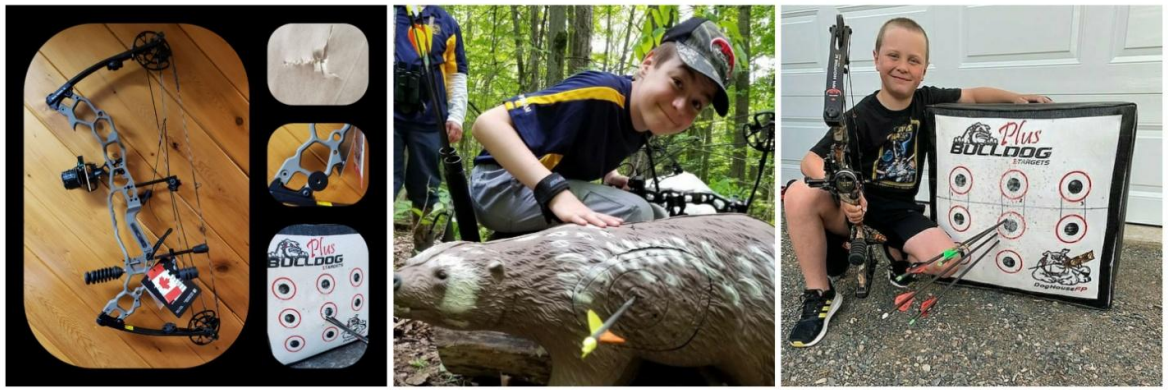
Complete Tuning Guide For APA Dual Cam Bows

The Archery Guy



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Check the Specifications of the Bow

Make Sure the Bow is set to Maximum Poundage first. If not, tighten the limb bolts all the way in and back them out One Quarter Turn!

Then take a tape measure and measure the axle to axle length of the bow and the brace height. This will give you a preliminary indication to the tuning and condition of the bow.

The Axle to Axle is the most important measurement as it will indicate whether or not your:

- **Draw Length is not within spec**
- **The Bow poundage is too high or low**
- **The Cams are not Positioned Properly**

Once you do this preliminary check, back the limb bolts 4 complete turns. This will make it easier to check cam timing, as you need to draw the bow on order to check this. Also it makes it easier when using the Cam Lock or a Bow Press when adjusting cables.

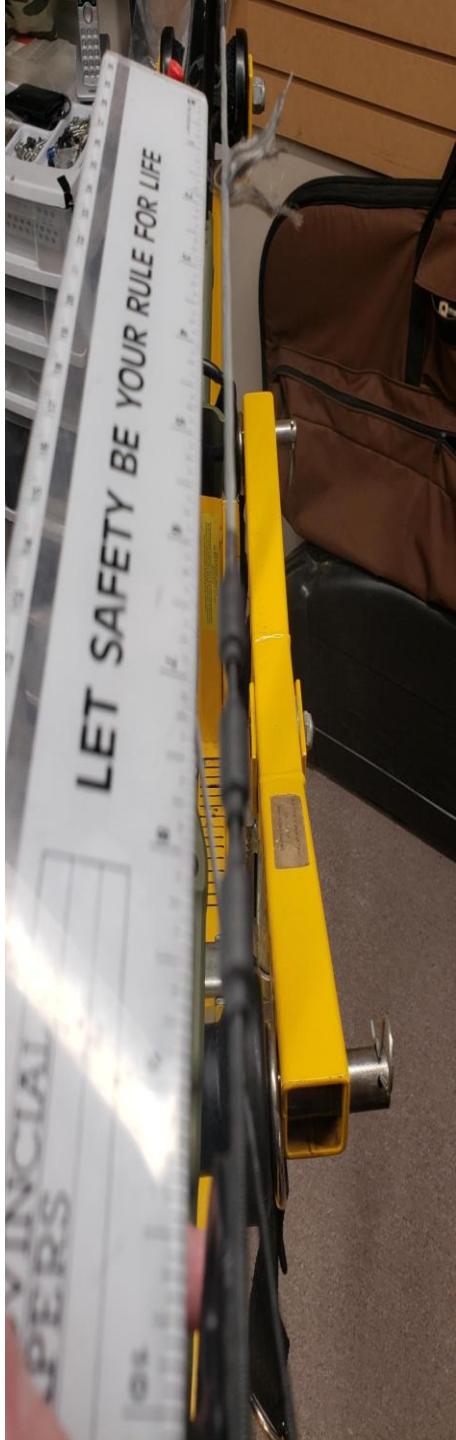
Check For Cam Lean on the Top Cam and Make Necessary Adjustments

Note: 2021 APA Dual Cam Bows that do not have the "variable yolk technology" need to have the cam lean corrected first. The 2022 bows have this new feature and adjusting for cam lean is not necessary.

To correct Top cam lean on a right hand bow, use a straight edge against the Cam Module. The straight edge should run parallel to the bowstring. If the Straight edge is pointing away from the string (the gap getting wider), your cam is leaning to the left and you need to twist the left side yolk cable (ie. the side the ruler is on) or untwist the other side, depending on the number of twists in those cables. It would be the Right Side Yolk Cable from the Shooters Perspective.

You would do the opposite for a left hand bow.

Note: When twisting or untwisting the yolk cables, look at the cables first to see how many twists they have. You do not want to over twist a cable or untwist a cable so there are little to no twists left.



