

Tom Dorigatti

The Triple-Tape System for Improving Anchor Draw Length Consistency

Do You Think Your ‘Hard Stops’ Are Really ‘Hard Stops’?

Many of the cams being utilized on today's bows have gone away from the soft, smooth, long “valleyed” systems of yesteryear in favor of higher let-offs and thus higher speeds. Few manufacturers even offer let off percentages below 65% anymore, and those that do have it only as a special order option. The term “hard cam” is more common, along with others such as “hard wall,” “solid stops,” or “short valley.” Along with this, we shooters of today are thinking that since our bows have “solid stops” and a “hard wall,” then we don't have to concern ourselves much with watching or working for tighter consistency as to how far we draw back our bows into our anchor point. We figure that since we have the hard wall, then that means if we pull the bow back to the stops, we are consistent and don't have to worry about it.

This article is not going to deal with the fact that most shooters of today have their draw lengths set from ½ inch to 2 inches or more too long. It assumes that you already have your draw length very close to where it is supposed to be and that the bow is already tuned. It will deal with, however, the fact that hard cams are not as easy to be consistent with as we think. It will also offer an explanation of how to set up a visual reference to make yourself more consistent with your draw back to anchor draw length. I call it the “Triple Tape System for Improving Draw Length Consistency.”

Four Questions

There are four important questions I will pose at this point:

1. Do you know how close you are to being at the same point in the draw cycle of your bow when you hit your anchor point or full draw each time?
2. Do you know how much “room” you have in your cam system to ‘wander’ from the short side to the long side to the absolute limits of how far that cam can be drawn back to?
3. Do you know if you are at your “sweet spot” or if you are really coming in too short or perhaps too hard into those stops?
4. Do you know that this can be set up to be more controllable than simply by feel alone for little or no cost and with little or no adjustment to the bow (unless one is really needed).

Since most of today's bows are no longer of the round wheel/soft cam variety, we think most bows and cam systems have very little room for error in how far we pull back the bow to get to our anchor. Few things could be further from the truth! We think we have our draw lengths set correctly and that everything is peachy keen. We tend to put that part of the matrix out of our minds. However, upon further investigation I've discovered that even with a hard cam and a “hard stop” bow, a person can and will vary their draw length control by as much as ¾” . . . and some shooters, even more than that. What I mean by this is simple: we all can come *into the stops*, or we can come *INTO the stops*, or we can come *HARD INTO the stops*, or we can pull until we cannot draw the bow any farther. In addition, we can do anything in between any of these at any time or

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on any shot and not even realize we are doing it. What I discovered in this recent research is that average shooters vary the most, and better shooters vary the least. This isn't rocket science and should be entirely obvious. According to the video *Secrets of the Pros*, (I paraphrase) "Draw length is probably the most critical aspect for accuracy control." The not so obvious is how much this variance really is among the bow brands, cam types, and among different levels of shooters; even when time is taken to try to get it right!

I won't bore you with the data and tables, since that really isn't the focus of this article. However, there are some key elements that I need to stress with regards to the cam type, the cam size, and how aggressive the cam is. What I discovered isn't rocket science, and it makes complete sense.

1. **How Much Variance Can you Get out of the Cam Itself?** What I have found from extensive checking on my own equipment arsenal and from several cooperative fellow shooters, clearly shows that even the hardest cams can be pulled from softly into the stops back to where you cannot pull it any further. This can and does vary a lot more than one would think. One can easily ascertain this on their own bow in a matter of minutes by simple use of a measuring arrow and an assistant to mark that arrow from any common point of reference. I would

recommend the True Draw reference point transfer I recommended in an earlier article. If you haven't done this with your bow, I highly recommend that you do. What you are going to find will shock you!

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Photo 1 A typical draw variance for a 29" draw.



Photo 2 A typical draw variance for a 27" draw.

- *Conclusions on the Variance*

- i. The larger the cam (the longer the draw length) and the less aggressive the cam, the more the shooter can vary the distance pulled “into the stops.” Of course, this was anticipated, but I didn’t expect the numbers I got. This number ranged from just over 1¼” on the larger, less aggressive cams to just under ¾” on a 27” cam (which is the shortest draw length that I measured). The ¾” variance also is pretty close on a very aggressive cam with a very short valley.

- ii. I also found that the norm for the shooters I checked, including myself (on four different bows and three different cam types), the initial anchor point draw length variance was from ¼” to ¾”!

- 2. ***How Much Do You Vary Your Anchoring Draw Length?*** Most of the archers that I have approached with this question haven’t a clue. Some didn’t seem to even care. Most that cared told me that since their bows were hard stop cams and that they set their draw lengths up to the stops, they figured they probably weren’t varying very much at all. When asked how far into the stops they drew, most couldn’t tell me, they just said “Where it feels good.” Those that I measured were appalled at how far they could vary from short to long, and even more by how much they were changing either from shot to shot for from the beginning of an end or round to the conclusion of the end or round! It was a real eye opener for them to see that they were running anywhere from ¼” to ¾” or more variance when all the time they thought that they were coming to the same point in the draw cycle every time by “hitting their anchor point and going by feel alone.”

