



Merlin Bows
Bull In The Hollow
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Fax: +44 (0) 1509 235252
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OPERATING INSTRUCTIONS

Important!

This is an advanced piece of equipment designed for use by experienced archers. This operation sheet assumes you have experience of modern archery bows and bow set up. Do not attempt to use or adjust your bow without proper instruction.

If you have any doubts on any aspect of shooting, bow set up, maintenance or operation please consult an authorized Merlin dealer for additional guidance.

SAFETY

This is a powerful bow and must be used responsibly. Make sure the area you are in is completely clear and that no one could accidentally walk within range of your bow. Be aware of arrow deflection should you miss as it could travel at extreme angles to the target.

Never dry fire your bow. (Shoot without an arrow) This may damage the bow and cause injury. Do not use arrows lighter than 5 grains per pound of peak weight, and inspect each arrow for damage before every shot. Make sure your arrows are long enough so that when the bow is drawn they can not be pulled off the rest and fall inside the bow. Inspect your bow regularly and cease shooting if any damage is found.

MAINTENANCE

Your bow requires minimal maintenance but does need some care and attention to keep it in perfect order.

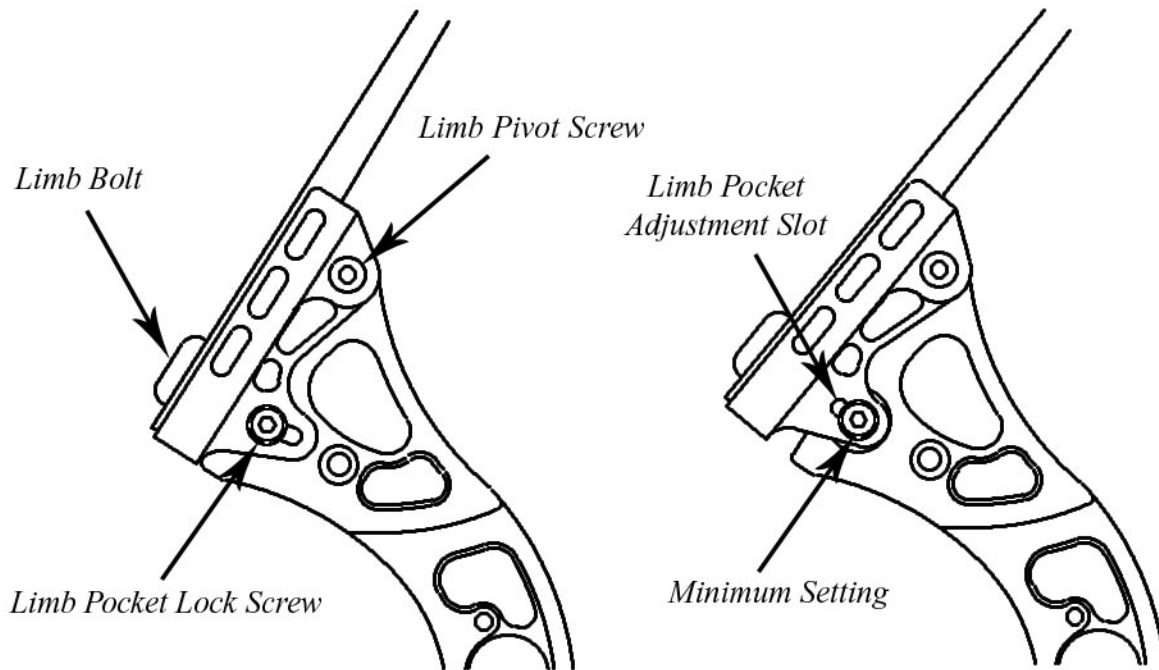
Change the strings and cables at least once a year. Inspect the strings and cables every time you shoot. If there are any loose or broken strands then cease shooting immediately and replace. Weekly, rub bees wax into the strings and cables. After a days shooting clean the bow of dirt. Pay particular attention around the cams and dry the bow if wet with a soft cloth. Never use heat to dry the bow.

