

2010 Compound Bow Evaluation

Bear Attack

By Anthony Barnum



Bear Attack

Introduction:

For 2010, Bear Archery Products provides the Attack as its flagship offering. The Attack maintains some of the same innovations provided on previous Bear flagship bows (namely the Dual Arc String Suppressors) while incorporating some new technology into a smooth but fast hunting package. Most noticeable is the addition of new Max Pre-Load Quad Limbs, which are distinctive because of their extreme past parallel profile. This profile is excellent for reducing felt vibration and, in fact, the limbs are so far past parallel that special adapters have been developed for several popular bow presses to accommodate the Attack, for fear that it won't stay in the press! The Max Pre-Load Quad Limbs are paired with the new Bear E-Cam to create Bear Archery Products most efficient setup to date. The E-Cam rotates on sealed ball bearings and offers modular draw-length adjustability in 1/2" increments. The Dual Arc String Suppressors incorporated on the Attack are slightly different than in years past in that they are now offset from the riser toward the inside of the bow. The damping attachment then reaches back across centerline to cradle the string while in the static position, helping to minimize excess string vibration.

The Attack sample that was provided for this evaluation was measured to have a brace-height of 7.000 inches, while the axle-to-axle length was measured to be 31 inches. The requested 29 inch, 60 pound model was measured straight out of the box to have a 29 7/16 inch draw length and peak draw-weight of 62.3 pounds. When shot by hand with a 300 grain arrow, the Attack achieved an average speed of 321.6 fps in the out of box configuration with only a brass nock added to the string. Per request from Bear, a slight adjustment to the limb bolts was made and the modules were adjusted to bring the Attack into specification.

Subjective Test Results:

Fit & Finish:

The Fit and Finish on the Attack sample provided for this evaluation was good overall and above average when compared with other Bear bows that have been evaluated in the past. Only minor imperfections were noted in the film-dip finish on the lower suppressor arm and in the recessed area just below the grip on the outside of the riser. Some machining marks were also noted on the interior portions of the cam and idler wheel, but this is more than offset by the dark green anodized finish of these items which matches the rest of the bow quite well. Otherwise, the rest of the bow was flawless.

Grip:

Bear provides a synthetic one-piece grip on the Attack. This grip is comfortable with well-rounded edges and seems to fit my hand nicely. It offered consistent hand placement each time I drew the bow by hand, and was only moderately susceptible to torque when I applied it. The Attack settled back nicely to a consistent position after each of the attempts to induce torque.

Draw Cycle:

The new E-Cam stacks smoothly but quickly and provides a consistently smooth draw until just before the drop into the valley. At that point, there is a little more "give" and the string drops quickly into the valley; this drop is certainly manageable and ends in a nice valley (there is a little bit of room for error), but the back wall is a bit soft. On average, the attack stores 3.79 ft-lbs. of energy for each inch that you draw it back.

Sound & Vibration:

The bottom of the bow kicks forward and the top tips back ever so slightly at the shot.. Recoil is minimal and I was not able to feel any residual vibration traveling through the riser after the initial feedback from the shot, where there is very little jump or shock. The sound output seemed to be below average from a shooters perspective. With its minimal shock / vibration and good balance, the Attack was a joy to shoot.

Bear Attack

Contact Info: Bear Archery Products

www.beararcheryproducts.com

MSRP:	\$749.99	Draw Length:	25"-30"*
Cams:	E-Cam	Draw Weight:	50-70*
Limbs:	Max Pre-Load	Brace Height:	7"*
Grip:	One-Piece Slim Synthetic	Axle to Axle:	31"*
Let-off:	80%*	Mass Weight:	4.6 ^
String:	Bear Contra-Band HP		
Damping:	Dual Arc Offset String Suppressor		*Advertised
Finish:	Realtree APG HD™		^Measured

Performance at a Glance (60.1 lbs, 29 1/4"):

Arrow	Speed	K. E.	Momentum
300 Grains	309.8	63.9	13.3
360 Grains	286.4	65.6	14.7
420 Grains	267.2	66.6	16.0
540 Grains	238.4	68.1	18.4

Arrow (Grains):	300	360	420	540
Dynamic Efficiency:	82.4%	84.5%	85.8%	87.8%
Speed Per Inch of PS:	15.1	14.0	13.0	11.6
Noise Output (dBA):	86.6	86.4	86.2	80.9
Total Vibration (G):	248.4	106.1	84.5	66.6