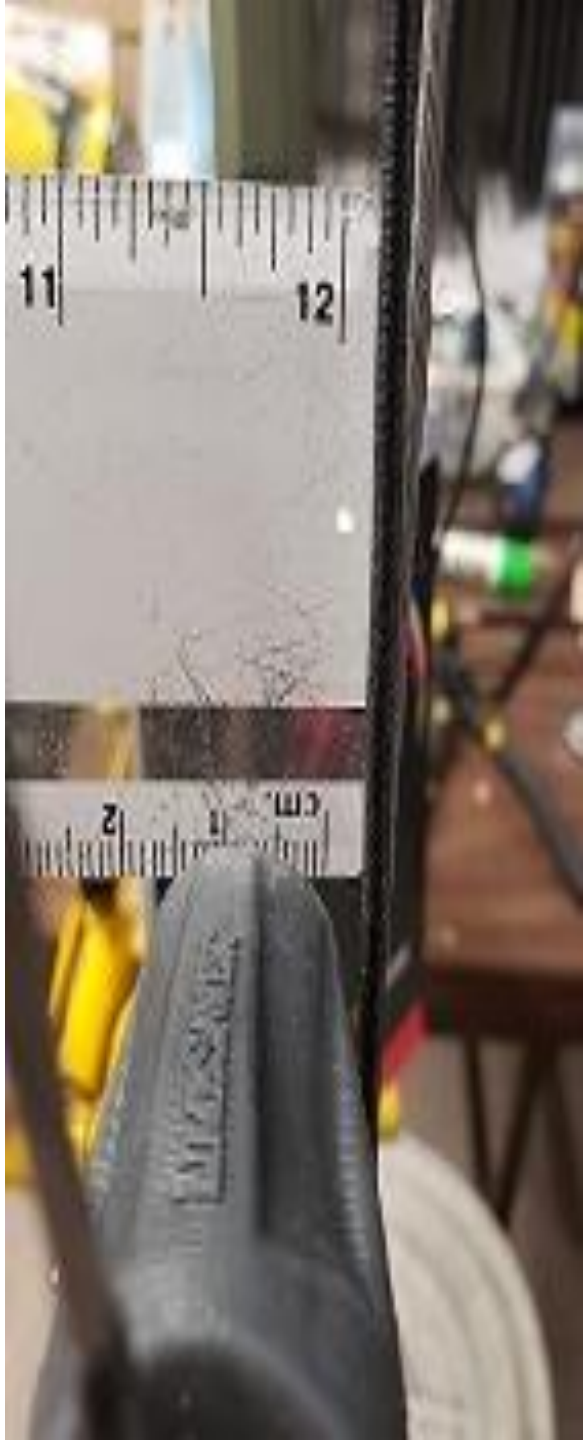
Check for Cam Lean on the Bottom Cam and make Necessary Adjustments

IMPORTANT!

When looking up from the bottom cam, make sure you have clearance between the lower cable and the rubber stopper.

"On a Right Hand Bow" , If the bottom cable is going to touch the rubber stopper, then put twists on the right hand bottom yolk cable or take twists out of the left hand side. That again is looking from the shooters perspective. You Just have to make sure that the cable just clears the Stopper. Do the opposite on a Left Hand Bow. You then check it with a straight edge like you did with the top cam.

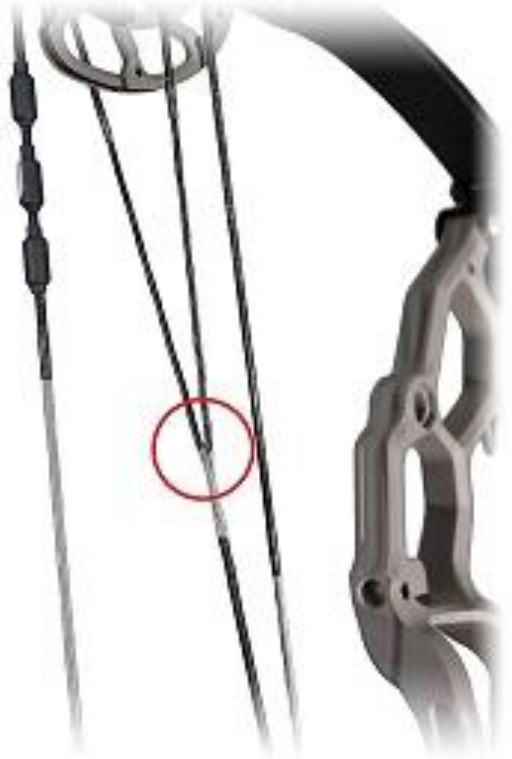
Again, bows with the Variable Yolk Technology do not require Cam Lean adjustments on the bottom cam.



APA Variable Yolk Technology On the Buss Cables

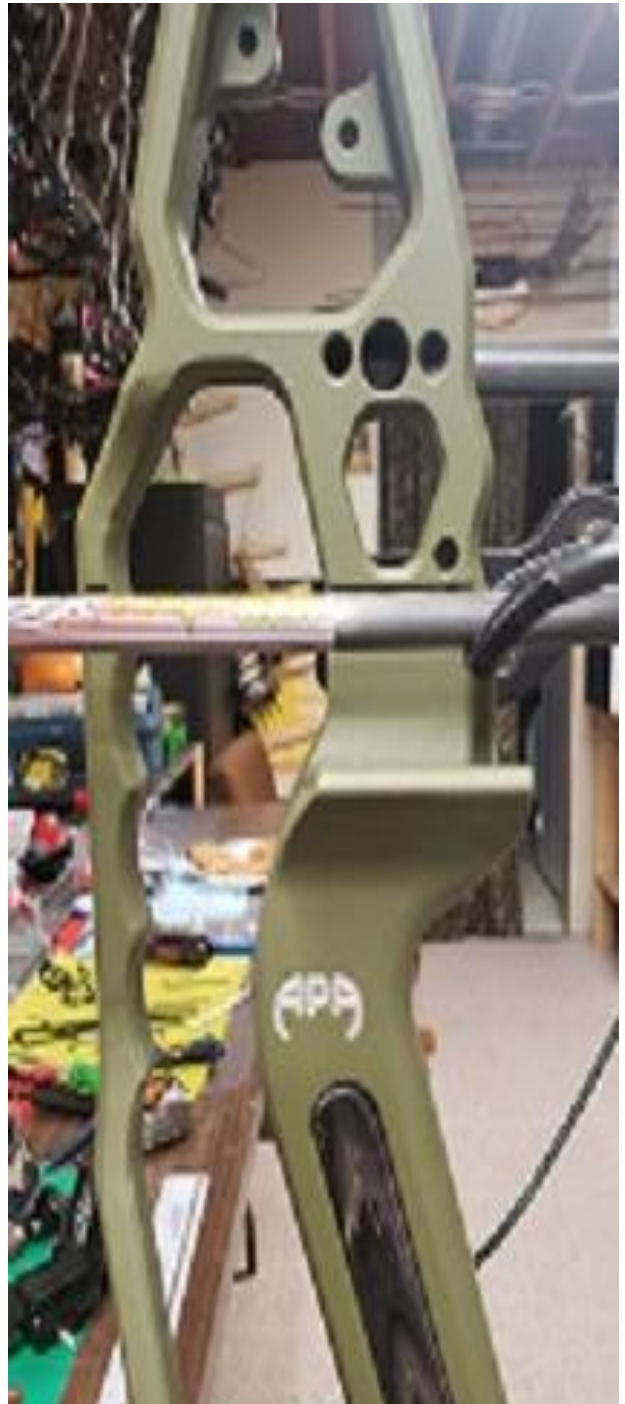
The 2022 models have the "Variable Yolk Technology" which means the yolks automatically settle exactly where the bow needs them to be to eliminate any “Cam Lean"