The cams and axles should not need lubricating, though occasionally a few drops of lightweight oil is recommended after shooting in the rain.

Periodically check screws have not come loose. If screw heads start to become worn, replace with new ones.

Do not store the bow when wet and never keep your bow near any heat sources. This includes inside your car on a sunny day.

POUNDAGE ADJUSTMENTS



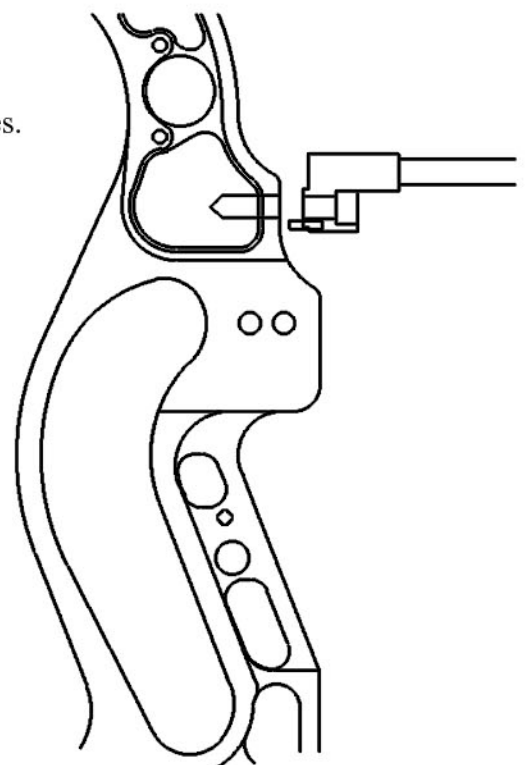
You can change the poundage of your bow by turning the limb bolt. Anti Clockwise to decrease, clock wise to increase. Make sure all four of the Limb Pocket Lock Screws are relaxed before attempting to turn the Limb Bolt. Turn both bolts equal amounts, and when the desired weight is achieved tighten up the Limb Pocket Lock Screws. (Note: These lock screws only need to be snugged up solid. Do not overtighten) Undo the bolts no more than 5 1/2 turns from the fully wound up position. The minimum setting can be visually checked by looking at the position of the Limb Pocket Set Screw heads in relation to the adjustment slot in the limb pocket. The Limb Pivot Screws do not need to be relaxed before changing poundage, though periodically check these screws are done up. Do not over tighten

CABLE GUARD ATTACHMENT

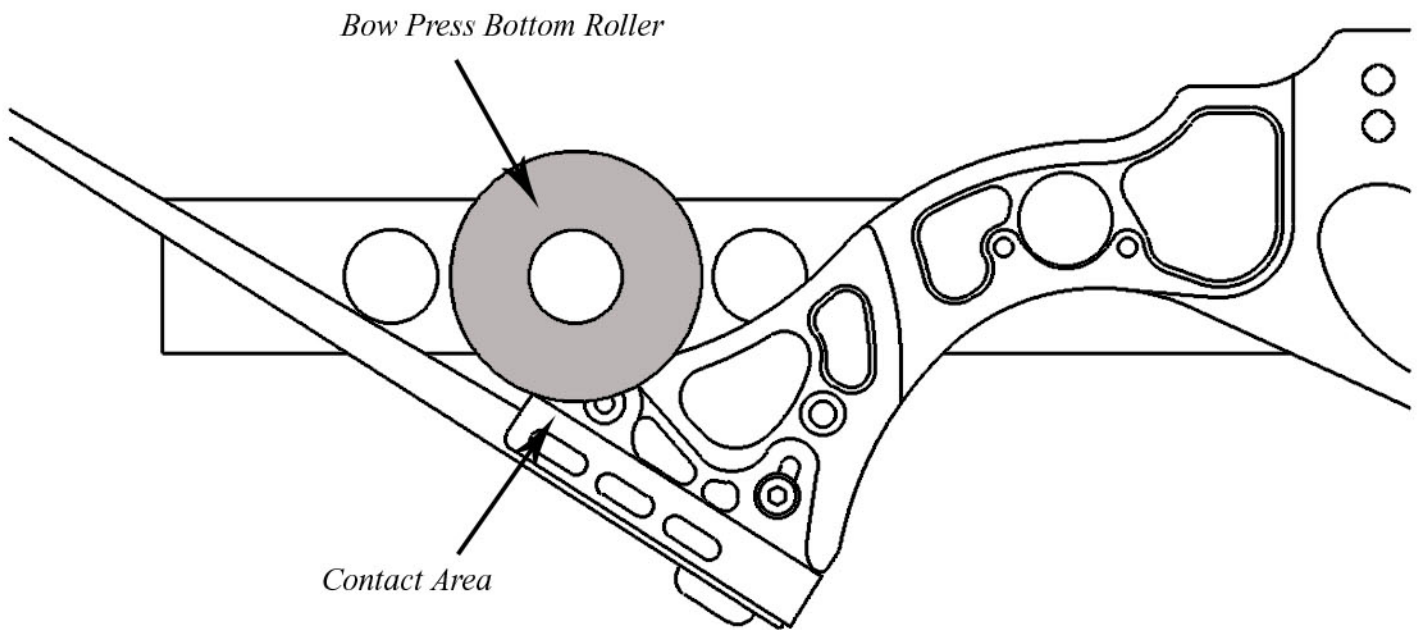
When attaching the cable guard to the bow, the position of the bracket should be set to the minimum angle that will achieve arrow clearance. This will reduce the rake on the cables and prolong the life of the cables.