- *Conclusions Concerning the Shooters’ Thoughts on Their Variances*

- i. First off, most thought they had draw length under control to a very small amount. They had been misleading themselves!

- ii. Most good shooters’ anchor point “draw lengths” varied within a reasonably consistent range no matter which bow or cam style was involved. But on the average it is nearly ¼” difference for a good shooter and ½” or slightly over for the average shooter.

- iii. This difference doesn’t vary on every single shot, but it does vary depending upon the following (and probably other variables as well):

- 1. How soon into the round you are. Early in the round, people tend to overdraw.
 - 2. Which arrow in the “end” you are shooting. The first arrow is normally drawn farther than the last arrow of the end.

- 3. Indoors, whether they are shooting the high target or the low target and how high those targets are from the floor!

- 4. The time of day you are shooting. Oh, yes, if you’ve worked or done a lot of activity that day, you tend to come in “short”. If you are fresh, such as in the morning, then you tend to come in long for a longer period of time during the “round.”

- 5. The shooters never had a “sense” that they are really varying, since most are going by feel alone along with the anchor point and a few other potentially variable parameters. The bow feels the same regardless. But if you would take the time to actually mark the arrows, a different story will emerge all together.

So, now that I’ve prepared you and hopefully raised the questions in your minds as to just how consistent you are with your anchor point draw length, let’s go into setting up a Proactive system to help control this issue and to minimize your variance with a visual cross-check. In addition, this system will help teach you the muscle memory quickly and still give you a visual cue to use at a quick glance as a double check on those tough uphill, downhill, side hill, and other shots with poor footing or body positioning outdoors.

The Tape System for Improving Draw Length Consistency

This is not new nor did I invent it. It has been around since the mid-1970s, in the days of the wheelie bows, or round wheeled “soft cams.” There are many variants of this system that were used in the past. It was pretty much abandoned by most shooters with the advent of harder-cammed bows, solo-cam bows, and the development of hybrid cams. Again, as mentioned before, people don’t see the need for watching their anchoring draw length, since things feel like they are in the stops so it is “good enough.” Most set themselves up to where they figure they are right on, and practice from there, never thinking about a potential source of variance which can be a potential point or X-robber for them.

Most people who use a “tape system” use two tapes, one on each cable and either they set them to draw even with each other (less precise) or they set them to draw the top of one tape to the bottom of the other tape (more precise). There was even a set of “cable stops” back in the early 1980s that one could place on the cables as a “draw stop” to help control the anchor point draw length. You simply set the stops to come together when you were either in the center of the valley or at just the back of the

valley and pulled to that point. However, most of the time, we found ourselves coming off those stops, or that they would come loose or slide down the cables with use. Those didn't last long. Once people started setting themselves up to the wall or back of the valley, then creep tuning came in and it became apparent that absolute draw length control, especially indoors wasn't as critical . . . if the bow was properly creep or tiller tuned. Outdoors, however is an entirely different story. Nonetheless, people still shoot mostly by "feel" and pulling to somewhere into the stops.

The Triple-Tape System What I have done, however, is what I feel is an improvement on the tape system and one that is much more accurate to apply and use. It costs only the use of three or six pieces of $\frac{1}{8}$ " wide masking tape about 4" long, a little time, and some super glue or "Fletch-Tite"TM. Instead of only two pieces of tape to align, I recommend the use of three tapes, two on one cable, and one on the opposing cable. The idea is to space the two pieces of tape apart just a little wider than the single piece of tape on the opposing cable. Then, when you are at the "sweet spot" on your draw length anchor, the single tape is aligned between the two pieces of tape on the opposing cable. To learn the muscle memory, one simply draws back the bow to anchor, visually checks to make sure those tapes are aligned correctly, sets their shot sequence (back tension), and finishes the shot. The telltale signal that you are "losing it" is a tightening of the release hand or forearm. A quick glance at those tapes at this time will show, more than likely that the single tape is now aligned with the top tape, which is an indication you have "crept" at least $\frac{1}{4}$ ". Some people set up to draw with the single and bottom tape aligned halfway and come into the "in between position." This is fine, but remember that any loss of tension must be regained.