Therefore, adjustment for Cam Lean on both the Top and Bottom Cams are not necessary



Nock Point Alignment Zone

Make sure your D loop is set so your arrow is level or 90 degrees to the bow string and the nocked arrow lies within the referenced location. APA provides a reference location for the proper positioning of the arrow, which extends to the bow handle. This is called the " Nock Point Alignment Zone"



Set Center Shot

The 2022 model APA Dual Cam Bows have a Centre Shot Indicator Built into the Cam Lock Pin.

Insert the Cam Lock Pin into the precision drilled hole in the riser above the arrow, with the laser etched indicator.

Note: There is an arrow etched onto the pin showing you which end of the cam lock pin goes into the riser! APA Bows with the M1 or X1 with the RDS have a centre shot between 11/16" and 3/4" away from the vertical riser to the centre of the arrow.

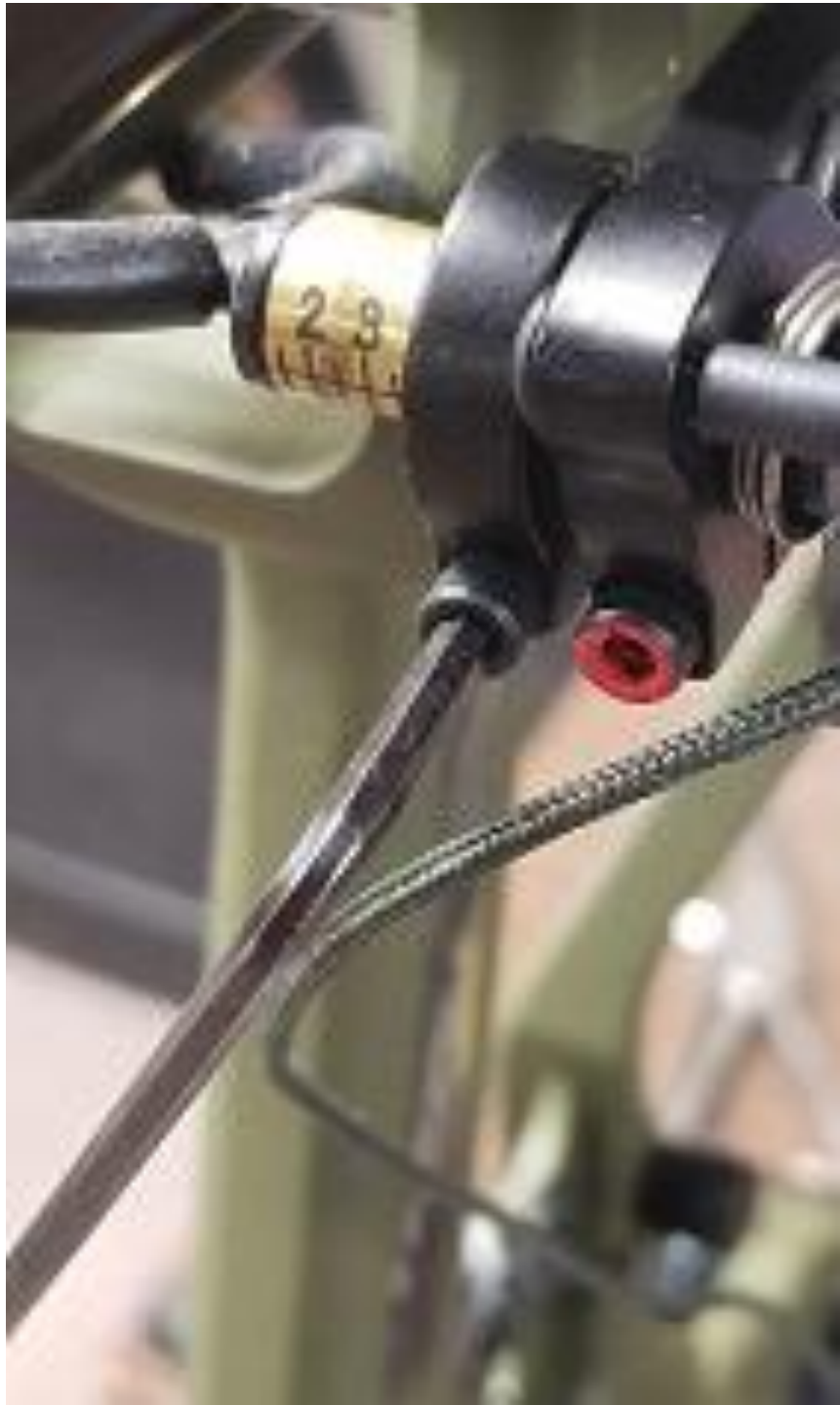
Older APA Dual Cam Bows having the MX Cam (no RDS) have a centre shot approximately 13/16" away from the vertical riser. You can use a tape measure to set the centre shot. Simply put the tape against the vertical riser and measure out to the centre of the arrow shaft. Adjust the arrow rest accordingly.

Adjust Arrow Rest to Get Center Shot

This procedure is for the APA Twister Drop Away Rests. For all other rests, refer to the Manufacturer's instructions!

First loosen the black hex screw on the main bracket of the arrow rest.

Do not touch the Red Screw!