The cable guard mount is fitted with a location pin that eliminates any possibility of the mount rotating. To adjust the rake angle the locking bolt needs to be completely removed so the mount can be lifted clear.

The bow has been designed to be shot with a cable guard. Do not attempt to draw the bow without the cable guard fitted.



BOW PRESS ROLLER LOCATION



Correct bow press operation is crucial. The contact points of the bow press should have the top rollers as high up the limb as possible, just under the limb fork, while the bottom rollers should be positioned on the back of the limb pocket as shown in the diagram above. **DO NOT POSITION THE BOTTOM SET OF ROLLERS ON THE LIMB!** This may break the limb. Such a failure is not covered under warranty.

If using a bow press to assemble a bow, or disassemble a bow, back out the limb bolts to the minimum position first. It is acceptable to use a bow press with the limbs in the maximum position only for twisting cables or turning a peep.

We recommend bow presses manufactured by Apple Archery Products Inc.. Do not use strap type bow presses wrap around the grip area of the riser.

Do not attempt to use a bow press without proper training.

WARRANTY

The Merlin 'X-Range' compound bows are backed by a 'Limited Lifetime' warranty as set out below.

For the first 5 years of life, each 'X-Range' bow is guaranteed to be free from defects in materials or workmanship. During those 5 years, Merlin Bows will offer repairs or replacements at the cost of Merlin Bows.

For the remainder of the lifetime of the product, Merlin will offer repairs or replacements at a 50% discount from the recommended retail price, subject to suitable compatible parts.

It is very important that you retain a copy of the original, dated sales receipt. You must also register your bow with us within 30 days of purchase. This can be done either by returning the warranty registration slip provided with your bow, or by registering online. Failure to register your bow and failure to provide proof of purchase may result in Merlin Bows refusing to perform warranty work.

SERVICE PROCEDURE

If your bow requires warranty work you must first contact Merlin Bows for a Return Authorization Number. After receiving an RA number, Merlin will discuss with you the best location to send your bow for repair. For example, UK and European customers may be required to send the bow direct to Merlin Bows for repair. Our USA customers may be required to send the bow to our US based service centre. Warranty work can also be carried out by an authorized Merlin dealer. However, Merlin Bows will not cover additional labour costs if any may be charged by that dealer. It is the responsibility of the owner to arrange safe transport of the bow to the place of service. The cost of returning a bow to the place of service is not covered under the warranty. Merlin Bows will then pay the return shipping costs back to the customer. If you request a priority or express shipping service, the additional cost of this is payable by you.

When shipping the bow to the place of service, the RA number should be clearly marked on the outside of the parcel. All accessories should be removed from the bow prior to shipping.