How to Set up the Tapes

1. Cut two pieces of masking tape (it works the best in most cases) $\frac{1}{8}$ " wide and about 4 inches long. The wider you make these tapes, the less accurate your consistency will be. You will be cutting all three tapes from the same 4" long piece of masking tape so that the widths are identical.
2. If the cable guard is above the bow handle, then it is best to mount the single tape on the down cable about $\frac{1}{2}$ " to $\frac{3}{4}$ " below the cable guard. This insures that this tape isn't disturbed or moved by the cable glide or roller guides. It also insures you get the matched tapes

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Photo 3

Photo 3 View of triple tapes on single cam bow.

as close to the rest level as possible. To mount the tape, simply wrap it tightly about five or six layers thick around the cable, pressing it firmly with your fingers. Do not glue it into place just yet.

a. For “shoot through systems” or bows with the cable guard below the handle, strive to have it set so that the down cable aligns as close as possible to the height of the peep at full draw. This will give you a view of the tape alignment in your peripheral vision as you come into your scope, which is a big help.



Photo 4 View of triple tape on a shoot through bow.

3. Draw back the bow to what you feel is the correct point and have someone mark the opposing cable (up moving cable) or in the case of a single cam, the back side of the bowstring, right where the single cable aligns. Since you have all three pieces you will use the same width, mark the opposing cable for the full width of the single piece of tape.
4. Place the two tapes on the “up cable” or back side of the bow string where you have it marked. Again, do not glue them down just yet. Five or six layers is plenty, just be sure to firmly roll them tightly onto the cable.
5. Draw back the bow to your “normal” anchor draw length and check for proper tape alignment. It is your choice as to which of the tapes to move to get the single tape into the center of the gap.
6. Repeat drawing the bow several times to verify align-

ment and that it is indeed “comfortable.”

7. If the tapes are properly aligned and you are happy, then take either super glue or Fletch-Tite™ glue and coat the tapes and the cable with the glue and let it dry a few minutes. This will hold the tapes in place unless you choose to move them.



Photo 5 View of triple tapes at full draw below cable guard.

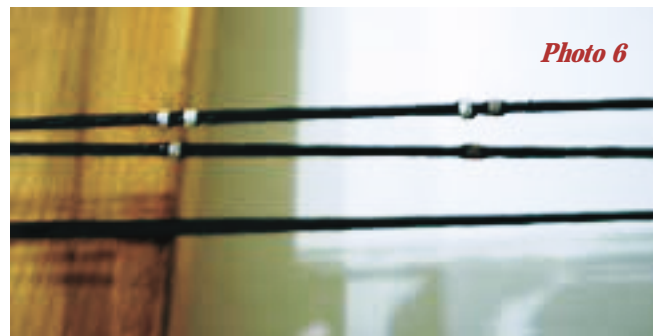


Photo 6 View at Full Draw Shoot Through system.

- a. You want the tapes on a single cam or a bow with the cable guard above the arrow rest to align as close to the rest as possible.
- b. You want the tapes to align on a shoot thru system as close to peep height level at full draw as possible.
- c. If you so choose, use a two sets of tapes This gives you a backup just in case one set moves or you move a set only to find you don't like the new alignment. You can then return the moved set more quickly by simply measuring the other set's distance apart.
8. Shoot this setup for several days, paying very strict attention to drawing those tapes into alignment every single time, time and again, and accept nothing less.

Normally, in a few hundred shots you are already getting used to it. Over the course of a week or two, you will find yourself pulling to those tapes pretty much



Photo 7 View of Draw Variance without use of Tape System.



Photo 8 View of Draw Variance using Triple Tape System.

automatically and only giving them a glance for assurance you are “there.”

9. When outdoors, religiously draw to those tapes! You will find that your consistency and control outdoors on those uphill, downhill, side hill, and poor footing shots will improve dramatically. You will have significantly improved draw length and anchor control no matter what the situation.

Conclusion

What I have explained is not something that takes a doctoral degree to figure out. It isn't new. However, it is a quick and easy way for you, the up and coming shooter, to improve upon your anchor draw length consistency and gain better control of your cam system. This method will also help get you to find that real sweet spot in the draw cycle (your personal draw length sweet spot) much quicker and easier than just shooting groups and shooting by feel alone. You will achieve a better sense of muscle memory and will have the additional benefit of a visual reference for a cross check.

This might not necessarily turn a 555 shooter into a 560 shooter. A professional archer who is already shooting at that level may not benefit either. However, take a close look at Photos 7 and 8 again. Which would you prefer to

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have happening during your draw and shot sequence? What do you have to lose by trying this “triple tape system?”

Tom Dorigatti has been shooting archery since he was 12 years old. He has been bowhunting and in competitive archery for nearly 40 years. During his archery career, Tom has competed or shot archery in no fewer than 38 of the contiguous United States plus Alaska, Hawaii, the Azores, and Guam. He has won numerous local and state tournament titles and has placed as high as second overall in three different sections of the



NFAA. Tom prefers to shoot in the Unlimited Division, but has recently been learning to shoot a recurve bow FITA style. He is also the mastermind behind the archery puzzles currently adorning these pages.