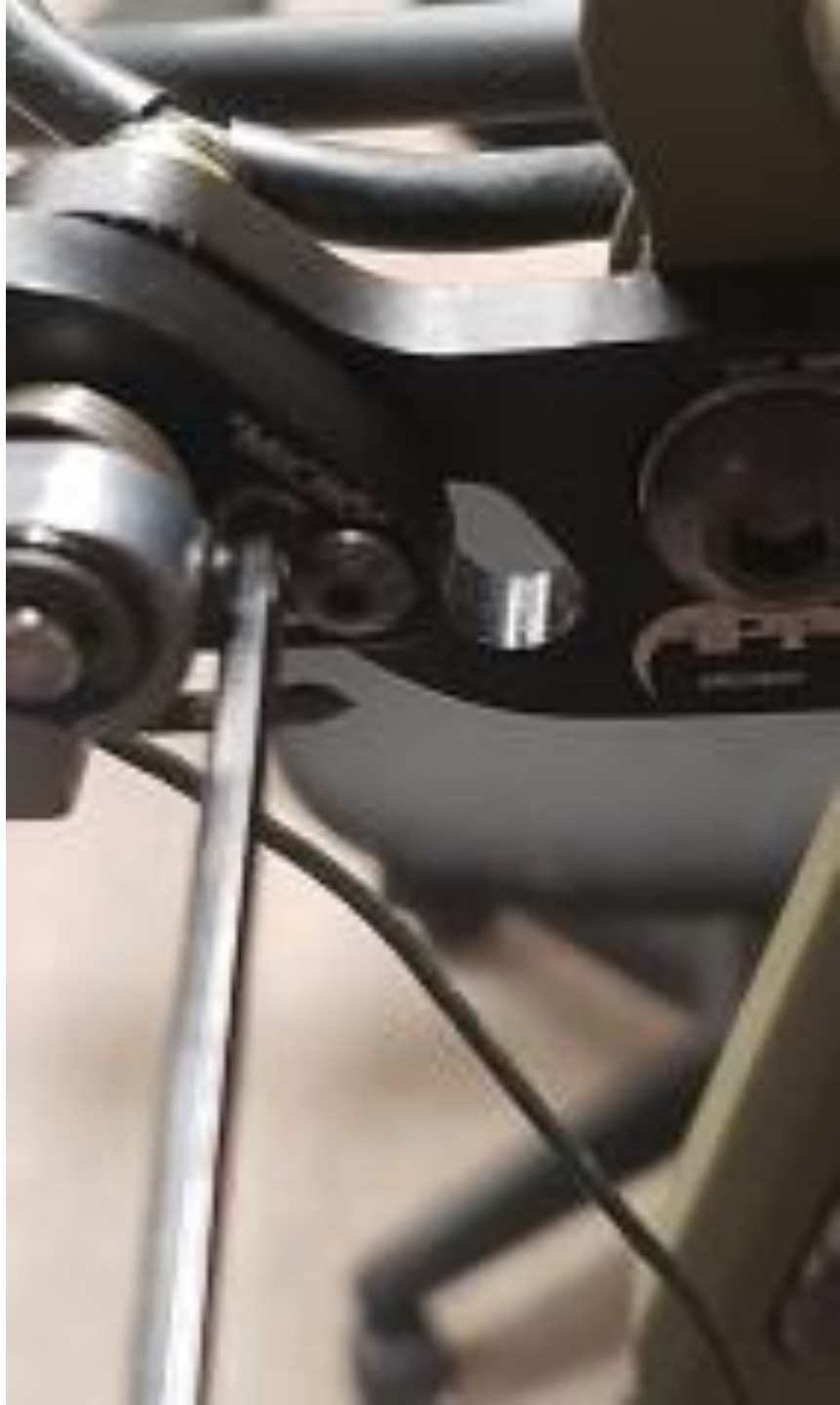


Turn the Adjustment Screw on the APA Twister Rest to get the Required Center Shot

Adjust the windage of the rest by turning the "Silver Adjustment Screw" ,until Centre Shot is achieved.

•You may have to press down on the spring in order to reach the screw head

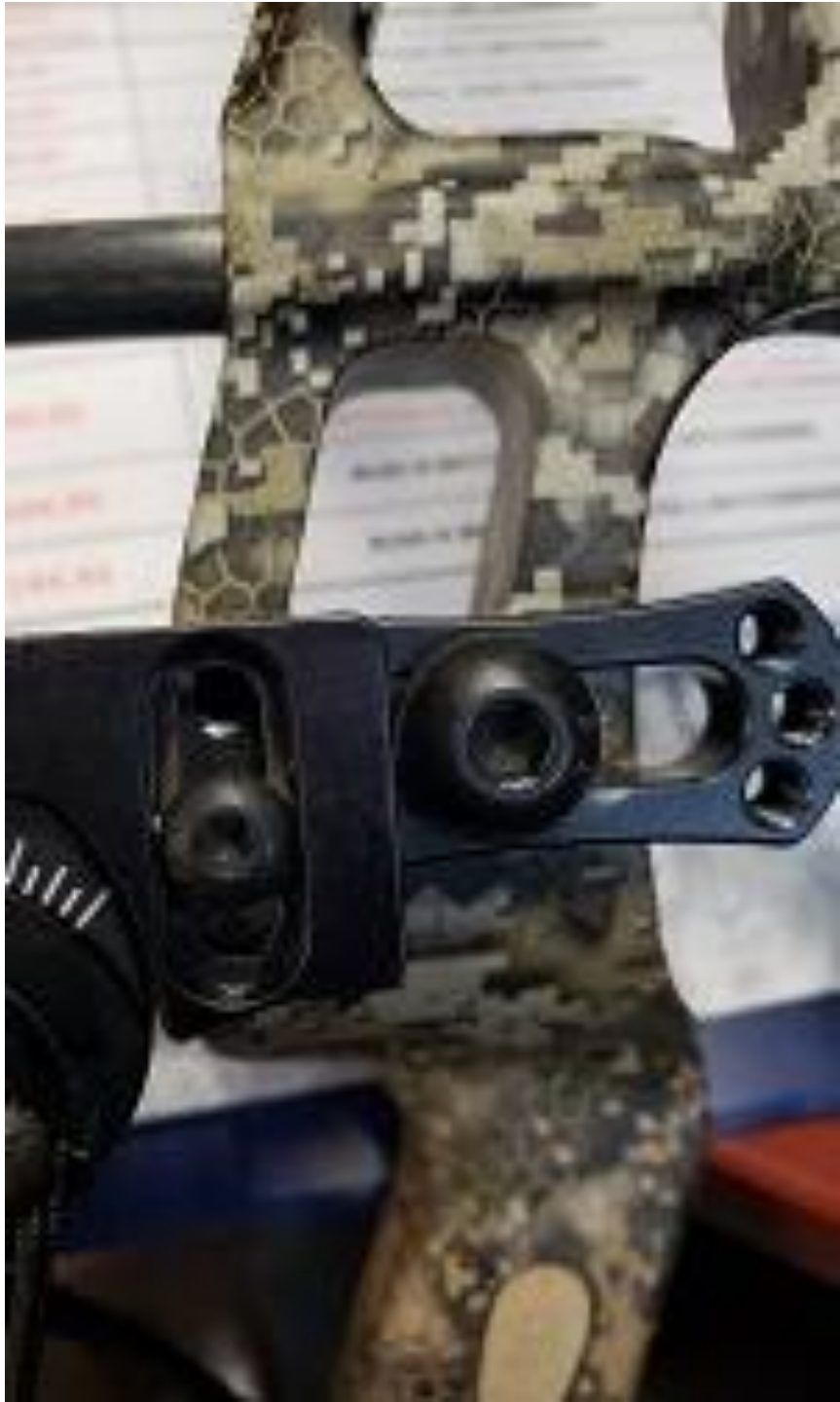
- **Remember to retighten the main bracket screw when finished.**