Additional Warranty Limitations

- . Stripped threads, rounded off or broken screw heads are not covered under warranty.
- . Cosmetic finish, including, but not limited to:- Chips, scratches, dents and surface finish are not covered under warranty.
- . Wearable parts, such as strings and cables, axles, bearings, grips, threads and cable guards are not covered under warranty.
- . Signs of misuse, modification or negligence in both maintenance and operation will render the warranty invalid.
- . Shooting arrows weighing less than 5 grains per pound of draw weight will render the warranty invalid.
- . This warranty applies only to the first purchaser of the bow and is not transferable.
- . Merlin Bows reserves the right to replace any defective parts with a newer designed alternative.



WARRANTY REGISTRATION SLIP

YOUR DETAILS

NAME	
ADDRESS 1	
ADDRESS 2	
TOWN	
COUNTY/STATE	
POSTCODE/ZIP	
COUNTRY	

BOW DETAILS

BOW MODEL	
SERIAL NUMBER	

SALES DETAILS

DEALER NAME	
PURCHASE DATE	

Return to:
Merlin Bows
Bull In The Hollow
Leicester Road
Loughborough
LE12 8UE, England

Alpha Cam Operating Instructions.

Thank you for purchasing a Merlin bow. This information will guide you through the adjustment and tuning of your Alpha Cam. Please read all the information carefully before using your bow. If you are in any doubt, please contact an authorised Merlin dealer for advice, or feel free to contact us directly.

IMPORTANT!

Your Alpha Cam has been designed to be shot with a cable guard. Don't draw the bow without the cable guard fitted and adjusted properly. Once the cable guard is attached to the bow, adjust the rake to the minimum amount needed to give arrow clearance. Regularly check all screws are secure.

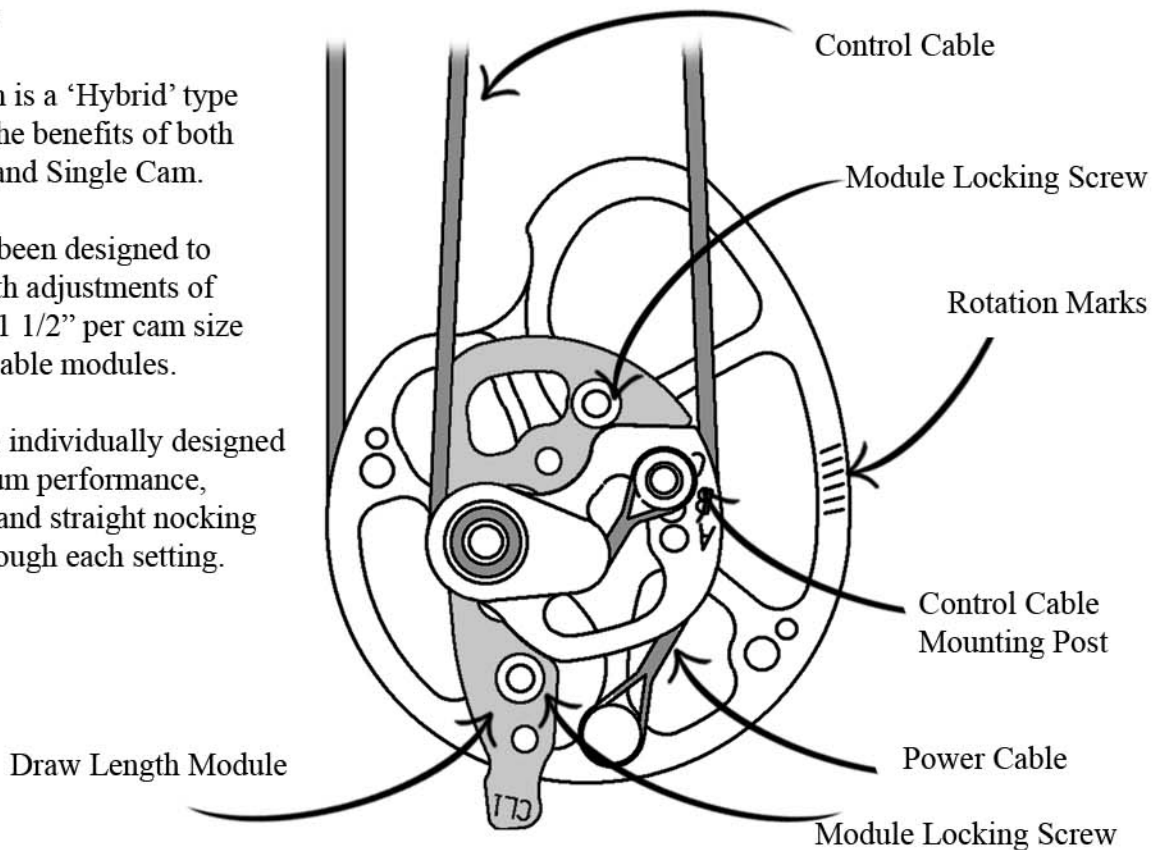
Adjustments to strings and cables must be done in a suitable bow press. If you are in any doubt about the safe operation of a bow press do not attempt to use one. Misuse of a bow press could damage your bow and cause injury to yourself. Damaged caused to the bow while using a bow press will not be covered under warranty. So be careful! Use only a professionally built press. (We recommend Apple Archery bow presses. Please see our separate information sheet on bow press operation)

