Bow Mechanics Q & A

How do I adjust the draw weight of my bow? Weight adjustments can easily be made by turning the weight adjustment bolt clockwise to increase weight or counter clockwise to decrease weight. You should always turn the top and bottom adjustment bolts in equal amounts.

How far can I back the weight off of my bow and still be safe? It depends on the make and model of bow. Hoyt recommends that you never exceed ten complete rotations of the limb weight adjustment bolts. On a Bowtech, one complete rotation equals 3 to 4 lbs. draw weight, so 3 complete rotations are about max.

What is Tiller? Tiller is the difference in actual distance between the upper limb to the string and lower limb to the string measured from the base of the limbs (where the limb and riser meet) at a 90 degree angle. Single cam models must be measured from a reference line from axle to axle. The main function of tiller is to allow the archer to more easily and comfortably aim during the draw and release of the shot. Most bows will shoot best with an even tiller which means the distance from the string to the limb is the same on top and bottom. Tiller adjustments are made by adjusting either the top or bottom limb weight adjustment bolt. For example, if you have too much tiller on the bottom limb, decrease the weight on the top limb or increase the weight on the bottom. Initially set tiller equal on top and bottom.

What is brace height? Brace height is the distance between the pivot point of the grip and the string at rest.

How often should I lubricate my wheels/cams? A light, spot lubrication of the axles where they pass through the wheel/cam should be done on a regular basis (1,500-2,000 shots). In adverse hunting conditions where dirt, dust, and moisture are encountered, lubrication may be done on a daily basis. Use a silicone or Teflon based lubrication. Do not use "penetrating oils" such as WD-40, EZ #7, Fast Break, etc.

What is "ATA Standard" draw length? A method of measurement has been established to provide an industry standard of draw length and eliminate the variances in the original method caused by different thicknesses of bow risers. The ATA Standard Draw Length is arrived at by measuring the "Draw Length to Pivot Point" which is the distance from the string's nock point to the pivot point of the grip, and adding 1 and 3/4 inches. The 1 and 3/4 inches represents the average distance from the far side of the bow to the bow grips pivot point. Manufactures use this ATA Standard Draw Length when they designate the draw length of a bow.

What is a reflex riser and a deflex riser? Reflex and deflex are terms used to explain the geometry of a riser. A deflex riser bow will have a higher brace height than a reflex riser bow which generally means it is a more forgiving bow. A reflex riser bow has a shorter brace height which usually translates into a higher performance bow and perhaps a bit less forgiving than a deflex riser bow. Reflex/deflex is measured by the position of the throat of the grip in terms of its location from a line drawn from each of the pocket pivot points on the handle. If the throat of the grip is in front of the pivot point line it is considered deflex, if it is behind the pivot point line it is considered reflex.

How often should I wax my bow strings? Apply a light coat of bowstring wax to your bow's strings and cables on a regular basis, once every two weeks during peak use.