Some Other Manufacturers Rests are Not Ideally Suited and may not Function properly on APA Dual Cam Bows

Some Rests have a longer attachment arm and when set so the launcher is close to the back of the riser shelf, the rest bracket extends in front of the riser (as shown in this picture) and the tiny set screw that bites down on the riser to secure the rest and keep it level cannot be used.

With a Limb Driven or Cable Driven Rest, this becomes a problem because repetitive tension is applied to the rest cord and the rest will usually not remain level over time. This usually happens over several shots. The rest will have to be continuously readjusted.



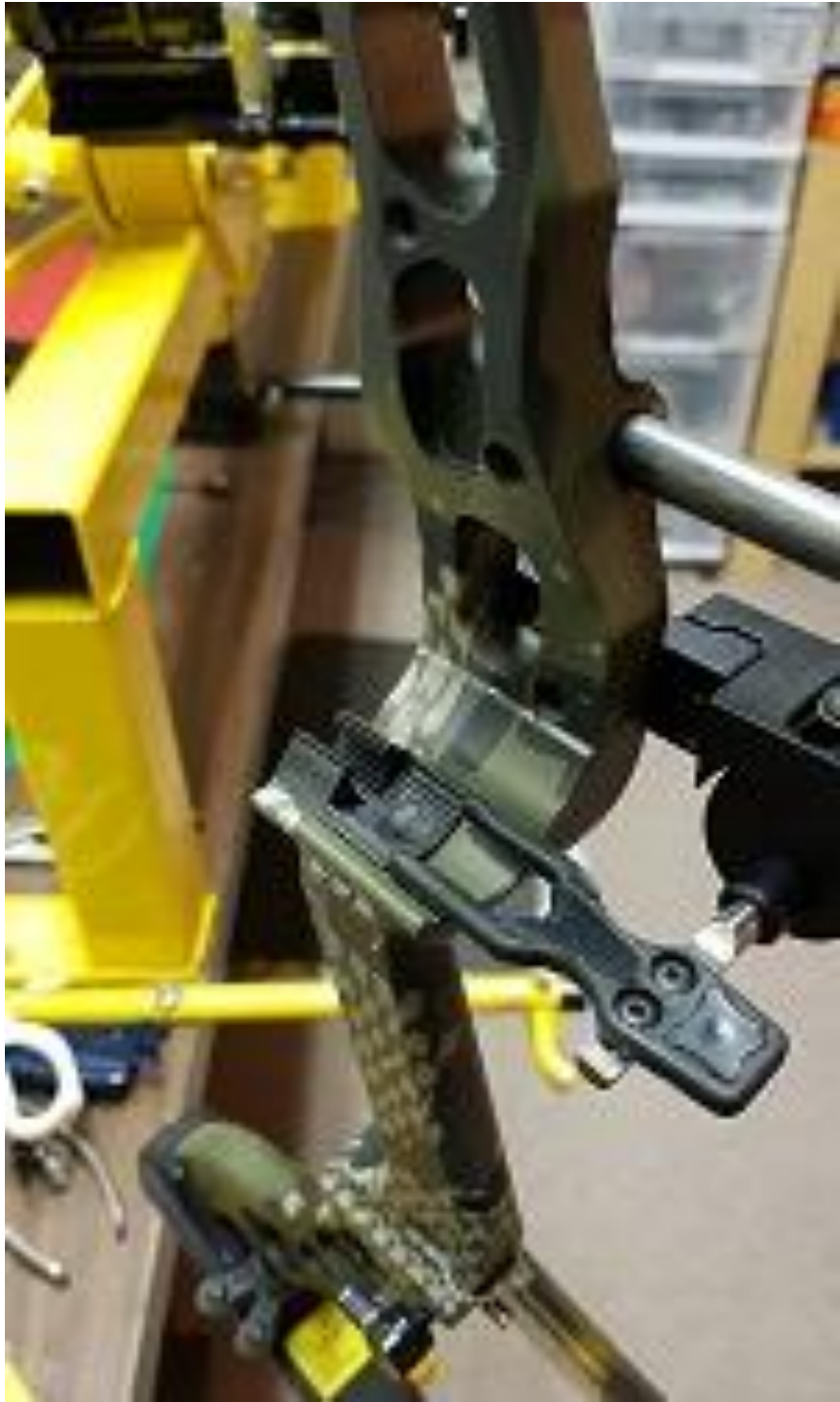
Arrow Rest will not Position Properly on the APA Bow

When these rests are mounted properly, as shown in this picture, the rest will sit too far back from the riser.

Two problems will arise:

Firstly, when your bow holding hand is ahead of the arrow launcher, any slight bow hand torque will be magnified and accuracy and arrow grouping will suffer!

Secondly, If your bow has a shorter brace height, the arrow fletching may get caught up in the vertical arrow launcher.



Adjust Cam Timing

First, set the draw length to the shooter. The tuning may change slightly if you go and re adjust the draw length later.