Cam Overview

The Alpha Cam is a 'Hybrid' type cam, utilising the benefits of both the Twin Cam and Single Cam.

The Alpha has been designed to give draw length adjustments of approximately 1 1/2" per cam size via interchangeable modules.

Each module is individually designed to give maximum performance, consistent feel and straight nocking point travel through each setting.



Draw Length Adjustments

There are 4 different cam sizes, and each cam has 3 unique draw length modules. Each module changes the draw length between 3/8" and 3/4" depending on cam size. Alpha Cam No.1 offers the longest draw length range, while Alpha Cam No.2 the shortest. For the correct module size, see the chart below.

Alpha Cam No.1

AL1 - Longest
AL2 - Middle
AL3 - Shortest

Alpha Cam No.2

BL1 - Longest
BL2 - Middle
BL3 - Shortest

Alpha Cam No.3

CL1 - Longest
CL2 - Middle
CL3 - Shortest

Alpha Cam No.4

DL1 - Longest
DL2 - Middle
DL3 - Shortest

To Change the draw length, a suitable bow press will be needed to relax the tension on the strings and cables.

Step 1 - A bow press is not required for this part. Remove the module locking screws completely. (Location of screws shown on previous page) The existing module should slide out. Place the new module into position and replace locking screws. Tighten firmly.

Step 2 - In a suitable bow press, relax the tension on the strings and cables. The control cable mounting post needs to correspond with the draw length module. (See Below). Undo the screw holding the control cable mounting post and move the post to the correct hole. Tighten firmly.

Module Number

AL1, BL1, CL1, DL1 ----- Use Control Cable Mounting Post C

AL2, BL2, CL2, DL2 ----- Use Control Cable Mounting Post B

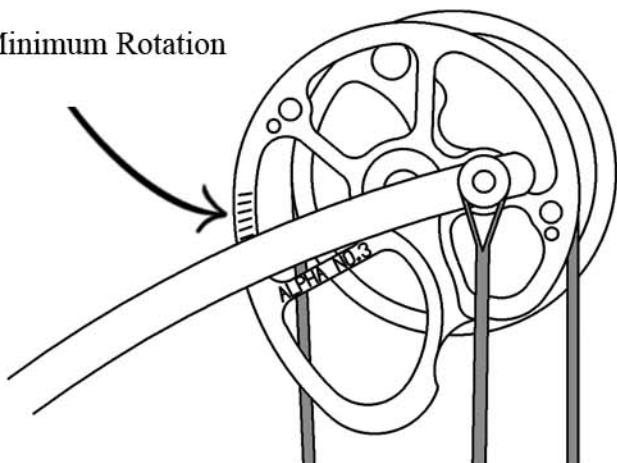
AL3, BL3, CL3, DL3 ----- Use Control Cable Mounting Post A

