collection, you may feel daunted by the measuring techniques available and their accuracy (or lack thereof). A middle road might be to take advantage of the internet. By taking photos and/or videos and sharing them with someone knowledgeable, you might be able to get measurements that you feel more confident about.

Doc shares, “I’m doing more long distance consulting and coaching by phone and computer all the time. It’s a great option when someone doesn’t have access to an expert or a mentor in person. Like all other aspects of driving and working horses in harness, doing a good job of sizing and fitting collars is an art — part science, part numbers, and a lot of tinkering and fussing to get it right and keep it right. I encourage folks to get help from someone who is truly knowledgeable one way or another. Trial and error is usually a tough way to learn.”

You’re Not Done Yet

In the article “The Elusive Ideal Point of Draft,” (Rural Heritage, Aug/Sep 2014) we learned about the anatomy of the shoulder area of the horse and how important proper collar and harness fit are to protecting the sensitive structures of this area. Ensuring the comfort of our horses not only protects them from injury but also makes our work safer and more efficient. Going from understanding the importance of proper fit to getting proper fit is, of course, not easy. A quick search of the Rural Heritage Front Porch brought up 55 threads on “collar fit” over a period of 10 years, with 16 of those threads explicitly about...
fitting a collar. The rest were about the many ways that getting the right collar fit impacts our horses’ comfort and ability to work well in harness.

Collar fit is often compared to fitting human boots. You wouldn’t attempt to climb a mountain in a pair of boots that were too big or too small, just as you shouldn’t expect your horse to work with a collar that’s improperly fit. Doc was recently on a website looking at work boots. “There was a chart comparing foot measurements to boot size. On a diagram of the foot, the measurements required were length from toe to heel, greatest width at the front of the foot, and greatest width at the heel. It was very similar to the three measurements I use when measuring for collar size. In my opinion, any measurement system using a single measurement is pretty much a shot in the dark.”

At this point you may have measurements and you may know the style of collar you need, but you’re still not yet ready to buy a collar. You still need to make some additional decisions that will significantly impact the size and style of the collar you choose. For instance, you need to think about using collar pads or not, adjustable collars or not, and the impact of working condition.

Once you do buy a collar, there’s even more that must be considered before you can work your horse. Doc explains, “Collars rarely come off the production line with the measurements we need. Rather, they typically need to be reshaped and molded into the perfect size and shape for your animal. This can be accomplished first by way of proper hame adjustment and, second, by the animal doing some relatively light, steady work in the collar after hame adjustment has it fitting close to ideal. The secret ingredient is a collar that has the correct inside circumference distance to be molded into the specific size and shape of a cross section of the neck at the proper level and angle on the neck where the collar should rest.” So, there’s more to come!

5 Miller, p. 80.
14 Response by Jerry Hicks at 2011-08-01 06:45:19 at http://www.ruralheritage.com/messageboard/frontporch/15031.htm