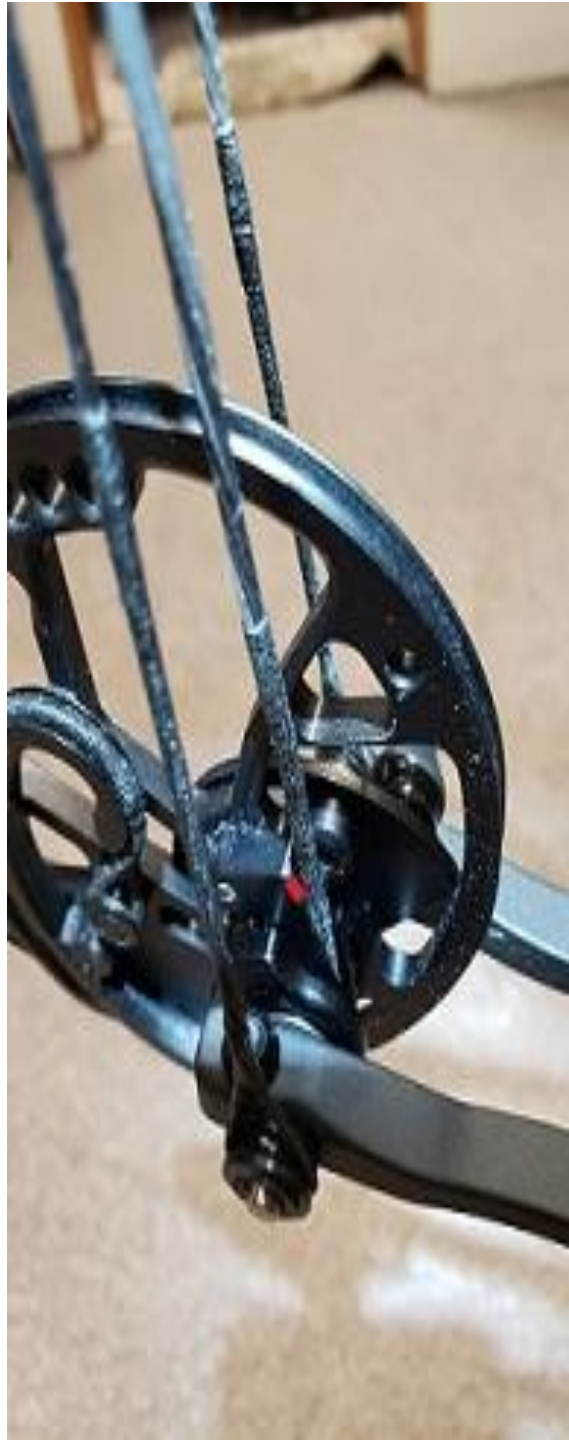
It helps a lot if you reduce the draw weight of the bow while adjusting cam timing. Turn the limb bolts out no more than 4 turns from bottom.

Take Note of the RDS Position and back them off before you begin.

When checking the cam timing on your APA Bow it is important to draw the bow back with an arrow and release, or a safe drawing device. You should be able to feel whether or not your cams are out of time.

Note: A draw board will not give you a correct result. It may get you close, but not exact!

This is a picture of the bottom cam at full draw. See how the cable is lying flat in the module groove. Both cams should be the same in order for the bow to be properly timed.



Upper Cam Timing is Out

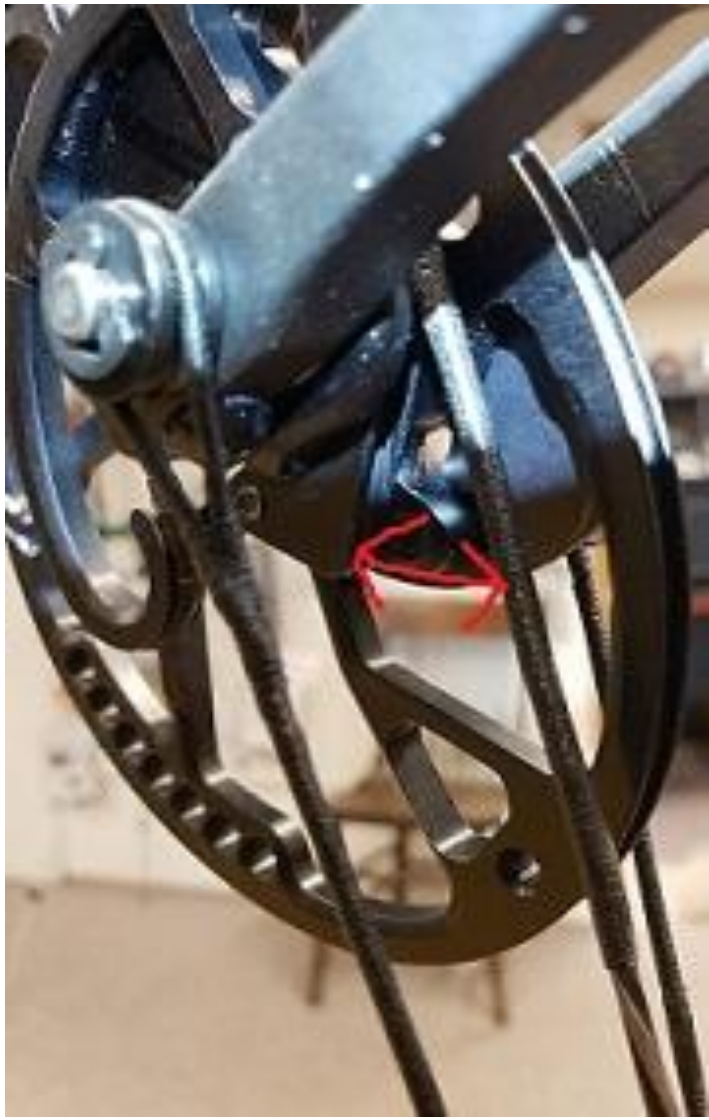
This is a pic of the top cam. Notice the gap between the module groove and the buss cable. In order to correct the problem, the buss cable that attaches to the top cam is shorter than the bottom cable, meaning it has more twists than the bottom cable.

You have to remove twists from this cable or add twists to the opposite buss cable.

Note: When twisting or untwisting the cables, look at the cables first to see how many twists they have. You do not want to over twist a cable or remove twists from a cable that is not twisted equally to the other.