Cam Rotation and Timing

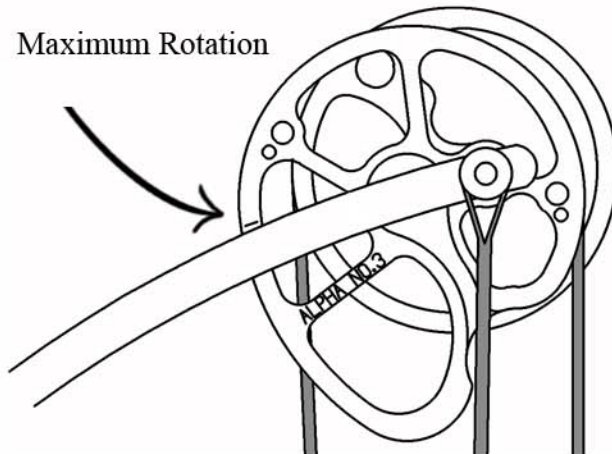
Your Alpha Cam does not require timing to the same extent as a twin cam, but there are parameters that should be maintained. You will notice there are rotation marks engraved into both cams. (See diagram below) These marks are used as a reference to cam rotation in relation to the top face of the limb. The top face of the limb should always be between the top and bottom marks. If you find the marks are outside these parameters, then some adjustment is required. This is done with a combination of twisting or untwisting strings and cables in a suitable bow press to bring them back into line.

It is not crucial to obtaining perfect tune that both the top and bottom cams are rotated identically. They are guidelines to rotations we have found to offer best tunability, so feel free to experiment with different positions if you wish.

Minimum Rotation

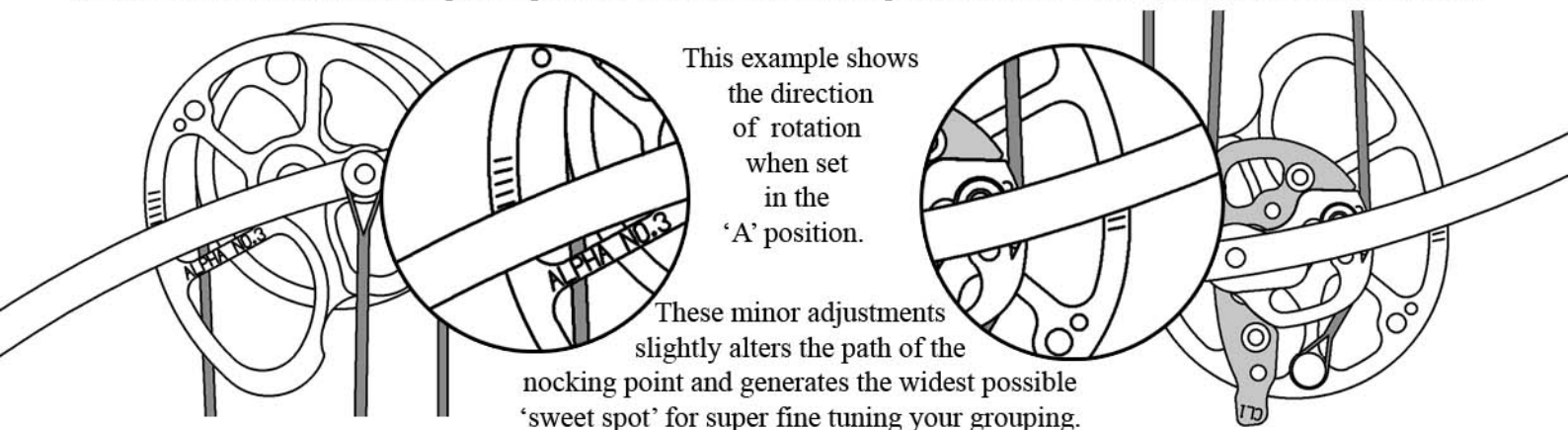


Maximum Rotation



Advanced Tuning Tip

Changing the rotation of the top cam in relation to the bottom cam influences the path of the nocking point. For fine tuning your bow, we suggest making the following adjustments depending on the position of the control cable mounting post. If using the longest module with mounting post 'C', set the cam rotations to be equal top and bottom. For the shortest module with the post in position 'A', back rotate the top cam 3 lines closer to the minimum rotation position than the bottom. With the middle module and the post in position 'B', back rotate the top cam 1-2 lines closer to minimum than the bottom.