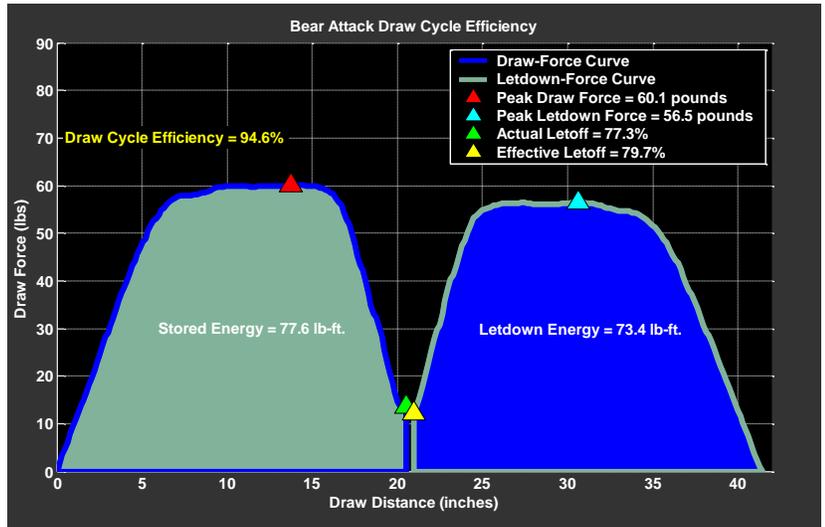
Bear Attack

Objective Test Results:

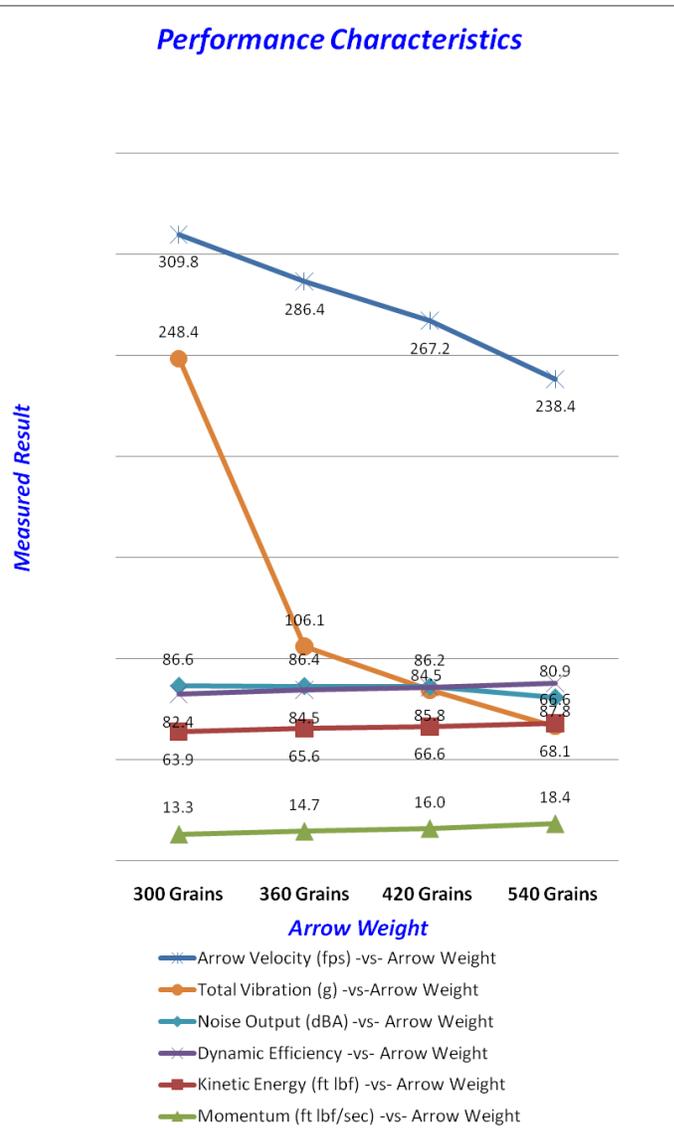
Speed / Performance Measurements:

Speed measurements are made with 4 different arrow weights to determine the average speed of the bow per inch of Power Stroke. Draw Cycle Efficiency is calculated using the stored energy and the let-down energy captured in the Force-Draw curve. The stored energy is used further to determine the average dynamic efficiency of the bow.

Speed per inch of Power Stroke: 13.4
Dynamic Efficiency: 85.1%
Draw Cycle Efficiency: 94.6%



Performance Characteristics



Vibration Measurements:

Vibration measurements are made with 4 different arrow weights to determine the average vibration in 3 dimensions as well as the total average vibration.

Positive X-Vibration: 37.9 g
Negative X-Vibration: -40.7 g
Positive Y-Vibration: 105.0 g
Negative Y-Vibration: -114.4 g
Positive Z-Vibration: 62.2 g
Negative Z-Vibration: -68.8 g
Total Vibration: 126.4 g

The addition of a 12 inch B-Stinger Pro Stabilizer with a 14 ounce weight yielded a significant reduction of peak total vibration when measured with a 360 grain arrow.

B-Stinger Reduction: 7.3%

Sound Measurements:

Sound measurements were made with 4 different arrow weights to determine the average sound output, the average A-Weighted sound output (mimicking the human ear) and the average C-Weighted sound output.

Unweighted Sound Output: 102.8 dB
A-Weighted Sound Output: 85.0 dBA
C-Weighted Sound Output: 94.8 dBC