Also, remember that the cables are mostly served and a 1/2 twist may be all you would need to get it close.

If a half twist is too much from the single loop end, you can add the required twists to each side of the yolk on the same cable.

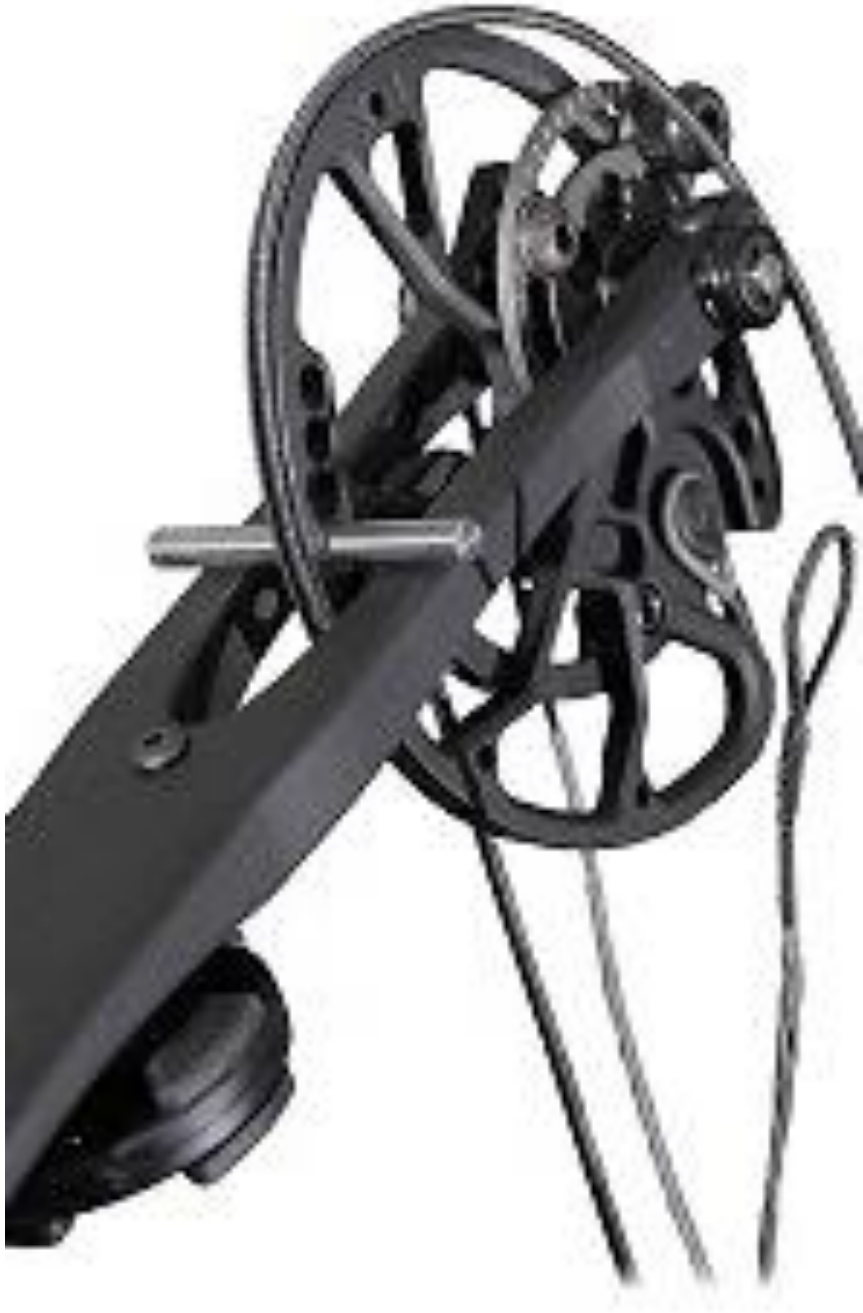


APA Cam Lock

The Cam Lock Pin allows you to replace strings or cables, make adjustments, install accessories and tune their bow without the need for a bow press.

Use the cam lock pin, in order to twist or untwist cables when timing your bow.

Remember: Make sure all your cables and string are in their proper tracks before you remove the cam lock pin and re apply tension.



Paper Test

Note: Before you begin the paper tuning process and you get a tear that is 1 inch or more, or the tear does not improve, it is likely you are torquing the bow when you shoot, you have arrow fletching contact with the arrow rest or the buss cables, or your arrow spine may also be incorrect!

Make sure you are shooting correctly spined arrows, do not have any fletching contact and shoot with a relaxed bow hand. Do not punch the trigger. Correct these flaws before you begin tuning!

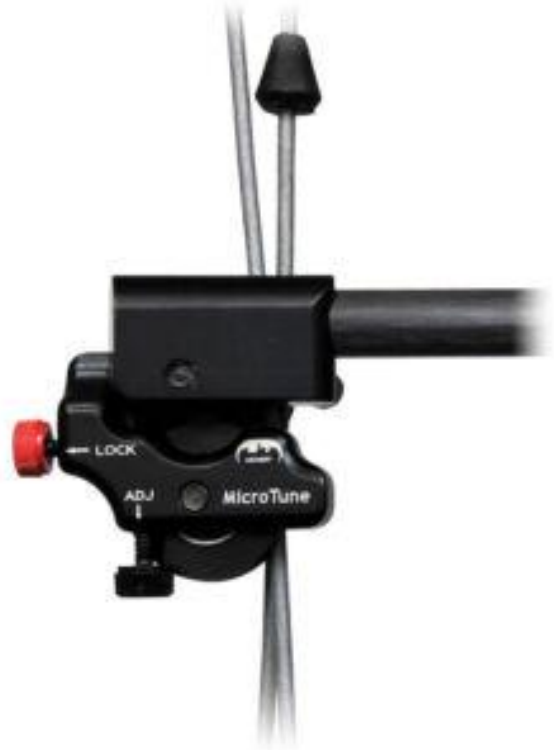
Once you have made adjustments to the cam timing it is important to check the nocking point for level. By looking at the Nock Point Alignment Zone you can see whether or not you have to make an adjustment.

Do not adjust your arrow rest! You must lower or raise your nocking loop. This can easily be done by twisting the d loop knots. Your D Loop will "corkscrew up or down along the centre serving".