This example shows the direction of rotation when set in the 'A' position.

These minor adjustments slightly alters the path of the nocking point and generates the widest possible 'sweet spot' for super fine tuning your grouping.

Viper Cam Operating Instructions.

Thank you for purchasing a Merlin bow. This information will guide you through the adjustment and tuning of your Viper Cam. Please read all the information carefully before using your bow. If you are in any doubt, please contact an authorised Merlin dealer for advice, or feel free to contact us directly.

IMPORTANT!

Your Viper Cam has been designed to be shot with a cable guard. Don't draw the bow without the cable guard fitted and adjusted properly. Once the cable guard is attached to the bow, adjust the rake to the minimum amount needed to give arrow clearance. Regularly check all screws are secure.

Adjustments to strings and cables must be done in a suitable bow press. If you are in any doubt about the safe operation of a bow press do not attempt to use one. Misuse of a bow press could damage your bow and cause injury to yourself. Damaged caused to the bow while using a bow press will not be covered under warranty. So be careful! Use only a professionally built press. (We recommend Apple Archery bow presses. Please see our separate information sheet on bow press operation)

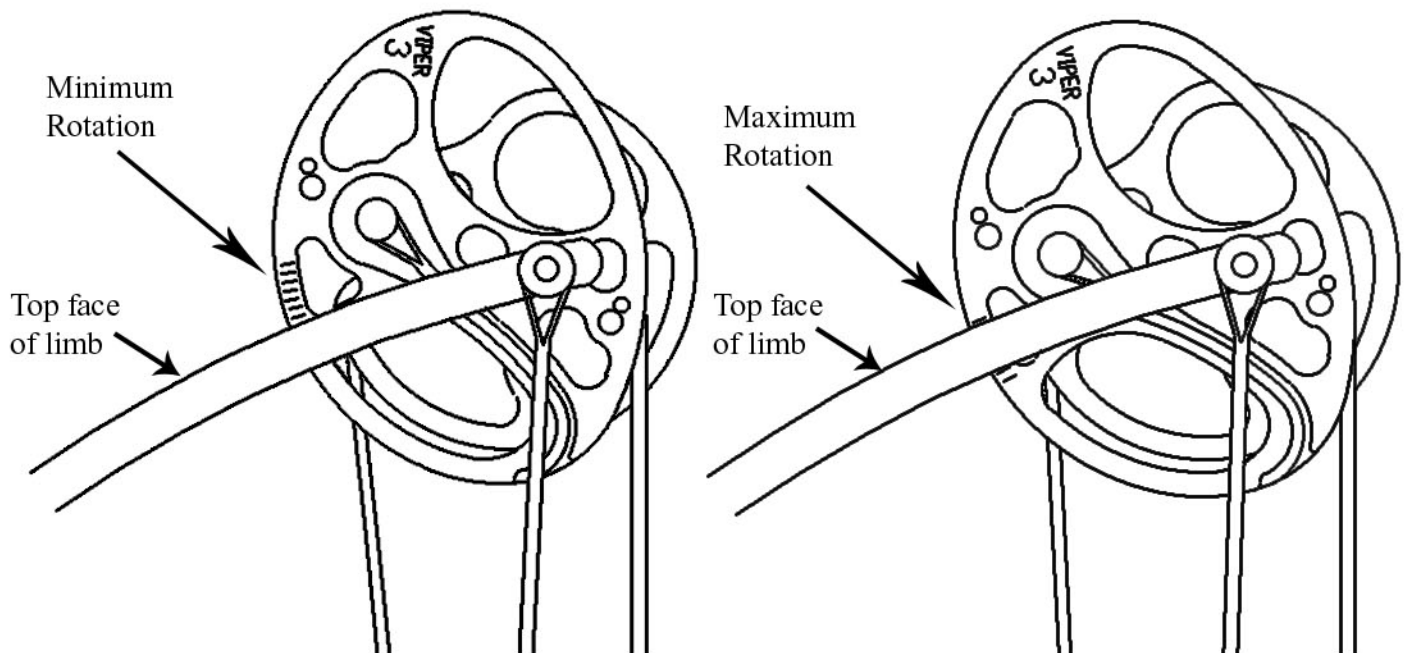
Viper Cam Overview.