After you make your adjustment, shoot a Correctly Spined and Fletched Arrow through paper in order to see how it flies. This is done at close distance (less than 10 feet). Try a second shot as well as another arrow to make sure the tears are repeatable.

APA Microtune for Fine Tuning Your Cam Timing

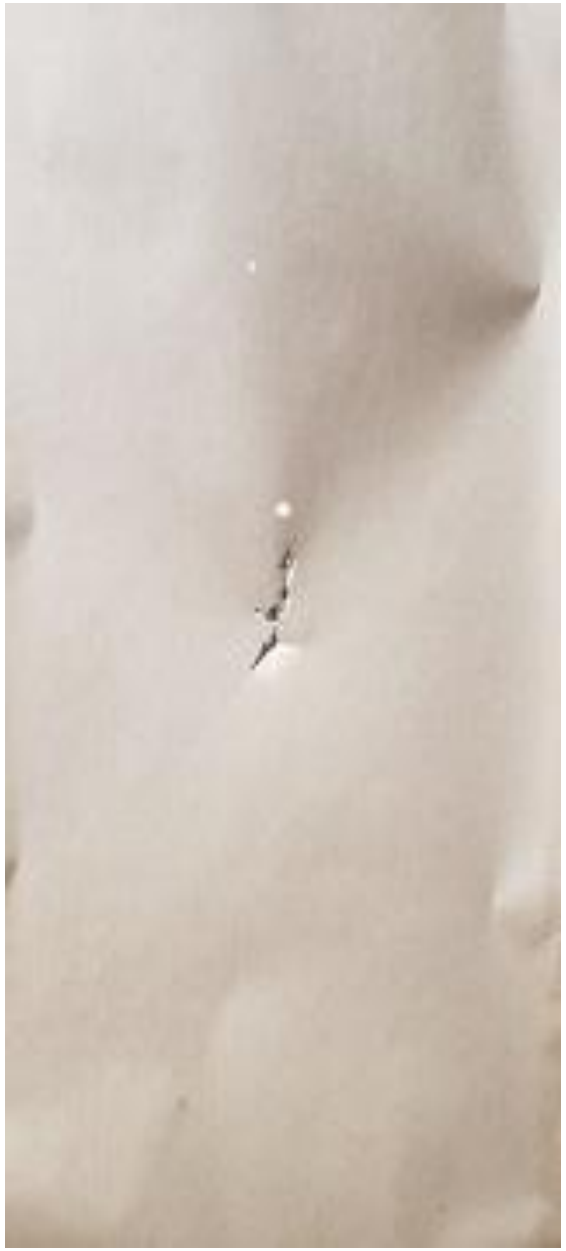
Once you think your cams are timed, you can use the Microtune in order to fine tune your bow.
Remember, the Microtune has to be set to its neutral position as shown in the picture. That means it is pre-set so there is equal adjustment in both directions, depending on which way you have to adjust it.



Nock Low Tear

This first picture represents a nock low tear. The arrow is porpoising out of the bow. The point is entering the paper and the fletching is tearing the paper underneath or below the point. This tear is caused if your bottom cam is slightly "fast" or if the spine of your arrow is too weak for the bow. This tear can be corrected by ensuring you are shooting a correctly spined arrow, loosening the tension on the microtune , or taking a twist from the bottom buss cable or adding a twist to the top buss cable.

For a nock high tear you would do the exact opposite!



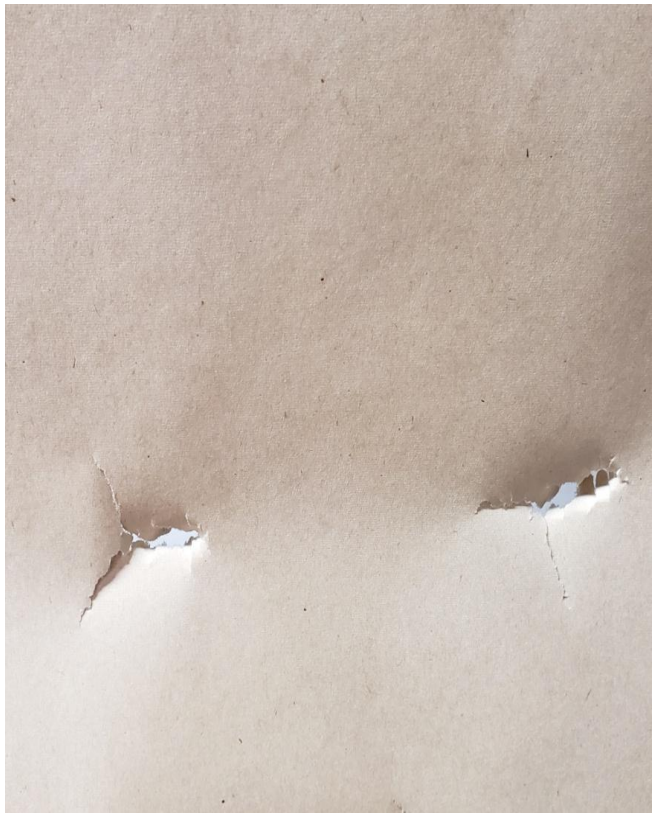
Nock Left Tear from a Right Hand Bow

The timing adjustment has corrected the vertical part of the tear.

Now we have a nock left tear as shown in this picture. There is some fishtailing of the arrow and the fletching is tearing to the left of the point. In order to correct this we have to move the arrow rest to the right (for a right hand bow). A very small adjustment (ie: 1/16") should eliminate this. You could also put a twist or so to the upper Left Hand Side Yolk cable. However, It is better to move the rest slightly than trying to yolk tune. Yolk Tuning would most likely cause some cam timing issues and you would have to go back and repeat the tuning process.

Also, yolk tuning would not be necessary with bows that have the "variable yolk technology".

Note: for a nock right tear you would do the opposite!



Bow is Paper Tuned

When all is adjusted, the bow will be tuned and you should have a perfect paper tear, as shown in this picture.

Make sure you do not have any fletching contact. Shoot with a relaxed bow hand. Do not punch the Trigger. You should correct these flaws before you begin tuning!

Remember to re position, tighten and check the RDS.