The Viper Cam is designed to generate very high energy storage for increased arrow speeds, while still remaining very shootable and easy to tune.

Cam Rotation and Timing.

Your Viper cam does not require timing to the same extent as a twin cam, but there are parameters that should be maintained. You will notice there are rotation marks engraved into both cams. (See diagram below) These marks are used as a reference to cam rotation in relation to the top face of the limb. The top face of the limb should always be between the top and bottom marks. If you find the marks are outside these parameters, then some adjustment is required. This is done with a combination of twisting or un-twisting strings and cables in a suitable bow press to bring them back into line.

It is not crucial to obtaining perfect tune that both the top and bottom cams are rotated identically. They are guidelines to rotations we have found to offer best tunability, so feel free to experiment with different positions if you wish. The Viper cam does not go out of tune in the same way other cams might, and will always offer a smooth draw cycle and solid back wall no matter what rotation is used.



Draw Length Adjustments.

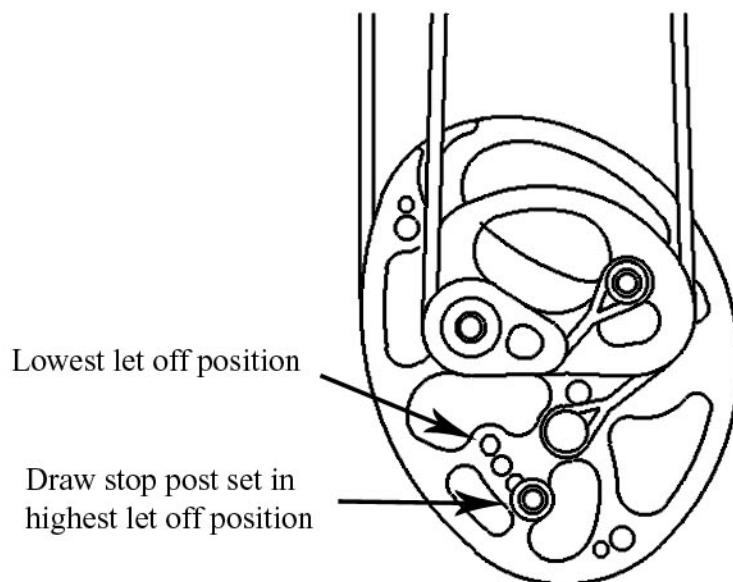
The Viper Cam is draw length specific. That means that for each draw length setting there is a different size cam. Although draw length adjustment within each cam is reduced, the benefit is a highly optimised cam working at peak performance no matter what your draw length.

There are 8 cam sizes. VP1-VP8. Each cam represents 1" of draw length adjustment. VP1 is the longest, VP8 the shortest. Bow weight does not change through all 8 cam sizes. Within each cam size is approximately ½" of fine adjustment.

The maximum and minimum rotation of the cams while performing fine draw length adjustment can be seen in figures on page 1.

Changing the Let Off.

By Moving the draw stop post forward you can reduce the let off. Let off will decrease approximately 10% when moved to the most forward position. See diagram below. Never draw your bow with the draw stop post removed! Moving the draw stop post will also change the draw length.



Maintenance.

The Viper cam features four sealed unit ball bearings. Under normal shooting condition, no maintenance is required. Occasionally, a few drops of lightweight oil is recommended after shooting in the rain. We recommend changing the strings and cables once a year. Sooner if required.



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